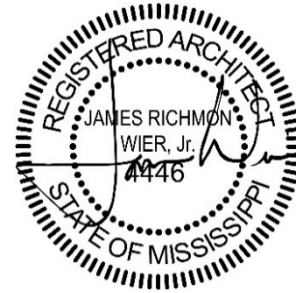




28 May 2020

West Rankin Utility Authority | Administration Building
WBA Project No. 5719



ADDENDUM NO. 03

NOTICE TO ALL DOCUMENT HOLDERS:

The following additions, deletions, changes and clarifications to the drawings and specifications are to be included as part of the Contract Documents.

SPECIFICATIONS

- ITEM NO. 1** **SECTION 27.8000 TELEPHONE AND DATA SYSTEMS**
ADD the attached Specification 27.8000 TELEPHONE AND DATA SYSTEMS, in its entirety.
- ITEM NO. 2** **SECTION 323300 CAST-IN-PLACE CONCRETE FOR PAVEMENTS AND SIDEWALKS**
DELETE Specification 323300 CAST-IN-PLACE CONCRETE FOR PAVEMENTS AND SIDEWALKS in its entirety and **REPLACE** with the attached Specification 323300 CAST-IN-PLACE CONCRETE FOR PAVEMENTS AND SIDEWALKS (Add 03).

DRAWINGS

- ITEM NO. 3** **SHEET C102 Construction Details**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **REVISE** strength requirements for concrete paving.
- ITEM NO. 4** **SHEET A102 Reflected Ceiling Plans**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **ADD** indication overhead canopies and dimensions.
- ITEM NO. 5** **SHEET E000 Legend**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **REVISE** One Line Diagram and **ADD** Data Riser Diagram.
- ITEM NO. 6** **SHEET E001 Panel Schedules**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **REVISE** Panel PA.
- ITEM NO. 7** **SHEET E100 Lighting Plan**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **REVISE** Lighting type in SHOWER 117.
- ITEM NO. 8** **SHEET E200 Power Plan**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **ADD** indication for exterior junction boxes and routing to CONTROL ROOM 103. **ADD** circuit for refrigerator at SAMPLES 119.
- ITEM NO. 9** **SHEET E300 Mechanical Plan**
DELETE sheet in its entirety and **REPLACE** with attached sheet. **ADD** indication for fire alarm bell at SPKLR. 124

Encl: Specifications (8.5x11):
27.8000 Telephone and Data Systems, 323300 Cast-In-Place Concrete For Pavements and Sidewalks (Add 03)
Drawings (24x36):
C102 – Add 03 – CONSTRUCTION DETAILS, A102 – Add 03 – REFLECTED CEILING PLANS, E000 – Add 03 – LEGEND, E001 – Add 03 – PANEL SCHEDULE, E100 – Add 03 – LIGHTING PLAN, E200 – Add 03 – POWER PLAN, E300 – Add 03 – MECHANICAL PLAN

cc: All Document Holders
File 5719.C2



SECTION 27.8000
TELEPHONE AND DATA SYSTEMS

PART 1 – GENERAL

- 1.1 Provide complete telephone and data systems in accordance with this specification and the contract drawings. All systems shall be furnished and installed to meet or exceed EIA/TIA Category 6 Standards.
- 1.2 All new wiring on this project shall conform to the EIA TIA 568A T568A or T568B scheme. Consult Owner's IT personnel for which configuration to use. Obtain written instructions to ensure that there are no misunderstandings.
- 1.3 Prior to ordering equipment, provide six sets of manufacturer's cut sheets to the Architect or Engineer for the equipment to be installed. Also submit shop drawings showing the floor plan with all wiring tag identification and conduit and cable routing. Do not order any equipment without receiving submittals and shop drawings that have been reviewed and approved by the Engineer.
- 1.4 Contractors furnishing and installing telephone and data system components shall be regularly involved in furnishing and installing systems of the type specified. They shall have installed five systems similar in size and scope within the past six months. The Telephone and Data System Contractor shall pull the cable as well as install all jacks and make all other system terminations.

PART 2 – PRODUCTS

- 2.1 Outlet Boxes: Provide outlet boxes in accordance with Specification 260533.
- 2.2 Plaster Rings: Plaster rings shall be furnished to provide single-gang openings in outlet boxes unless otherwise noted.
- 2.3 Raceways: Provide raceways in accordance with Specification 260533.
- 2.4 Jacks: Provide outlet boxes with a strap containing the number of Jacks indicated on the drawings. Outlet jacks shall be 8-position, 8-conductor, RJ-45 jacks that are multivendor supportive accepting most phone and data plugs. Jacks shall have gold-plated (50 microinches minimum) contacts with 110 connections on the back. The jacks shall snap in the straps. The straps shall be colored to match the switches and receptacle color selected by the Architect under the requirements of Specification 26 46 00. The straps shall be covered by a stainless steel wallplate identical to those of the receptacles and switches. Telephone outlet jacks shall be yellow; data jacks shall be blue.
- 2.5 Telephone and Data Cable: Telephone and Data cable shall be Category 6 rated and shall conform to or exceed the EIA/TIA 578 Commercial Building Wiring Standard, Horizontal Cable Section and the EIA/TIA Technical Systems Bulletin 36 for Unshielded Twisted Pair Cables. Other standards supported shall include IEEE 802.3, Ibase5, 10BASE-T; IEEE 802.5, 4 Mbps, 16 Mbps (328 ft/100m), 104 Workstations, proposed ANSI X3T9.5 TP-PMD requirements for UTP at 100 Mbps, and 155 MB ATM. Cabling shall be UL listed. Telephone cables shall be yellow; data cables shall be blue. All Cable shall be plenum rated.
- 2.6 Fiber Optic Cable (Single Mode): All single mode fiber optic cable shall be tight-buffered, 8.7/125 micron, 12 fiber count with SC connectors. The fiber cable shall carry a OFNR (riser rated) UL Listing and be rated for indoor & outdoor use.

- 2.7 Fiber Optic Cable (Multi-Mode): All multi-mode fiber optic cable shall be tight-buffered, 50/125 micron, 12 fiber count with SC connectors. The fiber cable shall carry a OFNR (riser rated) UL Listing and be rated for indoor & outdoor use.
- 2.8 Fiber Optic Patch Panels: Fiber optic cables shall terminate at the Telephone & Data Backboards in fiber optic patch panels. Provide patch panels containing adapter panels for the number of optical fibers shown on the contract documents. The fiber patch panels shall be made of metal and shall have separate doors for the service side and user side with optional keyed locks. Each panel shall include all grommets, cable ties, spools, strain relief brackets, and ID labels required for terminating all optical fibers in the panel. The panel shall be mounted directly to the telephone and data backboard, unless otherwise noted.
- 2.9 Telephone Backbone Cable: The telephone backbone cable shall be Cat 3, 24 Awg., and have a minimum of 50 pairs. The cable shall have a flame retardant PVC outer jacket with sequential footage markings. The conductors shall be solid bare copper with a voltage rating of 300 volts with semi-rigid PVC insulation and shall be UL Listed Type MPR/CMR TIA 568-B.2.
- 2.10 Telephone and Data Backboard: Wall mount a ¾" x 4' x 8' sheet of plywood, primed and painted with two coats of fire retardant paint of the color and finish selected by the Architect. Provide a ¼" x 4" x 17.75" copper ground block (Erico Eritech TMGB-A18L23PT or approved equal) on the wall, bond a #1/0 AWG copper conductor to the ground block with a two hole compression lug and run the #1/0 AWG ground wire to the electrical power system ground. Bond the #1/0 AWG ground wire to the power system electrode using an exothermic weld.
- 2.11 Backboard-Mounted Cable Trough: Provide a continuous run of Silver Zinc Coated CableControl 4 ¾" x 4 ¾" Cable Trough, or approved equal, around the outside perimeter of all backboards, and a continuous run across the middle.
- 2.12 Punchdown Blocks: Telephone cables shall terminate at the Telephone & Data Backboard on Punchdown Blocks. Telephone Cabling shall be terminated on 110 punchdown blocks maintaining the Category 6 rating. Furnish punchdown blocks for all telephone outlets in this contract plus 25% additional outlets.
- 2.13 Patch Panels: Data Cables shall terminate at the Telephone & Data Backboard in patch panels. Provide a patch panel (or panels) containing the number of inputs required for the data cabling shown on the drawings plus 10% spare. Provide mounting brackets for patch panels as required. Provide crossconnecting cables as required to interconnect the patch panels providing the Owner a single connection point for a connection to a server.

PART 3 – EXECUTION

- 3.1 Provide a 1" conduit extending from each outlet box to a point above the nearest accessible ceiling. Terminate the conduit with a protective bushing.
- 3.2 Route conductors from the outlet box, above the lay-in ceilings, and to the telephone and data backboard. Group, tie-wrap, and support the conductors from the structural ceiling above the lay-in ceiling. Provide conduit for sleeves where cables pass through areas with hard ceilings.
- 3.3 Provide a minimum of two data cables to each data outlet or combination telephone/data outlet. Provide one cable to each telephone outlet.
- 3.4 Mount plywood backboard securely to wall framing members. The bottom of the backboard shall be 6" above the finished floor.
- 3.5 Provide a #1/0 copper ground wire in 1-1/4" PVC conduit from the Telephone and Data Backboard to the Building Power System Ground.

TELEPHONE AND DATA SYSTEMS

- 3.6 Service Conduits: Provide two 2" PVC conduits with long radius elbows from the Telephone and Data Backboard to the telephone company right-of-way. Conduits bends shall contain radii that are no less than 10 times the conduit diameter. Coordinate the exact termination point with the telephone company. Comply completely with all telephone company requirements. Furnish conduits with pullstrings. Stub conduits up 4" above the floor at the Telephone and Data Backboard and cover with plastic caps. Do not glue the caps on the conduits. Seal conduits below grade to prohibit the entrance, of dirt, water, and gases. Service conduits shall be buried 24" to 36" below grade. Mark the end of the conduits by placing a vertical stick of conduit from the end of the conduit vertically to a point at least 12" above grade. Provide physical protection as well as warning tape attached to stakes around the marker.
- 3.7 Equip all service conduits with a pullwire or string capable of withstanding 600 pounds of pulling tension.
- 3.8 Uniquely identify and label all cables at each end using EIA/TIA Standards. Provide engraved or professionally stenciled label markings on the faceplate beside each jack.
- 3.9 Use a Certification Tester meeting TIA/ISO Level II or IV Accuracy requirements to prove that cabling meets structured cabling manufacturer's warranty requirements. The tester must provide Pass/Fail results compliant with TIA/ISO standards. The tester must be a Fluke DTX CableAnalyzer or approved equal. Provide documentation reports containing all measurement data (MHz, dB, NEXT, EFLEXT, RL). Test cable to ensure that it supports Category Rated Network Speed and provide evidence in report. Test each cable for opens, shorts, correct pairs, crossed wiring, and proper termination approved equal. Replace any cable that is unable to pass the tests. Provide a written log of the test results of each cable to the Engineer at the prefinal inspection. Demonstrate testing of any cables selected by the Engineer.

END OF SECTION

CAST-IN-PLACE CONCRETE FOR PAVEMENTS AND SIDEWALKS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Scope: Contractor shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish and install cast-in-place concrete, reinforcement and related materials for concrete required for the site work.
- B. Coordination: Review installation procedures under other Sections and coordinate the installation of items that must be installed in the concrete.

1.02 QUALITY ASSURANCE

- A. Source Quality Control:
 - 1. Concrete Testing Service:
 - a. Contractor shall employ acceptable testing laboratory to perform materials evaluation, testing and design of concrete mixes.
 - b. Contractor's laboratory shall also evaluate concrete delivered to and placed at the site.
 - 2. Certificates, signed by concrete producer and Contractor, may be submitted in lieu of material testing when acceptable to Engineer.
 - 3. Quality Control: Perform sampling and testing during concrete placement, as follows:
 - a. Sampling: ASTM C 172.
 - b. Slump: ASTM C 143, one test for each load at point of discharge.
 - c. Air Content: ASTM C 31, one for each set of compressive strength specimens.
 - d. Compressive Strength: ASTM C 39, one set for each 50 cubic yards or fraction thereof for each class of concrete; 1 specimen tested at 7 days, 2 specimens tested at 28 days.
- B. Reference Standards: Comply with the applicable provisions and recommendations of the following, except as otherwise shown or specified.
 - 1. ACI 301, Specifications for Structural Concrete for Building (includes ASTM Standards referred to herein except ASTM A 36).
 - 2. ACI 347, Recommended Practice for Concrete Form work.
 - 3. ACI 304, Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.
 - 4. ACI 315, Manual of Standard Practice for Detailing Reinforced Concrete Structures.
 - 5. ACI 305, Recommended Practice for Hot Weather Concreting.
 - 6. ACI 306, Recommended Practice for Cold Weather Concreting.
 - 7. ASTM A 36, Structural Steel.
 - 8. Concrete Reinforcing Steel Institute, Manual of Standard Practice, include ASTM Standards referred herein.

1.03 SUBMITTALS

- A. Samples: Submit samples of materials to the Project Architect as specified and may be requested including names, sources and descriptions.
- B. Shop Drawings: Submit the following to the Project Architect for approval with additional requirements as specified.
 - 1. Copies of manufacturer's specifications with application and installation instructions for proprietary materials and items, including admixtures and bonding agents.
 - 2. Drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315, Chapters 1 thru 8. For walls, show elevations to a minimum scale of 3 inch to 1 foot. Show bar schedules, stirrup spacing, diagrams of bent bars, arrangements and assemblies, as required for the fabrication and placement of concrete reinforcement.

3. List of concrete materials and concrete mix designs proposed for use. Include the results of all tests performed to qualify the materials and to establish the mix designs in accordance with ACI 301, 3.9. Submit written report for each proposed concrete mix at least 15 days prior to start of Work. Do not begin concrete production until mixes have been reviewed and are acceptable. Mix designs may be adjusted when material characteristics, job conditions, weather, test results or other circumstances warrant. Do not use revised concrete mixes until they have been submitted and accepted.
- C. Laboratory Test Reports: Submit copies of laboratory test reports for concrete cylinders, materials and mix design tests. Production of concrete to comply with specified requirements is the responsibility of the Contractor.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver concrete reinforcement materials to the site bundled, tagged and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.
- B. All materials used for concrete must be kept clean and free from all foreign matter during transportation and handling and kept separate until measured and placed in the mixer. Bins or platforms having hard clean surfaces shall be provided for storage. Suitable means shall be taken during hauling, piling and handling to ensure that segregation of the coarse and fine aggregate particles does not occur and the grading is not affected.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type II.
- B. Aggregates: ASTM C 33.
 1. Fine Aggregate: Clean, sharp, natural sand free from loam, clay, lumps or other deleterious substances. Dune sand, bank run sand and manufactured sand are not acceptable.
 2. Coarse Aggregate: Clean, uncoated, processed aggregate containing no clay, mud, loam, or foreign matter, as follows:
 - a. Crushed stone, processed from natural rock or stone.
 - b. Washed gravel, either natural or crushed. Use of slag and pit or bank run gravel is not permitted.
- C. Coarse Aggregate Size: Size to be ASTM C 33, Nos. 57 or 67, unless permitted
- D. Water: Clean, potable.
- E. Air-Entraining Admixture: ASTM C 260.
- F. Water-Reducing Admixture: ASTM C 494. Only use admixtures which have been tested and accepted in mix designs.
- G. Slump Limits: Proportion and design mixes to result in concrete slump at the point of placement of not less than one inch and not more than four inches.

2.02 FORM MATERIALS

- A. Provide form materials with sufficient stability to withstand pressure of placed concrete without bow or deflection.
- B. Exposed Concrete Surfaces: Acceptable panel-type to provide continuous, straight, smooth, as-cast surfaces. Use largest practical sizes to minimize form joints.
- C. Unexposed Concrete Surfaces: Suitable material to suit project conditions.
- D. Provide 3/4 inch chamfer at all exposed corners.
- E. All formwork shall conform to the requirements of ACI 301-05. Forms shall not be removed until 48 hours after placement of concrete.

CAST-IN-PLACE CONCRETE FOR PAVEMENT AND SIDEWALKS

2.03 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A 615, Grade 60.
- B. Welded Wire Fabric: ASTM A 185 & ASTM A 82.
- C. Steel Wire: ASTM A 82, flat sheets not rolls
- D. Supports for Reinforcement: Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcement in place.
 - 1. Use wire bar type supports complying with CRSI recommendations, except as specified below. Do not use wood, brick, or other unacceptable materials.
 - 2. For slabs on grade, use supports with sand plates or horizontal runners where base materials will not support chair legs.
 - 3. For all concrete surfaces, where legs of supports are in contact with forms, provide supports complying with CRSI, Manual of Standard Practice as follows:
 - a. Either hot-dip galvanized, plastic protected or stainless steel legs.

2.04 GROUT

- A. Non-metallic, 100 percent solids, high strength epoxy grout.
 - 1. Use clean well graded sand with epoxy resins suitable for use on dry or damp surfaces.
 - 2. Product and Manufacturer: Provide one of the following:
 - a. Euco High Strength Grout by the Euclid Chemical Company.
 - b. Sikadur 42 Grout by Sika Chemical Company.
 - c. Five Star Epoxy Grout by U.S. Grout Corporation.
 - d. Or equal.
- B. Nonshrink, Nonmetallic Grout:
 - 1. Premixed nonstaining cementitious grout requiring only the addition of water at the job site.
 - 2. Product and Manufacturer: Provide one of the following:
 - a. Euco N-S by the Euclid Chemical Company.
 - b. Masterflow 713 by Master Builders Company.
 - c. Five Star by U.S. Grout Corporation.
 - d. Or equal.
- C. Ordinary Cement-Sand Grout: Except where otherwise specified use 1 part cement to 3 parts sand complying with the following:
 - 1. Cement: ASTM C 150, Type II.
 - 2. Sand: ASTM C 33.

2.05 EXPANSION JOINTS

- A. Expansion joint filler shall be preformed expansion joint filler complying with ASTM D1752, Type II cork.
- B. Expansion joint sealer:
 - 1. Exterior and Interior Joints in Horizontal Planes: Two-Component Polyurethane Sealant:
 - a. Polyurethane-based, 2-part elastomeric sealant complying with the following:
 - 1) FS TT-S-00227, Type 1 (self-leveling) Class A.
 - 2) Water Immersion Bond, FS TT-S-00227; Elongation of 25 percent with no adhesive failure.
 - 3) Hardness (Standard Conditions), ASTM C 661: 30-40.
 - 4) Stain and Color Change, FS TT-S-00227 and ASTM C 510: No discoloration or stain.
 - 5) Accelerated Aging, ASTM C 793: No change in sealant characteristics after 250 hours in weatherometer.
 - b. Product and Manufacturer: Provide one of the following:
 - 1) Sonolastic Paving Joint Sealant by Sonneborn Division of Contech Incorporated.
 - 2) Vulkem 255 by Mameco International.
 - 3) Or equal.

2.06 WATERSTOPS

- A. Reference Standard CRD-C 572.
 - 1. Construction Joints: A dumbbell shape polyvinyl chloride waterstop with the following minimum requirements:
 - a. Thickness: 3/8 inch.
 - b. Length: Six inches.
 - c. Bulb diameter: 3/4 inch.
 - 2. Expansion Joints: A dumbbell shape polyvinyl chloride waterstop with the following minimum requirements:
 - a. Thickness: 3/8 inch.
 - b. Length: Nine inches.
 - c. Bulb diameter: 3/4 inch.
- B. Product and Manufacturer: Provide waterstops as manufactured by one of the following:
 - 1. Vuncan Products, Inc.
 - 2. W. R. Meadows, Inc.
 - 3. Or equal.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Contractor and his installer shall examine the substrate and the conditions under which Work is to be performed and notify Engineer of unsatisfactory conditions. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to Engineer.

3.02 FORM WORK

- A. Form work: Construct so that concrete members and structures are correct size, shape, alignment, elevation and position, complying with ACI 347.
- B. Provide openings in Form work to accommodate Work of other trades. Accurately place and securely support items built into forms.
- C. Clean and adjust forms prior to concrete placement. Apply form release agents or wet forms, as required. Retighten forms during and after concrete placement if required to eliminate mortar leaks.

3.03 REINFORCEMENT, JOINTS, AND EMBEDDED ITEMS

- A. Comply with the applicable recommendations of specified codes and standards, and ACI, Manual No. SP-66, latest edition, for details and methods of reinforcement placement and supports.
- B. Clean reinforcement to remove loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.
- C. Position, support, and secure reinforcement against displacement during Form work construction or concrete placement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required.
 - 1. Place reinforcement to obtain the minimum concrete converges as shown and as specified in ACI 318. Arrange, space, and securely tie bars and bar supports together with 16 gage wire to hold reinforcement accurately in position during concrete placement operations. Set with ties so that twisted ends are directed away from exposed concrete surfaces.
 - 2. Reinforcing steel shall not be secured to forms with wire, nails or other ferrous metal. Metal supports subject to corrosion shall not touch formed or exposed concrete surfaces.
- D. Provide sufficient numbers of supports of strength required to carry reinforcement. Do not place reinforcing bars more than 2 inches beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.

CAST-IN-PLACE CONCRETE FOR PAVEMENT AND SIDEWALKS

- E. Splices: Provide standard reinforcement splices by lapping ends, placing bars in contact, and tying tightly with wire. Comply with requirements shown for minimum lap of spliced bars.
- F. Install welded wire fabric in as long lengths as practical, lapping at least one mesh.
- G. Concrete shall not be placed until the reinforcing steel is inspected and permission for placing concrete is granted by Engineer. All concrete placed in violation of this provision will be rejected.
- H. Joints: Provide construction, isolation, and control joints as indicated or required. Locate construction joints so as to not impair the strength and appearance of the structure. Place isolation and control joints in slabs on ground to stabilize differential settlement and random cracking. Control Joint spacing shall not exceed 15' and shall not exceed an aspect ratio (slab length to width) of 1.25. Joints shall be cut or tooled to a minimum of 25% of the pavement thickness.
- I. Installation of Embedded Items: Set and build into the Work anchorage devices and embedded items required for other Work that is attached to, or supported by cast-in-place concrete. Use setting diagrams, templates and instructions provided under other Sections and other contracts for locating and setting. Refer also to Paragraph 1.01.B., Coordination, above.
- J. Waterstops:
 - 1. General:
 - a. Comply with ACI 301, Chapter 6, and as specified below. All joints shall be made in accordance with manufacturer's instructions.
 - b. Obtain Engineer's approval for waterstop locations not shown.
 - c. Provide waterstops in all foundations, tanks and other substructures up to an elevation at least 12 inches above grade or to an elevation at least 12 inches above liquid level in tanks, whichever is higher, except where otherwise shown or noted.
 - 2. Polyvinyl Chloride Waterstop:
 - a. Tie waterstop to reinforcement so that it is securely and rigidly supported in the proper position during concrete placement continuously inspect waterstops during concrete placement to insure their proper positioning.
 - b. Waterstops shall be fused using equipment as supplied by or recommended by the manufacturer.
 - c. Where required, weld polyvinyl chloride waterstop to steel waterstop by gently heating while applying pressure to the two materials. Use a steel plate and two "C" clamps to apply the pressure and a propane torch to apply the heat. The polyvinyl chloride waterstop shall be clamped between the steel waterstop and the steel plate which is held in place by the two "C" clamps. As heat is applied to the steel waterstop tighten the "C" clamps. Heat for approximately 15 minutes at a temperature just enough to make the polyvinyl chloride "runny" and the weld complete. After cooling remove the "C" clamps and plate. Engineer must approve polyvinyl chloride before embedding in concrete.

3.04 CONCRETE AND PLACEMENT

- A. Proportioning and Design of Mix:
 - 1. Minimum compressive strength at 28 days: 4,500 psi. (4,000 psi. for curbs and sidewalks)
 - 2. Maximum water cement ratio by weight: 0.45.
 - 3. Minimum cement content: 564 pounds per cubic yard.
 - 4. Normal weight: 145 pounds per cubic foot.
 - 5. Use air-entraining admixture in all concrete: Provide not less than 4 percent nor more than 7 percent entrained air for concrete exposed to freezing and thawing, and from 2 percent to 4 percent for other concrete.
 - 6. Calcium Chloride: Do not use calcium chloride in concrete, unless otherwise authorized in writing by ENGINEER. Do not use admixtures containing calcium chloride.
 - 7. If fly ash is to be used, not more than 15% of the cement may be replaced by fly ash. Fly ash may not be used in concrete slabs to receive a float, trowel, or non-slip finish.

- B. Job-Site Mixing: Use drum type batch machine mixer, mixing not less than 12 minutes for one cubic yard or smaller capacity. Increase mixing time at least 15 seconds for each additional cubic yard or fraction thereof.
- C. Ready-Mixed Concrete: ASTM C 94.
- D. Concrete Placement: Comply with ACI 304, placing concrete in a continuous operation within planned joints or sections. Do not begin placement until work of other trades affecting concrete is completed.
- E. Consolidate placed concrete using mechanical vibrating equipment with hand rodding and tamping, so that concrete is worked around reinforcement and other embedded items and into all parts of forms.
- F. Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placement, and curing.
 - 1. In cold weather comply with ACI 306.
 - 2. In hot weather comply with ACI 305.

3.05 QUALITY OF CONCRETE WORK

- A. Make all concrete solid, compact and smooth, and free of laitance, cracks and cold joints.
- B. Cut out and properly replace to the extent ordered by the Engineer, or repair to the satisfaction of the Engineer, surfaces which contain cracks or voids, are unduly rough, or are in any way defective. Patches or plastering will not be acceptable.
- C. Repair, removal, and replacement of defective concrete as ordered by the Engineer shall be at no additional cost to the Owner.

3.06 CURING

- A. Begin initial curing after placing and finishing concrete as soon as free water has disappeared from exposed surfaces. Where possible, keep continuously moist for not less than 72 hours. Continue curing use of moisture-retaining cover or membrane-forming curing compound. Cure formed surfaces by moist curing until forms are removed. Provide protection as required to prevent damage to exposed concrete surfaces.
- B. Forms on structural walls shall be left in place for a minimum of 72 hours unless a cylinder breaks indicating the strength of the concrete has reached 75 percent of design strength.
- C. Forms on structural floors and ceiling shall be left in place until a cylinder break indicates the strength of the concrete has reached 85 percent of design strength.

3.07 FINISHES

- A. Finish:
 - 1. After placing concrete slabs, do not work the surface further until ready for floating. Begin floating when the surface water has disappeared or when the concrete has stiffened sufficiently. Use a wood float only. Check and level the surface plane to a tolerance not exceeding 1/4 inch in 10 feet when tested with a 10 foot straightedge placed on the surface at not less than 2 different angles. Cut down high spots and fill all low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat the surface to a uniform, smooth, granular texture.
 - 2. After floating, begin the first trowel finish operation using a trowel. Begin final troweling when the surface produces a ringing sound as the trowel is moved over the surface.
 - 3. Consolidate the concrete surface by the final hand troweling operation. Finish shall be free of trowel marks, uniform in texture and appearance, and with a surface plane tolerance not exceeding 1/8 inch in 10 feet when tested with a 10 foot straight edge. Grind smooth surface defects.
 - 4. Use trowel finish for the following: Interior exposed slabs unless otherwise shown or specified.
 - 5. Apply non-slip broom finish to exterior concrete slab and elsewhere as shown on the Drawings.

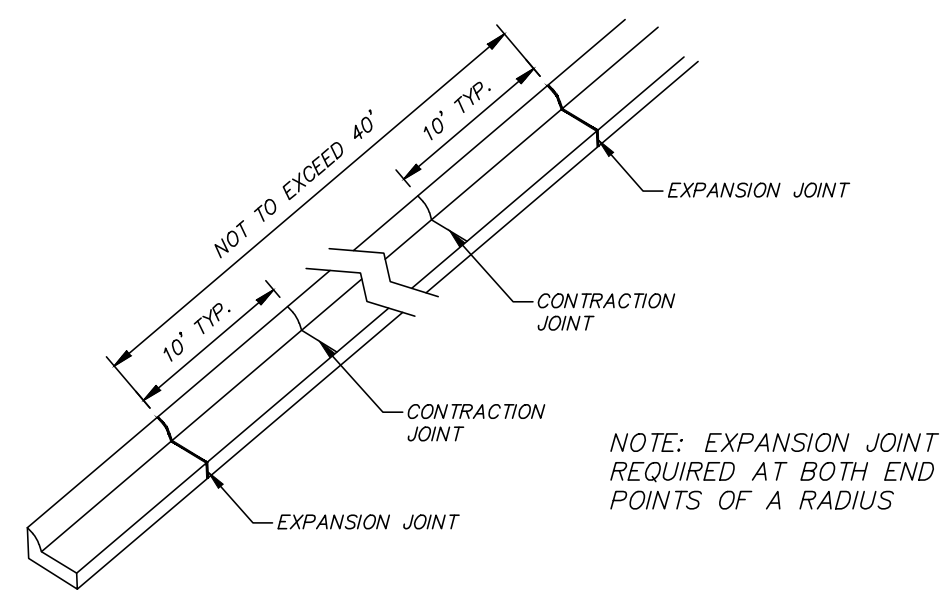
3.08 GROUT PLACEMENT

- A. General:
 - 1. Place grout as shown and in accordance with manufacturer's instructing. If manufacturer's instructions conflict with the Specifications do not proceed until Engineer provides clarification.
 - 2. Drypacking will not be permitted.

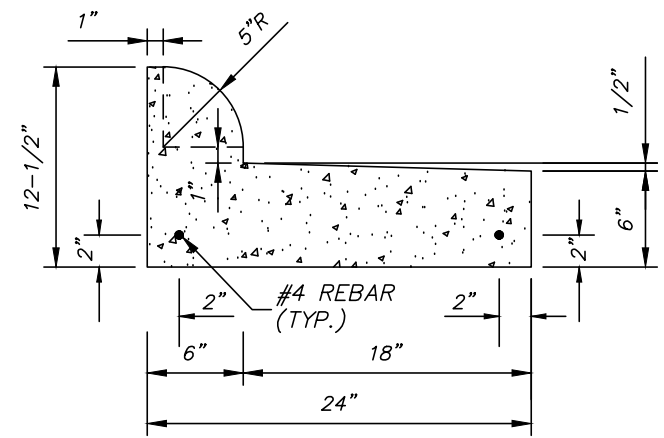
CAST-IN-PLACE CONCRETE FOR PAVEMENT AND SIDEWALKS

3. Manufacturers of proprietary products shall make available upon 72 hours notification the services of a qualified, full-time employee to aid in assuring proper use of the product under job conditions.
4. Placing grout shall conform to the temperature and weather limitations described in Article 3.04 above.

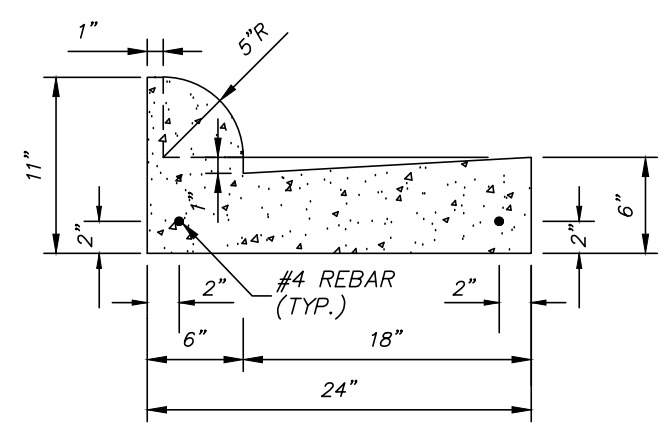
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TYPICAL CURB AND GUTTER JOINT SPACING



TYPE 3B MODIFIED CURB WITH REVERSED GUTTER

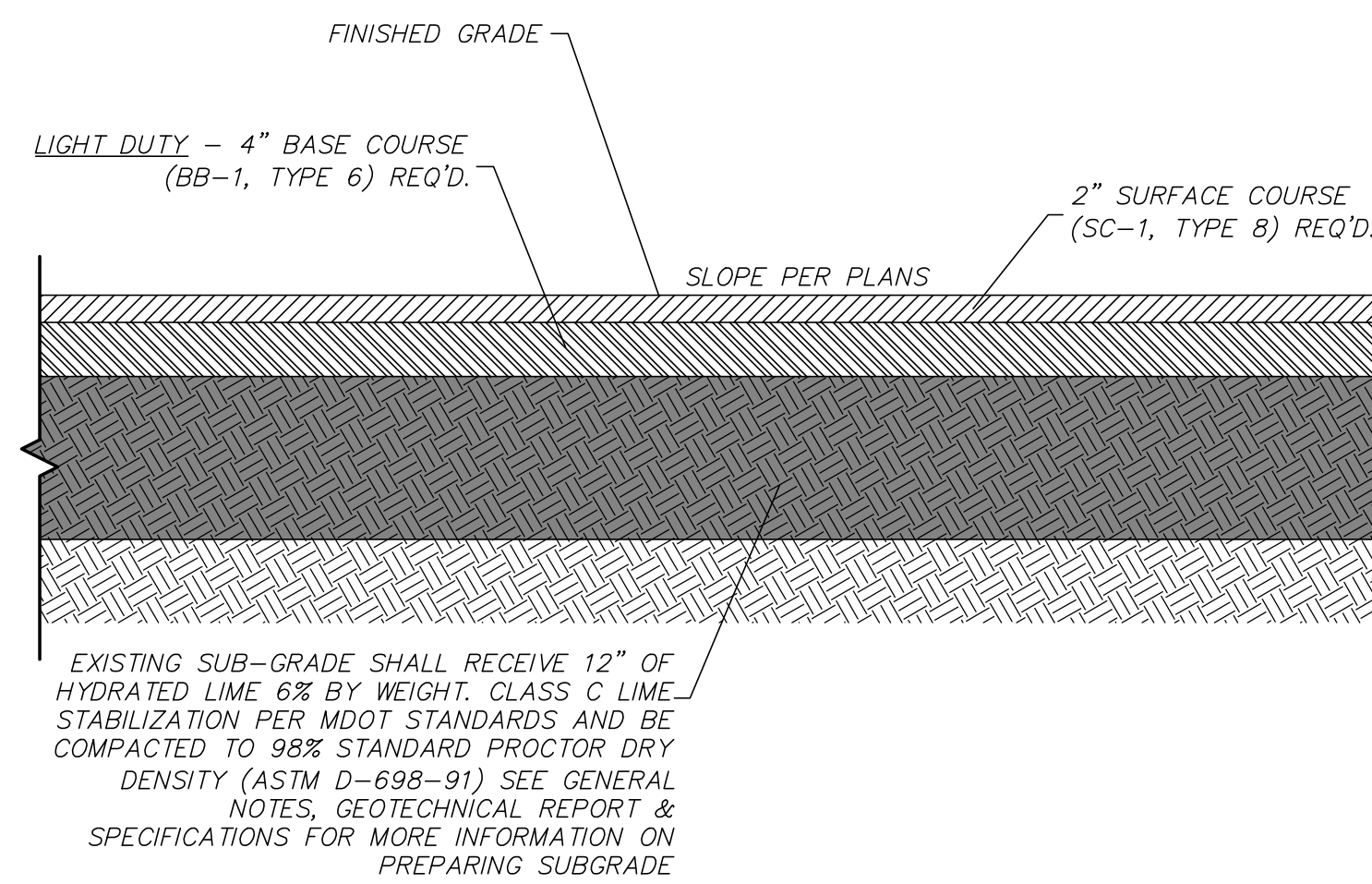


TYPE 3B MODIFIED CURB & GUTTER

- CURB AND GUTTER NOTES:
1. CURB AND GUTTER SHALL BE 4,000 PSI MINIMUM CONCRETE.
 2. CURB AND GUTTER SHALL BE PLACED ON COMPACTED SUB-GRADE MEETING ROADWAY SPECIFICATIONS.
 3. PROVIDE EXPANSION JOINTS WITH 1/2" EXPANSION MATERIAL AT INTERVALS NOT TO EXCEED FORTY (40) FEET. TWO 3/4" DOWEL BARS HELD IN PLACE BY APPROVED CHAIRS OR SUPPORTS, 15" IN LENGTH REQ'D. AT EXPANSION JOINTS.
 4. TOOLED CONTRACTION/CONTROL JOINTS (1/4" WIDE x 1" DEEP) ARE REQUIRED IN THE CURB AND GUTTER AT EVENLY SPACED INTERVALS NOT TO EXCEED TEN (10) FEET.
 5. CONTRACTOR SHALL MAKE TRANSITION FROM STANDARD CURB TO REVERSED GUTTER THROUGH A RADIUS IS POSSIBLE AND IF NOT, GRADUALLY TRANSITION BETWEEN CONTRACTION JOINTS.
 6. LOCATIONS FOR REVERSE GUTTER ARE NOTED ON THE DRAWINGS. THE CONTRACTOR MAY PROPOSE TO ADJUST LOCATIONS BY PROVIDING ENGINEER WITH A DRAWING WITH PROPOSED REVERSE GUTTER LOCATIONS FOR HIS REVIEW AND COMMENT/REJECTION/APPROVAL.
- LEGEND
• TP DENOTES "TOP OF PAVEMENT"
• TS DENOTES "TOP OF SIDEWALK"

CURB AND GUTTER DETAILS

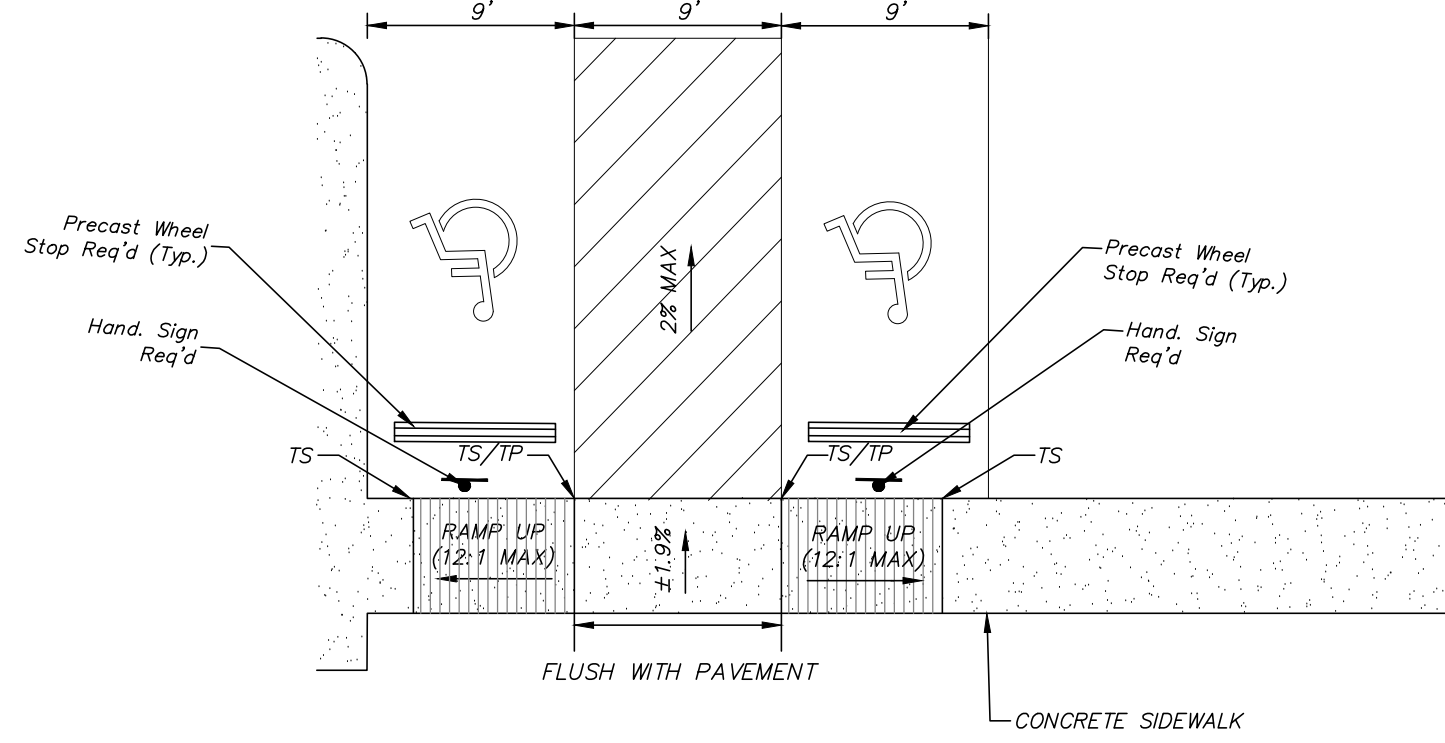
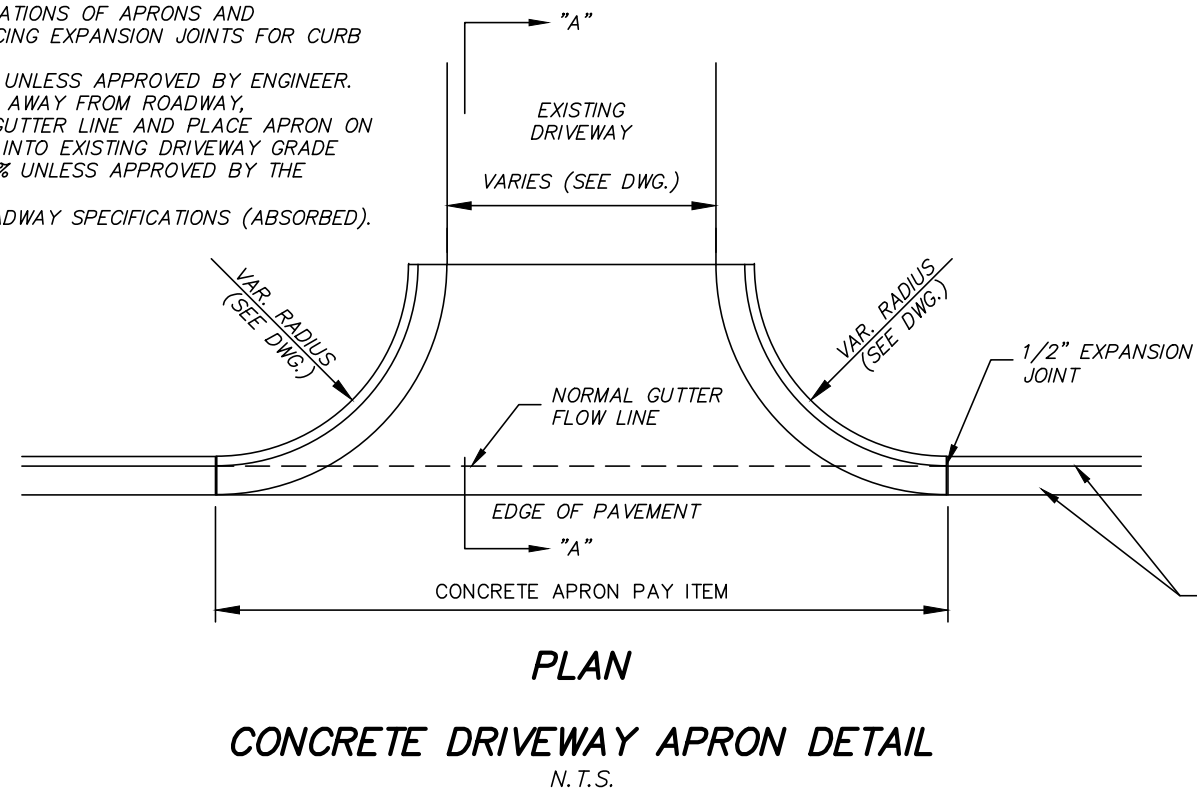
24" TYPE 3B MODIFIED
CURB & GUTTER w/
REVERSED GUTTER



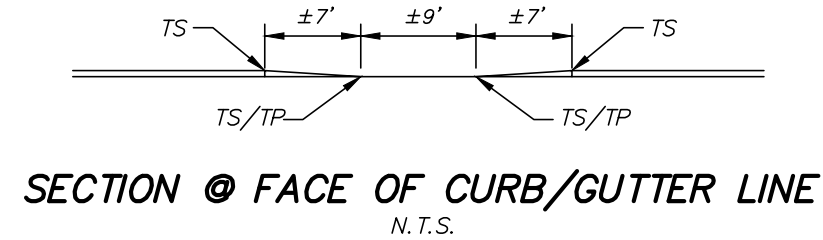
TYPICAL SECTION OF ASPHALT PAVEMENT STRUCTURE

- APRON NOTES:
1. PORTLAND CEMENT CONCRETE SHALL BE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI @ 28 DAYS.
 2. CONTRACTOR TO SEE DRAWINGS FOR THE DIMENSIONS REQUIRED FOR EACH INDIVIDUAL APRON.
 3. CONTRACTOR SHALL BE AWARE OF THE DAMAGE CAUSED DURING CONSTRUCTION OF APRONS TO AS GOOD OR BETTER CONDITION WITH SAME MATERIAL AS EXISTING DRIVEWAY.
 4. CONTRACTOR SHALL BE AWARE OF LOCATIONS OF APRONS AND EXPANSION JOINT MATERIAL WHEN SPACING EXPANSION JOINTS FOR CURB AND GUTTER.
 5. APRON SLOPE SHALL NOT EXCEED 15% UNLESS APPROVED BY ENGINEER.
 6. FOR APRONS WHERE DRIVEWAY SLOPES AWAY FROM ROADWAY, CONTRACTOR SHALL PIVOT ARROW AT GUTTER LINE AND PLACE APRON ON CONSTANT SLOPE AS REQUIRED TO TIE INTO EXISTING DRIVEWAY GRADE AT THE END OF THE APRON. MAX. 15% UNLESS APPROVED BY THE ENGINEER.
 7. SUBGRADE TO BE COMPACTED PER ROADWAY SPECIFICATIONS (ABSORBED).

SECTION "A" - "A"

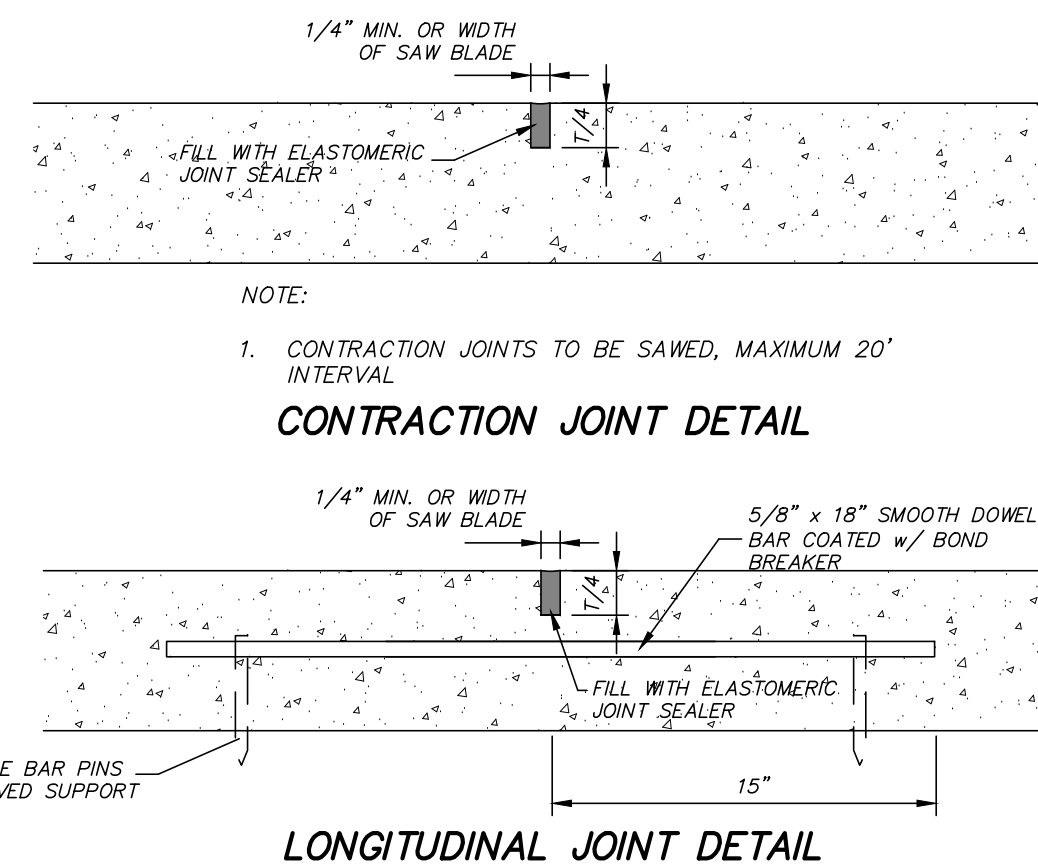


TYPICAL HANDICAPPED PARKING & HANDICAPPED RAMP DETAILS

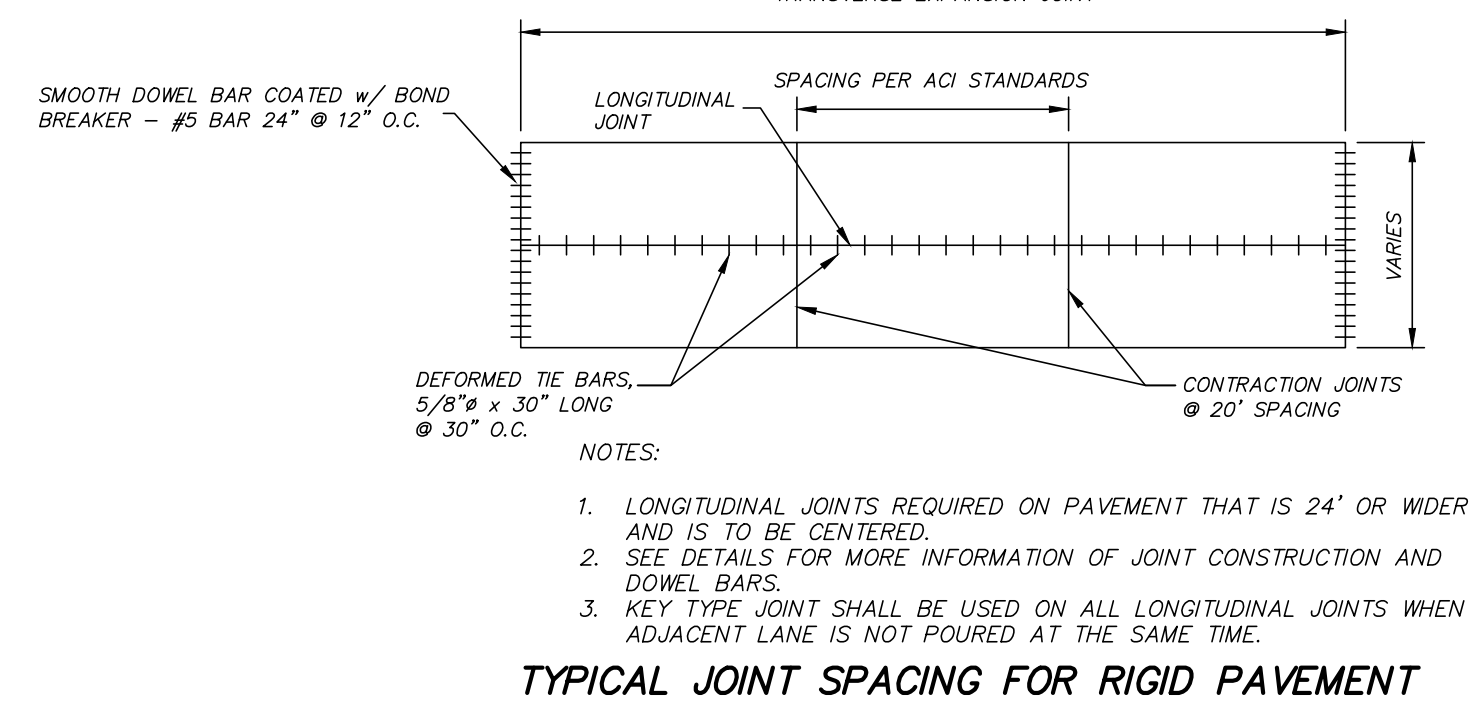


- RESERVED PARKING
R7-8 12"x18"
(GREEN AND BLUE ON WHITE)
- NOTES:
1. ALL PAVEMENT MARKINGS SHALL BE BLUE. (CURB FACE OR PARKING BLOCKS SHALL BE PAINTED BLUE).
 2. PARKING BLOCKS REQUIRED WHERE NO CURB EXIST TO PROTECT SIGN.
 3. ALL STRIPING AND SIGNAGE (HEIGHT, LOCATION, COLORS, ETC.) TO MEET ADA & CITY REQUIREMENTS.

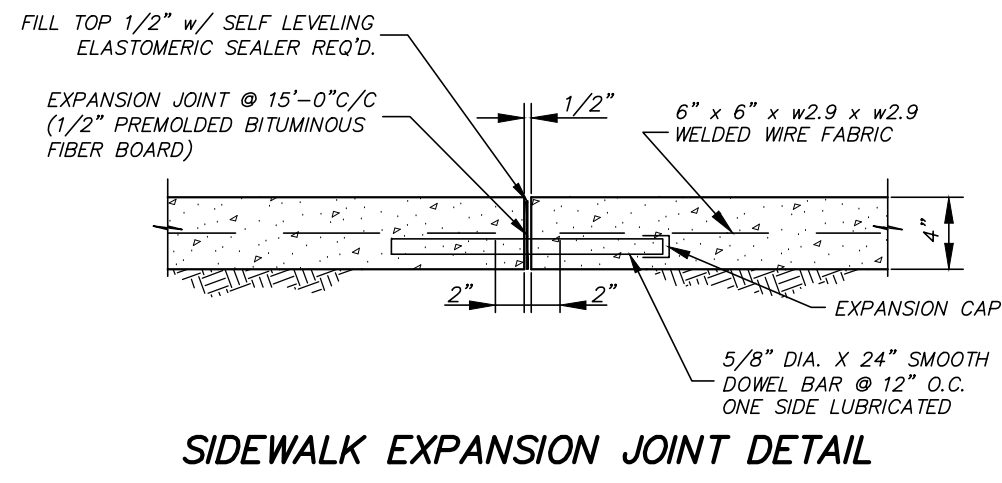
TYPICAL HANDICAPPED SIGNAGE DETAIL



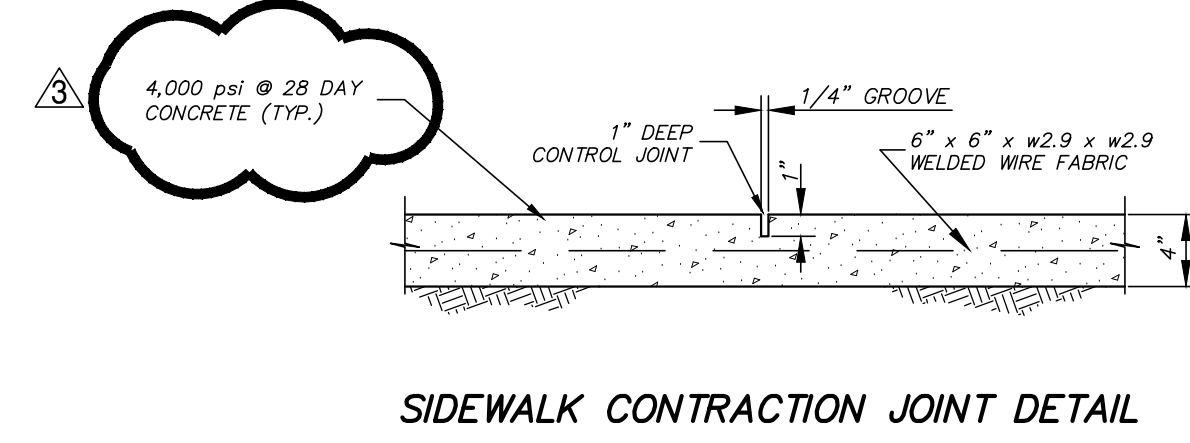
LONGITUDINAL JOINT DETAIL



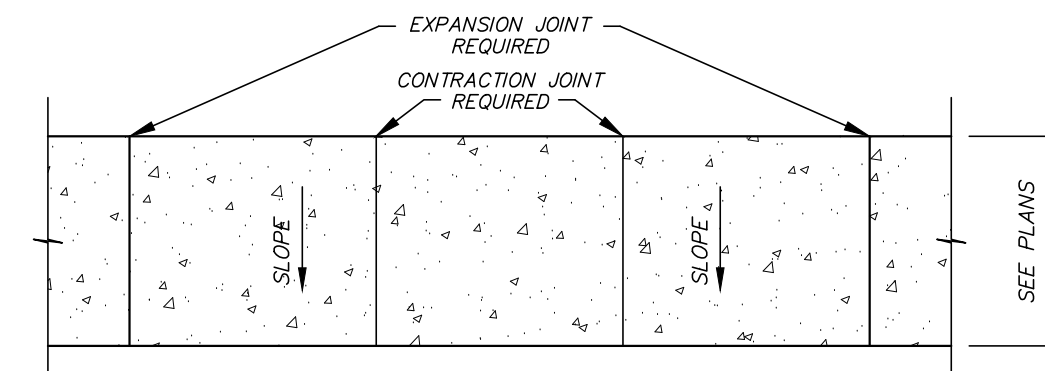
TYPICAL JOINT SPACING FOR RIGID PAVEMENT



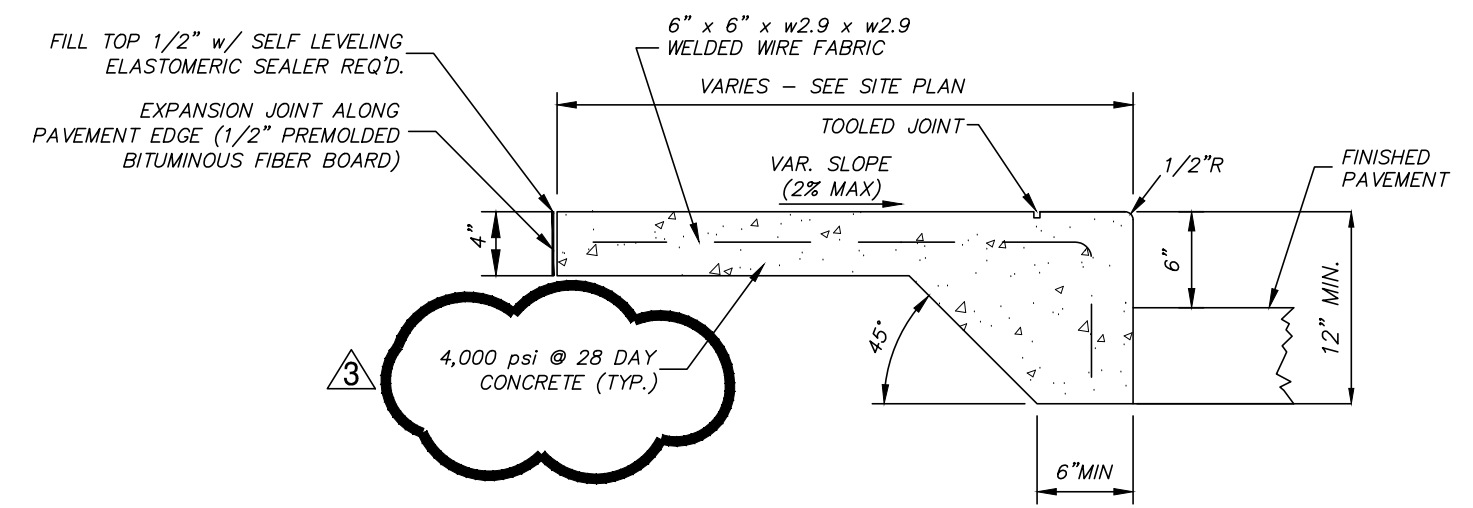
SIDEWALK EXPANSION JOINT DETAIL



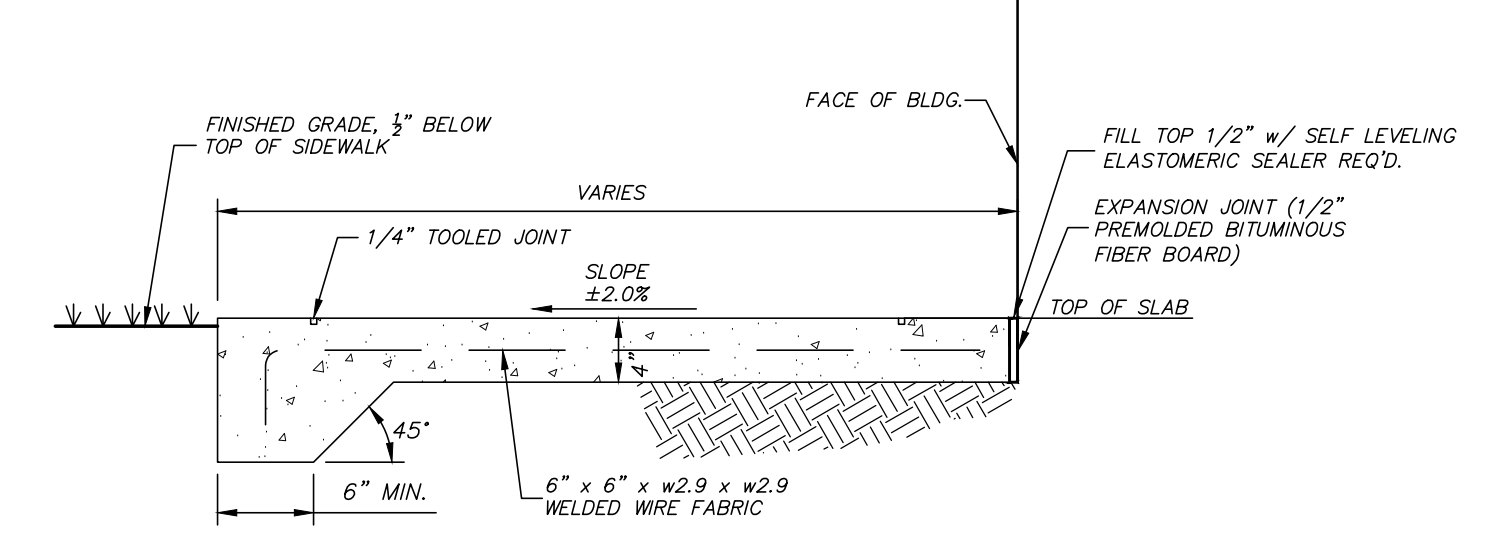
SIDEWALK CONTRACTION JOINT DETAIL



SIDEWALK JOINT LAYOUT DETAIL



SIDEWALK AT EDGE OF PAVEMENT

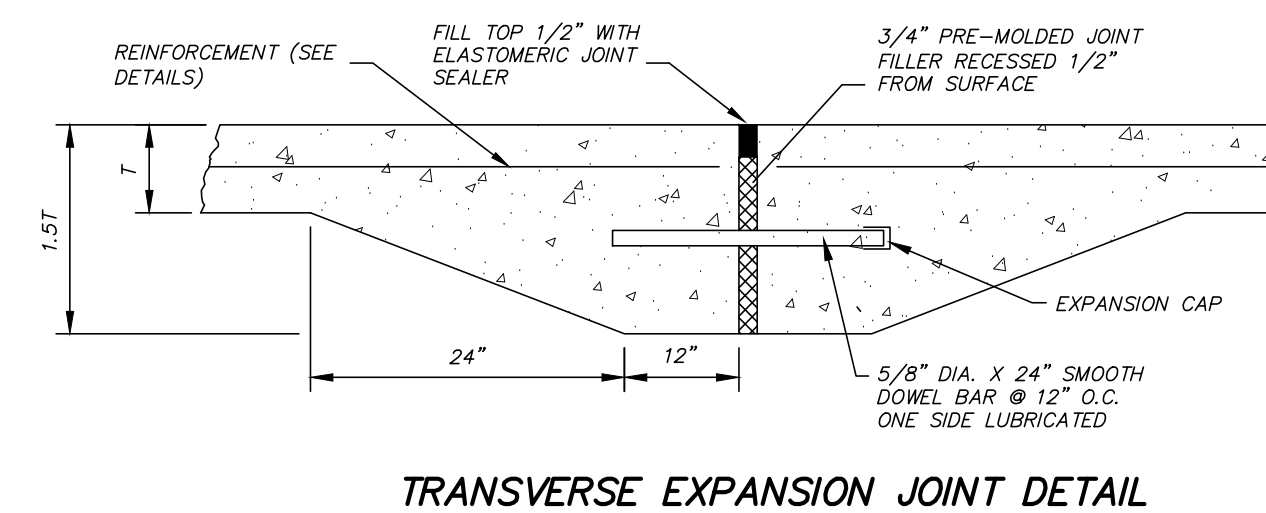


SIDEWALK AT BACK OF BUILDING

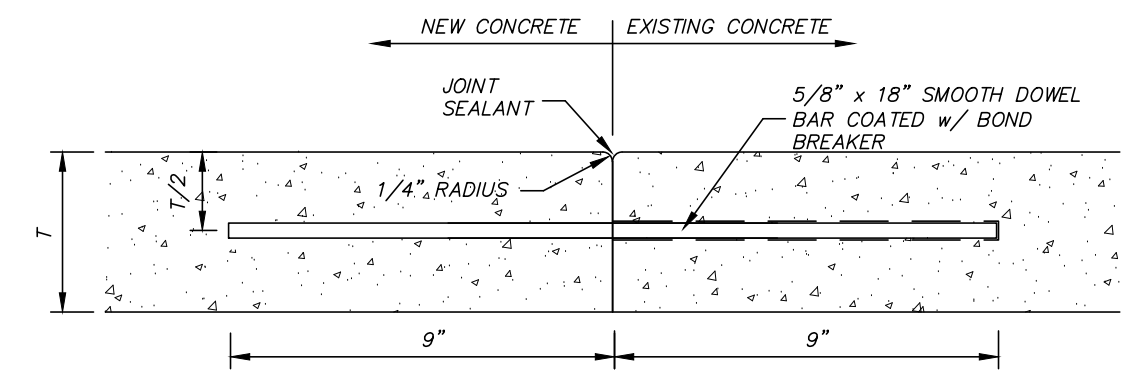
SIDEWALK CONSTRUCTION NOTES:

1. SUB-GRADE FOR SIDEWALK SHALL BE PREPARED IN SAME MANNER AS REQUIRED FOR PAVEMENT CONSTRUCTION.
2. EXPANSION JOINT REQ'D. WHERE TYPING SIDEWALK TO BUILDING OR BACK OF CURB WITH 1/2" PREMOLDED BITUMINOUS FIBER BOARD AND TOP FILLED WITH 1/2" SELF LEVELING ELASTOMERIC SEALER.
3. WELDED WIRE FABRIC SHALL BE SHEETS AND NOT ROLLS.
4. CONTRACTION JOINTS REQUIRED AT 5' O.C. & EXPANSION JOINTS REQUIRED AT 15' O.C. UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
5. CONTRACTION/CONTROL JOINTS SHALL BE TOOLED OR SAWCUT IN STRAIGHT LINES TO THE DEPTHS SHOWN AT THE PROPER CURE TIME AND WITH THE PROPER MATERIALS/EQUIPMENT TO LEAVE THE FINISHED CONCRETE SURFACE ALONG THE JOINTS LOOKING SMOOTH AND FREE FROM CHIPPING OR OTHER DEFECTS. JOINTS WHERE CHIPPING OR OTHER IRREGULARITIES THAT COMPROMISE THE LOOK OF THE CONCRETE PER THE OWNER/ENGINEER SHALL BE REJECTED AND SUBSEQUENTLY REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR SHALL SEE SPOT ELEVATIONS ON GRADING LAYOUT FOR SIDEWALK SLOPES.

CONCRETE SIDEWALK DETAILS



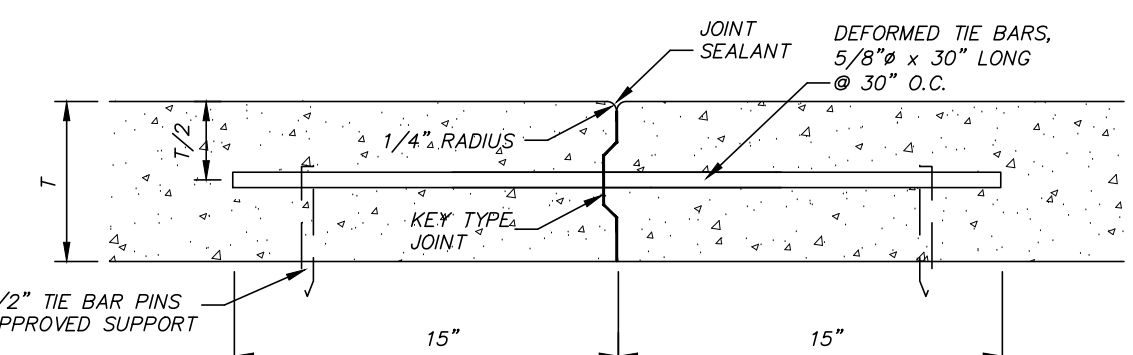
TRANSVERSE EXPANSION JOINT DETAIL



NOTES:

1. REQUIRED AT ALL LOCATIONS WHERE PROPOSED PAVEMENT TIES TO EXISTING PAVEMENT UNLESS OTHERWISE NOTED.
2. DRILL HOLE INTO EX. CONCRETE PAVEMENT TO LENGTH REQUIRED, USE CHEMICAL ADHESIVE TO BAR TO EXISTING CONCRETE.
3. DOWEL BAR LOCATION TO MATCH TIE BAR SPACING WHERE APPLICABLE, MINIMUM SPACING OF 18".
4. 1/4" RADIUS NOT REQ'D ON EXISTING CONCRETE IF NOT ALREADY THERE.
5. SEE DETAILS FOR PAVEMENT THICKNESS.

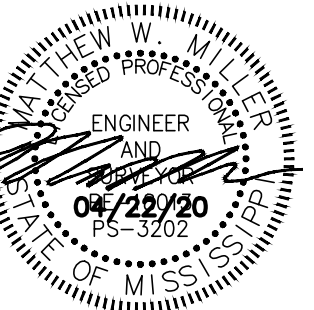
PROPOSED CONCRETE PAVEMENT TO EXISTING CONCRETE PAVEMENT DETAIL



NOTES:

1. KEY TYPE JOINT SHALL BE USED ON ALL LONGITUDINAL CONSTRUCTION JOINTS WHEN ADJACENT LANE IS NOT POURED AT THE SAME TIME
2. ALTERNATIVE METHODS FOR KEY TYPE JOINT SHALL BE PRESENTED TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

CONSTRUCTION JOINT DETAIL

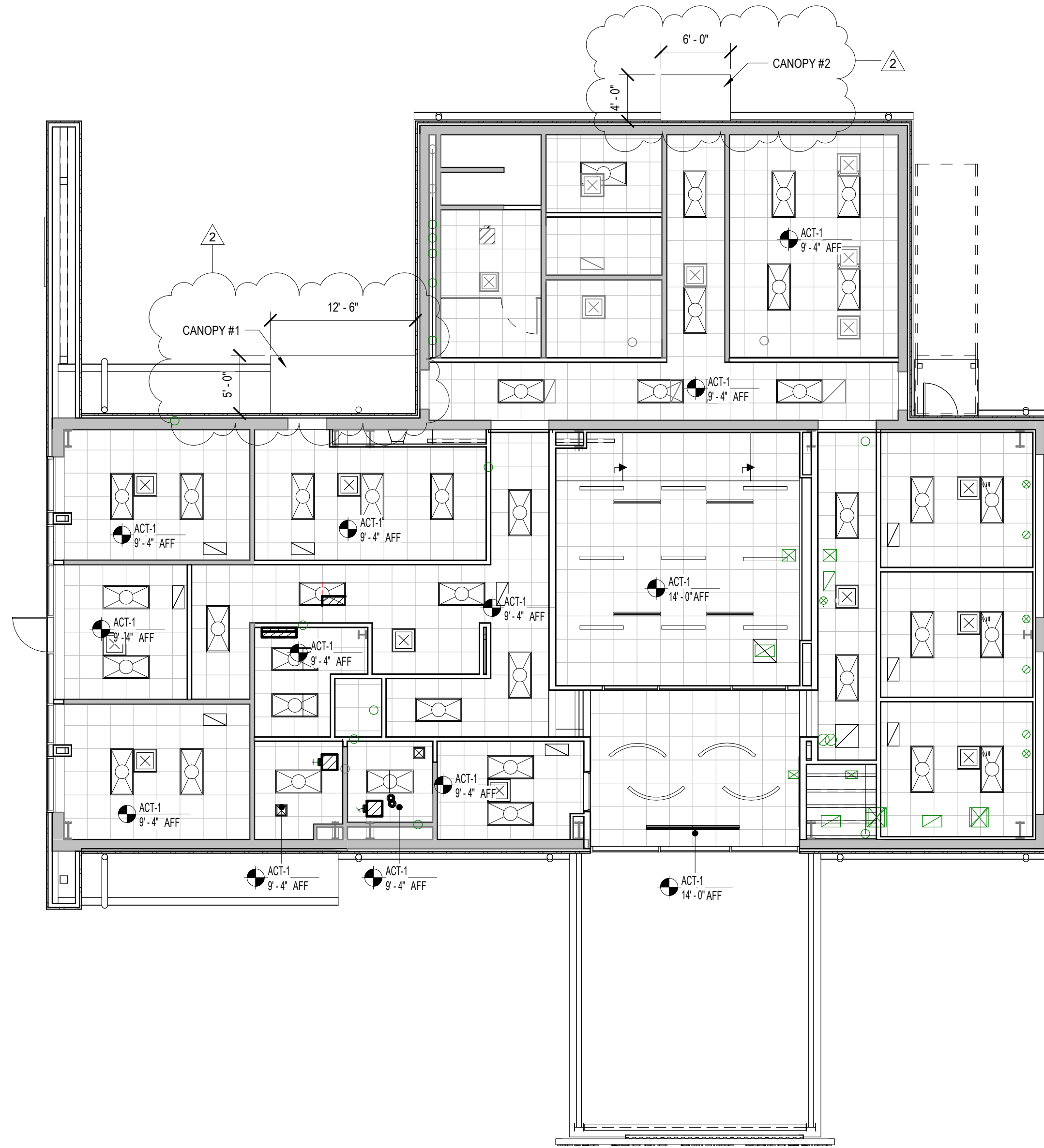


April 22, 2020

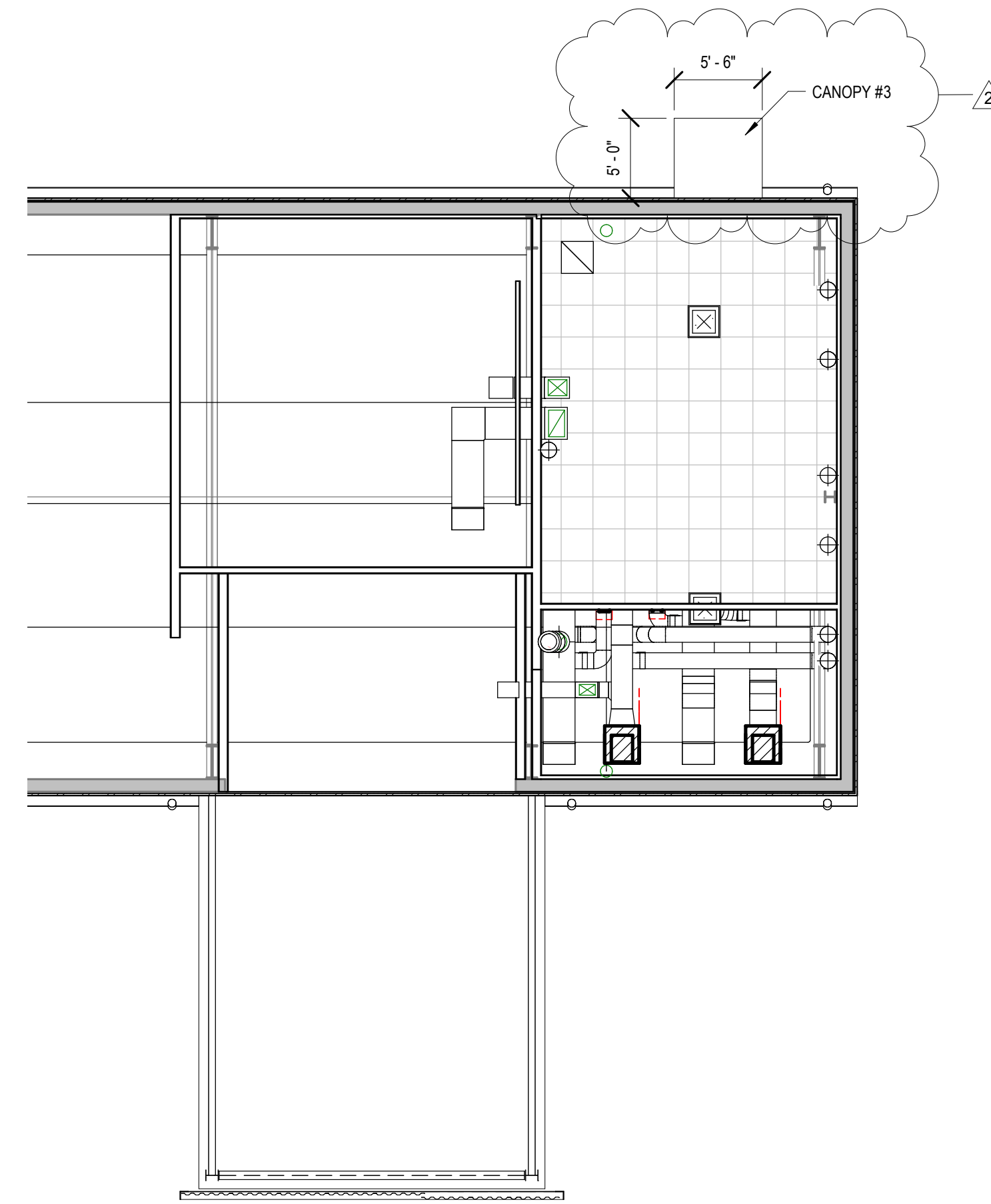
CONSTRUCTION DOCUMENTS
WBA # 5719

REVISIONS		
NO.	DESCRIPTION	DATE
3	Updated concrete compressive strength	5/26/20

C102
CONSTRUCTION DOCUMENTS



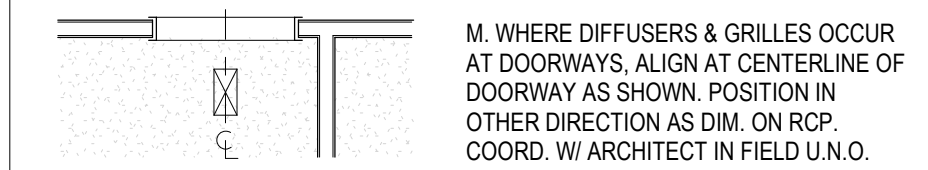
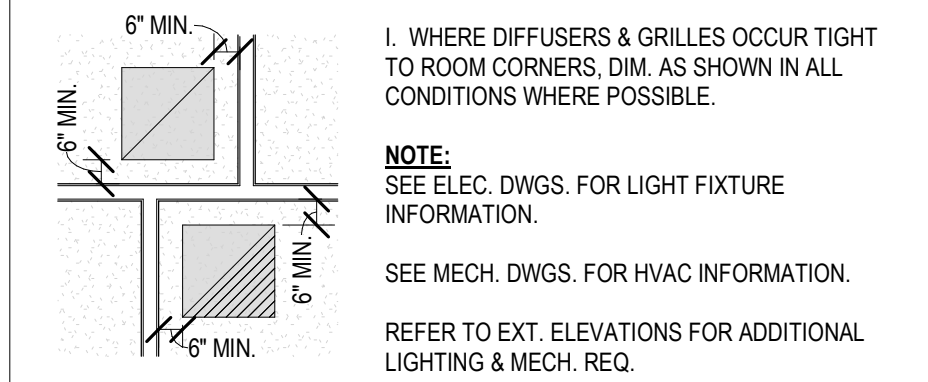
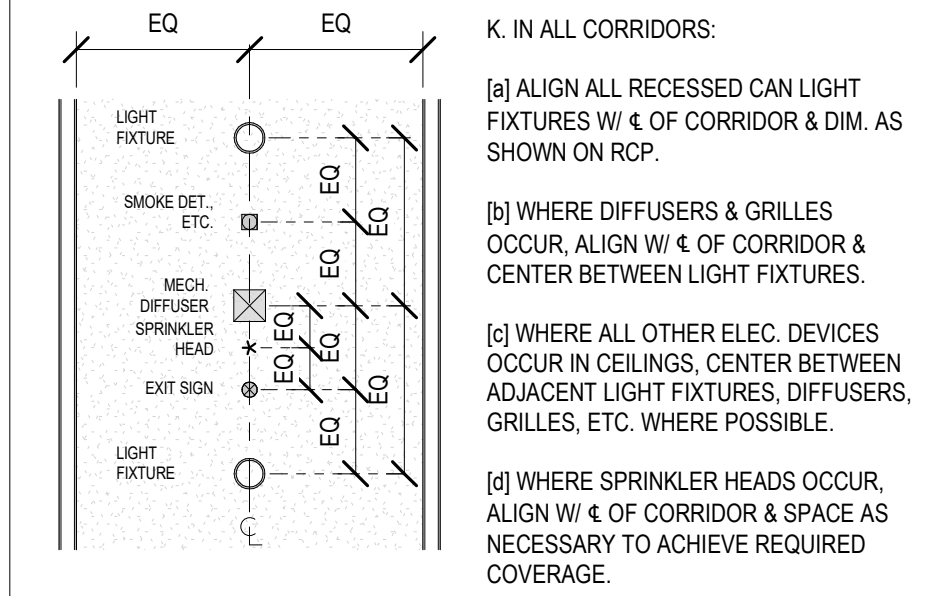
1 FIRST FLOOR RCP
1/8" = 1'-0"



2 MEZZANINE RCP
1/8" = 1'-0"

RCP GENERAL NOTES

- A. REFER TO FP. DWGS. FOR ALL AUTOMATIC FIRE SUPPRESSION SYS. REQ. G.C. TO COORD. SPRINKLER SYS. W/ WORK OF ALL OTHER TRADES.
- B. CONFIRM LIGHTING LAYOUT W/ ARCH. PRIOR TO INSTALLATION.
- C. REFER TO MECH. & ELEC. DWGS. FOR WALL MTD. GRILLES & DIFFUSERS & ALL OTHER ADDITIONAL FIXTURES, DEVICES & ITEMS NOT SHOWN.
- D. INSTALL ALL CEILING FIXTURES AS DIMENSIONED ON RCPs. IN ROOMS/SPACES W/ ONLY ONE FIXTURE, CENTER EA. WAY.
- E. FOR TYP. CONDITIONS, FOLLOW INSTALLATION PARAMETERS AS SHOWN BELOW.
- F. FOR ALL ATYPICAL CONDITIONS, & FOR ALL CONDITIONS WHERE CEILING COMPONENTS CANNOT BE INSTALLED AS SHOWN ON RCPs, COORDINATE EXACT LOCATIONS W/ ARCHITECT IN FIELD.
- G. LIGHT FIXTURES, MECH. DIFFUSERS & GRILLES, & ALL OTHER DEVICES SHOWN ON REFLECTED CEILING PLANS (RCPs) ARE FOR COORD. PURPOSES ONLY. REFER TO MECH., ELEC., & PLUMBING/FIRE PROTECTION DWGS. FOR ALL PRICING TAKE-OFFS. COORD. W/ OWNER/ARCHITECT IN FIELD.
- H. LOCATE ACCESS PANELS AS INDICATED ON DWGS. FOR ACCESS PANELS NOT SHOWN BUT REQD. BY PROVISIONS OF THE CONTRACT DOCUMENTS, LOCATE IN ACCORDANCE W/ APPLICABLE CODES. SUBMIT PROPOSED LOCATIONS TO THE ARCHITECT FOR REVIEW & ACCEPTANCE PRIOR TO INSTALLATION. ALL CEILING ACCESS PANELS ARE TO BE PROVIDED & INSTALLED TO MAINTAIN ALL REQD. FIRE RATINGS.
- J. CONTRACTOR IS TO SUBMIT PROPOSED LOCATIONS TO THE ARCHITECT FOR REVIEW & ACCEPTANCE PRIOR TO INSTALLATION FOR ANY & ALL CEILING MTD. FIXTURES OR DEVICES NOT SHOWN BUT REQD. BY PROVISIONS OF THE CONTRACT DOCUMENTS.



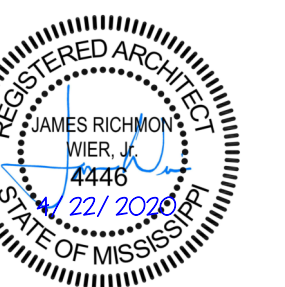
RCP LEGEND

CEILING TYPE LEGEND:

ACQUS. PANEL CLNG ASY. - SUSP. FROM STRUCT.	EXPOSED STRUCTURE, NO CEILING
GYP. BD. CLG. OR SOFFIT ASY. - RIGIDLY ATTACHED TO STRUCT.	

CEILING SYMBOL LEGEND:

RECESSED FIXTURE	RECESSED LINEAR SLOTLIGHT
SURFACE MTD. FIXTURE	SURFACE MTD. ADJUSTABLE FIXTURE
SURFACE MTD. LED FIXTURE	EXIT SIGN
PENDANT FIXTURE	HVAC SUPPLY REGISTER
PENDANT DOWNLIGHT FIXTURE	HVAC RETURN REGISTER
WALL MTD. FIXTURE	HVAC EXHAUST REGISTER
2X2 RECESSED FIXTURE	CEILING ACCESS PANEL
2X4 RECESSED FIXTURE	P= PANEL FOR PLUM. M= PANEL FOR MECH.
SURFACE MTD. FIXTURE	CEILING FAN
STRIP LIGHT FIXTURE	



APRIL 22, 2020

CONTRACT DOCUMENTS
WBA # 5719

REVISIONS

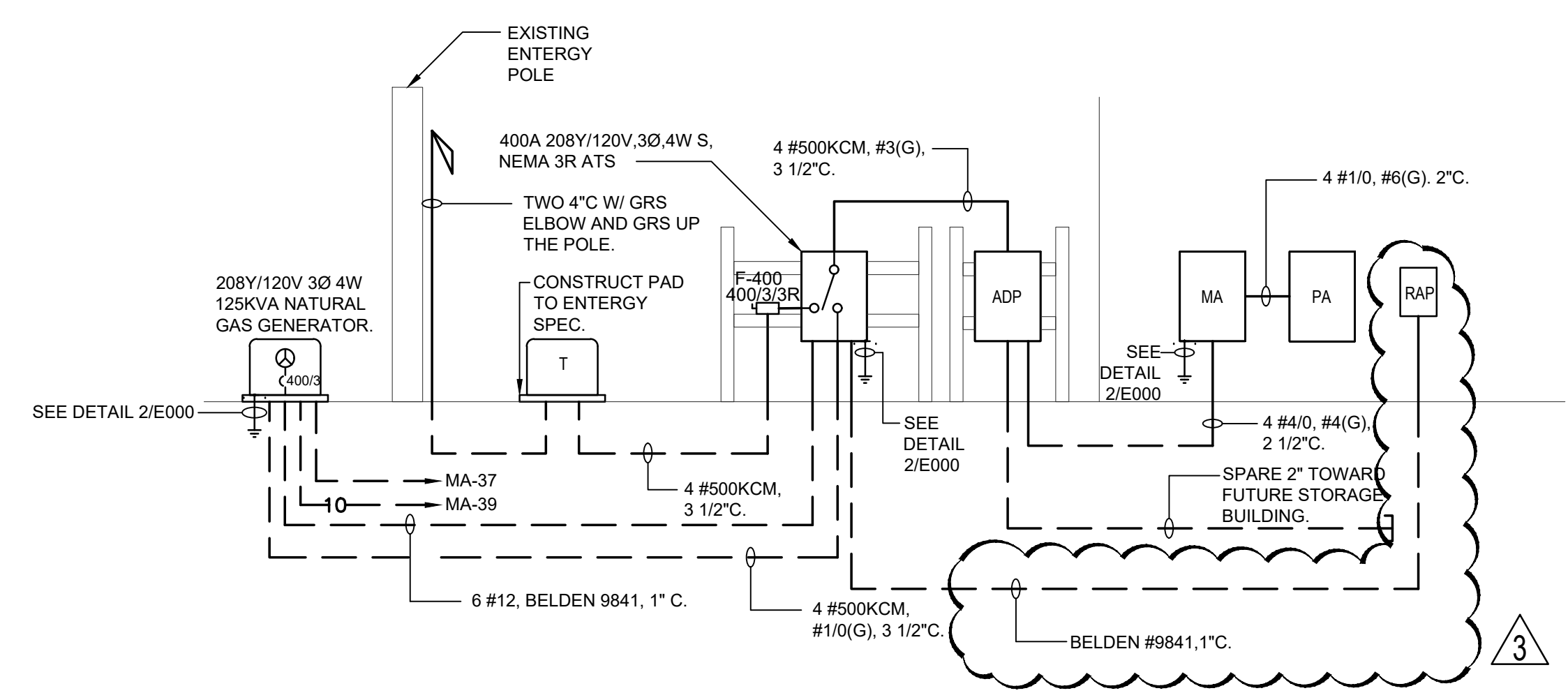
NO.	DESCRIPTION	DATE
2	Addendum 03	200528

GENERAL NOTES
1. ALL EQUIPMENT AND DEVICES ARE TO BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. 2. DEVICES NOTED AS "GFI" SHALL BE GROUND FAULT CIRCUIT INTERRUPTING DEVICES. 3. DEVICES NOTED AS "WP" SHALL BE WEATHERPROOF WHILE-IN-USE. 4. DEVICES NOTED AS "DL" SHALL BE RATED FOR DAMP LOCATION. 5. DEVICES NOTED AS "NL" SHALL BE NIGHT LIGHTS. PROVIDE UNSWITCHED POWER TO FIXTURE. 6. DEVICES NOTED AS "WG" SHALL BE PROVIDED AND INSTALLED WITH A WIRE GUARD. 7. DEVICES NOTED AS "TR" SHALL BE TAMPER RESISTANT. 8. PROVIDE UNSWITCHED POWER TO EMERGENCY BATTERY PACKS.
LUMINAIRES (See Light Fixture Schedule) NOTE: THE NUMBER INSIDE THE CIRCLE IS THE CIRCUIT NUMBER. THE LETTER BESIDE THE SYMBOL IS THE FIXTURE TYPE DESCRIBED IN THE LIGHT FIXTURE SCHEDULE.
2'X2' RECESSED FIXTURE. 2'X4' RECESSED FIXTURE. 2'X2' RECESSED EMERGENCY FIXTURE. 2'X4' RECESSED EMERGENCY FIXTURE. SURFACE MOUNTED OR SUSPENDED FIXTURE. SURFACE MOUNTED OR SUSPENDED EMERGENCY FIXTURE. RECESSED CEILING FIXTURE. RECESSED EMERGENCY CEILING FIXTURE. PENDANT MOUNT FIXTURE. CEILING MOUNTED EXIT SIGN. PROVIDE CHEVRONS AS INDICATED BY ARROWS. WALL MOUNTED EXIT SIGN. PROVIDE CHEVRONS AS INDICATED BY ARROWS. WALL MOUNTED FIXTURE. SITE ARM MOUNT POLE LIGHT FIXTURE.
MISCELLANEOUS PHOTOCELL. WALL MOUNTED JUNCTION BOX.
COMMUNICATIONS DATA OUTLET MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. DATA OUTLET MOUNTED WITH BOTTOM OF BOX 2" ABOVE COUNTER BACKSPASH. WHERE THERE IS NO BACKSPASH MOUNT 6" ABOVE COUNTER. WHERE TELEPHONE/DATA OUTLET IS SHOWN IN AN AREA WITH NO COUNTER, MOUNT 45" A.F.F. TO CENTERLINE OF BOX. TELEVISION CABLE OUTLET MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. WIFI.

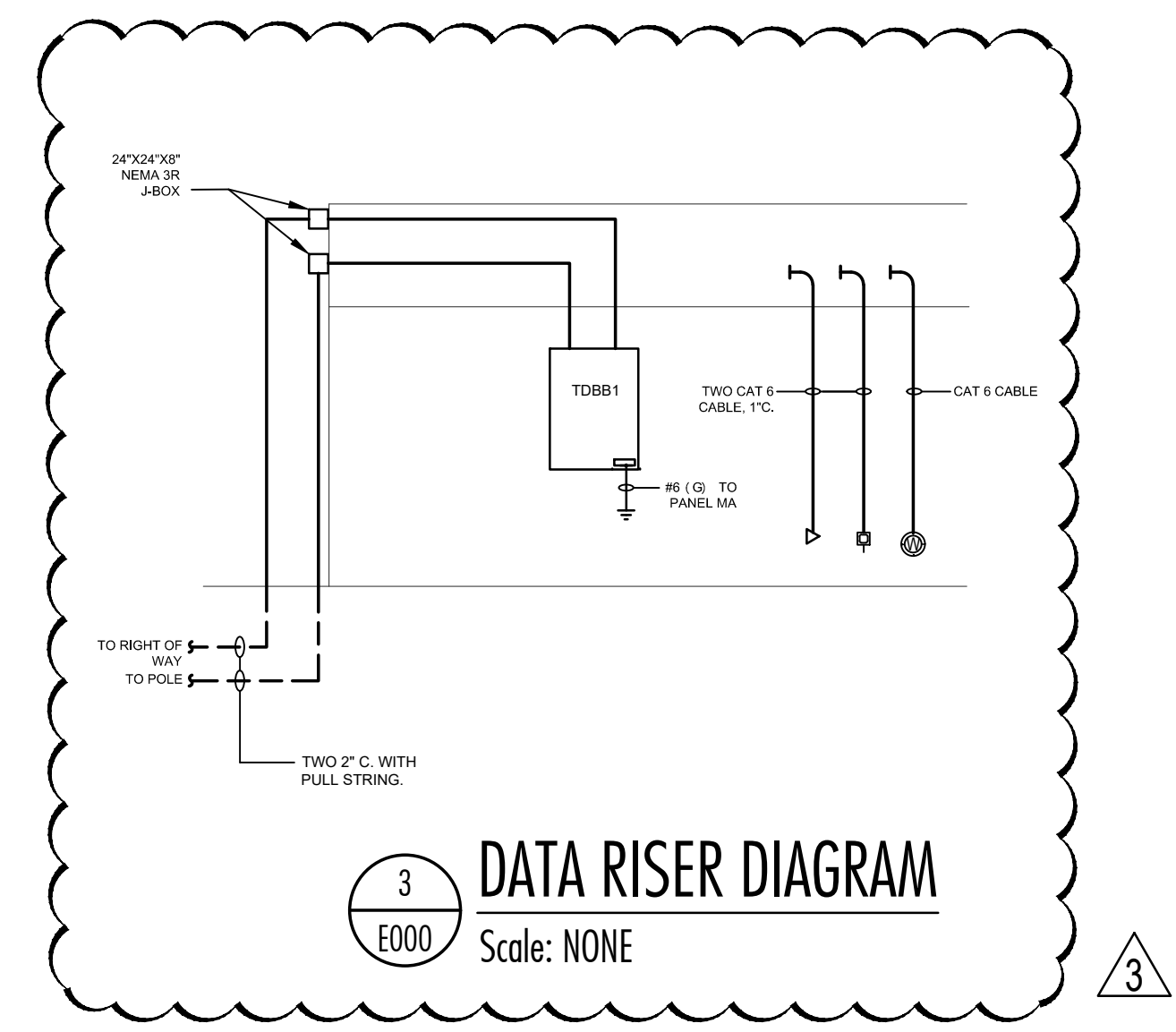
SWITCHES																											
SINGLE-POLE, SINGLE-THROW SWITCH. MOUNT CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. THREE-WAY SWITCH. MOUNT CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. LED DIMMER EQUAL TO LEVITON #P710-LFZ MOUNT CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. AUTOMATIC WALL SWITCH. SENSOR SWITCH #WSD-PDT OR APPROVED EQUAL. MOUNT CENTERLINE OF BOX AT 45" A.F.F. UNLESS NOTED OTHERWISE. AUTOMATIC WALL SWITCH WITH INTEGRAL 0-10V DIMMER. SENSOR SWITCH #WSX-PDT-D-VA OR APPROVED EQUAL. MOUNT CENTERLINE OF BOX AT 45"A.F.F. UNLESS NOTED OTHERWISE. HORSEPOWER RATED SWITCH WITH THERMAL OVERLOADS (MANUAL MOTOR STARTER). PASSIVE INFRARED AND ULTRASONIC DUAL TECHNOLOGY OCCUPANCY SENSOR WITH A 12' RADIAL COVERAGE. CEILING MOUNTED. SENSOR SWITCH #CM-PDT-9 OR APPROVED EQUAL. PASSIVE INFRARED AND ULTRASONIC DUAL TECHNOLOGY OCCUPANCY SENSOR WITH A 28' RADIAL COVERAGE. CEILING MOUNTED. SENSOR SWITCH #CM-PDT-10 OR APPROVED EQUAL. POWER PACK MOUNTED ABOVE CEILING. SENSOR SWITCH #PP20 OR APPROVED EQUAL.																											
VOLTAGE DROP CHART FOR 20A, 1Ø CIRCUITS <table border="1"> <thead> <tr> <th>Voltage</th> <th>Circuit Length</th> <th>Conductor Size (AWG)</th> </tr> </thead> <tbody> <tr> <td>120</td> <td>< 50'</td> <td>#12</td> </tr> <tr> <td>120</td> <td>> 50'</td> <td>#10</td> </tr> <tr> <td>120</td> <td>> 90'</td> <td>#8</td> </tr> <tr> <td>120</td> <td>> 140'</td> <td>#6</td> </tr> <tr> <td>277</td> <td>< 130'</td> <td>#12</td> </tr> <tr> <td>277</td> <td>> 130'</td> <td>#10</td> </tr> <tr> <td>277</td> <td>> 200'</td> <td>#8</td> </tr> <tr> <td>277</td> <td>> 330'</td> <td>#6</td> </tr> </tbody> </table> VOLTAGE DROP CHART NOTES: 1) CIRCUIT SIZES INDICATED ON THE DRAWINGS ARE MINIMUM REQUIREMENTS. REFER TO THIS CHART FOR UPSIZING CONDUCTORS AS NEEDED. 2) DO NOT CONNECT CONDUCTORS LARGER THAN #10 DIRECTLY TO A RECEPTACLE OR A SWITCH. PROVIDE A JUNCTION BOX TO DOWNSIZE THE CONDUCTOR TO #12 AT THE DEVICE. 3) FOR CIRCUITS LONGER THAN THOSE LISTED ABOVE, CONSULT WITH THE ENGINEER FOR CONDUCTOR SIZES.	Voltage	Circuit Length	Conductor Size (AWG)	120	< 50'	#12	120	> 50'	#10	120	> 90'	#8	120	> 140'	#6	277	< 130'	#12	277	> 130'	#10	277	> 200'	#8	277	> 330'	#6
Voltage	Circuit Length	Conductor Size (AWG)																									
120	< 50'	#12																									
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GEAR FUSED DISCONNECT SWITCH. TEXT INDICATES AMPACITY/NUMBER OF POLES/ENCLOSURE TYPE; F-(RATING OF FUSES). NON-FUSED DISCONNECT SWITCH. TEXT INDICATES AMPACITY/NUMBER OF POLES/ENCLOSURE TYPE. PANELBOARD.																											

ELECTRICAL LEGEND
CONDUIT AND WIRING CONDUCTORS IN CONDUIT CONCEALED WITHIN WALL OR CEILING. TIC MARKS INDICATE NUMBER OF CONDUCTORS. THE EQUIPMENT GROUNDING CONDUCTOR IS NOT SHOWN, BUT SHALL BE PROVIDED. SIZE THE EQUIPMENT GROUNDING CONDUCTOR AND THE CONDUIT PER THE NEC. THE ABSENCE OF TIC MARKS SIGNIFIES THAT TWO CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. FOR EXAMPLE, THE MARKINGS TO THE LEFT SIGNIFY THAT THREE CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. THE TEXT INSIDE THE ARC INDICATES THE AWG SIZE OF THE CONDUCTORS THAT SHALL BE RUN IN THE CONDUIT. THE ABSENCE OF TEXT SIGNIFIES THAT THE CONDUCTORS SHOULD BE #12 AWG. CONDUCTORS IN CONDUIT CONCEALED BELOW GRADE OR FLOOR. TIC MARKS INDICATE NUMBER OF CONDUCTORS. THE EQUIPMENT GROUNDING CONDUCTOR IS NOT SHOWN, BUT SHALL BE PROVIDED. SIZE THE EQUIPMENT GROUNDING CONDUCTOR AND THE CONDUIT PER THE NEC. THE ABSENCE OF TIC MARKS SIGNIFIES THAT TWO CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. THE MARKINGS TO THE LEFT SIGNIFY THAT THREE CONDUCTORS PLUS AN EQUIPMENT GROUNDING CONDUCTOR SHOULD BE PROVIDED. HOMERUN TO PANELBOARD. ARC DENOTES CONCEALED CIRCUITRY. TEXT DENOTES PANELBOARD NAME WITH CIRCUIT NUMBER. DEVICES HAVING CIRCUIT NUMBERS LOCATED BESIDE THEM MAY NOT SHOW THE CIRCUIT NUMBERS AT THE HOMERUN ARROWS. PARTIAL HOMERUN TO PANELBOARD. COMBINE ALL PARTIAL HOMERUNS THAT ARE ON THE SAME CIRCUIT IN A JUNCTION BOX PRIOR TO ENTERING THE PANELBOARD. LOW VOLTAGE CONDUCTORS USED FOR MOTION DETECTOR CIRCUITRY. SEE MANUFACTURER'S RECOMMENDATIONS FOR CONDUCTOR REQUIREMENTS.
RECEPTACLES DUPLEX RECEPTACLE, NEMA 5-20R, MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, ONE COVER PLATE, MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. DUPLEX RECEPTACLE, NEMA 5-20R, MOUNTED WITH BOTTOM OF BOX 2" ABOVE COUNTER BACKSPASH. WHERE THERE IS NO BACKSPASH MOUNT 6" ABOVE COUNTER. WHERE RECEPTACLE IS SHOWN IN AN AREA WITH NO COUNTER, MOUNT 45"A.F.F. TO CENTERLINE OF BOX. DUPLEX RECEPTACLE, NEMA 5-20R, FOR DRINKING FOUNTAIN FED FROM GFI BREAKER. MOUNTED IN ACCORDANCE WITH MANUFACTURER'S ROUGH-IN REQUIREMENTS. VERIFY CONNECTION TYPE PRIOR TO BID. RECEPTACLE SHALL BE MOUNTED, CONCEALED BEHIND THE SHROUD OF THE DRINKING FOUNTAIN.
ACCESS CONTROL CARD READER. PUSH TO EXIT BUTTON. MOTION DETECTOR TO RELEASE MAGNETIC LOCK. ELECTRIC DOOR STRIKE. HANDICAP PUSH PAD FURNISHED WITH AUTOMATIC DOOR OPERATOR, INSTALLED BY ELECTRICAL CONTRACTOR.

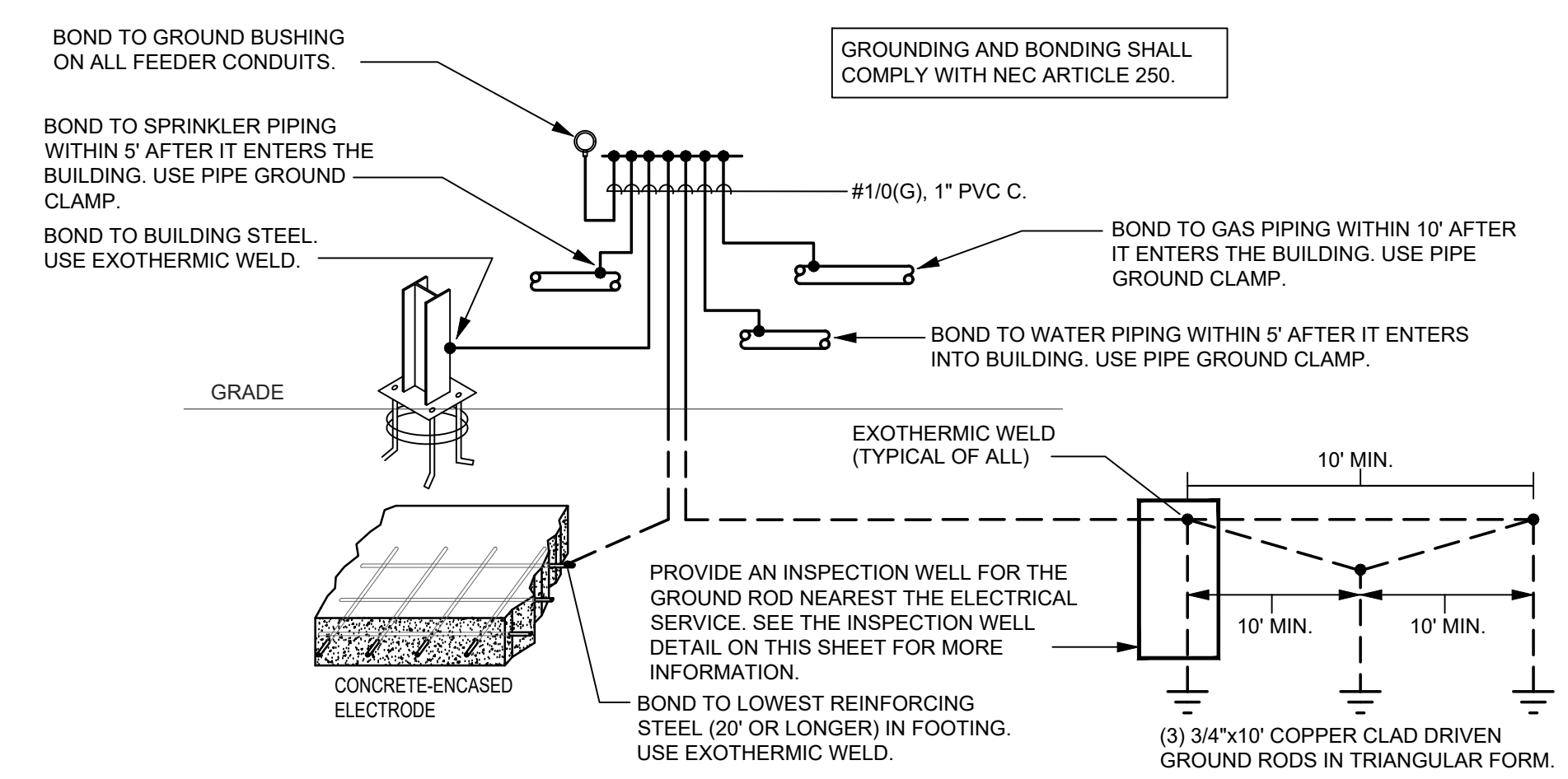
LIGHTING FIXTURE SCHEDULE					
TYPE	MANUFACTURER	PART NUMBER	LAMPS	MOUNTING	REMARKS
A	LITHONIA	EPANL-2X4-5400LM-80CRI-40K	LED, 48.8W 5679 LUMENS	RECESSED	
AE	LITHONIA	EPANL-2X4-5400LM-80CRI-40K	LED, 48.8W 5679 LUMENS	RECESSED	WITH 120V EMERGENCY BATTERY PACK.
B	LITHONIA	LDN6-40/20-L06AR-LS	LED, 22.5 2006 LUMENS	RECESSED	
C	ALW	LP3.5SD-S-LOW-80-4000K	LED, 5.3W 600 LUMENS	SUSPENDED	
D	ALW	MR3-Q42-SS-MIN-80-4000K	LED, 2.3W 2375 LUMENS	SUSPENDED	
F	LITHONIA	ZL1N-L48-3000LM-FST-MVOLT-40K	LED, 35W 4585 LUMENS	SUSPENDED	
G	LITHONIA	WST-P2-40K-VF-MVOLT-*	LED, 25W 3469 LUMENS	WALL	*COLOR BY ARCHITECT.
GE	LITHONIA	WST-P2-40K-VF-MVOLT-E7WC-*	LED, 25W 3469 LUMENS	WALL	*COLOR BY ARCHITECT.
H	ALW	HB3.5S-S4-LOW/80/4000K-0/10V/S	LED, 2.1.2W 3200 LUMENS	SUSPENDED	*COLOR BY ARCHITECT.
HE	ALW	HB3.5S-S4-LOW/80/4000K-0/10V/S	LED, 2.1.2W 3200 LUMENS	SUSPENDED	*COLOR BY ARCHITECT. WITH EMERGENCY BATTERY PACK.
J	BARN LIGHT	BLE-W-WHMA-710-G38-E26		WALL	
K	GOETHAM	EV06SH-40/15-DFF-SMO-MVOLT-EZ10	LED, 14.7W 1274 LUMENS	RECESSED	
SA	LITHONIA	DSX1 LED-P3-40K-T4M-MVOLT-SPA	LED, 102W 12300 LUMENS	25' POLE	* COLOR BY ARCHITECT #SSS-25-4G-DM19AS/T20-*
SB	LITHONIA	OFL2-LED-P2-40K-MVOLT-YK-	LED, 114W 12280 LUMENS	POLE	
SF	LITHONIA	DSXF3 LED-6-P1-40K-NSP-MVOLT-	LED, 129W 14,201 LUMENS	STANCHION	** COLOR BY ARCHITECT FIXTURES SHALL MOUNTED 7' FROM FLAG POLE
X	LITHONIA	LQM-S-W-3-R-120/277-ELN			



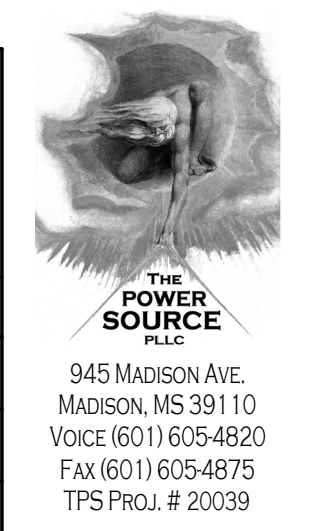
1 ONE LINE DIAGRAM
E000 Scale: NONE



3 DATA RISER DIAGRAM
E000 Scale: NONE

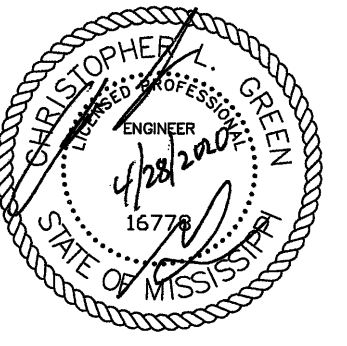


2 GROUND DETAIL
E000 Scale: NONE



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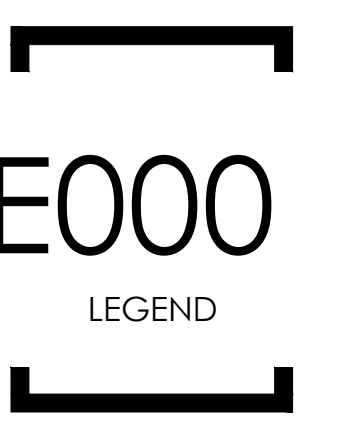
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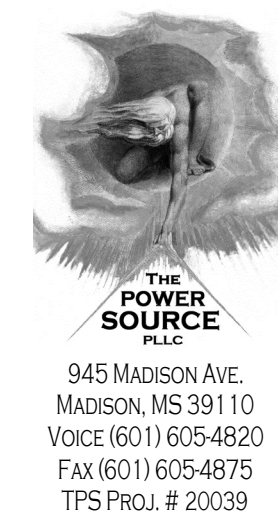


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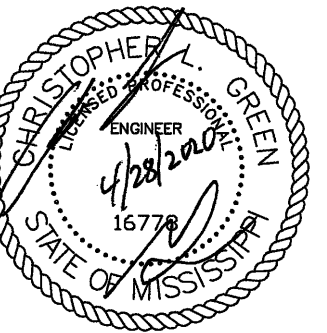
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PANEL		LOCATION: ELECTRICAL ROOM		LUG LOCATION: TOP FEED		PANELBOARD AIC RATING (A): 22,000					
ADP		VOLT: 208Y/120V, 3Ø, 4W		MAIN BUS: MAIN LUGS ONLY							
		BUS: 400A		MOUNTING: SURFACE							
CIRCUIT NO.	BREAKER	AMPS	POLES	DESCRIPTION	PHASE LOAD (KVA)			DESCRIPTION	BREAKER	CIRCUIT NO.	
					A	B	C				
1	225	3		MA	17.6	0.0		SPARE	200	3	2
3	-	-		-		17.5	0.0		-	-	4
5	-	-		-			14.9	0.0	-	-	6
7	225	3		SPARE	0.0	0.0		SPARE	200	3	8
9	-	-		-		0.0	0.0		-	-	10
11	-	-		-			0.0	0.0	-	-	12
13	125	3		SPARE	0.0	0.0		SPARE	200	3	14
15	-	-		-		0.0	0.0		-	-	16
17	-	-		-			0.0	0.0	-	-	18
19	125	3		SPARE	0.0	0.0		SPARE	200	3	20
21	-	-		-		0.0	0.0		-	-	22
23	-	-		-			0.0	0.0	-	-	24
TOTAL					17.6	17.5	14.9				

PANEL		LOCATION: ELECTRICAL ROOM		LUG LOCATION: TOP FEED		PANELBOARD AIC RATING (A): 22,000						
MA		VOLT: 208Y/120V, 3Ø, 4W		MAIN BUS: MAIN LUGS ONLY								
		BUS: 225A		MOUNTING: SURFACE								
CIRCUIT NO.	BREAKER	AMPS	POLES	DESCRIPTION	PHASE LOAD (KVA)			DESCRIPTION	BREAKER	CIRCUIT NO.		
					A	B	C					
1	25	2		XCU-01	1.4	0.8		DCU-01, DSS-01	30	2	2	
3	-	-		-		1.4	0.8		-	-	4	
5	20	1		DH-01			0.8	2.1	F/E-03	25	1	6
7	25	2		XCU-02	1.4	0.8			EWI-01	15	2	8
9	-	-		-		1.4	0.8		-	-	10	
11	20	1		DH-02			0.8	1.5	F/E-04	20	1	12
13	35	2		CU-03	1.8	1.8			CU-05	35	2	14
15	-	-		-		1.8	1.8		-	-	16	
17	20	1		DH-03			0.8	2.1	F/E-05	25	1	18
19	25	2		CU-04	1.3	0.8			WH-01	30	2	20
21	-	-		-		1.3	0.8		-	-	22	
23	60	3		SPARE			0.0	0.0	xWH	**20	1	24
25	-	-		-	0.0	0.0			SPARE	20	1	26
27	-	-		-	0.0	0.0			SPARE	20	1	28
29	30	2		SPARE			0.0	0.0	SPARE	20	1	30
31	-	-		-	0.0	0.0			SPARE	20	1	32
33	25	2		SPARE			0.0	0.0	SPARE	20	1	34
35	-	-		-			0.0	0.0	SPARE	20	1	36
37	20	1		GENERATOR BATTERY CHARGER	0.0	0.0			SPARE	20	1	38
39	30	1		GENERATOR BLOCK HEATER			0.0	0.0	SPARE	20	1	40
41	20	1		SPARE			0.0	0.0	SPARE	20	1	42
43	20	1		SPARE	0.0	0.0			SPARE	20	1	44
45	20	1		SPARE			0.0	0.0	SPARE	20	1	46
47	20	1		SPARE			0.0	0.0	SPARE	20	1	48
49	20	1		SPARE	0.0	7.4			PANEL PA	125	3	50
51	20	1		SPARE			0.0	7.3	-	-	-	52
53	20	1		SPARE			0.0	7.0	-	-	-	54
TOTAL				** LOCKABLE BREAKER	17.6	17.5	14.9					

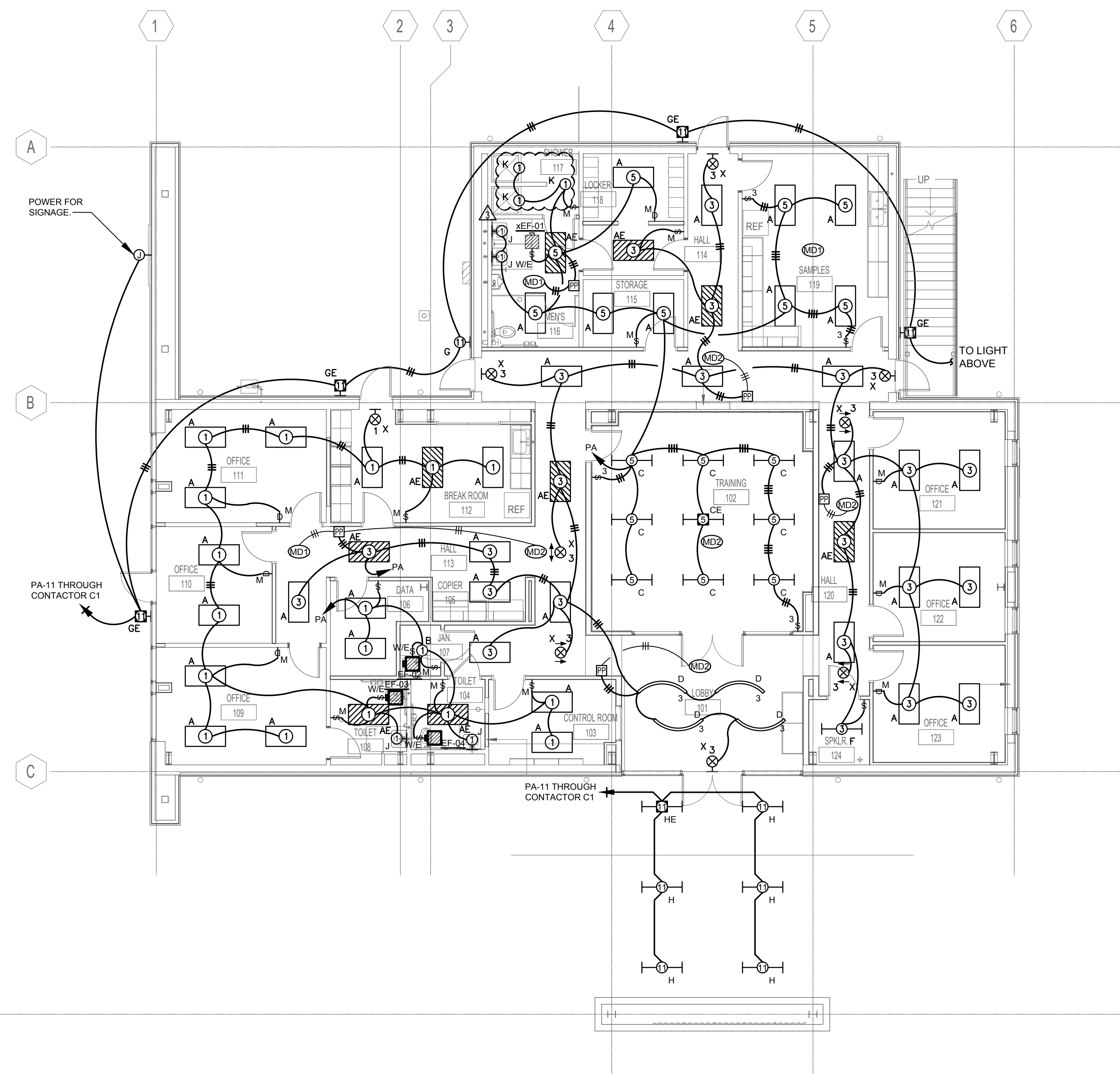
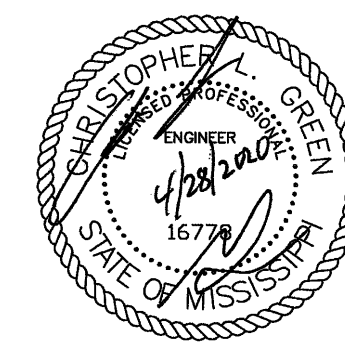
PANEL		LOCATION: ELECTRICAL ROOM		LUG LOCATION: BOTTOM FEED		PANELBOARD AIC RATING (A): 22,000							
PA		VOLT: 208Y/120V, 3Ø, 4W		MAIN BUS: MAIN LUGS ONLY									
		BUS: 125A		MOUNTING: SURFACE									
CIRCUIT NO.	BREAKER	AMPS	POLES	DESCRIPTION	PHASE LOAD (KVA)			DESCRIPTION	BREAKER	CIRCUIT NO.			
					A	B	C						
1	20	1		LTS - BREAK, OFFICE, TLT, DATA, CONTROL, JAN.	1.1	0.8		REC - OFFICE	20	1	2		
3	20	1		LTS - HALL, LOBBY, OFFICE, SPKLR		1.2	0.7		REC - OFFICE	20	1	4	
5	20	1		LTS - TRAIN, MENS, STOR, LOCK, SAMPLES			0.6	0.8	REC - OFFICE	20	1	6	
7	20	1		LTS - 2ND FLOOR STORAGE, MECH	0.4	0.5			REC - TLT, JAN	20	1	8	
9	20	1		CONTACTOR C1			0.0	0.5	REC - TDBB	20	1	10	
11	20	1		LTS - EXTERIOR				0.3	0.5	REC - TDBB	20	1	12
13	20	1		LTS - PARKING LOT/POLE LIGHTS	0.7	0.9			REC - HALL, LOBBY	20	1	14	
15	20	1		POWER FOR DOOR			0.4	1.0	REC - COPIER	20	1	16	
17	20	1		POWER FOR DOOR				0.2	0.5	REC - COPIER	20	1	18
19	20	1		FIRE ALARM BELL	0.0	0.2			REC - EXTERIOR	20	1	20	
21	20	1		SPARE			0.0	1.1	REC - BREAKROOM, STOR, LOCKER, MENS TLT	20	1	22	
23	20	1		SPARE				0.0	0.8	REC - BREAKROOM REF.	20	1	24
25	20	1		SPARE	0.0	0.5			REC - BREAKROOM	20	1	26	
27	20	1		SPARE			0.0	0.5	REC - CONTROL ROOM	20	1	28	
29	20	1		SPARE				0.0	0.3	REC - CONTROL ROOM	20	1	30
31	20	1		SPARE	0.0	0.5			REC - CONTROL ROOM	20	1	32	
33	20	1		SPARE			0.0	0.8	REC - TRAINING	20	1	34	
35	20	1		SPARE				0.0	0.6	REC - TRAINING	20	1	36
37	20	1		SPARE	0.0	0.7			REC - HALL, LOBBY	20	1	38	
39	20	1		SPARE			0.0	0.8	REC - OFFICE	20	1	40	
41	20	1		SPARE				0.0	0.8	REC - OFFICE	20	1	42
43	20	1		SPARE	0.0	0.8			REC - OFFICE	20	1	44	
45	20	1		SPARE			0.0	0.2	REC - EXTERIOR	20	1	46	
47	20	1		SPARE				0.0	0.7	REC - SAMPLES	20	1	48
49	20	1		SPARE	0.0	0.2			REC - SAMPLES	20	1	50	
51	20	1		SPARE			0.0	0.2	REC - SAMPLES	20	1	52	
53	20	1		SPARE				0.0	0.8	REC - SAMPLES REF.	20	1	54
TOTAL					7.4	7.3	7.0						

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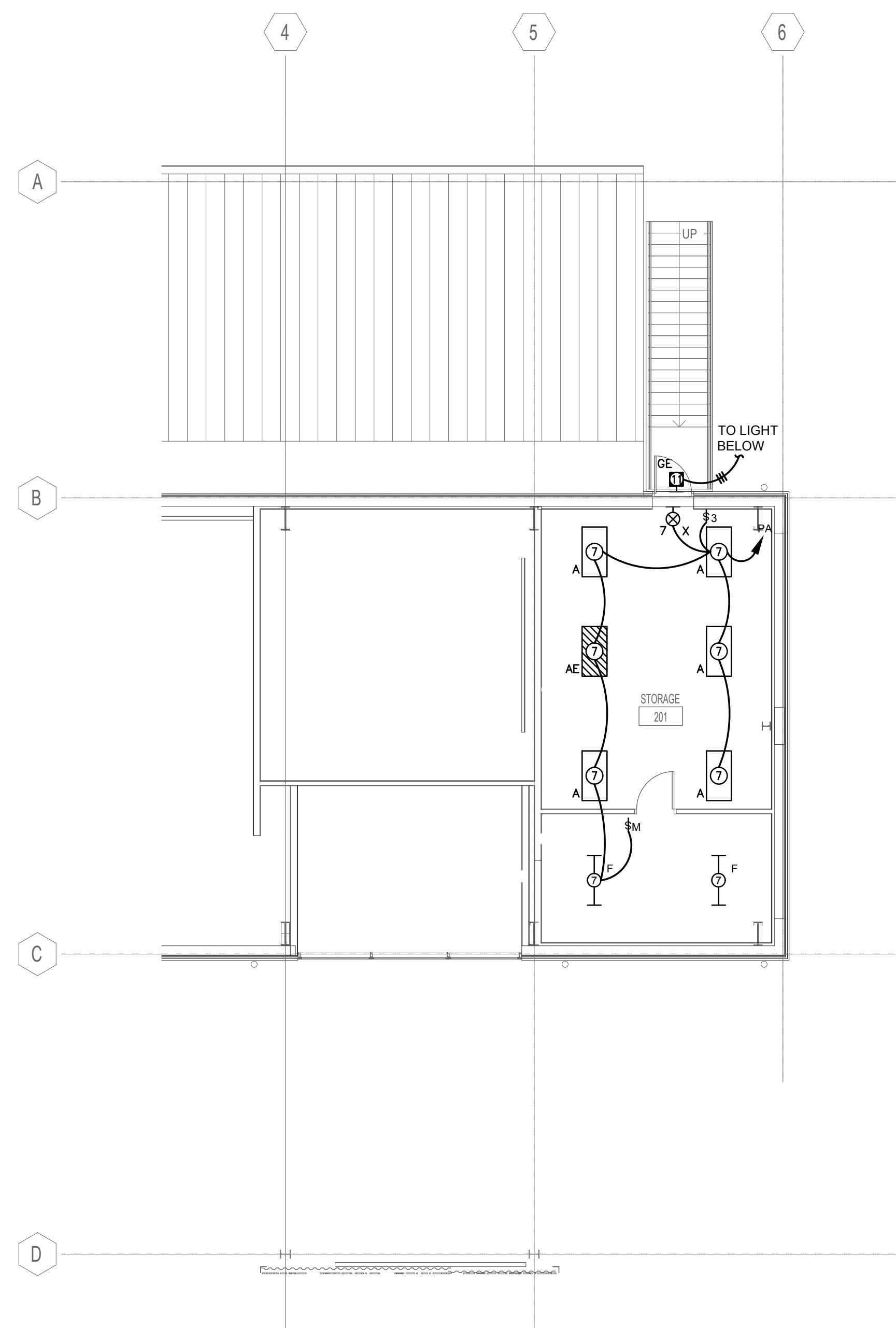
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E001
PANEL SCHEDULES

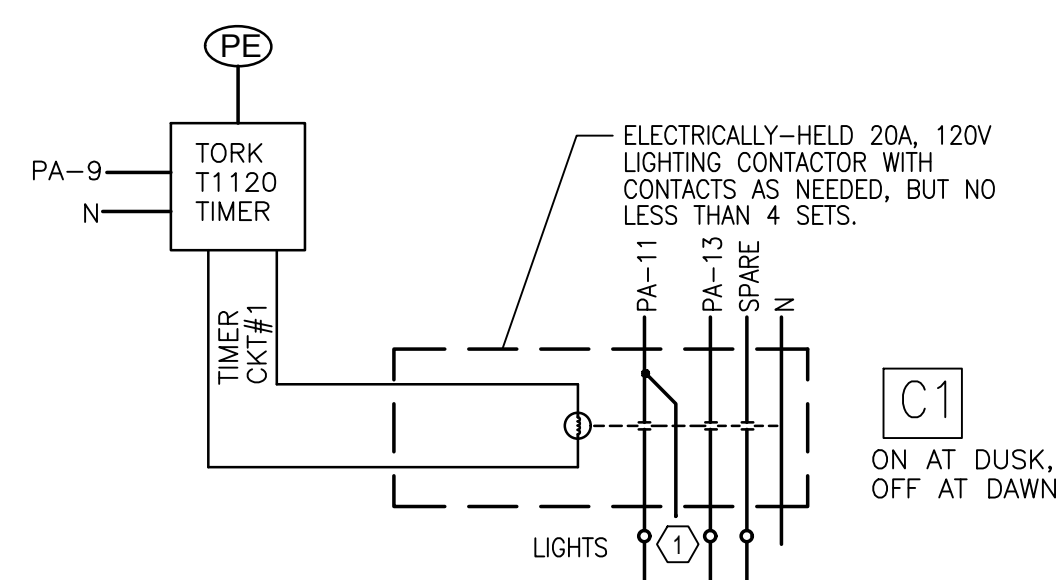


1 LIGHTING PLAN - FIRST FLOOR
 E100 Scale: 1/8" = 1'-0"

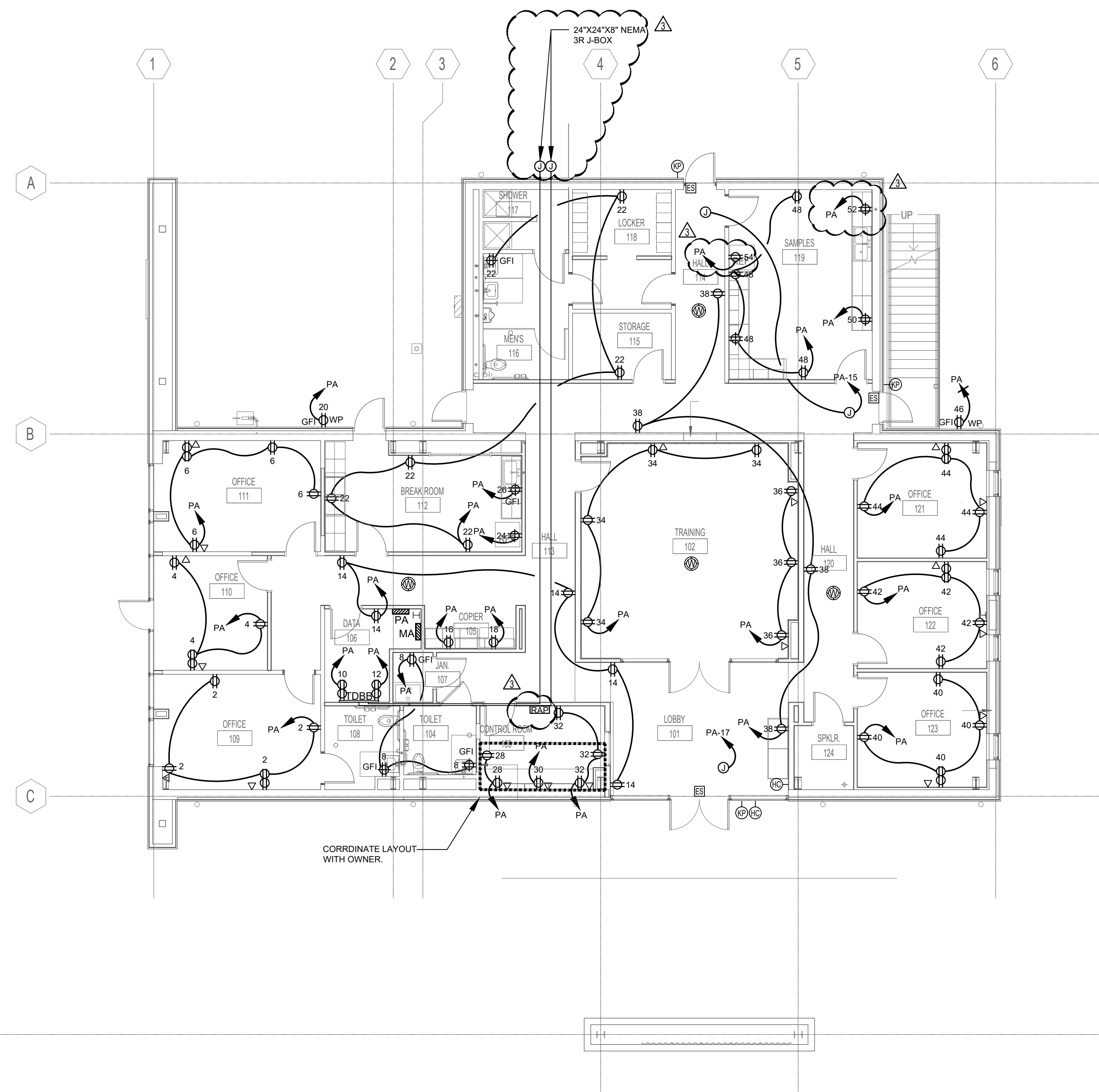
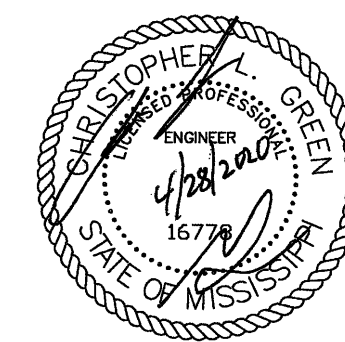


2 LIGHTING PLAN - MEZZANINE
 E100 Scale: 1/8" = 1'-0"

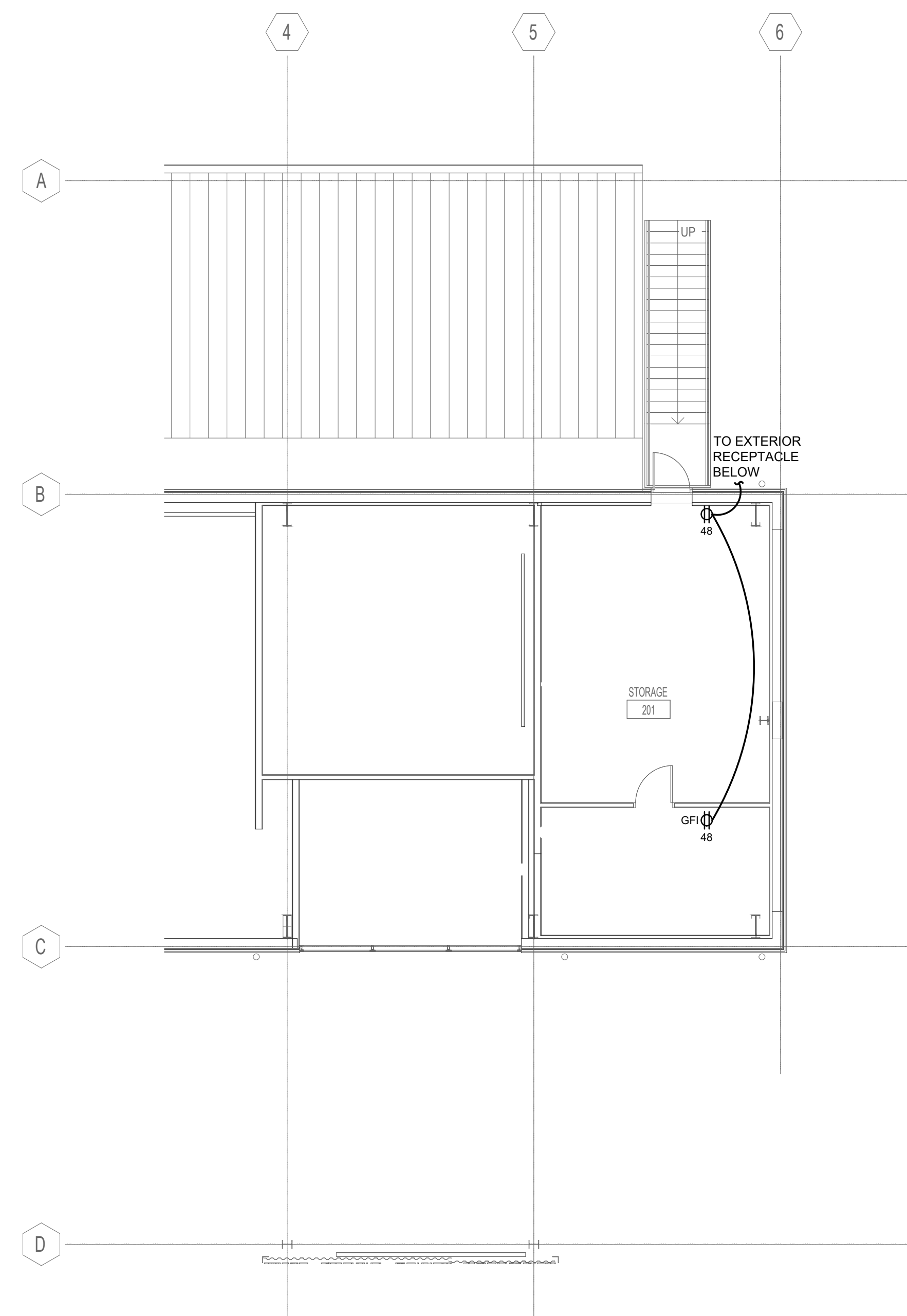
LIGHTING CONTACTOR KEYED NOTES	
Mark	Description
①	UNSWITCHED HOT TO EMERGENCY BATTERY PACK



3 LIGHTING CONTACTOR DETAIL
 E-100 Scale: NONE



1 FIRST FLOOR POWER PLAN
 Scale: 1/8" = 1'-0"



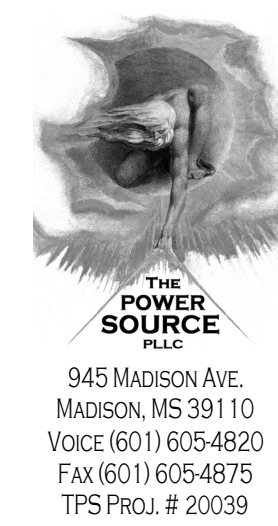
2 MEZZANINE POWER PLAN
 Scale: 1/8" = 1'-0"

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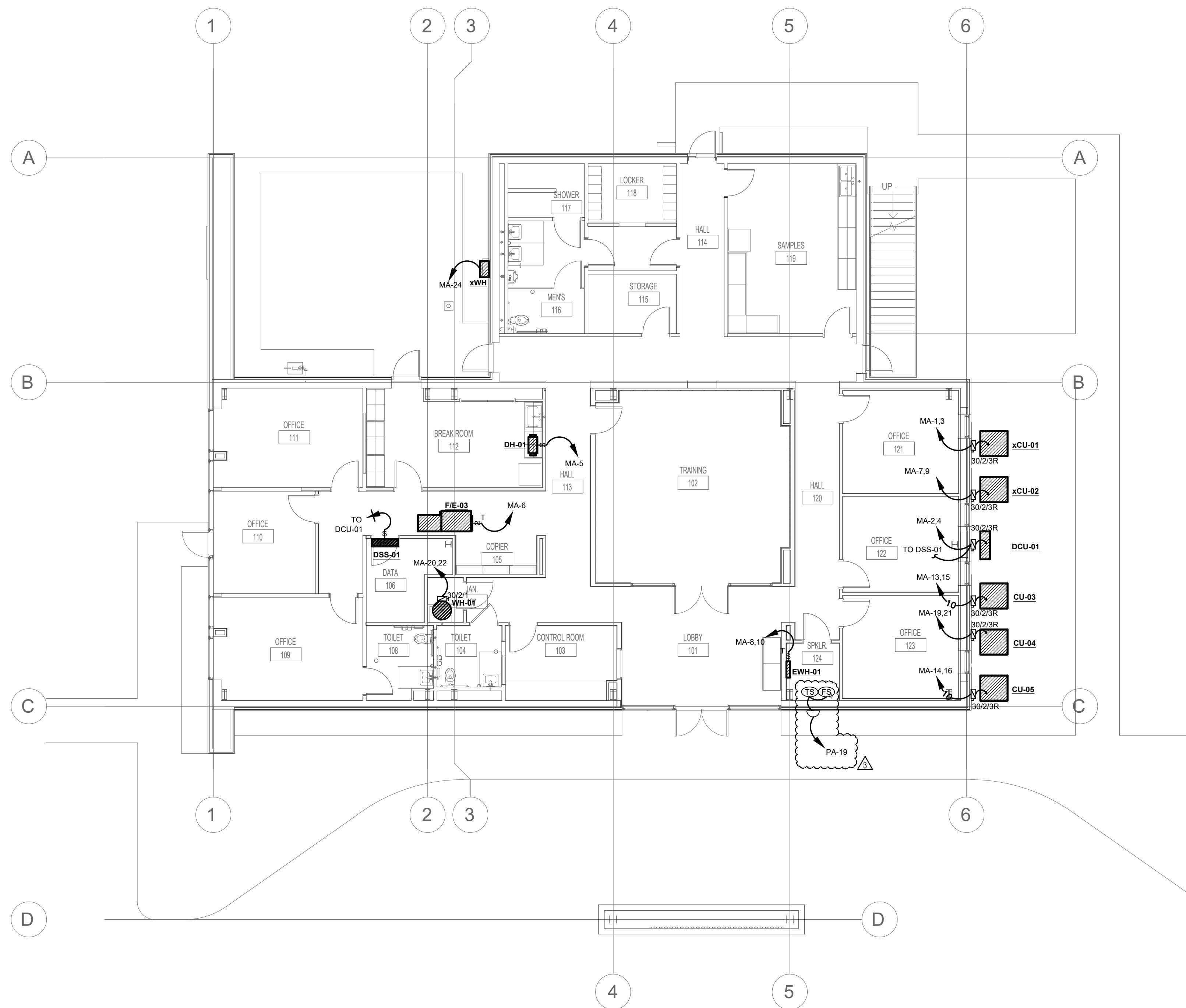
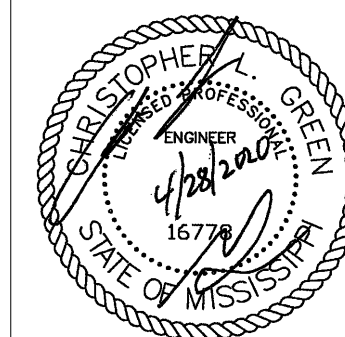
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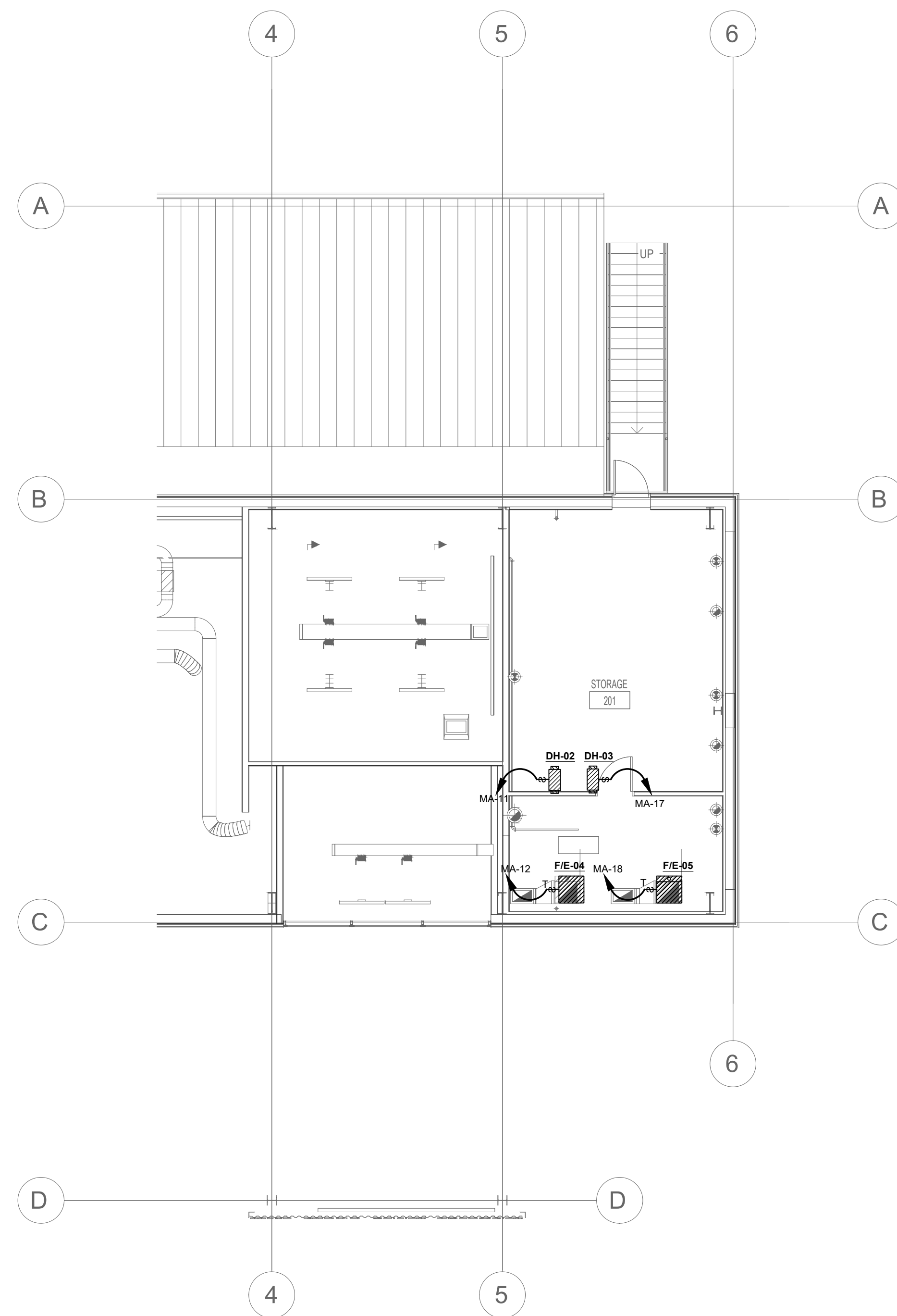


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1 MECHANICAL PLAN - FIRST FLOOR
E300 Scale: 1/8" = 1'-0"



2 MECHANICAL PLAN - MEZZANINE
E300 Scale: 1/8" = 1'-0"

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1	ADDENDUM	05/28/2020

