REBID: RENOVATE INTERIOR & EXTERIOR
St. Clair Readiness Center
St. Clair, Missouri

STATE OF MISSOURI
MICHAEL L. KEHOE,
GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026

VESTAL CORPORATION

DGG INC.

OWNER:	STATE OF MISSOURI MIKE KEHOE, GOVERNOR DEPARTMENT OF MISSOURI NATIONAL GUARD
PROJECT MANAGEMENT:	OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DESIGNER:	VESTAL CORPORATION 1 THE PINES COURT, STE A ST. LOUIS, MO 63141
PROJECT NUMBER:	T2326-01
SITE NUMBER:	6304
FACILITY NUMBER:	8136304011

SHEET NUMBER:

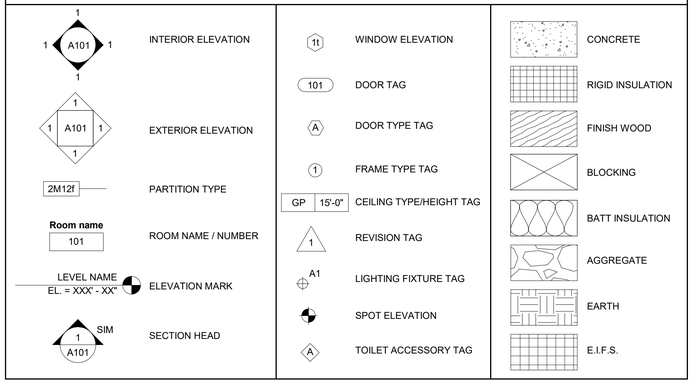
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6/27/2025

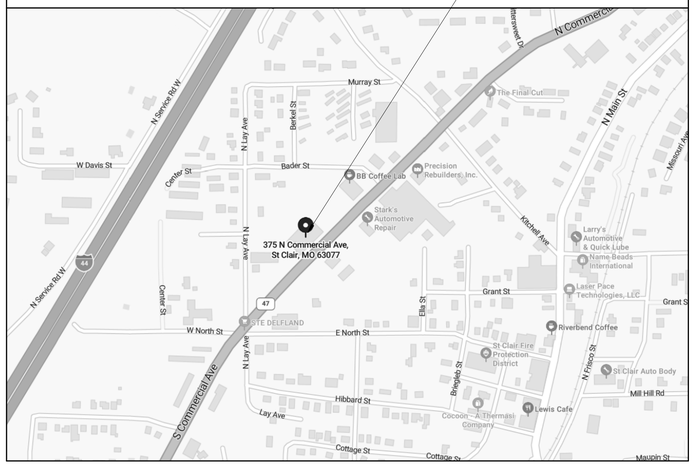
ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
BD	BOARD
BLDG	BUILDING
BO_	BOTTOM OF ___
CF/CI	CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED / OWNER INSTALLED
CG	CORNER GUARD
CJ	CONTROL JOINT
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CR	CARD READER
DIA	DIAMETER
DN	DOWN
DS	DOWNSPOUT
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATOR
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FRT	FIRE RETARDANT TREATED
GA	GAUGE
GFRC	GLASS-FIBER REINFORCED CONCRETE
GRG	GLASS-REINFORCED GYPSUM
GLU LAM	GLUE LAMINATED WOOD
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
JAN	JANITOR
JT	JOINT
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED / OWNER INSTALLED
OPP	OPPOSITE
OD	OVERFLOW DRAIN
PR	PAIR
R	RISER
R-#	R-VALUE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE	REFER TO
REF	REFRIGERATOR
REV	REVISION
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
SF	SQUARE FEET
SIM	SIMILAR
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
T	TREAD
TO_	TOP OF ___
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
WD	WOOD
WH	WATER HEATER

SYMBOLS



LOCATION MAP



SOLAR MAP



PROJECT DIRECTORY

OWNER	CIVIL	ARCHITECT	STRUCTURAL	MECHANICAL	PLUMBING	ELECTRICAL
STATE OF MISSOURI OFFICE OF ADMINISTRATION 730 TRUMAN BUILDING, 301 WEST HIGH ST. POST OFFICE BOX 809 JEFFERSON CITY, MO 65102 P: (573) 751-3339 F: (573) 751-7277	VESTAL CORPORATION 1 THE PINES COURT SUITE A CHESTERFIELD, MO 63141 P: (314)439-9900 F: (314)439-9906	VESTAL CORPORATION 1 THE PINES COURT SUITE A CHESTERFIELD, MO 63141 P: (314)439-9900 F: (314)439-9906	VESTAL CORPORATION 1 THE PINES COURT SUITE A CHESTERFIELD, MO 63141 P: (314)439-9900 F: (314)439-9906	VESTAL CORPORATION 1 THE PINES COURT SUITE A CHESTERFIELD, MO 63141 P: (314)439-9900 F: (314)439-9906	VESTAL CORPORATION 1 THE PINES COURT SUITE A CHESTERFIELD, MO 63141 P: (314)439-9900 F: (314)439-9906	VESTAL CORPORATION 1 THE PINES COURT SUITE A CHESTERFIELD, MO 63141 P: (314)439-9900 F: (314)439-9906

COVERSHEET / GENERAL

SHEET #	SHEET NAME
G000	COVERSHEET
G001	GENERAL INFORMATION
G002	CODE DATA AND LIFE SAFETY
G003	LIFE SAFETY PLAN

CIVIL

SHEET #	SHEET NAME
C001	GENERAL NOTES
C101	SITE PLAN
C501	DETAILS

DEMOLITION

SHEET #	SHEET NAME
D101	FLOOR DEMO PLAN
D103	REFLECTED CEILING DEMO PLAN

ARCHITECTURAL

SHEET #	SHEET NAME
A100	FLOOR PLAN
A110	ROOF PLAN
A120	REFLECTED CEILING PLAN
A140	ENLARGED PLANS
A141	ENLARGED PLANS
A201	EXTERIOR ELEVATIONS
A300	BUILDING SECTIONS
A350	WALL SECTIONS
A510	ROOF DETAILS
A520	CEILING DETAILS
A521	CEILING DETAILS
A550	SECTION DETAILS
A600	INTERIOR ELEVATIONS - RESTROOMS
A601	INTERIOR ELEVATIONS - RESTROOMS
A700	DOOR SCHEDULE AND DETAILS
A701	DOOR DETAILS
A720	PARTITION TYPES AND DETAILS
A800	INTERIOR FINISH SCHEDULE AND LEGEND
A810	FINISH PLAN

MECHANICAL

SHEET #	SHEET NAME
M001	MECHANICAL LEGEND
MD101	GROUND FLOOR PLAN - HVAC DEMO
M101	OVERALL GROUND FLOOR PLAN - HVAC
M102	OVERALL ROOF PLAN - HVAC
M103	OVERALL GAS PIPING PLAN - HVAC
M301	HVAC SECTIONS
M402	ENLARGED FLOOR PLANS - HVAC
M403	ENLARGED FLOOR PLANS - HVAC
M501	HVAC DETAILS
M502	HVAC DETAILS
M601	HVAC SCHEDULES
M701	AIRFLOW SCHEMATICS
M901	GAS PIPING ISOMETRIC

PLUMBING

SHEET #	SHEET NAME
P001	PLUMBING LEGEND
PD101	GROUND FLOOR PLAN - PLUMBING DEMOLITION
P101	UNDERGROUND PLAN - PLUMBING
P102	GROUND FLOOR PLAN - PLUMBING
P401	ENLARGED UNDERGROUND PLANS - PLUMBING
P402	ENLARGED UNDERGROUND PLANS - PLUMBING
P403	ENLARGED FLOOR PLANS - PLUMBING
P404	ENLARGED FLOOR PLANS - PLUMBING
P501	PLUMBING DETAILS
P502	PLUMBING DETAILS
P601	PLUMBING SCHEDULE
P901	PLUMBING ISOMETRICS
P902	PLUMBING ISOMETRICS
P903	PLUMBING ISOMETRICS
P904	PLUMBING ISOMETRICS

ELECTRICAL

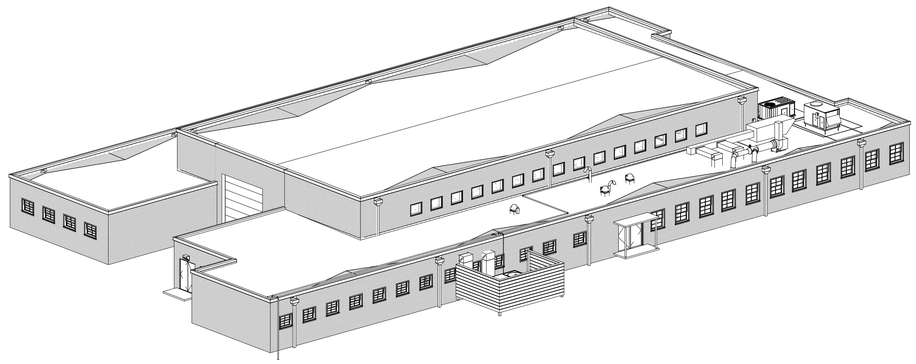
SHEET #	SHEET NAME
E001	SYMBOLS, ABBREVIATIONS, NOTES
E101	DEMOLITION LIGHTING PLAN
E102	DEMOLITION POWER PLAN
E121	LIGHTING PLAN
E131	POWER PLAN
E132	ENLARGED PLAN - KITCHEN
E133	ELECTRICAL - ROOF POWER PLAN
E501	ELECTRICAL - DETAILS
E601	PANEL SCHEDULES
E602	PANEL SCHEDULES
E701	ONE-LINE RISER DIAGRAM

KITCHEN

SHEET #	SHEET NAME
Q-DT-01	FOODSERVICE EQUIPMENT HOOD DRAWINGS
Q-DT-02	FOODSERVICE EQUIPMENT HOOD DRAWINGS
Q-DT-03	FOODSERVICE EQUIPMENT HOOD DRAWINGS
Q-DT-04	FOODSERVICE EQUIPMENT HOOD DRAWINGS
Q-DT-05	FOODSERVICE EQUIPMENT ELEVATIONS
Q-FP-01	FLOOR PLAN
Q-FP-02	FOODSERVICE EQUIPMENT SPOT ELECTRICAL PLAN
Q-FP-03	FOODSERVICE EQUIPMENT SPOT PLUMBING

FIRE ALARM

SHEET #	SHEET NAME
FA100	FIRE ALARM SYSTEM
FA101	FIRE ALARM SYSTEM DETAILS AND CALCULATIONS
FA102	FIRE ALARM SYSTEM RISER DIAGRAM
FA103	FIRE ALARM SYSTEM HORN STROBE COVERAGE



GENERAL NOTES

A. **CONTRACTOR IS NOT AUTHORIZED TO SCALE CONSTRUCTION DRAWINGS.** ARCHITECT IS TO BE NOTIFIED IN THE EVENT A DISCREPANCY IS FOUND IN EITHER SPECIFICATION OR CONSTRUCTION DRAWINGS PRIOR TO THE BEGINNING OF CONSTRUCTION.
B. GENERAL CONTRACTOR SHALL OBSERVE ALL REGULATIONS IMPOSED BY GOVERNING BODIES. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL, STATE AND NATIONAL CODES.
C. THE CONSTRUCTION DOCUMENTS HAVE BEEN CAREFULLY PREPARED BUT MAY NOT DEPICT EVERY CONDITION TO BE ENCOUNTERED. IT IS THEREFORE THE GENERAL CONTRACTORS AND SUBCONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS OF THE AFFECTED WORK PRIOR TO SUBMITTING A BID. IF CONDITIONS DIFFER OR ADDITIONAL WORK IS REQUIRED BEYOND THAT STATED IN THE CONSTRUCTION DOCUMENTS IT IS THE CONTRACTORS RESPONSIBILITY TO BRING SUCH MATTERS TO THE ATTENTION OF THE ARCHITECT IN A REASONABLE TIME PERIOD (IE: 5 WORK DAYS) PRIOR TO BID SUBMISSION OR OTHERWISE INCLUDE SUCH INSTANCES IN THEIR BID SUM OR QUALIFY IN THE BID SUBMITTAL.
D. INFORMATION PROVIDED DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO FIELD VERIFY ACTUAL QUANTITIES, DIMENSIONS AND CONDITIONS.
E. GENERAL CONTRACTOR TO COORDINATE ALL TOP OF STEEL BEARING HEIGHTS AND TOP OF MASONRY HEIGHTS WITH STRUCTURAL DRAWINGS. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
F. CONTRACTOR SHALL COORDINATE ALL WORK OF EVERY TRADE AND CHARACTER OF THE PROJECT. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS AND SAFETY OF CONSTRUCTION.
G. ALL WORK OF EVERY CHARACTER SHALL BE LAID OUT BY THE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR THE CORRECT FIT AND SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE BUILDING SITE PRIOR TO CONSTRUCTION.
H. ALL WRITTEN CORRESPONDENCE WILL BE TRANSMITTED FROM SUBCONTRACTOR THROUGH GENERAL CONTRACTOR THROUGH OWNER'S REP TO ARCHITECT. ALL PARTIES INVOLVED ARE TO RECEIVE WRITTEN AND SIGNED COPIES OF SUCH. **NO VERBAL AGREEMENTS AFFECTING COST OR ALTERNATIVE CONSTRUCTION METHODS AND ARRANGEMENTS WILL BE CONSIDERED VALID OR BINDING, AND ARE THEREFORE, DISALLOWED.**
I. GENERAL CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS / DIMENSIONS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
J. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES AT THE TIME OF CONSTRUCTION TO VERIFY EXACT LOCATIONS, INFORMATION, AND/OR CHANGES OR ADDITIONS.
K. GENERAL CONTRACTOR SHALL COMPLY WITH ALL DIRECTIVES OF THE OWNER. IF CONFLICTS BETWEEN DRAWINGS, SPECIFICATIONS AND REQUIREMENTS OF BUILDING OWNER AND/OR OPERATORS ARISE, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
L. CIVIL FINISH FLOOR ELEVATION XXX.XX' = ARCHITECTURAL FINISH FLOOR ELEVATION 100'-0".
M. THE CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION ACTIVITY, INCLUDING STORAGE OF MATERIAL AND EQUIPMENT, WITHIN THE CONSTRUCTION LIMITS, AT ALL TIMES BEING RESPONSIBLE FOR AND ABIDING BY RULES AND REGULATIONS OF THE OWNER.
N. GENERAL CONTRACTOR TO BE RESPONSIBLE FOR REPAIRING ANY AND ALL SURFACES TO REMAIN DAMAGED BY HIMSELF OR SUBCONTRACTORS UNDER HIS CONTROL. REPAIRS ARE TO MATCH EXISTING MATERIALS AND MUST BE ACCEPTABLE TO OWNER. THE CONTRACTOR IS RESPONSIBLE IN HIS BID SUM THE PATCHING OF ALL ADJACENT MATERIALS AND FINISHES INCLUDING PAINTING, CONCRETE FLOORS, WALLS, ETC. WHETHER STATED IN THE CONSTRUCTION DOCUMENTS OR NOT.
O. ALL FLOOR TRANSITIONS BETWEEN DIFFERENT MATERIALS SHALL BE SMOOTH AND FLUSH (MAXIMUM = 1/8" PER FOOT).
P. GENERAL CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS FROM JOBSITE. ALL CONSTRUCTION DEBRIS SHALL BE CONTAINED INSIDE CONSTRUCTION LIMITS.
Q. ALL WALLS WITH ITEMS SUCH AS GRAB BARS, TOILET ACCESSORIES, WOOD TRIM, SHELVING, CASEWORK, ETC. SHALL BE REINFORCED WITH CONCEALED, FIRE TREATED WOOD BLOCKING. (GENERAL CONTRACTOR TO INSTALL BLOCKING - TYPICAL).
R. ALL WOOD BLOCKING, PLYWOOD, ETC. SHALL BE FIRE RETARDANT TREATED LUMBER.

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DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
GENERAL INFORMATION

SHEET NUMBER:
G001

6/27/2025

CODE DATA & LIFE SAFETY INFORMATION

PROJECT DESCRIPTION:
EXISTING:

NO. OF STORIES AT OR ABOVE GRADE	1
NO. OF STORIES BELOW GRADE	0
BUILDING HEIGHT	11'-2" TO 20'-5"
BUILDING AREA	APPROX 17,217 SF
AUTOMATIC SPRINKLER SYSTEM	NON-SPRINKLED

RENOVATION:

LEVEL 2 ALTERATION
AREA OF RENOVATION 6035 SQ F

APPLICABLE CODES:
2018 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL PLUMBING CODE
2009 INTERNATIONAL ENERGY CONSERVATION CODE
2014 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL FUEL GAS CODE
2015 INTERNATIONAL FIRE CODE
NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS
NFPA 14, STANDPIPE & HOSE SYSTEM
NFPA 72, NATIONAL FIRE ALARM CODE
AMERICANS WITH DISABILITY ACT (ADA) - ICC/ANSI 117.1-2009

DESIGN PARAMETERS:
GROUND SNOW LOAD= XX
WIND SPEED = XX MPH
SEISMIC DESIGN CATEGORY = D
OCCUPANCY CATEGORY = XX
FROST LINE DEPTH = XX"

TYPE OF CONSTRUCTION, BUILDING HEIGHT & AREA:

CONSTRUCTION TYPE (IBC CHAPTER 6)	TYPE II B
ALLOWABLE HEIGHT (IBC TABLE 504.3 AND TABLE 504.4)	3 STORIES, 55'-0"
ALLOWABLE AREA (IBC TABLE 506.2)	23,000 SF
ALLOWABLE AREA INCREASE (IBC SECTION 506)	XX,XXX SF (SECTION 506.3 - SPRINKLER)
ALLOWABLE AREA INCREASE (IBC SECTION 506)	XX,XXX SF (SECTION 506.2 - FRONTAGE)
TOTAL ALLOWABLE AREA (W/INCREASES SECTION 506)	23,000 SF

OCCUPANCY CLASSIFICATION:
PRIMARY OCCUPANCY CLASSIFICATIONS (IBC CHAPTER 3)

BUSINESS GROUP - B

OCCUPANCY LOAD CALCULATION:
BUSINESS GROUP "B" = 150 GROSS SQFT PER PERSON

RENOVATION AREA
MAIN LEVEL:
BUSINESS = 6035 SQFT /150 = 40 occ

TOTAL OCCUPANTS = 40 OCCUPANTS

EGRESS EXIT CALCULATION:
MAIN LEVEL:
BUSINESS = 40 occ X 0.2" = 8"

EGRESS PROVIDED = 1 = 64" WIDE DOORS
1 = 60" WIDE DOORS
1 = 42" WIDE DOORS
2 = 36" WIDE DOOR
TOTAL WIDTH PROVIDED = 238"

TOTAL OCCUPANTS = 40 OCCUPANTS / 0.2" = 8" REQUIRED
TOTAL WIDTH OF EGRESS PROVIDED = 238" PROVIDED

PLUMBING FIXTURE COUNTS:
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (TABLE 2902.1)

BUSINESS OCCUPANTS = 115 occ

	MALE	MALE/FEMALE	FEMALE
BUSINESS (B)			
WATER CLOSETS		1 PER 25 FIRST 50	
		1 PER 50 OVER 50	
LAVATORIES		1 PER 40 FIRST 80	
		1 PER 80 OVER 80	
DRINKING FOUNTAIN		1 PER 100	
SERVICE SINK		1	

	REQUIRED BUSINESS EXISTING	REQUIRED BUSINESS NEW	PROVIDED BUSINESS EXISTING	PROVIDED BUSINESS NEW
MALE				
WATER CLOSETS	4		5	
URINALS	4		2	
LAVATORIES	4		4	
SHOWERS	4		5	
FEMALE				
WATER CLOSETS	2		5	
LAVATORIES	2		4	
SHOWERS	1		3	
MALE/FEMALE				
WATER CLOSETS	2			
URINALS	0			
LAVATORIES	2			
DRINKING FOUNTAINS				
OTHER				
SERVICE SINK	1		1	

INTERIOR FINISH REQUIREMENTS:

INTERIOR EXIT STAIRWAYS, RAMPS & PASSAGEWAYS (IBC TABLE 803.13)	
GROUP B	CLASS A
CORRIDORS & ENCLOSURES FOR EXIT ACCESS STAIRWAYS & RAMPS	
GROUP B	CLASS B
ROOMS & ENCLOSED SPACES	
GROUP B	CLASS C

EXIT REQUIREMENTS:

OCCUPANT LOAD (IBC TABLE 1004.1.1)	
ACCESSORY STORAGE AREAS, MECHANICAL/EQUIPMENT	300 GROSS SF PER OCCUPANT
BUSINESS AREAS	100 GROSS SF PER OCCUPANT
CAPACITY & EXIT WIDTH (IBC 1005.1)	
STAIRWAYS	0.3" PER OCCUPANT
OTHER EGRESS COMPONENTS	0.2" PER OCCUPANT
DOOR WIDTH (IBC 1008.1.1)	
MINIMUM WIDTH	32"
MAXIMUM WIDTH	48"
STAIRWAY WIDTH (IBC 1009.1)	
MINIMUM WIDTH	44"
LESS THAN 50 OCCUPANTS	36"
RAMP WIDTH (IBC 1010.5.1)	
MEANS OF EGRESS RAMP	PER 1018.2
RAMP BETWEEN HANDRAILS	36"
COMMON PATH OF TRAVEL (IBC 1014.3)	
ASSEMBLY OCCUPANCY	75'
BUSINESS OCCUPANCY	100'
MINIMUM NUMBER OF EXITS (IBC 1015.1)	
1-49 OCCUPANTS	1 EXIT
49-500 OCCUPANTS	2 EXITS
501-1,000 OCCUPANTS	3 EXITS
MORE THAN 1,000 OCCUPANTS	4 EXITS
TRAVEL DISTANCE (IBC TABLE 1016.1)	
ASSEMBLY OCCUPANCY	250'
BUSINESS OCCUPANCY	300'
DEAD ENDS (IBC 1018.4)	
ASSEMBLY OCCUPANCY	20'
BUSINESS OCCUPANCY	50'
CORRIDOR WIDTH (IBC TABLE 1018.2)	
MINIMUM WIDTH	44"
ACCESS TO EQUIPMENT	24"
LESS THAN 50 OCCUPANTS	36"

BUILDING ENVELOPE DESIGN REQUIREMENTS:

ROOF	
INSULATION ENTIRELY ABOVE DECK	R-20 ci
WALLS (ABOVE GRADE)	
MASS	R-9.5 ci
METAL FRAMED	R-13 + R-7.5 ci
WALLS (BELOW GRADE)	
MASS	NOT REQUIRED
SLAB ON GRADE FLOORS	NOT REQUIRED
OPAQUE DOORS	
SWINGING (ASSEMBLY)	U-0.70
ROLLING (ASSEMBLY)	U-0.50
FENESTRATION - METAL FRAMING	
CURTAIN WALL / STOREFRONT	U-0.50
ENTRANCE DOOR	U-0.85
ALL OTHERS	U-0.55

FIRE RESISTANCE REQUIREMENTS:

BUILDING ELEMENTS (IBC TABLE 601)	
PRIMARY STRUCTURAL FRAME:	
TYPICAL	0 HOUR
SUPPORTING ROOF ONLY	0 HOUR
EXTERIOR WALLS:	
BEARING	0 HOUR
NONBEARING BY FIRE SEPARATION DISTANCE	
0' TO 5'	1 HOUR
5' TO 10'	1 HOUR
10' TO 30'	0 HOUR
OVER 30'	0 HOUR
INTERIOR WALLS:	
BEARING	
TYPICAL	0 HOUR
SUPPORTING ROOF ONLY	0 HOUR
NONBEARING WALLS	0 HOUR
FLOOR CONSTRUCTION :	
TYPICAL	0 HOUR
ROOF CONSTRUCTION:	
TYPICAL	0 HOUR
20' OR MORE ABOVE FLOOR BELOW	0 HOUR
SHAFT ENCLOSURES (IBC 708)	
4 STORIES OR MORE	2 HOUR ASSEMBLY
3 STORIES OR LESS	1 HOUR ASSEMBLY
OPENING PROTECTIVES (IBC TABLE 715.4)	
FIRE WALLS & FIRE BARRIERS	
4 HOUR ASSEMBLY	3 HOUR ASSEMBLY
3 HOUR ASSEMBLY	3 HOUR ASSEMBLY
2 HOUR ASSEMBLY	1 1/2 HOUR ASSEMBLY
1 1/2 HOUR ASSEMBLY	1 1/2 HOUR ASSEMBLY
SHAFT, EXIT ENCLOSURES & EXIT PASSAGEWAY	
2 HOUR ASSEMBLY	1 1/2 HOUR ASSEMBLY
FIRE BARRIERS ENCLOSURES FOR SHAFTS & EXIT ACCESS	
1 HOUR ASSEMBLY	1 HOUR ASSEMBLY
OTHER FIRE BARRIERS	
1 HOUR ASSEMBLY	3/4 HOUR ASSEMBLY
FIRE PARTITIONS - CORRIDOR WALLS	
1 HOUR ASSEMBLY	1/3 HOUR ASSEMBLY
1/2 HOUR ASSEMBLY	1/3 HOUR ASSEMBLY
OTHER FIRE PARTITIONS	
1 HOUR ASSEMBLY	3/4 HOUR ASSEMBLY
1/2 HOUR ASSEMBLY	1/3 HOUR ASSEMBLY
EXTERIOR WALLS	
3 HOUR ASSEMBLY	1 1/2 HOUR ASSEMBLY
2 HOUR ASSEMBLY	1 1/2 HOUR ASSEMBLY
1 HOUR ASSEMBLY	3/4 HOUR ASSEMBLY
SMOKE BARRIERS	
1 HOUR ASSEMBLY	1/3 HOUR ASSEMBLY
FIRE DAMPERS (IBC TABLE 716.3.2.1)	
LESS THAN 3 HOUR ASSEMBLY	1 1/2 HOUR
3 HOUR OR GREATER ASSEMBLY	3 HOUR
INTERIOR EXIT STAIRWAYS & RAMPS (IBC 1022)	
4 STORIES OR MORE	2 HOUR ASSEMBLY
3 STORIES OR LESS	1 HOUR ASSEMBLY
EXIT PASSAGEWAYS (IBC 1023)	1 HOUR ASSEMBLY
HORIZONTAL EXITS (IBC 1025)	2 HOUR ASSEMBLY

FIRE PROTECTION SYSTEMS:
AUTOMATIC SPRINKLER SYSTEMS (IFC 903)
FIRE DEPARTMENT CONNECTIONS (IFC 903.3.7)
MONITORING (IFC 903.4.1)
ALARMS (IFC 903.4.2)
STANDPIPE SYSTEMS (IFC 905 & NFPA 14)
FIRE EXTINGUISHERS (IFC 906 & NFPA10)
FIRE ALARM SYSTEMS (IFC 907 & NFPA 72)

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FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
CODE DATA AND LIFE SAFETY

SHEET NUMBER:
G002

6/27/2025

EGRESS PATH DISTANCES

PATH	TOTAL TRAVEL DISTANCE
PATH A	86'-5"
PATH B	40'-8"
PATH C	16'-6"
PATH D	67'-10"
PATH F	61'-4"
PATH H	65'-6"
PATH I	64'-9"

LIFE SAFETY LEGEND

- EXISTING
- 1 HOUR SEPARATION
- 2 HOUR SEPARATION
- Name — ROOM NAME
- 20000 SF — AREA OF ROOM
- AS&M — OCCUPANCY TYPE
- 300 | 1 — OCCUPANT LOAD | OCCUPANT LOAD FACTOR
- ALLOWABLE CAPACITY OF EXIT (DOOR SIZE MINUS 4" / .2)
- OCCUPANT LOAD
- EXIT LOCATION
- FE — FIRE EXTINGUISHER



Plan North
True North

1 LIFE SAFETY PLAN
1/8" = 1'-0"

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PROFESSIONAL SEAL

VESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
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SHEET TITLE:
LIFE SAFETY PLAN

SHEET NUMBER:
G003

6/27/2025

GENERAL NOTES

1. SPECIFICATIONS: UNLESS REFERRED TO SPECIFICALLY, ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE CURRENT SPECIFICATIONS AND REQUIREMENTS OF THE COUNTY OF ST. CLAIR ON THIS PROJECT, AS WELL AS THE MANUFACTURER RECOMMENDATIONS FOR INSTALLATION SHALL GOVERN THE MATERIALS AND WORKMANSHIP TO COMPLETE THE IMPROVEMENTS SET FORTH IN THESE PLANS.

2. SAFETY: THE CONTRACTOR AND SUBCONTRACTORS SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, LOCAL AND OWNER'S REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR PROTECTION OF PERSONS, EMPLOYEES, AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

3. PERMITS: THE OWNER SHALL SECURE AND PAY FOR ALL PERMITS AND GOVERNMENT FEES, LICENSES, AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE IMPROVEMENTS SHOWN ON THE PLANS.

4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE OWNER AND THE CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS. CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE REFLECTING ALL WORK THAT IS TO BE CONDUCTED.

5. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A 24-HOUR TELEPHONE NUMBER TO READILY CONTACT A RESPONSIBLE PARTY IN THE CASE OF AN EMERGENCY.

6. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE OWNER AT LEAST SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION. TWENTY FOUR (24) HOUR ADVANCE NOTIFICATION IS REQUIRED FOR ALL WORK REQUIRING INSPECTION, TESTING OR APPROVAL BY OWNER, OWNER'S REPRESENTATIVE OR GOVERNING AUTHORITY, IF ANY.

7. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY THE OWNER AND REQUEST A FINAL PUNCH LIST INSPECTION OF THE SITE ONCE ALL OF THE ITEMS ON THE CONSTRUCTION PLANS HAVE BEEN COMPLETED.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND VERIFY THE EXTENT OF THE WORK TO BE PERFORMED PRIOR TO BEGINNING CONSTRUCTION. THIS IS ESPECIALLY TRUE WITH REGARD TO ANY ITEMS TO BE REMOVED.

9. THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION.

11. WHEN WORKING WITHIN THE UTILITY EASEMENTS THE CONTRACTOR SHALL CONFORM TO THE LATEST CONSTRUCTION REQUIREMENTS OF THE UTILITY. THE CONTRACTOR IS TO CONTACT THE UTILITY REPRESENTATIVE PRIOR TO ANY CONSTRUCTION ACTIVITY.

12. THE CONTRACTOR IS CAUTIONED THAT THE LOCATION AND OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORD INFORMATION OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY TO LOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

13. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ANY UTILITIES AS REQUIRED BY THE PLANS WITH THE OWNER AND AFFECTED UTILITY.

14. WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR SHALL UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF LAYING PIPE OR OTHER WORK IN ORDER THAT IT MAY BE DETERMINED THE EXACT ELEVATION AND MAKE NECESSARY ADJUSTMENTS.

15. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY OR UNDER THE DIRECTION OF A PROFESSIONAL REGISTERED SURVEYOR.

16. THE CONTRACTOR SHALL FURNISH AND MAINTAIN SANITARY CONVENIENCE FACILITIES FOR THE WORKERS AND INSPECTORS FOR THE DURATION OF THE WORK.

17. NO MATERIALS, INCLUDING PIPE, SHALL BE STORED WITHIN THE RIGHT-OF-WAY OR WITHIN 100 FEET OF ANY INTERSECTING STREET, ALLEY, OR DRIVEWAY, DURING NON-WORKING HOURS. STORAGE OF EQUIPMENT SHALL COMPLY WITH THESE SAME REQUIREMENTS. COMPLIANCE WITH THESE REQUIREMENTS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE PROPERTY. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY AND ALL EXISTING WORK DAMAGED DURING OR DUE TO THE EXECUTION OF THIS WORK TO EQUAL OR BETTER CONDITION PRIOR TO THE DAMAGE, AT HIS OWN EXPENSE. ALL SAID WORK TO BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AND THE CITY. ANY DAMAGE TO OTHER UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE APPROPRIATE UTILITY OWNER AT THE CONTRACTOR'S EXPENSE.

19. WHEN ROAD OR STREET NAME SIGNS AND SUPPORTS INTERFERE WITH CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION IN A MANNER SATISFACTORY TO AND AS DIRECTED BY THE OWNER. AFTER COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL ERECT THE ROAD OR STREET SIGNS AND SUPPORTS IN A PERMANENT LOCATION IN ACCORDANCE WITH THE PLANS UNLESS OTHERWISE DIRECTED BY THE OWNER.

20. THE TRACKING OF MUD, DIRT, DEBRIS OR SPILLAGE OF SAME UPON STREETS, DRIVES, SIDEWALKS, ETC. IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. AT THE END OF THE DAY, THE CONTRACTOR SHALL CLEAN UP AND DISPOSE OF ALL DEBRIS AND MATERIAL RESULTING FROM HIS OPERATION AND RESTORE ALL SURFACES AND STRUCTURES TO THEIR ORIGINAL CONDITION.

21. THE CONTRACTOR SHALL MAINTAIN THE PROJECT IN A PRESENTABLE CONDITION. ALL TRASH AND DEBRIS EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED IMMEDIATELY AND PROPERLY DISPOSED OF OFFSITE IN A LICENSED LANDFILL.

22. ADEQUATE TEMPORARY OFF-STREET PARKING SHALL BE PROVIDED FOR CONSTRUCTION EMPLOYEES. PARKING ON NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ON THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVING CONDITIONS.

23. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE TRAFFIC CONTROL DEVICES FOR THE PURPOSE OF REGULATING, WARNING, AND DIRECTING TRAFFIC. ALL FLAG MEN, BARRICADES, WARNING SIGNS, ETC. SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES. THE SIGNS SHALL BE ERECTED PER THE MoDOT MANUAL OF TRAFFIC CONTROL DEVICES.

24. THE CONTRACTOR IS RESPONSIBLE TO CONTACT OWNER AND OR OWNER'S REPRESENTATIVE TO MAKE ARRANGEMENTS TO TAKE WATER FROM THE HYDRANTS. ALL ARRANGEMENTS SHALL BE MADE BEFORE OPENING ANY FIRE HYDRANT. THE TAKING OF WATER FROM A FIRE HYDRANT WITHOUT AUTHORIZATION MAY RESULT IN THE CONTRACTOR'S PERSECUTION FOR THEFT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO A FIRE HYDRANT DUE TO HIS USE.

25. ALL ELEVATIONS SHOWN ARE BASED ON U.S.G.S. DATUM, WITH ALL PROPOSED CONTOURS SHOWN BEING THE FINISHED ELEVATIONS OF PAVED AREAS.

26. DRIVE LANES FOR DAY-TO-DAY PLANT OPERATIONS SHALL BE KEPT OPEN TO TRAFFIC DURING ALL PHASES OF CONSTRUCTION OF IMPROVEMENTS. NO DRIVE LANES SHALL BE CLOSED WITHOUT PRIOR WRITTEN PERMISSION FROM THE OWNER OR OWNER'S REPRESENTATIVE.

27. ALL EXCAVATIONS, WHETHER THEY BE UTILITY TRENCHES, BASEMENT EXCAVATIONS, OR FOOTING EXCAVATIONS, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "CONSTRUCTION STANDARDS FOR EXCAVATIONS".

28. EXCAVATION AND/OR OPEN TRENCHES TO BE COVERED AND PROTECTED AT ALL TIMES OTHER THAN DURING NORMAL WORKING HOURS.

29. SAFETY FOR THE WORKERS, EMPLOYEES OR PASSERBY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

30. EARTHWORK QUANTITIES ARE THE RESPONSIBILITY OF THE GRADING AND UTILITY CONTRACTORS. THE CONTRACTOR IS RESPONSIBLE FOR ALL HAUL-ON OR HAUL-OFF OF MATERIAL FROM THE SITE AS MAY BE REQUIRED.

31. THE CONTRACTOR SHALL COORDINATE ALL DISCONNECTION, SEALING, AND/OR REMOVAL OF UTILITIES WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE RESPECTIVE UTILITY COMPANY.

32. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THEY HAVE THE LATEST SET OF CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL CONTACT OWNER OR OWNER'S REPRESENTATIVE OF ANY PLAN DISCREPANCIES PRIOR TO CONSTRUCTION.

33. CONTRACTOR SHALL RESTORE TO ORIGINAL CONDITION ALL PROPERTY DISTURBED BY THEIR OPERATIONS.

GENERAL DEMOLITION NOTES:

1. THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE RECORD INFORMATION AND FIELD LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY DEMOLITION OR CONSTRUCTION. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT.

2. THE INTENT OF THIS DEMOLITION PLAN IS TO DEMOLISH ALL ELEMENTS WITHIN THE DEMOLITION LIMITS, INCLUDING, BUT NOT LIMITED TO, PARKING AREAS, SIDEWALKS, ABOVE AND BELOW GRADE UTILITIES.

3. ALL CONTRACTORS WILL BE REQUIRED TO VISIT THE SITE PRIOR TO BEGINNING DEMOLITION TO FAMILIARIZE THEMSELVES WITH THE SITE.

4. GENERAL CONTRACTOR RESPONSIBLE TO COORDINATE DEMOLITION, RELOCATING, DISCONNECTING, AND CAPPING OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION WITH APPROPRIATE UTILITY COMPANY AND OWNER. CONTRACTOR TO PROVIDE BY-PASS CONNECTIONS AS DETERMINED BY UTILITY COMPANIES OR ICL PERFORMANCE PRODUCTS LP. TO MAINTAIN CONTINUITY OF SERVICES TO OCCUPIED AREAS OF THE SITE. PROVIDE ADEQUATE NOTICE TO OWNER OR OWNER'S REPRESENTATIVE IF SHUT-DOWN OF SERVICES IS REQUIRED.

5. CONTRACTOR TO CONSULT WITH OWNER REGARDING SALVAGE OF ITEMS TO BE REMOVED. OWNER HAS FIRST SALVAGE RIGHTS ON ALL ITEMS REMOVED.

6. GENERAL CONTRACTOR TO COORDINATE DEMOLITION WORK WITH NEW CONSTRUCTION SHOWN ELSEWHERE IN THE PLANS. DUE CARE IS TO BE TAKEN TO AVOID UNDUE DAMAGE TO ADJACENT STRUCTURES/FINISHES AND SCHEDULED ITEMS TO REMAIN.

7. GENERAL CONTRACTOR TO REMOVE ALL DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS FROM THE PLANT SITE. COORDINATE LOCATION OF DUMPSTER WITH OWNER OR OWNER'S REPRESENTATIVE PRIOR TO ITS DELIVERY. ALL DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS IN A LICENSED DEMOLITION LANDFILL.

8. IF UNANTICIPATED ELECTRICAL, PLUMBING, OR STRUCTURAL ELEMENTS ARE ENCOUNTERED WHICH CONFLICT WITH THE INTENDED FUNCTION OR DESIGN, NOTIFY OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY.

9. CONTRACTOR TO COORDINATE ALL PHASING OF DEMOLITION AND NEW CONSTRUCTION WITH OWNER. PROVIDE FREE AND SAFE ACCESS TO AND FROM EXISTING PLANT BUILDINGS AT ALL TIMES, ENTRANCE WALKS AND MEANS OF EGRESS.

10. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS NOT TO DAMAGE EXISTING PAVING, SIDEWALKS AND CURBS WHERE NOTED TO BE USED IN PLACE (UIP). IF THE PAVING, SIDEWALKS AND/OR CURBS ARE DAMAGED, THE CONTRACTOR SHALL REPAIR THEM AT THEIR COST.

11. PROMPTLY REPAIR DAMAGES CAUSED BY DEMOLITION WORK TO ADJACENT AREAS SCHEDULED TO REMAIN IN PLACE.

12. CONTRACTOR SHALL CATALOG AND PROPERLY STORE ALL EXISTING ITEMS, IF ANY, SCHEDULED TO BE REINSTALLED.

13. UPON REMOVAL OF ANY STORM OR SANITARY SEWER STRUCTURES THE PIPES GOING TO THAT STRUCTURE SHALL HAVE THE ENDS CAPPED OR REMOVED AS INDICATED ON THE PLANS.

14. ALL EXISTING SEWER STRUCTURES TO BE USED IN PLACE (U.I.P.) SHALL BE PROTECTED BY THE PLACEMENT OF BARRICADES OR A SIMILAR DEVICE AROUND THE STRUCTURE.

15. REMOVE ALL TREES, SHRUBS AND BUSHES (INCLUDING ROOTS) AS INDICATED WITH THE DEMOLITION LIMITS. ALL TREES SHOWN TO BE LEFT IN PLACE SHALL BE PROTECTED BY A CONSTRUCTION FENCE.

16. REFER TO EROSION CONTROL DRAWINGS FOR EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO DEMOLITION.

GRADING NOTES

1. THE GRADING CONTRACTOR SHALL PERFORM A COMPLETE GRADING AND COMPACTION OPERATION AS SHOWN ON THE PLANS, STATED IN THESE NOTES, OR REASONABLY IMPLIED THERE FROM, ALL IN ACCORDANCE WITH THE PLANS AND NOTES AS INTERPRETED BY THE GEOTECHNICAL ENGINEER OF RECORD.

2. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST TWO DAYS IN ADVANCE OF THE START OF THE GRADING OPERATION.

3. ALL AREAS SHALL BE ALLOWED TO DRAIN. ALL LOW POINTS SHALL BE PROVIDED WITH TEMPORARY DITCHES.

4. A SEDIMENT CONTROL PLAN THAT INCLUDES MONITORED AND MAINTAINED SEDIMENT CONTROL BASINS AND/OR STRAW BALES SHOULD BE IMPLEMENTED AS SOON AS POSSIBLE. NO GRADED AREA IS TO BE ALLOWED TO REMAIN BARE OVER THE WINTER WITHOUT BEING SEEDED AND MULCHED. CARE SHOULD BE EXERCISED TO PREVENT SOIL FROM DAMAGING ADJACENT PROPERTY AND SILTING UP EXISTING DOWNSTREAM STORM DRAINAGE SYSTEM.

5. SOFT SOIL IN THE BOTTOM AND BANKS OF ANY EXISTING OR FORMER POND SITES OR TRIBUTARIES SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENTLY TO BE USED AS FILL. NONE OF THIS MATERIAL SHOULD BE PLACED IN PROPOSED RIGHT-OF-WAY LOCATIONS OR ON STORM SEWER LOCATIONS.

6. SITE PREPARATION INCLUDES THE CLEARANCE OF ALL STUMPS, TREES, BUSHES, SHRUBS, AND WEEDS; THE GRUBBING AND REMOVAL OF ROOTS AND OTHER SURFACE OBSTRUCTIONS FROM THE SITE; AND THE DEMOLITION AND REMOVAL OF ANY MAN-MADE STRUCTURES. THE UNSUITABLE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE. TOPSOIL AND GRASS IN THE FILL AREAS SHALL BE THOROUGHLY DISCED PRIOR TO THE PLACEMENT OF ANY FILL. THE GEOTECHNICAL ENGINEER SHALL APPROVE THE DISCING OPERATION.

7. COMPACTION EQUIPMENT SHALL CONSIST OF TAMPING ROLLERS, THE ROLLER SHALL BE DESIGNED SO AS TO AVOID THE CREATION OF A LAYERED FILL WITHOUT PROPER BLENDING OF SUCCESSIVE FILL LAYERS.

8. THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND TEST THE PLACEMENT OF THE FILL TO VERIFY THAT SPECIFICATIONS ARE MET. A SERIES OF FILL DENSITY TESTS WILL BE DETERMINED ON EACH LIFT OF FILL. INTERIM REPORTS SHOWING FILL QUALITY WILL BE MADE TO THE OWNER AT REGULAR INTERVALS.

9. THE GEOTECHNICAL ENGINEER SHALL NOTIFY THE CONTRACTOR OF REJECTION OF A LIFT OF FILL OR ITS ACCEPTANCE PRIOR TO THE PLACEMENT OF ADDITIONAL FILL.

10. ALL AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A DEPTH OF NOT LESS THAN 6 INCHES AND THEN COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN BELOW. NATURAL SLOPES STEEPER THAN 1 VERTICAL TO 5 HORIZONTAL TO RECEIVE FILL SHALL HAVE HORIZONTAL BENCHES CUT INTO THE SLOPE BEFORE THE PLACEMENT OF ANY FILL. THE WIDTH AND HEIGHT TO BE DETERMINED BY THE GEOTECHNICAL ENGINEER . THE FILL SHALL BE LOOSELY PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN BELOW. THE GEOTECHNICAL ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE ACCEPTABILITY OF SOILS PLACED. ANY UNACCEPTABLE SOILS PLACED SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

11. THE SEQUENCE OF OPERATION IN THE FILL AREAS WILL BE FILL, COMPACT, VERIFY ACCEPTABLE SOIL DENSITY, AND REPETITION OF THE SEQUENCE. THE ACCEPTABLE MOISTURE CONTENTS DURING THE FILLING OPERATION ARE THOSE AT WHICH SATISFACTORY DRY DENSITIES CAN BE OBTAINED. THE ACCEPTABLE MOISTURE CONTENTS DURING THE FILLING OPERATION IN THE REMAINING AREAS ARE FROM 2 TO 8 PERCENT ABOVE THE OPTIMUM MOISTURE CONTROL.

12. THE SURFACE OF THE FILL SHALL BE FINISHED SO THAT IT WILL NOT IMPOUND WATER. IF AT THE END OF A DAYS WORK IT WOULD APPEAR THAT THERE MAY BE RAIN PRIOR TO THE NEXT WORKING DAY, THE SURFACE SHALL BE FINISHED SMOOTH. IF THE SURFACE HAS BEEN FINISHED SMOOTH FOR ANY REASON, IT SHALL BE SCARIFIED BEFORE PROCEEDING WITH THE PLACEMENT OF SUCCEEDING LIFTS. FILL SHALL NOT BE PLACED ON FROZEN GROUND, NOR SHALL FILLING OPERATIONS CONTINUE WHEN THE TEMPERATURE IS SUCH AS TO PERMIT THE LAYER UNDER PLACEMENT TO FREEZE.

13. FILL AND BACKFILL SHOULD BE COMPACTED TO THE CRITERIA SPECIFIED IN THE FOLLOWING TABLE:

CATEGORY	MINIMUM PERCENT COMPACTION
FILL IN BUILDING AREAS BELOW FOOTINGS	90%
FILL UNDER SLABS, WALKS, AND PAVEMENT	90%
FILL OTHER THAN BUILDING AREAS	88%
NATURAL SUBGRADE	88%
PAVEMENT SUBGRADE	90%
PAVEMENT BASE COURSE	90%

MEASURED AS A PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR TEST (ASTM-D-1557).

MOISTURE CONTENT MUST BE WITHIN 2 PERCENT BELOW OR 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT IF FILL IS DEEPER THAN 10 FEET.

14. NO SLOPE SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL)

HEAVY STONE REVETMENT:

HEAVY STONE REVETMENT CONSTRUCTED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER SHALL MEET THE REQUIREMENTS BELOW.

MATERIALS. HEAVY STONE REVETMENT SHALL BE SOUND, DURABLE, AND FREE FROM CRACKS AND OTHER STRUCTURAL DEFECTS THAT WOULD CAUSE IT TO DETERIORATE. IT SHALL NOT CONTAIN ANY SOAPSTONE, SHALE, OR OTHER MATERIAL EASILY DISINTEGRATED. THE STONE SHALL BE IN BLOCKS AT LEAST 12 INCHES IN THICKNESS PERPENDICULAR TO THE SLOPE AND HAVE APPROXIMATELY RECTANGULAR FACES 7 INCHES OR MORE IN WIDTH. ALL BLOCKS SHALL WEIGH NOT LESS THAN 50 POUNDS, AND AT LEAST 60 PERCENT SHALL WEIGH NOT LESS THAN 100 POUNDS.

BROKEN CONCRETE. WHEN OTHER WORK INCLUDED IN THE CONTRACT OCCASIONS QUANTITIES OF BROKEN CONCRETE, THE CONTRACTOR'S MAY USE SUCH MATERIAL AS BLOCKS FOR REVETMENT, PROVIDED MINIMUM SIZE AND WEIGHT REQUIREMENTS FOR STONE ARE MAINTAINED.

CONSTRUCTION REQUIREMENTS. UNLESS OTHERWISE APPROVED, THE SLOPES UPON WHICH REVETMENT IS TO BE PLACED SHALL CONFORM TO THE SECTION SHOWN ON THE PLANS. THE SLOPES SHALL BE COMPACTED TO A UNIFORM DENSITY AS REQUIRED FOR ADJACENT MATERIAL. THE REVETMENT SHALL BE STARTED IN A TRENCH BELOW THE TOE OF THE SLOPE SHOWN ON THE PLANS AND SHALL PROGRESS UPWARD. EACH STONE OR BROKEN CONCRETE BLOCK SHALL BE LAID PERPENDICULAR TO THE SLOPE, SHALL BE FIRMLY BEDDED AGAINST THE SLOPE AND AGAINST ADJOINING STONES OR BROKEN CONCRETE, AND SHALL BE LAID WITH WELL BROKEN JOINTS. AFTER REVETMENT HAS BEEN PLACED, THE VOIDS SHALL BE FILLED WITH SPALLS OR SMALL STONE IN SUCH A MANNER THAT ALL REVETMENT STONES OR BROKEN CONCRETE ARE TIGHTLY WEDGED. THE FINISHED SURFACE SHALL PRESENT A UNIFORM APPEARANCE TRUE TO LINE, GRADE, AND SECTION.

SEWER NOTES:

1. ALL PUBLIC STORM AND SANITARY SEWER CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF THE APPLICABLE CODES AND SHALL CONFORM TO ALL APPROPRIATE METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARDS 2020.

2. ALL PUBLIC STORM AND SANITARY SEWER STRUCTURES AND APPURTENANCES TO CONFORM TO THE STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS SHOWN IN CURRENT METROPOLITAN ST. LOUIS SEWER DISTRICT, "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES", 2020.

3. AFTER ALL SEWERS AND APPURTENANCES ARE COMPLETED, INSPECTED AND ACCEPTED, THE CONTRACTOR WILL BE PERMITTED TO CONNECT THE SEWER EXTENTIONS INTO THE EXISTING SYSTEM, IN THE PRESENCE OF AN INSPECTOR.

4. DRAINAGE PIPE SHALL BE REINFORCED CONCRETE CLASS III (AT A MINIMUM) EXCEPT AS NOTED ON PLANS. INSTALLATION SHALL CONFORM TO M.S.D. STANDARDS AND SPECIFICATIONS.

5. JOINTING MATERIAL FOR POLY VINYL CHLORIDE (PVC) SANITARY SEWERS SHALL CONFORM TO ASTM SPECIFICATION D-3212. ALL PVC PIPE SHALL CONFORM TO ASTM D-3034 TYPE PSM WITH A SDR RATING OF 35, OR LOWER.

6. MANHOLE FRAMES AND COVERS SHALL BE STANDARD FRAMES AND COVERS AS APPROVED BY THE GOVERNING AUTHORITY.

7. TRENCHES UNDER EXISTING PAVEMENT AND UNDER AREAS TO BE PAVED WITH AND OFF THE ROAD RIGHT-OF-WAY SHALL BE BACKFILLED WITH 3/4" MINUS CRUSHED LIMESTONE AND COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST (ASTM D-1557).

8. IN ALL AREAS WHERE SEWER AND APPURTENANCES ARE TO BE CONSTRUCTED IN FILLED GROUND, THE FILL WILL BE PLACED TO APPROXIMATE FINISH GRADE AND COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST (ASTM D-1557), PRIOR TO THE EXCAVATING AND INSTALLING PIPE. ALL TESTS SHALL BE PERFORMED UNDER THE DIRECTION OF AND VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS.

9. THE SEWER CONTRACTOR MAY CONSTRUCT THE BUILDING SEWER LATERALS IN CONJUNCTION WITH THE SANITARY MAIN, TRUNK OR LATERAL SEWERS, WITH THE DEVELOPMENT, PROVIDED THAT THE BUILDING SEWER LATERAL TERMINATES FIVE (5) FEET, OR MORE, OUTSIDE THE PROPOSED OR EXISTING BUILDING LINE OR FOUNDATION WALL.

10. ALL MANHOLE AND INLET TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR. AT THE TIME OF CONSTRUCTION STAKEOUT, CURB OR GRATE INLETS WILL BE FACED STAKED, PROVIDED SAID STAKES DO NOT FALL IN THE DITCH LINE. IF STAKES FALL WITHIN THE DITCH LINE, THE CONTRACTOR OR JOB SUPERINTENDENTS SHALL NOTIFY THE ENGINEER THAT STAKES ARE NEEDED AND ALLOW 48 HOURS FOR CUTS. TOPS OF MANHOLES, INLETS, VALVE BOXES, ETC. SHALL CONFORM TO FINISH GRADE.

11. ALL STANDARD STREET CURB INLETS TO HAVE A FRONT OF INLET TWO AND A HALF (2.5) FEET BEHIND CURB.

12. ALL SANITARY BUILDING CONNECTIONS HAVE BEEN DESIGNED SO THAT THE MINIMUM VERTICAL DISTANCE FROM THE LOW POINT OF THE FINISHED FLOOR TO THE FLOW LINE OF A SANITARY SEWER AT THE CORRESPONDING BUILDING CONNECTION IS NOT LESS THAT THE DIAMETER OF THE PIPE PLUS A VERTICAL DISTANCE OF TWO AND A HALF (2.5) FEET.

13. SOILS ENGINEER WILL VERIFY THAT ALL COMPRESSIBLE MATERIAL HAS BEEN REMOVED PRIOR TO FILL PLACEMENT AND THAT ALL FILLED AREAS, INCLUDING TRENCH BACKFILLS, UNDER BUILDINGS, PROPOSED SANITARY AND STORM SEWER LINES, PUBLIC RIGHT-OF-WAY AND PAVED AREAS HAS BEEN COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST (ASTM D-1557), UNLESS OTHERWISE RECOMMENDED IN THE SOILS REPORT FOR THIS PROJECT. FILL IS TO BE PLACED IN A MAXIMUM OF NINE (9) INCH LIFTS. TESTS SHALL BE TAKEN AT A MAXIMUM OF 50 FOOT INTERVALS ALONG THE ROUTE OF THE PIPE; AT A MAXIMUM OF 2 FOOT VERTICALLY; AND LATERALLY ON EACH SIDE OF THE PIPE, AT A DISTANCE EQUAL TO THE DEPTH OF FILL OVER THE PIPE. A COPY OF THESE RESULTS WILL BE SUBMITTED TO OWNER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

14. WHEN PVC PIPE IS USED, APPROPRIATE RUBBER SEAL WATER-STOP, AS APPROVED BY THE SEWER DISTRICT, SHALL BE INSTALLED BETWEEN PVC PIPE AND MASONRY (CONCRETE & BRICK) STRUCTURE.

15. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM THE LOCATION OF EXISTING UTILITIES AND/OR UNDERGROUND FACILITIES BY NOTIFYING UTILITY COMPANIES PRIOR TO CONSTRUCTION.

16. GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING AND PROPOSED SANITARY AND STORM SEWERS INCLUDING BUILDING LATERALS.

17. ALL CONSTRUCTION METHODS AND MATERIALS USED SHALL CONFORM TO CURRENT APPLICABLE STANDARDS.

18. SHOP DRAWINGS ARE REQUIRED FOR CONSTRUCTION OF NON-STANDARD REINFORCED CONCRETE STRUCTURES.

19. MAINTENANCE OF THE SEWERS DESIGNATED AS PUBLIC SHALL BE THE RESPONSIBILITY OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT UPON DEDICATION OF THE SEWERS TO THE DISTRICT.

PAVEMENT NOTES:

1. ALL PAVING TO BE IN ACCORDANCE WITH MODOT STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED THESE PLANS OR BY THE OWNER AND/OR HIS REPRESENTATIVE.

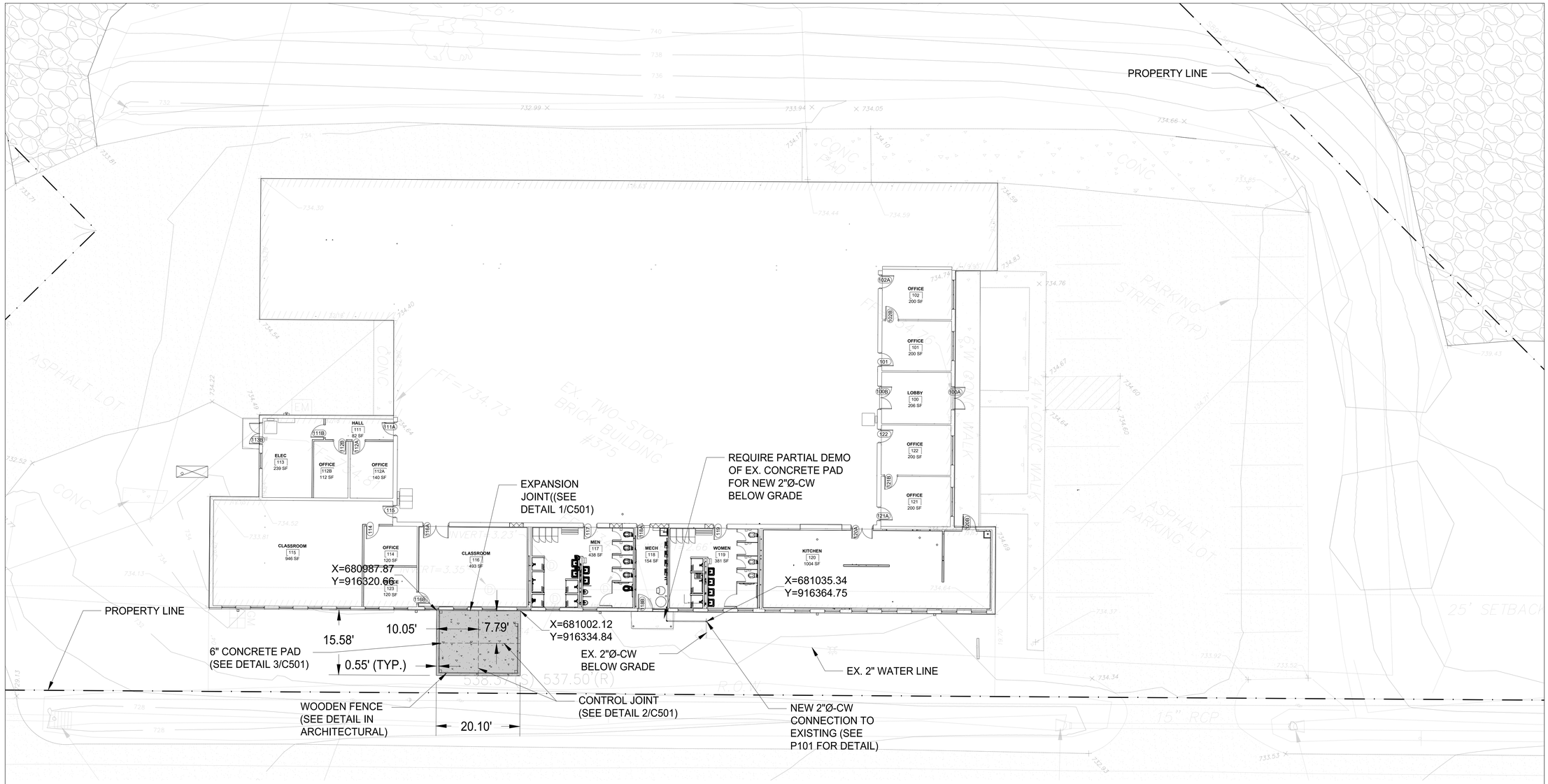
2. ALL SUB GRADE IN CUT OR FILL WILL NEED TO CONFORM TO THE COMPACTION REQUIREMENTS RECOMMENDED BY THE GEOTECHNICAL REPORT OR DETAIL WITHIN THESE PLANS.

3. MATERIALS FOR CONSTRUCTION SHALL BE TESTED AND INSPECTED PER THE APPROPRIATE ASTM CODE OR AT THE OWNER'S OR OWNER'S REPRESENTATIVE'S DISCRETION.

4. THE OWNER AND/OR OWNER'S REPRESENTATIVE SHALL APPROVE THE SUB GRADE BEFORE ANY BASE IS PLACED THEREON AND SHALL APPROVE THE BASE BEFORE CONCRETE OR SURFACE COURSE IS PLACED. THE SUB GRADE AND BASE SHALL BE SO CONSTRUCTED THAT IT WILL BE UNIFORM IN DENSITY THROUGHOUT.

5. NO TRAFFIC WILL BE ALLOWED ON NEW CONCRETE PAVEMENT UNTIL IT HAS CURED FOR SEVEN (7) DAYS AND IT REACHES FOUR THOUSAND (4,000) PSI WITHIN 28 DAYS.

5.1. CONCRETE PAVEMENTS SHALL NOT BE APPROVED UNLESS IT REACHES A STRENGTH OF FOUR THOUSAND (4,000) PSI. CYLINDERS/COMPRESSIVE STRENGTH. ONE (1) SET OF FOUR (5) CYLINDERS WITHIN THE FIRST FIFTY (50) CUBIC YARDS AND ONE (1) SET PER ONE HUNDRED (100) CUBIC YARDS THEREAFTER. ONE (1) CYLINDER MUST BE TESTED AT SEVEN (7) DAYS, THREE (3) AT TWENTY-EI



1
C101

SITE PLAN

1" = 1'-0"

NOTES

1. COMPLETELY SEPARATED JOINT IN THE CLAY PIPE DISCOVERED APPROXIMATELY 5 FEET OUTSIDE INTO THE YARD AND 4 FEET DEEP PER PLUMBING CONTRACTOR.
2. BROKEN PIPE RUNS UNDER THE DITCH RIGHT BEFORE HWY 47 PER PLUMBING CONTRACTOR.
3. DAMAGED GRASS AND MULCH WILL BE REPAIRED AS NEEDED.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
CHRISTOPHER JAY MANISCALCO
NUMBER PE-2008019566
PROFESSIONAL ENGINEER
06/27/2025

PROFESSIONAL SEAL

YESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST, CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 81136304011

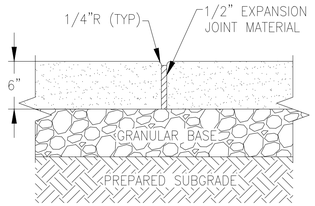
ISSUE DATE: 06/27/2025

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DRAWN BY: DSL
CHECKED BY: CJM
DESIGNED BY: DSL

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C101

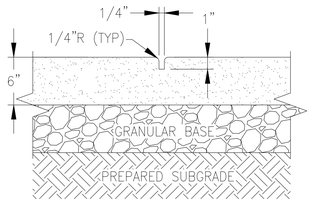
06/27/2025



1 C501

EXPANSION JOINT IN CONCRETE SIDEWALK

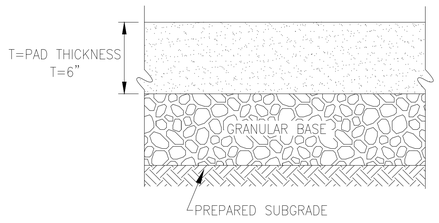
NTC



2 C501

CONTROL JOINT IN CONCRETE SIDEWALK

NTC



3 C501

CONCRETE PAD

NTC

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DRAWN BY: DSL
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SHEET TITLE:

DETAILS

SHEET NUMBER:

C501

06/27/2025

DEMOLITION / NEW CONSTRUCTION LEGEND

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE REMOVED

NEW CONSTRUCTION

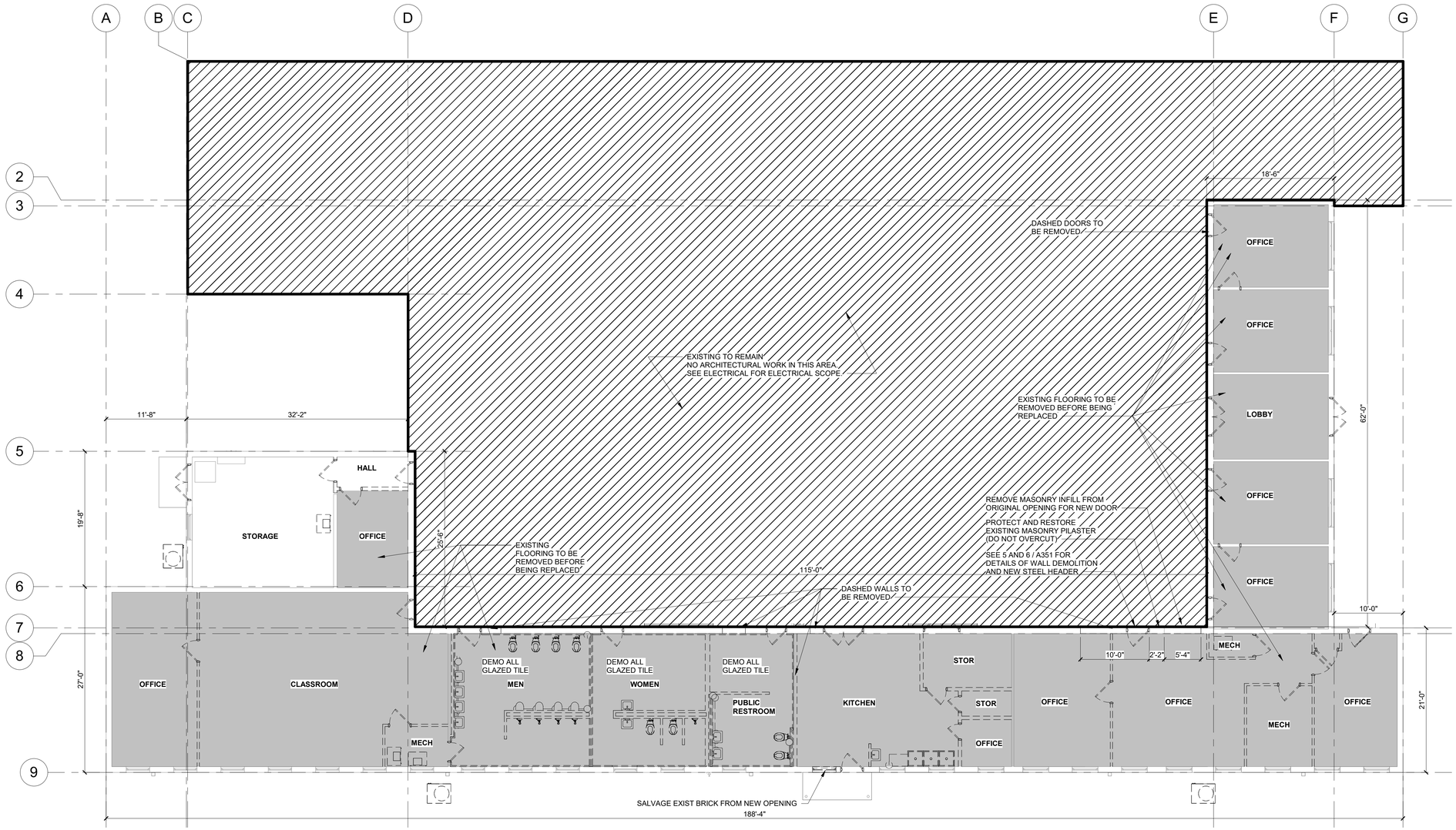
NOT IN SCOPE

NOTE: NOT ALL TYPES USED.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR HIRING AN ABATEMENT CONTRACTOR TO IDENTIFY THE PROCESS AND WORK IN THE ASBESTOS. AIR MONITORING IS NEEDED BEFORE, DURING, AND AFTER THE ABATEMENT WORK. THE GENERAL CONTRACTOR NEEDS TO DO HAZARDOUS MATERIAL TESTING TO VERIFY THAT ALL ASBESTOS HAS BEEN CLEANED.

GENERAL DEMOLITION NOTES

A. LIGHT GRAY WALLS INDICATE EXISTING CONSTRUCTION TO REMAIN.
B. DASHED LINES INDICATE EXISTING CONSTRUCTION TO BE REMOVED.
C. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS TO DETERMINE EXACT EXTENT OF DEMOLITION REQUIRED TO COORDINATE WITH NEW CONSTRUCTION.
D. CONTRACTOR TO CAREFULLY AND PRUDENTLY PERFORM DEMOLITION AS INDICATED. CONTRACTOR SHOULD CAREFULLY OBSERVE EXISTING CONDITIONS PRIOR TO ANY AND ALL DEMOLITION AND COORDINATE SUCH WORK WITH NEW CONSTRUCTION. ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARISE.
E. CONTRACTOR TO PROTECT AND SHORE ADJACENT AREAS THAT ARE TO REMAIN INTACT DURING DEMOLITION AND ENSURE MAINTENANCE OF EXISTING STRUCTURAL INTEGRITY.
F. ALL STRUCTURAL COLUMNS, BEAMS, ETC. SHALL BE PROTECTED AGAINST DAMAGE DURING DEMOLITION.
G. DEMOLITION WORK INCLUDES DISCONNECTIONS, CAPPING AND/OR REMOVAL OF ALL ELECTRICAL, PLUMBING AND HVAC LINES AND/OR EQUIPMENT WHICH IS FOUND WITHIN OR ADJACENT TO SPECIFIC ITEMS NOTED TO BE DEMOLISHED. CONFIRM ANY DISCREPANCIES WITH ARCHITECT IN WRITING. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
H. WHERE DEMOLITION INVOLVES ABANDONMENT OF EXISTING MECHANICAL, ELECTRICAL AND PLUMBING SERVICE, COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING CONTRACTORS.
I. CONTRACTOR TO COORDINATE WITH THE OWNER THE DISCONNECTION OR INTERRUPTION OF ANY MECHANICAL, PLUMBING, ELECTRICAL, DATA OR COMMUNICATION SERVICES PRIOR TO DEMOLITION. CONTRACTOR TO COORDINATE WITH THE OWNER THE NEED FOR AND LOCATION OF TEMPORARY SERVICES.
J. PATCH WALL FINISHES TO MATCH EXISTING AT ANY DEMOLISHED MECHANICAL, ELECTRICAL AND/OR PLUMBING EQUIPMENT. RETURN AIR SUPPLY / RETURN GRILLS, ELECTRICAL OUTLETS, RECEPTACLES, ETC. TO OWNER.
K. ALL ITEMS NOTED TO BE REMOVED ARE TO BE INSPECTED PRIOR TO DEMOLITION TO DETERMINE IF MECHANICAL, ELECTRICAL OR PLUMBING IS AFFECTED. IF SO, THE DEMOLITION CONTRACTOR IS TO CONTACT THE RESPECTIVE MECHANICAL, ELECTRICAL OR PLUMBING CONTRACTOR TO HAVE THEIR WORK REMOVED, DISCONNECTED OR CAPPED, SO THAT DEMOLITION CAN PROCEED WITHOUT INTERRUPTION.
L. WHERE NEW CONSTRUCTION WILL ADJOIN EXISTING, REMOVE ALL MISCELLANEOUS ACCESSORIES AS NECESSARY. LEAVE CLEAN SAWCUT EDGES OR EQUIVALENT.
M. WHERE DEMOLITION EXPOSES REMAINING INTERIORS TO WEATHER, COORDINATE WITH NEW CONSTRUCTION OR PROVIDE TEMPORARY WEATHER ENCLOSURE.
N. WHERE DEMOLITION CREATES GAPS IN EXISTING FINISHES TO REMAIN, PATCH TO MATCH EXISTING / ADJACENT SURFACES. WHERE PATCHING INVOLVES FIRE RATED ASSEMBLIES, PATCH SHALL MAINTAIN FIRE RATING.
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P. ALL EXISTING SURFACES TO REMAIN WHICH ARE AFFECTED BY THE DEMOLITION PROCESS ARE TO BE PATCHED OR CLEANED TO PROVIDE A SMOOTH, LEVEL FINISH SURFACE, READY TO RECEIVE NEW SCHEDULED FINISH.
Q. EXISTING CONDITIONS WHICH ARE DISCOVERED DURING DEMOLITION THAT WILL INTERFERE WITH THE FINAL FLOOR PLAN ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.
R. ALL SALVAGED DOORS, WINDOWS AND CASEWORK FROM DEMOLITION TO BE RETURNED TO OWNER FOR RIGHT OF FIRST REFUSAL.



1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"

Plan North
True North

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026
PROFESSIONAL SEAL

VESTAL CORPORATION

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DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
FLOOR DEMO PLAN

SHEET NUMBER:
D101

6/27/2025

SYMBOL LEGEND

- ACOUSTICAL CEILING (RE: MATERIAL & FINISH SCHEDULE)
- EXPOSED (RE: SPEC & FINISH SCHEDULE)
- GYPSUM BOARD SOFFIT/CEILING (PAINT)
- WOOD CEILING (RE: SPEC & FINISH SCHEDULE)
- METAL PANEL SOFFIT/CEILING (RE: SPEC & FINISH SCHEDULE)
- HVAC DIFFUSER/RETURN AIR GRILLE (RE: MECH)
- LIGHT FIXTURE (RE: ELEC)
- LIGHT FIXTURE (RE: ELEC)
- LIGHT FIXTURE (RE: ELEC)

DEMOLITION / NEW CONSTRUCTION LEGEND

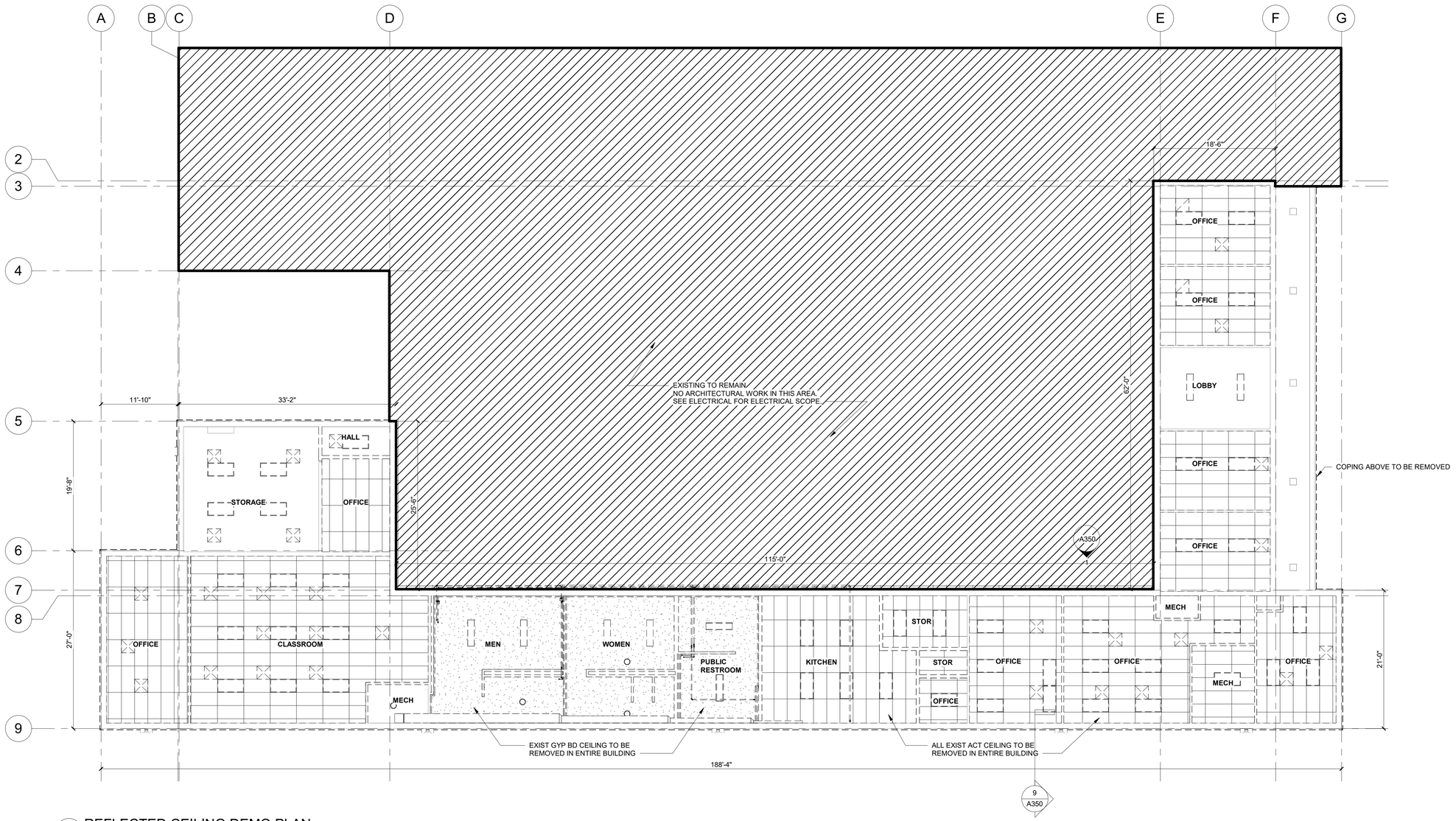
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R. ALL SALVAGED DOORS, WINDOWS AND CASEWORK FROM DEMOLITION TO BE RETURNED TO OWNER FOR RIGHT OF FIRST REFUSAL.



Plan North
True North

1 REFLECTED CEILING DEMO PLAN
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026
PROFESSIONAL SEAL

VESTAL CORPORATION

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375 COMMERCIAL AVE.
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PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
REFLECTED CEILING DEMO PLAN

SHEET NUMBER:
D103

6/27/2025

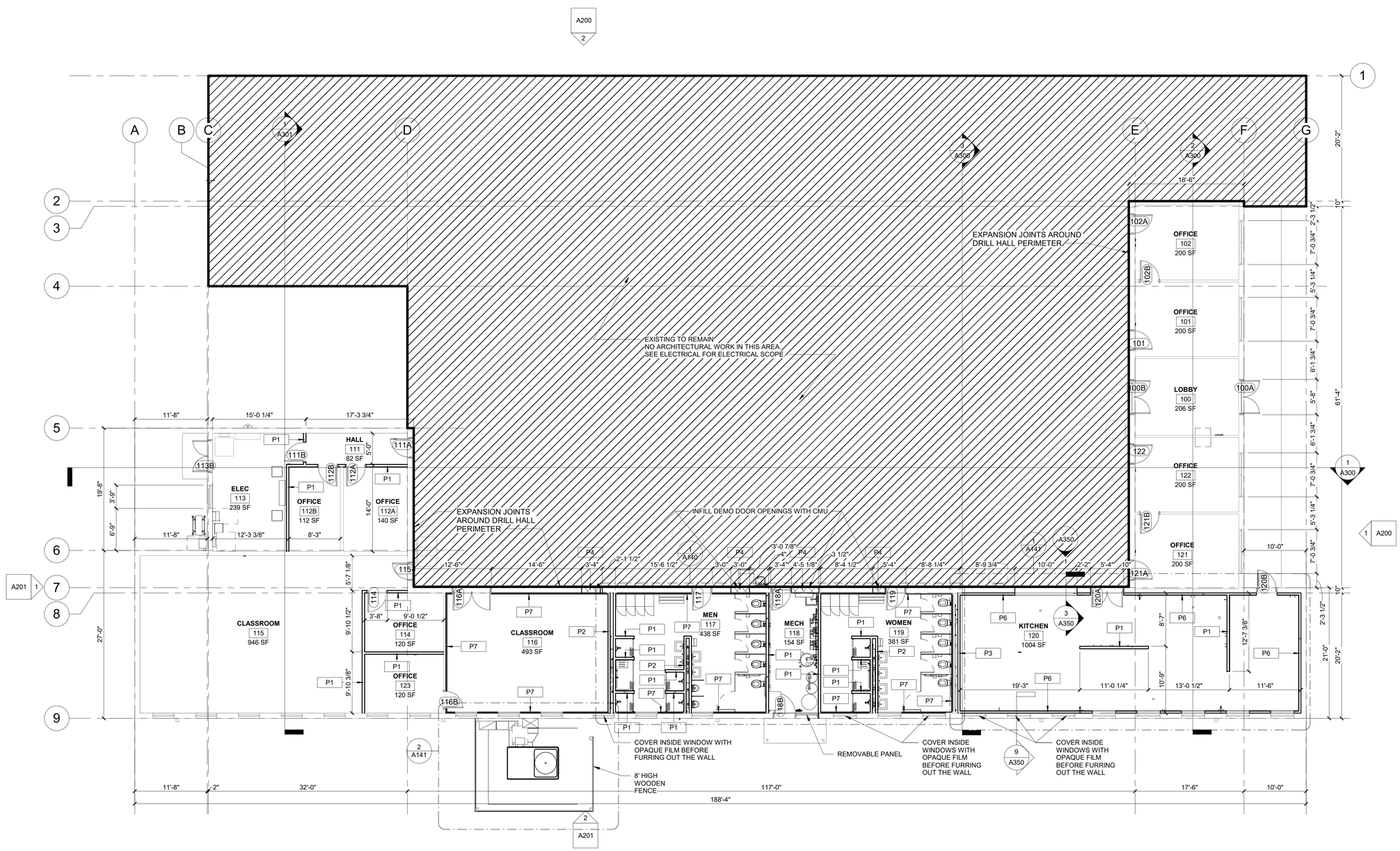
DEMOLITION / NEW CONSTRUCTION LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- NEW CONSTRUCTION
- NOT IN SCOPE

NOTE: NOT ALL TYPES USED.

GENERAL FLOOR PLAN NOTES:

A. DO NOT SCALE DRAWINGS - USE DIMENSIONS AND NOTES ONLY.
B. FIELD VERIFY ANY EXISTING CONSTRUCTION, CONFIGURATION AND DIMENSIONS.
C. CONTRACTOR TO CONFIRM ALL DIMENSIONS AGAINST ACTUAL SITE CONDITIONS. ANY CONFLICT OR DISCREPANCIES IN DIMENSIONS OR ELEVATIONS SHALL BE RESOLVED WITH THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK OR PROCUREMENT OF MATERIALS.
D. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTION OF COMPLETE SETS OF CONTRACT DOCUMENTS (DRAWINGS & SPECIFICATIONS) TO ALL TRADES. EACH TRADE SHALL REVIEW ALL CONTRACT DOCUMENTS SO AS TO BE AWARE OF ALL ITEMS OF WORK AFFECTING THEIR RESPECTIVE TRADE. NO CLAIMS FOR "EXTRAS" WILL BE HONORED DUE TO FAILURE TO REVIEW COMPLETE SET OF DOCUMENTS.
E. EGRESS DOORS SHALL NOT LOCK AGAINST THE DIRECTION OF EGRESS TRAVEL.
F. ALL NEW WOOD FRAMING, SHEATHING, BLOCKING, ETC., SHALL BE FIRE RETARDANT TREATED. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING AT WALL AND CEILING FRAMING FOR ANCHORAGE OF ELEMENTS TO BE FASTENED OVER FINISHED SURFACES INCLUDING, BUT NOT LIMITED TO: WALL BUMPERS, HANDRAILS, GRAB BARS, WOOD TRIM, TOILET ACCESSORIES, AND WALL MOUNTED EQUIPMENT.
G. INTERIOR DIMENSIONS ARE GIVEN TO THE FINISHED FACE OF WALL CONSTRUCTION, UNLESS NOTED OTHERWISE.
H. PROVIDE CONTROL JOINTS IN GYPSUM BOARD AT SPACING NOT EXCEEDING 30'-0" O.C. AT LONG STRAIGHT RUNS OF WALL OR SOFFIT. IN FIRE RATED PARTITIONS, PROVIDE FIRE RATED CONTROL JOINTS. DO NOT ALLOW BRACING TO SPAN ACROSS CONTROL JOINTS. CONTROL JOINTS SHALL CONSIST OF DOUBLE STUDS OR DOUBLE FURRING CHANNELS AS PROVIDED BY CONTRACTOR.
I. GENERAL CONTRACTOR MUST KEEP THE APPROVED SET OF BID DOCUMENTS ON SITE AT ALL TIMES.
J. REFER TO PLAN FOR FIRE EXTINGUISHER CABINET (FEC) LOCATIONS. SEMI-RECESSED FIRE EXTINGUISHER CABINET AS NOTED IN SPECIFICATIONS.
K. REPAIR EXISTING SURFACES TO REMAIN AS NEEDED DUE TO THE DEMOLITION OR THE REMOVAL OF CONSTRUCTION. REFER TO DEMOLITION PACKAGE.
L. REPAIR HOLES IN EXISTING PARTITIONS TO REMAIN WHERE PARTITION MOUNTED ITEMS HAVE BEEN REMOVED.
M. PATCH AND REPAIR ALL EXISTING DOOR FRAMES AS NEEDED
N. REFERENCE FINISH SHEET FOR FINISH INFORMATION.



PLAN TRUE

1 FLOOR PLAN
1/8" = 1'-0"

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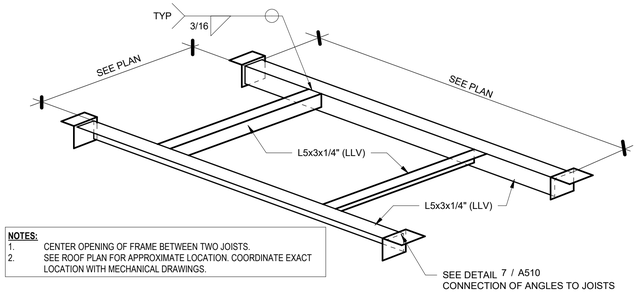
ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
FLOOR PLAN

SHEET NUMBER:
A100

6/27/2025



NOTES:
1. CENTER OPENING OF FRAME BETWEEN TWO JOISTS.
2. SEE ROOF PLAN FOR APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.

2 ANGLE FRAME AT NEW EQUIPMENT
3/4" = 1'-0"

SAFETY NOTE:
"ALL PERSONNEL SHALL UTILIZE SAFETY HARNESS OR FALL ARREST/ANCHORING SYSTEM WHEN PERFORMING ANY WORK ON THE ROOF IN ACCORDANCE WITH OSHA FALL PROTECTION REQUIREMENTS."
SAFETY SIGNS/LABELS SHALL BE POSTED ON ALL EXTERIOR WALLS WHERE ACCESS IS PERMITTED TO THE HVAC EQUIPMENT ON THE ROOF.

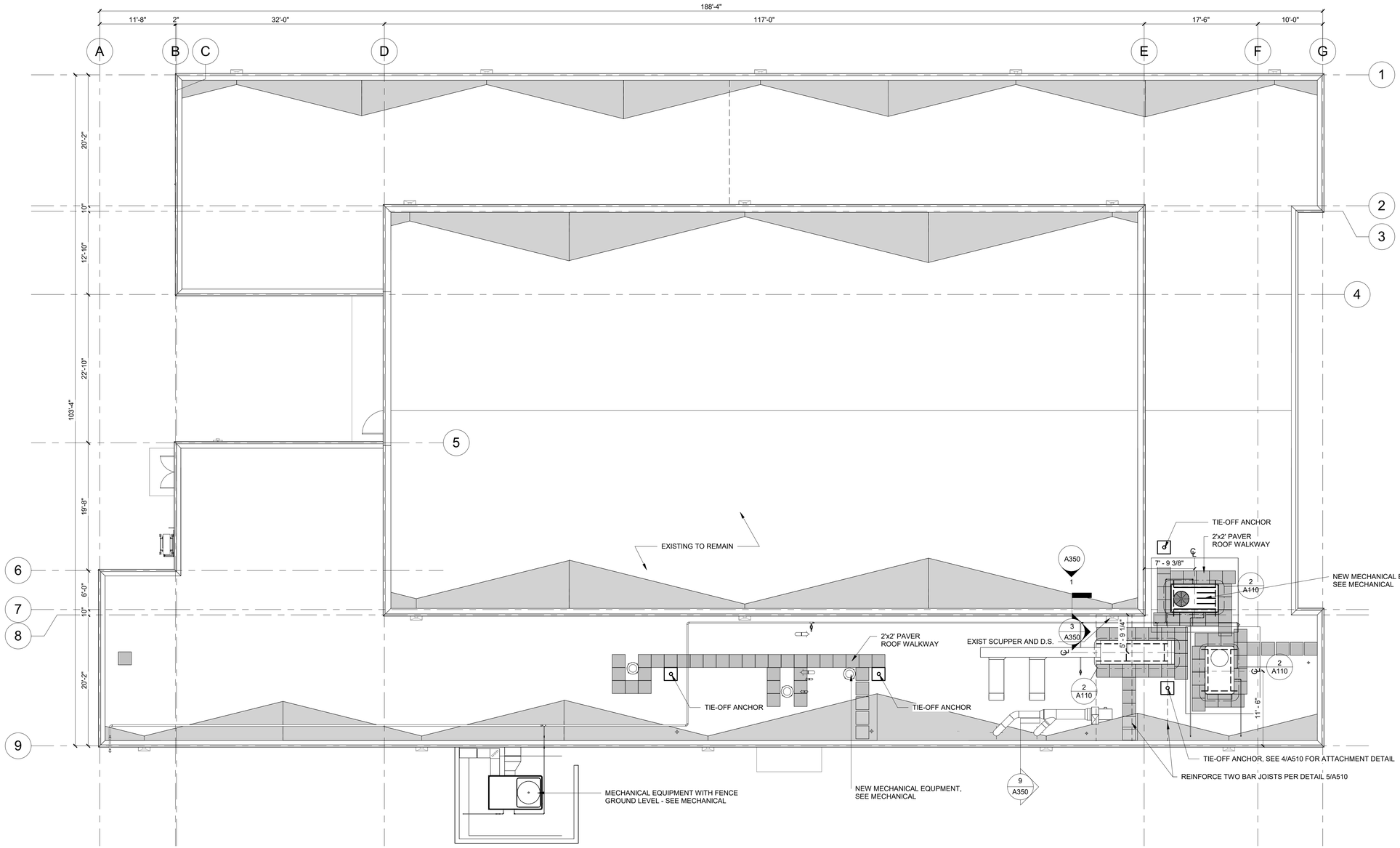
DEMOLITION / NEW CONSTRUCTION LEGEND

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- NOT IN SCOPE

NOTE: NOT ALL TYPES USED

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F. GENERAL CONTRACTOR MUST KEEP THE APPROVED SET OF BID DOCUMENTS ON SITE AT ALL TIMES.
G. REPAIR EXISTING SURFACES TO REMAIN AS NEEDED DUE TO THE DEMOLITION OR THE REMOVAL OF CONSTRUCTION. REFER TO DEMOLITION PACKAGE.
H. REPAIR HOLES IN EXISTING PARTITIONS TO REMAIN WHERE PARTITION MOUNTED ITEMS HAVE BEEN REMOVED.



PLAN TRUE

1 ROOF PLAN
1/8" = 1'-0"

NOTE: NO ROOFING IS INCLUDED IN THE SCOPE OF WORK.
ONLY REPAIR AND PATCH AROUND NEW MECHANICAL EQUIPMENT

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CAD DWG FILE:
DRAWN BY: OA
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DESIGNED BY: JB

SHEET TITLE:
ROOF PLAN

SHEET NUMBER:
A110

6/27/2025

DEMOLITION / NEW CONSTRUCTION LEGEND

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- NEW CONSTRUCTION
- NOT IN SCOPE

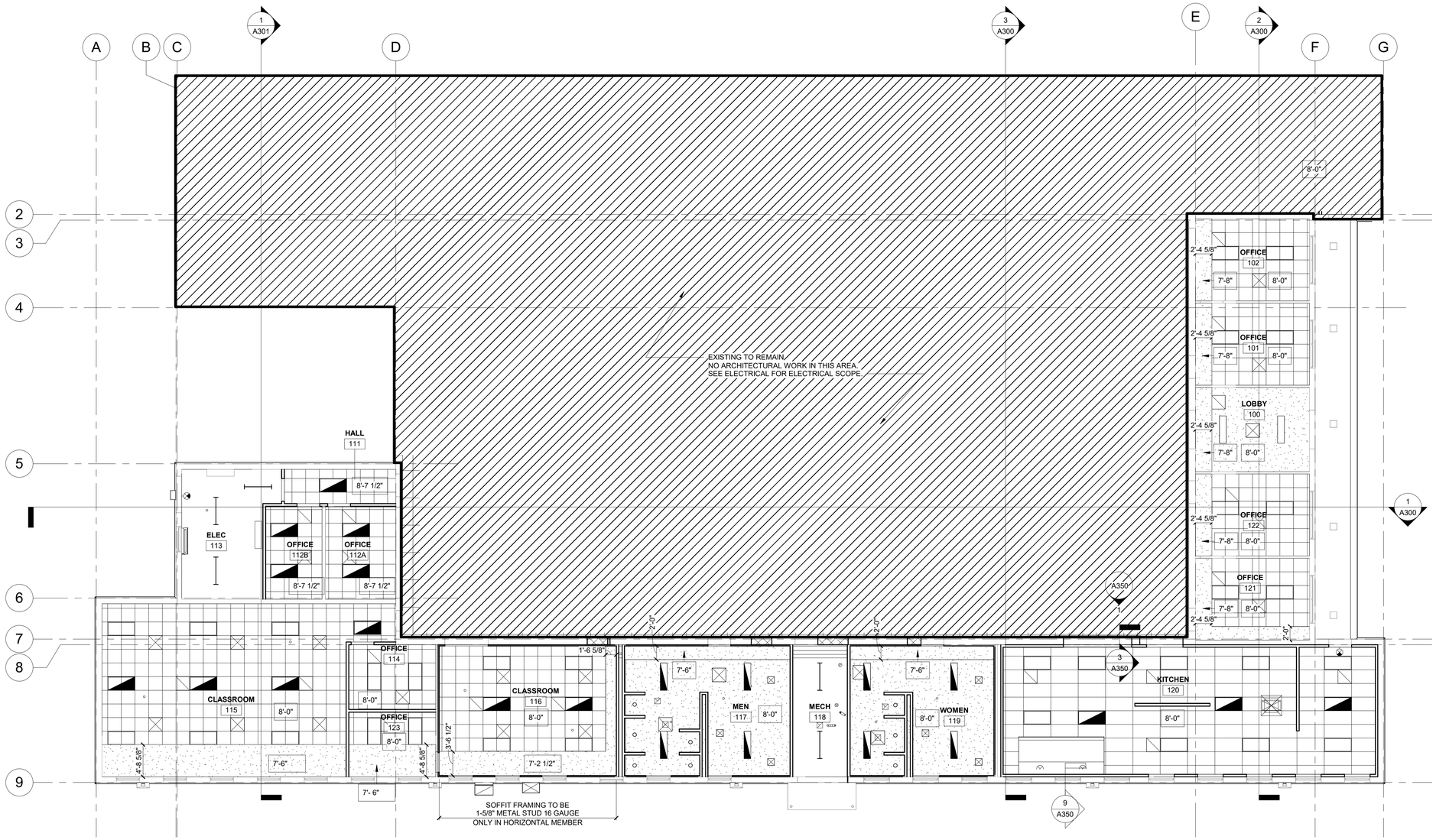
NOTE: NOT ALL TYPES USED.

SYMBOL LEGEND

- ACOUSTICAL CEILING (RE: MATERIAL & FINISH SCHEDULE)
- EXPOSED (RE: SPEC & FINISH SCHEDULE)
- GYPSUM BOARD SOFFIT/CEILING (PAINT)
- WOOD CEILING (RE: SPEC & FINISH SCHEDULE)
- METAL PANEL SOFFIT/CEILING (RE: SPEC & FINISH SCHEDULE)
- HVAC DIFFUSER/RETURN AIR GRILLE (RE: MECH)
- LIGHT FIXTURE (RE: ELEC)
- LIGHT FIXTURE (RE: ELEC)
- LIGHT FIXTURE (RE: ELEC)

GENERAL CEILING NOTES:

A. ALL ACT HEIGHTS ARE TO FACE OF TILE UNO.
B. SHADED PORTIONS ARE TO RECEIVE SOUND BATT INSULATION (INCLUDING FULL HEIGHT OF PARTITIONS ABOVE WINDOW AND DOOR HEADS).
C. COORDINATE ALL LIGHTING FIXTURE LOCATIONS WITH ELECTRICAL DRAWINGS – REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO CONSTRUCTION.
D. ALL EXPOSED METAL DECK, STEEL BAR JOISTS, BEAMS, ANGLES, CONDUITS, JUNCTION BOXES, DUCTWORK, ETC. ARE TO BE PAINTED.
E. ALL HVAC ROUTING IS TO BE COORDINATED WITH ARCHITECT.
F. ALL SOFFIT FRAMING TO BE 3-5/8" METAL STUDS UNO.



PLAN TRUE

1 FIRST FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"

STATE OF MISSOURI
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VESTAL CORPORATION

OFFICE OF ADMINISTRATION
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ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

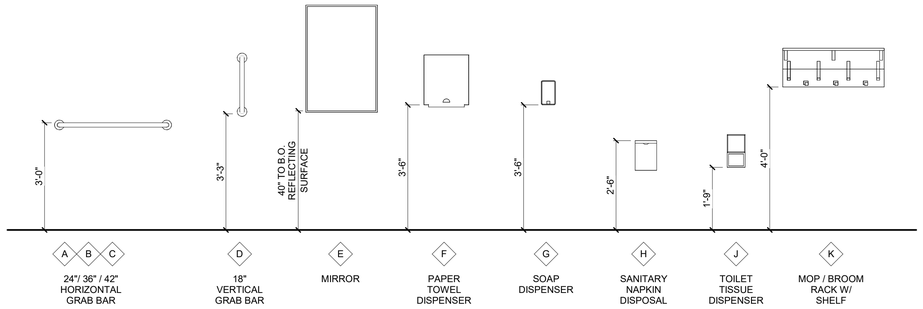
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DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
REFLECTED CEILING PLAN

SHEET NUMBER:
A120

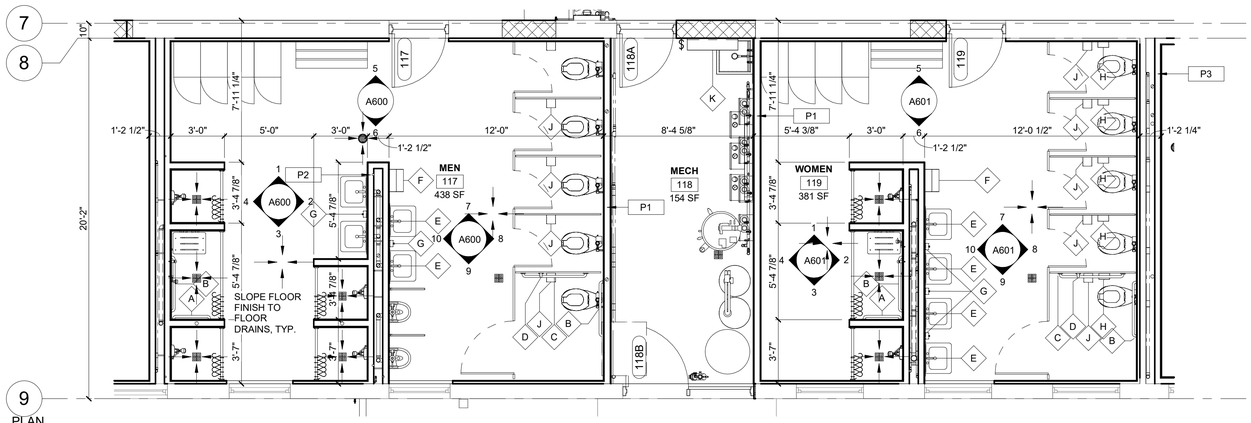
6/27/2025

RESTROOM ACCESSORIES

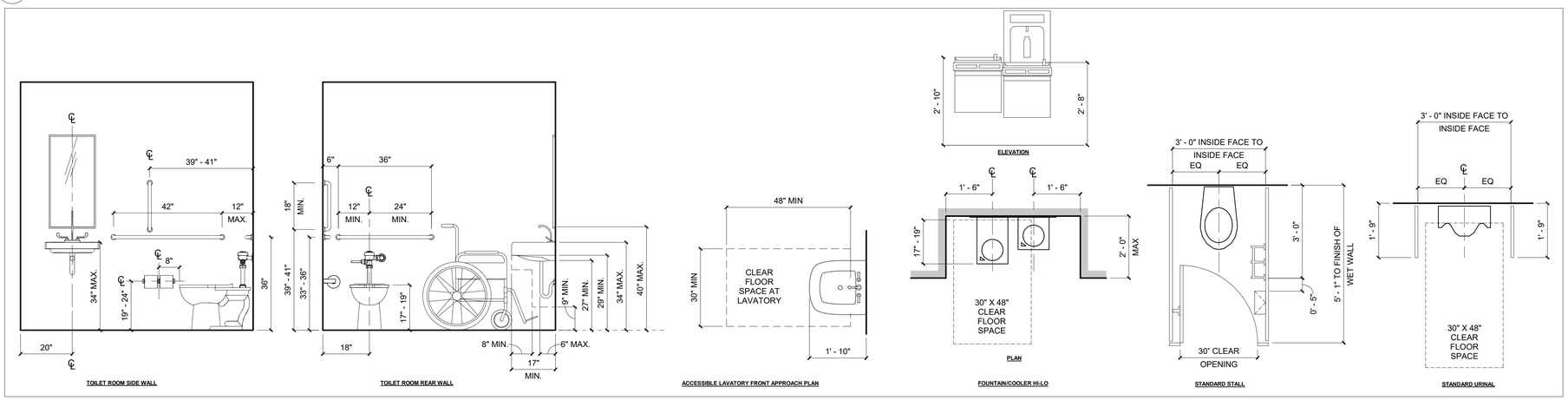


RESTROOM ACCESSORIES SCHEDULE

DESCRIPTION	MARK	Count	BY	MOUNTING HEIGHT	WIDTH	HEIGHT	DEPTH	MANUFACTURER	MODEL	COMMENTS
24" GRAB BAR	A	2	CF/CI	3'-0"				BOBRICK	B-5806 x 24	
36" GRAB BAR	B	4	CF/CI	3'-0"				BOBRICK	B-5806 x 36	
42" GRAB BAR	C	2	CF/CI	3'-0"				BOBRICK	B-5806 x 42	
18" GRAB BAR	D	2	CF/CI	3'-3"				BOBRICK	B-5806 x 18	
24"X36" MIRROR	E	8	CF/CI	3'-3"	24"	36"	3/4"	BOBRICK	B-290 2436	
PAPER TOWEL DISPENSER	F	2	CF/CI	3'-6"	12 5/8"	15 1/2"	9 1/16"	BOBRICK	B-2974	
SOAP DISPENSER	G	5	CF/CI	3'-6"	4 3/4"	8 1/8"	3 1/2"	BOBRICK	B-2111	
SANITARY NAPKIN DISPOSAL	H	5	CF/CI	2'-6"	7 1/2"	10"	3 13/16"	BOBRICK	B-270	
TOILET TISSUE DISPENSER	J	10	CF/CI	1'-9"	6 1/16"	11"	5 15/16"	BOBRICK	B-4288	
MOP / BROOM RACK WITH SHELF	K	1	CF/CI	4'-0"	34"	13"	-	BOBRICK	B-239 x 34	
SHOWER ROD	L	8	CF/CI	6'-6"				BOBRICK	B207 x 36	
SOLID PHENOLIC FOLDING SHOWER / DRESSING AREA SEAT	M	2	CF/CI			22"		BOBRICK	B-5192	



1 RESTROOM PLAN
1/4" = 1'-0"



2 TYP. TOILET ROOM DIMENSIONS W/ MULTI-STALL
1/2" = 1'-0"

GENERAL FLOOR PLAN NOTES:

A. DO NOT SCALE DRAWINGS - USE DIMENSIONS AND NOTES ONLY.
B. FIELD VERIFY ANY EXISTING CONSTRUCTION, CONFIGURATION AND DIMENSIONS.
C. CONTRACTOR TO CONFIRM ALL DIMENSIONS AGAINST ACTUAL SITE CONDITIONS. ANY CONFLICT OR DISCREPANCIES IN DIMENSIONS OR ELEVATIONS SHALL BE RESOLVED WITH THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK OR PROCUREMENT OF MATERIALS.
D. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTION OF COMPLETE SETS OF CONTRACT DOCUMENTS (DRAWINGS & SPECIFICATIONS) TO ALL TRADES. EACH TRADE SHALL REVIEW ALL CONTRACT DOCUMENTS SO AS TO BE AWARE OF ALL ITEMS OF WORK AFFECTING THEIR RESPECTIVE TRADE. NO CLAIMS FOR "EXTRAS" WILL BE HONORED DUE TO FAILURE TO REVIEW COMPLETE SET OF DOCUMENTS.
E. EGRESS DOORS SHALL NOT LOCK AGAINST THE DIRECTION OF EGRESS TRAVEL.
F. ALL NEW WOOD FRAMING, SHEATHING, BLOCKING, ETC., SHALL BE FIRE RETARDANT TREATED. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING AT WALL AND CEILING FRAMING FOR ANCHORAGE OF ELEMENTS TO BE FASTENED OVER FINISHED SURFACES INCLUDING, BUT NOT LIMITED TO: WALL BUMPERS, HANDRAILS, GRAB BARS, WOOD TRIM, TOILET ACCESSORIES, AND WALL MOUNTED EQUIPMENT.
G. INTERIOR DIMENSIONS ARE GIVEN TO THE FINISHED FACE OF WALL CONSTRUCTION, UNLESS NOTED OTHERWISE.
H. PROVIDE CONTROL JOINTS IN GYPSUM BOARD AT SPACING NOT EXCEEDING 30'-0" O.C. AT LONG STRAIGHT RUNS OF WALL OR SOFFIT. IN FIRE RATED PARTITIONS, PROVIDE FIRE RATED CONTROL JOINTS. DO NOT ALLOW BRACING TO SPAN ACROSS CONTROL JOINTS. CONTROL JOINTS SHALL CONSIST OF DOUBLE STUDS OR DOUBLE FURRING CHANNELS AS PROVIDED BY CONTRACTOR.
I. GENERAL CONTRACTOR MUST KEEP THE APPROVED SET OF BID DOCUMENTS ON SITE AT ALL TIMES.
J. REFER TO PLAN FOR FIRE EXTINGUISHER CABINET (FEC) LOCATIONS. SEMI-RECESSED FIRE EXTINGUISHER CABINET AS NOTED IN SPECIFICATIONS.
K. REPAIR EXISTING SURFACES TO REMAIN AS NEEDED DUE TO THE DEMOLITION OR THE REMOVAL OF CONSTRUCTION. REFER TO DEMOLITION PACKAGE.
L. REPAIR HOLES IN EXISTING PARTITIONS TO REMAIN WHERE PARTITION MOUNTED ITEMS HAVE BEEN REMOVED.
M. PATCH AND REPAIR ALL EXISTING DOOR FRAMES AS NEEDED
N. REFERENCE FINISH SHEET FOR FINISH INFORMATION.

RESTROOM ACCESSORIES SCHEDULE NOTES

1. G.C. RESPONSIBLE FOR PROVIDING ALL WOOD BLOCKING AS REQUIRED FOR PROPERLY INSTALLING ALL ACCESSORIES (INCLUDING OWNER PROVIDED ITEMS)
2. ALL ACCESSORIES SHALL BE INSTALLED PER A.D.A. REQUIREMENTS
3. MODEL NUMBERS SHOWN FOR DESIGN INTENT. REFERENCE SPECIFICATIONS FOR ADDITIONAL APPROVED EQUALS

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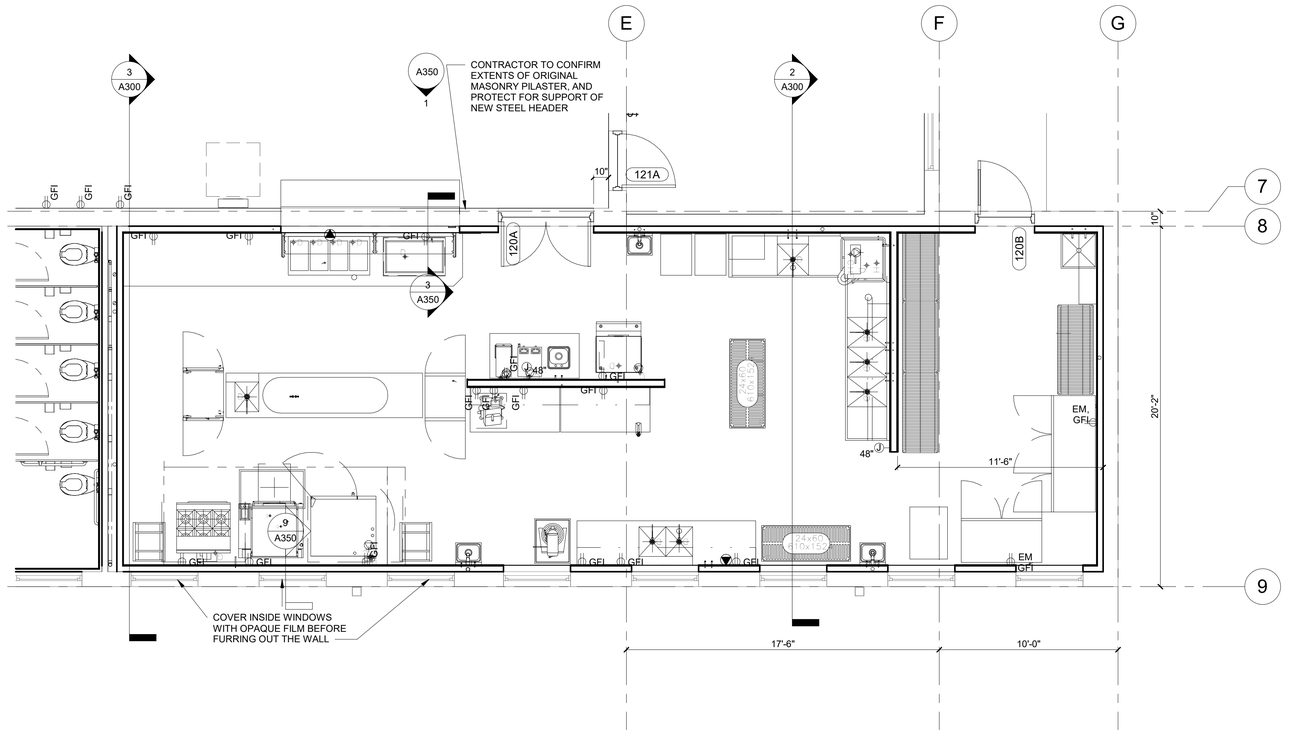
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DESIGNED BY: JB

SHEET TITLE:
ENLARGED PLANS

SHEET NUMBER:
A140

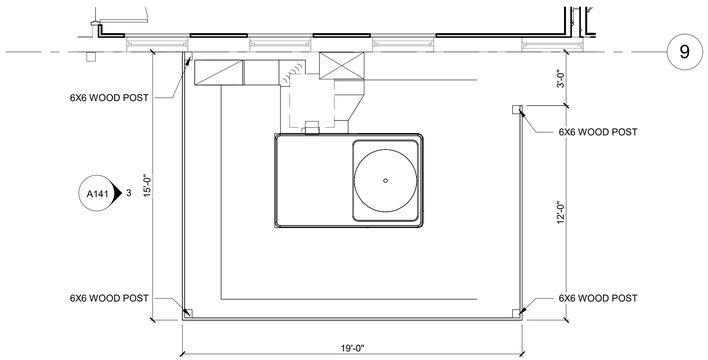
6/27/2025



PLAN TRUE

1 ENLARGED KITCHEN PLAN

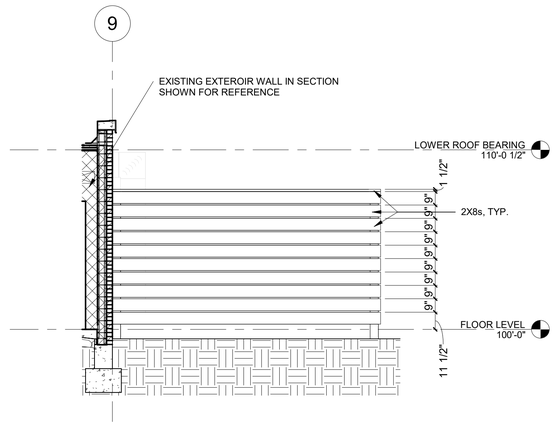
1/4" = 1'-0"



PLAN TRUE

2 ENLARGED NEW FENCE PLAN

1/4" = 1'-0"



3 FENCE ELEVATION

1/4" = 1'-0"

EQUIPMENT SCHEDULE

ITEM NO.	QUANTITY	DESCRIPTION	REMARKS
1	1	MOP SINK	BY PLUMBER
2	1	MOP RACK	BY G.C.
3	1	WALL SHELF	BY G.C.
4	1 LOT	STORAGE SHELVING	
5	1	FREEZER	THREE SECTION WITH FULL HEIGHT DOORS
6	1	REFRIGERATOR	TWO SECTION WITH FULL HEIGHT DOORS
7	1	CAN RACK	
8	3	HAND SINKS	WITH SIDE SPLASHES
9	1	THREE COMPARTMENT SINK/ CLEAN DISH TABLE	
10	1	DOUBLE OVER SHELF	
11	1	DISH MACHINE	UL LISTED FOR VENTLESS OPERATION
12	1	SOILED DISH TABLE	
13	1	RACK SHELF	
14	3	SOILED DISH TRANSPORT CART	
15	2	POT AND PAN RACKS	
16	1	PREP TABLE	
17	1	WALL SHELF	
18	1	MIXER	20 QT
19	1	PORTABLE MIXER STAND	
20	0	SPARE NUMBER	
21	0	SPARE NUMBER	
22	1	SLICER	
23	0	SPARE NUMBER	
24	2	WORK TABLES	
25	1	CAN OPENER	
26	1	WALL SHELF	
27	1	COMBI OVEN	SINGLE DECK
28	1	BRAISING PAN	30 GALLON
29	1	TRENCH DRAIN	
30	1	RANGE	6 BURNER WITH CONVECTION OVEN BASE
31	1	STAINLESS STEEL WALL PANELING	
32	1	HOOD WITH FIRE PROTECTION SYSTEM	
33	1	DUCT AND FAN	BY HVAC
34	2	RACK	
35	1	ICE MACHINE	
36	1	BEVERAGE COUNTER	
37	1	DROP IN DUMP SINK	
38	1	COFFEE MAKER	BY VENDOR
39	1	TEA BREWER	BY VENDOR
40	1	PASS THRU REFRIGERATOR	SINGLE SECTION WITH HALF HEIGHT DOORS
41	1	WORK TABLE WITH SINK	
42	1	HANGING UTENSIL RACK	
43	1	HOT HOLDING CABINET	FULL HEIGHT - PASS THRU UNIT
44	1	SERVING COUNTER	
45	0	SPARE NUMBER	
46	1	DROP IN COLD PAN	3 PAN UNIT
47	1	DROP IN HOT FOOD UNIT	4 PAN UNIT
48	1	PROTECTOR GUARD	
49	1	TRAY AND SILVER CART	
50	1	BEVERAGE COUNTER	
51	0	SPARE NUMBER	
52	2	TEA DISPENSERS	BY VENDOR
53	2	COFFEE DISPENSERS	BY VENDOR

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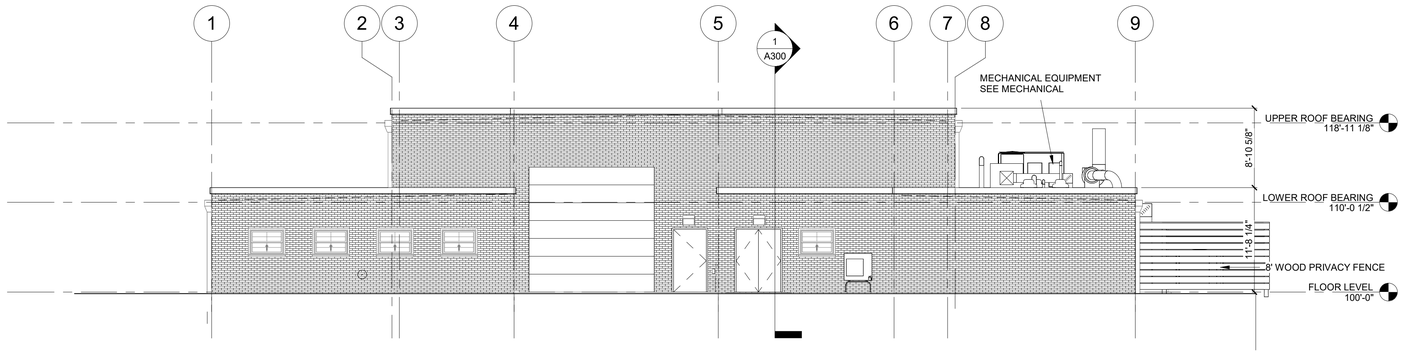
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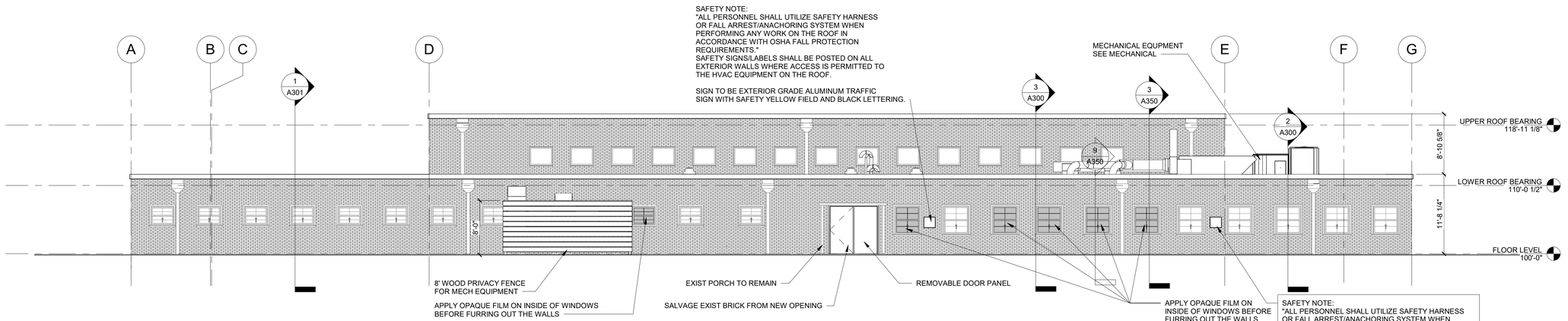
SHEET TITLE:
ENLARGED PLANS

SHEET NUMBER:
A141

6/27/2025



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



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

GENERAL EXTERIOR ELEVATION NOTES

A. COORDINATE ALL GRADES WITH CIVIL DRAWINGS, NO CONCRETE FOUNDATIONS ARE TO BE VISIBLE ABOVE FINISH GRADE, ONLY FINISH MATERIALS. G.C. TO FIELD VERIFY ALL GRADES AT BUILDING AND BRICK SHELF ELEVATION.
B. FOR DOOR SCHEDULE AND FRAME ELEVATIONS, REFER TO A700 SERIES SHEETS.

CONC1 - CAST-IN-PLACE CONCRETE 1
INTEGRAL COLORED CAST-IN-PLACE CONCRETE

MV1 - MASONRY VENEER 1
RUNNING BOND, 4"x2-2/3"x8" (NOMINAL) BRICK VENEER (RE: SPEC)

MP1 - METAL PANEL 1
COMPOSITE PANEL, RAINSCREEN SYSTEM (RE: SPEC)

GL1 - GLAZING 1
GLAZING UNIT (RE: FRAME ELEVATIONS AND SPEC)

GL2 - GLAZING 2
SPANDREL GLAZING UNIT (RE: FRAME ELEVATIONS AND SPEC)

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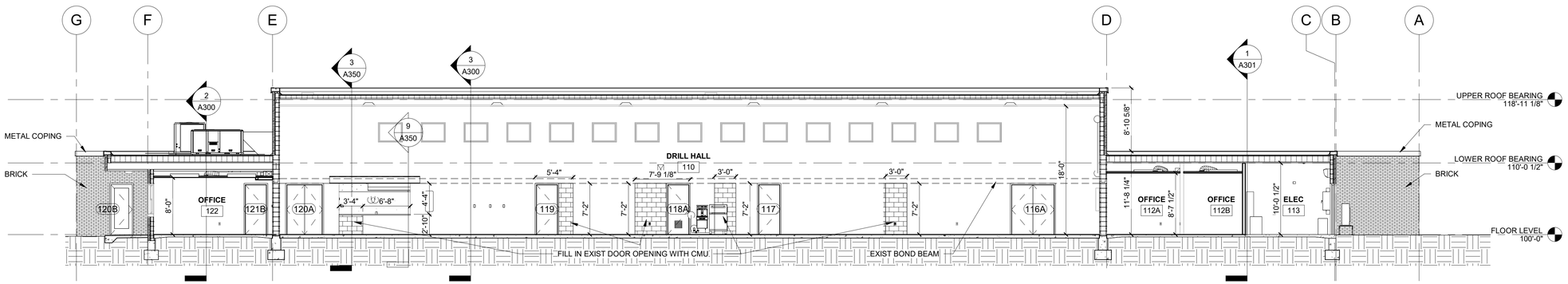
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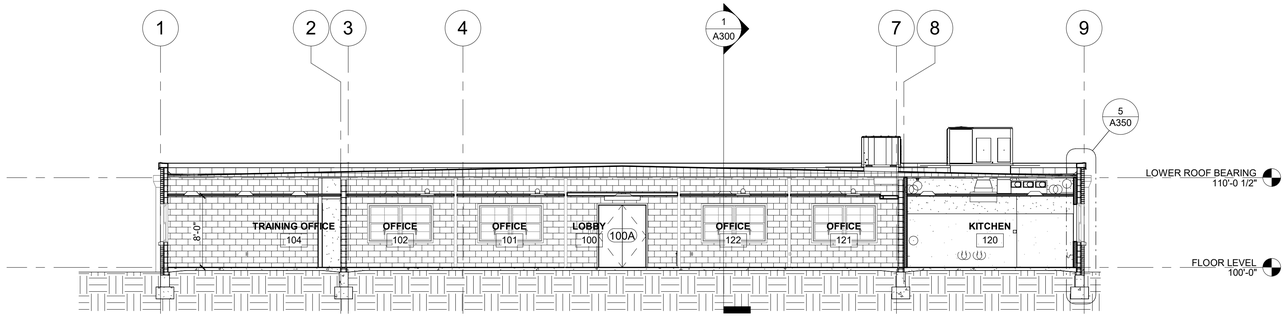
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EXTERIOR ELEVATIONS

SHEET NUMBER:
A201

6/27/2025

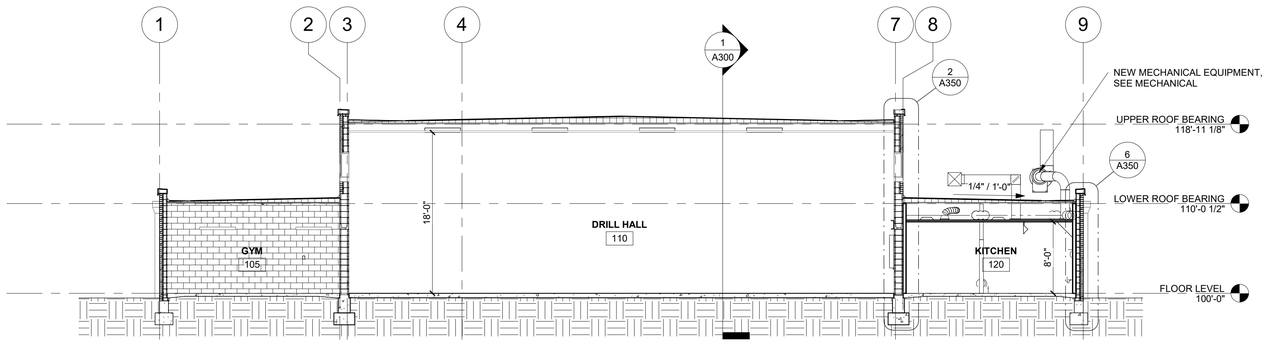


1 EXISTING BUILDING SECTION
1/8" = 1'-0"



NOTE: COORDINATE ALL EQUIPMENT WITH DISCIPLINES

2 EXISTING BUILDING SECTION
1/8" = 1'-0"



3 EXISTING BUILDING SECTION
1/8" = 1'-0"

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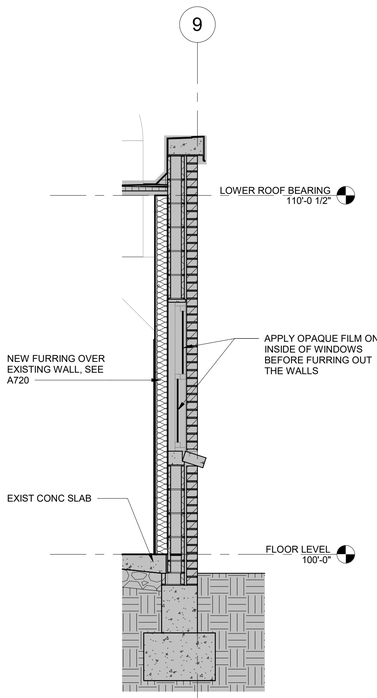
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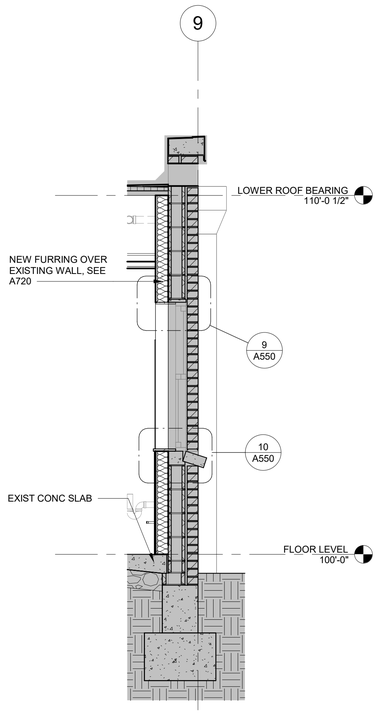
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BUILDING SECTIONS

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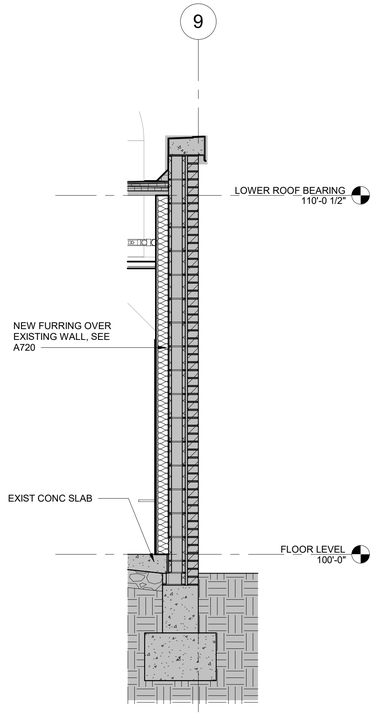
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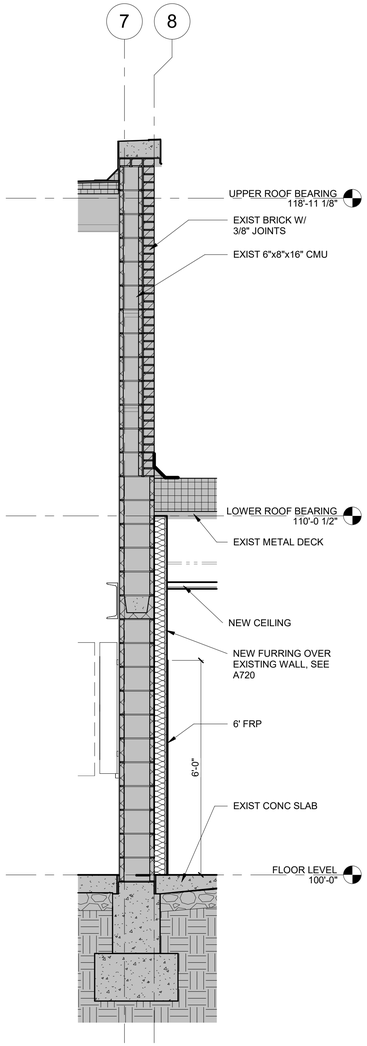
9 WALL SECTION
1/2" = 1'-0"



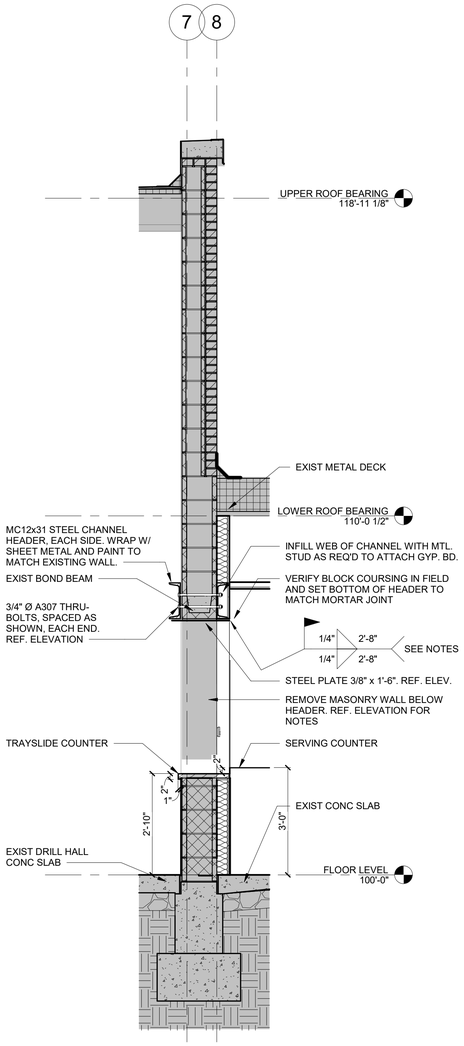
5 WALL SECTION
1/2" = 1'-0"



6 WALL SECTION
1/2" = 1'-0"

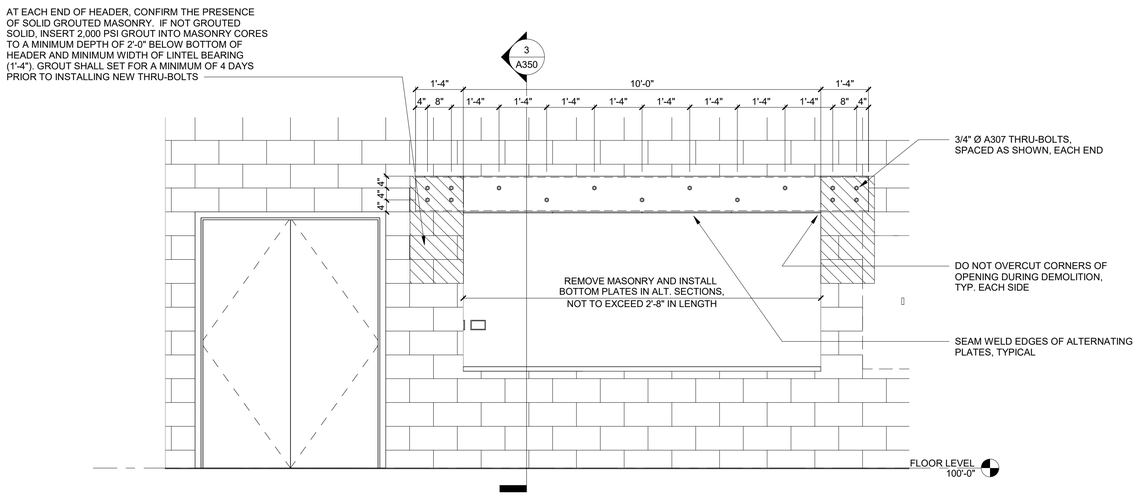


2 WALL SECTION
1/2" = 1'-0"



3 WALL SECTION
1/2" = 1'-0"

STEEL HEADER NOTES:
1. INSTALL THE DOUBLE STEEL CHANNEL HEADER PRIOR TO REMOVING ANY MASONRY IN THIS AREA.
2. REMOVE MASONRY BELOW THE HEADER IN ALTERNATING LENGTHS OF 2'-8". INSTALL STEEL BOTTOM PLACE INTO THESE SECTIONS AND WELD INTO PLACE.



1 SERVING WINDOW ELEVATION
1/2" = 1'-0"

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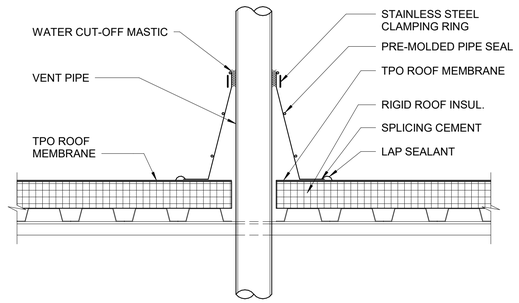
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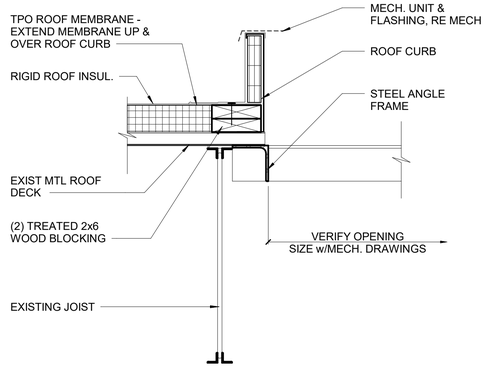
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WALL SECTIONS

SHEET NUMBER:
A350

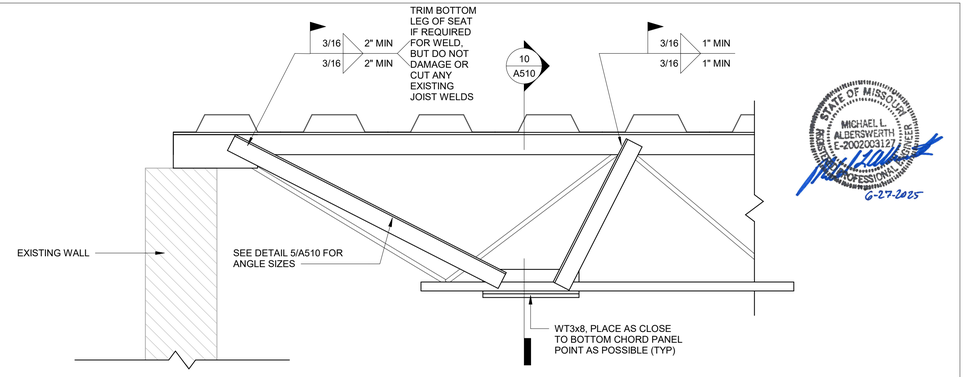
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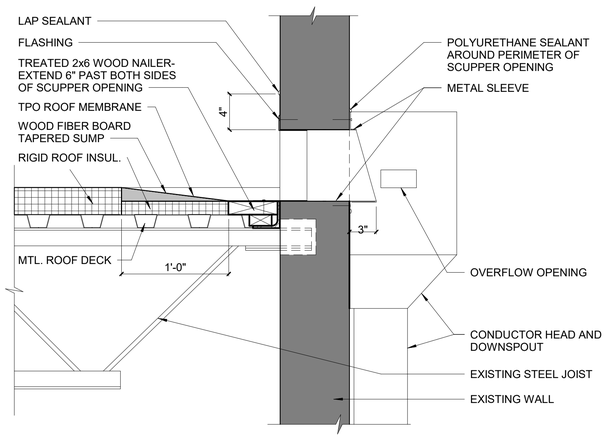
1 TYP. VENT STACK DETAIL
1 1/2" = 1'-0"



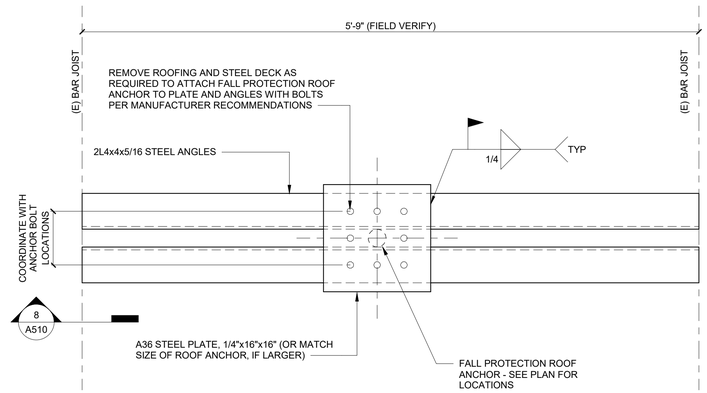
3 TYP. ROOF CURB DETAIL
1 1/2" = 1'-0"



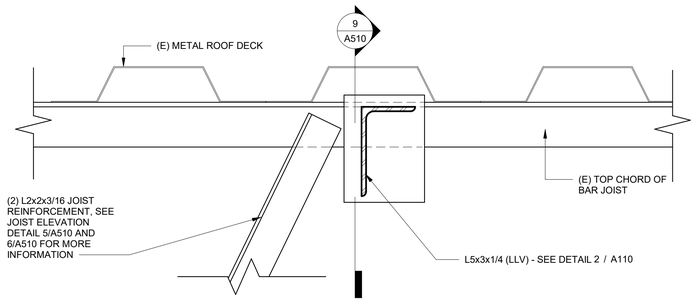
6 JOIST REINFORCEMENT DETAIL
1 1/2" = 1'-0"



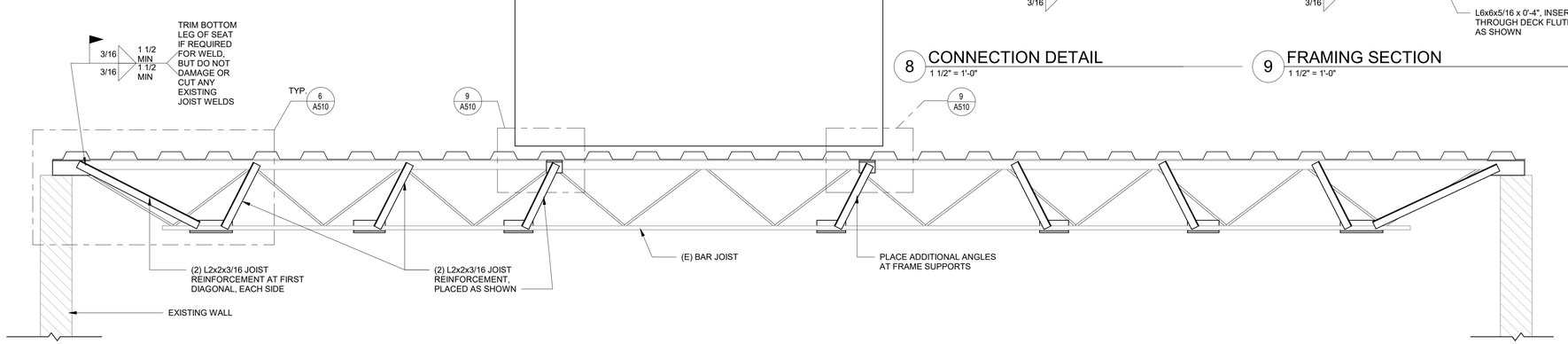
2 TYP. SCUPPER DETAIL
1 1/2" = 1'-0"



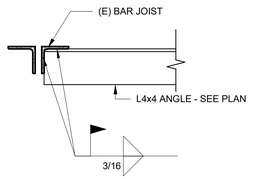
4 ROOF ANCHORAGE
1 1/2" = 1'-0"



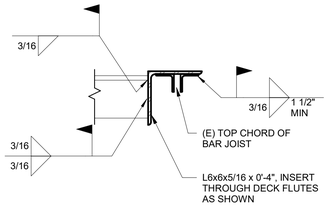
7 ANGLE FRAME SUPPORT AT JOIST
3" = 1'-0"



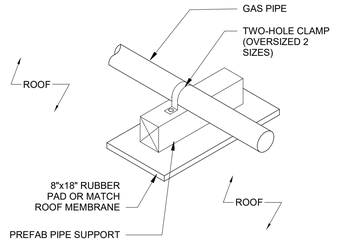
5 JOIST REINFORCEMENT ELEVATION
3/4" = 1'-0"



8 CONNECTION DETAIL
1 1/2" = 1'-0"

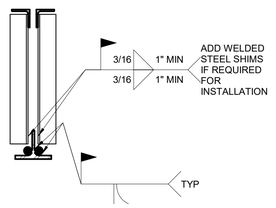


9 FRAMING SECTION
1 1/2" = 1'-0"



NOTE:
ROOFING PAD IS RECOMMENDED TO AVOID ABRASION TO ROOF BUT IS NOT SUPPLIED BY WAI.

11 GAS PIPE ROOF SUPPORT
12" = 1'-0"



10 JOIST REINFORCEMENT SECTION
1 1/2" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026
PROFESSIONAL SEAL

MICHAEL L. ALBERSWERTH
E-2002003121
PROFESSIONAL ENGINEER
6-27-2025

VESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

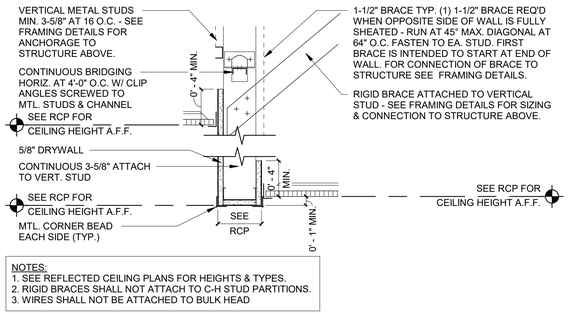
ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
ROOF DETAILS

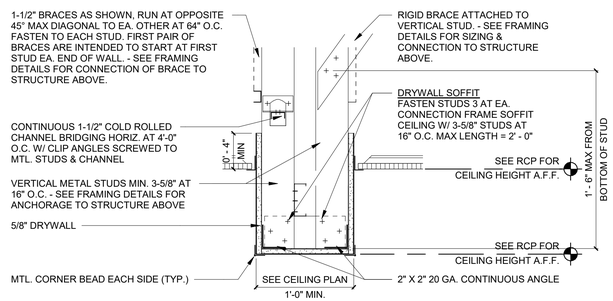
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6/27/2025

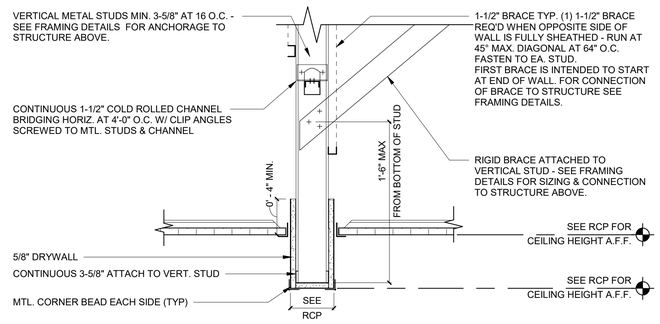


NOTES:
1. SEE REFLECTED CEILING PLANS FOR HEIGHTS & TYPES.
2. RIGID BRACES SHALL NOT ATTACH TO C-H STUD PARTITIONS.
3. WIRES SHALL NOT BE ATTACHED TO BULK HEAD

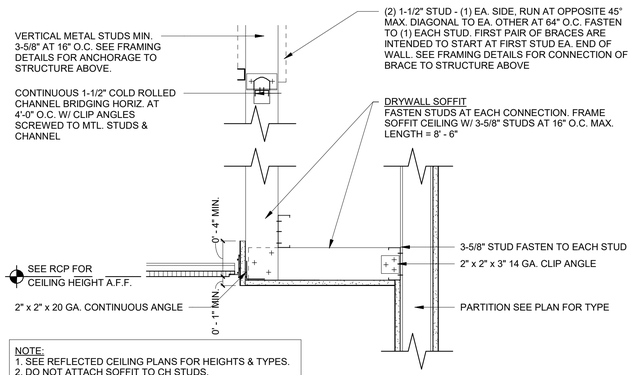
1 TYP. BULKHEAD DETAIL
1 1/2" = 1'-0"



2 TYP. BULKHEAD DETAIL (1'-0" AND GREATER)
1 1/2" = 1'-0"

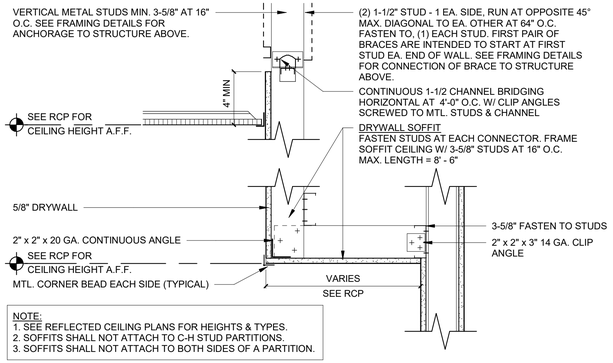


3 TYP. BULKHEAD DETAIL (LESS THAN 1'-0")
1 1/2" = 1'-0"



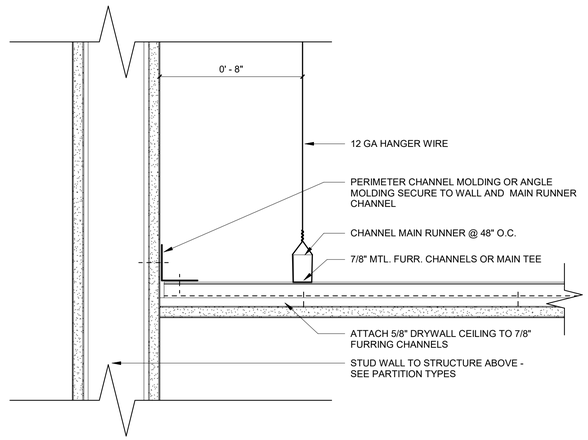
NOTE:
1. SEE REFLECTED CEILING PLANS FOR HEIGHTS & TYPES.
2. DO NOT ATTACH SOFFIT TO CH STUDS.
3. DO NOT ATTACH SOFFITS TO BOTH SIDES OF WALL.

4 TYP. DROP SOFFIT AT CEILING HEIGHT DETAIL
1 1/2" = 1'-0"

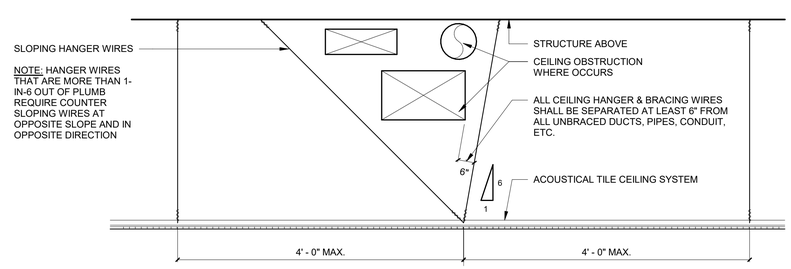


NOTE:
1. SEE REFLECTED CEILING PLANS FOR HEIGHTS & TYPES.
2. SOFFITS SHALL NOT ATTACH TO C-H STUD PARTITIONS.
3. SOFFITS SHALL NOT ATTACH TO BOTH SIDES OF A PARTITION.

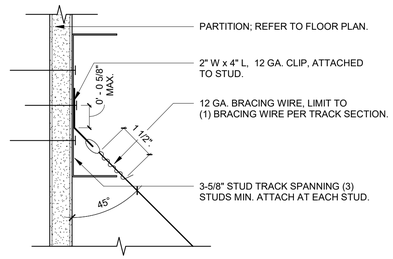
5 TYP. DROP SOFFIT BELOW CEILING DETAIL
1 1/2" = 1'-0"



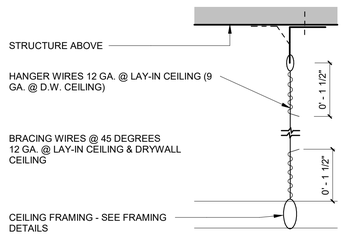
6 TYP. PARTITION CONNECTION DETAIL TO MAIN RUNNER CHANNELS
3" = 1'-0"



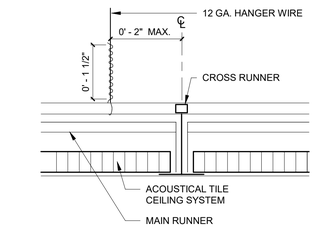
7 TYP. ACOUSTIC CEILING COUNTER SLOPING WIRES AT OBSTRUCTION
1" = 1'-0"



8 TYP. BRACING/STRAP HANGING WIRE CONNECTION AT WALL STUD
6" = 1'-0"



9 TYP. TRACK HANGER & BRACING WIRE CONNECTION DETAIL
6" = 1'-0"



10 TYP. WIRE CONNECTION TO ACOUSTIC LAY-IN CEILING GRID
6" = 1'-0"

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PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
CEILING DETAILS

SHEET NUMBER:
A520

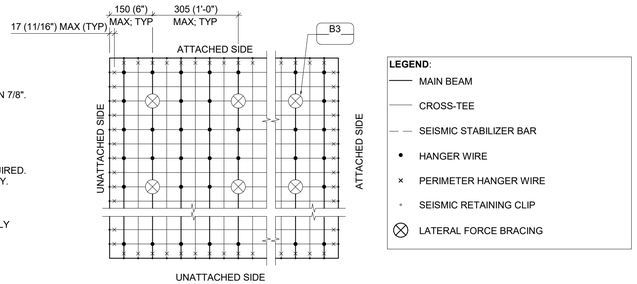
6/27/2025

SEISMIC CEILING REQUIREMENTS (SUSPENDED)

BASIC CONNECTIONS, PERIMETER AND LATERAL SPLAY BRACING REQUIREMENTS:
- MINIMUM INTERSECTION STRENGTH LIMITS AT MAIN TEE AND CROSS TEE IS 60 LBS.
- REQUIREMENT TO HAVE VERTICAL HANGER WIRE (12-GAUGE) @ 4'-0".
- INTERMEDIATE OR HEAVY DUTY MAIN TEE CLASSIFICATION REQUIRED.
- ALL VERTICAL HANGER WIRES TO BE 1 IN 6 MAX PLUMB OF VERTICAL.
- PERIMETER VERTICAL HANGER WIRES CAN NOT BE MORE THAN 8" FROM THE WALL IF MOLDING LESS THAN 7/8".
- GRID END / WALL CLEARANCE TO BE MINIMUM OF 3/8".
- PERIMETER CLOSURE (MOLDING) WIDTH TO BE MINIMUM 7/8".
- PERIMETER ATTACHMENT OF THE GRID ON TWO ADJACENT WALLS IS NOT PERMITTED.
- REQUIREMENT TO HAVE PERIMETER TEE ENDS TIED TOGETHER.
- HORIZONTAL RESTRAINT (SPLAY WIRES OR RIGID BRACING) WITHIN 2" OF INTERSECTION AND SPLAYED 90 DEGREES APART OF 45 DEGREES ANGLES IS NOT REQUIRED.
- COMPRESSION POSTS (STRUTS) 12" OC IN BOTH DIRECTIONS, STARTING 6'-0" FROM WALLS ARE NOT REQUIRED.
- PARTITIONS ARE NOT TO BE ATTACHED TO CEILING SYSTEM, UNLESS CEILING IS ABLE TO MOVE LATERALLY.
- SEISMIC SEPARATION JOINTS ARE NOT REQUIRED.

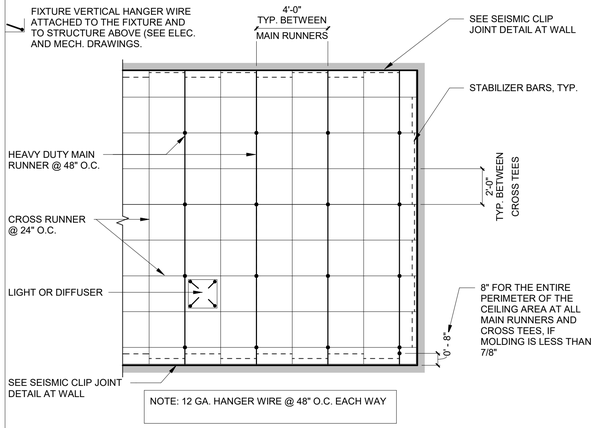
LIGHT FIXTURE ATTACHMENT REQUIREMENTS:
- LIGHT FIXTURE ARE TO BE MECHANICALLY ATTACHED TO GRID (TWO PER FIXTURE UNLESS INDEPENDENTLY SUPPORTED).
- PENDANT-HUNG FIXTURES ARE TO BE DIRECTLY SUPPORTED FROM STRUCTURE WITH 9-GUAGE WIRE (OR APPROVED ALTERNATE).
- RIGID LAY-IN OR CAN LIGHT FIXTURES REQUIRE TO BE ATTACHED DIRECTLY TO STRUCTURE.

MISCELLANEOUS ATTACHMENT REQUIREMENTS:
- AIR TERMINALS LESS THAN OR EQUAL TO 20 LBS IS TO BE POSITIVELY ATTACHED TO GRID. AIR TERMINALS BETWEEN 21 LBS AND 56 LBS ARE TO BE POSITIVELY ATTACHED TO GRID AND WITH TWO WIRES TO STRUCTURE. GREATER THAN 57 LBS REQUIRES DIRECT SUPPORT TO STRUCTURE.
- SPRINKLER HEADS AND OTHER PENETRATIONS REQUIRE A MINIMUM 3/8" CLEARANCE ON ALL SIDES.
- CABLE TRAY AND ELECTRICAL CONDUIT IS NOT REQUIRED TO BE INDEPENDENTLY SUPPORTED OR BRACED.

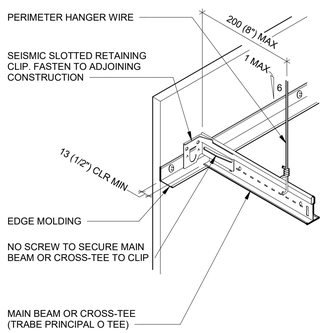


PLAN - CEILING SUSPENSION DIAGRAM AND SEISMIC CRITERIA

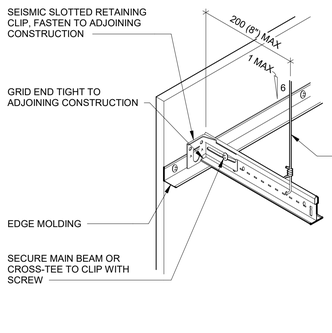
- 12 GA. VERTICAL HANGER WIRE @ 48" O.C. EACH WAY.



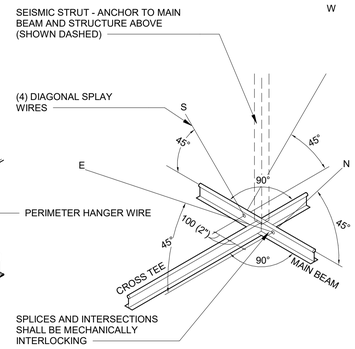
NOTE: 12 GA. HANGER WIRE @ 48" O.C. EACH WAY



ISOMETRIC - UNATTACHED SIDE



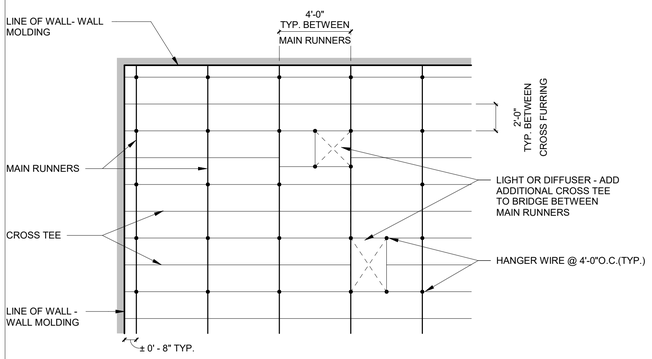
ISOMETRIC - ATTACHED SIDE

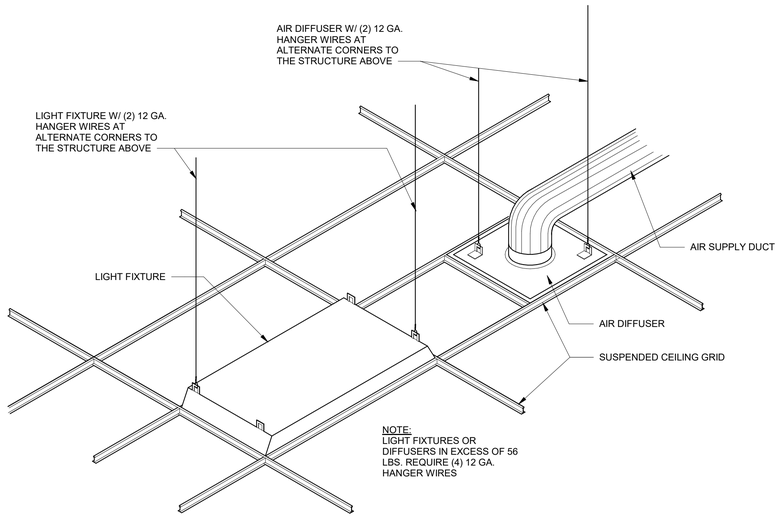


ISOMETRIC - LATERAL FORCE BRACING

SEISMIC CEILING REQUIREMENTS (GYP BD)

BASIC CONNECTIONS, PERIMETER AND LATERAL SPLAY BRACING REQUIREMENTS:
- MINIMUM INTERSECTION STRENGTH LIMITS AT MAIN TEE AND CROSS TEE IS 60 LBS.
- REQUIREMENT TO HAVE VERTICAL HANGER WIRE (12-GAUGE) @ 4'-0".
- NO MAIN TEE CLASSIFICATION REQUIRED.
- ALL VERTICAL HANGER WIRES TO BE 1 IN 6 MAX PLUMB OF VERTICAL.
- PERIMETER VERTICAL HANGER WIRES ARE NOT REQUIRED TO BE LESS THAN 8" FROM THE WALL.
- NO GRID END / WALL CLEARANCE REQUIRED.
- NO MINIMUM PERIMETER CLOSURE (MOLDING) WIDTH.
- NO REQUIREMENT TO HAVE PERIMETER TEE ENDS TIED TOGETHER.
- HORIZONTAL RESTRAINT (SPLAY WIRES OR RIGID BRACING) WITHIN 2" OF INTERSECTION AND SPLAYED 90 DEGREES APART OF 45 DEGREES ANGLES IS NOT REQUIRED.
- COMPRESSION POSTS (STRUTS) 12" OC IN BOTH DIRECTIONS, STARTING 6'-0" FROM WALLS ARE NOT REQUIRED.
- SEISMIC SEPARATION JOINTS ARE NOT REQUIRED.
- DRYWALL CONTROL JOINTS REQUIRED WHEN APPLICABLE OR AS NOTED ON DRAWINGS:
  1. INTERIOR CEILINGS WITH PERIMETER RELIEF: MAXIMIUM 50'-0" SINGLE DIRECTION AND MAXIMIUM 2,500 SFT.
  2. INTERIOR CEILINGS WITHOUT PERIMETER RELIEF: MAXIMIUM 30'-0" SINGLE DIRECTION AND MAXIMIUM 900 SFT.
  3. EXTERIOR CEILINGS: MAXIMIUM 30'-0" SINGLE DIRECTION AND MAXIMIUM 900 SFT.





2 SUSPENDED CEILING SEISMIC ISOMETRIC DETAILS
1 : 20

SUSPENDED CEILING SEISMIC GENERAL NOTES

A. CEILING SYSTEMS MAY NOT BE USED TO SUPPORT WALLS OR PARTITIONS.

B. 12 GA. (MIN.) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 48" x 48" GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNER; NOT MORE THAN 6:1 OUT OF PLUMB UNLESS COUNTER SLOPING WIRES ARE PROVIDED.

C. PROVIDE 12 GA. (MIN.) HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN 8" OF THE SUPPORT OR WITHIN (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LEAST, FOR THE PERIMETER OF THE CEILING AREA. END CONNECTIONS FOR RUNNERS WHICH ARE DESIGNED AND DETAILED TO RESIST THE APPLIED VERTICAL AND HORIZONTAL FORCES MAY BE USED IN LIEU OF THE 12 GA. HANGER WIRES.

D. PROVIDE TRAPEZE AND OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO TYPICAL HANGER SPACING. PROVIDE ADDITIONAL HANGERS, STRUTS AND BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS AND DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1" OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.

E. ATTACH CEILING GRID MEMBERS TO NO MORE THAN (2) ADJACENT WALLS. CEILING GRID MEMBERS SHALL BE AT LEAST 1/2" FREE OF OTHER WALLS. WHERE WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHALL BE FREE WITH MINIMUM OF 1/2" SPACE PROVIDED BETWEEN RUNNERS AND WALL.

F. AT THE PERIMETER OF THE CEILING OR WHERE MAIN AND CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AND THE FREE END TO PREVENT LATERAL SPREADING. PROVIDE A METAL STRUT OR 16 GA. WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNER. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS 12" OR LESS, INTERLOCK IS NOT REQUIRED.
   1. EDGE MOLDING 7/8" WIDE (MINIMUM), UNLESS OTHERWISE NOTED.
   2. PROVIDE PERIMETER HANGER WIRES AT ENDS OF MAIN BEAMS AND CROSS-TEES AT 8" MAXIMUM) FROM EACH WALL OR CHANGE IN PLANE.
   3. PROVIDE SLOTTED RETAINING CLIP AT ENDS OF MAIN BEAMS AND CROSS-TEES. ANCHOR CLIP TO ADJOINING CONSTRUCTION ON EACH SIDE; ANCHOR CLIP TO BEAMS AND TEES ON 2 SIDES (ATTACHED SIDES).

G. PROVIDE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND (4) 12 GA. SPLAYED BRACING WIRES ORIENTED 90 DEGREES FROM EACH OTHER AT THE FOLLOWING SPACING.
   1. PLACE BRACING ASSEMBLIES AT A SPACING NOT MORE THAN 12" BY 12" ON CENTER.
   2. PLACE BRACING ASSEMBLIES AT LOCATIONS NOT MORE THAN (1/2) THE SPACING GIVEN ABOVE, FROM EACH PERIMETER WALL AND AT THE EDGE OF VERTICAL CEILING OFFSETS. THE SLOPE OF THESE WIRES SHALL NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND SHALL BE TAUT. SPLICES IN BRACING WIRES ARE NOT TO BE PERMITTED.
   3. SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, AND FIRE RATED SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 96 SQUARE FEET OR LESS, SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE, DO NOT REQUIRE BRACING ASSEMBLIES WHEN ATTACHED TO THE ADJACENT WALLS.

H. PROVIDE LATERAL FORCE SPLAY WIRE BRACING CLUSTERS OF 4 WIRES ATTACHED TO MAIN BEAM WITHIN 2" OF CROSS-TEE INTERSECTION. WIRES ARRAYED AT 90-DEGREES FROM EACH OTHER AND AT ANGLE NOT GREATER THAN 45-DEGREES FROM PLANE OF CEILING. PROVIDE SEISMIC STRUT ATTACHED TO MAIN BEAMS AND STRUCTURE ABOVE AT EACH LATERAL FORCE BRACING LOCATION. RIGID BRACING AND SEISMIC STRUT MAY BE USED IN LIEU OF SPLAY WIRES AND SEISMIC STRUT. CONTINUOUS CEILING AREA NOT TO EXCEED 2,500 SQUARE FEET. LATERAL FORCE BRACING IS NOT REQUIRED AT CEILING AREAS LESS THAN 1,000 SQUARE FEET.

I. FASTEN HANGER WIRES WITH NO LESS THAN (3) TIGHT TURNS. FASTEN BRACING WIRES WITH (4) TIGHT TURNS. MAKE ALL TIGHT TURNS WITHIN A DISTANCE OF 1 1/2". HANGER AND BRACING WIRE ANCHORS TO THE STRUCTURE, INSTALL IN SUCH A MANNER THAT THE DIRECTION OF THE WIRE ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE FORCES ACTING ON THE WIRE.
   NOTE: WIRE TURNS MADE BY MACHINE WHERE BOTH STRANDS HAVE BEEN DEFORMED OR BENT IN WRAPPING CAN WAIVE THE 1 1/2" REQUIREMENT, BUT THE NUMBER OF TURNS SHALL BE MAINTAINED AND BE AS TIGHT AS POSSIBLE.

J. SEPARATE ALL CEILING HANGING AND BRACING WIRES AT LEAST 6" FROM ALL UNBRACED DUCTS, PIPES, CONDUITS, ETC. LIGHTWEIGHT ITEMS, SUCH AS SINGLE ELECTRICAL CONDUIT NOT EXCEEDING 3/4" NOMINAL DIAMETER, MAY BE ATTACHED TO HANGER WIRES USING CONNECTORS ACCEPTABLE TO THE ARCHITECT.

K. CEILING PENETRATIONS (COLUMNS, WALLS, SPRINKLERS, ETC.) AND INDEPENDENTLY SUPPORTED FIXTURES OR SERVICES ARE TO BE TREATED AS PERIMETER CLOSURES AND SHALL MAINTAIN CLEARANCE AT END OF GRID WITH SUITABLE ESCUTCHEONS OR CLOSURES. EXCEPT WHEN RIGID BRACING AND SEISMIC STRUTS ARE USED, PROVIDE SPRINKLER HEADS AND OTHER PENETRATIONS WITH 2" OVER-SIZE ESCUTCHEON, SLEEVE, OR ADAPTER THROUGH THE CEILING PANEL TO ALLOW 1" FREE MOVEMENT IN ALL HORIZONTAL DIRECTIONS.

L. ATTACH ALL LIGHT FIXTURES, CEILING MOUNTED AIR TERMINALS AND SERVICES TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURES. SCREWS OR APPROVED FASTENERS ARE REQUIRED.

M. SUPPORT FLUSH LIGHT FIXTURES, RECESSED LIGHT FIXTURES, AIR TERMINALS AND SERVICES WEIGHING LESS THAN 56 LBS. DIRECTLY ON RUNNERS OF A HEAVY DUTY GRID SYSTEM. PROVIDE A MINIMUM OF (2) 12 GA. SLACK SAFETY WIRES ATTACHED TO FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO STRUCTURE ABOVE. ALL 48" x 48" LIGHT FIXTURES SHALL HAVE SLACK SAFETY WIRES AT EACH CORNER.

N. ALL FLUSH LIGHT FIXTURES, RECESSED LIGHT FIXTURES, AIR TERMINALS AND SERVICES WEIGHING 56 LBS. OR MORE SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN (4) TAUT 12 GA. WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE. THE (4) TAUT 12 GA. WIRES INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE MUST BE CAPABLE OF SUPPORTING (4) TIMES THE WEIGHT OF THE UNIT.

O. WHERE CONFLICT IN CEILING DEVICES OCCURS, COORDINATE WITH THE ARCHITECT.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026
PROFESSIONAL SEAL

YESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

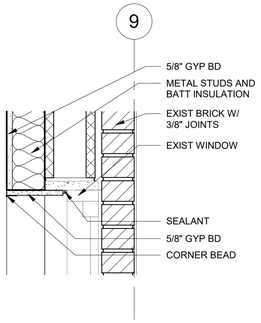
ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

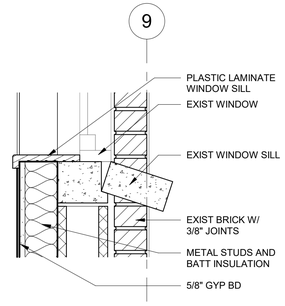
SHEET TITLE:
CEILING DETAILS

SHEET NUMBER:
A521

6/27/2025



9 WINDOW HEAD FURRING DETAIL
1 1/2" = 1'-0"



10 WINDOW SILL FURRING DETAIL
1 1/2" = 1'-0"

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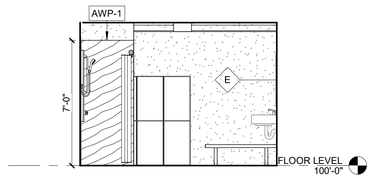
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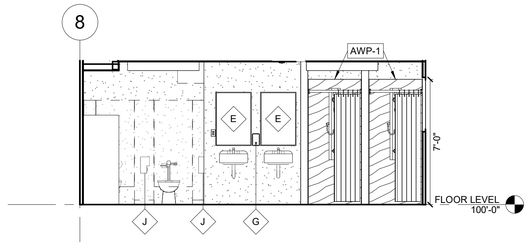
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SECTION DETAILS

SHEET NUMBER:
A550

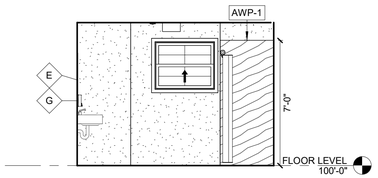
6/27/2025



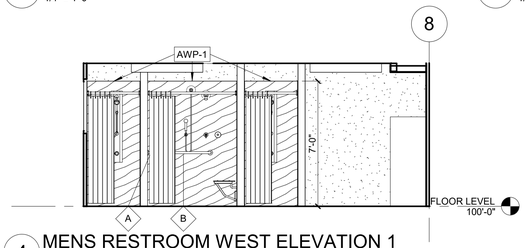
1 MENS RESTROOM NORTH ELEVATION 1
1/4" = 1'-0"



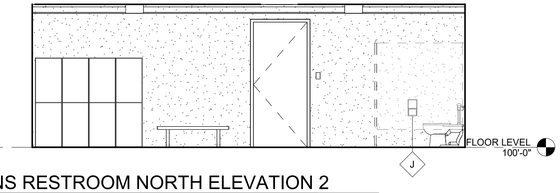
2 MENS RESTROOM EAST ELEVATION 1
1/4" = 1'-0"



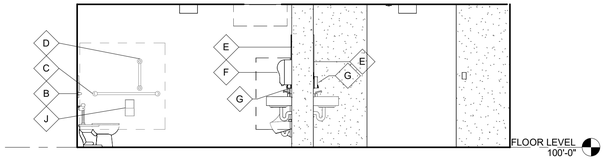
3 MENS RESTROOM SOUTH ELEVATION 1
1/4" = 1'-0"



4 MENS RESTROOM WEST ELEVATION 1
1/4" = 1'-0"



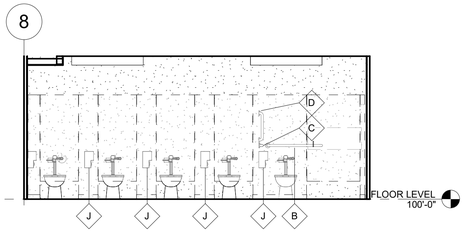
5 MENS RESTROOM NORTH ELEVATION 2
1/4" = 1'-0"



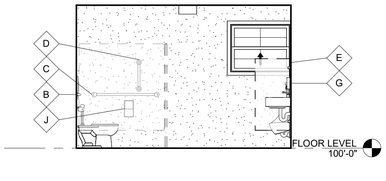
6 MENS RESTROOM SOUTH ELEVATION 2
1/4" = 1'-0"



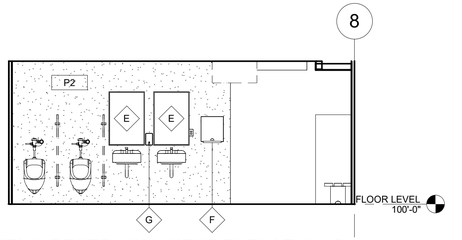
7 MENS RESTROOM NORTH ELEVATION 3
1/4" = 1'-0"



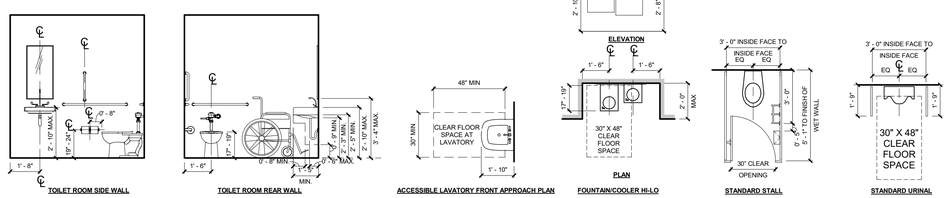
8 MENS RESTROOM EAST ELEVATION 2
1/4" = 1'-0"



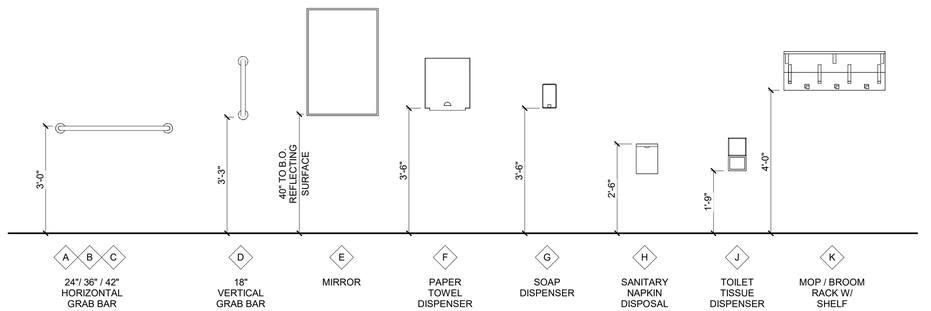
9 MENS RESTROOM SOUTH ELEVATION 3
1/4" = 1'-0"



10 MENS RESTROOM WEST ELEVATION 2
1/4" = 1'-0"



STANDARD TOILET ELEVATIONS
1/4" = 1'-0"



RESTROOM ACCESSORIES
1/2" = 1'-0"

GENERAL INTERIOR ELEVATION NOTES:

A. PROVIDE BLOCKING IN WALLS AT RESTROOM ACCESSORIES AND COUNTERTOPS.
B. PROVIDE REQUIRED FIRE RETARDANT TREATED WOOD BLOCKING AT CASEWORK, COUNTERTOPS AND ANY OTHER ITEM ATTACHING OR ANCHORED TO THE WALL.
C. WHERE PLASTIC LAMINATE GRAIN/PATTERN RETURN A CORNER, GRAIN/PATTERN TO RUN IN SAME DIRECTION ON ALL SIDES.

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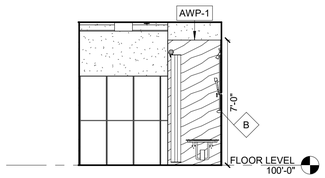
SHEET TITLE:
INTERIOR ELEVATIONS - RESTROOMS

SHEET NUMBER:
A600

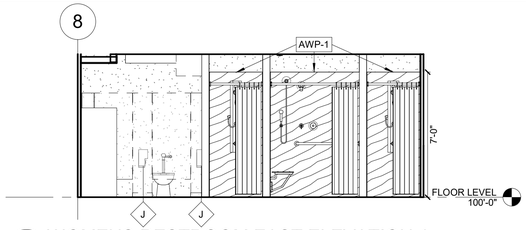
6/27/2025

GENERAL INTERIOR ELEVATION NOTES:

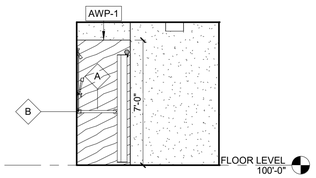
A. PROVIDE BLOCKING IN WALLS AT RESTROOM ACCESSORIES AND COUNTERTOPS.
B. PROVIDE REQUIRED FIRE RETARDANT TREATED WOOD BLOCKING AT CASEWORK, COUNTERTOPS AND ANY OTHER ITEM ATTACHING OR ANCHORED TO THE WALL.
C. WHERE PLASTIC LAMINATE GRAIN/PATTERN RETURN A CORNER, GRAIN/PATTERN TO RUN IN SAME DIRECTION ON ALL SIDES.



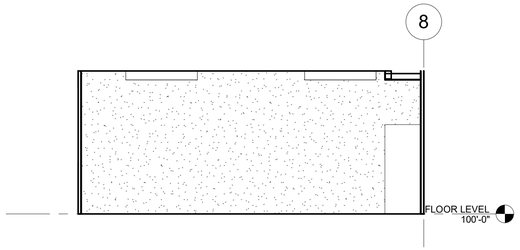
1 WOMENS RESTROOM NORTH ELEVATION 1
1/4" = 1'-0"



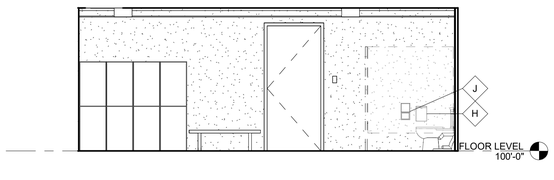
2 WOMENS RESTROOM EAST ELEVATION 1
1/4" = 1'-0"



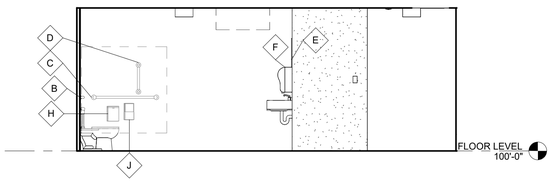
3 WOMENS RESTROOM SOUTH ELEVATION 1
1/4" = 1'-0"



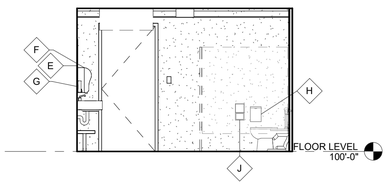
4 WOMENS RESTROOM WEST ELEVATION 1
1/4" = 1'-0"



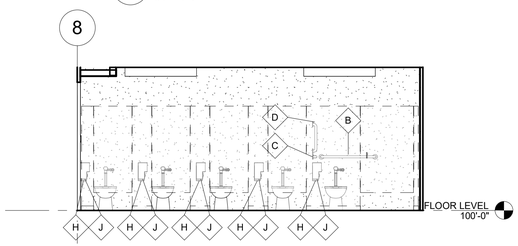
5 WOMENS RESTROOM NORTH ELEVATION 2
1/4" = 1'-0"



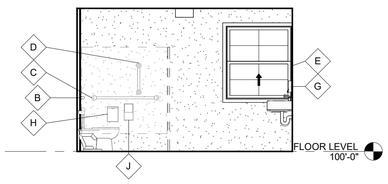
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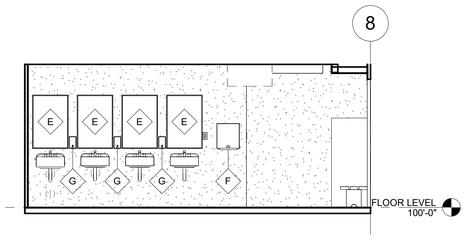
7 WOMENS RESTROOM NORTH ELEVATION 3
1/4" = 1'-0"



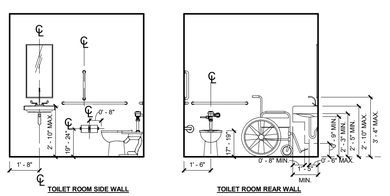
8 WOMENS RESTROOM EAST ELEVATIONS 2
1/4" = 1'-0"



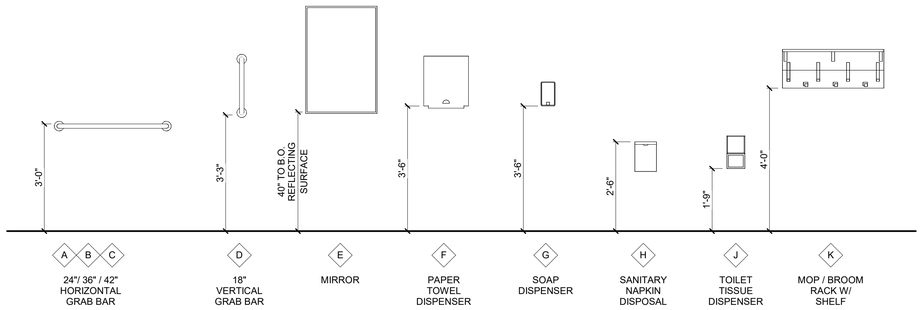
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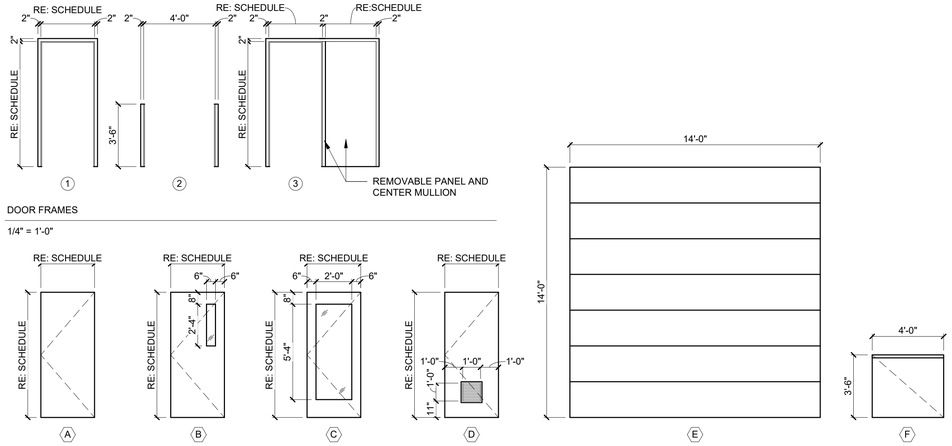
ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
CHECKED BY: FZ
DESIGNED BY: JB

SHEET TITLE:
INTERIOR ELEVATIONS - RESTROOMS

SHEET NUMBER:
A601

6/27/2025

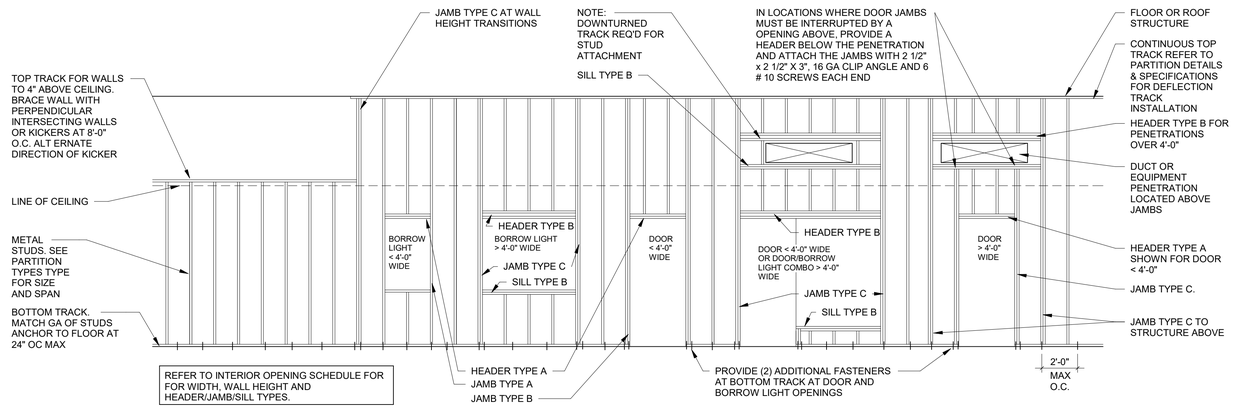


DOOR FRAMES

1/4" = 1'-0"

DOOR TYPES T = TEMPERED GLASS

1/4" = 1'-0"



1 INTERIOR WALL TYP OPENINGS FRAMING

1/4" = 1'-0"

DOOR SCHEDULE

	DOOR								FRAME			DETAILS		HDW SET	FIRE RATING	
DOOR #	PAIR	W	H	THK	ELEV	MATL	FINISH	GLAZING	ELEV	MATL	FINISH	HEAD	JAMB			REMARKS
100A	●	2'-8"	7'-0"	1 3/4"	A	HM	PT-2	-	1	HM	PT-2	H4	J4	8	-	
100B	●	2'-8"	7'-0"	1 3/4"	C	WD	ST	GL-1	1	HM	PT-2	H2	J2	6	1	
101		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H2	J2	9	1	
102A		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H2	J2	9	1	
102B		3'-0"	7'-0"	1 3/4"	A	WD	ST	-	1	HM	PT-2	H1	J1	9	-	
106			7'-0"		-	-	-	-	-	-	-	-	-	-	2	EXIST VAULT DOOR TO REMAIN
110B			14'-0"	1 1/2"	E	STEEL	-	-	-	-	-	H6	J6	-	-	EXIST SECTIONAL DOOR TO REMAIN
111A		3'-0"	7'-0"	1 3/4"	B	WD	ST	-	1	HM	PT-2	H2	J2	5	1	
111B		3'-0"	7'-0"	1 3/4"	A	HM	PT-2	GL-1	1	HM	PT-2	H1	J1	1	-	
112A		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H1	J1	9	-	
112B		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H1	J1	9	-	
113B	●	2'-6"	7'-0"	1 3/4"	A	HM	PT-2	-	1	HM	PT-2	H4	J4	8	-	
114		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H2	J2	9	-	
115		2'-8"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H2	J2	4	1	
116A	●	3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H8	J2	4	1	
116B		2'-8"	7'-0"	1 3/4"	A	WD	ST	-	1	HM	PT-2	H1	J1	4	-	
117		3'-0"	7'-0"	1 3/4"	A	WD	ST	-	1	HM	PT-2	H8	J2	7	1	
118A		3'-0"	7'-0"	1 3/4"	D	WD	ST	-	1	HM	PT-2	H8	J2	2	1	
118B	●	3'-6"	7'-0"	1 3/4"	A	HM	PT-2	-	3	HM	PT-2	H7	J4	8	-	ONE REMOVABLE PANEL
119		3'-0"	7'-0"	1 3/4"	A	WD	ST	-	1	HM	PT-2	H8	J2	7	1	
120A	●	2'-6"	7'-0"	1 3/4"	A	WD	ST	-	1	HM	PT-2	H3	J3	4	1	
120B		3'-0"	7'-0"	1 3/4"	A	HM	PT-2	-	1	HM	PT-2	H5	J5	8	-	
121A		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H2	J2	9	-	
121B		3'-0"	7'-0"	1 3/4"	A	WD	ST	-	1	HM	PT-2	H1	J1	9	-	
122		3'-0"	7'-0"	1 3/4"	B	WD	ST	GL-1	1	HM	PT-2	H2	J2	9	1	

INTERIOR WALL OPENING SCHEDULE - HEADER, JAMB AND SILL TYPES

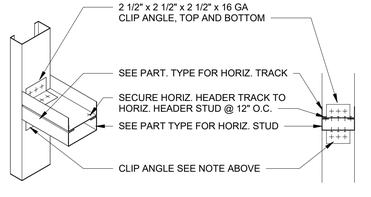
WALL HEIGHT "H" REF PART TYPE FOR STUD SIZE/GA	ROUGH OPENING WIDTH "W"	HEADER TYPE	JAMB TYPE	SILL TYPE
3 5/8" STUD - 1 LAYER 5/8" GYP BD EA SIDE				
8'-0" - 12'-0"	0'-0" < W ≤ 4'-0"	A	A -OR- B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
12'-0" < H ≤ 14'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B-OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
14'-0" < H ≤ 16'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B-OR-C	B
	8'-0" < W ≤ 12'-0"	B	D	B

WALL HEIGHT "H" REF PART TYPE FOR STUD SIZE/GA	ROUGH OPENING WIDTH "W"	HEADER TYPE	JAMB TYPE	SILL TYPE
3 5/8" STUD - 2 LAYERS 5/8" GYP BD EA SIDE				
8'-0" - 12'-0"	0'-0" < W ≤ 4'-0"	A	A -OR- B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
12'-0" < H ≤ 14'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B-OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
14'-0" < H ≤ 16'-0"	0'-0" < W ≤ 4'-0"	A	A- OR-B	A
	4'-0" < W ≤ 8'-0"	B	B-OR-C	B
	8'-0" < W ≤ 12'-0"	B	D	B

WALL HEIGHT "H" REF PART TYPE FOR STUD SIZE/GA	ROUGH OPENING WIDTH "W"	HEADER TYPE	JAMB TYPE	SILL TYPE
6" STUD - 1 LAYER 5/8" GYP BD EA SIDE				
8'-0" - 12'-0"	0'-0" < W ≤ 4'-0"	A	A -OR- B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
12'-0" < H ≤ 14'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
14'-0" < H ≤ 16'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	D	B

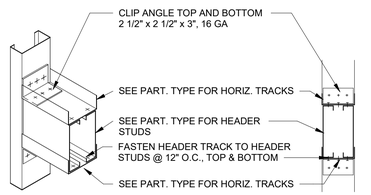
WALL HEIGHT "H" REF PART TYPE FOR STUD SIZE/GA	ROUGH OPENING WIDTH "W"	HEADER TYPE	JAMB TYPE	SILL TYPE
6" STUD - 2 LAYERS 5/8" GYP BD EA SIDE				
8'-0" - 12'-0"	0'-0" < W ≤ 4'-0"	A	A -OR- B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
12'-0" < H ≤ 14'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	C	B
14'-0" < H ≤ 16'-0"	0'-0" < W ≤ 4'-0"	A	B	A
	4'-0" < W ≤ 8'-0"	B	B -OR- C	B
	8'-0" < W ≤ 12'-0"	B	D	B

HEADER TYPE A



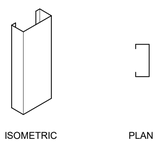
ALL FASTENERS SHALL BE NO. 10 SCREWS - TYP.

HEADER TYPE B

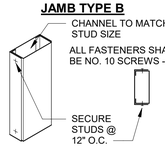


ALL FASTENERS SHALL BE NO. 10 SCREWS - TYP.

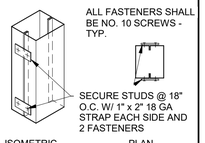
JAMB TYPE A



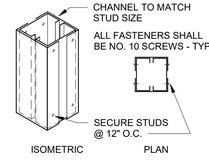
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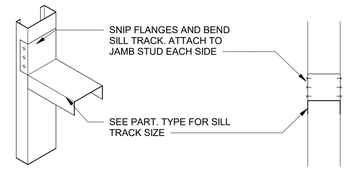
JAMB TYPE C



JAMB TYPE D

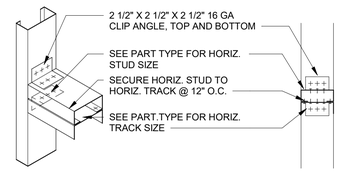


SILL TYPE A



ALL FASTENERS SHALL BE NO. 10 SCREWS - TYP.

SILL TYPE B



ALL FASTENERS SHALL BE NO. 10 SCREWS - TYP.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026
PROFESSIONAL SEAL

YESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

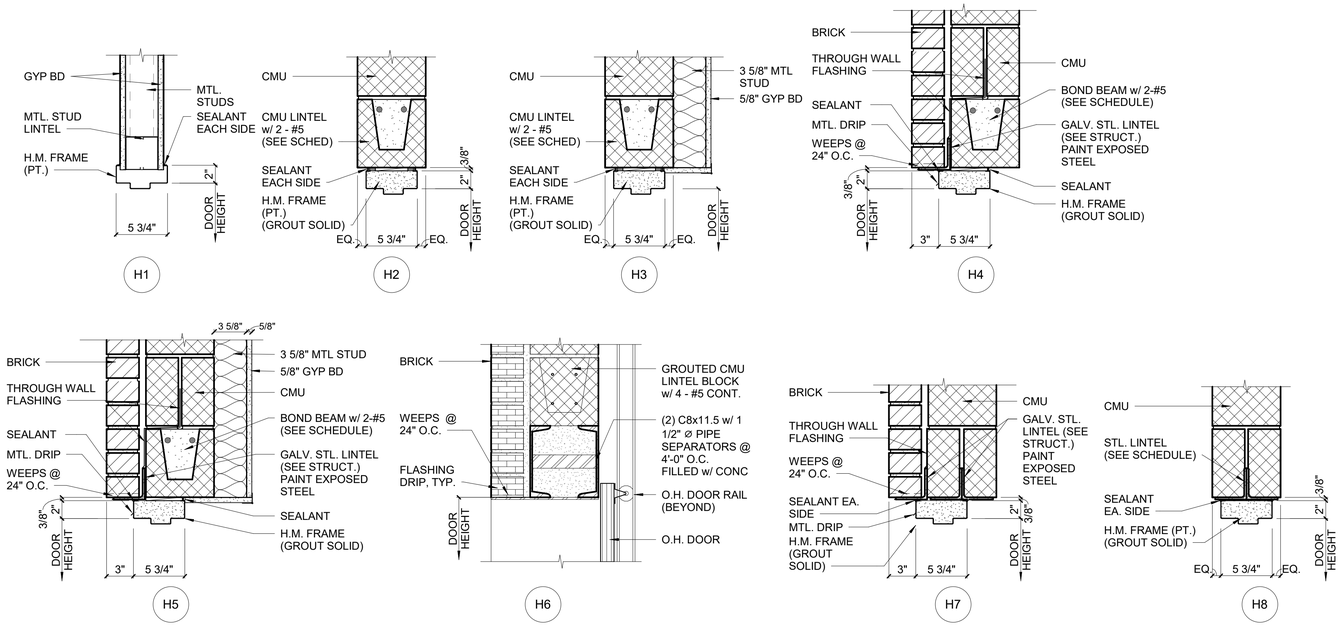
ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
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DESIGNED BY: JB

SHEET TITLE:
DOOR SCHEDULE AND DETAILS

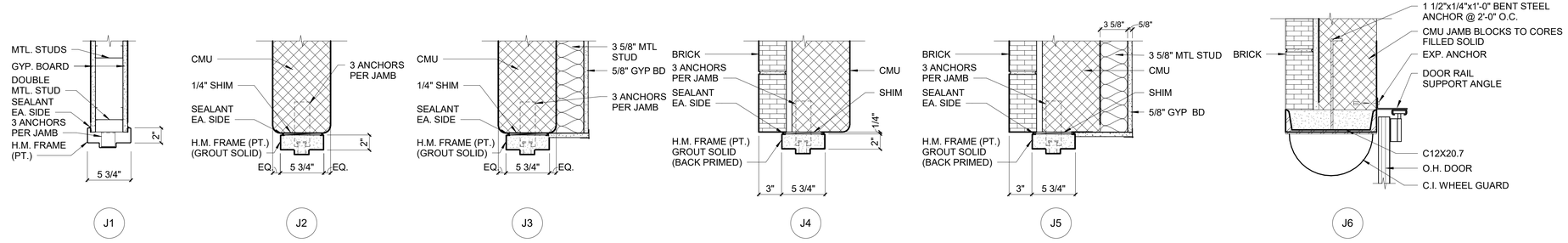
SHEET NUMBER:
A700

6/27/2025



1 DOOR HEAD DETAILS

1 1/2" = 1'-0"



2 DOOR JAMB DETAILS

1 1/2" = 1'-0"

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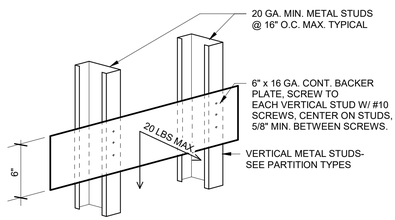
ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: OA
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DESIGNED BY: JB

SHEET TITLE:
DOOR DETAILS

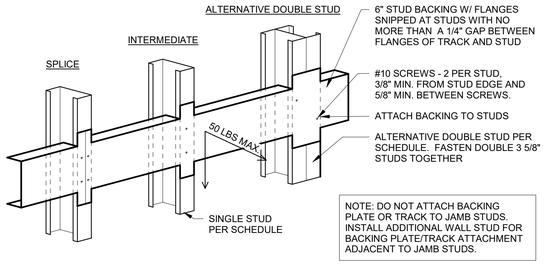
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A701

6/27/2025



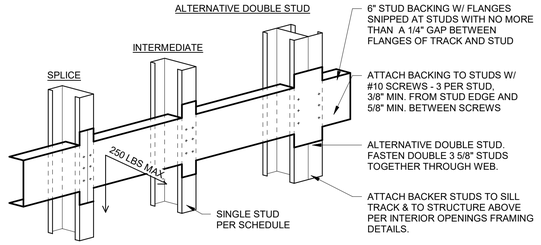
TYPICAL METAL BLOCKING DETAIL - 20 LB MAX. LOAD

NOTE:
1. THIS DETAIL MAY BE USED FOR THE ATTACHMENT OF CABINETS OR EQUIPMENT DISTRIBUTING LESS THAN OR EQUAL TO 20 LBS TO EACH STUD UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER. (THE CENTER OF GRAVITY SHALL BE LESS THAN 6" FROM FACE OF STUDS.
2. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED.
3. THIS DETAIL MAY BE USED FOR WALL DOOR STOP ATTACHMENT.
4. PRESCRIBED WEIGHT SHALL INCLUDE CONTENT WEIGHT. TYP. ALL DETAILS.
5. FOR WALLS THAT DO NOT EXTEND TO STRUCTURE ABOVE PROVIDE BRACING AT EACH STUD.



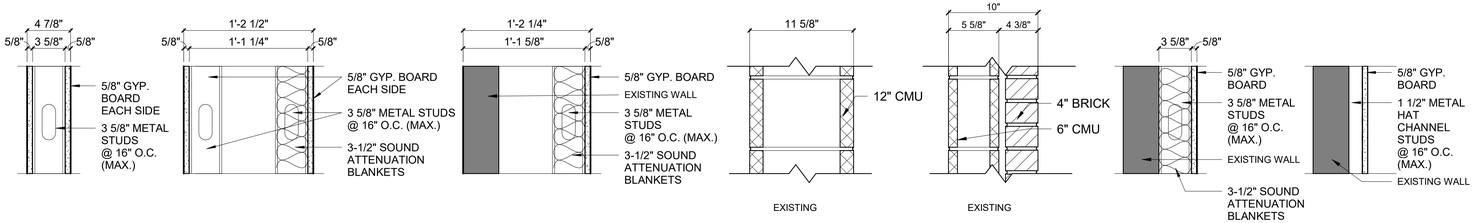
TYPICAL METAL BLOCKING DETAIL- 50 LB MAX LOAD - 600T125 - 43 MIN BACKER

NOTE:
1. THIS DETAIL MAY BE USED FOR THE ATTACHMENT OF CABINETS, LIGHT FIXTURES, SHOWER CURTAIN RODS OR EQUIPMENT DISTRIBUTING LESS THAN OR EQUAL TO 50 LBS TO EACH STUD UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER. (THE CENTER OF GRAVITY SHALL BE LESS THAN 6" FROM FACE OF STUDS.
2. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED.
3. FOR EXTERIOR WALL STUDS USE DOUBLE TYP. SPECIFIED STUDS FASTENED TOGETHER IN LIEU OF STUDS SPECIFIED HERE.
4. PRESCRIBED WEIGHT SHALL INCLUDE CONTENT WEIGHT. TYP. ALL DETAILS.
5. FOR WALLS THAT DO NOT EXTEND TO STRUCTURE ABOVE PROVIDE BRACING AT EACH STUD.



TYPICAL METAL BLOCKING DETAIL- 250 LB MAX LOAD - 600T150 - 68 MIN. BACKER

NOTE:
1. THIS DETAIL MAY BE USED FOR THE ATTACHMENT OF WALL MOUNTED TOWEL BARS, GRAB BARS, SHOWER SEATS, SHELVING, HANDRAILS, COUNTERS, LAVS. , INFANT CHANGING TABLES, CASEWORK, AND EQUIPMENT DISTRIBUTING LESS THAN OR EQUAL TO 250 LBS TO EACH STUD UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER. (THE CENTER OF GRAVITY SHALL BE LESS THAN 6" FROM FACE OF STUDS.)
2. NOTCHING OR CUTTING OF BACKING PLATE IS NOT PERMITTED.
3. THIS DETAIL MAY BE USED FOR WALL DOOR STOP ATTACHMENT
4. PRESCRIBED WEIGHT SHALL INCLUDE CONTENT WEIGHT. TYP. ALL DETAILS
5. FOR WALLS THAT DO NOT EXTEND TO STRUCTURE ABOVE PROVIDE BRACING AT EACH STUD.



1 PARTITION TYPES
1 1/2" = 1'-0"

GENERAL PARTITION TYPE NOTES:

A. REFER TO ARCHITECTURAL FLOOR PLANS FOR PARTITION TYPE DESIGNATIONS.
B. SEE THIS SHEET FOR ACTUAL PARTITION TYPES, DETAILS AND GENERAL NOTES REGARDING CONSTRUCTION OF PARTITIONS SHOWN ON PLANS.
C. REFER TO CODE DATA FOR ADDITIONAL FIRE RATINGS, SMOKE PARTITION LOCATIONS, INFORMATION AND REQUIREMENTS.
D. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING RATED ASSEMBLIES AS INDICATED ON CONSTRUCTION DOCUMENTS AND PER ALL LOCAL AND JURISDICTIONAL CODES IN FORCE.
E. FIRE WALLS SHALL NOT BE PENETRATED EXCEPT AS ALLOWED AND PROTECTED BY CODE REGULATIONS AND REQUIREMENTS (E.G. APPROPRIATE USE OF FIRE STOPPING, DAMPERS, FIRE RESISTIVE MATERIALS AND METHODS OF CONSTRUCTION.
F. GYPSUM BOARD IS TO BE WATER RESISTANT TYPE "X" GYPSUM BOARD ON WET FACES OF PLUMBING WALLS AND ON CERAMIC TILE FACED WALL SURFACES (E.G. TILED SERVERY WALLS, DRINKING FOUNTAIN WALLS, REST ROOM PLUMBING WALLS, OR TILED WALLS).
G. WET WALLS THAT RECEIVE CERAMIC TILE THAT ARE SUBJECT TO BEING HOSED DOWN, SUCH AS "BACK OF HOUSE" AREAS (E.G. KITCHEN, DISH ROOM, JANITOR'S CLOSET,ETC.) SHALL BE CEMENTITIOUS BACKER BOARD (IN LIEU OF WATER RESISTANT GYPSUM BOARD). PLACE 6 MIL POLYETHYLENE MEMBRANE BEHIND CEMENT BACKER BOARD (AS A VAPOR BARRIER).
H. ALL STRUCTURAL STEEL COLUMNS SHALL BE PROTECTED AS REQUIRED BY CODE (TYPICAL).
I. AT ALL SMOKE BARRIER AND FIRE RATED PARTITIONS, FURR OUT ALL COLUMNS, BEAMS, JOISTS AND OTHER STRUCTURAL ITEMS AS REQUIRED TO SEAL GYPSUM BOARD TIGHT TO STRUCTURAL DECK OR EXTERIOR WALL TO MAINTAIN REQUIRED RATING.
J. ALL GYPSUM BOARD AT STAIR, RAMP, & CORRIDOR WALLS TO BE IMPACT RESISTANT GYPSUM BOARD.
K. GENERAL CONTRACTOR TO VERIFY THAT ALL EXISTING WALLS, REQUIRED TO BE FIRE RATED AS SHOWN ON PLANS, MEET CODE FOR RATINGS. IF EXISTING WALLS INDICATED AS RATED WALLS HAVE NOT BEEN CONSTRUCTED ACCORDING TO CODE REQUIREMENTS, GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND SHALL BRING SUCH WALLS UP TO CODE. IF EXISTING WALLS SHOWN AS RATED WALLS ON PLANS HAVE UNPROTECTED, OR IMPROPERLY PROTECTED OPENINGS, GENERAL CONTRACTOR SHALL PROPERLY INFILL OR PROTECT OPENINGS AS REQUIRED TO COMPLY WITH CODE.

INTERIOR METAL STUD LIMITING HEIGHT SCHEDULE

STUD SIZE	STUD SPACING	ALLOWABLE DEFLECTION	LIMITING HEIGHT
1 5/8"	16" O.C.	L/240	8'-10" MAX HGT.
1 5/8"	24" O.C.	L/240	7'-9" MAX HGT.
2 1/2"	16" O.C.	L/240	12'-3" MAX HGT.
2 1/2"	24" O.C.	L/240	10'-8" MAX HGT.
3 5/8"	16" O.C.	L/240	16'-3" MAX HGT.
3 5/8"	24" O.C.	L/240	14'-3" MAX HGT.
4"	16" O.C.	L/240	17'-7" MAX HGT.
4"	24" O.C.	L/240	15'-4" MAX HGT.
6"	16"O.C.	L/240	24'-1" MAX HGT.
6"	24" O.C.	L/240	20'-1" MAX HGT.

NOTES:
1. THE ABOVE LIMITING HEIGHTS ARE BASED ON THE CLARKDEITRICH PROSTUD (PROSTUD 33MIL) (5.0 PSF), NON-COMPOSITE WALL (FULLY BRACED), CONTRACTOR TO VERIFY LIMITING HEIGHTS BASED ON MANUFACTURER OF STUD PROVIDED FOR PROJECT.

NOTES:
1. IF DIMENSION "A" IS LESS THAN 18" AND MULTIPLE OPENINGS TO BE USED, REFER TO STUD REINFORCEMENT DETAILS.
2. FOR A SINGLE HOLE IF DIMENSION "A" IS LESS THAN 18" PROVIDE SOLID STEEL PLATE. THICKNESS SHALL MATCH STUD, WIDTH THE SAME AS THE STUD.
3. USE FACTORY PUNCHED OPENING IF POSSIBLE TO AVOID PUNCHING NEW HOLES.

STUD WIDTH (sw)	MAXIMUM HOLE DIAMETER (dia)	MAXIMUM NOMINAL CONDUIT DIAMETER	MAXIMUM STEEL/IRON/PVC PIPING DIAMETER	MAXIMUM COPPER PIPING DIAMETER
2 1/2"	1 1/2" Ø	1" Ø	1" Ø	1 1/4" Ø
3 5/8"	2 5/16" Ø	1 1/2" Ø	1 1/2"	2" Ø
4"	2 1/2" Ø	2" Ø	2" Ø	2" Ø
6"	4" Ø	3" Ø	3" Ø	3" Ø

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SITE # 6304
FACILITY # 8136304011

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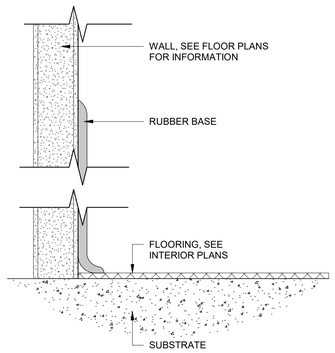
SHEET TITLE:
PARTITION TYPES AND DETAILS

SHEET NUMBER:
A720

6/27/2025

GENERAL FINISH NOTES:

A. FINISH SYSTEMS DESCRIBE THE FINISH SPECIFICATION FOR THE VERTICAL SURFACE OF ALL FINISHES APPLIED TO A PARTITION. IF DISCREPANCY OCCURS, CONTACT THE ARCHITECT FOR CLARIFICATION PRIOR TO STARTING WORK WITHIN THE SUBJECT AREA.
B. WORKMANSHIP SHALL BE THE BEST OF ITS RESPECTIVE KINDS FOR EACH OF THE VARIOUS TRADES EMPLOYED.
C. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING AND CONFIRMING ALL SUBSTRATE CONDITIONS WHERE NEW MATERIALS ARE APPLIED. SUBSTRATE SHALL BE SMOOTH, FREE OF DEFECTS AND SHALL CONFORM TO THE REQUIREMENTS OF THE FINISHED MATERIAL MANUFACTURERS WRITTEN RECOMMENDATIONS.
D. UPON COMPLETION OF INSTALLATION OF PORCELAIN/CERAMIC TILE, CONTRACTOR TO CLEAN ALL TILE SURFACES PER MANUFACTURERS WRITTEN RECOMMENDATIONS SO THEY ARE FREE OF FOREIGN MATTER. SEAL ALL GROUT WITH (2) COATS OF MANUFACTURERS RECOMMENDED GROUT SEALER. PROHIBIT FOOT AND/OR WHEEL TRAFFIC FROM TILED FLOORS FOR AT LEAST 7 DAYS AFTER GROUTING IS COMPLETE.
E. FINISH SUBSTITUTIONS SHALL BE APPROVED BY ARCHITECT ONLY. SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS FOR ANY SUBSTITUTIONS.
F. DURING INSTALLATION OF CARPET, CONTRACTOR MUST COMPLY WITH CARPET MANUFACTURERS WRITTEN RECOMMENDED INSTALLATION METHODS. THIS INCLUDES SEAM SEALERS, GLUE, TERMINATION OF ALL SEAMS AND EXPOSED EDGES.
G. UPON COMPLETION OF INSTALLATION OF CARPET, CONTRACTOR TO REMOVE VISIBLE ADHESIVE, SEAM SEALER AND OTHER SURFACE BLEMISHES USING CLEANER RECOMMENDED BY CARPET MANUFACTURER. COMPLY WITH CRI 104, SECTION 15: "PROTECTION OF INDOOR INSTALLATION.". REFER TO FINISH AND MATERIAL LEGEND FOR ARCHITECT DESIRED INSTALL.
H. PROVIDE AND CONTINUE SCHEDULED FLOORING FROM PARTITION TO PARTITION AND UNDER MILLWORK UNLESS NOTED OTHERWISE.
I. FLOOR TRANSITIONS SHALL OCCUR AT CENTERLINE OF DOOR, UNLESS NOTED OTHERWISE.
J. TOLERANCE VARIATION FROM FLAT AND LEVEL SURFACE: 1/8" IN 10', UNLESS NOTED OTHERWISE IN SPECIFICATIONS.
K. ALL WALLS SHALL BE PAINTED (P-XX) UNLESS NOTED OTHERWISE.
L. ALL DOOR FRAMES TO BE PAINTED TO MATCH ADJACENT WALL, UNLESS NOTED OTHERWISE.
M. ALL GYPSUM BOARD CEILINGS TO BE PAINTED (P-XXX), UNLESS NOTED OTHERWISE.
N. ALL ACOUSTICAL CEILINGS TO BE (ACT-XX), UNLESS NOTED OTHERWISE.
O. ALL WINDOW SILLS TO BE (SS-XX), UNLESS NOTED OTHERWISE.
P. ALL RECEPTACLES, SWITCHES, COVER PLATES, ETC. ARE TO BE STAINLESS STEEL, UNLESS NOTED OTHERWISE.
Q. WHERE PLASTIC LAMINATE GRAIN/PATTERN RETURN A CORNER, GRAIN/PATTERN TO RUN IN SAME DIRECTION ON ALL SIDES.



1 RUBBER COVE BASE
12" = 1'-0"

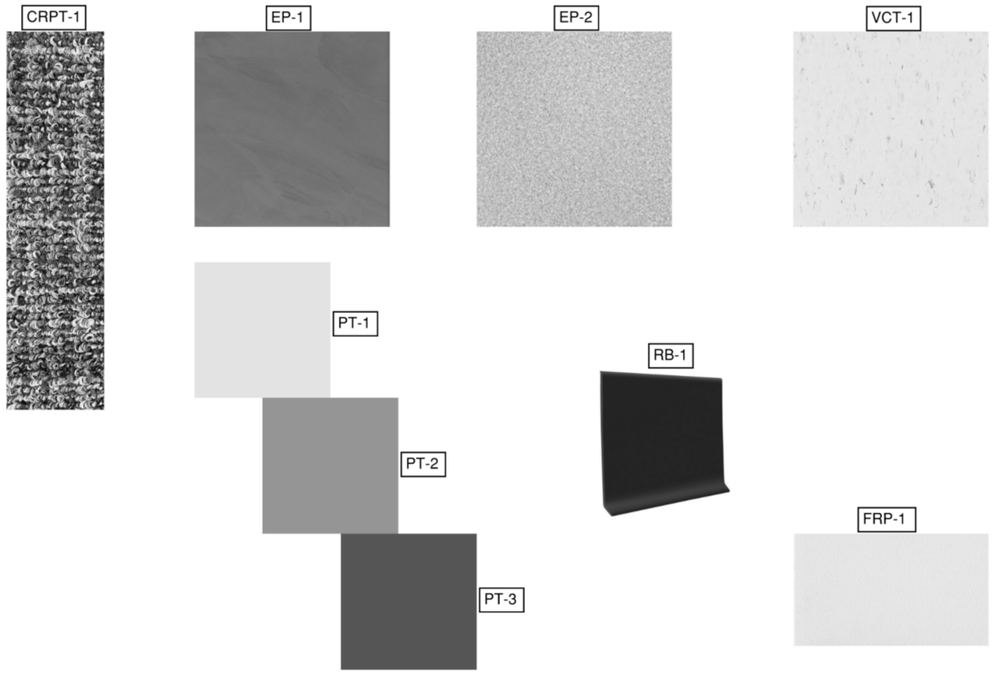
ROOM FINISH SCHEDULE

ROOM #	NAME	FLOOR FINISH	BASE FINISH	WALL FINISHES				CEILING FINISH	CEILING HEIGHT	COMMENTS
				NORTH	SOUTH	EAST	WEST			
100	LOBBY	EP-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT1	8'-0"	
101	OFFICE	CRPT-1	RB-1	PT-1	PT-1	PT-3	PT-1	ACT1	8'-0"	
102	OFFICE	CRPT-1	RB-1	PT-1	PT-1	PT-3	PT-1	ACT1	8'-0"	
104	TRAINING OFFICE	CRPT-1	RB-1	PT-2	PT-1	PT-1	PT-1	ACT1	8'-0"	
105	GYM	-	-	-	-	-	-	EXP	10'-0 1/2"	
106	ORD STOR	SCONC	-	-	-	-	-	EXP	9'-7"	
107	STOR	SCONC	-	-	-	-	-	EXP	10'-0 1/2"	
108	STOR	SCONC	-	-	-	-	-	EXP	10'-0 1/2"	
109	OFFICE	SCONC	-	PT-1	PT-1	PT-1	PT-3	EXP	10'-0 1/2"	
110	DRILL HALL	EP-2	-	PT-1	PT-1	PT-1	PT-1	EXP	18'-11"	
111	HALL	SCONC	-	PT-1	PT-1	PT-1	PT-1	ACT1	8'-7 1/2"	
112A	OFFICE	CRPT-1	RB-1	PT-1	PT-3	PT-1	PT-1	ACT1	8'-7 1/2"	
112B	OFFICE	CRPT-1	RB-1	PT-1	PT-3	PT-1	PT-1	ACT1	8'-7 1/2"	
113	ELEC	SCONC	-	PT-1	PT-1	PT-1	PT-1	EXP	10'-0 1/2"	
114	OFFICE	CRPT-1	RB-1	PT-1	PT-3	PT-1	PT-1	ACT1	8'-0"	
115	CLASSROOM	VCT-1	RB-1	PT-1	PT-2	PT-1	PT-1	ACT1	8'-0"	
116	CLASSROOM	VCT-1	RB-1	PT-1	PT-2	PT-1	PT-1	ACT1	8'-0"	
117	MEN	EP-2	-	PT-1	PT-1	PT-1	PT-1	GYP1	8'-0"	SEE ELEVATION FOR SHOWER WALL EPOXY DETAILS 7' HEIGHT
118	MECH	SCONC	-	PT-1	PT-1	PT-1	PT-1	EXP	10'-0 1/2"	
119	WOMEN	EP-2	-	PT-1	PT-1	PT-1	PT-1	GYP1	8'-0"	SEE ELEVATION FOR SHOWER WALL EPOXY DETAILS 7' HEIGHT
120	KITCHEN	EP-2	-	FRP	FRP	FRP	FRP	ACT2	8'-0"	
121	OFFICE	CRPT-1	RB-1	PT-1	PT-1	PT-3	PT-1	ACT1	8'-0"	
122	OFFICE	CRPT-1	RB-1	PT-1	PT-1	PT-3	PT-1	ACT1	8'-0"	
123	OFFICE	CRPT-1	RB-1	PT-1	PT-3	PT-1	PT-1	ACT1	8'-0"	

FINISH AND MATERIAL SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER	STYLE	MODEL #	COLOR	SIZE	FINISH	REMARKS
ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	1912TEMP	-	WHITE	24" X 48"	-	FOR GENERAL AREAS
ACT-2	ACOUSTIC CEILING TILE	ARMSTRONG	1959	-	WHITE	24" X 48"	-	KITCHEN
GYP-1	GYPSUM BOARD	USG	-	-	WHITE	-	-	BATHROOMS
PT-1	PAINT	PPG	-	PPG1036-1	GRAY GLIMPSE	-	SEMI-GLOSS	ALL OVER USE
PT-2	PAINT	PPG	-	PPG1012-5	STEEPLE GRAY	-	SEMI-GLOSS	ACCENT PAINT FOR GENERAL USE
PT-3	PAINT	PPG	-	PPG1162-7	DRAGONFLY	-	SEMI-GLOSS	ACCENT PAINT FOR OFFICE
CRPT-1	CARPET TILE	BENTLEY	LONG STORY SHORT	401033	LAMPOON	18" X 36"	-	FOR OFFICE MONOLITHIC LAY PATTERN
EP-1	EPOXY	LIQUID ELEMENTS	SMOOTH-DUO	-	HALIFAX RAIN	-	MATTE	FOR LOBBY FLOOR
EP-2	EPOXY	LIQUID ELEMENTS	POLISHED	-	RAW CONCRETE	-	-	FOR KITCHEN AND BATHROOM FLOORS
RB-1	RUBBER BASE	ARMSTRONG FLOORING OR EQUAL	TRADITIONAL	DC-40	BLACK B	6"	-	FOR ALL AREAS
ST	STAIN							WOOD DOORS
VCT-1	VINYL COMPOSITION TILE	TARKETT	VCT II	480	PURE WHITE	12" X 12"		FOR CLASSROOMS
SCOC	SEALED CONCRETE	-	-	-	-	-	-	FOR ALL OTHER AREAS
FRP-1	FIBERGLASS REINFORCED PANEL	ALTRO	PURAGUARD	W140/400	SEA SALT	4'X10'	GLOSS	FOR KITCHEN WALLS, SEE ELEVATIONS
AWP-1	ALUMINUM COMPOSITE WALL PANEL	LIQUID ELEMENTS	CUSTOM WALL PANEL		HALIFAX RAIN	4'X8'	MATTE	ALUMINUM COMPOSITE WALL PANEL WITH RESINOUS WALL COATING

St. Clair Readiness Center Material Design Board



STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
STATE OF MISSOURI
FERNANDO ZABALA
NUMBER A-2024047900
ARCHITECT
EXP.DATE 12/31/2026
PROFESSIONAL SEAL

YESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

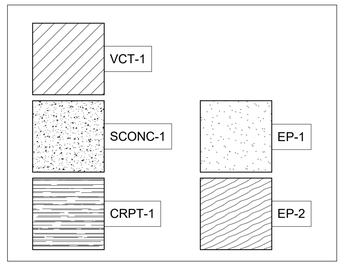
ISSUE DATE:6/27/2025

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DRAWN BY: OA
CHECKED BY: FZ
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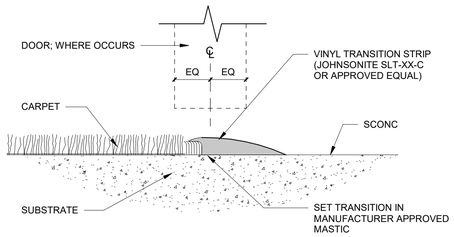
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INTERIOR FINISH SCHEDULE AND LEGEND

SHEET NUMBER:
A800

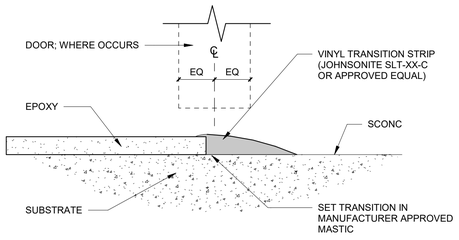
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FINISH FLOOR LEGEND

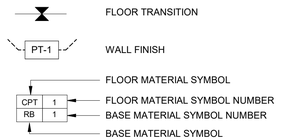


2 CARPET TO CONCRETE
12" = 1'-0"

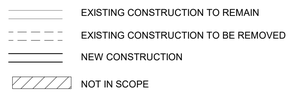


3 EPOXY TO CONCRETE
12" = 1'-0"

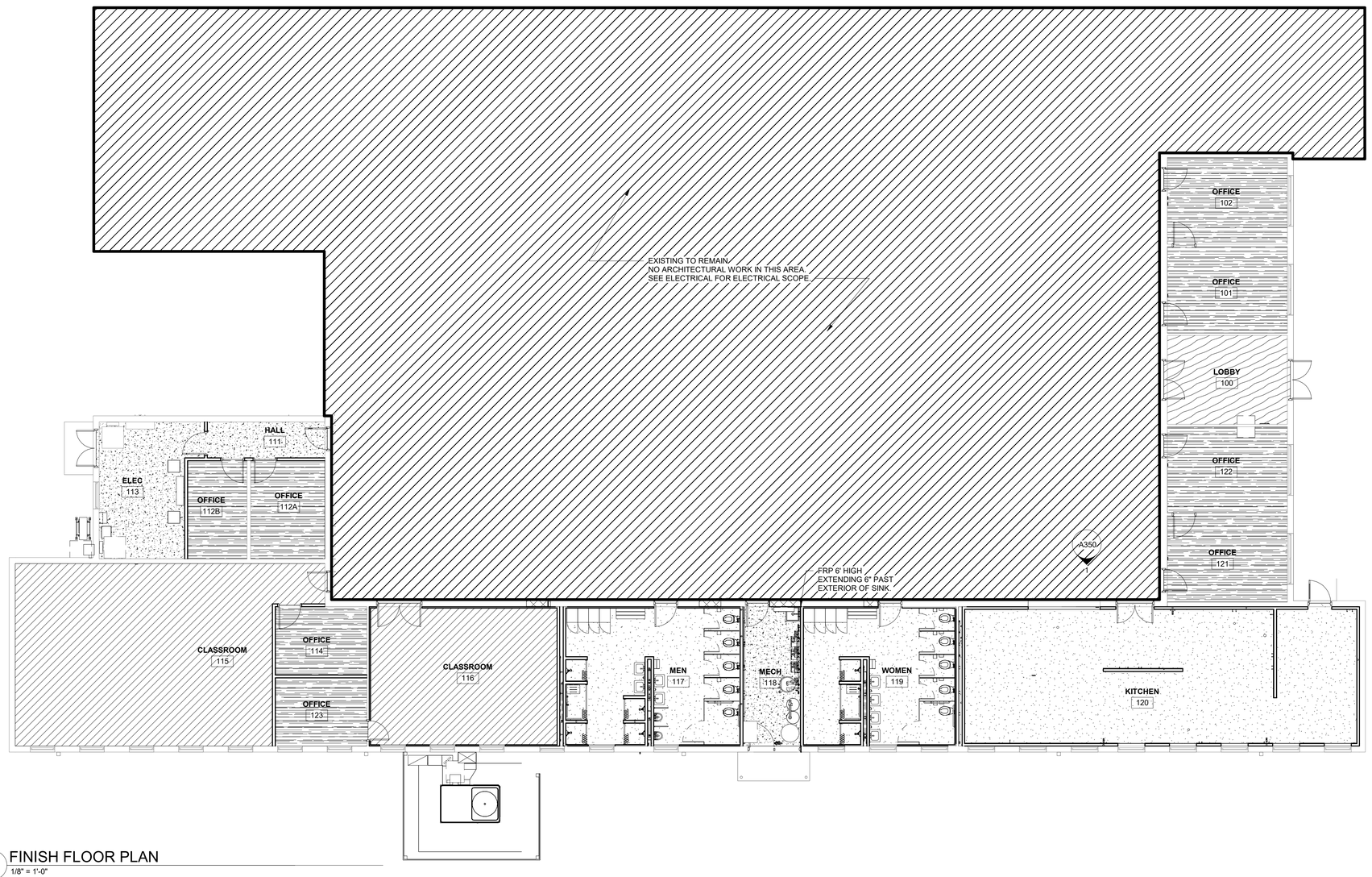
FINISH PLAN SYMBOLS AND MATERIAL LEGEND



DEMOLITION / NEW CONSTRUCTION LEGEND



NOTE: NOT ALL TYPES USED.



PLAN TRUE

1 FINISH FLOOR PLAN
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

06/27/2025
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VESTAL CORPORATION

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DRAWN BY: OA
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DESIGNED BY: JB

SHEET TITLE:
FINISH PLAN

SHEET NUMBER:
A810

6/27/2025

MECHANICAL LEGEND

HVAC DUCTWORK SYMBOLS

- ROUND ELBOW UP - SUPPLY
- ROUND ELBOW UP - RETURN
- ROUND ELBOW UP - EXHAUST
- ROUND ELBOW DOWN - SUPPLY
- ROUND ELBOW DOWN - RETURN
- ROUND ELBOW DOWN - EXHAUST
- DUCTWORK POSITIVE PRESSURE (SUPPLY AIR OR FAN DISCHARGE) (DN / UP)
- DUCT SECTION - RETURN (DN / UP)
- DUCT SECTION - EXHAUST (DN / UP)
- VOLUME DAMPER RECTANGULAR
- BACK DRAFT DAMPER
- MOTORIZED DAMPER
- SMOKE DAMPER VERTICAL
- SMOKE DAMPER AND FIRE DAMPER (VERTICAL)
- FLEX CONNECTION
- TD 250mm — TOP OF DUCT FITTING DOWN 250 MM
- TU 250mm — TOP OF DUCT FITTING UP 250 MM
- BD 250mm — BOTTOM OF DUCT FITTING DOWN 250 MM
- BU 250mm — BOTTOM OF DUCT FITTING UP 250 MM
- AIR DIFFUSER - SUPPLY
- AIR DIFFUSER - RETURN
- AIR DIFFUSER - EXHAUST
- DEMO DIFFUSER
- DEMO DUCT

HVAC CONTROL SYMBOLS

- (T) THERMOSTAT
- (TS) SPACE TEMPERATURE SENSOR
- (H) HUMIDISTAT
- (SP) STATIC PRESSURE SENSOR
- (SD) SMOKE DETECTOR

HVAC PIPING SYMBOLS

- CD — CONDENSATE DRAIN LINE - HVAC
- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- G — NATURAL GAS
- GWR — GLYCOL WATER RETURN
- GWS — GLYCOL WATER SUPPLY
- HPR — HIGH PRESSURE STEAM CONDENSATE
- HPS — HIGH PRESSURE STEAM
- HWR — (HEATING) HOT WATER RETURN
- HWS — (HEATING) HOT WATER SUPPLY
- LPR — LOW PRESSURE STEAM CONDENSATE
- LPS — LOW PRESSURE STEAM
- MPR — MEDIUM PRESSURE STEAM CONDENSATE
- MPS — MEDIUM PRESSURE STEAM
- MUW — MAKE UP WATER LINE
- PD — CONDENSATE PUMP DISCHARGE
- RC — REFRIGERANT CIRCUIT, LIQUID/GAS RECIRCULATION
- RHG — REFRIGERANT HOT GAS LINE
- RL — REFRIGERANT LIQUID LINE
- RLR — REFRIGERANT LIQUID / GAS RECIRCULATION LINE
- RS — REFRIGERANT SERVICE COMPRESSOR SUCTION
- V — VENT (MECHANICAL)
- LEVER MANUAL VALVE
- THREE-WAY VALVE
- BALL VALVE
- BUTTERFLY VALVE
- UNION FITTING
- CHECK VALVE

HVAC GENERAL SYMBOLS

- (#) REVISION TAG
- (#) KEYED NOTE TAG
- (XXX / ##) EQUIPMENT TAG
- (## / X#####) SECTION DESIGNATION / SHEET No. WHERE SECTION IS SHOWN
- S-# / ### SUPPLY DIFFUSER TAG
- R-# / ### RETURN DIFFUSER TAG
- E-# / ### EXHAUST DIFFUSER TAG

HVAC ABBREVIATIONS

A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
AUX	AUXILIARY
BAS	BUILDING AUTOMATED SYSTEM
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNITS
BFP	BACKFLOW PREVENTER
CFM	CUBIC FEET PER MINUTE
CIR	CIRCULATING
CLG	CEILING
CM	CONTROL MODULE
CONN	CONNECTION
CONT	CONTROL
CV	CONTROL VALVE
CU	CONDENSING UNIT
D	DIFFUSERS
DAC	DOOR AIR CURTAIN
DEH	DEHUMIDIFIER
DR	DRY BULB
DN	DOWN
DR	DRAIN
DX	DIRECT EXPANSION
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ECM	ELECTRONICALLY COMMUTATED MOTOR
EMCS	ENERGY MONITORING CONTROL SYSTEM
EMER	EMERGENCY
EMS	ENERGY MONITORING SYSTEM
ENT	ENTRANCE
ESP	EXTERNAL STATIC PRESSURE
EWC	ELECTRIC WATER COOLING
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE

HVAC ABBREVIATIONS (CONTINUED)

FLR	FLOOR
FCU	FAN COIL UNIT
FSD	FIRE SMOKE DAMPER
FTU	FAN TERMINAL UNIT
FTR	FILTER
FV	FAN
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HP	HORSE POWER
HTG	HEATING
HWP	HOT WATER PUMP
KW	KILOWATT
L	LOUVER
LS	SUPPLY LOUVER
L/S	LITERS PER SECOND
LWT	LEAVING WATER TEMPERATURE
MCA	MINIMUM CIRCUIT AMPACITY
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MEZZ	MEZZANINE
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
PS	POWER SUPPLY
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RLA	RATED LOAD AMPS
RM	ROOM
RT	RETURN
SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SC	SENSIBLE COOLING
SD	SMOKE DETECTOR
SOV	SHUT-OFF VALVE
TC	TOTAL COOLING
TYP	TYPICAL
VAV	VARIBLE AIR VOLUME
V.D.	VOLUME DAMPER
VOL	VOLUME
VEF	VENTILATION EXHAUST FAN
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
WB	WET BULB

GENERAL NOTES - MECHANICAL HVAC

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
2. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
3. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
4. MANUFACTURERS MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
5. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS RECOMMENDATIONS.
6. PROVIDE ACCESS PANELS IN NON-ACCESSIBLE GENERAL CONSTRUCTION SUBSTRATES FOR MAINTENANCE AND ADJUSTMENT OF ALL CONCEALED DAMPERS, AIR CONTROL DEVICES, CONTROL DEVICES/INSTRUMENTATION, EQUIPMENT AND DUCTWORK ACCESS DOORS. WOOD, GYPSUM DRYWALL AND CONCEALED SPLINE CEILINGS ARE CONSIDERED NON-ACCESSIBLE.
7. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
8. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS.
9. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS.
10. INSTALL AND CONTROL PANELS 4' ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT.
11. ANY WELDING SHALL BE 1/4" FILLET UNLESS REQUIRED OTHERWISE.
12. ALL PERSONNEL TO UTILIZE SAFETY HARNESS AND LINE WHEN PERFORMING ANY INSPECTION OR WORK ON THE ROOF IN ACCORDANCE WITH OSHA FALL PROTECTION REQUIREMENTS.
13. FOR EACH EQUIPMENT REQUIRING SEISMIC SUPPORTS, CONTRACTOR TO PROVIDE DELEGATED DESIGN FOR RESTRAINTS WHICH INCLUDE SEISMIC DESIGN CALCULATIONS AND MOUNTING DETAILS, SIGNED BY A QUALIFIED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF MISSOURI. REFER TO MECHANICAL SEISMIC CODE BLOCK FOR EQUIPMENT REQUIRING SEISMIC RESTRAINTS.

GENERAL DEMOLITION NOTES - MECHANICAL HVAC

1. THE DRAWINGS DEPICT ONLY GENERALLY THE EXISTING CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD OBSERVATIONS AND CONFIRM THE LOCATIONS OF EXISTING HVAC EQUIPMENT THAT NEED TO BE RELOCATED AND ASSOCIATED PIPING AND DUCTWORK.
2. DEMOLITION WORK SHALL BE DONE BY THE MECHANICAL CONTRACTOR. CONTRACTOR SHALL FOLLOW STANDARD DEMOLITION PROCEDURES TO REMOVE THE EXISTING PIPING AND/OR DUCTWORK AND THE EXISTING HVAC EQUIPMENT. CONTRACTOR TO COORDINATE THE DEMO WITH OWNER AND OTHER TRADES.
3. THE CONTRACTOR IS RESPONSIBLE TO FOLLOW BUILDING MANAGEMENT RULES WITH REGARD TO TRASH AND NOISE.
4. THE CONTRACTOR SHALL MAINTAIN IN OPERATION ALL EXISTING UTILITIES DURING CONSTRUCTION.
5. ALL DEMOLITION WORK WILL BE SCHEDULED WITH BUILDING MANAGEMENT AND PERFORMED ONLY FOLLOWING APPROVAL.
6. THE CONTRACTOR SHALL INFORM BUILDING MANAGEMENT AND RECEIVE SCHEDULE APPROVAL FOR ANY REQUIRED UTILITY SHUTDOWN.
7. PATCH WALL AND/OR CEILING/ROOF LOCATIONS AFFECTED BY DEMOLITION/RELOCATION WORK TO MATCH ADJACENT SURFACES.
8. ANY PIPING/DUCTWORK SHOWN TO BE REMOVED SHALL INCLUDE REMOVAL OF ALL ASSOCIATED FITTINGS, CONNECTIONS, HANGERS, INSULATION, ETC.

GENERAL NOTES - AIR SYSTEMS

1. AIR SYSTEMS REFER TO ARCHITECT REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.
2. INTERNAL AIRFLOW DIMENSIONS ARE SHOWN FOR DUCTS. INCREASE DUCT SIZE AS NECESSARY TO MAINTAIN FREE FLOW AREA INDICATED.
3. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
4. DIFFUSER SIZES SHOWN ARE NECK SIZES. REGISTERS AND GRILLE SIZES ARE NOMINAL.
5. PROVIDE VOLUME DAMPERS OR OTHER APPROVED BALANCING DEVICES AT DUCT BRANCHES AND RUN OUTS.
6. PROVIDE 3.3 FT CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND MFG. REQUIREMENTS.

GENERAL NOTES - PIPING SYSTEMS

1. REFRIGERANT PIPING SHALL BE TYPE ACR DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS ABOVE GROUND WITHIN BUILDING. TYPE K ANNEALED TEMPER COPPER TUBING FOR 2 INCHES AND SMALLER WITHOUT JOINTS.
2. REFRIGERANT PIPE SHALL BE INSTALLED IN THE SHORTEST AND MOST DIRECT ARRANGEMENT AS POSSIBLE.
3. REFRIGERANT SUCTION LINES SHALL BE INSULATED.
4. CONDENSATE DRAIN LINES SHALL BE EITHER TYPE L DRAWN TEMPER COPPER TUBING WITH SOLDERED JOINTS OR SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS.
5. PITCH PIPING 1:240 IN DIRECTION OF FLOW.
6. PROVIDE TRAPS IN ALL CONDENSATE LINES.

GENERAL NOTES - INSULATION

1. EXTERIOR AND INTERIOR REFRIGERANT SUCTION AND HOT GAS BY-PASS PIPING SHALL BE INSULATED WITH EITHER CELLULAR GLASS, FLEXIBLE ELASTOMERIC OR CLOSED CELL TYPE INSULATION WITH VAPOR BARRIER AND FIELD APPLIED JACKET.
2. INTERIOR CONDENSATE DRAIN SHALL BE INSULATED WITH EITHER CELLULAR GLASS, FLEXIBLE ELASTOMERIC OR CLOSED CELL TYPE INSULATION WITH VAPOR BARRIER.
3. INTERIOR HEATING/COOLING SUPPLY AND RETURN DUCTWORK AND PLENUMS SHALL BE INSULATED WITH EXTERIOR BLANKET OR BOARD INSULATION WITH VAPOR BARRIER.
4. EXTERIOR HEATING OR COOLING SUPPLY AND RETURN DUCTWORK AND PLENUMS SHALL BE INSULATED WITH EXTERIOR BLANKET OR BOARD INSULATION WITH VAPOR BARRIER AND PROTECTIVE COVER/JACKET.

GENERAL NOTES - GAS PIPING

1. LOW PRESSURE GAS STOPS, 2 INCHES AND SMALLER SHALL BE AGA CERTIFIED DESIGN FOR 2 PSIG OR LESS NATURAL GAS, WITH AGA STAMP, PLUG OR BALL TYPE, BRONZE BODY AND BRONZE PLUG.
2. GAS VALVES 2 INCHES AND SMALLER SHALL BE RATED FOR 150 PSI WOG, BRONZE BODY, BRONZE PLUG, STRAIGHT-AWAY PATTERN SQUARE HEAD, TAPERED PLUG TYPE, WITH THREADED ENDS.
3. GAS VALVES 2-1/2 INCHES AND LARGER, CLASS 125 OR 175 WOG, LUBRICATED PLUG TYPE, SEMI-STEEL BODY, WRENCHED OPERATED WITH FLANGED ENDS.
4. EARTHQUAKE ACTUATED AUTOMATIC SHUTOFF VALVES SHALL BE MECHANICAL OPERATION WITH THREADED ENDS FOR 2 INCHES AND SMALLER AND FLANGED ENDS FOR 2-1/2 INCHES AND LARGER.
5. GAS SHUTOFF VALVE SHALL BE PROVIDED DOWNSTREAM OF GAS METER, OUTSIDE BUILDING AT GAS SERVICE ENTRANCE.
6. NATURAL GAS PIPING ABOVE GROUND WITHIN BUILDING SHALL BE STEEL PIPE, BUTT WELDING FITTINGS AND WELDED JOINTS.
7. PROVIDE GAS VALVES FOR SHUT-OFF TO APPLIANCES.
8. GAS PIPING MAY BE INSTALLED IN ACCESSIBLE ABOVE CEILING SPACES, HOWEVER LOCATION OF VALVES IN SUCH SPACES ARE PROHIBITED.
9. DO NOT INSTALL GAS PIPING IN OR THROUGH CIRCULATING AIR DUCTS, CLOTHES OR TRASH CHUTES, CHIMNEYS OR GAS VENTS (FLUES), VENTILATING DUCTS, OR DUMBWAITER OR ELEVATOR SHAFTS.

GENERAL NOTES - PACKAGED OUTDOOR EQUIPMENT

1. ROOF CURB SHALL BE MANUFACTURER'S STANDARD CONSTRUCTION, INSULATED AND HAVE A CORROSIVE PROTECTIVE COATING, COMPLETE WITH FACTORY INSTALLED WOOD NAILER AND DRAIN NIPPLE.
2. ROOF TOP UNITS SHALL BE EQUIPPED WITH LOW AMBIENT CONTROL DESIGNED TO OPERATE AT TEMPERATURES DOWN TO 0 DEG. F.
3. GROUND MOUNTED CONDENSERS SHALL BE INSTALLED 6 INCH THICK REINFORCED CONCRETED PAD, MINIMUM 4 INCHES LARGER ON EACH SIDE THAN THE CONDENSING UNIT.
4. CONTRACTOR TO FIELD VERIFY ROOF SLOPE BEFORE PURCHASE OF EQUIPMENT CURBS.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-026428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

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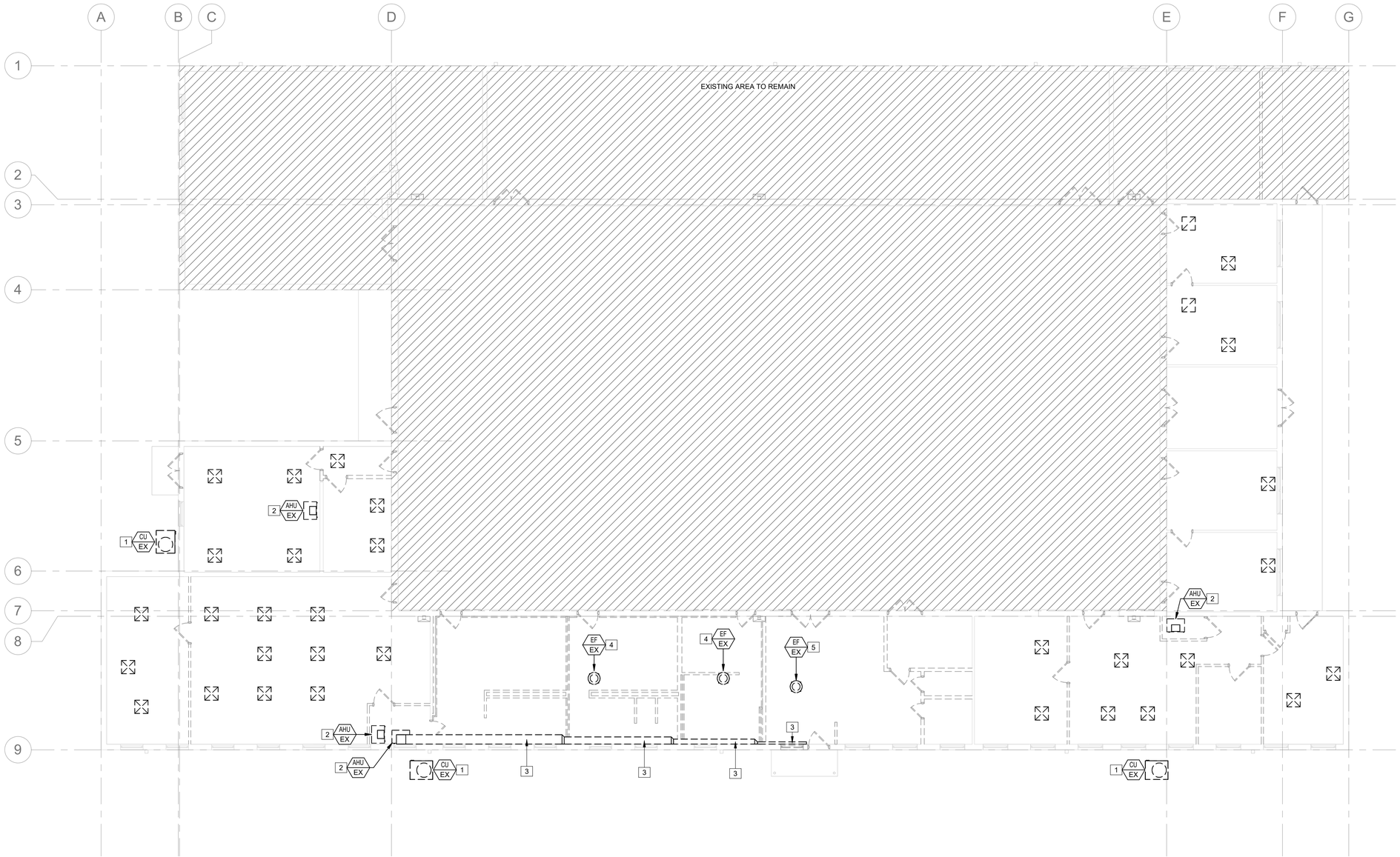
SHEET TITLE:
MECHANICAL LEGEND

SHEET NUMBER:
M001

47 SHEETS
06/27/2025

KEYED NOTES:

1. EXISTING OUTDOOR CONDENSING UNIT AND ASSOCIATED POWER AND REFRIGERANT LINE TO BE DEMOLISHED AND DISPOSED OF.
2. EXISTING AIR HANDLING UNIT/FURNACE AND ASSOCIATED GAS PIPING AND FLUE DUCTWORK TO BE DEMOLISHED AND DISPOSED OF. GAS PIPING TO BE DEMOLISHED BACK TO MAIN SERVICE LINE AT THE GAS METER IN THE SOUTH FACE OF BUILDING. PATCH ALL WALL AND/OR ROOF PENETRATIONS ACCORDINGLY.
3. EXISTING DUCTWORK AND ASSOCIATED HANGERS TO BE DEMOLISHED AND DISPOSED OF.
4. EXISTING ROOF EXHAUST FAN TO BE DEMOLISHED AND DISPOSED OF. CAP AND SEAL ROOF CURB WEATHER TIGHT.
5. EXISTING ROOF EXHAUST VENTILATOR SERVING RANGE HOOD TO BE DEMOLISHED AND DISPOSED OF. DEMOLISH ALL ASSOCIATED DUCTWORK AND CAP AND SEAL ROOF CURB WEATHER TIGHT.



TRUE N

1 / MD101 GROUND FLOOR PLAN - HVAC DEMO
SCALE: 1/8" = 1'-0"

2 0 2 4 6 10"
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION

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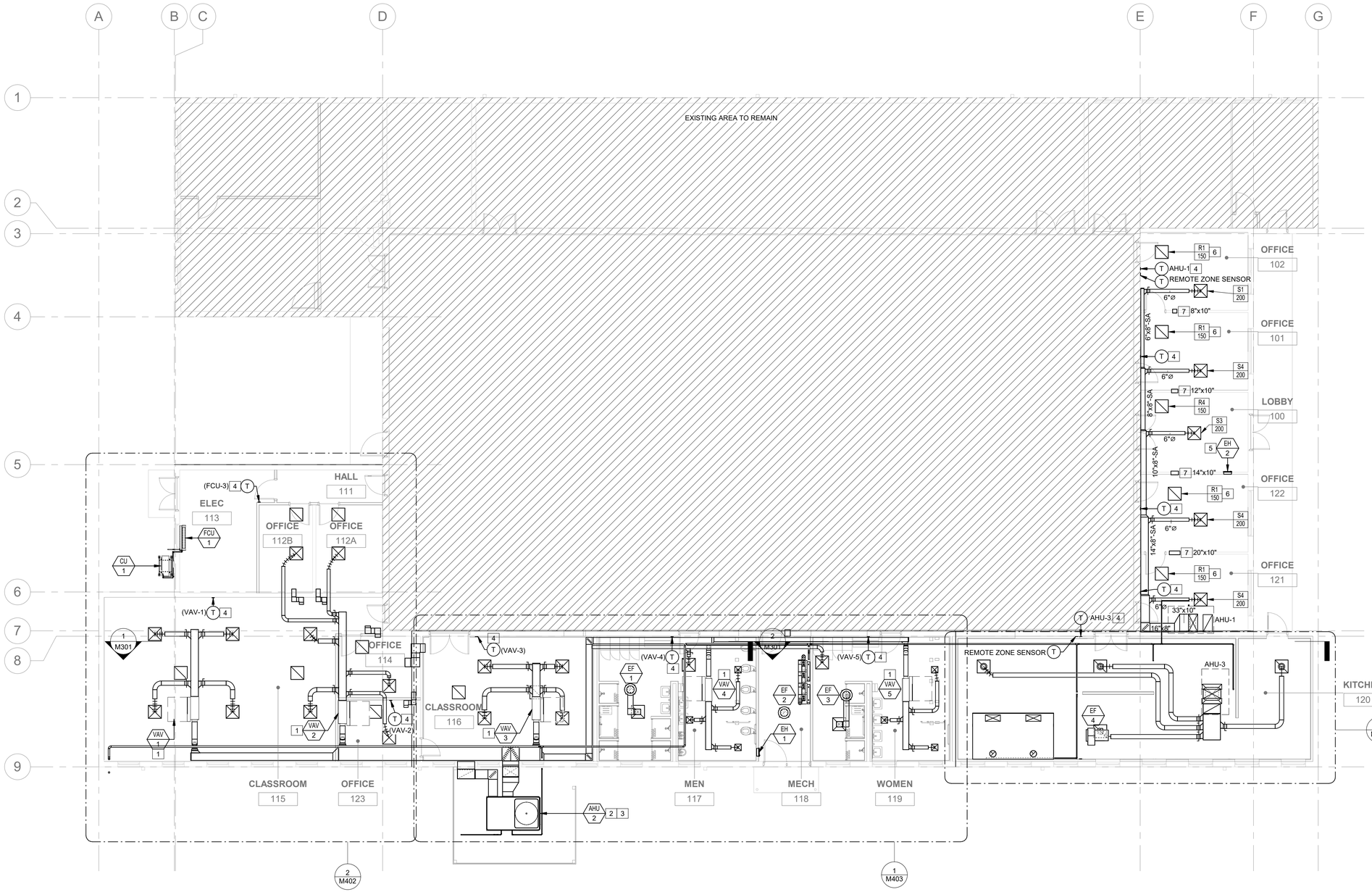
SHEET TITLE:
GROUND FLOOR PLAN - HVAC DEMO

SHEET NUMBER:
MD101

47 SHEETS
06/27/2025

KEYED NOTES:

1. PROVIDE A SINGLE DUCT VARIABLE AIR VOLUME (VAV-X) TERMINAL UNIT AND LOCATE AS SHOWN ON PLAN. FOR PROPER SUPPLY AIR FLOW, PROVIDE A MINIMUM LENGTH OF THREE TIMES THE INLETS DIAMETER, MEASURED FROM VAV TERMINAL INLET TO TRANSITON.
2. PROVIDE AND INSTALL PACKAGED AHU AND ASSOCIATED DUCTWORK, GAS & CONDENSATE PIPING AND CONTROL PER MFG'S INSTRUCTIONS. MOUNT UNIT ON GRADE WITH 6" CONCRETE PAD. PROVIDE AHU WITH MANUFACTURER'S RECOMMENDED CLEARANCE.
3. EXTEND CONDENSATE PIPING AND DISCHARGE AT A MIN. OF 5 FT AWAY FROM THE AHU. REFER TO CONDENSATE PIPING DETAIL.
4. MOUNT T-STAT AT 48" AFF. PROVIDE WITH PLASTIC LOCKABLE COVER.
5. INSTALL EH PER MFG'S INSTRUCTIONS. MOUNT UNIT AT 1' AFF. REFER TO SCHEDULE FOR MORE INFO.
6. PROVIDE WITH TITUS RETURN CANOPY (RCP).
7. PROVIDE TRANSFER DUCTS WITH 1" DUCT LINER INSULATION.



TRUE N

1 / M101 OVERALL GROUND FLOOR PLAN - HVAC
SCALE: 1/8" = 1'-0"

2 0 2 4 6 10"
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
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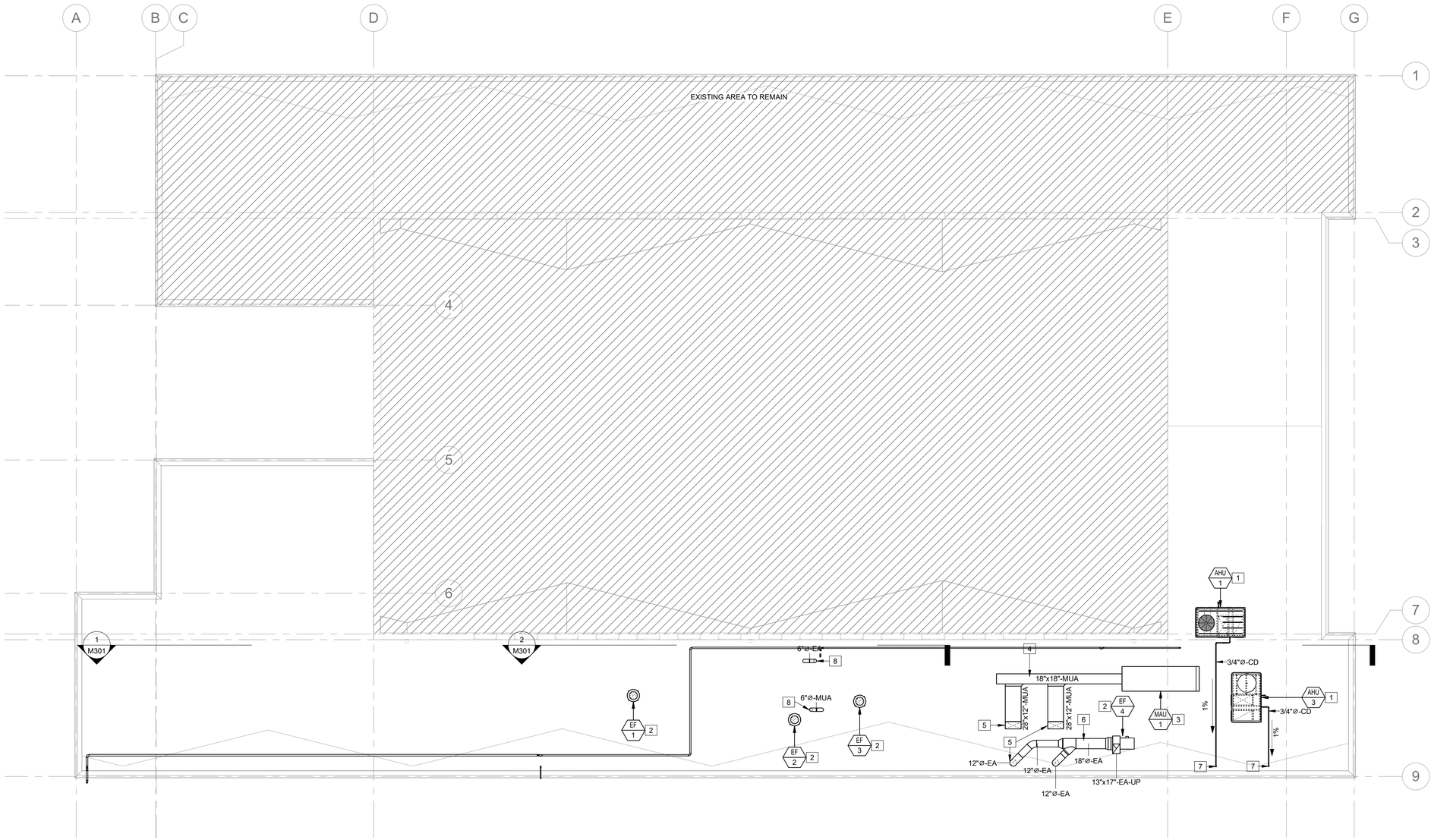
47 SHEETS
06/27/2025

SAFETY NOTE:

1. **ALL HVAC PERSONNEL SHALL UTILIZE SAFETY HARNESS OR FALL ARREST/ANCHORING SYSTEM WHEN PERFORMING ANY WORK ON THE ROOF IN ACCORDANCE WITH OSHA FALL PROTECTION REQUIREMENTS. SAFETY SIGNS/LABLES SHALL BE POSTED ON ALL EXTERIOR WALLS WHERE ACCESS IS PERMITTED TO THE HAVC EQUIPMENT ON THE ROOF.**

KEYED NOTES:

1	PROVIDE AHU, MOUNT ON MANUFACTURER'S 14" ROOF CURB AND INSTALL UNIT AND ASSOCIATED DUCTWORK, PIPING & CONTROL PER MANUFACTURER'S INSTRUCTIONS. COORDINATE DUCTS DROPS WITH EXISTING ROOF FRAMING. ROUTE CONDENSATE PIPING TO SCUPPER DRAINS AS SHOWN IN PLAN.
2	PROVIDE EXHAUST/GREASE FAN AND MOUNT ON MANUFACTURER'S 14" EQUIPMENT ROOF CURB. INSTALL UNIT AND ASSOCIATED DUCT AND CONTROLS PER MANUFACTURER'S INSTRUCTIONS. SLOPE DUCTWORK AT MINIMUM OF 2%. REFER TO SCHEDULE AND DETAIL FOR MORE INFORMATION. INTERLOCK WITH MAU-1 AND KITCHEN HOOD SWITCH.
3	PROVIDE MAU, MOUNT ON MANUFACTURERS 14" ROOF CURB AND INSTALL UNIT AND ASSOCIATED DUCTWORK, GAS PIPING & CONTROL PER MANUFACTURER'S INSTRUCTIONS. INTERLOCK WITH EF-4 AND KITCHEN HOOD SWITCH.
4	ROUTE DUCT ON THE ROOF AND PROVIDE A MIN R-VALUE OF 8 FOR THE MAKEUP AIR DUCT. SUPPORT DUCT ON THE ROOF PER SMACNA STANDARDS.
5	PROVIDE ROOF CURB FOR DUCT PENETRATION THRU THE ROOF. PENETRATION SHALL BE WEATHER TIGHT.
6	SLOPE DUCTWORK AT MINIMUM 2% DOWN TO KITCHEN HOOD. REFER TO DETAIL #1 ON SHEET M502 FOR MORE INFORMATION.
7	DISCHARGE CONDENSATE PIPING NEAR SCUPPER DRAINS AS SHOWN IN PLAN.
8	COMBUSTION AIR INTAKE AND EXHAUST PENETRATE THROUGH ROOF FOR TANKLESS WATER HEATERS.



TRUE N

1 M102 OVERALL ROOF PLAN - HVAC
SCALE: 1/8" = 1'-0"

2 0 2 4 6 10"
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-026428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025

PROFESSIONAL SEAL

VESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/27/2025

CAD DWG FILE:
DRAWN BY: NJA
CHECKED BY: RPV
DESIGNED BY: NJA

SHEET TITLE:
OVERALL ROOF PLAN - HVAC

SHEET NUMBER:
M102

47 SHEETS
06/27/2025

SAFETY NOTE:

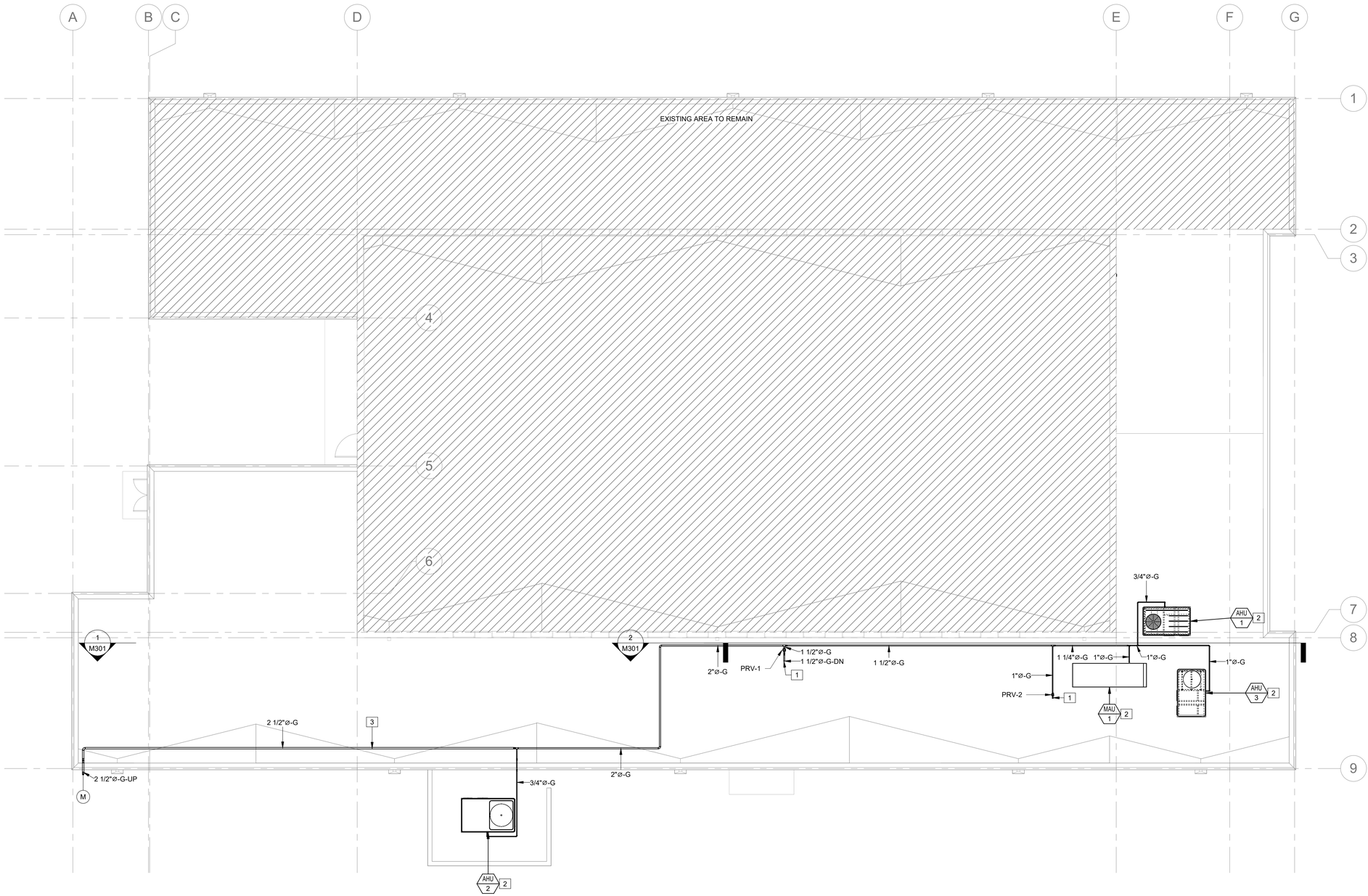
1. **ALL HVAC PERSONNEL SHALL UTILIZE SAFETY HARNESS OR FALL ARREST/ANCHORING SYSTEM WHEN PERFORMING ANY WORK ON THE ROOF IN ACCORDANCE WITH OSHA FALL PROTECTION REQUIREMENTS. SAFETY SIGNS/LABLES SHALL BE POSTED ON ALL EXTERIOR WALLS WHERE ACCESS IS PERMITTED TO THE HAVC EQUIPMENT ON THE ROOF.**

KEYED NOTES:

1 PENETRATE GAS PIPING DOWN THROUGH ROOF. ROUTE REMAINING PIPING AS HIGH AS POSSIBLE BELOW ROOF DECK.

2 PROVIDE GAS TO EACH UNIT AND INSTAL PER MFG'S INSTRUCTIONS. REFER TO GAS REGULATOR SCHEDUCLE FOR MORE INFO.

3 CONTRACTOR TO FIELD VERIFY EXISTING GAS ROUTING. TIE THE EXISTING TO REMAIN GAS LINE INTO NEW GAS MAIN AT INDICATED LOCATION.



TRUE N

1 M103 OVERALL GAS PIPING ROOF PLAN - HVAC

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

2 0 2 4 6 10"
1/8" = 1'-0"

STATE OF MISSOURI
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STATE OF MISSOURI
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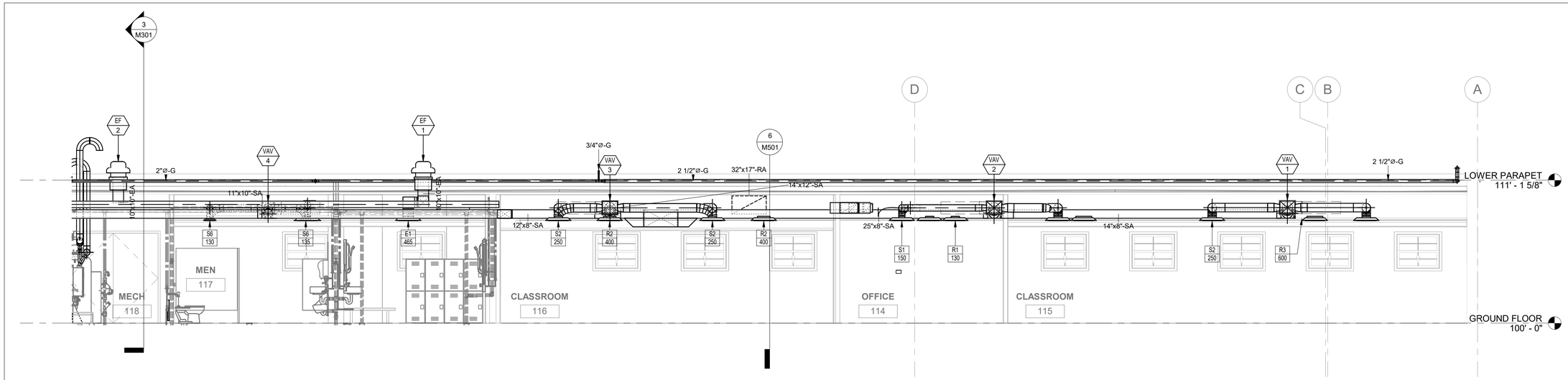
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OVERALL GAS PIPING PLAN - HVAC

SHEET NUMBER:

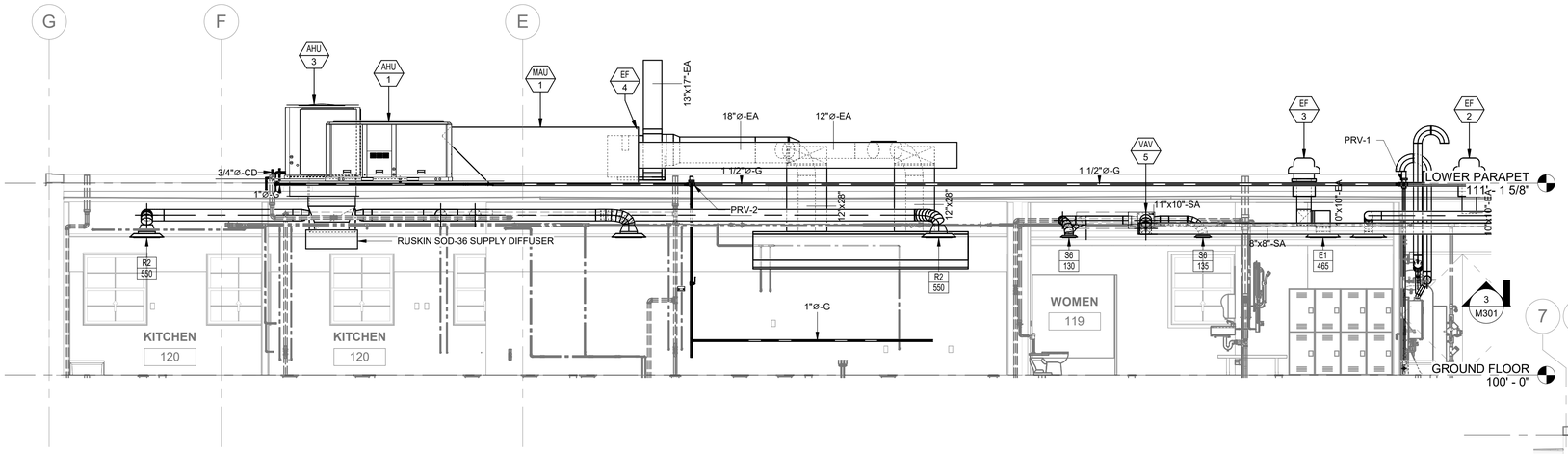
M103

47 SHEETS
06/27/2025



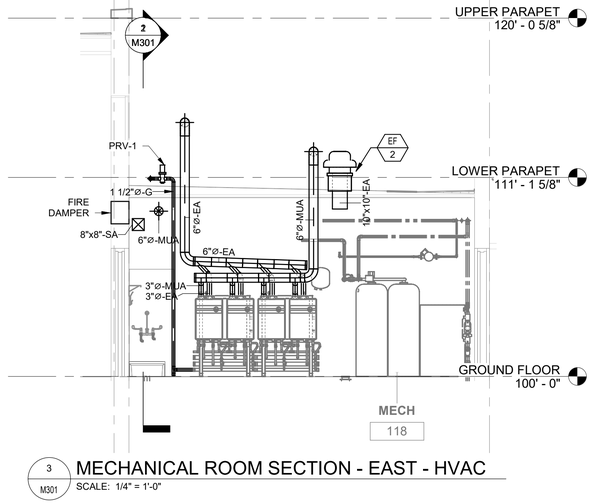
1 M301 SOUTH CLASSROOM HVAC SECTION

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



2 M301 SOUTH CLASSROOM HVAC SECTION

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



3 M301 MECHANICAL ROOM SECTION - EAST - HVAC

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

1 0 1 2 3 5"
1/4" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025
PROFESSIONAL SEAL

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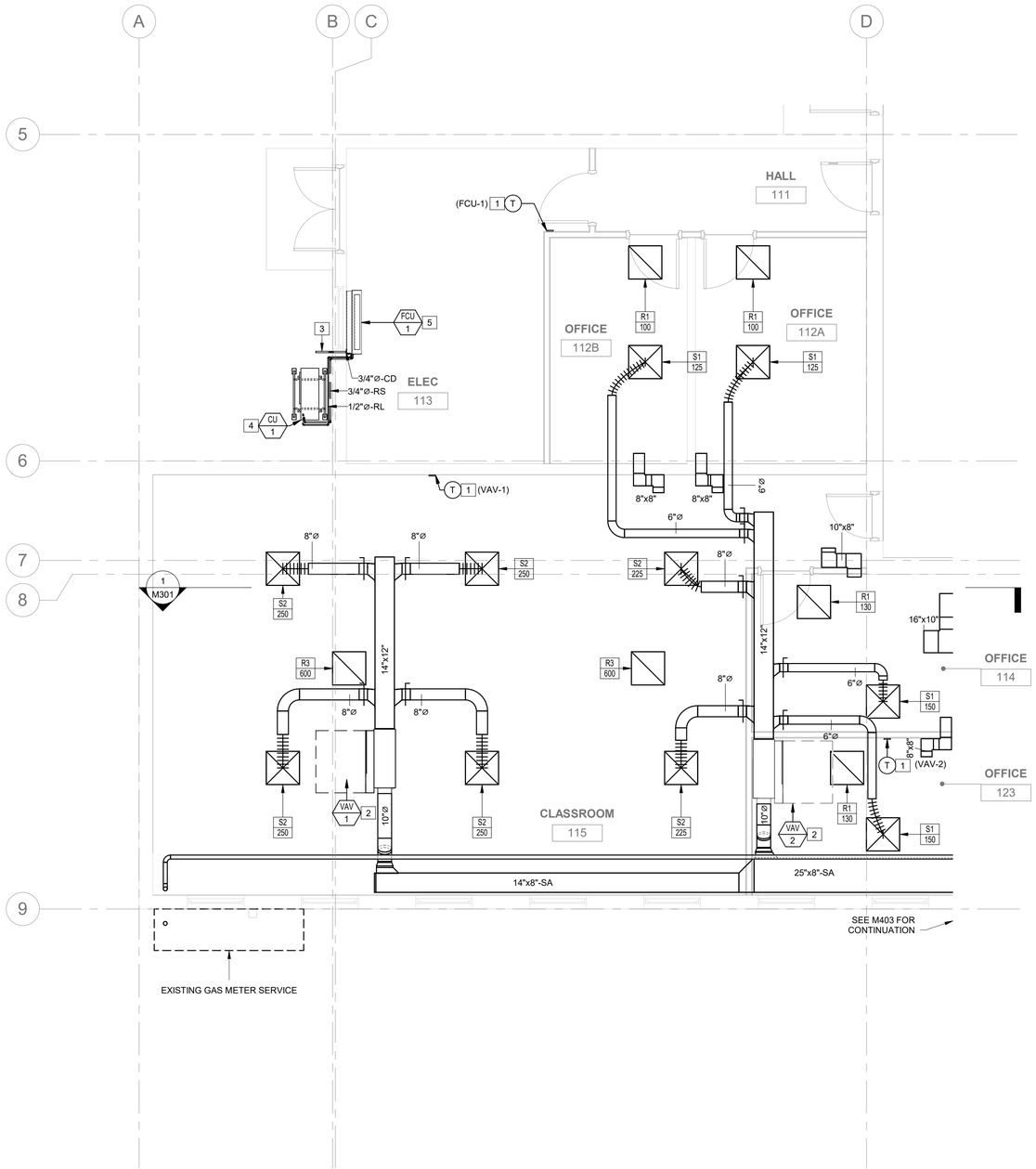
ISSUE DATE: 06/27/2025

CAD DWG FILE:
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SHEET TITLE:
HVAC SECTIONS

SHEET NUMBER:
M301

47 SHEETS
06/27/2025



TRUE N

2 / M402 ENLARGED FLOOR PLAN - SOUTH WEST - HVAC

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

GENERAL NOTES:

- MOST MAIN DUCTWORK FROM AHU TO BE ROUTED AS CLOSE TO BOTTOM OF STRUCTURE AS POSSIBLE. SOFFIT TO BE INSTALLED AROUND MAIN DUCTWORK. SEE ARCHITECTURAL RCP FOR SOFFITT SCOPE. COORDINATE WITH GC.
- ALL VAV TAPS ARE TO OFFSET FROM MAIN DUCTWORK TO ALLOW FOR VAV INSTALLATION CONCEALED ABOVE CEILING.
- AIR TERMINALS ARE TO BE COORDINATED WITHIN CEILING GRIDS. COORDINATE LOCATION WITH LIGHTING FIXTURES.

KEYED NOTES:

1 PROVIDE DIGITAL THERMOSTAT AND MOUNT AT 48" AFF. COORDINATE WITH LIGHT SWITCHES OR OTHER WALL MOUNTED ITEMS.

2 PROVIDE A SINGLE DUCT VARIABLE AIR VOLUME (VAV-X) TERMINAL UNIT AND LOCATE AS SHOWN ON PLAN. FOR PROPER SUPPLY AIR FLOW, PROVIDE A MINIMUM LENGTH OF THREE TIMES THE INLETS DIAMETER, MEASURED FROM VAV TERMINAL INLET TO TRANSITON.

3 FCU CONDENSATE TO DISCHARGE ON GRADE WITH SPLASH BLOCK.

4 PROVIDE AND INSTALL CONDENSING UNIT (CU) TO SERVE FAN COIL UNIT (FCU) PER MANUFACTURER'S INSTRUCTIONS. LOCATE AND INSTALL CONDENSING UNIT LEVEL ON HOUSEKEEPING PAD IN EXISTING CONDENSER UNIT LOCATION. REFER TO SCHEDULE FOR MORE INFORMATION ON CONDENSING UNIT STAND. PROVIDE WITH INSULATION AND ALUMINUM JACKET.

5 PROVIDE AND INSTALL FCU AND ASSOCIATED PIPING AND CONTROL PER MANUFACTURER'S INSTRUCTIONS. MOUNT UNIT AT 8FT AFF. CONNECT INSULATED REFRIGERANT LINES AND SLOPE INSULATED COPPER CONDENSATE PIPING AT 1% TO DISCHARGE ON GRADE.

KEYPLAN

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-026428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

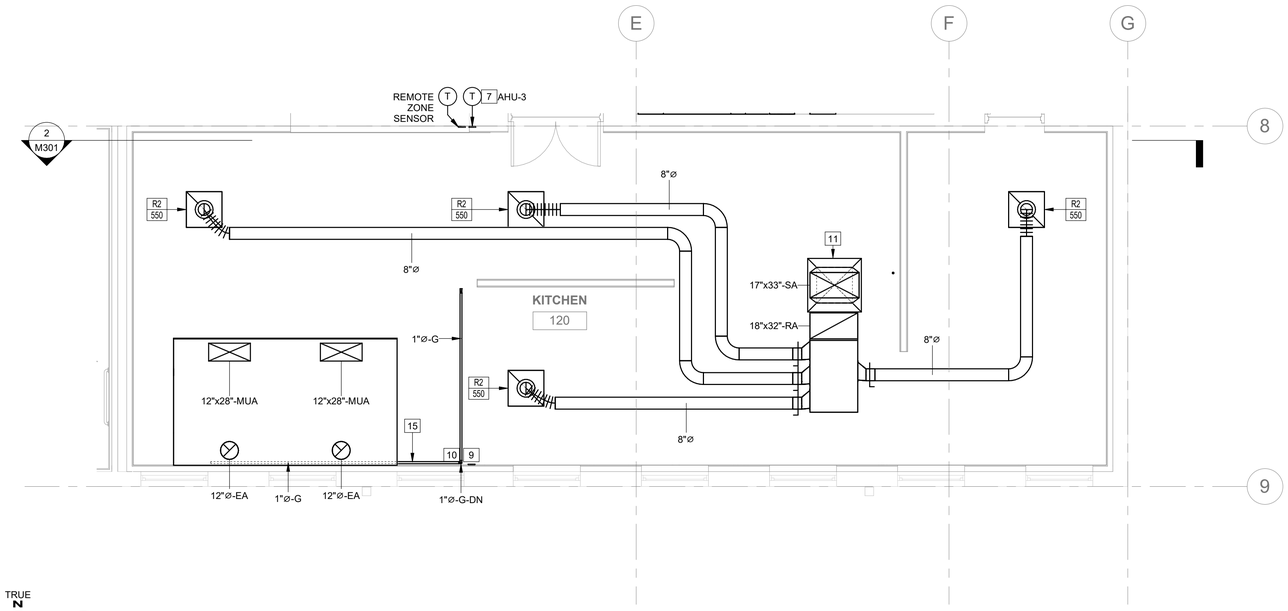
ISSUE DATE: 06/27/2025

CAD DWG FILE:
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DESIGNED BY: NJA

SHEET TITLE:
ENLARGED FLOOR PLANS - HVAC

SHEET NUMBER:
M402

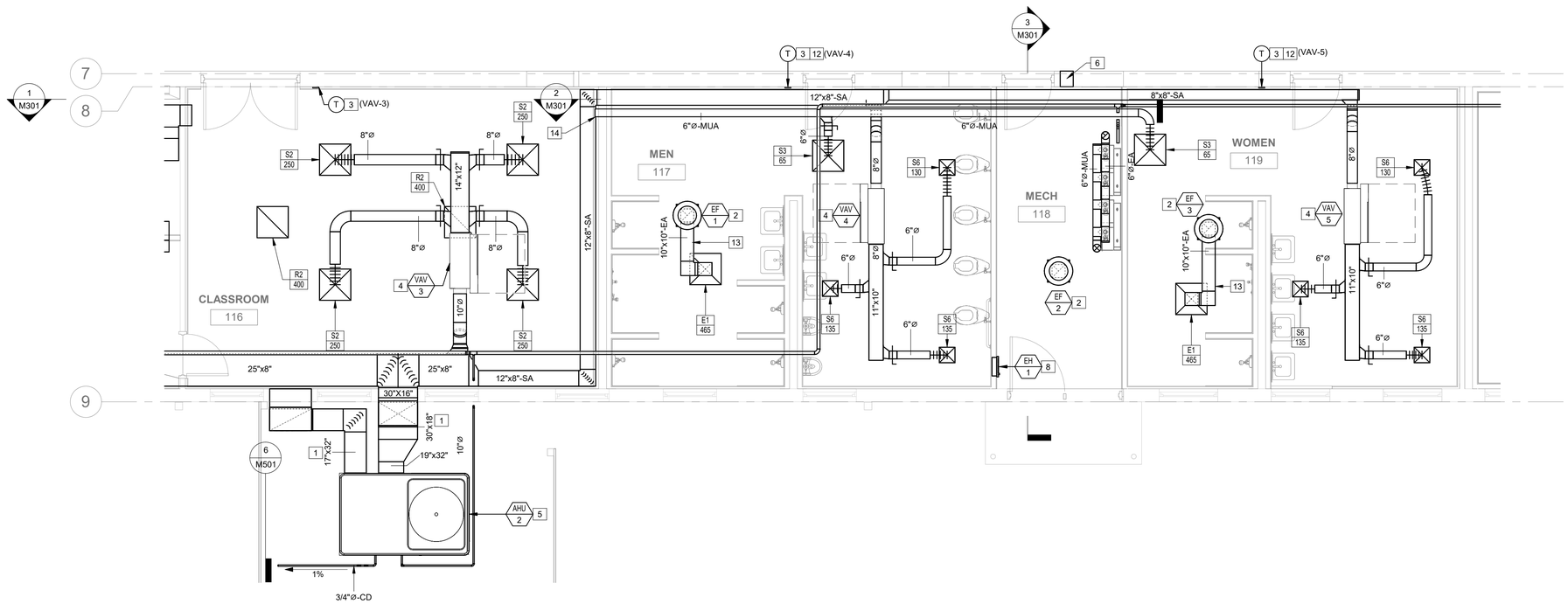
47 SHEETS
06/27/2025



TRUE N

2 M403 ENLARGED FLOOR PLAN - KITCHEN - HVAC

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



TRUE N

1 M403 ENLARGED FLOOR PLAN - SOUTH - HVAC

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

GENERAL NOTES:

- MOST MAIN DUCTWORK FROM AHU TO BE ROUTED AS CLOSE TO BOTTOM OF STRUCTURE AS POSSIBLE. SOFFIT TO BE INSTALLED AROUND MAIN DUCTWORK. SEE ARCHITECTURAL RCP FOR SOFFITT SCOPE. COORDINATE WITH GC.
- ALL VAV TAPS ARE TO OFFSET FROM MAIN DUCTWORK TO ALLOW FOR VAV INSTALLATION CONCEALED ABOVE CEILING.
- AIR TERMINALS ARE TO BE COORDINATED WITHIN CEILING GRIDS. COORDINATE LOCATION WITH LIGHTING FIXTURES.
- FIELD COORDINATE DUCT ROUTING THROUGH ROOF TRUSSES.

KEYED NOTES:

1. ANY DUCTWORK LOCATED OUTSIDE THE BUILDING SHALL BE PROVIDED WITH A MIN. 2" LINER INSULATION (MIN R-VALUE OF 8). EXTERIOR DUCTWORK TO BE SEALED WEATHER TIGHT OR PROVIDED WITH JACKETING AND VAPOR BARRIER.
2. EXHAUST FAN TO BE INSTALLED ON ROOF IN LOCATION SHOWN. COORDINATE LOCATION WITH EXISTING CONDITIONS AND STRUCTURE. FRAME OUT OPENING AS NEEDED. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL AND SCHEDULE FOR MORE INFORMATION.
3. PROVIDE DIGITAL THERMOSTAT AND MOUNT AT 48" AFF. COORDINATE WITH LIGHT SWITCHES OR OTHER WALL MOUNTED ITEMS.
4. PROVIDE A SINGLE DUCT VARIABLE AIR VOLUME (VAV-X) TERMINAL UNIT AND LOCATE AS SHOWN ON PLAN. FOR PROPER SUPPLY AIR FLOW, PROVIDE A MINIMUM LENGTH OF THREE TIMES THE INLETS DIAMETER, MEASURED FROM VAV TERMINAL INLET TO TRANSITON.
5. PROVIDE AND INSTALL PACKAGED AHU AND ASSOCIATED DUCTWORK. GAS & CONDENSATE PIPING AND CONTROL PER MFG'S INSTRUCTIONS. MOUNT UNIT ON GRADE WITH 6" CONCRETE PAD. PROVIDE AHU WITH MANUFACTURER'S RECOMMENDED CLEARANCE.
6. PROVIDE 15"x10" GREENHECK MODEL DFD-110 OR EQUIVALENT FIRE DAMPER. MOUNT AT 8' 6" AFF. PROVIDE WITH FACTORY SLEEVE OPTION. PROVIDE OPENINGS WITH GRILLE AND BIRD SCREEN.
7. PROVIDE DIGITAL PROGRAMMABLE THERMOSTAT AND MOUNT AT 48" AFF. COORDINATE WITH LIGHT SWITCHES OR OTHER WALL MOUNTED ITEMS.
8. INSTALL EH PER MFG'S INSTRUCTIONS. MOUNT UNIT AT 1' AFF. REFER TO SCHEDULE FOR MORE INFO.
9. LOCATE KITCHEN CONTROL PANEL ON THE WALL AND MOUNT AT 60" AFF. GREASE FAN AND MAKE-UP AIR UNIT TO INTERLOCK WITH TYPE 1 HOOD, REFER TO KITCHEN DRAWINGS FOR WIRING DIAGRAM.
10. PROVIDE AN EMERGENCY SHUT-OFF VALVE TO SHUT OFF THE GAS FLOW TO THE KITCHEN COOKING APPLIANCES. THE VALVE SHALL NOT BE LOCATED MORE THAN 6 FT OF THE SERVING APPLIANCES.
11. PROVIDE WITH RUSKIN SOD-36 DOUBLE DEFLECTION SUPPLY DIFFUSER.
12. THERMOSTATS IN ACCESSIBLE AREAS TO BE PROVIDED WITH PLASTIC LOCKABLE CAGE.
13. RESTROOM EXHAUST DUCTWORK TO BE CONSTRUCTED OUT OF ALUMINUM.
14. PROVIDE MAKE-UP AIR DUCT FROM CLASSROOM PLENUM TO SERVE RESTROOMS.
15. PROVIDE GAS TO EACH UNIT AND INSTAL PER MFG'S INSTRUCTIONS. REFER TO GAS REGULATOR SCHEDUCLE FOR MORE INFO.

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025

PROFESSIONAL SEAL

VESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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STATE OF MISSOURI - ST. CLAIR READINESS CENTER

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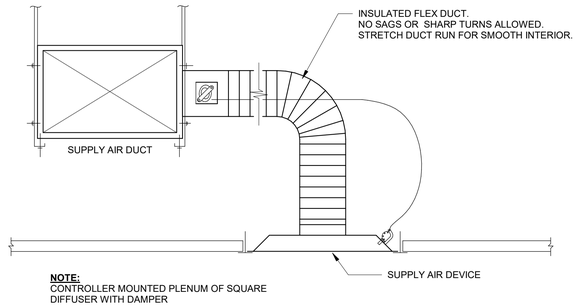
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DESIGNED BY: NJA

SHEET TITLE:
ENLARGED FLOOR PLANS - HVAC

KEYPLAN

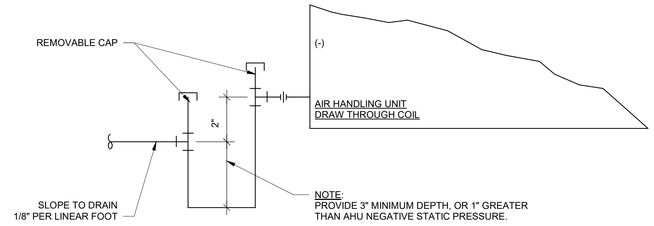
SHEET NUMBER:
M403

47 SHEETS
06/27/2025

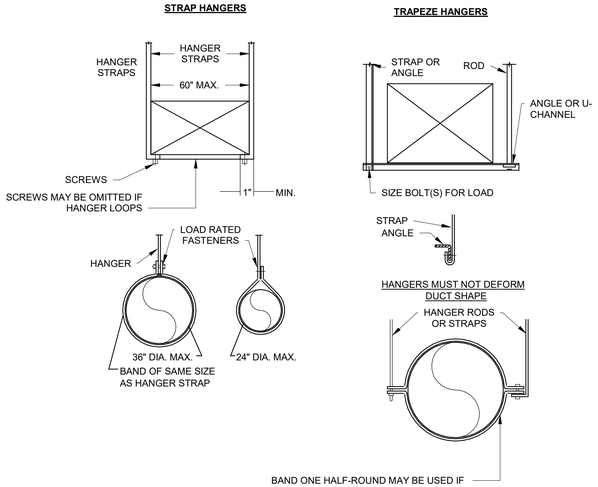


NOTE:
CONTROLLER MOUNTED PLENUM OF SQUARE DIFFUSER WITH DAMPER

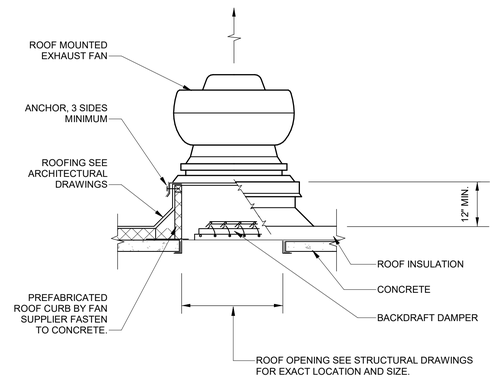
1 M501 AIR DEVICE WITH CONTROLLER DETAIL
SCALE: NTS



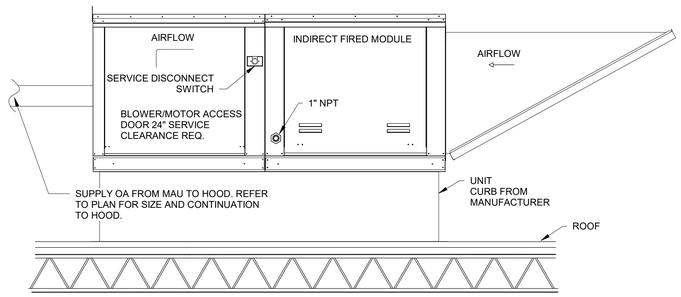
2 M501 AIR HANDLING UNIT TRAP DETAIL
SCALE: NTS



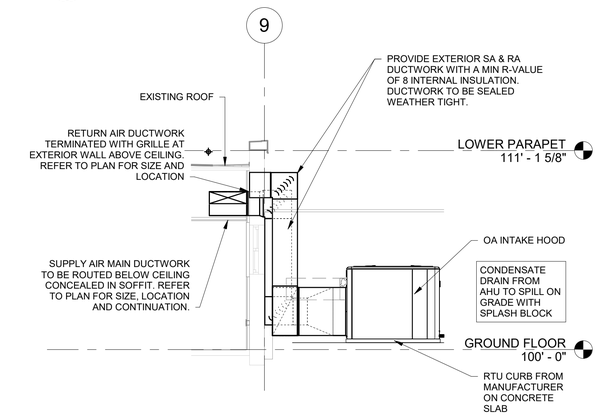
3 M501 HARD DUCT SUPPORT DETAIL
SCALE: NTS



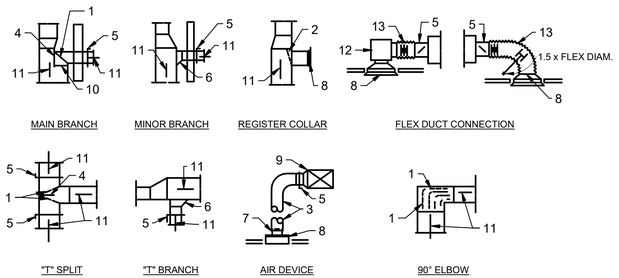
4 M501 ROOF MOUNTED EXHAUST FAN DETAIL
SCALE: NTS



7 M501 MAKE-UP AIR UNIT (MAU) DETAIL
SCALE: NTS

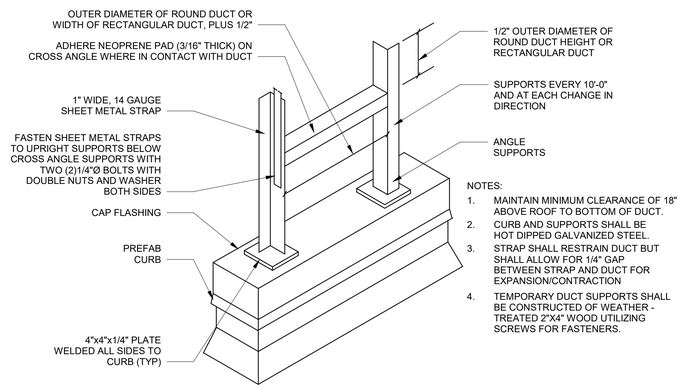


6 M501 PACKAGED AHU DETAIL LOCATED ON GRADE
SCALE: NTS



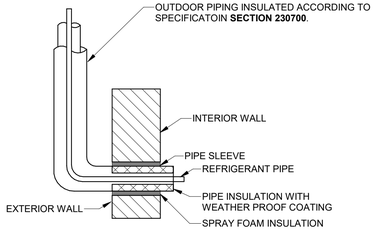
NOTES:
1. TURNING VANES OR EXTRACTOR WITH LEADING AND TRAILING EDGES PARALLEL TO SIDE OF DUCT.
2. ADJUSTABLE AIREXTRACTOR.
3. BRANCH DUCTWORK AS SHOWN ON PLAN.
4. FIXED SPLITTER.
5. MANUAL DAMPER.
6. 45° SHOE TAP.
7. ROUND DUCT ADAPTER, WHERE REQUIRED.
8. AIR DEVICE.
9. SPIN COLLAR TAP WITH QUADRANT DAMPER, IF BRANCH DUCTWORK IS ROUND.
10. THROAT SIZE, KEY NOTED ON PLAN.
11. AIR FLOW.
12. AIR PLENUM BOX TO BE USED WHEN THERE IS NOT ADEQUATE SPACE FOR MINIMUM RADIUS OF 1.5X FLEX DIAM.
13. FLEXIBLE DUCT.

5 M501 DUCT CONNECTIONS DETAIL
SCALE: NTS



NOTES:
1. MAINTAIN MINIMUM CLEARANCE OF 18" ABOVE ROOF TO BOTTOM OF DUCT.
2. CURB AND SUPPORTS SHALL BE HOT DIPPED GALVANIZED STEEL.
3. STRAP SHALL RESTRAIN DUCT BUT SHALL ALLOW FOR 1/4" GAP BETWEEN STRAP AND DUCT FOR EXPANSION/CONTRACTION
4. TEMPORARY DUCT SUPPORTS SHALL BE CONSTRUCTED OF WEATHER - TREATED 2"X4" WOOD UTILIZING SCREWS FOR FASTENERS.

8 M501 ROOF DUCT SUPPORT
SCALE: NTS



9 M501 PIPING THROUGH EXTERIOR CMU WALL
SCALE: NTS

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
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PROFESSIONAL SEAL

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STATE OF MISSOURI - ST. CLAIR READINESS CENTER

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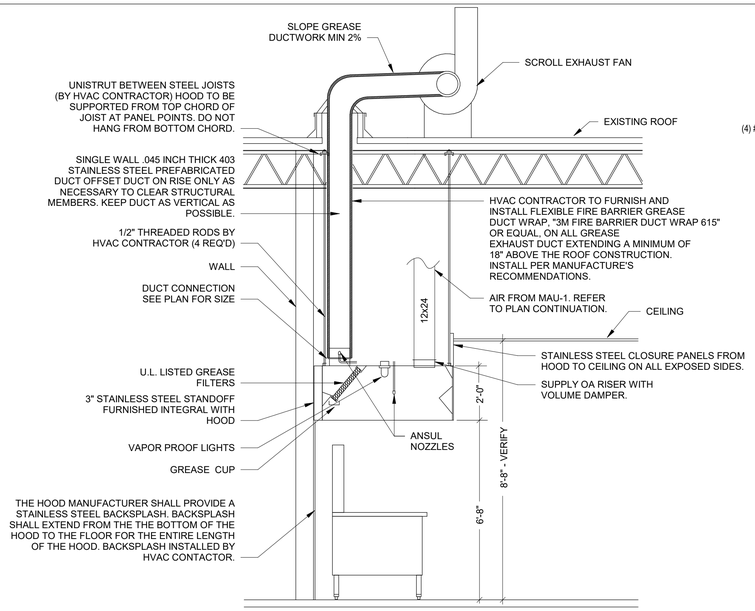
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SHEET TITLE:
HVAC DETAILS

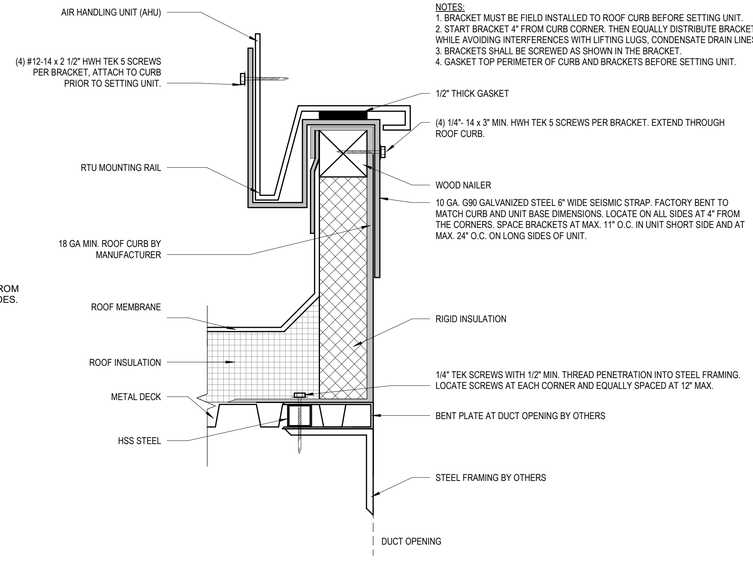
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47 SHEETS
06/27/2025



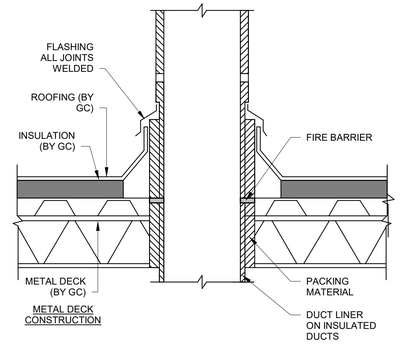
NOTES:
1. ENTIRE INSTALLATION OF EXHAUST HOOD & DUCTWORK SHALL COMPLY WITH 2015 INTERNATIONAL MECHANICAL CODE.
2. REFER TO SCHEDULE FOR EXHAUST HOOD AND FAN SPECIFICATIONS.
3. REFER TO FLOOR PLAN FOR DUCTING ARRANGEMENT AND DUCT SIZE AT HOOD.
4. IF THE CEILING IS HIGHER THAN THE TOP OF THE EXHAUST HOOD, THE HOOD MANUFACTURER SHALL PROVIDE STAINLESS STEEL CLOSURE PANELS FROM THE TOP OF THE HOOD TO THE CEILING ON ALL EXPOSED SIDES.

1 M502 SECTION THRU EXHAUST HOOD
SCALE: NTS

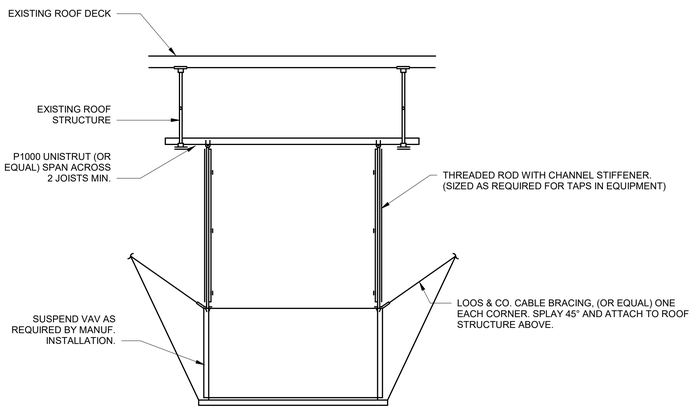


NOTES:
1. BRACKET MUST BE FIELD INSTALLED TO ROOF CURB BEFORE SETTING UNIT.
2. START BRACKET 4" FROM CURB CORNER. THEN EQUALLY DISTRIBUTE BRACKETS AS MUCH AS POSSIBLE WHILE AVOIDING INTERFERENCES WITH LIFTING LUGS, CONDENSATE DRAIN LINES, UNIT BASE SCREWS, ETC.
3. BRACKETS SHALL BE SCREWED AS SHOWN IN THE BRACKET.
4. GASKET TOP PERIMETER OF CURB AND BRACKETS BEFORE SETTING UNIT.

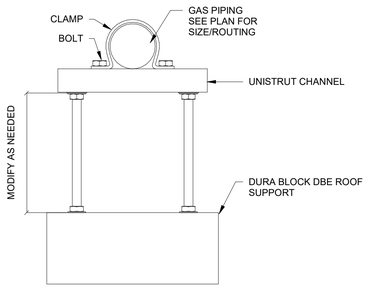
2 M502 AHU SUPPORT DETAIL FOR METAL ROOF
SCALE: NTS



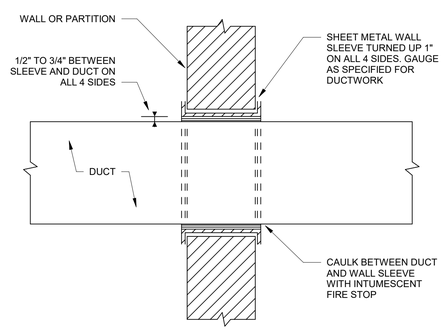
3 M502 DUCT PENETRATION THROUGH ROOF
SCALE: NTS



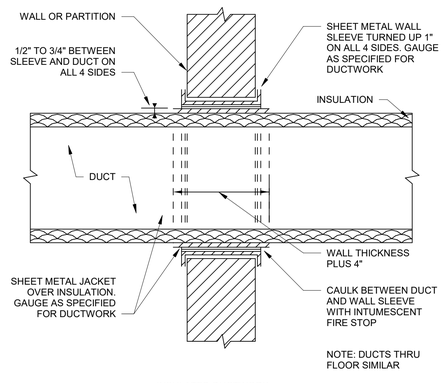
4 M502 SEISMIC SUSPENDED VAV UNIT DETAIL
SCALE: NTS



7 M502 GAS PIPE ROOF SUPPORT
SCALE: NTS

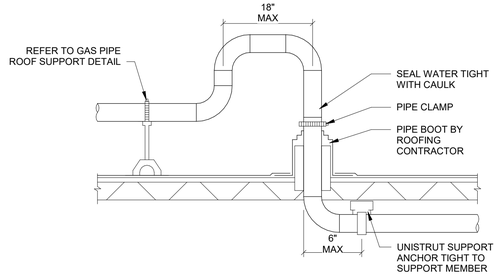


LINED OR NON-INSULATED DUCTWORK

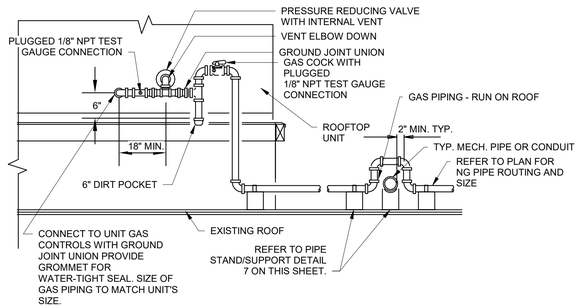


INSULATED DUCTWORK

6 M502 DUCT PENETRATION DETAIL
SCALE: NTS



8 M502 GAS PIPE BOOT
SCALE: NTS



5 M502 AHU GAS PIPE CONNECTION
SCALE: NTS

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE 12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION

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STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

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CAD DWG FILE:
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SHEET TITLE:
HVAC DETAILS

SHEET NUMBER:
M502

47 SHEETS
06/27/2025

AIR HANDLING UNIT SCHEDULE

PLAN MARK	LOCATION	MANUFACTURER - MODEL	MIN OA	AIR SIDE SUPPLY FAN				COIL SIDE DX COOLING COIL						GAS HEATING COIL			FILTERS	ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES
				QTY	CFM	ESP	TBHP	TMBH	SMBH	EDB/EWB	LDB/LWB	IEER/EER	REFRIGERANT	INPUT (MBh)	OUTPUT (MBh)	EAT/LAT	TYPE	VOLTS/PH	MCA/MOP		
AHU-1	ROOF	TRANE-YHK060A4S0M	160	1	2000	1.50	3.0	59.63	44.29	80/67	55.75/55.66	16.4/12.2	R-454B	100	81	60/97.03	MERV 8	460/3	16/20	1014	2-10, 12-16
AHU-2	GRADE	TRANE-YSK150A4S0M	1000	1	3800	1.20	4.6	137.36	93.53	80/67	54.11/53.60	14.5/10.8	R-454B	200	162	60/98.8	MERV 8	460/3	33/45	1436	1-6, 8-9, 11, 14, 16
AHU-3	ROOF	TRANE-YSK120A4S0M	1050	1	3000	1.50	3.0	115.58	79.12	80/67	54.03/53.61	15.1/11	R-454B	200	162	60/109.18	MERV 8	460/3	30/40	1223	2-10, 12-16

NOTES:
1. PROVIDE UNIT WITH RTU CONTROL PANEL FOR OPERATION OF UNIT AND COMMUNICATION WITH VAV BOXES.
2. PROVIDE UNIT WITH RTU CONTROL PANEL FOR OPERATION OF UNIT.
3. PROVIDE UNIT WITH ECONOMIZER CONTROL WITH ENTHALPY CONTROL.
4. PROVIDE DUCT PRESSURE SENSOR.
5. PROVIDE UNIT WITH 2 SETS OF MERV 8 FILTER.
6. UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.
7. PROVIDE 14" SEISMICALLY RATED AND PRE-INSULATED ROOF CURB. PROVIDE WITH SEISMIC CALCULATIONS SEALED BY PE.
8. PROVIDE WITH RETURN MOUNTED SMOKE DETECTOR INTEGRATED TO SHUTDOWN UNIT UPON SMOKE DETECTION.
9. UNIT TO BE PROVIDED WITH MODULATING GAS HEAT.
10. MANUFACTURER TO PROVIDE WITH SINGLE ZONE VAV SUPPLY FAN.
11. MANUFACTURER TO PROVIDE WITH MULTI-ZONE VAV SUPPLY FAN.
12. MANUFACTURER TO PROVIDE REMOTE ZONE SENSOR FOR SINGLE ZONE VAV UNITS.
13. UNIT TO BE PROVIDED WITH HOT GAS REHEAT.
14. PROVIDE MODULATING VARIABLE SPEED COMPRESSOR WITH MINIMUM MODULATION TO 15%.
15. PROVIDE SINGLE ZONE VAV OPERATION WITH FULLY MODULATING FAN AND DISCHARGE AIR CONTROL.
16. PROVIDE IEER VALUE AS SCHEDULED.

VAV UNIT SCHEDULE

PLAN MARK	LOCATION	MANUFACTURER - MODEL	AIR SIDE SUPPLY FAN			COIL SIDE HEATING COIL			ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES
			MAX. CFM	MIN. CFM	ESP	CFM	KW	EAT/LAT	VOLTS/PH	MCA/MOP		
VAV-1	CLASSROOM-115	TRANE-VCEF10	1000	400	0.03	600	6.0	55/86.46	480/3/60	9.02/15	81	1-5
VAV-2	OFFICE-114	TRANE-VCEF10	1000	400	0.03	600	6.0	55/86.46	480/3/60	9.02/15	81	1-5
VAV-3	CLASSROOM-116	TRANE-VCEF10	1000	400	0.03	600	6.0	55/86.46	480/3/60	9.02/15	81	1-5
VAV-4	MEN-117	TRANE-VCEF08	400	200	0.02	200	2.0	55/86.46	480/3/60	3.01/15	67	1-5
VAV-5	WOMEN-119	TRANE-VCEF08	400	200	0.02	200	2.0	55/86.46	480/3/60	3.01/15	67	1-5

NOTES:
1. UNITS TO BE TRANE MODEL, SIZE, AND CONFIGURATION AS INDICATED IN SCHEDULE AND ON DRAWINGS EACH RCP CIRCUIT SHALL BE PROVIDED A LINE VOLTAGE.
2. PROVIDE WITH ZONE TEMPERATURE SENSORS.
3. PROVIDE WITH FACTORY-WIRED DISCHARGE AIR TEMPERATURE SENSOR.
4. PROVIDE UNIT-MOUNTED CONTROL POWER TRANSFORMER, DISCONNECT, AND POWER FUSE.
5. PROVIDE UNIT WITH FIBER FREE LINER AND HANGER BRACKETS.

CONDENSING UNIT SCHEDULE

PLAN MARK	LOCATION	MANUFACTURER - MODEL	NOMINAL TONS	CONNECTING FCU(S)	AMBIENT	EER/IEER	CONNECTIONS		ELECTRICAL		WEIGHT (LBS)	NOTES
							LIQUID (IN)	SUCTION (IN)	VOLTS/PH	MCA/MOP		
CU-1	GRADE	MITSUBISHI-PUY-AH30NL	2.5	FCU-1	95.3	10.1/-	3/8	5/8	230/1	22/37	155	1-5

NOTES:
1. MANUFACTURERS SUBMITTAL SHALL INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUME.
2. MANUFACTURER TO PROVIDE WITH MINI-SPLIT STAND QSMS1201M WITH 12" HEIGHT.
3. MANUFACTURER TO PROVIDE WITH LOW AMBIENT COOLING.
4. MANUFACTURER TO PROVIDE WITH WIND BAFFLE KIT.
5. UNITS SHALL ONLY BE INSTALLED BY FACTORY TRAINED INSTALLERS/TECHNICIANS.

FAN COIL UNIT SCHEDULE

PLAN MARK	LOCATION	MANUFACTURER - MODEL	AIR SIDE SUPPLY FAN			COIL SIDE DX COOLING COIL					ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES
			CFM	ESP	TBHP	TMBH	SMBH	EDB/EWB	LAT	REFRIGERANT	VOLTS/PH	MCA/MOP		
FCU-1	ELEC - 113	MITSUBISHI-PKA-AK30NL	635	-	-	30	-	80/67	-	R-454B	230/1	-	46	1-5

NOTES:
1. MANUFACTURER TO PROVIDE WITH WIRED THERMOSTAT.
2. MANUFACTURER TO PROVIDE WITH 2 SETS OF FILTERS
3. MANUFACTURER TO PROVIDE UNIT WITH MOUNTING BRACKET.
4. UNIT SHALL ONLY BE INSTALLED BY TRAINED INSTALLERS/TECHNICIANS.
5. INDOOR UNIT IS POWERED BY OUTDOOR UNIT.

FAN SCHEDULE

PLAN MARK	MANUFACTURER - MODEL	FAN					ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES
		CFM	ESP	RPM	DRIVE TYPE	BHP	VOLTZ/PH	MCA/MOP		
EF-1	GREENHECK-G-095-E	465	0.36	1300	DIRECT	1/12	115/60/1	-	31	1-3
EF-2	GREENHECK-G-090-E	350	0.38	1300	DIRECT	1/25	115/60/1	-	29	1-3
EF-3	GREENHECK-G-095-E	465	0.36	1300	DIRECT	1/12	115/60/1	-	31	1-3
EF-4	GREENHECK-USF-16-B7	2938	0.5	1178	DIRECT	3/4	460/60/3	2/15	231	1, 4-11

NOTES:
1. 14" ROOF SEISMICALLY RATED CURB WITH 1" INSULATION THICKNESS.
2. BIRDSCREEN GALVANIZED, NOM. 84% FREE AREA.
3. BACK DRAFT DAMPER.
4. UL/CUL 705 LISTED - "POWER VENTILATORS FOR RESTAURANT EXH. APPLIANCES"
5. FOAM CURB SEAL (FACTORY APPLIED).
6. COATED WITH HI-PRO POLYESTER, CONCRETE GRAY-RAL 7023.
7. BEARINGS WITH GREASE FITTINGS, L10 LIFE OF 100,000 HRS (L50 AVG. LIFE 500,000 HRS).
8. MOTOR STARTER TO BE PROVIDED BY ELECTRICAL CONTRACTOR.
9. INCLUDES GREASE TRAP WITH CLEAN OUT PORT.
10. INTERCONNECT UNIT OPERATION TO ASSOCIATED KITCHEN HOOD.
11. INCLUDES OPTIONAL DRAINAGE PORT.

MAKE-UP AIR UNIT SCHEDULE

PLAN MARK	LOCATION	MANUFACTURER - MODEL	AIR SIDE SUPPLY FAN				COIL SIDE GAS HEATING COIL				FILTERS	ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES
			QTY	CFM	ESP	TBHP	INPUT (MBh)	OUTPUT (MBh)	EAT/LAT	PSI	TYPE	VOLTS/PH	MCA/MOP		
MAU-1	ROOF	GREENHECK-IGX-P112-H12-MF-G	1	2350	1	1-1/2	200	162	4/67.9	0.5	MERV 8	460/60/3	4.6/15	1081	1-10

NOTES:
1. PROVIDE WITH PREMIUM EFFICIENCY MOTOR(S), COMBINATION FILTER/MIXING BOX, 2" PLEATED MERV 8 PRE-FILTER AND LOW LEAKAGE DAMPER. ALL ACCESS TO UNIT SHALL BE FROM THE SIDE.
2. INCLUDES MANUFACTURER 12" SEISMICALLY RATED ROOF CURB WITH FRONT DUCT OPENING.
3. COATED WITH HI-PRO POLYESTER, CONCRETE GRAY-RAL 7023.
4. SWITCH NEMA 3R, TOGGLE, FACTORY INSTALLED.
5. INCLUDES NEOPRENE VIBRATION ISOLATORS FOR SUPPLY FAN AND MOTOR.
6. PROVIDE WITH FACTORY MOUNTED CONTROL PANEL WITH BACNET CARD.
7. PROVIDE UNIT WITH FACTORY SUPPLIED SENSORS: 120V SMOKE DETECTOR, SUPPLY AIR TEMPERATURE SENSOR AND DIRTY FILTER SWITCHES.
8. INTERCONNECT SMOKE DETECTOR WITH ZONE ALARM PANEL TO SHUT DOWN UNIT IN CASE OF AN ALARM.
9. INTERCONNECT UNIT OPERATION TO ASSOCIATED KITCHEN HOODS.
10. PROVIDE 14" SEISMICALLY RATED AND PRE-INSULATED ROOF CURB. PROVIDE WITH SEISMIC CALCULATIONS SEALED BY PE.

AIR DEVICE SCHEDULE

PLAN MARK	MANUFACTURER - MODEL	MODULE SIZE (IN)	NECK SIZE	MOUNT TYPE	NOTES
E1	TITUS-PAR-AA	24"x24"	10'	LAY-IN	3
R1	TITUS-PAR-AA	24"x24"	8"	LAY-IN	3
R2	TITUS-PAR-AA	24"x24"	12"	LAY-IN	3
R3	TITUS-PAR-AA	24"x24"	16"	LAY-IN	3
R4	TITUS-PAR-AA	24"x24"	8"	SURFACE	3
S1	TITUS-OMNI-AA	24"x24"	6"	LAY-IN	3, 5
S2	TITUS-OMNI-AA	24"x24"	8"	LAY-IN	3, 5
S3	TITUS-OMNI-AA	24"x24"	6"	SURFACE	3, 5
S4	ACUTHERM-ADV	24"x24"	6"	LAY-IN	1-7
S6	TITUS-OMNI-AA	12"x12"	6"	LAY-IN	3, 5

NOTES:
1. PROVIDE WITH ACUTHERM BYPASS R-RINGS.
2. PROVIDE WITH ACUTHERM DIGITAL WALL ADJUSTER (ADJ-D).
3. ALL GRILLS AND DIFFUSERS MADE IN ALUMINUM WHITE COLOR.
4. DIFFUSER TO BE MASTER TYPE.
5. INSULATED BACKPAN, 1/2" FIBERGLASS WITH FOIL/SCRIM VAPOR BARIER.
6. PROVIDE WITH 24V 60Hz ELECTRICAL POWER.
7. PROVIDE WITH OPTIONAL 24V TRANSFORMER.

ELECTRIC UNIT HEATERS (EH) SCHEDULE

TAG	AREA SERVED	SERIES	TYPE	MOUNTING	CAPACITY (KW)	VOLT/PHASE/AMPS	ACCESSORIES
EH-1	MECH - 118	CWH3000	FAN-FORCED WALL HEATER	WALL	3	208/1/14.5	1-4
EH-2	LOBBY - 100	CWH3000	FAN-FORCED WALL HEATER	WALL	3	208/1/14.5	1-4

NOTES:
1. UNIT TO BE RECESSED MODEL.
2. PROVIDE WITH INTEGRAL THERMOSTAT.
3. PROVIDE WITH THERMAL OVERLOAD PROTECTION.
4. ELECTRICAL TO PROVIDE DISCONNECT SWITCH.

MECHANICAL EQUIPMENT COMPONENTS EARTHQUAKE LOAD RESISTANCE

OCCUPANCY CATEGORY: II	SEISMIC DESIGN CATEGORY: D									
SYSTEM COMPONENTS		ANCHORAGE TO FLOORS, ROOFS, ETC		SWAY BRACING		LOCATION OF PROFESSIONALLY SEALED ANCHORAGE AND SWAY BRACING DETAILS				
						ON CONSTR. DOCUMENTS	SUBSEQUENT SUBMITTAL (SEE NOTE BELOW)		COMMENTS	
	I_p	NOT PROVIDED FOR PROJECT	PROVIDED FOR PROJECT	NOT PROVIDED FOR PROJECT	PROVIDED FOR PROJECT	DRAWING NO OR SPEC SECT	SHOP DRAWING	SEPARATE PERMIT & PLANS	SEE NOTES BELOW	PROVIDED BY
AIR DEVICE	1.0	✓		✓					1	CONTRACTOR
DUCTWORK	1.0								2	CONTRACTOR
SUSPENDED			✓		✓				2,4	CONTRACTOR
PACKAGED COOLING & HEATING UNIT (AHU-1-3)	1.0		✓		✓				5	MANUFACTURER
FCU	1.0	✓		✓					4	CONTRACTOR
VAV BOXES	1.0		✓		✓				3	CONTRACTOR

NOTE: IT IS THE BASIC INTENT OF THIS CODE BLOCK TO DECLARE IF SWAY BRACING IS BEING PROVIDED ON THE PROJECT. IF SO, TO DECLARE WHETHER OR NOT THE DETAILS ARE SHOWN ON THE PLANS OR WILL BE SHOWN ON A SUBSEQUENT SUBMISSION. IF SEISMIC RESTRAINT IS NOT REQUIRED BY CODE THIS CAN BE STATED IN COMMENTS
NOTE: A SHOP DRAWINGS SHOULD BE SUBMITTED A MINIMUM OF TWO WEEKS PRIOR TO PLANNED INSTALLATION TO ALLOW FOR PLAN REVIEW AND DISTRIBUTION TO INSPECTOR. ADDITIONAL TIME MAY BE NEEDED IF SUCH SUBMISSIONS ARE DEFICIENT.

NOTES:
1. WEIGH 20 POUNDS OR LESS, OR FOR DISTRIBUTION SYSTEMS WEIGHING 5LB/FT OR LESS.
2. HVAC DUCTS HAVING A CROSS-SECTIONAL AREA OF LESS THAN 6 SQUARE FEET.
3. SWAY BRACING TO ONLY BE PROVIDED WHERE NOTED.
4. NOT REQUIRED IF UNDER 50LB.
5. SEISMIC DETAIL BY MANUFACTURER.

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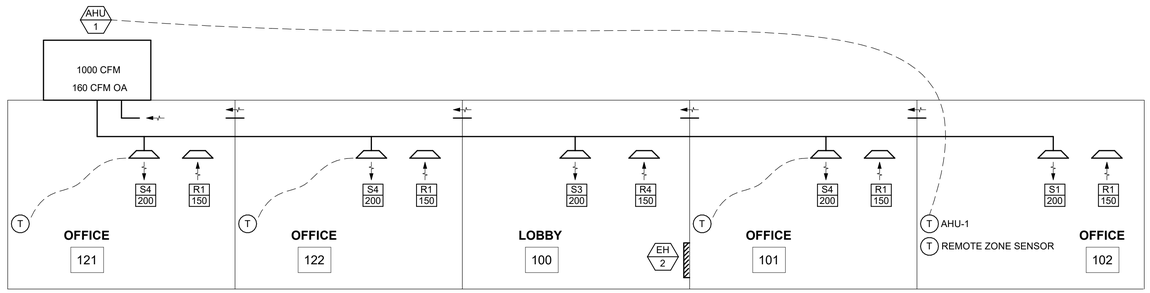
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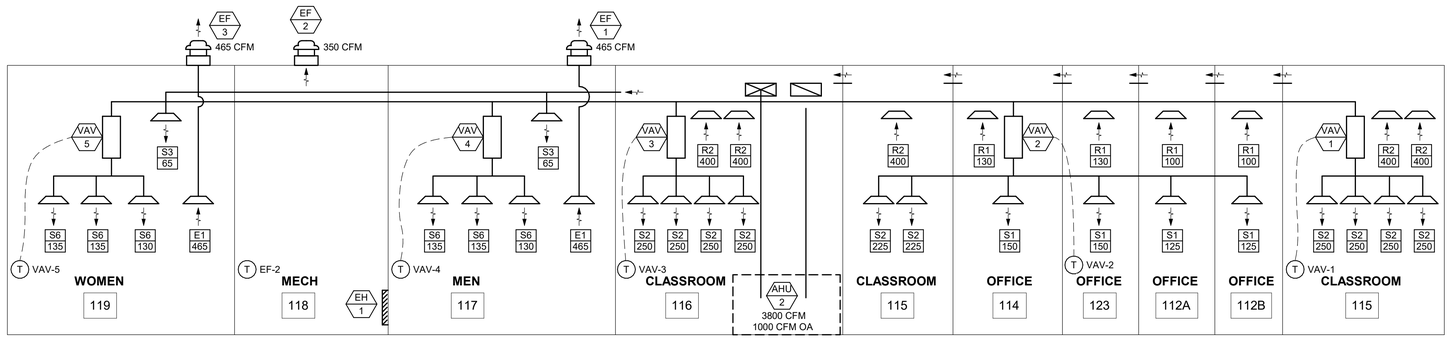
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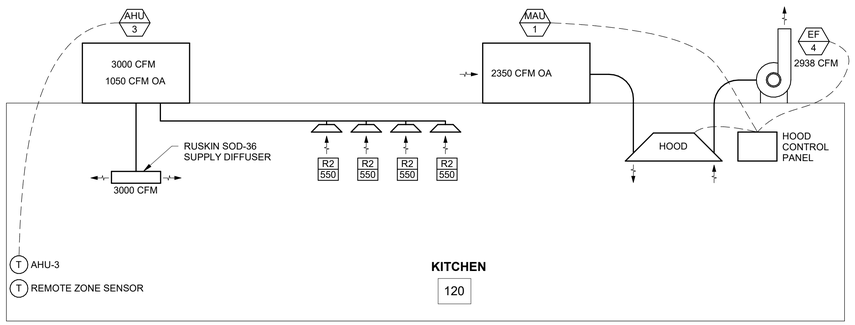
1 M701 AIRFLOW DIAGRAM - EAST OFFICES

SCALE: NTS



2 M701 AIRFLOW DIAGRAM - SOUTH OFFICES

SCALE: NTS



3 M701 AIRFLOW DIAGRAM - KITCHEN

SCALE: NTS

MULTIPLE-ZONE VAV SYSTEM WITH TERMINAL HEAT (AHU-2) SEQUENCE OF OPERATION

1. VARIABLE AIR VOLUME - TERMINAL UNIT

RUN CONDITIONS - SCHEDULED:
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN
- A 75°F (ADJ.) COOLING SETPOINT
- A 70°F (ADJ.) HEATING SETPOINT.

- UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN
- A 85°F (ADJ.) COOLING SETPOINT.
- A 55°F (ADJ.) HEATING SETPOINT.

ZONE SETPOINT ADJUST:
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR.

VARIABLE VOLUME TERMINAL UNIT - PRESSURE DEPENDENT - DAMPER CONTROL:
THE UNIT SHALL MAINTAIN ZONE COOLING SETPOINTS BY MODULATING THE DAMPER THROUGH ONE OF THE FOLLOWING:

OCCUPIED:
- WHEN ZONE TEMPERATURE IS GREATER THAN ITS COOLING SETPOINT, THE ZONE DAMPER SHALL MODULATE OPEN TO MAINTAIN SETPOINT.
- WHEN THE ZONE TEMPERATURE IS LESS THAN THE COOLING SETPOINT, THE ZONE DAMPER SHALL MODULATE CLOSED TO MINIMUM POSITION.

UNOCCUPIED:
- WHEN THE ZONE IS UNOCCUPIED THE ZONE DAMPER SHALL MODULATE CLOSED TO INACTIVE POSITION.
- WHEN THE ZONE TEMPERATURE IS GREATER THAN ITS COOLING SETPOINT, THE ZONE DAMPER SHALL MODULATE OPEN TO MAINTAIN SETPOINT.

ELECTRIC REHEATING STAGE:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE REHEATING TO MAINTAIN ITS SETPOINT. TO PREVENT SHORT CYCLING, THE STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE REHEATING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.).
- AND THE ZONE TEMPERATURE IS BELOW SETPOINT.
- AND SUFFICIENT AIRFLOW IS PROVIDED.

DISCHARGE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.

AHU FAN NEEDS TO BE RUNNING BEFORE THE VAV REHEAT CAN BE TURNED ON. WHEN THE AIR TEMPERATURE IN HEATING MODE UNOCCUPIED (OR OCCUPIED) WANTS HEAT THE THERMOSTAT MUST ACTIVATE THE RTU FAN (IN LOW SPEED).

RESTROOM EXHAUST FAN (EF-1 AND EF-3) SEQUENCE OF OPERATION

SYSTEM CONTROL:
• EF-1 AND EF-3 FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS

KITCHEN MAKE-UP AIR UNIT (MAU-1) SEQUENCE OF OPERATION

SYSTEM DESCRIPTION:
• (MAU-1) SYSTEM CONSISTS OF VARIABLE FLOW MAKE-UP AIR UNIT TO PROVIDE FRESH MAKE-UP AIR TO THE KITCHEN HOOD. THE SYSTEM IS INTERCONNECTED TO THE OPERATION OF THE KITCHEN HOOD.

SYSTEM CONTROL:
• SYSTEM SHALL RECEIVE 'ON/OFF' STATUS SIGNALS FROM KITCHEN HOOD AND MODULATE VFD OPERATION ACCORDING TO THE OCCUPATION.

SAFETIES AND ALARMS:
ALARMS SHALL BE PROVIDED FOR ALL CRITICAL POINTS INCLUDING THE FOLLOWING:

• SUPPLY DUCT SMOKE DETECTOR ALARM.
• SUPPLY FAN FAILURE.
• DIRTY FILTER ALARM.

THE FOLLOWING SAFETIES SHALL BE MONITORED AND SHALL SHUT DOWN THE UNIT WHEN AN ALARM CONDITION IS ACTIVE. EACH SAFETY SHALL REQUIRE A MANUAL RESET:
• SUPPLY DUCT SMOKE DETECTOR ALARM.

KITCHEN HOOD EXHAUST FAN (EF-4) SEQUENCE OF OPERATION

SYSTEM DESCRIPTION:
• (EF-4) SYSTEM CONSISTS OF A CENTRIFUGAL BACKWARD INCLINED ROOF MOUNTED EXHAUST FAN INTERCONNECTED TO THE KITCHEN HOOD.

SYSTEM CONTROL:
• UNIT TO BE INTERLOCKED TO THE KITCHEN CONTROLLER ALONG WITH MAKE-UP AIR UNIT.
• TEMPERATURE SENSOR WILL BE INSTALED INSIDE THE HOOD, AUTOMATICALLY ACTIVATE THE EXHAUST
FAN WHEN COOKING APPLIANCES BEGIN GENERATING HEAT, AND KEEP FAN RUNNING UNTIL TEMPERATURE DROPS.

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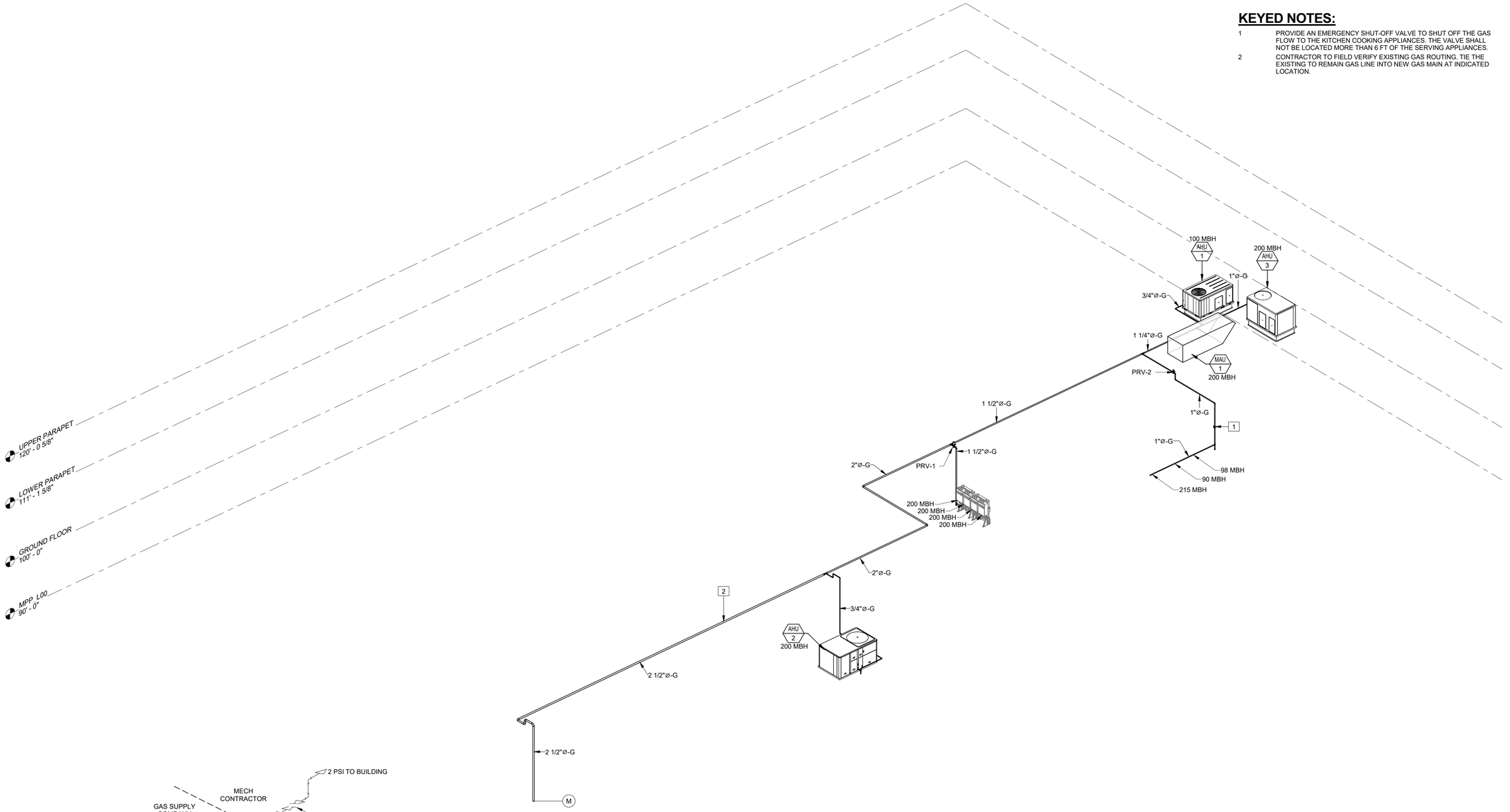
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AIRFLOW SCHEMATICS

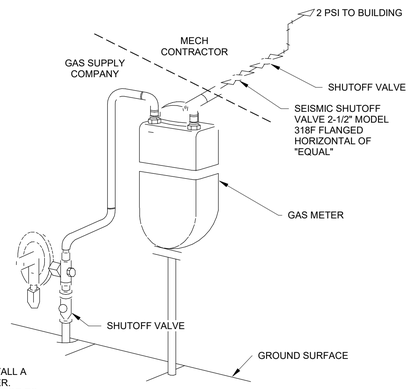
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KEYED NOTES:

1. PROVIDE AN EMERGENCY SHUT-OFF VALVE TO SHUT OFF THE GAS FLOW TO THE KITCHEN COOKING APPLIANCES. THE VALVE SHALL NOT BE LOCATED MORE THAN 6 FT OF THE SERVING APPLIANCES.
2. CONTRACTOR TO FIELD VERIFY EXISTING GAS ROUTING. TIE THE EXISTING TO REMAIN GAS LINE INTO NEW GAS MAIN AT INDICATED LOCATION.





NOTES:

1. GAS COMPANY TO INSTALL A REGULATOR AND METER. MECHANICAL CONTRACTOR TO MAKE ALL CONNECTIONS FROM METER TO BUILDING SERVICE

1 / M901 GAS METER AND EARTHQUAKE VALVE DETAILS

SCALE: NTS

NATURAL GAS SCHEDULE

TAG	LOCATION	GAS LOAD (BTUH)	INLET PRESSURE	OPERATING PRESSURE	CONN. SIZE	MANUFACTURER MODEL	SPRING COLOR-RANGE-ORIFICE
COMBI OVEN	KITCHEN - 120	98,000	2 PSI	5.5" W.C. - 14" W.C.	3/4"	-	-
BRAISING PAN	KITCHEN - 120	90,000	2 PSI	7" W.C.	3/4"	-	-
RANGE	KITCHEN - 120	215,000	2 PSI	5" W.C.	3/4	-	-
AHU-1	ROOF	80,000	2 PSI	7" W.C.	1/2"	ITRON B42-R 3/4"x3/4"	BROWN - 6"-8" W.C. - 1/8"x3/16"
AHU-2	SOUTH ON GRADE	200,000	2 PSI	7" W.C.	3/4"	ITRON B42-R 3/4"x3/4"	BROWN - 6"-8" W.C. - 1/8"x3/16"
AHU-3	ROOF	200,000	2 PSI	7" W.C.	3/4"	ITRON B42-R 3/4"x3/4"	BROWN - 6"-8" W.C. - 1/8"x3/16"
MAU-1	ROOF	150,000	2 PSI	7" W.C.	3/4"	ITRON B42-R 3/4"x3/4"	BROWN - 6"-8" W.C. - 3/16"
TWH-1	MECH - 118	200,000	2 PSI	4" W.C. - 10.5" W.C.	3/4"	-	-
TWH-2	MECH - 118	200,000	2 PSI	4" W.C. - 10.5" W.C.	3/4"	-	-
TWH-3	MECH - 118	200,000	2 PSI	4" W.C. - 10.5" W.C.	3/4"	-	-
TWH-4	MECH - 118	200,000	2 PSI	4" W.C. - 10.5" W.C.	3/4"	-	-
GAS METER REGULATOR	SOUTH OF BUILDING	1,920,000	50 PSI	2 PSI	2-1/2"	-	-
PRV-2	ROOF	-	2 PSI	7" W.C.	1"	ITRON B42-R 1"x1"	BROWN - 6"-8" W.C. - 3/8"
PRV-1	ROOF	-	2 PSI	7" W.C.	1-1/2"	ITRON B34-R 1-1/2"x1-1/2"	BLACK - 6.5"-13" W.C. - 3/8

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-026428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE
12/31/2025

PROFESSIONAL SEAL

VESTAL CORPORATION

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

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GAS PIPING ISOMETRIC

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47 SHEETS
06/27/2025

PLUMBING LEGEND

PLUMBING PIPING SYMBOLS

CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
ST	STORM DRAINAGE
OD	OVERFLOW DRAINAGE
INDS	INDUSTRIAL SEWER
SAN	SANITARY SEWER
V	SANITARY VENT
GW	KITCHEN GREASE WASTE

LABORATORY GAS SYMBOLS

Ar	ARGON
CA	COMPRESSED AIR
He	HELIUM
N2	NITROGEN
O2	OXYGEN

PLUMBING GENERAL SYMBOLS

#	REVISION TAG
#	KEYED NOTE TAG
	FLOW ARROW
## / X#####	SECTION DESIGNATION / SHEET No. WHERE SECTION IS SHOWN
	CONNECT TO EXISTING
B.O.P = ######	SPOT ELEVATION

PLUMBING ABBREVIATIONS

AC	ABOVE CEILING AREA
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
BFP	BACKFLOW PREVENTER
B.O.P	BOTTOM OF PIPE
C.L.	CENTER LINE
CO	CLEANOUT
DF	DRINKING FOUNTAIN
DWH	DOMESTIC WATER HEATER
DWS	DOMESTIC WATER SOFTNER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
I.E.	INVERT ELEVATION
HCP	HOT WATER CIRCULATING PUMP
GPM	GALLONS PER MINUTE
GWI	GREASE WASTE INTERCEPTOR
LAV	LAVATORY
L/S	LITER PER SECOND
MB	MOP BASIN
N.I.C.	NOT IN CONTRACT
OD	OVERFLOW DRAIN
RD	ROOF DRAIN
RG	REGISTER
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SAN	SANITARY SEWER
SH	SHOWER
SK	SINK
SOV	SHUT-OFF VALVE
SSD	SUBSOIL DRAINAGE
T.O.P	TOP OF PIPE
TR	TRENCH DRAIN
TWH	TANKLESS WATER HEATER
UR	URINAL
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTER

GENERAL NOTES - PLUMBING

1. THE CONTRACTOR IS TO OBTAIN ALL PERMITS, PATENT RIGHTS, AND LICENSES THAT ARE REQUIRED FOR PERFORMING THE WORK UNDER ALL LAWS, ORDINANCES, RULES AND REGULATIONS, OR ORDERS OF ANY OFFICER AND/OR GOVERNING BODY, HAVING JURISDICTION FOR THE WORK UNDER THIS SECTION. THE CONTRACTOR IS TO GIVE ALL NOTICES NECESSARY IN CONNECTION WITH, PAY ALL FEES RELATING TO AND ALL COSTS AND EXPENSES INCURRED ON ACCOUNT OF THE WORK UNDER THIS SECTION. NO WORK IS TO BE COVERED BEFORE INSPECTION BY THE JURISDICTIONAL INSPECTOR AND THE OWNER'S REPRESENTATIVE. POST PERMITS AS REQUIRED.
2. THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC, AND REQUIRE COORDINATION BETWEEN DISCIPLINES. SUCH COORDINATION IS THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACT DOCUMENTS INDICATE THE AVAILABLE INFORMATION ON EXISTING UTILITIES AND SERVICES, AND ON NEW SERVICES TO BE PROVIDED TO THE PROJECT BY UTILITY COMPANIES AND AGENCIES. COORDINATE ALL UTILITY INTERRUPTIONS WITH THE OWNER AND THE UTILITY COMPANY. PLAN WORK SO THAT THESE INTERRUPTIONS ARE KEPT TO A MINIMUM.
3. THE EQUIPMENT INDICATED ON THE CONTRACT DOCUMENTS REPRESENT A STANDARD OF QUALITY TO BE MAINTAINED. SUBSTITUTIONS OF EQUAL QUALTITY MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL EQUIPMENT AND MATERIALS ARE TO BE NEW AND UNUSED AND INSTALLED BY ONLY QUALIFIED PERSONNEL. THE CONTRACTOR IS TO INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, IN ADDITION TO ANY STATE AND LOCAL CODES THAT MAY APPLY. WORKMANSHIP: ALL LABOR IS TO BE CAREFULLY SKILLED FOR THIS KIND OF WORK, THOROUGH IN ALL RESPECTS AND UNDER THE DIRECTION OF A COMPETENT FOREMAN.
4. EQUIPMENT FURNISHED UNDER THIS CONTRACT IS TO HAVE A PERMANENT LABEL CLEARLY INDICATING THE MAINTENANCE TO BE PERFORMED TO MAINTAIN THE EQUIPMENT IN EFFICIENT OPERATING CONDITION. EQUIPMENT SUPPLIERS ARE TO FURNISH THE FULL AND PARTIAL INPUT AND OUTPUT CAPACITIES TO ENABLE THE DETERMINATION OF COMPLIANCE WITH THE ENERGY CONSERVATION CODE.
5. ELECTRONICALLY SUBMIT COPIES OF SHOP DRAWINGS IN PDF FORMAT ON ALL EQUIPMENT AND MATERIALS FOR ENGINEERS REVIEW. SUBMITTAL INFORMATION IS TO INDICATE ALL PERFORMANCE DATA (RATED FOR THE ALTITUDE OF THIS PROJECT) THAT COMPLIES WITH THE SCHEDULED DATA. LIST ALL DEVIATIONS AND REASONS FOR DEVIATION. SUBMITTALS WITHOUT PROPER INFORMATION WILL BE REJECTED.
6. SUBMIT TYPED AND BOUND COPIES OF OPERATING AND MAINTENANCE MANUALS PRIOR TO SCHEDULING SYSTEMS DEMONSTRATION FOR THE OWNER. MANUALS ARE TO HAVE INDEX WITH TAB DIVIDERS FOR EACH MAJOR EQUIPMENT SECTION TO FACILITATE LOCATING INFORMATION ON A SPECIFIC PIECE OF EQUIPMENT. ALPHABETICAL LIST OF SYSTEM COMPONENTS, WITH THE NAME, ADDRESS AND 24 HOUR TELEPHONE NUMBER OF THE COMPANY RESPONSIBLE FOR SERVICING EACH ITEM DURING THE FIRST YEAR OF OPERATION.
7. DELIVERY AND STORAGE OF MATERIALS: PROVIDE FOR THE SAFETY AND GOOD CONDITION OF ALL MATERIALS AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNERS REPRESENTATIVE PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE AND PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. REPLACE ALL DAMAGED AND DEFECTIVE WORK BEFORE FILING APPLICATION FOR FINAL ACCEPTANCE.
8. BEFORE SUBMITTING HIS BID, THE CONTRACTOR FOR THE WORK UNDER THIS SECTION IS TO CAREFULLY STUDY ALL DRAWINGS, AND MAKE A CAREFUL EXAMINATION OF THE PREMISES. HE IS TO DEFINITELY DETERMINE IN ADVANCE, THE METHODS OF INSTALLATION AND CONNECTING THE APPARATUS AND THE MEANS TO BE PROVIDED FOR GETTING THE EQUIPMENT INTO PLACE. AFTER AWARD OF THE CONTRACT, NO SUBSEQUENT ALLOWANCES WILL BE MADE TO THE CONTRACTOR DUE TO HIS FAILURE TO COMPLY WITH THE ABOVE REQUIREMENTS AND ANY OTHER CONDITIONS AFFECTING THE INSTALLATION AND COMPLETION OF ALL WORK.
9. ACCURATELY RECORD ALL CHANGES TO THE CONTRACT DOCUMENTS ON ONE SET OF DRAWINGS. TRANSMIT THE INFORMATION TO THE ENGINEER AND OWNER'S REPRESENTITIVE.
10. FURNISH WRITTEN CERTIFIED GUARANTEE, IN ACCEPTANCE FORM, TO THE OWNER AGAINST DEFECTIVE WORKMANSHIP, MATERIALS AND OPERATING EQUIPMENT. IN ADDITION TO THE GUARANTEES REQUIRED ELSEWHERE. ALL WORK, MATERIALS AND EQUIPMENT PROVIDED UNDER THE MECHANICAL SECTIONS ARE TO BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR UNDER THIS GUARANTEE, IS RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY EQUIPMENT AND MATERIALS FURNISHED UNDER THIS SECTION. PROVIDE CERTIFICATES FOR ALL EQUIPMENT HAVING WARRANTIES IN EXCESS OF (1) YEAR.
11. ALL WORK AND MATERIALS ARE TO BE IN FULL ACCORDANCE WITH THE GOVERNING EDITION OF THE LOCAL PLUMBING CODE AND OTHER APPLICABLE CODES , LAWS OR REGULATIONS OF BODIES LAWFULLY EMPOWERED AND HAVING JURISDICTION OVER THIS PROJECT. NOTHING IN THE PLANS OR THESE SPECIFICATIONS IS TO BE CONSTRUED AS TO PERMIT WORK NOT CONFORMING TO THESE CODES.
12. RESOLVE ALL QUESTIONS, DISCREPANCIES OR CONFLICTS WITH ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED.
13. PROVIDE IDENTIFICATION TAGS FOR ALL SCHEDULED EQUIPMENT.
14. COORDINATE THE INSTALLATION OF PLUMBING SYSTEMS WITH OTHER TRADES AND PROVIDE OFFSETS AND ADJUSTMENTS AS NECESSARY TO ACCOMMODATE STRUCTURE AND OTHER TRADES.
15. LEVEL ALL EQUIPMENT CURBS / BASES PRIOR TO INSTALLATION OF ANY EQUIPMENT.
16. SEAL ALL WALL AND ROOF PENETRATIONS WATERTIGHT WITH SILICONE CAULKING AND BACKER ROD. U.L. LISTED AND FM APPROVED SEALANTS ARE TO BE USED AT ALL PENETRATIONS OF RATED WALLS, CEILINGS AND FLOORS.
17. COORDINATE TO PROVIDE ALL THE MISCELLANEOUS SUPPORT AND FRAMING REQUIRED FOR THE PLUMBING EQUIPMENT.
18. COORDINATE AND VERIFY ALL OPENINGS IN STRUCTURAL WALLS, ABOVE CEILINGS, AND FLOORS WITH THE STRUCTURAL CONTRACTOR.
19. PROVIDE EQUIPMENT VIBRATION ISOLATION FROM STRUCTURE AND ASSOCIATED PIPING SYSTEMS.
20. COORDINATE WITH THE GENERAL CONTRACTOR TO PROVIDE OPENINGS THROUGH CONCRETE FOR PIPE PENETRATIONS AND SIMILAR SERVICES BY CORE DRILLING AND SAWING. REVIEW THE PROPOSED CUTTING WITH THE INSTALLER OF THE WORK TO BE CUT, AND COMPLY WITH HIS RECOMMENDATIONS TO MINIMIZE DAMAGE.
21. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE PLUMBING REQUIREMENTS FOR ALL CUTTING AND PATCHING OF EXISTING FACILITIES TO BE COMPLETED BY THE GENERAL CONTRACTOR OR OTHERS.
22. USE ADJUSTABLE PIPE HANGERS ON SUSPENDED PIPE. ISOLATE HANGERS COMING IN CONTACT WITH BARE COPPER PIPE WITH DIELECTRIC HANGER LINERS. PROVIDE SUPPORTS BETWEEN PIPING AND BUILDING STRUCTURE WHERE NECESSARY TO PREVENT SWAYING. CONFORM TO THE MICHIGAN STATE PLUMBING CODE FOR HANGER SIZES AND SPACING. DO NOT SUPPORT PIPE FROM OTHER PIPE OR DUCT SYSTEMS INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED MOVEMENT OF PIPING SYSTEM AND TO PERMIT PROPER MOVEMENT BETWEEN PIPE ANCHORS.
23. INSTALL PIPE, TUBE AND FITTINGS IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE PERMANENTLY-LEAKPROOF PIPING SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE WITHOUT PIPING FAILURE. INSTALL EACH RUN WITH A MINIMUM OF JOINTS AND COUPLINGS, BUT WITH ADEQUATE AND ACCESSIBLE UNIONS FOR DISASSEMBLY, MAINTENANCE OR REPLACEMENT OF VALVES AND EQUIPMENT. REDUCE SIZES BY USE OF REDUCING FITTINGS. INSTALL PIPING WITHOUT SPRINGING OR FORCING. SUPPORT PIPING INDEPENDENTLY AT EQUIPMENT SO ITS WEIGHT WILL NOT BE SUPPORTED BY THE EQUIPMENT. FURNISH ALL DEVICES NECESSARY FOR FINAL CONNECTION, INCLUDING BUT NOT LIMITED TO TAIL PIECES, STOPS AND SUPPLIES. LOCATE PIPING RUNS, EXCEPT AS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY. AVOID DIAGONAL RUNS WHEREVER POSSIBLE. ORIENT HORIZONTAL RUNS PARALLEL WITH WALLS AND COLUMN LINES. HOLD PIPING CLOSE TO WALLS, OVERHEAD CONSTRUCTION, COLUMNS AND OTHER STRUCTURAL AND PERMANENT-ENCLOSURE ELEMENTS OF THE BUILDING. LIMIT CLEARANCE OF 0.5" WHERE FURRING IS SHOWN FOR ENCLOSURE OR CONCEALMENT OF PIPING, BUT ALLOW FOR INSULATION THICKNESS, IF ANY.
24. FLUSH OUT PIPING SYSTEMS WITH CLEAN WATER BEFORE PROCEEDING WITH THE REQUIRED TESTS. PROVIDE TEMPORARY EQUIPMENT FOR TESTING, INCLUDING PUMP AND GAUGES. TEST PIPING SYSTEM BEFORE INSULATION IS INSTALLED WHEREVER FEASIBLE. TEST EACH NATURAL SECTION OF EACH PIPING SYSTEM INDEPENDENTLY, BUT DO NOT USE PIPING SYSTEM VALVES TO ISOLATE SECTIONS WHERE TEST PRESSURE EXCEEDS VALVE PRESSURE RATING. FILL EACH SECTION OF WATER, DRAIN OR VENT PIPING WITH WATER AND PRESSURIZE FOR TWO HOURS AT 150% OF OPERATING PRESSURE, BUT NOT LESS THAN 50 PSIG FOR PRESSURE PIPING AND TEN FEET FOR DRAIN AND VENT PIPING. TEST FAILS IF LEAKAGE IS OBSERVED OR IF PRESSURE DROP EXCEEDS 5% OF TEST PRESSURE. REPAIR PIPING SYSTEMS SECTIONS WHICH FAIL BY DISASSEMBLY AND RE-INSTALLATIONS, USING NEW MATERIALS TO THE EXTENT REQUIRED TO OVERCOME LEAKAGE. DO NOT USE CHEMICALS, STOP-LEAK COMPOUNDS, MASTICS OR OTHER TEMPORARY REPAIR METHODS. AFTER TESTING AND REPAIR WORK HAVE BEEN COMPLETED, DRAIN TEST WATER FROM PIPING SYSTEMS.
25. FILL ALL DOMESTIC WATER LINES WITH A CHLORINE WATER SOLUTION OF 50 PARTS PER MILLION, MINIMUM. HOLD SOLUTION IN PIPE FOR AT LEAST 24 HOURS. OPEN AND CLOSE ALL VALVES 3 TIMES DURING CHLORINATION. WASTE CHLORINE SOLUTION FROM EACH OUTLET. MEASURE SOLUTION FOR RESIDUAL CHLORINE AT END. IF NOT LESS THAN 10 PPM, REPEAT. ALL NEW POTABLE WATER SYSTEMS ARE TO BE CLEANED AS HEREIN SPECIFIED PRIOR TO TESTING OR APPLICATION OF INSULATION. COMPLY WITH ALL APPLICABLE HEALTH CODES WHICHEVER IS MORE STRINGENT.
26. PROVIDE SHUT OFF VALVES ON ALL DOMESTIC AND PROCESS WATER SYSTEMS ON ALL BRANCHES AT EACH EQUIPMENT / FIXTURE GROUP, AS CLOSE TO MAIN AS POSSIBLE.
27. BALL VALVES 1" AND SMALLER : NIBCO T585 (THREADED ENDS) OR NIBCO S585 (SOLDERED ENDS). RATED FOR 400 PSI NON-SHOCK WOG 2-PIECE CAST BRONZE BODIES, TFE SEAT, FULL PORT, BRONZE TRIM, BLOWOUT PROOF STEMS BRASS/BRONZE BALL. VALVE ENDS ARE TO HAVE FULL DEPTH ANSI THREADS OR EXTENDED SOLDER CONNECTIONS. BALL VALVES 1 1/4" THRU 3" : NIBCO T-598 (THREADED ENDS) OR S-590 (SOLDER ENDS). RATED FOR 400 PSI NON-SHOCK WOG, 3-PIECE CAST BRONZE BODY, TFE SEAT, CONVENTIONAL PORT, BRONZE TRIM, BLOWOUT PROOF STEM, BRONZE BALL, VALVE ENDS ARE TO HAVE FULL DEPTH ANSI THREADS OR EXTENDED SOLDER CONNECTIONS. CHECK VALVES 2 1/2" AND SMALLER : NIBCO T413 (THREADED ENDS) OR NIBCO T413 (SOLDERED ENDS). Y- PATTERN HORIZONTAL SWING-TYPE, CLASS 125, RATED FOR 200 PSI WOG BRONZE ASTM B-62 BODY WITH TFE SEAT DISC. GAS VALVES : ALL SIZES= CORROSION RESISTANT LUBRICATED PLUG TYPE WITH CORROSION RESISTANT BEARINGS SUITABLE FOR INTENDED SERVICE, LEVER OPERATED.
28. INSTALL VALVES ON HORIZONTAL PIPING WITH STEMS POINTING UP, AND AS CLOSE TO VERTICAL AS POSSIBLE. INSTALL VALVES AT EACH PIECE OF EQUIPMENT, FIXTURE OR APPLIANCE SO THAT THE SUPPLY AND RETURN SERVICES CAN BE SHUT OFF TO REMOVE THE ITEM WITHOUT DISTURBING THE PIPING SYSTEM. INSTALL VALVES WHERE REQUIRED FOR PROPER OPERATION OF PIPING AND EQUIPMENT, INCLUDING VALVES IN BRANCH LINES TO ISOLATE SECTIONS OF PIPING.
29. DOMESTIC WATER PIPING: ABOVE GROUND INSIDE BUILDINGS, SIZE 2" AND UNDER IS TO BE COPPER TUBE, HARD TEMPER, TYPE "L" PIPE WITH WROUGHT COPPER, OR CAST BRONZE FITTINGS AND AND LEAD FREE, 95/5 TIN ANTIMONY SOLDER. BELOW GROUND, SIZE 2" AND UNDER IS TO BE COPPER TUBE, ANNEALED, TYPE K PIPE WITH WROUGHT COPPER, AND SILVER SOLDERED FITTINGS.
30. LAY UNDERGROUND PIPING TRUE TO THE GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. INSTALL GASKETS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR THE USE OF LUBRICANTS, CEMENTS AND OTHER SPECIAL INSTALLATION REQUIREMENTS. CLEAR THE INTERIOR OF CONDUIT OF DIRT AND OTHER SUPERFLUOUS MATERIAL AS THE WORK PROGRESSES. PLACE PLUGS IN THE END OF UNCOMPLETED CONDUIT AT THE END OF THE DAY OR WHENEVER WORK STOPS. FLUSH LINES, IF REQUIRED, TO REMOVE COLLECTED DEBRIS. MAKE JOINTS BETWEEN CAST IRON PIPE AND OTHER TYPES OF PIPE WITH STANDARD MANUFACTURED CAST IRON ADAPTERS AND FITTINGS. SET GRADE CLEANOUTS LOCATED IN UNPAVED AND ASPHALT PAVED AREAS IN 12"x12"x4" CONCRETE PADS.
31. CLEAN AND DRY PIPE SURFACES PRIOR TO INSULATING. EXTEND PIPING INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS AND SIMILAR PIPING PENETRATIONS, EXCEPT WHERE OTHERWISE INDICATED. INSTALL PROTECTIVE SHEETMETAL SHIELD AROUND BOTTOM HALF OF PIPE INSULATION AT EACH PIPE SUPPORT SUFFICIENT TO PREVENT CRUSHING OF THE INSULATION. AT CONTRACTORS OPTION, INSTALL PRE-MANUFACTURED HEAVY DENSITY PIPE SHIELDS IN LIEU OF PIPE INSULATION AT EACH PIPE SUPPORT. EXCEPT AS NOTED, COVER VALVES, FLANGES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN. DO NOT COVER VALVE OPERATORS, THREADED OR SOLDER JOINT STRAINERS OR BLOWDOWN END OF STRAINERS. MARK LOCATION OF UNIONS AND FLANGES COVERED BY INSULATION WITH PERMANENT PAINT OR INK, PAINTED STENCIL OR APPROVED LABEL. MAINTAIN INTEGRITY OF VAPOR-BARRIER JACKETS ON INSULATION OF COLD PIPES AND PROTECT TO PREVENT PUNCTURE OR OTHER DAMAGE. INSULATE BETWEEN PIPE AND PIPE SADDLES. ON UNDERGROUND PIPE INSULATION, INSTALL UNICELLULAR INSULATION ON PIPE WITHOUT SLITTING INSULATION. SEAL ALL TRANSVERSE JOINTS WITH ADHESIVE. PROVIDE COMPOSITE INSTALLATION (INSULATION, JACKET, COVERING, SEALER, MASTIC AND ADHESIVE) COMPLYING WITH THE FOLLOWING: FLAME SPREAD: 25 OR LESS. SMOKE DEVELOPED: 50 OR LESS. METHOD: ASTM E84 (NFPA 255). FIBERGLASS PIPE INSULATION: SCHULLER MICRO-LOK 850, HEAVY DENSITY PIPE INSULATION WITH AP-T JACKET. FIBERGLASS FITTING INSULATION: SCHULLER "ZESTON" FITTING COVERS WITH FACTORY-CUT FIBERGLASS INSULATION INSERT.
32. BUILDING PLUMBING SYSTEMS WILL BE EXTENDED TO CONNECT TO EXISTING SERVICE. FIELD VERIFY SIZE, LOCATION, AND CONDITION OF EXISTING SERVICE.
33. SANITARY WASTE AND VENT (SWV) PIPING ABOVE GROUND IN RETURN AIR PLENUMS IS SHALL BE CAST IRON, NO HUB, NEOPRENE GASKET, STAINLESS STEEL SLEEVE JOINT, SCHEDULE 40 PVC IS PERMISSIBLE ABOVE GROUND IN NON PLENUM RATED APPLICATIONS. BELOW GROUND SWV PIPING SHALL BE SCHEDULE 40 PVC WITH SOLVENT GLUED FITTINGS AND JOINTS.

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

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VESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

STATE OF MISSOURI -
ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

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PLUMBING LEGEND

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06/25/2025

GENERAL DEMOLITION NOTES - PLUMBING

1. THE DRAWINGS DEPICT ONLY GENERALLY THE EXISTING CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD OBSERVATIONS AND CONFIRM THE LOCATIONS OF EXISTING PLUMBING FIXTURES AND ASSOCIATED PIPING BEING REMOVED.

2. DEMOLITION WORK SHALL BE DONE BY THE PLUMBING CONTRACTOR. CONTRACTOR SHALL FOLLOW STANDARD DEMOLITION PROCEDURES TO REMOVE THE EXISTING PIPING AND/OR FIXTURES. CONTRACTOR TO COORDINATE THE DEMO WITH OWNER AND OTHER TRADES.

3. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING BUILDING MANAGEMENT RULES WITH REGARD TO TRASH AND NOISE.

4. THE CONTRACTOR SHALL MAINTAIN IN OPERATION ALL EXISTING UTILITIES DURING CONSTRUCTION.

5. ALL DEMOLITION WORK WILL BE SCHEDULED WITH BUILDING MANAGEMENT AND PERFORMED ONLY FOLLOWING APPROVAL.

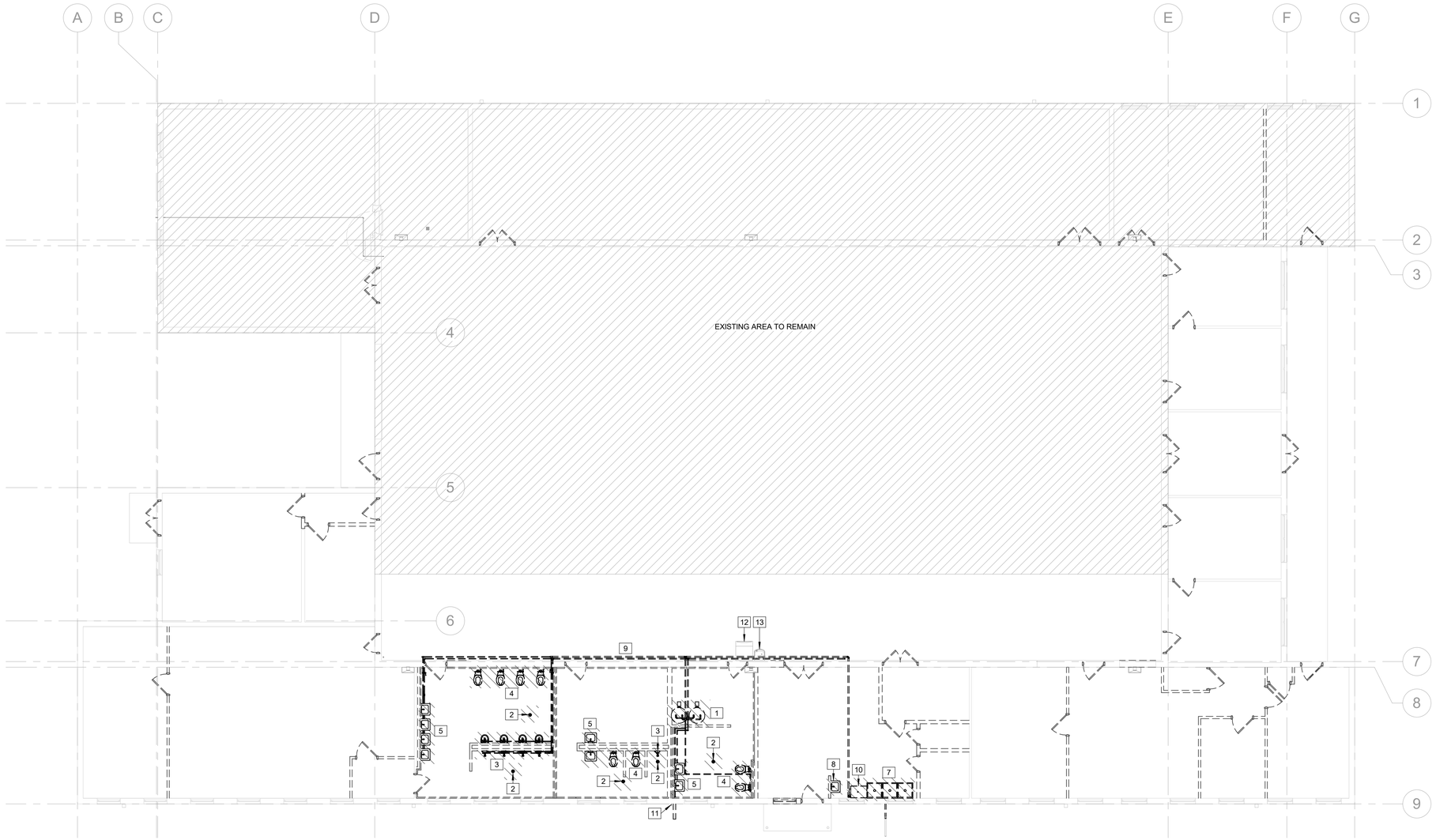
6. THE CONTRACTOR SHALL INFORM BUILDING MANAGEMENT AND RECEIVE SCHEDULE APPROVAL FOR ANY REQUIRED UTILITY SHUTDOWN.

7. PATCH WALL AND/OR CEILING/ROOF LOCATIONS AFFECTED BY DEMOLITION/RELOCATION WORK TO MATCH ADJACENT SURFACES.

8. ANY FIXTURES/PIPING SHOWN TO BE REMOVED SHALL INCLUDE REMOVAL OF ALL ASSOCIATED FITTINGS, CONNECTIONS, HANGERS, INSULATION, ETC.

KEYED NOTES:

1	DEMOLISH AND REMOVE WATER HEATERS AND ALL ASSOCIATED PIPING.
2	DEMOLISH AND REMOVE FLOOR DRAIN AND ALL ASSOCIATED PIPING.
3	DEMOLISH AND REMOVE SHOWER HEADS AND ALL ASSOCIATED HW & CW PIPING.
4	DEMOLISH AND REMOVE TOILETS AND ALL ASSOCIATED PIPING.
5	DEMOLISH AND REMOVE LAVATORIES AND ALL ASSOCIATED PIPING.
6	DEMOLISH AND REMOVE URINALS AND ALL ASSOCIATED PIPING.
7	DEMOLISH AND REMOVE THREE-COMPARTMENT SINK AND ALL ASSOCIATED PIPING.
8	DEMOLISH AND REMOVE HAND WASHING SINK AND ALL ASSOCIATED PIPING.
9	DEMOLISH AND REMOVE ALL HW & CW PIPING.
10	DEMOLISH AND REMOVE GREASE INTERCEPTOR AND ALL ASSOCIATED PIPING.
11	EXISTING HOSE BIBB TO BE REUSED.
12	ICE MACHINE TO BE REUSED
13	DRINKING FOUNTAIN TO BE REUSED



TRUE N

1 / PD101 GROUND FLOOR PLAN - PLUMBING DEMOLITION
SCALE: 1 : 100

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SHEET TITLE:

GROUND FLOOR PLAN - PLUMBING DEMOLITION

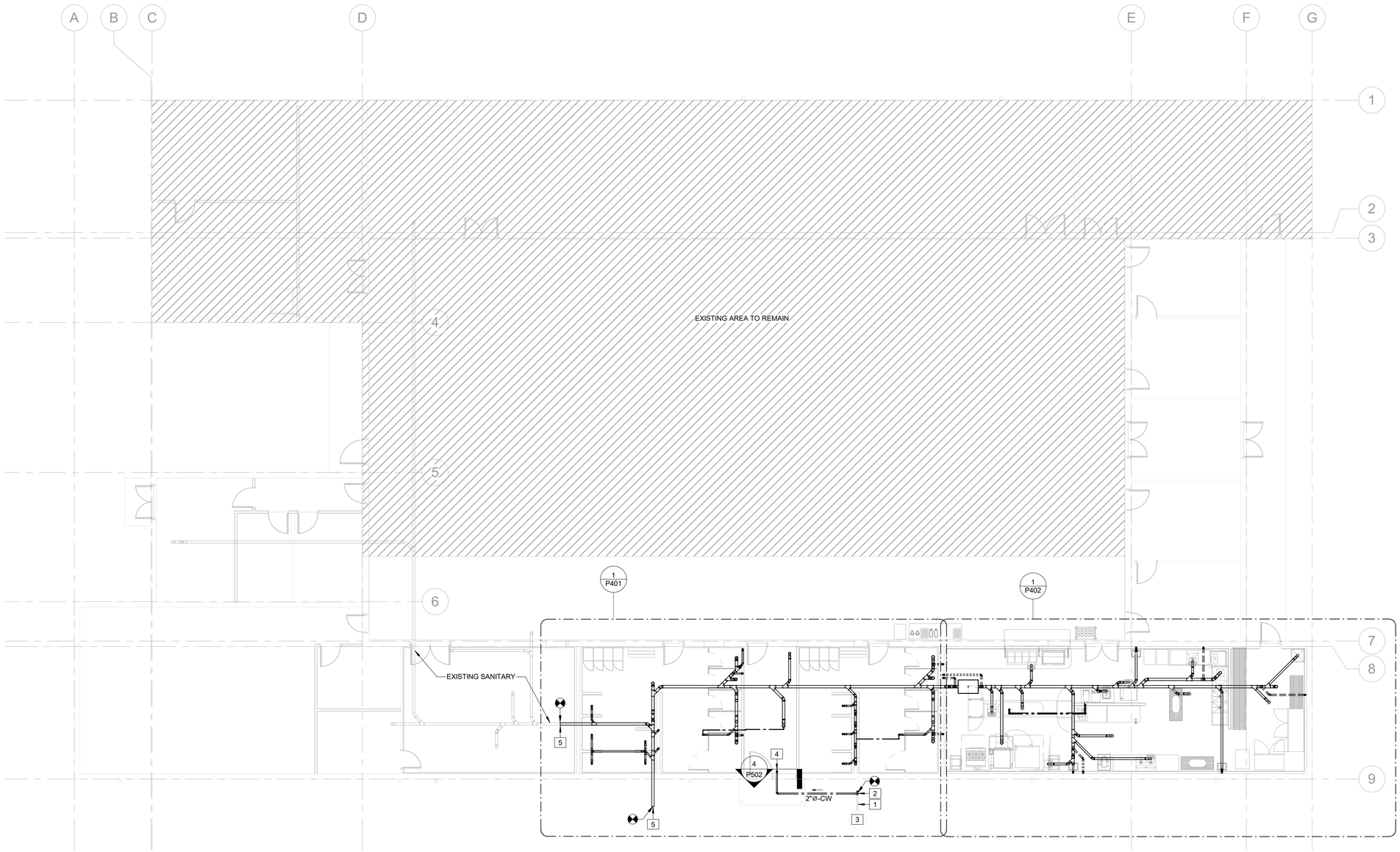
SHEET NUMBER:

PD101

06/25/2025

KEYED NOTES:

1 EXISTING 2"Ø-CW BELOW GRADE TO REMAIN.
2 CONNECT NEW 2"Ø-CW TO EXISTING 2"Ø-CW BELOW GRADE AND ROUTE TO MECHANICAL ROOM AS SHOWN ON PLAN. FIELD VERIFY CONDITION, SIZE, PIPE MATERIAL, AND EXACT LOCATION. REFER TO CIVIL SHEET C101.
3 EXISTING 2" WATER METER
4 2"Ø-CW SERVICE MAIN UP THROUGH FLOOR TO RPZ-1.
5 CONNECT NEW 4"Ø-SAN PIPING TO EXISTING 4"Ø SANITARY PIPING USING ANACO-HUSKY 6-BAND CLAMP OR EQUAL. FIELD VERIFY EXACT LOCATION OF AND INVERT ELEVATION EXISTING PIPING.



TRUE N

1/P101 UNDERGROUND PLAN - PLUMBING
SCALE: 1/8" = 1'-0"

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-026428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE
12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/25/2025

CAD DWG FILE:
DRAWN BY: MDC
CHECKED BY: KAR
DESIGNED BY: MDC

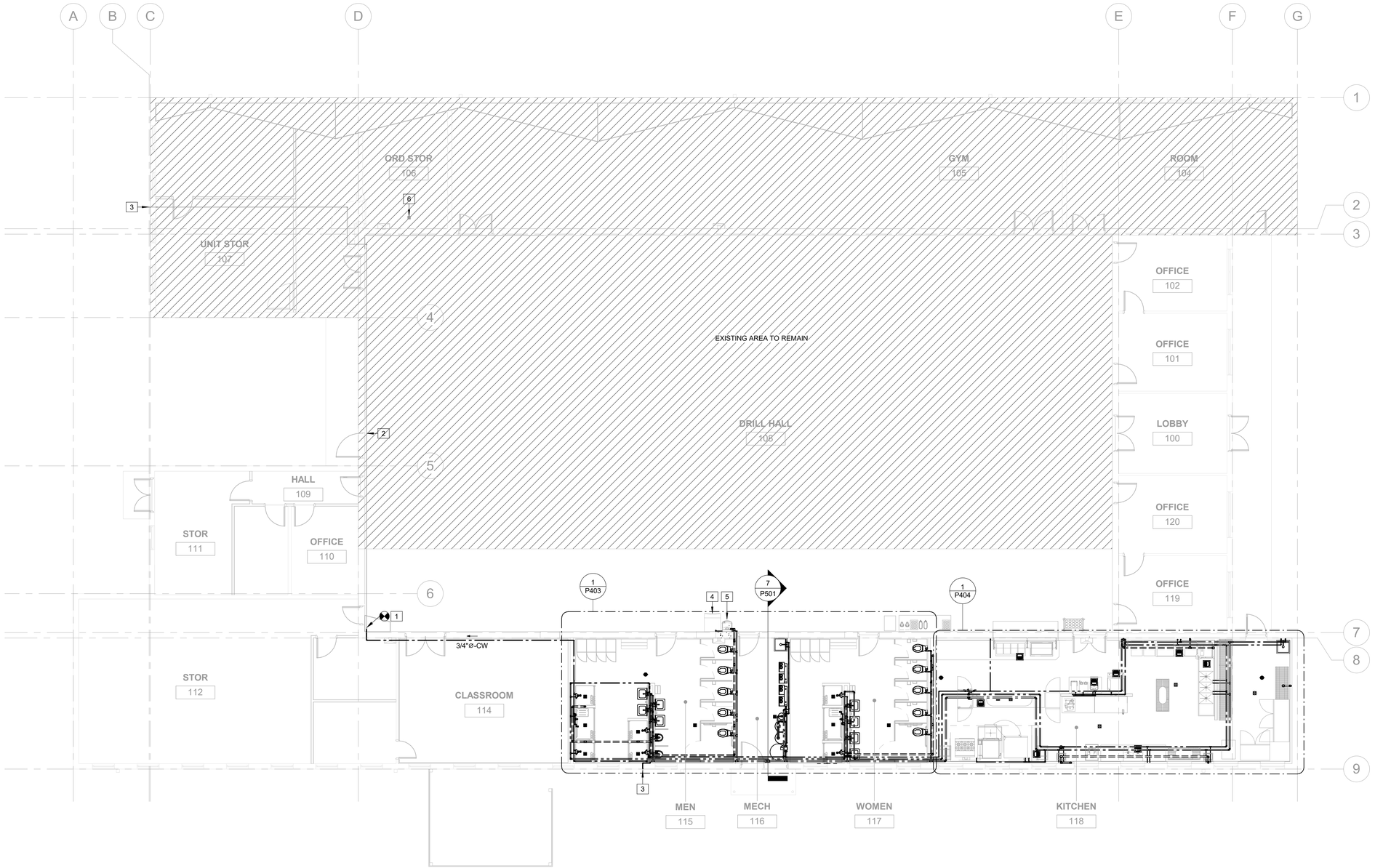
SHEET TITLE:
UNDERGROUND PLAN - PLUMBING

SHEET NUMBER:
P101

06/25/2025

KEYED NOTES:

1. CONNECT NEW 3/4"Ø-CW TO EXISTING 3/4"Ø-CW SERVING EXISTING HOSE BIB. VERIFY EXISTING LINE IS ACTIVE BEFORE MAKING ANY CONNECTIONS. VERIFY EXACT LOCATION, SIZE, AND CONDITION OF PIPING AND HOSE BIBB.
2. EXISTING 3/4"Ø-CW TO REMAIN.
3. EXISTING HOSE BIBB TO BE REUSED.
4. PROVIDE 1/2"Ø-CW VALVED CONNECTION TO EXISTING ICE MACHINE AND ROUTE DISCHARGE FROM EXISTING CONDENSATE PUMP SERVING ICE MACHINE TO MOP SINK IN MECHANICAL ROOM.
5. PROVIDE NEW 2"Ø-SAN TO RECEIVE DISCHARGE FROM EXISTING DRINKING FOUNTAIN.
6. EXISTING FLOOR DRAIN TO REMAIN.



TRUE N

1/P102 GROUND FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE
12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION
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STATE OF MISSOURI -
ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/25/2025

CAD DWG FILE:
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CHECKED BY: KAR
DESIGNED BY: MDC

SHEET TITLE:

GROUND FLOOR PLAN - PLUMBING

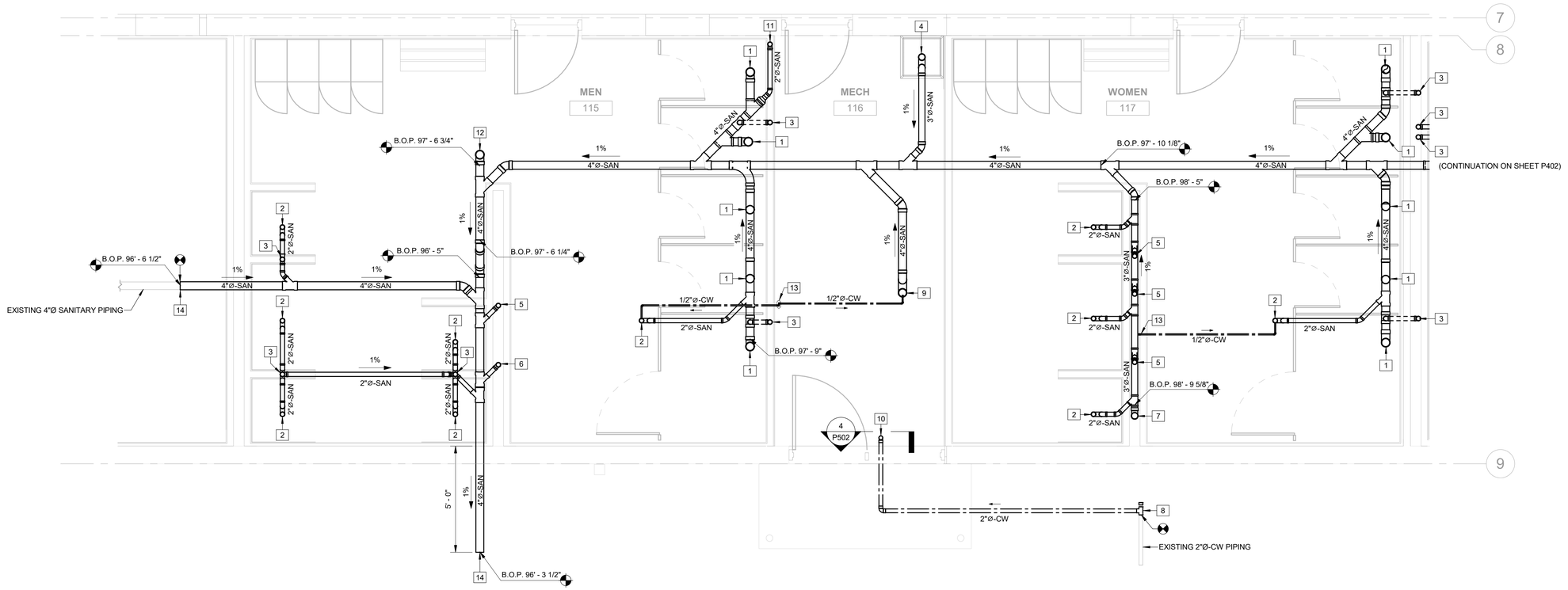
SHEET NUMBER:

P102

06/25/2025

KEYED NOTES:

1 4"Ø-SAN UP TO WC-1
2 2"Ø-SAN UP TO FD-1
3 2"Ø-V UP
4 3"Ø-SAN UP TO MB-1
5 2"Ø-SAN UP TO LAV-1
6 2"Ø-SAN UP TO UR-1
7 3"Ø-SAN UP TO WCO-1
8 CONNECT NEW 2"Ø-CW TO EXISTING 2"Ø-CW BELOW GRADE AND ROUTE TO MECHANICAL ROOM AS SHOWN ON PLAN. FIELD VERIFY CONDITION, SIZE, PIPE MATERIAL, AND EXACT LOCATION. REFER TO CIVIL SHEET C101.
9 4"Ø-SAN UP TO FD-1
10 2"Ø-CW SERVICE MAIN UP THROUGH FLOOR TO RPZ-1.
11 2"Ø-SAN UP TO SERVE DRINKING FOUNTAIN.
12 4"Ø-SAN UP TO FCO-1
13 1/2"Ø-CW UP TO TP-1
14 CONNECT NEW 4"Ø-SAN PIPING TO EXISTING 4"Ø SANITARY PIPING USING ANACO-HUSKY 6-BAND CLAMP OR EQUAL. FIELD VERIFY EXACT LOCATION OF AND INVERT ELEVATION EXISTING PIPING.



TRUE N

1 P401 ENLARGED UNDERGROUND PLAN - RESTROOMS
SCALE: 3/8" = 1'-0"

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
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PROFESSIONAL ENGINEER
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ST. CLAIR READINESS CENTER

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MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/25/2025

CAD DWG FILE:
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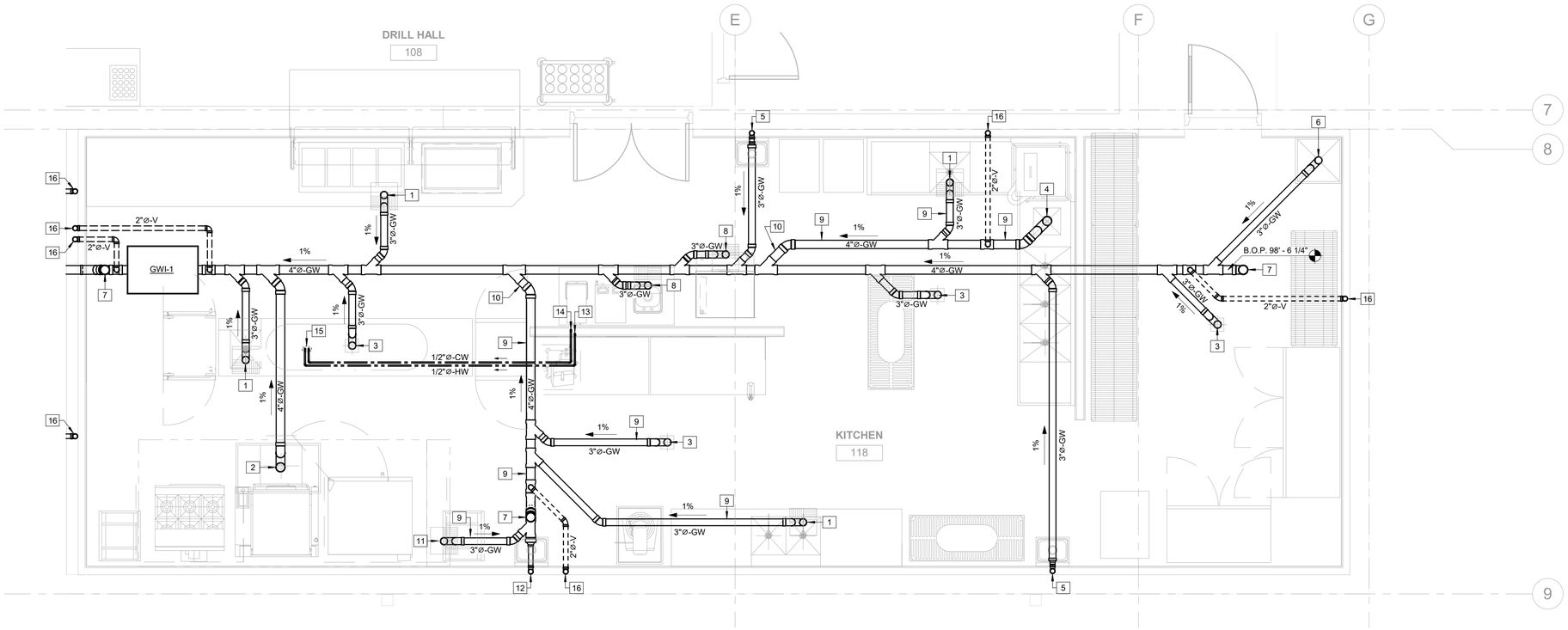
SHEET TITLE:
ENLARGED UNDERGROUND PLANS - PLUMBING

SHEET NUMBER:
P401

06/25/2025

KEYED NOTES:

1	3"Ø-SAN UP TO FLOOR SINK
2	4"Ø-SAN UP TO TRENCH DRAIN / FLOOR TROUGH.
3	3"Ø-SAN UP TO FD-1
4	4"Ø-SAN UP TO FLOOR SINK. PROVIDE CAST IRON DRAINAGE PIPING FOR HIGH TEMPERATURE DISCHARGE FROM DISHWASHING MACHINE.
5	2"Ø-SAN UP TO HAND SINK
6	4"Ø-SAN UP TO MOP SINK
7	4"Ø-SAN UP TO FCO-1
8	2"Ø-SAN UP TO FLOOR SINK
9	PROVIDE CAST IRON PIPING FOR HIGH TEMPERATURE DISCHARGE.
10	PROVIDE ANACO-HUSKY 6-BAND COUPLING OR EQUAL FOR TRANSITION BETWEEN PVC AND CAST IRON PIPING.
11	4"Ø-SAN UP TO FLOOR SINK. PROVIDE CAST IRON DRAINAGE PIPING FOR HIGH TEMPERATURE DISCHARGE.
12	2"Ø-SAN UP TO HAND SINK. PROVIDE CAST IRON DRAINAGE PIPING.
13	1/2"Ø-HW UP
14	1/2"Ø-CW UP
15	1/2"Ø-CW-UP & 1/2"Ø-HW-UP THROUGH FLOOR TO SERVE WORK TABLE SINK.
16	2"Ø-V UP



TRUE NORTH

1 / P402 ENLARGED UNDERGROUND PLAN - KITCHEN

SCALE: 3/8" = 1'-0"

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025

EXP. DATE
12/31/2025

PROFESSIONAL SEAL

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MISSOURI 63077

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SHEET TITLE:

ENLARGED UNDERGROUND PLANS - PLUMBING

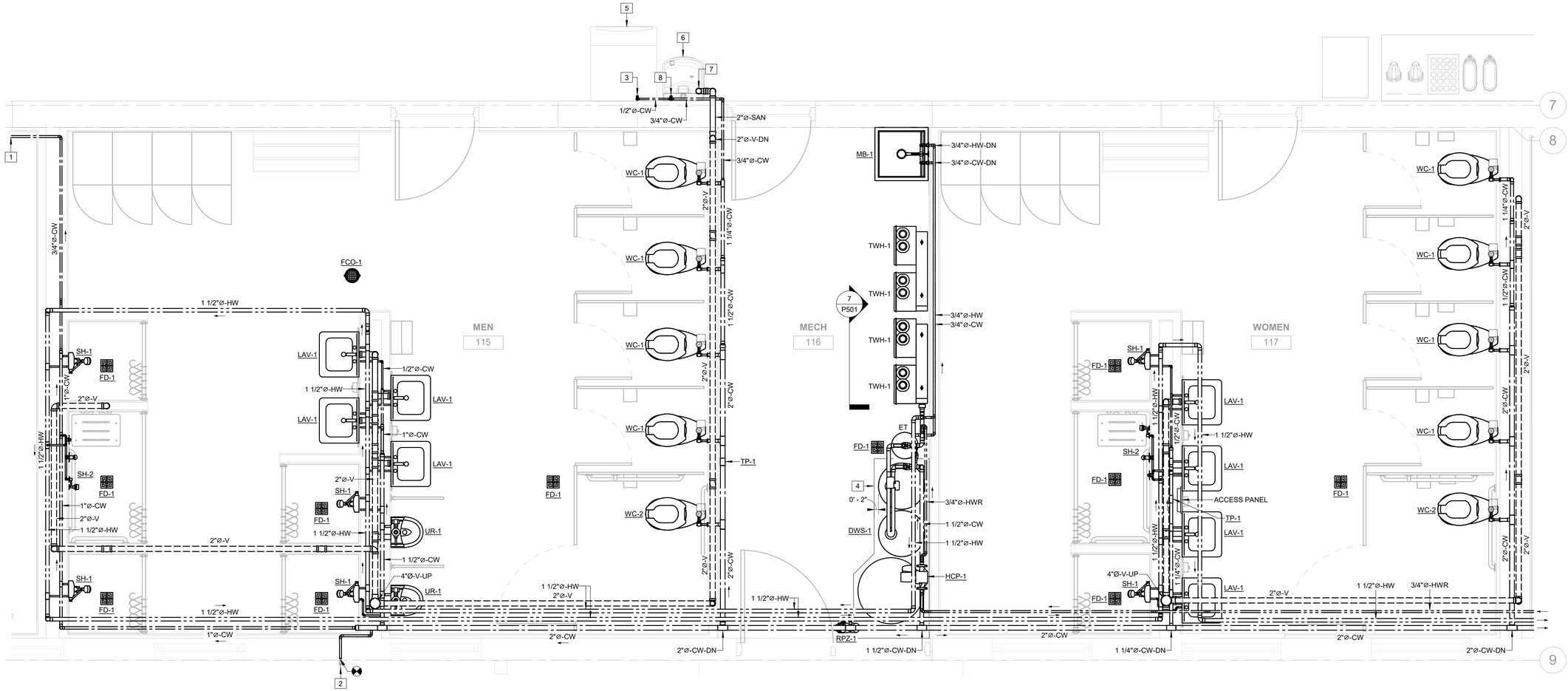
SHEET NUMBER:

P402

06/25/2025

KEYED NOTES:

1. CONNECT TO EXISTING 3/4"Ø-CW SERVING EXISTING HOSE BIB LOCATED ON THE EXTERIOR OF ROOM 107 - UNIT STORAGE.
2. EXISTING HOSE BIBB TO BE REUSED.
3. PROVIDE 1/2"Ø-CW VALVED CONNECTION TO EXISTING ICE MACHINE AND ROUTE DISCHARGE FROM EXISTING CONDENSATE PUMP SERVING ICE MACHINE TO MOP SINK IN MECHANICAL ROOM.
4. PLUMBING CONTRACTOR SHALL PROVIDE 4" HIGH CONCRETE HOUSEKEEPING PAD UNDER DOMESTIC WATER SOFTENER SYSTEM EQUIPMENT AS SHOWN. HOUSEKEEPING PAD FOOTPRINT SHALL EXTEND 2" BEYOND THE EQUIPMENT PROFILE ON ALL SIDES.
5. ICE MACHINE TO BE REUSED
6. DRINKING FOUNTAIN TO BE REUSED
7. PROVIDE NEW 2"Ø-SAN TO RECEIVE DISCHARGE FROM EXISTING DRINKING FOUNTAIN.
8. PROVIDE 1/2"Ø-CW VALVED CONNECTION TO EXISTING DRINKING FOUNTAIN.



TRUE N

1 / P403 ENLARGED FLOOR PLAN - PLUMBING

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

STATE OF MISSOURI
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GOVERNOR

STATE OF MISSOURI
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NUMBER PE-028428
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6/27/2025

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PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/25/2025

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SHEET TITLE:

ENLARGED FLOOR PLANS - PLUMBING

SHEET NUMBER:

P403

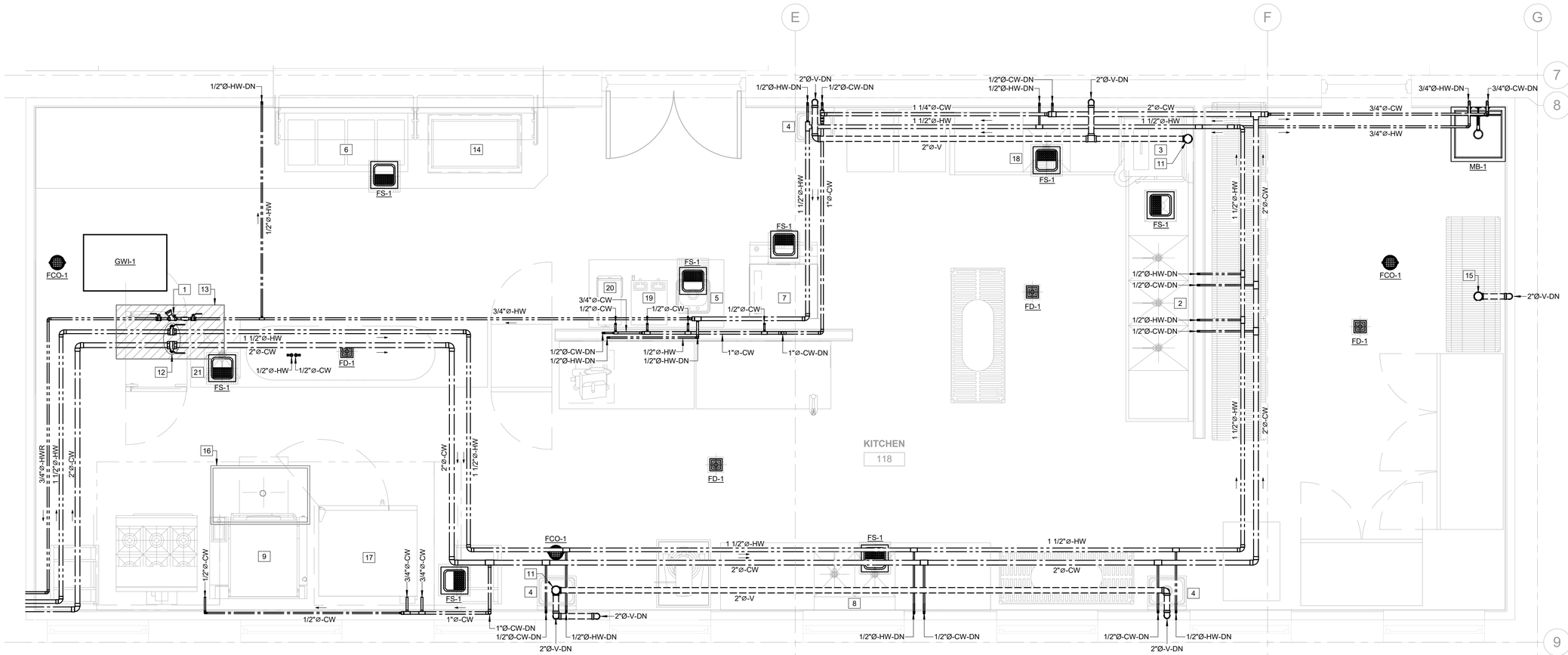
06/25/2025

GENERAL NOTES:

1. REFER TO KITCHEN EQUIPMENT VENDOR DRAWINGS FOR EQUIPMENT SCHEDULE, GENERAL NOTES, AND EQUIPMENT SUBMITTALS.
2. PLUMBING CONTRACTOR TO COORDINATE FINAL DRAIN LOCATIONS WITH KITCHEN EQUIPMENT VENDOR SHOP DRAWINGS BEFORE INSTALLATION - TYPICAL ALL DRAINAGE FIXTURES.

KEYED NOTES:

1 CIRCUIT SETTER BALANCING VALVE - REFER TO DETAIL 3 / P502.
2 TRIPLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
3 DISHWASHING MACHINE - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING FROM EQUIPMENT TO FLOOR SINK. PROVIDE PRESSURE REGULATING VALVE FOR DISHWASHING MACHINE IF HOT WATER PRESSURE IS IN EXCESS OF 25 PSI.
4 HAND WASHING SINK
5 DROP-IN SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING FROM EQUIPMENT TO FLOOR SINK.
6 DROP-IN HOT FOOD UNIT - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
7 ICE MACHINE - PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL TYPE "L" COPPER TUBING DRAIN LINES FROM EQUIPMENT TO FLOOR SINK. ALL DRAINAGE LINES FROM ICE BIN/MACHINES ARE TO BE INSULATED.
8 DOUBLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
9 BRAISING PAN.
11 3"Ø-V-UP TO 3'Ø-VTR
12 ISOLATION VALVES SERVING KITCHEN AREA
13 PROVIDE 24" x 48" CEILING ACCESS PANEL BELOW ISOLATION VALVES AND CIRCUIT SETTER. COORDINATE EXACT PLACEMENT WITH CEILING TILES AND LIGHTING FIXTURES. PROVIDE VISIBLE LABELING ON BOTTOM OF ACCESS PANEL DENOTING LOCATION OF ISOLATION VALVES AND CIRCUIT SETTER FOR MAINTENENCE.
14 DROP-IN COLD PAN - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
15 2"Ø-V-UP TO 3'Ø-VTR
16 TRENCH DRAIN / FLOOR TROUGH TO BE PROVIDED BY KITCHEN EQUIPMENT VENDOR AND INSTALLED BY THE PLUMBING CONTRACTOR. REFER TO KITCHEN EQUIPMENT VENDOR DRAWINGS FOR SIZING AND INSTALLATION DETAIL.
17 COMBI OVEN - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK. CONNECT 3/4"Ø-CW PIPING TO WATER FILTER PROVIDED BY KITCHEN EQUIPMENT VENDOR BEFORE MAKING FINAL CONNECTION TO COMBI OVEN.
18 SINGLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
19 COFFEE MAKER
20 TEA BREWING MACHINE
21 WORK TABLE SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.



TRUE N

1 / P404 ENLARGED FLOOR PLAN - KITCHEN PLUMBING
SCALE: 1/2" = 1'-0"

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE
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PROFESSIONAL SEAL

VESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
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STATE OF MISSOURI - ST. CLAIR READINESS CENTER

375 SOUTH COMMERCIAL AVENUE, ST. CLAIR MISSOURI 63077

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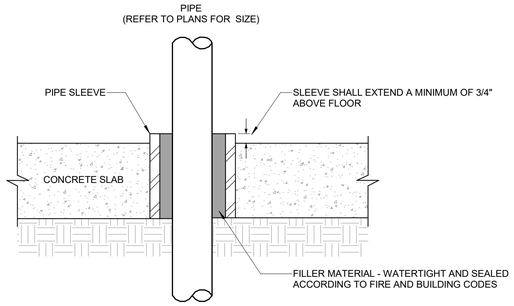
ISSUE DATE: 06/25/2025

CAD DWG FILE:
DRAWN BY: MDC
CHECKED BY: KAR
DESIGNED BY: MDC

SHEET TITLE:
ENLARGED FLOOR PLANS - PLUMBING

SHEET NUMBER:
P404

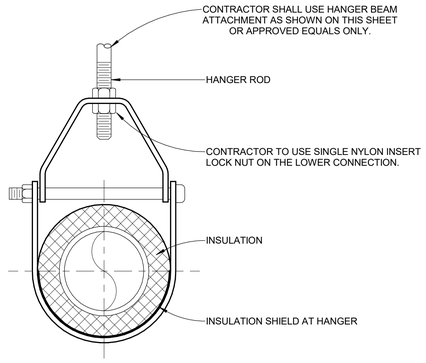
06/25/2025



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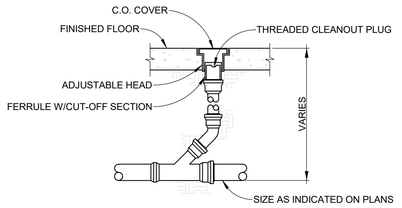
1. PIPE SLEEVE SHALL BE SIZED TO PROVIDE 1" CLEARANCE ALL AROUND.

1 P501 TYPICAL CONCRETE FLOOR PENETRATION DETAIL
SCALE: NTS

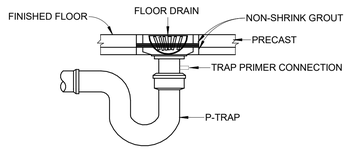


ADJUSTABLE CLEVIS HANGER

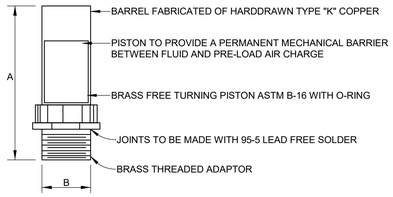
4 P501 PIPE HANGER DETAIL
SCALE: NTS



5 P501 TYPICAL FLOOR CLEANOUT DETAIL
SCALE: NTS



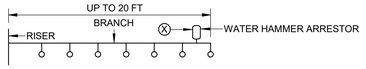
3 P501 FLOOR DRAIN DETAIL
SCALE: NTS



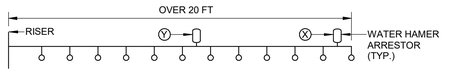
WATER HAMMER ARRESTOR SCHEDULE							
PIPE SIZE		P.D.I. SYMBOL	FIXTURE UNIT RATING	A SIZE		B SIZE	
in.	mm			in.	mm	in.	mm
1/2"	13	'A'	1-11	5"	127	1/2"	13
3/4"	19	'B'	12-32	5"	127	3/4"	19
1"	1"	'C'	33-60	7"	178	1"	1"
1 1/4"	31	'D'	61-113	7"	178	1 1/4"	31
1 1/2"	38	'E'	114-154	9"	228	1 1/2"	38
2"	50	'F'	155-330	9"	228	2"	50

BASIC RULES:

RULE 1: COVERS MULTIPLE FIXTURE BRANCH LINES WHICH DO NOT EXCEED 20 FEET IN LENGTH.

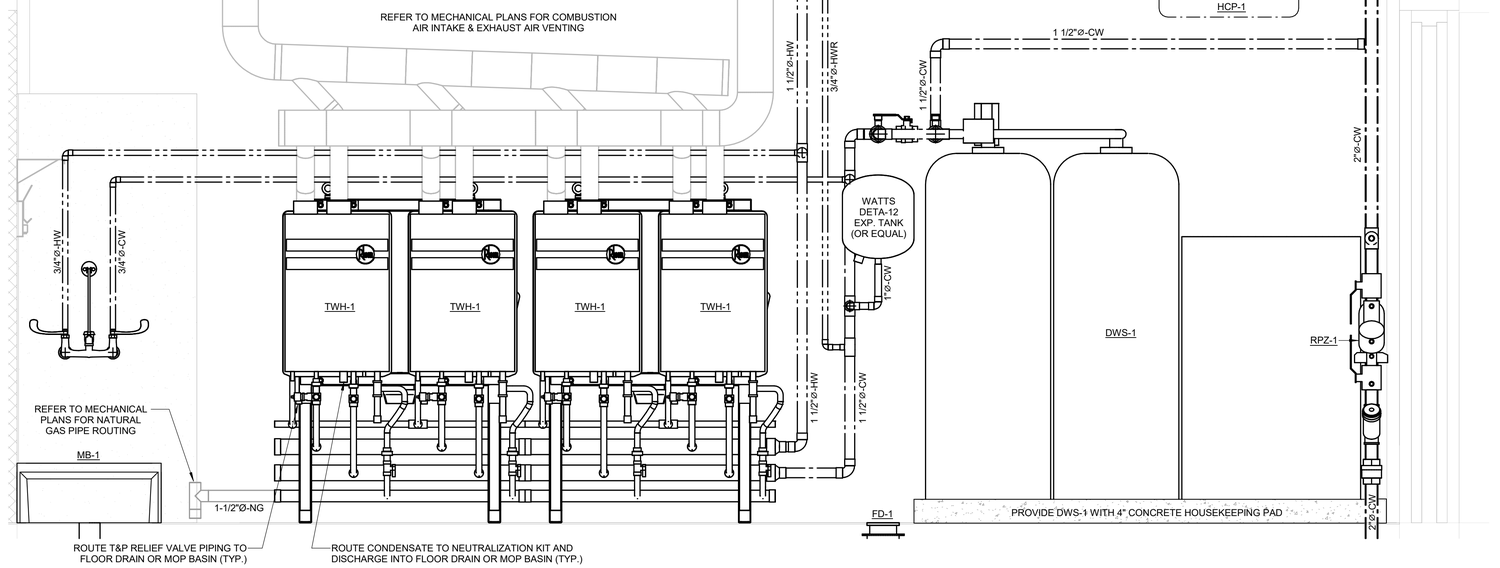


RULE 2: COVERS MULTIPLE FIXTURE BRANCH LINES WHICH EXCEED 20 FEET IN LENGTH. THE SUM OF THE FIXTURE UNIT RATINGS OF UNITS (X) AND (Y) SHALL BE EQUAL TO OR GREATER THAN THE DEMAND OF THE BRANCHES.

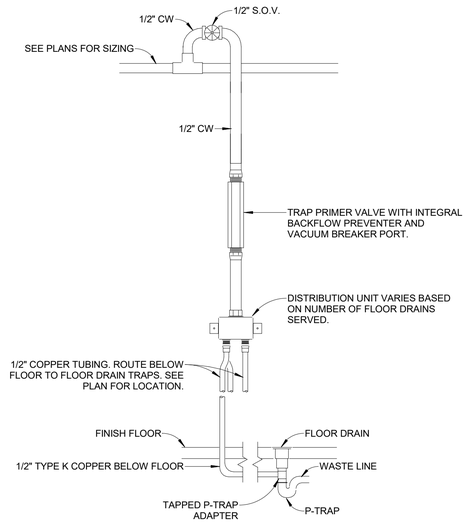


REFER TO MANUFACTURER'S RECOMMENDATION FOR EXACT WATER HAMMER ARRESTOR INSTALLATION.

2 P501 WATER HAMMER ARRESTOR SCHEDULE
SCALE: NTS



7 P501 WATER HEATERS & WATER SOFTENER SECTION
SCALE: NTS



6 P501 TRAP PRIMER W/ DISTRIBUTION UNIT
SCALE: NTS

STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

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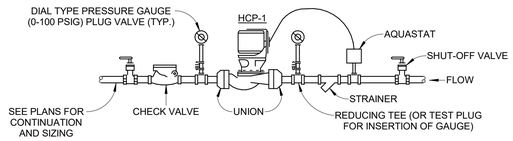
ISSUE DATE: 06/25/2025

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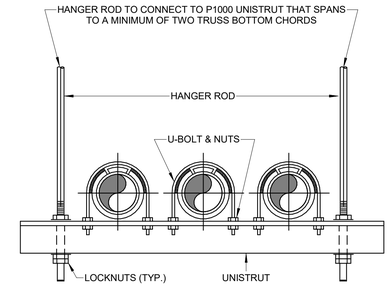
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PLUMBING DETAILS

SHEET NUMBER:
P501

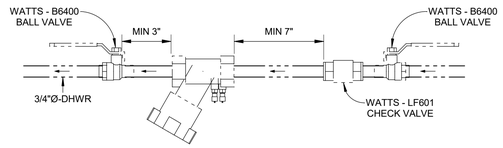
06/25/2025



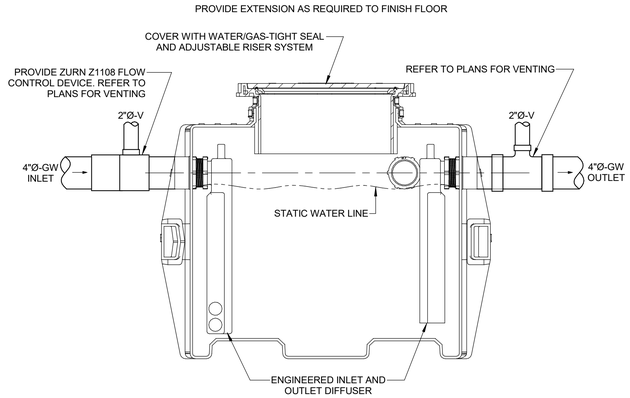
1 P502 HOT WATER CIRCULATING PUMP (HCP-1)
SCALE: NTS



2 P502 TYPICAL TRAPEZE HANGER DETAIL
SCALE: NTS

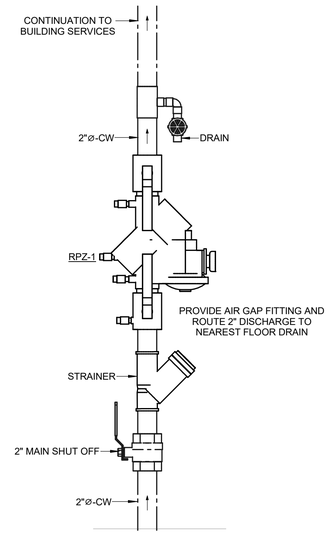


3 P502 CIRCUIT SETTER DETAIL
SCALE: NTS



NOTE:
INSTALL, ANCHOR, AND BACKFILL GREASE INTERCEPTOR PER MANUFACTURERS INSTRUCTIONS. REFER TO PLAN FOR EXACT LOCATION.

6 P502 GREASE INTERCEPTOR DETAIL
SCALE: NTS



4 P502 BACKFLOW PREVENTER DETAIL
SCALE: NTS

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
RICHARD PAUL VESTAL
NUMBER PE-028428
PROFESSIONAL ENGINEER
6/27/2025
EXP. DATE
12/31/2025
PROFESSIONAL SEAL

VESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

STATE OF MISSOURI -
ST. CLAIR READINESS
CENTER

375 SOUTH COMMERCIAL
AVENUE, ST. CLAIR
MISSOURI 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/25/2025

CAD DWG FILE:
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PLUMBING DETAILS

SHEET NUMBER:
P502

06/25/2025

PLUMBING PIPING AND INSULATION SPECIFICATIONS

SYSTEM TYPE	EXTERIOR BELOW GRADE				INTERIOR BELOW GRADE				INTERIOR ABOVE GRADE			
	MATERIAL	JOINT TYPE	INSULTATION THICKNESS	NOTES	MATERIAL	JOINT TYPE	INSULTATION THICKNESS	NOTES	MATERIAL	JOINT TYPE	INSULTATION THICKNESS	NOTES
DOMESTIC WATER PIPING	COPPER - TYPE K	SILVER SOLDERED	1"	1,3	COPPER - TYPE K	SILVER SOLDERED	1"	1,3	COPPER - TYPE L	BRAZED OR SOLDERED	1"	1,3
SANITARY WASTE PIPING	PVC ASTM 1785-SCHEDULE 40	SOLVENT WELD	N/A	2,3	PVC ASTM 1785-SCHEDULE 40	SOLVENT WELD	N/A	2,3	PVC ASTM 1785-SCHEDULE 40	SOLVENT WELD	N/A	2,3,4
SANITARY VENT PIPING	PVC ASTM 1785-SCHEDULE 40	SOLVENT WELD	N/A	2,3	PVC ASTM 1785-SCHEDULE 40	SOLVENT WELD	N/A	2,3	PVC ASTM 1785-SCHEDULE 40	SOLVENT WELD	N/A	2,3,4

NOTES:
1. PIPE TUBE AND FITTINGS CARRYING WATER USED IN POTABLE WATER SYSTEMS SHALL MEET THE REQUIREMENTS OF NSF 61.
2. WHERE THE WASTE WATER TEMPERATURE WILL BE GREATER THAN 140 F, THE DRAINAGE PIPING MATERIAL SHALL BE RATED FOR THE HIGHEST TEMPERATURE OF THE WASTE WATER. REFER TO DRAWINGS FOR SPECIFICATION.
3. ALL PIPING SHALL BE CLEARLY LABELED AND IDENTIFIED ACCORDING TO THE UNIFORM PLUMBING CODE.
4. ALL PIPING AND INSULATION IN RETURN AIR PLENUM SPACE MUST MEET 25/50 FLAME/SMOKE SPREAD REQUIREMENTS OR BE WRAPPED WITH AN APPROVED FIRE PROTECTION MATERIAL.

PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	CONNECTIONS			
				DRAIN	CW	HW	VENT
WC-1	AMERICAN STANDARD	2234001.020	WATER CLOSET - FLOOR MOUNTED MADERA® 15" HEIGHT WITH TOUCHLESS SELECTRONIC® PISTON FLUSH VALVE, 1.28 GPF/4.8 LPF. AMERICAN STANDARD SEAT #5901.100 HEAVY DUTY OPEN FRONT, NO COVER.	4'	1"	-	2"
WC-2	AMERICAN STANDARD	3462001.020	WATER CLOSET - FLOOR MOUNTED MADERA® ADA 16.5 INCH TOILET SYSTEM WITH TOUCHLESS SELECTRONIC® PISTON FLUSH VALVE, 1.28 GPF/4.8 LPF. PROVIDE SAME SEAT AS WC-1.	4'	1"	-	2"
UR-1	AMERICAN STANDARD	6590001EC.020	URINAL - WASHBROOK® 1.0 GPF/3.8 LPF TOP SPUD SIPHON JET URINAL WITH TOUCHLESS SELECTRONIC® PISTON FLUSH VALVE, 1.0 GPF/3.8 LPF.	2"	3/4"	-	2"
LAV-1	AMERICAN STANDARD	0356015.020	LUCERNE WALL-HUNG ADA LAVATORY. PROVIDE INNSBROOK SELECTRONIC BATTERY POWERED FAUCET, MODEL 6055.202. PROVIDE P-TRAP, SUPPLY STOPS, AND ANTI-SCALD VALVE. SET MAXIMUM HOT WATER TEMPERATURE TO 110°F. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.	2"	1/2"	1/2"	2"
MB-1	ZURN	Z1996-24	MOP SERVICE BASIN - 24" X 24" X 10". MOLDED HIGH DENSITY COMPOSITE BASIN, PVC DRAIN BODY, STAINLESS STEEL STRAINER AND GASKETED OUTLET CONNECTION. SERVICE FAUCET: MODEL Z1996-SF. PROVIDE ANTI-SCALD VALVE. SET MAXIMUM HOT WATER TEMPERATURE TO 110°F.	3"	1/2"	1/2"	2"
SH-1	BRADLEY	WS-1X	INDIVIDUAL PIVOTING WALL SHOWER. PROVIDE ANTI-SCALD VALVE. SET MAXIMUM HOT WATER TEMPERATURE TO 110°F.	2"	1/2"	1/2"	2"
SH-2	BRADLEY	HN300	ADA COMPLIANT IN-WALL SHOWER. PROVIDE WITH ALL OPTIONAL MANUFACTURER ACCESSORIES INCLUDING: HAND SHOWER, BARRIER-FREE SEAT, SHOWERHEAD ANCHOR PLATE, SHOWERHEAD BACK PLATE, SHOWER CURTAIN WITH ROD AND HOOKS, L-SHAPED GRAB BAR, AND ANTI-SCALD VALVE. SET MAXIMUM HOT WATER TEMPERATURE TO 110°F.	2"	1/2"	1/2"	2"

PLUMBING EQUIPMENT SCHEDULE

MARK	MANUFACTURER	MODEL	VOLTAGE/ PHASE	DESCRIPTION	CONNECTIONS			
					DRAIN	CW	HW	VENT
DWS-1	FLECK	9500-140-95-150-M	120/1	TWIN ALTERNATING WATER SOFTENER SYSTEM. 150,000 GRAIN CAPACITY WITH CONTINUOUS SERVICE FLOW RATE OF 25 GPM. PROVIDE SXT ELECTRONIC CONTROLLER AND INSTALL PER MANUFACTURERS INSTRUCTIONS. PROVIDE A THREE VALVE SERVICE BYPASS BETWEEN THE INLET AND OUTLET OF THE WATER SOFTENER AS RECOMMENDED BY THE MANUFACTURER.	-	1-1/2"	-	-
GWI-1	SCHIER	GB-75	-	GREASE WASTE INTERCEPTOR. 75 GPM FLOWRATE AND 861 LB GREASE CAPACITY. PROVIDE VERTICAL EXTENSION AS NECESSARY FOR BELOW GRADE INSTALLATION. INSTALL PER MANUFACTURERS INSTRUCTIONS.	4"	-	-	2"

WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	VOLTAGE / PHASE	FUEL	INPUT (MBH)	FIRST HOUR DELIVERY RATING (GPH)	TEMP RISE (°F)	DESCRIPTION	CONNECTIONS				
									DRAIN	CW	HW	INTAKE	EXHAUST
TWH-1	RHEEM	RTGH-CS11i	120/1	NAT. GAS	PER UNIT: 199.9 TOTAL: 799.6	PER UNIT: 276 TOTAL: 1056	90	(4) IKONIC COMMERCIAL TANKLESS WATER HEATERS. PROVIDE MODULAR RACK KIT - PART # AP24551, AND MANIFOLD PIPING KIT - PART # AP24554 (4SS) FOR SIDE-BY-SIDE INSTALLATION. PROVIDE MIC-6 MANIFOLD CONTROLLER - MODEL # RTG20213A, AND RJ25 MANIFOLD CONTROL CABLES. PROVIDE MULTI-UNIT CONDENSATE NEUTRALIZATION KIT - MODEL # RTG20372, AND (4) SERVICE VALVE KITS - MODEL # RTG20220AB. INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. SET WATER DELIVERY TEMPERATURE TO 140°F. PROVIDE WITH WATTS DETA-12 EXPANSION TANK OR EQUAL.	3/4"	1-1/2"	1-1/2"	6"	6"

PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	VOLTAGE/ PHASE	HP	RPM	WEIGHT (LBS)	MAX OPERATING PRESSURE (PSI)	MAX OPERATING TEMPERATURE (°F)	FLOWRATE (GPM)	HEAD (FT)	DESCRIPTION	CONNECTIONS	
												DRAIN	HWR
HCP-1	BELL & GOSSETT	PL36B	115/1	1/6	3300	13.1	150	225	4	28	HOT WATER RECIRCULATION PUMP. LEAD FREE BRONZE BODY WITH STAINLESS STEEL FACEPLATE. REFER TO DETAIL 1 / P502.	-	3/4"

PLUMBING ACCESSORY SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	CONNECTIONS			
				DRAIN	CW	HW	VENT
RPZ-1	WATTS	LF909M1-QT-S	BACKFLOW PREVENTOR - REDUCED PRESSURE ZONE ASSEMBLY. PROVIDE AIR GAP FITTING. PIPE FULL SIZE INDIRECT WASTE TO NEAREST FLOOR DRAIN IN THE SAME ROOM.	-	2"	-	-
TP-1	WATTS	LFTP300	TRAP PRIMER - BRASS BODY WITH EPDM SEALS AND BUILT IN VACUUM BREAKER. PROVIDE DISTRIBUTION UNIT TO SERVE MULTIPLE FLOOR DRAINS WHERE REQUIRED.	-	1/2"	-	-

DRAIN AND CLEANOUT SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	CONNECTIONS			
				DRAIN	CW	HW	VENT
FD-1	ZURN	Z415-SZ1	DURA-COATED CAST IRON FLOOR DRAIN WITH POLISHED NICKEL BRONZE STRAINER.	2" - 4"	1/2"	-	2"
FCO-1	ZURN	Z1400-BZ1	DURA-COATED CAST IRON FLOOR CLEANOUT WITH POLISHED NICKEL BRONZE TOP.	4"	-	-	-
FS-1	ZURN	Z1750	STAINLESS STEEL FLOOR SINK. PROVIDE WITH REMOVABLE HALF-GRATE AND SEDIMENT BASKET.	2" - 4"	-	-	-
WCO-1	ZURN	Z1468	WALL CLEAN OUT WITH BRONZE RAISED HEX HEAD PLUG AND STAINLESS STEEL ACCESS COVER.	4"	-	-	-

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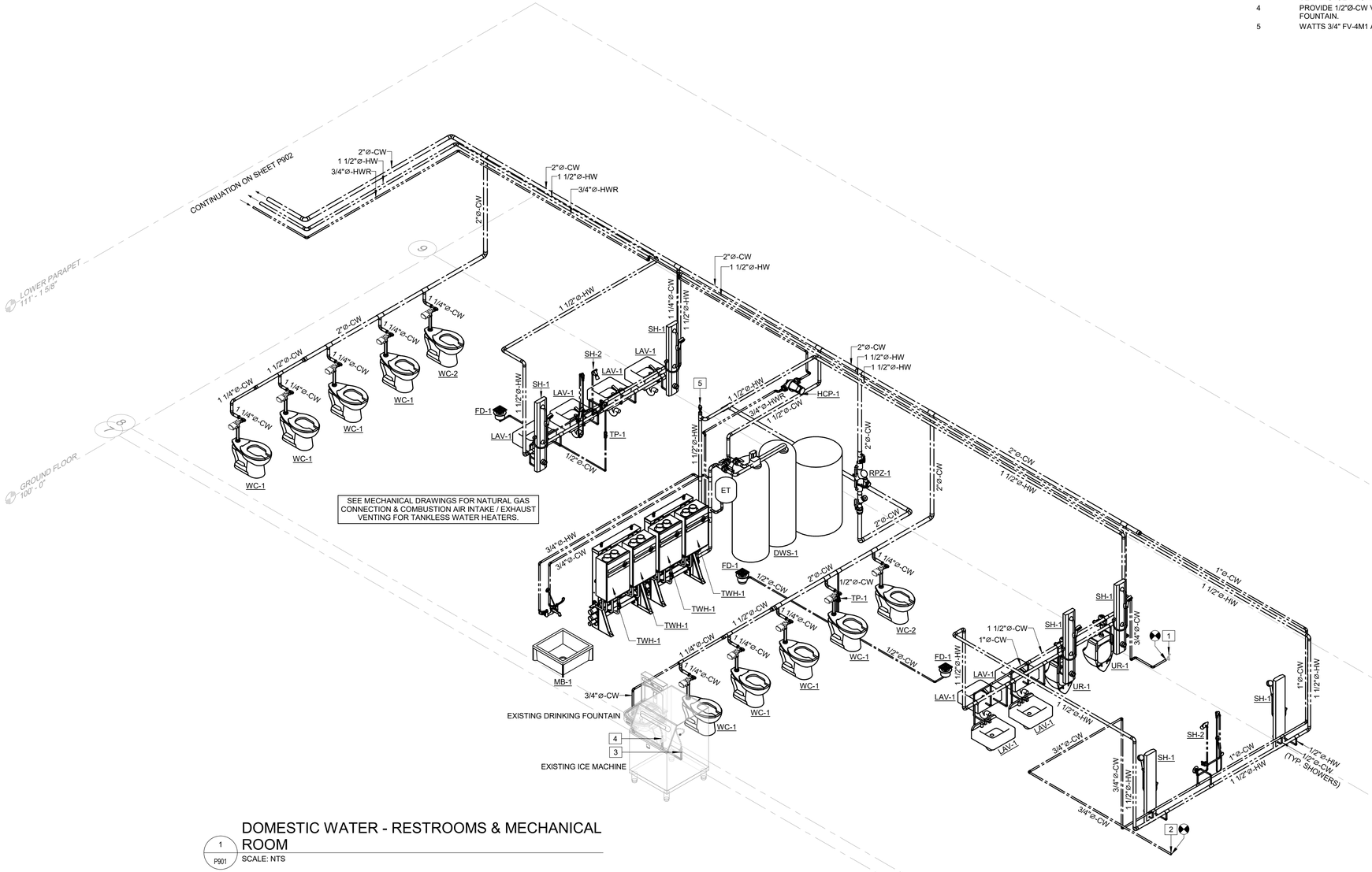
SHEET TITLE:
PLUMBING SCHEDULE

SHEET NUMBER:
P601

06/25/2025

KEYED NOTES:

1 EXISTING HOSE BIBB TO BE REUSED.
2 CONNECT TO EXISTING 3/4"Ø-CW SERVING EXISTING HOSE BIB LOCATED ON THE EXTERIOR OF ROOM 107 - UNIT STORAGE.
3 PROVIDE 1/2"Ø-CW VALVED CONNECTION TO EXISTING ICE MACHINE AND ROUTE DISCHARGE FROM EXISTING CONDENSATE PUMP SERVING ICE MACHINE TO MOP SINK IN MECHANICAL ROOM.
4 PROVIDE 1/2"Ø-CW VALVED CONNECTION TO EXISTING DRINKING FOUNTAIN.
5 WATTS 3/4" FV-4M1 AUTOMATIC AIR VENT VALVE OR EQUAL.



1 P901 DOMESTIC WATER - RESTROOMS & MECHANICAL ROOM
SCALE: NTS

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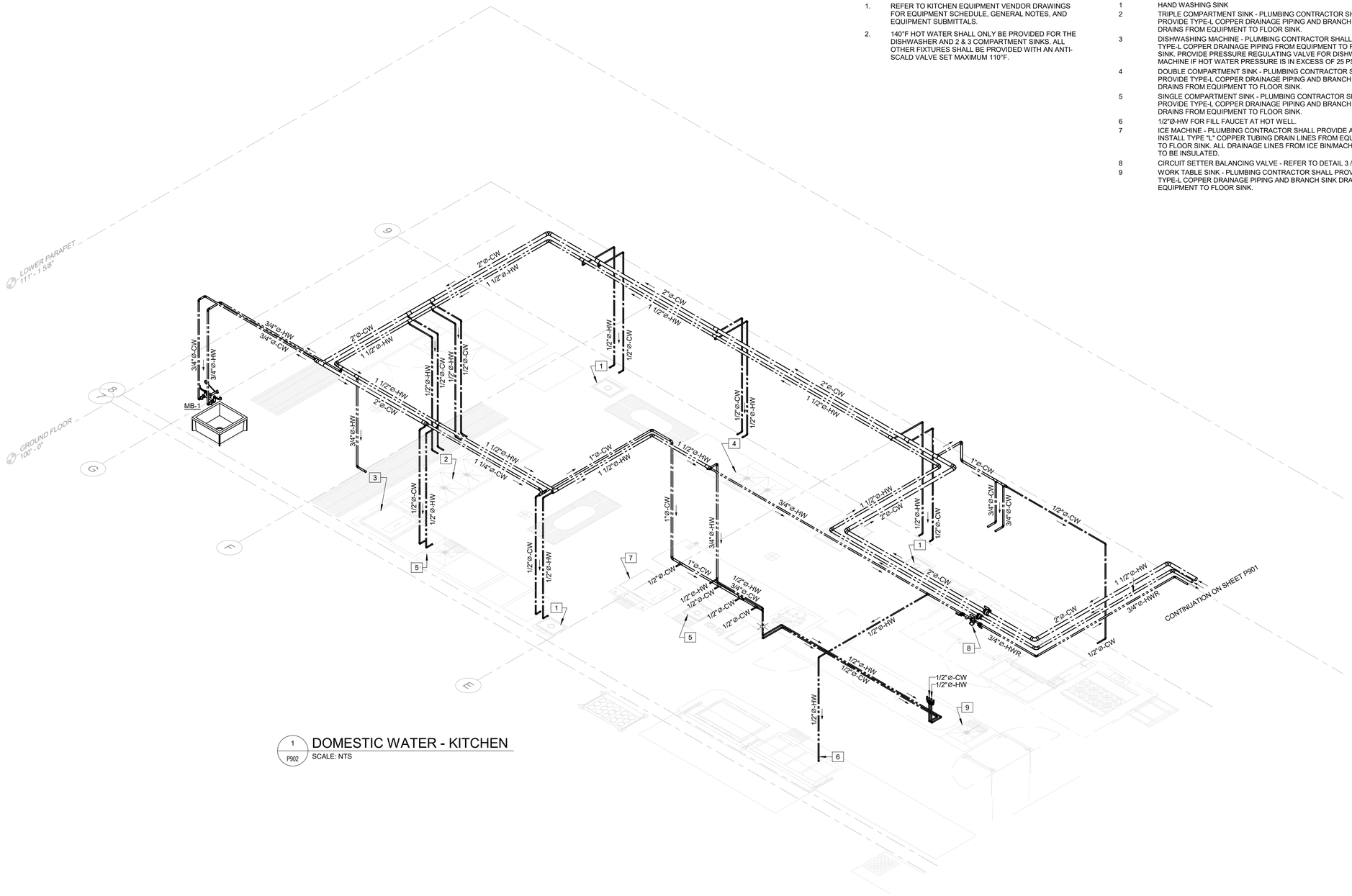
06/25/2025

GENERAL NOTES:

1. REFER TO KITCHEN EQUIPMENT VENDOR DRAWINGS FOR EQUIPMENT SCHEDULE, GENERAL NOTES, AND EQUIPMENT SUBMITTALS.
2. 140°F HOT WATER SHALL ONLY BE PROVIDED FOR THE DISHWASHER AND 2 & 3 COMPARTMENT SINKS. ALL OTHER FIXTURES SHALL BE PROVIDED WITH AN ANTI-SCALD VALVE SET MAXIMUM 110°F.

KEYED NOTES:

1 HAND WASHING SINK
2 TRIPLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
3 DISHWASHING MACHINE - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING FROM EQUIPMENT TO FLOOR SINK. PROVIDE PRESSURE REGULATING VALVE FOR DISHWASHING MACHINE IF HOT WATER PRESSURE IS IN EXCESS OF 25 PSI.
4 DOUBLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
5 SINGLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.
6 1/2"Ø-HW FOR FILL FAUCET AT HOT WELL.
7 ICE MACHINE - PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL TYPE "L" COPPER TUBING DRAIN LINES FROM EQUIPMENT TO FLOOR SINK. ALL DRAINAGE LINES FROM ICE BIN/MACHINES ARE TO BE INSULATED.
8 CIRCUIT SETTER BALANCING VALVE - REFER TO DETAIL 3 / P502.
9 WORK TABLE SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.



1 P902 DOMESTIC WATER - KITCHEN
SCALE: NTS

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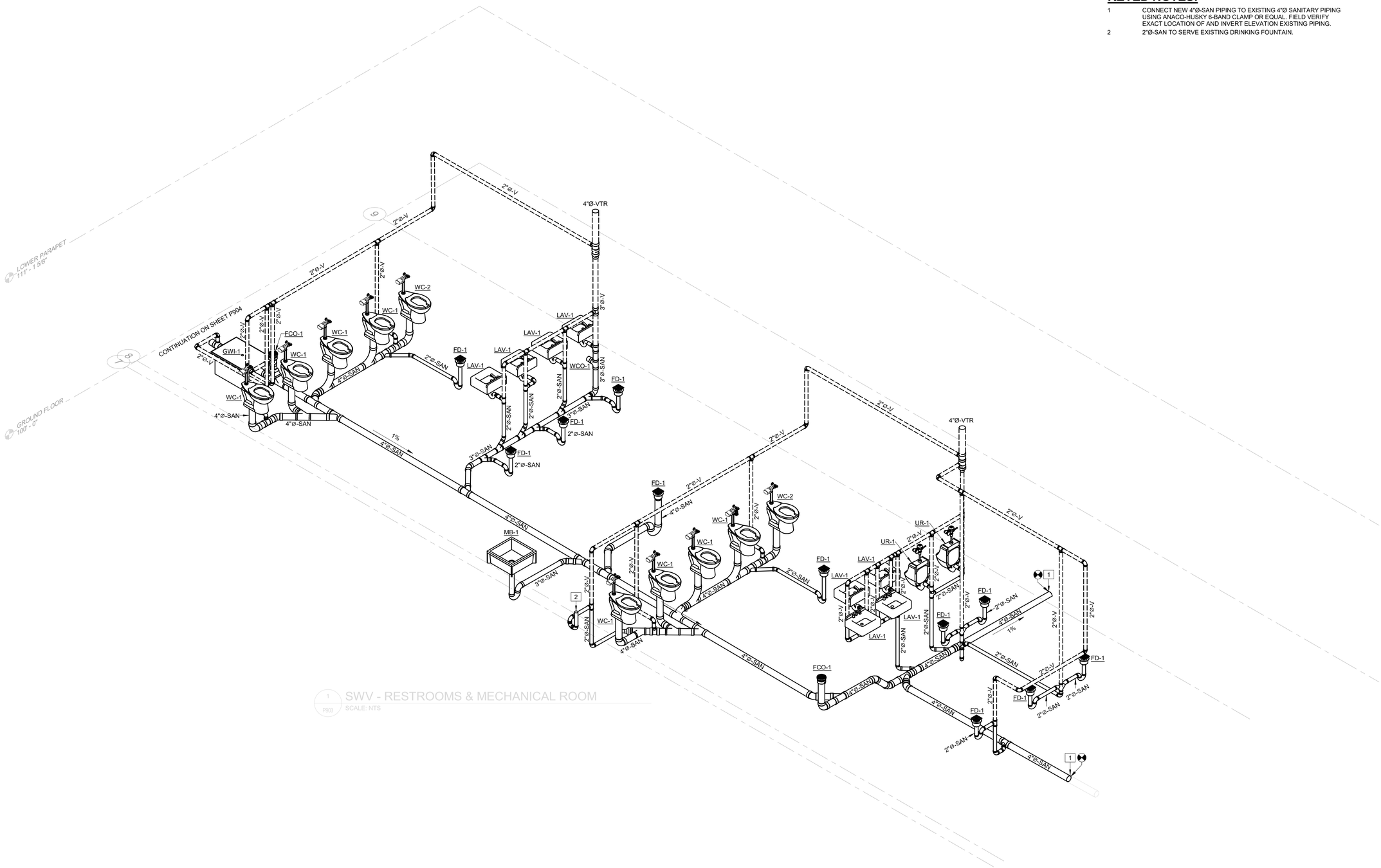
SHEET NUMBER:
P902

06/25/2025

KEYED NOTES:

1 CONNECT NEW 4"Ø-SAN PIPING TO EXISTING 4"Ø SANITARY PIPING USING ANACO-HUSKY 6-BAND CLAMP OR EQUAL. FIELD VERIFY EXACT LOCATION OF AND INVERT ELEVATION EXISTING PIPING.

2 2"Ø-SAN TO SERVE EXISTING DRINKING FOUNTAIN.



1 P903 SWV - RESTROOMS & MECHANICAL ROOM
SCALE: NTS

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P903

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KEYED NOTES:

1 PROVIDE CAST IRON PIPING FOR HIGH TEMPERATURE DISCHARGE.

2 DISHWASHING MACHINE - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING FROM EQUIPMENT TO FLOOR SINK. PROVIDE PRESSURE REGULATING VALVE FOR DISHWASHING MACHINE IF HOT WATER PRESSURE IS IN EXCESS OF 25 PSI.

3 TRIPLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.

4 DOUBLE COMPARTMENT SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.

5 DROP-IN SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING FROM EQUIPMENT TO FLOOR SINK.

6 DROP-IN HOT FOOD UNIT - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK..

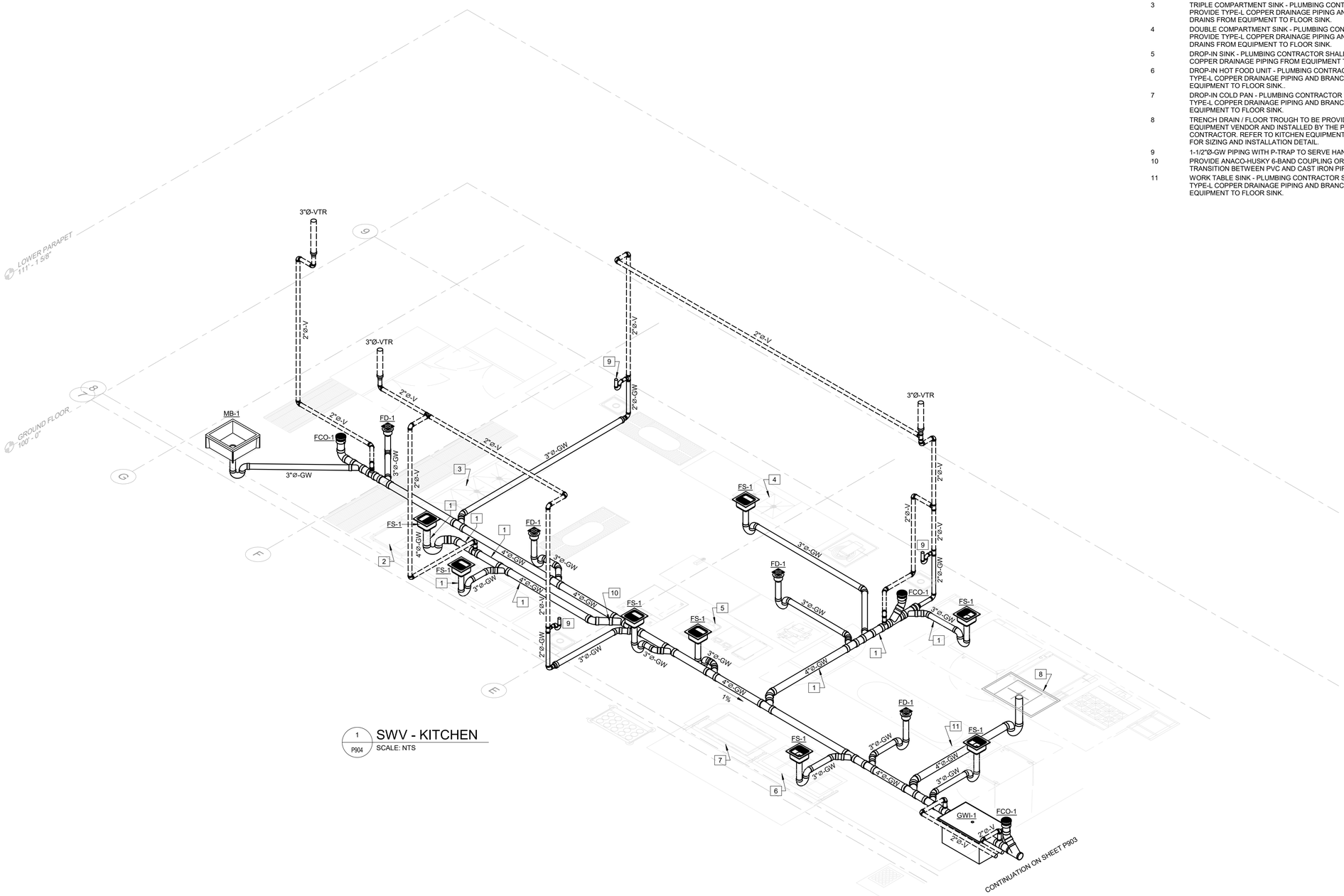
7 DROP-IN COLD PAN - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.

8 TRENCH DRAIN / FLOOR TROUGH TO BE PROVIDED BY KITCHEN EQUIPMENT VENDOR AND INSTALLED BY THE PLUMBING CONTRACTOR. REFER TO KITCHEN EQUIPMENT VENDOR DRAWINGS FOR SIZING AND INSTALLATION DETAIL.

9 1-1/2"Ø-GW PIPING WITH P-TRAP TO SERVE HAND WASHING SINK.

10 PROVIDE ANACO-HUSKY 6-BAND COUPLING OR EQUAL FOR TRANSITION BETWEEN PVC AND CAST IRON PIPING.

11 WORK TABLE SINK - PLUMBING CONTRACTOR SHALL PROVIDE TYPE-L COPPER DRAINAGE PIPING AND BRANCH SINK DRAINS FROM EQUIPMENT TO FLOOR SINK.



1 P904 SWV - KITCHEN
SCALE: NTS

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P904

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ELECTRICAL SYMBOLS, ABBREVIATIONS, AND NOTES

POWER, LIGHTING, AND SYSTEMS SYMBOLS LEGEND

- A — LIGHT FIXTURE - LETTER REFERS TO LIGHTING FIXTURE SCHEDULE.
- A — LIGHT FIXTURE - LETTER REFERS TO LIGHTING FIXTURE SCHEDULE. FIXTURE WITH BATTERY PACK.
- RE — LIGHT FIXTURE - RELOCATED
- B — STRIP LIGHT FIXTURE - LETTER REFERS TO LIGHTING FIXTURES SCHEDULE.
- B — STRIP LIGHT FIXTURE - LETTER REFERS TO LIGHTING FIXTURE SCHEDULE. FIXTURE WITH BATTERY PACK.
- C — RECESSED DOWN LIGHT- LETTER REFERS TO THE LIGHTING FIXTURE SCHEDULE.
- C — RECESSED DOWN LIGHT - LETTER REFERS TO LIGHTING FIXTURE SCHEDULE. FIXTURE WITH BATTERY PACK.
- G — WALL MOUNTED LIGHT FIXTURE - LETTER REFERS TO LIGHTING SCHEDULE.
- G — WALL MOUNTED LIGHT FIXTURE - LETTER REFERS TO LIGHTING SCHEDULE. FIXTURE WITH BATTERY PACK.
- Y — BATTERY POWERED EMERGENCY LIGHT - MOUNT ON WALL AT 7'-6" AFF TO CENTER. LETTER REFERS TO LIGHTING FIXTURE SCHEDULE. FIXTURE CONNECTED TO EMERGENCY POWER.
- X — EXIT LIGHT - CEILING MOUNTED OR WALL MOUNTED. ARROWS AS INDICATED - LETTER REFERS TO LIGHTING FIXTURE SCHEDULE. FIXTURE CONNECTED TO BATTERY PACK.
- $a — SINGLE POLE SWITCH - MOUNT AT 48" AFF TO CENTER. 'a' INDICATES SWITCH LEG.
- b$3 — 3 WAY SWITCH - MOUNT AT 48" AFF TO CENTER 'b' INDICATES SWITCH LEG.
- $M — MOTOR RATED DISCONNECT SWITCH WITH THERMAL OVERLOAD PROTECTION.
- $OS — DUAL TECHNOLOGY WALL MOUNTED OCCUPANCY SENSOR SWITCH - MOUNT AT 48" AFF TO CENTER.

- DUPLEX RECEPTACLE - MOUNT AT 18" AFF TO CENTER UNLESS OTHERWISE NOTED
- EM — DUPLEX RECEPTACLE CONNECTED TO EMERGENCY POWER- RED DEVICE WITH RED FACEPLATE. MOUNT AT 18" AFF TO CENTER UNLESS OTHERWISE NOTED
- SPECIAL PURPOSE RECEPTACLE
- TWO DUPLEX RECEPTACLES MOUNTED UNDER A COMMON COVERPLATE - MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.
- DATA OUTLET - WALL - MOUNT AT 18"AFF TO CENTER UNLESS OTHERWISE NOTED. PROVIDE A SINGLE BOX. EXTEND A 1/2"CONDUIT, WITH PULLWIRE, TO ABOVE ACCESSIBLE CEILING AND MARK.
- J — JUNCTION BOX - WALL MOUNTED
- J — JUNCTION BOX - CEILING MOUNTED
- D — DIFFUSER - CEILING MOUNTED
- DISCONNECT SWITCH - MOUNT 72" TO TOP OF SWITCH
- J — JUNCTION BOX - FLOOR MOUNTED
- WIREMOLD
- MOTOR
- PANEL - SURFACE MOUNTED
- PANEL - RECESSED MOUNTED
- DISTRIBUTION / SWITCHBOARD - SURFACE MOUNTED
- HOMERUN CONDUIT

CONDUIT SIZE TABLES

CONDUIT SIZE TABLE FOR # 12 CONDUCTORS (3/4"C MIN)
UP TO 8 #12---------- =3/4"C 9 #12 TO 12 #12 ------- =1"C

CONDUIT SIZE TABLE FOR #10, #8, #6, AND #4 CONDUCTORS (3/4"C MIN)	
UP TO 6 #10---------- =3/4"C 7 #10 TO 11 #10 ------- =1"C	#10 →
UP TO 3 #8---------- =3/4"C 4 #8 TO 5 #8---------- =1"C 6 #8 TO 10#8----------=1-1/4"C	#8 →
UP TO 2 #6---------- =3/4"C 3 #6 TO 4 #6---------- =1"C 5 #6 TO 7#6---------- =1-1/4"C	#6 →
UP TO 3 #4---------- =1"C 4 #4 TO 5 #4---------- =1-1/4"C 6 #4 TO 7#4---------- =1-1/2"C	#4 →

1. PROVIDE ALL CONDUIT RUNS WITH GREEN EQUIPMENT GROUNDING CONDUCTORS SIZED PER NEC TABLE 250-122. ALLOW FOR THE ADDITIONAL EQUIPMENT GROUNDING CONDUCTORS IN DETERMINING PROPER CONDUIT SIZES.

2. USE SIZE #10 CONDUCTORS FOR ANY 20A, 120V BRANCH CIRCUIT RUN OVER 100' IN LENGTH.

3. NO MORE THAN THREE 20A, 120V, CIRCUITS SHALL BE RUN IN CONDUITS U.O.N

ONE-LINE DIAGRAM LEGEND

- UTILITY TRANSFORMER
- GENERATOR
- X — CABLE SIZE CALLOUT
- X / X — EQUIPMENT CALLOUT
- INLINE TRANSFORMER
- MANUAL TRANSFER SWITCH
- CIRCUIT BREAKER
- CURRENT TRANSFORMER
- DISCONNECT SWITCH
- STARTER SWITCH
- STARTER / DISCONNECT SWITCH
- GROUND
- M — METER
- M — MOTOR
- PANEL
- SPARE
- SWITCH AND FUSE

A ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
AWG	AMERICAN WIRE GAUGE
A	AMPERE
AHJ	AUTHORITY HAVING JURISDICTION
B	
BLDG.	BUILDING
C	
CB	CIRCUIT BREAKER
C	CONDUIT
CU	COPPER
D	
DISC	DISCONNECT SWITCH
DWG	DRAWING
E	
EMT	ELECTRIC METALLIC TUBING
EC	ELECTRICAL CONTRACTOR
EG	EQUIPMENT GROUNDING
EGC	EQUIPMENT GROUNDING CONDUCTOR
F	
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
F	FUSE
G	
G	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GEC	GROUNDING ELECTRODE CONDUCTOR
H	
HP	HORSE POWER
I	
IC	INTERRUPTING CAPACITY
J	
JB	JUNCTION BOX
K	
KAIC	KILOAMP INTERRUPTING CAPACITY
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KCMIL	THOUSAND CIRCULAR MILLS
L	
LTG	LIGHTING
M	
MCB	MAIN CIRCUIT BREAKER
N	
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY
N	NEUTRAL
NTS	NOT TO SCALE
P	
PH	PHASE
PB	PULL BOX
R	
RGS	RIGID GALVANIZED STEEL
S	
SD	SMOKE DETECTOR
SPD	SURGE PROTECTIVE DEVICE
SYS	SYSTEM
T	
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
U	
UPS	UNINTERRUPTED POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	
VA	VOLT AMPERE
V	VOLT OR VOLTAGE
W	
W	WATT
WP	WEATHERPROOF

GENERAL NOTES

COORDINATION

1 PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS. REVIEW THE GENERAL NOTES AND ALL OTHER TRADE DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR OWNER, AS SPECIFIED, OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID.

2 REFER TO ARCHITECTURAL PLANS, SECTIONS AND ELEVATIONS FOR EXACT LOCATION OF ELECTRICAL DEVICES AND LIGHT FIXTURES PRIOR TO ROUGH IN.

3 ALL CONDUCTOR LENGTHS PROVIDED IN THESE DESIGN DOCUMENTS ARE INTENDED SOLELY FOR USE IN THE DESIGN CALCULATIONS BY THE DESIGN PROFESSIONAL UNLESS SPECIFICALLY NOTED OTHERWISE IN THESE DOCUMENTS. THEY SHALL NOT BE USED BY CONTRACTORS IN BIDDING OF CONSTRUCTING THE PROJECT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MATERIAL QUANTITIES REQUIRED TO BID AND CONSTRUCT THE COMPLETE PROJECT.

4 CONDUIT RUNS ARE SHOWN DIAGRAMMATIC. INSTALL CONDUIT TO SUIT FIELD CONDITIONS.

5 VERIFY RATINGS, LOCATIONS, AND CONNECTIONS OF ALL EQUIPMENT PROVIDED BY OTHERS AND INSTALLED AND/OR CONNECTED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO OWNER'S EQUIPMENT.

6 CONNECTIONS TO EQUIPMENT FURNISHED BY OTHER SHALL BE COORDINATED. OBTAIN MANUFACTURERS' SHOP DRAWINGS PRIOR TO ROUGH IN, IN ALL CONDUIT TO THIS EQUIPMENT.

7 CONFIRM WITH MECHANICAL EQUIPMENT MANUFACTURER'S RECOMMENDATIONS FOR EXACT OVERCURRENT PROTECTION DEVICES TYPE AND SIZE PRIOR TO ROUGH IN

8 ALL ELECTRICAL EQUIPMENT SHALL BE NRTL LABELED AND LISTED FOR THE USE.

9 ALL EMPTY CONDUIT/RACEWAY SHALL BE INSTALLED WITH PULL STRINGS.

10 PROVIDE PROPERLY SIZED LUGS AT ALL CIRCUIT BREAKERS PANELS AND SWITCHBOARDS, FOR THE CONDUCTORS SHOWN TO CONNECT TO THESE LUGS.

11 SUPPLY POWER AND MAKE CONNECTIONS TO ALL MOTORS AND EQUIPMENT REQUIRING ELECTRICAL, INCLUDING ALL FRACTIONAL HORSEPOWER MOTORS.

CODE COMPLIANCE

12 ALL ELECTRICAL EQUIPMENT SHALL BE NRTL LABELED AND LISTED FOR THE USE.

13 ALL ELECTRICAL WORK SHALL COMPLY WITH 2020 NATIONAL ELECTRIC CODE AND ALL LOCAL CODES AND REGULATIONS.

PENETRATIONS

14 EXACT METHOD AND LOCATION OF CONDUIT PENETRATIONS AND/OR OPENINGS IN CONCRETE WALLS AND FLOORS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER.

15 PROVIDE PROPER FIRE PROOFING AND SEALANT FOR PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.

GROUNDING

16 PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN ALL LINE-VOLTAGE CONDUITS. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC REQUIREMENTS.

17 PROVIDE EQUIPMENT BONDING JUMPERS SIZED PER NEC ART.250.102 (C) AT ALL EQUIPMENT WITH METALLIC ENCLOSURES THAT REQUIRE ELECTRICAL CONNECTIONS.

WIRING DEVICES

18 CONTRACTOR SHALL PERMANENTLY MARK THE INTERIOR OF WIRING DEVICES COVERPLATES AND EXTERIOR OF JUNCTION BOXES OF LUMINARIES AND EQUIPMENT WITH CIRCUIT IDENTIFICATION.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI — STEPHEN S. SLOTTEN — NUMBER — PE-2018000275 — PROFESSIONAL ENGINEER

6-27-25

PROFESSIONAL SEAL

YESTAL CORPORATION

DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:

SYMBOLS, ABBREVIATIONS, NOTES

SHEET NUMBER:

E001

06/27/2025

SYMBOL
(#)

KEYED NOTES - E101

1 EXISTING LIGHTING TO REMAIN. LIGHTING CONTROL COMPONENTS SHALL BE ADDED TO UPGRADE LIGHTING TO COMPLY WITH IECC ENERGY CODE. SEE NEW WORK PLAN.

2 DISCONNECT AND REMOVE TURN OVER EXISTING LIGHTING. LIGHTS TO BE REPLACED.

3 REMOVE EXISTING LIGHTING CONTROL TOGGLE SWITCH AND REPLACE WITH NEW OCCUPANCY SENSER / DIMMER. SEE NEW WORK DRAWING E121.

4 REMOVE EXISTING LIGHTING CONTROL TOGGLE SWITCH AND REPLACE WITH NEW LOW VOLTAGE DIMMER. SEE NEW WORK DRAWING E121.

GENERAL NOTES - E101

1 ITEMS SHOWN AS A DASHED LINETYPE ARE EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED. ITEMS SHOWN AS A LIGHT SOLID LINETYPE ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

2 FOR PORTIONS OF CIRCUITS REMOVED AND NOT RE-USED, REMOVE CONDUCTORS TO THEIR SOURCE OF SUPPLY.

3 DISCONNECT ELECTRICAL SYSTEMS IN WALLS AND CEILINGS TO BE REMOVED.

4 DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS, AND OTHER ACCESSORIES.

5 PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION.

6 REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOORS AND PATCH SURFACES.

GENERAL NOTES - E101

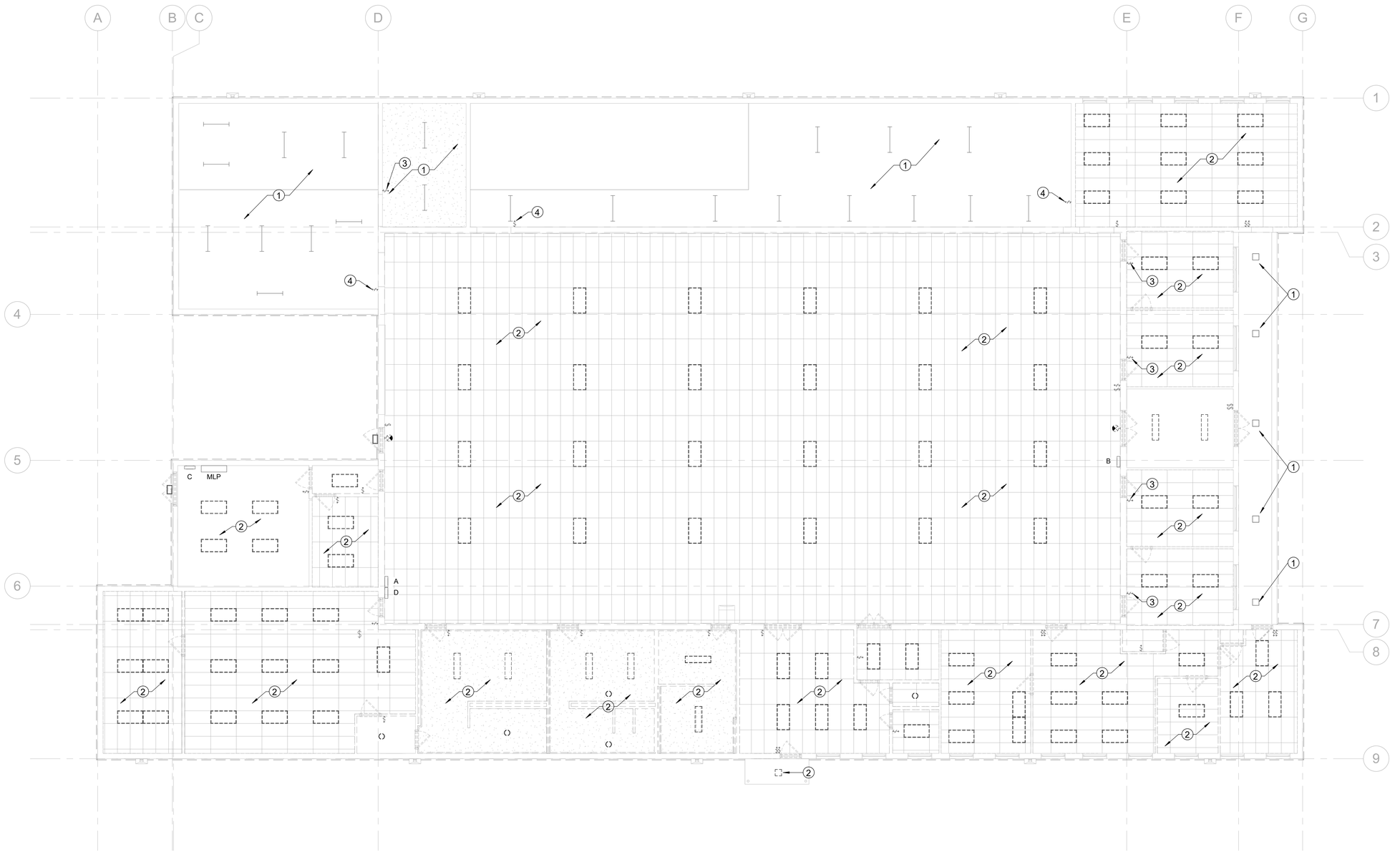
7 DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS NOT REMOVED.

8 REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.

9 EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS, OR AS SPECIFIED.

10 DEVICES WITH SUBSCRIPT (E) ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

11 DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND NOT ALL EXISTING WIRING DEVICES MAY BE SHOWN. RECEPTACLES AND DATA OUTLETS IN WALLS NOT BEING DEMOLISHED MAY REMAIN IN SERVICE.



1 E101 DEMOLITION REFLECTED CEILING LIGHTING PLAN
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
STEPHEN S. SLOTTEN
NUMBER
PE-2018000275
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SHEET TITLE:
DEMOLITION LIGHTING PLAN

SHEET NUMBER:
E101

06/27/2025

SYMBOL
(#)

KEYED NOTES - E102

1 EXISTING PANEL MLP. 400A 120/240V 3-WIRE.

2 EXISTING PANEL 'A'. 225A 120/240V 3-WIRE 30 POLES.

3 EXISTING PANEL 'B'. 225A 120/240V 3-WIRE 30 POLES.

4 EXISTING PANEL 'C'. 100A 120/240V 3-WIRE 20 POLES.

5 EXISTING PANEL 'D'. 125A 120/240V 3-WIRE 24 POLES.

6 DISCONNECT AND REMOVE POWER TO EXISTING OUTDOOR CONDENSING UNIT.

7 DISCONNECT AND REMOVE POWER TO EXISTING INDOOR AIR HANDLING UNIT.

KEYED NOTES - E102

8 DISCONNECT AND REMOVE POWER TO EXISTING ROOFTOP EXHAUST FAN.

9 DISCONNECT AND REMOVE EXISTING RECEPTACLE. PRESERVE BACKBOX AND CONDUIT. PROVIDE NEW RED RECEPTACLE AND COVERPLATE AND WIRE TO NEW 120V EMERGENCY POWER PANEL. SEE NEW WORK PLAN.

10 DISCONNECT AND REMOVE POWER TO EXISTING KITCHEN EXHAUST HOOD.

GENERAL NOTES - E102

1 ITEMS SHOWN AS A DASHED LINETYPE ARE EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED. ITEMS SHOWN AS A LIGHT SOLID LINETYPE ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

2 FOR PORTIONS OF CIRCUITS REMOVED AND NOT RE-USED, REMOVE CONDUCTORS TO THEIR SOURCE OF SUPPLY.

3 DISCONNECT ELECTRICAL SYSTEMS IN WALLS AND CEILINGS TO BE REMOVED.

4 PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION.

5 REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOORS AND PATCH SURFACES.

6 DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS NOT REMOVED.

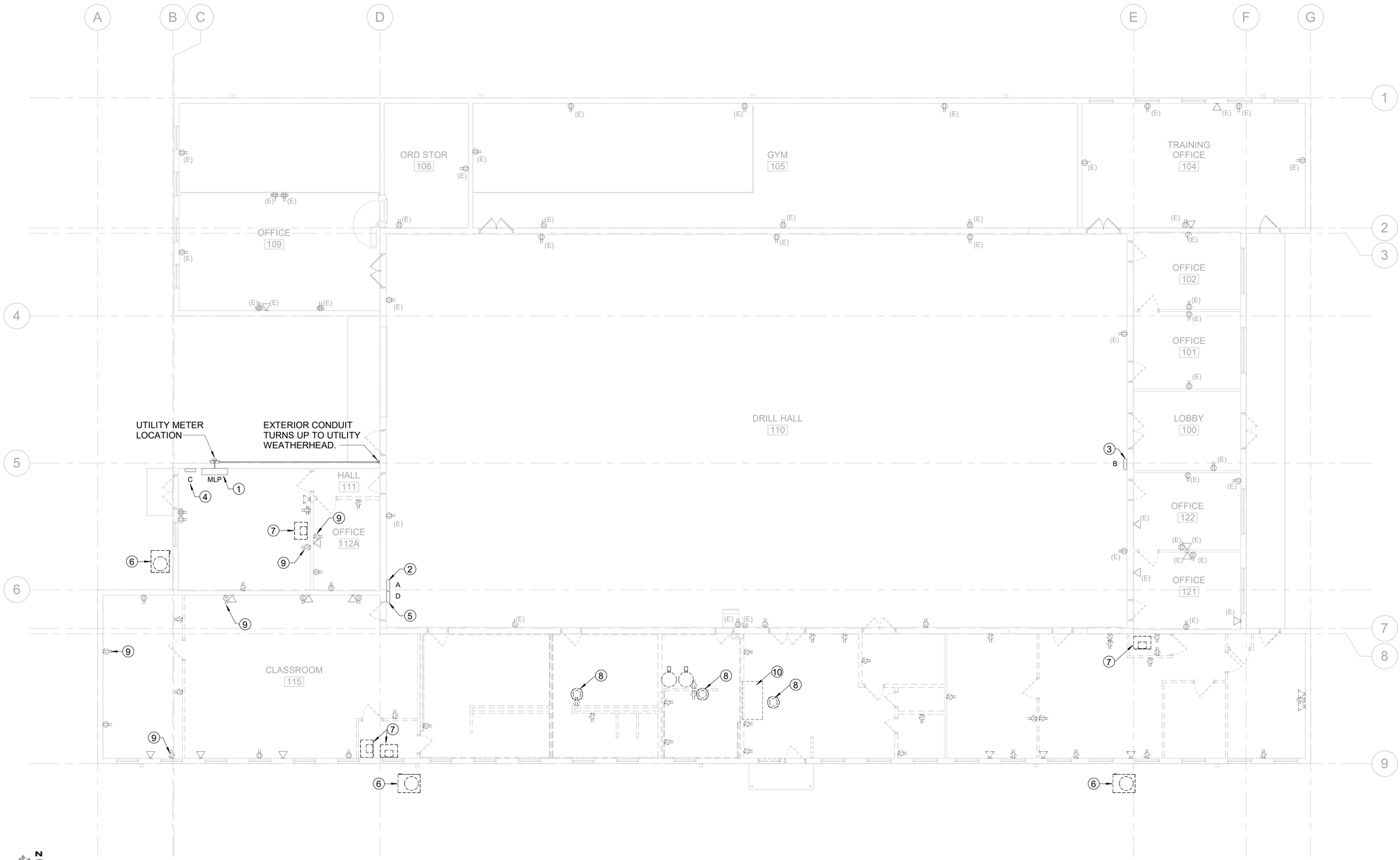
GENERAL NOTES - E102

7 REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.

8 EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS, OR AS SPECIFIED.

9 DEVICES WITH SUBSCRIPT (E) ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

10 DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND NOT ALL EXISTING WIRING DEVICES MAY BE SHOWN. RECEPTACLES AND DATA OULETS IN WALLS NOT BEING DEMOLISHED MAY REMAIN IN SERVICE.



TRUE NORTH

1 E102 DEMOLITION POWER PLAN
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
STEPHEN K. SLOTTEN
NUMBER
PE-2018000275
PROFESSIONAL ENGINEER

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SHEET TITLE:
DEMOLITION POWER PLAN

SHEET NUMBER:
E102

06/27/2025

LIGHT FIXTURE SCHEDULE							
TYPE	MANUFACTURER	CATALOG NO.	MOUNTING	VOLTAGE	LAMP	WATTS	REMARKS
A1	LITHONIA	2VTL4-40L-ADP-EZ1-LP840-N100	RECESSED	120/277	LED 4000 K	31.4	WITH EMBEDDED LIGHTING CONTROL INTERFACE
A1-EM	LITHONIA	2VTL4-40L-ADP-EZ1-LP840-N100-EL14L	RECESSED	120/277	LED 4000 K	31.4	WITH BATTERY PACK
A2	LITHONIA	2VTL4-48L-ADP-EZ1-LP840-N100	RECESSED	120/277	LED 4000 K	38.4	WITH EMBEDDED LIGHTING CONTROL INTERFACE
A2-EM	LITHONIA	2VTL4-48L-ADP-EZ1-LP840-N100-EL14L	RECESSED	120/277	LED 4000 K	38.4	WITH EMBEDDED LIGHTING CONTROL INTERFACE
A3	LITHONIA	2GTL4-100L-EZ1-LP840-N100	RECESSED	120/277	LED 4000 K	82.8	WITH EMBEDDED LIGHTING CONTROL INTERFACE
A3-EM	LITHONIA	2GTL4-100L-EZ1-LP840-N100-E10W	RECESSED	120/277	LED 4000 K	82.8	WITH BATTERY PACK
B	LITHONIA	LBL4-4000LM-80CRI-40K-MIN1-ZT-MVOLT-NLIGHT	SURFACE	120/277	LED 4000 K	32.4	WITH EMBEDDED LIGHTING CONTROL INTERFACE
B-EM	LITHONIA	LBL4-4000LM-80CRI-40K-MIN1-ZT-MVOLT-E10W	SURFACE	120/277	LED 4000 K	32.4	WITH BATTERY PACK
C	LITHONIA	WF4-REG-SWW5-90CRI-MW-M6	RECESSED	120	LED 4000 K	9	LISTED FOR WET LOCATIONS
EM	LITHONIA	ELM2L	WALL	120/277	LED	2	EMERGENCY LIGHT
S	LITHONIA	CLX-L48-4000LM-SEF-FDL-MVOLT-EZ1-40K-80CRI-WH-HC36M12-N100	SUSPENDED	120/277	LED 4000 K	22.8	WITH EMBEDDED LIGHTING CONTROL INTERFACE
X1	LITHONIA	LQM-S-W-3-R-120/277 M6	WALL OR CEILING	120/277	LED	4	EXIT SIGN, DIRECTIONAL ARROWS PER PLANS
X2	LITHONIA	ECRG-RD-M6	WALL OR CEILING	120/277	LED	2	EMERGENCY LIGHT / EXIT SIGN COMBO

LIGHTING CONTROL SYMBOLS (NOT ALL MAY BE USED):

LIGHTING CONTROL CATALOG NUMBERS ARE THOSE OF ACUITY BRANDS AND ARE MEANT TO ESTABLISH A BASIS OF DESIGN AND PERFORMANCE CRITERIA. 'OR EQUAL' LIGHTING CONTROL SYSTEMS IN COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS MAY BE SUBMITTED FOR APPROVAL. LIGHTING CONTROLS ARE DESIGNED TO INTEGRATE WITH MANUFACTURER'S EMBEDDED LIGHTING CONTROLS.

- OSC — nCM 10 OCCUPANCY SENSOR (CORRIDOR)
- OS — nCM PDT 9 OCCUPANCY SENSOR
- $D — nPODMA 2P DX ON/OFF & RAISE/LOWER WALL POD
- $ — nPODMA ON/OFF WALL POD
- $OS — nWSXA PDT LV DX WALL SWITCH OCCUPANCY SENSOR ON/OFF & RAISE/LOWER
- LSC — nECY-MVOLT-BAC-ENC-SEP LIGHTING NETWORK SYSTEM CONTROLLER
- P — nPP16 POWER PACK

LIGHTING CONTROL LINETYPES:

- LINE POWER
- CAT-5e CABLE

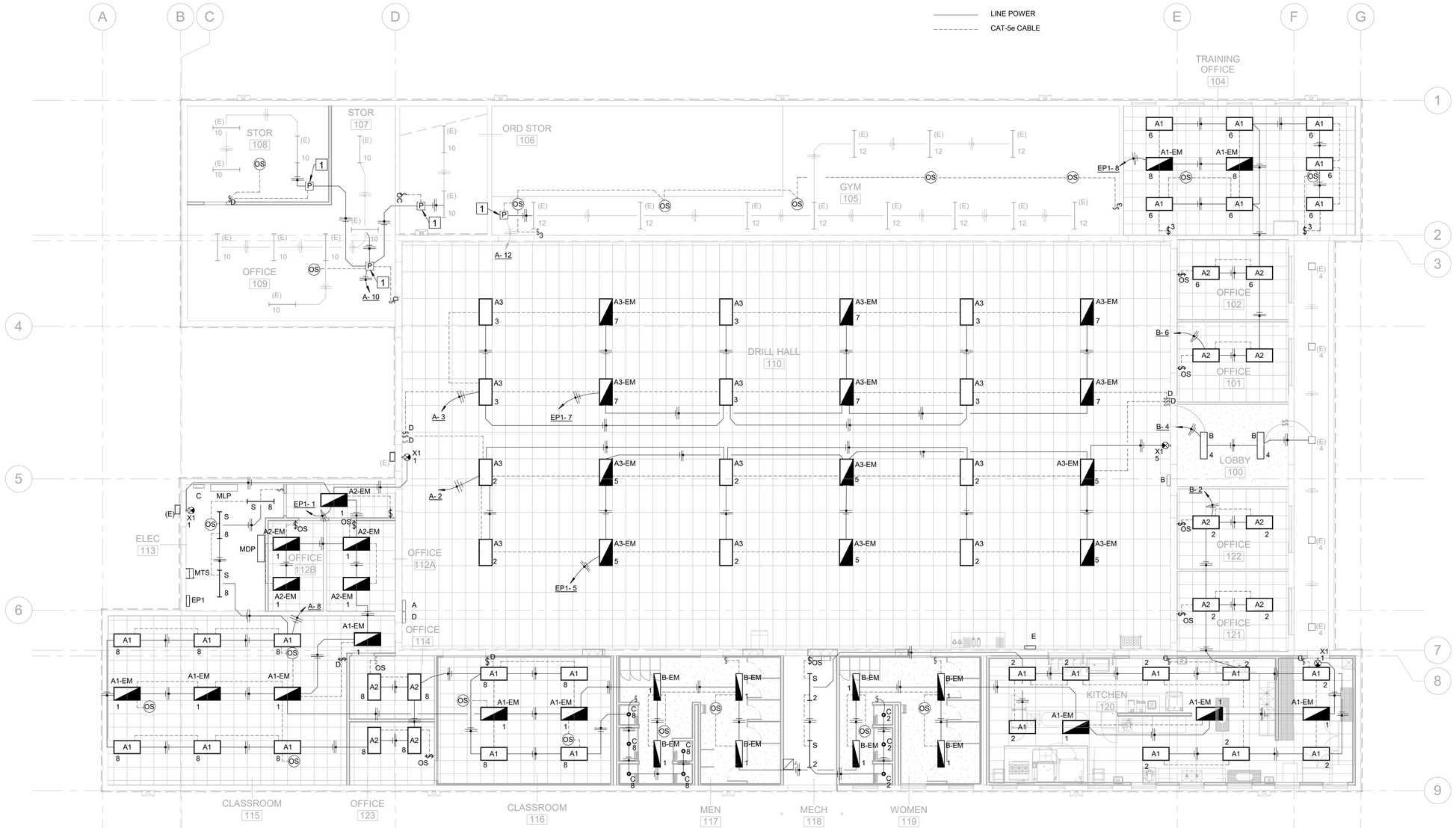
GENERAL NOTES - E121

1. EMERGENCY EXIT SIGNS AND EMERGENCY FIXTURES BATTERY PACK SHALL BE CONNECTED TO UNSWITCHED PORTION OF LIGHTING CIRCUIT.
2. DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND NOT ALL EXISTING WIRING DEVICES MAY BE SHOWN. RECEPTACLES AND DATA OULETS IN WALLS NOT BEING DEMOLISHED MAY REMAIN IN SERVICE.
3. DEVICES WITH SUBSCRIPT (E) ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

KEYED NOTES - E121

SYMBOL #

1. INTERCEPT EXISTING LIGHTING CIRCUIT AND INSTALL A 120V LIGHTING CONTROL RELAY POWER PACK TO PROVIDE LOW VOLTAGE LIGHTING CONTROL.



N

1 REFLECTED CEILING LIGHTING PLAN
SCALE: 1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STEPHEN K. SLOTTEN
NUMBER PE-2018000275
PROFESSIONAL ENGINEER
6-27-25

PROFESSIONAL SEAL

YESTAL CORPORATION
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FACILITY # 8136304011

ISSUE DATE:06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:
LIGHTING PLAN

SHEET NUMBER:
E121

06/27/2025

SYMBOL
#

KEYED NOTES - E131

1 JUNCTION BOX FOR 120V CONNECTION TO TANKLESS WATER HEATER.

2 PROVIDE 2#12 AWG IN 1/2" CONDUIT TO EACH FCU-1 FOR CONTROL CONNECTIONS TO UNIT CU-1.

3 PROVIDE WALL MOUNTED PLYWOOD BACKBOARD FOR MOUNTING OF DATA / COMMUNICATIONS EQUIPMENT.

4 PROVIDE 120V CONNECTION TO RECIRCULATION PUMP.

5 PROVIDE 2#12, 1#12G IN 1/2" CONDUIT.

GENERAL NOTES - E131

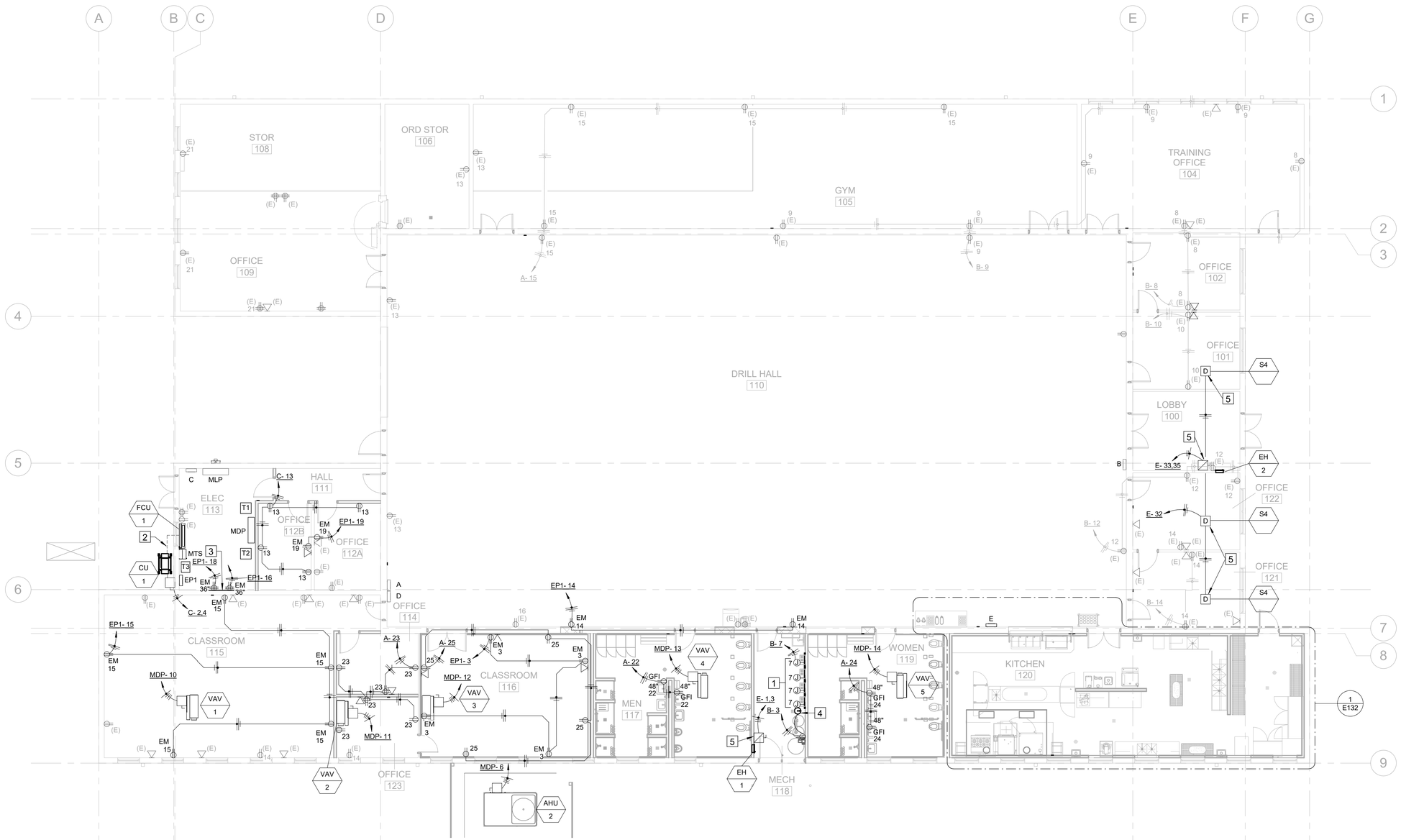
1 DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND NOT ALL EXISTING WIRING DEVICES MAY BE SHOWN. RECEPTACLES AND DATA OUTLETS IN WALLS NOT BEING DEMOLISHED MAY REMAIN IN SERVICE.

2 DEVICES WITH SUBSCRIPT (E) ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

3 RECEPTACLES TAGGED WITH 'EM' SHALL HAVE RED DEVICE AND RED COVERPLATE TO DENOTE CONNECTION TO EMERGENCY POWER.

4 DEVICES AND CIRCUITS SHOWN WITH LIGHT LINETYPE ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED. CIRCUITS ARE SCHEMATIC AND MAY NOT MATCH ACTUAL FIELD CONDITIONS.

5 CIRCUIT NUMBERS INIDCATED ON EXISTING PANELS ARE FOR REFERENCE ONLY AND ARE BASED ON EXISTING DRAWINGS AND MAY NOT MATCH CURRENT FIELD CONDITIONS. USE SPARE CIRCUITS OR CIRCUITS MADE SPARE BY DEMOLITION.



TRUE NORTH N

1 E131 POWER PLAN
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
STEPHEN K. SLOTTEN
NUMBER
PE-2018000275
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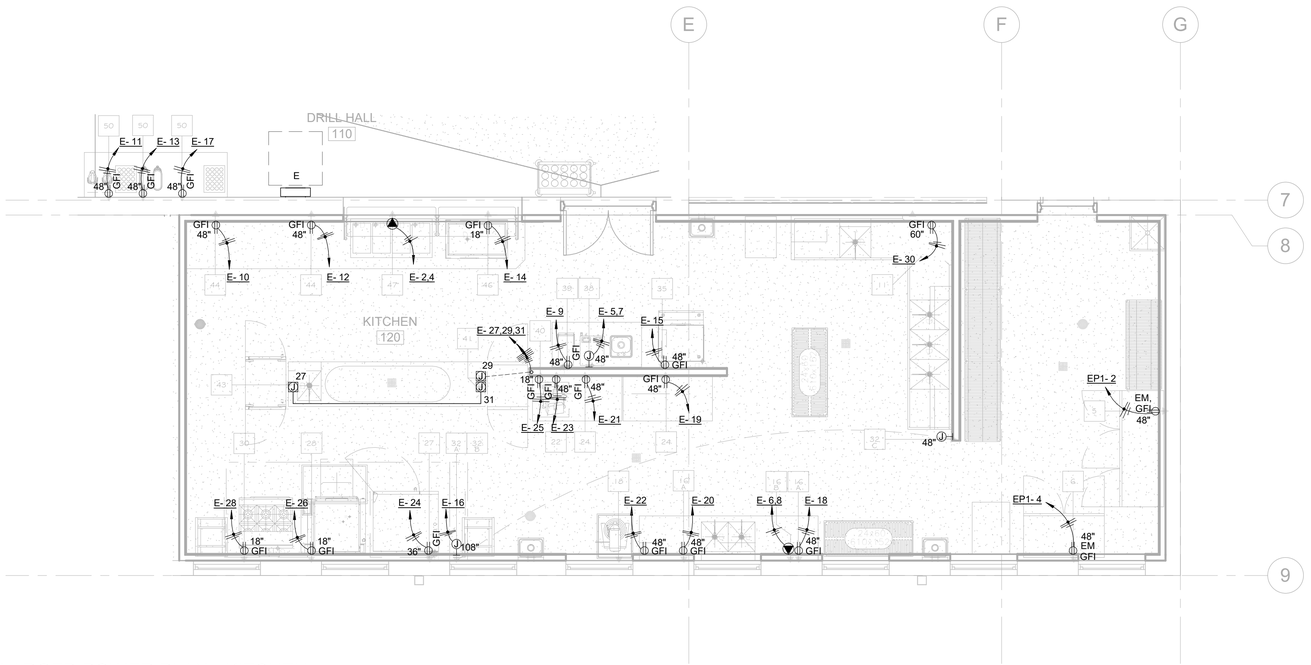
ISSUE DATE:06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:
POWER PLAN

SHEET NUMBER:
E131

06/27/2025



1 E132 ENLARGED POWER PLAN - KITCHEN

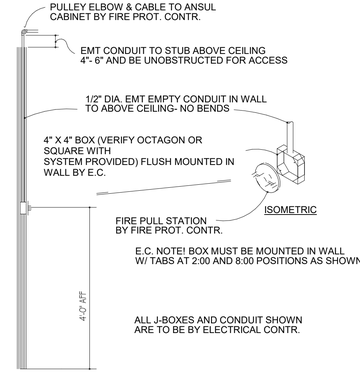
1/4" = 1'-0"

EQUIPMENT SCHEDULE

ITEM NO.	QTY.	DESCRIPTION	REMARKS
1	1	MOP SINK	BY PLUMBER
2	1	MOP RACK	BY G.C.
3	1	WALL SHELF	BY G.C.
4	1 LOT	STORAGE SHELVING	
5	1	FREEZER	THREE SECTION WITH FULL HGT DOORS
6	1	REFRIGERATOR	TWO SECTION WITH FULL HGT DOORS
7	1	CAN RACK	
8	3	HAND SINKS	WITH SIDE SPLASHES
9	1	THREE COMPARTMENT SINK/CLEAN DISH TABLE	
10	1	DOUBLE OVER SHELF	
11	1	DISH MACHINE	UL LISTED FOR VENTLESS OPERATION
12	1	SOILED DISH TABLE	
13	1	RACK SHELF	
14	1	SOILED DISH TRANSPORT CART	
15	2	POT AND PAN RACKS	
16	1	PREP TABLE	
17	1	WALL SHELF	
18	1	MIXER	20 QT.
19	1	PORTABLE MIXER STAND	
20	0	SPARE NUMBER	
21	0	SPARE NUMBER	
22	1	SLICER	
23	0	SPARE NUMBER	
24	2	WORK TABLES	
25	1	CAN OPENER	
26	1	WALL SHELF	
27	1	COMBI OVEN	SINGLE DECK
28	1	BRAISING PAN	30 GALLON
29	1	TRENCH DRAIN	
30	1	RANGE	6 BURNER WITH CONVECTION OVEN BASE
31	1	STAINLESS STEEL WALL PANELING	
32	1	HOOD WITH FIRE PROTECTION SYSTEM	
33	1	DUCT AND FAN	BY HVAC
34	1	RACK	
35	1	ICE MACHINE	
36	1	BEVERAGE COUNTER	
37	1	DROP IN DUMP SINK	
38	1	COFFEE MAKER	BY VENDOR
39	1	TEA BREWER	BY VENDOR
40	1	PASS THRU REFRIGERATOR	SINGLE SECTION WITH HALF HGT DOORS
41	1	WORK TABLE WITH SINK	
42	1	HANGING UTENSIL RACK	
43	1	HOT HOLDING CABINET	FULL HGT - PASS THRU UNIT
44	1	SERVING COUNTER	
45	0	SPARE NUMBER	
46	1	DROP IN COLD PAN	3 PAN UNIT
47	1	DROP IN HOT FOOD UNIT	4 PAN UNIT
48	1	PROTECTOR GUARD	
49	1	TRAY AND SILVER CART	
50	1	BEVERAGE COUNTER	
51	0	SPARE NUMBER	
52	2	TEA DISPENSERS	B Y VENDOR
53	2	COFFEE DISPENSERS	BY VENDOR

ELECTRICAL SCHEDULE

CONN. NO.	VOLTAGE	PHASE	AMPS LOAD	K.W. LOAD	CONN. TYPE	HGT. A.F.F.	COMMENTS
5	115	1	14		D.R.	4'-0"	
6	115	1	5.4		D.R.	4'-0"	
11	115	1	16		D.R.	5'-0"	
16A	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET
16B	208	1	30		S.R.	4'-0"	CONVENIENCE OUTLET
18	115	1	6		D.R.	4'-0"	
22	115	1	4		D.R.	4'-0"	
24	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET
27	115	1	6.8		J.B.	3'-0"	
29	115	1	9		D.R.	1'-6"	
30	115	1	4		D.R.	1'-6"	
32A	115	1	20		J.B.	9'-0"	ELECT. CONTR. SHALL PROVIDE 20 AMP 24 HR DEDICATED CIRCUIT FOR HOOD CONTROL AND FIRE PROTECTION SYSTEM AT HOOD - REFER TO HOOD WIRING DIAGRAM
32B					J.B.	9'-0"	ELECT. CONTR. SHALL INTERCONNECT EXHAUST FANS AND MAKE-UP AIR FANS TO MICRO-SWITCH IN CONTROL PANEL - REFER TO HOOD DWG FOR WIRING DIAGRAMS
32C					J.B.	4'-0"	ELECT. CONTR. SHALL PROVIDE J-BOX AND EMPTY CONDUIT IN WALL FOR REMOTE MANUAL PULL STATION - REFER TO HOOD DWG FOR WIRING DIAGRAMS
35	115	1	15.2		D.R.	4'-0"	
38	115/240	1	26	6.2	J.B.	4'-0"	VERIFY - EQUIPMENT SUPPLIED BY VENDOR
39	115	1	14	1.7	D.R.	4'-0"	VERIFY - EQUIPMENT SUPPLIED BY VENDOR
40	115	1	2.2		D.R.	1'-6"	
41	115	1	20	1.92	S.C.	4"	ELECT. CONTR. SHALL CONNECT TO J-BOX BELOW BOTTOM SHELF FOR PRE-WIRED RECEPTACLES ON TABLE.
43	115	1	12.5	1.5	S.C.	4"	ELECT. CONTR. SHALL CONNECT TO J-BOX BELOW BOTTOM SHELF FOR PRE-WIRED RECEPTACLES ON TABLE.
44	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET
46	115	1	3.5		D.R.	1'-6"	
47	208	1	14.4	4	S.R.	1'-6"	
50	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET



SECTION THRU WALL

VERIFY LOCATION OF FIRE PULL(S) W/ FIRE MARSHAL PRIOR TO INSTALLATION (MUST BE 10'-0" MIN FROM HOOD AND NO MORE THAN 48"A.F.F., AND LOCATED IN EGRESS PATH)

3 32C PULL STATION DETAIL

SCALE: 12" = 1'-0"

GENERAL NOTES - E132

1 ELECTRICAL CONTRACTOR SHALL VERIFY DIMENSIONAL LOCATIONS WITH THE KITCHEN EQUIPMENT CONTRACTOR'S SHOP DRAWINGS.

2 ELECTRICAL CONTRACTOR SHALL MAKE ALL EXTERNAL AND INTERNAL CONNECTIONS AS NECESSARY TO MAKE FOOD SERVICE EQUIPMENT FUNCTIONAL.

3 DEVICE COVERPLATES IN THE FOOD SERVICE KITCHEN SHALL BE STAINLESS STEEL TYPE.

4 RECEPTACLES MOUNTED GREATER THAN 48" FOR KITCHEN EQUIPMENT SHALL BE INSTALLED HORIZONTALLY.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI STEPHEN K. SLOTTEN NUMBER PE-2018000275 PROFESSIONAL ENGINEER

6-27-25

PROFESSIONAL SEAL

VESTAL CORPORATION

DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE:06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:

ENLARGED PLAN - KITCHEN

SHEET NUMBER:

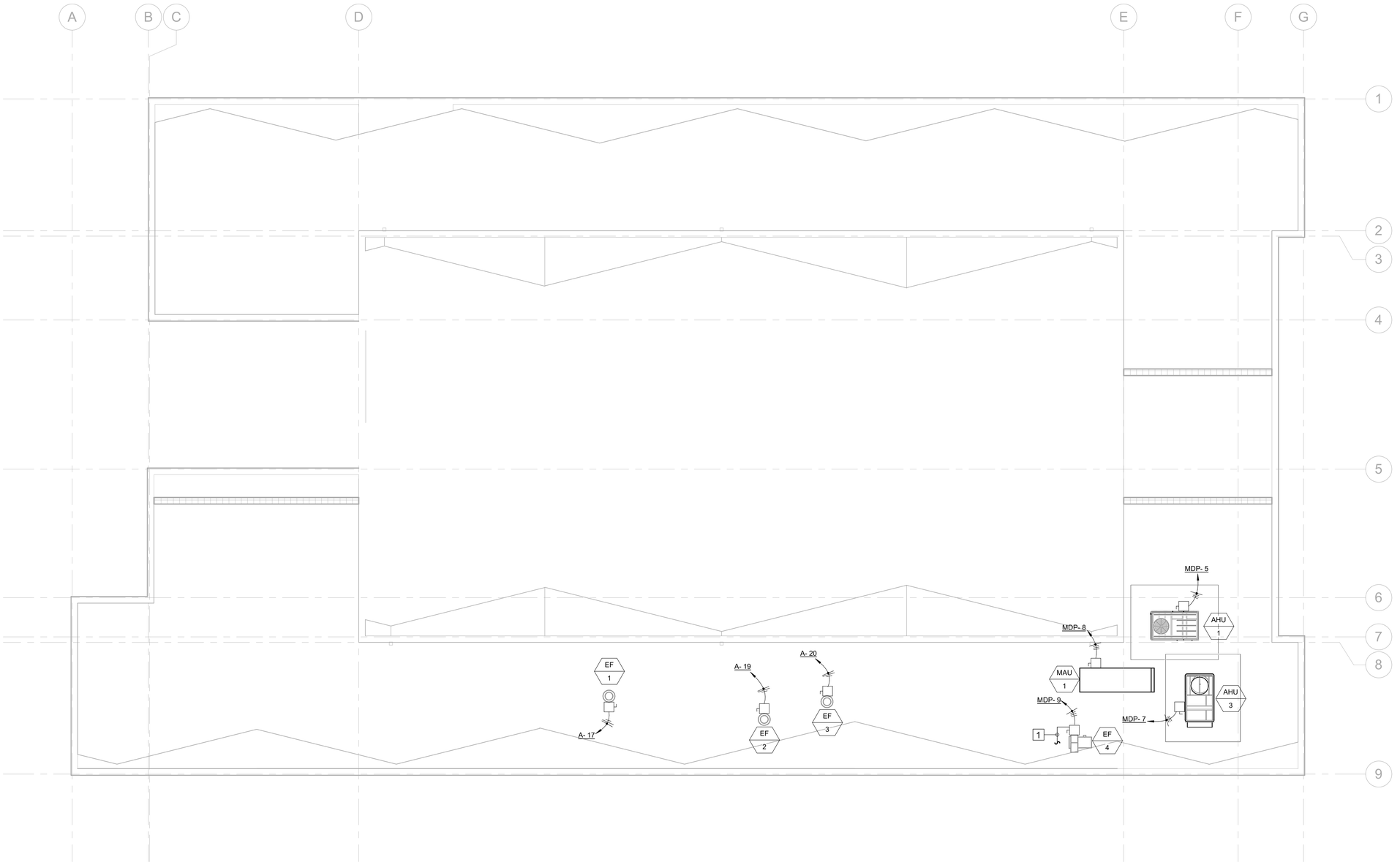
E132

06/27/2025

SYMBOL
[#]

KEYED NOTES - E133

1 PROVIDE CONDUIT AND CONTROL WIRING TO KITCHEN EXHAUST HOOD CONTROLLER FOR HOOD / FAN INTERLOCK.



N
TRUE NORTH

1 E133 ROOF PLAN
1/8" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
STEPHEN K. SLOTTEN
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SITE # 6304
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ISSUE DATE:06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:

ELECTRICAL - ROOF POWER PLAN

SHEET NUMBER:

E133

06/27/2025

MECHANICAL EQUIPMENT DATA SCHEDULE

								DISCONNECT AT EQUIPMENT					STARTER				
PLAN MARK	EQUIPMENT	LOCATION	HP	KW	VOLTS	PHASE	MCA/MOP	FEEDER	FURN. BY	INST. BY	TYPE	SIZE	FURN BY	INST. BY	TYPE	SIZE	REMARKS
AHU-1	AIR HANDLING UNIT	ROOF			480	3	16/20	REF. E701	M.C.	M.C.			M.C.				
AHU-2	AIR HANDLING UNIT	GRADE			480	3	33/45	REF. E701	M.C.	M.C.			M.C.				
AHU-3	AIR HANDLING UNIT	ROOF			480	3	30/40	REF. E701	M.C.	M.C.			M.C.				
CU-1	CONDENSING UNIT	GRADE			230	1	22/37		M.C.	M.C.			M.C.				POWERS UNIT FCU-1
EF-1	EXHAUST FAN	ROOF	1/12		120	1	-	2#12,1#12G	ELEC	E.C.	NEMA 3R	30A, NF	E.C.				
EF-2	EXHAUST FAN	ROOF	1/25		120	1	-	2#12,1#12G	ELEC	E.C.	NEMA 3R	30A, NF	E.C.				
EF-3	EXHAUST FAN	ROOF	1/12		120	1	-	2#12,1#12G	ELEC	E.C.	NEMA 3R	30A, NF	E.C.				
EF-4	EXHAUST FAN	ROOF	3/4		480	3	2/15	REF. E701	ELEC	E.C.	NEMA 3R	30A, NF	E.C.				INTERLOCK WITH KITCHEN HOOD
EH-1	ELECTRIC UNIT HEATER	MECH 118		3	208	1	-	2#12,1#12G	M.C.	M.C.	NEMA 1	30A, NF	M.C.				
EH-2	ELECTRIC UNIT HEATER	LOBBY 100		3	208	1	-	2#12,1#12G	M.C.	M.C.	NEMA 1	30A, NF	M.C.				
FCU-1	FAN COIL UNIT	ELEC 113			230	1	-	2#12,1#12G	ELEC	E.C.	NEMA 1	30A, NF	M.C.				POWERED BY CU-1
MAU-1	MAKE-UP AIR UNIT	ROOF	5		460	3	4.6/15	REF. E701	M.C.	M.C.	NEMA 3R	30A, NF	M.C.	M.C.	VFD		
S4	AIR DIFFUSER	OFFICES 101,121,122			120	1	-	2#12,1#12G									
VAV-1	VARIABLE AIR VOLUME	CLASS. 116		6	480	3	9/15	REF. E701	M.C.	M.C.			M.C.				
VAV-2	VARIABLE AIR VOLUME	OFFICE 123		6	480	3	9/15	REF. E701	M.C.	M.C.			M.C.				
VAV-3	VARIABLE AIR VOLUME	CLASS. 115		6	480	3	9/15	REF. E701	M.C.	M.C.			M.C.				
VAV-4	VARIABLE AIR VOLUME	MEN 117		2	480	3	3/15	REF. E701	M.C.	M.C.			M.C.				
VAV-5	VARIABLE AIR VOLUME	WOMEN 119		2	480	3	3/15	REF. E701	M.C.	M.C.			M.C.				

STATE OF MISSOURI
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375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE:06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:

ELECTRICAL - DETAILS

SHEET NUMBER:

E501

06/27/2025

Switchboard: MDP

Location: ELEC 113 | **Volts:** 480/277 Wye | **A.I.C. Rating:** DO NOT USE
Supply From: | **Phases:** 3 | **Mains Type:** BKR
Mounting: DO NOT USE | **Wires:** 4 | **Mains Rating:** 400 A
Enclosure: | **MCB Rating:** 400 A

Notes:
FRAME SIZES SHOWN ARE FOR REFERENCE ONLY. THE SELECTED MANUFACTURER SHALL PROVIDE APPROPRIATE FRAME SIZES BASED ON THEIR EQUIPMENT SPECIFICATIONS.

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	T1 - MLP	2	200 A	200 A	29303 VA	BACKFEED EXISTING MLP
2	T2 - PANEL E	3	200 A	125 A	54325 VA	KITCHEN
3	T3 - PANEL EP1	3	60 A	50 A	7431 VA	EMERGENCY POWER PANEL
4	Spare	3	60 A	40 A	0 VA	
5	AHU-1	3	60 A	20 A	10629 VA	
6	AHU-2	3	60 A	40 A	21923 VA	
7	AHU-3	3	60 A	40 A	19930 VA	
8	MAU-1	3	60 A	20 A	3054 VA	
9	EF-4	3	60 A	20 A	768 VA	
10	VAV-1	3	60 A	20 A	7474 VA	
11	VAV-2	3	60 A	20 A	7474 VA	
12	VAV-3	3	60 A	20 A	7474 VA	
13	VAV-4	3	60 A	20 A	2001 VA	
14	VAV-5	3	60 A	20 A	2001 VA	
				Total Conn. Load:	144482 VA	
				Total Amps:	174 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	16349 VA	100.00%	16349 VA		
Receptacle	32372 VA	65.45%	21186 VA	**Total Conn. Load:**	144482 VA
Power	93718 VA	100.00%	93718 VA	**Total Est. Demand:**	133807 VA
Lighting	2043 VA	125.00%	2554 VA	**Total Conn.:**	174 A
				Total Est. Demand:	161 A

Notes:

Switchboard: MLP

Location: ELEC 113 | **Volts:** 120/240 Single | **A.I.C. Rating:** DO NOT USE
Supply From: | **Phases:** 1 | **Mains Type:** FUSES
Mounting: DO NOT USE | **Wires:** 3 | **Mains Rating:** 400 A
Enclosure: | **MCB Rating:** 400 A

Notes:
EXISTING PANEL

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	EXHAUST FAN - ASSEMBLY HALL	2	30 A	20 A	3840 VA	EXISTING FAN
2	EXHAUST FAN - ASSEMBLY HALL	2	30 A	20 A	3840 VA	EXISTING FAN
3	PANEL A	2	100 A	100 A	9934 VA	EXISTING PANEL
4	PANEL B	2	100 A	100 A	6229 VA	EXISTING PANEL
5	PANEL C	2	100 A	100 A	5280 VA	EXISTING PANEL
6	PANEL D	2	100 A	100 A	0 VA	EXISTING PANEL
				Total Conn. Load:	29123 VA	
				Total Amps:	121 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	8080 VA	100.00%	8080 VA		
Receptacle	12780 VA	89.12%	11390 VA	**Total Conn. Load:**	29123 VA
Power	4860 VA	100.00%	4860 VA	**Total Est. Demand:**	28584 VA
Lighting	3403 VA	125.00%	4254 VA	**Total Conn.:**	121 A
				Total Est. Demand:	119 A

Notes:

Branch Panel: EP1

Location: ELEC 113 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: T3 | **Phases:** 3 | **Mains Type:** BKR
Mounting: | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: Type 1 | **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	LIGHTING - RESTROOMS, KITCHEN, CLASS,...	20 A	1	987 VA	1680...					1	20 A	FREEZER	2
3	CLASSROOM 116	20 A	1			720 VA	648 VA			1	20 A	REFRIGERATOR	4
5	LIGHTING - ASSEMBLY HALL	20 A	1					497 VA	0 VA	1	20 A	Spare	6
7	LIGHTING - ASSEMBLY HALL	20 A	1	497 VA	63 VA					1	20 A	CLASSROOM 104	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	360 VA					1	20 A	RECEPTACLES - DRILL HALL	14
15	RECEPTACLES - CLASSROOM 115	20 A	1			900 VA	360 VA			1	20 A	QUAD RECEPTACLE	16
17	Spare	20 A	1					0 VA	360 VA	1	20 A	QUAD RECEPTACLE	18
19	RECEPTACLES - OFFICES 112A, 112B	20 A	1	360 VA	0 VA					1	20 A	Spare	20
21	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	22
23	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	24
25	Space	--	1	--	--					1	--	Space	26
27	Space	--	1			--	--			1	--	Space	28
29	Space	--	1					--	--	1	--	Space	30
			Total Load:	3946 VA		2628 VA		857 VA					
			Total Amps:	35 A		24 A		7 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	5388 VA	100.00%	5388 VA		
Lighting	2043 VA	125.00%	2554 VA	**Total Conn. Load:**	7431 VA
				Total Est. Demand:	7942 VA
				Total Conn.:	21 A
				Total Est. Demand:	22 A

Notes:

Branch Panel: A

Location: DRILL HALL 110 | **Volts:** 120/240 Single | **A.I.C. Rating:** 10,000
Supply From: MLP | **Phases:** 1 | **Mains Type:** MLO
Mounting: | **Wires:** 3 | **Mains Rating:** 225 A
Enclosure: Type 1 | **MCB Rating:** 0 A

Notes:
EXISTING PANEL

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	SPARE (FORMER LIGHTING CKT.)	20 A	1	0 VA	497 VA			1	20 A	LIGHTING - ASSEMBLY HALL	2
3	LIGHTING - ASSEMBLY HALL	20 A	1			497 VA	0 VA	1	20 A	SPARE (FORMER LIGHTING CKT.)	4
5	SPARE (FORMER LIGHTING CKT.)	20 A	1	0 VA	0 VA			1	20 A	SPARE (FORMER LIGHTING CKT.)	6
7	SPARE (FORMER LIGHTING CKT.)	20 A	1			0 VA	579 VA	1	20 A	LIGHTING - CLASSROOMS, OFFICE	8
9	SPARE (FORMER LIGHTING CKT.)	20 A	1	0 VA	251 VA			1	20 A	LIGHTING - ORDNANCE, OFFICE STOR.	10
11	SPARE (FORMER LIGHTING CKT.)	20 A	1			0 VA	251 VA	1	20 A	LIGHTING - GYM (FORMER RANGE)	12
13	(EXISTING) RECEPTACLES, OVERHEAD DOOR	20 A	1	720 VA	720 VA			1	20 A	(EXISTING) RECEPTACLES	14
15	(EXISTING) RECEPTACLES - GYM	20 A	1			900 VA	540 VA	1	20 A	(EXISTING) RECEPTACLES	16
17	EF-1 (FORMERLY LOCKER EXHAUST FAN)	20 A	1	100 VA	1080 VA			1	20 A	(EXISTING) RECEPTACLES WATER FOUNTAIN,...	18
19	EF-2 (FORMERLY TOILET EXHAUST FAN)	20 A	1			100 VA	100 VA	1	20 A	EF-3 (FORMERLY KITCHEN REC.)	20
21	(EXISTING) RECEPTACLES - UNIT STOR.	20 A	1	720 VA	360 VA			1	20 A	RECEPTACLES - MEN'S	22
23	RECEPS. OFFICE 114 (FORMER KITCHEN REC)	20 A	1			1440 VA	360 VA	1	20 A	RECEPTACLES - WOMEN'S	24
25	RECEPS. CLASS 116 (FORMER KITCHEN REC)	20 A	1	720 VA	0 VA			1	20 A	Spare	26
27	(EXISTING) Spare	40 A	2			0 VA	0 VA	1	20 A	Spare	28
29				0 VA	0 VA			1	20 A	Spare	30
			Total Load:	5168 VA		4766 VA					
			Total Amps:	43 A		40 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	7560 VA	100.00%	7560 VA		
Power	300 VA	100.00%	300 VA	**Total Conn. Load:**	9934 VA
Lighting	2074 VA	125.00%	2592 VA	**Total Est. Demand:**	10452 VA
				Total Conn.:	41 A
				Total Est. Demand:	44 A

Notes:

STATE OF MISSOURI
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DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:
PANEL SCHEDULES

SHEET NUMBER:
E601

06/27/2025

Branch Panel: B

Location: DRILL HALL 110
Supply From: MLP
Mounting:
Enclosure: Type 1

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating: 10,000
Mains Type: MLO
Mains Rating: 225 A
MCB Rating: 0 A

Notes:
EXISTING PANEL

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	SPARE (FORMER LIGHTING CKT.)	20 A	1	0 VA	508 VA			1	20 A	LIGHTING - OFFICES, KITCHEN	2
3	REC. FOR WATER SOFTENER. RECIRC. PUMP.	20 A	1			180 VA	448 VA	1	20 A	(EXISTING) LIGHTING - FRONT CANOPY	4
5					373 VA			1	20 A	LIGHTING - OFFICES, TRAINING	6
7	TANKLESS WH CONTROL BOXES (FORMER...	20 A	1			400 VA	720 VA	1	20 A	(EXISTING) RECEPTACLES	8
9	(EXISTING) RECEPTACLES	20 A	1	1080 VA	360 VA			1	20 A	(EXISTING) RECEPTACLES	10
11	(EXISTING) RECEPTACLES	20 A	1			900 VA	720 VA	1	20 A	(EXISTING) RECEPTACLES	12
13	(EXISTING) CLOCK	20 A	1	0 VA	540 VA			1	20 A	(EXISTING) RECEPTACLES	14
15	SPARE (FORMER A/C UNIT)	20 A	2			0 VA	0 VA	2	30 A	SPARE (FORMER A/C UNIT)	16
17				0 VA	0 VA						18
19	(EXISTING) UNIT SIGN	20 A	1			0 VA	0 VA	2	20 A	SPARE (FORMER A/C UNIT)	20
21	Spare	20 A	1	0 VA	0 VA						22
23	SPARE (FORMER FURNACE)	20 A	2			0 VA					24
25				0 VA							26
27											28
29											30
			Total Load:	2861 VA		3368 VA					
			Total Amps:	24 A		28 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	400 VA	100.00%	400 VA		
Receptacle	4500 VA	100.00%	4500 VA	**Total Conn. Load:**	6229 VA
Lighting	1329 VA	125.00%	1661 VA	**Total Est. Demand:**	6561 VA
				Total Conn.:	26 A
				Total Est. Demand:	27 A

Notes:

Branch Panel: C

Location: ELEC 113
Supply From: MLP
Mounting:
Enclosure: Type 1

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating: 10,000
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: 0 A

Notes:
EXISTING PANEL

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	SPARE	50 A	2	0 VA	2280 VA			2	30 A	CU-1	2
3						0 VA	2280 VA				4
5	SPARE (FORMER FURNACE)	50 A	2	0 VA							6
7						0 VA					8
9	SPARE (FORMER A/C)	20 A	2	0 VA							10
11						0 VA					12
13	RECEPTACLES, OFFICES 112A, 112B	20 A	1	720 VA							14
15											16
17											18
19											20
			Total Load:	3000 VA		2280 VA					
			Total Amps:	25 A		19 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	720 VA	100.00%	720 VA		
Power	4560 VA	100.00%	4560 VA	**Total Conn. Load:**	5280 VA
				Total Est. Demand:	5280 VA
				Total Conn.:	22 A
				Total Est. Demand:	22 A

Notes:

Branch Panel: D

Location: DRILL HALL 110
Supply From: MLP
Mounting:
Enclosure: Type 1

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating: 10,000
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: 0 A

Notes:
EXISTING PANEL

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1					0 VA			2	20 A	SPARE (FORMER A/C)	2
3							0 VA				4
5					0 VA			2	20 A	(EXISTING) - FRONT OFFICE HEATER	6
7							0 VA				8
9											10
11											12
13											14
15											16
17											18
19											20
21											22
23											24
			Total Load:	0 VA		0 VA					
			Total Amps:	0 A		0 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn.:	0 A
				Total Est. Demand:	0 A

Notes:

Branch Panel: E

Location: DRILL HALL 110
Supply From: T2
Mounting:
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: BKR
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EH-1	20 A	2	1500...	1500...					2	20 A	HOT FOOD DROP-IN UNIT	2
3						1500...	1500...						4
5	COFFEE MAKER	40 A	2					3100...	2496...	2	30 A	PREP TABLE	6
7				3100...	2496...								8
9	TEA BREWER	20 A	1			1700...	1920...			1	20 A	SERVING COUNTER	10
11	BEVERAGE COUNTER	20 A	1					1920...	1920...	1	20 A	SERVING COUNTER	12
13	BEVERAGE COUNTER	20 A	1	1920...	420 VA					1	20 A	DROP-IN COLD PAN	14
15	ICE MACHINE	20 A	1			1824...	1800...			1	20 A	HOOD CONTROL	16
17	BEVERAGE COUNTER	20 A	1					1920...	1920...	1	20 A	PREP TABLE	18
19	WORK TABLE	20 A	1	1920...	1920...					1	20 A	PREP TABLE	20
21	WORK TABLE	20 A	1			1920...	720 VA			1	20 A	MIXER	22
23	SLICER	20 A	1					480 VA	816 VA	1	20 A	COMBI-OVEN	24
25	PASS-THRU REF.	20 A	1	264 VA	1080...					1	20 A	BRAISING PAN	26
27	HOT HOLDING CABINET	20 A	1			1500...	480 VA			1	20 A	RANGE	28
29	WORK TABLE RECEPTACLES	20 A	1					1920...	1920...	1	20 A	DISH MACHINE	30
31	WORK TABLE RECEPTACLES	20 A	1	1920...	9 VA					1	20 A	DIFFUSERS RMS 101,121,122	32
33	EH-2	20 A	2			1500...							34
35								1500...					36
37													38
39													40
41													42
			Total Load:	18049 VA		16364 VA		19912 VA					
			Total Amps:	153 A		136 A		168 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	16349 VA	100.00%	16349 VA		
Receptacle	26984 VA	68.53%	18492 VA	**Total Conn. Load:**	54325 VA
Power	10992 VA	100.00%	10992 VA	**Total Est. Demand:**	45833 VA
				Total Conn.:	151 A
				Total Est. Demand:	127 A

Notes:

KEYED NOTES - E602

1 EXISTING 50A/2P SPARE BREAKER.

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STEPHEN K. SLOTTEN NUMBER PE-2018000275 PROFESSIONAL ENGINEER
6-27-25

PROFESSIONAL SEAL

YESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

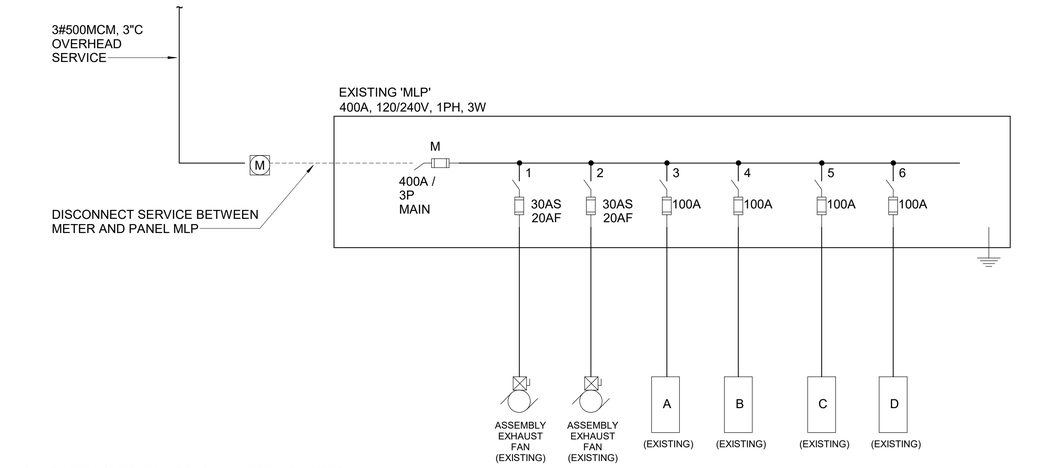
ISSUE DATE:06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:
PANEL SCHEDULES

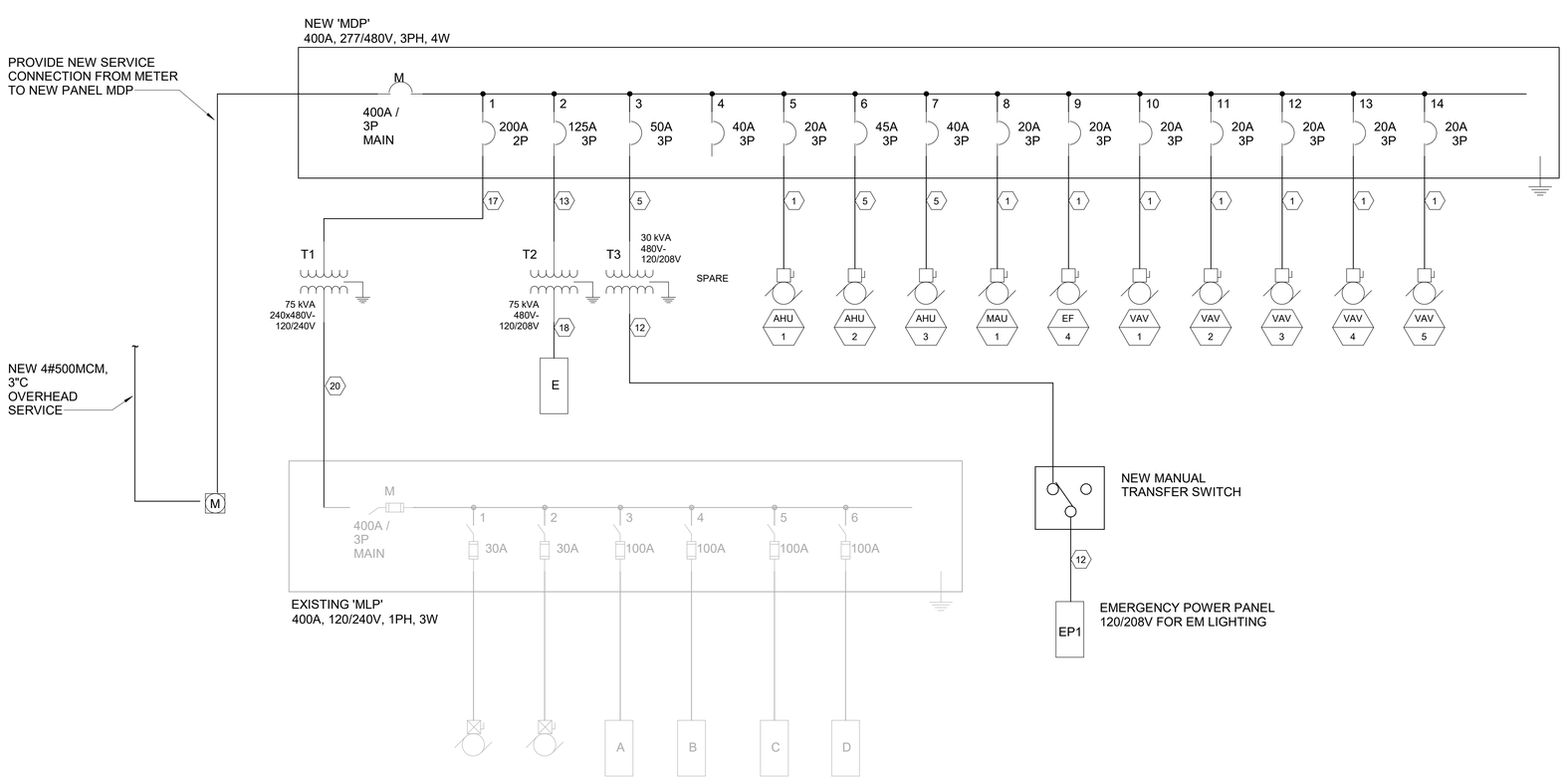
SHEET NUMBER:
E602

06/27/2025



1 ONE-LINE DIAGRAM - DEMOLITION

FEEDER SCHEDULE									
	PHASE		NEUTRAL		EQUIPMENT GROUND		MINIMUM CONDUIT		RATED AMPS (NEC)
FEEDER #	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	
1	3	12			1	12	1	3/4"	20
2	3	12	1	12	1	12	1	3/4"	20
3	3	10			1	10	1	3/4"	30
4	3	10	1	10	1	10	1	3/4"	30
5	3	8			1	10	1	3/4"	50
6	3	8	1	8	1	10	1	3/4"	50
7	3	6			1	10	1	3/4"	60
8	3	6	1	6	1	10	1	1"	60
9	3	4			1	8	1	1-1/4"	80
10	3	4	1	4	1	8	1	1-1/4"	80
11	3	3			1	8	1	1-1/4"	100
12	3	3	1	3	1	8	1	1-1/4"	100
13	3	1			1	6	1	1-1/2"	125
14	3	1	1	1	1	6	1	1-1/2"	125
15	3	1/0			1	6	1	1-1/2"	150
16	3	1/0	1	1/0	1	6	1	1-1/2"	150
17	3	4/0			1	4	1	2"	225
18	3	4/0	1	4/0	1	4	1	2-1/2"	225
19	3	500			1	3	1	3"	400
20	3	500	1	500	1	3	1	4"	400



2 ONE-LINE DIAGRAM - NEW

STATE OF MISSOURI
MICHAEL L. KEHOE,
GOVERNOR

STATE OF MISSOURI
STEPHEN K. SLOTTEN
NUMBER
PE-2018000275
PROFESSIONAL ENGINEER

6-27-25

PROFESSIONAL SEAL

YESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
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DEPARTMENT OF
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ST. CLAIR READINESS
CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/27/2025

CAD DWG FILE:
DRAWN BY: SKS
CHECKED BY: JCA
DESIGNED BY: SKS

SHEET TITLE:
ONE-LINE RISER
DIAGRAM

SHEET NUMBER:
E701

06/27/2025

FOR QUESTIONS, CALL THE
St. Louis & Little Rock Office
REGION 72
PHONE: (636) 225 - 3113
EMAIL: reg72@captiveaire.com

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

HOOD INFORMATION – JOB#6644084

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)							TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP			END TO END	ROW
1	Item 32	6618 SND-2-PSP-F	CAPTIVEAIRE	12' 6"	600 DEG	I	HEAVY	235	2938			4"	12"	1469	1870	-0.756"	2350	304 SS WHERE EXPOSED	ALONE	ALONE
												4"	12"	1469	1870	-0.756"				

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY		
1	Item 32	CAPTRATE SOLO FILTER	9	20"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	LEFT	12"x27"x24"					YES	871 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	Item 32	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 116.00" HIGH X 198.00" LONG 304 SS VERTICAL.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 74" HIGH INSULATED 304 SS.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 74" HIGH INSULATED 304 SS.
		SENSOR-CV.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1	Item 32	Front	150"	20"	6"	MUA	12"	28"		1174	0.388"
						MUA	12"	28"		1174	0.388"

WALL-MOUNT UTILITY CABINET

HOOD NO	LOCATION	SIZE	UTILITY CABINET(S)				WEIGHT
			FIRE SYSTEM		ELECTRICAL	SWITCHES	
			TYPE	SIZE	MODEL #	QUANTITY	
1	WALL MNT	12"x36"x24"	TANK FS	4.0/4.0			300.00 LBS

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐
Approved with NO Exception Taken ☐
Revise and Resubmit ☐
SIGNATURE _____
Your Title _____ Date _____

SND–2 Series with PSP Accessory Specification

The SND-2 series hood with PSP accessory is a low proximity compensating hood system, The hood shall have the size, shape and performance specified on drawings.

Construction shall be type 430 stainless steel with a #3 or #4 polish where exposed. Individual component construction shall be determined by the manufacturer and ETL. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints and penetrations of the hood enclosure to the lower outermost perimeter that directs and captures grease-laden vapor and exhaust gases shall have a liquid-tight continuous external weld in accordance with NFPA 96. Hood shall be wall type with fully welded 10 gauge corner hanging angles. Corner hanging angles have a .625 x 1.500 slot pre-punched at the factory, allowing hanging rods to be used for quick and safe installations. Hanging rod and connection is provided by and installed by others.

Ventilator shall be furnished with U.L. classified aluminum baffle filters, supplied in size and quantity as required by ventilator. The filters shall extend the full length of the hood and the filler panels shall not be more than 6" in width.

The hood manufacturer shall supply complete computer generated submittal drawings including hood section view(s) and hood plan view(s), These drawings must be available to the engineer, architect and owner for their use in construction, operation and maintenance.

Exhaust duct collar to be 4" high with 1" flange. Duct sizes, CFM and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

U.L. incandescent light fixtures and globes shall be installed and pre-wired to a junction box. The light fixtures shall be installed with a maximum of 4'0" spacing on center and allow up to a 100 watt standard light bulb.

The hood shall have:
-A double wall insulated front to eliminate condensation and increase rigidity. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.
-An integral front baffle to direct grease laden vapors toward the exhaust filter bank.
-A built-in wiring chase provided for outlets and electrical controls on the hood face and shall not penetrate the capture area or require an external chaseway.
-Low velocity make-up air (up to 90%) is provided through front and side plenums (PSP accessory).
-A removable grease cup for easy cleaning.

The hood shall be ETL Listed as "Exhaust Hood Without Exhaust Damper", ETL Sanitation Listed and built In accordance with NFPA 96. The hood shall be listed for 450°F cooking surfaces at 228 CFM/ft and 600°F cooking surfaces at 294 CFM/ft.

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

UL 710 AND NFPA 96

AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED

ETL LISTED
FILE# 102900319PRT-001

SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

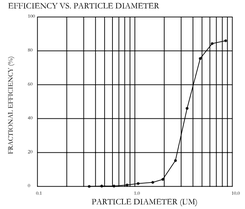
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S),

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

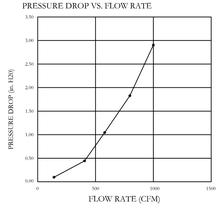
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05, MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



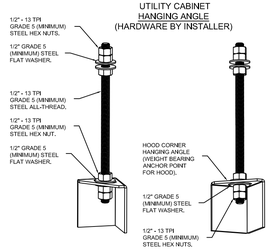
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:.
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

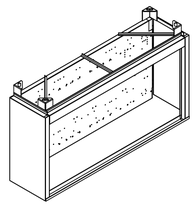
WALL-MOUNT UTILITY CABINET
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH UTILITY CABINET HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

CABINET TO BE HUNG BY HOOD INSTALLER. SEE UTILITY CABINET SCHEDULE FOR CABINET SIZE.

UTILITY CABINET
HANGING ANGLE
(HARDWARE BY INSTALLER)





REVISIONS	
DESCRIPTION	DATE:
△	
△	
△	
△	

CAPTIVE-AIRE
St. Louis & Little Rock Office
16024 Manchester Rd., Suite 233, Ellisville, MO, 63011 PHONE: (636) 225 - 3113 FAX: 9192275939 EMAIL: reg72@captiveaire.com
www.captiveaire.com

Missouri Readiness Center St. Clair R1
SAINT CLAIR, MO, 63077

DATE: 2/27/2024
DWG.#: 6644084
DRAWN BY:
SCALE: 3/4" = 1'–0"
MASTER DRAWING
SHEET NO. 1

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

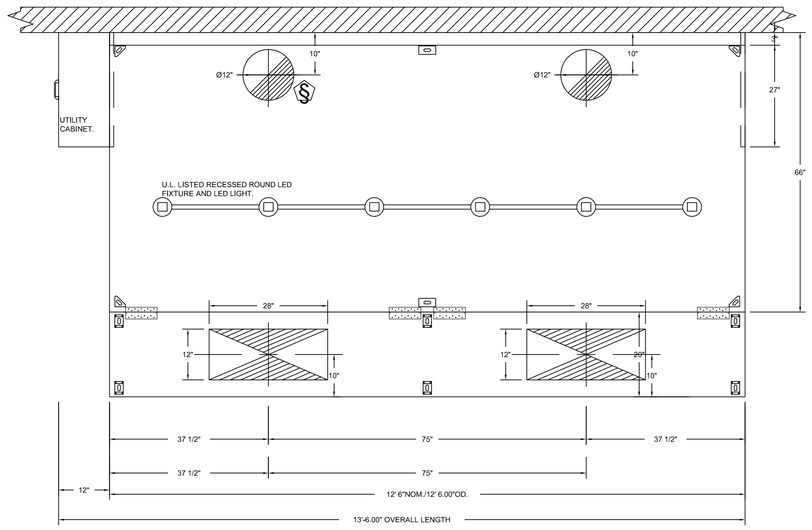
ISSUE DATE: 6/27/2025

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DESIGNED BY: MDG

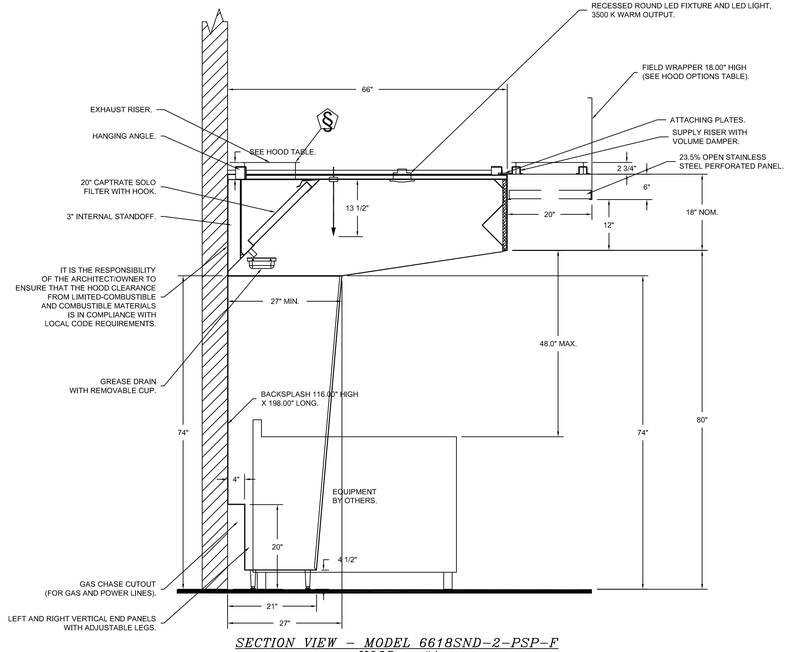
SHEET TITLE:
FOODSERVICE EQUIPMENT HOOD DRAWINGS

SHEET NUMBER:
Q-DT-01

6/27/2025



PLAN VIEW – HOOD #1 (Item 32)
12' 6.00" LONG 6618SND-2-PSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



SECTION VIEW – MODEL 6618SND-2-PSP-F
HOOD – #1

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVEAIRE
St. Louis & Little Rock Office
16024 Manchester Rd., Suite 233, Ellisville, MO. 63011 PHONE: (636) 225 - 3113 FAX: 9192275939 EMAIL: reg72@captiveaire.com
www.captiveaire.com

Missouri Readiness Center St. Clair R1
SAINT CLAIR, MO, 63077

DATE: 2/27/2024

DWG.#: 6644084

DRAWN BY:

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

MASTER DRAWING

SHEET NO. 2

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

ESTAL CORPORATION

DGG
DANIEL G. GOMEZ, INC.
CONSULTING ENGINEERS
1034 S. BRENTWOOD BLVD.
SUITE 1850
ST. LOUIS, MO 63117

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: MDG
CHECKED BY: MDG
DESIGNED BY: MDG

SHEET TITLE:
FOODSERVICE EQUIPMENT HOOD DRAWINGS

SHEET NUMBER:
Q-DT-02

6/27/2025

FIRE SYSTEM INFORMATION – JOB#6644084

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	36	WALL UTILITY CABINET LEFT	N/A

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-OT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS, NO, CLOSE ON TEMP RISE AT 360°F.	2	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	2	0
		0 - 0 - 361091 3/8" BRASS PLUG.	3	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79425 3/8" NPT FEMALE TO 1/2" MALE PROPRESS ADAPTER.	3	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	6	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	8	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION, 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - BI145 3/8" BLACK IRON 90 ELL.	4	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - SLPCON-40FT SUPERVISED LOOP CONNECTION KIT, CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 39' GAP. KIT CONTAINS 42 FEET OF BLACK MG WIRE, 42 FEET OF TAN MG WIRE, 40 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	8	0
		16 - 16 - OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE),	8	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	8	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0

NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

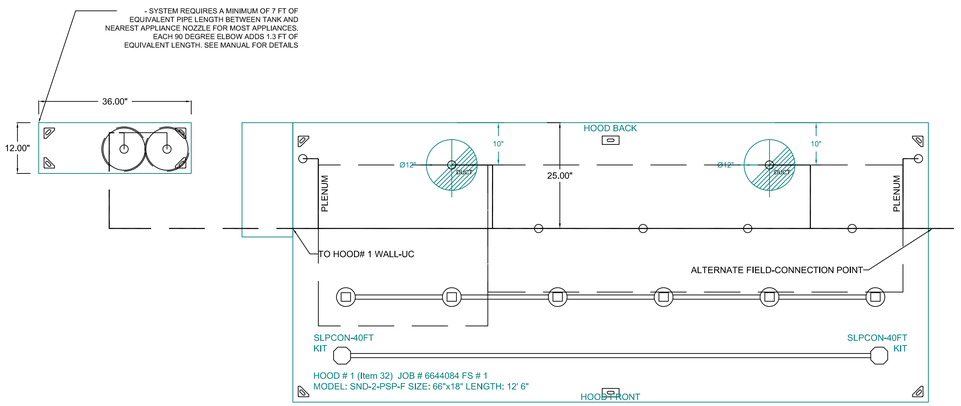
JOB #: 6644084.
JOB NAME: MISSOURI READINESS CENTER ST. CLAIR R1.

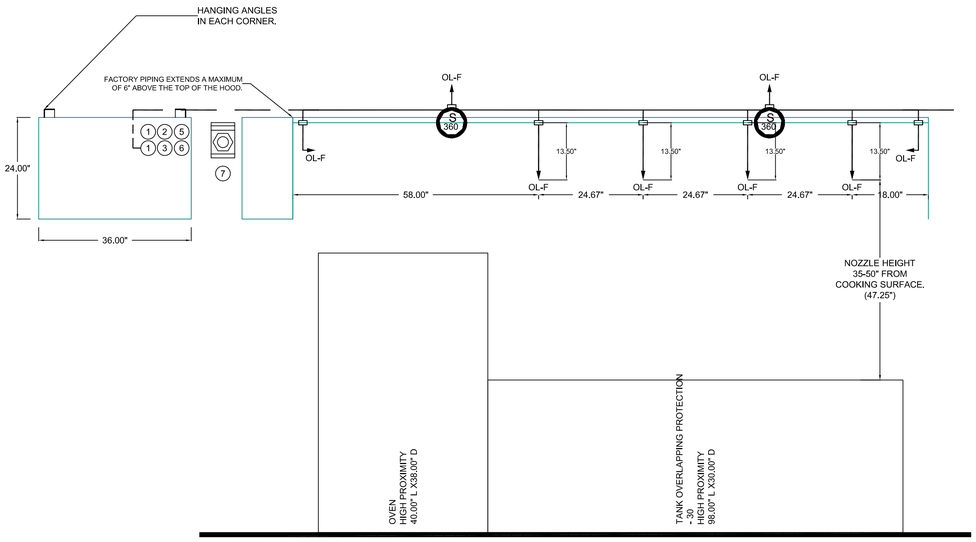
SYSTEM SIZE: TANK-SP-2-WC DESIGN FP: 36, MAXIMUM FP: 40.
HOOD # 1 12' 6.00" LONG x 66" WIDE x 18" HIGH.
RISER # 1 SIZE: 12" DIA.
RISER # 2 SIZE: 12" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND – FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.



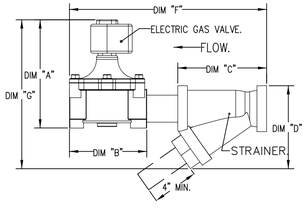


GAS VALVES AND STRAINERS

	GAS VALVE SIZING						GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1	ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,908,046 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/ VERTICAL	8214280	4417668	(SC)ECVA2

ALL GAS VALVES/STRAINERS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$.



REVISIONS

	DESCRIPTION	DATE:
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△		

CAPTIVEAIRE
St. Louis & Little Rock Office
16024 Manchester Rd., Suite 233, Ellisville, MO. 63011 PHONE: (636) 225 - 3113 FAX: 9192275939 EMAIL: regi72@captiveaire.com
www.captiveaire.com

Missouri Readiness Center St. Clair R1
SAINT CLAIR, MO, 63077

DATE: 2/27/2024

DWG.#: 6644084

DRAWN BY:

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

MASTER DRAWING

SHEET NO. 3

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: MDG
CHECKED BY: MDG
DESIGNED BY: MDG

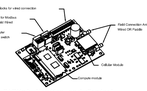
SHEET TITLE:
FOODSERVICE EQUIPMENT HOOD DRAWINGS

SHEET NUMBER:
Q-DT-03

6/27/2025

ELECTRICAL PACKAGE – JOB#6644084

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	#	HP	VOLT	PH
1		DCV-1111	WALL MOUNT IN SS BOX	UTILITY CABINET LEFT	1 LIGHT 1 FAN	SMART CONTROLS DCV					



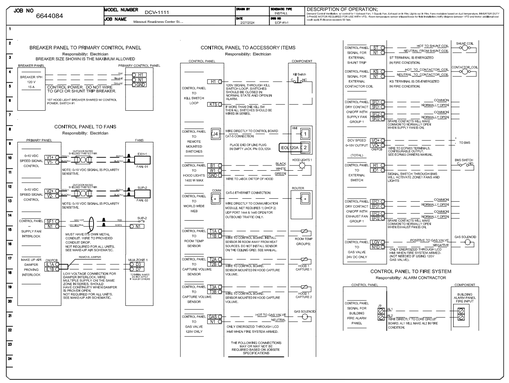
CASLink Monitor and Control

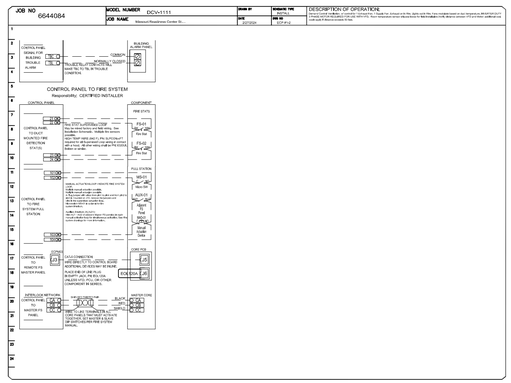
— *Fixed control panel to support communications to cloud-based Building Management System.*
— *Fixed Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.*
— *Fixed Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.*
— *Fixed Control Panel to allow cloud-based Building Management System to control ENTIRE STOVE/EXHAUST control strategy for fully integrated Building Management.*

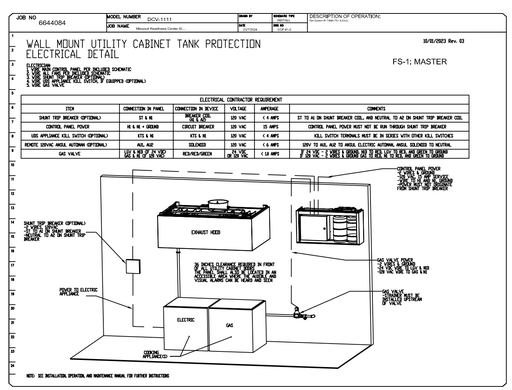
MONITORING AND CONTROL POINTS LIST

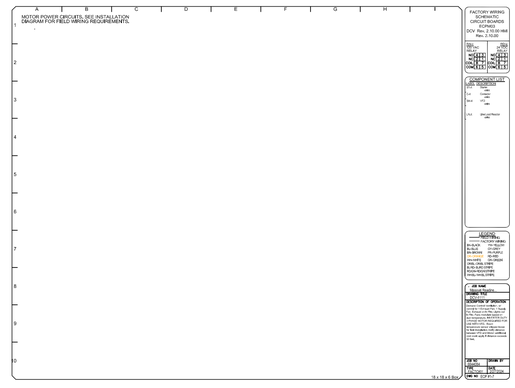
DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
RTU Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Diagnostic	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
MUC Faults	MONITOR
MUC Filter Dig Percentage	MONITOR
Fire Condition	MONITOR
CEMS Fire System	MONITOR
Building Pressure	MONITOR
Prog. Fan Rules	MONITOR & CONTROL
Fans Rules	MONITOR & CONTROL
Lights Rules	MONITOR & CONTROL
Fault Rules	MONITOR & CONTROL

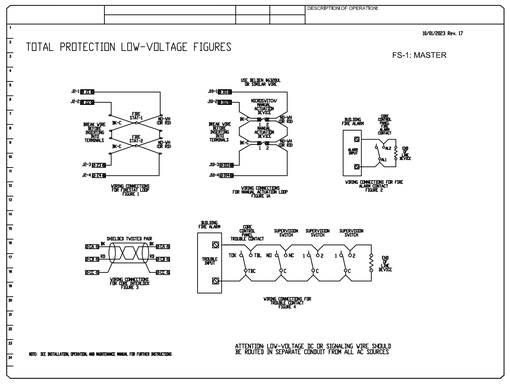
RV Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
MUC Filter Dig Percentage	MONITOR
Fire Condition	MONITOR
CEMS Fire System	MONITOR
Building Pressure	MONITOR
Fans Rules(s)	MONITOR & CONTROL
Lights Rules(s)	MONITOR & CONTROL
Fault Rules	MONITOR & CONTROL

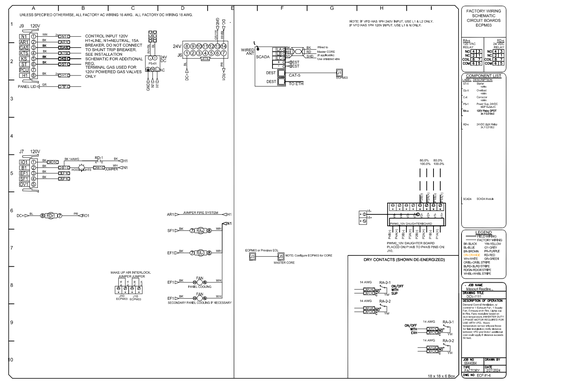


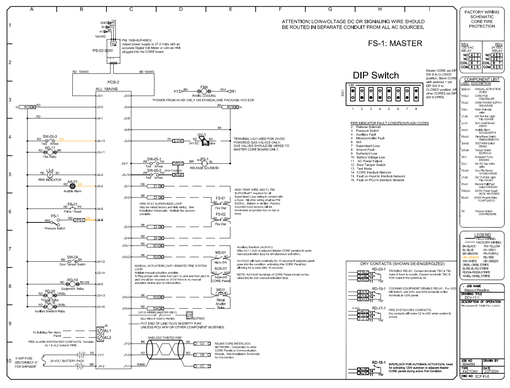






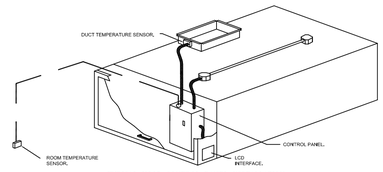






DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FANS(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:
THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD, DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC" FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODABLE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN. THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

REVISIONS

	DESCRIPTION	DATE:
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St. Louis & Little Rock Office
16024 Manchester Rd., Suite 233, Ellisville, MO. 63011 PHONE: (636) 225 - 3113 FAX: 9192279939 EMAIL: regr72@captiveaire.com
www.captiveaire.com

Missouri Readiness Center St. Clair R1

SAINT CLAIR, MO, 63077

DATE: 2/27/2024

DWG.#: 6644084

DRAWN BY:

SCALE: 1/2" = 1'–0"

MASTER DRAWING

SHEET NO. 4

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: MDG
CHECKED BY: MDG
DESIGNED BY: MDG

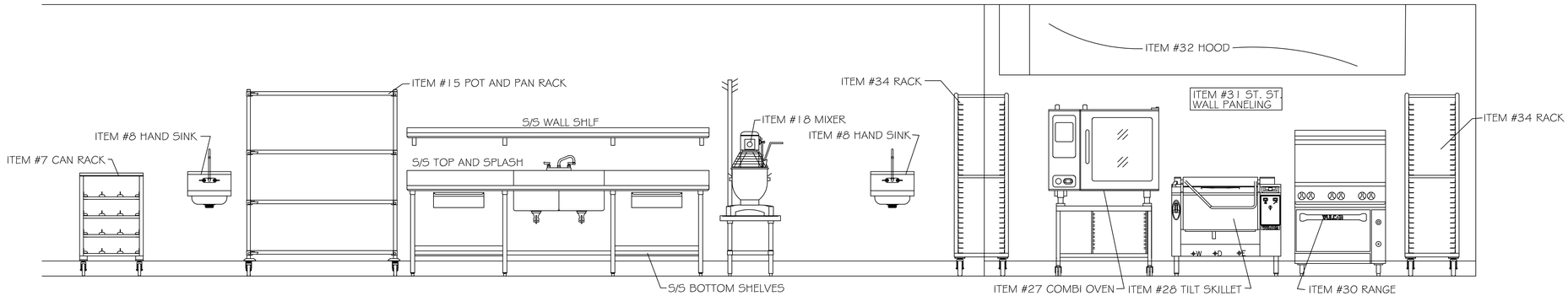
SHEET TITLE:

FOODSERVICE EQUIPMENT HOOD DRAWINGS

SHEET NUMBER:

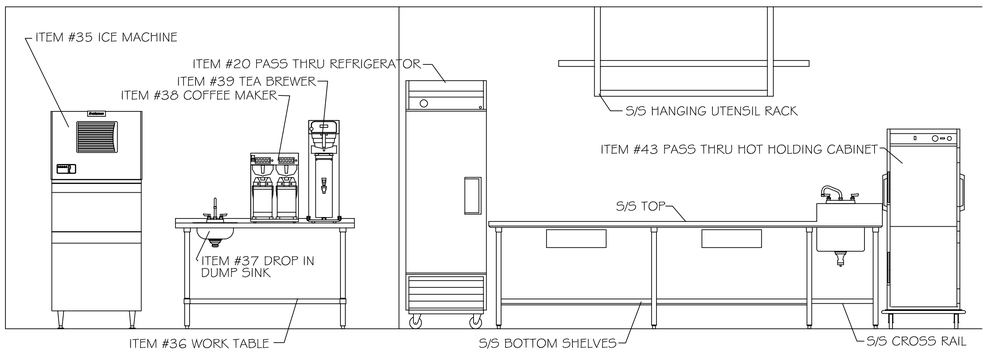
Q-DT-04

6/27/2025



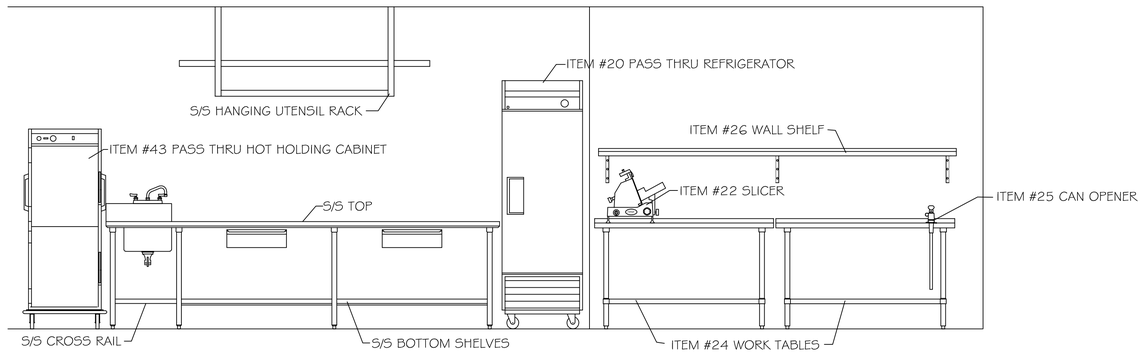
ELEVATION - ITEM #16 PREP TABLE

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



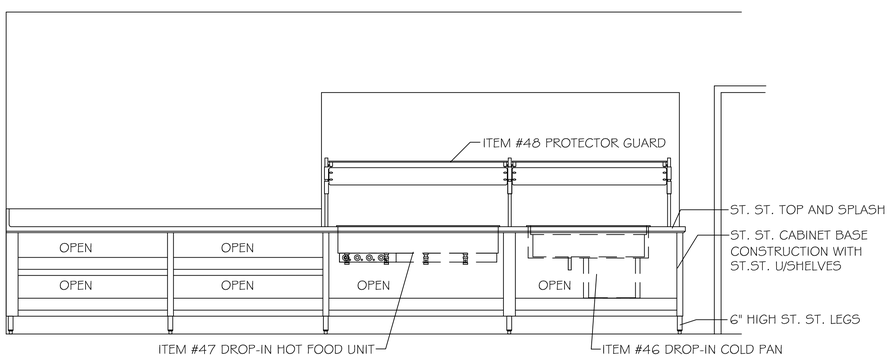
ELEVATION - ITEM #41 WORK TABLE WITH SINK

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



ELEVATION - ITEM #41 WORK TABLE WITH SINK

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



ELEVATION - ITEM #44 SERVING COUNTER

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

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

OFFICE OF ADMINISTRATION
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375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

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SITE # 6304
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ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: MDG
CHECKED BY: MDG
DESIGNED BY: MDG

SHEET TITLE:

FOODSERVICE EQUIPMENT ELEVATIONS

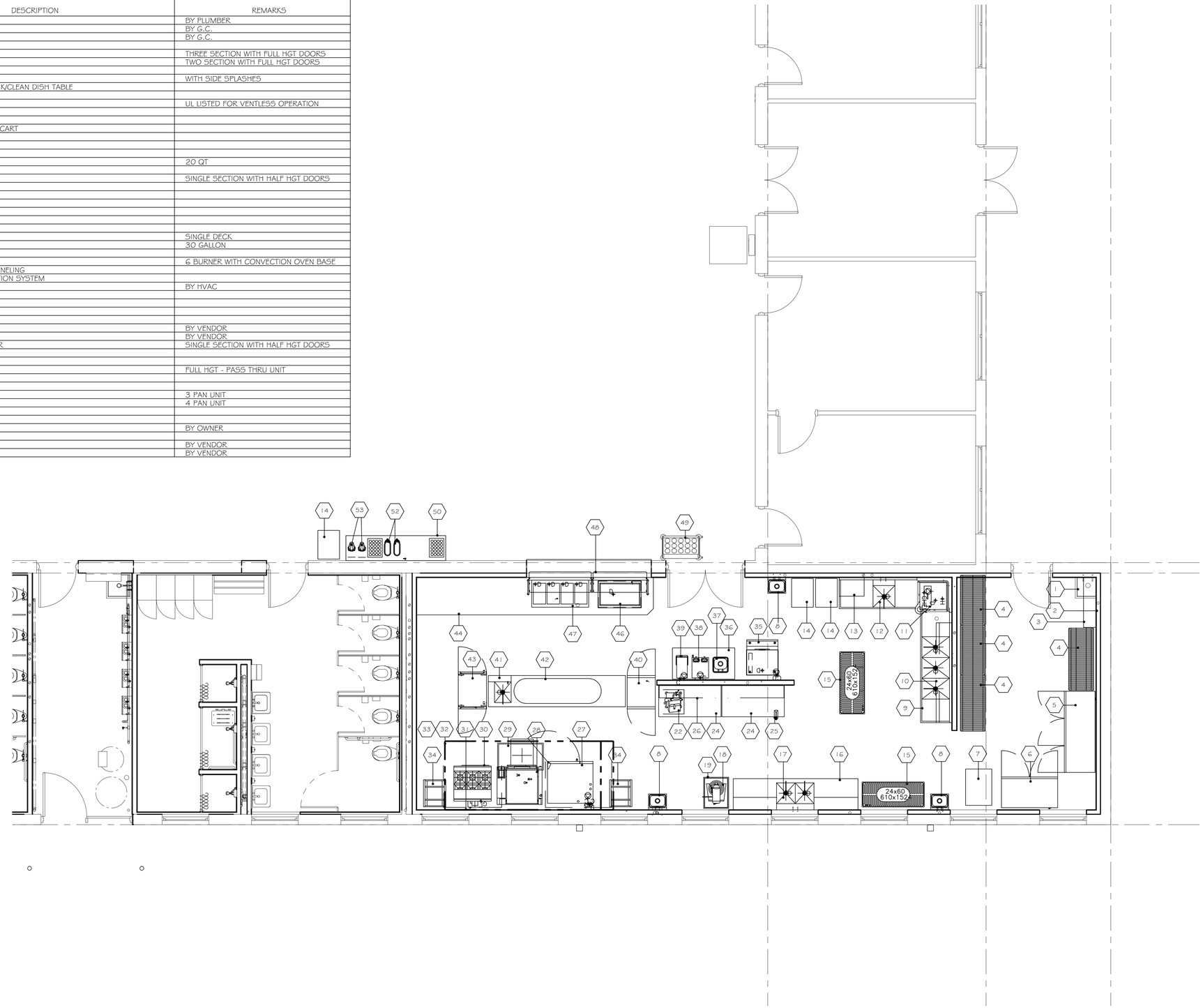
SHEET NUMBER:

Q-DT-05

6/27/2025

EQUIPMENT SCHEDULE

ITEM NO.	QTY.	DESCRIPTION	REMARKS
1	1	MOP SINK	BY PLUMBER
2	1	MOP RACK	BY G.C.
3	1	WALL SHLEF	BY G.C.
4	1 LOT	STORAGE SHELVING	
5	1	FREEZER	THREE SECTION WITH FULL HGT DOORS
6	1	REFRIGERATOR	TWO SECTION WITH FULL HGT DOORS
7	1	CAN RACK	
8	3	HAND SINKS	WITH SIDE SPLASHES
9	1	THREE COMPARTMENT SINK/CLEAN DISH TABLE	
10	1	DOUBLE OVER SHELF	
11	1	DISH MACHINE	UL LISTED FOR VENTLESS OPERATION
12	1	SOILED DISH TABLE	
13	1	RACK SHELF	
14	3	SOILED DISH TRANSPORT CART	
15	2	POT AND PAN RACKS	
16	1	PREP TABLE	
17	1	WALL SHELF	
18	1	MIXER	20 QT
19	1	PORTABLE MIXER STAND	
20	0	SPARE NUMBER	SINGLE SECTION WITH HALF HGT DOORS
21	0	SPARE NUMBER	
22	1	SLICER	
23	0	SPARE NUMBER	
24	2	WORK TABLES	
25	1	CAN OPENER	
26	1	WALL SHELF	
27	1	COMBI OVEN	SINGLE DECK
28	1	BRAISING PAN	30 GALLON
29	1	TRENCH DRAIN	
30	1	RANGE	6 BURNER WITH CONVECTION OVEN BASE
31	1	STAINLESS STEEL WALL PANELING	
32	1	HOOD WITH FIRE PROTECTION SYSTEM	
33	1	DUCT AND FAN	BY HVAC
34	2	RACK	
35	1	ICE MACHINE	
36	1	BEVERAGE COUNTER	
37	1	DROP IN DUMP SINK	
38	1	COFFEE MAKER	BY VENDOR
39	1	TEA BREWER	BY VENDOR
40	1	PASS THRU REFRIGERATOR	SINGLE SECTION WITH HALF HGT DOORS
41	1	WORK TABLE WITH SINK	
42	1	HANGING UTENSIL RACK	
43	1	HOT HOLDING CABINET	FULL HGT - PASS THRU UNIT
44	1	SERVING COUNTER	
45	0	SPARE NUMBER	
46	1	DROP IN COLD PAN	3 PAN UNIT
47	1	DROP IN HOT FOOD UNIT	4 PAN UNIT
48	1	PROTECTOR GUARD	
49	1	TRAY AND SILVER CART	
50	1	BEVERAGE TABLE	BY OWNER
51	0	SPARE NUMBER	
52	2	TEA DISPENSERS	BY VENDOR
53	2	COFFEE DISPENSERS	BY VENDOR



1 FOODSERVICE EQUIPMENT FLOOR PLAN
1/4" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

ESTAL CORPORATION

DGG
DAVIS GRAHAM & GRAHAM, INC.
ARCHITECTURE | ENGINEERING
314.878.2100 | dgginc.com

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: MDG
CHECKED BY: MDG
DESIGNED BY: MDG

SHEET TITLE:
FLOOR PLAN

SHEET NUMBER:
Q-FP-01

6/27/2025

ELECTRICAL NOTES:

1. ALL ELECTRICAL OUTLETS AND CONNECTIONS SHOWN ON PLAN ARE FOR FOODSERVICE EQUIPMENT AND ARE FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL VERIFY ALL LEFT TO RIGHT DIMENSIONAL LOCATIONS WITH THE KITCHEN EQUIPMENT CONTRACTOR'S SHOP DRAWINGS.
2. ELECTRICAL CONTRACTOR SHALL VERIFY ALL INCOMING SERVICES, MAKE ALL EXTERNAL & INTERNAL CONNECTIONS AND PROVIDE ALL SWITCHES, BREAKERS, PANEL BOARDS, CONDUITS, J-BOXES, ETC. AS NECESSARY TO MAKE FOODSERVICE EQUIPMENT FUNCTIONAL.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL J-BOXES, OUTLETS AND RECEPTACLES IN FIXTURES. FIXTURE FABRICATOR TO LOCATE ALL RECEPTACLES AND/OR SWITCHES WHEN PART OF THE FIXTURE. INTERNAL WIRING SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
4. ELECTRICAL CONTRACTOR SHALL MAKE ALL INTER-CONNECTIONS FOR ALL FOODSERVICE EQUIPMENT REQUIRING A FIELD JOINT DUE TO LENGTH OR OTHER CONSTRAINTS. (THIS MAY INCLUDE BUT IS NOT LIMITED TO: EXHAUST VENTILATORS, CHEFS COUNTERS, BUFFET COUNTERS, CONVEYORS, ETC.)
5. ALL SYMBOLS NOTED AS 12", 18", 24", ETC. ARE FROM FINISHED FLOOR TO CENTERLINE OF STUB-OUT AT HEIGHT INDICATED ON PLAN. ALL SYMBOLS NOTED AS STUB-UP SHALL TERMINATE IN A J-BOX MOUNTED HORIZONTAL TO THE FINISHED FLOOR. THE J-BOX TOP SHALL BE AT 5 1/2" A.F.F. AND SHALL BE FITTED WITH APPROPRIATE RECEPTACLE AND FACE PLATE.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE A 6'-0" PIGTAIL FLEX CONDUIT AT ALL DIRECT CONNECT STUB-OUTS. ELECTRICAL CONTRACTOR TO EXTEND AND CONNECT TO ALL EQUIPMENT AND/OR FIXTURES AS REQUIRED.
7. ELECTRICAL CONTRACTOR SHALL CONNECT 120V CONTROL CIRCUIT FROM FIRE PROTECTION SYSTEM TO CONTROL COIL.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE A MINIMUM OF 3 WIRES ON ALL 208 OR 230 VOLT CIRCUITS.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL SERVICE ON ROOF FOR EXHAUST AND/OR MAKE-UP AIR SYSTEMS. ELECTRICAL CONTRACTOR SHALL VERIFY LOCATION.
10. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL UNDERBAR LIGHTING AND CONNECT BACKBAR DISPLAY LIGHTING.
11. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL STAINLESS STEEL COVER PLATES ON ALL RECEPTACLES AND SWITCHES IN FOODSERVICE AREAS. ALL RECEPTACLES ABOVE 48" SHALL BE SET HORIZONTALLY.
12. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL GENERAL LIGHTING FIXTURES. DECORATIVE LIGHTING FIXTURES SUPPLIED BY THE KITCHEN EQUIPMENT CONTRACTOR SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
13. ELECTRICAL CONTRACTOR SHALL PROVIDE CAPS AND CORDS FOR ALL ITEMS WHICH USE CONVENIENCE OUTLETS WHEN NOT SUPPLIED BY THE MANUFACTURER. ELECTRICAL CONTRACTOR SHALL SHORTEN ANY CORDS IF NECESSARY OR IF REQUESTED. KITCHEN EQUIPMENT CONTRACTOR SHALL COORDINATE.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE TWIST-LOCK TYPE RECEPTACLES ON ALL PENDANT CORDS THAT HANG FROM A CEILING JUNCTION BOX. KITCHEN EQUIPMENT CONTRACTOR SHALL PROVIDE TWIST-LOCK PLUGS ON ALL FOODSERVICE EQUIPMENT POWERED BY THE PENDANT CORDS.
15. ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL FLY FANS AND/OR AIR CURTAINS PROVIDED AND INSTALLED BY THE KITCHEN EQUIPMENT CONTRACTOR.
16. LIGHT AND POWER PANELS SHALL BE SELECTED AND SIZED TO ALLOW FOR A 20 PERCENT CIRCUIT CAPACITY FOR FUTURE USE.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUIT FOR BEVERAGE AND REMOTE REFRIGERATION LINES AS REQUIRED. CONDUIT BENDS SHALL BE A MINIMUM OF 24" RADIUS.
18. BEVERAGE AND/OR REFRIGERATION CONDUIT LINES DEPICTED ON PLAN ARE SCHEMATIC ONLY. ACTUAL LINE RUN LOCATION/ROUTE SHALL BE VERIFIED AND COORDINATED BY THE ELECTRICAL CONTRACTOR AND KITCHEN EQUIPMENT CONTRACTOR AND/OR VENDOR.
19. BEVERAGE CONDUITS REQUIRE A PULL BOX OR PULL SLEEVE EVERY 75'-0" OR EVERY THREE (3) BENDS, WHICH EVER COMES FIRST. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL PULL BOXES. KITCHEN EQUIPMENT CONTRACTOR TO COORDINATE LOCATION BASED ON MANUFACTURER'S RECOMMENDATION.
20. ELECTRICAL CONTRACTOR SHALL CONNECT ALL COMPRESSORS COMPLETE WITH DISCONNECT SWITCHES AND MAGNETIC STARTERS.
21. ELECTRICAL CONTRACTOR SHALL PROVIDE ON/OFF SWITCH WITH MAGNETIC STARTER(S) FOR EXHAUST FAN AND/OR MAKE-UP AIR FAN.
22. ELECTRICAL CONTRACTOR SHALL VERIFY ALL WIRING OF WALK-IN COOLERS/FREEZERS, EXHAUST HOODS, BUFFET COUNTER, DISH MACHINES AND BOOSTER HEATERS, ETC. WITH SHOP DETAILS.
23. ELECTRICAL CONTRACTOR SHALL VERIFY TYPE OF CONDUIT THAT MEETS LOCAL CODES.
24. ELECTRICAL CONTRACTOR SHALL PROVIDE SEAL TIGHT CONDUIT IN ALL EXPOSED AREAS.
25. KITCHEN EQUIPMENT CONTRACTOR SHALL VERIFY ALL UTILITY LOADS SHOWN ON THIS PLAN. IF DISCREPANCIES ARE FOUND, THE KITCHEN EQUIPMENT CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE CHANGES REQUIRED WITH ALL TRADES AND PARTIES INVOLVED PRIOR TO PURCHASE AND INSTALLATION OF EQUIPMENT. THE KITCHEN EQUIPMENT CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH ANY CHANGES REQUIRED AS A RESULT OF ITS FAILURE TO COORDINATE AS REQUIRED.
26. ELECTRICAL CONTRACTOR SHALL PROVIDE A DEDICATED CIRCUIT WITH AN ISOLATED GROUND FOR ALL POINT OF SALE AND COMPUTER EQUIPMENT SHOWN ON PLAN.
27. ELECTRICAL CONTRACTOR SHALL INTER-WIRE ALL WALK-IN COOLER/ FREEZER LIGHTS (AS REQUIRED.) ALL CONDUIT SHALL BE RUN ON THE TOP EXTERIOR CEILING OF THE WALK-IN. ALL PENETRATIONS SHALL BE SEALED BY THE KITCHEN EQUIPMENT CONTRACTOR.
28. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SHUNT-TRIP BRANCH BREAKER FOR ALL ELECTRICAL APPLIANCES UNDER THE EXHAUST HOODS UNLESS OTHER WISE NOTED OR PROVIDED IN A UTILITY DISTRIBUTION SYSTEM.

LEGEND

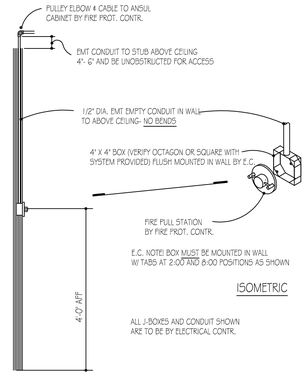
A.	AMPERES
A.F.F.	ABOVE FINISHED FLOOR
C.O.	CONVENIENCE OUTLET
D.F.A.	DOWN FROM ABOVE
E.C.	ELECTRICAL CONNECTION
D.R.	DUPLEX RECEPTACLE
J.B.	JUNCTION BOX
S.R.	SINGLE RECEPTACLE
H.P.	HORSE POWER
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
K.W.	KILOWATTS
P.W.	PRE-WIRED
P	PHONE LINE/SYSTEM
S.D.	STUB-DOWN
S.O.	STUB-OUT
S.U.	STUB-UP

NOTES:
1. MECHANICAL AND ELECTRICAL REQUIREMENTS SHOWN ARE FOR FOOD SERVICE EQUIPMENT ONLY.

2. ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACE FLOOR (FLOOR, WALL OR CEILING) TO THE CENTERLINE OF ROUGH-INS.

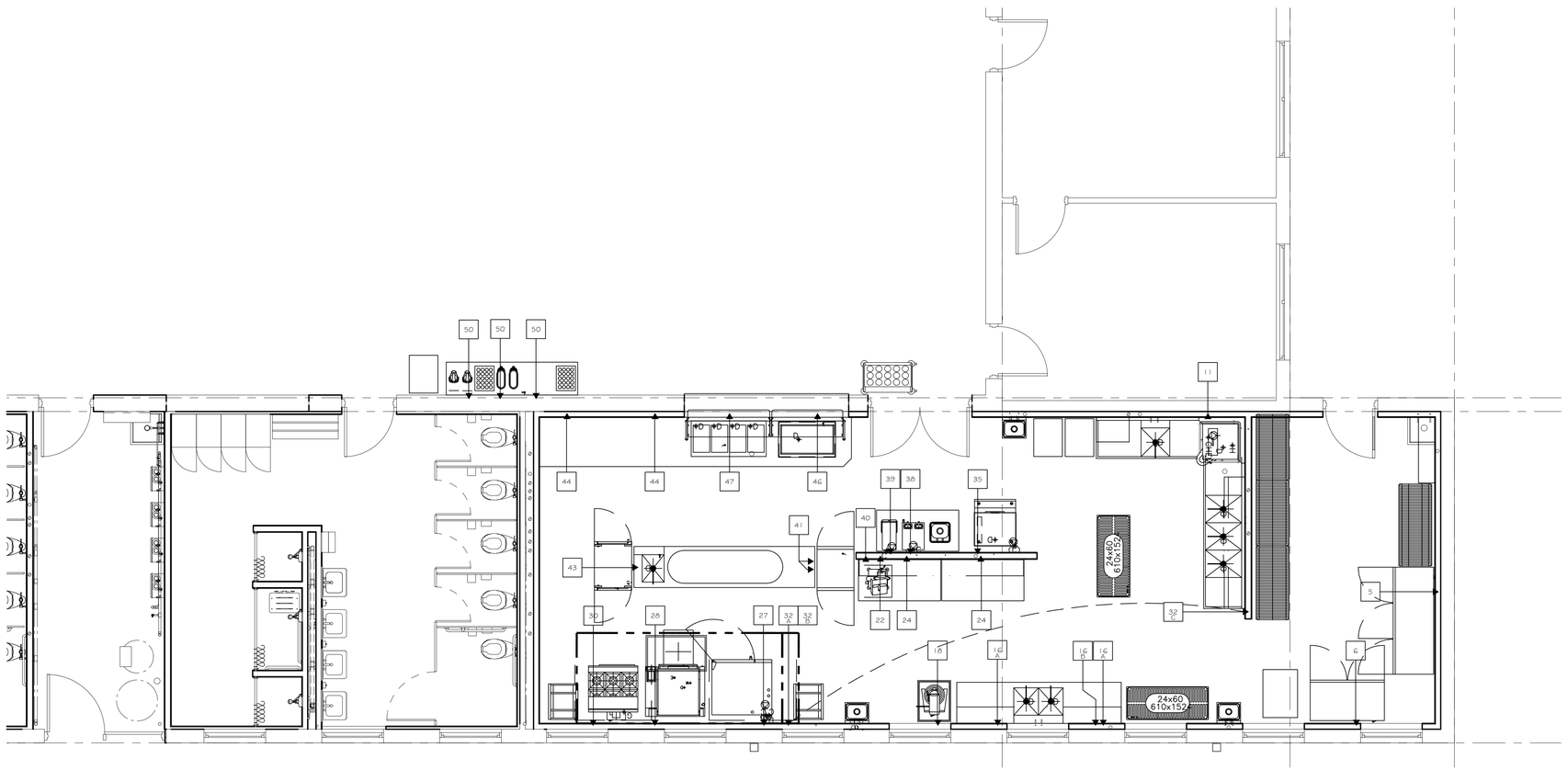
ELECTRICAL SCHEDULE

CONN. NO.	VOLTAGE	PHASE	AMPS LOAD	K.W. LOAD	CONN. TYPE	MGT. A.F.F.	COMMENTS
5	115	1	14		D.R.	4'-0"	
6	115	1	5.4		D.R.	4'-0"	
11	115	1	16		D.R.	5'-0"	
16A	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET
16B	208	1	30		S.R.	4'-0"	CONVENIENCE OUTLET
18	115	1	6		D.R.	4'-0"	
22	115	1	4		D.R.	4'-0"	
24	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET
27	115	1	6.8		J.B.	3'-0"	
29	115	1	9		D.R.	1'-6"	
30	115	1	4		D.R.	1'-6"	
32A	115	1	20		J.B.	9'-0"	ELECT. CONTR. SHALL PROVIDE 20 AMP 24 HR DEDICATED CIRCUIT FOR HOOD CONTROL AND FIRE PROTECTION SYSTEM AT HOOD - REFER TO HOOD WIRING DIAGRAM
32B					J.B.	9'-0"	ELECT. CONTR. SHALL INNERCONNECT EXHAUST FANS AND MAKE-UP AIR FANS TO MICRO-SWITCH IN CONTROL PANEL - REFER TO HOOD DWG FOR WIRING DIAGRAMS
32C					J.B.	4'-0"	ELECT. CONTR. SHALL BROVIDE J-BOX AND EMPTY CONDUIT IN WALL FOR REMOTE MANUAL PULL STATION - REFER TO HOOD DWG FOR WIRING DIAGRAMS
35	115	1	15.2		D.R.	4'-0"	
38	115/240	1	26	6.2	J.B.	4'-0"	VERIFY - EQUIPMENT SUPPLIED BY VENDOR
39	115	1	14	1.7	D.R.	4'-0"	VERIFY - EQUIPMENT SUPPLIED BY VENDOR
40	115	1	2.2		D.R.	1'-6"	
41	115	1	20	1.92	S.C.	4"	ELECT. CONTR. SHALL CONNECT TO J-BOX BELOW BOTTOM SHELF FOR PRE-WIRED RECEPTACLES ON TABLE.
43	115	1	12.5	1.5	S.C.	4"	ELECT. CONTR. SHALL CONNECT TO J-BOX BELOW BOTTOM SHELF FOR PRE-WIRED RECEPTACLES ON TABLE.
44	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET
46	115	1	3.5		D.R.	1'-6"	
47	208	1	14.4	4	S.R.	1'-6"	
50	115	1	20	1.92	D.R.	4'-0"	CONVENIENCE OUTLET



SECTION THRU WALL

VERIFY LOCATION OF FIRE PULL(S) W/FIRE MARSHALL PRIOR TO INSTALLATION. (MUST BE 10'-0" MIN FROM HOOD AND NO MORE THAN 48"A.F.F., AND LOCATED IN EGRESS PATH)



1 FOODSERVICE EQUIPMENT SPOT ELECTRICAL PLAN
1/4" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

ESTAL CORPORATION

DGG
DANIEL GRAVE, INC.
ARCHITECTURE
ENGINEERING
PLANNING

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
DRAWN BY: MDG
CHECKED BY: MDG
DESIGNED BY: MDG

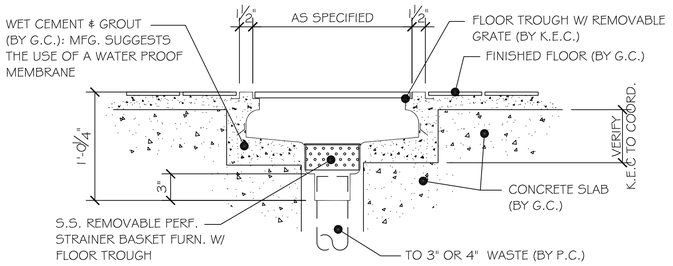
SHEET TITLE:

FOODSERVICE EQUIPMENT SPOT ELECTRICAL PLAN

SHEET NUMBER:

Q-FP-02

6/27/2025



NOTE: FLOOR TROUGH TO BE INSTALLED FLUSH TO FINISHED FLOOR TO ELIMINATE TRIP HAZARD.

FLOOR TROUGH TO BE PROVIDED BY THE KITCHEN EQUIPMENT CONTRACTOR. PLUMBING CONTRACTOR TO INSTALL.

PLUMBING NOTES:

1. ALL PLUMBING OUTLETS AND CONNECTIONS SHOWN ON PLAN ARE FOR FOODSERVICE EQUIPMENT AND ARE FOR REFERENCE ONLY. PLUMBING CONTRACTOR TO VERIFY ALL LEFT TO RIGHT DIMENSIONAL LOCATIONS WITH THE KITCHEN EQUIPMENT CONTRACTORS SHOP DRAWINGS.
2. PLUMBING CONTRACTOR SHALL VERIFY ALL INCOMING SERVICES, MAKE ALL EXTERNAL & INTERNAL CONNECTIONS AND PROVIDE ALL PIPING, FITTINGS, BACK FLOW PREVENTOR, PARTS, ETC. AS NECESSARY TO MAKE FOODSERVICE EQUIPMENT FUNCTIONAL.
3. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL INDIVIDUAL SHUT-OFF VALVES FOR ALL WATER & GAS LINES AS REQUIRED.
4. ALL FLOOR, WALL & CEILING PENETRATIONS MUST BE SEALED WATER TIGHT AND VERMIN PROOF.
5. ALL SYMBOLS NOTED AS 12", 18", 24", ETC. ARE FROM FINISHED FLOOR TO CENTERLINE OF STUB-OUT AT HEIGHT INDICATED ON PLAN. ALL SYMBOLS NOTED AS STUB-UP SHALL BE STUBBED-UP ABOVE FINISHED FLOOR AT HEIGHT INDICATED ON PLAN.
6. ALL FLOOR SINKS SHOWN ARE TO BE FLUSH WITH THE FINISHED FLOOR (UNLESS OTHERWISE REQUIRED BY LOCAL BUILDING AND/OR HEALTH CODE.) FLOOR SINKS SHALL BE LOCATED IN MANNER SO AS TO ALLOW FOR SIGHT INSPECTION BY CODE OFFICIALS.
7. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL REMOVABLE GRILLS OR COVERS FOR ALL FULLY OR PARTIALLY EXPOSED FLOOR SINKS.
8. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL TYPE "L" COPPER TUBING DRAIN LINES FROM ALL APPLICABLE EQUIPMENT TO FLOOR SINKS. ALL DRAIN LINES FROM ICE BINMACHINES, WALK-IN AND/OR BEER REFRIGERATION SYSTEMS, ETC. ARE TO BE INSULATED.
9. FLOOR SINKS FOR DISHWASHING MACHINES SHALL HAVE A MINIMUM OF A 3" CAST IRON DRAIN PIPE. PVC WILL MELT OR DEFORM FROM HEAT.
10. PLUMBING CONTRACTOR SHALL PROVIDE 140 DEGREE HOT WATER TO DISHWASHING MACHINE.
11. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL PRESSURE REGULATING VALVE FOR DISHWASHING MACHINE IF HOT WATER PRESSURE IS IN EXCESS OF 25 LBS. FLOW PRESSURE.
12. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL AUTOMATIC SHUT-OFF VALVE(S) IN GAS LINE FOR ALL FOODSERVICE EQUIPMENT BELOW EXHAUST VENTILATOR.
13. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL LINE STRAINER AND/OR APPROVED FILTER ON GAS SUPPLY LINE.
14. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL HOT WATER TANK (UNLESS OTHERWISE NOTED.) UNIT SHALL BE SIZED FOR ADEQUATE WATER CONSUMPTION TO MEET ALL APPLICABLE CODES.
15. KITCHEN EQUIPMENT CONTRACTOR SHALL PROVIDE AND PLUMBING CONTRACTOR TO INSTALL APPLIANCE GAS PRESSURE REGULATOR(S) FOR EQUIPMENT (AS REQUIRED.) BLDG. MAIN LINE PRESSURE REGULATOR(S) SHALL BE FURNISHED AND INSTALLED BY THE PLUMB. CONTR.
16. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL GATE VALVES ON ALL WATER AND GAS LINES.
17. PLUMBING CONTRACTOR SHALL PROVIDE CHROME PLATED PIPES AND FITTINGS FOR ALL EXPOSED LINE RUNS (AS REQUIRED.) EXPOSED PIPING SHALL BE HELD OFF THE WALL FOR CLEANING.
18. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL GREASE TRAPS AS REQUIRED BY BUILDING/HEALTH CODE.
19. KITCHEN EQUIPMENT CONTRACTOR SHALL VERIFY ALL UTILITY SIZES AND LOAD REQUIREMENTS SHOWN ON PLANS.
20. KITCHEN EQUIPMENT CONTRACTOR AND PLUMBING CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS AT THE JOB-SITE.
21. ALL WALK-IN DRAIN LINES TO HAVE A MINIMUM SLOPE OF 1" PER 1'-0". ALL DRAIN LINES SHALL BE MOUNTED 1" FROM WALLS.
22. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXTERNAL AND/OR INTERNAL HOOK-UPS OF WATER, GAS, STEAM, ETC. TO ALL NEW AND REUSED EQUIPMENT PER PLAN.
23. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL INTER-CONNECTIONS REQUIRED DUE TO FIELD JOINTS REQUIRED IN FOODSERVICE EQUIPMENT. KITCHEN EQUIPMENT CONTRACTOR TO COORDINATE AS REQUIRED.
24. KITCHEN EQUIPMENT CONTRACTOR SHALL VERIFY ALL UTILITY LOADS SHOWN ON THIS PLAN. IF DISCREPENCIES ARE FOUND THE KITCHEN EQUIPMENT CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE CHANGES REQUIRED WITH ALL TRADES AND PARTIES INVOLVED.
25. KITCHEN EQUIPMENT CONTRACTOR SHALL FURNISH ALL FAUCETS LOOSE FOR PLUMBING CONTRACTOR TO INSTALL ON SINKS, COUNTERS, DISH TABLES, ETC...

LEGEND

A.	AMPERES
A.F.F.	ABOVE FINISHED FLOOR
C.O.	CONVENIENCE OUTLET
C.W.	COLD WATER
D.F.A.	DOWN FROM ABOVE
E.C.	ELECTRICAL CONNECTION
E.D.R.	DUPLEX RECEPTACLE
E.J.B.	JUNCTION BOX
E.S.R.	SINGLE RECEPTACLE
F.D.	FLOOR DRAIN
F.F.D.	FUNNEL FLOOR DRAIN
F.S.	FLOOR SINK
G.T.	GREASE TRAP
H.D.	HUB DRAIN
H.P.	HORSE POWER
H.W.	HOT WATER
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
K.W.	KILOWATTS
P.W.	PRE-WIRED
S.D.	STUB-DOWN
S.O.	STUB-OUT
S.U.	STUB-UP
W/V	WASTE WITH VENT

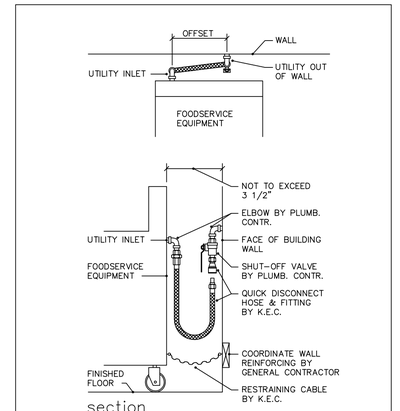
NOTES;
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2. ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACE FLOOR (FLOOR, WALL OR CEILING) TO THE CENTERLINE OF ROUGH-INS.

3. PLUMB. CONTR. IS RESPONCIBLE FOR REDUCING BUILDING GAS SUPPLY PRESSURE TO ACCEPTABLE LEVELS FOR EQUIPMENT TO OPERATE PROPERLY.

PLUMBING SCHEDULE

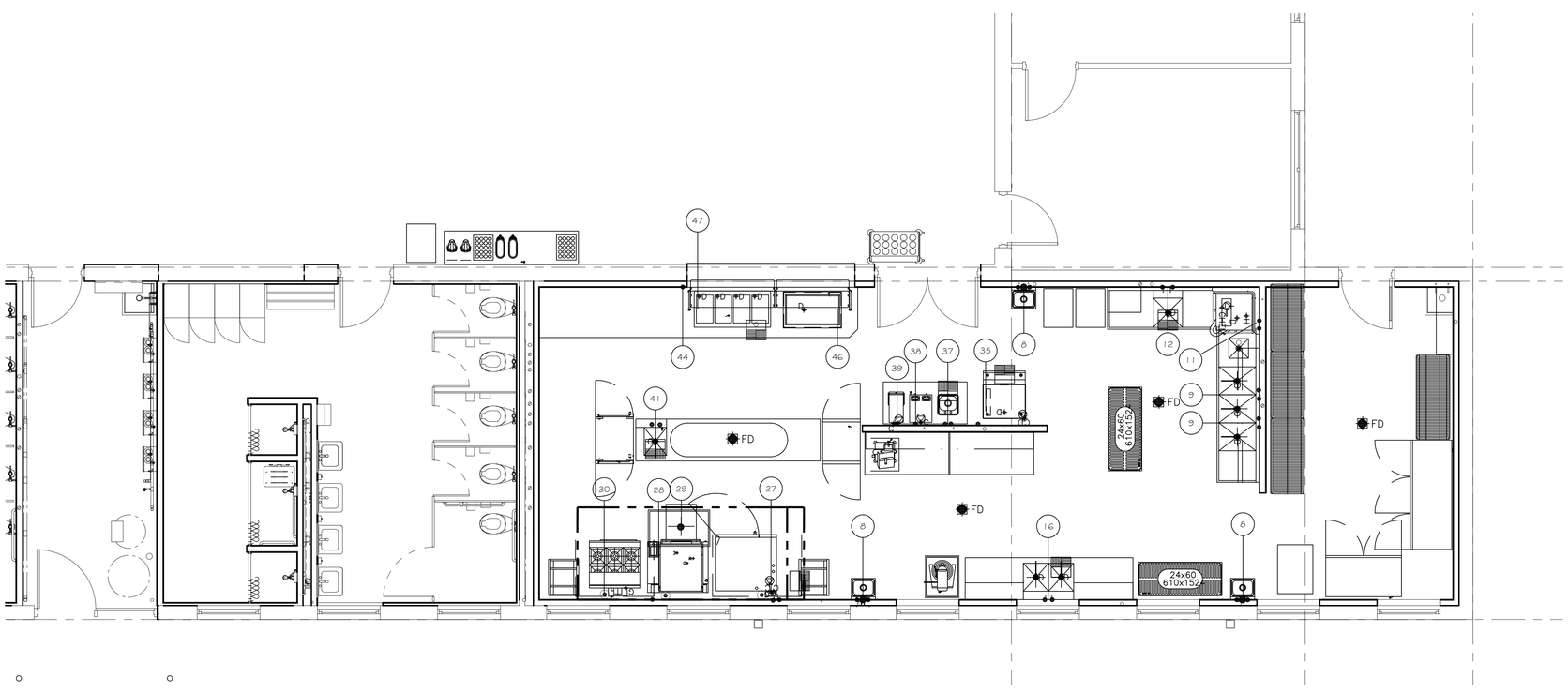
CONN. NO.	HOT WATER	COLD WATER	DIRECT WASTE	IN-DIRECT WASTE	GAS SIZE	GAS MBTUS	CONN. TYPE	HGT. A.F.F.	COMMENTS
8	1/2"						S.O.	1'-6"	
		1/2"					S.O.	1'-6"	
			1-1/2"				S.O.	1'-9"	
9	1/2"						S.O.	1'-6"	
		1/2"					S.O.	1'-6"	
				1-1/2"			F.S.		PLBG. CONTR. SHALL BRANCH SINK DRAINS AND EXTEND TO FLOOR SINK. FLOOR SINK SHALL BE BRANCHED TO GREASE TRAP. PLBG. CONTR. SHALL SIZE, PROVIDE AND INSTALL GREASE TRAP FOR (3) 20"X27"X14"D SINKS
11	3/4"						S.O.	6'-6"	PLBG. CONTR. SHALL PROVIDE 120 DEGREE MIN. H.W. - 140 DEGREE RECOMMENDED
				2"			F.S.		PLBG. CONTR. SHALL BRANCH FROM DRAIN ON EQUIPMENT TO FLOOR SINK. PROVIDE DRAIN MATERIAL FOR HIGH TEMPERATURE DISCHARGE
12	1/2"						S.O.	1'-6"	
		1/2"					S.O.	1'-6"	
				1-1/2"			F.S.		PLBG. CONTR. SHALL PIPE FROM DRAIN ON EQUIPMENT TO FLOOR SINK.
16	1/2"						S.O.	1'-6"	
		1/2"					S.O.	1'-6"	
				1-1/2"			F.S.		PLBG. CONTR. SHALL PIPE FROM DRAIN ON EQUIPMENT TO FLOOR SINK.
27		3/4"					S.O.	5'-6"	PLBG. CONTR. SHALL PIPE THRU KEC PROVIDED FILTER TO TREATED WATER INLET
		3/4"					S.O.	5'-6"	UNTREATED WATER
									PLBG. CONTR. SHALL BRANCH FROM DR. ON EQUIPMENT TO FLOOR SINK.
				1-1/2"			F.S.		PROVIDE DRAIN MATERIAL FOR HIGH TEMP DISCHARGE
					3/4"	98	S.O.	2'-6"	
28		1/2"					S.O.	1'-6"	FOR FILL FAUCET
					3/4"	90	S.O.	2'-6"	
29			4"				S.O.	0"	PLBG. CONTR. SHALL CONNECT TO KEC PROVIDED TRENCH DRAIN - SEE DETAIL
30					3/4"	215	S.O.	2'-6"	
35		1/2"					S.O.	6'-0"	PLBG. CONTR. SHALL PIPE THRU KEC PROVIDE FILTER SYSTEM TO ICE MACHINE
				(2) 3/4"			F.S.		PLBG. CONTR. SHALL PIPE FROM DRAIN ON EQUIPMENT TO FLOOR SINK.
37	1/2"						S.O.	1'-6"	
		1/2"					S.O.	1'-6"	
				1-1/2"			F.S.		PLBG. CONTR. SHALL PIPE FROM DRAIN ON EQUIPMENT TO FLOOR SINK.
38		1/2"					S.O.	4'-0"	VERIFY- VENDOR PROVIDED EQUIPMENT
39		1/2"					S.O.	4'-0"	VERIFY- VENDOR PROVIDED EQUIPMENT
41	1/2"						S.O.	1'-6"	
		1/2"					S.O.	1'-6"	
				1-1/2"			F.S.		PLBG. CONTR. SHALL PIPE FROM DRAIN ON EQUIPMENT TO FLOOR SINK.
44	1/2"						S.O.	1'-6"	FOR FILL FAUCET AT HOT WELL
46				3/4"			F.S.		PLBG. CONTR. SHALL BRANCH FROM DR. ON EQUIPMENT TO FLOOR SINK.
47				3/4"			F.S.		PLBG. CONTR. SHALL BRANCH FROM DR. ON EQUIPMENT TO FLOOR SINK.



NOTE: IF UTILITY INLET IS NOT AT HEIGHT SHOWN, MECHANICAL TRADES TO PROVIDE PIPING WITH ELBOWS TO RAISE INLET

QUICK DISCONNECT

NO SCALE



1 FOODSERVICE EQUIPMENT SPOT PLUMBING PLAN
1/4" = 1'-0"

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

ESTAL CORPORATION

DGG
DAVIS & GANNON, INC.
ENGINEERS
115 E. Main Street
Jacksonville, Illinois 62650

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 6/27/2025

CAD DWG FILE:
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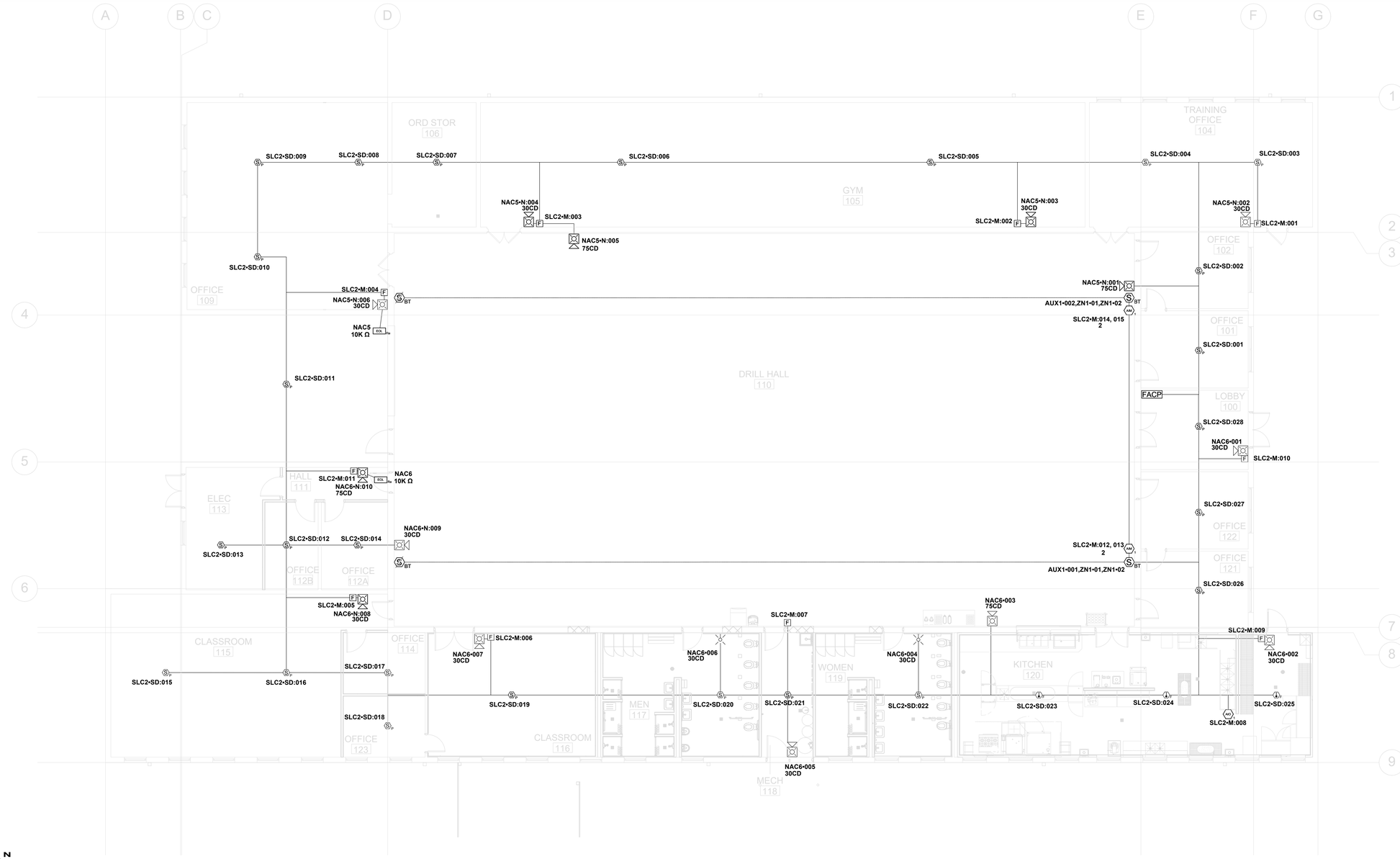
SHEET TITLE:

FOODSERVICE EQUIPMENT SPOT PLUMBING

SHEET NUMBER:

Q-FP-03

6/27/2025



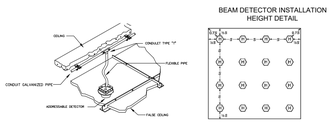
1 FIRE ALARM - 1ST FLOOR PLAN
FA101 1/8" = 1'-0"

GENERAL NOTES

- ALL WORK AND CONNECTIONS SHALL BE ACCORDING WITH THE CURRENT EDITION OF NFPA-72 (EDITION 2022) AND NFPA-70 (NEC EDITION 2023).
- ALL WIRING EXPOSED TO PHYSICAL DAMAGE MUST BE INSTALLED IN ½" EMT CONDUITS.
- ALL WIRING AND EMT CONDUIT ROUTES SHALL BE COORDINATED WITH ALL TRADES.
- NOTIFICATION CIRCUITS FOR ALL AREAS MUST BE TAKEN FROM NAC OUTPUTS FROM PANEL.
- USE FIRE ALARM CABLE, RISER-FPLR, 2-16 AWG SOLID BARE COPPER CONDUCTORS WITH POLYOLEFIN INSULTAION, PVC JACKET WITH RIPCORD FOR SIGNALING LINE CIRCUIT (SLC) AND NOTIFICATION CIRCUITS.
- CONTRACTOR TO SUPPLY/INSTALL LASER SMOKE DETECTORS FOR DRILL HALL. DETECTORS SHALL MOUNT TO BOTTOM SIDE OF JOISTS. DETECTOR SPACING AND SPECIFICATIONS SHALL BE INCLUDED IN SHOP DRAWINGS.
- LASER SMOKE DETECTORS IN DRILL HALL SHALL BE SUPPLIED WITH 24V FROM REMOTE POWER SUPPLIES.
- NOTIFICATION DEVICES IN PLANT SPACE SHALL BE SUPPLIED WITH 24V FROM REMOTE POWER SUPPLIES.
- REMOTE POWER SUPPLIES SHALL BE SUPPLIED WITH 127VAC IN AN INDEPENDENT CIRCUIT.

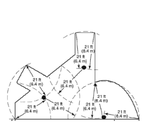
KEYED NOTES

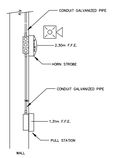
- PROVIDE CONTROL PANEL AS INDICATED.
- PROVIDE SMOKE DETECTORS AS INDICATED.
- PROVIDE THERMAL DETECTOR AS INDICATED.
- PROVIDE LASER SMOKE DETECTORS AS INDICATED.
- PROVIDE MANUAL PULL STATIONS AS INDICATED.
- PROVIDE HORN STROBES AS INDICATED.
- ALL HORN STOBES IN THE SAME LINE OF SIGHT SHALL BE SYNCHRONIZED.



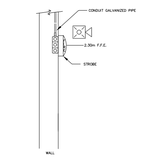
DETECTOR INSTALLATION DETAIL

BEAM DETECTOR INSTALLATION HEIGHT DETAIL
DETECTOR SPACING DETAIL

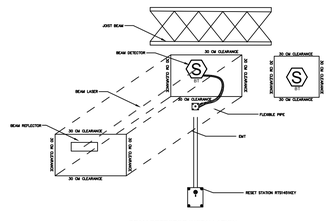

DETECTOR SPACING IN IRREGULAR AREAS DETAIL



HORN/STROBE AND PULL STATION INSTALLATION DETAIL



STROBE INSTALLATION DETAIL



BEAM DETECTOR INSTALLATION HEIGHT DETAIL

SYMBOL	DESCRIPTION
FACP	NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM
	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F
BT	OSID SMOKE DETECTION, EMITTER BATTERY OPERATED
BT	SMOKE DETECTION, IMAGER 80° COVERAGE
	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE
2	DUAL MONITOR MODULE, ADDRESSABLE
	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE
F	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE
Wall	L-SERIES STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
EOL	GEN EOL 10K

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
STEPHEN K. SLOTTEN
NUMBER PE-2018000275
PROFESSIONAL ENGINEER
6-27-25

PROFESSIONAL SEAL

YESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/27/2025

CAD DWG FILE:
DRAWN BY: RHL
CHECKED BY: JCA
DESIGNED BY: RHL

SHEET TITLE:
FIRE ALARM SYSTEM

SHEET NUMBER:
FA100

1 OF 4 SHEETS
06/27/2025

Symbol Legend

SYMBOL	DESCRIPTION	MANUFACTURER	PART NUMBER	MODEL	QUANTITY	BACKBOX REQUIREMENTS	MOUNTING HEIGHT	PROVIDED BY	INSTALLED BY	USER TEXT	UL	FM	NYC B.S.A.	Chicago	ULC	CSFM	NYC M.E.A.
FACP	NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM	NOTIFIER	NFS-320	NFS-320	1												
	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F	NOTIFIER	FST-951	FST-951	3						S2101	Approved			S2101	7270-0028:0502	
	OSID SMOKE DETECTION, EMITTER BATTERY OPERATED	XTRALIS	OSE-SP-01	OSE-SP-01	2						Listed	Listed			Listed	N/A	
	SMOKE DETECTION, IMAGER 80° COVERAGE	XTRALIS	OSI-90	OSI-90	2						Listed	Listed			Listed	N/A	
	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE	NOTIFIER	FSP-951	FSP-951	25						S911	Approved			S911	7272-0028:0503	
2	DUAL MONITOR MODULE, ADDRESSABLE	NOTIFIER	FDM-1	FDM-1	2						S635	Approved	N/A		CS669	7300-0028:202	143-01-E
	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE	NOTIFIER	FMM-1	FMM-1	1						S635	Approved			CS669	7300-0028:202	447-99-E
F	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE	NOTIFIER	NBG-12LX	NBG-12LX	10						S692	Approved			N/A	7150-0028:199	Not Approved
Wall	L-SERIES STROBE, RED, WALL	SYSTEM SENSOR	SRL	SRL	2												
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL	SYSTEM SENSOR	P2RL	P2RL	11												
Flsh	L-SERIES 2-WIRE, HORN STROBE, RED, WALL	SYSTEM SENSOR	P2RL	P2RL	4												
EOL	GEN EOL 10K	GENERIC	GEOL10K	GEOL10K	2												

Appliance List

Job number: 1 Job name: Drawing1

Device	Address	Circuit	V. Drop	Panel Card	Part Number	Description	Zone	User Label	Custom Label	Coordinate
PHOTOELECTRIC DETECTOR	SD:001	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:001	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:002	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:002	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:003	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:003	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:004	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:004	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:005	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:005	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:006	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:006	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:007	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:007	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:008	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
MONITOR MODULE	M:008	SLC2:0.004V		00	FMM-1	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:009	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:009	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:010	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:010	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:011	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
ADDRESSABLE PULL STATION	M:011	SLC2:0.004V		00	NBG-12LX	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:012	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
DUAL MONITOR MODULE	M:012, 013	SLC2:0.008V		00	FDM-1	DUAL MONITOR MODULE, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:013	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
DUAL MONITOR MODULE	M:014, 015	SLC2:0.008V		00	FDM-1	DUAL MONITOR MODULE, ADDRESSABLE				
PHOTOELECTRIC DETECTOR	SD:014	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:015	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:016	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:017	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:018	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:019	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:020	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:021	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:022	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
HEAT DETECTOR	SD:023	SLC2:0.0021V		00	FST-951	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F				
HEAT DETECTOR	SD:024	SLC2:0.0021V		00	FST-951	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F				
HEAT DETECTOR	SD:025	SLC2:0.0021V		00	FST-951	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F				
PHOTOELECTRIC DETECTOR	SD:026	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR	SD:027	SLC2:0.0021V		00	FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				
PHOTOELECTRIC DETECTOR					FSP-951	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE				

Appliance List by Circuit

Circuit	Device	Device Custom Label
00:SLC2-M:001	ADDRESSABLE PULL STATION	
00:SLC2-M:002	ADDRESSABLE PULL STATION	
00:SLC2-M:003	ADDRESSABLE PULL STATION	
00:SLC2-M:004	ADDRESSABLE PULL STATION	
00:SLC2-M:005	ADDRESSABLE PULL STATION	
00:SLC2-M:006	ADDRESSABLE PULL STATION	
00:SLC2-M:007	ADDRESSABLE PULL STATION	
00:SLC2-M:008	MONITOR MODULE	
00:SLC2-M:009	ADDRESSABLE PULL STATION	
00:SLC2-M:010	ADDRESSABLE PULL STATION	
00:SLC2-M:011	ADDRESSABLE PULL STATION	
00:SLC2-M:012, 013	DUAL MONITOR MODULE	
00:SLC2-M:014, 015	DUAL MONITOR MODULE	
00:SLC2-SD:001	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:002	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:003	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:004	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:005	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:006	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:007	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:008	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:009	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:010	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:011	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:012	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:013	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:014	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:015	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:016	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:017	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:018	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:019	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:020	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:021	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:022	HEAT DETECTOR	
00:SLC2-SD:023	HEAT DETECTOR	
00:SLC2-SD:024	HEAT DETECTOR	
00:SLC2-SD:025	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:026	PHOTOELECTRIC DETECTOR	
00:SLC2-SD:027	PHOTOELECTRIC DETECTOR	

Battery Calculations for Panel: P1

Part No:NFS-320 - NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM

Part No.	Qty.	Description	Standby	Total Standby	Alarm	Total Alarm
		Panel Equipment				
NFS-320 MAIN BOARD	1	MAINBOARD FOR NFS-320 SYSTEM	250.0000mA	250.0000mA	390.0000mA	390.0000mA
			Total Panel Stby	250.0000mA	Total Panel Alarm	390.0000mA
		Peripheral Devices				
FSP-951	25	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE (Signaling line)	0.2000mA	5.0000mA	4.5000mA	112.5000mA
NBG-12LX	10	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE (Signaling line)	0.3750mA	3.7500mA	5.0000mA	50.0000mA
FST-951	3	INTELLIGENT THERMAL HEAT DETECTOR,, WHITE, LOW PROFILE, FIXED 135F (SLC)	0.2000mA	0.6000mA	4.5000mA	13.5000mA
FMM-1	1	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE (Signaling line)	0.3750mA	0.3750mA	5.1000mA	5.1000mA
FDM-1	2	DUAL MONITOR MODULE, ADDRESSABLE (Signaling line)	0.7500mA	1.5000mA	5.7000mA	11.4000mA
OSI-90	2	SMOKE DETECTION, IMAGER 80° COVERAGE (Initiating)	0.0000mA	0.0000mA	0.0000mA	0.0000mA
P2RL	4	L-SERIES 2-WIRE, HORN STROBE, RED, WALL (Notification) 75CD 88dB	0.0000mA	0.0000mA	119.0000mA	476.0000mA
P2RL	10	L-SERIES 2-WIRE, HORN STROBE, RED, WALL (Notification) 30CD 88dB	0.0000mA	0.0000mA	73.0000mA	730.0000mA
GEOL10K	2	GEN EOL 10K (Notification)	0.0000mA	0.0000mA	0.0000mA	0.0000mA
SRL	2	L-SERIES STROBE, RED, WALL (Notification) 30CD	0.0000mA	0.0000mA	63.0000mA	126.0000mA
OSI-90	2	SMOKE DETECTION, IMAGER 80° COVERAGE (Power)	10.0000mA	20.0000mA	10.0000mA	20.0000mA
			Total Peripheral Stby	31.2250mA	Total Periph Alarm	1544.5000mA
			Total Standby Amps	281.2250mA	Total Alarm Amps	2007.5000mA

Standby time: 24 Hrs 6.749Ah
Alarm time: 5 Min 0.167Ah
Battery requirement: 6.917Ah
Compensation Factors - Standby: 1.2 Alarm: 1.2 Requirement with compensation: 8.3Ah

Circuit Calculations Panel: P1 Card: 00

Terminal Voltage: 20.4V:DC Amperage: 2.0000A
Cable: 18/2 SOL JKT FPLR 1M RL RED #18
Calculations based on Lump Sum Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 18%

Circuit	Description	Type	Total Len	FSP-951, 4.500mA	NBG-12LX, 5.000mA	FST-951, 4.500mA	FMM-1, 5.100mA	FDM-1, 5.700mA	Total Amps	Gauge	V Drop %	V Drop	Resistance	Max Len
SLC2		Signaling line/NOTIFIER SLC, ONYX FLASHSCAN	685'-4	25	10	3	1	2	11.2250mA	#18	0.59	0.1201V	10.7 Ohms	21050'-0

Circuit Calculations Panel: P1 Card: 00

Terminal Voltage: 20.4V:DC Amperage: 2.0000A
Cable: 16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, SHIELDED, PLENUM FA, FPLP #16
Calculations based on Lump Sum Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 18%

Circuit	Description	Type	Total Len	P2RL, 30CD, 73.000mA	GEOL10K	P2RL, 75CD, 119.000mA	Total Amps	Gauge	V Drop %	V Drop	Resistance	Max Len
NAC5		Notification	285'-3 1/2	4	1	2	530.000mA	#16	3.71	0.756V	1.4 Ohms	1385'-0

Circuit Calculations Panel: P1 Card: 00

Terminal Voltage: 20.4V:DC Amperage: 2.0000A
Cable: 16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, SHIELDED, PLENUM FA, FPLP #16
Calculations based on Lump Sum Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 18%

Circuit	Description	Type	Total Len	P2RL, 30CD, 73.000mA	GEOL10K	P2RL, 75CD, 119.000mA	SRL, 30CD, 63.000mA	Total Amps	Gauge	V Drop %	V Drop	Resistance	Max Len
NAC6		Notification	571'-7 1/2	7	1	2	2	875.0000mA	#16	12.26	2.5069V	2.9 Ohms	839'-0

Circuit Calculations Panel: P1 Card: 00 Circuit:AUX1

Circuit Name: AUX1
Circuit Type: Power/Non-resettable Terminal Voltage: 20.2V:DC Amperage: 2.0000A
Cable: 14/2 SOL JKT FPLR 1M RL RED #14
Calculations based on Running Total Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 18%

Device	Part No	Appliance Desc	Distance	Current	Voltage	Voltage Drop
	NFS-320	Panel			20.2V	
001	OSI-90	SMOKE DETECTION, IMAGER 80° COVERAGE	44'-1 1/2	10.0000mA	20.1951V	(0.0049V)
002	OSI-90	SMOKE DETECTION, IMAGER 80° COVERAGE	41'-0 1/2	10.0000mA	20.1926V	(0.0025V)
			85'-2 1/2	20.0000mA		
					Total Current:	20.0000mA
			(Total VDrop Percent:0.04%)		Total Voltage Drop :	0.0074V

Bill of Material

Qty.	Description	Manufacturer	Model	Part No.
25	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE	NOTIFIER	FSP-951	FSP-951
10	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE	NOTIFIER	NBG-12LX	NBG-12LX
3	INTELLIGENT THERMAL HEAT DETECTOR,, WHITE, LOW PROFILE, FIXED 135F	NOTIFIER	FST-951	FST-951
2	L-SERIES STROBE, RED, WALL	SYSTEM SENSOR	SRL	SRL
14	L-SERIES 2-WIRE, HORN STROBE, RED, WALL	SYSTEM SENSOR	P2RL	P2RL
1	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE	NOTIFIER	FMM-1	FMM-1
2	GEN EOL 10K	GENERIC	GEOL10K	GEOL10K
2	OSID SMOKE DETECTION, EMITTER BATTERY OPERATED	XTRALIS	OSE-SP-01	OSE-SP-01
2	DUAL MONITOR MODULE, ADDRESSABLE	NOTIFIER	FDM-1	FDM-1
2	SMOKE DETECTION, IMAGER 80° COVERAGE	XTRALIS	OSI-90	OSI-90
1	Panel: P1			
1	NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM	NOTIFIER	NFS-320	NFS-320
774'-3	Electrical Metallic Tubing (EMT)	GENERIC	3/4"	GN-201
686'-4 1/2	18/2 SOL JKT FPLR 1M RL RED	GENESIS (HONEYWELL CABLE)	43061004	43061004
85'-2 1/2	14/2 SOL JKT FPLR 1M RL RED	GENESIS (HONEYWELL CABLE)	43131004	43131004
4.05339501941023172S5	16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, NON-SHIELDED, PLENUM FIRE ALARM	WINDY CITY	1602PFA-BLK	1602PFA-BLK
856.92000260854649696	16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, SHIELDED, PLENUM FA, FPLP	WINDY CITY	7611323	7611323

Appliance List by Circuit

Circuit	Device	Device Custom Label
[SLC2-M:012, 013]:ZN1-01	BEAM DETECTOR	
[SLC2-M:012, 013]:ZN1-02	BEAM DETECTOR	
[SLC2-M:014, 015]:ZN1-01	BEAM DETECTOR	
[SLC2-M:014, 015]:ZN1-02	BEAM DETECTOR	
0:0-0	BEAM DETECTOR	
0:0-0	BEAM DETECTOR	
0:0-0	BEAM DETECTOR	
0:0-0	BEAM DETECTOR	
00:AUX1-001	BEAM DETECTOR	
00:AUX1-002	BEAM DETECTOR	
00:NAC5-N:001	N/A	
00:NAC5-N:002	N/A	
00:NAC5-N:003	N/A	
00:NAC5-N:004	N/A	
00:NAC5-N:005	N/A	
00:NAC5-N:006	N/A	
00:NAC6-001	N/A	
00:NAC6-002	N/A	
00:NAC6-003	N/A	
00:NAC6-004	STROBE	
00:NAC6-005	N/A	
00:NAC6-006	STROBE	
00:NAC6-007	N/A	
00:NAC6-N:008	N/A	
00:NAC6-N:009	N/A	
00:NAC6-N:010	N/A	
00:NAC6-N:011	N/A	

Cable/Circuit Report

Cable Length Overage: 0.000000%

Source	Card	Circuit	Circuit Type	Circuit Abbr	Wiring Style	Manufacturer	Part No.	Type	Description	Gauge	Length	Color
P1	00	SLC2	Signaling line	U	Class B	GENESIS (HONEYWELL CABLE)	43061004	Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	931'-4 1/2	Red
P1	00	NAC5	Notification	V1	Class B	WINDY CITY	7611323	N/A	16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, SHIELDED, PLENUM FA, FPLP	#16	481'-9 1/2	Red
P1	00	NAC6	Notification	V1	Class B	WINDY CITY	7611323	N/A	16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, SHIELDED, PLENUM FA, FPLP	#16	1128'-2 1/2	Red
P1	00	AUX1	Power	P2	Class B	GENESIS (HONEYWELL CABLE)	43131004	Fire Alarm	14/2 SOL JKT FPLR 1M RL RED	#14	129'-4	Red
Device[SLC2:M:012, 013]		ZN1	Initiating	Z	Class B	WINDY CITY	1602PFA-BLK	N/A	16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, NON-SHIELDED, PLENUM FIRE ALARM	#16	4'-2 1/2	Red
Device[SLC2:M:014, 015]		ZN1	Initiating	Z	Class B	WINDY CITY	1602PFA-BLK	N/A	16 AWG 2 CONDUCTOR BARE COPPER, TWISTED, NON-SHIELDED, PLENUM FIRE ALARM	#16	1'-11 1/2	Red

SYMBOL	DESCRIPTION
FACP	NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM
	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F
	OSID SMOKE DETECTION, EMITTER BATTERY OPERATED
	SMOKE DETECTION, IMAGER 80° COVERAGE
	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE
2	DUAL MONITOR MODULE, ADDRESSABLE
	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE
F	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE
Wall	L-SERIES STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
Flsh	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
EOL	GEN EOL 10K

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STEPHEN K. SLOTTEN NUMBER PE-2018000275 PROFESSIONAL ENGINEER
6-27-25

PROFESSIONAL SEAL

YESTAL CORPORATION
DGG INC.

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF MISSOURI NATIONAL GUARD

ST. CLAIR READINESS CENTER

375 COMMERCIAL AVE.
ST. CLAIR, MO 63077

PROJECT # T2326-01
SITE # 6304
FACILITY # 8136304011

ISSUE DATE: 06/27/2025

CAD DWG FILE:
DRAWN BY: RHL
CHECKED BY: JCA
DESIGNED BY: RHL

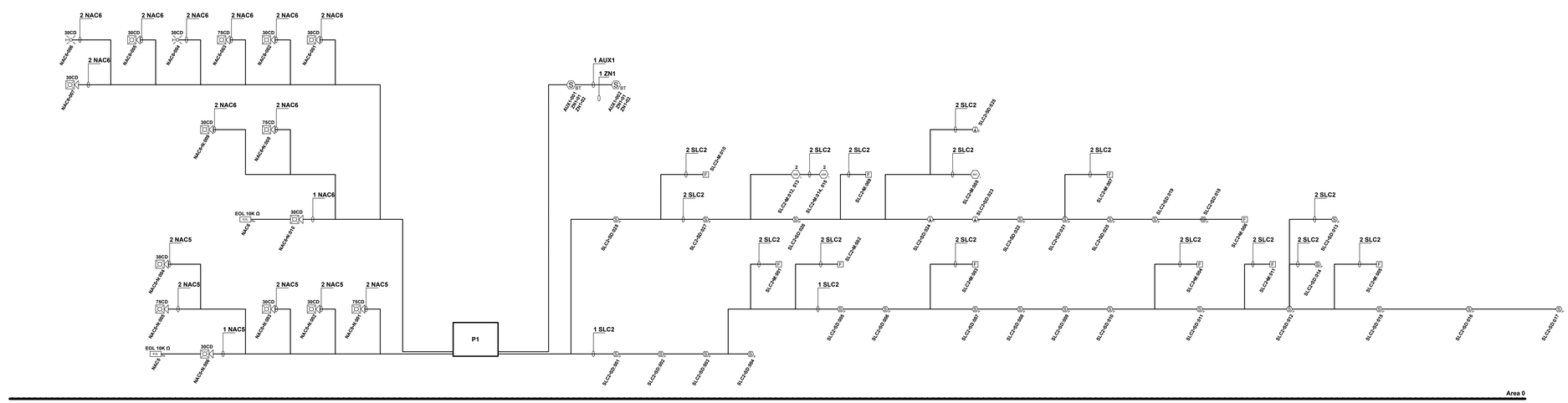
SHEET TITLE:

FIRE ALARM SYSTEM DETAILS AND CALCULATIONS

SHEET NUMBER:

FA101

2 OF 4 SHEETS
06/27/2025



SYMBOL	DESCRIPTION
FACP	NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM
	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F
	OSID SMOKE DETECTION, EMITTER BATTERY OPERATED
	SMOKE DETECTION, IMAGER 80° COVERAGE
	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE
	DUAL MONITOR MODULE, ADDRESSABLE
	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE
F	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE
Wall	L-SERIES STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
EOL	GEN EOL 10K

STATE OF MISSOURI
MICHAEL L. KEHOE,
GOVERNOR

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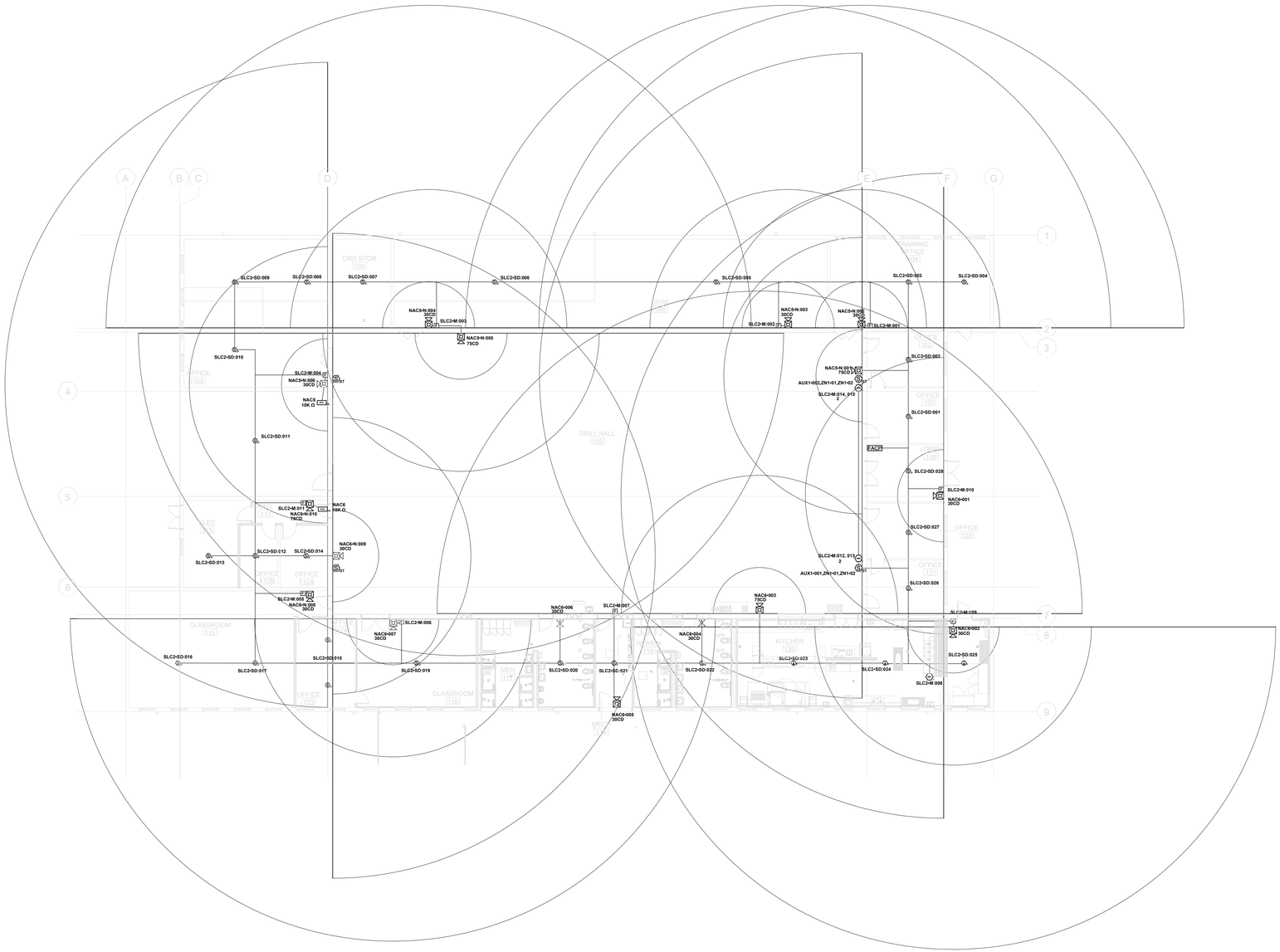
SHEET TITLE:

FIRE ALARM SYSTEM
RISER DIAGRAM

SHEET NUMBER:

FA102

3 OF 4 SHEETS
06/27/2025



SYMBOL	DESCRIPTION
FACP	NFS-320 INTELLIGENT ADDRESSABLE FIRE ALARM SYSTEM
	INTELLIGENT THERMAL HEAT DETECTOR, LOW PROFILE, FIXED 135F
ST	OSID SMOKE DETECTION, EMITTER BATTERY OPERATED
ST	SMOKE DETECTION, IMAGER 80° COVERAGE
P	LOW PROFILE INTELLIGENT PHOTO SENSOR, WHITE
2	DUAL MONITOR MODULE, ADDRESSABLE
	MONITOR MODULE W/FLASHSCAN, ADDRESSABLE
F	PULL STATION, NBG-12L, FLASHSCAN, ADDRESSABLE
Wall	L-SERIES STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
Wall	L-SERIES 2-WIRE, HORN STROBE, RED, WALL
EOL	GEN EOL 10K

STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

STATE OF MISSOURI
STEPHEN K. SLOTTEN
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SHEET TITLE:

FIRE ALARM SYSTEM HORN STROBE COVERAGE

SHEET NUMBER:

FA103

4 OF 4 SHEETS
06/27/2025