



Sheet Title A101 PLANS. ELEVATIONS AND LEGENDS A102 WALL SECTION AND DETAILS A103 DETAILS, NOTES AND SCHEDULES E101 ELECTRICAL DEMOLITION AND NEW WORK PLANS E201 ELECTRICAL SPECIFICATIONS

PROJECT SCOPE

PROJECT DESCRIPTION: ADDING EMERGENCY EXIT DOOR WITH EMERGENCY EXIT PANIC HARDWARE TO QUIET STUDY ROOM #108; ADDING EXTERIOR CONCRETE FROST SLAB; ADDING EMERGENCY EXIT SIGNAGE.

| | <u>LIFE</u> | <u>SAFE</u> | TY LEC | <u>GEND</u> | |
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| | CODE SUMN USE GROUP | IARY: | | A-3 (LIBRARY | <i>"</i>) |
| | NON-SEPAR CONSTRUCT | ATED FION TYPE: | | II-B | , |
| | BUILDING HE NO. OF STOP | EIGHT: RIES: | | 24 FT 1-STORY | |
| | TOTAL EXIT | CAPACITY: LOAD: | | 1440 OCC. 462 OCC. | |
| | | | ERMITTED: | 250'-0" | |
| | EXII 1 | EGRESS W 72" 72" | IDTH | 360 OCC | ΙŸ |
| | 2 3 4 | 36" 36" | | 180 OCC 180 OCC | |
| | 5 6 (NEW) | 36" 36" | | 180 OCC 180 OCC | |
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ARCHITECT FACE1 X DESIGN **STUDIO** 4681 Olentangy Blvd. Columbus, OH 43214 t. (513) 490-7518 www.fdsarch.com SEAL MEGAN ASHLEY STUART ARC.1917752 SRED AR License #ARC.1917752 Expiration Date 12/31/2025 CLIENT COLUMBUS METROPOLITAN LIBRARY 96 S. Grant Ave. Columbus, OH 43215 CONSULTANTS STRUCTURAL -KORDA/NEMETH ENGINEERING, INC. M.E.P. -KORDA/NEMETH ENGINEERING, INC. REVISIONS 08/30/2024 Issue Date: Revision # Date Description CLIENT NAME & PROJECT NAME COLUMBUS **METROPOLITAN LIBRARY** WHITEHALL BRANCH - QUIET **ROOM EMERGENCY EXIT DOOR** PROJECT ADDRESS 4445 E. BROAD ST. COLUMBUS, OH 43213 PROJECT INFORMATION Project No: 23-009 Drawn By: MAS Checked By: MAS Sheet Size: 24" x 36" SHEET TITLE PLANS, **ELEVATIONS** AND LEGENDS SHEET NO. A101





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BASIS OF DESIGN: KAWNEER 451T; BACK SET, 2" X 4.5" THERMALLY BROKEN ALUMINUM STOREFRONT SYSTEM WITH CLIP ON STOOL TRIM. FINISH TO MATCH ADJACENT EXISTING ALUMINUM STOREFRONT.

- GLASS TYPE GL-1.

FACE OF NEW FROST SLAB BELOW.

DOOR THRESHOLD FASTENED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SET IN FULL BED OF SEALANT.

- GLASS TYPE GL-1, TYP.

- BASIS OF DESIGN: KAWNEER 500T THERMALLY BROKEN ENTRANCE WITH 5" WIDE STILES. FINISH TO MATCH ADJACENT EXISTING ALUMINIUM STOREFRONT.

NEW CONTINUOUS FLASHING WITH HEMMED EDGE. OVERLAP EXISTING CONTINUOUS FLASHING 0'-4" MIN. SET IN FULL BED OF SEALANT. MATCH EXISTING FLASHING FINISH.

- EXISTING CONTINUOUS FLASHING

- GLASS TYPE GL-1.





HARDWARE SET NO. 01

PROVIDE EACH SLG DOOR WITH THE FOLLOWING:

| | | DOC | OR HARDWARE | | |
|-----|----|-------------------------|---|--------|------------------|
| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MANUFAC TURER |
| | | | | | |
| 1 | EA | CONT. HINGE | 112XY EPT | 628 | IVE |
| 1 | EA | POWER TRANSFER | EPT 10 | 689 | VON |
| 1 | EA | ELEC. PANIC HARDWARE | RX-33A-EO-ALK 9-VOLT BATTERY WITH HARDWIRE OPTION | 626 | VON |
| 1 | EA | CYLINDER | AS REQUIRED | 626 | MED |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4040XP REG OR PA AS REQ | 689 | LCN |
| 1 | EA | PA MOUNTING PLATE | 4040XP-18PA | 689 | LCN |
| 1 | EA | BLADE STOP SPACER | 4040XP-61 | 689 | LCN |
| 1 | EA | DOOR SWEEP | 8198AA | AA | ZER |
| 1 | EA | THRESHOLD | 65A | A | ZER |
| 1 | EA | DOOR POSITION SWITCH | BY ACCESS CONTROL PROVIDER | | |
| 1 | EA | POWER SUPPLY | PS902 120/240 VAC | LGR | SCE |

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DOORS REQUIRE SPECIAL 3/8 INCH UNDERCUT FOR ADA TYPE THRESHOLD.

PERMIMETER WEATHER SEALS PROVIDED BY ALUMINUM SECTION.

WHEN TOUCHBAR OF EXIT DEVICE IS DEPRESSED, AN INTERNAL HORN SOUNDS INDICATED UNAUTHORIZED USE OF THE OPENING. ALARM CAN BE ARMED OR DISARMED BY KEYED CYLINDER.

| | — EXISTING ALUMINIUM STOREFRONT SYSTEM. | | |
|---|---|-------|--|
| | —— BACKER ROD AND SEALANT | | |
| | <u>TOP OF BEAM</u> | | |
| | BASIS OF DESIGN: KAWNEER 4511; BACK SET, 2" X 4.5" THERMALLY BROKEN ALUMINUM STOREFRONT SYSTEM. FINISH TO MATCH ADJACENT EXISTING ALUMINUM STOREFRONT. | | |
| | —— GLASS TYPE GL-1 | | |
| | | _ | |
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| | GLASS TYPE GL-1 | | |
| | BASIS OF DESIGN: KAWNEER BACK SET 451T; THERMALLY BROKEN ALUMINUM STOREFRONT WITH SUB-SILL. SUB-SILL COMPONENTS TO MATCH ADJACENT EXISTING ALUMINUM STOREFRONT SILL COMPONENTS TO MAINTAIN EXISTING AESTHETIC. FINISH TO MATCH EXISTING ALUMINUM STOREFRONT. | | |
| | PROVIDE PERIMETER SEALANT. SUB-SIL SET IN FULL BED OF SEALANT. | L | |
| | NEW CAST-IN-PLACE CONCRETE FROST | SLAB. | |
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| ARCHITECT | |
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| REVISIONS Issue Date: C | 8/30/2024 |
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| Revision # Date Descripti | on |
| CLIENT NAME & PROJECT NAME COLUMBUS METROPOLITAN L WHITEHALL BRANCH ROOM EMERGENCY E PROJECT ADDRESS 4445 E. BROAD ST. COLUMBUS, OH 4321 | IBRARY - QUIET XIT DOOR |
| Project No: Drawn By: | 23-009 MAS |
| Checked By: Sheet Size: SHEET TITLE DETAILS, NOTI AND SCHEDUL | MAS 24" x 36" ES ES |
| SHEET NO. | |
| A103 | |



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POWER & TECHNOLOGY DEMOLITION PLAN

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SCALE: 1/8" = 1'-0" 0'1'2' 4' 8'

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ELECTRICAL SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| Ю | CEILING OR WALL MOUNTED LUMINAIRE |
| ₹ ; ₹ | EXIT SIGN FIXTURE (WITH DIRECTIONAL ARROWS AS SHOWN) (TYPE AND MOUNTING AS NOTED; SHADED AREA DENOTES FACE) |
| PC | DAYLIGHT HARVESTING PHOTOCELL SENSOR |
| | COMBINATION FIRE ALARM AUDIBLE AND VISUAL DEVICE |
| | FIRE ALARM MANUAL PULL STATION |
| (); (); (); (); (); (); (); (); (); (); | SIMPLEX RECEPTACLE; DUPLEX RECEPTACLE; QUADRUPLEX (DOUBLE DUPLEX) RECEPTACLE |
| $\checkmark \Downarrow$ | FLOOR RECESSED OUTLET BOX |
| | SECURITY SYSTEM CAMERA, CEILING MOUNTED |
| GB | SECURITY SYSTEM GLASS BREAK DETECTION |
| Р | SECURITY SYSTEM DOOR POSITION SWITCH |
| AP | WIRELESS ACCESS POINT |
| MD | MOTION DETECTOR |
| PS | POWER SUPPLY |

FLOOR PLAN

| POWER & TECHNOLOGY NEW WORK PLAN | |
|----------------------------------|--|
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SCALE: 1/8" = 1'-0" 0'1'2' 4' 8'

GENERAL NOTES

- 1. SOLID LIGHT-WEIGHT SYMBOLS INDICATE DEVICES TO REMAIN. DASHED SYMBOLS INDICATE DEVICES AND EQUIPMENT TO BE REMOVED.
- COORDINATE PHASING OF DEMOLITION AND CONSTRUCTION WITH OWNER'S REPRESENTATIVE. 2.
- 3. ALL EXISTING LIGHTING, POWER, AND TECHNOLOGY DEVICES TO REMAIN UNLESS NOTED OTHERWISE. EXISTING EQUIPMENT OUTSIDE OF SCOPE OF WORK BOUNDARIES SHALL BE MAINTAINED. RECONNECT ANY CIRCUITS CUT PASSING THROUGH DEMOLITION AREA.
- 4. REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS FOR LUMINAIRE/ DEVICES MOUNTING HEIGHTS AND ADDITIONAL INSTALLATION INFORMATION.
- 5. PROVIDE APPROPRIATE MOUNTING HARDWARE AS REQUIRED TO SUPPORT LUMINAIRES.

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| Sheet Size: 24" SHEET TITLE ELECTRICAL DEMOLITION AND NEW/ | x 36" |

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DESIGNED BY: Prairie Gallina Rob Jones CHECKED BY: PROJECT NUMBER: 2024-0503

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SECTION 26 00 05 DIVISION 26/27/28 GENERAL REQUIREMENTS

- A. Furnish all materials, labor, tools and equipment to complete and leave ready for operation all electrical systems as called for in these Specifications or shown on the Drawings and any and all details essential to complete the work.
- B. The Contractor is responsible for becoming thoroughly familiar with all Drawings and Specifications prior to bidding so that all conditions of work are clear with regard to electrical requirements of equipment, mounting conditions, etc. Contractor shall study reflected ceiling plans, elevations, and details, etc.
- C. Provide quality work conforming to the best accepted practices and standards of the trade. Further definition of quality is given by reference to various laws, codes, standards, and regulations.
- D. Material and equipment installed under this Contract shall be new, undeteriorated, and of a quality not less than the minimum specified. All equipment and conductors shall be certified, listed and labeled by UL. If UL does not certify an associated piece of equipment, then certification by another nationally recognized testing laboratory such as ETL shall be permissible. If equipment or conductors are of a type that no testing lab lists or labels, then a safety evaluation must be performed at the supplier's expense by the inspecting authority or another Federal, State or municipal agency.
- E. The latest adopted editions of the following Codes also apply to this work: National Electrical Code, NEC and the National Fire Protection Association Codes, NFPA.
- F. Drawings are schematic and show approximate locations and the extent of work. Exact locations and extent must be coordinated with other Contractors and verified in the field. Coordination of the final fabrication drawings and final coordination of the installation in the field is the Contractor's responsibility.Contractor is to take the design to the next level of detail knowing exactly what equipment and materials he is going to provide and build the project based on that equipment Unless otherwise excluded in the Contract Documents, secure and pay for all permits and governmental fees, licenses, and inspections necessary for the proper execution and completion of work
- G. Whenever the Contractor furnishes equipment or material other than the Design Base Manufacturer specified, the Contractor is responsible for the cost and coordination of all modifications required not only for his/her work, but also for the work of all other Trades affected. Where changes to other Trades' work are required, this Contractor must include the additional costs of all such work in his/her bid and ultimately make arrangements with these other Trades for such changes and compensate them accordingly. Where changes to design are required, the Contractor shall submit such changes to the Architect for approval. The Contractor shall investigate potential conflicts such as the following: Physical dimensions and weights, Code required working clearances, Connecting pipe sizes, Additional control and interlock wiring, Lug size and quantity, Increased wire size, and Sound levels of audible devices.
- H. Contractor shall maintain at the job site, one copy of Drawings which shall be used exclusively for recording the location of all installed Work not extraneous information such as field notes. Neatly record all information with red pen.
- I. At completion of the Project, Contractor shall deliver "As- Built" Drawings and Coordination Drawings to the Associate for review and approval with regard to completeness. This submission shall consist of the job site "As-Built" Drawings in electronic AutoCAD format (Release 14 or later). Following approval, provide a full plotted set as well as the electronic version and original.
- J. Unless otherwise required in General or Special Conditions, Contractor shall perform all cutting and patching required for his/her own work. Work must be accomplished in a neat and workmanlike manner, acceptable to the Architect.
- K. Patching shall match adjacent materials and shall be accomplished only by tradesmen skilled in the respective craft required. Materials and equipment used in the patching work shall comply with requirements of those Sections of the Specifications relating to material to be used in new construction.
- L. The Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction may require portions of the work to be inspected, tested, or approved. These services shall be performed by approved agencies.
- M. The Contractor shall warrant all work for a period of one (1) year from date of contract completion against defects in materials, equipment, and workmanship. The Contractor will be required to make all repairs or changes which, in the opinion of the Owner, are necessary as the result of defective materials, equipment, or workmanship. The Contractor shall, promptly upon receipt of notice from the owner, and without expense to the owner, replace all defective work with suitable materials and equipment.

SECTION 26 00 10 COORDINATION BETWEEN TRADES

- A. Electrical Contractor shall coordinate all of his/her work with the General Trades Contractor for location of all devices, fixtures and equipment prior to rough-in.
- B. All control and interlock wiring, regardless of voltage, is by the Contractor furnishing the control device, except if the control device actuates or is actuated by the fire alarm control panel. The Division 26/27/28 Contractor shall be responsible for this wiring from the fire alarm control panel to the control device.

SECTION 26 00 55 SLEEVES, SEALS AND FIRESTOPS

- A. Furnish and install sleeves for conduit penetrations through masonry and concrete construction or where conduit passes through walls exposed and through smoke or fire rated separations. Provide watertight, corrosive service, oil resistant service and fire rated seals and firestopping as specified herein.
- B. Firestopping materials shall be classified by UL as "fill, void or cavity materials" and "through penetration firestop systems." Firestopping materials shall conform to both Flame (F) and Temperature (T) ratings as tested by nationally accepted test agencies per ASTM E-814 or UL 1479 Fire Tests of Through-Penetration Firestops.
- The F rating shall be a minimum of one (1) hour, but not less than the fire resistance rating of the assembly being penetrated.
- Conduct the fire test with a minimum positive pressure differential of 0.01 inches of 0.01 inches of water column.
- C. Sleeve material through floors and walls shall be machine cut rigid galvanized steel conduit. Sleeves installed in new construction shall have welded flange at mid-point of sleeve which functions as a water barrier and anchor collar. At the Contractor's option, steel wall sleeves by Link-Seal may be provided.

- SECTION 26 00 70 DEMOLITION
- A. Perform demolition work of all electrical items as shown and/or described on the Drawings. Remove all items from site designated as scrap. Provide care so as not to damage adjacent construction designated to remain. All electrical items in good condition are to remain the property of the Owner. Verify with the Owner's Representative which items are considered scrap and are to be disposed of.
- B. Disconnect and remove all items as shown and described on the Drawings completely back to source, including: Lighting fixtures, poles and bases, Electrical equipment and pads, Devices, boxes and plates, and Conduit and wires. Maintain all existing circuits to items that are to remain in use.
- C. Existing outlets which are to be removed and have conduits rising from the floor slab shall have the conduits cut below floor level. Rework as required to provide feed-through service to other remaining outlets. Pull new wire between remaining outlets affected by feed-through. Patch floor as required to restore to original condition.
- D. Abandoned outlet boxes in walls to remain shall be closed with blank coverplates. If equipped with devices, the devices shall be removed and the conductors removed to the adjacent outlet or reconnected as required to provide feed-through service. Outlet boxes in walls, which are to remain and be resurfaced, shall be removed.
- E. All electrical items and lighting fixtures designated to remain are to be cleaned. All outlet boxes shall have knockout plugs installed in unused openings. All existing outlets, equipment, and associated wiring and conduit systems which interfere with the work of the General Trades, Structural, Plumbing, Fire Protection, or HVAC Contractors shall be reworked as required to maintain system operation. Relocate conduits where they interfere with new work of other trades.

SECTION 26 05 10 WIRE AND CABLE

- A. Furnish and install all electrical conductors for service entrance, feeder and branch circuit wiring and control wiring. Refer to other Division 26/27/28 specification sections for additional wiring requirements.
- B. Wire and cable furnished shall be in accordance with the following standards where applicable: UL Standard 44 for rubber insulated wires and cables, UL Standard 83 for thermoplastic insulated wires and cables, UL Standard 1569 for Type MC cable, and UL Standard 817 for flexible cords and cables. Wire and cable shall be in accordance with applicable NEC Articles. Wire and cable shall be identified by surface markings indicating manufacturer, size, metal type, voltage rating, UL listing and cable type.
- C. All indoor wire shall be Type "THHN/THWN" single conductor annealed uncoated copper with PVC insulation and nylon jacket. Insulation shall be heat and moisture resistant with light stabilized jacket. Wire shall be rated 600 volt, 90 degree C in dry locations, 75 degree C in wet locations. Conductors No. 10 AWG and smaller may be solid; All branch circuits, feeders and control wiring shall be type "THHN/THWN."
- D. All outdoor and service entrance wire shall be Type "THXN" single conductor annealed uncoated copper with heat and moisture resistant thermosetting cross linked polyethylene insulation. Wire shall be rated 600 volt, 90 degree C in dry locations, 75 degree C in wet locations.
- E. Unless otherwise noted, minimum wire size for lighting and power branch circuits shall be No. 12 AWG and for control and auxiliary systems No. 14 AWG. Wire size for branch circuit homeruns shall be as indicated in the panelboard schedules. Remainder of branch circuit shall be No. 12 AWG, unless noted otherwise.
- F. Type "MC" cable may be used for concealed branch circuit wiring in dry locations (in walls or above ceilings) between lighting fixtures, or power outlets. Homeruns, multi-wire branch circuits, and circuit runs with multiple circuits shall occur in conduit. Conversion from "MC" cable to conduit shall occur within 10 feet of first utilization device connection to circuit.
- G. Emergency circuit wiring and ground fault circuit breaker wiring shall be installed in separate conduits from all other wiring.

SECTION 26 05 26 GROUNDING

- A. Furnish and install a complete grounding system as shown on the Drawings and specified herein. Provide all accessories as necessary for a complete system. All components of the electrical system shall be grounded and bonded including: raceways, enclosures, receptacles, motors, controllers, panelboards, contactors, lighting fixtures, emergency generators, transfer switches, telephone systems, and all other electrical components and subsystems.
- B. All equipment shall be UL listed and labeled and in accordance with applicable NEMA and ANSI Standards and NEC Article 250.
- C. Exothermic welds shall be powdered copper oxide and aluminum to form a molded homogeneous copper joint connection between the copper conductor and the material being bonded to.

H. Enclosure and Equipment Grounding

- 1. Metal enclosures or raceways for conductors or equipment shall be
- grounded.2. Exposed noncurrent-carrying metal parts of fixed equipment likely to
- become energized shall be grounded.3. Exposed noncurrent-carrying metal parts lighting fixtures shall be grounded.

I. Method of Grounding

- 1. Provide separate green insulated equipment grounding conductors for all feeders and branch circuits.
- J. Bonding shall be provided and conform to all requirements of NEC Article 250 V and VII.
- K. Exterior lighting fixtures and poles shall be grounded by the use of a manufacturer supplied ground lug or pigtail or by the use of ground clips fastened in bare metal that is free of paint.
- L. Metal roofing and metal veneer siding shall be bonded to building steel or nearest grounding system connection with #6 AWG conductor every 100 feet.

Manufacturers of Exothermic Welds shall be: Cadweld by ERICO Products, Inc.

SECTION 26 05 29 HANGERS, SUPPORTS AND INSERTS

- A. Furnish and install complete hangers, supports and concrete inserts as required for the installation of conduits and equipment installed under Division 26. Provide all beam clamps, expansion anchors, threaded rod, framing steel and hardware as required.
- B. Conduits or raceways shall be securely supported and anchored with proper devices, using lead shields in walls or sides of beams, expansion shields or other approved type device for direct down-pull loads. Minerallac type hanger shall be limited to above ceilings. Holes made in walls or ceilings for use with anchoring devices shall be covered by large steel washers. Include special hangers, as required. Minerallac type fittings shall not be permitted within 8 feet of the floor surface where exposed raceways are installed. Hangers shall be individual ring or clevis type, one hole straps or multiple trapeze hangers.

SECTION 26 05 33 CONDUIT AND FITTINGS

- A. Provide complete grounded conduit systems for all electrical conductors. All conduits shown on the Drawings shall meet NEC fill requirements for the conductors enclosed. Conduit raceway systems shall be made mechanically tight and electrically continuous throughout. All metal raceway systems shall be grounded.
- B. Electrical Metallic Tubing (EMT) shall be zinc galvanized (min. .0008 in thick) inside and out, with circular cross section, uniform wall thickness and continuously welded seams. EMT shall be furnished in ten foot standard lengths.
- C. Flexible Metal Conduit (FMC) shall be steel or aluminum, hot dipped zinc galvanized inside and out and made from one continuous length of high grade strip of uniform weight and thickness shaped into interlocking convolutions with smooth interior and exterior surfaces. Conduit shall be provided in standard coil lengths.
- D. All conduit shall be rigid metal conduit, unless noted otherwise below, minimum 3/4 inch trade size. EMT may be used as follows: In interior partitions inside building, above suspended ceilings inside building, and exposed above 9' A.F.F. inside building in unfinished areas. EMT is prohibited in all other applications.
- E. Flexible metal conduit up to six feet in length shall be used for connections to lighting fixtures. A green grounding conductor shall be installed in each flexible conduit as specified in Section 26 05 26, "Grounding." All runs shall be terminated in insulated flexible conduit fittings in accordance with NEC. Minimum size to be 1/2 inch.
- F. All conduit and EMT fittings shall be galvanized malleable iron or steel. Connectors and couplings shall be threaded or compression type, split screw is allowed in all other locations. Conduit bodies shall be malleable iron, threaded for heavywall conduit and compression type for EMT, with cadmium finish and cadmium plated sheet steel covers. Provide neoprene cover gaskets for conduit body covers exposed to weather.
- G. Conduit support fastenings shall be by: Wood screws to wood, toggle bolts in hollow concrete masonry units, expansion bolts in concrete or brick, machine screws, welded threaded studs on steel work, nail-type nylon anchors or threaded studs driven by a powder charge and provided with lock washers and nuts for concrete, brick or steel work. Conduit shall not be supported using wire or nylon ties.
- H. Conduit shall be independently supported from elements of the building and shall not rest on, nor be supported from suspended ceilings. Boxes shall be fastened to structure independently from conduit system.
- I. Install insulated throat fittings on all EMT conduit ends. Fasten conduit to boxes and cabinets using locknuts. Provide two locknuts where required by the NEC, where insulating bushings are used and where bushings cannot be brought in to firm contact with the box.
- J. Provide a high strength pull cord in all empty conduits, and cap ends.
- K. Maintain minimum clearances of 6 inches from parallel hot water piping and 4 inches from crossovers. Provide conduit sleeves, seals and firestops in accordance with Section 26 00 55, "Sleeves, Seals and Firestops."
- L. Where exposed, Contractor shall paint conduits to match existing tenant spaces.

SECTION 26 05 34 OUTLET BOXES

- A. Outlets shall be provided for devices, lighting fixtures, and as otherwise required. Outlet boxes shall be of sufficient size to provide free space for all conductors enclosed in the box. Boxes shall be not less than the minimum size required by NEC Article 314 for the number and size of conductors contained within. All equipment shall be UL listed and labeled and in accordance with applicable NEMA and ANSI Standards
- B. Interior Outlet Boxes: Provide galvanized flat rolled sheet steel interior outlet wiring boxes, of types, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices. Through wall boxes shall not be used.
- C. All boxes shall be rigidly supported from building structure independent of the conduit system. Framing members of suspended ceiling systems shall not be permitted as a support. Flush boxes shall finish within 1/4 inch of surface of non-combustible materials. Boxes shall not project beyond finished surfaces.
- D. Flush fixtures in lay-in ceilings shall have branch circuit conduit terminated in a junction box above ceiling, but accessible through ceiling opening and located at least one foot away from the fixture.

SECTION 26 05 35 PULL AND JUNCTION BOXES

- A. Pull or junction boxes shall be provided in all raceway systems where required to avoid an excessive number of bends, to facilitate wire pulling, or to afford required access to the raceway system. Maximum distance between boxes in raceway systems shall not exceed 100 feet. Pull and junction boxes shall provide adequate space and dimensions for the installation of conductors in accordance with NEC Article 314.
- B. Pull and Junction Boxes: Provide galvanized code-gauge sheet steel junction and pull boxes, with screw-on covers, of types, shapes and sizes, to suit each respective location and installation.
- C. Concealed pull or junction boxes shall be flush in finished walls, located near the floor and provided with flush type covers; blank device plates in case of outlet type boxes and flat plates prime painted and secured with flat head screws in the case of larger boxes. Surface junction boxes in utility areas shall be without knockouts, shall have close fitting screw covers and shall be finished in medium gray enamel.
- D. Pull and junction boxes shall be located in utility areas or above accessible ceiling systems wherever possible. Boxes located in exposed areas shall be brought to the attention of the Architect prior to installation.
- E. Pull and junction boxes shall be sized in accordance with the NEC for both contained conductors and conduit entrances and exits. Fasten boxes rigidly to structural surfaces, or solidly imbed electrical boxes in concrete or masonry. Boxes not otherwise accessible in ceilings and walls shall be made accessible by an access panel. Provide watertight boxes, slip expansions or bonding jumpers where dictated by construction conditions.

SECTION 26 05 53 ELECTRICAL IDENTIFICATION

- A. Identify and label all existing circuits and equipment that are located within the contract construction area.
- B. In pull and junction boxes, identify each set of circuit conductors by permanent ink on plastic tags with circuit number, voltage and phase, wire size, source, and load information.

SECTION 26 51 14 LUMINAIRES

- A. Furnish and install luminaires and drivers as herein specified and shown on the Drawings. Luminaire Manufacturer and model numbers shall be as specified on the Drawings. All LED modules and drivers for a given luminaire type shall be by the same Manufacturer.
- All equipment shall be UL listed and labeled and in accordance with applicable NEMA and ANSI Standards.
- C. Unless specifically indicated otherwise, all fixtures shall have a color temperature of 4000 degrees Kelvin, and a minimum of 80 CRI.
- D. Provide product data of each fixture for review.
- E. Recessed LED luminaires shall have integral thermal protection. LED luminaire shall be rated for installation/ambient temperature from -40 degrees C to +40 degrees C. Driver shall have a power factor greater than 0.90.
- F. Emergency LED drivers shall be integral mounted, ninety (90) minute capacity, sealed maintenance free nickel cadmium battery and integral charger, operate at rated lumen output of fixture or next highest lumen output available and have remote mountable charging indicator light and test switch. Led drivers shall feature a self-diagnostic circuit that automatically tests unit and reports failure with an audible and visual alarm. (Bodine BSL Series or equivalent)
- G. Lighting fixtures shall be provided with all required mounting hardware for a complete installation. Luminaires located in gypsum board (drywall) or plaster ceilings shall have appropriate plaster rings provided with each luminaire. Luminaires provided by the Manufacturer with cords attached shall be coordinated by the Division 26 Contractor so that cord lengths are of appropriate lengths for each luminaire installation.
- H. All lighting fixtures mounted in suspended acoustical tile ceilings shall be securely attached to the ceiling grid system by removable grid clips or fasteners. All lighting fixtures mounted on suspended acoustical tile ceilings shall be mounted to junction boxes with bar hangers attached to the ceiling grid system. In addition, fixtures heavier than ten pounds shall have hangers attached to the ceiling grid system.
- I. Luminaires shall be securely mounted to elements of the building structure such that they will be square, plumb, and rigid, and will not fall or sag. Flush luminaires shall be furnished with installation provisions compatible with the suspended acoustical system furnished by the General Trades Contractor. This Contractor shall verify the actual suspension system to be used and make all adjustments in luminaire installation provisions.
- J. The Contractor shall install the luminaires with the plastic wrap intact and only remove the wrap after the work environment is clean. Contractor shall patch any holes in the wrap to keep dirt out of the luminaire during construction.
- K. All luminaires that are wall mounted or surface mounted to other than suspended acoustical tile ceilings shall be attached to outlet boxes that are securely supported to the building structure and UL listed for luminaire support.
- L. All surface mounted and recessed luminaires installed in suspended acoustical tile ceilings, shall have a supplemental support means attached to the building structure consisting of chain or cable, installed with 6 inches of slack. This support means shall be attached from the structure to the luminaire at each end and shall be capable of suspending the luminaire in the event the ceiling grid at the luminaire is removed.
- M. Clean both inside and outside surfaces of luminaires after installation. No luminaires shall be installed until the painting work of the General Trades Contractor is completed. Damaged, deformed or defective luminaires are to be replaced.
- N. All luminaires are to be in working order at the time of Contract Completion. This Contractor shall replace all defective luminaires with new up until the time of Contract Completion.
- O. Furnish all required installation accessories for the luminaires as required for specific location whether or not included in the Manufacturer's catalog number. Such accessories include rings, flanges, canopies, stem hangers, and suspension straps. REFER TO ARCHITECTURAL PLANS.
- P. Designated emergency egress, and exit signage fixtures shall be connected ahead of any switching.
- Q. Install LED emergency drivers integrally within the luminaire if possible; otherwise, remote mounted from the luminaire to building structure above ceiling. Install test switch/charging light plate in ceiling tile next to luminaire. Wet/ outdoor shall have their emergency drivers remote and installed within the confines of the building in a heated area.
- R. Luminaires provided by the Manufacturer with cords attached shall be coordinated by the Division 26 Contractor to assure adequate cord length for each individual luminaire installation.
- S. Luminaire supports used in fire rated ceiling assemblies shall be in conformance with that assembly's UL listing requirements.
- T. Electrical contractor shall provide one (1) of each type of luminaire specified as spare, sealed in original packaging and placed in the building storage as directed by Owner.
- U. Fixtures shall have a manufacturer's full warranty for five (5) years.

SECTION 28 31 10 FIRE ALARM SYSTEM

A. Furnish and install all equipment and accessories for an extension of the existing fire alarm system, as described herein and as shown on the Plans.

B. Fire alarm installation shall conform to the requirements of the NFPA 101, Life Safety Code, the Ohio Building Code, and Local Code and Building Authority requirements. All equipment shall be UL listed and labeled, and in accordance with applicable NEMA and ANSI Standards. All devices and installation shall be in accordance with the Americans with Disabilities Act.

C. Operation of any manual pull station cause immediate and continuous operation of fire alarm signal and alarm indication at the control panel and remote annunciators until the actuated device is restored to normal and the control panel is manually reset.

D. Fire Alarm Panel shall have separate zones for every addressable device.

E. Manual pull stations shall be red lexan semi-flush mounted push type double action with pull handle. Unit shall lock in the pulled position requiring a tool to reset. Unit shall be individually addressable on the system.

F. Programming shall be done by the manufacturer's authorized representative. Electrical Contractor shall include in the bid sufficient funds to cover two visits of 8 hours duration for programming changes, to be done at the completion of the project after final acceptance test.

G. Follow manufacturers written instructions regarding mounting, wiring, and testing the fire alarm system. Installers shall be certified for fire alarm work by State Agencies.

H. All wiring shall be in conduit and independent of all other systems. Paint all junction boxes with red paint and label "Fire Alarm".

I. Fire alarm wiring shall have color-coded insulation as follows: Initiating Device Circuits - Violet, Annunciation Device Circuits - Pink, Control Device Circuits - Tan.

J. Provide relays and wiring connection from the fire alarm system to all security system controllers to cause exterior doors and other egress doors to be released.

K. Each zone in the fire alarm control panel and remote annunciator and each device shall be individually tested as installed in the building under the supervision of an authorized manufacturer's representative. Contractor shall include in his/her bid, time for testing after normal work hours. The complete fire alarm system shall be tested by the Contractor as required by the Fire Marshal inspecting authority in the presence of the Owner's representative. Contractor shall make all modifications as required by the Fire Marshal.

Manufacturers shall match existing fire alarm system manufacturer

SECTION 28 13 00 SECURITY AND ACCESS CONTROL

A. Door Contacts

A.1. Where still accessible door contacts shall be recessed round 3/4" plug type door contacts by DSC, DMP, Bosch or Honeywell. Match existing in elsewhere in building.

B. Motion Sensors

- B.1. The motion sensors shall be listed and approve dby UL, ULC, CE, FCC, IC, and EN50131-2-4 grade 2.
- B.2. The motion sensor shall operate on 9 VDC-15, with a maximum current draw of 25mA.
- B.3. The motion sensor shall be capable of operating in temperatures ranging from -20 degree F to +130 degree F.
 B.4. The motion sensor shall utilize both infrared and microwave technologies, as
- well as light level sensors.B.5. The motion sensors shall utilize active white light suppression to combine
- infrared disturbance with visible light spectrum to minimize false triggers caused b transient sources such as passing automobile headlights.B.6. The motion sensors shall utilize adjustable optics with 86 zone tri-focus optic configuration.
- B.7. The microwave sensors shall have adjustable sensitivity and supervised control.
- B.8. The sensor shall provide automatic temperature compensation
 B.9. The approved manufacturer and series shall be Bosch Professional Series, with equals by GE and Ademco. The Contractor shall verify the appropriate coverage range and provide the required unit.



ELECTRICAL SPECIFICATIONS

SHEET NO.



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KORDA

KORDA/NEMETH ENGINEERING

PROJECT NUMBER: 2024-0503

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