

Liberty School District – Distribution Center
Addendum No: 004
Description Narrative
November 01, 2023

This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

A. CONSTRUCTION MANAGER'S FRONT END MANUAL

Reissued Scopes of Work Issued

03-3000 – Concrete – Add 04

26-1000 – Electrical – Add 04

003001 – CM Site Logistics Sheets

B. OTHER

Bidder Questions Answers

C. SPECIFICATIONS

1. Please reference the attached Addendum No. 004 issued by Hollis + Miller dated November 01, 2023, for updates to Specifications.

D. DRAWINGS

1. Please reference the attached Addendum No. 004 issued by Hollis + Miller dated November 01, 2023, for updates to Drawings.

Please direct any questions regarding the information in this addenda and the project to Newkirk Novak Construction Partners.

PROJECT: N3-0643
COST CODE: 03-3000**Liberty Public Schools-Distribution Center
03-3000 – Concrete Scope of Work – Add 04****Specific scope of work to be performed:**

Provide all required labor, material, equipment, permits, layout, freight, and applicable taxes necessary for the **Concrete** Scope of Work complete as set forth in the drawings and specifications by Hollis + Miller Architects dated October 10th, 2023 and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 033000 Cast-In-Place Concrete
- 321313 Concrete Paving

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

1. All items per Master Scope of Work.
2. All concrete work and associated accessories including but not limited to, form/wreck, shoring, place, finish all concrete shown in the contract documents. This includes but is not limited to footings, grade beams, foundation walls, building walls, slab on grade, columns, equipment/housekeeping and site equipment pads, exterior concrete stoops, concrete pavement, concrete drives, curb & gutter, concrete bollards, wheel stops etc.
3. All site concrete, including but not limited to, sidewalks, sidewalk ramps, steps, paving, curb & gutter, flumes, light poles bases, trash enclosure footings, etc. Furnish and install handicap sidewalk ramps as required.
4. Install all steel anchor rods required in concrete. These items will be provided by others.
5. Provide all materials, equipment, labor, accessories, etc. required to install all reinforcing rebar/steel including dowels for concrete and masonry.
6. This contractor is responsible for all layouts and surveying associated with the installation of their work from existing control points.
7. Contractor to anticipate under slab electrical rough-in and should include measures to install rock to avoid damage which includes hand work, tele-belted, etc.
8. Install expansion joints and controls joints/contraction joints, including performed/isolation joint filler where required. Provide a joint plan for engineer approval prior to performing slab on grade activities.

9. Provide all column block outs as required. Infill column block outs with concrete/non-shrink grout as required. Reference structural details.
10. This package is to grout all column base plates after erection.
11. Include excavation for all structural concrete, pole bases, bollards, etc. Spoils to be stock piled on site at location approved by Contractor. Spoils will be removed from approved stock pile location by Earthwork Contractor.
 - a) Backfill at all concrete walls and foundations to be provided by this Scope of Work unless specifically excluded below.
 - b) This contractor is responsible to repair and replace damaged building pad and surrounding subgrade. All soils, including low volume materials, are to be reinstalled and re-compacted to their original state if damaged during the concrete installation.
 - c) This contractor is responsible for all low volume material placement as required to perform subsequent grading operations as stated above.
12. Provide gravel / rock fill under all concrete: site and building per construction documents.
13. The earthwork subcontractor is responsible for all excavation, cut, fill, structural fill, and compaction of soils to +/- 1/10 foot based on elevations indicated in the contract documents. The concrete, site utilities, electrical, landscaping & asphalt contractors will be responsible for fine grading after the earthwork contractor establishes grade to within +/- 1/10 foot.
14. All footing and underslab insulation shall be by this scope of work, including interior foundation wall insulation.
15. Provide under slab insulation and wood isolation under new freezer / cooler area.
16. Install all handrails, guards and embedded items to be set in concrete. These items will be provided by others. Grout at emebdded items by this Contractor.
17. Sleeves required for penetrations will be furnished by associated contractors and installed by the Concrete Contractor.
18. Winter/Summer protection, provisions as required to maintain the project schedule including but not limited to:
 - a) Hotwater/Ice,
 - b) Heaters, Fules, and tarps
 - c) Fire Watch,
 - d) Winter concrete surcharges including heated water and admixtures.
 - e) Protection of concrete from heat/frost, freezing and low temperatures
19. Include an allowance of (2%) of the contract value to be used at the direction of the construction manager. Any unused portions will be returned to the owner.

The following work is excluded:

1. Concrete paving markings – By Asphalt Contractor.

PROJECT: N3-0643
COST CODE: 26-1000**Liberty Public Schools-Distribution Center
26-1000 – Electrical Scope of Work – Add 04****Specific scope of work to be performed:**

Provide all required labor, material, equipment, permits, freight, labor, and applicable taxes necessary for the **Electrical** Scope of Work complete as set forth in the drawings and specifications by Hollis + Miller Architects dated October 10th, 2023 and all other applicable sections of the project manual and all other subcontract documents identified.

Scope of work includes, but is not limited to, the following specification sections:

- Division 00
- Division 01
- 260500 Common Work Results for Electrical
- 260519 Low-Voltage Electrical Power Conductors and Cables
- 260523 Control-Voltage Electrical Power Cables
- 260526 Grounding and Bonding for Electrical Systems
- 260529 Hangers and Supports for Electrical Systems
- 260533 Raceway and Boxes for Electrical Systems
- 260553 Identification for Electrical Systems
- 260923 Lighting Control Devices
- 260943 Relay-Based Lighting Controls
- 262200 Transformers
- 262416 Panelboards
- 262726 Wiring Devices
- 262813 Fuses
- 262816 Enclosed Switches and Circuit Breakers
- 263213 Engine Generators
- 263600 Transfer Switches
- 264113 Lighting Protection for Structures
- 265119 LED Interior Lighting
- 265219 Emergency and Exit Lighting
- 265619 LED Exterior Lighting
- 280500 Common Work Results for Electronic Safety and Security
- 280513 Conductors and Cables for Electronic Safety and Security
- 283111 Digital, Addressable Fire Alarm System

JOB SPECIFIC SCOPE INCLUDES (but is not limited to):

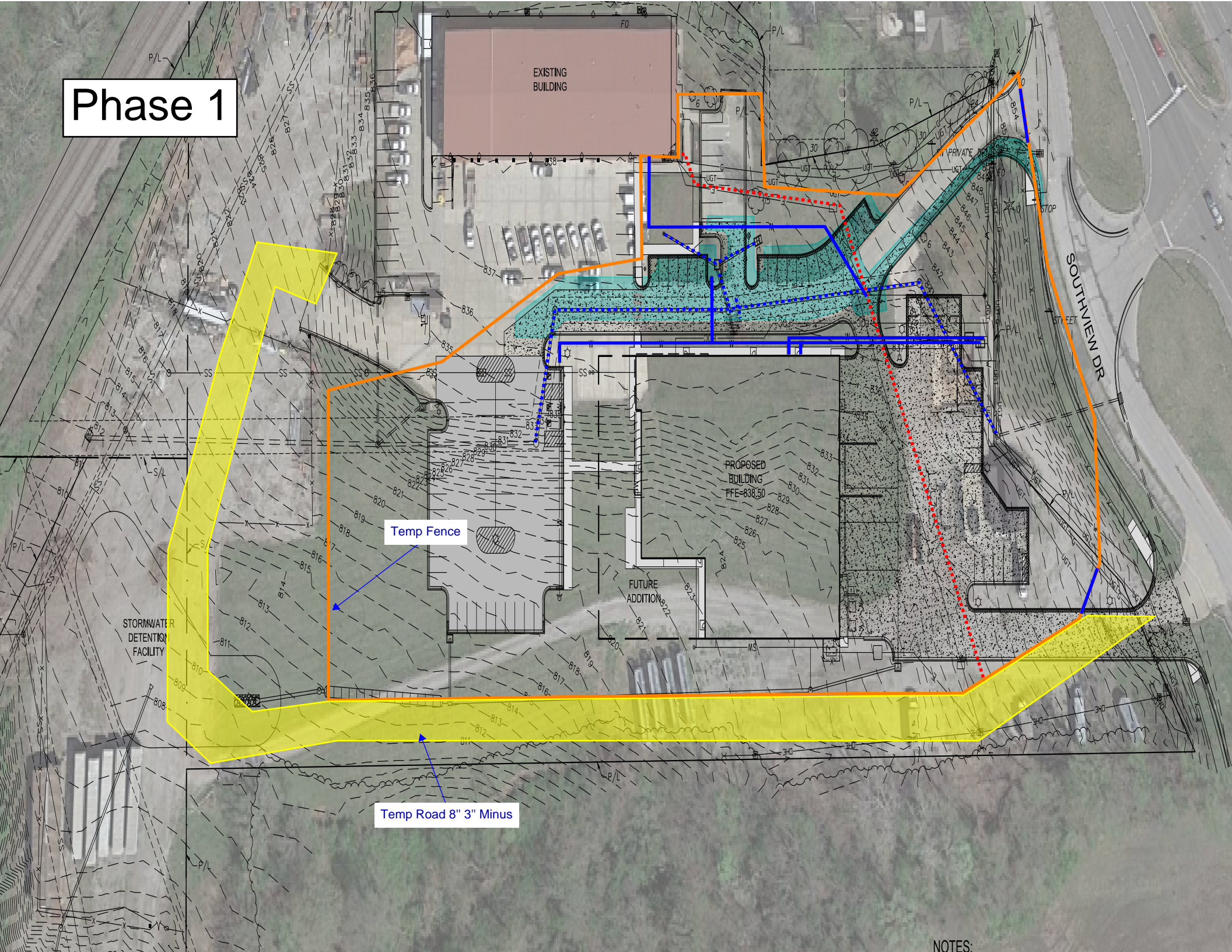
1. All items per Master Scope of Work.
2. Provide electrical make save / cut for existing service demo.
3. Provide all site and building electrical.
4. Provide conduit raceways and sleeves for the following systems, including but not limited to:
 - a) Temperature Control
 - b) Building Automation System
 - c) Access Control
5. Fire Alarm System complete, including but not limited to:
 - a) Furnish of duct detectors. Include final connection and testing. Installation to be my Mechanical Subcontractor.
 - b) Provide and install all new audio/visible devices. If existing device is deemed re-usable by district, provide credit for new device.
 - c) Testing of all systems
 - d) System shall interface with security electronics systems. Coordinate with security electronics subcontractor. Provide fire alarm system programming and auxiliary contracts as required to allow for fire alarm annunciation/control from the security electronics control panels as specified.
 - e) Provide input and output modules for all equipment that must be monitored/controlled for the purpose of smoke evacuation/pressurization.
 - f) Provide all fire alarm wiring including control and monitoring wire from each input/output module to its corresponding piece of smoke evacuation equipment.
 - g) Testing for fire alarm system in conjunction with HVAC contractor, electrical contractor and general contractor to verify accurate function of smoke evacuation/pressurization systems.
 - h) Provide magnetic door holds devices.
6. Electrical service to other MEPT systems, including but not limited to:
 - a) Line voltage interlock wiring for mechanical system
 - b) Starters and disconnect switches
 - c) Unit heaters
 - d) Plumbing fixtures
 - e) Duct detectors
 - f) Pre action system
 - g) Variable frequency drives and/or controllers furnish by MEP subcontractors
7. Provide temporary electrical services to the Project, including but not limited to
 - a) 100A service to feed temporary construction power
 - b) Provide connections to Construction Managers trailer.
 - c) Provide and maintain temporary electrical services for construction purpose to within 100' of all construction areas.

- d) Power for mason saws and other trade equipment
 - e) Dismantle and remove all temporary services when no longer required.
 - f) Roofing operations
 - g) Communications raceway and cabling to Contractors trailer
 - h) Provide temp lighting in building spaces until permanent lighting is installed.
8. Provide and install all power requirements and electrical connections to all equipment, furnishings, etc. requiring electric power including but not limited to, indicated or not indicated – handicap assist door operators, magnetic hold-open devices, all disconnects, other systems requiring power, etc.
 9. Provide power and final electrical hookup as needed for residentail appliances.
 10. Provide and set all roof penetrations as required for the work of this contractor.
Penetrations will be flahsed in and made weather tight by roofing contractor.
 11. Spoils generated by this scope to be stored at onsite locations approved by Contractor.
Spoil removal to be by earthwork subcontractor.
 12. Install owner supplied items, such stored smart boards and projectors.
 13. Provide and install all access control **cabling**, devices, etc. complete.
 14. Provide and install all video surveillance **cabling**, devices, etc. complete.
 15. This contract is to provide and install all fixtures, devices, raceway, unistrut etc. needed for exterior and interior lighting and any site electrical work.
 16. This contractor will be required to pull permits for all work as required.
 17. Provide an allowance equal to (2%) of the contract value amount. Any unused portions will be returned to the owner.

The following work is excluded:

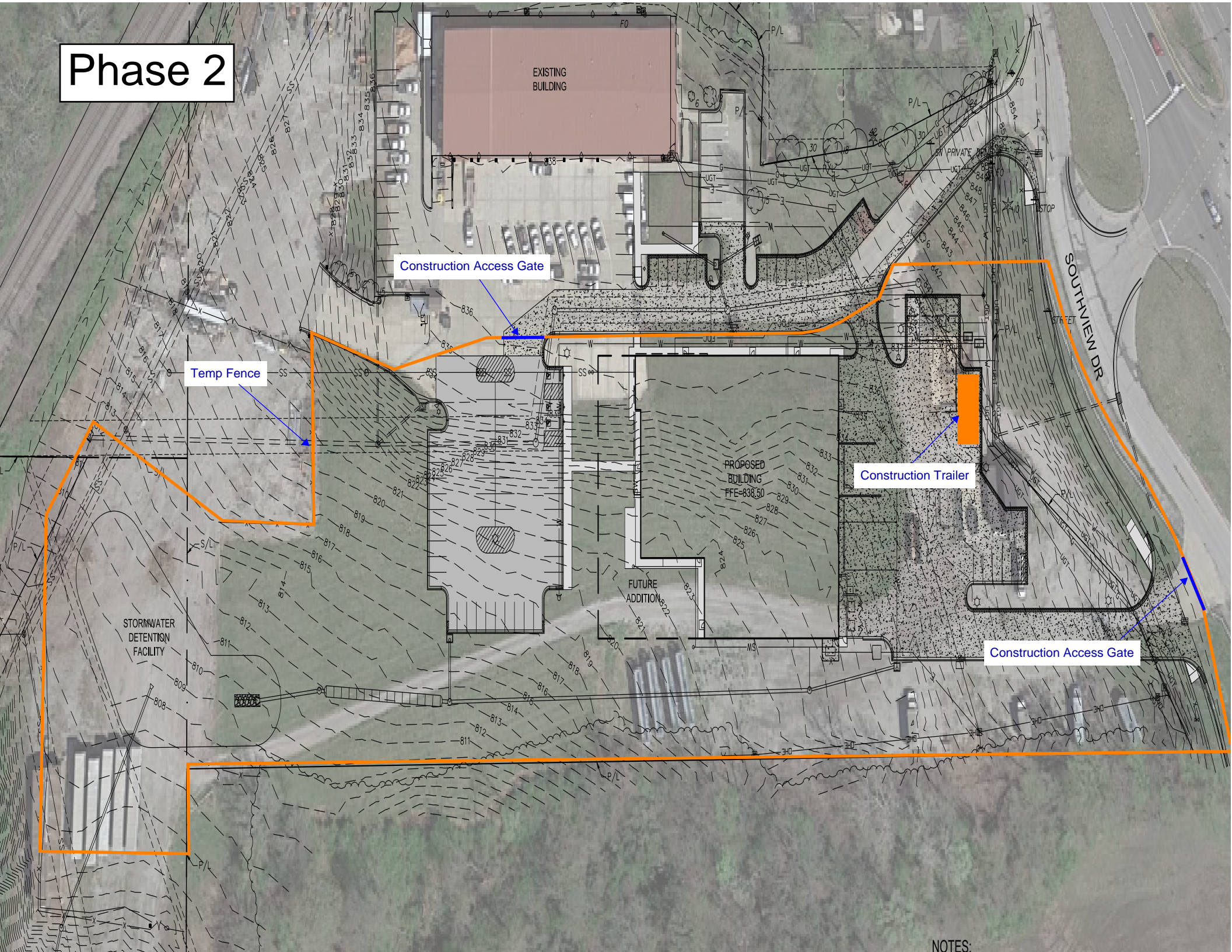
Data / Communications Cabling and Conduit

Phase 1



NOTES:

Phase 2



NOTES:

Construction Manager: Newkirk Novak Construction Partners					Liberty School District - Distribution Center Question Log					
Architect: Hollis Miller								Date: 11/1/2023		
Question Issued By:	#	Discipline	Scope of Work	Date	Drawing / Detail #	Question	Response	Answered By	Date Answered	Issued Addendum
Pro-Mechanical	1	Plumbing	Plumbing	10/20/2023		Kitchen drawings call out call for floor sinks. The plumbing drawings call for floor drains. Please clarify.	Please provide floor sinks and floor drains as designed and specified by the foodservice designer	Brian Levy	11/1/2023	Add 04
Industrial Sales	2	Civil	Landscaping	10/26/2023		The drawings do not indicate a limits of irrigation or where the point of connection for the system is located. Can you provide me with any information.	The limits of irrigation have been added to the Landscape Plans as a boundary. The point of connection for the system has been added to the Utility Plans. It is planned that a new irrigation tap will be supplied from the Public Main for the irrigation system.	Braden T.	11/1/2023	Add 04
NNCP	4	Arch / Structural	Multiple	10/26/2023		S202/2 Shows a Stem Wall. S100 does not show top of wall elevation only shows top of footing. AS102/J4 Shows no Stem Wall. Please clarify intent and elevations as applicable.	Use the structural detail S202/2 for the footing and stem wall. use details on AS102 for material finish and final elevation.	Shea E	11/1/2023	Add 04
NNCP	5	Arch / Structural	Multiple	10/26/2023		AS102/A1 - Height of enclosure is shown as dependent on trash dumpster. Please provide assumed height for bidding purposes. This affects numerous trades quantity takeoffs.	Please review detail P12/AS102 & J4/AS102.	Shea E	11/1/2023	Add 04
Royal Construction	6	Arch	Carpentry	10/26/2023		123200 1.5.A & B – There are no LEED requirements, so I am assuming that FSC materials are not required. Please confirm.	No FSC material required for casework.	Shea E	11/1/2023	Add 04
Royal Construction	7	Arch	Carpentry	10/26/2023		123200 2.7.B – Please confirm 120Deg Concealed hinges are what is wanted on this project. This differs from the majority of School Projects.	Continue with the 120Deg concealed hinges as specified.	Shea E	11/1/2023	Add 04
DH Pace	8	Arch	Carpentry	10/26/2023		Door 08113.A01 mentions a steel stiffener core and Manufactures standard kraft-paper honeycomb core on page 08113-3 of the specs. Please advise what core to use on these doors.	See attached updated specs.	Shea E	11/1/2023	Add 04
Gaf	9	Arch	Roofing	10/27/2023		Substitution Request for EverGuard TPO	Substitutions was not accepted	Shea E	11/1/2023	Add 04
Builders Steel	10	Arch	Steel	10/27/2023		The spec for the horizontal sliding mezzanine gate indicates that the gate is to be stainless steel. The guardrail at the mezzanine is indicated as mild steel. Please verify that the guardrail is to be mild steel and the gate is to be stainless.	The horizontal sliding gate is a product, "SafeMezz". This is a prefabricated gate purchased from the manufacturer. The manufacturers standard metal is the design intention for this project.	Shea E	11/1/2023	Add 04
NNCP	11	MEP	HVAC	10/27/2023		Please confirm Approved RTU HVAC Manufacturers. Approved manufactures on this job have differed from previous bid in district.	RTU manufacturers will be clarified in Addendum #4	Matt H.	11/1/2023	Add 04
Cornell Roofing	12	Arch	Roofing	10/30/20023		075423 - Please advise if a substrate board and or vapor barrier are required.	No, a substrate and/or vapor barrier will not be required.	Brandon M	11/1/2023	Add 04
Turf Design	13	Civil	Landscaping	10/30/2023		Is there an existing irrigation system, if so do you know the mainline size as well as current zones and where the system ends?	Yes, there is an existing system. No information is known regarding sizes, zones, or existing system limits.	Braden T.	11/1/2023	Add 04
RRI INC Midwest	14	Arch	Waterproofing	10/31/2023		Substitution Request for AVM Aussie Mate 580-PL.	Substitution was not accepted	Shea E	11/1/2023	Add 04
HME, Inc	15	Arch	Coatings	10/31/2023		1. Columns are high performance coatings which will be shop primed with Macropoxy 646. The beams at the second floor, mezzanine, and roof will be shop primed with SW Pro Cryl primer. I’m assuming the canopy steel will be Pro Cryl primer as well? Or does this need to be galvanized? A623/A1 shows braced frames and girts that are exposed with HP1 coating. Are we to assume all braced frames and girts are high performance coatings or only at this location? 2. Do you know what version of Macropoxy primer they are wanting for the high performance coatings? The Macropoxy 646-100 called out in the specs is higher priced than the “fast cure” option our rep recommends. If we can use the fast cure option it would provide some savings. 3. The specs callout NOMMA 1 finish for exposed stairs and rail, but then later state NOMMA 3 finish for industrial class stairs. Since both stairs are grating tread stairs is it safe to assume they are both industrial class stairs and only need NOMMA 3 finish for both the stairs and rail? 4. On A142 the details say RE: M7/A142 for beam penetrations thru metal panel, but there is no detail M7. Is this scheduled to come out in an addendum? 5. The specs call for welded connections lower than 25’ AFF to be NOMMA 1 finish. Do we know if or where this applies?	1. All exposed braced frames are to be painted HP1. The canopies are to be painted with the PPro Cryl Primer. 2. Use the specified Macropoxy 646-100. 3. NOMMA 3 finish is acceptable for both stairs and rail. 4. Detail has been revised. Reference H10/A361 for detail. 5. At all exposed welded connections below 25'. the majority of the connections will be at exposed cross bracing and the mezzanine.	Shea E	11/1/2023	Add 04
Kpoxxy	16	Arch	Coatings			Please provide clarification on what surfaces 071900.A02 Anti-Graffiti is going on project.	The Anti-Graffiti coating is only applied to the block walls of the trash enclosure.	Shea E	11/1/2023	Add 04
IBC. Inc	17	Arch	Racking			105629 - Pallet Racking - No Manufacturer / s are listed in the project specifications. No hight of racking, details, provided. Please provide basis of design and heights of racking, height between racks, etc.	Refer to updated specs in the addendum.	Shea E	11/1/2023	Add 04

ADDENDUM NO. 04

Issued: November 01, 2023
Project: Liberty Distribution Center
Project No. 23021
Owner: Liberty Public Schools
8 Victory Lane
Liberty, Missouri 64068

Bidding Documents Issued: August 31, 2023

This Addendum includes these 3 pages and the following attachments:

Project Manual:

Reissued Section 000105 "Certifications Page" consisting of 2 pages.
Reissued Section 000110 "Table of Contents" consisting of 6 pages.
Reissued Section 104100 "Signage" consisting of 12 pages.

Drawings:

Revised Architectural Sheets: G000, AS101, A142, A701, A711, and A720
New Architectural Sheet A721
Refer to MKEC, Civil Addendum No. 4
Refer to Bob D. Campbell, Structural Addendum No. 4
Refer to Smith & Boucher, MEP Addendum No. 4

PROJECT MANUAL REVISIONS

A1 SECTION 000005 – CERTIFICATIONS PAGE

A1.1 REPLACE existing Section 000005 "Certifications Page" with the attached revised Section 000005 "Certifications Page", dated November 01, 2023.

A2 SECTION 000110 - TABLE OF CONTENTS

A2.1 REPLACE existing Section 000110 "Table of Contents" with the attached revised Section 000110 "Table of Contents", dated November 01, 2023.

A3 SECTION 101400 - SIGNAGE

A3.1 REPLACE existing Section 101400 "Signage" with the attached revised Section 101400 "Signage", dated November 01, 2023.

A4 SECTION 081113 – HOLLOW METAL DOORS AND FRAMES

A4.1 REVISE Clause 2.3.B.2.e in Section 081113 "Hollow Metal Doors and Frames" as follows:
e. Core: Manufacturer's standard mineral-board core for fire-rated doors.

A4.2 REVISE Clause 2.3.C.2.e in Section 081113 "Hollow Metal Doors and Frames" as follows:



e. Core: Manufacturer's standard mineral-board core for fire-rated doors.

A4.3 ADD Clause 2.3.C.2.h to Section 081113 "Hollow Metal Doors and Frames" as follows:

e. Core: Manufacturer's standard vertical steel stiffener.

A5 SECTION 088000 – GLAZING

A5.1 ADD Subparagraph 2.10.C as follows:

- C. Fire-Rated Glazing: Provide glazing gaskets, glazing accessories, glazing tapes, setting blocks, spacers, edge blocks, and other glazing accessories that are compatible with glazing products and each other and are approved by testing agencies that listed and labeled fire-resistant glazing products with which products are used for applications and fire protection ratings indicated.

A5.2 ADD Subparagraph 2.11.D as follows:

- D. Glazing Sealants for Fire-Rated Glazing Products: Neutral-curing sealant complying with ASTM C 920, Type S, Grade NS, Class 50, Use NT. Comply with sealant and glass manufacturer's written instructions for selecting glazing sealants suitable for applications indicated.
 - a. Colors or Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

A6 SECTION 105629 – PALLET STORAGE RACKS

A6.1 ADD Paragraph 2.1.B, and subsequent subparagraphs, as follows:

- A. Provide pallet storage racks meeting system requirements by one of the following manufacturer's:
 - 1 Bulldog Rack Company
 - 2 Tri-Boro Shelving
 - 3 Ridg-U-Rak Storage Systems

A6.2 REPLACE "by height indicated on Drawings" in Clauses 2.4.B.2.a & 2.4.B.2.b with "228 inches high."

C1 REFERENCE ATTACHED CIVIL ADDENDUM NO. 4

M1 REFERENCE ATTACHED MEP ADDENDUM NO. 4

DRAWINGS REVISIONS

A7 SHEET G000

A7.1 Updated sheet index

A8 SHEET AS101

A8.1 ADDED locations for sign types W01-W04

A9 SHEET A142

A9.1 Updated annotations on details K1/A142 & K11/A142

A10 SHEET A701 – ARCHITECTURAL EGD SHEETS

A10.1 ADDED sign X07 to floor plan.

A11 SHEET A711

A11.1 ADDED sign X07 to “ENVIRONMENTAL GRAPHICS SCHEDULE”

A12 SHEET A720

A12.1 REVISE elevation of title block K1 to include sign X07.

A12.2 REVISE sheet keynote legend

A13 SHEET A721

A13.1 ADDED Sheet with detail of sign types W01-W04 to project.

C2 REFERENCE ATTACHED CIVIL ADDENDUM NO. 4

S1 REFERENCE ATTACHED STRUCTURAL ADDENDUM NO. 4

M2 REFERENCE ATTACHED MEP ADDENDUM NO. 4

END OF ADDENDUM NO. 04



LIBERTY DISTRIBUTION CENTER

ADDENDUM 04

November 1, 2023

The following are a summary of addendum items:

- C101:
 - Updated sheet view for changes with Addendum 4.
- C104:
 - Added irrigation line tap location and notes.
- C109:
 - Provided additional sliding gate information.
 - Added paving notes 20, 21, 22.
 - Revised the location and callouts for perimeter fencing.
 - Added mow strip beneath sliding gates.
 - Added sidewalk to north side of northern driveway.
- C110:
 - Revised the location and callouts for perimeter fencing.
- C111:
 - Revised grading around the sliding gates at the driveways.
- C202:
 - Added mow strip detail to plans.
- C206:
 - Added sliding gate cut sheet details.
- L100:
 - Added boundary to plan for limits of irrigation.
- L101:
 - Added boundary to plan for limits of irrigation.

**Liberty Public Schools Distribution Center
Smith & Boucher Project No. 2314705**

11.01.2023

To Documents Titled:

Liberty Public Schools Distribution Center
08.31.2023

Architect-of-Record:

Hollis & Miller
1828 Walnut Street Suite 922
Kansas City, MO 64108

The Contract Documents for the above referenced project and the Work covered thereby are modified as described herein.

SPECIFICATIONS

1. Section 237416.11 Packaged, Small-Capacity, Rooftop Air-Conditioning Units
 - a. PART 2 (2.1)(A): REVISE to read:
 - A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Trane.
 2. Aeon.
 3. Daikin Applied.
 4. Lennox.
2. Section 237416.13 Packaged, Large-Capacity, Rooftop Air-Conditioning Units
 - a. PART 2 (2.1)(A): REVISE to read:
 - A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Trane.
 2. Aeon.
 3. Daikin Applied.
 4. Lennox.
3. Section 275116 – Public Address System
 - a. PART 1(1.1)(B)(5)(b): REVISE bullet 'b' to say, "Operation: (2) zones: (1) for each 2-way speaker".

DRAWINGS

4. Sheet ME201 – Site Plan – Mechanical and Electrical
 - a. ADD (3) 'P7' and (1) 'P6' type light fixtures to the site plan.
 - b. ADD (4) 120V cameras mounted to the (4) new pole lights.
 - c. ADD plan notes 22 and 23.
5. Sheet ME202 – Mechanical and Electrical – Roof Plan
 - a. ADD (6) data outlets. See sheet for revisions.
 - b. REVISE plan note 5.
6. Sheet E201 – Overall Power Plan – Level 1

PRINCIPALS

President
Chris Beverlin, P.E.

Clark A. Basinger, P.E.
Michael J. Falbe, P.E.
Richard C. Crabtree, P.E.
Wayne E. Davis, P.E.
Jeffrey L. Wright, P.E.
Christopher W. Boos, P.E.
Brandon M. Ford, P.E.
Steven Brooks, P.E.
Ryan Hagedorn, P.E.

Administrative Manager
James M. Spina

**Liberty Public School Distribution Center
Addenda 04 – Structural Narrative**

SHEET S003 – SCHEDULES

1. Revised Column Base Plate Schedule.
2. Revised Structural Foundation Schedule.

SHEET S100 – FOUNDATION PLAN

1. Revised plan note at 4" concrete slab.
2. Revised footing sizes at braced frames.

- a. ADD power receptacle and (2) CAT6 to (4) new TV locations. See sheet for revisions.
- 7. Sheet E202 – Overall Power Plan – Mezz Level
 - a. ADD device tag to exterior speakers to show (2) CAT6 data drops needed per device.
- 8. Sheet E302 – Electrical Schedules and Detail
 - a. REVISE Lighting Control Panel Schedule. See sheet for all revisions.
 - b. REVISE Light Fixture schedule to include new fixtures 'P6' and 'P7'.
- 9. Sheet E303 – Electrical Schedules and Detail
 - a. REVISE Telecommunication Device Schedule. See sheet for revisions.
- 10. Sheet E304 – Electrical Schedules and Detail
 - a. REVISE Panel Schedules EP, OP1, P2, and P3. See sheet for all revisions.

Attachments

- Sheets listed above.

END OF MEP ITEMS FOR ADDENDUM #4

SECTION 000105 - CERTIFICATIONS PAGE

ARCHITECT

I HEREBY, PURSUANT TO RSMO 327.411, STATE THAT THE SPECIFICATIONS INTENDED TO BE AUTHENTICATED BY MY SEAL ARE LIMITED TO SPECIFICATIONS LISTED BELOW:

DIVISION 1 SECTIONS:	011000, 012100, 012200, 012300, 012500, 012500.01, 013100, 013200, 013233, 013300, 014000, 014200, 014529, 016000, 017419, 017700, 017823, 017839, 017900.
DIVISION 4 SECTION:	042000.
DIVISION 5 SECTIONS:	055000, 055100, 055213.
DIVISION 6 SECTIONS:	061000, 061600, 062013.
DIVISION 7 SECTIONS:	071113, 071326, 071900, 072100, 072500, 074213, 074219, 075423, 076200, 077200, 078413, 078413, 078446, 079200.
DIVISION 8 SECTIONS:	081113, 081416, 083323, 083613, 083800, 084113, 087100, 088000 , 088300.
DIVISION 9 SECTIONS:	092116, 092900, 093000, 095113, 096513, 096519, 096813, 098433, 099113, 099123, 099600.
DIVISION 10 SECTIONS:	101400 , 101423, 102113, 102310, 102600, 102800, 104300, 104413, 104416, 105629 .
DIVISION 11 SECTION:	111300.
DIVISION 12 SECTIONS:	122113, 122413, 123200, 123666, 129300.
DIVISION 32 SECTION:	323119.

I HEREBY DISCLAIM ANY RESPONSIBILITY FOR ALL OTHER SPECIFICATIONS, DRAWINGS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ARCHITECTURAL OR ENGINEERING PROJECT OR SURVEY.

KEVIN NELSON NOVEMBER 1, 2023

ARCHITECT

DATE



NOVEMBER 1, 2023

DOCUMENT 000110 – TABLE OF CONTENTS

Project Name: Liberty SD Distribution Center
 Project No.: 23021
 Site Address 1142 Southview Dr
 City, State Zip Liberty, Missouri 64068

Revisions	Date
Addendum 01	10.20.2023
Addendum 04	11.01.2023

		Latest Revision	Original Issue
INTRODUCTORY INFORMATION			
000101	Project Team Directory	10.20.2023	10.10.2023
000105	Certifications and Seals	11.01.2023	10.10.2023
000110	Table of Contents	11.01.2023	10.10.2023

BIDDING REQUIREMENTS
 (Refer to Construction Manager's Front End Manual for additional Bidding Requirements)

BIDDING REQUIREMENTS			
003132	Geotechnical Data		10.10.2023

CONTRACTING REQUIREMENTS
 (Refer to Construction Manager's Front End Manual for additional Contracting Requirements)

DIVISION 1 – GENERAL REQUIREMENTS

011000	Summary	10.20.2023	10.10.2023
012100	Allowances		10.10.2023
012200	Unit Prices		10.10.2023
012300	Alternates		10.10.2023
012500	Substitution Procedures		10.10.2023
012500.o1	Substitution Procedures Form	10.20.2023	10.10.2023
013100	Project Management and Coordination		10.10.2023
013200	Construction Progress Documentation		10.10.2023
013233	Photographic Documentation		10.10.2023
013300	Submittal Procedures		10.10.2023
014000	Quality Requirements		10.10.2023
014200	References		10.10.2023
014529	Testing and Inspections		10.10.2023
016000	Product Requirements		10.10.2023
017419	Construction Waste Management & Disposal		10.10.2023
017700	Closeout Procedures		10.10.2023
017823	Operation and Maintenance Data		10.10.2023
017839	Project Record Documents		10.10.2023
017900	Demonstration and Training		10.10.2023

DIVISION 3 – CONCRETE

033000	Cast-in-Place Concrete		10.10.2023
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DIVISION 4 - MASONRY

042000	Unit Masonry		10.10.2023
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DIVISION 5 - METALS

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052100	Steel Joist Framing		10.10.2023
053100	Steel Decking		10.10.2023
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055000	Metal Fabrications		10.10.2023
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055213	Pipe and Tube Railings		10.10.2023

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DIVISION 6 – WOOD AND PLASTICS		
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061600	Sheathing	10.10.2023
062013	Exterior Finish Carpentry	10.10.2023
DIVISION 7 - THERMAL AND MOISTURE PROTECTION		
071113	Bituminous Dampproofing	10.10.2023
071326	Self-Adhering Sheet Waterproofing	10.10.2023
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072500	Weather Barriers	10.10.2023
074213	Formed Metal Wall and Soffit Panels	10.10.2023
074219	Insulated Metal Wall Panels	10.10.2023
075423	Thermoplastic Polyolefin (TPO) Roofing	10.10.2023
076200	Sheet Metal Flashing and Trim	10.10.2023
077200	Roof Accessories	10.10.2023
078413	Penetration Firestopping	10.10.2023
078446	Fire Resistive Joint Systems	10.10.2023
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DIVISION 8 - DOORS AND WINDOWS		
081113	Hollow Metal Doors and Frames	11.01.2023
081416	Flush Wood Doors	10.10.2023
083323	Overhead Coiling Doors	10.10.2023
083613	Sectional Doors	10.10.2023
083800	Traffic Doors	10.10.2023
084113	Aluminum Framed Entrances and Storefronts	10.10.2023
087100	Door Hardware	10.10.2023
088000	Glazing	11.01.2023
088300	Mirrors	10.10.2023
DIVISION 9 - FINISHES		
092116	Non-Structural Metal Framing	10.10.2023
092900	Gypsum Board	10.10.2023
093000	Tiling	10.10.2023
095113	Acoustical Panel Ceilings	10.10.2023
096513	Resilient Base and Accessories	10.10.2023
096519	Resilient Tile Flooring	10.10.2023
096813	Tile Carpeting	10.10.2023
098433	Acoustical Wall Units	10.10.2023
099113	Exterior Painting	10.10.2023
099123	Interior Painting	10.10.2023
099600	High-Performance Coatings	10.10.2023
DIVISION 10 – SPECIALTIES		
101400	Signage	11.01.2023
101423	ADA and Code Signage	10.10.2023
102113	Toilet Compartments	10.10.2023
102310	Glazed Interior Wall and Door Assemblies	10.10.2023
102600	Wall and Door Protection	10.10.2023
102800	Toilet, Bath & Laundry Accessories	10.10.2023
104300	Emergency Aid Specialties	10.10.2023
104413	Fire Extinguisher Cabinets	10.10.2023
104416	Fire Extinguishers	10.10.2023
105629	Pallet Storage Racks	11.01.2023

	Latest Revision	Original Issue
DIVISION 11 - EQUIPMENT		
111300 Loading Dock Equipment		10.10.2023
114000 Food Service Equipment	10.20.2023	10.10.2023
DIVISION 12 - FURNISHINGS		
122113 Horizontal Louver Blinds		10.10.2023
122413 Roller Window Shades		10.10.2023
123200 Manufactured Wood Casework		10.10.2023
123666 Solid Surfacing Countertops		10.10.2023
129300 Site Furnishings		10.10.2023
DIVISION 21 – FIRE SUPPRESSION		
210500 Common Work Results for Fire Suppression		10.10.2023
211313 Wet-Pipe Sprinkler Systems		10.10.2023
DIVISION 22 - PLUMBING		
220500 Common Work Results for Plumbing		10.10.2023
220513 Common Motor Requirements for Plumbing Equipment		10.10.2023
220516 Expansion Fittings and Loops for Plumbing Piping		10.10.2023
220517 Sleeves and Sleeve Seals for Plumbing Piping		10.10.2023
220518 Escutcheons for Plumbing Piping		10.10.2023
220519 Meters and Gauges for Plumbing Piping		10.10.2023
220523 General Duty Valves for Plumbing Piping		10.10.2023
220529 Hangers and Supports for Plumbing Piping and Equipment		10.10.2023
220553 Identification for Plumbing Piping and Equipment		10.10.2023
220719 Plumbing Piping Insulation		10.10.2023
221116 Domestic Water Piping		10.10.2023
221119 Domestic Water Piping Specialties		10.10.2023
221316 Sanitary Waste and Vent Piping		10.10.2023
221319 Sanitary Waste Piping Specialties		10.10.2023
223400 Fuel- Fired, Domenstic Water Heaters		10.10.2023
224000 Plumbing Fixtures		10.10.2023
224700 Drinking Fountains/Water Coolers		10.10.2023
DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING		
230500 Common Work Results for HVAC		10.10.2023
230513 Common Motor Requirements for HVAC Equipment		10.10.2023
230548 Vibration Controls for HVAC		10.10.2023
230553 HVAC System Identification		10.10.2023
230593 Testing, Adjusting, and Balancing		10.10.2023
230713 Duct Insulation		10.10.2023
230719 HVAC Piping Insulation		10.10.2023
230900 Instrumentation and Control for HVAC		10.10.2023
231123 Facility Natural-Gas Piping		10.10.2023
232300 Refrigerant Piping		10.10.2023
233113 Metal Ducts		10.10.2023
233116 Nonmetal Ducts		10.10.2023
233300 Duct Accessories		10.10.2023
233416 Centrifugal HVAC Fans		10.10.2023
233423.01 HVAC Dust Collector		10.10.2023
233600 Air Terminal Units		10.10.2023
233713 Diffusers, Registers, and Grilles		10.10.2023
237416.11 Packaged, Small-Capacity, Rooftop Air-Conditioning Units		10.10.2023
237416.13 Packaged, Large-Capacity, Rooftop Air-Conditioning Units		10.10.2023
238126 Split-System Air-Conditioners		10.10.2023
238239.13 Cabinet Unit Heaters		10.10.2023

DIVISION 26 - ELECTRICAL

260500	Common Work Results for Electrical		10.10.2023
260519	Low-Voltage Electrical Power Conductors and Cables		10.10.2023
260523	Control-Voltage Electrical Power Cables		10.10.2023
260526	Grounding and Bonding for Electrical Systems		10.10.2023
260529	Hangers and Supports for Electrical Systems		10.10.2023
260533	Raceway and Boxes for Electrical Systems		10.10.2023
260553	Identification for Electrical Systems		10.10.2023
260923	Lighting Control Devices		10.10.2023
260943	Relay-Based Lighting Controls		10.10.2023
262200	Transformers		10.10.2023
262416	Panelboards		10.10.2023
262726	Wiring Devices		10.10.2023
262813	Fuses		10.10.2023
262816	Enclosed Switches and Circuit Breakers		10.10.2023
263213	Engine Generators		10.10.2023
263600	Transfer Switches		10.10.2023
264113	Lightning Protection for Structures		10.10.2023
265119	LED Interior Lighting		10.10.2023
265219	Emergency and Exit Lighting		10.10.2023
265619	LED Exterior Lighting		10.10.2023

DIVISION 27 – COMMUNICATIONS

270000	District Communications Specifications (LPS Standard)	10.20.2023	10.10.2023
270500	Common Work Results for Communications		10.10.2023
270526	Grounding and Bonding for Communications Systems		10.10.2023
270536	Cable Trays for Communications Systems		10.10.2023
275116	Public Address System		10.10.2023

DIVISION 28 - ELECTRONIC ACCESS CONTROL AND INTRUSION DETECTION

280500	Common Work Results for Electronic Safety and Security		10.10.2023
280513	Conductors and Cables for Electronic Safety and Security		10.10.2023
283111	Digital, Addressable Fire-Alarm System		10.10.2023

DIVISION 31 - EARTHWORK

311000	Site Clearing		10.10.2023
312000	Earth Moving		10.10.2023

DIVISION 32 - EXTERIOR IMPROVEMENTS

321216	Asphalt Paving		10.10.2023
321313	Concrete Paving		10.10.2023
321373	Concrete Paving Joint Sealants		10.10.2023
323113	Chain Link Fences and Gates	10.20.2023	10.10.2023
323119	Decorative Metal Fences and Gates		10.10.2023

DIVISION 33 - UTILITIES

331100	Water Utility Distribution Piping		10.10.2023
333100	Facility Sanitary Sewers		10.10.2023
334100	Storm Utility Drainage Piping		10.10.2023

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SECTION 101400 - SIGNAGE

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Signage:
 - a. Flat Cut:
 - 1) Standard (101400.A30).
 - b. Film:
 - 1) Solid color vinyl (101400.A43).
 - c. Specialty (101400.A71):
 - d. **Post and Panel Signage:**
 - 1) **Non-illuminated Post (101400.A90).**
 - 2) **Non-illuminated Panel (101400.A92).**
- B. Related Sections include the following:
 - 1. Section 015000 "Temporary Facilities and Controls" for temporary Project identification signs and for temporary information and directional signs.
 - 2. **Section 033000 "Cast-In-Place Concrete" for concrete signage footings.**
 - 3. **Section 051200 "Structural Steel Framing" for steel posts at signage.**
 - 4. Section 061000 "Rough Carpentry" for signage blocking.
 - 5. Section 064023 "Interior Architectural Woodwork"
 - 6. Section 099123 "Interior Painting" for painting behind vinyl film signage.
 - 7. Section 099600 "High Performance Coatings" for painting of graphics on precast walls.
 - 8. Section 101423 "ADA and Code Signage" for related graphic substrate.

1.2 DEFINITIONS

- A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."
- B. Final Artwork: High resolution digital files to be used for production (including digital printing).
 - 1. Graphics shown in drawings are placeholders only.
 - 2. Final artwork to be supplied by Designer (or architect), after approval from Owner, to Signage contractor.
 - 3. Signage Contractor to use final art in creating shop drawings for approval by Designer,
- C. Signage Contractor: Contractor responsible for the fabrication and installation of signage unless responsibility for fabrication or installation is called out by others in the drawings.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Conference: Conduct conference at Project site.
 - 1. Review and finalize construction schedule including submittals, engineering, fabrication and installation. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review temporary protection requirements for during and after installation.
 - 3. Architect to work with Contractor to arrange the meeting. Architect to set agenda and run the meeting.
- B. Signage Contractor is responsible for obtaining all required signage permits.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Including but not limited to, the following:

1. Manufacturer's technical product data for each type of product specified. Include data on physical characteristics, durability, fade resistance, flame resistance and manufacturing process.
 2. Product data shall show compliance with requirements for fire performance characteristics and physical properties.
- B. Shop Drawings: Submit shop drawings for fabrication and erection of signs and supports. Include plans, elevations, and large scale details of sign wording and lettering layout. Include large scale sections of typical members and other components.
1. Show fabrication joints and fasteners. Show anchors, grounds, reinforcement, accessories, layout, and installation details including attachments to other work. Indicate materials and profiles of signage fittings, joinery, finishes, fasteners, anchorages, and accessory items.
 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 3. Based on Message Schedule approved by Owner, provide sign layouts for all signs:
 - a. Indicate message line breaks.
 - b. Include large scale details of signs wording and lettering layout, pictograms (arrows and symbols), artwork, and Braille layout.
 - c. Include outline of sign face, character spacing, line spacing, and copy composition.
 - d. Submit product data simultaneously for overall review and comparison prior to fabrication.
 4. Include a panel map for each vinyl film sign to coordinate installation.
 5. Field Dimensions shall be obtained, reviewed, and accepted by signage manufacturer prior to submittal of shop drawings. Refer to Article 1.4.I. "Field Dimensions for Environmental Graphics."
 6. For signage required to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 7. Wiring Diagrams: For illuminated signs and illuminated characters. Include locations of transformers and disconnect switches.
 8. For signs supported by or anchored to permanent construction, provide setting drawings, full-size spacing templates, and directions for installation of anchor bolts and other appropriate anchors to be installed.
 9. Submit drawings in 11 inch by 17 inch format unless otherwise requested by the Architect.
 10. Submit all shop drawings as a single package by Signage Contractor.
- C. Sign Schedule: Use same designations indicated on Drawings.
- D. Samples for Verification:
1. Submit an 8 inch by 10 inch sample of each material showing finishes, colors, surface textures and qualities of manufacturer and design of each component including graphics.
 - a. X01: 1/2 Scale sample of letter S.
 - b. X02: 1/2 Scale sample of number 4.
 - c. X03: Full scale sample.
 - d. X04: Full scale sample.
 - e. S01: Full scale sample of magnetic tag with paper insert.
 - f. S02: Full scale sample of blade sign with magnetic attachment.
 - g. ID01 THRU ID06: Full scale sample of each.
 - h. **W01: 12 inch by 12 inch sample of EZ bars with reflective white vinyl.**
 2. Submit 12-inch-long actual samples of each accessory required.
 3. Samples to be kept by the Architect as a record to later match against items in the field.
- E. Delegated-Design Submittal: For all signage unless otherwise noted.
1. Signage Contractor is responsible for determining proper mounting, fastening and anchoring methods including the design of concrete bases, concrete footings, and anchorage to signage frame for all signs unless noted otherwise. Determination to account for surface material sign is being mounted upon.
 2. Drawings are for aesthetic and functional design intent, only. No instructions for structural appropriateness have been made. It is the responsibility of the signage contractor to ensure that all elements are fabricated for a stable and durable installation while adhering to the aesthetic details indicated.
 3. Professional Engineer Qualifications: A legally qualified professional engineer licensed in the State of M who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for design and installations of signs, flagpoles, and miscellaneous support that is similar to those indicated for this Project in material, design, and extent. Include structural analysis calculations for signs indicated to comply with design loads; signed and sealed by the qualified professional engineer responsible for their preparation.
- F. Field Samples: Build field samples to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. Approved field samples to be incorporated

into final work.

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

G. Field Dimensions for Graphic Design:

1. Provide field dimensions to Architect for graphic design of graphics.
 - a. Field dimensions shall be accepted by Architect prior to final art release.
2. Include dimensions, locations, and graphic depictions of all disruptions within the field of wall surface indicated to receive graphic signage. Examples of disruptions of wall surface include, but are not limited to, the following:
 - a. Louvers, Vents, Ductwork, Thermostats.
 - b. Outlets, Light Switches, Light Fixtures, and Conduit.
 - c. Wall Base, Baseboards, Corner Guards, Expansion Joints, and Reveal Joints.
 - d. Motion Sensors.
 - e. Fire Alarm Devices.
 - f. Fire Extinguishers and Fire Extinguisher Cabinets.
 - g. Furnitures.
 - h. ADA signage, Room Signage, and other Code required signage.
 - i. Doors and Windows.
 - j. Mullions, Frames, and Handles.
 - k. Televisions.
 - l. Other obstructions to wall or glazing surfaces not listed that would adversely affect wall graphic design.
3. Elevations and dimensions shall be drawing using a computer aided drafting program and submitted in a legible format.
4. Dimensional Tolerance: 1/8-inch maximum.
5. Dimensions shall be reviewed and accepted by signage manufacturer prior to submittal of shop drawings.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Warranty: Special warranty specified in this Section.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For signs to include in maintenance manuals. Include the following:
 1. Methods for maintaining wall covering.
 2. Include precautions for use of cleaning materials and methods that could be detrimental to finishes and performance/longevity of film graphics.
- B. Warranty: Provide warranty documentation for signage.

1.7 QUALITY ASSURANCE

- A. Signage Contractor Qualifications: All sign fabrication within this section shall be performed by a signage contractor with the following:
 1. A minimum of five (5) years experience producing architectural signs, and a minimum of five (5) years experience producing compliant signs as specified in ANSI 117.1 (1986), Minimum Guidelines and Requirements for Accessible Design (MGRAD), Uniform Federal Accessibility Standards (UFAS) and American with Disabilities Act Accessibility Guidelines (ADAAG).
 2. A firm that employs skilled workers experienced in producing custom-fabricated products similar to those required for this Project and with at least seven years continuous experience under the current company name. Fabricator shall have a record of successful in-service performance, as well as sufficient production capacity to produce required units.
 3. Fabricator shall have completed at least seven (7) similar signage projects having similar requirements within the last four (4) years for each signage type.
 4. 3M-certified printer and 3M-certified installer. Subcontracting to a 3M-certified printer is acceptable.

- B. Uniformity of Manufacturer: For each separate type of sign and graphic image required, obtain signs from a single manufacturer.
 - 1. Manufacturer's name, trade name, or trademark shall not appear on any visible surface.
- C. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines. Comply with applicable provisions in ICC/ANSI A117.1.
- D. Fire Performance Characteristics: Provide wall coverings with the following surface burning characteristics as determined by testing identical products per ASTM E 84 by UL or other testing and inspecting organizations acceptable to authorities having jurisdiction. Identify wall coverings with appropriate markings of applicable testing and inspecting organization.
 - 1. Flame Spread: 5 or less.
 - 2. Smoke Developed: 25 or less.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, National Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- F. Aesthetic Requirements: Provide copy with straight and true edges; space characters as indicated; reproduce type style accurately with square corners and even curves; provide uniform letters and symbols; and provide smooth finishes with no visible imperfections.
- G. ADA Accessibility Guidelines: Signage shall comply with the ADA Accessibility Guidelines where applicable. Characters and graphics, including but not limited to, copy height, letter stroke symbols, materials, and finishes indicated on the Drawings are intended as guidelines for compliance. Implement each applicable ADA guideline. Should conflicts arise, notify the Designer before proceeding.
- H. Inspections: The Architect reserves the right to periodically visit the Signage Contractor's facilities to inspect and review layouts.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Use special care in handling to prevent twisting, warping, nicking, and other damage to signage. Store materials to permit easy access for inspection and identification.
 - 1. Keep aluminum off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect aluminum and packaged materials from corrosion and deterioration.
- B. Coordinate delivery and storage of sign materials with the Owner. Schedule delivery to minimize storage requirements.
- C. Store signage in a well-ventilated area, away from uncured concrete and masonry, and protected from weather, moisture, soiling, abrasion, extreme temperatures, and humidity. Materials stored at the Project Site without prior approval of the Owner, may have to be relocated at the sign Signage Contractor's expense.

1.9 PROJECT CONDITIONS

- A. Weather Limitations for Exterior Signage: Proceed with installation only when existing and forecasted weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
- B. Interior Environmental Limitations: Do not deliver and install glass graphics until spaces are enclosed and weathertight, wet work in spaces to receive murals is complete and dry, work above ceilings is complete, and temporary or permanent HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
 - 1. Maintain a constant temperature not less than 60 deg F in installation areas for at least 10 days before and 10 days after installation.
- C. Lighting: Do not install vinyl wall graphics until permanent level of lighting is provided on the surfaces to receive murals.
- D. Ventilation: Provide continuous ventilation during installation and for not less than the time recommended by the vinyl wall graphics manufacturer for full drying and curing.

- E. Field Measurements: Verify recess openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.10 COORDINATION

- A. Signage Contractor is responsible for preparing a schedule indicating engineering, fabrication, delivery, installation, and final inspection of the work. Submit this schedule to the Architect and Owner for approval and coordination with other work at the Project Site.
- B. Installation:
 - 1. Coordinate installation with the Owner, Construction Manager, and other trades.
 - 2. For signs supported by or anchored to permanent construction, coordinate specific requirements for types and placement of anchorage devices and similar items to be used for attaching signs. Deliver such items to Project Site in time for installation.
 - 3. Signage Contractor is responsible for furnishing setting drawings, installation templates and directions for installing for appropriate blocking, anchorage devices, and electrical conduits.
 - 4. Signage Contractor to coordinate all appropriate blocking needed.
- C. Coordinate location of remote transformers with building construction. Ensure that any transformers are accessible after completion of work.

1.11 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of metal and polymer finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image colors.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

- A. General: Use materials of size and thickness indicated or, if not indicated as required to produce strength and durability in finished product for use intended. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for various components of work.
- B. All materials shall be new stock, free from defects impairing strength, durability, and appearance. No fabrication or installation materials or procedures shall be used that will in any way change the usual quality or in any manner have an adverse effect on existing materials and surfaces.
- C. Graphic Content and Style: Provide sign copy that complies with requirements indicated in the Message Schedule on Drawings, and on artwork for size, style, spacing, content, mounting height and location, material, finishes, and colors of signage. All digital prints to be high resolution output.
- D. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. Provide materials without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- E. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties for each aluminum form required not less than that of alloy and temper designated below.
 - 1. Plate and Sheet: ASTM B 209, Alloy 5005-H32 or Alloy 6061-T6.
 - 2. Material Gauge: Produce Fabricated Aluminum Signs with .090" faces and .063" returns.
 - 3. Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
 - 4. Extrusions: ASTM B221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.

- a. Basis-of-Design Product: Subject to compliance with requirements, provide SignComp Extrusions and Systems (877.784.0405) or approved comparable product.
 - 5. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of alloy 6063-T5.
 - a. Mounting: Concealed studs, non-corroding for substrates encountered.
 - 6. Cutting: Computer guided lasers cut letters, logos or shapes.
 - 7. Construction: Cut letter returns from .063" coil (1", 1.5", 2", 3", 4", 5", 6") to size based on the desired letter depth, bent to the contour of the laser cut faces to produce a hollow-backed letter with 90° angle edges. Inside joints are MIG welded with 1"-1.5" intervals. Finish exposed welds and surfaces smooth, flush, and blended to match adjoining surfaces.
 - a. For Exterior Applications: Provide weep holes to drain water at lowest part of exterior signage. Equip weeps with permanent baffles to block light leakage without inhibiting drainage.
 - 8. Performance: Welds are tested for strength. Finishes are Salt Fog tested to ASTM B-117-95 for corrosion resistance.
 - 9. Finishes:
 - a. Painted finish – DA sanded face & returns, primed, then sprayed; refer to "Coatings and Paintings" Paragraph.
- F. **Concrete Footings: Refer to Section 033000 "Cast-In-Place Concrete".**
- G. Expanded PVC Sheet: Subject to compliance with requirements, provide "Sintra" by 3A Composites.
- 1. Material: Moderately expanded closed-cell polyvinyl chloride.
 - 2. Color: As selected by Architect from manufacturer's full range.
 - 3. Basis-of-Design Product: Subject to compliance with requirements, provide "Sintra" by 3A Composites or a comparable product of an approved manufacturer.
- H. Magnetic Sheeting:
- 1. Basis of Design Products: Subject to compliance with requirements, provide "Flexible Magnetic Sheeting" by Magnum Magnetics or a comparable product with the following criteria proposed to and accepted by Architect prior to bidding.
 - 2. Material: Flexible magnetic composition with finished surface prepared for digital printing.
 - 3. Color: White, opaque.
 - 4. Thickness: 20 mils.
 - 5. Chemical Resistance: Resists mild alkalis, mild acids, and salt. Excellent resistance to water.
- I. Vinyl Film: UV-Resistant vinyl film of nominal thickness indicated, with pressure-sensitive, permanent adhesive on back; die cut to form characters or images as indicated and suitable for exterior applications.
- J. **Steel:**
- 1. **Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.**
 - 2. **Steel Channels, Plates, Shapes, and Bars: ASTM A 36/A 36M.**
 - 3. **Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from plate complying with ASTM A 36/A 36M or ASTM A 283/A 283M, Grade C or D.**
 - 4. **Steel Tubing: ASTM A 500/A 500M, cold-formed steel tubing.**
 - 5. **Steel Pipe: ASTM A 53/A 53M, Standard Weight (Schedule 40) unless otherwise indicated.**

2.2 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

- D. Coatings and Paints: Inks, dyes, and paints that are recommended by manufacturer for optimum adherence to surface and are UV and water resistant for colors and exposure indicated.
1. Baked Enamel:
 - a. Exposed panel finish: Deterioration includes, but is not limited to, the following:
 - 1) Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - 2) Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - 3) Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 2. Clear Anodic Finish:
 - a. Manufacturer's standard Class 1 clear anodic coating, 0.018 mm or thicker, over a satin (directionally textured) mechanical finish, complying with AAMA 611.
 3. Color Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 4. Fluoropolymer:
 - a. Aluminum:
 - 1) 2-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions.
 - 2) Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 3) Mica Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish with suspended mica flakes containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 4) Metallic Fluoropolymer: AAMA 2605. Three-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, coating and resin manufacturers' written instructions.
 5. Industrial Paint Finish:
 - a. Basis of Design: Provide MAP Ultra Low VOC by Matthews Paint Company or a comparable product submitted to and accepted by Architect with the following product characteristics.
 - b. Finished coated surface shall provide a minimum of 150 in/lbs of impact resistance on all exposed faces.
 - c. All edges and faces shall have a seamless finish unless indicated otherwise on drawings.
 6. Overcoat/Topcoat:
 - a. Basis of Design Products: Subject to compliance with requirements, provide "Clear Diamond Finish" by KBS or a comparable product with the following criteria proposed to and accepted by Architect prior to bidding.
 - 1) Provide: Two topcoats.
 7. Powder-Coat:
 - a. Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm) Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and backing finish.
- E. Industrial Paint Finish:
1. Basis of Design: Provide acrylic polyurethane "MAP-LVG Ultra Low VOC" by Matthews Paint Company or a comparable product submitted to and accepted by Architect with the following product characteristics.
 - a. Finish: Satin
 2. Finished coated surface shall provide a minimum of 150 in/lbs of impact resistance on all exposed faces.
 3. All edges and faces shall have a seamless finish unless indicated otherwise on drawings.

2.3 ACCESSORIES

- A. Mounting Methods: Use double sided vinyl tape and silicone adhesive fabricated from materials that are not corrosive to sign materials and mounting surface.
- B. Adjustable Edge Grips: Subject to compliance with requirements, provide "SO-APEG9" by Gyford Display or comparable product with the following product characteristics, submitted to and accepted by Architect prior to bidding:
1. Material: Anodized aluminum.
 2. Stud Dimensions: 1 inch diameter by 1-15/16 inch length.

3. Nylon tip set screw.
- C. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.
1. Use concealed fasteners and anchors unless indicated to be exposed.
 2. Exposed Metal-Fastener Components, General:
 - a. Fabricated from same basic metal and finish of fastened metal unless otherwise indicated.
 - b. Fastener Heads: For nonstructural connections, use oval countersunk screws and bolts with tamper-resistant, Allen-head slots unless otherwise indicated.
- D. Visible studs shall have sleeves painted to match color specified by Architect.
- E. Tamper Resistant Standoff Supports: Subject to compliance with requirements, provide "WSS-1619/TP" by NovaDisplay or comparable product with the following product characteristics, submitted to and accepted by Architect prior to bidding:
1. Material: SS201 Stainless Steel.
 2. Stud Dimensions: 5/8 inch diameter by 3/4 inch length.
 3. Panel Requirements:
 - a. Maximum Panel Thickness: 1/2 inch.
 - b. Panel Hole Size: 7/16 inch.
 4. Cap Thread Size: M10x1.25.
 5. Accessory: Provide nylon or neoprene gasket.
- F. Tamper Resistant Standoff Supports: Subject to compliance with requirements, provide "SOK-8-100" by Gyford or comparable product with the following product characteristics, submitted to and accepted by Architect prior to bidding. Quantities as required to complete design as indicated on the Construction Drawings.
1. Material: Anodized aluminum.
 2. Stud Dimensions: 5/8 inch diameter.
 3. Components:
 - a. SO-CAP8.
 - b. SO-100.
 - c. HD-S19.
 - d. HD-CBS1.
 - e. HD-FDA1.
 4. Accessory: Provide nylon or neoprene gasket.
- G. Stand-off-Hardware: Provide products from CR Laurence Co. as indicated below. Fabricate from Type 316 stainless steel. Finish shall be brushed stainless steel. Provide all accessories necessary for mounting to underside of transaction counter.
1. Stand-Off-Base: Model S0B10112BS by CR Laurence (1-inch diameter by 1-1/2 inch long standoff sleeve).
 2. Stand-Off-Cap: Model CAP1BS by CR Laurence (1-inch diameter standoff cap).
 3. Comparable products from other manufacturers will be considered.

2.4 FABRICATION

- A. General: Provide manufacturer's standard signs of configurations indicated.
1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
 2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
 4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.
 5. Internally brace signs for stability and for securing fasteners.
 6. Provide rebates, lugs, and brackets necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.
 7. Castings: Fabricate castings free of warp, cracks, blowholes, pits, scale, sand holes, and other defects that impair appearance or strength. Grind, wire brush, sandblast, and buff castings to remove seams, gate

marks, casting flash, and other casting marks before finishing

- B. Brackets: Fabricate brackets, fittings, and hardware for bracket-mounted signs to suit sign construction and mounting conditions indicated. Modify manufacturer's standard brackets as required.
 - 1. Aluminum Brackets: Factory finish brackets with baked-enamel or powder-coat finish to match sign-background color unless otherwise indicated.

2.5 FLAT CUT

- A. General: Flat Cut
 - 1. Standard (101400.A30 - **X01, X02, X03**).
- B. Flat cut characters and shapes with uniform faces; square-cut, smooth, eased edges; precisely formed lines and profiles; and as follows:
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. APCO Graphics, Inc.
 - b. R. K. Ramos Signage Systems.
 - c. ASI Sign Systems, Inc.
 - d. Dimensional Innovations.
 - e. Gemini Incorporated.
 - f. Metallic Arts.
 - g. Square One.
- C. Refer to Drawings for:
 - 1. Sign Height, Width and Depth.
 - 2. Typeface and Character Spacing.
 - 3. Color.
 - 4. Mounting Position.
- D. Mounting: Furnish inserts and other anchorage devices to connect masonry work. Coordinate anchorage devices with supporting structure.
 - 1. Fabricate anchorage devices that are capable of withstanding dead loads of units.
 - 2. Lettering shall be pin-mounted and stood off wall **1 inch** unless indicated otherwise.
- E. Refer to Article 2.1 "Materials" for material technical information.
- F. Refer to Article 2.2 "Finishes" for materials selected below.
- G. Material selection:
 - 1. ALUMINUM
 - a. Fabricate flat-cut-out characters and shapes from aluminum sheet/plate of thickness as indicated on drawings.
 - b. Welding: Use welding method that is appropriate for metal and finish indicated and that develops full strength of members joined. Finish exposed welds and surfaces smooth, flush, and blended to match adjoining surfaces.
 - c. Finishes:
 - 1) ExteriBaked Enamel or Powder-Coat Finish: Manufacturer's standard, in color finish selected by the Architect.

2.6 FILM SIGNAGE

- A. Solid Color Vinyl (101400.A43 - **X03, X04**):
 - 1. Basis of Design Products: Subject to compliance with requirements, provide "IJ680CR" by 3M or a comparable product with the following criteria proposed to and accepted by Architect prior to bidding.
 - a. https://www.3m.com/3M/en_US/p/d/b00020926/
 - b. Material: Vinyl.
 - c. Finish: Luster.
 - d. Color: White.
 - e. Thickness: 7-8 mil.

- f. Adhesive type: Manufacturer's standard releasable pressure sensitive adhesive.
- g. Adhesive color: Clear with silver underneath.
- h. Liner: Polyethylene coated paper.
- i. Chemical Resistance: Resists mild alkalis, mild acids, and salt. Excellent resistance to water.
- j. Applied film shrinkage: less than 0.4 mm.
- k. Weeded Custom Cut in factory as indicated on drawings for field installation.
- l. Artwork shall be furnished by the Owner, on disc to manufacturer's standards.

2.7 SPECIALTY (101400.71):

- A. General:
 - 1. Refer to Article 2.1 "Materials" for material technical information.
 - 2. Refer to Article 2.2 "Finshes" for materials selected below.
 - 3. Refer to Article 2.3 "Accessories" for related installation components.
- B. S01: Magnetic Label Holder
 - 1. Basis of Design Products: Subject to compliance with requirements, provide magnetic label holders for beam tags fwith slide paper inserts; Type "M51GR" by HOL-DEX or a comparable product with the following criteria proposed to and accepted by Architect prior to bidding.
 - a. Size: 2 inch by 6 inch
 - b. Color and Finish: Clear, Matte, Anti-glare.
 - c. Refer to Drawings for locations

2.8 POST AND PANEL SIGNAGE

- A. **Non-illuminated Post (101400.AA90).**
- B. **Non-illuminated Panel (101400.AA92).**
- C. **Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:**
 - 1. **ASI-Modulex, Inc.**
 - 2. **Dimensional Innovations.**
 - 3. **Innerface Sign Systems, Inc.**
 - 4. **Seemore Signs.**
 - 5. **Howard Industries**
 - 6. **SignComp**
- D. **General:**
 - 1. **In addition to special care used to handle and fabricate structural frame exposed to view in final position, comply with the following:**
 - a. **Fabricate with exposed surfaces smooth, square, and free of surface blemishes including pitting, rust, scale, and roughness.**
 - b. **Grind sheared, punched, and flame-cut edges to remove burrs and provide smooth surfaces and edges.**
 - c. **Fabricate with exposed surfaces free of mill marks, including rolled trade names and stamped or raised identification.**
 - d. **Fabricate with exposed surfaces free of seams to maximum extent possible.**
 - e. **Remove blemishes by filling or grinding or by welding and grinding, before cleaning, treating, and shop priming.**
 - f. **Fabricate with piece marks fully hidden in the completed structure or made with media that permits full removal after erection.**
 - g. **Seal-weld open ends of hollow structural sections with 3/8-inch closure plates.**
- E. **Frames: All posts and frames manufactured from heavy duty 6063 T5 aluminum extrusions.**
 - 1. **Bolted connection to concrete pad by Signage contractor.**
 - 2. **Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.**
 - 3. **Frame Components: 2-1/4" x 3" posts, post caps and E-Z Change Wordbars**

- F. **Panels: Signage panels to be constructed from heavy duty 6063 T5 aluminum plate.**
 - 1. **Minimum Panel thickness: 0.125 inch.**
 - 2. **Provide "Wordbar" extrusions:**
 - a. **Color and length: Refer to the drawings.**

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs.
- C. Verify that anchor inserts are correctly sized and located to accommodate signs.
- D. Verify that items provided under other sections of Work are sized and located to accommodate signs.
- E. Examine supporting members to ensure that surfaces are at elevations indicated or required to comply with authorities having jurisdiction and are free from dirt and other deleterious matter.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.
- G. Field verify dimensions of all conditions.

3.2 INSTALLATION, GENERAL

- A. Preparation
 - 1. Acclimatize materials by removing them from packaging in the installation areas not less than 24 hours before installation.
 - 2. Follow manufacturer's printed instructions for surface preparation.
 - a. Prepare substrates to achieve a smooth, dry, clean surface free of flaking, unsound coatings, cracks, and defects.
 - b. Painted surfaces: Treat areas susceptible to pigment bleeding.
 - c. Metals: If not factory-primed, clean and apply rust inhibitive zinc primer.
 - d. Moisture content: maximum of 5 percent on new plaster, concrete, and concrete masonry units when tested with an electronic moisture meter.
 - e. Adhesion Test: Perform manufacturer's standard non-destructive adhesion test on substrate, prime or repaint all surfaces that fail adhesion test as recommended by manufacturer.
- B. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches of sign without encountering protruding objects or standing within swing of door.
- C. Face Mounting: Mount plaques using exposed fasteners with rosettes attached through face of plaque into wall surface.
- D. Wall-Mounted Signs Mounted on Glass: Provide opaque sheet matching sign material and finish onto opposite side of glass to conceal back of sign.
- E. Wall-Mounted Signs on Smooth Surfaces: Comply with sign manufacturer's written instructions except where more stringent requirements apply.
 - 1. Silicone-Adhesive Mounting: Attach signs to irregular, porous, or vinyl-covered surfaces. Where signage is located on exterior surfaces, provide exterior rated adhesive as recommended by signage manufacturer for substrate indicated.

- F. Wall-Mounted Signs on Textured Surfaces: Comply with sign manufacturer's written instructions except where more stringent requirements apply. Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
 - 1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
 - a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place sign in position and push until flush to surface, embedding studs in holes. Temporarily support sign in position until adhesive fully sets.
 - b. Thin or Hollow Surfaces: Place sign in position and flush to surface, install washers and nuts on studs projecting through opposite side of surface, and tighten.
- G. Vertical Tolerance: Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1m).
- H. Installation – Flat Cut
 - 1. Installation of panels:
 - a. Install panels in locations and mounting heights as indicated on Drawings. Attach using concealed system to wall surfaces unless otherwise indicated. Utilize mechanical fasteners appropriate for wall substrate. Keep perimeter lines straight, level, and plumb. Align panels with adjacent installations.
 - b. For textured substrates, install using 3M Textured Surface Applicator as recommended or required by manufacturer for best installation practices for a warranted installation.
- I. Installation – Film Signage
 - 1. Field-Applied, Vinyl-Film Signs:
 - a. Align sign Characters in final position before removing release liner. Remove release liner in stages, and apply and firmly press characters into final position. Press from the middle outward to obtain good bond without blisters or fishmouths. Remove carrier film without disturbing applied vinyl film.
 - b. Remove excess adhesive at finished seams, perimeter edges, and adjacent surfaces.
- J. **Installation - Direct Burial Method:**
 - 1. **Install only after all other work is completed.**
 - 2. **Coordination between trades to ensure district guidelines are achieved.**
 - 3. **Excavation: Excavate posthole to dimensions indicated. Reconstruct subgrade that is not firm, undisturbed, or compacted soil, or that is damaged by freezing temperatures, frost, rain, accumulated water, or construction activities by excavating an additional 12 inches (300 mm), back filling with satisfactory soil or well-graded aggregate, and compacting to original subgrade elevation.**
 - 4. **Setting in Earth: Set post in position, support to prevent movement, and backfill with satisfactory soil or well-graded aggregate as recommended in writing by manufacturer. Place and compact backfill in 6- inch lifts, compacting each lift.**

3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.
- B. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes to components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- C. Remove temporary protective coverings and strippable films as signs are installed.
- D. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean conditions during construction and protect from damage until acceptance by Owner.

END OF SECTION

Distribution Center

Liberty Public Schools

1142 Southview Dr,
Liberty, MO 64068

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ALTERNATE LIST

ALTERNATE 1 - NORTH CLERESTORY

BASE BID: AS DRAWN IN DOCUMENTS

ALTERNATE: DO NOT PROVIDE NORTH CLERESTORY WINDOWS AND FRAMING MATERIAL. CONTINUE MP1 OVER INDICATED NORTH CLERESTORY LOCATIONS. RE-A201

ALTERNATE 2 - LIGHTNING PROTECTION

BASE BID: NO LIGHTNING PROTECTION

ALTERNATE: RE: MEP SHEETS

DESIGN TEAM

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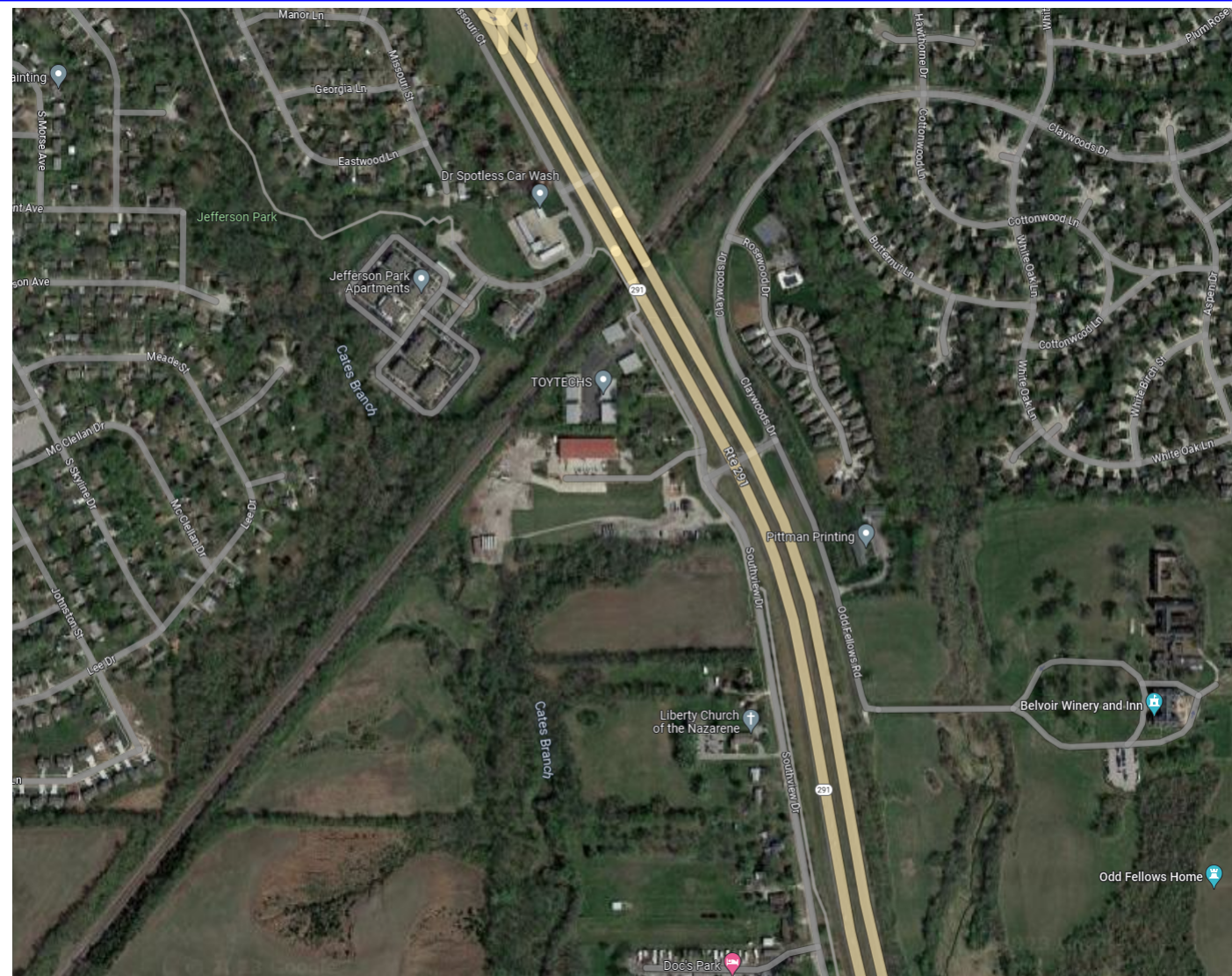
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CONSTRUCTION
DOCUMENTS

Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

REVISIONS:

#	Description	Date
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4	ADDENDUM 4	11.01.2023
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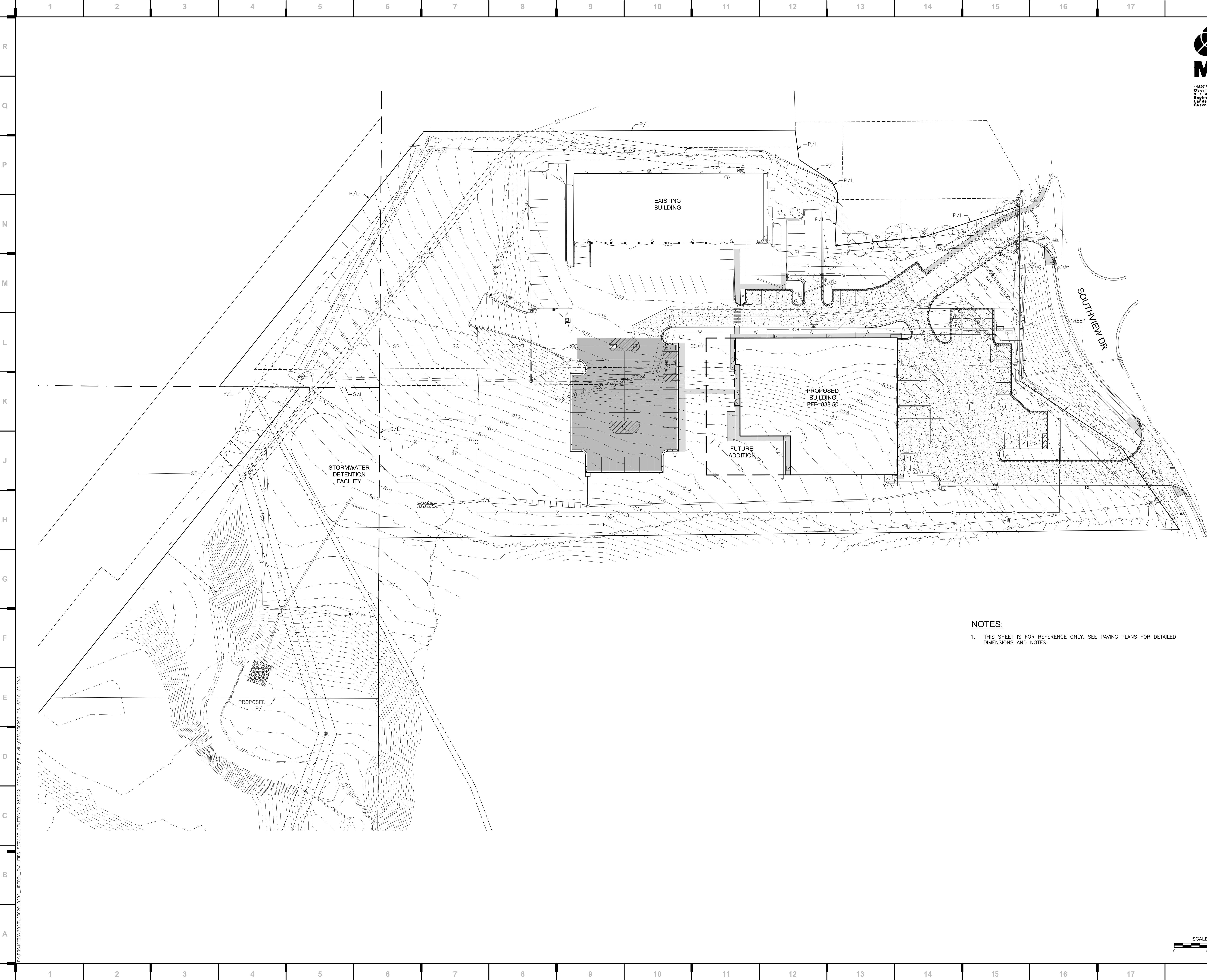
NOVEMBER 1, 2023
Kevin E. Nelson
A-2019015618

This Professional Seal does not affect the design responsibility of the engineer and does not constitute an endorsement of the project, nor does it constitute an endorsement of the engineer's services or the quality of the work.

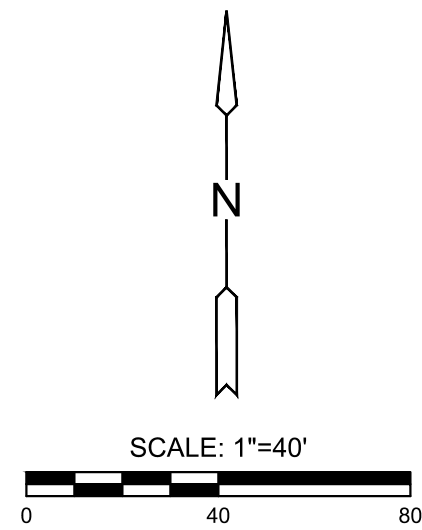
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COVER SHEET



NOTES:
1. THIS SHEET IS FOR REFERENCE ONLY. SEE PAVING PLANS FOR DETAILED DIMENSIONS AND NOTES.



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CONSTRUCTION DOCUMENTS

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1142 Southwest Dr, Liberty, MO 64068

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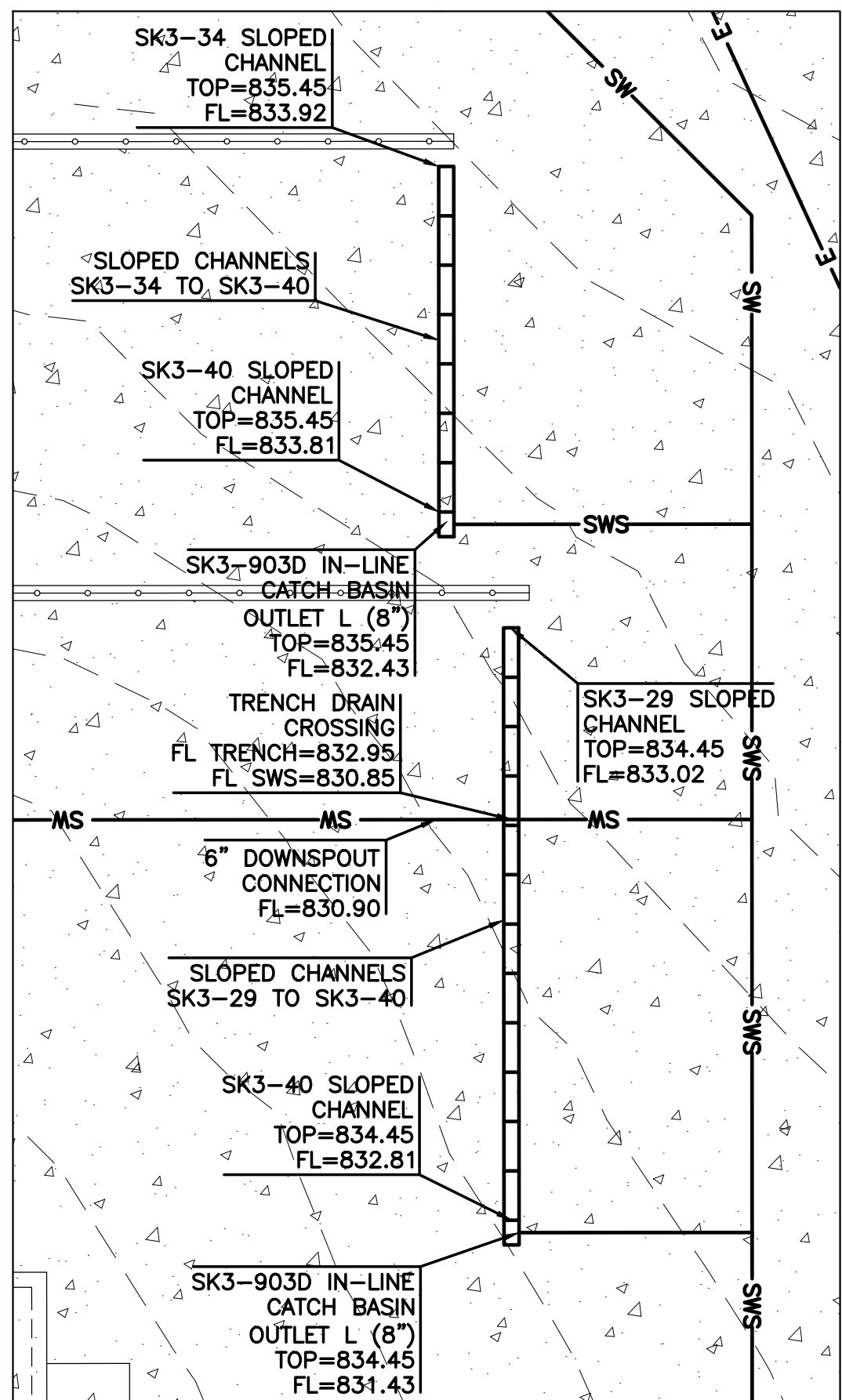
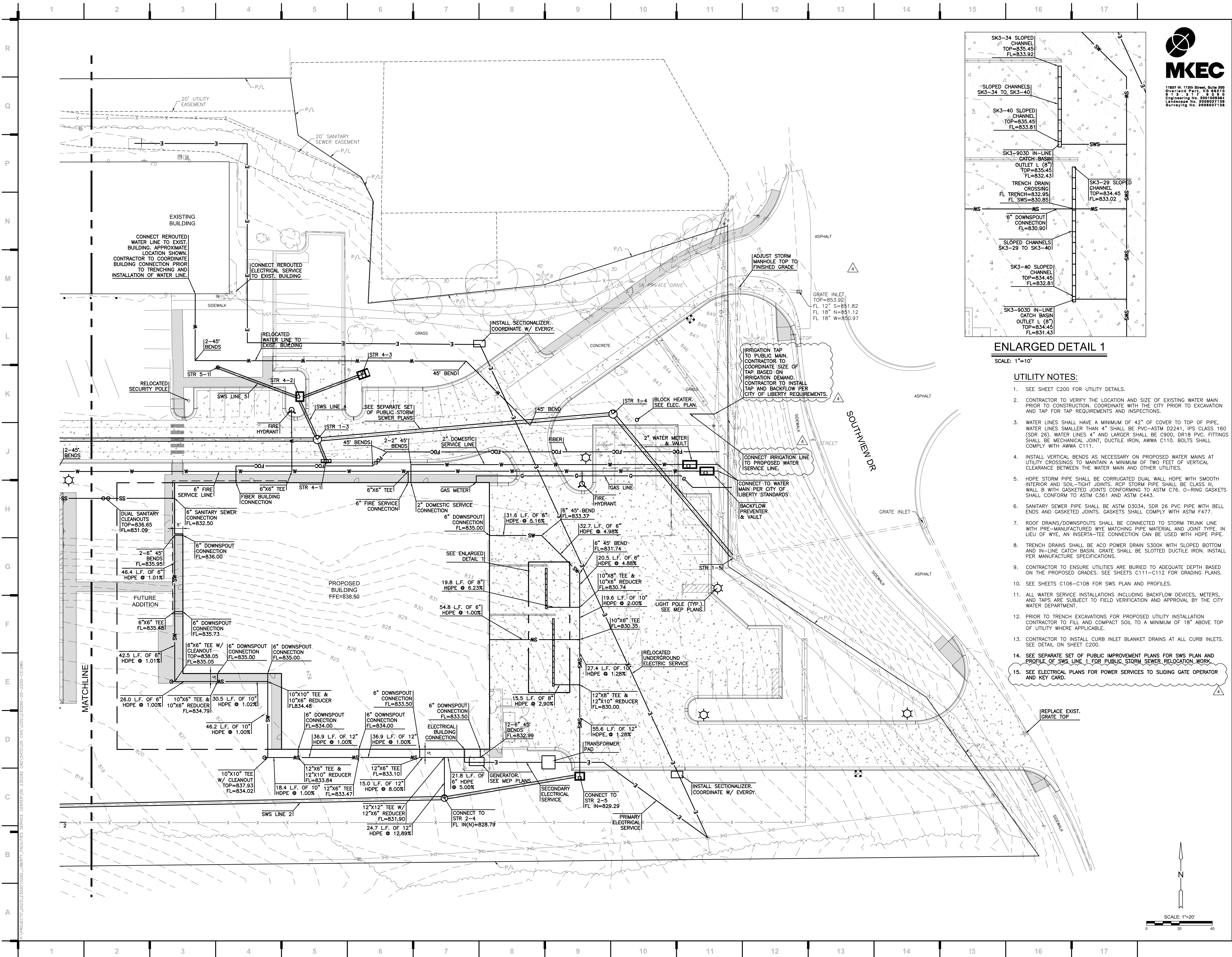


BRADEN L. TAYLOR, P.E.
LISC. #2021001896

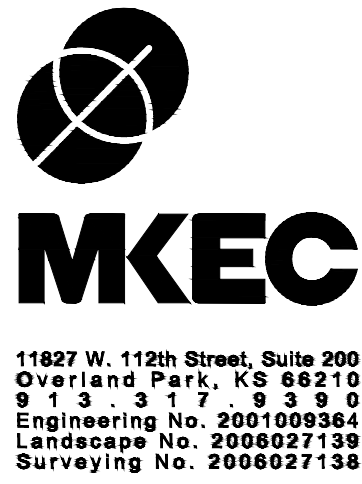
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C101

OVERALL SITE PLAN



- UTILITY NOTES:**
- SEE SHEET C200 FOR UTILITY DETAILS.
 - CONTRACTOR TO VERIFY THE LOCATION AND SIZE OF EXISTING WATER MAIN PRIOR TO CONSTRUCTION. COORDINATE WITH THE CITY PRIOR TO EXCAVATION AND TAP FOR TAP REQUIREMENTS AND INSPECTIONS.
 - WATER LINES SHALL HAVE A MINIMUM OF 42" OF COVER TO TOP OF PIPE. WATER LINES SMALLER THAN 4" SHALL BE PVC-ASTM D2241, IPS CLASS 160 (SDR 26). WATER LINES 4" AND LARGER SHALL BE C900, DR18 PVC. FITTINGS SHALL BE MECHANICAL JOINT, DUCTILE IRON, AWWA C110. BOLTS SHALL COMPLY WITH AWWA C111.
 - INSTALL VERTICAL BENDS AS NECESSARY ON PROPOSED WATER MAINS AT UTILITY CROSSINGS TO MAINTAIN A MINIMUM OF TWO FEET OF VERTICAL CLEARANCE BETWEEN THE WATER MAIN AND OTHER UTILITIES.
 - HDPE STORM PIPE SHALL BE CORRUGATED DUAL WALL HDPE WITH SMOOTH INTERIOR AND SOIL-TIGHT JOINTS. RCP STORM PIPE SHALL BE CLASS III, WALL B WITH GASKETED JOINTS CONFORMING TO ASTM C76. O-RING GASKETS SHALL CONFORM TO ASTM C361 AND ASTM C443.
 - SANITARY SEWER PIPE SHALL BE ASTM D3034, SDR 26 PVC PIPE WITH BELL ENDS AND GASKETED JOINTS. GASKETS SHALL COMPLY WITH ASTM F477.
 - ROOF DRAINS/DOWNSPOUTS SHALL BE CONNECTED TO STORM TRUNK LINE WITH PRE-MANUFACTURED WYE MATCHING PIPE MATERIAL AND JOINT TYPE. IN LIEU OF WYE, AN INSERTA-TEE CONNECTION CAN BE USED WITH HDPE PIPE.
 - TRENCH DRAINS SHALL BE ACO POWER DRAIN S300K WITH SLOPED BOTTOM AND IN-LINE CATCH BASIN. GRATE SHALL BE SLOTTED DUCTILE IRON. INSTALL PER MANUFACTURE SPECIFICATIONS.
 - CONTRACTOR TO ENSURE UTILITIES ARE BURIED TO ADEQUATE DEPTH BASED ON THE PROPOSED GRADES. SEE SHEETS C111-C112 FOR GRADING PLANS.
 - SEE SHEETS C106-C108 FOR SWS PLAN AND PROFILES.
 - ALL WATER SERVICE INSTALLATIONS INCLUDING BACKFLOW DEVICES, METERS, AND TAPS ARE SUBJECT TO FIELD VERIFICATION AND APPROVAL BY THE CITY WATER DEPARTMENT.
 - PRIOR TO TRENCH EXCAVATIONS FOR PROPOSED UTILITY INSTALLATION CONTRACTOR TO FILL AND COMPACT SOIL TO A MINIMUM OF 18" ABOVE TOP OF UTILITY WHERE APPLICABLE.
 - CONTRACTOR TO INSTALL CURB INLET BLANKET DRAINS AT ALL CURB INLETS. SEE DETAIL ON SHEET C200.
 - SEE SEPARATE SET OF PUBLIC IMPROVEMENT PLANS FOR SWS PLAN AND PROFILE OF SWS LINE 1 FOR PUBLIC STORM SEWER RELOCATION WORK.
 - SEE ELECTRICAL PLANS FOR POWER SERVICES TO SLIDING GATE OPERATOR AND KEY CARD.



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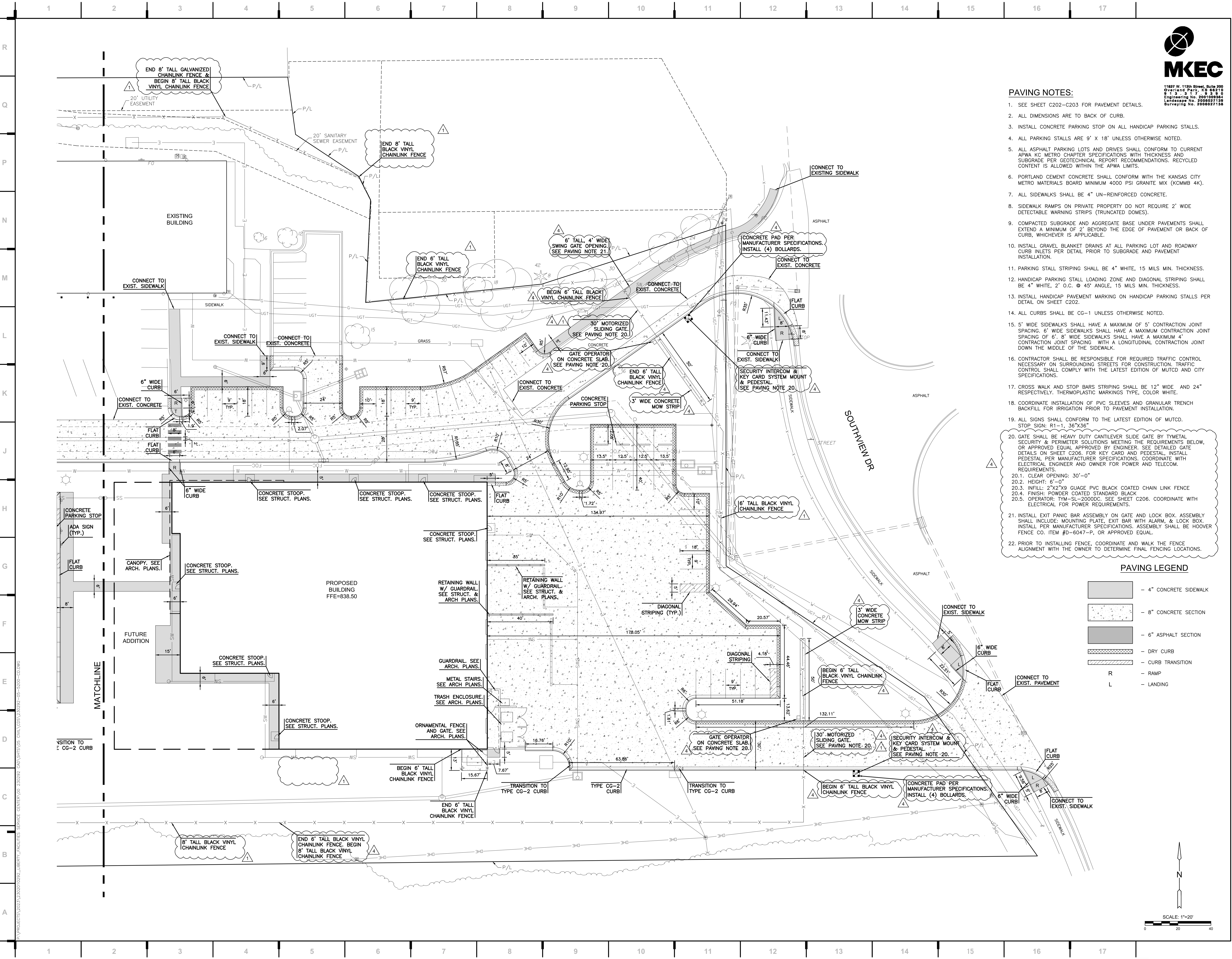
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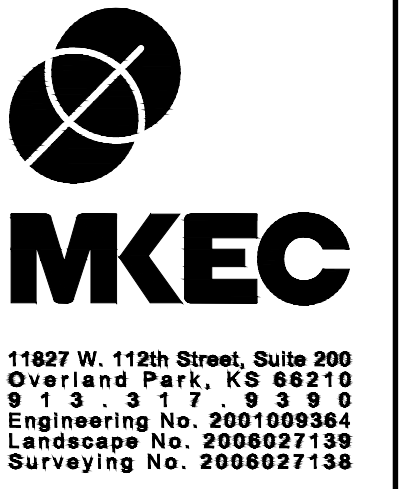
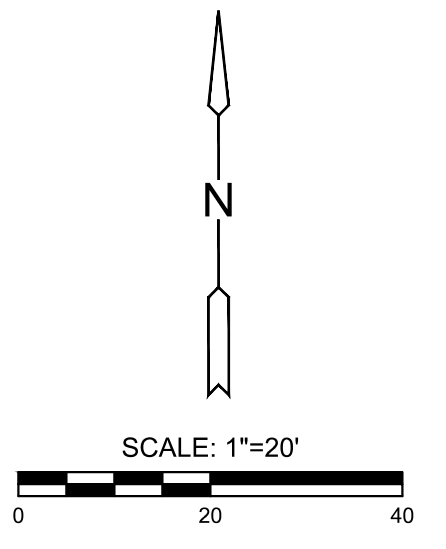
C104



- PAVING NOTES:**
- SEE SHEET C202-C203 FOR PAVEMENT DETAILS.
 - ALL DIMENSIONS ARE TO BACK OF CURB.
 - INSTALL CONCRETE PARKING STOP ON ALL HANDICAP PARKING STALLS.
 - ALL PARKING STALLS ARE 9' X 18' UNLESS OTHERWISE NOTED.
 - ALL ASPHALT PARKING LOTS AND DRIVES SHALL CONFORM TO CURRENT APWA KC METRO CHAPTER SPECIFICATIONS WITH THICKNESS AND SUBGRADE PER GEOTECHNICAL REPORT RECOMMENDATIONS. RECYCLED CONTENT IS ALLOWED WITHIN THE APWA LIMITS.
 - PORTLAND CEMENT CONCRETE SHALL CONFORM WITH THE KANSAS CITY METRO MATERIALS BOARD MINIMUM 4000 PSI GRANITE MIX (KCMBB 4K).
 - ALL SIDEWALKS SHALL BE 4" UN-REINFORCED CONCRETE.
 - SIDEWALK RAMPS ON PRIVATE PROPERTY DO NOT REQUIRE 2' WIDE DETECTABLE WARNING STRIPS (TRUNCATED DOMES).
 - COMPACTED SUBGRADE AND AGGREGATE BASE UNDER PAVEMENTS SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, WHICHEVER IS APPLICABLE.
 - INSTALL GRAVEL BLANKET DRAINS AT ALL PARKING LOT AND ROADWAY CURB INLETS PER DETAIL PRIOR TO SUBGRADE AND PAVEMENT INSTALLATION.
 - PARKING STALL STRIPING SHALL BE 4" WHITE, 15 MILS MIN. THICKNESS.
 - HANDICAP PARKING STALL LOADING ZONE AND DIAGONAL STRIPING SHALL BE 4" WHITE, 2" O.C. @ 45° ANGLE, 15 MILS MIN. THICKNESS.
 - INSTALL HANDICAP PAVEMENT MARKING ON HANDICAP PARKING STALLS PER DETAIL ON SHEET C202.
 - ALL CURBS SHALL BE CG-1 UNLESS OTHERWISE NOTED.
 - 5' WIDE SIDEWALKS SHALL HAVE A MAXIMUM OF 5' CONTRACTION JOINT SPACING. 6' WIDE SIDEWALKS SHALL HAVE A MAXIMUM CONTRACTION JOINT SPACING OF 6'. 8' WIDE SIDEWALKS SHALL HAVE A MAXIMUM 4' CONTRACTION JOINT SPACING WITH A LONGITUDINAL CONTRACTION JOINT DOWN THE MIDDLE OF THE SIDEWALK.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TRAFFIC CONTROL NECESSARY ON SURROUNDING STREETS FOR CONSTRUCTION. TRAFFIC CONTROL SHALL COMPLY WITH THE LATEST EDITION OF MUTCD AND CITY SPECIFICATIONS.
 - CROSS WALK AND STOP BARS STRIPING SHALL BE 12" WIDE AND 24" RESPECTIVELY. THERMOPLASTIC MARKINGS TYPE, COLOR WHITE.
 - COORDINATE INSTALLATION OF PVC SLEEVES AND GRANULAR TRENCH BACKFILL FOR IRRIGATION PRIOR TO PAVEMENT INSTALLATION.
 - ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF MUTCD. STOP SIGN: R1-1, 36"X36"
 - GATE SHALL BE HEAVY DUTY CANTILEVER SLIDE GATE BY TYPETAL SECURITY & PERIMETER SOLUTIONS MEETING THE REQUIREMENTS BELOW, OR APPROVED EQUAL APPROVED BY ENGINEER. SEE DETAILED GATE DETAILS ON SHEET C206. FOR KEY CARD AND PEDESTAL, INSTALL PEDESTAL PER MANUFACTURER SPECIFICATIONS. COORDINATE WITH ELECTRICAL ENGINEER AND OWNER FOR POWER AND TELECOM. REQUIREMENTS.
 - 20.1. CLEAR OPENING: 30'-0"
 - 20.2. HEIGHT: 6'-0"
 - 20.3. INFILL: 2"x2"x9 GAUGE PVC BLACK COATED CHAIN LINK FENCE
 - 20.4. FINISH: POWDER COATED STANDARD BLACK
 - 20.5. OPERATOR: TYM-SL-2000DC. SEE SHEET C206. COORDINATE WITH ELECTRICAL FOR POWER REQUIREMENTS.
 - INSTALL EXIT PANIC BAR ASSEMBLY ON GATE AND LOCK BOX. ASSEMBLY SHALL INCLUDE: MOUNTING PLATE, EXIT BAR WITH ALARM, & LOCK BOX. INSTALL PER MANUFACTURER SPECIFICATIONS. ASSEMBLY SHALL BE HOOVER FENCE CO. ITEM #D-6047-P, OR APPROVED EQUAL.
 - PRIOR TO INSTALLING FENCE, COORDINATE AND WALK THE FENCE ALIGNMENT WITH THE OWNER TO DETERMINE FINAL FENCING LOCATIONS.

PAVING LEGEND

	4" CONCRETE SIDEWALK
	8" CONCRETE SECTION
	6" ASPHALT SECTION
	DRY CURB
	CURB TRANSITION
R	RAMP
L	LANDING



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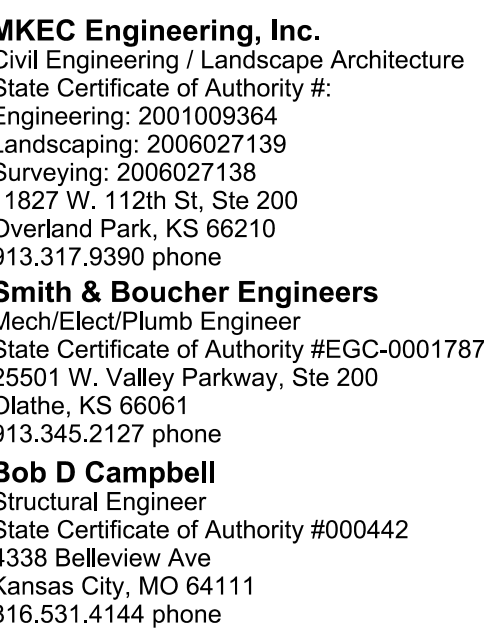
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1	ADDENDUM 1	10.20.2023
4	ADDENDUM 4	11.01.2023



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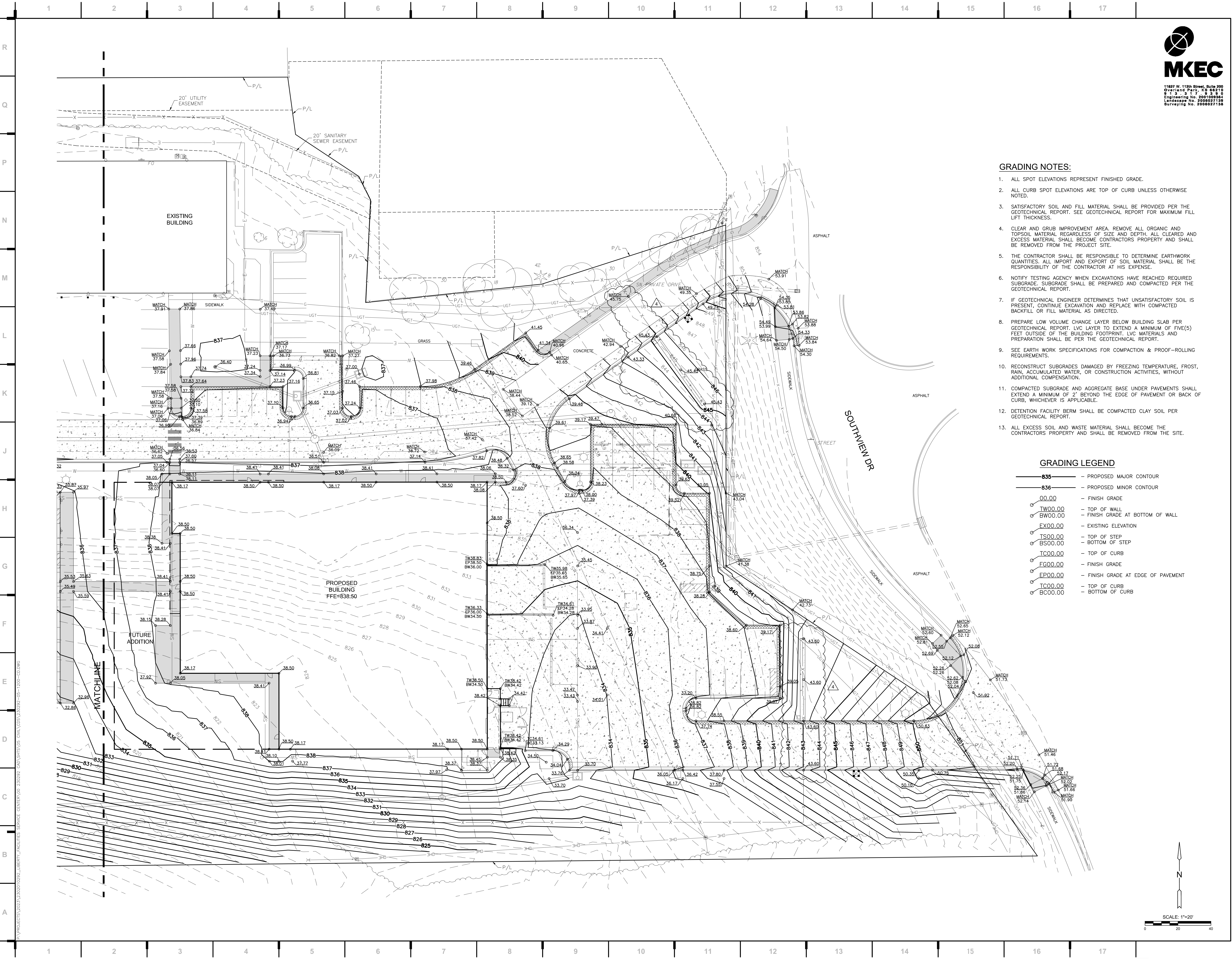
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 - 4" CONCRETE SIDEWALK
 - 8" CONCRETE SECTION
 - 6" ASPHALT SECTION
 - DRY CURB
 - CURB TRANSITION
R - RAMP
L - LANDING



C110



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GRADING NOTES:

- ALL SPOT ELEVATIONS REPRESENT FINISHED GRADE.
- ALL CURB SPOT ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED.
- SATISFACTORY SOIL AND FILL MATERIAL SHALL BE PROVIDED PER THE GEOTECHNICAL REPORT. SEE GEOTECHNICAL REPORT FOR MAXIMUM FILL LIFT THICKNESS.
- CLEAR AND GRUB IMPROVEMENT AREA. REMOVE ALL ORGANIC AND TOPSOIL MATERIAL REGARDLESS OF SIZE AND DEPTH. ALL CLEARED AND EXCESS MATERIAL SHALL BECOME CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE EARTHWORK QUANTITIES. ALL IMPORT AND EXPORT OF SOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.
- NOTIFY TESTING AGENCY WHEN EXCAVATIONS HAVE REACHED REQUIRED SUBGRADE. SUBGRADE SHALL BE PREPARED AND COMPACTED PER THE GEOTECHNICAL REPORT.
- IF GEOTECHNICAL ENGINEER DETERMINES THAT UNSATISFACTORY SOIL IS PRESENT, CONTINUE EXCAVATION AND REPLACE WITH COMPACTED BACKFILL OR FILL MATERIAL AS DIRECTED.
- PREPARE LOW VOLUME CHANGE LAYER BELOW BUILDING SLAB PER GEOTECHNICAL REPORT. LVC LAYER TO EXTEND A MINIMUM OF FIVE(5) FEET OUTSIDE OF THE BUILDING FOOTPRINT. LVC MATERIALS AND PREPARATION SHALL BE PER THE GEOTECHNICAL REPORT.
- SEE EARTH WORK SPECIFICATIONS FOR COMPACTION & PROOF-ROLLING REQUIREMENTS.
- RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURE, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES, WITHOUT ADDITIONAL COMPENSATION.
- COMPACTED SUBGRADE AND AGGREGATE BASE UNDER PAVEMENTS SHALL EXTEND A MINIMUM OF 2' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, WHICHEVER IS APPLICABLE.
- DETENTION FACILITY BERM SHALL BE COMPACTED CLAY SOIL PER GEOTECHNICAL REPORT.
- ALL EXCESS SOIL AND WASTE MATERIAL SHALL BECOME THE CONTRACTORS PROPERTY AND SHALL BE REMOVED FROM THE SITE.

GRADING LEGEND

- 835** — PROPOSED MAJOR CONTOUR
- 836** — PROPOSED MINOR CONTOUR
- 00.00** — FINISH GRADE
- TW00.00** — TOP OF WALL
- BW00.00** — FINISH GRADE AT BOTTOM OF WALL
- EX00.00** — EXISTING ELEVATION
- TS00.00** — TOP OF STEP
- BS00.00** — BOTTOM OF STEP
- TC00.00** — TOP OF CURB
- FG00.00** — FINISH GRADE
- EP00.00** — FINISH GRADE AT EDGE OF PAVEMENT
- TC00.00** — TOP OF CURB
- BC00.00** — BOTTOM OF CURB

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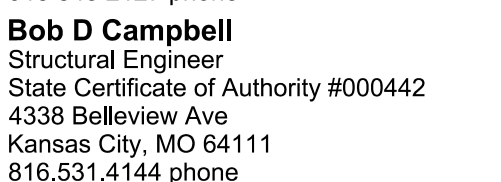
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BRADEN L. TAYLOR, P.E.
LISC. #2021001896

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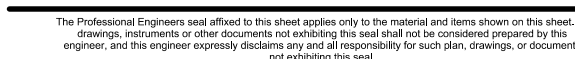


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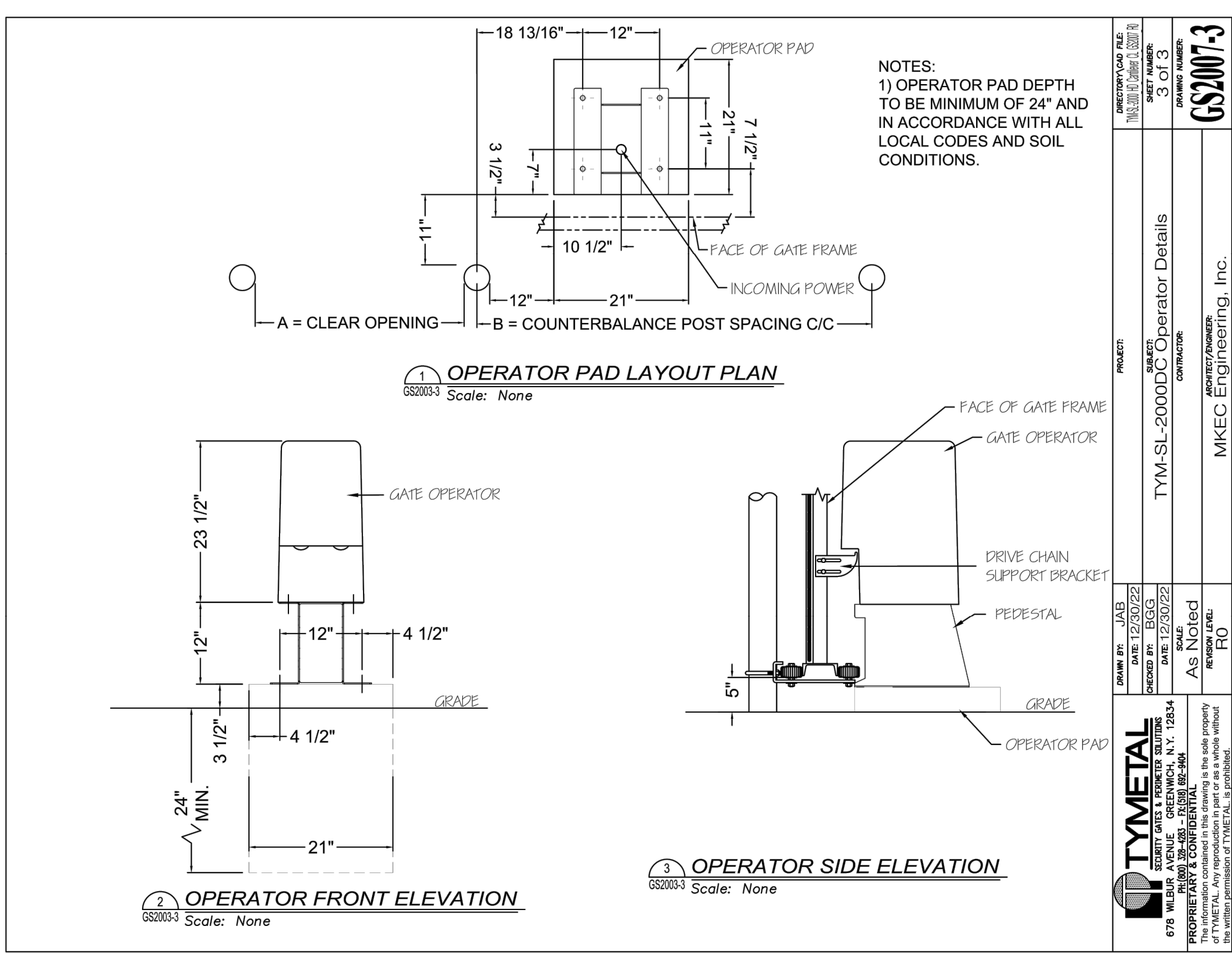
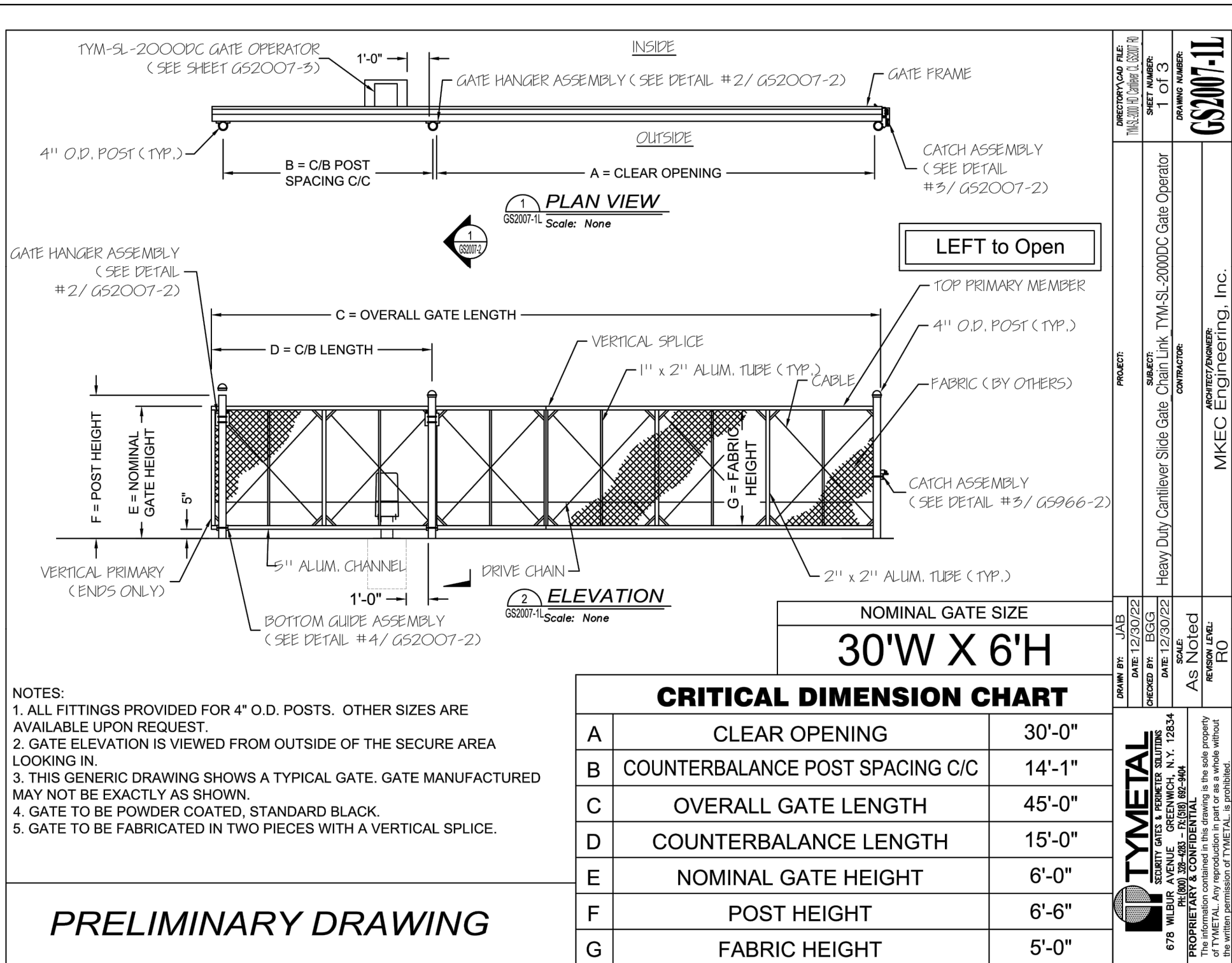
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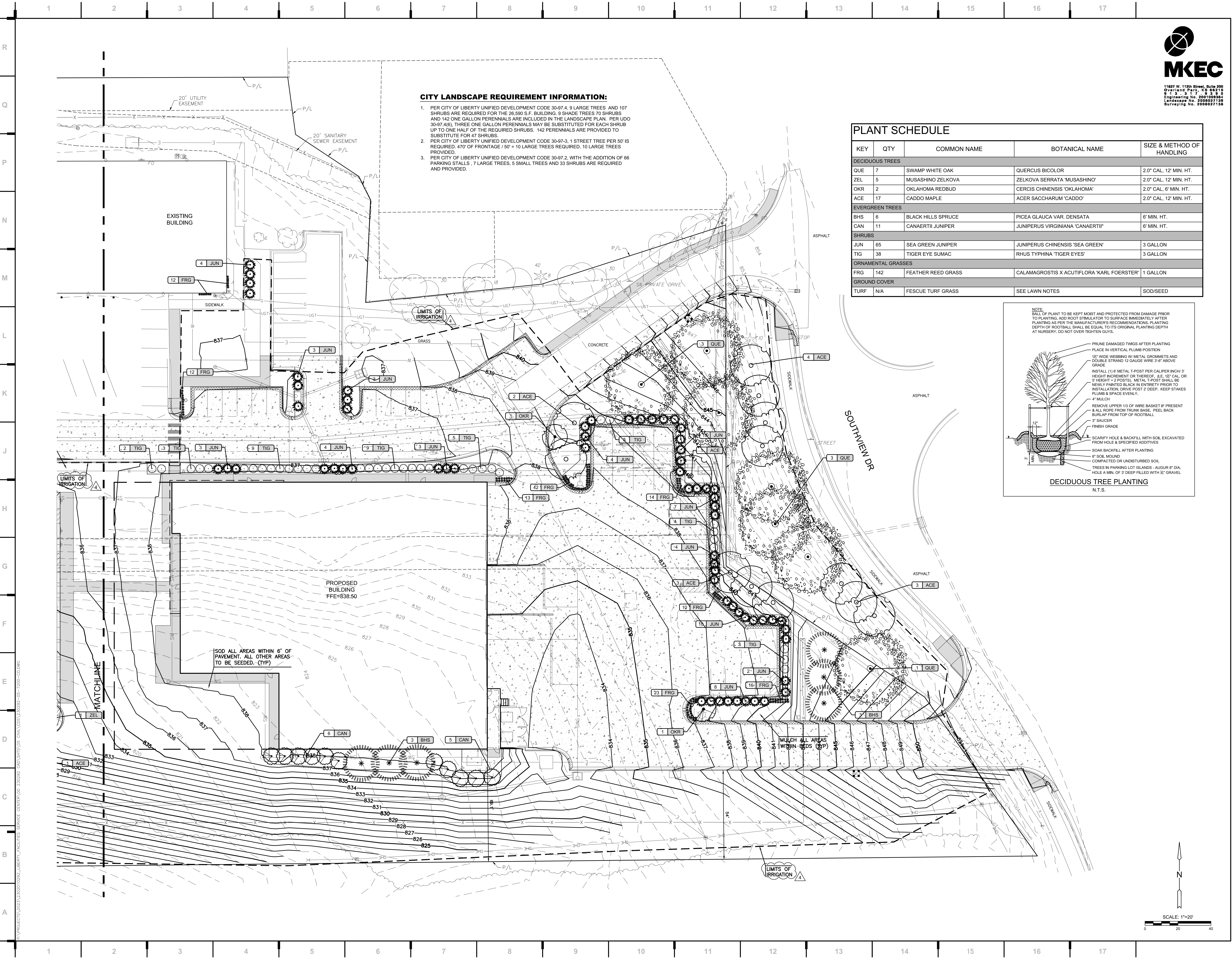
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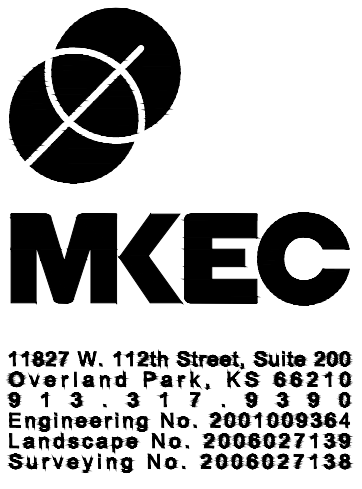
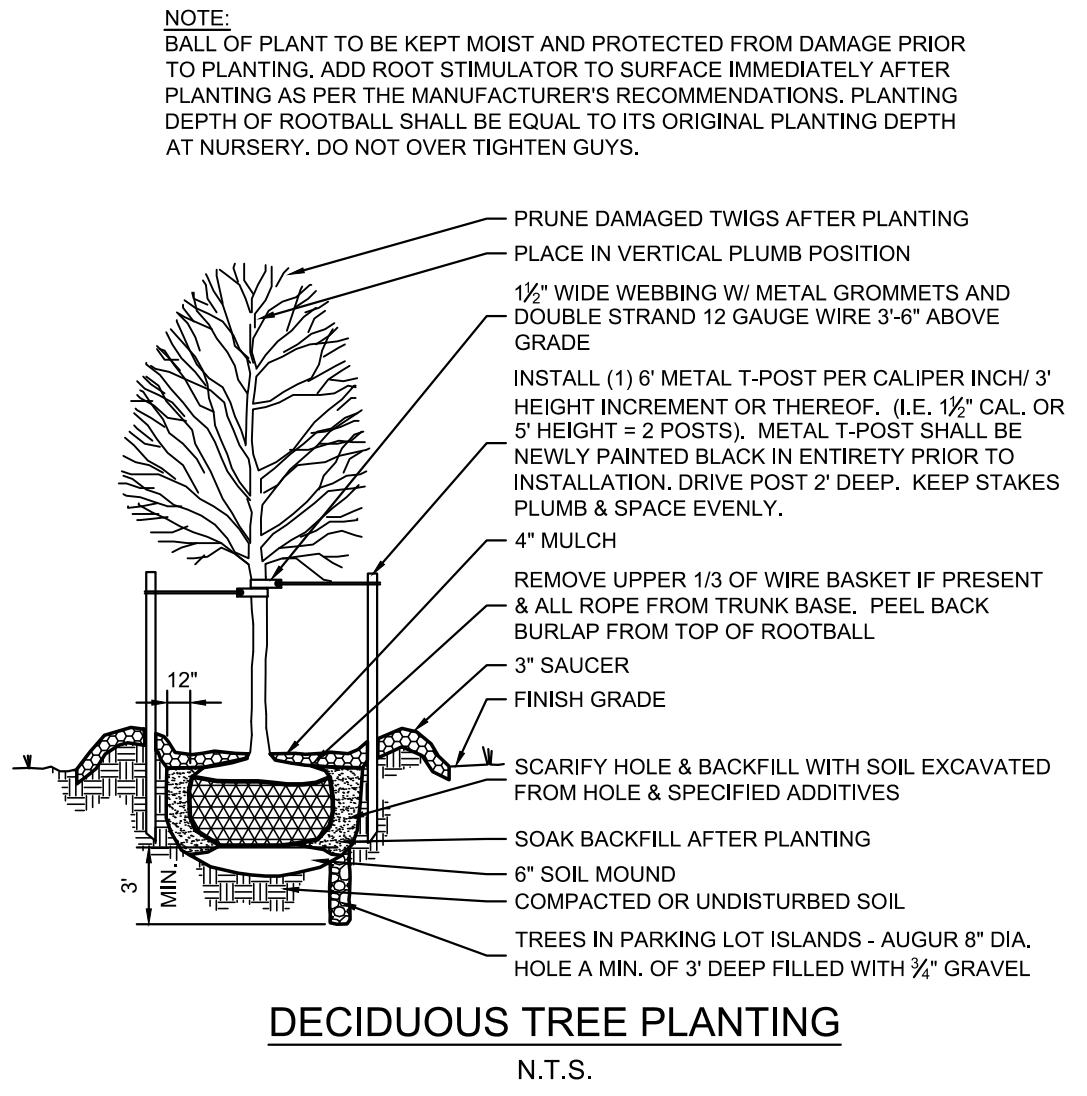


CITY LANDSCAPE REQUIREMENT INFORMATION:

- 1. PER CITY OF LIBERTY UNIFIED DEVELOPMENT CODE 30-97.4, 9 LARGE TREES AND 107 SHRUBS ARE REQUIRED FOR THE 26,590 S.F. BUILDING. 9 SHADE TREES 70 SHRUBS AND 142 ONE GALLON PERENNIALS ARE INCLUDED IN THE LANDSCAPE PLAN. PER UDO 30-97.4(6), THREE ONE GALLON PERENNIALS MAY BE SUBSTITUTED FOR EACH SHRUB UP TO ONE HALF OF THE REQUIRED SHRUBS. 142 PERENNIALS ARE PROVIDED TO SUBSTITUTE FOR 47 SHRUBS.
- 2. PER CITY OF LIBERTY UNIFIED DEVELOPMENT CODE 30-97-3, 1 STREET TREE PER 50' IS REQUIRED. 470' OF FRONTAGE / 50' = 10 LARGE TREES REQUIRED. 10 LARGE TREES PROVIDED.
- 3. PER CITY OF LIBERTY UNIFIED DEVELOPMENT CODE 30-97.2, WITH THE ADDITION OF 66 PARKING STALLS, 7 LARGE TREES, 5 SMALL TREES AND 33 SHRUBS ARE REQUIRED AND PROVIDED.

PLANT SCHEDULE

KEY	QTY	COMMON NAME	BOTANICAL NAME	SIZE & METHOD OF HANDLING
DECIDUOUS TREES				
QUE	7	SWAMP WHITE OAK	QUERCUS BICOLOR	2.0" CAL, 12' MIN. HT.
ZEL	5	MUSASHINO ZELKOVA	ZELKOVA SERRATA 'MUSASHINO'	2.0" CAL, 12' MIN. HT.
OKR	2	OKLAHOMA REDBUD	CERCIS CHINENSIS 'OKLAHOMA'	2.0" CAL, 6' MIN. HT.
ACE	17	CADDO MAPLE	ACER SACCHARUM 'CADDO'	2.0" CAL, 12' MIN. HT.
EVERGREEN TREES				
BHS	6	BLACK HILLS SPRUCE	PICEA GLAUCA VAR. DENSATA	6' MIN. HT.
CAN	11	CANAERTII JUNIPER	JUNIPERUS VIRGINIANA 'CANAERTII'	6' MIN. HT.
SHRUBS				
JUN	65	SEA GREEN JUNIPER	JUNIPERUS CHINENSIS 'SEA GREEN'	3 GALLON
TIG	38	TIGER EYE SUMAC	RHUS TYPHINA 'TIGER EYES'	3 GALLON
ORNAMENTAL GRASSES				
FRG	142	FEATHER REED GRASS	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	1 GALLON
GROUND COVER				
TURF	N/A	FESCUE TURF GRASS	SEE LAWN NOTES	SOD/SEED



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STATE OF MISSOURI
BRIAN J. HOCHSTEIN, L.A.
LISC. #2010013958

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CHECKED BY: BJH
DATE: 10.10.2023

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GENERAL LANDSCAPE NOTES

1.

THE LANDSCAPE CONTRACTOR SHOULD READ ALL LANDSCAPE PLANS, SPECIFICATIONS AND VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. IF A DISCREPANCY BETWEEN PLANT QUANTITIES SHOWN ON PLANS AND WITHIN THE PLANT SCHEDULE EXIST THE PLANS QUANTITIES SHALL BE USED. PLANT SCHEDULE QUANTITIES FOR INFORMATION ONLY.

2.

ANY AND ALL QUESTIONS CONCERNING THE LANDSCAPE PLANS AND SPECIFICATIONS SHALL BE DIRECTED TO THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT AT 913-317-9390.

3.

THE LANDSCAPE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES (INCLUDING THOSE INDICATED ON THE PLAN) PRIOR TO INSTALLATION OF PLANT MATERIAL.

4.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MULCHING, AND OTHER REQUIREMENTS OF PLANT MATERIALS WHILE THEY ARE TEMPORARILY STORED ON OR OFF SITE.

5.

THE LANDSCAPE CONTRACTOR SHALL COORDINATE LAYOUT OF PLANTING BEDS, PLANT MASSING, STAKED LOCATION OF TREES AND INSTALLATION OF PLANT MATERIAL WITH OWNER PRIOR TO COMMENCEMENT OF WORK.

6.

ALL PLANT MATERIAL (EXCEPT SHADE TREES) IS DELINEATED AT MATURE SIZE OF PLANT MATERIAL. SHADE TREES ARE DELINEATED AT 85% OF ACTUAL MATURE SIZE.

7.

ALL PLANT MATERIALS MEET THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1996) PER THE AMERICAN ASSOCIATION OF NURSERYMEN.

8.

PER OWNER'S DIRECTION, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT ALL PLANT MATERIAL AT THE NURSERY, PRIOR TO DIGGING.

9.

AREAS DISTURBED AREAS ARE TO RECEIVE SOD AND SEED AS FOLLOWS:
SOD & SEED: FESCUE TURF. SUBMIT SPECIES TO LANDSCAPE ARCHITECT FOR REVIEW.
FERTILIZER: HAVE SOIL TESTED TO OBTAIN RECOMMENDED SOIL AMENDMENTS FOR THE GRASSES LISTED. REPORT RECOMMENDATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE ANY APPLICATION OF FERTILIZER IS MADE.

10.

CONDUCT PLANTING UNDER FAVORABLE WEATHER CONDITIONS DURING EITHER THE SPRING PLANTING SEASON, MARCH 1ST TO JUNE 1ST, OR THE FALL PLANTING SEASON, SEPTEMBER 30TH UNTIL FREEZING OF THE GROUND. DURING THE FALL PLANTING SEASON, CONIFEROUS MATERIAL PLANTING SHALL BE CONDUCTED AUGUST 15TH TO OCTOBER 1ST. DEVIATION FROM THE ABOVE PLANTING DATES WILL ONLY BE PERMITTED WITH APPROVAL IN WRITING BY THE LANDSCAPE ARCHITECT.

11.

THE PLANTING SOIL MIXTURE FOR ALL TREE PLANTINGS SHALL INCLUDE SOIL EXCAVATED FROM THE HOLE. RATIO: 50% VIRGIN SOIL + 50% AMENDED TOP SOIL.

12.

ROOT STIMULATOR SHALL BE APPLIED TO ALL PLANT MATERIALS WITH THE EXCEPTION OF LAWN AREAS. APPLY AS PER THE MANUFACTURERS RECOMMENDATIONS.

13.

THE LANDSCAPE CONTRACTOR SHALL RESTORE FINISH GRADES IN ALL PLANTING AREAS (PER GRADING PLANS) WHICH MAY HAVE BEEN DISTURBED DURING PLANTING OPERATIONS.

14.

ALL TREE SAUCERS AND PLANTING BEDS ARE TO BE MULCHED WITH A MINIMUM OF 4" DOUBLE-GROUND OAK MULCH (COLOR DIED); COLOR TO BE 'JAVA BROWN'. ALL PLANTING BEDS SHALL HAVE WEED BARRIER MAT BELOW MULCH LAYER AND CONTRACTOR TO SUBMIT WEED BARRIER PRODUCT TO LANDSCAPE ARCHITECT FOR REVIEW. WHERE PLANTING BEDS ARE ADJACENT TO WALKS AND CURBS THE SOIL LEVEL SHALL BE 4" LOWER TO ALLOW FOR MULCH LAYER. WHERE SOD IS INDICATED, ITS THICKNESS SHALL ALSO BE ACCOUNTED FOR SO THAT THE SOIL SURFACE IN THE SOD IS 1/2" BELOW THE HARDSCAPE SURFACE.

15.

ALL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE SUCH AS TREFLAN OR EQUAL. APPLY AS PER MANUFACTURER'S RECOMMENDATION. THE PRE-EMERGENT SHALL NOT BE APPLIED UNTIL AFTER ALL PLANTING WITHIN THESE AREAS IS COMPLETE, BUT BEFORE THESE AREAS ARE MULCHED. DO NOT DISTURB AREAS AFTER APPLICATION. WATER AS DIRECTED.

16.

MULCH, STAKES, GUY WIRE, PRE-EMERGENT HERBICIDES, ETC. SHALL BE SUBSIDIARY TO INDIVIDUAL PLANTS.

17.

LANDSCAPE EDGING: ALL PLANTING BEDS ABUTTING LAWN AREAS SHALL BE EDGED WITH BLACK STEEL EDGING 3/8" X 4" X 12" WITH 12" STAKES.

18.

ALL SLOPES THAT EXCEED A 3:1 GRADE SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET - NORTH AMERICAN GREEN S150. INSTALL AS PER THE MANUFACTURER'S RECOMMENDATIONS.

19.

LABEL EACH TREE AND SHRUB WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTH BOTANICAL AND COMMON NAME. LABEL EACH ORNAMENTAL GRASS, GROUNDCOVER, PERENNIAL, AND ANNUAL WITH THE LABEL PROVIDED BY THE ORIGINAL GROWER OF THE PLANT. LABELS SHALL NOT BE REMOVED UNTIL AFTER PROVISIONAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT.

20.

STAKES AND GUYING SHALL BE REMOVED AT THE END OF ONE FULL GROWING SEASON.

21.

ALL PLANTING BEDS SHALL BE OVER EXCAVATED TO A DEPTH OF 2". ALL AREAS DENOTED WITH SOD (LAWN AREAS) SHALL HAVE A 6" MINIMUM TOPSOIL LAYER. TOPSOIL SHALL BE LAID IN 3" LIFTS. IN AREAS WHERE CONSTRUCTION GRADING HAS NOT OCCURRED AND THE VIRGIN GRADE YET EXIST, THE TOPSOIL LAYER MAY NOT BE REQUIRED BASED ON THE DECISION OF THE LANDSCAPE ARCHITECT.

22.

TOPSOIL SHALL BE FERTILE NATURAL TOPSOIL, TYPICAL OF THE LOCALITY, FOLLOWING MAJOR GRADING OPERATIONS THE FINA 8" LIFT SHALL BE OBTAINED FROM WEED-DRAINED AREAS. STOCKPILED TOPSOIL MAY BE USED. IT SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OR SLAG AND SHALL BE FREE OF STONES, LUMPS, STICKS, PLANTS OR THEIR ROOTS, TOXIC SUBSTANCES OR OTHER EXTRANEOUS MATTER THAT MAY BE HARMFUL TO PLANT GROWTH OR WOULD INTERFERE WITH FUTURE MAINTENANCE. TOPSOIL PH RANGE SHALL BE 5.5 TO 7.0.

23.

THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTION OF PLANT MATERIAL SPECIES WITHOUT THE WRITTEN APPROVAL BY THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT. ANY SUBSTITUTION WHICH HAS NOT BEEN APPROVED SHALL BE REMOVED AND IMMEDIATELY REPLACED WITH THE CORRECT PLANT AT LANDSCAPE CONTRACTOR'S EXPENSE.

24.

IN THE CONDITION WHERE THE PLANT MATERIAL HAS BEEN SUPPLIED BY THE OWNER THROUGH A PLANT PROCUREMENT PROGRAM WITH A MYKE PRO 2 YEAR WARRANTY, THE LANDSCAPE CONTRACTOR'S WARRANTY OF PLANT MATERIAL SHALL BEGIN FROM THE TIME OF HANDLING PLANT MATERIAL AT TIME OF DELIVERY THROUGH INSTALLATION AND END AFTER THE SUBSTANTIAL COMPLETION AND FINAL PUNCHLIST APPROVAL BY LANDSCAPE ARCHITECT.

25.

THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THE LANDSCAPE CONSTRUCTION.

26.

COORDINATE WITH THE OWNER AND GENERAL CONTRACTOR FOR SLEEVE LOCATIONS AND TIMING OF SLEEVE INSTALLATION. ALL SLEEVING REQUIRED UNDER HARDSCAPE SURFACES FOR THE IRRIGATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.

27.

THE CONTRACTOR SHALL FURNISH TOPSOIL; TOPSOIL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT. REFER TO SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.

28.

THE CONTRACTOR SHALL SUPPLY ALL PLANTING SOIL MIX.

29.

ALL LANDSCAPE AREAS SHALL BE IRRIGATED BY A PERMANENT IRRIGATION SYSTEM. IRRIGATION DESIGN SHALL BE DELEGATED DESIGN TO THE LANDSCAPE CONTRACTOR. IRRIGATION DESIGN SHALL IRRIGATE TURF AREAS WITH ROTOR HEADS AND ALL BEDS WILL BE IRRIGATED BY DRIP IRRIGATION OR POP UP HEADS. ALL TREES SHALL BE IRRIGATED BY DRIP IRRIGATION WITH A TREE RING AROUND EACH INDIVIDUAL TREES. NEW IRRIGATION SYSTEM SHALL BE INTEGRATED INTO EXISTING IRRIGATION SYSTEM WHERE POSSIBLE. IRRIGATION DESIGNER SHALL COORDINATE WITH SCHOOL DISTRICT FOR THE LOCATION OF NEW CONTROLLER AND ASSOCIATED IRRIGATION EQUIPMENT PRIOR TO COMMENCING DESIGN. CONTRACTOR SHALL SUBMIT PLANS, DETAILS AND SPECIFICATIONS DETAILING THE DESIGN OF THE SYSTEM TO THE LANDSCAPE ARCHITECT AND OWNER FOR REVIEW. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MONITOR INSTALLED PLANT MATERIAL FOR A MINIMUM OF 60 DAYS. TO ESTABLISH PLANT MATERIALS, WATER FROM SOURCES AND KEEP LAWN UNIFORMLY MOIST TO A DEPTH OF 4 INCHES. WATER LAWN AT A MINIMUM RATE OF (1) ONE INCHES PER WEEK AS NECESSARY TO PROVIDE A HEALTHY GREEN APPEARANCE. INSTALLATION, MAINTENANCE, AND MONITORING OF THE IRRIGATION SYSTEM WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR THE FIRST 60 DAYS. AT THE END OF THE ESTABLISHMENT PERIOD, CONTRACTOR IS TO ADJUST WATER CYCLING FOR MAINTENANCE OF PLANT MATERIAL. CONTRACTOR TO PROVIDE TRAINING TO DISTRICT AND SCHOOL MAINTENANCE STAFF IN THE OPERATION OF NEW IRRIGATION SYSTEM.

30.

IRRIGATION SYSTEM TO BE INSTALLED BY LANDSCAPE CONTRACTOR FOR APPROVAL BY SCHOOL DISTRICT AND LANDSCAPE ARCHITECT. SYSTEM SHALL BE INSTALLED TO LIMIT OVER SPRAY ONTO PAVEMENT AREAS. CONTRACTOR SHALL NOT INSTALL ANY PLANT MATERIAL UNTIL IRRIGATION IS IN PLACE. IRRIGATION SYSTEM CONTRACT SHALL INCLUDE INITIAL WINTER SHUT DOWN AND BLOW OUT. CONTRACTOR TO PROVIDE (1) ONE YEAR WARRANTY FOR IRRIGATION SYSTEM TO THE SCHOOL DISTRICT.

31.

ALL TOP SOIL AND PLANTING BED SOIL MIX SHALL BE APPROVED BY OWNER'S REPRESENTATIVES PRIOR TO INSTALLATION OF ANY SOD, SEED, PLANT MATERIALS AND MULCH.

32.

THE TYPICAL PLANTING SOIL MIX FOR ALL PLANTING BEDS (SHRUBS, ORNAMENTAL GRASS AND PERENNIAL BED AREAS) SHALL CONSIST OF THE FOLLOWING MAKE-UP UNLESS OTHERWISE INDICATED IN THESE PLANS:
- 80% TOPSOIL AS SPECIFIED
- 20% PREPARED ADDITIVES (BY VOLUME AS FOLLOWS):
 - 2 PARTS HUMUS AND/OR PEAT
 - 1 PART STERILIZED COW MANURE
 - 1 PART SHREDDED PINE BARK (BARK PIECES BETWEEN 3/4" AND 1 1/2" IN LENGTH/DIAMETER.
- COMMERCIAL FERTILIZER AS RECOMMENDED BY SOIL REPORT.
- LIME AS RECOMMENDED BY SOIL REPORT.

GENERAL LANDSCAPE NOTES

1.

THE LANDSCAPE CONTRACTOR SHOULD READ ALL LANDSCAPE PLANS, SPECIFICATIONS AND VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. IF A DISCREPANCY BETWEEN PLANT QUANTITIES SHOWN ON PLANS AND WITHIN THE PLANT SCHEDULE EXIST THE PLANS QUANTITIES SHALL BE USED. PLANT SCHEDULE QUANTITIES FOR INFORMATION ONLY.

2.

ANY AND ALL QUESTIONS CONCERNING THE LANDSCAPE PLANS AND SPECIFICATIONS SHALL BE DIRECTED TO THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT AT 913-317-9390.

3.

THE LANDSCAPE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES (INCLUDING THOSE INDICATED ON THE PLAN) PRIOR TO INSTALLATION OF PLANT MATERIAL.

4.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MULCHING, AND OTHER REQUIREMENTS OF PLANT MATERIALS WHILE THEY ARE TEMPORARILY STORED ON OR OFF SITE.

5.

THE LANDSCAPE CONTRACTOR SHALL COORDINATE LAYOUT OF PLANTING BEDS, PLANT MASSING, STAKED LOCATION OF TREES AND INSTALLATION OF PLANT MATERIAL WITH OWNER PRIOR TO COMMENCEMENT OF WORK.

6.

ALL PLANT MATERIAL (EXCEPT SHADE TREES) IS DELINEATED AT MATURE SIZE OF PLANT MATERIAL. SHADE TREES ARE DELINEATED AT 85% OF ACTUAL MATURE SIZE.

7.

ALL PLANT MATERIALS MEET THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1996) PER THE AMERICAN ASSOCIATION OF NURSERYMEN.

8.

PER OWNER'S DIRECTION, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT ALL PLANT MATERIAL AT THE NURSERY, PRIOR TO DIGGING.

9.

AREAS DISTURBED AREAS ARE TO RECEIVE SOD AND SEED AS FOLLOWS:
SOD & SEED: FESCUE TURF. SUBMIT SPECIES TO LANDSCAPE ARCHITECT FOR REVIEW.
FERTILIZER: HAVE SOIL TESTED TO OBTAIN RECOMMENDED SOIL AMENDMENTS FOR THE GRASSES LISTED. REPORT RECOMMENDATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE ANY APPLICATION OF FERTILIZER IS MADE.

10.

CONDUCT PLANTING UNDER FAVORABLE WEATHER CONDITIONS DURING EITHER THE SPRING PLANTING SEASON, MARCH 1ST TO JUNE 1ST, OR THE FALL PLANTING SEASON, SEPTEMBER 30TH UNTIL FREEZING OF THE GROUND. DURING THE FALL PLANTING SEASON, CONIFEROUS MATERIAL PLANTING SHALL BE CONDUCTED AUGUST 15TH TO OCTOBER 1ST. DEVIATION FROM THE ABOVE PLANTING DATES WILL ONLY BE PERMITTED WITH APPROVAL IN WRITING BY THE LANDSCAPE ARCHITECT.

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IRRIGATION SYSTEM TO BE INSTALLED BY LANDSCAPE CONTRACTOR FOR APPROVAL BY SCHOOL DISTRICT AND LANDSCAPE ARCHITECT. SYSTEM SHALL BE INSTALLED TO LIMIT OVER SPRAY ONTO PAVEMENT AREAS. CONTRACTOR SHALL NOT INSTALL ANY PLANT MATERIAL UNTIL IRRIGATION IS IN PLACE. IRRIGATION SYSTEM CONTRACT SHALL INCLUDE INITIAL WINTER SHUT DOWN AND BLOW OUT. CONTRACTOR TO PROVIDE (1) ONE YEAR WARRANTY FOR IRRIGATION SYSTEM TO THE SCHOOL DISTRICT.

31.

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32.

THE TYPICAL PLANTING SOIL MIX FOR ALL PLANTING BEDS (SHRUBS, ORNAMENTAL GRASS AND PERENNIAL BED AREAS) SHALL CONSIST OF THE FOLLOWING MAKE-UP UNLESS OTHERWISE INDICATED IN THESE PLANS:
- 80% TOPSOIL AS SPECIFIED
- 20% PREPARED ADDITIVES (BY VOLUME AS FOLLOWS):
 - 2 PARTS HUMUS AND/OR PEAT
 - 1 PART STERILIZED COW MANURE
 - 1 PART SHREDDED PINE BARK (BARK PIECES BETWEEN 3/4" AND 1 1/2" IN LENGTH/DIAMETER.
- COMMERCIAL FERTILIZER AS RECOMMENDED BY SOIL REPORT.
- LIME AS RECOMMENDED BY SOIL REPORT.

FESCUE TURF NOTES:

1.

INSTALL FESCUE TURF SOD OR SEED PER NOTES BELOW. A 6" SOD STRIP SHALL BE INSTALLED ADJACENT TO ALL PAVED AREAS AND ADJACENT TO BUILDING FOOTPRINT. ALL OTHER DISTURBED AREAS SHALL BE SEEDED.

2.

SUBMITTALS SHALL INCLUDE: PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED, CERTIFICATION OF SOD AS KANSAS STATE FESCUE TRIAL MIX, PRODUCT CERTIFICATES: FOR SOIL AMENDMENTS AND FERTILIZERS, SIGNED BY PRODUCT MANUFACTURER, MATERIAL TEST REPORTS: FOR EXISTING SURFACE SOIL AND IMPORTED TOPSOIL, AND PLANTING SCHEDULE: INDICATING ANTICIPATED PLANTING DATES FOR SOD INSTALLATION.

3.

INSTALLER QUALIFICATIONS: A QUALIFIED LANDSCAPE INSTALLER WHOSE WORK HAS RESULTED IN SUCCESSFUL LAWN ESTABLISHMENT.

4.

INSTALLER'S FIELD SUPERVISION: REQUIRE INSTALLER TO MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR ON PROJECT SITE WHEN PLANTING IS IN PROGRESS.

5.

REPORT SUITABILITY OF TOPSOIL FOR LAWN GROWTH. STATE RECOMMENDED QUANTITIES OF NITROGEN, PHOSPHORUS, AND POTASH NUTRIENTS AND SOIL AMENDMENTS TO BE ADDED TO PRODUCE SATISFACTORY TOPSOIL.

6.

DELIVERY, STORAGE, AND HANDLING FOR SOD: HARVEST, DELIVER, STORE, AND HANDLE SOD ACCORDING TO REQUIREMENTS IN TPI'S "SPECIFICATIONS FOR TURFGRASS SOD MATERIALS" AND "SPECIFICATIONS FOR TURFGRASS SOD TRANSPLANTING AND INSTALLATION" IN ITS "GUIDELINE SPECIFICATIONS TO TURFGRASS SODDING."

7.

LAWN MAINTENANCE: BEGIN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL ACCEPTABLE LAWN IS ESTABLISHED, BUT FOR NOT LESS THAN 60 DAYS FROM DATE OF SUBSTANTIAL COMPLETION. MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS TO PRODUCE A UNIFORMLY SMOOTH LAWN. WATERING: PROVIDE AND MAINTAIN TEMPORARY IRRIGATION SYSTEM TO CONVEY WATER FROM SOURCES AND TO KEEP LAWN UNIFORMLY MOIST TO A DEPTH OF 4 INCHES.

8.

WATER LAWN AT A MINIMUM RATE OF 1 INCH PER WEEK OR AS NECESSARY TO PROVIDE A HEALTHY GREEN APPEARANCE. A DEEP ROOT SYSTEM IS DESIRED THEREFORE DO NOT WATER LAWNS AFTER ESTABLISHMENT MORE THAN EVERY OTHER DAY.

9.

MOW LAWN AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 33 PERCENT OF GRASS HEIGHT. REMOVE NO MORE THAN 33 PERCENT OF GRASS-LEAF GROWTH IN INITIAL OR SUBSEQUENT MOWINGS. DO NOT DELAY MOWING UNTIL GRASS BLADES BEND OVER AND BECOME MATTED. DO NOT MOW WHEN GRASS IS WET. SCHEDULE INITIAL AND SUBSEQUENT MOWINGS TO MAINTAIN THE FOLLOWING GRASS HEIGHT: MOW GRASS 2 INCHES HIGH IN SPRING AND FALL AND 2 1/2 INCHES HIGH IN THE SUMMER. TRIM AND EDGE ALONG WALKS, WALLS, ETC.

10.

LAWN POSTFERTILIZATION: APPLY FERTILIZER AFTER INITIAL MOWING AND WHEN GRASS IS DRY.

11.

APPLY FERTILIZER 5 TIMES PER SEASON, SPRING: FERTILIZER PLUS WEED CONTROL FOR CRABGRASS, LATE SPRING: FERTILIZER PLUS WEED CONTROL FOR BROADLEAF WEEDS, SUMMER: FERTILIZER, EARLY FALL: FERTILIZER PLUS WEED CONTROL, LATE FALL: WINTERIZER.

12.

AERATE LAWN A MINIMUM OF ONCE PER YEAR.

13.

TURFGRASS SPECIES: GRASS SPECIES, BOTH SOD AND SEED, AS FOLLOWS, WITH NOT LESS THAN 95 PERCENT GERMINATION, NOT LESS THAN 85 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED: MOST CURRENT AVAILABLE KANSAS STATE FESCUE TRIAL MIX, RATED IN TOP 1/3 OF VARIETIES TESTED FOR VISUAL APPEARANCE AVERAGE THROUGHOUT THE YEAR OR APPROVED EQUAL.

14.

TOPSOIL: ASTM D 5268, PH RANGE OF 5.5 TO 7, A MINIMUM OF 4 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1 INCH OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

15.

TOPSOIL SOURCE: REUSE SURFACE SOIL STOCKPILED ON-SITE. VERIFY SUITABILITY OF STOCKPILED SURFACE SOIL TO PRODUCE TOPSOIL. CLEAN SURFACE SOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH. SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. OBTAIN TOPSOIL DISPLACED FROM NATURALLY WELL-DRAINED CONSTRUCTION OR MINING SITES WHERE TOPSOIL OCCURS AT LEAST 4 INCHES DEEP; DO NOT OBTAIN FROM BOGS OR MARSHES. TOPSOIL TO BE PLACED IN AN 8" LIFT IN ALL PLANTING BED AREAS.

16.

AMEND SOIL AS NECESSARY TO MEET TOPSOIL REQUIREMENTS OF ASTM D 5268.

17.

EXAMINE AREAS TO RECEIVE LAWNS AND GRASS FOR COMPLIANCE WITH REQUIREMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

18.

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES, TREES, SHRUBS, AND PLANTINGS FROM DAMAGE CAUSED BY PLANTING OPERATIONS. PROVIDE EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS. ELIMINATE COMPETING GRASS VEGETATION IN ALL AREAS TO BE IMPROVED WITH "ROUNDUP" OR AN APPROVED EQUAL ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. SEVERAL APPLICATIONS MAY BE NECESSARY. WORK TO REMOVE COMPETING VEGETATION, SHALL BEGIN SEVERAL MONTHS BEFORE SODDING OPERATIONS COMMENCE.

19.

LIMIT SOD AND SEED SUBGRADE PREPARATION TO AREAS TO BE PLANTED THE SAME OR FOLLOWING DAY. NEWLY GRADED AREAS: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY. APPLY FERTILIZER DIRECTLY TO SUBGRADE BEFORE LOOSENING. SPREAD TOPSOIL IF NECESSARY, APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND.

20.

LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION AND TURF OFF OWNER'S PROPERTY.

21.

PRIOR TO LAYING SOD OR SEEDING THE CONTRACTOR SHALL DEMONSTRATE TO THE OWNER AND OWNER'S REPRESENTATIVE THAT WATER IS AVAILABLE AND IN A WORKING ORDER TO ADEQUATELY COVER ALL SODDED AREAS. THE LANDSCAPE CONTRACTOR MUST COORDINATE WITH THE GENERAL CONTRACTOR AND OWNER, TO CONNECT TO BUILDING HOSE BIDS OR OTHER MEANS PRIOR TO SOD INSTALLATION. LAY SOD WITHIN 24 HOURS OF HARVESTING. DO NOT LAY SOD IF DORMANT OR IF GROUND IS FROZEN OR MUDDY.

22.

LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD; DO NOT STRIP OR OVERLAP. STAGGER SOD STRIPS OR PADS TO OFFSET JOINTS IN ADJACENT COURSES. AVOID DAMAGE TO SUBGRADE OR SOD DURING INSTALLATION. TAMP AND ROLL LIGHTLY TO ENSURE CONTACT WITH SUBGRADE. ELIMINATE AIR POCKETS, AND FORM A SMOOTH SURFACE. WORK SIFTED SOIL OR FINE SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD; REMOVE EXCESS TO AVOID SMOTHERING SOD AND ADJACENT GRASS. DO NOT ALLOW EDGES OF SOD TO TURN UP WHEN INSTALLING. LAY SOD ACROSS ANGLE OF SLOPES EXCEEDING 1:3. ANCHOR SOD ON SLOPES EXCEEDING 1:6 WITH WOOD PEGS OR STEEL STAPLES SPACED AS RECOMMENDED BY SOD MANUFACTURER BUT NOT LESS THAN 2 ANCHORS PER SOD STRIP TO PREVENT SLIPPAGE. SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1-1/2 INCHES BELOW SOD. SATISFACTORY SODDED LAWN: WITHIN 60 DAYS AND AT END OF MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, EVEN-COLORED, VIABLE LAWN HAS BEEN ESTABLISHED, FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.

23.

SEEDING OF LAWNS MAY BE ACCOMPLISHED BY HYDRAULIC, BROADCAST OR SEED DRILLING METHODS. CONTRACTOR TO SUBMIT SEEDING INSTALLATION PLAN WITH SEED INSTALLATION INSTRUCTIONS TO OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVE PRIOR TO INSTALLATION. SEEDING OPERATIONS SHALL INSTALL SEED AT RATES LISTED ON APPROVED SEED PRODUCT AND FOLLOWING APPROVAL BY OWNER'S REPRESENTATIVE.

24.

REESTABLISH LAWNS THAT DO NOT COMPLY WITH REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE SATISFACTORY. SATISFACTORY SODDED OR SEEDED LAWN: WITHIN 60 DAYS AND AT END OF MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING (90 PERCENT OVER ANY 10 SQ. FT. AND BARE SPOTS NOT EXCEEDING 5 BY 5 INCHES).

25.

PROMPTLY REMOVE SOIL AND DEBRIS CREATED BY LAWN WORK FROM PAVED AREAS. CLEAN WHEELS OF VEHICLES BEFORE LEAVING SITE TO AVOID TRACKING SOIL ONTO ROADS, WALKS, OR OTHER PAVED AREAS. ERECT BARRICADES AND WARNING SIGNS AS REQUIRED TO PROTECT NEWLY PLANTED AREAS FROM TRAFFIC. MAINTAIN BARRICADES THROUGHOUT MAINTENANCE PERIOD AND REMOVE AFTER LAWN IS ESTABLISHED. REMOVE EROSION CONTROL MEASURES AFTER GRASS ESTABLISHMENT PERIOD.

GENERAL LANDSCAPE NOTES

1.

THE LANDSCAPE CONTRACTOR SHOULD READ ALL LANDSCAPE PLANS, SPECIFICATIONS AND VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. IF A DISCREPANCY BETWEEN PLANT QUANTITIES SHOWN ON PLANS AND WITHIN THE PLANT SCHEDULE EXIST THE PLANS QUANTITIES SHALL BE USED. PLANT SCHEDULE QUANTITIES FOR INFORMATION ONLY.

2.

ANY AND ALL QUESTIONS CONCERNING THE LANDSCAPE PLANS AND SPECIFICATIONS SHALL BE DIRECTED TO THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT AT 913-317-9390.

3.

THE LANDSCAPE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES (INCLUDING THOSE INDICATED ON THE PLAN) PRIOR TO INSTALLATION OF PLANT MATERIAL.

4.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MULCHING, AND OTHER REQUIREMENTS OF PLANT MATERIALS WHILE THEY ARE TEMPORARILY STORED ON OR OFF SITE.

5.

THE LANDSCAPE CONTRACTOR SHALL COORDINATE LAYOUT OF PLANTING BEDS, PLANT MASSING, STAKED LOCATION OF TREES AND INSTALLATION OF PLANT MATERIAL WITH OWNER PRIOR TO COMMENCEMENT OF WORK.

6.

ALL PLANT MATERIAL (EXCEPT SHADE TREES) IS DELINEATED AT MATURE SIZE OF PLANT MATERIAL. SHADE TREES ARE DELINEATED AT 85% OF ACTUAL MATURE SIZE.

7.

ALL PLANT MATERIALS MEET THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1996) PER THE AMERICAN ASSOCIATION OF NURSERYMEN.

8.

PER OWNER'S DIRECTION, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT ALL PLANT MATERIAL AT THE NURSERY, PRIOR TO DIGGING.

9.

AREAS DISTURBED AREAS ARE TO RECEIVE SOD AND SEED AS FOLLOWS:
SOD & SEED: FESCUE TURF. SUBMIT SPECIES TO LANDSCAPE ARCHITECT FOR REVIEW.
FERTILIZER: HAVE SOIL TESTED TO OBTAIN RECOMMENDED SOIL AMENDMENTS FOR THE GRASSES LISTED. REPORT RECOMMENDATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE ANY APPLICATION OF FERTILIZER IS MADE.

10.

CONDUCT PLANTING UNDER FAVORABLE WEATHER CONDITIONS DURING EITHER THE SPRING PLANTING SEASON, MARCH 1ST TO JUNE 1ST, OR THE FALL PLANTING SEASON, SEPTEMBER 30TH UNTIL FREEZING OF THE GROUND. DURING THE FALL PLANTING SEASON, CONIFEROUS MATERIAL PLANTING SHALL BE CONDUCTED AUGUST 15TH TO OCTOBER 1ST. DEVIATION FROM THE ABOVE PLANTING DATES WILL ONLY BE PERMITTED WITH APPROVAL IN WRITING BY THE LANDSCAPE ARCHITECT.

11.

THE PLANTING SOIL MIXTURE FOR ALL TREE PLANTINGS SHALL INCLUDE SOIL EXCAVATED FROM THE HOLE. RATIO: 50% VIRGIN SOIL + 50% AMENDED TOP SOIL.

12.

ROOT STIMULATOR SHALL BE APPLIED TO ALL PLANT MATERIALS WITH THE EXCEPTION OF LAWN AREAS. APPLY AS PER THE MANUFACTURERS RECOMMENDATIONS.

13.

THE LANDSCAPE CONTRACTOR SHALL RESTORE FINISH GRADES IN ALL PLANTING AREAS (PER GRADING PLANS) WHICH MAY HAVE BEEN DISTURBED DURING PLANTING OPERATIONS.

14.

ALL TREE SAUCERS AND PLANTING BEDS ARE TO BE MULCHED WITH A MINIMUM OF 4" DOUBLE-GROUND OAK MULCH (COLOR DIED); COLOR TO BE 'JAVA BROWN'. ALL PLANTING BEDS SHALL HAVE WEED BARRIER MAT BELOW MULCH LAYER AND CONTRACTOR TO SUBMIT WEED BARRIER PRODUCT TO LANDSCAPE ARCHITECT FOR REVIEW. WHERE PLANTING BEDS ARE ADJACENT TO WALKS AND CURBS THE SOIL LEVEL SHALL BE 4" LOWER TO ALLOW FOR MULCH LAYER. WHERE SOD IS INDICATED, ITS THICKNESS SHALL ALSO BE ACCOUNTED FOR SO THAT THE SOIL SURFACE IN THE SOD IS 1/2" BELOW THE HARDSCAPE SURFACE.

15.

ALL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE SUCH AS TREFLAN OR EQUAL. APPLY AS PER MANUFACTURER'S RECOMMENDATION. THE PRE-EMERGENT SHALL NOT BE APPLIED UNTIL AFTER ALL PLANTING WITHIN THESE AREAS IS COMPLETE, BUT BEFORE THESE AREAS ARE MULCHED. DO NOT DISTURB AREAS AFTER APPLICATION. WATER AS DIRECTED.

16.

MULCH, STAKES, GUY WIRE, PRE-EMERGENT HERBICIDES, ETC. SHALL BE SUBSIDIARY TO INDIVIDUAL PLANTS.

17.

LANDSCAPE EDGING: ALL PLANTING BEDS ABUTTING LAWN AREAS SHALL BE EDGED WITH BLACK STEEL EDGING 3/8" X 4" X 12" WITH 12" STAKES.

18.

ALL SLOPES THAT EXCEED A 3:1 GRADE SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET - NORTH AMERICAN GREEN S150. INSTALL AS PER THE MANUFACTURER'S RECOMMENDATIONS.

19.

LABEL EACH TREE AND SHRUB WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTH BOTANICAL AND COMMON NAME. LABEL EACH ORNAMENTAL GRASS, GROUNDCOVER, PERENNIAL, AND ANNUAL WITH THE LABEL PROVIDED BY THE ORIGINAL GROWER OF THE PLANT. LABELS SHALL NOT BE REMOVED UNTIL AFTER PROVISIONAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT.

20.

STAKES AND GUYING SHALL BE REMOVED AT THE END OF ONE FULL GROWING SEASON.

21.

ALL PLANTING BEDS SHALL BE OVER EXCAVATED TO A DEPTH OF 2". ALL AREAS DENOTED WITH SOD (LAWN AREAS) SHALL HAVE A 6" MINIMUM TOPSOIL LAYER. TOPSOIL SHALL BE LAID IN 3" LIFTS. IN AREAS WHERE CONSTRUCTION GRADING HAS NOT OCCURRED AND THE VIRGIN GRADE YET EXIST, THE TOPSOIL LAYER MAY NOT BE REQUIRED BASED ON THE DECISION OF THE LANDSCAPE ARCHITECT.

22.

TOPSOIL SHALL BE FERTILE NATURAL TOPSOIL, TYPICAL OF THE LOCALITY, FOLLOWING MAJOR GRADING OPERATIONS THE FINAL 8" LIFT SHALL BE OBTAINED FROM WEED-DRAINED AREAS. STOCKPILED TOPSOIL MAY BE USED. IT SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OR SLAG AND SHALL BE FREE OF STONES, LUMPS, STICKS, PLANTS OR THEIR ROOTS, TOXIC SUBSTANCES OR OTHER EXTRANEOUS MATTER THAT MAY BE HARMFUL TO PLANT GROWTH OR WOULD INTERFERE WITH FUTURE MAINTENANCE. TOPSOIL PH RANGE SHALL BE 5.5 TO 7.0.

23.

THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTION OF PLANT MATERIAL SPECIES WITHOUT THE WRITTEN APPROVAL BY THE OWNER AND / OR MKEC LANDSCAPE ARCHITECT. ANY SUBSTITUTION WHICH HAS NOT BEEN APPROVED SHALL BE REMOVED AND IMMEDIATELY REPLACED WITH THE CORRECT PLANT AT LANDSCAPE CONTRACTOR'S EXPENSE.

24.

IN THE CONDITION WHERE THE PLANT MATERIAL HAS BEEN SUPPLIED BY THE OWNER THROUGH A PLANT PROCUREMENT PROGRAM WITH A MYKE PRO 2 YEAR WARRANTY, THE LANDSCAPE CONTRACTOR'S WARRANTY OF PLANT MATERIAL SHALL BEGIN FROM THE TIME OF HANDLING PLANT MATERIAL AT TIME OF DELIVERY THROUGH INSTALLATION AND END AFTER THE SUBSTANTIAL COMPLETION AND FINAL PUNCHLIST APPROVAL BY LANDSCAPE ARCHITECT.

25.

THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THE LANDSCAPE CONSTRUCTION.

26.

COORDINATE WITH THE OWNER AND GENERAL CONTRACTOR FOR SLEEVE LOCATIONS AND TIMING OF SLEEVE INSTALLATION. ALL SLEEVING REQUIRED UNDER HARDSCAPE SURFACES FOR THE IRRIGATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.

27.

THE CONTRACTOR SHALL FURNISH TOPSOIL; TOPSOIL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT. REFER TO SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.

28.

THE CONTRACTOR SHALL SUPPLY ALL PLANTING SOIL MIX.

29.

ALL LANDSCAPE AREAS SHALL BE IRRIGATED BY A PERMANENT IRRIGATION SYSTEM. IRRIGATION DESIGN SHALL BE DELEGATED DESIGN TO THE LANDSCAPE CONTRACTOR. IRRIGATION DESIGN SHALL IRRIGATE TURF AREAS WITH ROTOR HEADS AND ALL BEDS WILL BE IRRIGATED BY DRIP IRRIGATION OR POP UP HEADS. ALL TREES SHALL BE IRRIGATED BY DRIP IRRIGATION WITH A TREE RING AROUND EACH INDIVIDUAL TREES. NEW IRRIGATION SYSTEM SHALL BE INTEGRATED INTO EXISTING IRRIGATION SYSTEM WHERE POSSIBLE. IRRIGATION DESIGNER SHALL COORDINATE WITH SCHOOL DISTRICT FOR THE LOCATION OF NEW CONTROLLER AND ASSOCIATED IRRIGATION EQUIPMENT PRIOR TO COMMENCING DESIGN. CONTRACTOR SHALL SUBMIT PLANS, DETAILS AND SPECIFICATIONS DETAILING THE DESIGN OF THE SYSTEM TO THE LANDSCAPE ARCHITECT AND OWNER FOR REVIEW. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MONITOR INSTALLED PLANT MATERIAL FOR A MINIMUM OF 60 DAYS. TO ESTABLISH PLANT MATERIALS, WATER FROM SOURCES AND KEEP LAWN UNIFORMLY MOIST TO A DEPTH OF 4 INCHES. WATER LAWN AT A MINIMUM RATE OF (1) ONE INCHES PER WEEK AS NECESSARY TO PROVIDE A HEALTHY GREEN APPEARANCE. INSTALLATION, MAINTENANCE, AND MONITORING OF THE IRRIGATION SYSTEM WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR THE FIRST 60 DAYS. AT THE END OF THE ESTABLISHMENT PERIOD, CONTRACTOR IS TO ADJUST WATER CYCLING FOR MAINTENANCE OF PLANT MATERIAL. CONTRACTOR TO PROVIDE TRAINING TO DISTRICT AND SCHOOL MAINTENANCE STAFF IN THE OPERATION OF NEW IRRIGATION SYSTEM.

30.

IRRIGATION SYSTEM TO BE INSTALLED BY LANDSCAPE CONTRACTOR FOR APPROVAL BY SCHOOL DISTRICT AND LANDSCAPE ARCHITECT. SYSTEM SHALL BE INSTALLED TO LIMIT OVER SPRAY ONTO PAVEMENT AREAS. CONTRACTOR SHALL NOT INSTALL ANY PLANT MATERIAL UNTIL IRRIGATION IS IN PLACE. IRRIGATION SYSTEM CONTRACT SHALL INCLUDE INITIAL WINTER SHUT DOWN AND BLOW OUT. CONTRACTOR TO PROVIDE (1) ONE YEAR WARRANTY FOR IRRIGATION SYSTEM TO THE SCHOOL DISTRICT.

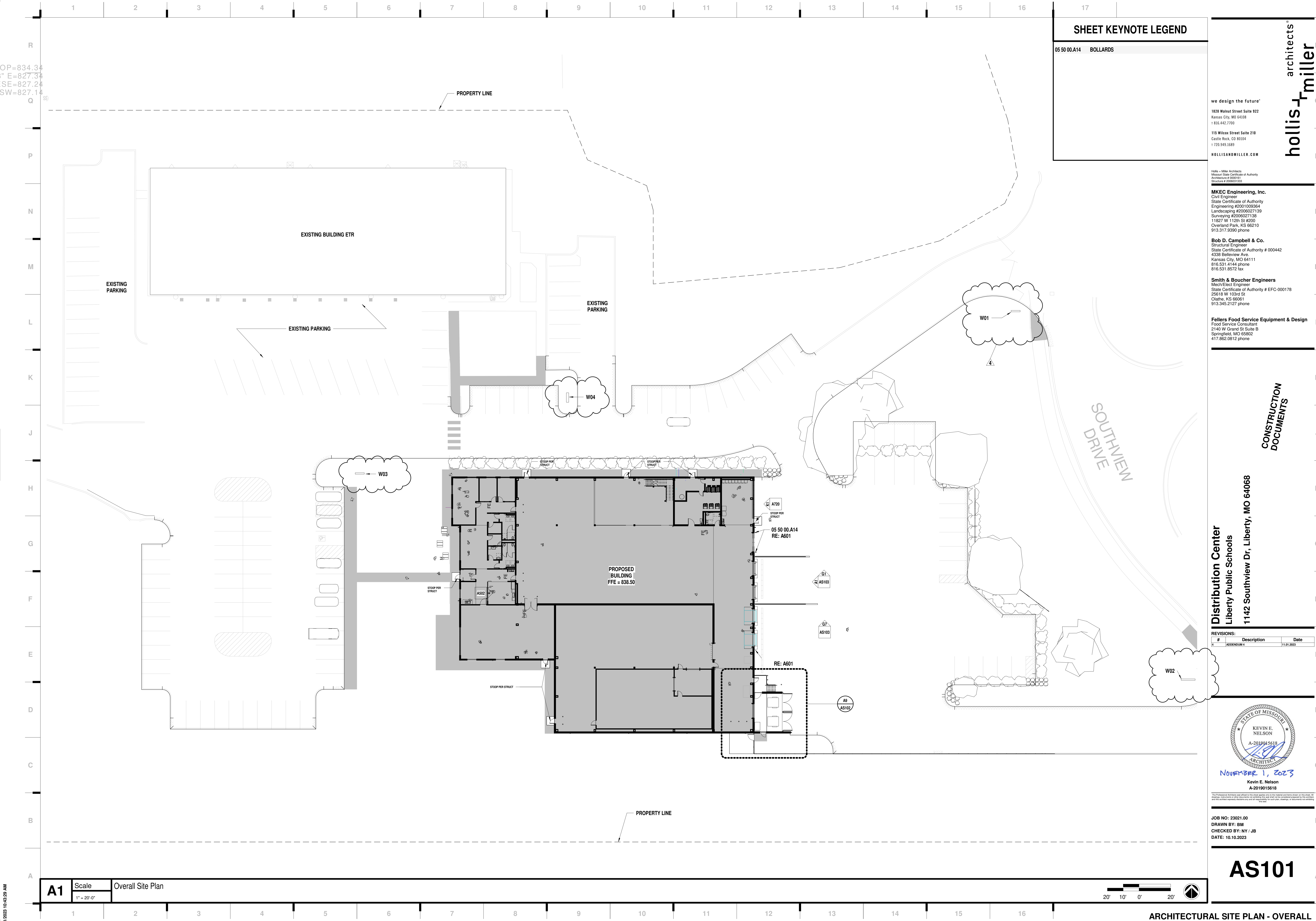
31.

ALL TOP SOIL AND PLANTING BED SOIL MIX SHALL BE APPROVED BY OWNER'S REPRESENTATIVES PRIOR TO INSTALLATION OF ANY SOD, SEED, PLANT MATERIALS AND MULCH.

32.

THE TYPICAL PLANTING SOIL MIX FOR ALL PLANTING BEDS (SHRUBS, ORNAMENTAL GRASS AND PERENNIAL BED AREAS) SHALL CONSIST OF THE FOLLOWING MAKE-UP UNLESS OTHERWISE INDICATED IN THESE PLANS:
- 80% TOPSOIL AS SPECIFIED
- 20% PREPARED ADDITIVES (BY VOLUME AS FOLLOWS):
 - 2 PARTS HUMUS AND/OR PEAT
 - 1 PART STERILIZED COW MANURE
 - 1 PART SHREDDED PINE BARK (BARK PIECES BETWEEN 3/4" AND 1 1/2" IN LENGTH/DIAMETER.
- COMMERCIAL FERTILIZER AS RECOMMENDED BY SOIL REPORT.
- LIME AS RECOMM

OP=834.34
" E=827.34
SE=827.24
SW=827.14



SHEET KEYNOTE LEGEND

05 50 00.A14 BOLLARDS

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Structure # 200603133

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Food Service Consultant
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Springfield, MO 65802
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Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

REVISIONS:		
#	Description	Date
1	ADDENDUM 1	11.01.2023

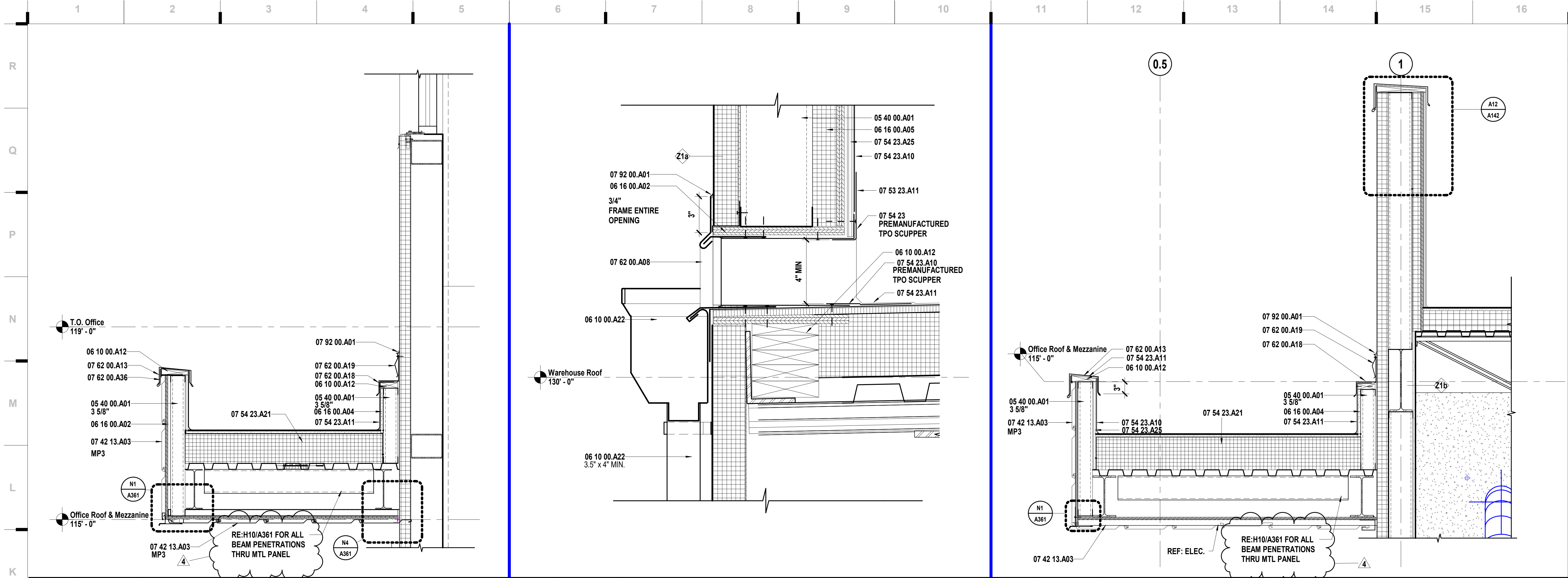
STATE OF MISSOURI
KEVIN E. NELSON
A-2019015618
NOVEMBER 1, 2023
Kevin E. Nelson
A-2019015618

JOB NO: 23021.00
DRAWN BY: BM
CHECKED BY: NY / JB
DATE: 10.10.2023

AS101

A1 Scale Overall Site Plan
1" = 20'-0"

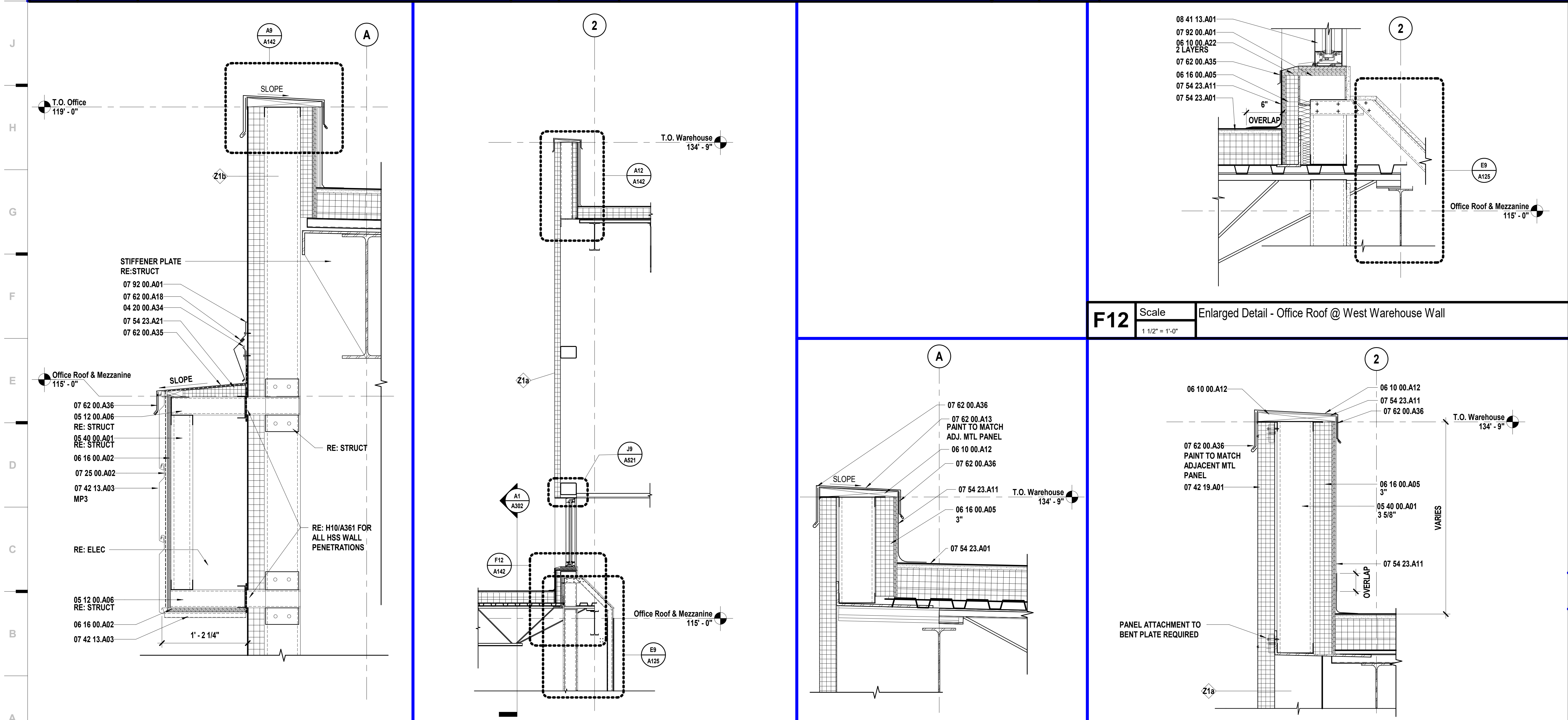




K1 Scale 1" = 1'-0" Roof Detail - East Canopy

K6 Scale 3" = 1'-0" Roof Detail - South Wall Drainage System

K11 Scale 1" = 1'-0" Roof Detail - West Canopy



A1 Scale 1 1/2" = 1'-0" Roof Detail - North Office

A5 Scale 1/2" = 1'-0" Roof Detail - High to Low Roof w/ Clearstory

A9 Scale 1 1/2" = 1'-0" Parapet Detail - Typical 2'-0" & Under

A12 Scale 1 1/2" = 1'-0" Parapet Detail - Typical 2'-0" & Over

SHEET KEYNOTE LEGEND	
04 20 00.A34	FLASHING TERMINATION BARS
05 12 00.A06	HSS SHAPE
05 40 00.A01	COLD-FORMED METAL FRAMING
06 10 00.A12	PRESERVATIVE TREATED WOOD BLOCKING/NAILERS
06 10 00.A22	PRESERVATIVE TREATED PLYWOOD BLOCKING
06 16 00.A02	FIRE-RETARDANT TREATED PLYWOOD
06 16 00.A04	GLASS-MAT GYPSUM WALL SHEATHING
06 16 00.A05	CEMENTITIOUS WALL SHEATHING
07 25 00.A02	SELF-ADHERING WEATHER BARRIERS
07 42 13.A03	CONCEALED FASTENER METAL WALL PANELS
07 42 19.A01	FOAMED-INSULATION-CORE METAL WALL PANELS
07 53 23.A11	VERTICAL WALL FLASHING
07 54 23	TPO ROOFING
07 54 23.A01	ADHERED TPO MEMBRANE ROOFING SYSTEM
07 54 23.A10	BASE FLASHING
07 54 23.A11	VERTICAL WALL FLASHING
07 54 23.A21	TAPERED INSULATION
07 54 23.A25	COVERBOARD
07 62 00.A08	SCUPPERS
07 62 00.A13	COPING
07 62 00.A18	COUNTER FLASHING
07 62 00.A19	COUNTER FLASHING RECEIVER
07 62 00.A35	PRE-FINISHED MISC METAL FLASHING
07 62 00.A36	CLEAT
07 92 00.A01	SEALANT
08 41 13.A01	THERMAL BROKEN STOREFRONT FRAMING (4.5")

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CONSTRUCTION DOCUMENTS

Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

REVISIONS:
Description Date
1 ADDENDUM 4 11.01.2023

STATE OF MISSOURI
KEVIN E. NELSON
A-2019015618
NOVEMBER 1, 2023
Kevin E. Nelson
A-2019015618
The Professional Architect seal and stamp is the official seal and stamp of the architect. All drawings, specifications and other documents prepared by the architect and submitted to the client, whether or not they are signed and sealed by the architect, shall remain the property of the architect and shall not be used for any other project without the written consent of the architect.

JOB NO: 23021.00
DRAWN BY: SE
CHECKED BY: NY / JB
DATE: 10.10.2023

A142

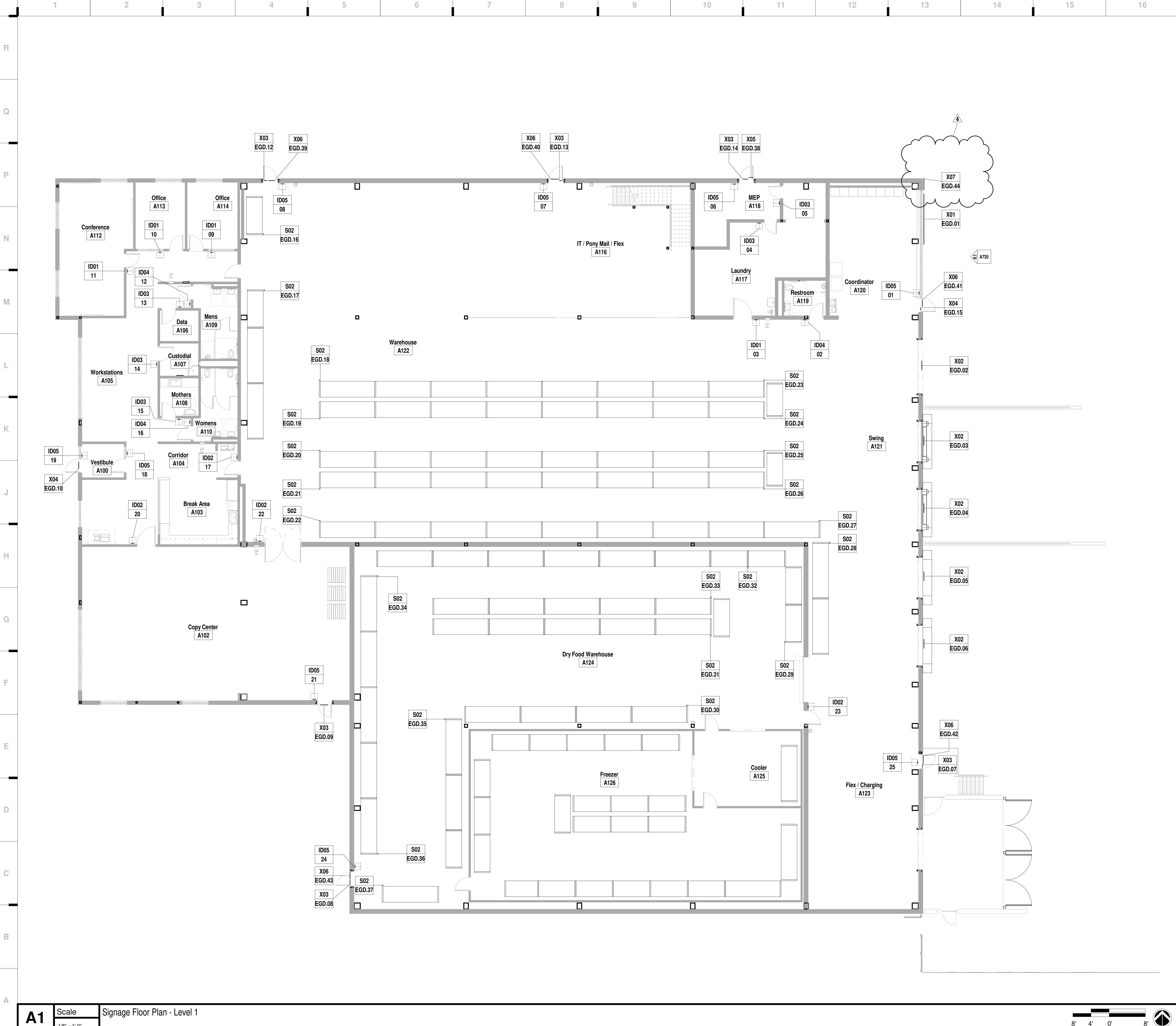
1. REFER TO PLUMBING DRAWINGS FOR ROOF DRAIN DETAILS

2. REFER TO MECHANICAL DRAWINGS FOR ROOF MOUNTED EQUIPMENT AND CURBS

3. REFER TO PLUMBING DRAWINGS FOR EXPOSED GAS PIPING AND SUPPORTS

4. REFER TO STRUCTURAL DRAWINGS FOR MECHANICAL SCREEN SUPPORTS

5. ALL FLASHING, DOWNSPOUTS AND GUTTERS COLOR TO MATCH ADJACENT METAL PANEL



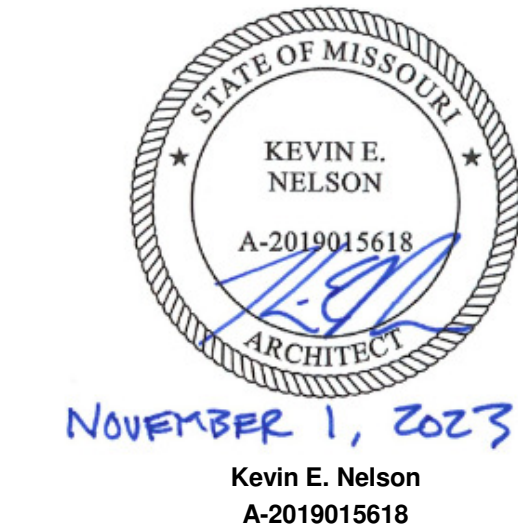
EGD GENERAL NOTES

- THESE GENERAL NOTES ARE SUPPLEMENTAL TO THE PROJECT MANUAL.
- CONTRACTOR TO REVIEW THE DRAWINGS (INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, STRUCTURAL, SITE, AND ELECTRICAL DRAWINGS) AND FIELD VERIFY SITE CONDITIONS TO CONFIRM SIZES AND LOCATIONS OF SIGNAGE AND ANY SIGNAGE-RELATED ELEMENTS.
 - ANY DISCREPANCIES AND/OR CONFLICTS SHALL BE REPORTED TO THE ARCHITECT IN WRITING BEFORE PROCEEDING WITH FABRICATION OR ORDERING OF MATERIALS.
 - REFER TO FINAL ART FOR ADDITIONAL INSTRUCTIONS AND INFORMATION ON NON-PRINTING LAYERS.
 - PRE-INSTALL COORDINATION MEETING IS MANDATORY.
 - CONTRACTOR SHALL SUBMIT FULLY-DETAILED WORKING (SHOP) DRAWINGS OF ALL SIGNS AND GRAPHICS CONTAINED IN THIS PACKAGE TO THE ARCHITECT. DRAWINGS SHALL BE REVIEWED AND HAVE SIGNED APPROVAL PRIOR TO FABRICATION OR ORDERING OF MATERIALS. REFER TO PROJECT MANUAL.
 - ALL SIGNS ARE TO BE FABRICATED FROM MATERIALS SPECIFIED UNLESS OTHERWISE APPROVED IN WRITING BY CLIENT AND ARCHITECT.
 - CONTRACTOR IS RESPONSIBLE FOR DETERMINING PROPER MOUNTING, FASTENING AND ANCHORING METHODS FOR ALL SIGNS UNLESS NOTED OTHERWISE. DETERMINATION TO ACCOUNT FOR SURFACE MATERIAL SIGN IS BEING MOUNTED TO. SEE ALSO SECTION 10 14 00 OF THE SPECIFICATIONS.
 - DRAWINGS CONTAINED IN THIS PACKAGE ARE FOR AESTHETIC AND FUNCTIONAL DESIGN, ONLY. NO INSTRUCTIONS FOR STRUCTURAL APPROPRIATENESS HAVE BEEN MADE. IT IS THE RESPONSIBILITY OF THE FABRICATOR TO ENSURE THAT ALL ELEMENTS ARE FABRICATED FOR A STABLE AND DURABLE INSTALLATION WHILE ADHERING TO THE AESTHETIC DETAILS INDICATED.
 - ALL FASTENERS ARE TO BE CONCEALED UNLESS NOTED OTHERWISE. ANY VISIBLE FASTENERS TO BE COUNTER-SUNK AND PAINTED TO MATCH ADJACENT MATERIAL, UNLESS NOTED OTHERWISE.
 - ALL TEXT SHOWN IS FOR REFERENCE ONLY. UNLESS NOTED OTHERWISE, SIGNAGE CONTRACTOR TO CONFIRM MESSAGE SCHEDULE WITH ARCHITECT FOR EXACT TEXT ON EACH SIGN.
 - LAY OUT EACH SIGN MESSAGE FOR APPROVAL PER SPECIFICATION SECTION 10 14 23.
 - ALL GRAPHICS SHOWN ARE PLACEHOLDER IMAGES.
 - CONTRACTOR TO COORDINATE BLOCKING NEEDS WITH ARCHITECT AND CONSTRUCTION MANAGER.
 - PROVIDE ACCESSIBLE PANELS TO ALL TRANSFORMERS. FINAL LOCATION OF TRANSFORMERS TO BE APPROVED BY ARCHITECT.
 - FOR SIGNS WITH ILLUMINATION, ALLOW FOR 10 (TEN) FEET OF CABLE PER SIGN FOR CONNECTION TO ELECTRICAL JUNCTION BOX.
 - PROVIDE APPROPRIATE CHEMICAL BOND BREAK BETWEEN ALL DISSIMILAR METALS (INCLUDING BETWEEN SIGN PARTS OR BETWEEN SIGNS AND MOUNTING SUBSTRATE).
 - CONTRACTOR TO VERIFY ALL EXISTING FINISHES AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PERFORMING ANY WORK.

Distribution Center Liberty Public Schools

1142 Southview Dr, Liberty, MO 64068

REVISIONS:		
#	Description	Date
1	ADDENDUM 1	10.20.2023
4	ADDENDUM 4	11.01.2023



JOB NO: 23021.00
DRAWN BY: MM
CHECKED BY: JCC
DATE: 10.10.2023

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ADA & Code Signage Schedule							
Sign #	Sign Type	# On Sign	Message On Sign	Room: Number	Name on Drawing	Mounting Surface/ Method	Comments
01	ID05	-	EXIT	A120	Coordinator	MOUNTED ON GLASS	
02	ID04	-	RESTROOM	A119	Restroom		
03	ID01	TBD	-	A122	Warehouse		
04	ID03	-	MEP	A118	MEP		
05	ID03	-	TBD	A117	Laundry		
06	ID05	-	EXIT	A118	MEP		
07	ID05	-	EXIT	A116	IT / Pony Mail / Flex		
08	ID05	-	EXIT	A122	Warehouse		
09	ID01	TBD	-	A111	Corridor	MOUNTED ON GLASS	
10	ID01	TBD	-	A111	Corridor	MOUNTED ON GLASS	
11	ID01	TBD	-	A111	Corridor		
12	ID04	-	MENS	A109	Mens		
13	ID03	-	DATA	A106	Data		
14	ID03	-	CUSTODIAL	A107	Custodial		
15	ID03	-	MOTHERS ROOM	A108	Mothers		
16	ID04	-	WOMENS	A110	Womens		
17	ID02	TBD	TBD	A122	Warehouse		
18	ID05	-	EXIT	A104	Corridor	MOUNTED ON GLASS	
19	ID05	-	EXIT	A100	Vestibule	MOUNTED ON GLASS	
20	ID02	TBD	TBD	A102	Copy Center		
21	ID05	-	EXIT	A102	Copy Center		
22	ID02	TBD	TBD	A102	Copy Center		
23	ID02	TBD	TBD	A124	Dry Food Warehouse		
24	ID05	-	EXIT	A124	Dry Food Warehouse		
25	ID05	-	EXIT	A123	Flex / Charging		
26	ID06	-	ROOF ACCESS	A200	Mezzanine		

Environmental Graphics Schedule					
Sign #	Sign Type	Keynote	Description		Comments
EGD.01	X01	10 14 00.A30	"DISTRIBUTION CENTER"		
EGD.02	X02	10 14 00.A30	"1"		
EGD.03	X02	10 14 00.A30	"2"		
EGD.04	X02	10 14 00.A30	"3"		
EGD.05	X02	10 14 00.A30	"4"		
EGD.06	X02	10 14 00.A30	"5"		
EGD.07	X03	10 14 00.A43	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.08	X03	10 14 00.A43	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.09	X03	10 14 00.A43	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.10	X04	10 14 00.A43 & 10 14 00.A30	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT	MOUNTED ON GLASS DOOR	
EGD.12	X03	10 14 00.A43	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.13	X03	10 14 00.A43	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.14	X03	10 14 00.A43	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.15	X04	10 14 00.A43 & 10 14 00.A30	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT	MOUNTED ON GLASS DOOR	
EGD.16	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.17	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.18	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.19	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.20	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.21	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.22	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.23	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.24	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.25	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.26	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.27	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.28	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.29	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.30	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.31	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.32	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.33	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.34	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.35	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.36	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.37	S02	10 14 00.A10	NUMBER ON SIGN TO BE DETERMINED BY DISTRICT		
EGD.38	X05	10 14 00.A43	FIRE SPRINKLER ROOM VINYL LETTERS		
EGD.39	X06	10 14 00.A43	FIRE DEPARTMENT VINYL LETTERS		
EGD.40	X06	10 14 00.A43	FIRE DEPARTMENT VINYL LETTERS		
EGD.41	X06	10 14 00.A43	FIRE DEPARTMENT VINYL LETTERS		
EGD.42	X06	10 14 00.A43	FIRE DEPARTMENT VINYL LETTERS		
EGD.43	X06	10 14 00.A43	FIRE DEPARTMENT VINYL LETTERS		
EGD.44	X07	10 14 00.A30	ADDRESS		

EGD GENERAL NOTES

- THESE GENERAL NOTES ARE SUPPLEMENTAL TO THE PROJECT MANUAL.
- CONTRACTOR TO REVIEW THE DRAWINGS (INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, STRUCTURAL, SITE, AND ELECTRICAL DRAWINGS) AND FIELD VERIFY SITE CONDITIONS TO CONFIRM SIZES AND LOCATIONS OF SIGNAGE AND ANY SIGNAGE-RELATED ELEMENTS.
 - ANY DISCREPANCIES AND/OR CONFLICTS SHALL BE REPORTED TO THE ARCHITECT IN WRITING BEFORE PROCEEDING WITH FABRICATION OR ORDERING OF MATERIALS.
 - REFER TO FINAL ART FOR ADDITIONAL INSTRUCTIONS AND INFORMATION ON NON-PRINTING LAYERS.
 - PRE-INSTALL COORDINATION MEETING IS MANDATORY.
 - CONTRACTOR SHALL SUBMIT FULLY-DETAILED WORKING (SHOP) DRAWINGS OF ALL SIGNS AND GRAPHICS CONTAINED IN THIS PACKAGE TO THE ARCHITECT. DRAWINGS SHALL BE REVIEWED AND HAVE SIGNED APPROVAL PRIOR TO FABRICATION OR ORDERING OF MATERIALS. REFER TO PROJECT MANUAL.
 - ALL SIGNS ARE TO BE FABRICATED FROM MATERIALS SPECIFIED UNLESS OTHERWISE APPROVED IN WRITING BY CLIENT AND ARCHITECT.
 - CONTRACTOR IS RESPONSIBLE FOR DETERMINING PROPER MOUNTING, FASTENING AND ANCHORING METHODS FOR ALL SIGNS UNLESS NOTED OTHERWISE. DETERMINATION TO ACCOUNT FOR SURFACE MATERIAL SIGN IS BEING MOUNTED TO. SEE ALSO SECTION 10 14 00 OF THE SPECIFICATIONS.
 - DRAWINGS CONTAINED IN THIS PACKAGE ARE FOR AESTHETIC AND FUNCTIONAL DESIGN, ONLY. NO INSTRUCTIONS FOR STRUCTURAL APPROPRIATENESS HAVE BEEN MADE. IT IS THE RESPONSIBILITY OF THE FABRICATOR TO ENSURE THAT ALL ELEMENTS ARE FABRICATED FOR A STABLE AND DURABLE INSTALLATION WHILE ADHERING TO THE AESTHETIC DETAILS INDICATED.
 - ALL FASTENERS ARE TO BE CONCEALED UNLESS NOTED OTHERWISE. ANY VISIBLE FASTENERS TO BE COUNTER-SUNK AND PAINTED TO MATCH ADJACENT MATERIAL, UNLESS NOTED OTHERWISE.
 - ALL TEXT SHOWN IS FOR REFERENCE ONLY. UNLESS NOTED OTHERWISE, SIGNAGE CONTRACTOR TO CONFIRM MESSAGE SCHEDULE WITH ARCHITECT FOR EXACT TEXT ON EACH SIGN.
 - LAY OUT EACH SIGN MESSAGE FOR APPROVAL PER SPECIFICATION SECTION 10 14 23.
 - ALL GRAPHICS SHOWN ARE PLACEHOLDER IMAGES.
 - CONTRACTOR TO COORDINATE BLOCKING NEEDS WITH ARCHITECT AND CONSTRUCTION MANAGER.
 - PROVIDE ACCESSIBLE PANELS TO ALL TRANSFORMERS. FINAL LOCATION OF TRANSFORMERS TO BE APPROVED BY ARCHITECT.
 - FOR SIGNS WITH ILLUMINATION, ALLOW FOR 10 (TEN) FEET OF CABLE PER SIGN FOR CONNECTION TO ELECTRICAL JUNCTION BOX.
 - PROVIDE APPROPRIATE CHEMICAL BOND BREAK BETWEEN ALL DISSIMILAR METALS (INCLUDING BETWEEN SIGN PARTS OR BETWEEN SIGNS AND MOUNTING SUBSTRATE).
 - CONTRACTOR TO VERIFY ALL EXISTING FINISHES AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PERFORMING ANY WORK.

Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

REVISIONS:

#	Description	Date
1	ADDENDUM 1	10.03.2023
4	ADDENDUM 4	11.01.2023

STATE OF MISSOURI

KEVIN E. NELSON

A-2019015618

ARCHITECT

NOVEMBER 1, 2023

Kevin E. Nelson
A-2019015618

STATE OF MISSOURI

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NOVEMBER 1, 2023

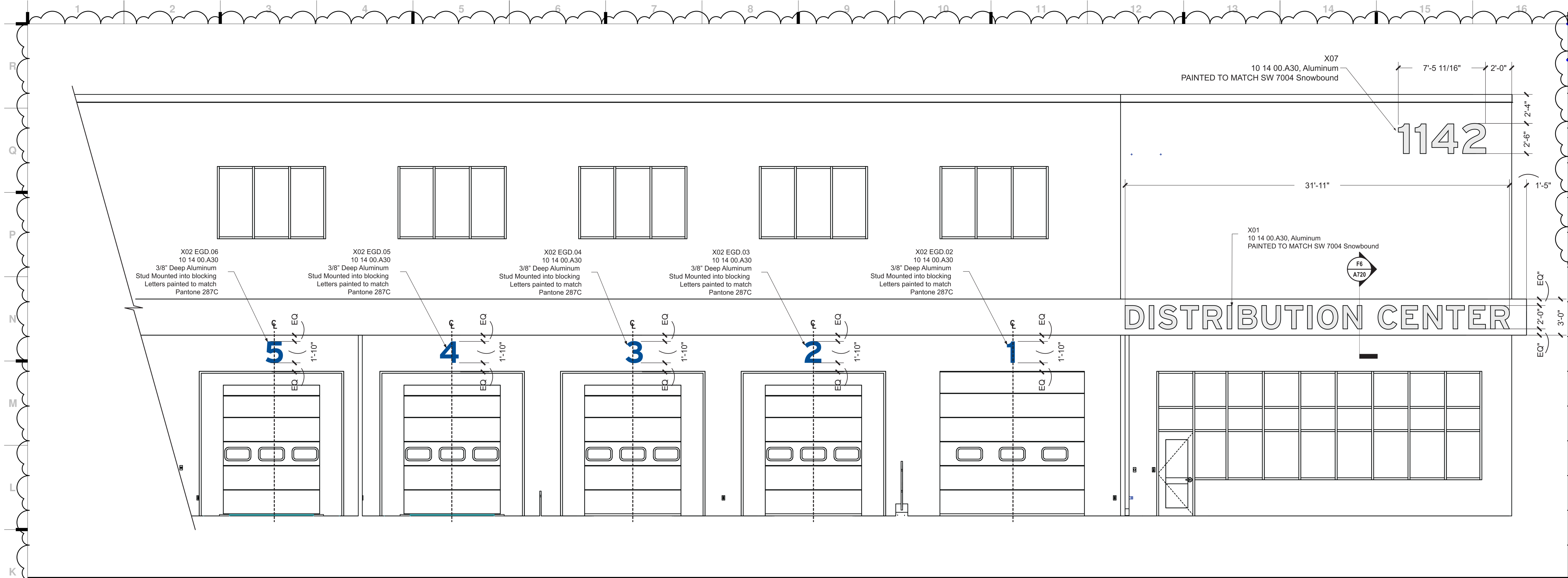
Kevin E. Nelson
A-2019015618

JOB NO: 23021.00
DRAWN BY: MM
CHECKED BY: JCC
DATE: 10.10.2023

A711

Please consider the environment before printing this.

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K1 Scale Exterior Elevation - X01, X02 & X07 - E
1/4" = 1'-0"

SHEET KEYNOTE LEGEND

- 10 14 00.A10 - FABRICATED SIGNAGE
- 10 14 00.A30 - FLAT CUT
- 10 14 00.A43 - VINYL FILM
- 10 14 00.A71 - CHANGABLE INSERT
- 10 14 00.A72 - MAGNETIC BLADE SIGN

ARTWORK TO BE SUPPLIED BY ARCHITECT

ALL DIMENSIONS AND MOUNTING CONDITIONS MUST BE VERIFIED IN THE FIELD PRIOR TO FINAL ARTWORK RELEASE

ALL ATTACHMENTS TO BE CONCEALED UNO. PROVIDE BLOCKING AS REQUIRED FOR SECURE ANCHORAGE. SEE ARCHITECTURAL WALL FOR CONSTRUCTION

hollis + miller architects

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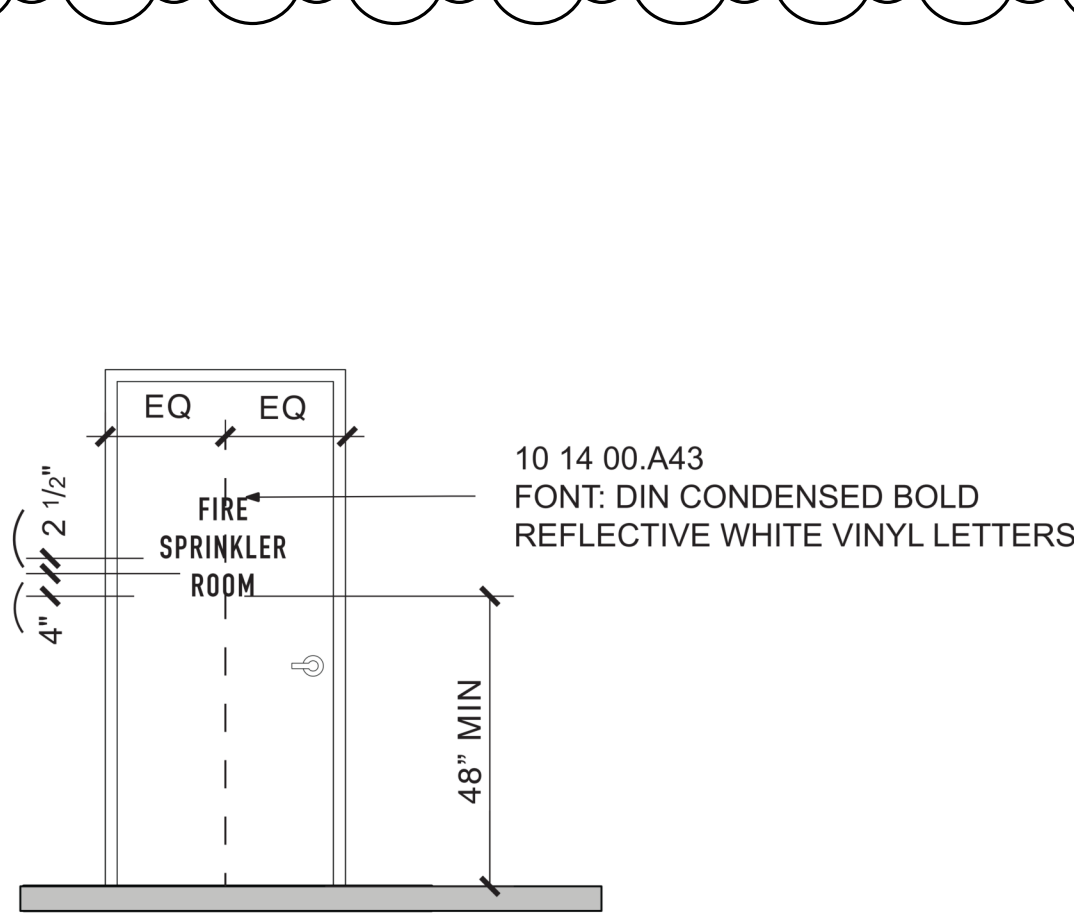
hollis + miller architects
Missouri State Certificate of Authority
Architecture # 200001333
Structure # 200001333

MKEC Engineering, Inc.
Civil Engineer
State Certificate of Authority
Engineering #2001009364
Landscaping #2006027139
Surveying #2006027139
11827 W 112th St #200
Overland Park, KS 66210
913.317.5590 phone

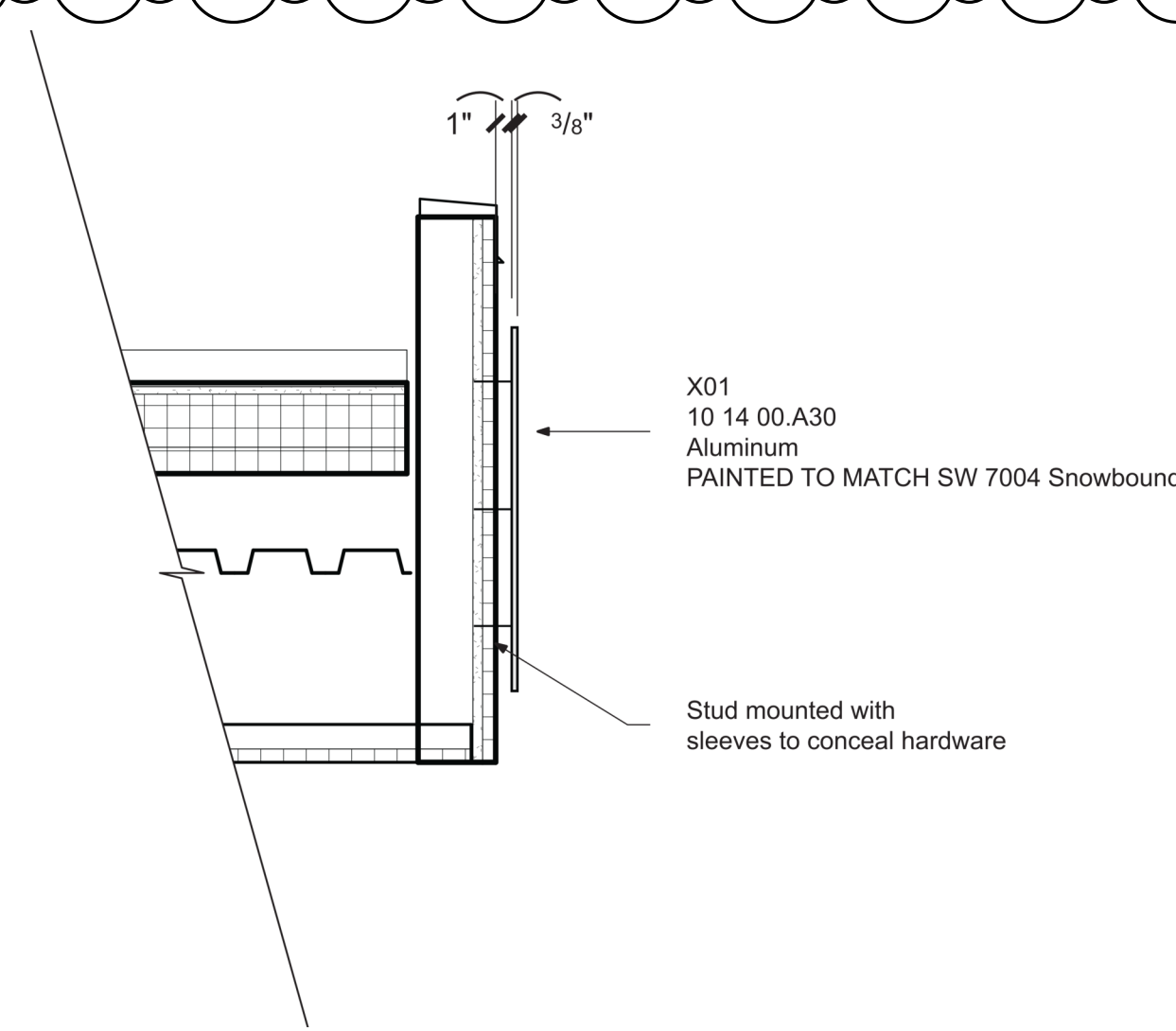
Bob D. Campbell & Co.
Structural Engineer
State Certificate of Authority # 000442
4338 Bellevue Ave.
Kansas City, MO 64111
816.531.4144 phone
816.531.8572 fax

Smith & Boucher Engineers
Mech/Elect Engineer
State Certificate of Authority # EFC-000178
25618 W 103rd St
Olathe, KS 66061
913.345.2127 phone

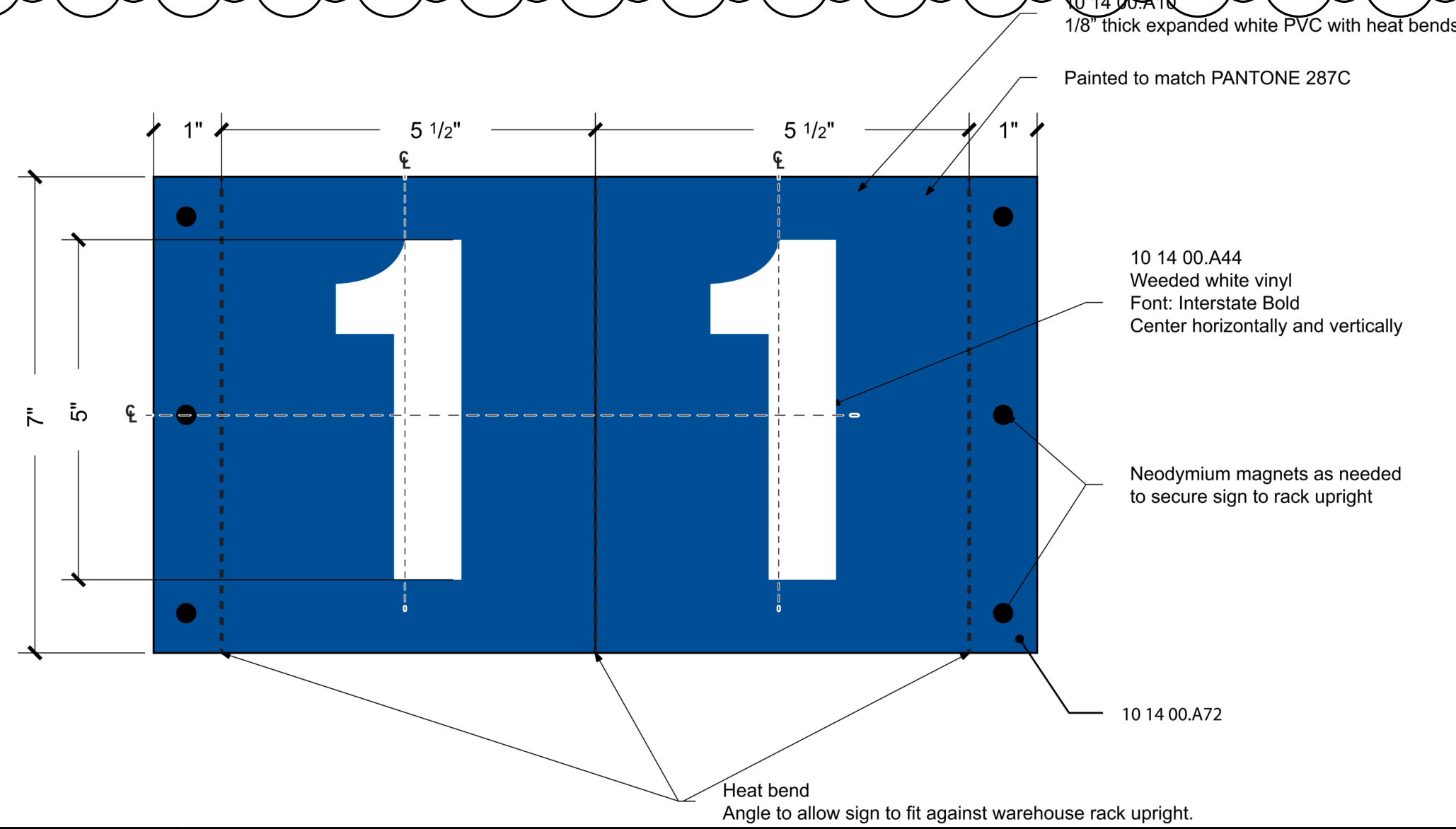
Fellers Food Service Equipment & Design
Food Service Consultant
2140 W Grand St Suite B
Springfield, MO 65802
417.862.0812 phone



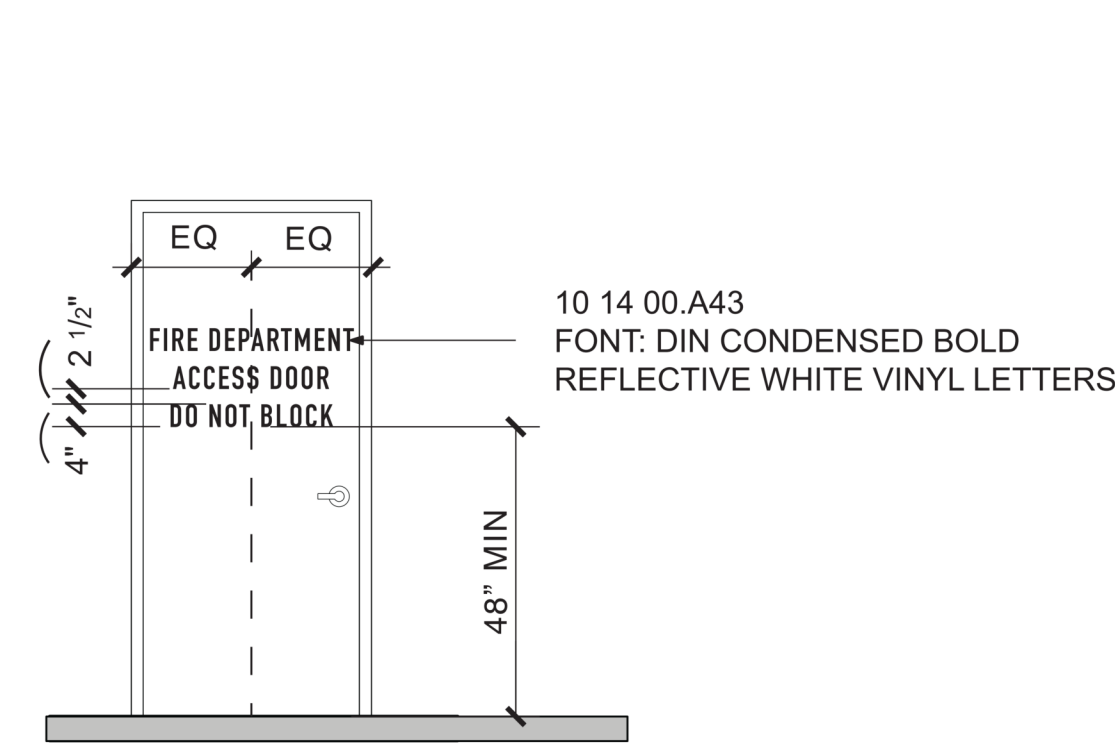
F1 Scale Exterior Elevation - X05 - Fire Sprinkler Room Vinyl
3/8" = 1'-0"



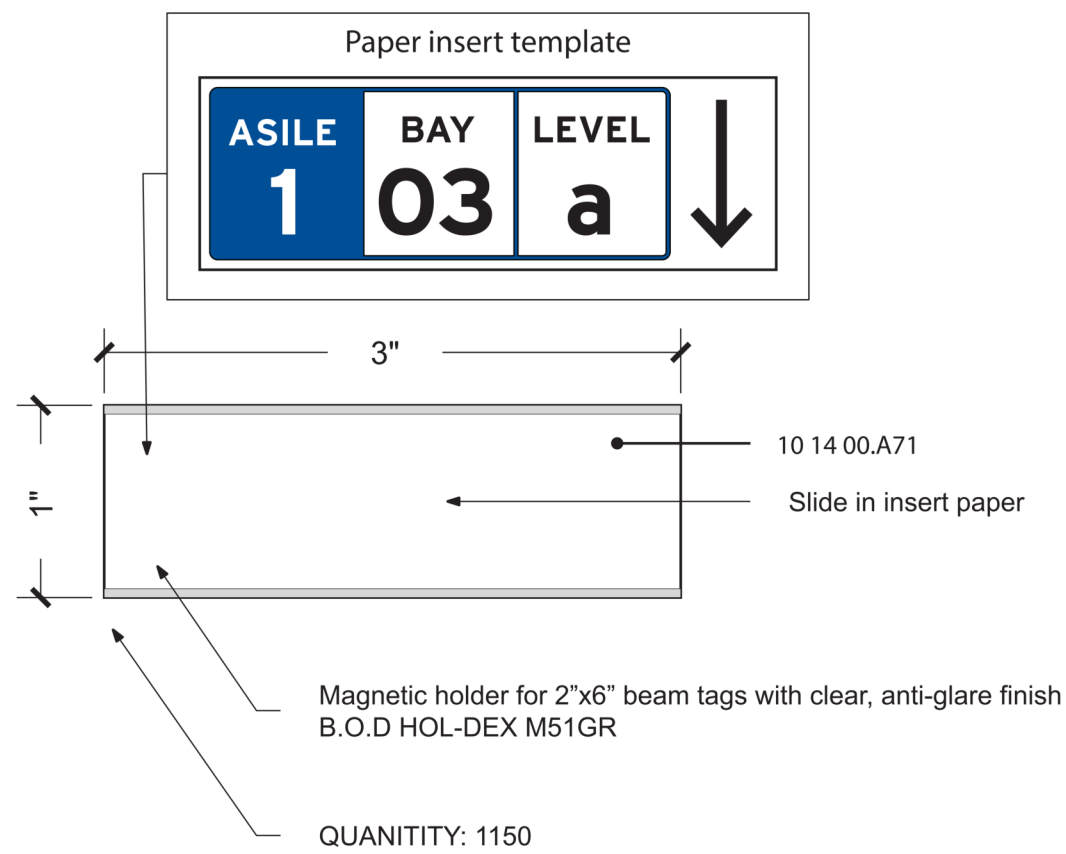
F6 Scale SECTION - X01
1" = 1'-0"



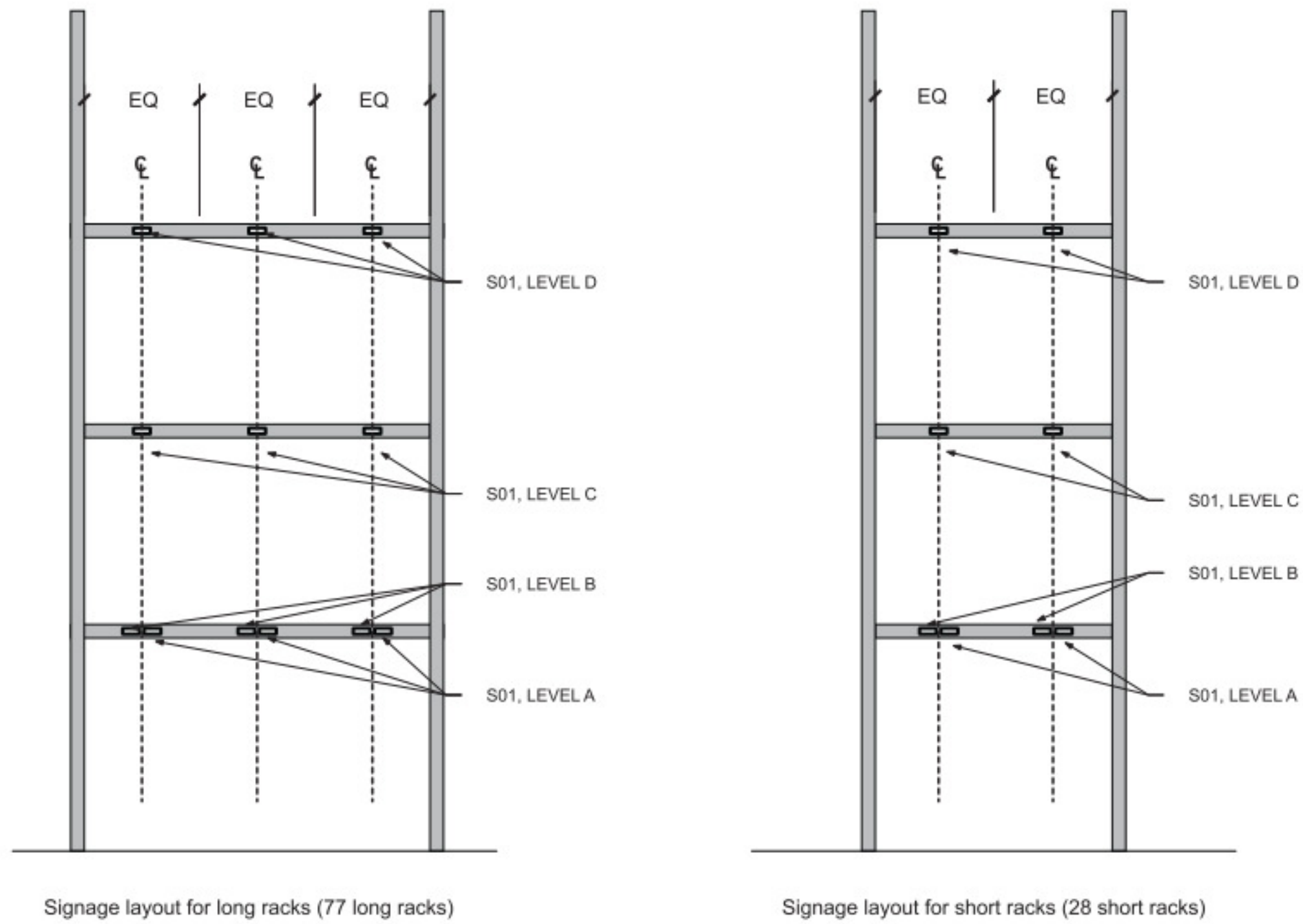
F10 Scale DETAIL - S02 - RACKING BLADE SIGN
6" = 1'-0"



A1 Scale EXTERIOR ELEVATION - X06 - Fire Department Vinyl
3/8" = 1'-0"



A6 Scale Detail - S01 - RACKING CHANGABLE TAGS
6" = 1'-0"

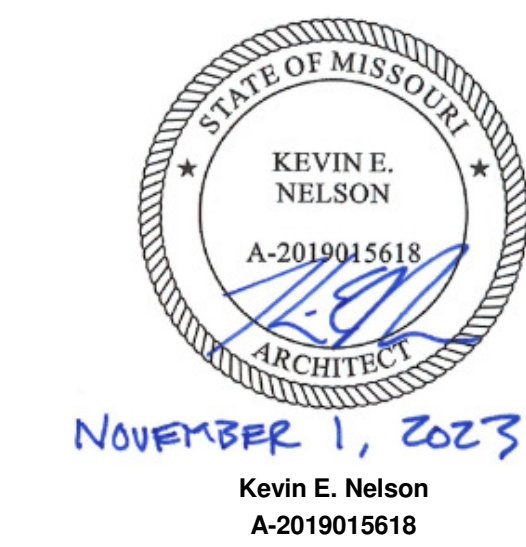


A10 Scale S01 - TYPICAL LOCATION OF RACKS
1/4" = 1'-0"

CONSTRUCTION DOCUMENTS

Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

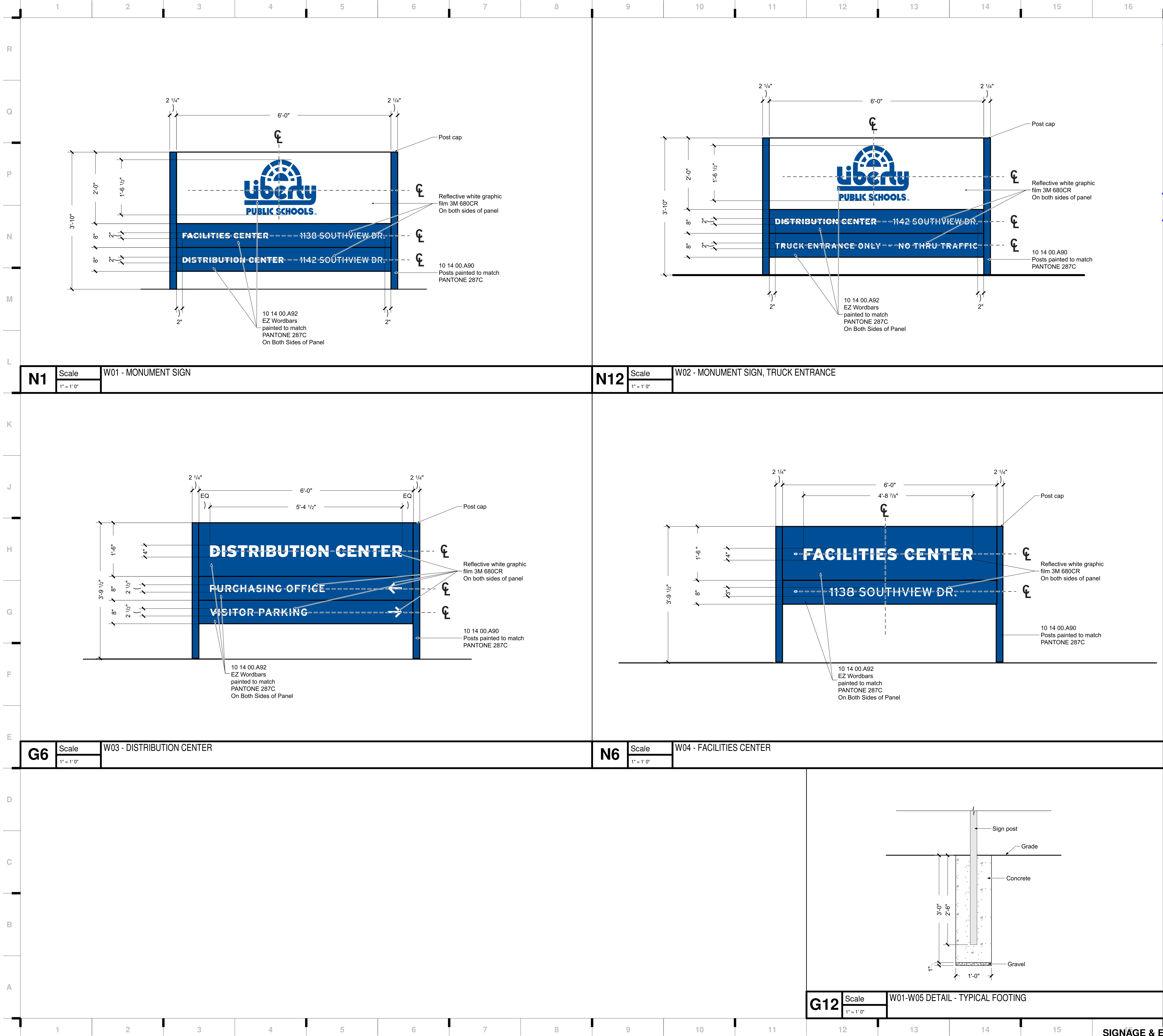
REVISIONS:		
#	Description	Date
2	ADDENDUM 2	11.01.2023
4	ADDENDUM 4	11.01.2023



JOB NO: 23021.00
DRAWN BY: MM
CHECKED BY: JCC
DATE: 10.10.2023

A720

11/7/2023 10:43:34 AM



SHEET KEYNOTE LEGEND

10 14 00.A90 - NON ILLUMINATED POST SIGN
10 14 00.A72 - NON ILLUMINATED PANEL SIGN
ARTWORK TO BE SUPPLIED BY ARCHITECT
ALL DIMENSIONS AND MOUNTING CONDITIONS MUST BE VERIFIED IN THE FIELD PRIOR TO FINAL ARTWORK RELEASE
ALL ATTACHMENTS TO BE CONCEALED UNO. PROVIDE BLOCKING AS REQUIRED FOR SECURE ANCHORAGE. SEE ARCHITECTURAL WALL FOR CONSTRUCTION

SHEET NOTES

FIELD VERIFY LOCATION OF SIGNAGE BEFORE INSTALLATION OF FOOTING AND POSTS
REFER TO SHEET AS101 FOR W01-W05 LOCATION

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Missouri State Certificate of Authority
Architecture # 2000161
Structure # 200017333

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Food Service Consultant
2140 W Grand St Suite B
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CONSTRUCTION DOCUMENTS

Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

REVISIONS:

#	Description	Date
1	ADDENDUM 1	11.01.2023

Kevin E. Nelson
A-2019015618
NOVEMBER 1, 2023

The Professional Address and Address to the client are subject to the client's approval. The client is responsible for the accuracy of the information provided. The client is responsible for the accuracy of the information provided. The client is responsible for the accuracy of the information provided.

JOB NO: 23021.00
DRAWN BY: MM
CHECKED BY: JCC
DATE: 10.10.2023

A721

GENERAL NOTES - STRUCTURAL

1. General Information

- A. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
- B. The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. In the case of work in an existing building the contractor shall scan existing structure to locate all rebar in the area of the new work/opening using ground penetrating radar and notify the engineer of record for review prior to continuing. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for decision before proceeding.
- C. All design and construction work for this project shall conform to the requirements of the following governing design codes:
1. International Building Code (IBC 2018) as amended by the city of Liberty, MO.
 2. Minimum Design Loads for Buildings and Other Structures (ASCE7-16)
 3. Specification for Structural Steel Buildings (AISC 360-16)
 4. Member Design Basis is Allowable Stress Design (ASD)
 5. Connection Design Basis is Allowable Stress Design (ASD)
 6. Structural Welding Code (AWS D1.1-17)
 7. Building Code Requirements for Masonry Structures (TMS 402-16)
 8. North American Specification for the Design of Cold-Formed Steel Structural Members (AISI S100-16)
- D. These drawings are for this specific project and no other use is authorized.

2. Structural Load Design Criteria

- A. Floor Live = 125 psf (An allowance of 15psf has been made for partitions as a uniformly distributed live load where the live load stated above is 80psf or less) Floor Collateral Dead = 55 psf
- B. Roof Live = 20 psf, Roof Collateral Dead = 25 psf
- C. Snow: Pg = 30psf, Pf = 14psf, Is = 1.0, Ce = 1.0, Ct = 1.0, Drift per ASCE/SEI 7
- D. Lateral Loads:
- 1.) Wind: V = 109 mph, Exposure C
- Occupancy (Risk) Category II, Iw=1.0 GCpII=+0.18
- Design wind pressures to be used for the design of exterior component and cladding materials on the designated zones of wall and roof surfaces shall be per section 30.7 and Table 30.7.2 of ASCE/SEI 7. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors when the area of A applicable
- 2.) Seismic: Ss = 0.095, Si = 0.069
- Occupancy (Risk) Category II, Iw=1.0
- Site Classification C, Ss = 0.082, Si = 0.069
- Basic Seismic Design Category B
- Basic Seismic Force-resisting System:
- Steel system not specifically detailed for seismic resistance
- Equivalent Lateral Force Procedure
- R = 3, Omega = 3, Cd = 3
- E. This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3.2 of the International Building Code.

3. Concrete

- A. All concrete for foundations (walls, grade beams, footings and piers) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 6 gallons of water per 100 pounds of cement and not over 4 inches of slump.
- B. All concrete for interior flatwork shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 525 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.75 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM C157 (air drying method only).
- C. All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.
- D. All concrete for columns shall develop a minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 560 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5 gallons of water per 100 pounds of cement and not over 4 inches of slump.
- E. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C-84 added to the mix at manufacturer's dosage rates for improved workability.
- F. The preceding minimum mix requirements may have up to 15% maximum of the cement content reduced with an approved ASTM C-918 Class C fly ash, provided the total minimum cementitious content is not reduced.
- G. Combined aggregate (coarse plus fine) for all concrete shall be well graded from coarsest to finest with no more than 10 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 and finer sieves. Submit this gradation report with the concrete mix design shop drawings.
- H. All interior concrete slabs on grade shall be placed over 15 mil, Class A Vapor Barrier per ASTM E1745 with less than 0.01 p.p.m.s, tested after mandatory conditioning. All joints shall be lapped and sealed per manufacturer's recommendations. All penetrations, as well as damaged vapor barrier material shall also be sealed per manufacturer's recommendation prior to concrete placement. Install barrier per manufacturer recommended details at all discontinuous edges (at interior columns, exterior edge of slab, etc.) to ensure limits of warranty are followed. The vapor barrier shall be placed over free-draining granular material as prescribed by the project soils report.
- I. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current editions.
- J. Control joints in dirt formed slab to be as shown on plans. Where not shown, limit controlled areas to not more than 144 square feet, or 12 feet on any side. Slab panel side ratio shall not exceed 1.12 to 1.
- K. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
- L. Construction joints in beams, slabs, and grade beams shall occur at midspan (midside third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.
- M. No aluminum items shall be embedded in any concrete.

4. Reinforcing Steel

- A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A185.
- B. Clear coverage of concrete over reinforcing steel shall be as follows:
1. Concrete placed against earth: 3"
 2. Formed concrete against earth: 2"
 3. Slabs: 1"
 4. Beams or Columns: 1-1/2"
 5. Other: 2"
- All coverage shall be nominal bar diameter minimum.
- C. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 24" minimum unless noted otherwise).
- D. At corners of all walls, beams, and grade beams supply corner bars (minimum 2-0" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars. Where there are no vertical bars in outside face of wall, supply 3 - #4 vertical support bars for corner bars.
- E. Bars marked continuous and all vertical steel shall be lapped 48 bar diameters (2-0" minimum) at splices and embedments, unless shown otherwise. Splice top bars near midspan and splice bottom bars over supports, unless noted otherwise.
- F. At all holes in concrete walls and slabs, add 2 - #5 bars (opening dimension plus 96 diameters long) at each of four sides and add 2 - #5 x 5'-0" diagonally at each of four corners of hole. Openings in 8" thick walls are reinforced similar, but with 1 - #5 instead of 2 - #5, respectively.
- G. Unless otherwise covered on architectural plans or specifications, vertical control joints in concrete wall shall be spaced at a maximum of 20'-0" on center and coordinated with the architect. Every other horizontal wall reinforcing bar shall be discontinuous at control joints except heavy top and bottom bars unless noted otherwise. Provide base seal waterproof style number 772 (by Greenstreak Inc. or approved equal) on dirt face side of wall at all walls below grade.
- H. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.
- I. All slabs and stairs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way. All exterior porches and stoops not otherwise detailed may be constructed in any standard manner, solid or hollow, but must be reinforced with #4 bars at 12" on center each way minimum. Porches shall be doweled to adjacent walls or grade beams with #4 bars at 12" on center, hooked or embedded 48 diameters into both members. Slope porches 1/8" per foot for drainage unless noted otherwise.
- J. Allow _____ ton of reinforcing bars #4 or larger to be used as directed in the field for special conditions by the engineer of record (labor for placing same to be included).

5. Structural Steel

- A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel (except at moment connections where plates shall be ASTM A572, grade 50). Hollow Structural Sections (HSS) shall be ASTM A500, grade C. Fabrication and erection shall be in accordance with AISC 303-05 "Code of Standard Practice for Steel Buildings and Bridges" in the 13th Edition of the AISC Steel Construction Manual.
- B. All welding shall conform to the recommendations of the AWS.
- C. All exterior steel and connections, and brack relief angles shall be hot-dip galvanized.
- D. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N) All bolts shall be fully pretensioned. All beam connections shall be designed per the AISC Manual of Steel Construction "Framed Beam Connections" for the indicated reactions or at least 0.4 x beam total shear capacity. Vw/Omega, shown in the manual of steel construction manual, shall be greater; and, shall account for eccentricity when the bolt line is more than 2" from the center of the support. All connections must be two bolt minimum. Additional connection elements may not be specifically shown in the conceptual details in this set but may be required by the final connection design, such as stiffener plates, doubler plates, supplement/reinforcing plates or other connection material. Connection design and shop drawing preparation shall be completed under the direct supervision of a professional engineer licensed in the state the project is located and shop drawings and connection calculations shall bear his/her seal.
- E. All anchor bolts shall be 3/4" diameter, ASTM F1554, Grade 36 unless noted otherwise. Washers of minimum size and thickness for the given anchor bracket in Table 14-2 of the AISC Steel Construction Manual shall be provided at every column anchor bolt. Washers shall have a standard size hole for the anchor bolt. At braced frames washers shall be welded all around to the column base plate with 3/16" fillet weld.
- F. Design, fabrication and erection of all open-web bar joists shall comply with the recommendations of the Steel Joist Institute (SJI). Joists shall be designed to support loads given in the standard load tables of SJI Specs and Tables plus an additional point load of 200 lbs. on the top or bottom chord at 1/4" of fillet weld each side (minimum) reinforcing.
- G. All K-series joists shall bear 2-1/2" minimum on structural steel beams and be welded to the beams with 1 1/2" of 1/8" fillet weld each side (minimum).
- H. All K-series joists bearing on masonry walls shall have 6" x 3/8" x 6" bearing plates set in bond beams. Bearing plates shall be located not more than 1/2" from the face of the wall on the bearing side. Joists shall bear 4" minimum on bearing plates and be welded to beams or bearing plates with 2-1/2" of 1/8" fillet weld each side (minimum).
- I. All LH and DLH series joists shall bear minimum on structural steel beams and be welded to the beams with 2-1/2" of 1/4" fillet weld each side (minimum).
- J. All LH and DLH - series joists bearing on masonry walls shall have 3/8"x12" embedded plates set in bond beams with 1-1/2" of 1/4" fillet weld each side (minimum). Bearing plates shall be located not more than 1/2" from the face of the wall on the bearing side. Joists shall bear 6" minimum on bearing plates and be welded to beams or bearing plates with 2-1/2" of 1/4" fillet weld each side (minimum).
- K. All steel joists shall have bridging in accordance with SJI Institute Specifications. Provide rigid x-bridging in addition to and matching horizontal bridging where joists are discontinuous unless horizontal bridging is anchored to wall top and bottom. Joist sweave allowance shall comply with AISC Standard Practice.
- L. All LH series joists shall have rigid x-bridging as per SJI Specifications.
- M. Steel joists shall be designed for 20psf net uplift resulting from wind loading as measured 12ft. from a building corner. 15psf net uplift as measured 8ft. from the building edge, and 10psf otherwise.
- N. All openings in steel joist top flange shall have 3x3x1/4 angle frame set between joists. Support mechanical equipment with 4x8x16 angles, lapped between joists framed to 4x4x16 angles (length equals mechanical unit dimension plus distance each end to next panel point) laid parallel to and welded to top and/or bottom cord of joists to distribute load to joist panel points.
- O. All steel joists shall have a midspan camber approximately equal to that recommended by the Steel Joist Institute Specifications.
- P. Design and installation of steel decking shall comply with the recommendations of the Steel Deck Institute (SDI). All decking shall be galvanized unless noted otherwise.
- Q. Allow 2.0 tons structural steel to be used as directed in field for special conditions by the engineer of record. Cost for shop drawings, fabrication, delivery, detailing, and erection to be included. 50% of structural steel allowance shall be bid as miscellaneous galvanized angle and plate.

6. Post Installed Anchors

- A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have an ICC-ES Evaluation Service Report. Special inspection is required for all post installed anchors. The contractor shall coordinate an on-site meeting with the post installed anchor manufacturer field representative to educate the construction team on the anchor installation guidelines and requirements.
- B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 308.2 and ICC-ES AC108. All anchors shall be installed per the anchor manufacturer's written instructions.
- C. Adhesive anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
- D. Mechanical anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
- E. Adhesive anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
- F. Anchors used in hollow concrete masonry shall have been tested and qualified in accordance with ICC-ES AC108 or ICC-ES AC308 as appropriate. All anchors shall be installed per the anchor manufacturer's written instructions with appropriate screen tubes used for adhesives.

7. Foundations

- A. The soil investigation was prepared by Kruger Technologies, Inc., the report number is 223115G, and the telephone number is (913)498-1114.
- B. Spread footings, grade beams, and retaining walls are designed to bear on engineered fill or undisturbed soil capable of safely sustaining 2000 psf.
- C. Contractor shall provide for dewatering at excavations from either surface water or seepage.
- D. All foundation excavations shall be inspected by a qualified soil engineer, approved by the architect and/or structural engineer, prior to placement of steel or concrete. This inspection shall be at the owner's expense.
- E. All concrete in the structural portion retaining the backfill shall have attained its design strength prior to being backfilled.
- F. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become desiccated or softened by water or other conditions, recompact materials to the density and water content specified for engineered fill. Do not place concrete on frozen ground.

8. Concrete Masonry Units

- A. Concrete block used in exterior walls or load bearing walls shall meet the requirements of ASTM C90 and have a minimum net compressive strength of 2630 psi and laid up using type N mortar such that it meets 2000 psi. Mortar shall be volume proportion based cement lime mortar. Proportioning shall be completed by box measure. Any block in contact with earth shall be normal weight units, laid using type "S" mortar and grouted solid.
- B. The contractor shall provide adequate temporary bracing for all masonry walls during construction.
- C. All concrete block shall have 9 gage (or larger) horizontal joint reinforcing (ladder or truss) per architectural drawings and specifications (16" maximum vertical spacing).
- D. Cavity wall construction shall be reinforced as designed for specific concrete block used. The horizontal joint reinforcing shall be of the ladder or truss style per specification and continuous between brick and block, as prescribed by the architectural drawings.
- E. Vertical reinforcing shall be reinforced as follows in 6", 8", 10", and 12" walls:
1. Vertical reinforcing shall be a minimum of 1 - #4 bar in 6" and 8" walls and 2 - #4 bars in 10" and 12" walls at 4'-0" on center, at each corner, at each door and window jamb, each side of control joints and in the end void of each length of wall. Lap splices for masonry vertical reinforcing shall be 48 bar diameters, 24" minimum.
 2. Horizontal reinforcing:
 - A. Horizontal joint reinforcing as noted above.
 - B. Continuous horizontal bars shall be included per section or detail in bond beam or optional running bond beam where noted. Where bond beams are continuous at corners of walls, supply corner bars matching size of horizontal bars (minimum 2'-0" or 40 bar diameters in each direction).
- F. Grout, where noted above, shall have a minimum design ultimate compressive strength of 2500 psi at 28 day test and 3/8" maximum aggregate size.
- G. Non-load bearing concrete block walls shall be isolated from adjacent structural elements with vertical 3/8" control joints and at the top of the wall with 1" air space or compressible material and support per architectural detail.
- H. Unless otherwise covered on architectural plans or specifications, vertical control joints in masonry construction shall be 3/8" wide, full height of wall. Joints shall be spaced at a maximum of 24'-0" on center and coordinated with the architect. All horizontal joint reinforcing shall be discontinuous at control joints in masonry. All bond beam horizontal reinforcing shall be continuous through control joints.
- I. Intels over all openings up to 8'-0" wide in new and existing masonry walls not otherwise covered shall be one 6x3 1/2x5/16 angle for each 4" width of masonry. All exterior intels to be galvanized.
- J. Walls shall be anchored top and bottom by dowels matching wall vertical reinforcing (unless noted otherwise) from floor slab bottom and bracing angles at the top, per details on the drawings.

9. Light Gage Metal Structural Framing

- A. All load bearing, light gage structural studs, track, and bridging shall be of the type, size, gage, and spacing as shown on the plans, minimum.
- B. All materials shall be 33,000 psi minimum yield, except studs of 16 gage or heavier shall have a minimum yield of 50,000 psi.
- C. All properties, fabrication, and erection shall be in accordance with latest editions of the AISI "Specifications for the Design of Cold-Formed Structural Members."
- D. All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members is not permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
- E. Tracks shall be securely anchored to floor and overhead members. Special anchorage requirements required for field wall bracing shall be as shown on the plans.
- F. Prior to fabrication and/or erection, the contractor shall submit shop drawings complete with detail of erection, fabrication, attachments, anchorages, intels, etc., for review by the architect/engineer.

10. Deferred Submittal and Shop Drawing

- A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc.
- B. Deferred submittals shall be submitted to the architect of record for review who shall forward to the building official for review and approval. Design calculations for deferred submittals shall be submitted the same time as the shop drawings for review. Design calculations shall be prepared and sealed by a Professional Engineer licensed in the state of the project. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by the building official.
- C. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
1. Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC.
 2. Review and approve each submission.
 3. Stamp each submission as approved.
- D. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
- E. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that such submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.
- F. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall notify the GC.
1. Concrete mix designs and material certificates including admixtures and compounds applied to the concrete after placement.
 2. Reinforcing steel shop drawings including erection drawings and bending details. Bar list will not be reviewed for rebar quantities.
 3. Elevations of all reinforced concrete masonry walls at a scale no smaller than 3/8" = 1'-0" showing all required reinforcing.
 4. Grout mix design (for CMU).
 5. Construction and control joint plans and/or elevations.
 6. Structural steel shop drawings including erection drawings and piece details. Include joist, decking and connector submittals. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. review.
 7. Deferred Submittal: Structural steel connections (including braced frames)
 8. Deferred Submittal: Structural steel joists
 9. Deferred Submittal: Railings and guardrails
 10. Deferred Submittal: Metal stair framing
 11. Deferred Submittal: Exterior cold-formed metal framing
 12. Miscellaneous anchors shown on the structural drawings.
 13. Standard details and bridging information for light gage metal framing.
- Erection plans and details for light gage metal joists and intels spanning more than 6'-0" shall be submitted. Standard wall framing need not be submitted.

11. Statement of Structural Special Inspections

- A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
- B. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
- C. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority, building official and structural engineer.
- D. The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.
- E. The following inspections and tests are required with the frequency (continuous or periodic) as defined within the referenced section or standard listed below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
1. Shop Fabrication - structural steel and steel bar per Section 1704.2.5 unless AISC certified shop.
 2. Steel Construction per Section 1705.2 and the quality assurance requirements of AISC 341 Chapter 4 (as referenced by AISC 360)
 3. Cold-Formed Steel Deck per Section 1705.2.2 and the quality assurance requirements of SDI QACQ.
 4. Concrete Construction per Section 1705.3 and Table 1705.3
 - a. Reinforcing Steel Placement
 - b. Cast in Place Anchors
 - c. Post Installed Anchors
 - d. Design Mix Verification
 - e. Concrete Sampling and Testing
 - f. Concrete Placement
 - g. Concrete Curing
 5. Formwork Shape, Location and Dimensions
 6. Masonry Construction per Section 1705.4 and the quality assurance requirements of TMS 402/ACI305/ASCES and TMS602/AS30 1/ASCE6 (Level B)
 6. Verification of Soils per Table 1705.6

12. Copyright and Disclaimer

- A. All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and Company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
- B. I, Wayne E. Davis, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

STRUCTURAL ABBREVIATIONS

@	AND	GA	GAGE	RAD	RADIUS
Ø	ROUND, DIAMETER	GALV	GALVANIZE(D)	RD-#	ROOF DECK TYPE
ADTL	ADDITIONAL	GEN	GENERAL	REF	REFERENCE
AFF	ABOVE FINISHED FLOOR	HORIZ	HORIZONTAL	REINF	REINFORCEMENT
ALT	ALTERNATE	HOLLOW	HOLLOW STRUCTURAL SECTION	REQD	REQUIRED
ARCH	ARCHITECTURAL	IF	INSIDE FACE	REV	REVISION
BLDG	BUILDING	INFO	INFORMATION	RTU	ROOF TOP UNIT
BM	BOTTOM OF	INT	INTERIOR	SLP	SLIP CRITICAL
BT	BEAM	JOIST	JOIST	SC	SCHED. (E)
BOTTOM	BOTTOM	JOINT	JOINT	SCHED	SECTION
BEARING	BEARING	KT	KIPS (1000 LBS)	SHT	SHEET
CAMBER	CAMBER	K	KIPS PER SQUARE FOOT	SM	SIMILAR
CD-#	CONCRETE DECK TYPE	KSI	KIPS PER SQUARE INCH	SJ	SAW JOINT
CONC	CONSTRUCTION/CONTROL JOINT	LBS	POUNDS	SL	SNOW LOAD
COL	COMPLETE JOINT PENETRATION	L4	DEVELOPMENT LENGTH	SLAB-ON-GRADE	SLAB-ON-GRADE
CMU	CENTERLINE	LL	LIVE LOAD	SOQ-#	SLAB-ON-GRADE TYPE
COLUMN	CONCRETE MASONRY UNIT	LLV	LONG LEG HORIZONTAL	SPCG	SPACING
CONC	CONCRETE	LONG	LONG LES VERTICAL	SPEC	SPECIFICATION
CONN	CONNECTION	LONGT	LONGITUDINAL	SPRT	SUPPORT
CONT	CONTINUOUS	LONGS	LONG-SLOTTED HOLE TRANSVERSE	SQ	SQUARE
COORD	COORDINATE	LTWT	LIGHTWEIGHT	SS	STAINLESS STEEL
COV, CVR	COVER	M	MOMENT FORCE	SSLT	SHORT-SLOTTED HOLE TRANSVERSE
DBL	DOUBLE	MAX	MAXIMUM	STD	STANDARD
DET	DETAIL	MECH	MECHANICAL	STIFF	STIFFENER
DIA	DIAMETER	MFG	MANUFACTURER	STR	STRUT
DIM	DIAMETER	MIN	MINIMUM	STRUT	STRUCTURE, STRUCTURAL
DWG	DEAD LOAD	MSRY	MASONRY	T/	TOP OF
EA	EACH	MTL	METAL	THRU	THROUGH
EF	EACH FACE	NF	NEAR FACE	TOS	TOP OF STEEL, TOP OF SLAB
EJ	EXPANSION JOINT	NTS	NEAR SIDE	TRANS	TRANSVERSE
EL	ELEVATION	NOT	NOT TO SCALE	TYP	TYPICAL
EMBD	EMBEDMENT, EMBEDDED	OC	ON CENTER	UNO	UNLESS NOTED OTHERWISE
ENGR	ENGINEER	OP	OUTSIDE FACE	V	SHEAR FORCE
EOR	ENGINEER OF RECORD	OPG	OPENING	VERT	VERTICAL
EOS	EDGE OF DECK	OVS	OVERSIZED HOLE	W/	WITH
EQUAL	EQUAL	P	AXIAL FORCE	W/O	WITHOUT
EQUIP	EQUIPMENT	PAF	POWDER ACTUATED FASTENER	WF	WELD FLANGE
EXP	EXPANSION	PC	PRECAST	WIND	WIND LOAD
EXT	EXTERIOR	PFC	POUNDS PER CUBIC FOOT	WP	WORK POINT
EXTG	EXISTING	PFR	PERF-ENGINEERED METAL BUILDING	WWF	WELDED WIRE FABRIC
EXTG, EXIST	EXISTING	PL	PLATE		
FIN	FINISH	PLF	POUNDS PER LINEAR FOOT		
FDN	FOUNDATION	PJP	PARTIAL JOINT PENETRATION		
FF	FAR FACE	PSI	POUNDS PER SQUARE INCH		
FLR	FLOOR	PSI	POUNDS PER SQUARE INCH		
FS	FAR SIDE	QTY	QUANTITY		
FTG	FOOTING				
FV	FIELD VERIFY				

LEGEND:

→ SPAN DIRECTION OF DECK

NCD-1 3/4" CONCRETE SLAB REINFORCED W/ 6x6-W2 14x2.1 WWF ON 0.8x26ga GALVANIZED FORM DECK (3 SPAN CONTINUOUS)

RD-1 1/2", 22ga GALVANIZED WIDE RIB ROOF DECK (3 SPAN CONTINUOUS) ATTACH TO STRUCTURE TO DEVELOP 25psf DIAPHRAGM SHEAR (ASD LOAD)

30 FOOTING MARK - SEE SCHEDULE ON SHEET S003.

1 HSS 8"x8"x5/16" COLUMN SIZE

BASE PLATE MARK - SEE SCHEDULE ON SHEET S003

LEVEL BEAM DESIGNATION	W14x22	STEEL BEAM SIZE
	117'-6"	TOP OF BEAM ELEVATION
SLOPING BEAM DESIGNATION	W14x22	STEEL BEAM SIZE
	T 133'-0" T 132'-5"	TOP OF BEAM ELEVATION EACH END

REVISIONS:

#	Description	Date

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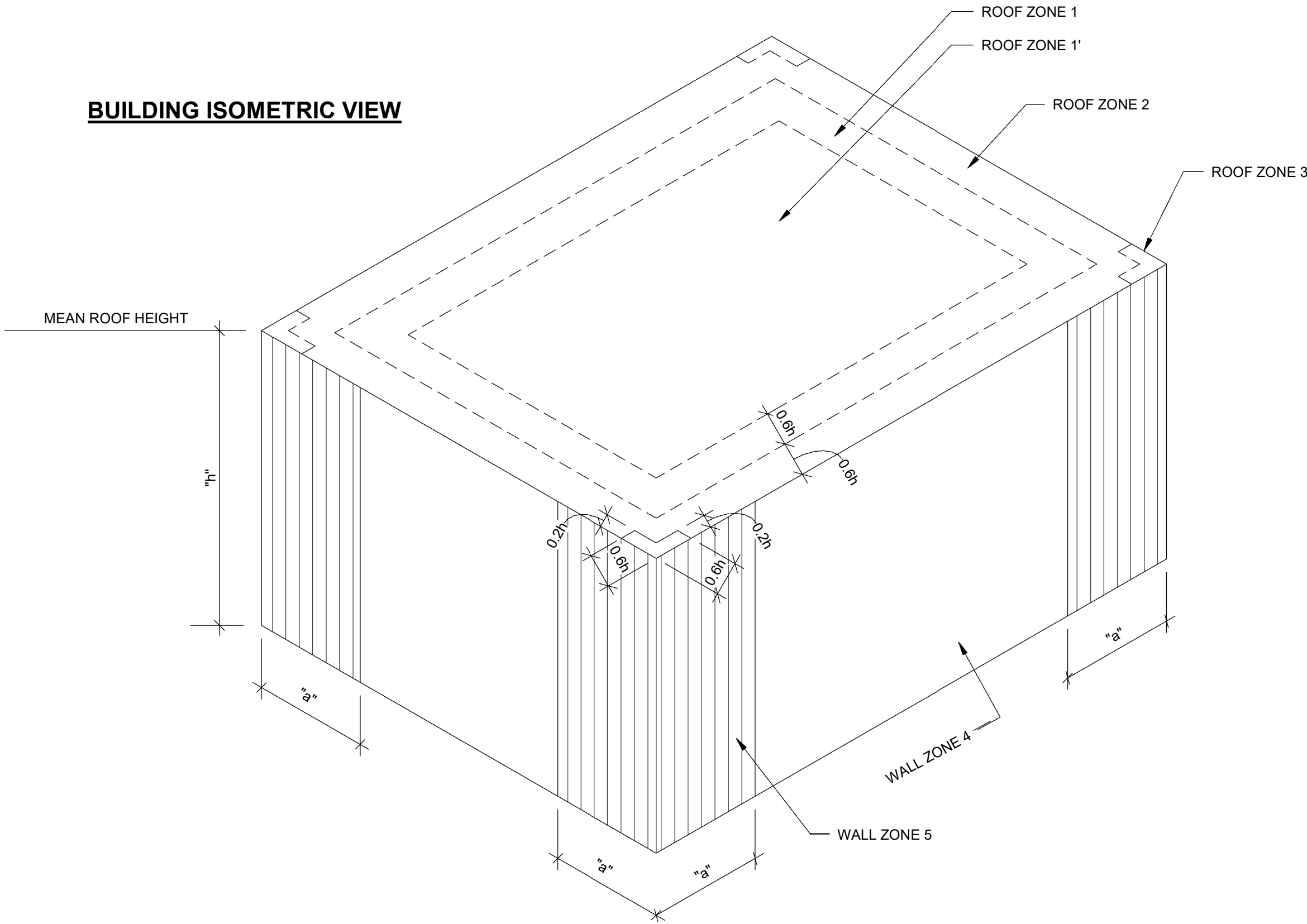
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11-1-23

ASCE 7-16 BASIC LOAD CASE 1.0W COMPONENT AND CLADDING WIND PRESSURE DIAGRAM NOTES:

1. REFER TO GENERAL NOTES FOR WIND LOAD DESIGN CRITERIA.
2. POSITIVE LOADS ACT IN A PERPENDICULAR DIRECTION TOWARDS THE SURFACE. NEGATIVE LOADS ACT IN PERPENDICULAR DIRECTION AWAY FROM THE SURFACE.
3. WIND LOADS CALCULATED ARE BASED ON THE PROVISIONS OF ASCE 7. VALUES SHOWN ARE DETERMINED ASSUMING AN ENCLOSED BUILDING WITH AN INTERNAL PRESSURE COEFFICIENT = +0.18 AND A Kd FACTOR = 0.85. LOADS SHOWN ARE FROM UNFACTORED BASIC LOAD CASE.
4. LINEAR INTERPOLATION IS PERMITTED FOR TRIBUTARY AREAS BETWEEN VALUES GIVEN.
5. "r" SHALL BE THE LESSER OF 10 PERCENT OF THE LEAST HORIZONTAL DIMENSION OR 0.4x"r", BUT NOT LESS THAN 4 PERCENT OF THE LEAST HORIZONTAL DIMENSION OR 3 FT.
6. FIGURES SHOWN ARE ILLUSTRATIVE ONLY AND ARE NOT INTENDED TO DEPICT THE ACTUAL STRUCTURE DIMENSIONS.
7. ALL DESIGNERS USING THIS WIND LOAD DIAGRAM MUST INDEPENDENTLY VERIFY THE DESIGN PRESSURES BASED ON THE APPLICABLE BUILDING CODE.
8. ROOF PRESSURES ARE FOR FLAT ROOF ONLY. WIND LOADS FOR THE DESIGN OF SLOPED ROOFS (WITH ANGLES GREATER THAN 10 DEGREES) SHALL BE OBTAINED USING THE PROVISIONS OF ASCE 7-16.
9. PARAPETS SHALL BE DESIGNED FOR COMPONENTS AND CLADDING LOADS PER ASCE 7 SECTION 6.5.12.4.4. IF A PARAPET 3'-0" OR HIGHER OCCURS AROUND THE PERIMETER OF THE ROOF, ZONE 3 MAY BE TREATED AS ZONE 2 FOR ROOF PRESSURE AND SUCTION.

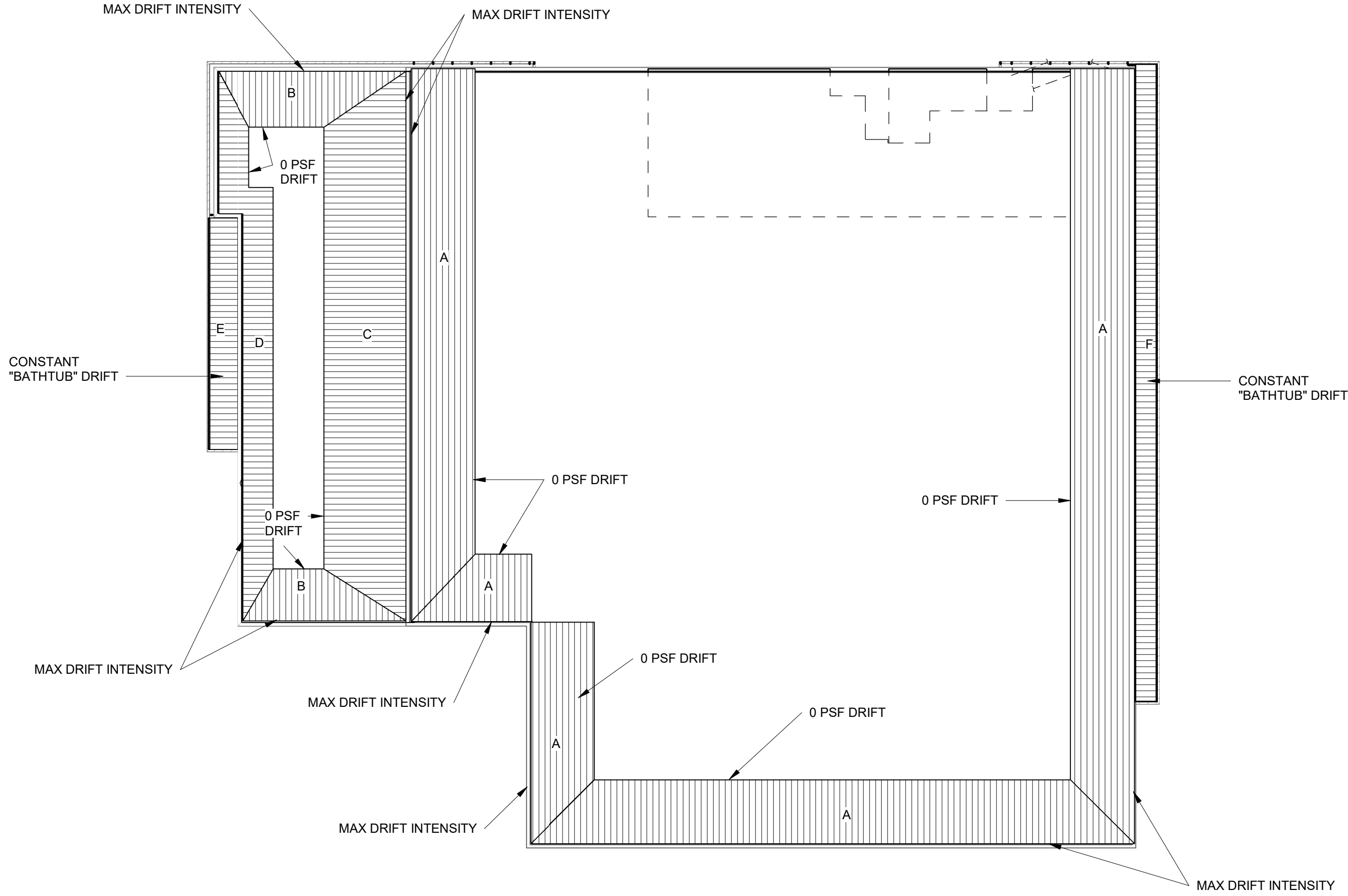
BUILDING ISOMETRIC VIEW



FLAT ROOF (SLOPE LESS THAN 3 DEGREES) BUILDING COMPONENT AND CLADDING DESIGN WIND PRESSURES (+) AND SUCTION (-) (PSF)													
EFFECTIVE AREA (SQ. FT.)	10		20		50		100		200		500		1000
ZONE 1	-55.7	14.7	-52.8	13.2	-46.9	7.9	-44.0	11.7	-41.1	11.7	-35.2	11.7	-35.2
ZONE 1'	-32.3	14.7	-32.3	13.2	-32.3	7.9	-32.3	11.7	-27.9	11.7	-22.0	11.7	-17.6
ZONE 2	-73.3	14.7	-68.9	13.2	-63.1	7.9	-58.7	11.7	-52.8	11.7	-46.9	11.7	-46.9
ZONE 3	-99.7	14.7	-90.9	13.2	-79.2	7.9	-68.9	11.7	-58.7	11.7	-46.9	11.7	-46.9
ZONE 4	-38.1	35.2	-36.7	35.2	-35.2	33.7	-32.3	29.3	-30.8	29.3	-29.3	29.3	24.3
ZONE 5	-46.9	35.2	-44.0	35.2	-39.6	33.7	-36.7	29.3	-33.7	29.3	-29.3	29.3	24.3

BUILDING COMPONENTS &
CLADDING WIND LOADS DIAGRAM

1/8" = 1'-0"



DRIFT LOAD CHART		
DRIFT LOAD TYPE	DRIFT MAX INTENSITY (PSF)	DRIFT WIDTH "W"
DRIFT A	59	13'-3"
DRIFT B	48	10'-9"
DRIFT C	76	17'-0"
DRIFT D	28	6'-3"
DRIFT E	40	"BATHTUB"
DRIFT F	76	"BATHTUB"
DRIFT G	13	3'-0"
DRIFT H	37	8'-3"
DRIFT J	53	12'-0"

SNOW DRIFT LOAD DIAGRAM NOTES:

1. GROUND SNOW LOAD AND FLAT SNOW LOADS ARE INDICATED IN GENERAL NOTE 2 ON SHEET S001.
2. SNOW DRIFT LOAD IS IN ADDITION TO THE GROUND SNOW LOAD INDICATED IN GENERAL NOTE 2 ON SHEET S001.
3. ROOF FRAMING MEMBERS DESIGNED BY SUPPLIER SHALL BE DESIGNED FOR THE WORST CASE LOAD EFFECTS RESULTANT FROM GROUND SNOW, UNBALANCED SNOW, SNOW DRIFT, AND RAIN-ON-SNOW LOADS TAKEN IN COMBINATION AS REQUIRED BY ASCE 7.

2 SNOW DRIFT LOAD DIAGRAM

1/8" = 1'-0"

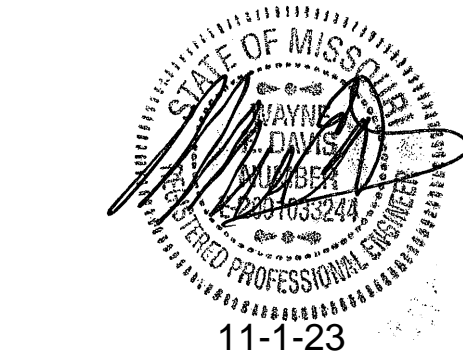


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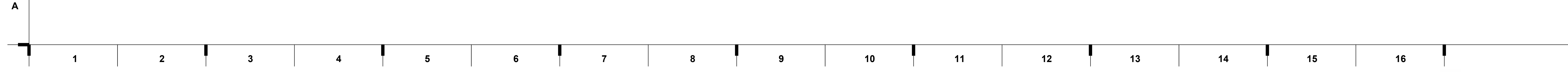
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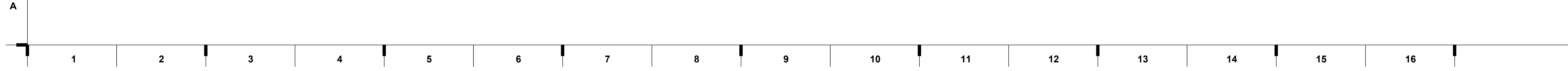
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CHECKED BY: WED
DATE: 11.1.2023

S002



FOUNDAT

FOUNDATION PLAN



DT LEOKA TRAINING PLAN

1 ROOF FRAMING PLAN

1/8" = 1'-0"



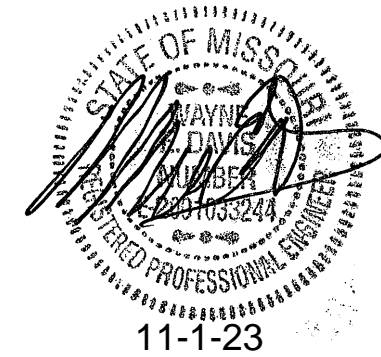
TYPICAL: PROVIDE ROOF DECK OPENINGS
& RTU SUPPORT ANGLE FRAMES PER
GENERAL NOTE SN ON SHEET S001.
REFER TO DETAIL 2/S301 FOR JOIST
REINFORCEMENT REQUIREMENTS

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S102

ROOF FRAMING PLAN

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115 Wilcox Street Suite 210
Castle Rock, CO 80104
1 720.949.1889

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Structure # 200001033

MKEC Engineering, Inc.
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Engineering #2001009364
Landscaping #2006027139
Surveying #2006027138
11827 W 112th Street, Suite 200
Overland Park, KS 66210
913.317.5590 phone

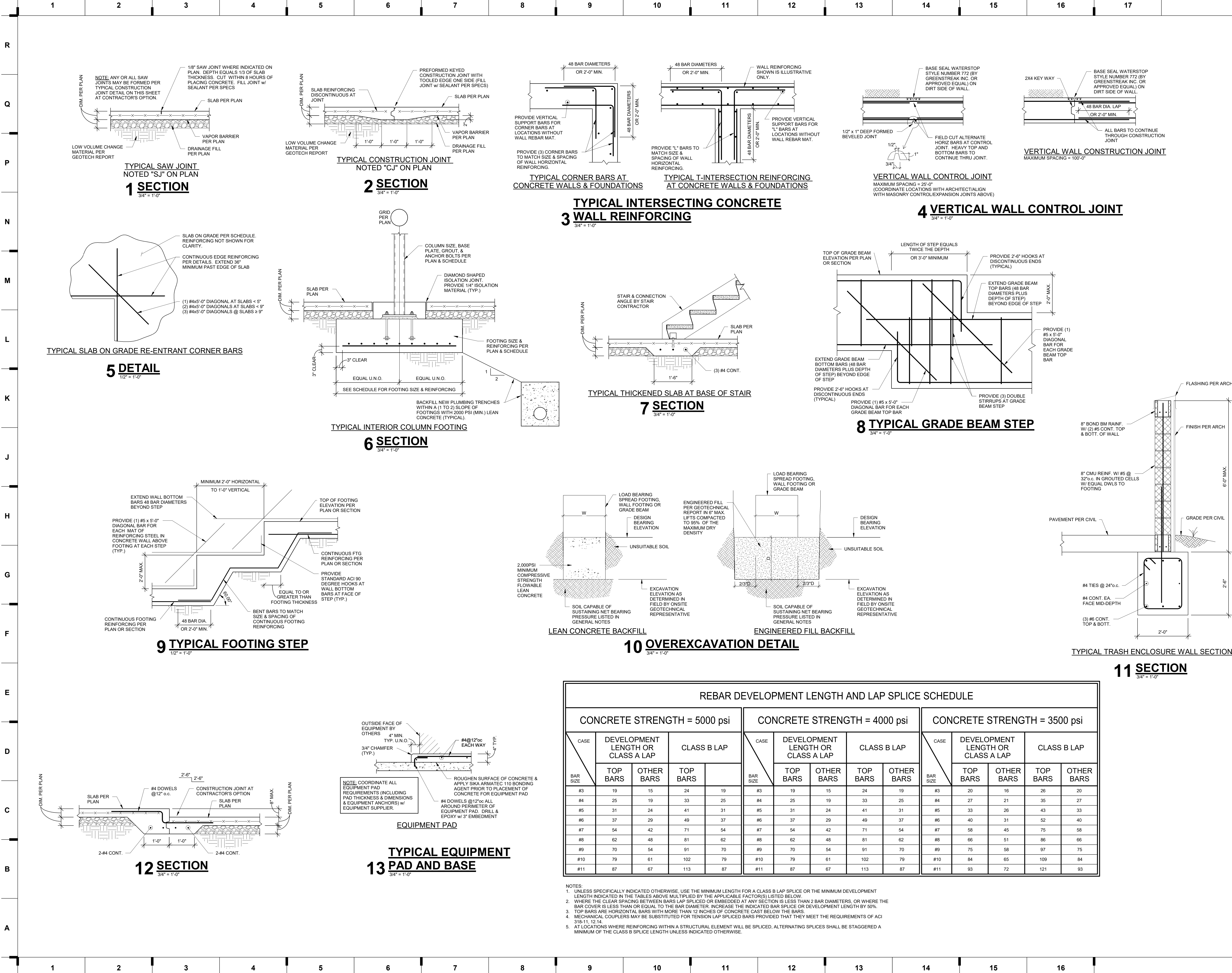
Bob D. Campbell & Co.
Structural Engineer
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Kansas City, MO 64111
816.531.4144 phone
816.531.8572 fax

Smith & Boucher Engineers
Mech/Elect Engineer
State Certificate of Authority #
25618 W 103rd St
Olathe, KS 66061
913.345.2127 phone

Fellers Food Service Equipment & Design
Food Service Consultant
State Certificate of Authority #
2140 W Grand St Suite B
Springfield, MO 65802
417.862.0812 phone

CONSTRUCTION
DOCUMENTS

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3 TYPICAL INTERSECTING CONCRETE WALL REINFORCING

4 VERTICAL WALL CONTROL JOINT

7 TYPICAL THICKENED SLAB AT BASE OF STAIR

8 TYPICAL GRADE BEAM STEP

10 OVEREXCAVATION DETAIL

11 SECTION

9 TYPICAL FOOTING STEP

12 TYPICAL EQUIPMENT PAD AND BASE

REBAR DEVELOPMENT LENGTH AND LAP SPLICE SCHEDULE														
CONCRETE STRENGTH = 5000 psi					CONCRETE STRENGTH = 4000 psi					CONCRETE STRENGTH = 3500 psi				
CASE BAR SIZE	DEVELOPMENT LENGTH OR CLASS A LAP		CLASS B LAP		CASE BAR SIZE	DEVELOPMENT LENGTH OR CLASS A LAP		CLASS B LAP		CASE BAR SIZE	DEVELOPMENT LENGTH OR CLASS A LAP		CLASS B LAP	
	TOP BARS	OTHER BARS	TOP BARS			TOP BARS	OTHER BARS	TOP BARS	OTHER BARS		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	19	15	24	19	#3	19	15	24	19	#3	20	16	26	20
#4	25	19	33	25	#4	25	19	33	25	#4	27	21	35	27
#5	31	24	41	31	#5	31	24	41	31	#5	33	26	43	33
#6	37	29	49	37	#6	37	29	49	37	#6	40	31	52	40
#7	54	42	71	54	#7	54	42	71	54	#7	58	45	75	58
#8	62	48	81	62	#8	62	48	81	62	#8	66	51	86	66
#9	70	54	91	70	#9	70	54	91	70	#9	75	58	97	75
#10	79	61	102	79	#10	79	61	102	79	#10	84	65	109	84
#11	87	67	113	87	#11	87	67	113	87	#11	93	72	121	93

- NOTES:
- UNLESS SPECIFICALLY INDICATED OTHERWISE, USE THE MINIMUM LENGTH FOR A CLASS B LAP SPLICE OR THE MINIMUM DEVELOPMENT LENGTH INDICATED IN THE TABLES ABOVE MULTIPLIED BY THE APPLICABLE FACTOR(S) LISTED BELOW.
 - WHERE THE CLEAR SPACING BETWEEN BARS LAP SPliced OR EMBEDDED AT ANY SECTION IS LESS THAN 2 BAR DIAMETERS, OR WHERE THE BAR COVER IS LESS THAN OR EQUAL TO THE BAR DIAMETER, INCREASE THE INDICATED BAR SPLICE OR DEVELOPMENT LENGTH BY 50%.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
 - MECHANICAL COUPLERS MAY BE SUBSTITUTED FOR TENSION LAP SPliced BARS PROVIDED THAT THEY MEET THE REQUIREMENTS OF ACI 318-11, 12.14.
 - AT LOCATIONS WHERE REINFORCING WITHIN A STRUCTURAL ELEMENT WILL BE SPliced, ALTERNATING SPLICES SHALL BE STAGGERED A MINIMUM OF THE CLASS B SPLICE LENGTH UNLESS INDICATED OTHERWISE.

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Surveying #20006027139
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913.317.5590 phone

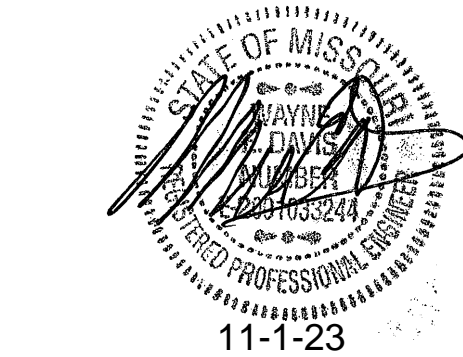
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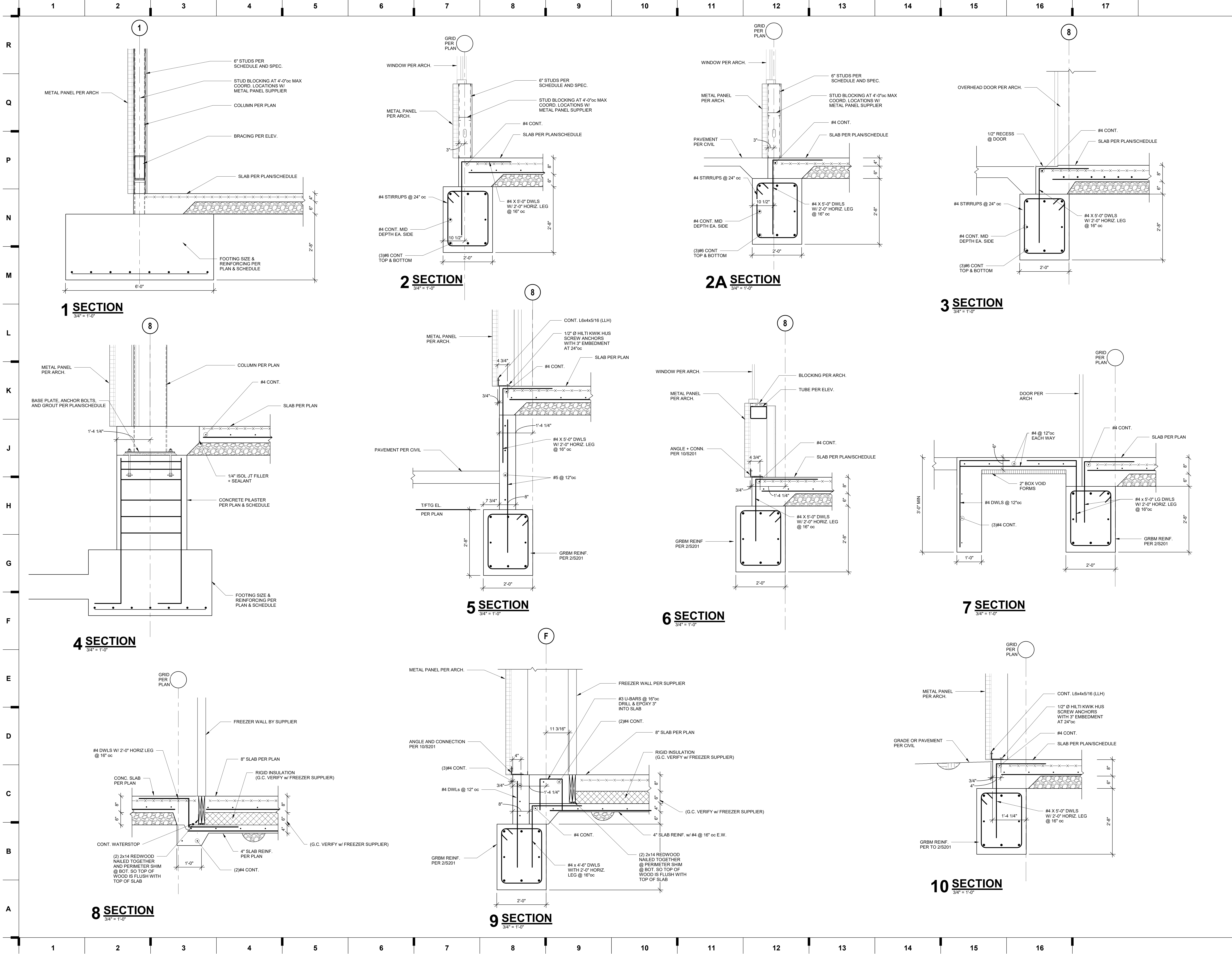
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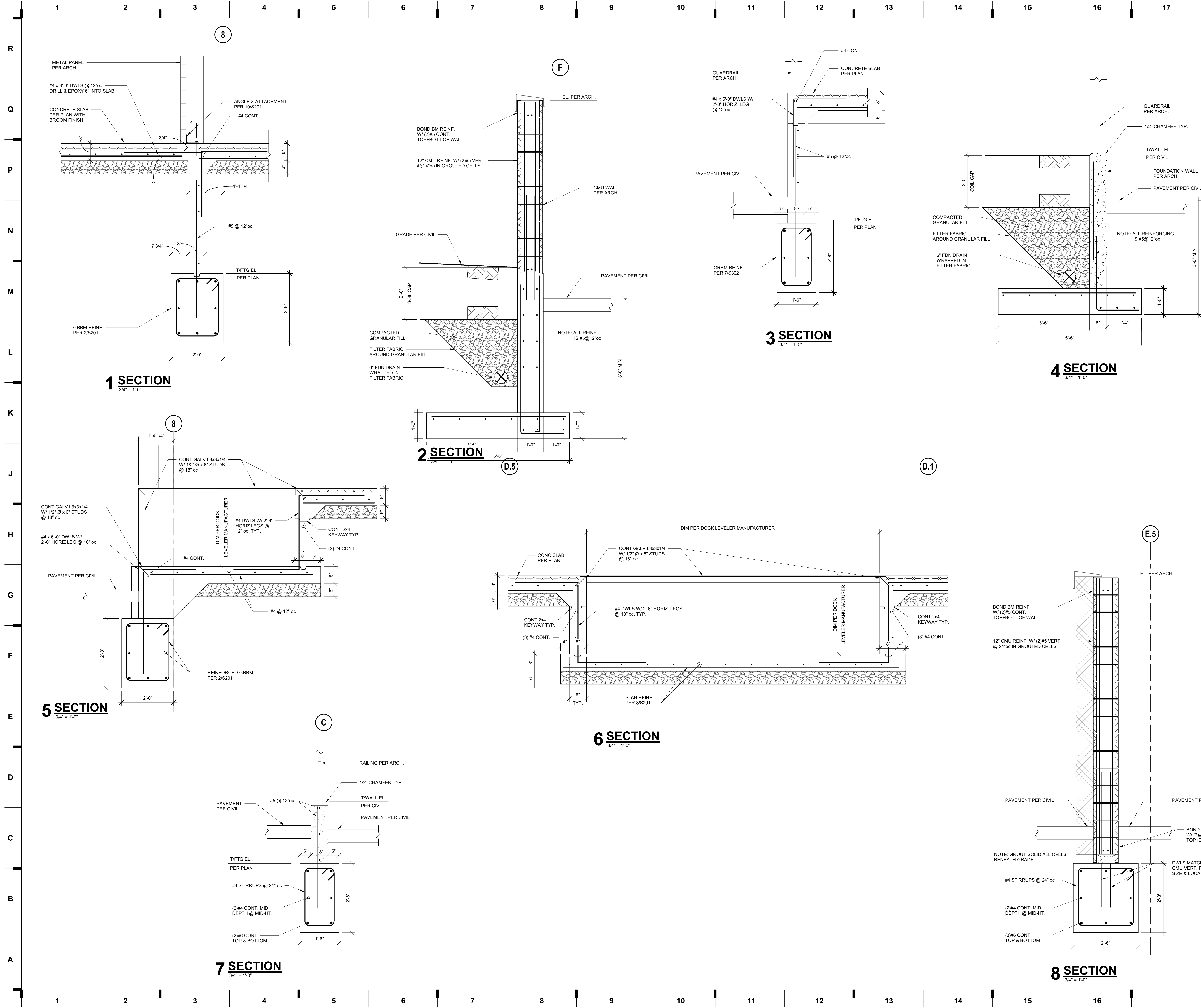
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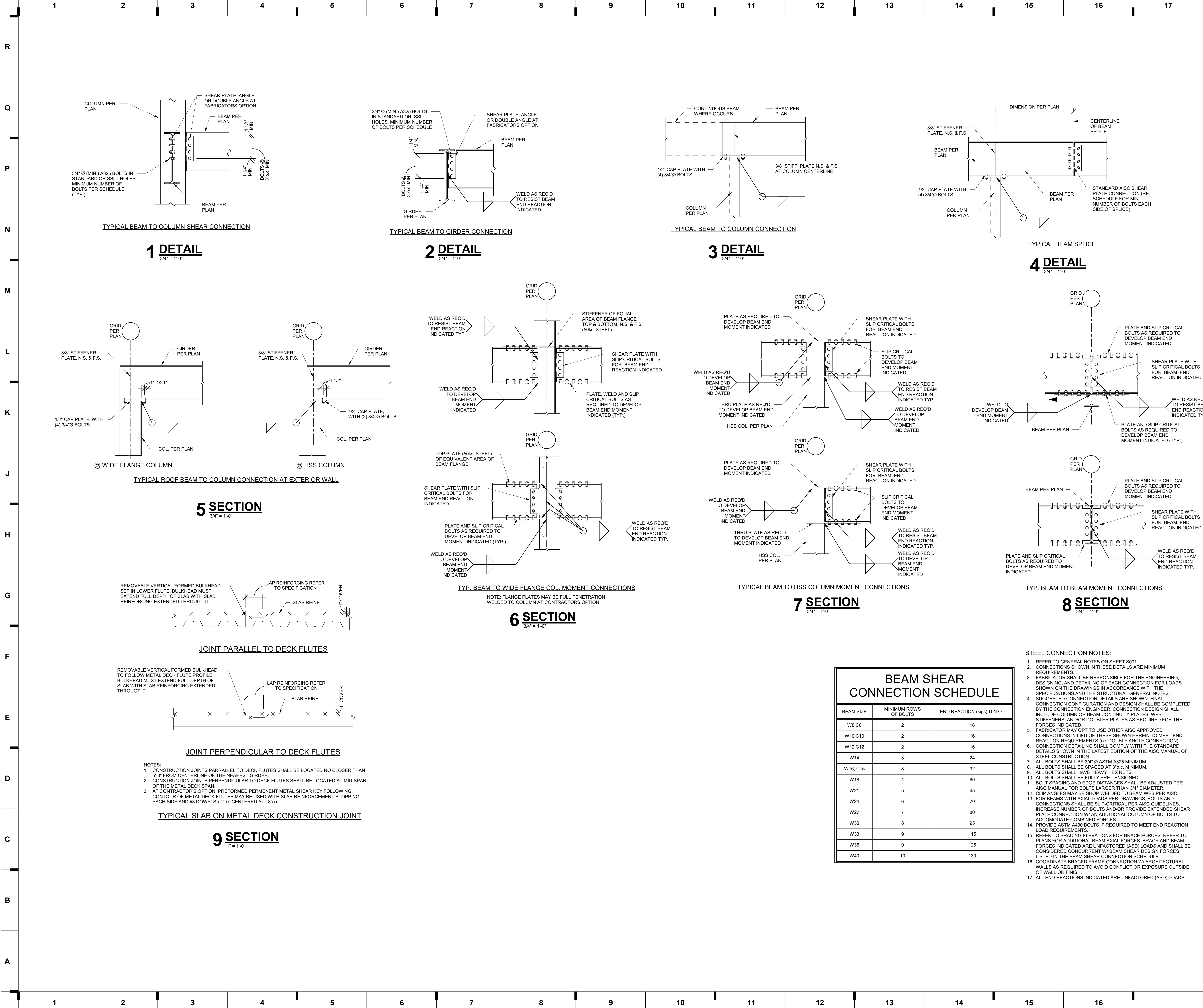
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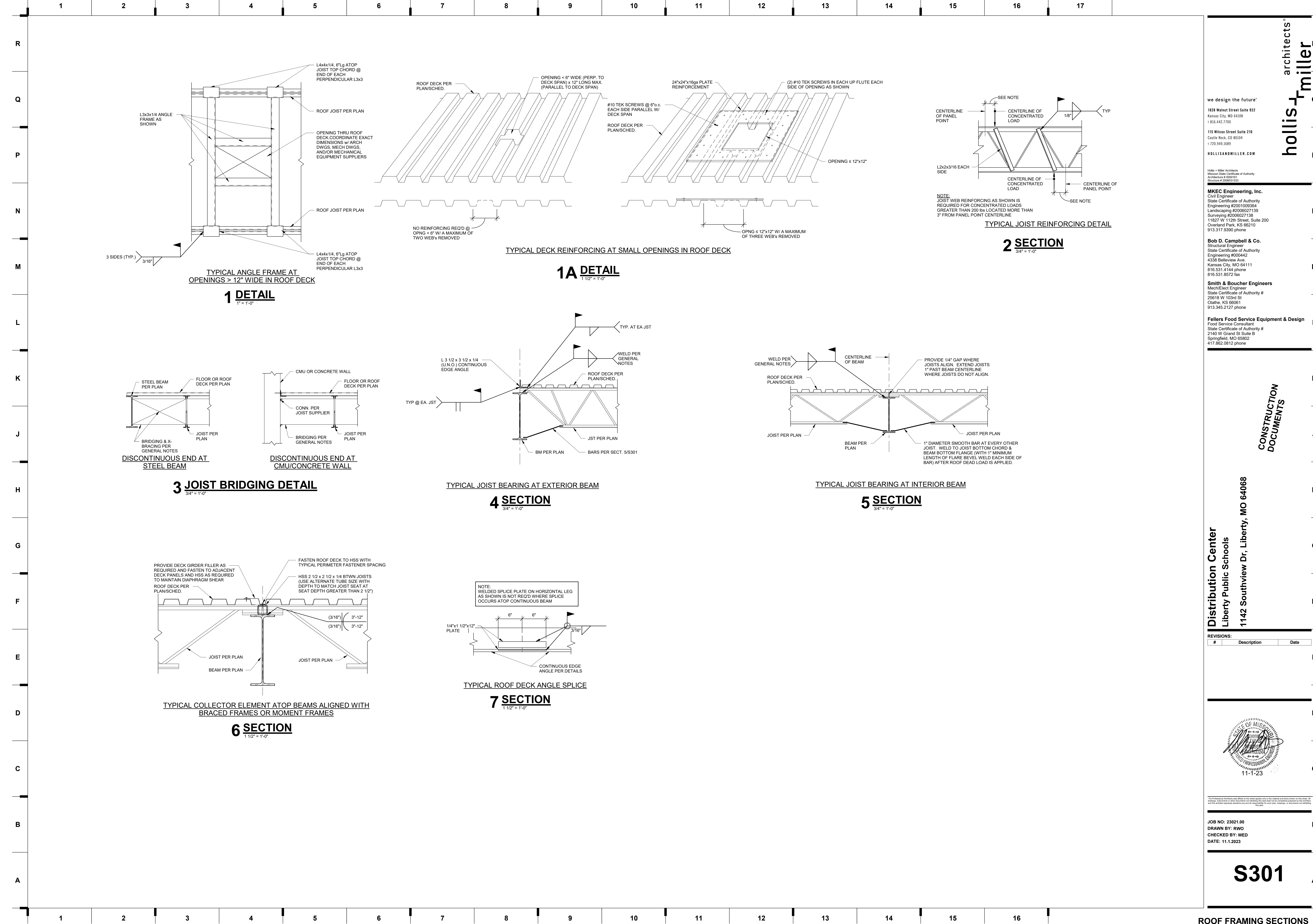
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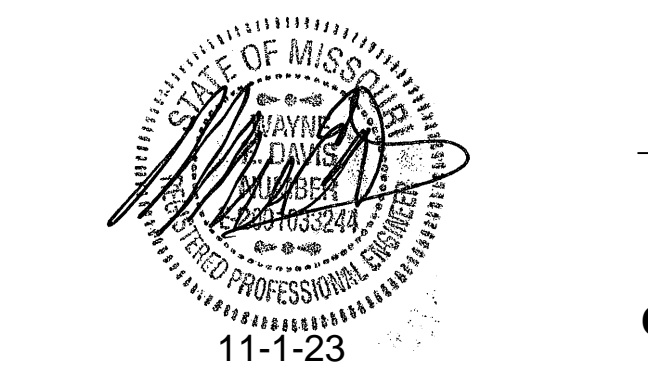
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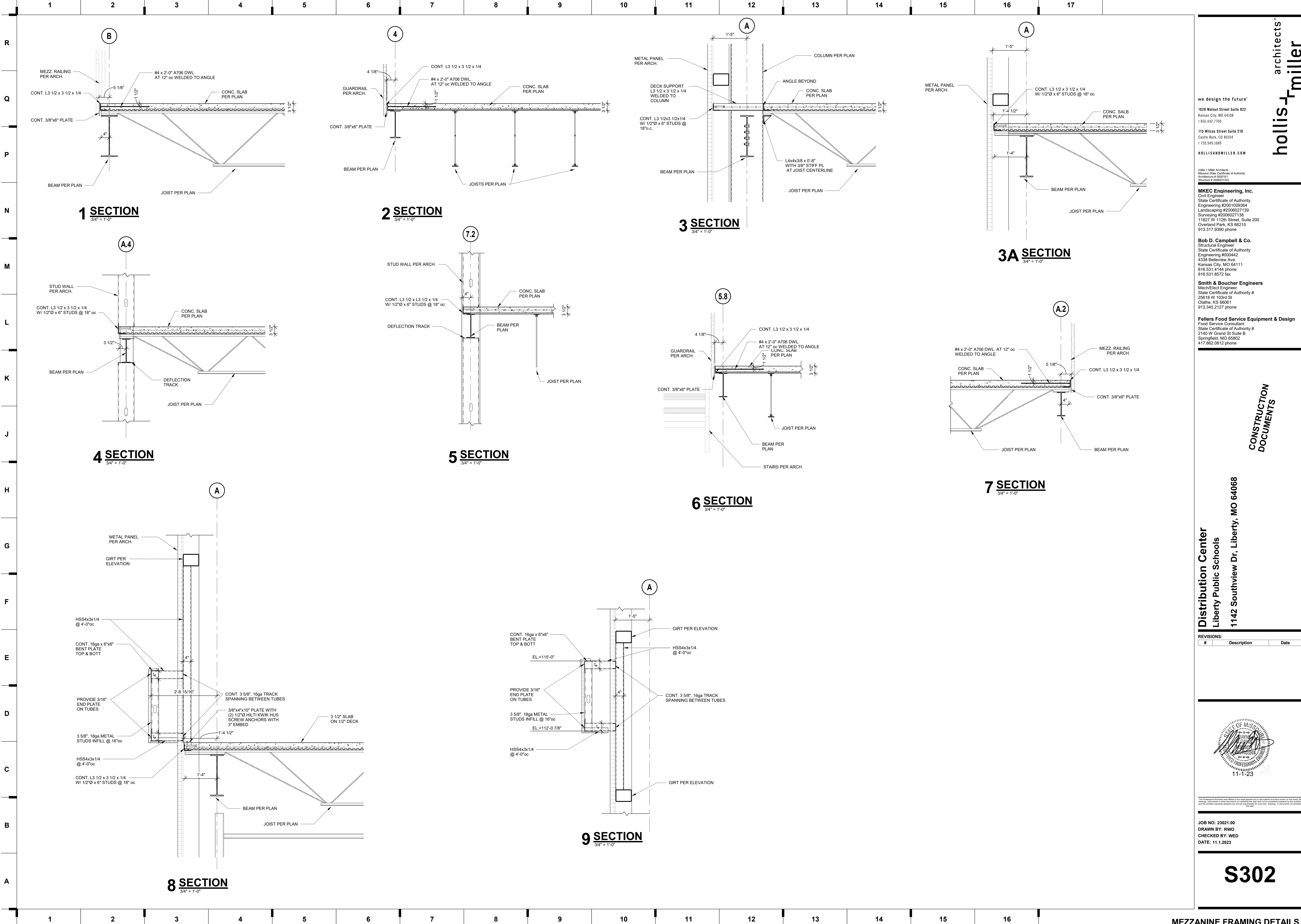
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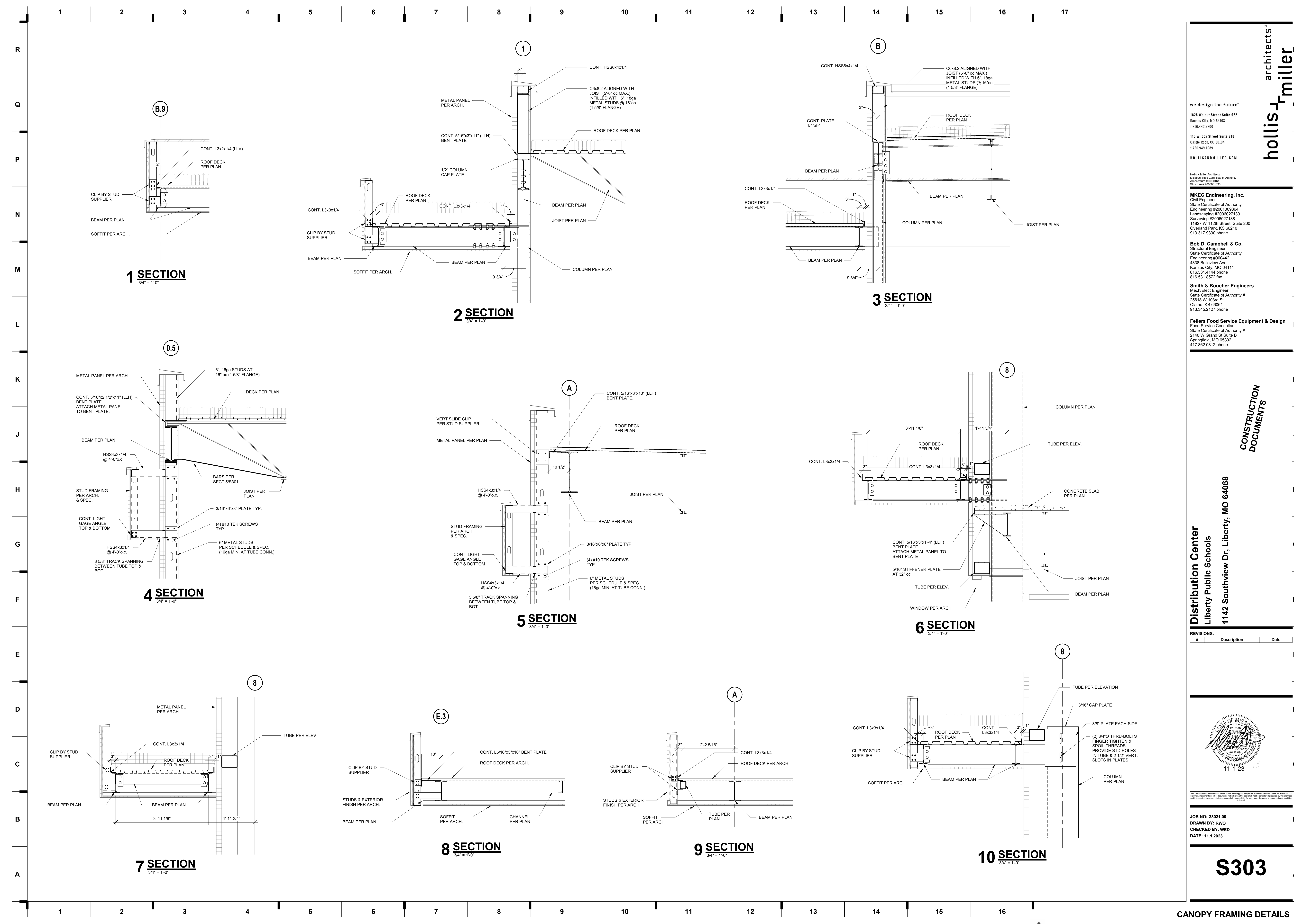
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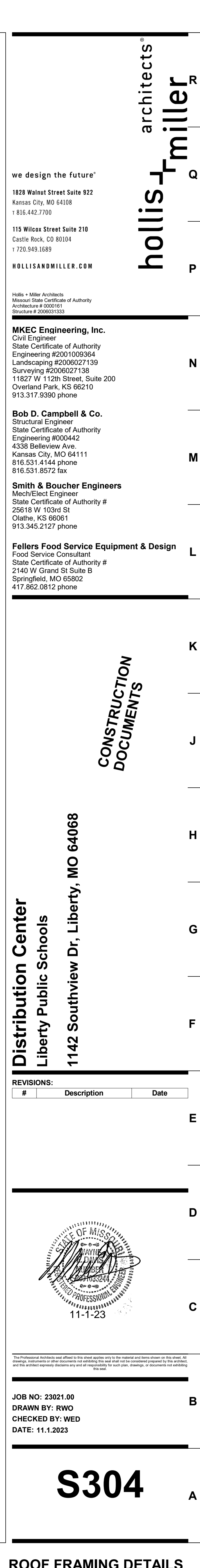
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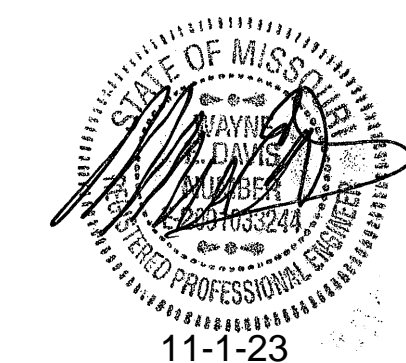
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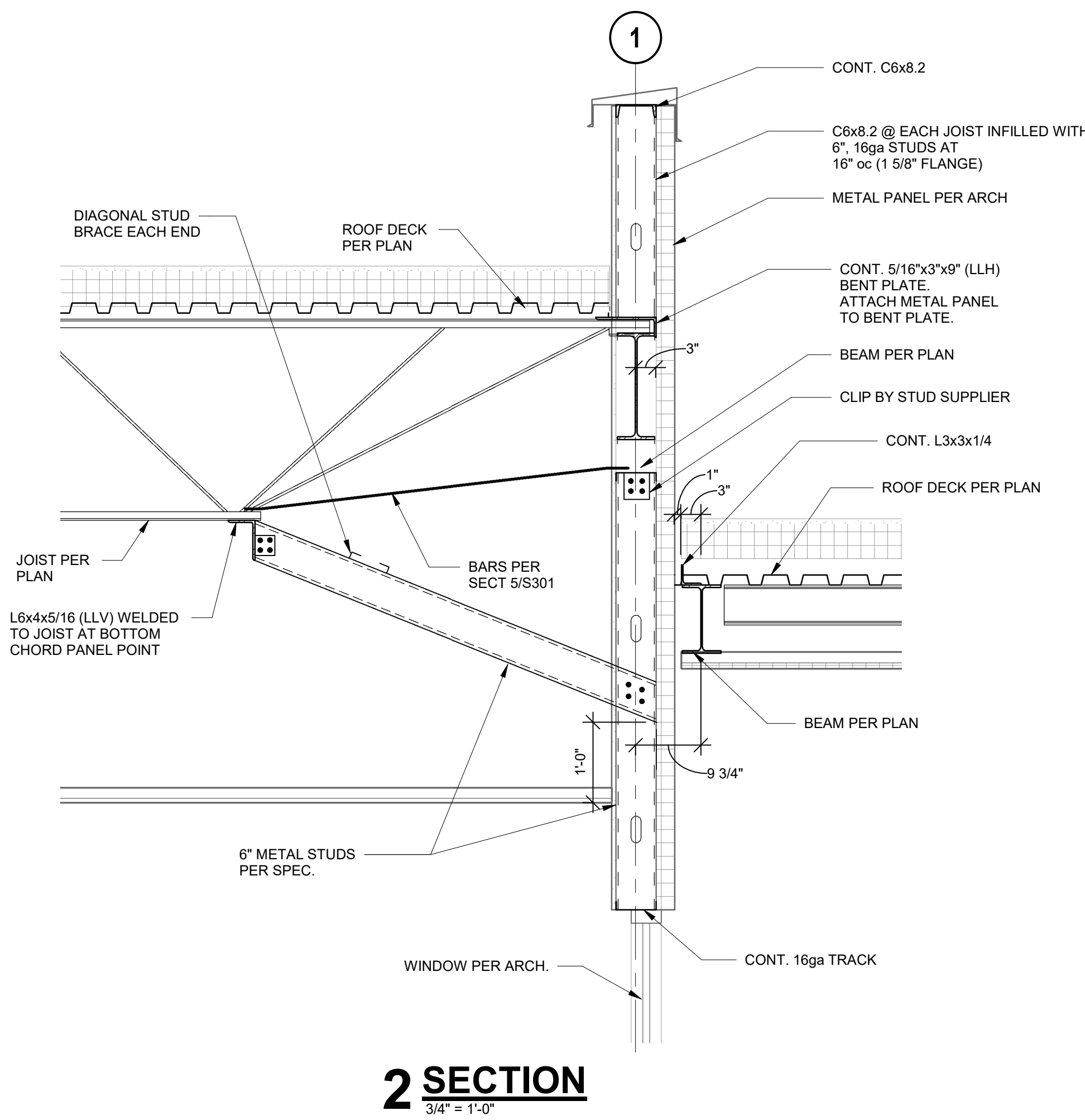
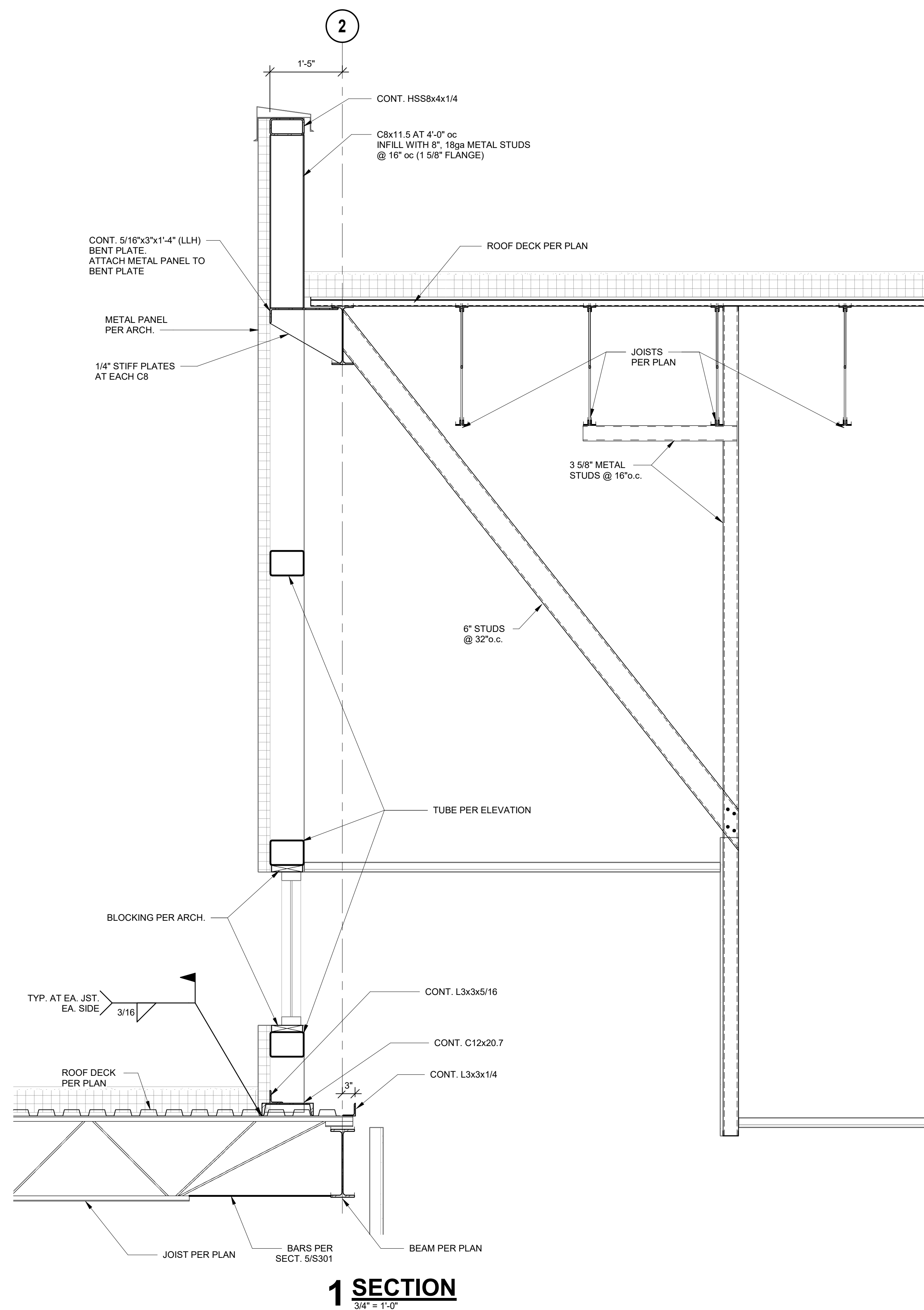


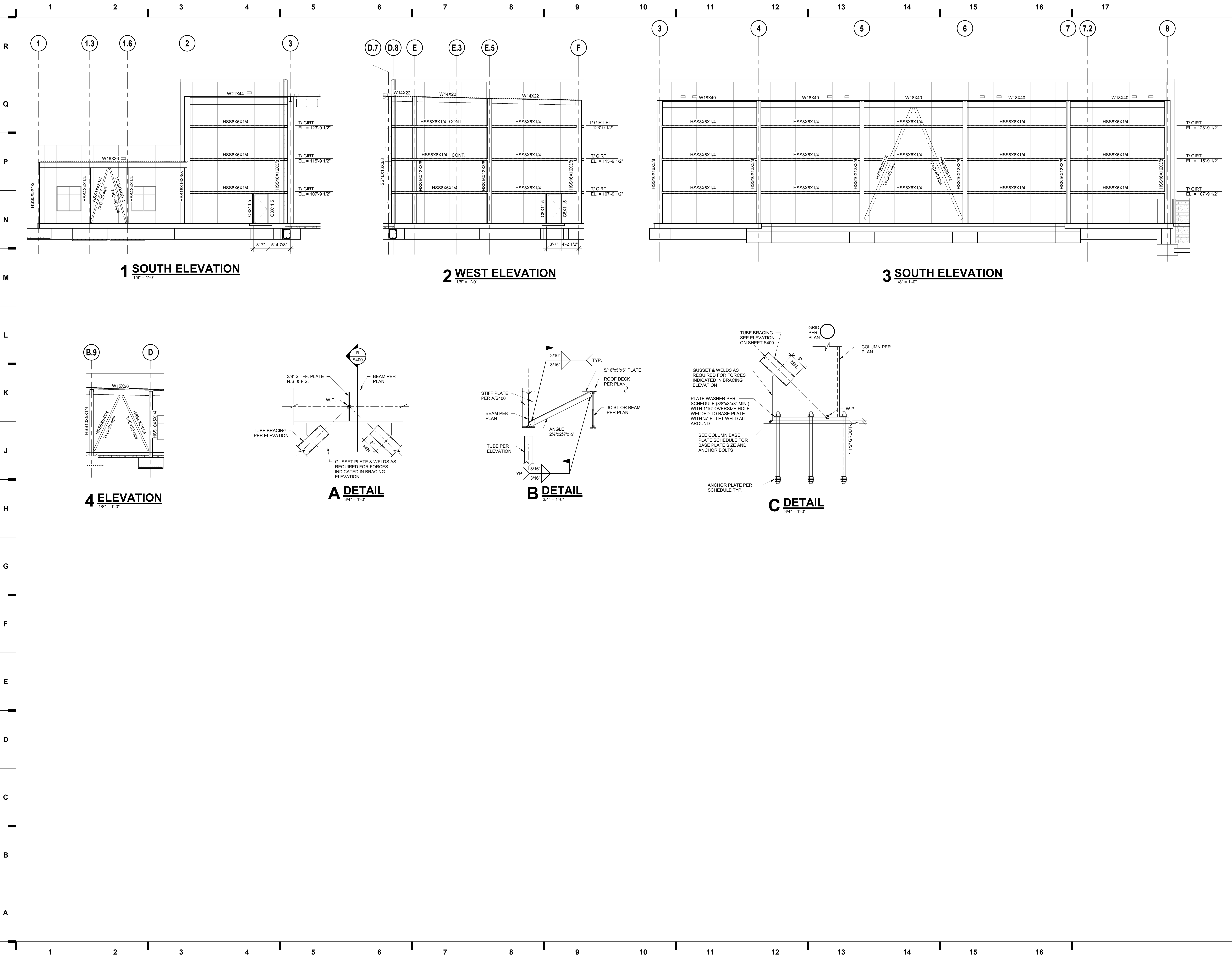
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ROOF FRAMING DETAILS





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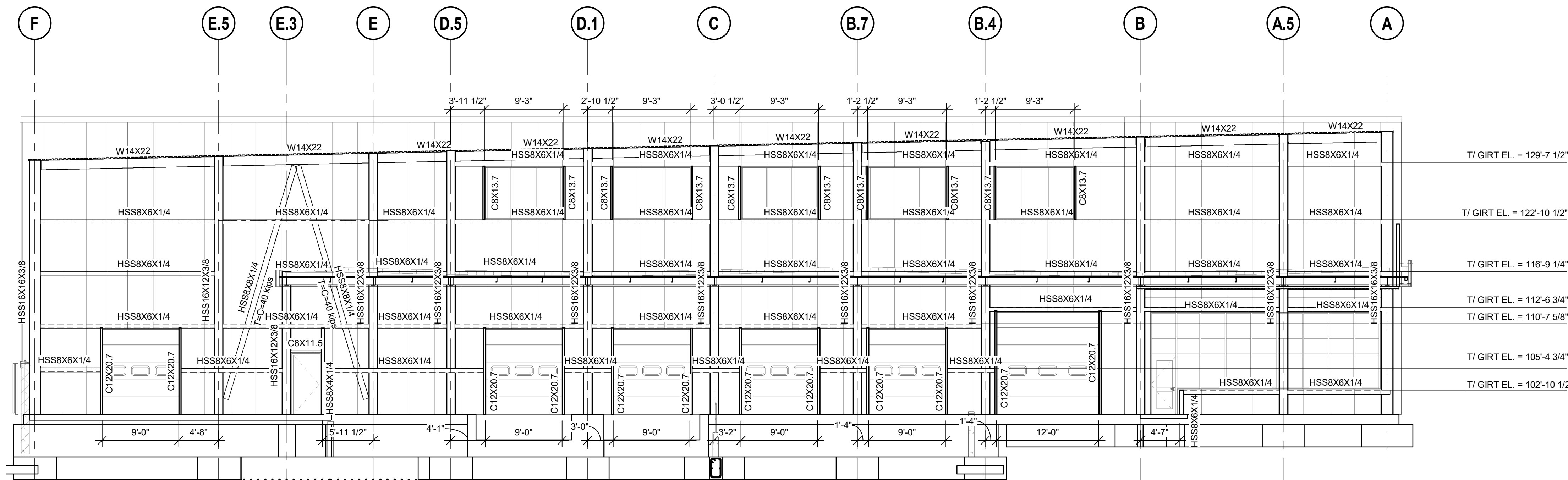


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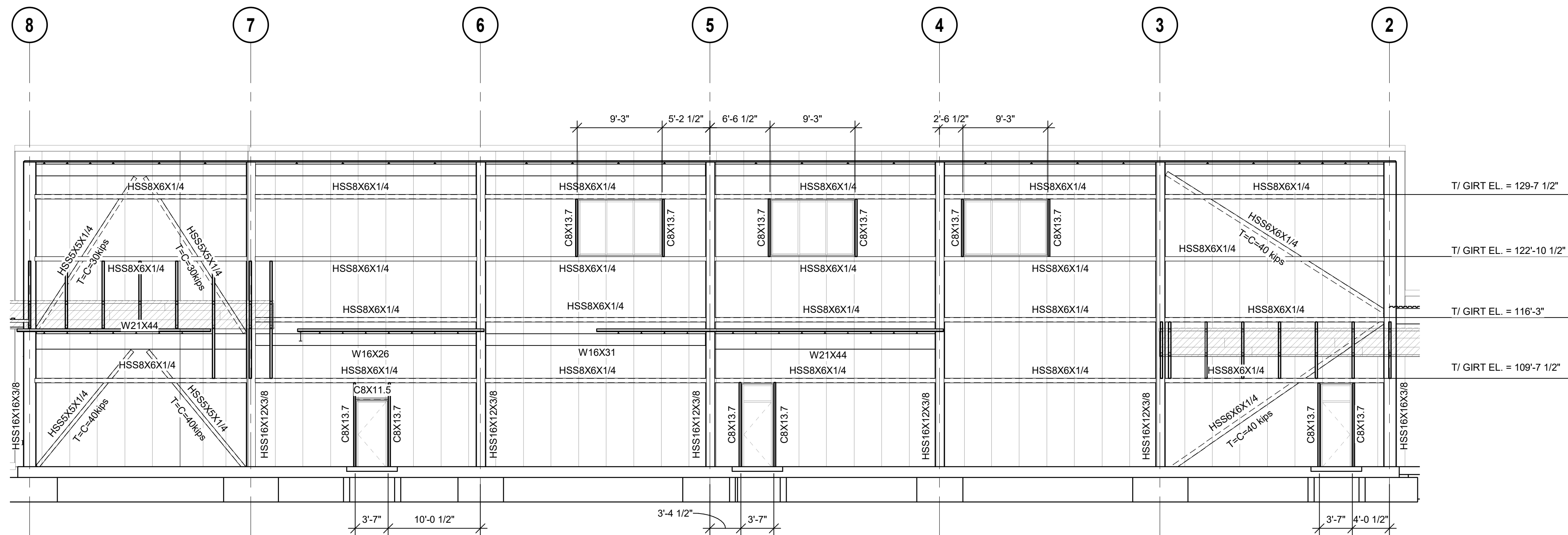
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ELEVATION VIEWS

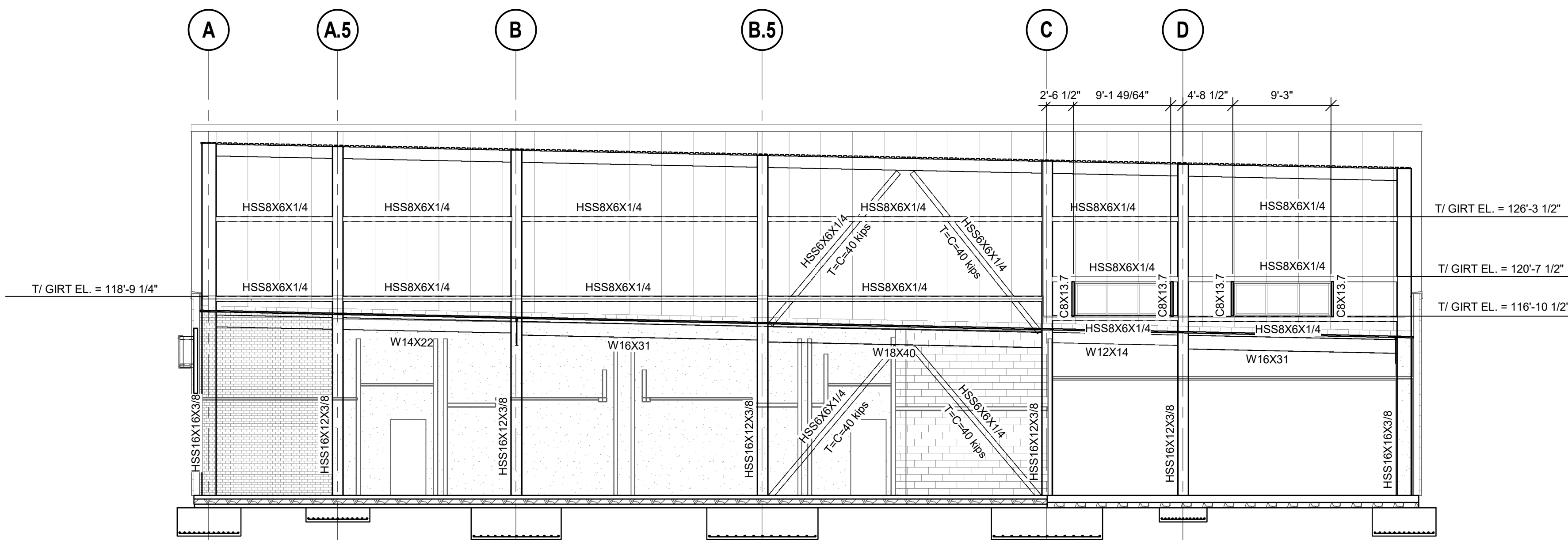
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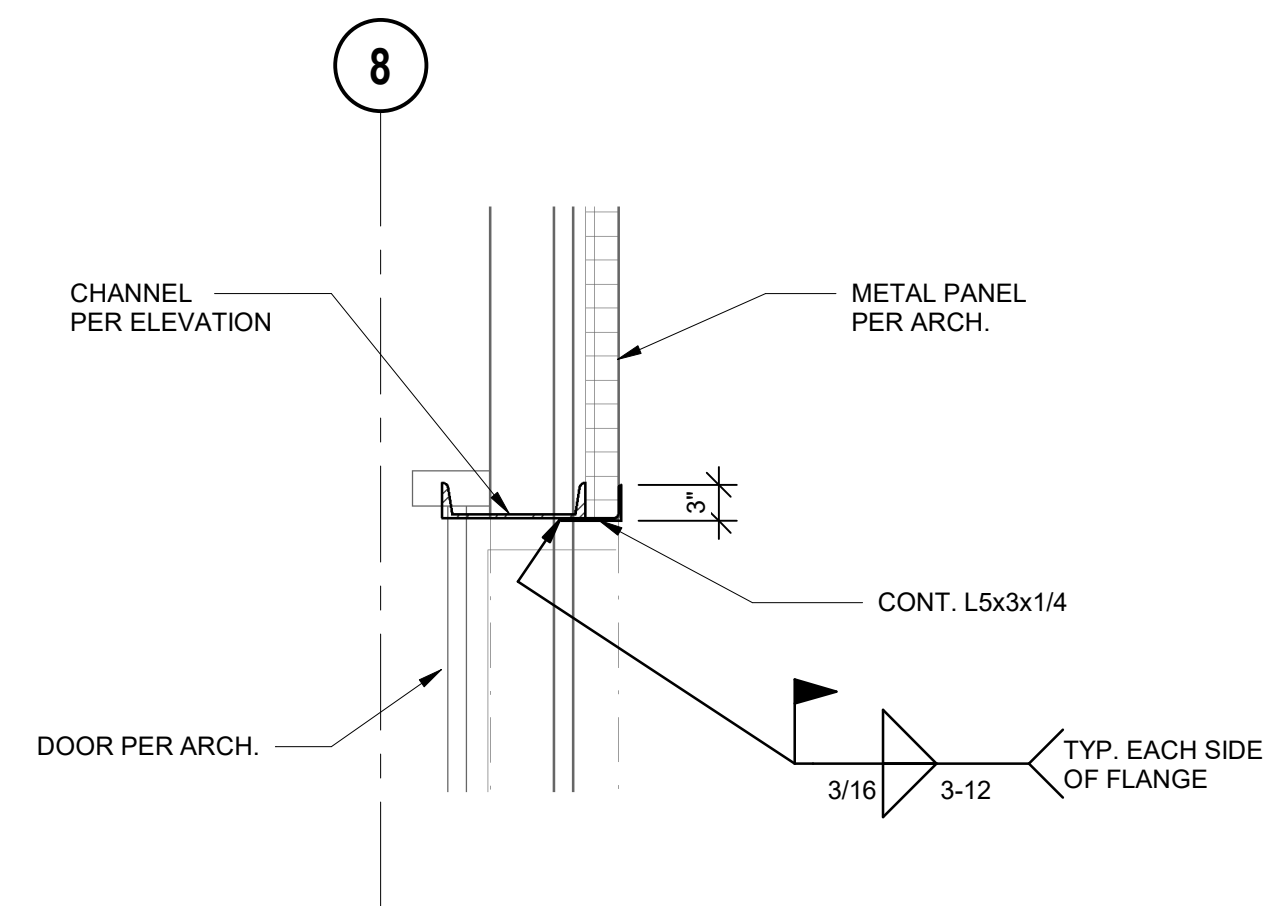
1 EAST ELEVATION
1/8" = 1'-0"



2 NORTH ELEVATION
1/8" = 1'-0"



3 WEST ELEVATION
1/8" = 1'-0"



TYPICAL - JAMB @ SECTIONAL
4 DOOR
3/4" = 1'-0"

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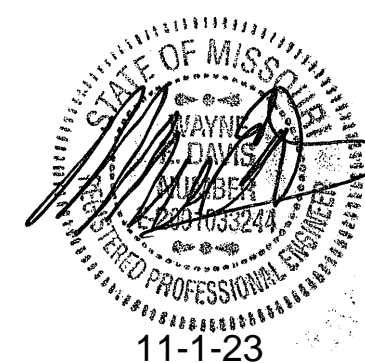
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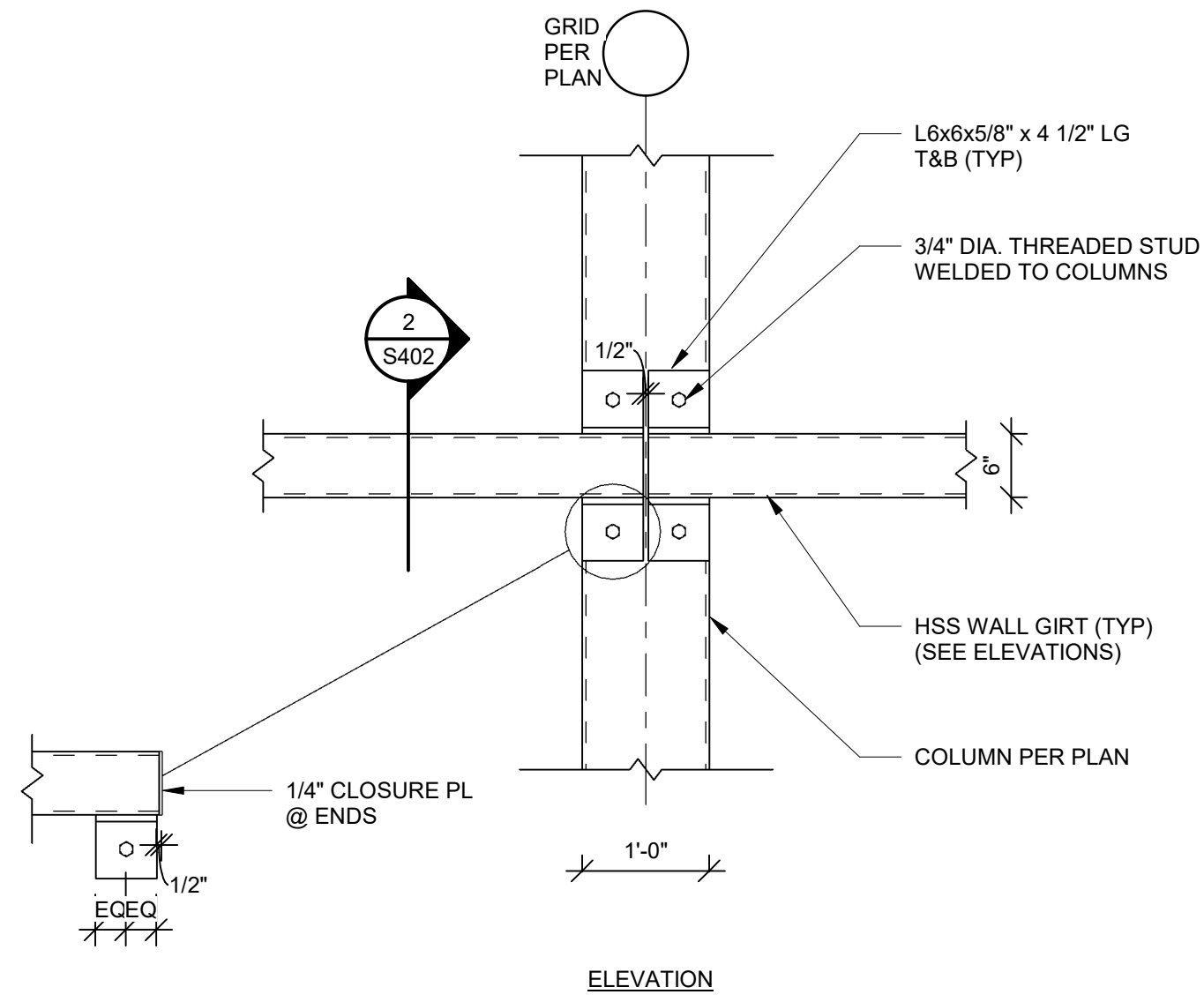


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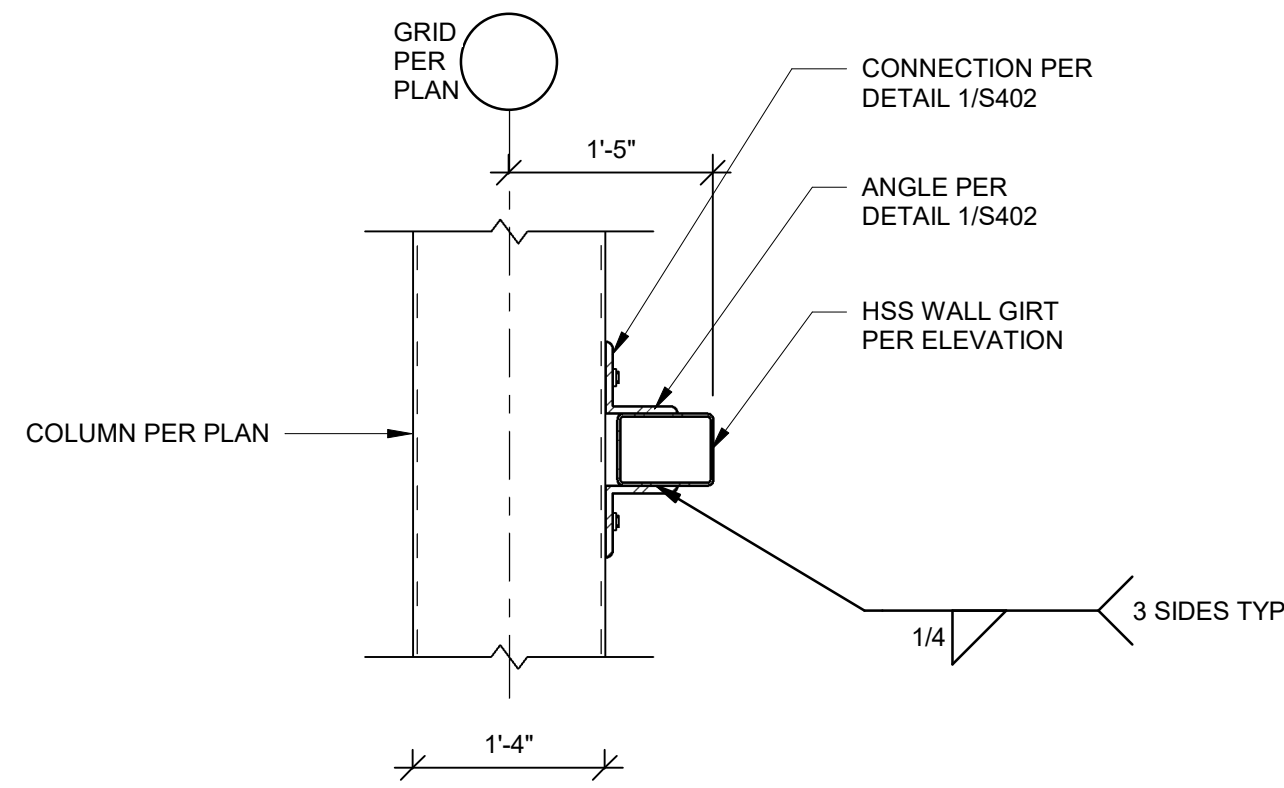
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ELEVATION VIEWS

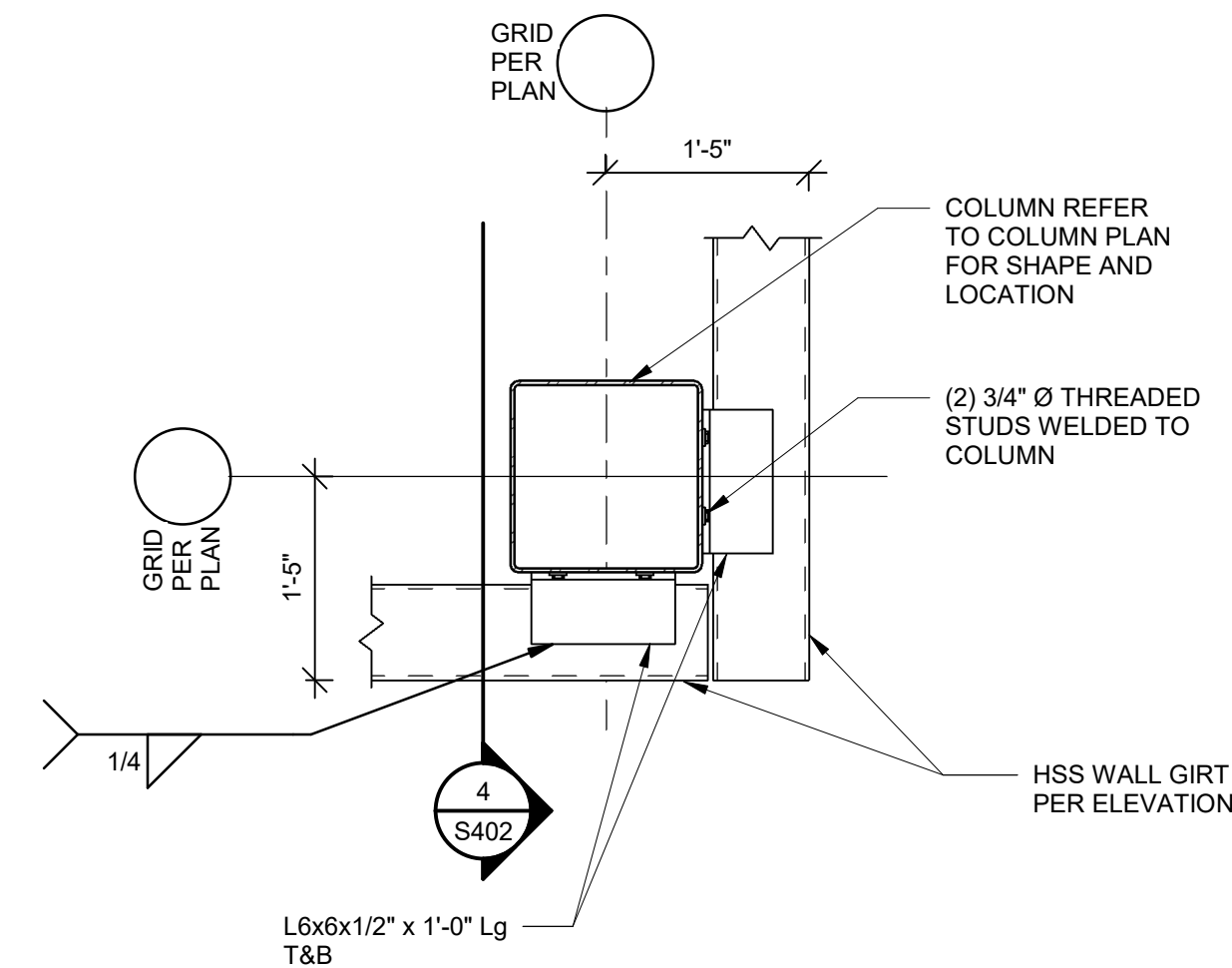
**TYPICAL GIRT CONNECTION @
1 COLUMN**
3/4" = 1'-0"



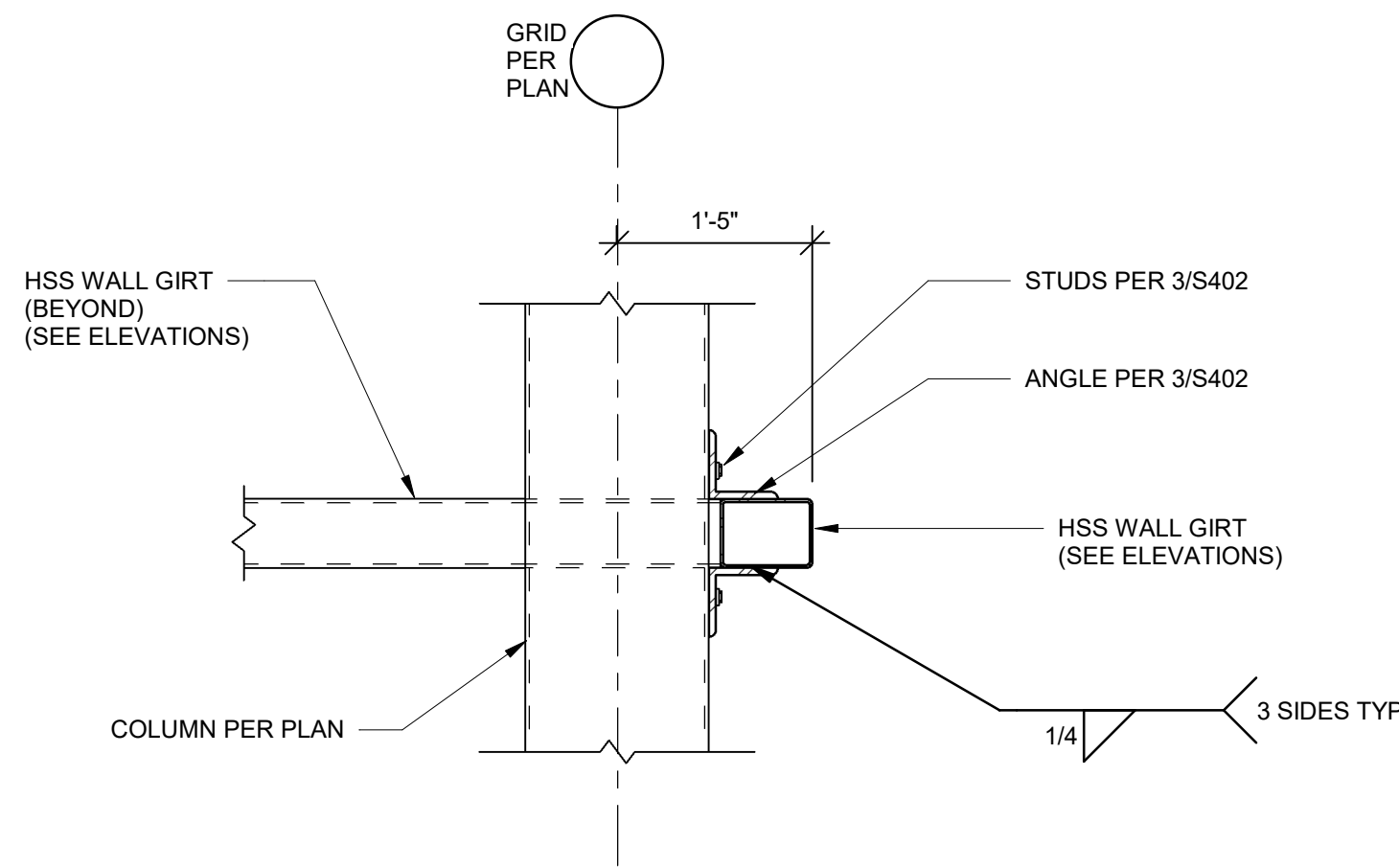
**TYPICAL SECTION @ GIRT CONN
2 @ COLUMN**
3/4" = 1'-0"



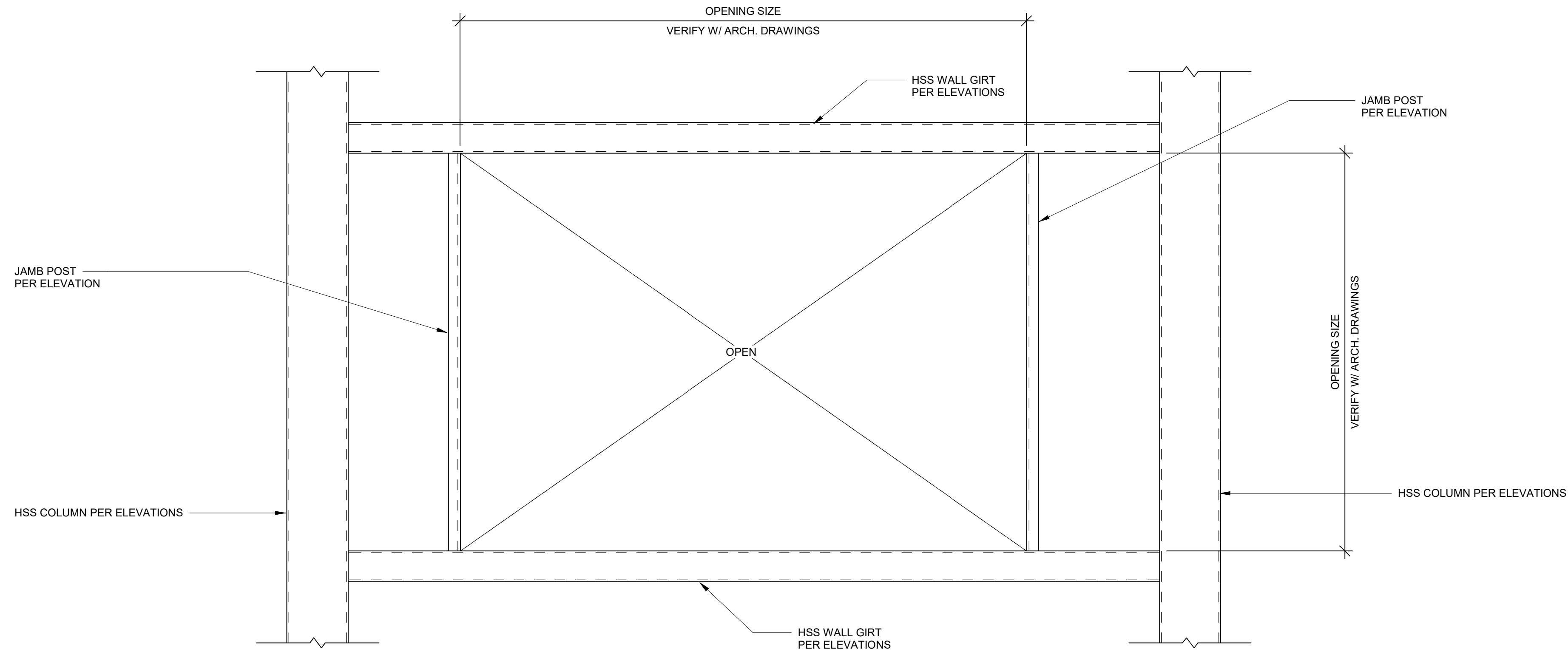
**TYPICAL GIRT CORNER
3 CONNECTION PLAN**
3/4" = 1'-0"



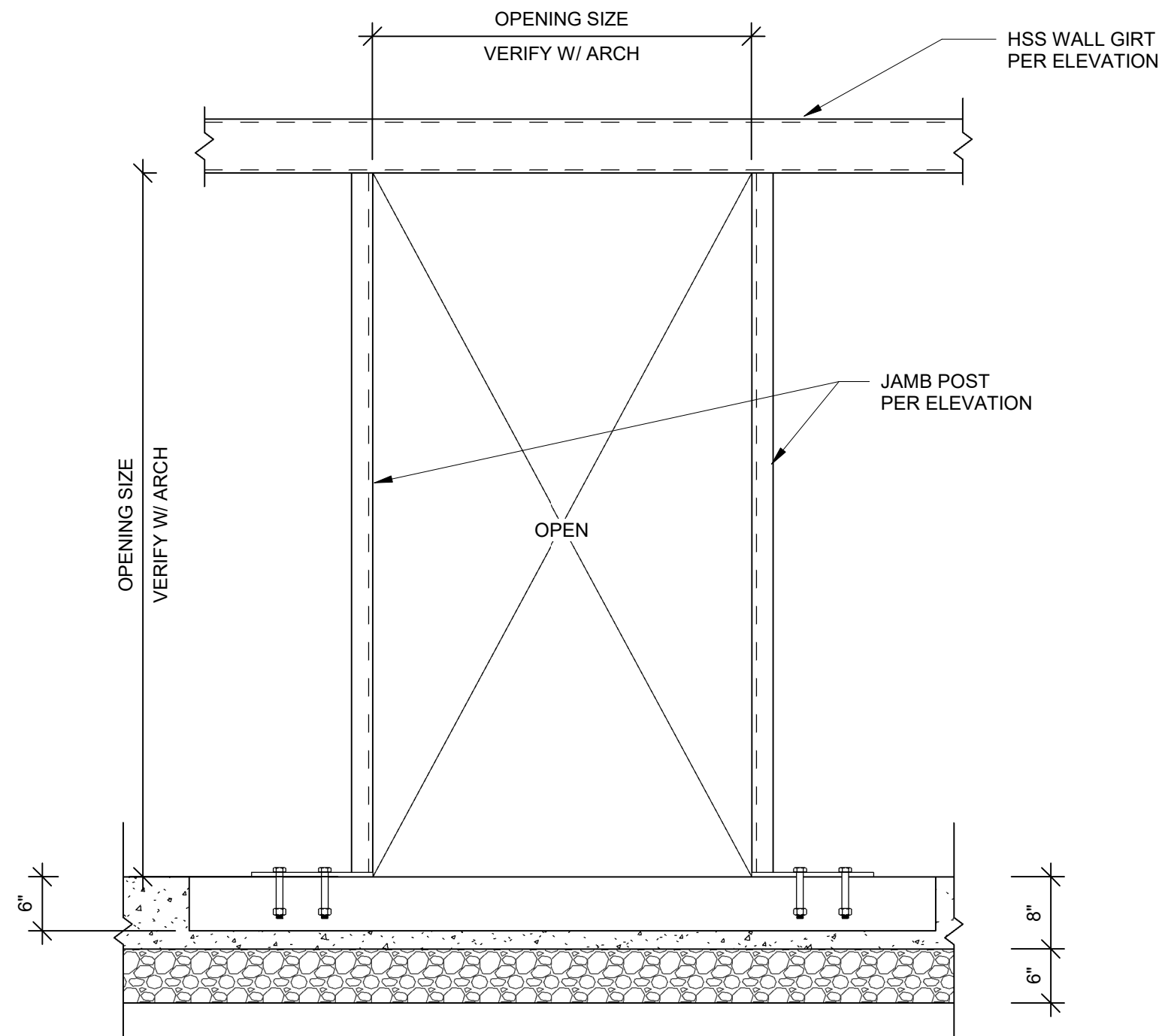
**TYPICAL GIRT CONN SECTION @
4 CORNERS**
3/4" = 1'-0"



5 TYPICAL WINDOW FRAME
3/4" = 1'-0"



6 TYPICAL DOOR FRAME
3/4" = 1'-0"



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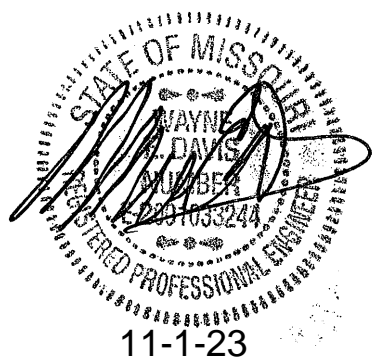
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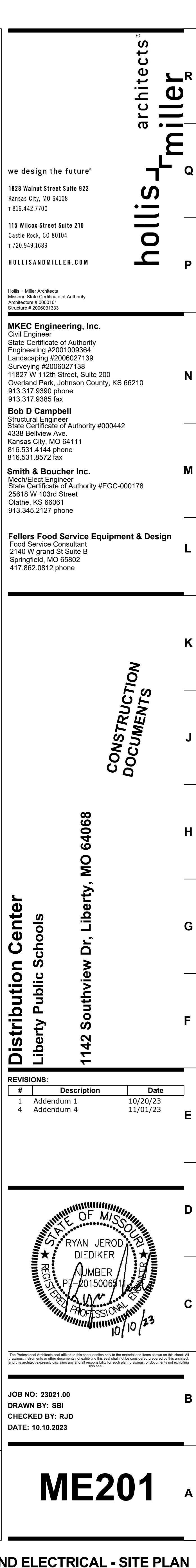
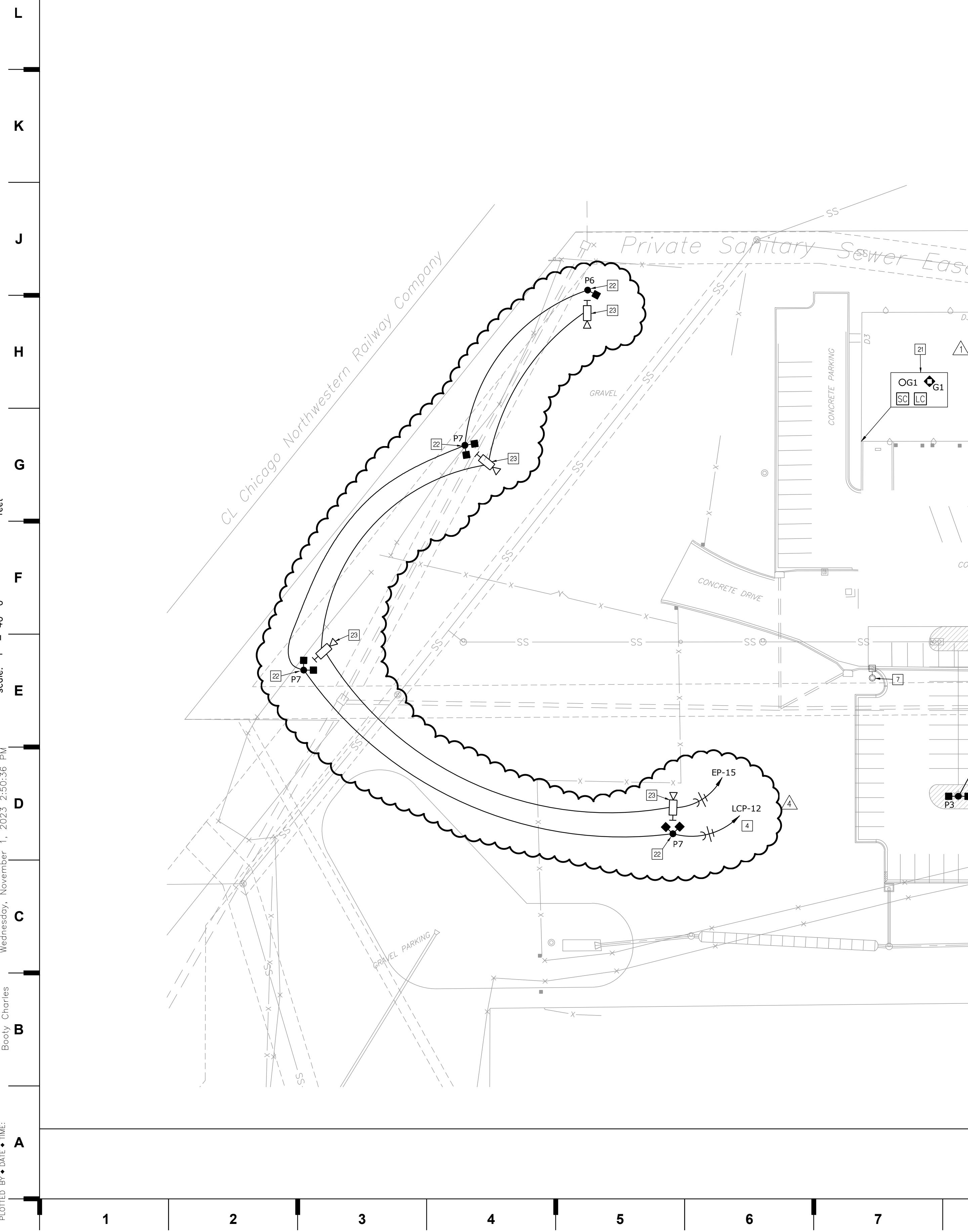
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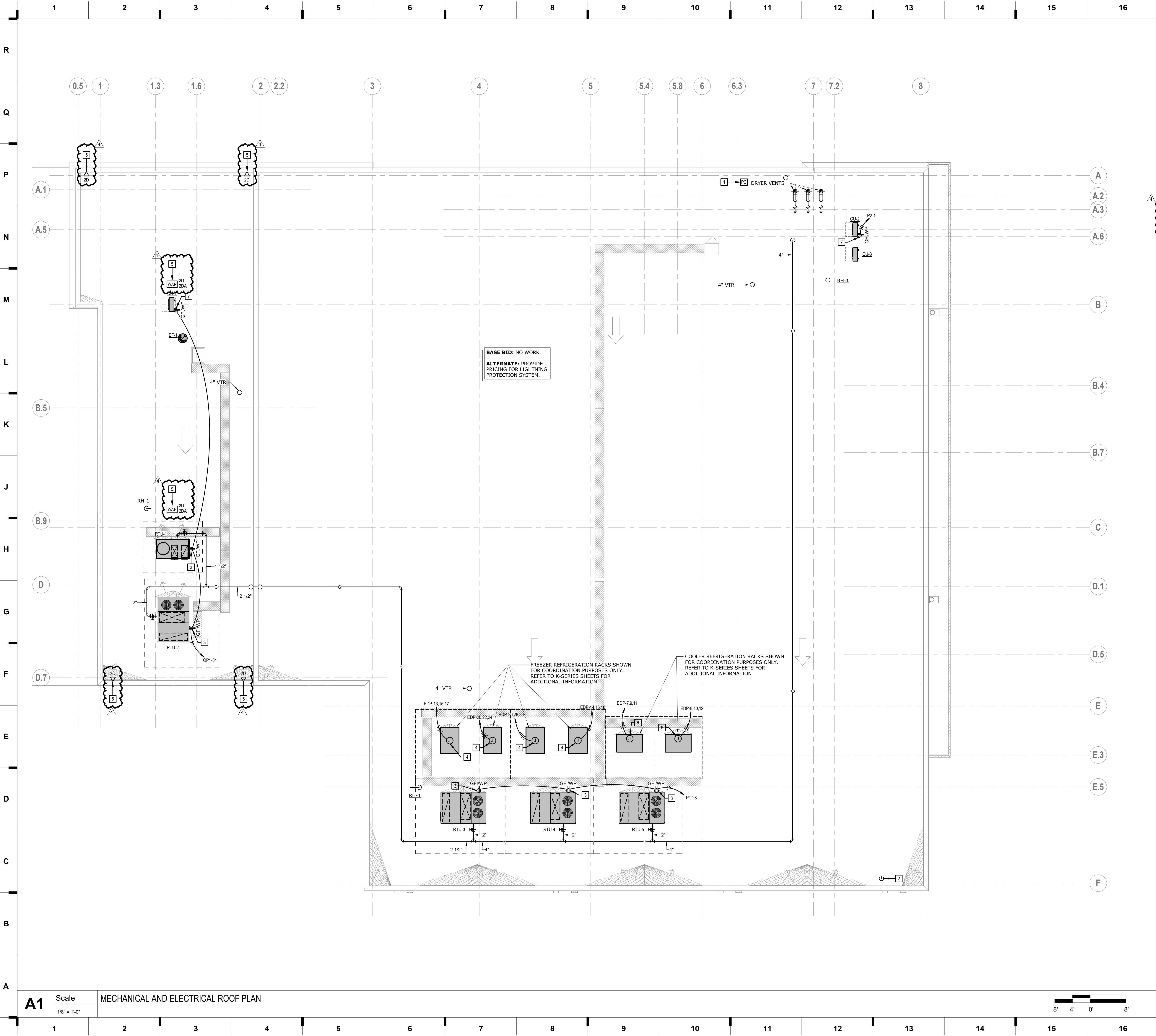


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WIND GIRT CONNECTIONS





SHEET KEYNOTE LEGEND

ELECTRICAL GENERAL NOTES:

1. REFER TO SHEET E201 FOR TYPICAL ELECTRICAL GENERAL NOTES APPLICABLE TO ENTIRE PROJECT.

ELECTRICAL PLAN NOTES:

- 1 MOUNT EXTERIOR PHOTOCELL ON ROOF AND AIM NORTH. INSTALL PER MANUFACTURER'S MOUNTING RECOMMENDATIONS.
- 2 ROOF PENETRATION FOR FUTURE PHOTOVOLTAIC INSTALLATION. PATCH AND SEAL ROOF PENETRATION TO MAINTAIN WARRANTY. PROVIDE (2) 1-1/2" CONDUIT WITH PULLSTRINGS FROM ROOF, DOWN TO FIRST FLOOR. REFER TO SHEET E201 FOR ADDITIONAL INFORMATION.
- 3 REFER TO RTU SCHEDULE NOTE 2 ON SHEET ME301 FOR ADDITIONAL INFORMATION.
- 4 ELECTRICAL CONNECTION FOR FREEZER CONTROL PANEL. CIRCUIT WITH (4)#6, (1)#10G., IN 1" C. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO INSTALLATION. COORDINATE EXACT LOCATION WITH ALL TRADE PARTNERS.
- 5 COORDINATE EXACT LOCATION OF DATA OUTLETS WITH ARCHITECT.
- 6 ELECTRICAL CONNECTION FOR COOLER CONTROL PANEL. CIRCUIT WITH (4)#6, (1)#10G., IN 3/4" C. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO INSTALLATION. COORDINATE EXACT LOCATION WITH ALL TRADE PARTNERS.
- 7 MOUNT RECEPTACLE ON SAME UNISTRUT THAT THE CONDENSING UNIT DISCONNECT IS MOUNTED TO.

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REVISIONS:
Description Date
1 ADDENDUM 1 11/01/23



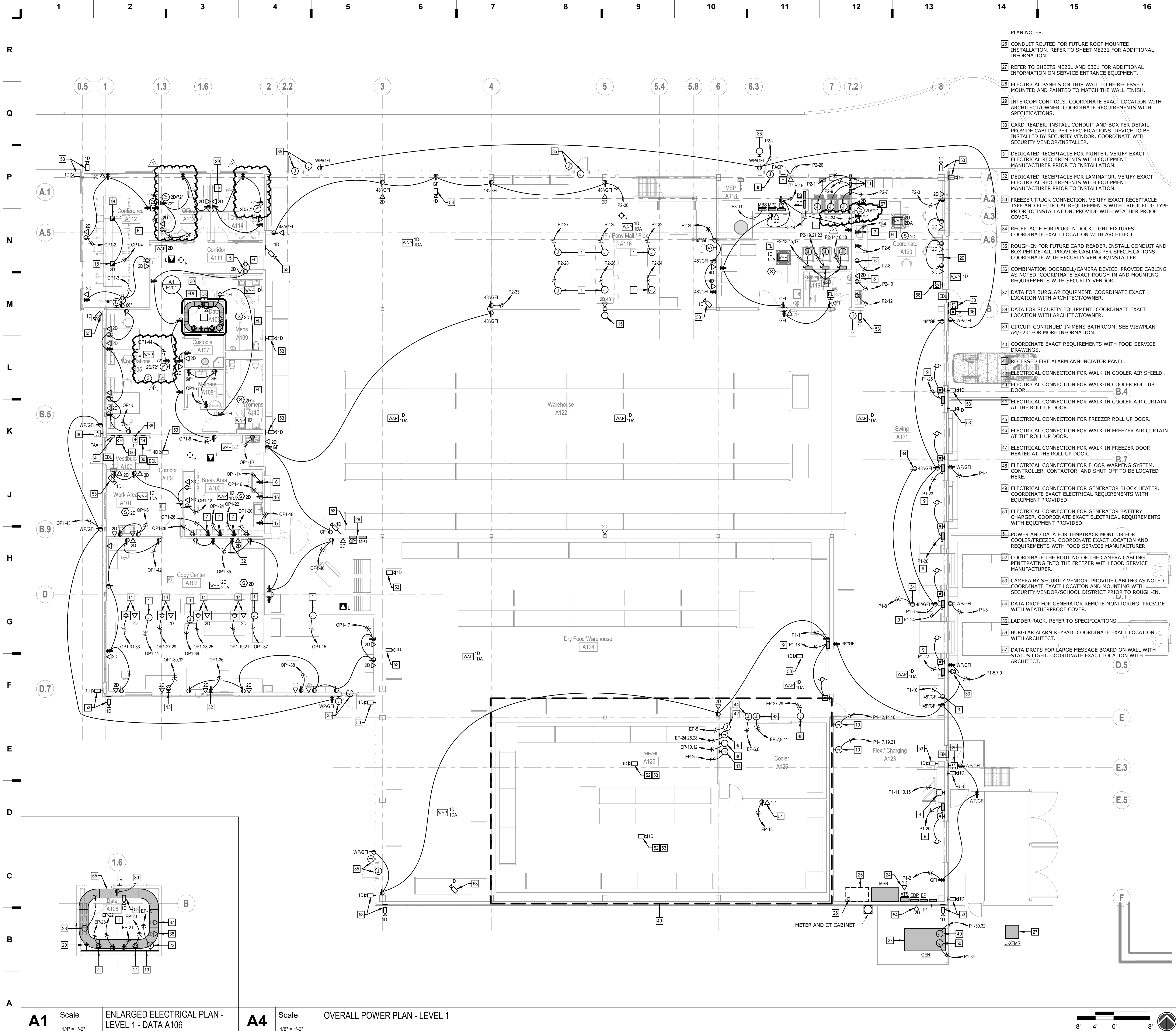
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ME202

MECHANICAL AND ELECTRICAL - ROOF PLAN

Please consider the environment before printing this.



PLAN NOTES:

- [26] CONDUIT ROUTED FOR FUTURE ROOF MOUNTED INSTALLATION. REFER TO SHEET ME231 FOR ADDITIONAL INFORMATION.
- [27] REFER TO SHEETS ME201 AND E301 FOR ADDITIONAL INFORMATION REGARDING ALL MECHANICAL/PLUMBING EQUIPMENT.
- [28] ELECTRICAL PANELS ON THIS WALL TO BE RECESSED MOUNTED AND PAINTED TO MATCH THE WALL FINISH.
- [29] INTERCOM CONTROLS. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER. COORDINATE REQUIREMENTS WITH SPECIFICATIONS.
- [30] CARD READER. INSTALL CONDUIT AND BOX PER DETAIL. PROVIDE CABLING PER SPECIFICATIONS. DEVICE TO BE INSTALLED BY SECURITY VENDOR. COORDINATE WITH SECURITY VENDOR/INSTALLER.
- [31] DEDICATED RECEPTACLE FOR PRINTER. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [32] DEDICATED RECEPTACLE FOR LAMINATOR. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [33] FREEZER TRUCK CONNECTION. VERIFY EXACT RECEPTACLE TYPE AND ELECTRICAL REQUIREMENTS WITH TRUCK PLUG TYPE PRIOR TO INSTALLATION. PROVIDE WITH WEATHER PROOF COVER.
- [34] RECEPTACLE FOR PLUG-IN DOCK LIGHT FIXTURES. COORDINATE EXACT LOCATION WITH ARCHITECT.
- [35] ROUGH-IN FOR FUTURE CARD READER. INSTALL CONDUIT AND BOX PER DETAIL. PROVIDE CABLING PER SPECIFICATIONS. COORDINATE WITH SECURITY VENDOR/INSTALLER.
- [36] COMBINATION DOORBELL/CAMERA DEVICE. PROVIDE CABLING AS NOTED. COORDINATE EXACT ROUGH IN AND MOUNTING REQUIREMENTS WITH SECURITY VENDOR.
- [37] DATA FOR BURGLAR EQUIPMENT. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- [38] DATA FOR SECURITY EQUIPMENT. COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- [39] CIRCUIT CONTINUED IN MENS BATHROOM. SEE VIEWPLAN A4/E201 FOR MORE INFORMATION.
- [40] COORDINATE EXACT REQUIREMENTS WITH FOOD SERVICE DRAWINGS.
- [41] RECESSED FIRE ALARM ANNUNCIATOR PANEL.
- [42] ELECTRICAL CONNECTION FOR WALK-IN COOLER AIR SHIELD.
- [43] ELECTRICAL CONNECTION FOR WALK-IN COOLER ROLL UP DOOR.
- [44] ELECTRICAL CONNECTION FOR WALK-IN COOLER AIR CURTAIN AT THE ROLL UP DOOR.
- [45] ELECTRICAL CONNECTION FOR FREEZER ROLL UP DOOR.
- [46] ELECTRICAL CONNECTION FOR WALK-IN FREEZER AIR CURTAIN AT THE ROLL UP DOOR.
- [47] ELECTRICAL CONNECTION FOR WALK-IN FREEZER DOOR HEATER AT THE ROLL UP DOOR.
- [48] ELECTRICAL CONNECTION FOR FLOOR WARMING SYSTEM. CONTROLLER, CONTACTOR, AND SHUT-OFF TO BE LOCATED HERE.
- [49] ELECTRICAL CONNECTION FOR GENERATOR BLOCK HEATER. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED.
- [50] ELECTRICAL CONNECTION FOR GENERATOR BATTERY CHARGER. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED.
- [51] POWER AND DATA FOR TEMTRACK MONITOR FOR COOLER/FREEZER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH FOOD SERVICE MANUFACTURER.
- [52] COORDINATE THE ROUTING OF THE CAMERA CABLING PENETRATING INTO THE FREEZER WITH FOOD SERVICE MANUFACTURER.
- [53] CAMERA BY SECURITY VENDOR. PROVIDE CABLING AS NOTED. COORDINATE EXACT LOCATION AND MOUNTING WITH SECURITY VENDOR/SCHOOL DISTRICT PRIOR TO ROUGH-IN.
- [54] DATA DROP FOR GENERATOR REMOTE MONITORING. PROVIDE WITH WEATHERPROOF COVER.
- [55] LADDER RACK, REFER TO SPECIFICATIONS.
- [56] BURGLAR ALARM KEYPAD. COORDINATE EXACT LOCATION WITH ARCHITECT.
- [57] DATA DROPS FOR LARGE MESSAGE BOARD ON WALL WITH STATUS LIGHT. COORDINATE EXACT LOCATION WITH ARCHITECT.

SHEET KEYNOTE LEGEND

GENERAL NOTES:

1. REFER TO M/E SCHEDULES AND DETAILS FOR CIRCUITING INFORMATION REGARDING ALL MECHANICAL/PLUMBING EQUIPMENT.
2. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING LOCATIONS OF ALL WALL MOUNTED ELECTRICAL DEVICES. DEVICES NOT REFERENCED ON THE ARCHITECTURAL DRAWINGS ARE TYPICAL, UNLESS SPECIFICALLY NOTED OTHERWISE ON THIS SHEET. REFER TO THE TYPICAL MOUNTING HEIGHT DETAIL ON SHEET ME401.
3. SEAL ALL PENETRATIONS AS REQUIRED TO MAINTAIN ALL RATINGS FOR ALL FIRE RESISTANCE/RATED CONSTRUCTION. REFER TO ARCHITECTURAL CODE PLANS FOR RATED WALL AND FLOOR LOCATIONS.
4. WHERE ANY DEVICE JUNCTION BOXES ARE RECESSED WITHIN OPPOSITE SIDES OF A FIRE RATED WALL AND ARE WITHIN 24" OF EACH OTHER MEASURED HORIZONTALLY, FURNISH AND INSTALL A MOLDABLE FIRE STOP PUTTY PACK AROUND EACH JUNCTION BOX TO MAINTAIN FIRE RATING OF WALL.
5. 120V BRANCH CIRCUITING SHALL BE AS FOLLOWS: (UNLESS SPECIFICALLY NOTED OTHERWISE)
- 0-100' = #12 AWG.
101-150' = #10 AWG.
151-250' = #8 AWG.
- GROUND CONDUCTOR AND RACEWAYS SHALL BE INCREASED AS REQUIRED.

6. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.

PLAN NOTES:

- [1] CORD REEL WITH DUPLEX RECEPTACLE. COORDINATE EXACT LOCATION WITH ARCHITECT. REFER TO DETAIL ON SHEET ME401 FOR ADDITIONAL INFORMATION.
- [2] BANK OF (5) GARAGE DOOR CONTROLS. COORDINATE EXACT LOCATION WITH ARCHITECT. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH DOOR SUPPLIER.
- [3] ELECTRICAL CONNECTION FOR PALLET WRAPPER. COORDINATE EXACT LOCATION WITH PALLET WRAPPER LOCATION PRIOR TO ROUGH-IN. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [4] ELECTRICAL CONNECTION FOR CARDBOARD COMPACTOR. CIRCUIT WITH (4)#8, (1)#10G., IN 3/4" C. COORDINATE EXACT LOCATION WITH CARDBOARD COMPACTOR LOCATION PRIOR TO ROUGH-IN. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [5] (1)POWER AND (1)DATA OUTLET FOR CLOCK-IN STATION. COORDINATE EXACT LOCATION WITH ARCHITECT.
- [6] DEDICATED RECEPTACLE FOR REFRIGERATOR. REFER TO ARCHITECTURAL PLAN/CASEWORK ELEVATIONS FOR EXACT LOCATIONS.
- [7] DEDICATED RECEPTACLE FOR MICROWAVE. REFER TO ARCHITECTURAL PLAN/CASEWORK ELEVATIONS FOR EXACT LOCATIONS.
- [8] DEDICATED RECEPTACLE FOR VENDING MACHINE. REFER TO ARCHITECTURAL PLAN/CASEWORK ELEVATIONS FOR EXACT LOCATIONS.
- [9] PROVIDE JUNCTION BOX AND CONDUIT FOR OVERHEAD DOOR CONTROLLER. CONTROLLER AND DISCONNECT PROVIDED BY DOOR SUPPLIER. INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH DOOR SUPPLIER.
- [10] ELECTRICAL CONNECTION FOR FORKLIFT CHARGER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [11] 30A/1P/NEMA 3 NON-FUSED DISCONNECT FOR POWER TO GAS DRYER. CIRCUIT WITH (2)#12, (1)#12G., 3/4" C. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [12] 30A/3P/NEMA 3 NON-FUSED DISCONNECT, FOR POWER TO WASHER. CIRCUIT WITH (4)#10, (1)#10G., 3/4" C. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [13] L6-30R POWER RECEPTACLE FOR COPY CENTER PRINTER. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [14] CEILING MOUNTED L6-30R POWER RECEPTACLE AND DATA OUTLET FOR COPY CENTER EQUIPMENT. COORDINATE EXACT LOCATION WITH ARCHITECT. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [15] MEZZANINE'S ELECTRIC GATE CONTROLS. CONNECT TO ELECTRIC GATE PER GATE PROVIDER DIRECTIONS.
- [16] DEDICATED RECEPTACLE FOR ICE MAKER. REFER TO ARCHITECTURAL PLAN/CASEWORK ELEVATIONS FOR EXACT LOCATIONS. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [17] DEDICATED RECEPTACLE FOR DISHWASHER. REFER TO ARCHITECTURAL PLAN/CASEWORK ELEVATIONS FOR EXACT LOCATIONS. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- [18] PROVIDE (2) GANG 4" CIRCULAR LEGRAND EVOLUTION SERIES FLOORBOX (OR APPROVED EQUAL) WITH (1) GANG FOR POWER RECEPTACLE AND (1) GANG FOR (2) DATA JACKS. PROVIDE 1-1/4" CONDUIT FOR LOW VOLTAGE, STUBBED TO ABOVE ACCESSIBLE CEILING. COORDINATE EXACT FLOORBOX LOCATION AND FINISH WITH ARCHITECT PRIOR TO INSTALLATION.
- [19] 4'x8', 3/4" A-C GRADE, FIRE-RETARDANT - TREATED PLYWOOD WITH THE (A) SIDE OF THE PLYWOOD INSTALLED FACING OUT. PRIOR TO EQUIPMENT INSTALLATION, PLYWOOD SHALL BE PAINTED WITH TWO COATS OF WHITE, FIRE RETARDANT LOW-GLOSS PAINT.
- [20] 12" LONG x 2" WIDE x 1/4" THICK GROUNDING BUSBAR WITH PRE-DRILLED HOLES. EXTEND (1) #3/0 COPPER CONDUCTOR, IN RACEWAY, BETWEEN EACH BUSBAR IN BUILDING AND TO BUILDING SERVICE GROUND.
- [21] NEMA L5-30R RECEPTACLES FOR DATA RACKS. CIRCUIT WITH (2)#10, #10G, IN 3/4" C. COORDINATE FINAL REQUIREMENTS WITH LOW VOLTAGE VENDOR.
- [22] ELECTRICAL CONNECTION TO SECURITY IDF CABINET BY OTHERS.
- [23] TELECOM MPOE. COORDINATE EXACT LOCATION WITH LOW VOLTAGE CONTRACTOR. REFER TO SITE PLAN FOR MORE INFORMATION.
- [24] DATA DROP FOR ATS REMOTE MONITORING.
- [25] AREA RESERVED FOR FUTURE PHOTOVOLTAIC EQUIPMENT.

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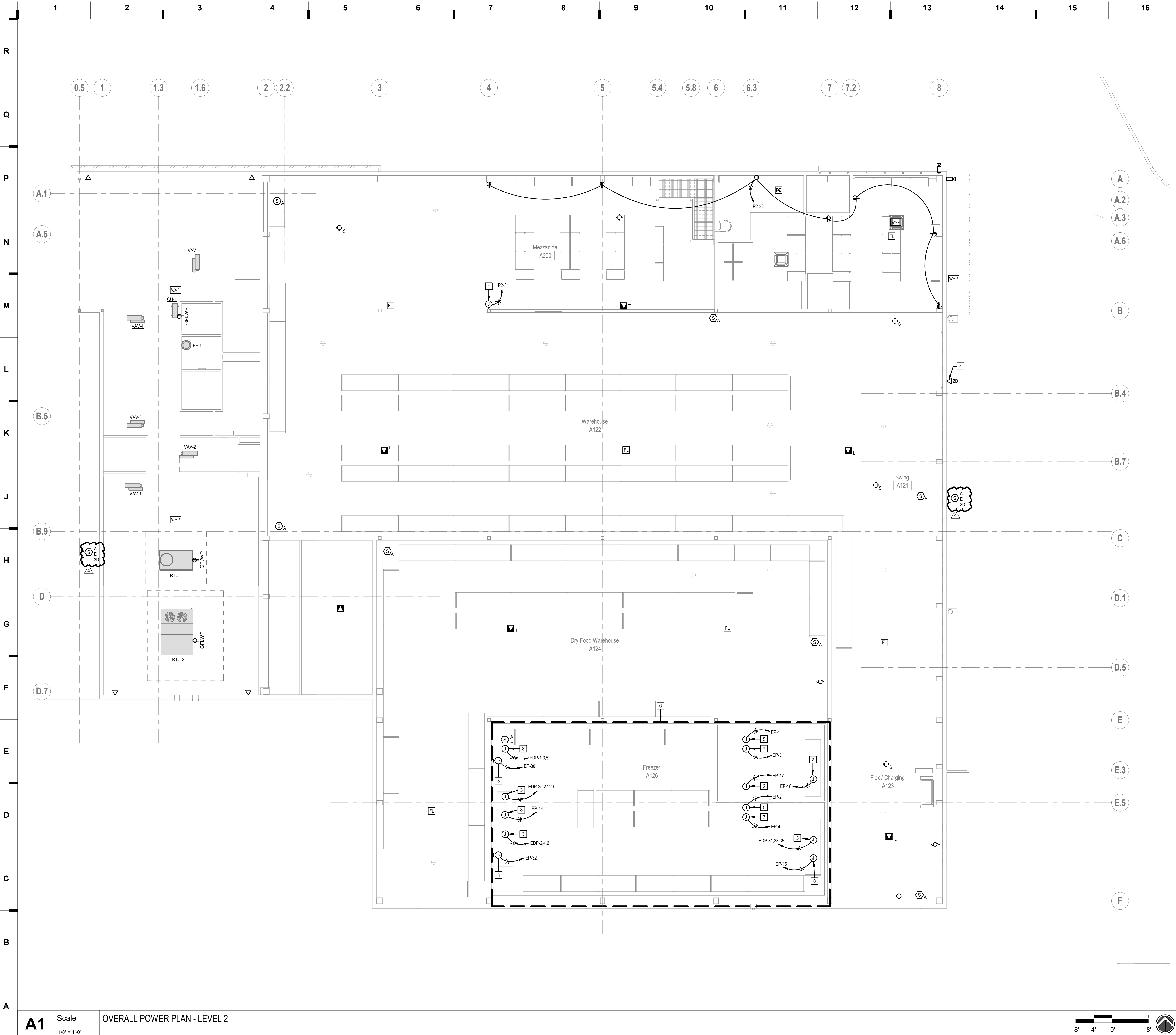
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SHEET KEYNOTE LEGEND

GENERAL NOTES:

1. REFER TO SHEET E101 FOR TYPICAL POWER GENERAL NOTES APPLICABLE TO ENTIRE PROJECT.

PLAN NOTES:

- 1 ELECTRICAL CONNECTION FOR ELECTRIC GATE. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH GATE SUPPLIER. REFER TO SHEET E201 FOR LOCATION OF GATE CONTROLS.
- 2 ELECTRICAL CONNECTION FOR COOLER EVAPORATOR COIL FAN. CIRCUIT WITH (2)#12, (1)#10G, IN 3/4" C. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO INSTALLATION. COORDINATE EXACT LOCATION WITH ALL TRADE PARTNERS.
- 3 ELECTRICAL CONNECTION FOR FREEZER EVAPORATOR COIL. CIRCUIT WITH (4)#10, (1)#10G, IN 3/4" C. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO INSTALLATION. COORDINATE EXACT LOCATION WITH ALL TRADE PARTNERS.
- 4 PROVIDE DUPLEX DATA DROP IN A WEATHERPROOF ENCLOSURE FOR SITE CONTROLLER DEVICE. REFER TO SHEET E102 FOR EXACT LOCATION.
- 5 ELECTRICAL CONNECTION FOR DOOR LIGHTS, HEATED VENTS, AND THRESHOLDS.
- 6 COORDINATE EXACT REQUIREMENTS WITH FOOD SERVICE DRAWINGS.
- 7 ELECTRICAL CONNECTION FOR LIGHT FIXTURES IN THIS SPACE. INTERCONNECT WITH THE MOTION SENSORS IN THE SPACE.
- 8 ELECTRICAL CONNECTION FOR FREEZER COIL HEAT TAPE.

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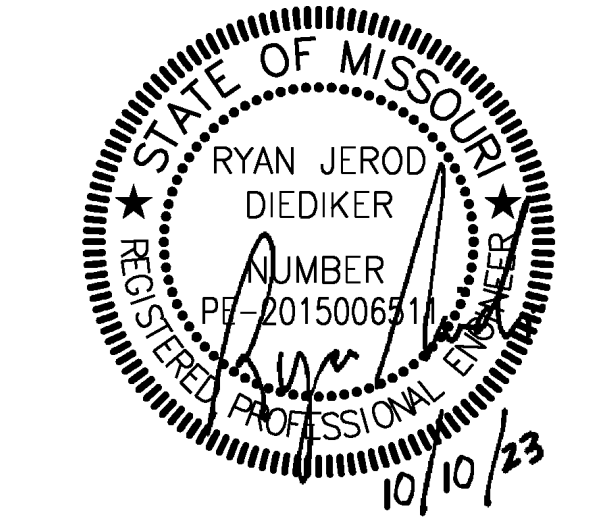
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REVISIONS:		
#	Description	Date
1	ADDENDUM 1	11/01/23



JOB NO: 23021.00
DRAWN BY: SBI
CHECKED BY: RJD
DATE: 10.10.2023

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E202

OVERALL POWER PLAN - MEZZ LEVEL

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PROJECT NAME: E302
FILE LOCATION: \\msb\projects\2314705\Drawings\06-2314705-E302.dwg
LAST CORRECTION BY: DATE: TIME:
PLOT BY: DATE: TIME:
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Wednesday, November 1, 2023 2:50:52 PM

LIGHTING CONTROL DEVICE SCHEDULE					
SYMBOL	DESCRIPTION	DETECTION TYPE	SETTINGS (TYPICAL)	MANUFACTURER/MODEL	NOTES
\$VS	WALL MOUNTED SWITCH/VACANCY SENSOR LINE VOLTAGE - SINGLE RELAY	DUAL TECHNOLOGY	ON: MANUAL OFF: 15 MINUTE DELAY	WATTSTOPPER LMDW-101-ENG1	1,2
\$OS	WALL MOUNTED SWITCH/OCCUPANCY SENSOR LINE VOLTAGE - SINGLE RELAY	DUAL TECHNOLOGY	ON: AUTOMATIC OFF: 15 MINUTE DELAY	WATTSTOPPER LMDW-101-ENG1	1,2
\$VD	WALL MOUNTED SWITCH/VACANCY SENSOR LOW VOLTAGE - SINGLE RELAY - WITH 0-10V DIMMING	DUAL TECHNOLOGY	ON: MANUAL OFF: 15 MINUTE DELAY	WATTSTOPPER LMDW-102-ENG2	1,2
\$S#	ON/OFF SWITCH # INDICATES QUANTITY OF ZONES CONTROLLED AT EACH LOCATION	-	-	WATTSTOPPER LMSW-101-ENG1	1
\$D#	WALL MOUNTED ON/OFF DIMMER SWITCH # INDICATES QUANTITY OF ZONES CONTROLLED AT EACH LOCATION	-	-	WATTSTOPPER LMDM-101-ENG1	1,2
\$M	WALL MOUNTED OVERRIDE SWITCH LOW VOLTAGE - SINGLE RELAY	-	-	WATTSTOPPER LMSW-101	1,2
◇	CEILING MOUNTED LIGHTING SYSTEM OCCUPANCY SENSOR	DUAL TECHNOLOGY	-	WATTSTOPPER LMDC-100	1,3,4
◇G1	WIRELESS OCCUPANCY SENSOR	PASSIVE INFRARED	ON: AUTOMATIC OFF: 15 MINUTE DELAY	SYNAPSE WSN-DPM	1
LC	WIRELESS LIGHTING CONTROLLER	-	-	SYNAPSE DIM10-220	1
SC	WIRELESS SITE CONTROLLER WITH NEMA 4X ENCLOSURE	-	-	SYNAPSE CBSSW-450-002	1

NOTE 1: THE MANUFACTURERS AND MODELS LISTED ARE THE BASIS OF DESIGN, ALL PRODUCT SUBSTITUTIONS SUBMITTED MUST BE APPROVED AS EQUAL. REFER TO DRAWINGS FOR QUANTITIES.
NOTE 2: ALL WALL MOUNTED LIGHTING CONTROLS MUST HAVE MATCHING FINISHES TO THOSE LISTED IN SPECIFICATION SECTION 262726 - WIRING DEVICES.
NOTE 3: OCCUPANCY SENSOR LOCATIONS SHOWN ON FLOOR PLANS ARE GENERIC, CONTRACTOR TO MODIFY LOCATIONS AS REQUIRED BASED COVERAGE CAPABILITIES OF SUBMITTED PRODUCTS.
NOTE 4: MODIFY LOCATIONS OF CEILING MOUNTED OCCUPANCY SENSORS AS REQUIRED SO THAT NO OCCUPANCY SENSOR IS WITHIN 4'-0" OF AN HVAC SUPPLY DIFFUSER.

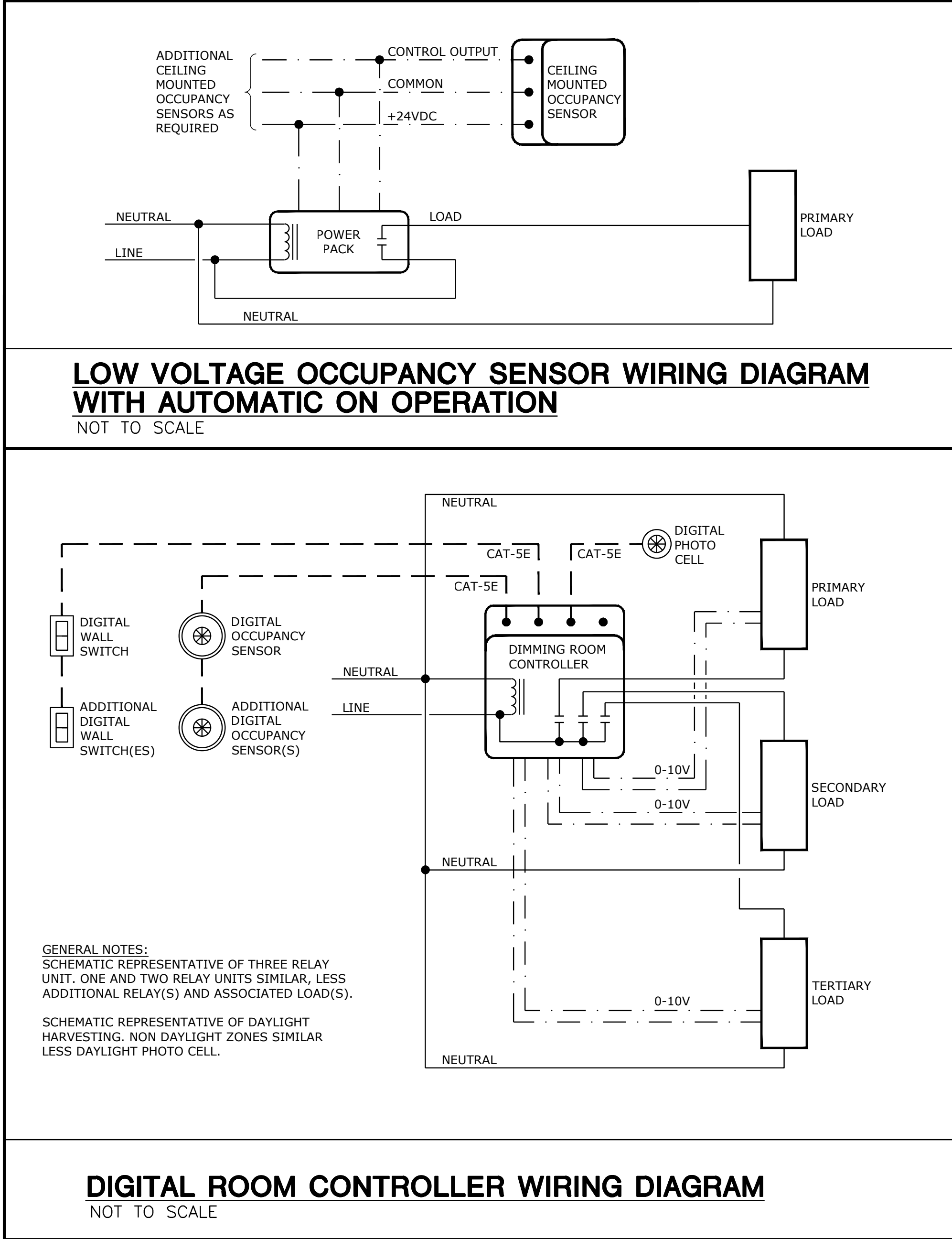
LIGHTING CONTROL REQUIREMENTS & DESCRIPTIONS - PER SPACE TYPE	
TYPE	LIGHTING CONTROL REQUIREMENTS FOR SPACE
1	CONTROL METHOD: OCCUPANCY ON - OCCUPANCY OFF: POWER PACKS/CONTROLLERS: -LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED. OCCUPANCY SENSOR(S): -TYPE AND MINIMUM QUANTITY NOTED ON PLANS, MODELS/SETTINGS AS NEEDED TO PROVIDE SMALL MOTION COVERAGE IN ENTIRE ROOM. -SET TIME DELAYS FOR SHUT-OFF AT 15 MINUTES.
2	CONTROL METHOD: MANUAL ON - OCCUPANCY OFF - MANUAL ON/OFF CONTROLS: POWER PACKS/CONTROLLERS: -LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED. OCCUPANCY SENSOR(S): -TYPE, LOCATION(S), AND MINIMUM QUANTITY NOTED ON PLANS. MODELS/SETTINGS AS NEEDED TO PROVIDE SMALL MOTION COVERAGE IN ENTIRE ROOM. -SET TIME DELAYS FOR SHUT-OFF AT 15 MINUTES. ON/OFF ZONE SWITCHES: -LOCATION(S) AND QUANTITIES SHOWN ON FLOOR PLANS. -ZONE QUANTITIES FOR EACH SWITCH LOCATION DENOTED ON FLOOR PLANS. -ZONE DESIGNATIONS ARE DENOTED FOR EACH SWITCH WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT SWITCHES WITHIN THE SAME ROOM. -ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "a", "b", "c", ETC. -ON AND OFF CONTROL FOR EACH ZONE, WITH EITHER SEPARATE BUTTONS OR SINGLE BUTTON ROCKER STYLE. NOT TOGGLE STYLE.
3	CONTROL METHOD: MANUAL ON - OCCUPANCY OFF - MANUAL OVERRIDE DIMMING CONTROLS: POWER PACKS/CONTROLLERS: -LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED. OCCUPANCY SENSOR(S): -TYPE, LOCATION, AND MINIMUM QUANTITY NOTED ON PLANS. MODELS/SETTINGS AS NEEDED TO PROVIDE SMALL MOTION COVERAGE IN ENTIRE ROOM. -SET TIME DELAYS FOR SHUT-OFF AT 15 MINUTES. DIMMABLE ZONE SWITCHES: -LOCATION(S) AND QUANTITIES SHOWN ON FLOOR PLANS. -ZONE QUANTITIES FOR EACH SWITCH LOCATION DENOTED ON FLOOR PLANS. -ZONE DESIGNATIONS ARE DENOTED FOR EACH DIMMER LOCATION WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT DIMMERS WITHIN THE SAME ROOM. -ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "a", "b", "c", ETC. -ON AND OFF CONTROL FOR EACH ZONE, WITH EITHER SEPARATE BUTTONS OR SINGLE BUTTON ROCKER STYLE. NOT TOGGLE STYLE. -RAISE AND LOWER CONTROL FOR EACH ZONE, WITH EITHER SEPARATE BUTTONS OR SINGLE BUTTON ROCKER STYLE. NOT SLIDER STYLE.
4	CONTROL METHOD: PHOTOCELL/TIME CLOCK ON - PHOTOCELL/TIME CLOCK OFF - AUTOMATIC DIMMING TO 50% (FOR POLE LIGHT FIXTURES): POWER PACKS/CONTROLLERS: -LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED.
5	CONTROL METHOD: TIME CLOCK ON/MANUAL ON - TIME CLOCK OFF - MANUAL ON/OFF CONTROLS: POWER PACKS/CONTROLLERS: -LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED. ON/OFF AND DIMMABLE ZONE SWITCHES: -LOCATION(S) AND QUANTITIES SHOWN ON FLOOR PLANS. REFER TO FLOOR PLANS FOR SWITCH TYPE USED IN EACH SPACE. -ZONE QUANTITIES FOR EACH SWITCH LOCATION DENOTED ON FLOOR PLANS. -ZONE DESIGNATIONS ARE DENOTED FOR EACH SWITCH LOCATION WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT SWITCHES WITHIN THE SAME ROOM. -ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "a", "b", "c", ETC. -ON AND OFF CONTROL FOR EACH ZONE, WITH EITHER SEPARATE BUTTONS OR SINGLE BUTTON ROCKER STYLE. NOT TOGGLE STYLE. -AFTER BUSINESS HOURS, LIGHTS TURN OFF. SWITCH FOR EACH ZONE ALLOWS LIGHTS TO TURN ON FOR UP TO 2 HOURS, THEN AUTOMATICALLY TURN OFF.
6	CONTROL METHOD: OCCUPANCY ON - OCCUPANCY OFF-MANUAL OVERRIDE DIMMING CONTROLS: POWER PACKS/CONTROLLERS: -LOCAL DEVICES IN ACCESSIBLE LOCATIONS AS REQUIRED TO ACHIEVE CONTROL METHOD INDICATED. OCCUPANCY SENSOR(S): -TYPE, LOCATION, AND MINIMUM QUANTITY NOTED ON PLANS. MODELS/SETTINGS AS NEEDED TO PROVIDE SMALL MOTION COVERAGE IN ENTIRE ROOM. -SET TIME DELAYS FOR SHUT-OFF AT 15 MINUTES. DIMMABLE ZONE SWITCHES: -LOCATION(S) AND QUANTITIES SHOWN ON FLOOR PLANS. -ZONE QUANTITIES FOR EACH SWITCH LOCATION DENOTED ON FLOOR PLANS. -ZONE DESIGNATIONS ARE DENOTED FOR EACH DIMMER LOCATION WHEN DIFFERENT ZONES ARE CONTROLLED FROM DIFFERENT DIMMERS WITHIN THE SAME ROOM. -ZONES ARE DENOTED ON EACH ASSOCIATED LIGHT FIXTURE WHEN MULTIPLE ZONES ARE PRESENT WITHIN ROOM, USING LOWER CASE LETTERS AS FOLLOWS: "a", "b", "c", ETC. -ON AND OFF CONTROL FOR EACH ZONE, WITH EITHER SEPARATE BUTTONS OR SINGLE BUTTON ROCKER STYLE. NOT TOGGLE STYLE. -RAISE AND LOWER CONTROL FOR EACH ZONE, WITH EITHER SEPARATE BUTTONS OR SINGLE BUTTON ROCKER STYLE. NOT SLIDER STYLE.

GENERAL NOTES:
NOTE 1: WHERE LIGHTS ARE TIME CLOCK CONTROLLED, REFER TO LIGHTING CONTROL PANEL SCHEDULE "LCP" FOR ADDITIONAL INFORMATION.
NOTE 2: CONTRACTOR MUST INCLUDE SHOP DRAWINGS WITH LIGHTING CONTROLS SUBMITTAL SHOWING WIRING SCHEMATICS/DIAGRAMS OVERLAYED ON FLOOR PLANS FOR EACH ROOM.
NOTE 3: ALL WALL MOUNTED LIGHTING CONTROLS MUST HAVE MATCHING FINISHES TO THOSE LISTED IN SPECIFICATION SECTION 262726 - WIRING DEVICES.
NOTE 4: PROVIDE A DIGITAL LIGHTING CONTROL SYSTEM FROM A MANUFACTURER LISTED IN SPECIFICATION SECTION 260023 - LIGHTING CONTROL DEVICES. WIRELESS SYSTEMS ARE NOT PERMITTED.
NOTE 5: CONTRACTOR TO MODIFY OCCUPANCY SENSOR LOCATIONS, AND/OR INCREASE QUANTITIES, AS REQUIRED BASED ON COVERAGE CAPABILITIES OF SUBMITTED PRODUCTS.
NOTE 6: CONTRACTOR MUST COORDINATE WITH LIGHT FIXTURE SCHEDULE, AND MOST IMPORTANTLY THE LIGHT FIXTURE SUBMITTAL, TO VERIFY DIMMING TYPE NEEDED FOR EACH RELAY/CONTROLLER.
NOTE 7: CONTRACTOR TO MODIFY PHOTOCELL LOCATIONS AS REQUIRED BASED ON SUBMITTED PRODUCTS.
NOTE 8: "BMS" = BUILDING MANAGEMENT SYSTEM.

LIGHTING CONTROL PANEL - "LCP"

RELAYS	RELAY AREA DESCRIPTION	LOAD	CIRCUIT	SCHEDULED ON	SCHEDULED OFF	NOTES
1	WEST EXTERIOR BLDG MNTD	270	P3-3	PHOTOCELL	PHOTOCELL	-
2	EAST EXTERIOR BLDG MNTD	210	P3-4	PHOTOCELL	PHOTOCELL	-
3	UNDER MEZZ AND HIGHBAYS	1,015	P3-5	TIMECLOCK	TIMECLOCK	1,3
4	HIGHBAYS	1,575	P3-6	TIMECLOCK	TIMECLOCK	1,3
5	HIGHBAYS	1,575	P3-7	TIMECLOCK	TIMECLOCK	1,3
6	HIGHBAYS	1,400	P3-8	TIMECLOCK	TIMECLOCK	1,3
7	HIGHBAYS	1,050	P3-9	TIMECLOCK	TIMECLOCK	1,3
8	HIGHBAYS	1050	P3-10	TIMECLOCK	TIMECLOCK	1,3
9	POLE LIGHT FIXTURES EAST	640	P3-12	PHOTOCELL	PHOTOCELL	2
10	POLE LIGHT FIXTURES WEST	530	P3-13	PHOTOCELL	PHOTOCELL	2
11	MEZZANINE CEILING FIXTURES	565	P3-12	TIMECLOCK	TIMECLOCK	1,3
12	FLOOD POLE LIGHTS WEST	560	P3-15	PHOTOCELL	PHOTOCELL	-
13						
14						
15						
16						

NOTES:
CABINET REQUIREMENTS:
- BASIS OF DESIGN IS THE WATTSTOPPER LMCP SERIES. ALL PRODUCT SUBSTITUTIONS SUBMITTED MUST BE APPROVED AS EQUAL.
- ALL RELAYS TO BE RATED FOR 20A (MINIMUM) - NORMALLY CLOSED.
- PHOTOCELL INPUT FOR CONTROL OF EXTERIOR LIGHTING. ELECTRICAL CONTRACTOR TO PROVIDE CABLING REQUIRED BETWEEN THE EXTERIOR PHOTOCELL AND RELAY CABINETS. MOUNT PHOTOCELL ON ROOF AND AIM NORTH.
- SEVEN DAY TIME CLOCK INCLUDING SKIP-A-DAY CAPABILITY.
- PROVIDE ETHERNET INTERFACE FOR REMOTE PROGRAMMING, BAS INTERFACE, AND OWNER LOCAL AREA NETWORK FOR REMOTE SCHEDULE PROGRAMMING.
NOTES:
1. COORDINATE SCHEDULED ON/OFF TIME OF DAY WITH OWNER PRIOR TO SUBSTANTIAL COMPLETION.
2. POLE LIGHTS DIM TO 50% AFTER NO MOTION HAS BEEN DETECTED FOR 15 MINUTES VIA INTEGRAL MOTION SENSOR/DIMMING.
3. AFTER BUSINESS HOURS, LIGHTS TURN OFF. SWITCH FOR EACH ZONE ALLOWS LIGHTS TO TURN ON FOR UP TO 2 HOURS, THEN AUTOMATICALLY TURN OFF. REFER TO SHEET E101 FOR OVERRIDE SWITCH LOCATIONS.



LIGHT FIXTURE SCHEDULE						
TYPE	DESCRIPTION	MOUNTING	SOURCE	VOLTS	MANUFACTURER	V-A
A1	2x4 LED FLAT PANEL WITH FIELD SELECTABLE LUMEN OUTPUT AND COLOR TEMPERATURE. 0-10V DIMMING. (X) = PROVIDE WITH EMERGENCY BATTERY.	RECESSED	LED 6,000 LUMENS 3500K 80 CRI	120	LITHONIA GPX WILLIAMS SERIES BP GE CURRENT LPI SIGNIFY FLUX PANEL OR APPROVED EQUAL	60
A1X	SAME AS A1, BUT WITH DIFFERENT LUMEN OUTPUT.	RECESSED	LED 4,000 LUMENS 3500K 80 CRI	120	SAME AS A1.	40
A2	(X) = PROVIDE WITH EMERGENCY BATTERY.					
B1	HIGH BAY LED, 15" WIDE BY 23" LONG, ACRYLIC SEMI-RECESSED LENS, MEDIUM DISTRIBUTION. PROVIDE WITH AIRCRAFT CABLE, HOOK, AND ALL REQUIRED HARDWARE FOR PENDANT MOUNTING. (X) = PROVIDE WITH EMERGENCY BATTERY.	PENDANT	LED 22,000 LUMENS 4000K 80 CRI	120	LITHONIA I-BEAM IBE HE WILLIAMS GS OR APPROVED EQUAL	175
B1X	4" WIDE, 8'-0" LONG RECESSED LINEAR PERIMETER LIGHT FIXTURE WITH FLUSH DIFFUSER. CONTINUOUS ROW MOUNTING. REFER TO ARCHITECTURAL PLANS FOR EXACT LENGTHS. COORDINATE FINISH WITH ARCHITECT. PROVIDE ALL MOUNTING HARDWARE NEEDED FOR PERIMETER RECESSED INSTALLATION. 0-10V DIMMING.	RECESSED PERIMETER	LED 2,800 LUMENS 3500K 80 CRI	120	COOPER DEFINE 4 MARK SLOT 4 OR APPROVED EQUAL	40
C1	4" OPEN LED MODULE DOWNLIGHT WITH SEMI-SPHERICAL REFLECTOR, TRIM FLANGE WITH SAME FINISH. INTEGRAL DRIVER. MEDIUM OPTIC DISTRIBUTION.	RECESSED	LED 1,000 LUMENS 3500K 80 CRI	120	LITHONIA LDM4 PORTOLO SERIES LD4B LIGHTOLIER SERIES P4R OR APPROVED EQUAL	15
D1	SAME AS FUTURE D1, BUT PROVIDE WITH DIFFERENT COLOR TEMPERATURE AND WET LOCATION LISTED.	RECESSED	LED 1,000 LUMENS 4000K 80 CRI	120	SAME AS D1.	15
E1	(X) = PROVIDE WITH EMERGENCY BATTERY.					
E1X	10" TALL, 4" DIAMETER CYLINDRICAL LIGHT FIXTURE. PROVIDE WITH RED GLASS LENS ACCESSORY AND AN A19, E26 MEDIUM BASE, LED, FLASHING LIGHT BULB. WET LOCATION LISTED. PROVIDE WATTSTOPPER FSP-211 MOTION SENSOR ONLY FOR THE FIXTURES INDICATED ON SHEET E102. (4) TOTAL.	SURFACE	(1) LED BULB	120	SPECTRUM LIGHTING SJ1INC OR APPROVED EQUAL	10
G1	SAME AS G1, BUT WALL MOUNT VERSION AND PROVIDE WITH WATTSTOPPER FSP-211 MOTION SENSOR.	WALL	(1) LED BULB	120	SPECTRUM LIGHTING WJ1INC OR APPROVED EQUAL	10
G2	SINGLE HEAD DIE CAST ALUMINUM SITE LUMINAIRE WITH TYPE V F FORWARD THROW DISTRIBUTION. RECTANGULAR ARM, 1050mA MAXIMUM ELECTRONIC DRIVER. INTEGRAL MOTION SENSOR DIMS FIXTURE TO 50% OUTPUT AFTER NO MOTION HAS BEEN DETECTED FOR 15 MINUTES, AND RAMPS UP TO 100% UPON MOTION DETECTION. 30" SQUARE STRAIGHT STEEL POLE WITH BASE COVER.	CONCRETE BASE	LED 14,500 LUMENS 4000K 80 CRI	120	LITHONIA D SERIES SIZE 1 OR APPROVED EQUAL	140
P1	SAME AS FUTURE P1, BUT PROVIDE WITH TYPE II DISTRIBUTION AND DIFFERENT LUMEN PACKAGE.	CONCRETE BASE	LED 12,600 LUMENS 4000K 80 CRI	120	SAME AS P1	110
P2	SAME AS FUTURE P1, BUT (2) HEAD FIXTURE, POSITIONED 180 DEGREES APART.	CONCRETE BASE	LED 14,500 LUMENS/HEAD 4000K 80 CRI	120	SAME AS P1	280
P3	SAME AS FUTURE P1, BUT (2) HEAD FIXTURE WITH (1) P1 HEAD AND (1) P2 HEAD POSITIONED 180 DEGREES APART. REFER TO SITE PLAN FOR DIRECTION OF THE HEADS.	CONCRETE BASE	LED 14,500 LUMENS (P1) 12,600 LUMENS (P2) 4000K 80 CRI	120	SAME AS P1	250
P4	SAME AS FUTURE P1, BUT (2) HEAD FIXTURE WITH (1) P1 HEAD AND (1) P2 HEAD POSITIONED 90 DEGREES APART. REFER TO SITE PLAN FOR DIRECTION OF THE HEADS.	CONCRETE BASE	LED 14,500 LUMENS (P1) 12,600 LUMENS (P2) 4000K 80 CRI	120	SAME AS P1	250
P5	RECTANGULAR FLOOD LIGHT FIXTURE. ADJUSTABLE OPTICS, AND SELECTABLE COLOR TEMPERATURE AND LUMEN OUTPUT. SET WITH 12,338 LUMEN OUTPUT AND 4000K COLOR TEMPERATURE UPON INSTALLATION. 25" SQUARE STRAIGHT STEEL POLE WITH BASE COVER.	CONCRETE BASE	LED 12,338 LUMENS 4000K 80 CRI	120	COOPER LUMARK AP LSF SELECTABLE FLOOR SERIES SPITZER LIGHTING FLS SERIES OR APPROVED EQUAL	80
P6	SAME AS P6, BUT PROVIDE WITH (2) P6 FIXTURE HEADS INSTALLED ON SAME POLE, AIMED 90 DEGREES APART FROM EACH OTHER.	CONCRETE BASE	LED 12,338 LUMENS/HEAD 4000K 80 CRI	120	SAME AS P6	160
S1	4'-0" LONG STR- LIGHT, ROUND DIFFUSE LENS. GENERAL DISTRIBUTION. PROVIDE WITH MOUNTING HARDWARE REQUIRED FOR PENDANT AND SURFACE MOUNT APPLICATIONS. (X) = PROVIDE WITH EMERGENCY BATTERY.	PENDANT SURFACE	LED 5,000 LUMENS 4000K 80 CRI	120	LITHONIA CLA COLUMBIA MPS OR APPROVED EQUAL	35
S1X	EXTERIOR WALL PACK, FORWARD THROW. ARCHITECT TO SELECT FINISH. (X) = PROVIDE WITH INTEGRAL EMERGENCY BATTERY.	WALL	LED 1,500 LUMENS 4000K 80 CRI	120	LITHONIA WST OR APPROVED EQUAL	15
WX	LED EXIT SIGN, SINGLE OR DOUBLE FACE AS REQUIRED AND/OR SHOWN ON DRAWINGS. UNIVERSAL MOUNT. RECESSED MOUNTED, EDGE-LIT, RED LETTERING ON MIRROR. SEALED NI-CAD BATTERY, MINIMUM 90 MINUTE CAPACITY. DRAWINGS INDICATE ARROWS.	UNIVERSAL	LED	120	LITHONIA LRP OR APPROVED EQUAL	3
X1	LED EXIT SIGN, SINGLE OR DOUBLE FACE AS REQUIRED AND/OR SHOWN ON DRAWINGS. UNIVERSAL MOUNT. CAST ALUMINUM HOUSING. RED LETTERING. SEALED NI-CAD BATTERY, MINIMUM 90 MINUTE CAPACITY. DRAWINGS INDICATE ARROWS. FURNISH WITH PENDANT MOUNT KIT FOR INSTALLATIONS IN OPEN CEILING AREAS AWAY FROM WALLS.	UNIVERSAL	LED	120	DUAL LITE SERIES SE CHLORIDE SERIES CAD LITHONIA SERIES LE WILLIAMS SERIES EXTICA OR APPROVED EQUAL	3
X2						

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1142 Southview Dr, Liberty, MO 64068

Distribution Center
Liberty Public Schools

REVISIONS:

#	Description	Date
4	Addendum 4	11/01/23

STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
RYAN JEROD DIEDIKER
NUMBER 001500691
EXPIRATION DATE 10/10/23

JOB NO: 23021.00
DRAWN BY: SBI
CHECKED BY: RJU
DATE: 10.10.2023

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engineers
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phone 913.345.2127 fax 913.345.0617
project number 2314705

E302

Please consider the environment before printing this sheet.

ELECTRICAL SCHEDULES AND DETAIL

PROJECT NAME: X:\23\23147\Drawings\06-2314705-E303.dwg
LAST CORRECTION BY: DATE: 10-40-56 AM
FILED BY: DATE: 10-40-56 AM
FILED BY: DATE: 10-40-56 AM

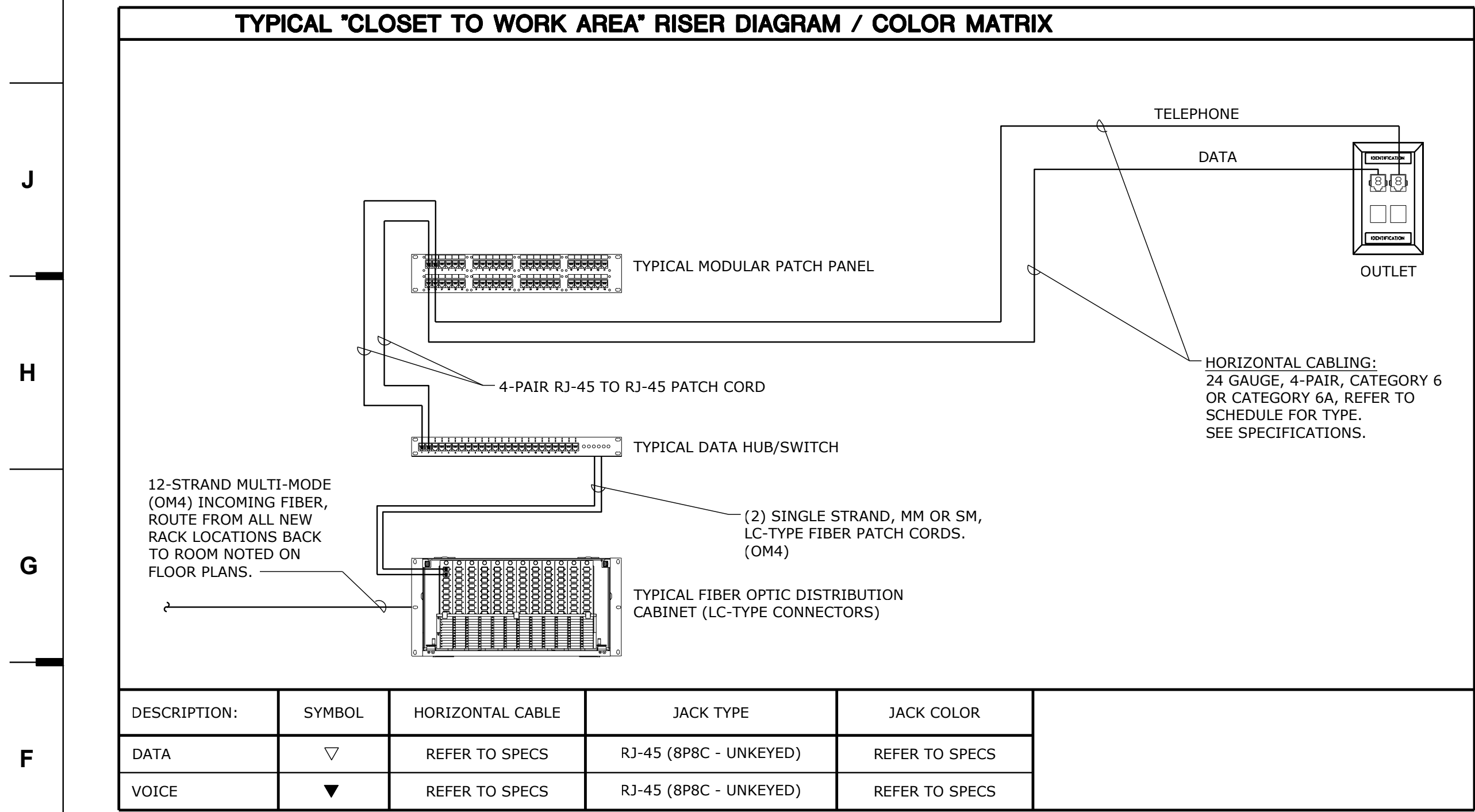
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
TELECOMMUNICATION DEVICE SCHEDULE																
SYMBOL DESCRIPTION (NOTE 1)																
▽#D #DA	WALL MOUNTED DATA OUTLET (#D) DATA CAT6 JACKS AS NOTED ON PLANS (#DA) DATA CAT6A JACKS AS NOTED ON PLANS															
WAS #D #DA	WIRELESS ACCESS POINT DATA OUTLET (#D) DATA CAT6 JACKS AS NOTED ON PLANS (#DA) DATA CAT6A JACKS AS NOTED ON PLANS															
TV #D #DA	DATA OUTLET FOR TV (#D) DATA CAT6 JACKS AS NOTED ON PLANS (#DA) DATA CAT6A JACKS AS NOTED ON PLANS															
□#D #DA	DATA OUTLET FOR IN FLOOR BOX/POKE THRU (#D) DATA CAT6 JACKS AS NOTED ON PLANS (#DA) DATA CAT6A JACKS AS NOTED ON PLANS															
□#D #DA	SECURITY CAMERA DATA OUTLET (#D) DATA CAT6 JACKS AS NOTED ON PLANS (#DA) DATA CAT6A JACKS AS NOTED ON PLANS															
□#D #DA	DOOR BELL CAMERA DATA OUTLET (#D) DATA CAT6 JACKS AS NOTED ON PLANS (#DA) DATA CAT6A JACKS AS NOTED ON PLANS															
□#D #DA	BURGLAR ALARM - KEYPAD DEVICE BY OTHERS. REFER TO SPECIFICATIONS FOR CABLEING INFORMATION.															
□#D #DA	BURGLAR ALARM - MOTION SENSOR DEVICE BY OTHERS. REFER TO SPECIFICATIONS FOR CABLEING INFORMATION.															
□#D #DA	2-WAY IP SPEAKER (#D) DATA CAT6 JACKS AS NOTED ON PLANS (L) STATUS LIGHT															
□#D #DA	5W LOUD SPEAKER COORDINATE MOUNTING TYPE AND ELEVATION WITH AV VENDOR. (#D) DATA CAT6 JACKS AS NOTED ON PLANS (E) EXTERIOR RATED DEVICE.															

- NOTES:
1. ALL CABLEING ROUTED DIRECTLY TO TELECOMMUNICATIONS ROOM UNLESS SPECIFICALLY NOTED OTHERWISE. REFER TO FLOOR PLANS FOR ADDITIONAL INFORMATION.
 2. REFER TO SPECIFICATIONS FOR FURTHER CABLEING AND TERMINATION DETAILS.

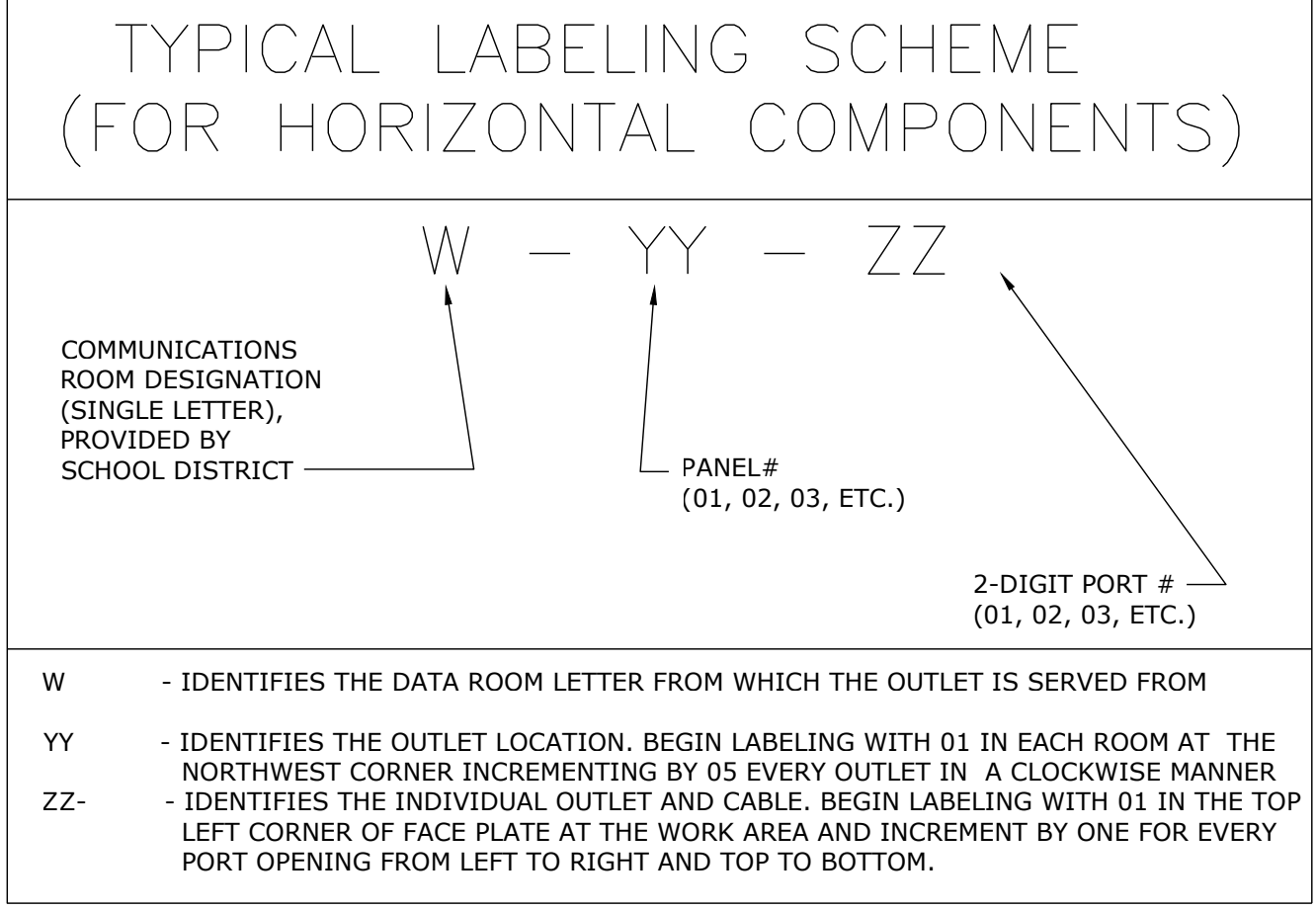
SECURITY DOOR ROUGH-IN - SINGLE DOOR DETAIL

NOT TO SCALE

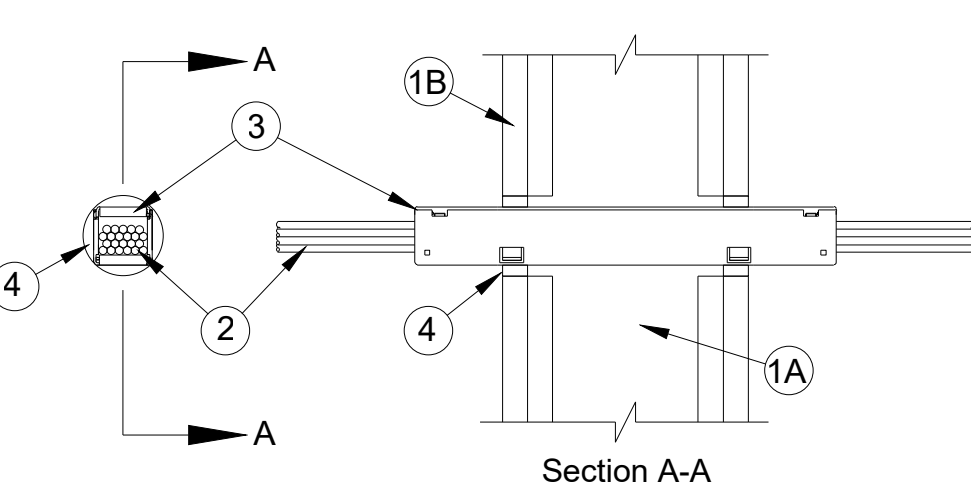
(SYMBOL [CR])



- TELECOMMUNICATIONS INSTALLATION NOTES:
1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE A.D.A.A.G. (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES)
 2. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, AND IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
 3. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
 4. FLUSH MOUNT ALL TELECOMMUNICATION OUTLETS TO MATCH RECEPTACLE HEIGHTS. EXCEPT WHERE OTHERWISE NOTED. OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
 5. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL TELECOMMUNICATIONS INSTALLATION THIS CONTRACTOR SHALL ADJUST OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
 6. TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TELECOMMUNICATION DEVICES ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
 7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
 8. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS.



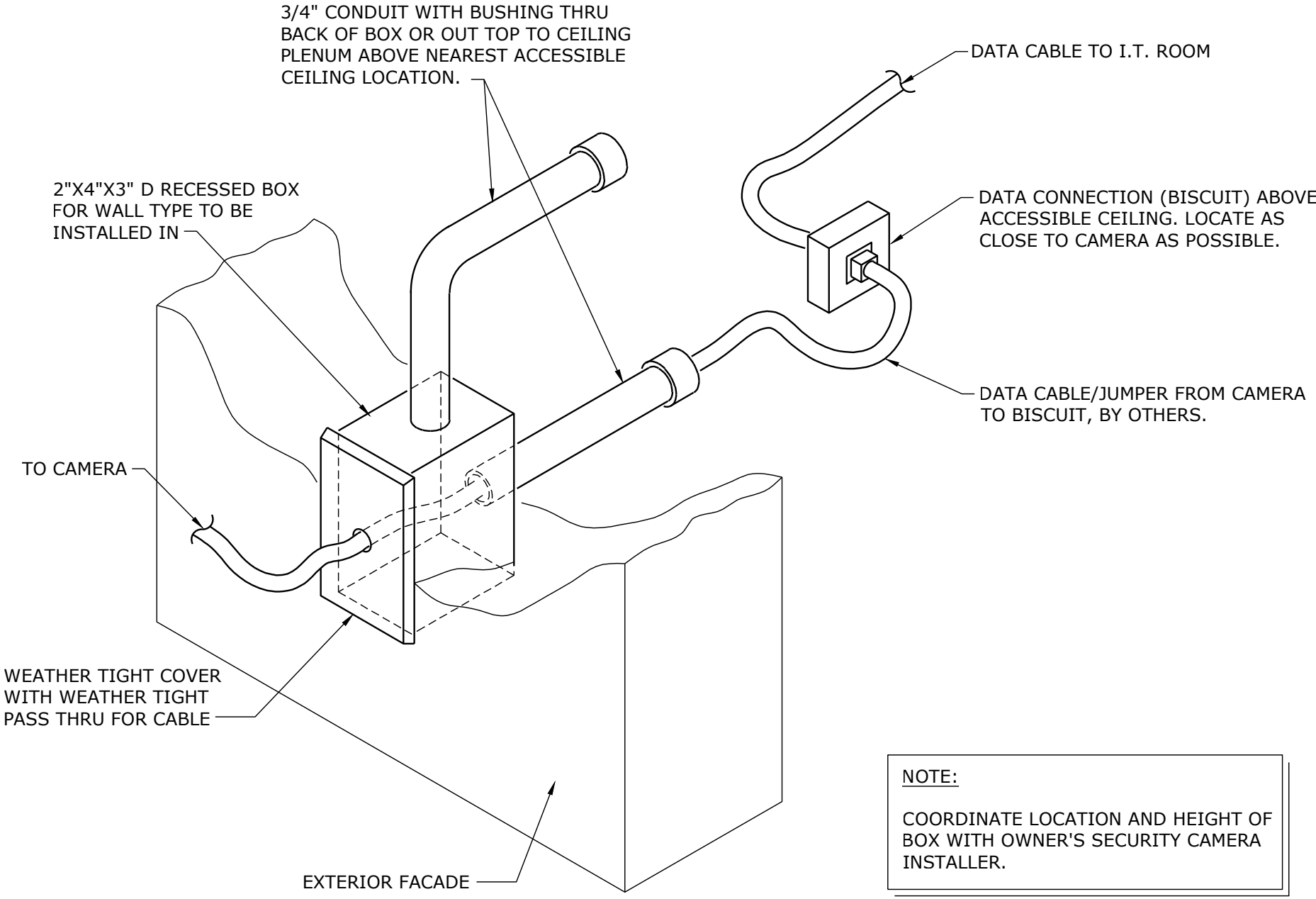
System No. W-L-3256
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1, 1-1/4 and 1-3/4 Hr (See Item 2)
L Rating At Ambient - Less Than 1 or 1.4 CFM (See Item 3)
L Rating At 400 F - Less Than 1 or 1.4 CFM (See Item 3)



1. Wall Assembly - The 1 or 2 hr fire-rated gypsum board/wall assembly shall be constructed of the materials and in the manner described within the individual U200, 1400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
 - A. Studs - Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
 - B. Gypsum Board* - Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Gypsum board to accommodate firestop device to be max 3 in. (76 mm) wide by max 2-1/2 in. (64 mm) high, or nom 2 in. (51 mm) diameter. The hourly F Rating of the firestop system is dependent upon the hourly rating of the wall in which it is installed.
2. Cables - Within the loading area for each firestop device module, the cables may represent a 0 to 100 percent visual fill. Cable fill to be distributed at a uniform height across the width of the firestop device module. Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types of cables may be used:
 - A. Max four pair No. 22 AWG (or smaller) copper conductor data cable with polyvinyl chloride (PVC) or plenum rated jacketing and insulation.
 - B. Max RGU coaxial cable with fluorinated ethylene insulation and jacketing.
 - C. Fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation having a max diam of 1/4 in. (6 mm). The T Rating is 1 hr and 1-3/4 hr in 1 hr and 2 hr rated walls, respectively, when no cables are installed in firestop device. The T Rating is 1 hr and 1-1/4 hr in 1 hr and 2 hr rated walls, respectively, when cables are installed in firestop device. The L Rating for the empty firestop device is less than 1.4 cfm at ambient and at 400F. When Item 3A is used, the L Rating with 100 percent visual fill of cable is less than 1 cfm at ambient and at 400F.
3. Firestop Device* - Firestop device consists of a 1-1/4 by 1-1/4 by 10-1/2 in. (36 by 36 by 267 mm) long galv steel tube with an incompressible material lining. Firestop device to be installed in accordance with the accompanying installation instructions. Prior to installation within wall, lid removed from device to capture grouped cables. After wall such that lid is on top and ends project an equal distance from the "approximate" centerline of the wall assembly. The space between the device and the periphery of the opening shall be min 8 in. (203 mm, point contact) to max 1/2 in. (13 mm).
SPECIFIED TECHNOLOGIES INC. - EZ PATH Series 22 Fire Rated Pathway
4. Fill, Void or Cavity Material* - Sealant - Min 5/8 in. (16 mm) thickness of sealant to be applied in annular space between firestop device and periphery of opening on each side of wall assembly. Nom 3/8 in. (10 mm) diam bead of fill material applied at the point contact location between the firestop device and gypsum board wall on both sides of the wall assembly.
SPECIFIED TECHNOLOGIES INC. - SpecSeal 100, 101, 102, 105, 120 or 129 Sealant, SpecSeal LCI Sealant, SpecSeal LCI 50 Sealant, Penel 300 Sealant or SpecSeal Series SIL300 Sealant
*Refer to the UL Classification Mark

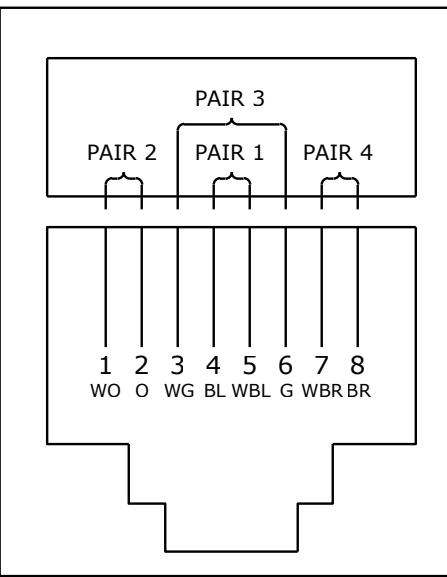
TELECOMMUNICATIONS CABLING AT FIRE WALL PENETRATIONS

NOT TO SCALE



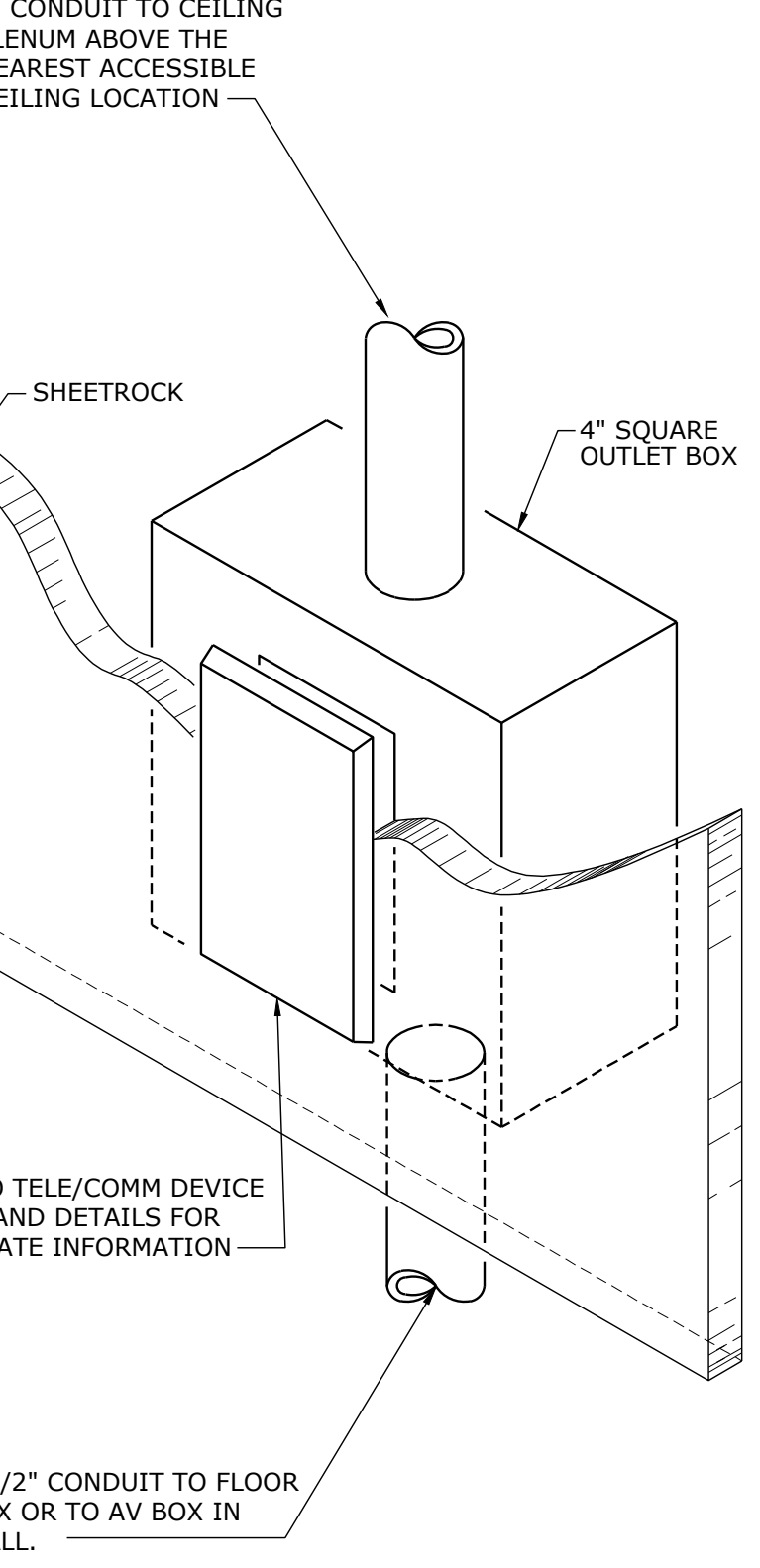
SECURITY POE CAMERA OUTLET DETAIL

NOT TO SCALE



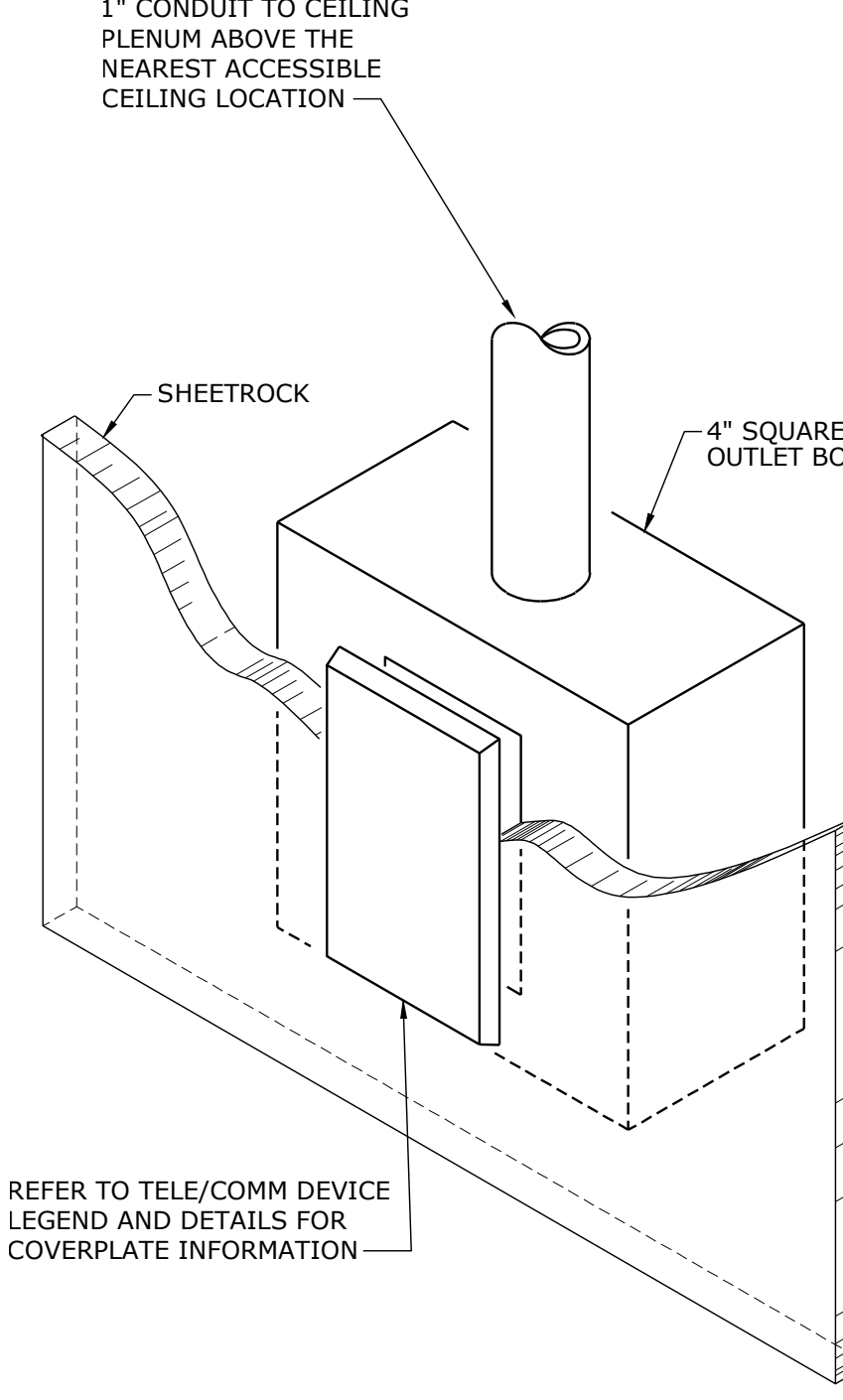
EIGHT POSITION JACK PIN/PAIR ASSIGNMENTS ANSI/TIA/EIA T568B

NOT TO SCALE



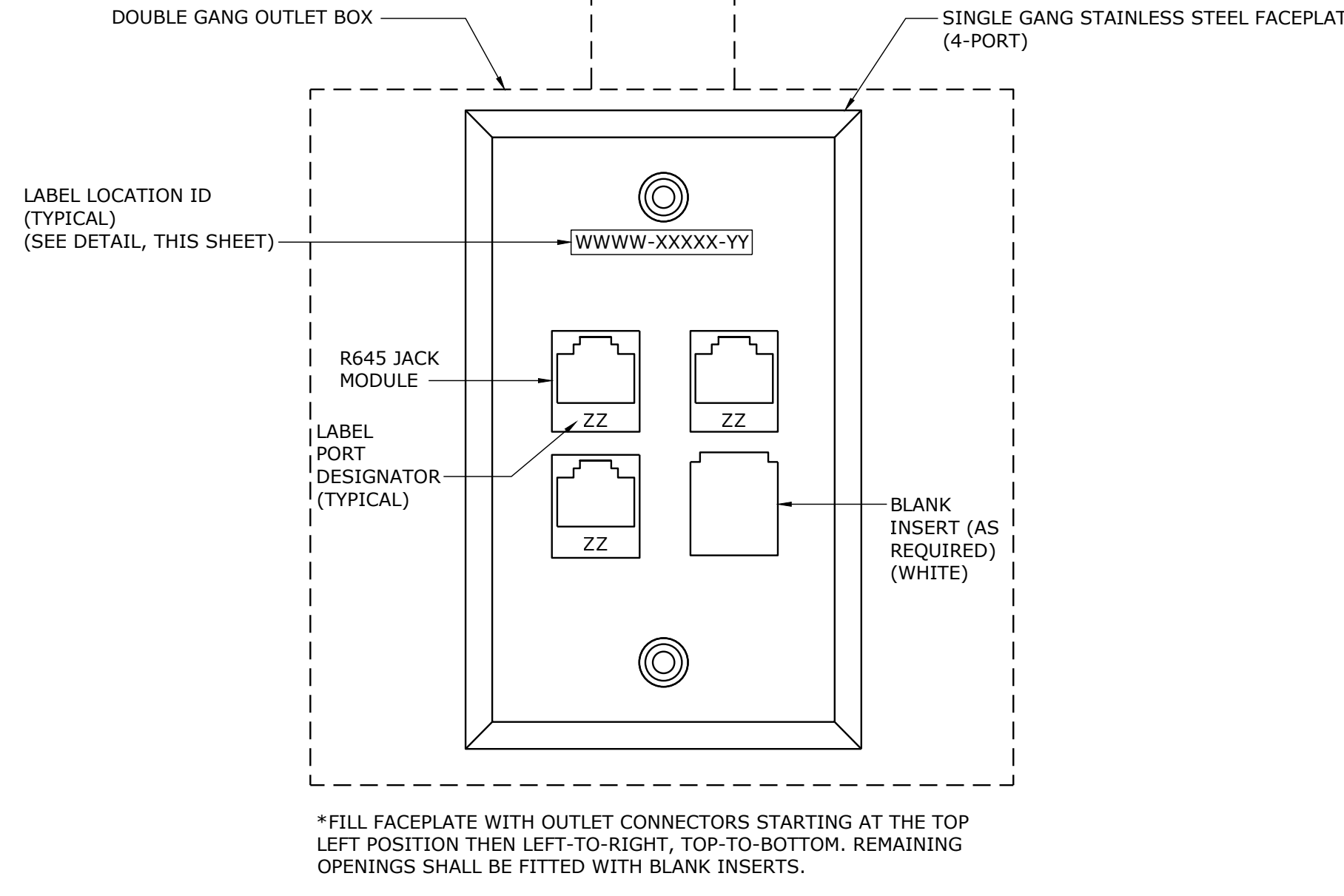
TV OUTLET DETAIL

NOT TO SCALE



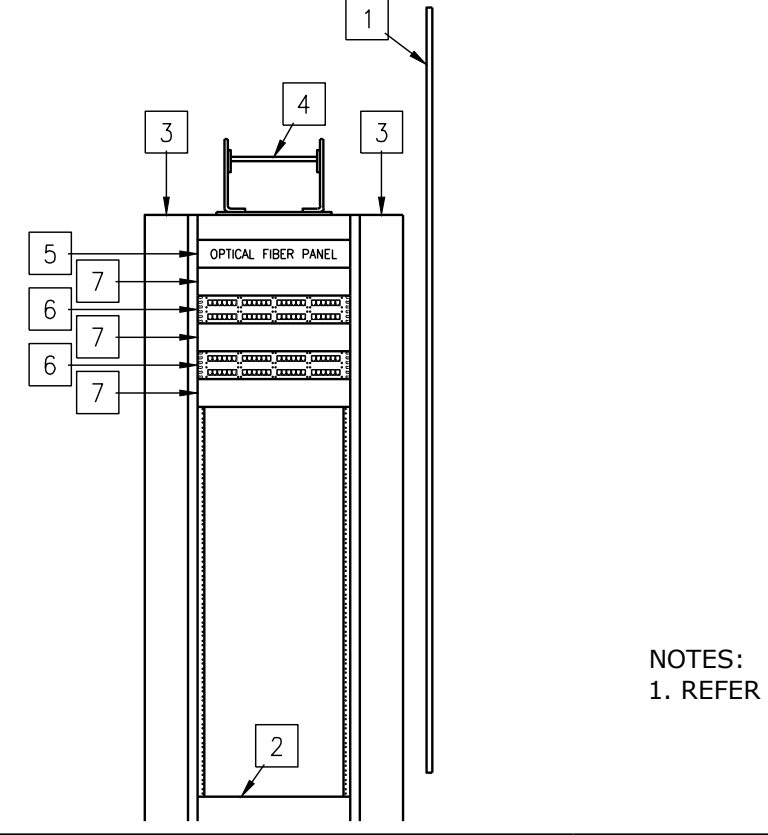
TELE/DATA OUTLET ROUGH-IN DETAIL

NOT TO SCALE



WALL MOUNTED PHONE/DATA OUTLET

NO SCALE



- ENLARGED PLAN NOTES:
- 1 TELECOMMUNICATIONS BACKBOARD.
 - 2 TELECOMMUNICATIONS TWO-POST RACK.
 - 3 VERTICAL CABLE MANAGER.
 - 4 LADDER RACK. INSTALL LADDER RACK FROM RACK TO ADJACENT WALL, ORIENTED AS SHOWN IN DETAIL.
 - 5 OPTICAL FIBER PATCH PANEL.
 - 6 48-PORT CATEGORY 6 PATCH PANEL, QUANTITY AS REQUIRED.
 - 7 HORIZONTAL CABLE MANAGER (TYP.) QUANTITY AS REQUIRED..

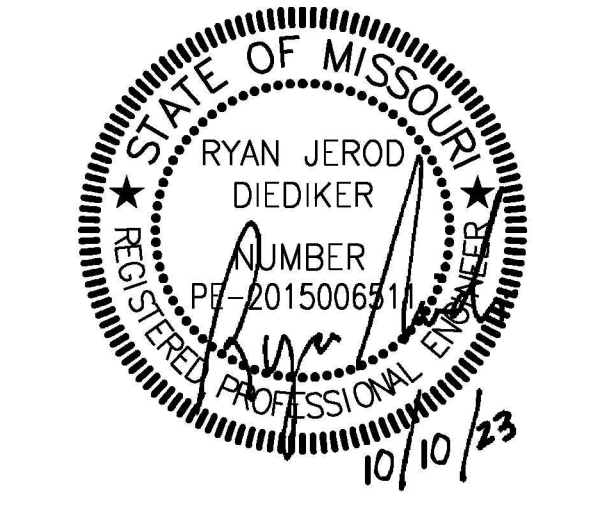
NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.

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project number 2314705

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Structural # 000003331
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Food Service Consultant
2140 W grand St Suite B
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417.862.0812 phone

Distribution Center
Liberty Public Schools
1142 Southview Dr, Liberty, MO 64068

REVISIONS:		
#	Description	Date
4	Addendum 4	11/01/23



JOB NO: 23021.00
DRAWN BY: SBI
CHECKED BY: RJU
DATE: 10.10.2023

E303

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PANEL EDP									
MAIN BUS AMPS: 600 A		AIC: 65,000 A		EQUIPMENT GROUND BUS					
MAIN BREAKER: 500 A		SECTIONS: 1 - 42 SPACE							
VOLTAGE: 208Y/120 V		MOUNTING: SURFACE							
PHASES/WIRES: 3 PH / 4 W		ENCLOSURE TYPE: NEMA 1							
CIRCUIT DESCRIPTION	POLES	AMPS	CKT NO	CKT NO	AMPS	POLES	CIRCUIT DESCRIPTION	POLES	AMPS
FREEZER EVAPORATOR COIL HEATER	3	30	1	2	30	3	FREEZER EVAPORATOR COIL HEATER	3	30
			3	4					
			5	6					
COOLER CONTROL PANEL	3	45	7	8	45	3	COOLER CONTROL PANEL	3	45
			9	10					
			11	12					
WALK-IN FREEZER CONTROL PANEL	3	60	13	14	60	3	WALK-IN FREEZER CONTROL PANEL	3	60
			15	16					
			17	18					
PANEL 'EP'	3	150	19	20	60	3	WALK-IN FREEZER CONTROL PANEL	3	60
			21	22					
			23	24					
FREEZER EVAPORATOR COIL HEATER	3	30	25	26	60	3	WALK-IN FREEZER CONTROL PANEL	3	60
			27	28					
			29	30					
FREEZER EVAPORATOR COIL HEATER	3	30	31	32		1	PREPARED SPACE	1	
			33	34		1	PREPARED SPACE	1	
			35	36		1	PREPARED SPACE	1	
PREPARED SPACE	1		37	38		1	PREPARED SPACE	1	
PREPARED SPACE	1		39	40		1	PREPARED SPACE	1	
PREPARED SPACE	1		41	42		1	PREPARED SPACE	1	

PANEL EP									
MAIN BUS AMPS: 150 A		AIC: 65,000 A		MAIN LUGS ONLY EQUIPMENT GROUND BUS					
MAIN BREAKER: N/A		SECTIONS: 1 - 42 SPACE							
VOLTAGE: 208Y/120 V		MOUNTING: SURFACE							
PHASES/WIRES: 3 PH / 4 W		ENCLOSURE TYPE: NEMA 1							
CIRCUIT DESCRIPTION	POLES	AMPS	CKT NO	CKT NO	AMPS	POLES	CIRCUIT DESCRIPTION	POLES	AMPS
FREEZER - DOOR LTG, HEATED VENTS	1	20	1	2	20	1	COOLER - DOOR LTG, HEATED VENTS	1	20
FREEZER - LIGHTS	1	20	3	4	20	1	COOLER - LIGHTS	1	20
COOLER - AIR SHIELD	1	20	5	6	20	2	COOLER AIR CURTAIN	2	
COOLER - ROLL UP DOOR	3	20	7	8					
			9	10	20	2	FREEZER AIR CURTAIN	2	
			11	12					
TEMPERATURE MONITOR	1	20	13	14	20	1	FREEZER COIL HEAT TAPE	1	20
120V CAMERAS - WEST LOT	1	20	15	16	20	1	FREEZER COIL HEAT TAPE	1	20
COOLER EVAPORATOR COIL FAN	1	20	17	18	20	1	COOLER EVAPORATOR COIL FAN	1	20
IT EQUIPMENT	1	20	19	20	20	1	IT EQUIPMENT	1	20
IT EQUIPMENT	1	20	21	22	20	1	IT EQUIPMENT	1	20
IT EQUIPMENT	1	20	23	24	20	3	FREEZER - ROLL UP DOOR	3	
FREEZER - DOOR HEATER	1	20	25	26					
FLOOR WARMING SYSTEM	2	25	27	28					
			29	30	20	1	FREEZER COIL HEAT TAPE	1	20
SOUTH GATE	1	20	31	32	20	1	FREEZER COIL HEAT TAPE	1	20
SPARE	1	20	33	34	20	1	NORTH GATE	1	20
SPARE	1	20	35	36	20	1	SPARE	1	
SPARE	1	20	37	38	20	1	SPARE	1	
PREPARED SPACE	1		39	40		1	PREPARED SPACE	1	
PREPARED SPACE	1		41	42		1	PREPARED SPACE	1	

PANEL MP2									
MAIN BUS AMPS: 400 A		AIC: 65,000 A		MAIN LUGS ONLY EQUIPMENT GROUND BUS					
MAIN BREAKER: N/A		SECTIONS: 1 - 30 SPACE							
VOLTAGE: 208Y/120 V		MOUNTING: SURFACE							
PHASES/WIRES: 3 PH / 4 W		ENCLOSURE TYPE: NEMA 1							
CIRCUIT DESCRIPTION	POLES	AMPS	CKT NO	CKT NO	AMPS	POLES	CIRCUIT DESCRIPTION	POLES	AMPS
DWH-1	1	20	1	2	15	1	SF-4,5,6	1	
UH-3	2	20 LCK	3	4	20 LCK	3	UH-2	3	
			5	6					
CU-2	2	25	7	8					
			9	10	25	2	CU-3	2	
PANEL 'P2'	3	125	11	12					
			13	14	100	3	PANEL 'P3'	3	
			15	16					
REC - TRUCK BLOCK HEATER	1	20	17	18					
REC - TRUCK BLOCK HEATER	1	20	19	20	20	1	REC - TRUCK BLOCK HEATER	1	
REC - TRUCK BLOCK HEATER	1	20	21	22		1	PREPARED SPACE	1	
PREPARED SPACE	1		23	24		1	PREPARED SPACE	1	
PREPARED SPACE	1		25	26		1	PREPARED SPACE	1	
PREPARED SPACE	1		27	28		1	PREPARED SPACE	1	
PREPARED SPACE	1		29	30		1	PREPARED SPACE	1	

PANEL P3									
MAIN BUS AMPS: 100 A		AIC: 18,000 A		MAIN LUGS ONLY EQUIPMENT GROUND BUS					
MAIN BREAKER: N/A		SECTIONS: 1 - 30 SPACE							
VOLTAGE: 208Y/120 V		MOUNTING: SURFACE							
PHASES/WIRES: 3 PH / 4 W		ENCLOSURE TYPE: NEMA 1							
CIRCUIT DESCRIPTION	POLES	AMPS	CKT NO	CKT NO	AMPS	POLES	CIRCUIT DESCRIPTION	POLES	AMPS
LTG - COORD. OFFICE, RR, LAUNDRY	1	20	1	2	20	1	LTG - MEZZANINE	1	
LTG - WEST EXTERIOR BLDG MNTD	1	20	3	4	20	1	LTG - EAST EXTERIOR BLDG MNTD	1	
LTG - UNDER MEZZ AND HIGHBAY	1	20	5	6	20	1	LTG - HIGHBAYS	1	
LTG - HIGHBAYS	1	20	7	8	20	1	LTG - HIGHBAYS	1	
LTG - HIGHBAYS	1	20	9	10	20	1	LTG - HIGHBAYS	1	
BUILDING MANAGEMENT SYSTEM - BMS	1	20	11	12	20	1	LTG - POLE LIGHT FIXTURES EAST	1	
LTG - POLE LIGHT FIXTURES WEST	1	20	13	14	20	1	LIGHTING CONTROL PANEL - LCP	1	
LTG - FLOOD POLE LIGHTS WEST	1	20	15	16	20	1	SPARE	1	
SPARE	1	20	17	18	20	1	SPARE	1	
SPARE	1	20	19	20	20	1	SPARE	1	
PREPARED SPACE	1		21	22	20	1	SPARE	1	
PREPARED SPACE	1		23	24					
PREPARED SPACE	1		25	26		1	PREPARED SPACE	1	
PREPARED SPACE	1		27	28		1	PREPARED SPACE	1	
PREPARED SPACE	1		29	30		1	PREPARED SPACE	1	

PANEL OP1									
MAIN BUS AMPS: 125 A		AIC: 65,000 A		MAIN LUGS ONLY					
MAIN BREAKER: N/A		SECTIONS: 1 - 54 SPACE		EQUIPMENT GROUND BUS					
VOLTAGE: 208Y/120 V		MOUNTING: RECESSED							
PHASES/WIRES: 3 PH / 4 W		ENCLOSURE TYPE: NEMA 1							
CIRCUIT DESCRIPTION	POLES	AMPS	CKT NO	CKT NO	AMPS	POLES	CIRCUIT DESCRIPTION		
REC - OFFICES	1	20	1	2	20	1	REC - CONFERENCE ROOM		
REC - CONFERENCE ROOM	1	20	3	4	20	1	REC - CONFERENCE ROOM FBs		
REC - WORKSTATIONS	1	20	5	6	20	1	REC - WORK AREA SOUTH		
REC - MOTHERS, RR, DATA	1	20	7	8	20	1	REC - HALLS, CLOCK IN, JAN.		
LTG - COPY CENTER	1	20	9	10	20GFI	1	REC - ELECTRIC WATER COOLER		
LTG - OFFICES, RR, DATA, CONF	1	20	11	12	20	1	REC - WORK AREA AND BREAKROOM		
LTG - CORRIDOR AND VESTIBULE	1	20	13	14	20GFI	1	REC - REFRIGERATOR		
REC - CORD REEL	1	20	15	16	20GFI	1	REC - ICE MAKER		
REC - COPY CENTER	1	20	17	18	20GFI	1	REC - DISHWASHER		
REC - COPY EQUIPMENT	2	30	19	20	20GFI	1	REC - COUNTER RECEPTACLE		
			21	22	20	1	REC - MICROWAVE		
REC - COPY EQUIPMENT	2	30	23	24	20	1	REC - MICROWAVE		
			25	26	20	1	REC - MICROWAVE		
REC - COPY EQUIPMENT	2	30	27	28	20	1	REC - COUNTER RECEPTACLE		
			29	30	30	2	REC - COPY EQUIPMENT		
REC - COPY EQUIPMENT	2	30	31	32	20	1			
			33	34	20	1	REC - ROOF TOP		
REC - LAMINATOR	1	20	35	36	20	1	REC - LAMINATOR		
REC - CORD REEL	1	20	37	38	20	1	REC - PRINTER		
REC - CORD REEL	1	20	39	40	20	1	REC - COPY CENTER		
REC - CORD REEL	1	20	41	42	20	1	REC - COPY CENTER		
REC - EXTERIOR RECEPTABLES	1	20	43	44	20	1	TV		
SPARE	1	20	45	46	20	1	SPARE		
SPARE	1	20	47	48	20	1	SPARE		
SPARE	1	20	49	50	20	1	SPARE		
SPARE	1	20	51	52	20	1	SPARE		
SPARE	1	20	53	54	20	1	SPARE		
							GFI - GROUND FAULT BREAKER		