Moody Nolan

Addendum #2

Project	CMHA Easton Office Renovation 3400 Morse Crossing Columbus, OH 43219	**Addendum Number**	2
Project Number	25011.01	**Date**	4/30/2025
To	Chris Belcastro		

TO ALL BIDDERS:

Addendum No. 2 to the Drawings and Project Manual, dated March 28, 2025 for the CMHA Easton Office Renovation, as prepared by Moody Nolan, Inc., 300 Spruce St. Suite 300, Columbus, OH 43215.

This Addendum shall hereby be done and become part of the Contract Documents the same as if originally bound thereto. The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Acknowledge receipt of this Addendum on the Bid Form.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum.

This addendum contains changes to the requirements of the bidding Documents, Project Manual and Construction Drawings which have been issued to date. Such changes are to be incorporated into the Construction Documents and shall apply to the work in the same meaning and force as if they had been included in the original documents. Wherever this Addendum modifies a portion of a paragraph of the Project Manual or a portion of any Drawing, the remainder of the paragraph or Drawing shall remain in force.

Questions & Answers

1. Where is the IT room where data needs to be pulled back to?
   The IT room is located in MDF Room 123A, on the east side of the restrooms.

2. What is the make of the existing panels?
   The existing panels are GE A Series Panelboards.

3. Per the attachment, should there be (2) data at the standard wall locations?
   The existing design of the space includes (2) data connections at each furniture location. We assumed the furniture systems would be powered the same.

4. Access control is not listed as part of Div 27. Should it be included?
   Access control will now be included as part of the technology scope. Please see the attached revised specifications that reflect this update.

5. Are any WAPs (Wireless Access Points) required? None are shown.
   Yes, CMHA will provide locations, contractor to provide wiring from MDF Room 123A to location determined in future Addendum.

6. Are we adding to an existing TR (Telecommunications Room) location?
   Yes, new CAT 6 to be run from new office locations to MDF Room 123A. No new space will be provided or created.

7. Are any patch panels and such needed in the TR room(s)?
   Existing patch panels, cable trays, racks, etc. will be utilized. No additional ones are required at this time.

8. There is a spec section 088700 for decorative window film, but it doesn't have any film noted on the drawings, can you provide location of film?
   See revised sheet A901.

9. Please provide locations of tie in for the water and sanitary on Alternates 6 and 7.
   Alternates 6 and 7 include replacing sinks in the same locations existing sinks.

10. What is the deck height of the floors?
    We're assuming that you are asking what the dimension is from the first floor to the underside of the second-floor metal deck. Existing documents indicate this to be 13'-6 ½". This should be verified by the contractor.

11. What is the ceiling tile material for type A1?
    This will be included in Addendum #3.

12. AD101 – At Mothers Room 143 – Keynote D05 is questionable, minor board removal for cabinetry at elevation 10/A801.
    Coded note D05 has been removed from Mothers Room 143.

13. A101 – Keynote 10 22 21.A1 – No information is provided for headers above Demountable Partition System. Since glass provides no sound value, is header similar to wall type D3?
    Yes. Use wall type D3 above the Demountable Partition System.

14. Are jambs / heads for the Demountable Partition System equal to storefront Details on Sheet A700?
    No. The Basis of Design specified system: Infinium – Quantum Single Butt Glazed, has a nominal 1 ½" x 2 ½" head, sill and jamb frame. All other transitions are butt glazed.

15. Wall types 3D and 3H – Why does the wall carry to the deck? Could it stop at 10'-0" A.F.F.?
    Wall type 3D must extend to deck above. Wall type 3H may stop at 10'-0" A.F.F. or 6" A.F.C. minimum.

16. Sheet G200 – Wall type 4 is non-applicable.
    Type 4 Wall Type Schedule and Detail removed from sheet.

17. Sheet G200 – References to Fire walls are non-applicable.
    Correct. Details are standard and have not been specifically revised for this project.

18. Sheet G200 – Detail 5B – A 2" deflection track is utilized, per specifications 09 21 16-4.
    Provide deflection track at top of full height walls as specified. The main purpose of Detail 5B is to illustrate the acoustical sealant and insulation.

19. In specifications 09 21 16-9 it details bridging. No bridging is indicated on drawings and all partitions except 3H have board on each side. Is bridging required?
    Provide bridging as specified in technical specifications.

20. Detail 5B allows for 1" deflection for existing second floor slab. Deflection is not an issue, can it be eliminated?
    No. Provide deflection tracks as designed and specified.

21. May we eliminate the box lintels detailed on A700.
    Box lintels may be eliminated at openings less than 7'-0" wide.

22. Regarding ACGI Baffles: Is this a grille system with backers, or individual individually hung baffles?
    This will be addressed in Addendum #3.

23. Regarding the ACGI Baffles: How many blades are per LF?
    This will be included in Addendum #3.

24. Regarding the ACGI Baffles: The finish schedule just says black. Is this to be painted black? Or does this need to be solid wood or veneered wood?
    This will be included in Addendum #3.

25. The specification for the data calls out for the Hubbell product or an approved equal by OTDI. Can you provide who the approved equals are?
    This will be included in Addendum #3.

26. Can you provide an item number for ceiling tile A3?
    A3 = Ultima tegular 1911. A2 = Ultima tegular fine line 1912.

Substitution Requests	09 54 00-1 – Ceiling Baffles – Replace with J2 PET Felt Folded Box Baffles **Request denied – Basis of Design product is a metal baffle system**.
Specifications	00 01 10 – Table of Contents **Revised to include new sections**. 27 05 28 – Conduits and Backboxes for Communications Systems **Revised section.** 27 05 28.36 – Cable Tray for Communications Systems **New Section.** 27 15 00 – Voice and Data Wiring System **Revised section.** 28 10 00 – Electronic Access Control and Intrusion Detection **New Section.** 28 23 00 – Video Surveillance **New Section.**
Drawings	G001 – DRAWING INDEX, GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS **Revised the Index of Drawings** G200 – PARTITION TYPE SCHEDULE **Revised Type 3 Wall Type Schedule.**

Type 4 Wall Type Schedule and Detail removed from sheet.

AD101 – LEVEL 01 – DEMOLITION PLAN

Demo additional door.
Removed Demolition Keynote #30.
Coded Note D05 has been removed from Mothers Room 143.
Added Demolition Keynote Note D37: ALTERNATE #1: SAWCUT AND REMOVE PAVEMENT AND CURB AS NEEDED TO RUN CONDUIT FOR EV CHARGERS. COORDINATE EXACT EXTENT AND PATH WITH ELECTRICAL DRAWINGS. Also indicated extents on plan.

A101 – LEVEL 01 – FLOOR PLAN

Changed door 126B to 126.
Revised swing of door 126.
Infilled door opening between Corridor 127 and Fitness 126.
Eliminated built-in casework in Fitness 126.
Removed Elevation 5/A851 callout.
Added Coded Note #11: ALTERNATE #1: PATCH AND REPAIR PAVEMENT AND CURB TO ORIGINAL CONDITIONS. Also indicated extents on plan.

A201 – LEVEL 01 - RCP

Revised ceiling types in Elevator Lobby, Waiting area and Executive suite.

A800 – FINISH SCHEDULE / LEGEND

Revised ceiling types A1, A2, and A3 in the Finish Legend

A801 – INTERIOR ELEVATIONS

Revised Elevation 3 – eliminated door and casework, added glazing film.
Removed Section 6/A851 callout.

A851 – Millwork Details

Removed Elevation 5 and Detail 6 – Yoga Mat Storage from sheet.

A901 – LEVEL 01 – FINISH PLAN

Removed Coded Note #4 at Lobby Stair.
Revised Coded Note #4 to read "NOT USED."
Revised south wall of Fitness 126.
Added Coded Note 13 to the glazing on the south side of Fitness 126.
Added Coded Note 13 to legend that reads: "DECORATIVE GLASS FILM; O.F.C.I."

FP101 - LEVEL 01 - FIRE PROTECTION PLAN

Added clarification on scope of work and hazards.

FP301 - FIRE PROTECTION DETAILS AND SCHEDULES

Added clarification on fire protection notes and equipment.

PD101 - LEVEL 01 - PLUMBING DEMOLITION PLAN

Added clarification on existing clean out to remain.

P101 - LEVEL 01 - PLUMBING PLAN

Added clarification on notes and sizing.

P301 - PLUMBING DETAILS AND SCHEDULES

Added clarification on stack detail.

E101 – LEVEL 01 – POWER PLAN

Revised receptacle layout in Fitness Room 126 per owner changes.
Added fire alarm devices.
Updated coded notes for clarification.
Revised circuits and device counts per telecom changes.

E201 – LEVEL 01 – LIGHTING PLAN

Added occupancy sensors.

Added "GTD" detail.
Revised general/coded notes for clarification and per drawing changes.
Removed daylight sensors.
Added daylight sensors.

E301 – ELECTRICAL RISER AND DETAILS
Revised circuit breaker size.
Removed redundant detail.

E401 – ELECTRICAL SCHEDUELS, LEGENDS, AND DETAILS
Revised/added panel schedules per drawing changes.

T101 – LEVEL 01 – TELECOM PLAN
Sheet added per additional scope.

T201 –TELECOM LEGEND AND DETAILS
Sheet added per additional scope.

T202 – ACCESS CONTROL DETAILS AND LEGEND
Sheet added per additional scope.

Attachments

Substitution Requests:
09 54 00-1

Specifications:
00 01 10, 27 05 28, 27 05 28-36, 27 15 00, 28 10 00, & 28 23 00.

Drawings:
G001, G200, AD101, A101, A201, A800, A801, A851, A901, FP101, FP301, PD101, P101, P301, E101, E201, E301, E401, T101, T201, and T202.

SUBSTITUTION REQUEST
(During the Bidding/Negotiating Stage)

Project: CMHA Easton Office Renovation

Substitution Request Number:

From: J2 Systems

To: Moody Nolan Inc

Date: 4/29/25

A/E Project Number:

Re:

Contract For:

Specification Title: Ceiling Baffles

Description: Autex Frontier Raft Baffles`

Section: 095400 Page: 2

Article/Paragraph: 2.01

Proposed Substitution: J2 PET Felt Folded Box Baffles - Custom Size to meet specifications

Manufacturer: J2 Systems Address: Woods Cross, UT Phone: 801-701-7979

Trade Name: Model No.:

Attached data includes product description, specifications, drawings, photographs, 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: Shandelle Carpenter

Signed by: Shandelle Carpenter

Firm: J2 Systems

Address: 2193 South 1200 West #105

Woods Cross, UT 84087

Telephone: 801-701-7979

A/E's REVIEW AND ACTION

- [ ] Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- [ ] Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- [X] Substitution rejected - Use specified materials.
- [ ] Substitution Request received too late - Use specified materials.

Signed by: Daniel C. Bossenbroek Date: 04/30/2025

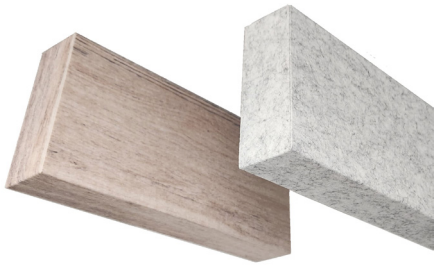
Supporting Data Attached: [ ] Drawings [ ] Product Data [ ] Samples [ ] Tests [ ] Reports [ ] _____

Basis of design system has metal baffles, not felt.

Form Version: January 2013
CSI Form 1.5C

J2 PET Folded Box Baffle

PRODUCT DATA AND SPECIFICATIONS



J2 PET Acoustic Folded Box Baffles are designed to trap noise and reverberation while adding style and substance to overhead spaces. Our ceiling systems are made from J2 PET Acoustic Felt.

- Eco-friendly
- Durable
- Hard-Wearing
- 34 Color Options
- Printed Surfaces Available

STYLE: Suspended Ceiling Baffle

COMPOSITION: 100% PET (>75% recycled PET material)

DENSITY: 1900g/sqm-2400g/sqm (approx 12pcf)

DIMENSIONS: Width: 2", Height: 7.75", Length: 2', 4' or 8', or custom length up to 8'

FIRE RATING: ASTM E84 – Class B (Class A availabe on request, color options may vary)

ACOUSTIC NRC: All acoustic panel systems offer diverse sound absorption characteristics. Similar baffle systems have an NRC of between 0.65-0.85, however not all systems have been tested for NRC ratings.

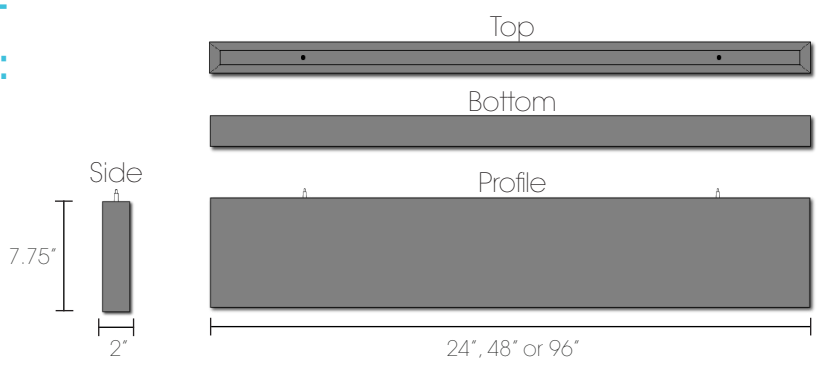
APPLICATION: Ceiling

CLEANING & CARE: Remove dust and dirt by dusting, vacuuming, or with a soft cloth or sponge and a solution of carpet or upholstery shampoo. Use a soft, damp cloth and blot dry. Spot cleaner can be used for lightly soiled areas.

WARRANTY: 4-year warranty against workmanship and manufacturing defects.

HARDWARE & INSTALLATION: Standard suspension hardware: aircraft cable connected to cable adjusters. Each baffle includes 5ft lengths of 1/16" cable and cable adjusters–24" and 48" baffles include two (2), and 96" baffles include three (3). Additional mounting options are available, including pre-cut T-rail and Unistrut notches.

PRODUCT DIAGRAMS:



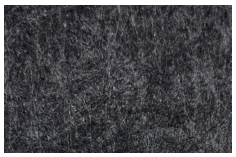
Can do custom size to meet specifications: 94.5"x9"x3"

J2 PET Felt - 9mm & 12mm

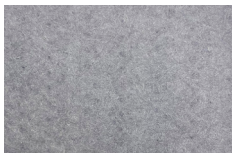
COLOR OPTIONS

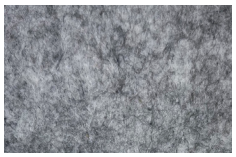

Black - 194

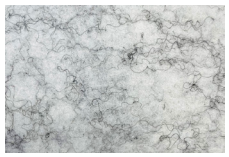

Charcoal Gray - 176

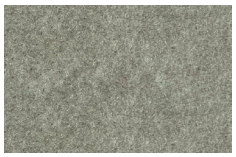

Graphite Gray - 172

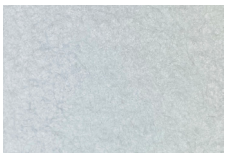

Quartz Gray - 179


Steel Gray - 174


Granite Gray - 171


Marble Gray - 177


Smoke Gray - 170


White - 193


Ivory - 113


Khaki - 111


Latte - 119


Mustard Yellow - 112


Canary Yellow - 117


Deep Orange - 121

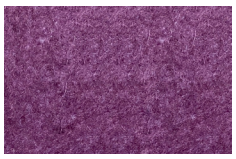

Rust Red - 136

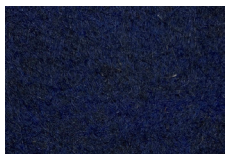

Brick Red - 137

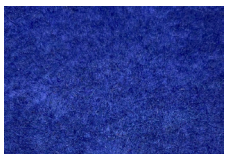

Candy Red - 131

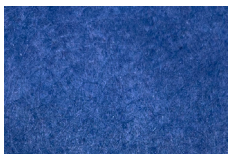

Fire Red - 231


Peach - 135

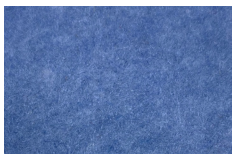

Aubergine - 147


Denim Blue - 151

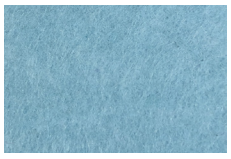

Cobalt Blue - 152


Twilight Blue - 157

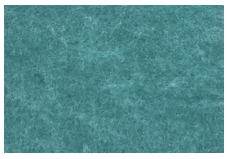

Sea Blue - 150

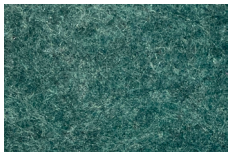

Sky Blue - 154


Azure - 252

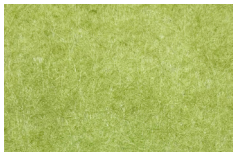

Aqua Blue - 164

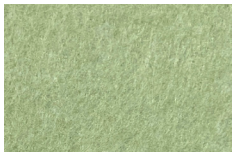

Iceberg Blue - 158


Turquoise - 160


Turtle Green - 162


Grass Green - 167


Pistachio Green - 161


Spearmint Green - 169

Custom colors available upon request. Minimum order quantities apply.

J2 PET Printed Wood Grain

PATTERN OPTIONS

OPTION 1

OPTION 2

OPTION 3

OPTION 4

OPTION 5

OPTION 6

OPTION 7

All patterns can be scaled to customer specifications.
*Custom patterns available on request.

TABLE OF CONTENTS

DIVISION 26 – ELECTRICAL

DIVISION 27/28 – COMMUNICATION

SECTION 27 05 28.36

CABLE TRAY FOR COMMUNICATIONS SYSTEMS

PART 1 GENERAL

1.01 SCOPE

A. Furnish and install a complete cable tray system as Specified. Cable tray shall be a continuous-run around all obstructions. Provide all elbows, tees, hangers, splice plates, barrier strips, end plates, dropouts, expansion plates, hardware, etc as required for a complete system installation.

1.02 STANDARDS

A. All equipment shall be UL listed and labeled in accordance with applicable NEMA and ANSI standards and NEC Article 392.

1.03 SUBMITTALS

A. Submit product data sheets of cable tray and accessories for review. Refer to Specification section 26 00 10, “General Provisions” for submittal process. Also refer to Specification section 26 01 20, “Operation and Maintenance Manuals” for O & M submittal process.

1.04 MANUFACTURERS

A. Cable Tray

1. Cabolfil
2. B-Line
3. Chalfant
4. Hubbell

PART 2 PRODUCTS

2.01 CABLE TRAY

A. Furnish and install a complete cable tray system as Specified and as shown on the Drawings. Cable tray shall be a continuous-run around all obstructions. Provide all elbows, tees, hangers, splice plates, barrier strips, end plates, dropouts, expansion plates, hardware, etc as required for a complete system installation.

B. Unless noted otherwise, all cable tray show on the drawings shall be 18” wide with 4” loading depth equal to Hubbell HLS06 **(ladder tray) and Hubbell HBT06 (basket tray)**. Cable tray shall not be loaded to more than 40% full at completion of project.

C. System to include all splice plates, trapeze-style supports, clamps and fittings. All devices to be UL listed for proper grounding of cable tray system.

D. Cable tray shall be a wire mesh cable management system for distribution through the building. Wire mesh shall be hot-dipped galvanized steel with double wire side rails for

increased load strength. All wire to be rolled over and ground smooth to eliminate cable damage. Cable tray in equipment rooms shall be cable runway type ladder tray.

E. Cable tray shall support a minimum of 16 pounds per foot based on a 10 foot span. Cable tray shall be installed per manufacturer's instructions to support 100% cable fill condition.

F. Cable tray layout and material submittal shall be submitted to the owner for approval prior to release for order.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install cable tray and components in accordance with manufacturer's written instructions **and NEMA VE 2-2006 or latest edition**.

B. Coordinate layout of cable tray including specific routing and mounting elevations with building structure and work of other trades. Provide additional elbows and fittings as required to facilitate changes in elevation of cable tray to avoid conflicts with building structure and work of other trades.

C. All splice plates shall be installed in a manner to maintain the integrity of the cable tray as an equipment-grounding conductor. Install bonding jumpers across expansion and adjustable splice plates. Install expansion splice plates where cable tray crosses building expansion joints.

D. Install cable dropouts on cable tray where cables will be exiting tray.

E. Install end plates on cable tray ends.

F. Conduits attached to cable tray supports shall be secured with approved conduit clamps.

G. Where cable tray penetrates walls, **transition to conduit and firestop**.

H. Cable trays carrying low voltage cables shall be kept a minimum of 12 inches away from power wiring or lighting fixture ballasts.

I. Cable tray shall be located above suspended ceilings below HVAC ductwork and piping systems. Cable tray shall be safely accessible and shall not be installed above inaccessible ceiling types.

J. Cable trays shall be supported by trapeze-style supports utilizing a segment of unistrut suspended by 3/8" threaded rod. Threaded rod shall have ½" EMT sleeve over threads to protect communications cabling.

K. Cable trays shall be bonded to the communications system ground system with a #6 AWG grounding conductor. Ensure the grounding continuity throughout the length of the tray. Where there are breaks in the tray due to structural, mechanical, or other construction obstacles provide a bonding strap to bridge the void as directed by the manufacturer.

END OF SECTION

SECTION 27 05 28

CONDUITS AND BACKBOXES FOR COMMUNICATIONS SYSTEMS

PART 1 GENERAL

1.01 SCOPE

A. Furnish and install complete telephone conduit system, including riser, telephone terminal boards and junction boxes as shown on the Drawings.

PART 2 PRODUCTS

2.01 STANDARDS

A. Conduits for communication wall outlets shall be minimum of 1". Conduits for floor outlets shall be 1-1/2” minimum.

B. A dedicated conduit shall serve each outlet box.

C. Communication boxes shall be 4-11/16”(h) x 4-11/16”(w) x 2-1/8”(d), equipped with a 2-gang cover/plaster ring. Wall-phone outlets will be equipped with a single-gang cover/plaster ring.

D. Each conduit stub shall be bonded to the grounding system.

E. Pull boxes, if needed, shall be accessible. Pull boxes shall not be installed above fixed ceilings, HVAC ducts, or piping systems.

F. Cable that is run above accessible ceilings shall be supported by J-hooks.
1. J-hooks shall be furnished and installed under this contract.
2. Supports shall be installed every 4 to 5 feet on-center.

G. Cable that is run above non-accessible ceilings shall be in conduit.

H. Provide conduit sleeves to transition cabling in cable tray or j-hooks through walls.

PART 3 EXECUTION

3.01 INSTALLATION

A. No more than two (2) 90 degree bends in telephone conduit without a pull box or slip sleeve. LB type fittings shall not be used in lieu of conduit bends.

B. Bends in conduits, and in particular conduits larger than 2", shall be long sweep bends.

C. Provide #14 steel pull wires or nylon pull cords to all empty conduits.

D. **Conduit system shall be continuous from all outlets to above accessible ceiling and utilize J-Hooks to cable tray or nearest Technology Room. Provide a grounding bushing on each conduit stub and bond to the building grounding system with #10 copper ground conductor.**

E. For conduit two (2) inches in diameter and smaller the recommended 90-degree bend radius is six (6) times the internal diameter.

F. Approved UL fire stop must be used when penetrating fire rated walls or floors.

H. Penetrations

1. Structural Engineer must approve any core drilling for cable pathways that must run through solid (cement, etc.) walls, floors, or ceilings.

2. Furnish and install fire stop and sleeves for firewall penetrations as required by NEC code and in accordance with ANSI/EIA/TIA-569, Annex A (normative) Firestopping.

3. Seal all unused openings created for the job.

4. Sealing material and application of sealing material to comply with local fire and building authorities requirements.

END OF SECTION

SECTION 27 15 00

VOICE AND DATA WIRING SYSTEMS

PART 1 GENERAL

1.01 SCOPE

A. Furnish and install all cables, cable supports, wall plates, connectors, line cords, patch cords, adapters, outlets, boxes, brackets and all other accessories and parts required for a complete system.

B. Types of cable systems, specified in this section include the following:

1. Telephone/Voice Communication Cable Systems
2. Data Communication Cable System

1.02 STANDARDS

A. All equipment shall meet the applicable requirements of UL and shielding requirements of the Federal Communications Commission.

B. Wire and cable shall meet the applicable requirements of NEC Articles 770 and 800, NFPA 72, NFPA 101, NEMA and IEEE.

C. Comply with applicable portions of NEMA-250 standards (et. al.) pertaining to grounding of electrical and/or communication equipment and enclosures.

D. Comply with EIA/TIA-568, 568A, 569, 607 and TSB 75 standards for commercial building wiring for voice and data communications as applicable.

E. Eligible equipment manufacturers and installers shall be those regularly engaged in the manufacture and installation of telephone/voice and data communication cabling system of the types and as specified herein and on the Drawings, whose products have been satisfactory used and installed in similar service for not less than five years.

F. Contractor shall have at least five years of successful installation experience with projects utilizing intrabuilding telephone/voice and data communication cabling system work similar to that required for this project. Cable, wire, and outlet installation shall be performed by personnel that have been certified by an organization such as BICSI (Building Industry Consulting Service International) or have at least 5 years' experience in the telecommunications industry and shall be certified by the manufacturer of the installed system. Contractor shall be certified by the manufacturer of the system to be installed and provide a manufacturer's warranty. Contractor shall have on staff a full-time RCDD listed with the company on the BICSI website.

G. The A/E and the owner reserve the right to disqualify manufacturers, equipment suppliers, and installers, who, in their sole opinions, do not comply with the requirements of these specifications.

1.03 SUBMITTALS

A. For Review:

1. A minimum of five (5) reference accounts at which similar work, both in scope and design, have been completed by the Contractor within the last five (5) years.
2. Product data sheets of all components must be sent to for approval before material is purchased.
3. As-built riser/wiring diagrams and plans of the entire communication wiring system showing all cable runs, outlet locations, distribution frame layouts, connector block locations, etc. shall be submitted upon completion of the project. All documentation must be sent to owner prior to Life Safety Inspection. The bid documents will be available in AutoCAD format for use in developing the as-built drawings.
4. Product data sheets of test equipment
5. System certification and warranty statement
6. Completed materials list with quantities stated. Attached spreadsheet shall be submitted with proposal.

B. To be included in Record and Information Manuals:
1. One copy of each approved submittal
2. Cable test reports
3. Record drawings of the actual installation of the telephone/voice and data communication wiring system

1.04 MANUFACTURERS

A. Horizontal User Voice and Data Cables
1. **Belden**
2. Hubbell
3. **Commscope**

B. Patch Cables and Line Cords
1. **Belden**
2. Hubbell
3. **Commscope**

C. Voice/Data Outlets
1. Hubbell
2. **Leviton**
3. **Krone**

D. CATV
1. Commscope
2. **Belden**
3. **Hubbell**

1.05 COMMUNICATIONS CABLING SYSTEM OVERVIEW

A The cable system shall be a single star topology for the horizontal cable distribution as defined by ANSI/EIA/TIA-568-A.

B. The installation shall be a certified system with supporting test results and a cable management system for tracking moves, additions and changes. The system shall meet ANSI/EIA/TIA cabling standards to ensure a flexible system that will support mutli-vendor operating systems.

C. All copper voice station cables shall originate from the telephone board identified on the drawings.

D. All copper data station cables shall originate from the data patch panels identified on the drawings.

E. All fire rated wall and floor penetrations shall be fire-stopped with appropriate materials to maintain the integrity of the rating.

F. Horizontal Station Cables

1. Voice-Data Outlet: two (2) Category-6 UTP cables shall be used.
2. Voice-Only Outlet: one (1) Category-6 UTP cable shall be used.
3. Data-Only Outlet: one (1) Category-6 UTP cable shall be used.

G. Manufacturer's Instructions

1. Compliance: Require compliance with instructions in full detail, including each step in sequence.
2. Conflict: In cases where the manufacturer's instructions conflict with the Construction Documents, the contractor shall request clarification from the Manufacturer, owner and the design A/E before proceeding. Owner and the design A/E's permission to proceed is required in cases of conflict.

H. Furnish all patch cords from the patch panels to owner's active network equipment to provide for a complete and working system.
1. Furnish three foot, yellow patch cords in the closet in a quantity corresponding to 100% of the data jacks used on the project.
2. Furnish ten foot, grey patch cords on the user end corresponding to 100% of the data jacks used on the project.
3. All patch cords must be tested for functionality.
4. For each work area outlet provide one 1' and one 10' CAT 6 patch cord of the same manufacturer and level of the structured cabling system. Basis for design: Hubbell #HC6xx01 and #HC6xx10.

PART 2 PRODUCTS

2.01 CABLES

A. Horizontal User Voice and Data Cable
1. Four (4) twisted pairs UTP, 24 AWG solid copper conductors, 100 Ohm, color coded per the band strip color coding conventional standard as follows:
Pair #1 – White/blue and blue/white
Pair #2 – White/orange and orange/white
Pair #3 – White/green and green/white
Pair #4 – White/brown and brown/white

2. Cable shall be performance rated Category 6, as noted herein.

2.02 CONNECTOR HARDWARE

A. Voice/data Outlets
1. All components of the structured cabling system shall be Component Certified to meet he appropriate category of cabling being installed. The manufacturer shall provide Category 6 component compliance certificates from a recognized third party testing organization upon request. All jacks, faceplates, patch panels, and

patch cords shall be of one manufacturer and supplied by the contractor. At no time are "modular plugs" for terminations acceptable.

A. Minimum requirements for work area Technology outlets (TOs), except for wireless access points and wall phone outlets shall be Category 6, black RJ45 jacks.
B. Basis of design and Performance: Hubbell #HXJ6BK or approved equal through the owner.
C. Minimum requirements for Wireless Access points (WAPs) will be one Category 6A, gray RJ45 jack. The jack will be terminated within a single opening surface mount box. A 1' CAT6A patch cord will be supplied for each end and will be channel tested for performance.
D. Basis for design and performance: Hubbell #HJ6AGY or approved equal through the owner.

2. The faceplate shall stainless steel or plastic in accordance with the architectural design. The faceplate shall have four or six modular openings designed to accommodate the jacks described above. Openings without jacks installed shall have blank inserts installed. Stainless steel covers shall be used in auditoriums, classrooms, and where frequent use or abuse is more likely.

A. Plastic faceplates basis of design and performance: Hubbell -IFPL26TI or equal approved by the owner.
B. Stainless steel faceplates basis of design and performance: Hubbell - SSF206 or equal approved by the owner.
C. Blanks for faceplates basis for design and performance: Hubbell SFBI10 or equal approved by the owner.

3. Wall phones outlets shall be stainless steel, equipped with a flush CAT6 data jack, and designed for modular mounting of wall phones. Basis of design: Hubbell part #SP6F or equal approved by the owner. The mounting must be ADA compliant.

B. Data-Only Outlets

1. Data-Only Outlets shall be similar to Voice/data outlets except without the standard telephone plug in the middle.

C. Voice-Only Outlets

1. Voice-Only Outlets shall have only the telephone jack and no data jacks.

D. Wall Phone Oultet

1. Wall phone outlet shall have a single gang faceplate with mounting lugs – Provide Suttle SE 630AC6-44. Provide station cable to patch panel in the designated Telecommunications Room.

MANUFACTURERS

A. Manufacturer certified Data/Voice Structured Cabling system shall be selected from the following approved manufacturer components:

1. Belden/CDT Media Twist Category 6 UTP.
2. Berk-Tek/Nexans LANMark 1000 Category 6 UTP.
3. CommScope UltraMedia Category 6 UTP.

4. Corning Cable Systems InfiniCor SX+ Optical Fiber Cabling, Termination Components, and Enclosures.
5. Hubbell Premise Wiring Mission Critical Copper Cabling System Termination Components.
6. **Hubbell Premise Wiring Mission Critical Optical Fiber Cabling, Termination Components and Enclosures.**
7. **Leviton Voice & Data Division NetLAN or NetSync Copper Cabling System Termination Components.**
8. **Leviton Voice & Data Division Optical Fiber Cabling and Termination Components, and Enclosures.**
9. **Mohawk/CDT AdvanceNet Category 6 UTP.**
10. **Panduit Network Connectivity Group Netkey Cabling System Termination Components with Certification Plus.**
11. **Panduit Network Connectivity Group Optical Fiber Cabling System, Termination Components, and Enclosures.**
12. **Superior Essex NextGain Category 6 UTP.**

B. It shall be the responsibility of the bidder to confirm all design reference part numbers, listed herein, as current and suitable for the items described and specified and shall file a formal RFI for all perceived discrepancies prior to bidding.

2.2 SYSTEM REQUIREMENTS

A. Coordinate the features of materials and equipment so that they form an integrated system as per manufacturer certification program requirements. Match components and interconnections for optimum future performance and appearance.

B. Match components and interconnections for optimum future performance and appearance.

2.3 MOUNTING ELEMENTS

A. Building Cable Trays (except within MDF and IDF spaces) shall be provided by the Electrical Contractor as per Section 27 05 28.36. Ladder tray shall be provided by this Contractor within MDF and IDF spaces per section B-C below.

B. General: Provide heavy-duty (solid bar - welded) type ladder rack to run horizontally above equipment rack line-up to support and train cable equipment racks below. Center ladder racks on the equipment racks.

C. Provide ladder racks with the following features:
1. 24-inch wide “Telco style” ladder rack with welded solid bar fabrication.
2. 3-inch channel rack to runway mounting plates.
3. 3-inch wall angle support kits for each wall termination.
4. Butt splice kits to extend rack lengths.
5. Provide clamp-on bar type side rails to extend capacity of rack.
    a. Bars to be 4 inches in height and spaced every 6 inches on-center for the entire length of the rack system.
6. Ladder Rack and Accessories
    b. Approved Manufacturers: Hubbell, Cabolfil, B-line, Chalfant.
7. Extend a #6 ground conductor to each conduit entering the telecom room, each equipment rack, each overhead ladder rack.

D. Conduit, In-Wall, and Floor Boxes shall be provided by the Electrical Contractor. This Contractor shall be responsible to coordinate with the Electrical Contractor, to confirm that proper box sizes shall be provided, and immediately notify the Electrical Contractor of any errors or inconsistencies encountered.

E. Any required metallic surface raceway shall be provided by the Electrical Contractor. This Contractor shall be responsible to coordinate with the Electrical Contractor to confirm that proper box styles and sizes shall be provided, and immediately notify the Electrical Contractor of any errors or inconsistencies encountered.

F. All walls of EF(s)/MTR(s)/TR(s) shall have backboards. Backboards for EF(s)/MTR(s)/TR(s) are to be 3/4"x48"x96" fire retardant treated plywood with the A side facing the room, mounted vertically, and placed within 12" of floor. At no time is it acceptable to run/mount anything on backboard within any ER/MTR/TR other than communications cabling or equipment. All electrical outlets and switches will be installed with wall cavities. Backboards are to remain unpainted or they will have to be replaced at the projects expense.

G. Floor boxes and surface raceway installations shall be reviewed and approved by owner before installation.

2.4 HORIZONTAL UTP CABLE FOR DATA

A. Data cables shall be Category 6 rated, consisting of 4-Pair 24 AWG UTP, listed CMP with transmission characteristics that meet and exceed those of ANSI/TIA/EIA-568-B performance specifications.

B. Hubbell #HC6 or approved equal.

C. CAT6 Plenum Cable – Hubbell #C6RPB or approved equal through the owner.

D. Cable shall be white in color.

E. Design Reference: Belden Media Twist, BerkTek LANMark 1000, CommScope UltraMedia, Mohawk/CDT AdvanceNet, Superior Essex NextGain.

2.5 HORIZONTAL UTP CABLE FOR VOICE

A. Voice cable shall be Category 6 rated, consisting of 4-pair 24 AWG UTP, listed CMP with transmission characteristics that meet and exceed those of ANSI/TIA/EIA-568-B performance specifications.

B. Hubbell #HC6 or approved equal.

C. CAT6 Plenum Cable – Hubbell #C6RPB or approved equal through the owner.

D. Cable shall be white in color.

E. Design Reference: Belden Media Twist, BerkTek LANMark 1000, CommScope UltraMedia, Mohawk/CDT AdvanceNet, Superior Essex NextGain.

2.6 HORIZONTAL UTP CABLE FOR EMERGENCY "BLUE" TELEPHONES

A. Cable will be outdoor rated 6 pair Category 3 cable with water blocking compounds to prevent moisture intrusion, have an operating range suitable for -40 degree C to 80 degree C, and meet Category 3 transmission requirements. Basis of design: Superior Essex #04-061-85.
   1. From the protection unit in the TR a 4 pair cable will be extended to the rack and terminated on a jack in the patch panel.
   2. Overvoltage protection to be provided at both ends. Grounding will be provided at both ends an NEC codes and applicable standards shall be met. Electrical contractor to provide

ground at stanchion. Basis of design: Circa Telecom #502 equipped with two 1360-75 modules.

3. One 2" conduit shall be placed for low voltage communications to each stanchion from the nearest building telecommunications room. Prior to entering the building the 2" conduit shall transition to rigid metallic conduit to the nearest TR. The communication pathway will be separate from power pathway.
4. Pathway shall meet outside plant standards.

2.7 TELEPHONE BACKBONE (RISER) UTP CABLE

A. Multi-pair Telephone Backbone (Riser) cables shall consist of solid 24 AWG UTP, specified in 25-Pair increments, listed CMP with transmission characteristics of Category 3 at minimum.

B. Multi-pair Telephone Backbone (Riser) cables shall be from the same manufacturer as Horizontal 4-pair UTP and shall be included in the structured cabling system warranty.

C. Cables shall be gray in color.

2.8 VERTICAL CABLE MANAGERS

A. Vertical Cable Managers shall be 78 inches high by 3 inches wide, minimum, and shall be black in color. Front management capabilities shall be provided.

B. 3" wide vertical cable management shall be dedicated to each side of each rack, as depicted in project drawings.

C. Hubbell VM610 or approved equal.

2.9 HORIZONTAL CABLE MANAGERS

A. Horizontal Cable Managers with cover shall be 19 inches wide by 3.5 inches high and shall be black in color. Front management capabilities shall be provided. Front Cable Managers shall be ring style from left to right across each 3.5" horizontal as depicted in project drawings.

2.10 BLANK FILLER PANELS

A. Blank Filler Panels shall be 19 inches wide by 1.75 inches, and 3.5 inches high. Panels shall be black in color.

2.11 MULTIPLE OUTLET POWER STRIPS

A. Multiple Outlet Power Strips shall have ten (10) NEMA 5-20R receptacles and surge suppression. Provide line cord and 5-20P plug length sufficient to access power receptacles as indicated on drawings. Units shall include on/off switches positioned at the top/rear of each strip.

B. Design Reference: Geist #VSSA104-102S20 or equal by Leviton or Tripp-Lite.

2.12 MODULAR COPPER PATCH PANELS

A. 48-Port High Density RJ-45 Modular Patch Panels with 110-style connecting blocks for the termination all UTP cables, as required.

B. Patch Panels must meet or exceed all transmission performance requirements for Category 6.

C. Each RJ-45 port will be terminated with 4-Pairs of UTP cable, unless otherwise directed (example: “Rack-to-Wall Tie Cabling”).

D. All Patch Panel Ports shall be black in color.

2.13 CONNECTING BLOCKS

A. Connecting blocks shall be 25-Pair 110-style blocks with a 300-pair base for the termination of UTP cables, as required.

B. Blocks must meet or exceed all transmission performance requirements for Category 5.

C. Blocks shall be Ortronics OR110ABC6300 for station cables and Hubbell 110 BLK 300 FTK 5 for backbone cables. All station cables shall terminate on patch panels.

2.14 MODULAR COPPER JACKS AND CONNECTORS FOR DATA

A. Flush mounted modular RJ-45 Jacks to fit in a double gang, 3-1/2 inch deep box and/or fit in optional surface mounted wiremold or floor boxes as shown on drawings.

B. RJ-45 Modular Jacks shall be 110 style 8-position universal configurations and shall meet at minimum, the transmission performance requirements of Category 6. Punch down cable pairs at all termination points for 568A terminations.

C. RJ-45 Modular Jacks shall be UL listed and meet ANSI/TIA/EIA-568-B.2 requirements.

D. RJ-45 Modular Jacks shall be mounted in Modular Faceplates for six openings.

E. All Category 6 Outlet “Data” modules shall be black in color.

2.15 MODULAR COPPER JACKS AND CONNECTORS FOR WIRELESS ACCESS POINTS

A. Provide a single-port biscuit jack Hubbell ISB1EI with Cat 6A gray jack located above the ceiling for wireless access points.
B. Cat 6A cable from access point outlet to nearest Telecommunications Room.
C. Provide a 1’ CAT 6A patch cord for each end and permanent link test for performance.
D. Provide 10’ service loop with excess cable stored on j-hook.
E. Provide single-gang Caddy Bracket in ceiling tile for support of access point.

2.16 MODULAR COPPER JACKS AND CONNECTORS FOR WALL TELEPHONES

A. Wall phone outlets shall be stainless steel, equipped with a flush CAT6 data jack, and designed for modular mounting of wall phones.

B. Basis of design: Hubbell #SP6F or equal approved by the owner.

C. Mounting shall be ADA compliant**.**

2.17 MODULAR WORK AREA FACEPLATES

A. Modular Work Area Faceplates with the number of modular openings as shown on project drawings. Faceplates shall contain four, six, eight, or ten openings.

B. Provide modular mounting frames as required in surface wiremold.

C. Faceplates shall be provided to match plates as specified in Section 16140 WIRING DEVICES. Where stainless steel plates are required, this Contractor shall make provisions for such plates, up to and including fabrication of custom plates designed to accept termination hardware for the certified manufacturer solution proposed for telephone, data, and video cabling.

D. All faceplates shall contain integral protected label slots with transparent plastic covers (windows). Labels shall be produced with font style and size as compatible with the EIA/TIA-606 Standard.

2.18 COPPER PATCH CORDS

A. Category 6, 8-conductor stranded copper Patch Cords with RJ-45 Plugs.

B. All Patch Cords shall be tested and included in the structured cabling system warranty for the manufacturer-certified solution proposed.

2.19 D-RINGS

A. Provide 4" wide aluminum D-rings, open or split to allow placement of cross-connect wire.

B. Design Reference: AllenTel GB series or approved equal.

2.20 OPTICAL FIBER BACKBONE CABLE

A. New segments of multi-element optical fiber backbone cable shall meet the requirements of the National Electrical Code® (NEC®) Section 770. The cable shall be listed OFNP (OFCP) for plenum applications, as required. Multimode shall be Corning Cable Systems SX300 type and single mode shall be Corning Cable Systems SMF28e type. Outdoor cable shall be of a loose buffer tube 100% dielectric design, utilizing a UV stabilized, flame retardant outer jacket over corrugated armor. Extension of existing cabling segments shall utilize the same construction, core size, and performance factor as the existing segment to be mated.

B. Install one six-stand OM3 armored fiber cable. The cable shall be placed from each EF to each TR and terminated with six strand fusion spliced pigtails, or factory preterm with LC/UPC style connectors. Sheath shall be bonded and grounded on both ends. Install one six-strand single mode armored fiber cable. The cable will be placed from each EF to each TR and terminated with six strand fusion spliced pigtails, or factory preterm with SC/APC style connectors.

C. Minimum bend radius shall be no less than fifteen (15) times outside diameter under full tensile load and no less than ten (10) times outside diameter under no load.

D. All optical fiber cables shall be shipped with OTDR results for each fiber. OTDR results shall show attenuation and bandwidth. The results shall be documented in such a manner that the information can be retained for future use.

E. Backbone (riser) cable in non-plenum air spaces shall be NEC Type OFNR as follows:

F. Corning 900 µm tight buffered Fan-Out Riser Cable.

G. Backbone (riser) cable in plenum air spaces shall be NEC Type OFNP as follows:
   1. Corning 900 µm tight buffered Fan-Out Plenum Cable.
   2. Campus Backbone (Underground & Building Entrance) shall be of loose tube design non-gel filled with waterblocking technology NEC OFNR.

2.21 OPTICAL FIBER CONNECTORS

A. Optical Fiber Connectors
   1. All optical fiber cables shall be terminated with permanently installed connectors per EIA/TIA-45 S-21.
   2. Fusion spliced cassettes shall be used at each EF/TR for connectivity. LC/UPC shall be used for multimode and SC/APC shall be used for single mode.
   3. Optical fiber connections shall utilize ~~"LC/APC" type~~ connectors with ceramic ferrule and bend limiting strain relief.
   4. Minimum two (2) 3 meter duplex (LC/UPC TO LC/UPC) multimode jumpers and two (2) 3 meter duplex (SC/APC TO LC/UPC) single-mode jumpers provided by the project for every six (6) strands of fiber. The jumpers will be of the same manufacture as the cable and hardware components.
   5. Fiber distribution housings shall be Corning CCH housings and CCH splice cassettes.

B. Optical Fiber to Desktops
   1. 9/125 Micrometer, Single mode, optical fiber (OS2) with dual-LC connectors.
   2. Yellow jacket color. Coordinate color with owner.
   3. Imprinted with fiber count, fiber type, and aggregate length at regular intervals.
   4. Comply with TIA-492CAAB for detailed specifications.
   5. Comply with TIA-568-C.3 for performance specifications.
   6. Comply with ICEA S-104-696 for mechanical properties.

2.22 EQUIPMENT RACKS

A. Equipment Racks
   1. Corrosion-resistant aluminum framework with mounting provision for EIA-19-inch standard width equipment.
   2. Fabricated from 6061-T6 structural grade aluminum.
   3. 5/8-inch, 5/8-inch, 1/2-inch standard hole pattern.
   4. Stainless steel assembly hardware.
   5. Tapped vertical U-channel structural members.
   6. Wide flange base plates and top angles, front and back.
   7. Height: 84" inches.
   8. Hubbell #HPW84RR19D

B. Wall Mounted Equipment Racks
   1. Corrosion-resistant framework with mounting provision for EIA-19-inch standard wide equipment.
   2. Swing out frame capable of being hinged from either side.
   3. Reinforcement kit with wall mounting bracket provisions.
   4. 150 pound load capacity.
   5. Height: 38 inches.
   6. Depth: 25 inches.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine pathway elements intended for Data/Voice Structured Cabling. Check conduits, raceways, cable trays, and other elements for compliance with space allocations, installation tolerances, hazards to cable installations, and other conditions affecting installation. Proceed with installation only after any unsatisfactory conditions have been corrected.

B. Allow sufficient cable length for work area outlet details such that wall locations can be adjusted anywhere within the assigned room prior to and until time of installation.

3.2 APPLICATION OF MEDIA

A. Backbone Cable for Telephone Service: Where the digital PBX is applied, Category 3, ~~100-Pair~~ multi-pair backbone cable shall be run between the MDF (Main Distribution Frame) and the IDF (Intermediate Distribution Frame).

B. Backbone Cable for Data Service: Data cables running between the MDF (Main Distribution Frame) and the IDF (Intermediate Distribution Frame) spaces shall include Category 6 4-pair, ~~12-element Multimode, and 6-element Singles~~ multi-element Single Mode Optical Fiber. Provide cabling as indicated on Riser Diagram.

C. Horizontal Cable for Voice Service: Telephone cables running form MDF and IDF spaces to Work Area Outlets shall be Category 6, 4-Pair UTP.

D. Horizontal Cable for Voice Service: Data cables running from MDF and IDF spaces to Work Area Outlets shall be Category 6, 4-Pair UTP.

E. Horizontal Cable for Wireless Access Points: Data cables running from MDF and IDF spaces to Access Points shall be Category 6A, 4-Pair UTP

3.3 INSTALLATION

A. Installation environment shall combine floor-standing racks with a wall mount arrangement, openly visible within a Telecom facility. As such, aesthetics are extremely important. Installation practices shall require above average attention to detail and shall be monitored directly by the Engineer. Owner shall reserve the right to require the re-working of any wiring element(s) deemed visually un-acceptable. The successful Contractor is hereby requested to anticipate the application of superior craftsmanship to all elements of this project, thereby avoiding all potential conflicts. Contact the Engineer for questions or additional confirmation of intent.

B. Wiring Method: Install copper and optical fiber in cable tray above the suspended ceiling and in conduit or J-Hooks except within consoles, cabinets, desks, and counters and except in accessible ceiling spaces where un-enclosed wiring may be used. Wiring in walls shall be run in conduit. Where special circumstances prevent installation of conduit, surface raceway shall be provided and installed by this Contractor.

C. The maximum length of horizontal cables shall be limited to 295 feet (90 meters) from the Work Area Outlet to the HC (Horizontal Cross-connect) in the MDF or IDF.

D. Communications cables shall not be supported from or come into contact with ductwork, piping, plumbing, and mechanical equipment or on top of lay-in ceiling tile. Voice/data cabling shall not share raceways with other low voltage systems.

E. Install cables without damaging conductors, shield, or jacket. Cables shall not be painted – painted cables will be replaced to maintain cable warranties.

F. Observe caution such that during and upon completion of the installation, all cables are maintained free of kinks, sharp bends, twists, gouges, cuts, or any other physical damage that may cause alterations to the physical or electrical characteristics of the cabling.

G. Pull cables without exceeding cable manufacturer's recommended pulling tensions.

1. Pull cables simultaneously if more than one is being pulled in the same raceway.

2. Use pulling compound or lubricant if necessary. Use compounds that will not damage conductor or insulation.

3. Use pulling means, including fish tape, cable, rope, and basket-weave or cable grips, that will not damage media or raceway.

H. All horizontal cable must be free of tension at both ends as well as over the length of the run.

I. Whenever possible, primary cable routing paths shall follow the logical structure of the building. Install exposed cables parallel and perpendicular to surfaces or exposed structural members and follow surface contours where possible. When a wall must be breached, provide sleeved openings. No diagonal runs shall be permitted, unless otherwise specifically noted.

J. Secure and support cable at intervals not exceeding 48 inches and not more than 6 inches from cable tray, latter racks, sleeves, conduits, cabinets, boxes, fittings, outlets, racks, frames, and terminals.

K. All cables shall be neatly combed and bundled using Velcro style ties. All ties shall be rated plenum or non-plenum based upon the area in which they are installed. Plastic cable ties of any type are not acceptable.

L. Wiring within Wiring Closets and Enclosures: Provide conductors of adequate length. Train conductors to terminal points with no excess. Using lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to smaller radii than minimums recommended by manufacturer.

M. Separation of Wires: comply with ANSI/TIA/EIA-569-a and ANSI/NECA/BICSI 568-2001 Standard for separating unshielded copper voice and data communications cabling from potential EMI sources, including electrical power lines and equipment.

N. All cables shall be installed as continuous “home run” pulls from connector block to connector block, or work area outlet to patch panel. No in-line connectors or splices shall be permitted.

O. Install cables using techniques, practices, and methods that are consistent with Category 6 rating of components and that ensure Category 6 and Category 6A performance of completed and linked signal paths, end to end.

P. Install all modules in accordance with manufacturer’s instructions using a 110-style ~~66-style~~ impact insertion tool for cable terminations.

Q. Work area outlet horizontal cabling shall be arranged on the patch panels in sequential alpha-numeric order according to the faceplate numbering scheme.

R. Faceplate outlet numbering shall be in sequential and consecutive order from left to right and top to bottom.

S. Telephone riser cables shall be arranged on 110 block fields in the MDF organized in sequential and consecutive order by cable pair from left to right, top to bottom. Riser cables shall be terminated in rack-mounted patch panels in the IDFs. Terminate 1 cable pair per patch panel port.

T. Cable routing from the cable tray onto the distribution frame shall be neatly organized and supported by cable brackets, clips, loops, etc., as required to minimize stress and tension on the terminations. MDF 110 block column height shall be arranged so as to allow the entire cable

bundle to be combed and contained behind the block mounting. Provide D-Rings or spools as needed for a manageable cross-connect field.

U. Provide a 20' fiber optic cable service loop at each TR. The 20' service loop will be placed on the wall using Leviton 49800- 0FR for slack management (see Exhibit A) in a craftsmanship like manner. Slack inside the fiber housings does not count towards the 20' service loop. All cable, hardware, and connectors will be of one manufacturer.

V. Provide a 10' copper backbone cable service loop at each TR. The 10' service loop location shall be coordinated with owner prior to installation.

3.4 GROUNDING

A. Comply with ANSI J-STD-607, Commercial Building Grounding and Bonding Requirements for Telecommunications.

B. Furnish and install TMGB (Telecommunications Main Grounding Bus) bar with standoff insulators in MDF. Bond to power grounding system.

C. Furnish and install TGB (Telecommunications Grounding Bus) bar in each IDF. Isolate from electrical grounding system.

D. Furnish and install TBB (Telecommunications Bonding Backbone) from TMGB to TGB in each IDF and MDF space. TBB shall be 6 AWG solid copper, minimum.

E. Ground all signal raceways within each MDF and IDF to Signal Ground Bus. Maintain electrical separation from all raceways outside MDF an IDF spaces. Provide 6 AWG bare copper ground connection from TMGB or TGB to each isolated section of cable tray unless otherwise detailed on plans.

F. Ground cable shields, drain conductors, and equipment to eliminate shock hazard and to minimize ground loops, common mode returns, noise pickup, crosstalk, and other impairments.

G. Bond shields to ground at only one point in each circuit.

H. The DC resistance from the TGB in the furthest IDF (longest ground cable) to the building earth shall not exceed 0.5 ohms.

3.5 INSTALLATION IN EQUIPMENT ROOMS AND TELCOMMUNICATIONS ROOMS

A. Mount patch panels, terminal strips, and other connecting hardware on open frame equipment racks and wall mounted plywood backboards, unless otherwise indicated.

B. Group connecting hardware for cables into separate logical field as indicated on project drawings for Data/Voice.

C. Use patch panels to terminate cables entering the space, unless otherwise indicated.

D. "Ring runs" shall be provided in all MDF and IDF spaces to keep jumper (cross-connect) wire organized. "Rings" shall consist of 4-inch wide aluminum "D-Style" screw mounted. The bottom of the "D-Ring" shall be mounted 2 inches above, and centered over, the space between each vertical column of blocks. "D" rings shall be open or split to allow placement of cross-connect wire.

E. All Fiber Optic cables shall be run from the MDF to each IDF. The only allowable splicing is within the fiber termination housing for the pre-terminated tails. All Fiber Optic Cable inside of buildings will be run in inner ducts or be Armored for protection. These inner ducts will be placed in cable trays, in riser sleeves, or any conduits that share fiber and copper.

3.6 INSTALLATION STANDARDS

A. Comply with requirements of ANSI/TIA/EIA-568-B and ANSI/TIA/EIA-569-A.

3.7 IDENTIFICATION

A. Comply with general requirements of ANSI/TIA/EIA-606-A.

B. Each technology outlet (TO) shall be identified with a unique identifier. Each TO shall be labeled with the TR room number which the cable terminates in, and a four digit number which the first number will identify the floor the TO is on and a three digit following that:

1. For example: for cable number 21 on the 2nd floor terminating in the second floor TR room 214 the unique identifier would be 214-2021 if the same cable was on the 3rd floor terminating in the same closet it would be labeled 214-3021.

2. Each floor shall be placed on its own patch panel.

4. All numbering will be sequential and flow left to right on patch panels. When TR(s) contain different floors there will be 3 rack units left blank for each floor for future adds.

C. Post cable schedule in a prominent location in each MDF and IDF. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules in Microsoft Excel format for inclusion in O&M Manuals.

3.8 FIELD QUALITY CONTROL

A. Perform the following tests and inspections and prepare test reports for inclusion in the O&M Manuals.

1. Operational Test: After installation of cables and connectors, demonstrate product capability and compliance with requirements. Test each signal path for end-to-end performance from each end of all pairs installed. Remove temporary connections when tests have been satisfactorily completed.

2. Copper Cable Procedures: Inspect for physical damage and test each conductor signal path for continuity and shorts. Use Class 3, Bi-directional, Category 6 Tester. Test for faulty connectors, splices, and terminations. Test according to ANSI/TIA/EIA-568B Category 6 parameters including, Wiremap, Length, NEXT, Insertion Loss (Attenuation), PSNEXT, ELFEXT, PSELFEXT, Structural Return Loss, Propagation Delay, Delay Skew.

3. Optical Fiber Cable Procedures: Notify owner no later than 1 week (5 working days) prior to testing to arrange for personnel to be on site during testing. Perform visual and mechanical inspection and test on each individual element. Certify compliance with test parameters and manufacturer's written recommendations.

a. Test optical performance with optical power meter capable of generating light source at 850 and 1300 nm for multi-mode and 1310 and 1550 nm for single mode. Measurement shall be recorded to the nearest 0.1dB. Fiber optic cable testing shall be

dedicated to fiber element testing and shall test one element at a time. Combinations testing will not be permitted. Equipment shall be factory calibrated with current certification.

b. In addition to the measurements, the associated fiber optic connectors shall be inspected for proper termination techniques, workmanship, labeling, and shall be certified by this Contractor to be free of any defects such as scratches or chips.

c. Caps shall be replaced on un-used couplers following completion of test procedures.

d. Each fiber element shall be tested with test results electronically stored. Once testing is complete, results shall be downloaded and turned over to owner with accompanying viewing software.

4. This Contractor shall provide 5-days' notice to owner prior to commencing cable testing. owner shall, at their discretion, be present to observe any and all cable test procedures. Cable testing procedures shall be acceptable to owner.

5. This Contractor shall produce test reports to be accepted by owner. Test reports shall be completely and legibly filled out, dated, and signed by the person performing the tests. The completed forms shall be submitted to owner for review and acceptance. Provide a digital record of the test results in MS Word or FLW format.

6. Multimode testing shall be performed using TIA/EIA-526-14-B Method B for in building riser cables Encircled Flux testing is a requirement, proper mandrels must be used.

7. Single mode testing shall be performed using TIA.EIA-526-7 Method A.1 for in building riser cables. For outside plant cables TIA/EIA-52607 Method A.1 and Method B will be used. If issues arise in the building riser cables it will be the responsibility of the contractor to supply an OTDR for further testing and trouble shooting.

B. Remove malfunctioning units, repair or replace with new units, and re-test as specified above.

C. Upon completion of installation and acceptance by owner, the cabling contractor will contact owner for witness testing. owner will be given at least one week (5 working days) advanced notice for testing.
   a. To be tested the system must be complete, this includes all pathways, cabling dressed, labeling, faceplates secured and fire stopping.
   b. All testing shall be done with a CCTT (certified cable testing technician); the CCTT shall perform all testing.
   c. The approved test instrument is the Fluke Versiv (DSX-5000) or owner approved equal. MARGINAL TESTS WILL NOT BE ACCEPTED. Test Instruments shall be within its 12-month calibration period and have the latest software and firmware versions installed. If the test instruments is not within calibration period, testing will not take place.
   d. Permanent link test results, including individual frequency measurements, shall be recorded in the test instrument for subsequent uploading to a PC, using Fluke software, from which administrative documentation (testing reports) may be generated.
   e. Testing shall be performed on each cabling segment (connector to connector). Sampling is not acceptable.
   f. Owner will witness all setup and referencing of test instruments prior to testing.

END OF SECTION

SECTION 28 10 00

ELECTRONIC ACCESS CONTROL AND INTRUSION DETECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:
1. Providing all aspects of the access control system and intrusion detection system including, but not limited to, all conduit, junction boxes, wire, 110 VAC, access control hardware, mounting and terminating, interfacing with other systems, programming, testing and training for a complete system.
2. Card readers identified for use on the Access Control and Alarm Monitoring System (ACAMS) shall be Lenel Readers furnished and installed as detailed on the drawings and specified herein.
3. Provide Access Control and Alarm Monitoring System (ACAMS)

B. Related Work Specified Elsewhere:
1. Section 08 71 00: Door Hardware
2. Division 26 00 00: Electrical

1.02 REFERENCES

A. The access control system shall be installed in accordance with all applicable national, state and local codes including, but not limited to, the most recent editions (as adopted) of the following:

- Americans with Disabilities Act (ADA)
- Building, Life Safety, and Fire Codes as adopted by the State of Ohio.
- Building Officials & Code Administrators International, Inc., (BOCA), National Building Code
- National Fire Protection Association, National Electric Code (NFPA 70)
- National Fire Protection Association Life Safety Code (NFPA 101)
- Underwriter’s Laboratories (UL), Access Control System Units (UL 294)
- Underwriters Laboratories (UL) Applicable Standards for Safety
- Underwriter’s Laboratories (UL), Anti-Theft Alarms and Devices (UL 1037)
- Underwriter’s Laboratories (UL), Proprietary Burglar - Alarm Systems (UL 1076)

1.04 DEFINITIONS

A. The following definitions will apply for security and access control.

1. ACAMS – Access Control and Alarm Monitoring System
2. Cardholder - As identified within the software application “one who maintains valid credentials for access to the building.
3. Customer – CMHA
4. Front End Equipment- Refers to hardware and software required to maintain the main operating systems and application software for the security system proposed.
5. ISC – Intelligent System Controller (hardware panel)
6. Security Architecture – the configuration of hardware and software components which when assembled provide for the complete system structure.
7. Server – Computer file server
8. System – Also referred to as the ACAMS
9. TCP/IP – Transmission Control Protocol/Internet Protocol
10. Workstation – a computer station where application software is installed.

1.05 SYSTEM DESCRIPTION

A. The contractor shall include all permits and inspections required to install a complete and operating system.

B. The basis of design systems is the Lenel ONGuard platform for the Access Control and Alarm Monitoring Systems (ACAMS). The electrical contractor’s vendor furnishing, installing and commissioning the Access Control and Intrusion Detection System shall be certified by Lenel to be a Prime Integrator and as a Lenel-Authorized Value-Added Reseller (VAR) of Lenel OnGuard systems for installation, terminations, testing, commissioning, programming and warranty of Lenel OnGuard systems for Columbus, Ohio at the time of bidding and at the time of issuance of contract by CMHA. The Lenel Certified Contractor is responsible for all wiring installation.

C. All field hardware should be mounted and communicating with the security file server, along with all points cataloged and configured within the system prior to beginning the installation.

D. The owner will make available for deployment of the security architecture (backbone) a TCP/IP network port designated to facilitate the transmission of all security-related data traffic.

E. The ACAMS shall be designed to support advanced distributed network architecture, whereas the Intelligent System Controller does not need to have a home-run wire to the database server. Intelligent System Controller shall be networked with a dedicated Windows based PC that is licensed to run the ACAMS software. Also, the Intelligent System Controller shall be connected to a Local Area Network / Wide Area Network via industry standard TCP/IP communication protocol. Network based Intelligent System Controller shall be able to communicate back with the database server through industry standard network switches and routers and shall not have to be on the same subnet. Provide all firmware and flashware within the new equipment for compatibility with the existing campus-wide host computer. Provide lithium battery in Intelligent System Controllers to maintain local event memory and local databases.

F. HARDWARE and client workstations / database server. Secondary communications paths shall include direct connection (RS-232/485), network (TCP/IP) or dial up connections. As such, any alarm in the ACAMS shall be capable of being routed to any

client workstation(s) on the network, regardless of the Controller that generated the alarm.

G. Depending upon the configuration, the ACAMS field hardware must be able to include any or all of the following components:

1) Intelligent System Controller (ISC) Lenel 3300

2) Input Control Module (ICM) Lenel 1100

3) Output Control Module (OCM) Lenel 1200

4) Card Readers and Keypads Lenel 2020W, 2010W, 2020W-NDK, -CK

5) Dual Reader Interface Module (DRI) Lenel 1320

6) Panel Power Supplies Lenel AL600ULX-4CB, AL400ULX
Power supplies shall be provided with lead-acid batteries to maintain 4 hours of operation upon line voltage power failure.

1.06 SEQUENCE OF OPERATIONS

A. The system will consist of a security workstation, intelligent system controller, input control module, output control module, card reader interface modules, system power supplies, card readers and associated door hardware connections. The system will be networked via an RS 485 cabling system. The system will be a connected to the owner's Digital Alarm Communicator Transmitter and the ACAMS for monitoring, reporting, acknowledgement and card management. The 16-channel digital communicator shall be connected and programmed to report independent alarms for each tenant, each perimeter door, fire alarm system alarms and fire alarm system trouble signals. The workstation in the building will allow the User to manage Cardholder access cards, monitor alarms and review transaction history. The ISC will be connected to the appropriate data switch in the Net-Shelter Enclosure.

B. The system shall be capable of communicating to the ACAMS over a TCP/IP internet protocol primary path with a voice-grade dial-up secondary path.

C. The system will continue to monitor, communicate and report fire alarm system common alarm, trouble and supervisory signals and fire suppression system common alarm and trouble signals. The signals will continue to be integrated via a Lenel input control module.

D. The system shall include 1 Lenel system keypad, at lobby entrance, to arm and disarm the intrusion detection functions. When the system is armed, all forced entries, unauthorized entries or propped doors will be logged at the system server and communicated to the central station as an alarm signal. When the system is disarmed, forced entries, unauthorized entries and propped door alarms will be logged at the server; no alarm signal will be transmitted to the central station.

E. Doors controlled by the ACAMS shall be provided with a Lenel card reader, a dual card reader interface module and connections to electrified door hardware devices. Upon a valid card swipe, the door lock will release the door for a predetermined period of time and shunt (ignore) the door position contacts until the person passes through the door and the door is

closed again. Actuating the door hardware from the secure side of the door will send a request-to-exit signal to the controller to shunt (ignore) any alarm signals until the person passes through the door and the door is closed again. The door and latch contacts will confirm the door position and protect against any propped door conditions. Doors forced open or opened from the non-secured sided without a valid card swipe will send an alarm signal to the monitoring station.

F. Doors monitored by the ACAMS that are not provided with a card reader will be provided with door position and latch position switches. Doors forced open or opened from the non-secured sided without a valid card swipe will send an alarm signal to the monitoring station.

G. Doors identified as egress doors will be furnished with hardware that will remain locked during a commercial power failure. Door hardware power supplies will be supplied with battery back-up.

H. All ACAMS control module doors shall be provided with door tamper switches. Doors shall provide alarm signals to the ACAMS when the cabinets are opened.

I. The ACAMS shall monitor for normal AC power failures, 12 VDC power failures and low battery conditions in any and all power supplies, ACAMS controllers and ACAMS modules. The system shall report the failure to the ACAMS when any of the trouble conditions occur.

1.07 SUBMITTALS

A. Product Data: Submit manufacturers' technical product data for each access control item. Include all information necessary to show compliance with requirements, and include instructions for installation and for maintenance of operating parts and finish.

B. Submit Lenel Certification documents for the vendor furnishing the system components and the personnel installing, terminating, programming and commissioning the system.

C. As Built Documents: Submit product data and as-built drawings for access control system.

1.08 QUALITY ASSURANCE

A. Access Control Hardware Contractor Qualifications: Access control hardware contractor shall have a minimum of 5 years of experience providing, installing and servicing Lenel Access Control systems. The Access Control Contractor shall be certified by Lenel to be a Prime Integrator and as an Lenel-Authorized Value-Added Reseller (VAR) of Lenel OnGuard systems.

B. Access control hardware contractor must have an established office. This office must have at least (10) full-time employees.

C. Must maintain a "local" stock of Lenel service parts including at least (2) of each of the primary components of the system.

D. Must have at least (5) Lenel, factory certified service technicians who have up-to-date certifications. A copy of the technician certifications MUST be included in the bid documents. If the technicians are not currently certified, the vendors quotation will be rejected.

E. Must have a minimum of (5) local reference. References will be called for verification. If verification of references cannot be made, the vendor's quotation will be rejected.

F. Shall provide 24-hour, 7-day per week services for the entire system.

G. COORDINATION

1. Ensure that adequate conduit is provided and that equipment backbones are adequate for system installation.
2. Ensure that adequate power has been provided and properly located for the security system equipment.
3. Coordinate with the Construction Manager to ensure that doors and door frames are properly prepared for electric locking hardware and door position switches.
4. Coordinate locations of all devices with the Construction Manager prior to installation.
5. Coordinate and verify the location of each piece of rack mounted equipment with the owner.
6. Coordinate custom ACAMS report requirements with the owner. Submit report formats to the owner for review and acceptance.
7. Coordinate all initial database partitioning and setup with the owner prior to initial programming and card holder data entry.
8. The access control system must be interfaced with the HVAC system per the description in the HVAC/Access section.

1.09 DELIVERY STORAGE AND HANDLING

A. Provide secure lock-up for electronic hardware delivered to the project, but not yet installed. Control handling and installation of hardware items which are not immediately replaceable, so that completion of the work will not be delayed by hardware losses, both before and after installation. Defective pieces shall be rejected, removed and replaced by new pieces of applicable quality, at no additional cost to the owner.

B. Keep exposed trim suitably covered during construction period.

1.10 WARRANTY

A. The Vendor shall provide written warranty, signed by the Vendor, agreeing to replace/repair within one year from the date that the customer sign off is received. The warranty shall cover all costs for service, parts, labor, prompt field service, pickup, transportation and delivery. The warranty period for service shall cover the period starting with the FINAL CERTIFICATION DATE of each system and shall continue for an initial period of one (1) year. Warranty service shall be required during normal business hours Monday – Friday, not including holidays or weekends.

The vendor shall present the owner with a service contract proposal when the system is signed off on based on service requirements as agreed upon between both parties.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with requirements, provide products as manufactured by Lenel Systems International, Inc.

2.02 LENEL 3300: INTELLIGENT SYSTEM CONTROLLER (ISC)

An Intelligent System Controller (ISC) shall link the ACAMS Software to all other field hardware components (Thumbprint Readers, Keypads, Intrusion Detection Panels, Output and Input Control Modules). The ISC shall provide full distributed processing of access control & alarm monitoring operations. Access levels, hardware configurations, and programmed alarm outputs assigned at the administration client workstation shall be downloaded to the ISC, which shall store this information and function using its high speed, local 32-bit microprocessor.

All access granted/denied and arm/disarm decisions must be made at the ISC to provide fast responses to Thumbprint reader and keypad transactions. A fully configured ISC with 32 Thumbprint readers shall require less than one-half (0.5) seconds to grant access to an authorized cardholder or deny access to an unauthorized cardholder.

The SYSTEM Access Control Field Hardware shall provide a network based ISC. The network ISC shall be a 10 MB Ethernet based panel that has the capability to reside on a local area network (LAN) or wide area network (WAN) without connectivity to a PCserial port. The ISC shall contain an integral network interface card to deliver this functionality. Network based Intelligent System Controllers shall be able to communicate back with the database server through industry standard switches and routers and shall not have to be on the same subnet.

The ISC is required to continue to function normally (stand-alone) in the event that it loses communication with the SYSTEM software. While in this off-line state, the ISC is required to make access granted/denied and arm/disarm decisions and maintain a log of the events that have occurred. Events shall be stored in local memory, and then uploaded automatically to the SYSTEM database after communication has been restored. The ISC must contain the following features:

- UL 294, ULC, and CE Certified
- Support for Host Communications Speed of 115,200 bps
- Support for Direct Connect, Remote Dial Up, or Local Area Network (LAN) Connection
- Support for Dual Path Host Communications - Secondary Path shall be either Direct Connect, Local Area Network (LAN) Connection, or Remote Dial Up Connection.
- Support for 8 MB of On-Board Memory
- LAN Support shall utilize RJ45 (10/100baseT) Ethernet Interface.
- Flash Memory for real time program updates and overall host communications
- Support for four 2 wire downstream ports
- Memory storage of up to 5,000 cardholders/100,000 events, with memory expansion of up to 350,000 cardholders/1,000,000 events
- Base ISC with standard memory download from the SYSTEM shall require no more than ten

(10) minutes

- Downstream ports shall be for connecting Thumbprint readers and data gathering panels via RS-485 multi-drop wiring configuration
- Support for up to 32 devices consisting of Reader Interface Modules, Input Control Modules, and Output Control Modules in any combination desired with a maximum of 16 ICMs per ISC
- Support of multiple card technologies
- Supervised Communications between ISC and SYSTEM Software
- Multi – drop support for up to eight ISC's per SYSTEM communications port
- Support of up to eight card formats and facility codes
- RS-485 Full Duplex, UL 1076 Grade AA communication channel to the SYSTEM head-end
- Integration to other manufacturer’s card readers
- Uninterruptible Power Supply (UPS) with battery backup
- 32-bit Microprocessor
- An ISC downstream serial port shall multi-drop 16-access control field hardware devices using an RS-485 UL 1076 Grade A communication format allowing a distance of 4,000 feet using Belden 9842 cable.
- 12 VAC or 12 VDC input power
- Issue Code Support for Magnetic Stripe Formats
- Individual Shunt Times (ADA Requirement)
- Up to Nine Digit PIN Codes
- Downstream serial RS-232 device support
- Status LEDs for normal component and communication status

2.03 LENEL 1100: INPUT CONTROL MODULE (ICM)

The Input Control Module shall monitor all system alarm inputs.

A) Grade A Inputs

The Input Control Module shall provide up to 16 UL 1076 Grade A analog supervised alarm input zones to monitor and report line fault conditions (open, short, ground, or circuit fault), alarm conditions, power faults and tampers. When an alarm input is activated, the associated alarm condition shall be reported to both the ISC and subsequently to the SYSTEM alarm monitoring client workstation. Status LEDs shall

provide information about the sixteen-alarm zone inputs, cabinet tamper, and power fault. For each status LED, a slow flash shall imply a "No Alarm" condition and a fast flash shall indicate an alarm condition, and a solid LED shall indicate a “Zone Fault” (open, short, ground, or circuit fault).

B) Grade AA Inputs

The Input Control Module must provide up to 16 UL 1076 Grade AA alarm input zones to monitor and report line fault conditions, alarm conditions, power faults and tampers.

When an alarm input is activated, the associated alarm condition shall be reported to both the ISC and subsequently to a SYSTEM alarm monitoring client workstation. Status LEDs shall provide information about the sixteen-alarm zone inputs, cabinet tamper, and power fault. For each status LED, a slow flash shall imply a "No Alarm" condition, a fast flash shall indicate an “Alarm Condition”, and a solid LED shall indicate a “Zone Fault” (open, short, ground, or circuit fault).

The Input Control Modules must also be able to operate independently and in conjunction with Output Control Modules (OCM), which will send an output signal to a corresponding output device upon alarm input activation. Once an alarm has been received, the Input Control Module shall activate any or all alarm outputs within the Output Control Module. The Output Control Module shall provide 16 Form C outputs rated at 5A @ 30VDC. Upon an alarm input from the Input Control Module, the Output Control Module shall transmit an activating signal to a corresponding output device.

Up to 16 ICMs shall be connected to an available ISC using RS-485 cabling. Diagnostic LEDs shall indicate ISC communication, input zone scanning, and Input Control Module heartbeat.

The ICM must contain the following features:

- UL 294, ULC, and CE Certified
- Alarm contact status scanning at up to 180 times per second for each zone
- Eight configuration DIP switches to assign unit addresses and communications speed
- A low power CMOS microprocessor
- Filtered data for noise rejection to prevent false alarms
- Up to 16 Grade A, or AA Supervised Inputs in any Combination
- 12 VAC or 12 VDC Input Power
- 2 Form C Contacts for load switching
- 2 dedicated inputs for tamper and power status

2.04 LENEL 1200: OUTPUT CONTROL MODULE (OCM)

The Output Control Module shall incorporate 16 Output Relays that are capable of controlling a corresponding output device upon any input activation or on command from the SYSTEM. Output relays shall be capable of responding to:

- Input alarms from within the same ISC.
- Commands from a System Operator.
- Time zone control commands for automatic operation.

Output relays shall be capable of:

- Pulsing for a predetermined duration. Duration shall be programmable for each relay individually.
- "Following" any input point an ICM attached to the same ISC (on with alarm, off when clear, or as required).
- Responding on command from the System Operator to pulse, command on, command off, or reset to normal state.

Each OCM shall provide 16 Form C relays rated at 5A @ 30 VDC. The OCM shall control the relays by digital communication. Upon an input from the ICM or command from the System Operator, the ICM shall transmit an activating signal to a corresponding relay. The OCM shall be UL 294 and CE Certified.

2.05 LENEL 1320: DUAL READER INTERFACE MODULE (DRI)

The Dual Reader Interface Module shall provide an interface between the ISC and Thumbprint readers. The Dual Reader Interface Module must operate with any Thumbprint reader that produces a standard Wiegand (Data 1 / Data 0 or Clock and Data) communication output. As with other Thumbprint reader types listed above, a single ISC shall be able to multi-drop as many as 32 Dual Reader Interface Modules.

Each DRI shall support two Thumbprint readers, each of which shall be up to 500’ away from the DRI. Up to sixteen (16) DRIs shall be connected to each port on the ISC.

The DRI shall monitor per Thumbprint reader - door position, exit push button, and 4 auxiliary alarm inputs. It shall also control the electric strike and provide four auxiliary relay outputs.

The DRI shall support an integrated Thumbprint reader/keypad and shall support three access modes upon loss of communication with the ISC; locked, unlocked, and facility code.

The DRI shall offer the following features:

a) UL 294, ULC, and CE Certified

b) 12VDC or 12VAC Input Power

c) Support for up to eight Wiegand Card and Magnetic formats

d) Support for Clock/Data and Data1/Data 0 Wiegand Communications

e) 4 Programmable Inputs and 4 Programmable Relay Outputs per Reader

2.06 LENEL AL6000ULX-4BC, AL400ULX: FIELD HARDWARE POWER SUPPLIES

Power Supplies for field hardware shall be designed specifically for the SYSTEM equipment installed. These power supplies shall be regulated, isolated versions for the ISC, ICM, Thumbprint Readers and other equipment. Each version shall be available in UPS with battery back-up. All power supplies shall also allow mounting space for the ISC, ICM, SRI, DRI or other device/panel required.

Minimum Specifications:

a) Type UL Listed Class II power limited

b) Input 120 VAC hard wired

c) Output Regulated and filtered DC

d) Alarm outputs Individual low battery and power fail

e) Battery backup Four hours of rechargeable backup for the connected load

f) Battery support Battery charger to maintain battery

g) Battery Sealed gel type

h) Enclosure Key lockable wall mount housing with tamper switch

2.07 HID 230 MAGNETIC STRIPE / PROXIMITY CARD READERS

The SYSTEM shall support a variety of card readers and keypads that must encompass a wide functional range. The SYSTEM may combine any of the card readers described below for installations requiring multiple types of card reader capability (i.e., magnetic swipe cards, proximity cards, etc.). These card readers, described below, shall be used in Wiegand communication format only.

All magnetic stripe/proximity card readers are to be housed in an aluminum bezel with a wide lead
–in for easy card entry. Each card reader shall contain read head electronics, a micro ISC, and a sender to encode digital door control signals. A bi-color LED (s) (red and green) shall be used to indicate card reader status and access status.

A flashing red LED shall indicate the card reader is waiting for a card to be entered. A solid red LED is to indicate that the card reader has defaulted to a locked mode of operation. A solid green LED shall indicate the card reader has defaulted to an unlocked mode of operation. The green LED must illuminate upon a valid credential swipe/PIN entry for the duration of the door strike time.

Card Readers must be able to support a user defined downloadable off-line mode of operation (locked, unlocked, or facility code), which will go in effect during loss of communication with the

ISC.

All card readers shall provide audible feedback to indicate access granted/denied decisions. Upon a card swipe, two beeps shall indicate access granted and three beeps shall indicate access denied. All keypad buttons shall provide tactile audible feedback. As many as 32 card readers of any type described below shall be able to be connected to a single ISC port. All card readers may optionally include card reader back boxes for conduit installations.

a) Standard Card Readers with Wiegand Communications and Clock/Data Output

The standard card readers with Wiegand Communications and Clock/Data Output shall be provided without a keypad. The standard card reader with Wiegand Communications and Clock/Data Output must offer the following features:

- UL 294, ULC, and CE Certified
- Low Power/Surface Mount Card Reader
- 600,000 pass read head
- Small, rugged, die cast aluminum
    - Bi-directional card swipe
    - Compatible with HID Proximity formats up to 36 bits and Dorado EMPI proximity formats.
- Weatherized Finishes
- LEDs for access and card reader status
- 12VDC or 5VDC Input Power
- RJ-45 Jack for Quick Installation

2.08 LENEL CK KEYPAD

The LNL-CK integrates a 32-character backlit LCD display with a 16-position keypad and a reader port. This highly functional I/O device can communicate to the system controller via a 2-wire RS-
485 interface. It can also communicate to an LNL-1300/1320 reader interface with a TTL interface.

The display terminal is for use in low voltage, class 2 circuits only.

Primary Power:

Voltage: 12VDC±15%

Current: 175mA (Terminal only)

Reader Port:

Power: Pass Through

Interface: 2-wire, Clock/Data or Data 1/Data 0

LED control: 2-wire or 1-wire bi-color

Buzzer control: Available with 1-wire LED control

Communication:

RS-485: 4,000 feet (1,219 m) max., 24AWG, 120ohm impedance

TTL: 500 feet (152 m) max, 18 AWG

Dimension:

6.75" W x 5.00" L x 1.00" D (172mm W x 127mm L x 25mm D)

Weight:

14 oz. (400g) nominal

Environment:

Temperature:

-20°C to +70°C,

storage 0°C to 50°C,

operating

Humidity:

0% to 95% RHNC

PART 3 - EXECUTION

3.01 INSTALLATION

A. Wiring Techniques

1) All Security System wiring shall be run within concealed conduit. No exposed cabling or conduit is acceptable.

2) Provide code compliant fire proofing techniques for all penetrations of fire rated partitions and slabs, where the penetrations are made by or used for installation of the Security System.

3) Route all wire and cable as required to prevent interference and signal contamination of both security system cable and cable associated with other systems. Coordinate the routing of wire and cable requiring isolation from power, radio frequency (RF), telephone, etc., with all other trades.

4) Separate 120 VAC and other line voltage cables from low voltage cables within enclosures.

5) Wire nuts shall not be an acceptable means of connecting wire and cable.

6) Door monitoring contact switches shall be concealed in the door frame or integral to the door hardware. Surface-mounted door contacts shall not be provided.

B. Splices

1) Run all wire and cable continuous from device location to the final point of termination. No minimum cable splices will be allowed.

2) Securely fasten junction boxes to the building structure.

3) Secure junction box covers with tamperproof screws

4) Provide compression type fittings to secure cable at junction box openings.

5) Make cable connection for device terminations in junction boxes with crimp type connectors. Connectors shall provide a hermetic seal and test probe access such that the circuit may be checked without breaking the connection.

C. Component Connections

1) Prepare wire ends for attachment to components in accordance with Vendor recommendations.

2) Wherever possible, and unless otherwise recommended by the Vendor, connect individual wire conductors with crimp type spade lugs.

D. Grounding

1) Establish an earth ground connection within the security server room and in each FIELD HARDWARE location. The intent of the earth ground is to prevent ground loops within security system circuits, ensure proper communications between system components and devices, and isolate security equipment from building electrical system noise.

2) Under no conditions shall the AC neutral, either in a power panel or in receptacle outlets, be used for a reference ground.

3) Provide all necessary hardware and cable to properly ground security equipment.

4) Ground all equipment according to the Vendor recommendations for each piece of equipment. The vendor shall be responsible for any damage to equipment or communications problems that may occur due to improper grounding.

E. Conduits, Boxes And Raceways

1) Install all conduit necessary for a complete installation in finished areas concealed in

chases, furrings, concrete slabs and/or above suspended ceilings. No exposed conduit shall be installed within public areas.

2) Conduit shall be carefully installed, properly and adequately supported as required to comply with the requirements outlined herein and as required by the NEC to provide a neat, workmanlike installation. Horizontal conduit runs shall be supported by clamps, pipe straps, special brackets or heavy iron tie, tied to the black iron structural members supporting the ceiling. Fastening of conduit to masonry walls, floor or partitions require malleable pipe clips with screws and suitable expansion sleeves.

3) All conduit shall be cut accurately to measurements established at the building and shall be installed without springing or forcing.

4) All required inserts shall be drilled-in and all openings required through concrete or masonry shall be saw cut or core drilled with tools specifically designed for this purpose.

5) Swab Out and remove all burrs from conduit before any wires are pulled.

6) Lay out and inspect conduit runs as to avoid proximity to hot pipes. In no case shall a conduit be run within 12” of such pipes, except where crossings are unavoidable and then the conduit shall be kept at least 6” from the insulated covering of the pipe crossed.

7) Provide fire stops where conduits penetrate fire rated walls and/or floors.

8) All conduit installation, whether run exposed or concealed, shall be approved prior to installation.

F. Power Requirements

1) 120 VAC power dedicated to security will be provided by electrical contractor. Coordinate with the owner to establish locations of security dedicated 120 VAC circuits.

2) Connect to the AC power (provided by electrical vendor) and provide UL listed power supplies and transformers to distribute low voltage power to the system components as required.

3) Provide hinged cover terminal cabinets with tamper switches for all power supplies, transformers and power distribution terminal strips.

G. Surge Protection

1) Provide protection against spikes, surges, noise, and other line problems for all system equipment and components.

2) Protect all exterior control, power, signal cables and conductors against power surges.

3.02 SYSTEM PROGRAMMING

A. System Programming and Data Entry

1. Provide all initial system programming and setup of the ACAMS including, but not limited to, the following:

a) Graphical maps and icons. Coordinate with the Construction Manager to obtain AutoCAD architectural backgrounds for implementation as graphical maps. Import all AutoCAD background information provided by the Construction Manager and produce graphical maps for the conversion of the project.

b) ACAMS Thumbprint reader information. Coordinate all Thumbprint reader values descriptors, alarm messages, map call up and identification with the owner.

c) Input and output points for the ACAMS. Coordinate all input and Output priorities and text, including descriptors, alarm messages, and map call up and identification with the owner.

d) Initial system Thumbprint Reader information. Coordinate all Thumbprint Reader values and text including descriptors, alarm messages, map call up and identification, with the owner.

e) Alarm monitoring and automatic shut down information for the UPS interface.

3.03 SYSTEM TESTING

A. Final testing of the Work will be conducted in coordination with the owner.

B. Conduct a complete test of the entire Security System and provide the owner with a written report on the results of that test. During the course of this test, calibrate and test all equipment, place the integrated Security System in service, and test the integrated system.

C. Following completion of the initial testing and correction of any noted deficiencies, conduct a five-day burn-in test. The intent of such test shall be to prove the Security System by placing it in near real operating conditions.

During this period the Security System shall be fully functional and programmed such that all points, interfaces, controls, reports, messages, prompts, etc., can be exercised and validated. Record and correct any system anomaly, deficiency, or failure noted during this period. Scheduling of the final acceptance test shall be based on a review of the results of this burn-in test.

D. Deliver a report describing the results of functional tests, burn-in tests, diagnostics, calibrations, corrections, and repairs including written certification to the owner showing that the installed Security System has been calibrated, tested, and is fully functional as specified herein.

Upon written notification from the vendor that the Security System is completely installed, integrated and operational, and the burn-in testing completed, the owner will conduct a final acceptance test of the entire system.

1. Prior to any final acceptance testing, submit two sets of preliminary (draft) record

drawings to the owner. The preliminary record drawings are to be used by the owner to conduct the system final test.

2. Upon final acceptance of the work, the Contractor shall submit record documentation to the owner within 30 days from the date of final acceptance.

3. Record documentation shall include all information required in the prefabrication submittals but revised to reflect “as installed” conditions. Record documentation shall include the following:

   - Floor plan drawings indicating device locations with device legends indicating manufacturers and model numbers for each device.

   - Floor plan drawings indicating conduit and wire routing and junction box locations. Wire routing shall include cable identification and terminal strip numbers.

   - Mounting details for all equipment and hardware.

   - Functional block diagrams for each system.

   - Wiring details showing rack elevations, equipment wiring, terminations and inter-rack wiring.

   - Wiring diagrams for all custom circuitry.

   - Point to point wiring diagrams.

   - Layout details for each riser location, including security panels, power supplies, junction boxes, conduit and any other security-related equipment located in the riser.

4. During the course of the final acceptance test by the owner, the Vendor shall be responsible for demonstrating that, without exception, the completed and integrated system complies with the contract requirements.

5. In order to sufficiently demonstrate the Security System’s functionality, the Vendor will be requested to perform certain daily operations inherent to the Security System. These operations may include, but not be limited to, manually locking and unlocking of doors within the ACAMS, verifying the status of current alarm/control points within the ACAMS, responding to alarms, adding/deleting personnel from the Thumbprint holder database, etc. As all of these operations depend heavily on the training outlined within the Specification, the Vendor shall have completed all of the required training prior to initiation of the final acceptance test.

6. Demonstrate the functionality of the various interfaces between systems. This will include, but not be limited to, generation of alarms from related systems failure (e.g., loss of communications, UPS alarms, etc.), fire alarm system fail safe lock release, and interface to any externally controlled devices and/or database system(s).

7. All equipment shall be on and fully operational during any and all testing procedures. Provide all personnel, equipment, and supplies necessary to perform all site testing.

Provide a minimum of two employees familiar with the system for the final acceptance test. One employee shall be responsible for monitoring and verifying alarms while the other will be required to demonstrate the function of each device. Supply at least two two-way radios for use during the test.

A Vendor's representative shall be present on site to answer any question, if the Vendor so elects or by specific request of the owner, at no charge to the owner.

8. The owner shall withhold Certification of the system until the owner deems, at its sole discretion, the system to be accepted. Acceptance will be made when system is fully functional for a period of thirty (30) days without failure. Should problems arise during this final period, Vendor shall correct the problems, and the thirty (30) day non-failure period shall start over.

END OF SECTION 28 10 00

SECTION 28 23 00

VIDEO SURVEILLANCE

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. The work covered by this section shall include all labor, equipment, materials, and services required to furnish and install a complete network based video surveillance system for the project unless otherwise noted.

B. CCTV licenses and system programming for all licenses and devices to be furnished by DPS services unless otherwise noted.

C. The Contractor to furnish equipment and configure the Dynamic Host Configuration Protocol (DHCP), and default manufacturer username and passwords. At the end of this section see form that must be filled out.

D. Final security camera locations are to be functional. Coordinate with other trades to avoid conflict with, but not limited to, light fixtures (obstructions and glare), exposed ductwork, architectural clouds, and FFE, etc.

E. The system installation shall comply with all other codes and authorities having jurisdiction.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated, including dimensions and data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: Detail assemblies of standard components that are custom assembled for specific application on this Project.

1. Blue Phone camera mounting brackets.

2. Wall-mount camera brackets, anchors and fasteners.

3. Parapet-mount camera brackets, anchors and fasteners.

4. Ceiling-mount camera brackets and associated support wires.

5. Wiring Diagrams: Power, signal, and control wiring, and grounding.

C. Equipment List: Include every piece of equipment by model number, manufacturer, serial number, location, and date of original installation. Add pretesting record of each piece of equipment, listing name of person testing, date of test, set points of adjustments, name and description of the view of preset positions, description of alarms, and description of

unit output responses to an alarm.

D. Provide commissioning and certification of each camera location. Coordinate with DPS to confirm camera IP Addresses are properly programmed, camera locations match locations identified on DPS monitoring screen, and camera aim and focus are properly set.

E. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NECA 1.

C. Comply with NFPA 70.

D. Electronic data exchange between video surveillance systems with an access control system shall comply with Genetec.

E. All work shall be performed by contractors with a minimum experience of five (5) consecutive years. All installers shall be certified by the manufacturer.

1.5 PROJECT CONDITIONS

A. Environmental Conditions: Capable of withstanding the following environmental conditions without mechanical or electrical damage or degradation of operating capability:

1. Interior, Controlled Environment: System components, except central-station control unit, installed in temperature-controlled interior environments shall be rated for continuous operation in ambient temperatures of 36 to 122 deg F dry bulb and 20 to 90 percent relative humidity, noncondensing. NEMA 250, Type 1 enclosures.

2. Exterior Environment: System components installed in locations exposed to weather shall be rated for continuous operation in ambient temperatures of minus 30 to plus 122 deg F dry bulb and 20 to 90 percent relative humidity, condensing. Rate for continuous operation when exposed to rain as specified in NEMA 250, winds up to 85 mph and snow cover up to 24 inches thick. NEMA 250, Type 4 enclosures.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of cameras, equipment related to camera operation, and control-station equipment that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Three years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Approved Manufacturers:
   1. Bosch (basis of design)
   2. Axis
   3. Sony

2.2 GENERAL

A. The cabling shall be installed per requirements of the manufacturer and the Project Documents, utilizing material meeting all applicable standards. The Contractor is responsible for providing all incidental and/or miscellaneous hardware not explicitly specified below as required for a complete and operational system.

B. Materials shall be as listed or shall be approved equivalent products of other manufacturers meeting the intent and quality level of the specifications.

C. Testing: All installed cabling shall be tested 100% at specified performance after installation by the contractor.

2.3 CABLE AND INSTALLATION

A. The contractor shall provide and install all low-voltage plenum-rated Category 6 Data Cable to camera locations from patch panel in MDF/IDF. Refer to specification section 27 15 00 for cabling requirements.

B. All exterior cameras shall use surge/spike suppression on all copper video data lines to protect headend equipment. Protectors shall protect all modes herein mentioned and shall contain all modes in a single unit system.

2.4 SURVEILLANCE EQUIPMENT

A. Description: Video cameras, lenses, mounts, power supply and accessories to generate video images, process them, and distribute them to form a highly integrated CCTV network. The system shall display images on monitors located in the security command center and at selected locations.

B. Camera Configurations shall be:
   1. At camera locations with data outlet identification numbers starting with “C” Provide a plenum-rated biscuit jack surface outlet with one RJ-45 modular jack above accessible ceiling with 10 foot station cable service loop; or biscuit-jack with one RJ-45 modular jack in a Randl 5 square outlet box with single-gang mud ring, in dry-wall ceiling or wall, for camera installation.

C. Surge Protectors for outdoor cabling shall meet the following criteria:

   a. Video and Data
      1) Surge capacity 100 amp per conductor
      2) Protection modes L-G (all)
      3) Band pass 0-2gHZ
      4) Insertion Loss <0.3db

   b. Provide L-COM #AL-CAT6JW overvoltage protection at both ends of the CAT 6 cable, and a grounding jumper to ground rod or ground bus for each protection module.

D. Provide all penetrations and all conduits as necessary for installation of CCTV installation.

E. All exterior penetrations require necessary weatherproofing to avoid moisture penetration.

F. All outdoor cable runs underground shall be rated for underground (OSP) use.

G. Provide 5'-0" service loops for pole mounted cameras or cameras mounted to the outside wall of a building. Support service loops from proper cable support system.

H. Configuration:

1. All outdoor cameras shall offer day/night solution, providing color images under normal lighting conditions (0.6 Lux with F 1.2 lens) while switching to hi- resolution black and white images under adverse lighting conditions (0.03 Lux with F1.2 lens).

2. All interior cameras installed in areas with suspended ceiling, fixed tile or drop grid shall be provided in unobtrusive ceiling or dome enclosures mounted in the ceiling. Additional tile or grid supports shall be provided to assure a solid installation.

3. Interior cameras installed in areas without suspended ceilings (or where a ceiling mount would not be appropriate) shall be enclosed in decorative wall mount or dome enclosures.

4. All indoor cameras shall be offered as an integrated camera and lens unit packaged into a versatile indoor dome enclosure that can be mounted directly to a ceiling/wall or recessed in a ceiling or wall.

5. All cameras shall be color optics offering DSP technology for providing better picture quality and advanced functions when used with incandescent lighting.

2.5 PAN-TILT-ZOOM CAMERA DOME CAMERAS

A. The IP camera dome shall transmit high quality video across the network for remote viewing and recording.
B. 2.0 megapixel minimum.
C. The dome shall use compression based on H.264/MPEG4 that optimizes data and maximizes picture quality.
D. The dome shall be configurable remotely from the NVRMS.
E. The Local Area Network (LAN) interface shall be Transmission Control Protocol/User Datagram Protocol /Internet Protocol (TCP/UDP/IP) unicast and multicast.
F. DHCP support shall be provided.
G. Adjustment of fps according to network performance capability shall not sacrifice quality.
H. An embedded self-supported OS shall be provided.
I. Provide appropriate camera housings with heater/blower per manufacturer recommendation with parapet mounting brackets.
J. Video motion detection shall be provided.
K. Provide a rack mounted 4 port, 60W per port POE injector in each IDF/MDF that supports up to four PTZ cameras. Equal to Midspan POE240U-4UP-N. Provide a midspan rack plate for POE injector to enable rack mounting. Rack plate shall be equal to POE125Y-ACCY01-R.

2.6 FIXED POSITION CAMERA DOMES

A. The IP camera dome shall transmit high quality video across the network for remote viewing and recording.
B. 5.0 megapixel minimum.

C. The dome shall use compression based on H.264/MPEG4 that optimizes data and maximizes picture quality.
D. The dome shall be configurable remotely from the NVRMS.
E. The LAN interface shall be TCP/UDP/IP unicast and multicast.
F. DHCP support shall be provided.
G. Adjustment of fps according to network performance capability shall not sacrifice quality.
H. An embedded self-supported OS shall be provided.
I. Provide appropriate wall camera enclosures with heater/blower per manufacturer recommendation with mounting brackets (wall, ceiling or corner as required).
J. Video motion detection shall be provided.

PART 3 EXECUTION

3.1 WIRING

A. Refer to Division 27 Communications Sections and Technology Detail Drawings for cable types and installation methods.

B. Wiring Method: Install cables in raceways and as otherwise indicated. Conceal raceways and wiring except in unfinished spaces.

C. Wiring Method: Install cables concealed in accessible ceilings, walls, and floors where possible.

D. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.

3.2 VIDEO SURVEILLANCE SYSTEM INSTALLATION

A. Outdoor Installation: Comply with ANSI C2, “National Electrical Safety Code.”

B. Fire Wall Penetrations: The Contractor shall avoid penetration of fire rated walls and floors wherever possible. Contractor shall also seal all floor, ceiling and wall penetrations in fire or smoke barriers and in the wiring closet.

C. Wall Penetrations: Where penetrations are necessary, they shall be sleeved with metallic conduit and resealed with an Underwriter Laboratories (UL) approved sealant. Provide three sided pre-finished metal hood and seal to wall where conduit penetrates exterior wall.

D. Pulling Cable: Do not exceed manufacturer's recommended pulling tensions. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.

E. Grounding: Provide independent signal circuit grounding recommended by manufacturer.

F. Install cameras level and plumb.

G. Install cameras with 84-inch- minimum clear space below cameras and their mountings. Change type of mounting to achieve required clearance.

H. Set pan-and-tilt unit stops to suit final camera position and to obtain the field of view required for camera. Connect all controls and alarms, and adjust.

I. Install power supplies and other auxiliary components at control stations, unless otherwise indicated.

J. Identify system components, wiring, cabling, and terminals according to Division 26 Section "Identification."

3.3 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation and supervise pretesting, testing, and adjusting of video surveillance equipment.

B. The Contractor shall configure cameras for connection to the network and assist DPS in certifying the camera. Certification includes validation of camera ID at Blankenship, clear image, camera aiming, focusing, and verification of proper PTZ control where applicable.

C. Inspection: Verify that units and controls are properly installed, connected, and labeled, and that interconnecting wires and terminals are identified.

D. Pretesting: Align and adjust system and pretest components, wiring, and functions to verify that they comply with specified requirements. Conduct tests at varying lighting levels, including day and night scenes as applicable. Prepare video surveillance equipment for acceptance and operational testing as follows:

1. Prepare equipment list described in Part 1 "Submittals" Article.

2. Verify operation of auto-iris lenses.

3. Set back-focus of fixed focal length lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Adjust until image is in focus with and without the filter.

4. Set back-focus of zoom lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Additionally, set zoom to full wide angle and aim camera at an object 50 to 75 feet away. Adjust until image is in focus from full wide angle to full telephoto, with the filter in place.

5. Set and name all preset positions

6. Set sensitivity of motion detection.

7. Connect and verify responses to alarms.

8. Verify operation of control-station equipment.

E. Test Schedule: Schedule tests after pretesting has been successfully completed and system has been in normal functional operation for at least 14 days. Provide a minimum of 10 days' notice of test schedule.

F. Operational Tests: Perform operational system tests to verify that system complies with Specifications. Include all modes of system operation. Test equipment for proper operation in all functional modes.

G. Remove and replace malfunctioning items and retest as specified above.

H. Record test results for each piece of equipment.

I. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.

3.4 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions and to optimize performance of the installed equipment. Tasks shall include, but are not limited to, the following:

1. Check cable connections.

2. Check proper operation of cameras and lenses. Verify operation of auto-iris lenses and adjust back-focus as needed.

3. Adjust all preset positions

4. Recommend changes to cameras, lenses, and associated equipment to improve owner's utilization of video surveillance system.

5. Provide a written report of adjustments and recommendations.

3.5 CLEANING

A. Clean installed items using methods and materials recommended in writing by manufacturer.

B. Clean video surveillance system components, including camera-housing windows, lenses, and monitor screens.

END OF SECTION

ABBREVIATIONS

SYMBOLS

&	AND
L	ANGLE
@	AT
#	NUMBER / POUND
℄	CENTERLINE / COLUMN IINE
℗	PROPERTY LINE
♿	ACCESSIBLE

A

AB	ANCHOR BOLT
ABV	ABOVE
AC	AIR CONDITIONING / AIR CONDITIONER
ACC	ACCESSIBLE
ACOUS	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJACENT / ADJUSTABLE
AFC	ABOVE FINISH CEILING
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
ALUM	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
APPD	APPROVED
APPROX	APPROXIMATE
APT	APARTMENT
ARCH	ARCHITECT / ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
AV	AUDIO VISUAL
AUTO	AUTOMATIC

B

BC	BOTTOM OF CURB
BD	BOARD
BET	BETWEEN
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM / BENCHMARK
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BUR	BUILT UP ROOF

C

CAB	CABINET
CB	CATCH BASIN
CEM	CEMENT(ITIOUS)
CER	CERAMIC
CFM	CUBIC FEET PER MINUTE
CFMF	COLD FORMED METAL FRAMING
CIP	CAST IN PLACE
CI	CURB INLET
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
CNSK	COUNTERSUNK
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS / CONTINUE
CONTR	CONTRACTOR
CORR	CORRIDOR / CORRUGATED
CPT	CARPET
CRS	COURSE
CT	CERAMIC TILE
CTR	CENTER
CTRD	CENTERED
CW	COLD WATER / CURTAIN WALL

D

DBL	DOUBLE
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING

E

E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN / EACH FACE
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION (ABOVE GRADE)
ELECT	ELECTRICAL
ELEV	ELEVATION (BUILDING ELEVATION)
ELV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EP	ELECTRICAL PANEL / EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPANSION
EXPO	EXPOSED
EX'G	EXISTING
EXIST	EXISTING
EXT	EXTERIOR

F

FA	FIRE ALARM
FD	FLOOR DRAIN / FIRE DEPARTMENT
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH OR FINISHED
FLG	FLASHING
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FACE OF
FP	FIREPROOF
FRMG	FRAMING
FRP	FIBER REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FSD	FIRE SEPARATION DISTANCE
FT	FOOT OR FEET
FTG	FOOTING
FURN	FURNACE / FURNITURE
FURR	FURRING
FWC	FABRIC WALLCOVERING
FHC	FIRE HOSE CABINET
FXTR	FIXTURE

G

GA	GAGE / GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GFI	GROUND FAULT INTERRUPT
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GL	GLASS OR GLAZING
GND	GROUND
GYP	GYPSUM
GWB	GYPSUM WALLBOARD

H

H	HEIGHT / HIGH
HB	HOSE BIB
HC/HDCP	ACCESSIBLE
HOLW	HOLLOW
HDBD	HARDBOARD
HDO	HIGH DENSITY OVERLAY
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HGT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR / HANDRAIL
HTG	HEATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HW	HOT WATER

I

ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT

J

JAN	JANITOR
JBOX	JUNCTION BOX
JST	JOIST
JT	JOINT

K

KIT	KITCHEN
KO	KNOCKOUT

L

L	LENGTH
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LF	LINEAR FOOT
LGTH	LENGTH
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LIGHT
LTG	LIGHTING

M

MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MT	MARBLE TILE
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUL	MULLION

N

N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE

O

OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OCC	OCCUPANT(S)
OD	OUTSIDE DIAMETER
OFC	OFFICE
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD

P

PC	PRE-CAST
PEMB	PRE-ENGINEERED METAL BUILDING
PERF	PERFORATED
PL	PLATE / PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTIC / PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PORC	PORCELAIN
POS	POINT OF SALE
PR	PAIR
PREFIN	PREFINISHED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT / PRESSURE TREATED
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER

Q

QT	QUARRY TILE
QTY	QUANTITY

R

R	RISER
RA	RETURN AIR
RAD	RADIUS
RB	RUBBER BASE
RD	ROOF DRAIN
REF	REFRIGERATOR / REFERENCE
REINF	REINFORCED
REQ'D	REQUIRED
RES	RESILIENT
REV	REVISION
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RMV	REMOVE
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER

S

S	SOUTH
SA	SUPPLY AIR
SAN	SANITARY
SC	SOLID CORE / SEALED CONCRETE
SCHED	SCHEDULE
SD	SMOKE DETECTOR / STORM DRAIN
SECT	SECTION
SF	SQUARE FOOT / STOREFRONT
SHTG	SHEATHING
SHR	SHOWER
SHT	SHEET
SHT'G	SHEATHING
SI	SQUARE INCH
SIM	SIMILAR
SLV	SHORT LEG VERTICAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SQ	SQUARE
SS	STAINLESS STEEL
SSG	STRUCTURAL SEALANT GLAZED
SSK	SERVICE SINK
STA	STATION
STD	STANDARD
STL	STEEL
STM	STEAM
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
SY	SQUARE YARD
SYM	SYMMETRICAL
SYS	SYSTEM(S)

T

T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TEL	TELEPHONE
THK	THICK(NESS)
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TS	TUBE STEEL
TV	TELEVISION
TW	TOP OF WALL
TYP	TYPICAL
TZ	TERRAZZO

U

UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL

V

VCT	VINYL COMPOSITION TILE
VB	VAPOR BARRIER / VINYL BASE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VWC	VINYL WALL COVERING

W

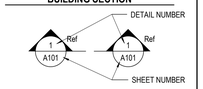
W	WEST / WIDTH
WF	WIDE FLANGE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WI	WROUGHT IRON
WP	WATERPROOF
WR	WATER RESISTANT
WSCT	WAINSCOT
WT	WEIGHT
WTR	WATER
WWF	WELDED WIRE FABRIC

Y

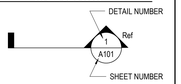
YD	YARD / YARD DRAIN

SYMBOLS LEGEND

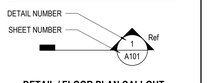
BUILDING SECTION



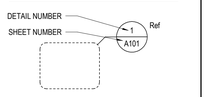
WALL SECTION



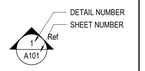
DETAIL SECTION



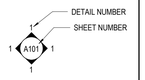
DETAIL / FLOOR PLAN CALLOUT



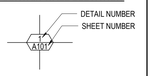
EXTERIOR ELEVATION



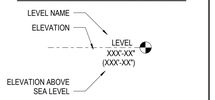
INTERIOR ELEVATION



WINDOW / CURTAIN WALL ELEVATION



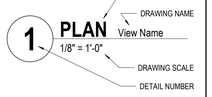
VERTICAL ELEVATION / LEVEL MARK



SPOT ELEVATION

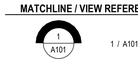
REVISION CLOUD & TAG

VIEW TITLE

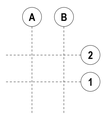


GRAPHIC SCALE

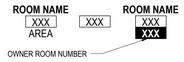
MATCHLINE / VIEW REFERENCE



GRIDS HEADS / LINES



ROOM TAGS



ROOM OCCUPANCY TAG

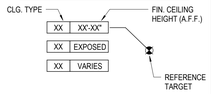
ROOM FINISH TAG

DOOR TYPE TAG

WALL TYPE TAG

WINDOW TYPE TAG

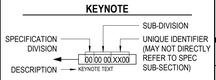
CEILING TAG



CURTAIN PANEL TYPE TAG

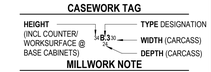
CODED NOTE / ACCESSORY TAG

KEYNOTE



FURNITURE / EQUIPMENT TAG

CASEWORK TAG



MILLWORK NOTE

NORTH ARROW

AREA TAG

AREA NAME
150 SF

MATERIALS LEGEND

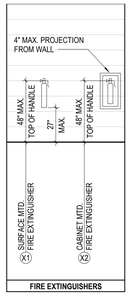
ALUMINUM	GRANULAR FILL
ACOUSTIC CEILING	GYPSUM BOARD
BRICK	INSULATION - BATT
CONCRETE	INSULATION - RIGID
CONCRETE MASONRY	PLYWOOD
CONCRETE (SURFACE)	STEEL
EARTH	WOOD - ROUGH FRAMING
GLASS - LARGE SCALE	WOOD - ROUGH BLOCKING
GLASS - SMALL SCALE	WOOD - FINISHED

INDEX OF DRAWINGS

TYPICAL MOUNTING HEIGHTS

GENERAL MOUNTING HEIGHT NOTES:

1. ALL MOUNTING HEIGHTS ARE ABOVE FINISH FLOOR (CRITICAL FOR ADA COMPLIANCE)
2. ALL DIMENSIONS ARE TO FACE OF FINISHED WALL (CRITICAL FOR ADA COMPLIANCE)
3. ALL DIMENSIONS TO CONTROLS ARE TO TOP OF BUTTON, LEVER OR KNOB



KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
03 30 00.A1	ALTERNATE #2: CONCRETE SLAB ON GRADE TO MATCH EXISTING PATIO.
03 30 00.A3	ALTERNATE #2: 36" X 36" X 12" CONCRETE FOOTING. TOP OF CINCRETE AT 24" BELOW GRADE.
04 00 00.A1	ALTERNATE #2: BRICK VENEER ON 20" X 20" CMU PIER OVER 28"X 28" X 24" CMU FOUNDATIO WITH LIMESTONE CAP TO MATCH EXISTING.
05 70 00.A1	ALTERNATE #2: ALUMINUM RAILING AND GATE TO MATCH EXISTING.
05 73 13.A1	ALTERNATE #5: STAINLESS STEEL FRAME WITH GLASS PANEL GUARDRAIL WITH STAINLESS STEEL HANDRAIL. SEE DETAIL ON SHEET A801.
05 73 13.A2	ALTERNATE #5: STAINLESS STEEL WALL MOUNTED HANDRAIL. SEE DETAIL ON SHEET A801.
05 73 13.A3	ALTERNATE #5: STAINLESS STEEL FRAME WITH GLASS PANEL GUARDRAIL. SEE DETAIL ON SHEET A801.
06 40 00.E1	ALTERNATE #5: SOLID SURFACE (SS-3) TRIM ON FLOOR
06 40 00.E2	ALTERNATE #5: SOLID SURFACE (SS-3) CAP ON EXISTING WALL
06 40 00.F1	18" DEEP PLASTIC LAMINATE COUNTER AT 34" A.F.F.
06 40 00.G2	FIXED SHELF AND COAT ROD
10 22 21.A1	DEMOUNTABLE GLASS PARTITION SYSTEM
10 44 00.B3	SEMI-RECESSED FIRE EXTINGUISHER CABINET
11 31 00.B1	55" TELEVISION: SONY MODEL K55S30
11 31 00.B2	65" TELEVISION: TCL MODEL 65QM751G
11 31 00.B3	85" TELEVISION
11 52 23.A1	WALL MOUNTED TELEVISION BRACKET
12 33 55.A2	ALTERNATE #6: BASE CABINETS, COUNTER TOPS, AND BACKSPLASH - SEE FINISH PLANS AND INTERIOR ELEVATIONS.

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664
Moody Nolan

DRAWING TITLE:
DRAWING INDEX, GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

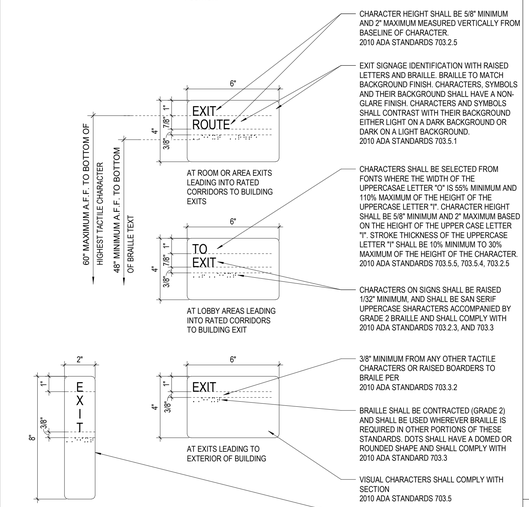
STATE OF OHIO
JONATHAN D. MOODY
1215709
REGISTERED ARCHITECT

JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025
25011.01
G001
CONSTRUCTION DOCUMENTS

FILE NAME: A:\CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:17 PM
FILE INFO: Autodesk Docs://25011 CMHA Easton Office Renovation - R25\25011_CMHA Easton Office Renovation_ARCH_R25.rvt

WHERE A TACTILE SIGN IS PROVIDED AT A DOOR FOR ROOMS AND SPACES, SIGNS SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THEN THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, OR AT THE RIDHT SIDE OF THE DOUBLE LEAF DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MINIMUM X 18" MINIMUM CENTERED ON THE TACTILE CHARACTER IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREEE OPEN POSITION.



CHARACTER HEIGHT SHALL BE 5/8" MINIMUM AND 2" MAXIMUM MEASURED VERTICALLY FROM BASELINE OF CHARACTER.
2010 ADA STANDARDS 703.2.5

EXIT SIGNAGE IDENTIFICATION WITH RAISED LETTERS AND BRAILLE TO MATCH BACKGROUND FINISH. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.
2010 ADA STANDARDS 703.5.1

AT ROOM OR AREA EXITS LEADING INTO RATED CORRIDORS TO BUILDING EXITS

CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". CHARACTER HEIGHT SHALL BE 5/8" MINIMUM AND 2" MAXIMUM BASED ON THE HEIGHT OF THE UPPER CASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MINIMUM TO 30% MAXIMUM OF THE HEIGHT OF THE CHARATHER.
2010 ADA STANDARDS 703.5.5, 703.5.4, 703.2.5

AT LOBBY AREAS LEADING INTO RATED CORRIDORS TO BUILDING EXIT

CHARACTERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM, AND SHALL BE SAN SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE AND SHALL COMPLY WITH 2010 ADA STANDARDS 703.2.3, AND 703.3

3/8" MINIMUM FROM ANY OTHER TACTILE CHARACTERS OR RAISED BOARDERS TO BRAILE PER
2010 ADA STANDARDS 703.3.2

BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL BE USED WHEREVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND SHALL COMPLY WITH 2010 ADA STANDARD 703.3

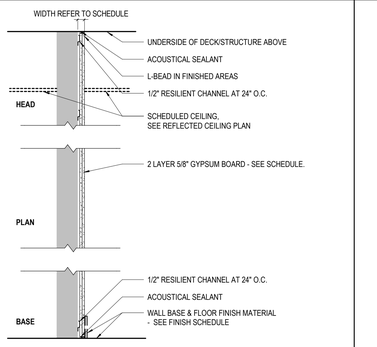
AT EXITS LEADING TO EXTERIOR OF BUILDING

VISUAL CHARACTERS SHALL COMPLY WITH SECTION
2010 ADA STANDARDS 703.5

ALTERNATE SPECIFICATION (FOR MULLION OR GLASS APPLICATION) - ONLY FOR USE AT STOREFRONT EGRESS ROUTES WITH LIMITED WALL SURFACES. PROVIDE DUMMY PLACARD AT BACK SIDE IF MOUNTED TO GLASS

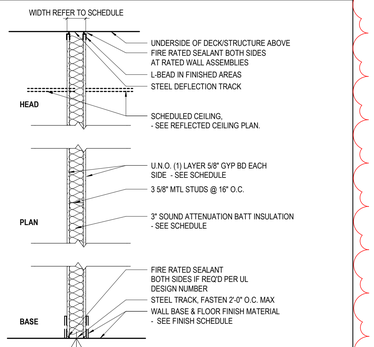
7 DETAIL ACCESSIBLE - TACTILE EXIT SIGNS
3" = 1'-0"

TYPE 0 - RESILIENT CHANNEL WALL TYPES



TYPE	WIDTH	STUD WIDTH	GYP. BD - 1 SIDE	GYP. BD - 2 SIDES	"TYPE X" GYP. BD.	FIRE RATING	UL #	STC RATING	SOUND INSUL.	CODED NOTES	COMMENTS
0A	1 3/4"	1/2"	Yes	No	No	0HR			No	04	

TYPE 3 - 3 5/8" METAL STUD WALL TYPES



TYPE	WIDTH	STUD WIDTH	GYP. BD - 1 SIDE	GYP. BD - 2 SIDES	"TYPE X" GYP. BD.	FIRE RATING	UL #	STC RATING	SOUND INSUL.	CODED NOTES	COMMENTS
3C	4 7/8"	3 5/8"	No	Yes	No	0HR		47	Yes	04	
3D	4 7/8"	3 5/8"	No	Yes	No	0HR		40	No	04	
3F	4 7/8"	3 5/8"	No	Yes	No	0HR			No	05	
3G	4 1/4"	3 5/8"	Yes	No	No	0HR			Yes	04	
3H	4 1/4"	3 5/8"	Yes	No	No	0HR			No	05	
3L	6 5/8"	3 5/8"	No	Yes	Yes	0HR		51+	Yes	04	2 LAYERS TYPE "X" GYPSUM BOARD, 1/2" RESILIENT CHANNELS ON ONE SIDE

1

GENERAL NOTES - WALL TYPE

1. ALL DIMENSIONS TO FACE OF WALL U.N.O.
2. USE 5/8" WATER RESISTANT GYP. BD. ON ALL WET WALLS, UNO.
3. USE CEMENT BOARD FOR ALL WALLS TO RECEIVE CERAMIC TILE, UNO.
4. FIRE SAFE ALL JOINTS AND PENETRATIONS AT FIRE RATED PARTITIONS.
5. UL NUMBERS LISTED APPLY ONLY TO THE TESTED MANUFACTURERS. EQUAL MANUFACTURERS' EQUIVALENT ASSEMBLY INFORMATION MUST BE APPROVED BY ARCHITECT.
6. INSULATION MUST EXTEND FULL HEIGHT OF PARTITION. WHERE SOUND ATTENUATION BATTS ARE INDICATED IN PARTITIONS, INSTALL ACOUSTIC SEALANT AT BOTH SIDES, ALONG THE TOP AND BOTTOM, AND AT INTERSECTING PARTITIONS.
7. WHERE 3 5/8", 4" OR 6" STUD WALLS ARE INDICATED, SEE SPECIFICATIONS FOR HEIGHT LIMITS
8. REFER TO FINISH SCHEDULE FOR FINISHES.
9. SEAL TOP & BOTTOM OF PARTITION WITH ACOUSTIC SEALANT AS REQUIRED BY STC RATING.

CODED NOTE LEGEND

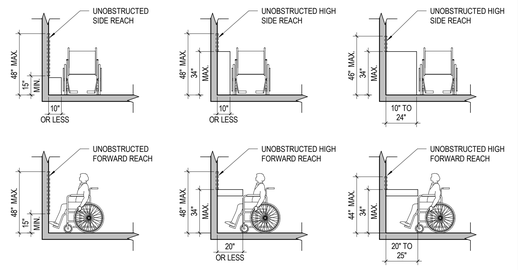
1. BRACE EACH STUD @ 4'-0" O.C. TO BACK-UP WALL FOR ENTIRE HEIGHT OF PARTITION.
2. BRACE EACH STUD @ 8'-0" O.C. TO BACK-UP WALL FOR ENTIRE HEIGHT OF PARTITION.
3. SMOKE TIGHT SEAL SHALL BE PROVIDED AT TOP, BOTTOM AND ENDS OF WALL AND AT ALL PENETRATIONS.
4. FULL HEIGHT PARTITION. TERMINATE GYP. BD. AND STUDS AT DECK/STRUCTURE ABOVE.
5. STOP GYP. BD. AND STUDS 6" AFC. BRACE PARTITION TO DECK/STRUCTURE PER METAL STUD MANUFACTURER DESIGN LOADING CRITERIA.
6. FULL HEIGHT SHAFT WALL. TERMINATE GYP BD. AND STUDS AT DECK/STRUCTURE ABOVE.
7. FULL HEIGHT PARTITION. TERMINATE GYP BD., PLYWOOD AND STUDS AT DECK/STRUCTURE ABOVE.
8. FULL HEIGHT PARTITION. TERMINATE CMU AT DECK/STRUCTURE ABOVE.
9. STOP CMU FULL COURSE ABOVE FINISH CEILING. BRACE WALL TO STRUCTURE PER STRUCTURAL DRAWINGS.
10. FULL HEIGHT PARTITION. TERMINATE CMU AT DECK. ABOVE. STOP FURRING AND GYP. BD. @ 6" ABOVE FINISHED CEILING.

GENERAL NOTES - ACCESSIBILITY

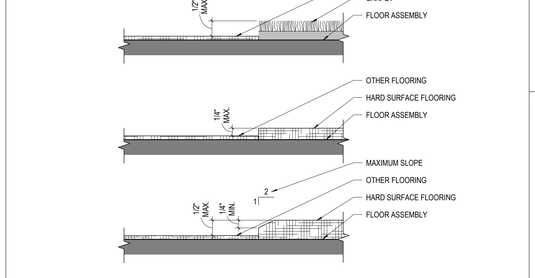
1. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL BE AT LEAST 60" LONG IN THE DIRECTION OF THE DOOR SWING AND 48" CLEAR IN THE DIRECTION OPPOSITE THE DOOR SWING MEASURED IN RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION.
2. IDENTIFY ACCESSIBLE ENTRANCES WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONALDIRECTIONAL SIGNS, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIANS.
3. IN BUILDINGS AND FACILITIES, FLOORS OF A GIVEN STORY SHALL BE AT A COMMON LEVEL THROUGHOUT, OR SHALL BE CONNECTED BY PEDESTRIAN RAMPS, PASSENGER ELEVATORS OR SPECIAL ACCESS LIFTS.
4. FLOOR SURFACES SHALL BE SLIP RESISTNAT.
5. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2" IN HEIGHT. LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. BEVEL OTHERS WITH A SLOPE NOT GREATER THAN 1:2.
6. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF EGRESS SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE SHALL BE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. MOUNT DOOR OPENING HARDWARE BETWEEN 34" AND 44" A.F.F.
7. CENTER HAND-ACTIVATED DOOR OPENING HARDWARE BETWEEN 34" AND 44" A.F.F.
8. MAXIMUM PULL OR PUSH EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS MEASURED AT RIGHT ANGLES TO HINGED DOORS AND AT CENTER PLANE OF SLIDING OR FOLDING DOORS. CORRESPONDING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. MAXIMUM EFFORT TO OPERATE REQUIRED FIRE DOORS MAY BE INCREASED BUT SHOULL NOT EXCEED 15 POUNDS.
9. THE BOTTOM 10" OF ALL DOORS (EXCEPT SLIDING) SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
10. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL NOT BE LESS THAN 2' IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE MOUNTED SO THAT THE CLEAR WIDTH OF THE DOORWAY IS NOT LESS THAN 32".
11. WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32". CLEAR OPENNINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS MORE THAN 24" DEEP SHALL PROVIDE A CLEAR OPENING OF 36" MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING WIDTH LOWERTHAN 34" ABOVE THE FINISHED FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34" AND 80" ABOVE THE FINISHED FLOOR OR GROUND SHALL NOT EXCEED 4".
12. ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE MOUNTED 15" MINIMUM A.F.F. TO THE BOTTOM OF THE BOX AND 48" MAXIMUM A.F.F. TO THE TOP OF THE BOX.
13. FLOORS AND LANDINGS SHALL NOT BE MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
14. MINIMUM MANEUVERING CLEARANCES AT DOORS AND GATES SHALL EXTEND THE FULL WIDTH OF THE DOORWAY AND THE REQUIRED LATCH SIDE OR HINGE SIDE CLEARANCE.
15. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY AS FOLLOWS. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34" MINIMUM AND 44" ABOVE THE FINISHED FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
16. THE DISTANCE BETWEEN TWO HINGED OR PIVOTED DOORS OR GATES IN SERIES SHALL BE A MINIMUM OF 48" PLUS THE WIDTH OF THE DOORS OR GATES SWINGING INTO TIME SPACE.
17. A KEY OPERATED LOCKING DEVICE IS PERMITTED FROM THE EGRESS SIDE PROVIDED THAT THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED; A READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED". THE SIGN SHALL BE IN LETTERS 1" HIGH ON A CONTRASTING BACKGROUND.
18. ALL CONTROLS FOR USE BY CUSTOMERS MUST BE MOUNTED BETWEEN 15" AND 48" ABOVE THE FINISHED FLOOR AND MUST HAVE 30" X 48" MINIMUM CLEAR FLOOR SPACE FOR A FORWARD OR PARALLEL APPROACH. CONTROLS MOUNTED OVER AN OBSTRUCTION THAT IS BETWEEN 10" AND 24" DEEP MAY BE NO HIGHER THAN 46" A.F.F. IF A PARALLEL APPROACH IS PROVIDED; OR WHERE OBSTRUCTIONS ARE BETWEEN 20" AND 25" DEEP WITH A FORWARD APPROACH. CONTROLS MUST NOT REQUIRE TIGHT GRASPING OR TWISTING OF THE WRIST.
19. COMMON EMPLOYEE AREAS SUCH AS BREAK ROOMS, LOCKERS, AND TOILET ROOMS MUST BE ACCESSIBLE AND HAVE ACCESSIBLE FEATURES AND FIXTURES. EMPLOYEE WORK AREAS LESS THAN 1,000 S.F. AS DEFINED BY PERMANENTLY INSTALLED PARTITIONS, COUNTERS, CASEWORK OR FURNISHINGS ARE NOT REQUIRED TO HAVE AN ACCESSIBLE PATH OF CIRCULATION THROUGHOUT THE SPACE , BUT ARE REQUIRED TO BE CONSTRUCTED SO AN INDIVIDUAL CAN APPROACH, ENTER AND EXIT THE SPACE.
20. IN COMMON SPACES WITHIN EMPLOYEE AREAS, AT LEAST ONE OF EACH TYPE OF STORAGE OR WORK COUNTER, 5% OF LOCKERS AND CONTROLS (EMERGENCY PHONES, CARD READERS, ETC.) MUST BE ON AN ACCESSIBLE ROUTE, WITHIN REACH RANGE AND MUST COMPLY WITH STANDARDS OF LACAL CODES, WHICHEVER IS MORE STRICT.
21. THE FIRE ALARM SYSTEM SHALL HAVE PERMANENTLY INSTALLED AUDIBLE AND VISIBLE ALARMS COMPLYING WITH NFPA (1999 OR 2010 EDITION) AND AS REQUIRED BY LOCAL AUTHORITIES. ALARMS MUST BE LOCATED IN PUBLIC AND COMMON USE AREAS. WHERE EMPLOYEES HAVE AUDIBLE ALARMS, THE WIRING SHALL BE DESIGNATED SO VISIBLE ALARMS CAN BE INTEGRATED INTO THE SYSTEM, UNLESS GREATER STANDARDS ARE REQUIRED BY LOCAL AUTHORITIES.
22. THE OPERABLE PORTION OF CARD READERS ARE TO BE MOUNTED AT 48" OR BELOW WITH A CLEAR FLOOR SPACE FOR FRONT OR PARALLEL APPROACH.
23. ALL EQUIPMENT INTENDED FOR CUSTOMER USE MUST BE PLACED SO THAT CONTROLS REQUIRED FOR USE ARE WITHIN ACCESSIBLE REACH RANGE. OWNER MUST VERIFY THAT ALL EQUIPMENT MEETS THESE REQUIREMENTS PRIOR TO INSTALLATION.
24. ALL SIGNS IDENTIFYING PERMANENT ROOMS OR SPACES ARE REQUIRED TO HAVE VISUAL AND RAISED CHARACTERS AND BRAILLE. SIGNAGE TO BE MOUNTED ON LATCH SIDE OF THE DOOR WITH THE BOTTOM OF THE BRAILLE NO LOWER THAN 48" AND THE BOTTOM OF THE HIGHEST TACTILE CHARACTER NO HIGHER THAN 60" A.F.F.
25. IN PUBLIC AREAS PROVIDED WITH WORK SURFACES OR COUNTERS INTENDED FOR DINNING AND/OR DRINKING , AT LEAST 5% OF THE TABLES MUST BE ACCESSIBLE WITH COMPLIANT KNEE AND TOE CLEARANCE AN ACCESSIBLE ROUTE AND DISTRIBUTED THROUGHOUT THE SPACE.
26. ALL EQUIPMENT (INCLUDING COFFEE MACHINES, ATM MACHINES, ETC.) FURNITURE AND MILLWORK INTENDED FOR CUSTOMER USE MUST BE ON AN ACCESSIBLE ROUTE AND MUST MEET ACCESSIBILITY STANDARDS FOR CLEAR FLOOR SPACE, REACH RANGE, OPERATING PARTS, AND KNEE AND TOE SPACES AS DEFINED BY ACCESSIBILITY REQUIREMENTS OR APPLICABLE LOCAL CODES, WHICHEVER IS MORE STRICT.
27. PROVIDE ACCESSIBLE FLOOR TRANSITIONS AT ALL LOCATIONS WHERE THERE IS A LEVEL CHANGE IN FLOORING MATERIAL OR AT DOOR THRESHOLDS. THE CHANGE OF LEVEL BETWEEN MATERIALS MUST BE NO MORE THAN 1/4" OR UP TO 1/2" IF SLOPED NO MORE THAN 1:2.
28. ALL DATA AND POWER RECEPTACLES INTENDED FOR CUSTOMER ACCESS OR USE MUST BE INSTALLED WITHIN ACCESSIBLE REACH RANGES.
29. WALL MOUNTED EQUIPMENT, FIXTURES, LIGHTING, ETC. BETWEEN 27" AND 80" A.F.F. SHALL NOT PROTRUDE MORE THAN 4" FROM THE WALL PER ACCESSIBILITY REQUIREMENTS.

6 DETAIL DEVICES AT DOORS
3/8" = 1'-0"

3 DETAIL MANEUVERING SPACES
1/4" = 1'-0"



5 DETAIL DEVICE MOUNTING AT ACCESSIBLE ROUTES
1/4" = 1'-0"



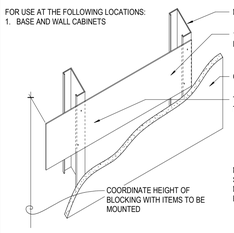
2 DETAIL ACCESSIBLE FLOOR TRANSITION
6" = 1'-0"

4 DETAIL MANEUVERING SPACES AT DOORS
1/4" = 1'-0"

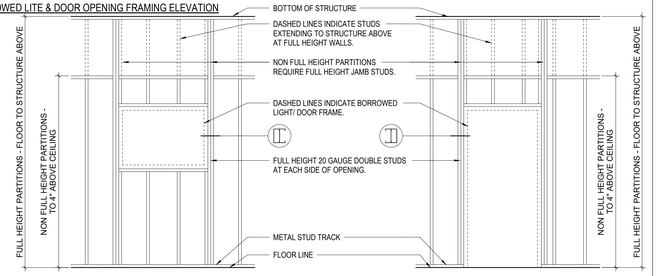
1 DETAIL TACTILE EXIT SIGN MOUNTING LOCATION
1/2" = 1'-0"

DETAIL 7D: METAL STRAPPING - HORIZONTAL / AXON

FOR USE AT THE FOLLOWING LOCATIONS:
1. BASE AND WALL CABINETS

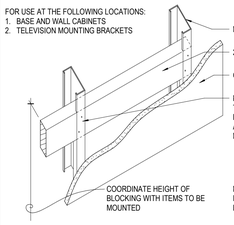


BORROWED LITE & DOOR OPENING FRAMING ELEVATION

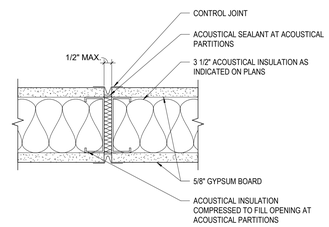


DETAIL 7C: WOOD BLOCKING - HORIZONTAL / AXON

FOR USE AT THE FOLLOWING LOCATIONS:
1. BASE AND WALL CABINETS
2. TELEVISION MOUNTING BRACKETS

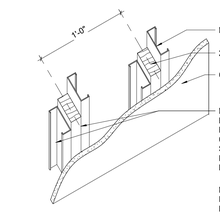


DETAIL 9C: CONTROL JOINT @ 1 HR PARTITION

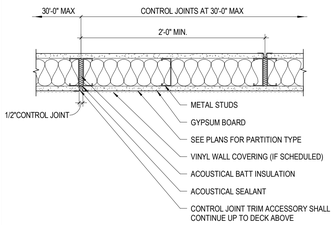


PER USG DETAIL

DETAIL 7B: WOOD BLOCKING - VERTICAL / AXON



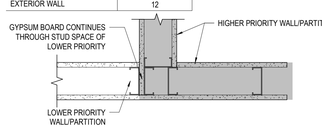
DETAIL 9B: ACOUSTICAL CONTROL JOINT



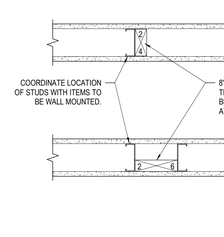
WALL/PARTITION PRIORITY LEGEND

WALL/PARTITION FIRE RATING	PRIORITY
4 HOUR FIRE WALL	1
3 HOUR FIRE WALL	2
2 HOUR FIRE WALL	3
2 HOUR FIRE BARRIER	4
2 HOUR SMOKE BARRIER	5
1 HOUR FIRE BARRIER	6
1 HOUR SMOKE BARRIER	7
1 HOUR FIRE PARTITION	8
SMOKE PARTITION	9
ACOUSTICAL PARTITION	10
NON RATED PARTITION	11
EXTERIOR WALL	12

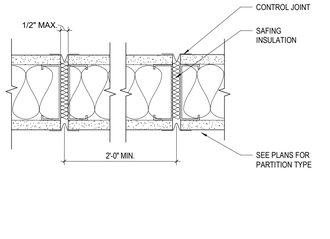
NOTE:
1. REFER TO WALL TYPE LEGEND FOR NUMBER OF LAYERS AND TYPE OF GYPSUM WALL BOARD.
2. THE HIGHER PRIORITY WALL MUST PASS THROUGH THE LESSER PRIORITY WALL. TAPE AND SEAL JOINTS IN GYPSUM WALL BOARD IN HIGHER PRIORITY WALL BEHIND INTERSECTING LOWER PRIORITY WALL.
3. ALTERNATE LAYERS OF GYPSUM WALL BOARD SHALL OVERLAP AT CORNER INTERSECTIONS OF MULTI-LAYERED RATED GYPSUM BOARD PARTITIONS.



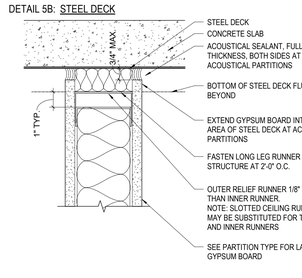
DETAIL 7A: WOOD BLOCKING - PLAN



DETAIL 9A: TYPICAL CONTROL JOINT



DETAIL 5B: STEEL DECK



#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

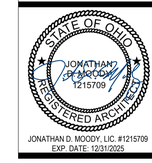
COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:

PARTITION TYPE SCHEDULE



JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025

25011.01

G200

CONSTRUCTION DOCUMENTS

FILE NAM: A-CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:20 PM
FILE INFO: Autodesk Docs://25011 CMHA Easton Office Renovation_R25/25011_CMHA Easton Office Renovation_ARCH_R25.rvt

2 PLAN — LEVEL 02 - PARTIAL DEMOLITION
1/8" = 1'-0"

1 PLAN — LEVEL 1 - DEMOLITION
1/8" = 1'-0"

GENERAL NOTES - DEMOLITION PLANS

1. X

DEMOLITION LEGEND

XXX	ROOM NUMBER
	EXISTING WALLS / PARTITIONS TO REMAIN
	EXISTING 1 HR RATED WALLS TO REMAIN
	OTHER CONSTRUCTION TO REMAIN
	CONSTRUCTION TO BE REMOVED
	DOOR TO REMAIN
	DOOR TO BE REMOVED
	EXISTING 2'x2' ACOUSTIC CEILING TO BE REMOVED
	EXISTING 2'x2' ACOUSTIC CEILING TO REMAIN
	EXISTING GYPSUM CEILING TO REMAIN
	NOT IN ARCHITECTURAL SCOPE. REFER TO OTHER DISCIPLINES FOR WORK IN THIS AREA.

DEMOLITION KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
D01	REMOVE EXISTING FLOORING AND WALL BASE COMPLETE. PATCH AND REPAIR SLAB, AS REQUIRED AND PREPARE FOR NEW FLOOR FINISH. PATCH AND REPAIR EXISTING CONSTRUCTION SCHEDULED TO REMAIN INTACT, AS REQUIRED, FOR SMOOTH FINISHED SURFACE.
D02	REMOVE GLAZING AND FRAME SYSTEM COMPLETE.
D03	REMOVE DOOR, FRAME AND HARDWARE COMPLETE. THIS INCLUDES SIDELITE FRAME AND GLAZING IN SOME LOCATIONS.
D04	REMOVE EXISTING OPERABLE PARTITION AND SUPPORT STRUCTURE COMPLETE.
D05	REMOVE WALL AS INDICATED AND/OR REQUIRED TO COMPLETE NEW WORK. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO REMOVING ELECTRICAL SWITCHES, OUTLETS, CONDUIT, PIPES, ETC.
D06	NO ARCHITECTURAL DEMOLITION IN THIS AREA. REFER TO OTHER DISCIPLINES FOR DEMOLITION SCOPE IN THIS AREA.
D07	REMOVE EXISTING ACOUSTICAL CEILING SYSTEM. SALVAGE ACOUSTICAL PANELS FOR RE-USE. THIS INCLUDES, BUT IS NOT LIMITED TO: GRIDS, TILES, LIGHT FIXTURES, SUPPLY REGISTERS. COORDINATE CEILING DEMOLITION WITH FIRE SUPRESSION, ELECTRICAL, MECHANICAL, AND FIRE ALARM CONTRACTORS.
D08	REMOVE EXISTING CASEWORK. THIS INCLUDES, BUT IS NOT LIMITED TO: BASE CABINETS, DRAWERS, SHELVES, COUNTERTOPS, AND WALL CABINETS.
D09	LIMIT FLOORING OF DEMOLITION.
D10	ALTERNATE #2: REMOVE EXISTING PARKING SPACES, CURBS AND PAVEMENT.
D11	REMOVE EXISTING DOOR AND HARDWARE. EXISTING FRAME TO REMAIN. SALVAGE HARDWARE FOR RE-USE.
D13	REMOVE EXISTING GRADE AS REQUIRED FOR NEW CONCRETE PAD. COORDINATE WITH NEW WORK.
D14	REMOVE EXISTING PLUMBING FIXTURE(S) COMPLETE.
D15	REMOVE EXISTING BIFOLD DOORS, FRAME, MOUNTING TRACK AND HARDWARE COMPLETE.
D16	REMOVE EXISTING LIMESTONE SILL AND WALL BELOW GLAZING..
D17	REMOVE EXISTING WIRE MESH PARTITION.
D18	REMOVE EXISTING FRAMELESS MIRROR - SALVAGE FOR RE-USE.
D20	ALTERNATE #2: REMOVE EXISTING ALUMINUM RAILIG AND GATE.
D21	ALTERNATE #2: REMOVE EXISTING BUSHES.
D22	ALTERNATE #5: REMOVE EXISTING WALL ABOVE STRINGER, AND WALL MOUNTED HANDRAIL.
D23	ALTERNATE #5: REMOVE EXISTING WALL ABOVE FLOOR.
D24	ALTERNATE #6: REMOVE EXISTING PLUMBING FIXTURE AND CASEWORK. THIS INCLUDES, BUT IS NOT LIMITED TO: BASE CABINETS, DRAWERS, SHELVES, AND COUNTERTOPS.
D25	REMOVE EXISTING CARPET - SALVAGE FOR RE-USE.
D26	ALTERNATE #7: REMOVE EXISTING PLUMBING FIXTURE, COUNTER, BACKSPLASH, SIDE SPLASHES AND BASE CABINETS COMPLETE.
D28	ALTERNATE #2: REMOVE EXISTING BRICK PAVERS.
D29	REMOVE EXISTING CARD READER. NEW CARD READER TO BE INSTALLED IN CURRENT LOCATION.
D31	ALTERNATE #3: REMOVE FLOORING IN THIS ROOM.
D32	REMOVE EXISTING WALL MOUNTED TELEVISION, MOUNTING BRACKET, ELECTRICAL AND DATA OUTLETS COMPLETE.
D33	REMOVE EXISTING WALLCOVERING COMPLETE. PREPARE WALL SURFACES FOR PAINT.
D34	ALTERNATE #5: REMOVE FLOORING FROM THE STAIR.
D35	SAW-CUT AND REMOVE PORTION OF EXISITNG SLAB TO PROVIDE A PATH FOR POWER TO NEW FURNITURE SYSTEM GROUP.
D36	SAW-CUT AND REMOVE PORTION OF EXISITNG BRICK VENEER TO ACCOMODATE NEW EXHAUST DUCT AND LOUVER. SEE HVAC DRAWINGS.
D37	ALTERNATE #1: SAWCUT AND REMOVE PAVEMENT AND CURB AS NEEDED TO RUN CONDUIT FOR EV CHARGERS. COORDINATE EXACT EXTENT AND PATH WITH ELECTRICAL DRAWINGS.

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:

LEVEL 01 - DEMOLITION PLAN

STATE OF OHIO — JONATHAN D. MOODY — 1215709 — REGISTERED ARCHITECT

JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025

25011.01

AD101

CONSTRUCTION DOCUMENTS

FILE NAME: A-CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:22:24 PM
FILE PATH: A:\Active Projects\25011 CMHA Easton Office Renovation - R25\25011_CMHA Easton Office Renovation_ARCH_R25.rvt

2 PLAN LEVEL 2 - PARTIAL PLAN
1/8" = 1'-0"

1 PLAN LEVEL 01 - FLOOR PLAN
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF WALL (UNLESS NOTED OTHERWISE).
2. SEE STRUCTURAL DRAWINGS FOR LOCATIONS OF ALL STEEL REINFORCING IN WALL & FLOOR CONSTRUCTION.
3. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION OF LOCATIONS AND TYPES OF FINISH MATERIALS.
4. SEE ELEVATIONS AND STRUCTURAL DRAWINGS FOR LOCATIONS OF EXPANSION & CONTROL JOINTS. CONTRACTOR SHALL PROVIDE ADDITIONAL INTERIOR CONTROL JOINTS AS REQUIRED TO COMPLY WITH MAXIMUM SPACING REQUIREMENTS IN SPECIFICATIONS AND NATIONAL MASONRY INSTITUTE. SEE DETAILS ON **AXXX**.
5. MECHANICAL & ELECTRICAL EQUIPMENT SHALL BE ON HOUSEKEEPING PADS. PADS ARE TO BE PROVIDED BY THE TRADE SUPPLYING THE EQUIPMENT. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. WORK TO BE COORDINATED THROUGH THE GENERAL TRADES CONTRACTOR. PADS 4" MIN. 4" THICK W/ W.W.F., UNLESS NOTED OTHERWISE).
6. PATCH AND REPAIR ALL OPEN AND DAMAGED DRYWALL TO ORIGINAL SPECIFICATION, UNO

(#) CODED NOTE LEGEND

1. ALIGN
2. INFILL WALL TO MATCH EXISTING CONSTRUCTION.
3. CENTER WALL ON MULLION.
4. PATCH AND REPAIR GYPSUM BOARD WALL. PREP FOR PAINT OR OTHER SCHEDULED FINISH.
5. EXTEND PARTITION FRAMING AND GYPSUM BOARD TO DECK, TYPICAL BOTH SIDES. PROVIDE SOUND-ATTENUATING ACOUSTICAL INSULATION AND SEAL GAPS AROUND PERIMETER OF DRYWALL WITH ACOUSTICAL SEALANT.
6. REINSTALL SALVAGED MIRRORS. MOUNT BOTTOM AT 12" ABOVE FLOOR.
7. PROVIDE CONCRETE PAD TO MATCH EXISTING SIMILAR CONDITIONS.
8. CUSTOM CASEWORK DESK.
9. ALTERNATE #1: ELECTRIC CAR CHARGERS - SEE ELECTRICAL DRAWINGS.
10. ALTERNATE #2: NEW BUSHES TO MATCH EXISTING
11. ALTERNATE #1: PATCH AND REPAIR PAVEMENT AND CURB TO ORIGINAL CONDITIONS.

FLOOR PLAN LEGEND

- EXISTING WALLS / PARTITIONS
- EXISTING 1 HR RATED WALLS
- NEW NON-INSULATED WALLS / PARTITIONS
- NEW SOUND-INSULATED WALLS / PARTITIONS
- NOT IN ARCHITECTURAL SCOPE. REFER TO OTHER DISCIPLINES FOR WORK IN THIS AREA.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
03 30 00.A1	ALTERNATE #2: CONCRETE SLAB ON GRADE TO MATCH EXISTING PATIO.
03 30 00.A3	ALTERNATE #2: 36" X 36" X 12" CONCRETE FOOTING. TOP OF CINCRETE AT 24" BELOW GRADE.
04 00 00.A1	ALTERNATE #2: BRICK VENEER ON 20" X 20" CMU PIER OVER 28"X 28" X 24" CMU FOUNDATIO WITH LIMESTONE CAP TO MATCH EXISTING.
05 70 00.A1	ALTERNATE #2: ALUMINUM RAILING AND GATE TO MATCH EXISTING.
05 73 13.A1	ALTERNATE #5: STAINLESS STEEL FRAME WITH GLASS PANEL GUARDRAIL WITH STAINLESS STEEL HANDRAIL. SEE DETAIL ON SHEET A801.
05 73 13.A2	ALTERNATE #5: STAINLESS STEEL WALL MOUNTED HANDRAIL. SEE DETAIL ON SHEET A801.
05 73 13.A3	ALTERNATE #5: STAINLESS STEEL FRAME WITH GLASS PANEL GUARDRAIL. SEE DETAIL ON SHEET A801.
06 40 00.E1	ALTERNATE #5: SOLID SURFACE (SS-3) TRIM ON FLOOR.
06 40 00.E2	ALTERNATE #5: SOLID SURFACE (SS-3) CAP ON EXISTING WALL
06 40 00.F1	18" DEEP PLASTIC LAMINATE COUNTER AT 34" A.F.F.
06 40 00.G2	FIXED SHELF AND COAT ROD
10 22 21.A1	DEMOUNTABLE GLASS PARTITION SYSTEM
10 44 00.B3	SEMI-RECESSED FIRE EXTINGUISHER CABINET
11 31 00.B1	55" TELEVISION: SONY MODEL K55S30
11 31 00.B2	65" TELEVISION: TCL MODEL 65QM751G
11 31 00.B3	85" TELEVISION
11 52 23.A1	WALL MOUNTED TELEVISION BRACKET
D37	ALTERNATE #1: SAWCUT AND REMOVE PAVEMENT AND CURB AS NEEDED TO RUN CONDUIT FOR EV CHARGERS. COORDINATE EXACT EXTENT AND PATH WITH ELECTRICAL DRAWINGS.

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COMMUNITY. COMMITMENT. COLLABORATION.

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DRAWING TITLE:
LEVEL 01 - FLOOR PLAN

STATE OF OHIO · JONATHAN D. MOODY · 1215709 · REGISTERED ARCHITECT

JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

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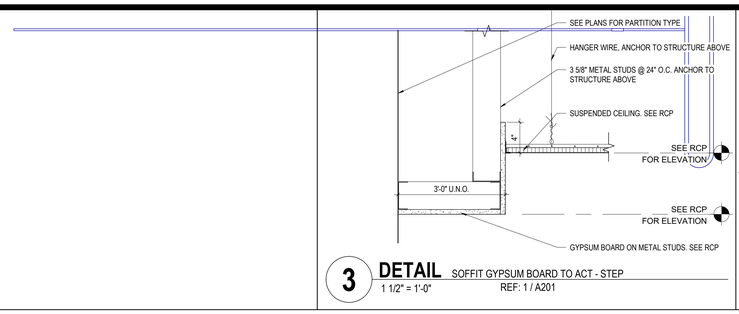
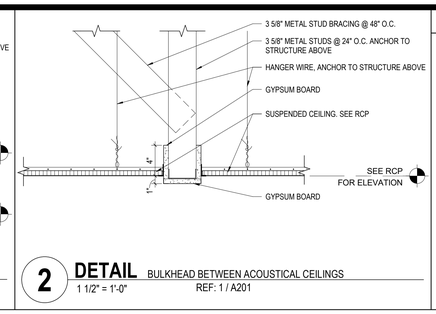


3 DETAIL SOFFIT GYPSUM BOARD TO ACT - STEP
1 1/2" = 1'-0" REF: 1 / A201



2 DETAIL BULKHEAD BETWEEN ACOUSTICAL CEILINGS
1 1/2" = 1'-0" REF: 1 / A201

RCP LEGEND

- EXISTING GYPSUM CEILING OR SOFFIT TO REMAIN
- EXISTING ACOUSTIC CEILING TO REMAIN: 2'X2'
- A1 ACOUSTIC CEILING TYPE 1: 2'x2' LAY-IN CEILING
- A2 ACOUSTIC CEILING TYPE 2: 2'x2' LAY-IN CEILING
- A3 ACOUSTIC CEILING TYPE 2: 2'x2' LAY-IN CEILING
- B1 BAFFLE CEILING TYPE 1: BAFFLE
- E1 EXPOSED STRUCTURE ABOVE
- G1 GYPSUM BOARD CEILING OR SOFFIT
- NOT IN ARCHITECTURAL SCOPE. REFER TO OTHER DISCIPLINES FOR WORK IN THIS AREA.

- 2x2 LIGHT FIXTURE (SHADING DENOTES EMERGENCY FIXTURE)
- 2x4 LIGHT FIXTURE (SHADING DENOTES EMERGENCY FIXTURE)
- 1x4 LIGHT FIXTURE (SHADING DENOTES EMERGENCY FIXTURE)
- 1x8 LIGHT FIXTURE (SHADING DENOTES EMERGENCY FIXTURE)
- OR RECESSED CAN LIGHT
- SURFACE MOUNTED LIGHT
- LINEAR COVE LIGHT

NOTE: COORDINATE ARCHITECTURAL REFLECTED CEILING PLANS WITH THE MECHANICAL AND ELECTRICAL DRAWINGS FOR NUMBER OF, AND LOCATIONS. OF, AND TYPES OF FIXTURES AND GRILLES. NOT ALL ITEMS SHOWN ON LEGEND MAY BE PRESENT IN PROJECT.

- CEILING MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW
- WALL MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW (PERPENDICULAR / PARALLEL)
- EXIT LIGHT
- SUPPLY DIFFUSER
- LINEAR DIFFUSER
- EXHAUST/RETURN GRILLE
- SPEAKER
- XX XX'-XX" CEILING TAG WITH HEIGHT

1 RCP LEVEL 01 - RCP
1/8" = 1'-0"

RCP GENERAL NOTES

1. PAINT DESIGNATED FOR EXPOSED OVERHEAD STRUCTURE IS TO INCLUDE ALL EXPOSED COMPONENTS INCLUDING (BUT NOT EXCLUSIVE TO) DECKING, STRUCTURAL MEMBERS, MECHANICAL AND ELECTRICAL DELIVERY SYSTEMS, FIRE PROTECTION SYSTEMS (EXCLUDING SPRINKLER HEADS), AND ALL OTHER MISCELLANEOUS BUILDING SYSTEMS LOCATED OVERHEAD. EACH OF THE AFOREMENTIONED CATEGORIES IS TO INCLUDE ANY AND ALL ASSOCIATED SUPPORTS, FASTENERS, HANGERS, STRUTS, BRACES, BRACKETS, ETC.
2. LIGHT FIXTURES SHOWN TO INDICATE PROPOSED FIXTURES & GENERAL DESIGN INTENT.
3. FINISHED CEILING HEIGHTS ARE MARKED FROM TOP OF FINISH FLOOR (UNLESS NOTED OTHERWISE).
4. COORDINATE LOCATION OF FIXTURES WITH MECHANICAL, ELECTRICAL, PLUMBING, FIRE SUPPRESSION AND TECHNOLOGY DRAWINGS. ANY CONFLICT BETWEEN TRADES, NOTIFY ARCHITECT PRIOR TO INSTALLATION.
5. FACE OF BULKHEADS ARE TO ALIGN WITH FACE OF ADJACENT WALLS TO WHICH BULKHEADS ARE PARALLEL , UNLESS NOTED OTHERWISE OR DIMENSIONED.
6. ALL GYPSUM BOARD SOFFITS & CEILINGS TO BE PAINTED FLAT CEILING WHITE (UNLESS NOTED OTHERWISE).
7. ALL GYPSUM SOFFITS IN FOOD SERVICE AREAS TO BE PAINTED WITH A SATIN FINISH.
8. PAINT DUCTWORK INSIDE AIR GRILLES FLAT BLACK.
9. CEILING GRIDS ARE CENTERED ON ROOM, U.N.O. OR DIMENSIONED.
10. WHERE EXIT SIGNS OCCUR OVER A DOOR OR PAIR OF DOORS, CENTER SIGN ON DOOR OPENING.
11. ALL CEILING DEVICES TO BE CENTERED IN TILE, U.N.O.

CODED NOTE LEGEND

1. ALIGN FEATURES
2. OPEN TO ABOVE
3. REPLACE DAMAGED CEILING TILE IN KIND.
4. INFILL GAP IN SOFFIT.
5. PAINT ALL FACES OF SOFFIT PT-4
6. PAINT FRONT FACE OF SOFFIT PT-4
7. PAINT BOTTOM FACE OF SOFFIT PT-4

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT

RCP CEILING SCHEDULE

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
LEVEL 01 - RCP

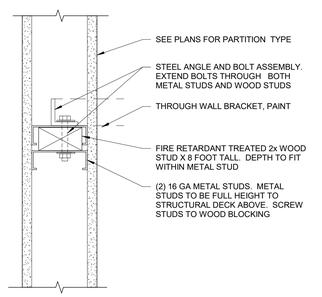
STATE OF OHIO JONATHAN D. MOODY 1215709 REGISTERED ARCHITECT
JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025
25011.01
A201
CONSTRUCTION DOCUMENTS

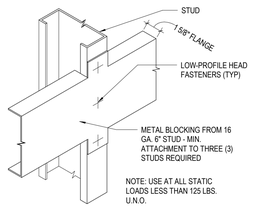
FILE NAME: A-CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:38 PM
FILE INFO: J:\Archive Docs\25011 CMHA Easton Office Renovation - R25\25011_CMHA Easton Office Renovation_ARCH_R25.rvt

FINISH LEGEND

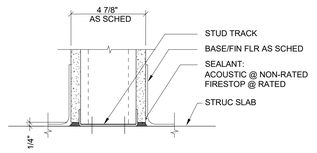
Finish Group	FINISH TYPE	TAG	MANUFACTURER	STYLE	COLOR/FINISH	SIZE	COMMENTS
BASE							
BASE	RUBBER BASE	RB-1	TARKETT	MILLWORK OBLIQUE	BLACK	3"	EXECUTIVE SUITE WALL BASE
BASE	RUBBER BASE	RB-2	TARKETT	STANDARD	BLACK/MATCH EXISTING	4"	
BASE	TILE BASE	TWB-1	FLORIDA TILE	EAST VILLAGE HDP	AVENUE	3X24 BULLNOSE	
CEILINGS							
CEILINGS	ACOUSTICAL CEILING TILE	A1	ARMSTRONG	CORTEGA SECOND LOOK II - #GR2767D	-	2X4	MATCH EXISTING
CEILINGS	ACOUSTICAL CEILING TILE	A2	ARMSTRONG	ULTIMA - TEGULAR - #1912LEC	-	2'X2'	9/16" GRID
CEILINGS	ACOUSTICAL CEILING TILE	A3	ARMSTRONG	ULTIMA - TEGULAR - #1911LEC	-	2'X2'	15/16" GRID
CEILINGS	BAFFLE CEILING	B1	ACGI/ARMSTRONG	Baffle Series 1 [WB1]	BLACK	3.5"X3/4" THICK	
CEILINGS	EXPOSED STRUCTURE	E1					
FLOORS							
FLOORS	CARPET TILE	CR-1	MOHAWK	RELAXING FLOORS - MELOW D	SOLITUDE	18X36	INSTAL ASHLAR
FLOORS	CARPET TILE	CR-2	MOHAWK	RELAXING FLOORS - MELOW D	EASY BREEZY	12" X 36"	INSTALL ASHLAR
FLOORS	ENTRANCE CARPET	EC-1	MILLIKEN	OBEX™ TILE	CUT/CORSS DARK GREY	24X24	
FLOORS	LUXURY VINYL TILE	LV-1	INTERFACE	BRUSHED LINES	KOHL	9.8X39.3	
FLOORS	LUXURY VINYL TILE	LV-2	INTERFACE	BRUSHED LINES	GALENA	9.8X39.3	
FLOORS	RUBBER FLOOR	RF-1	EXISTING STOCK	EXISTING STOCK	-	-	USE OWNER EXISTING STOCK
FLOORS	SEALED CONCRETE	SC-1		-	-	-	
FLOORS	TILE FLOOR	TF-1	FLORIDA TILE	EAST VILLAGE HDP	AVENUE	12X24	
MISCELLANEOUS							
MISCELLANEOUS	CORNER GUARD	CG-1	INPRO	STAINLESS STEEL		1" WING, 8' HIGH	@ ALL EXPOSED DRYWALL CORNERS
MISCELLANEOUS	GROUT	GR-1	MAPEI		107 IRON		
MISCELLANEOUS	GROUT	GR-2	MAPEI		47 CHARCOAL		
MISCELLANEOUS	PLASTIC LAMINATE	PL-1	FORMICA	WALNUT RIFTWOOD	-	-	CASEWORK @ RECEPTION DESK AND MOTHERS ROOM
MISCELLANEOUS	PLASTIC LAMINATE	PL-2	FORMICA		BLACK	PLEX FINISH	CASEWORK @ KITCHENETTES, AND YOGA MAT STORAGE
MISCELLANEOUS	PLASTIC LAMINATE	PL-3	WILSONART		LINEN		ALT. COUNTER @ MOTHER'S ROOM
MISCELLANEOUS	QUARTZ	QZ-1	DUPONT		ONXY CARRARA		TRANSACTION TOP RECEPTION DESK
MISCELLANEOUS	QUARTZ	QZ-2	DUPONT		SNOW WHITE		
MISCELLANEOUS	SOLID SURFACE	SS-1	CORIAN	-	GLACIER WHITE	-	
MISCELLANEOUS	SOLID SURFACE	SS-2	CORIAN		SILVER GREY		
MISCELLANEOUS	SOLID SURFACE	SS-3	CORIAN		CARBON AGGREGATE		CAP AT STAIRS
MISCELLANEOUS	TRANSITIONS/TRIM	T1	SCHLUTER	JOLLY			@ EXPOSED TILE CORNERS
MISCELLANEOUS	TRANSITIONS/TRIM	T2	FRY REGLET	"L TRIM"			
WALLS							
WALLS	PAINT	PT-1	SHERWIN WILLIAMS	PROMAR 200	ROCK CANDY	-	
WALLS	PAINT	PT-4	SHERWIN WILLIAMS	PROMAR 200	IRON ORE		
WALLS	SPECIALTY WALL	SW-1	PLANTHROPY	-	-	-	PRESERVED MOSS ELEMENT BEHIND RECEPTION DESK.
WALLS	WALL COVERING	WC-1	WOLF GORDON	SERRA	SRRS213 CARBON	-	
WALLS	WALL TILE	WT-1	ERGON	STONE PROJECT	BLACK FALDA LAPP	12X24	USE GR-2; USE OWNER EXISTING STOCK
WALLS	WALL TILE	WT-2	CROSSVILLE	DRESSCODE	WHITE GLOSS PIANO	6X5	USE GR-1;



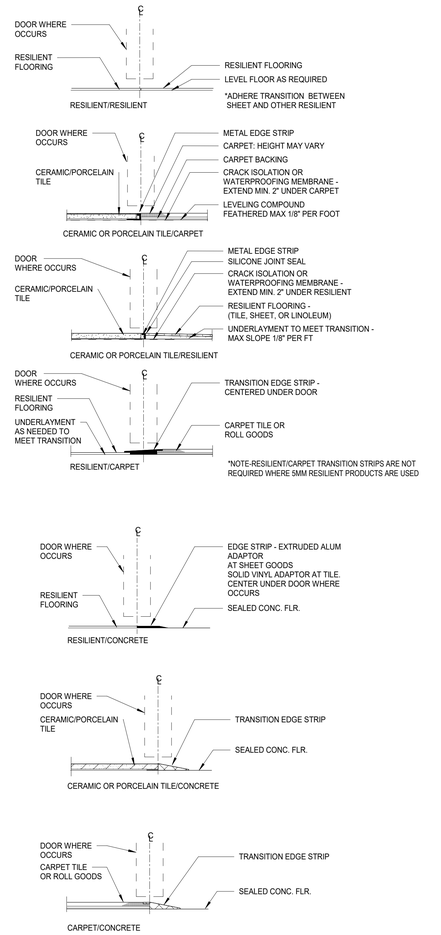
4 DETAIL CSWK-COUNTER SUPPORT DETAIL
3" = 1'-0"



3 DETAIL METAL BLOCKING TYP.
3" = 1'-0"



2 DETAIL TYP WALL BASE DETAIL
3" = 1'-0"



1 FLOORING TRANSITIONS
3" = 1'-0"

GENERAL NOTES - FINISH PLANS

1. STANDARDS AND PROCEDURES FOR THE PREPARATION AND APPLICATION OF INTERIOR FINISHES ARE DEFINED IN THE PROJECT MANUAL. FINISH (SUB) CONTRACTORS ARE REQUIRED TO READ, UNDERSTAND AND FOLLOW ALL RELEVANT SECTIONS OF THE PROJECT MANUAL.
2. FINISH MATERIALS ARE LISTED IN THE LEGEND COMPONENT OF THE FINISH SCHEDULE. SPECIFICATIONS ARE INCLUDED IN THE PROJECT MANUAL. ANY CONFLICTS OR DISCREPANCIES BETWEEN THESE TWO SHOULD BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY.
3. NO FINISH MATERIAL SUBSTITUTIONS WILL BE ACCEPTED EXCEPT IN THE SPECIFIC CIRCUMSTANCES ENUMERATED IN THE PROJECT MANUAL.
4. PAINTED HOLLOW METAL DOORS AND FRAMES TO BE PAINTED TO MATCH ADJACENT WALL COLOR UNLESS NOTED OTHERWISE. MATERIAL, FINISH AND COLOR INFORMATION FOR ALL OTHER DOORS AND FRAMES IS CONTAINED IN THE DOOR SCHEDULE AND ITS ASSOCIATED LEGENDS. IF WALLS ON OPPOSITE SIDES OF DOOR FRAME ARE DIFFERENT COLORS THE PAINT COLORS SHOULD BE SPLIT AT THE JAMB OF THE FRAME.
5. ALL VERTICAL TRANSITIONS BETWEEN DIFFERING WALL FINISHES ARE TO BE MADE AT INSIDE CORNERS (UNLESS NOTED OTHERWISE).
6. FLOORING MATERIAL DESIGNATED FOR STAIRS IS TO INCLUDE STAIR AND ALL ASSOCIATED TREADS, RISERS, LANDINGS, ETC. (UNLESS NOTED OTHERWISE).
7. PAINT DESIGNATED FOR METAL STAIR COMPONENTS IS TO INCLUDE ALL EXPOSED METAL COMPONENTS ASSOCIATED WITH THE STAIR SYSTEM ITSELF. ALL EXPOSED STRUCTURAL STEEL COMPONENTS SUPPORTING THE STAIR SYSTEM (UNLESS NOTED OTHERWISE), AND ALL EXPOSED METAL COMPONENTS OF THE HANDRAIL AND GUARDRAIL SYSTEMS (UNLESS NOTED OTHERWISE). UNDERSIDES OF STAIR RUNS AND LANDINGS ARE CONSIDERED "EXPOSED" IN ALL SITUATIONS.
8. FOR CLARITY, SOME FINISH INFORMATION HAS BEEN PRESENTED GRAPHICALLY IN THE FORM OF FINISH AND FLOORING PLANS. SHOULD THERE BE A DISCREPANCY BETWEEN THE FINISH SCHEDULE AND THESE PLANS, THE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY. FOR THE PURPOSE OF BIDDING, INFORMATION DETAILED ON THE FINISH FLOOR PLANS AND FLOORING PLANS IS TO TAKE PRECEDENCE OVER THE FINISH SCHEDULE UNTIL FURTHER CLARIFICATION CAN BE GIVEN. FOR AREAS NOT SPECIFICALLY DETAILED ON THESE PLANS, THE FINISH SCHEDULE PERTAINS.
9. PAINT DESIGNATED FOR EXPOSED OVERHEAD STRUCTURE IS TO INCLUDE ALL EXPOSED COMPONENTS INCLUDING (BUT NOT EXCLUSIVE TO) DECKING, STRUCTURAL MEMBERS, MECHANICAL AND ELECTRICAL DELIVERY SYSTEMS, FIRE PROTECTION SYSTEMS (EXCLUDING SPRINKLER HEADS), AND ALL OTHER MISCELLANEOUS BUILDING SYSTEMS LOCATED OVERHEAD. EACH OF THE AFOREMENTIONED CATEGORIES IS TO INCLUDE ANY AND ALL ASSOCIATED SUPPORTS, FASTENERS, HANGERS, STRUTS, BRACES, BRACKETS, ETC.
10. WHERE RESILIENT BASE IS SPECIFIED (VINYL OR RUBBER) PROVIDE COVE PROFILE BASE AT ALL RESILIENT FLOORS AND STRAIGHT BASE FOR ALL CARPET AREAS (UNLESS OTHERWISE NOTED). HEIGHT AND COLOR TO BE AS INDICATED ON FINISH LEGEND.
11. REFER TO REFLECTED CEILING PLANS AND SPECIFICATION MANUAL FOR ALL CEILING MATERIAL AND FINISH INFORMATION.
12. ALL DRYWALL SOFFITS TO BE PAINTED FLAT CEILING WHITE UNLESS NOTED OTHERWISE ON CEILING PLANS.
13. CERAMIC WALL TILE TO EXTEND FULL WIDTH AND FULL HEIGHT FOR ANY AND ALL SCHEDULED TILED WALLS (UNLESS NOTED OTHERWISE).
14. FOR EPOXY OR INTUMESCENT PAINT COLOR REFER TO PAINT SCHEDULE NUMBERS.
15. WITHIN FINISH SCHEDULE CELLS: SLASH MARKS INDICATE DIFFERENCES IN FINISH MATERIAL WHILE COMMAS INDICATE DIFFERENCES IN PATTERN OR COLOR WITHIN A SPECIFIC MATERIAL.
16. APPROPRIATE METAL OR VINYL TRANSITION STRIPS MUST BE PROVIDED AT ALL FINISH MATERIAL FLOORING CHANGES. GENERAL CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL FLOORING TRANSITIONS AND AREAS IN WHICH FLOORING PATTERNS ARE SHOWN. SEE FLOOR FINISH PLANS, DETAILS AND NOTES FOR SPECIFIC INFORMATION.
17. WALL PAINT INDICATED FOR CURTAIN WALL LOCATIONS APPLIES TO ALL ASSOCIATED DRYWALL COMPONENTS (CURBS, HEADERS, BULKHEADS, ETC.) AND SHOULD NOT BE INTERPRETED AS APPLYING TO CURTAIN WALL COMPONENTS OR GLASS.
18. FLOORING CONTRACTOR(S) IS RESPONSIBLE FOR COORDINATING FINISHED FLOOR ELEVATIONS WITH ALL/ANY FLOOR MOUNTED COMPONENTS (RECEPTACLES, ACCESS PANELS, ETC.) SO THAT COMPONENTS ARE INTEGRATED AND FLUSH.
19. PAINT ALL GYPSUM BOARD WALLS ON FIRST FLOOR PAINT PT-1. THIS DOES NOT INCLUDE ROOMS 106, 109A, 123A, 136, 146, 148, 148A, S101, AND S102,

CODED NOTE LEGEND

1. ALIGN
2. SW-1: GREEN WALL ELEMENT; REFER TO ELEVATIONS, FINISH LEGEND AND SPECS FOR MORE INFORMATION.
3. BRANDED RAISED LETTER SIGNAGE/DIRECTORY.
4. NOT USED.
5. RB BASE AT CARPET, TILE BASE AT TILE.
6. PATCH WITH MATCHED/SALVAGED EXISTING CARPET TILE.
7. PATCH WITH MATCHING EXISTING FLOORING; ALTERNATE #3: REPLACE FLOORING WITH CR-2. SEE FINISH LEGEND FOR DETAILS.
8. ALTERNATE #3: REPLACE FLOORING (CARPET AND RESILIENT) WITH CR-1, SEE FINISH LEGEND FOR DETAILS.
9. ALTERNATE #7: REPLACE BACKSPLASH WITH TILE AS INDICATED.
10. BRANDING/ARTWORK PLACEHOLDER. KEEP WALL CLEAR OF DEVICES.
11. BRANDING/ARTWORK PLACEHOLDER. KEEP WALL CLEAR OF DEVICES. PROVIDE IN WALL BLOCKING.
12. USE OWNER'S EXISTING STOCK
13. DECORATIVE GLASS FILM; O.F.C.I.

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:

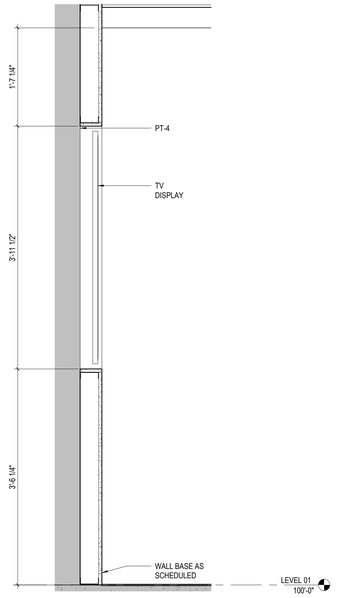
FINISH SCHEDULE/LEGEND

STATE OF OHIO
JONATHAN D. MOODY
1215709
REGISTERED ARCHITECT

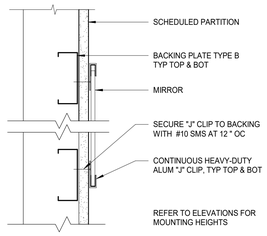
JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025
25011.01
A800
CONSTRUCTION DOCUMENTS

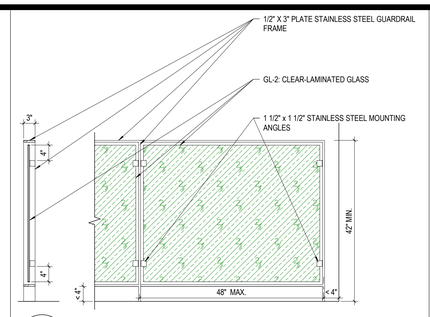
FILE NAME: A-CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:37 PM
FILE INFO: Autodesk Docs://25011 CMHA Easton Office Renovation - R25/25011_CMHA Easton Office Renovation_ARCH_R25.rvt



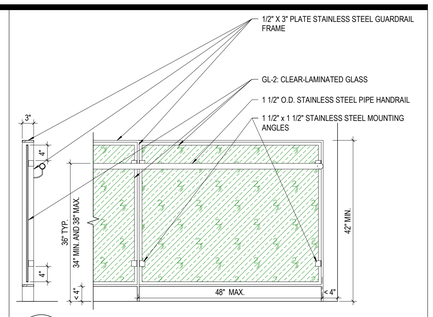
15 DETAIL RECESSED DIGITAL DISPLAY
1" = 1'-0" REF: 8 / A801



14 DETAIL WALL MIRROR
3" = 1'-0"



13 DETAIL ALT. #5 - INFILL GLASS PANEL GUARDRAIL AT 2ND FLOOR
3/4" = 1'-0"



12 DETAIL ALT. #5 - INFILL GLASS PANEL GUARDRAIL AT STAIR
3/4" = 1'-0"

GEN. NOTES - INTERIOR ELEVATIONS

1. ALL DIMENSIONS ARE TO FACE OF WALL (UNLESS NOTED OTHERWISE).
2. SEE FINISH PLANS AND LEGEND FOR ADDITIONAL INFORMATION OF LOCATIONS AND TYPES OF FINISH MATERIALS.
3. ALL MOUNTING HEIGHTS ARE ABOVE FINISHED FLOOR (AFF). SEE SHEET A800.
4. REFER TO PME DRAWINGS FOR OTHER REQUIREMENTS NOT SHOWN ON INTERIOR ELEVATIONS. NOTIFY ARCHITECT OF DISCREPANCIES FOR CLARIFICATION.
5. PROVIDE BLIND CABINETS WHERE APPLICABLE.
6. CONTRACTOR TO PROVIDE BLOCKING IN WALL AS REQUIRED FOR ALL OWNER FURNISHED WALL MOUNTED EQUIPMENT AND ACCESSORIES. COORDINATE FINAL LOCATION WITH OWNER.
7. PROVIDE SCRIBES / FILLERS BETWEEN ALL WALLS AND CABINET ENDS, U.N.O. PROVIDE MINIMUM 2" FILLERS BETWEEN THE CORNER CABINETS IN AN "L" SHAPE CONFIGURATION.
8. PROVIDE CORNER CLOSURE PIECE UNDER THE WALL CABINETS IN AN "L" SHAPE CONFIGURATION.
9. WALL BASE AND WALL FINISH ARE TO EXTEND BEHIND EQUIPMENT
10. COORDINATE LOCATIONS OF GROMMETS WHERE NECESSARY FOR COMPUTER CORDS WITH OWNER, U.N.O.
11. CASEWORK MANUFACTURER SHALL VERIFY/MEASURE ALL FIELD CONDITIONS PRIOR TO FABRICATION OF CASEWORK / COUNTERTOPS. ANY ALTERATION TO CASEWORK REQUIRES AS A RESULT OF FIELD CONDITIONS SHALL BE APPROVED BY THE ARCHITECT AND OWNER PRIOR TO FABRICATION OR INSTALLATION. CASEWORK MANUFACTURER SHALL COORDINATE WITH CONTRACTOR INSTALLATION OF BLOCKING.
12. PROVIDE FINISHED ENDS/SIDES OF ALL EXPOSED END CABINETS.

(#) CODED NOTES - INTERIOR ELEVATIONS

1. EXISTING KITCHEN EQUIPMENT
2. OWNER FURNISHED, CONTRACTOR INSTALLED SIGNAGE/DIRECTORY. DESIGN/PRODUCT TBD BY OWNER.
3. CUSTOM MOSS LOGO, SEE FINISH SCHEDULE SW-1 FOR MORE DETAIL.
4. 85" DISPLAY, SEE TECHNICAL DRAWINGS AND SPECS FOR MORE INFORMATION.

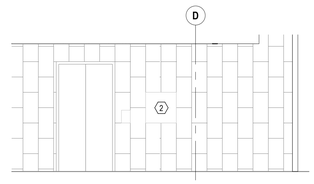
GLAZING TYPES

GL-1 INTERIOR GLAZING (CLEAR TEMPERED)

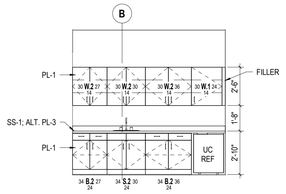
GL-2 INTERIOR GLAZING (CLEAR LAMINATED)

IG-1 INSULATE GLAZING (CLEAR)

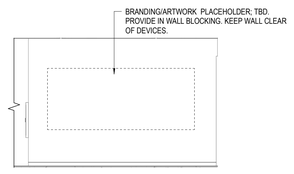
IG-1A INSULATE GLAZING (CLEAR TEMPERED)



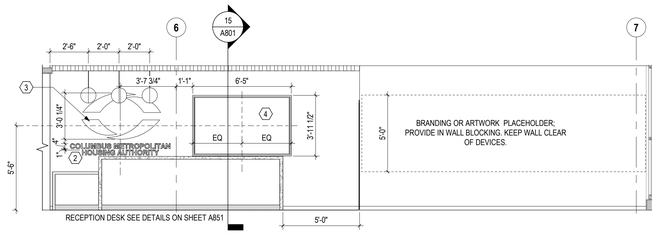
11 ELEVATION ELEVATOR LOBBY EAST
1/4" = 1'-0" REF: 1 / A101



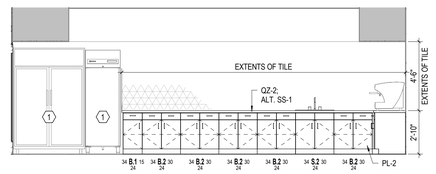
10 ELEVATION MOTHER'S ROOM -WEST
1/4" = 1'-0" REF: 1 / A101



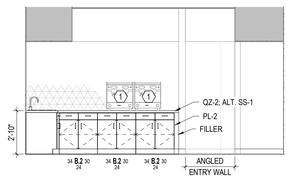
9 ELEVATION ELEVATOR LOBBY - NORTH
1/4" = 1'-0" REF: 1 / A101



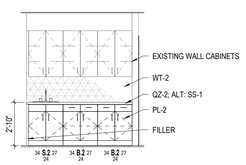
8 ELEVATION LOBBY - NORTH
1/4" = 1'-0" REF: 1 / A101



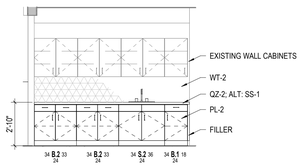
7 ELEVATION ALTERNATE #6 - KITCHEN - EAST
1/4" = 1'-0" REF: 1 / A101



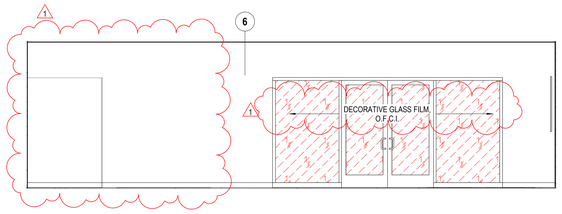
6 ELEVATION ALTERNATE #6 - KITCHEN - SOUTH
1/4" = 1'-0" REF: 1 / A101



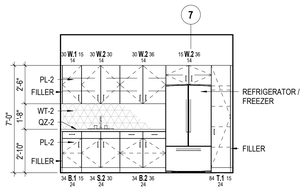
5 ELEVATION ALTERNATE #7 - EAST KITCHENETTE
1/4" = 1'-0" REF: 1 / A101



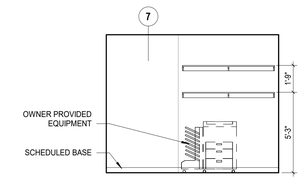
4 ELEVATION ALTERNATE #7 - WEST KITCHENETTE
1/4" = 1'-0" REF: 1 / A101



3 ELEVATION FITNESS ROOM-126 - SOUTH ELEVATION
1/4" = 1'-0" REF: 1 / A101



2 ELEVATION EXECUTIVE KITCHEN - SOUTH
1/4" = 1'-0" REF: 1 / A101



1 ELEVATION EXECUTIVE KITCHEN - NORTH
1/4" = 1'-0" REF: 1 / A101

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:

INTERIOR ELEVATIONS AND DETAILS

STATE OF OHIO
JONATHAN D. MOODY
1215709
REGISTERED ARCHITECT

JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025

25011.01

A801

CONSTRUCTION DOCUMENTS

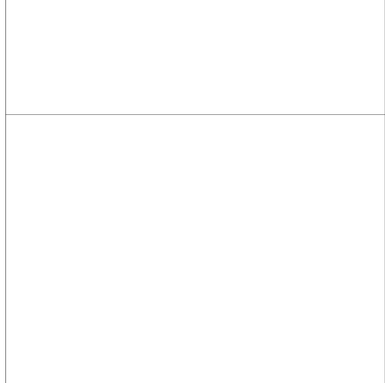
FILE NAME: A:\CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:41 PM
FILE INFO: Autodesk Docs://25011 CMHA Easton Office Renovation - R23/25011_CMHA Easton Office Renovation_ARCH_R25.rvt

CODED NOTES - CASEWORK

1. COUNTERTOP/SURFACE/FACE: QUARTZ STONE (2 CM) WITH MITER-FOLD, PENCIL-EDGE JOINTS ON CONT. 3/4" CABINET GRADE PARTICLE BOARD OR PLYWOOD SUBSTRATE. (COLOR AS NOTED).
2. COUNTERTOP/SURFACE/FACE: SOLID SURFACE (1/2") WITH SEAMLESS BUTT JOINT, PENCIL-EDGE FINISHING ON CONT. 3/4" CABINET GRADE PLYWOOD SUBSTRATE. (COLOR AS NOTED).
3. CASES AND COMPONENTS: PLASTIC LAMINATE (COLOR AS NOTED ON SPECIFIC DRAWINGS) ON 3/4" CABINET-GRADE PARTICLE BOARD OR PLYWOOD SUBSTRATE. (SEE GENERAL NOTES 3).
4. DOORS AND DRAWER FRONTS (FINISH AS NOTED): FULL OVERLAY STYLE. DOORS ON CONCEALED, EUROPEAN-STYLE HINGES (SEE GENERAL NOTE 3 & 4). PLASTIC LAMINATE ON 3/4" PARTICLE BOARD OR PLYWOOD SUBSTRATE. WITH COORDINATING 3mm PVC EDGE BAND (3/4").
5. NOT USED.
6. FOR PLASTIC LAMINATE CABINETS: INTERIORS TO BE WHITE MELAMINE WITH MATCHING MELAMINE ADJUSTABLE SHELVES (MATCHING VINYL EDGE TAPE @ ALL SIDES. SHELVES ARE ADJUSTABLE (UNLESS NOTED OTHERWISE) SUPPORTED ON NICKEL (SPOON-TYPE) SHELF PINS. RECEIVING HOLES TO BE SPACED 2" O.C.
7. DOOR/DRAWER PULL (SEE 24 / A840 FOR SPECIFIC DESIGNATIONS)
8. DRAWERS (EXCEPT FILES) ON MEDIUM-DUTY, FULL EXTENSION, SOFT-CLOSING GLIDES - FULL FILE DRAWERS ON HEAVY-DUTY, FULL-EXTENSION GLIDES. (WHITE MELAMINE INTERIORS).
9. FRY 4" LED BASE - LED-BS4 (CLEAR ANODIZED FINISH)
10. SCHEDULED WALL BASE
11. PARTICLE BOARD OR PLYWOOD RIBS SPACED NOT MORE THAN 16" O.C. PROVIDE PENETRATIONS FOR WIRE MANAGEMENT.
12. COUNTER SUPPORT BRACKETS (12" X 18" U.N.O.):
    400 W. Gamby Street, Manheim, PA 17545
    1-888-647-0200 - 1-717-664-4582 (fax) info@aandmhardware.com
    REGULARLY SPACED SO THAT OPEN SPANS NEVER EXCEED 42"
13. THRU-COUNTER WIRE MANAGEMENT: DOUG MOCKET MM3 CAP (17S -SATIN NICKEL) FOR 1 3/4" HOLE. EXACT AND FINAL LOCATIONS ARE TO BE FIELD-COORDINATED WITH OWNER.
14. CONTINUOUS LED STRIP IN STANDARD MOUNT (SEE LIGHTING PLAN)
15. FLUSH POWER GROMMET - 2 ELECTRIC / DUAL USB MOCKETT PCS62BJUSB SATIN ALUMINUM - SPACE EVENLY 42" O.C.
16. STAINLESS STEEL HOOK (SEE MCMASTER-CARR #11655A12) LOCATE (1) EACH SIDE OF POWER GROMMET (4 1/2" FROM CENTERLINE OF GROMMET).
17. 6"X6"X1 1/8" ANGLE BRACKET (19" THICK) NICKEL PLATED STEEL - SEE McMASTER-CARR #1556A49
18. TOP & WATERFALL SIDES WV-1 (REFER TO FINISH LEGEND)
    "PLEXWOOD" 1/2" SOLID SLAB ON 3/4" CABINET GRADE PARTICLE BOARD OR PLYWOOD SUBSTRATE. PROVIDE MITER-FOLD CORNERS & MATCHING HARDWOOD EDGING/NOSING
19. BOTTOM-MOUNT SLIDING TRASH CABINET ORGANIZER (SEE SIMPLYPUT #932584, SKU # SP-BSC10-1-35-P

GENERAL NOTES - CASEWORK

1. REFER TO SPECIFICATION MANUAL SECTIONS 06-20-00 (FINISHED CARPENTRY) AND 06-40-00 (ARCHITECTURAL WOODWORK) FOR A COMPLETE ENUMERATION OF PERFORMANCE AND FABRICATION GUIDELINES.
2. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING IN-WALL BLOCKING ADEQUATE FOR THE SUPPORT OF ALL CABINETRY NOTED HEREIN. IN ADDITION, THE CONTRACTOR SHALL PROVIDE ADEQUATE IN-WALL BLOCKING FOR ANY/ALL FINISH CARPENTRY OR ANCILLARY COMPONENTS (INCLUDING BUT NOT LIMITED TO WALL PANELS, MILLWORK, CUSTOM CASEWORK, GRAPHIC PANELS, BANNERS, ETC.) DESIGNATED AND DETAILED HEREIN AS RIGIDLY ATTACHED TO WALL ASSEMBLIES OR OTHER STRUCTURAL COMPONENTS. SEE SPECIFICATION SECTION **06 10 50** FOR BLOCKING REQUIREMENTS. NOTE: SPECIFIC TYPES OF BLOCKING ARE SHOWN IN DETAIL DRAWINGS FOR CLARITY – THIS IS NOT TO BE TAKEN AS A FULL ACCOUNTING. GENERAL/TYPICAL BLOCKING MAY OR MAY NOT BE SHOWN.
3. FOR PLASTIC LAMINATE CABINETS: ALL EXPOSED EXTERIOR SURFACES ARE TO BE CLAD IN PLASTIC LAMINATE (COLOR AS NOTED). ALL EXPOSED INTERIOR SURFACES ARE TO BE CLAD IN WHITE MELAMINE. HIDDEN OR CONCEALED FACES ARE TO BE CLAD IN A PLASTIC LAMINATE BACKER. DOORS AND ADJUSTABLE SHELVES ARE TO BE FULLY CLAD IN THE SAME PLASTIC LAMINATE AS THE CASE (UNLESS NOTED OTHERWISE).
4. PROVIDE LOCKS FOR CABINET DOORS (UPPER AND LOWER) AS NOTED ON SPECIFIC ELEVATIONS.
5. ALL COUNTERTOPS ARE TO INCLUDE A CONTINUOUS MATCHING 4" BACKSPLASH (UNLESS SHOWN AND NOTED OTHERWISE). ALL BACKSPLASHES ASSUMED TO INCLUDE SIDESPLASHES AT ADJOINING WALLS AND/OR OTHER VERTICAL INTERRUPTIONS.
6. PLASTIC LAMINATE COUNTERTOPS ARE TO HAVE A 1 ½" NOSING WITH A MATCHING DOELKIN WOODTAPE VINYL EDGE BAND (MANUFACTURER'S BEST MATCH). EDGE BAND MATCHES TO BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION. UNDERSIDES OF COUNTER ARE TO BE CLAD WITH BACKER SHEET.
7. ALL THRU-COUNTER WIRE MANAGEMENT SLOTS ARE TO BE *12" LONG X 1" WIDE WITH DOUG MOCKET BRUSH STRIP INSERT (BR1-90)*. ALL FABRICATED WORKSURFACES WITH OPEN KNEE SPACE ARE TO RECEIVE A MINIMUM OF (1) INSERT EVERY 48". EXACT AND FINAL LOCATIONS ARE TO BE FIELD-COORDINATED WITH OWNER.
8. FOR "WET" AREAS (INCLUDING ALL FOOD SERVICE CABINETRY): COUNTERTOP/BACKSPLASH AND BASE CABINET SUBSTRATES ARE TO BE MARINE GRADE PLYWOOD.
9. NOTE THAT EQUIPMENT/APPLIANCES SHOWN IS FOR REFERENCE ONLY. EXACT LOCATIONS TO BE VERIFIED IN FIELD WITH OWNER.
10. FOR CABINETS AT INSIDE CORNERS: PROVIDE "CORNER CABINET" EXTENSION SO THAT END CABINET OF ONE RUN EXTENDS ALONG AND BEHIND OTHER RUN TO FILL IN CORNER DEAD SPACE – MODIFY AUGMENT SHELF SUPPORTS AS REQUIRED.
11. FINISH/MATERIAL ABBREVIATIONS ARE DELINEATED IN THE OVERALL PROJECT FINISH LEGEND.
12. ALL QUARTZ STONE WORKSURFACE/COUNTERTOP TO BE 2 CM WITH MITER-FOLD, PENCIL-EDGE NOSING ON 3/4" CABINET-GRADE PARTICLEBOARD SUBSTRATE. UNLESS NOTED OTHERWISE. COLOR AS NOTED.
13. ALL SOLID SURFACE COUNTERTOP/SURFACE/FACE TO BE 1/2" WITH SEAMLESS BUTT JOINT, PENCIL-EDGE FINISHING ON CONT. 3/4" CABINET GRADE PARTICLEBOARD SUBSTRATE.UNLESS NOTED OTHERWISE. COLOR AS NOTED.
14. ALL PLASTIC LAMINATE CASES AND COMPONENTSTO BE ON 3/4" CABINET-GRADE PLYWOOD SUBSTRATE. UNLESS NOTED OTHERWISE. COLOR AS NOTED.
15. ALL DOORS AND DRAWER FRONTS (FINISH AS NOTED) TO BE *REVEAL OVERLAY STYLE, DOORS ON CONCEALED, EUROPEAN-STYLE HINGES*. PLASTIC LAMINATE ON 3/4" PARTICLEBOARD SUBSTRATE. WITH COORDINATING 3mm PVC EDGE BAND (3/4"). UNLESS NOTED OTHERWISE.
16. FOR PLASTIC LAMINATE CABINETS: INTERIORS TO BE WHITE MELAMINE WITH MATCHING MELAMINE ADJUSTABLE SHELVES (MATCHING VINYL EDGE TAPE @ ALL SIDES. SHELVES ARE ADJUSTABLE (UNLESS NOTED OTHERWISE) SUPPORTED ON NICKEL (SPOON-TYPE) SHELF PINS. RECEIVING HOLES TO BE SPACED 2" O.C.
17. ALL DRAWERS (EXCEPT FILES) ON MEDIUM-DUTY, FULL EXTENSION, SOFT-CLOSING GLIDES - FULL FILE DRAWERS ON HEAVY-DUTY, FULL-EXTENSION GLIDES. (WHITE MELAMINE INTERIORS).
18. ALL INTERNAL FRAMING AND/OR PLYWOOD RIBS TO BE SPACED NOT MORE THAN 16" O.C. - PROVIDE PENETRATIONS FOR WIRE MANAGEMENT
19. ALL COUNTER SUPPORT BRACKETS (12" X 18" U.N.O.) REGULARLY SPACED SO THAT OPEN SPANS NEVER EXCEED 42"

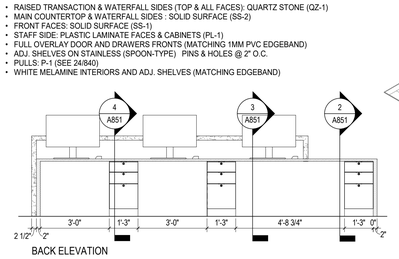


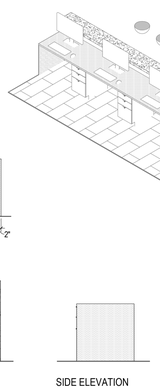
4 DETAIL TRANSACTION @ PED
1 1/2" = 1'-0" REF: 1g / A851

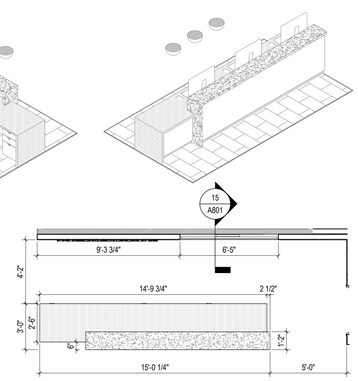
3 DETAIL TRANSACTION @ KNEE SPACE
1 1/2" = 1'-0" REF: 1g / A851

2 DETAIL LOWER WORK SURFACE
1 1/2" = 1'-0" REF: 1g / A851

- RAISED TRANSACTION & WATERFALL SIDES (TOP & ALL FACES): QUARTZ STONE (QZ-1)
- MAIN COUNTERTOP & WATERFALL SIDES : SOLID SURFACE (SS-2)
- FRONT FACES: SOLID SURFACE (SS-1)
- STAFF SIDE: PLASTIC LAMINATE FACES & CABINETS (PL-1)
- FULL OVERLAY DOOR AND DRAWERS FRONTS (MATCHING 1MM PVC EDGEBAND)
- ADJ. SHELVES ON STAINLESS (SPOON-TYPE) PINS & HOLES @ 2" O.C.
- PULLS: P-1 (SEE 24/840)
- WHITE MELAMINE INTERIORS AND ADJ. SHELVES (MATCHING EDGEBAND)







1b ELEVATION RECEPTION/SECURITY DESK
3/8" = 1'-0"

1a PLAN RECEPTION PLAN
1/4" = 1'-0"

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

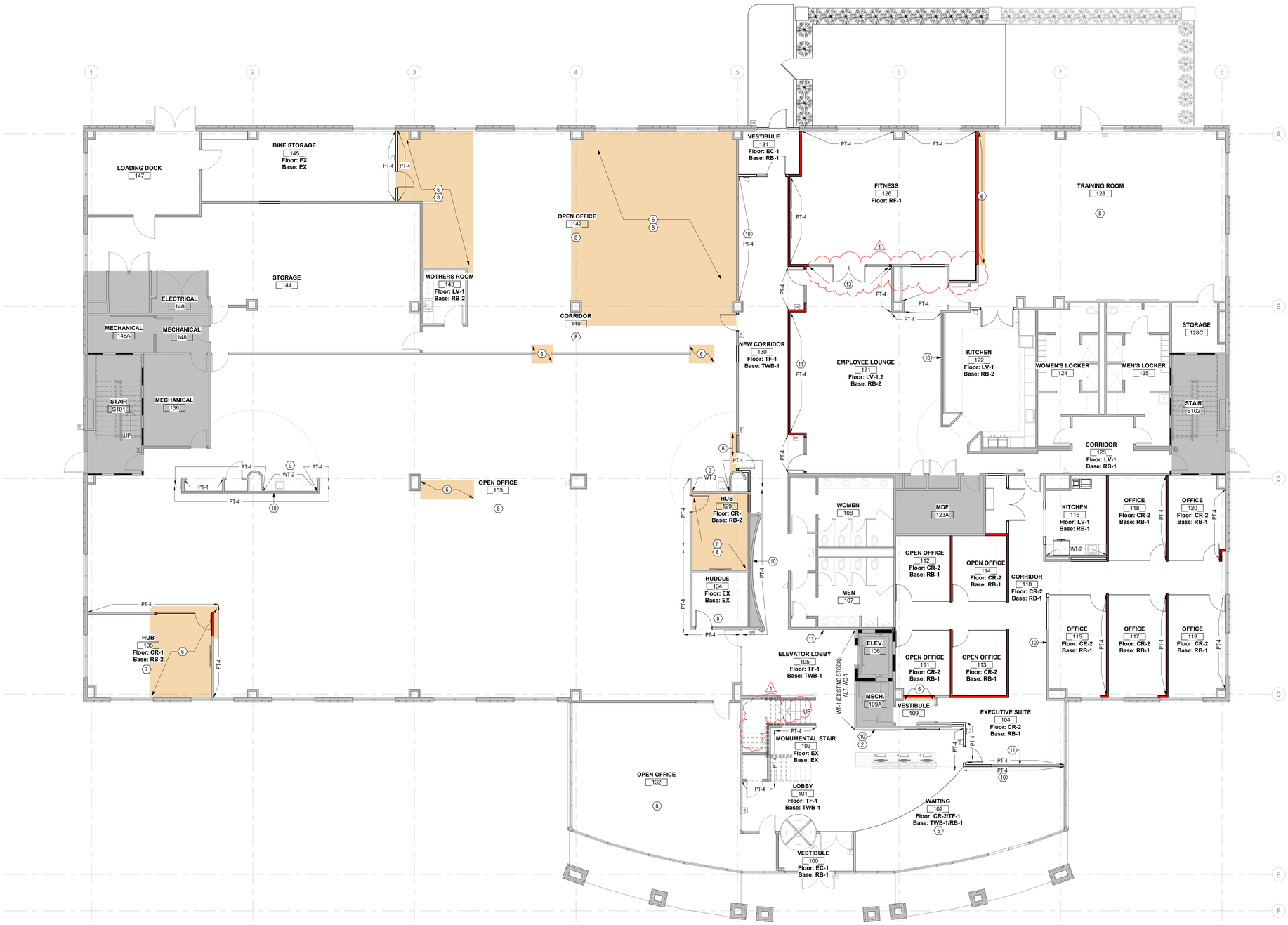
DRAWING TITLE:

MILLWORK DETAILS

STATE OF OHIO
JONATHAN D. MOODY
1215709
REGISTERED ARCHITECT
JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025
25011.01
A851
CONSTRUCTION DOCUMENTS

FILE NAME: A-CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:44 PM
FILE INFO: J:\Active\Docs\25011 CMHA Easton Office Renovation - R25\25011 CMHA Easton Office Renovation_ARCH_R25.rvt



1 PLAN LEVEL 01 - FINISHES
1/8" = 1'-0"

FILE NAME: A-CMHA EASTON RENOVATION
REVIT VERSION: 2025
PRINT DATE: 4/30/2025 5:23:48 PM
FILE PATH: J:\Active Docs\25011 CMHA Easton Office Renovation - R25\25011_CMHA Easton Office Renovation_ARCH_R25.rvt

GENERAL NOTES - FINISH PLANS

1. STANDARDS AND PROCEDURES FOR THE PREPARATION AND APPLICATION OF INTERIOR FINISHES ARE DEFINED IN THE PROJECT MANUAL. FINISH (SUB) CONTRACTORS ARE REQUIRED TO READ, UNDERSTAND AND FOLLOW ALL RELEVANT SECTIONS OF THE PROJECT MANUAL.
2. FINISH MATERIALS ARE LISTED IN THE LEGEND COMPONENT OF THE FINISH SCHEDULE. SPECIFICATIONS ARE INCLUDED IN THE PROJECT MANUAL. ANY CONFLICTS OR DISCREPANCIES BETWEEN THESE TWO SHOULD BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY.
3. NO FINISH MATERIAL SUBSTITUTIONS WILL BE ACCEPTED EXCEPT IN THE SPECIFIC CIRCUMSTANCES ENUMERATED IN THE PROJECT MANUAL.
4. PAINTED HOLLOW METAL DOORS AND FRAMES TO BE PAINTED TO MATCH ADJACENT WALL COLOR UNLESS NOTED OTHERWISE. MATERIAL, FINISH AND COLOR INFORMATION FOR ALL OTHER DOORS AND FRAMES IS CONTAINED IN THE DOOR SCHEDULE AND ITS ASSOCIATED LEGENDS. IF WALLS ON OPPOSITE SIDES OF DOOR FRAME ARE DIFFERENT COLORS THE PAINT COLORS SHOULD BE SPLIT AT THE JAMB OF THE FRAME.
5. ALL VERTICAL TRANSITIONS BETWEEN DIFFERING WALL FINISHES ARE TO BE MADE AT INSIDE CORNERS (UNLESS NOTED OTHERWISE).
6. FLOORING MATERIAL DESIGNATED FOR STAIRS IS TO INCLUDE STAIR AND ALL ASSOCIATED TREADS, RISERS, LANDINGS, ETC. (UNLESS NOTED OTHERWISE).
7. PAINT DESIGNATED FOR METAL STAIR COMPONENTS IS TO INCLUDE ALL EXPOSED METAL COMPONENTS ASSOCIATED WITH THE STAIR SYSTEM ITSELF. ALL EXPOSED STRUCTURAL STEEL COMPONENTS SUPPORTING THE STAIR SYSTEM (UNLESS NOTED OTHERWISE), AND ALL EXPOSED METAL COMPONENTS OF THE HANDRAIL AND GUARDRAIL SYSTEMS (UNLESS NOTED OTHERWISE). UNDERSIDES OF STAIR RUNS AND LANDINGS ARE CONSIDERED "EXPOSED" IN ALL SITUATIONS.
8. FOR CLARITY, SOME FINISH INFORMATION HAS BEEN PRESENTED GRAPHICALLY IN THE FORM OF FINISH AND FLOORING PLANS. SHOULD THERE BE A DISCREPANCY BETWEEN THE FINISH SCHEDULE AND THESE PLANS, THE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY. FOR THE PURPOSE OF BIDDING, INFORMATION DETAILED ON THE FINISH FLOOR PLANS AND FLOORING PLANS IS TO TAKE PRECEDENCE OVER THE FINISH SCHEDULE UNTIL FURTHER CLARIFICATION CAN BE GIVEN. FOR AREAS NOT SPECIFICALLY DETAILED ON THESE PLANS, THE FINISH SCHEDULE PERTAINS.
9. PAINT DESIGNATED FOR EXPOSED OVERHEAD STRUCTURE IS TO INCLUDE ALL EXPOSED COMPONENTS INCLUDING (BUT NOT EXCLUSIVE TO) DECKING, STRUCTURAL MEMBERS, MECHANICAL AND ELECTRICAL DELIVERY SYSTEMS, FIRE PROTECTION SYSTEMS (EXCLUDING SPRINKLER HEADS), AND ALL OTHER MISCELLANEOUS BUILDING SYSTEMS LOCATED OVERHEAD. EACH OF THE AFOREMENTIONED CATEGORIES IS TO INCLUDE ANY AND ALL ASSOCIATED SUPPORTS, FASTENERS, HANGERS, STRUTS, BRACES, BRACKETS, ETC.
10. WHERE RESILIENT BASE IS SPECIFIED (VINYL OR RUBBER) PROVIDE COVE PROFILE BASE AT ALL RESILIENT FLOORS AND STRAIGHT BASE FOR ALL CARPET AREAS (UNLESS OTHERWISE NOTED). HEIGHT AND COLOR TO BE AS INDICATED ON FINISH LEGEND.
11. REFER TO REFLECTED CEILING PLANS AND SPECIFICATION MANUAL FOR ALL CEILING MATERIAL AND FINISH INFORMATION.
12. ALL DRYWALL SOFFITS TO BE PAINTED FLAT CEILING WHITE UNLESS NOTED OTHERWISE ON CEILING PLANS.
13. CERAMIC WALL TILE TO EXTEND FULL WIDTH AND FULL HEIGHT FOR ANY AND ALL SCHEDULED TILED WALLS (UNLESS NOTED OTHERWISE).
14. FOR EPOXY OR INTUMESCENT PAINT COLOR REFER TO PAINT SCHEDULE NUMBERS.
15. WITHIN FINISH SCHEDULE CELLS: SLASH MARKS INDICATE DIFFERENCES IN FINISH MATERIAL WHILE COMMAS INDICATE DIFFERENCES IN PATTERN OR COLOR WITHIN A SPECIFIC MATERIAL.
16. APPROPRIATE METAL OR VINYL TRANSITION STRIPS MUST BE PROVIDED AT ALL FINISH MATERIAL FLOORING CHANGES. GENERAL CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL FLOORING TRANSITIONS AND AREAS IN WHICH FLOORING PATTERNS ARE SHOWN. SEE FLOOR FINISH PLANS, DETAILS AND NOTES FOR SPECIFIC INFORMATION.
17. WALL PAINT INDICATED FOR CURTAIN WALL LOCATIONS APPLIES TO ALL ASSOCIATED DRYWALL COMPONENTS (CURBS, HEADERS, BULKHEADS, ETC.) AND SHOULD NOT BE INTERPRETED AS APPLYING TO CURTAIN WALL COMPONENTS OR GLASS.
18. FLOORING CONTRACTOR(S) IS RESPONSIBLE FOR COORDINATING FINISHED FLOOR ELEVATIONS WITH ALL/ANY FLOOR MOUNTED COMPONENTS (RECEPTACLES, ACCESS PANELS, ETC.) SO THAT COMPONENTS ARE INTEGRATED AND FLUSH.
19. PAINT ALL GYPSUM BOARD WALLS ON FIRST FLOOR PAINT PT-1. THIS DOES NOT INCLUDE ROOMS 106, 109A, 123A, 136, 146, 148, 148A, S101, AND S102.

CODED NOTE LEGEND

1. ALIGN
2. SW-1: GREEN WALL ELEMENT; REFER TO ELEVATIONS, FINISH LEGEND AND SPECS FOR MORE INFORMATION.
3. BRANDED RAISED LETTER SIGNAGE/DIRECTORY.
4. NOT USED.
5. RB BASE AT CARPET, TILE BASE AT TILE.
6. PATCH WITH MATCHED/SALVAGED EXISTING CARPET TILE.
7. PATCH WITH MATCHING EXISTING FLOORING; ALTERNATE #3: REPLACE FLOORING WITH CR-2, SEE FINISH LEGEND FOR DETAILS.
8. ALTERNATE #3: REPLACE FLOORING (CARPET AND RESILIENT) WITH CR-1, SEE FINISH LEGEND FOR DETAILS.
9. ALTERNATE #7: REPLACE BACKSPLASH WITH TILE AS INDICATED.
10. BRANDING/ARTWORK PLACEHOLDER. KEEP WALL CLEAR OF DEVICES.
11. BRANDING/ARTWORK PLACEHOLDER. KEEP WALL CLEAR OF DEVICES. PROVIDE IN WALL BLOCKING.
12. USE OWNER'S EXISTING STOCK
13. DECORATIVE GLASS FILM; O.F.C.I.

#	DATE	CHANGE DESCRIPTION
1	4/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

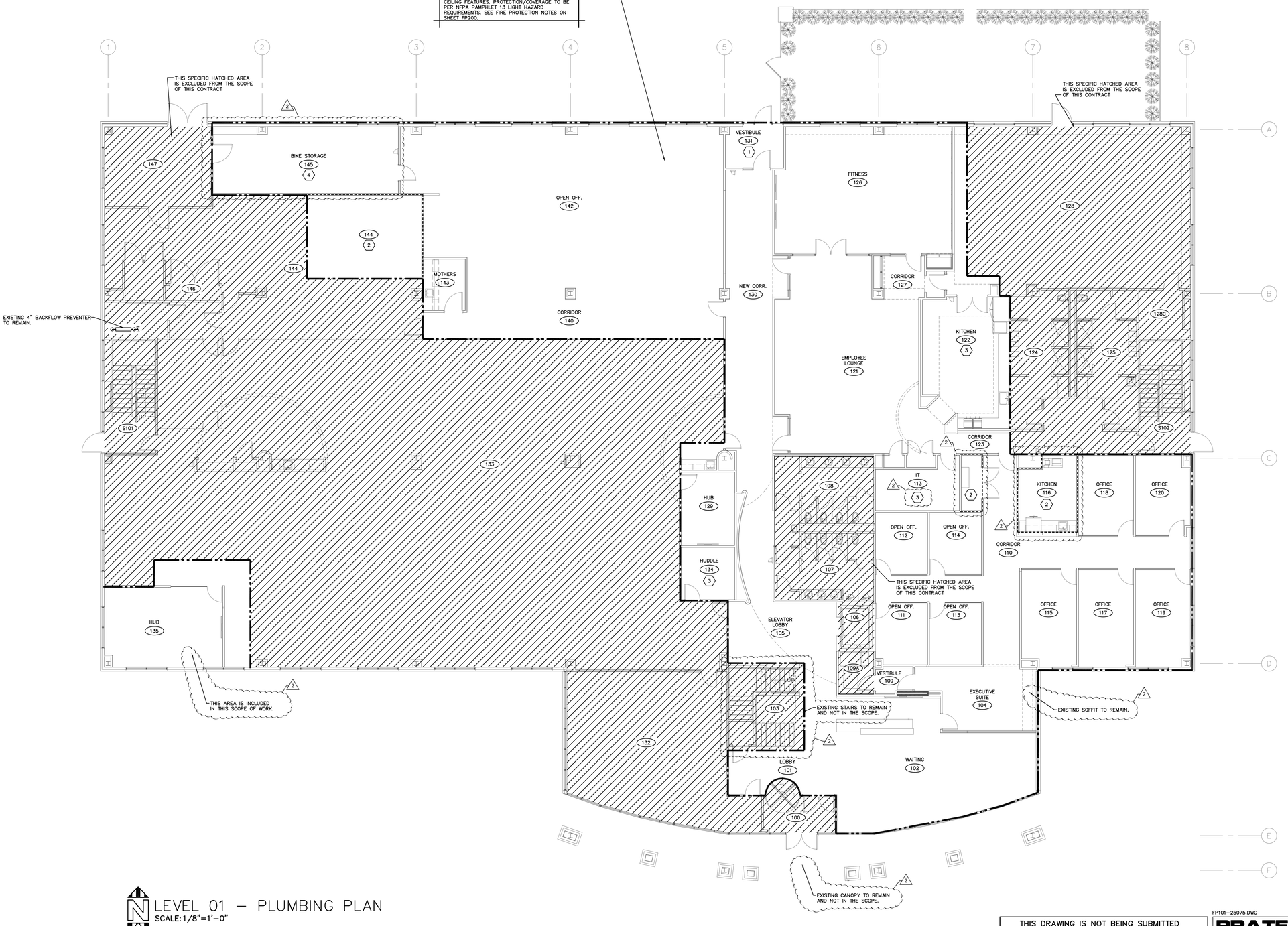
Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
LEVEL 01 - FINISH PLAN

STATE OF OHIO
JONATHAN D. MOODY
1215709
REGISTERED ARCHITECT
JONATHAN D. MOODY, LIC. #1215709
EXP. DATE: 12/31/2025

03/28/2025
25011.01
A901
CONSTRUCTION DOCUMENTS

F.P. SPRINKLER TENANT FINISH NOTE:
MODIFY THE EXISTING BUILDING F.P. SPRINKLER INSTALLATION WITHIN THIS SPECIFIC AREA AS REQUIRED BY THE NEW STRUCTURAL, DUCTWORK, AIR DEVICE, AND LIGHTING LAYOUT. THIS INCLUDES, BUT IS NOT LIMITED TO REVISING, RAISING, AND/OR OFFSETTING EXISTING SPRINKLER PIPING AS REQUIRED BY NEW CEILING FEATURES AND/OR NEW MECHANICAL/ELECTRICAL/PLUMBING ITEMS ABOVE THE NEW CEILING, REMOVING AND REPLACING EXISTING PENDENT HEADS WITH NEW, AND THE COORDINATION OF SPRINKLER HEADS WITH NEW AS WELL AS EXISTING DUCTWORK, AIR DEVICES, LIGHTING, STRUCTURAL MEMBERS, AND CEILING FEATURES. PROTECTION/COVERAGE TO BE PER NFPA PAMPHLET 13 LIGHT HAZARD REQUIREMENTS. SEE FIRE PROTECTION NOTES ON SHEET FP200.



LEVEL 01 – PLUMBING PLAN
SCALE: 1/8"=1'-0"

CODED NOTES

1. PROVIDE SPRINKLER PROTECTION WITH DRY BARREL SPRINKLER HEAD PER NFPA 13 AND OHIO BUILDING CODE. DRY BARREL SPRINKLER HEAD SIZED FOR –20°F EXTERIOR AND 50°F INTERIOR.
2. PROVIDE SPRINKLER PROTECTION PER NFPA PAMPHLET NO. 13 ORDINARY HAZARD GROUP 1 OCCUPANCY REQUIREMENTS FOR THIS SUB-ZONE WITHIN THE OVERALL ZONE. REFER TO ARCH. PLANS FOR IDENTIFICATION OF SPECIFIC PROTECTION AREAS. SEE FIRE PROTECTION NOTES ON SHEET FP-301.
3. EXISTING ROOM TO REMAIN. NO WORK.
4. PROVIDE SPRINKLER PROTECTION PER NFPA PAMPHLET NO. 13 ORDINARY HAZARD GROUP 2 OCCUPANCY REQUIREMENTS FOR THIS SUB-ZONE WITHIN THE OVERALL ZONE. REFER TO ARCH. PLANS FOR IDENTIFICATION OF SPECIFIC PROTECTION AREAS. SEE FIRE PROTECTION NOTES ON SHEET FP-301. THIS CONTRACTOR SHALL PROVIDE, PAY FOR, AND SECURE UPDATED FLOW TEST DATA FOR INCLUSION WITH HYDRAULIC CALCULATIONS WHICH ARE TO BE PROVIDE AS APART OF THIS CONTRACT FOR THIS AREA.

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
LEVEL 01 - FIRE PROTECTION PLAN

THIS DRAWING IS NOT BEING SUBMITTED FOR PLAN APPROVAL PURPOSES

THIS PLAN IS PREPARED TO ASSIST FIRE PROTECTION (SUB)CONTACTORS IN SUBMITTING A BID. SUCCESSFUL LICENSED FIRE PROTECTION (SUB)CONTRACTOR SHALL PREPARE DETAILED CONSTRUCTION DRAWINGS, PERFORM DETAIL HYDRAULIC FLOW CALCULATIONS, PAY FOR PLAN APPROVAL FEES, OBTAIN PERMIT, AND SUBMIT DOCUMENTS TO AUTHORITY(IES) HAVING JURISDICTION FOR REVIEW AND APPROVAL.

FP101–25075.DWG

PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
(614) 766 4896
FAX: (614) 766 2354

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
J.A. HAHN	J.A. HAHN	C.M. ANDERSON	25075

STATE OF OHIO
TIM PRATER
E-51932
PROFESSIONAL ENGINEER
03/31/25

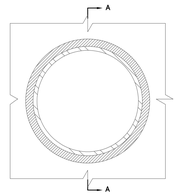
03/31/2025
25011.01
FP101
CONSTRUCTION DOCUMENTS

UL/CUL SYSTEM NO. WL1085

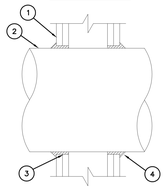
METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

F RATING = 1-HR. OR 2-HR.
T RATING = 0-HR
L RATING AT AMBIENT = LESS THAN 1CFM/SQ. FT.
L RATING AT 400°F = 4 CFM/SQ. FT..

FRONT VIEW



SECTION A-A



1. GYPSUM WALL ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR OR 2-HR FIRE-RATING) (2-HR SHOWN).
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
   B. MAXIMUM 12" NOMINAL DIAMETER CAST IRON PIPE.
   C. MAXIMUM 6" NOMINAL DIAMTER COPPER PIPE.
   D. MAXIMUM 6" NOMINAL DIAMETER EMT.
   E. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
3. HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT FORCED INTO ANNULAR SPACE TO MAXIMUM EXTENT POSSIBLE.
4. MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT TO BE INSTALLED AROUND PIPE, LAPPING 1/4" BEYOND PERIPHERY OF OPENING

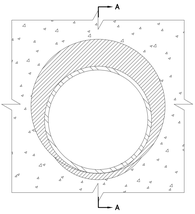
NOTES:
1. MAXIMUM DIAMTER OF OPENING = 13-1/4".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/4".

UL/CUL SYSTEM NO. CAJ1154

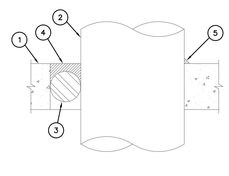
METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F RATING = 3-HR
T RATING = 1/4-HR
L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L RATING AT 400°F = 4 CFM/SQ. FT.

TOP VIEW

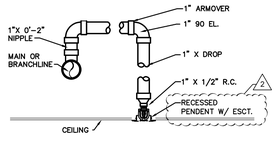


SECTION A-A



1. CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING):
   A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
   B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   A. MAXIMUM 10" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
   B. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
   C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
   D. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. BACKER ROD, HILTI CF 128 FILLER FOAM, OR MINERAL WOOL TO BE USED AS BACKER.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
5. MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES:
1. MAXIMUM DIAMTER OF OPENING = 14".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 3-1/4".
3. MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.



1 **ARM OVER DETAIL**

NOT TO SCALE

FIRE PROTECTION NOTES

1. ALL FIRE PROTECTION CONTRACT WORK IS TO COMPLY WITH THE APPLICABLE NFPA STANDARDS REFERENCED IN THE LOCAL BUILDING CODE AS ADMINISTERED BY THE LOCAL REVIEW/INSPECTION/APPROVAL AUTHORITIES, THE INSURANCE UNDERWRITER'S GUIDELINES, THE LOCAL FIRE PREVENTION AUTHORITY (FIRE MARSHALL'S OFFICE/FIRE DEPARTMENT), AND ANY OTHER AUTHORITIES HAVING JURISDICTION, AS CONFIRMED AND VERIFIED IN ADVANCE BY THE LICENSED F.P. CONTRACTOR.
2. UNLESS DIRECTED OTHERWISE, WHERE NEW STRUCTURE IS BEING ADDED, AND/OR EXISTING STRUCTURE IS BEING REMOVED/RELOCATED/REMODELED/REPLACED OR OTHERWISE ALTERED, THE F.P. CONTRACTOR SHALL REVISE THE EXISTING SPRINKLER INSTALLATION & PROVIDE NEW F.P. ITEMS AS REQUIRED TO PROVIDE/MAINTAIN THE COVERAGE SPECIFIED HEREIN. THIS INCLUDES SPACING AND LOCATION REQUIREMENTS (MIN./MAX.) BETWEEN SPRINKLER HEADS/PIPING, AND RELATIVE TO WALLS, SOFFITS, PARTITIONS & ANY OTHER OBSTRUCTIONS TO SPRINKLER DISCHARGE. THIS APPLIES TO WORK IN/AT THE REVISED AREA(S), AS WELL AS ALL ADJACENT AREAS WHERE WORK ASSOCIATED WITH THIS PROJECT IS BEING DONE. THE WORK AREAS ARE AS DEFINED BY THE FIRE PROTECTION & ARCHITECTURAL DOCUMENTS.
3. UNLESS DIRECTED OTHERWISE, EXISTING FIRE PROTECTION ITEMS THAT ARE NOT IN PRIOR TO START OF WORK IN THIS CONTRACT THAT OBSTRUCT NEW WORK AND/OR ARE IN EXPOSED LOCATIONS WHERE NEW CONCEALING/FINISH STRUCTURE IS BEING PROVIDED UNDER SEPARATE CONTRACT SHALL BE REMOVED, INCLUDING ALL ASSOCIATED WORK, WHETHER INDICATED ON DRAWINGS OR NOT. PIPING (IF ANY) ASSOCIATED WITH THESE ITEMS TO BE REMOVED BACK TO NEAREST ACTIVE MAIN OUTSIDE OF THE EXPOSED LOCATION, OR TO WITHIN NEW CONCEALING STRUCTURE PROVIDED, AND CAPPED AT THAT POINT.
4. ALL EXISTING SPRINKLER HEAD LOCATIONS ARE TO BE FIELD VERIFIED BY THE FIRE PROTECTION CONTRACTOR IN ADVANCE.
5. CUTTING/REMOVAL & REPAIR/REPLACEMENT OF EXIST. STRUCTURES, SURFACES AND/OR FINISHES REQ'D FOR REMOVAL OF EXIST. AND/OR INSTALLATION OF NEW F.P. WORK IS BY THIS CONTRACTOR., UNLESS INDICATED OTHERWISE.
   REPAIR/REPLACEMENT TO BE TO ORIGINAL CONDITION, TO MATCH ADJACENT STRUCTURES, SURFACES AND FINISHES IN TYPE AND KIND. THIS INCLUDES CEILINGS, PARTITIONS, FLOORS, SOFFITS, ETC., BOTH WITHIN AND OUTSIDE THE REVISED/REMODELED AREAS THAT ARE AFFECTED BY WORK REQUIRED FOR COMPLETION OF THIS PROJECT. NOT APPLICABLE IF EXISTING STRUCTURES, SURFACES AND/OR FINISHES ARE BEING REVISED/REMOVED/ REPLACED UNDER SEPARATE CONTRACT.
6. EXISTING SPRINKLER HEADS SHALL NOT BE REUSED, REPLACED, AND/OR RELOCATED.
7. WHERE NEW DROPPED CEILINGS ARE BEING PROVIDED UNDER SEPARATE CONTRACT, NEW SPRINKLER HEADS SHALL BE INSTALLED IN THE CEILING AS REQUIRED FOR PROPER PROTECTION/COVERAGE. THIS INCLUDES NEW DROPPED CEILINGS AT AREAS WITHOUT EXISTING CEILINGS, & AT AREAS WITH EXISTING CEILINGS BEING REPLACED (INCLUDING REPLACEMENT AT SAME ELEVATION AS EXISTING CEILING). CEILING CONDITIONS & MODIFICATIONS TO BE CONFIRMED FROM ARCHITECTURAL DOCUMENTATION, AND VERIFIED IN FIELD.
8. MODIFICATIONS TO THE EXISTING SPRINKLER SYSTEM SHALL BE ACCORDING TO NFPA PAMPHLET NO. 13, THE APPLICABLE BUILDING CODE AND THE INSURER'S GUIDELINES, RULES AND REGULATIONS (REQUIRED FOR APPROVAL). SPECIFIC AREAS DESIGNATED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
   A. LIGHT HAZARD OCCUPANCY = .10 GPM PER SQUARE FOOT OF FLOOR AREA WHEN ALL SPRINKLERS WITHIN THE MOST REMOTE 1500 SQUARE FEET OF FLOOR AREA ARE OPERATING. MAXIMUM SPACING OF SPRINKLER HEADS SHALL BE 225 SQUARE FEET PER HEAD.
   B. ORDINARY HAZARD GROUP 1 OCCUPANCY = .15 GPM PER SQUARE FOOT OF FLOOR AREA WHEN ALL SPRINKLERS WITHIN THE MOST REMOTE 1500 SQUARE FEET OF FLOOR AREA ARE OPERATING. MAXIMUM SPACING OF SPRINKLER HEADS SHALL BE 130 SQUARE FEET PER HEAD.
   C. ORDINARY HAZARD GROUP 2 OCCUPANCY = .20 GPM PER SQUARE FOOT OF FLOOR AREA WHEN ALL SPRINKLERS WITHIN THE MOST REMOTE 1500 SQUARE FEET OF FLOOR AREA ARE OPERATING. MAXIMUM SPACING OF SPRINKLER HEADS SHALL BE 130 SQUARE FEET PER HEAD.
   D. ADD A TOTAL ALLOWANCE OF 100 GPM FOR SIMULTANEOUS USE OF INSIDE (IF ANY) AND OUTSIDE HOSE STREAMS FOR LIGHT HAZARD OCCUPANCY CALCULATIONS AT THE APPROPRIATE CONNECTION POINT(S); 250 GPM FOR ORDINARY HAZARD.
   E. WATER DEMAND OF SPRINKLERS INSTALLED IN RACKS OR WATER CURTAINS SHALL BE ADDED TO THE CEILING SPRINKLER DEMAND AT THE POINT(S) OF CONNECTION. DEMANDS SHALL BE BALANCED TO THE HIGHER PRESSURE.
   F. DESIGN AREAS LISTED HEREIN MAY BE REDUCED IN ACCORDANCE WITH NFPA PAMPHLET NO. 13 ALLOWANCE FOR USE OF QUICK RESPONSE SPRINKLER HEADS, PROVIDED THE INSTALLATION COMPLIES WITH ALL SPECIFIED CONDITIONS.
9. THE EXISTING BUILDING IS FULLY SPRINKLED PER NFPA PAMPHLET NO. 13 AND IN ACCORDANCE WITH THE BUILDING CODE. WORK IN THIS CONTRACT IS TO MAINTAIN THIS CONDITION FOR THE INDICATED TENANT FINISH PORTION OF THE STRUCTURE, AS WELL AS EXISTING ADJACENT AREAS.
10. THE FIRE PROTECTION CONTRACTOR SHALL SIZE ALL FIRE PROTECTION SYSTEM PIPING ACCORDING TO HYDRAULIC CALCULATIONS AND/OR PER PIPE SCHEDULE FOR PIPE SCHEDULED SYSTEMS AS DEFINED BY NFPA 13, WITH THE EXCEPTION OF PIPING SIZES INDICATED ON THESE PLANS AT SPECIFIC LOCATIONS.
11. FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL ADDITIONAL PIPING, EQUIP. AND ACCESSORIES WHETHER SHOWN ON DWG'S. OR NOT, WHICH IS REQ'D TO PROVIDE AND MAINTAIN COMPLETE SPRINKLER & OTHER FIRE PROTECTION SYSTEMS FOR THE BUILDING.
12. FIRE PROTECTION CONTRACTOR TO LOCATE AND INSTALL ALL SPRINKLER HEADS IN LAY-IN CEILINGS PER DETAILS INCLUDED WITH THESE DRAWINGS.
13. COORDINATE ALL SPRINKLER DROPS FOR HEAD LOCATION WITH CLG. GRIDS, STRUCTURE AND WORK IN OTHER CONTRACTS IN SAME AREA. VERIFY LOCATION OF ALL ITEMS/
    ELEMENTS FROM ARCHITECTURAL & OTHER CONTRACTS PLANS INCLUDED W/COMPLETE CONSTRUCTION DOCUMENTS, & COORD. INSTALLATION W/ APPROPRIATE CONTRACTORS.
14. FIRE PROTECTION CONTRACTOR TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQ'D. FOR COORDINATION AND APPROVED INSTALLATION.
15. FIRE PROTECTION PIPING IS NOT PERMITTED TO RUN ABOVE ANY ELECTRICAL SWITCH-GEAR, MOTOR CONTROL CENTERS OR PANELS, INCLUDING ACCESS/CLEARANCE SPACE 42" IN FRONT OF THESE ITEMS, AND MIN. 30" WIDE, UNDER ANY CIRCUMSTANCES. NEW ITEM LOCATIONS TO BE VERIFIED FROM ELECTRICAL DRAWINGS, AND INSTALLATION COORDINATED WITH ELECTRICAL CONTRACTOR IN ADVANCE OF F.P. INSTALLATION.
    A. LOCATION OF EXISTING ITEMS OF THESE TYPES TO BE DETERMINED AND CONFIRMED IN THE FIELD PRIOR TO START OF WORK.
    B. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR REVIEWING ARCHITECTURAL PROJECT DOCUMENTATION FOR ITEMS AFFECTING FIRE PROTECTION WORK, INCLUDING SPECIFIC DIRECTIONS AND ITEMS OF A GENERAL NATURE, WHICH MAY NOT BE REFERRED TO BY THE F.P. DOCUMENTATION.
    C. UNLESS DIRECTED OTHERWISE, WHERE CONCEALING/FINISH STRUCTURE IS PROVIDED UNDER SEPARATE CONTRACT, ALL WORK IN THE FIRE PROTECTION CONTRACT NOT SPECIFICALLY INTENDED FOR EXPOSED/VISIBLE INSTALLATION SHALL BE INSTALLED WITHIN THE CONCEALING STRUCTURE.

FIRE PROTECTION EQUIPMENT

* LOCATION OF PENDANT AND CONCEALED TYPE HEADS TO BE COORDINATED WITH ARCHITECT AND STRUCTURE PROVIDED IN ADVANCE. FINAL LAYOUT OF ALL SPRINKLER HEADS, INCLUDING SPRINKLER HEAD STYPES RELATIVE TO LOCATIONS IS SUBJECT TO APPROVAL BY ARCHITECT/OWNER IN ADVANCE.

FIRE PROTECTION SPRINKLER HEADS

A. RECESSED PENDENT HEADS: SIMILAR TO VIKING VK302 MICROFAST QUICK RESPONSE SPRINKLERS (K5.6 & 8.0) ORIFICE WITH ADJUSTABLE TWO-PIECE ESCUTCHEON. ESCUTCHEON & HEAD TO BE FURNISHED WITH MANUFACTURER APPLIED FINISH. COLOR TO BE COORDINATED w/ARCHITECT/OWNER IN ADVANCE. HORIZONTAL DEFLECTOR SIDEWALL HEADS (IF REQUIRED) TO BE SIMILAR. DRY PIPE BARREL HEADS TO BE SIMILAR, WITH 1" INLET, ADJUSTABLE DRY BARREL AND COMPRESSED CENTER STRUT ACTUATOR. DRY BARREL HEADS FOR USE IN AREAS SUBJECT TO FREEZING WITH ADJACENT CONDITIONED SPACE FOR INSTALLATION OF WET SUPPLY PIPING AND ASSOCIATED ITEMS.

B. UPRIGHT HEADS: SIMILAR TO VIKING VK300 MICROFAST QUICK RESPONSE SPRINKLERS (K5.6 & 8.0) BRASS FINISH. SIDEWALL HEAD (IF REQUIRED) TO BE SIMILAR, WITH VERTICAL OR HORIZONTAL DEFLECTOR. DRY BARREL HEADS TO BE SIMILAR WITH 1" INLET, ADJUSTABLE DRY BARREL AND CENTER STRUT ACTUATOR. FOR USE IN AREAS WITHOUT CONCEALING "FINISH" STRUCTURE WITH EXPOSED SUPPLY PIPING. EXCEPTIONS TO BE APPROVED IN ADVANCED.

C. EXTENDED COVERAGE SIDEWALL HEADS: SIMILAR TO VIKING MODEL VK188 WITH 1" NPT INLET, OUTLET SPRAY DEFLECTOR, 5.6 "K" FACTOR AND NATURAL BRONZE FINISH. PROVIDE DEFLECTOR HORIZONTAL AND/OR VERTICAL DEFLECTOR AS REQUIRED BY AREA OF COVERAGE. HEAD TO BE LISTED "QUICK RESPONSE" TYPE. COORDINATE FINISH OF SPRINKLER HEAD WITH ARCHITECT/OWNER IN ADVANCE.

FIRE PROTECTION SPRINKLER PIPING AND HANGERS

A. 1 1/2" AND SMALLER PIPE SHALL BE SCHEDULE 40 BLACK STEEL WITH CLASS 125 CAST OR CLASS 150 MALLEABLE IRON SCREWED FITTINGS PER NFPA STANDARDS.

B. 1 1/2" AND LARGER PIPE MAY BE SCHEDULE 40 BLACK STEEL WITH LISTED/APPROVED GROOVED FITTINGS WITH MALLEABLE IRON MECHANICAL COUPLINGS SIMILAR TO THAT MANUFACTURED BY VICTAULIC.

2
1. COUPLINGS SHALL BE SIMILAR TO VICTAULIC RIGID STYLE 005 FIRELOCK WITH EDPM GASKET & HOUSING FABRICATED IN TWO OR MORE PARTS OF MALLEABLE IRON CASTINGS. LISTED OUTLET COUPLINGS MAY BE USED SUBJECT TO APPROVAL BY ALL REVIEW & INSPECTION AUTHORITIES. FINAL ASSEMBLIES SHALL BE RATED FOR 175 PSIG WORKING PRESSURE.
2. PIPE GROOVING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. ROLL ROOVING ONLY PERMITTED FOR SCHEDULE 10 PIPE; ROLL OR CUT GROOVING MAY BE USED FOR SCHEDULE 40 PIPE, AT THE CONTRACTOR'S OPTION.
3. ASSEMBLY AND INSTALLATION OF COUPLINGS TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

C. HANGERS TO BE SIMILAR TO ANVIL FIG. 69 WITH GALVANIZED ADJUSTABLE NUT AND CARBON STEEL BAND. INSTALL IN ACCORDANCE WITH NFPA PAMPHLET NO. 13 REQUIREMENTS.

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—A—	AIR LINE	———	ZONE LIMIT/BOUNDARY LINE
—D—	DRAIN LINE	- - - - -	SUB-ZONE LIMIT/BOUNDARY LINE
—DPS—	DRY PIPE SYSTEM		TEE WITH NIPPLE & CAP
—F—	FIRE PROTECTION LINE		PLUGGED TEE
—W—	DOMESTIC WATER SERVICE LINE		Y-TYPE STRAINER
	PENDANT TYPE SPRINKLER HEAD		BALL VALVE
	UPRIGHT TYPE SPRINKLER HEAD		APPROVED TYPE DRAIN VALVE
	CONCEALED SPRINKLER HEAD		GATE VALVE (FLANGED BODY)
	SIDEWALL SPRINKLER HEAD		GATE VALVE (SCREWED BODY)
	DRY SPRINKLER HEAD		FIRE HOSE VALVE (FHV)
	DRY SPRINKLER HEAD (SIDEWALL)		FLOOR DRAIN
	CAPPED LINE		CURB BOX & VALVE
	EXISTING WORK TO REMAIN		CONNECT TO EXISTING
	EXISTING WORK TO BE REMOVED		PRESSURE GAUGE
	PIPE FLANGES		FLOW SWITCH
	PIPE UNION	A	ABORT
	CONCENTRIC REDUCER	M	MANUAL PULL
	ECCENTRIC REDUCER		

FIRE PROTECTION ABBREVIATIONS

A.	COMPRESSED AIR	F.H.C.	FIRE HOSE CABINET
AB.	ABOVE	FLR.	FLOOR
A.D.	ACCESS DOOR	F.D.	FLOOR DRAIN
ARCH.	ARCHITECT	FURN.	FURNISH
BTM.	BOTTOM	F.E. CHEM.	FIRE EXTINGUISHER CHEM.
BLDG.	BUILDING	F.H.R.	FIRE HOSE RACK
CAB.	CABINET	F.H. & V.C.	FIRE HOSE & VALVE CAB.
C.I.	CAST IRON	F.P.	FIRE PROTECTION
CLG.	CEILING	GA.	GAGE
CONC.	CONCRETE	GEN.	GENERAL
CONN.	CONNECT	MFR.	MANUFACTURER
CONTR.	CONTRACTOR	MECH.	MECHANICAL
C.W.	COLD WATER	MTD.	MOUNTED
CONT.	CONTINUATION	NOM.	NOMINAL
DTL.	DETAIL	PLBG.	PLUMBING
DIA.	DIAMETER	PRESS.	PRESSURE
DN.	DOWN	REQD.	REQUIRED
DR.	DOOR	RM.	ROOM
ELEC.	ELECTRICAL	SCHED.	SCHEDULE
EXIST.	EXISTING	SHT.	SHEET
F.	FIRE	T.S.	TAMPER SWITCH
FT. HD.	FEET OF HEAD	TYP.	TYPICAL
F. E.	FIRE EXTINGUISHER	W/	WITH
F.E.C.	FIRE EXTINGUISHER CABINET		

FIRE PROTECTION ABBREVIATIONS

AB.	ABOVE	FLR.	FLOOR
ARCH.	ARCHITECT	F.P.	FIRE PROTECTION
CLG.	CEILING	RM.	ROOM
CONTR.	CONTRACTOR	SHT.	SHEET
CONT.	CONTINUATION	TYP.	TYPICAL
F.	FIRE	W/	WITH

FIRE PROTECTION LEGEND

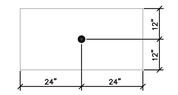
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
———	ZONE LIMIT/BOUNDARY LINE	- - - - -	SUB-ZONE LIMIT/BOUNDARY LINE

PIPING INSTALLATION NOTE:

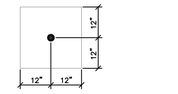
ALL NEW HORIZONTAL PIPING TO BE INSTALLED AS HIGH AND AS CLOSE TO THE BOTTOM OF THE OVERHEAD DECK AS POSSIBLE, WITHIN THE BEAM FRAMING STRUCTURE SPACE. THIS CONDITION WHERE HORIZONTAL PIPING INTERSECTS THE FRAMING STRUCTURE. CONTRACTOR SHALL PROVIDE ALL OFFSETS AND FITTINGS AS REQUIRED TO MAINTAIN THIS CON-

FP SPRINKLER NOTE:

REFER TO ARCHITECTURAL PLANS FOR CEILING INSTALLATION DETAILS, INCLUDING ANY SPECIAL FEATURES SUCH AS "CLOUD" OR PARTIAL CEILINGS, CEILING POCKETS, OFFSET CEILINGS, ETC. THAT COULD REQUIRE SPECIFIC PROTECTION IN ACCORDANCE WITH NFPA PAMPHLET NO. 13 REQUIREMENTS. THIS MAY INCLUDE THE REQUIREMENT FOR SPRINKLERS ABOVE AND BELOW CERTYPES OF CEILING CONSTRUCTION.



24"x48" CEILING TILE



24"x24" CEILING TILE

SPRINKLER HEAD LOCATION NOTES:

1. ALL LOCATIONS INDICATED ARE TO BE MAINTAINED WITHIN PLUS OR MINUS 1/2", AND ALIGNED WITH ADJACENT HEADS FOR A UNIFORM, EVEN APPEARANCE OF COMPLETED INSTALLATION. POSITIONS INDICATED APPLY TO FULL SIZE SMOOTH SURFACE TILES, AS WELL AS FULL SIZE SUB-GRIDDED (SCORED OR GRAPHICALLY DIVIDED) SURFACE TILES. THE APPEARANCE OF THE FINISHED CEILING TILE FACE AS INSTALLED OVERRIDES THE ACTUAL PHYSICAL DIMENSIONS OF THE TILE FOR PLACEMENTS INDICATED HEREIN. VERIFY CEILING TILE TYPES FROM ARCHITECTURAL DOCUMENTATION.
2. RECESSED PENDANT SPRINKLER HEADS TO BE INSTALLED WITH DEFLECTORS AT SAME ELEVATION AS ADJACENT SPRINKLERS IN SAME AREA/ENCLOSURE, PLUS OR MINUS 1/4". RECESSED HEADS TO BE INSTALLED SO DEFLECTOR IS A MAXIMUM OF 1" BELOW THE ELEVATION OF THE CEILING PLANE. CONCEALED HEADS TO BE INSTALLED WITH COVERS FLUSH TO CEILING PLANE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. INSTALLATION OF ALL SPRINKLER HEADS TO BE COORDINATED WITH STRUCTURE AND WORK OF OTHER TRADES, VERIFIED IN ADVANCE BY THE FIRE PROTECTION CONTRACTOR.

2 **SPRINKLER HEAD LOCATION DETAIL**

NOT TO SCALE

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
FIRE PROTECTION DETAILS AND SCHEDULES

STATE OF OHIO
TIM PRATER
E-51932
PROFESSIONAL ENGINEER
03/31/25

03/31/2025

25011.01

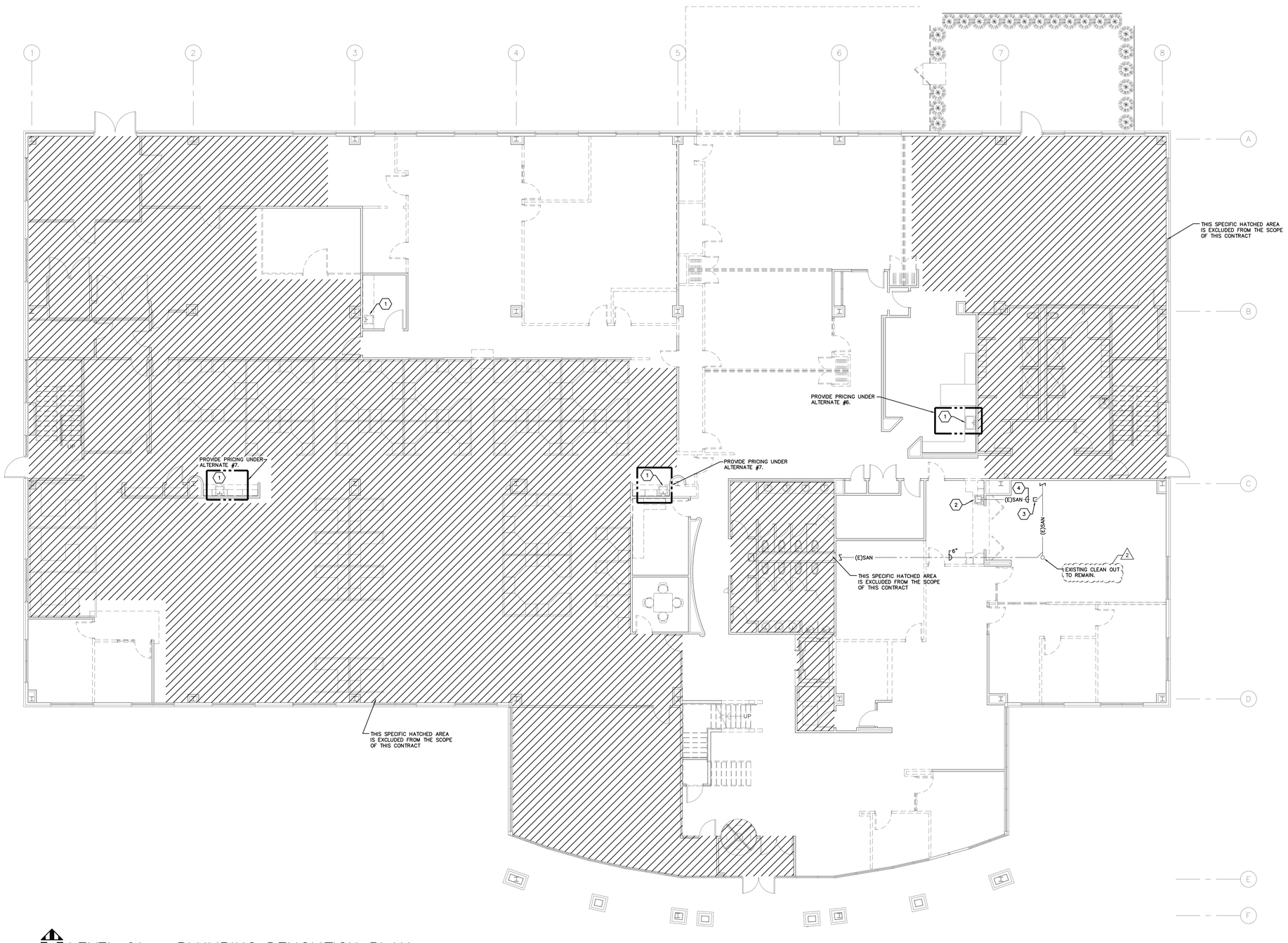
FP301

CONSTRUCTION DOCUMENTS

FP301-25075.DWG

PRATER
Engineering Associates, Inc.
6130 Wilcox Road (614) 766 4896
Dublin, Ohio 43016 FAX: (614) 766 2354

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
J.A. HAHN	J.A. HAHN	C.M. ANDERSON	25075



LEVEL 01 – PLUMBING DEMOLITION PLAN
SCALE: 1/8"=1'-0"

CODED NOTES

1. EXISTING SINK AND ACCESSORIES TO BE REMOVED. REMOVE SUPPLY AND WASTE PIPING BACK TO EXISTING ROUGH-INS FOR CONNECTION TO NEW WORK.
2. REMOVE EXISTING SINK, ACCESSORIES AND ASSOCIATED PIPING.
3. SANITARY LINE WILL BE CAP OFF WITH-IN 24" OFF THE MAIN AND INACTIVE SANITARY LINE WILL BE ABANDONED. FIELD VERIFY THIS LOCATION IN ADVANCE OF WORK.
4. EXISTING 2" SANITARY LINE TO BE ABANDONED.

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

DURING DESIGN PROCESS ACCESS TO ALL AREAS WAS NOT AVAILABLE, EXISTING PIPING BELOW FLOOR IS A SCHEMATIC OF ESTIMATED ROUTING AND COMMON PRACTICES. VERIFY ACTUAL ROUTING AND MODIFY AS NECESSARY AT NO ADDITIONAL COST.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT OR OWNER'S REP PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

PLUMBING CONTRACT NOTE:
ALL PATCHING OF EXISTING FLOOR PENETRATIONS BEING ABANDONED AS PART OF THIS CONTRACT SHALL BE PERFORMED BY THIS CONTRACTOR IN STRICT ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS AND PROVISIONS AS INCLUDED THEREIN. REFER TO ARCHITECTURAL DRAWINGS AS WELL AS THE PROJECT MANUAL FOR FURTHER DETAIL AND REQUIREMENTS.

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

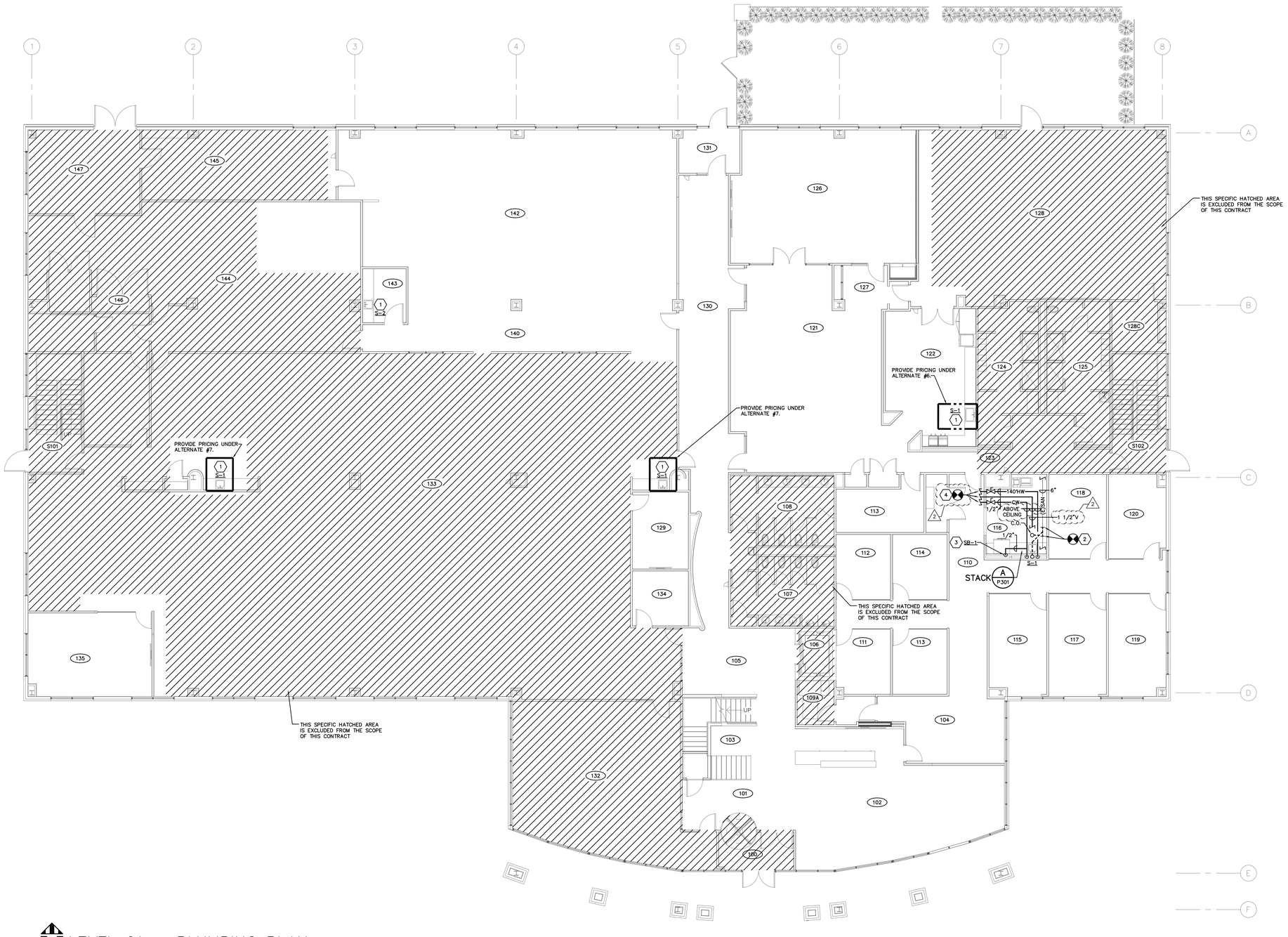
DRAWING TITLE:
LEVEL 01 - PLUMBING DEMOLITION PLAN

PD101-25075.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
(614) 766 4896
FAX: (614) 766 2354

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
J.A. HAHN	J.A. HAHN	–	25075

STATE OF OHIO
TIM PRATER
E-51932
REGISTERED PROFESSIONAL ENGINEER
03/31/25

03/31/2025
25011.01
PD101
CONSTRUCTION DOCUMENTS



LEVEL 01 – PLUMBING PLAN
SCALE: 1/8"=1'-0"

CODED NOTES

2

1. CONNECT NEW PLUMBING FIXTURE TO EXISTING SUPPLY AND WASTE ROUGH-INS.
2. CONNECT NEW SANITARY TO EXISTING SANITARY MAIN BELOW SLAB. FIELD VERIFY TIE-IN LOCATION IN ADVANCE OF WORK. PROVIDE WITH TEST CLEANOUT AT CONNECTION.
3. PROVIDE 1/2" CW SUPPLY DROP IN STRUCTURE TO THE INLET OF SB-1. EXTEND 1/2" CW FROM OUTLET OF SB-1 TO ASSE 1024 LISTED BACKFLOW SIMILAR TO WATTS LF7 AND MAKE FINAL CONNECTION TO OWNER PROVIDED REFRIGERATOR ICE MAKER.
4. CONNECT NEW 1/2" HOT, 1/2" COLD WATER AND 1 1/2" TO EXISTING LINES IN OVERHEAD STRUCTURE.

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

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CONSTRUCTION NOTES

1. ALL WORK TO BE SCHEDULED IN ADVANCE WITH THE OWNER.
2. HOURS AND AREAS OF ACCESS FOR CONSTRUCTION TO BE PER THE OWNER'S DIRECTION.
3. SEQUENCING AND PHASING OF WORK TO BE PER THE OWNER'S DIRECTION.
4. DESIGNATED WORK AREAS ARE AS INDICATED BY THE ARCHITECTURAL PLANS AND THE OWNER. ANY WORK REQUIRED OUTSIDE OF THESE AREAS TO BE APPROVED BY AND SCHEDULED IN ADVANCE WITH THE OWNER.
5. WORK TO BE DONE IN SUCH A MANNER AS TO AVOID OR MINIMIZE INTERRUPTION OF NORMAL ACTIVITIES IN ADJACENT AREAS REMAINING IN OPERATION DURING CONSTRUCTION. ANY UTILITY OUTAGES OR IMPAIRMENTS TO BE SCHEDULED WITH THE OWNER IN ADVANCE, AND EXECUTED IN THE MANNER DIRECTED.
6. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR FIRESTOPPING AT ALL FIRE PROTECTION RELATED PENETRATIONS OF FIRE, SMOKE AND OTHER RATED STRUCTURES, INCLUDING FLOORS, WALLS, PARTITIONS, ETC.. REFER TO ARCHITECTURAL DOCUMENTATION FOR LOCATIONS OF ALL RATED STRUCTURES, AND SPECIFIC INFORMATION AND REQUIREMENTS PERTAINING TO SAME.
7. ALL CONDITIONS UPON COMPLETION OF WORK INCLUDED UNDER THIS CONTRACT TO MATCH CONDITIONS PRIOR TO START OF WORK.

PLUMBING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—CW—	DOMESTIC COLD WATER LINE		HOSE BIBB
—140°—HW—	140° HOT WATER LINE (DOMESTIC)		PIPE BRANCH TOP CONNECTION
—IND—	INDIRECT WASTE LINE		PIPE BRANCH BOTTOM CONNECTION
—SAN—	SANITARY LINE		BALL VALVE
—V—	VENT LINE		CHECK VALVE
	P-TRAP (PLAN VIEW)		FLOOR OR AREA DRAIN
	CAPPED LINE		CONNECT TO EXISTING
	THRU FLOOR AS SHOWN		JANITOR OR SHOWER FAUCET/HEAD LOCATION

PLUMBING ABBREVIATIONS

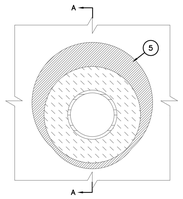
AB.	ABOVE	INV. ELEV.	INVERT ELEVATION
A.F.F.	ABOVE FINISHED FLOOR	LAV.	LAVATORY
APPROX.	APPROXIMATELY	MECH.	MECHANICAL
B.F.P.	BACKFLOW PREVENTER	PLBG.	PLUMBING
BLDG.	BUILDING	PRESS.	PRESSURE
CLG.	CEILING	R.D.	ROOF DRAIN
C.O.	CLEAN OUT	RM.	ROOM
CONN.	CONNECT	THERM.	THERMOMETER
CONTR.	CONTRACTOR	TP	TRAP PRIMER
ELEC.	ELECTRICAL	TYP.	TYPICAL
E.W.C.	ELECTRIC WATER COOLER	UR.	URINAL
FLR.	FLOOR	V.T.R.	VENT THRU ROOF
F.D.	FLOOR DRAIN	W.	WASTE
F.V.	FLUSH VALVE	W/	WITH
H.B.	HOSE BIBB	WC	WATER CLOSET

UL/CUL SYSTEM NO. W-L-5029

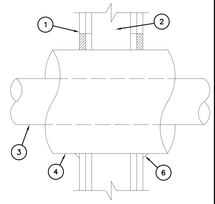
INSULATED METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

F RATING = 1-HR. AND 2-HR
T RATING = 1/2-HR., 3/4 HR., 1-HR., AND 1-3/4 HR. (SEE U.L. FIRE RESISTANCE DIRECTORY)
L RATING AT AMBIENT = 4 CFM/SQ. FT.
L RATING AT 400°F = LESS THAN 1 CFM/SQ. FT.

FRONT VIEW



SECTION A-A



1. GYPSUM WALL ASSEMBLY (UL/ULC CLASSIFIED U300 OR U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
   B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
2. (NOT SHOWN), WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE.
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
   A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 20 OR HEAVIER).
   B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
   C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
   D. MAXIMUM 4" NOMINAL DIAMETER EMT.
4. MAXIMUM 2" THICK GLASS-FIBER PIPE INSULATION.
5. MINIMUM 5/8" DEPTH HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT.
6. MINIMUM 1/2" BEAD HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT.

NOTES:
1. MAXIMUM DIAMETER OF OPENING = 18".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-7/8".

PLUMBING FIXTURE SCHEDULE

PLUMBING FIXTURE NOTES:

1. UNLESS INDICATED OTHERWISE, THE ARCHITECT SHALL SELECT THE FIXTURE COLOR/FINISH FROM THE MANUFACTURER'S FULL RANGE OF STANDARD OPTIONS.
2. UNLESS INDICATED OTHERWISE, ALL EXPOSED METALLIC COMPONENTS TO BE FURNISHED WITH POLISHED CHROME FINISH, INCLUDING FAUCETS, TRAPS, STOPS, PIPING, ETC.
3. UNLESS INDICATED OTHERWISE, ALL EXPOSED PIPING SHALL BE FURNISHED WITH POLISHED CHROME FINISH BRASS ESCUTCHEONS AT ALL WALL/CABINET PENETRATIONS AND FIXTURE CONNECTIONS.
4. UNLESS INDICATED OTHERWISE, ALL HARD-WIRED FIXTURES THAT ARE 120V POWER WIRING TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LOW-VOLTAGE WIRING FROM TRANSFORMER TO SOLENOID VALVE TO BE PROVIDED BY THE PLUMBING CONTRACTOR.

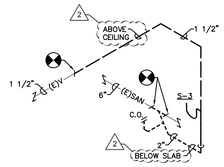
FIXTURE	MANUFACTURER	REMARKS	PIPE SIZE CW	PIPE SIZE HW
S-1	ELKAY LEONARD/ McGUIRE	FIXTURE; ELKAY MODEL LRAD312265 SINGLE BOWL DROP-IN SINK. 18 GA. 304 STAINLESS STEEL WITH LUSTROUS SATIN FINISH. REAR CENTER DRAIN PLACEMENT. 31" X 22" X 6-1/2" CONTROLS; MOEN NO. 7864 ONE LEVEL GOOSENECK AND PULL-DOWN FAUCET WITH CHROME FINISH. ONE HOLE MOUNT. 1.5 GPM. TRAP; McGUIRE MODEL 8902 1 1/4"x1 1/2" 17 GA. P-TRAP, CHROME PLATED STOP(S); McGUIRE MODEL 2165LK 1/2" LAVATORY SUPPLIES W/ LOOSE KEY BRASS ANGLE STOPS & COPPER FLEX TUBE RISERS. ALL CHROME PLATED DISPOSER; IN-SINK-ERATOR MODEL BADGER 5 (1/2 HP, 120V/1PH). FURNISH WITH 1-1/2" DISHWASHER DRAIN CONNECTION.	1/2"	1/2"
S-2	ELKAY LEONARD/ McGUIRE	FIXTURE; ELKAY MODEL LRAD312265 SINGLE BOWL DROP-IN SINK. 18 GA. 304 STAINLESS STEEL WITH LUSTROUS SATIN FINISH. REAR CENTER DRAIN PLACEMENT. 31" X 22" X 6-1/2" CONTROLS; MOEN NO. 7864 ONE LEVEL GOOSENECK AND PULL-DOWN FAUCET WITH CHROME FINISH. ONE HOLE MOUNT. 1.5 GPM. TRAP; McGUIRE MODEL 8902 1 1/4"x1 1/2" 17 GA. P-TRAP, CHROME PLATED STOP(S); McGUIRE MODEL 2165LK 1/2" LAVATORY SUPPLIES W/ LOOSE KEY BRASS ANGLE STOPS & COPPER FLEX TUBE RISERS. ALL CHROME PLATED TW MIXER; SIMILAR. TO LEONARD NO. 170 THERM. MIXER FOR SGL. FAUCET; NO. 270 FOR MULTIPLE FAUCETS (MAX. 6 SIDE BY SIDE IN A SINGLE RM.). PROVIDE W/ INLET CHECK/STOPS & ASSE 1070 LISTING. INSTALL MIXER BELOW FIXTURE OUT OF HANDICAP ACCESS CLEARANCE SPACE. MIXERS IN PUBLIC TOILET RM'S, TO BE WITHIN ACCESSIBLE CASEWORK OUT OF SIGHT. SET FOR 105 DEGREES F. TW SUPPLY TO FAUCET.	1/2"	1/2"
SB-1	SIOUX CHIEF	FIXTURE; SIOUX CHIEF 696 (PROVIDE 696R IN RATED WALL ASSEMBLIES) SERIES ABS OUTLET BOX WITH VALVE AND WATER HAMMER ARRESTER, 1/2" INLET CONNECTION & 1/4" OUTLET CONNECTION. FITTINGS; PROVIDE 6 FT. TUBING COIL	1/2"	---

CLEANOUT SCHEDULE

DES.	LOCATION	DESCRIPTION
MODELS FOR CLEANOUTS WHERE REQUIRED BY CODE		
CO	CONCEALING WALL	USE CLEANOUT TEE AND PROVIDE CLEANOUT AND ACCESS COVER SIMILAR TO ZURN ZA81468 WITH ROUND POLISHED STAINLESS STEEL ACCESS COVER, SECURING SCREW, AND BRONZE TAPER THREADED PLUG.
CO	FLOOR IN FINISH AREAS	ZURN MODEL NO.ZN1400 CAST IRON BODY ADJUSTABLE CLEANOUT WITH ANCHOR FLANGE, POLISHED NICKEL BRONZE ROUND SCORIATED FRAME AND TOP, AND BOTTOM GASKET CONNECTION OUTLET. CLEANOUTS IN STRUCTURES ABOVE GRADE TO BE FURNISHED WITH CLAMPING COLLAR.
CO	FLOOR IN MECHANICAL/ UTILITY AREAS & EXTERIOR AREAS	ZURN MODEL NO. Z1400-HD CAST IRON BODY ADJUSTABLE CLEANOUT WITH ANCHOR FLANGE, COATED ROUND SCORIATED FRAME AND TOP, AND BOTTOM GASKET CONNECTION OUTLET. CLEANOUTS IN STRUCTURES ABOVE GRADE TO BE FURNISHED WITH CLAMPING COLLAR.
CO	EXPOSED OR WITHIN ACCESSIBLE STRUCTURE	ZURN MODEL ZB1470 WITH COUNTER-SUNK TAPERED THREAD BRONZE PLUG.

PLUMBING NOTES

1. REFER TO ARCHITECTURAL DOCUMENTATION FOR ADDITIONAL SCOPE/INFORMATION REGARDING DEMOLITION/REMODELING WORK, INCLUDING IDENTIFICATION OF AREAS AND ITEMS/ELEMENTS INVOLVED, AS WELL AS INFORMATION OF BOTH A GENERAL AND SPECIFIC NATURE.
2. UNLESS DIRECTED OTHERWISE, WHERE CONCEALING/FINISH STRUCTURE IS PROVIDED UNDER SEPARATE CONTRACT, ALL WORK IN THE PLUMBING CONTRACT NOT SPECIFICALLY INTENDED OR IDENTIFIED FOR EXPOSED/VISIBLE INSTALLATION SHALL BE INSTALLED WITHIN THE CONCEALING STRUCTURE.
3. ALL PIPING SHOWN IS ABOVE CEILING IN AREAS WITH DROPPED CEILINGS, OR AT BOTTOM OF OVERHEAD SUPPORT STRUCTURE IN EXPOSED STRUCTURE AREAS, UNLESS INDICATED OTHERWISE.
4. THE PLUMBING CONTRACTOR IS TO SECURE AND VERIFY ALL MEASUREMENTS AND CONDITIONS AT THE PROJECT IN ADVANCE OF WORK (INCLUDING FABRICATION).
5. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR FIRESTOPPING AT ALL PLUMBING RELATED PENETRATIONS OF FIRE, SMOKE AND OTHER RATED STRUCTURES, INCLUDING FLOORS, WALLS, PARTITIONS, ETC.. REFER TO ARCHITECTURAL DOCUMENTATION FOR LOCATIONS OF ALL RATED STRUCTURES, AND SPECIFIC INFORMATION AND REQUIREMENTS PERTAINING TO SAME.
6. LAYOUT AND INSTALLATION OF PLUMBING CONTRACT PIPING, EQUIPMENT, ITEMS AND ELEMENTS INDICATED ON PLAN IS SCHEMATIC IN NATURE. EXACT LOCATION, ROUTING AND INSTALLATION TO BE COORDINATED WITH BUILDING STRUCTURE AND ALL OTHER WORK PROVIDED UNDER SEPARATE CONTRACT.
7. COORDINATE EXACT LOCATION AND INSTALLATION OF ALL PLUMBING UTILITIES REQUIRED AND PROVIDED FOR WORK UNDER SEPARATE CONTRACT WITH THE APPROPRIATE CONTRACTOR(S) IN ADVANCE OF WORK. THIS INCLUDES SUPPLY AND DRAIN ELEMENTS, FOR DIRECT (PIPED) AND/OR INDIRECT (FLOOR/HUB DRAIN, AIR GAP, ETC.) CONNECTION/SERVICE.
8. RUN ALL WATER LINES LEVEL.
9. ROUGH IN ALL PIPING (SUPPLY, RETURN, WASTE, DRAIN, ETC.) FOR FIXTURES/EQUIPMENT INSTALLATION THRU OR ON FACE OF WALL (AS APPLICABLE), AND TERMINATE WITH SHORT PIPE NIPPLE AND CAP. ROUGH INS AT EXTERIOR WALLS (IF ANY) TO BE ON "WARM" SIDE OF INSULATION ASSEMBLY, AS REQUIRED FOR NON-FREEZE INSTALLATION.
10. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF COLUMBUS OHIO BUILDING CODE, INCLUDING APPLICABLE PLUMBING, MECHANICAL AND HANDICAP ACCESSIBILITY PROVISIONS.
11. PROVIDE CLEANOUTS AS FOLLOWS:
    A. AT THE BASE OF ALL SANITARY & VENT STACKS.
    B. IN ALL HORIZONTAL STORM AND SANITARY PIPING AT INTERVALS NOT TO EXCEED 100 LF. IN LENGTH.
    C. AT EACH CHANGE OF DIRECTION BY STORM AND SANITARY PIPING BELOW GRADE OR AT THE LOWEST POINT OF THE HORIZONTAL DRAINAGE SYSTEM GREATER THAN 45 DEGREES, UNLESS ANOTHER CLEANOUT IS WITHIN 40 FT. DEVELOPED LENGTH.
    D. AT ALL STORM AND SANITARY PIPING BUILDING EXIT POINTS, AND/OR BUILDING SEWER CONNECTIONS FOR SITE UTILITY TIE-IN.
    E. AT CONNECTION POINTS TO EXISTING STORM, SANITARY AND VENT PIPING (TEST TYPE CLEANOUTS).
12. UNLESS INDICATED OTHERWISE, ALL FIXTURES AND EQUIPMENT PROVIDED WITH PLUMBING SUPPLY PIPING TO BE FURNISHED WITH APPROVED/LISTED STOPS IN ACCESSIBLE LOCATIONS.
13. SEE ARCHITECTURAL DRAWINGS FOR DETAILS OF CASEWORK, EQUIPMENT AND OTHER ITEMS/ELEMENTS PROVIDED UNDER SEPARATE CONTRACT, INCLUDING EXACT LOCATIONS AND UTILITY CONNECTION REQUIREMENTS. COORDINATE PLUMBING UTILITY WORK AS REQUIRED IN ADVANCE, INCLUDING PLACEMENT OF FITTINGS, ACCESSORIES, APPURTENANCES, DRAINS, ETC.
14. VERIFY THE EXACT LOCATION AND INSTALLATION REQUIREMENTS FOR ALL DRAINS WITH THE ARCHITECTURAL AND STRUCTURAL DOCUMENTATION FOR PROPER PLACEMENT IN RESPECT TO SLOPES AND STRUCTURE AT EACH DRAIN. COORDINATE INSTALLATION WITH THE APPROPRIATE CONTRACTOR. FINAL INSTALLATION AND LOCATION SUBJECT TO APPROVAL.
15. UNLESS INDICATED OTHERWISE, BUILDING DRAIN (STORM, SANITARY) TIE-INS ARE PROVIDED AT 5 FT. BEYOND FACE OF EXTERIOR PERIMETER STRUCTURE AND CONTINUED TO SITE UTILITY ELEMENTS UNDER SEPARATE CONTRACT. COORDINATE/CONFIRM LOCATIONS (INCLUDING INVERT ELEVATION) WITH THE SITE UTILITY CONTRACTOR IN ADVANCE.
16. UNLESS INDICATED OTHERWISE, BUILDING WATER SERVICE TIE-IN IS PROVIDED AT 5 FT. BEYOND FACE OF EXTERIOR PERIMETER STRUCTURE FROM SITE UTILITY ELEMENTS UNDER SEPARATE CONTRACT. COORDINATE/CONFIRM LOCATION (INCLUDING DEPTH OF BURY) WITH THE SITE UTILITY CONTRACTOR IN ADVANCE.
17. NO PLUMBING PIPING IS TO BE RUN THRU OR ABOVE THE FOLLOWING AREAS, ELECTRICAL SWITCHGEAR ROOMS, ELECTRICAL UTILITY ROOMS/CLOSETS, ELEVATOR SHAFTS, ELEVATOR MACHINE ROOMS, TELEPHONE/COMMUNICATION ROOMS/CLOSETS, UPS EQUIPMENT ROOMS, BATTERY STORAGE AND/OR CHARGING ROOMS, DATA PROCESSING AND/OR STORAGE ROOMS; OR ANY SIMILAR TYPE AREAS SENSITIVE TO POTENTIAL WATER LEAKAGE OR DISCHARGE AS A RESULT OF ACCIDENTAL DAMAGE TO, OR DETERIORATION OF, PIPING.
18. PLUMBING PIPING IS NOT PERMITTED TO RUN ABOVE ANY ELECTRICAL SWITCH- GEAR, MOTOR CONTROL CENTERS OR PANELS (INCLUDING ACCESS/CLEARANCE SPACE 42" IN FRONT OF THESE ITEMS, AND MIN. 30" WIDE), UNDER ANY CIRCUMSTANCES.
    A. LOCATION OF NEW ITEMS OF THESE TYPES TO BE DETERMINED AND CONFIRMED FROM INDICATION BY THE PROJECT ELECTRICAL DOCUMENTATION, AND ACTUAL INSTALLATION CONFIRMED WITH THE ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.



STACK A / P101

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

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DRAWING TITLE:
PLUMBING DETAILS AND SCHEDULES

STATE OF OHIO
TIM PRATER
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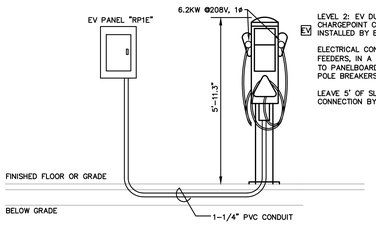


LEVEL 2: EV DUAL HEAD CHARGER: CHARGEPOINT CT4021 FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.

ELECTRICAL CONTRACTOR SHALL PROVIDE 2 FEEDERS, IN A SINGLE 1-1/4" CONDUIT BACK TO PANELBOARD AND PROVIDE (2) 40 AMP, 2 POLE BREAKERS.

LEAVE 5' OF SLACK FEEDERS FOR FINAL CONNECTION BY OTHERS.

EV CHARGING BOLLARD DETAIL
SCALE: NONE

GENERAL NOTES

A. THE EXISTING WORK SHOWN ON PLANS IS FROM PREVIOUS ENGINEERING, DOCUMENTATION AND FIELD OBSERVATIONS. ACTUAL CONDITIONS MAY VARY. CONTRACTOR SHALL FIELD VERIFY EXISTING WORK AND CONDITIONS, WHETHER SHOWN OR NOT, AND MAKE MINOR ADJUSTMENTS NECESSARY TO COMPLETE NEW WORK. IF EXISTING CONDITIONS ARE FOUND THAT PROHIBITS NEW WORK AS DIRECTED, NOTIFY THE ENGINEER IN WRITING FOR REDIRECTION AS REQUIRED.

B. ALL DEVICES, FIXTURES, AND EQUIPMENT SHOWN ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE. SUCH ITEMS ARE LABELED WITH AN "E" OR NOTED AS EXISTING FOR ADDITIONAL CLARITY. MAINTAIN AND PROTECT DURING DEMOLITION AND CONSTRUCTION. IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR BECOMES FAMILIAR WITH EXISTING CONDITIONS IN FIELD PRIOR TO BIDDING.

C. ELECTRICAL EQUIPMENT, LIGHT FIXTURES, AND WIRING DEVICES, ETC. SHOWN IN THIN LINES WITH SUBSCRIPT "E" ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY. KEEP IT AND ALL ASSOCIATED WIRING AND COMPONENTS IN OPERATION AS NECESSARY FOR A COMPLETE SYSTEM.

D. ELECTRICAL EQUIPMENT, LIGHT FIXTURES, DATA AND WIRING DEVICES, ETC. SHOWN WITH SUBSCRIPT "REL" INDICATE RELOCATED DEVICE. EXTEND CABLING AS NECESSARY FOR A COMPLETE SYSTEM. COORDINATE FINAL LOCATION WITH ARCHITECT AND LOW VOLTAGE CONTRACTOR.

E. THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF THE BUILDING.

GENERAL NOTES

F. VERIFY AND COORDINATE THE POWER CONNECTION REQUIREMENTS FOR EACH PIECE OF EQUIPMENT TO BE INSTALLED. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE PROPER LOCATION OF THE DISCONNECT OR OUTLET TO AVOID CONFLICTS.

G. ALL HOMERUNS FOR POWER CIRCUITS SHALL USE MINIMUM #12 AWG WIRING AND COMPLY WITH VOLTAGE DROP REQUIREMENTS.

H. ALL WIRING SHALL BE RUN IN CONDUIT, EMT OR RIGID. MINIMUM CONDUIT SIZE SHALL BE 3/4". MC CABLE MAY BE USED ONLY IN CONCEALED LOCATIONS AND SHALL BE PROPERLY SUPPORTED. A MAXIMUM LENGTH OF 6'-0" OF FLEXIBLE CONDUIT MAY BE USED FOR FINAL CONNECTIONS ONLY (FROM JUNCTION BOXES TO LIGHT FIXTURES, APPLIANCES, MOTORS, ETC.). TYPE BX, ROMEX, ARMORED CABLE (AC) OR SIMILAR SHALL NOT BE ACCEPTABLE.

I. ALL CONDUITS AND ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED GREEN GROUNDING CONDUCTOR.

J. CONDUITS SHALL BE: MOUNTED AS HIGH AS POSSIBLE WHERE RUN OVERHEAD, ROUTED TO AVOID CONFLICTS WITH OTHER WORK, PROVIDED WITH ONE SWEEPING ELBOWS AND BUSHED ENDS TO HELP PROTECT THE CABLE THAT IS PULLED THROUGH IT.

K. COORDINATE THE LOCATIONS OF NEW WORK AND ROUTING OF NEW CONDUITS TO AVOID CONFLICTS WITH THE EXISTING CONDITIONS AND OTHER NEW WORK.

L. COORDINATE LOCATION OF LANDLORD'S UNDERGROUND UTILITIES PRIOR TO TRENCHING.

M. ALL RECEPTACLES LOCATED IN FOOD PREPARATION AND KITCHEN AREAS, OR WITHIN 6'-0" OF THE OUTSIDE EDGE OF A SINK, OR INDOOR WET LOCATIONS, SHALL BE GFCI PROTECTED PER NEC 210.8. SUCH LOCATIONS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO: THE BACK-OF HOUSE AND FOOD PREPARATION AREAS, COOKLINE AND DISH WASHING. RECEPTACLES LOCATED BEHIND EQUIPMENT OR OTHERWISE INACCESSIBLE LOCATIONS SHALL BE GFCI PROTECTED AT THE CIRCUIT BREAKER.

N. ALL DUPLEX CONVENIENCE RECEPTACLES IN PUBLICLY ACCESSIBLE AREAS SHALL BE TAMPER RESISTANT TYPE.

O. FIRE ALARM DEVICES SHOWN FOR BIDDING PURPOSES ONLY. ELECTRICAL CONTRACTOR TO RETAIN THE SERVICES OF A FIRE ALARM VENDER TO SUBMIT FIRE ALARM PERMIT AND CONSTRUCTION DRAWINGS. PRIOR TO SUBMITTING THE FIRE ALARM DRAWINGS FOR PERMITTING, CONTRACTOR SHALL SUBMIT TO THE ENGINEER ONE COPY FOR REVIEW. FIRE ALARM DRAWINGS SHALL INCLUDE ALL REQUIRED EQUIPMENT CUT SHEETS BATTERY CALCULATIONS, VOLTAGE AND WIRE SIZING CALCULATIONS, SCALED FLOOR PLANS WITH NEW AND EXISTING DEVICE LOCATIONS AND A RISER DIAGRAM WHERE APPLICABLE. UPON REVIEW BY THE ENGINEER AND ALL CORRECTIONS TO THE DRAWINGS HAVE BEEN MADE, THIS CONTRACTOR SHALL OBTAIN THE FIRE ALARM PERMIT AND COMPLETE ALL LIFE SAFETY INSPECTIONS FOR FINAL OCCUPANCY.

CODED NOTES ⬡

1. AREA IS NOT IN CONTRACT. ALL DEVICES IN THIS AREA ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED. KEEP IN OPERATION AS NEEDED.
2. TIE RECEPTACLE INTO EXISTING CIRCUIT AS SHOWN.
3. RELOCATE DEVICE TO NEW LOCATION SHOWN. EXTEND CABLING AS NECESSARY FOR A COMPLETE SYSTEM. COORDINATE FINAL LOCATION WITH ARCHITECT AND LOW VOLTAGE CONTRACTOR.
4. REFER TO DETAIL A ON SHEET E301 FOR ADDITIONAL INFORMATION.
5. REFER TO DETAIL B ON SHEET E301 FOR ADDITIONAL INFORMATION.
6. ROUGH-IN FOR CARD READER. REFER TO TELECOM SHEETS FOR ADDITIONAL INFORMATION. 2
7. TRANSFORMER SHALL BE FLOOR MOUNTED ON SLAB. COORDINATE MOUNTING WITH OWNER'S ARCHITECT. REFER TO EXISTING RISER DIAGRAM ON SHEET E301 FOR ADDITIONAL INFORMATION.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN FOR DUAL HEAD PEDESTAL MOUNTED EV CHARGING STATION. EXTEND 1-1/4" CONDUIT BACK TO EV PANEL. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN. REFER TO DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.
9. EXTEND TO INTEGRAL CIRCUIT BREAKER OR DISCONNECT SWITCH. INSTALL CONDUIT AND WIRING AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
10. RELOCATED FAN POWERED VAV BOX. 277V-1Ø, 20A/2P. EXTEND EXISTING WIRING, CONDUIT, AND ALL ASSOCIATED ACCESSORIES AS NEEDED FOR A COMPLETE SYSTEM. RELOCATE EXISTING FIRE ALARM SYSTEM ADDRESSABLE MODULE FOR UNIT SHUTDOWN UPON ALARM.
11. PROVIDE WIRING AND CONDUIT TO FURNITURE. PROVIDE TWO (2) 4" SQUARE JUNCTION BOX FOR THE POWER AND ONE (1) 4"x1 1/16" DEEP SQUARE JUNCTION BOX FOR THE COMMUNICATIONS CONNECTIONS TO THE FURNITURE SYSTEM. FLUSH MOUNT THE WALL MOUNTED JUNCTION BOX AT 18" AFF. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT WITH THE FURNITURE CONTRACTOR PRIOR TO ROUGH-IN. EXTEND TWO (2) 1"Ø EMT CONDUIT FROM THE COMMUNICATION JUNCTION BOX ABOVE THE CEILING. THE ELECTRICAL CONTRACTOR SHALL MAKE THE FINAL CONNECTION TO THE FURNITURE SYSTEM AND POWER JUNCTION BOX CIRCUIT FROM PANELBOARD "CPR1A" TO PROVIDE POWER TO THE WORKSTATION PC RECEPTACLE. CIRCUIT FROM PANELBOARD "RP1D" TO PROVIDE POWER TO THE CONVENIENCE RECEPTACLE.
12. PROVIDE COMBINATION POWER AND COMMUNICATION FLOOR BOX. FLOOR BOX SHALL BE EQUAL TO WIREMOLD EVOLUTION SERIES EFB4SS-OG WITH FLUSH STYLE DIE-CAST ALUMINUM COVER AND WIREMOLD EFB8-MB MOUNTING BRACKET. COORDINATE THE FINAL LOCATION WITH THE ARCHITECT AND GENERAL TRADES CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE WITH TWO (2) 20 AMP DEVICES AND STUB TWO (2) 1" COMMUNICATION CONDUITS FROM EACH FLOOR BOX UNDER THE FLOOR. EXTEND AND TERMINATE IN AN ACCESSIBLE LOCATION. PROVIDE WIREMOLD EFB1G-B BLANK DEVICE PLATE FOR EMPTY GANG LOCATIONS. 2
13. RELOCATED FAN POWERED VAV BOX. 277V-3Ø, 20A/3P. EXTEND EXISTING WIRING, CONDUIT, AND ALL ASSOCIATED ACCESSORIES AS NEEDED FOR A COMPLETE SYSTEM. RELOCATE EXISTING FIRE ALARM SYSTEM ADDRESSABLE MODULE FOR UNIT SHUTDOWN UPON ALARM.
14. PROVIDE COMBINATION POWER AND COMMUNICATION FLOOR BOX FOR FURNITURE FEED. FLOOR BOX SHALL BE EQUAL TO WIREMOLD RFBA SERIES WITH FURNITURE FEED ALUMINUM COVER. COORDINATE THE FINAL LOCATION WITH THE ARCHITECT AND GENERAL TRADES CONTRACTOR PRIOR TO ROUGH-IN. EXTEND TWO (2) 1.25" COMMUNICATION CONDUITS FROM EACH FLOOR BOX TO ABOVE THE CEILING. DO NOT DAISY CHAIN THE COMMUNICATION CONDUITS. CIRCUIT FROM PANELBOARD "CPR1A" TO PROVIDE POWER TO THE WORKSTATION PC RECEPTACLE. CIRCUIT FROM PANELBOARD "RP1D" TO PROVIDE POWER TO THE CONVENIENCE RECEPTACLE.
15. PROVIDE WIRING DEVICES WITHIN RECEPTIONIST DESK AS SHOWN -- EXTEND MC CABLE HORIZONTALLY THROUGH THE FRAMING MEMBERS BETWEEN DEVICES SHOWN. 2
16. PROVIDE 20A-1P CIRCUIT BREAKER FOR THIS DEVICE. INSTALL CIRCUIT BREAKER INTO PANEL LIPA LOCATED ON SECOND FLOOR UTILIZING FIRST AVAILABLE SPACE. TIE CIRCUIT FROM SHOWN DEVICE TO BREAKER INSTALLED THIS WAY.

LEVEL 01 – POWER PLAN
SCALE: 1/8"=1'-0"

E101-25075.DWG

PRATER
Engineering Associates, Inc.
6130 Wilcox Road, Dublin, Ohio 43016
(614) 766 4896
FAX: (614) 766 2354

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
E.ROE	E.ROE	G.OWENS	25075

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
LEVEL 01 - POWER PLAN

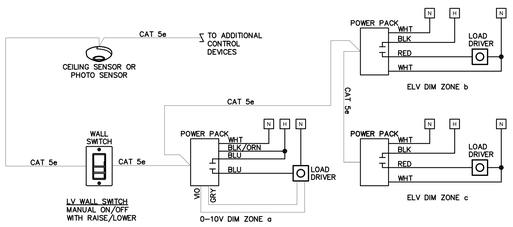
STATE OF OHIO — GREGORY S. OWENS E-63408 — PROFESSIONAL ENGINEER

03/31/2025

25011.01

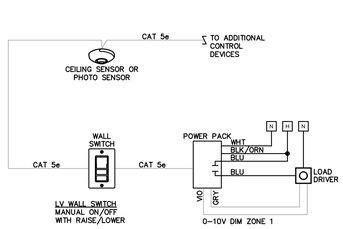
E101

CONSTRUCTION DOCUMENTS



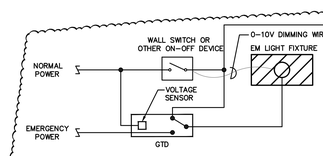
MULTI ZONE CEILING MOTION SENSOR

CAT 5e NON-BOOTED PLENUM CABLES, 2 CAT 5e PORTS PER DEVICE
APPROX. 16 DEVICES MAX PER POWER PACK
ADDITIONAL SWITCHES & SENSORS DAISY CHAINED
COORDINATE DIMMING TYPE POWER PACK WITH CONSTRUCTION DOCUMENTS



CEILING MOTION SENSOR

CAT 5e NON-BOOTED PLENUM CABLES, 2 CAT 5e PORTS PER DEVICE
APPROX. 16 DEVICES MAX PER POWER PACK
ADDITIONAL SWITCHES & SENSORS DAISY CHAINED

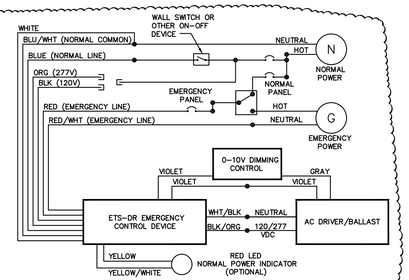


GENERATOR TRANSFER DEVICE (GTD) SCHEMATIC DIAGRAM

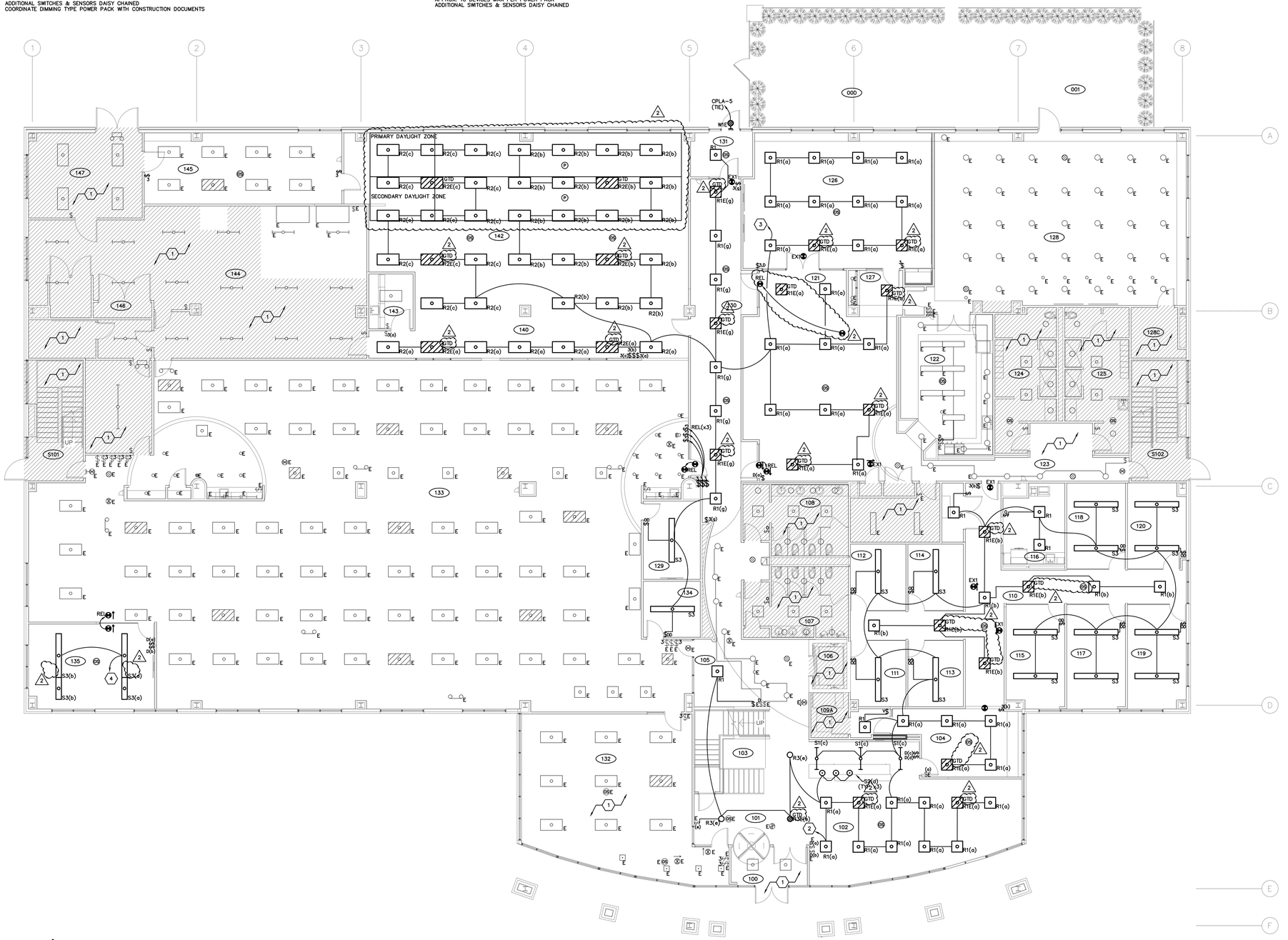
GENERATOR TRANSFER DEVICE (GTD) BLOCK DIAGRAM

SCALE: NONE

DETAIL SHOWN TO CONVEY DESIGN INTENT. DEVICE MUST BE UL 924 LISTED.
VERIFY EXACT WIRING WITH MANUFACTURER'S WIRING DIAGRAMS.



GENERATOR TRANSFER DEVICE (GTD) WIRING DIAGRAM



LEVEL 01 – LIGHTING PLAN

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

GENERAL NOTES

A. THE EXISTING WORK SHOWN ON PLANS IS FROM PREVIOUS ENGINEERING DOCUMENTATION AND FIELD OBSERVATIONS. ACTUAL CONDITIONS MAY VARY. CONTRACTOR SHALL FIELD VERIFY EXISTING WORK AND CONDITIONS, WHETHER SHOWN OR NOT, AND MAKE MINOR ADJUSTMENTS NECESSARY TO COMPLETE NEW WORK. IF EXISTING CONDITIONS ARE FOUND THAT PROHIBITS NEW WORK AS DIRECTED, NOTIFY THE ENGINEER IN WRITING FOR REDIRECTION AS REQUIRED.

B. ALL DEVICES, FIXTURES, AND EQUIPMENT SHOWN ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE. SUCH ITEMS ARE LABELED WITH AN "E" OR NOTED AS EXISTING FOR ADDITIONAL CLARITY. MAINTAIN AND PROTECT DURING DEMOLITION AND CONSTRUCTION. IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR BECOMES FAMILIAR WITH EXISTING CONDITIONS IN FIELD PRIOR TO BIDDING.

C. ELECTRICAL EQUIPMENT, LIGHT FIXTURES, AND WIRING DEVICES, ETC. SHOWN IN THIN LINES WITH SUBSCRIPT "E" ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY. KEEP IT AND ALL ASSOCIATED WIRING AND COMPONENTS IN OPERATION AS NECESSARY FOR A COMPLETE SYSTEM.

D. ELECTRICAL EQUIPMENT, LIGHT FIXTURES, DATA AND WIRING DEVICES, ETC. SHOWN WITH SUBSCRIPT "REL" INDICATE RELOCATED DEVICE. EXTEND CABLING AS NECESSARY FOR A COMPLETE SYSTEM. COORDINATE FINAL LOCATION WITH ARCHITECT AND LOW VOLTAGE CONTRACTOR.

E. ALL LIGHTING FIXTURE LOCATIONS INDICATED ON THIS DRAWING SHALL BE SUPERSEDED BY THE ARCHITECTURAL CEILING PLAN FOR THE AREA. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FIXTURES, QUANTITY AND TYPE.

F. MOUNTING HEIGHT FOR ALL LIGHTING FIXTURES SHALL BE VERIFIED WITH THE OWNER/ARCHITECT PRIOR TO ROUGH-IN.

G. EXIT AND EMERGENCY LIGHTING SHALL BE CIRCUITED TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS AND SHALL BE INSTALLED PER THE LOCAL GOVERNING CODES AND AUTHORITY HAVING JURISDICTION. COORDINATE ALL EXIT SIGN AND EM LIGHTING LOCATIONS WITH OWNER/ARCHITECT PRIOR TO PLACEMENT.

H. ALL HOMERUNS FOR LIGHTING CIRCUITS SHALL USE MINIMUM #10 AWG WIRING TO COMPLY WITH VOLTAGE DROP REQUIREMENTS.

I. ALL EXPOSED WIRING SHALL BE RUN IN CONDUIT, EMT OR RIGID. MINIMUM CONDUIT SIZE SHALL BE 3/4". MC CABLE MAY BE USED ONLY IN CONCEALED LOCATIONS AND SHALL BE PROPERLY SUPPORTED. A MAXIMUM LENGTH OF 6'-0" OF FLEXIBLE CONDUIT MAY BE USED FOR FINAL CONNECTIONS ONLY (FROM JUNCTION BOXES TO LIGHT FIXTURES, APPLIANCES, MOTORS, ETC.). TYPE BX, ROMEX, ARMORED CABLE (AC) OR SIMILAR SHALL NOT BE ACCEPTABLE.

J. ALL CONDUITS AND ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED GREEN GROUNDING CONDUCTOR.

K. CONDUITS SHALL BE: MOUNTED AS HIGH AS POSSIBLE WHERE RUN OVERHEAD, ROUTED TO AVOID CONFLICTS WITH OTHER WORK, PROVIDED WITH WIDE SWEEPING ELBOWS AND BUSHED ENDS TO HELP PROTECT THE CABLE THAT IS PULLED THROUGH IT.

L. COORDINATE THE LOCATIONS OF NEW WORK AND ROUTING OF NEW CONDUITS TO AVOID CONFLICTS WITH THE EXISTING CONDITIONS AND OTHER NEW WORK.

M. ALL RELOCATED LIGHTING FIXTURES ARE TO BE CLEANED AND MADE OPERABLE PRIOR TO INSTALLATION.

N. TIE EMERGENCY FIXTURE GTDS AND NEW EXIT SIGNS TO CIRCUIT CPLA-5 UNLESS OTHERWISE NOTED.

O. HATCHED LIGHT FIXTURES INDICATE EMERGENCY OPERATION. EMERGENCY FIXTURES SHOWN BEHIND SWITCHING (TAGGED "GTD") SHALL BE CONNECTED TO NORMAL AND EMERGENCY CIRCUITS VIA UL924 LISTED DEVICE BYPASS NORMAL POWER SWITCH AND ILLUMINATE TO FULL OUTPUT UPON LOSS OF UTILITY POWER. SEE DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.

P. COORDINATE LOCATION OF LIGHTING CONTROLS WITH ARCHITECT/OWNER PRIOR TO INSTALLATION. 2

CODED NOTES

1. AREA IS NOT IN CONTRACT. ALL DEVICES IN THIS AREA ARE EXISTING TO REMAIN. KEEP IN OPERATION AS NEEDED.
2. EXTEND CIRCUITRY TO EXISTING LIGHTING CIRCUIT LP1A-10.
3. EXTEND CIRCUITRY TO EXISTING LIGHTING CIRCUIT LP1A-14.
4. EXTEND CIRCUITRY TO EXISTING LIGHTING CIRCUIT LP1A-6. 2

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
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CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
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FOR
CMHA

Moody Nolan
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PHONE: 614-461-4664

DRAWING TITLE:
LEVEL 01 - LIGHTING PLAN

E201-25075.DWG
PRATER
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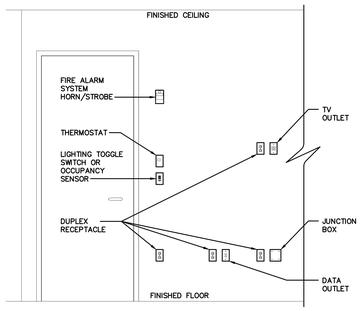
DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
E.ROE	E.ROE	G.OWENS	25075

STATE OF OHIO
GREGORY S. OWENS
E-63408
PROFESSIONAL ENGINEER

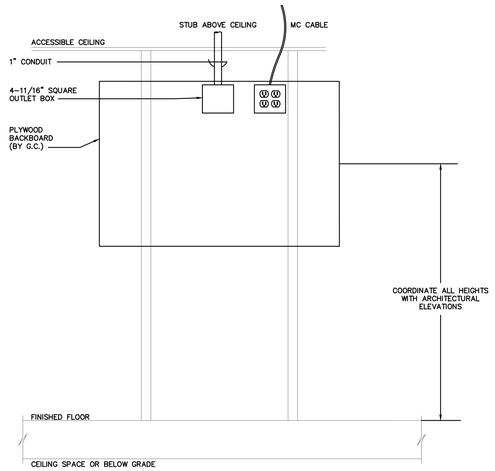
03/31/2025
25011.01
E201
CONSTRUCTION DOCUMENTS



DEVICE MOUNTING DETAIL

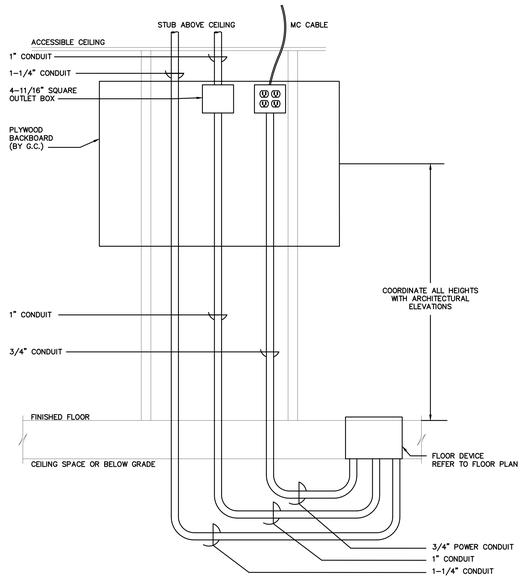
SCALE: NONE

DOOR SHOWN FOR ENCLOSED ROOMS. ALIGNMENT SHALL APPLY IN CORRIDORS, LOBBIES, ETC.



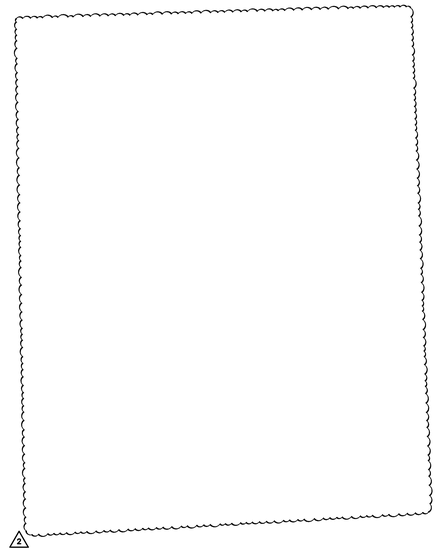
A E301 TV ROUGH-IN DETAIL

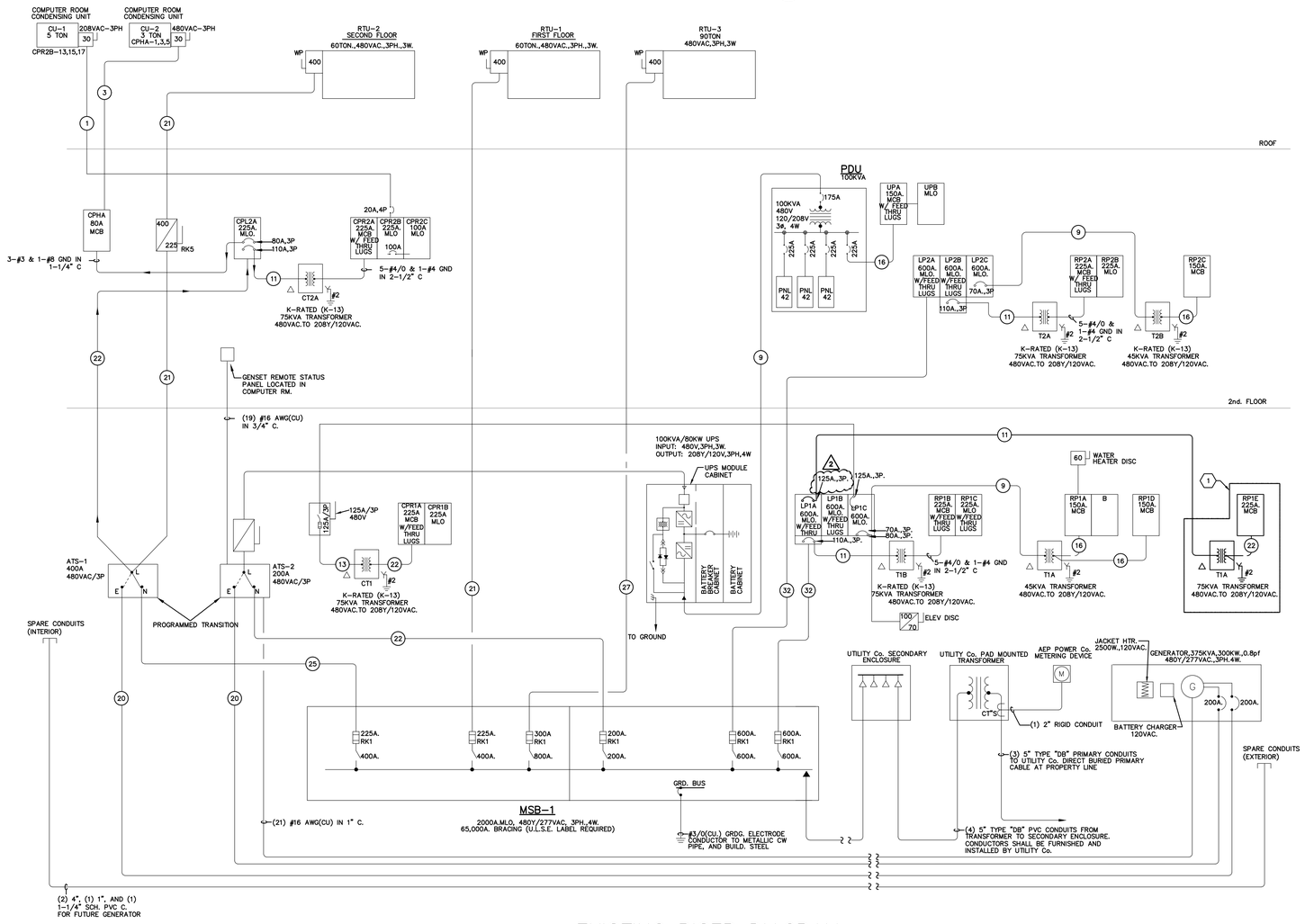
SCALE: NONE



B E301 TV ROUGH-IN W/ FLR DEVICE DETAIL

SCALE: NONE





EXISTING RISER DIAGRAM

SCALE: N.T.S.

FEEDER SCHEDULE

#	# OF PHASE PARALLEL RUNS	# OF CONDUCTORS PER CONDUIT	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	GROUND CONDUCTOR SIZE	CONDUIT SIZE
1	1	3	12	–	12	3/4"
2	1	4		12		
3	1	3	10	–	10	3/4"
4	1	4		10		
5	1	3	8	–	10	3/4"
6	1	4		8		1"
7	1	3	6	–	10	1"
8	1	4		6		
9	1	3	4	–	8	1-1/4"
10	1	4		4		
11	1	3	2	–	6	1-1/4"
12	1	4		2		1-1/2"
13	1	3	1	–	6	1-1/2"
14	1	4		1		2"
15	1	3	1/0	–	6	1-1/2"
16	1	4		1/0		2"
17	1	3	2/0	–	4	2"
18	1	4		2/0		
19	1	3	3/0	–	4	2"
20	1	4		3/0		2-1/2"
21	1	3	4/0	–	2	2"
22	1	4		4/0		2-1/2"
23	1	3	250KCMIL	–	2	2-1/2"
24	1	4		250KCMIL		3"
25	1	3	350KCMIL	–	1/0	3"
26	1	4		350KCMIL		
27	1	3	500KCMIL	–	1/0	3"
28	1	4		500KCMIL		3-1/2"
29	2	3	250KCMIL	–	1/0	2-1/2"
30	2	4		250KCMIL		3"
31	2	3	350KCMIL	–	2/0	3"
32	2	4		350KCMIL		
33	2	3	500KCMIL	–	2/0	3"
34	2	4		500KCMIL		3-1/2"
35	3	3	350KCMIL	–	2/0	3"
36	3	4		350KCMIL		
37	3	3	500KCMIL	–	3/0	3"
38	3	4		500KCMIL		3-1/2"
39	4	3	350KCMIL	–	3/0	3"
40	4	4		350KCMIL		
41	5	3	500KCMIL	–	4/0	3"
42	5	4		500KCMIL		3-1/2"
43	6	3	500KCMIL	–	250KCMIL	3"
44	6	4		500KCMIL		3-1/2"

NOTES:
FEEDER SCHEDULE TO BE USED TO SIZE THE BRANCH AND FEEDER CONDUITS FOR ALL CIRCUITS SHOWN ON THE DRAWINGS. UNLESS NOTED OTHERWISE, EACH SINGLE PHASE CIRCUIT IS TO INCLUDE A NEUTRAL CONDUCTOR. THE BRANCH CIRCUIT CONDUCTOR SIZES ARE SHOWN IN THE PANEL SCHEDULES.

LINE TYPE LEGEND

- EXISTING ELECTRICAL EQUIPMENT/DEVICES TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT/DEVICES TO BE REMOVED.
- NEW ELECTRICAL EQUIPMENT/DEVICES TO BE PROVIDED.

RISER CODED NOTES ⬡

1. AREA OF WORK.

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
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FOR
CMHA

Moody Nolan
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SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
ELECTRICAL RISER AND DETAILS

03/31/2025

25011.01

E301

CONSTRUCTION DOCUMENTS

E301-25075.DWG

PRATER
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Dublin, Ohio 43016
(614) 766 4896
FAX: (614) 766 2354

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
E.ROE	E.ROE	G.OWENS	25075

Panel ID: RP1B | Voltage: 208 / 120 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 225 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
EXISTING	20/1	EX	1.000	1	A	2	0.960	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	3	B	4	1.440	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	5	C	6	1.800	EX	20/1	EXISTING
REC - OFFICE 117,119	**20/1**	EX	1.080	7	A	8	1.800	EX	20/1	EXISTING
REC - RM 102,104,110	**20/1**	EX	0.900	9	B	10	1.800	EX	20/1	EXISTING
REC - OFFICE 115,117	**20/1**	EX	0.900	11	C	12	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	0.720	13	A	14	1.000	EX	20/1	EXISTING
REC - OFFICE 119,120	**20/1**	EX	0.900	15	B	16	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	17	C	18	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	19	A	20	1.000	EX	20/1	EXISTING
COPIER - RM 116	**20/1**	EX	0.360	21	B	22	1.000	EX	20/1	EXISTING
GD - RM 116	**20/1**	EX	1.200	23	C	24	1.000	EX	20/1	EXISTING
REC - RM 116	**20/1**	EX	0.360	25	A	26	1.000	EX	20/1	EXISTING
EXISTING	20/2	EX	0.750	27	B	28	1.000	EX	20/1	EXISTING
-	-	EX	0.750	29	C	30	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	31	A	32	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	33	B	34	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.000	35	C	36	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.200	37	A	38	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.200	39	B	40	1.000	EX	20/1	EXISTING
EXISTING	20/1	EX	1.200	41	C	42	1.000	EX	20/1	EXISTING

Demand Load Panel Summary: 29.1 KVA; 80.7 AMPS; Total Demand Load 166.8 AMPS
Connected Load Panel Summary: Phase A: 20.9 KVA 173.8 AMPS; Phase B: 21.1 KVA 175.4 AMPS; Phase C: 21.4 KVA 178.0 AMPS; Total: 63.3 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: RP1A | Voltage: 208 / 120 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.C.B. | Main Size: 150 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) DOWNLIGHTS	20/1	EX	0.850	1	A	2	0.360	EX	20/1	(EX) FA PANEL
(EX) REC BATHROOM	20/1	EX	0.720	3	B	4	1.000	EX	20/1	EXISTING
SPARE	20/1	EX	0.000	5	C	6	1.250	EX	30/2	(EX) GENERATOR
(EX) EX FAN	20/1	EX	0.360	7	A	8	1.250	EX	-	(EX) GENERATOR
(EX) REC ELEV PIT	20/1	EX	0.360	9	B	10	0.750	EX	20/1	(EX) DOWNLTS
(EX) ELEV EQUIP	20/1	EX	1.000	11	C	12	0.750	EX	20/1	(EX) DOWNLTS
(EX) ELEV CAB	20/1	EX	0.850	13	A	14	0.750	EX	20/1	(EX) DOWNLTS
(EX) LTS-LOBBY TRACK	20/1	EX	0.850	15	B	16	0.750	EX	20/1	(EX) DOWNLTS
(EX) LTS-STAIR	20/1	EX	1.000	17	C	18	0.750	EX	20/1	(EX) DOWNLTS
(EX) LTS-COORIDOR	20/1	EX	1.000	19	A	20	0.750	EX	20/1	(EX) DOWNLTS
(EX) LTS-COFFEE	20/1	EX	1.000	21	B	22	0.540	EX	20/1	**REC - CONF 135**
(EX) MICROWAVE	20/1	EX	1.200	23	C	24	0.540	EX	20/1	**REC - CONF 129**
(EX) COPIER	20/1	EX	0.360	25	A	26	0.000	EX	20/1	**SPARE**
(EX) REC-DOCK	20/1	EX	0.360	27	B	28	0.000	EX	20/1	**SPARE**
(EX) REC-RM 139	20/1	EX	0.720	29	C	30	0.000	EX	20/1	(EX) DOWNLTS
(EX) REC-RM 139	20/1	EX	0.720	31	A	32	0.000	EX	20/1	(EX) COPIER
(EX) DED REC 141	20/1	EX	0.360	33	B	34	0.000	EX	20/1	(EX) REC-CORR 109
(EX) DED REC 141	20/1	EX	0.360	35	C	36	0.000	EX	20/1	(EX) REC-CONF 117
(EX) DED REC 141	20/1	EX	0.360	37	A	38	0.000	EX	20/1	(EX) REC-CONF 117
(EX) 1ST FL HW TANK	30/2	EX	1.750	39	B	40	0.750	EX	20/1	(EX) LTS-102,122
-	-	EX	1.750	41	C	42	0.750	EX	20/1	(EX) DOWNLTS

Demand Load Panel Summary: 29.8 KVA; 82.6 AMPS; Total Demand Load 119.3 AMPS
Connected Load Panel Summary: Phase A: 14.4 KVA 119.6 AMPS; Phase B: 15.9 KVA 132.4 AMPS; Phase C: 16.6 KVA 138.1 AMPS; Total: 46.8 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: RP1C | Voltage: 208 / 120 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 225 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) SUB FEED	100/1	EX	1.080	1	A	2	0.960	EX	20/1	EXISTING
-	100/1	EX	1.080	3	B	4	1.440	EX	20/1	EXISTING
-	100/1	EX	1.080	5	C	6	1.800	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	7	A	8	1.800	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	9	B	10	1.800	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	11	C	12	1.200	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	13	A	14	1.200	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	15	B	16	1.200	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	17	C	18	1.080	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	19	A	20	0.775	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	21	B	22	0.775	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	23	C	24	0.775	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	25	A	26	0.775	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	27	B	28	0.775	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	29	C	30	0.775	EX	20/1	EXISTING
REC - OFFICE 111,113	**20/1**	EX	1.080	31	A	32	0.775	EX	20/1	EXISTING
EXISTING	20/1	EX	1.080	33	B	34	0.775	EX	20/1	EXISTING
REC - OFFICE 111,112	**20/1**	EX	1.080	35	C	36	0.775	EX	20/1	EXISTING
REC - OFFICE 112,114	**20/1**	EX	0.900	37	A	38	0.775	EX	20/1	EXISTING
REC - OFFICE 118,120	**20/1**	EX	1.080	39	B	40	0.775	EX	20/1	EXISTING
REC - RM 121	**20/1**	EX	0.900	41	C	42	0.900	EX	**20/1**	**REC - RM 121**

Demand Load Panel Summary: 31.0 KVA; 86.1 AMPS
Connected Load Panel Summary: Phase A: 14.4 KVA 120.3 AMPS; Phase B: 15.1 KVA 125.8 AMPS; Phase C: 12.9 KVA 107.4 AMPS; Total: 42.4 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: B | Voltage: 208 / 120 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 150 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) SIGN	20/1	EX	1.200	1	A	2	0.960	EX	20/1	(EX) NORTH BASE
SPARE	20/1	EX	0.000	3	B	4	1.440	EX	20/1	(EX) NORTH BASE
SPARE	20/1	EX	0.000	5	C	6	1.800	EX	20/1	(EX) COPIER
(EX) REC	20/1	EX	0.720	7	A	8	1.800	EX	20/1	**TREADMILL - RM 126**
(EX) REC	20/1	EX	0.720	9	B	10	1.800	EX	20/1	**TREADMILL - RM 126**
(EX) REC	20/1	EX	0.720	11	C	12	0.600	EX	20/1	**ELLIPTICAL - RM 126**
(EX) WATER HEATER	40/2	EX	1.250	13	A	14	0.600	EX	20/1	**STAIR MACH. - RM 126**
-	-	EX	1.250	15	B	16	0.360	EX	20/1	**REC - FITNESS 126**
SPARE	50/2	EX	0.000	17	C	18	0.900	EX	20/1	**REC - FITNESS 126**
-	-	EX	0.000	19	A	20	0.000	EX	20/1	**SPARE**
SPARE	20/1	EX	0.000	21	B	22	0.000	EX	20/1	**SPARE**
SPARE	20/1	EX	0.000	23	C	24	0.000	EX	20/1	(EX) LTS CONTROL

Demand Load Panel Summary: 13.2 KVA; 36.7 AMPS
Connected Load Panel Summary: Phase A: 13.3 KVA 110.6 AMPS; Phase B: 12.3 KVA 102.3 AMPS; Phase C: 10.5 KVA 87.7 AMPS; Total: 36.1 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: RP1D | Voltage: 208 / 120 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 225 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) FURNITURE	20/3	EX	0.775	1	A	2	0.775	EX	20/2	(EX) FURNITURE
(EX) FURNITURE	-	EX	0.775	3	B	4	0.775	EX	-	(EX) FURNITURE
(EX) FURNITURE	-	EX	0.775	5	C	6	0.775	EX	20/3	(EX) FURNITURE
(EX) FURNITURE	20/3	EX	0.775	7	A	8	0.775	EX	-	(EX) FURNITURE
(EX) FURNITURE	-	EX	0.775	9	B	10	0.775	EX	-	(EX) FURNITURE
(EX) FURNITURE	-	EX	0.775	11	C	12	0.775	EX	20/2	**FURNITURE**
(EX) FURNITURE	20/3	EX	0.775	13	A	14	0.775	EX	-	-
(EX) FURNITURE	-	EX	0.775	15	B	16	0.000	EX	20/3	(EX) SPARE
(EX) FURNITURE	-	EX	0.775	17	C	18	0.000	EX	-	-
FURNITURE	20/2	EX	0.775	19	A	20	0.000	EX	-	-
-	-	EX	0.775	21	B	22	0.775		**20/2**	**FURNITURE**
REC - CORR 130	**20/1**		0.360	23	C	24	0.775		-	-
REC - LOBBY 102	**20/1**		0.540	25	A	26	0.775		**20/3**	**FURNITURE**
CARD READERS	**20/1**		0.500	27	B	28	0.775		-	-
REC - LOBBY 102	**20/1**		0.720	29	C	30	0.775		-	-
SPACE	-		0.000	31	A	32	0.000		-	SPACE
SPACE	-		0.000	33	B	34	0.000		-	SPACE
SPACE	-		0.000	35	C	36	0.000		-	SPACE
SPACE	-		0.000	37	A	38	0.000		-	SPACE
SPACE	-		0.000	39	B	40	0.000		-	SPACE
SPACE	-		0.000	41	C	42	0.000		-	SPACE

Demand Load Panel Summary: 19.9 KVA; 55.4 AMPS
Connected Load Panel Summary: Phase A: 6.7 KVA 56.2 AMPS; Phase B: 6.7 KVA 55.8 AMPS; Phase C: 6.5 KVA 54.2 AMPS; Total: 19.9 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: CPL2A | Voltage: 480 / 277 | Panel Type: GE A SERIES
Location: ELEC RM 244 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.C.B. | Main Size: 225 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) LTS - STAIRS	20/1	EX	2.200	1	A	2	0.000	EX	20/1	(EX)LTS - 2ND FLR BATH
(EX)LTS - 1ST FLR BATH	20/1	EX	2.200	3	B	4	0.000			SPACE
LTS - 1ST FLR EM	20/1	EX	1.380	5	C	6	0.000			SPACE
(EX) LTS - 2ND FLR EM	20/1	EX	2.200	7	A	8	0.000			SPACE
(EX) LTS - 2ND FLR EM	20/1	EX	2.200	9	B	10	0.000			SPACE
(EX) LTS - 2ND FLR EM	20/1	EX	2.200	11	C	12	0.000			SPACE
(EX) LTS - 2ND FLR EM	20/1	EX	2.200	13	A	14	0.000			SPACE
SPACE		EX	0.000	15	B	16	0.000			SPACE
SPACE		EX	0.000	17	C	18	0.000			SPACE
SPACE		EX	0.000	19	A	20	0.000			SPACE
SPACE		EX	0.000	21	B	22	0.000			SPACE
SPACE		EX	0.000	23	C	24	0.000			SPACE
SPACE		EX	0.000	25	A	26	0.000			SPACE
SPACE		EX	0.000	27	B	28	0.000			SPACE
SPACE		EX	0.000	29	C	30	0.000			SPACE
(EX) UPS		80/3	0.000	31	A	32	0.000			SPACE
-		-	0.000	33	B	34	0.000			SPACE
-	-	-	0.000	35	C	36	0.000			SPACE
(EX) XFMR TC2A	-	110/3	0.000	37	A	38	0.000		-	**UNUSED SPACE**
-	-	-	0.000	39	B	40	0.000		-	**UNUSED SPACE**
-	-	-	0.000	41	C	42	0.000		-	**UNUSED SPACE**

Demand Load Panel Summary: 18.2 KVA; 21.9 AMPS
Connected Load Panel Summary: Phase A: 6.6 KVA 23.8 AMPS; Phase B: 4.4 KVA 15.9 AMPS; Phase C: 3.6 KVA 12.9 AMPS; Total: 14.6 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: CPR1A | Voltage: 208 / 120 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.C.B. | Main Size: 225 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) FURNITURE	20/3	EX	1.800	1	A	2	1.800	EX	20/3	(EX) FURNITURE
-	-	EX	1.800	3	B	4	1.800	EX	-	-
-	-	EX	1.800	5	C	6	1.800	EX	-	-
(EX) FURNITURE	20/3	EX	1.800	7	A	8	1.800	EX	20/3	(EX) FURNITURE
-	-	EX	1.800	9	B	10	1.800	EX	-	-
-	-	EX	1.800	11	C	12	1.350	EX	-	-
(EX) FURNITURE	20/3	EX	1.800	13	A	14	1.350	EX	20/2	(EX) FURNITURE
-	-	EX	1.800	15	B	16	1.350	EX	-	-
-	-	EX	1.800	17	C	18	1.800	EX	20/3	(EX) FURNITURE
(EX) FURNITURE	20/2	EX	0.960	19	A	20	1.800	EX	-	-
-	-	EX	0.480	21	B	22	1.800	EX	-	-
(EX) FURNITURE	20/2	EX	0.960	23	C	24	1.800	EX	20/3	(EX) FURNITURE
-	-	EX	0.960	25	A	26	1.800	EX	-	-
(EX) FURNITURE	20/2	EX	1.440	27	B	28	1.800	EX	-	-
-	-	EX	0.960	29	C	30	0.775		**20/2**	**FURNITURE**
FURNITURE	**20/2**		0.775	31	A	32	0.775		-	-
-	-		0.775	33	B	34	0.775		**20/2**	**FURNITURE**
FURNITURE	**20/3**		0.775	35	C	36	0.775		-	-
-	-		0.775	37	A	38	0.000		-	SPACE
-	-		0.775	39	B	40	0.000		-	SPACE
SPACE	-		0.000	41	C	42	0.000		-	SPACE

Demand Load Panel Summary: 58.3 KVA; 161.8 AMPS
Connected Load Panel Summary: Phase A: 18.2 KVA 151.6 AMPS; Phase B: 18.2 KVA 151.6 AMPS; Phase C: 16.4 KVA 136.6 AMPS; Total: 52.8 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: LP1A | Voltage: 480 / 277 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 600 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
(EX) TIME CLOAD PHOTC	20/1	EX	0.775	1	A	2	0.775	EX	20/2	(EX) R.V. PLUG
(EX) POLE LTS	30/1	EX	0.775	3	B	4	0.775	EX	-	-
(EX) POLE LTS	20/1	EX	0.775	5	C	6	2.500	EX	20/1	(EX) OFFICE LTS
(EX) POLE LTS	20/1	EX	0.775	7	A	8	2.500	EX	20/1	(EX) OPEN OFFICE LTS
(EX) CANOPY LTS	20/1	EX	0.775	9	B	10	3.275	EX	20/1	**LTS - NORTH OFFICE**
CUH-1	**25/1**		5.000	11	C	12	0.200	EX	20/1	**EF-1**
(EX) GND MTD FLOODS	201	EX	0.775	13	A	14	3.275	EX	20/1	**LTS - SOUTH OFFICE**
SPACE			0.000	15	B	16	0.000	EX	20/1	(EX) SPARE
SPACE			0.000	17	C	18	1.500	EX	30/2	(EX) WH-1
SPACE			0.000	19	A	20	1.500	EX	-	-
SPACE			0.000	21	B	22	0.775			SPACE
SPACE			0.000	23	C	24	0.775		-	SPACE
SPACE			0.000	25	A	26	0.000		-	SPACE
SPACE	-		0.000	27	B	28	2.200	EX	30/2	(EX) POLE LTS
SPACE	-		0.000	29	C	30	2.200	EX	-	-
XFMR 75KVA	**100/3**		9.360	31	A	32	0.000		-	SPACE
-	-		9.360	33	B	34	0.000		-	SPACE
-	-		6.240	35	C	36	0.000		-	SPACE
(EX) XFMR 75KVA	110/3	EX	0.000	37	A	38	0.000		-	UNUSED SPACE
-	-	EX	0.000	39	B	40	0.000		-	UNUSED SPACE
-	-	EX	0.000	41	C	42	0.000		-	UNUSED SPACE

Demand Load Panel Summary: 35.9 KVA; 43.2 AMPS
Connected Load Panel Summary: Phase A: 19.7 KVA 71.2 AMPS; Phase B: 17.9 KVA 64.7 AMPS; Phase C: 19.2 KVA 69.3 AMPS; Total: 56.9 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

NOTE: BREAKERS SHOWN IN BOLD ARE NEW

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Panel ID: LP1B | Voltage: 480 / 277 | Panel Type: GE A SERIES
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 600 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
VAV-13	20/3	EX	3.000	1	A	2	3.000	EX	20/1	HTR
-	-	EX	3.000	3	B	4	3.000	EX	20/1	WALL HTR W.STAIR
-	-	EX	3.000	5	C	6	3.000	EX	20/1	ENTRY HTR
VAV-12	20/3	EX	3.000	7	A	8	3.000	EX	20/1	WALL HTR E.STAIR
-	-	EX	3.000	9	B	10	6.000	EX	30/1	VAV-10
-	-	EX	3.000	11	C	12	7.000	EX	30/1	VAV-24
DOCK LIFT PUMP	20/3	EX	4.000	13	A	14	7.000	EX	30/1	VAV-24A
-	-	EX	4.000	15	B	16	3.600	EX	20/3	VAV-26
-	-	EX	4.000	17	C	18	3.600	EX	-	-
VAV-14	20/3	EX	3.000	19	A	20	3.600	EX	-	-
-	-	EX	3.000	21	B	22	4.000	EX	20/3	VAV-6
-	-	EX	3.000	23	C	24	4.000	EX	-	-
UNIT HTR RM.140	20/3	EX	4.000	25	A	26	4.000	EX	-	-
-	-	EX	4.000	27	B	28	5.000	EX	30/1	VAV-1-08
-	-	EX	4.000	29	C	30	3.000	EX	20/3	VAV-1-10
VAV-1-11	20/3	EX	2.000	31	A	32	3.000	EX	-	-
-	-	EX	2.000	33	B	34	3.000	EX	-	-
-	-	EX	2.000	35	C	36	2.300	EX	20/3	VAV-1-09
VAV-7	-	EX	4.000	37	A	38	2.300	EX	-	-
VAV-8	-	EX	5.500	39	B	40	2.500	EX	-	-
VAV-9	-	EX	5.500	41	C	42	5.000	EX	30/1	VAV-1-07

Connected Load Panel Summary: Phase A: 48.9 KVA 176.5 AMPS; Phase B: 51.6 KVA 186.3 AMPS; Phase C: 41.9 KVA 151.3 AMPS; Total: 142.4 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

Panel ID: RP1E | Voltage: 208 / 120 | Panel Type: SEE SPEC
Location: ELEC RM 144 | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: M.L.O | Main Size: 225 Amps

REFER TO "CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS" CHART FOR WIRE SIZES

BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION
EV CHARGER	40/2	-	3.120	1	A	2	0.000	-	40/2	FUTURE
-	-	-	3.120	3	B	4	0.000	-	-	-
EV CHARGER	40/2	-	3.120	5	C	6	0.000	-	40/2	FUTURE
-	-	-	3.120	7	A	8	0.000	-	-	-
EV CHARGER	40/2	-	3.120	9	B	10	0.000	-	40/2	FUTURE
-	-	-	3.120	11	C	12	0.000	-	-	-
EV CHARGER	40/2	-	3.120	13	A	14	0.000	-	40/2	FUTURE
-	-	-	3.120	15	B	16	0.000	-		-
SPACE	-	-	0.000	17	C	18	0.000	-	-	SPACE
SPACE	-	-	0.000	19	A	20	0.000	-	-	SPACE
SPACE	-	-	0.000	21	B	22	0.000	-	-	SPACE
SPACE	-	-	0.000	23	C	24	0.000	-	-	SPACE

Demand Load Panel Summary: 25.0 KVA; 69.3 AMPS
Connected Load Panel Summary: Phase A: 9.4 KVA 78.0 AMPS; Phase B: 9.4 KVA 78.0 AMPS; Phase C: 6.2 KVA 52.0 AMPS; Total: 25.0 KVA
Breaker Options (If Used): HT - Handle Tie; LO - Lock-On Device; GF - GND Fault CKT Interrupter; EX - Existing to Remain; SH - Shunt Trip Breaker

FIXTURE SCHEDULE

NOTE : FIXTURE NUMBER, LETTER PREFIX INDICATES TYPE OF MOUNTING AS FOLLOWS: CL–CEILING MOUNTED; S–STEM SUSPENDED; W–WALL MOUNTED; R–CEILING RECESSED; WR–WALL RECESSED; CV–COVE MOUNTED; UC–UNDER CABINET; RF–ROOF MOUNTED; P–POST; GR–GROUND; H–MOUNTED IN HOOD; C–CHAIN MOUNTED.

FIXTURE NUMBER	DESCRIPTION	MANUFACTURER (EQUALS)	CATALOG NUMBER	LAMPS NUMBER	REMARKS
R1	2'X2' RECESSED LED WITH 3307 LUMENS, 0–10V DIMMING AND 3500K COLOR TEMPERATURE.	METALUX (LSI INDUSTRIES, LITHONIA)	22FP3235C	(1) 29.2W LED (INCLUDED)	
R1E	SAME AS "R1" BUT WITH EMERGENCY BATTERY.	METALUX (LSI INDUSTRIES, LITHONIA)	22FP3235C–EL10W	(1) 29.2W LED (INCLUDED)	
R2	2'X4' RECESSED LED WITH 4000 LUMENS, 0–10V DIMMING AND 3500K COLOR TEMPERATURE.	LITHONIA (LSI INDUSTRIES, METALUX)	2BLT4 30L ADP GZ10 LP830	(1) 22.5W LED (INCLUDED)	
R2E	SAME AS "R2" BUT WITH EMERGENCY BATTERY.	LITHONIA (LSI INDUSTRIES, METALUX)	2BLT4 30L ADP GZ10 LP830 EL14L	(1) 22.5W LED (INCLUDED)	
R3	6" ROUND DOWNLIGHT WITH 3500 LUMENS, 0–10 DIMMING AND 3500K COLOR TEMPERATURE	COOPER LIGHTING (LITHONIA, METALUX)	HC635D010–HM63040835–61	(1) 33.7W LED (INCLUDED)	
R3E	SAME AS "R3" BUT WITH EMERGENCY BATTERY.	COOPER LIGHTING (LITHONIA, METALUX)	HC635D010REM7–HM63040835–61	(1) 33.7W LED (INCLUDED)	
S1	4' STRIP LIGHT WITH 400 LUMENS PER FOOT, 0–10V DIMMING, AND 3500K COLOR TEMPERATURE	PEERLESS (LITHONIA, METALUX)	SQMS LSL 4FT MSL4 80CRI 35K 400LMF DARK ZT 277V SCT	(1) 4.8W/FT LED (INCLUDED)	
S2	12" GLOBE PENDANT WITH 1800 LUMENS, 0–10V DIMMING AND 3000K COLOR TEMPERATURE	VISA LIGHTING (OR APPROVED ALTERNATE)	OP2130 SOLIDCAP I30K(H) MVOLT XX FRST	(1) 27W LED (INCLUDED)	FINISH TO BE BLACK. VERIFY CABLE LENGTH WITH ARCHITECT/OWNER.
S3	CUSTOM LENGTH STRIP FIXTURE WITH 3500 LUMENS, 0–10V DIMMING AND 3500K COLOR TEMPERATURE	FOCAL POINT (LITHONIA, METALUX)	FSM2BS–BWBW–625DN–250UP–35K–1C–UNV–LD1	(1) 8W/FT LED (INCLUDED)	VERIFY CABLE LENGTH WITH ARCHITECT/OWNER. SEE FLOOR PLANS FOR LENGTH OF FIXTURE.
W1E	WALL MOUNTED EGRESS FIXTURE	LITHONIA (METALUX, CURRENT)	WDGE1 LED P1 30K 80CRI VW MVOLT E4WH	(1) 4W LED (INCLUDED)	MOUNT ABOVE EGRESS DOOR
EX1	RECESSED EDGE LIT EXIT SIGN SINGLE FACE	COMPASS (SURE LITES)	CELR1RN	LED (INCLUDED)	REFER TO FLOOR PLANS FOR ARROWS

NOTE: VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO ROUGH–IN.

LIGHTING CONTROL NOTES

1. ENCLOSED OFFICES SHALL BE MANUAL ON, AUTO OFF, & MANUAL DIM.
2. CONFERENCE, MEETING, MULTIPURPOSE, CLASSROOM, LECTURE & TRAINING ROOMS SHALL BE MANUAL ON, AUTO OFF, & MANUAL DIM.
3. AUTOMATIC SHUTOFF IS NOT REQUIRED FOR SPACES WHERE AUTOMATIC SHUTOFF WOULD ENDANGER THE SAFETY OR SECURITY OF THE ROOM OR BUILDING OCCUPANTS (INCLUDING STAIRWELLS, ELECTRICAL ROOMS, MECHANICAL ROOMS).
4. ALL OTHER SPACES SHALL BE MANUAL ON, AUTO OFF, UNLESS NOTED/SHOWN OTHERWISE. REFER TO LIGHTING CONTROL LEGEND FOR DEVICE TYPES & ASSOCIATED CONTROL SEQUENCE.
5. POWER PACKS & WIRING ARE SHOWN ON THE DRAWINGS FOR SPECIFIC CIRCUITING & SWITCHING, EXCEPT WHEN CONTROL INTENT IS CLEAR (EX.–BOUND BY A ROOM). ALL SWITCH CONTROLS & POWER PACKS SHALL BE FURNISHED & INSTALLED AS REQUIRED. IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE & FUNCTIONAL BRANCH CIRCUIT WIRING & CONTROL SYSTEM IS FURNSHED & INSTALLED.

LIGHTING CONTROL LEGEND

LINE VOLTAGE CONTROL

- OD — WALL MOUNTED SELF–ADJUSTING 2400 SQ. FT. SINGLE–CIRCUIT DUEL TECHNOLOGY (ULTRA/PIR) SENSOR WITH 180° FIELD OF VIEW, AND DIMMING – ACUITY CONTROLS MODEL#WSX–PDT–D. EXTEND 0–10V DIMMING WIRING TO ALL FIXTURES WITHIN THE ROOM FOR FULL RANGE DIMMING CONTROL. SWITCH SHALL BE PROGRAMMED FOR AUTO OFF AND MANUAL ON.
- O — WALL MOUNTED SELF–ADJUSTING 2400 SQ. FT. SINGLE–CIRCUIT DUEL TECHNOLOGY (ULTRA/PIR) SENSOR WITH 180° FIELD OF VIEW – ACUITY CONTROLS MODEL#WSX–PDT. SWITCH SHALL BE PROGRAMMED FOR AUTO OFF AND AUTO ON.
- V — WALL MOUNTED SELF–ADJUSTING 2400 SQ. FT. SINGLE–CIRCUIT DUEL TECHNOLOGY (ULTRA/PIR) SENSOR WITH 180° FIELD OF VIEW – ACUITY CONTROLS MODEL#WSX–PDT. SWITCH SHALL BE PROGRAMMED FOR AUTO OFF AND MANUAL ON.

LOW VOLTAGE CONTROL

- D — WALL MOUNTED LOW VOLTAGE (LV) MANUAL ON/OFF AND RAISE LOWER – ACUITY CONTROLS MODEL#nPODM–DX. EXTEND 0–10V DIMMING WIRING TO ALL FIXTURES WITHIN THE ROOM FOR FULL RANGE DIMMING CONTROL. SWITCH SHALL BE PROGRAMMED FOR AUTO OFF AND MANUAL ON. REFER TO WIRING DIAGRAM.
- OS — LOW VOLTAGE CEILING / WALL MOUNTED SELF–ADJUSTING 2000 SQ. FT. DUAL TECH. MOTION SENSOR WITH 360° FIELD OF VIEW. ACUITY CONTROLS nLIGHT #nCM PDT 10 RBJ. JUNCTION BOX MOUNTED POWER PACK – ACUITY CONTROLS NLIGHT #NPP16 D. 120/277 VOLT INPUT, 16A LOAD RATING, 15VDC, 40 mA OUTPUT, INSTALL ABOVE ACCESSIBLE CEILING. REFER TO WIRING DIAGRAM.
- P — LOW VOLTAGE CEILING / WALL MOUNTED LOW VOLTAGE CONTINUOUS DIMMING DAYLIGHT SENSOR PHOTOCELL. DAYLIGHT HARVESTING FOR 0–10V DIMMING DRIVERS NLIGHT NCM ADCX RJB NLIGHT NCM ADCX RJB. JUNCTION BOX MOUNTED POWER PACK – ACUITY CONTROLS NLIGHT #NPP16 D. 120/277 VOLT INPUT, 16A LOAD RATING, 15VDC, 40 MA OUTPUT, INSTALL ABOVE ACCESSIBLE CEILING. REFER TO WIRING DIAGRAM.

NOTE:
(a) LETTERING IN PARENTHESIS INDICATES LIGHTING CONTROL ZONE ASSOCIATED TO FIXTURE WITH SAME TAG

NOTES:
ALL OCCUPANCY SENSOR SHALL BE PROGRAMMED TO AUTOMATIC CONTROL LIGHTING FIXTURES TO "OFF" ONLY.

THIS CONTRACTOR SHALL INCLUDED FACTORY SET UP, TESTING AND COMMISSIONING OF ALL THE LIGHTING CONTROL. THE FINAL LOCATION OF SENSORS SHALL BE DESIGNED BY THE MANUFACTURER TO REDUCE FALSE ON'S AND OFF'S FROM HVAC SYSTEMS OR ADJACENT AREAS. UNLESS OTHERWISE DIRECTED, SET OCCUPANCY SENSOR TIME DELAY FUNCTION TO 30 MINUTES.

LIGHTING CONTROLS SHALL BE FIELD TESTED, DOCUMENTED SHOWING FUNCTION OF THE SYSTEM AND COMMISSIONING REPORTS SHALL BE SUBMITTED. COMMISSIONING DOCUMENTATION SHALL DETAIL THE SYSTEM AND ALL COMPONENTS ARE CALIBRATED, ADJUSTED, AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. FIELD TESTING SHALL OCCUR WHEN FURNITURE, HVAC EQUIPMENT IS OPERATIONAL AND OWNER EQUIPMENT IS INSTALLED.

ALL SENSOR COMPONENTS AND CONNECTIONS SHALL BE INSTALLED WITHIN A 4" SQUARE JUNCTION BOX.

ACCEPTABLE EQUIVALENT PRODUCTS SHALL BE BY WATTSTOPPER, LUTRON, HUBBELL, OR COOPER LIGHTING CONTROLS. WIRELESS SOLUTIONS ARE NOT CONSIDERED EQUAL TO BASIS OF DESIGN.

CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS

	WIRE SIZE	2 WIRE+GROUND	3 WIRE+GROUND	4 WIRE+GROUND
15A	#12 WIRE, #12 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
20A	#12 WIRE, #12 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
25A	#10 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
30A	#10 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
35A	#8 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
40A	#8 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
45A	#6 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
50A	#6 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	1" CONDUIT
60A	#4 WIRE, #10 GROUND	1" CONDUIT	1" CONDUIT	1–1/4" CONDUIT
70A	#4 WIRE, #8 GROUND	1" CONDUIT	1" CONDUIT	1–1/4" CONDUIT
80A	#3 WIRE, #8 GROUND	1–1/4" CONDUIT	1–1/4" CONDUIT	1–1/4" CONDUIT
90A	#2 WIRE, #8 GROUND	1–1/4" CONDUIT	1–1/4" CONDUIT	1–1/4" CONDUIT

NOTES:
WIRE SIZE BASED UPON THHN COPPER WIRING, EMT CONDUIT.
PROVIDE WIRE FOR EACH PHASE, NEUTRAL, AND GROUND AS NOTED.
BRANCH CIRCUIT WIRING SHALL MATCH CIRCUIT BREAKER/FUSE SIZE.

VOLTAGE DROP:
20A, 120V BRANCH CIRCUITS (3% VD) – USE #12 FOR UP TO 60 FT, #10 FROM 61 FT TO 100 FT, #8 FROM 101 FT TO 150 FT.
20A, 277V BRANCH CIRCUITS (3% VD) – USE #12 FOR UP TO 130 FT, #10 FROM 131 FT TO 200 FT, #8 FROM 201 FT TO 320 FT.

NOTES TO BIDDERS

DESIGN DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING CONDITIONS. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL LABOR AND MATERIALS NECESSARY FOR MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS TO THE DESIGN AND INCLUDE IN HIS BID ALL COSTS, LABOR AND MATERIALS NECESSARY TO MEET THE DESIGN INTENT. CLARIFICATIONS PROVIDED BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING SHALL BE FINAL AND SHALL BE IMPLEMENTED AT THE CONTRACTOR'S EXPENSE.

ALL BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES. CONTRACTORS SHALL INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH INSTALLING ALL WORK IN STRICT COMPLIANCE WITH GOVERNING CODES, THE PLANS SPECIFICATIONS AND NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT THE ARCHITECT, ENGINEER OR OWNER TO ANY APPARENT DISCREPANCIES BETWEEN THE GOVERNING CODES AND THE DESIGN INTENT.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MOUNTING HGT. TO CENTER UNLESS OTHERWISE NOTED
	CEILING OUTLET	
	WALL OUTLET	SEE DRAWINGS
	LUMINAIRE – NORMAL POWER	CLG/WALL
	LUMINAIRE – EMERGENCY (LIFE SAFETY) POWER	CLG/WALL
J	WIRED JUNCTION BOX	SEE DRAWINGS
	DUPLEX RECEPTACLE	18"
A	DUPLEX RECEPTACLE – ABOVE COUNTER	AB COUNTER
	POWER AND VOICE/DATA POKE THROUGH	FLOOR MTD.
WP	DUPLEX RECEPTACLE WEATHERPROOF / GROUND FAULT	18"
GF	DUPLEX RECEPTACLE W/ GROUND FAULT INTERRUPTER	18"
GF/A	DUPLEX RECEPTACLE W/ GFCI – ABOVE COUNTER	AB COUNTER
U	DUPLEX RECEPTACLE W/ DUAL USB OUTLETS	18"
U/A	DUPLEX RECEPTACLE W/ DUAL USB OUTLETS – AB COUNTER	AB COUNTER
	220V RECEPTACLE	18"
	DOUBLE DUPLEX RECEPTACLE	18"
A	DOUBLE DUPLEX RECEPTACLE – ABOVE COUNTER	AB COUNTER
	SIMPLEX RECEPTACLE	18"
3, 4	TOGGLE SWITCH – SINGLE, 3–WAY & 4–WAY	42"
	DATA OUTLET ROUGH IN	18"
A	DATA OUTLET ROUGH IN – ABOVE COUNTER	AB COUNTER
W	WALL TELEPHONE OUTLET	48"
C	DATA OUTLET – CEILING	CLG MTD
WAP	WIRELESS ACCESS POINT	CLG MTD
	CEILING MOUNTED EXIT LIGHT	
	WALL MTD. EXIT LIGHT	AB DOOR
	CEILING MOUNTED EXIT LIGHT W/ DIRECTIONAL ARROWS	
	ELECTRICAL PANEL – SURFACE MOUNT, FLUSH MOUNT INSTALL AT 48" TO HIGHEST CIRCUIT BREAKER IN APT UNITS.	6'–0" TO TOP
	PLYWOOD TELEPHONE BACKBOARD	SEE DRAWINGS
30/15/3	SAFETY SWITCH – (DISCONNECT SIZE/FUSE SIZE/POLES)	AS REQUIRED
	COMBINATION MOTOR STARTER	AS REQUIRED
	MANUAL MOTOR STARTING SWITCH W/ PILOT LIGHT	42"
	MANUAL MOTOR CONTROLLER/DISCONNECT	42"
T	LINE VOLTAGE THERMOSTAT	60"
	EMERGENCY BATTERY UNIT	90"
F	FIRE ALARM MANUAL PULL STATION	42"
F	FIRE ALARM SIGNAL – AUDIO VISUAL	80"
F	FIRE ALARM SIGNAL – STROBE ONLY	80"
F	FIRE ALARM SIGNAL – AUDIO	80"
F	FIRE ALARM SIGNAL – AUDIO VISUAL	CLG. MTD.
F	FIRE ALARM SIGNAL – STROBE ONLY	CLG. MTD.
F	SMOKE DETECTOR – DUCT MOUNTED	SEE DRAWINGS
F	SMOKE DETECTOR – CEILING	
H	HEAT DETECTOR – CEILING	
CO	CARBON MONOXIDE DETECTOR – CEILING	
SD	DUCT SMOKE DETECTOR W/ SMOKE DAMPER	
FA	FIRE ALARM CONTROL RELAY	AS REQ'D
AM	FIRE ALARM MONITOR MODULE	AS REQ'D
DH	FIRE ALARM MAGNETIC DOOR HOLDER	AS REQ'D
FS	SPRINKLER SYSTEM FLOW SWITCH	
TS	SPRINKLER SYSTEM TAMPER SWITCH	
PS	SPRINKLER SYSTEM PRESSURE SWITCH	
	PUSH BUTTON STATION – DOORBELL ON UNIT PLANS	42"
DO	ELECTRIC DOOR OPERATOR PUSH PLATE	42"
AO	DOOR HARDWARE AUTO OPERATOR	AB. DOOR
CR	ACCESS CONTROL CARD READER	42"
RX	ACCESS CONTROL REQUEST TO EXIT/PANIC	42"
DC	ACCESS CONTROL DOOR CONTACT	AS REQ'D
ML	ACCESS CONTROL MAGNETIC LOCK	AS REQ'D
MS	ACCESS CONTROL MOTION SENSOR	CLG. MTD.
ES	ACCESS CONTROL ELECTRIC STRIKE/LOCK	AS REQ'D
EL	ACCESS CONTROL ELECTRIC LOCK CONCEALED RODS	AS REQ'D
EPT	DOOR HARDWARE ELECTRIC POWER TRANSFER	AS REQ'D
EH	DOOR HARDWARE ELECTRIC HINGE	AS REQ'D
PS	DOOR HARDWARE POWER SUPPLY	AB. DOOR
DE	DOOR HARDWARE DELAYED EGRESS DEVICE	AB. DOOR
PB	PANIC BUTTON ROUGH IN – SINGLE GANG BOX W/ 3/4" CONDUIT PATHWAY TO AB ACCESSIBLE CEILING.	BELOW DESK
DR	DOOR RELEASE ROUGH IN – SINGLE GANG BOX W/ 3/4" CONDUIT PATHWAY TO AB ACCESSIBLE CEILING.	BELOW DESK

ELECTRICAL LEGEND NOTES

1. DEVICES WITH SUBSCRIPT "A" INDICATE DEVICES INSTALLED ABOVE COUNTER UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHT, OTHERWISE INSTALL AT 42" A.F.F. TO CENTER OF RECEPTACLE.

CIRCUIT IDENTIFICATION

CIRCUIT IDENTIFICATION REQUIREMENTS

A. ALL DISCONNECTING MEANS SHALL BE MARKED TO INDICATE ITS SPECIFIC PURPOSE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

B. PROVIDE CIRCUIT LABEL FOR ALL NEW RECEPTACLES.

C. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES FOR ALL LIGHTING AND APPLIANCE PANELBOARDS. PROVIDE CIRCUIT IDENTIFICATION LABELS AT EACH SWITCH AND/OR CIRCUIT BREAKER IN SWITCHBOARDS. DIRECTORIES AND IDENTIFICATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE. EVERY NEW CIRCUIT OR ALTERED CIRCUIT SHALL BE IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE AND USE. THE IDENTIFICATION SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHER CIRCUITS. DO NOT COPY THESE SCHEDULES AS FINAL PANELBOARD INDEX INFORMATION. UTILIZE THE EXISTING PANELBOARD DIRECTORY TO POPULATE THE NEW DIRECTORY WITH INFORMATION THAT ACCURATELY REFLECTS EXISTING TO REMAIN CONDITIONS AND ALL ADDITIONS, DELETIONS, OR MODIFICATIONS TO THE BRANCH CIRCUITS MADE DURING DEMOLITION AND CONSTRUCTION.

D. FIELD COORDINATE FINAL CIRCUIT NUMBERS SHOWN IN CONJUNCTION WITH THE EXISTING TO REMAIN CIRCUITS. UPON COMPLETION OF THE DEMOLITION PHASE THIS CONTRACTOR SHALL IDENTIFY THE EXISTING TO REMAIN CIRCUITS AND ALTER THE FINAL CIRCUITS NUMBERS TO ACCOMMODATE THE REMAIN CIRCUITS. MAINTAIN THE CIRCUIT DENSITY SHOWN ON THE ELECTRICAL DRAWINGS.

E401–25075.DWG

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E.ROE	E.ROE	G.OWENS	25075

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

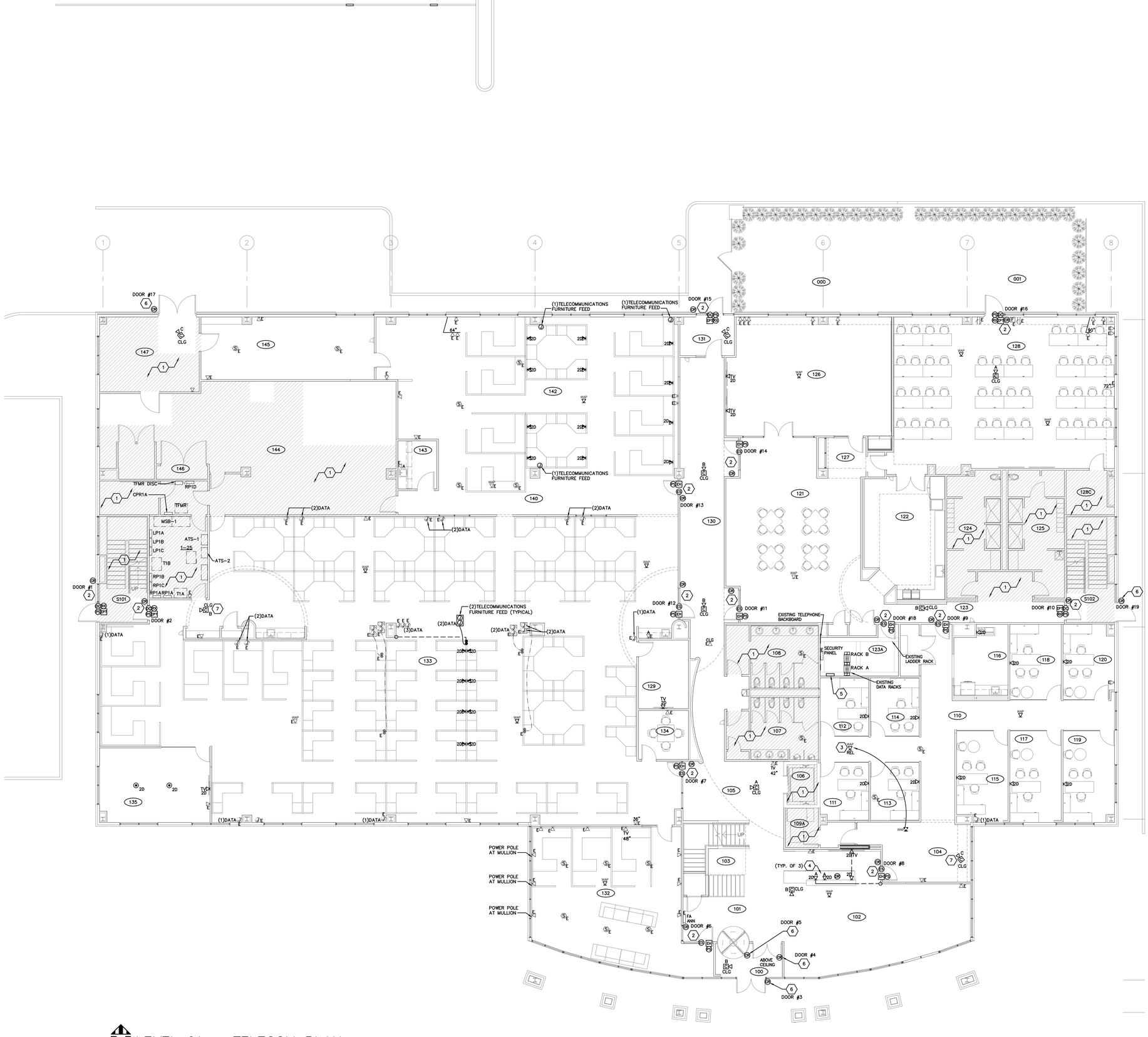
CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

DRAWING TITLE:
ELECTRICAL SCHEDULES, LEGENDS, AND DETAILS

STATE OF OHIO · GREGORY S. OWENS · E–63408 · REGISTERED PROFESSIONAL ENGINEER

03/31/2025
25011.01
E401
CONSTRUCTION DOCUMENTS



LEVEL 01 – TELECOM PLAN
SCALE: 1/8"=1'-0"

CAMERA LEGEND

SYMBOL	DESCRIPTION
C A	AXIS #M3058-PLVE
C B	AXIS #P3719-PLE
C C	AXIS #P3265-V

BASES OF DESIGN CAMERAS LISTED ABOVE ARE AXIS. HANWHA IS AN APPROVED EQUAL.
PROVIDE (1) CAT6A CABLE AT ALL CAMERA LOCATIONS. COORDINATE FINAL CAMERA LOCATION, DIRECTION, AND AIMING WITH OWNER REPRESENTATIVE PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY MOUNTS AND ASSOCIATED MOUNTING HARDWARE FOR A COMPLETE INSTALL.

GENERAL NOTES

A. THE EXISTING WORK SHOWN ON PLANS IS FROM PREVIOUS ENGINEERING, DOCUMENTATION AND FIELD OBSERVATIONS. ACTUAL CONDITIONS MAY VARY. CONTRACTOR SHALL FIELD VERIFY EXISTING WORK AND CONDITIONS, WHETHER SHOWN OR NOT, AND MAKE MINOR ADJUSTMENTS NECESSARY TO COMPLETE NEW WORK. IF EXISTING CONDITIONS ARE FOUND THAT PROHIBITS NEW WORK AS DIRECTED, NOTIFY THE ENGINEER IN WRITING FOR REDIRECTION AS REQUIRED.

B. ALL DATA DEVICES, FIXTURES, AND EQUIPMENT SHOWN ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE. SUCH ITEMS ARE LABELED WITH AN "E" OR NOTED AS EXISTING FOR ADDITIONAL CLARITY. MAINTAIN AND PROTECT DURING DEMOLITION AND CONSTRUCTION. KEEP IT AND ALL ASSOCIATED WIRING AND COMPONENTS IN OPERATION AS NECESSARY FOR A COMPLETE SYSTEM. IT IS RECOMMENDED THAT THE GENERAL CONTRACTOR BECOMES FAMILIAR WITH EXISTING CONDITIONS IN FIELD PRIOR TO BIDDING.

C. ALL CABLING SHALL BE BLUE, PLENUM RATED CAT6A.

D. PROVIDE FIRESTOP MATERIAL FOR EACH PENETRATION OF SLAB AND THROUGH RATED FIRE RATED WALLS.

E. THE "#D" DESIGNATION NEXT TO A DATA OUTLET REPRESENTS THE NUMBER OF CAT6A MODULAR CONNECTORS AT THAT LOCATION (i.e. 2D = (2) CATEGORY 6A MODULAR CONNECTORS). PROVIDE EACH NEW WAP WITH (2) CAT6A MODULAR CONNECTORS AND EACH NEW CAMERA WITH (1) CAT6A MODULAR CONNECTOR. EXTEND (1) CAT6A DATA CABLE FROM EACH MODULAR CONNECTOR TO THE NEW PATCH PANEL IN THE EXISTING RACK IN THE EXISTING IT ROOM 123A. PROVIDE A PATCH CORD FOR EACH CABLE DROP.

F. PROVIDE A 25' CABLE SERVICE LOOP AT EACH WIRELESS ACCESS POINT (WAP) LOCATION.

CODED NOTES

1. AREA IS NOT IN CONTRACT. ALL DEVICES IN THIS AREA ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED. KEEP IN OPERATION AS NEEDED.
2. REFER TO ELEVATION ON SHEET T201.
3. RELOCATE DEVICE TO NEW LOCATION SHOWN. PROVIDE NEW CABLING FROM THE EXISTING RACK TO THE NEW LOCATION.
4. PROVIDE WIRING DEVICES WITHIN RECEPTIONIST DESK AS SHOWN – EXTEND LOW VOLTAGE CABLES HORIZONTALLY THROUGH THE FRAMING MEMBERS BETWEEN DEVICES SHOWN.
5. NEW ACCESS CONTROL EQUIPMENT. COORDINATE FINAL LOCATION OF EQUIPMENT IN THE FIELD.
6. TIE EXISTING ACCESS CONTROLLED DOOR INTO NEW ACCESS CONTROL SYSTEM. PROVIDE NEW CARD READER COMPATIBLE WITH NEW SYSTEM.
7. REPLACE EXISTING CAMERA WITH NEW CAMERA IN THE SAME LOCATION.

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PHONE: 614-461-4664

DRAWING TITLE:
LEVEL 01 - TELECOM PLAN

T101-25075.DWG

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E.ROE	E.ROE	–	25075

STATE OF OHIO
GREGORY S. OWENS
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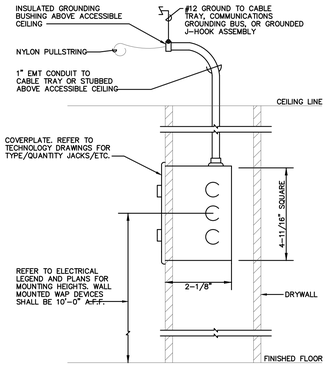
REGISTERED PROFESSIONAL ENGINEER

03/31/2025
25011.01
T101 2
CONSTRUCTION DOCUMENTS

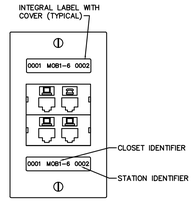


TELECOM OUTLET DETAIL

SCALE: NONE

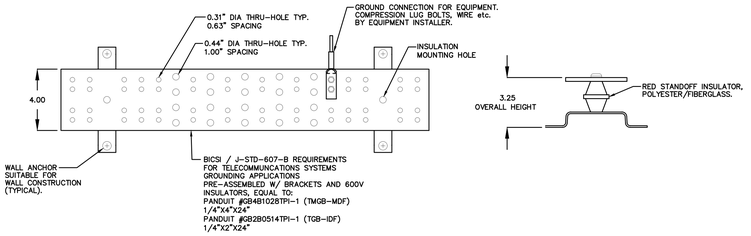
TYPICAL FOR ALL COMMUNICATIONS WALL DEVICES. CEILING WAPs SIMILAR, WITH BOX MOUNTED AT STRUCTURE ABOVE IN LIEU OF WALL, AND WAP AND BRACKET (FURNISHED BY OWNER INSTALLED BY CONTRACTOR) MOUNTED TO THE CEILING SYSTEM BY THIS CONTRACTOR.

AT EACH ▽ LOCATION SHOWN ON THESE PLANS, THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A 4" SQUARE BACKBOX WITH A SINGLE GANG ADAPTER AND A FOUR (4) PORT PLATE FOR TELEPHONE/VOICE/DATA DEVICES. SEE COMMUNICATIONS OUTLET DETAIL, THIS SHEET. RUN A 3/4" CONDUIT WITH PULLSTRING, FROM OUTLET TO 6" ABOVE ACCESSIBLE CEILING. REAM AND BUSH ENDS OF CONDUIT.



COMMUNICATIONS OUTLET DETAIL

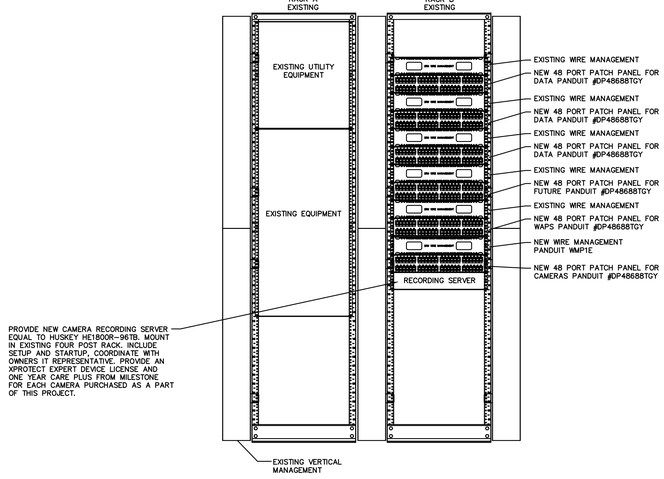
NTS



GROUNDING BUS DETAIL TMGB & TGB

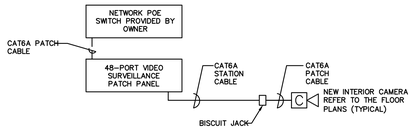
SCALE: NONE

PROVIDE PATCH CORDS FOR CONNECTION BETWEEN PATCH PANELS AND OWNER PROVIDED SWITCHES.



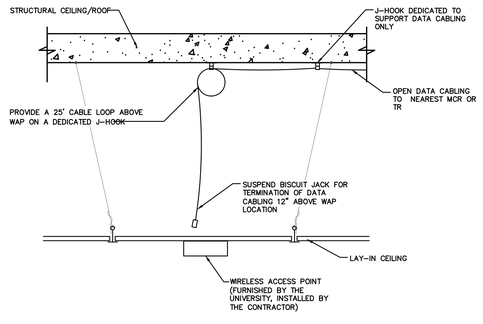
FIRST FLOOR RACK ELEVATION

SCALE: NONE



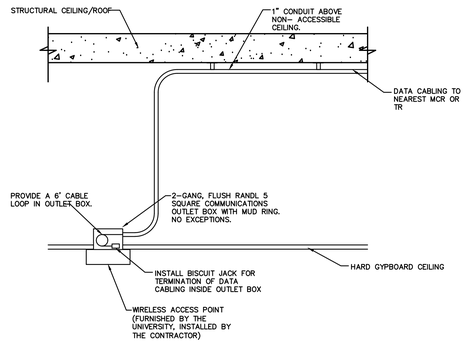
CCTV RISER DIAGARM

SCALE: N.T.S.



INTERIOR WAP MOUNTING DETAIL AT ACCESSIBLE CEILINGS

SCALE: NONE



INTERIOR WAP MOUNTING DETAIL AT NON-ACCESSIBLE CEILINGS

SCALE: NONE

TELECOMMUNICATIONS ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	JUNC	JUNCTION
AFG	ABOVE FINISHED GRADE	MFGR	MANUFACTURER
BC	BONDING CONDUCTOR	MECH	MECHANICAL
BFG	BELOW FINISHED GRADE	PNL	PANEL
BLDG	BUILDING	RECEPT	RECEPTACLE
CAB	CABINET	SW	SWITCH
CLG	CEILING	SYS	SYSTEM
C	CONDUIT	TBB	TELECOMMUNICATIONS BONDING BACKBONE
CONN	CONNECTION / CONNECTOR	T.C.	TELECOMMUNICATION CONTRACTOR
CONTR	CONTRACTOR	TELE	TELECOMMUNICATION
CONT	CONTROL	TFMR	TRANSFORMER
DTL	DETAIL	TMGB	TELECOMMUNICATION MAIN GROUNDING BUSBAR
DIAG	DIAGRAM	TGB	TELECOMMUNICATION GROUNDING BUSBAR
E.C.	ELECTRICAL CONTRACTOR	TR	TELECOMMUNICATION ROOM
EF	EQUIPMENT FACILITY	TYP	TYPICAL
ER	EQUIPMENT ROOM	UON	UNLESS OTHERWISE NOTED
EXH	EXHAUST	WP	WEATHERPROOF
G.C.	GENERAL CONTRACTOR		
GRD	GROUND		
H.C.	MECHANICAL CONTRACTOR		

TELECOMMUNICATIONS LEGEND

SYMBOL	DESCRIPTION	MOUNTING HGT. TO CENTER UNLESS OTHERWISE NOTED
▽	TELECOMMUNICATION WALL OUTLET OR OVERHEAD OUTLET	18"/CLG
▼	FURNITURE OUTLET	ON FURNITURE
WAP ▽	WIRELESS ACCESS POINT CONNECTION	ABOVE CEILING
◉	SPECIAL OUTLET WALL / FLOOR MOUNTED	DIV 26
TV ▽	TELEVISION OUTLET	SEE DRAWINGS
(J)	JUNCTION BOX	SEE DRAWINGS
	LADDER RACK	DIV 26
(S)	SPEAKER	ABOVE CEILING
[C]	CCTV CAMERA	CEILING
[DC]	DOOR SWITCH/CONTACT, REFER TO TECHNOLOGY DOOR DETAILS	AS REQ'D
[CR]	CARD READER, REFER TO TECHNOLOGY DOOR DETAILS	48"
[PS]	DOOR POWER SUPPLY, REFER TO TECHNOLOGY DOOR DETAILS	AS REQ'D
[RX]	REQUEST TO EXIT, REFER TO TECHNOLOGY DOOR DETAILS	AS REQ'D
[ES]	ELECTRIC STRIKE, REFER TO TECHNOLOGY DOOR DETAILS	AS REQ'D
[EH]	ELECTRIC HINGE, INTEGRAL TO DOOR HARDWARE REFER TO TECHNOLOGY DOOR DETAILS	AS REQ'D
[EPT]	ELECTRIC HINGE, INTEGRAL TO DOOR HARDWARE REFER TO TECHNOLOGY DOOR DETAILS	AS REQ'D
[C]	CCTV CAMERA	CEILING

TELECOMMUNICATIONS NOTES

A. INSTALLER QUALIFICATIONS : ENGAGE AN EXPERIENCED FACTORY-AUTHORIZED AND BICSI CERTIFIED INSTALLER TO PERFORM WORK OF THIS SECTION.

B. COMPLY WITH THE LATEST VERSIONS OF THE ELECTRONIC INDUSTRIES ASSOCIATION/ TELECOMMUNICATIONS INDUSTRY (EIA/TIA) APPLICABLE STANDARDS.

C. PRODUCTS SHALL BE MANUFACTURED BY THE LEVITON, SIEMON COMPANY, BELDEN, BERK-TEK, PANDUIT, OR HUBBELL.

D. DATA FACEPLATE COLOR AND FINISH SHALL BE APPROVED BY THE ARCHITECT. PLASTIC FACEPLATES SHALL BE EQUAL TO HUBBELL IFP26TI. STAINLESS STEEL FACEPLATES SHALL BE EQUAL TO HUBBELL SSF206. FACEPLATES SHALL HAVE FOUR OR SIX MODULAR OPENINGS. REFER TO PLANS FOR REQUIREMENTS.

E. CAT 6A CABLE - PLENUM EQUAL TO PNADUIT, BERK-TEK, GENERAL CABLE CAT6A UTP BLUE COLOR.

F. CAT 6A INSERT SHALL BE EQUAL TO PANDUIT #CJK6A88TGBL.

G. MODULAR PATCH PANELS SHALL BE EQUAL TO PANDUIT #DP48688TGY.

H. DATA OUTLETS SHALL BE 8-POSITION/8 CONDUCTOR CATEGORY 6A OUTLETS WITH INSULATION DISPLACEMENT #110 CONNECTOR WHICH ACCEPTS #23 AWG SOLID WIRE.

I. CONDUIT SYSTEM SHALL BE CONTINUOUS FROM OUTLETS TO TELEPHONE BACKBOARD OR ACCESSIBLE CEILING.

J. ALL WORKSTATIONS OUTLETS SHALL BE IDENTIFIED BY CLEARLY LISTING THE RACK, PATCH PANEL AND JACK POSITION. THE RESPECTIVE IDENTIFICATION SHALL BE AT THE CORRESPONDING PATCH PANEL. ALL ID TAGS SHALL BE TYPE-WRITTEN AND COORDINATED WITH THE OWNER ALONG WITH FINAL COLOR CODING.

K. DATA CABLING SHALL BE 4-PAIR, UNSHIELDED TWISTED PAIR (UTP) #23 AWG SOLID COPPER CONDUCTORS WITH A BLUE HIGH-DENSITY POLYETHYLENE INSULATION, NEC TYPE CMP OR BETTER, EIA/TIA CATEGORY 6A.

L. TEST EACH CATEGORY 6A UTP CABLE IN ACCORDANCE WITH CURRENT EIA/TIA TESTING STANDARDS. USE A LEVEL III TEST SET FOR TESTING CABLES. PROGRAM THE TEST SET TO TEST CATEGORY 6 CABLING. SUBMIT DOCUMENTATION THAT THE TEST SET HAS BEEN CALIBRATED BY THE MANUFACTURER WITHIN THE LAST 12-MONTHS. PROVIDE AT LEAST 10-DAYS NOTICE IN WRITING WHEN THE CABLING IS READY FOR FINAL ACCEPTANCE TESTING. ALL TESTING SHALL BE IN THE PRESENCE OF THE OWNER AND/OR THE A/E. WRITTEN TEST RESULTS SHALL BE PROVIDED TO THE OWNER AND A/E FOR REVIEW, UTILIZING REPORT FORMATS PER EIA/TIA STANDARDS. ANY CABLE THAT FAILS TO MEET ITS SPECIFIED CHARACTERISTICS SHALL BE REPLACED WITH A NEW CABLE AND RETESTED. CORRECT DEFICIENCIES INDICATED BY TESTS AND COMPLETELY RETEST WORK AFFECTED BY SUCH DEFICIENCIES. IT SHALL BE THE JUDGEMENT OF THE A/E TO REQUIRE ADDITIONAL TESTING SHOULD CONDUCTORS SHOW DEFICIENCIES IN THEIR PERFORMANCE. THE ADDITIONAL TESTING SHALL BE AT THE EXPENSE OF THE CONTRACTOR AND NOT THE OWNER OR A/E. TAG ALL CABLES, OUTLETS, AND OTHER COMPONENTS FOR WHICH TESTS HAVE BEEN SATISFACTORILY COMPLETED. TAGGING ADMINISTRATION SHALL BE IN ACCORDANCE WITH EIA/TIA STANDARDS. LABEL ALL DATA OUTLETS WITH MACHINE-WRITTEN LABELS WITH UNIQUE IDENTIFIERS PER THE OWNER'S ESTABLISHED LABELING SCHEME.

M. ALL LABELING SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL PRIOR TO INSTALLATION.

N. COORDINATE ALL VOICE/DATA WORK WITH OWNER..

#	DATE	CHANGE DESCRIPTION
2	04/30/2025	ADDENDUM #2

COLUMBUS METROPOLITAN HOUSING AUTHORITY
COMMUNITY. COMMITMENT. COLLABORATION.

CMHA EASTON OFFICE RENOVATION
3400 MORSE CROSSING
COLUMBUS, OHIO 43219
FOR
CMHA

Moody Nolan
300 SPRUCE STREET
SUITE 300
COLUMBUS, OHIO 43215
PHONE: 614-461-4664

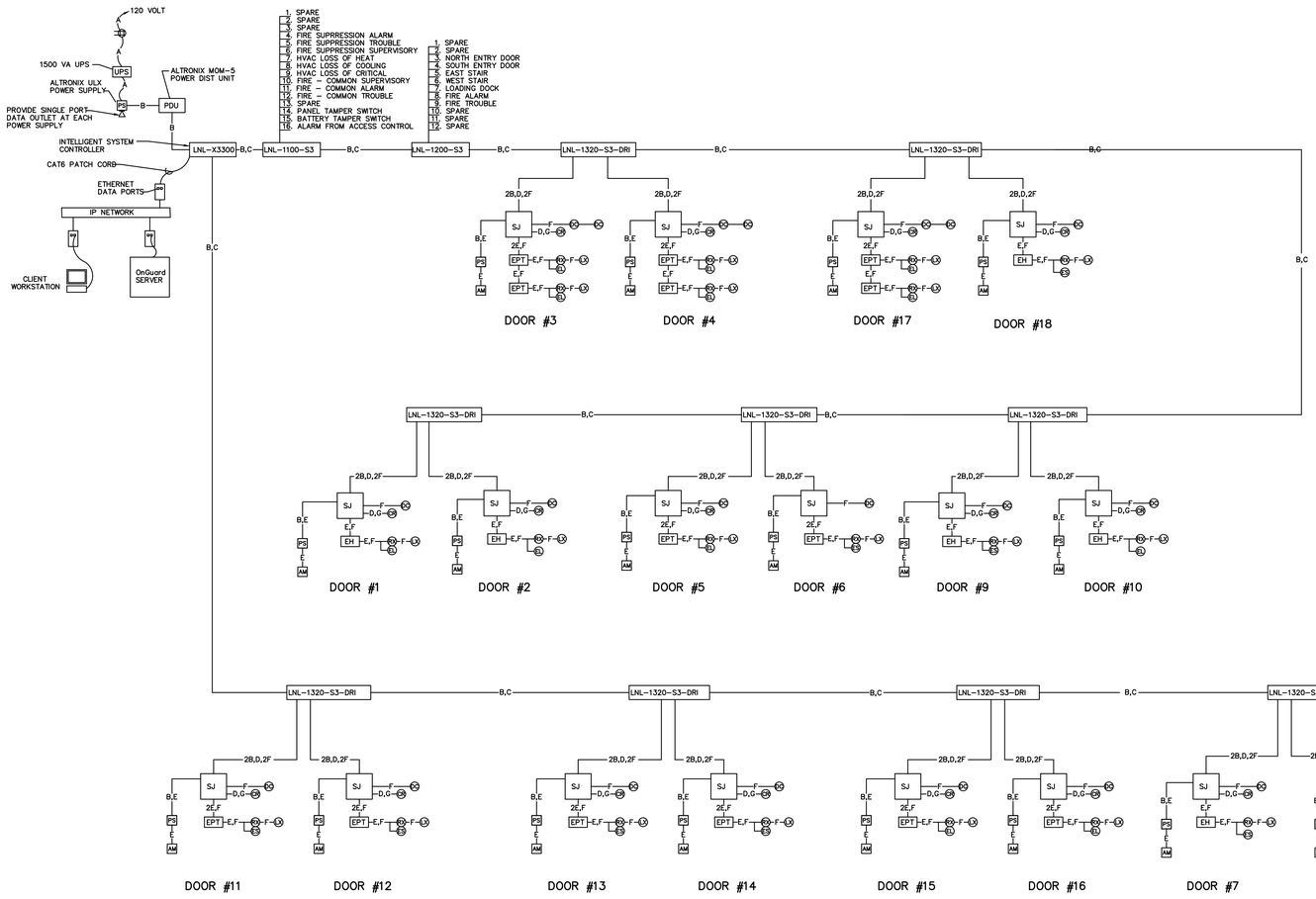
DRAWING TITLE:
TELECOM LEGEND AND DETAILS

T201-25075.DWG
PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
(614) 766 4896
FAX: (614) 766 2354

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
E.ROE	E.ROE	–	25075

STATE OF OHIO
GREGORY S OWENS
E-63408
REGISTERED PROFESSIONAL ENGINEER

03/31/2025
25011.01
T201 2
CONSTRUCTION DOCUMENTS



CABLE LEGEND

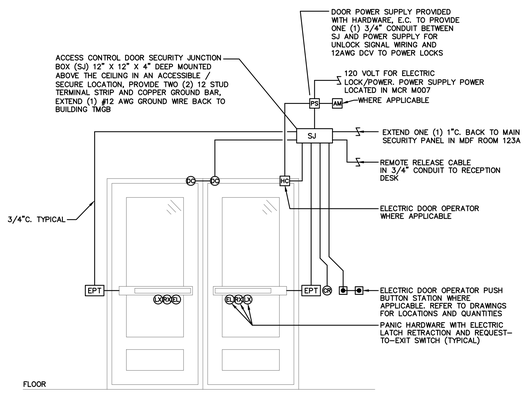
ID	DESCRIPTION	CONFIGURATION	CABLE NOTES
A	120 VOLT POWER	2 #12 + 1 #12 GROUND	THHN IN 3/4" CONDUIT
B	12 VOLT DC CONTROL	1 PAIR TW SH 18 AWG	BELDEN 5341FE IN 3/4" CONDUIT
C	RS-485 DATA	2 PAIR TW SH 24 AWG	BELDEN 9842 IN 3/4" CONDUIT
D	CARD READER CABLE	6 CONDUCTOR SH 22 AWG	BELDEN 5504FY IN 3/4" CONDUIT
E	POWER SUPPLY CONTROL	2 CONDUCTOR TW SH 14 AWG	BELDEN 6100FE IN 3/4" CONDUIT
F	DOOR/LATCH CONTACT	4 PAIR TW SH 18 AWG	BELDEN 9157 IN 3/4" CONDUIT
G	NETWORK CABLE	CATEGORY 6, 4-PAIR UTP	IN NETWORK PATHWAY

ACCESS CONTROL LEGEND

SYMBOL	DESCRIPTION	MOUNTING HGT. TO CENTER UNLESS OTHERWISE NOTED
EPT	ELECTRIC POWER TRANSFER	AS REQ'D
EH	ELECTRIC HINGE	AS REQ'D
CR	ACCESS CONTROL CARD READER	42"
DCX	ACCESS CONTROL DOOR CONTACT	AS REQ'D
LX	ACCESS CONTROL LATCH BOLT DETECTION	AS REQ'D
RTE	REQUEST TO EXIT SWITCH	AS REQ'D
EL	DOOR HARDWARE LATCH RETRACTION	CLG. MTD.
PB	ELECTRIC DOOR OPERATOR PUSH BUTTON	42"
PS	POWER SUPPLY	STRUCTURE ABOVE
SJ	SECURITY JUNCTION BOX	STRUCTURE ABOVE
AM	FIRE ALARM ADDRESSABLE MODULE	STRUCTURE ABOVE
DR	DUAL READER INTERFACE/LENEL CABINET	STRUCTURE ABOVE
DO	DOOR OPERATOR AT RECEPTIONIST DESK	AS REQ'D
ES	DOOR HARDWARE ELECTRIC STRIKE	AS REQ'D

ACCESS CONTROL RISER DIAGRAM

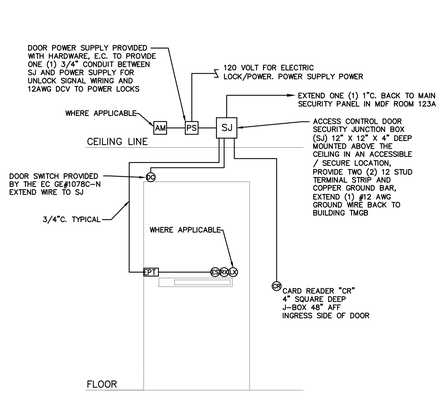
SCALE: NONE



TYPICAL ENTRY DOOR ROUGH-IN

SCALE: NONE

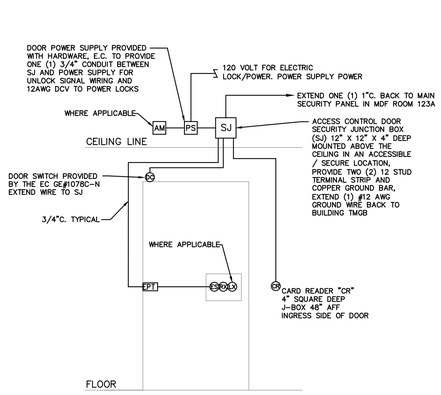
NOTE: REFER TO ACCESS CONTROL & CABLE LEGEND.
REFER TO DRAWINGS AND RISER FOR LOCATIONS AND QUANTITIES OF DEVICES.



ACCESS CONTROL DOOR DETAIL

SCALE: NONE

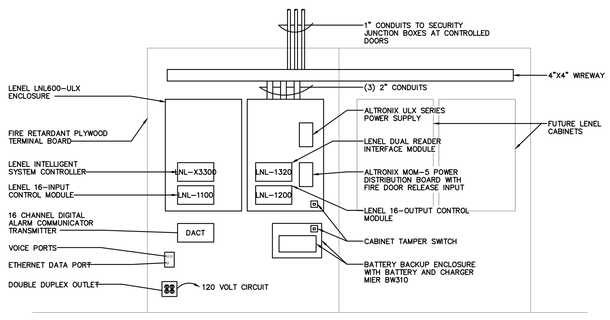
NOTE: REFER TO ACCESS CONTROL & CABLE LEGEND. SINGLE DOOR SHOWN – DOUBLE DOORS SIMILAR.
REFER TO DRAWINGS AND RISER FOR LOCATIONS AND QUANTITIES OF DEVICES.



ACCESS CONTROL DOOR DETAIL

SCALE: NONE

NOTE: REFER TO ACCESS CONTROL & CABLE LEGEND. SINGLE DOOR SHOWN – DOUBLE DOORS SIMILAR.
REFER TO DRAWINGS AND RISER FOR LOCATIONS AND QUANTITIES OF DEVICES.



ACCESS CONTROL TERMINAL BOARD ELEVATION

SCALE: NONE

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