

West Michigan Hispanic Chamber of Commerce - HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

Project Number: 2024-010.00

Issued For: Addendum 1

WEST MICHIGAN HISPANIC CHAMBER OF COMMERCE

2007 Division Ave S Grand Rapids, MI 49507 T: 616-706-8368 CONTACT: Brad Laackman, Owner Representative

GENERAL CONTRACTOR:

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660 Fulton St East Ada, MI 49301 T: 616-676-1222 CONTACT: Kevin Osbeck

ARCHITECT OF RECORD: ROSSETTI 160 WEST FORT

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STRUCTURAL ENGINEER:

Resurget Engineering

28 W Adams Ave, Suite 1710 Detroit, MI 28226 T: 313-315-3290 CONTACT: Marc Steinhobel

MEP ENGINEER: MA Engineering 180 High Oak Rd Bloomfield Hills, MI 48304 T: 248-258-1610 **CONTACT:** John Richards

CONTACT: Adam Howe

OWNER CONSULTANTS

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CONTACT: John Male

FOOD EQUIPMENT CONSULTANT: Merchandise Equipment & Supply 2039 Walker Ct NW Grand Rapids, MI 49544 T: 616-791-1100

GENERAL "N" NEW DRAWING

DELETED DRAWINGS: NONE

DWG # DRAWING NAME **ISSUED FOR** G-001 General Information Sheet Addendum 1 02/20/2025 G-003 Code Analysis & Life Safety Plan 02/20/2025 N G-004 Products and Specs 02/20/2025 G-005 Products and Specs Addendum 1 G-006 Products and Specs G-007 LEED Specifications DRAWINGS: 8

"N" NEW DRAWING DELETED DRAWINGS: NONE

> DWG # DRAWING NAME C-100 Existing Conditions/Den C-200 Site Development Plan C-201 Site Utility Plan C-202 Site Grading Plan Bid Set 02/07/2025

ARCH ""N" NEW DRAWING

DELETED DRAWINGS: NONE

DWG#	DRAWING NAME	ISSUED FOR	DATE
A-001	Architectural Site Plan	Addendum 1	02/20/2025
A-101	Floor Plan - Level 1	Addendum 1	02/20/2025
A-102	Floor Plan - Level 2	Addendum 1	02/20/2025
A-103	Roof Plan	Addendum 1	02/20/2025
A-201	Elevations - East and South	Addendum 1	02/20/2025
A-202	Elevations - West and North	Addendum 1	02/20/2025
A-301	Building Sections	Addendum 1	02/20/2025
A-302	Wall Profiles	Addendum 1	02/20/2025
A-303	Details	Addendum 1	02/20/2025
A-304	Details	Addendum 1	02/20/2025
A-401	Stairs & Elevator - Enlarged Plans and Sections	Addendum 1	02/20/2025
A-402	Typical Stair & Elevator Details	Addendum 1	02/20/2025
A-403	Interior Elevations	Addendum 1	02/20/2025
A-501	Roof Details	Addendum 1	02/20/2025
A-601	Door Schedule and Finish Legend	Addendum 1	02/20/2025
A-602	Partition Schedule, Legend, and Details	Addendum 1	02/20/2025
A-701	Reflected Ceiling Plan - Level 1	Addendum 1	02/20/2025
A-702	Reflected Ceiling Plan - Level 2	Addendum 1	02/20/2025

STRUCTURAL

DRAWINGS: 18

"N" NEW DRAWING DELETED DRAWINGS: NONE

DWG # DRAWING NAME ISSUED FOR 02/07/2025 S.002 GENERAL NOTES Bid Set 02/07/2025 S.003 SPECIAL INSPECTIONS Bid Set 02/07/2025 S.101 FRAMING PLANS Addendum # 02/20/2025 02/07/2025 S.201 WALL ELEVATIONS Bid Set 02/07/2025 S.301 TYPICAL CONCRETE DETAILS S.302 FOUNDATION DETAILS 02/07/2025 02/07/2025 02/07/2025 S.503 STEEL SECTIONS AND DETAILS Bid Set 02/07/2025 02/20/2025 S.701 SECTIONS AND DETAILS 02/20/2025

MECHANICAL

"N" NEW DRAWING DELETED DRAWINGS: NONE

	DWG#	DRAWING NAME	ISSUED FOR	DATE
	M-111	HVAC Floor Plan - Level 1	Addendum 1	02/20/2025
	M-121	HVAC Floor Plan - Level 2	Addendum 1	02/20/2025
	MP-001	Mechanical Symbols List, Index and Notes	Addendum 1	02/20/2025
	MP-002	Mechanical Specifications	Addendum 1	02/20/2025
	MP-131	Mechanical Roof Plan	Addendum 1	02/20/2025
	MP-401	Mechanical Schedules	Addendum 1	02/20/2025
	MP-402	Mechanical Schedules	Addendum 1	02/20/2025
	MP-501	Mechanical Details	Addendum 1	02/20/2025
	MP-502	Mechanical Details	Addendum 1	02/20/2025
	MP-601	Temperature Controls	Addendum 1	02/20/2025
DRA	WINGS:	10		

PLUMBING "N" NEW DRAWING

DELETED DRAWINGS: NONE

P-111 Plumbing Floor Plan - Level 1

"N" NEW DRAWING **DELETED DRAWINGS: E-031**

E-000 ELECTRICAL LEGEND, SHEET INDEX. Addendum 1 E-010 ELECTRICAL ONE-LINE DIAGRAM E-500 ELECTRICAL DETAILS

FIRE PROTECTION

DELETED DRAWINGS: NONE

DWG # DRAWING NAME FP-121 Fire Protection Plan - Level 2 Addendum 1 02/20/2025

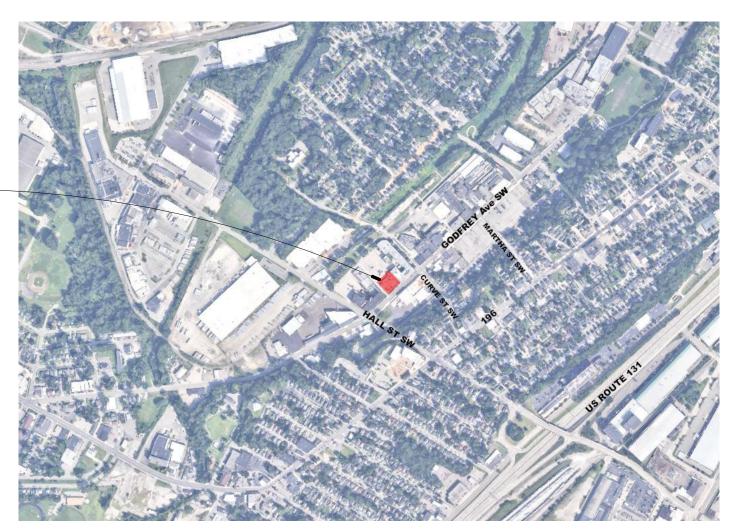
FOOD SERVICE AND EQUIPMENT

PROVIDED FOR REFERENCE ONLY

DELETED DRAWINGS: NONE

DWG# DRAWING NAME ISSUED FOR DATE N FS - 3 Electrical Plan N FS - 4 Plumbing Plan Addendum 1 02/20/202

PROJECT SITE



LOCATION MAP NOT TO SCALE

ROSSETTI

SHEET TITLE

Cover Sheet

PROJECT# 2024-010.00

SHEET#

ABBREVIATIONS LABORATORY SOUTH AND EAST **ANGLE** LAVATORY SOLID CORE LAV FACH LINOLEUM FLOORING SCD SEAT COVER DISPENSER **EXPOSED CONSTRUCTION** CENTERLINE LKR LOCKER SCHED SCHEDULE **EXPOSED CONSTRUCTION** LIGHT SOAP DISPENSER PAINTED SECT LVT LUXURY VINYL TILE SECTION **EXPANSION JOINT ELEVATION** DIAMETER MAX MAXIMUM **SHOWER** ELEC. **ELECTRICAL** POUND OR NUMBER MECH SHEET MECHANICA ELEV. ELEVATOR **EXISTING** MEMB. MEMBRANE SIMII AR EMER. EMERGENC\ MTL METAL SFM STATE FIRE MARSHAL **ENCLOSURE** ENCL **MANUFACTURE** SPEC **SPECIFICATIONS** MFR. E.O.S./EOS EDGE OF SLAB **MANHOLE SQUARE** E.O.D./EOD EDGE OF DECK MINIMUM STAINLESS STEE ACCES. ACCESSORY **ELECTRICAL PANEI MIRROR** S. SK. SERVICE SINK ACCESS. ACCESSIBILITY EPX **EPOXY** MISC. MISCELLANEOUS SOLID SURFACE ACOUS. ACOUSTICAL EQUAL STANDARD (CAR ACOUSTICAL CEILING TILE MLAM METAL LAMINATI **EQUIPMENT** EQPM M.O. MASONRY OPENING AREA DRAIN **ELECTRIC WATER COOLER** MOUNTED STA STATION **ADJUSTABLE** EXIST./EX EXISTING STD MUL. STANDARD MULLION AGGR. **AGGREGATE** EXTERIOR ALUMINUM STOR STORAGE APPROX **APPROXIMAT** FIRE ALARM NOT IN CONTRACT STRU STRUCTURAL ARCH. ARCHITECTURA FLAT BAR SUSP NUMBER SUSPENDED ASB. ASBESTOS FLOOR DRAIN SYM NOM NOMINAL SYMMETRICAL ASPH. ASPHAL^{*} FOUNDATION NTS NOT TO SCALE FIRE EXTINGUISHER TRD **TREAD** BAF FIRE EXTINGUISHER CABINET TOP OF CURB FIRE HOSE CABINET **OVERALL** TRAFFIC ELASTOMERIC BITUM BITUMINOUS FIN OBSCURE OBS COATING BLDG. **BUILDING** FLOOR ON CENTER *TELEPHONE* BLOCKING FLASH **FLASHING** OUTSIDE DIAMETER TONGUE AND GROOVE BEAM **FLUORESCENT** FLUOR OPCI OWNER PROVIDED BOT. BOTTOM FACE OF CONCRETE FOC TOP OF PARAPET CONTRACTOR INSTALLED BRICK FACE OF FINISH OFC OFFICE TOILET ACCESSORY FOS FACE OF STUDS OPNG OPENING CAB. CABINET FPRF **OPPOSITE CATCH BASIN** FRP FIBERGLASS REINFORCED PANEL OPOI T.O.W. OWNER PROVIDED TOP OF WALL CEM. CEMENT FULL SIZE TOS/ T.O.S. TOP OF STEEL OWNER INSTALLED CER. **CERAMIC** FOOT OR FEET CAST IRON FTG. **FOOTING** TERRAZZO FLOORING **CONTROL JOINT** FURRING PRCST PRECAS⁷ CEILING FUT. **FUTURE** PI ATE UPH UPHOLSTERY CLKG. CAULKING PLAM PLASTIC LAMINATE UNF UNFINISHED CLO. CLOSET GAUGE PNT UNLESS NOTED OTHERWISE CLR. CLEAR GALV. GALVANIZED POINT CASED OPENING G.B. GRAB BAR PLAS PLASTER COLUMN **GLASS FIBER REINFORCED** VCT PLYWD VINYL COMPOSITION TILE CONC. PLYWOOD CONCRETE CONCRETE VERT. VERTICAL CONN. CONNECTION GLASS VINYL ASBESTOS TILI **CONSTR** CONSTRUCTION GND GROUND **ROOF DRAIN** VEST VESTIBULE **CONTINUOUS** CONT **GRADE** REFLECTED CEILING PLAN VINYL FLOORING CORR. CORRIDOR GYP. **GYPSUM** RUBBER FLOORING CARPET RESIN PANE CTSK. COUNTER SUNK HOSE BIBB RESINOUS FLOORING WITH **HOLLOW CORE** RQD WALL BASE REQUIRED DOUBLE HDWD HARDWOOD W.C. WATER CLOSET DEPARTMENT HDWE **HARDWARE** WALLCOVERING DRINKING FOUNTAIN HOLLOW METAL WOOD DET. DETAIL HORIZ. HORIZONTAL WITHOUT W/O DIAMETER WATER RESISTANT DIM. **DIMENSION** HGT **HEIGHT** WSCT. WAINSCO DISP DISPENSER WT. WEIGHT DEPT. OF STATE ARCHITECT **INSIDE DIAMETER** INSUL INSULATION D.O. DOOR OPENING INTER, INTERIOR DRAWFR **JANITOR** D.S. **DOWN SPOUT** JANITOR'S CLOSET DRY STAND PIPE DWG. DRAWING

KITCHEN

KEYNOTE SYSTEM

051200.B

KEYED NOTE TAG

SECTIONS ARE SIMILARLY IDENTIFIED.

DIRECTED BY THE ARCHITECT.

1. CERTAIN MATERIALS, COMPONENTS OR ASSEMBLIES ARE IDENTIFIED

AND/OR DESCRIBED ON SOME DRAWINGS USING AN ALPHANUMERIC

REFERENCE-IDENTIFICATION. OR KEYNOTE SYSTEM. THIS KEYNOTE

EACH KEYNOTE ITEM. (SHOULD THE LEGEND ON THE DRAWING NOT

CONTAIN THAT ITEM, REFER TO LEGENDS ON OTHER DRAWINGS).

INFORMATION ONLY, AS AN EXPRESSION OF GENERAL INTENT. THE

COMPONENTS OR ASSEMBLIES ARE SIMILARLY IDENTIFIED, OR EVEN THE SAME MATERIAL, COMPONENT OR ASSEMBLY IN DIFFERENT DETAILS OR

INFORMATION ADJACENT TO THE KEYNOTE. SHOULD SIMILAR CONDITIONS

HAVE DIFFERENT ADDITIONAL INFORMATION, OR ONE NOT HAVE ANY, THE

2. THE KEYNOTE SYSTEM IS USED FOR CONVEINIENCE AND GENERAL

ARCHITECT SPECIFICALLY DOES NOT WARRANT ALL MATERIALS.

3. SOME MATERIALS, COMPONENTS OR ASSEMBLIES HAVE ADDITIONAL

HIGHER QUALITY SHALL TAKE PRECEDENCE UNLESS OTHERWISE

SYSTEM CONSISTS OF A 6-DIGIT NUMBERFOLLOWED BY A PERIOD AND A

LETTER SUFFIX. WHERE KEYNOTES ARE USED ON A DRAWING, REFER TO

THE LEGEND ON THAT DRAWING FOR IDENTIFICATION WHICH RELATES TO

MATERIAL LEGEND **ENGINEERED FILL POROUS FILL GRAVEL FILL** CAST IN PLACE CONCRETE PRECAST CONCRETE CONCRETE MASONRY **GROUT** MORTAR **ALUMINUM** STAINLESS STEEL

STRUCTURAL STEEL

MISCELLANEOUS STEEL

HARDWOOD

PLYWOOD

WOOD, ENDGRAIN

ENGINEERED WOOD

RIGID INSULATION

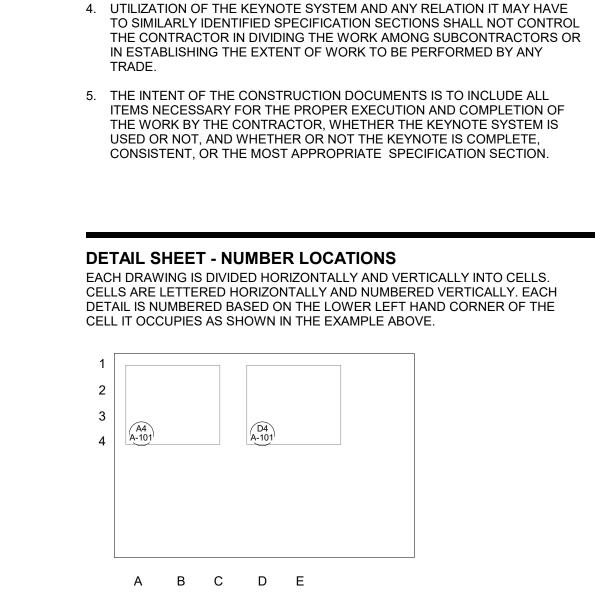
BATT INSULATION

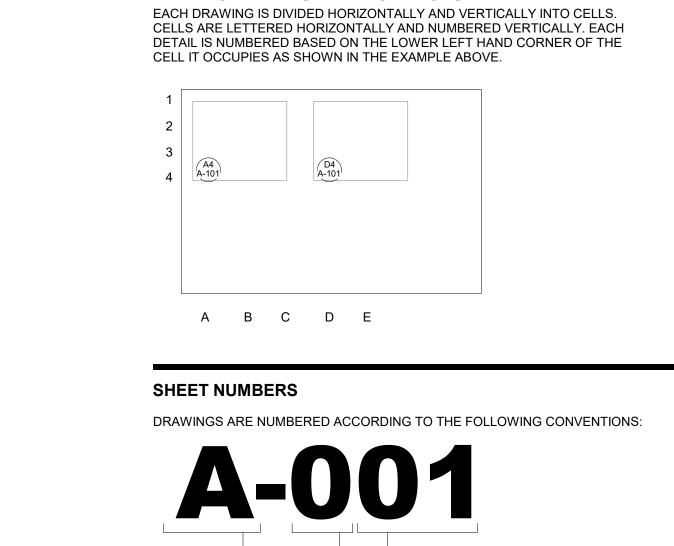
GYPSUM BOARD

CEMENT BOARD

SEALANT WITH BACKER ROD

SPRAY ON FIREPROOFING





DISCIPLINE DESIGNATOR

G GENERAL

C CIVIL

LS LIFE SAFETY

LANDSCAPE

S STRUCTURAL

P PLUMBING

M MECHANICAL

E ELECTRICAL

FA FIRE ALARM

SC SECURITY FS FOOD SERVICE

DT DATA

AV AUDIO VISUAL

A ARCHITECTURAL

FP FIRE PROTECTION

DRAWING SEQUENCE NUMBER

DRAWING TYPE DESIGNATOR

0 GENERAL, LEGENDS

4 LARGE SCALE VIEWS

(PLANS & SECTIONS)

6 SCHEDULES & DIAGRAMS

7 REFLECTED CEILING PLANS

l PLANS

2 ELEVATIONS

3 SECTIONS

5 DETAILS

VIEW LEGEND	
	—DETAIL NUMBER
A8 A101	—DRAWING NUMBER
<u>ELEVATIONS</u>	
A8 A101	EXTERIOR ELEVATION [COARSE
A8 A101	PARTIAL ELEVATION [MEDIUM]
1 A8 A101	INTERIOR ELEVATION [FINE]
<u>SECTIONS</u>	
A8 A101	BUILDING SECTION [COARSE]
A8 A101	PARTIAL SECTION [MEDIUM]

WALL PROFILE OR DETAIL [FINE]

-DETAIL NUMBER

A-101 SCALE: 1/8" = 1'-0" REF: G-100

-SHEET WHERE

DRAWING WHERE

REFERENCED

DRAWN

Ao Drawing Title

MATERIAL TAG SYSTEM

PRECEDENCE.

PNT-07 \qquad MATERIAL TAG

1. CERTAIN MATERIALS ARE IDENTIFIED AND/OR

WHERE MATERIAL TAGS ARE USED ON A

THE ROOM FINISH SCHEDULE ON A-611).

2. THE MATERIAL TAG SYSTEM IS USED FOR

DESCRIBED ON SOME DRAWINGS USING A KEY.

DRAWING, REFER TO THE LEGEND/KEY ON A-611

FOR IDENTIFICATION WHICH RELATES TO EACH

MATERIAL ITEM. (SHOULD THE LEGEND ON THE

DRAWING NOT CONTAIN THAT ITEM, REFER TO

CONVEINIENCE AND GENERAL INFORMATION

THE ROOM FINISH SCHEDULE SHALL TAKEN

ONLY, AS AN EXPRESSION OF GENERAL INTENT

REFLECTED CEILING PLANS ITEMS SHOWN ON THE ARCHITECTURAL DRAWINGS ARE TO BE LOCATED PER THE ARCHITECTURAL DRAWINGS. NOT ALL ITEMS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS. COORDINATE WITH MECHANICAL & ELECTRICAL DRAWINGS FOR LOCATION, MOUNTING CONDITIONS, QUANTITIES AND TYPES OF ALL LIGHTS, GRILLES, DIFFUSERS, EXIT SIGNS, AND ALL MISCELLANEOUS WOOD BLOCKING REQUIREMENTS PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING AS SPECIFIED IN SPECIFICATIONS SECTION 061000 - ROUGH CARPENTRY - FOR THE FOLLOWING ITEMS (UNLESS ANOTHER BACKING MATERIAL IS NOTED): A. GRAB BARS G. DOOR BUMPERS B. MIRRORS H. SHELVING . TOILET ACCESSORIES I. CLOSET POLES . STAIR RAILS J. COAT HOOKS E. TOILET PARTITIONS K. MILLWORK COUNTERS F. UNDER PRE-FAB. CURB FOR ALL L. MILLWORK CABINETS ROOF-MOUNTEDEQUIPMENT M. TV BLOCKING <u>SIGNAGE BACKING PANELS ALL AREAS INDICATED ON THE DRAWINGS-</u> PROVIDE 18 GA (MINIMUM) STEEL BACKING PANELS AT SIGNAGE LOCATIONS (WHERE ATTACHMENT TO GYPSUM BOARD IS REQUIRED). SPAN PANELS THREE METAL STUDS (MINIMUM) HORIZONTALLY. REFER TO SIGNAGE ISSUE SKETCHES FOR SIGNAGE LOCATIONS. MECHANICAL AND ELECTRICAL OPENINGS-SIZE AND LOCATION OF ALL FLOOR OPENINGS, ROOF OPENINGS, AND WALL OPENINGS REQUIRED TO ACCOMMODATE DUCT PENETRATIONS, EQUIPMENT, ETC. SHALL BE COORDINATED AND VERIFIED WITH MECHANICAL AND ELECTRICAL TRADES. MECHANICAL AND ELECTRICAL EQUIPMENT PADS PROVIDE CONCRETE PADS FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF ALL EQUIPMENT AND VERIFY SIZE WITH MECHANICAL AND ELECTRICAL TRADES. <u>ROOF EQUIPMENT AND OPENINGS</u> REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF ALL EXHAUST FANS, VENTS, MECHANICAL OR ELECTRICAL EQUIPMENT, ETC. FIRE EXTINGUISHER TYPES PROVIDE 2A-10B:C TYPE FIRE EXTINGUISHERS AT ALL TYPICAL LOCATIONS UNLESS NOTED OTHERWISE. SYMBOL LEGEND SMOKE SEPARATION 1 HOUR FIRE SEPARATION METAL STUD PARTITION CMU PARTITION CONCRETE WALL WALL PARTITION TAG, SEE A-601, C6.Z UNO DOOR & TAG, SEE A-611 ROOM, SEE A-621 FOR FINISH SCHEDULE RAILING TAG, SEE A-631, R8.42Ga UNO KEYED NOTE TAG, SEE LIST ON G-002 MATERIAL TAG, SEE FINISH LEGEND/KEY A-611 <u> 12'-4"</u> TOP OF SLAB/ CONCRETE ELEVATION **COLUMN GRID WORK POINT**

FLOOR ELEVATION

GENERAL NOTES

BY THE CHANGE.

SECTION 078413.

JURISDICTION PRIOR TO ACCEPTANCE.

TREATMENT OF EXISTING SURFACES

FOR OPENINGS IN PARTITIONS OR WALLS:

ESTABLISHED BY EITHER CRITERIA OR SCHEDULES.

ONE JAMB WILL BE LOCATED DIMENSIONALLY.

WILL BE SHOWN ON THE PLANS. THE

OR GRID LINE, OR ADJACENT TO A

-DOOR AS

TYP.

 \Box

TO ADJACENT WALL OR

NEAREST CMU JOINT

CMU WALLS

PARTITIONS.

SCHEDULED

FOLLOWING DIAGRAMS APPLY:

AND FLUSH FLOOR SURFACE.

DIMENSIONING CRITERIA

THE PROJECT SHALL CONFORM TO UNDERWRITERS LABORATORY FIRE

U.L. DESIGN NUMBER SHALL BE COORDINATED BY THE RELATED PRIME

CONTRACTOR, SUBCONTRACTOR AND/OR MATERIAL SUPPLIER FOR

REFER TO SPECIFICATION SECTION 078100, AS APPLICABLE, FOR SPRAY-ON

FIREPROOFING REQUIREMENTS. ANY MATERIAL SUBSTITUTIONS TO A LISTED

COMPLIANCE.THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL APPROVALS

FOR ANY MATERIAL SUBSTITUTIONS IN THE MECHANICAL AND ELECTRICAL U.L.

DESIGN ASSEMBLY - BY THE FIRE MARSHALL AND BUILDING INSPECTOR HAVING

FOR ANY CHANGE OF U.L. DESIGN NUMBER, OR AY CHANGE IN MATERIAL(S) IN A

U.L. DESIGN ASSEMBLY. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR

TO COORDINATE ALL OTHER RELATED MATERIALS OR ASSEMBLIES AFFECTED

PROVIDE COMPLETE U.L. APPROVED THROUGH-PENETRATION FIRESTOP

AS REQUIRED TO ACHIEVE AN UNINTERRUPTED SURFACE APPEARANCE.

DIMENSIONS FOR LOCATING PARTITIONS AND OPENINGS ARE GENERALLY

DIMENSIONED. TYPICAL DIMENSIONING CRITERIA ARE OUTLINED BELOW.

ESTABLISHED BY CRITERIA. ONLY EXCEPTIONS TO THESE CRITERIA WILL BE

(A) WHEN AN OPENING OCCURS AT A COLUMN OR GRID LINE, NO DIMENSIONS

(B) WHEN NEITHER THE JAMB OF A DOOR OR OPENING OCCURS AT A COLUMN

(C) WHEN ONE JAMB IS LOCATED BY A PARTITION AT A RIGHT ANGLE, THE

NOT DIMENSIONED

ON FLOOR PLANS

TO COLUMNS

DIMENSIONS ON PLANS ARE SHOWN TO THE FACE OF MASONRY UNIT, FACE

OF CONCRETE, AND THE FACE OF THE GYPSUM WALLBOARD OF METAL STUD

WALL ADJ.

OPENING WIDTH WILL BE

PARTITION AT A RIGHT ANGLE

NOT DIMENSIONED

ON FLOOR PLANS

METAL STUD

WALLS

-PARTITIONS

ANGLE, TYP.

GENERAL NOTES [PROJECT SPECIFIC]

B. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND BECOME

KNOWLEDGEABLE OF CONDITIONS IN THE VICINITY OF THE PROJECT. HE

SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS

OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY CONDITION

INCONSISTENT WITH THE CONTRACT DOCUMENTS BEFORE PROCEEDING

REMOVAL OR RELOCATION) DURING THE COURSE OF CONSTRUCTION TO

BE IN CONFLICT WITH WORK INDICATED IN THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL REMOVE OR RELOCATE SUCH UTILITIES ONLY

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE REVIEW OF

ITEM WHICH IS INCLUDED OR IMPLIED BT THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY

E. THE CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND ASSEMBLIES

NECESSARY TO COMPLETE THE PROJECT AS DESCRIBED BY THESE

F. ALL CONSTRUCTION MEANS AND METHODS ARE THE RESPONSIBILITY OF

H. THE CONTRACTOR SHALL PREVENT ALL UNAUTHORIZED PERSONNEL

I. NUMERICAL DIMENSIONS SHOWN ON THE PLANS SHALL TAKE

J. ALL DIMENSIONS ARE TO BE CONSIDERED NOMINAL UNLESS NOTED

DETERMINED, NOTIFY THE ARCHITECT FOR CLARIFICATION.

GIVEN OR SCALED SHALL BE VERIFIED IN THE FIELD.

L. FLOOR SPOT FLEVATIONS ARE SHOWN THUS XXX'-X"

FROM ENTERING THE PROJECT SITE DURING WORK HOURS, AND IS

RESPONSIBLE FOR SECURING THE PROJECT SITE DURING NON-WORK

PRECEDENCE OVER SCALED DIMENSIONS. ALL DIMENSIONS WHETHER

K. DETAILS NOT INDICATED ARE SIMILAR IN CHARACTER TO THOSE SHOWN. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CAN NOT BE

M. PROVISIONS SHALL BE MADE AT FULL HEIGHT NONBEARING WALLS FOR 1-

OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION OR FIRE

STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF

O. SEE STRUCTURAL DRAWINGS FOR BRACING OF NONLOAD BEARING

METAL BACKING PLATE IN STEEL STUD PARTITIONS FOR PROPER

P. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING OR

ANCHORAGE OF WALL ATTACHED ITEMS; I.E. TOILET ACCESSORIES,

TOILET PARTITIONS, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES.

MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS,

N. SEAL PENETRATIONS THROUGH FIRE-RESISTANCE-RATED

STOPPAGE. SEE DETAILS ON SHEET LS-001.

INCH VERTICAL MOVEMENT OF BUILDING STRUCTURE WITHOUT TRANSFER

OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP

CONSTRUCTIONS WITH THROUGH- PENETRATION FIRESTOP MATERIAL AS

REQUIRED TO ACHIEVE RESPECTIVE FIRE-RESISTIVE RATING AND SMOKE

OTHERWISE. ALL DIMENSIONS ARE TO FINISHED WALL SURFACES UNLESS

AND DEBRIS BEFORE LEAVING THE PROJECT SITE.

G. DURING AND AT THE COMPLETION OF THE DAILY WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP AND REMOVING ALL RUBBISH

AMBIGUITY OR INCONSISTENCY, OR ERROR WHICH THEY DISCOVER UPON

ALL CONTRACT DOCUMENTS. NO EXTRAS WILL BE PERMITTED FOR ANY

AFTER RECEIVING DIRECTION TO PROCEED FROM THE OWNER

C. THE CONTRACTOR SHALL NOTIFY THE OWNER REPRESENTATIVE OF ANY AND ALL UTILITIES IDENTIFIED ON THE PROJECT SITE (NOT IDENTIFIED FOR

A. GENERAL NOTES APPLY TO ALL SHEETS.

WITH THAT AREA OF WORK

REPRESENTATIVE.

EXAMINATION.

CONTRACT DOCUMENTS.

THE CONTRACTOR.

OTHERWISE NOTED.

RESPECTIVE WALLS.

MASONRY WALLS.

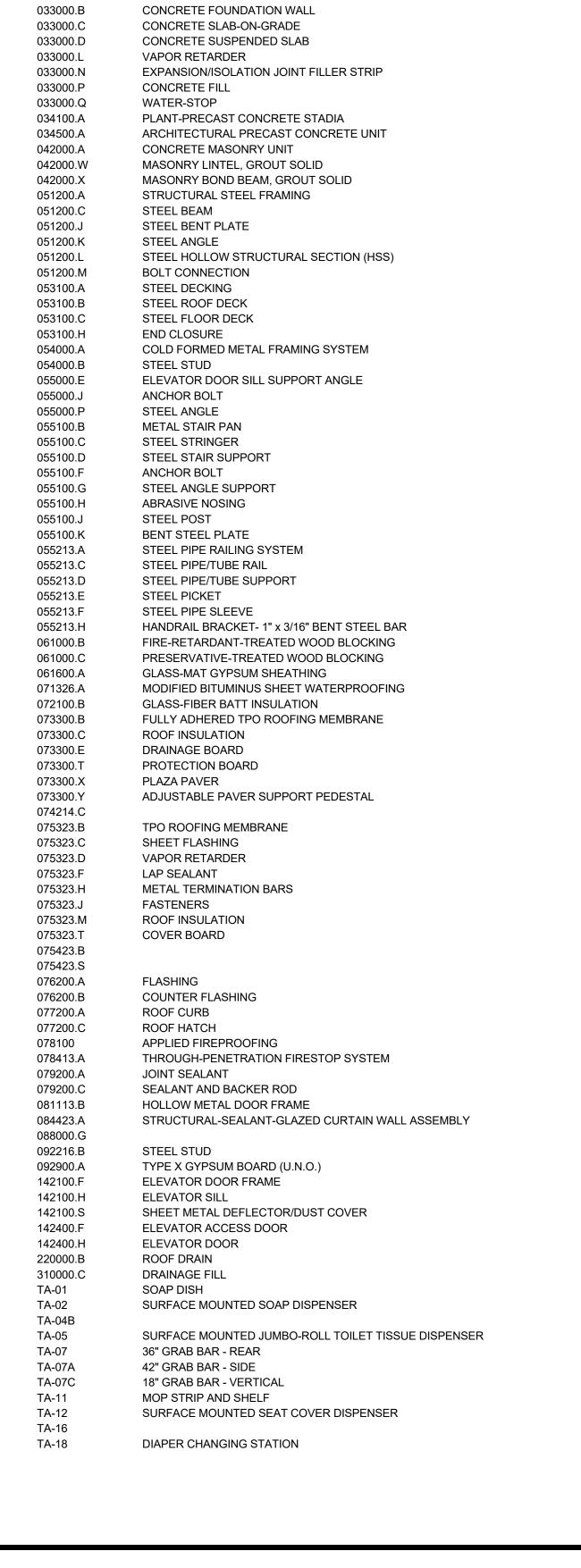
AT RIGHT

SYSTEMS AT ALL RATED WALL PENETRATIONS. REFERENCE SPECIFICATION

PATCH AND REPAIR ALL EXISTING WALL SURFACES ADJACENT TO NEW WORK

PATCH AND REPAIR CONCRETE FLOORS TO ACHIEVE A CONTINUOUS, SMOOTH

RESISTANCE DIRECTORY AND BUILDING MATERIALS DIRECTORY.



IN THE SPECIFICATIONS.

CONTRACTOR.

CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.

T. COORDINATE MECHANICAL CHASE SIZES WITH MECHANICAL

REFERENCE ELEVATION OF FINISH FLOOR 615 FEET.

DECK ABOVE. SEAL TIGHTLY AROUND PENETRATIONS.

ABOVE FINISHED CEILING ON CONCRETE WALLS.

S. INCLUDE OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER

SCHEDULE, AND COORDINATE WITH OWNER TO ACCOMMODATE THESE

U. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS SIZE

AND LOCATION OF EQUIPMENT PADS INDICATED ON FLOOR PLANS.

V ARCHITECTURAL FINISH FLOOR ELEVATION 100'-0" EQUALS ACTUAL SITE

[ENTIRE PROJECT]

DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151 **PROJECT**

West Michigan Hispanic **Chamber of** Commerce -1111 Godfrey Ave. SW Grand Rapids, MI 49507 **CONSULTANT PROFESSIONAL SEAL** © 2025 ROSSETTI # DESCRIPTION DATE 02/07/2025 2 Addendum 1 02/20/2025 Q. GYPSUM BOARD AND PLASTER SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WERE INDICATED ON DRAWINGS AND/OR AS DESCRIBED R. MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CJA) SHALL BE LOCATED AS INDICATED ON FLOOR PLANS AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON CONCRETE FLOOR SLABS ABUT MASONRY WALLS BEARING ON

ROSSETTI

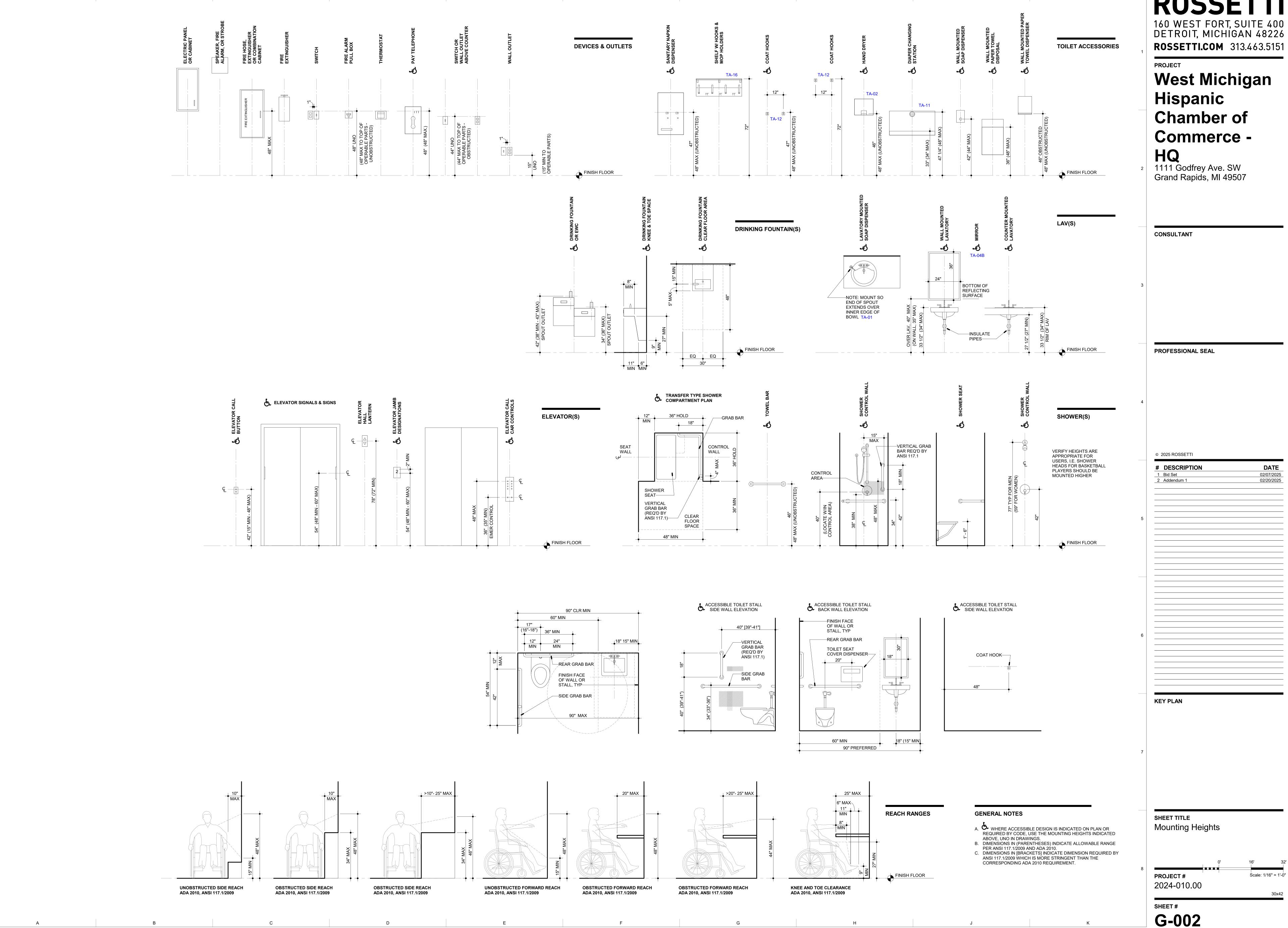
160 WEST FORT, SUITE 400

FURNISHED AND CONTRACTOR INSTALLED ITEMS IN THE CONSTRUCTION **KEY PLAN** W. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP MINIMUM 4 INCHES X. SCRIBE GYPSUM BOARD OF WALL AND PARTITIONS TO IRREGULARITIES OF

> SHEET TITLE **General Information Sheet**

Scale: 1/16" = 1'-0" PROJECT # 2024-010.00

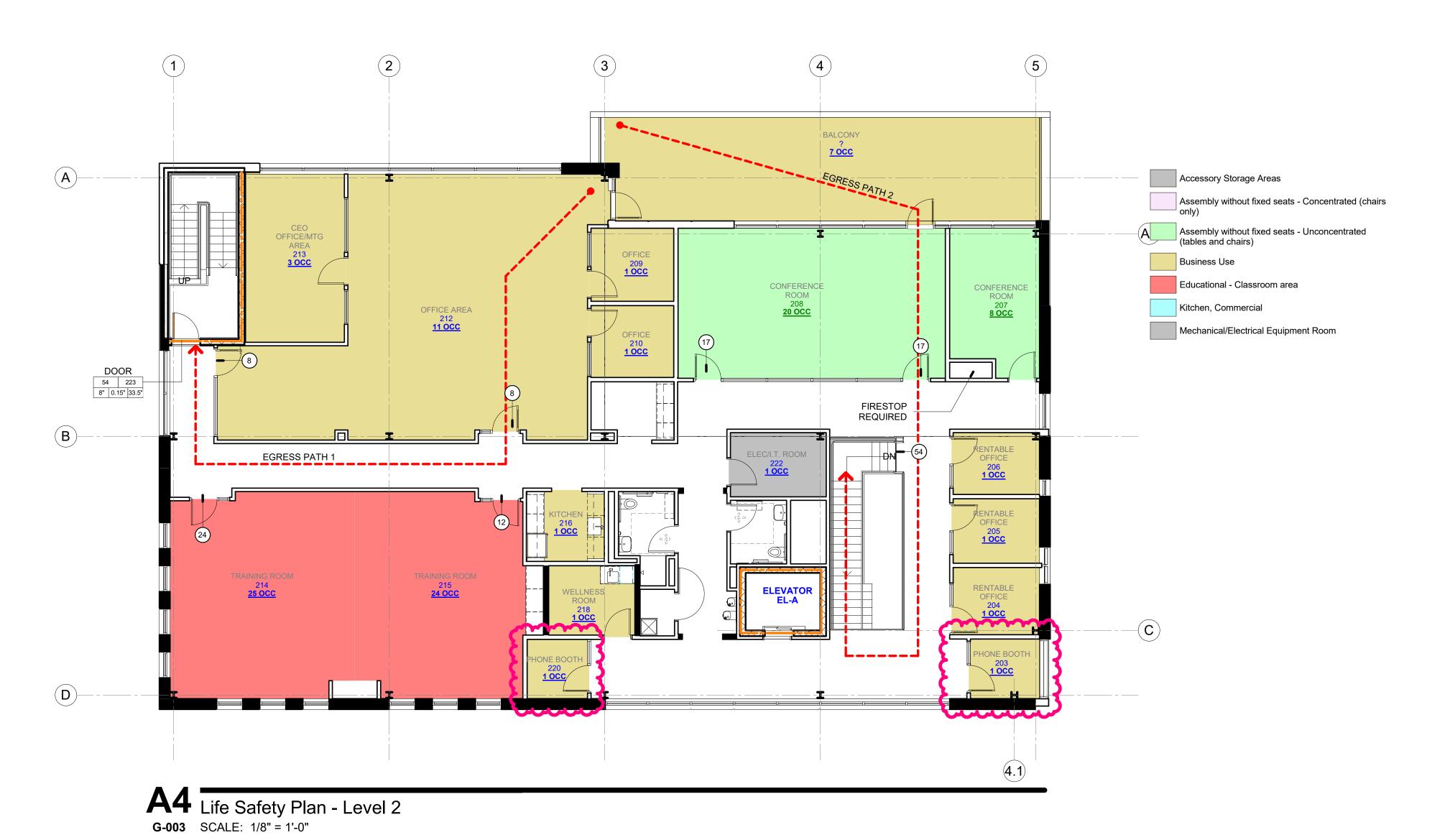
SHEET#

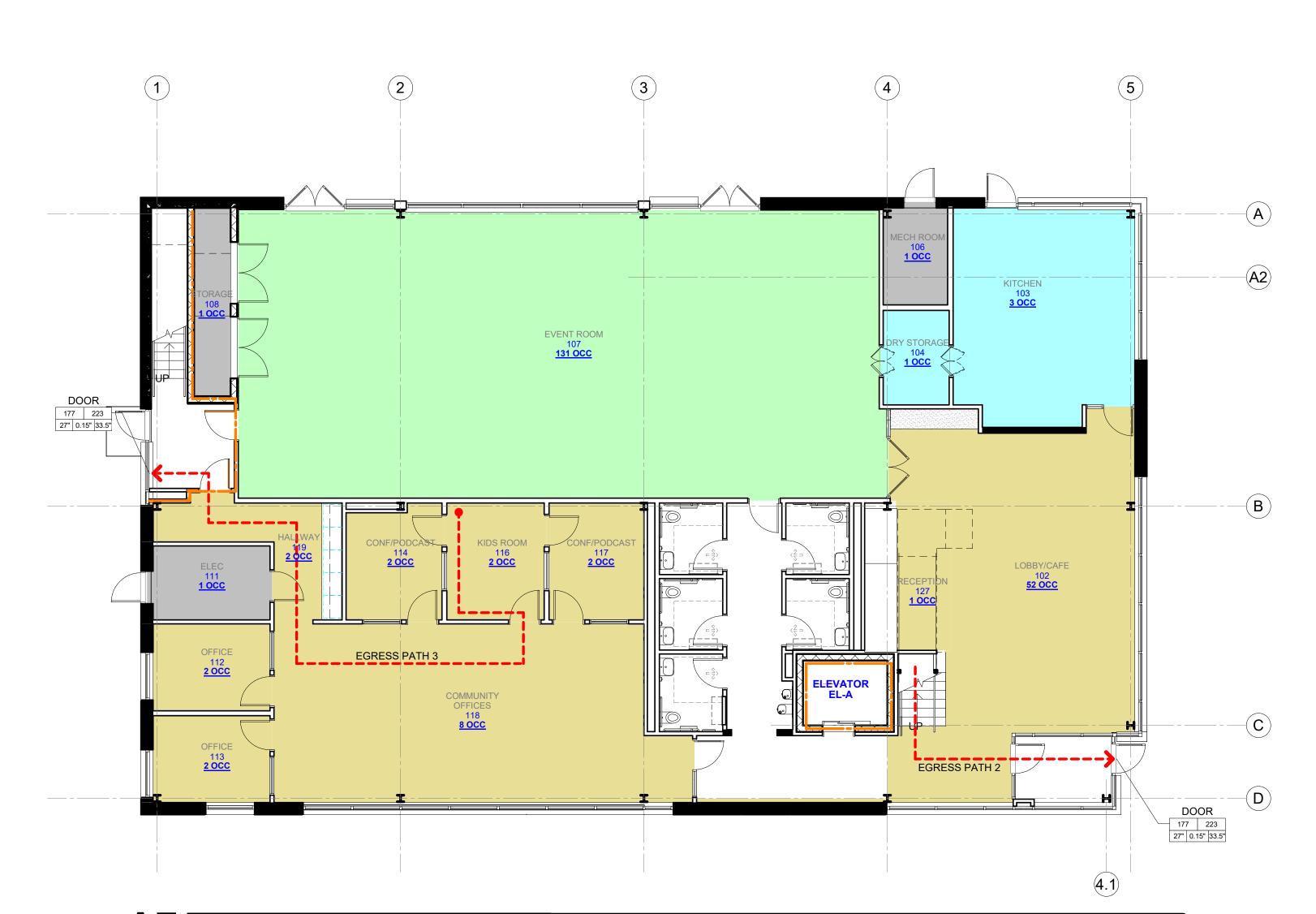


160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

DATE 02/07/2025 02/20/2025

Scale: 1/16" = 1'-0"





Life Safety Plan - Level 1

G-003 SCALE: 1/8" = 1'-0"

OCCUPANCY LOAD SCHEDULE

ST-B STAIR B

museums, lecture halls,

gymnasiums

libraries, arcades and 1 1 1 1

REQUIRED: 3 3 2 2

* Shaded Occupant Loads indicate actual occupant count is used instead of SF/occupant calculation- see seating table above.

D14 //	DOOMNIAME	4554	LOAD	000104
KIVI #	ROOM NAME	AREA	FACTOR	OCC LOA
	BALCONY	605 SF		0
101	VESTIBULE	68 SF	400	0
102	LOBBY/CAFE	778 SF	100	8
103	KITCHEN	401 SF	200	3
104	DRY STORAGE	66 SF		0
106	MECH ROOM	66 SF	300	1
107	EVENT ROOM	1,956 SF	15	131
108	STORAGE	73 SF	300	1
109	HALLWAY	70 SF		0
111	ELEC	91 SF	300	1
112	OFFICE	107 SF	100	2
113	OFFICE	107 SF	100	2
114	CONF/PODCAST	112 SF	100	2
116	KIDS ROOM	120 SF	100	2
117	CONF/PODCAST	117 SF	100	2
118	COMMUNITY OFFICES	732 SF	100	8
119	HALLWAY	139 SF		0
120	TOILET	52 SF		0
121	TOILET	48 SF		0
122	TOILET	48 SF		0
123	TOILET	48 SF		0
124	TOILET	48 SF		0
125	HALLWAY	139 SF		0
126	HALLWAY	122 SF		0
127	RECEPTION	83 SF		0
201	HALLWAY	99 SF		0
202	HALLWAY	1,107 SF		0
203	PHONE BOOTH	53 SF		0
204	RENTABLE OFFICE	78 SF	100	1
205	RENTABLE OFFICE	75 SF	100	1
206	RENTABLE OFFICE	72 SF	100	1
207	CONFERENCE ROOM	169 SF	15	8
208	CONFERENCE ROOM	545 SF	15	20
209	OFFICE	81 SF	100	1
210	OFFICE	80 SF	100	1
211	WORK ROOM	62 SF		0
212	OFFICE AREA	1,028 SF	100	11
213	CEO OFFICE/MTG AREA	224 SF	100	3
214	TRAINING ROOM	500 SF		0
215	TRAINING ROOM	475 SF		0
216	KITCHEN	74 SF	100	1
217	TOILET	59 SF	100	0
218	WELLNESS ROOM	80 SF	100	1
219	JANITOR	22 SF	100	0
220	PHONE BOOTH	48 SF		0
221	TOILET	48 SF		0
222	ELEC/I.T. ROOM	83 SF	300	1
EL-A	ELEVATOR	58 SF	300	0
ST-A	STAIR A	30 SF		0
	STAID D	00 01		0

GENERAL NOTES

- a. One (1) Barrier-free of each fixture type (min) per toilet room; one (1) ambulatory stall shall be provided in any toilet room where six (6) or greater stalls are provided.
- b. One (1) family toilet (min) shall be provided
- c. Family restrooms used to supplement required men/women fixtures.
- d. Restrooms avaiable to all occupants on each floor.

CODE ANALYSIS

PROJECT SCOPE

New 2-story building, with a total of approximately 12,160 SF

APPLICABLE CODES
2015 Michigan Building Code (MBC) 2021 Michigan Mechanical Code (MMC) 2021 Michigan Mechanical Code (MMC) 2021 Michigan Plumbing Code (MPC) 2015 Michigan Energy Code (MEC) 2013 ANSI/ASHRA/IES 90.1 2023 National Electrical Code (NEC) 2017 ICC A117.1

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION NON-SEPARATED MIXED-USE: B and A3, fully sprinklered

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS (A-3 is controlling occupancy)
Allowable Area: 28,500 SF

Actual Area: 12,164 SF total

6,100 SF - First Floor 6,064 SF - Second Floor + Balcony Allowable Stories (Height): 2 (40'-0") Actual Stories (Height): 2 (30'-0")

CHAPTER 6 - TYPES OF CONSTRUCTION Type: IIB

-Structural Frame: 0 hour -Bearing Walls: 0 hour -Exterior Non-Bearing Walls: 0 Hour -Interior Non-Bearing Walls: 0 Hours -Opening Protectives at Exterior Wall: 0 Hours -Floor Construction and Secondary Framing: 0 hour -Roof Construction and Secondary Framing: 0 hour

CHAPTER 9 - FIRE PROTECTION SYSTEMS Automatic Sprinkler Systems: YES Fire Alarm and Detection Systems: YES

CHAPTER 10 - MEANS OF EGRESS TABLE 1004.1.2 SEE OCCUPANCY LOAD SCHEDULE

Total Occupants: 462 1011.12.2 - A permanent ladder with roof hatch is used for access to non-occupiable roof

CHAPTER 11 - ACCESSIBILITY

1103.2.7 Limited Access Spaces: Nonoccupiable spaces accessed only by ladders are not required to be accessible.

	WC/Male WC/Female	Lavatories	DFs	Service sink
Assembly A-3	1 per 125 1 per 65	1 per 200	1 per 500	1
Business B	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	1 per 500	1

Refer to MPC Chapter 29 and Table 403.1 "MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES" for specifics, exceptions, and footnotes. OCCUPANCY: ASSEMBLY - A-3 OCCUPANTS: 180 Auditoriums without WATER CLOSET LAVATORIES BATHTUBS OR DRINKING permanent seating, art galleries, exhibition halls, MALE FEMALE MALE FEMALE SHOWERS FOUNTAINS

<varies>

PLUMBING FIXTURE CALCULATIONS Refer to MPC Chapter 29 and Table 403.1 "MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES" for specifics, exceptions, and footnotes.

OCCUPANCY: Business - B OCCUPANTS: 127 (64 MALE / 64 FEMALE) Buildings for the transaction WATER CLOSET LAVATORIES of business, professional BATHTUBS OR DRINKING services, light industrial and similar uses MALE FEMALE MALE FEMALE SHOWERS FOUNTAINS

EGRESS PATH DISTANCES

Max Exit Access Travel Distance (E): 200'

Max Common Path of Travel (C): 50'

RESS PATH	TRAVEL DISTANCE
ress Path1	63' - 7"
ress Path3	79' - 3"
ress Path 2	168' - 10"

LIFE SAFETY LEGEND

1 Service Sink

1 Service Sink

SMOKE BARRIER PER 2020 FFPC SECTION 8.5 1 HOUR FIRE BARRIER 2 HOUR FIRE WALL



—OCCUPANCY LOAD DOOR — TYPE OF EGRESS COMPONENT 0 170 **—** EGRESS CAPACITY

0" 0.2" 34" — ACTUAL EGRESS WIDTH EGRESS CAPACITY FACTOR CALCULATED EGRESS WIDTH NAME AND NUMBER **XXX OCC** FIXED/MAX NUMBER OF OCCUPANTS NAME - ROOM NAME AND NUMBER **XXX OCC** - NUMBER OF OCCUPANTS

- GRESS LOAD AT THAT LOCATION (ADDITIVE ALONG PATH OF TRAVEL) - EGRESS LOAD IN OUTLINED AREA

COMMON PATH OF TRAVEL EXIT ACCESS TRAVEL OCCUPANCY USE GROUP

OCCUPANT LOAD FOR A GIVEN AREA. TOTAL OF ALL EQUALS TOTAL FLOOR OCCUPANTS.

FIRE EXTINQUISHER GREASE FIRE EXTINQUISHER FIRE EXTINQUISHER CABINET

> AREA OF SMOKE PROTECTED SPACES PER 1024.6.3 (OUTDOOR) ROOMS TO BE SPRINKLERED SPACES PER 903.2.1.5

> > SHEET#

ROSSETTI 160 WEST FORT, SUITE 400

DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic **Chamber of** Commerce -HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT

PROFESSIONAL SEAL

© 2025 ROSSETTI DATE # DESCRIPTION 02/07/2025 2 Addendum 1 02/20/2025

KEY PLAN

SHEET TITLE Code Analysis & Life Safety Plan

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151 **PROJECT** West Michigan Hispanic **Chamber of** Commerce -1111 Godfrey Ave. SW Grand Rapids, MI 49507 **CONSULTANT**

PROFESSIONAL SEAL

© 2025 ROSSETTI # DESCRIPTION DATE 02/20/2025 1 Addendum 1

KEY PLAN

SHEET TITLE Products and Specs

Scale: 1/16" = 1'-0" PROJECT # 2024-010.00

This is delegated design. Refer to Structural drawings and specs.

General
This Section includes access doors and frames for walls and ceilings

Product data and Shop Drawings. **Products**

Recessed Access Door for Drywall Surfaces: Model RDW manufactured by Karp Associates, Inc. or equal as approved by Architect

Frame: 16 gage steel. Flange of frame shall be one-piece construction, 1.00" wide, beaded to receive drywall Door: 16 gage steel. Hinge: Concealed pivoting rod type.

Locks: Flush and screwdriver operated with steel can and studs. Finish: Prime coat of rust inhibitive electrostatic powder, baked white enamel. Finish inset material to match adjacent surface finishes.

Install doors flush with adjacent finish surfaces or recessed to receive finish material. Adjust doors and hardware after installation for proper operation. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

Finish: Dark Bronze (Factory Painted Finish, match color of exterior aluminum strorefront)

Performance Requirements:

Structural-Test Performance: Provide test result when tested according to ASTM E 330. The design pressures are based on the Ohio Building Code, 2017 Edition.

	A B	C	D E	F	Н	J	DOCCETTI
	080671 DOOR HARDWARE SETS	<u>Set: 4.0</u>	<u>Set: 9.0</u>	<u>Set: 13.0</u>	Set: 18.0	Set: 23.0	ROSSETTI
	General This Section includes commercial door hardware for swinging doors.	Doors: 107.1, 107.2	Doors: 101.1	Doors: 111.1	Doors: 212.2	Doors: 104, 222	160 WEST FORT, SUITE 400
	Commercial door hardware includes, but is not necessarily limited to, the follwing: • Mechanical door hardware	2 Continuous Hinge CFM_SLF-HD1 x Length Required x PT PE 087100 2 Electric Power Transfer EL-CEPT 630 SU 087100	1 Continuous Hinge CFM_SLF-HD1 x Length Required x PT PE 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100	3 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100 ↑	3 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100 1 Access Control Coll Lock 70 SN200 10XC271 PIDS 0F LP US26D SA 281500	3 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100	DETROIT, MICHIGAN 48226
1	 Electromechanical and accss control hardware Electromechanical and accss control hardware power supplies, back-ups and surge protection. 	Concealed Vert Rod Exit Devoie. 1 Nightletch w/Flog Letch LD 70 56-SN200-ADPE8610 BIPS- LIS22D SA 281500	1 Rim Exit Device, Storeroom, w/Elec. Latch Retraction LD 55 56 70 PE8804 x Less Pull US32D SA 087100	1 Access Control Rim Exit Device	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500	ROSSETTI.COM 313.463.5151
	Automatic Operators Related Sections:	Retraction 1 Concealed Vert Rod Exit Device, Exit Only w/Elec. Latch Retraction LD 55 56 ADPE8610 EO US32D SA 281300 US32D SA 087100	1 Small Format Inter Core 33600006N 26 MC 087100 1 Offset Pull RM5277-36 x Mtg-Type 12HD US32D RO 087100 1 Conc Overhead Stop 6-X36 630 RF 087100	1 Surface Closer, HD Parallel Arm 351 P10 EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 1 Door Stop RM860 / RM850 (As Condition US26D RO 084126	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 3 Silencer 608-RKW RO 087100	PROJECT
	Division 08 Section "Door Hardware" Division 08 Section "Automatic Door Operators" Division 28 Section "Access Control Hardware Devices"	1 Small Format Inter Core 33600006N 26 MC 087100 2 Offset Pull RM5277-36 x Mtg-Type 12HD US32D RO 087100	1 Automatic Opener (Push) 1 Gasketing 6231 Provided by Aluminum Frame Supplier	1 Door Stop RM860 / RM850 (As Condition Requires) US26D RO 084126 Provided by Aluminum Frame	Requires) 3 Silencer 608-RKW RO 087100 1 ElectroLynx Harness QC-C**** x Length Required MK 087100	1 <u>ElectroLynx</u> Harness QC-C**** x Length Required MK 087100	West Michigan
	S <u>ubmittals</u> Submit product data, Door Hardware, and Keying Schedule.	2 Conc Overhead Stop 6-X36 630 RF 087100 2 Surface Closer, HD Parallel Arm 281 P10 EN SA 087100	1 Sweep 315CN x Length Required PE 087100	1 Gasketing Supplier 1 ElectroLvnx Harness QC-C**** x Length Required MK 087100	1 ElectroLynx Harness QC-C1500P MK 087100 AQL_x Amps & Relays Required SIL 087100	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	Hispanic
	<u>Products</u>	1 Gasketing Provided by Aluminum Frame Supplier 2 Sweep 3452CNB x Length Required PE 087100	1 Threshold MSES25SS PE 087100 1 Credential Reader Provided by Security Supplier	1 ElectroLvnx Harness QC-C1500P MK 087100 1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	1 Wiring Diagram (Consolidate as Applicable) Elevation and Point to Point as Specified	1 Wiring Diagram Elevation and Point to Point as Specified	
	Basis of Design: Products list below (or approved equal) Manufacturer's Abbreviations:	1 Threshold 278x292AFGT x Length Required x MSES25SS PE 087100	1 ElectroLvnx Harness QC-C**** x Length Required MK 087100 1 ElectroLvnx Harness QC-C1500P MK 087100 ✓	1 Wiring Diagram Elevation and Point to Point as Specified	Notes:	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure.	Chamber of
	1. MK - McKinney 2. PE - Pemko	2 ElectroLvnx Harness QC-C**** x Length Required MK 087100 4 2 ElectroLvnx Harness QC-C1500P MK 087100 4	2 Operator Actuator 505 / 503 (As Required) NO 087100 1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	Notes: SYSTEM OPERATIONAL NARRATIVE	SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry.	Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times.	Commerce -
	3. SU - Securitron4. RO - Rockwood5. SA - Sargent	1 Position Switch DPS-M-BK SU 087100 4 1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100 4	1 Wiring Diagram Elevation and Point to Point as Specified	Door is normally closed and secure. Presenting valid credential to door reader momentarily unlocks lever allowing entry. Entry also possible via key override.	Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in lock, signals an egress.	Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors the <u>door's</u> open/closed status. Lever remains locked during power loss. (Fail Secure)	HQ
2	6. MC - Medeco 7. RF - Rixson 8. NO - Norton	1 Wiring Diagram Elevation and Point to Point as Specified	Notes: SYSTEM OPERATIONAL NARRATIVE	Free egress at all times. Request to exit switch, incorporated in exit device, signals an egress. Door position switch, incorporated in exit device trim, monitors the doors open/closed status.	Door position switch, incorporated in lock, monitors the <u>door's</u> open/closed status. Lever remains locked during power loss. (Fail Secure)	Lever remains locked during power loss. (Fair Secure)	1111 Godfrey Ave. SW
		Notes: SYSTEM OPERATIONAL NARRATIVE	Door is normally closed and secured. Presenting valid credential to reader momentarily retracts latch allowing manual entry or via door operator by pressing actuator.	Lever remains locked during power loss. (Fail Secure)			Grand Rapids, MI 49507
	Set: 1.0 Doors: 106	Doors are normally closed and secured. Presenting valid credential to reader momentarily retracts latch allowing entry. Entry also possible via key override.	Entry also possible via key override. Free egress at all times. Vestibule side actuator retracts latch prior to setting door operator into motion.			<u>Set: 24.0</u>	
	CEM CLE UD1 v Langth Paguired	Free egress at all times. Request to exit switches, incorporated in exit devices, signal an egress. Door position switches monitor the doors open/closed status.	Request to exit switch, incorporated in exit device, signals an egress. Door position switch, incorporated in exit device, monitors the doors open/closed status. Latch remains projected during power loss. (Fail Secure)	Set: 14.0		Doors: 108, 108.1 8 Hinge TA2714 [NRP] US26D MK 087100	
	1 Electric Power Transfer EL-CEPT 630 SU 087100	<u>Set: 5.0</u>		Doors: 107.4	Set: 19.0 Doors: 103.2, 112, 113, 114, 116, 117, 209, 210	2 Manual Flush Bolt 555 / 557 (As Required) US26D RO 087100 1 Dust Proof Strike 570 US26D RO 087100	
	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 1 Small Format Inter Core 33600006N 26 MC 087100	Doors: 103.1, 109, 208.2, 212.1	<u>Set: 10.0</u> Doors: 107	4 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100 LD 70 SN200-PE8876 BIPS-0E US26D MK 087100 LD 70 SN200-PE8876 BIPS-0E US26D MK 087100 ↓	3 Hinge T4A3786 [NRP] US26D MK 087100	1 Storeroom Lock 70 8204 LNB US26D SA 087100 1 Small Format Inter Core 33600006N 26 MC 087100 1 Surf Overhead Stop 10-X36 630 RF 087100	CONSULTANT
	1 Surface Closer, HD Parallel Spring 281 CPS EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	1 Continuous Hinge CFM_SLF-HD1 x Length Required x PT 1 Electric Power Transfer EL-CEPT 630 SU 087100	CEM SLE HD1 v I ength Paguired	1 Small Format Inter Core 33600006N US32D SA 281500 7	1 Electric Power Transfer EL-CEPT 630 SU 087100 / 1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 / 1 Small Format Inter Core 33600006N 26 MC 087100	1 Door Stop RM860 / RM850 (As Condition Requires) US26D RO 084126	
	1 Gasketing Provided by Aluminum Frame Supplier 1 Rain Guard 346C x Width of Frame Head PE 087100	Rim Exit Device, Storeroom, w/Elec. Latch Retraction Small Format Inter Core LD 70 56-SN200-PE8804 BIPS-0E x Less Pull LD 70 56-SN200-PE8804 BIPS-0E v Less Pull SA 281500 MC 087100	2 Electric Power Transfer EL-CEPT 630 SU 087100	1 Surface Closer, HD Parallel Arm 351 P10 EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 1 December 2015 RM860 / RM850 (As Condition US36D RO 084136	1 Surface Closer, Regular Arm 351 O EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	2 Silencer 608-RKW RO 087100	
3	1 Sweep 3452CNB x Length Required PE 087100 1 Threshold 278x292AFGT x Length Required PF 087100	1 Offset Pull RM5277-36 x Mtg-Type 12HD US32D RO 087100 1 Conc Overhead Stop 6-X36 630 RF 087100	Concealed Vert Rod Exit Devcie. 1 Nightlatch w/Elec. Latch Retraction LD 70 56-SN200-ADPE8610 BIPS- 0E P106 x Less Pull US32D SA 281500	1 Door Stop Requires)	1 Door Stop	Set: 25.0 Doors: 218	
	x MSES25SS 1 ElectroLynx Harness QC-C**** x Length Required MK 087100	1 Surface Closer, HD Parallel Arm 281 P10 EN SA 087100 Provided by Aluminum Frame	1 Concealed Vert Rod Exit Device, Exit Only w/Elec. Latch Retraction LD 55 56 ADPE8610 EO US32D SA 087100 4 1 Small Format Inter Core 33600006N 26 MC 087100	1 ElectroLvnx Harness QC-C**** x Length Required MK 087100 \$\rightarrow\$ 1 ElectroLvnx Harness QC-C1500P MK 087100 \$\rightarrow\$	1 <u>ElectroLynx</u> Harness QC-C**** x Length Required MK 087100 ∳ 1 <u>ElectroLynx</u> Harness QC-C1500P MK 087100 ∳	4 Hinge TA2714 [NRP] US26D MK 087100 1 Privacy Lock V21 8265 LNB US26D SA 087100	
	1 ElectroLvnx Harness QC-C1500P MK 087100 1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	1 Sweep 3452CNB x Length Required PE 087100 278x292AFGT x Length Required x	2 Offset Pull RM5277-36 x Mtg-Type 12HD US32D RO 087100 2 Conc Overhead Stop 6-X36 630 RF 087100	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100 Elevation and Point to Point as	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100 Elevation and Point to Point as	1 Surface Closer, Regular Arm 351 O EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 1 Mop Plate K1050 6" high CSK BEV US32D RO 087100	
	1 Wiring Diagram Elevation and Point to Point as Specified	1 ElectroLynx Harness QC-C**** x Length Required MK 087100	2 Surface Closer, HD Parallel Arm 351 P10 EN SA 087100 1 Gasketing Provided by Aluminum Frame Supplier	1 Wiring Diagram Specified	1 Wiring Diagram Specified	1 Door Stop RM860 / RM850 (As Condition Requires) US26D RO 084126	
	Notes: SYSTEM OPERATIONAL NARRATIVE	1 ElectroLvnx Harness QC-C1500P MK 087100 1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	2 Sweep 3452CNB x Length Required PE 087100 278x292AFGT x Length Required x PE 087100	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door reader momentarily unlocks lever allowing entry	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure.	1 Gasketing 303AS (Head & Jambs) PE 087100 1 Coat Hook RM801 US26D RO 087100	
	Door is normally closed and secure. Presenting valid credential to reader momentarily unlocks lever allowing entry. Entry also possible via key override.	1 Wiring Diagram Elevation and Point to Point as Specified	MSES25SS PE 08/100 2 ElectroLvnx Harness QC-C**** x Length Required MK 08/7100 2 ElectroLvnx Harness QC-C1500P MK 08/7100	Presenting valid credential to door reader momentarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times. Presented to exit switch, incorporated in exit device, signals an egress.	Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times.	Doors: 221	PROFESSIONAL SEAL
	Free egress at all times. Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors doors open/closed status.	Notes: SYSTEM OPERATIONAL NARRATIVE	1 Position Switch DPS-M-BK SU 087100 +	Request to exit switch, incorporated in exit device, signals an egress. Door position switch, incorporated in exit device trim, monitors the doors open/closed status. Lever remains locked during power loss. (Fail Secure)	Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors the <u>door's</u> open/closed status. Lever remains locked during power loss. (Fail Secure)	3 Hinge TA2714 [NRP] US26D MK 087100 1 Privacy Lock V21 8265 LNB US26D SA 087100	
	Lever remains locked during power loss. (Fail Secure)	Doors are normally closed and secured. Presenting valid credential to reader momentarily retracts latch allowing entry. Entry also possible via key override.	(Consolidate as Applicable) 1 Wining Diagram Elevation and Point to Point as			1 Privacy Lock V21 8265 LNB US26D SA 087100 1 Surface Closer, Regular Arm 351 O EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	
4	Set: 2.0	Free egress at all times. Request to exit switches, incorporated in exit devices, signal an egress. Door position switches monitor the doors open/closed status.	Notes:	Set: 15.0	<u>Set: 20.0</u> Doors: 219	1 Mop Plate K1050 6" high CSK BEV US32D RO 087100 1 Door Stop RM860 / RM850 (As Condition US26D RO 084126	
4	Doors: 111 1 Continuous Hings	Latch remains projected during power loss. (Fail Secure) Set: 6.0	SYSTEM OPERATIONAL NARRATIVE Doors are normally closed and secured. Presenting valid credential to reader momentarily retracts latch allowing entry.	Doors: 212, 214, 215 4 Hinge T4A3786 [NRP] US26D MK 087100	3 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100	1 Gasketing 303AS (Head & Jambs) PE 087100 1 Coat Hook RM801 US26D RO 087100	
	1 Continuous Hinge x PT PE 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100	Doors: 203, 204, 205, 206, 207	Entry also possible via key override. Free egress at all times. Request to exit switches, incorporated in exit devices, signal an egress.	1 Electric Power Transfer EL-CEPT 630 SU 087100 / 1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 /	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 ↑ 1 Small Format Inter Core 33600006N 26 MC 087100	Set: 27.0	
	1 Access Control Rim Exit Device	1 Continuous Hinge CFM_SLF-HD1 x Length Required x PT 1 Electric Power Transfer EL-CEPT 630 SU 087100	Door position switches monitor the doors open/closed status. Latch remains projected during power loss. (Fail Secure)	1 Small Format Inter Core 33600006N 26 MC 087100 1 Surface Cam Action Closer 422 CTB2 EN SA 087100	1 Surface Closer, Parallel Arm 351 P9 EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 RM860 / RM850 (As Condition US32D RO 084136	Doors: 120, 121, 122, 123, 124, 217 3 Hinge TA2714 [NRP] US26D MK 087100	
	1 Surface Closer, HD Parallel Spring 281 CPS EN SA 087100	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 ∳ 1 Small Format Inter Core 33600006N 26 MC 087100	Set: 11.0	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 1 Gasketing Provided by Aluminum Frame Supplier	1 Door Stop RW850 (As Condition Requires) US26D RO 084126 3 Silencer 608-RKW RO 087100	3 Hinge TA2714 [NRP] US26D MK 087100 1 Privacy Lock V21 8265 LNB US26D SA 087100 1 Surface Cam Action Closer 422 CTB2 EN SA 087100	© 2025 ROSSETTI
	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 1 Gasketing Provided by Aluminum Frame Supplier	1 Surface Closer, Regular Arm 351 O EN SA 087100 1 Door Stop RM860 / RM850 (As Condition US26D RO 084126	Doors: 118	1 ElectroLynx Harness QC-C**** x Length Required MK 087100 # 1 ElectroLynx Harness QC-C1500P MK 087100 #	1 ElectroLynx Harness QC-C**** x Length Required MK 087100 ∳ 1 ElectroLynx Harness QC-C1500P MK 087100 ∳	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 1 Mop Plate K1050 6" high CSK BEV US32D RO 087100	# DESCRIPTION DATE
	1 Rain Guard 346C x Width of Frame Head PE 087100 1 Sweep 3452CNB x Length Required PE 087100	1 Gasketing Provided by Aluminum Frame Supplier	1 Continuous Hinge CFM_SLF-HD1 x Length Required x PT 1 Electric Power Transfer EL-CEPT 630 SU 087100	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	1 Gasketing 303AS (Head & Jambs) PE 087100 1 Coat Hook RM801 US26D RO 087100	1 Bid Set 02/07/2025 2 Addendum 1 02/20/2025
	1 Threshold 278x292AFGT x Length Required x MSES25SS PE 087100 1 ElectroLynx Harness QC-C**** x Length Required MK 087100	1 ElectroLynx Harness QC-C**** x Length Required MK 087100 ∳ 1 ElectroLynx Harness QC-C1500P MK 087100 ∳	1 Rim Exit Device, Storeroom, w/Elec. Latch Retraction LD 70 56-SN200-PE8804 BIPS-0E x Less Pull US32D SA 281500	1 Wiring Diagram Elevation and Point to Point as Specified	1 Wiring Diagram Specified		
	1 ElectroLynx Harness QC-C1500P MK 087100 AQL_x Amps & Relays Required SUL 087100	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100 Elevation and Point to Point as	1 Small Format Inter Core 33600006N 26 MC 087100 1 Offset Pull RM5277-36 x Mtg-Type 12HD US32D RO 087100	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure.	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry.	_	
5	1 Wiring Diagram (Consolidate as Applicable) Elevation and Point to Point as Specified	1 Wiring Diagram Specified	1 Conc Overhead Stop 6-X36 630 RF 087100 1 Surface Closer, HD Parallel Arm 351 P10 EN SA 087100 Provided by Aluminum Frame	Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times.	Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in lock, signals an egress.	5	
	Notes: SYSTEM OPERATIONAL NARRATIVE	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure.	1 Gasketing Supplier 1 ElectroLynx Harness QC-C**** x Length Required MK 087100	Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors the door's open/closed status. Lever remains locked during power loss. (Fail Secure)	Door position switch, incorporated in lock, monitors the <u>door's</u> open/closed status. Lever remains locked during power loss. (Fail Secure)		
	Door is normally closed and secure. Presenting valid credential to reader momentarily unlocks lever allowing entry.	Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times.	1 ElectroLynx Harness QC-C1500P MK 087100 1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	20vol remains recited during power less. (I am secure)	<u>Set: 21.0</u>	087100 – DOOR HARDWARE	
	Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in lock, signals an egress.	Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors the door's open/closed status. Lever remains locked during power loss. (Fail Secure)	1 Wiring Diagram Elevation and Point to Point as Specified	Set: 16.0	Doors: 116.1, 116.2 3 Hinge T4A3786 [NRP] US26D MK 087100	General This Section includes commercial door hardware for swinging doors.	
	Door position switch, incorporated in lock, monitors doors open/closed status. Lever remains locked during power loss. (Fail Secure)	<u>Set: 7.0</u> Doors: 103	Notes: SYSTEM OPERATIONAL NARRATIVE	Doors: 107.3 4 Hinge	1 Electric Power Transfer EL-CEPT 630 SU 087100 / 1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 /	S <u>ubmittals</u> Submit product data, Door Hardware, and Keying Schedule.	
		1 Continuous Hinge CFM_SLF-HD1 x Length Required PE 087100	Door is normally closed and secured. Presenting valid credential to reader momentarily retracts latch allowing entry. Entry also possible via key override.	1 Electric Power Transfer EL-CEPT 630 SU 087100 \$\rightarrow\$ 1 Fire Rated Access Control Rim 12 70 SN200-PE8876 BIPS-0E 11822D SA 281500 \$\rightarrow\$	1 Small Format Inter Core 33600006N 26 MC 087100 1 Surface Closer, Parallel Stop Arm 351 PS EN SA 087100	Products Basis of Design: Products list below (or approved equal)	
	<u>Set: 3.0</u> Doors: 101	1 Electric Power Transfer EL-CEPT 630 SU 087100	Free egress at all times. Request to exit switch, incorporated in exit device, signal an egress. Door position switches monitor the doors open/closed status.	1 Small Format Inter Core 33600006N 26 MC 087100	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 3 Silencer 608-RKW RO 087100 1 ElectroLynx Harness QC-C**** x Length Required MK 087100	Hinges - Butt Hinges: McKinney (MK) - TA/T4A Series, 5-knuckle	
	1 Continuous Hinge CFM_SLF-HD1 x Length Required x PT PE 087100	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 ∳ 1 Small Format Inter Core 33600006N 26 MC 087100 1 Surface Closer, Parallel Arm 351 P9 EN SA 087100	Latch remains projected during power loss. (Fail Secure)	1 Stop Arm 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	1 ElectroLynx Harness QC-C1500P MK 087100 AOL x Approx & Pelays Pequiped	- Continuous Hinges: Pemko (PE) Power Transfer Switches: Securitron (SU) - EL-CEPT Series	
6	1 Electric Power Transfer EL-CEPT 630 SU 087100 1 Rim Exit Device, Storeroom, w/Elec. Latch Retraction LD 55 56 70 PE8804 x Less Pull US32D SA 087100	1 Door Stop RM860 / RM850 (As Condition Requires) 1 Conduction Provided by Aluminum Frame		1 Gasketing Provided by Aluminum Frame Supplier 1 Gasketing 303AS PE 087100	1 Power Supply (Consolidate as Applicable) 1 Wiring Diagram AQL_X Amps & Relays Required (Consolidate as Applicable) Elevation and Point to Point as Specified	Electric Door Wire Harnesses: McKinney (MK) QC-C Series Provide the following tools as part of base bid contract:	
	1 Small Format Inter Core 33600006N 26 MC 087100 1 Offset Pull RM5277-36 x Mtg-Type 12HD US32D RO 087100	1 ElectroLynx Harness QC-C**** x Length Required MK 087100	Doors: ST-B	1 ElectroLvnx Harness QC-C**** x Length Required MK 087100 1 ElectroLvnx Harness QC-C1500P MK 087100 4	Notes:	a. McKinney (MK) - Electrical Connecting Kit: QC-R001 b. McKinney (MK) - Connector Hand Tool: QC-R003	
	1 Conc Overhead Stop 6-X36 630 RF 087100 1 Automatic Opener (Push) 6331 689 NO 087113 ↑	1 ElectroLvnx Harness QC-C1500P MK 087100 1 Power Supply AQL_x Amps & Relays Required SII 087100	3 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100 ❖	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100 Elevation and Point to Point as	SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry.	Door Operating Trim - Flush Bolts and Surface Bolts: Rockwood (RO) - Door Push Plates and Pulls: Rockwood (RO)	
	1 Gasketing Provided by Aluminum Frame Supplier	1 Wiring Diagram (Consolidate as Applicable) Elevation and Point to Point as Specified	1 Fire Rated Access Control Rim Exit Device, Fail Safe WEB 1 Small Format Inter Core 33600006N 12 70 SN200-PE8875 BIPS-0E WEB US32D SA 281500 MC 087100	1 Wiring Diagram Specified	Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in lock, signals an egress.	Cylinders and Keying: Medeco (MC) - X4	
	1 Sweep 3452CNB x Length Required PE 087100 1 Threshold 278x292AFGT x Length Required x MSES25SS PE 087100	Notes: SYSTEM OPERATIONAL NARRATIVE	1 Surface Cam Action Closer 422 CTB2 EN SA 087100 1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure.	Door position switch, incorporated in lock, monitors the <u>door's</u> open/closed status. Lever remains locked during power loss. (Fail Secure)	Mortise Locks and Latching Devices Mortise Locksets: a. Corbin Russwin Hardware (RU) - ML2000 Series	KEY PLAN
	1 Credential Reader Provided by Security Supplier 1 ElectroLynx Harness QC-C**** x Length Required MK 087100	Door is normally closed and secure. Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry. Entry also possible via key override.	1 Door Stop RM860 / RM850 (As Condition Requires) US26D RO 084126 1 Gasketing 303AS (Head & Jambs) PE 087100	Presenting valid credential to door reader momentarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times.	<u>Set: 22.0</u>	b. Sargent Manufacturing (SA) - 8200 Series Conventional Exit Devices	
	1 ElectroLynx Harness QC-C1500P MK 087100 ↑ 2 Operator Actuator 505 / 503 (As Required) NO 087100 ↑	Free egress at all times. Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors the door's open/closed status.	1 ElectroLvnx Harness QC-C**** x Length Required MK 087100 1 ElectroLvnx Harness QC-C1500P MK 087100	Request to exit switch, incorporated in exit device, signals an egress. Door position switch, incorporated in exit device trim, monitors the doors open/closed status. Lever remains locked during power loss. (Fail Secure)	Doors: 213	a. Corbin Russwin Hardware (RU) - PED4000 / PED5000 Seriesb. Sargent Manufacturing (SA) - PE80 Series	
	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) Elevation and Point to Point as	Lever remains locked during power loss. (Fail Secure)	1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100	Set: 17.0 Doors: 109.1	4 Hinge T4A3786 [NRP] US26D MK 087100 1 Electric Power Transfer EL-CEPT 630 SU 087100 ∳ 1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 ∳	Door Closers - Surface-mounted a. Corbin Russwin Hardware (RU) - DC8000 Series	
7	1 Wiring Diagram Specified	Set: 8.0	1 Wiring Diagram Specified	Doors: 109.1 3 Hinge T4A3786 [NRP] US26D MK 087100	1 Small Format Inter Core 33600006N 26 MC 087100 1 Surface Cam Action Closer 422 CTB2 EN SA 087100	b. Norton Rixson (NO) - 9500 Series b. Sargent Manufacturing (SA) - 281 Series	
	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secured.	Doors: 208, 208.1, 220 CFM_SLF-HD1 x Length Required PE 087100	Notes: SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure.	1 Electric Power Transfer EL-CEPT 630 SU 087100 \$\rightarrow\$ 1 Fire Rated Access Control Rim Exit Device WEB US32D SA 281500 \$\rightarrow\$	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100 3 Silencer 608-RKW RO 087100	- Surface-mounted (Heavy Duty) a. Corbin Russwin Hardware (RU) - DC6000 Series b. Norton Rixson (NO) - 7500 Series	
	Presenting valid credential to reader momentarily retracts latch allowing manual entry or via door operator by pressing actuator. Entry also possible via key override.	1 Electric Power Transfer EL-CEPT 630 SU 087100	Presenting valid credential to reader momentarily unlocks lever allowing entry. Entry also possible via key override. Free egress at all times.	1 Small Format Inter Core 33600006N 26 MC 087100 Surface Closer, HD Parallel Spring 351 CPS EN SA 087100	1 ElectroLynx Harness QC-C**** x Length Required MK 087100 1 ElectroLynx Harness QC-C1500P MK 087100 AQL x Amps & Relays Required SUL 087100	b. Sargent Manufacturing (SA) - 351 Series - Surface-mounted (Cam Action)	
	Free egress at all times. Vestibule side actuator retracts latch prior to setting door operator into motion. Request to exit switch, incorporated in exit device, signals an egress.	1 Access Control Cyl Lock 70 SN200-10XG271 BIPS-0E LB US26D SA 281500 ∳ 1 Small Format Inter Core 33600006N 26 MC 087100 1 Surface Cam Action Closer 422 CTB2 EN SA 087100	Request to exit switch, incorporated in exit device, signals an egress. Door position switch, incorporated in exit device trim, monitors the doors open/closed status. Lever remains unlocked during power loss. (Fail Safe)	1 Kick Plate K1050 10" high CSK BEV US32D RO 087100	(Consolidate as Applicable) 1 Wiring Diagram Elevation and Point to Point as	a. Corbin Russwin Hardware (RU) - DC5000 Series b. Norton Rixson (NO) - 2800ST Series b. Sargent Manufacturing (SA) - 422 Series	
	Door position switch, incorporated in exit device, monitors the doors open/closed status. Latch remains projected during power loss. (Fail Secure)	1 Gasketing Provided by Aluminum Frame Supplier	Integrate with fire alarm system and fire command center/panel.	1 Gasketing Supplier 1 Gasketing 303AS PE 087100	Notes:	Door Protective Trim: Rockwood (RO)	SHEET TITLE
		1 ElectroLynx Harness QC-C**** x Length Required MK 087100 1 ElectroLynx Harness QC-C1500P MK 087100 AQL x Amps & Relays Required GN 087100		1 ElectroLvnx Harness QC-C**** x Length Required MK 087100 1 ElectroLvnx Harness QC-C1500P MK 087100 ACL x Apper & Palaws Pagerised	SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry.	Doorstops and Holders: Rockwood (RO) Overhead Door stops and holders: Norton Rixson (RF)	Products and Specs
		1 Power Supply (Consolidate as Applicable) 1 Wiring Diagram Elevation and Point to Point as		1 Power Supply AQL_x Amps & Relays Required (Consolidate as Applicable) SU 087100 Elevation and Point to Point as Specified	Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in lock, signals an egress.	Architectural Seals: Pemko (PE)	
		Notes:		Notes:	Door position switch, incorporated in lock, monitors the door's open/closed status. Lever remains locked during power loss. (Fail Secure)	Electroninc Accessories: Securitron (SU) - DPS Series Intellegent Switching Power Supplies: Securitron (SU) - AQL Series	0' 16' 32'
8		SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door mounted card reader temporarily unlocks lever allowing entry.		SYSTEM OPERATIONAL NARRATIVE Door is normally closed and secure. Presenting valid credential to door reader momentarily unlocks lever allowing entry.		8	PROJECT # Scale: 1/16" = 1'-0"
40 PM		Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in lock, signals an egress. Door position switch, incorporated in lock, monitors the door's open/closed status.		Entry also possible via key override. Free egress at all times. Request to exit switch, incorporated in exit device, signals an egress.			2024-010.00 30x42
25 5:10:		Door position switch, incorporated in lock, monitors the door's open/closed status. Lever remains locked during power loss. (Fail Secure)		Door position switch, incorporated in exit device trim, monitors the doors open/closed status. Lever remains locked during power loss. (Fail Secure)			SHEET#
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088000 - GLAZING
Submit product data, samples, shop drawings, warranty, maintenance data for each product.
As indicated on Architectural drawings.
       GT-01 (Exterior Envelope): Low-E, 1" thick Insulating Glass.
               Basis of Design Product: Guardian SunGuard SN68 on Clear or Approved Equal.
               Outdoor Lite: 1/4 inch clear, Low-E coating on #2 surface.
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Interspace: 1/2 inch airspace Indoor Lite: 1/4 inch clear. Performance Requirements: Minimum Visible Light Transmittance: 68 percent. Maximum U-Factor: 0.30 Btu/(hr x sq ft x deq F). Maximum Solar Heat Gain Coefficient: 0.38

Outdoor Visible Reflectance: 11 percent.

Insulated Glass Units: Double pane with polyisobutylene primary and secondary silicone sealant edge

Primary Glass Products: Clear float and tinted float glass: Comply ASTM C1036, Standard Specification for Flat Glass.

Heat-Treated Glass Products: Heat-strengthened, tempered, coated, and spandrel glass: Comply with

ASTM C1048, Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass. Contractor shall provide safety glazing as required by Code, for applicable glazing types indicated.

Comply with FGMA Glazing Manual and manufacturer's recommendations.

092900 - GYPSUM BOARD ASSEMBLIES

This section includes gypsum board and non-structural metal framing

<u>Products</u> Non-structural metal framing complying with ASTM C645:

Gypsum wallboard: ASTM C1396/1396M, Type "X", 5/8 inch thick.

Mold/Moisture resistant gypsum panels: ASTM C1396/1396M, Type "X", 5/8 inch thick. Locations: Toilet Rooms (except at tiled walls) and Kitchen. Glass-Mat Tile Backerboard: ASTM C1178, 5/8 inch thick.

Locations: Behind tile finishes, refer to room schedule for locations.

All accessories to comply with Manufacturer's recommendations.

Install all products as indicated in Manufacturer's written instructions and comply with ASTM C 840 and

Level 4 for gypsum board surfaces unless otherwise indicated.

Level of gypsum board finish: provide the following levels of gypsum board finish per GA-214. Level 1 for ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for sound-rated assemblies. Level 2 where water-resistant gypsum backing board panels form substrates for tile, and

Control Joints: Provide control joints at 30 feet minimum or as otherwise noted on construction

093013 TILING SPECIFICATION

Submit product data, shop drawings, and samples of tiles and all accessories.

Refer to finish schedule for tile manufacturers, models, colors and sizes. Membrane, sealants to be manufacturer's standard product.

Elastomeric Sealants:One-part mildew-resistant silicone sealant for non-traffic areas. Multi-part pourable urethane sealant for traffic areas. Chemical-resistant sealant at chemical-resistant flooring.

Tile Installation: Interior floor installation on concrete. Tile Type: Ceramic floor tile. Setting Materials:

FLOOR TILE INSTALLATION SCHEDULE

Latex-portland cement mortar (thin set); TCA F113. Organic adhesive or water-cleanable epoxy adhesive; TCA F116. Grout: Polymer-modified tile grout or water-cleanable epoxy grout.

WALL TILE INSTALLATION SCHEDULE Tile Installation: Interior wall installation over backer units. Tile Type: Ceramic wall tile. Setting Materials:

Latex-portland cement mortar (thin set); TCA W244. Organic adhesive or water-cleanable epoxy adhesive. Grout: Polymer-modified tile grout or water-cleanable epoxy grout.

099123 PAINTING SPECIFICATION

<u>Submittals</u>
Product data including confirmation of MPI numbers and samples.

PRODUCTS

PRIMERS/SEALERS Interior Latex Primer/Sealer: MPI #50. Basis-of-Design Product: SW; ProMar 200 Zero VOC Interior Latex Primer, B28 Series. METAL PRIMERS

Primer, Rust-Inhibitive, Water Based: MPI #107. Basis-of-Design Product: SW; Pro Industrial Pro-Cryl Universal Primer, B66 Series.

Basis-of-Design Product: SW; Kem Bond HS Universal Alkyd Primer, B50 Series.

WOOD PRIMERS Interior Lacquer Sanding Sealer: MPI #24.

Alkyd Metal Primer: MPI #76.

WATER-BASED PAINTS Interior Latex (Flat): MPI #53 (Gloss Level 1). Basis-of-Design Product: SW; ProMar 200 Zero VOC Interior Latex Flat, B30 Series.

Interior Latex (Eggshell): MPI #52, #139 (Gloss Level 3). Basis-of-Design Product: SW; ProMar 200 Zero VOC Interior Latex Eg-Shel, B20 Series. Interior Epoxy (Eggshell): MPI #151 (Gloss Level 3).

Interior Epoxy (Semi-gloss): MPI #153 (Gloss Level 5). Basis-of-Design Products: SW; Pro Industrial Pre-Catalyzed Waterbased Semi-gloss Epoxy.

Basis-of-Design Products: SW; Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45 Series.

PAINT SCHEDULE

Interior Ferrous Metal Substrates: (2) coat system.

Latex Over Primer System: Prime Coat: Primer, alkyd, quick dry. Topcoat: Interior latex. Colors and Finish: Refer to Finish Legend.

Eggshell Pre-Catalyzed Epoxy System: Use at exposed steel columns. Prime Coat: Primer, rust inhibitive, water based. Intermediate Coat: Interior pre-catalyzed epoxy (eggshell) matching topcoat. Topcoat: Interior pre-catalyzed epoxy (eggshell) matching topcoat. Color: Refer to Finish Legend.

Interior Metal Doors and Frames Substrates: (3) coat system. Semi-gloss Epoxy System: Prime Coat: Primer, rust inhibitive, water based. Intermediate Coat: Interior pre-catalyzed epoxy (Semi-gloss) matching topcoat. Topcoat: Interior pre-catalyzed epoxy (Semi-gloss) matching topcoat. Color: Match color of wall in which door is located.

Interior Pipe Lines Substrates: (2) coat system. Prime Coat: Primer, rust inhibitive, water based. Topcoat: Interior acrylic matching primer. Colors and Finish: Refer to Finish Legend.

Interior Gypsum Board Substrates: (3) coat system. Flat Latex System:

Prime Coat: Interior latex primer. Intermediate Coat: Interior latex (flat) matching topcoat. Topcoat: Interior latex (flat). Colors: Refer to Finish Legend.

Eggshell Latex System: Prime Coat: Interior latex primer. Intermediate Coat: Interior latex (eggshel) matching topcoat. Topcoat: Interior latex (eggshel). Colors: Refer to Finish Legend.

Eggshell Epoxy System: Use in commercial kitchen and toilet rooms. Prime Coat: Interior latex primer. Intermediate Coat: Interior pre-catalyzed epoxy (eggshell) matching topcoat. Topcoat: Interior pre-catalyzed epoxy (eggshell) matching topcoat. Colors: Refer to Finish Legend.

102800 - TOILET AND BATH ACCESSORIES

This Section includes the following:

Public-use washroom accessories. Under-lavatory guards.

Product Data, Setting Drawings for all trades for cutouts, Quality Assurance and Warranty covering Fifteen (15) years for mirrors from date of Substantial Completion.

Products

Toilet Accessories – Refer to G-002 for types of accessories required. Manufacturer: Bradley (Basis-of-Design).

Trap Wrap for Lavatories: Provide P-trap insulation for all lavatories; insulation kit with insulation for offset grid drain, white, Model C500R by Brocar Products Inc., Cincinnati, Ohio or equal as approved by Architect.

Keys: Provide universal keys for access to toilet accessory units requiring internal access for servicing. Provide minimum of six (6) keys to Owner's representative.

Execution Installation

> Install all accessories in accordance with manufacturer's printed instructions and as required to provide a firm and secure anchorage for each item.

Fabricate concealed mounting devices and fasteners for all accessories from the same materials as the accessories or galvanized steel. Finish exposed mounting devices and fasteners to match the accessories.

Install grab bars to withstand a downward load of at least 250 lbf (1112 N), complying with ASTM F 446. Cleaning And Final Adjustments

Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items.

Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary

104413 FIRE PROTECTION SPECIALITIES SPECIFICATION

<u>General</u>

This section includes portable fire extinguishers and fire extinguister cabinets.

Submittals:

Submit product data, shop drawings, and maintenance Data.

Multi-Purpose Dry Chemical Type Extinguisher: UL-rated, 2A:10B:C in enameled steel container, for Class A, Class B and Class C fires.

Product: Model No. MP10 by Larsen or equal as approved by Architect. Wet-Chemical Type: UL-rated, stainless-steel container; with pressure-indicating gage, 1.5 gal (6 liters), for Class

Product: Model No. WC-6L by Larsen or equal as approved by Architect. Mounting Brackets: Manufacturer's standard steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or black baked-enamel finish.

Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and

location. Locate as indicated by Architect. Identify bracket-mounted fire extinguishers with the words "FIRE EXTINGUISHER" in red letter decals applied to mounting surface. Fire Extinguisher Cabinets; Fully-recessed type; Larsen's Architectural Series Vertical Duo Door; stainless steel #

4 finish; 5/16 inch (8 mm) flat trim; Model SS-2409-R2 or Model FS-SS-2409-R2 at fire rated walls or equal as approved by Architect.

Adjust fire protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly. Clean all surfaces as recommended by manufacturer. Touch up marred finishes, or replace products that cannot be restored to factory-finished appearance.

108200 - EQUIPMENT METAL SCREEN WALL

This section includes fixed, extruded-aluminum louvered screen for equipment.

<u>Submittals</u>
Submit product data, finish samples, shop drawings, and quality/performance reports.

<u>Products</u> Horizontal Blade Louvered Equipment Screen:

Architectural Louvers Co. (Harray, LLC); Model V4YH or Approved Equal.

4" Deep, sight-proof blade configuration. Mitered outside corners and hidden mullion joints at section breaks. Concealed frame.

Finish: Kynar 500 organic coating. Custom color to match lower band of adjacent dome fabric.

281500 INTEGRATED ACCESS CONTROL HARDWARE DEVICES

This Section includes access control hardware for Swinging doors.

This section includes, but is not necessarily limited to, the following for the integrated access control security and

site management system: Electrified and Intgrated Access Control Key Door Hardware

<u>Submittals</u>

Submit product data and System Operational Descriptions, Operating and Maintenance manuals, Warranty

information.

Standard warranty period: One year from date of substantial completion, unless otherwise indicated. Special warranty period (Electrified Access Control Door Hardware):

Submit shop drawings showing details of electrified integrated locking hardware and access control firmware indicating the following:

Two years for Electrified, Wiegand Output, and IP-Enabled Access Control Door Hardware.

Wiring diagrams

<u>Coordination</u>

• Elevation diagram of each unique access-controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.

Complete (risers, point-to-point) access control system block wiring diagram.

2. Electrical Coordination: Coordinate with related Electrical Sections the voltages and wiring details required at electrically controlled and operated hardware openings.

Submit Installer Qualifications, including proof of certification.

A. Coordinate quantity and arrangement of assemblies with ceiling space configuration and with components occupying ceiling space, including structural members, pipes, air-distribution components, raceways, cable trays, recessed lighting fixtures, and other items.

B. Access Control System Electrical Coordination: Coordinate the layout and installation of scheduled electrified door hardware, and related access control equipment, with required connections to source power junction boxes, power supplies, detection and monitoring hardware and fire alarm system. Door Hardware Interface: The card key access control system to interface and be connected to electronic door. control hardware (electromechanical locks, electric strikes, magnetic locks, door position switches, other

monitoring contacts, and related auxiliary control devices) as described under Division 8 "Door Hardware". Coordinate the installation and configuration of specified door hardware being monitored or controlled with the controls, software and access control hardware specified in this Section. C. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified

to be factory prepared for installing electrified door hardware and access control system components. Check Shop

system hardware to comply with indicated requirements. D. Door and Frame Preparation: Related Division 08 Sections (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field

Drawings of other work to confirm that adequate provisions are made for locating and installing access control

modifications. <u>Products</u>

A. Integrated Wired Output Multi-Class Cylindrical Locks: Wiegand or Open Supervised Device Protocol (OSDP) output ANSI A156.2, Grade 1, Cylindrical Lockset with integrated card reader with or without keypad option, and request-to-exit signaling in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle trim with 1/2" deadlocking stainless steel latch. Lock is U.L listed and labeled for use on up to 3 hour fire rated openings.

Basis of Design:

a. Corbin Russwin (RU) - CLX3300 SN Series. b. Sargent Manufacturing (SA) - SN200/SN210 10X Line.

B. A. Integrated Wired Output Multi-Class Exit Hardware: Wiegand output ANSI 156.3 Grade 1 rim, mortise, and vertical rod exit device hardware with integrated card reader with or without keypad option, latchbolt and touchbar monitoring, and request-to-exit signaling, in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle exit trim with 3/4" throw latch bolt. U.L listed and labeled for either panic or "fire exit hardware" for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder

Basis of Design:

c. approved equal

a. Corbin Russwin (RU) - PED5000 SN Series. b. Sargent Manufacturing (SA) - SN200/SN210 PE80 Series. c. approved equal

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance of the installed access control system.

B. Examine roughing-in for electrical source power to verify actual locations of wiring connections before electrified and integrated access control door hardware installation.

C. Examine roughing-in for LAN and control cable conduit systems to PCs, controllers, card readers, and other

cable-connected devices to verify actual locations of conduit and back boxes before device installation. D. Notify architect of any discrepancies or conflicts between the specifications, drawings and scheduled access controlled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

Doors and frames at scheduled access controlled openings to be properly prepared to receive specified electrified and access control hardware and connections without additional in-field modifications.

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KEY PLAN

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Products and Specs

PROJECT# 2024-010.00

SHEET#

0174139 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL Submittal

PART 1 - GENERAL 1.1 SUMMARY

1.2 DEFINITIONS

1.3 ACTION SUBMITTALS

A. Section includes administrative and procedural requirements for the following:
1. Recycling nonhazardous demolition and construction waste.
2. Disposing of nonhazardous demolition and construction waste.
B. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

1. Section 04 2000 "Unit Masonry" for disposal requirements for masonry waste.

2. Section 31 1000 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

Retain terms that remain after this Section has been edited for a project.

A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition

C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.
 D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

A. Waste Management Plan: Submit plan within 7 days of date established for the Notice to Proceed.
1.4 INFORMATIONAL SUBMITTALS
See Evaluations for examples of progress reports.

See Evaluations for examples of progress reports.

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Material category.

Generation point of waste.
 Total quantity of waste in tons.

4. Quantity of waste in tons.

5. Total quantity of waste recovered (salvaged plus recycled) in tons.

6. Total quantity of waste recovered (salvaged plus recycled) as a percent

individuals and organizations. Indicate whether organization is tax exempt.

6. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

Retain "LEED Submittal" Paragraph below if Contractor rather than Architect or Owner is required to sign letter for LEED credits.

G. <u>LEED Submittal</u>: Submit documentation to USGBC, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met. Respond to questions and requests from USGBC regarding construction

waste management and disposal until the USGBC has made its determination on the Project's LEED

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills

1.5 QUALITY ASSURANCE

Some Contractors may use waste management coordination services of an outside waste management firm.

A. Waste Management Coordinator Qualifications: Experienced firm, or individual employed and assigned by General Contractor, with a record of successful waste management coordination of projects with similar requirements.

Retain one of or both subparagraphs below if acceptable.

certification application. Document correspondence with USGBC as informational submittals.

Firm employs a LEED-Accredited Professional, certified by the USGBC, as waste management coordinator.
 Waste management coordinator may also serve as LEED coordinator.

B. Waste Management Conference(s): Conduct conference(s) at Project site to comply with requirements in Section 01 3100 "Project Management and Coordination."

1.6 WASTE MANAGEMENT PLAN
Retain option in "General" Paragraph below if Project requires selective demolition or building

A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures. If applicable, list local charitable organizations (such as Habitat for Humanity) in "Salvaged Materials for Donation" Subparagraph below.

Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 Handling and Transportation Procedures: Include method that will be used for separating

 Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.
 PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total nonhazardous solid waste generated by the Work for at least four distinct material steams. Facilitate recycling and salvage of materials.

B. Calculations must exclude excavated soil and land-clearing debris.
C. Calculations must include materials destined for alternative daily cover (ADC) in the calculations as waste (not Recycled Materials).
Retain subparagraph below with last option in "General" Paragraph above to suit Project. Verify capabilities of local recycling facilities.

capabilities of local recycling facilities.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage,

A. General: Implement approved waste management plan. Provide nandling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

Retain option in "Waste Management Coordinator" Paragraph below when Project size and complexity of waste management justifies full-time, on-site waste management coordinator.

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
1. Distribute waste management plan to everyone concerned within three days of submittal return.

Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
 D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
 Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.
 Retain "Waste Management in Historic Zones or Areas" Paragraph below when construction wastehandling operations take place in historic area; revise to suit Project.

3.2 RECYCLING DEMOLITION AND CONSTRUCTIONWASTE, GENERAL
A. General: Recycle paper and beverage containers used by on-site workers.
B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall be shared equally by Owner and Contractor.
C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
Procedures in "Procedures" Paragraph below describe the "source-separated" method for handling recyclable waste. If space at Project site is limited, consider revising below to allow "co-mingled" method, which takes less space because it permits all recyclable waste to be placed in a single

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
1. Provide appropriately marked containers or bins for controlling recyclable waste until

container that is separated later at the recycling facility.

removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining

Store components off the ground and protect from the weather.
 Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

0174139 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

Submittal (continued)

3.4 RECYCLING CONSTRUCTION WASTE
Paragraphs in this article are examples of items that are common to normal construction operations; retain or insert other specific disposal, cleanup, or removal requirements to suit Project or recycling facilities.

Packaging:
1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces

4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
B. Wood Materials:

Clean Cut-Offs of Lumber: Grind or chip into small pieces.
Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.
 Retain "Clean Gypsum Board" Subparagraph below if gypsum board will be chipped on-site; delete if gypsum board to be processed off-site.
 Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile

chipper or hammer mill. Screen out paper after grinding.

D. Paint: Seal containers and store by type.

3.5 DISPOSAL OF WASTE

of accumulate on-site.

and comply with requirements for recycling wood.

Insert other specific disposal, cleanup, or removal requirements to suit Project.

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed

Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
B. General: Except for items or materials to be salvaged or recycled, remove waste materials, and legally dispose of at designated spoil areas on Owner's property.
Retain one of two "Burning" paragraphs below; burning is usually not permitted.

C. Burning: Do not burn waste materials.

Attach forms that will be issued with this Section either before or after end of Section according to office preference.

END OF SECTION 01 7419

018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

<u>Submittal</u>

PART 1 - GENERAL 1.1 SUMMARY

1.2 DEFINITIONS

1.1 SUMMARY
 A. Section includes general requirements and procedures for compliance with USGBC's LEED prerequisites and credits needed for Project to obtain LEED Silver certification based on "LEED Version 4 for Building Design and Construction" (hereafter, LEED v4 BD+C).
 1. Specific requirements for LEED are also included in other Sections.

Other LEED prerequisites and credits needed to obtain LEED certification depend on product selections and may not be specifically identified as LEED requirements.
 Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests.

 If retaining subparagraph below, attach a copy of the LEED checklist to end of this Section as information for Contractor.

A copy of LEED Project checklist is attached at end of this Section for information only.
a. Some LEED prerequisites and credits needed to obtain indicated LEED certification depend on Architect's design and other aspects of Project that are not part of the Work of the Contract.

Retain terms that remain after this Section has been edited for a project.

A. LEED: USGBC's "LEED Version 4 for Building Design and Construction." Definitions that are part of this document apply to this Section.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site. Review LEED requirements

and action plans for compliance with requirements.

1.4 ADMINISTRATIVE REQUIREMENTS

Retain one of two paragraphs in this article. Retain first if Architect or Owner submits LEED documentation to USGBC; retain second if Contractor does.

A. Respond to questions and requests from Architect about USGBC's LEED prerequisites and credits that are Contractor's responsibility, that depend on product selection or product qualities, or that depend on Contractor's procedures, until USGBC has made its determination on Project's LEED certification application.

B. Submit documentation to Architect's LEED Consultant and respond to questions and requests from Architect's LEED Consultant about LEED prerequisites and credits that are Contractor's responsibility, that depend on product selection or product qualities, or that depend on Contractor's procedures, until USGBC has made its determination on Project's LEED certification application.

1.5 ACTION SUBMITTALS

Requirements in this article assume that Product Data and cost information are submitted to Architect, who then either fills out the LEED online forms or forwards the submittals to Owner or Sustainability Consultant to fill out the forms. Submittals include documentation needed to verify compliance with LEED requirements, so that Architect, Owner, or Sustainability Consultant can be assured, when filling out the online forms, that requirements have been met. Although USGBC's LEED reference guides do not specifically identify who can certify compliance, submittals could be deleted if requirements in this Section are revised to require Contractor to fill out the online forms and to notify Architect or Owner when completed.

Submittals in "Sustainable Design Documentation Submittals" Paragraph below may be necessary to verify compliance with indicated USGBC LEED prerequisites and credits. Additional submittals may be required in other Sections.

Sustainable Design Documentation Submittals:

1. Documentation for luminaires indicating lumens emitted and vertical illuminance values.

2. Documentation for compliant paying materials indicating the SRL SR, and

Documentation for compliant paving materials indicating the SRI, SR, and permeability.
 Documentation for compliant roofing materials indicating the SRI.
 Product Data and certification for WaterSense-labeled water fixtures.

Product Data for plumbing fixtures indicating flush or flow rate.
 Documentation complying with Section 01 9113 "General Commissioning Requirements," Section 01 9119.43 "Exterior Enclosure Commissioning," Section 21 0800 "Commissioning of Fire Suppression," Section 22 0800 "Commissioning of Plumbing," Section 23 0800 "Commissioning of HVAC," and Section 26 0800 "Commissioning of Electrical Systems."

7. Documentation complying with Building-Level Energy Metering and Submetering: Product data for meters, sensors, and data collection system used to provide continuous metering of building energy-consumption performance.

Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs) complying with LEED requirements.
 Sustainability reports for products that comply with LEED requirements for raw material and source extraction reporting.
 Documentation for products that comply with LEED requirements for leadership

Documentation for products that comply with LEED requirements for leadership extraction practices and for multi-attribute optimization. Include the following:

a. Product Data and certification letter from product manufacturers, indicating participation in an extended producer responsibility program and statement of costs.
b. Product Data and certification for bio-based materials, indicating that they comply with requirements. Include statement of costs.
c. Receipts for salvaged and refurbished materials used for Project, indicating sources and costs.
d. Product Data and certification letter from product manufacturers, indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content. Include statement of costs.
e. Documentation for regional materials, indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material and costs of regional materials.

Documentation complying with Section 01 7419 "Construction Waste Management and Disposal."
 First five subparagraphs below are based on requiring all materials in a category to comply with minimum requirements. An alternative is the budget method. If the budget method is used, add a

submittal showing calculations.
12. Product Data for adhesives and sealants used inside weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials.
13. Product Data for paints and coatings used inside weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials.

14. Laboratory test reports for flooring, indicating compliance with requirements for low-emitting materials.
15. Laboratory test reports for products containing composite wood or agrifiber products or wood glues, indicating compliance with requirements for low-emitting materials.
16. Laboratory test reports for ceilings, walls, and thermal insulation, indicating compliance with requirements for low-emitting materials.

Construction Indoor-Air-Quality (IAQ) Management:

a. Construction IAQ management plan.

b. Product Data for temporary filtration media.

c. Product Data for temporary illustion friedia.
c. Product Data for filtration media used during occupancy.
d. Construction Documentation: Six photographs at three different times during construction period, along with brief description of SMACNA approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.

Delete "IAQ Assessment" Subparagraph below if using Owner-engaged IAQ testing.

18. IAQ Assessment:

Retain first two subparagraphs below if using building air flush-out procedures.

a. Signed statement describing the building air flush-out procedures, including dates when flush-out was begun and completed and statement that filtration media

a. Signed statement describing the building air flush-out procedures, including dates when flush-out was begun and completed and statement that filtration media was replaced after flush-out.
b. Product Data for filtration media used during flush-out and occupancy.
Retain subparagraph below if using Contractor-engaged IAQ testing.

018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

Submittal (cor

Submittal (cont)

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Sustainability Consultant.
 B. Project Materials Cost Data: Provide statement indicating total cost for materials used for Project. Costs exclude labor, overhead, and profit. Include breakout of costs for all material and products used on the project with the exception of the following categories of items:

Plumbing.
 Mechanical.
 Electrical.

Electrical.
 Specialty items, such as elevators and equipment.

4. Specialty items, such as elevators and equipment.
5. Furniture.
"Sustainable Design Action Plans" Paragraph below requires Contractor to make early submittals indicating how certain LEED requirements will be met. This action can provide reassurance that Contractor understands LEED requirements and can help to clear up misunderstandings before they become a problem.

C. Sustainable Design Action Plans: Provide preliminary submittals within 30 days of date

C. Sustainable Design Action Plans: Provide preliminary submittals within 30 days of date established for the Notice to Proceed, indicating how the following requirements will be met:

 Waste management plan complying with Section 01 7419 "Construction Waste Management and Disposal."
 Construction IAQ management plan.

D. Sustainable Design Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with sustainable design action plans.

1.7 QUALITY ASSURANCE
Requiring that Contractor engage a LEED AP to coordinate LEED requirements may help avoid inadvertent errors that could jeopardize Project's LEED certification if Contractors' personnel have

limited experience.

A. Sustainability Consultant: Engage an experienced LEED Accredited Professional to coordinate LEED requirements. Sustainability Consultant may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.1 MATERIALS
Usually retain first paragraph below when requirements for salvaged and refurbished materials, recycled content, bio-based materials, or certified wood are included in other Sections. This action will help ensure that credit requirements are met if costs differ from Architect's estimates.

A. Provide products and procedures necessary to obtain LEED credits indicated as Contractor's responsibility. Although other Sections may specify some requirements that contribute to these LEED credits, Contractor shall provide additional materials and procedures necessary to obtain LEED

credits indicated.

B. At least 20 different products from at least five different manufacturers shall have EPDs that comply with LEED requirements. Industry-wide (generic) EPDs shall be valued as one-half of a product.

C. At least 15%, by cost, of the total value of permanently installed building products in the

product that meet at least one of the following:

1. Extended Producer Responsibility Program: Building materials shall be manufactured by a participant in an extended producer responsibility program.

"Recycled Content" Paragraph below is an alternative to requiring recycled content in Sections where such products are specified.

Recycled Content: Building materials shall have recycled content such that postconsumer recycled content plus one-half of preconsumer recycled content for Project.

 Cost of postconsumer recycled content plus one-half of preconsumer recycled content of an item shall be determined by dividing weight of postconsumer recycled content plus one-half of preconsumer recycled content in the item by total weight of the item and multiplying by cost of the item.

 Bio-Based Materials: Building materials, other than wood, shall meet ASTM Test

Method D6866.

4. Do not include plumbing, mechanical, and electrical components, and specialty items, such as elevators and equipment, in the calculation.

D. At least 20 different products from at least five different manufacturers shall comply with LEED requirements for material ingredient reporting.

Retain first paragraph below and delete remaining paragraphs in this article if Contractor is responsible for complying with credit requirements for leadership extraction practices.

Retain one or more of "Extended Producer Responsibility Program," "Recycled Content," and "Certified Wood" paragraphs below, and possibly supplement by requirements in other Sections, for bio-based materials to comply with credit requirements for leadership extraction practices.

"Certified Wood" paragraphs below, and possibly supplement by requirements in other Sections, for bio-based materials to comply with credit requirements for leadership extraction practices.

"Certified Wood" Paragraph below is an alternative to requiring certified wood in Sections where wood products are specified.

2.2 LOW-EMITTING MATERIALS

A. Provide products and procedures necessary to obtain LEED credits indicated as Contractor's responsibility. Although other Sections may specify some requirements that contribute to these LEED credits, Contractor shall provide additional materials and procedures necessary to obtain LEED

credits indicated.

This article contains requirements applicable to Credit EQ "Low-Emitting Materials," Option 1. If retaining this article, coordinate with Sections where relevant products are specified to avoid conflicting requirements in those Sections.

B. Paints and Coatings: For field applications that are inside weatherproofing system, paints and coatings shall comply with VOC content limits of authorities begins invited in the following and the following states.

and coatings shall comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:
Categories in subparagraphs below are taken from USGBC's LEED Rating Systems and the standards referenced by them; if clarification is required, see those documents or LEED reference guides.

Flat Paints and Coatings: 50 g/L.
 Nonflat Paints and Coatings: 50 g/L.
 Dry-Fog Coatings: 150 g/L.
 Primers, Sealers, and Undercoaters: 100 g/L.
 Rust-Preventive Coatings: 100 g/L.
 Zinc-Rich Industrial Maintenance Primers: 100 g/L.
 Pretreatment Wash Primers: 420 g/L.
 Clear Wood Finishes, Varnishes: 275 g/L.
 Floor Coatings: 50 g/L.

Shellacs, Clear: 730 g/L

12. Shellacs, Pigmented: 550 g/L.
13. Stains: 100 g/L.
C. Paints and Coatings: For field applications that are inside weatherproofing system, 90 percent of paints and coatings shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
Adhesives and sealants are required in many Sections where, without being specifically mentioned, they may be specified only by requirement to install products according to manufacturer's written instructions. For this reason, it is probably best to retain both "Adhesives and Sealants" paragraphs below if this credit is required.
D. Adhesives and Sealants: For field applications that are inside weatherproofing system, adhesives and sealants shall comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:
Categories in subparagraphs below are taken from USGBC's LEED Rating Systems and the

standards referenced by them; if clarification is required, see those documents or LEED reference

Wood Glues: 30 g/L. Metal-to-Metal Adhesives: 30 g/L. Adhesives for Porous Materials (except Wood): 50 g/L. Subfloor Adhesives: 50 g/L. Plastic Foam Adhesives: 50 g/L Carpet Adhesives: 50 g/L. Carpet Pad Adhesives: 50 g/L. VCT and Asphalt Tile Adhesives: 50 g/L. Cove Base Adhesives: 50 g/L. Gypsum Board and Panel Adhesives: 50 g/L. Rubber Floor Adhesives: 60 g/L. Ceramic Tile Adhesives: 65 g/L. Multipurpose Construction Adhesives: 70 g/L. Fiberglass Adhesives: 80 g/L. Contact Adhesives: 80 g/L. Structural Glazing Adhesives: 100 g/L. Wood Flooring Adhesives: 100 g/L. Structural Wood Member Adhesives: 140 g/L

19. Single-Ply Roof Membrane Adhesives: 250 g/L.
20. Special-Purpose Contact Adhesives (That Are Used to Bond Melamine-Covered Board, Metal, Unsupported Vinyl, Rubber, or Wood Veneer 1/16 Inch or Less in Thickness to Any Surface): 250 g/L.
21. Top and Trim Adhesives: 250 g/L.
22. Plastic Cement Welding Compounds: 250 g/L.

Plastic Cement Welding Compounds: 250 g/
 ABS Welding Compounds: 325 g/L.
 CPVC Welding Compounds: 490 g/L.
 PVC Welding Compounds: 510 g/L.
 Adhesive Primer for Plastic: 550 g/L.

Adnesive Primer for Plastic: 550 g/L.
 Sheet-Applied Rubber Lining Adhesives: 850 g/L.
 Aerosol Adhesive, General-Purpose Mist Spray: 65 percent by weight.
 Aerosol Adhesive, General-Purpose Web Spray: 55 percent by weight.
 Special-Purpose Aerosol Adhesives (All Types): 70 percent by weight.
 Other Adhesives: 250 g/L.

Architectural Sealants: 250 g/L.
 Nonmembrane Roof Sealants: 300 g/L.
 Single-Ply Roof Membrane Sealants: 450 g/L.
 Other Sealants: 420 g/L.
 Sealant Primers for Nonporous Substrates: 250 g/L.
 Sealant Primers for Porous Substrates: 775 g/L.
 Modified Bituminous Sealant Primers: 500 g/L.

39. Other Sealant Primers: 750 g/L.

E. Adhesives and Sealants: For field applications that are inside weatherproofing system, 90 percent of adhesives and sealants shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

F. Flooring: Flooring shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

If retaining "Composite Wood, Agrifiber Products, and Adhesives" Paragraph below, coordinate with

If retaining "Composite Wood, Agrifiber Products, and Adhesives" Paragraph below, coordinate with Sections where composite wood products are specified to avoid conflicting requirements in those Sections.

G. Composite Wood, Agrifiber Products, and Adhesives: Shall be made using ultra-low-emitting formaldehyde resins as defined in California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no

to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no added formaldehyde.

H. Ceilings, Walls, and Thermal Insulation: Shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

Submittal (cont)

Submittal (cont)

exceeded:

PART 3 - EXECUTION

3.1 NONSMOKING BUILDING

A. Smoking is not permitted within the building or within 25 ft. of entrances, operable windows, or outdoor-air intakes.

3.2 CONSTRUCTION INDOOR-AIR-QUALITY (IAQ) MANAGEMENT

A. Comply with SMACNA's "SMACNA IAQ Guideline for Occupied Buildings under Construction."

Coordinate first subparagraph below with Section 015000 "Temporary Facilities and Controls."

Identify air handlers and associated return-air inlets authorized by Owner for use during construction

1. If Owner authorizes use of permanent heating, cooling, and ventilating systems during construction period as specified in Section 01 5000 "Temporary Facilities and Controls," install MERV 8 filter media at each return-air inlet for the air-handling system used during construction.

2. Replace air filters immediately prior to occupancy with new filters specified in

Section 23 4100 "Particulate Air Filtration."

3.3 INDOOR-AIR-QUALITY (IAQ) ASSESSMENT

A. Air-Quality Testing: Engage testing agency to perform the following:

The EPA standard referenced in first subparagraph below is available from NTIS; (800) 553-6847 with PB90200288 ordering number.

Conduct baseline indoor-air-quality testing, after construction ends and prior to occupancy, using testing protocols consistent with the EPA's "Compendium of Methods for the Determination of Air Pollutants in Indoor Air," and as additionally detailed in USGBC's "Green Building Design and Construction Reference Guide."
 Demonstrate that the contaminant maximum concentrations listed below are not

Formaldehyde: 27 ppb.
 Particulates (PM10): 50 mcg/cu. m.
 Ozone: 0.075 ppm, according to ASTM D5149
 Total Volatile Organic Compounds (TVOC): 500 mcg/cu. m.
 Carbon Monoxide: 9 ppm and no greater than 2 ppm above outdoor levels.
 Target Chemicals in California Department of Public Health

"Standard Method for the Testing and Evaluations of Volatile

Environmental Chambers," Table 4-1 (except formaldehyde).

Organic Chemical Emissions from Indoor Sources Using

3. For each sampling point where the maximum concentration limits are exceeded, conduct additional flush-out with outside air and retest the specific parameter(s) exceeded to indicate the requirements are achieved. Repeat procedure until all requirements have been met. When retesting noncomplying building areas, take samples from same locations as in the first test.

4. Air-sample testing shall be conducted as follows: All measurements shall be conducted prior to occupancy but during normal occupied hours, and with building ventilation system starting at the normal daily start time and operated at the minimum outside airflow rate for the occupied mode throughout the duration of the air testing. 8. All interior finishes, such as millwork, doors, paint, carpet, acoustic tiles, and movable furnishings (e.g., workstations, partitions), must be installed, and major VOC punch list items must be finished. 9. The number of sampling locations varies depending on the size of building and number of ventilation systems. Identify at least one location per ventilation system; at least one location per floor of the building; and at least one location per space type. To determine a sampling protocol, identify and group spaces (or floors) that are very similar in their construction, finishes, configuration, size, and HVAC systems. Randomly select one out of every seven identical spaces to include in the testing. In addition, for buildings with a large number of identical spaces (more than 21 spaces in a sample group), test a minimum of three spaces in the sample group.

10. Air samples shall be collected between 3 and 6 feet (0.9 and 1.8 m) from the floor to represent the breathing zone of occupants and for a duration lasting a minimum of 65 minutes.

B. Flush-Out:
 Project's mechanical engineer of record should verify that HVAC system design and equipment indicated are capable of delivering flush-out indicated. Provide HVAC system and equipment operating information necessary to achieve credit. If Project HVAC systems and equipment cannot suit requirement, consider requiring temporary systems and equipment.
 1. After construction ends, prior to occupancy and with all interior finishes installed,

ft. of floor area while maintaining an internal temperature of at least 60 deg F and a relative humidity no higher than 60 percent.

In first subparagraph below, indicate operating procedure for each HVAC system and piece of

and the operating duration required for flush-out.

END OF SECTION 01 8113.14

equipment and the operating duration required for flush-out.

2. If occupancy is desired prior to flush-out completion, the space may be occupied following delivery of a minimum of 3500 cu. ft. of outdoor air per sq. ft. of floor area to the space. Once a space is occupied, it shall be ventilated at a minimum rate of 0.30 cfm per sq. ft. of outside air or the design minimum outside air rate, whichever is greater. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions shall be maintained until a total of 14,000 cu. ft./sq. ft. of outside air has been delivered to the space.

In subparagraph below, indicate operating procedure for each HVAC system and piece of equipment

perform a building flush-out by supplying a total volume of 14,000 cu. ft. of outdoor air per sq.

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160 WEST FORT, SUITE 400

DETROIT, MICHIGAN 48226

ROSSETTI.COM 313.463.5151

PROJECT

West Michigan
Hispanic
Chamber of
Commerce HQ
1111 Godfrey Ave. SW

Grand Rapids, MI 49507

CONSULTANT

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 # DESCRIPTION
 DATE

 1 Bid Set
 02/07/2025

 2 Addendum 1
 02/20/2025

KEY PLAN

SHEET TITLE

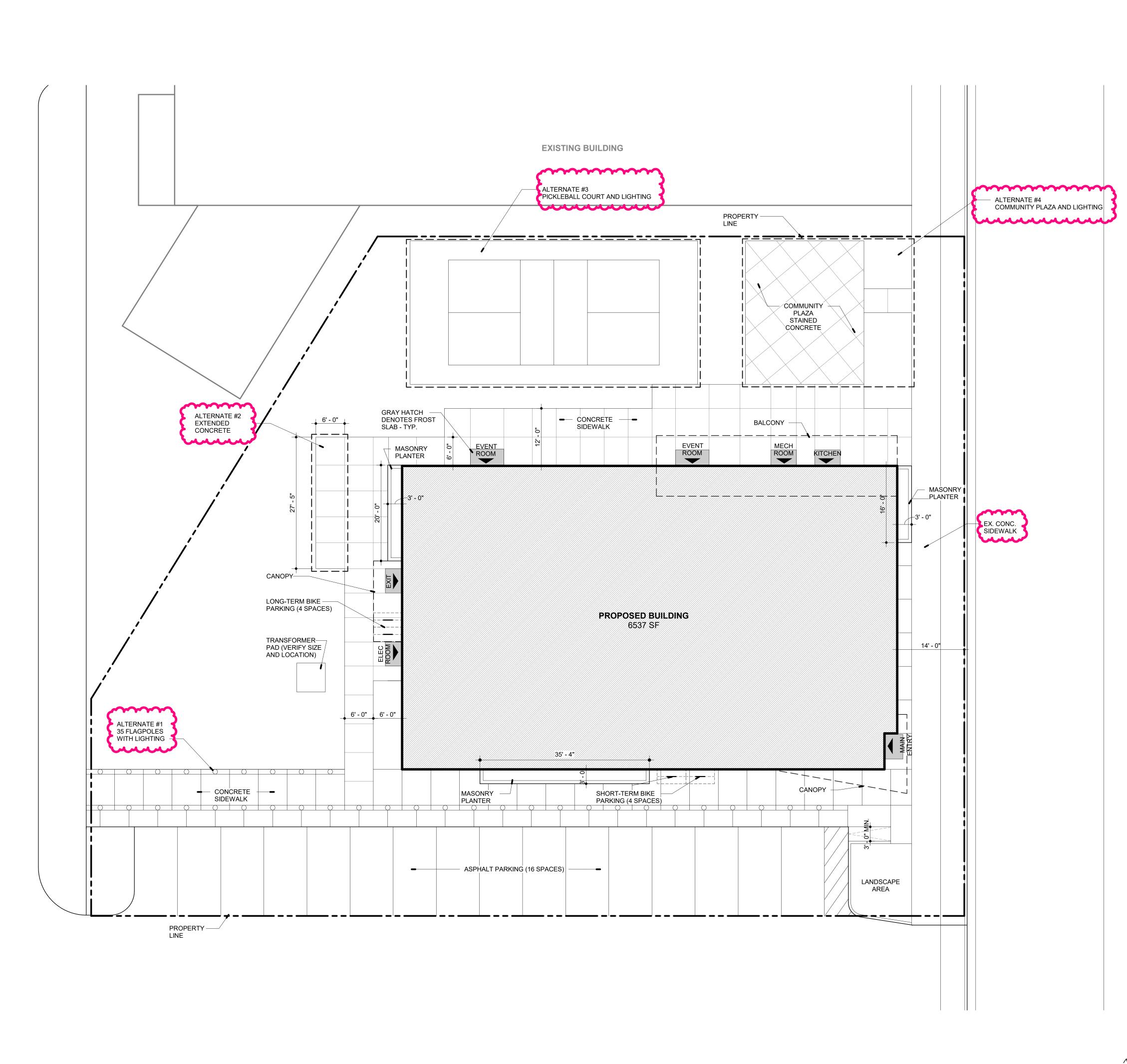
LEED Specifications

Scale: 1/16" = 1'-0"

0'

PROJECT # 2024-010.00

SHEET#



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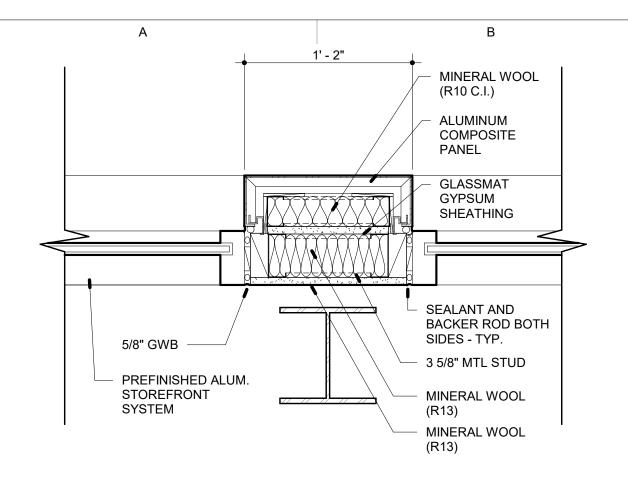
KEY PLAN

SHEET TITLE Architectural Site Plan

PROJECT# 2024-010.00

SHEET# **A-001**

A8 Site Plan **A-001** SCALE: 1" = 10'-0"



A2 ENLARGED PLAN - TYP. STOREFRONT JAMB @ ACP PANELS **A-101** SCALE: 1 1/2" = 1'-0"

FLOOR PLAN GENERAL NOTES

- A. FLOOR PLAN NOTES APPLY TO ALL FLOOR PLAN SHEETS. B. INTERIOR PARTITIONS SHOWN WITH CONCRETE HATCH PATTERN ARE 8 INCH THICK PRECAST CONCRETE PANELS, FULL HEIGHT TO BOTTOM OF
- STRUCTURAL ROOF DECK, UNLESS NOTED OTHERWISE
 C. ALL FIRE RATED PARTITIONS TO EXTEND FULL HEIGHT TO BOTTOM STRUCTURAL DECK WITH 3" ACOUSTICAL INSULATION (.Z). NON FIRE RATED PARTITIONS TO EXTEND ONE LAYER TO BOTTOM OF STRUCTURAL DECK WITH 3" ACOUSTICAL INSULATION (.W), UNLESS NOTED OTHERWISE. REFER TO SHEET A-601 FOR PARTITION TYPES AND
- D. PROVISIONS SHALL BE MADE AT FULL HEIGHT NONBEARING PARTITIONS FOR 1-INCH VERTICAL MOVEMENT OF BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO PARTITIONS. FILL IRREGULARITIES BETWEEN TOP OF PARTITIONS AND DECK ABOVE WITH FIRESTOPPING SYSTEM AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE PARTITIONS.
- E. SEAL PENETRATIONS THROUGH FIRE-RESISTANCE-RATED CONSTRUCTIONS WITH PENETRATION FIRESTOPPING MATERIAL AS REQUIRED TO ACHIEVE RESPECTIVE FIRE-RESISTIVE RATING AND SMOKE STOPPAGE. F. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN STEEL STUD PARTITIONS FOR PROPER ANCHORAGE OF PARTITIONS ATTACHED ITEMS; I.E. TOILET

FURNISHING, WALL-MOUNTED FIXTURES EQUIPMENT AND SPECIALITIES,

MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, G. GYPSUM BOARD AND PLASTER SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE INDICATED ON DRAWINGS AND/OR AS

ACCESSORIES, TOILET PARTITIONS, CABINETS, SHELVINGS,

- DESCRIBED IN THE SPECIFICATIONS. H. INCLUDE OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER FURNISHED, OWNER EXISTING AND CONTRACTOR INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND COORDINATE WITH
- OWNER TO ACCOMMODATE THESE ITEMS. I. COORDINATE MECHANICAL CHASE SIZES WITH MECHANICAL
- CONTRACTOR. J. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS' SIZE

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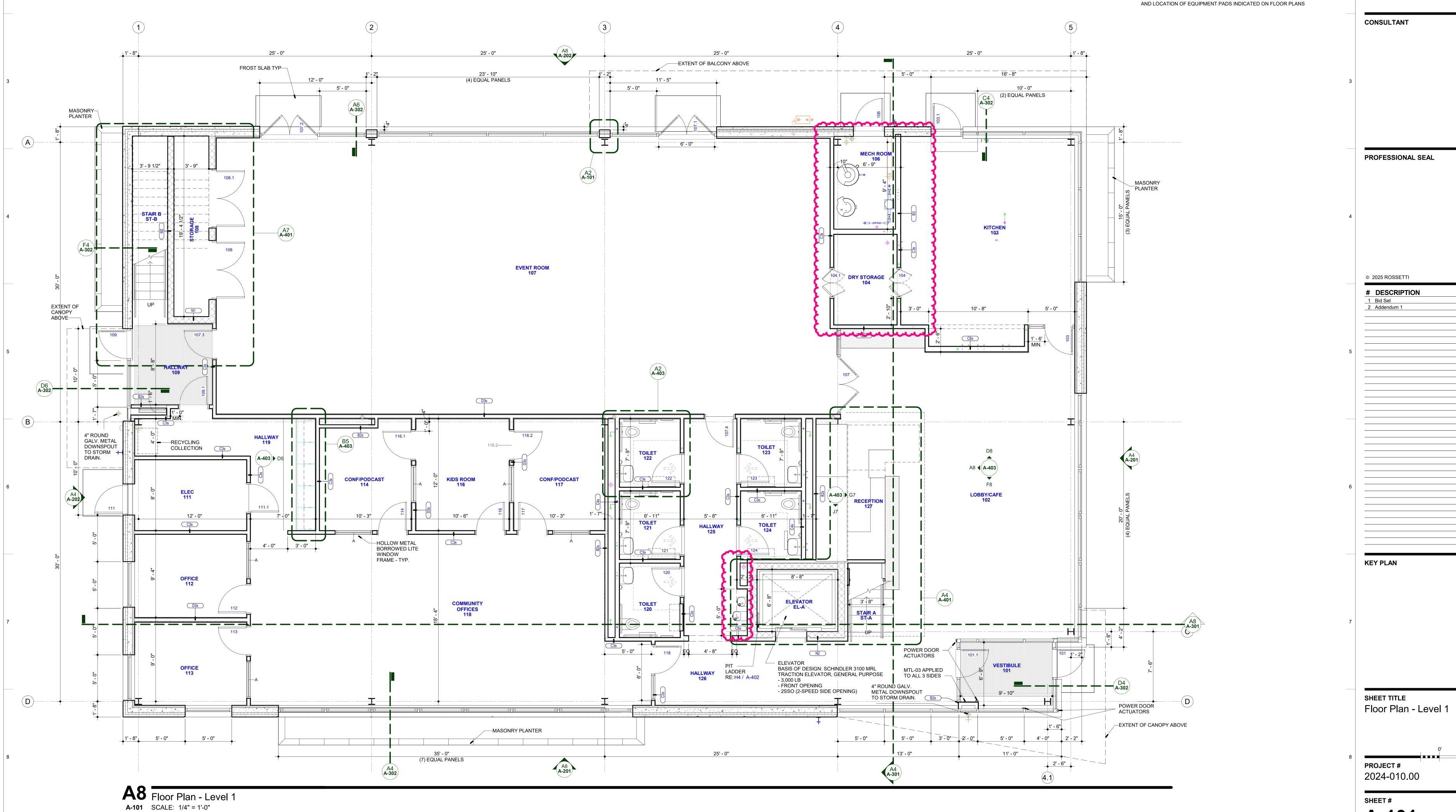
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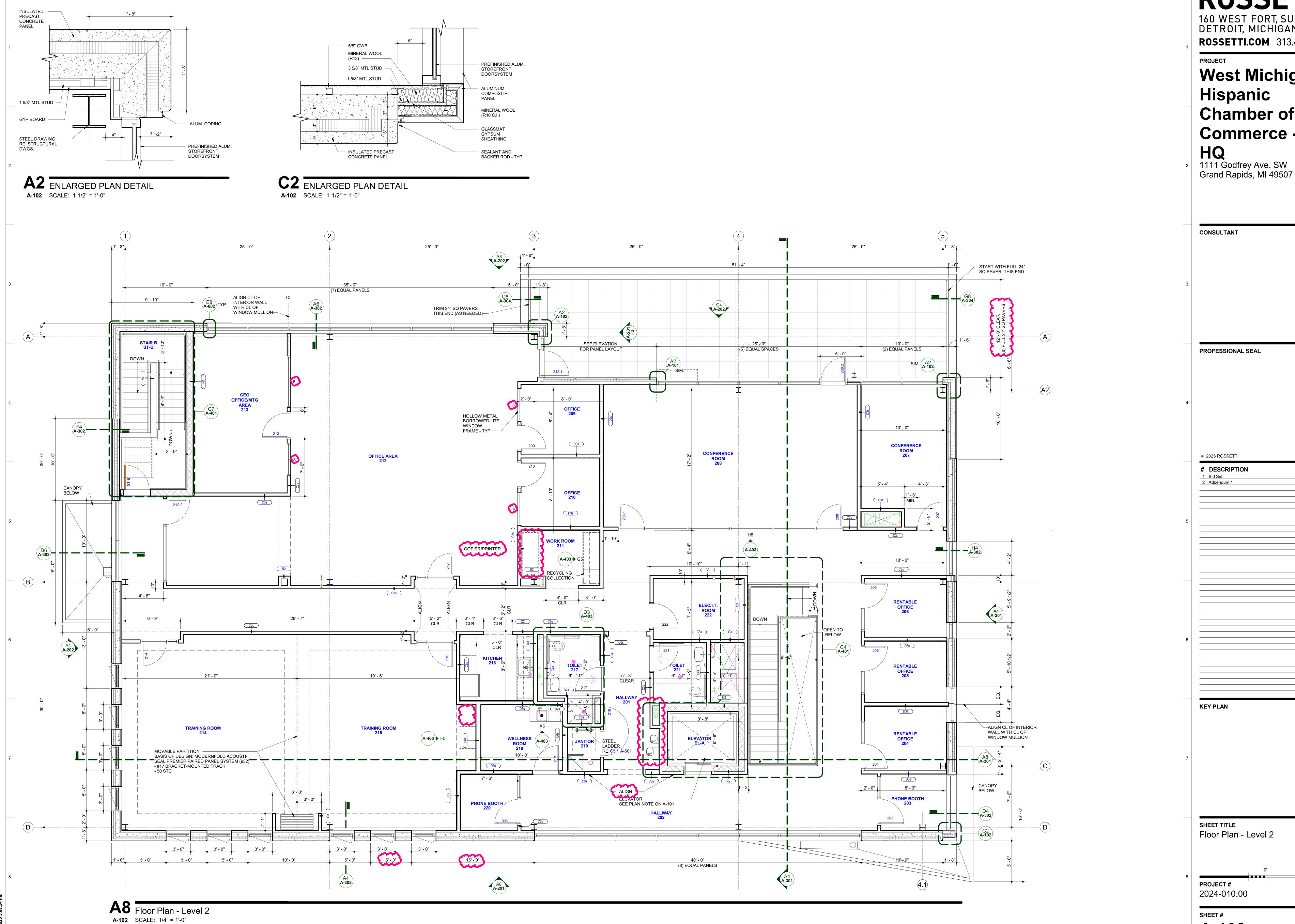
1111 Godfrey Ave. SW Grand Rapids, MI 49507

02/07/2025

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

SHEET# A-101



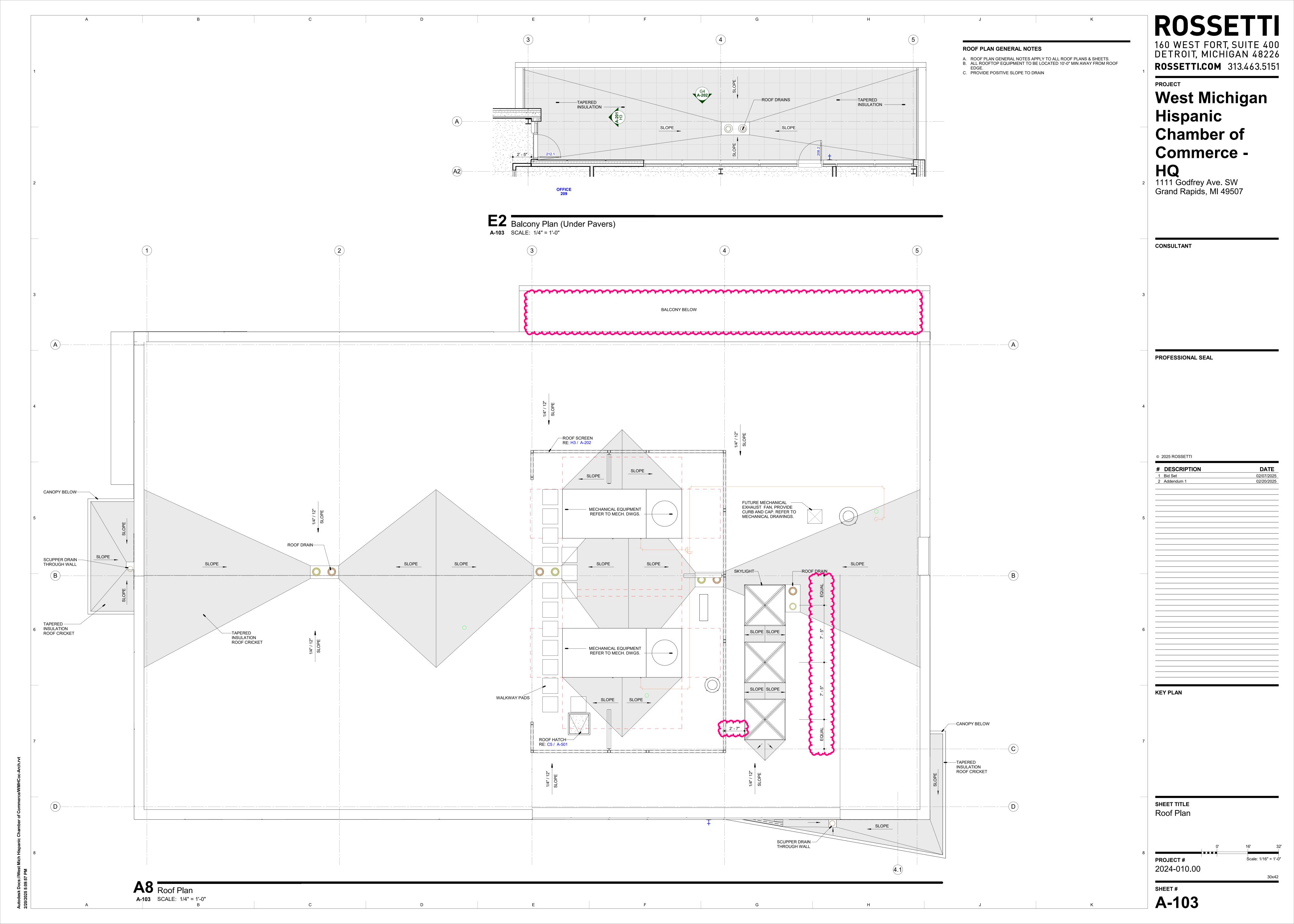


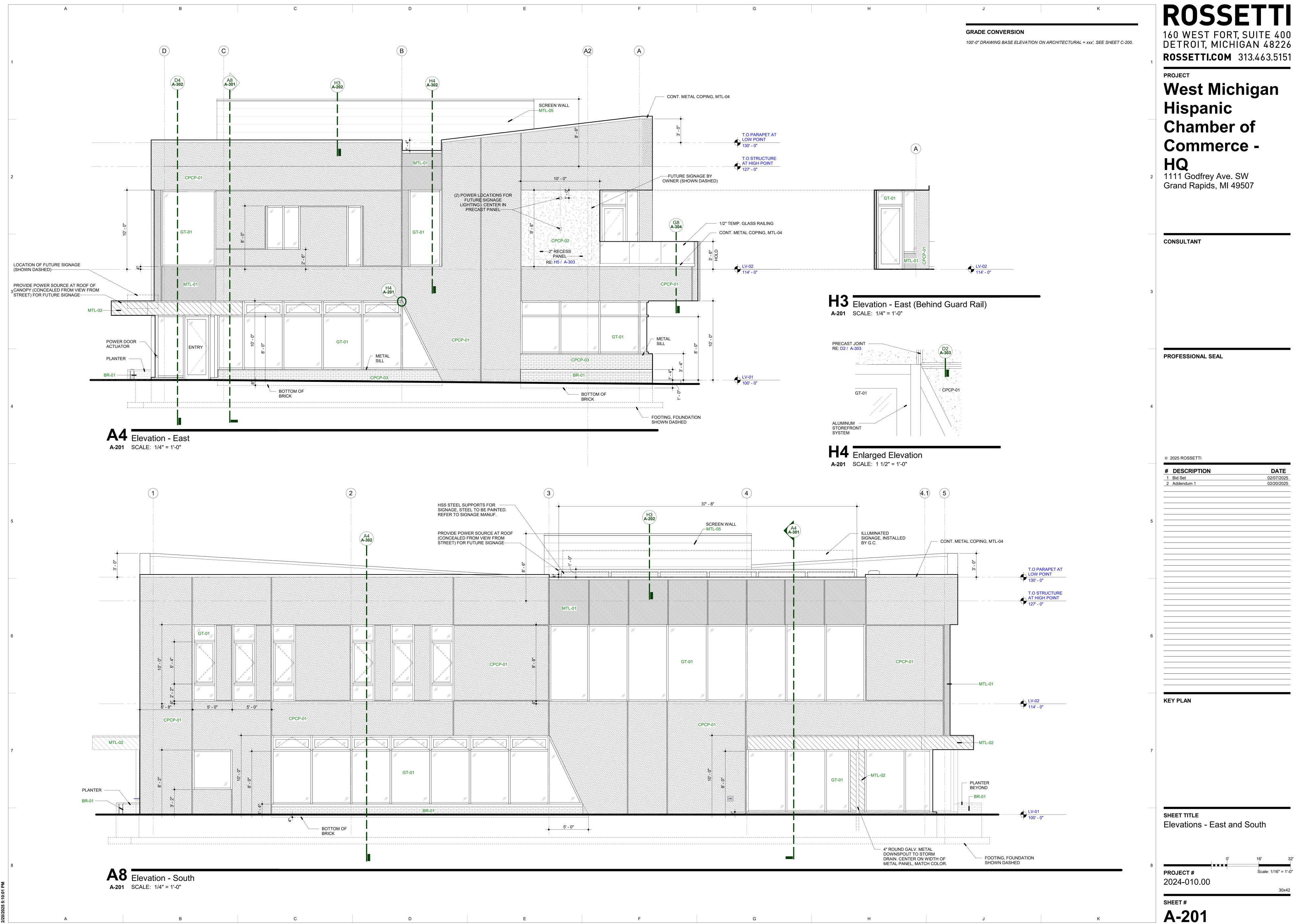
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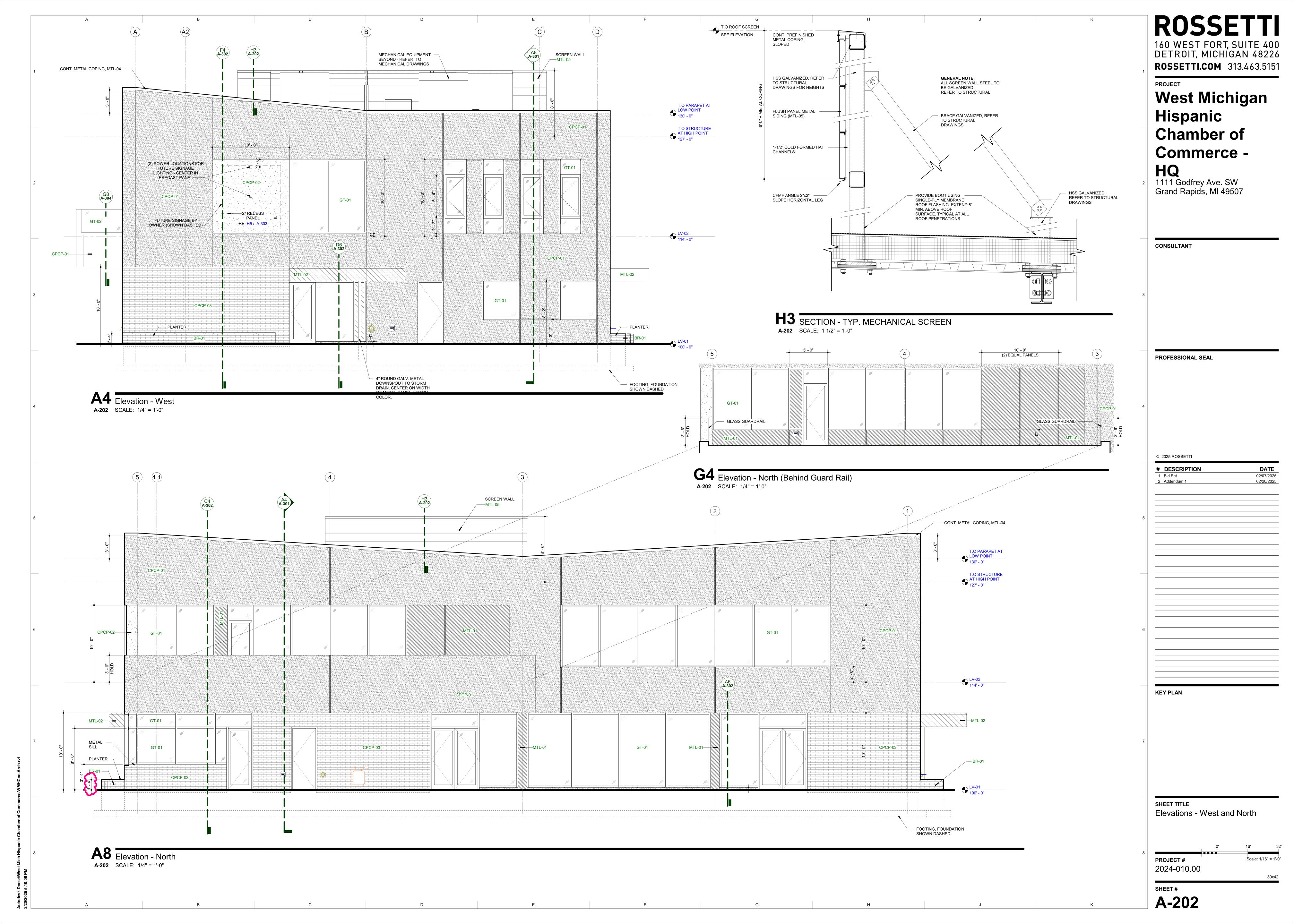
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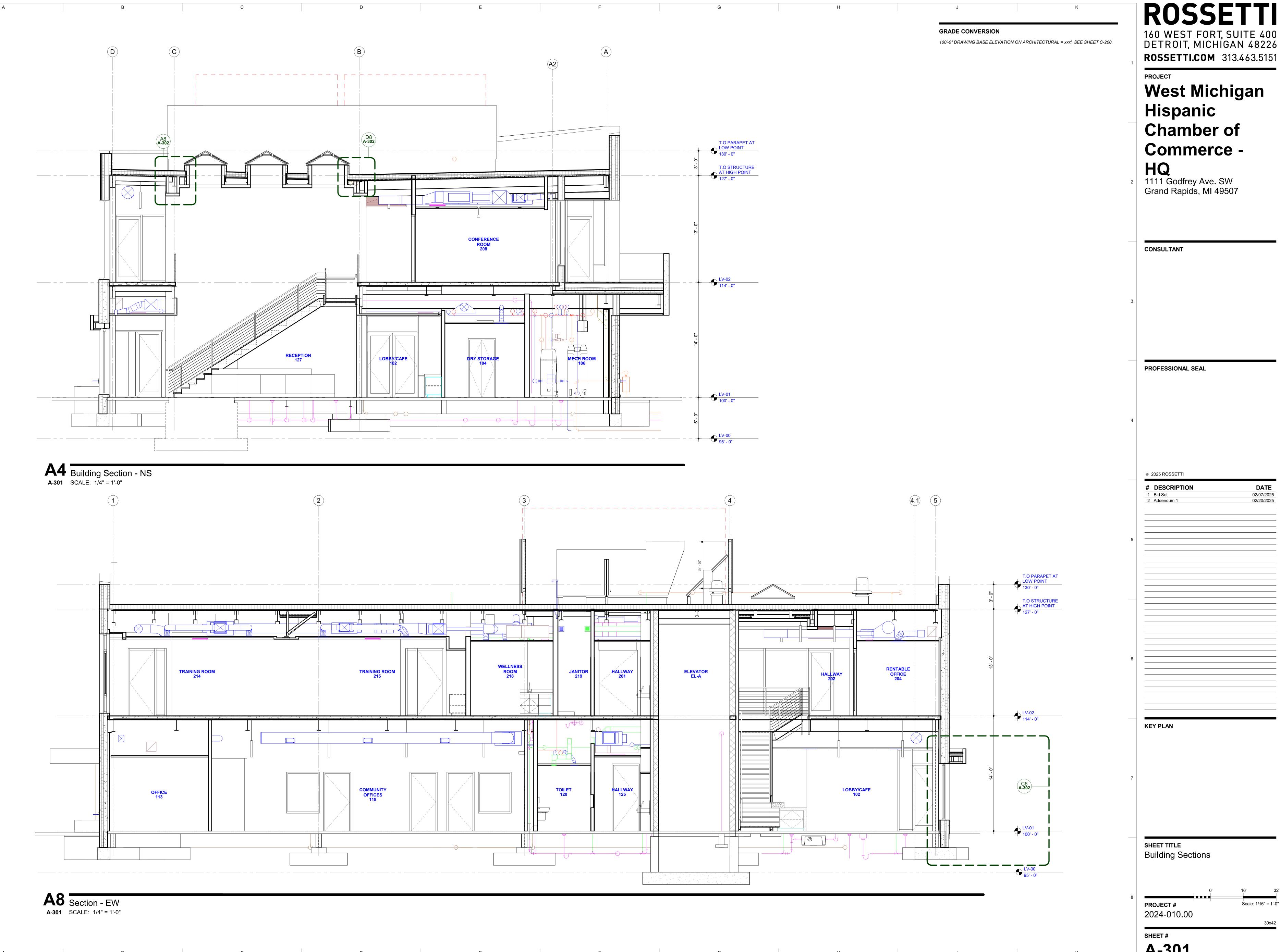
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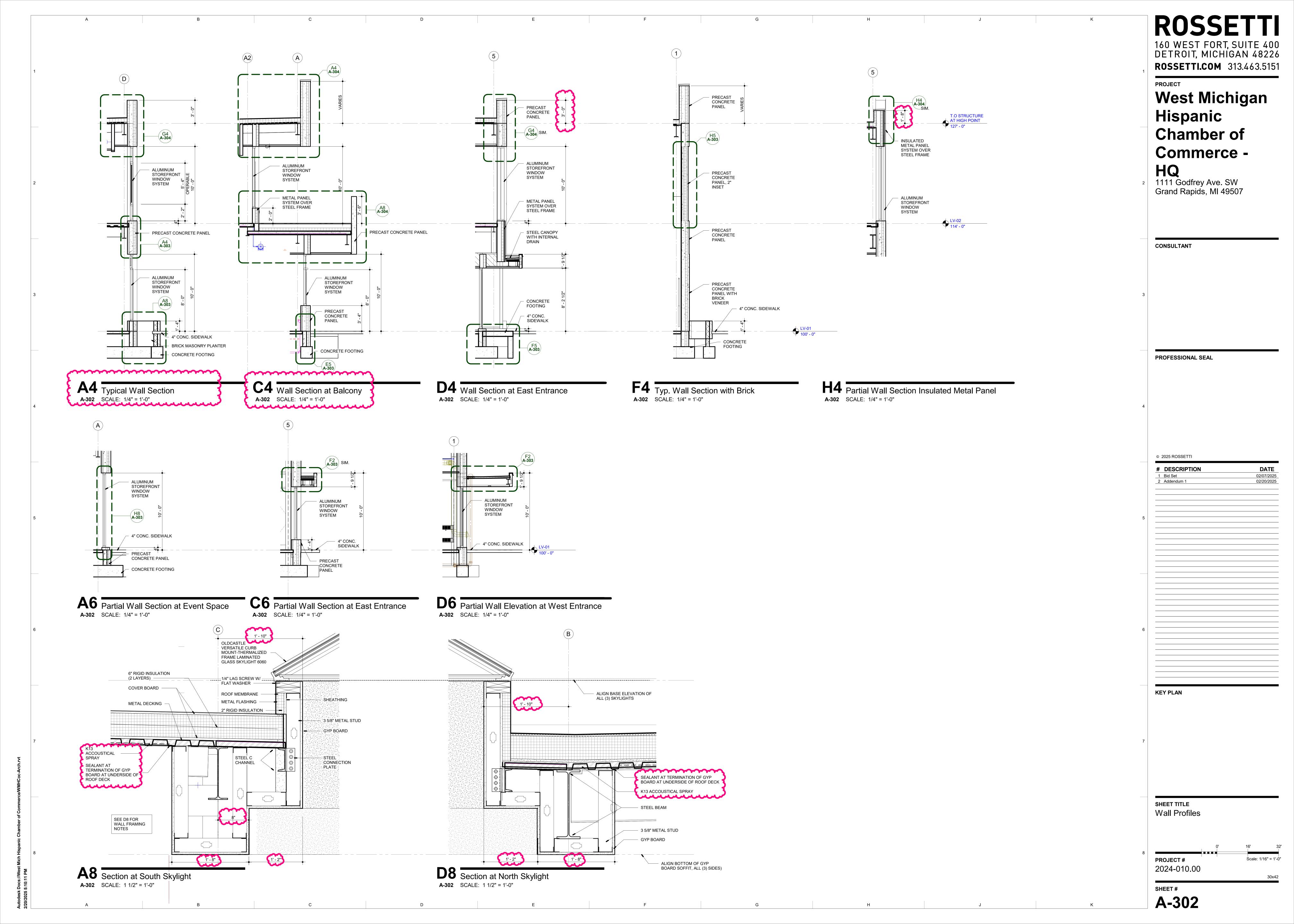


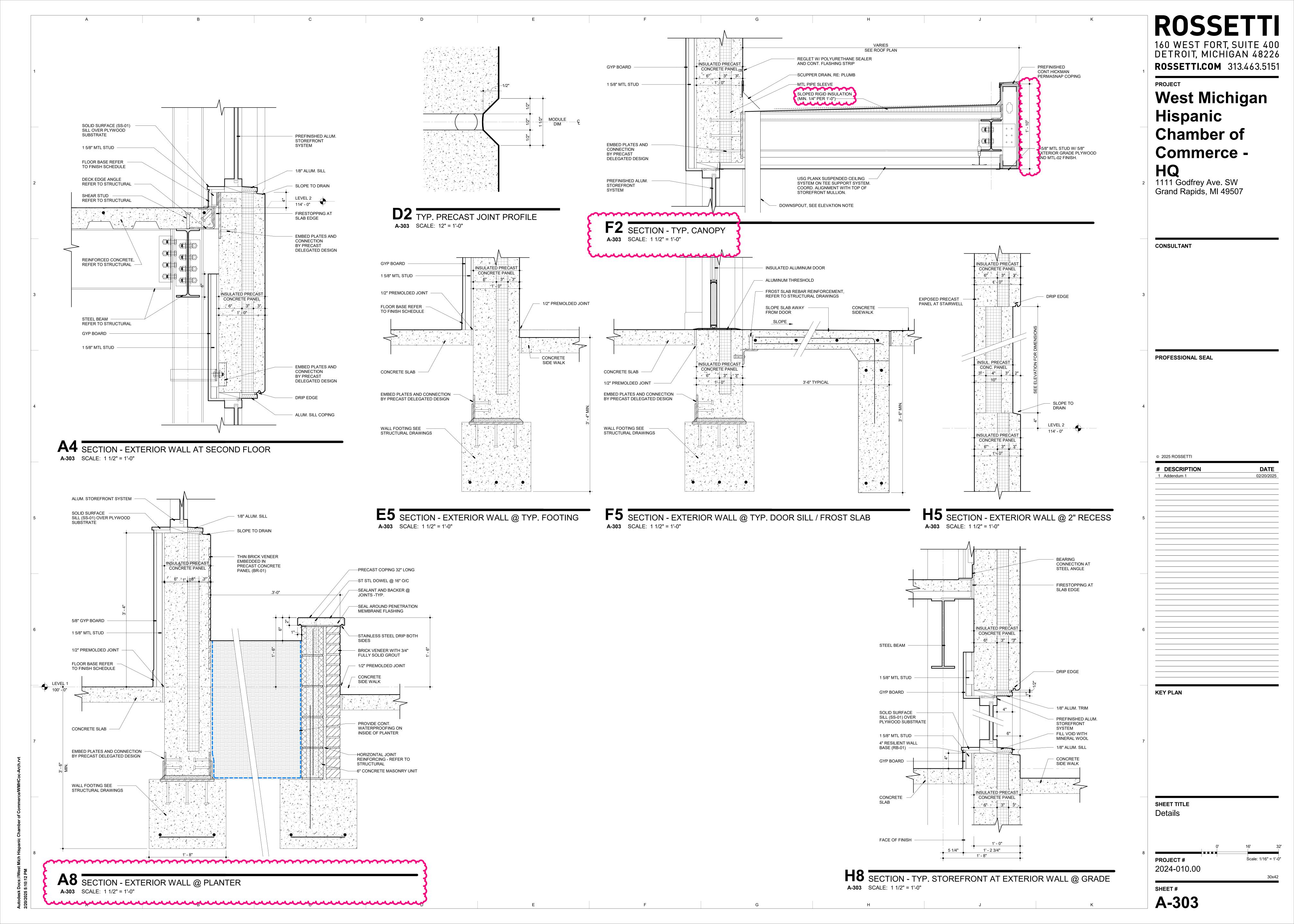


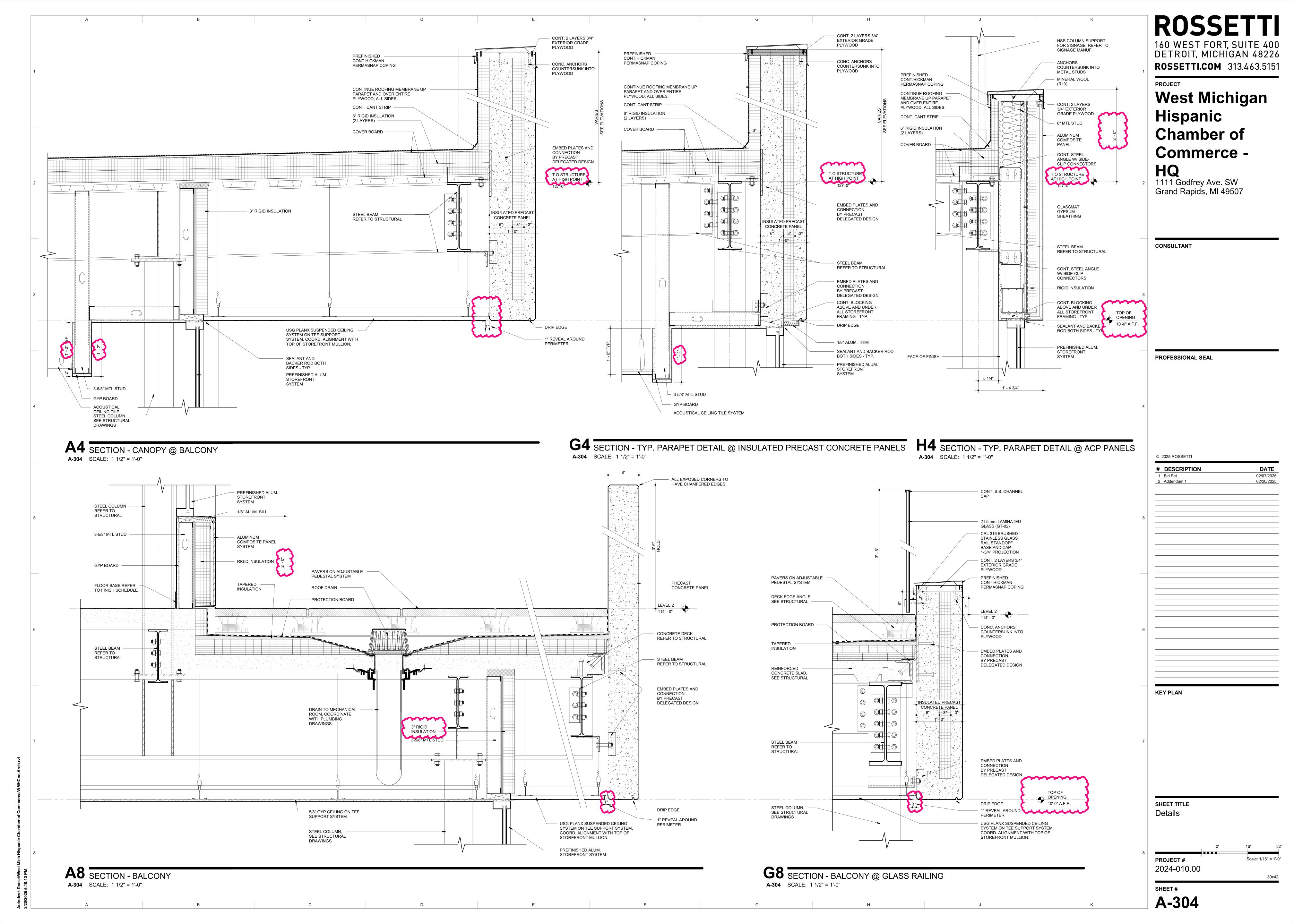


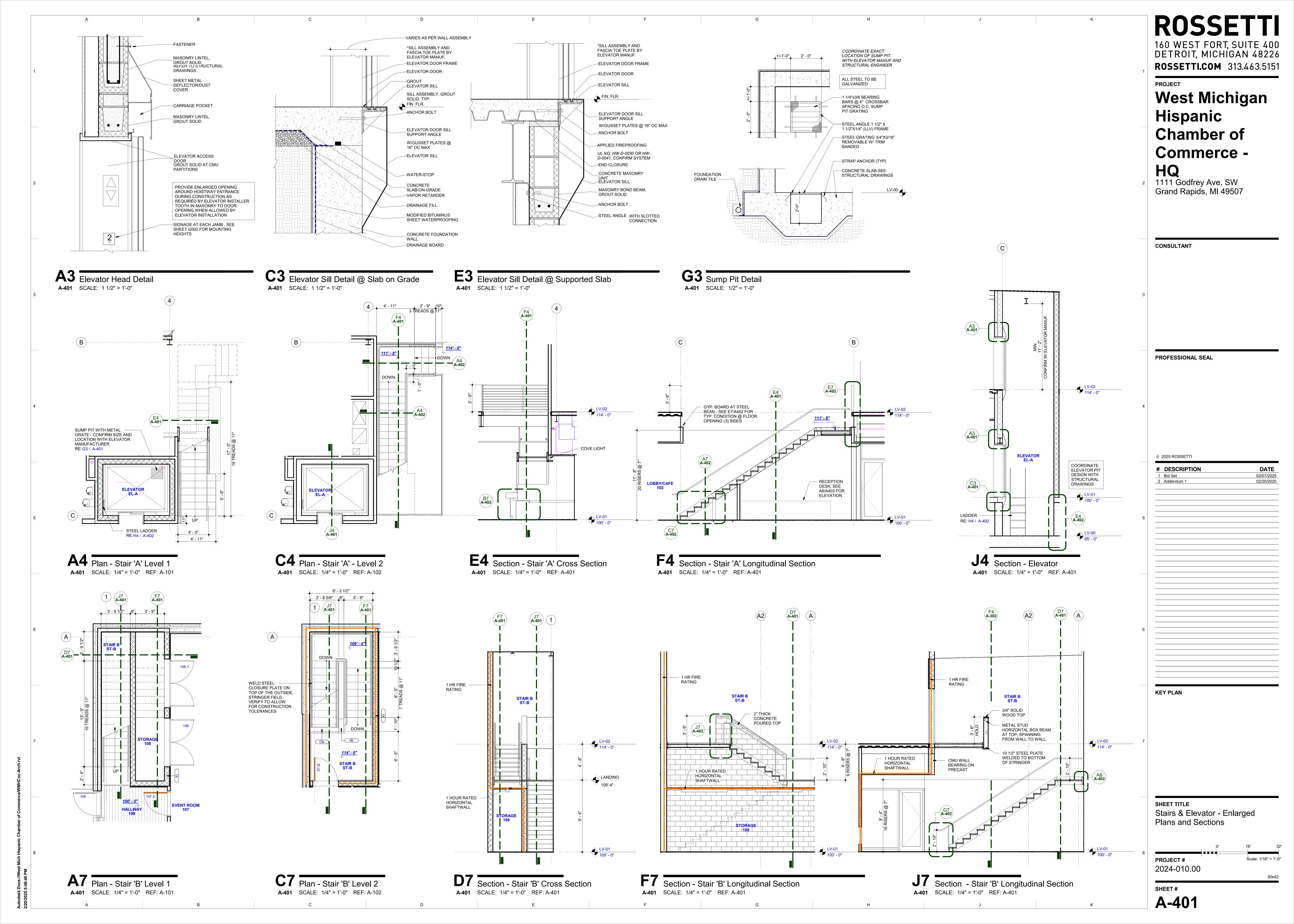
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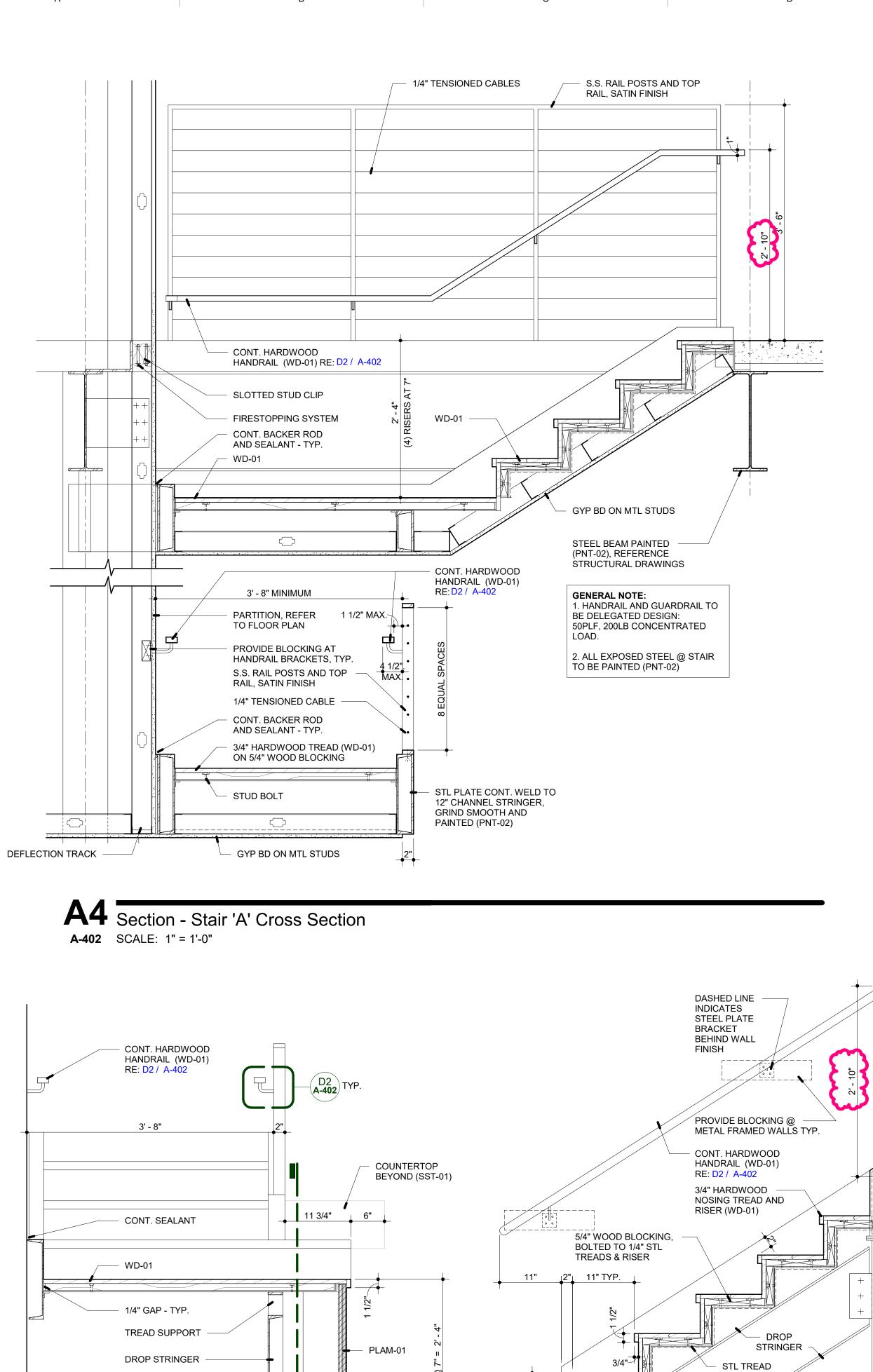
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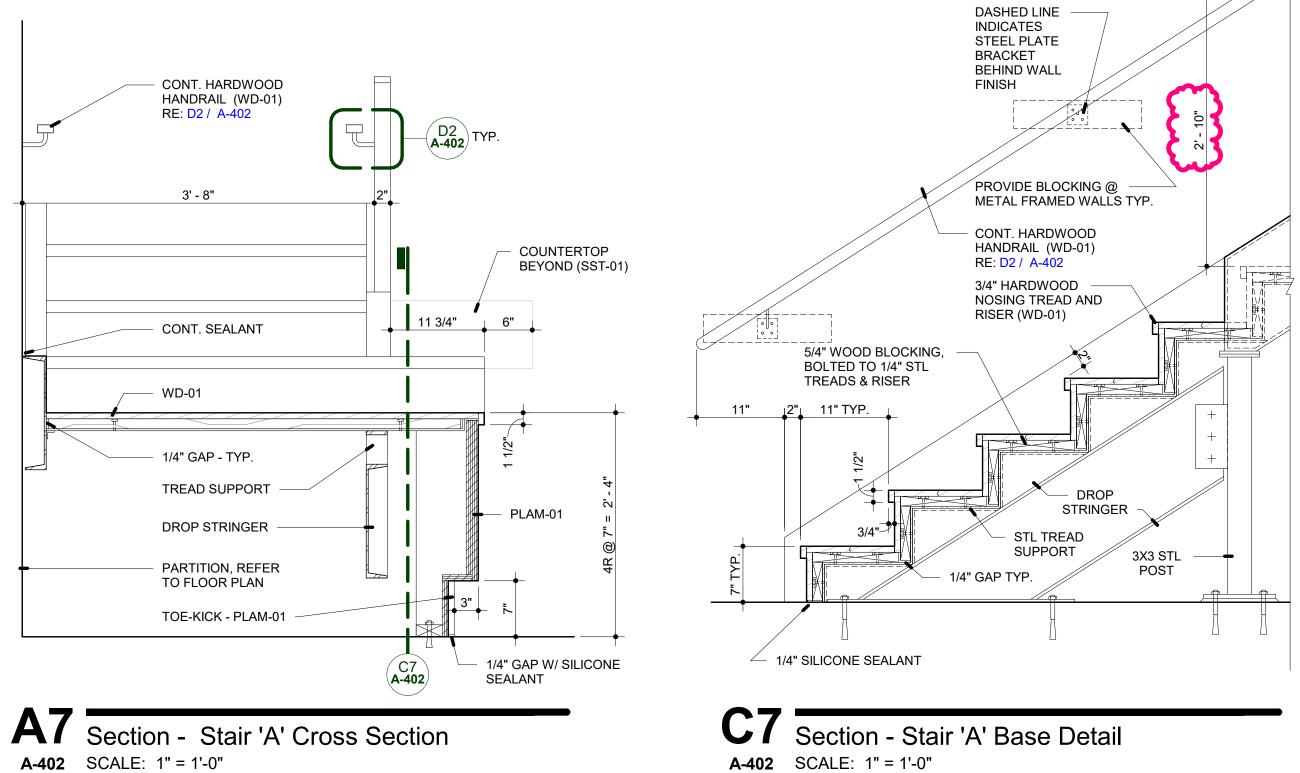




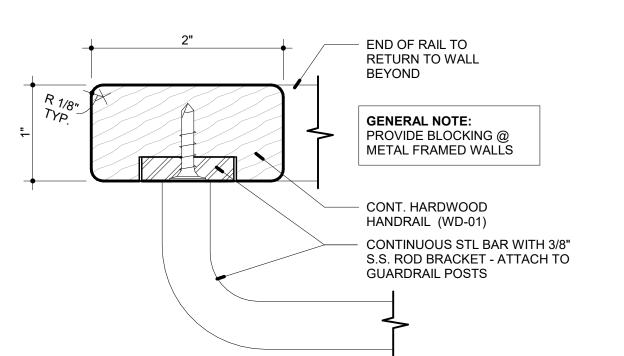






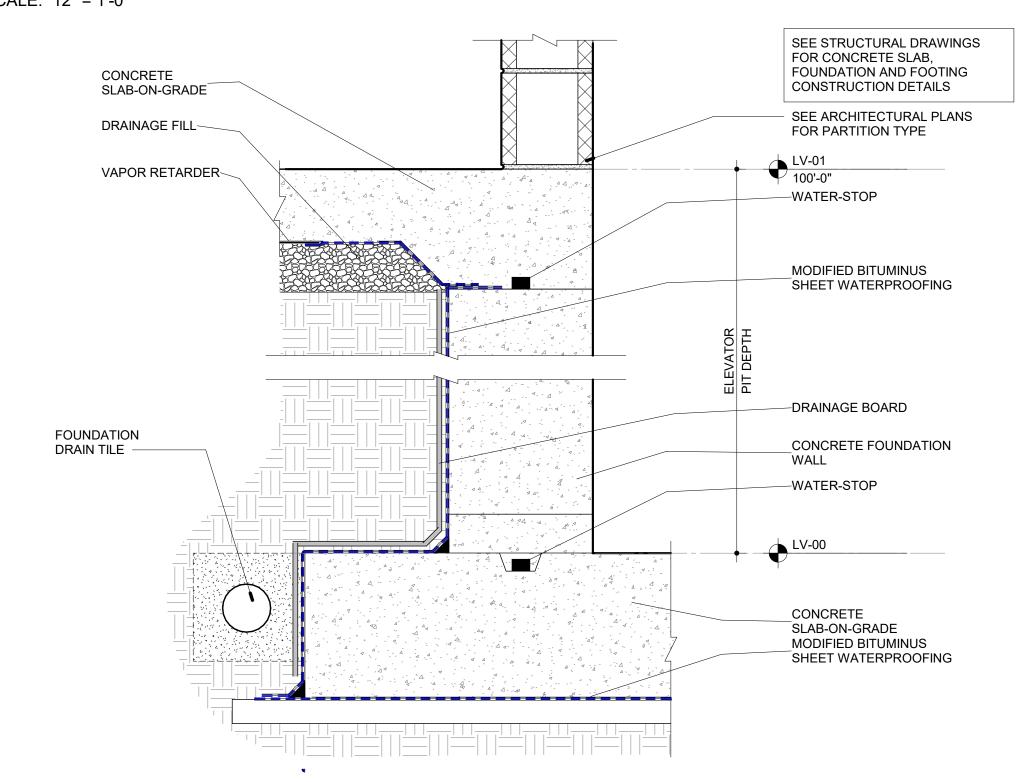


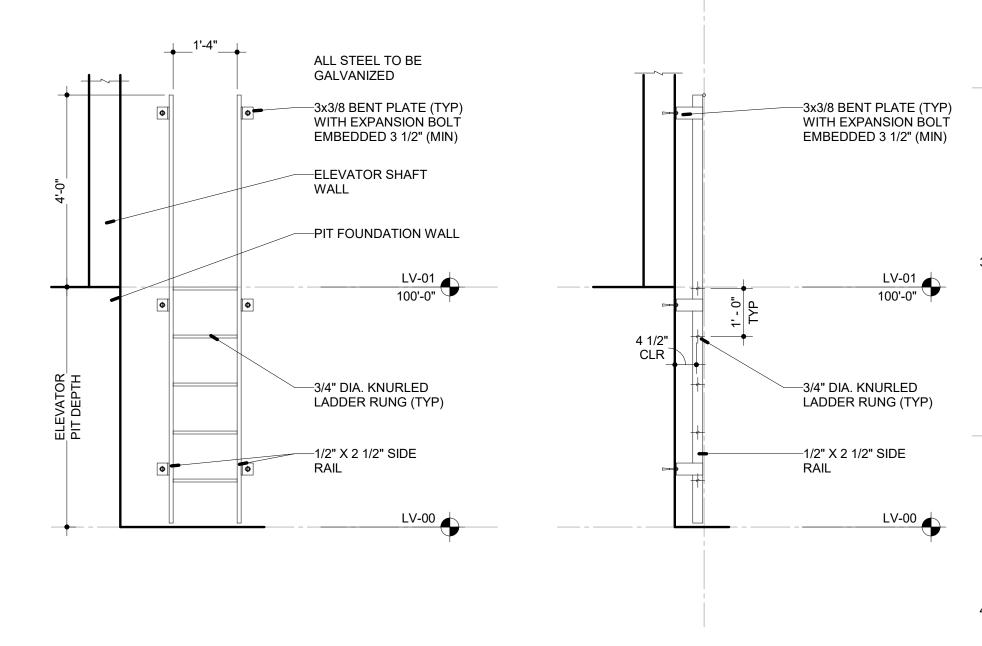
A-402 SCALE: 1" = 1'-0"



A-402 SCALE: 1" = 1'-0"

Section - Typ. Stair 'A' Handrail **A-402** SCALE: 12" = 1'-0"

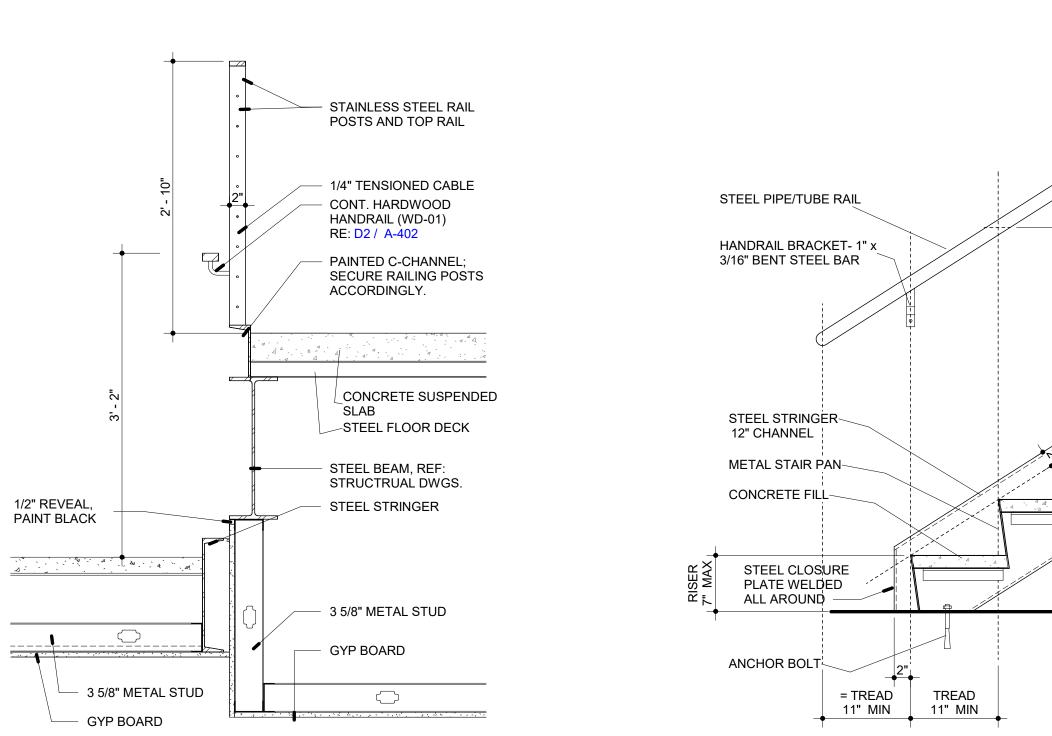




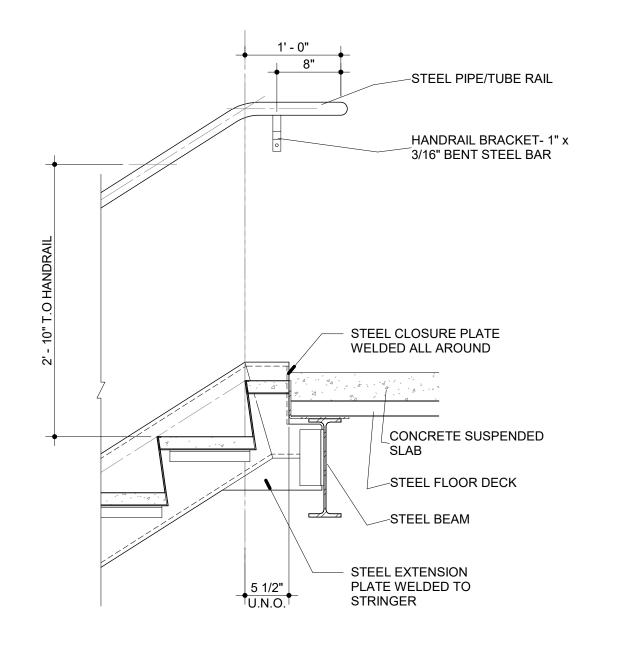
Elevation / Section - Pit Ladder Detail

A-402 SCALE: 1/2" = 1'-0"

Section - Elevator Pit Detail **A-402** SCALE: 1 1/2" = 1'-0"



Section - Stair 'A' Connection to Concrete Slab G7 Section - Stair 'B' Base Detail @ Wall **A-402** SCALE: 1" = 1'-0"



Section - Stair 'B' Connection to Concrete Slab **A-402** SCALE: 1" = 1'-0"

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DATE # DESCRIPTION 02/07/2025 2 Addendum 1 02/20/2025 **KEY PLAN**

SHEET TITLE Typical Stair & Elevator Details

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

SHEET#

A-402

A8 Section - Stair 'B' Stringer at Interior Walls **A-402** SCALE: 1" = 1'-0"

INSULATED PRECAST CONCRETE PANEL

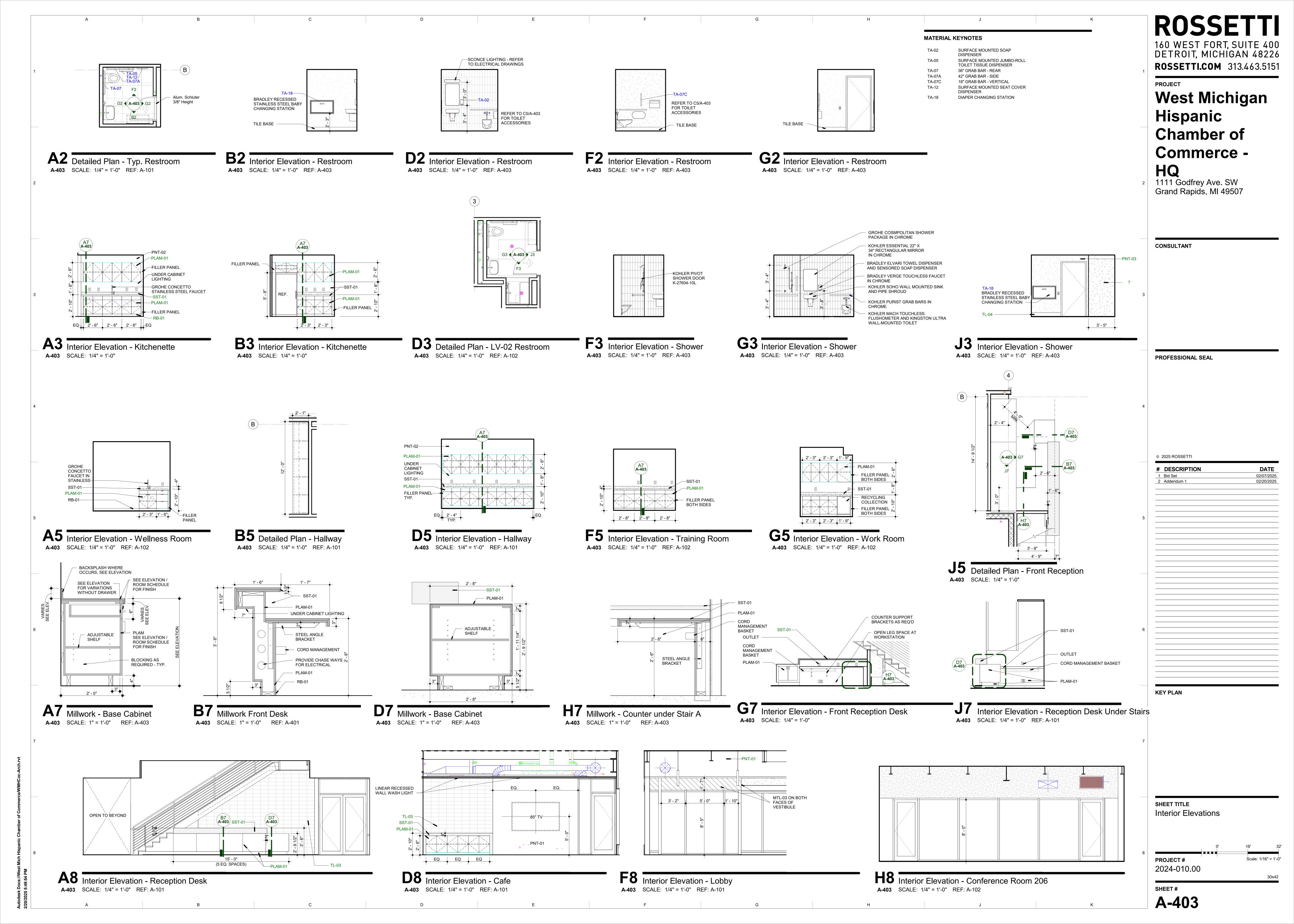
JOINT SEALANT

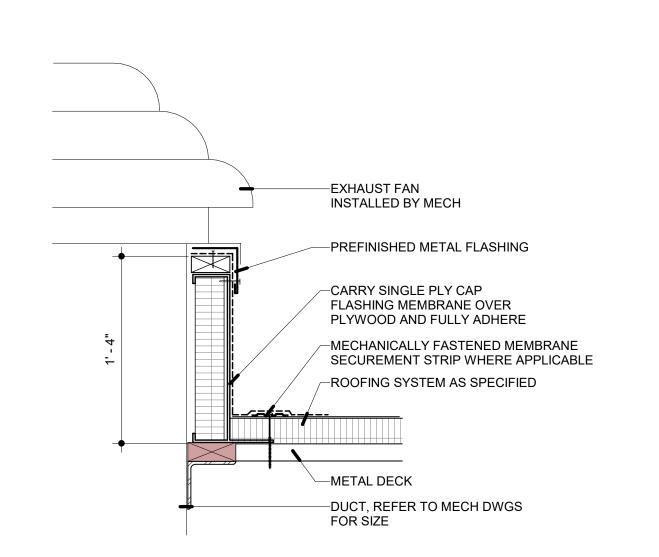
STEEL STRINGER

CONCRETE FILL

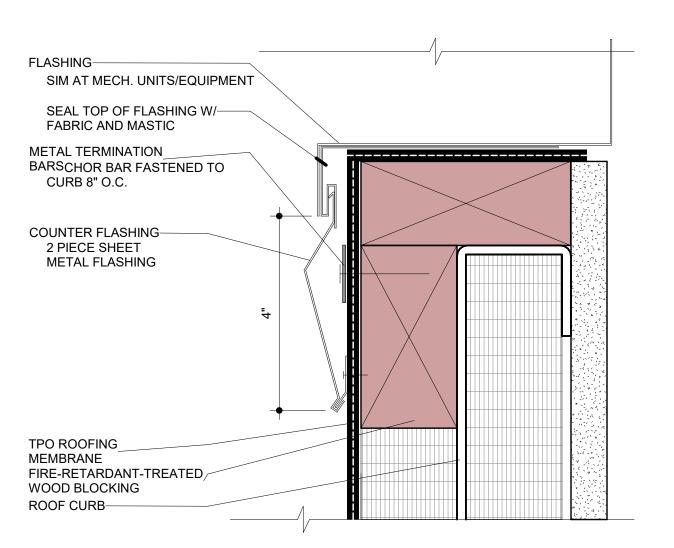
STEEL ANGLE-

ANCHOR BOLT-

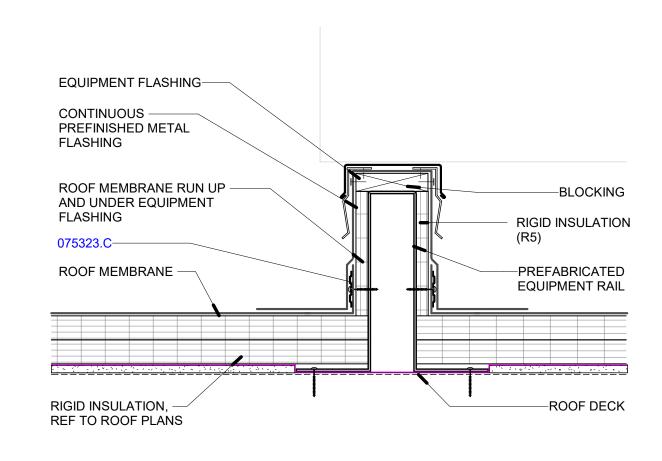




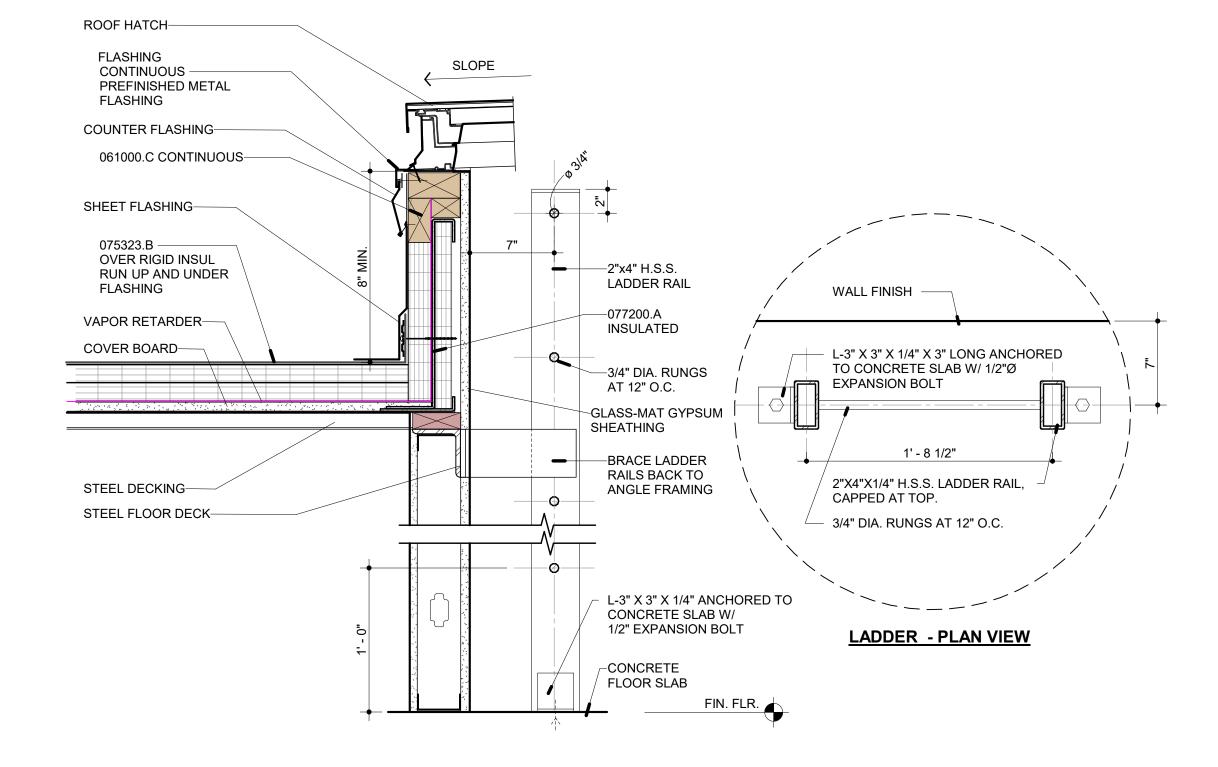
A3 EXHAUST FAN CURB **A-501** SCALE: 1 1/2" = 1'-0"



A5 TYP ROOF CURB ENLARGED DETAIL **A-501** SCALE: 6" = 1'-0"



TYP ROOF EQUIPMENT RAIL DETAIL **A-501** SCALE: 1 1/2" = 1'-0"



DECK MEMBRANE.

LIEU OF SEAM FASTENING PLATES FOR

MATERIAL KEYNOTES

053100.B STEEL ROOF DECK 053100.C STEEL FLOOR DECK

053100.A

075323.C

075323.D

075323.J

075323.M

075323.T

076200.A FLASHING

077200.A ROOF CURB 077200.C ROOF HATCH

STEEL DECKING

075323.B TPO ROOFING MEMBRANE

FASTENERS

076200.B COUNTER FLASHING

SHEET FLASHING

VAPOR RETARDER

ROOF INSULATION

COVER BOARD

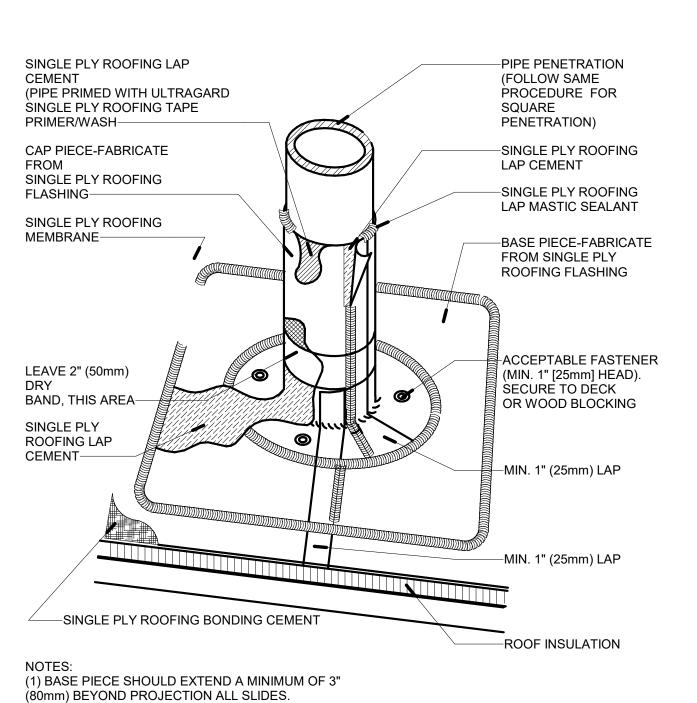
061600.A GLASS-MAT GYPSUM SHEATHING

METAL TERMINATION BARS

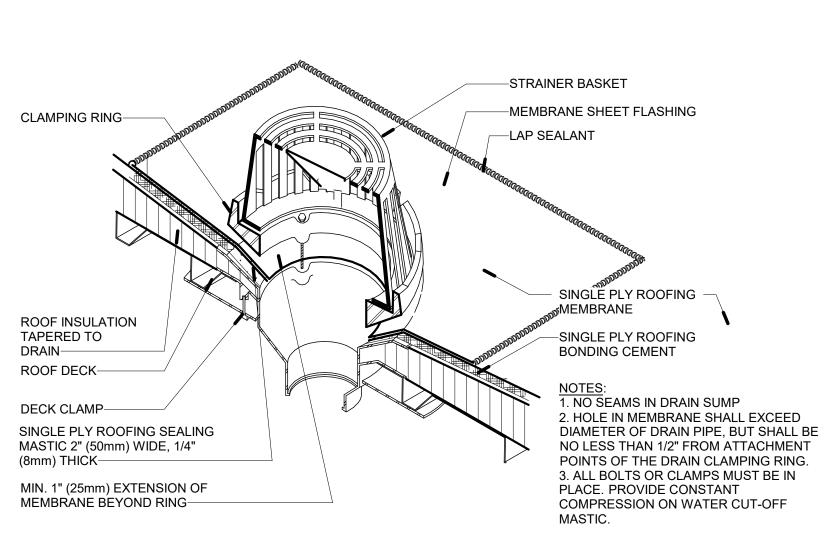
STEEL HOLLOW STRUCTURAL SECTION (HSS)

061000.B FIRE-RETARDANT-TREATED WOOD BLOCKING

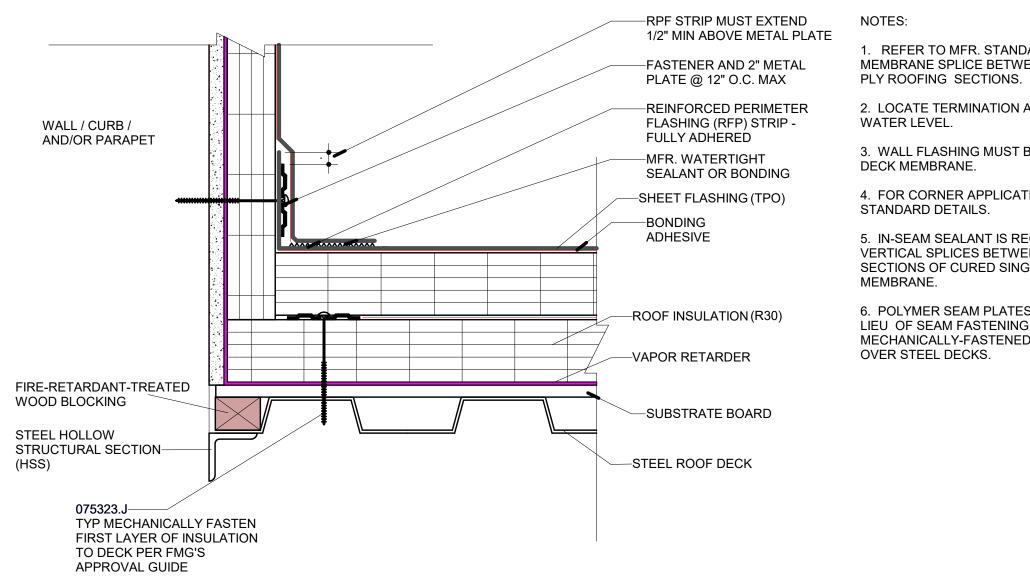
C5 ROOF HATCH & LADDER DETAIL **A-501** SCALE: 1 1/2" = 1'-0"



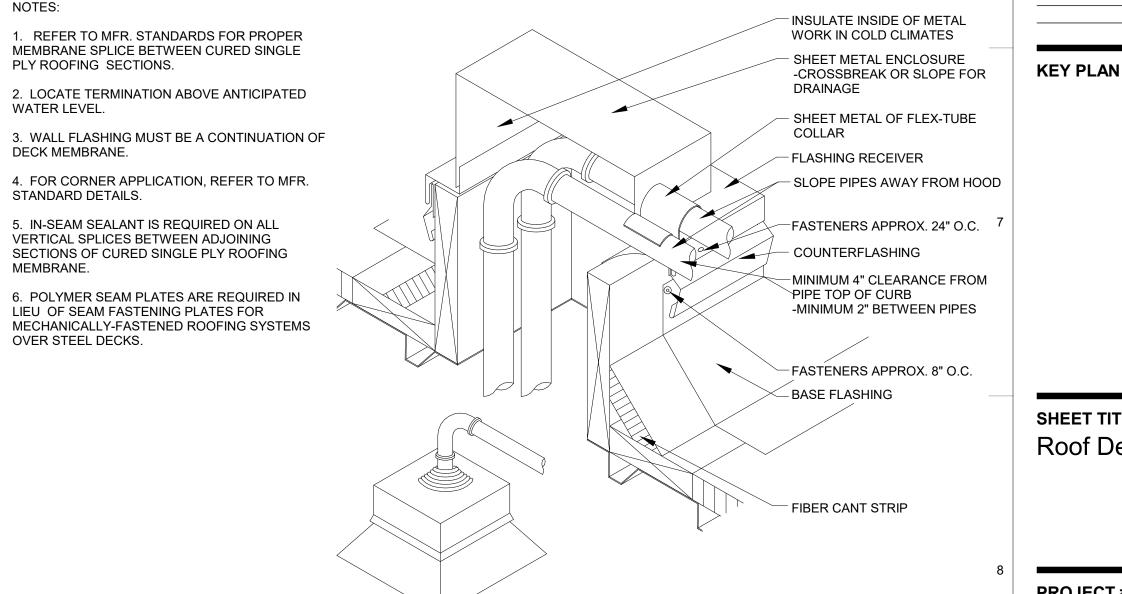
Ab roofing Piping Pentration Detail **A-501** SCALE: 1 1/2" = 1'-0"



ROOF DRAIN DETAIL (TPO) **A-501** SCALE: 1 1/2" = 1'-0"



RS-1 BASE TIE-IN SINGLE PLY ROOF FLASHING DETAIL **A-501** SCALE: 3" = 1'-0"



Jo Piping/Conduit through roof deck detail **A-501** SCALE: 1 1/2" = 1'-0"

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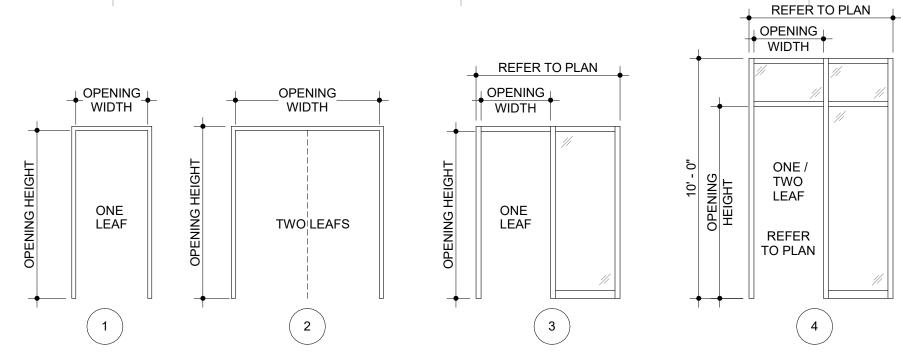
DESCRIPTION DATE 02/07/2025 2 Addendum 1 02/20/2025

SHEET TITLE **Roof Details**

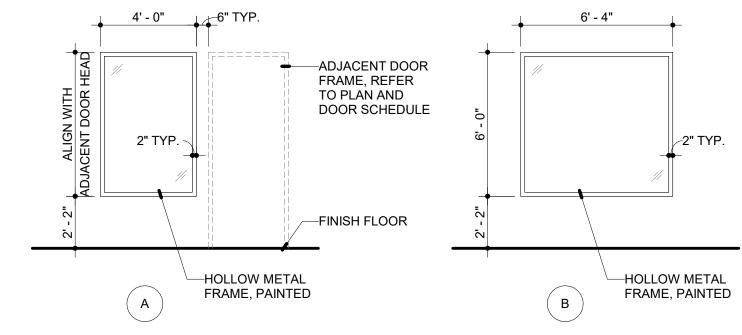
Scale: 1/16" = 1'-0" PROJECT# 2024-010.00

SHEET#

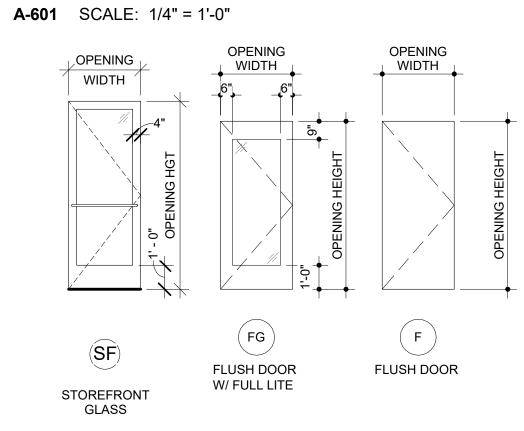
	END/KEY ROSv3.4	MANUEL OTHER	MODEL	MATERIAL ATTRIBUTES	DEMARKO
(EY	DESCRIPTION Acoustical Ceiling Tile	MANUFACTURER	MODEL	MATERIAL ATTRIBUTES Color: White Thickness: 3/4" Size: 24" x 24" Beveled Tegular	REMARKS
ACT-01	<u> </u>	Armstrong	Ultima	Installation15/16" Prelude Grid	
3R-01	Smooth Brick	Belden Brick	481-483 Smooth, Mortar MC58	Product#: Modular Color: 481-483 Smooth Height: 2 1/4" Thickness: 3 5/8" Contact: Gary Tenney gary@beldenbricksales.com (586-404-8195)	full width at planters
CONC-01	Concrete Slab Flooring			Texture: Fine Aggregate, Polished	Exposed concrete floor surfaces, as noted
CONC-02	Concrete Slab Flooring			Texture: Fine Aggregate, Flat	Mechanical and Electrical
CPCP-01	Composite Precast Concrete Panel	Fabcon Precast	6" Precast Conc + 3" Rigid Insulation + 3" Precast Conc	Color: Autumn (4%) pigment concrete panels Texture: Terracotta	Exterior Facade
CPCP-02	Composite Precast Concrete Panel	Fabcon Precast	3" Precast Conc + 4" Rigid Insulation + 3" Precast Conc		Exterior Facade
CPCP-03	Composite Precast Concrete Panel	Fabcon Precast, Belden Brick	1/2" Brick + 3" Precast Conc + 3" Rigid Insulation + 6" Precast Conc	Product#: Modular 5/8 Flat back Color: 481-483 Smooth Height: 2 1/4" Thickness: 5/8"	Exterior Facade
CPT-01	Carpet Tile	Interface	Etched Earth EE712	Color: 103454 Fossil Size: 19.69" x 19.69" InstallationMonolithic Contact: Cara Bogosian cara.bogosian@interface.com 248.214.2707	Offices and Conference Rooms
CPT-02	Walk-Off Mat	Construction Specialties	M1 No Frame, Recessed	Color: Anodized Mill, Black Heavy Duty Carpet Inserts	Vestibule
EC-02	Acoustic Spray	International Cellulose	K-13 Thermal Insulation	Color: Light Grey Thickness: 1.5" Contact: Brien Straw bstraw@spray-on.com (713-433-6701)	
GL-01	Interior Clear Glass	Any qualified manufacturer	1/4" clear float glass	Color: Clear	Interior Storefront, provide safety glass where required by code
GT-01	Insulating Glass, 1/4" Clear, 1/2" Air Space, 1/4" Clear, Low E on #2 Surface	See specification	See specification	Color: Clear	Exterior glass, provide safety glass where required by code
LVT-01	Luxury Vinyl Tile	Interface	Natural Wood Grains	Color: C01103 Oak Satin Thickness: 3mm Size: 9.85" x 39.38" InstallationGlue Down, Ashlar Contact: Cara Bogosian cara.bogosian@interface.com 248.214.2707	Event Space and Kitchenette
MTL-01	Metal Panels	Alucobond	EasyFix	Product#: AB434 Color: Dark Bronze Anodized	
MTL-02	Solamum Steel	Zahner	Solanum Steel	Color: Pre-Oxidized Weathering Steel	Exterior Canopy, 14 guage thickness
MTL-03	Metal Planks	USG	Planx Linear Metal Ceiling System, Butt Joint between each panel	Color: S-25 Natural Ovang Saranté Size: 6" x 8' 6"	Soffit and Vestibule
MTL-04	Metal Coping	Hickman	PermaSnap Sloped Version	Color: MFR color chart to match precast panels	
MTL-05	Metal Roof Screen	RoofScreen	Flush Panel	Color: Dark Bronze	
PLAM-01	Plastic Laminate	Formica	Fenix	Product#: J0032 Thickness: .7mm Size: 4' x 8' sheet Contact: Vickey Bowers vickey.bowers@formica.com 586.267.8922	
PNT-01	Latex Paint	Sherwin Williams		Color: SW 7064 Passive Texture: Eggshell	
PNT-02	Paint	Sherwin Williams		Color: SW 7064 Passive Texture: Semi-Gloss	All exposed structure and all exposed mechanical
PNT-03	Epoxy Paint	Sherwin Williams		Color: SW 7064 Passive	Kitchen and Toilet Rooms
PNT-04	Paint	Sherwin Williams	Interior Storefront Paint		Door and Door Frame
PNT-05	Kynar Finish	Kawneer	provided by mfr.		
PREF-01	Prefinished	Kawner		Color: Dark Bronze	
PREF-02	Prefinished			Color: MFR color chart to match precast panels	
PREF-03	Prefinished			Color: MFR color to match Exterior Aluminum Storefront	
PREF-04	Prefinished			Color: Wood stain selected by architect, clear finish	
RB-01	Resilient Wall Base	Johnsonite	Traditional TightLock Resilient	Color: 21 Platinum CG Height: 4.375"	
RS-01	Resinous Flooring	RES-TEK	XCL-Guard Self-Leveling Colored Quartz Overlay System	Color: CF Blend 9	Kitchen
SS-01	Solid Surface	Corian	Solid Surface	Color: Deep Espresso	Interior window sills
SST-01	Synthetic Stone	Wilsonart	Quartz	Color: Lazio Q1018 Texture: Polished Thickness: 3cm Size: 65" x 130" slab Contact: Brittany Dewar brittany.dewar@wilsonart.com 734.404.4830	
TL-01	Porcelain Tile	Tile Bar	Kobe Flakes	Color: Smoke Gray Grout: Mapei 47 Charcoal, 3/16" Grout Joints Thickness: 3/8" Size: 24" x 24" Contact: Megan Erickson merickson@tilebar.com 240.644.6700	Restroom Floors
TL-02	Ceramic Tile	Daltile	Stencil Linear Wall Tile	Color: White SC32 Grout: Mapei 27 Silver, 3/16" Grout Joints Thickness: 5/16" Size: 4" x 12" InstallationVertical Stack Bond Contact: Taylor Sheppard taylor.sheppard@daltile.com 224.374.4180	Restroom Walls
TL-03	Ceramic Tile	Tile Bar	Curve Fluted Tile	Color: Gray Thickness: 8mm (.31") Size: 6" x 12" InstallationHorizontal Running Bond	
TL-04	Tile Cove Base	Daltile	Color Wheel	Color: Arctic White Matte Grout: Mapei 27 Silver, 3/16" Grout Joints Size: 6" x 12" Contact: Taylor Sheppard taylor.sheppard@daltile.com 224.374.4180	Restrooms
WD-01	Wood		Quarter sawn white oak, appearance grade B	Color: Stain color to be provided by architect	Stair A risers and treads, stained with polyurethane finish



E2 Door Frame Types **A-601** SCALE: 1/4" = 1'-0"



G2 Hollow Metal Borrowed Lite Window Frame



A-601 SCALE: 1/4" = 1'-0"

DOOR SCHEDULE ROSv3.4

DELETED DOOR(S): NONE

LV-02: 23

TOTAL DOORS: 54

"R" REVISED DOOR, "N" NEW DOOR

		_	NG SIZE			DOOR		I	FIRE			FRAME		HDWE CARD		Construc
ROOM NAME	OPNG#	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	GLASS	THRESHOLD	RATING	TYPE	MATERIAL	FINISH	GLASS	SET READER	REMARKS	Туре
VESTIBULE	101	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	3	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar, Automatic Operator	
VESTIBULE	101.1	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GL-01	ALUM	No Rating	3	ALUM	PREF-01	GL-01	Yes	Self-Closing Device, Panic Bar, Automatic Operator	
KITCHEN	103	3' - 0"	8' - 0"	SF	ALUM	PREF-03	GL-01	No Threshold	No Rating	4	ALUM	PREF-03	GL-01	Yes		
KITCHEN	103.1	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
DRY STORAGE	104	3' - 0"	7' - 0"								ALUM				No stop on frame, Refer to FSE Plan	1
EVENT ROOM	104.1	3' - 0"	7' - 0"								ALUM					1
	106	3' - 0"	8' - 0"	F	ALUM	PREF-02	None	ALUM	No Rating	1	ALUM	PREF-02	None		Self-Closing Device	1
EVENT ROOM	107	6' - 0"	8' - 0"	SF	ALUM	PREF-03	GL-01	No Threshold	No Rating	4	ALUM	PREF-03	GL-01	Yes		
EVENT ROOM	107.1	6' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
EVENT ROOM	107.2	6' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
EVENT ROOM	107.3	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	60 MIN	1	H.M.	PNT-04	None	Yes	PNT-05, Self-Closing Device, Panic Bar	1
EVENT ROOM	107.4	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
STORAGE	108	6' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	2	H.M.	PNT-04	None	No	PNT-04	1
STORAGE	108.1	6' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	2	H.M.	PNT-04	None	No	PNT-04	1
HALLWAY	109	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	3	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
HALLWAY	109.1	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	60 MIN	1	H.M.	PNT-04	None	Yes	PNT-04, Self-Closing Device, Panic Bar	1
ELEC	111	3' - 0"	8' - 0"	F	ALUM	PREF-02	None	ALUM	No Rating	1	ALUM	PREF-02	None	Yes		1
ELEC	111.1	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	ALUM	PNT-04	None	Yes	PNT-04	1
OFFICE	112	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
OFFICE	113	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
CONF/PODCAST	114	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
KIDS ROOM	116	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
KIDS ROOM	116.1	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
KIDS ROOM	116.2	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
CONF/PODCAST	117	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
COMMUNITY OFFICES	118	3' - 0"	8' - 0"	SF	ALUM	PREF-03	GL-01	No Threshold	No Rating	4	ALUM	PREF-03	GL-01	Yes		
TOILET	120	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
TOILET	121	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
TOILET	122	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
TOILET	123	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
TOILET	124	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
01: 31																
PHONE BOOTH	203	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
RENTABLE OFFICE	204	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
RENTABLE OFFICE	205	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
RENTABLE OFFICE	206	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
CONFERENCE ROOM	207	3' - 0"	7' - 0"	F	WD	PREF-04	GL-01	No Threshold	No Rating	1	ALUM	PREF-03	None	Yes		1
CONFERENCE ROOM	208	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
CONFERENCE ROOM	208.1	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
CONFERENCE ROOM	208.2	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device	
OFFICE	209	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes		1
OFFICE	210	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes		1
OFFICE AREA	212	3' - 0"	8' - 0"	FG	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
OFFICE AREA	212.1	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device	
OFFICE AREA	212.2	3' - 0"	8' - 0"	FG	WD	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
CEO OFFICE/MTG AREA	213	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes		1
TRAINING ROOM	214	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold		3	ALUM	PREF-03	GL-01	Yes		
TRAINING ROOM	215	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold		3	ALUM	PREF-03	GL-01	Yes		
TOILET	217	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold		1	H.M.	PNT-04	None	No		1
WELLNESS ROOM	218	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
JANITOR	219	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold		1	H.M.	PNT-04	None	Yes	Self-Closing Device	1
PHONE BOOTH	220	3' - 0"	8' - 0"	SF	ALUM	PREF-04	GL-01	No Threshold	No Rating	3	ALUM	PREF-03	GL-01	Yes		
TOILET	221	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	No		1
	222	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	No Rating	1	H.M.	PNT-04	None	Yes	Self-Closing Device	1
ELEC/I.T. ROOM STAIR B	222 ST-B	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	60 MIN	•	H.M.	PNT-04	None	Yes	Son Glooming Bornes	

ROOM FINISH SCHEDULE ROSv3.4

"R" REVISED ROOM, "N" NEW ROOM "-" REFER TO ELEVATIONS AND/OR FINISH PLAN

DELETED ROOM(S): NONE

404	ROOM NAME		BASE FINISH	WALL FINISH	REMARKS
101	VESTIBULE	CPT-02	RB-01,-	PNT-01,	
102	LOBBY/CAFE	CONC-01	RB-01,	PNT-01,	
103	KITCHEN	RS-01	RB-01,	PNT-03,	
104	DRY STORAGE	RS-01	RB-01,	PNT-03,	
106	MECH ROOM	CONC-02	RB-01,	PNT-01,	
107	EVENT ROOM	LVT-01	RB-01,	PNT-01,	
108	STORAGE	LVT-01	RB-01,	PNT-01,	
109	HALLWAY	CPT-02	RB-01,	PNT-01,	
111	ELEC	CONC-02	RB-01,	PNT-01,	
112	OFFICE	CPT-01	RB-01,	PNT-01,	
113	OFFICE	CPT-01	RB-01,	PNT-01,	
114	CONF/PODCAST	CPT-01	RB-01,	PNT-01,	
116	KIDS ROOM	CPT-01	RB-01,	PNT-01,	
117	CONF/PODCAST	CPT-01	RB-01,	PNT-01,	
118	COMMUNITY OFFICES		RB-01,	PNT-01,	
119	HALLWAY	CPT-01	RB-01,	PNT-01,	
120	TOILET	TL-01	TL-04,	TL-02,PNT-03	
121	TOILET	TL-01	TL-04,	TL-02,PNT-03	
122	TOILET	TL-01	TL-04,	TL-02,PNT-03	
123	TOILET	TL-01	TL-04,	TL-02,PNT-03	
124	TOILET	TL-01	TL-04,	TL-02,PNT-03	
125	HALLWAY	CONC-01	RB-01,	PNT-01,	
126	HALLWAY	CONC-01	RB-01,	PNT-01,	
	RECEPTION	CONC-01	· ·	PNT-01,	
127		CONC-01	RB-01,	PINT-UT,	
			I -		
EL-A	ELEVATOR		-,		
EL-A ST-A ST-B 1: 27	STAIR A STAIR B	WD-01 CONC-02	-,		
ST-A ST-B	STAIR A STAIR B BALCONY	WD-01 CONC-02	-,		
ST-A ST-B	STAIR A STAIR B	WD-01		PNT-01,	
ST-A ST-B 1: 27	STAIR A STAIR B BALCONY	WD-01 CONC-02	-,	PNT-01, PNT-01,	
ST-A ST-B 1: 27	STAIR A STAIR B BALCONY HALLWAY	WD-01 CONC-02	-, RB-01,		
ST-A ST-B 1: 27 201 202	STAIR A STAIR B BALCONY HALLWAY	WD-01 CONC-02 CONC-01 CONC-01	-, RB-01, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01, RB-01, RB-01,	PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01	-, RB-01, RB-01, RB-01, RB-01,	PNT-01, PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01 CPT-01	RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01, PNT-01, PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01 CPT-01 CPT-01	RB-01, RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01, PNT-01, PNT-01, PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01	-, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01	-, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209	BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01	-, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01, PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01 CPT-01	RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213	BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216	STAIR A STAIR B BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 2217	BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN TOILET	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN TOILET WELLNESS ROOM	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219	BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE WORK ROOM OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN TOILET WELLNESS ROOM JANITOR	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220	BALCONY HALLWAY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN TOILET WELLNESS ROOM JANITOR PHONE BOOTH	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01,	PNT-01,	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221	BALCONY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN TOILET WELLNESS ROOM JANITOR PHONE BOOTH TOILET	WD-01 CONC-02 CONC-01 CONC-01 CPT-01 TL-01 CPT-01 TL-01 TL-01 TL-01	-, RB-01, RB-01,	PNT-01, TL-02,PNT-03 PNT-01, TL-02,PNT-03	
ST-A ST-B 1: 27 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220	BALCONY HALLWAY HALLWAY HALLWAY PHONE BOOTH RENTABLE OFFICE RENTABLE OFFICE RENTABLE OFFICE CONFERENCE ROOM CONFERENCE ROOM OFFICE OFFICE WORK ROOM OFFICE AREA CEO OFFICE/MTG AREA TRAINING ROOM TRAINING ROOM KITCHEN TOILET WELLNESS ROOM JANITOR PHONE BOOTH	WD-01 CONC-02 CONC-01 CONC-01 CPT-01	-, RB-01,	PNT-01,	

DOOR SCHEDULE NOTES

GENERAL NOTES

- A. ALL HOLLOW METAL FRAMES IN MASONRY SHALL BE GROUTED SOLID.
 B. INSTALL EXTERIOR FRAMES WITH 1/4 INCH SHIM AND JOINT SEALANT AROUND PERIMETER OF FRAME.
- C. MASONRY LINTELS AND STEEL LINTELS ARE INDICATED ON STRUCTURAL D. GLASS TYPES FOR DOORS ARE INDICATED IN NOTES COLUMNS OF DOOR AND FRAME SCHEDULE OR IN SPECIFICATIONS. GLASS TYPES FOR FRAMES ARE INDICATED ON FRAME ELEVATIONS OR IN SPECIFICATIONS.
- E. EXTERIOR WINDOW FRAME TYPES ARE INDICATED ON FLOOR PLAN WITH HEXAGON SYMBOL. F. FRAME MANUFACTURER SHALL COORDINATE LOCATIONS OF CONCEALED CONDUIT AND J-BOXES REQUIRED FOR SECURITY SYSTEM HARDWARE PRIOR TO MANUFACTURING OF HOLLOW METAL FRAMES AND COORDINATE
- WITH SECURITY HARDWARE AND DEVICES. G. PROVIDE HEAD RECEIVERS AT ALUMINUM STOREFRONTS AND CURTAINWALLS AS REQUIRED FOR FRAME AND STRUCTURAL DEFLECTION.
- H. SEE SPECIFICATIONS 087100 HARDWARE FOR HARDWARE SET NOTED IN DOOR SCHEDULE.
- I. MAX AIR LEAKAGE RATE FOR DOORS TO BE 0.2 CFM/SF J. REFER TO FLOOR PLANS FOR PARTITION TYPES. K. ALL DOORS TO BE 1 3/4" THICK UNLESS NOTED OTHERWISE.
- L. DOOR OPENING SIZES ARE INSIDE FRAME DIMENSIONS. M. ALL HOLLOW METAL FRAMES TO BE 2" THICK UNLESS NOTED OTHERWISE.

TYPICAL REMARKS

- ADD "ADA" PUSH BUTTON TO DOOR REFER TO PLAN FOR LOCATION.
 DOOR SIZE TO ALIGN WITH EXTERIOR MULLIONS/GLAZING. COORDINATE FINAL SIZE.
 3. INSULATED EXTERIOR DOOR.

ABBREVIATIONS

- ALUM ALUMINUM GL INTERIOR GLAZING TYPE (SEE ROOM FINISH LEGEND)
 GT EXTERIOR GLAZING TYPE (SEE 088000)
 HM HOLLOW METAL
 TR THRESHOLD/TRANSITION
- WD WOOD

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic **Chamber of** Commerce -HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT

PROFESSIONAL SEAL

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DESCRIPTION DATE 02/07/2025 02/20/2025

KEY PLAN

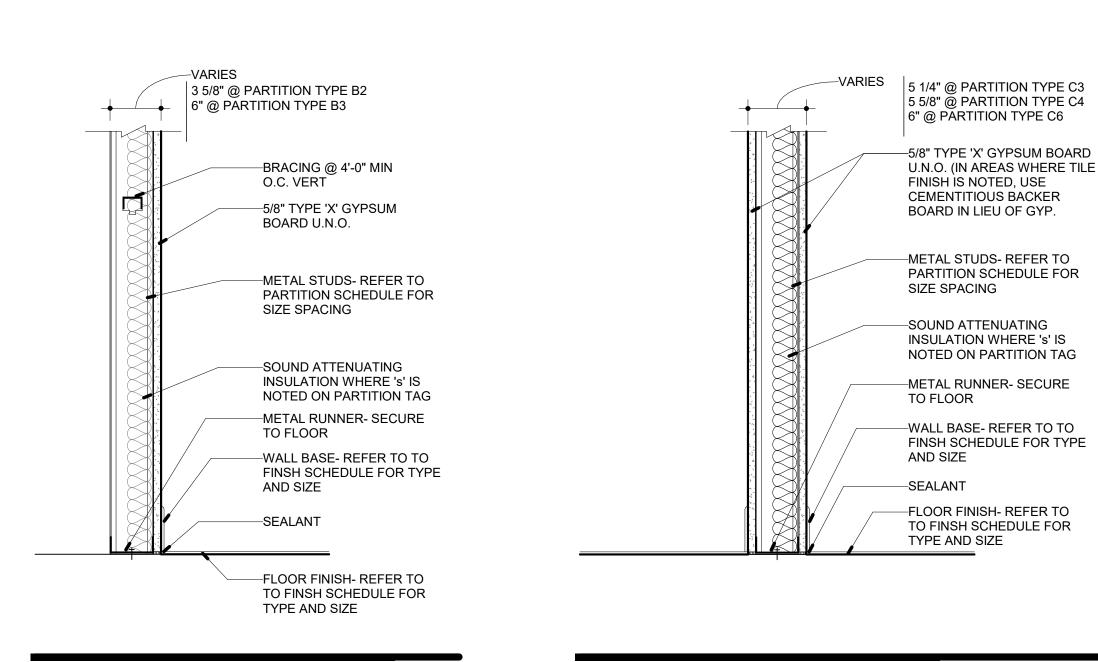
SHEET TITLE Door Schedule and Finish Legend

PROJECT# 2024-010.00

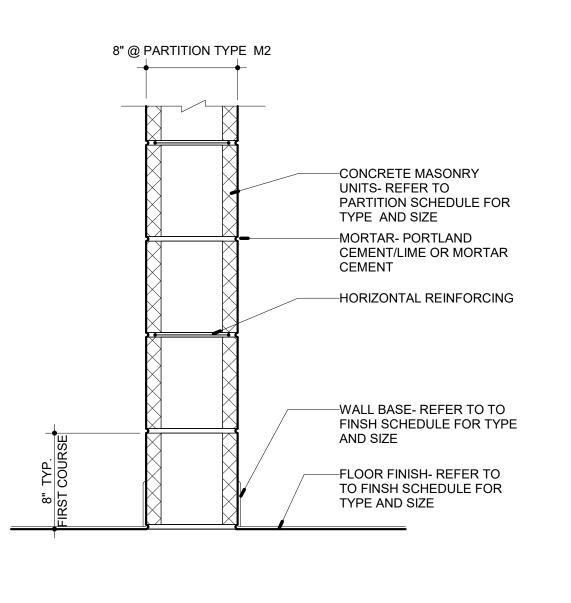
SHEET#

LV-02: 25

TOTAL ROOMS: 52



6 1/2" @ PARTITION TYPE D3 —1/2" RESILIENT CHANNEL -5/8" TYPE 'X' GYPSUM BOARD U.N.O. (2 LAYERS) -METAL STUDS- REFER TO PARTITION SCHEDULE FOR SIZE SPACING -5/8" TYPE 'X' GYPSUM BOARD U.N.O. (1 LAYER) -SOUND ATTENUATING INSULATION WHERE 's' IS NOTED ON PARTITION TAG -METAL RUNNER- SECURE TO FLOOR -WALL BASE- REFER TO TO FINSH SCHEDULE FOR TYPE -SEALANT —FLOOR FINISH- REFER TO TO FINSH SCHEDULE FOR TYPE AND SIZE



Partition Type M

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

9 1/8" @ PARTITION TYPE N1 1'-0 1/4" @ PARTITION TYPE N2 -CONCRETE MASONRY UNITS- REFER TO PARTITION SCHEDULE FOR TYPE AND SIZE -7/8" METAL FURRING (3 5/8 FURRING FOR N2) -5/8" TYPE 'X' GYPSUM BOARD U.N.O. -HORIZONTAL REINFORCING -METAL FURRING AT PERIMETER -WALL BASE- REFER TO TO FINSH SCHEDULE FOR TYPE AND SIZE -FLOOR FINISH- REFER TO TO FINSH SCHEDULE FOR TYPE AND SIZE

Partition Type N SCALE: 1 1/2" = 1'-0"

Partition Type B SCALE: 1 1/2" = 1'-0"

Partition Type C SCALE: 1 1/2" = 1'-0"

Partition Type D (STC +/-55) SCALE: 1 1/2" = 1'-0"

INTERIOR PARTITION SCHEDULE ROSv3.4

"R" REVISED PARTITION, "N" NEW PARTITION

DELETED WALL GROUP(S): NONE

		WIE	OTH		STUD		MAX HEIGHT		UL DESIGN			STC*			
TYPE	DESCRIPTION	MODEL	ACTUAL	DETAIL	DEPTH	THICK	SPACING	(.X or .Y)	(.Z)	1Hr	2Hr	Other	W/O	W/	REMARKS
B2	1 GYP, 1 SIDE ON 3 5/8" METAL STUDS	<varies></varies>	4 1/4"	A-601	3 5/8"	30 MIL	16"	13' - 7"	13' - 7"				29	34	
В3	1 GYP, 1 SIDE ON 6" METAL STUDS	6 3/4"	6 5/8"	A-601	6"	30 MIL	16"	20' - 3"	20' - 3"					37	
C3	1 GYP, BOTH SIDES ON 3 5/8" METAL STUDS	<varies></varies>	4 7/8"	A-601	3 5/8"	30 MIL	16"	13' - 6"	14' - 10"	U419			42	44	
C4	1 GYP, ONE SIDE ON 6" METAL STUDS	5 5/8"	5 1/4"	A-601	4"	30 MIL	16"	14' - 7"	15' - 5"				42	44	
C6	1 GYP, BOTH SIDES ON 6" METAL STUDS	7 1/4"	7 1/4"	A-601	6"	30 MIL	16"	20' - 0"	21' - 6"	U419			42	44	
D3	2 GYP, ONE SIDES ON 3 5/8" METAL STUDS, 1 GYP ONE SIDE, 1 RC ONE SIDE	6"	6 1/8"	A-601	3 5/8"	30 MIL	16"	14' - 7"	15' - 5"		U419		48	56	
M2	8" CMU (NORMAL WEIGHT)	8"	7 5/8"	A-601				16' - 0"	16' - 0"		U905		45	51	
N1	8" CMU, 7/8" STEEL FURRING + 1 GYP, ON 1 SIDE	9 1/2"	9 1/8"	A-601	7/8"	18 MIL	16"	24' - 0"	24' - 0"		U905				
N2	8" CMU, 3 5/8" STEEL FURRING + 1 GYP, ON 1 SIDE	1' - 0 1/2"	9 1/8"	A-601	7/8"	18 MIL	16"	24' - 0"	24' - 0"		U905				

PARTITION GENERAL NOTES

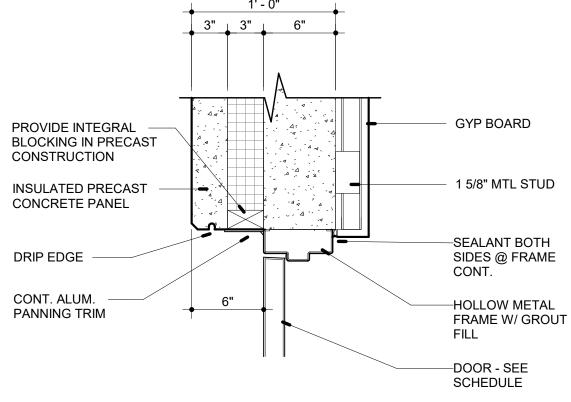
- A. PARTITION TYPES ARE LOCATED ON THE PLANS UNLESS NOTED
- B. WHERE PARTITION TYPES ARE INDICATED, THE PARTITION TYPE IS CONTINUOUS UNTIL THE PARTITION CHANGES DIRECTIONS, OR A
- DIFFERENT PARTITION TYPE IS NOTED. C. PARTITIONS ARE TYPICALLY DIMENSIONED FROM THE FACE OF THE
- PARTITION TO FACE OF PARTITION OR COLUMN CENTERLINE UNLESS
- D. ALL GYPSUM BOARD SHALL BE 5/8" TYPE 'X' UNLESS OTHERWISE NOTED. SEE SPECIFICATIONS AND DRAWINGS.
- E. ALL INTERIOR STEEL STUDS TO BE NOT LESS THAN 30 MIL THICK AND SPACED AT 1'-4" O.C. UNLESS NOTED OTHERWISE
- F. PROVIDE DOUBLE STUDS AT EACH SIDE OF ALL OPENINGS FROM FLOOR G. TAPE AND SEAL ALL JOINTS IN GYPSUM BOARD ABOVE CEILINGS.
- H. FIRE RESISTANCE RATINGS ARE NOTED ON THE LIFE SAFETY PLAN I. AT ALL FIRE RESISTANCE RATED CONSTRUCTION, SEAL PARTITIONS AT STRUCTURE, FLOOR AND AT ALL PENETRATIONS WITH UL RATED
- J. PROVIDE UL RATED ASSEMBLIES AT ALL FIRE RESISTENCE RATED
- K. MAINTAIN CONTINUITY OF FIRE RATED PARTITIONS AT INTERSECTIONS OF NON-RATED OR LESSER RATED PARTITIONS.
- L. WHEN INSULATION IS INDICATED ON PARTITION OR PARTITION TYPE (WITH .s SUFFIX), CONSTRUCT A FULL HEIGHT ACOUSTICAL PARTITION WITH THE STC RATING INDICATED. IF NO STC IS INDICATED, PROVIDE 3" ACOUSTICAL BATT INSULATION. PROVIDE INSULATION FOR THE FULL DEPTH, WIDTH AND HEIGHT OF CAVITY AND SEAL PERIMETER AND ALL
- PENETRATIONS WITH ACOUSTICAL SEALANT. M. AT ALL ACOUSTICAL PARTITIONS, SEAL PARTITIONS WITH ACOUSTIC SEALANT AT ALL ADJACENT CONSTRUCTION AND AT ALL PENETRATIONS
- N. FINISHES ON PARTITIONS SYSTEMS TO EXTEND TO PLASTER/GYPSUM
- BOARD CEILING SYSTEMS UNLESS NOTED OTHERWISE.FINISHES ON PARTITION SYSTEMS TO EXTEND 4" ABOVE ACOUSTICAL CEILING SYSTEM
- UNLESS NOTED OTHEWISE. O. FINISHES ON PARTITION SYSTEMS TO EXTEND 4" ABOVE ACOUSTICAL
- CEILING SYSTEM UNLESS NOTED OTHEWISE. P. REFER TO ROOM FINISH SCHEDULE FOR ALL INTERIOR FINISHES. Q. * STC RATINGS ARE FROM THE FOLLOWING SOURCES: USG ACOUSTICAL ASSEMBLIES, GYPSUM ASSOCIATION 2003 FIRE RESISTANCE DESIGN MANUAL, NATIONAL GYPSUM THE SOUND BOOK, CALIFORNIA DEPARTMENT OF HEALTH SERVICES CATALOG OF STC AND IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES.

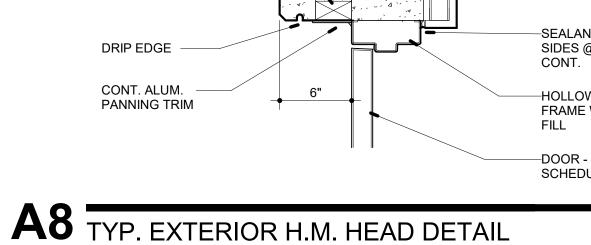
INTERIOR WALL PARTITION KEY

PARTITION GROUPS

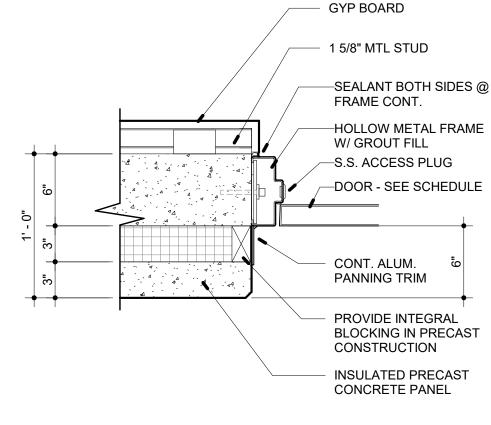
- B = ONE LAYER OF GYPSUM BOARD ON ONE SIDE OF METAL STUDS. C = ONE LAYER OF GYPSUM BOARD ON BOTH SIDES OF METAL STUDS.
- D = TWO LAYERS OF GYPSUM BOARD ON BOTH SIDES OF METAL STUDS. M = MASONRY WALL.
- N = MASONRY WALL WITH ONE LAYER OF GYPSUM BOARD ON METAL FURRING ON ONE SIDE OF MASONRY.

TYPICAL ABBREVIATIONS GYP GYPSUM BOARD CMU CONCRETE MASONRY UNIT

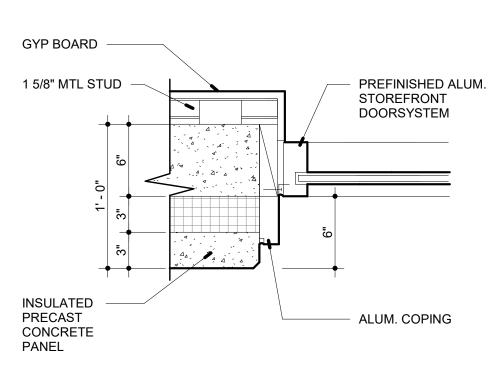




A-602 SCALE: 1 1/2" = 1'-0"



C8 TYP. EXTERIOR H.M. JAMB DETAIL **A-602** SCALE: 1 1/2" = 1'-0"



E8 TYP. EXTERIOR STOREFRONT JAMB DETAIL **A-602** SCALE: 1 1/2" = 1'-0"

SHEET TITLE Partition Schedule, Legend, and **Details**

ROSSETTI

160 WEST FORT, SUITE 400

DETROIT, MICHÍGAN 48226

ROSSETTI.COM 313.463.5151

West Michigan

Hispanic

Chamber of

Commerce -

1111 Godfrey Ave. SW Grand Rapids, MI 49507

PROJECT

HQ

CONSULTANT

PROFESSIONAL SEAL

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2 Addendum 1

DESCRIPTION

DATE

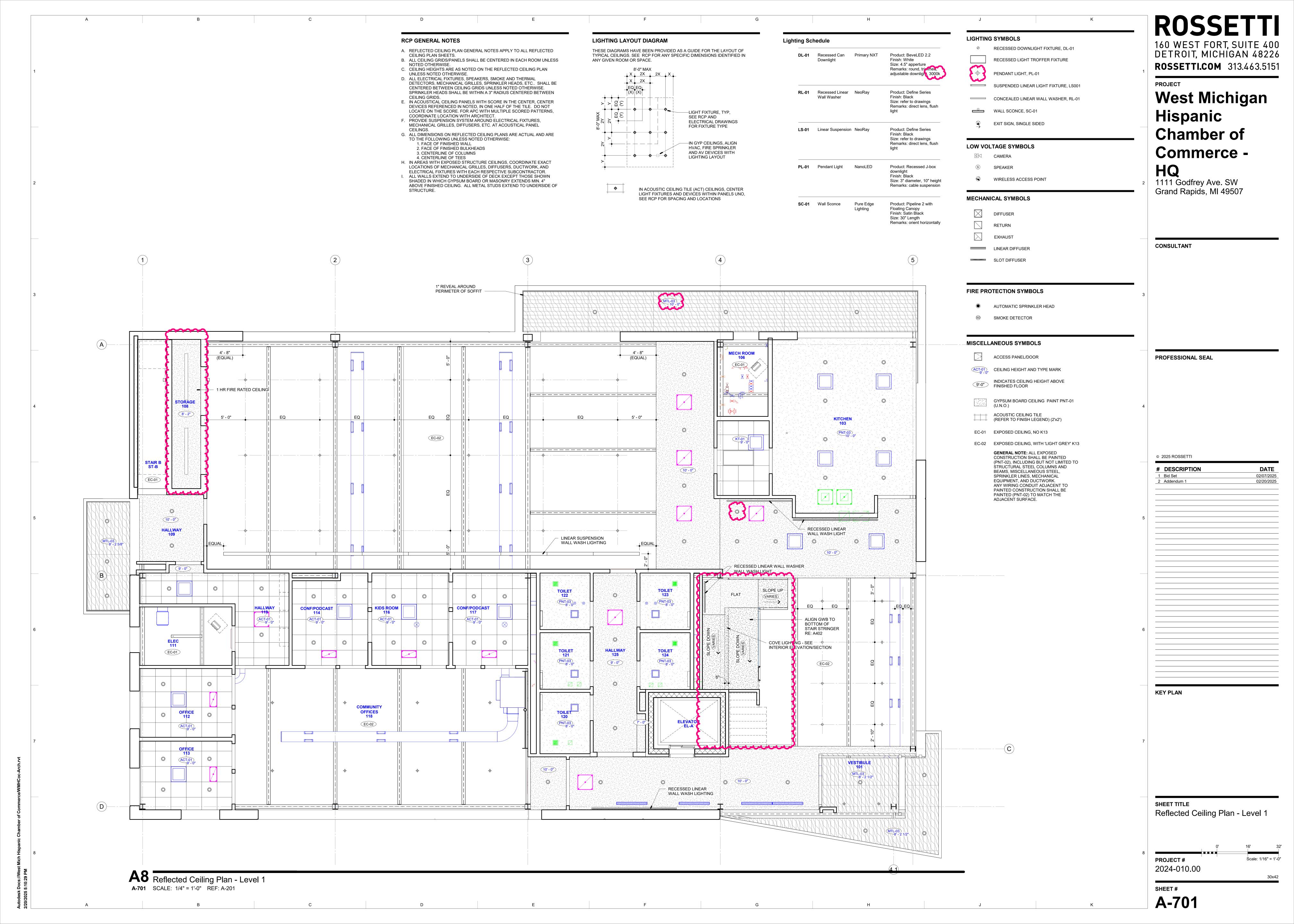
02/07/2025

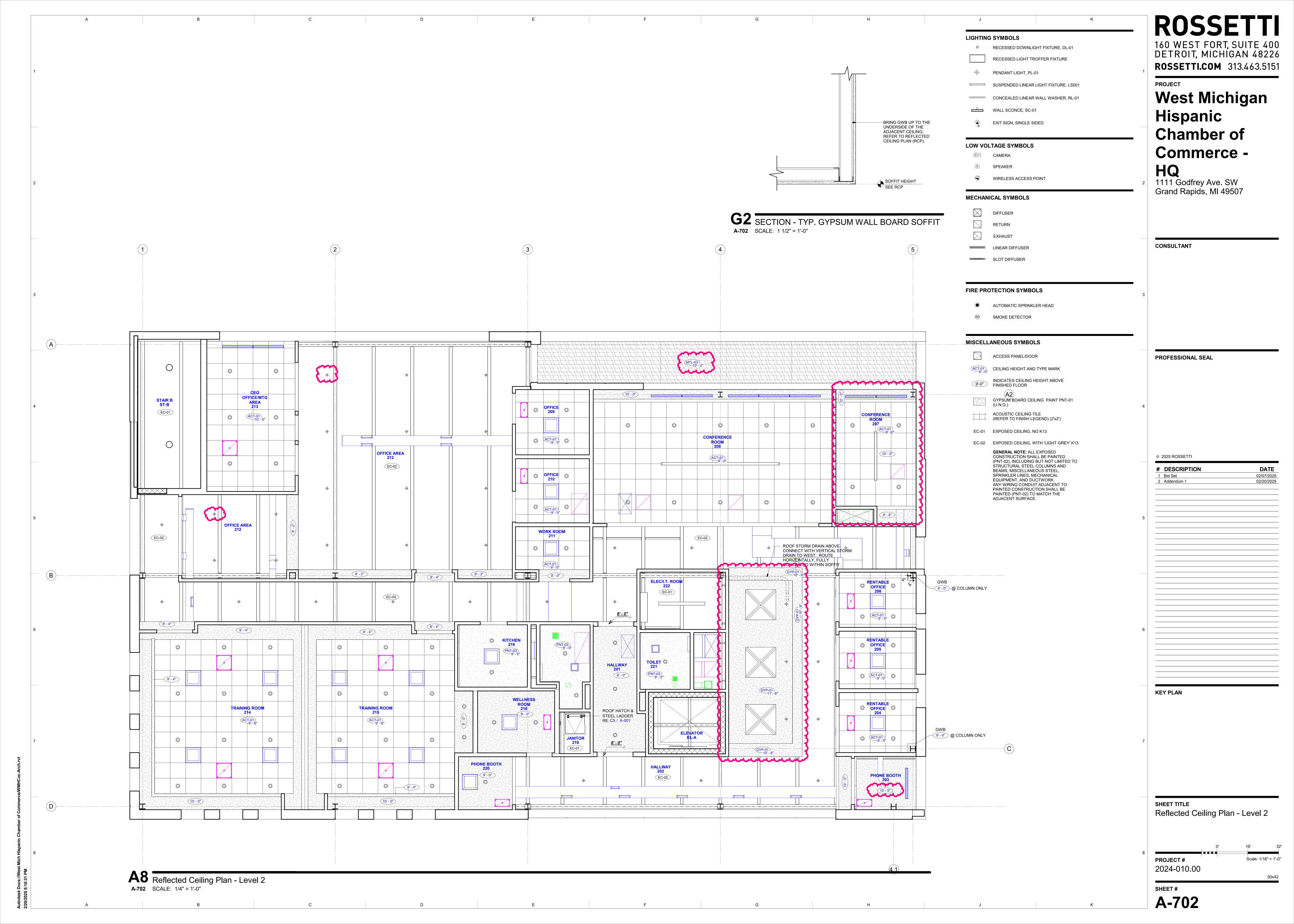
02/20/2025

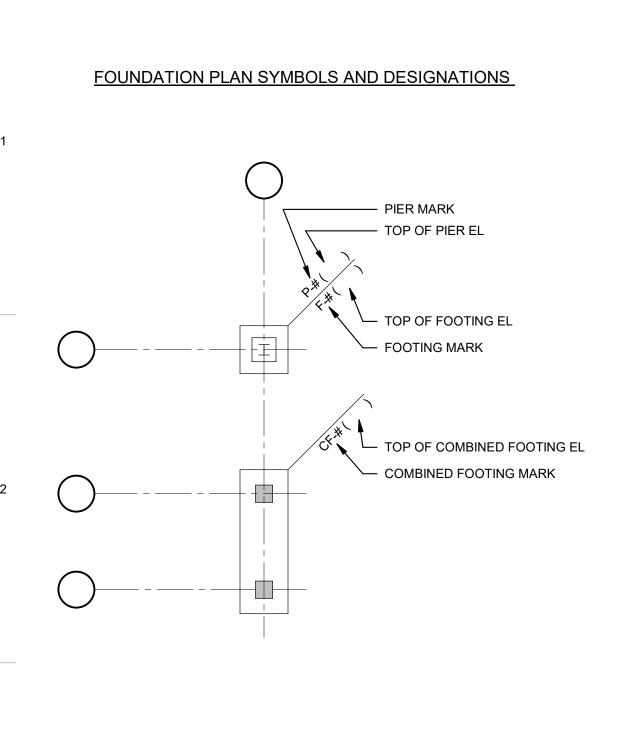
Scale: 1/16" = 1'-0" PROJECT# 2024-010.00

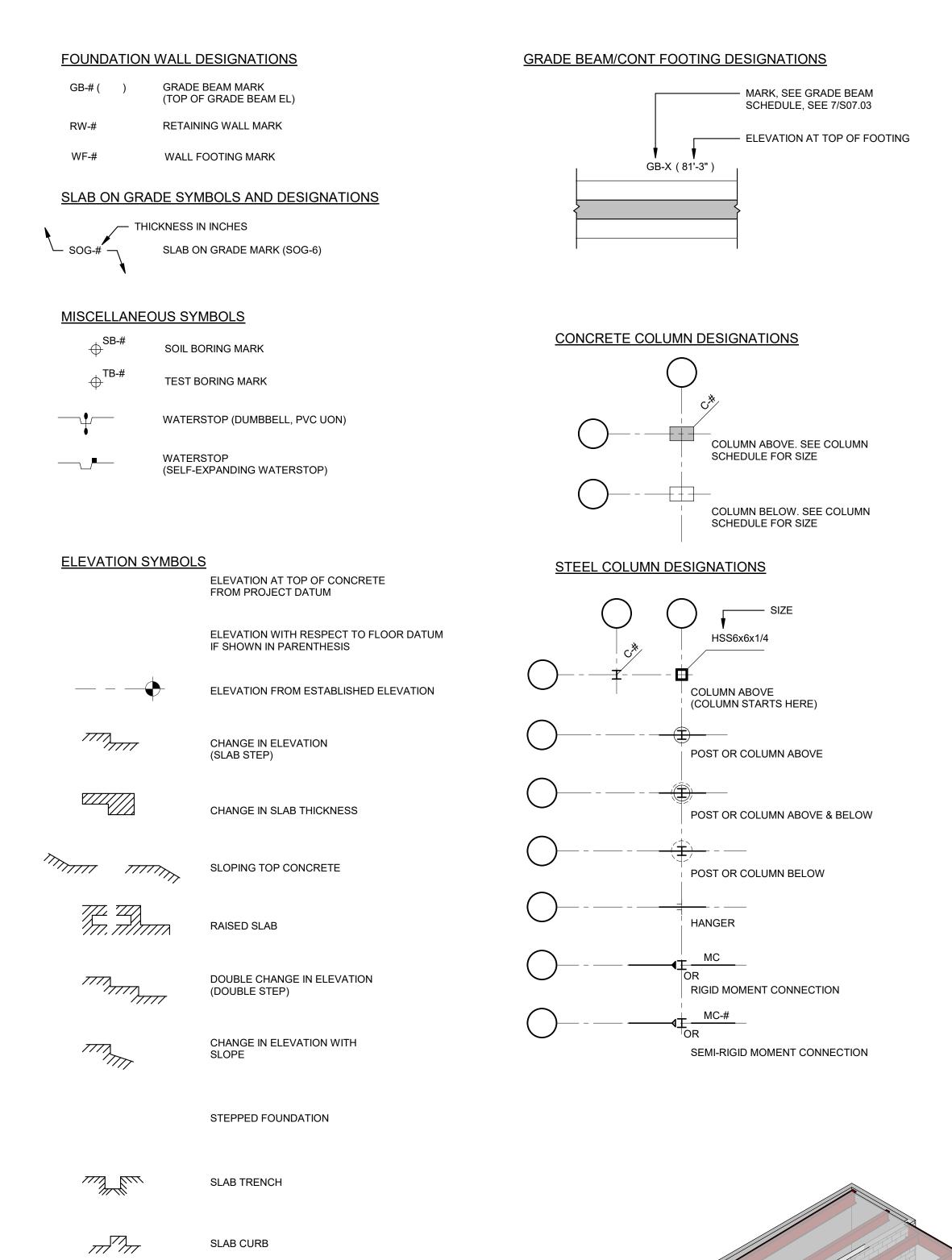
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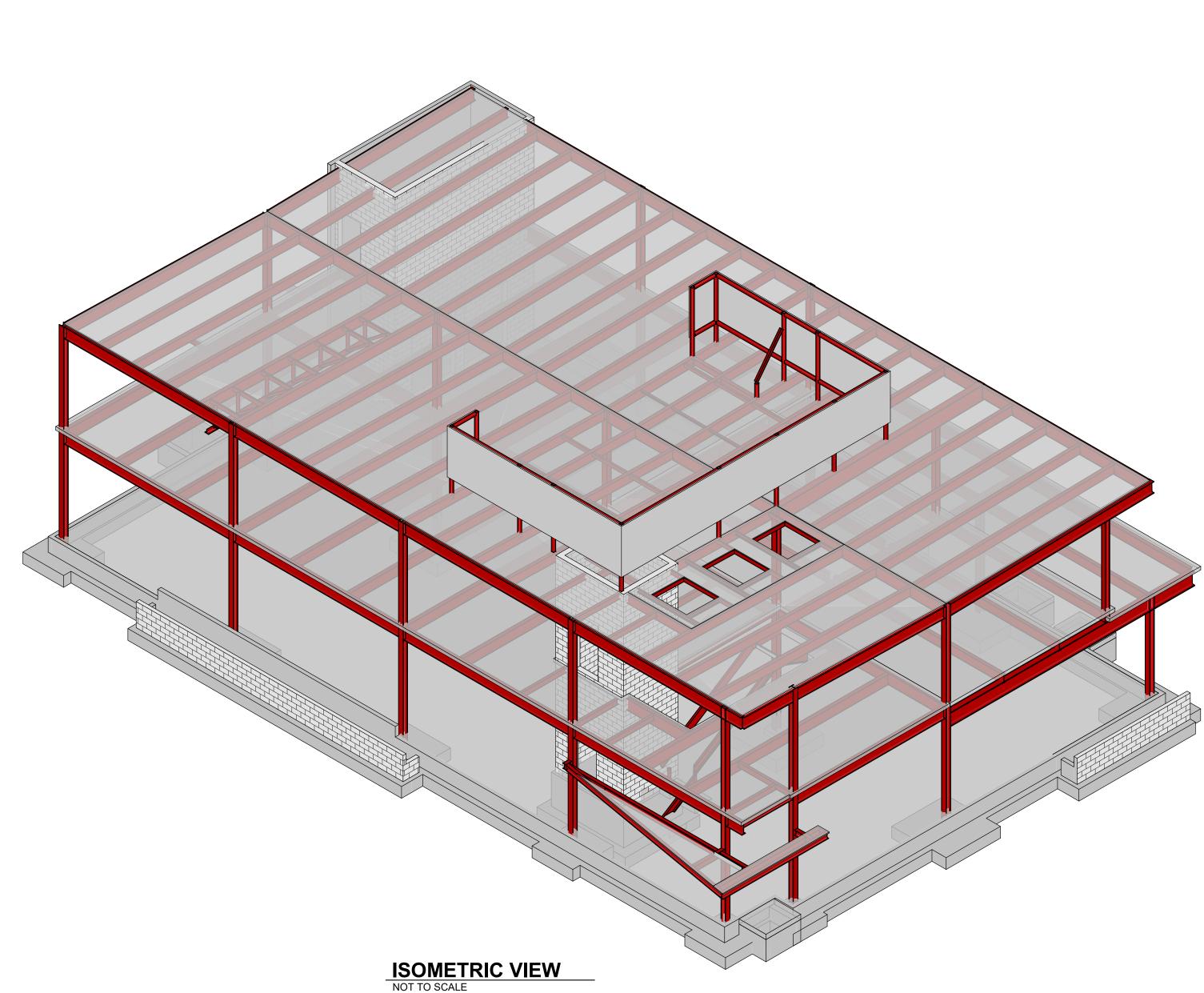
KEY PLAN

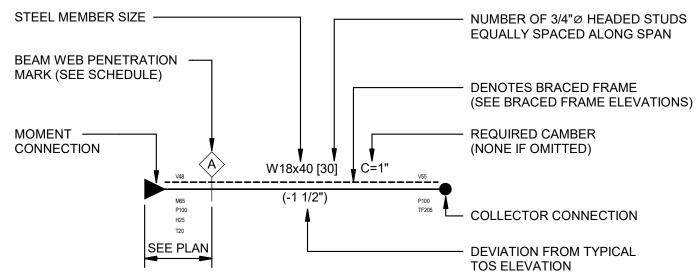












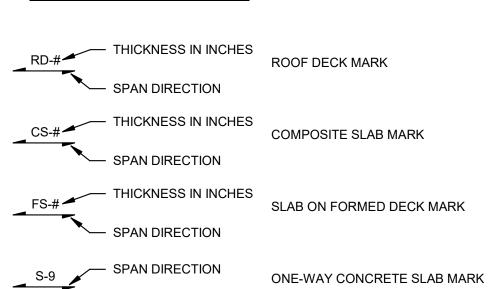
- FACTORED BEAM DESIGN HORIZONTAL FORCE (KIPS)
- FACTORED BEAM DESIGN END MOMENT (FOOT-KIPS)
- FACTORED BEAM DESIGN SHEAR (KIPS) (SEE SCHEDULE IF OMITTED)
- FACTORED BEAM DESIGN AXIAL (KIPS)

STEEL BEAM DESIGNATIONS

- FACTORED BEAM DESIGN TORSIONAL MOMENT (FOOT-KIPS)
- FACTORED AXIAL FORCE TRANSFERRED THROUGH THE CONNECTION JOINT (KIPS)



DECK AND SLAB SYMBOLS



ABBREVIATIONS

ADD	ADDITIONAL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
3F	BRACED FRAME
3OF	BOTTOM OF FOOTING
30S	BOTTOM OF STEEL
3P	BEARING PLATE
BRG	BEARING
CANT	CANTILEVERED
CFMF	COLD FORMED METAL FRAMING
CIP	CAST IN PLACE
CJ	CONTROL OR CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE

CONCRETE CONNECTION CONTINUOUS OR CONTINUATION

CONN CONT CONTR CONTRACTOR COORD COORDINATE DIAMETER DIAGONAL

DIAG DIM DWG **DIMENSIONS** DRAWING EACH FACE ELEVATION EQUAL **EACH WAY EXISTING EXPANSION** EXTERIOR

FINISH FLOOR FOUNDATION FTG GALV GB GALVANIZED **GRADE BEAM** HORIZ HORIZONTAL INTERIOR

LONG LEGS BACK TO BACK LONG SIDE HORIZONTAL LONG SIDE VERTICAL MAX MAXIMUM MECHANICAL

MINIMUM MASONRY PIER NOT IN CONTRACT ON CENTER OVERFLOW ROOF DRAIN

OH OPNG PC PERIM OPPOSITE HAND OPENING PRECAST PERIMETER

POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH **ROOF DECK**

REFERENCE REINF REINFORCING REQD REQUIRED **ROOF TOP UNIT** SIMILAR

SHORT LEG BACK TO BACK SOG SLAB ON GRADE

SPACING TOP OF CONCRETE TOP OF FOOTING **TOSLAB** TOP OF SLAB TOS TYP TOP OF STEEL

TYPICAL UON VERT UNLESS OTHERWISE NOTED VERTICAL **VERIFY IN FIELD** WITHOUT WELDED WIRE FABRIC

ROSSETTI.COM 313.463.5151 **PROJECT** West Michigan Hispanic **Chamber of** Commerce- HQ 1111 Godfrey Ave, SW Grand Rapids, MI 49507 CONSULTANT RESURGET ENGINEERING DETROIT - SAN FRANCISCO 28 W ADAMS AVE

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160 WEST FORT, SUITE 400

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WWW.RESURGET.ENGINEERING PROFESSIONAL SEAL

CONSULTING STRUCTURAL ENGINEERS

2025 ROSSETTI	
DESCRIPTION	DATE
Bid Set	02/07/202

201 SPEAR ST

(415) 523-3548

SAN FRANCISCO, CA

SUITE 1100

KEY PLAN

DRAWING LIST

ABBREVIATIONS AND SYMBOLS

TYPICAL CONCRETE DETAILS

STEEL SECTIONS AND DETAILS STEEL SECTIONS AND DETAILS

STEEL SECTIONS AND DETAILS

GENERAL NOTES

SPECIAL INSPECTIONS FRAMING PLANS BUILDING ELEVATIONS

WALL ELEVATIONS

FOUNDATION DETAILS

FOUNDATION SECTIONS

SECTIONS AND DETAILS

SECTIONS AND DETAILS

SHEET TITLE

SHEET#

S.001

S.002

S.201

S.301

S.302

S.303

S.700

S.701

SHEET TITLE **ABBREVIATIONS AND** SYMBOLS

PROJECT# 24094

SHEET#

until the submittal items have been approved by the Building Official. The component designer shall be responsible for that component's conformance to the Code and all design criteria indicated in the construction documents and all necessary connections not specifically show in the

structural and architectural drawings Prior to submittal to the Building Official, all deferred submittal items shall be 3. submitted to the design team for review of general conformance with design 4. criteria. Submittals to design team shall be stamped and signed by a licensed engineer and shall include the following:

A. Drawing which indicate the magnitude, direction, and location of all loads imposed on the primary structure. B. Connection details that show how the component is connected to the primary structure.

C. Design calculation demonstrating conformance with code requirements and design criteria. Calculations shall clearly indicated a complete load path for both the vertical and lateral loads to the primary structure. Deferred Structural Submittal Components include, but are not limited to the 3.

A. Exterior cladding (including curtain wall and exterior metal studs) B. Interior Metal Stud Systems

DESIGN BUILD METAL STAIRS AND RAILINGS

1. Steel stairs in buildings shall be contractor design-build Design build stair and railing structural calculations and drawings shall be stamped and signed by a registered Professional Engineer, licensed in the state of the Project. Design build stair design shall clearly indicate a complete load path for both lateral and vertical loads to the primary structural elements shown in these drawings. The calculations and drawings shall show the magnitude, location and direction of all design loads imposed by the stair

structural elements onto the primary structure. Design build stairs shall be designed to meet all relevant Code requirements. This includes all Code mandated vertical and lateral loads, and deformation compatibility. The stair framing elements and their connections shall be designed and detailed to be adequate to maintain support of the design dead plus live loads during the expected lateral deformations of the primary structure in a seismic event. Design stairs to accommodate the seismic story displacements given in DESIGN CRITERIA

Shop drawings and calculations of stairs and railings shall be approved by the Engineer prior to start of fabrication.

COLD FORMED METAL FRAMING

 Cold Formed Metal Framing (CFMF) members to be designed manufactured, detailed and erected in accordance with AISI "Specification for Design of Cold Formed Steel Structural Members". CFMF members shall conform to ASTM A13 with minimum yield strength of

33ksi for 18ga and thinner or 50ksi for 16ga and thicker. CFMF shall be galvanized per ASTM A653 - G60. Welds shall be in accordance with AWS D1.3 "Structural Welding Code –

Sheet Metal" and AWS D19.0 "Welding Zinc Coated Steel".

5. CFMF design and detailing is a delegated design responsibility. CFMF contractor to submit signed and sealed calculations for CFMF members and CFMF supporting exterior finishes shall be a minimum of 18ga and 16ga for

studs backing up brick veneer. Deflection of studs backing up brick veneer shall be limited to span/600 under 10 year wind pressure. Studs shall have bridging lines installed at a maximum spacing of 4'-0" o.c.

PRECAST CONCRETE PANELS

foundation connections.

1. Precast concrete panel sizes and profiles are indicated on the Architectural drawings. Precast concrete panel piece sizes may be modified by the Manufacturer as approved by the Architect. 2. Connection steel shall conform to AISC requirements. All steel anchors,

shapes and plates shall be galvanized. Provide connections complying with ACI 318 Chapter 16 and PCI recommendations. Design connections for a minimum erection tolerance of one inch in any direction. Consider eccentricity of loads on connection.

connecting to the structure to adequately support the precast concrete panels | 7. for the loads and considerations indicated above. Provide weld plates in precast concrete panels and building slabs for bearing, roof and foundation connections. Provide weld plates in precast concrete panels where bearing is on steel, otherwise bearing shall be on a bearing pad

Contractor shall verify all existing conditions and site restrictions. Refer to Architectural drawings for wall dimensions and wall support details.

unless detailed for a welded connection. Provide shims for bearing and

STRUCTURAL STEEL BOLTING

High strength bolts shall conform to Group A (ASTM A325/F1852) and Group 1 B (ASTM A490/F2280) where specified. See details and schedules for bolt diameters and bolt types. Bolt tensioning requirement shall be as follows,

A. Bolts in moment connections or braced frames with oversized, long slotted or short slots parallel to force connections – Slip critical (Type B. Bolts to shear connections with long slotted holes – Snug Tight (Type X)

wit plate washers per AISC UON C. All other bolted connections – Snug Tight (Type X) UON Machine bolts shall conform to ASTM A307, grade A. All bolt holes shall be standard size holes (1/16" larger than bolt), UON Anchor bolts for non-frame columns shall be ASTM F1554, grade 36. Anchor

A307 or A36. STRUCTURAL STEEL WELDING

. All welding shall be done by AWS certified welders in accordance with AWS D1.1 structural welding code, latest edition. Structural steel shop drawings shall show all welding with AWS A2.4

All welds shall be made using low-hydrogen electrodes with minimum tensile strength of 70ksi. See specifications for further requirements. Welds that have been defined by the contract documents as "Demand Critical Welds" (DCW) require higher standards for welding, testing, and

inspection per AISC 341-05 section 7.3. 5. The contractor is responsible for the following, but not limited to: A. Joint preparations and welding procedures including, but not limited to: welding procedures, required root openings, root face dimensions,

groove angles, backing bars, copes, surface roughness values, and welding tapers of unequal parts. Sequencing and procedures of welding to minimize the effect of shrinkage, residual stresses, and to maintain erection tolerances. welds on the project shall be submitted for review and acceptance prior to starting fabrication or erection. These shall be submitted to owner's Testing

Lab for review and acceptance prior to being submitted to the architect. Fillet weld sizes shown on the drawings are minimum sizes. Increase weld size to AWS minimum sizes, based on plate thicknesses. The minimum size | POST-INSTALLED ANCHORS IN CONCRETE weld shall be 3/16". Fillet weld lengths shown on the drawings are the net effective length required. Where length of weld is not shown it shall be full length of joint.

9. All groove and butt welds shall be complete joint penetration (CJP) welds, UON. Joint configuration for all CJP welds is steel fabricator option. All partial penetration groove weld sizes shown on the drawings refer to effective throat thickness.

10. All steel exposed to the weather shall have additional seal welding to protect

the members (pipes, tubes, built-ups) and the connections from moisture infiltration. These additional seal welds shall be shown on the shop drawings | 2 for review by the architect. Welds shown on the drawings may be shop or field welds at the contractor's option unless specifically noted to be field or shop weld.

IREPROOFING STRUCTURAL STEEL Refer to the architectural drawings for minimum hourly values of steel fire protection for determining the thickness of spray applied fireproofing. The structural steel frame consists of all structural steel members sized, identified, or indicated on the structural drawings. All structural steel beams and columns shown on the structural drawings shall be considered primary members UON. Braces in brace frames shall be | SHEAR STUDS AND DEFORMED BAR ANCHORS

considered secondary members.

1. Steel deck types shall be the products shown in the deck schedule or approved equal. All steel decking must have a current ICC or IAPMO certification

All structural framing shall be considered as restrained.

Steel deck shall be fabricated and erected in accordance with Steel Deck Institute – SDI specifications Deck manufacturer shall be a certified member of SDI. 4. Material for steel deck and accessories shall be ASTM A653 - SS designation, grade 33, minimum yield 38 ksi, with zinc coating in accordance

5. Touch-up damaged galvanized surfaces after erection with zinc rich paint. Provide miscellaneous steel shelf angles, hangers, anchors, ties and cramps | 6. Refer to architectural drawings for fireproofing requirements. Submit the following prior for review and acceptance prior to fabrication: A. Deck shop drawings showing deck gage, layout, fastening, closures,

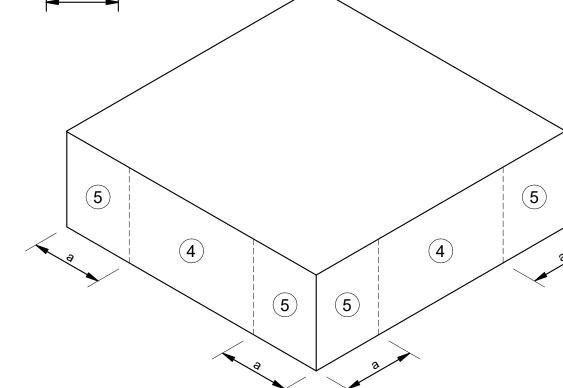
with ASTM A653, G60 for floor deck and G90 for roof deck, UON

shoring requirements, beam shear stud layouts, etc. B. ICC or IAPMO report for decking Written verification of structural conformance.

D. Deck units shall be connected to steel supports per schedule on Deck subcontractor shall indicate on the shop drawings whether deck

shoring is required for all deck conditions. This includes slab edge conditions. These shoring requirements shall be reviewed and approved by the general contractor prior to submittal to the architect and engineer. 9. All welding shall be per AWS D1.3. 10. Minimum bearing of decking on supports shall be 2-inch, parallel or perpendicular to span. Provide 2-inch bearing and required fastening for each unit at shared supports.

11. Units shall be continuous over three or more spans, except where framing does not permit, in these locations deck supplier shall span capacity. 12. No loads are permitted to be hung from roof deck. 13. Design and provide edge forms, flashing, closure plates, and incidental support at wall ends for all deck units, around columns, and at all perimeter locations requiring closure. Coordinate all closures with elevator, stair and other architectural details.



ASCE 7 COMPONENT & CLADDING WIND **DESIGN PRESSURES ZONES**

CONCRETE BLOCK MASONRY

Masonry construction shall be in accordance with ACI 530. Compressive strength of grouted CMU construction f'm shall be 2000 psi. All hollow concrete masonry units shall conform to ASTM C90, moisture controlled block; lightweight classification, compression strength of block

shall be 2150 psi to achieve f'm of 2000 psi; 13% maximum absorption for exposed to weather units. Use open ended bond beam units where possible Compressive strength of the grout shall be 2000 psi. Maximum size of aggregate in grout shall be per CODE. Mortar shall conform to CODE with strength of 2500 psi.

F'm shall be justified by preconstruction prism tests and prism tests during construction as specified in CODE. In addition to prism testing, material testing shall be conducted on the block, grout, and mortar to check for compliance with minimum specified strength. bolts for all brace frame and moment frame columns shall be ASTM F1554 All cells with vertical reinforcement or as noted on drawings shall be grouted

grade 55. Anchor bolts for ledgers to concrete or CMU wall shall be ASTM 9. Lay all units in running bond with fully mortared head joints 10. Horizontal joint reinforcing shall be "ladder type" with W1.7 diameter longitudinal bars. Provide 3/16 diameter longitudinal bars at walls be brick

> 1. Provide minimum #5 vertical bars at 48" o.c. and horizontal joint reinforcing at 16" o.c. unless indicated otherwise on drawings. 12. Provided minimum (2)#5 vertical bars additional at each side of openings or control joint UON

Bond beam reinforcing shall be continuous unless noted otherwise. 14. Provide minimum lap and splice lengths per ACI 530. 15. Reinforcing shall be held in place with approved spacing system embed in 16. Provide control joints in wall at a maximum spacing of 25' feet on center per

detail provided on the drawings. See structural drawings for control joint

. Pipes and conduits shall not be embedded in any masonry unless approved by architect and structural engineer. 18. Grouting of cores shall be in accordance with "low lift grouting" per ACI530. 19. Grout lifts shall be keyed 4" into lower masonry course. Project specific welding procedure specifications (WPS) for all field and shop | 20. High lift grouting shall be in conformance with the CODE. Contractor shall submit a high lift grout procedure for review and approval by the architect/engineer and Testing Lab.

Grout masonry below grade solid.

Expansion anchors A. Expansion Anchors shall be per CODE requirements

B. Expansion Anchors shall be: Kwik-Bolt TZ (ESR-1917) by Hilti, Power-Stud+ SD2 (ESR-2502) by Power Fasteners, Strong Bolt (ESR-1771) by Simpson, TruBolt+ (ESR-2427) by ITW Red Head or approved equal. For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors

Adhesive anchors shall be: HIT-HY 200 (ESR-3187) by Hilti, HIT-RE 500

Tension test 50% of all expansion anchors to test load provided by manufacture Adhesive anchors Comply with CODE requirements.

SD (ESR-2732) by Hilti, Set-XP (ESR-2508) by Simpson, or approved For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors D. Tension test 50% of all expansion anchors to test load provided by

Shear studs shall be AWS D1.1 "type B" headed studs per ASTM A108.

Provide granular flux-filled Nelson shear connector S3L or Nelson headed concrete anchor H4L, or approved equal. Threaded studs shall be AWS D1.1 "type A" threaded studs per ASTM A108 Provide Nelson partially threaded stud CPL or approved equal. Deformed bar anchors (DBA) shall be stud type per ASTM A496, cold finished low-carbon steel, minimum tensile strength of 80,000 psi. Provide nelson deformed bar concrete anchors D2L or equal.

. All shear stud and deformed bar anchors shown on drawings shall be welded to steel members attached to per manufacturer's requirements to obtain full STRUCTURAL STEEL

Structural steel design fabrication and erection shall be in accordance with American Institute of Steel Construction, AISC 360 – Specification for Structural Steel Building and Steel Construction Manual, UON All structural steel shall conform to the following:

A. Structural steel rolled shapes: ASTM A992, Fy= 50 ksi, Typical UON;

 B. Structural steel channels and angles ASTM A36, Fy= 36 ksi, UON

C. Structural steel plates and bars: ASTM A572 Grade 50, Fy= 50 ksi, UON Square or rectangular steel tubes: ASTM A500, Grade C, Fy=50ksi. E. Round steel tubes: ASTM A500, Grade C, Fy=46ksi.

Structural Steel Fabricator shall be AISC Certified or have a AISC equivalent Quality Assurance program verified by a qualified independent testing agency. Non-Certified Fabricators shall comply with additional Special Inspection requirements per CODE. Detailing of connections and framing shall be performed using rational engineering principles in accordance with Contract Documents. Typical

details shown do not indicate the correct number of bolts, weld or plate sizes unless specifically noted. Connections shall be designed by a Professional Engineer registered in the State in which the project is Constructed, for connections not specifically detailed on drawings. Submit signed and sealed calculations for review. Shop drawings detailing fabrication and field erection details shall be

submitted and reviewed by the architect/engineer prior to fabrication. The contractor shall be responsible for the following: A. Coordination of selection of optional details shown on the structural B. All erection aids, including but not limited to: erection angles, lift holes, and other aids.

with the details shown on the structural drawings. Shear connections shall be AISC approved connections and capable of end 10. Non-composite beams shall be designed to support minimum of 50% of the

Steel connections shall be detailed on the shop drawings in conformance

Maximum Total Uniform Load per AISC Steel Construction Manual unless noted otherwise on drawings. 1. All structural and architectural steel exposed to weather shall be painted per specifications.

Dimensional tolerances for built up members shall be per AWS D1.1. 13. Steel beams are equally spaced between dimensioned points, UON 14. Where AESS is indicated on drawings, detail and finish steel in conformance with the "AESS" section of the general notes and specifications. 15. Fabrication and erection tolerance of brick frames shall conform to AISC 303, Section 10 – Architecturally Exposed Structural Steel. Reference Architectural and MEP drawings for miscellaneous members and

plates not shown on Structural Drawings. . Beams shall be fabricated with natural camber up. Provide additional camber as noted on drawings. 18. Field verify all existing condition before submitting shop drawing for review. 19. Thoroughly clean existing steel surfaces to review weld.

20. Comply with the following cleaning and painting requirements, UON: A. SSPC-SP3 and one coat of shop primer for all interior steel. Omit paint at | 8. Chamfer exposed concrete corners per the architectural drawings. concrete and on top flange of beams with shear connectors. B. SSPC-SP6 and hot dipped Galvanized G90 for exterior steel exposed to

exterior conditions C. SSPC-SP6 and one coat of shop primer minimum for AESS. . Anchor rods, base plates and bearing plates shall be pre-set prior to concrete or grout placement 22. Provide adjustable channel slots for masonry anchors at steel columns and

lintels at 24" o.c. when encased in masonry. 23. The contractor shall provide minimum 4" concrete cover around all steel members or components adjacent to and exposed to soil. Minimum reinforcement in concrete cover shall be #3 at 12" o.c. 24. Non-shrink grout shall meet the requirements of ASTM Standard C1107, and shall attain a minimum 28 day compressive strength of 8000 psi.

25. Provide temporary bracing and/or shoring as required to stabilized framing until lateral load system in complete. Account for temperature differentials in erection procedures.

ARCHITECTURALLY EXPOSED STEEL (AESS) . Steel defined as AESS on project shall be fabricated and constructed in

accordance with the AESS requirement of Specification Section 05 12 00. See Architectural drawing for miscellaneous steel to be AESS.

. Elevator machine beams, hoist beams, rails, sills, door supports and connections to the primary structure and design-build components to be designed by the Elevator Manufacturer. Refer to the Section "Deferred Structural Submittals" for Deferred Submittal requirements. In addition, the following shall apply:

A. The Contractor shall be shall be responsible for providing additional framing necessary for any penetrations through the machine room floor not shown on the structural drawings. Submitted documents shall include the location, direction, and magnitude

of all loads imposed by the elevator system to the primary structure.

CONCRETE l. Mixing, batching, transporting, and placing of all concrete and selection of

concrete materials shall conform to ACI 301 specification for structural concrete for buildings, UON. Each mix design listed below shall be submitted, with current supporting data, and be approved by architect/structural engineer and the testing laboratory prior to use. Concrete mix designs shall be stamped and signed by a civil or structural engineer licensed in the state of Michigan. Submittal shall include the following:

A. Cement type and source. B. Cement cube strength. Course and fine aggregate source and grading. Admixture data sheets.

Use of calcium chloride, chloride ions or other salts in concrete mix is The schedule below indicates the minimum concrete design mix requirements. Some design mix properties may need to exceed minimum requirements in order to make other properties meet minimum requirements.

A. Type A – Foundation: Footings and grade beams Normal weight concrete (150 pcf) • Strength - f'c = 4000 psi (at 28 days)

Flyash / cement ratio = 50 percent max B. Type B- Slab-on-grade (including curbs and pads) Normal weight concrete (150 pcf)

 Strength - f'c = 4000 psi (at 28 days) Max w/c ratio = 0.40 Flyash / cement ratio = 50 percent max Shrinkage limit = 0.040%

Type C – Concrete on Metal Deck Normal weight concrete (150 pcf) • Strength - f'c = 350 psi (at 28 days) Max w/c ratio = 0.50

A. Concrete on Steel Deck – 1" clear from top of slab

 Flyash / cement ratio = 50 percent may Shrinkage limit = 0.040% Type D- Precast Panels Normal weight concrete (150 pcf) Strength - f'c =5000 psi (at 28 days)

> Max w/c ratio = 0.40 Shrinkage limit = 0.040% 5. Concrete exposed to freeze/thaw cycles including foundation walls shall be air-entrained 6% +/- 1%. Minimum concrete cover over reinforcing steel shall be as follows (UON):

B. Slabs and Walls Interior Faces – ¾" (#11 and smaller) Exposed to Weather – 1.5" (#5 and smaller) and 2" (#6 and larger)

 Exposed to earth – 2 Footings or Grade Beams Not exposed to Earth – 2³

 Exposed to Earth – 2" Cast Against Earth – 3"

D. Slab on Grade – 2" from bottom The contractor shall provide minimum 4" reinforced concrete cover around all | STRUCTURAL OBSERVATIONS steel members or components (WF, TS, plates, bolts, etc.) adjacent to and exposed to soil. Do not place conduits or other elements exceeding 25% of the depth of the concrete slab or wall. No conduit is allowed in columns or beams unless

reviewed and approved by Structural Engineer Anchor rods, leveling plates, bearing plates and other structural steel embeds shall be secured in place within a 1/8" tolerance in any direction prior to placing concrete

0. Aluminum products are prohibited embed or directly attached to concrete. 1. Slab on grade to be placed on min 15mil class A vapor retarder with lapped and taped joints. Coordinate vapor retarder requirements with selected floor

REINFORCING STEEL Steel reinforcement shall be as follows:

A. ASTM A615 grade 60 UON ASTM A706 Gr 60 for bars to be welded, coupled and where noted on

Reinforcing bars shall be lap spliced per the lap splice schedule. Lap splices | 1. Verify all existing dimension before submitting shop drawings for review. 3. Mechanical splices, if used at contractor's option, shall be ICC approved and be capable of developing 125% of specified minimum yield strength of bar in 3 tension or compression

. Welded wire fabric shall conform to ASTM A185. 5. Welded wire fabric shall be lap spliced 8" or one full mesh spacing plus 2", whichever is greater Welding of reinforcing steel shall be in accordance with AWS D1.4. Weld reinforcing bars only where noted on the drawings. Tack welding or welding of bars to plates, templates, etc, is prohibited, unless specifically shown on

the drawings. Submit rebar shop drawings in accordance with ACI 315 for review and acceptance by architect/engineer prior to fabrication. The shop drawings

shall include: A. Reinforcing size, lengths and bends. Location, spacing and number of bars. Methods and details of support to maintain specified cover. D. Locations of construction joints.

Location and length of all splices. Contractor shall investigate and coordinate reinforcing steel placement in congested areas and provide templates, reinforcing bar coupling, or bar welding where necessary to maintain bar placement. Bars shall not be bent or twisted in the field, unless specifically detailed on the structural drawings

0. Securely tie all reinforcing in-place with iron wire. Support all reinforcing in place with acceptable chairs.

CONCRETE FORMWORK AND JOINTS

Design and construction of formwork is the responsibility of the contractor and shall be in conformance with ACI 301. The contractor shall determine the need for shoring and re-shoring. Design and construction of shoring / reshoring, including analysis of the structure, is the responsibility of the contractor. Submit proposed shoring and reshoring plans. conforming to ACI 301, to the engineer for record only. All construction joints shall be constructed in accordance with the typical construction joint details shown on the structural drawings. All construction joints shall be coordinated and constructed in accordance with architectural

finishes and treatments. The maximum length of pours shall be as follows: A. Slab-on-grade and topping slabs: 120 feet

Suspended concrete slab: 120 feet Concrete fill in metal deck: 120 feet Architectural Topping Slabs: 120 feet

Walls: 80 feet The contractor shall submit the proposed locations of construction joints to the architect/engineer and receive approval prior to fabrication of formwork. 6. Clean and roughen to ¼" amplitude, all horizontal construction joint surfaces against which concrete is to be placed. All construction joints shall be wetted and standing water removed immediately before new concrete is placed. For existing concrete, mechanically roughen to 1/4" amplitude, clean and degrease existing concrete before placing concrete adjacent to existing concrete. Apply bonding agent prior to placing concrete. Bonding agent shall

be cementitious or epoxy-based bonding agent approved by Structural holes for slip critical connections, steel to be fire-proofed, encased in 9. Provide water-stops in all construction joints in elements exposed to weather, soil or liquid on one side. Refer to architectural drawings and specifications | 13. Thoroughly clean and roughen construction joints between foundations and | Acc for waterproofing and damp-proofing requirements.

10. Joints shall be prepared and sealed with joint sealant. 11. Provide pockets in concrete as required for structural steel columns, beams. Coordinate size and locations with steel shop drawings. Fill pockets with concrete after steel erection.

SHORING AND BRACING

work by the Testing Agency.

the Owner and Architect/Structural Engineer.

Contractor shall provide temporary shoring and bracing of existing construction, new construction and underground utilities as follows Where shown or noted on the Drawings Where existing construction is to be altered or disturbed until permanent support is in place.

Where existing construction is not undergoing alteration and is to remain undisturbed but is disturbed as a result of the work of this contract. D. As required for safe erection, installation of new construction, equipment, E. When needed for Contractor's "means and methods" of construction,

and other safety related issues. Shoring and bracing shown on the Drawings is conceptual. Contractor shall be responsible for verifying existing conditions, shoring and bracing calculations, methods of installation, transfer of loads through to final load support, and work sequence phasing with new construction. Shoring and bracing shall be performed by a Contractor with minimum 5 years demonstrated experience in similar size and scope of shoring and

bracing projects. Shoring and bracing shall be designed by a Professional Engineer registered in the State of the Project with minimum 5 years demonstrated experience in similar size and scope of shoring and bracing projects. Design loads and methods shall conform to applicable codes. Soil and material strengths shall be verified by tests, unless conservative estimates that do not affect deflections and deformations are approved by the Architect/Structural

Contractor shall submit drawings and calculations sealed and signed by the Contractor's Professional Engineer showing complete design including temporary conditions, final conditions and sequence of work. Before starting work, Contractor shall perform condition survey of the existing building structure, exterior façade and interior finishes, including photographic documentation and submit survey to the Owner for record. During the shoring and bracing operations, Contractor shall:

A. Keep the existing and new construction in a safe condition. B. Monitor existing and new construction to detect any signs of distress or deformation. C. Take immediate steps to prevent distress, deformation or damage. 8. Contractor shall continuously monitor the shoring and bracing system. Contractor shall review and ascertain that all field connections are completed according to the Contractor's design and issue approval for inspection of the

. After completion of shoring and bracing and completion of work requiring shoring and bracing, Contractor shall repair any damage to the existing and new construction, without any cost to the Owner, and to the satisfaction of

ARCHITECTURAL SLAB PLANS . See Architectural Slab Plans that show the following information:

A. Locations of the edge of slab at perimeter and interior openings Slab elevations 2. Slab depressions (elevations and locations of depression)

D. Slab slopes E. Concrete curbs (width, height, location)

SPECIAL INSPECTIONS

Special inspections shall be provided by the Owner's Testing Lab in according to the code and the project specifications. The special inspector shall observe the work for conformance with the construction documents. The special inspector shall send reports to the inspector of record, architect, engineer, contractor and Owner. All discrepancies shall be brought to the attention of the contractor for correction. When work is done to the satisfaction of the inspector, then the special inspector shall submit a final signed report stating that, to the best of their knowledge, the work was competed in conformance with the plans, specifications, and the applicable workmanship provisions of the CODE.

Refer to Special Inspection tables and notes for specific requirements. EXISTING CONSTRUCTION

 Before submitting a proposal for work, and/or preparing shop drawings for this work each Bidder, Contractor and Sub-Contractor shall visit the site and become fully acquainted with the existing conditions, temporary construction required, type of equipment required to perform the work. Field verify all existing dimensions, conditions, members sizes and elevations with the information provided on the drawings. Information provided on drawings is based on limited field observations and available existing drawings which may not reflect actual conditions. Discrepancies to be noted and immediately brought to the attention of the Structural Engineer. Provide temporary shoring and bracing as required before, during and after

construction as required until all materials have reached the required strength Existing construction not undergoing alteration is to remain undisturbed. Where such construction is disturbed as a result of the operations of this contract, Contractor shall repair or replace as required and to the satisfaction of the Architect/Structural Engineer and Owner's Representative. Verify the existence, location and elevation of existing utilities, sewers, drains, etc. in demolition areas and adjacent to new work before proceeding

proceed with work until discrepancies have been resolved. Provide fire safety precautions during field cutting and welding operations, meeting the Owner's requirements. Provide temporary protection of existing equipment during execution of work, satisfying the Owner's requirements.

with the work. All discrepancies shall be documented and reported, do not

Provide temporary protection to prevent damage from the weather and Coordinate work with the Owner's personnel to avoid any interference in their 10. Refer to "SHORING AND BRACING" notes for additional requirements.

Resurget Engineering shall provide Structural Observation of the structural systems for general conformance to the drawings and specifications at significant stages of construction and at completion of the primary structural

system as defined in Code Structural Observation does not include or waive any of the responsibilities of the Special Inspector as required per the Section "Special Inspections". At the conclusion of work included in permit, the structural observer will submit to the building official a written statement that the structural observations have been completed and that to the best of their knowledge the work is in conformation with the construction documents Structural Observation on this project shall be conducted on the following

A. Spread Footings B. Concrete Slabs Structural steel erection

structural elements:

D. CMU Bearing/Shear Walls

are to be securely tied at all side and end laps. Splice reinforcing where 2. Review all shop drawings for accuracy and compliance with shop drawing before submitting for review. Review of shop drawings does not relieve the Contractor of any responsibility or errors and omissions. Use of 2D Drawing or 3D REVIT model does not relieve the Contractor of any responsibility specified in the contract documents. Allow a minimum of 10 working days for review by Structural Engineer of each set of submitted contract drawing. Submit shop drawings in reasonable quantities with at least 10 working days between submittals. Review time stated is for Structural Engineer only, add additional time to schedule as required for review by other disciplines. Contractor shall coordinate work between multiple trades before submitting shop drawings. Dimensions and elevations specific to equipment installation shall be provided and coordinated prior to submittal for review. Failure to provide these dimensions shall result in return of shop drawings without Structural Engineer is not responsible for coordination of work marked as "by Ultin

> others" on shop drawings. FOUNDATIONS Foundations have been designed using the findings, recommendations, and criteria provided in the geotechnical reference documents listed in the "DESIGN CRITERIA". Refer to these documents, and subsequent addenda, for information on generalized subsurface profiles, soil properties, existing site features, and conditions affecting foundation installation. See the geotechnical report for site preparation and elevation of suitable insitu soils to obtain minimum allowable bearing capacity used for design. In addition to the removal of unsuitable soils and replacement with Engineered fill is an option in lieu of extending the bottom of foundation elevations to

bearing elevation. See the geotechnical report for over excavation requirements below structural foundations. All excavations shall be inspected and approved by the geotechnical engineer before placing concrete. Geotechnical Engineer or testing agency under their review shall inspect and test all subgrades, fills and backfills to meet requirements of Contract

Foundation bearing elevations shown on drawings are minimums. Foundation bearing elevation shall be below minimum local frost depth requirements, bearing on undisturbed natural soils or engineered fill having a minimum allowable bearing as indicated. Any temporary shoring needed for excavation shall be designed by licensed engineer working for the contractor. Temporary shoring designs shall be submitted to Architect for record only (not for review or approval). Earth forms: Side forms for foundations may be omitted and concrete placed A = 1against soil if it can be shown that the soil excavations are suitable for such use and will not cave prior to or during the concrete pour. If the vertical excavated soil surfaces are deemed to be unsatisfactory for use as a foundation side form, then the contractor shall provide standard concrete side forms at no extra cost to the owner. Exterior sides of elevation shall be

Extend all footing and grade beam reinforcing continuous through intersecting footings and grade beams. The contractor shall adjust the concrete cover at reinforcing bars to avoid interference. Pad foundation area are centered on columns unless noted otherwise. 10. Do not place concrete on or adjacent to saturated sub-grade, sub-grade with standing water, sub-grade with organic content, frost or ice. Contractor responsible for de-watering of site and excavations as required. Do not undermine existing foundation without approved underpinning design. |Sp.

smooth and vertical from grade elevation to minimum frost depth.

walls and columns per "CONCRETE FORMWORK AND JOINTS". 4. Balance backfill adjacent to foundation walls to eliminate excessive lateral 5. Backfill and engineered fill shall consist of clean, well graded soils, free of organic material, silt or clay or meet the requirements of the project specification manual. Backfill shall be compacted to 95% of maximum density, as determined by the Modified Proctor Method (ASTM D1557), in maximum lifts of 6".

. The drawings indicate the structure in its final condition. The contractor is fully responsible for all temporary measures necessary for erection prior to the structure's final condition The contractor is responsible for means and methods, scheduling, sequencing of construction or compliance with OSHA provisions. The contractor shall coordinate with other trades in determining the erection sequence so that the erection sequence and associated site conditions will not adversely impact or damage work by other trades or previously erected

Deflection and movement of structure A. Floor beams, trusses, transfer girders, and cantilevers will continue to deflect as additional loads are applied during construction. Although camber may be shown to account for the theoretical dead load deflection, this may not occur until all dead load is on the member. B. The contractor shall coordinate the attachment of any items to the structure so that typical lateral movements of adjacent floors in any

direction are accommodated by the attachments. The lateral movement Lateral Equivalent

GENERAL NOTES

1. Governing Design Code: 2015 Michigan Building Code with local jurisdiction amendments (hereafter referred to as "CODE") 2. All construction shall be in accordance with the following:

B. Drawings and Specifications 3. The structural drawing notes are intended to work together and be complementary with the project specifications. Consult the specifications for additional requirements in each section. Information provided on structural drawings shall take precedence over the specifications. Information shown on specific details shall take precedence over typical details and structural

Typical details and general notes shall apply, UON. . The structural drawings shall be used in conjunction with the architectural drawings. See architectural drawings for information not shown, including

but not limited to the following: A. Setting out dimensions and angles of all grid lines B. Setting out dimensions of concrete walls and wall openings that are not

shown on the structural drawings. Slab geometry that includes the following: · Edge of slab locations at building perimeter Edge of slab location at interior openings Location and geometry of slab depressions and slopes (depression and slopes in structural slabs that are not shown diagrammatically

on the structural drawings shall be reviewed by SEOR) Concrete curb locations, height and width . Interior partitions and ceilings including Interior metal stud partitions (size, location and detailing) Interior glazed walls (location and detailing) Interior CMU partition (locations and openings)

Exterior non-bearing wall construction. This includes:

Exterior metal studs (size, location, and detailing) Curtain wall and louver details Aluminum trellises (sizes and detailing) Anchorage and bracing of building contents G. Concrete chamfers, grooves, inserts, embedments, etc.

H. Architectural (non-structural) topping slabs – location and detailing Concrete finishes Dimensions not shown on the structural drawings All fireproofing requirements including fireproofing requirements for structural steel elements Misc steel required for support of architectural elements

M. Waterproofing system and details 6. See the mechanical, electrical and plumbing drawings for information not shown, including but not limited to: A. Wall and slab openings for services, pipe sleeves, hangers, trenches

except as shown Electrical conduit runs, boxes, outlets in walls and slabs Concrete inserts for electrical, mechanical, or plumbing D. Size and location of equipment pads and equipment anchor bolts (typical concrete pad detail are provided on the Structural Drawings)

E. Locations for beam penetrations for pipes and ducts, except as shown (typical steel penetrations are provided on the Structural Drawings) Contractor is responsible for the coordinating all equipment pad sizes and locations with the actual layout provided in the shop drawings. Drawing scales noted on structural drawings are for reference only. Do NOT scale drawings. The contractor shall verify dimensions not provided with the

•	proceeding with work.	not provided man
	DESIGN CRITERIA	
Design is	s in accordance with CODE	CODE REFEREI
Risk Category	II	IBC Table 1604 ASCE Table 1.5
FLO	OR LIVE LOADS	CODE REFERE
OFFICE	50 PSF + PARTITIONS	ASCE Table 4
BALCONY	75 PSF	ASCE Table 4
ROOF	20 PSF	ASCE Table 4
PARTITIONS	15 PSF	ASCE Table 4
S	SNOW LOADS	CODE REFEREI
Ground Snow Load	Pg = 35 PSF	ASCE Figure 7
Flat Roof Snow Load	Pf = 25 PSF	ASCE Section
Exposure Factor	Ce = 1.0	ASCE Table 7
mportance Factor	I = 1.0	ASCE Table 1.
Thermal Factor	Ct = 1.1	ASCE Table 7
	to vertical projections, on lower roofs adjeased for the effects of drifting.	acent to high roof
	MIND I OADS	CODE BEEEBEI

portance Factor		1 = 1.0		ASCE Table 1.5-2	
ermal Factor		Ct = 1.1		ASCE Table 7-3	
				acent to high roofs, o	
1	WIND LOA	ADS		CODE REFERENCE	
timate Design ind Speed sec. gust)	V(ULT	TIMATE)= 115	MPH	ASCE Figure 26.5-1	
erviceability Limit ate Wind Speed	A SCE				
posure Category		В		ASCE Section 26.7.3	
ernal Pressure pefficient	Marie Mari			ASCE Section 26.11-1	
	COMPONEN	TS AND CLAI	DDING ROOF	=	
	Zone 1	Zone 2	Zone 3	CODE REFERENCE	
pport Beam > 100 SF)	-23 PSF	-27 PSF	-27 PSF	ASCE Table 30.7-2	
oof Sheathing = 50 SF)	-24 PSF	-32 PSF	-38 PSF	ASCE Table 30.7-2	
eck Fasteners < 10 SF)	-25 PSF	-42 PSF	-63 PSF	ASCE Table 30.7-2	
(DING WALL	S			
	Zone 4	Zone 5		CODE REFERENCE	
= 100 SF	18/-19 PSF	18/-19 PSF		ASCE Table 30.7-2	
= 50 SF	21/-23 PSF	21/-26 PSF		ASCE Table 30.7-2	
= 10 SF	23/-25 PSF	23/-31 PSF		ASCE Table 30.7-2	
illding design splacements	Wind drift a	t Serviceabilit	y Limit State	Wind Speed = h/400	
SI	EISMIC LO	DADS		CODE REFERENCE	
eismic Importance ctor		ASCE Table 1.5-2			
ort Period Spectral esponse celeration		SS = 0.110 g	ASCE Section 11.4.		
) sec. Period ectral Response celeration		S1 = 0.052 g		ASCE Section 11.4.	
e Class		D		ASCE Section 11.4.	
esign Short ectral Response celeration	S	SDS = 0.092 g	J	ASCE Section 11.4.	
esign Short Period pectral Response celeration	5	SD1 = 0.075 g	l	ASCE Section 11.4.	
eismic Design ategory		В		ASCE Section 11.6	
eismic Force esisting System	Ordinary	Precast Shea	ar Walls	ASCE Table 12.2-1	
eismic Response pefficient		ASCE Section 12.8.1.1			
esponse odification Factor				ASCE Table 12.2-1	
alysis Procedure	Equiv	alent Lateral I	-orce	ASCE Section 12.8	

Seismic Inelastic Story Drift (Delta m) = 2.0%

40 PCF (Walls Unbraced at Top)

5 PSF (MEP)

2500 PSF

FOUNDATION DESIGN

1. Refer to Geotechnical Report by SME dated August 21st, 2024 for additional

SUPERIMPOSED DEAD LOAD

2. Lateral earth pressure is based upon drained soil. Refer to drawings for

Allowable Soil

Bearing Capacity

foundation drainage.

Typical Floors and

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic **Chamber of** Commerce- HQ

2 1111 Godfrey Ave, SW Grand Rapids, MI 49507

RESURGET

ENGINEERING

DETROIT - SAN FRANCISCO 28 W ADAMS AVE 201 SPEAR ST

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WWW.RESURGET.ENGINEERING **PROFESSIONAL SEAL** * / STEINHOBEL ENGINEER

DATE

DESCRIPTION 02/07/2025

KEY PLAN

GENERAL NOTES

SHEET#

PROJECT#

24094

SHEET TITLE

			INSPECTIO	N FREQUENCY				
		INSPECTION TASK	CONTINUOUS	PERIODIC	_ REFERENCED STANDARD	IBC REFERENCE	RESPONSIB AGENT	
NS	SPECTIO	N OF STEEL FABRICATED ITEMS SHALL BE PERFORMED ON PREMISES	CONTINUOUS					
	RING FA	ABRICATION. EPTIONS: SPECIAL INSPECTIONS DURING FABRICATION NOT REQUIRED		X	AISC QUALITY	1704.2.5	SI	
٦.	WHEF	RE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORANCE WITH			CERTIFICATION			
ELE	EMENTS	ISPECTION AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL IN BUILDINGS, STRUCTUREA AND PORTIONS THEREOF SHALL BE IN NCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC	Х	Х	AISC QUALITY CERTIFICATION	1705.2.1	SI	
Α.	ELEM	CIAL INSPECTION OF RAILING SYSTEMS COMPOSED OF STRUCTURAL STEEL BENTS SHALL BE LIMITED TO WELDING INSPECTION OF WELDS AT THE BASE		Х	AISC QUALITY CERTIFICATION	1705.2.1	SI	
	OF CA	ANTILEVERED RAIL POSTS. INSPECTION TASK	INSPEC	TION TYPE	REFERENCED	IBC REFERENCE	RESPONSIE	
			QC	QA	STANDARD	IBO NEI ERENOE	AGENT	
		OF BOLTING			_			
1.	A.	ECTION TASKS PRIOR TO BOLTING: MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER	0	P	_			
	В.	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS.	0	0	_			
	C.	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE,	0	0				
	_	BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).			AISC 360,		2.7	
	D. E.	PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE	0	0	SECTION N5, TABLE N5.6-1	1705.2	SI/TA	
	F.	CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS. PRE-INSTASLLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL	0	0	_			
		OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED.	Р	0				
	G.	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS.	0	0				
2.		ECTION TASKS DURING BOLTING:			_			
	A.	FASTENER ASSMEBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	0	0				
	B.	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.	0	0	AISC 360,			
	C.	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTING FROM ROTATING.	0	0	SECTION N5, TABLE N5.6-2	1705.2	SI/TA	
	D.	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC			_			
	INIODE	SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.	0	0	AISC 360,			
3.	A.	ECTION TASKS AFTER BOLTING: DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	P	P	SECTION N5, TABLE N5.6-3	1705.2	SI/TA	
PEC		F WELDING:	'	<u>'</u>	TABLE NO.0-3			
1.		ECTION TASKS PRIOR TO WELDING:			_			
	A.	WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	Р	Р				
	B.	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.	Р	Р				
	C.	MATERIAL IDENTIFICATION (TYPE/GRADE).	0	0	-			
	D.	WELDER IDENTIFICATION SYSTEM.	0	0				
	E.	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY): - JOINT PREPARATION. - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL). - CLEANLINESS (CONDITION OF STEEL SURFACES). - TACKING (TACK WELD QUALITY AND LOCATION). - BACKING TYPE AND FIT (IF AVAILABLE).	0	0	AISC 360, SECTION N5, TABLE N5.4-1	1705.2	SI/TA	
	F.	CONFIGURATION OF FINISH AND ACCESS HOLES.	0	0	_			
	G.	FIT-UP OF FILLET WELDS: - DIMENSIONS (ALIGNMENT, GAPS AT ROOT).						
		- DIMENSIONS (ALIGNMENT), GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION).	0	0				
	H.	CHECK WELDING EQUIPMENT.	0	-	-			
2.	A.	ECTION TASKS DURING WELDING: USE OF QUALIFIED WELDERS.	0	0	_			
	7.	CONTROL AND HANDLING OF WELDING CONSUMABLES:	J	<u> </u>	-			
	B.	- PACKAGING. - EXPOSURE CONTROL.	0	0				
	C.	NO WELDING OVER CRACKED TACK WELDS.	0	0	-			
	D.	WPS FOLLOWED: - SETTINGS ON WELDING EQUIPMENT.			A100.000			
		- SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS.			AISC 360, SECTION N5,	1705.2	SI/TA	
		- SHIELDING GAS TYPE/FLOW RATE.	0	0	TABLE N5.4-2			
		- PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) PROPER POSITION (F, V, H, OH).						
	E.	WELDING TECHNIQUES: - INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS.	О	0				
		- EACH PASS MEETS QUALITY REQUIREMENTS.						
3.		ECTION TASKS AFTER WELDING:			_			
	A. B.	WELDS CLEANED. SIZE, LENGTH AND LOCATION OF WELDS.	O P	O P	_			
	В. С.	WELDS MEET VISUAL ACCEPTANCE CRITERIA:	ı	ı-	-			
		- CRACK PROHIBITION.						
		- WELD/BASE-METAL FUSION CRATER CROSS SECTION.	Р	P				
		- WELD PROFILES. - WELD SIZE.	'	•	AISC 360, SECTION N5,	1705.2	SI/TA	
		- UNDERCUT. - POROSITY.			TABLE N5.4-3	1700.2		
	D.	ARC STRIKES.	Р	Р	-			
	E.	K-AREA.	Р	Р				
	_	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED).	Р	Р	1			
	F.	3. (a. 1.1. 1.2. 1.1. 1.2. 1.2. 1.2. 1.2. 1.			-			

QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.

QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, APPLICABLE BUILDING CODE, PURCHASER, OWNER, OR ENGINEER OF RECORD.

O: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. P: PERFORM THESE TASKS FOR EACH STEEL ELEMENT.

	TAOK	INSPECTION	FREQUENCY	REFERENCED	MDO DEFEDENCE	RESPONSIBLE
	TASK	CONTINUOUS	PERIODIC	STANDARD	MBC REFERENCE	AGENT
1.	INSPECT REINFORCEMENT, INCLUDING POST-TENSIONED CABLES, AND VERIFY PLACEMENT.	-	Х	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	SI
2.	REINFORCING BAR WELDING:					
	A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	Х	AWS D1.4		SI
	B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	Х	ACI 318: 26.6.4	-	31
	C. INSPECT ALL OTHER WELDS	X	-			
3.	INSPECT ANCHORS CAST IN CONCRETE.	-	Х	ACI 318: 17.8.2	-	SI / TA
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED MEMBERS.					SI / TA
	A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	Х		ACI 318: 17.8.2.4		
	B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		Х	ACI318: 17.8.2		
5.	VERIFY USE OF REQUIRED DESIGN MIX.	-	Х	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	SI / TA
3.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	х	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10	SI / TA
7.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Х	ACI 318: 26.5.3-26.5.5	1908.9	SI
3.	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	Х	ACI 318: 26.11.1.2(b)	-	SI / SE / TA

TAOK	INSPECTION I	FREQUENCY	REFERENCED		RESPONSIBLE	
TASK	CONTINUOUS	PERIODIC	STANDARD	IBC REFERENCE	AGENT	
SPRAYED FIRE RESISTANT MATERIALS:						
A. SURFACE CONDITIONS	x	-	MANUFACTURER'S REQUIREMENTS	1705.13.2		
B. APPLICATION	-	Х	MANUFACTURER'S REQUIREMENTS	1705.13.3	SI/TA	
C. THICKNESS	X	-	ASTM E605	1705.13.4		
D. DENSITY	-	Х	ASTM E605	1705.13.5		
E. BOND STRENGTH	-	Х	ASTM E736	1705.13.6		
MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS.	-	X	AWCI 12-B	1705.14	SI/TA	

SPECIAL INSPECTION REQUIREMENTS - OPEN-WEB STEEL JOISTS AND JOIST GIRDERS											
	INSPECTION	FREQUENCY	REFERENCED		RESPONSIBLE						
TASK	CONTINUOUS	PERIODIC	STANDARD	IBC REFERENCE	AGENT						
. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS:				-							
A. END CONNECTIONS - WELDED OR BOLTED.	-	Х	SJI SPECIFICATIONS LISTED IN SECTION 2207.1	1705.2.3							
B. BRIDGING - HORIZONTAL OR DIAGONAL.	-	Х	-	-	SI / TA						
1. STANDARD BRIDGING.	-	Х	SJI SPECIFICATIONS LISTED IN SECTION 2207.1	1705.2.3							
2. BRIDGING THAT DIFFERS FROM SJI SPECIFICATIONS LISTED IN SECTION	X	-									

	SPECIAL INSPECTION REQUIREMENTS - SOILS AND FOUNDATIONS											
	TASK	INSPECTION	FREQUENCY	REFERENCED	MBC REFERENCE	RESPONSIBLE						
	TAOR	CONTINUOUS	PERIODIC	STANDARD	MBC REI ERENCE	AGENT						
1	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE						
2	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE						
3	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X	GEOTECHNICAL REPORT	1705.6	SI/GE/TA						
4	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-	GEOTECHNICAL REPORT	1705.6	SI/GE/TA						
5	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE/TA						

		MINIMUM T	ESTS							
	VERIFICATION OF SLUMP FLOW A IN ACCORDANCE WITH SPEC	ND VISUAL STABILITY CIFICATION ARTICLE 1	INDEX (VSI) AS DEI .5 B.1.b.3 FOR SELF	IVERED TO THE PRO -CONSOLIDATING GR	JECT SITE OUT.					
	VERIFICATION OF f'm IN ACCORI	DANCE WITH SPECIFIC	CATION ARTICLE 1.4	B PRIOR TO CONSTR	RUCTION.					
		MINIMUM SPECIAL	INSPECTION							
		INSPECTION F	REQUENCY		REFERENCE CRITERIA	A				
	TASK	CONTINUOUS	PERIODIC	MBC SECTION	TMS 402	TMS 602	RESPONSIBLE AGENT			
	RIFY COMPLIANCE WITH THE APPROVED SUBMITTALS. MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPL	- IANCE:	X	-	-	ART. 1.5	SI			
A.	PROPORTIONS OF SITE-PREPARED MORTAR.	-	Х	-	-	ART. 2.1, 2.6A	21			
B.	CONSTRUCTION OF MORTAR JOINTS.	-	Х	-	-	ART. 3.3B	SI			
C.	LOCATION OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES.	-	Х	-	-	ART. 3.4, 3.6A				
. PF	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:									
A.	GROUT SPACE.	-	Х	-	-	ART. 3.2D, 3.2F				
B.	GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR RODS, AND ANCHORS.	-	Х	-	SEC. 6.1	ART. 2.4, 3.4	SI/TA			
C.	PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHORS.	-	Х	-	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	ART. 3.2E, 3.4, 3.6A	31/TA			
D.	PROPORTIONS OF SITE-PREPARED GROUT	-	Х	-	-	ART. 2.6 B, 2.4 B.1.b				
E.	CONSTRUCTION OF MORTAR JOINTS.	-	X	-	-	ART. 3.3B				
. VE	RIFY DURING CONSTRUCTION:	,								
A.	SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X	-	-	ART. 3.3F				
B.	TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	-	X	-	SEC. 1.2.1(e), 6.1.4.3, 6.2.1	-				
C.	WELDING OF REINFORCEMENT.	Х	-	-	SEC. 8.1.6.7.2, 9.3.3.4(c),11.3.3.4(b)	-	SI/TA			
D.	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	-	Х	-	-	ART. 1.8C, 1.8D				
E.	PLACEMENT OF GROUT	Х	-	-	-	ART. 3.5, 3.6 C				
	SSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR RISMS.	-	Х	-	-	ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4	SI/TA			

STATMENT OF SPECIAL INSPECTIONS - STEEL ELEMENTS OF COMPOSITE CONSTRUCTION INSPECTION TYPE QC QA PRIOR TO CONCRETE PLACEMENT 1. PLACEMENT AND INSTALLATION OF STEEL DECK 2. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS 3. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS P P REFERENCED STANDARD RESPONSIBLE AGENT RESPONSIBLE AGENT RESPONSIBLE AGENT RESPONSIBLE AGENT SI/TA SI/TA

MBC REFERENCE SECTION 1705.1 AND TABLE 3.1.2 TMS 402/ACI 530/ASCE 5

QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.

QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, APPLICABLE BUILDING CODE, PURCHASER, OWNER, OR ENGINEER OF RECORD.

O: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. P: PERFORM THESE TASKS FOR EACH STEEL ELEMENT.

SPECIAL INSPECTIONS

- PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH THE 2015 MICHIGAN (INTERNATIONAL) BUILDING CODE CHAPTER 17 AND AS MODIFIED IN THE MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION.

 DESGINATION OF RESPONSIBLE AGENT AND THEIR QUALIFICATIONS
- SI SPECIAL INSPECTOR QUALIFIED WITH DEMONSTRATED COMPETENCE DOCUMENTED BY CERTIFICATIONS FROM RECOGNIZED AGENCIES SUCH AS AWS, ACI, MASONRY INSTITUTE OF MICHIGAN (MIM), ETC., AS SUBMITTED AND APPROVED BY THE BUILDING OFFICIAL. SPECIAL INSPECTOR MAY BE A FIRM WITH MULTIPLE SPECIALISTS AND A PROJECT MANAGER PROVIDING REPORTS.

 TA TESTING AGENCY QUALIFIED TO TEST AND INSPECT MATERIALS AND ASSEMBLIES. TESTING AGENCY SHALL BE UNDER THE SUPERVISION OF THE SPECIAL INSPECTOR.
- GE GEOTECHNICAL ENGINEER WHO PROVIDED THE ORIGINAL PROJECT GEOTECHNICAL SOILS INVESTIGATION REPORT.

 SE SPECIALTY ENGINEER RESPONSIBLE FOR DESIGNING ASSEMBLIES SUCH AS PRECAST CONCRETE, STEEL JOISTS, COLD FORMED FRAMING ASSEMBLIES, ETC. SPECIALTY ENGINEER SHALL PROVIDE
- OBSERVATION OF FABRICATED AND INSTALLED ITEMS OF THEIR DESIGN IN ADDITION TO THE SPECIAL INSPECTION.

 TA, GE AND SE SHALL SUBMIT RECORDS OF THE INSPECTION RESULTS TO THE SI. THE SI SHALL COMPILE AND SUBMIT INSPECTION RECORDS TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. RECORDS SHALL INCLUDE STATEMENTS OF TESTS, WHETHER INSTALLED/FABRICATED ITEM COMPLIES WITH CONTRACT DOCUMENTS, REMEDIAL WORK PERFORMED, RETESTS.
- SI SHALL PROVIDE A DAILY REPORT OF ANY DISCREPANCIES FROM THE CONTRACT DOCUMENTS FOUND ON THE SAME DAY OF THE INSPECTION TO THE ENGINEER OF RECORD. FORMAL REPORTS OF COMPLIANCE CAN FOLLOW BY A MAXIMUM OF 2 WEEKS. SI SHALL PROVIDE AND SIGN FINAL REPORT WITH A SUMMARY OF ALL TESTS PERFORMED AND RESULTS TO THE ENGINEER OF RECORD AND
- BUILDING OFFICIAL, IN ACCORDANCE WITH SECTION 1704.2.4.
 SI, TA & GE SHALL BE PAID BY THE OWNER IN COMPLIANCE WITH THE MICHIGAN (INTERNATIONAL) BUILDING CODE.
- WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION. SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND THE GOVERNING BUILDING CODE. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTION OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1.
- REFER TO MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL QUALITY CONTROL TESTING AND INSPECTIONS.

ROSSETTI

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02/07/2025

CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING



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DESCRIPTION

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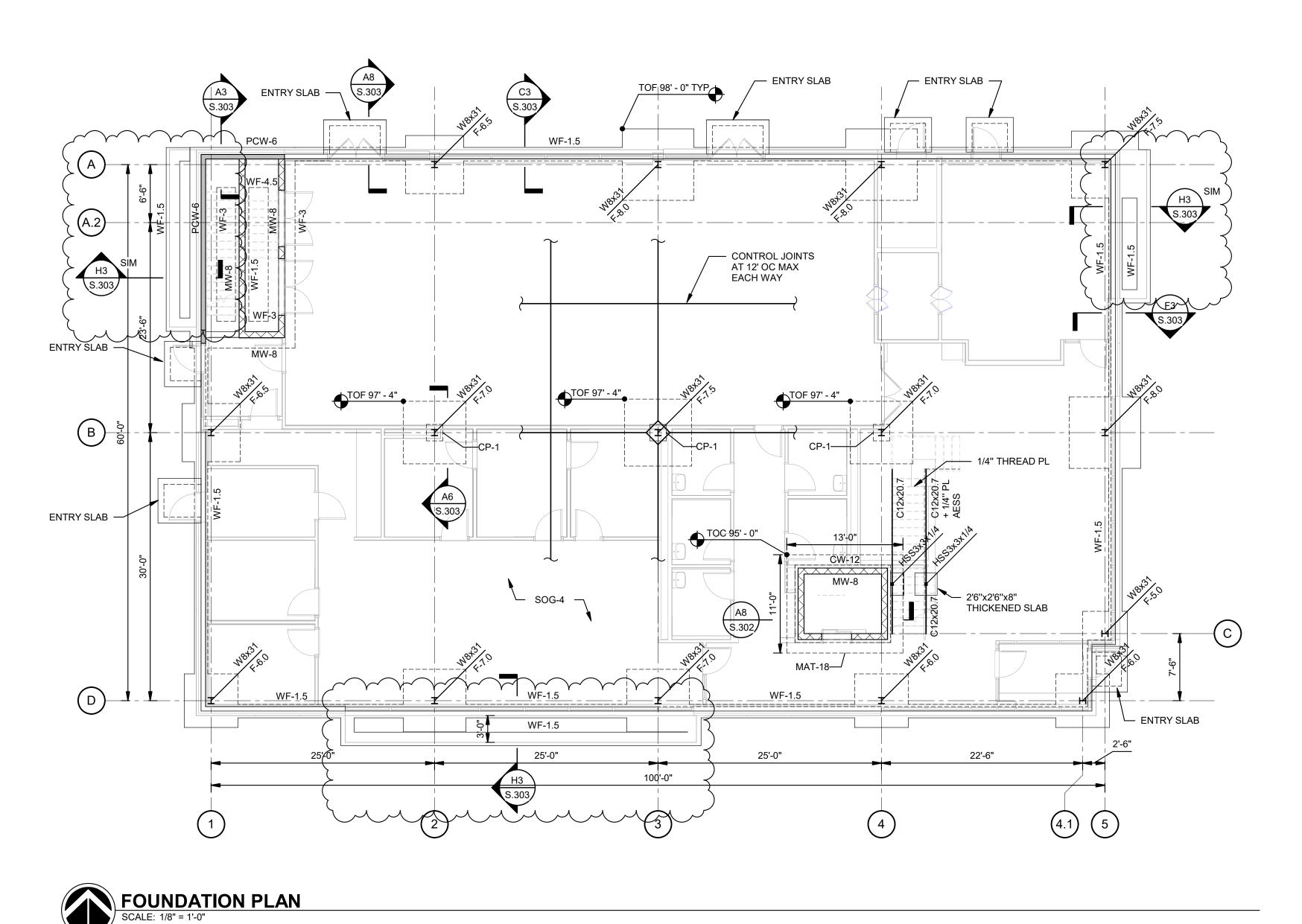
KEY PLAN

SHEET TITLE
SPECIAL INSPECTIONS

	0' I I	10 1	6' 3
PROJECT # 24094		S	Scale: 1/16" = 1'-
Z700 7			

HEET#

5.003



FOUNDATION/SLAB ON GRADE NOTES:

- . REFERENCE ELEVATION 100'-0" ESTABLISHED ELEVATIONS: FINISH FIRST FLOOR EL 100'-0" UON. TOP OF FOOTING EL 98'-0" UON.
- 2. SLAB ON GRADE TYPES: SOG-4: 4" CONCRETE SLAB ON GRADE WITH 4x4-W2.9.xW2.9 WWF PLACED 2" FROM TOP, VAPOR RETARDER ON 6" COMPACTED GRANULAR FILL.
- 3. REFER TO THE FOLLOWING FOR ADDITIONAL INFORMATION: S.002 FOR GENERAL NOTES S.301 FOR CONCRETE DETAILS
- S.302 FOR FOUNDATION SCHEDULES AND TYPES S.401 FOR MASONRY SECTIONS AND DETAILS S.50X STEEL SECTIONS AND DETAILS
- 4. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PADS SHALL BE VERIFIED W/APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.
- 5. DIMENSIONS INDICATED THUS (V) SHALL BE VERIFIED W/ APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS
- PRIOR TO FABRICATION. 6. FOUNDATION DRAINAGE PIPE DIAMETER TO BE NOMINAL 6" UNLESS OTHERWISE NOTED.
- 7. FIELD LOCATE EXISTING UNDERGROUND UTILITIES, PIPING, etc. PRIOR TO PLACEMENT OF FOUNDATIONS. NOTIFY ENGINEER OF ANY INTERFERENCE WHICH MIGHT REQUIRE RELOCATION AND/OR MODIFICATION OF FOUNDATIONS.
- 8. WALLS: PCW-8: 8" CONCRETE PRECAST WALL PCW-6: 6" CONCRETE PRECAST WALL
- 9. MAT-18: 18" THICK CONCRETE WITH #5@12" OC TOP AND BOTTOM BARS EACH WAY

- SECOND FLOOR FRAMING NOTES:
- 1. REFERENCE ELEVATION 100'-0" ESTABLISHED ELEVATIONS: FINISH SECOND FLOOR EL 114'-0" UON. SECOND FLOOR TOP OF STEEL EL 113'-6 1/2" UON.
- 2. SLAB TYPES: CS-5.5: 3 1/2" NORMAL WEIGHT CONCRETE ON 2", 20 GA GALVANIZED COMPOSITE METAL DECK (MIN 3 SPAN CONT) REINFORCED WITH 6x6-W2.1xW2.1 WWF PLACED 1" FROM TOP, TOTAL THICKNESS = 5 1/2".
- 3. [X] INDICATES MINIMUM NUMBER OF 3/4"Øx4 1/2" LONG HEADED SHEAR STUDS WELDED TO TOP OF BEAMS AND GIRDERS AS REQUIRED BY AISC.
- 4. REFER TO THE FOLLOWING FOR ADDITIONAL INFORMATION: S.002 FOR GENERAL NOTES. S.40X FOR MASONRY SECTIONS AND DETAILS
- S.50X FOR STEEL FRAMING SECTIONS AND DETAILS. 5. BEAMS SHALL BE EQUALLY SPACED WITHIN A BAY UNLESS
- OTHERWISE NOTED. 6. AT FLOOR OPENINGS THE DIMENSION FROM THE EDGE OF SLAB TO THE CENTERLINE TO ADJACENT BEAM SHALL BE 6"
- 7. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PADS SHALL BE VERIFIED W/ APPROVED MANUFACTURERS

EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.

8. DIMENSIONS INDICATED THUS (V) SHALL BE VERIFIED W/APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.

UNLESS OTHERWISE NOTED.

- 1. REFERENCE ELEVATION 100'-0" **ESTABLISHED ELEVATIONS:** UNDERSIDE OF DECK EL 127'-0" AT HIGH SIDES (A AND D
- 2. METAL ROOF DECK TYPES: RD-1.5: 1.5", 20GA MINIMUM WIDE RIB GALVANIZED METAL ROOF DECK (MIN 3 SPAN CONTINUOUS).

S.50X FOR STEEL FRAMING SECTIONS AND DETAILS

- LOADING ON APPROVED SHOP DRAWINGS EXCEED THE DESIGN LOAD INDICATED ON THE DESIGN DRAWING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO
- 8. BEAMS SUPPORTING STEEL JOISTS ARE TO BE DROPPED 2" FROM TOP OF STEEL ELEVATION

ROOF FRAMING NOTES:

West Michigan Hispanic LINES) AND 126'-4" AT VALLEY ALONG B LINE UON.

3. REFER TO THE FOLLOWING FOR ADDITIONAL INFORMATION: S.002 FOR GENERAL NOTES. S.201 FOR SHEAR WALL ELEVATIONS.

4. STEEL JOISTS OR BEAMS IN BAY SHALL BE EQUALLY SPACED WITHIN A BAY UNLESS OTHERWISE NOTED.

5. AT ROOF OPENINGS THE DIMENSION FROM THE EDGE OF DECK TO THE BACK OF ANGLE AND THE DIMENSION FROM THE EDGE OF DECK TO THE EDGE OF THE TOP FLANGE OF ADJACENT BEAM SHALL BE 0" UNLESS OTHERWISE NOTED

6. DIMENSIONS INDICATED THUS (V) SHALL BE VERIFIED W/ APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.

7. IN CASES WHERE MECHANICAL OR ELECTRICAL EQUIPMENT COMMENCING WITH THE WORK.

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DESCRIPTION

KEY PLAN

SHEET TITLE

FRAMING PLANS

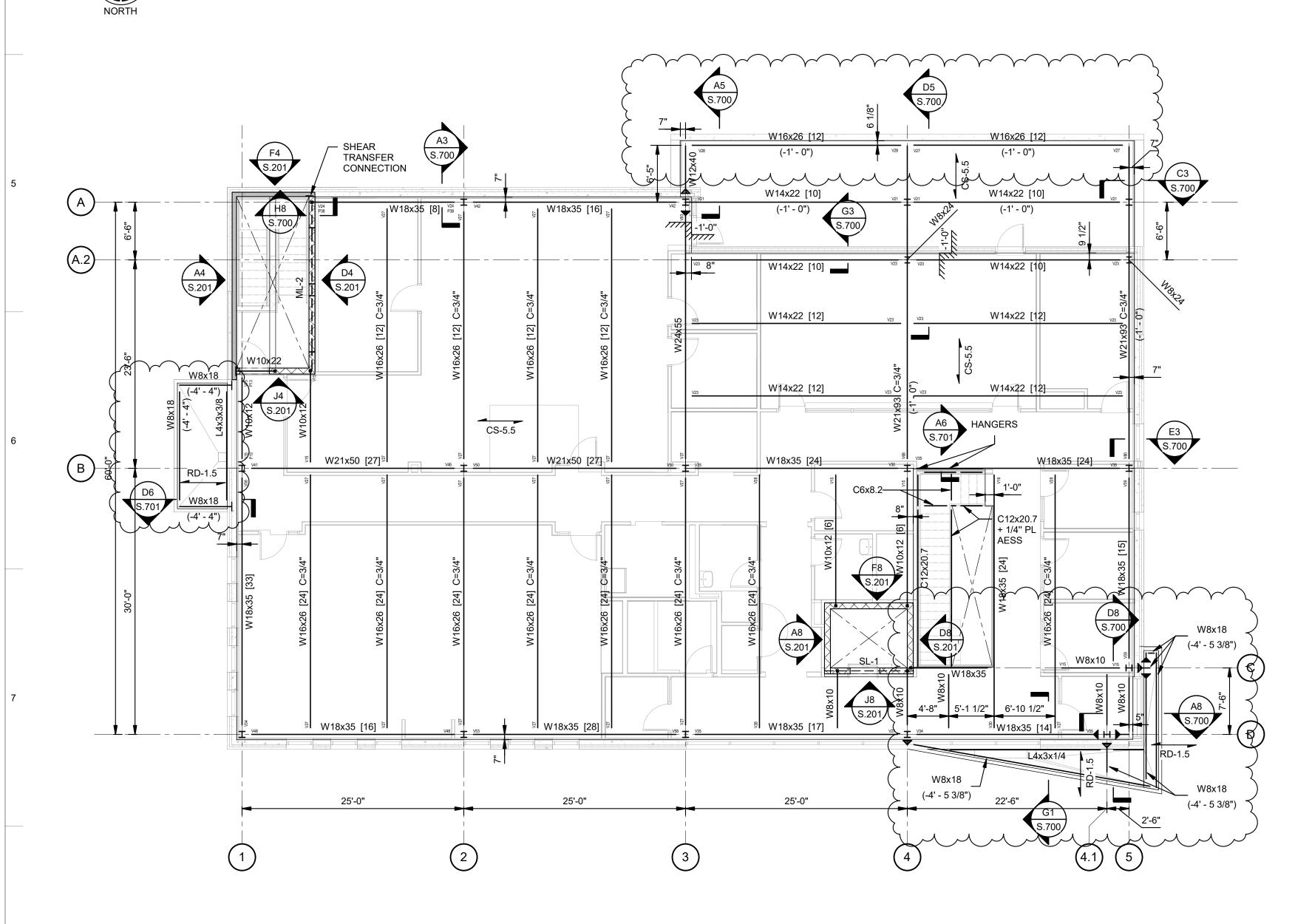
PROJECT# 24094

SHEET#

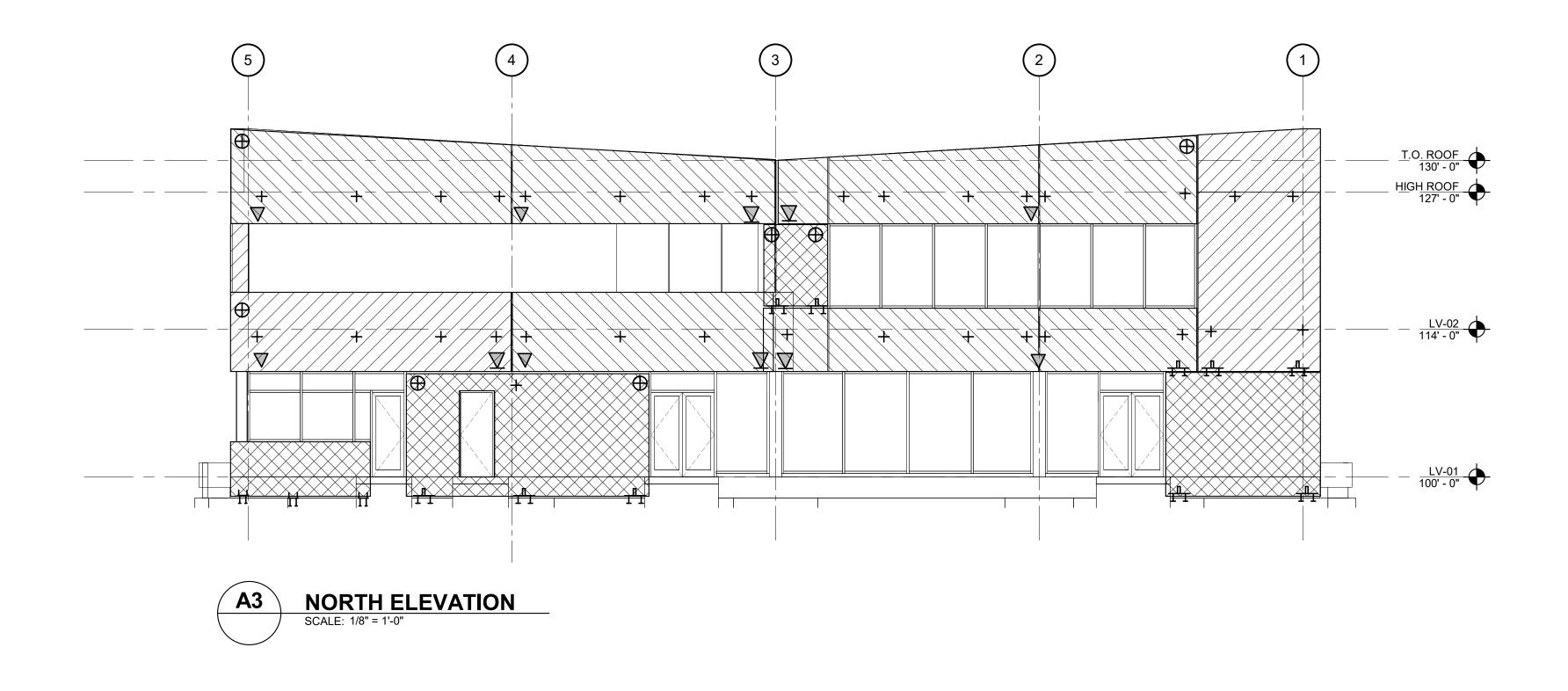
S.101

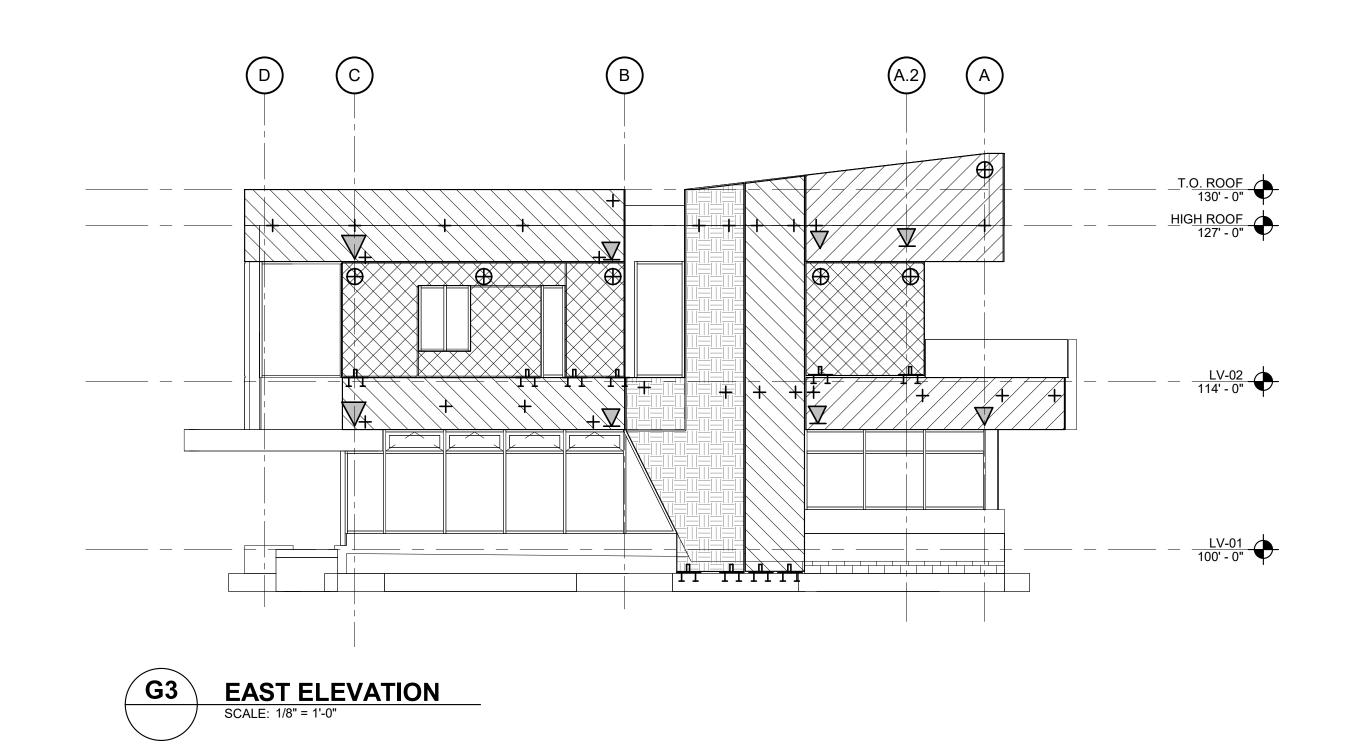
SEE DETAIL RD-1.5 L4x3 1/2x1/4 LLV TYP SEE DETAIL 25'-0" 22'-6" ADD SHEAR CONNECTION
TO TIE BEAM ENDS
TOGETHER V=10K
TYP 4.1 5

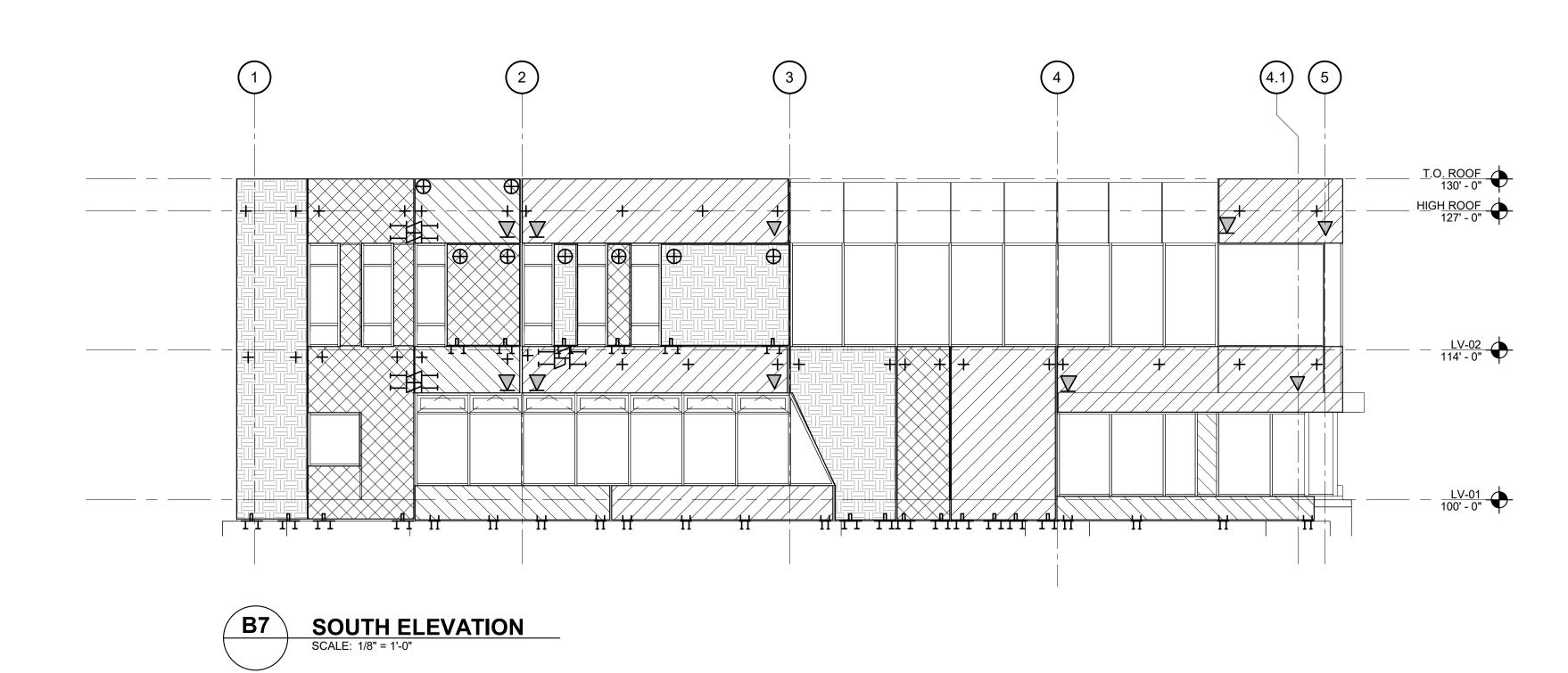


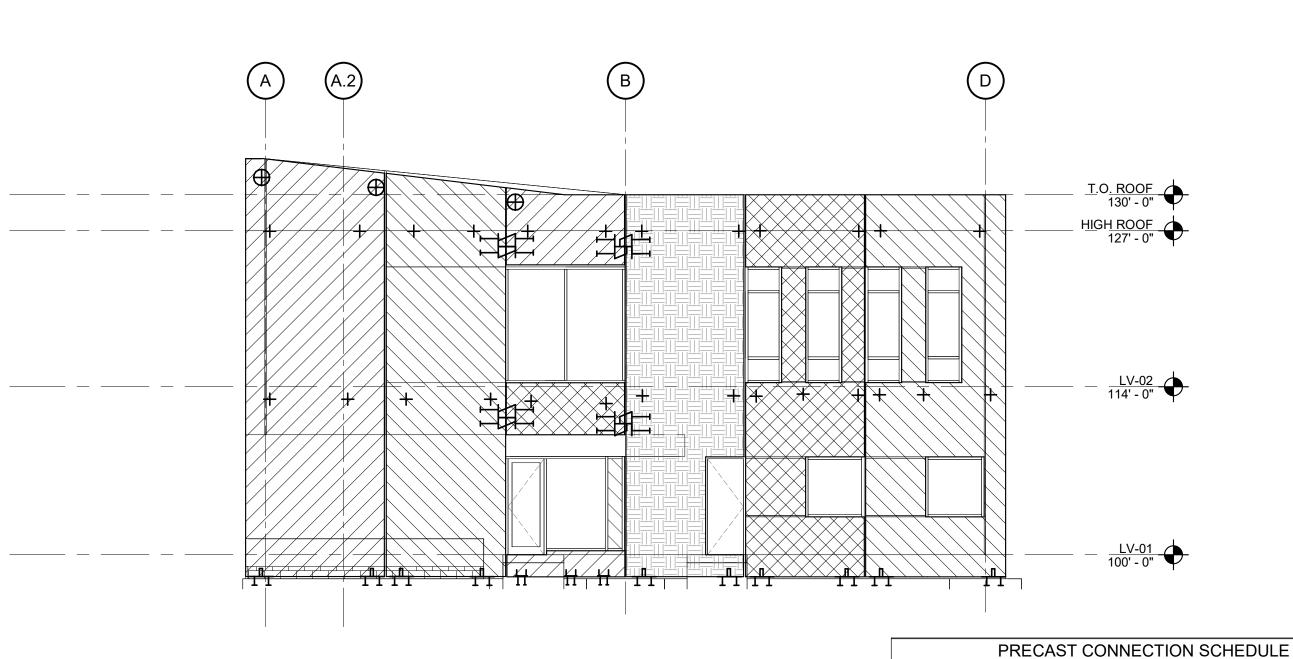


2ND LEVEL FRAMING PLAN









G7 WEST ELEVATION

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

LATERAL CONNECTION, PRECAST TO STEEL, FOR OUT OF PLAIN WIND/SEISMIC LOADS. NO RESTAINT IN VERTICAL OR HORIZONTAL DIRECTIONS. GRAVITY SUPPORT, PRECAST TO STEEL. SUPPORT IN VERTICAL AND HORIZONTAL DIRECTION. GRAVITY SUPPORT, PRECAST TO STEEL. SUPPORT IN VERTICAL DIRECTION ONLY. GRAVITY SUPPORT AT BASE. SUPPORTS VERTICAL, HORIZONTAL AND LATERAL LOADS GRAVITY SUPPORT BETWEEN PANELS. SUPPORT IN VERTICAL AND HORIZONTAL DIRECTION GRAVITY SUPPORT BETWEEN PANEL. SUPPORT IN VERTICAL DIRECTION ONLY LATERAL SUPPORT BETWEEN PANEL. SUPPORT FOR OUT OF PLANE WIND/SEISMIC LOADS. GRAVITY SUPPORT AT BASE WITH MOMENT RESTRAINT. SUPPORTS VERTICAL, HORIZONTAL, SHEAR AND MOMENT A DUE TO LATERAL LOADS

CONNECTION TYPE

ROSSETTI

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SAN FRANCISCO, CA

DATE

PROFESSIONAL SEAL



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DESCRIPTION

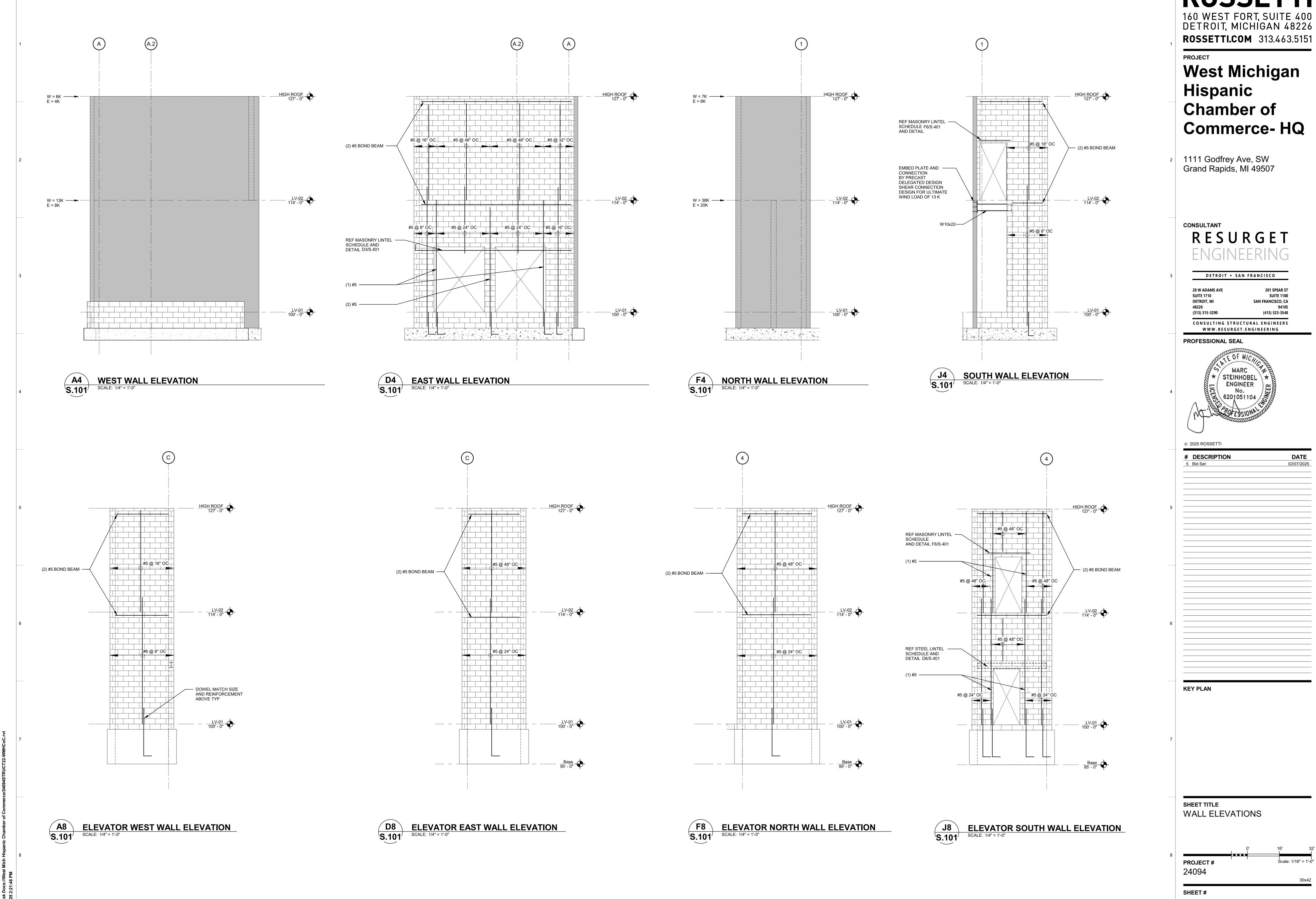
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KEY PLAN

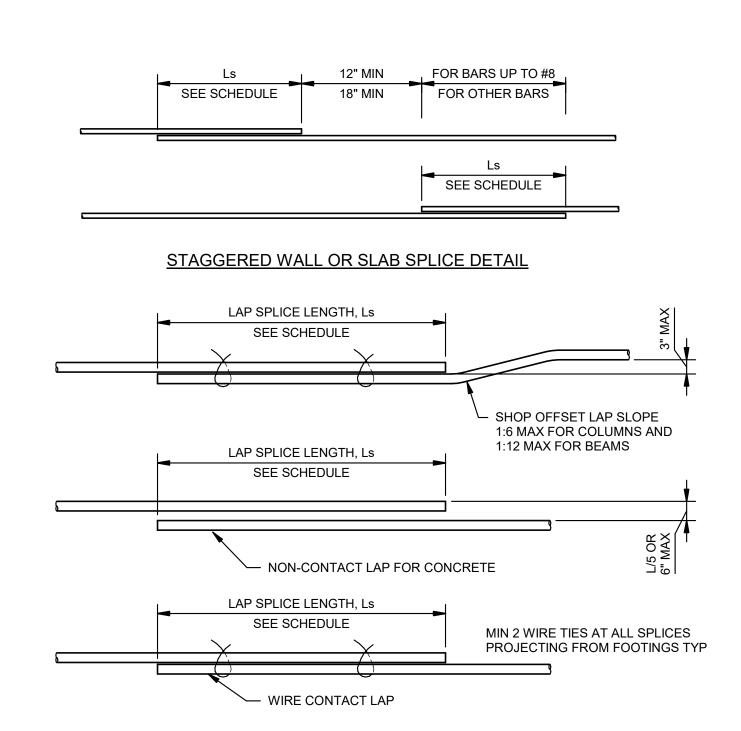
SHEET TITLE **BUILDING ELEVATIONS**

PROJECT# 24094

SHEET#



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226



TYPICAL LAP SPLICE DETAIL

TYPICAL LAP SPLICE

TENSION DEVELOPMENT LENGTHS, Ld (IN)							TENSION LAP SPLICE LENGTHS, L _s (IN)						
ВА	R SIZE		$f_c = 40$	000 PSI									
DESI	GNATION	CA	SE 1	CA	SE 2			R SIZE		0.14	$f_c = 40$		<u></u>
	METRIC	TOP	OTHER	TOP	OTHER		DESIC	SNATION	LAP		SE 1		SE 2
		BARS	BARS	BARS	BARS		#3 #4 #5	METRIC	CLASS	TOP BARS	OTHER BARS	TOP BARS	OTHER
#3	(#10)	20	15	29	22			(#10)	В	26	20	38	29
#4	(#13)	26	20	38	29			` '	В	34	26	50	38
#5	(#16)	33	25	47	36	-		(#13)					
#6	(#19)	38	29	56	43			(#16)	В	43	33	61	47
#7	(#22)	55	42	82	63		#6	(#19)	В	50	38	73	56
	, ,				-		#7	(#22)	В	71	55	107	82
#8	(#25)	62	48	94	72		#8	(#25)	В	82	63	122	94
#9	(#29)	70	54	105	81		#9	(#29)	В	92	71	137	106
#10	(#32)	79	61	118	91		#10	(#32)	В	104	80	154	119
#11	(#36)	87	67	131	101			` '					
#14	(#43)	105	81	157	121	L	#11	(#36)	В	114	88	171	132
#18	(#57)	140	108	209	161								

1. DETERMINE DEVELOPMENT LENGTH (L_d) OR LAP SPLICE LENGTH (L_s) BASED ON BAR POSITION AS DEFINED:

CASE 1: BEAMS AND COLUMNS:

 CONCRETE COVER >= db CENTER TO CENTER BAR SPACING >= 2 d_b

 STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN CODE MINIMUM OTHER MEMBERS: CONCRETE COVER >= d_b

CENTER TO CENTER BAR SPACING >= 3 db

CASE 2: BEAMS AND COLUMNS:

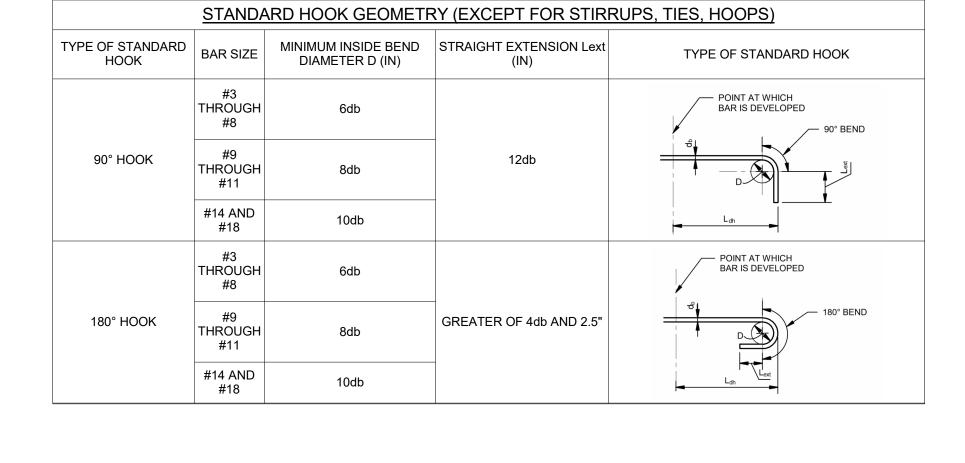
 CONCRETE COVER < db CENTER TO CENTER BAR SPACING < 2 db OTHER MEMBERS:

 CONCRETE COVER < d_b CENTER TO CENTER BAR SPACING < 3 d₀

- 2. "TOP BARS" ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
- 3. ALL DETAILING SHALL COMPLY WITH THIS SCHEDULE UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE 4. THE BAR DEVELOPMENT LENGTHS AND LAP LENGTHS SHOWN ARE FOR CLASS "B" LAP SPLICES. FOR CLASS "A"
- SPLICE, DIVIDE THE SPECIFIED CLASS "B" LAP LENGTH BY 1.3. 5. THE BAR DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS APPLY TO NORMAL WEIGHT CONCRETE. MULTIPLY THE
- SPECIFIED LAP LENGTHS BY 1.3 FOR LIGHTWEIGHT CONCRETE. 6. THE BAR DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS APPLY TO UNCOATED REINFORCEMENT. FOR EPOXY-COATED REBAR:
- A. CONCRETE COVER < 3db OR CLEAR SPACING < 6db, MULTIPLY ALL LENGTHS BY 1.5. B. CONCRETE COVER >= 3db AND CLEAR SPACING >= 6db, MULTIPLY ALL LENGTHS BY 1.2.
- 7. A STANDARD HOOK SHALL BE PROVIDED WHERE Ld IS UNATTAINABLE DUE TO SPACE RESTRICTIONS (REFER TO SCHEDULE FOR HOOKED BAR DEVELOPMENT LENGTH Ldh)
- 9. STAGGER ALL SPLICES WHEREVER POSSIBLE. WHERE CLASS "A" SPLICE IS CALLED FOR ON DRAWING, STAGGER AT

8. SEE DRAWINGS FOR LAP SPLICE CLASSIFICATION. IF NO LAP SPLICE CLASSIFICATION IS SHOWN PROVIDE CLASS "B"

- LEAST 50% OF THE BARS. ELSE PROVIDE CLASS "B" SPLICE. 10. WHEN SPLICING BARS OF DIFFERENT SIZE, THE LAP LENGTH SHALL BE BASED ON THE LARGER OF: A. THE SPLICE LENGTH OF THE SMALLER BAR.
- B. THE DEVELOPMENT LENGTH OF THE LARGER BAR 11. LAP SPLICES FOR #14 AND #18 BARS ARE NOT PERMITTED. PROVIDE TYPE 2 MECHANICAL SPLICE UON. 12. CONCRETE WALLS:
- A. LAP SPLICES IN HORIZONTAL REINFORCEMENT SHALL BE STAGGERED 12" MIN B. WITH TWO CURTAINS OF REINFORCEMENT, SPLICES SHALL BE STAGGERED 12" MIN APART AT ALTERNATING
- BARS, 50% AT THE HIGHER LOCATION AND 50% AT THE LOWER LOCATION. 13. BUNDLED BAR SPLICES:
- A. ENTIRE BUNDLED BARS SHALL NOT BE LAP SPLICED. STAGGER INDIVIDUAL BAR SPLICES. B. INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL NOT OVERLAP EACH OTHER.
- C. MULTIPLY LAP LENGTH BY 1.2 AT THREE BAR BUNDLES D. MULTIPLY LAP LENGTH BY 1.33 AT FOUR BAR BUNDLES
- 14. THE TABLE APPLIES FOR 60 KSI REBAR. FOR 80 KSI REBAR MULTIPLY ALL LENGTHS BY 1.33.
- BAR DEVELOPMENT (Ld) AND LAP SPLICE (Ls) LENGTH



	<u>S1</u>	<u> </u>	METRY FOR STIRRUP	S, TIES, HOOPS
TYPE OF STANDARD HOOK	BAR SIZE	MINIMUM INSIDE BEND DIAMETER D (IN)	STRAIGHT EXTENSION Lext (IN)	TYPE OF STANDARD HOOK
90° HOOK	#3 THROUGH #5	4db	GREATER OF 6db AND 3"	DETAILING DIMENSION 90° BEND
90 HOOK	#6 THROUGH #8	6db	12db	
135° HOOK	#3 THROUGH #5	4db	- GREATER OF 6db AND 3"	DETAILING DIMENSION 135° BEND
133 1100K	#6 THROUGH #8	6db	GREATER OF OUD AND 3	D L _{ext}
180° HOOK	#3 THROUGH #5	4db	- GREATER OF 4db AND 2.5"	DETAILING DIMENSION 180° BEND
160 HOOK	#6 THROUGH #8	6db	GILLATER OF 4400 AND 2.3	D L _{ext}

_				1
	HEAD	ED BAR DEV LENGTHS	VELOPMENT S (IN)	
		SIZE NATION	f'c = 4000 PSI	
Ī		METRIC		2" MIN
	#3	(#10)	6	Lat Lat
	#4	(#13)	8	
	#5	(#16)	10	
	#6	(#19)	12	HEADED BAR REFER TO SCHEDULE
Ī	#7	(#22)	14	A A A A A A A A A A A A A A A A A A A
	#8	(#25)	16	
	#9	(#29)	18	
	#10	(#32)	20	V
	#11	(#36)	22	

- HEADED BAR DEVELOPMENT NOTES:

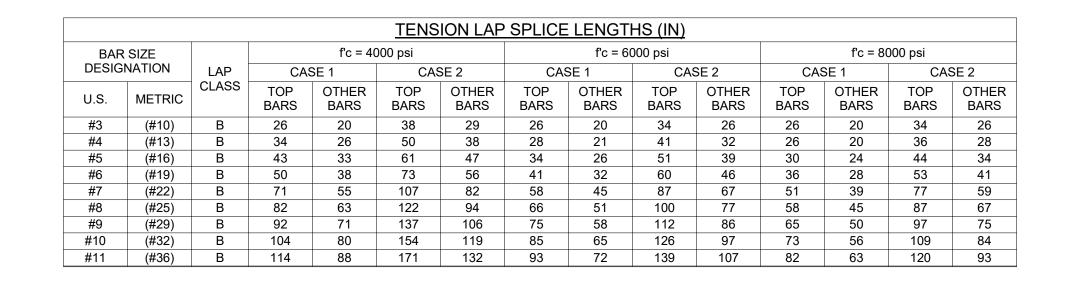
 1. HEADED BAR DEVELOPMENT LENGTHS APPLY TO 60 KSI REBAR ONLY
- 2. HEADED BAR DEVELOPMENT LENGTHS APPLY TO NORMAL WEIGHT CONCRETE. HEADED BARS SHALL NOT BE USED IN LIGHT WEIGHT CONCRETE
- 3. NET BEARING AREA OF HEAD SHALL NOT BE LESS THAN 4 TIMES BAR AREA 4. CLEAR SPACING BETWEEN BARS SHALL NOT BE LESS THAN 4 TIMES BAR DIAMETER 5. SMALLER DEVELOPMENT LENGTHS MAY BE SUBMITTED FOR REVIEW BY SEOR IF
- JUSTIFIED BY TESTING AND AN ICBO TEST REPORT IS PROVIDED 6. FOR EPOXY-COATED REBAR, MULTIPLY ALL LENGTHS BY 1.2

D6	HEADED BAR DEVELOPMENT LENGTHS
\	SCALE: 1" = 1'-0"

				٦				HOOK WHERE SPECIFIED
	EPOXY REBAR	DOWEL SCHEDULE		_		ĺ	/====== (
REBAR	EMBEDMENT DI	EPTH (INCH) UON	TEST] <u></u>	분			
SIZE	HILTI HIT RE 500 (ICC ESR-6010)	SIMPSON SET-XP (ICC ESR-2508)	LOAD (KIPS)	LENGTH	SPECIFIED			DOWEL SIZE SPECIFIED
#3	3 1/4	4	5.9		AS			1
#4	4 1/2	6	10.8		∮끨	A A A A A A A A A A A A A A A A A A A	A	
#5	5 3/4	9	16.7	MIN EMBED	SCHEDULE	4 2 4 4	4 - 1 - 4 - 1 - 4 - 1	
#6	6 1/4	10	23.8] E	딩			
#7	7 1/4	12	32.4		PER 9		4. 4. 4.	>]
#8	9 1/4	14	42.7] _	<u> </u>	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
#9	11 1/4	16	54.0					
#10	14	18	68.6				42 . 42 4	ļ
#11	16 1/2	20	84.2			MIN EDGE DISTANCE PER SCHEDULE		

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ICC REPORT 2. MINIMUM EDGE DISTANCE SHALL BE 1.5 x EMBEDMENT 3. DETAIL TO BE USED ONLY WHERE APPROVED BY SEOR

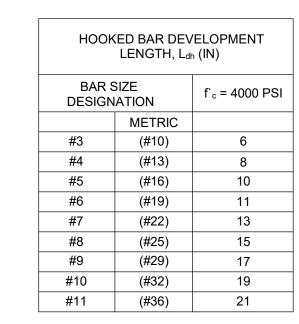


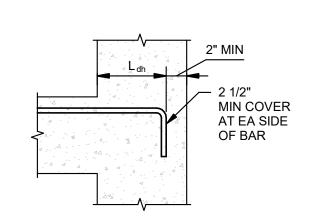


				<u>TEN</u>	<u>ISION DE</u>	EVELOP	<u>MENT LE</u>	<u>ENGTHS</u>	5 (IN)				
BAR	SIZE		f'c = 40	000 psi			f'c = 60	000 psi			f'c = 80	000 psi	
DESIG	NATION	CAS	SE 1	CAS	SE 2	CAS	SE 1	CAS	SE 2	CAS	SE 1	CAS	SE 2
U.S.	METRIC	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	(#10)	20	15	29	22	20	15	26	20	20	15	26	20
#4	(#13)	26	20	38	29	21	16	31	24	20	15	27	21
#5	(#16)	33	25	47	36	26	20	39	30	23	18	34	26
#6	(#19)	38	29	56	43	31	24	46	35	27	21	40	31
#7	(#22)	55	42	82	63	44	34	66	51	39	30	59	45
#8	(#25)	62	48	94	72	51	39	77	59	44	34	66	51
#9	(#29)	70	54	105	81	57	44	86	66	49	38	74	57
#10	(#32)	79	61	118	91	65	50	96	74	56	43	83	64
#11	(#36)	87	67	131	101	72	55	107	82	62	48	92	71
#14	(#43)	105	81	157	121	86	66	129	99	74	57	112	86
#18	(#57)	140	108	209	161	114	88	172	132	99	76	148	114

ASTM STANDARD REINFORCING BARS										
BAR	SIZE	NOM	INAL DIMEN	ISIONS						
DESIG	NATION	AREA	WEIGHT	DIAMETER						
	METRIC	IN ²	LB/FT	IN						
#3	(#10)	0.11	0.376	0.375						
#4	(#13)	0.20	0.668	0.500						
#5	(#16)	0.31	1.043	0.625						
#6	(#19)	0.44	1.502	0.750						
#7	(#22)	0.60	2.044	0.875						
#8	(#25)	0.79	2.670	1.000						
#9	(#29)	1.00	3.400	1.128						
#10	(#32)	1.27	4.303	1.270						
#11	(#36)	1.56	5.313	1.410						
#14	(#43)	2.25	7.650	1.693						
#18	(#57)	4.00	13.600	2.257						







HOOKED BAR DEVELOPMENT NOTES:

- 1. THE HOOKED BAR DEVELOPMENT LENGTHS APPLY TO NORMAL WEIGHT CONCRETE. FOR LIGHTWEIGHT CONCRETE L_{dh} SHALL NOT BE LESS THAN 10 d_b, 7 1/2", AND 1.3 TIMES THE
- SPECIFIED LENGTH. 2. HOOKED BAR DEVELOPMENT LENGTHS APPLY TO MEMBERS WITH:
- A. SIDE COVER >= 2 1/2 INCHES B. END CONCRETE COVER (90° HOOKS) >= 2 INCHES 3. FOR 180° HOOKS AT RIGHT ANGLES TO EXPOSED SURFACE, PROVIDE 2 INCHES MINIMUM
- 4. THE TABLE APPLIES FOR 60 KSI REBAR. FOR 80 KSI REBAR MULTIPLY ALL LENGTHS BY 1.33. 5. FOR EPOXY-COATED REBAR, MULTIPLY ALL LENGTHS BY 1.2.

HOOKED BAR DEVELOPMENT LENGTH (Ldh) SCHEDULE

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DESCRIPTION DATE 02/07/2025

KEY PLAN

SHEET TITLE

TYPICAL CONCRETE DETAILS

PROJECT#

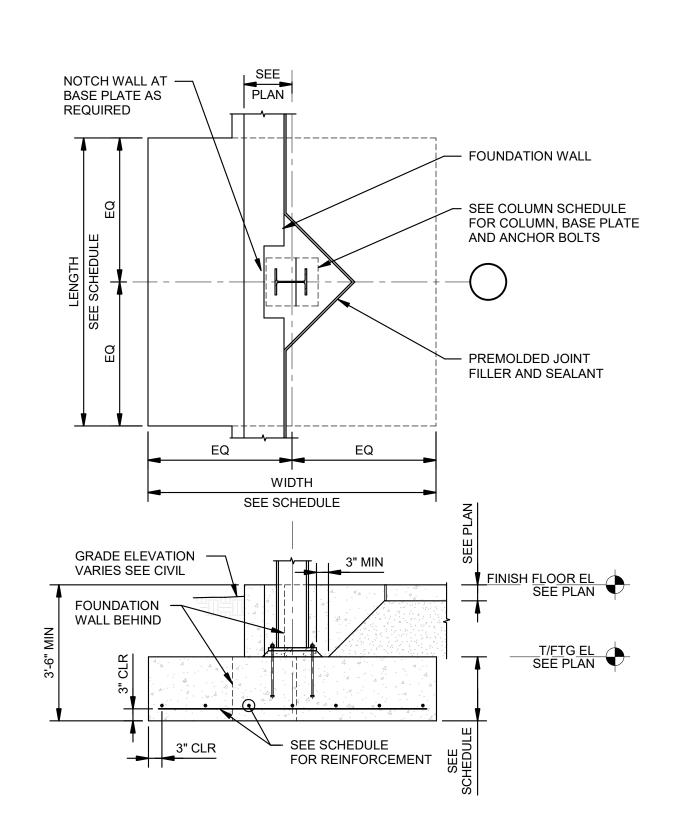
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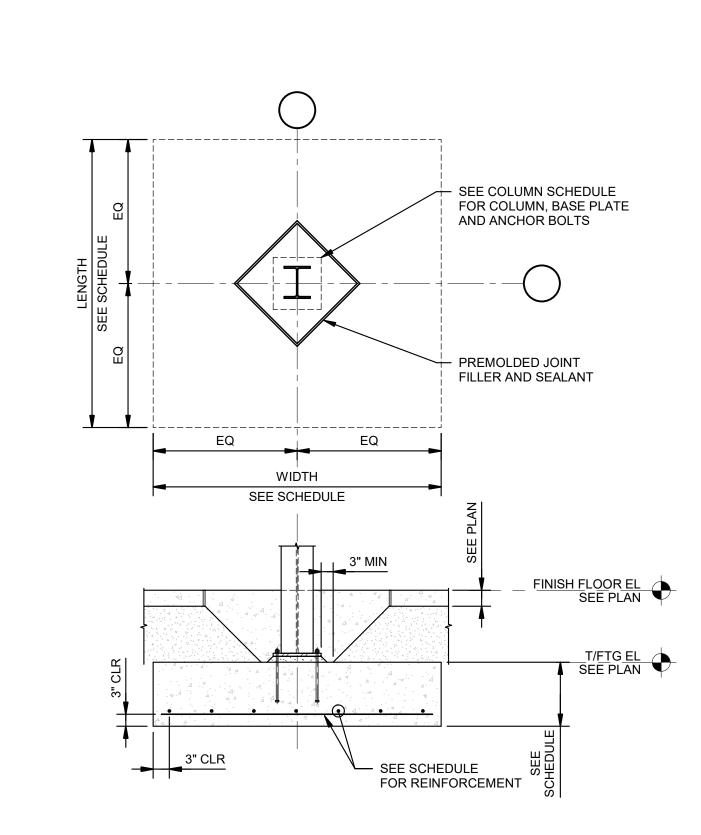
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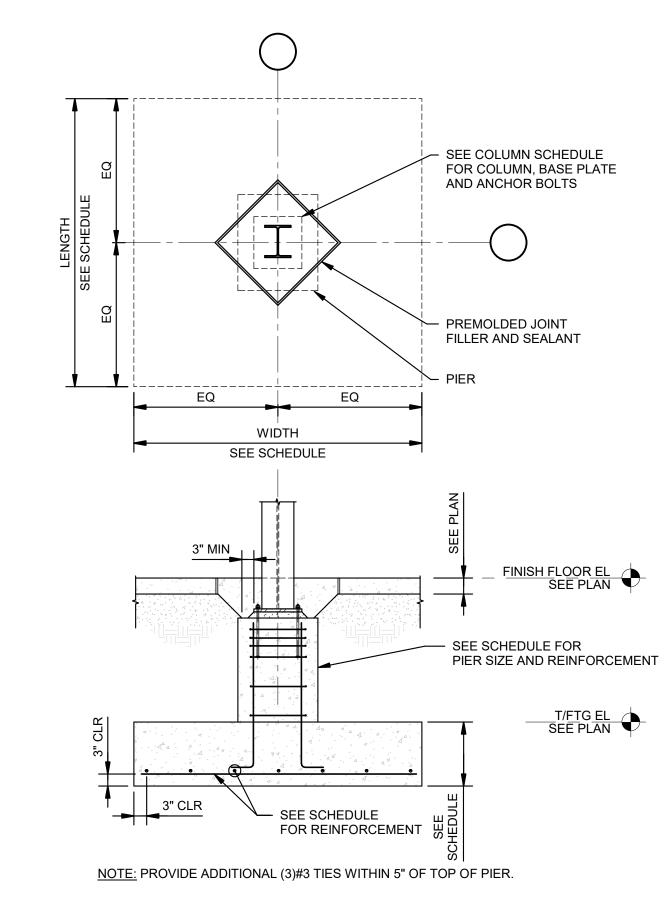
			FOOTII	NG SCHEDI	JLE	
			FOUNDATION	REINFORCE	MENT EA WAY	
MARK	LENGTH	WIDTH	THICKNESS	TOP	BOTTOM	COMMENTS
F-5.0	5' - 0"	5' - 0"	1' - 6"		(5)#5	
F-6.0	6' - 0"	6' - 0"	1' - 6"		(6)#5	
F-6.5	6' - 6"	6' - 6"	1' - 6"		(5)#6	
F-7.0	7' - 0"	7' - 0"	1' - 6"		(9)#5	
F-7.5	7' - 6"	7' - 6"	1' - 6"		(7)#6	
F-8.0	8' - 0"	8' - 0"	1' - 6"		(8)#6	

	WALL FOOTING SCHEDULE										
		FOUNDATION	REINFO	RCING							
MARK	WIDTH	THICKNESS	LONGITUDINAL BOTTOM	TRANSVERSE BOTTOM	COMMENTS						
WF-1.5	1' - 6"	1' - 6"	(2)#5								
WF-3	3' - 0"	1' - 6"	(3)#5	<varies></varies>							
WF-4.5	4' - 6"	1' - 6"	(4)#5	#4 @ 12" OC							

			FORMED	PIER SCHED	ULE	
				REINFORCEMEN	Т	
MARK	LENGTH	WIDTH	TYPE	VERTICAL	TIES	COMMENTS
CP-1	1' - 10"	1' - 10"	С	(8)#7	#3 @ 12	



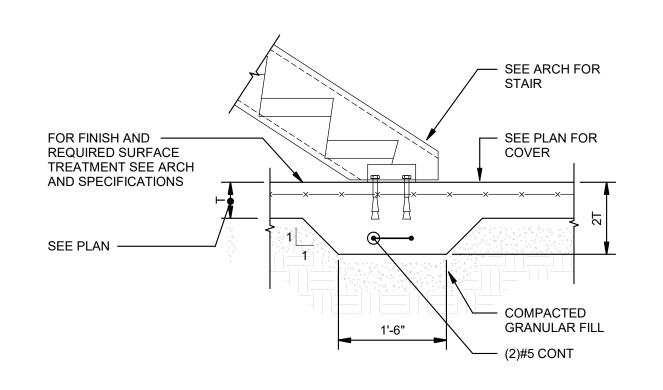


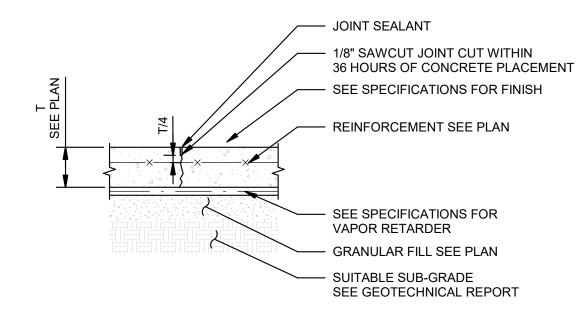


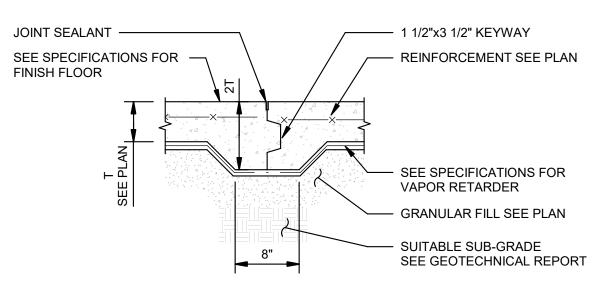


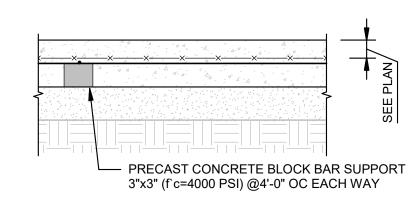












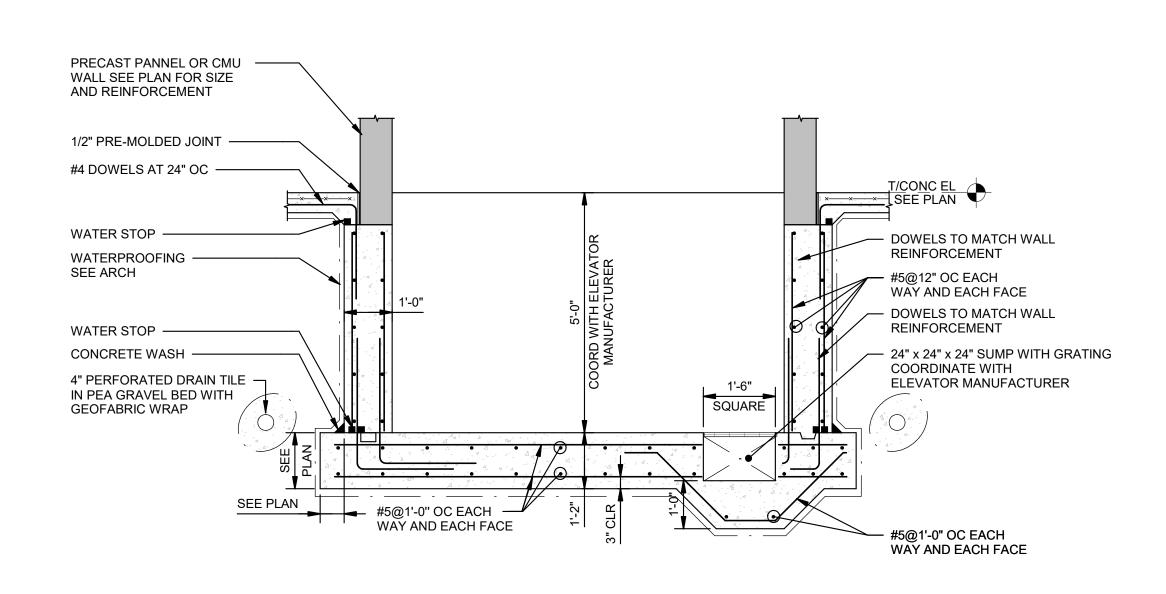
A6 TYPICAL THICKENED SLAB AT BASE OF STAIRS

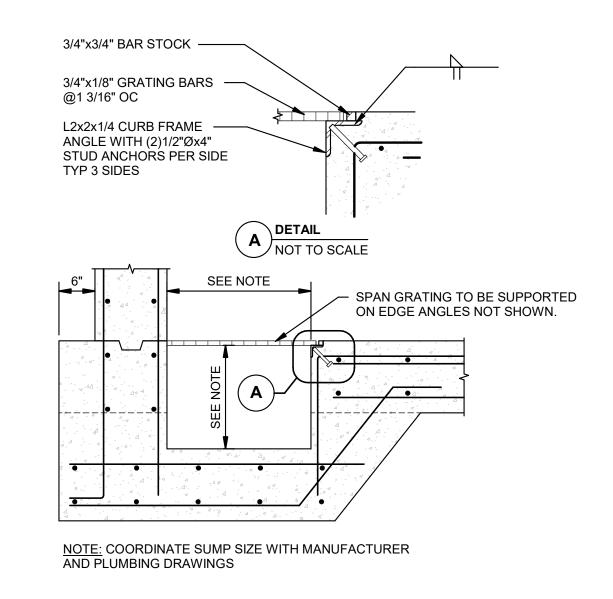
SCALE: 3/4" = 1'-0"

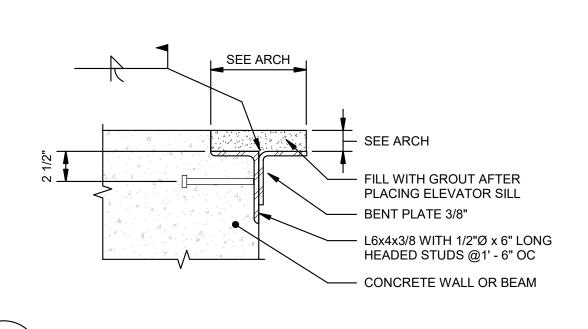




TYPICAL WWF MESH SUPPORT FOR SLAB ON GRADE













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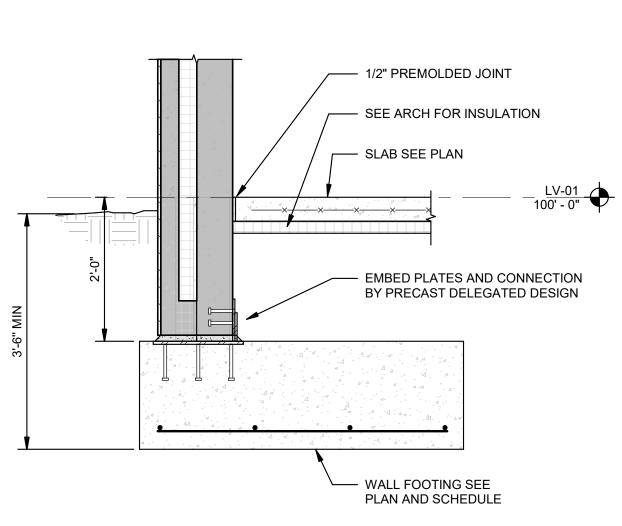
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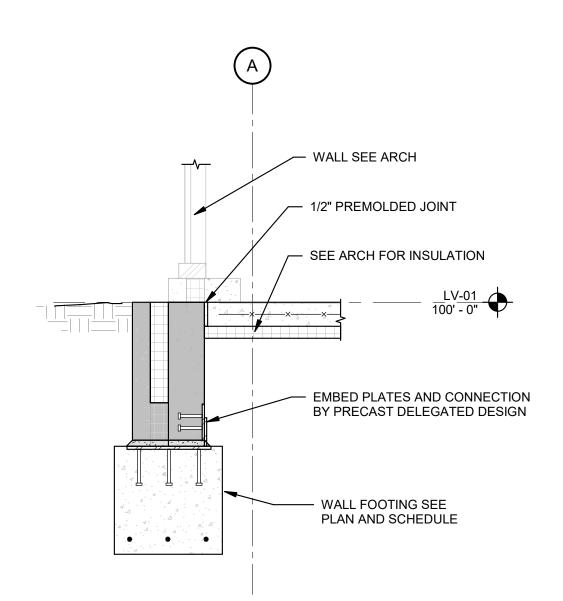
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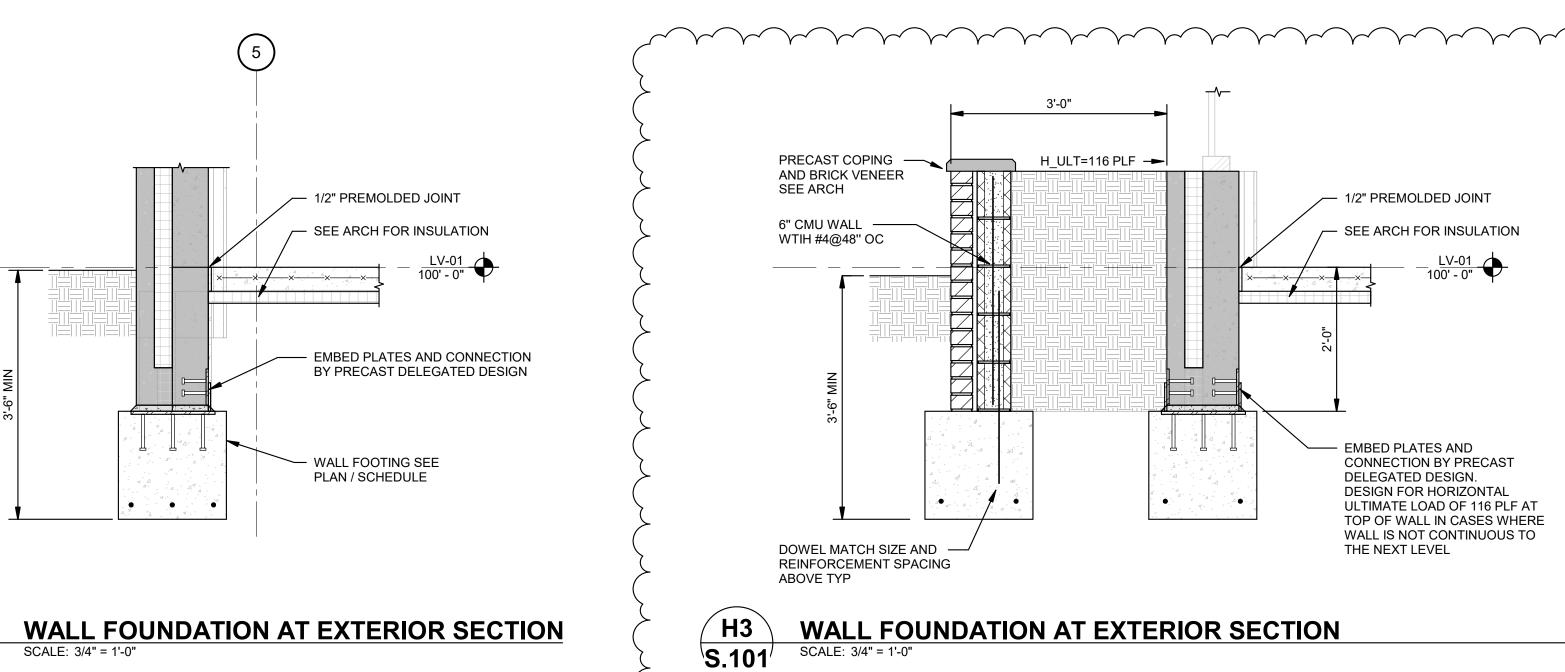
SHEET TITLE
FOUNDATION DETAILS

0' 16'
PROJECT # Scale: 1/16" = 1

SHEET#

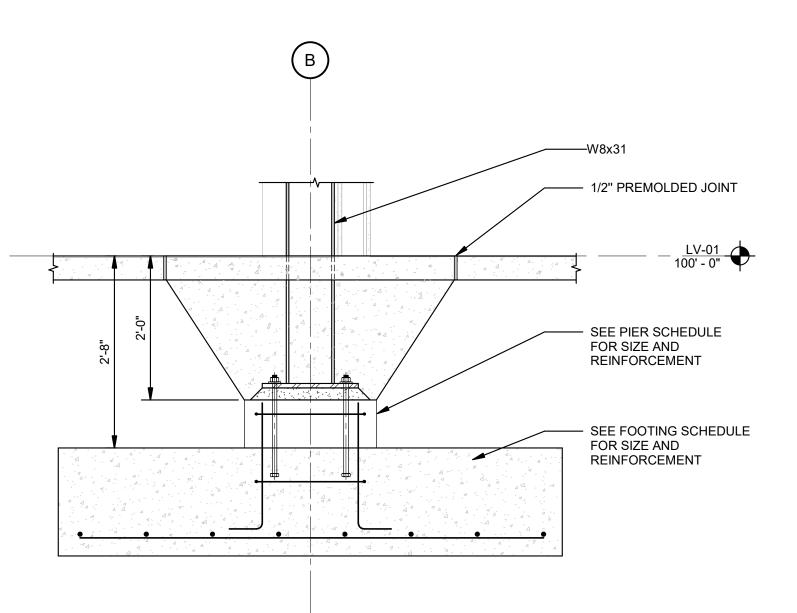




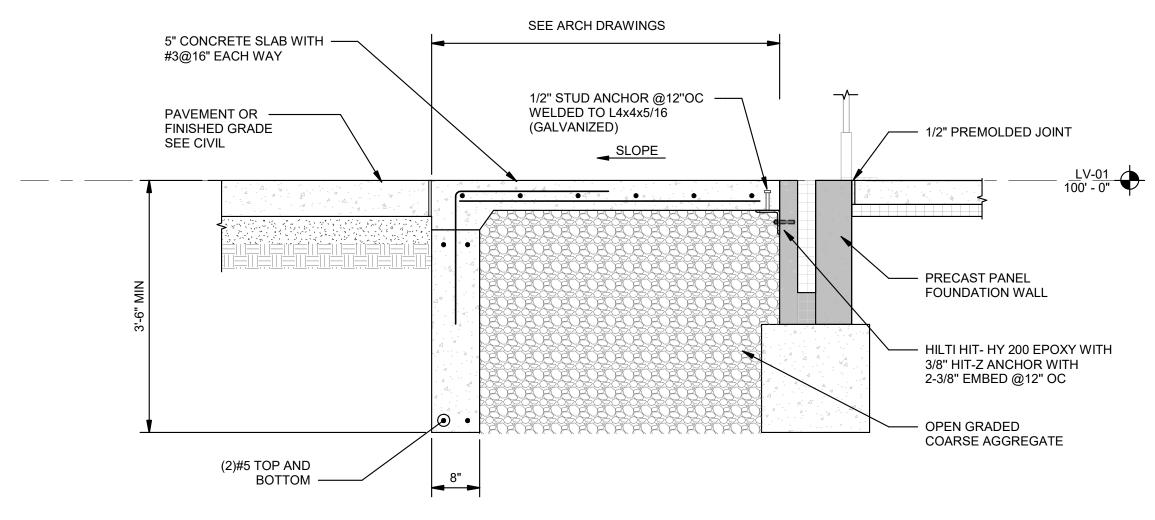












NOTES:

1. WIDTH OF ENTRY SLAB TO EXTEND 1'-6" PAST DOOR SWING SIDE AND 6" PAST DOOR HINGE SIDE
2. COORDINATE WITH DOOR SUPPLIER



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KEY PLAN

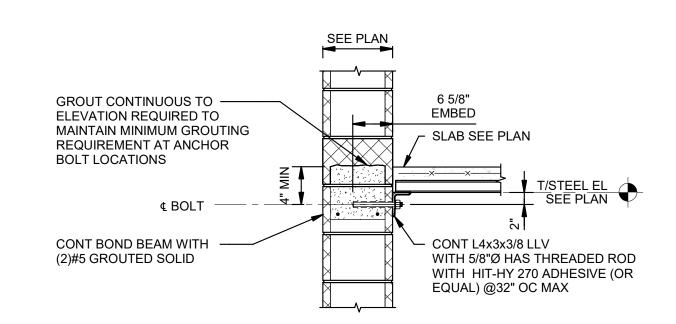
SHEET TITLE FOUNDATION SECTIONS

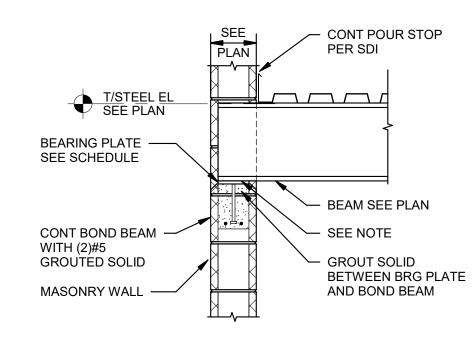
PROJECT# 24094

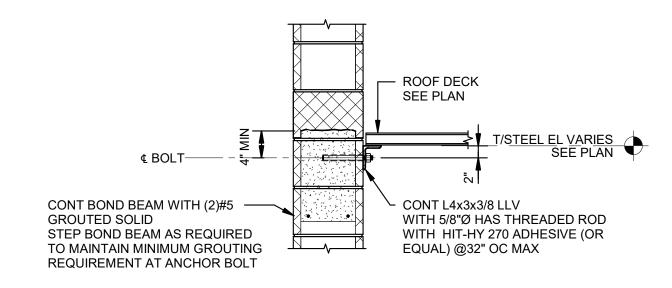
BEARING PLATE SCHEDULE										
<u></u>	DEARING PLATE SCHEDULE									
BEAM SIZE	SIZE	NO. OF 1/2"Ø x 6" LONG STUD ACHORS	REMARKS							
W8	1/4"x6"x6"	2	-							
W10-W12	3/8"x6"x6"	2	-							
W16-W18	3/8"x7"x7"	2	-							

	STEEL AND MASONRY LINTEL SCHEDULE								
MARK	MARK SIZE REMARKS								
SL-1	W8x21 + 3/8" PLATE								
ML-1	8" CMU WITH (2)#5	EXTEND REINF 12" EACH SIDE OF OPENING							
ML-2	16" CMU WITH (2)#5	EXTEND REINFORCEMENT FULL LENGTH OF WALL							

	CMU WALL REINFORCING SCHEDULE											
MARK	MARK NOMINAL WALL		HORIZONTAL	MIN VERTI	CAL REINFORCING							
WATER	THICKNESS	FLOOR	REINFORCING	1 LAYER	END REINFORCING							
MW-8	8"	1ST-2ND	W1.7 LADDER JOINT @ 16" OC	#5 @ 24" OC	(1) # 5 BARS							
MW-8	8"	2ND-ROOF	W1.7 LADDER JOINT @ 16" OC	#5 @ 48" OC	(1) # 5 BARS							





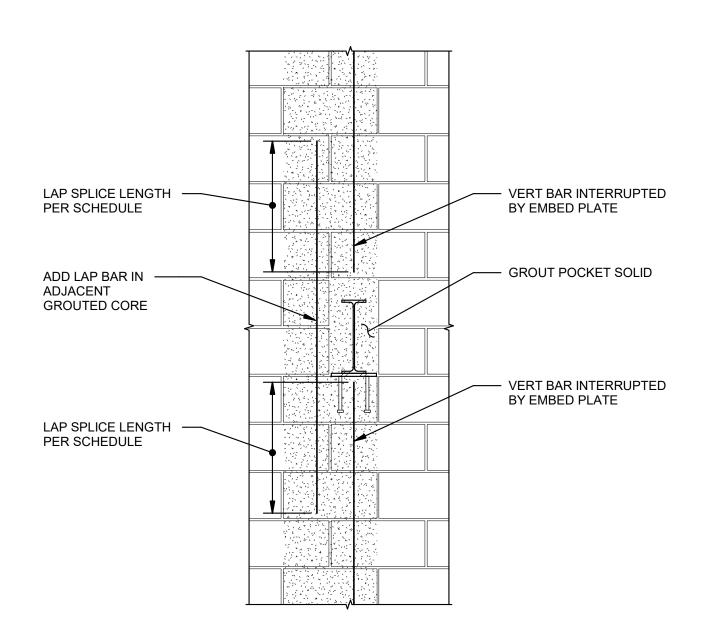


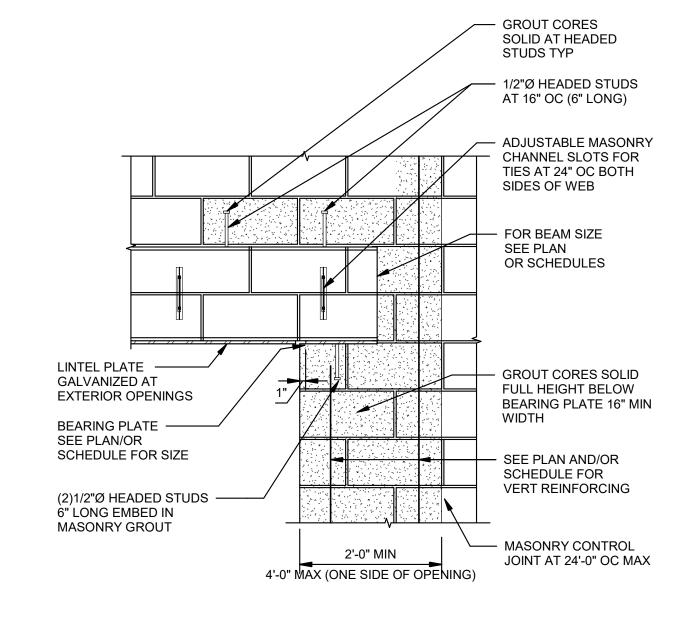


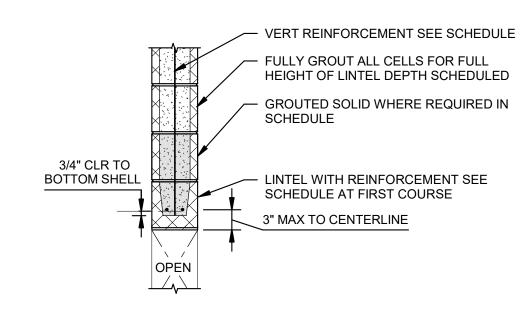
TYPICAL STEEL BEAM BEARING ON CMU WALL

NOTE: DO NOT FILL GAP BETWEEN UNDERSIDE OF BEAM AND BOTTOM OF PLATE WITH GROUT AT INSIDE OF WALL FACE









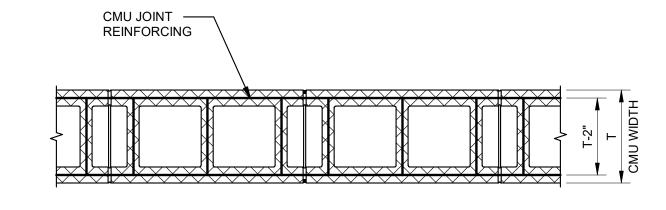
NOTES:

1. MASONRY LINTELS SHALL BE SHORED DURING CONSTRUCTION AND SHALL REMAIN SHORED UNTIL MASONRY HAS GAINED 100% OF FULL SPECIFIED STRENGTH (f'm).





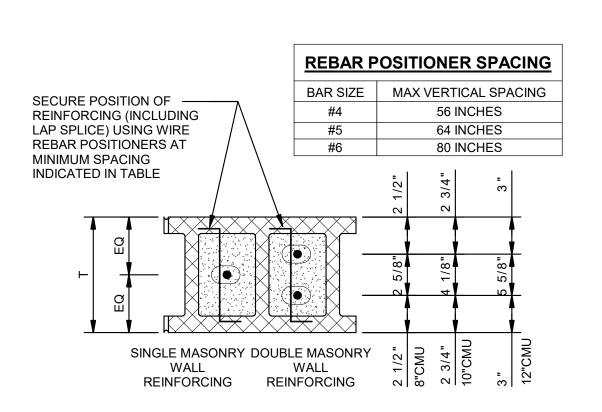




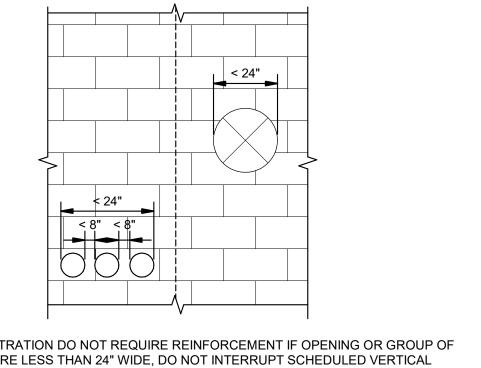
- NOTES:

 1. LAP SIDE RODS AT MIN 6" AT SPLICES.
- 2. PLACE REINFORCING DIRECTLY ON MASONRY AND PLACE MORTAR OVER WIRES TO FORM BED 3. RUN REINFORCING CONTINUOUS IN HORIZONTAL JOINTS AND SPACE 16"
- OC VERTICAL 4. PROVIDE CORNERS AND TEES AT INTERSECTIONS, SEE DETAIL FOR CORNERS AND TEES.
- 5. CUT BOTH HORIZONTAL RAILS AT CONTROL AND EXPANSION JOINTS









NOTE: PENETRATION DO NOT REQUIRE REINFORCEMENT IF OPENING OR GROUP OF OPENINGS ARE LESS THAN 24" WIDE, DO NOT INTERRUPT SCHEDULED VERTICAL REINFORCEMENT, AND ARE SPACED AT LEAST 8" CLEAR FROM AN ADJACENT OPENING. OPENINGS SPACED CLOSER THAN 8" MUST BE CONSIDERED AS ONE OPENING.

TYPICAL NON-LOAD BEARING CMU WALL PENETRATIONS (<24") SCALE: 1/2" = 1'-0"

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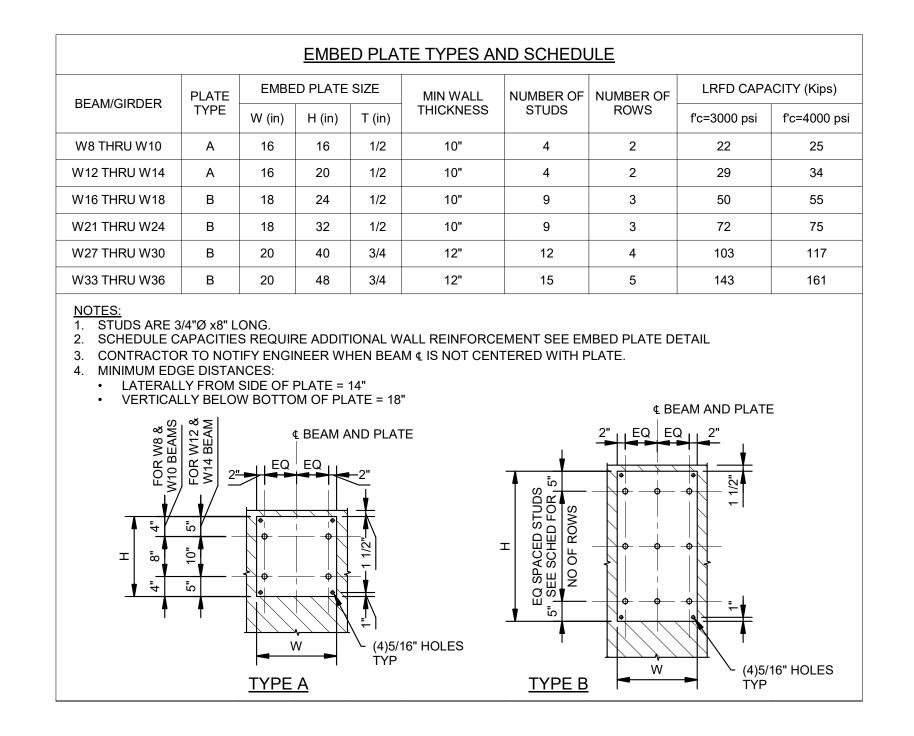
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Bid Set	02/07/2025

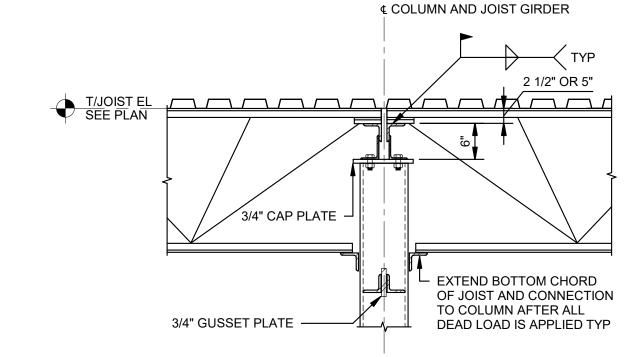
KEY PLAN

SHEET TITLE MASONRY SECTIONS AND **DETAILS**

PROJECT# 24094

SHEET#





TYPICAL JOIST/JOIST GIRDER

TO COLUMN CONNECTION

CONT SLAB EDGE

REINFORCING SEE

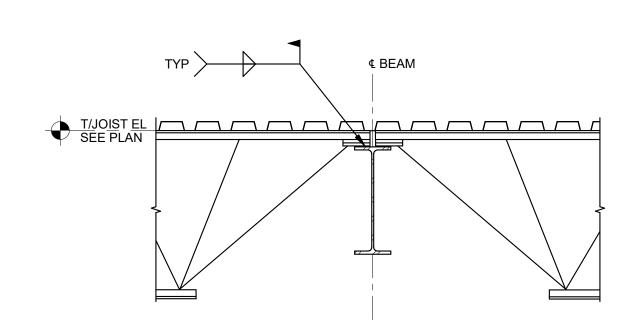
FOR REQUIRED

COMPOSITE METAL

DETAILING

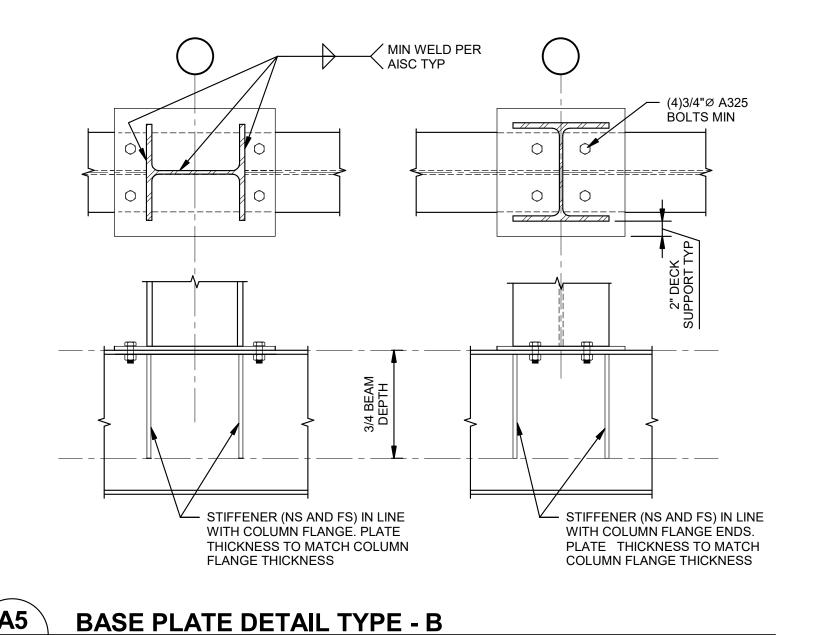
DECK SLAB

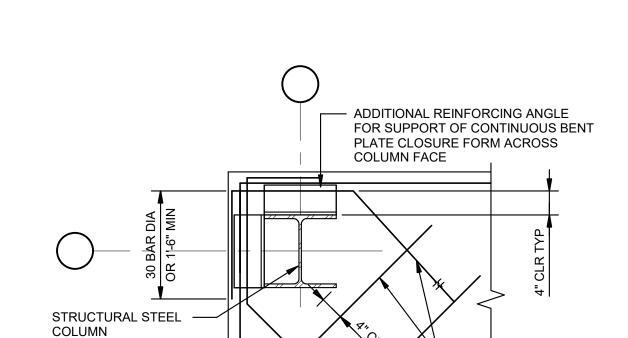
ADDITIONAL SECTIONS









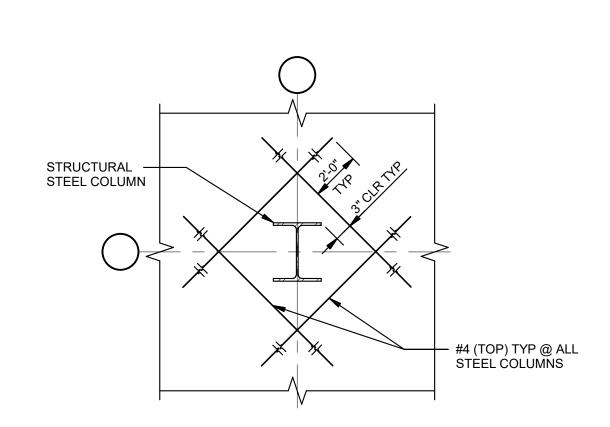




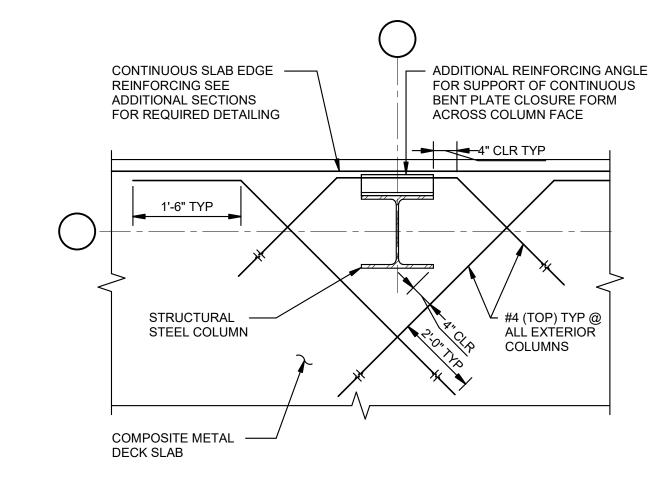
- #4 (TOP) TYP @

ALL CORNER

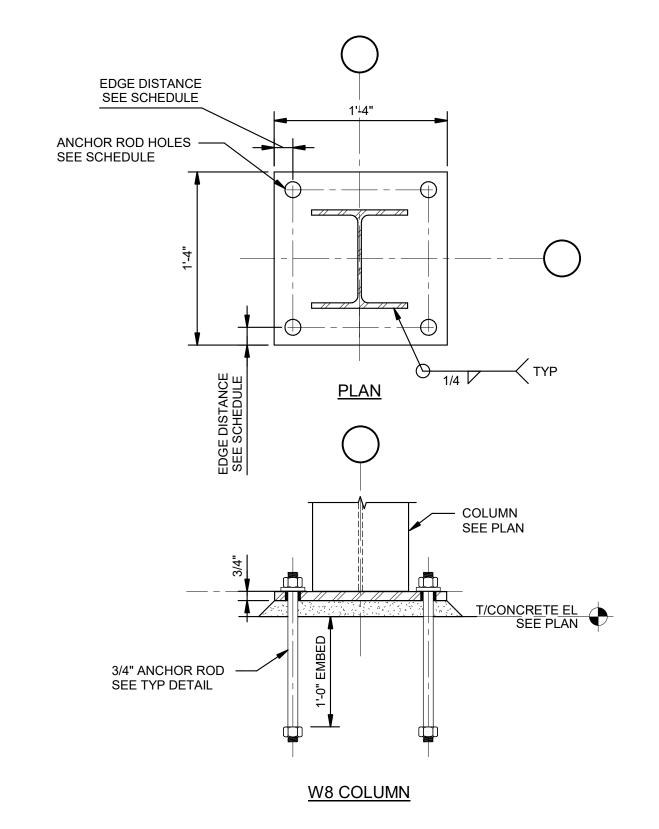
COLUMNS



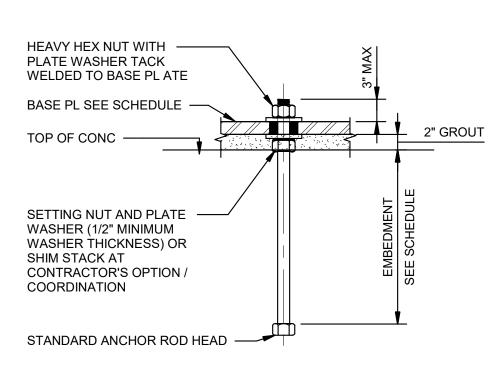
TYPICAL COMPOSITE SLAB COLUMN DETAIL



TYPICAL COMPOSITE SLAB EXTERIOR COLUMN DETAIL







TYPICAL ANCHOR ROD DETAIL

DACE I				IER SCHEDULE
DAGE	LATE / ANCH		LE AND WASH	IER SCHEDULE
ANCHOR ROD DIAMETER [IN]	BASE PLATE HOLE DIAMETER [IN]	MIN WASHER SIZE [IN]	MIN WASHER THICKNESS [IN]	DISTANCE FORM EDGE OF BASE PLATE TO CENTER OF HOLE [IN]
3/4	1 5/16	2	1/4	1 1/2
1	1 13/16	3	3/8	1 1/2

NOTE: CIRCULAR OR SQUARE WASHERS MEETING THE SIZE SHOWN ARE ACCEPTABLE



HGH ROOF							LISH ROOF
126' - 9"				.24	.24		126' - 9"
LV-02 - T.O.STEEL				W8x24	W8x24		LV-02 - T.O.STEEL
113' - 6 1/2"	W8x31	W8x31	W8x31	1	1	W8x31	113' - 6 1/2"
LV-01							LV-01
100' - 0"	1		1				100' - 0"
BP TYPE	A	Α	A	В	В	A	
BP SIZE	16x16x3/4	16x16x3/4	16x16x3/4	10x16x3/4	10x16x3/4	16x16x3/4	
AR SIZE	(4) 3/4"	(4) 3/4"	(4) 3/4"	(4) 3/4" A325	(4) 3/4" A325	(4) 3/4"	
AR EMBED	1'-0"	1'-0"	1'-0"	-	-	1'-0"	
Column Locations							
	A-2, A-3, C-5, D-1, D-2, D-3, D-4, D-4.1	A-4	A-5	A.2-4	A.2-5	B-1, B-2, B-3, B-4, B-5	

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151 **PROJECT** West Michigan Hispanic **Chamber of** Commerce- HQ 1111 Godfrey Ave, SW Grand Rapids, MI 49507 CONSULTANT RESURGET ENGINEERING DETROIT - SAN FRANCISCO SAN FRANCISCO, CA (415) 523-3548 CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING PROFESSIONAL SEAL 8 ★ / STEINHOBEL \ ★ ENGINEER 至 6201051104

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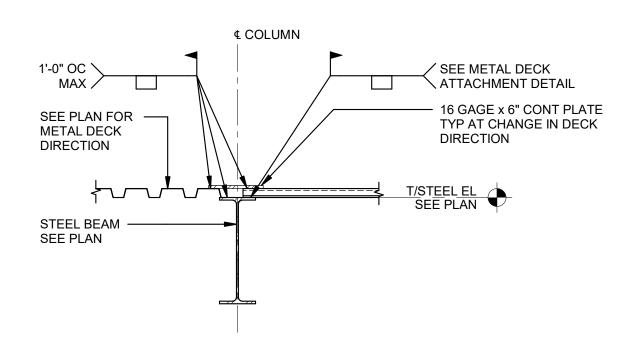
KEY PLAN

SHEET TITLE STEEL SECTIONS AND **DETAILS**

PROJECT# 24094

SHEET#

S.501





EDGE PL THK PL 1/8 0"<'E'<6"

1/4 6"≤'E'<9"

DECK PERPENDICULAR TO BM

EDGE PL THK PL

DECK PARALLEL TO BM

SUPPORTS NOT EXCEEDING 36" OC

TYPICAL EDGE W/OUT FILL

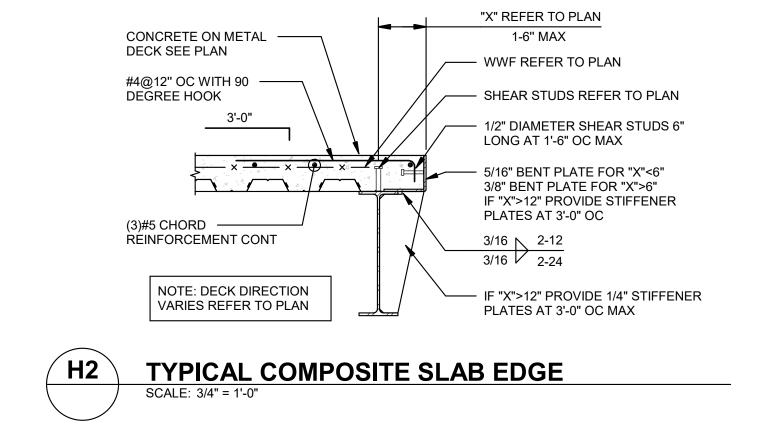
PROVIDE 5/8"Ø PUDDLE WELDS TO EACH SUPPORTING MEMBER AS

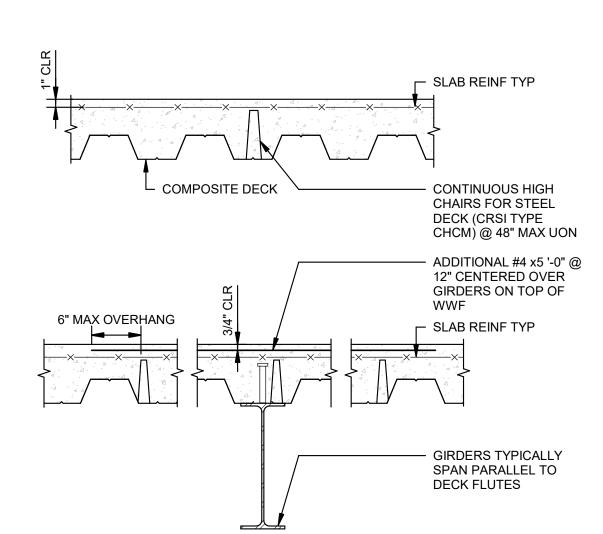
SHOWN BELOW. ENDS TO BE BUTTED AT SUPPORTS ONLY. PROVIDE #10 HEX HEAD SELF DRILLING SCREW SIDE LAP FASTENERS BETWEEN

1/8 0"<'E'<6"

1/4 6"≤'E'<9" 5/16 9"≤'E'<12" 7/16 12"≤'E'<26" 5/16 9"≤'E'<12"

7/16 12"≤'E'<26"

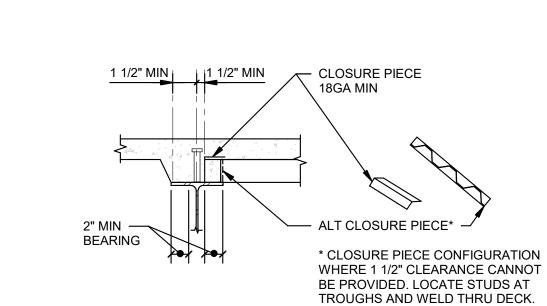




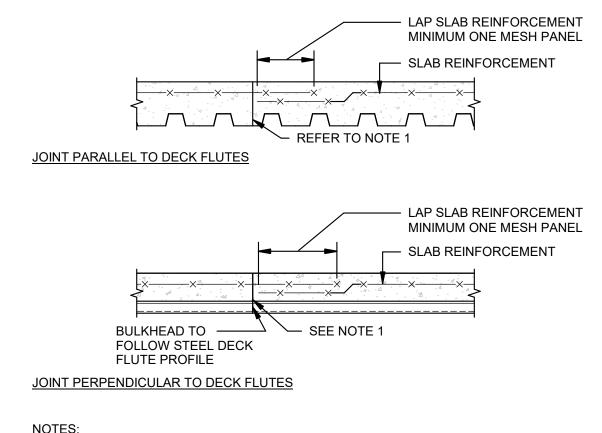
NOTES:

1. REINFORCEMENT SHOWN OVER GIRDERS IS IN ADDITION TO THE TYPICAL SLAB REINFORCEMENT SPECIFIED ON THE DRAWINGS

TYPICAL COMPOSITE SLAB REINFORCEMENT DETAIL



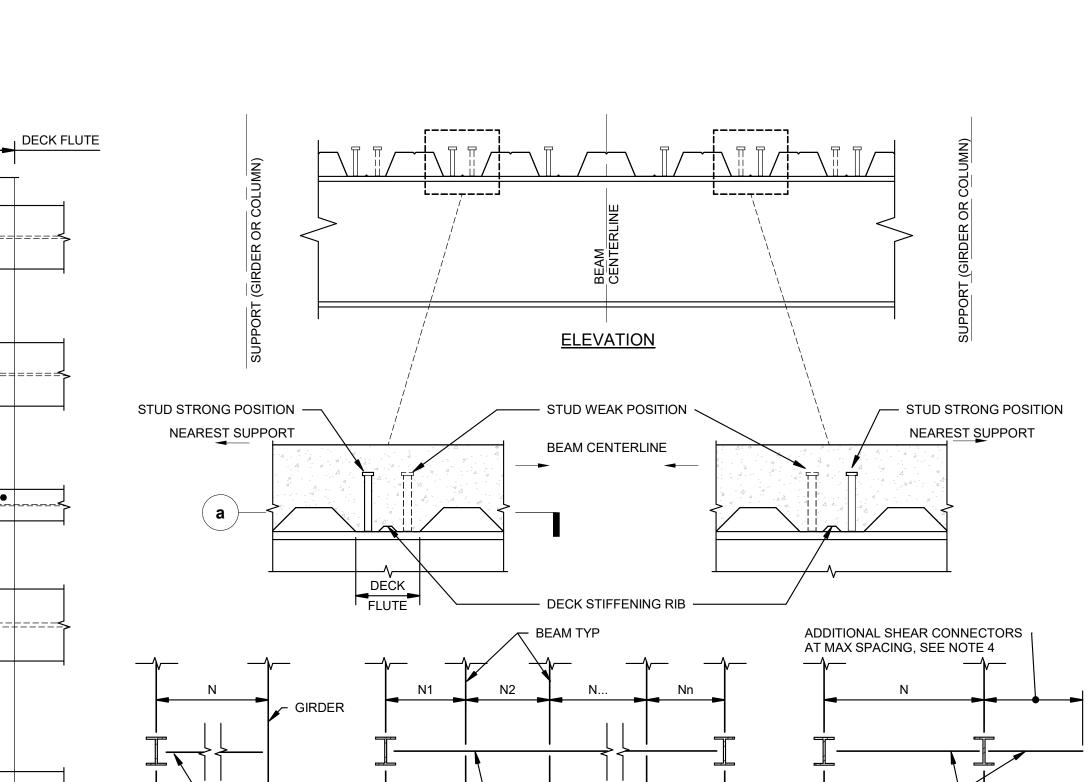
STUD AT CHANGE OF DECK DIRECTION

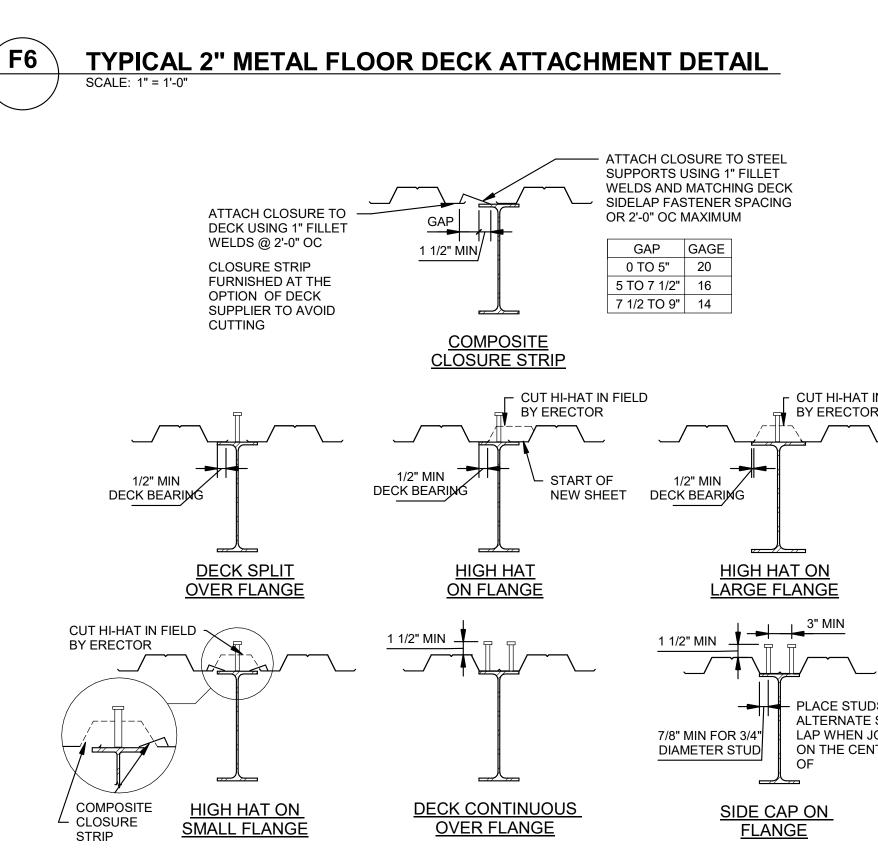


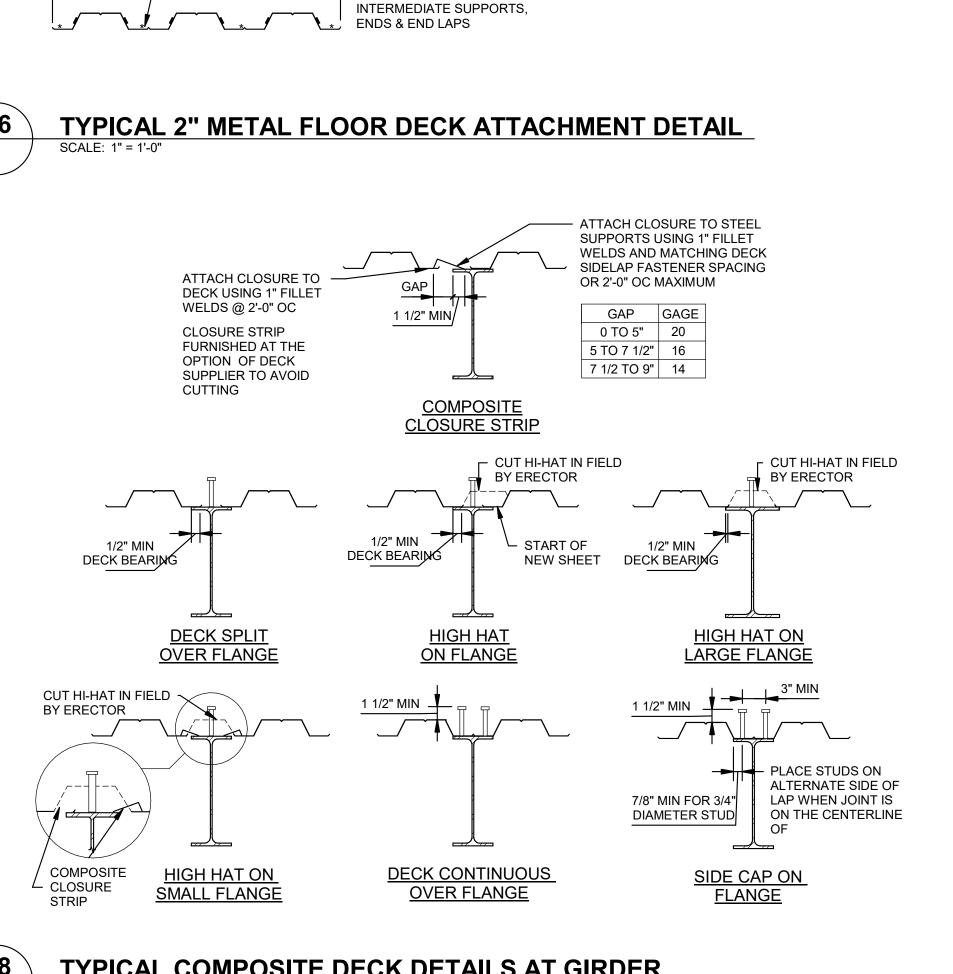
NOTES:

1. PROVIDE REMOVABLE VERTICAL FORMED BULKHEAD SET IN LOWER FLUTE . BULKHEAD MUST EXTEND FULL DEPTH OF SLAB WITH SLAB REINFORCEMENT EXTENDING THROUGH IT. 2. CONSTRUCTION JOINTS PARALLEL TO DECK FLUTES SHALL BE LOCATED 4'-0" MINIMUM FROM CENTERLINE OF THE NEAREST GIRDER. 3. CONSTRUCTION JOINTS PERPENDICULAR TO DECK FLUTES SHALL BE LOCATED AT THE CENTER OF SPAN OR 4'-0" WHICHEVER IS SMALLER. 4. AT CONTRACTORS'S OPTION, PREFORMED PERMANENT LIGHT GAGE STEEL SHEAR KEY FOLLOWING THE CONTOUR OF STEEL DECK FLUTES MAY BE USED WITH SLAB REINFORCEMENT STOPPING EACH SIDE AND #3 DOWELS x 2'-0" CENTERED AT 18".

CONSTRUCTION DETAIL IN COMPOSITE SLAB DETAIL







TYPICAL COMPOSITE DECK DETAILS AT GIRDER

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CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING PROFESSIONAL SEAL * * STEINHOBEL * ENGINEER 6201051104

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DESCRIPTION DATE 02/07/2025

SHEET TITLE STEEL SECTIONS AND

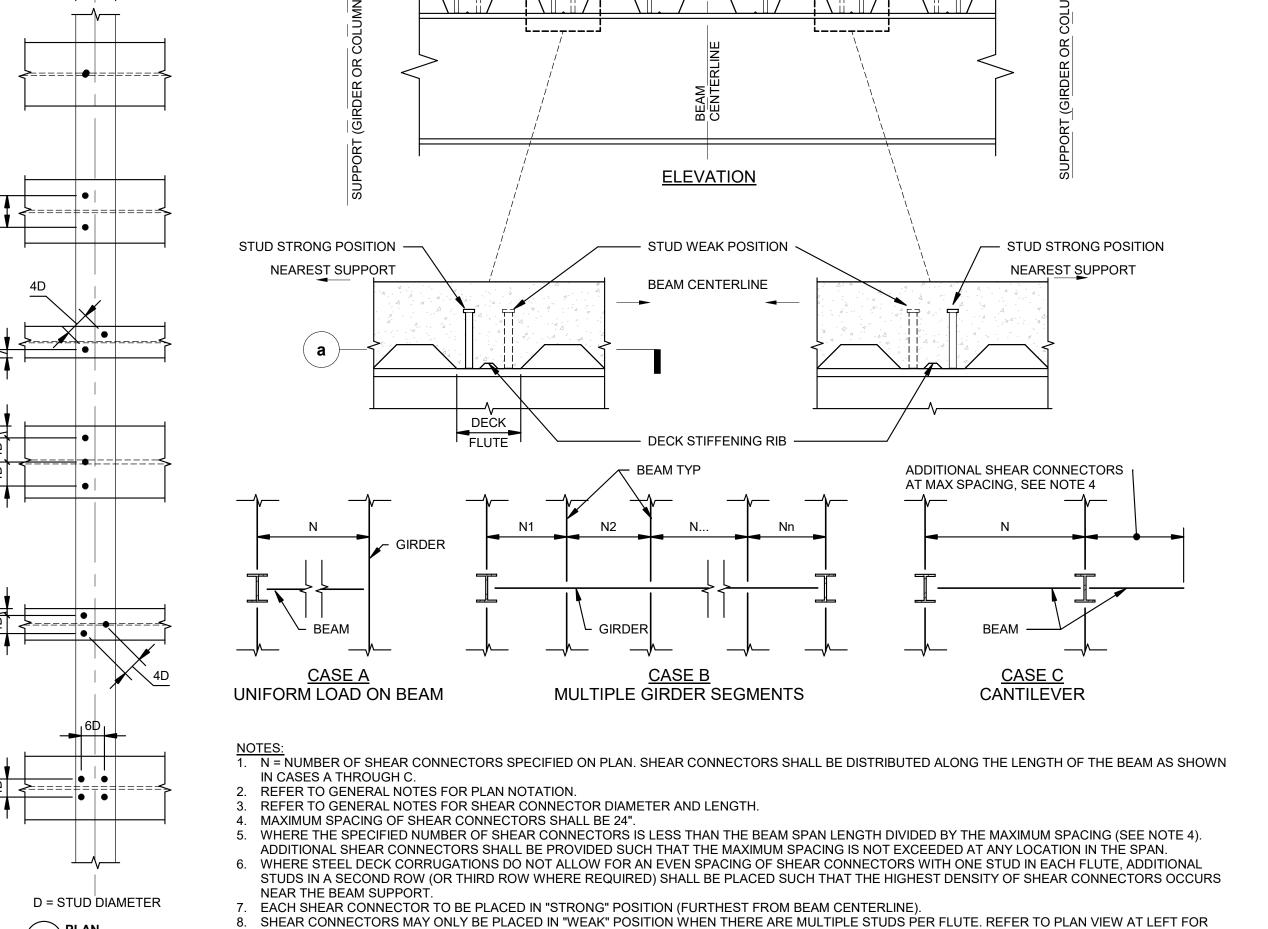
PROJECT# 24094

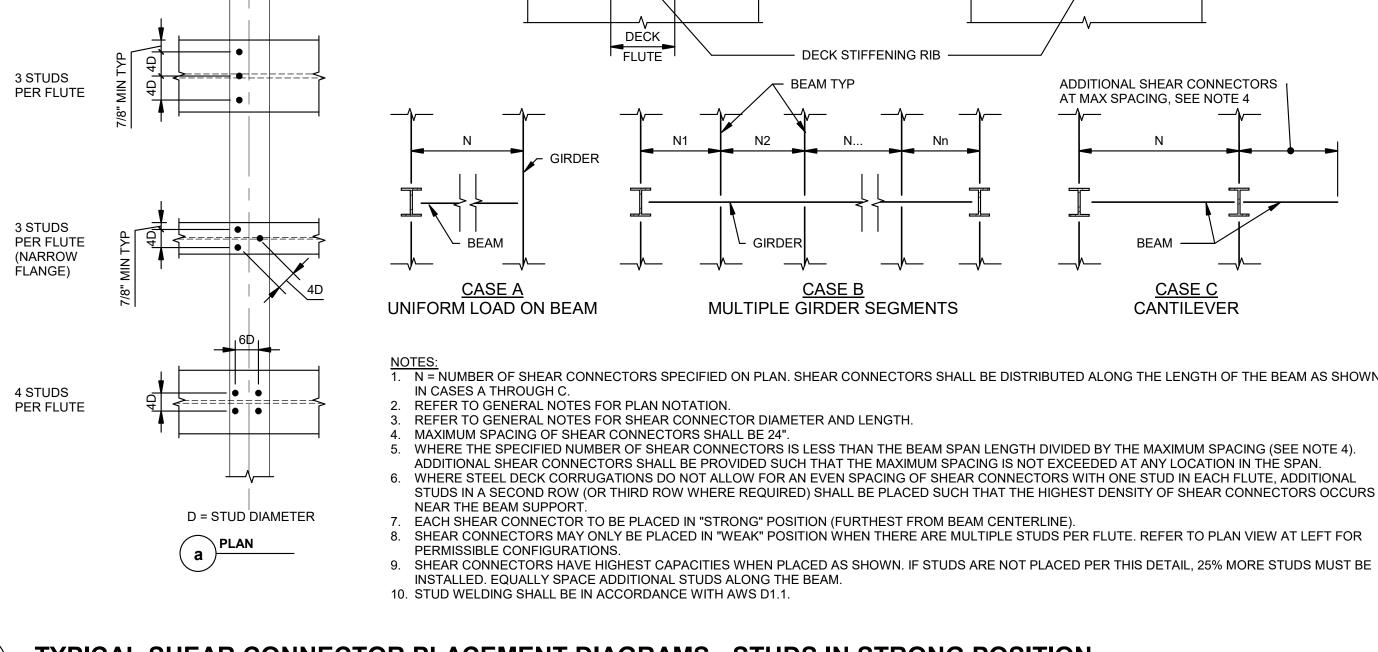
SHEET#

DETAILS

KEY PLAN

S.502





1 STUD PER FLUTE

2 STUDS PER FLUTE

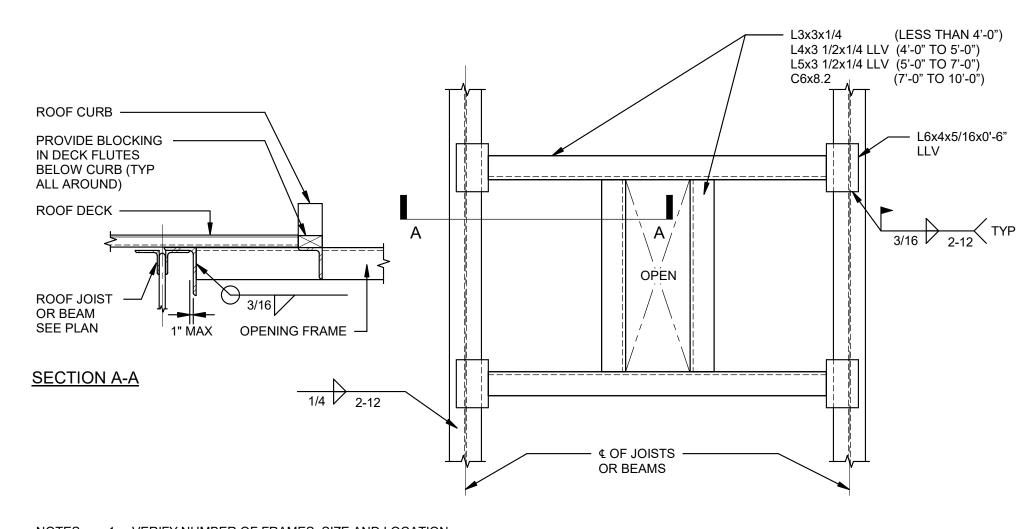
2 STUDS PER FLUTE (NARROW

FLANGE)

TYPICAL SHEAR CONNECTOR PLACEMENT DIAGRAMS - STUDS IN STRONG POSITION

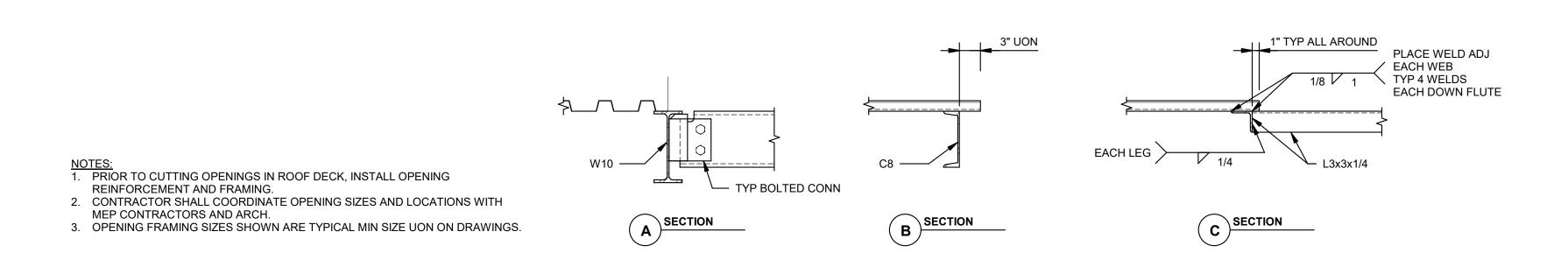
NOTE: COORDINATE UNIT SIZE AND LOCATION WITH APPROVED MECHANICAL EQUIPMENT

LIGHT WEIGHT MECHANICAL UNIT PRE-FAB CURB AT BEAM

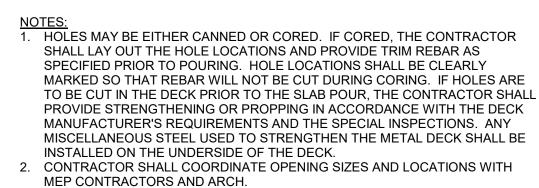


NOTES: 1. VERIFY NUMBER OF FRAMES, SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS 2. SUPPORT FRAME TO BE USED WITH EQUIPMENT WEIGHING 2000 LBS OR LESS

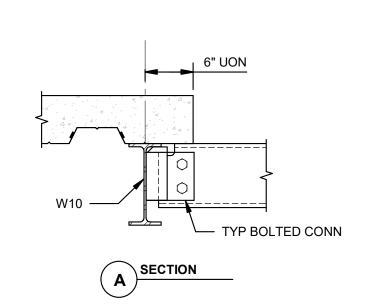
TYP ROOF OPENING AND RTU SUPPORT FRAME

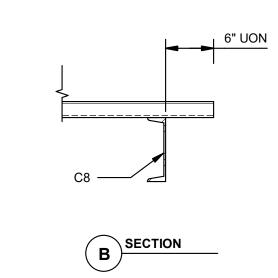


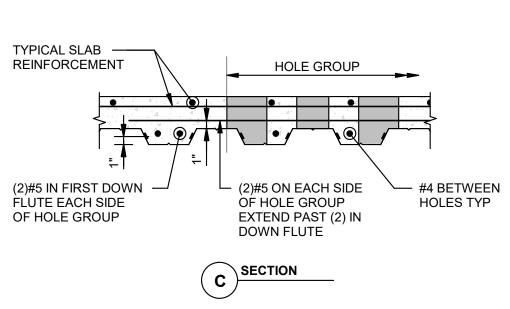
OPENINGS IN METAL DECK



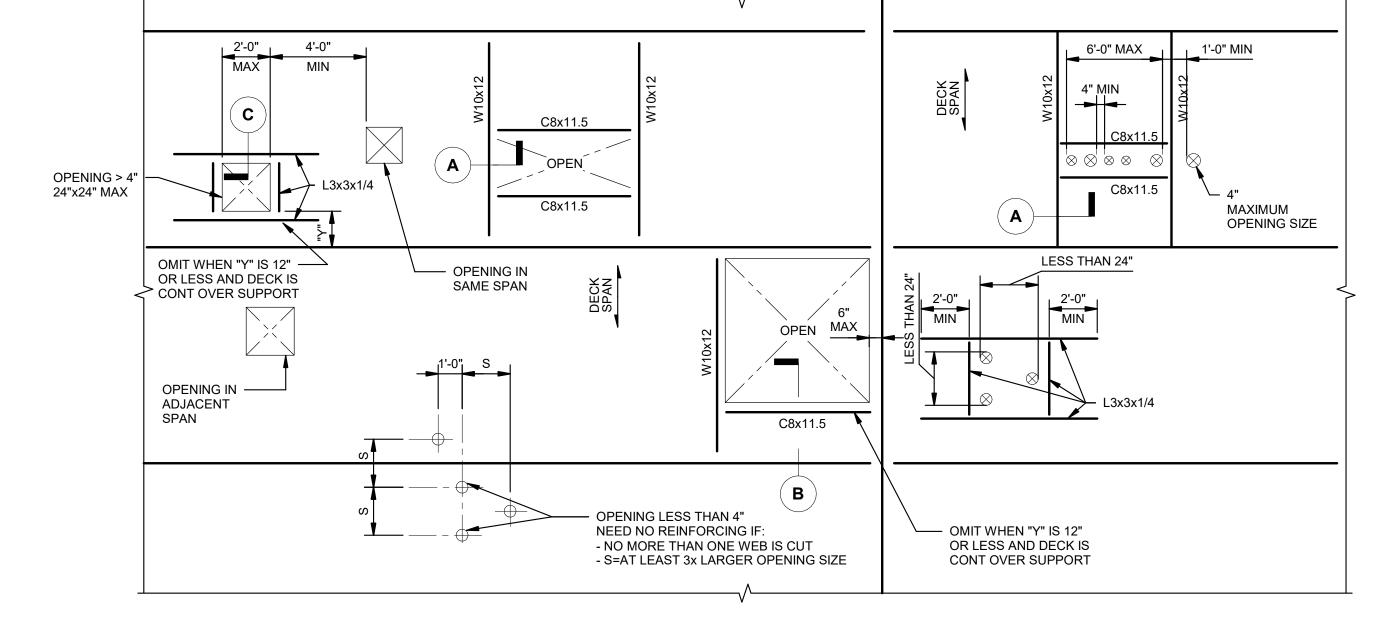
3. EXTEND BARS BEYOND EDGE OF OPENING FOR DISTANCE EQUAL TO Ld, DEVELOPMENT LENGTH. 4. OPENING FRAMING SIZES SHOWN ARE TYPICAL MIN SIZE UON ON DRAWINGS.



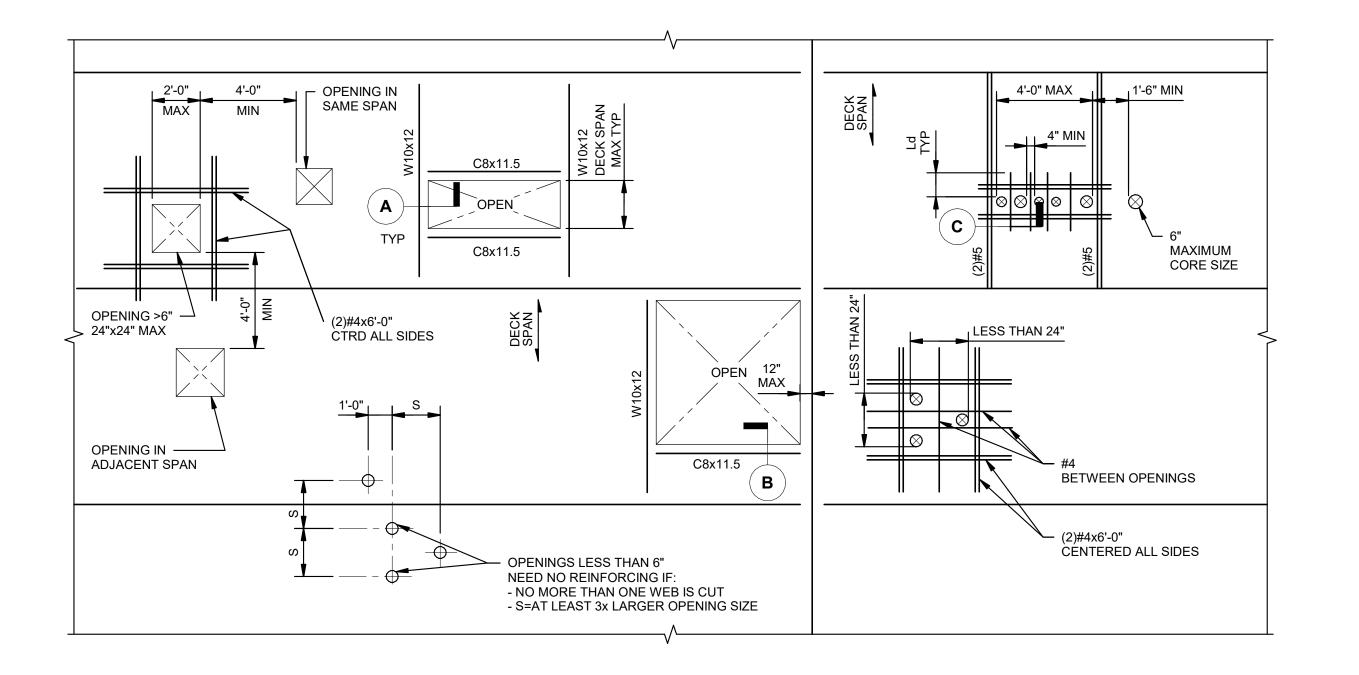




OPENINGS IN CONCRETE FILLED METAL DECK



TYPICAL OPENING IN METAL DECK WITHOUT CONCRETE FILL



TYPICAL OPENING IN CONCRETE FILLED METAL DECK

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KEY PLAN

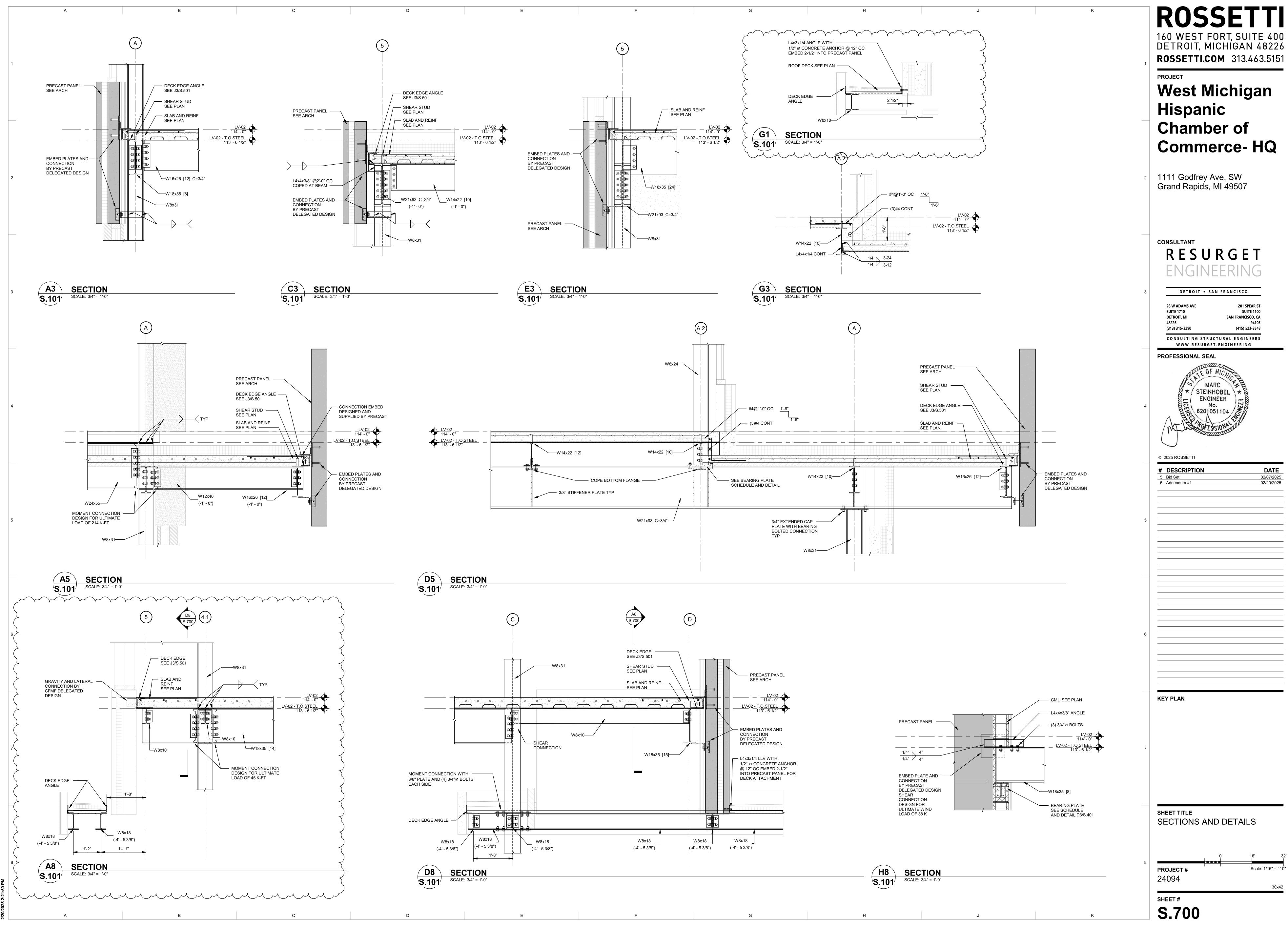
SHEET TITLE STEEL SECTIONS AND

PROJECT#

SHEET#

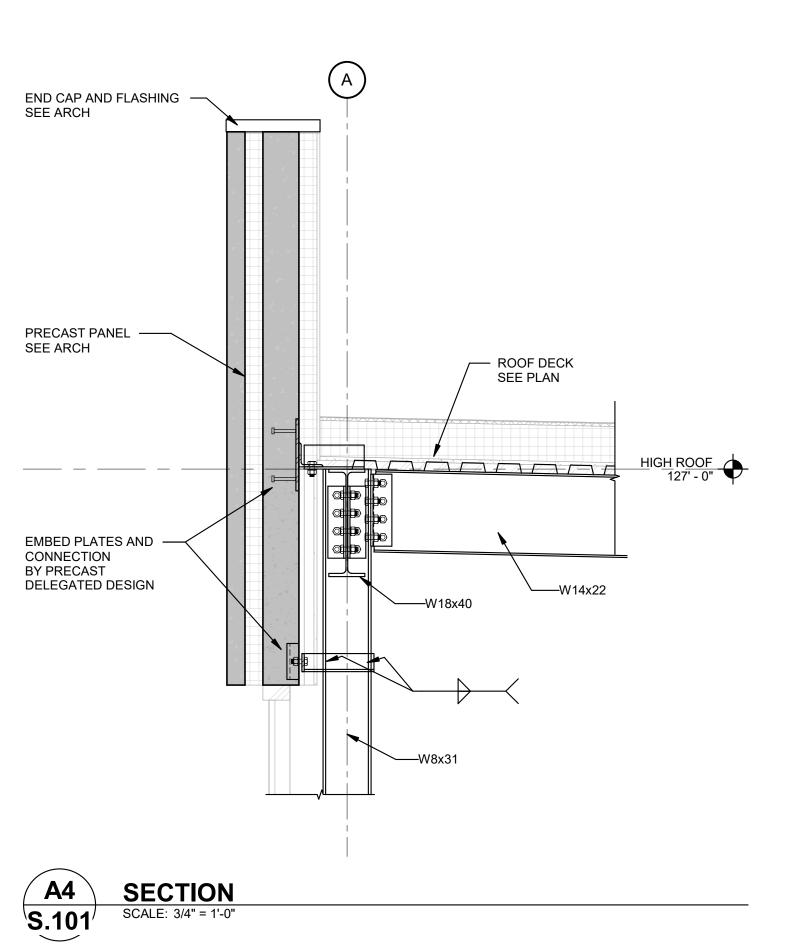
S.503

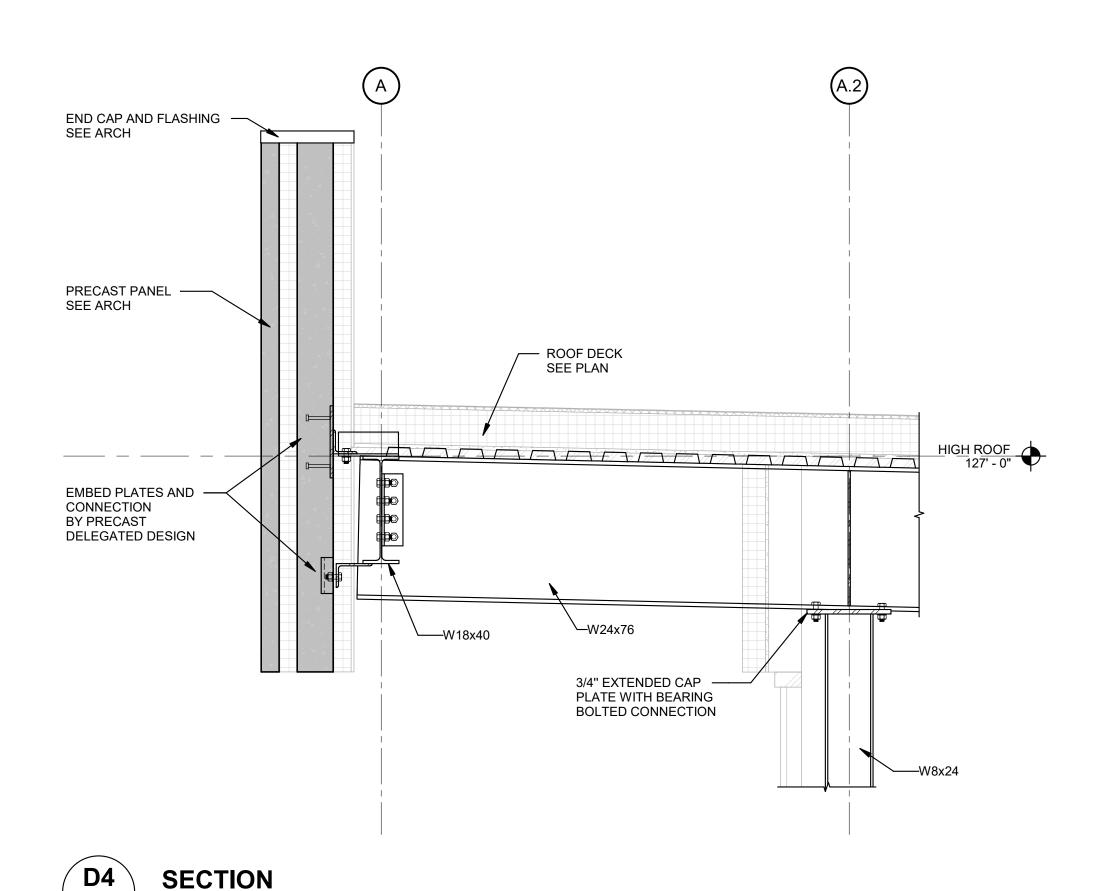
DETAILS

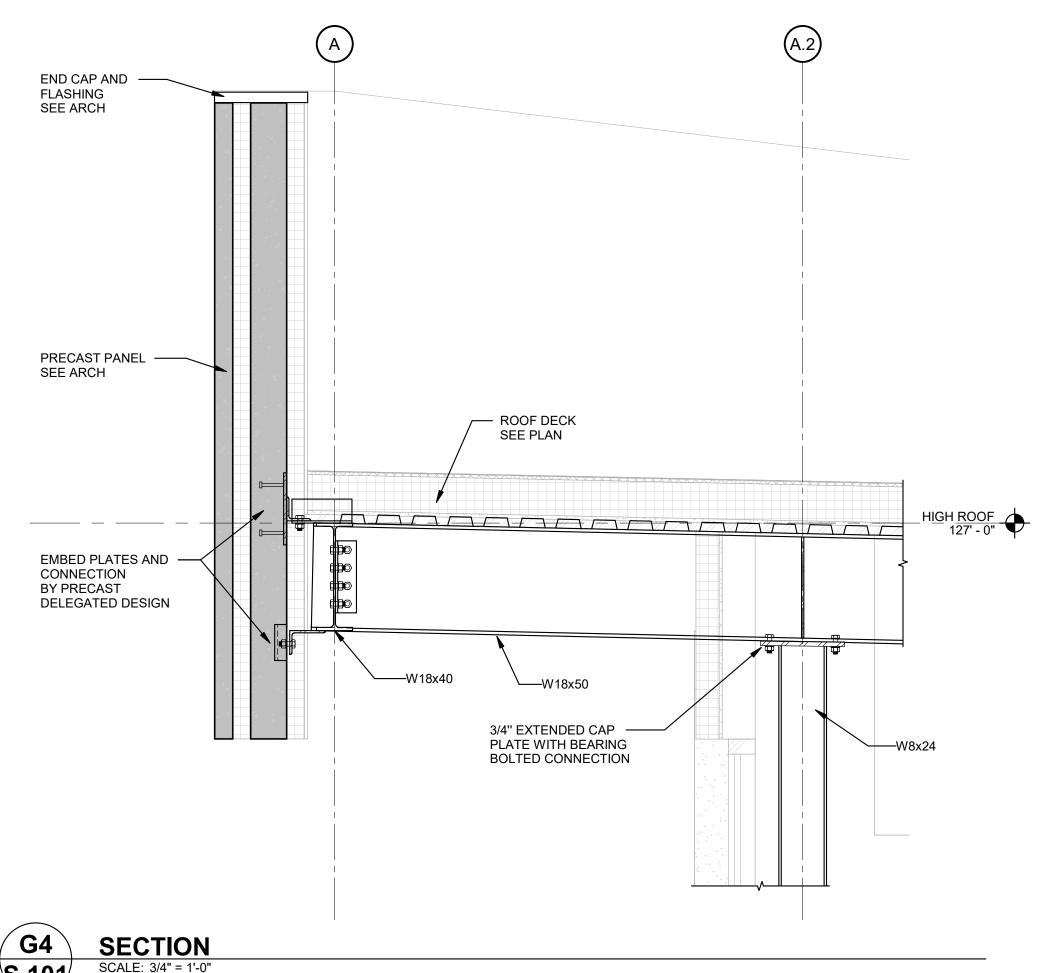


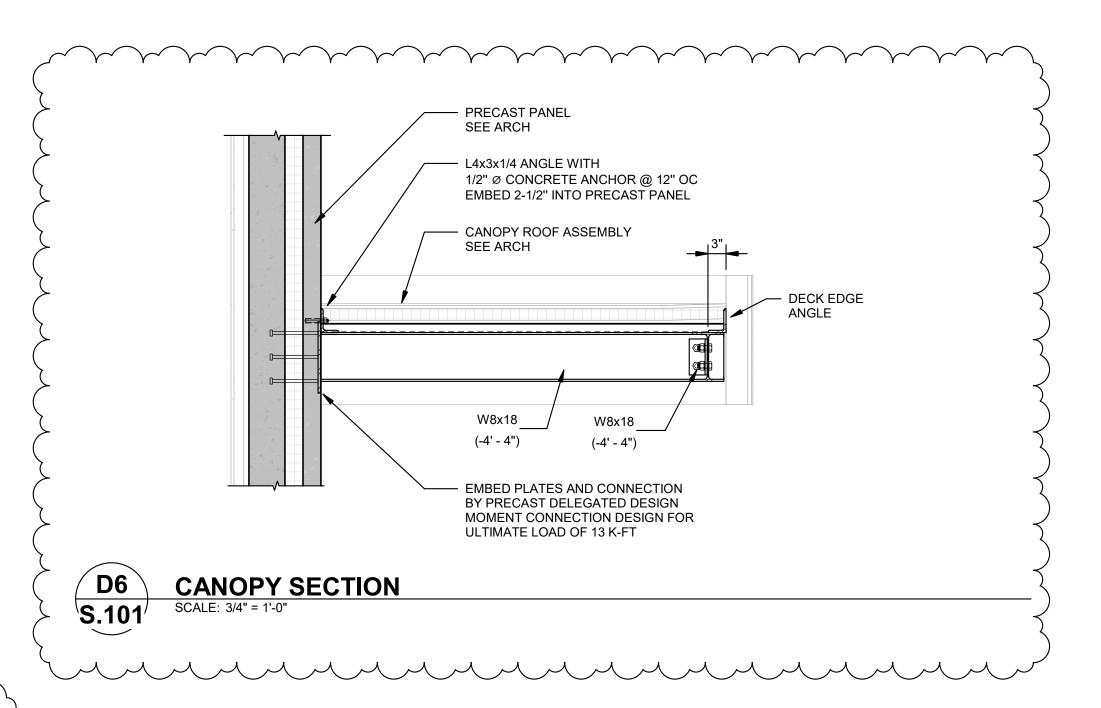
DETROIT, MICHÍGAN 48226

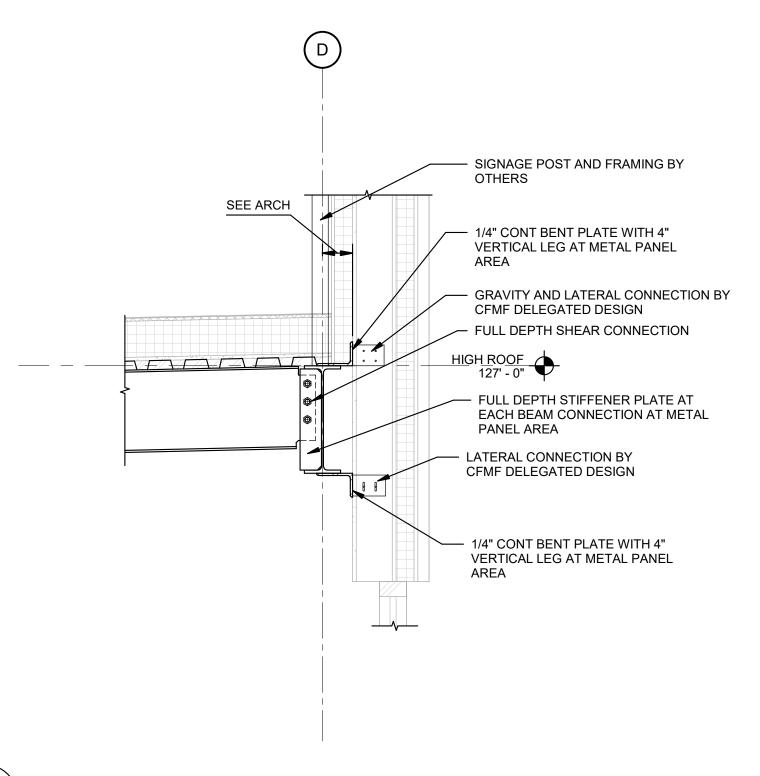
DATE 02/07/2025

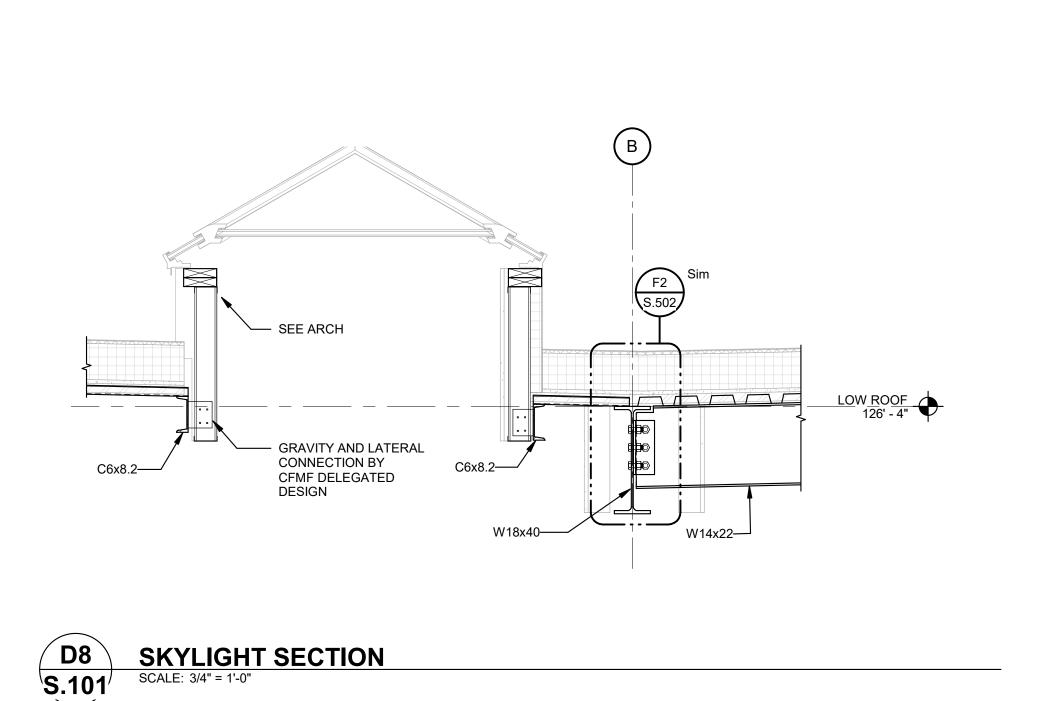


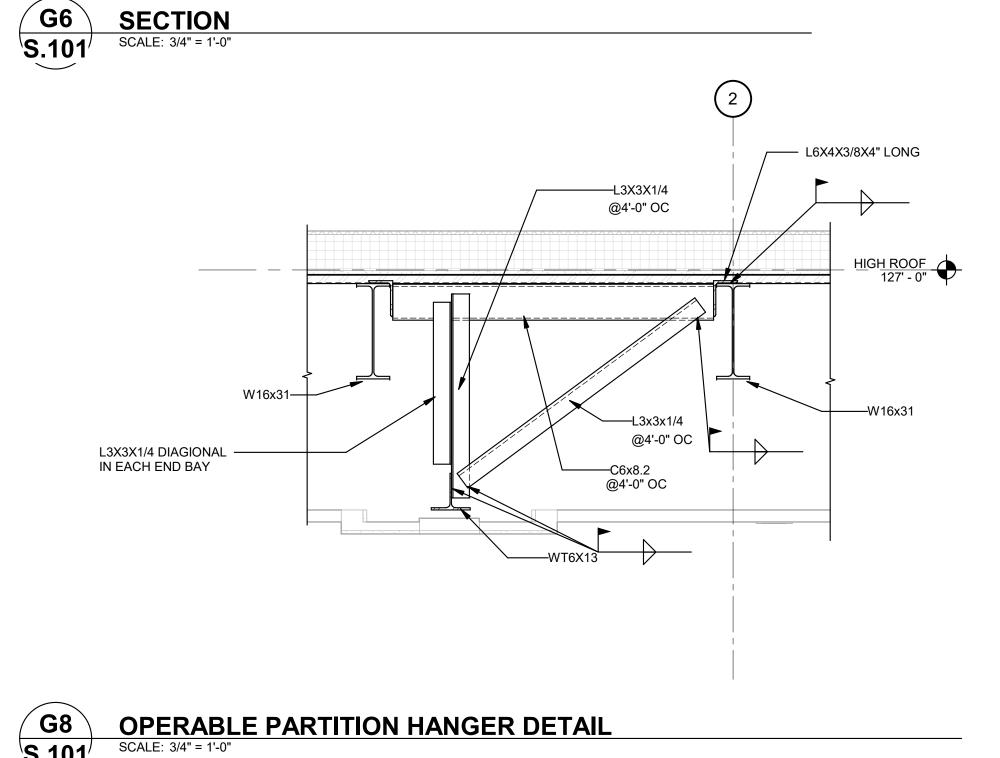


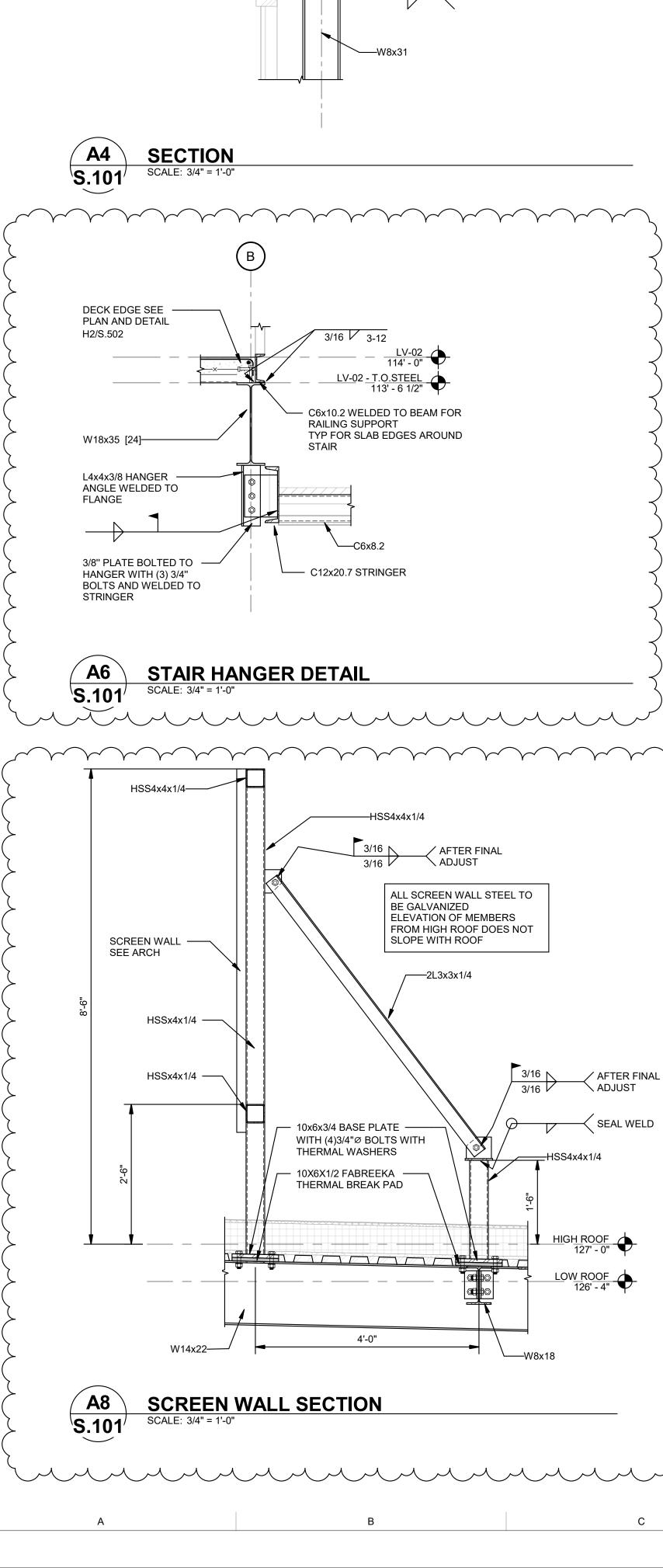


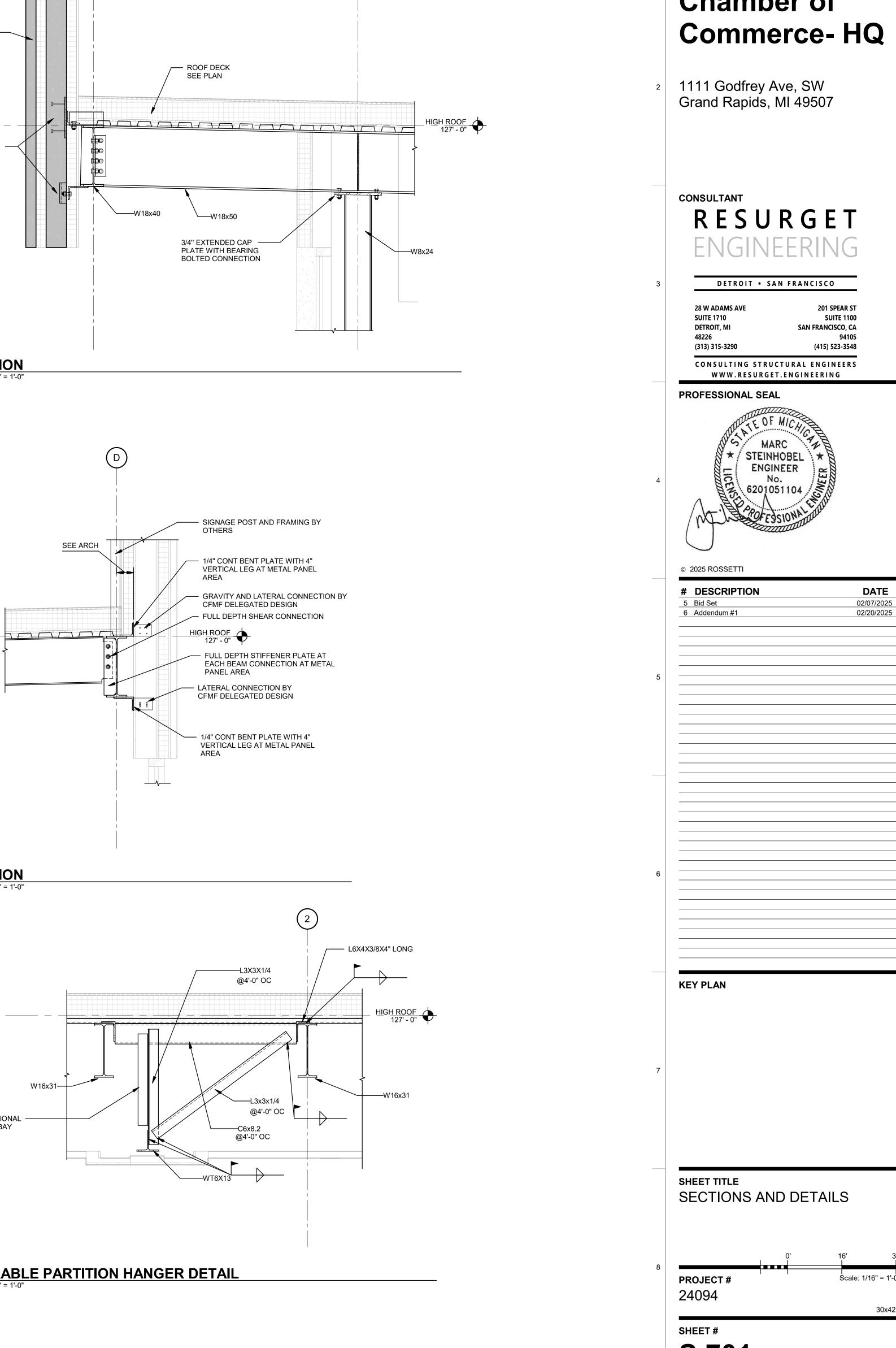












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PROJECT

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DATE

S.701

ABBREVIATIONS

CCU	AIR CONDITIONING CONDENSING UNIT	F	FAHRENHEIT	Р	PUMP
D	ACCESS DOOR	FD	FLOOR DRAIN	PD	PRESSURE DROP (FEET OF WATER)
FF	ABOVE FINISHED FLOOR	FLR	FLOOR	PSI	POUNDS PER SQUARE INCH
HU	AIR HANDLING UNIT	FPM	FEET PER MINUTE	PRV	PRESSURE REDUCING VALVE
Р	ACCESS PANEL	FPWH	FREEZE PROOF WALL HYDRANT		
SR	AUTOMATIC SPRINKLER RISER	FSW	FLOW SWITCH	RA	RETURN AIR
		FS	FLOOR SINK	RD/SP	ROOF DRAIN/STAND PIPE
TU	BRITISH THERMAL UNIT	FT.	FEET	BAL.	BALANCE
		0514	OALL ONG DED MINUTE	RET	RETURN
С	COOLING COIL	GPM	GALLONS PER MINUTE	RF	RETURN FAN
F	CENTRIFUGAL FAN			RH	REHEAT COIL
FM	CUBIC FEET PER MINUTE	НВ	HOSE BIBB	Rh	RELATIVE HUMIDITY
I	CAST IRON	НО	HUB OUTLET	RPM	REVOLUTIONS PER MINUTE
0	CLEAN OUT	HP	HORSEPOWER	RS	ROOF SUMP
OND	CONDENSATE	HW	HOT WATER (POTABLE)	RC	RAIN CONDUCTOR
		HWR	HOT WATER RETURN (POTABLE)	REL	RELOCATED
ONT	CONTINUATION			REB	REBALANCE
UH	CABINET UNIT HEATER	IN	INCHES	SA	SUPPLY AIR
W	COLD WATER	INL	INLET	SAN	SANITARY WASTE
WS	CHILLED WATER SUPPLY	INV	INVERT	SD	SMOKE DETECTOR
WR	CHILLED WATER RETURN			SF	SUPPLY FAN
		LAT	LEAVING AIR TEMPERATURE	SG	SPECIFIC GRAVITY
b	DRY BULB TEMPERATURE, °F	LAV	LAVATORY	SP	STATIC PRESSURE (INCHES OF WATER)
3	DECIBELS	LBS/HR	POUNDS PER HOUR	SP	STAND PIPE
DC	DIRECT DIGITAL CONTROL	LWT	LEAVING WATER TEMPERATURE	SPR	SPRINKLER
ET	DETAIL			SPR/STP	SPRINKLER SPRINKLER STANDPIPE
IA	DIAMETER	MAX.	MAXIMUM	SPS	STATIC PRESSURE SENSOR
N.	DOWN	MBH	1000 BTU/HR	STK	STATIC PRESSURE SENSOR STACK
S	DOWNSPOUT	MECH	MECHANICAL	SIK	STACK
WG.	DRAWING	MIN.	MINIMUM	TP	TOTAL DDECCUDE
		MISC	MISCELLANEOUS	TYP	TOTAL PRESSURE
A	EXHAUST AIR			IYP	TYPICAL
CUH	ELECTRIC CABINET UNIT HEATER	NC	NORMALLY CLOSED		LINUTLIEATED
F	EXHAUST FAN	NIC	NOT IN CONTRACT	UH	UNIT HEATER
LEV.	ELEVATION	NO	NORMALLY OPEN	UON	UNLESS OTHERWISE NOTED
SP	EXTERNAL STATIC PRESSURE	NOM.	NOMINAL		
UH	ELECTRIC UNIT HEATER	NFWH	NON FREEZE WALL HYDRANT	V	VALVE
X.	EXISTING		OUTOIDE AID	VTR	VENT THRU ROOF
XH	EXHAUST	OA	OUTSIDE AIR		
XIST	EXISTING	OF	OVERFLOW	W	WASTE
		OFD	OVERFLOW DRAIN	WG	WATER GAUGE

GENERAL HVAC NOTES:

THE FOLLOWING NOTES APPLY TO ALL HVAC DRAWINGS, EXCEPT WHERE OTHERWISE INDICATED.

- WHEREVER VOLUME DAMPERS OCCUR ABOVE CEILINGS WITHOUT REMOVABLE TILE AND AN ACCESS PANEL IS NOT FURNISHED, PROVIDE AN EXPOSED DAMPER REGULATOR TO ALLOW DAMPER ADJUSTMENT FROM BELOW CEILING. UNIT TO BE EQUAL TO VENTLOCK No. 666 IN 1/2"x3/8" SIZE.
- 2. ALL DIMMENSION SHOWN FOR DUCTWORK ARE NET INSIDE DIMENSIONS.
- DIFFUSER AND REGISTER LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- 4. THOUGH SOME OFFSETS & TRANSITIONS ARE SHOWN IN PIPING AND SHEET METAL TO HELP INDICATE THE PHYSICAL RELATIONSHIP BETWEEN THEM. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL PIPING AND SHEET METAL OFFSET & TRANSITIONS REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT
- 5. DUCT PRESSURE CONSTRUCTION CLASSIFICATION SHALL BE AS SPECIFIED.6. ALL ROUND RUNOUTS AND DROPS TO DIFFUSERS SHALL BE SAME NOMINAL

INTERFERENCES.

- SIZE AS INDICATED ON THE DRAWINGS.

 7. ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED
- IN FURRED CHASE OR SUSPENDED CEILING.

 8. ACCESS PANELS AND DOORS ARE REQUIRED THROUGH BUILDING CONSTRUCTION ASSEMBLIES SUCH AS WALLS, CEILING, PARTITONS AND FLOORS TO SERVICE AND MAINTAIN DAMPERS, CONTROL MOTORS, REGULATORS, VALVES, FLEXIBLE DUCT CONNECTIONS AND OTHER ITEMS OR DEVICES INCORPORATED IN MECHANICAL WORK. SUCH PANELS AND DOORS SHALL BE PROVIDED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS. MECHANICAL CONTRACTOR SHALL COORDINATE LOCATION OF ACESS DOORS AND PANELS AND VERIFY THE EXACT QUANTITY, SIZE, FIRE-RATING AND LOCATION AFTER THE SYSTEMS AND EQUIPMENT REQUIRING ACCESS HAVE BEEN INSTALLED AND

PRIOR TO THE CLOSURE OF THE AFFECTED CEILING AND BUILDING ASSEMBLIES. MINIMUM ACCESS PANEL AND DOOR SIZE SHALL BE 24 INCHES

9. ALL DUCTWORK PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE PROVIDED WITH FIRE DAMPERS AND ACCESS DOOR.

BY 18 INCHES UNLESS OTHERWISE NOTED.

PLUMBING GENERAL NOTES:

FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES AND VARIOUS PIECES OF EQUIPMENT REFER TO SPECIFICATIONS.

 IN ALL WASTE DRAINAGE PIPING THE CONTRACTOR SHALL FURNISH AND INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF FAMOURS (IN ADDITION TO THE CLEANOURS INDICATED ON INSTALL OF THE CLEANOURS (IN ADDITION TO THE CLEANOURS (IN ADD

WALL HYDRANT

- INSTALL CLEANOUTS (IN ADDITION TO THE CLEANOUTS INDICATED ON DRAWINGS AS REQUIRED BY THE GOVERNING PLUMBING CODE).
- 3. REFER TO HVAC GENERAL NOTE-4
- 4. FOR ADDITION NOTES COMMON TO PLUMBING REFER TO HVAC NOTES.

	URAL GAS LOAD EDULE
EQUIPMENT	TOTAL INPUT CFH
RTU-1	600
RTU-2	600
GWH-1	76
GWH-2	199
TOTAL	1,475 CFH

PIPE DESIGN BASED ON 7" W.C. SERVICE PRESSURE @ 660 EQUIVALENT

LINEAR FT. AND 0.2" W.C. ALLOWABLE PRESSURE DROP.

HVAC LEGEND & SYMBOLS

PLUMBING, PIPING & FIRE PROTECTION

ITEM TO BE REMOVED EXISTING WORK

NEW WORK

ISOLATION VALVE

WATER FLOW SWITCH

EXPANSION JOINT - SLIDING

SPRINKLER HEAD (PENDANT)

SPRINKLER HEAD (UPRIGHT)

CHECK VALVE

VALVE IN RISER

STRAINER

UNION

CLEANOUT

PIPE ANCHOR

ALIGNMENT GUIDE

CLEANOUT FLOOR

CLEANOUT WALL

CLEANOUT GRADE FLOOR DRAIN (FD)

THERMOMETER

CAP OR PLUG

ELBOW - TURNED DOWN
ELBOW - TURNED UP
TEE OUTLET - DOWN
TEE OUTLET - UP

DIRECTION OF FLOW BALANCING VALVE

TWO-WAY MODULATING CONTROL VALVE

THREE-WAY MODULATING CONTROL VALVE

REDUCER - CONCENTRIC

PRESSURE GAUGE WITH COCK

MANUAL AIR VENT

NEW CONNECTION

COLD WATER PIPING

NPCW NON POTABLE COLD WATER

IRW IRRIGATION WATER

HOT WATER RETURN PIPING

SANITARY LINE (UNDERGROUND)

SANITARY LINE (ABOVE GROUND)

FIRE SPRINKLER PIPE (FS)

RF SHEILDING DAMPER

TEMPERATURE SENSOR

THERMOSTAT

_____ HW _____

_____V____

= = = = = =

===== SAN =====

_____ OF ____

____COND ____

_____FP____

TEST PLUG (PRESSURE/TEMPERATURE)

HIGH PRESSURE COLD WATER PIPING

WITH DUCT SIZE 18 INCHES WIDE (IN PLANE OF DRAWING) AND 6 INCHES DEEP. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT UNLESS OTHERWISE NOTED. WITH DUCT SIZE 22 INCHES WIDE (IN PLANE OF DRAWING) AND 14 INCHES DEEP. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT UNLESS OTHERWISE NOTED. INDICATES ROUND DUCT WITH DUCT SIZE OF 6 INCHES IN DIAMETER. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT (FROM DUCT ORIGIN AT TAP TO END OF DUCT) UNLESS OTHERWISE NOTED. VANE TURN ELBOW & AIR SPLIT TYPE DUCT TAKE-OFF RISE - INCLINED RISE IN RESPECT TO AIR FLOW DN. - INCLINED DROP IN RESPECT TO AIR FLOW VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS VANED ELBOW (SHORT RADIUS) INDICATES FLEXIBLE DUCT (RUNOUT) OF SIZE AS SCHEDULED OR SHOWN. LENGTH SHALL NOT EXCEED 5 FT. DUCT TURNING UP VOLUME CONTROL DAMPER DUCT TURNING DOWN FLEXIBLE CONNECTION OR FLEXIBLE DUCT CONNECTOR VERTICAL FIRE DAMPER MOTORIZED DAMPER MANUAL DAMPER HORIZONTAL FIRE DAMPER FIRE DAMPER COMBINATION FIRE AND SMOKE DAMPER POINT OF NEW CONNECTION

DUCT SMOKE DETECTOR

ITEM TO BE REMOVED

SUPPLY AIR DIFFUSER

RETURN AIR GRILLE

SUPPLY AIR GRILLE

LINEAR SUPPLY AIR DIFFUSER

MECHANICAL SHEET INDEX

•	
SHEET NO.	SHEET TITLE
MP-001	MECHANICAL SYMBOLS LIST, INDEX AND NOTES
MP-002	MECHANICAL SPECIFICATIONS
P-101	UNDERGROUND PLUMBING PLAN
P-111	PLUMBING FLOOR PLAN - LEVEL 1
P-121	PLUMBING FLOOR PLAN - LEVEL 2
M-111	HVAC FLOOR PLAN - LEVEL 1
M-121	HVAC FLOOR PLAN - LEVEL 2
MP-131	MECHANICAL ROOF PLAN
MP-401	MECHANICAL SCHEDULES
MP-402	MECHANICAL SCHEDULES
MP-501	MECHANICAL DETAILS
MP-502	MECHANICAL DETAILS
MP-601	TEMPERATURE CONTROLS
FP-111	FIRE PROTECTION PLAN - LEVEL 1
FP-121	FIRE PROTECTION PLAN - LEVEL 2
	MP-001 MP-002 P-101 P-111 P-121 M-111 M-121 MP-131 MP-401 MP-501 MP-502 MP-601 FP-111

ROSSETTI 140 WEST FORT SHITE 400

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PROJECT

West Michigan Hispanic Chamber of Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

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DESCRIPTION

2 Addendum 1 02/20/2025

DATE

01/24/2025

SHEET TITLE

Mechanical Symbols List, Index and Notes

PROJECT#
2024-010.00

KEY PLAN

SHEET#

MP-001

WORK INCLUDED:

FURNISH ALL LABOR AND MATERIAL APPLIANCES. EQUIPMENT AND SUPERVISION TO PUT IN PLACE A COMPLETE AND FUNCTIONING. MECHANICAL INSTALLATION READY FOR OPERATION, AS SPECIFIED HEREIN AND AS INDICATED ON THE DRAWINGS. SYSTEMS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO THE FOLLOWING MAJOR EQUIPMENT OR OPERATIONS:

2. HEATING, VENTILATION AND AIR CONDITIONING

INSULATION

 TEMPERATURE CONTROLS FIRE PROTECTION

<u>DEFINITIONS:</u>

"PROVIDE": TO FURNISH AND COMPLETELY INSTALL SPECIFIED PRODUCTS AND INCIDENTALS, WHETHER SPECIFICALLY INDICATED OR NOT, NECESSARY FOR A COMPLETE, FUNCTIONAL INSTALLATION. INCLUDES ALL GENERAL AND SPECIALIZED LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THE INSTALLATION.

"PIPING": A COMPLETE SYSTEM, INCLUDING PIPE, TUBING, FITTINGS, HANGERS, SUPPORTS, VALVES, AND ALL SPECIALTIES THAT COMPRISE A FULLY FUNCTIONAL PIPING SYSTEM, WHETHER SPECIFICALLY INDICATED OR NOT.

CODES, ORDINANCES, AND STANDARDS:

ALL WORK SHALL CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE MICHIGAN BUILDING CODES AND OTHER ADOPTED FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND STANDARDS HAVING JURISDICTION OVER THE WORK. WHERE CONTRACT DOCUMENT REQUIREMENTS EXCEED THE REQUIREMENTS OF THE REFERENCED CODES, ORDINANCES, AND STANDARDS, THE CONTRACT DOCUMENT REQUIREMENTS SHALL BE TAKEN AS MINIMUM. ALL EQUIPMENT CONTAINING ELECTRICAL WIRING AND/OR ELECTRICAL COMPONENTS SHALL HAVE A UNDERWRITERS

PERMITS, FEES AND INSPECTIONS

LABORATORIES (UL) "PACKAGE" LABEL.

SECURE ALL NECESSARY PERMITS, CONNECTION FEES, TAD FEES, LICENSES AND APPROVALS AND ARRANGE FOR ALL INSPECTIONS, INCLUDE ALL RELATED COSTS.

FURNISH CERTIFICATES OF FINAL INSPECTION AND APPROVAL UPON COMPLETION OF PROJECT.

EXAMINATION OF SITE:

VISIT PROJECT SITE AND BECOME FULLY COGNIZANT OF ALL EXISTING ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL AND SITE CONDITIONS, OR EXISTING CODE VIOLATIONS WHICH MAY AFFECT THE WORK. NOTIFY ARCHITECT PRIOR TO SUBMITTING BID IF REVISIONS TO CONTRACT DOCUMENTS ARE NECESSARY TO RECTIFY ANY OF THE AFOREMENTIONED EXISTING CONDITIONS.

NO "EXTRAS" TO CONTRACT PRICE WILL BE ALLOWED AFTER RECEIVING BID IN ORDER TO RECTIFY EXISTING CONDITIONS IN ORDER TO MEET THE DESIGN INTENT OF THE CONTRACT DOCUMENTS OR SATISFY CODE REQUIREMENTS.

COORDINATION WITH OTHER TRADES:

COORDINATE ALL WORK BEFORE AND DURING CONSTRUCTION WITH ALL OTHER AFFECTED TRADES.

WHERE INTERFERENCES DEVELOP, NOTIFY ARCHITECT FOR RESOLUTION OF CONFLICT.

RELOCATION OF CONFLICTING INSTALLED WORK, DUE TO LACK OF COORDINATION, OR POOR COORDINATION WILL NOT BE CONSIDERED EXTRA WORK.

APPROVED MANUFACTURERS:

USE ONLY MATERIALS SPECIFICALLY INDICATED IN CONTRACT DOCUMENTS, OR COMPARABLE MATERIALS BY OTHER LISTED ACCEPTABLE MANUFACTURERS. NOTE THAT "ACCEPTABLE MANUFACTURER" DOES NOT CONSTRUE AUTOMATIC APPROVAL OF SPECIFIC MATERIALS BY ONE OR ALL OF THE LISTED ACCEPTABLE MANUFACTURERS. ARCHITECT AND/OR ENGINEER OF RECORD RESERVES THE RIGHT OF FINAL DETERMINATION OF ACCEPTABILITY OF EACH ITEM.

FURNISHING OF MATERIALS AND MANUFACTURERS OTHER THAN THOSE INDICATED AS ACCEPTABLE IN THE CONTRACT DOCUMENTS WILL BE CONSIDERED VOLUNTARY SUBSTITUTES.

ACCEPTABLE, ARCHITECT WILL AUTHORIZE USE OF SUBSTITUTE IN WRITTEN FORM BY LETTER OR ADDENDUM TO CONTRACT APPROVED VOLUNTARY SUBSTITUTES MUST ONLY BE INDICATED ON FORM OF PROPOSAL WITH APPROPRIATE "ADD" OR "DEDUCT"

SUBMIT ALL VOLUNTARY SUBSTITUTES TO ARCHITECT FOR REVIEW NO LATER THAN FIFTEEN (15) DAYS PRIOR TO BID DUE DATE. IF

SHOP DRAWINGS:

SUBMIT COMPLETE ELECTRONIC SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT INTENDED FOR USE ON THIS PROJECT. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL PHYSICAL, PERFORMANCE AND ELECTRICAL CHARACTERISTICS FOR ALL MATERIALS AND EQUIPMENT.

SUBMIT ELECTRONIC COPIES OF ALL SHOP DRAWINGS FOR REVIEW BY ARCHITECT. NO WORK IS TO BE INSTALLED PRIOR TO RETURN OF ARCHITECT REVIEWED SHOP DRAWINGS.

TO CONTRACT PRICE, DO NOT USE VOLUNTARY SUBSTITUTES FOR BASE BID.

OPERATION AND MAINTENANCE MANUALS: UPON COMPLETION OF PROJECT, SUBMIT TWO (2) COMPLETE BOUND SETS OF OPERATING AND MAINTENANCE MANUALS FOR ALL

EQUIPMENT AND SYSTEMS INSTALLED IN THIS PROJECT. MANUALS SHALL INCLUDE GUARANTEE(S), COMPLETE OPERATING INSTRUCTIONS, REPAIR PARTS LIST, PREVENTATIVE MAINTENANCE

SCHEDULE, BELT AND FILTER SCHEDULE, AND LIST OF ALL SUBCONTRACTORS ASSOCIATED WITH THE WORK, INCLUDING TELEPHONE

OPERATING AND MAINTENANCE INSTRUCTIONS:

NUMBER AND CONTACT PERSON.

PRIOR TO FINAL ACCEPTANCE BY OWNER, PROVIDE ALL PERSONNEL, EQUIPMENT, AND LABOR AS NECESSARY TO INSTRUCT OWNER'S PERSONNEL IN PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT INSTALLED IN THIS PROJECT. PROVIDE INSTRUCTIONAL SESSION DURING TIME PERIOD AGREED TO WITH OWNER.

CUTTING AND PATCHING: ALL CUTTING AND PATCHING SHALL BE PROVIDED BY THE GENERAL TRADES UNDER THE DIRECTION OF THE MECHANICAL TRADES. COST WILL BE PAID BY THE MECHANICAL TRADE REQUESTING THE WORK.

RESTORED SURFACES SHALL BE OF SAME MATERIALS AND QUALITY AS ADJACENT SURFACES, AND SHALL MATCH

SURROUNDING SURFACES, AND/OR BE RESTORED TO PRE-CONSTRUCTION CONDITION.

PROTECTION OF EXISTING SERVICES:

PROTECT FROM ALL DAMAGE, EXISTING SERVICES (I.E., GAS, WATER, ELECTRICAL, ETC.), ENCOUNTERED IN THE WORK, NOT SPECIFICALLY INDICATED TO BE DEMOLISHED. INCLUDE ALL RELATED COSTS.

REPAIR AND/OR REPLACE EXISTING ACTIVE SERVICES INTENDED TO REMAIN IN SERVICE, BUT DAMAGED DURING THE COURSE OF CONSTRUCTION. ABSORB ALL RELATED COSTS. NO "EXTRAS" WILL BE PAID TO RESTORE EXISTING ACTIVE SERVICES DAMAGED DURING CONSTRUCTION.

ARCHITECT WILL DETERMINE COURSE OF ACTION WHEN EXISTING INACTIVE SERVICES ARE DAMAGED DURING COURSE OF CONSTRUCTION. ABSORB ALL COSTS RELATIVE TO ADDITIONAL DEMOLITION, TERMINATION, RELOCATION AND/OR RESTORATION OF EXISTING, DAMAGED INACTIVE SERVICES AS DIRECTED BY ARCHITECT.

DEMOLITION:

DEMOLITION DRAWINGS ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF THE WORK AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTS, PIPING AND APPROXIMATE SIZES AND APPROXIMATE LOCATIONS. DO NOT SCALE DRAWINGS FOR EXACT MEASUREMENTS.

ALL MECHANICAL WORK SHOWN ON THE DEMOLITION DRAWINGS HAS BEEN TAKEN FROM THE OWNER'S RECORD DRAWINGS AND/OR CERTAIN FIELD OBSERVATIONS. EXACT SIZES, LOCATIONS, ARRANGEMENT AND ELEVATIONS OF ALL EXISTING MECHANICAL EQUIPMENT, EXISTING DUCTWORK, EXISTING PIPING AND EXISTING MECHANICAL DEVICES SHALL BE VERIFIED IN THE FIELD.

THE CONTRACTOR SHALL INCLUDE, IN HIS QUOTE, ALLOWANCES FOR REASONABLE DEVIATIONS BETWEEN WHAT IS SHOWN AND ACTUAL JOB CONDITIONS IN ORDER TO COMPLETE THE WORK IN THE SCOPE INDICATED.

REMOVE, RECONNECT, CAP, PLUG AND REPLACE EXISTING PIPING AND DUCTWORK ONLY WHERE INDICATED IN THE CONTRACT REMOVE AND/OR REPLACE EXISTING EQUIPMENT, VALVES, CONTROLS, ETC., ONLY WHERE INDICATED IN THE CONTRACT DOCUMENTS.

INTERRUPTION OF EXISTING ACTIVE PIPING: WHERE THE WORK MAKES TEMPORARY SHUT-DOWNS OF SERVICE UNAVOIDABLE, SHUT-DOWN AT TIME AS APPROVED BY THE OWNER, WHICH WILL CAUSE LEAST INTERFERENCES WITH ESTABLISHED OPERATING ROUTINE. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED TO MAKE NECESSARY CONNECTION TO EXISTING UNLESS SPECIFICALLY NOTED TO THE CONTRARY. REMOVED MATERIALS SHALL NOT BE REUSED IN THE WORK. SALVAGE MATERIALS

THAT ARE TO BE REUSED SHALL BE STORED SAFE AGAINST DAMAGE AND TURNED OVER TO THE APPROPRIATE TRADE FOR REUSE.

SALVAGED MATERIALS OF VALUE THAT ARE NOT TO BE REUSED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSION RIGHTS ARE WAIVED. THE MATERIALS ARE TO BE REMOVED FROM THE SYSTEMS BY THIS CONTRACTOR AND TURNED OVER TO THE OWNER IN THEIR ORIGINAL CONDITIONS. THE OWNER SHALL MOVE AND STORE THE MATERIALS. WHERE THE OWNER WAIVES POSSESSION RIGHTS, THESE MATERIALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR, WHO SHALL REMOVE AND LEGALLY DISPOSE OF THE SAME, AWAY FROM THE PREMISES.

ELECTRICAL WORK:

PROVIDE ALL ELECTRICAL WORK ASSOCIATED WITH, AND NECESSARY TO COMPLETE THIS PROJECT, WHICH IS NOT INCLUDED AS ELECTRICAL TRADES WORK.

PROVIDE ALL ELECTRICAL WORK. AS APPLICABLE. IN ACCORDANCE WITH DIVISION 16 REQUIREMENTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION (WITH ELECTRICAL TRADES) OF CORRECT VOLTAGES FOR ALL MECHANICAL EQUIPMENT. IN CASE OF DISCREPANCY. NOTIFY ENGINEER IMMEDIATELY AND PRIOR TO SHOP DRAWING SUBMITTALS. FAILURE TO COMPLY WITH THIS REQUIREMENT HOLDS THE CONTRACTOR FULLY RESPONSIBLE FOR ANY SUBSEQUENT PROBLEMS.

CLEANING AND FINISHING:

PRIOR TO FINAL ACCEPTANCE BY OWNER, THOROUGHLY CLEAN ALL WORK INSIDE AND OUT AS APPLICABLE, AND LEAVE ALL SYSTEMS AND EQUIPMENT IN PERFECT WORKING ORDER. THOROUGHLY CLEAN ALL PLUMBING FIXTURES, EXPOSED PIPING, FLOOR DRAIN GRATES, AND CLEANOUT COVERS AS APPLICABLE.

GUARANTEE:

REFER TO ARCHITECTURAL SPECIFICATIONS FOR GUARANTEES, IF NONE EXIST THE FOLLOWING MINIMUM GUARANTEES SHALL BE

PROVIDE A ONE (1) YEAR GUARANTEE COVERING ALL LABOR AND MATERIAL PROVIDED IN THIS PROJECT. FROM DATE OF OWNER ACCEPTANCE GUARANTEE SHALL INCLUDE ALL SHIPPING AND TRANSPORTATION CHARGES NECESSARY TO RETURN DEFECTIVE MATERIALS TO MANUFACTURER, AS WELL AS LABOR CHARGES NECESSARY TO REMOVE AND REPLACE DEFECTIVE MATERIALS. DEFECTIVE MATERIALS AND/OR EQUIPMENT MAY BE REPAIRED IN LIEU OF REPLACED WITH PRIOR APPROVAL OF ARCHITECT

SANITARY WASTE, VENT AND STORM PIPING:

BELOW GRADE AND/OR BELOW FLOOR SLABS WITHIN BUILDING WALLS AND EXTENDING 5'-0" OUTSIDE:

PIPE: ASTM D2665 SCHEDULE 40 PVC-DWV WITH SOLVENT WELDED JOINTS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS FITTINGS: ASTM D1554 PVC SOLVENT CEMENTED. SOLVENT CEMENT: ASTM D2564. INSTALLATION: IN ACCORDANCE WITH ASTM D2321.

ABOVE GROUND PIPE AND FITTINGS:

CAST IRON HUBLESS SOIL PIPE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 310 AND LOCAL CODE REQUIREMENTS. HUBLESS COUPLING GASKETS SHALL CONFORM TO ASTM STANDARD C564. SCHEDULE 40 PVC IS ACCEPTABLE IN

UNDERGROUND SEWERS ON SITE EXTENDING BEYOND 5 FEET OUTSIDE OF BUILDING SHALL BE PROVIDED BY SITE UTILITIES CONTRACTOR

DOMESTIC WATER PIPING

ABOVE GROUND: PIPE:

2" AND SMALLER, ASTM B88, TYPE L, SEAMLESS HARD DRAWN RIGID COPPER WATER TUBE. FITTINGS: ANSI B16.22. WROUGHT COPPER. JOINTS: ASTM B32-95TA SOLDER JOINT 2" AND SMALLER; PRO-PRESS JOINTS ARE ALSO ACCEPTABLE.

ALL COMPONENTS OF DOMESTIC WATER SYSTEM SHALL BE LEAD FREE.

DOMESTIC WATER VALVES:

APOLLO 77C-140-01 FULL PORT, TWO PIECE WITH SCREWED ENDS, BRONZE BODY AND END PIECE, STAINLESS STEEL BALL, TEFLON SEAT RINGS, STAINLESS STEEL STEM, REINFORCED PTFE TEFLON PACKING WITH BRASS PACKING GLAND, ZINC PLATED STEEL HANDLE WITH PLASTIC GRIP SECURED BY ZINC PLATED STEEL HANDLE NUT, 150 PSI STEAM, 600 PSI WOG WORKING PRESSURE, NIBCO, JOSAM,

SWING CHECK VALVES 2" AND SMALLER: BRONZE BODY AND TRIM

NATURAL GAS PIPING:

ABOVE GROUND:

PIPE: 4" AND SMALLER, ASTM A-120, SCHEDULE 40, BLACK STEEL FITTINGS: 2" AND SMALLER, MALLEABLE IRON, 150 LB. ASTM A 197; UNIONS, 250 LB. ASTM A 197; 2-1/2" AND LARGER, STANDARD

WEIGHT, BUTT WELDED, BLACK STEEL, ASTM A 234 JOINTS: 2" AND SMALLER, ANSI B2.1 THREADS; 2-1/2" AND LARGER, ANSI B16.25 BUTTWELD.

PAINT ALL EXTERIOR GAS PIPING WITH TWO COATS OF RUST INHIBITING ENAMEL PAINT.

NATURAL GAS VALVES:

PIPING 2" AND SMALLER: MILWAUKEE VALVE CO., INC., MODEL #BB-1-100 "BUTTERBALL" OR APPROVED EQUAL AGA CERTIFIED AND UL LISTED QUARTER-TURN BUTTERFLY VALVE, BRONZE BODY, THREADED ENDS, STAINLESS STEEL STEM AND DISC, VITON SEAL WITH POSITIVE SHUT-OFF AND RATED FOR 175 LB. WORKING

PIPING 2-1/2" AND LARGER: MSS SP-78; 175 PSI, LUBRICATED PLUG TYPE, SEMI-STEEL BODY, SINGLE GLAND, WRENCH OPERATED, FLANGED ENDS.

VALVES GENERAL:

PROVIDE ALL VALVES NECESSARY FOR THE PROPER OPERATION AND DRAINAGE OF SYSTEMS. PROVIDE DRAIN VALVES AT ALL LOW

PROVIDE BALL VALVES AT EACH PIECE OF EQUIPMENT REQUIRING A WATER CONNECTION, IN RISERS AND MAIN BRANCHES AT POINTS OF TAKE-OFF FROM THEIR SUPPLY AND RETURN MAINS, ADJACENT TO CONTROL VALVES AND ALL EQUIPMENT REQUIRING PRESSURE TYPE VACUUM BREAKERS

PROVIDE CHECK VALVES WHERE SHOWN OR NECESSARY TO PREVENT BACKFLOW.

PROVIDE BALANCING VALVES IN LINES WHERE IT IS NECESSARY TO REGULATE THE QUANTITY OF WATER FLOWING IN A CIRCUIT.

ALL VALVES SHALL BE LINE SIZE UNLESS OTHERWISE INDICATED.

ALL PRODUCTS THAT CONSTITUTE A PART OF ANY VALVE ASSEMBLY SHALL BE ASBESTOS-FREE.

PIPING INSTALLATION:

INSTALL ALL PIPING PARALLEL OR PERPENDICULAR TO BUILDING WALL AND COLUMNS IN LOCATIONS TO AVOID INTERFERENCE WITH DUCTWORK, STRUCTURE, OTHER PIPING, LIGHTING AND ELECTRICAL EQUIPMENT OR OTHER EQUIPMENT. DO NOT LOCATE PIPING ABOVE OR WITHIN 3 FEET HORIZONTALLY OF ELECTRICAL PANELS OR EQUIPMENT.

FOR PIPING PASSING THROUGH WALLS, PACK VOID BETWEEN PIPE AND STRUCTURE WITH APPROVED, NON-COMBUSTIBLE MATERIAL. DO NOT ALLOW CONTACT BETWEEN PIPING AND MASONRY OF CONCRETE SURFACES.

PROVIDE ALL THE NECESSARY HANGERS. RODS. SUPPORTS. CHANNELS. ANGLES. STRUCTURAL MEMBERS AND CONCRETE INSERTS TO PROPERLY SECURE PIPING AND RELATED EQUIPMENT. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE LATEST REQUIREMENTS OF ANSI CODE FOR PRESSURE PIPING B31.1, AND MSS STANDARD PRACTICE SP-58.

PROTECT ALL INSULATED PIPE LINES AGAINST INSULATION DAMAGE AT ALL HANGERS BY THE USE OF 1 FOOT LONG, 12 GAUGE STEEL SEMI-CIRCULAR SHIELDS FOR PIPE SIZES WITH 12" OD AND LESS (INCLUDING INSULATION) AND 2 FOOT LONG, 1/2" STEEL SEMI-CIRCULAR SHIELDS FOR PIPE SIZES OVER 12" OD (INCLUDING INSULATION). SECURELY CEMENT ALL SHIELDS TO THE INSULATION. PROVIDE RIGID CALSIL PIPE INSULATION INSERTS AT EACH HANGER.

PIPING INSULATION:

ALL ADHESIVES, SEALERS AND COATINGS SHALL BE INCOMBUSTIBLE. INSULATION SHALL BE APPLIED BY EXPERIENCED PIPE COVERERS AS PER BEST TRADE PRACTICE. WHERE EXISTING INSULATED PIPING AND SURFACES ARE EXPOSED DUE TO RENOVATIONS. RE-INSULATE EXPOSED SURFACES TO MATCH THE EXISTING INSTALLATION. APPLY INSULATION TO PIPE LINES AND EQUIPMENT ONLY AFTER TESTING AND INSPECTION, AND ALL SURFACES HAVE BEEN THOROUGHLY CLEANED. MAINTAIN COMPLETE VAPOR BARRIER IN CONDENSATION PIPING SYSTEMS.

DOMESTIC COLD WATER PIPING INSULATION: FIBERGLASS INSULATION WITH FACTORY-APPLIED VAPOR BARRIER JACKET WITH SELF-SEALING LAPS. ASTM C547 CLASS 1 INSULATION, CONDUCTIVITY OF 0.26. VAPOR BARRIER JACKET: LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.2 PERMS, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAME SPREAD/ SMOKE DENSITY OF 25/50. APPLY INSULATION IN THICKNESS LISTED BELOW.

ALL PIPE SIZES: 1/2" THICK DOMESTIC HOT WATER & DOMESTIC HOT WATER RETURN PIPING INSULATION:

FIBERGLASS INSULATION WITH FACTORY-APPLIED VAPOR BARRIER JACKET WITH SELF-SEALING LAPS. ASTM C547 CLASS 1 INSULATION, CONDUCTIVITY OF 0.26. VAPOR BARRIER JACKET: LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.2 PERMS, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAME SPREAD/ SMOKE DENSITY OF 25/50. APPLY NSULATION IN THICKNESS LISTED BELOW.

PIPE 1" AND SMALLER: 1-1/2" THICK

PIPE 1-1/4" AND LARGER: 2" THICK STORM PIPING INSULATION (HORIZONTAL PIPING ONLY):

FIBERGLASS INSULATION WITH FACTORY-APPLIED VAPOR BARRIER JACKET WITH SELF-SEALING LAPS. ASTM C547 CLASS 1 INSULATION, CONDUCTIVITY OF 0.26. VAPOR BARRIER JACKET: LAMINATED WHITE KRAFT PAPER. ALUMINUM FOIL, GLASS FIBER REINFORCEMENT. PERMEANCE OF 0.2 PERMS, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAME SPREAD/ SMOKE DENSITY OF 25/50. APPLY INSULATION IN THICKNESS LISTED BELOW.

ALL PIPE SIZES: 1/2" THICK

PLUMBING/PIPING TESTING AND BALANCING:

TEST AND ADJUST ALL NEW PIPING SYSTEMS INSTALLED IN THIS PROJECT, PROVIDE ALL TESTING INSTRUMENTS, GAUGES, PUMPS AND OTHER EQUIPMENT REQUIRED OR NECESSARY FOR TEST. REPAIR ALL DEFECTS DISCLOSED BY TESTS WITHOUT ADDITIONAL COST TO THE OWNER REPEAT TESTS AETER ANY DEFECTS DISCLOSED ARE REPAIRED OR REPLACED. UNI ESS WAIVED BY ARCHITEC ARRANGE AND PAY THE COST OF ALL UTILITIES USED ON TESTS. COMPLETE ALL TESTS BEFORE COVERING IS APPLIED. ISOLATE ALL PIPING SYSTEM COMPONENTS NOT CONSTRUCTED TO WITHSTAND TEST PRESSURES. PURIFY WATER SYSTEM IN ACCORDANCE WITH STATE OF MICHIGAN AND AHJ REQUIREMENTS.

DRAINAGE SYSTEM:

THE DRAINAGE SYSTEM SHALL BE TESTED IN ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS AND IN THE PRESENCE OF THE PROPER INSPECTOR. AIR TEST SHALL BE 5 PSIG AND SHALL REMAIN IN OPERATION FOR A PERIOD OF 15 MINUTES. WATER SYSTEM:

TEST AT 150 PSIG FOR EIGHT (8) HOURS WITH ZERO LOSS IN PRESSURE. CHECK JOINTS AND FITTINGS FOR LEAKS WITH LIQUID SOAP NATURAL GAS SYSTEM:

ALL GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH RULES AND REGULATIONS OF THE COMPANY OR UTILITY SERVING THE PROJECT, AND IN ANY CASE SHALL NOT BE LESS THAN THE FOLLOWING:

THE PIPING SYSTEM OR PORTIONS OF THE PIPING SYSTEM TO BE TESTED SHALL BE SUBJECTED TO AN AIR PRESSURE, USING OIL-FREE COMPRESSOR AIR, OF NOT LESS THAN 100 POUNDS PER SQUARE INCH, EQUAL 204" OF MERCURY. THE PRESSURE SHALL BE APPLIED WITH A FORCE PUMP AND SHALL BE MAINTAINED FOR NOT LESS THAN 30 MINUTES WITHOUT LEAKAGE. A MERCURY COLUMN GAUGE SHALL BE USED IN MAKING THE TESTS. TESTS SHALL BE SCHEDULED WITH LOCAL AUTHORITY FOR PRESENCE OF PROPER INSPECTOR. THE CONTRACTOR INSTALLING THESE PIPING SYSTEMS SHALL BE HELD RESPONSIBLE FOR THE TEST AND SHALL CERTIFY THE APPLICATION AND SHALL CERTIFY THE APPLICATION AND SUCCESS OF THE TEST.

NATURAL GAS LINES SHALL BE BLOWN OUT WITH DRY, OIL-FREE COMPRESSED AIR.

USING COILED PLASTIC MARKERS.

PIPE IDENTIFICATION: IDENTIFY ALL NEW PIPING INSTALLED IN THIS PROJECT IN ACCORDANCE WITH ANSI A13.1 1981, OSHA, AND OWNER'S STANDARDS

PLUMBING FIXTURE CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE WASTE WATER CLOSETS (FLUSH VALVE) WATER CLOSETS (FLUSH TANK) LAVATORY DRINKING FOUNTAINS ELECTRIC WATER COOLERS SERVICE SINKS SHOWERS WALL/ROOF HYDRANTS HOSE BIBS

CLEANOUTS AND ACCESS COVERS: PROVIDE CLEANOUTS AT THE FOOT OR BASE OF EACH VERTICAL WASTE OR SOIL STACK, RAIN CONDUCTORS, IN DRAINAGE LINES AT ALL CHANGES IN DIRECTION AND AT 100'-0" INTERVALS.

CLEANOUTS SHALL BE READILY ACCESSIBLE, AND SHALL HAVE 18" CLEARANCE BEHIND THE PLUG FOR RIDDING, EXCEPT WHERE A REMOVABLE ACCESS COVER IS PROVIDED. CLEANOUTS SHALL BE SAME NOMINAL PIPE SIZE AS LINE SERVED, BUT NOT LARGER THAN

PROVIDE CLEANOUTS SPECIFICALLY DESIGNED FOR FLOOR TYPE.

ZURN 1400 SERIES, JAY R. SMITH, JOSAM, WADE.

FLOOR DRAINS:

UNLESS OTHERWISE NOTED, PROVIDE ROUND STRAINER/ GRATE, CAST IRON BODY, SEEPAGE FLANGE AND CLAMPING COLLAR. BOTTOM OUTLET SAME SIZE AS PIPE SERVED, WITH CAULKED, NO-HUB OR NEOPRENE GASKET CONNECTION. LOAD CLASSIFICATIONS PER ASME A112.21.1M. WATERPROOFING: 40 MILS SHEET MEMBRANE, CHLORINATED POLYETHYLENE, CHLORALOY

REFER TO PLUMBING FIXTURE SCHEDULE FOR FLOOR DRAIN TYPES.

VACUUM BREAKERS:

HOSE CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE STANDARD 1011, WITH FINISH TO MATCH HOSE CONNECTION MANUFACTURERS: CHICAGO, WATTS, KEWANNEE

BACKFLOW PREVENTERS:

REDUCED PRESSURE ZONE: INCLUDES DUAL CHECK VALVES, REDUCED PRESSURE RELIEF VALVE AND AIR VENT, SHUTOFF VALVES ON INLET AND OUTLET, STRAINER ON INLET, TEST PORTS WITH TEST COCKS, MANUFACTURER'S STANDARD MATERIALS. ASSE STANDARD 1013 CERTIFIED. MANUFACTURERS: WATTS 909 SERIES, CONBRACO, FEBCO

DOUBLE CHECK VALVE ASSEMBLIES:

INCLUDES DOUBLE CHECK VALVES. SHUTOFF VALVES ON INLET AND OUTLET, STRAINER ON INLET, TEST PORTS WITH TEST COCKS. MANUFACTURER'S STANDARD MATERIALS. ASSE STANDARD 1015 CERTIFIED. MANUFACTURER: WATTS 709 SERIES, CONBRACO,

BACKFLOW PREVENTERS (AT APPLIANCE CONNECTIONS): DUAL CHECK VALVE: INCLUDES TWO REMOVABLE CHECK VALVE ASSEMBLIES. MANUFACTURER'S STANDARD MATERIALS. ASSE

ATMOSPHERIC VACUUM BREAKERS:

SINGLE FLOAT AND DISC WITH LARGE ATMOSPHERIC PORT. ANGLE PATTERN BRASS BODY, WITH CHROME PLATED FINISH, 1/2" INLET

AND OUTLET UNLESS OTHERWISE NOTED. ASSE STANDARD 1001 CERTIFIED. MANUFACTURERS: WATTS 288A SERIES, CHICAGO

WATER SAVER MODEL L-102.

SPRING LOADED SINGLE FLOAT AND DISC WITH INDEPENDENT FIRST CHECK VALVE, MANUFACTURER'S STANDARD MATERIALS. WITH TEST COCKS AND BALL TYPE ISOLATION VALVES. ASSE STANDARD 1020 CERTIFIED. MANUFACTURERS: WATTS 800 SERIES,

WATER HAMMER ARRESTERS:

CONBRACO, FEBCO.

CERTIFIED PER PDI STANDARD WH-201, BELLOWS TYPE, WITH STAINLESS STEEL CASING AND BELLOWS, PRESSURE RATED FOR 250 PSI. PISTON TYPE, PRECHARGED TO 60 PSIG, SUITABLE FOR INSTALLATION IN ANY POSITION. PROVIDE ON ALL QUICK CLOSING VALVES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR PROPER OPERATION. MANUFACTURERS: (BELLOWS) ZURN SHOKTROL OR BY JAY R. SMITH, WADE; (PISTON) SIOUX CHIEF

SHEET METAL NOTES:

DEGREASE AND TREAT ALL EXPOSED DUCTWORK SO IT IS SUITABLE FOR PAINTING.

STANDARD 1024 CERTIFIED. MANUFACTURERS: WATTS 7 SERIES, CONBRACO, FEBCO.

BLANK-OFF RETURN DUCTWORK IN AREAS OF WORK THAT CREATES DUST TO PREVENT DEBRIS FROM ENTERING MECHANICAL SYSTEM. PROTECT ALL DUCTWORK DURING CONSTRUCTION BY SEALING OPEN ENDS.

DUCTWORK: ALL DUCTWORK AND SHALL BE CONSTRUCTED AND SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST SMACNA'S ISSUE OF DUCT CONSTRUCTION STANDARDS. IN ADDITION, ALL CONCEALED JOINTS AND SEAMS SHALL BE SEALED WITH DLICT SEALANT FOLIAL TO FOSTER #32-14 APPROVED SEALANT MANUFACTURERS: 3M COMPANY BENJAMIN FOSTER COMPANY UNITED SHEET METAL, FLINTKOTE. ALL EXPOSED ROUND SPIRAL DUCTWORK SHALL BE MANUFACTURED BY EASTERN SHEET METAL, SEMCO, LYNDEN OR U.S. SHEET METAL. EXPOSED DUCTWORK SHALL HAVE SELF SEALING GASKETS WITH ALL MANUFACTURED FITTINGS. NO DUCT SEALANT ALLOWED ON EXPOSED DUCTWORK. ALL DUCTWORK SHALL BE DESIGNED FOR +/- 2" W.G. STATIC

PRESSURE BUT NOT LESS THAN 26 GA. THICKNESS. ALL ROUND TAKE-OFFS DOWNSTREAM OF TERMINAL UNITS SHALL BE MADE WITH CONICAL TAKE-OFF SPIN-IN FITTINGS TYPE SM-2DG. WITH FACTORY INSTALLED ADJUSTABLE DAMPER AS MANUFACTURED BY GENERAL ENVIRONMENT CORPORATION, GLENDALE,

FLEXIBLE CONNECTIONS: AT EACH POINT OF CONNECTION OF DUCTWORK TO FANS, PROVIDE A FLEXIBLE CONNECTION, VENTEABRICS INC. "VENTGLAS LA " NOT LESS THAN 12" IN LENGTH AND MADE OF HEAVY GRADE GLASS FABRIC DOUBLE COATED. WITH NEOPRENE AND PROVIDED WITH A SUITABLE FRAME AT EACH END ARRANGED FOR BOLTING TO INLET AND OUTLET OF FAN AND DUCTWORK, RESPECTIVELY. PROVIDE EXTERIOR U/V RESISTANT CONNECTIONS OUTDOORS.

OR WIDTH. WHERE BUILDING CONSTRUCTION DOES NOT PERMIT A LONG RADIUS ELBOW OR TURN OR IF SHOWN ON THE CONTRACT DOCUMENTS. ACOUSTICAL TURNING VANES AND DEFLECTORS SHALL BE PROVIDED IN ALL ELBOWS. FLEXIBLE DUCTWORK: ALL LOW PRESSURE AND HIGH PRESSURE FLEXIBLE DUCT SHALL BE FLEXMASTER USA, INC., TYPE #1M INSULATED FLEXIBLE DUCT CONSISTING OF A FACTORY FABRICATED ASSEMBLY OF A TRILAMINATE ALUMINUM FOIL. FIBERGLASS AND POLYESTER. THE FLEXIBLE DUCT SHALL BE UL LISTED 181 CLASS 1 AIR DUCT AND COMPLY WITH NFPA 90A AND 90B AND HAVE A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED OF NOT OVER 50. THE FLEXIBLE DUCT SHALL HAVE A MINIMUM PRESSURE

VANES AND DEFLECTORS: ALL ELBOWS AND TURNS SHALL BE MADE WITH A RADIUS NOT LESS THE 1-1/2" TIMES THE DUCT DIAMETER

DUCT INSULATION - GENERAL:

DUCTWORK SHALL BE THERMALLY INSULATED AS SPECIFIED.

RATING OF 12" WC THROUGH TEMPERATURE RANGE OF -20 DEGREES F. TO + 250 DEGREES F.

ALL DUCT INSULATION SHALL HAVE A FLAME SPREAD CLASSIFICATION OF 25 OR LESS. A FUEL CONTRIBUTED RATING OF 35 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS, AS RATED BY UNDERWRITERS' LABORATORIES. BLANKET TYPE (UP TO 1-1/2 LB./CU. FT. INSULATION):

INSULATION WITH ATTACHED FACING SHALL BE SECURED TO THE DUCTS WITH ADHESIVE APPLIED IN 6" BRUSH WIDTHS EVERY 12". THE ADHESIVE SHALL BE RIDGED SLIGHTLY BY USING A SERRATED TROWEL. INSULATION WITHOUT ATTACHED FACING (PLAIN) SHALL BE SECURED TO THE DUCTS THE SAME AS ABOVE THEN BIND WITH TYING CORD, SPIRAL WRAPPED OR HALF HITCHED. DUCT FITTINGS SHALL BE INSULATED BY WRAPPING WITH A GLASS FIBER BLANKET.

DUCT FITTINGS BY INSULATION STAPLES OR JUTE TWINE. THE BLANKET SHALL BE COVERED WITH AN OPEN MESH CLOTH OR GLASS FIBER HEAVILY COATED WITH VAPOR BARRIER ADHESIVE. THE INSULATION THICKNESS SHALL BE EQUAL TO THE THICKNESS OF THE INSULATION ON THE ADJOINING DUCTWORK.

DUCT INSULATION APPLICATION:

THE FOLLOWING DUCTWORK SHALL BE INSULATED AS DESCRIBED HEREIN. REFER TO PREVIOUS PARAGRAPHS FOR RELATED INSULATION MATERIALS, DUCT INSULATION AND FINISH APPLICATIONS.

CONCEALED AIR CONDITIONING SUPPLY AIR DUCTWORK. CONCEALED OUTDOOR INTAKE DUCTWORK AND CONCEALED MIX PLENUMS: (THIS INCLUDES DUCTWORK IN CEILING SPACES USED AS RETURN AIR PLENUM, DUCTWORK IN UNVENTED ATTIC SPACES OR LINVENTED CEILINGS SPACES WITH ROOF INSULATION), OWENS-CORNING FIRERGLAS FACED DUCTWRAP COMMERCIAL GRADE TYPE 100 1-1/2" THICK. MINIMUM INSTALLED R VALUE 4.5. 1 LB./CU. FT. DENSITY WITH FACTORY "FRK" VAPOR BARRIER JACKET OR LAMINATED ALUMINUM FOIL, OPEN MESH GLASS FIBER REINFORCING MESH SCRIM AND FLAMEPROOF KRAFT PAPER.

PLENUMS LOCATED IN CONCEALED SPACES VENTED TO THE OUTDOORS (THIS INCLUDES DUCTWORK IN VENTED CEILING SPACES OR ATTICS) AND IN UNIVENTED ATTICS OR CEILINGS SPACES WITH INSULATED CEILINGS: OWENS-CORNING FIBERGLAS FACED DUCTWRAP COMMERCIAL GRADE TYPE 100 2" THICK MINIMUM INSTALLED R VALUE 6.0 1 LB /CU. FT. DENSITY WITH FACTORY "FRK" VAPOR BARRIER JACKET OR LAMINATED ALUMINUM FOIL, OPEN MESH GLASS FIBER REINFORCING MESH SCRIM AND FLAMEPROOF KRAFT PAPER.

INSULATION IS NOT REQUIRED ON EXPOSED SUPPLY DUCTWORK, RETURN DUCTWORK AND EXHAUST DUCTWORK.

HEATING AND AIR CONDITIONING SUPPLY AIR DUCTWORK, OUTDOOR AIR INTAKE DUCTWORK, RETURN AIR DUCTWORK AND MIXING

BALANCE ALL OUTLETS AND TERMINAL BOXES TO WITHIN 10% OF RATED C.F.M IN ACCORDANCE WITH AABC AND NEBB. SUBMIT BALANCING REPORT.

AIR TESTING AND BALANCING:

TEMPERATURE CONTROLS:

PROVIDE COMPLETE AND OPERABLE CONTROLS SYSTEM INCLUDING ALL WIRING, SENSORS, HARDWARE, SOFTWARE AND PROGRAMMING. TAKE POWER FROM SPARE 120V CIRCUIT OR EXTEND FROM EXISTING TRANSFORMER W/ SPARE CAPACITY. ALL WIRING SHALL BE IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS.

FIRE SUPPRESSION

1.01 SUBMITTALS:

A. SHOP DRAWINGS AND PRODUCT DATA: BEFORE ANY WORK IS COMMENCED, SUBMIT COMPLETE SETS OF THE FOLLOWING: SHOP DRAWINGS, SPRINKLER SYSTEM HYDRAULIC CALCULATIONS STANDPIPE SYSTEM HYDRAULIC CALCULATIONS. MATERIAL AND

EQUIPMENT LISTS AND FULL DESCRIPTIVE DATA FOR EACH SYSTEM ALL IN ACCORDANCE WITH NFPA 13 FOR APPROVAL TO:

 a. INSURANCE CARRIER b. LOCAL FIRE MARSHAL

d. ARCHITECT.

OBTAIN APPROVAL OF SHOP DRAWINGS. HYDRAULIC CALCULATIONS. AND PRODUCT DATA FROM THE FIR MARSHAL AND THE INSURANCE CARRIER PRIOR TO SUBMISSION TO THE OWNER AND THE ARCHITECT.

3. INCLUDE IN SHOP DRAWINGS REFLECTED CEILING PLANS SHOWING SPRINKLER HEAD LOCATIONS.

4. SUBMIT SPRINKLER DRAWINGS WHICH ARE LEGIBLE AND SHOW:

a. EXACT PIPING ARRANGEMENT AND SHOW ALL PIPE LENGTHS, VALVES, FITTINGS AND VALVES. SECTION VIEWS AND SUFFICIENT NOTES TO PROVIDE FULL DESCRIPTIVE DATA FOR REVIEW, EXCEPT FOR FLOW-REQUIREMENTS WHICH SHALL BE SHOWN ON CALCULATION SHEETS.

COORDINATION WITH ALL DRAWINGS IS REQUIRED FOR BIDDING AND INSTALLATION.

6. SUBMIT MANUFACTURERS DATA SHEETS ON ALL SYSTEM

AND GREATER THAN SCHEDULE 10.

7. PROVIDE FIRE-HYDRANT FLOW TEST REPORT: PART 2 - PRODUCTS 2.01 MATERIALS: B. ABOVE GROUND PIPING:

SMALLER AND SCHEDULE 30 IN NPS 8 (DN200) AND LARGER. SCHEDULE 30 STEEL PIPE: ASTM A135 OR ASTM A795, WITH WALL THICKNESS LESS THAN SCHEDULE 40 AND EQUAL

STANDARD-WEIGHT STEEL PIPE: ASTM A53, ASTM A135, OR ASTM A795; SCHEDULE 40 IN NPS 6 (DN150) AND

TO OR GREATER THAN SCHEDULE 30 OR ASTM A795 AND ASME B36.10M, SCHEDULE 30 WROUGHT-STEEL PIPE. THINWALL, THREADABLE STEEL PIPE: ASTM A135, OR ASTM A795, WITH WALL THICKNESS LESS THAN SCHEDULE 40

SCHEDULE 10 STEEL PIPE: ASTM A135 OR ASTM A795, SCHEDULE 10 IN NPS 5 (DN125) AND SMALLER AND NFPA 13 SPECIFIED WALL THICKNESS IN NPS 6 TO NPS 10 (DN150 TO DN250).

AS AN ALTERNATE TO SOLID PIPING OFFSETS IN SPRINKLER PIPING DROPS TO ATTAIN CENTER OF CEILING TILE

PROVIDE SPRINKLER SYSTEM FINAL CONNECTIONS TO THE CENTER OF CEILING OF CEILING TILE BY MEANS OF AN FM APPROVED, BRAIDED, STAINLESS STEEL, ONE-PIECE, LEAK TESTED FLEXIBLE PIPE DROP INCLUDING A CEILING GRID MOUNTING BRACKET, AN ADJUSTABLE FLANGE AND AN FM/UL LISTED SPRINKLER HEAD AS SPECIFIED. PROVIDE UNITS AS MANUFACTURED BY FLEXHEAD INDUSTRIES OR AS

C. ABOVE GROUND FITTINGS:

CAST-IRON THREADED FITTINGS: ASME B16.4 MALLEABLE-IRON THREADED FITTINGS: ASME B16.3. STEEL, THREADED COUPLINGS: ASTM A865.

LOCATIONS, THE FOLLOWING FLEXIBLE SYSTEM IS ACCEPTABLE.

STEEL WELDING FITTINGS: ASTM A234/A234M, ASME B16.9, OR ASME B16.11. STEEL FLANGES AND FLANGED FITTINGS: ASME B16.5. STEEL, GROOVED-END FITTINGS: UL-LISTED AND FM-APPROVED, ASTM A47 (ASTM A47M), MALLEABLE IRON OR ASTM A536, DUCTILE IRON; WITH DIMENSIONS MATCHING STEEL PIPE AND ENDS FACTORY GROOVED ACCORDING

D. ABOVE GROUND FIRE PROTECTION SERVICE VALVES:

APPROVED.

2. GATE VALVES: NPS 2 (DN50) AND SMALLER: UL 262; CAST-BRONZE, THREADED ENDS; SOLID WEDGE; OS&Y, AND RISING STEM, VISUAL INDICATOR: WITH ELECTRICAL 115-V AC. PREWIRED TWO-CIRCUIT, SUPERVISORY SWITCH. GATE VALVES, NPS 2-1/2 (DN65) AND LARGER: UL 262, IRON BODY, BRONZE MOUNTED, TAPER WEDGE, OS&Y, AND

GENERAL: UL LISTED AND FM APPROVED, WITH MINIMUM 175-PSIG (1200 KPA) NONSHOCK WORKING-PRESSURE

RATING. VALVES FOR GROOVED-END PIPING MAY BE FURNISHED WITH GROOVED ENDS INSTEAD OF TYPE OF ENDS

RISING STEM. INCLUDE REPLACEABLE, BRONZE, WEDGE FACING RINGS AND FLANGED ENDS. VISUAL INDICATOR:

4. SWING CHECK VALVES, NPS 2 (DN50) AND SMALLER: UL 312 OR MSS SP-80, CLASS 150; BRONZE BODY WITH BRONZE DISC AND THREADED ENDS.

WITH ELECTRICAL 115-V AC, PREWIRED, TWO-CIRCUIT, SUPERVISORY SWITCH

BRONZE-ALLOY DISCS, AND STAINLESS STEEL SPRING AND HINGE PAN.

SWING CHECK VALVES: NPS 2-1/2 (DN65) AND LARGER: UL 312, CAST-IRON BODY AND BOLTED CAP, WITH BRONZE DISC OR CAST-IRON DISC WITH BRONZE-DISC RING AND FLANGED ENDS. SPLIT-CLAPPER CHECK VALVES, NPS 4 (DN100) AND LARGER: UL 312, CAST-IRON BODY WITH RUBBER SEAL,

OF THE VANE TYPE DESIGN AS SHOWN AND WHERE REQUIRED, COMPATIBLE WITH THE PIPE SIZE AND PIPE MATERIAL

DRAIN & TEST VALVES NEED NOT BE OS&Y

2.02 WATER FLOW SWITCHES: PROVIDE UL-LISTED OR FM-APPROVED WATER FLOW TYPE SWITCHES AND/OR WATER PRESSURE TYPE FLOW SWITCHES

ON SYSTEMS WHERE PRESSURE FLUCTUATIONS COULD CAUSE FALSE WATER FLOW ALARMS, PROVIDE SWITCHES WITH AN ADJUSTABLE RETARD FEATURE

PROVIDE SWITCHES WITH A TAMPER SWITCH ON THE WIRING COMPARTMENT COVER PLATE.

PROVIDE SWITCHES WITH SINGLE OR DOUBLE-POLE, DOUBLE THROW CONTACTS RATED AT 1.0 AMPS, 120 VOLTS, 60 HERTZ AC AND 0.25 AMPS, 24 VOLTS, DC. COORDINATE WITH SECTION 16800 TO DETERMINE THE EXACT ELECTRICAL REQUIREMENTS OF THE FLOW SWITCHES TO ENSURE THEIR COMPATIBILITY WITH THE FIRE ALARM SYSTEM.

PROVIDE SWITCHES RATED FOR A MINIMUM OF 250 PSI WORKING PRESSURE F. PROVIDE SWITCHES WITH AN ADDRESSABLE MODULE.

G. WIRING OF SWITCHES INTO THE FIRE ALARM SYSTEM IS BY FAC. H. PROVIDE SWITCHES AT THE FOLLOWING LOCATIONS:

IN THE SPRINKLER/STANDPIPE RISER AS PART OF THE ALARM VALVE TRIM. ADJACENT TO EACH SPRINKLER ZONE CONTROL VALVE.

2.03 SUPERVISORY TAMPER SWITCHES:

A. PROVIDE UL LISTED AND FM APPROVED SUPERVISORY TAMPER SWITCHES ON ALL MANUALLY OPERATED VALVES WHOSE POSITION COULD IMPAIR ANY PART OF ALL OF SPRINKLER SYSTEM OPERATION. B. PROVIDE SWITCHES WITH R DOUBLE-POLE, DOUBLE-THROW CONTACTS RATED AT 1.0 AMPS, 120 VOLTS, 60 HERTZ. AC AND 0.25 AMPS, 24 VOLTS DC. COORDINATE WITH SECTION 16800 TO DETERMINE THE EXACT ELECTRICAL REQUIREMENTS

OF THE SUPERVISORY TAMPER SWITCHES TO ENSURE THEIR COMPATIBILITY WITH THE FIRE ALARM SYSTEM. C. PROVIDE SWITCHES WITH A GASKETED, WATERTIGHT WIRING COMPARTMENT COVERPLATE

 D. PROVIDE EXPLOSION-PROOF SWITCHES IN HAZARDOUS AREAS. E. WIRING OF SWITCHES INTO THE FIRE ALARM SYSTEM IS SPECIFIED IN DIVISION 16.

2.04 ALARM VALVE: A. PROVIDE A UL-LISTED AND FM-APPROVED ALARM CHECK VALVE, RATED AT A MINIMUM OF 300 PSIG WORKING PRESSURE CAPABLE OF BEING INSTALLED VERTICALLY OR HORIZONTALLY. PROVIDE VALVE BODY OF DUCTILE IRON WITH FLANGED OR GROOVED CONNECTIONS. PROVIDE VALVE WITH A BRASS SEAT, AND SINGLE HINGE PIN AND LATCH DESIGN. PROVIDE VARIABLE PRESSURE TRIM SET WITH RETARD CHAMBER, DRAIN CONNECTIONS, PRESSURE GAUGES AND CONNECTIONS

FOR (ELECTRIC ALARM PRESSURE SWITCH) (WATER MOTOR GONG ALARM). DO NOT DISCHARGE THE DRIP CUP

ASSEMBLY INTO THE MAIN DRAIN PIPING. THE VIKING CORP. "MODELJ-1", OR AS APPROVED.

2.05 FIRE DEPARTMENT CONNECTIONS:

A. WALL, FIRE DEPARTMENT CONNECTIONS:

UL 405. CAST-BRASS BODY WITH BRASS. WALL. ESCUTCHEON PLATE: BRASS. LUGGED CAPS WITH GASKETS ANI BRASS CHAINS; AND BRASS, LUGGED SWIVEL CONNECTIONS. INCLUDE INLETS WITH THREADS ACCORDING TO NFPA 1963 AND MATCHING LOCAL FIRE DEPARTMENT SIZES AND THREADS, OUTLET WITH PIPE THREADS, EXTENSION PIPE NIPPLES, CHECK DEVICES OR CLAPPERS FOR INLETS AND ESCUTCHEON PLATE WITH MARKING AUTO SPKR & STANDPIPE

POLISHED BRASS. 2.06 ACCESSORIES:

C. PRESSURE GAGES:

A. HANGER AND SUPPORTS:

TYPE: FLUSH MOUNTING.

ESCUTCHEON PLATE: RECTANGULAR.

1. FURNISH HANGERS AND SUPPORTS IN ACCORDANCE WITH NFPA 13

ATTACH PROPERLY LETTERED, APPROVED IDENTIFICATION SIGNS CONFORMING TO NFPA 13 TO EACH VALVE AND

ALARM DEVICE. PERMANENTLY AFFIX A DESIGN DATA NAMEPLATE TO THE RISER OF THE SYSTEM.

PROVIDE PRESSURE GAGES ON THE SUCTION AND DISCHARGE SIDES OF THE FIRE PUMP. PROVIDE PRESSURE GAGES ON BOTH SIDES OF THE WET PIPE SPRINKLER SYSTEM ALARM VALVE AND AT THE TOP

PROVIDE UL-LISTED SPRING PRESSURE GAGES WITH A 3-1/2-INCH DIAL AND BE DRAINABLE. PROVIDE ANY ADDITIONAL GAUGES REQUIRED BY NFPA 13, 14 AND 20, NOT SPECIFICALLY LISTED HERE. D. INSPECTORS TEST CONNECTION AND DRAINS:

OF EACH STANDPIPE RISER.

DRAIN PIPING FOR SYSTEM TESTING.

PROVIDE AN INSPECTORS TEST CONNECTION AND DRAIN SYSTEM (RISER AND LOW POINT DRAIN) IN ACCORDANCE WITH NFPA 13 FOR EACH ZONE. PROVIDE A SECTIONAL DRAIN VALVE AND COMMON DRAIN PIPING TO THE NEAREST FLOOR DRAIN FOR DRAINAGE. PROVIDE A TEST VALVE, SIGHT GLASS, SPRINKLER ORIFICE EQUIVALENT AND PIPING TRIM TO THE COMMON

PART 3 - EXECUTION 3.01 PIPING APPLICATIONS:

A. INSTALL ALL PIPING SYSTEMS IN FULL ACCORDANCE WITH NFPA 13 AND THE AUTHORITY HAVING JURISDICTION.

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Grand Rapids, MI 4950

CONSULTANT



PROFESSIONAL SEAL

© 2021 ROSSETTI **# DESCRIPTION** DATE 01/24/2025 2 Addendum 1 02/20/2025

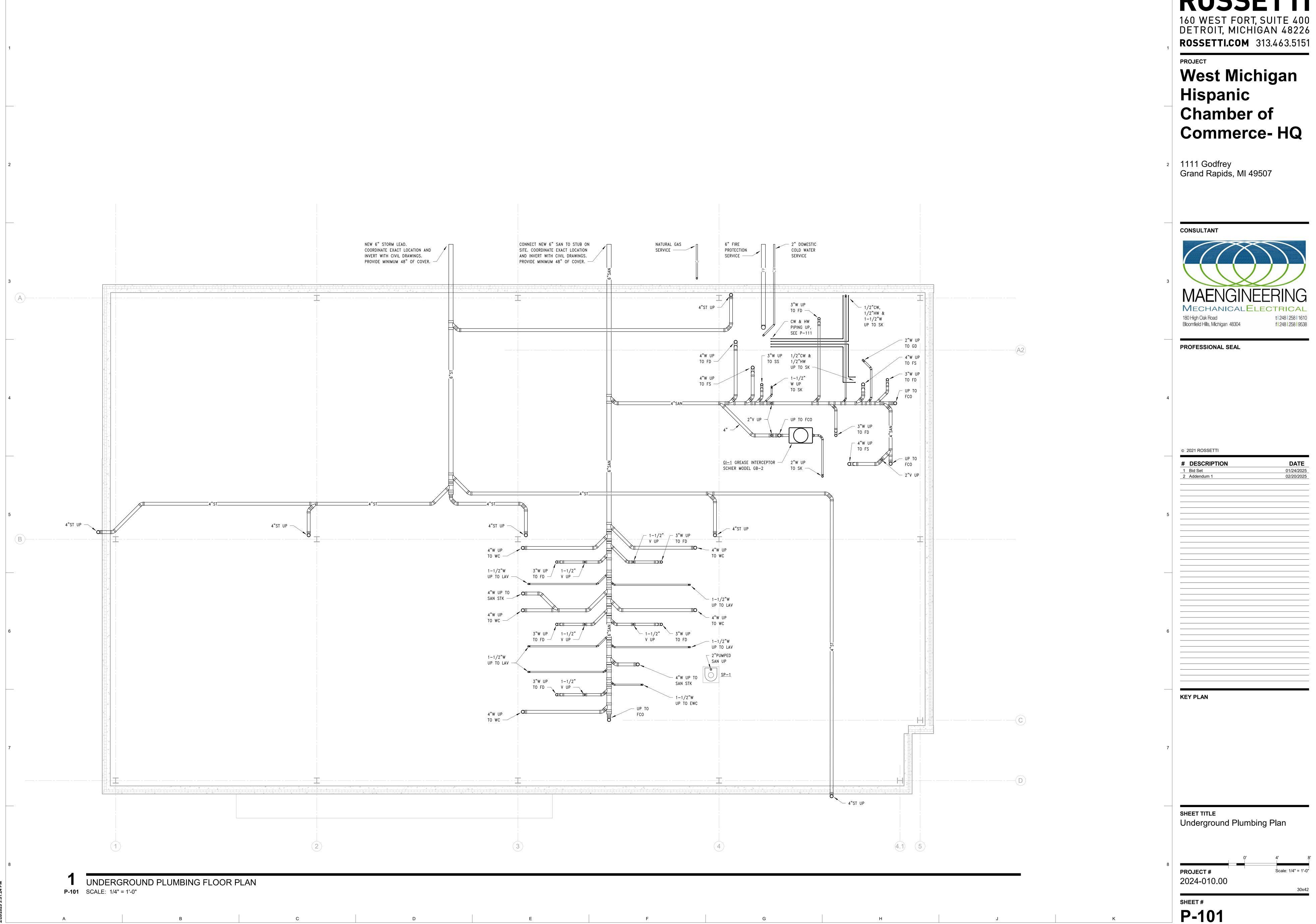
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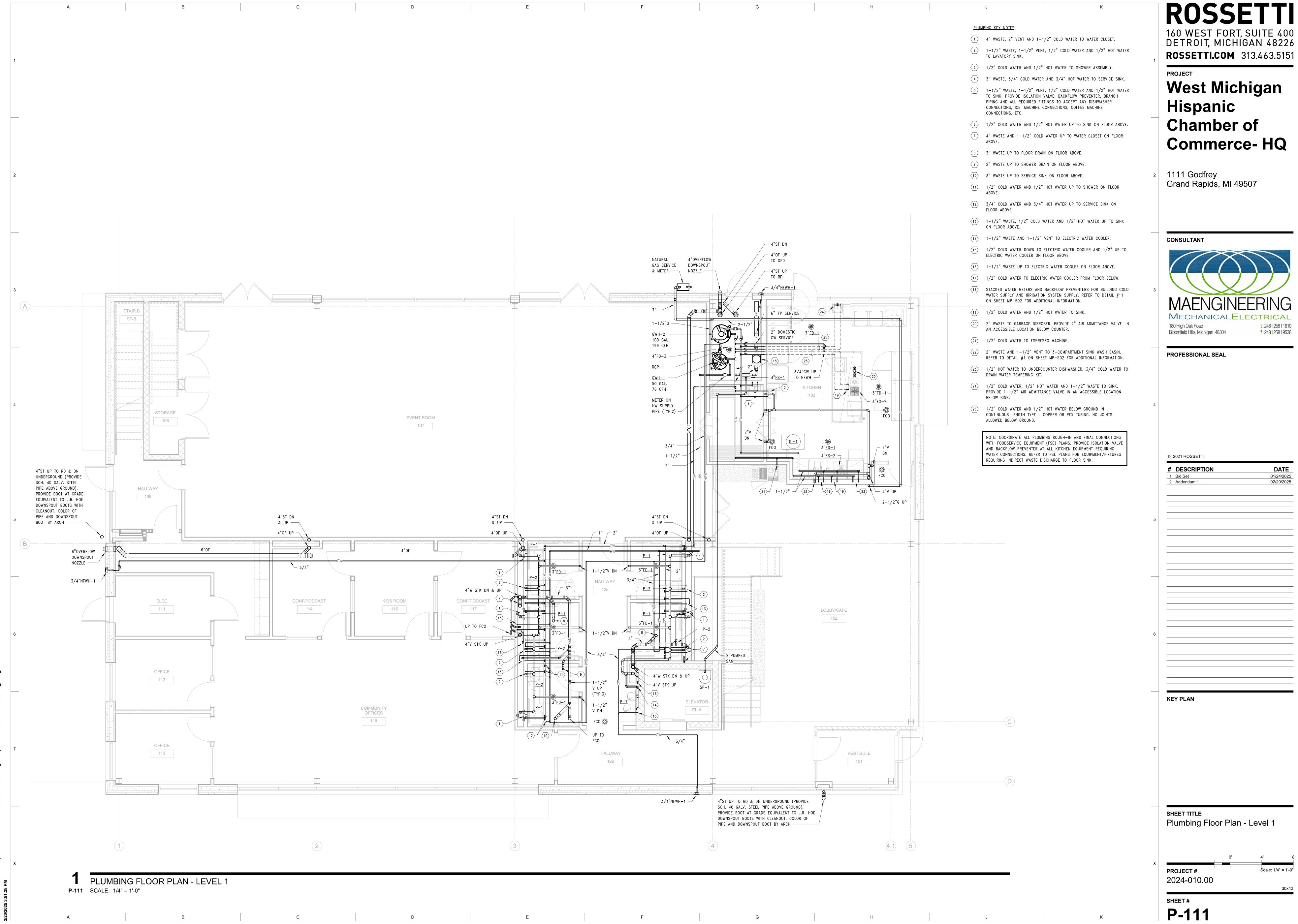
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Mechanical Specifications

PROJECT#

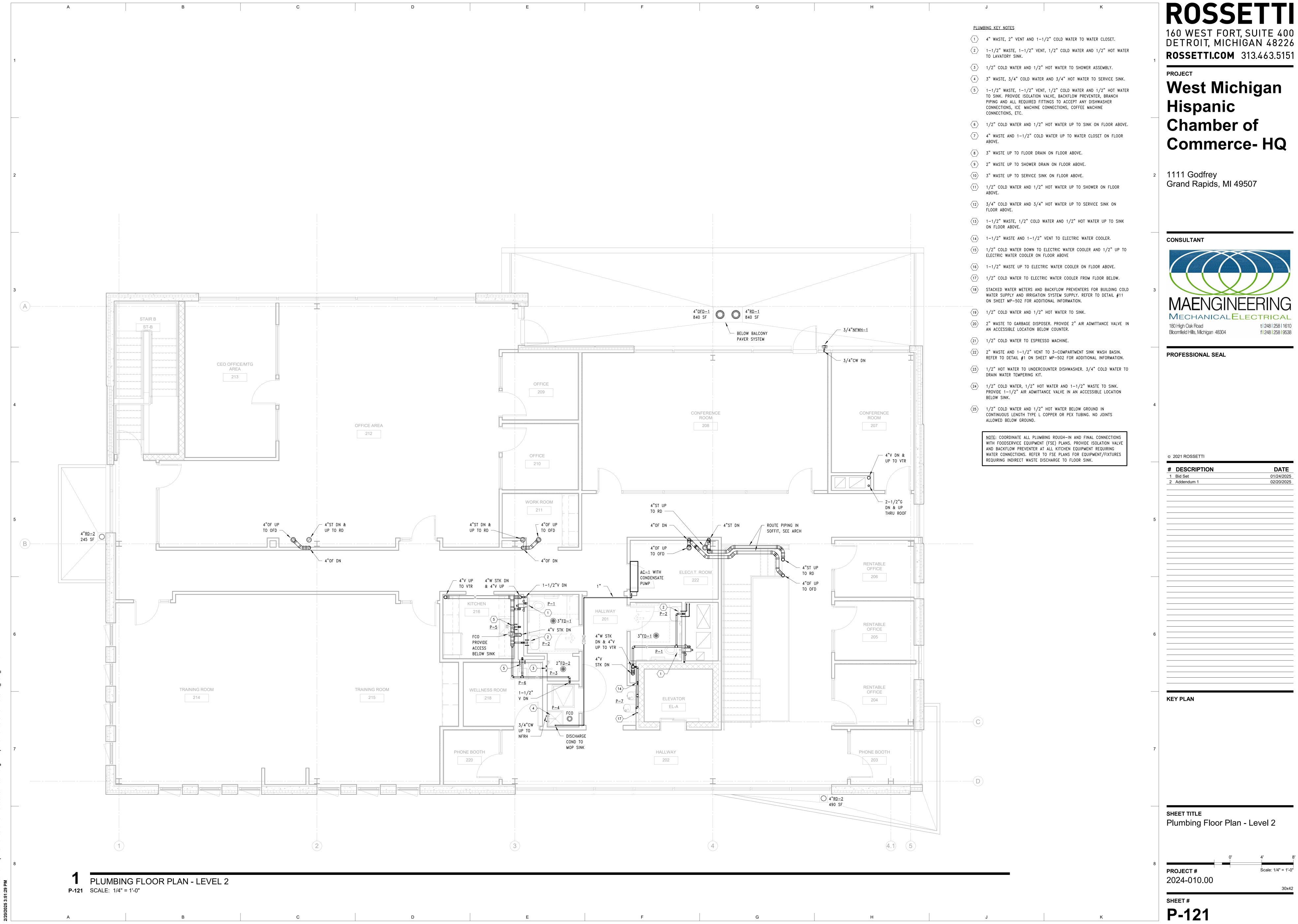
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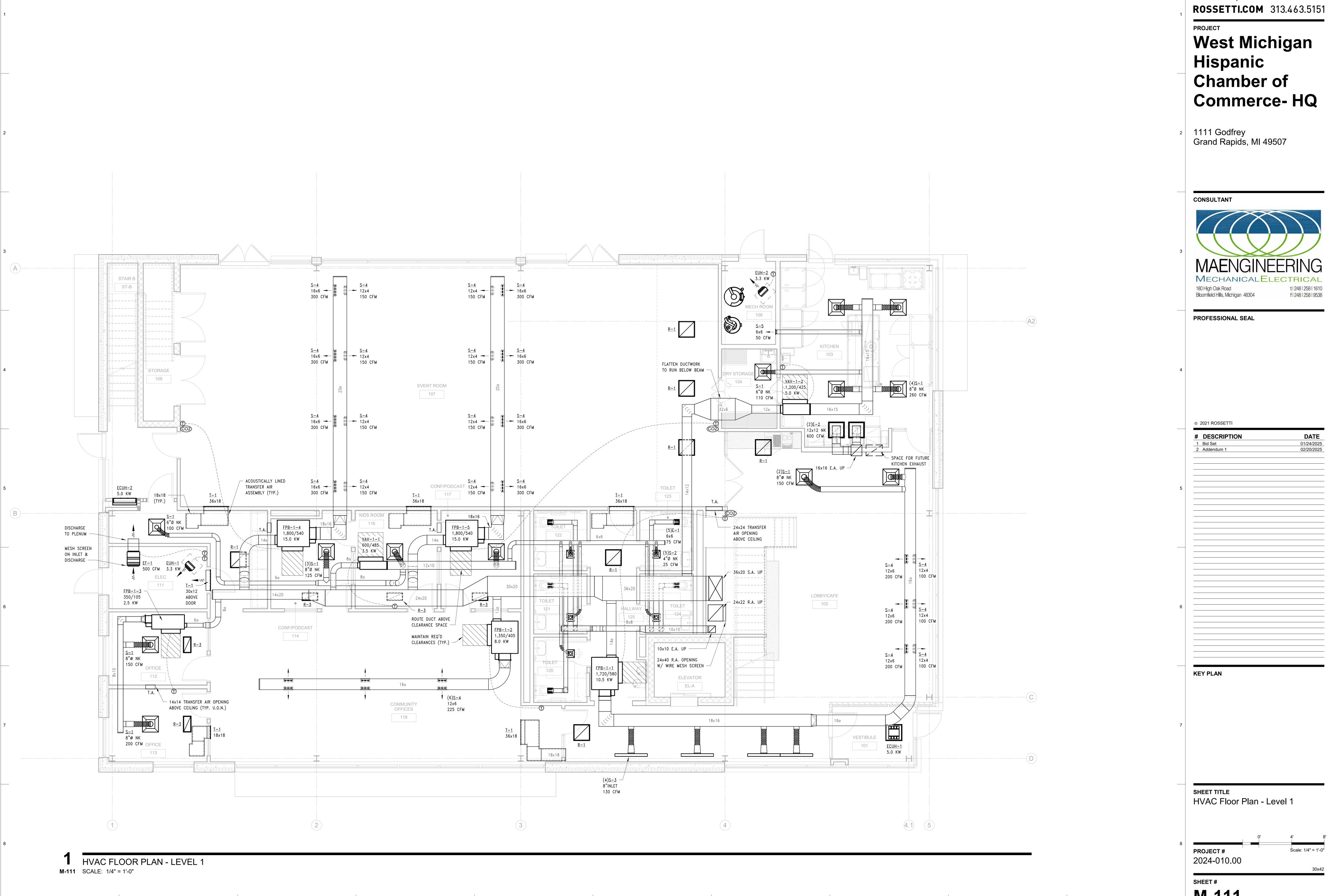
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M-111

┌ (2)<u>S-3</u> 10"INLET 215 CFM STAIR B / (2)<u>S-3</u> 10"INLET 10x10 _210 CFM_ __200 CFM__ CEO OFFICE/MTG AREA 213 <u>S-1</u> 6"Ø NK 100 CFM (4)<u>S−4</u> 16x6 • 275 CFM MAINTAIN REQ'D CLEARANCES (TYP.) <u>FPB-2-7</u> 1,050/570 7.5 KW 12x10 <u>FPB-2-8</u> 400/170 3.0 KW <u>FPB-2-5</u> CONFERENCE 20x20 430/235 3.0 KW ROOM 207 FLATTEN DUCT MAIN OFFICE AREA TO RUN BELOW BEAM -212 <u>FPB-2-2</u> 2,400/720 CONFERENCE ROOM 208 10.5 KW 6"Ø NK 18x18 32x24 R.A. UP THRU ROOF TO 32x20 S.A. UP THRU - 24x32 LINED RETURN <u>T−1</u> 36x18 + SPACE FOR WORK ROOM ROOF TO RTU-2 FUTURE 70x20 R.A. OPENING W/ KITCHEN S-5 10x6 175 CFM WIRE MESH SCREEN 30x12 EXHAUST (2)<u>S−5</u> 10x6 − 180 CFM 40x24 R.A. UP THRU 8"Ø NK / ROOF TO RTU-1 16x16 E.A. DN & UP THRU ROOF TO EF-3 — <u>R-3</u> — 42x20 R.A. OPENING W/ WIRE MESH SCREEN FLATTEN DUCT MAIN TO RUN BELOW BEAM — RENTABLE OFFSET/TRANSITION DUCT AS REQUIRED TO AVOID STRUCTURE IN CEILING SPACE SUPPORTING 36x20 S.A. UP THRU OFFICE <u>E-1</u> 8x8 ROOF TO RTU-1 206 60x24 ABOVE S 100 CFM (3)<u>S−1</u> \ 8"Ø NK ELEC/I.T. ROOM OPERABLE WALL BELOW 115 CFM KITCHEN RENTABLE OFFICE 205 (4)<u>S-1</u> 8"Ø NK 205 CFM (4)<u>S-1</u> 8"Ø NK 260 CFM <u>FPB-2-4</u> 1,050/50 E.A. DN & 150 CFM 12x12 UP - S-2 - E-1 THRU ROOF 4"Ø NK 6x6 TO EF-2 VAV-2-1 1,200/425 5.5 KW 25 CFM 75 CFM **ELEVATOR** TRAINING ROOM TRAINING ROOM EL-A AIR OPENING ACOUSTICALLY LINED ABOVE CEILING TRANSFER AIR (TYP. U.O.N.) HALLWAY ASSEMBLY (TYP.) 202 ∮ 200 CFM <u>S-1</u> R-3 6"Ø NK 100 CFM R-3 └ (5)<u>S-4</u> 16x6 300 CFM PHONE BOOTH PHONE BOOTH 220 203 4.1) 5

HVAC FLOOR PLAN - LEVEL 2

M-121 SCALE: 1/4" = 1'-0"

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PROJECT

West Michigan Hispanic Chamber of Commerce- HQ

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PROFESSIONAL SEAL

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DESCRIPTION

01/24/2025 2 Addendum 1 02/20/2025

DATE

KEY PLAN

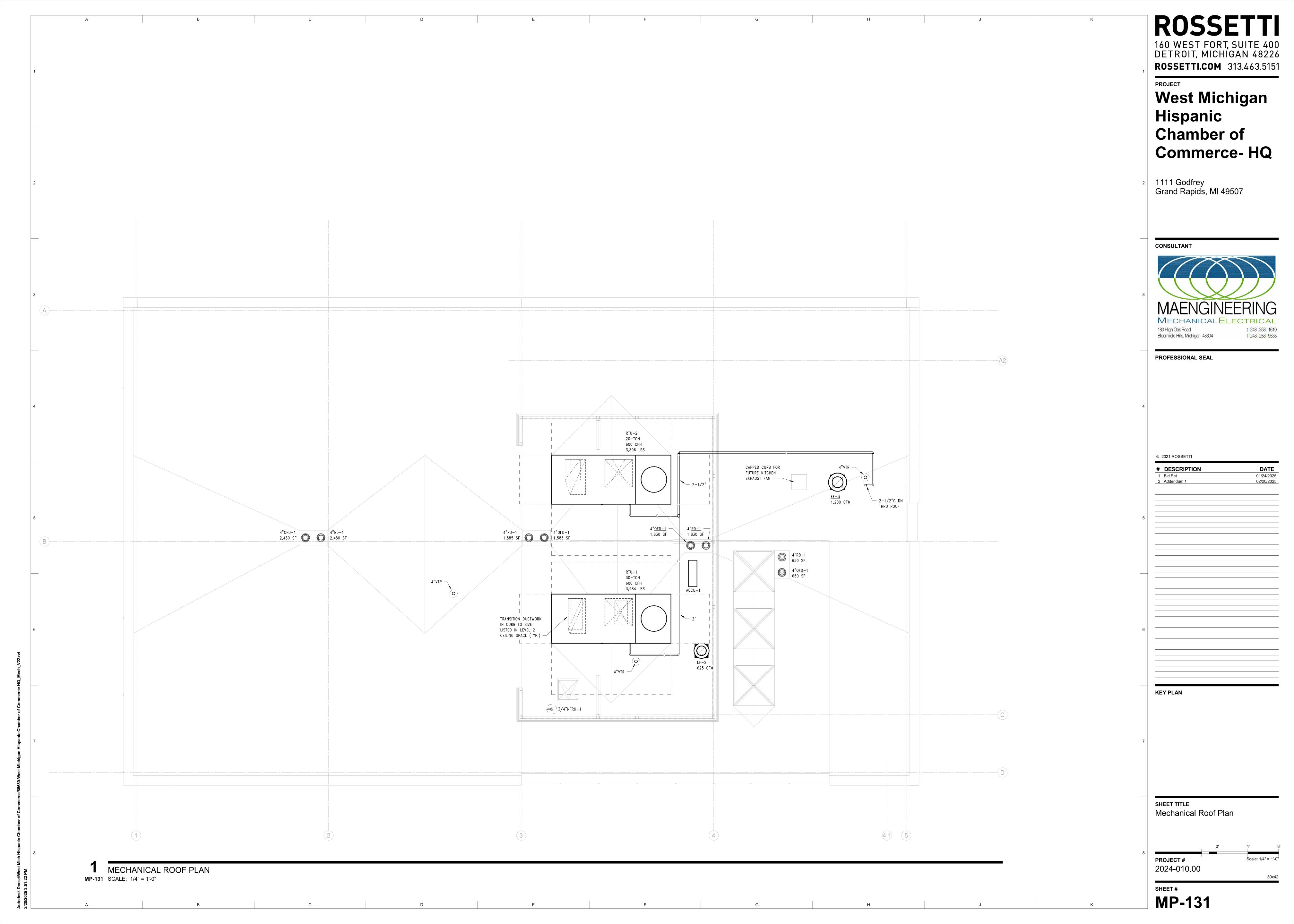
SHEET TITLE HVAC Floor Plan - Level 2

PROJECT#

Scale: 1/4" = 1'-0" 2024-010.00

SHEET#

M-121



							ELECTRICAL DATA			
TAG	MANUFACTURER & MODEL No.	AREA SERVED	MOUNTING	CFM	MBH				NO OF	NOTES/ACCESSORIES
						WATTS	VOLTS / PHASE	AMPS	FANS	
ECUH-1	BERKO FFCH558	VESTIBULE #101	RC	250	17.0	5000	208/3	24	1	ABC
ECUH-2	BERKO CUH935	STAIR B #ST-B	RW	250	17.0	5000	208/3	15	1	AC
EUH-1	MARKEL F2F5103N	ELEC #109	SUS	400	11.2	3300	208/3	9.17	1	ACDE
EUH-2	MARKEL F2F5103N	MECH ROOM #106	SUS	400	11.2	3300	208/3	9.17	1	ACDE
	SW RW		CE WALL			MOUNTI	NG KEY			ECESSED CEILING EMI-RECESSED CEILING
	SRW		ECESSED WALL							URFACE WALL INVERTED
	F SUS	FLOORSUSPE								ECESSED WALL INVERTED LOOR INVERTED
	000	- 0001 L	NDLD							PEN CEILING
						NOTES AND A	CCESSORIES DESIGN	NATION		
A	INTERGRAL THERMOSTA	АТ						E	WALL BRACKET	
В	CEILING MOUNTED									
С	UNIT MOUNTED DISCON	NECT SWITCH								
D	MOUNTED UNIT AS HIGH	I AS POSSIBLE								

												ROO	F TC	P UN	IIT SC	CHEC	ULE	ALL UNIT 90.1-202	ΓS SHALL BE II 1)	N FULL COMPL	ANCE WITH M	IICHIGAN ENE	ERGY CODE (AS	SHRAE			
			E	LECTRICAL DA	ТА	HEA	TING		COOLI	NG DATA @ 9	95°F OAT			SI	JPPLY FAN DAT	TA			F	RELIEF FAN DA	ГА			EFF	ICIENCY		
TAG	MANUFACTURER & MODEL NO.	AREA SERVED	VOLTS	UNIT MCA	MROPD	INPUT CFH	OUTPUT MBH	TOTAL MBH	SENSIBLE MBH	MIN. O.A. CFM	EAT db/wb	UNIT LAT AFTER FAN TEMP GAIN db/wb	CFM	ESP "WC	TSP "WC W/ LOADED FILTER	HP	RPM	CFM	ESP "WC	TSP "WC	HP	RPM	WEIGHT LBS	EER IEER	AFLUE %	REFRIGERANT	NOTES/ACCESSORIES
RTU-1	DAIKIN DPSC30B	FIRST FLOOR	208/3	179.5	225	600.0	486.0	340.3	237.9	4,200	82.5/67.4	56.9/54.7	9,000		4.4	10.0	1,738	1,200	0.5		1.5	900	3,984	10.4 16.7	80	R32	ABCDEFGHIJKLMNOPQ
RTU-2	DAIKIN DPSC20B	SECOND FLOOR	208/3	140.3	175	600.0	486.0	251.6	185.9	2,400	80.9/66.3	53.4/52.9	6,500		3.9	10.0	1,510	1,200	0.5		1.5	900	3,896	11.1 20.0	80	R32	ABCDEFGHIJKLMNOPQ
	NOTES AND ACCESSORIES DESIGNATION																										
A 14"HIG	ROOF CURB									Н вс	TTOM DISCHA	RGE AND RETU	IRN									0	MOTORIZE	ED DAMPER	3		
B ECONO	MIZER - COMPARATIVE	ENTHALPY								I VS	DIGITAL COME	PRESSOR										Р					SCREENING SYSTEM, ACRYLICAP ABS, HORIZONTAL ESS TO ALL COMPONENTS.
C POWER	EXHAUST - VARIABLE S	SPEED - PRESSURE C	ONTROL							J MC	DULATING GA	S VALVE WITH	STAINLESS S	STEEL HEAT EX	(CHANGER							Q	NOTE THA	AT LAT IS FR	N) TINU BHT MC	IOT COIL)	
D DISCOI	INECT SWITCH									K DII	RECT DRIVE FA	AN WITH VFD O	R ECM SUPPL	_Y DUCT S.P. (CONTROL												
E GFI RE	CEPTACLE - WIRED BY E	LECT.								L DO	OUBLE WALL CO	ONSTRUCTION															
F COMBO RACK, 2" MERV-8 FILTERS & 4" MERV-13 FILTERS M TRUE VAV UNIT - N									MAINTAIN CON	ISTANT DISCI	HARGE TEMP /	AND STATIC PR	ESSURE														
G SMOKE	DETECTOR AT RETURN									N MI	n. Outdoor a	IR AFMS															

MANUFACTURER

DTFS-F

DTFS-F

DTFS-F

DTFS-F

DTFS-F

DTFS

DTFS

DTFS

DTFS

DTFS

DTFS-F

NOTES AND ACCESSORIES DESIGNATION A. LYNERGY SCR HEATING COIL, 4-WIRE

D. 3-STAGE HEATING COIL

B. ACCESS DOOR INTERLOCKED DISCONNECT SWITCH

& MODEL NO.

FPB-1-1

FPB-1-2

FPB-1-3

FPB-1-4

FPB-1-5

FPB-2-1

FPB-2-2

FPB-2-3

FPB-2-4

FPB-2-5

FPB-2-6

FPB-2-7

FPB-2-8

SYSTEM

EVENT ROOM

SEE PLAN

MTG RM (210)

ROOM (206) CONFERENCE

	EXHAUST FAN SCHEDULE													
TAG	MANUFACTURER	LOCATION	SERVICE	FAN	DRIVE		FAN			MOTOR		WEIGHT	NOTES/ACCESSORIES	
	& MODEL NO.		SERVICE	TYPE	TYPE	CFM	ESP IN. W.C.	RPM	VOLTAGE	HP	BHP	(LBS.)		
EF-1	LOREN COOK 120SQ10D	ELEC (111)	ELEC (111)	IN-LINE	BELT	500	0.25	796	120/1/60	1/6	0.049	105	AEF	
EF-2	LOREN COOK 100 ACEB	ROOFTOP	TOILET ROOMS	DOWNBLAST CENTRIFUGAL	BELT	625	0.50	1,523	120/1/60	1/6	0.123	38	ABCD	
EF-3	LOREN COOK 120 ACEB	ROOFTOP	KITCHEN GENERAL EXH.	DOWNBLAST CENTRIFUGAL	BELT	1,200	0.75	1,515	120/1/60	1/3	0.288	59	ABCD	

E. VIBRATION ISOLATION HANGER MOUNTS

F. PROVIDE TEMPERATURE CONTROLLER

VAV-2-1	TITUS DESV	RTU-2	MULTIPLE, SEE PLAN	12	16x15	1,200	425	208/3/60	5.5	19.1	20	АВ
NOTES AND	ACCESSORIES DESIGNATIO)NI										

AIRFLOW AIRFLOW IN. W.C. IN. W.C. CFM

RTU-1

MULTIPLE,

SEE PLAN

SERIES FAN POWERED BOX SCHEDULE

INLET SP STREAM SP AIRFLOW FAN HP

SIZE D 14 1,720 580 1.00 0.25 1,720 1/2 208/3/60 10.5 42.7 45 32 31 A B C

 SIZE D
 12
 1,350
 405
 1.00
 0.25
 1,350
 1/2
 208/3/60
 8.0
 34.0
 35
 28
 25
 A B C

SIZE E 14 1,800 540 1.00 0.25 1,800 3/4 208/3/60 15.0 61.9 65 34 30 B C D

SIZE C 10 770 230 1.00 0.25 770 1/3 208/3/60 5.0 21.5 25 32 25 A B C

SIZE C 10 820 505 1.00 0.25 820 1/3 208/3/60 5.5 23.2 25 34 27 ABC

SIZE D 12 1,050 505 1.00 0.25 1,050 1/2 208/3/60 7.5 32.3 35 34 23 A B C

SIZE B 8 430 235 1.00 0.25 430 1/3 208/3/60 3.0 14.5 15 29 23 A B C

| CUNFERENCE | SIZE B | 8 | 400 | 170 | 1.00 | 0.25 | 400 | 1/3 | 208/3/60 | 3.0 | 14.5 | 15 | 28 | 20 | A B C

VARIABLE AIR VOLUME BOX SCHEDULE

ELECTRIC HEATING COIL

| VOLTAGE | KW | MCA | MOCP | RADIATED | DISCHARGE |

1 208/3/60 10.5 62.7 75 42 28 ABC

A. LYNERGY SCR HEATING COIL, 4-WIRE

B. ACCESS DOOR INTERLOCKED DISCONNECT SWITCH

SIZE PRIMARY PRIMARY

MANUFACTURER

TITUS DESV

DESV

VAV-1-2

		G/	AS V	VAT	ER HE	ATE	RSC	HE	DUL	.E		
	MUNUFACTURER			GAS [DATA		CAPAC	CITIES		ELECTRICAL		
TAG	& MODEL NO.	LOCATION	TYPE INPUT THERMA			RECO	/ERY (GPH)	TR (°F)	STOR. (GAL)	VOLTS / PHASE	NOTES / ACCESSORIES	
GWH-1	A.O. SMITH BTX-80	MECH ROOM #106	NAT	76.0	96%		86	100	50	120/1	ABCD	
GWH-2	A.O. SMITH BTH-199	MECH ROOM #106	NAT	199.0	96%		230	100	100	120/1	ABCD	
				N	OTES AND ACCESS	ORIES DES	SIGNATION					
А	P&T RELIEF VALVE TO	FLOOR DRAIN				С	EXPANSIO	N TANK				
B CONCENTRIC VENT KIT (VERTICAL)							PROVIDE A	AUXILIARY	CONTACT F	FOR REMOTE BMS M	ONITORING	

			ı	UMF		<i>)</i> ∟	DOL	· L			
TAG	MUNUFACTURER &	LOCATION	SYSTEM	TYPE	SIZE	CAPA	CITIES	N	MOTOR DAT	A	- NOTES / ACCESSORIES
IAO	MODEL NO.	LOCATION	SERVED	11112	OIZL	GPM	HEAD	HP	VOLTS	RPM	NOTEO / AGGEGGGNIEG
RCP-1	BELL&GOSSETT LR-15B	UTILITY #134	GWH-1	INLINE	3/4"	10	10	1/12	120/1	3150	A
			NOT	ES AND ACC	CESSORIES	S DESIGNA	TION				

			SUN	MP PUN	MP S	SCH	EDUL	E.			
TAG	MANUFACTURER	LOCATION	SERVICE	PUMP	GPM	HEAD		МОТО	OR		NOTES/ACCESSORIES
170	& MODEL NO.	LOCATION	OLIVIOL	TYPE	OI W	(FT)	VOLTAGE	HP	FLA	RPM	No TES//NOCESSONIES
SP-1	GOULDS WE0738H	SEE PLAN	ELEVATOR SUMP PUMP	SUBMERSIBLE EFFLUENT	50	20	208/3/60	3/4	6.2	3,500	ABCDEF

NOTES AND ACCESSORIES DESIGNATION

A. 2" INLET AND DISCHARGE B. PROVIDE CHECK VALVE ON DISCHARGE C. PACKAGED EQUIPMENT D. ALARM PANEL WITH 3 FLOAT CONTROL SYSTEM E. HIGH LEVEL ALARM TO DDC F. SINGLE POINT ELECTRICAL CONNECTION WITH

FACTORY INSTALLED DISCONNECT

GRILLE, REGISTER AND DIFFUSER SCHEDULE													
TAG	MANUFACTURER & MODEL NO.	SERVICE	TYPE	MOUNTING	FINISH	NECK SIZE	OVERALL SIZE	MAX. NC	NOTES/ACCESSORIES				
S-1	TITUS OMNI	SUPPLY	UPPLY PLAQUE LAY-IN OR GYP CEILING		WHITE	SEE PLAN	24"x24"	25	A				
S-2	TITUS OMNI	SUPPLY	PLAQUE DIFFUSER	LAY-IN OR GYP CEILING	WHITE	SEE PLAN	12"x12"	25	A				
S-3	TITUS TBD-80	SUPPLY	LINEAR DIFFUSER	LAY-IN OR GYPCEILING	BLACK INTERIOR WHITE FRAME	NOTE D	4'-0" LENGTH	25	CD				
S-4	TITUS S300FS	SUPPLY	GRILLE	ROUND DUCT	MATCH FINISH OF DUCTWORK	N/A	SEE PLAN	25	В				
S-5	TITUS 272FS	SUPPLY	GRILLE	WALL OR RECT. DUCT	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25					
R-1	TITUS PXP	RETURN	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	N/A	24"x24"	25	A				
R-2	TITUS PAR	RETURN	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	22"x22"	24"x24"	25	ΑE				
R-3	TITUS PAR	RETURN	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	10"x22"	12"x24"	25	AE				
E-1	TITUS 3FL	EXHAUST	GRILLE	WALL OR GYP CEILING	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25					
E-2	TITUS PAR	EXHAUST	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	SEE PLAN	24"x24"	25	A				
T-1	TITUS 3FL	TRANSFER AIR	GRILLE	WALL	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25					
T-2	TITUS 56FL	I I CERTIFE I WALL		WALL	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25					

NOTES AND ACCESSORIES DESIGNATION		
A. PROVIDE MATCHING TRIM FOR INSTALLATION IN HARD CEILING,	D	. SEE PLAN FOR OVAL INLET SIZE, ALL TAKE-OFF BRANCH DUG

SERVED

(222)

OUTDOOR UNIT

MANUFACTURER

MITSUBISHI

PUY-A36NKA7

& MODEL NO.

NOTES AND ACCESSORIES DESIGNATION

C. MOTORIZED DAMPER

A. FACTORY MOUNTED AND WIRED DISCONNECT SWITCH

B. 18" INSULATED ROOF CURB FOR SLOPED ROOF

D. SEE PLAN FOR OVAL INLET SIZE, ALL TAKE-OFF BRANCH DUCTS TO OVAL TRANSITION SHALL BE 8" DIA. ROUND E. PROVIDE ACOUSTICAL BOOT F. PROVIDE MATCHING SIZE GRILLE SILENCER, RUSKIN MODEL GSV

	PACKAGED SPLIT SYSTEM AC UNIT SCHEDULE																						
INDOOR		INDOOR UNIT COOLING						OOR UNIT F	AN	ELECTRIC REHEAT	HUMIDIFIER	HUMIDIFIER REFRIGERANT	ELECTRICAL DATA						PHYSICAL DATA				NOTERWOOFFRANCE
UNIT TYPE	TOTAL	SENSIBLE	AMBIENT	EAT °F				ESP		(KW)	(LB/HR)	TYPE	INDO	OOR EVAPORT	IOR	OUTD	OOR CONDEN	NSER	INDOOR	UNII	OUTDOOR	UNII	NOTES/ACCESSORIES
	MBH	MBH	°F DB	DB/WB	SEER	EER	CFM	IN. WG	WATTS	(1777)			VOLTAGE	MCA	MOCP	VOLTAGE	MCA	MOCP	SIZE (IN.)	WEIGHT (LBS)	SIZE (IN.)	WEIGHT (LBS)	
WALL	36.0	25.2	95.0	80.0/67.0	18.8	10.8	920	N/A	56	N/A	N/A	R410A	NOTE B	NOTE B	NOTE B	208/1/60	25.0	30	14.88 H x 46.06 W x 11.63 D	46	52.69 H x 41.31 W x 14.19 D	211	ABCDEFGHI

NOTES AN	ID ACCESSORIES D	<u>ESIGNATION</u>

AC-1

INDOOR UNIT

MANUFACTURER

MITSUBISHI

PKA-A36KA7

& MODEL NO.

REFER TO ARCH RCP

B. AIR EXTRACTOR DAMPER

C. 2-SLOT, 1" SLOT WIDTH

A. FACTORY MOUNTED AND WIRED DISCONNECT SWITCH B. INDOOR UNIT TO RECEIVE FIELD-WIRED POWER FROM OUTDOOR UNIT, WIRING PROVIDED BY MECH. & INSTALLED BY ELEC. C. PROVIDE LINE SET FOR EXTENDED LENGTH OF PIPING (FIELD VERIFY LENGTH OF PIPING REQUIRED)

D. WIRED REMOTE THERMOSTAT E. OUTDOOR UNIT MOUNTED ON ROOF EQUIPMENT RAILS PROVIDED BY MECHANICAL CONTRACTOR F. LOW AMBIENT COOLING WIND BAFFLE KIT

G. INDEPENDENTLY POWERED CONDENSATE PUMP

H. PROVIDE WALL BRACKET FOR INDOOR UNIT I. SUBJECT TO COMPLIANCE WITH ALL PROJECT DOCUMENTS, DAIKIN AND LG ARE ACCEPTABLE ALTERNATIVES

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

NOTES/ACCESSORIES

NOTES/ACCESSORIES

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507



PROFESSIONAL SEAL

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DESCRIPTION DATE 01/24/2025 2 Addendum 1 02/20/2025

KEY PLAN

SHEET TITLE Mechanical Schedules

PROJECT# 2024-010.00

SHEET#

MP-401

		PLUM	BING FIXT	JRE SCHED	JLE
TAG	DESCRIPTION	MANUFACTURER	MODEL#	FINISH	NOTES
P-1	WALL-MOUNTED WATER CLOSET	AMERICAN STANDARD	2257.101	WHITE VITREOUS CHINA	WALL-MOUNTED, ELONGATED BOWL, 1 ½" TOP SPUD, 1.28 GPF, ANTIMICROBIAL FINISH, GLAZED TRAPWAY, SIPHON JET, BOTTOM DISCHARGE, ADA COMPLIANT. INSTALL IN ACCORDANCE WITH ADA REQUIREMENTS. MOUNTING OF FLUSH VALVE TO BE WITH THE LEVER/OVERRIDE BUTTON ON THE WIDE SIDE OF THE COMPARTMENT. PROVIDE WALL CARRIER. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD OR KOHLER.
	FLUSH VALVE	AMERICAN STANDARD	6065.721.002	CHROME	1.1 GPF, SENSOR-OPERATED, BATTERY POWERED, 1-1/2" TOP SPUD CONNECTION, LEFT OR HIGH HAND INSTALLATION, MANUAL OVERRIDE BUTTON, ANGLE STOP, VACUUM BREAKER. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD OR KOHLER.
	TOILET SEAT	AMERICAN STANDARD	5905.100	WHITE	ELONGATED, SOLID INJECTION MOLDED, OPEN FRONT, SELF-SUSTAINING STAINLESS STEEL CHECK HINGE, ANTIMICROBIAL SURFACE. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD OR KOHLER.
P-2	WALL-HUNG LAVATORY	AMERICAN STANDARD	0321.075	WHITE VITREOUS CHINA	WALL-HUNG, PRE-DRILLED 4" CENTERSET, REAR OVERFLOW, CONCEALED ARMS SUPPORT, ADA COMPLIANT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD OR KOHLER.
	FAUCET	AMERICAN STANDARD	6055.204	CHROME	CAST BRASS CONSTRUCTION, SENSOR-OPERATED, BATTERY POWERED, 4" CENTERSET, DECK-MOUNTED, 0.35 GPM AERATOR, ADA COMPLIANT. AMERICAN STANDARD, DELTA, KOHLER, SLOAN OR ZURN
	ACCESSORIES				1/2" x 3/8" ANGLE SUPPLIES WITH LOOSE KEY STOPS, FLEXIBLE STAINLESS BRAIDED RISERS AND CHROME-PLATED ESCUTHEON PLATES. ASSE 1070 MIXING VALVE. STAINLESS STEEL GRID STRAINER, 1-1/4" CHROME-PLATED CAST BRASS ADJUSTABLE P-TRAP WITH CLEANOUT AND TUBING OUTLET TO WALL, COMPLETE WITH CHROME-PLATED CAST BRASS ESCUTCHEON PLATE. PROVIDE TRUEBRO ADA-COMPLIANT PIPING INSULATION KIT FOR EXPOSED PIPING. PROVIDE WALL CARRIER.
P-3	SHOWER BASE	BEST BATH	P4836B	WHITE	48" x 36" BARRIER-FREE SHOWER PAN, 3/4" BEVELED THRESHOLD, CENTER DRAIN, ADA COMPLIANT. PROVIDE 2" DRAIN ASSEMBLY WITH STAINLESS STEEL GRID STRAINER.
	SHOWER SURROUND				SHOWER SURROUND, GRAB BARS AND SEAT SPECIFIED BY ARCH.
	VALVE	DELTA	R10000-UNBX	WHITE	SINGLE HANDLE MIXING VALVE, BRASS BODY. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, DELTA OR KOHLER.
	TRIM	DELTA	T13H332	CHROME	PRESSURE BALANCED SHOWER ASSEMBLY, METAL LEVER HANDLE, RED/BLUE INDICATOR MARKINGS, SHOWERHEAD WITH DIVERTER, HANDSHOWER WITH 24" STAINLESS STEEL SLIDE BAR, 70" FLEXIBLE HOSE, 1.5 GPM, ADA COMPLIANT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, DELTA OR KOHLER.
P-4	SERVICE SINK	FIAT PRODUCTS	MSB2424		ONE-PIECE MOLDED STONE, 10" HIGH WALLS WITH 1" WIDE SHOULDERS, FACTORY INSTALLED STAINLESS STEEL DRAIN BODY WITH DOME STRAINER AND LINT BASKET. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, FIAT PRODUCTS OR KOHLER.
	FAUCET	AMERICAN STANDARD	8354.112		WALL-MOUNTED, 8" BODY, VACUUM BREAKER, LEVER HANDLES, 1/4 TURN CERAMIC CARTRIDGES, 3/4" MALE HOSE THREADED OUTLET, PAIL HOOK WITH WALL BRACE. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD OR KOHLER.
P-5	ACCESSORIES STAINLESS STEEL SINK	FIAT PRODUCTS ELKAY	ECTSRAD252260	STAINLESS STEEL	E-77-AA VINYL BUMPER GUARDS ON ALL SIDES NOT ADJACENT TO WALL, MSG2424 STAINLESS STEEL WALL GUARDS, 832-AA HOSE AND HOSE BRACKET, 833-AA SILICONE SEALANT. DROP-IN INSTALLATION, SINGLE BOWL, 22-1/2" x 16-3/4" x 6" BOWL DIMENSIONS, 25" x 22" x 6"
					OVERALL DIMENSIONS, SOUND DEADENED 18 GA 304 STAINLESS STEEL, ADA COMPLIANT. SINK DIMENSIONS SHALL BE CONFIRMED WITH BASE CABINET DRAWINGS. UNIT SHALL BE PRE-DRILLED TO ACCEPT FAUCET. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, ELKAY OR KOHLER.
	FAUCET	ELKAY	LKLFHA2031	CHROME	SINGLE HOLE TOP MOUNT, SINGLE LEVER, PULL-DOWN SPRAY WITH AERATED FLOW AND SPRAY FUNCTION, SOLID BRASS CONSTRUCTION, SWING SPOUT, 1.5 GPM, ADA COMPLIANT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, ELKAY OR KOHLER.
	ACCESSORIES				1/2" x 3/8" ANGLE SUPPLIES WITH LOOSE KEY STOPS, FLEXIBLE STAINLESS BRAIDED RISERS AND CHROME-PLATED ESCUTCHEON PLATES, DRAIN TO ACCEPT GARBAGE DISPOSAL, 1-1/2" CHROME-PLATED CAST BRASS ADJUSTABLE P-TRAP WITH CLEANOUT AND TUBING OUTLET TO WALL, COMPLETE WITH CHROME-PLATED CAST BRASS ESCUTCHEON PLATE.
	GARBAGE DISPOSAL	INSINKERATOR	EVOLUTION COMPACT		3/4 HP MOTOR, 120V/1PH, 8.1 AMP, CONTINUOUS FEED, STAINLESS STEEL GRIND COMPONENTS, MANUAL RESET OVERLOAD, DISHWASHER DRAIN CONNECTION, PLUG AND CORD.

TAG	DESCRIPTION	MANUFACTURER	MODEL#	FINISH	NOTES
P-6	STAINLESS STEEL SINK	ELKAY	LRAD172065PD	STAINLESS STEEL	DROP-IN INSTALLATION, SINGLE BOWL, 14" x 14" x 6-1/2" BOWL DIMENSIONS, 17" x 20" x 8" OVERALL DIMENSIONS, SOUND DEADENED 18 GA 304 STAINLESS STEEL, ADA COMPLIANT. SINK DIMENSIONS SHALL BE CONFIRMED WITH BASE CABINET DRAWINGS. UNIT SHALL BE PRE-DRILLED TO ACCEPT FAUCET. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, ELKAY OR KOHLER.
	FAUCET	ELKAY	LKLFHA2031	CHROME	SINGLE HOLE TOP MOUNT, SINGLE LEVER, PULL-DOWN SPRAY WITH AERATED FLOW AND SPRAY FUNCTION, SOLID BRASS CONSTRUCTION, SWING SPOUT, 1.5 GPM, ADA COMPLIANT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD, ELKAY OR KOHLER.
	ACCESSORIES				1/2" x 3/8" ANGLE SUPPLIES WITH LOOSE KEY STOPS, FLEXIBLE STAINLESS BRAIDED RISERS AND CHROME-PLATED ESCUTCHEON PLATES, STAINLESS STEEL BASKET STRAINER, 1-1/2" CHROME-PLATED CAST BRASS ADJUSTABLE P-TRAP WITH CLEANOUT AND TUBING OUTLET TO WALL, COMPLETE WITH CHROME-PLATED CAST BRASS ESCUTCHEON PLATE.
P-7	ELECTRIC WATER COOLER	ELKAY	LZSTL8WSSK	STAINLESS STEEL	DUAL LEVEL FOUNTAIN WITH BOTTLE FILLING STATION, SELF-CLOSING PUSHBAR ACTIVATION OF BUBBLERS, ELECTRONIC SENSOR ACTIVATION OF BOTTLE FILLER, FILTER WITH LED STATUS INDICATOR, ANTIMICROBIAL SURFACE COATING, WALL-MOUNT INSTALLATION, HERMETICALLY-SEALED COMPRESSOR, 120V, 8.0 GPH CAPACITY BASED ON 90 DEGREES F AMBIENT TEMP AND 80 DEGREES F INLET WATER TEMP, 5 YEAR COMPRESSOR WARRANTY, LEAD-FREE, ADA COMPLIANT. ELKAY, HALSEY TAYLOR, HAWS, OASIS OR SUNROC.
FD-1	GENERAL FLOOR DRAIN	JAY R. SMITH	2005-A		LIGHT DUTY, ADJUSTABLE NICKEL BRONZE STRAINER, DRAINAGE FLANGE, WEEPHOLES, 5" STRAINER DIAMETER. JAY. R SMITH, MIFAB, WADE, WATTS OR ZURN. PROVIDE "SURE SEAL" DRAIN TRAP SEALER.
FD-2	SHOWER DRAIN				INCLUDED IN P-3 FIXTURE SELECTION.
FD-3	FLOOR DRAIN				SAME AS FD-1 FLOOR DRAIN.
FS-1	HIGH CAPACITY FLOOR SINK	ZURN	1752		12" x 12" x 10" 16 GA 304 STAINLESS STEEL FLOOR SINK, 4" PIPE SIZE, NO GRATE, DOME STRAINER. JAY R. SMITH, MIFAB, WADE, WATTS OR ZURN. PROVIDE "SURE SEAL" DRAIN TRAP SEALER.
FS-2	FOOD SERVICE FLOOR SINK	ZURN	Z1902		12" x 12" SANI-FLOR RECEPTOR, 10" SUMP DEPTH, CAST IRON BODY AND SQUARE SLOTTED LIGHT DUTY GRATE WITH WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, COMPLETE WITH WHITE ABS ANTI SPLASH INTERIOR BOTTOM DOME STRAINER, MEMBRANE CLAMP WITH HARDWARE, EXTENSION AS REQUIRED, JAY R. SMITH, MIFAB, WADE, WATTS OR ZURN. PROVIDE "SURE SEAL" DRAIN TRAP SEALER. PROVIDE GRATING WITH PARTIAL OPENINGS AS REQUIRED TO ACCEPT INDIRECT WASTE DRAINS FROM FOOD SERVICE FIXTURES AND EQUIPMENT.
RD-1	ROOF DRAIN	ZURN	Z100F		CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP AND GRAVEL STOP. JAY R. SMITH, MIFAB, WADE, WATTS OR ZURN.
RD-2	ROOF DRAIN	ZURN	Z125		8-3/8" DIA. CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP AND GRAVEL STOP. JAY R. SMITH, MIFAB, WADE, WATTS OR ZURN.
OFD-1	OVERFLOW DRAIN	ZURN	Z100F		SAME AS RD-1. PROVIDE 2" WATER DAM.
IFWH-1	NON-FREEZE WALL HYDRANT	JAY R. SMITH	5509-QT		3/4" ENCASED FLUSH ANTI-SIPHON WALL HYDRANT NON-FREEZE TYPE WITH BRONZE CASING, INTEGRAL VACUUM BREAKERS, ALL BRONZE INTERIOR PARTS AND NON-TURNING OPERATING ROD WITH FREE-FLOATING COMPRESSION CLOSURE VALVE. BOX FACE AND HINGED COVER SHALL BE NICKEL BRONZE COMPLETE WITH OPERATING KEY LOCK. JAY R. SMITH, MIFAB, WADE, WATTS OR ZURN.
IFRH-1	NON-FREEZE ROOF HYDRANT	WOODFORD	SRH		NON-FREEZE TYPE, 3/4" HOSE OUTLET CONNECTION, 3/4" NPT INLET CONNECTION, ASSE 1052 LISTED, DUAL CHECK BACKFLOW PREVENTER, VENTURI ACTION

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

PROJECT

West Michigan Hispanic Chamber of Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

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DESCRIPTION

5					

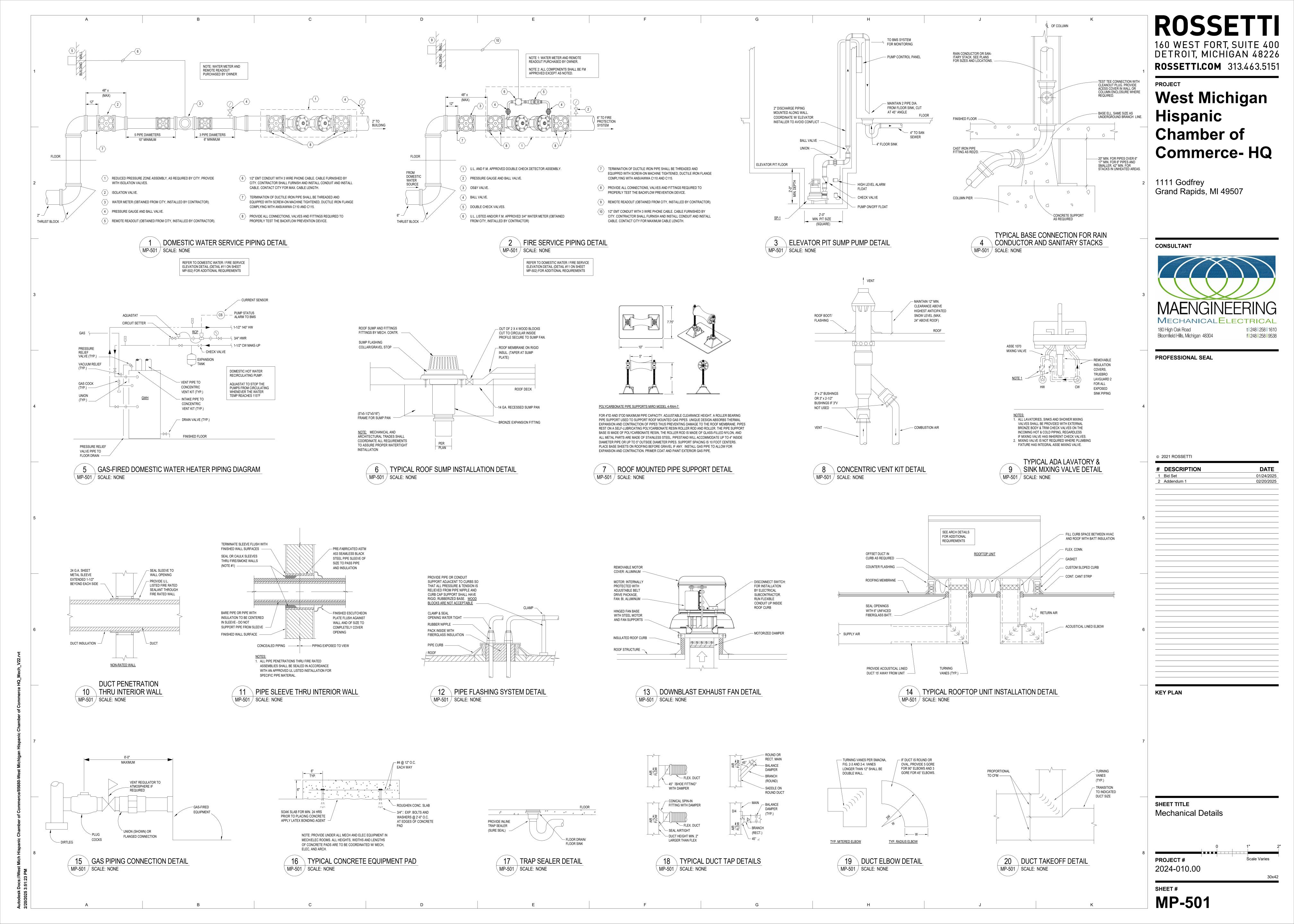
KEY PLAN

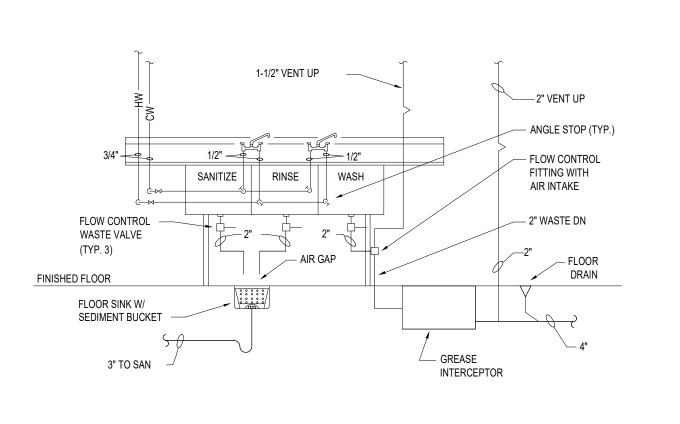
sнеет тітье Mechanical Schedules

8 PROJECT # Scale: 1/16" = 1'-0" 2024-010.00

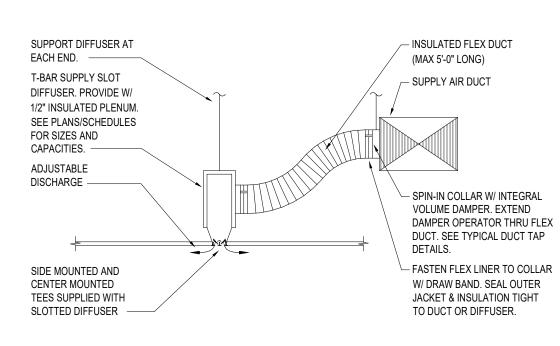
SHEET#

MP-402

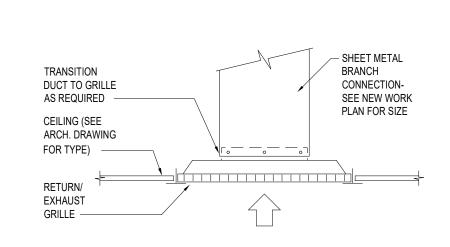




3-COMPARTMENT SINK DETAIL MP-502 | SCALE: NONE

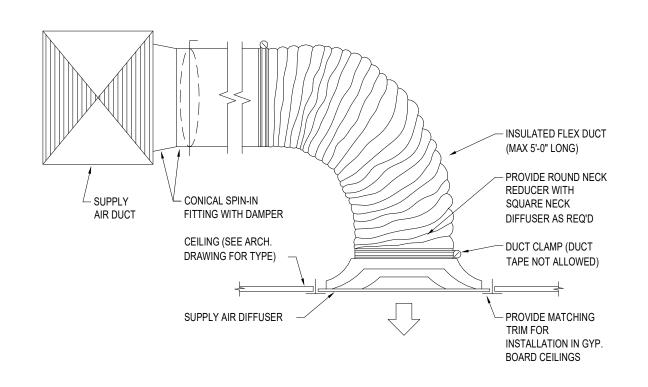


\ LINEAR SLOT DIFFUSER WITH FLEX DUCT DETAIL MP-502 | SCALE: NONE

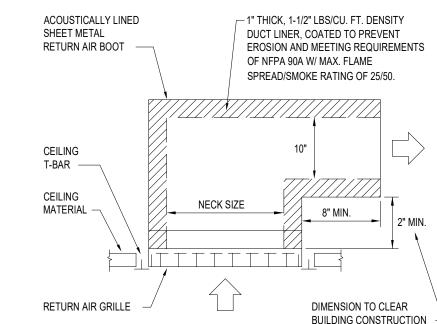


RETURN / EXHAUST AIR GRILLE DETAIL MP-502 | SCALE: NONE

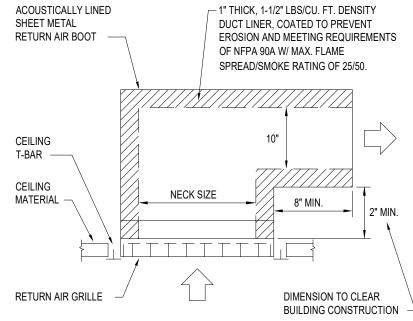
MP-502 | SCALE: NONE



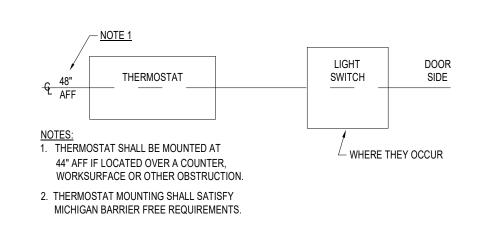
SUPPLY AIR DIFFUSER WITH FLEX DUCT DETAIL MP-502 | SCALE: NONE



5 ACOUSTICAL BOOT DETAIL MP-502 | SCALE: NONE



RETURN AIR GRILLE WITH



THERMOSTAT MOUNTING DETAIL MP-502 SCALE: NONE

TRANSITION

(TYPICAL) —

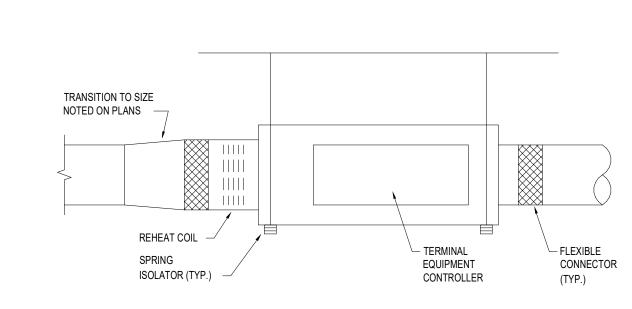
\ IN-LINE FAN INSTALLATION DETAIL

AS REQUIRED

SPRING VIBRATION

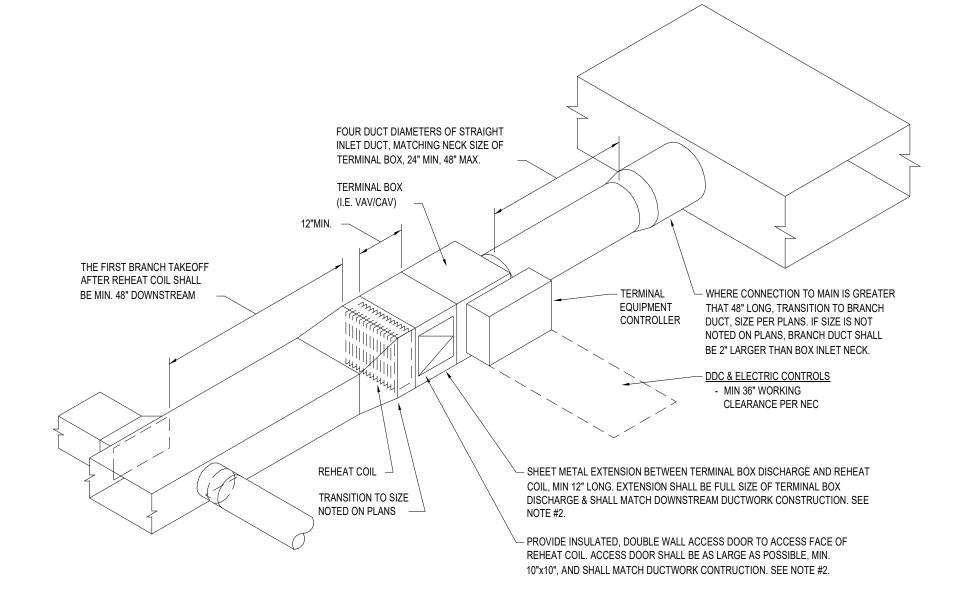
ISOLATOR (TYPICAL)

FLEX DUCT



DUCT-MOUNTED SUPPLY GRILLE DETAIL



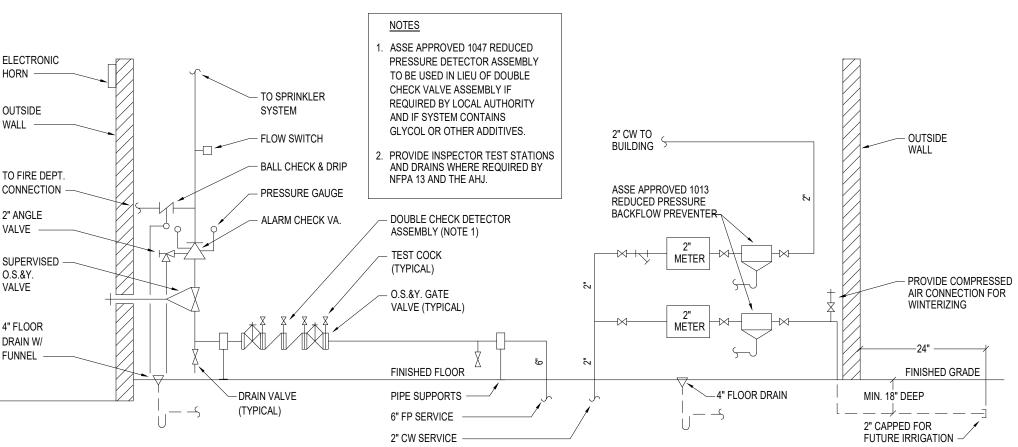


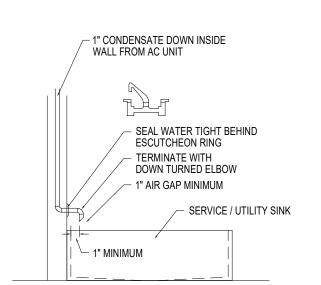
NOTES:

1. FLEX DUCT IS NOT ALLOWED UPSTREAM OR DOWNSTREAM OF TERMINAL BOXES, EXCEPT IN THE BRANCH CONNECTION DIRECTLY TO DIFFUSER/GRILLES.

- 2. TERMINAL BOX CONSTRUCTION THAT INCORPORATES A FACTORY PROVIDED ACCESS DOOR IN THE SIDE OF THE BOX CASING ARE ALLOWED TO MOUNT THE REHEAT COIL DIRECTLY TO THE TERMINAL BOX DISCHARGE OPENING AND FOREGO THE SHEET METAL EXTENSION BETWEEN BOX & COIL.
- 3. TERMINAL BOXES SHALL BE MOUNTED NO HIGHER THAN 2' ABOVE THE CEILING GRID & SHALL BE LOCATED SO AS TO ALLOW CLEAR VERTICAL LADDER ACCESS FOR MAINTENANCE.







12 CONDENSATE TO SINK DRAIN DETAIL MP-502 | SCALE: NONE

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151 **PROJECT** West Michigan Hispanic

Chamber of Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507

CONSU	ILTAN	Г				
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Bloomfield Hills, Michigan 48304

PROFESSIONAL SEAL

180 High Oak Road

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#	DESCRIPTION	DATE
1	Bid Set	01/24/202
2	Addendum 1	02/20/202

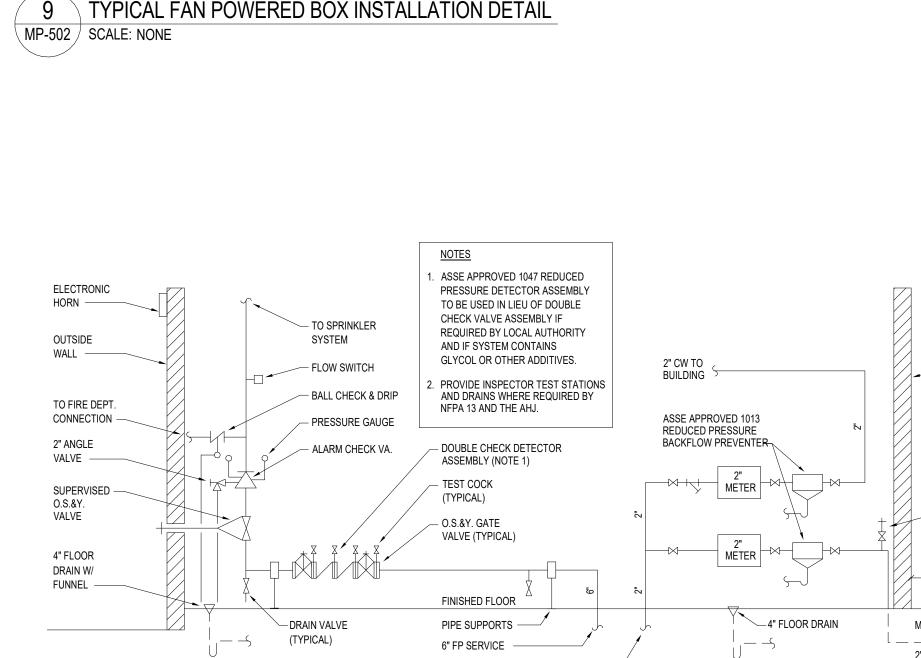
KEY PLAN

SHEET TITLE **Mechanical Details**

PROJECT# 2024-010.00

SHEET#

MP-502



- ROUND OR OVAL DUCT

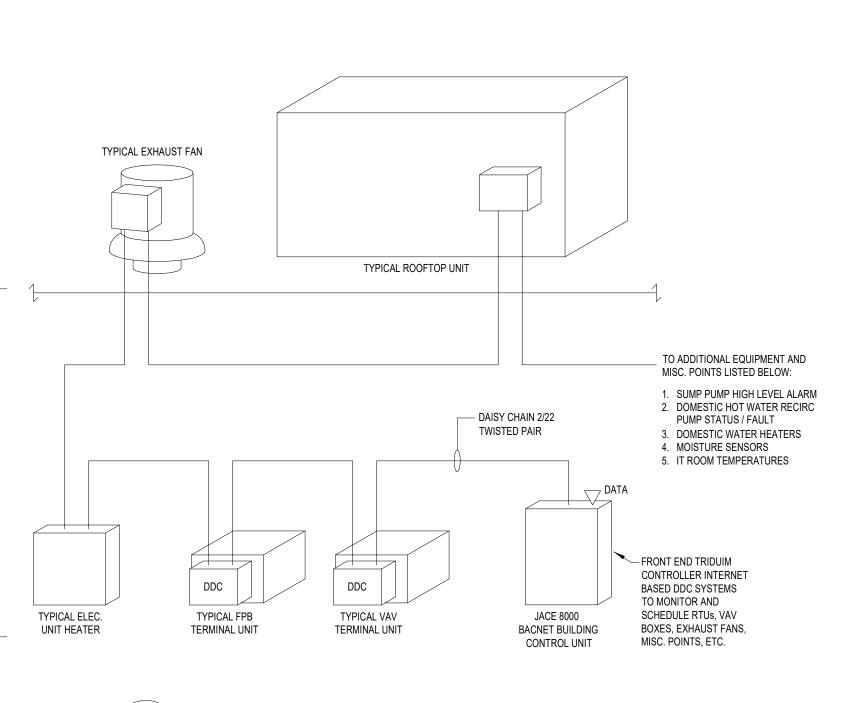
- SUPPLY AIR

GRILLE WITH

DAMPER

AIR EXTRACTOR

11 DOMESTIC WATER / FIRE SERVICE ELEVATION DETAIL



TYPICAL COMMUNICATION ARCHITECTURE

BUILDING CONTROLS

- WORK BY THE MECHANICAL SYSTEMS CONTROLS CONTRACTOR SHALL INCLUDE, BUT NOT BE LIMITED TO:
- I. PROVIDING A NATIVE BACNET-BASED (LATEST VERSION OF ANSI/ASHRAE 135) MCS CONSISTING OF PROGRAMMABLE AND APPLICATION SPECIFIC DDC CONTROLLERS, ELECTRONIC SENSORS, RELAYS, SWITCHES, CONTROL PANELS, POWER SUPPLIES, TWISTED SHIELDED PAIR (TSP) NETWORK CABLING AND ALL ASSOCIATED CONTROL WIRING (EXCLUDING ETHERNET NETWORK WIRING) AND LOW VOLTAGE CONDUIT SYSTEMS. PROVIDE ALL REQUIRED 120V WIRING PER ELECTRICAL SPECIFICATIONS, INCLUDING TRANSFORMERS REQUIRED, FROM DESIGNATED SPARE ELECTRICAL CIRCUITS.
- 2. SYSTEM CONTROLLERS SHALL BE NIAGARA TRIDIUM JACE 8000 SERIES WITH INITIAL CAPACITY FOR ALL EQUIPMENT IN PROJECT AND MISCELLANEOUS POINTS. CONTROLLERS SHALL BE EXPANDABLE FOR OTHER FUTURE GROWTH. CONTROLLERS SHALL RUN ON NIAGARA 4.2.
- 3. SYSTEM SHALL REPORT THROUGH IP ON OWNER'S LAN TO NIAGARA 4 SUPERVISOR SOFTWARE. PROVIDE NIAGARA 4 SOFTWARE, ALL REQUIRED FRONT END PROGRAMMING AND INTERACTIVE GRAPHICS
- 4. SYSTEM SHALL HAVE MULTIPLE PASSWORD PROTECTION LEVELS AND ALARM NOTIFICATION THROUGH
- 5. PROVIDE ALL REQUIRED SYSTEM LICENSES FOR A TWO YEAR PERIOD. AT A MINIMUM PROVIDE 5 USER
- 6. PROVIDE A ONE YEAR WARRANTY ON ALL PARTS, LABOR AND PROGRAMMING.

7. PROVIDE 24 HOUR SERVICE THAT WILL RESPOND WITHIN 3-HOURS OF NOTIFICATION.

- 8. PROVIDING CONTROL PANELS FOR ALL DDC CONTROLLERS AND AN AUXILIARY CONTROL PANEL FOR ALL ANCILLARY CONTROL DEVICES.
- 9. PROVIDE APPLICATION SPECIFIC NATIVE BACNET TERMINAL UNIT CONTROLLERS FOR TERMINAL UNITS (VAV, FAN COIL UNITS ETC.) INCLUDING ASSOCIATED ROOM TEMPERATURE SENSORS WITH LED DISPLAY, AND CO2 SENSORS. CONTROLLER SHALL CONFORM TO THE LATEST VERSION OF ANSI/ ASHRAE 135 BACNET APPLICATION SPECIFIC CONTROLLER. CONTROLLER SHALL BE A MICROPROCESSOR-BASED, 32 BIT, MULTI-TASKING, REAL-TIME DIGITAL CONTROL PROCESSOR CAPABLE OF STAND-ALONE OPERATION FOR CONTROL OF MECHANICAL TERMINAL UNITS, I.E. VAV TERMINAL UNITS, FAN POWERED BOXES.
- 10. ENGINEERING, SUBMITTALS, AS-BUILT DRAWINGS, AND OPERATION AND MAINTENANCE MANUALS.
- 11. PROVIDE AND INSTALL ALL DDC PANEL AND DEVICE ENCLOSURES.
- 12. PROVIDE GAUGES, INDICATING DEVICES, CONTROL VALVES, ELECTRIC AND ELECTRONIC CONTROL ACCESSORIES, AND OTHER CONTROL SYSTEM DEVICES.
- 13. PROVIDE SETUP / PROGRAMMING, CALIBRATION AND START-UP SERVICES OF ALL DDC AND NON-DDC TEMPERATURE CONTROL SYSTEMS. PROVIDE COMPLETE FULL AUTOMATED GRAPHICS PROGRAMMING OF SYSTEM FRONT END UTILIZING BUILDING FLOOR PLAN AND AUTOMATED FULL COLOR GRAPHICS.
- 14. PROVIDE SITE SUPERVISION OF TEMPERATURE CONTROL WORK AND COORDINATION WITH RELATED ELECTRICAL, FIRE ALARM WORK AND PACKAGED CONTROLS.
- 15. PROVIDE ALL CONTROL WIRING AND ELECTRICAL COMPONENTS NECESSARY FOR EACH SYSTEM TO PERMIT AUTOMATIC OR INTERLOCKED OPERATION, SUCH AS: AIR COOLED CONDENSING UNITS, HIGH LEVEL ALARM CIRCUITS, DAMPER END SWITCHES.
- 16. ALL OTHER WORK AND COMPONENTS REQUIRED FOR COMPLETE AND OPERATIONAL TEMPERATURE CONTROL SYSTEMS, INCLUDING PROVISIONS FOR ALL WIRING, SOFTWARE, HARDWARE, REQUIRED
- ACCESSORIES, PROGRAMMING, GRAPHICS GENERATION, AND TRAINING. 17. START-UP, CALIBRATION, AND CHECKOUT OF SENSORS, TRANSDUCERS, THERMOSTATS, CONTROL VALVES, DAMPERS/DAMPER OPERATORS, METERS, AND ALL OTHER COMPONENTS PROVIDED.
- 18. TRAINING OF PERSONNEL TO FAMILIARIZE OPERATIONS STAFF WITH THE CONFIGURATION AND OPERATION OF THIS PROJECT'S INSTALLATIONS.

(DI) STATUS (DI) FAULT (DO) START/STOP RELIEF AIR RETURN AIR RETURN AIR STATIC RETURN STATIC AO) FAN SPEED DAMPER (N.C.) HUMIDITY TEMPERATURE PRESSURE PRESSURE RETURN AIR SMOKE DETECTOR F (OR ECM) OUTDOOR REFERENCE (PROTECTED FROM WIND) DPT MOUNTED AND PIPED BY CONTROLS CONTRACTOR EXHAUST AIR RETURN AIR EXHAUST FAN(S) STATUS COOLING RETURN AIR DAMPER (N.O.) STATUS (DI) FAULT AO COMPRESSOR STAGING MODULATING SUPPLY STATIC HEAT (0-10V) PRESSURE DO) START/STOP LOCATE 2/3 OUTDOOR AIR COIL DISCHARGE HIGH LIMIT OUTDOOR AIR OUTDOOR AIR AO) FAN SPEED DOWN MAIN TEMPERATURE **TEMPERATURE** HUMIDITY TEMPERATURE STATIC PRESSURE TEMPERATURE SUPPLY DUCT SUPPLY AIR SMOKE DETECTOR F (OR ECM) AFMS H-2 OUTDOOR AIR **FILTERS** NATURAL GAS HEATING COIL UNIT DIGITAL CONTROLLER W/ BACNET NOTE: T-1 AND H-1 ARE GLOBAL NOTE: T-2, T-3 AND AND T-4 ARE INTERFACE

MULTI-ZONE ROOFTOP UNIT CONTROL DIAGRAM (RTU-1 & 2)

ALL SETPOINTS ARE ADJUSTABLE THROUGH THE DDC

- 1. PROVIDE ALL CONTROLS AND DDC DEVICES REQUIRED FOR UNIT OPERATION AND MONITORING
- 2. THE ROOFTOP UNIT IS CONTROLLED BY A MICROPROCESSOR CONTROLLER WITH FULL BACNET MSTP INTERFACE PROVIDED WITH THE RTU. THE BMS CONTRACTOR SHALL WIRE AND MOUNT ALL REMOTE SENSORS PROVIDED WITH RTU. THE UNIT IS A VARIABLE AIR VOLUME UNIT.
- 3. THE UNIT ON-OFF-AUTO SWITCH IS NORMALLY IN THE AUTO POSITION. 4. IN THE OCCUPIED MODE, OUTDOOR AIR DAMPER GOES TO THE MINIMUM POSITION AND MAINTAINS THAT POSITION AS MEASURED BY THE AFMS. THE OUTDOOR
- AIR DAMPER POSITION IS ADJUSTED THROUGH THE DDC TO MAINTAIN CO2 LEVELS BELOW 950 PPM IN ALL SPACES WITH SENSORS. LOCAL ZONES FIRST OPEN VAV BOXES TO FULL OPEN AND THEN THE DDC SLOWLY OPENS THE OUTDOOR AIR DAMPER. 5. TEMPERATURE CONTROL: THE UNIT CYCLES STAGED DX COOLING, COMPARATIVE ENTHALPY ECONOMIZER AND MODULATING GAS HEAT TO MAINTAIN UNIT DISCHARGE AIR
- TEMPERATURE SETPOINT. THE DISCHARGE AIR TEMPERATURE (NORMALLY 55°F) IS AUTOMATICALLY RESET TO THE HIGHEST TEMPERATURE (MAX 70°F) TO MAINTAIN BOTH SPACE TEMPERATURE IN ALL ZONES AND RETURN AIR HUMIDITY OF 55% RH MAXIMUM. 6. THE UNIT CONTROLS MODULATE THE SUPPLY FAN MOTOR SPEED THROUGH THE UNIT PROVIDED VFD TO MAINTAIN THE SUPPLY DUCT STATIC PRESSURE SET POINT.
- THE BALANCING CONTRACTOR DETERMINES THE PRESSURE SETTINGS. THE MINIMUM FAN CFM SHALL BE PER MANUFACTURER'S RECOMMENDATION. SPEED OFFSET WILL BE DETERMINED BY THE BALANCER AND SET UP BY CONTROLS CONTRACTOR.
- 8. ALL ALARMS ARE SENT TO THE DDC SYSTEM THROUGH THE BACNET INTERFACE. 9. THE UNIT OCCUPANCY SCHEDULE IS PROGRAMMED THROUGH THE DDC. THE UNIT IS NORMALLY IN OCCUPIED MODE TO MAINTAIN PRESSURE RELATIONSHIPS. ITEMS 10, 11 AND 12 MAY BE DISABLED BUT THE OPTION TO INCORPORATE THEM IS AVAILABLE.
- 10. OPTIMUM START CONTROL (MAY BE ENABLED OR DISABLED THROUGH THE DDC): THE SYSTEM WILL BE ENABLED WHENEVER THE SUPPLY FAN IS ENERGIZED. THE SUPPLY FAN WILL OPERATE UNDER A 365 DAY TIME SCHEDULE ADJUSTED BY AN OPTIMUM START CALCULATION, SUBJECT TO A MANUALLY RESET HEATING LEAVING AIR TEMPERATURE SAFETY LOW LIMIT. A SIGNAL FROM THE FIRE ALARM SYSTEM, AND RETURN AIR DUCT SMOKE DETECTORS.
- 11. UNOCCUPIED MODE: THE OUTDOOR AIR AND RELIEF AIR DAMPERS ARE FULLY CLOSED AND THE RETURN AIR DAMPER IS OPEN. THE SUPPLY AND RELIEF FANS ARE OFF AND THE FLOW CONTROL SIGNALS ARE SET TO MINIMUM VALUE. THE UNIT CYCLES ON STARTING AT MINIMUM POSITION, TO MAINTAIN SPACE SETPOINTS.
- 12. MORNING WARMUP MODE (MAY BE ENABLED OR DISABLED THROUGH THE DDC): WHEN THE UNIT STARTS-UP AFTER THE UNOCCUPIED PERIOD AND THE RETURN AIR TEMPERATURE IS BELOW THE WARM-UP MODE SETPOINT, 65 DEGREES F. (ADJUSTABLE), THE WARM-UP MODE IS IN EFFECT. THE OUTDOOR AIR AND RELIEF AIR DAMPERS WILL CLOSE FULLY. THE WARM-UP MODE WILL REMAIN IN EFFECT UNTIL OCCUPANCY PERIOD. ALL THE VAV BOXES SHALL BE 100% OPEN UNTIL SPACE
- 13. START-UP CONTROL: UPON START-UP OF THE SYSTEM AFTER MORNING WARM UP MODE. THE HEATING AND COOLING MODES WILL INITIATE AND OUTDOOR AIR DAMPERS WILL GRADUALLY OPEN APPROPRIATELY AS THE SYSTEM RAMPS UP TO THE CONTROL SETPOINT. START-UP PARAMETERS WILL BE SET TO MINIMIZE OVERSHOOT AND UNDERSHOOT. VAV BOXES WILL CONTROL TO MAINTAIN SPACE TEMPERATURE.
- 1. LOW TEMPERATURE PROTECTION: IF THE LOW TEMPERATURE PROTECTION THERMOSTAT SENSES TEMPERATURES BELOW 40°F, THE UNIT OUTDOOR AIR DAMPER FULLY CLOSES AND THE RETURN AIR DAMPER FULLY OPENS AND AN ALARM IS SENT TO THE DDC. THE LOW LIMIT THERMOSTAT MUST BE MANUALLY RESET.
- 2. FIRE PROTECTION: DUCT SMOKE DETECTOR, PROVIDED BY THE FIRE ALARM CONTRACTOR, LOCATED IN THE RETURN DUCT WILL STOP THE UNIT VIA A HARDWIRED INTERLOCK IF SMOKE IS SENSED AND SEND A SIGNAL TO THE BUILDING FIRE ALARM SYSTEM. SMOKE DETECTORS MUST BE MANUALLY RESET.
- 3. ALARM MONITORING: FAN SYSTEM FAILURE ALARM: AN ALARM IS GENERATED WHENEVER THE SUPPLY OR RELIEF FAN FAILS TO RESPOND TO START-STOP COMMANDS AS DETERMINED BY THE ASSOCIATED CURRENT SENSOR. IF A FAN VFD HAS FAILED AND THE SYSTEM HAS BEEN STARTED IN A MANUAL MODE AN ALARM IS GENERATED AT THE DDC AND A GLOBAL COMMAND SHALL BE ISSUED THROUGH THE DDC SYSTEM TO SET THE FLOW RATE AT ALL ASSOCIATED VAV BOXES TO THEIR MAXIMUM CFM VALUES. THE DUCTWORK SHALL BE PROTECTED BY A HIGH LIMIT DUCT PRESSURE CONTROLLER THAT SHALL STOP THE ROOFTOP UNIT SHOULD THE HIGH-PRESSURE LIMIT BE EXCEEDED.
- 4. FILTER MONITORING: THE DIFFERENTIAL PRESSURE SENSOR ACROSS THE RESPECTIVE FILTER GENERATES A DIRTY FILTER ALARM IN THE DDC SYSTEM IF THE DIFFERENTIAL PRESSURE EXCEED THE FILTER MANUFACTURERS RECOMMENDED PRESSURE DROP.
- 5. AUTOMATIC SHUTDOWN/RESTART: WHEN THE UNIT IS SHUTDOWN ON POWER FAILURES AND THE POWER IS RESTARTED, IT SHALL BE AUTOMATICALLY RESTARTED THROUGH A SEQUENCE PROGRAM TO PREVENT OVERLOADING OF THE ELECTRICAL DISTRIBUTION SYSTEM. IF ANY SAFETY DEVICE SHUTS THE UNIT DOWN IT SHALL BE

SCR CONTROL ELECTRICAL REHEAT COIL SUPPLY PRIMARY AIR FROM RTU TO SPACE FAN POWERED BOX INDUCED AIR FROM PLENUM SENSOR, LOCATE MIN. 12" FROM REHEAT COIL TO DDC DDC SPACE TEMPERATURE SENSOR WITH SETPOINT ADJUSTMENT

TYPICAL SERIES FAN POWERED BOX WITH

SEQUENCE OF OPERATION:

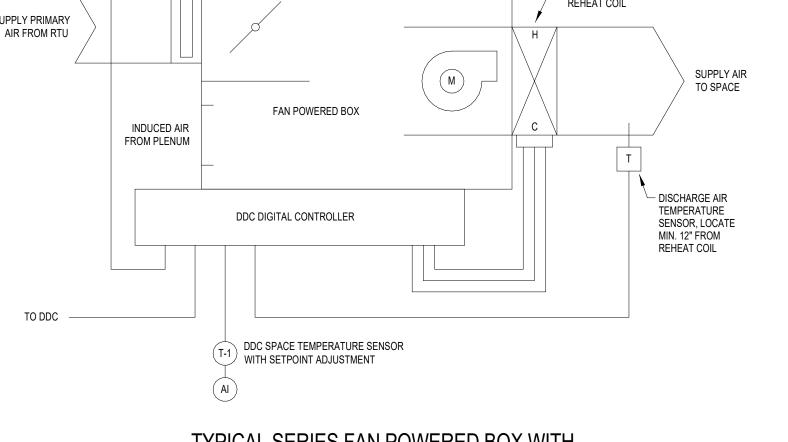
UNSAFE CONDITIONS.

- 1. SPACE SENSOR T-1 SHALL, THROUGH THE DDC, MODULATE THE PRIMARY SUPPLY AIR DAMPER IN SEQUENCE WITH THE SCR ELECTRIC REHEAT COIL WITH SERIES FAN TO MAINTAIN THE DESIRED SPACE TEMPERATURE.
- 2. WHEN SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE BOX DDC CONTROLLER SHALL MODULATE THE PRIMARY SUPPLY AIRFLOW BETWEEN ITS MINIMUM AND MAXIMUM
- SETTING TO MAINTAIN SPACE TEMPERATURE. 3. WHEN THE SPACE TEMPERATURE FALLS BELOW SETPOINT, THE BOX DDC CONTROLLER
- SHALL REDUCE THE PRIMARY SUPPLY AIRFLOW TO ITS MINIMUM SETTING AND MODULATE THE SCR ELECTRIC REHEAT COIL TO MAINTAIN SPACE TEMPERATURE.
- 4. THE SCR ELECTRIC REHEAT COIL HIGH LIMIT AND AIR FLOW SAFETY CONTROLS PREVENT
- 5. THE BOX MINIMUM AND MAXIMUM AIRFLOW SETTINGS SHALL BE AS INDICATED ON THE FAN POWERED BOX SCHEDULE.

6. SPACE TEMPERATURE SETPOINTS SHALL BE AS FOLLOWS (ALL ADJUSTABLE):

HEATING OCCUPIED SETPOINT = 70°F HEATING UNOCCUPIED SETPOINT = 62°F COOLING OCCUPIED SETPOINT = 74°F COOLING UNOCCUPIED SETPOINT = 80°F

- 7. THE BOX OCCUPIED/UNOCCUPIED SCHEDULE CAN BE PROGRAMMED THROUGH THE DDC. THE SERIES FAN RUNS CONTINUOUSLY WHEN THE BUILDING IS OCCUPIED. THE FAN IS CYCLED INTERMITTENTLY DURING THE UNOCCUPIED PERIOD TO MEET THE UNOCCUPIED SET POINT. WHEN THE FAN RUNS DURING THE UNOCCUPIED CYCLE, THE ELECTRIC HEATING COIL IS ACTIVATED AND DEACTIVATES ON FAN SHUTDOWN. THE PRIMARY AIR DAMPER IS
- IN THE CLOSED POSITION AND ONLY OPENS TO MAINTAIN SPACE SETBACK TEMPERATURE 8. THE BOX DDC CONTROLLER SHALL RECALIBRATE THE AIRFLOW SENSOR ONCE A WEEK MINIMUM. THE RECALIBRATION PROCESS SHALL BE STAGGERED AMONGST THE TERMINAL UNITS SO THE DUCT STATIC PRESSURE DOES NOT EXCEED LIMITS.
- 9. POSITION FEEDBACK (CONTROL SIGNAL) FOR FAN POWERED BOX DAMPER AND SCR ELECTRIC COIL POWER LEVEL SHALL BE DISPLAYED WITH SYSTEM GRAPHICS.
- 10. WHEN A SMOKE DETECTOR ON THE FLOOR IS ACTIVATED THE FAN IS SHUT DOWN THROUGH THE DDC AND FIRE ALARM SYSTEM.



DDC SPACE TEMPERATURE SENSOR

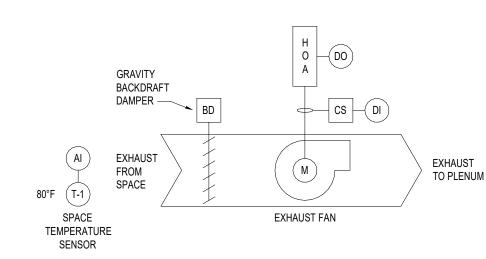
WITH SETPOINT ADJUSTMENT

- 1. SPACE SENSOR T-1 SHALL, THROUGH THE DDC, MODULATE THE VARIABLE AIR VOLUME
- 3. WHEN THE SPACE TEMPERATURE FALLS BELOW SETPOINT, THE BOX DDC CONTROLLER
- ELECTRIC REHEAT COIL TO MAINTAIN SPACE TEMPERATURE.
- UNSAFE CONDITIONS.
- VAV UNIT SCHEDULE.

HEATING OCCUPIED SETPOINT = 70°F

HEATING UNOCCUPIED SETPOINT = 62°F COOLING OCCUPIED SETPOINT = 74°F COOLING UNOCCUPIED SETPOINT = 80°F

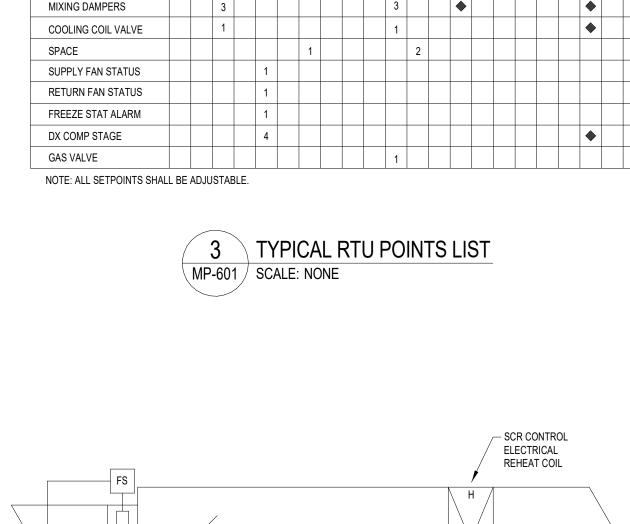
- MAINTAIN SPACE SETBACK TEMPERATURES.
- 8. THE BOX DDC CONTROLLER SHALL RECALIBRATE THE AIRFLOW SENSOR ONCE A WEEK MINIMUM. THE RECALIBRATION PROCESS SHALL BE STAGGERED AMONGST THE TERMINAL UNITS SO THE DUCT STATIC PRESSURE DOES NOT EXCEED LIMITS.
- 9. POSITION FEEDBACK (CONTROL SIGNAL) FOR VAV BOX DAMPER AND SCR ELECTRIC COIL



TEMPERATURE CONTROLLED EXHAUST FAN CONTROL DIAGRAM \ MP-601 / SCALE: NONE

SEQUENCE OF OPERATION (EF-1)

- 2. THE SPACE TEMPERATURE SENSOR (T-1) SHALL CYCLE THE FAN TO MAINTAIN
- 3. FAN STATUS IS REPORTED TO THE DDC THROUGH A CURRENT SENSOR.



OUTPUT

AIR HANDLING UNIT

SUPPLY FAN

RELIEF FAN

SUPPLY AIR

RETURN AIR

OUTSIDE AIR

MIXED AIR

SUPPLY AIR

| DIGITAL | ANALOG | DIGITAL

INPUT

SOFTWARE

•

- DISCHARGE AIR

TEMPERATURE

MIN. 12" FROM

REHEAT COIL

SENSOR, LOCATE

TYPICAL VARIABLE AIR VOLUME BOX WITH ELECTRIC REHEAT COIL CONTROL DIAGRAM

SEQUENCE OF OPERATION:

- BOX DAMPER IN SEQUENCE WITH THE SCR ELECTRIC REHEAT COIL TO MAINTAIN THE DESIRED SPACE TEMPERATURE.
- 2. WHEN SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE BOX DDC CONTROLLER SHALL MODULATE THE SUPPLY AIRFLOW BETWEEN ITS MINIMUM AND MAXIMUM SETTING TO MAINTAIN SPACE TEMPERATURE.
- SHALL REDUCE THE SUPPLY AIRFLOW TO ITS MINIMUM SETTING AND MODULATE THE SCR
- 4. THE SCR ELECTRIC REHEAT COIL HIGH LIMIT AND AIR FLOW SAFETY CONTROLS PREVENT
- 5. THE BOX MINIMUM AND MAXIMUM AIRFLOW SETTINGS SHALL BE AS INDICATED ON THE

6. SPACE TEMPERATURE SETPOINTS SHALL BE AS FOLLOWS (ALL ADJUSTABLE):

- 7. THE BOX OCCUPIED/UNOCCUPIED SCHEDULE CAN BE PROGRAMMED THROUGH THE DDC. DURING THE UNOCCUPIED MODE THE BOX IS FULLY CLOSED AND ONLY OPENS TO
- POWER LEVEL SHALL BE DISPLAYED WITH SYSTEM GRAPHICS.

- 1. THE FAN HAND OFF AUTO SWITCH IS NORMALLY IN THE AUTO POSITION
- THE SPACE AT 80°F (ADJUSTABLE).

 WIRING BY INDOOR AC UNIT **EVAPORATOR** TCC (TYP.) M—AOPUMP ——— UNIT CONTROL

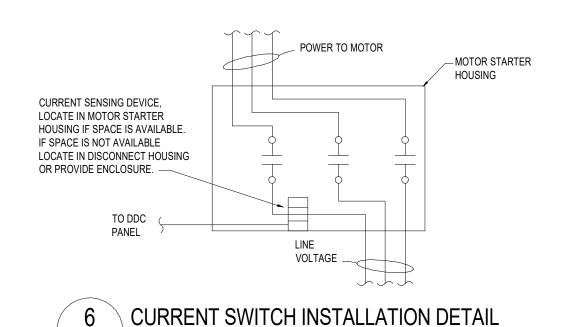
OUTDOOR UNIT

CONDENSER

\ PACKAGED SPLIT SYSTEM AC UNIT CONTROL DIAGRAM MP-601 / SCALE: NONE

1. TEMPERATURE CONTROLS CONTRACTOR (TCC) SHALL PROVIDE FIELD WIRING BETWEEN

- INDOOR UNIT CONTROLS AND THE REMOTE OUTDOOR CONDENSER. REFER TO MECH FLOOR PLANS FOR LOCATION OF UNITS. 2. TC CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR EXACT TERMINATIONS AND WIRING REQUIREMENTS.
- 3. TEMPERATURE HIGH LEVEL ALARM SHALL ALARM TO DDC. MOISTURE HIGH LEVEL ALARM (MOUNTED IN CONDENSATE DRAIN PAN) SHALL ALARM TO DDC. MOISTURE ALARM SHALL SHUT DOWN AC UNIT.
- 4. CONDENSATE PUMP (WHERE REQUIRED) HAS SELF CONTAINED LEVEL CONTROL. PUMP RECEIVES POWER FROM AC UNIT. PROVIDE ALL REQUIRED TRANSFORMERS, WIRING, ETC.



 $\overline{\mathsf{MP-601}}$ SCALE: NONE

SUN SHIELD - OUTSIDE AIR TEMPERATURE SENSOR —(AI) ONE SET OF SENSORS REQUIRED FOR ENTIRE BUILDING OUTSIDE AIR HUMIDITY SENSOR

OUTDOOR AIR SENSOR INSTALLATION DETAIL MP-601 / SCALE: NONE

BUILDING

8 START / STOP CONTROL DIAGRAM

- 1. THE FAN HAND OFF AUTO SWITCH IS NORMALLY IN THE AUTO POSITION
- 2. THE FAN IS SCHEDULED ON AND OFF THROUGH THE DDC AND IS NORMALLY ON WHEN THE BUILDING IS OCCUPIED.

EXHAUST FAN

3. WHEN THE FAN IS SWITCHED ON, INTERLOCKED MOTORIZED DAMPER IN THE FAN CURB

TRAY OPENS. 4. FAN STATUS IS REPORTED TO THE DDC THROUGH A CURRENT SENSOR.

TYPICAL EXHAUST FAN WITH SCHEDULED MP-601 / SCALE: NONE SEQUENCE OF OPERATION (EF-2 & 3)

OUTDOORS

SHEET TITLE

Scale Varies PROJECT# 2024-010.00

MP-601

SHEET#

Temperature Controls

ROSSETTI

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DETROIT, MICHÍGAN 48226

ROSSETTI.COM 313.463.5151

West Michigan
Hispanic
Chamber of

Commerce- HQ

MAENGINEERING

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DATE

01/24/2025

02/20/2025

PROJECT

1111 Godfrey

CONSULTANT

180 High Oak Road

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2 Addendum 1

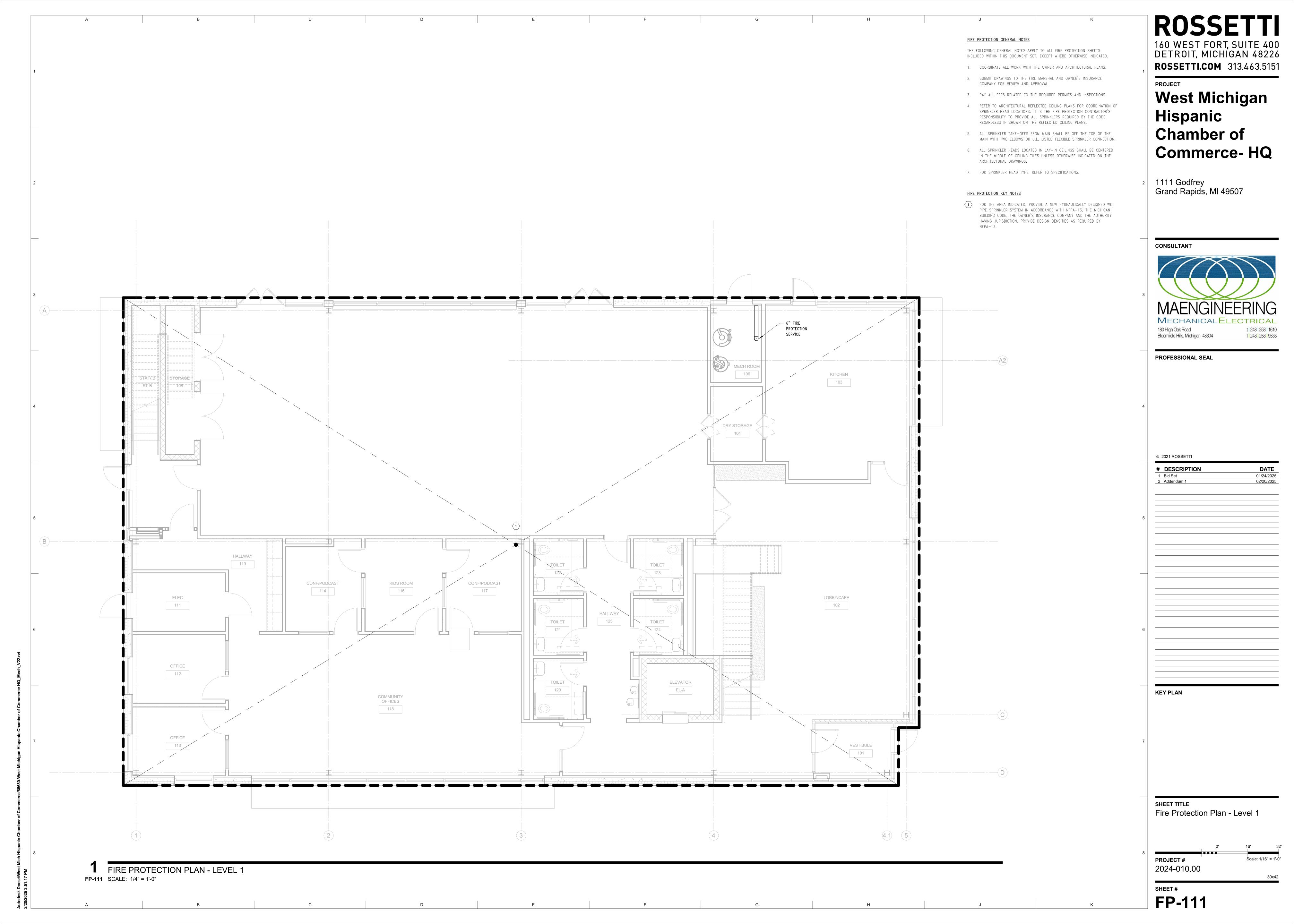
KEY PLAN

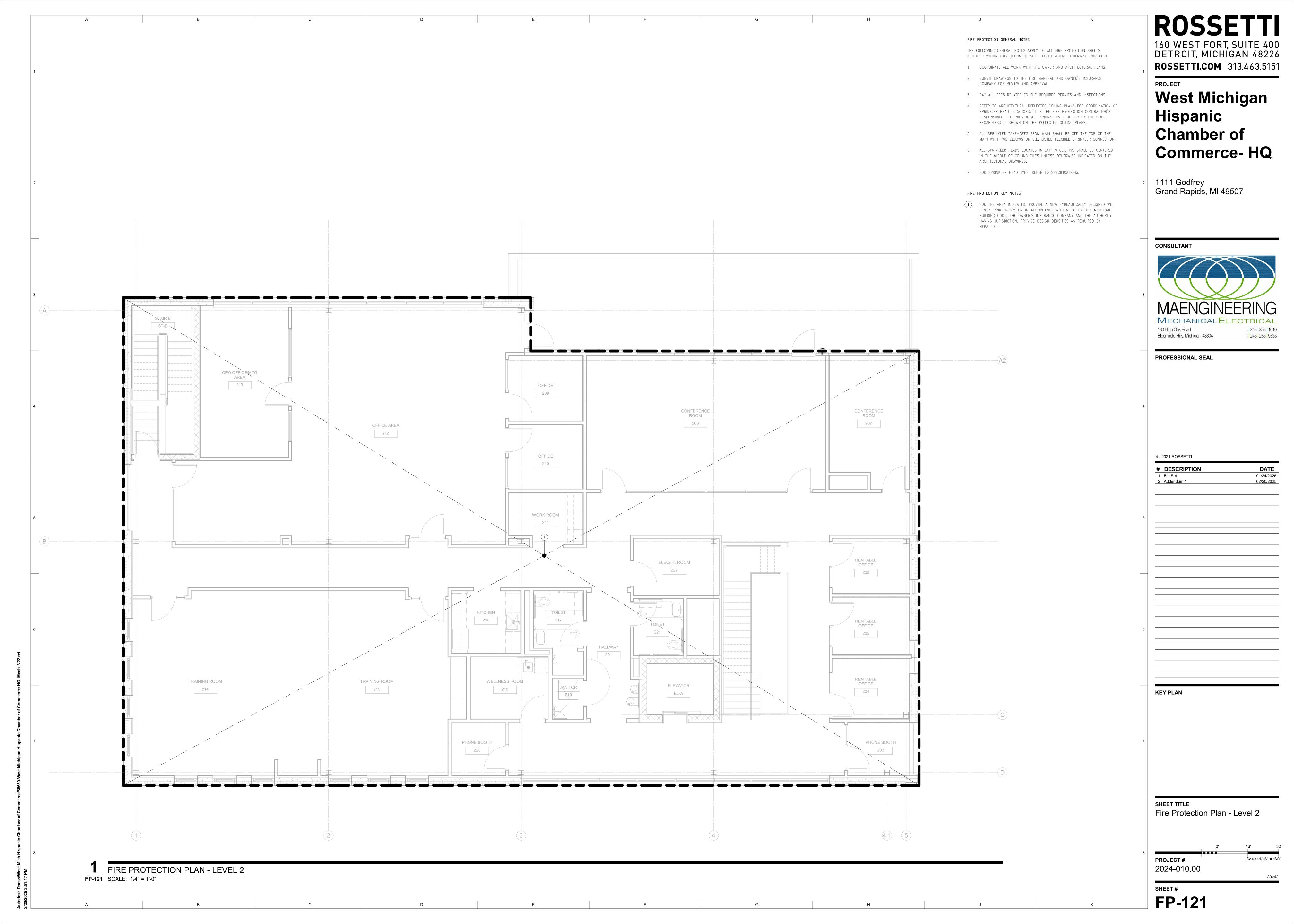
DESCRIPTION

Bloomfield Hills, Michigan 48304

PROFESSIONAL SEAL

Grand Rapids, MI 49507





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BREAKER	MAX. CIRCUIT	MAXIM	UM LENG	TH IN FE	EET																					
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800	640	_	_	_	-	_	_	_	-	_	_	_	_	_	_	_	_	-	-	_	874	1177	1360	_	_	_
1000	800	_	_	_	-	-	_	_	-	_	-	_	-	_	-	-	-	-	-	_	_	942	1088	1569	_	_
1200	960	_	_	_	-	-	-	-	-	_	_	_	-	-	-	-	-	-	-	-	_	785	907	1307	-	_
1600	1200	_	-	_	-	_	-	_	-	_	_	-	-	_	_	-	_	ı	ı	_	_	_	-	980	1226	1307
1800	1440	_	_	_	-	_	_	_	_	_	_	_	_	_	_	-	_	ı	ı	_	_	_	_	_	1089	1177
2000	1600	-	_	_	_	_	-	_	_	_	_	-	_	_	_	-	_	-	1	-	-	_	-	_	980	1137

208V. SINGLE PHASE CIRCUIT LENGTH TABLE												
BREAKER AMPACITY	MAX. CIRCUIT LOAD	MAXIMUM LENGTH IN FEET										
(AMPS)	(AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4						
20	4	380	605	964	-	-						
	8	190	302	482	765	-						
	12	127	202	321	510	810						
	16	95	151	241	382	607						
30	24	_	101	161	255	405						
40	32	_	_	121	191	304						
50	40	_	_	_	153	243						
60	48	_	_	_	_	202						

BREAKER AMPACITY	MAX. CIRCUIT	MAXIM	JM LENG	TH IN FI	EET	
(AMPS)	LOAD (AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4
20	4	220	349	556	882	-
	8	110	174	278	441	701
	12	73	116	185	294	467
	16	55	87	139	221	350
30	24	_	58	93	147	234
40	32	_	_	70	110	175
50	40	_	-	_	88	140
60	48	_	_	_	_	117

208V.	THREE P	HASE	CIRCUI	T LENG	GTH TA	BLE
BREAKER AMPACITY	MAX. CIRCUIT LOAD	MAXIM	UM LENG	TH IN FI	EET	
(AMPS)	(AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4
20	4	439	698	1113	-	-
	8	220	349	557	883	_
	12	127	233	371	589	935
	16	95	175	278	442	701
30	24	_	116	186	294	468
40	32	_	_	139	221	351
50	40	_	-	-	177	281
60	48	_	_	_	_	234

	FEEDER	& BRAN	NCH CIR Nonline	CUIT SIZING AR LOADS	SCHEDULE -	-
OVERCURREN #	IRE SIZE - /	AWG OR KCM	IL	CONDUIT SIZE	-	
DEVICE RATING (AMPERES)		E.G.	4 WIRE+G (2PH & 2N)	5 WIRE+G (NOTE-7)	6 WIRE+G (3PH & 3N)	NOTE
15-20	12	12	3/4"	3/4"	3/4"	
25-30	10	10	3/4"	3/4"	3/4"	
35-40	8	10	3/4"	1"	1"	
45-50	8(6)	10	3/4"(1")	1"	1"(1 1/4")	
60	6(4)	10	1"(1 1/4")	1"(1 1/4")	1 1/4"	
70	6(4)	8	1"(1 1/4")	1"(1 1/4")	1 1/4"	
80-90	4(2)	8	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")	
100	3(2)	8	1 1/4"	1 1/2"	1 1/2"	
110	2(1)	6	1 1/2"	2"	2"	
125	1(1/0)	6	1 1/2"(2")	2"	2"	
150	1/0	6	2"	2"	2"	
175	2/0	6	2"	2"	2 1/2"	
200	3/0	6	2"	2 1/2"	2 1/2"	
225	4/0	4	2 1/2"	2 1/2"	3"	
250	250	4	3"	3"	3"	
300	350	4	3"	3 1/2"	3 1/2"	
350	500	3	3 1/2"	4"	4"	
400	500	3	3 1/2 "	4"	4"	
450	2-4/0	2-2	2-2 1/2"	2-2 1/2"	2-3"	
500	2-250	2-2	2-3"	2-3"	2-3"	
600	2-350	2-1	2-3"	2-3 1/2"	2-3 1/2"	
700	2-500	2-1/0	2-3 1/2"	2-4"	2-4"	
800	2-500	2-1/0	2-3 1/2"	2-4"	2-4"	
1000	3-400	3-2/0	3-3"	3-3 1/2"	3-4"	
1200	4-350	4-3/0	4-3"	4-3 1/2"	4-3 1/2"	
1600	5-400	5-4/0	5-3"	5-3 1/2"	5-4"	
2000	6-400	6-250	6-3"	6-3 1/2"	6-4"	
	•				•	

	IRE SIZE -	AWG OR KC	/IL	CONDUIT SIZE		
VICE RATING (AMPERES)	PHASE & NEUTRAL	E.G.	2 WIRE+G	3 WIRE+G	4 WIRE+G (3PH & 1N)	NOT
15-20	12	12	3/4"	3/4"	3/4"	
25-30	10	10	3/4"	3/4"	3/4"	
35-40	8	10	3/4"	3/4"	3/4"	
45-50	8(6)	10	3/4"	3/4"	3/4"(1")	
60	6(4)	10	3/4"(1")	3/4"(1")	1"(1 1/4")	
70	6(4)	8	3/4"(1")	3/4"(1")	1"(1 1/4")	
80-90	4(2)	8	1"	1"(1 1/4")	1 1/4"	
100	3(2)	8	1"(1 1/4")	1 1/4"	1 1/4"	
110	2(1)	6	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")	
125	1(1/0)	6	1 1/4"	1 1/2"	1 1/2"(2")	
150	1/0	6	1 1/4"	1 1/2"	2"	
175	2/0	6	1 1/2"	2"	2"	
200	3/0	6	1 1/2"	2"	2"	
225	4/0	4	2"	2"	2 1/2"	
250	250	4	2"	2 1/2"	2 1/2"	
300	350	4	2 1/2"	3"	3"	
350	500	3	3"	3"	3 1/2"	
400	500	3	3"	3"	3 1/2 "	
450	2-4/0	2-2	2-2"	2-2"	2-2 1/2"	
500	2-250	2-2	2-2"	2-2 1/2"	2-2 1/2"	
600	2-350	2-1	2-2 1/2"	2-3"	2-3"	
700	2-500	2-1/0	2-3"	2-3"	2-3 1/2"	
800	2-500	2-1/0	2-3"	2-3"	3-3 1/2"	
1000	3-400	3-2/0	3-2 1/2"	3–3"	3-3"	
1200	4-350	4-3/0	4-2 1/2"	4-3"	4-3"	
1600	5-400	5-4/0	5-2 1/2"	5-3"	5-3"	
2000	6-400	6-250	6-2 1/2"	6-3"	6-3"	

	TRANSFORMER CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE TYPE (NOTE 6)						
TRANSF. KVA	PRIMARY		SECONDAR	<u> </u>			
IKANSI. KVA	SWITCH/FUSE OR CIRCUIT BREAKER	PRIMARY FEEDER	SWITCH/FUSE OR CIRCUIT BREAKER	SECONDARY FEEDER			
9	30/20A.	20A., 3W.	30/30A.	30A., 4W.			
15	30/25A.	25A., 3W.	60/60A.	60A., 4W.			
30	60/45A.	45A., 3W.	100/100A.	100A., 4W.			
45	100/70A.	70A., 3W.	200/175A.	175A., 4W.			
75	200/125A.	125A., 3W.	400/300A.	300A., 4W.			
112 1/2	200/175A.	175A., 3W.	400/400A.	400A., 4W.			
150	400/225A.	225A., 3W.	600/600A.	600A., 4W.			
225	400/350A.	350A., 3W.	800/800A.	800A., 4W.			
300	600/500A.	500A., 3W.	1200/1000A.	1000A., 4W.			

TRANSFORMER CIRCUIT SIZING SCHEDULE - NONLINEAR LOAD TYPE (NOTE 6)					
TRANSF. KVA	PRIMARY	CIRCUIT	SECONDAR	Y CIRCUIT	
IKANSI. KVA	SWITCH/FUSE OR CIRCUIT BREAKER	PRIMARY FEEDER	SWITCH/FUSE OR CIRCUIT BREAKER	SECONDARY FEEDE	
9	30/20A.	20A., 3W.	30/30A.	30A., 5WNL	
15	30/25A.	25A., 3W.	60/60A.	60A., 5WNL	
30	60/45A.	45A., 3W.	100/100A.	100A., 5WNL	
45	100/70A.	70A., 3W.	200/175A.	175A., 5WNL	
75	200/125A.	125A., 3W.	400/300A.	300A., 5WNL	
112 1/2	200/175A.	175A., 3W.	400/400A.	400A., 5WNL	
150	400/225A.	225A., 3W.	600/600A.	600A., 5WNL	
225	400/350A.	350A., 3W.	800/800A.	800A., 5WNL	

MOUNTING HEIGHTS

EQUIPMENT OR OUTLETS	ELEVATIONS
WALL SWITCHES	3'-9" AFF
RECEPTACLES	1'-6" AFF
TELECOMMUNICATIONS OUTLETS	1'-6" AFF
TELECOMMUNICATIONS OUTLETS - WALL PHONE	3'-9" AFF
CLOCK OUTLETS	7'-6" AFF
TV OUTLETS	1'-6" AFF
FIRE ALARM — PULL STATIONS	3'-9" AFF
FIRE ALARM - SPEAKERS, VISUAL UNITS, HORNS	7'-0" AFF
PUSHBUTTONS	3'-9" AFF
DISCONNECT SWITCHES	5'-6" AFF
MOTOR STARTERS	5'-6" AFF
PANELS & CABINETS	6'-0" TO TOP
VOLUME CONTROLS	3'-9" AFF
DIMMERS	3'-9" AFF
INDIVIDUAL CIRCUIT BREAKERS	5'-6" TO TOP
ACCESS CONTROL DEVICES	3'-9" AFF

MOUNTING HEIGHT NOTES: 1. ALL ELEVATIONS ARE TO CENTER LINE OF DEVICE, UNLESS

2. REFER TO ARCHITECTURAL ELEVATION DRAWINGS FOR COORDINATION WITH

CIRCUIT MAXIMUM DISTANCE TABLES

- 1. CIRCUIT MAXIMUM DISTANCE IS BASED ON NEC CHAPTER 9, TABLE 8
 CONDUCTOR PROPERTIES FOR COATED COPPER CONDUCTORS AT 75
 DEGREES CELSIUS.
- 2. MAXIMUM CIRCUIT LOAD FOR DISTANCE IS BASED ON NEC 220-10(b)
- CIRCUIT SIZING SCHEDULES NOTES: 1. BASED ON THHN/THWN, 90°., 600V., INSULATED, COPPER WIRE APPLIED AT 75° FOR TERMINATIONS RATED AT 60°C/75°C AND 75°C. FOR TERMINATIONS RATED AT 60°C PROVIDE WIRE AND CONDUIT SIZES INDICATED IN PARENTHESIS.
- 2. BASED ON WIRE OUTSIDE DIAMETERS AND RIGID METALLIC CONDUIT INSIDE DIAMETERS AS PROVIDED IN THE NEC. DO NOT REDUCE CONDUIT SIZE FOR NON-RIGID METALLIC APPLICATION. REFER TO NEC FOR CONDUIT TYPES MORE RESTRICTIVE THAN RIGID
- 3. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC.
- 4. BASED ON MOTOR RUNNING OVERLOAD PROTECTION PROVIDED BY THERMAL OVERLOAD RELAYS.
- 5. MOTOR STARTING TYPE BASED ON 460V., 3 PHASE, FULL VOLTAGE NON- REVERSING EXCEPT FOR MOTORS SIZED 75HP OR GREATER WHICH ARE BASED ON 460V., 3 PHASE, PART WINDING REDUCED VOLTAGE STARTING.
- 6. TRANSFORMER CIRCUITS BASED ON 480V TO 208/120V., 3 PHASE, 4 WIRE, DRY TYPE. . PROVIDE THREE PHASE WIRES AND ONE DOUBLE AMPACITY NEUTRAL FOR
- 110 AMPACITY CIRCUITS AND LESS. PROVIDE THREE PHASE WIRES AND TWO NEUTRAL WIRES, SIZES AS INDICATED FOR 125 AMPACITY CIRCUITS AND GREATER.
- 8. FOR ALL CONDUITS AND WIRES INSTALLED EXPOSED IN DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS, APPLY THE CORRECTION FACTORS PER NEC 208 TABLE 310.15(B)(2)(c) FOR AMBIENT

	MOTOR CI (FOR 460V.		SIZING S MOTORS) (NO		E
	SWITCH/FUSE	CIRCUIT	STARTER	С	40
P	3411011/1031	BREAKER	SIZE/TYPE	PHASE	

	V	.,	, (
MOTOR HP	SWITCH/FUSE	CIRCUIT BREAKER	STARTER	C	ONDUIT & W	
MUTUR HP	3#11011/11032	BREAKER	SIZE/TYPE	PHASE	E.G.	CONDUIT
1/2	30/3A.	3A	1	12	12	3/4"
3/4	30/3A.	6A	1	12	12	3/4"
1	30/6A.	6A	1	12	12	3/4"
1 1/2	30/6A.	10A	1	12	12	3/4"
2	30/6A.	10A	1	12	12	3/4"
3	30/10A.	15A	1	12	12	3/4"
5	30/15A.	20A	1	12	12	3/4"
7 1/2	30/20A.	30A	1	12	10	3/4"
10	30/25A.	35A	1	12	10	3/4"
15	30/30A.	50A	2	10	10	3/4"
20	60/40A.	60A	2	8	10	3/4"
25	60/50A.	75A	2	6	10	1"
30	60/60A.	100A	3	6	10	1"
40	100/80A.	125A	3	4	8	1 1/2"
50	100/100A.	150A	3	3	8	1 1/2"
60	200/125A.	175A	4	1	6	1 1/2"
75	200/150A.	200A	4	1/0	6	1 1/2"
100	200/200A.	225A	4	2/0	6	2"
125	200/200A.	225A	5	3/0	6	2"
150	400/250A.	300A	5	4/0	4	2 1/2"
200	400/350A.	400A	5	350	4	3"
	•					

GENERAL NOTES: (APPLY TO ALL ELECTRICAL DRAWINGS)

- 1. THIS IS A PHASED CONSTRUCTION PROJECT, COORDINATE WITH GC/CM AND ARCHITECT/OWNER AND OTHER TRADES FOR PHASING.
- ALUMINUM CONDUCTORS NOT TO BE USED FOR FEEDERS RATED SMALLER THAN 100A. FEEDER SIZES NOTED ON PLANS ARE FOR ALUMINUM AND COPPER.
- REFER TO ARCHITECTURAL SPECIFICATIONS FOR SCHEDULE OF ALTERNATES, COORDINATE ALL DEDUCT AND ADD ALTERNATE WORK REQUIREMENTS WITH ARCHITECT AND OTHER TRADES PRIOR TO BID.
- 4. COORDINATE WORK WITH ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL AND INTERIOR DESIGN DOCUMENT.
- 5. COORDINATE ELECTRICAL WORK REQUIREMENTS WITH OTHER TRADES, TENANT AND
- 6. SERVICES TO PORTIONS OF THE BUILDING OUTSIDE THE AREA OF WORK SHALL BE MAINTAINED AT ALL TIMES.
- '. COORDINATE SERVICES AND SCHEDULE SHUTDOWNS WITH THE LANDLORD.
- UL LISTED FIRESTOPPING TO BE PROVIDED FOR ALL RATED PENETRATIONS TO MAINTAIN THE RATING OF THE ASSEMBLY FOR ALL ELECTRICAL PENETRATIONS OF FIRE RATED WALLS, FLOORS AND CEILING ASSEMBLIES AS APPLICABLE.
- ELECTRICAL WORK SHALL COMPLY WITH ALL LOCAL AND STATE ELECTRICAL CODES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION (AHJ).

ELECTRICAL LEGEND

● POLE MOUNTED LIGHTING FIXTURE "A" FIXTURE TYPE



LED STRIP LIGHTING FIXTURE LED LIGHTING FIXTURE

HALF SHADED LIGHTING FIXTURES WITH BUILT-IN EMERGENCY BATTERIES
TO OPERATE LIGHTING FIXTURE FOR 90 MIN. - TYPICAL FOR ALL HALF
SHADED LIGHTING SYMBOLS
FULLY SHADED LIGHTING FIXTURES BUILT-IN EMERGENCY BATTERIES TO
OPERATE LIGHTING FIXTURE FOR 90 MIN. WITH NO LOCAL OR
AUTOMATIC LIGHTING CONTROL - NIGHT LIGHTS - TYPICAL FOR ALL
FULLY SHADED LIGHTING SYMBOLS
LED LIGHTING FIXTURES

OH LED WALL MOUNTED LIGHTING FIXTURE **⊗** EXIT LIGHTING FIXTURE

> S SINGLE POLE LIGHT SWITCH Se Double Pole Light Switch

S4 FOUR WAY LIGHT SWITCH Sk KEY SWITCH SP SWITCH WITH PILOT LIGHT

SWITCH WITH TIMER WITH MIN. 1 HOUR SETTING DUPLEX RECEPTACLE

DUPLEX RECEPTACLE — CONNECTED TO GENERATOR QUAD RECEPTACLE

QUAD RECEPTACLE - CONNECTED TO GENERATOR

GFR DUPLEX RECEPTACLE

GFR DUPLEX RECEPTACLE — CONNECTED TO GENERATOR

JUNCTION BOX HOOD OUTLET

RANGE OUTLET, 50A/2P, 3W, 125/250V, WITH GROUND (COORDINATE WITH EQUIPMENT PURCHASED)

DRYER OUTLET, 30A/2P, 3W, 125/250V, WITH GROUND, (COORDINATE WITH EQUIPMENT PURCHASED)

▼ COMBINATION DATA AND TELEPHONE OUTLET TELEPHONE OUTLET

 $oldsymbol{
abla}_{\mathsf{WAP}}$ wireless access point

FLUSH FLOOR BOX - SINGLE-GANG BOX WITH 1 DUPLEX OUTLET - POKE THROUGH, WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL. FLUSH FLOOR BOX - SINGLE-GANG BOX WITH 1 DUPLEX OUTLET WALKER #880CS1-1 FLOOR BOX OR SIMILAR.

FLUSH FLOOR BOX — SINGLE-GANG BOX WITH 1 DUPLEX OUTLET — POKE THROUGH, CONNECTED TO GENERATOR — WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH FLOOR BOX - TWO-GANG BOX WITH 2 DUPLEX OUTLETS - POKE THROUGH, WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH FLOOR BOX — SINGLE—GANG BOX WITH 2 DUPLEX OUTLETS — POKE THROUGH, CONNECTED TO GENERATOR — WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL. —

FLUSH FLOOR BOX - TYPE F2 - THREE-GANG BOX WITH 2 DUPLEX OUTLETS AND TELECOMM - POKE THROUGH, WIREMOLD EVOLUTION SERIES #6AT OR APPROVED EQUAL.

FLUSH FLOOR BOX — TYPE F4 — FURNITURE FEED POWER AND TELECOMM — POKE THROUGH, WIREMOLD EVOLUTION SERIES #8AT OR APPROVED EQUAL. FLUSH FLOOR BOX - TYPE F7 - THREE-GANG BOX WITH DUPLEX OUTLET AND TELECOMM - POKE THROUGH, WIREMOLD #RC7.

HR1 MULTI-SERVICE FLUSH FLOOR BOX FOR RAISED FLOOR - TYPE R1 - WITH (2)-20A DUPLEX RECEPTACLES, TELECOMM AND AV, WIREMOLD #EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH MOUNTED FURNITURE FEED BOXES FOR RAISED FLOOR SYSTEM - TYPE R2 - FOR CONNECTION TO SYSTEMS FURNITURE POWER AND TELECOMM, WIREMOLD #EVOLUTION SERIES OR APPROVED EQUAL.

F1 FLUSH FLOOR BOX - TYPE F7 - THREE-GANG BOX WITH 2 DUPLEX OUTLETS AND TELECOMM - WIREMOLD RFB SERIES #RFB4 OR APPROVED EQUAL.

TELEVISION OUTLET 4-SQUARE BOX - SINGLE GANG, 60" AFF EXCEPT AS NOTED; 1"CONDUIT TO BOX FROM ABOVE SUSPENDED CEILING.

CEILING MOUNTED DUPLEX RECEPTACLE, DATA/PHONE AND AV OUTLET CEILING MOUNTED DUPLEX RECEPTACLE

TIME CLOCK, SINGLE GANG BOX, 48"AFF, 3/4"C. TO BOX FROM ABOVE SUSPENDED CEILING, REQUIRES DUPLEX OUTLET NEARBY FOR POWER

MANUAL SINGLE PHASE MOTOR STARTER THREE PHASE COMBINATION MAGNETIC FUSIBLE MOTOR STARTER

NON-FUSIBLE DISCONNECT SWITCH CB CIRCUIT BREAKER DISCONNECT SWITCH

MOTOR - SINGLE PHASE MOTOR - THREE PHASE

LIGHTING AND/OR RECEPTACLE PANEL HOMERUN TO LIGHTING PANEL C CONTACTOR

CP CONTROL PANEL

INTERCOM UNIT, PBX-STYLE, FLUSH MOUNTED, PROVIDE 3/4"CONDUIT FROM ACCESSIBLE CEILING AREA TO 4"X4" DEEP BACK BOX.

TSC TOUCH SCREEN MUSHROOM TYPE EMERGENCY SHUT-OFF PUSHBUTTON

SMOKE DETECTOR HEAT DETECTOR

DUCT SMOKE DETECTOR CARD READER

EGRESS CARD READER MAGNETIC DOOR HOLDER

DOOR CONTACTS DOOR STATUS SENSOR

KNOXBOX F FIRE ALARM PULL STATION

FO FIRE ALARM STROBE

FINE ALARM HORN-STROBE (F)- FIRE ALARM HORN/STROBE - CEILING OR PENDANT MOUNTED

TAMPER SWITCH (REFER TO MECHANICAL FOR QUANTITIES)

FS FLOW SWITCH (REFER TO MECHANICAL FOR QUANTITIES) AUDIO/VISUAL ALARM

FACP FIRE ALARM CONTROL PANEL - FLUSH FAAP FIRE ALARM ANNUNCIATOR PANEL - FLUSH

☐ SECURITY CAMERA

HANDICAP DOOR ACTIVATOR PUSH BUTTON STATION

PANIC ALARM PUSH BUTTON, TIED TO ALERTING SYSTEM (NURSE CALL AND/OR SECURITY) TO SUMMON HELP

SPEAKER

B DOORBELL PC PHOTOCELL

-CIS- OCCUPANCY SENSOR MULTI-TECHNOLOGY CEILING MOUNTED OS OCCUPANCY SENSOR MULTI-TECHNOLOGY WALL MOUNTED WITH LIGHT SWITCH

OCCUPANCY SENSOR POWER PACK

XX KEY NOTE DOOR CONTACT

WIRELESS DOORBELL VIDEO ANALYTICS

HOA HAND-OFF-AUTOMATIC UNIT HEATER EXHAUST FAN EWC ELECTRIC WATER COOLER ABOVE FINISHED FLOOR

WP WEATHERPROOF NEC NATIONAL ELECTRIC CODE SERVICE DISCONNECT

GFR GROUND FAULT CIRCUIT INTERRUPTER

MW MICROWAVE GARBAGE DISPOSAL REF. REFRIGERATOR

DW DISHWASHER

LEGEND NOTES: ALL OCCUPANCY SENSORS SHALL HAVE ISOLATED AUXILIARY CONTACTS FOR USE BY MECHANICAL TRADES TO CONTROL MECHANICAL EQUIPMENT.

THIS IS STANDARD SYMBOL LIST — SOME OF THESE SYMBOL MAY NOT APPEAR ON DRAWINGS.

ELECTRICAL SHEET INDEX

E-000 | ELECTRICAL LEGEND, SHEET INDEX, AND GENERAL NOTES | ELECTRICAL ONE-LINE DIAGRAM WIRE AND LIGHTING FIXTURE SCHEDULES AND CONTROL MATRIX

E-030 | ELECTRICAL PANEL SCHEDULES E-100 | SITE PLAN - ELECTRICAL E-210 | FLOOR PLAN - LEVEL 1 - LIGHTING E-220 | FLOOR PLAN - LEVEL 2 - LIGHTING

E-320 | FLOOR PLAN - LEVEL 2 - POWER E-330 ROOF PLAN - POWER E-400 ENLARGED KITCHEN PLAN - POWER

E-600 | ELECTRICAL SPECIFICATIONS

E-500 | ELECTRICAL DETAILS

E-310 | FLOOR PLAN - LEVEL 1 - POWER

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

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DESCRIPTION

01/24/2025 2 Addendum 1 02/20/2025

KEY PLAN

SHEET TITLE Electrical Legend, Tables and

Scale: 1/16" = 1'-0"

PROJECT#

General Notes

2024-010.00 SHEET#

	SWITCH	I/FUSE		CONNECTED LOSS	DEMANDIOAD	EEEDED OGE (OODDED)
POSITION	SWITCH	FUSE	EQUIPMENT	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)	FEEDER SIZE (COPPER) (SEE RISER FOR AL)
01	1200A/3P	1200 A	MAIN SD LSI ARMS			
1	400A/3P	225 A	RTU-1 179.5 A	64.6	51.7	2 1/2"C, 3#4/0 & 1#4 G
2	400A/3P	400 A	RP-2AA	33.5	25.3	4"C, 4-600 kcmil & 1#3 G
3	200A/3P	175 A	RTU-2 140.3 A	50.5	40.4	2"C, 3#2/0 & 1#6 G
4	200A/3P	200 A	RP-1AA	31.5	24.9	2"C, 4#3/0 & 1#6 G
5	400A/3P	400 A	RP-1BA	12.3	12.3	4"C, 4-600 kcmil & 1#3 G
6	200A/3P	200 A	ELEVATOR	43.2	34.6	SEE RISER
7	200A/3P		SPARE			
8	200A/3P		SPARE			
9	100A/2P	80 A	EV CHARGER	12.0	9.6	1 1/4"C, 2#2 & 1#8 G
10	100A/3P		SPARE			
11	60A/3P		SPARE			
12	60A/3P		SPARE			
13	60A/3P		SPARE			
14	60A/3P	60 A	EVENT POWER	15.0	12.0	1 1/4"C, 4#4 & 1#10 G
15	60A/3P		SPARE			
16	30A/3P	20 A	KEF-1	4.0	3.2	3/4"C, 3#12 & 1#12 G
17	60A/3P	45 A	FPB-1-1 42.7 MC/	13.1	6.5	1"C, 3#6 & 1#10 G
18	60A/3P	35 A	FPB-1-2 34.0 MC/	10.4	5.2	3/4"C, 3#8 & 1#10 G
19	30A/3P	15 A	FPB-1-3 12.8 MC/	3.9	2.0	3/4"C, 3#12 & 1#12 G
20	100A/3P	70 A	FPB-1-4 61.9 MCA	18.9	9.5	1 1/4"C, 3#4 & 1#8 G
21	100A/3P	70 A	FPB-1-5 61.9 MCA	18.9	9.5	1 1/4"C, 3#4 & 1#8 G
22	30A/3P	25 A	FPB-2-1 21.5 MC/	6.6	3.3	3/4"C, 3#10 & 1#10 G
23	100A/3P	80 A	FPB-2-2 62.7 MC/	19.2	9.6	1 1/4"C, 3#2 & 1#8 G
24	30A/3P	25 A	FPB-2-3 23.2 MC/	7.1	3.5	3/4"C, 3#10 & 1#10 G
25	60A/3P	35 A	FPB-2-4 32.3 MC/	9.9	4.9	3/4"C, 3#8 & 1#10 G
27	30A/3P	15 A	FPB-2-5 14.5 MCA	4.4	2.2	3/4"C, 3#12 & 1#12 G
28	60A/3P	40 A	FPB-2-6 37.5 MCA	11.5	5.7	3/4"C, 3#8 & 1#10 G
29	30A/3P	35 A	FPB-2-7 32.3 MC/	9.9	4.9	3/4"C, 3#8 & 1#10 G
30	30A/3P	15 A	FPB-2-8 14.5 MC/	4.4	2.2	3/4"C, 3#12 & 1#12 G
31	30A/3P	20 A	ECUH-2	5.0	0.0	3/4"C, 3#12 & 1#12 G
32	30A/3P	20 A	EUH-1	3.3	0.0	3/4"C, 3#12 & 1#12 G
33	30A/3P	15 A	SP-1	1.3	1.1	3/4"C, 3#12 & 1#12 G
34	30A/3P		SPARE			
35	30A/3P		SPARE			
36	60A/3P	50 A	FOOD TRUCK OUTLET	12.0	9.6	1"C, 3#6 & 1#10 G
37	60A/3P	50 A	FOOD TRUCK OUTLET	12.0	9.6	1"C, 3#6 & 1#10 G
38	30A/3P	15 A	VAV-1-1 14.5 MCA	4.4	2.2	3/4"C, 3#12 & 1#12 G
39	30A/3P	15 A	VAV-2-1 19.1 MCA	5.8	2.9	3/4"C, 3#12 & 1#12 G
40	3P		SPACE			
41	3P		SPACE			
			1			

308 KVA

857 A

449 KVA

1247 A

TOTAL CALCULATED LOAD:

GENERAL RISER NOTES:

- H. NEW ELECTRICAL SERVICE REQUIREMENTS TO BE COORDINATED WITH DTE ENERGY.

- L. ALL OUTDOOR AND ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, AND DEVICES AND ALL ASSOCIATED TO BE WET RESISTANT INCLUDING CONDUITS, BOXES, SUPPORTS, FITTINGS, ETC.
- M. FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT DISCONNECTS MAINTAIN CODE REQUIRED DEDICATED EQUIPMENT SPACE AND WORKING CLEARANCES, COORDINATE WITH ALL TRADES PRIOR TO INSTALLATIONS.

RISER KEY NOTES:

- COORDINATE WITH UTILITY COMPANY FOR NEW ELECTRICAL SERVICE EXACT REQUIREMENTS.
- 5 COORDINATE WITH APPROVED ELEVATOR SUBMITTALS FOR EXACT REQUIREMENTS AND PROVIDE SERVICES AS REQUIRED.
- PROVIDE LIGHTING CONTROL RELAY PANELS TO CONTROL ALL EXTERIOR AND INTERIOR HOUSE LIGHTING, BUILDING MOUNTED LIGHTING, PARKING LOT LIGHTING AND BUILDING AND MONUMENT SIGNS TO COMPLY WITH THE FLORIDA ENERGY CODE. COORDINATE EXACT REQUIREMENTS WITH LANDLORD.
- PROVIDE BREAKERS, FEEDERS, DISCONNECTS ETC. FOR MULTIPLE EQUIPMENT, INDICATED ONLY ONE FOR TYPICAL INSTALLATION, TOTAL NUMBER AS NOTED, REFER TO PLANS AND PANEL SCHEDULES AND VERIFY EXACT QUANTITIES.
- VFD SUPPLIED WITH EQUIPMENT, PROVIDE COMPLETE INSTALLATION, COORDINATE WITH MECHANICAL FOR ALL REQUIREMENTS.

- EXACT TYPE, QUANTITIES AND LOCATIONS OF EV CHARGING STATIONS TO BE VERIFIED WITH OWNER PRIOR TO ROUGH IN. INFORMATION INDICATED ARE BASED ON REDECHARGE (2)—40A INPUT CURRENT AND (2)—50A BREAKERS FOR EACH STATION. SERVICES ARE SIZED FOR TOTAL 30 DUAL EV CHARGING STATIONS (60 CHARGERS) AT EACH WING: WEST, CENTER, EAST, OVERALL TOTAL 90 EV CHARGING STATIONS (180 CHARGERS). (20) DUAL EV CHARGING STATIONS TO BE INSTALLED AND (40) ARE FUTURE.

- A. REFER TO SHEET E000 FOR ELECTRICAL LEGEND AND GENERAL NOTES, SHEET E.020 FOR WIRE SCHEDULES AND SHEET E04X SERIES FOR PANEL SCHEDULES.
- B. REFER TO VOLTAGE DROP SCHEDULE ON SHEET E001, MAXIMUM VOLTAGE DROP NOT TO EXCEED 3% FOR BRANCH CIRCUITS AND 2% FOR FEEDERS. ADJUST WIRE SIZES PER THE INSTALLATION LENGTHS TO MAINTAIN THE MAXIMUM VOLTAGE DROP LEVELS.
- I. COORDINATE WITH MECHANICAL FOR DISCONNECTS, STARTERS, GFR RECEPTACLES PROVIDED WITH THE MECHANICAL EQUIPMENT, INSTALL AND WIRE. PROVIDE IF NOT INCLUDED WITH EQUIPMENT. J. ALL FLOOR AND GROUND MOUNTED EQUIPMENT (DISTRIBUTION PANELS, POWER PANELS, TRANSFORMERS, ETC.) TO BE PAD MOUNTED, PROVIDE CONCRETE PADS AS REQUIRED PER APPROVED EQUIPMENT SUBMITTAL AND VIBRATION ISOLATOR PADS, COORDINATE WITH ARCHITECT.
- K. RUN ALL UNDERGROUND CONDUITS MIN. 4" UNDER SLAB.
- N. PROVIDE VFD'S AND COMPLETE INSTALLATION UNLESS INCLUDED WITH EQUIPMENT, COORDINATE WITH MECHANICAL FOR ALL EQUIPMENT REQUIRING VFD'S, NOT ALL ARE IDENTIFIED ON THESE DOCUMENTS.
- O. PROVIDE FAULT CURRENT CALCULATIONS, COORDINATION AND ARC FLASH STUDY, REFER TO SPECIFICATION SECTION 260574. PROVIDE PANELBOARDS FULLY RATED FOR THE AVAILABLE FAULT CURRENTS PER THE STUDY RESULTS. SUBMIT STUDY PRIOR OR WITH THE EQUIPMENT SUBMITTALS TO CONFIRM ADEQUATE RATINGS FOR ALL EQUIPMENT SUBMITTED.

- PROVIDE GROUNDING AND BONDING PER NEC 250.
 BOND ALL NEW CONCRETE ENCASED ELECTRODES TO THE GROUNDING ELECTRODE SYSTEM. ONLY
 ONE IS SHOWN IN DETAIL. COORDINATE WITH CONCRETE INSTALLER TO PROVIDE ELECTRODES
 WHICH REMAIN ACCESSIBLE AFTER POUR FOR BONDING.
 BOND METAL WATER PIPING AND OTHER INTERIOR METAL PIPING THAT MAY BECOME ENERGIZED
 TO GROUNDING SYSTEM PER NEC. MAKE WATER PIPE CONNECTIONS AHEAD OF METER AND
 WITHIN 5'-0" OF BUILDING ENTRANCE.
 BOND GROUND BUS WITHIN EVERY METAL CABINET, PANEL, ETC. TO THE ENCLOSURE.
- PROVIDE ANY UNUSED VERTICAL POSITIONS FULLY BUSSED AS SPACE IN ALL EQUIPMENT: SWITCHBOARD/ DISTRIBUTION PANEL/PANELBOARDS.
- PROVIDE CONCRETE PAD FOR ALL FLOOR AND GRADE MOUNTED ELECTRICAL EQUIPMENT, REFER TO SPECIFICATIONS.

- FEEDER SIZES INDICATED TO BE ADJUSTED FOR OVERALL INSTALLED LENGTHS TO MAINTAIN MAXIMUM 3% VOLTAGE DROP FOR BRANCH CIRCUITS AND 2% FOR FEEDERS.
- PROVIDE CONTACTORS AND/OR SHUNT TRIP BREAKERS AS REQUIRED FOR INTERLOCKING WITH THE FIRE SUPPRESSION OF ALL THE EQUIPMENT AND DEVICES UNDER THE HOOD, INCLUDING MAU AND EF FOR KITCHEN HOOD. COORDINATE ALL REQUIREMENTS WITH MECHANICAL AND FIRE SUPPRESSION SYSTEM PROVIDER. REFER TO DETAILS ON SHEET E.500.

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507





PROFESSIONAL SEAL

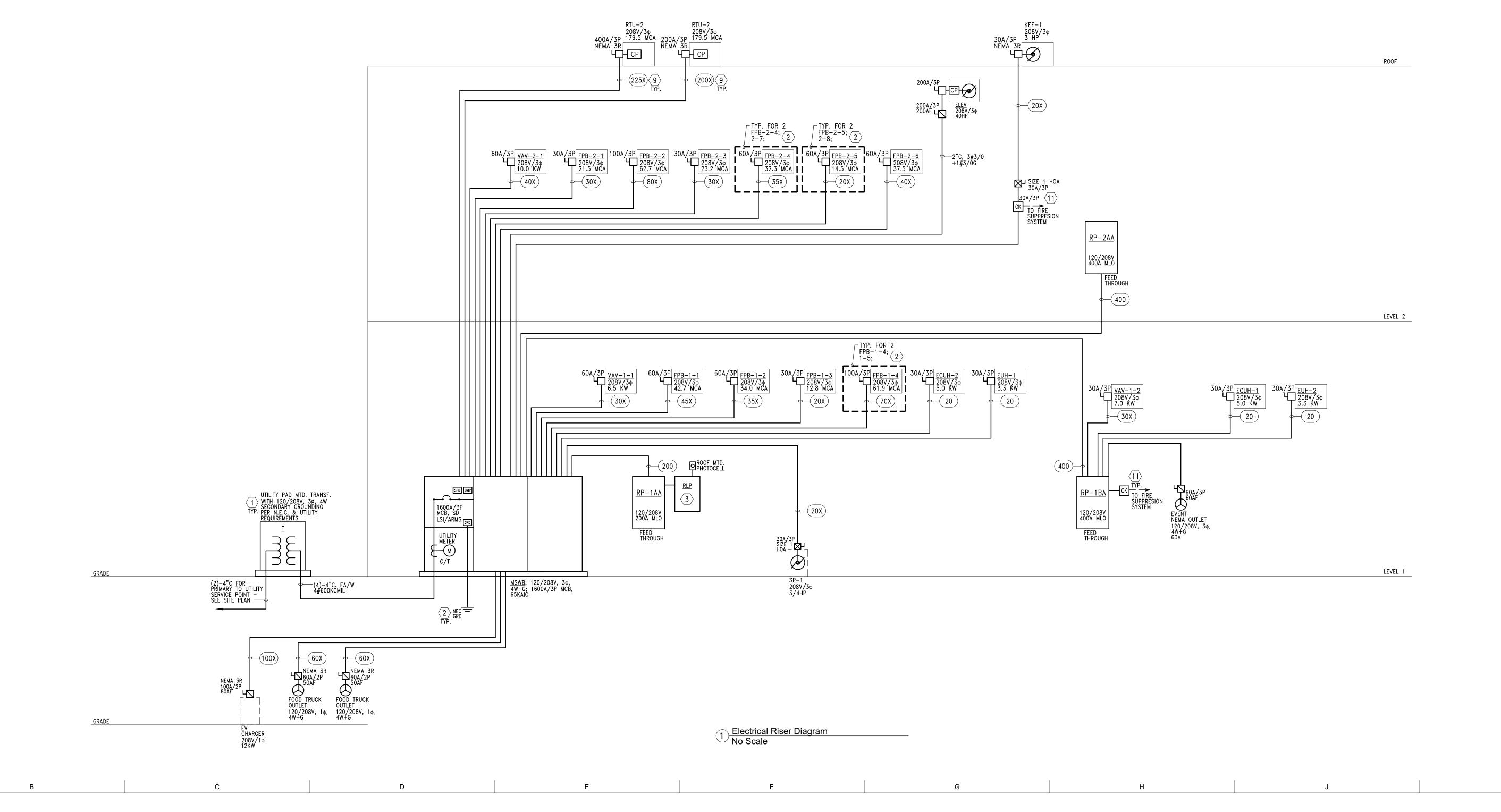
#	DESCRIPTION	DATE
1	Bid Set	01/24/202
2	Addendum 1	02/20/202

KEY PLAN

SHEET TITLE Electrical Riser Diagram

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

SHEET#



LIGHTING FIXTURE SCHEDULE:

- "A" LED 2'X4' RECESSED LAY-IN LIGHTING FIXTURE, ACRYLIC CURVED RIBBED DIFFUSER, 120/277V, HPF ELECTRONIC DRIVER, DIMMING CONTROL, 60W, 6000 LUMENS. LITHONIA #2BLT4-60L-ADP-LP832 OR APPROVED EQUAL.
- "AE" SAME AS TYPE "A" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "A1" SAME AS TYPE "A" EXCEPT RECESSED FLANGE MOUNTED LIGHTING FIXTURE. "A1E" SAME AS TYPE "A1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "A2" SAME AS TYPE "A" EXCEPT 2'X2' AND 5000LM. "A2E" SAME AS TYPE "A2" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "B" LED RECESSED LAY-IN 2'X4' FLAT PANEL LIGHTING FIXTURE, MATTE WHITE FINISH, WITH OPAL DIFFUSER, 120/277V ELECTRONIC HPF DRIVER, DIMMING CONTROL, 0-10V DIMMING, 60W, 6000LM.. LITHONIA # OR APPROVED EQUAL.
- "BE" SAME AS TYPE "B" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "B1" SAME AS TYPE "B" EXCEPT DAMP LOCATION RATED, WITH EXTRA LENS GASKETING.
- "B1E" SAME AS TYPE "B1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "C" LED PENDANT MOUNTED CONTINUOUS LINEAR DIRECT LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, EXTRUDED ALUMINUM CONSTRUCTION WITH ACRYLIC LENS, FINISH AND END CAP TO BE SELECTED BY ARCHITECT/OWNER, 120/277V, HPF ELECTRONIC DRIVER, DIMMING CONTROL, 10W/FT, 1000 LUMENS/FT.
 FOCAL POINT OR APPROVED EQUAL.
- "CE" SAME AS TYPE "C" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "C1" SAME AS TYPE "C" EXCEPT DIRECT/INDIRECT DISTRIBUTION, 30% UP/60% DOWN. PROVIDE SEPARATE DIMMING CONTROL FOR THE DIRECT AND INDIRECT COMPONENTS. "C1E" SAME AS TYPE "C1" EXCEPT WITH BUILT—IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "C2" SAME AS TYPE "C1" EXCEPT WITH ASYMMETRIC UPLIGHT AND WALL WASH DOWN DISTRIBUTION.
- "C3" LED SURFACE MOUNTED CONTINUOUS LINEAR DIRECT LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, EXTRUDED ALUMINUM CONSTRUCTION WITH ACRYLIC LENS, FINISH AND END CAP TO BE SELECTED BY ARCHITECT/OWNER, 120/277V, HPF ELECTRONIC DRIVER, DIMMING CONTROL, 10W/FT,
- "C3E" SAME AS TYPE "C3" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "C4" SAME AS TYPE "C3" EXCEPT RECESSED LIGHTING FIXTURE.
- "C4E" SAME AS TYPE "C4" EXCEPT WITH BUILT—IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "C5" SAME AS TYPE "C4" EXCEPT WITH WALL WASH DISTRIBUTION.
- "D" LED SURFACE OR PENDANT MOUNTED STRIP LIGHTING FIXTURE, 4FT OR 8FT LENGTH AS INDICATED ON PLANS, COLD—ROLLED STEEL HOUSING, WIDE DIFFUSE LENS, 120/277V ELECTRONIC HPF DIMMING DRIVER, 32W, 5000 LUMENS.
 LITHONIA #CLX-L48-5000LM-SEF-WDL-MVOLT OR APPROVED EQUAL.
- "DE" SAME AS TYPE "D" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "E" NOT USED.
- "F" LED WALL-MOUNTED VAPORTIGHT ELEVATOR PIT LIGHTING FIXTURE, 4FT LONG, LOW PROFILE, CORROSION RESISTANT NEMA 4X, FIBERGLASS HOUSING, HIGH IMPACT INJECTION MOLDLED ACRYLIC LENS, 120-277V, ELECTRONIC HPF DRIVER & 4000LM 25W. LITHONIA #FEM-L48 SERIES OR APPROVED EQUAL.
- "G" LED RECESSED 4" DIA. DOWNLIGHT FIXTURE, GALVANIZED STEEL HOUSING, MEDIUM WIDE DISTRIBUTION, 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 3500 LUMENS, 40W. GOTHAM #EV04-/35-AR-MWD-LSS-MVOLT OR APPROVED EQUAL.
- "GE" SAME AS TYPE "G" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "G1" SAME AS TYPE "G" EXCEPT 3500LM AND WITH WET LOCATION RATED WITH EXTRA LENS GASKETING.
- "G1E" SAME AS TYPE "G1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "G2" SAME AS TYPE "G1" EXCEPT 5000LM AND WITH WET LOCATION AND LOW TEMPERATURE RATED.
- "G2E" SAME AS TYPE "G2" EXCEPT WITH BUILT—IN EMERGENCY BATTERY LOW TEMP RATED, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "G3" SAME AS TYPE "G1" EXCEPTWITH SHOWER LENS.
- "H" LED PENDANT MOUNTED CYLINDER, 4" DIA, ALUMINUM HOUSING, SEMI-SPECULAR REFLECTOR, LENS, CLEAR TRIM, FINISH SELECTED BY ARCHITECT. MEDIUM DISTRIBUTION, 120-277V, ELECTRONIC HPF DRIVER & 7000LM 90W. GOTHAM #ICO CYL-/70-4AR-MWD-LSS-MVOLT OR APPROVED EQUAL.
- "HE" SAME AS TYPE "H" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "H1" SAME AS TYPE "H", EXCEPT 5000LM.
- "H1E" SAME AS TYPE "H1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "I" NOT USED.
- "JE" LED WALL MOUNTED 4FT LONG STAIRWELL LIGHTING FIXTURE WITH OCCUPANCY SENSOR, FROSTED LENS, 120/277V HPF ELECTRONIC DRIVER, 50W, 6000LM LITHONIA OR APPROVED EQUAL.
- "K" LED DECORATIVE PENDANT MOUNTED CHANDELIER TO BE SELECTED BY ARCHITECT/DESIGNER. 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 10000 LUMENS, 150W.
- "L" LED SURFACE MOUNTED CONTINUOUS RGB TAPELIGHT LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, 120V, ELECTRONIC HPF DIMMING DRIVER, DIM TO 0.1%, DIMMING CONTROL, 5W/FT, PROVIDE 120V POWER SUPPLY PER MANUFACTURER SPECIFICATIONS FOR A COMPLETE INSTALLATION. GERMAN LIGHT PRODUCTS #50505RGB-60 OR APPROVED EQUAL. "L1" SAME AS TYPE "L" EXCEPT WHITE TAPELIGHT.
- "M" LED SURFACE MOUNTED UNDERCABINET CONTINUOUS LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, 120V ELECTRONIC HPF DRIVER, DIMMING CONTROL, 0-10V DIMMING, MAX. 10W/FT. LITHONIA OR APPROVED EQUAL.
- "N" LED WALL MOUNTED VANITY LIGHTING FIXTURE TO BE SELECTED BY ARCHITECT/DESIGNER. 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 1500 LUMENS, 15W. "OA" OUTDOOR LED WALL MOUNTED WET LOCATION RATED LIGHTING FIXTURE, FINISH TO BE SELECTED BY
- ARCHITECT/LIGHTING DESIGNER, PHOTOCELL, 120-277V. HPF ELECTRONIC DIMMING DRIVER, 25W, 3500 LUMENS, 4000K. LOW TEMPERATURE, OUTDOOR RATED, BUILT-IN EMERGENCY BATTERY LITHONIA #WST-LED-P2-40K-VF-MVOLT-PE OR APPROVED EQUAL. "OAE" SAME AS TYPE "OA" EXCEPT WITH BUILT-IN EMERGENCY BATTERY
- "OB" OUTDOOR LED DECORATIVE WALL SCONCE TO BE SELECTED BY ARCHITECT/DESIGNER, WET LOCATION OUTDOOR RATED, LOW TEMPERATURE 120/277V ELECTRONIC HPF DRIVER, 8000 LUMENS, 80W.
- "OBE" SAME AS TYPE "OB" EXCEPT WITH BUILT—IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. PROVIDE REMOTE MINI—INVERTER IF SELECTED FIXTURE IS NOT AVAILABLE WITH BUILT—IN EMERGENCY BATTERY.
- "P" LED COVE MOUNTED CONTINUOUS RUNT LIGHTING FIXTURE TO BE SELECTED BY ARCHITECT/DESIGNER. REFER TO ARCHITECTURAL SECTIONS FOR EXACT LENGTH AND REQUIREMENTS. 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 10W/FT, 1000LM/FT.
- "PE" SAME AS TYPE "P" WITH 4FT SECTION IN CONTINUOUS RUN PROVIDED WITH BUILT-IN EMERGENCY BATTERY, 10W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "X" LED UNIVERSAL MOUNT SELF-CONTAINED, EDGE-LIT EXIT LIGHT, RED LETTERS, SINGLE OR DOUBLE FACE, AND DIRECTIONAL ARROWS AS INDICATED, FINISH OR AS SELECTED BY ARCHITECT, 120/277 INPUT AND NI-CAD BATTERY. LIGHTALARMS "GRANDE" SERIES OR APPROVED EQUAL.

LIGHTING FIXTURE SCHEDULE NOTES:

- 1. ALL LIGHTING FIXTURES COLOR TEMPERATURE TO BE 3500K LED, AS DIRECTED BY
- 2. REFER TO SPECIFICATIONS FOR ADDITIONAL LAMP AND DRIVER REQUIREMENTS.
- COORDINATE MOUNTING OF ALL LIGHTING FIXTURES WITH THE ARCHITECTURAL PLANS, PROVIDE MOUNTING HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION FOR THE CEILING TYPES THE FIXTURES ARE BEING INSTALLED.
- 4. ALL FIXTURE FINISHES/COLORS TO BE COORDINATED WITH ARCHITECT.
- 5. FOR ALL LINEAR CONTINUOUS RUN LIGHTING FIXTURES REFER TO PLANS FOR OVERALL LENGTHS, PROVIDE SECTIONS AS REQUIRED. PROVIDE 4' SECTIONS WITHIN THE CONTINUOUS RUN WITH BUILT-IN EMERGENCY BATTERIES AT LOCATIONS INDICATED ON PLANS.
- FOR ALL PENDANT MOUNTED LIGHTING FIXTURES PROVIDE CABLE SUSPENSION LENGTHS AS
 REQUIRED FOR THE MOUNTING HEIGHTS INDICATED ON THE ARCHITECTURAL REFLECTED CEILING
 PLANS AND ELEVATIONS.
- 7. DIMMERS TO BE COMPATIBLE WITH THE DIMMING DRIVERS, PROVIDE TYPES AND RATINGS AS REQUIRED FOR THE LOADS CONTROLLED.
- 8. DIMMING TO BE TO 1%, UNLESS OTHERWISE DIRECTED BY ARCHITECT/OWNER.

LIGHTING CONTROL MATRIX SCHEDULE

LIGHTING CONTROL TAG	ROOM/SPACE TYPE	CONTROLS	AUTOMATIC LIGHTING CONTROL	LOCAL CONTROL	MANUAL ON	PARTIAL AUTO ON	BI-LEVEL	DAYL SIDE LIGHT	IGHT TOP LIGHT	AUTOMATIC PARTIAL OFF (H APPLIES)	AUTOMATIC FULL OFF	SCHEDULED FULL OFF	NOTES
ASED ON ASHRAE 9	0.1-2013 TABLE 9.6.1 - CONTROL FUNCTIONS			a	b	С	d	е	f	g	h	i	
LC1	UTILITY ROOM	LOCAL		YES	YES								
LC2	RESTROOM	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES							YES	
LC3	CORRIDOR	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES			YES		YES	
LC4	OFFICE	LOCAL/DIM/OS	OCCUPANCY SENSOR (OS)	YES	YES		YES						
LC5	JANITOR/ STORAGE	LOCAL/OS	OCCUPANCY SENSOR (OS)	YES	YES						YES		
(LC6)	CONFERENCE ROOM/ LOCKER ROOM/ KITCHEN/ DINING/ FOOD PREP/ OPEN OFFICE/ GYM	LOCAL/DIM/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES					YES	
LC7	LOBBY	LOCAL/DIM/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES					YES	
LC8	STAIRS	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES					YES		YES	

LIGHTING CONTROL NOTES:

- CONTRACTOR TO PROVIDE MOTION SENSORS, DAYLIGHT SENSORS, ROOM CONTROLLERS, AND ACCESSORIES AS REQUIRED FOR A FULLY OPERATIONAL INSTALLATION PER 2015 MICHIGAN ENERGY CODE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ROUGH—IN. PROVIDE ADDITIONAL ROOM CONTROLLERS/POWER PACKS AND ASSOCIATED WIRING FOR MULTIPLE SWITCH LEG LOCATIONS. SEE PLANS FOR EXACT SWITCH LEGS WITH—IN EACH AREA OR ROOM. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHTING CONTROL MANUFACTURER'S DEVICE LAYOUT AS PART OF SHOP DRAWINGS SUBMITTALS.
- ELECTRICAL CONTRACTOR IS TO INCLUDE THE SCOPE OF A LIGHTING CONTROLS DESIGNER/INSTALLER AS SUBCONTRACTOR TO ELECTRICAL CONTRACTOR TO PROVIDE FINAL DESIGN, DOCUMENTATION, PROGRAMMING, AND INSTALLATION OF THE LIGHTING CONTROLS. CONTRACT DOCUMENTS INCLUDE INTENDED FUNCTIONALITY ONLY. TO PREVENT FALSE ACTIVATION, MOUNT CEILING MOUNT SENSORS AWAY FROM DIFFUSERS AND THE PATH OF STRONG AIR TURBULENCE A MINIMUM OF FOUR FEET FOR STANDARD SENSITIVITY AND SIX FEET FOR MAXIMUM SENSITIVITY.
- LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE WITHIN THE RANGE OF COVERAGE(S) OF CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREA TO ACCOMMODATE ALL OCCUPANCY HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM(S). PROVIDE THE QUANTITY OF ROOM CONTROLLERS AND POWER PACKS NEEDED TO CONTROL SWITCH LEGS AND VOLTAGES INDICATED. . UNLESS OTHERWISE INDICATED, ADJUST MOTION SENSOR TIME TO TURN OFF CONTROLLED LIGHTING AFTER 20 MINUTES.
- INCLUDE TESTING BY AN INDEPENDENT THIRD PARTY TESTING AGENCY OR INDEPENDENT COMMISSIONING AGENT AS REQUIRED BY THE MICHIGAN ENERGY CODE (ASHRAE 90.1-2013). TEST, CERTIFY AND PROVIDE DOCUMENTATION OF LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANSI/ASHRAE/IES STANDARD 90.1-2013, SECTION 9.4.3 FUNCTION TESTING).
- PROVIDE DAY LIGHT SENSORS WHERE LIGHTING FIXTURES FALL WITHIN TOP/SIDE LIGHTED AREAS FOR BOTH PRIMARY AND SECONDARY ZONES AS DEFINED BY ASHRAE 90.1-2013, SECTION 9.4.1.1-e AND SECTION 9.4.1.1-f
- INTEGRATE CONTROLS FOR UNDERCABINET LIGHTING TO PROVIDE AS MANUAL ON/AUTOMATIC OFF BY SAME SENSOR(S) SERVING GENERAL LIGHTING IN SPACE/ROOM. 10. IN ROOMS WITH PARTIAL ON CONTROL, PROGRAM ASSOCIATED SWITCH FOR FULL ON AND MANUAL OFF IN ADDITION TO AUTOMATIC OFF VIA OCCUPANCY SENSOR.
- 11. FOR AUTOMATIC DAYLIGHT RESPONSIVE CONTROLS SET DAYLIGHT SENSOR TO MAINTAIN THE SAME LIGHTING LEVELS AS THE LEVELS OUTSIDE THE DAYLIGHT AREA

	C	ONDUIT & WIRE SCHI	EDULE (600	OV & BELO	OW)
	3-WIRE	SYSTEM		4-WIRE	SYSTEM
WIRE TAC	G CU/AL	CONDUIT & WIRE	WIRE TAG	CU/AL	CONDUIT & WIRE
(20X)	CU	3/4"C. 3#12 + 1#12G.	20	CU	3/4"C. 4#12 + 1#12G.
(25X)	CU	3/4"C. 3#10 + 1#10G.	25	CU	3/4"C. 4#10 + 1#10G.
(30X)	CU	3/4"C. 3#10 + 1#10G.	30	CU	3/4"C. 4#10 + 1#10G.
(35X)	CU	3/4"C. 3#8 + 1#10G.	35	CU	3/4"C. 4#8 + 1#10G.
(40X)	CU	3/4"C. 3#8 + 1#10G.	40	CU	3/4"C. 4#8 + 1#10G.
(50X)	CU	1"C. 3#6 + 1#10G.	50	CU	1"C. 4#6 + 1#10G.
(55X)	CU	1"C. 3#6 + 1#10G.	55	CU	1"C. 4#6 + 1#10G.
(60X)	CU	1 1/4"C. 3#4 + 1#10G.	60	CU	1 1/4"C. 4#4 + 1#10G.
(70X)	CU	1 1/4"C. 3#4 + 1#8G.	70	CU	1 1/4"C. 4#4 + 1#8G.
(85X)	CU	1 1/4"C. 3#3 + 1#8G.	85	CU	1 1/4"C. 4#3 + 1#8G.
(100X)	CU	1 1/4"C. 3#2 + 1#8G.	100)	CU	1 1/4"C. 4#2 + 1#8G.
100%	AL	2"C. 3#1/0 + 1#6G.		AL	2"C. 4#1/0 + 1#6G.
(110))	CU	1 1/2°C. 3#1 + 1#6G.	110)	СП	1 1/2"C. 4#1 + 1#6G.
110%	AL	2"C. 3#1/0 + 1#4G.	110	AL	2"C. 4#1/0 + 1#4G.
(125X)	CU	2°C. 3#1/0 + 1#6G.	125)	CU	2"C. 4#1/0 + 1#6G.
120%	AL	2"C. 3#2/0 + 1#4G.	120	AL	2"C. 4#2/0 + 1#4G.
(150X)	СП	2"C. 3#1/0 + 1#6G.	150)	CU	2"C. 4#1/0 + 1#6G.
100%	AL	2°C. 3#3/0 + 1#4G.	150	AL	2"C. 4#3/0 + 1#4G.
(175X)	СП	2"C. 3#2/0 + 1#6G.	175)	CU	2"C. 4#2/0 + 1#6G.
	AL	2 1/2°C. 3#4/0 + 1#4G.	1,10	AL	2 1/2"C. 4#4/0 + 1#4G.
(200)	CU	2"C. 3#3/0 + 1#6G.	200	CU	2"C. 4#3/0 + 1#6G.

AL 3"C. 3#250KCMIL + 1#4G. AL 3"C. 4#250KCMIL + 1#4G. CU 2 1/2"C. 3#4/0 + 1#4G. CU 2 1/2"C. 4#4/0 + 1#4G. (225X) AL 3"C. 3#300KCMIL + 1#2G. AL 3"C. 4#300KCMIL + 1#2G. CU 3"C. 3#250KCMIL + 1#4G. CU 3"C. 4#250KCMIL + 1#4G. AL 3"C. 3#350KCMIL + 1#2G. AL 3"C. 4#350KCMIL + 1#2G. CU 3"C. 3#350KCMIL + 1#4G. CU | 3"C. 4#350KCMIL + 1#4G. AL 4"C. 3#500KCMIL + 1#2G. AL 4"C. 4#500KCMIL + 1#2G. CU 4"C. 4#500KCMIL + 1#3G. CU | 4"C. 3#500KCMIL + 1#3G. (2) 2 1/2"C. EA/W 3#4/0 AL CU 4"C. 3#600KCMIL + 1#3G. CU 4"C. 4#600KCMIL + 1#3G. (2) 3"C. EA/W 3#250KCMIL (2) 3"C. EA/W 4#250KCMIL + 1#1G. (2) 2 1/2"C. EA/W 3#4/0 + 1#1G. (2) 2 1/2"C. EA/W 4#4/0 CU CU + 1#2G. (2) 3"C. EA/W 4#300KCMIL + 1#2G. (2) 3"C. EA/W 3#300KCMIL AL CU + 1#2G. (2) 3"C. EA/W 4#350KCMIL + 1#1/0G. (2) 3"C. EA/W 4#350KCMIL (2) 3 C. EA/W 3#350KCMIL + 1#1G. (2) 4"C. EA/W 3#500KCMIL + 1#1G. (2) 4"C. EA/W 4#500KCMIL AL + 1#2/0G. (2) 4"C. EA/W 3#500KCMIL + 1#2/0G. (2) 4"C. EA/W 4#500KCMIL CU + 1#1/0G. (3) 3°C. EA/W 3#350KCMIL + 1#1/0G. (3) 3"C. EA/W 4#350KCMIL AL + 1#3/0G. (2) 4"C. EA/W 3#600KCMIL + 1#3/0G. (2) 4"C. EA/W 4#600KCMIL CU CU + 1#1/0G. (3) 4"C. EA/W 4#500KCMIL + 1#1/0G. (3) 4°C. EA/W 3#500KCMIL

GENERAL WIRING NOTES: FOR 2-WIRE SYSTEMS USE Y AS SUFFIX, SIMILAR TO X FOR THE 3-WIRE SYSTEM. 2. THE USE OF ALUMINUM WIRES HAVE TO BE APPROVED BY THE ENGINEER AND OWNER PRIOR TO BID, NO ALUMINUM WIRES ALLOWED FOR 100A AND LESS.

+ 1#2/0G. (3) 4"C. EA/W 3#600KCMIL

+ 1#4/0G. (3) 4°C. EA/W 3#600KCMIL

1#250KCMIL G. (4) 4"C. EA/W 3#600KCMIL

1#350KCMIL G.

+ 1#3/0G. |(4) 4"C. EA/W 3#500KCMIL +

+ 1#4/0G. (5) 4°C. EA/W 3#600KCMIL &

CU

AL

CU

AL

CU

AL

+ 1#3/0G. (3) 3"C. EA/W 4#400KCMIL

+ 1#2/0G. (3) 4"C. EA/W 4#600KCMIL

+ 1#4/0G. (3) 4"C. EA/W 4#600KCMIL

+ 1#3/0G. (4) 4"C. EA/W 4#500KCMIL +

1#250KCMIL G. (4) 4"C. EA/W 4#600KCMIL

CU

AL

ROSSETTI 160 WEST FORT, SUITE 400

DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

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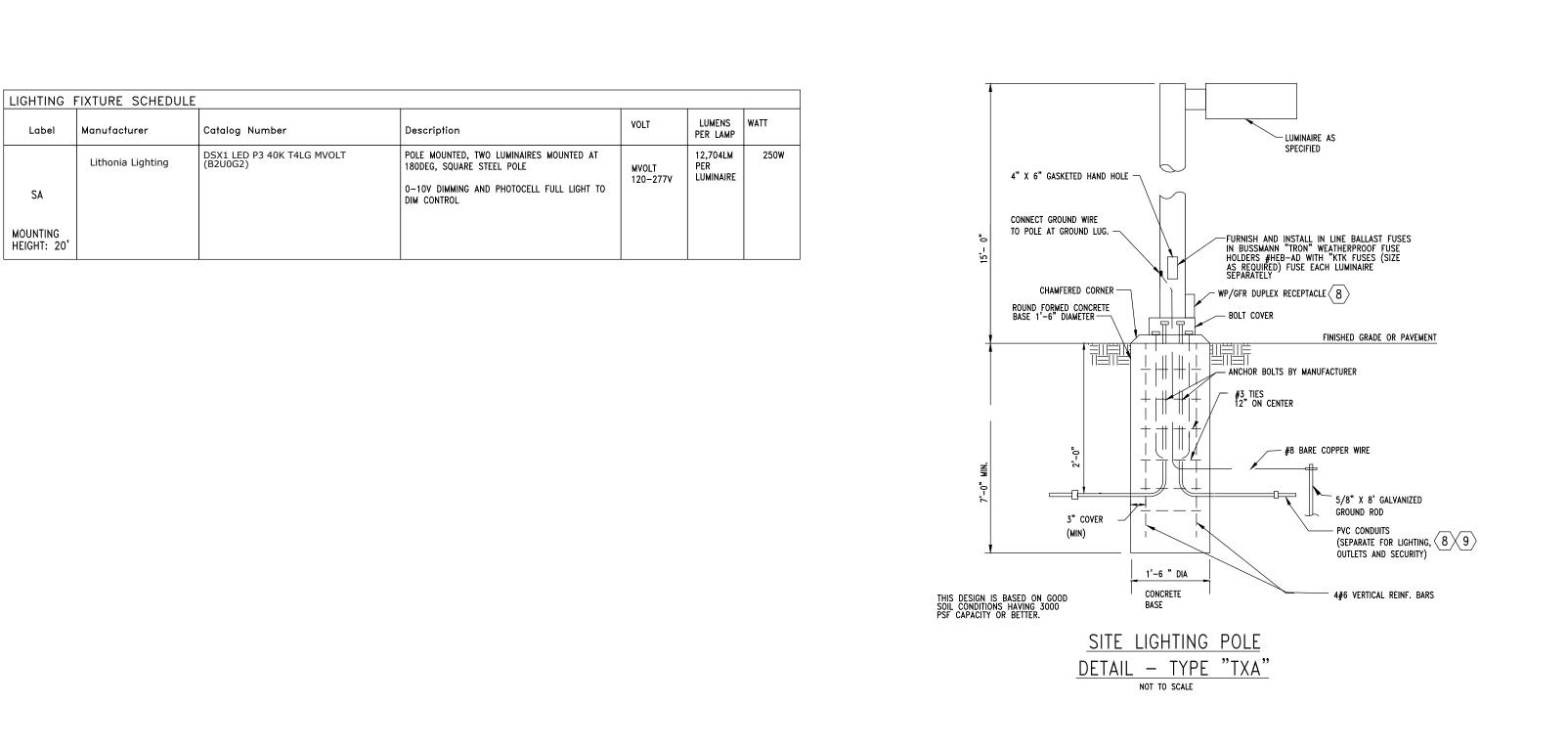
DESCRIPTION **DATE** 01/24/2025 2 Addendum 1 02/20/2025

KEY PLAN

SHEET TITLE Wire and Lighting Fixture Schedule and Controls Matrix

PROJECT# 2024-010.00

SHEET#



GENERAL SITE PLAN NOTES:

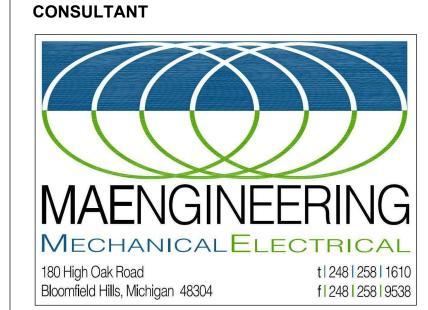
- A. REFER TO SHEET E-000 FOR ELECTRICAL LEGEND.
- B. LOCATE SITE LIGHTING POLES MIN. 3' BEHIND THE CURB NEXT TO DRIVE WAYS AND PARKING (VEHICLE TRAFFIC AREAS). 6" CONCRETE BASE CAN BE USED THEN, IN LIEU OF THE 3'-0" SHOWN ON THE SITE LIGHTING POLE DETAIL THIS SHEET, COORDINATE WITH ARCHITECT/OWNER.

KEYED SITE PLAN NOTES:

- EXACT REQUIREMENTS FOR THE INSTALLATION OF THE NEW ELECTRICAL SERVICE TO BE VERIFIED WITH THE UTILITY COMPANY, PROVIDE ALL WORK AS DIRECTED BY UTILITY COMPANY.
- 2 EXACT LOCATION FOR UTILITY TRANSFORMER TO BE VERIFIED WITH UTILITY CO., CIVIL AND ARCHITECT/OWNER. MAINTAIN CODE REQUIRED CLEARANCES AROUND THE EQUIPMENT AND AWAY FROM THE BUILDING.
- PROVIDE POWER FOR ELECTRIC CAR CHARGING STATION. EXACT LOCATION AND REQUIREMENTS TO BE COORDINATED WITH ARCHITECT/OWNER. PROVIDE COMPLETE INSTALLATION, CONDUITS, WIRING AND CONNECTIONS AS INDICATED ON THE TO INTERIOR DOCUMENTS, INCLUDE 1"C FOR DATA CONNECTION FROM CHARGING STATION LOCATION TO INSIDE THE BUILDING, COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDER AND OWNER.

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PROJECT



ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

ROSSETTI.COM 313.463.5151

West Michigan

Commerce-HQ

Hispanic

Chamber of

Grand Rapids, MI 49507

PROFESSIONAL SEAL

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DESCRIPTION

1 Bid Set 01/24/2025
2 Addendum 1 02/20/2025

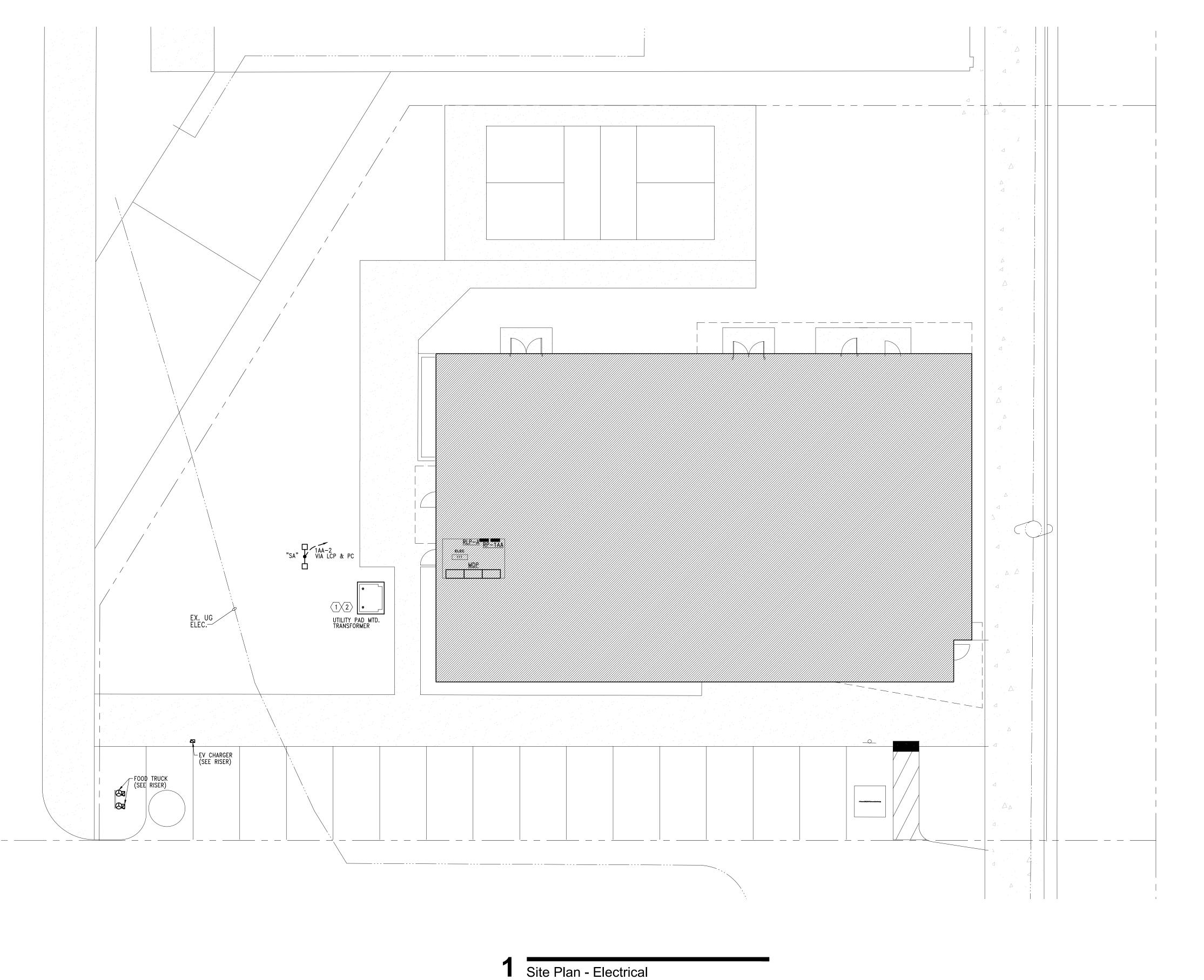
KEY PLAN

sнеет тітье Site Plan - Electrical

PROJECT # 2024-010.00

SHEET#

E-100



E-100 SCALE: 1" = 10'-0"

	Branch Panel: 2A Location: ELEC. Supply From: Mounting: Surfac Enclosure: Type	'I.T. ROO :e	M 222			Volts: Phases: Wires:		/ye			ı	LI.C. Rating: Mains Type: MLO ains Rating: 400 A	ı	
кт	Circuit Description	Trip	Poles		A	E	ì		:	Poles	Trip	Circui	t Description	СКТ
1	LIGHTING	20 A	1	700 VA	900 VA					1	20 A	Olicai	REFR.	2
3	LIGHTING	20 A	1			600 VA	400 VA			1	20 A		DEDIC. REC.	4
5	LIGHTING	20 A	1					605 VA	400 VA	1	20 A		DEDIC. REC.	6
7	LIGHTING	20 A	1	510 VA	400 VA					1	20 A		DEDIC. REC.	8
9	LIGHTING	20 A	1			935 VA	720 VA			1	20 A		RECEPTACLE	10
1	LIGHTING	20 A	1					1000 VA	180 VA	1	20 A		RECEPTACLE	12
3	LIGHTING	20 A	1	1220 VA	180 VA					1	20 A		RECEPTACLE	14
5	LIGHTING	20 A	1			700 VA	180 VA			1	20 A		RECEPTACLE	16
7	LIGHTING	20 A	1					600 VA	180 VA	1	20 A		RECEPTACLE	18
9	RECEPTACLE	20 A	1	360 VA	180 VA					1	20 A		RECEPTACLE	20
1	EF-3 1/3 HP	20 A	1			900 VA	180 VA			1	20 A		RECEPTACLE	22
3	RECEPTACLE	20 A	1					180 VA	180 VA	1	20 A		RECEPTACLE	24
5	RECEPTACLE	20 A	1	180 VA	180 VA					1	20 A		RECEPTACLE	26
7	RECEPTACLE	20 A	1	1,00		180 VA	180 VA			1	20 A		RECEPTACLE	28
9	RECEPTACLE	20 A	1			100 171	100 111	720 VA	180 VA	1	20 A		RECEPTACLE	30
1	RECEPTACLE	20 A	1	900 VA	180 VA			120 171	100 171	1	20 A		RECEPTACLE	32
3	RECEPTACLE	20 A	1	000 171	100 171	720 VA	360 VA			1	20 A		RECEPTACLE	34
5 5	RECEPTACLE	20 A	1			720 171	000 771	540 VA	720 VA	1	20 A		RECEPTACLE	36
	RECEPTACLE	20 A	1	180 VA	720 VA			340 VA	720 VA	1	20 A		RECEPTACLE	38
, 9	RECEPTACLE	20 A	1	100 VA	720 VA	180 VA	360 VA			1	20 A		RECEPTACLE	40
	RECEPTACLE	20 A	1			100 VA	300 VA	180 VA	720 VA	1	20 A		RECEPTACLE	42
1 3	RECEPTACLE	20 A	1	360 VA	180 VA			100 VA	720 VA	1	20 A		RECEPTACLE	44
		_		360 VA	100 VA	720.1/4	540 VA			_				
5	RECEPTACLE	20 A	1			720 VA	540 VA	720 VA	700 \ / 4	1	20 A		RECEPTACLE	46
7	RECEPTACLE	20 A		200 \/A	700 \ / 4			720 VA	720 VA	1	20 A		RECEPTACLE	48
9	RECEPTACLE	20 A	1	360 VA	720 VA	000 1/4	7001/4			1	20 A		RECEPTACLE	50
1	RECEPTACLE	20 A	1			360 VA	720 VA	000) / 4	540.1/4	1	20 A		RECEPTACLE	52
3	RECEPTACLE	20 A	1	7001/4	000.1/4			360 VA	540 VA	1	20 A		RECEPTACLE	54
5	RECEPTACLE	20 A	1	720 VA	900 VA	=====	- 40 \ /A			1	20 A		RECEPTACLE	56
7	RECEPTACLE	20 A	1			720 VA	540 VA			1	20 A		RECEPTACLE	58
9	RECEPTACLE	20 A	1					360 VA	540 VA	1	20 A		RECEPTACLE	60
1	RECEPTACLE	20 A	1	360 VA	540 VA					1	20 A		RECEPTACLE	
3	RECEPTACLE	20 A	1			540 VA	180 VA			1	20 A		RECEPTACLE	64
5	RECEPTACLE	20 A	1					540 VA	600 VA	1	20 A		EF-2 1/6HP	66
7	FURNITURE FEED	20 A	1	0 VA	1200 VA					1	20 A		UTURE SIGN VIA RLP & PC	68
9	FURNITURE FEED	20 A	1			0 VA	1200 VA			1	20 A		UTURE SIGN VIA RLP & PC	70
1	FURNITURE FEED	20 A	1					0 VA	1200 VA	1	20 A	F	UTURE SIGN VIA RLP & PC	72
3	FURNITURE FEED	20 A	1	0 VA	180 VA					1	20 A		RECEPTACLE	74
5	DEDIC. REC.	20 A	1			400 VA	180 VA			1	20 A		RECEPTACLE	76
7	DEDIC. REC.	20 A	1					400 VA	0 VA	1	20 A		SPARE	78
9	GARBAGE DISPOSAL	20 A	1	400 VA	0 VA					1	20 A		SPARE	80
1	DEDIC. REC.	20 A	1			400 VA	0 VA			1	20 A		SPARE	82
3	DEDIC. REC.	20 A	1					400 VA	0 VA	1	20 A		SPARE	84
		Tota	I Load:	127	10 VA	1309	5 VA	1276	5 VA					
en	d:	Total	Amps:	10	6 A	109) A	100	5 A					
oad Classification			Connected Load D			Demand Fac	tor	Estimated	Panel Totals					
quipment			1500 VA			80.00%		1200						
htin			6565 VA			100.00%		6565 VA			Total Conn. Load: 38570 VA			
ner			305 VA			100.00%		305 VA			Total Est. Demand: 29970 VA			
wer				3600 VA		100.00%	+	3600		Total Conn.: 107 A				
	tacle			26600 VA		68.80%		18300		+		Total Est. Demand:		

	Location: DR Supply From: Mounting: Su Enclosure: Typ	rface	€ 104			Volts: Phases: Wires:		ye			ı	LI.C. Rating: Mains Type: MLO ains Rating: 400 A	
СКТ	Circuit Description LIGHTING	Trip	Poles		A 500 1/A		В	(Poles	Trip	Circui	t Description
		20 A	1	800 VA	500 VA	500.1/4	204.1/4			1	20 A		OT
	LIGHTING	20 A	1			560 VA	204 VA	440.)/A	4004.1/4	1	20 A		REFRIGERATOR
	LIGHTING	20 A	1	4440.1/4	0.1/4			410 VA	1224 VA	1	20 A		FREEZER
7 9	LIGHTING LIGHTING	20 A 20 A	1	1110 VA	0 VA	600 VA	0 VA			1	20 A 20 A		SP SP
11	LIGHTING	20 A	1			000 VA	UVA	80 VA	0 VA	1	20 A		SF
13	RCP-1	20 A	1	200 VA	0 VA			00 VA	UVA	1	20 A		SF
15	GWH-1; GWH-2	20 A	1	200 VA	UVA	400 VA	0 VA			1	20 A		SF
17	FIRE SUPPR. TS/FS & A/V	20 A	1			400 VA	UVA	300 VA	0 VA	1	20 A		SF
19	RECEPTACLE	20 A	1	180 VA	0 VA			300 VA	UVA	1	20 A		SF
21	DEDIC. REC.	20 A	1	100 VA	UVA	400 VA	0 VA			1	20 A		SF
23	RECEPTACLE	20 A	1			400 VA	UVA	180 VA	0 VA	1	20 A		SP
25	RECEPTACLE	20 A	1	180 VA	0 VA			100 VA	UVA	1	20 A		SP
27	DEDIC, REC.	20 A	1	100 VA	J VA	400 VA	0 VA			1	20 A		SP SP
29	RECEPTACLE	20 A	1			400 VA	UVA	400 VA	0 VA	1	20 A		SP SP
31	RECEPTACLE	20 A	1	180 VA	0 VA			400 VA	UVA	1	20 A		SF
33	RECEPTACLE	20 A	1	100 VA	UVA	180 VA	0 VA			1	20 A		SF
	DOOR OPERATOR	20 A	1			100 VA	UVA	800 VA	0 VA	1	20 A		SF
37	DOOR OPERATOR DOOR OPERATOR	20 A	1	800 VA	0 VA			500 VA	UVA	1	20 A		SF
39	ELEV. PIT REC.	20 A	1	000 VA	UVA	180 VA	0 VA			1	20 A		SP
	LIGHTING	20 A	1			100 VA	UVA	480 VA	0 VA	1	20 A		SP
43	DEDIC. REC.	20 A	1	600 VA	0 VA			400 VA	UVA	1	20 A		SP
45	DEDIC. REC.	20 A	1	600 VA	UVA	600 VA	1260 VA			'	20 A		35
45	DEDIC. REC.	20 A	1			600 VA	1200 VA	600 VA	1260 VA	2	20 A		GARBAGE DISPO
				600 \/A				600 VA	1200 VA				
49	DEDIC. REC.	20 A	1	600 VA		600.1/4				2			0
	DEDIC. REC.	20 A	1			600 VA		E40.\/A		1			er.
53 55	RECEPTACLE RECEPTACLE	20 A	1	360 VA				540 VA	-				SF
		20 A	1	360 VA		200 VA				1			SF
57 59	IRRIGATION CP LIGHTING	20 A 20 A	1			200 VA		800 VA		1			SF SF
				600 \/A				000 VA					
61	POWER	20 A	1	600 VA		400 \/A				1			SF SF
	RECEPTACLE	20 A	1			400 VA		400 VA					SF
65 67	RECEPTACLE	20 A	'					400 VA		1			SF
	SPARE	20.4	1			0.1/4				1			SF
69		20 A				0 VA		0.1/4		1			
71	SPARE	20 A	1	0.1/4				0 VA		1			SF
73	SPARE	20 A	1	0 VA		0.1/4				1			SF
75 77	SPARE SPARE	20 A	1			0 VA		0 VA		1			SF
77 79	SPARE	20 A 20 A	1	0 VA				UVA		1			SF SF
81	SPARE	20 A	1	UVA	-	0 VA				1			SF
83	SPARE	20 A	1			UVA		0 VA		1			SP
			Load:	611	0 VA	508	4 VA	7474	4 VA	+ '			- SF
ı			Amps:		1 A		0 A		2 A	J			
Legen	d:		• • •										
Load (Classification		Con	nected Loa	d	Demand Fa	ctor	Estimated	Demand			Panel	Totals
Equipn	ment			200 VA		80.00%		160	VA				
Lighting	g			4790 VA		100.00%	5	4790	VA			Total Conn. Load:	
Other				550 VA		100.00%	5	550	VA			Total Est. Demand:	19528 VA
Power				3100 VA		100.00%		3100				Total Conn.:	
Recept				6980 VA		100.00%		6980				Total Est. Demand:	54 A
Snarr				3948 VA		100.00%)	3948	VA	1			I
Spare										+			

11 LIGHTING					Location: Supply From: Mounting: Enclosure:	Surface				Phases: Wires:		ye				Type: MLO		
1	Ι,	Ţ		CKI	Cinquit Description	Tois	Dalas							Dalas	Tois	Cimero	it December	
A	+		1	-	·						3 						•	;
S JUSTING	+	_	1					200 171	1000 171	1000 VA	200 VA							\dashv
P	_	_	1				1					1240 VA	720 VA					\rightarrow
10		_	1				1	600 VA	800 VA					_				-
1		10	1	9			1			600 VA	800 VA			1				\dashv
10 10 RECEPTACE 20 A 1 1 1 1 1 1 1 1 1		12	1	11	LIGHTING	20 A	1					760 VA	800 VA	1	20 A		(2) FLOOR REC.	
19		14	1	13	LIGHTING	20 A	1	1080 VA	800 VA					1	20 A		(2) FLOOR REC.	
19		16]	15	RECEPTACLE	20 A	1			360 VA	400 VA			1	20 A		FACP	,
2 1 1 1 1 1 1 1 1 1		18		17	RECEPTACLE	20 A	1					720 VA	400 VA	1	20 A		ACCESS CONTROL	-
24 Security 100		20		19	LIGHTING	20 A	1	50 VA	400 VA					1	20 A		SECURITY PANEL	-
20		22		21	LIGHTING		1			370 VA	400 VA			1	20 A			-
March Marc		24	1	23	LIGHTING	20 A	1					150 VA	400 VA	1	20 A			-
28 BEDIC GUAD REC. 20 A 1 50 V A 50	_	_	1					540 VA	400 VA					_				\rightarrow
State	_	_	1							400 VA	400 VA							_
33 RECEPTACLE 20 A 1 10 V 1 20 A 1 2	-	_	1					F00:				400 VA	400 VA	1	20 A		DEDIC. REC.	-
Signature Sign	_		1				· ·	500 VA		E40.1/4	0.1/4			_	20.4		00455	_
18	_	_	1							540 VA	UVA	540 \/4	0.1/4					\dashv
40	_	_	ł					500 \/^	0.1/4			540 VA	UVA					_
41 FURNITURE FEED	-	_	-					500 VA	UVA	1600 \/A	0.1/4							_
43 PURNTURE FEED	_		1							1000 VA	OVA	1600 VA	0 VA					_
46		_	1					1600 VA	0 VA			1000 VA	OVA	_				_
48		_	1					1000 171	0 171	1600 VA	0 VA			_				_
SO	-	_	1									540 VA	0 VA					\dashv
STATE RECEPTACLE		_	1				1	540 VA	0 VA					_				-
S3 RECEPTACLE	_	_	1				1			360 VA	0 VA			1				-
ST RECEPTACLE	_	_	1				1					360 VA	0 VA	1				-
S		56	1	55	RECEPTACLE	20 A	1	720 VA	0 VA					1	20 A		SPARE	Ξ
61 DEDIC REC. 20 A 1 180 VA 0 VA 1 10 VA 1 20 A SPARE 66 66 66 RECEPTACLE 20 A 1 VA VA VA VA VA 1 20 A SPARE 67 RECEPTACLE 20 A 1 VA VA VA VA VA VA V		58	1	57	RECEPTACLE	20 A	1			540 VA	0 VA			1	20 A		SPARE	Ξ
63 RECEPTACLE		60	1	59	DEDIC. REC.	20 A	1					180 VA	0 VA	1	20 A		SPARE	Ξ
RECEPTACLE		62	1	61	DEDIC. REC.	20 A	1	180 VA	0 VA					1	20 A		SPARE	Ξ
67 RECEPTACLE		64	1	63	RECEPTACLE	20 A	1			180 VA	0 VA			1	20 A		SPARE	Ξ
Formation		66		65	RECEPTACLE	20 A	1					360 VA	0 VA	1	20 A		SPARE	=
Total Amps: 97 A 100 0 96		68		67	RECEPTACLE	20 A	1	720 VA						1			SPACE	Ξ
73 FLOOR RECEPTACLE 20 A		70		69	RECEPTACLE	20 A	1			360 VA				1			SPACE	Ξ
75 RECEPTACLE		72	1	71	FLOOR RECEPTACLE	20 A	1					400 VA		1			SPACE	Ξ
77 RECEPTACLE		74	1	73	FLOOR RECEPTACLE	20 A	1	400 VA						1			SPACE	Ξ
RECEPTACLE	_	_	1				1			720 VA				1				-
RECEPTACLE	-	_	Į.									540 VA						_
RECEPTACLE 20 A 1	_	_	1					540 VA		7001/4								_
Total Load: 11570 VA		_	ł							720 VA		540.1/4						_
Legend:	_	04	1	03	RECEPTAGLE			115	70.\/A	1155	:0.\/A	_		'			SPACE	_
Load Classification Connected Load Demand Factor Estimated Demand Panel Totals Lighting 6050 VA 100.00% 6050 VA Total Conn. Load: 34170 VA Power 2100 VA 100.00% 2100 VA Total Est. Demand: 26760 VA Receptacle 24820 VA 70.15% 17410 VA Total Est. Demand: 26760 VA Spare 1200 VA 100.00% 1200 VA Total Est. Demand: 74 A	_		-	Lege	nd:													_
Lighting 6050 VA 100.00% 6050 VA Total Conn. Load: 34170 VA Power 2100 VA 100.00% 2100 VA Total Est. Demand: 26760 VA Receptacle 24820 VA 70.15% 17410 VA Total Est. Demand: 95 A Spare 1200 VA 100.00% 1200 VA Total Est. Demand: 74 A	_								.									_
Power 2100 VA 100.00% 2100 VA Total Conn. Load: 34170 VA Receptacle 24820 VA 70.15% 17410 VA Total Est. Demand: 26760 VA Spare 1200 VA 100.00% 1200 VA Total Est. Demand: 74 A Total Est. Demand: 74 A	_		1						a							Panei	lotais	_
Receptacle 24820 VA 70.15% 17410 VA Total Est. Demand: 26760 VA Spare 1200 VA 100.00% 1200 VA Total Est. Demand: 74 A	_		ł												Tot	al Conn I oad:	34170 \/ \Δ	_
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160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

PROJECT

West Michigan Hispanic **Chamber of** Commerce - HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

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1			

DESCRIPTION

01/24/2025 02/20/2025

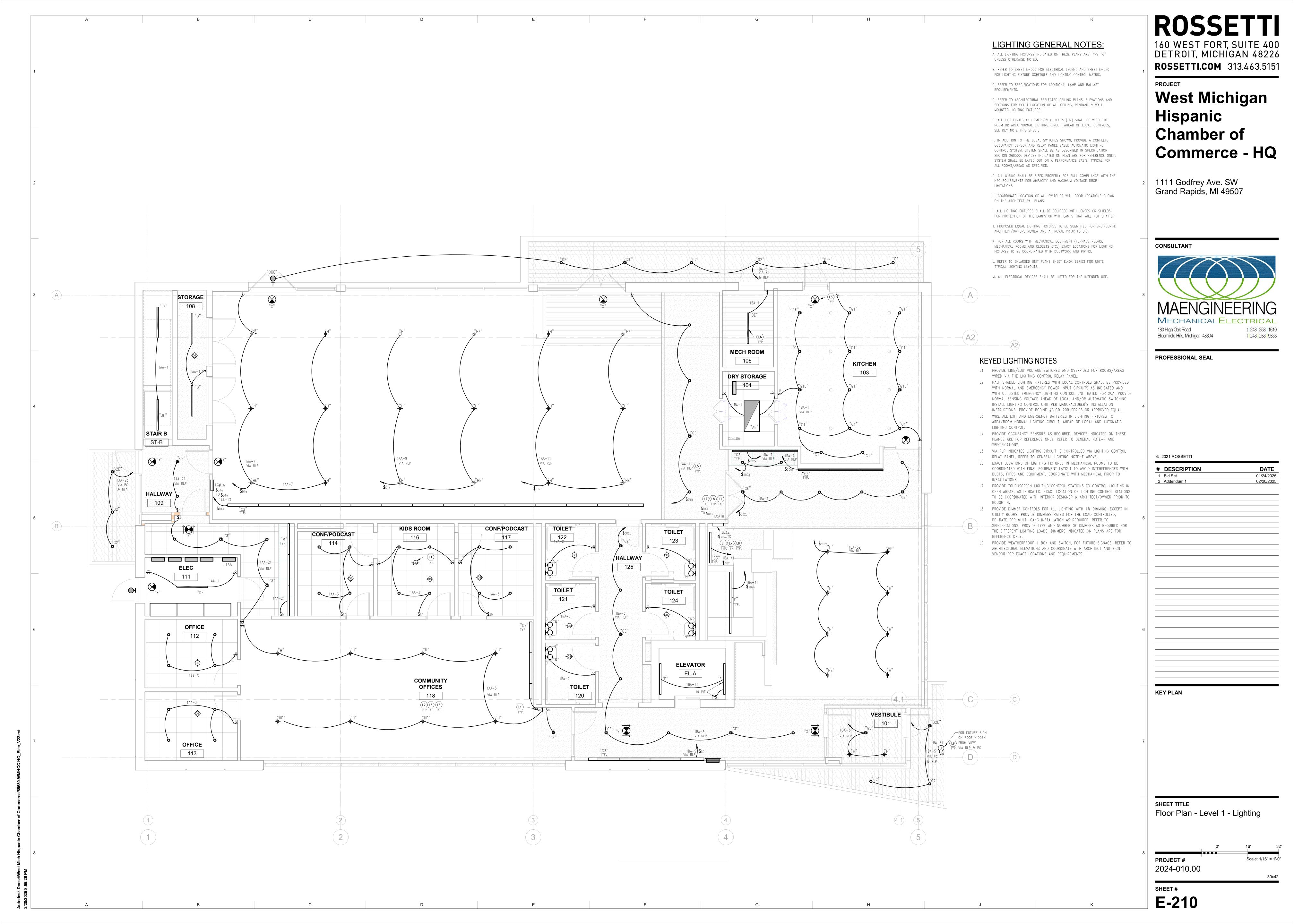
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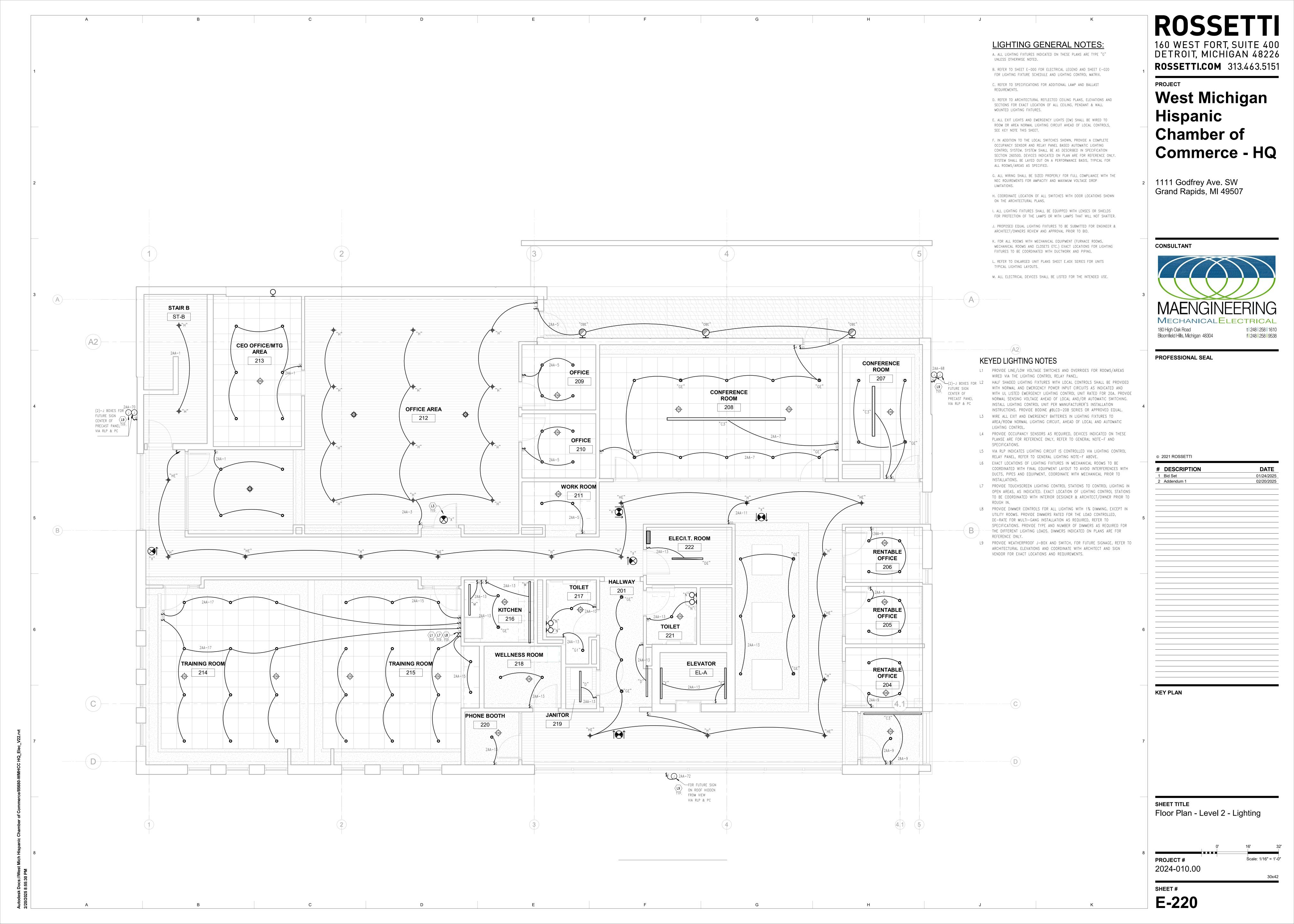
KEY PLAN

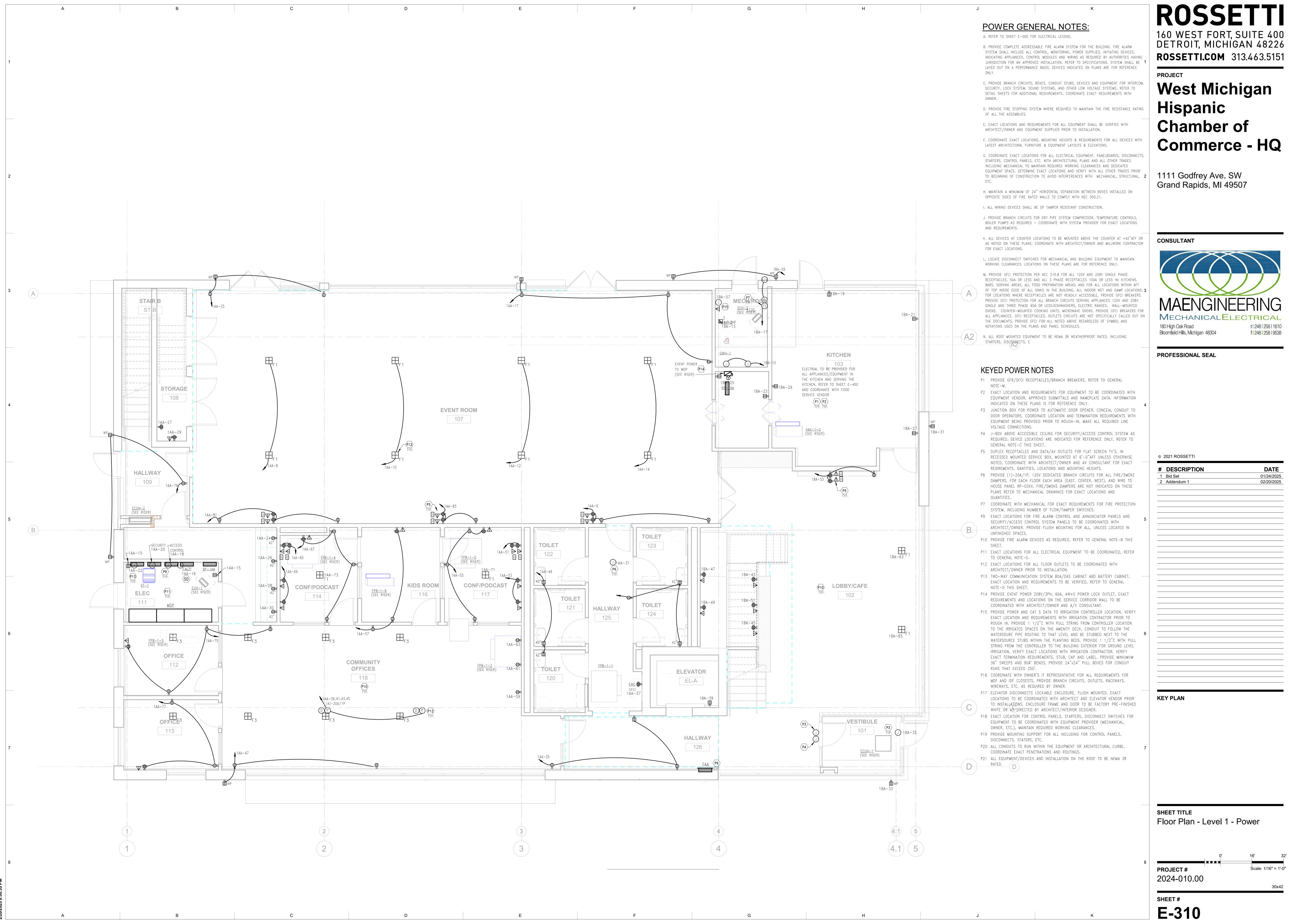
SHEET TITLE Electrical Panel Schedules

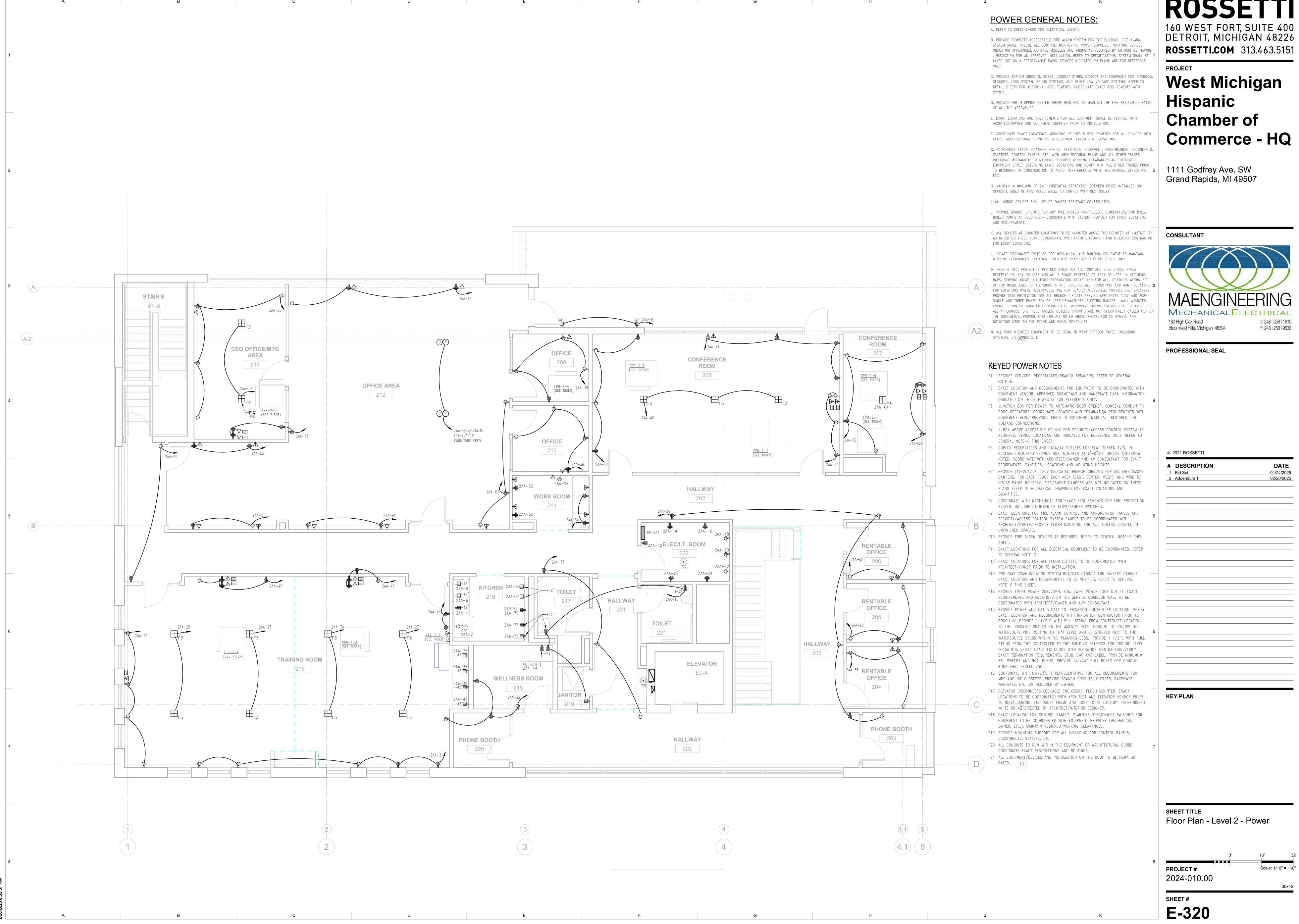
PROJECT# 2024-010.00

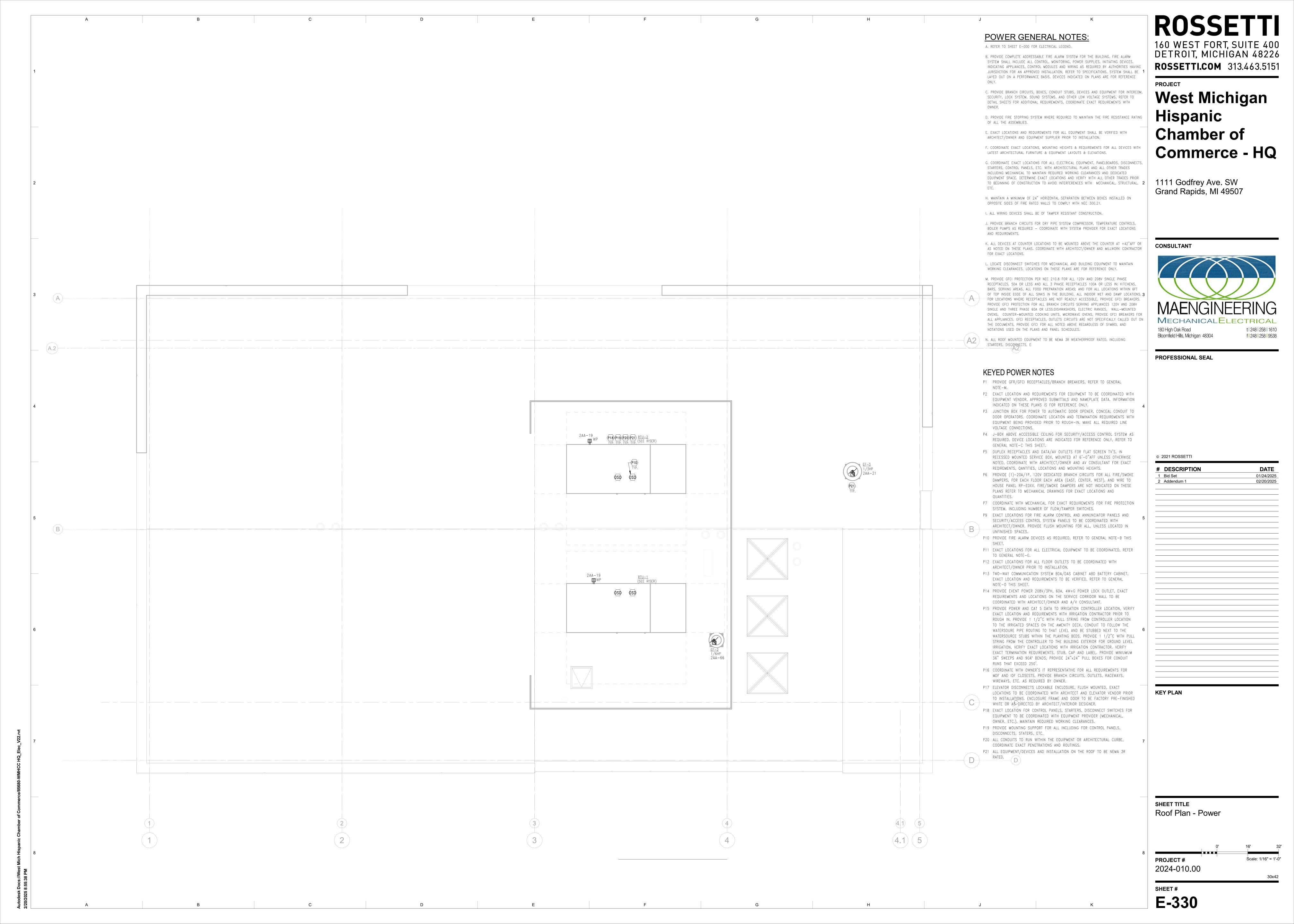
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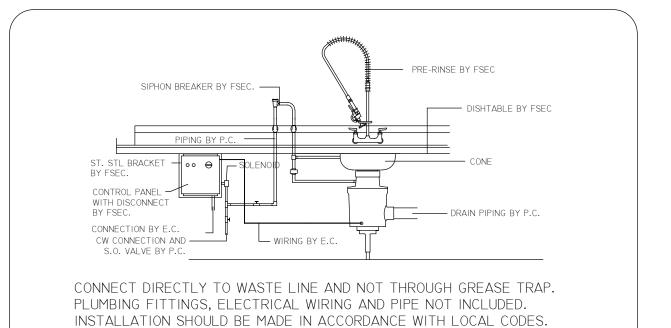




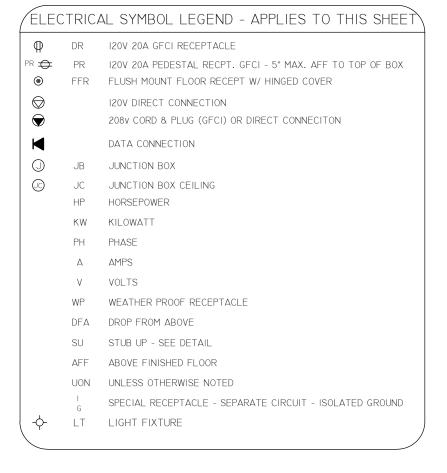


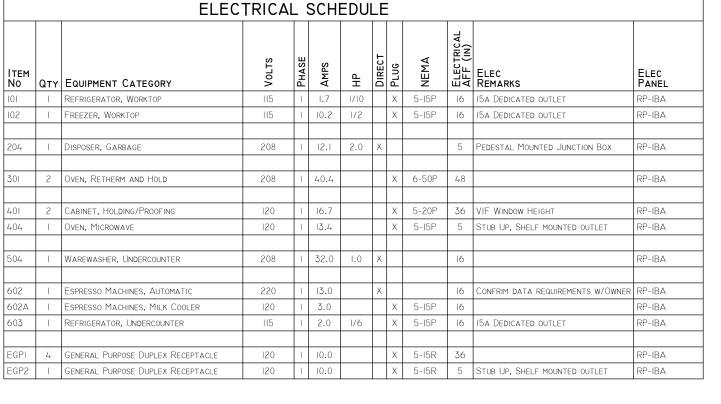






TYPICAL DISPOSER INSTALLATION





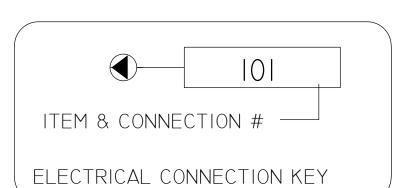
NOTE FOR EQUIPMENT SCHEDULE

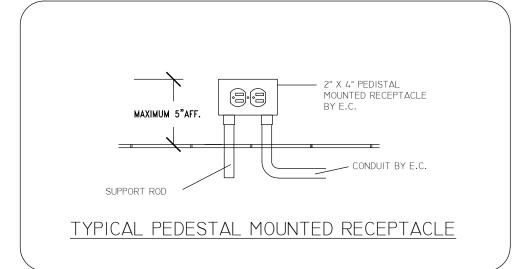
- * NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED OR
- BY OTHERS.

 * NOTE: ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE
- EQUIPMENT CONTRACT.

 * NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY
- REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS.

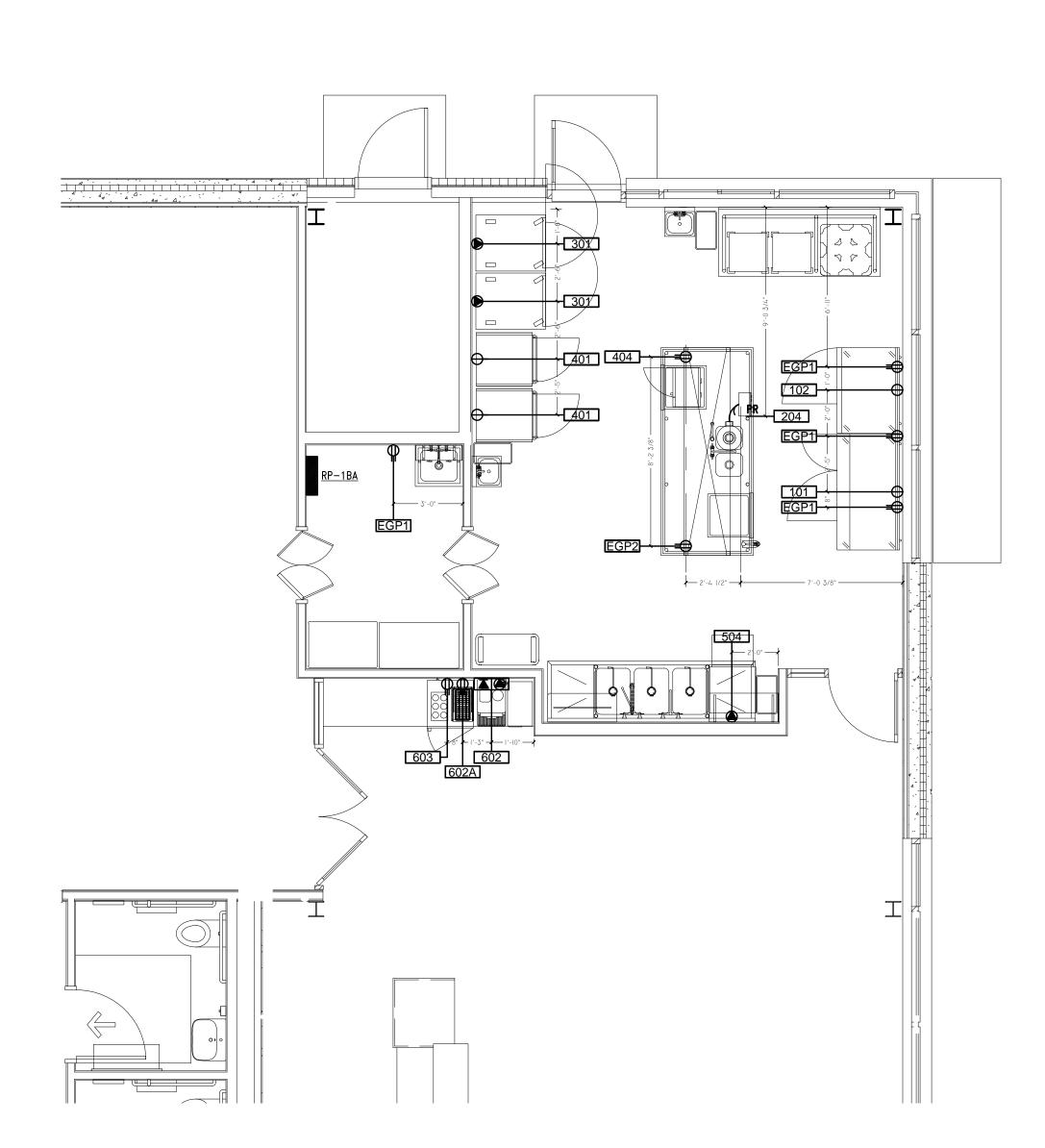
 * NOTE: DO NOT START WORK UNLESS ALL ITEMS BY OWNER
 OR OTHERS HAVE BEEN VERIFIED.





POWER TO BE PROVIDED TO ALL EQUIPMENT BASED ON FINAL APPROVED KITCHEN PLANS AND EQUIPMENT SUBMITTALS. COORDINATE ALL WORK WITH KITCHEN CONSULTANT, FIRE PROTECTION AND OWNER FOR ALL EQUIPMENT AND LOCATIONS. PROVIDE ALL DISCONNECTS, STARTERS, HOA COMBO STARTER/DISC., BRANCH BREAKERS, WIRING, CONDUIT, OUTLETS, INTERCONNECTIONS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION.

INFORMATION INDICATED ON THIS PLAN IS FOR REFERENCE ONLY.



Enlarged Kitchen Plan - Electrical

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

GENERAL POWER NOTES:

- A. REFER TO SHEET E-000 FOR ELECTRICAL LEGEND AND GENERAL NOTES.

 B. PROVIDE COMPLETE FIRE ALARM SYSTEM COVERAGE FOR THE RENOVATED AREAS AS AN EXTENSION THE FXISTING BUILDING FIRE ALARM SYSTEM. FIRE ALARM SYSTEM SHALL INCLUDE MONITORING.
- PROVIDE COMPLETE FIRE ALARM SYSTEM COVERAGE FOR THE RENOVATED AREAS AS AN EXTENSION OF THE EXISTING BUILDING FIRE ALARM SYSTEM. FIRE ALARM SYSTEM SHALL INCLUDE MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. RELOCATE EXISTING DEVICES AND PROVIDE NEW AS REQUIRED. DEVICES ARE NOT SPECIFICALLY INDICATED ON PLANS AND ARE FOR REFERENCE ONLY. SYSTEM SHALL BE LAID OUT ON A PERFORMANCE BASIS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- C. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
 D. PROVIDE FIRE STOPPING SYSTEM AS REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATINGS OF ALL ASSEMBLIES.
- COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH ARCHITECTURAL DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.
- CONTRACTOR TO CONDUCT A COORDINATION MEETING WITH ALL OTHER TRADES PRIOR TO START OF THE WORK TO DETERMINE EQUIPMENT LOCATIONS AND PATHWAYS TO AVOID INTERFERENCES WITH OTHER SYSTEMS AND TO MAINTAIN THE CODE REQUIRED, DEDICATED EQUIPMENT SPACE, WORKING CLEARANCES AND ACCESS.
- G. CONTRACTOR TO CONDUCT A ROUGH ELECTRICAL INSPECTION/ COORDINATION WITH THE OWNER/TENAN AND USER GROUPS), PRIOR TO ENCLOSING WALLS, FOR THE PURPOSE OF CONFIRMING ALL J-BOX LOCATIONS FOR ALL POWER, FOOD SERVICE EQUIPMENT, TELECOMM, AV, LIGHTING CONTROLS, SECURITY ACCESS CONTROL, ETC.

 H. EXACT LOCATIONS OF ELECTRICAL EQUIPMENT PANELS, DISCONNECTS, ETC. TO BE COORDINATED WITH ADDRESS PRIOR TO PROVIDE CODE REQUIRED REDUCATED FOURIERING.
- I. PROVIDE GROUND FAULT INTERRUPTER TYPE RECEPTACLES FOR ALL RECEPTACLES WITHIN 6'-0" OF WATER SOURCES AND SINKS, INCLUDING ALL RECEPTACLES AT MILLWORK AND KITCHEN. FOR ALL LOCATIONS THAT ARE NOT READILY ACCESSIBLE PROVIDE GFCI TYPE BRANCH BREAKER IN THE PANELBOARD OR BLANK FACE GFCI AT AN ACCESSIBLE LOCATION NEAR THE RECEPTACLE. GROUND FAULT PROTECTION TO BE PROVIDED FOR ALL RECEPTACLES 120V AND 50A OR LESS AND 208V SINGLE AND 3 PHASE 100A OR LESS; ALL OVENS, ELECTRIC RANGES, DISHWASHERS, COOKING UNITS, MICROWAVE OVENS, PER NEW 210.8.(B)(D).
 J. GROUND FAULT PROTECTION FOR DEVICES INSTALLED AT LOCATIONS NOT READILY ACCESSIBLE, PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD.
- COORDINATE WITH FIRE SUPPRESSION/MECHANICAL AND LOCAL AHJ FOR REQUIREMENTS TO SHUT OFF POWER TO ALL ITEMS UNDER THE HOODS AND MECHANICAL VENTILATION EQUIPMENT AUTOMATICALLY UPON FIRE SUPPRESSION SYSTEM. PROVIDE CONTACTORS AND WIRE AS REQUIRED TO ALLOW INTERLOCKING WITH HOOD FIRE SUPPRESSION SYSTEM FOR CIRCUITS REQUIRED TO BE TRIPPED UPON ACTIVATION OF KITCHEN FIRE SUPPRESSION SYSTEM. REFER TO DETAILS ON SHEET E.500 AND INCLUDE IN BID ALL COSTS ASSOCIATED.
- L. ALL ELECTRICALLY ENERGIZED ITEMS UNDER THE EXHAUST HOODS MUST SHUT OFF AUTOMATICALLY UPON FIRE SYSTEM ACTUATION, ALSO CONTRACTOR SHALL VERIFY WITH A.H.J REQUIREMENTS TO SHUT OFF MECHANICAL VENTILATION EQUIPMENT UPON ACTIVATION OF FIRE SUPPRESSION SYSTEM, REFER TO TYPICAL WIRING DIAGRAMS THIS SHEET AND INCLUDE IN BID ALL COSTS ASSOCIATED. PROVIDE CONTROL CONTACTORS AND WIRE AS REQUIRED TO ALLOW INTERLOCKING WITH HOOD FIRE SUPPRESSION SYSTEM.
- M. ARCHITECT TO APPROVE ALL FINISHES OF EXPOSED OUTLETS AND HEIGHT AND EXACT LOCATION OF ALL OUTLETS.

ELECTRICAL NOTES:

- 1. E.C. SHALL ROUGH-IN ELECTRICAL SERVICE THROUGH WALLS, FLOORS AND CEILINGS. E.C. TO PROVIDE AND INSTALL ELECTRICAL SERVICES FROM RROUGH-INS TO FINAL CONNECTION POINTS ON FOODSERVICE EQUIPMENT.
- 2. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL OUTLETS IN WALLS, FLOOR AND CEILING, AND IN OR ON FOODSERVICE EQUIPMENT WHERE NOTED ON DRAWINGS.
- 3. E.C. SHALL FURNISH AND INSTALL ALL DISCONNECT SWITCHES AS REQUIRED FOR THE EQUIPMENT IN ACCORDANCE WITH PREVAILING ELECTRICAL AND BUILDING CODES.
- 4. E.C. SHALL FURNISH AND INSTALL ALL CONDUIT AND WIRING BETWEEN REMOTE CONTROL PANELS AND THE FOODSERVICE EQUIPMENT.
- 5. ALL CONDUITS SHALL BE RUN IN THE WALL AT 6" A.F.F. MINIMUM OR AS INDICATED. ALL EXPOSED CONDUIT SHALL BE RUN TIGHT TO THE WALL. E.C. SHALL NOT ATTACH CONDUIT TO ANY LEGS OR SHELVING BRACING. CONDUIT MAY BE SECURED TO THE BOTTOM OF THE TABLES OR OTHER STEEL SURFACES. ALL FLEXIBLE CONDUIT SHALL BE "SEALTITE" OR EQUAL. FLEXIBLE METAL CONDUIT IS NOT ACCEPTABLE. ALL COVER PLATES SHALL BE STAINLESS STEEL.
- 6. S.C. SHALL PROVIDE AND INTERWIRE SHUNT-TRIP BREAKER TO AUTOMATICALLY SHUT DOWN ELECTRIC EQUIPMENT AND RECEPTACLES UNDER HOODS WHEN FIRE PROTECTION SYSTEM IS ACTIVATED. E.C. SHALL INTERCONNECT FIRE PROTECTION SYSTEM WITH BUILDING ALARM SYSTEM, IF REQUIRED BY THE ARCHITECT.
- 7. E.C. SHALL ROUGH IN, CONNECT AND INTERCONNECT ROOFTOP EQUIPMENT FOR FOODSERVICE VENTILATION SYSTEMS AS SHOWN ON DRAWINGS. ROOFTOP EQUIPMENT UTILITY LOADS ARE SHOWN ON THE HOOD MANUFACTURERS SHOP DRAWING.
- 8 120V 1PH 5KW FOR HOOD LIGHTS F.C. TO CONNECT TO HUNCTION BOX ON
- 120V. 1PH .5KW FOR HOOD LIGHTS. E.C. TO CONNECT TO JUNCTION BOX ON TOP OF EXHAUST HOOD. SEE MANUFACTURERS SHOP DRAWINGS FOR JUNCTION BOX LOCATIONS.
- LOW VOLTAGE CONTROL WIRING FROM ROOFTOP VENTILATION PACKAGE TO CONTROL PANEL ON FACE OF HOOD. SEE MANUFACTURERS SHOP DRAWINGS FOR JUNCTION BOX AND CONTROL PANEL LOCATIONS. E.C. TO INTERCONNECT.
- 10. HOOD CONTROLS & CONTROL WIRING TO BE LOCATED AND PROVIDED BY OTHERS.
- 11. 120V. 1PH 20A DEDICATED CIRCUIT FOR P.O.S. SYSTEM ITEM E.C. TO PROVIDE CONDUIT FROM P.O.S. SYSTEM TO FOODSERVICE OFFICE, FOR COMPUTER TERMINAL. OTHER TRADES TO PROVIDE PHONE JACK FOR DATE LINK. VERIFY ALL ELECTRICAL REQUIREMENTS WITH SUPPLIER OF SYSTEM.
- 12. E.C. SHALL FURNISH AND INSTALL ALL INTERCONNECTING WIRING FOR WALK—IN REFRIGERATOR AND/OR FREEZER LIGHTS, DOOR HEATERS, COMPRESSORS EVAPORATORS, ALARM SYSTEMS, HEATED PRESSURE RELIEF VENTS, WINDOW HEATERS, TIME CLOCKS, INTERLOCKS, ETC. UNITS ARE NOT PRE—WIRED. WIRE PER MANUFACTURERS DRAWINGS. CONDUIT FOR WALK—IN LIGHTING SHALL BE RUN OVER TOP OF BOXES. INTERIOR CONDUIT RUNS ARE NOT ACCEPTABLE. ALL PENETRATIONS FOR CONDUIT AND REFRIGERATION LINES SHALL BE SEALED WITH FOAM TO INSURE THAT THERE ARE NO AIR LEAKAGES. PENETRATIONS FOR CONDUIT SHALL BE THROUGH THE WALLS OF THE WALK—IN. THERE WILL BE NO PENETRATION THROUGH THE CEILING PANELS OF THE WALK—IN REFRIGERATOR/FREEZER.
- 13. ALL WIRING, CONDUIT, RECEPTACLES, JUNCTION BOXES AND DCO'S PROVIDED AS PART OF THE COUNTER BY F.E.C. FINAL CONNECTIONS BY E.C.
- 14. HEIGHTS GIVEN FOR ELECTRICAL ROUGH-INS TO CENTER OF VERTICALLY MOUNTED BOX.

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PROJECT

West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

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PROFESSIONAL SEAL

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DESCRIPTION

2	Addendum 1	02/20/202
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DATE 01/24/202

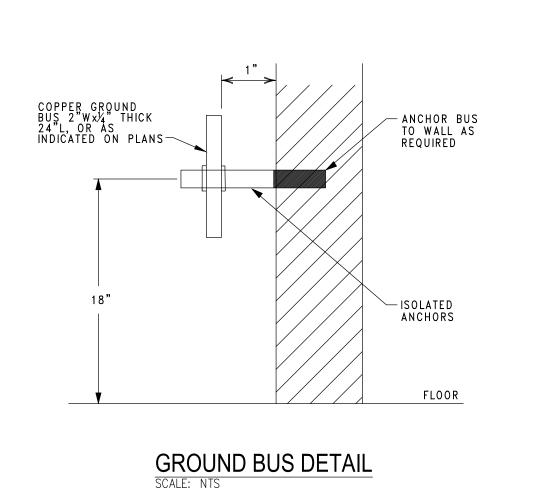
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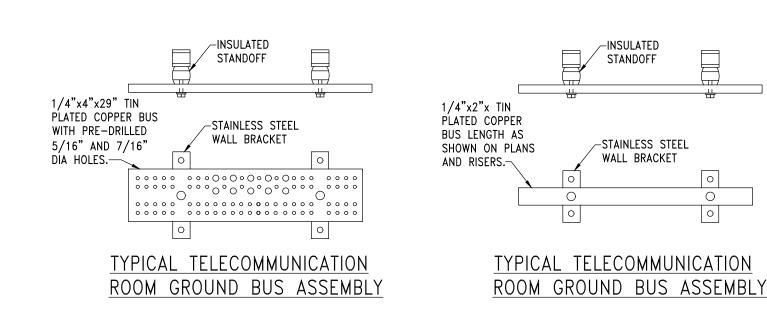
Enlarged Kitchen Plan - Power

0' 16'
PROJECT # Scale:
2024-010.00

SHEET#

KEY PLAN





TYPICAL GROUND BUS ASSEMBLIES

_____ TO EMERGENCY BALLAST SENSING __LIGHT SWITCH

- 1PDT ISOLATED AUX.

1> OCCUPANCY SENSOR MODEL NUMBERS WIRING DIAGRAMS AND

DIAGRAMS ACCORDINGLY PER MANUFACTURERS INSTALLATION

SCHEMATIC OCCUPANCY CONTROL DETAIL

(CEILING MOUNTED SENSOR) ①

Schematic Only

INSTRUCTIONS AND INDICATE ON AS-BUILT DOCUMENTS.

CONDUCTOR COLORS ARE BASED ON WATTSTOPPER. EQUAL EQUIPMENT

ON THE WSU PREFERRED MANUFACTURERS LIST MAY BE USED. MODIFY

- CONTACTS FOR CONTROL FUNCTIONS WHEN NOTED

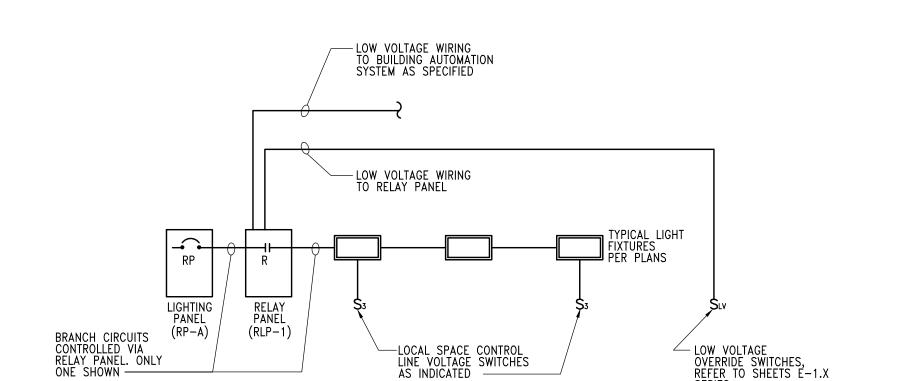
_ _ CIRCUIT WHERE APPLICABLE

KEY NOTES:

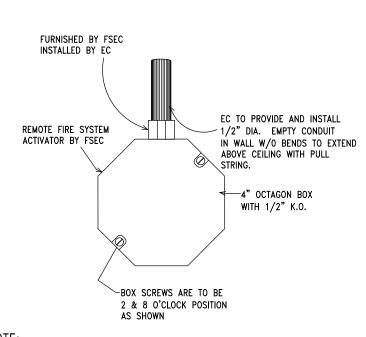
LINE VOLTAGE

(120V)

CIRCUIT 1[⊥]

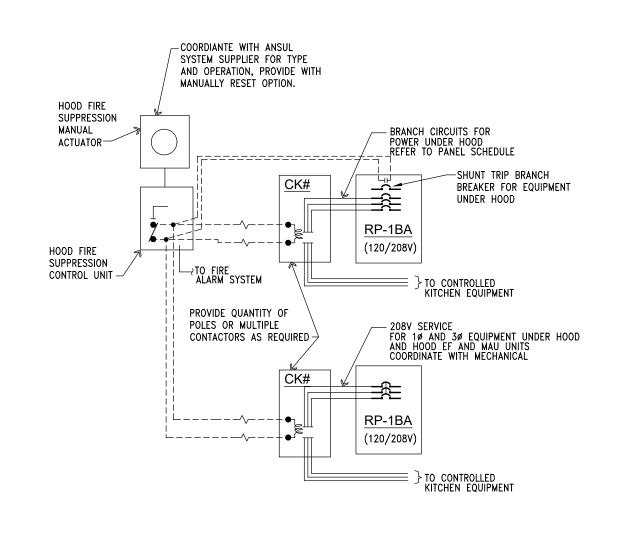


AUTOMATIC LIGHTING CONTROL OVERRIDE
SCHEMATIC DIAGRAM
No Scale

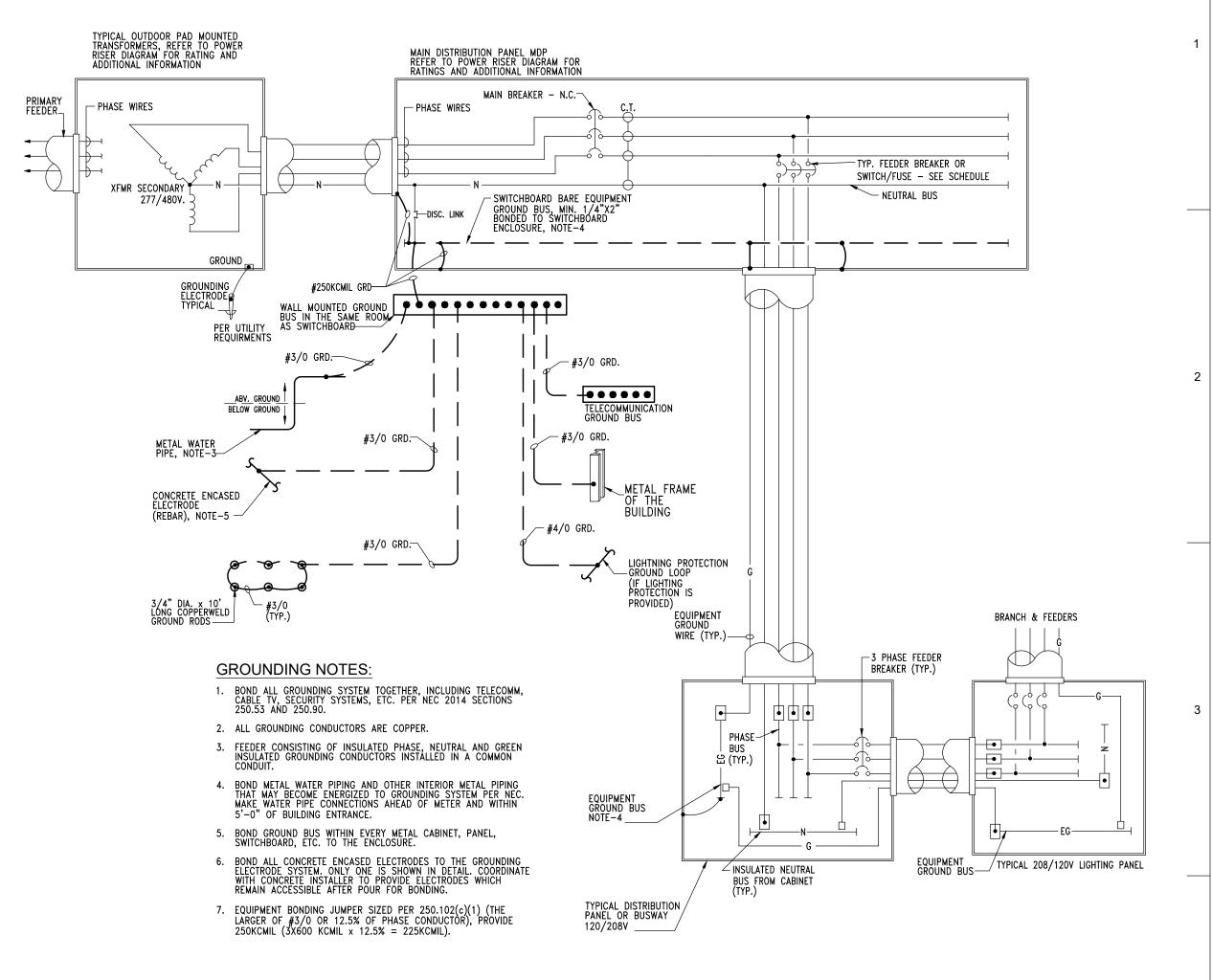


NOTE: VERIFY HEIGHT AND EXACT REQUIREMENT WITH LOCAL AUTHORITY. ADA REQUIREMENTS MAY APPLY.

ANSUL FIRE SYSTEM REMOTE PULL STATION DETAIL

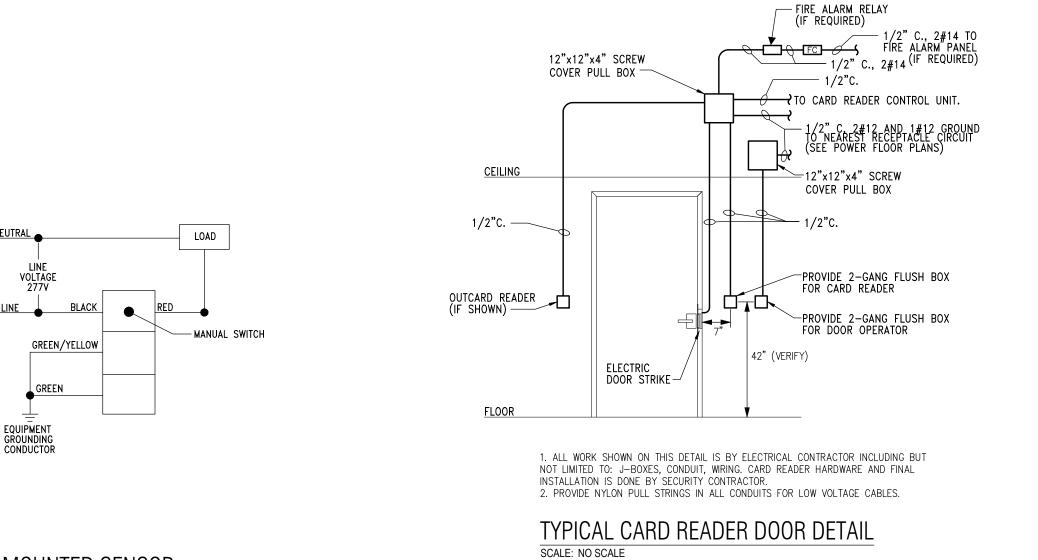


WIRING SCHEMATIC FOR HOOD FIRE SUPPRESSION SYSTEM

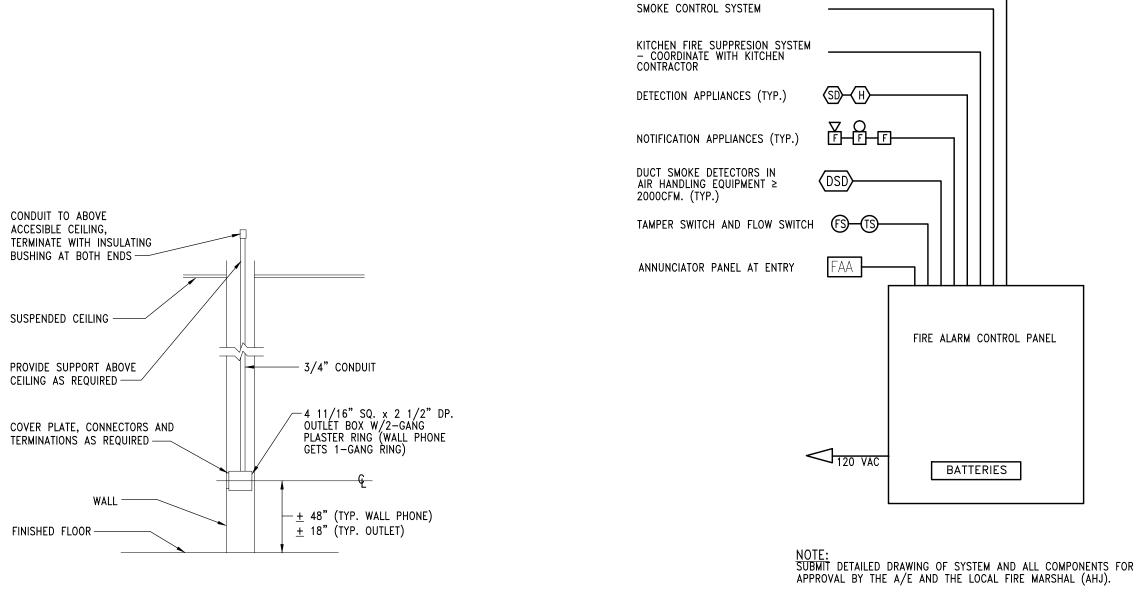


ELECTRICAL SYSTEM GROUNDING SCHEME
Schematic Only

ELEVATOR CONTROL



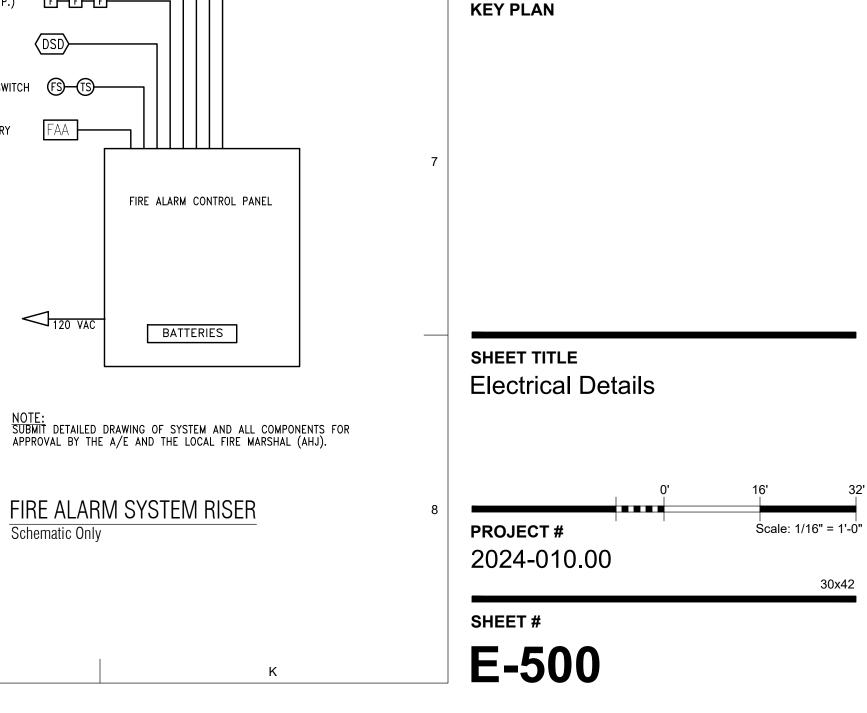
WALL MOUNTED SENSOR



TYPICAL TELECOMMUNICATION OUTLET

DETAIL

No Scale



ROSSETTI

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West Michigan

Commerce-HQ

MECHANICALELECTRICAL

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DATE

01/24/2025

02/20/2025

Hispanic

1111 Godfrey

CONSULTANT

180 High Oak Road Bloomfield Hills, Michigan 48304

PROFESSIONAL SEAL

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2 Addendum 1

DESCRIPTION

Chamber of

Grand Rapids, MI 49507

PROJECT

ELECTRICAL SPECIFICATIONS

GENERAL REQUIREMENTS:

ENGINEER.

ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL LOCAL AND STATE AUTHORITIES HAVING JURISDICTION THEREOF.

ALL EQUIPMENT SHALL BE SPECIFICATION GRADE AND SHALL HAVE U.L. LABEL FOR INTENDED USE.

ELECTRICAL SYSTEMS SHALL BE COMPLETE IN EVERY DETAIL, INCLUDING ALL INCIDENTAL ITEMS FOR A PROPER AND FUNCTIONING INSTALLATION SUBJECT TO FINAL APPROVAL OF ARCHITECT/ENGINEER.

ALL REQUIRED PERMIT AND INSPECTIONS SHALL BE OBTAINED BY CONTRACTOR AND SUCH COSTS SHALL BE INCLUDED IN BID PRICE FOR THIS

PROVIDE UL LISTED SYSTEM FOR FIRE STOPPING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. PROVIDE SYSTEM WITH EQUAL OR GREATER RATING THAN ASSEMBLY, REFER TO ARCHITECTURAL DOCUMENTS FOR RATINGS AND LOCATIONS OF ASSEMBLIES. EXAMINATION OF SITE IS MANDATORY. CONTRACTOR IS HEREBY HELD TO HAVE EXAMINED THE SITE AND HAVE INCLUDED IN HIS BID PRICE ALL COSTS DUE TO SITE AND FIELD CONDITIONS.

COMPLETE IDENTIFICATION OF PROJECT ELECTRICAL COMPONENTS IS REQUIRED. IDENTIFY ALL PANELS, DISCONNECTS, CONTROL DEVICES, ETC. WITH THE NOMENCLATURE INDICATED ON THE DOCUMENTS AND WITH POWER SOURCE AND ELECTRICAL RATINGS USING PLASTIC LAMINATE NAMEPLATE. INSTALL TYPEWRITTEN DIRECTORIES OF ALL CIRCUITS ON INSIDE OF PANELS. IDENTIFY WIRING DEVICE COVERPLATES WITH PANELBOARD AND BRANCH CIRCUIT NUMBER SERVING DEVICE, E.G. "A-15". PROVIDE 1/4" MACHINE-WRITTEN BLACK LETTERING ON CLEAR PLASTIC ADHESIVE TAPE. LOCATE ON BOTTOM FRONT OF COVERPLATE, CENTERED BELOW WIRING DEVICE(S). SUBMIT SAMPLE OF LABELED TAPE

WITH WIRING DEVICE/COVERPLATE SUBMITTAL. SAMPLE MAY BE ADHERED TO PAPERWORK IN SUBMITTAL, RATHER THAN TO A COVERPLATE. PROVIDE TEMPORARY POWER AND LIGHTING DURING CONSTRUCTION. REMOVE TEMPORARY WIRING UPON COMPLETION OF THE PROJECT. TEMPORARY SERVICES SHALL BE AS REQUIRED, BY N.E.C. AND OSHA.

COORDINATE SIZE AND LOCATION OF ANY REQUIRED ACCESS PANELS IN WALLS OR FINISHED CEILINGS WITH ARCHITECT PRIOR TO INSTALLATION.

GROUND CONTINUITY SHALL BE MAINTAINED THROUGHOUT THE ELECTRICAL SYSTEM. INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH EVERY

WARRANTY: UNLESS A LONGER PERIOD IS SPECIFIED IN INDIVIDUAL PARAGRAPHS, PROVIDE A MINIMUM OF A ONE YEAR WARRANTY ON ALL ELECTRICAL WORK BEGINNING THE DATE OF FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER.

SUBMITTALS: SUBMIT SHOP DRAWINGS FOR ALL MAJOR COMPONENTS OR SYSTEMS OF THE PROJECT. SUBMIT ADDITIONAL SHOP DRAWINGS IF REQUESTED BY

NO APPARATUS OR EQUIPMENT SHALL BE SHIPPED FROM STOCK OR FABRICATED UNTIL SHOP DRAWINGS FOR SAME HAVE BEEN STAMPED 'REVIEWED" OR "REVIEWED AS NOTED". SUBMIT DATA REQUIRED FOR TRANSFORMERS SUCH AS EFFICIENCY, REGULATION, CORE LOSS AND SOUND LEVELS. (SEE APPLICABLE SECTIONS).

SUBMIT SYSTEM COMPONENTS, PRODUCT DATA AND SHOP DRAWINGS COMPLETE FOR EACH SYSTEM UNDER ONE SUBMITTAL. DO NOT BREAK OUT EQUIPMENT FOR ONE SYSTEM BETWEEN MULTIPLE SUBMITTALS.

ALL SHOP DRAWINGS MUST BE CLEARLY MARKED TO SHOW EQUIPMENT SUBMITTED AND ANY DEVIATIONS FROM SPECIFICATIONS SHALL BE NOTED THEREON. DO NOT INCLUDE ONLY MODEL NUMBERS TO INDICATE SUBMITTED EQUIPMENT. STRIKE OUT ANY INFORMATION ON PRODUCT DATA THAT IS NOT PROJECT SPECIFIC, AND EDIT RELEVANT INFORMATION TO SHOW ACTUAL EQUIPMENT SUBMITTED. ELECTRICAL CONTRACTOR MUST SIGN AND APPROVED ALL SHOP DRAWINGS PRIOR TO SUBMITTAL.

UNIQUELY NUMBER EACH PAGE IN SUBMITTAL. IF DIFFERENT SYSTEMS ARE INCLUDED IN ONE SUBMITTAL, CLEARLY SEPARATE INFORMATION AND PROVIDE DIFFERENT SUB-NUMBERING OF SYSTEMS. SHOP DRAWINGS THAT ARE INCOMPLETE, UNSIGNED AND NOT PLAINLY MARKED WILL NOT BE REVIEWED.

<u>UTILITY SERVICES (NEW BUILDINGS):</u> ELECTRIC SERVICE TO THE SITE WILL BE UNDERGROUND, SECONDARY METERED SERVICE AT THE VOLTAGE INDICATED ON DRAWINGS. SERVICE WILL BE PROVIDED BY THE DETROIT EDISON COMPANY. POWER COMPANY WILL PROVIDE AND INSTALL PRIMARY CABLE, SERVICE TRANSFORMER

AND WILL MAKE FINAL CONNECTIONS. TRADE CONTRACTOR SHALL INSTALL TRANSFORMER PAD AND GROUNDING PER UTILITY STANDARD DRAWINGS, UNDERGROUND DUCT BANKS AND

ALL SECONDARY WIRING FROM TRANSFORMER TO BUILDING POWER EQUIPMENT. ALL EXCAVATION, TRENCHING AND BACKFILLING SHALL BE PROVIDED BY TRADE CONTRACTOR. CONSULT UTILITY COMPANIES PROVIDING SERVICE TO THIS PROJECT AND COMPLY WITH THEIR REQUIREMENTS. INCLUDE ANY UTILITY COMPANY CHARGES IN BASE BID PRICE.

TELEPHONE SERVICE WILL BE PROVIDED BY THE TELEPHONE COMPANY. PROVIDE TELEPHONE SERVICE CONDUIT FROM SERVICE POINT TO TELEPHONE SERVICE EQUIPMENT (TELEPHONE BOARD OR CABINET) WITHIN BUILDING. COORDINATE CONDUIT TERMINATION WITH TELEPHONE

MICHIGAN UNIFORM ENERGY CODE:

MICHIGAN UNIFORM ENERGY CODE:

THIS IS A PERFORMANCE BASED DESIGN-BUILD SPECIFICATION.

THE INTENT OF THIS SPECIFICATION ITEM IS FOR FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MICHIGAN UNIFORM ENERGY CODE 2015 AND RELATED AMENDMENTS AS THEY APPLY TO THE ASHRAE 90.1-2013 STANDARD, REFER TO PLANS FOR DETAILS AND REQUIREMENTS FOR EACH SPACE AND/OR AREA.

DESIGN AND PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION. INDICATE ALL COMPONENTS ON PLAN FOR REVIEW AND APPROVAL AS PART OF THE LIGHTING PACKAGE SUBMITTAL DOCUMENTATION. COORDINATE WITH ARCHITECTURAL TRADES TO PROVIDE CEILING ACCESS PANELS WHERE REQUIRED.

THIS IS A PERFORMANCE BASED DESIGN-BUILD SPECIFICATION.

THE INTENT OF THIS SPECIFICATION ITEM IS FOR FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MICHIGAN UNIFORM ENERGY CODE AND RELATED AMENDMENTS AS THEY APPLY TO THE ASHRAE 90.1-2013 STANDARD. AUTOMATIC CONTROL APPLIES TO NEW AND TO EXISTING TO

AS-BUILT DOCUMENTATION. COORDINATE WITH ARCHITECTURAL TRADES TO PROVIDE CEILING ACCESS PANELS WHERE REQUIRED. PROVIDE OCCUPANCY SENSOR(S) IN EVERY ROOM OR SPACE (EXCEPT WHERE TIME SWITCHES/CONTACTOR CONTROL IS INDICATED) TO AUTOMATICALLY SHUTOFF ALL NON-EMERGENCY LIGHTING WITHIN ITS SPACE WITH ADJUSTABLE TIME DELAY UP TO 30 MINUTES. WHERE INDICATED. CONTROL LIGHTING THROUGH TIME SWITCH WITH ASTRONOMICAL TIME CLOCK. PROVIDE LIGHTING CONTROLLED VIA CONTACTORS AND TIME SWITCH AS REQUIRED FOR QUANTITY OF CIRCUITS CONTROLLED. CONTROL EXTERIOR FIXTURES WITH TIME CLOCK, CONTACTOR AND

DESIGN AND PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION. INDICATE ALL COMPONENTS ON

OCCUPANCY SENSORS SHALL BE OF ULTRASONIC, INFRARED OR MULTI-TECHNOLOGY TYPE AS RECOMMENDED BY MANUFACTURER FOR EACH SPACE/APPLICATION CEILING MOUNTED.

OCCUPANCY SENSORS AND ACCESSORIES, TIME CLOCKS, AND CONTACTORS ARE NOT SPECIFICALLY INDICATED. CONTRACTOR TO DESIGN GROUPING OF BRANCH CIRCUITS AND QUANTITY OF TIME CLOCKS AND CONTACTORS REQUIRED AND PROVIDE ACCORDINGLY. PROVIDE LOCAL WALL SWITCHES ON-OFF TYPE IN ADDITION TO OCCUPANCY AND TIME CLOCK/CONTACTOR CONTROL.

PROVIDE UNIVERSAL VOLTAGE POWER SWITCHES (RELAY) PACKS WITH LOAD CONTACT RATED 20A @ 120/277V FOR EACH SENSOR AS REQUIRED TO ACHIEVE THE LIGHTING CONTROL INTENDED. COORDINATE WITH SWITCH LEGS SHOWN ON PLANS. PROVIDE AUXILIARY CONTACT FOR CONTROL OF HVAC EQUIPMENT ON EACH RELAY PACK. MOUNT COMPONENTS CONCEALED ABOVE FINISHED CEILINGS WHEN PRESENT. PROVIDE ACCESS PANELS FOR NON-ACCESSIBLE CEILINGS. WHEN NO FINISHED CEILINGS ARE PRESENT. MOUNT COMPONENTS CONCEALED IN SHEET METAL ENCLOSURE WITH HINGED COVER. SIZE ENCLOSURE TO ACCOMMODATE COMPONENTS AND WIRING, AND COORDINATE LOCATION

PROVIDE FIXTURES WITH TANDEM WIRED BALLASTS AS REQUIRED TO COMPLY WITH ASHRAE 90.1.

DERIVED SOURCES PER NEC ARTICLE 250.30. INCLUDE INSULATION CLASS IN SUBMITTAL INFORMATION.

REFER TO THE LIGHTING DRAWINGS FOR COORDINATION WITH FIXTURES, CIRCUITING AND SWITCHING. **ELECTRICAL EQUIPMENT AND DEVICES:**

DOWNSTREAM PROTECTION OF OTHER WIRING DEVICES.

ELECTRONIC LOW VOLTAGE OR FLUORESCENT

STEP DOWN TRANSFORMERS SHALL BE GENERAL PURPOSE, DRY TYPE, SELF AIR COOLED, TWO WINDING, UL CLASS 185 INSULATION (115 DEGREE C RISE, 30 DEGREE C HOT SPOT, AND 40 DEGREE C AMBIENT) WITH STANDARD FULL CAPACITY TAPS. VOLTAGE AND KVA AS INDICATED. MANUFACTURERS: GE, WESTINGHOUSE, SQUARE D, OR APPROVED EQUAL. PROVIDE GROUNDING OF TRANSFORMERS AS SEPARATELY

RECEPTACLES SHALL BE SPECIFICATION GRADE, GROUNDING TYPE, 2-POLE, 3-WIRE, AND POLARIZED. RECEPTACLES IN GENERAL SHALL BE 15A, 125 V., HUBBELL #HBL5262 OR EQUAL MOUNTED 18" AFF EXCEPT AT COUNTERS WHERE THEY SHALL BE 6" ABOVE COUNTER AND IN TOILET ROOMS AT 48" ÄFF. RECEPTACLES ON SINGLE CIRCUIT SHALL BE 20 AMPERES, HUBBELL #HBL5362. HIGH AMPERE RATINGS AND VOLTAGES ARE INDICATED ON DRAWINGS.

ISOLATED GROUND RECEPTACLES SHALL BE HUBBELL #IG-5362 WITH A SEPARATE GROUND WIRE IN CIRCUIT CONDUIT. THE ONLY WIRING THAT CAN OCCUPY THIS CONDUIT IS OTHER ISOLATED GROUND CIRCUITS. RECEPTACLES DESIGNATED "GFR" SHALL BE GROUND FAULT RECEPTACLES, SIMILAR TO HUBBELL #GF-5362. FOR OUTDOOR OR WET LOCATIONS, PROVIDE WEATHERPROOF BOX AND GASKETED COVER PLATE. WIRE 'GFR' RECEPTACLES FOR SELF PROTECTION AND NOT

GENERAL USE RECEPTACLES IN GUEST ROOMS OF HOTELS AND MOTESL, CHILD CARE FACILITIES, PRESCHOOLS AND ELEMENTARY SCHOOLS, BUSINESS OFFICES, CORRIDORS WAITING ROOMS IN MEDICAL, DENTAL OFFICES AND OUTPATIENT FACILITIES AND DORMITORIES SHALL BE SPECIFICATION GRADE TAMPER PROOF TYPE, GROUNDING TYPE, 2-POLE, 3-WIRE, AND POLARIZED, RECEPTACLES IN GENERAL SHALL BE 20 AMPERES, HUBBELL #BR20TR OR EQUAL, RECEPTACLES IN PATIENT CARE AREAS SHALL BE HOSPITAL GRADE TAMPER RESISTANT TYPE HUBBELL #HBL8300S OR EQUAL. HIGH AMPERE RATINGS AND VOLTAGES ARE INDICATED ON DRAWINGS. RECEPTACLES SHALL BE MOUNTED 16" AFF EXCEPT AT COUNTERS WHERE THEY SHALL BE 6" ABOVE COUNTER AND IN TOILET ROOMS AT 48" AFF.

RECEPTACLES DESIGNATED "GFR" SHALL BE GROUND FAULT RECEPTACLES AND TAMPER RESISTANT, HUBBELL #GFTR20W OR EQUAL AND IN PATIENT CARE AREAS SHALL BE HOSPITAL GRADE AND TAMPER RESISTANT, HUBBELL #GFR8300HWTR OR EQUAL. FOR OUTDOOR OR WET LOCATIONS, PROVIDE WEATHERPROOF BOX AND GASKETED COVER PLATE.

SWITCHES SHALL BE SINGLE POLE, TWO POLE, OR THREE-WAY, AS INDICATED, TOGGLE TYPE, 20A, 120/277V., QUIET TYPE, HUBBELL #1221/1222/1223 OR EQUAL. PILOT TYPE SWITCHES HUBBELL #1251. PROVIDE DIMMERS RATED FOR LOAD WATTAGE AND VOLTAGE CONTROLLED. CONTRACTOR TO COORDINATE RATING BASED ON APPROVED FIXTURE SUBMITTALS AND ACTUAL FIXTURE QUANTITIES. PROVIDE DIMMERS DESIGNED FOR CONTROLLED LOAD (INCANDESCENT, MAGNETIC LOW VOLTAGE,

WIRING DEVICE COLORS SHALL BE AS SELECTED BY THE OWNER/ARCHITECT.

DEVICE COVER PLATES SHALL BE OF TYPE AND NUMBER OF GANGS FOR DEVICES INSTALLED, SMOOTH EDGED 302/304 GRADE BRUSHED STAINLESS STEEL. PROVIDE BRANCH CIRCUIT IDENTIFICATION ON ALL COVERPLATES AS SPECIFIED UNDER "GENERAL REQUIREMENTS". COVERPLATES FOR DEVICES CONNECTED TO THE EMERGENCY SYSTEM SHALL ALSO BE FACTORY LABELED WITH BLACK LETTERING TO READ "FMFRGFNCY".

PROVIDE TELEPHONE/DATA OUTLETS AND STUBS AS INDICATED. TELEPHONE/DATA OUTLETS SHALL CONSIST OF TWO GANG OUTLET BOX WITH PLASTER RING AND NO COVER PLATE. JACK AND COVER PLATE ARE SUPPLIED BY OTHERS. HEIGHT OF OUTLET FOR DESK PHONE IS 16" AFF AND FOR WALL PHONE 48" AFF. TELEPHONE/DATA OUTLETS SHALL CONTAIN OF 3/4" CONDUIT FROM OUTLET TO AN ACCESSIBLE PORTION OF CEILING SPACE. TERMINATE WITH INSULATING BUSHING.

WHERE TWO OR MORE WIRING DEVICES. DIMMERS. AND/OR VOICE/DATA OUTLETS ARE INDICATED ADJACENT TO EACH OTHER. THEY SHALL BE INSTALLED IN GANGED OUTLET BOXES AND PROVIDED WITH SUITABLE GANG BARRIERS. ALL BOXES IN FINISHED AREAS SHALL BE FLUSH MOUNTED. BOXES SHALL BE SUITABLE TO RECEIVE THE DEVICES SPECIFIED. COORDINATE DEVICE LOCATIONS BETWEEN LIGHTING AND POWER

PLANS AND GANG AS APPLICABLE. PROVIDE BOXES FOR GANGED DIMMERS SIZED PER MANUFACTURE'S RECOMMENDATION AND SUITABLE FOR INSTALLATION OF DIMMERS WITH NO SIDE FIN HEAT-SINKS REMOVED.

STANDARD TIME SWITCHES SHALL BE ELECTRONIC, PROGRAMMABLE, SEVEN DAY, 24 HOUR CARRYOVER, 365 DAY ASTRO DIAL, PILOT DUTY, INTERMATIC #ET816CR OR EQUAL. TIME SWITCHES SHALL BE ELECTRONIC, PROGRAMMABLE, FOUR CHANNEL, FULL YEAR OR SEVEN DAY PROGRAMMING, NI-CAD BATTERY

YEAR ADJUSTMENT AND SEASONAL PROGRAMMING, TORK DZS-400A GENERAL PURPOSE. LIGHTING CONTACTORS SHALL BE 600V, 120V COIL, ELECTRICALLY OPERATED, MECHANICALLY HELD AMPERE RATING AND NUMBER OF POLES AS INDICATED ON DRAWINGS OR 3-POLE IF NOT INDICATED. SQUARE D CLASS 8903 OR EQUAL.

BACK-UP WITH CHARGER, 365 DAY ASTRO DIAL AND MOMENTARY FEATURE FOR ALL CIRCUITS, WITH AUTOMATIC DAYLIGHT SAVINGS AND LEAP

LOCATE TIME SWITCHES AND CONTACTORS ADJACENT TO THE PANELS SERVING THEM, UNLESS OTHERWISE INDICATED.

PHOTOCELL CONTROLS SHALL BE "ON-FF" CONTROL EQUIPPED WITH 1/2" THREADED STEM, ADJUSTABLE YOKE, FAIL-SAFE OPERATION, ONE TO THREE FOOT CANDLE "ON" ADJUSTMENT, HERMETICALLY SEALED, LIGHTING ARRESTOR, S.P.S.T. SWITCH, 120 OR 277 VOLT AS REQUIRED, 60 HZ, 1500 WATTS TUNGSTEN, TORK 2000 SERIES OR EQUAL. PROVIDE ALL MOUNTING HARDWARE IN STAINLESS STEEL. INSTALL IN ACCESSIBLE LOCATION OF ROOF. WHEN USED WITH RELAY PANEL SYSTEM, SELECT SENSOR WHICH IS COMPATIBLE WITH RELAY PANEL INPUT.

GROUND BUS SHALL BE 8" LONG, 2" WIDE AND MINIMUM ¼" THICK WITH PRE-DRILLED HOLES FOR LUGGING CABLE. WALL MOUNT AS INDICATED. PROVIDE ALL HARDWARE FOR WALL MOUNTING. FLOOR MOUNTED SERVICE FITTING:

PROVIDE TWO-GANG, RECTANGULAR, FLUSH MOUNTED, DEEP CAST IRON, FULLY ADJUSTABLE, WATERTIGHT FLOOR BOX.

PROVIDE RECTANGULAR FLIP-TOP COVER FOR EACH GANG SUITABLE FOR GROUND-FAULT STYLE RECEPTACLE. COVER IS TO COMPLY WITH UL REQUIREMENTS FOR SCRUB WATER EXCLUSION. PROVIDE 20A, 125V, GROUND-FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE IN POWER COMPARTMENT WITH 3/4" CONDUIT FOR BRANCH

CIRCUITING INDICATED. PROVIDE DATA COMPARTMENTS WITH COVER, READY FOR OWNER-INSTALLED DATA WIRING AND CONNECTORS. IDENTIFY

RECEPTACLE BRANCH CIRCUITS AS SPECIFIED FOR WIRING DEVICE COVERPLATES. PROVIDE 1"C FROM DATA COMPARTMENT FROM BOX, UP WALL TO NEAREST ACCESSIBLE CEILING. PROVIDE FLANGES AND TRIM COMPONENTS SUITABLE FOR FLOOR FINISH (TILE OR CARPET). COORDINATE WITH ARCHITECTURAL FINISH FOR APPROPRIATE COMPONENTS. COORDINATE FINISH COLOR OF ALL EXPOSED COMPONENTS WITH ARCHITECT PRIOR TO SUBMITTAL - BLACK, BRUSHED ALUMINUM OR BRASS. INCLUDE ARCHITECT-APPROVED COLOR AND COORDINATED TRIM COMPONENTS WITH SUBMITTAL.

CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.

MANUFACTURERS: HUBBELL B4233 OR APPROVED EQUAL BY WALKER.

PROVIDE FOUR GANG BOX, WITH TWO DUPLEX, DATA AND AV COMPARTMENTS. PROVIDE (2)-20A. 125V. GROUND-FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE IN POWER COMPARTMENT WITH 34" CONDUIT FOR BRANCH CIRCUITING INDICATED. PROVIDE DATA COMPARTMENTS WITH COVER, READY FOR OWNER-INSTALLED DATA WIRING AND CONNECTORS. IDENTIFY RECEPTACLE BRANCH CIRCUITS AS SPECIFIED FOR WIRING DEVICE COVERPLATES.

PROVIDE 1"C FROM DATA COMPARTMENT AND 1 1/4"C FROM AV COMPARTMENT FROM BOX, UP WALL TO NEAREST ACCESSIBLE CEILING. PROVIDE FLANGES AND TRIM COMPONENTS SUITABLE FOR FLOOR FINISH (TILE OR CARPET). COORDINATE WITH ARCHITECTURAL FINISH FOR APPROPRIATE COMPONENTS. COORDINATE FINISH COLOR OF ALL EXPOSED COMPONENTS WITH ARCHITECT PRIOR TO SUBMITTAL - BLACK, BRUSHED ALUMINUM OR BRASS. INCLUDE ARCHITECT-APPROVED COLOR AND COORDINATED TRIM COMPONENTS WITH SUBMITTAL.

CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION. WIREMOLD RFP4 OR APPROVED EQUAL.

PROVIDE FURNITURE FEED BOX, WITH 3/4" CONDUIT FOR BRANCH CIRCUITING INDICATED. PROVIDE DATA COMPARTMENTS WITH COVER, READY FOR OWNER-INSTALLED DATA WIRING AND CONNECTORS. IDENTIFY RECEPTACLE BRANCH CIRCUITS AS SPECIFIED FOR WIRING DEVICE

PROVIDE 1 ½ "C FROM DATA COMPARTMENT FROM BOX, UP WALL TO NEAREST ACCESSIBLE CEILING. PROVIDE FLANGES AND TRIM COMPONENTS SUITABLE FOR FLOOR FINISH (TILE OR CARPET). COORDINATE WITH ARCHITECTURAL FINISH FOR APPROPRIATE COMPONENTS. COORDINATE FINISH COLOR OF ALL EXPOSED COMPONENTS WITH ARCHITECT PRIOR TO SUBMITTAL - BLACK, BRUSHED ALUMINUM OR BRASS. INCLUDE ARCHITECT-APPROVED COLOR AND COORDINATED TRIM COMPONENTS WITH SUBMITTAL. CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.

WIREMOLD RFP4 OR APPROVED EQUAL.

PROVIDE FOUR GANG BOX, WITH TWO DUPLEX, DATA AND AV COMPARTMENTS. PROVIDE (2)-20A, 125V, GROUND-FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE IN POWER COMPARTMENT WITH 34" CONDUIT FOR BRANCH CIRCUITING INDICATED. PROVIDE DATA COMPARTMENTS WITH COVER, READY FOR OWNER-INSTALLED DATA WIRING AND CONNECTORS. IDENTIFY RECEPTACLE BRANCH CIRCUITS AS SPECIFIED FOR WIRING DEVICE COVERPLATES

PROVIDE 1"C FROM DATA COMPARTMENT AND 1 1/4"c FROM AV COMPARTMENT FROM BOX, UP WALL TO NEAREST ACCESSIBLE CEILING. PROVIDE FLANGES AND TRIM COMPONENTS SUITABLE FOR FLOOR FINISH (TILE OR CARPET). COORDINATE WITH ARCHITECTURAL FINISH FOR PPROPRIATE COMPONENTS. COORDINATE FINISH COLOR OF ALL EXPOSED COMPONENTS WITH ARCHITECT PRIOR TO SUBMITTAL — BLACK BRUSHED ALUMINUM OR BRASS. INCLUDE ARCHITECT-APPROVED COLOR AND COORDINATED TRIM COMPONENTS WITH SUBMITTAL.

CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.

WIREMOLD RFP4 OR APPROVED EQUAL.

PROVIDE POKE THROUGH FOUR GANG BOX WITH TWO DUPLEX, DATA AND AV COMPARTMENTS.

PROVIDE (2)-20A, 125V, GROUND-FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE IN POWER COMPARTMENT WITH 34" CONDUIT FOR BRANCH CIRCUITING INDICATED. PROVIDE DATA COMPARTMENTS WITH COVER, READY FOR OWNER-INSTALLED DATA WIRING AND CONNECTORS, IDENTIFY RECEPTACLE BRANCH CIRCUITS AS SPECIFIED FOR WIRING DEVICE COVERPLATES.

PROVIDE 1"C FROM DATA COMPARTMENT AND 1 1/4"c FROM AV COMPARTMENT FROM BOX, UP WALL TO NEAREST ACCESSIBLE CEILING. PROVIDE FLANGES AND TRIM COMPONENTS SUITABLE FOR FLOOR FINISH (TILE OR CARPET). COORDINATE WITH ARCHITECTURAL FINISH FOR APPROPRIATE COMPONENTS. COORDINATE FINISH COLOR OF ALL EXPOSED COMPONENTS WITH ARCHITECT PRIOR TO SUBMITTAL - BLACK, BRUSHED ALUMINUM OR BRASS. INCLUDE ARCHITECT-APPROVED COLOR AND COORDINATED TRIM COMPONENTS WITH SUBMITTAL. CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.

WIREMOLD EVOLUTION SERIES. PROVIDE POKE THROUG FURNITURE FEED WITH POWER AND DATA COMPARMTENTS. PROVIDE 34"C FOR POWER WIRING AND 2"C FOR TELECOMM OR AS DIRECTED BY OWNER'S IT.

WIREMOLD EVOLUTION SERIES.

ALL CONDUCTORS SHALL BE SOFT-DRAWN COPPER OF SIZES INDICATED ON THE DRAWINGS. ALL CONDUCTORS SHALL BE INSULATED FOR 600 VOLTS AND WITH 75 DEGREES (CENTIGRADE) CODE GRADE INSULATION. CONDUCTORS SIZED #10 AND SMALLER SHALL BE SOLID. ALL CONDUCTORS LARGER THAN #10 SHALL BE MADE UP OF STRANDED SINGLE

CONDUCTOR CABLE. CONDUCTORS SHALL HAVE THWN OR THHN INSULATION AS APPLICABLE. CONDUCTORS IN UNDERGROUND CONDUIT AND FOR SERVICE ENTRANCE CONDUCTOR SHALL HAVE XHHW OR THWN INSULATION. #12 AWG SHALL BE THE MINIMUM WIRE SIZE ALLOWED EXCEPT #14 AWG MAY BE USED FOR CONTROL WIRING.

TYPICAL BRANCH CIRCUITS FROM 20A, 1-POLE BRANCH OVERRCURRENT DEVICES ARE 1/2°C, 2 #12 AND 1 # 12G. MC CABLE SHALL BE PERMITTED FOR USE AS APPROVED BY N.E.C AND AUTHORITY HAVING JURISDICTION.

STARTERS, SAFETY SWITCHES, FUSES AND HEATERS:

MANUAL MOTOR STARTERS SHALL BE 600V TOGGLE TYPE WITH THERMAL OVERLOAD ELEMENT FOR MOTOR PROTECTION STAINLESS STEEL COVER PLATE AND PILOT LIGHT; FLUSH IN ALL AREAS EXCEPT IN UNFINISHED SPACES. CONTRACTOR TO COORDINATE AND PROVIDE QUANTITY OF POLES AS REQUIRED FOR BRANCH CIRCUIT AND LOAD SERVED. MANUAL MOTOR SWITCHES SHALL BE THE SAME AS MANUAL STARTERS EXCEPT WITHOUT OVERLOADS AND USED AS DISCONNECTING MEANS.

MAGNETIC MOTOR STARTERS SHALL BE 600 VOLT 3-PHASE WITH 3 THERMAL OVERLOAD ELEMENTS, HOA SWITCH AND RESET BUTTON IN COVER AND GREEN RUNNING PILOT LIGHT, NEMA ENCLOSURE AND SIZE AS INDICATED. COMBINATION STARTERS SHALL HAVE BUILT-IN FUSED DISCONNECT. PROVIDE START-STOP PUSH BUTTONS FOR USE IN HAND (MANUAL) MODE.

PROVIDE THERMAL ALLOY MELTING TYPE HEATER ELEMENTS FOR ALL MOTORS BASED ON MOTOR NAMEPLATE DATA.

SAFETY AND DISCONNECT SWITCHES SHALL BE 250 OR 600 VOLTS AS REQUIRED, HEAVY DUTY, TWO OR THREE POLE. "QUICK-MAKE". "QUICK-BREAK" SWITCH MECHANISM AND COVER INTERLOCK. SWITCHES SHALL BE FUSED OR UNFUSED AS INDICATED AND SHALL HAVE PAD LOCK PROVISIONS, WITH NEMA TYPE ENCLOSURE FOR LOCATION USED. SWITCHES SHALL BE SQUARE "D"CLASS 3110 OR APPROVED EQUAL. PROVIDE ALL NECESSARY FUSES AND REPLACE ALL THOSE BLOWN DURING CONSTRUCTION. ALL FUSES SHALL BE TIME LAG, DUAL ELEMENT, BUSSMAN "LOW PEAK YELLOW" OR EQUAL.

MAIN DISTRIBUTION PANEL SHALL BE FUSE-SWITCH TYPE, BRACED FOR 65,000 A.I.C. MINIMUM, DEAD FRONT CONSTRUCTION. VOLTAGE. PHASE, AMPERE RATING, AND DEVICES SHALL BE AS INDICATED ON THE DRAWINGS. MAIN DISTRIBUTION PANEL SHALL HAVE SERVICE

LIGHTING PANELS SHALL BE OF VOLTAGE, PHASE, SERVICE AND NUMBER OF WIRES INDICATED ON THE DRAWINGS. BREAKERS SHALL BE THERMAL MAGNETIC, TRIP FREE, SINGLE OR MULTIPOLE, BOLTED DESIGN, MOLDED CASE, MINIMUM 10,000 A.I.C. AT 240 VOLTS OR 14,000

A.I.C. AT 277 VOLTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR AS SCHEDULED. LIGHTING PANELS RATED FOR 277/480V, 3-PHASE, 4W SERVICE SHALL BE SQUARE D TYPE "NF" OR EQUAL, AND THOSE RATED FOR 120/208V, 3-PHASE, 4-WIRE SERVICE SHALL BE SQUARE D TYPE "NQOD" OR EQUAL. LOAD CENTERS ARE NOT PERMITTED. PROVIDE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) BREAKERS ON ALL BRANCH CIRCUITS SERVING DWELLING UNIT BEDROOMS AND IN NON-DWELLING UNIT SLEEPING AREAS. AFCI CIRCUIT BREAKERS ARE NOT SPECIFICALLY INDICATED ON PANEL SCHEDULES.

CONTRACTOR, MANUFACTURER MAY RE-ARRANGE CIRCUIT ORDER IN PANELS, HOWEVER CIRCUIT NUMBERS FROM PANELBOARD SCHEDULES IN CONTRACT DOCUMENTS MUST BE INDICATED ON ANY SUBMITTED PANELBOARD ELEVATIONS, DRAWINGS, TABLES AND SCHEDULES. SHORT CIRCUIT AND ARC FLASH:

CONTRACTOR IS TO FURNISH SHORT CIRCUIT AND ARC FLASH CALCULATIONS FOR ALL NEW DISTRIBUTION EQUIPMENT AND FOR ALL MODIFIED EXISTING DISTRIBUTION EQUIPMENT FROM THE SERVICE CONNECTION POINT DOWN TO THE PANELBOARD LEVEL. THE CALCULATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION AND APPROVAL OF A REGISTERED PROFESSIONAL ELECTRICAL ENGINEER SKILLED IN PERFORMING AND INTERPRETING POWER SYSTEM STUDIES. OBTAIN AVAILABLE FAULT CURRENT FROM UTILITY AS REQUIRED TO PERFORM THE STUDY. SUBMIT REPORT TO DEMONSTRATE THAT EQUIPMENT IS ADEQUATELY PROTECTED FOR AVAILABLE FAULT CURRENT. INCREASE THE WITHSTAND RATING OF ANY DISTRIBUTION EQUIPMENT WHICH IS FOUND TO BE INADEQUATELY RATED. SUBMIT STUDY RESULTS PRIOR TO DISTRIBUTION EQUIPMENT, AND INDICATE COORDINATED RATINGS IN DISTRIBUTION EQUIPMENT SUBMITTALS. INCLUDE FAULT CURRENT RATINGS ON ONE-LINE

INCLUDE IN BID ALL COSTS TO PROVIDE FINAL APPROVED STUDY INCLUDING MULTIPLE ITERATIONS OR "RUNS" OF THE STUDY AS REQUIRED IF FIRST PASS STUDY FINDS THAT EQUIPMENT IS NOT COMPLIANT, AND/OR IF SUBMITTALS ARE NOT APPROVED. DO NOT ASSUME THAT THE STUDY WILL RESULT IN ACCEPTABLE OR "PASSING" EQUIPMENT RATINGS AND SETTINGS ON THE FIRST RUN. THE STUDY IS TO PROVIDE DIRECTION AND RECOMMENDATIONS AS REQUIRED TO ACHIEVE AN ACCEPTABLE ELECTRICAL SYSTEM INCLUDING POSSIBLE REVISIONS TO SPECIFIED EQUIPMENT IN THE MODELING. ADDITIONAL COST FOR MULTIPLE ITERATIONS, "RUNS," AND SUBMITTALS WILL NOT BE APPROVED.

DIAGRAM FOR REVIEW IN ADDITION TO TABULAR FORMAT TO INDICATE EQUIPMENT RATINGS ALONGSIDE CALCULATED VALUES.

PERFORM CALCULATIONS AS REQUIRED TO APPLY FIELD MARKINGS FOR ARC FLASH INCLUDING RECOMMENDED MARKING REQUIREMENTS, BOUNDARIES AND DESCRIPTIONS, FIELD MARK DISTRIBUTION EQUIPMENT (SWITCHBOARDS, PANELBOARDS, CONTROL PANELS, AND MOTOR CONTROL CENTERS) WITH FLASH PROTECTION INFORMATION PER NATIONAL ELECTRICAL CODE ARTICLE 110.16, FLASH PROTECTION. INCLUDE CALCULATED RATINGS ON MARKINGS. PROVIDE ANY ADDITIONAL MARKINGS ON EQUIPMENT AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION. FIELD MARK FLASH PROTECTION BOUNDARIES RESULTING FROM CALCULATIONS PER NFPA 70E.

INSTALLATION AND METHODS OF EXECUTION:

ALL WIRING SHALL BE IN CONDUIT, MINIMUM ½". FLEXIBLE METAL CONDUIT SHALL BE USED FOR SHORT CONNECTION TO MOTORS, FINAL CONNECTION TO RECESSED LIGHTING FIXTURES FROM RIGIDLY MOUNTED OUTLET BOX (NOT BETWEEN FIXTURES). VIBRATING EQUIPMENT, ETC... BUT NEVER LONGER THAN 6 FEET. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR ALL APPLICATIONS EXPOSED TO WATER OR WEATHER. PROVIDE ANTI-SHORT BUSHINGS FOR ALL FLEXIBLE CONDUIT ARMOR TERMINATIONS. PROVIDE SEPARATE EQUIPMENT GROUND WIRE IN ALL

CONDUIT CONCEALED IN CEILING, WALLS OR FURRED SPACES OR EXPOSED IN DRY LOCATIONS SHALL BE EMT, THIN WALL ELECTRIC METALLIC TUBING. CONDUIT EXPOSED TO WEATHER, IN CONTACT WITH CONCRETE, BURIED IN SLAB, OR IN HAZARDOUS AREAS, SHALL BE HEAVY WALL, RIGID. ALL CONDUITS SHALL BE HOT DIPPED GALVANIZED STEEL. PLASTIC CONDUIT, PVC-40. SHALL BE USED ONLY AS INDICATED ON THE DRAWINGS, PLASTIC CONDUIT SHALL BE APPROVED FOR UNDERGROUND USE. PVC BURIAL DEPTH SHALL BE 36" MINIMUM BELOW FINISH GRADE. IN PVC CONDUIT SYSTEMS, RISERS ABOVEGROUND

CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. EXACT ROUTING OF CONDUIT RUNS SHALL SUIT JOB CONDITIONS. EXPOSED CONDUIT SHALL BE RUN ONLY IN UNFINISHED AREAS SUBJECT TO FINAL APPROVAL OF ENGINEER AND SHALL RUN PARALLEL TO BUILDING LINES. NEVER DIAGONALLY.

CONNECTION TO EQUIPMENT SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S SHOP AND INSTALLATION DRAWINGS. REQUIREMENTS GENERALLY VARY FROM ONE MANUFACTURER TO ANOTHER AND CONTRACTOR IS BOUND TO COMPLY AND PROVIDE ALL WORK AS REQUIRED ALTHOUGH CERTAIN DISCREPANCIES MAY EXIST REGARDING THE REQUIREMENT FROM ONE MANUFACTURER TO ANOTHER. PROVIDE POWER WIRING, DISCONNECTS, AND PROTECTION DEVICES TO ALL MECHANICAL EQUIPMENT AND MAKE FINAL CONNECTIONS, INCLUDING

OUTLET BOXES MAY-BE SURFACE MOUNTED ON EXISTING WALLS (CMU, BRICK OR CONCRETE) WITH SMALLEST SURFACE RACEWAY AS REQUIRED FOR WIRING INSTALLED. PROVIDE FLUSH OUTLET BOXES AND CONDUIT AT NEW CONSTRUCTION WALL AND AT EXISTING WALLS WHICH ARE NOT CMU BRICK OR CONCRETE CONSTRUCTION. CUT AND PATCH EXISTING WALLS AS REQUIRED FOR FLUSH INSTALLATION. PROVIDE 4" TALL CONCRETE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.

ALL WIRING LOCATED ABOVE THE SUSPENDED CEILING MUST BE SUPPORTED INDEPENDENTLY OF THE SUPPORT WIRES FOR THE SUSPENDED

OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTANT WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF TWENTY

ELECTRICAL OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE RESISTANT RATED WALLS, PARTITIONS, FLOORS, OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING PER ARTICLE 300.21 2017 NEC. PROVIDE PROPER WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT AS REQUIRED PER NEC.

CONDUIT FOR SITE LIGHTING WORK SHALL BE PVC, SCHEDULE 40, SIZES AS INDICATED ON THE DRAWING. PVC CONDUIT SHALL NOT BE USED FOR RISERS ABOVE GROUND, OR INTO POLES, ELBOWS, PORTIONS UNDER BUILDING, OR IN CONCRETE BASE PORTION. IN SUCH CASES RIGID GALVANIZED CONDUIT SHALL BE USED.

SITE LIGHTING WIRE SHALL BE 600V, THWN/THHN INSULATION OR XHHW INSULATION, 75 DEGREES CENTIGRADE.

PERFORM ALL TRENCHING, EXCAVATION AND BACKFILLING. ALL CONDUITS SHALL BE INSTALLED A MINIMUM OF 30" BELOW FINISHED GRADE. BACKFILL OVER TRENCH SHALL BE FINE SAND, OR OTHER EQUIVALENT FILL AS SPECIFIED FOR CENTER SITE WORK. IN ALL CASES THE COMPACTION DENSITY OVER ELECTRICAL TRENCHES SHALL BE SAME AS ADJACENT PAVEMENT COMPACTION. SPLICES IN WIRING SHALL BE ONLY PERMITTED AT HANDHOLES OF LIGHTING POLES. SPLICES SHALL BE MADE UP WITH SCOTCHLOCK CONNECTORS. ALL CONDUITS SHALL BE MADE WATERTIGHTURATION OF OUTAGE.

PROVIDE PHOTOMETRIC CALCULATIONS FOR ANY FIXTURE SUBSTITUTIONS PROPOSED, INCLUDING FIXTURES SUBMITTED AS EQUAL IF REQUESTED BY THE A/E.

LIGHTING SPECIFICATIONS:

LED LAMP OR MODULE USED.

SITE LIGHTING

TESTING OF MOTORS FOR PROPER ROTATION.

FLUORESCENT BALLASTS SHALL BE UNIVERSAL VOLTAGE 120V THROUGH 277V, PROGRAMMED RAPID START, MAXIMUM 10% THD. OSRAM SYLVANIA QTP SERIES, OR APPROVED EQUAL BY ADVANCE, GE, LUTRON OR MOTOROLA. FLUORESCENT LAMPS SHALL BE MINIMUM 70 COLOR RENDERING INDEX, 3500K COLOR TEMPERATURE, LOW MERCURY TCLP-COMPLIANT TYPE. FLUORESCENT DIMMING BALLASTS SHALL BE LUTRON 5% TO 100%. SUBMIT DIMMING BALLAST PRODUCT DATA AND COMPATIBLE DIMMER SWITCHES WITH LIGHTING SUBMITTAL.

LED LIGHTING FIXTURES SHALL HAVE 5 YEAR WARRANTY, A COLOR RENDERING INDEX OF 90 OR HIGHER, 3500K COLOR TEMPERATURE UNLESS OTHERWISE INDICATED ON DRAWINGS, LIFETIME: 50,000 HOURS OR GREATER AND MAINTAIN AT LEAST 70% OF INITIAL LUMEN OUTPUT. RATED FOR OUTDOOR USE AND WET LOCATION, IF IN OPEN FIXTURE SHALL POSSESS COLOR MANAGEMENT SYSTEM TO MAINTAIN COLOR CONSISTENCY OVER TIME AND TEMPERATURE OF NO GREATER THAN ±100K

REFER TO LIGHTING FIXTURE SCHEDULE FOR LED FIXTURES WITH DIMMING CONTROLS. LED DRIVERS TO BE ELECTRONIC, HIGH POWER FACTOR, MIN. 0.9; UNIVERSAL VOLTAGE 120-277V; 5 YEAR WARRANTY, COMPATIBLE WITH THE

EMERGENCY BATTERY BALLASTS INTEGRAL TO FIXTURES SHALL BE SELF-DIAGNOSTIC TYPE, WITH 5 YEAR WARRANTY AND TEST SWITCH INTEGRAL TO FIXTURE, BODINE B50ST OR APPROVED EQUAL. PROVIDE EXIT AND EMERGENCY BATTERY LIGHTING UNITS WITH SELF DIAGNOSTICS, MAINTENANCE-FREE NI-CAD BATTERY, AND WITH UNIVERSAL VOLTAGE INPUT - 120V THROUGH 277V. REQUIREMENTS SPECIFIED HERE TAKE PRECEDENCE OVER SCHEDULED INFORMATION.

PROVIDE FACTORY INSTALLED FUSING IN EACH FIXTURE.

FOR ALL ELECTRIC-DISCHARGE LIGHTING FIXTURES, PROVIDE A LUMINAIRE DISCONNECTING MEANS TO DISCONNECT PHASE AND NEUTRAL CONDUCTORS FROM THE BRANCH CIRCUIT TO THE BALLAST. LOCATE DISCONNECTING MEANS CONCEALED WITHIN THE FIXTURE. TYPICAL FOR NEW, REUSED AND RELOCATED FIXTURES. ASSUME ALL REUSED AND RELOCATED FIXTURES REQUIRE THE FIELD ADDITION OF THE DISCONNECTING MEANS AND INCLUDE WORK IN BID. PROVIDE ALL NEW FIXTURES WITH DISCONNECTING MEANS FACTORY-INSTALLED. PROVIDE THOMAS & BETTS STA-KON LUMINAIRE DISCONNECT OR FOUAL.

PROVIDE PHOTOMETRIC CALCULATIONS FOR ANY FIXTURE SUBSTITUTIONS PROPOSED, INCLUDING FIXTURES SUBMITTED AS EQUAL IF REQUESTED BY THE A/E.

SUBMIT LAMP AND BALLAST PRODUCT DATA WITH EACH FIXTURE TYPE. <u>FIRE ALARM SYSTEM - PERFORMANCE SPECIFICATION:</u>

A/E WILL NOT SHOW DEVICES ON PLANS. SYSTEM'S QUALITY AND PERFORMANCE SHALL BE AS COVERED IN THESE SPECIFICATIONS. SCOPE OF WORK:

PROVIDE A COMPLETE MANUAL/AUTOMATIC ADDRESSABLE FIRE ALARM DETECTION AND NOTIFICATION SYSTEM INCLUDING ALL WORK FOR A COMPLETE, FUNCTIONING AND APPROVED INSTALLATION INCLUDING BUT NOT LIMITED TO THE FOLLOWING MAJOR ITEMS:

DEVICE LOCATION. BATTERY CALCULATIONS

FIRE SUPPRESSION SYSTEM.

CIRCUIT VOLTAGE DROP CALCULATIONS. BUILDING PLANS WITH LOCATION OF ALL DEVICES AND EQUIPMENT.

ANY OTHER FIRE RELATED DEVICES OR EQUIPMENT.

INTERFACE WITH OTHER SYSTEMS OR EQUIPMENT ELEVATORS FIRE SUPPRESSION AND POWER SHUTOFF. KITCHEN ANSUL SYSTEM. AIR HANDLING UNITS SMOKE DETECTION. FIRE CURTAINS AND SMOKE BARRIERS, FIRE AND SMOKE DAMPERS.

SYSTEM RISER. LEGEND FOR ALL DEVICES AND EQUIPMENT SHOWN ON PLANS AND RISER. SYSTEM OPERATION MATRIX AND AS REQUIRED FOR FULL COMPLIANCE WITH REQUIREMENTS OF NFPA 72 AND APPLICABLE LOCAL, STATE AND NATIONAL RULES AND REGULATIONS.

EMPLOY THE SERVICES OF A QUALIFIED CERTIFIED FIRE ALARM CONTRACTOR/CONSULTANT TO PREPARE THE SYSTEM DESIGN AND RELATED CONSTRUCTION DOCUMENTS INCLUDING ALL RELATED CALCULATIONS, DEVICE PLACEMENT; AND INCLUDE COORDINATION WITH OTHER SUPPLIERS/CONTRACTORS SUCH AS DESIGN-BUILD FIRE PROTECTION INSTALLER FULLY COMPLETE WITH ALL INFORMATION AND RELATED DATA, AS REQUIRED, TO OBTAIN SYSTEM APPROVAL BY THE AUTHORITIES HAVING JURISDICTION. DETERMINE THE APPLICABLE AUTHORITIES HAVING JURISDICTION FOR PROJECT AND INCLUDE ALL IN PLAN REVIEW, PERMITTING, AND INSPECTION.

SURVEY EXISTING CONDITIONS PRIOR TO BID. COORDINATE WORK WITH BUILDING FINISHES AND WITH OTHER WORK BEING PERFORMED. SYSTEM DESIGN SHALL PROVIDE FOR MINIMUM 25% SPARE CAPACITY ALL ACROSS IN THE FRONT END CONTROL EQUIPMENT AND IN EVERY CIRCUIT CAPACITY AND CONDUCTOR SIZING.

PROVIDE SYSTEM TESTING AND CORRECT ALL DEFECTS PRIOR TO FINAL DEMONSTRATION AND OWNER ACCEPTANCE. PROVIDE FOUR (4) HOURS OF TRAINING IN OPERATION AND MAINTENANCE FOR TWO PERSONS AS SELECTED BY THE OWNER/USER. SUBMITTALS TO THE AUTHORITIES HAVING JURISDICTION (AHJ):

THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED FOR REVIEW PRIOR TO INSTALLATION:

FLOOR PLANS. LOCATION OF CONTROL AND ANNUNCIATION EQUIPMENT. LOCATION OF INITIATING DEVICES AND ALARM INDICATING APPLIANCES ON PLANS.

POWER CONNECTION. SYSTEM RISER DIAGRAM. DEVICE CIRCUITING ON PLANS AND OR RISER.

BATTERY CALCULATIONS. CIRCUIT CONDUCTORS, TYPE AND SIZE VOLTAGE DROP CALCULATION FOR EVERY CIRCUIT WITH THE 25% SPARE CAPACITY INCLUDED.

INTERFACE WITH OTHER SYSTEMS OR EQUIPMENT (CONTROL FUNCTIONS) AS REQUIRED, SPECIFIED OR NOTED. SYSTEM MATRIX FOR EVENTS (FUNCTIONAL MATRIX) MANUFACTURER DATA, CUTS, SHEETS, LISTING AND ALL RELATED INFORMATION FOR THE EQUIPMENT AND DEVICES PROVIDED FOR THE

ARCHITECTS/ENGINEERS REVIEW:

SYSTEM.

ARCHITECT/ENGINEER WILL REVIEW SYSTEM DOCUMENTS AFTER THEY HAVE BEEN APPROVED BY LOCAL AUTHORITY. INCLUDE PROOF OF LOCAL AUTHORITY APPROVAL WITH A/E SUBMITTAL.

REVIEW WILL COVER GENERAL COMPLIANCE WITH PROJECT REQUIREMENTS AND THE INTENT OF THESE SPECIFICATIONS.

SUGGESTED CONSULTANTS/CONTRACTORS: SIEMENS FIRE SAFETY JOHNSON CONTROLS GAMEWELL

LOCAL ORDINANCES AS APPLICABLE

NATIONAL TIME AND SIGNAL

SIMPLEX/GRINNELL

CODES AND STANDARD: NFPA 72 - NATIONAL FIRE ALARM CODE NFPA 101 - LIFE SAFETY CODE NEC 760 - FIRE PROTECTIVE SIGNALING SYSTEMS

NEC 725 - SIGNALING AND POWER LIMITED CIRCUITS

REGULATORY REQUIREMENTS:

CONFORM TO REQUIREMENTS OF NATIONAL FIRE CODE (NFC). A.D.A. FEDERAL GUIDELINES

CONFORM TO STATE AND LOCAL FIRE CODES CONFORM TO RULES AND REQUIREMENTS OF LOCAL GOVERNING BODY.

SYSTEMS SUPERVISION:

PROVIDE ELECTRONICALLY SUPERVISED SYSTEM, WITH SUPERVISED ALARM INITIATING AND ALARM SIGNALING CIRCUITS. OCCURRENCE OF SINGLE GROUND OR OPEN CONDITION IN INITIATING OR SIGNALING CIRCUIT PLACES CIRCUIT IN TROUBLE MODE. OCCURRENCE OF SINGLE GROUND CONDITION ON ALARM INITIATING OR SIGNALING CIRCUIT DOES NOT DISABLE THAT CIRCUIT FROM TRANSMITTING AN ALARM.

THE FOLLOWING IS INTENDED TO ESTABLISH GENERAL QUALITY OF SYSTEM BUT NOT INTENDED TO LIMIT SYSTEM DESIGN OR EXCLUDE ANY REQUIRED DEVICES. FIRE ALARM CONTROL PANELS:

PROVIDE FLUSH MOUNTED MAIN FIRE ALARM CONTROL PANEL AND REMOTE FIRE ALARM CONTROL PANEL. COORDINATE PANEL FINISH WITH ARCHITECT. COORDINATE MOUNTING LOCATIONS WITH ARCHITECT AND WITH LOCAL AUTHORITY. MANUAL STATIONS:

SEMI FLUSH, ADDRESSABLE AND WITH PRIORITY ALARM MODULES. MANUAL STATIONS SHALL BE INDIVIDUALLY IDENTIFIABLE BY THE FIRE ALARM CONTROL PANEL. REMOTE INTERFACE MODULES:

SMOKE DETECTORS: (INTELLIGENT ANALOG ADDRESSABLE) PHOTOELECTRIC, LISTED FOR USE AS OPEN AREA PROTECTIVE COVERAGE AND SHALL BE INSENSITIVE TO AIR VELOCITY CHANGES.

DETECTORS SHALL BE OPERATIONAL WITH RELAY BASES, AUDIBLE BASES, AND REMOTE INDICATING LED'S PROGRAMMABLE BY THE CONTROL

ADDRESSABLE, PROGRAMMABLE INTERFACE MODULES AS REQUIRED TO MONITOR, CONTROL AND INITIATE REQUIRED FIRE ALARM FUNCTIONS.

ALARM HORNS/SPEAKERS: ALARM HORNS/SPEAKERS FULLY ENCLOSED AND DUSTPROOF. DESIGNED TO BE MOUNTED ON A WALL WITH ENTIRE LENS NOT LESS THAN

80" AFF AND NOT GREATER THAN 96" AFF. MOUNT ALL DEVICES AT THE SAME HEIGHT.

ALARM STROBES:

FLUSH BACK BOXES, COMPLYING WITH A.D.A. GUIDELINES FOR LIGHT INTENSITY AND THE FOLLOWING: XENON STROBE WITH MINIMUM REPETITION RATE OF 1 HZ, NOT EXCEEDING 3 HZ AND A MAXIMUM DUTY CYCLE OF 40% WITH A PULSE DURATION OF .2 SECONDS. UNFILTERED OR CLEAR WHITE LIGHT.

MINI HORNS WHEN USED FOR LIVING UNITS SHALL BE RATED 90DB AT 10' AND SHALL MOUNT TO A SINGLE GANG BOX.

VISUAL SIGNALS SHALL BE MOUNTED AT A HEIGHT OF MAXIMUM 80 INCHES ABOVE FINISH FLOOR LEVEL, OR SIX INCHES BELOW CEILING LEVEL WHICHEVER IS LOWER.

DEVICES SUCH AS MAGNETIC DOOR HOLDERS, WATER FLOW SWITCHES, TAMPER SWITCHES AND THE LIKE SHALL BE PROVIDED AS REQUIRED.

AUXILIARY DEVICES:

DUCT SMOKE DETECTORS:

SYNCHRONIZE DEVICES WHEN MULTIPLE DEVICES ARE WITHIN THE SAME LINE OF SIGHT.

PROVIDE DETECTORS FOR ALL AIR HANDLING UNITS AS REQUIRED.

PHOTOELECTRIC LISTED FOR USE IN DUCT DETECTION.

INSENSITIVE TO AIR VELOCITY CHANGES. CAPABLE OF SENSITIVITY TESTED AFTER REMOVAL FROM BASES. REMOTE INDICATING LED PROGRAMMABLE (RESETTABLE) FROM CENTRAL PANEL. (WALL OR CEILING MOUNTED - COORDINATE WITH ARCHITECT).

THE SYSTEM AS DESCRIBED SHALL BE INSTALLED, TESTED, AND APPROVED BY THE AHJ. THE SYSTEM SHALL INCLUDE ALL THE REQUIRED DOCUMENTS, WHETHER OR NOT SPECIFICALLY ITEMIZED HEREIN. ALL EQUIPMENT FURNISHED SHALL BE NEW AND INCLUDE THE LATEST STATE OF THE ART PRODUCTS FROM A SINGLE MANUFACTURER,

SERVICES FOR THE FIRE ALARM SYSTEM. CONTROL AND OTHER PANELS SHALL BE MOUNTED WITH SUFFICIENT CLEARANCE FOR OBSERVATION AND TESTING. ALL FIRE ALARM JUNCTION

ENGAGED IN THE MANUFACTURING AND SALE OF FIRE DETECTION SYSTEMS FOR OVER FIVE YEARS. THE INSTALLING CONTRACTOR SHALL CONTRACT WITH A SINGLE SOURCE FOR SUPPLYING DEVICES/MATERIALS, SERVICES, AND PROGRAMMING, INCLUDING FINAL INSPECTION/TEST

BOXES MUST BE CLEARLY MARKED FOR EASY IDENTIFICATION. FIRE ALARM PULL STATIONS AND HORNS INSTALLED IN FINISHED AREAS SHALL BE MOUNTED SEMI-FLUSH AND MAY BE SURFACE MOUNTED IN EXISTING AND NON-FINISHED AREAS. SMOKE DETECTORS AND THERMAL DETECTORS SHALL BE MOUNTED ON A RECESS MOUNTED JUNCTION

BOX IN FINISHED AREAS AND TO SURFACE MOUNTED JUNCTION BOXES IN NON-FINISHED AREAS.

INSTALL MANUAL STATION FLUSH MOUNTED WITH OPERATING HANDLE 48 INCHES ABOVE FLOOR. INSTALL AUDIBLE AND VISUAL SIGNAL DEVICES NO MORE THAN 80 INCHES ABOVE HIGHEST FLOOR LEVEL OR 6 INCHES BELOW THE CEILING, WHICHEVER IS LOWER.

MOUNT OUTLET BOX FOR ELECTRIC DOOR HOLDER TO WITHSTAND 80 POUNDS PULLING FORCE.

TESTING, APPROVAL AND CERTIFICATION:

ALL FIRE ALARM WIRING SHALL BE RUN IN A DEDICATED RACEWAY SYSTEM APPROVED BY THE AHJ. WITH APPROVAL OF LANDLORD AND THE AHJ, PLENUM RATED WIRING MAY BE RUN WITHOUT RACEWAYS ABOVE ACCESSIBLE FINISHED CEILINGS WHERE EXPOSED RACEWAY IS PERMITTED BY ARCHITECT IN FINISHED SPACES, SUCH AS IN EXISTING CONSTRUCTION, COORDINATE APPROVAL OF RACEWAY TYPE, ROUTING AND FINISH WITH THE AHJ AND WITH THE ARCHITECT.

NO WIRING OTHER THAN THAT DIRECTLY ASSOCIATED WITH FIRE ALARM DETECTION, ALARM OR AUXILIARY FIRE PROTECTION FUNCTIONS SHALL BE PERMITTED IN FIRE ALARM CONDUITS. WIRING SPLICES ARE TO BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NEEDED THEY MUST BE MADE ONLY IN JUNCTION BOXES AND SHALL BE CRIMP CONNECTED. TRANSPOSING OR CHANGING COLOR CODING OF WIRE SHALL NOT BE PERMITTED. ALL CONDUCTORS IN CONDUIT CONTAINING MORE THAN ONE WIRE SHALL BE LABELED AND HARNESSED SO THAT EACH DROPS OFF DIRECTLY OPPOSITE TO ITS TERMINAL. ALL WIRING SHALL BE CHECKED AND TESTED TO INSURE THAT THERE ARE NO GROUNDS, OPENS, OR SHORTS.

FIRE ALARM SYSTEM SHALL BE TESTED IN PRESENCE OF LOCAL INSPECTING AUTHORITY AND TEST REPORT OF RESULTS SHALL BE FILED WITH OWNER/ARCHITECT/ENGINEER AS PART OF SYSTEMS DOCUMENTATION.

MAKE ALL REVISIONS OR CHANGES NECESSARY TO MAINTAIN FINAL APPROVAL AT NO EXTRA COST TO OWNER. PROVIDE ALL PERSONNEL AND MATERIALS REQUIRED FOR SYSTEM TESTING.

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

ROSSETTI.COM 313.463.5151

PROJECT

West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

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DESCRIPTION DATE 01/24/2025 2 Addendum 1 02/20/2025

KEY PLAN

SHEET TITLE

Electrical Specifications

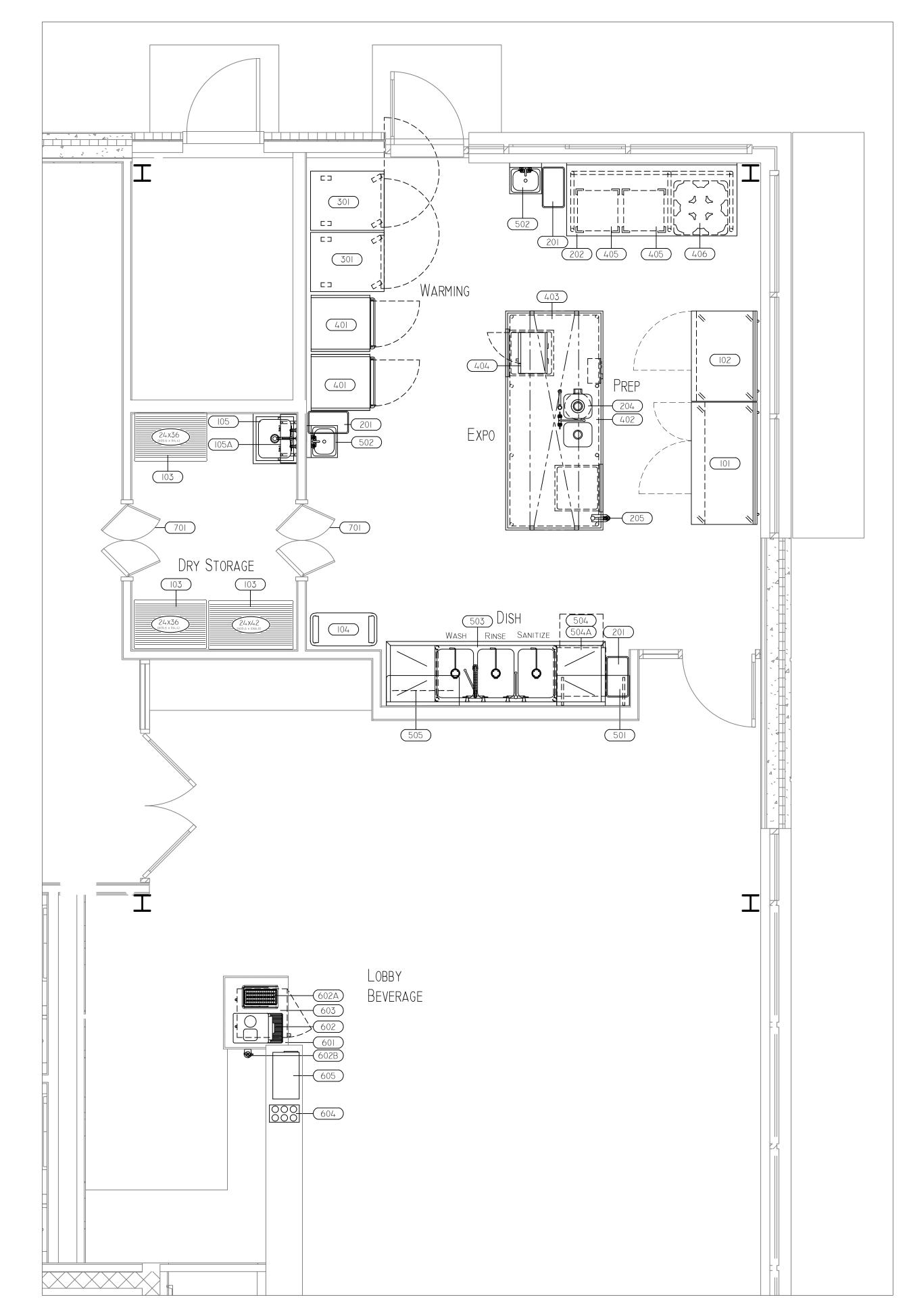
PROJECT#

Scale: 1/16" = 1'-0"

SHEET #

2024-010.00

- I. KITCHEN EQUIPMENT SHALL BE DELIVERED AND ERECTED BY F.S.E.C. (FOODSERVICE EQUIPMENT CONTRACTOR).
- 2. TRADES SHALL MAKE ALL FINAL CONNECTIONS BETWEEN EQUIPMENT AND ROUGH-IN POINT AND FURNISH ALL WIRING, SWITCHES, CONTROLS, SERVICE VALVES, PIPING, ETC. AS REQUIRED.
- 3. ALL REQUIREMENTS SHOWN ON DRAWINGS ARE REQUIRED FOR THE PROPER FUNCTION OF FOODSERVICE EQUIPMENT. TRADES SHALL PROVIDE ALL ADDITIONAL ROUGH-INS REQUIRED FOR OWNER SUPPLIED OR RELOCATED EQUIPMENT OR AS SHOWN ON ARCHITECTURAL - ENGINEERS DRAWINGS.
- 4. TRADES SHALL FURNISH AND INSTALL ALL ACCESSORIES (FAUCETS, DRAINS, SWITCHES, VALVES, GAS HOSES, ETC.) FURNISHED BY F.S.E.C.
- 5. MECHANICAL TRADES SHALL PROVIDE WATER HEATER AND JANITOR SINK WITH HOSE BIB FAUCET UNLESS NOTED IN ITEM SPECIFICATIONS.
- 6. SLOPES TO FD'S SHOULD BE HELD TO A MINIMUM DIMENSION. FLOOR SINKS OR FLOOR DRAINS TO BE OF ADEQUATE SIZE TO PREVENT OVERFLOW OF ADJACENT EQUIPMENT.
- 7. ALL "ROUGH-INS" SHOULD BE "UP-WITHIN" AND THEN "OUT-OF" WALLS WHEREVER POSSIBLE TO KEEP FLOORS AS CLEAN AS POSSIBLE. ROUGH-IN ARE SHOWN AT TERMINATION POINT TO ALLOW WIRING /PIPING TO FIXTURE BY TRADES.
- 8. TRADES TO ADVISE OF LOCATION OF UTILITY ACCESS HOLES IN EQUIPMENT WHICH SHALL BE PROVIDED BY F.S.E.C.
- 9. GENERAL TRADES SHALL PROVIDE WALL OR FLOOR OR FLOOR PENETRATIONS, AND FLOOR RECESS FOR FLOOR GRATES, WALK-INS, ETC.
- 10. PROVIDE MINIMUM OF 3'-0" DOOR OPENING FOR EQUIPMENT INSTALLATION.
- II. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE DISCONNECTED FROM UTILITIES BY THE TRADES.
- 12. GENERAL TRADES SHALL PROVIDE VENTILATION STRUCTURAL SUPPORT OF PENETRATIONS AND FIRE PROOFING UNLESS NOTED IN ITEM SPECIFICATIONS.
- 13. EXHAUST HOOD SHALL BE USED FOR VENTILATION OF COOKING EQUIPMENT ONLY, TRADES SHALL PROVIDE ROOM VENTILATION (A/C RECOMMENDED AS REQUIRED.
- 14. MECHANICAL TRADES SHALL PROVIDE ADEQUATE VENTILATION FOR ALL REFRIGERATION COMPRESSORS, WHETHER AIR OR WATER COOLED.
- 15. TRADES SHALL VERIFY ROUGH-IN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNERS SUPPLIED EQUIPMENT, ETC.
- 16. TRADES SHALL DISCONNECT, RELOCATE AND RECONNECT EXISTING EQUIPMENT AS REQUIRED.
- 17. HEIGHTS GIVEN FOR ELECTRICAL ROUGH-INS TO CENTER OF VERTICALLY MOUNTED BOX.
- 18. G.C. TO PROVIDE BACKING FOR WALL MOUNTED EQUIPMENT - F.S.E.C. SHALL COORDINATE LOCATION OF BACKING WITH G.C.
- 19. TRADES SHALL REVIEW ALL ROUGH-IN'S AND SHOP DRAWINGS FROM F.S.E.C. AND ADVISE PRIOR TO ROUGHING IN IF ANY CHANGES ARE REQUIRED.
- 20. OWNER SHALL COORDINATE ROUGH-IN REQUIREMENTS FOR OWNER SUPPLIED EQUIPMENT WITH ALL TRADES.
- 21. TRADES TO USE EXISTING ROUGH-IN'S IF APPLICABLE.
- 22. EQUIPMENT NOT BEING RE-USED TO BE DISCONNECTED FROM UTILITIES BY TRADES.
- 23. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE RECONNECTED BY THE TRADES.
- 24. TRADES TO VERIFY VENTILATION DATA WITH HOOD MFG. SHOP DRAWINGS.
- 25. WALL BEHIND EXHAUST HOOD TO BE NON COMBUSTABLE. SECTION 507.1 FROM MICHIGAN MECHANICAL CODE REFERS TO SECTION 4.2.1 FROM NFPA 96 2014 EDITION.



FLOOR PLAN

SIGNED APPROVED PRINT ☐ APPROVED AS DRAWN ☐ APPROVED AS NOTED ☐ NOT APPROVED RESUBMIT

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Merchandise P 616-791-1100 F 616-791-1148 2039 WALKER CT. NW GRAND RAPIDS, MI 49544

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ΓΕΜ 0	QTY	EQUIPMENT CATEGORY	EQUIPMENT REMARKS	
		REFRIGERATOR, WORKTOP		
2	1	FREEZER, WORKTOP		
3	3	SHELVING, WIRE	4-TIER	
4	1	CART, BUSSING		
5	1	SINK, MOP		
5A	I	SINK, MOP ACCESSORY		
)	3	* BIN, TRASH	BY OWNER	
)2		Table, Work,	OPEN BASE	
)3		SPARE NUMBER		
)4		Disposer, Garbage		
)5	ı	CAN OPENER		
)I	2	OVEN, RETHERM AND HOLD		
)I	2	CABINET, HOLDING/PROOFING		
)2		Table, Work		
)3	1	OVERSHELF, DOUBLE, TABLE MOUNT		
)4		Oven, Microwave		
)5	2	Dolly, Dishrack		
06	1	DOLLY, ADJUSTABLE PLATE		
)I		SHELF, WALL MOUNT		
)2	2	SINK, HAND, WALL MOUNT		
)3		SINK, 3 COMPARTMENTS		
)4		WAREWASHER, UNDERCOUNTER		
)4Α		Drain Water Tempering Kit		
)5		POT RACK, WALL MOUNT		
OI .		* SERVICE COUNTER	By Millwork	
)2		ESPRESSO MACHINES, AUTOMATIC		
)2A		ESPRESSO MACHINES, MILK COOLER		
D2B		FILTER SYSTEM, ESPRESSO MACHINE		
03		REFRIGERATOR, UNDERCOUNTER		
)4		Bottle Organizer		
)5		CUP DISPENSER		
)	2	KITCHEN SWING DOOR		

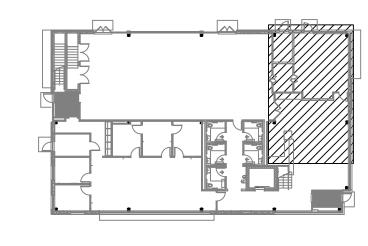
NOTE FOR EQUIPMENT SCHEDULE

- * NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED OR
- ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE
- EQUIPMENT CONTRACT.

 * NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY
 REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS.

 * NOTE: DO NOT START WORK UNLESS ALL ITEMS BY OWNER
- OR OTHERS HAVE BEEN VERIFIED.

KEY PLAN



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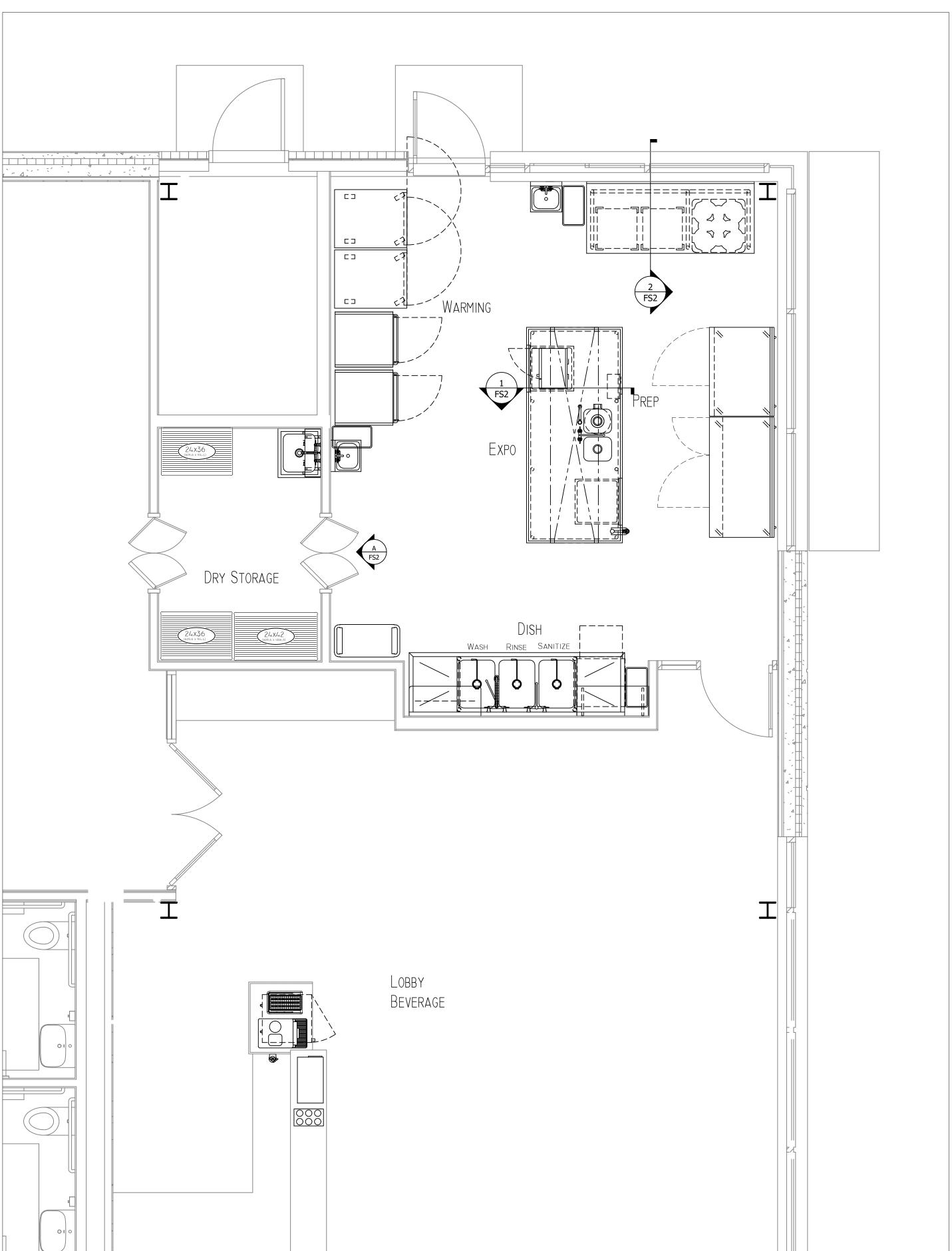
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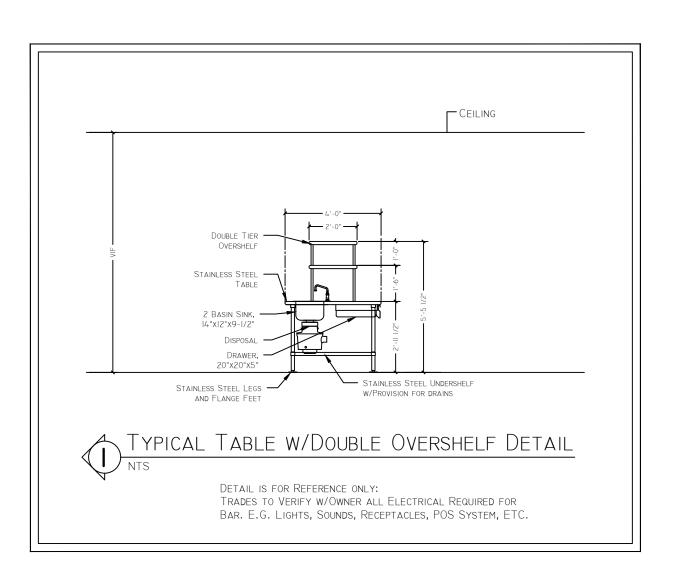
/10/2024 SCHEMATIC DESIGN /10/2025 SCHEMATIC DESIGN /15/2025 SCHEMATIC DESIGN /29/2025 SCHEMATIC DESIGN /20/7/2025 DESIGN DEVELOPMEN 2/18/2025 CONSTRUCTION DOCS

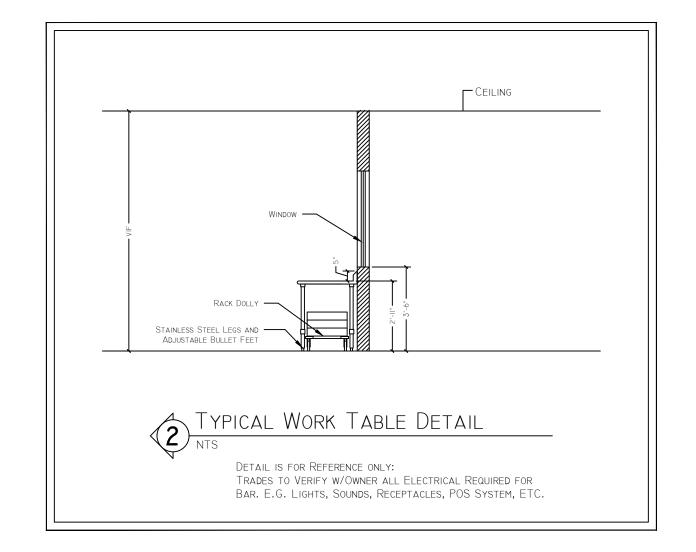
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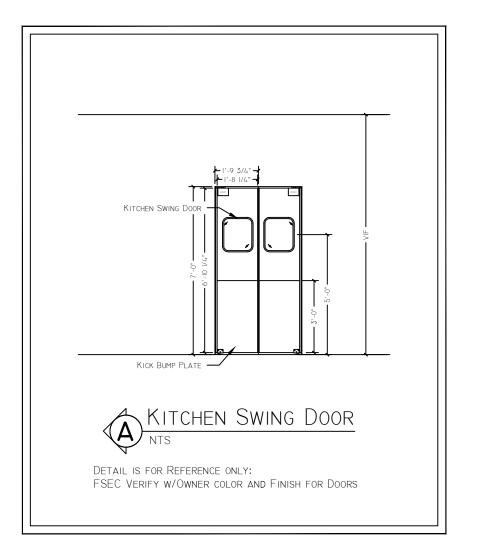
Floor Plan CALE: 3/8"=1" SHEET NO.

ATE: 02/18/2025









NOTE FOR EQUIPMENT SCHEDULE

- * NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED OR BY OTHERS.

 * NOTE: ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE EQUIPMENT CONTRACT.

 * NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS.

 * NOTE: DO NOT START WORK UNLESS ALL ITEMS BY OWNER OR OTHERS HAVE BEEN VERIFIED.

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SIGNED:

| DATE: _____

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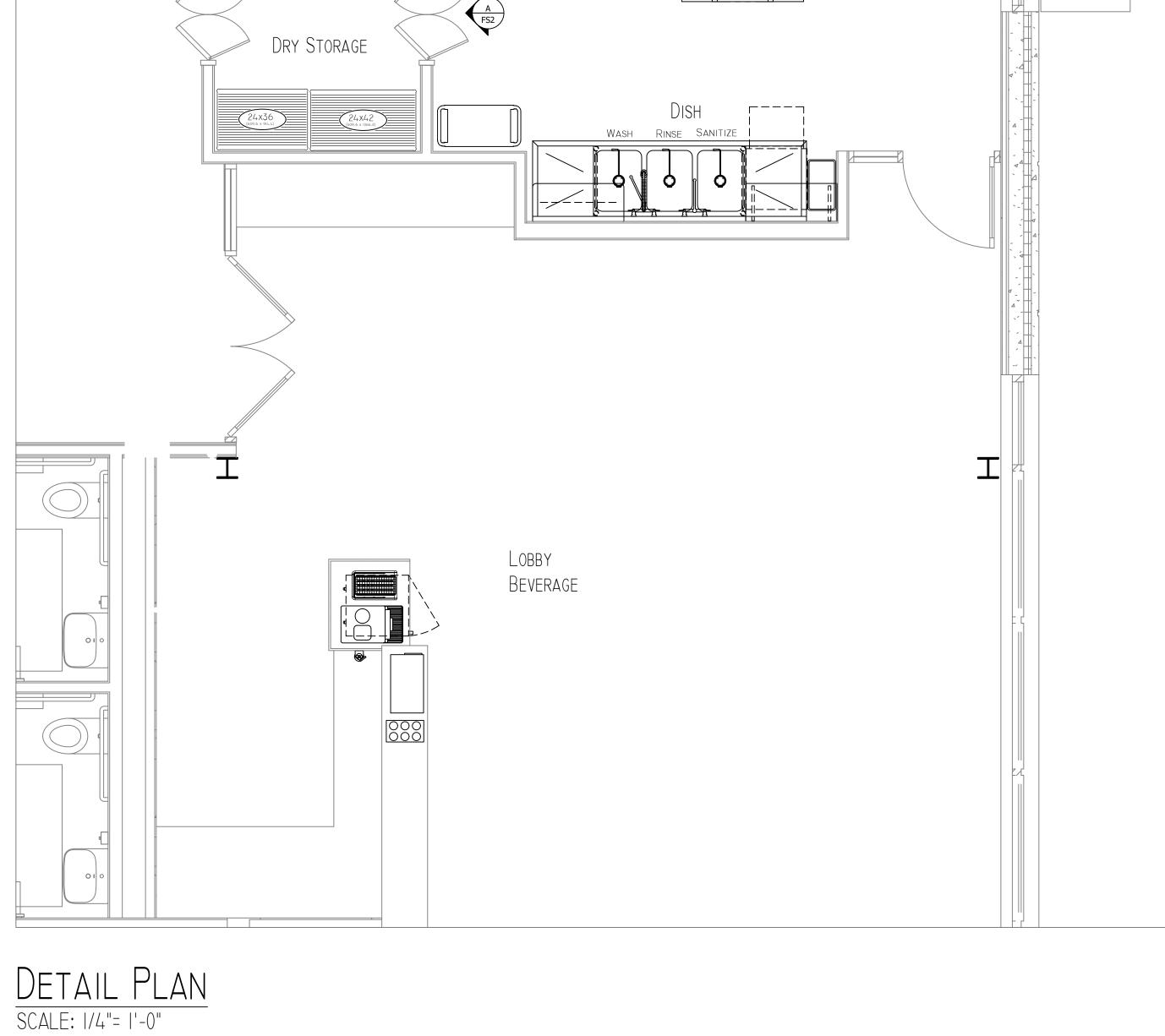
DOCUMENT ISSUE DATE 02/07/2025 DESIGN DEVELOPMEN 02/18/2025 CONSTRUCTION DOCS

DATE DESCRIPTION

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Detail Plan CALE: 3/8"=1' SHEET NO.

DATE: 02/18/2025



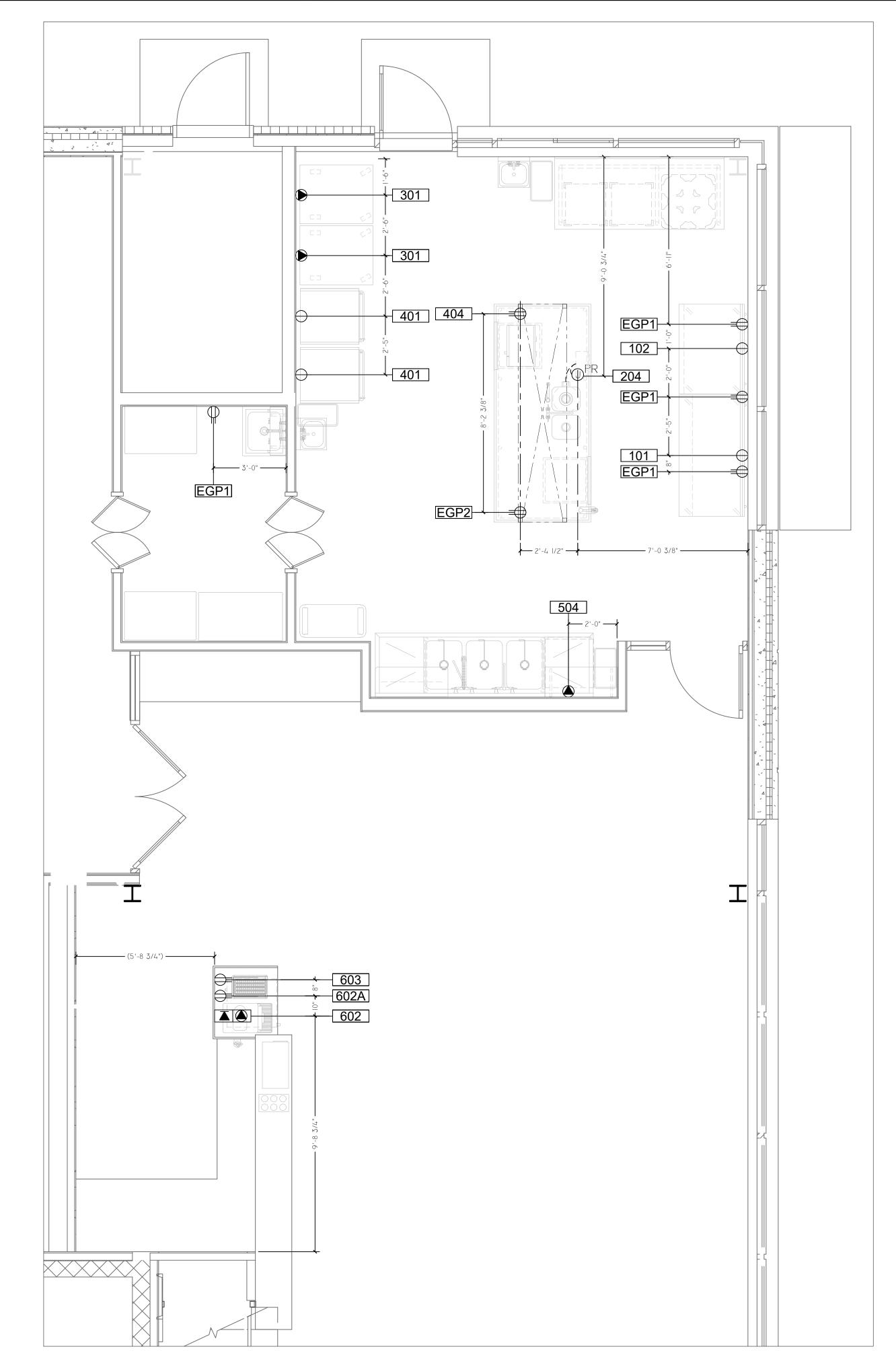
ELECTRICAL NOTES:

- I. E.C. SHALL ROUGH-IN ELECTRICAL SERVICE THROUGH WALLS, FLOORS AND CEILINGS. E.C. TO PROVIDE AND INSTALL ELECTRICAL SERVICES FROM RROUGH-INS TO FINAL CONNECTION POINTS ON FOODSERVICE EQUIPMENT.
- 2. E.C. SHALL FURNISH AND INSTALL ALL ELECTRICAL OUTLETS IN WALLS, FLOOR AND CEILING, AND IN OR ON FOODSERVICE EQUIPMENT WHERE NOTED ON DRAWINGS.
- 3. E.C. SHALL FURNISH AND INSTALL ALL DISCONNECT SWITCHES AS REQUIRED FOR THE EQUIPMENT IN ACCORDANCE WITH PREVAILING ELECTRICAL AND BUILDING CODES.
- 4. E.C. SHALL FURNISH AND INSTALL ALL CONDUIT AND WIRING BETWEEN REMOTE CONTROL PANELS AND THE FOODSERVICE EQUIPMENT.
- 5. ALL CONDUITS SHALL BE RUN IN THE WALL AT 6" A.F.F. MINIMUM OR AS INDICATED. ALL EXPOSED CONDUIT SHALL BE RUN TIGHT TO THE WALL. E.C. SHALL NOT ATTACH CONDUIT TO ANY LEGS OR SHELVING BRACING. CONDUIT MAY BE SECURED TO THE BOTTOM OF THE TABLES OR OTHER STEEL SURFACES. ALL FLEXIBLE CONDUIT SHALL BE " SEALTITE" OR EQUAL. FLEXIBLE METAL CONDUIT IS NOT ACCEPTABLE. ALL COVER PLATES SHALL BE STAINLESS STEEL.
- 6. S.C. SHALL PROVIDE AND INTERWIRE SHUNT-TRIP BREAKER TO AUTOMATICALLY SHUT DOWN ELECTRIC EQUIPMENT AND RECEPTACLES UNDER HOODS WHEN FIRE PROTECTION SYSTEM IS ACTIVATED. E.C. SHALL INTERCONNECT FIRE PROTECTION SYSTEM WITH BUILDING ALARM SYSTEM, IF REQUIRED BY THE ARCHITECT.
- 7. E.C. SHALL ROUGH IN, CONNECT AND INTERCONNECT ROOFTOP EQUIPMENT FOR FOODSERVICE VENTILATION SYSTEMS AS SHOWN ON DRAWINGS. ROOFTOP EQUIPMENT UTILITY LOADS ARE SHOWN ON THE HOOD MANUFACTURERS SHOP DRAWING.
- 8. I20V. IPH .5KW FOR HOOD LIGHTS. E.C. TO CONNECT TO JUNCTION BOX ON TOP OF EXHAUST HOOD. SEE MANUFACTURERS SHOP DRAWINGS FOR JUNCTION BOX LOCATIONS.
- 9. LOW VOLTAGE CONTROL WIRING FROM ROOFTOP VENTILATION PACKAGE TO CONTROL PANEL ON FACE OF HOOD. SEE MANUFACTURERS SHOP DRAWINGS FOR JUNCTION BOX AND CONTROL PANEL LOCATIONS. E.C. TO INTERCONNECT.
- 10. HOOD CONTROLS & CONTROL WIRING TO BE LOCATED AND PROVIDED BY OTHERS.
- II. I20V. IPH 20A DEDICATED CIRCUIT FOR P.O.S. SYSTEM ITEM #XX. E.C. TO PROVIDE CONDUIT FROM P.O.S. SYSTEM TO FOODSERVICE OFFICE, FOR COMPUTER TERMINAL. OTHER TRADES TO PROVIDE PHONE JACK FOR DATE LINK. VERIFY ALL ELECTRICAL REQUIREMENTS WITH SUPPLIER OF SYSTEM.
- 12. E.C. SHALL FURNISH AND INSTALL ALL INTERCONNECTING WIRING FOR WALK-IN REFRIGERATOR AND/OR FREEZER LIGHTS, DOOR HEATERS, COMPRESSORS EVAPORATORS, ALARM SYSTEMS, HEATED PRESSURE RELIEF VENTS, WINDOW HEATERS, TIME CLOCKS, INTERLOCKS, ETC. UNITS ARE NOT PRE-WIRED. WIRE PER MANUFACTURERS DRAWINGS.

CONDUIT FOR WALK-IN LIGHTING SHALL BE RUN OVER TOP OF BOXES. INTERIOR CONDUIT RUNS ARE NOT ACCEPTABLE. ALL PENETRATIONS FOR CONDUIT AND REFRIGERATION LINES SHALL BE SEALED WITH FOAM TO INSURE THAT THERE ARE NO AIR LEAKAGES.

PENETRATIONS FOR CONDUIT SHALL BE THROUGH THE WALLS OF THE WALK-IN. THERE WILL BE NO PENETRATION THROUGH THE CEILING PANELS OF THE WALK-IN REFRIGERATOR/FREEZER.

- 13. ALL WIRING, CONDUIT, RECEPTACLES, JUNCTION BOXES AND DCO'S PROVIDED AS PART OF THE COUNTER BY F.E.C. FINAL CONNECTIONS
- 14. HEIGHTS GIVEN FOR ELECTRICAL ROUGH-INS TO CENTER OF VERTICALLY MOUNTED BOX.



Electrical Plan SCALE: 3/8"= 1'-0"

ELECTRICAL NOTE: ROUGH-INS SHOWN ARE FOR FOODSERVICE EQUIPMENT ONLY. REFER TO OTHER PLANS FOR ALL OTHER ELECTRICAL REQUIREMENTS INCLUDING P.O.S. SYSTEMS, PHONE SYSTEMS, ALARM SYSTEMS, SECURITY SYSTEMS, H.V.A.C. SYSTEMS, LIGHTING AND SOUND SYSTEMS, CONVENIENCE OUTLETS AND ALL

OTHER REQUIREMENTS.

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GRAND RAPIDS, MI 49544

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ITEM No	QTY	EQUIPMENT CATEGORY	Volts	PHASE	AMPS	HP	DIRECT	PLUG	NEMA	ELECTRICAL AFF (IN)	ELEC REMARKS
101	I	REFRIGERATOR, WORKTOP	115	ı	1.7	1/10		Χ	5-I5P	16	I5A DEDICATED OUTLET
102	I	FREEZER, WORKTOP	115		10.2	1/2		Χ	5-I5P	16	15A DEDICATED OUTLET
							1				
204		DISPOSER, GARBAGE	208		12.1	2.0	X			5	PEDESTAL MOUNTED JUNCTION BOX
301	2	OVEN, RETHERM AND HOLD	208	I	40.4			X	6-50P	48	
401	2	CABINET, HOLDING/PROOFING	120		16.7			Χ	5-20P	36	VIF WINDOW HEIGHT
404	I	Oven, Microwave	120		13.4			Χ	5-I5P	5	STUB UP, SHELF MOUNTED OUTLET
504	l	WAREWASHER, UNDERCOUNTER	208		32.0	1.0	X			16	
602	I	ESPRESSO MACHINES, AUTOMATIC	220	1	13.0		X			16	CONFRIM DATA REQUIREMENTS W/OWNER
602A	I	ESPRESSO MACHINES, MILK COOLER	120	1	3.0			Х	5-I5P	16	
603	ı	REFRIGERATOR, UNDERCOUNTER	115		2.0	1/6		Χ	5-I5P	16	I5A DEDICATED OUTLET
EGPI	4	GENERAL PURPOSE DUPLEX RECEPTACLE	120	I	10.0			Х	5-I5R	36	
EGP2	-	GENERAL PURPOSE DUPLEX RECEPTACLE	120		10.0			X	5-I5R	5	STUB UP, SHELF MOUNTED OUTLET

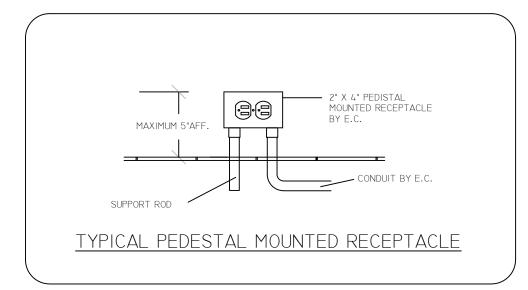
NOTE FOR EQUIPMENT SCHEDULE

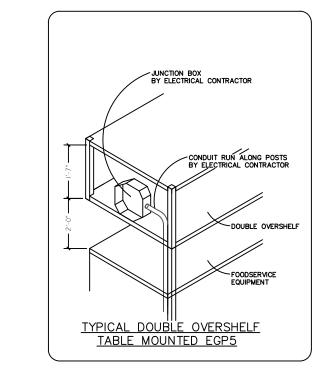
- * NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED OR
- BY OTHERS. * NOTE: ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE EQUIPMENT CONTRACT.
- * NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY
- REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS. * NOTE: DO NOT START WORK UNLESS ALL ITEMS BY OWNER

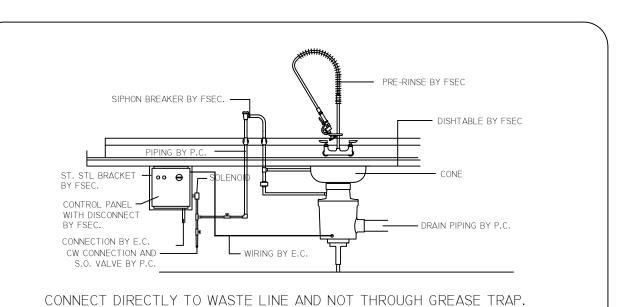
OR OTHERS HAVE BEEN VERIFIED.

ITEM & CONNECTION # ---

ELECTRICAL CONNECTION KEY







PLUMBING FITTINGS, ELECTRICAL WIRING AND PIPE NOT INCLUDED. INSTALLATION SHOULD BE MADE IN ACCORDANCE WITH LOCAL CODES.

TYPICAL DISPOSER INSTALLATION

		ELECTRICAL SYMBOL LEGEND
Φ	DR	120V 20A GFI RECEPTACLE
PR ♦	PR FFR	I20V 20A PEDESTAL RECPT 5" MAX. AFF TO TOP OF BOX FLUSH MOUNT FLOOR RECEPT W/ HINGED COVER
		120V DIRECT CONNECTION 208V CORD & PLUG OR DIRECT CONNECITON DATA CONNECTION
	JB	JUNCTION BOX
00	JC HP	JUNCTION BOX CEILING HORSEPOWER
	KW	KILOWATT
	PH	PHASE

V VOLTS

A AMPS

WP WEATHER PROOF RECEPTACLE DFA DROP FROM ABOVE

SU STUB UP - SEE DETAIL AFF ABOVE FINISHED FLOOR

UON UNLESS OTHERWISE NOTED SPECIAL RECEPTACLE - SEPARATE CIRCUIT - ISOLATED GROUND -**-** LT LIGHT FIXTURE

DATE ISSUE 02/18/2025 Construction Docs.

DOCUMENT ISSUE DATE

), DATE DESCRIPTION

THESE PLANS AND THE ESIGNS CONTAINED HEREI ARE THE PROPERTY OF MERCHANDISE EQUIPMENT AND SUPPLY AND MAY NO BE REPRODUCED OR USE BY ANYONE, EITHER ALL IN PART, WITHOUT FIRST SECURING OUR WRITTEN

PERMISSION.

ELECTRICAL PLAN SCALE: 3/8"=1" SHEET NO.

DATE: 02/18/2025

Plumbing Notes:

A. ALL GAS EQUIPMENT LOCATED BENEATH VENTILATION HOODS SHALL BE AUTOMATICALLY SHUT OFF WHEN THE FIRE PROTECTION SYSTEM IS ACTIVATED. THE FIRE SUPPRESSION SYSTEM PROVIDER SHALL PROVIDE A SOLENOID ACTIVATED GAS SHUT OFF VALVE FOR INSTALLATION BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE INSTALLATION WITH FIRE PROTECTION SYSTEM MANUFACTURER. M.C. TO PROVIDE SEPARATE MANUAL GAS SHUT-OFF VALVE FOR EACH CONNECTION TO GAS -FIRED EQUIPMENT.

B. ALL REQUIRED ROOF OPENINGS, STRUCTURAL SUPPORT, FLASHING, ETC., SHALL BE PERFORMED BY TRADES OTHER THAN MERCHANDISE EQUIPMENT AND SUPPLY.

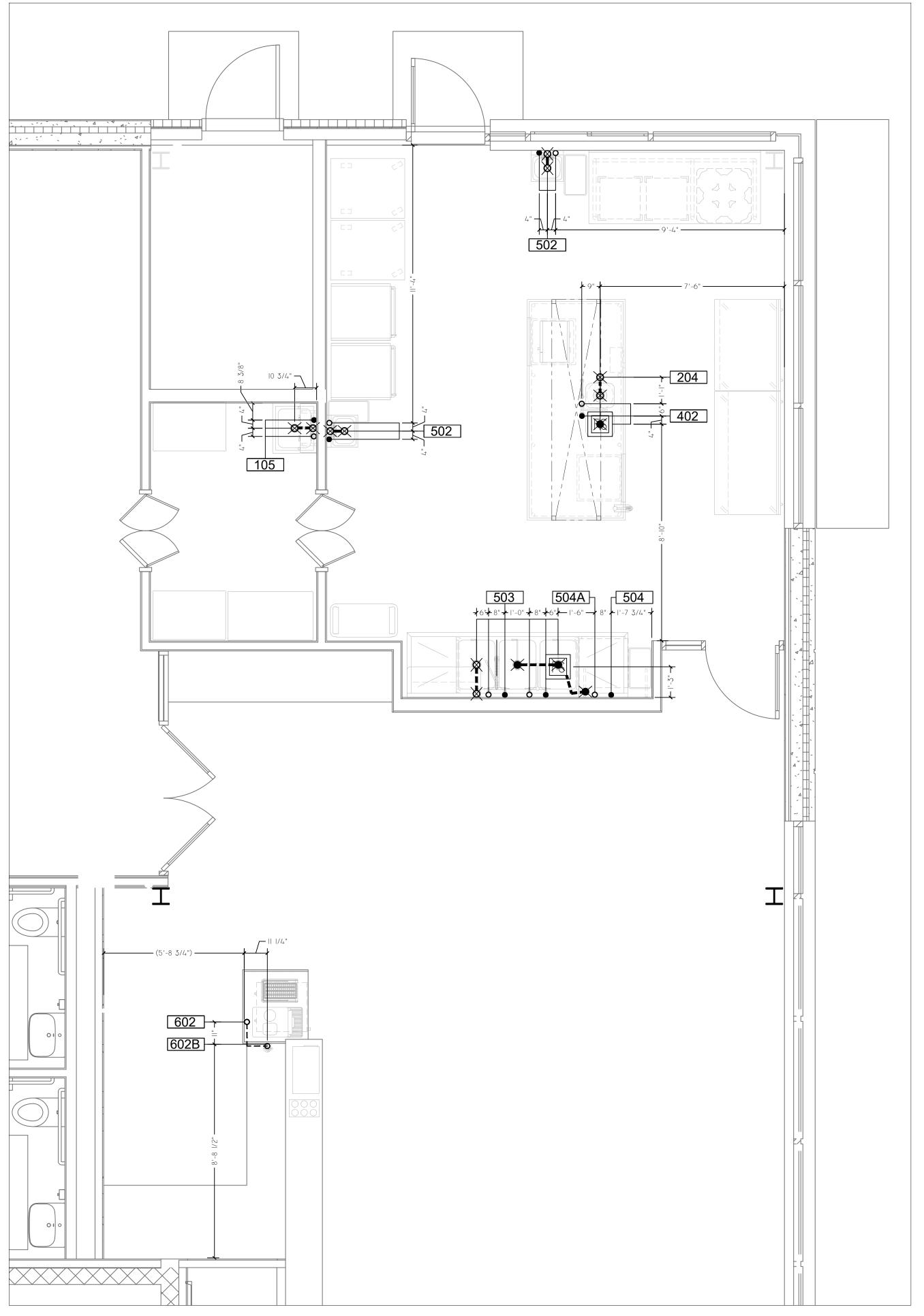
C. M.C. SHALL ROUGH IN UTILITY LINES THROUGH WALLS, FLOORS AND CEILINGS, CONNECT WASTE LINES FROM ROUGH INS AND MAKE ALL CONNECTIONS TO THE FOODSERVICE EQUIPMENT. M.C. TO PROVIDE ALL TRAPS, MANIFOLDS AND PIPING REQUIRED TO INTERCONNECT SINK DRAINS AS SHOWN. M.C. TO PROVIDE ALL TRAPS, VALVES, PIPING, ETC. NEEDED FOR INSTALLATION OF FOODSERVICE EQUIPMENT. ALL EXPOSED PIPING (ABOVE COUNTER HEIGHT OR IN A DIRECT LINE OF SIGHT) SHALL

D. BE STAINLESS STEEL OR CHROME PLATED. INSTALL STAINLESS STEEL OR CHROME PLATED BRASS ESCUTCHEONS OR FLANGES FOR UTILITY LINES WHICH EXTEND THROUGH WALLS AND EQUIPMENT. M.C. SHALL PROVIDE AND INSTALL ALL REQUIRED VACUUM BREAKERS. VACUUM BREAKERS, APPROVED BY THE ADPH,

E. MUST BE PROVIDED ON ALL DISPOSERS, HOSE REELS, PRESSURE WASHERS AND ON ALL BEVERAGE EQUIPMENT REQUIRING A WATER CONNECTION. ALL ATMOSPHERIC VACUUM BREAKERS MUST BE LOCATED DOWNSTREAM OF SHUT OFF VALVES IN ACCORDANCE WITH HEALTH DEPARTMENT CODES.

F. MC SHALL ROUGH IN AND CONNECT GAS PIPING TO ROOFTOP FOODSERVICE VENTILATION SYSTEMS S SHOWN ON

G. MC TO INSTALL GAS SHUT OFF VALVE PROVIDED BY THE FIRE SUPPRESSION SYSTEM PROVIDER. SEE NOTE "A".



Plumbing Plan SCALE: 3/8"= 1'-0"

SIGNED APPROVED PRINT

☐ APPROVED AS DRAWN ☐ APPROVED AS NOTED ☐ NOT APPROVED RESUBMIT

ERCHANDISE EQUIPMENT & SUPPLY, INC. 2039 WALKER CT. NW GRAND RAPIDS, MI 49544 DRAWINGS - DESIGNS - CONCEPTS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY UNDER PENALTY OF LAW

DRAWINGS - DESIGN - CONCEPTS

ARE THE PROPERTY OF:

P 616-791-1100 F 616-791-1148 2039 WALKER CT. NW

SIGNED:

PLUMBING SCHEDULE NO QTY EQUIPMENT CATEGORY 105 | I SINK, MOP 1/2 36 FLOOR 204 | I DISPOSER, GARBAGE 2 FLOOR 402 | I TABLE, WORK 1/2 5 1/2 5 FL SK STUB UP 502 | 2 | SINK, HAND, WALL MOUNT 1-1/2 16 1/2 | 16 | 1/2 | 16 | FL SK | 2 | 12 | SINK, SCULLERY, 3 COMPARTMENTS TRADE PIPE 2" DIRECT WASTE THRU GREASE INTERCEPTOR FL SK WAREWASHER, UNDERCOUNTER IIO° MIN. HW CONNECTION 70° RISE BOOSTER 504A | I | DRAIN WATER TEMPERING KIT 3/4 | 10 | FL SK | 1/2 24 602 | | ESPRESSO MACHINES, AUTOMATIC TRADE PIPE CW THRU FILTER TO ESPRESSO MACHINE 1/2 24 602B | | FILTER SYSTEM, ESPRESSO MACHINE TRADE PIPE CW THRU FILTER TO ESPRESSO MACHINE

NOTE FOR EQUIPMENT SCHEDULE

* NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED

* NOTE: ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE EQUIPMENT CONTRACT. * NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY

REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS. * NOTE: DO NOT START WORK UNLESS ALL ITEMS BY

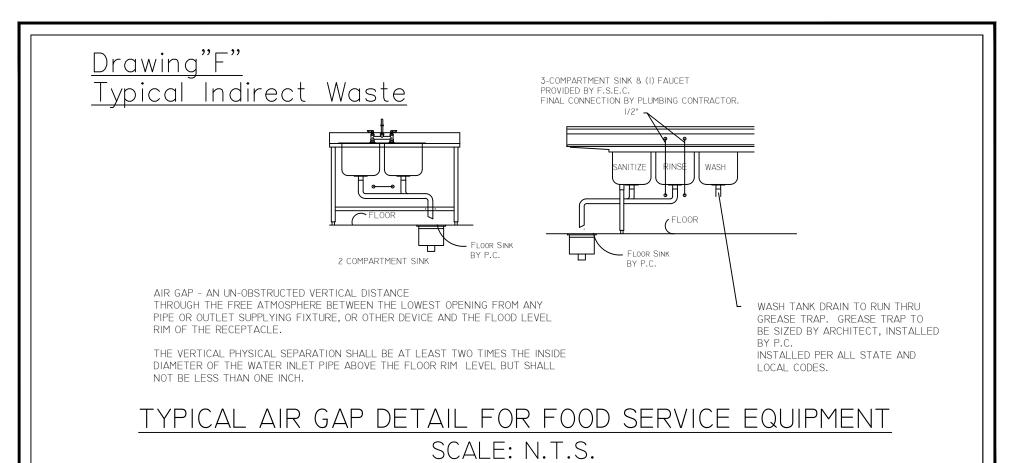
OWNER OR OTHERS HAVE BEEN VERIFIED.

ITEM & CONNECTION # PLUMBING CONNECTION KEY

Note: PC, Architect, Owner To Determine Quantity, Type and Location OF ANY FLOOR DRAINS FOR FOODSERVICE AREA. FLOOR DRAINS SHOWN IN DRAWING ARE FOR REFERENCE ONLY.

TBD TO BE DETERMINED DFA DROP FROM ABOVE BTC BRANCH TO CONNECTION AFF ABOVE FINISHED FLOOR UON UNLESS OTHERWISE NOTE CFM CUBIC FEET MINUTE SP STATIC PRESSURE HW HOT WATER - 25 PSI CW COLD WATER - 25 PSI G NATURAL GAS DW WASTE DRAIN - DIRECT CONNECTION DW WASTE DRAIN - INDIRECT CONNECTION FD FLOOR DRAIN HD HUB DRAIN FFD FUNNEL FLOOR DRAIN FS FLOOR SINK 12" SQ. WITH HALF GRATE FS FLOOR SINK 8" ROUND EVC EXHAUST VENT CONNECTION MUA MAKE UP AIR DUCT CONNECTION BC BEVERAGE CONDUIT WITH 24" SWEEP ENDS - BY P.

MECHANICAL SYMBOL LEGEND



Merchandise GRAND RAPIDS, MI 49544

COMMERCE \bigcirc CHAMBER ANIC HISP, HIGAN $\sum_{i=1}^{N}$

DOCUMENT ISSUE DATE

DESCRIPTION

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PLUMBING PLAN CALE: 3/8"=1" SHEET NO.

FS-4 ATE: 02/18/2025