

1X PLASTICS

PERMIT SUBMITTAL

OCTOBER 25, 2024

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ACCESSIBILITY NOTES:

- ACCESS TO THESE FACILITIES SHALL BE PROVIDED AT PRIMARY ENTRANCES, AS REQUIRED BY ADA.
- WALKS & SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2" AND SHALL BE A MIN. OF 36" IN WIDTH.
- SURFACES WITH A SLOPE OF LESS THAN 6% GRADIENT SHALL BE AT LEAST AS SLIP RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH.
- SURFACES WITH A SLOPE OF 6% GRADIENT OR GREATER SHALL BE SLIP RESISTANT.
- SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4" PER FOOT.
- WALKS, SIDEWALKS & PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. FOR GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN THE GRATINGS SHALL BE LIMITED TO 1/2" IN THE DIRECTION OF TRAFFIC FLOW.
- WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1 VERTICAL TO 20 HORIZONTAL, IT SHALL COMPLY WITH THE PROVISIONS OF A PEDESTRIAN RAMP.
- ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2". WHEN CHANGES IN LEVEL DO OCCUR, THEY SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2, EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. WHEN CHANGES IN LEVELS GREATER THAN 1/2" ARE NECESSARY, THEY SHALL COMPLY WITH THE REQUIREMENTS FOR CURBS OR PEDESTRIAN RAMPS.
- EVERY REQUIRED EXIT DOORWAY SHALL BE SIZED FOR A DOOR NOT LESS THAN 3 FT. WIDE BY NOT LESS THAN 6'-8" HIGH CAPABLE OF OPENING 90° AND MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT WAY IS 32" MIN.
- THRESHOLDS MAY BE A MAX. 1/2" ABOVE ADJACENT FINISH FLOOR.
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 1/2 LBS. FOR EXTERIOR DOORS AND 5 LBS. FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS.
- THE BOTTOM 10" OF ALL DOORS, EXCEPT AUTOMATIC AND SLIDING, SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
- PROVIDE LEVER-TYPE HARDWARE, PANIC BARS, PUSH - PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE THE HARDWARE. (34" TO 48" A.F.F.)
- PROVIDE 17" (MIN.) OR 18" (MAX.) FROM ADJACENT WALL TO CENTERLINE OF WATER CLOSET.
- PROVIDE A 30"x48" CLEAR SPACE WITHIN THE TOILET ROOM THAT DOES NOT ENCRoACH INTO THE DOOR SWING.
- GRAB BARS LOCATED ON EACH SIDE, OR ONE SIDE AND THE BACK OF PHYSICALLY DISABLED TOILET COMPARTMENTS SHALL BE SECURELY ATTACHED 33" MIN. AND 36" MAX. FROM THE FINISHED FLOOR TO THE TOP OF THE GRAB BAR AND PARALLEL TO THE FLOOR. THE SPACE BETWEEN WALL-MOUNTED GRAB BARS AND THE WALL SHALL BE 1/2". GRAB BARS AT THE SIDE SHALL BE 42" LONG, AND THE BACK END SHALL BE LOCATED 12" FROM THE BACK WALL. GRAB BARS AT THE BACK SHALL BE NOT LESS THAN 36" LONG WITH THE END CLOSEST TO THE SIDE WALL MOUNTED 12" FROM THE CENTER OF THE WATER CLOSET. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A GRAB BAR SHALL BE 1 1/4" TO 1 1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
- WATER CLOSET HEIGHT SHALL BE 17" (MIN.) OR 19" (MAX.) MEASURED TO THE TOP OF THE TOILET SEAT TO THE FINISHED FLOOR. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS, NO MORE THAN 44" A.F.F. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. OF FORCE.
- URINALS SHALL BE 17" (MAX.) ABOVE THE FLOOR AND PROJECT 13 1/2" FROM THE WALL. URINALS SHALL HAVE A CLEAR SPACE OF 30"x48" IN FRONT. FLUSH VALVES SHALL BE AUTOMATIC OR MOUNTED NO MORE THAN 44" A.F.F. IF HAND-OPERATED.
- IN FRONT OF LAVATORIES, PROVIDE A 30"x48" CLEAR SPACE LOCATED 25" (MAX.) FROM THE LEADING EDGE OF THE LAVATORY TOWARD THE MOUNTING WALL. KNEE CLEARANCE SHALL BE 11" DEEP (MIN.) AT 9" A.F.F. AND 8" DEEP (MIN.) AT 27" A.F.F. BETWEEN 9" AND 27" A.F.F., THE KNEE CLEARANCE SHALL BE PERMITTED TO REDUCE AT A RATE OF 1" IN DEPTH FOR EACH 6" IN HEIGHT.
- ALL ACCESSIBLE LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER THAN 34" A.F.F.
- HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

CONSTRUCTION NOTES:

- PERFORM ALL WORK IN ACCORDANCE WITH ACCEPTABLE TRADE PRACTICE TO ENSURE THE HIGHEST QUALITY FINISHED PRODUCT - EXPRESSED OR IMPLIED. PERFORM ALL WORK BY SKILLED MECHANICS IN ACCORDANCE WITH ESTABLISHED STANDARDS OF WORKMANSHIP IN EACH OF THE VARIOUS TRADES.
- WHEN THE PROJECT REQUIREMENTS REQUIRE THAT THE INSTALLATION OF WORK SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS, PERFORM THE WORK IN STRICT ACCORDANCE WITH THE MOST CURRENT WRITTEN MANUFACTURER'S INSTRUCTIONS.
- ALL PRODUCTS AND EQUIPMENT SHALL BE DELIVERED IN UNDAMAGED CONDITION AND STORED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO AVOID DISRUPTION OF THE WORK OR DAMAGE TO THE ITEMS. REPLACE DAMAGED OR UNFIT MATERIALS, AT NO COST TO THE OWNER.
- COORDINATE BLOCKING REQUIREMENTS WITH ADJACENT OR RELATED TRADES, ACCESSORIES, EQUIPMENT AND FIXTURES. INSTALL REQUIRED BLOCKING AT NO ADDITIONAL COST TO THE CONTRACTOR.
- ALL WEATHER-EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER. EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WATERPROOF.
- REPAIR PROPERTY DAMAGE BY THE INSTALLERS TO A LIKE NEW CONDITION, OR REPLACE DAMAGED SURFACES AND MATERIALS OF THE PREVIOUSLY INSTALLED WORK BY OTHER TRADES, INSTALLERS, AND SUBCONTRACTORS.
- ALLOWABLE TOLERANCES - UNLESS OTHERWISE NOTED OR INDICATED, THE FOLLOWING TOLERANCES SHALL APPLY TO ALL WORK:
 - ALL VERTICAL SURFACES SHALL BE PLUMB OR CONSTRUCTED TO THE EXACT SLOPES OR ANGLES INDICATED.
 - ALL HORIZONTAL SURFACES SHALL BE LEVEL OR CONSTRUCTED TO THE EXACT ANGLE INDICATED OR INTENDED.
 - WALL AND SOFFIT INTERSECTIONS SHALL BE 90° OR THE EXACT ANGLE INDICATED OR INTENDED.
 - ALL CORNERS AND EDGES SHALL BE STRAIGHT AND TRUE WITHOUT DENTS, WAVES, BULGES OR OTHER BLEMISHES.
 - ALL JOINTS SHALL BE TIGHT, STRAIGHT, EVEN, AND SMOOTH.
 - ALL STICKING ITEMS SHALL OPERATE SMOOTHLY WITHOUT OPERABLE OR BINDING AND WITHOUT EXCESSIVE FORCE.
- THE CONTRACTOR SHALL NOTIFY THE OWNER WHEN THE WORK IS SUBSTANTIALLY COMPLETE AND READY FOR INSPECTION. UPON INSPECTION, PROVIDE WRITTEN OPERATION AND MAINTENANCE INSTRUCTIONS AND WARRANTIES FOR ALL EQUIPMENT AND MATERIALS INSTALLED. PROVIDE WRITTEN GUARANTEES FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

GENERAL NOTES:

- THE CONTRACTOR SHALL SECURE AND PAY FOR GOVERNMENT LICENSES, INSPECTIONS, TESTING, TEMPORARY UTILITIES AND PERMITS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS AND/OR REGULATORY BODY HAVING AUTHORITY.
- CONTRACTORS SHALL VISIT THE SITE WHILE BIDDING AND SHALL FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND THE REQUIREMENTS OF THE PROJECT AND CONSTRUCTION DOCUMENTS PRIOR TO DEVELOPING THEIR BID. FABRICATION / CONSTRUCTION, AND PURCHASING. MATERIAL QUANTITIES SHALL BE BASED ON ACTUAL FIELD CONDITIONS AND MEASUREMENTS. DO NOT RELY ON SCALING DRAWINGS FOR ACCURATE DIMENSIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS DISCOVERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTIONS AND/OR REPAIRS REQUIRED FOR FAILING TO DO SO.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL CONSTRUCTION DOCUMENTS TO THEIR SUBCONTRACTORS AS REQUIRED FOR THEM TO DEVELOP A COMPLETE BID FOR THEIR WORK AND TO HAVE A COMPLETE UNDERSTANDING OF COORDINATION NEEDED WITH OTHER SUBCONTRACTORS FOR RELATED HIDDEN OR EXPOSED WORK TO ENSURE EFFICIENT AND ORDERLY INSTALLATION.
- THE ARCHITECT ASSUMES NO LIABILITY FOR THE SERVICES AND/OR CONSTRUCTION DOCUMENTS OF DESIGN SUB-CONSULTANTS COMPILED INTO THE SET OF DOCUMENTS ISSUED BY THE ARCHITECT. THESE DESIGN SERVICES MAY INCLUDE, BUT ARE NOT LIMITED TO, CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, PRE-ENGINEERED METAL BUILDING DESIGN, TILT-UP DESIGN, TRUSS SYSTEM DESIGN, AUTOMATIC FIRE SPRINKLER AND/OR ALARM SYSTEMS, LOW-VOLTAGE ELECTRICAL TELECOMMUNICATION AND SECURITY SYSTEMS AND GUTTER / DOWNSPOUT DESIGN.
- UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR SHALL PROVIDE AND PAY FOR LABOR, MATERIALS, EQUIPMENT, MACHINERY, SCAFFOLDING, SHORING, TOOLS, LAYOUT, ON-SITE DIMENSIONING, TRANSPORTATION, UTILITIES, AND OTHER FACILITIES AND SERVICES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS. THIS SHALL ALSO INCLUDE NECESSARY CUTTING, PATCHING AND REPAIRING OF EXISTING CONSTRUCTION MATERIALS IN PLACE. ALL WORK AND MATERIAL SHALL COMPLY WITH THE APPLICABLE GOVERNING CODES LISTED.
- WHERE DETAILS AND DESIGN INTENT ARE NOT CLEAR, THE CONTRACTOR SHALL CONSULT THE ARCHITECT FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR STRUCTURAL MODIFICATIONS, INSTALLATIONS AND ERECTION.
- CONTRACTORS SHALL TAKE CARE TO PROTECT ADJACENT AREAS FROM DUST AND DAMAGE DURING THE CONSTRUCTION PROCESS AND SHALL CLEAN UP AFTER THEMSELVES AT THE END OF EACH WORKING DAY. ANY DAMAGE DONE TO ADJACENT AREAS MUST BE REPAIRED TO MATCH ORIGINAL CONDITIONS OR TO THE OWNER'S SATISFACTION. REPAIRS ARE TO BE PAID FOR BY THE CONTRACTOR RESPONSIBLE.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY ADDITIONAL WORK OR REVISIONS REQUIRED DUE TO SITE CONDITIONS OR ADDITIONAL REQUIREMENTS OF ANY REGULATORY BODIES HAVING AUTHORITY.
- FOR THE DURATION OF THE PROJECT AND AT ALL TIMES OF EACH DAY, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE CONDITIONS, SECURITY AND SAFETY FOR WORKERS AND THE GENERAL PUBLIC, AS REQUIRED BY THE REGULATORY BODY HAVING AUTHORITY.
- THE GENERAL CONTRACTOR SHALL PURCHASE AND MAINTAIN INSURANCE COVERAGE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER. VERIFY AND COORDINATE WITH THE OWNER'S REPRESENTATIVE FOR ANY ADDITIONAL REQUIREMENTS.
- THE OWNER OR THE OWNER'S SUBCONTRACTORS MAY OCCUPY PORTIONS OF THE PROJECT DURING THE FINAL STAGE OF CONSTRUCTION. COORDINATE AND COOPERATE WITH THE OWNER TO MINIMIZE CONFLICT AND FACILITATE THE OWNER'S OPERATION.
- THE CONTRACTOR SHALL PROVIDE SECURITY OF THE WORK, INCLUDING TOOLS AND UNINSTALLED MATERIALS. PROTECT THE WORK, STORED PRODUCTS, CONSTRUCTION EQUIPMENT, AND OWNER'S PROPERTY FROM THEFT AND VANDALISM, AND PROTECT THE PREMISES FROM ENTRY BY UNAUTHORIZED PERSONNEL UNTIL FINAL ACCEPTANCE BY THE OWNER.
- CONTRACTOR SHALL COORDINATE STAGING AREAS AS REQUIRED BY THE LANDLORD / OWNER.
- THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES.
- THE STRUCTURAL ENGINEER AND ARCHITECT MUST BE NOTIFIED AND MUST GIVE APPROVAL PRIOR TO ANY MODIFICATION TO THE ROOF SYSTEM OR ADDING ANY ADDITIONAL ROOF-MOUNTED EQUIPMENT.

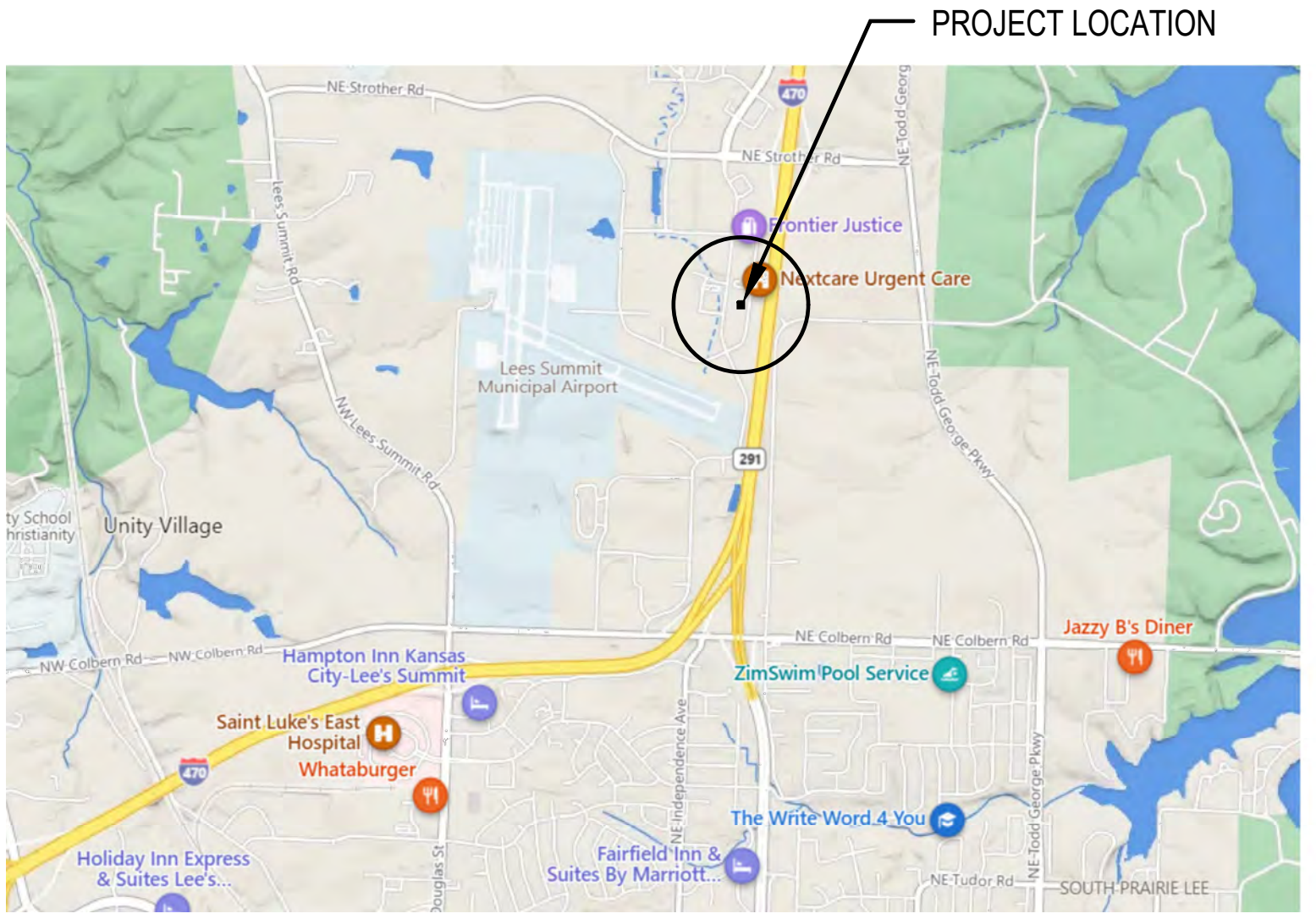
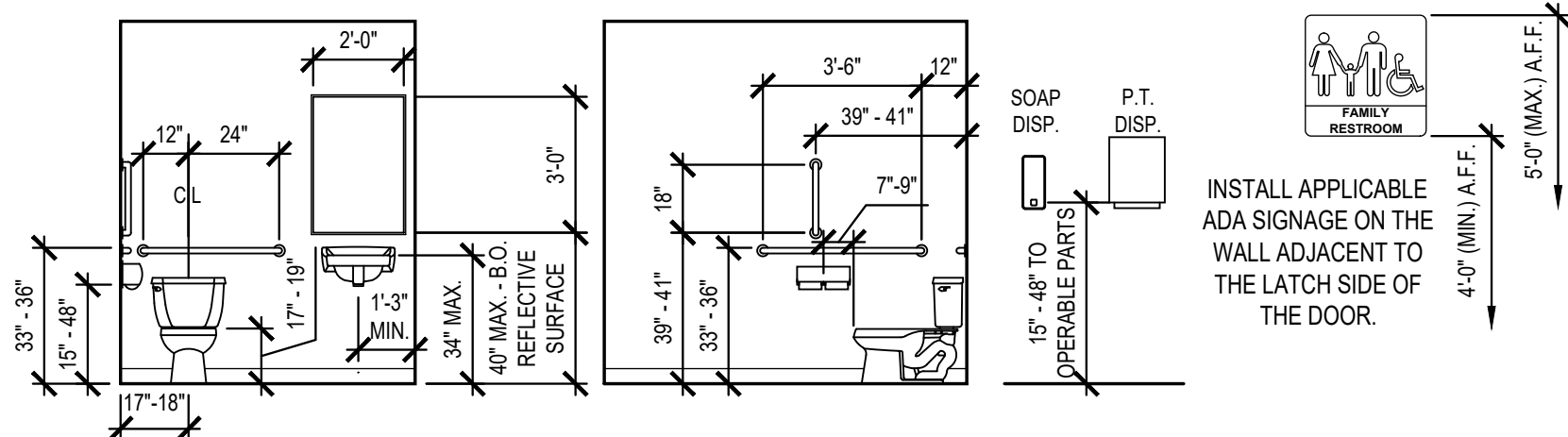
DISCLAIMER:

THESE DRAWINGS ARE CONSIDERED A "BUILDER'S SET" AND BY BEGINNING CONSTRUCTION, THE CONTRACTOR GUARANTEES TO THE ARCHITECT, THAT THE CONTRACTOR HAS THE COMPETENCE AND SKILL IN CONSTRUCTION NECESSARY TO BUILD THE PROJECT WITH THESE DRAWINGS. THE CONTRACTOR WILL BE REQUIRED TO ADAPT THE DRAWINGS TO ACTUAL FIELD CONDITIONS AND MAKE LOGICAL ADJUSTMENTS IN FIT, FORM, DIMENSION AND QUANTITY. IN THE EVENT ADDITIONAL DETAIL OR GUIDANCE IS NEEDED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT. FAILURE TO GIVE NOTICE SHALL RELIEVE THE ARCHITECT OF RESPONSIBILITY FOR ANY RESULTANT EXPENSES, REPAIRS OR ADDITIONAL WORK. IT IS UNDERSTOOD AND AGREED THAT IF THE ARCHITECT IS NOT HIRED TO DO CONSTRUCTION OBSERVATION OR ANY OTHER CONSTRUCTION PHASE SERVICES, THAT THE ENTITY HIRED TO PERFORM SUCH SERVICES ASSUMES ALL RESPONSIBILITY FOR THESE SERVICES, AND THE CLIENT WAIVES ANY CLAIMS AGAINST THE ARCHITECT THAT MAY BE IN ANY WAY CONNECTED THERETO.

ABBREVIATIONS:*

*NOTE: THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY ABBREVIATIONS NOT NOTED AND REQUEST CLARIFICATIONS.

@	AT	JT	JOINT
ACT	ACOUSTIC CEILING TILE	KS	KNEE SPACE
ADJ	ADJUSTABLE	LB	LONG
AFF	ABOVE FINISHED FLOOR	LB (#)	POUND
ALUM	ALUMINUM	LVL	LAMINATED VENEER LUMBER
ANOD	ANODIZED		
ATT	ATTENUATION		
BD	BOARD	MAX	MAXIMUM
BET	BETWEEN	MDO	MEDIUM DENSITY OVERLAY
BF	BARRIER FREE	MECH	MECHANICAL
BIT	BITUMINOUS	MFR	MANUFACTURER
BLDG	BUILDING	MICRO	MICROWAVE
BO	BOTTOM OF	MIN	MINIMUM
BTM	BOTTOM	MO	MASONRY OPENING
CPT	CARPET	MR	MOISTURE RESISTANT
CCT	CERAMIC TILE	MTD	METAL
CJ	CONTROL JOINT		
CLG	CENTER LINE	NIC	NOT IN CONTRACT
CLG	CEILING	NO	NUMBER
CLR	CLEAR	NOM	NOMINAL
CMU	CONCRETE MASONRY UNIT		
COMP	COMPRESSIBLE	O.C.	ON CENTER
CONC	CONCRETE	O.D.	OUTSIDE DIAMETER
CONT	CONTINUOUS	O.H.	OVERHEAD OR OPPOSITE HAND
		OSB	ORIENTED STRAND BOARD
		OZ	OUNCE
D	DRYER		
DEG	DEGREE		
DEMO	DEMOLITION	PREFAB	PREFABRICATED
DF	DRINKING FOUNTAIN	PLAM	PLASTIC LAMINATE
DH	DOUBLE-HUNG	PLYWD	PLYWOOD
DIA	DIAMETER	PR	PAIR
DN	DOWN	PT	PRESSURE TREATED
DP	DEEP	PNT	PAINT
DS	DOWN SPOUT	PEMB	PRE-ENGINEERED MTL BLDG
DW	DISHWASHER	QTY	QUANTITY
EA	EACH	R	RISER
EJ	EXPANSION JOINT	RCP	REFLECTED CEILING PLAN
EQ	EQUAL	REF	REFRIGERATOR, REFERENCE
ETR	EXISTING TO REMAIN	REINF	REINFORCED
EXG	EXISTING	REQD	REQUIRED
EXP	EXPOSED TO STRUCTURE	RM	ROOM
FD	FLOOR DRAIN	RO	ROUGH OPENING
FE	FIRE EXTINGUISHER, FINISHED	RCB	RUBBER COVE BASE
FF	FINISHED FLOOR	SC	SEALED CONCRETE
F&I	FURNISH AND INSTALL	SF	SQUARE FEET
FLR	FLOOR	SIM	SIMILAR
FR	FIRE RETARDANT	SQ	SQUARE
FRP	FIBER REINFORCED PLASTIC	SS	STAINLESS STEEL
FV	FIELD VERIFY	ST	STAIN
GA	GAUGE	T	TREAD
GALV	GALVANIZED	TBD	TO BE DETERMINED
GC	GENERAL CONTRACTOR	TO	TOP OF
GFI	GROUND FAULT CIRCUIT INTERRUPTER	TYP	TYPICAL
GL	GLASS	UNO	UNLESS NOTED OTHERWISE
GYP	GYP SUM BOARD	VCT	VINYL COMPOSITION TILE
H	HIGH	VERT	VERTICAL
HB	HOSE BIB		
HT	HEIGHT	W	WASHER, WIDE
HDW	HARDWARE	W/	WITH
HRDWD	HARDWOOD	WD	WOOD
HM	HOLLOW METAL	WH	WATER HEATER
HR	HOUR	WC	WALK-IN CLOSET
		WWF	WELDED WIRE FABRIC
IN	INCH		
INSUL	INSULATION		



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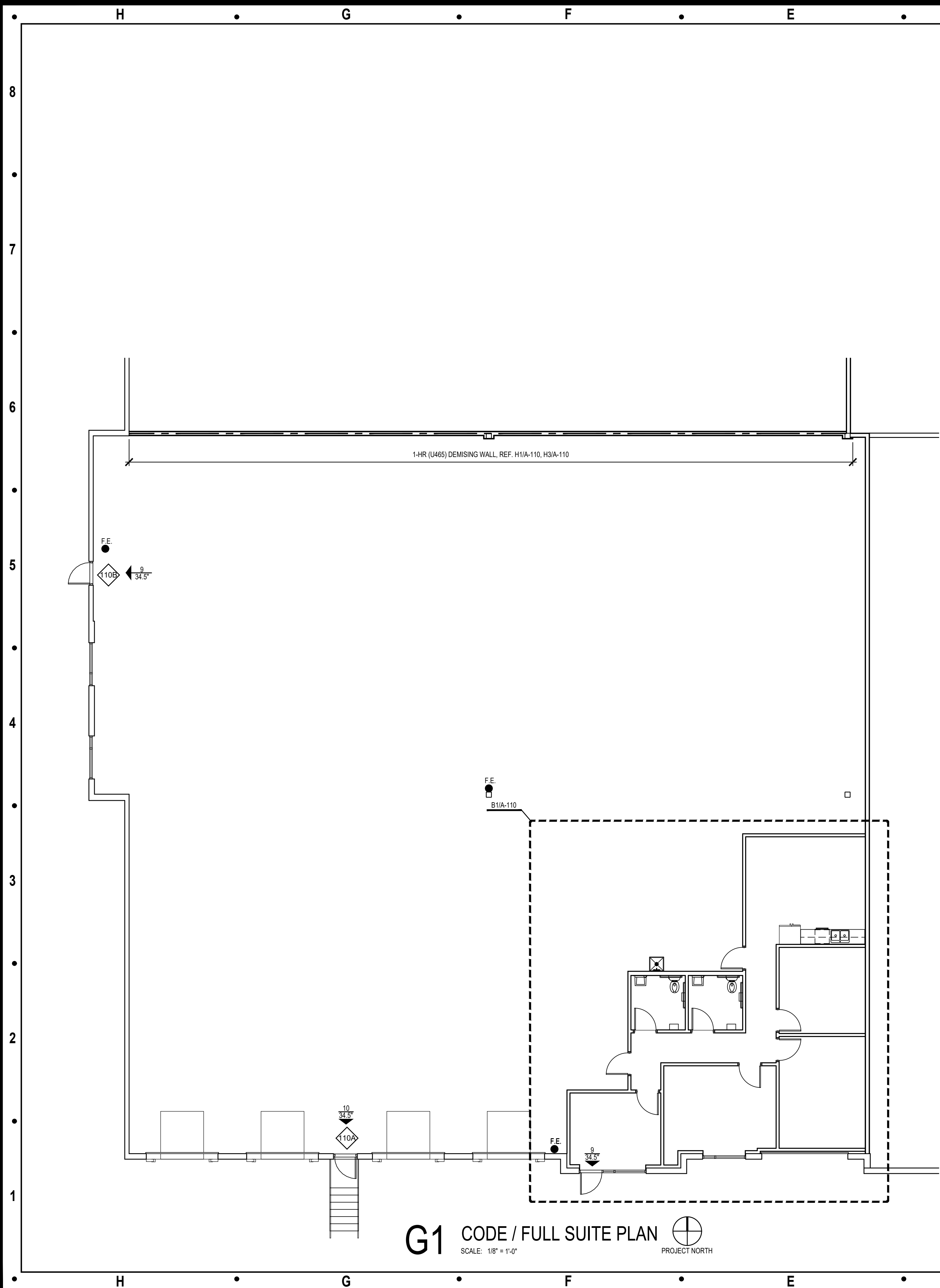


Project Number: 2410
Project Type: TENANT FINISH
Project Name and Address: 2700 NE McBaine Drive, Lee's Summit, Missouri 64064

Issue: Permit Submittal
Date: 10.25.24

Issue: Permit Submittal
Date: 10.25.24

Sheet Title:
COVER / MAP
GENERAL NOTES
ADA NOTES
A-001



G1 CODE / FULL SUITE PLAN
SCALE: 1/8" = 1'-0"
PROJECT NORTH

LIFE SAFETY / FIRE DEPARTMENT GENERAL NOTES

- PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY THE FIRE DEPARTMENT FIELD INSPECTOR DURING CONSTRUCTION AND FOR COMPLETED PROJECT. EXTINGUISHERS SHALL ALSO BE COMPATIBLE WITH ANY CHEMICALS PRESENT IN THE SPACE.
- AN OCCUPANT LOAD SIGN SHALL BE POSTED IN EACH ASSEMBLY ROOM OR SPACE. THE SIGN IS TO BE POSTED CONSPICUOUSLY NEAR THE ENTRANCE. COORDINATE FINAL LOCATION OF SIGN WITH THE FIRE DEPARTMENT FIELD INSPECTOR. THE SIGN IS TO BE PROVIDED AND INSTALLED BY THE OWNER'S REPRESENTATIVE.
- PROVIDE INTERNALLY ILLUMINATED EXIT SIGNS ABOVE EXITS WITH 3/4" x 8" (MIN.) LETTERS LIGHTED ON CONTRASTING BACKGROUND. PROVIDE TWO (2) SEPARATE POWER SUPPLIES CONFORMING TO ADOPTED CODE. VERIFY FINAL LOCATIONS WITH THE BUILDING INSPECTOR.
- PROVIDE EMERGENCY EXIT LIGHTING LEVEL PER CODE (ONE FOOT-CANDLE AT FLOOR LEVEL - MINIMUM).
- FINISHES SHALL NOT EXCEED CLASS A, B, OR C AS INDICATED IN THE BUILDING CODE.
- UNLESS ALREADY EXISTING, AN APPROVED SET OF NUMERALS, MINIMUM 6" HIGH (4" FOR REAR ENTRANCE) WITH A STROKE WIDTH OF NOT LESS THAN 1 INCH, SHALL BE PLACED ON OR NEAR THE ENTRANCE. THE NUMBERING SHALL BE PLACED IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. SAID NUMERALS SHALL CONTRAST WITH THEIR BACKGROUND. VERIFY REQUIREMENTS WITH THE REGULATORY BODY HAVING AUTHORITY.
- GENERAL CONTRACTOR SHALL SECURE PERMITS AND INSPECTION APPROVALS REQUIRED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY OF THIS BUILDING.
- STORAGE, DISPENSING, OR USE OF ANY FLAMMABLE AND/OR COMBUSTIBLE LIQUIDS, FLAMMABLE AND COMPRESSED GASES AND OTHER HAZARDOUS MATERIALS SHALL COMPLY WITH ADOPTED BUILDING CODE REGULATIONS.
- IF AN AUTOMATIC FIRE SPRINKLER SYSTEM OR FIRE ALARM SYSTEM IS REQUIRED, THE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ADOPTED BUILDING CODE. SYSTEM DESIGN DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR REVIEW PRIOR TO INSTALLATION. THIS INCLUDES DETECTION AND SUPPRESSION SYSTEMS FOR KITCHEN HOODS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND COORDINATE DEFERRED SUBMITTALS.
- CODE-REQUIRED SMOKE DETECTORS IN RETURN AIR DUCTS SHALL HAVE REMOTE INDICATORS IF IN CONCEALED SPACES OR MORE THAN 10' ABOVE THE FINISHED FLOOR. SMOKE DETECTORS MUST BE READILY VISIBLE TO THE FIRE DEPARTMENT PERSONNEL.
- INSTALL A "NO SMOKING" SIGN PER LOCAL ORDINANCES CONSPICUOUSLY POSTED AT EVERY ENTRANCE, AS REQUIRED.

LIFE SAFETY LEGEND

OFFICE	ROOM / SPACE NAME
110	ROOM / SPACE NUMBER
174 SF	ROOM / SPACE AREA
2	ROOM / SPACE OCCUPANT LOAD
OCCUPANT LOAD AND WIDTH AT EXIT POINT	
6	34.5'
5	34.5'
SEE ELECTRICAL SHEETS FOR EXIT SIGNS / EMERGENCY LIGHTING	
●	SLB 2A10BC FIRE EXTINGUISHER. DISTRIBUTE EXTINGUISHERS PER NFPA 101 SUCH THAT ONE CAN BE REACHED BY A TRAVEL DISTANCE OF NO MORE THAN 75' (IFC TABLE 906.3.1). MOUNT TOP OF EXTINGUISHERS 60" A.F.F. (MAX.) AND WITH STATE FIRE MARSHALL INSPECTION TAG ATTACHED. VERIFY FINAL SIZES AND LOCATIONS WITH THE REGULATORY BODY HAVING AUTHORITY.
KB	KNOX BOX. MOUNT TOP OF BOX AT 72" ABOVE ADJACENT SURFACE, AND VERIFY FINAL LOCATION WITH THE REGULATORY BODY HAVING AUTHORITY.

MIN. # OF REQ'D PLUMBING FIXTURES (2902.1)

WATER CLOSETS	REQUIRED	
	MEN	WOMEN
FACTORY AND INDUSTRIAL (1 PER 100)	1.135	1.135
BUSINESS (1 PER 25)	0.56*	
LAVATORIES	REQUIRED	
	MEN	WOMEN
FACTORY AND INDUSTRIAL (1 PER 100)	1.135	1.135
BUSINESS (1 PER 40)	0.35*	

SERVICE / UTILITY SINK	REQUIRED	PROVIDED
FACTORY AND INDUSTRIAL	1	1
BUSINESS	0	0

* SEPARATE FACILITIES ARE NOT REQUIRED BECAUSE THE BUSINESS OCCUPANT LOAD IS 25 OR FEWER (2902.2, EXC. 4)

MIN. # OF REQ'D PLUMBING FIXTURES (2902.1)

WATER CLOSETS	REQUIRED	
	MEN	WOMEN
STORAGE (1 PER 100)	0.095	0.095
BUSINESS (1 PER 25)	0.180	0.180
	REQUIRED	0.275
	PROVIDED	1
LAVATORIES	REQUIRED	
	MEN	WOMEN
STORAGE (1 PER 100)	0.095	0.095
BUSINESS (1 PER 40)	0.113	0.113
	REQUIRED	0.208
	PROVIDED	1

SERVICE / UTILITY SINK	REQUIRED	PROVIDED
STORAGE	1	1
BUSINESS	1	1

FIRE RESISTANCE

RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601)

ELEMENT	RATING (HRS)
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS	
EXTERIOR	0
INTERIOR	0
NONBEARING WALLS & PARTITIONS - EXTERIOR (TABLE 705.5)	
X < 5	2
5 <= X < 10	1
10 <= X < 30	0
X >= 30	0
NONBEARING WALLS & PARTITIONS - INTERIOR	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0
AUTOMATIC SPRINKLER SYSTEM REQ'D	(903.2.9)
EXISTING SYSTEM:	NFPA 13
TENANT SEPARATION WALL (508.3)	0 HR. REQ'D
DRAWING DESIGNATIONS:	
1 HR. RATED WALL	_____
2 HR. RATED WALL	_____

MEANS OF EGRESS

OCCUPANT LOAD (TABLE 1004.5)
MAX. FLOOR ALLOWANCE PER OCCUPANT (LOAD FACTOR)

SPACE	AREA / LOAD FACTOR	OCCUPANTS
STORAGE AREA	9,274 SF / 500 GROSS	19
BUSINESS AREA	1,263 SF / 150 GROSS	9
TOTAL TENANT OCCUPANTS		28

EXITS (CHAPTER 10)

EGRESS WIDTH (1005.3.2)
MINIMUM REQUIRED (28 OCCUPANTS x 0.2'): 5.6'
PROVIDED (3 DOORS x 34.5' CLR. WIDTH/DOOR): 103.5'

NUMBER OF EXITS (TABLE 1006.3.2)
MINIMUM REQUIRED: 2
PROVIDED: 3

EXIT SEPARATION DISTANCE (1007.1.1)
MINIMUM REQ'D: 1/3 THE DIAGONAL OF AREA SERVED

EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2)
MAXIMUM ALLOWED: 400'
PROVIDED: <400'

COMMON PATH OF EGRESS TRAVEL (TABLE 1006.2.1)
MAXIMUM ALLOWED: 100'
PROVIDED: <100'

PROJECT SUMMARY

THIS IS A TENANT FINISH PROJECT FOR A COMPANY THAT STORES AND DISTRIBUTES PLASTIC PROFILE EXTRUSIONS AND DIE-CUT PLASTICS.

CODE ANALYSIS

APPLICABLE GOVERNING CODES

2018	INTERNATIONAL BUILDING CODE
2018	INTERNATIONAL PLUMBING CODE
2018	INTERNATIONAL MECHANICAL CODE
2018	INTERNATIONAL FIRE CODE
2017	NATIONAL ELECTRICAL CODE
CURRENT	ICC / ANSI A117.1 - 2009, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

OCCUPANCY CLASSIFICATION

TENANT SPACE OCCUPANCY GROUPS:
GROUP S-1: MODERATE HAZARD STORAGE (311.2)
GROUP B: BUSINESS (304)

ADJACENT TENANT OCCUPANCY GROUPS:
GROUP S-1: MODERATE HAZARD STORAGE (311.2)
GROUP B: BUSINESS (304)

NONSEPARATED MIXED USE (508.3, TABLE 508.4):
NO SEPARATION REQUIRED BETWEEN S-1 AND B

TYPE OF CONSTRUCTION

II-B (602.2)

BUILDING HEIGHT LIMITATIONS

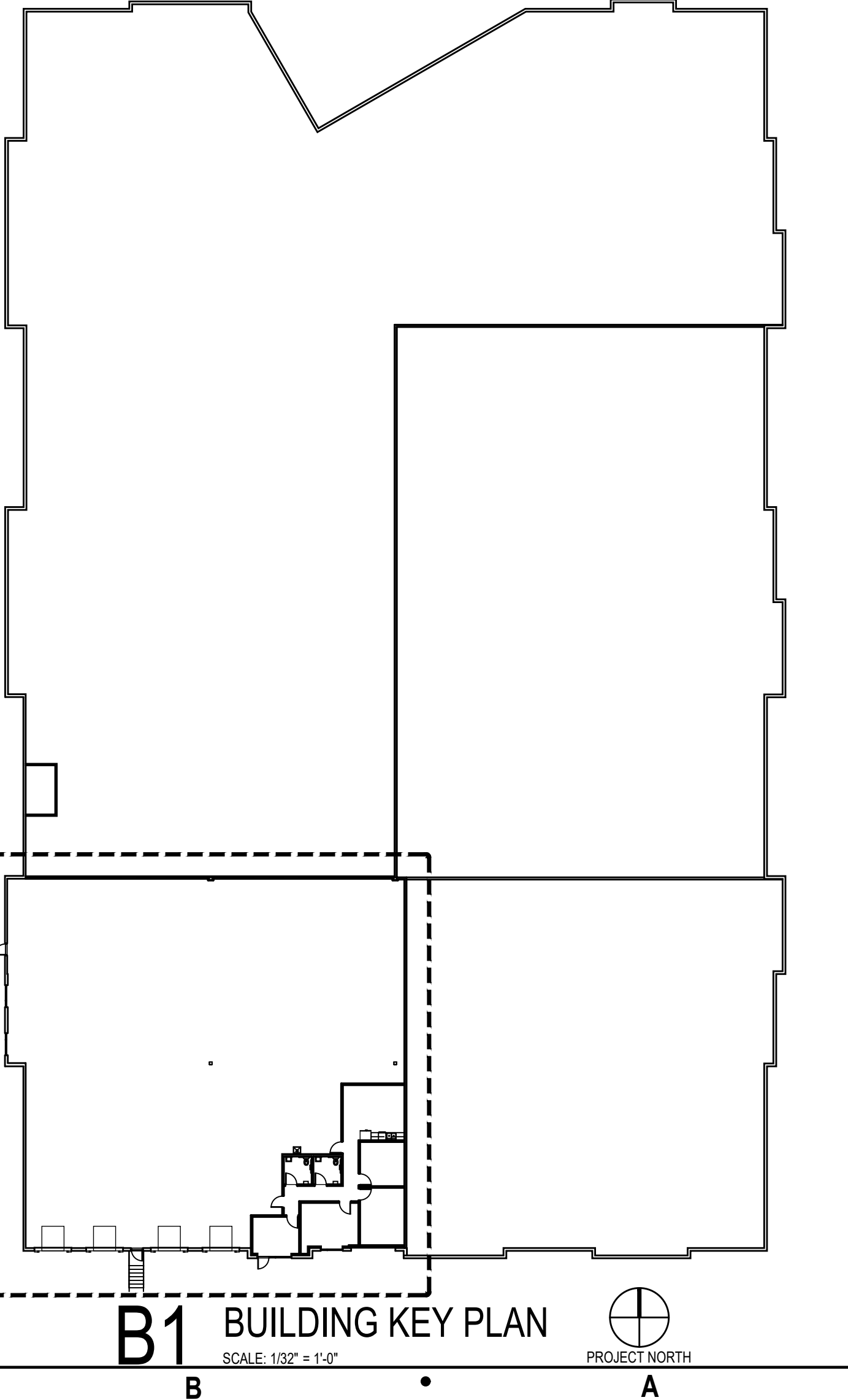
GROUPS S-1, B - FULLY SPRINKLED	ALLOWABLE HEIGHT IN FEET (TABLE 504.3)	75'
	ACTUAL HEIGHT IN FEET	36'
	ALLOWABLE # OF STORIES (TABLE 504.4)	3
	ACTUAL # OF STORIES	1

BUILDING AREA LIMITATIONS

GROUPS S-1, B - FULLY SPRINKLED	ALLOWABLE AREA (TABLE 506.2)	70,000 SF
	ACTUAL AREA	68,222 SF

TENANT USE AREAS

STORAGE GROUP S-1 AREA	9,274 SF
BUSINESS GROUP B AREA (OFFICE)	1,263 SF
TENANT FINISH SUITE AREA	10,537 SF



B1 BUILDING KEY PLAN
SCALE: 1/32" = 1'-0"
PROJECT NORTH

Architect:
MICHAEL MOORES, RA
t: (816) 516-4861

Client:
Ward Development
1120 NW Eagle Ridge Blvd.
Grain Valley, Missouri 64029
t: (816) 229-8115

Consultants:
MEP Engineering:
EBS
ENGINEERED BUILDING SYSTEMS
t: (913) 735-5654

Revisions to technical submissions which are not made or approved by the licensee are prohibited.

Seal:

MICHAEL MOORES, MO Architect #2009032812

Project Number: 2410
Project Type: TENANT FINISH
Project Name and Address:
1X PLASTICS
2700 NE McBaine Drive
Lee's Summit, Missouri 64064

Issue: _____ Date: _____
Permit Submittal 10.25.24

Sheet Title:
**BUILDING KEY PLAN
FULL SUITE PLAN
CODE INFORMATION**

A-002

UL Product iQ®



Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
Authorities Having Jurisdiction should be consulted before construction.
Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements.
When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design.
Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

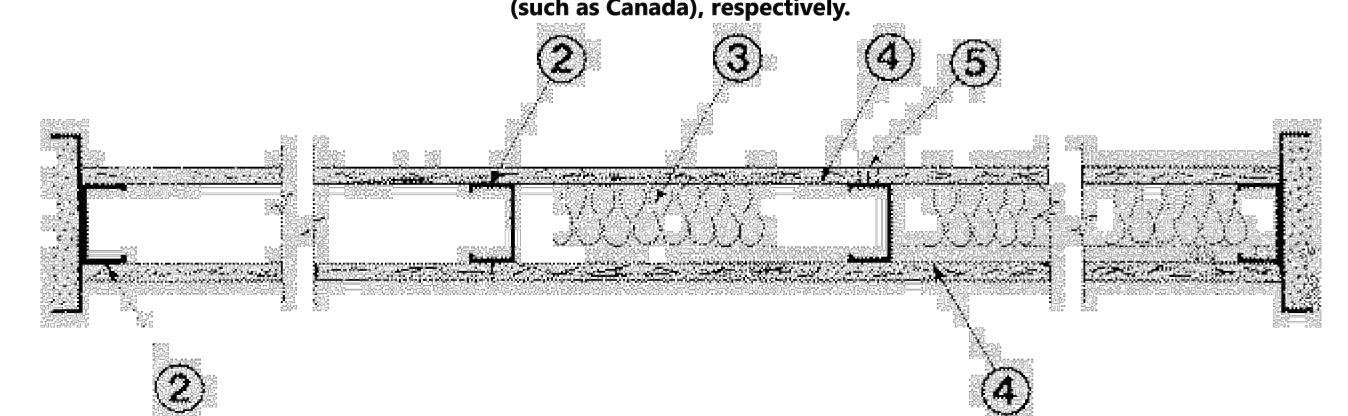
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

Design No. U465

February 16, 2024

Nonbearing Wall Rating - 1 HR.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. Floor and Ceiling Runners - (Not Shown) - Channel shaped runners, 3-5/8 in. deep (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1A. Framing Members* - Floor and Ceiling Runners - (Not Shown) - As an alternate to Item 1 - Channel shaped, min 3-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC, max.
CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV - Type SUPREME D24/30EQD and Type SUPREME D20
QUAIL RUN BUILDING MATERIALS INC - Type SUPREME D24/30EQD and Type SUPREME D20
SCAFCO STEEL STUD MANUFACTURING CO - Type SUPREME D24/30EQD and Type SUPREME D20
STEEL CONSTRUCTION SYSTEMS INC - Type SUPREME D24/30EQD and Type SUPREME D20
TELLING INDUSTRIES L L C - Type SUPREME D24/30EQD and Type SUPREME D20
UNITED METAL PRODUCTS INC - Type SUPREME D24/30EQD and Type SUPREME D20
1B. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2B, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1C. Floor and Ceiling Runners - (Not Shown) - For use with Item 2C - Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.
1D. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 through 1C - For use with Item 2D and 4G only, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
1E. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 through 1D - For use with Item 2E and 4I only, proprietary channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
1F. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 through 1E - For use with Item 2, channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 25 MSG steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1G. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 through 1F - For use with Item 2, channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide, attached to floor and ceiling with fasteners spaced 24 in. OC max.
2F. Framing Members* - Steel Studs - As an alternate to Items 2 through 2E - For use with Item 1F, channel shaped studs, min 3-5/8 in. wide fabricated from min 25 MSG steel, spaced a max of 24 in. OC.
2G. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 through 2F - For use with Item 1G, Proprietary channel shaped studs, minimum 3-5/8 in. wide. Studs to be cut 1/2 in. less than the assembly height.
2H. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1I, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.
2I. Framing Members* - Steel Studs - In lieu of Item 2 - For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 3-5/8 in. deep (min), spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.
2K. Framing Members* - Steel Studs - As an alternate to Item 2 - For use with Item 1B (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
2L. Framing Members* - Steel Studs - As an alternate to Items 2 - For use with Item 1J, channel shaped studs, min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
2M. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1K, proprietary channel shaped steel studs, min 1-1/4 in. wide by min 3-5/8 in. deep, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/4 in. less in length than assembly height.
2N. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1L, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.

1H. Floor and Ceiling Runners - (Not Shown) - Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.02 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.
1I. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2H, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
1J. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 - For use with Item 2 L, proprietary channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
1K. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2M, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep, fabricated from min 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.
1L. Framing Members* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1M. Framing Members* - Floor and Ceiling Runners - Not shown - In lieu of Items 1 through 1L - For use with Item 2O, proprietary channel shaped runners, min 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 20 MSG galv steel (0.0329 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.
1N. Framing Members* - Floor and Ceiling Runner - Not Shown - In lieu of Item 1 - For use with Item 2P, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-5/8 in. deep fabricated from min 0.019 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
1O. Framing Members* - Floor and Ceiling Runner - (Not Shown - Alternate to Item 1) - For use with Item 2Q, channel shaped runners pre-equipped with proprietary attachment clips. Min. 3-5/8 in. wide. Legs of top runners minimum 3-1/4 in. wide. Legs of bottom runners minimum 1-1/2 in. wide. Runners attached to floor and ceiling with fasteners 24 in. OC max.

1P. Framing Members* - Floor and Ceiling Runner - Not Shown - In lieu of Item 1 - For use with Item 2R, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-5/8 in. deep fabricated from min. 20 EQ/22 mils. (min. 0.0221 in. thick) galvanized steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
20. Framing Members* - Steel Studs - Not Shown - In lieu of Items 2 through 2N - For use with Item 1M, proprietary channel shaped steel studs, min 1-5/8 in. wide by min 3-5/8 in. deep fabricated from min 20 MSG galv steel (0.0329 in. min. bare metal thickness) spaced 24 in. OC max. Studs cut 3/4 in. less in length than assembly height.
2P. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1N, proprietary channel shaped steel studs, min 1-1/4 in. wide by min 3-5/8 in. deep with 1/4 in. return lips fabricated from min 0.019 in. thick galv steel spaced 24 in. OC max. Studs cut 3/4 in. less in length than assembly height.
2Q. Framing Members* - Steel Studs - (Not Shown - Alternate to Item 2, For use with Item 1O) - Channel shaped steel studs with attachment clips at top and bottom, min 3-5/8 in. depth, spaced a max of 24 in. OC. Studs clipped into floor and ceiling runners (Item 1O). Max 2-3/8 in. extension reveal from top of stud to inside of ceiling runner.
2R. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1P, proprietary channel shaped steel studs, min 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min. 20 EQ/22 mils. (min. 0.0221 in. thick) galvanized steel, spaced 24 in. OC max. Studs cut 3/4 in. less in length than assembly height.

3. Batts and Blankets* - (Optional) - Mineral wool or glass fiber batts partially or completely filling stud cavity. See Batts and Blankets (BZ1Z) category for names of Classified companies.
ROCKWOOL - Type AFB, min. density 1.69 pcf / 27.0 kg/m³
ROCKWOOL MALAYSIA SDN BHD - Type Acoustical Fire Batts

3A. Fiber, Sprayed* - As an alternate to Batts and Blankets (Item 3) - (100% Borate Formulation) - Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.
Applegate Greenfiber Acquisition LLC - Insulmax and SANCTUARY for use with wet or dry application.
3B. Fiber, Sprayed* - As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC - Cellulose insulation
3C. Fiber, Sprayed* - As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³.
INTERNATIONAL CELLULOSE CORP - Celbar-Rt.

3D. Batts and Blankets* - For use with Item 8. Nom 3 in. thick, minimum 3.4 pcf mineral wool batts, friction fit between the studs and floor and ceiling runners.

1P. Framing Members* - Floor and Ceiling Runner - Not Shown - In lieu of Item 1 - For use with Item 2R, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-5/8 in. deep fabricated from min. 20 EQ/22 mils. (min. 0.0221 in. thick) galvanized steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
JIC INTERNATIONAL DISTRIBUTORS - Non-structural Tracks 3-5/8" and 6".

2A. Framing Members* - Steel Studs - As an alternate to Item 2 - Channel shaped studs, min 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC - Type SUPREME D24/30EQD and Type SUPREME D20
CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV - Type SUPREME D24/30EQD and Type SUPREME D20
QUAIL RUN BUILDING MATERIALS INC - Type SUPREME D24/30EQD and Type SUPREME D20
SCAFCO STEEL STUD MANUFACTURING CO - Type SUPREME D24/30EQD and Type SUPREME D20
STEEL CONSTRUCTION SYSTEMS INC - Type SUPREME D24/30EQD and Type SUPREME D20
TELLING INDUSTRIES L L C - Type SUPREME D24/30EQD and Type SUPREME D20
UNITED METAL PRODUCTS INC - Type SUPREME D24/30EQD and Type SUPREME D20

2B. Framing Members* - Steel Studs - Not Shown - In lieu of Item 2 - For use with Item 1B, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.
CEMCO, LLC - Viper20™
CRACO MFG INC - SmartStud20™
MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper20™
IMPERIAL MANUFACTURING GROUP INC - Viper20™

2C. Steel Studs - (As an alternate to Item 2, For use with Item 1C) - Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height. See materials in Item(s) 4 that require Item 2C studs.
2D. Framing Members* - Steel Studs - As an alternate to Items 2 through 2C - For use with Item 1D and 4G only, channel shaped studs, min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.
CLARKDIETRICH BUILDING SYSTEMS - CD ProSTUD
DMFCWBS L L C - ProSTUD
MBA METAL FRAMING - ProSTUD
RAM SALES L L C - Ram ProSTUD
STEEL STRUCTURAL PRODUCTS L L C - Tri-S ProSTUD

2E. Framing Members* - Steel Studs - As an alternate to Items 2 through 2D - For use with Item 1E and 4I only, channel shaped studs, min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.
TELLING INDUSTRIES L L C - TRUE-STUD™

Architect: MICHAEL MOORES, RA t: (816) 516-4861
Client: Ward Development 1120 NW Eagle Ridge Blvd. Grain Valley, Missouri 64029 t: (816) 229-8115
Consultants: MEP Engineering: EBS ENGINEERED BUILDING SYSTEMS t: (913) 735-5654
Seal: ARCHITECT MICHAEL MOORES NUMBER A-2009032812 10.25.24
MICHAEL MOORES, MO Architect #2009032812
Project Number: 2410
Project Type: TENANT FINISH
Project Name and Address: 1X PLASTICS 2700 NE McBaine Drive Lee's Summit, Missouri 64064
Issue: Permit Submittal Date: 10.25.24
Sheet Title: U.L. LISTING DESIGN NO. U465 A-003

Table with columns H, G, F, E, D, C, B, A and rows 8, 7, 6, 5, 4, 3, 2, 1. Each cell contains technical specifications for various building materials and components.

Architect: MICHAEL MOORES, RA t: (816) 516-4861
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Consultants: MEP Engineering: EBS ENGINEERED BUILDING SYSTEMS t: (913) 735-5654
Seal: MICHAEL MOORES ARCHITECT ARCHITECT NUMBER A-2009032812 10.25.24
Project Number: 2410 Project Type: TENANT FINISH Project Name and Address: 2700 NE McBaine Drive Lee's Summit, Missouri 64064
Issue: Permit Submittal Date: 10.25.24
Sheet Title: U.L. LISTING - CONT'D DESIGN NO. U465 A-004

DOOR AND FRAME LEGEND

DOOR	MATERIAL	DESCRIPTION
	WD	PAINT-GRADE FLUSH / SLAB SOLID CORE WOOD DOOR.
	HM	HOLLOW METAL - 18 GAUGE COLD ROLLED STEEL / POLYSTYRENE FOAM CORE (CLASSIFICATION SD1 - LEVEL 2 - MODEL 1) 1 3/4"
	AL	ALUMINUM
	ETR	EXISTING TO REMAIN
FRAME	MATERIAL	DESCRIPTION
	WD	WOOD
	HM	HOLLOW METAL - 16 GAUGE COLD ROLLED STEEL
	AL	ALUMINUM
	ETR	EXISTING TO REMAIN

HARDWARE SETS

- ① 1-KEYED (INTERIOR AND EXTERIOR) CYLINDER LOCK WITH LOCKED INDICATOR
ALL ELSE IS EXISTING TO REMAIN
- ② 3-HINGES
1-LEVER-HANDLE OFFICE FUNCTION LOCKSET
1-WALL STOP
- ③ 3-HINGES
1-LEVER-HANDLE CLASSROOM FUNCTION LOCKSET
1-CLOSER
1-WALL STOP
- ④ 3-HINGES
1-LEVER-HANDLE PRIVACY FUNCTION LOCKSET
1-WALL STOP
- ⑤ EXISTING TO REMAIN

DOOR SCHEDULE

DOOR			FRAME			DETAILS - (SEE SHEET A-003)			HARDWARE	KEY NOTES / COMMENTS			
NO.	TYPE	SIZE	MATERIAL	PUSH FINISH	PULL FINISH	MATERIAL	PUSH FINISH	PULL FINISH			HEAD	JAMB	THRESHOLD
101A	B	1 3/4" X 3'-0" X 7'-0" (ETR)	AL	ANOD	ANOD	AL	ANOD	ANOD	-	-	-	①	A, B.
101B	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	②	
102	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	②	
103	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	②	
104	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	②	
106	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	③	
107	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	③	
108	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	④	
109	A	1 3/4" X 3'-0" X 7'-0"	WD	PNT	PNT	HM	PNT	PNT	-	H2/A-005	-	④	
110A	A	1 3/4" X 3'-0" X 7'-0" (ETR)	HM	-	-	HM	-	-	-	-	-	⑤	A.
110B	A	1 3/4" X 3'-0" X 7'-0" (ETR)	HM	-	-	HM	-	-	-	-	-	⑤	A.

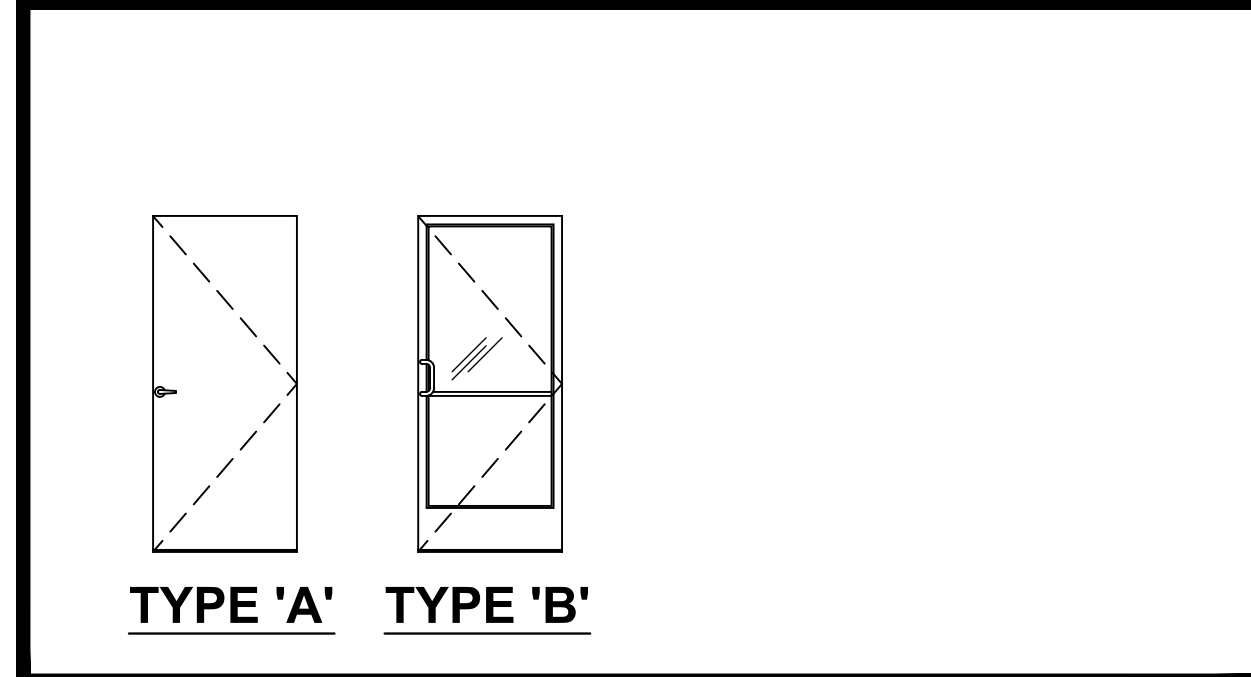
KEY NOTES:
A. EXISTING FRAME AND DOOR TO REMAIN
B. INSTALL A SIGN ABOVE THIS DOOR THAT READS, "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED"

DOOR NOTES

DOORS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. ALL DOOR HANDLES TO BE LEVER TYPE.
2. EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
3. PROVIDE DOOR STOPS OF APPROPRIATE TYPE FOR ALL INTERIOR DOORS, MATCH ADJACENT HARDWARE FINISH.
4. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES WILL BE 5 SECONDS MINIMUM.
5. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 1/2 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS.
6. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC DOORS, POWER ASSISTED DOORS, AND SLIDING DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
7. EXIT DOORS IN ASSEMBLY AND EDUCATION OCCUPANCIES SERVING AN OCCUPANT LOAD OF 50 OR MORE SHALL BE EQUIPPED WITH PANIC HARDWARE, WITH THE EXCEPTION BELOW (NOTE 8).
8. MAIN EXIT DOORS HAVING KEY-OPERATED LOCKING DEVICES ON THE EGRESS SIDE IN GROUP A OCCUPANCIES (SERVING 300 OCCUPANTS OR LESS), GROUPS B, F, M, S, AND PLACES OF RELIGIOUS WORSHIP SHALL HAVE DURABLE SIGNAGE ABOVE THE DOOR IN 1" HIGH LETTERS ON CONTRASTING BACKGROUND STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED". LOCKING DEVICES SHALL BE READILY DISTINGUISHABLE AS LOCKED.
9. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN THE PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. LOCKABLE EXIT DOORS SHALL OPERATE AS ABOVE IN EGRESS DIRECTION.
10. HAND-ACTIVATED DOOR OPENING HARDWARE TO BE CENTERED BETWEEN 34" AND 44" ABOVE THE FLOOR.
11. EVERY DOORWAY WHICH IS LOCATED WITHIN AN ACCESSIBLE PATH OF TRAVEL SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3'-0" IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. WHEN INSTALLED, EXIT DOORS SHALL BE CAPABLE OF OPENING SO THAT THE CLEAR WIDTH OF THE EXIT IS NOT LESS THAN 32", MEASURED BETWEEN THE FACE OF THE OPENED DOOR AND THE OPPOSITE STOP.
12. MINIMUM MANEUVERING CLEARANCES AT DOORS SHALL BE AS REQUIRED BY THE ICC/ANSI A117.1 ACCESSIBILITY CODE. THE FLOOR OR GROUND AREA WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND CLEAR. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY.
13. DOORS SHALL NOT PROJECT MORE THAN 7" INTO THE REQUIRED CORRIDOR WIDTH WHEN FULLY OPENED OR MORE THAN ONE HALF" INTO THE REQUIRED WIDTH WHEN IN ANY POSITION.
14. WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32" WITH THE LEAF POSITIONED AT AN ANGLE OF 90° FROM ITS CLOSED POSITION.
15. EXIT DOORS SHALL SWING IN THE DIRECTION OF EXIT TRAVEL WHEN SERVING 50 OR MORE OCCUPANTS.
16. COORDINATE ALL DOOR HARDWARE WITH THE OWNER TO ENSURE THE MANUFACTURER, FUNCTIONS, MODELS, AND KEYING SYSTEMS MEET THE OWNER'S STANDARD REQUIREMENTS.

DOOR TYPES



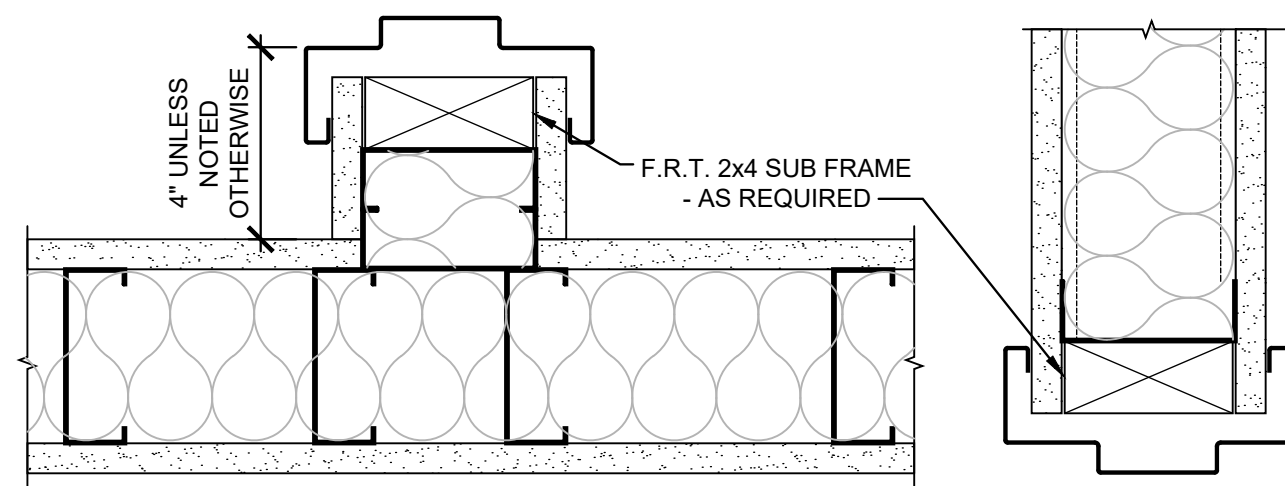
MATERIAL LEGEND

ITEM	DESCRIPTION
HM	HOLLOW METAL
WD	WOOD (PAINT GRADE, SOLID CORE SLAB DOOR)
STL	STEEL
RCB	4" RUBBER COVE BASE
PNT	PAINT
EXP	EXPOSED TO STRUCTURE
AL	ALUMINUM
ANOD	ANODIZED - MATCH EXISTING
SC	SEALED CONCRETE
GYP	GYPSUM BOARD
ACT	ACOUSTIC CEILING TILE
LVT	LUXURY VINYL TILE
CONC	CONCRETE

INTERIOR FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	BASE MATERIAL	WALL FINISH (NORTH)	WALL FINISH (EAST)	WALL FINISH (SOUTH)	WALL FINISH (WEST)	CEILING		COMMENT KEY NOTES
								MATERIAL	FINISH	
101	RECEPTION	CPT	RCB	PNT	PNT	PNT	PNT	ACT	-	
102	OFFICE	CPT	RCB	PNT	PNT	PNT	PNT	ACT	-	
103	OFFICE	CPT	RCB	PNT	PNT	PNT	PNT	ACT	-	
104	OFFICE	CPT	RCB	PNT	PNT	PNT	PNT	ACT	-	
105	BREAK ROOM	LVT	RCB	PNT	PNT	PNT	PNT	ACT	-	
106	HALL	CPT	RCB	PNT	PNT	PNT	PNT	ACT	-	
107	HALL	CPT	RCB	PNT	PNT	PNT	PNT	ACT	-	
108	MEN	LVT	RCB	PNT	PNT	PNT	PNT	ACT	-	1.
109	WOMEN	LVT	RCB	PNT	PNT	PNT	PNT	ACT	-	1.
110	PRODUCTION AREA	-	RCB	PNT	PNT	PNT	-	EXP	-	1, 2.

COMMENTS:
1. WALLS WITHIN 2' OF SERVICE SINKS, URINALS, AND WATER CLOSETS MUST BE PAINTED WITH EPOXY-BASED PAINT UP TO A MINIMUM OF 4" A.F.F.
2. PAINT AND INSTALL RCB AT THE OUTSIDE WALLS OF THE OFFICE. PAINT THE NEW DEMISING WALL.



H2 HOLLOW METAL JAMB DETAILS
SCALE: 3" = 1'-0"

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Seal:



10.25.24
MICHAEL MOORES, MO Architect #2009032812

Project Number: 2410

Project Type: TENANT FINISH

Project Name and Address:

1X PLASTICS
2700 NE McBaine Drive
Lee's Summit, Missouri 64064

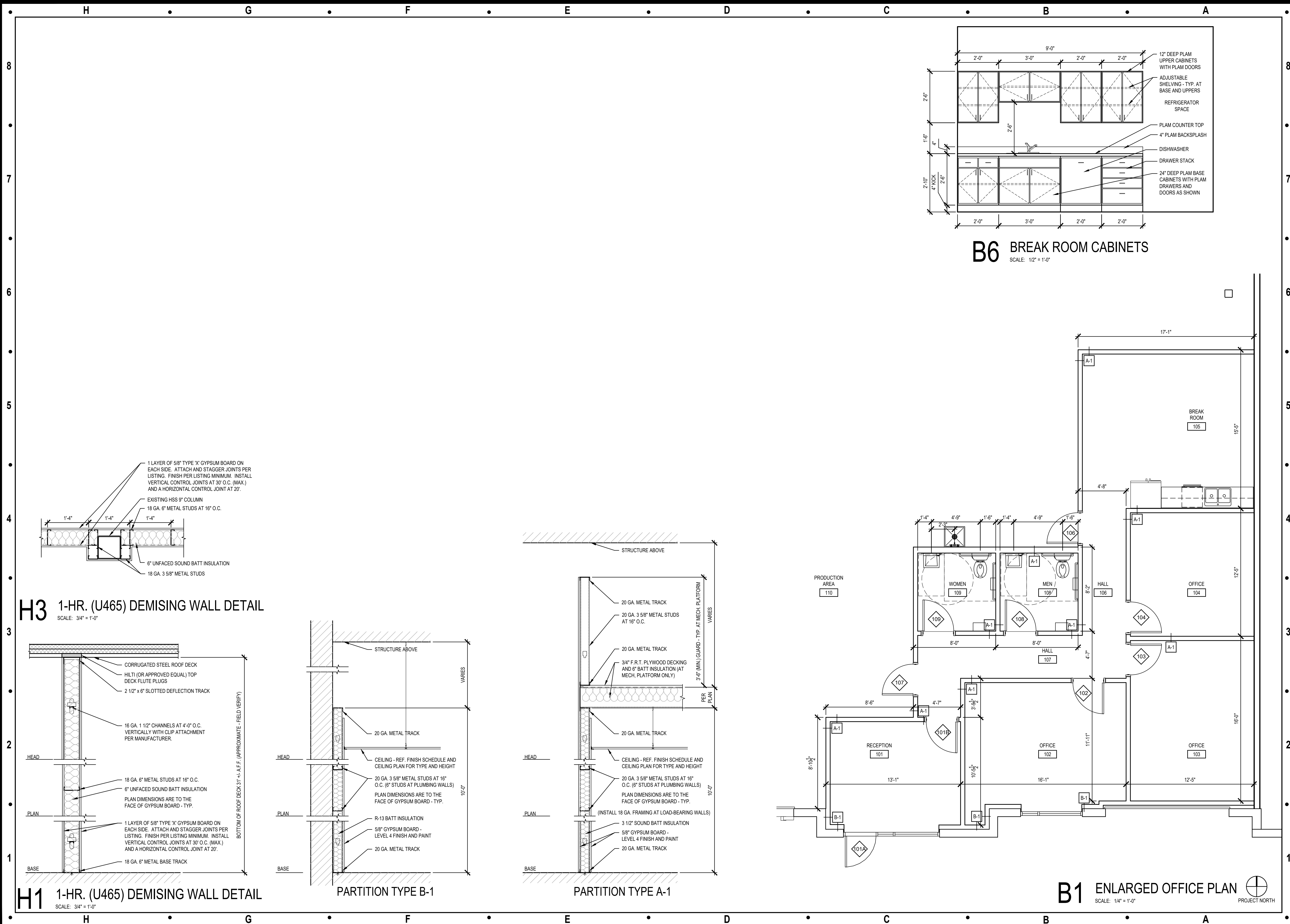
Issue: Date:

Permit Submittal 10.25.24

Sheet Title:

DOOR / WINDOW /
FINISH SCHEDULES
AND NOTES

A-005



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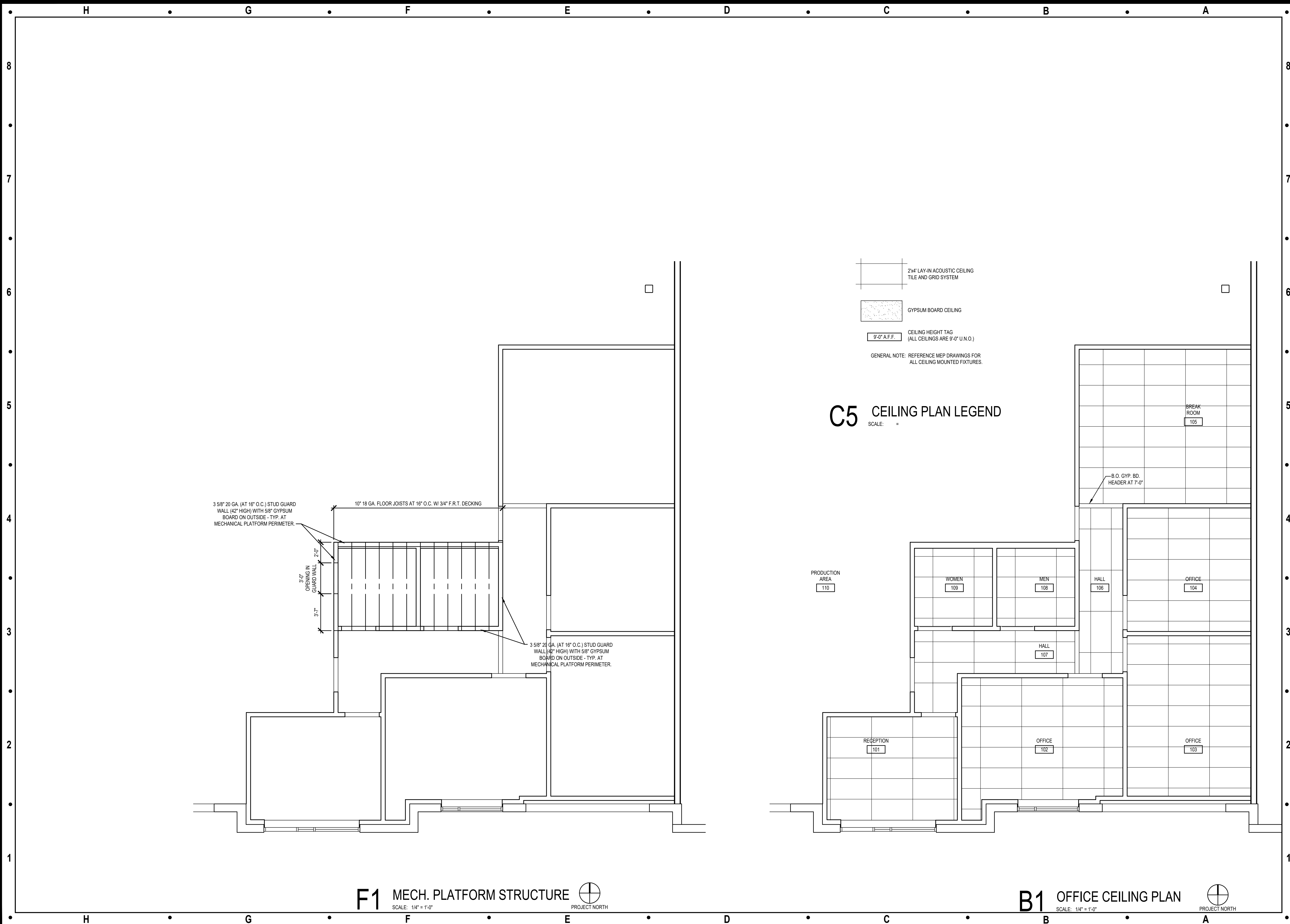


Project Number: 2410
Project Type: TENANT FINISH
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Issue: Permit Submittal
Date: 10.25.24

Sheet Title:
ENLARGED PLAN PARTITION TYPES CASEWORK
A-110



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Seal:

10.25.24
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Issue: Permit Submittal
Date: 10.25.24

Sheet Title:
**CEILING PLAN
MECH PLATFORM**
A-410

MECHANICAL ABBREVIATIONS

(ALPHABETICAL BY ABBREVIATION)

ABBREVIATION	LONG FORM
ABV	ABOVE
AC OR ACU	AIR-CONDITIONING UNIT
AHAP	AS HIGH AS POSSIBLE
AHU	AIR-HANDLING UNIT
AUTO	AUTOMATIC
BLW	BELOW
C	CHILLER
CD	CONDENSATE
CF	CABINET FAN
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CHP	CHILLED WATER PUMP
CLNG OR CLG	CEILING
CONC	CONCRETE
CP OR CWP	CONDENSER WATER PUMP
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
CRAC OR CACU	COMPUTER ROOM AIR-CONDITIONING UNIT
CREP	CHILLER ROOM EXHAUST FAN
CRU	CONDENSATE (STEAM) RETURN UNIT
CT	COOLING TOWER CELL
CTU	CONDENSATE (STEAM) TRANSFER UNIT
CU	CONDENSING UNIT
DV	CONSTANT VOLUME TERMINAL BOX
	DEPTH
DEF	DISHWASER EXHAUST FAN
DMPR	DAMPER
DN	DOWN
EA	EACH
EBH	ELECTRIC BASEBOARD HEATER
EDH	ELECTRIC DUCT-MOUNTED HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
	FILTER
FD	FIRE DAMPER
FCU	FAN-COIL UNIT
FF	FINAL FILTER
FFCH	FORCED-FLOW CABINET HEATER
FFU	FAN FILTER UNIT
FP	FAN POWERED TERMINAL BOX
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HUM	HUMIDIFIER
HWP OR HP	HEATING WATER PUMP
HX	HEAT EXCHANGER
KEF	KITCHEN (GREASE HOOD) EXHAUST FAN
KW	KILOWATTS
LD	LINEAR SUPPLY DIFFUSER
MOT	MOTORIZED
MTD	MOUNTED
MUAF	MAKE-UP AIR FAN
MUAHU	MAKE-UP AIR-HANDLING UNIT
OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OPG OR OPNG	OPENING
PF	PRE-FILTER
PLNM	PLENUM
RA	RETURN AIR
RAF	RETURN AIR FAN
RAG OR RG	RETURN AIR GRILLE
RAR OR RR	RETURN AIR REGISTER
RAS	RETURN AIR SILENCER
RE	IN REFERENCE TO
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SAF OR SF	SUPPLY AIR FAN
SAG OR SG	SUPPLY AIR GRILLE
SAR OR SR	SUPPLY AIR REGISTER
SAS	SUPPLY AIR SILENCER
SD	SMOKE DAMPER OR DETECTOR
TA	THROW AWAY (FILTER TYPE)
TEF	TOILET EXHAUST FAN
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VF	VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE

NOT ALL ABBREVIATIONS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

DUCTWORK LEGEND

(REFER TO SPECIFICATIONS SECTIONS 15815 AND 15820 FOR ADDITIONAL INFORMATION)

SINGLE LINE	DESCRIPTION	DOUBLE LINE
	ROUND ELBOW DOWN	
	ROUND ELBOW UP	
	OFFSET TO CHANGE ELEVATION (AT 30° WHEN POSSIBLE, ARROW SLOPES DN, U.N.O.)	
	ROUND RADIUS ELBOW	
	90° STRAIGHT TEE	
	90° CONICAL TEE	
	45° LATERAL TAP	
	45° LATERAL CONICAL TEE	
	SIZE OR SHAPE TRANSITION	
	ROUND FLEXIBLE DUCT	
	RECTANGULAR ELBOW DOWN	
	RECTANGULAR ELBOW UP	
	OFFSET TO CHANGE ELEVATION (AT 30° WHERE POSSIBLE, ARROW SLOPES DN, U.N.O.)	
	RECTANGULAR RADIUS ELBOW	
	RECTANGULAR ELBOW WITH TURNING VANES	
	SPLIT BRANCH TAKE-OFF WITH SQUARE ELBOW & SPLITTER DAMPER	
	SPLIT BRANCH TAKE-OFF WITH RADIUS ELBOW & SPLITTER DAMPER	
	SPLIT BRANCH TAKE-OFF TEE WITH STATIONARY SPLITTER DAMPER	
	BRANCH TAKE-OFF WITH 45° LEAD IN TAP	
	INSULATED LINED DUCTWORK (U.N.O.)	
	SQUARE FACED CEILING DIFFUSER 4-WAY DIRECTIONAL THROW (U.N.O.)	
	ROUND FACED CEILING DIFFUSER	
	CEILING RETURN OR EXHAUST AIR GRILLE OR REGISTER	
	SIDEALL SUPPLY GRILLE OR REGISTER	
	SUPPLY DUCT RISER	
	RETURN, EXHAUST OR OUTSIDE AIR DUCT RISER	
	MANUAL BALANCING DAMPER	
	AUTOMATIC (MOTOR-OPERATED) DAMPER	
	FIRE DAMPER	
	GRAVITY BACKDRAFT DAMPER	
	COMBINATION FIRE AND SMOKE DAMPER WITH SMOKE DETECTOR	
	SMOKE DAMPER (AUTOMATIC) WITH SMOKE DETECTOR	
	DUCT MOUNTED SMOKE DETECTOR	

NOT ALL SYMBOLS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

STANDARD MECHANICAL SYMBOLS

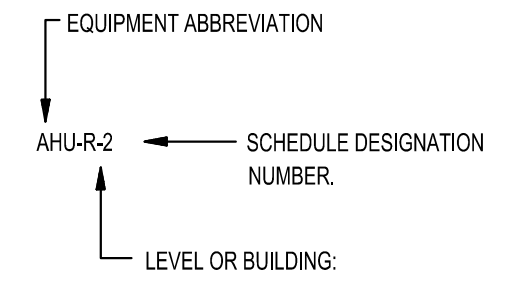
SYMBOL	DESCRIPTION
	GATE VALVE
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	ANGLE VALVE
	CHECK VALVE
	AUTOMATIC CONTROL VALVE (STRAIGHT THROUGH)
	AUTOMATIC CONTROL VALVE (3-WAY)
	AUTOMATIC CONTROL VALVE (ANGLE)
	AUTOMATIC CONTROL VALVE (STRAIGHT THROUGH)
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	THERMOMETER WELL
	TEST PLUG
	FLOW METER
	TEMPERATURE SENSOR
	PRESSURE SENSOR
	DIFFERENTIAL PRESSURE SWITCH
	IMMERSION THERMOSTAT
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	FLOW SWITCH
	ORIFICE
	PIPE SLEEVE THRU WALL OR FLOOR
	EXPANSION JOINT
	FLEXIBLE PIPE JOINT
	PIPE GUIDE
	ANCHOR
	STRAINER (Y-TYPE)
	STRAINER (BASKET TYPE)
	UNION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	DIRECTION OF FLOW
	DIRECTION OF SLOPE
	THERMOSTAT
	HUMIDISTAT
	FAN SPEED CONTROLLER
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	CONDENSATE DRAIN

NOT ALL SYMBOLS ON THIS LIST ARE NECESSARILY USED ON THIS PROJECT

OTHER SYMBOLS

SYMBOL	DESCRIPTION
	INDICATES CONNECTION TO EXISTING DUCT OR PIPE

GENERAL EQUIPMENT DESIGNATION KEY:



GENERAL MECHANICAL NOTES:

- REFER TO ARCHITECTURAL PLANS FOR RATED WALLS AND PARTITIONS. VERIFY FIRE AND/OR SMOKE DAMPER LOCATIONS AT DUCTS OR OPENINGS PENETRATING THESE WALLS.
- REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- VERIFY LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- VERIFY LOCATIONS OF EXPOSED DUCTS WITH ARCHITECT PRIOR TO INSTALLATION.
- DUCT DIMENSIONS INDICATED ON PLANS ARE FREE AREA DIMENSIONS.
- SUPPLY AND RETURN AIR DUCT SHALL BE INTERNALLY LINED WHERE SPECIFIED.
- ALL COVER SIZES ON MECHANICAL PLANS ARE GIVEN IN FREE AREA REQUIRED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS AND LOCATIONS.
- COORDINATE TERMINAL BOX AND BALANCING DAMPER LOCATIONS CAREFULLY TO ENSURE PROPER AND ADEQUATE ACCESS TO FILTERS, MOTORS, CONTROL VALVES, CONTROL PANELS, ETC. PROVIDE ACCESS PANELS AS SPECIFIED WHERE REQUIRED TO ASSURE THIS ACCESS.
- CEILING PLENUM SPACE IS VERY TIGHT. WHERE REQUIRED, DUCTS OR PIPES SHALL BE ROUTED BETWEEN LIGHT FIXTURES AND UP AND OVER OTHER DUCTS OR PIPES USING THE SPACES BETWEEN STRUCTURAL JOISTS OR BEAMS WHERE APPLICABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFULLY COORDINATING ALL TRADES. EXISTING UNKNOWN CONDITIONS MAY AFFECT EXACT DUCT OR PIPE ROUTING, OR EXISTING CONDITIONS MAY NEED TO BE MODIFIED TO ACCOMMODATE DUCTS AND PIPES.
- ALL BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS, AND GRILLES SHALL HAVE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT.
- BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
- RIGID DUCTWORK INSULATION: PROVIDE R-6 MINIMUM INSULATION WRAP ON ALL CONCEALED DUCTWORK. PROVIDE R-8 MINIMUM INTERNAL DUCT LINER ON ALL EXPOSED DUCTWORK. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE DIMENSIONS. SHEET METAL SIZES SHALL INCREASE ACCORDINGLY. PROVIDE R-12 MINIMUM INSULATION ON ALL DUCTWORK INSTALLED IN UNCONDITIONED SPACES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- FLEXIBLE DUCT WORK SHALL BE THERMAFLEX TYPE MKE, FLEXMASTER TYPE SM, OR APPROVED EQUAL. SHALL BE LISTED UNDER 181 AS CLASS 1 AIR DUCT AND SHALL BE PROVIDED WITH INTEGRAL R-8 MINIMUM FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORT TO AVOID SHARP BENDS AND SAGGING.
- WALL MOUNTED DIFFUSERS AND GRILLES SHALL BE PROVIDED WITH SUITABLE MOUNTING FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.

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MO Contractors #44349893 PE 2021102022

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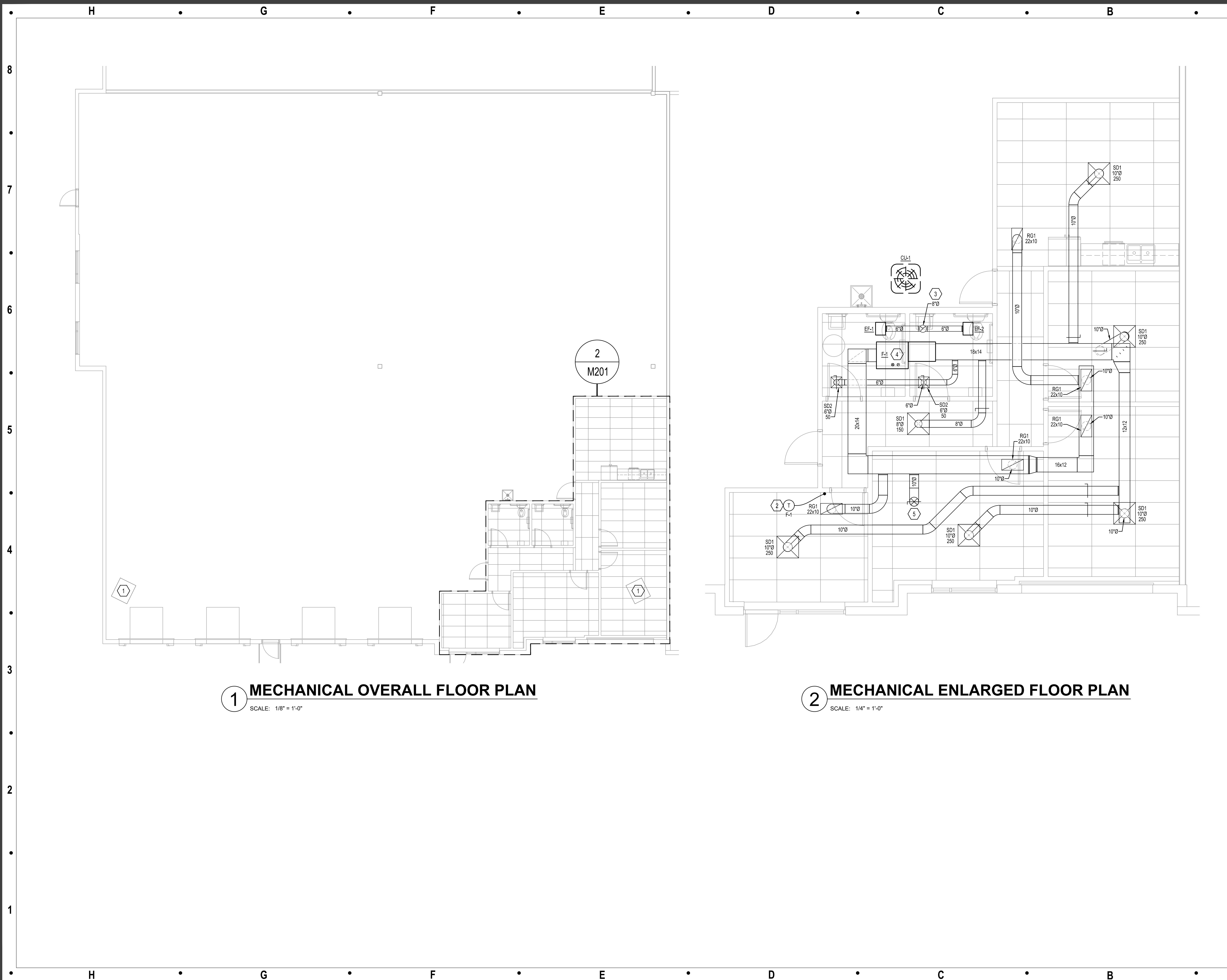
MICHAEL MOORES, MO Architect #2009032812

Project Number: 2410
Project Type: TENANT FINISH
Project Name and Address:

1X PLASTICS
2700 NE McBaine Drive
Lee's Summit, Missouri 64064

Issue: _____ Date: _____
Permit Submittal 10.25.24

Sheet Title:
MECHANICAL NOTES, SYMBOLS & ABBREVIATIONS
M101



1 MECHANICAL OVERALL FLOOR PLAN
SCALE: 1/8" = 1'-0"

2 MECHANICAL ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET M101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. PROVIDE ALL AIR DEVICES WITH ACCESSIBLE VOLUME DAMPERS FOR MEANS OF AIR BALANCING.

KEYED NOTES:

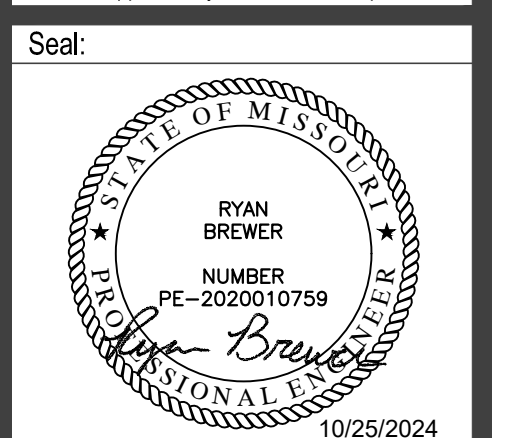
1. EXISTING GAS-FIRED UNIT HEATER SERVING WAREHOUSE AREA TO REMAIN. RELOCATE EXISTING CONTROLS AS REQUIRED TO ACCOMMODATE NEW OFFICE SPACE.
2. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTO-CHANGEOVER BETWEEN HEATING AND COOLING. MOUNT TOP OF THERMOSTAT AT MAXIMUM 48" PER ADA REQUIREMENTS.
3. ROUTE 8" EXHAUST DUCT UP THROUGH ROOF AND TERMINATE WITH ROOF CAP. MAINTAIN MINIMUM 10'-0" CLEARANCE FROM ALL MECHANICAL AIR INTAKES.
4. ROUTE COMBUSTION AIR INTAKE AND VENT FROM GAS-FIRED FURNACE UP THROUGH ROOF AND TERMINATE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SIZE INTAKE AND VENT PER MANUFACTURER RECOMMENDATIONS.
5. ROUTE 10" FRESH AIR INTAKE DUCT UP THROUGH ROOF AND TERMINATE WITH ROOF HOOD. MAINTAIN MINIMUM 10'-0" CLEARANCE FROM ALL EXHAUST OUTLETS.

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Date: 10.25.24

Sheet Title:
MECHANICAL FLOOR PLAN

M201

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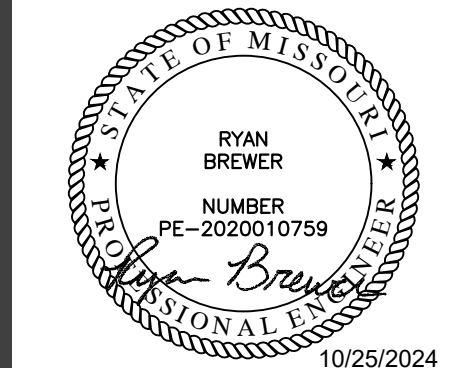
Consultants:

MEP Engineering:



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MICHAEL MOORES, MO Architect #2009032812

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Project Type: TENANT FINISH

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Lee's Summit, Missouri 64064

Issue: Date:

Permit Submittal 10.25.24

Sheet Title:

MECHANICAL DETAILS AND SCHEDULES

M301

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	MODEL	FACE TYPE	MOUNTING LOCATION	FACE SIZE (IN)	NOTES
SD1	PRICE	SPD	PLAQUE	CEILING	24"x24"	1,2,3,4,5,6
SD2	PRICE	SPD	PLAQUE	CEILING	12"x12"	1,2,3,4,5,6
RG1	PRICE	50	EGGCRATE	CEILING	24"x12"	1,2,3,5,6

- NOTES:
 1 NECK SIZE SHOWN ON DRAWINGS.
 2 BAKED ENAMEL FINISH TO MATCH CEILING COLOR, COORDINATE WITH ARCHITECTURAL PLANS.
 3 PROVIDE NECK FOR DUCT CONNECTION.
 4 BRANCH DUCT SIZE SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
 5 FRAME TYPE TO MATCH CONSTRUCTION OF MOUNTING LOCATION, COORDINATE WITH ARCHITECTURAL PLANS.
 6 PROVIDE VOLUME DAMPER ACCESSIBLE FROM FACE OF DIFFUSER/GRILLE WHEN LOCATED IN HARD CEILING.

FURNACE SCHEDULE

MARK	MANUFACTURER	MODEL	FLOW DIRECTION	NOMINAL TONNAGE	SUPPLY FAN			COOLING COIL			HEATING		MIN O/A CFM	ELECTRICAL				NOTE
					CFM	ESP (IN)	MIN HP	TH (MBH)	SH (MBH)	EAT (DB/WB)	INPUT MBH	OUTPUT MBH		FAN FLA	MCA	MOCOP	V/PH/Hz	
F-1	CARRIER	59MC6B080	HORIZONTAL	4	1500	0.50	1	44.3	31.7	80/67	80.0	78.0	300	11.5	13.1	15.0	120/1/60	1,2,3,4

- NOTES:
 1 PROVIDE WITH TWO SETS OF 2" THICK THROW-AWAY FILTERS.
 2 PROVIDE UNIT WITH FACTORY MOUNTED DISCONNECT.
 3 PROVIDE SECONDARY DRAIN PAN WITH FLOAT SWITCH, UNIT SHALL SHUT DOWN UPON ALARM FROM FLOAT SWITCH.
 4 UNIT SHALL BE MOUNTED HORIZONTALLY ON PLATFORM ABOVE RESTROOMS.
- VERIFY ALL ELECTRICAL ROUGH-IN REQUIREMENTS WITH OTHER TRADES PRIOR TO ORDERING AND INSTALLING MECHANICAL EQUIPMENT**

CONDENSING UNIT SCHEDULE

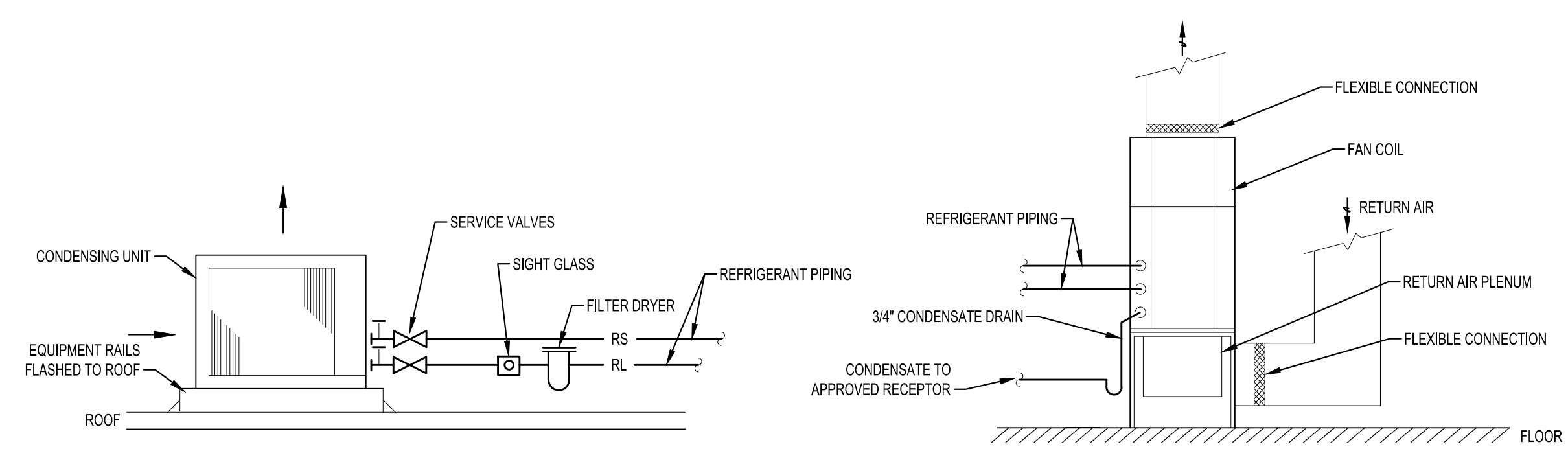
MARK	SERVICE	MANUFACTURER	MODEL	NOMINAL TONNAGE	MOTOR			COOLING			ELECTRICAL				NOTES
					HP	FLA	COMP RLA	TOTAL (MBH)	SENSIBLE (MBH)	SEER	MCA	MOCOP	V/PH/Hz		
CU-1	F-1	LENNOX	EL16XC1-036	3	1/6	1.0	13.6	32.2	22.8	16.0	18	30	208/1/60	1,2,3,4,5	

- NOTES:
 1 EQUIPMENT SIZED FOR AMBIENT TEMPERATURE OF 105°F, SUMMER DB = 97.2°F, WB = 76.4°F, WINTER DB = 5.8°F.
 2 PROVIDE WITH LOW AMBIENT CONTROLS, FACTORY MOUNTED DISCONNECT, AND STARTERS FOR ALL MOTORS.
 3 MOUNT UNIT ON EQUIPMENT RAILS FLASHED TO ROOF.
 4 SIZE AND INSTALL REFRIGERANT LINES PER THE MANUFACTURERS RECOMMENDATIONS, VERIFY WITH EQUIPMENT SUPPLIER REFRIGERATION LINE LENGTH AND SIZE.
 5 PROVIDE LIQUID LINE FILTER DRYER AND SIGHT GLASS.
- VERIFY ALL ELECTRICAL ROUGH-IN REQUIREMENTS WITH OTHER TRADES PRIOR TO ORDERING AND INSTALLING MECHANICAL EQUIPMENT**

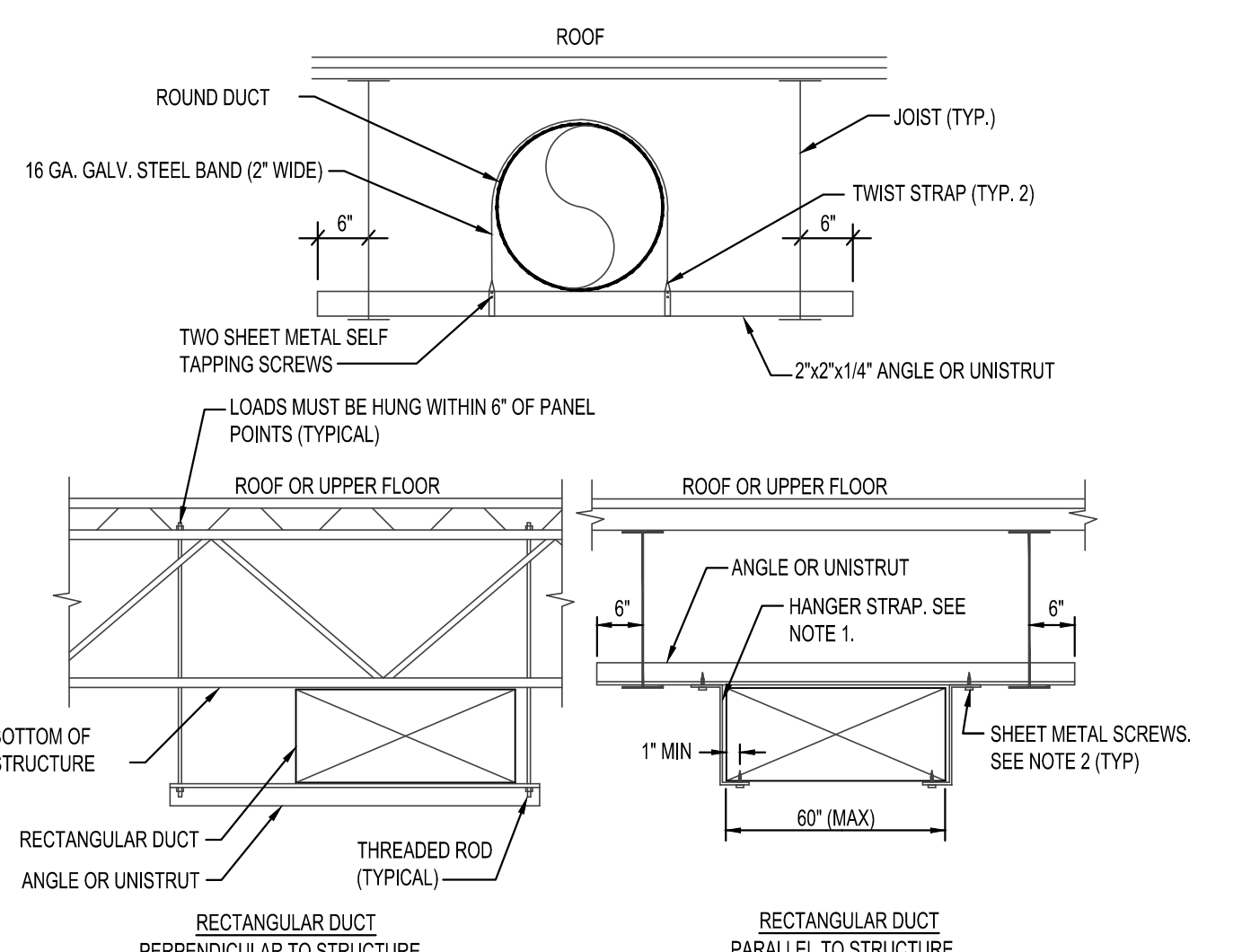
FAN SCHEDULE

MARK	MANUFACTURER	MODEL	MOUNTING	AREA SERVED	CFM	MOTOR WATTS	ESP (IN)	WEIGHT (LBS)	ELECTRICAL V / PH	NOTES
EF-1,2	GREENHECK	SP-B110	CEILING	RESTROOMS	70	80	0.250	20	120/1	1,2

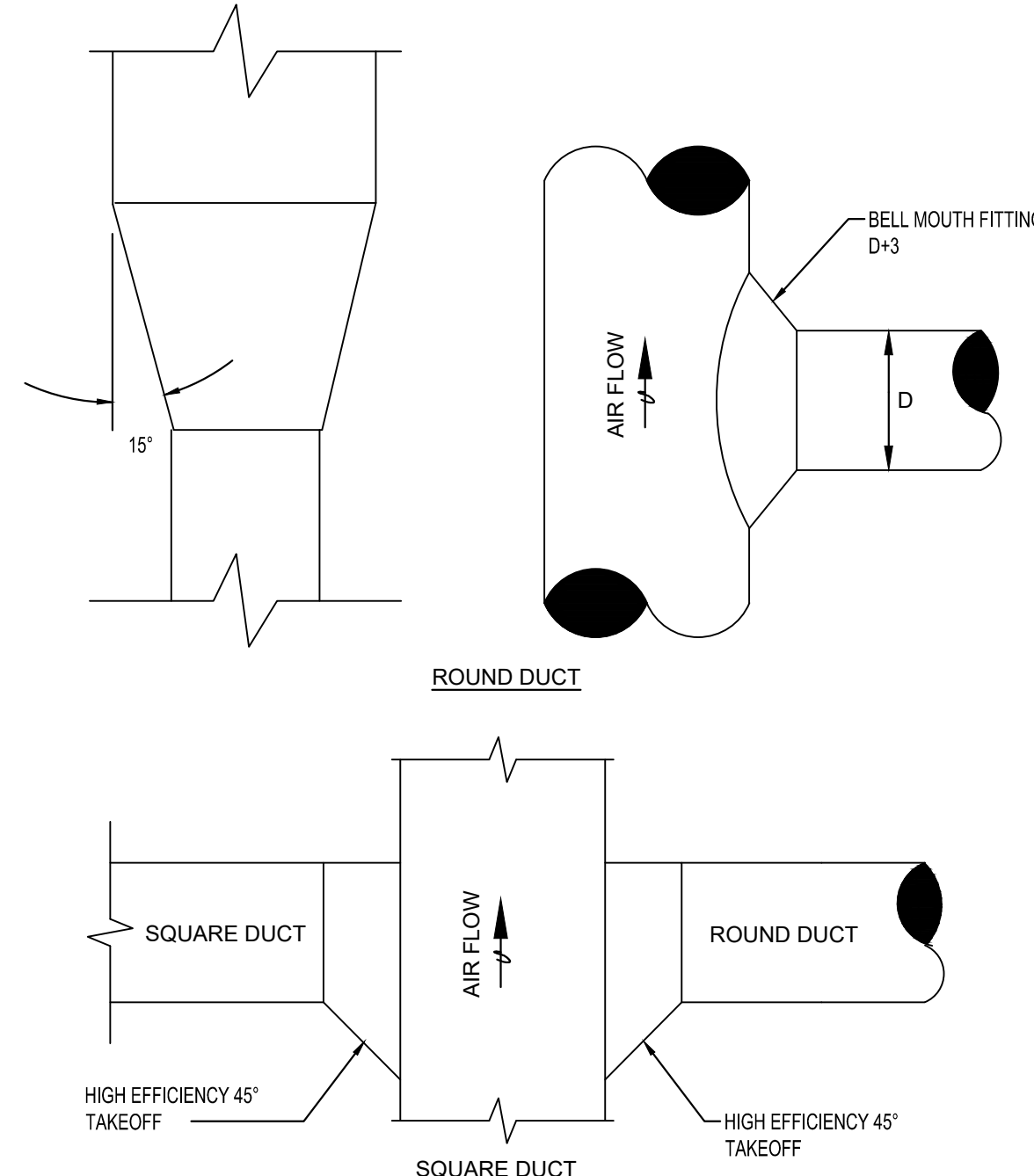
- NOTES:
 1 PROVIDE WITH SPEED CONTROLLER, BACKDRAFT DAMPER, AND DISCONNECT SWITCH.
 2 FAN SHALL BE INTERLOCKED WITH RESTROOM LIGHTS.
- VERIFY ALL ELECTRICAL ROUGH-IN REQUIREMENTS WITH OTHER TRADES PRIOR TO ORDERING AND INSTALLING MECHANICAL EQUIPMENT**



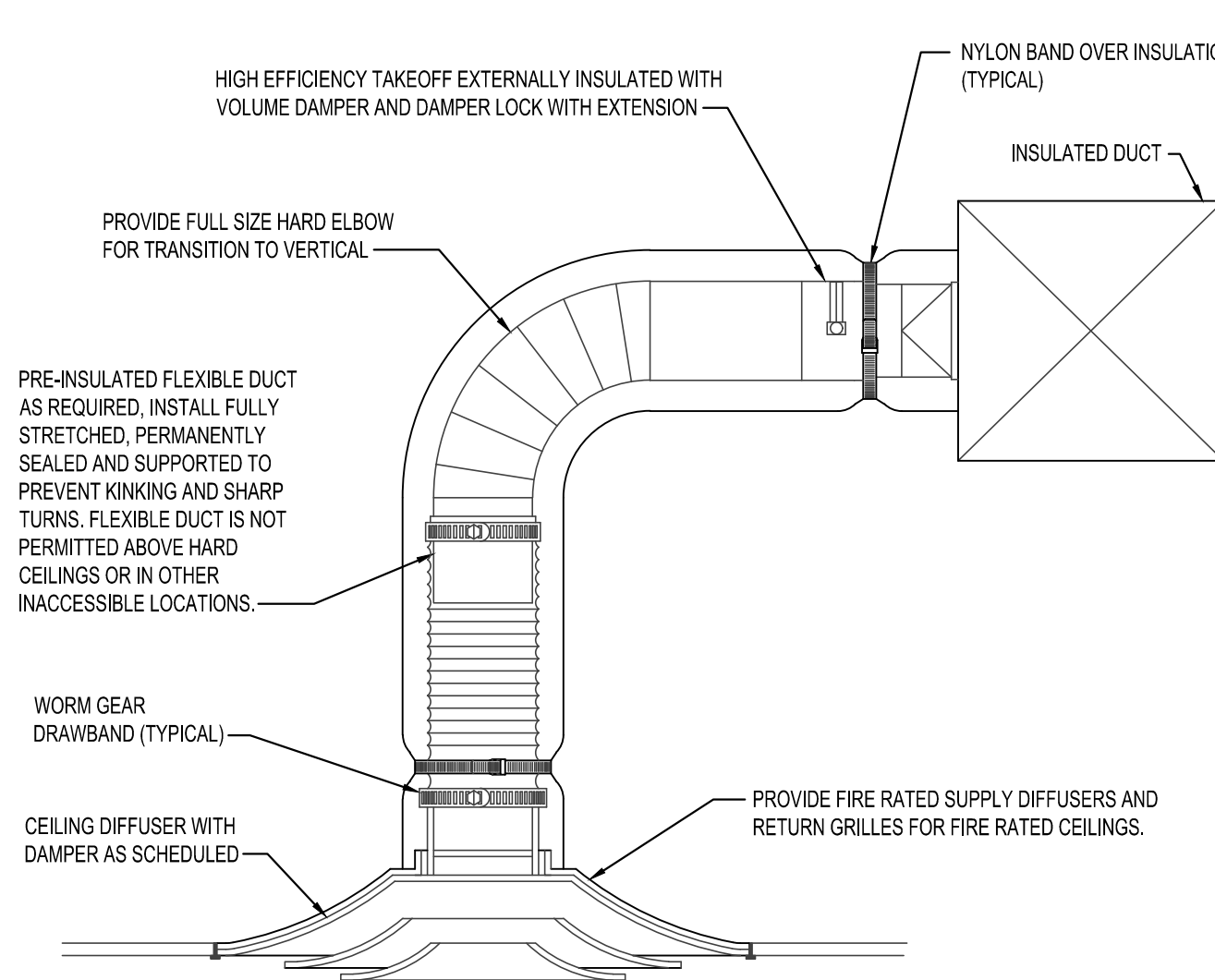
5 SPLIT SYSTEM DETAIL
NOT TO SCALE



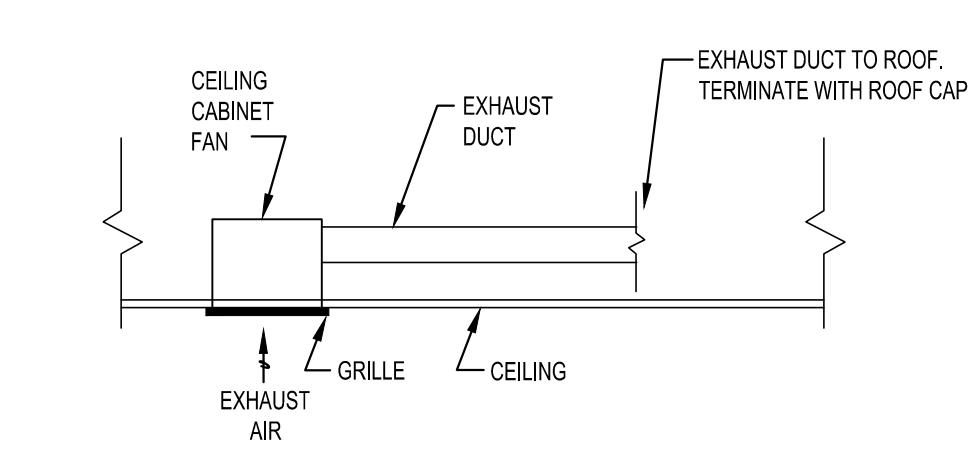
4 DUCT HANGERS AND SUPPORTS
NOT TO SCALE



3 DUCT TAKEOFFS AND FITTINGS
NOT TO SCALE



2 CEILING DIFFUSER
NOT TO SCALE



1 CEILING EXHAUST FAN DETAIL
NOT TO SCALE

Table with columns H, G, F, E, D, C, B, A and rows 8, 7, 6, 5, 4, 3, 2, 1. Contains mechanical specifications for various systems including HVAC, ductwork, and electrical components.

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Client: Ward Development 1120 NW Eagle Ridge Blvd. Grain Valley, Missouri 64029 t: (816) 229-8115

Consultants: MEP Engineering: EBS ENGINEERED BUILDING SOLUTIONS, LLC

DESCRIPTION: REPAIR ALL DUCTWORK FOUND TO VIBRATE, CHATTER OR PULSATE AND REPLACE WITH NEW DUCTWORK.

REVISIONS TO TECHNICAL SUBMISSIONS WHICH ARE NOT MADE OR APPROVED BY THE LICENSEE ARE PROHIBITED.

SEAL: RYAN BREWER PE-2020010759 MISSOURI PROFESSIONAL ENGINEER

Project Number: 2410 Project Type: TENANT FINISH Project Name and Address: 2700 NE McBaine Drive Lee's Summit, Missouri 64064

Issue: Permit Submittal Date: 10.25.24

1X PLASTICS 2700 NE McBaine Drive Lee's Summit, Missouri 64064 MECHANICAL SPECIFICATIONS

M401

H G F E D C B A

8
7
6
5
4
3
2
1

GENERAL PLUMBING NOTES

- ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
- PROVIDE TO OWNER A COPY OF ALL REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS AND ALL PLUMBING SYSTEMS EQUIPMENT MANUALS INCLUDING WARRANTIES.
- COORDINATE THE COMPLETE INSTALLATION OF SYSTEMS TO AVOID CONFLICT WITH OTHER TRADES.
- COORDINATE ALL ABOVE SLAB AND UNDER SLAB SANITARY, AND WATER PIPING SYSTEMS TO AVOID CONFLICT WITH ALL OTHER TRADES SYSTEMS, AND COLUMN FOOTINGS. ALL SOIL AND WASTE PIPING SHALL BE GRADED TO A UNIFORM SLOPE OF NOT LESS THAN 1/8" PER FOOT FOR PIPING 4" OR LARGER, AND NOT LESS THAN 1/4" PER FOOT FOR PIPING 3" OR SMALLER. ALL GREASE WASTE PIPING SHALL BE ROUTED AT 1/4" PER FOOT SLOPE.
- COORDINATE ALL FLOOR DRAINS, CLEANOUTS, AND FLOOR MOUNTED FIXTURES WITH FINISHED FLOOR SLAB ELEVATION TO ENSURE THEY ARE INSTALLED PLUMB AND FLUSH WITHOUT CRACKS, RISE IN THE SLAB, OR VOIDS AROUND GRATES OR TOPS. ALL CLEANOUTS SHALL BE INSTALLED ALONG MAINS AT 5'-0" DISTANCE MAXIMUM. ALL FLOOR AND WALL CLEANOUTS SHALL BE ACCESSIBLE FOR MAINTENANCE AND NOT INSTALLED BENEATH EQUIPMENT. ANY DRAIN GRATES THAT ARE DAMAGED AS A RESULT OF OTHER CONSTRUCTION PRIOR TO RELEASE OF THE BUILDING TO THE OWNER SHALL BE REPLACED WITH LIKE GRATE AT NO EXPENSE OF THE OWNER.
- ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
- PROVIDE TRAP AND SEAL PRIMERS ON ALL FLOOR DRAINS IF REQUIRED BY CODE OR OWNER.
- PLUMBING VENTS THROUGH THE ROOF ARE LOCATED AT A MINIMUM OF 5'-0" FROM BUILDING PARAPETS AND 10'-0" FROM FRESH AIR INTAKES AND AS REQUIRED TO MEET LOCAL CODES.
- ALL SHUT-OFF OR BALANCING VALVES TO PLUMBING ROUTED IN PIPE CHASES SHALL BE ACCESSIBLE FROM CEILING AREA OR ACCESS DOORS PROVIDED IN WALL.
- PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.
- CONTRACTOR TO FULLY INVESTIGATE ALL EXISTING PIPING TO REMAIN TO INSURE EXISTING PIPING IS IN GOOD REPAIR. IF ANY EXISTING PIPING IS FOUND TO BE DAMAGED REPLACE WITH LIKE.

PLUMBING ABBREVIATIONS

AD	AREA DRAIN, ACCESS DOOR	IE	INVERT ELEVATION
AFC	ABOVE FINISH CEILING	LP	LIQUEFIED PETROLEUM
AFG	ABOVE FINISH GRADE	MBH	100 BTU PER HOUR
AHU	AIR HANDLING UNIT	NA	NOT APPLICABLE
BFP	BACKFLOW PREVENTER	ORD	OVERFLOW ROOF DRAIN
BOP	BOTTOM OF PIPE	OST	STORM OVERFLOW
BOS	BOTTOM OF STRUCTURE	PD	PUMP DISCHARGE
CD	CONDENSATE	PIV	POST INDICATOR VALVE
CO	CLEANOUT	PRV	PRESSURE REDUCING VALVE
CW	DOMESTIC COLD WATER	REV	REVISION
DD	DECK DRAIN	RPM	REVOLUTIONS PER MINUTE
DN	DOWN	RTU	ROOF TOP UNIT
ETR	EXISTING TO REMAIN	SAN	SANITARY
EWC	ELECTRIC WATER COOLER	SCW	SOFT DOMESTIC COLD WATER
FCD	FLOOR CLEANOUT	SHW	SOFT DOMESTIC HOT WATER
FFA	FROM FLOOR ABOVE	SDHWR	SOFT RECIRC. HOT WATER
FP	FIRE PROTECTION	ST	STORM
FS	FLOOR SINK	TFA	TO FLOOR ABOVE
G	GAS (NATURAL)	TFB	TO FLOOR BELOW
GCD	GRADE CLEANOUT	TW	TEMPERED WATER
GPM	GALLONS PER MINUTE	UH	UNIT HEATER
HB	HOSE BIBB	V	VENT PIPE
HW	DOMESTIC HOT WATER	VTR	VENT THROUGH ROOF
HWR	HOT WATER RETURN	WCO	WALL CLEANOUT
HWS	HOT WATER SUPPLY	WH	WALL HYDRANT

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GATE VALVE		FLOOR DRAIN / AREA DRAIN
	CHECK VALVE		FLOOR SINK
	PRESSURE		HOT WATER RECIRCULATION PUMP
	SOLENOID VALVE		PLUMBING VENT THRU ROOF
	GLOBE VALVE (STRAIGHT PATTERN)		POINT OF CONNECTION (CONNECT NEW TO EXISTING)
	BUTTERFLY VALVE		PLUMBING EQUIPMENT DESIGNATION
	BALL VALVE		KITCHEN EQUIPMENT DESIGNATION
	GAS COCK		PLUMBING RISER OR DETAIL DESIGNATION
	PLUG VALVE		SANITARY SEWER PIPING
	FLOOR CLEAN OUT		STORM SEWER PIPING
	WALL CLEAN OUT		VENT PIPING
	CLEAN OUT		VENT PIPING (BELOW SLAB)
	HOSE BIBB		COLD WATER PIPING
	FREEZE PROOF WALL HYDRANT		HOT WATER PIPING
	SHOWER HEAD		COLD WATER PIPING (BELOW SLAB)
	ELBOW DOWN		HOT WATER PIPING (BELOW SLAB)
	ELBOW UP		HOT WATER RECIRCULATING PIPING
	TEE UP		FILTERED WATER PIPING
	TEE DOWN		FILTERED WATER PIPING BELOW GRADE
	STRAINER		GAS PIPING
	UNION		CONDENSATE PIPING
	REDUCER		
	CAP		
	FLEX PIPE		

PLUMBING FIXTURE SCHEDULE

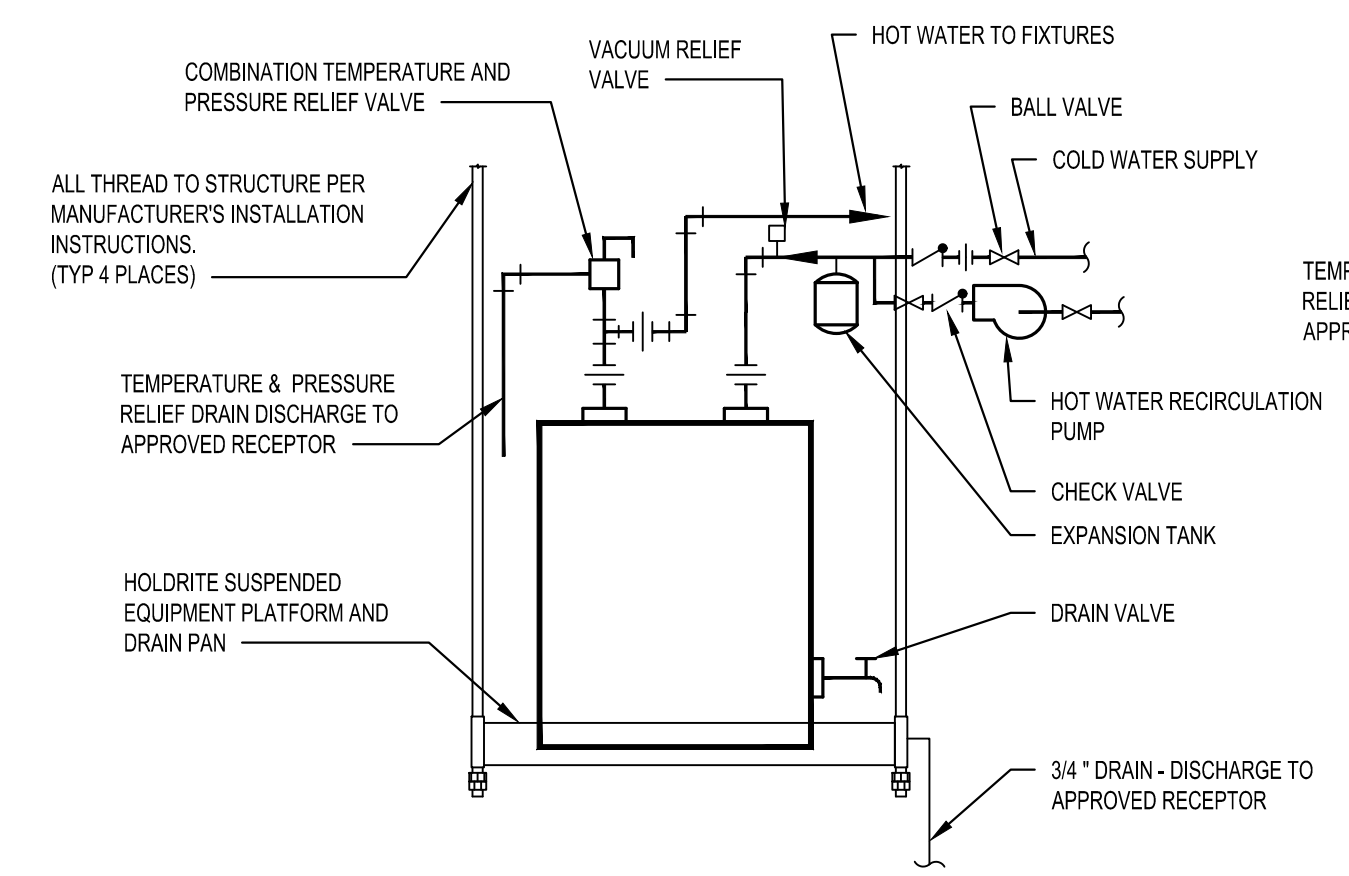
ITEM	MANUFACTURER	MODEL	DRAIN	VENT	COLD WATER	HOT WATER	DESCRIPTION
IMB	SILOUX CHIEF	696-G1010PF	---	---	1/2"	---	ICE MAKER OUTLET BOX, ABS BOX WITH NO-LEAD BRASS SHUT-OFF VALVE AND WATER HAMMER ARRESTOR.
EWH	BRADFORD WHITE	LE120L3-3	---	---	1"	1"	ELECTRIC WATER HEATER 19 GALLON TANK, 14 GALLON PER HOUR RECOVERY AT 90 %DF RISE, 208V SINGLE PHASE 3KW
FD	SILOUX CHIEF	832-35ANR	3"	2"	---	---	ADJUSTABLE FLOOR DRAIN WITH GRAY ABS BODY AND ROUND NICKEL-BRONZE STRAINER AND TRAP PRIMER CONNECTION.
LAV	AMERICAN STANDARD	9024.001EC	2"	1-1/2"	1/2"	1/2"	WALL-HUNG VITREOUS CHINALAVATORY WITH 7755-105 SENSOR OPERATED FAUCET. PROVIDE ASSE 1070 COMPLIANT MIXING VALVE AND TRUEBRO LAV GUARD PIPING COVERS.
MS	ZURN	Z1998-24-HH-SF	3"	2"	1/2"	1/2"	MOLDED HIGH DENSITY MOP SERVICE BASIN PROVIDE WITH HOSE AND HOSE BRACKET, AND SERVICE FAUCET.
RP	TACO	0026e-F2	---	---	---	---	IN-LINE CARTRIDGE STYLE CIRCULATOR PUMP. CAPABLE OF 12 FEET OF HEAD AT 6 GPM PROVIDE WITH AQUASTAT.
SNK	ELKAY	LRAD291855	2"	1-1/2"	1/2"	1/2"	DOUBLE COMPARTMENT STAINLESS STEEL SINK WITH LKA9031 DECK-MOUNTED FAUCET AND IN-SINKERATOR BADGER 1 1/3 HP GARBAGE DISPOSAL PROVIDE WITH ASSE 1070 COMPLIANT MIXING VALVE.
WC	AMERICAN STANDARD	2467.016	3"	2"	1/2"	---	CADET TWO-PIECE ELONGATED WATER CLOSET WITH 5257A85MT SEAT.

NOTES:
1. MODELS IN SCHEDULE ARE A BASIS OF DESIGN CONFIRM FINAL FIXTURE MODELS WITH OWNER PRIOR TO PURCHASING.
2. FIELD COORDINATE EXACT CONNECTION REQUIREMENTS OF ACTUAL EQUIPMENT SUPPLIED WITH ALL OTHER TRADES TO ENSURE PROPER ROUGH-IN IS PROVIDED.

PLUMBING FIXTURE MINIMUM CONNECTION SCHEDULE

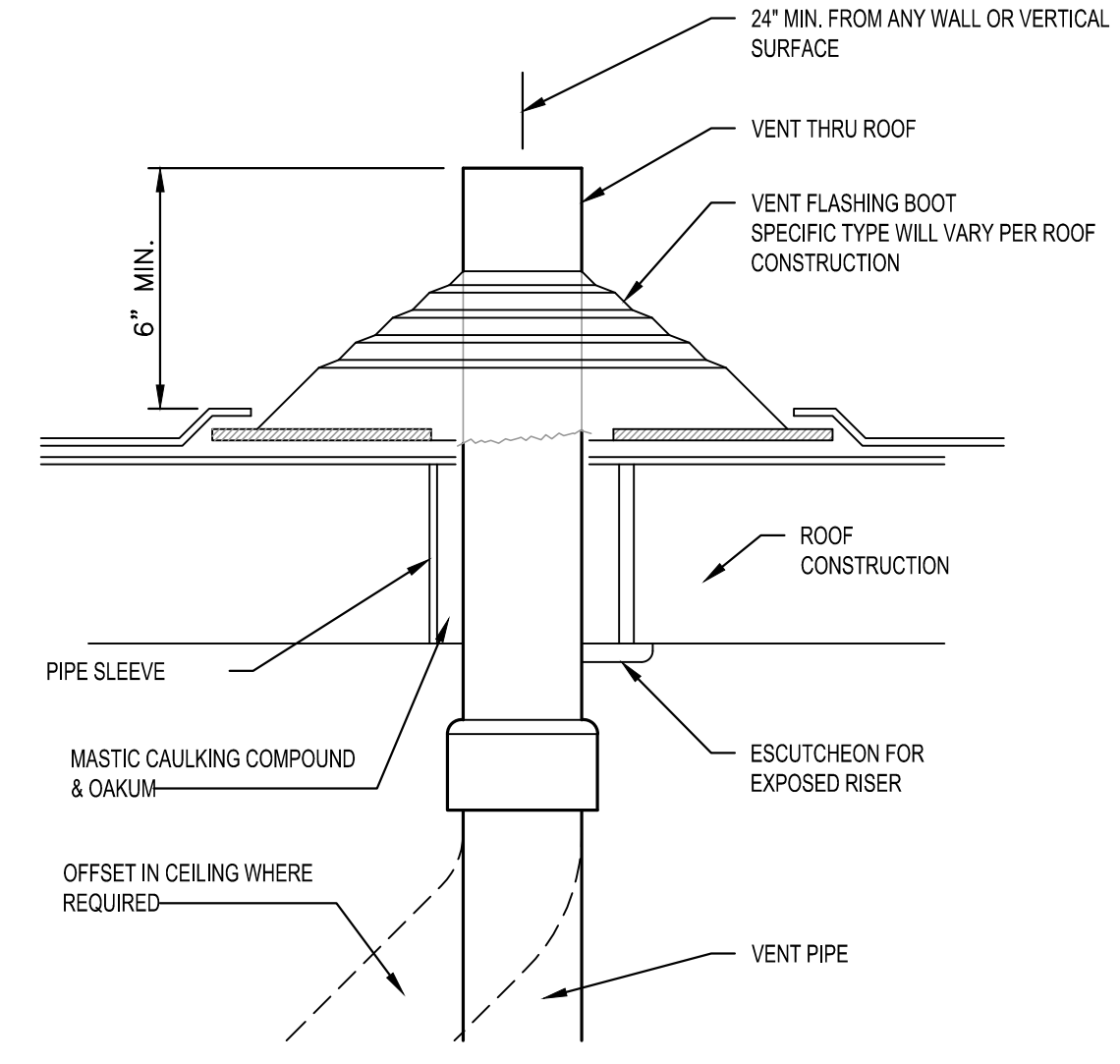
DESIGNATION	FIXTURE	C.W.	H.W.	DRAIN	VENT
WC	WATER CLOSET	1"	-	4"	2"
UR	URINAL	3/4"	-	2"	2"
LAV	LAVATORY	1/2"	1/2"	2"	2"
DW	DISHWASHER	-	1/2"	2"	-
MBSS	MOP BASIN/SERVICE SINK	1/2"	1/2"	3"	2"
SHR	SHOWER	1/2"	1/2"	2"	2"
SNK	SINK	1/2"	1/2"	2"	2"

- GENERAL NOTES:
- PITCH ALL DRAINAGE PIPING 3" AND LARGER AT 1/8" PER FOOT MINIMUM UNLESS OTHERWISE NOTED. PITCH ALL DRAINAGE PIPING 2-1/2" AND SMALLER AT 1/4" PER FOOT.
 - ALL UNDERGROUND DRAINAGE PIPING SHALL BE A MINIMUM OF 2" IN SIZE.
 - PROVIDE TRAP PRIMER UNITS FOR ALL FLOOR DRAINS.
 - VERIFY/COORDINATE LOCATIONS OF ALL FIXTURES, DRAIN, ETC. WITH ARCHITECT PRIOR TO ROUGH-IN.

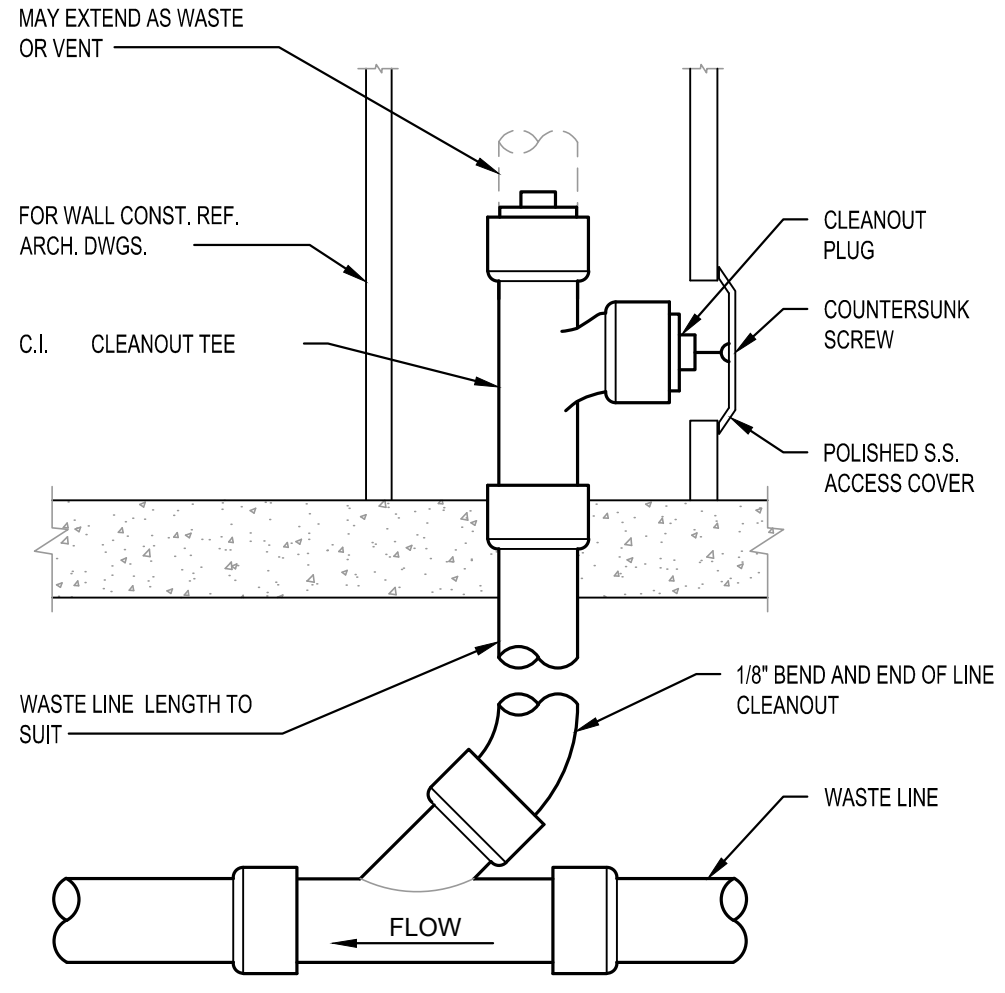


- NOTES:
1. COORDINATE WITH SITE CONDITIONS FOR WALL MOUNTED OR STRUCTURE SUSPENDED INSTALLATION.
2. WATER HEATER PLATFORM SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. IF RECIRCULATION PUMP IS NOT SELF CONTROLLED PROVIDE AQUASTAT.

3 ABOVE CEILING WATER HEATER
NOT TO SCALE



2 VENT THROUGH ROOF DETAIL (VTR)
NOT TO SCALE



1 WALL CLEANOUT
NOT TO SCALE

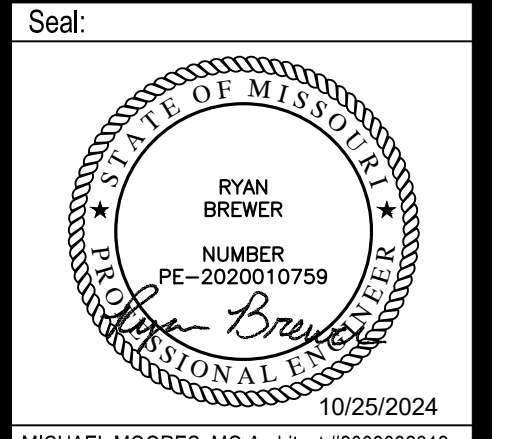
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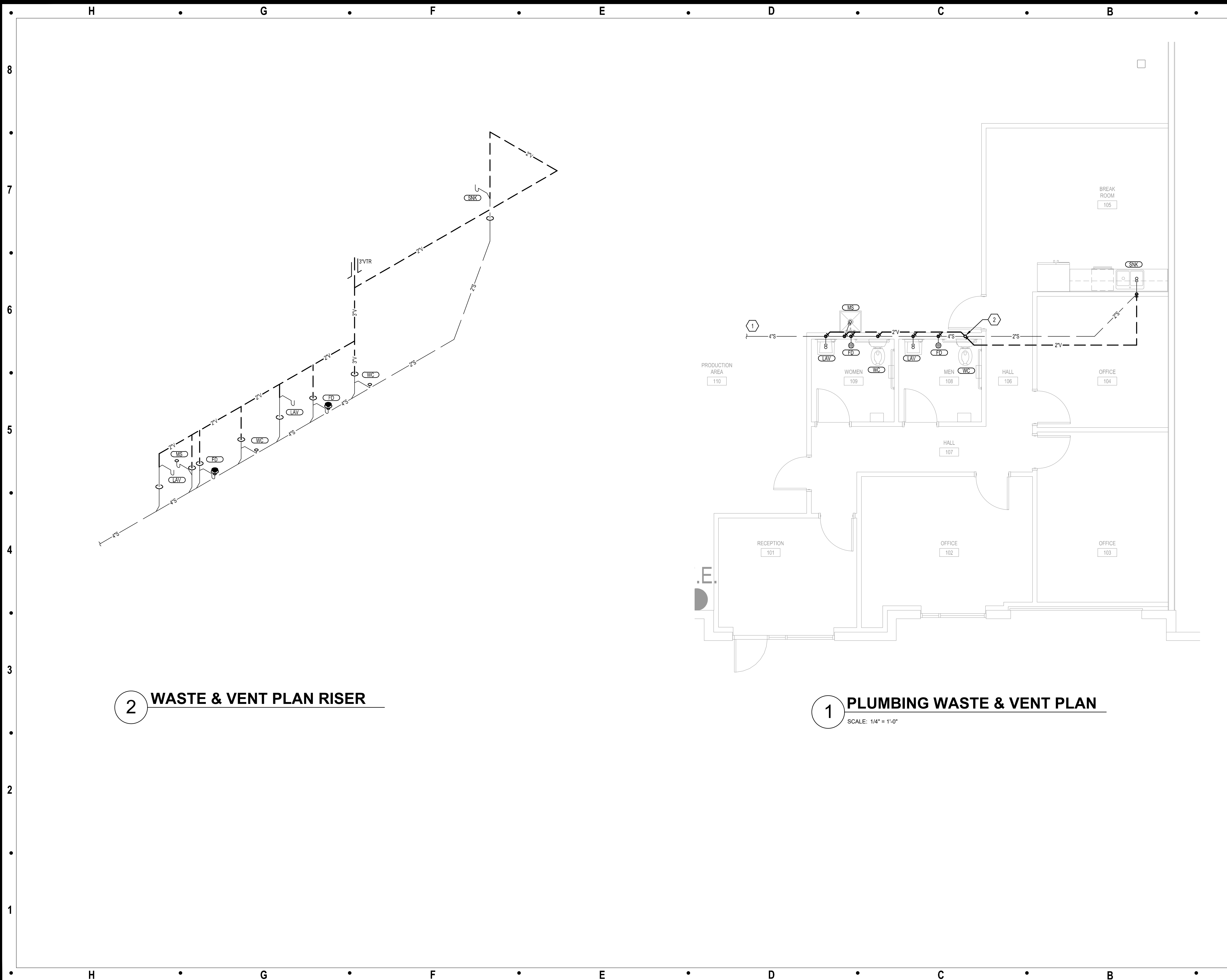
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Project Number: 2410
Project Type: TENANT FINISH
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Issue: _____ Date: _____
Permit Submittal 10.25.24

Sheet Title:
PLUMBING NOTES, SYMBOLS & ABBREVIATIONS

P101



2 WASTE & VENT PLAN RISER

1 PLUMBING WASTE & VENT PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P1.1 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE IN CONFORMANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES HAVING JURISDICTION AND INSPECTION. COORDINATE THE COMPLETE INSTALLATION OF SYSTEMS TO AVOID CONFLICT WITH OTHER TRADES.
3. PROVIDE TO OWNER A COPY OF ALL REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS AND ALL PLUMBING SYSTEMS EQUIPMENT MANUALS INCLUDING WARRANTIES.
4. COORDINATE ALL ABOVE SLAB AND UNDER SLAB SANITARY, AND WATER PIPING SYSTEMS TO AVOID CONFLICT WITH ALL OTHER TRADES SYSTEMS, AND COLUMN FOOTINGS. ALL SOIL AND WASTE PIPING SHALL BE GRADED TO A UNIFORM SLOPE OF NOT LESS THAN 1/8" PER FOOT FOR PIPING 4" OR LARGER, AND NOT LESS THAN 1/4" PER FOOT FOR PIPING 3" OR SMALLER. COORDINATE FINAL INVERTS WITH EXISTING PIPING PRIOR TO ROUGH-IN OF UNDER SLAB INSTALLATION.
5. COORDINATE ALL FLOOR DRAINS, CLEANOUTS, AND FLOOR MOUNTED FIXTURES WITH FINISHED FLOOR SLAB ELEVATION TO ENSURE THEY ARE INSTALLED PLUMB AND FLUSH WITHOUT CRACKS, RISE IN THE SLAB, OR VOIDS AROUND GRATES OR TOPS. ALL CLEANOUTS SHALL BE INSTALLED ALONG MAINS AT 50'-0" DISTANCE MAXIMUM. ALL FLOOR AND WALL CLEANOUTS SHALL BE ACCESSIBLE FOR MAINTENANCE AND NOT INSTALLED BENEATH EQUIPMENT. ANY DRAIN GRATES THAT ARE DAMAGED AS A RESULT OF OTHER CONSTRUCTION PRIOR TO RELEASE OF THE BUILDING TO THE OWNER SHALL BE REPLACED WITH LIKE GRATE AT NO EXPENSE OF THE OWNER.
6. PROVIDE TRAP AND SEAL PRIMERS ON ALL FLOOR DRAINS IF REQUIRED BY CODE OR OWNER.
7. PLUMBING VENTS THROUGH THE ROOF ARE LOCATED AT A MINIMUM OF 5'-0" FROM BUILDING PARAPETS AND 10'-0" FROM FRESH AIR INTAKES AND AS REQUIRED TO MEET LOCAL CODES.
8. ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
9. PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT SPECIFIED IN PLUMBING FIXTURES AND EQUIPMENT SCHEDULES ON THESE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS INDICATED ON PLUMBING SCHEDULES AND AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.

KEYED NOTES:

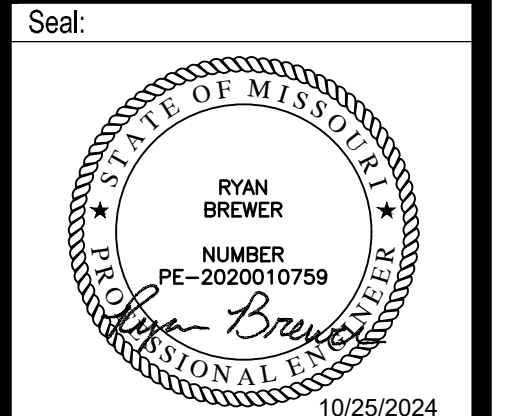
1. CONNECT NEW SANITARY PIPING INTO EXISTING SANITARY IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, MATERIAL, AND AVAILABLE INVERT.
2. ROUTE NEW 3" V UP TO 3" VTR. COORDINATE FINAL LOCATION WITH ALL NEW AND EXISTING ROOF TOP EQUIPMENT. MAINTAIN A MINIMUM 10' FROM ALL FRESH AIR INTAKES AND 2' FROM ALL VERTICAL SURFACES.

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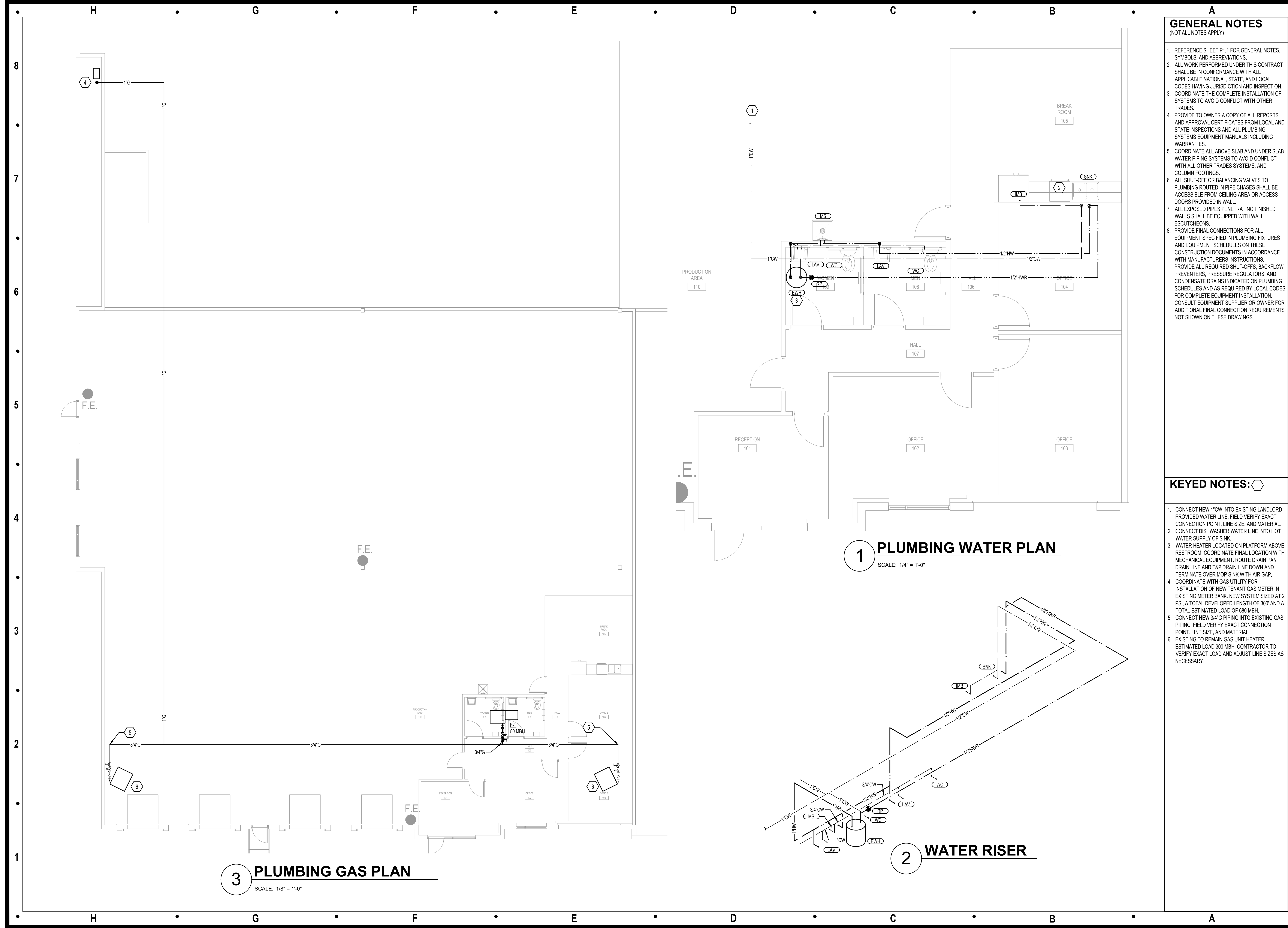
Project Number: 2410
Project Type: TENANT FINISH
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Issue: Date:
Permit Submittal 10.25.24

Sheet Title:
PLUMBING WASTE AND VENT PLAN

P201



- GENERAL NOTES**
(NOT ALL NOTES APPLY)
- REFERENCE SHEET P1.1 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
 - ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE IN CONFORMANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES HAVING JURISDICTION AND INSPECTION. COORDINATE THE COMPLETE INSTALLATION OF SYSTEMS TO AVOID CONFLICT WITH OTHER TRADES.
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 - COORDINATE ALL ABOVE SLAB AND UNDER SLAB WATER PIPING SYSTEMS TO AVOID CONFLICT WITH ALL OTHER TRADES SYSTEMS, AND COLUMN FOOTINGS.
 - ALL SHUT-OFF OR BALANCING VALVES TO PLUMBING ROUTED IN PIPE CHASES SHALL BE ACCESSIBLE FROM CEILING AREA OR ACCESS DOORS PROVIDED IN WALL.
 - ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH WALL ESCUTCHEONS.
 - PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT SPECIFIED IN PLUMBING FIXTURES AND EQUIPMENT SCHEDULES ON THESE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PROVIDE ALL REQUIRED SHUT-OFFS, BACKFLOW PREVENTERS, PRESSURE REGULATORS, AND CONDENSATE DRAINS INDICATED ON PLUMBING SCHEDULES AND AS REQUIRED BY LOCAL CODES FOR COMPLETE EQUIPMENT INSTALLATION. CONSULT EQUIPMENT SUPPLIER OR OWNER FOR ADDITIONAL FINAL CONNECTION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.

KEYED NOTES: ◻

- CONNECT NEW 1" CW INTO EXISTING LANDLORD PROVIDED WATER LINE. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.
- CONNECT DISHWASHER WATER LINE INTO HOT WATER SUPPLY OF SINK.
- WATER HEATER LOCATED ON PLATFORM ABOVE RESTROOM. COORDINATE FINAL LOCATION WITH MECHANICAL EQUIPMENT. ROUTE DRAIN PAN DRAIN LINE AND T&P DRAIN LINE DOWN AND TERMINATE OVER MOP SINK WITH AIR GAP.
- COORDINATE WITH GAS UTILITY FOR INSTALLATION OF NEW TENANT GAS METER IN EXISTING METER BANK. NEW SYSTEM SIZED AT 2 PSI. A TOTAL DEVELOPED LENGTH OF 300' AND A TOTAL ESTIMATED LOAD OF 680 MBH.
- CONNECT NEW 3/4" G PIPING INTO EXISTING GAS PIPING. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.
- EXISTING TO REMAIN GAS UNIT HEATER. ESTIMATED LOAD 300 MBH. CONTRACTOR TO VERIFY EXACT LOAD AND ADJUST LINE SIZES AS NECESSARY.

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Issue: _____ Date: _____
Permit Submittal 10.25.24

Sheet Title:
PLUMBING WATER PLAN

P202

ELECTRICAL ABBREVIATIONS

AC	ALTERNATING CURRENT
AHU	AIR HANDLING UNIT
A OR AMPS.	AMPERES
AFC	ABOVE FINISH COUNTER
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BTC	BRANCH TO CONNECTION POINT AND CONNECT EQUIPMENT
C	CONDUIT ("E.C." IS EMPTY CONDUIT)
CF	CEILING FAN
CM	COFFEE MAKER
CT	COOKTOP
D	DEDICATED CIRCUIT
DCO	DUPLEX CONVIENCE OUTLET
DP	DISPOSAL
DW	DISHWASHER
DY	DRYER
EMT	ELETRICAL METALLIC TUBING
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER (WATER-COOLED DRINKING FOUNTAIN)
EX	EXISTING
FCU	FAN COIL UNIT
GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI/P	GROUND FAULT INTERRUPTER PROTECTED
GRD	GROUND
H	HORIZONTAL MOUNT (RECEPTACLE)
HD	VENTILATION HOOD
HP	HORSEPOWER
HT	HEAT TRACE POWER (PROVIDE W/ 20A/1P GFI BREAKER)
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND (DUPLEX RECEPTS. - NEMA 5-20RIG)
KCM	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT-AMPERES (1000 VOLT-AMPERES)
KW	KILOWATTS (1000 WATTS)
MLO	MAIN LUGS ONLY
MCB	MAIN CIRCUIT BREAKER
MW	MICROWAVE (COORD MTG HT W/ ARCHITECT)
NIC	NOT IN CONTRACT
NEC	NATIONAL ELECTRICAL CODE
NF	NOT FUSED
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PNL	PANEL
PH OR Ø	PHASE
P	POLE
PVC	POLYVINYL CHLORIDE
RF	REFRIGERATOR
RG	RANGE
SPD	SURGE PROTECTIVE DEVICE
T	TAMPERPROOF RECEPTACLE
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION RECEPTACLE
UC	UNDERCOUNTER REFRIGERATOR (OR ICE MACHINE)
UL	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT-AMPERES
VD	VENDING MACHINE (24" AFF)
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WA	WASHER
WD	WARMING DRAWER
WO	WALL OVEN
WP	WEATHERPROOF
WP/WR	WEATHERPROOF/WEATHER RESISTANT
W/UNIT	DISCONNECT IS SUPPLIED WITH THE UNIT

GENERAL ELECTRICAL NOTES

- COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, REQUIREMENTS OF THE AHJ AND ALL LOCAL & STATE CODES.
- DO NOT SCALE FROM THESE DRAWINGS.
- REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS AND BUSHINGS.
- ALL JUNCTION BOXES SHALL HAVE A COVER.
- COORDINATE EACH LIGHT FIXTURE INSTALLATION(S) W/ ACTUAL CEILING TO BE FURNISHED.
- ALL BRANCH CIRCUITS WITHOUT A CONDUCTOR & CONDUIT INDICATED SHALL BE ROUTED TO A 20A-1P BREAKER W/ 24" AFF TO TOP OF PANEL.
- ALL BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG AND ALL CONDUIT SHALL NOT BE SMALLER THAN 3/4". UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH DEDICATED NEUTRALS UNLESS NOTED OTHERWISE. WHERE NEUTRALS ARE INDICATED TO BE SHARED, MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH 2P OR 3P BREAKERS AS REQUIRED PER NEC210.4.
- ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. THE RACEWAY SHALL NOT BE USED AN EQUIPMENT GROUND.
- ALL FIXTURES SHALL BE SUPPORTED FROM EACH CORNER (INDEPENDENT OF THE SUSPENDED CEILING) WITH 12 GAUGE WIRE CONNECTED TO STRUCTURAL SYSTEM OF BUILDING. THE INSTALLATION SHALL MEET OR EXCEED THE SEISMIC REQUIREMENTS OF LOCAL AND NATIONAL CODES.
- ELECTRICAL DEVICE MOUNTING HEIGHTS, UNO:

PANELBOARDS	78" AFF TO TOP OF PANEL
SWITCHES	48" AFF TO TOP OF JUNCTION BOX
RECEPTACLES	18" AFF TO CENTER OF RECEPTACLE
TELEDATA OUTLETS	18" AFF TO CENTER OF RECEPTACLE
APARTMENT LOADCENTERS	PER ANSII117.1 REQUIREMENTS (VERIFY WITH LOCAL INSPECTOR)
- ELECTRICAL EQUIPMENT (PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, ETC.) IS SHOWN TO SCALE ON THE FLOOR PLANS.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT THAT WILL FIT WITHIN THE SPACES SHOWN ON THE PLANS AND COMPLYING WITH ALL CODE REQUIRED CLEARANCES.
- ELECTRICAL CONTRACTOR TO LABEL ALL DEVICES (RECEPTACLES, SWITCHES, PANELBOARDS, DISCONNECTS, ETC.) WITH CIRCUIT NUMBER AND PANELBOARD DESIGNATION. RECEPTACLES, SWITCHES, AND SIMILAR DEVICES TO HAVE PRE-PRINTED, SELF ADHESIVE LABEL.
- PANELBOARDS, DISCONNECT SWITCHES, AND SIMILAR DEVICES TO HAVE ENGRAVED, SELF-ADHESIVE, LAMINATED ACRYLIC LABELS (BLACK W/ WHITE LETTERING).
- PROVIDE TYPE-WRITTEN PANELBOARD SCHEDULES FOR ALL ELECTRICAL PANELBOARDS.

ELECTRICAL SYMBOLS

LIGHTING FIXTURES/DEVICES			POWER EQUIPMENT/DEVICES		
SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTING
○ A	DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING	▨	SWITCHBOARD OR DISTRIBUTION PANEL REFER TO PANEL SCHEDULES	
⊙ A	DIRECTIONAL DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING	⊘	DRY-TYPE TRANSFORMER REFER TO PLANS FOR KVA RATING	
⊙ A	WALL MOUNTED LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL	⊞	120/208V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES	
— A	LINEAR LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING OR SUSPENDED	⊞	277/480V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES	
□ A	2X4 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING	⊞	JUNCTION BOX	WALL OR CEILING
□ A	2X2 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING	30/20/3	FUSED SAFETY SWITCH (E.G. 30/20/3 INDICATES A 30A, 3-POLE SWITCH WITH 20A FUSES)	
▨	HATCHING ON FIXTURE INDICATES FIXTURE TO HAVE EMERGENCY BACK-UP		30NF/3	NON-FUSED SAFETY SWITCH (E.G. 30NF/3 INDICATES A 30A, 3-POLE SWITCH WITHOUT FUSES)	
⊞	TWO HEAD EMERGENCY LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING	S ^M	MOTOR RATED SWITCH	
⊞ X1	EMERGENCY EXIT SIGN, PROVIDE ARROWS AS INDICATED. SHADING INDICATES FACE. LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING	⊞	MOTOR	
S	SINGLE POLE SWITCH 20A (120/277V)	⊞	⊞	NEMA 5-20R SIMPLEX RECEPTACLE	WALL - 18" AFF
S ₃	THREE WAY SWITCH 20A (120/277V)	⊞	⊞	NEMA 5-20R DUPLEX RECEPTACLE	WALL - 18" AFF
S ₄	FOUR WAY SWITCH 20A (120/277V)	⊞	⊞	NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER	⊞
⊞	WALL BOX DIMMER SWITCH	⊞	⊞	NEMA 5-20R QUAD-PLEX RECEPTACLE	WALL - 18" AFF
⊞ X	CEILING OR WALL MOUNTED OCCUPANCY SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL OR CEILING	⊞	NEMA 5-20R SPLIT RECEPTACLE, TOP OUTLET WIRED HOT, BOTTOM OUTLET SWITCHED.	WALL - 18" AFF
⊞ X	LOW-VOLTAGE CONTROL STATION (LETTER INDICATES CONTROL STATION TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL - 48" AFF TO TOP OF JUNCTION BOX	⊞	SPECIAL PURPOSE RECEPTACLE REFER TO PLANS FOR NEMA CONFIGURATION	WALL - 18" AFF OR CEILING
⊞ X	PHOTOCELL SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	FIELD VERIFY	⊞ USB	NEMA 5-20R - DUPLEX RECEPTACLE WITH USB PORTS SIMILAR TO HUBBELL #USB20AC5W	WALL - 18" AFF
⊞	POWERPACK (LETTER INDICATES POWERPACK TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	ACCESSIBLE CEILING	⊞	NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ON CEILING	CEILING - FLUSH
COMMUNICATION/LOW-VOLTAGE DEVICES			⊞	HUBBELL CF84 SERIES FLOOR BOX (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
⊞	CARD READER (VERIFY EXACT REQUIREMENTS)		⊞	HUBBELL 524 SERIES FLOOR BOX (OR EQUAL) WITH (1) DUPLEX RECEPTACLE AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
⊞	DATA, TELEPHONE, OR COMBO TELEDATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	WALL - 18" AFF	⊞	HUBBELL 824 SERIES FLOOR BOX (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH
⊞	DATA, TELEPHONE, OR COMBO TELEDATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	FLOOR OR CEILING	⊞	HUBBELL S1PT SERIES 4" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH
⊞	TELEVISION OUTLET	WALL OR CEILING	⊞	HUBBELL S1PTFF SERIES 4" POKE-THRU (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH
⊞	SPEAKER OUTLET	FIELD VERIFY	⊞	HUBBELL S1RS SERIES 6" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION AND AV CONNECTION CAPABILITY	FLOOR - FLUSH
TTB	TELEPHONE TERMINAL BOARD	WALL	---	CONDUIT IN OR UNDER FLOOR/GRADE	
⊞	SECURITY CAMERA OUTLET	FIELD VERIFY	⊞	CONDUCTOR HOME RUN - (H) HOT, (N) NEUTRAL, (E) EQUIPMENT GROUND, & (I) ISOLATED GROUND	
⊞	PUSH BUTTON		⊞	EQUIPMENT CONNECTION	
			---	CONDUIT IN CEILING OR WALL	

NOTE: NOT ALL SYMBOLS MAY BE USED.
 1 IF MOUNTED ABOVE A COUNTER, DEVICE TO BE WALL MOUNTED 6" ABOVE FINISHED COUNTER OR 44" TO TOP OF JUNCTION BOX (WHICHEVER IS LOWER).
 IF NOT MOUNTED ABOVE A COUNTER, DEVICE TO BE WALL MOUNTED AT 48" AFF TO TOP OF JUNCTION BOX AS REQUIRED TO MEET ADA REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS/ELEVATIONS.

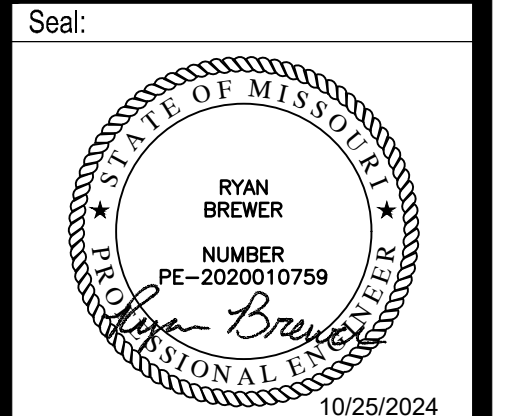
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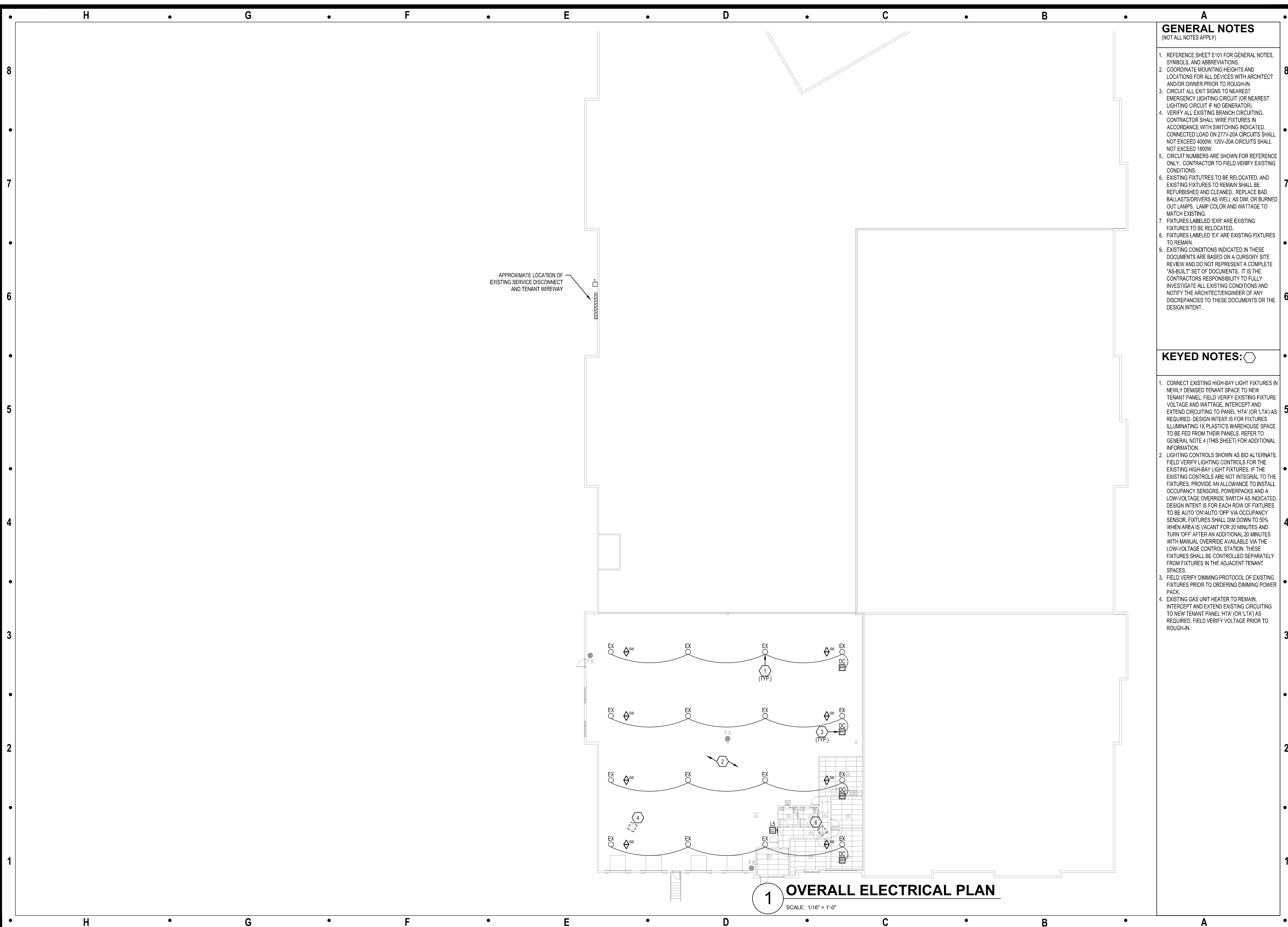
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Issue: _____ Date: _____
Permit Submittal _____ 10.25.24

Sheet Title:
ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS

E101



GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E-101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR OWNER PRIOR TO ROUGH-IN.
3. CIRCUIT ALL EXIT SIGNS TO NEAREST EMERGENCY LIGHTING CIRCUIT (OR NEAREST LIGHTING CIRCUIT IF NO GENERATOR).
4. VERIFY ALL EXISTING BRANCH CIRCUITING. CONTRACTOR SHALL WIRE FIXTURES IN ACCORDANCE WITH SWITCHING INDICATED. CONNECTED LOAD ON 277V-20A CIRCUITS SHALL NOT EXCEED 4000W. 120V-20A CIRCUITS SHALL NOT EXCEED 1800W.
5. CIRCUIT NUMBERS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
6. EXISTING FIXTURES TO BE RELOCATED, AND EXISTING FIXTURES TO REMAIN SHALL BE REFURBISHED AND CLEANED. REPLACE BAD BALLASTS/DRIVERS AS WELL AS DIM, OR BURNED OUT LAMPS. LAMP COLOR AND WATTAGE TO MATCH EXISTING.
7. FIXTURES LABELED 'EXR' ARE EXISTING FIXTURES TO BE RELOCATED.
8. FIXTURES LABELED 'EX' ARE EXISTING FIXTURES TO REMAIN.
9. EXISTING CONDITIONS INDICATED IN THESE DOCUMENTS ARE BASED ON A CURSORY SITE REVIEW AND DO NOT REPRESENT A COMPLETE "AS-BUILT" SET OF DOCUMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO FULLY INVESTIGATE ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES TO THESE DOCUMENTS OR THE DESIGN INTENT.

KEYED NOTES: ◻

1. CONNECT EXISTING HIGH-BAY LIGHT FIXTURES IN NEWLY DEMISED TENANT SPACE TO NEW TENANT PANEL. FIELD VERIFY EXISTING FIXTURE VOLTAGE AND WATTAGE. INTERCEPT AND EXTEND CIRCUITING TO PANEL 'HTA' (OR 'LTA') AS REQUIRED. DESIGN INTENT IS FOR FIXTURES ILLUMINATING 1X PLASTICS WAREHOUSE SPACE TO BE FED FROM THEIR PANELS. REFER TO GENERAL NOTE 4 (THIS SHEET) FOR ADDITIONAL INFORMATION.
2. LIGHTING CONTROLS SHOWN AS BID ALTERNATE. FIELD VERIFY LIGHTING CONTROLS FOR THE EXISTING HIGH-BAY LIGHT FIXTURES. IF THE EXISTING CONTROLS ARE NOT INTEGRAL TO THE FIXTURES, PROVIDE AN ALLOWANCE TO INSTALL OCCUPANCY SENSORS, POWERPACKS AND A LOW-VOLTAGE OVERRIDE SWITCH AS INDICATED. DESIGN INTENT IS FOR EACH ROW OF FIXTURES TO BE AUTO 'ON/AUTO 'OFF' VIA OCCUPANCY SENSOR. FIXTURES SHALL DIM DOWN TO 50% WHEN AREA IS VACANT FOR 20 MINUTES AND TURN 'OFF' AFTER AN ADDITIONAL 20 MINUTES WITH MANUAL OVERRIDE AVAILABLE VIA THE LOW-VOLTAGE CONTROL STATION. THESE FIXTURES SHALL BE CONTROLLED SEPARATELY FROM FIXTURES IN THE ADJACENT TENANT SPACES.
3. FIELD VERIFY DIMMING PROTOCOL OF EXISTING FIXTURES PRIOR TO ORDERING DIMMING POWER PACK.
4. EXISTING GAS UNIT HEATER TO REMAIN. INTERCEPT AND EXTEND EXISTING CIRCUITING TO NEW TENANT PANEL 'HTA' (OR 'LTA') AS REQUIRED. FIELD VERIFY VOLTAGE PRIOR TO ROUGH-IN.

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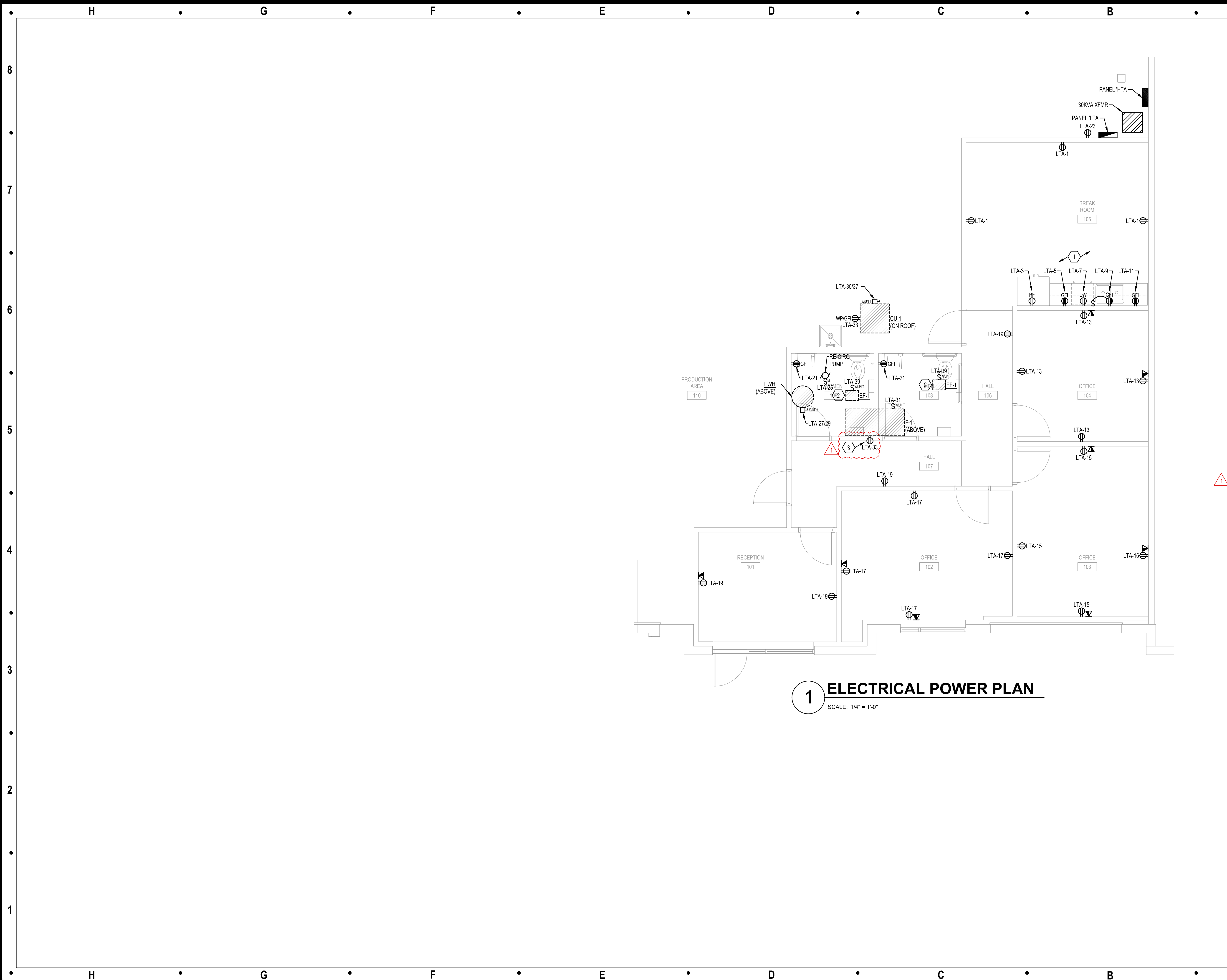
10/25/2024

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Project Number: 2410
Project Type: TENANT FINISH
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Issue: _____ Date: _____
Permit Submittal 10.25.24

Sheet Title:
OVERALL ELECTRICAL PLAN
E102



1 ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
3. PROVIDE AND INSTALL 3/4" CONDUIT AND PULL STRINGS FROM TELEPHONE/DATA OUTLETS TO ABOVE ACCESSIBLE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND/OR TENANT.
4. CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
5. REMOVE EXCESS WIRING RESULTING FROM DEMOLITION. ELECTRICAL CONTRACTOR TO RE-CIRCUIT OUTLETS LEFT ON INCOMPLETE CIRCUITS.
6. WHERE POSSIBLE, RE-USE SPARE CIRCUITS RESULTING FROM DEMOLITION PRIOR TO PULLING NEW CIRCUITS FROM PANELBOARD.
7. ALL DEVICES AND FIXTURES LABELED 'EX' ARE EXISTING TO REMAIN. ALL DEVICES AND FIXTURES LABELED 'EXR' ARE EXISTING TO BE RELOCATED.
8. EXISTING CONDITIONS INDICATED IN THESE DOCUMENTS ARE BASED ON A CURSORY SITE REVIEW AND DO NOT REPRESENT A COMPLETE "AS-BUILT" SET OF DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FULLY INVESTIGATE ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES TO THESE DOCUMENTS OR THE DESIGN INTENT.

KEYED NOTES:

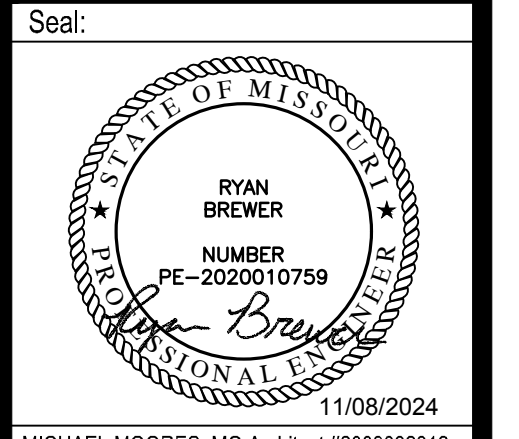
1. FIELD VERIFY EXACT CONNECTION REQUIREMENTS OF ALL BREAKROOM APPLIANCES WITH OWNER/EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
2. CONTROL INTENT IS FOR FAN TO ENERGIZE 'ON/OFF' WITH LIGHTS IN RESTROOM. PROVIDE A RIB RELAY AND ANY ADDITIONAL WIRING OR ACCESSORIES REQUIRED TO INTERLOCK FAN WITH LIGHTING SWITCHES.
3. RECEPTACLE TO BE MOUNTED ON EQUIPMENT PLATFORM IN AN ACCESSIBLE LOCATION. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

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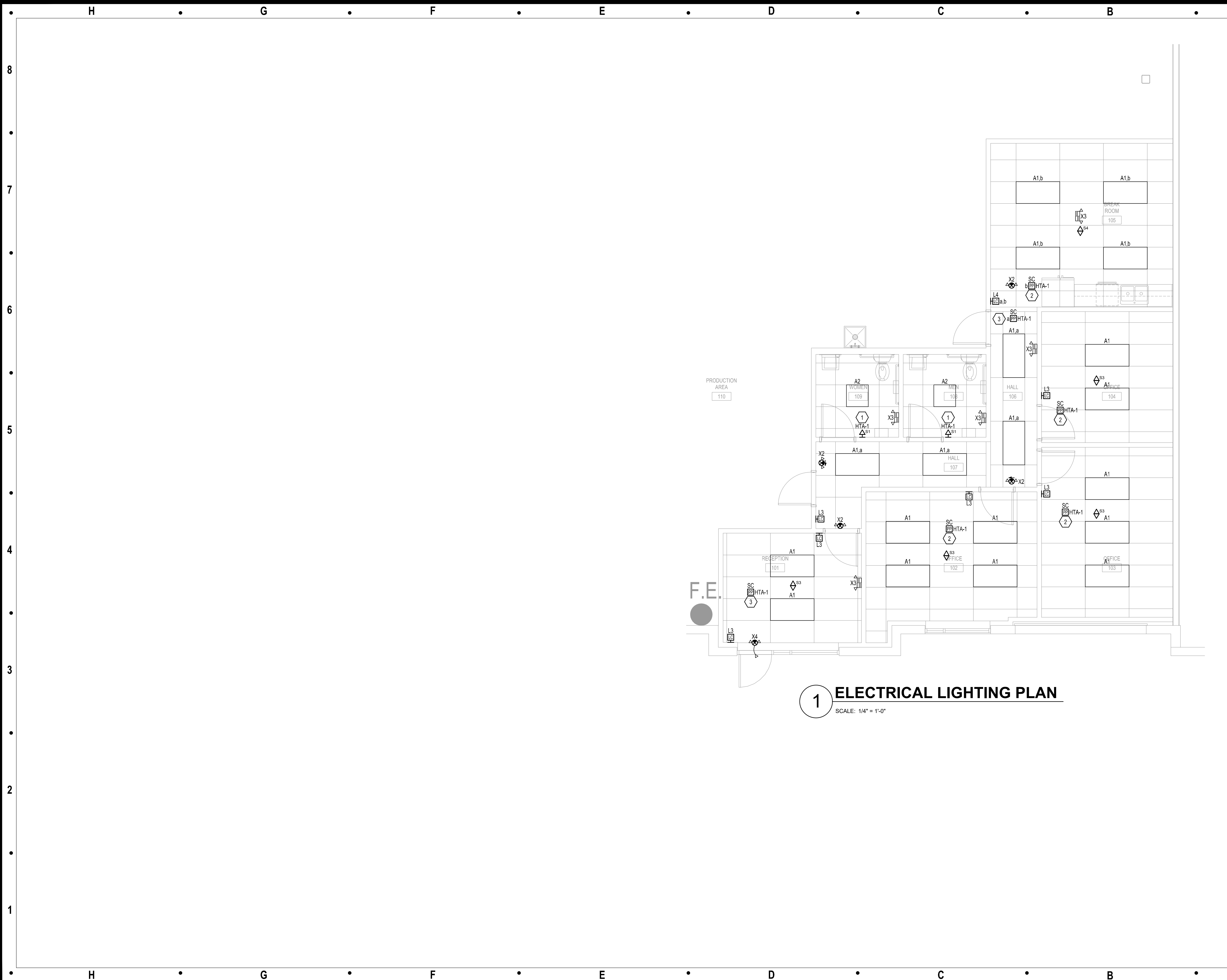
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Issue:	Date:
Permit Submittal	10.25.24
City Comment Response	11.08.24

Sheet Title:
ELECTRICAL POWER PLAN

E201



1 ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES
(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E-101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR OWNER PRIOR TO ROUGH-IN.
3. CIRCUIT ALL EXIT SIGNS TO NEAREST EMERGENCY LIGHTING CIRCUIT (OR NEAREST LIGHTING CIRCUIT IF NO GENERATOR).
4. VERIFY ALL EXISTING BRANCH CIRCUITING. CONTRACTOR SHALL WIRE FIXTURES IN ACCORDANCE WITH SWITCHING INDICATED. CONNECTED LOAD ON 277V-20A CIRCUITS SHALL NOT EXCEED 4000W. 120V-20A CIRCUITS SHALL NOT EXCEED 1800W.
5. CIRCUIT NUMBERS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
6. EXISTING FIXTURES TO BE RELOCATED, AND EXISTING FIXTURES TO REMAIN SHALL BE REFINISHED AND CLEANED. REPLACE BAD BALLASTS/DRIVERS AS WELL AS DIM, OR BURNED OUT LAMPS. LAMP COLOR AND WATTAGE TO MATCH EXISTING.
7. FIXTURES LABELED 'EXR' ARE EXISTING FIXTURES TO BE RELOCATED.
8. FIXTURES LABELED 'EX' ARE EXISTING FIXTURES TO REMAIN.
9. EXISTING CONDITIONS INDICATED IN THESE DOCUMENTS ARE BASED ON A CURSORY SITE REVIEW AND DO NOT REPRESENT A COMPLETE "AS-BUILT" SET OF DOCUMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO FULLY INVESTIGATE ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES TO THESE DOCUMENTS OR THE DESIGN INTENT.

KEYED NOTES:

1. CONTROL INTENT FOR THIS ZONE IS FOR LIGHTS TO BE AUTO 'ON', AUTO 'OFF' VIA OCCUPANCY SENSOR SWITCH.
2. CONTROL INTENT FOR THIS ZONE IS FOR LIGHTS TO BE MANUAL 'ON', AUTO 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE AVAILABLE VIA THE LOW-VOLTAGE CONTROL STATION.
3. CONTROL INTENT FOR THIS ZONE IS FOR LIGHTS TO BE AUTO 'ON', AUTO 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE AVAILABLE VIA THE LOW-VOLTAGE CONTROL STATION.

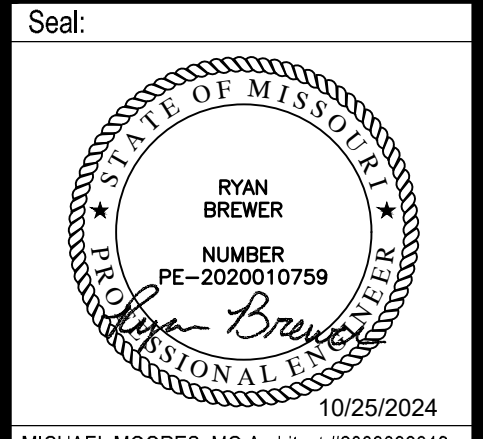
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Issue: Permit Submittal
Date: 10.25.24

Sheet Title:
ELECTRICAL LIGHTING PLAN

E301



WIRING OF MECHANICAL EQUIPMENT
 PROVIDE ALL RACEWAYS AND POWER WIRING FOR ALL DIVISION 15 EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS, INCLUDING, BUT NOT LIMITED TO, PUMPS, WATER HEATERS, AND HVAC EQUIPMENT, AND ALL LINE-VOLTAGE CONTROL AND INTERLOCK WIRING NOT PROVIDED UNDER DIVISION 15. CONNECT PER MANUFACTURER'S WIRING DIAGRAMS. COORDINATE WITH DIVISION 15 FOR DISCONNECTS FURNISHED WITH EQUIPMENT, AND PROVIDE ALL DISCONNECT SWITCHES AS REQUIRED. AFTER INSTALLING WIRING, VERIFY THAT EACH MOTOR LOAD HAS THE CORRECT PHASE ROTATION.

VERIFY THE ACTUAL "MAXIMUM OVERCURRENT PROTECTION" DEVICE RATINGS AND "MINIMUM CIRCUIT AMPACITY" CONDUCTOR SIZING FOR MECHANICAL EQUIPMENT FROM THE EQUIPMENT NAMEPLATE. BASE ELECTRICAL INSTALLATIONS ON ACTUAL REQUIRED AMPERAGES, WHICH MAY VARY SOMEWHAT FROM THE CONDUCTOR AND EQUIPMENT SIZES SHOWN ON THE DRAWINGS; HOWEVER, IN NO CASE, REDUCE THE SIZE OF CONDUCTORS INDICATED ON THE DRAWINGS WITHOUT AUTHORIZATION FROM THE ENGINEER. PROVIDE PROPERLY SIZED ELECTRICAL WIRING AND EQUIPMENT WITHOUT EXTRA COST TO THE OWNER. NOTIFY THE ENGINEER OF ALL CHANGES REQUIRED IN THE ELECTRICAL INSTALLATION DUE TO EQUIPMENT VARIANCES SO THAT THE EFFECTS ON FEEDERS, BRANCH CIRCUITS, PANELBOARDS, FUSES AND CIRCUIT BREAKERS CAN BE CHECKED PRIOR TO PURCHASING AND INSTALLATION. BE RESPONSIBLE FOR COORDINATING WITH DIVISION 15 TO VERIFY THE ACTUAL AMPACITIES AND CORRECT SIZES OF ALL CONDUCTORS AND OVERCURRENT PROTECTIVE DEVICES FOR ALL EQUIPMENT, AND CORRECT OVERLOAD HEATERS FOR ALL MOTORS, WHEN STARTERS ARE PROVIDED UNDER DIVISION 16.

PROVIDE ALL RACEWAYS, POWER WIRING, AND LINE-VOLTAGE CONTROL AND INTERLOCK WIRING NOT PROVIDED UNDER DIVISION 15, FOR ALL THERMOSTATS, TEMPERATURE CONTROL DEVICES, AND CONTROLS, INCLUDING, BUT NOT LIMITED TO, NIGHT-STATS, WATER HEATER INTERLOCKS, TIME SWITCHES AND OVERRIDE TIMERS. SEE MECHANICAL DRAWINGS FOR LOCATIONS AND TEMPERATURE CONTROL DIAGRAMS. LOW-VOLTAGE CONDUCTORS FOR THERMOSTATS AND TEMPERATURE CONTROL SYSTEMS MAY BE RUN EXPOSED ABOVE FINISHED ACCESSIBLE CEILINGS, IF APPROVED AND LISTED FOR THIS PURPOSE, BUT SHALL BE INSTALLED IN CONDUIT WITHIN WALLS AND WHERE EXPOSED IN THE WORK AREAS.

EXECUTION

METHOD OF PROCEDURE
 ERECT EQUIPMENT PARTS AT SUCH TIME AND IN SUCH MANNER AS TO MINIMIZE INTERFERENCES AND DELAYS IN THE EXECUTION OF THE WORK CARE SHALL BE USED IN THE ERECTION AND INSTALLATION OF ALL EQUIPMENT AND MATERIALS TO AVOID MARRING SURFACES OF THE WORK. DAMAGES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

EQUIPMENT REQUIRING ELECTRICAL SERVICE SHALL NOT BE ENERGIZED OR PLACED IN SERVICE UNTIL ALL INTERESTED PARTIES HAVE BEEN DULY NOTIFIED AND ARE PRESENT OR HAVE WAIVED THEIR RIGHT TO BE PRESENT, WHERE EQUIPMENT TO BE PLACED IN SERVICE INVOLVES SERVICE OR CONNECTION FROM ANOTHER CONTRACTOR OR THE OWNER, NOTIFY THE OWNER IN WRITING WHEN THE EQUIPMENT WILL BE READY. THE OWNER SHALL BE NOTIFIED AS FAR IN ADVANCE AS POSSIBLE, OF THE DATE THE VARIOUS ITEMS OF EQUIPMENT WILL BE COMPLETE.

THE WORK OF THIS TRADE INCLUDES ROUGH-IN FOR AND FINAL CONNECTION AND REQUIRED TO ALL MISCELLANEOUS EQUIPMENT FURNISHED BY OTHERS, OR UNDER OTHER DIVISIONS OF THE WORK. THIS SHALL INCLUDE POWER AND CONTROL WIRING, WIRING DEVICES AND COVER-PLATES FOR BUILT-IN EQUIPMENT ARE INCLUDED IN THE WORK OF THIS DIVISION. SAFETY DISCONNECTS AND OTHER MISCELLANEOUS PROTECTIVE DEVICES REQUIRED BY N.E.C. ARE INCLUDED IN THE WORK OF THIS DIVISION. DO ALL ROUGHING-IN AND FINAL CONNECTIONS FROM APPROVED SHOP DRAWINGS ONLY.

COMPLIANCE WITH THE DRAWING AND ANY NOTES THEREON IS REQUIRED. PROVIDE OPENINGS THROUGH WALLS, PARTITIONS, FLOORS, AND ROOFS AS REQUIRED FOR ELECTRICAL WORK.

PROVIDE SLEEVES FOR ELECTRICAL WORK PASSING THROUGH WALLS, PARTITIONS, ROOFS, AND FLOORS. SLEEVES SHALL EXTEND THROUGH FLOORS, WALLS AND PARTITIONS AND SHALL BE CUT FLUSH WITH EACH SURFACE UNLESS OTHERWISE SPECIFIED. FIRE WALL AND/OR FLOOR INTEGRITY SHALL BE RESTORED AFTER PENETRATION. SLEEVES IN CONCRETE AND MASONRY WALLS, CONCRETE FLOORS AND ROOFS, SHALL BE FABRICATED FROM STANDARD GALVANIZED STEEL PIPE WITH ENDS FINISHED SMOOTH, BURR FREE, WITHOUT SHARP EDGES. SLEEVES IN WALLS, ROOFS, AND FLOORS OF OTHER CONSTRUCTION AND THROUGH SUSPENDED CEILINGS SHALL BE FABRICATED FROM 22 U.S. GAUGE GALVANIZED STEEL. FLOOR SLEEVES SHALL EXTEND THREE INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. SPACE BETWEEN FLOOR SLEEVES AND PASSING CONDUIT SHALL BE FILLED WITH DUCT SEAL, PACKING AND CAULKED WITH WATERPROOF COMPOUND AS APPROVED. WHERE CONDUITS PASS THROUGH WATERPROOFED FLOORS OR WALLS, SLEEVES SHALL BE FABRICATED SUCH THAT WATERPROOFING CAN BE FLASHED ONTO AND AROUND THE SLEEVE.

RACEWAYS
 ALL POWER AND LIGHTING CIRCUITS SHALL BE RUN IN METALLIC RACEWAYS EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. THESE RACEWAYS SHALL BE RUN CONCEALED IN ALL FINISHED AREAS, AND WHERE RUN EXPOSED SHALL BE SQUARE TO THE BUILDING AND HELD TIGHT TO THE BUILDING CONSTRUCTION. LOW VOLTAGE, TELEPHONE, INTERCOM, MUSIC, ALARM AND SECURITY WIRING RUN ABOVE ACCESSIBLE CEILINGS SHALL BE RUN USING INSULATED, PLENUM RATED CABLE. PROVIDE LOW VOLTAGE CABLE IN CONDUIT IF REQUIRED BY LOCAL AHJ. VERIFY ALL REQUIREMENTS PRIOR TO INSTALLATION. METALLIC CONDUIT FOR THESE SYSTEMS SHALL BE PROVIDED ONLY WHERE RUN INSIDE WALLS. THE DRAWINGS INDICATE THE REQUIRED SIZE OF ALL RACEWAYS EXCEPT AS HEREINAFTER SPECIFIED). THE POINTS OF TERMINATION AND THE SUGGESTED ROUTING. HOWEVER, THE INSTALLER IS RESPONSIBLE FOR PROPER COORDINATION WITH BUILDING STRUCTURE AND THE WORK OF OTHER TRADES, FURNISH ALL REQUIRED BENDS, ELBOWS, FITTINGS, JUNCTION AND PULL BOXES, WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS, THAT MAY BE REQUIRED TO SATISFY CODES AND THE STANDARDS OF GOOD PRACTICE. WHERE CONDUITS FOR BOTH BRANCH AND FEEDER CIRCUITS ARE RUN CONCEALED, THEY MAY BE RUN OUT OF SQUARE TO THE BUILDING PROVIDING THE SHORTEST POSSIBLE RUN IS UTILIZED. RACEWAY SIZES ARE BASED ON THE USE OF COPPER CONDUCTORS AND N.E.C. FILL.

CONDUIT SHALL BE CONSTRUCTED AS ELECTRICAL RACEWAYS AND SHALL CONFORM TO THE FOLLOWING: CONCEALED IN SUSPENDED CEILINGS AND INTERIOR PARTITIONS - EMT WITH SET SCREW TYPE FITTINGS. UNDERGROUND OR BELOW INTERIOR SLABS - GRS. (NOTE: PVC CONDUIT IS PERMITTED OUTSIDE FOR PARKING AREA LIGHTING, SIGNS, ETC. ELBOWS SHALL BE GRS). EXPOSED ON BUILDING EXTERIOR - GRS.

CONDUIT BENDS SHALL BE MADE TO THE LARGEST POSSIBLE RADIUS FOR EASE IN PULLING CONDUCTORS AND TO PROVIDE A NEATLY INSTALLED APPEARANCE. EQUIPMENT AND CONDITIONS PERMITTING, POWER CONDUIT BENDS SHALL CONFORM TO THE FOLLOWING: 1-1/2 IN. - 18 IN. RADIUS; 2 IN. - 24 IN. RADIUS; 2-1/2 IN. - 24 IN. RADIUS; 3 IN. - 36 IN. RADIUS.

GRS CONDUIT SHALL BE CUT WITH POWER OR HACKSAW AND CLEANLY REAMED

TO REMOVE ALL "BURRS" AND ALL FIELD CUT THREADS SHALL BE PAINTED WITH WHITE LEAD BEFORE COUPLINGS ARE APPLIED.

EMPTY CONDUIT SYSTEMS INSTALLED FOR COMMUNICATION SYSTEMS, PUBLIC TELEPHONES, OWNER ITEMS AND OTHER SYSTEMS AS INDICATED ON DRAWINGS SHALL BE INSTALLED COMPLETE WITH NYLON PULL WIRES PROPERLY TAGGED AT BOTH ENDS FOR IDENTIFICATION.

WHERE BUILDING VENTILATION CONDITIONS ARE SUCH THAT AIR MAY FLOW CONTINUOUSLY IN CONDUITS, CAUSING CONDENSATION AND THE COLLECTION OF MOISTURE, THE CONDUITS SHALL BE SEALED AT EACH END WITH A PLIABLE X DUCT SEALING COMPOUND. ALSO SEAL ALL CONDUITS ENTERING AND LEAVING REFRIGERATED EQUIPMENT AND PROVIDE EXPANSION JOINTS PER N.E.C.

ALL CONNECTIONS TO MOTORS, SOLENOID VALVES, PRESSURE SWITCHES, LIMIT SWITCHES, AND SIMILAR APPARATUS SHALL BE FLEXIBLE CONDUIT WHERE PERMITTED. WHERE EQUIPMENT IS INSTALLED OUTDOORS OR EXPOSED TO MOISTURE, USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATER-TIGHT FITTINGS.

EQUIPMENT LEVELING, HANGERS AND SUPPORTS
 SET EACH PIECE INSTALLED UNDER THIS DIVISION TRUE AND LEVEL. ADEQUATELY SUPPORT ALL RACEWAYS FROM THE STRUCTURE USING SCREW CLAMPS TO SECURE TO SAME. ARRANGE SUPPORTS TO PREVENT MOISTURE COLLECTION AND ALLOW ENTRANCE TO BOXES WITHOUT BENDS. INSTALL MULTIPLE CONDUITS USING CHANNEL TRAPEZE SUPPORTS TIGHT TO STRUCTURE ABOVE. USE APPROVED SPACERS TO INSULATE FROM CONTACT WITH BUILDING. SIZE CLAMPS, INSERTS, CHANNELS AND ALL OTHER MEMBERS TO SUPPORT A LOAD EQUAL TO 200% OF THE COMBINED WEIGHT OF ALL SUPPORTED MATERIAL PLUS THE WEIGHT OF A MAN.

WHERE SEVERAL RACEWAYS ARE SUPPORTED ON A COMMON TRAPEZE HANGER, SUPPORTS SHALL BE SPACED TO ACCOMMODATE THE SMALLEST SIZE RACEWAY INVOLVED. SPACE HANGERS AS FOLLOWS:
 RIGID CONDUIT: 1/2 AND 3/4 IN. SIZE; 6'-0" ON CENTERS; 1 AND 1-1/4 IN. SIZE; 9'-0" ON CENTERS
 ELECTRIC METALLIC TUBING: 1/2 AND 3/4 IN. SIZE; 5'-0" ON CENTERS; 1 AND 1-1/4 IN. SIZE; 6'-0" ON CENTERS.

SECURELY ATTACH HANGERS AND SUPPORTS TO CONSTRUCTION BY METHODS RECOMMENDED IN THE "NECA STANDARDS OF INSTALLATION" MANUAL. COORDINATION WITH MECHANICAL TRADES; THE INTENT OF THE ABOVE CEILING SUPPORTS IS TO COMBINE AS MANY PIPES, CONDUITS, ETC., AS IS POSSIBLE WITHIN SAFE STRUCTURAL LIMITS, ON EACH HORIZONTAL SECTION OF A TRAPEZE HANGER. PRIOR TO SELECTING THE HORIZONTAL MEMBER, ALL TRADES, MECHANICAL AND ELECTRICAL, SHALL COORDINATE ACTUAL NUMBER OF PIPES, CONDUITS, ETC., SUCH THAT FINAL SELECTION RESULTS IN A NEATLY GROUPED, DISCIPLINED AND ACCESSIBLE INSTALLATION.

WIRING INSTALLATION
 EXCEPT FOR SUCH ITEMS AS ARE NORMALLY WIRED AT THEIR POINT OF MANUFACTURE AND SO DELIVERED - UNLESS SPECIFICALLY NOTED TO THE CONTRARY HEREIN - THE ELECTRICAL TRADE SHALL DO ALL ELECTRICAL WIRING OF EVERY CHARACTER. IT IS THE INTENT OF THESE SPECIFICATIONS AND DRAWINGS THAT ALL SYSTEMS AND EQUIPMENT SHALL BE PROVIDED WITH ALL NECESSARY UTILITY CONNECTIONS, COMPLETED TO ALLOW SAFE AND PROPER OPERATION OF SAID SYSTEMS. WHEN IT IS NECESSARY FOR TRADES PERFORMING WORK COVERED BY THIS DIVISION TO MAKE FINAL CONNECTIONS TO ITEMS OF EQUIPMENT BEING FURNISHED BY OTHERS, OR BY OTHER TRADES UNDER OTHER DIVISIONS, ALL SUCH WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DIVISION AND ALL MATERIALS USED SHALL BE AS SPECIFIED HEREIN.

MINIMUM WIRE SIZE FOR BRANCH CIRCUITS SHALL BE #12 AWG, EXCEPT THAT HOMERUNS LONGER THAN 100 FT. LENGTH FROM THE PANEL TO THE CIRCUIT'S ELECTRICAL LOAD CENTER SHALL BE #10 AWG MINIMUM. WHERE RUNS EXCEED 150', CONTRACTOR MUST ENSURE WIRE SIZE BEING UTILIZED DOES NOT CREATE A VOLTAGE DROP GREATER THAN 3%. REQUEST PROPER WIRE SIZE PRIOR TO INSTALLATION IF A 3% VOLTAGE DROP MAY OCCUR FOR ANY BRANCH CIRCUIT. WHERE MORE THAN THREE CURRENT CARRYING CONDUCTORS ARE ENCLOSED IN THE SAME RACEWAY, CONDUCTORS ARE TO BE DERATED PER N.E.C. AND WIRE SIZE INCREASED AS REQUIRED. WHERE THE INCREASED CONDUCTOR SIZE REQUIRES, INCREASE THE RACEWAY SIZE AS WELL. FOR CONTROL WIRING, USE #14 AWG MINIMUM. FOR FIXTURE WIRING, AS PERMITTED BY N.E.C., USE #18 AWG MINIMUM. FOR SIGNAL AND COMMUNICATIONS SYSTEMS USE WIRE SIZE AS SPECIFICALLY REQUIRED BY THE SYSTEM SUPPLIER.

MAKE CONNECTIONS TO TERMINALS USING PRESSURE-TYPE CONNECTORS. SOLDERED JOINTS ARE PROHIBITED. ALL JOINTS IN CONDUCTORS SHALL BE MADE AT AN ACCESSIBLE LOCATION WITHIN A BOX BY TWISTING THE BARE CONDUCTOR ENDS TOGETHER AND APPLYING A WIRE CONNECTOR IN ALL SIZES UP TO THE MAXIMUM CAPACITY OF THE CONNECTOR. JOINTS SHALL BE TAPED WITH AN APPROVED ELECTRICAL TAPE. SPLICES FOR CONDUCTORS LARGER THAN #10 AWG SHALL BE MADE WITH AN APPROVED COMPRESSION (SQUEEZE) CONNECTOR INSULATED WITH NOT LESS THAN TWO LAYERS OF ELECTRICAL FILL TAPE TO 1.5 TIMES THE THICKNESS OF INSULATION FOLLOWED BY TWO (MINIMUM) LAYERS OF HALF-LAPPED ELECTRICAL TAPE FOR MECHANICAL PROTECTION. LOCATE ALL SPLICES IN BOXES OR FITTINGS OF PROPER SIZE PER N.E.C.

IDENTIFY ALL WIRES AND CABLES WITH BRADY ADHESIVE WIRE MARKERS AT EACH BOX, PANEL, AND OUTLET. IDENTIFICATION SHALL, AS A MINIMUM, INDICATE THE PANEL AND CIRCUIT SUPPLYING THE OUTLET. AT THE PANEL END, THE LOAD SERVED AND ITS LOCATION SHALL BE INDICATED. PROVIDE A MINIMUM OF 8 IN. SLACK WIRE AT EACH OUTLET FOR MAKING CONNECTION TO THE DEVICE OR TO PROVIDE FOR A FUTURE DEVICE IN THE BOX.

BOXES
 EACH BOX SHALL BE OF PROPER SIZE TO ACCOMMODATE THE DEVICE AND FUNCTION FOR WHICH IT IS SHOWN. BOXES FOR WALL DEVICES SHALL BE FURNISHED COMPLETE WITH PLASTER RING OR TILE RING ACCORDING TO WALL CONSTRUCTION WHERE REQUIRED. BOXES FOR INSTALLATION IN MASONRY WALLS SHALL BE SPECIAL SQUARE CORNER MASONRY TYPE. BOXES FOR MOUNTING OF LIGHTING FIXTURES SHALL BE FOUR INCH OCTAGON, EQUIPPED WITH 3/8 IN. "NO-BOLT" FIXTURE STUD. BOXES FOR FLOOR OUTLETS SHALL BE CONCRETE PROOF STEEL BOXES WITH ADJUSTABLE TOPS AND DEVICES AS HEREINAFTER NOTED OR SHOWN. ALL BOXES SHALL BE FURNISHED COMPLETE WITH PROPER COVER AND/OR DEVICE PLATE AND DEVICE. UNLESS OTHERWISE NOTED, PLACE OUTLET BOXES AT THE FOLLOWING HEIGHTS (BOX CENTER TO FINISH FLOOR): WALL SWITCHES 48" AND CONVENIENCE OUTLETS 18" UNLESS NOTED OTHERWISE ON DRAWINGS.

TELEPHONE, ALARM, AND SIGNAL SYSTEM OUTLET BOXES SHALL BE STANDARD OUTLET BOX TYPE WHERE ONLY ONE CONDUIT ENTERS SAME. UNLESS OTHERWISE SPECIFIED OR INDICATED ON DRAWINGS, WHERE TWO OR MORE CONDUITS ENTER, BOX SHALL BE 4-11/16 IN. SQUARE MINIMUM WITH SUITABLE ADAPTER RING.

LOCATE ALL OUTLETS AS INDICATED ON DRAWINGS, HOWEVER, AT INSTALLATION INSPECT ARCHITECTURAL DRAWINGS AND LOCATE LOCAL SWITCHES ON THE STRIKE SIDE OF THE DOOR.

SYSTEM GROUNDING

EQUIPMENT, RACEWAY SYSTEMS, WIRING SYSTEM NEUTRALS, RECEPTACLES AND POWER OUTLETS, MOTORS AND MOTORIZED EQUIPMENT, SHALL BE GROUNDED IN ACCORDANCE WITH N.E.C. ARTICLE 250.

GROUND RECEPTACLES AND POWER OUTLETS TO THE CONDUIT SYSTEM WITH A GREEN GROUNDING CONDUCTOR SIZE IN ACCORDANCE WITH N.E.C. AND CONNECTED BETWEEN THE DEVICE GROUNDING SCREW AND THE OUTLET BOX. CONNECTION TO THE BOX MAY BE A "G" CLIP OR BY A 10/24 SCREW THREADED INTO A HOLE IN THE BACK OF THE BOX AND USED FOR NO OTHER PURPOSE. EQUIPMENT CONNECTED TO THE ELECTRICAL SYSTEM SHALL BE GROUNDED WITHIN INSULATED GREEN GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH N.E.C. AND INSTALLED WITHIN THE RACEWAY. CONDUCTOR SHALL BE CONTINUOUS BETWEEN A GROUNDING SCREW IN THE EQUIPMENT JUNCTION BOX AND A GROUND ATTACHMENT IN THE NEAREST OUTLET BOX IN THE RIGID METALLIC CONDUIT SYSTEM. THIS REQUIREMENT INCLUDES ALL FLEXIBLE CONDUIT.

GENERALLY FOR TELEPHONE AND SUPPLEMENTAL COMMUNICATION SYSTEMS NO #6 AWG CONDUCTOR TO EACH PROTECTOR CABINET, OTHER CABINET, OR DEVICE INSTALLATION SHALL BE CONSIDERED SUFFICIENT, FROM THE SERVICE GROUND (UNLESS INDICATED OTHERWISE).

GROUNDING MATERIAL:
 GROUND-RODS - 1/2" DIA., 10' LONG, COPPER/WEILD
 GROUND CONDUCTOR - SIZE AS PER N.E.C. REQUIREMENTS, SOFT DRAWN OR SOFT ANNEALED, COPPER WIRE.
 JOINTS AND CONNECTIONS - MOLDED FUSION WELDING PROCESS USING PROPER MOLD AND THE NUMBER, SIZE AND TYPE CARTRIDGE FOR THE JOINT OR CONNECTION. WATERPIPE CONNECTION, SILICON BRONZE APPROVED MECHANICAL CONNECTOR DESIGNED FOR THE PIPE AND CABLE TO BE BONDED.

PANELBOARD INSTALLATION:
 MOUNT PANELBOARDS WITH CENTERLINE AT 5 FT.-6IN. ABOVE FINISH FLOOR, EXCEPT THAT THE HIGHEST BREAKER HANDLE SHALL BE BELOW 6 FT.-6 IN. ABOVE FINISH FLOOR. ARRANGE BREAKERS SO THAT THE BREAKER RATING IS VISIBLE WITH THE PANEL FRONT IN PLACE.

PANEL DIRECTORIES, AS A MINIMUM, SHALL BE TYPEWRITTEN AND INDICATE BREAKER POSITION NUMBER AND EQUIPMENT SERVED. THE PANEL IDENTIFICATION SHALL BE LOCATED ON THE PANEL TRIM AND SHALL CONSIST OF A BLACK LAMINATED PHENOLIC LABEL, SCREW MOUNTED, WITH THE PANEL IDENTIFICATION MATCHING PANEL IDENTIFICATION ON DRAWINGS. LABEL ALL CONDUCTORS WITH ADHESIVE WRAP LABELS WITHIN 2 IN. OF THE CONDUCTOR TERMINATION PRIOR TO INSTALLATION OF TRIM.

LIGHTING FIXTURE INSTALLATION
 PROVIDE A LIGHTING FIXTURE FOR EACH AND EVERY OUTLET IN ACCORDANCE WITH TYPE DESIGNATION AND FIXTURE SCHEDULE ON THE DRAWINGS. VERIFY THE ARCHITECTURAL FINISHES AND CEILING CONSTRUCTION AND - REGARDLESS OF THE CATALOG NUMBER, PREFIXES AND SUFFIXES SHOWN - PROVIDE FIXTURES WITH THE PROPER TRIM, FRAMES, SUPPORTS AND HANGER AND OTHER MISCELLANEOUS APPURTENANCES TO PROPERLY COORDINATE WITH SAID FINISHES. REINFORCE CEILING CONSTRUCTION AS REQUIRED TO PROPERLY SUPPORT THE WEIGHT OF FIXTURES INSTALLED THEREON.

IMMEDIATELY PRIOR TO FINAL INSPECTION; THOROUGHLY CLEAN ALL FIXTURES INSIDE AND OUT, INCLUDING PLASTICS AND GLASSWARE. ADJUST TRIM TO FIT ADJACENT SURFACES. REPLACE BROKEN OR DAMAGED PARTS. INSTALL NEW LAMPS. ELECTRICALLY AND MECHANICALLY TEST THE SYSTEM FOR PROPER OPERATION.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL FROM LOCAL CODE AUTHORITIES AND MAKING ANY REVISIONS DIRECTED BY THEM ON EMERGENCY AND EXIT LIGHTING.

CLEANING
 THOROUGHLY CLEAN ALL FIXTURES, SWITCHES, OTHER DEVICES, PANELBOARDS, AND EQUIPMENT PROVIDED OR CONNECTED IN THIS CONTRACT. ALL SURFACES SHALL BE PROPERLY POLISHED AND SHALL BE FREE OF PAINT AND ALL OTHER DIRT OR DEBRIS. TOUCHUP OR COMPLETELY REFINISH ALL EQUIPMENT FURNISHED WITH FACTORY FINISHES THAT IS DAMAGED DURING DELIVERY OR CONSTRUCTION. PROPERLY PROTECT THE FRONTS OF ALL PANELBOARDS, SWITCHBOARDS AND SIMILAR EQUIPMENT TO PREVENT MARRING AND OTHER DEFACING.

AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY THE WORK OF THE TRADESMEN DOING ELECTRICAL WORK. AT COMPLETION OF THE WORK, REMOVE ALL RUBBISH, TOOLS, EQUIPMENT, AND SURPLUS MATERIALS. BROOM CLEAN ALL ASSIGNED SPACES PRIOR TO LEAVING THE PREMISES.

TESTING AND LOAD BALANCING

TEST ALL CIRCUITS TO ASSURE THEM TO BE FREE OF GROUNDS AND SHORTS. LIGHT AND TEST EACH LAMP. PROVE AND TEST THE AVAILABLE VOLTAGE ON THE LOAD SIDE OF EACH DISCONNECT. VERIFY PROPER OPERATION OF THE DISCONNECT. VERIFY THE PHASE SEQUENCE, VOLTAGE, AND ROTATION AT EACH MOTOR IN THE PRESENCE OF THE INSTALLER. RUN EACH MOTOR WITH ITS CONTROL AS NEARLY AS POSSIBLE UNDER OPERATING CONDITIONS FOR A SUFFICIENT LENGTH OVER TIME TO DEMONSTRATE CORRECT ALIGNMENT, WIRING CAPACITY, SPEED, AND OVERALL SATISFACTORY OPERATION. CHECK THAT THE PROPER OVERLOAD HEATERS HAVE BEEN INSTALLED BY READING THE MOTOR NAMEPLATE. ADJUST THE SIZE OF THE OVERLOAD HEATER AS REQUIRED TO MATCH THE MOTOR NAMEPLATE. OPERATE ALL MAIN AND FEEDER SWITCHES AND BREAKERS.

FURNISH AT THE COMPLETION OF THE PROJECT A FINAL INSPECTION CERTIFICATE FROM THE LOCAL INSPECTING AUTHORITY.


END OF SECTION 16000

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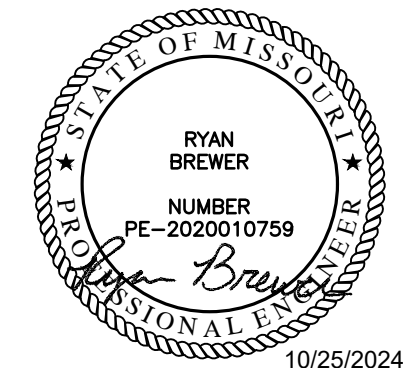
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10/25/2024
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Project Number: 2410
 Project Type: TENANT FINISH
 Project Name and Address:

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Issue: _____ Date: _____
 Permit Submittal 10.25.24

Sheet Title:
ELECTRICAL SPECIFICATIONS

E502