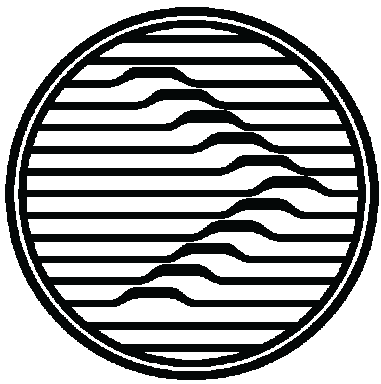


# GROUP HOME STUDY & ADA IMPROVEMENTS BELLEFONTAINE HABILITATION CENTER St. Louis, Missouri 63136

## BIDDING DOCUMENT SUBMISSION



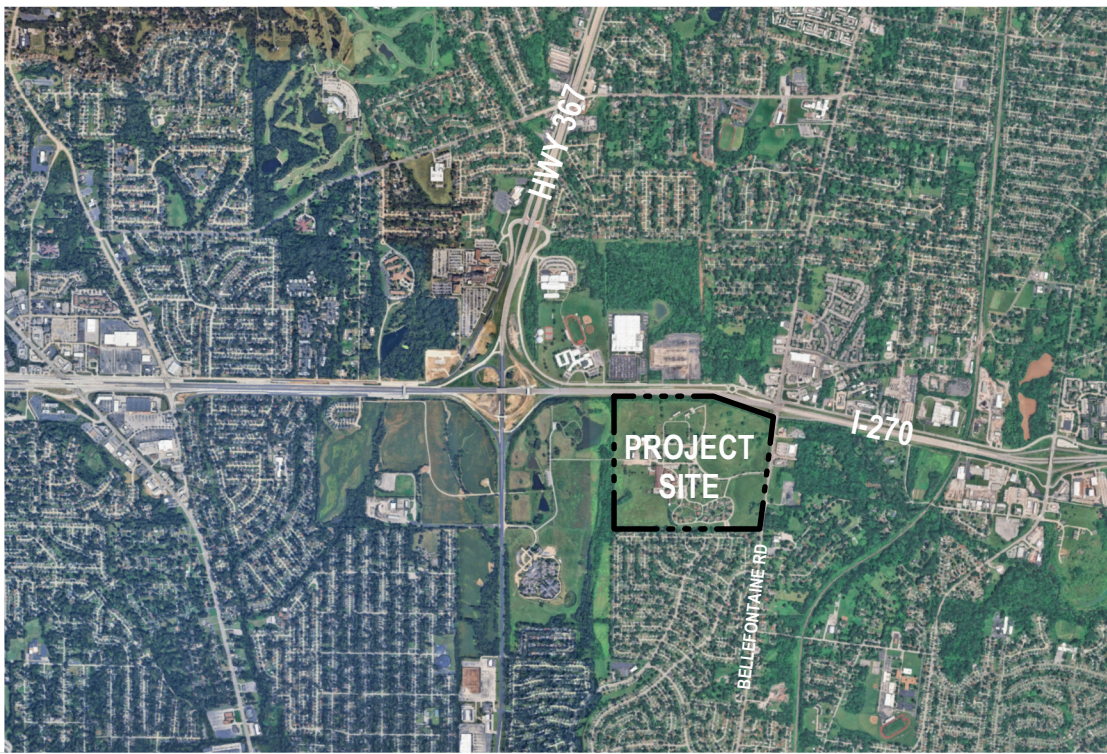
**Oculus Inc.**  
CONNECT • SHAPE • MOVE



**SCI ENGINEERING, INC.**

OWNER: STATE OF MISSOURI  
MIKE KEHOE,  
GOVERNOR  
DEPARTMENT OF MENTAL HEALTH

PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION



ARCHITECT DESIGNER:	OCULUS INC.
MEP/FP DESIGNER:	INTROBA
CIVIL DESIGNER:	OATES ASSOCIATES
ENVIRONMENTAL:	SCI ENGINEERING
PROJECT NUMBER:	M2319-01
SITE NUMBER:	7356
ASSET NUMBER:	6517356071

SHEET NUMBER:

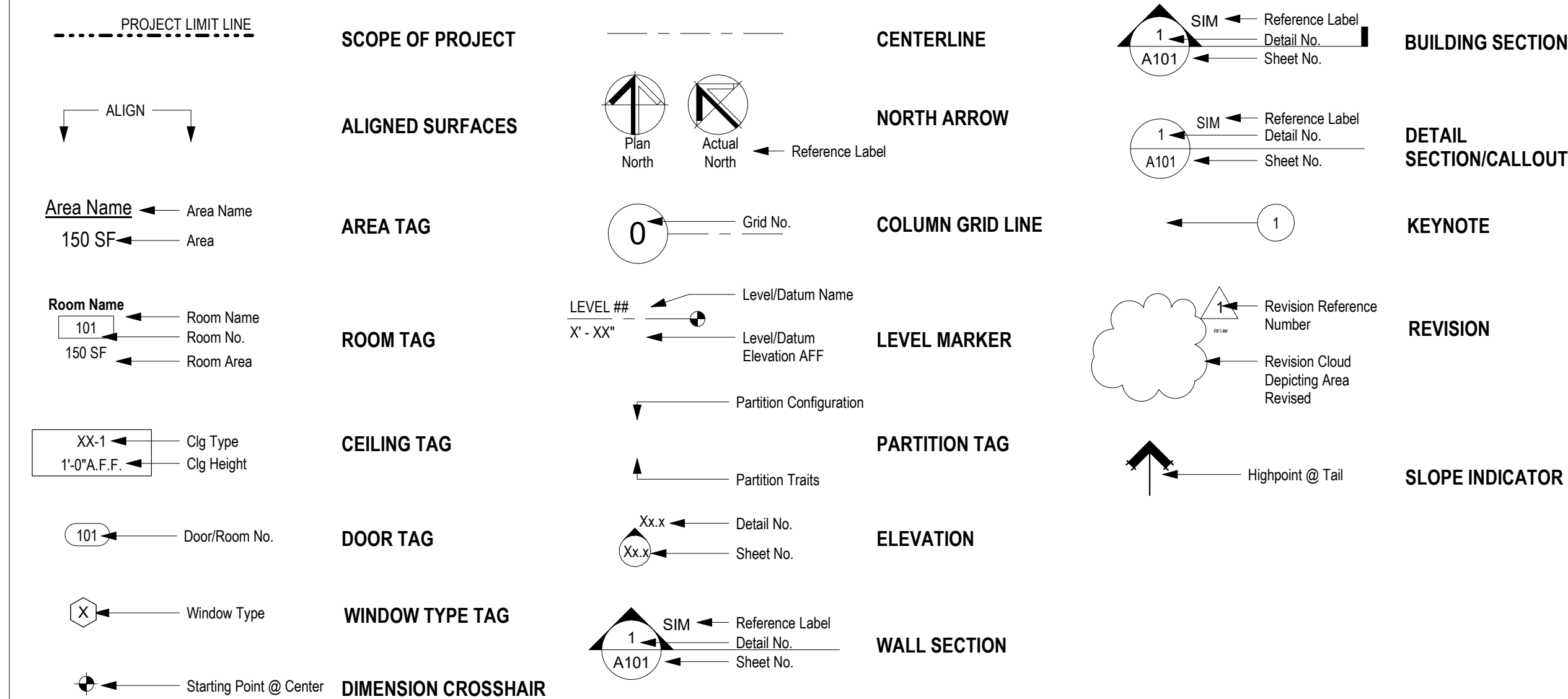
## GENERAL NOTES

1. NOTIFY ARCHITECT OF DISCREPANCIES ENCOUNTERED BETWEEN DOCUMENTS AND APPLICABLE CODES OF INTERPRETATIONS BY THE GOVERNING AGENCIES.
2. PERFORM WORK USING ONLY SKILLED WORKERS TRAINED AND EXPERIENCED IN THEIR RESPECTIVE TRADE.
3. VERIFY SITE CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING THE WORK AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.
4. VERIFY DIMENSIONS AND LOCATION OF OPENINGS, BASES, AND SPECIAL PROVISIONS REQUIRED FROM EQUIPMENT, DUCTS, PIPING, CONDUITS, FINISH HARDWARE, ETC.
5. SCALING DRAWINGS IS DISCOURAGED AND PERFORMED AT THE SOLE RISK OF THE CONTRACTOR.
6. COORDINATE WORK INDICATED IN EACH DISCIPLINE'S DRAWINGS.
7. DRAWINGS ARE COMPLETE FOR THE BASE BID GROUP HOME 1802. FOR ADDITIONAL BUILDINGS INCLUDED IN ALTERNATES, DRAWINGS ARE TYPICAL FOR NEW WORK. EXISTING CONDITIONS OF EACH GROUP HOME IN ALTERNATES MAY VARY SLIGHTLY FROM THE EXISTING CONDITIONS INCLUDED IN THE BASE BID GRUOP 1802 DRAWINGS.

## ABBREVIATIONS

AB	ANCHOR BOLT	CJ	CONSTRUCTION JOINT	EXP	EXPOSED/EXPANSION	ID	INSIDE DIAMETER	OTO	OUT TO OUT	T/W	TOP OF WALL
ABV	ABOVE	CK	CAULK (ING)	EXT	EXTERIOR	IF	INSIDE FACE	PD	PANIC DEVICE	TEL	TELEPHONE
AC	AIR CONDITIONING	CLG	CEILING	EXTG	EXISTING	INCL	INCLUDE (D) (ING)	PFB	PREFABRICATE (D)	TERR	TERRAZZO
ACC	ACCESS	CLS	CLOSURE	FICONC	FACE OF CONCRETE	INFO	INFORMATION	PFN	FINISHED	TH	THRESHOLD
ACOUS	ACOUSTICAL	CMU	CONCRETE MASONRY UNIT	FFIN	FACE OF FINISH	INSUL	INSULATE (D) (ION)	PLYWD	PLYWOOD	THK	THICK (NESS)
ACP	ACOUSTIC CEILING PANEL			FIMAS	FACE OF MASONRY	INT	INTERIOR	PMT	PAINT	TKS	TACK STRIP
ACR	ACRYLIC PANEL	CO	CLEAN OUT	FA	FIRE ALARM	INV	INVERT	PCL	POLISHED	TLB	TOWEL BAR
ACT	ACOUSTIC CEILING TILE	COL	COLUMN	FAB	FABRIC	JBOX	JUNCTION BOX	PROP	PROPERTY	TO	TOP OF
AD	ACCESS DOOR	COMP	COMPRESS (ED) (ION) (BLE)	FAS	FASTEN, FASTENER	JC	JANITOR'S CLOSET	FRT	PARTIAL/PRESERVATIVE	TOL	TOLERANCE
ADD	ADDENDUM			FBO	FURNISHED BY OTHERS	JT	JOINT	TREATED	TOS	TOP OF STEEL	
ADH	ADHESIVE	CONC	CONCRETE	FD	FLOOR DRAIN	KD	KNOCK DOWN	PTD	PAINTED	TP	TOILET PARTITION
ADJ	ADJUSTABLE	CONN	CONNECTION	FDN	FOUNDATION	KO	KNOCKOUT	PTN	PARTITION	TPD	TOILET PAPER DISPENSER
ADJC	ADJACENT	CONST	CONSTRUCTION	FE	FIRE EXTINGUISHER	KP	KICK PLATE	PTR	PAPER TOWEL DISPENSER	TRAN	TRANSITION
AFF	ABOVE FINISHED FLOOR	CONT	CONTINUOUS OR CONTINUE	FEC	FIRE EXTINGUISHER CABINET	L	LONG	PVC	POLYVINYL CHLORIDE	TYP	TYPICAL
AHU	AIR HANDLING UNIT					LAB	LABORATORY	QT	QUARRY TILE	UNF	UNFINISHED
AL/ALUM	ALUMINUM	CORR	CORRIDOR	FF	FINISHED FLOOR/FACE	LAM	LAMINATE (D)	OZ	QUARTZ	UNO	UNLESS NOTED OTHERWISE
ALT	ALTERNATE	CPT	CARPET (ING)	FGL	FIBERGLASS	LAV	LAVATORY	RAD	RADIUS		
ANC	ANCHOR/ANCHORAGE	CR	CARD READER	FHC	FIRE HOSE CABINET	LB	POUND	RD	ROOF DRAIN	UR	URNAL
ANOD	ANODIZED	CTR	CENTER/COUNTER	FHS	FIRE HOSE STATION	LP	LOW POINT	RDC	ROOF DRAIN CONDUCTOR	VCT	VINYL COMPOSITION TILE
AP	ACOUSTICAL PANEL	CTSK	COUNTERSINK	FIN	FINISH (ED)	LT	LIGHT	REF	REFERENCE	VERT	VERTICAL
APPROX	APPROXIMATE	DEMO	DEMOLISH/DEMOLITION	FLASH	FLASHING	LVT	LUXURY VINYL TILE	REFL	REFLECT (ED) (IVE) (OR)	VIF	VERIFY IN FIELD
ARCH	ARCHITECT (URAL)	DEPR	DEPRESSED	FLX	FLEXIBLE	MAINT	MAINTENANCE	REFN	REINFORCE (D)	VIN	VINYL
ASB	ASBESTOS	DET	DETAIL	FPRFG	FIREPROOFING	MAS	MASONRY	REQD	REQUIRED	VPB	VAPOR BARRIER
AUX	AUXILIARY	DF	DRINKING FOUNTAIN	FR	FIRE RESISTANT	MAT	MATERIAL (S)	REV	REVISION (S) REVISED	W	WITH
BD	BOTTOM OF DECK	DIA	DIAMETER	FRP	FIBER REINFORCED	MAX	MAXIMUM	RFG	ROOFING	W/O	WITHOUT
BD	BOARD	DIA	DIAGONAL		PLASTIC	MCB	METAL CORNER BEAD	RM	ROOM	WB	WALL BASE
BEL	BELOW	DIV	DIVISION	FS	FACE OF STUDS	MDF	MEDIUM DENSITY FIBERBOARD	RO	ROUGH OPENING	WC	WATER CLOSET
	BETWEEN	DMT	DEMOUNTABLE	FSZ	FULL SIZE			RS	RESINOUS FLOOR	WD	WOOD
BET	BETWEEN	DN	DOWN	FT	FEET/FOOT	MECH	MECHANIC (AL)	RSF	RESILIENT SHEET FLOORING	WG	WIRED GLASS
BEV	BEVELED	DN	DOWN	FTG	FOOTING	MED	MEDIUM	S	SINK	WH	WATER HEATER
BIT	BITUMINOUS	DP	DAMP PROOFING	FURR	FURRING	MET	METAL	SC	SEALED CONCRETE	WIN	WINDOW
BLDG	BUILDING	DR	DOOR	GA	GAUGE	MFR	MANUFACTURE (R)	SCH	SCHEDULE	WP	WATERPROOFED
BLK/G	BLOCKING	DS	DOWNSPOUT	GALV	GALVANIZED	MIN	MINIMUM	SECT	SECTION	WPF	WEATHER PROOFING
BM	BEAM	DWG	DRAWING	GB	GRAB BAR	MIR	MIRROR	SECT	SECTION	WPT	WORKING POINT
BOT	BOTTOM	DWR	DRAWER	GC	GENERAL CONTRACT (OR)	MISC	MISCELLANEOUS	SFGL	SAFETY GLASS	WSC	WINGS/COT
BRG	BEARING	EA	EACH	GFI	GROUND FAULT INTERRUPT	MO	MASONRY OPENING	SIM	SIMILAR	WT	WINDOW TREATMENT
BRG PL	BEARING PLATE	EB	EXPANSION BOLT	GL	GLASS/ GLAZING	MTL	MATERIAL	SMT	SEALANT	WFF	WELDED WIRE FABRIC
BRK	BRICK	EG	EXTERIOR GRADE	GVL	GRAVEL	MULL	MULLION	SQ	SQUARE	XFMR	TRANSFORMER
BS	BOTH SIDES	EJ	EXPANSION JOINT			N/A	NOT APPLICABLE	SS	STAINLESS STEEL		
BSMT	BASEMENT	EL	ELEVATION	GWB	GYP SUM WALL BOARD	NIC	NOT IN CONTRACT	SSM	SOLID SURFACE MATERIAL		
BLR	BUILT UP ROOFING	ELEC	ELECTRIC (AL)	GYP/BD	GYP SUM (BOARD)	NOM	NOMINAL	STA	STATION		
BW	BOTH WAYS	ELEV	ELEVATOR	HB	HOSE BIB	NRC	NOISE REDUCTION COEFFICIENT	STD	STANDARD		
C	CONDUIT	EMERG	EMERGENCY	HC	HOLLOW CORE	NTS	NOT TO SCALE	STG	SEATING		
CAB	CABINET	ENAM	ENAMEL	HM	HOLLOW METAL	OA	OVERALL	STL	STEEL		
CC	CENTER TO CENTER	ENT	ENTRANCE	HORIZ	HORIZONTAL	OC	ON CENTER	STRUC	STRUCTURAL		
CCTV	CLOSED CIRCUIT TELEVISION	EQ	EQUAL	HP	HIGH POINT/HORSEPOWER	OD	OUTSIDE DIAMETER	SUSP	SUSPENDED		
CEM	CEMENT	EQUIP	EQUIPMENT	HR	HANDRAIL	OH	OPPOSITE HAND	SYM	SYMMETRY (ICAL)		
CER	CERAMIC	EST	ESTIMATE	HSK	HOUSEKEEPING	OHD	OVERHEAD	SYS	SYSTEM		
CFL	COUNTER FLASHING	EWC	ELECTRIC WATER COOLER	HT	HEIGHT	OPNG	OPENING	T	TILE		
CG	CORNER GUARD	EXP	EXHAUST FAN	HTG	HEATING	OPP	OPPOSITE	T&G	TONGUE AND GROOVE		
CIRC	CIRCUMFERENCE	EXH	EXHAUST	HVAC	HEATING/VENTILATING/AC			T/S	TOP OF SLAB		

## PLAN SYMBOLS



## BASE BID AND ALTERNATE DESCRIPTION

**BASE BID - GROUP HOME 1802**  
GROUP HOME 1802 TO BE RENOVATED TO PROVIDE 24-HOUR BEHAVIORAL HEALTH SURVEILLANCE AND SHORT-TERM RESPITE CARE TO (4) INDIVIDUALS LIVING WITHIN THE HOME. HOME WILL RECEIVE NEW SIDING, WINDOWS, SIDEWALK AND PORCH PAVEMENT AT THE EXTERIOR OF THE BUILDING. THE INTERIOR OF THE HOME WILL RECEIVE FULL RENOVATION AND RECONFIGURATION OF THE SPACE TO ACCOMMODATE PROPER OBSERVATION AND ANTI-LIGATURE COMPONENTS FOR PROPER CARE. ALL MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION COMPONENTS WILL REQUIRE A FULL REMOVAL AND REINSTALLATION TO PROPERLY BRING EXISTING HOMES UP TO CODE AND CARE REQUIREMENTS.

**ALTERNATE 1**  
GROUP HOME 1803 TO BE RENOVATED SIMILAR TO PROJECT BASE BID.

**ALTERNATE 2**  
EXTERIOR FENCE TO BE PROVIDED AT GROUP HOME 1802/1803 SITE PERIMETER. COMPOSITE, ANTI-CLIMB FENCE TO BE INSTALLED. FENCE GATES AND MAN DOORS TO BE PROVIDED FOR CONTINUED SUPPORT, SURVEILLANCE, AND MAINTENANCE TO THESE HOMES.

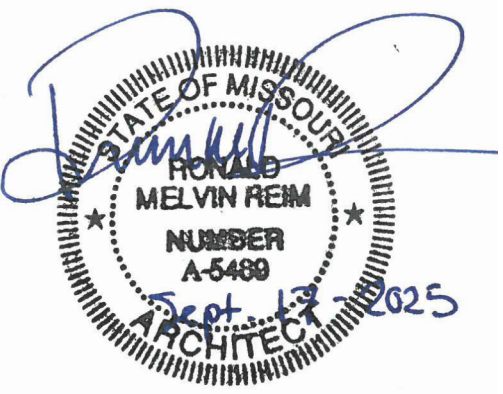
**ALTERNATE 3**  
GROUP HOME 1801 TO BE RENOVATED SIMILAR TO PROJECT BASE BID.

**ALTERNATE 4**  
GROUP HOME 1810 TO BE RENOVATED SIMILAR TO PROJECT BASE BID.

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FA501	FIRE ALARM DETAILS

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DEPARTMENT OF MENTAL  
HEALTH

BELLEFONTAINE  
HABILITATION CENTER

BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
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DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

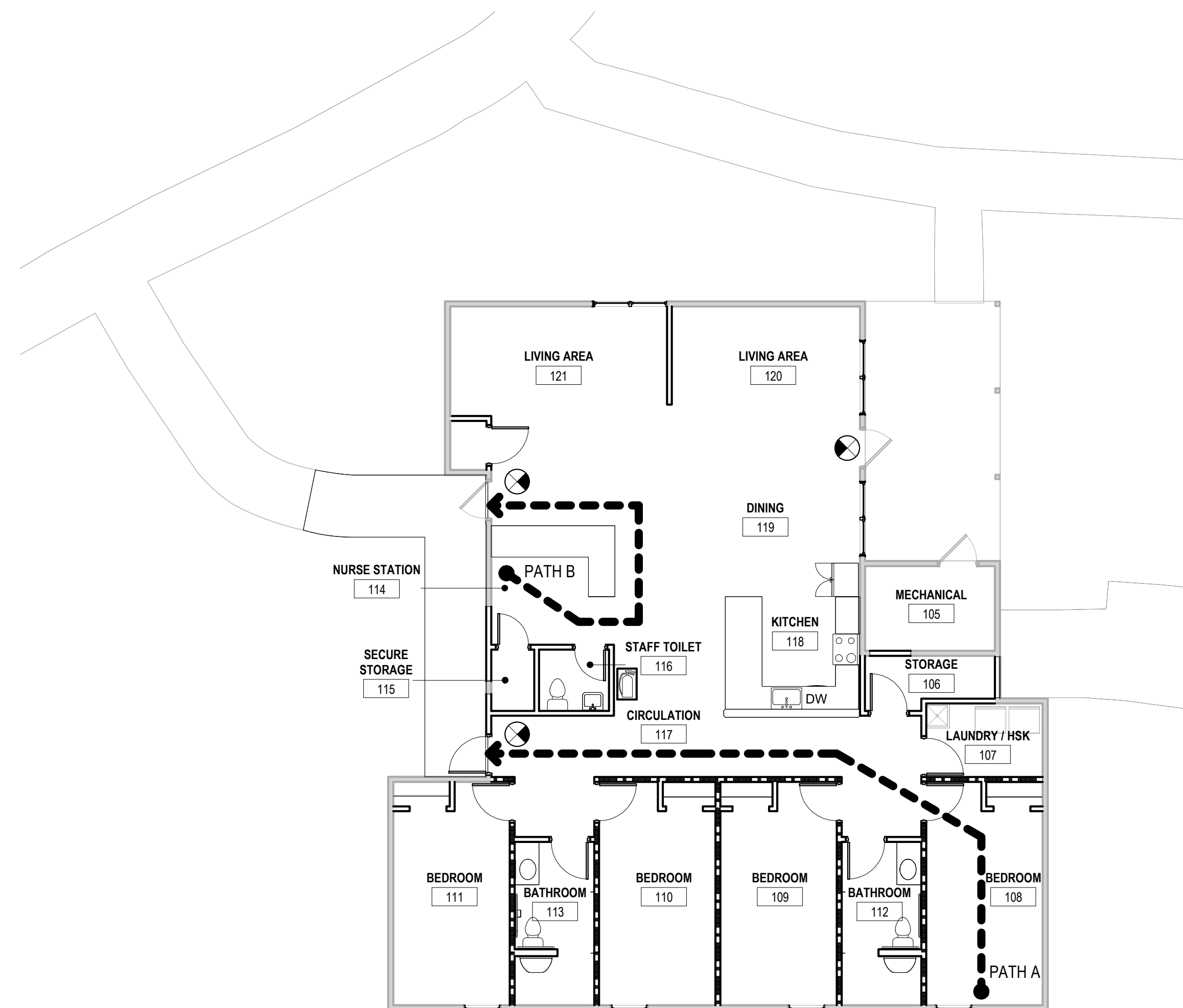
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DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
GENERAL  
INFORMATION

SHEET NUMBER:

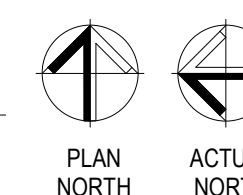
**G001**

2 OF 67 SHEETS  
09/17/2025



PATH ID	COMMON PATH DISTANCE	ACTUAL TRAVEL DISTANCE
PATH A	12' - 0"	33' - 7"
PATH B	37' - 9"	54' - 7"

**1 FIRST FLOOR LIFE SAFETY PLAN**  
1/8" = 1'-0"



**LIFE SAFETY PLAN LEGEND**

- PATH OF TRAVEL (FEET)
- START OF TRAVEL
- EXIT SIGN (COORDINATE W/ ELECTRICAL)
- PORTABLE FIRE EXTINGUISHER (COORDINATE W/ FIRE MARSHAL)
- REQUIRED HALF-HOUR FIRE PARTITION

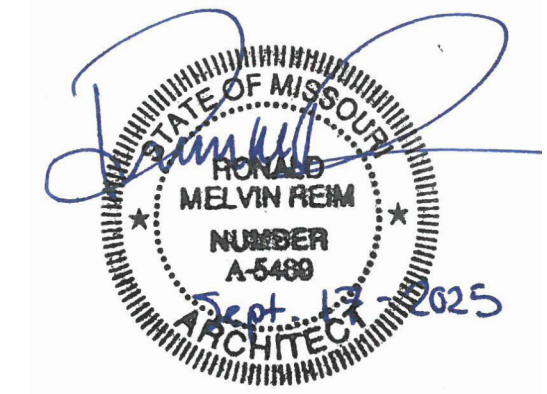
**SHEET NOTES**

1. THE MINIMUM WIDTH OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES. THE HEIGHT OF DOORS SHALL NOT BE LESS THAN 80 INCHES. (DETERMINED BY IBC CHAPTER 10 - SECTION 1004)
2. EGRESS DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. ALL EGRESS DOORS TO HAVE PANIC HARDWARE. PANIC HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS. (DETERMINED BY IBC CHAPTER 10 - SECTION 1010)
3. THE MEANS OF EGRESS, AND EXIT DISCHARGE, SHALL BE ILLUMINATED AT ANY TIME THE BUILDING IS OCCUPIED WITH A LIGHT INTENSITY OF NOT LESS THAN 1 FOOT-CANDLE AT THE WALKING SURFACE LEVEL. (DETERMINED BY IBC CHAPTER 10 - SECTION 1008)
4. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES. NO STORAGE IS PERMITTED IN ANY EGRESS PATHS. (DETERMINED BY IBC CHAPTER 10 - SECTION 1003)
5. ALL NEW FIRE EXTINGUISHER LOCATIONS ARE DETERMINED BY IFC TABLE 906.3(1) AND/OR BY THE DIRECTION OF THE LOCAL AUTHORITY.

**LIFE SAFETY - BUILDING CODE ANALYSIS**

PROJECT NAME:	GROUP HOME STUDY AND ADA IMPROVEMENTS
CITY:	BELLEFONTAINE NEIGHBORS
COUNTY:	ST. LOUIS
STATE:	MISSOURI
AUTHORITY HAVING JURISDICTION:	THE STATE OF MISSOURI (ABIDING BY THE RULES AND REGULATIONS OF BELLEFONTAINE NEIGHBORS)
APPLICABLE CODES AND STANDARDS	2018 INTERNATIONAL EXISTING BUILDING CODE (IBC) 2018 INTERNATIONAL BUILDING CODE (IBC) 2021 INTERNATIONAL ENERGY CONSERVATION CODE 2021 INTERNATIONAL MECHANICAL CODE 2021 INTERNATIONAL PLUMBING CODE 2020 NFPA 70, NATIONAL ELECTRICAL CODE 2021 NFPA 101, LIFE SAFETY CODE (LSC) 2010 ADA AND ABA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES - (23 JULY, 2004) 2018 A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (WHERE REQUIRED BY IBC OR LOCAL JURISDICTIONS.)
BASIC BUILDING INFORMATION	
ALTERATION LEVEL	LEVEL 3 (>50% ALTERATION)
CONSTRUCTION TYPE	V-B
OCCUPANCY CLASSIFICATION (IBC CHAPTER 3)	RESIDENTIAL GROUP R-3
ACTUAL BUILDING AREA:	2,493 GSF
ALLOWABLE AREA PER OCCUPANT:	200 SF PER OCCUPANT
TOTAL OCCUPANTS	2,493SF ÷ 200 SF PER OCCUPANT = 13 OCCUPANTS
FIRE-RESISTANT BUILDING ELEMENTS	
STRUCTURAL FRAME:	0 HOURS
EXTERIOR BEARING WALLS:	0 HOURS
INTERIOR BEARING WALLS:	0 HOURS
INTERIOR NONBEARING WALLS:	0 HOURS
FLOOR CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS:	0 HOURS
ROOF CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS:	0 HOURS
SEPARATION WALLS (420.2)	1/2 HOUR FIRE PARTITIONS REQUIRED BETWEEN SLEEPING UNITS
CEILING CONSTRUCTION AT SLEEPING UNITS	MATCH SEPARATION WALL RATING (1/2 HOUR)
EXTERIOR OPENINGS:	UNPROTECTED
PASSIVE FIRE SAFETY FEATURES - TRAVEL DISTANCES	
EXIT TRAVEL DISTANCE - WITH SPRINKLERS:	
MAXIMUM TRAVEL DISTANCE	300 FT MAXIMUM ALLOWED
	ACTUAL EXIT TRAVEL DISTANCES: SEE LIFE SAFETY PLANS
COMMON PATH DISTANCE - WITH SPRINKLERS:	
MAXIMUM COMMON PATH	125 FT MAXIMUM ALLOWED
	ACTUAL COMMON PATH DISTANCES: SEE LIFE SAFETY PLANS
DEAD END DISTANCE:	
MAXIMUM DEAD END (CORRIDOR)	50 FT MAXIMUM ALLOWED
EXIT CAPACITY:	
MINIMUM NUMBER OF EXITS PER FLOOR	1 REQUIRED EXIT (TRAVEL DISTANCE AND <20 OCCUPANTS MET)
DOORS (IBC SECTION 10XX.X)	
REQUIRED:	13 OCCUPANTS x .2" PER OCCUPANT = 2.6" (USE MINIMUM OF 32")
	ACTUAL DOOR WIDTHS: SEE LIFE SAFETY PLANS
ACTIVE FIRE SAFETY FEATURES	
AUTOMATIC SPRINKLER SYSTEM:	REQUIRED, PROVIDED THROUGHOUT THE BUILDING
FIRE ALARM SYSTEM:	REQUIRED, PROVIDED THROUGHOUT THE BUILDING
DETECTION SYSTEM:	REQUIRED (NFPA 90A, ASME 17.1), PROVIDED THROUGHOUT THE BUILDING
SMOKE CONTROL SYSTEM:	NOT REQUIRED, NOT PROVIDED.
PORTABLE FIRE EXTINGUISHERS:	PROVIDED PER NFPA 10. 75' TRAVEL DISTANCE.
EXIT IDENTIFICATION:	REQUIRED, PROVIDED
EXIT ILLUMINATION:	REQUIRED, PROVIDED

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ISSUE DATE: 09/17/2025

CAD DWG FILE:  
DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**LIFE SAFETY  
ANALYSIS**

SHEET NUMBER:

**G100**

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09/17/2025

## UTILITIES

- EXISTING UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED TO BE APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. MISSOURI LAW REQUIRES A MINIMUM 48-HOUR NOTICE TO ALL UTILITY COMPANIES BEFORE DIGGING. FIELD LOCATIONS OF UNDERGROUND FACILITIES MAY BE OBTAINED BY CALLING THE ONE CALL SYSTEM AT 1-800-DIG-RITE AND PROVIDING 48 HOURS ADVANCE NOTICE. NON-ONE CALL MEMBERS MUST BE CONTACTED DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT LIMITS ARE LISTED BELOW.
- ANY FACILITIES OR APPURTENANCES WHICH ARE THE PROPERTY OF ANY PUBLIC UTILITY LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED OR ADJUSTED BY THEIR RESPECTIVE OWNERS. THE CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE OWNERS OF ANY SUCH FACILITY IN THEIR REMOVAL AND REARRANGEMENT OPERATIONS IN ORDER THAT THESE OPERATIONS AND THE CONSTRUCTION OF THIS PROJECT MAY PROGRESS IN A REASONABLE MANNER. THE COST OF ANY NECESSARY RELOCATIONS SHALL BE INCURRED BY THE OWNER UNLESS NOTED OTHERWISE AND IF PRIOR AGREEMENTS ARE NOT IN PLACE.
- THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION WHICH MAY REQUIRE ADJUSTMENT, RELOCATION OR REMOVAL. ALL ARE MEMBERS OF MISSOURI ONE CALL, UNLESS NOTED OTHERWISE.

AMEREN UE (ELECTRIC)  
12121 DORSETT ROAD  
MARYLAND HEIGHTS, MO 63043  
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1590 WOODLAKE DRIVE  
CHESTERFIELD, MO 63017  
(314) 340-4119

AT&T (TELEPHONE)  
402 NORTH THIRD STREET  
SAINT CHARLES, MO 63301  
(636) 448-9607

MISSOURI AMERICAN WATER COMPANY  
727 CRAIG ROAD  
ST. LOUIS, MO 63141  
(314) 996-2396

CHARTER COMMUNICATIONS (COMMUNICATIONS)  
815 CHARTER COMMONS  
TOWN & COUNTRY, MO 63017  
(636) 387-6650

SPIRE ENERGY  
700 MARKET STREET  
ST. LOUIS, MO 63101  
(314) 342-0500

METROPOLITAN ST. LOUIS SEWER DISTRICT  
2350 MARKET STREET  
SAINT LOUIS, MO 63013  
(636) 768-6200

THE ABOVE INFORMATION REPRESENTS THE BEST INFORMATION AVAILABLE TO THE OWNER AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR HAS TAKEN THE FOREGOING INTO CONSIDERATION IN PREPARING HIS/HER BID, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY DELAYS OR INCONVENIENCE CAUSED BY SAME.

**MISSOURI ONE CALL SYSTEM, INC.**  
**PHONE: 1-800-DIG-RITE**

- THE CONTRACTOR SHALL KEEP ALL UTILITIES IN SERVICE DURING CONSTRUCTION OPERATIONS. MEANS & METHODS TO ACCOMPLISH THIS ARE THE CONTRACTOR'S RESPONSIBILITY, BUT SOME EXAMPLES INCLUDE POT HOLING TO AVOID DISRUPTION, SHORING TO LIMIT EXCAVATION, PUMPING TO MAINTAIN FLOW, AND TEMPORARY SUPPORTING TO MAINTAIN STABILITY.
- SHOULD UNCHARTED OR INCORRECTLY CHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL CONSULT WITH THE UTILITY OWNER AND ENGINEER IMMEDIATELY FOR DIRECTIONS. THE CONTRACTOR SHALL COOPERATE WITH THE SERVICES AND FACILITIES IN OPERATION AND REPAIR DAMAGED UTILITIES TO THE SATISFACTION OF THE UTILITY OWNER. IF THE UTILITY OWNER IS FOUND NOT RESPONSIBLE, THE COST TO REPAIR DAMAGED UTILITIES UNCHARTED OR INCORRECTLY CHARTED WILL BE CONSIDERED AN UNFORESEEN CONDITION AND WILL BE PAID FOR AT AN AGREED UPON PRICE OR ON A TIME AND MATERIAL BASIS.
- ALL EXISTING UTILITY ACCESS COVERS SUCH AS MANHOLES, VALVE BOXES, VAULT COVERS, METER COVERS, AND OTHER SURFACE APPURTENANCES - EVEN IF THERE IS NO SPECIFIC CALL OUT - SHALL BE ADJUSTED TO THE PROPER FINISH GRADE ELEVATION ACCORDING TO THE REQUIREMENTS OF THE AFFECTED UTILITY COMPANY.

## GENERAL

- ALL SITE WORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS INCLUDING THE CITY OF BELLEFONTAINE NEIGHBORS MUNICIPAL CODE, THE LATEST EDITION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION'S, "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", AND WITH THE LATEST EDITION OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES", IN SO FAR AS THEY APPLY, EXCEPT THAT ALL REFERENCES TO MEASUREMENT AND PAYMENT SHALL BE DELETED.
- ALL WATER AND SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BELLEFONTAINE NEIGHBORS AND ST. LOUIS COUNTY MUNICIPAL CODES AND WITH THE LATEST EDITION OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES", AND MISSOURI AMERICAN WATER "WATER MAIN SPECIFICATIONS", UNLESS OTHERWISE PROVIDED HEREIN.
- IF THERE ARE ANY DISCREPANCIES BETWEEN THESE PLANS, SPECIFICATIONS, OR STANDARDS BY GOVERNING BODIES, THE MOST STRINGENT AND RELEVANT REQUIREMENT SHALL BE BINDING AND APPLICABLE.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO ACCOMPLISH THE WORK. NO CONSTRUCTION ACTIVITIES SHALL BE PERFORMED UNTIL ALL NECESSARY PERMITS HAVE BEEN SECURED. THE COST OF THE PERMITS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- ALL CONSTRUCTION SHALL CONFORM TO THE PLANS AND SPECIFICATIONS. IF THE CONTRACTOR CHOOSES TO MAKE MODIFICATION DURING CONSTRUCTION, EVEN IF THE WORK IS AFFECTED BY OMISSION OR DISCREPANCY, WITHOUT THE APPROVAL OF THE ENGINEER, HE/ SHE IS MAKING SUCH CHANGES AT HIS/ HER OWN RISK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY CHANGES FROM THE APPROVED DOCUMENTS.
- THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION LAYOUT AND MATERIAL TESTING NECESSARY TO COMPLETE THE PROJECT TO THE PLANS AND SPECIFIED TOLERANCES.
- AT THE CONCLUSION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS FOR THE OWNER'S RECORDS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD, INCLUDING POTHOLING POTENTIAL UTILITY CONFLICTS, PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE CONSTRUCTION SITE FREE OF DEBRIS AT ALL TIMES AND SHALL KEEP DIRT/ MUD OFF ALL PUBLIC STREETS ADJACENT TO THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL CONFINE ALL OPERATIONS TO THE AREA SHOWN ON THE PLANS. ANY AREA DISTURBED BEYOND THESE LIMITS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

## GENERAL (CONTINUED)

- THE CONTRACTOR SHALL FERTILIZE, SEED, AND MULCH ALL EARTH SURFACES DISTURBED BY CONSTRUCTION, EXCEPT AS NOTED OTHERWISE IN THE PLANS. FERTILIZE, SEED, AND MULCH WITHIN THE CONSTRUCTION LIMITS AS PROVIDED IN THE CONTRACT. FERTILIZER, SEEDING, AND MULCH OUTSIDE THESE LIMITS DUE TO CONSTRUCTION ENCROACHMENTS SHALL BE RESTORED TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE CONTRACT.
- IF INDICATED, A PORTION OF THE CONSTRUCTION SITE MAY BE USED AS A STAGING AND CONTRACTOR PARKING AREA. IF SIDEWALKS, LAWNS, DRIVEWAYS, OR ANY OTHER AREA WITHIN OR IN THE HAUL PATH FROM THE STAGING AREA ARE DAMAGED BY THE CONTRACTOR, THEY SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED ON THE PROPOSED CONSTRUCTION SITE AND NOT ON ANY PUBLIC STREET OR RIGHT OF WAY OUTSIDE THE DESIGNATED CONSTRUCTION ZONE.
- THE CONTRACTOR SHALL STAGE ALL WORK TO MAINTAIN INGRESS AND EGRESS TO ALL ADJACENT BUILDINGS AND PROPERTIES AT ALL TIMES DURING CONSTRUCTION. AGGREGATE FOR TEMPORARY ACCESS OR OTHER TEMPORARY ELEMENTS MAY BE REQUIRED TO ACCOMPLISH REQUIREMENT.
- THE CONTRACTOR SHALL PROVIDE A PORTABLE RESTROOM FACILITY WITHIN THE CONSTRUCTION LIMITS. ADJACENT BUILDING RESTROOMS ARE NOT AVAILABLE FOR USE.
- THE CONTRACTOR SHALL PROVIDE THE NECESSARY SIGNS AND BARRICADES AT THE PROJECT ENTRANCES TO PREVENT PUBLIC ENTRY. ALL MATERIAL PILES, EQUIPMENT, OPEN EXCAVATIONS OR THEIR OBSTRUCTIONS, OR HAZARDS TO MOTORISTS OR PEDESTRIANS SHALL BE ENCLOSED BY FENCES OR PROTECTED BY BARRICADES. BARRIER SHALL BE EITHER 4' TALL SNOW FENCE WITH T-POSTS SPACED ON 5' CENTERS, CHAIN LINK FENCE ON STANDS, OR OTHER PRE-APPROVED METHODS. CAUTION TAPE IS NOT CONSIDERED ADEQUATE TO PROTECT EXCAVATIONS.
- THE CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION ENTRANCE AND INSTALL OTHER EROSION CONTROL ITEMS AS SHOWN ON THE "EROSION CONTROL PLANS" OR "STORMWATER POLLUTION PREVENTION PLAN" AND AS DIRECTED BY THE ENGINEER. TO CONTROL SITE RUNOFF, THE ENGINEER MAY REQUEST EROSION CONTROL ITEMS NOT SHOWN ON THE PLANS AT NO ADDITIONAL COST TO THE CONTRACT WHEN STAGED OPERATIONS CREATE A TEMPORARY CONDITION THAT WOULD ALLOW OFFSITE EROSION IF NOT CONTAINED.
- THE UNITED STATES ACCESS BOARD, PROWAG 2023 AND THE MISSOURI ACCESSIBILITY CODE SHALL GOVERN ALL ACCESS ROUTE IMPROVEMENTS.
- THE CONTRACTOR SHALL GUARANTEE ALL WORK, MATERIALS, AND LABOR ASSOCIATED WITH THIS WORK FOR A PERIOD OF ONE (1) YEAR.

## REMOVAL

- THE CONTRACTOR SHALL INSPECT AND ACCEPT THE SITE CONDITIONS PRIOR TO MOBILIZATION. DOCUMENTATION FOR ANY CONCERNS SHALL BE PROVIDED TO OWNER IN WRITING AND WITH PHOTOGRAPHS PRIOR TO MOBILIZATION. NO ADDITIONAL PAYMENT WILL BE MADE FOR REPAIR OF DAMAGED EXISTING FEATURES TO REMAIN THAT WERE NOT ADDRESSED BEFORE THE CONTRACTOR ASSUMED THE SITE FROM THE OWNER.
- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL EXISTING FEATURES SUCH AS SIGNS, PAVEMENT, CURB, AND TREES FROM DAMAGE. IF ANY FEATURE TO REMAIN IS DAMAGED, IT SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR'S EXPENSE AS DIRECTED BY THE OWNER OR ENGINEER.
- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. IF ANY PROPERTY MARKER IS TO REMAIN AND IS DAMAGED, IT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AS DIRECTED BY THE ENGINEER OR OWNER.
- THE CONTRACTOR SHALL REMOVE ALL EXISTING FEATURES INCLUDING BUT NOT LIMITED TO PAVEMENT, SIDEWALK, AND DRIVEWAY PAVEMENT WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION UNLESS NOTED OTHERWISE ON THE PLANS. ALL FEATURES WHICH ARE TO BE REMOVED AND FOR WHICH THERE IS NOT A SPECIFIC CALLOUT, WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.
- THE CONTRACTOR SHALL PROTECT EXISTING TREES TO REMAIN AND AVOID COMPACTING THE AREA UNDER THE TREE'S DRIPLINE. IF TREE ROOTS ARE ENCOUNTERED, THEY SHALL BE SAWN OFF AT THE EDGE OF THE EXCAVATION RATHER THAN RIPPED WITH EQUIPMENT.
- ANY EXCESS EARTH EXCAVATION SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED.
- FULL DEPTH SAW CUTTING ON ALL EDGES FOR REMOVAL ITEMS SHALL BE INCLUDED IN THE COST OF THE REMOVAL ITEM INVOLVED ACCORDING TO SECTION 202 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION."
- ALL PAVEMENT REMOVAL SHALL BE REMOVED TO THE NEAREST EXISTING JOINT LOCATION. NO PARTIAL SLAB REMOVALS WILL BE ALLOWED.
- THE CONTRACTOR SHALL REMOVE, MAINTAIN IN A TEMPORARY LOCATION, AND PERMANENTLY RESET ALL MAILBOXES, TRAFFIC SIGNS, STREET NAME SIGNS, AND ALL PRIVATE AND COMMERCIAL SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS ACCORDING TO SECTION 202 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" AND AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL REMOVE TRAFFIC SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND RE-ERECT THEM AT TEMPORARY LOCATIONS TO SAFELY MAINTAIN TRAFFIC CONTROL THROUGHOUT THE CONSTRUCTION PERIOD. AS SOON AS CONSTRUCTION OPERATIONS ALLOW, ALL TRAFFIC SIGNS SHALL BE PERMANENTLY LOCATED.
- WHERE TREE REMOVAL CONFLICTS WITH EXISTING UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CUT THE TREE OFF AT THE GROUND LINE AND GRIND THE STUMP AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE COMPLETELY REMOVING TREES AND ROOTS UNDER PAVED SURFACES.
- ANY UNSUITABLE MATERIAL ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR AND REPLACED WITH SUITABLE MATERIAL AS APPROVED BY THE ENGINEER. THE COST TO REMOVE AND REPLACE UNSUITABLE MATERIAL WILL BE CONSIDERED AN UNFORESEEN CONDITION AND WILL BE PAID FOR AT AN AGREED UPON PRICE OR ON A TIME AND MATERIAL BASIS.

## EARTHWORK & GRADING

- THE WORK INCLUDES THE REMOVAL OF EXISTING CONCRETE ROADWAY SURFACE AND AGGREGATE BASE.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER DURING SUBGRADE PREPARATION AND PRIOR TO SOIL MODIFICATION TO DETERMINE THE NECESSITY OF THE PROPOSED SUBGRADE IMPROVEMENT. IF THE SUBGRADE IS FOUND TO REQUIRE OR NOT TO REQUIRE REMEDIAL PROCEDURES, SOIL MODIFICATION AND MODIFIER MAY BE ADDED OR DELETED AS A CONTRACT MODIFICATION.
- PRIOR TO COMPACTION AND THE PLACEMENT OF PAVEMENT BASE COURSE LAYERS, THE CONTRACTOR SHALL PREPARE A DRY, STABLE SUBGRADE BY DISKING OR OTHERWISE AERATING THE SOIL. WHEN AIR DRYING IS NOT FEASIBLE, THE CONTRACTOR MAY USE A MOISTURE REDUCING CHEMICAL ADDITIVE SUCH AS HYDRATED LIME TO ADJUST THE MOISTURE IN THE SOIL AT NO ADDITIONAL COST TO THE CONTRACT.
- AT THE BEGINNING OF CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL STRIP THE TOP 6" OF EXISTING LAWN AREAS TO REMOVE ORGANICS AND SALVAGE EXISTING, CLEAN TOPSOIL FOR USE DURING FINAL GRADING AND LAWN RESTORATION. THE CONTRACTOR SHALL STOCKPILE THE TOPSOIL AS INDICATED ON THE PLANS OR AT AN AGREED UPON LOCATION.
- TOPSOIL SHALL BE SPREAD EVENLY (4" MIN.) OVER ALL THE LAWN AREAS WITHIN THE SITE TO MEET THE FINAL GRADE PRIOR TO CONCLUDING EARTHWORK OPERATIONS. TOPSOIL MAY CONSIST OF SALVAGED TOPSOIL, EXISTING TOPSOIL AMENDED WITH 2" OF IMPORTED COMPOST, AND/OR BE IMPORTED FROM PRE-APPROVED SOURCES AS NEEDED FOR SUPPLEMENTATION.

STATE OF MISSOURI  
MIKE KEHOE,  
GOVERNOR



ISSUE DATE: 09/17/2025  
LICENSE EXPIRES: 12/31/2025



OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION

DEPARTMENT OF MENTAL  
HEALTH

BELLEFONTAINE  
HABILITATION CENTER

BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
GENERAL NOTES

SHEET NUMBER:

C001

4 OF 64 SHEETS  
09/17/2025

09/17/2025 - CONSTRUCTION DOCUMENTS

## EARTHWORK AND GRADING (CONTINUED)

- FOR LAWN AREAS, SEED SHALL CONSIST OF TALL FESCUE APPLIED AT A RATE OF 10# PER 1,000-SF ACCORDING TO SECTION 805 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION". LIME, FERTILIZER, MULCH, AND CONSTRUCTION REQUIREMENTS SHALL BE ACCORDING TO SECTION 805 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION".
- FINAL PAYMENT ON RETAINAGE WILL NOT BE MADE UNTIL THE LAWN HAS ESTABLISHED TO A 95% LEVEL WITH NO INDIVIDUAL BARE SPOTS LARGER THAN 6"X6" IN SIZE AFTER ONE GROWING SEASON (APRIL TO MAY OR SEPTEMBER TO OCTOBER).
- DURING GRADING OPERATIONS, THE SURFACE SHALL BE SMOOTH AND NOT BE LEFT TO IMPOUND WATER IF THERE MAY BE RAIN PRIOR TO THE NEXT WORKING DAY. IF THE SURFACE IS FINISHED SMOOTH FOR ANY REASON, IT SHALL BE SCARIFIED BEFORE PROCEEDING WITH THE PLACEMENT OF SUCCEEDING EARTH LIFTS.
- DEWATERING OF EXCAVATION AREAS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION FROM NEW AREAS TO ADJACENT, EXISTING AREAS AS NECESSARY.

## DRAINAGE

- ALL DRAINAGE STRUCTURES CONSTRUCTED, ADJUSTED, OR RECONSTRUCTED UNDER THE CONTRACT, SHALL BE CLEANED OF ANY ACCUMULATION OF SILT, DEBRIS OR FOREIGN MATTER AT THE END OF EACH WORKING DAY AND AT THE TIME OF FINAL INSPECTION. THE EXISTING STRUCTURE ONE REACH IMMEDIATELY DOWNSTREAM SHALL ALSO BE CLEANED.
- MANHOLES AND DRAINAGE STRUCTURES MAY BE ADJUSTED WITH GRADE RINGS FOR ADJUSTMENTS UP TO TWELVE (12) INCHES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADJUSTMENTS REQUIRED TO MATCH FINISHED GRADE.
- ALL PIPE TRENCHES UNDER AND WITHIN 2 FEET OF PAVED AREAS SHALL BE BACKFILLED TO FINAL GRADE WITH COARSE AGGREGATE.

## EROSION CONTROL

- THE CONSTRUCTION OF THIS PROJECT IS NOT GOVERNED BY THE CONDITIONS OF THE GENERAL NPDES STORMWATER PERMIT ISSUED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES. HOWEVER, AN "EROSION CONTROL PLAN" HAS BEEN PREPARED BY THE ENGINEER IN CONJUNCTION WITH THIS PLAN SET. THE "EROSION CONTROL PLAN" CONTAINS INFORMATION SUCH AS REQUIRED SEQUENCE OF CONSTRUCTION, SEED, FERTILIZER AND LIME APPLICATION RATES AND PROCEDURES, AND PROVISION FOR MAINTENANCE OF EROSION CONTROL STRUCTURES AND MEASURES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP A COPY OF THE PLAN AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES, AND TO ENSURE COMPLIANCE WITH THE PLAN.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SILTATION CONTROL, AS NEEDED, TO PREVENT SILTATION OF OFF SITE PROPERTIES, UNTIL THE VEGETATION IN ALL DISTURBED AREAS HAS BEEN ESTABLISHED (75% COVERAGE OR MORE), AT WHICH TIME HE/SHE SHALL BE RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY SILTATION CONTROL AND REPAIR OF ANY ERODED AREAS. EROSION CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH APPLICABLE PLAN DETAILS AND THE MISSOURI URBAN MANUAL. NO CONSTRUCTION ACTIVITIES SHALL BE PERFORMED UNTIL EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED ON AND ADJACENT TO THE PROJECT SITE.
- THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES BY WATERING OR USING SLURRY MATERIALS DUE TO THE PROXIMITY OF ADJACENT BUILDINGS. THE CONTRACTOR SHALL WATER THE SITE FREQUENTLY AS NEEDED AND IF DIRECTED BY THE ENGINEER.
- DITCH CHECKS SHALL BE COMPOSED OF AGGREGATE, SILT PANELS, ROLLED EXCELSIOR, SILT WEDGES, OR OTHER PRE-APPROVED MATERIALS. HAY BALES SHALL NOT BE PERMITTED.

## GRAVITY SANITARY SEWER SPECIFICATIONS

- ALL MATERIALS, INSTALLATION, AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION THE METROPOLITAN ST. LOUIS SEWER DISTRICT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES", THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, THE MISSOURI DEPARTMENT OF PUBLIC HEALTH, THE MISSOURI PLUMBING CODE, AND THE REQUIREMENTS OF ST. LOUIS COUNTY.
- PRIOR TO COMMENCEMENT OF ANY WORK, THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE PLANS WITH THE ACTUAL DIMENSIONS AND CONDITIONS OF THE SITE. THE GENERAL CONTRACTOR MUST VERIFY THE ENGINEER'S LINES AND GRADES. IF A DISCREPANCY OCCURS FROM WHAT IS SHOWN ON THE PLANS, STANDARD SPECIFICATIONS, AND/OR DETAILS, THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE AFFECTED WORK. FAILING TO DO SO WILL BE CONSIDERED AS THE GENERAL CONTRACTOR HAVING PROCEEDED AT HIS OWN RISK AND EXPENSE.
- ALL SANITARY SEWER PIPES SHALL BE PVC SDR-35 (OR SDR-26 IF GREATER THAN 14 FEET DEEP) MEETING THE REQUIREMENTS OF ASTM D3034 WITH PIPE AND FITTINGS CONFORMING TO ASTM D3034 AND HAVING AN INTEGRAL BELL, GASKETED JOINT CONFORMING TO ASTM D3212
- SANITARY SEWER INVERTS SHOWN ON THE PLANS HAVE BEEN CALCULATED TO THE CENTER OF THE STRUCTURE. THE SANITARY SEWER SLOPES SHOWN ON THE PLANS IS THE PERCENT GRADE FROM CENTER TO CENTER OF STRUCTURE. THE LENGTH OF SANITARY SEWERS SHOWN ON THE PLANS IS THE DISTANCE FROM CENTER TO CENTER OF STRUCTURE.
- BEDDING OF THE PIPE AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH ASTM D2321-89 CLASS IB, THE THE METROPOLITAN ST. LOUIS SEWER DISTRICT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES" AND AS SHOWN IN THE PLANS. GRANULAR TRENCH BACKFILL SHALL BE USED AS INDICATED ON THE PLANS AND WHEN THE EDGE OF ANY TRENCH IS WITHIN 2 FT. OF ANY PAVEMENT, CURB, SIDEWALK, OR OTHER STRUCTURE. TRENCH BACKFILL SHALL BE COMPACTED WITH A ROLLER, VIBRATORY PLATE, OR OTHER COMPACTING DEVICE IN 12-INCH LIFTS.
- ALL GRAVITY SANITARY SEWER PIPES AND STRUCTURES SHALL BE TESTED IN ACCORDANCE WITH THE METROPOLITAN ST. LOUIS SEWER DISTRICTS "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES" GRAVITY SEWER PIPES SHALL BE TELEVISION INSPECTED BY THE METROPOLITAN ST. LOUIS SEWER DISTRICT PRIOR TO THE WORK BEING ACCEPTED. CONTRACTOR SHALL REPAIR OR REPLACE ANY LINE OR STRUCTURE WHICH FAILS ANY OF THE REQUIRED TESTS, AND RETEST. ALL TESTS SHALL BE WITNESSED BY THE ENGINEER AND THE METROPOLITAN ST. LOUIS SEWER DISTRICT. CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE METROPOLITAN ST. LOUIS SEWER DISTRICT 48 HOURS IN ADVANCE OF ANY TESTING TO BE PERFORMED.
- A MINIMUM 10-FOOT HORIZONTAL AND 18-INCH VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN ALL WATER AND SEWER MAINS IN ACCORDANCE METROPOLITAN ST. LOUIS SEWER DISTRICTS "STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES". WHERE PHYSICAL CONSTRAINTS PREVENT THIS REQUIREMENT FROM BEING MET, ALTERNATIVE METHODS FOR PREVENTING CROSS-CONTAMINATION BETWEEN THE SEWER AND WATER MAIN SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE STANDARDS.
- PVC PIPE SHALL BE STORED UNDER COVER TO PROTECT FROM ULTRAVIOLET LIGHT.
- WHENEVER PIPE LAYING IS NOT ACTIVELY IN PROGRESS, OPEN ENDS OF ALL INSTALLED PIPE AND FITTINGS SHALL BE FITTED WITH A WATERTIGHT PLUG.
- PENETRATIONS ON ALL EXISTING MANHOLES SHALL BE CORE DRILLED. NO IMPACT DEVICES WILL BE ALLOWED FOR THE PURPOSE OF CONNECTING NEW SEWER MAINS TO EXISTING MANHOLES.
- ALL PENETRATIONS SHALL BE MADE WATERTIGHT BY THE USE OF NON-SHRINK GROUT.
- SEE PLUMBING PLANS FOR CLEANOUT LOCATIONS.
- ALL MANHOLES SHALL BE INSPECTED AND LEAKAGE TESTED FOR WATER TIGHTNESS IN ACCORDANCE WITH ASTM C 969-94 OR ASTM C 1244-93, PRIOR TO BEING PLACED INTO SERVICE.

## ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE IN GRADE	CTR	CENTER	HVAC	HEATING/ VENTILATION/AIR	ROW	RIGHT OF WAY
ADJ	ADJACENT	CY	CUBIC YARD	ID	CONDITIONING	S	SOUTH
AGG	AGGREGATE	DIA	DIAMETER	IN	INSIDE DIAMETER	SAN	SANITARY
AI	AREA INLET	DND	DO NOT DISTURB	INV	INCHES	SEW	SEWER
ALT	ALTERNATE	DS	DOWN SPOUT	JB	INVERT	SF	SQUARE FEET
APPROX	APPROXIMATE	DTL	DETAIL	K	JUNCTION BOX	SHT	SHEET
BC	BACK OF CURB	E	EAST		LENGTH OF VERTICAL CURVE PER	STA	STATION
BIT	BITUMINOUS	EA	EACH		PERCENT GRADE DIFFERENCE	STD	STANDARD
BLDG	BUILDING	EJ	EXPANSION JOINT	LF	LINEAR FEET	STM	STORM
BLRD	BOLLARD	EL	ELEVATION	MAT	MATERIAL	SY	SQUARE YARD
BM	BENCHMARK	ELEC	ELECTRIC	MAX	MAXIMUM	TBA	TO BE ADJUSTED
BO	BY OTHERS (USED IN CONJUNCTION WITH TBA & TBR)	ENGR	ENGINEER	MECH	MECHANICAL	TBR	TO BE REMOVED
BVCE	BEGINNING OF VERTICAL CURVE ELEVATION	EOP	EDGE OF PAVEMENT	MH	MANHOLE	TBS	TO BE SAVED
BVCS	BEGINNING OF VERTICAL CURVE STATION	EQ	EQUAL	MIN	MINIMUM	TBRL	TO BE RELOCATED
BW	BOTTOM OF WALL	ESMT	EASEMENT	MISC	MISCELLANEOUS	TBV	TO BE VACATED
CATV	CABLE TELEVISION	ETR	EXISTING TO REMAIN	N	NORTH	TCE	TEMPORARY CONSTRUCTION
CB	CATCH BASIN	EVCE	END OF VERTICAL CURVE ELEVATION	NF	NOW OR FORMERLY		EASEMENT
CI	CURB INLET	EVCS	END OF VERTICAL CURVE STATION	NIC	NOT IN CONTRACT	TEL	TELEPHONE
CIPP	CURED IN-PLACE PIPE (LINER)	EX	EXISTING	NO	NUMBER	THK	THICK
CJ	CONTROL JOINT	EXP	EXPANSION	NTS	NOT TO SCALE	TLOF	TOUCH DOWN AND LIFT-OFF AREA
CL	CENTERLINE	FATO	FINAL APPROACH AND TAKEOFF AREA	OC	OIL AND CHIP	TUP	TEMPORARY USE PERMIT
CLF	CHAIN LINK FENCE	FES	FLARED END SECTION	OC	ON CENTER	TW	TOP OF WALL
CMP	CORRUGATED METAL PIPE	FF	FINISHED FLOOR	OD	OUTSIDE DIAMETER	TYP	TYPICAL
CMU	CONCRETE MASONRY BLOCK	FL	FLOW LINE	PERM	PERMANENT	UIP	USE IN PLACE
CO	CLEANOUT	FO	FIBER OPTIC	PL	PROPERTY LINE	UTIL	UTILITIES
COM	COMMUNICATIONS	FT	FEET	PVC	POLYVINYL CHLORIDE PIPE	VCP	VERTRIFIED CLAY PIPE
CONC	CONCRETE	FV	FIELD VERIFY	PVI	POINT OF VERTICAL INTERSECTION	W	WIDTH OR WEST
CONST	CONSTRUCTION	GI	GRATE INLET	PVMT	PAVEMENT	W/	WITH
CP	CONTROL POINT	GND	GROUND	QTY	QUANTITY	WO/	WITHOUT
		HDPE	HIGH DENSITY POLYETHYLENE	R	RADIUS	WR	WATER RESISTANT
		HMA	HOT-MIX ASPHALT	RCP	REINFORCED CONCRETE PIPE	WT	WEIGHT
		HT	HEIGHT	RD	ROOF DRAIN	WTR	WATER
						WWF	WELDED WIRE FABRIC
						YD	YARD DRAIN
						YL	YARD LIGHT

## LEGEND

EX	NEW	
		SIGN (TRAFFIC)
		SIGN (ADVERTISEMENT)
		TELEPHONE / POWER POLE
		LIGHT POLE
		ANCHOR POLE
		GUY WIRE
		FIRE HYDRANT
		GAS VALVE
		WATER VALVE
		ELECTRIC METER
		GAS METER
		TELEPHONE BOX
		ELECTRIC BOX
		MAILBOX
		CLEANOUT

EX	NEW	
		WATER LINE
		GAS LINE
		TELEPHONE LINE
		OVERHEAD ELECTRIC LINE
		ELECTRIC LINE
		FIBER OPTIC LINE
		STORM SEWER
		SANITARY SEWER
		FENCE LINE
		TREE LINE
		CONTOUR LINE
		LIMITS OF CONST

## LINETYPES

## STATE OF MISSOURI MIKE KEHOE, GOVERNOR



ISSUE DATE: 09/17/2025  
LICENSE EXPIRES: 12/31/2025



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SUITE 1500 ST. LOUIS, MO 63102  
(314) 367-6100



720 Olive, Suite 700  
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Professional Engineer License No. 011101



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## OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

## DEPARTMENT OF MENTAL HEALTH

## BELLEFONTAINE HABILITATION CENTER

BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

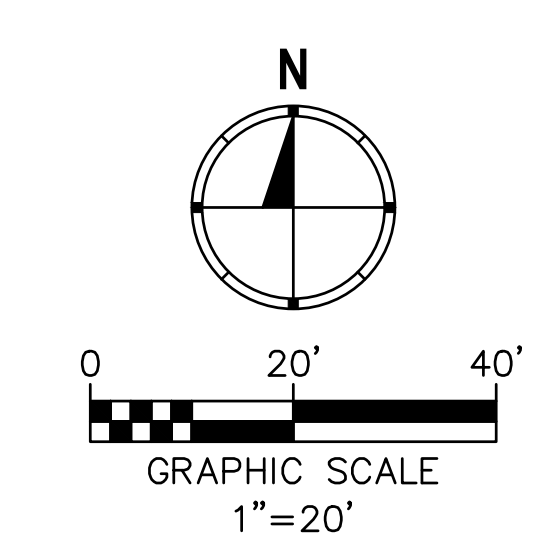
## SHEET TITLE: GENERAL NOTES

SHEET NUMBER:

# C002

5 OF 64 SHEETS  
09/17/2025

# 09/17/2025 - CONSTRUCTION DOCUMENTS



- KEYED NOTES**
- 1 EXISTING WATER VALVE, DND
  - 2 EXISTING WATER METER, DND
  - 3 EXISTING YELLOW FIRE HYDRANT, DND
  - 4 EXISTING GAS METER, DND
  - 5 EXISTING SANITARY MANHOLE, DND
  - 6 EXISTING SANITARY CLEANOUT, DND
  - 7 EXISTING HOTBOX WITH BACKFLOW PREVENTER AND FDC, DND
  - 8 EXISTING CONCRETE SIDEWALK / WALKING TRAIL, DND
  - 9 EXISTING POST INDICATOR VALVE, DND
  - 10 EXISTING GAS VALVE, DND
  - 11 EXISTING ELECTRIC JUNCTION BOX, DND
  - 12 EXISTING AC UNIT, DND
  - 13 EXISTING 4" X 4" WOODEN POST, DND
  - 14 EXISTING PIPE BOLLARDS, DND
  - 15 EXISTING TREE, TBS
  - 16 BASE BID: EXISTING SANITARY LATERAL CLEANOUT, TR
  - 17 ALTERNATE 1: EXISTING SANITARY LATERAL, TBA

**REMOVAL LEGEND**

- PAVEMENT REMOVAL, BASE BID
- PAVEMENT REMOVAL, ALTERNATE 1
- CONSTRUCTION LIMITS

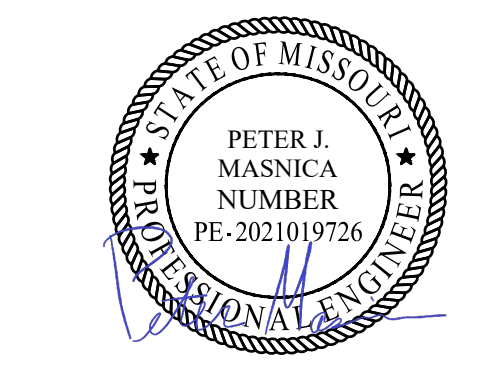
**CONTROL POINTS & BENCHMARKS**

CP#1	IRON BAR W/ CAP EASTING: 897944.2002 NORTHING: 1067471.2064 ELEVATION: 519.46'	TBM "A" CUT SQUARE ON NW CORNER OF CONCRETE PAD ELEVATION: 522.104'
CP#2	IRON BAR W/ CAP EASTING: 898102.5034 NORTHING: 1067111.6146 ELEVATION: 522.99'	TBM "B" CUT SQUARE ON NW CORNER OF ELECTRIC JUNCTION BOX PAD ELEVATION: 524.166'
CP#3	IRON BAR W/ CAP EASTING: 897839.3622 NORTHING: 1067237.1875 ELEVATION: 520.66'	TBM "C" CUT SQUARE ON SE CORNER OF ELECTRIC JUNCTION BOX PAD ELEVATION: 521.765'

NOTE (FOR INFORMATION ONLY):  
 BUILDING 1802 FRONT ENTRANCE: MEASURED APPROXIMATE CLEARANCE OF 91" FROM THE GROUND TO THE BEAM/OVERHANG, 102" GROUND TO CEILING.  
 BUILDING 1802 BACK ENTRANCE: MEASURED APPROXIMATE CLEARANCE OF 85.5" FROM THE GROUND TO CEILING.

NOTE:  
 UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED TO BE APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO.

STATE OF MISSOURI  
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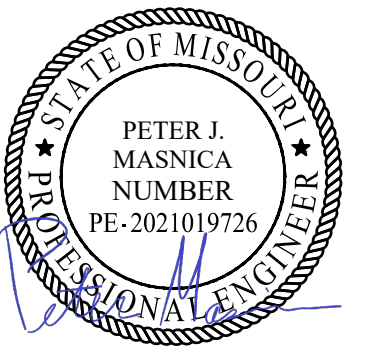
ISSUE DATE: 09/17/2025  
 CAD DWG FILE: \_\_\_\_\_  
 DRAWN BY: HJO  
 CHECKED BY: MYS  
 DESIGNED BY: PJM

SHEET TITLE:  
**EXISTING  
 CONDITIONS  
 AND REMOVALS**

SHEET NUMBER:

**C101**

6 OF 64 SHEETS  
 09/17/2025



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ISSUE DATE: 09/17/2025

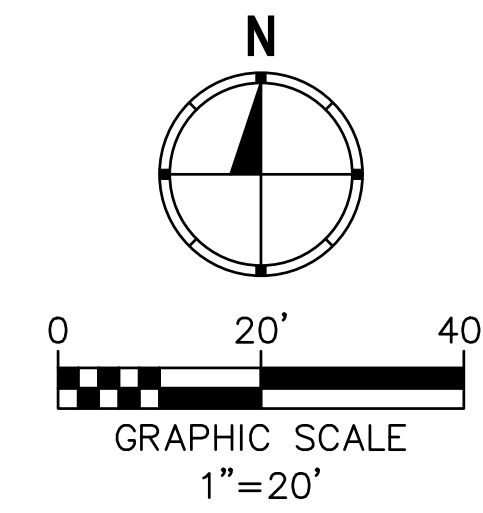
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DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
SITE PLAN


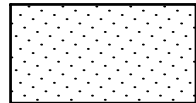


SHEET NUMBER:

**C201**

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09/17/2025



**LEGEND**

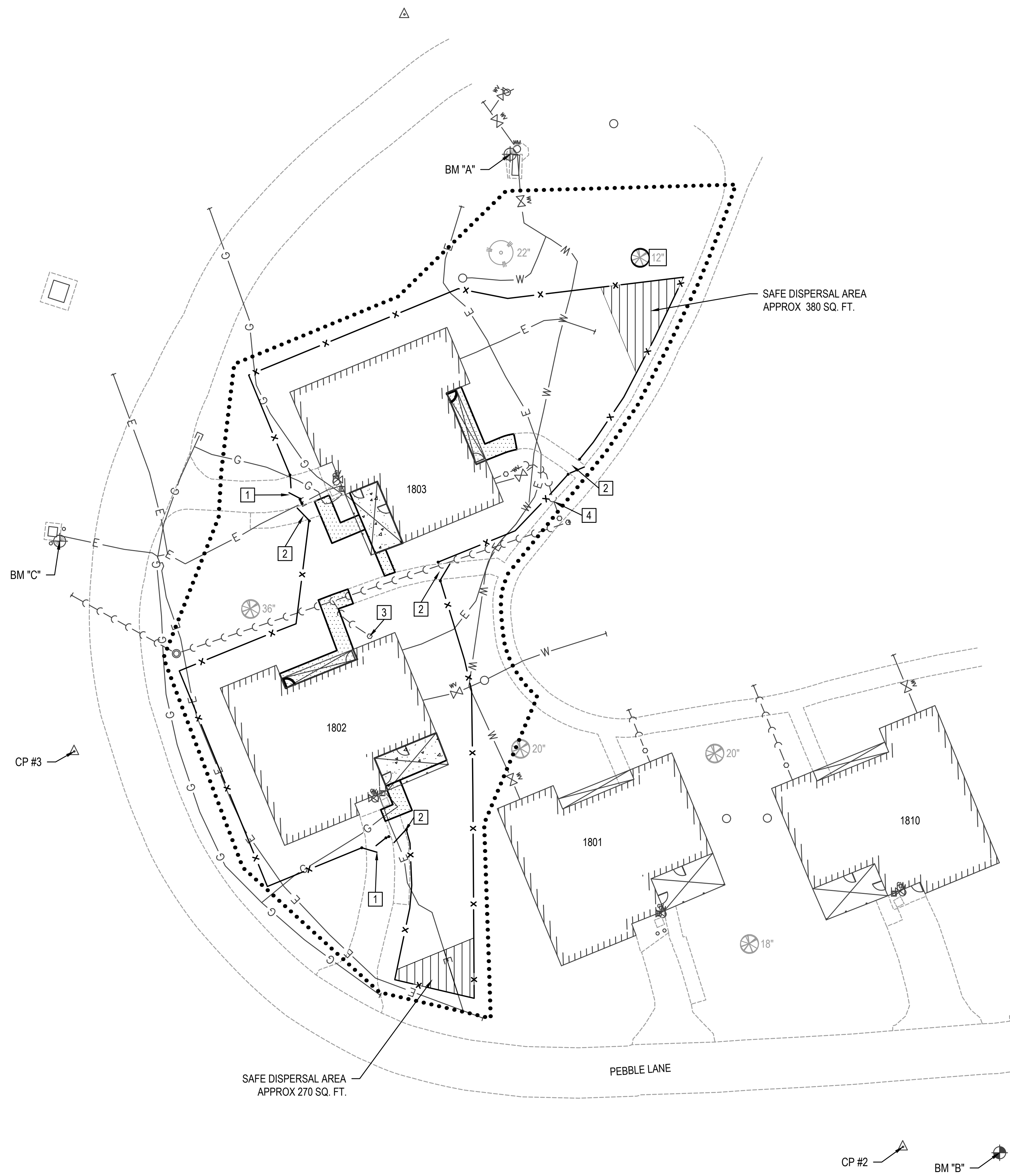
-  NEW PCC PAVEMENT, SEE DETAIL 1 ON SHEET C202
-  NEW PCC SIDEWALK, SEE DETAIL 2 ON SHEET C202
-  NEW FENCE, SEE DETAIL 4 ON SHEET C202
-  CONSTRUCTION LIMITS

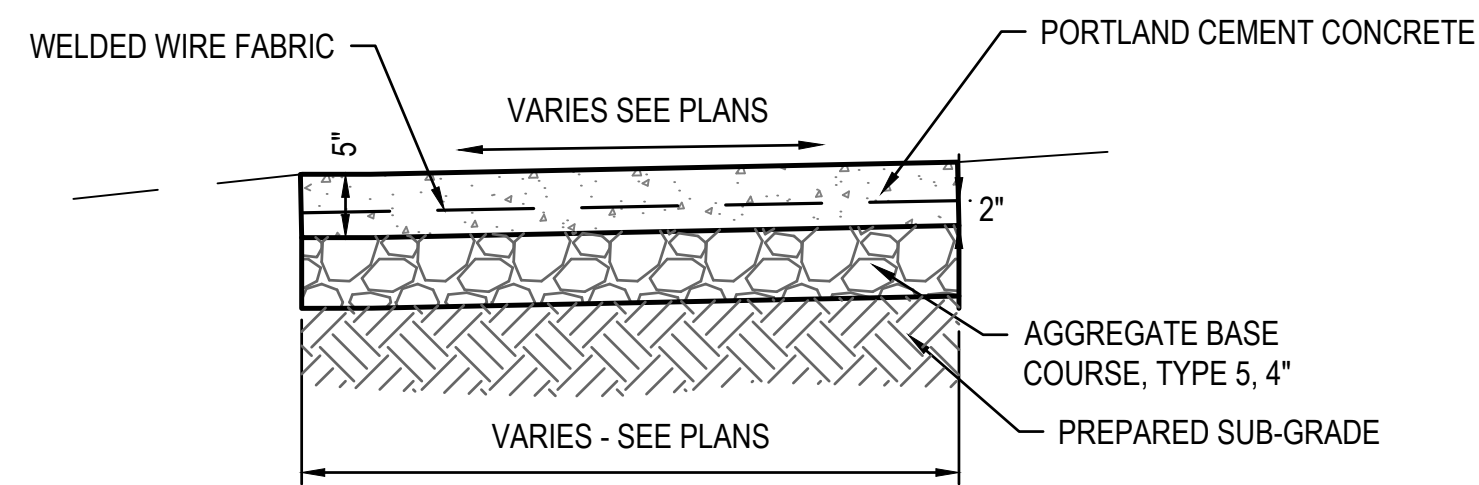
**KEYED NOTES**

- 1** ALTERNATE 2: NEW DOUBLE SWING GATE, SEE DETAIL 6 ON SHEET C202
- 2** ALTERNATE 2: NEW SWING GATE, SEE DETAIL 5 ON SHEET C202
- 3** REPLACE SANITARY CLEANOUT, SEE DETAIL 7 ON SHEET C202
- 4** ALTERNATE 1: REPAIR MISALIGNED 4" VCP SANITARY CLEANOUT JOINT, 29.5' FROM START PER SCI REPORT

**NOTES**

- BASE BID: INCLUDE IMPROVEMENTS AT GROUP HOME 1802.
- ALTERNATE 1: INCLUDE IMPROVEMENTS AT GROUP HOME 1803.
- ALTERNATE 2: INCLUDE EXTERIOR FENCE AND GATES AROUND GROUP HOMES 1802 AND 1803.
- ALTERNATE 3: INCLUDE IMPROVEMENTS AT GROUP HOME 1801. ASSUME SIMILAR TO ALTERNATE 1; WILL REQUIRE ADDITIONAL CIVIL DESIGN.
- ALTERNATE 4: INCLUDE IMPROVEMENTS AT GROUP HOME 1810. ASSUME SIMILAR TO ALTERNATE 1; WILL REQUIRE ADDITIONAL CIVIL DESIGN.





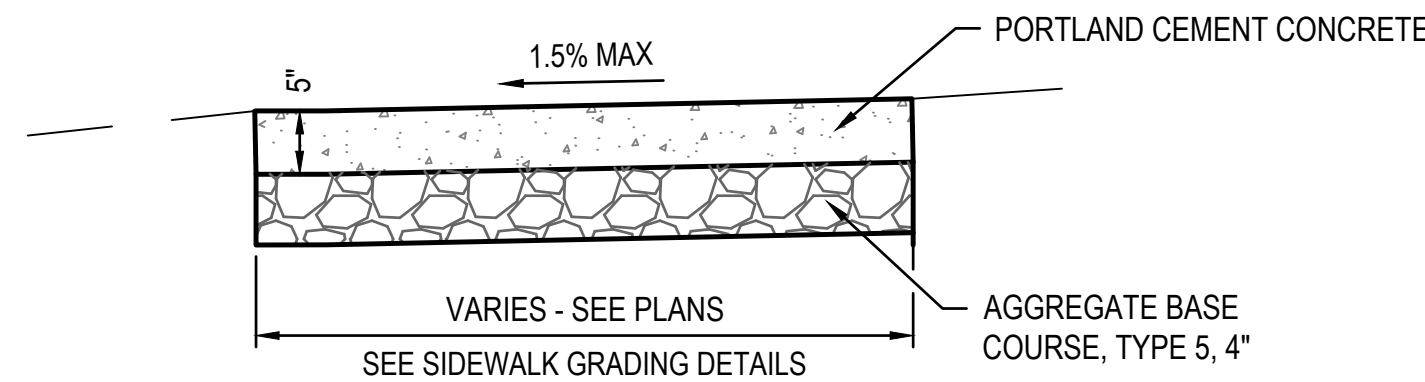
NOTES:

1. CONTRACTION JOINTS ARE TO BE ON  $\pm 10'$  CENTERS. SEE DETAIL 3 ON SHEET C202
2. EXPANSION JOINTS ARE TO BE ON  $\pm 100'$  CENTERS AND AT POINTS OF CURVATURE.
3. EXPANSION JOINT REQUIRED BETWEEN THE PAVEMENT AND EXISTING PAVEMENT OR STRUCTURES.
4. ALL EXPANSION AND CONTRACTION JOINTS SHALL BE SEALED WITH GUN GRADE LIMESTONE COLORED SEALANT.

**1 CONCRETE PAVEMENT DETAIL**  
SCALE: NO SCALE

NOTES:

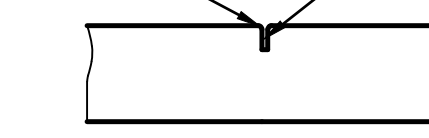
1. CONTRACTION JOINTS ARE TO BE ON  $\pm 5'$  CENTERS UNLESS OTHERWISE DETAILED ON THE PLANS.
2. EXPANSION JOINTS ARE TO BE ON  $\pm 100'$  CENTERS AND AT POINTS OF CURVATURE.
3. EXPANSION JOINT REQUIRED BETWEEN THE SIDEWALK AND EXISTING PAVEMENT OR STRUCTURES.
4. ALL EXPANSION JOINTS SHALL BE SEALED WITH GUN GRADE SEALANT.



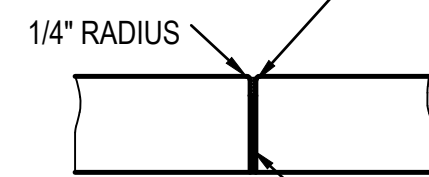
**2 STANDARD SIDEWALK**

TOOLED 1/4" RADIUS FOR SIDEWALKS, SAWED FOR PAVEMENT

MINIMUM DEPTH 1/4 OF THICKNESS JOINT WIDTH 1/8"-1/4" (SAWED JOINTS SHALL BE SEALED - SEE NOTE BELOW)



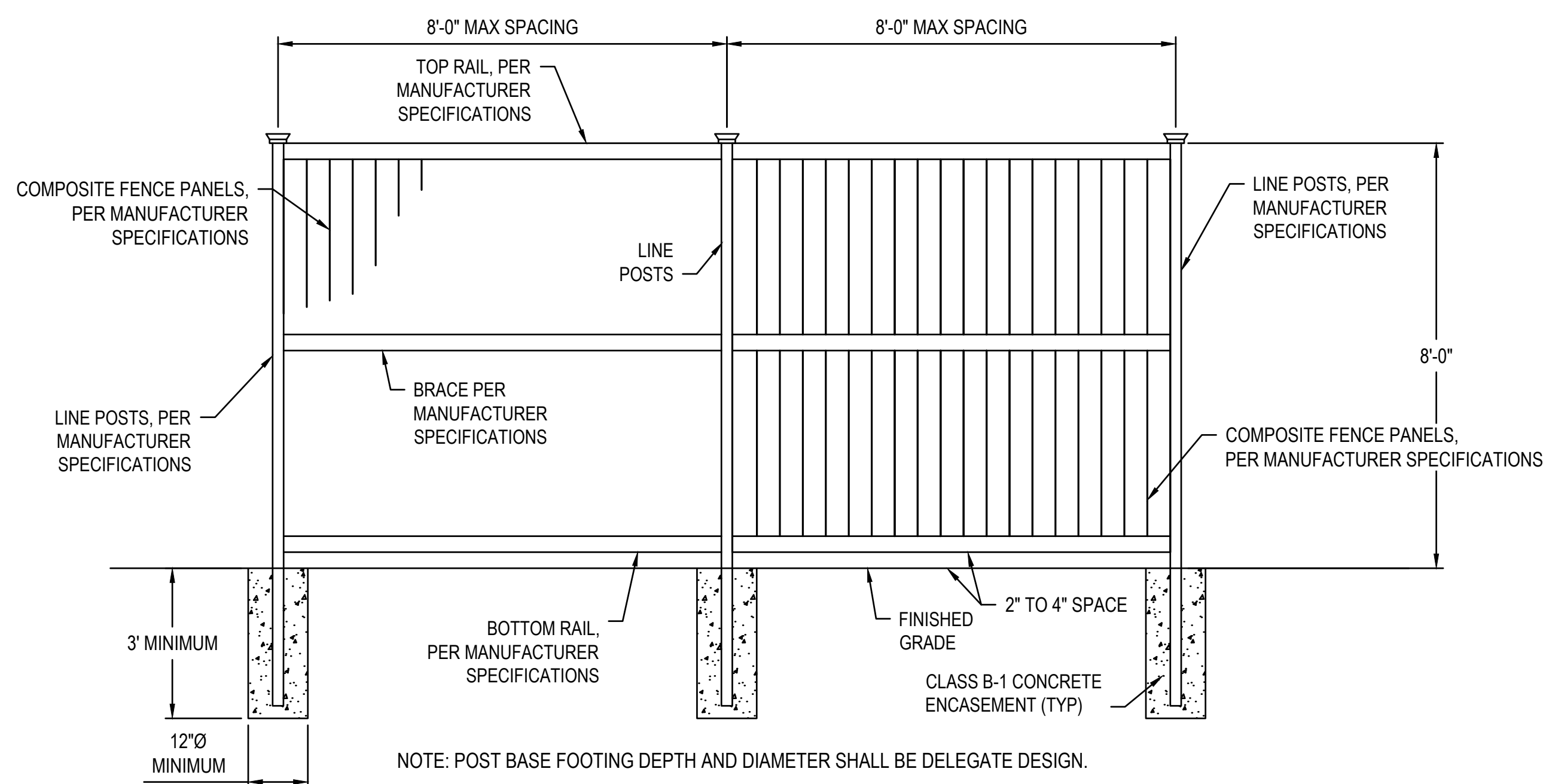
**CONTRACTION JOINT**



**EXPANSION JOINT**

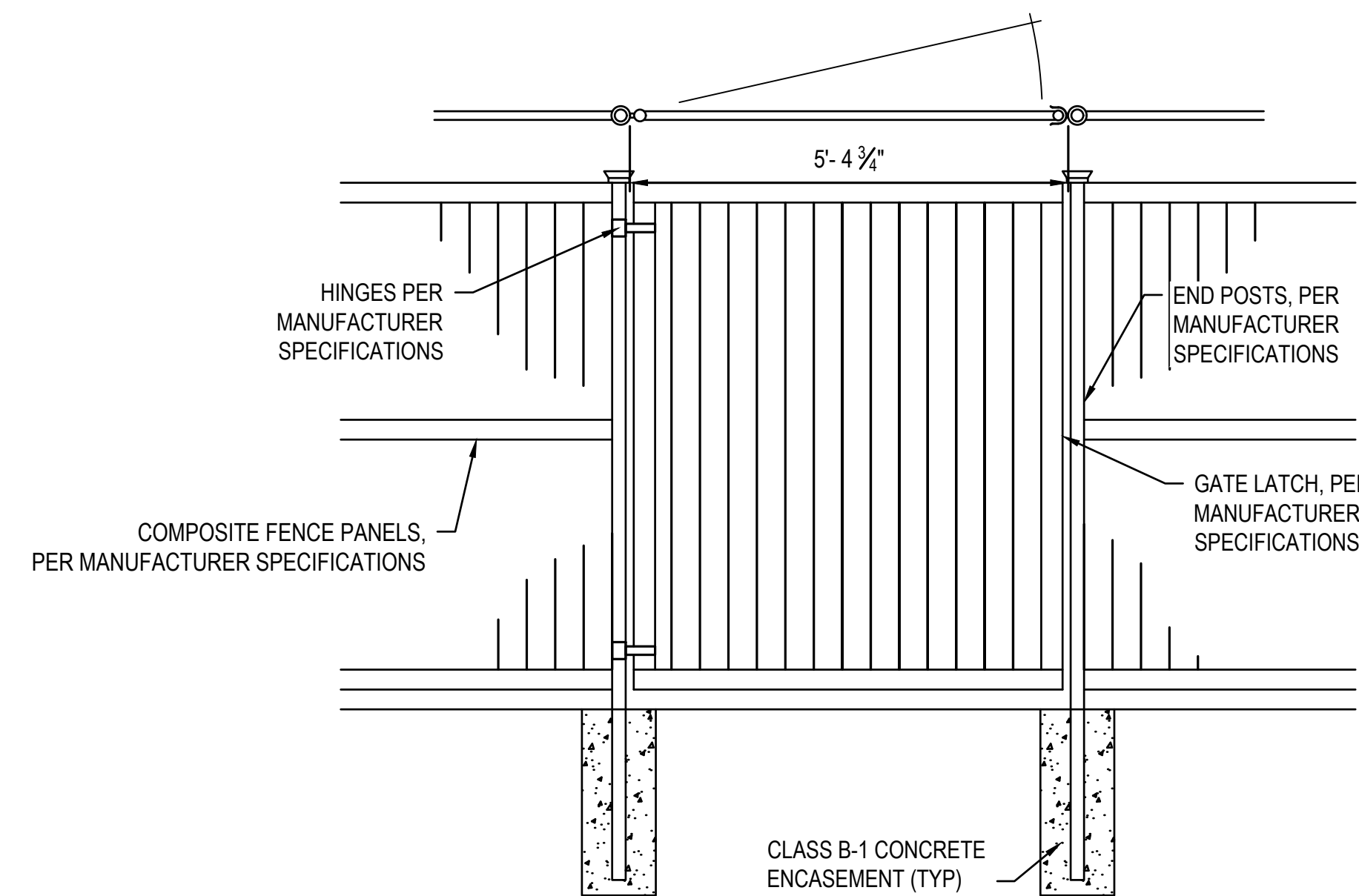
BACK JOINT WITH ONE COMPONENT URETHANE GUN GRADE SEALANT USING SONNEBORN SONOPLASTIC NP-1, MAMECO VULKEM 116, PECORDA DYNATROL 1, OR APPROVED EQUAL. FINISH JOINT WITH A SELF LEVELING SEALANT USING MAMECO INTERNATIONAL - VULKEM 45, PECORA CHEMICAL CORP - UREXPAN NR20, SIKA CHEMICAL CORP. - SILKAFLEX 12SL, CONTECH INC., SONNEBORN BUILDING PRODUCTS DIV. - SONALASTIC SL1

**3 TYPICAL CONCRETE JOINT DETAIL**  
SCALE: NO SCALE



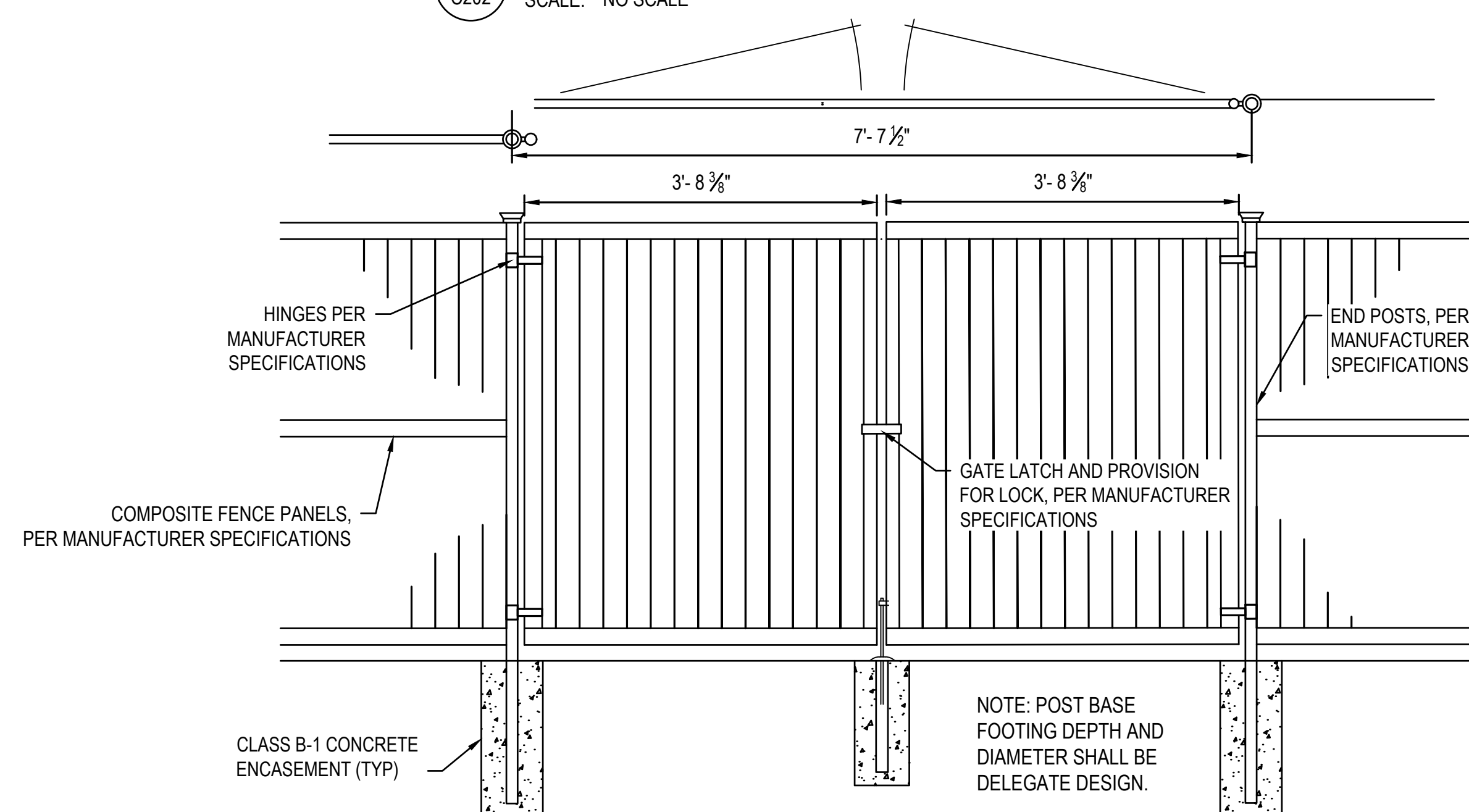
NOTE: POST BASE FOOTING DEPTH AND DIAMETER SHALL BE DELEGATE DESIGN.

**4 PRIVACY FENCE DETAIL**  
SCALE: NO SCALE



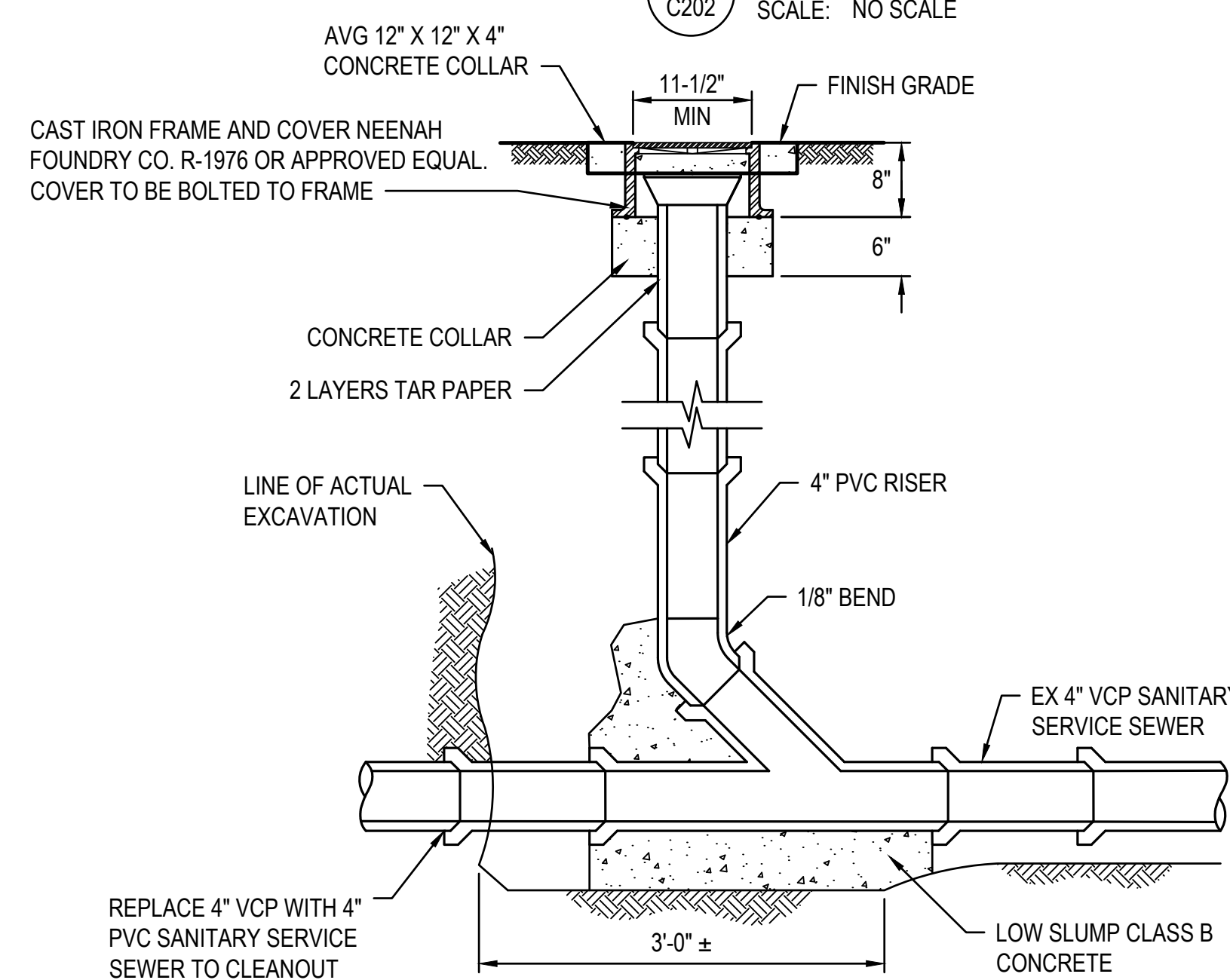
NOTE: POST BASE FOOTING DEPTH AND DIAMETER SHALL BE DELEGATE DESIGN.

**5 SWING GATE FENCE DETAIL**  
SCALE: NO SCALE



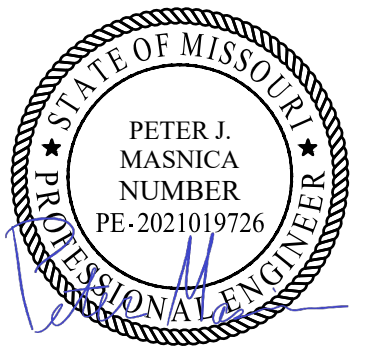
NOTE: POST BASE FOOTING DEPTH AND DIAMETER SHALL BE DELEGATE DESIGN.

**6 DOUBLE SWING GATE DETAIL**  
SCALE: NO SCALE



REPLACE 4" VCP WITH 4" PVC SANITARY SERVICE SEWER TO CLEANOUT

**7 CLEANOUT DETAIL**  
SCALE: NO SCALE



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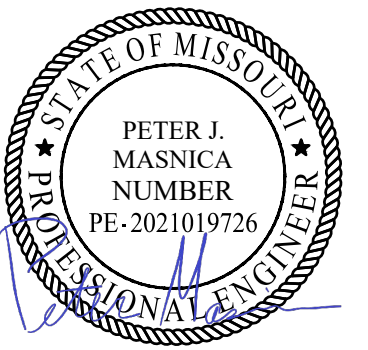
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DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
**SITE DETAILS**

SHEET NUMBER:

**C202**

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09/17/2025



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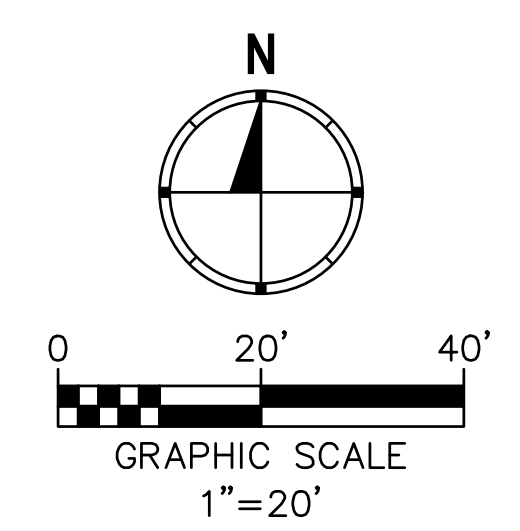
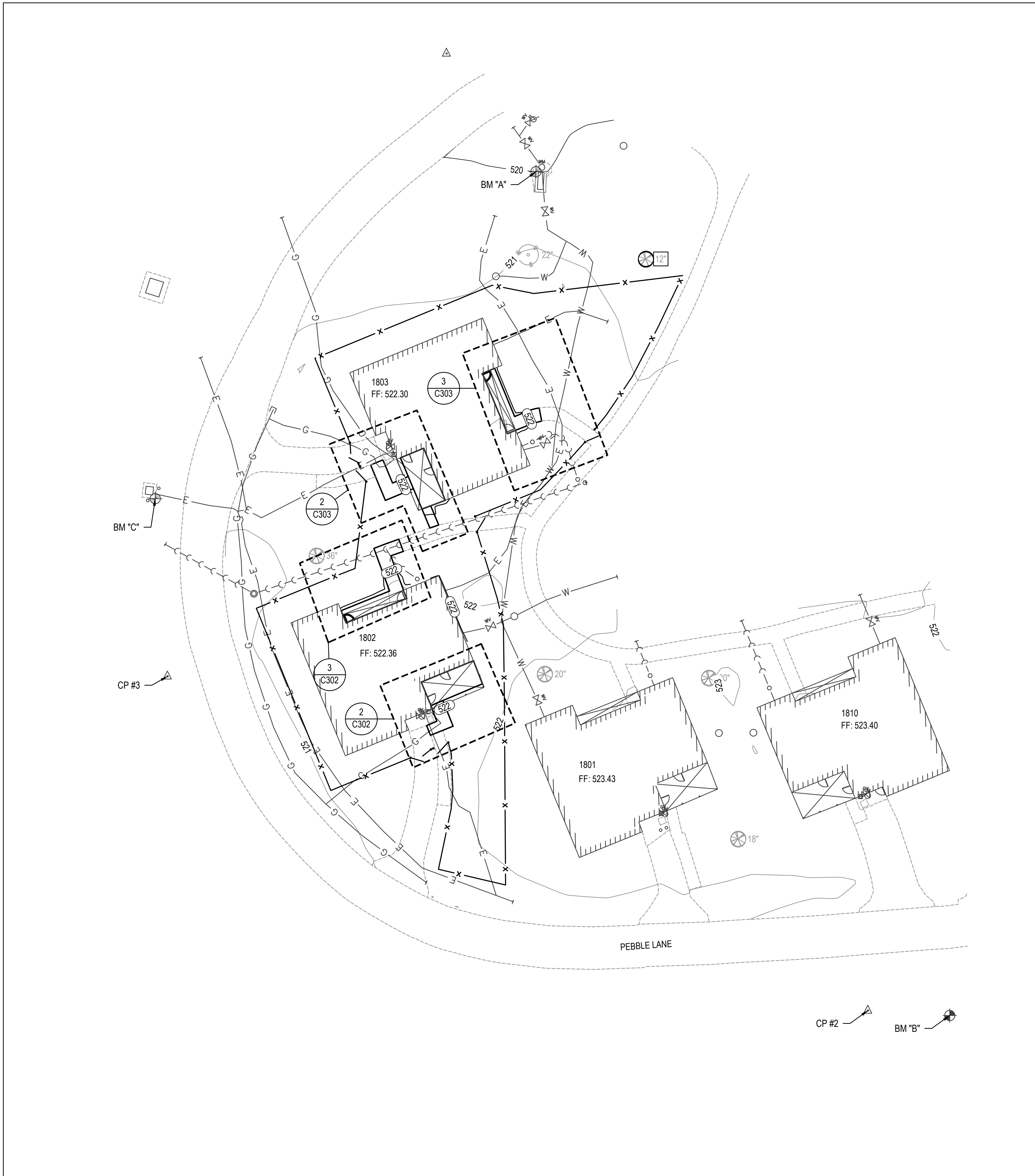
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DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025  
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
**GRADING PLAN**

SHEET NUMBER:

**C301**  
9 OF 64 SHEETS  
09/17/2025

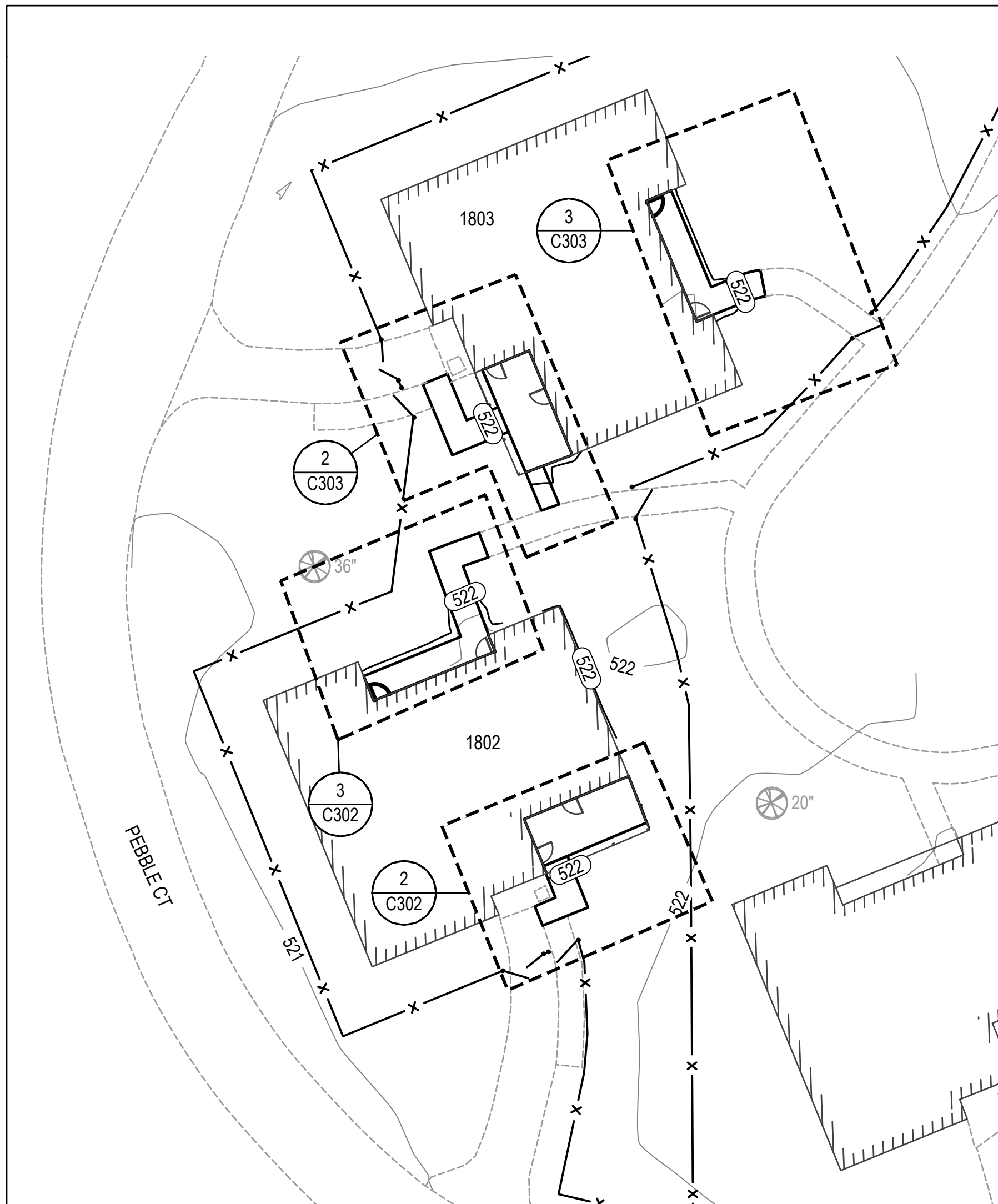


**GRADING PLAN LEGEND**

- XXX--- EXISTING CONTOUR ELEVATION
- XXX--- PROPOSED CONTOUR ELEVATION

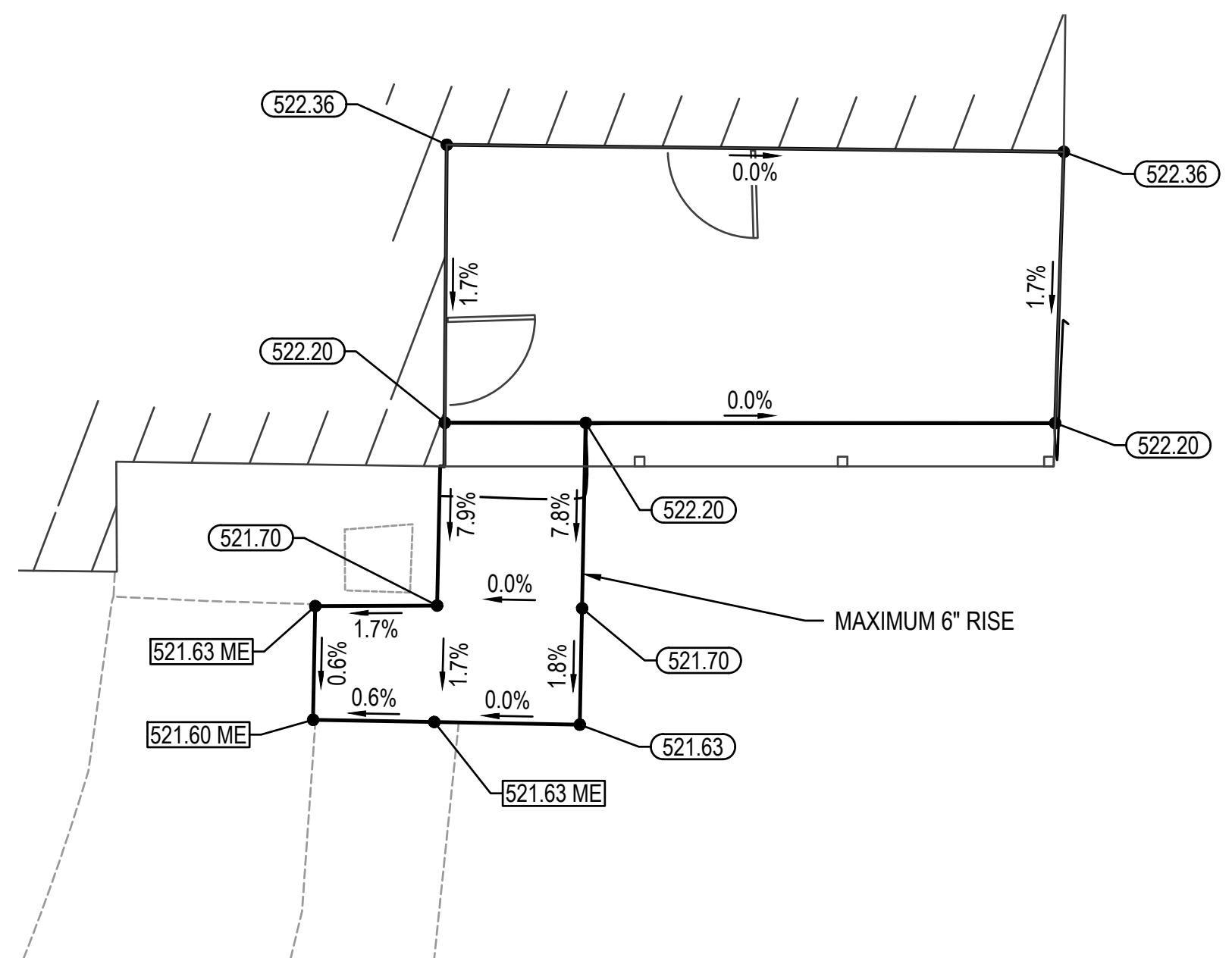
**NOTES**

- BASE BID: INCLUDE EARTHWORK ASSOCIATED WITH GROUP HOME 1802.
- ALTERNATE 1: INCLUDE EARTHWORK ASSOCIATED WITH GROUP HOME 1803.

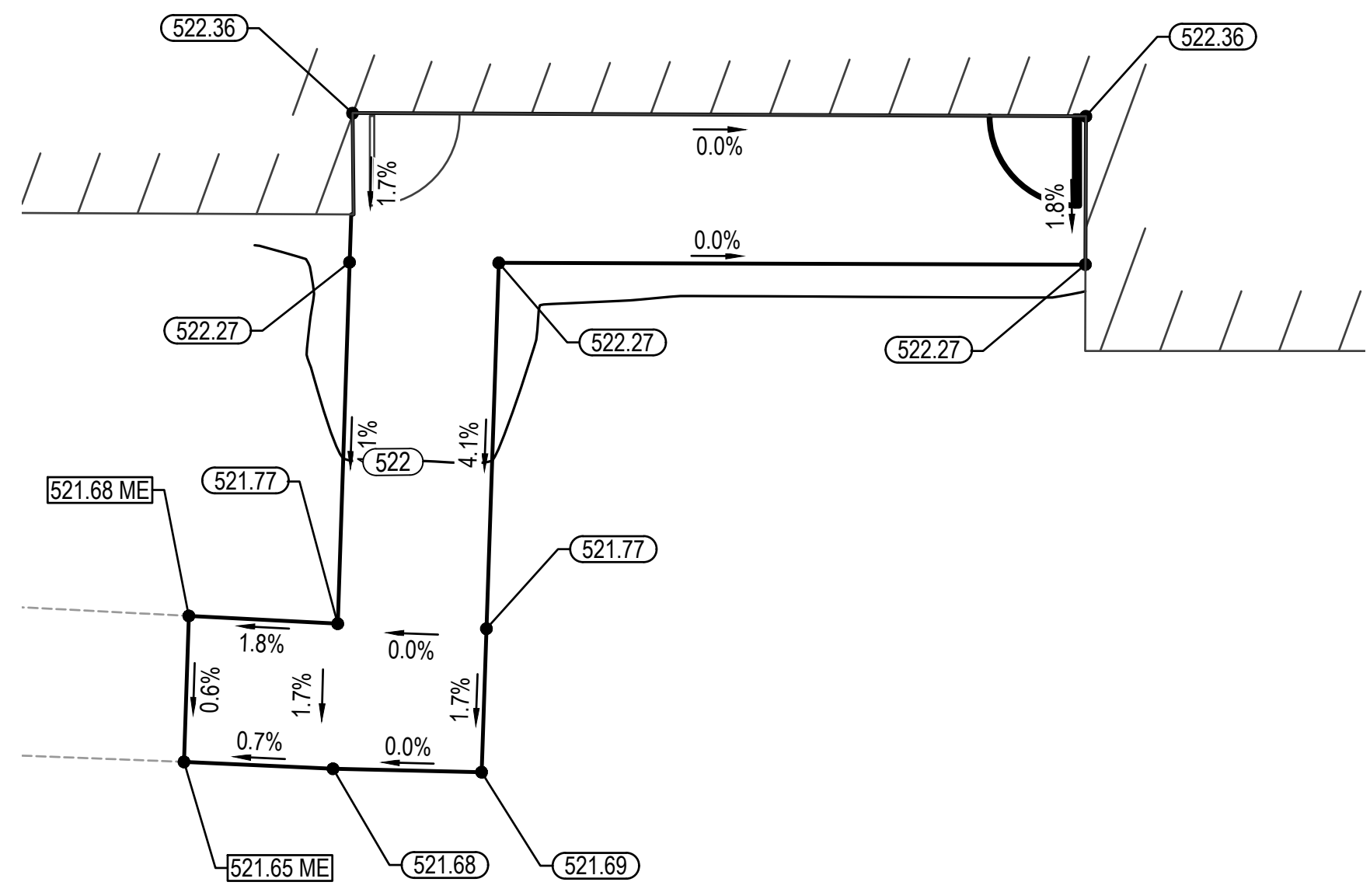
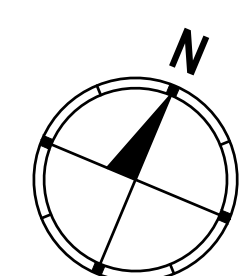


1 KEY MAP  
C302 SCALE: 1" = 20'

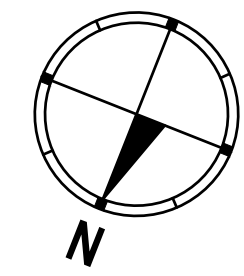
NOTE  
ALL NEW SIDEWALKS SHALL MEET ADA REQUIREMENTS. CROSS SLOPES ARE REQUIRED TO BE LESS THAN 2%. LANDINGS ARE REQUIRED TO BE LESS THAN 2% IN ALL DIRECTIONS. MAXIMUM ALLOWABLE RAMP RISE IS 6 INCHES.



2 BUILDING 1802 FRONT ENTRANCE  
C302 SCALE: 1" = 5' BASE BID

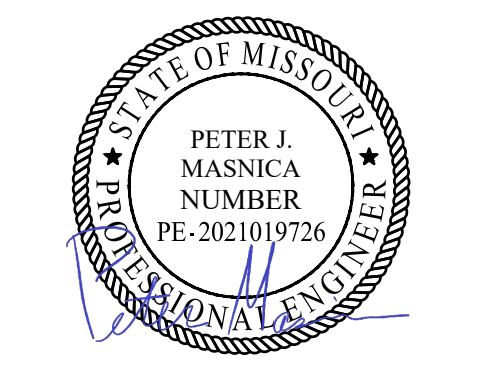


3 BUILDING 1802 BACK ENTRANCE  
C302 SCALE: 1" = 5' BASE BID



**GRADING PLAN LEGEND**

- (XXX) ME PROPOSED ELEVATION TO "MATCH" EXISTING ELEVATION
- (XXX) PROPOSED ELEVATION, UNLESS OTHERWISE NOTED
- X.X% SLOPE, % (POINTS DOWNHILL)



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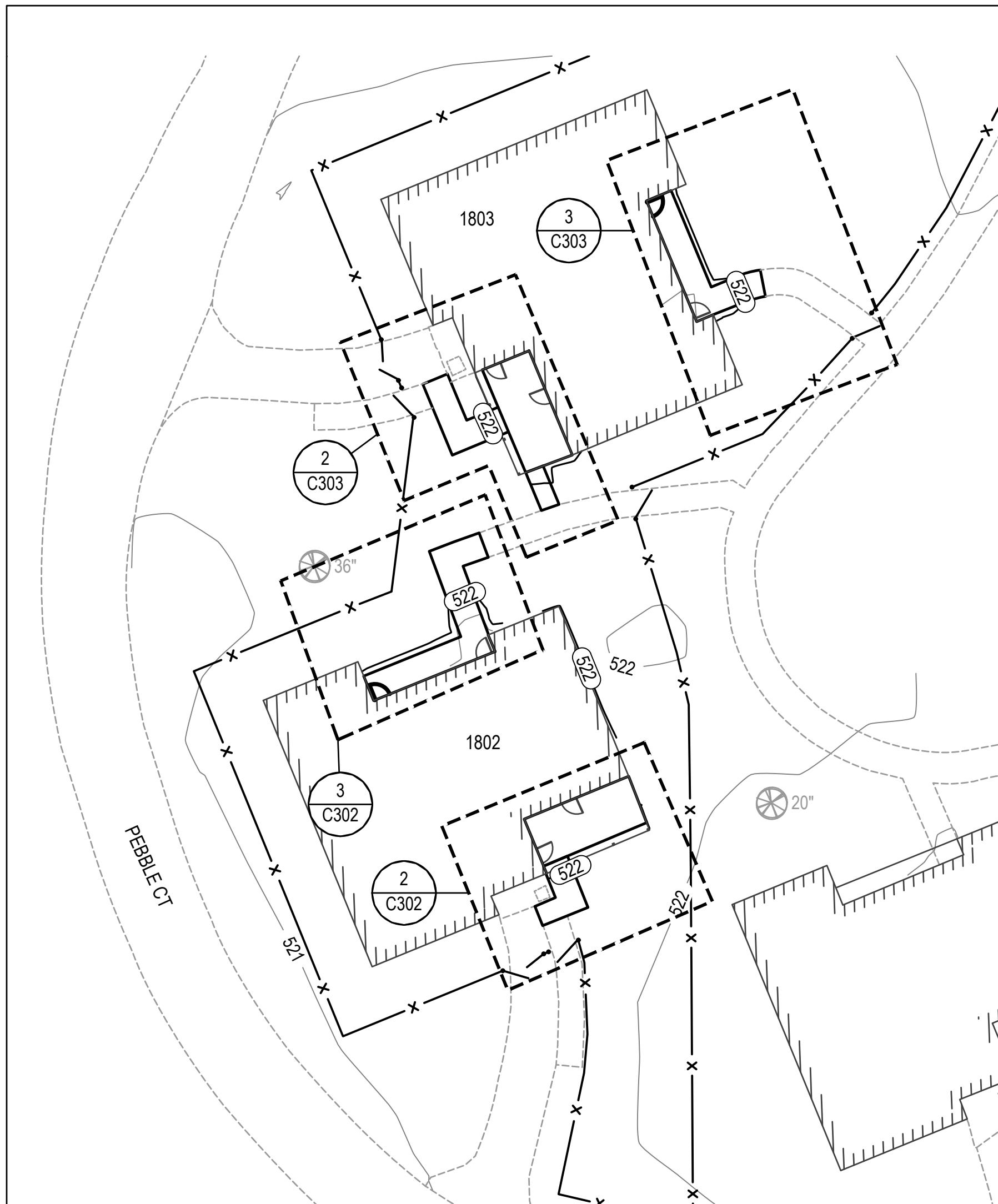
ISSUE DATE: 09/17/2025  
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
**GRADING  
DETAILS**

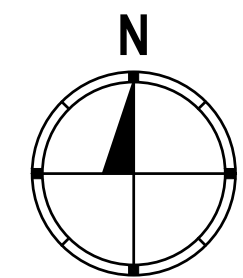
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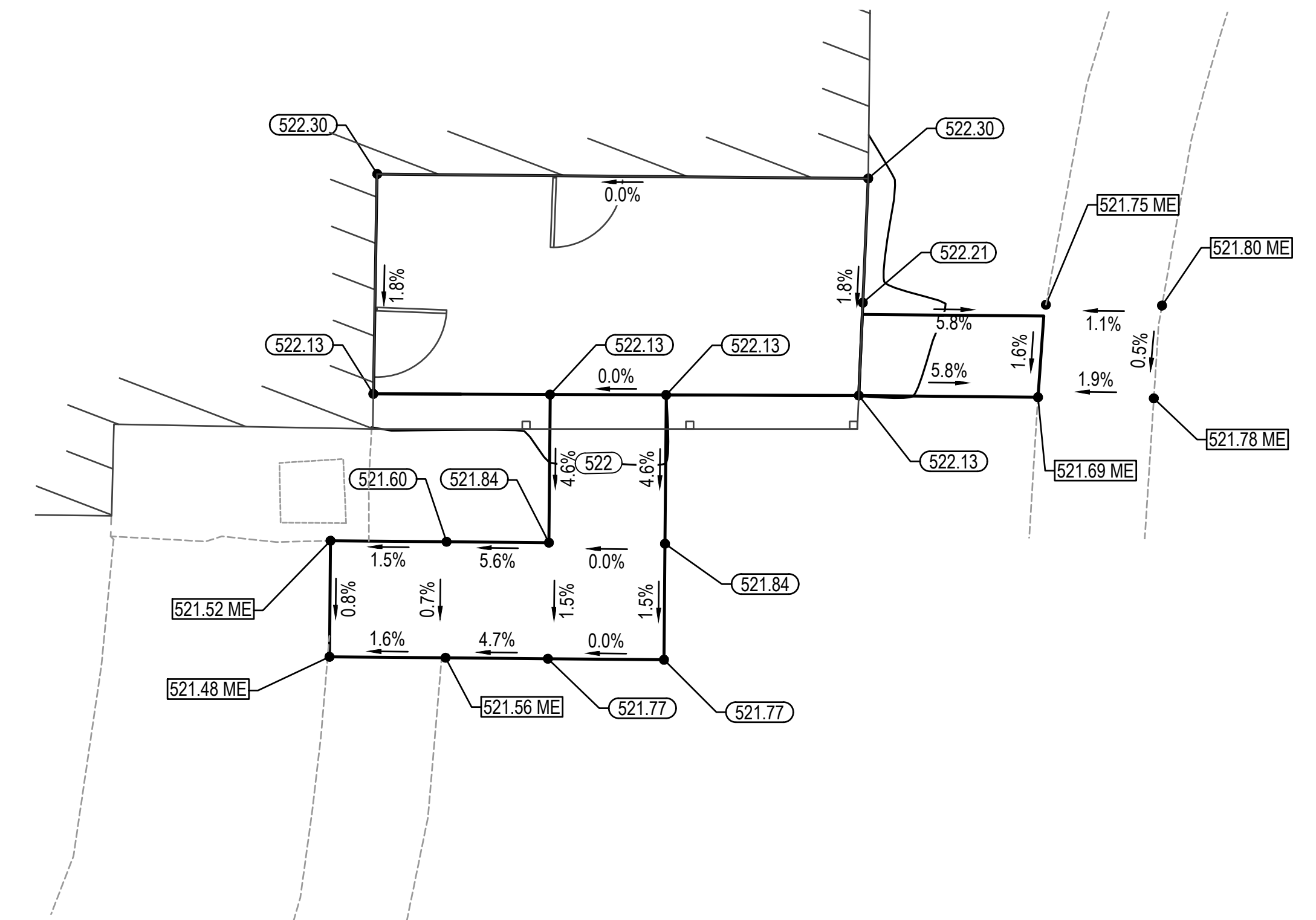
10 OF 64 SHEETS  
09/17/2025



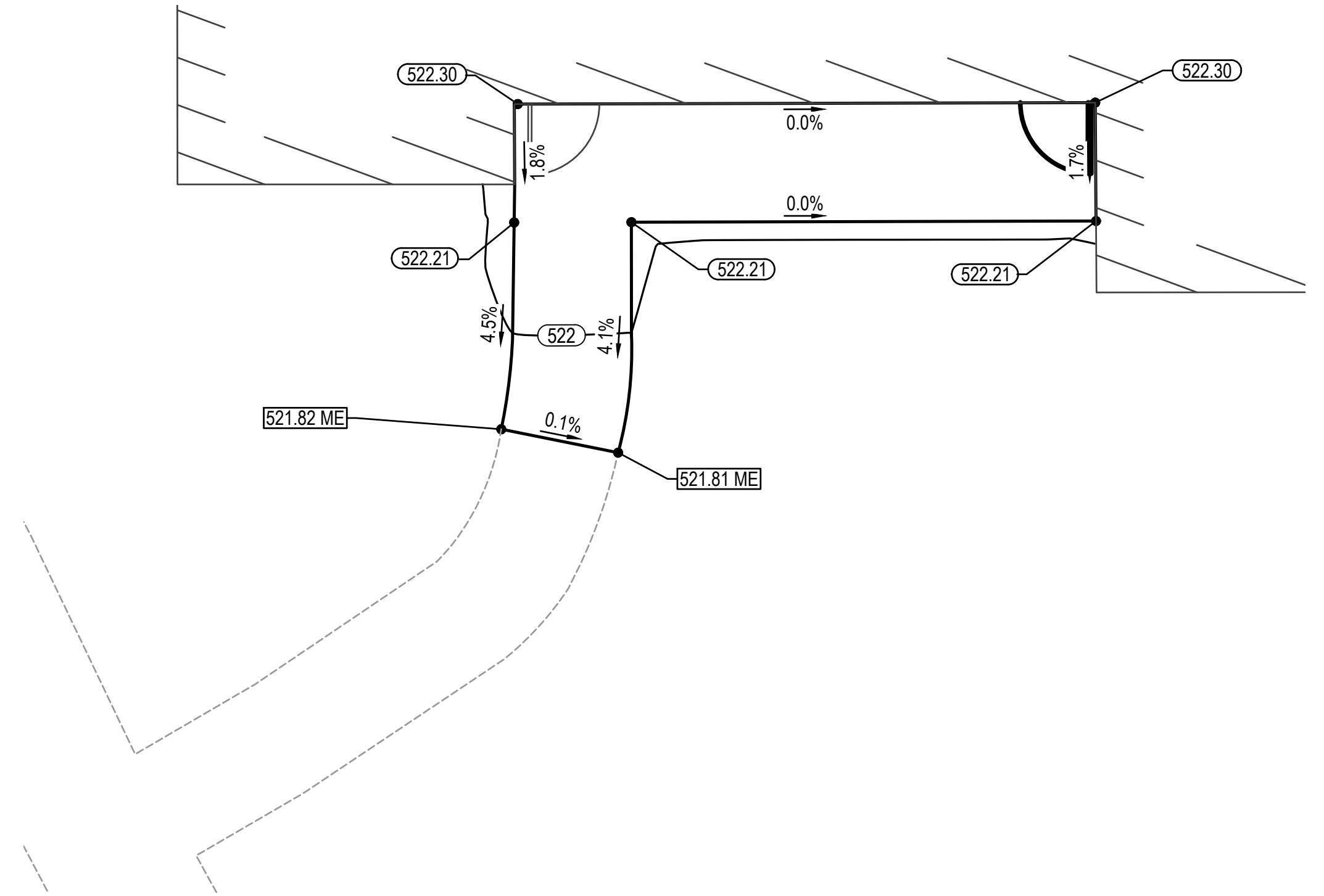
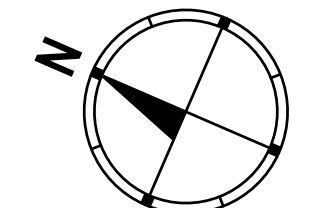
1 KEY MAP  
C303 SCALE: 1" = 20'



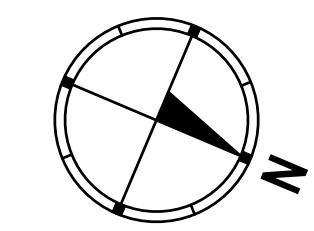
NOTE  
ALL NEW SIDEWALKS SHALL MEET ADA REQUIREMENTS. CROSS SLOPES ARE REQUIRED TO BE LESS THAN 2%. LANDINGS ARE REQUIRED TO BE LESS THAN 2% IN ALL DIRECTIONS. MAXIMUM ALLOWABLE RAMP RISE IS 6 INCHES.



2 BUILDING 1803 FRONT ENTRANCE  
C303 SCALE: 1" = 5' ALTERNATE 1

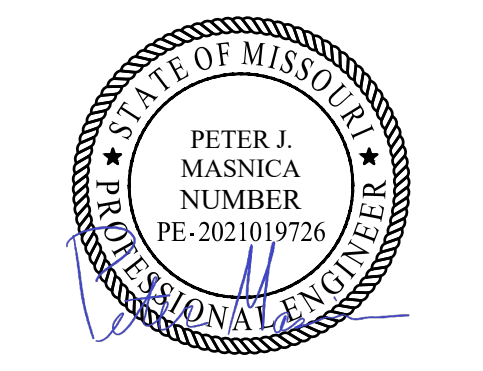


3 BUILDING 1803 BACK ENTRANCE  
C303 SCALE: 1" = 5' ALTERNATE 1



**GRADING PLAN LEGEND**

- PROPOSED ELEVATION TO "MATCH EXISTING ELEVATION"
- PROPOSED ELEVATION, UNLESS OTHERWISE NOTED
- SLOPE, % (POINTS DOWNHILL)



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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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DATE: \_\_\_\_\_

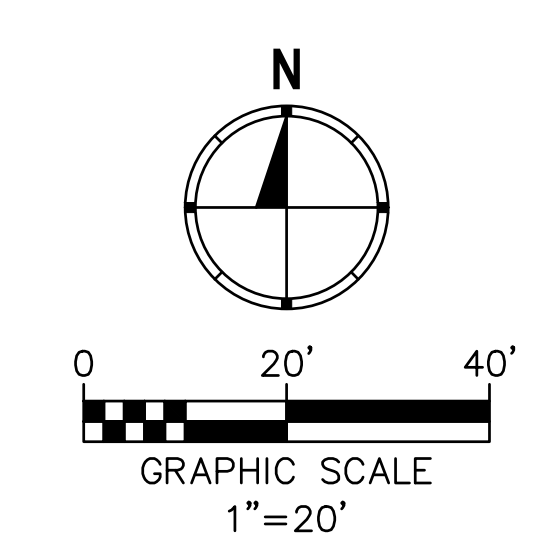
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CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
**GRADING  
DETAILS**


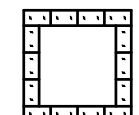


SHEET NUMBER:

**C303**

11 OF 64 SHEETS  
09/17/2025



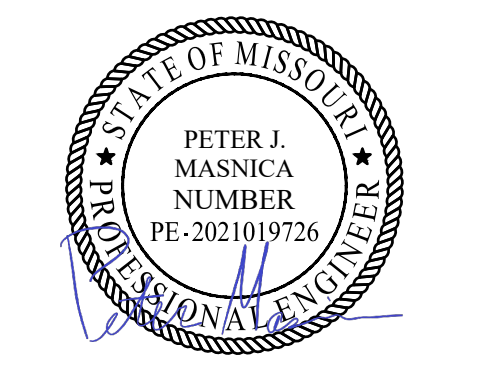
**LEGEND**

-  PERIMETER EROSION BARRIER, SEE DETAIL 1 ON SHEET C402
-  NEW TEMPORARY CONCRETE WASHOUT SEDIMENT BASIN, SEE DETAIL 2 ON SHEET C402
-  NEW SEEDING OR SODDING AREAS
-  CONSTRUCTION LIMITS

**NOTES**

1. INLET PROTECTION FOR DRAINAGE STRUCTURES TO BE ADJUSTED OR USED IN PLACE SHALL REMAIN OPERATIONAL UNTIL ALL STORM SEWER ITEMS ARE ADJUSTED TO GRADE WITH FRAME AND LID.
2. ALL EROSION CONTROL ITEMS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE LOCAL GOVERNING BODIES.
3. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED TO PREVENT STORM WATER RUNOFF FROM THE SITE. THIS WORK SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
4. ALL TRUCKS MUST BE WASHED DOWN PRIOR TO LEAVING THE SITE.
5. CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES DUE TO THE PROXIMITY OF NEARY RESIDENTIAL AND COMMERCIAL PROPERTIES. CONTRACTOR SHALL WATER SITE FREQUENTLY AS NEEDED.
6. CONTRACTOR SHALL ENSURE THAT NO SEDIMENT WASHES INTO THE EXISTING STORMWATER SYSTEMS OR NEARBY STREAM.
7. BASE BID: INCLUDE EROSION CONTROL AND SEEDING/SODDING ASSOCIATED WITH GROUP HOME 1802
8. ALTERNATE 1: INCLUDE EROSION CONTROL AND SEEDING/SODDING ASSOCIATED WITH GROUP HOME 1803

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HABILITATION CENTER

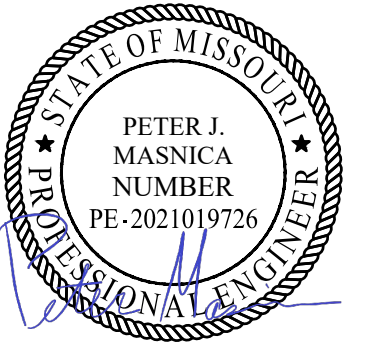
BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137  
PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: HJO  
CHECKED BY: MYS  
DESIGNED BY: PJM

SHEET TITLE:  
**EROSION  
CONTROL PLAN**

SHEET NUMBER:  
**C401**  
12 OF 64 SHEETS  
09/17/2025



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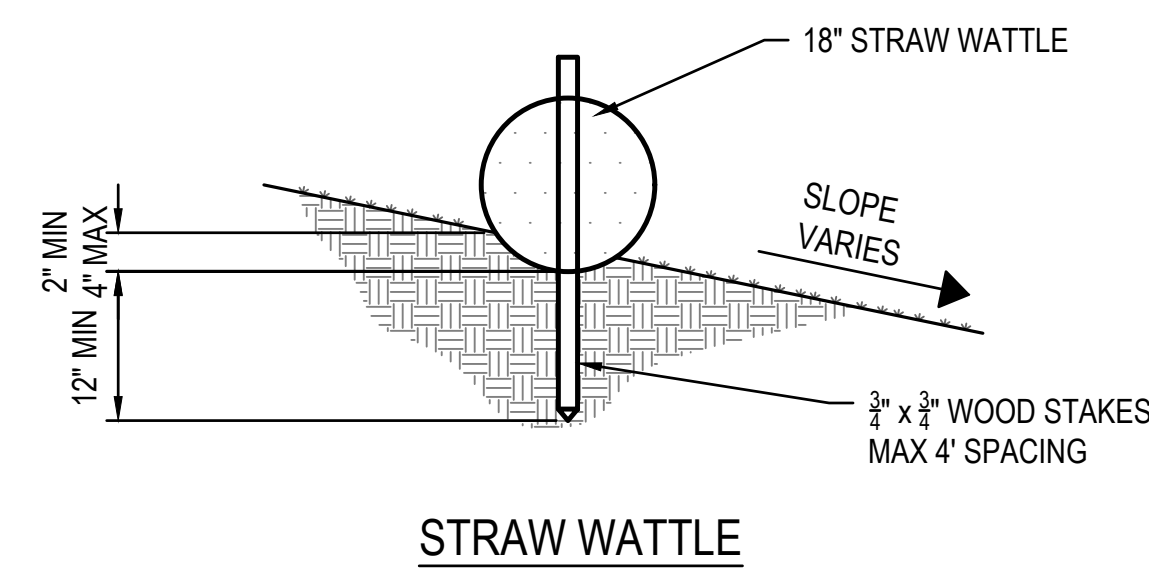
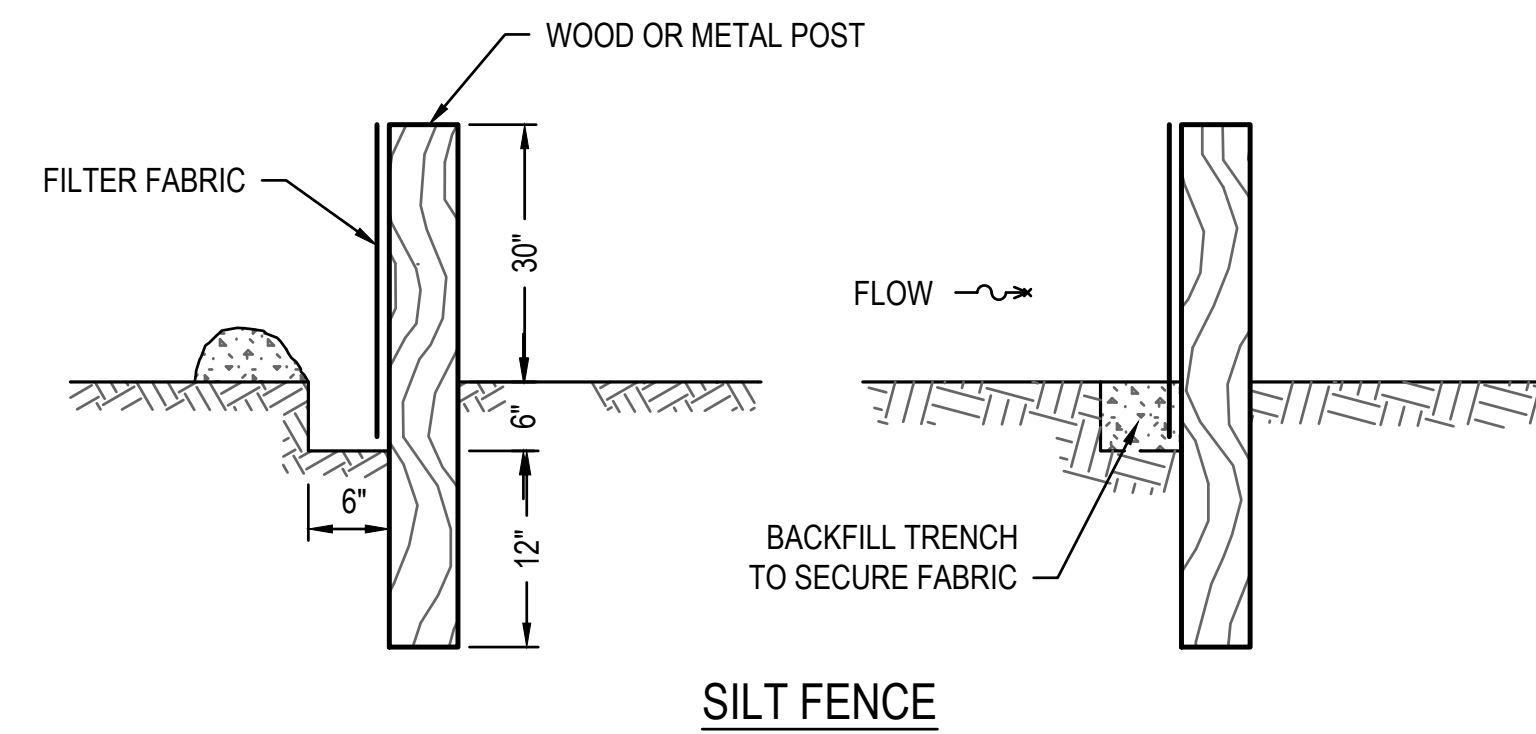
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SHEET TITLE:  
EROSION  
CONTROL  
DETAILS

SHEET NUMBER:

**C402**

13 OF 64 SHEETS  
09/17/2025



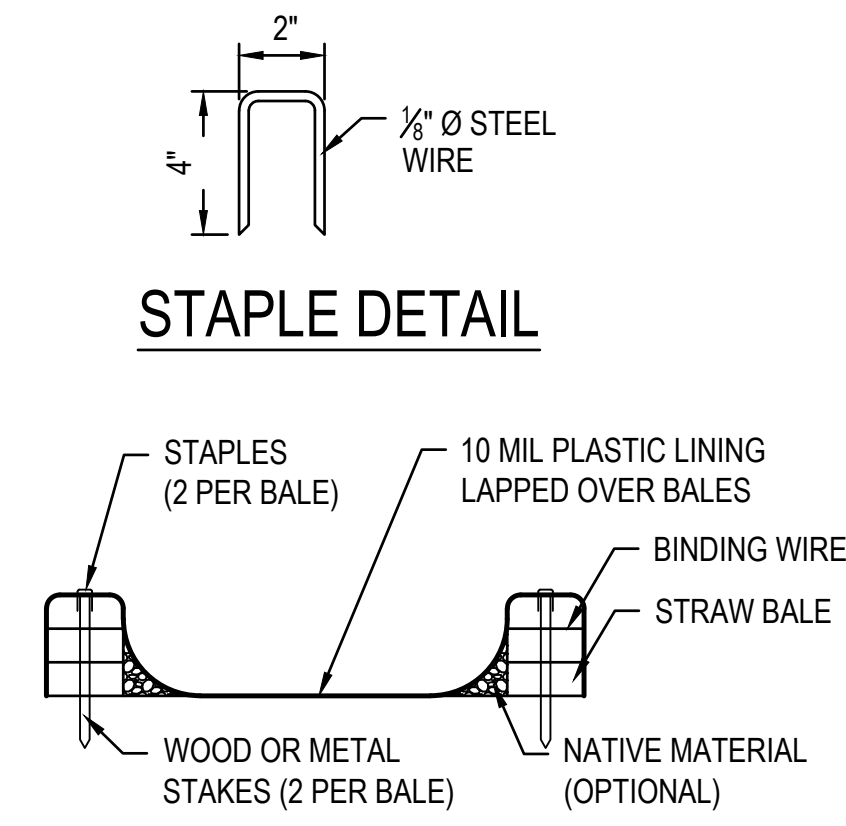
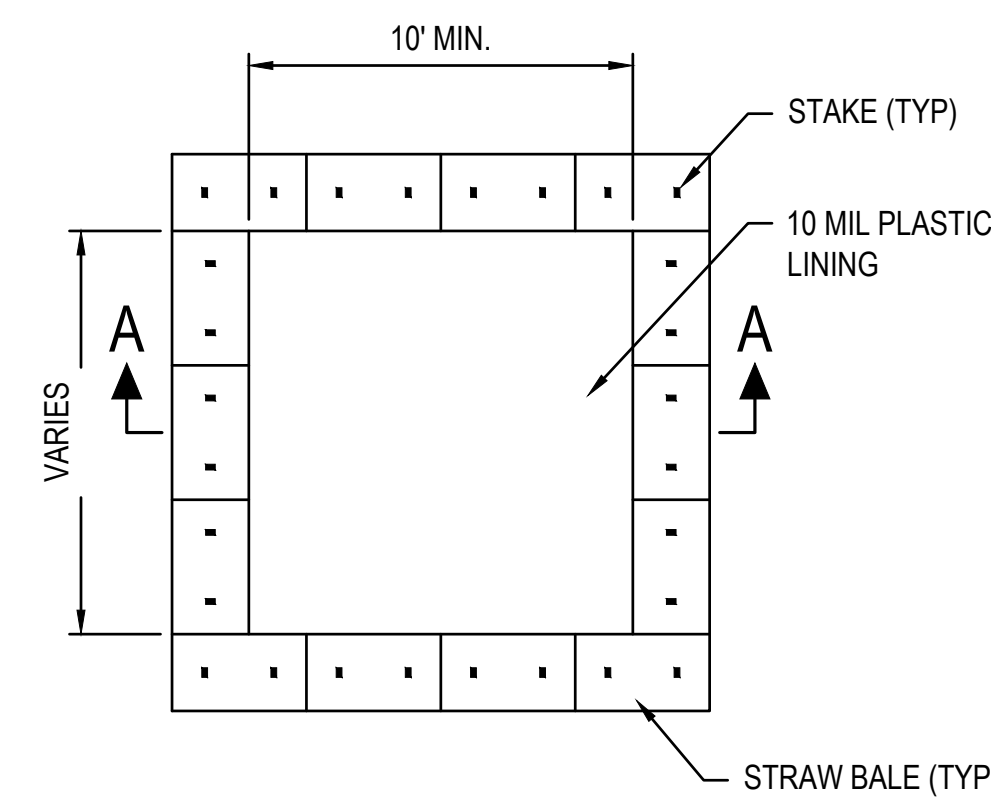
NOTES:

WATTLES MAY BE USED: ALONG THE TOE, TOP, FACE AND AT GRADE BREAKS OF EXPOSED AND ERODIBLE SLOPES TO SHORTEN SLOPE LENGTH AND SPREAD RUNOFF AS SHEET FLOW, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE PERIMETER OF A SMALL AREA (TYP LESS THAN 1/2 ACRE TRIBUTARY TO BARRIER).

1 PERIMETER EROSION BARRIER DETAIL  
C402 SCALE: NO SCALE

NOTES:

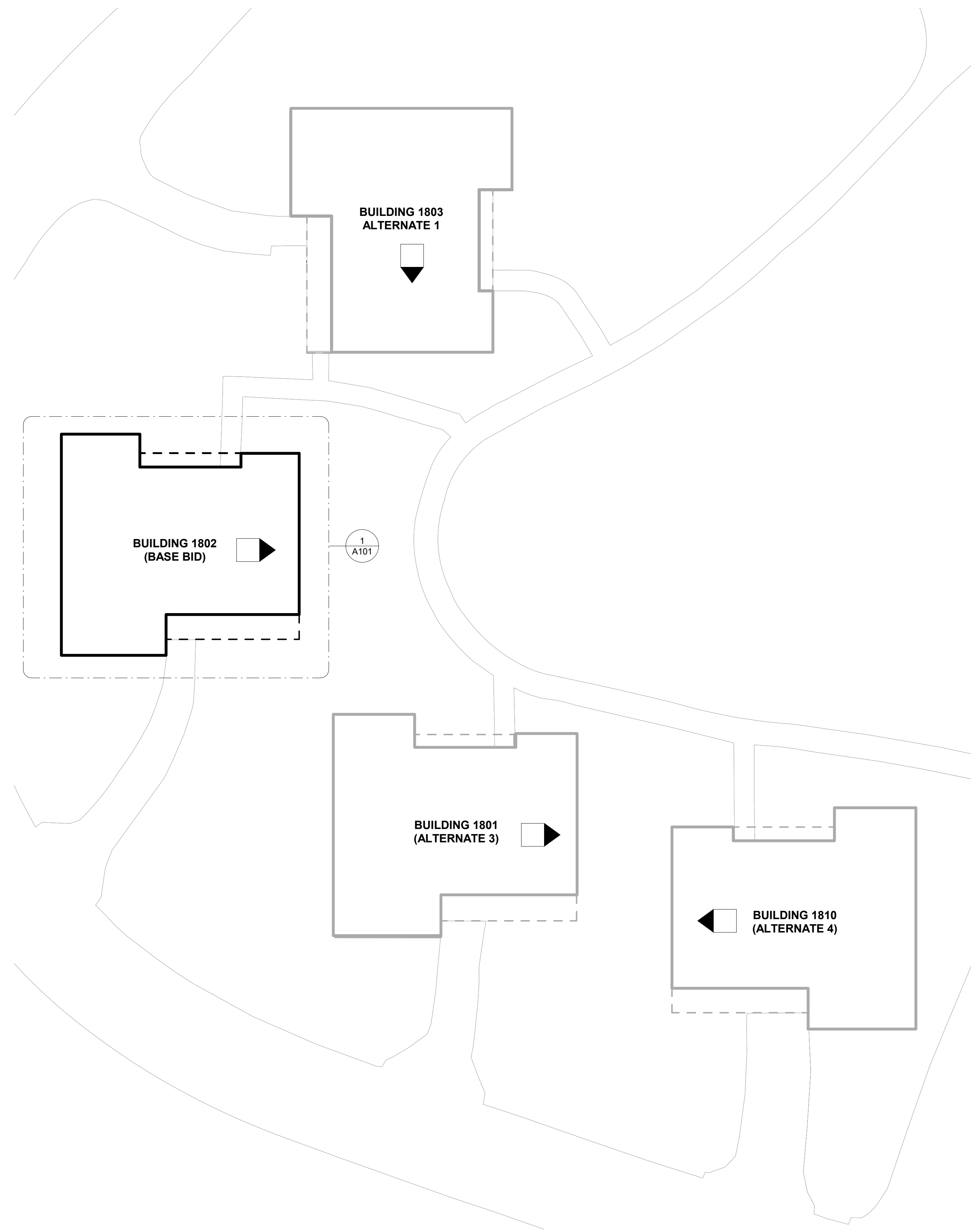
1. THE GENERAL CONTRACTOR SHALL INSPECT THE WASHOUT AREA WEEKLY.
2. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES.
3. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION. HARDENED CONCRETE MATERIALS SHOULD BE REMOVED AND DISPOSED OF.
4. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.



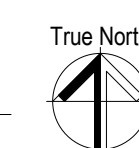
PLAN

SECTION A-A

2 CONCRETE WASHOUT  
C402 SCALE: NO SCALE



1 ARCHITECTURAL SITE PLAN - NEW  
1/16" = 1'-0"



## BASE BID AND ALTERNATES

### BASE BID - GROUP HOME 1802

GROUP HOME 1802 TO BE RENOVATED TO PROVIDE 24-HOUR BEHAVIORAL HEALTH SURVEILLANCE AND SHORT-TERM RESPITE CARE TO (4) INDIVIDUALS LIVING WITHIN THE HOME. HOME WILL RECEIVE NEW SIDING, WINDOWS, SIDEWALK AND PORCH PAVEMENT AT THE EXTERIOR OF THE BUILDING. THE INTERIOR OF THE HOME WILL RECEIVE FULL RENOVATION AND RECONFIGURATION OF THE SPACE TO ACCOMMODATE PROPER OBSERVATION AND ANTI-LIGATURE COMPONENTS FOR PROPER CARE. ALL MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION COMPONENTS WILL REQUIRE A FULL REMOVAL AND REINSTALLATION TO PROPERLY BRING EXISTING HOMES UP TO CODE AND CARE REQUIREMENTS.

### ALTERNATE 1

GROUP HOME 1803 TO BE RENOVATED SIMILAR TO PROJECT BASE BID.

### ALTERNATE 2

EXTERIOR FENCE TO BE PROVIDED AT GROUP HOME 1802/1803 SITE PERIMETER. COMPOSITE, ANTI-CLIMB FENCE TO BE INSTALLED. FENCE GATES AND MAN DOORS TO BE PROVIDED FOR CONTINUED SUPPORT, SURVEILLANCE, AND MAINTENANCE TO THESE HOMES.

### ALTERNATE 3

GROUP HOME 1801 TO BE RENOVATED SIMILAR TO PROJECT BASE BID.

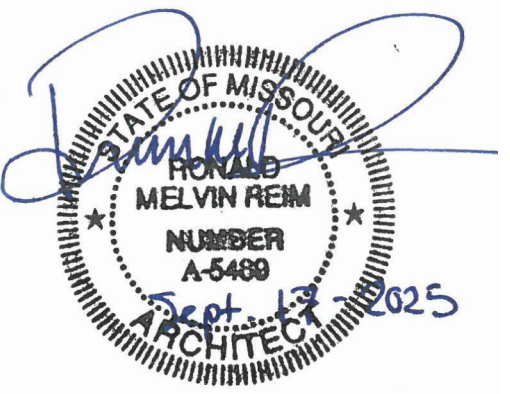
### ALTERNATE 4

GROUP HOME 1810 TO BE RENOVATED SIMILAR TO PROJECT BASE BID.

## LEGEND

BUILDING PLAN NORTH

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BELLEFONTAINE  
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ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

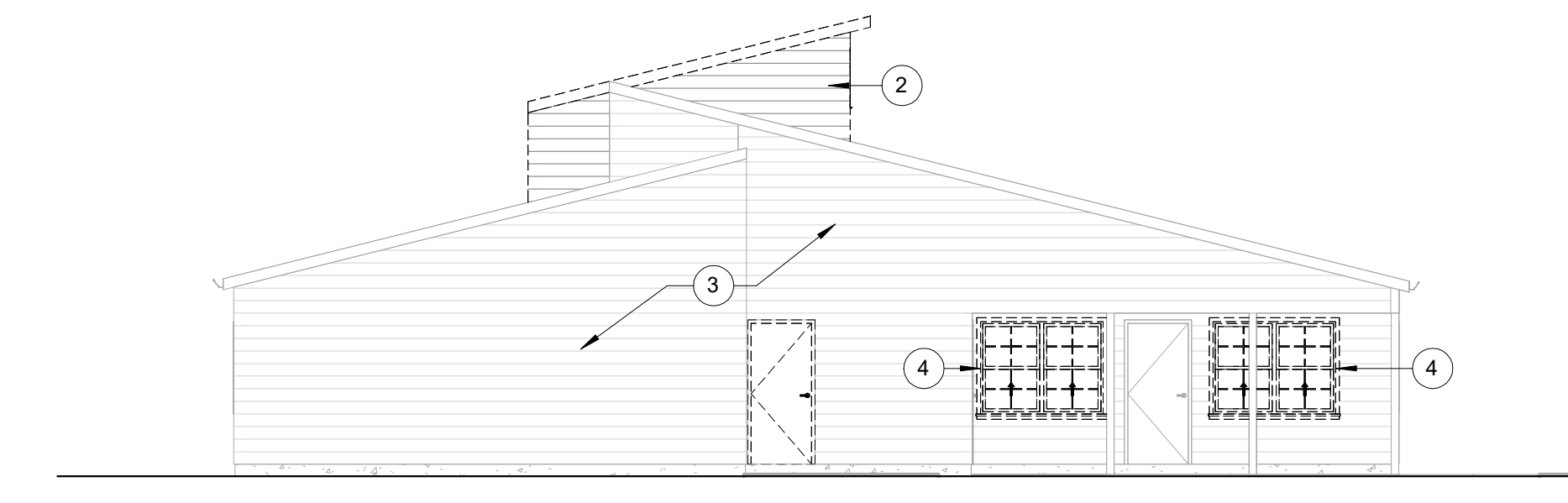
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DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
ARCHITECTURAL  
SITE PLAN

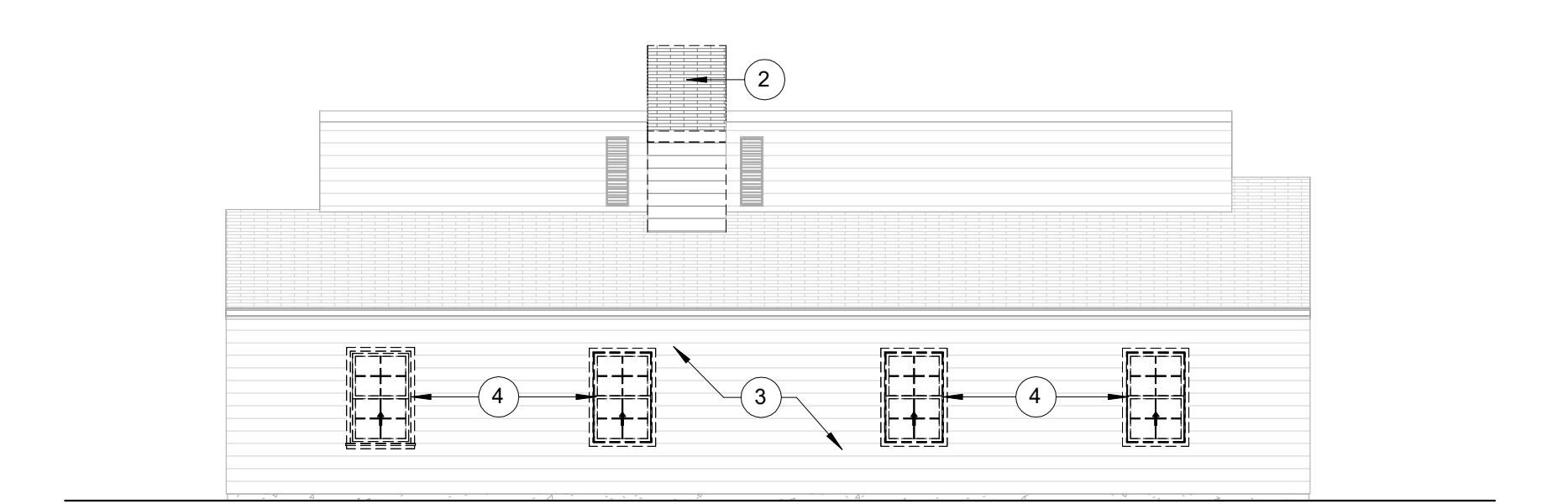
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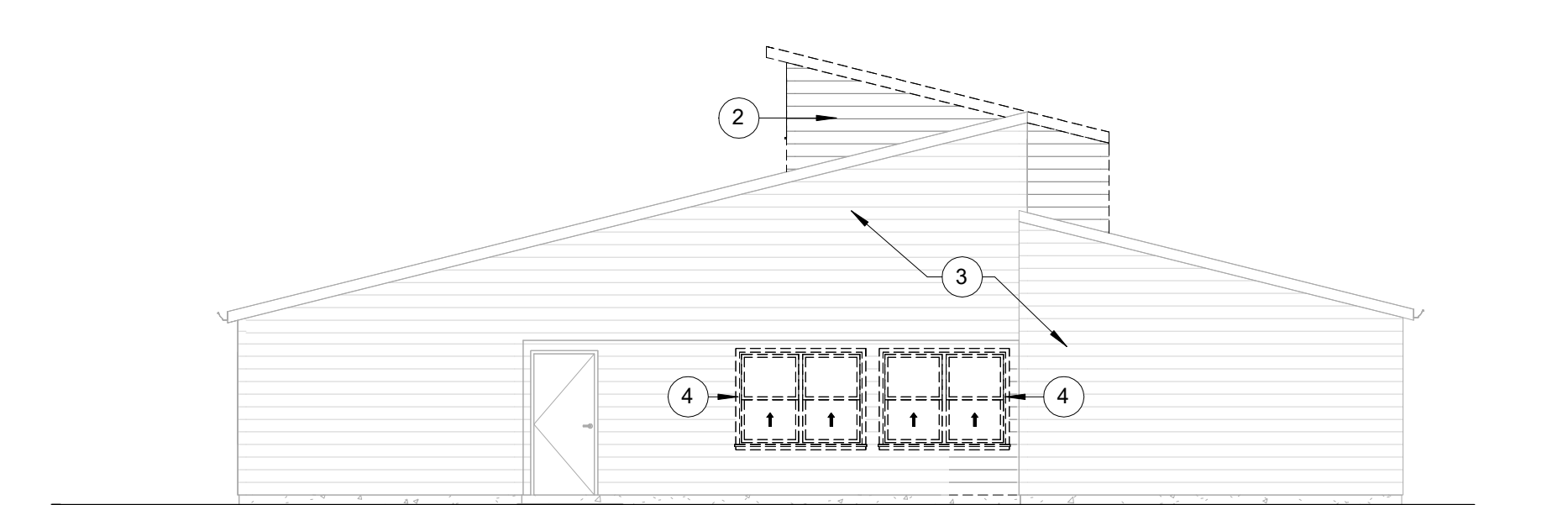
14 OF 67 SHEETS  
09/17/2025



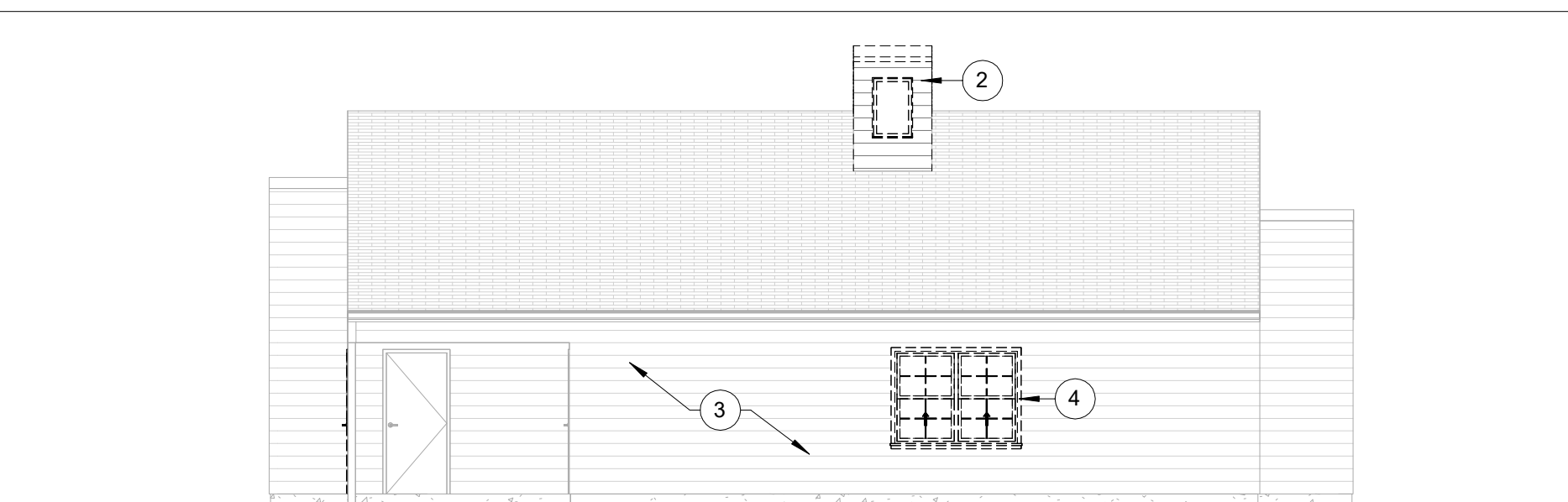
4 EXISTING ELEVATION A  
1/8" = 1'-0"



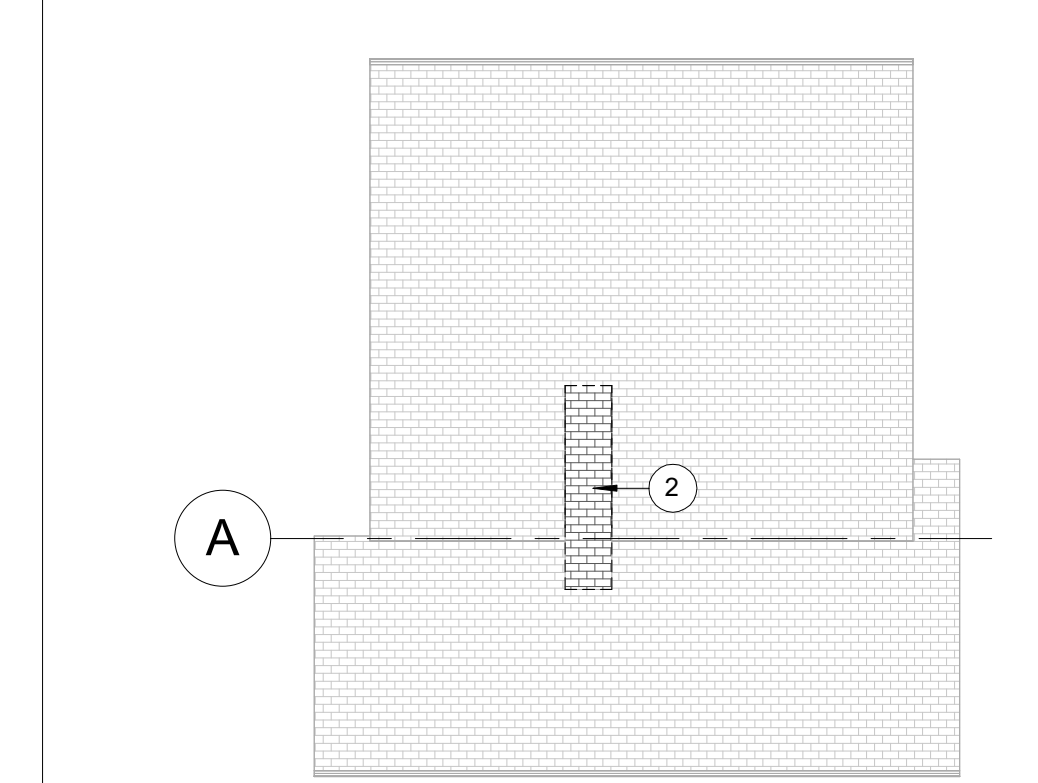
5 EXISTING ELEVATION B  
1/8" = 1'-0"



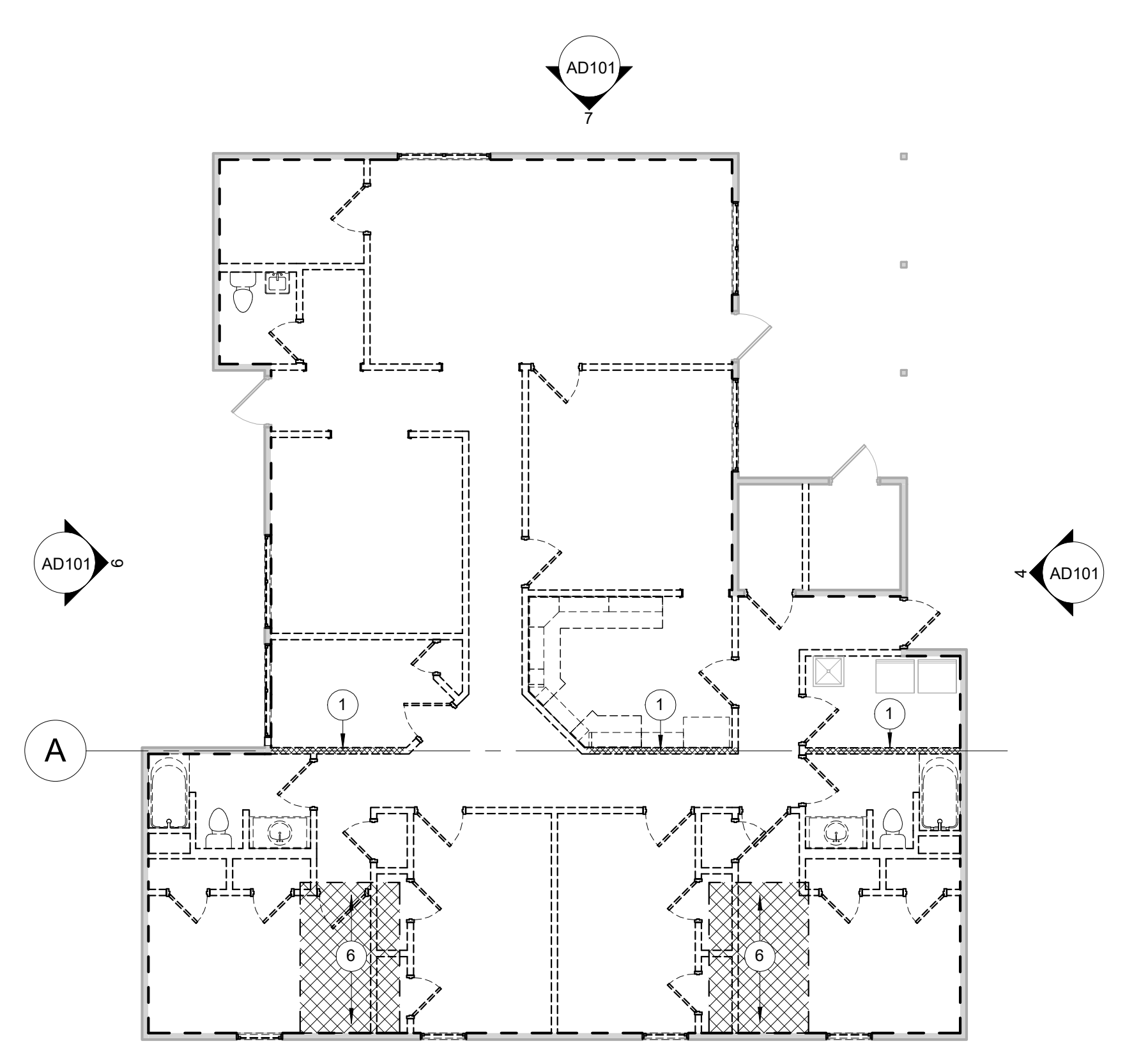
6 EXISTING ELEVATION C  
1/8" = 1'-0"



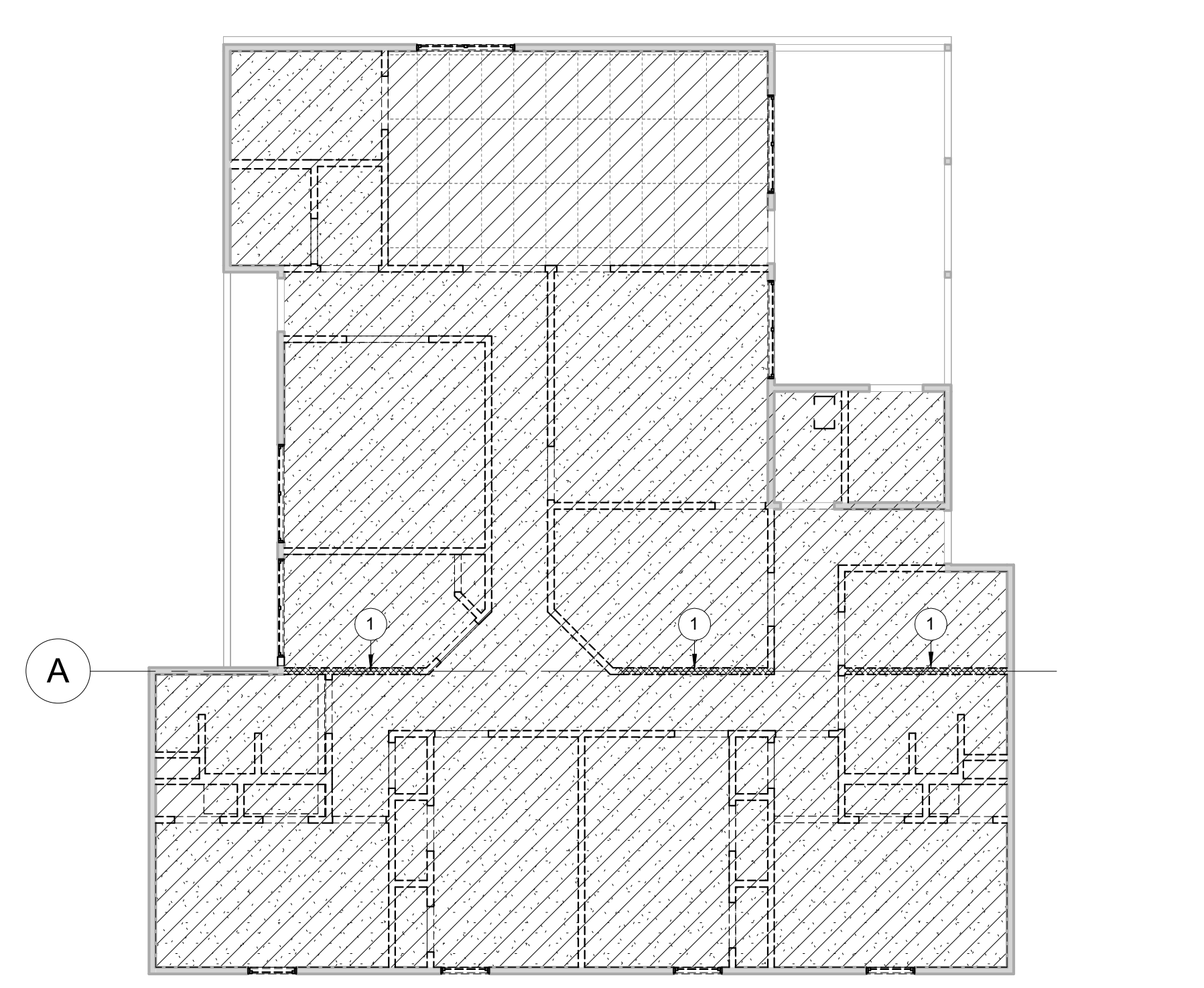
7 EXISTING ELEVATION D  
1/8" = 1'-0"



3 ROOF DEMOLITION PLAN  
1/16" = 1'-0"



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



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

**SHEET NOTES**

- DASHED LINEWORK INDICATES EXISTING ELEMENTS TO BE DEMOLISHED. SOLID AND GREY LINEWORK INDICATES EXISTING ELEMENTS TO REMAIN. PROTECT EXISTING CONSTRUCTION, SURFACES AND MATERIALS INDICATED TO REMAIN FROM DAMAGE OR DETERIORATION DUE TO PERFORMANCE OF WORK. PATCH AND REPAIR EXISTING DAMAGED MATERIALS AND SURFACES IN MANNER TO ELIMINATE EVIDENCE OF DAMAGE.
- IF MATERIALS ARE ENCOUNTERED THAT MAY BE HAZARDOUS OR MAY CONTAIN HAZARDOUS COMPONENTS, CEASE WORK IMMEDIATELY, PREVENT FURTHER DISTURBANCE, SECURE THE AREA, AND NOTIFY THE OWNER.
- TO EXTENT POSSIBLE DEMOLISH INDICATED ITEMS IN THEIR ENTIRETY. DEMOLISH PARTITIONS INDICATED FROM BASE TO HEAD. DEMOLISH SERVICES SERVING EQUIPMENT AND UTILITIES TO THEIR SOURCE, UNLESS INDICATED OTHERWISE.
- DO NOT CUT STRUCTURAL COMPONENTS UNLESS INDICATED OTHERWISE.
- PROVIDE FIRE EXTINGUISHERS AND FIRE WATCH WHEN PERFORMING HOT WORK OR WORK REQUIRING OPEN FLAME.
- DISPOSE OF DEMOLISHED MATERIALS IN LAWFUL MANNER, OFF SITE.
- LOCATE AND MARK UTILITIES TO REMAIN WITH TAGS INDICATING UTILITY TYPE. PROTECT UTILITIES FROM DAMAGE.

**KEYNOTES**

- 1 PARTITION AT GRID LINE SUSPECTED TO HAVE STRUCTURAL COMPONENTS AND/OR QUALITIES. USE SELECTIVE DEMOLITION AT INDICATED WALLS TO PRESERVE STRUCTURAL INTEGRITY OF STRUCTURAL COMPONENTS AND/OR BEARING WALL. PROVIDE SUPPORT AND SHORING AS NEEDED TO MAINTAIN STRUCTURAL ELEMENTS.
- 2 DEMOLISH DORMER IN ITS ENTIRETY.
- 3 DEMOLISH ALL SIDING, TRIMS, AND SIDING ACCESSORIES.
- 4 DEMOLISH WINDOW.
- 6 DEMOLISH SUBFLOOR.

**ALTERNATE INFORMATION**

**ALTERNATE 1:**  
BUILDING 1803 DOES NOT HAVE A ROOF DORMER AND DOES NOT REQUIRE DORMER DEMOLITION AND ROOF PATCH AND REPAIR.

**LEGEND**

- EXISTING CONSTRUCTION TO BE DEMOLISHED
- EXISTING CONSTRUCTION TO REMAIN
- ⌋ EXISTING DOOR TO BE DEMOLISHED
- ⌋ EXISTING DOOR TO REMAIN
- /// DEMOLISH CEILING AND ALL CEILING-MOUNTED COMPONENTS
- - - DEMOLISH INTERIOR WALL GYP BOARD FROM FLOOR SUBSTRATE TO ROOF JOISTS. FRAMING TO REMAIN.

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PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

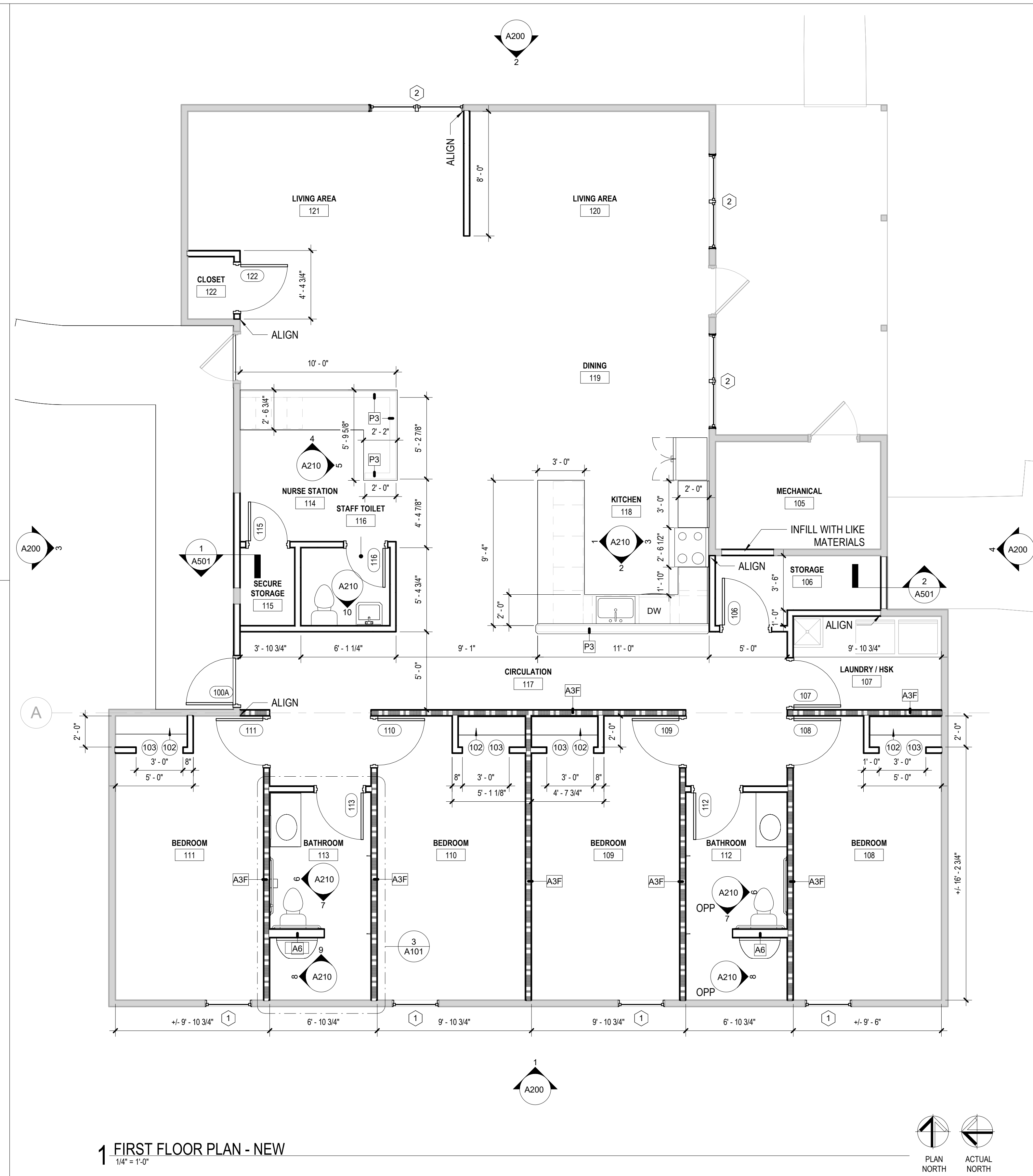
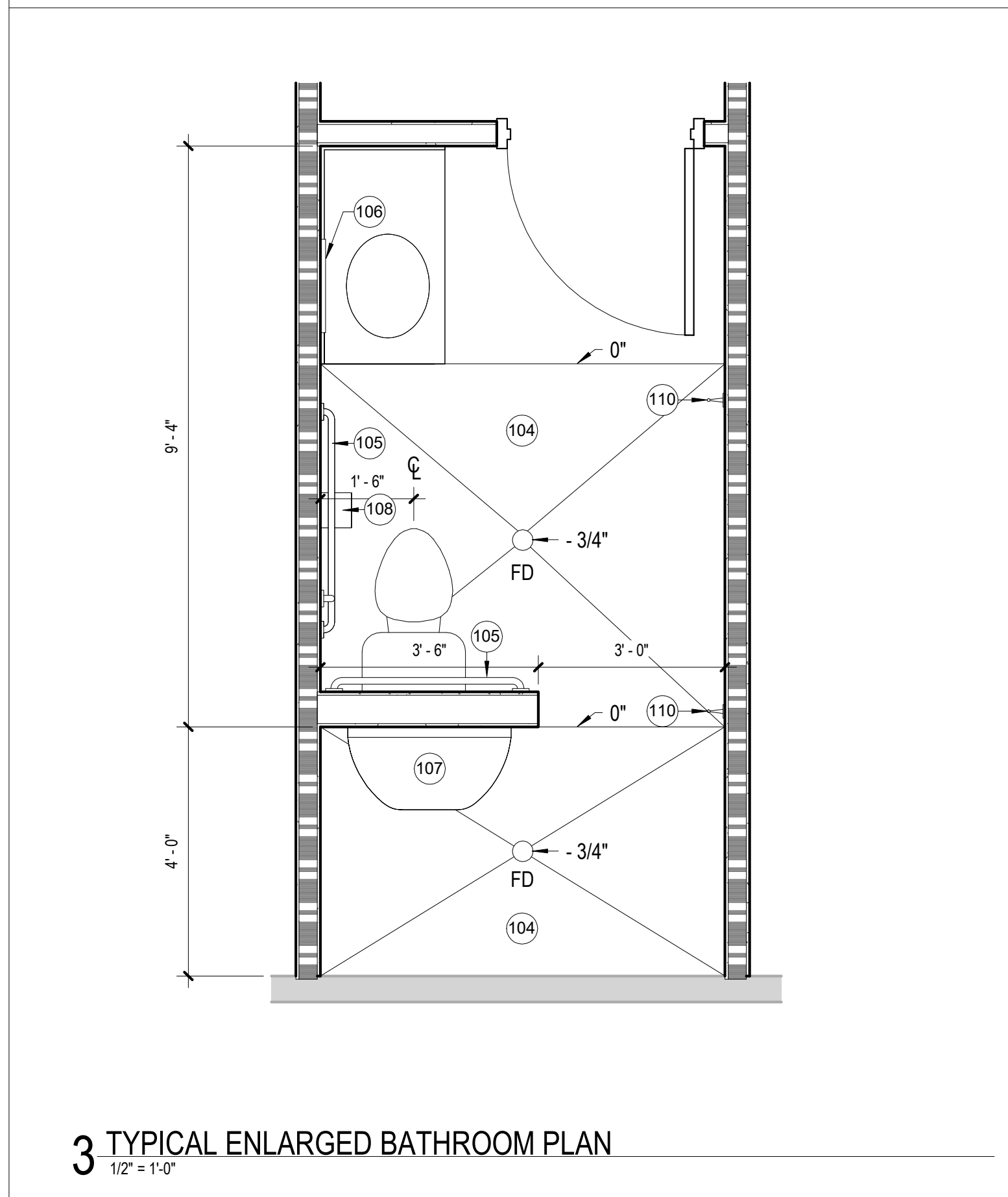
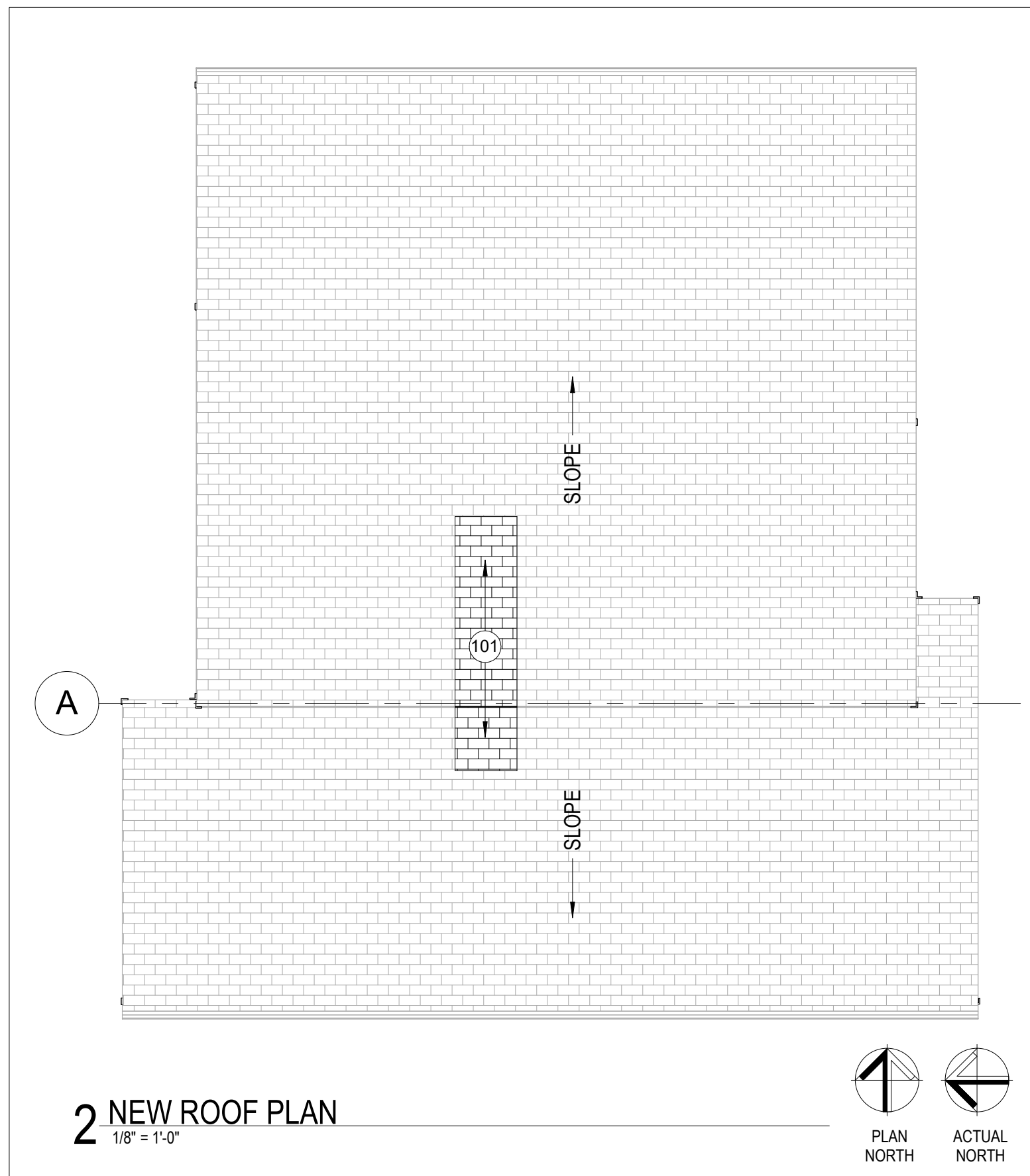
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DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**ARCHITECTURAL  
DEMOLITION**

SHEET NUMBER:

**AD101**  
15 OF 67 SHEETS  
09/17/2025



**SHEET NOTES**

- DIMENSIONS ARE TO FINISHED FACE OF WALL OR GRIDLINE, EXCEPT AS INDICATED OTHERWISE.
- PROVIDE FIRE STOPPING AS REQUIRED BY CODE.
- ANGLES ARE 90 DEGREES UNLESS NOTED OTHERWISE.
- PROVIDE STEEL OR FIRE RETARDANT TREATED WOOD FOR BLOCKING AND ROUGH BUCKS. COORDINATE LOCATIONS WITH INSTALLER. INSTALL PRIOR TO CLOSING WALLS.
- WHERE FLOOR FINISHES CHANGE AT COMMUNICATING ROOMS, PLACE TRANSITION UNDER CENTER OF DOOR OR FINISHED OPENING.
- PROTECT EXISTING SURFACES AND MATERIALS INDICATED TO REMAIN FROM DAMAGE OR DETERIORATION DUE TO PERFORMANCE OF WORK. PATCH AND REPAIR EXISTING MATERIALS AND SURFACES DAMAGED OR AFFECTED BY PERFORMANCE OF THE WORK.
- EXAMINE EXISTING SUBSTRATES TO RECEIVE NEW MATERIAL OR FINISH. PREPARE SUBSTRATE AS REQUIRED TO MEET MANUFACTURER'S INSTRUCTIONS OR RECOMMENDATIONS FOR PROPER APPLICATION OF NEW MATERIALS.
- VERIFY DIMENSIONS AND LOCATIONS OF OPENINGS, BASES AND SUPPORTS FOR EQUIPMENT, DUCTS, PIPING, CONDUITS, ETC. WHERE REQUIRED FOR NEW WORK, NEATLY CUT OPENINGS IN EXISTING CONSTRUCTION USING POWER SAWS OR CORE DRILLS. DO NOT USE IMPACT TOOLS. REVIEW OPENING LOCATIONS WITH TRADES PRIOR TO STARTING WORK. KEEP OPENINGS TO MINIMUM REQUIRED TO ALLOW FOR NEW WORK.
- ALL NEW PARTITIONS ARE TYPE A3 UNLESS NOTED OTHERWISE. SEE SHEET A601 FOR ADDITIONAL PARTITION INFORMATION.

**KEYNOTES**

- PROVIDE INFILL ROOF AND WALL MATERIALS TO MATCH EXISTING ADJACENT CONSTRUCTION. MATCH CONSTRUCTION TYPE, ASSEMBLY, AND FINISH PROPERTIES OF ADJACENT MATERIALS TO REMAIN.
- PROVIDE CONCEALED FASTENER SHELF WITH LIGATURE RESISTANT CLOTHES HANGER SYSTEM.
- 3'-0" X 6'-8" CLOSET OPENING. PROVIDE GYP RETURNS AT OPENING.
- RECESS FLOOR AND PROVIDE LEVELING COMPOUND TO SLOPE INDICATED SECTIONS OF FLOOR TO DRAIN. SEE DETAIL 4/A501 FOR ADDITIONAL INFORMATION. COORDINATE WITH PLUMBING.
- LIGATURE-RESISTANT ADA GRAB BARS.
- LIGATURE-RESISTANT MIRROR. CENTER OVER SINK.
- LIGATURE-RESISTANT SHOWER SEAT.
- LIGATURE-RESISTANT TOILET PAPER DISPENSOR.
- LIGATURE-RESISTANT TOWEL HOOK. MOUNT 4'-0" AFF MAX.

**ALTERNATE INFORMATION**

**ALTERNATE 1:**  
BUILDING 1803 DOES NOT HAVE A ROOF DORMER AND DOES NOT REQUIRE DORMER DEMOLITION AND ROOF PATCH AND REPAIR.

**LEGEND**

NAME	ROOM NAME
100	ROOM NUMBER
[Thick Dashed Line]	HALF-HOUR FIRE PARTITION CONSTRUCTION
[Thin Solid Line]	EXISTING ASSEMBLY
[Thick Solid Line]	NEW ASSEMBLY
[Thin Solid Line with Arrow]	NEW DOOR
[Thin Dashed Line with Arrow]	EXISTING DOOR

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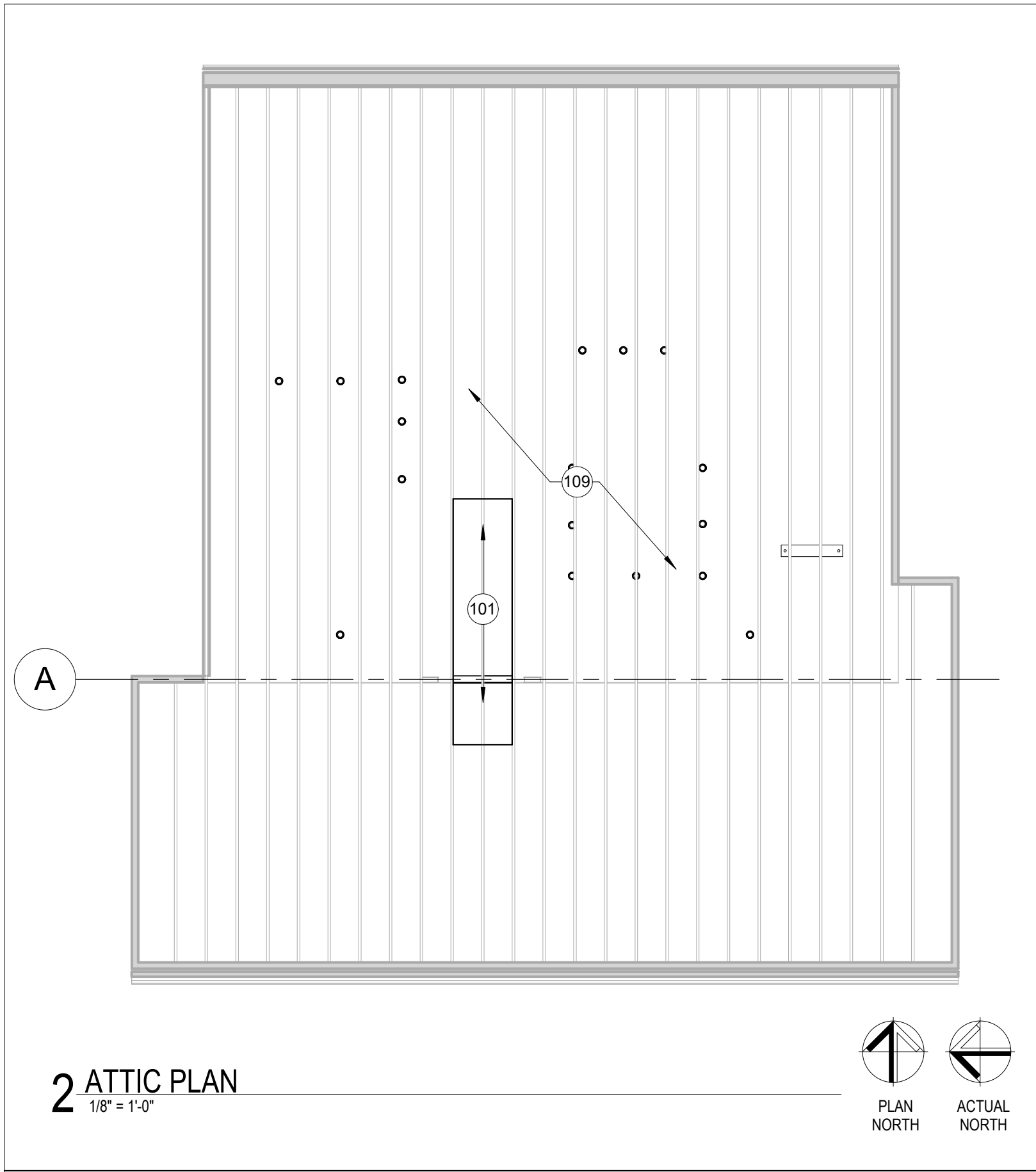
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CHECKED BY: RF  
DESIGNED BY: OCULUS

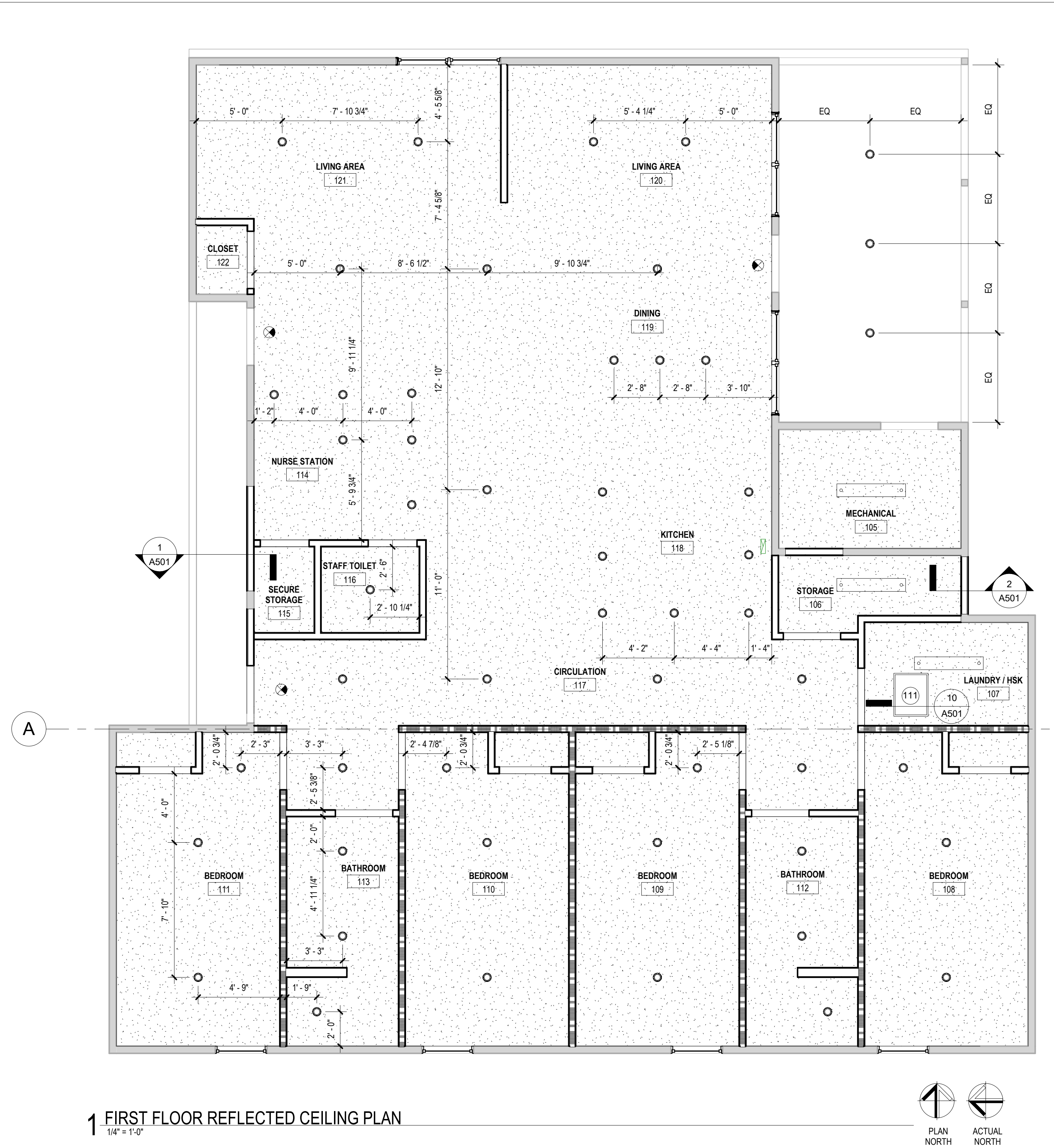
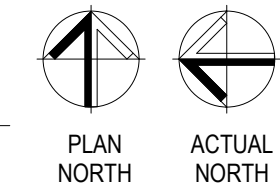
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**FIRST FLOOR PLAN**

SHEET NUMBER:

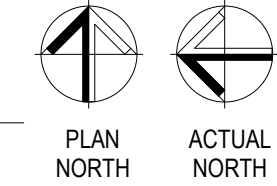
**A101**  
16 OF 67 SHEETS  
09/17/2025



2 ATTIC PLAN  
1/8" = 1'-0"



1 FIRST FLOOR REFLECTED CEILING PLAN  
1/4" = 1'-0"



SHEET NOTES

1. CEILING FIXTURES SHOWN ARE FOR REFERENCE ONLY. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION DRAWINGS FOR ADDITIONAL REQUIREMENTS AND COORDINATION.
2. REFER TO FLOOR PLAN FOR PARTITION TYPES NOT SHOWN.
3. CONTRACTOR SHALL COORDINATE ALL STRUCTURAL, PLUMBING, MECHANICAL, FIRE PROTECTION AND ELECTRICAL WORK WITH CEILING HEIGHTS AND ARCHITECTURAL WORK.
4. ALL CEILING MOUNTED OR RECESSED ITEMS INDICATED OR NOT INDICATED ON REFLECTED CEILING PLAN SUCH AS SPEAKERS, GRILLES, LIGHTS, ETC., SHALL BE CENTERED IN THE LAY-IN PANELS. AT GYPSUM BOARD CEILINGS INSTALL IN A CONSISTENT PATTERN.
5. NOTIFY ARCHITECT/ENGINEER OF ALL ITEMS NOT SHOWN ON THE REFLECTED CEILING PLAN AND LOCATE PER ARCHITECT/ENGINEER'S DIRECTION.
6. ALL CEILINGS TO BE 1 HOUR UL P533 ASSEMBLY. SEE DETAIL 3/A601 FOR TYPICAL CEILING CONDITION.

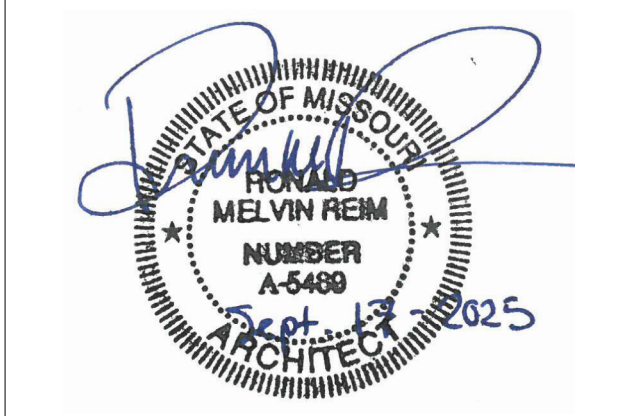
KEYNOTES

- 101 PROVIDE INFILL ROOF AND WALL MATERIALS TO MATCH EXISTING ADJACENT CONSTRUCTION. MATCH CONSTRUCTION TYPE, ASSEMBLY, AND FINISH PROPERTIES OF ADJACENT MATERIALS TO REMAIN.
- 109 PROVIDE R-49 FACED BATT INSULATION. INSTALL ABOVE CEILING BETWEEN ROOF MEMBERS AND COVER SPRINKLER SYSTEM. FILL GAPS TO PROVIDE CONTINUOUS INSULATION.
- 111 20"x30" (MIN) ATTIC ACCESS PANEL. LOCATE BETWEEN ROOF TRUSSES AND 6" MIN FROM ADJACENT WALL.

LEGEND

- NEW GYPSUM BOARD ATTACHED TO BOTTOM OF TRUSSES (PAINTED); REFER TO SPECIFICATIONS AND INTERIOR FINISH SCHEDULE
- PENDANT LIGHT
- RECESSED DOWN LIGHT FIXTURE
- EXIT SIGN

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BELLEVILLE  
HABILITATION CENTER

BUILDING 1802  
10695 BELLEVILLE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

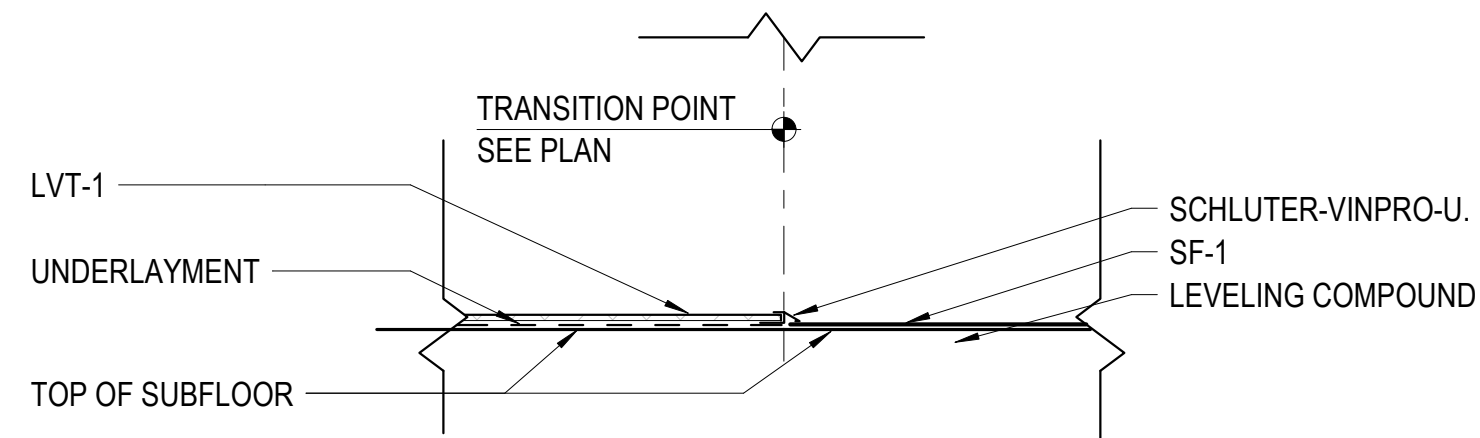
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
REFLECTED CEILING  
PLAN

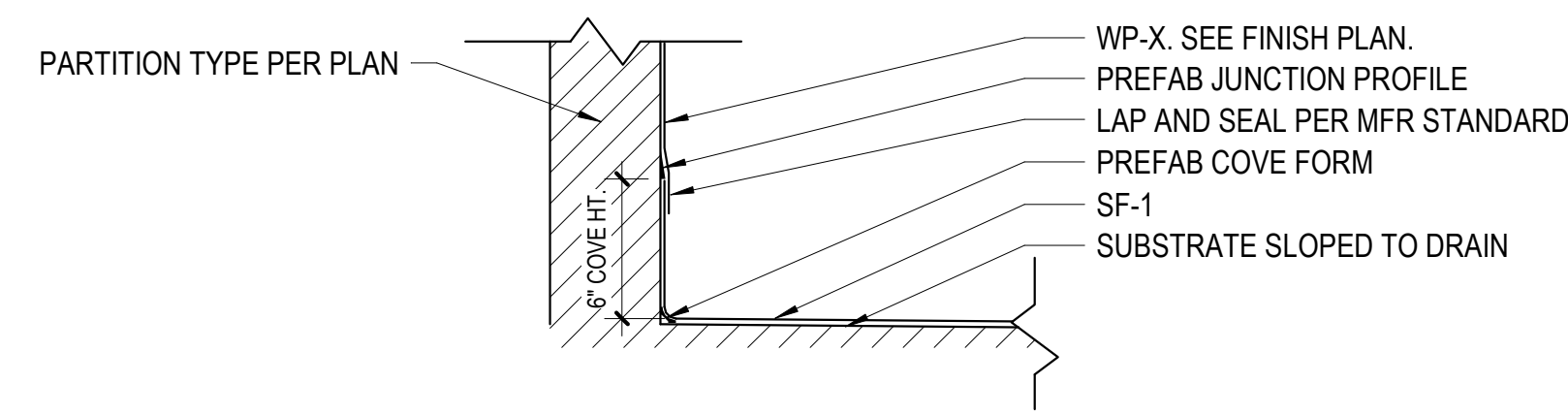
SHEET NUMBER:

**A111**

17 OF 67 SHEETS  
09/17/2025



**2 TRANSITION AT LVT & SHEET VINYL FLOOR**  
1/12" = 1'-0"



**3 COVE JUNCTION DETAIL**  
1/12" = 1'-0"



**1 FINISH PLAN**  
1/4" = 1'-0"

**FINISH SCHEDULE**

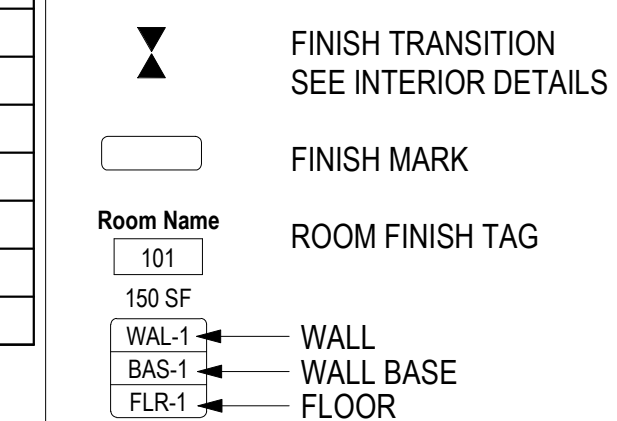
FINISH	PRODUCT NAME	MANUFACTURER	STYLE	COLOR	NOTES
LVT-1	LUXURY VINYL TILE	TARKETT	ARTFUL OAK	TBD	
PT-1	PAINT	SHERWIN WILLIAMS	INTERIOR SEMI-GLOSS	TBD	
PT-2	PAINT	SHERWIN WILLIAMS	INTERIOR SEMI-GLOSS	TBD	
PT-3	EXTERIOR PAINT	SHERWIN WILLIAMS	SHERWIN WILLIAMS	TBD	
PT-4	EXTERIOR PAINT	SHERWIN WILLIAMS	SHERWIN WILLIAMS	TBD	
PT-5	CEILING PAINT	SHERWIN WILLIAMS	INTERIOR-FLAT	TBD	
PT-6	INTERIOR DOOR / FRAME PAINT	SHERWIN WILLIAMS	INTERIOR SEMI-GLOSS	TBD	COLOR MATCH RESILIENT WALL BASE
PT-7	EXTERIOR DOOR / FRAME PAINT	SHERWIN WILLIAMS	EXTERIOR HIGH-GLOSS	TBD	COLORMATCH EXTERIOR
SF-1	SHEET FLOORING	TARKETT	AQUA MULTISAFE	TBD	PROVIDE INTEGRAL COVE WITH TRANSITION TO WP
SS-1	SOLID SURFACE	WILSONART	SOLID SURFACE	TBD	
WB-1	RESILIENT WALL BASE	JOHNSONITE	TRADITIONAL VINYL 4"	TBD	
WP-1	WALL PROTECTION	TARKETT	AQUARELLE WALL HFS	TBD	
WP-2	WALL PROTECTION	TARKETT	AQUARELLE WALL HFS	TBD	

NOTE: FINAL COLORS TO BE COORDINATED AND APPROVED BY OWNER.

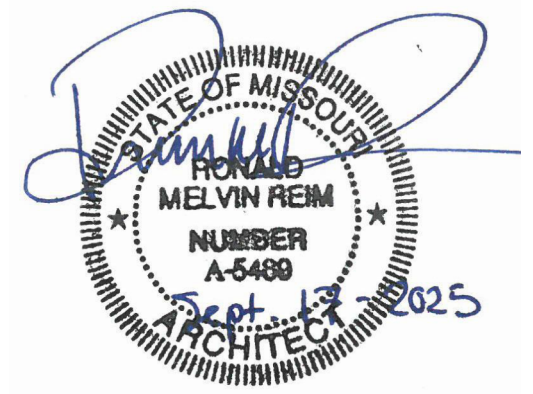
**SHEET NOTES**

- PREPARE SUBSTRATES IN ACCORDANCE WITH FINISH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATION FOR SUBSTRATE INDICATED AND AS REQUIRED FOR APPROPRIATE, COMPLETE AND BLEMISH-FREE APPLICATION.
- SEE INTERIOR ELEVATIONS FOR EXTENT OF WORK WHERE MORE THAN ONE FINISH OCCURS ON A WALL.
- CENTER FLOOR AND CEILING FINISHES AND PATTERNS WITHIN ROOM, EXCEPT AS INDICATED OTHERWISE.
- WHERE FLOOR FINISHES CHANGE AT COMMUNICATING ROOMS, PLACE TRANSITION UNDER CENTER OF DOOR OR FINISHED OPENING.
- PROVIDE FLAT PAINT FINISH ON PAINTED CEILINGS, SEMI GLOSS FINISH ON GYPSUM BOARD PARTITIONS, SEMI GLOSS ON INTERIOR PRIMED METAL INCLUDING HM DOORS AND FRAMES, EXCEPT AS INDICATED OTHERWISE.
- PROVIDE RESILIENT BASE TO TOE SPACE OF BASE CABINETS.
- FLOOR FINISHES TO EXTEND UNDER CASEWORK AND APPLIANCES.

**LEGEND**



STATE OF MISSOURI  
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GOVERNOR



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PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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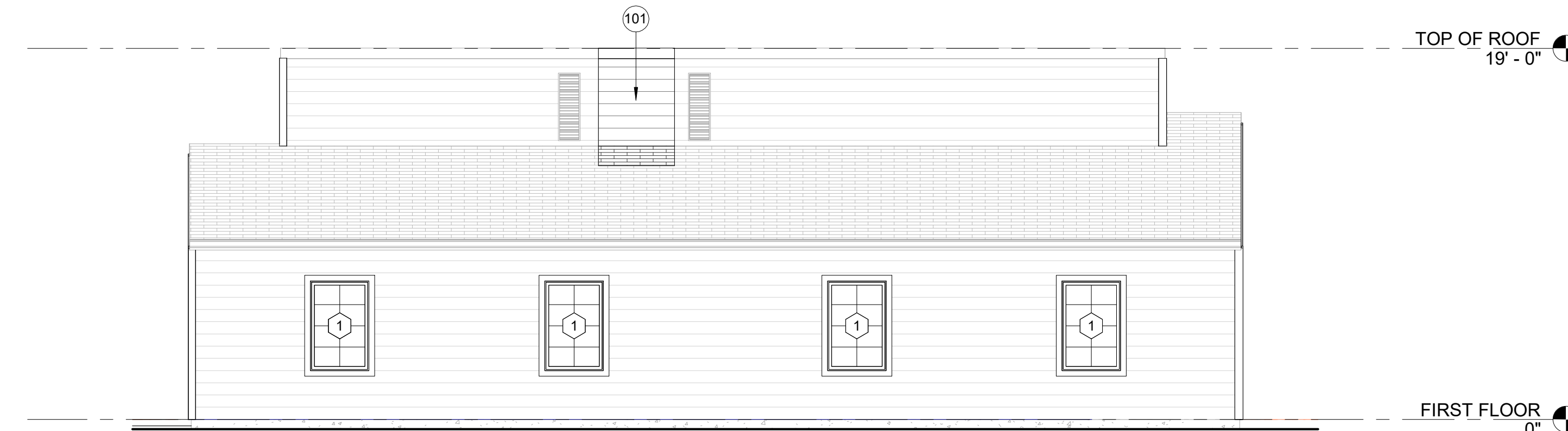
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DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**FINISH PLAN**

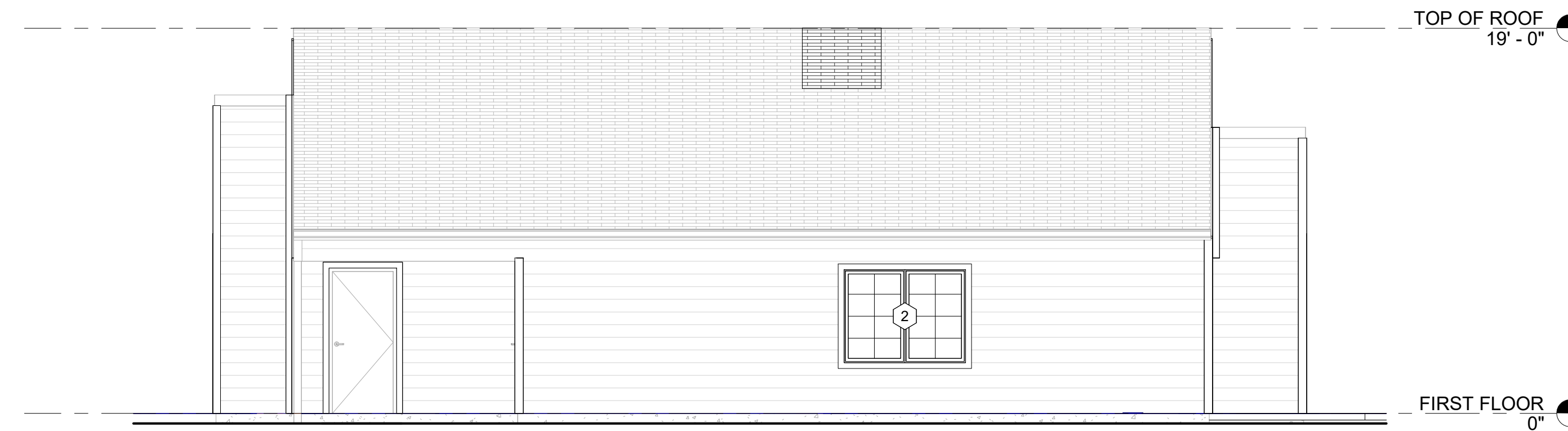
SHEET NUMBER:

**A121**

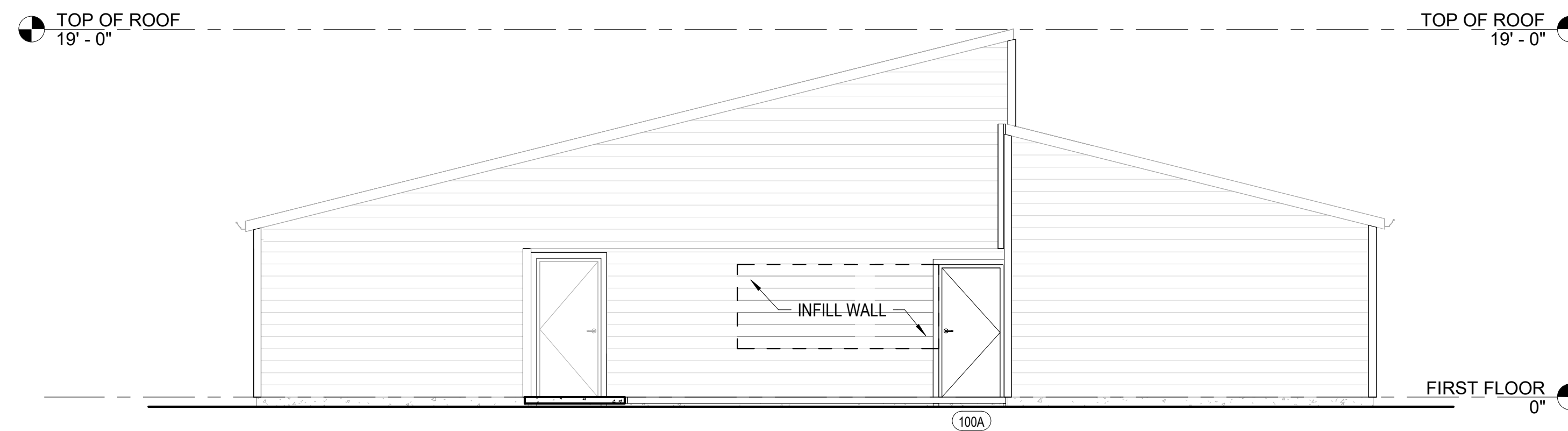
18 OF 67 SHEETS  
09/17/2025



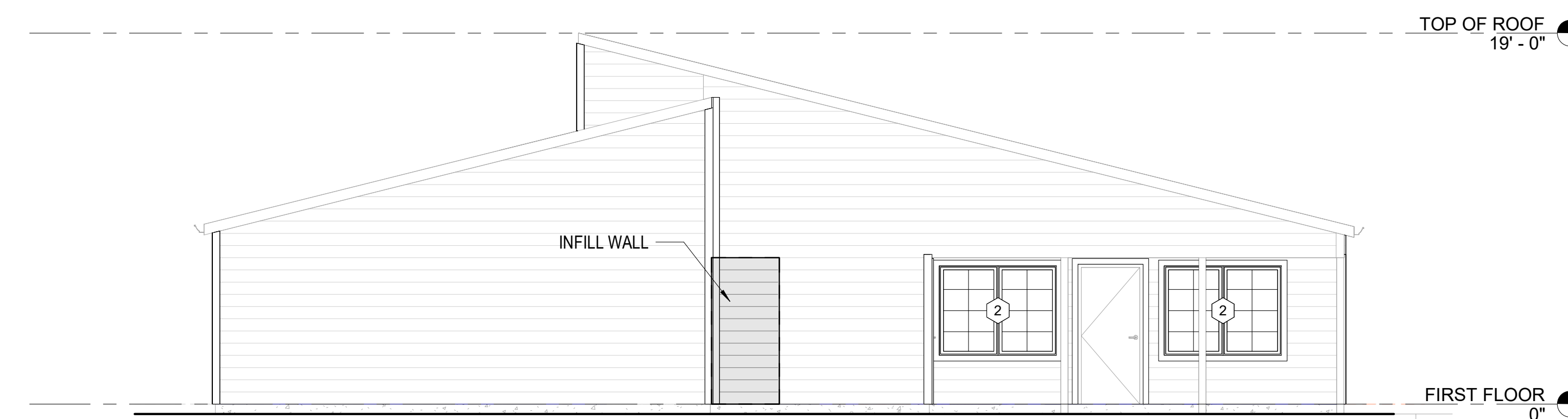
**1 SOUTH ELEVATION**  
3/16" = 1'-0"



**2 NORTH ELEVATION**  
3/16" = 1'-0"



**3 WEST ELEVATION**  
3/16" = 1'-0"



**4 EAST ELEVATION**  
3/16" = 1'-0"

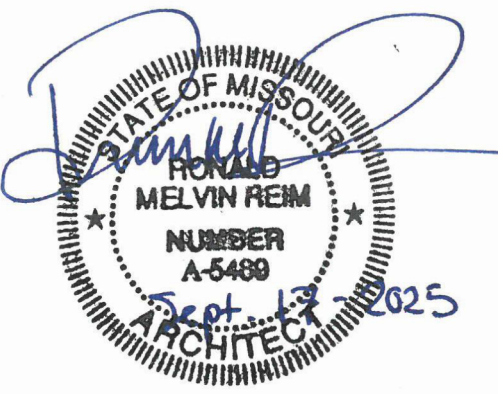
**SHEET NOTES**

- A. WHERE PROVIDING INFILL AT FORMER OPENINGS, INFILL EXTERIOR WALL FRAMING WITH MATERIALS TO MATCH EXISTING ADJACENT ASSEMBLIES.
- B. PATCH AND REPAIR WEATHER BARRIER AS NEEDED TO PROVIDE CONTINUOUS WEATHER-RESISTANT MEMBRANE.
- C. PROVIDE NEW FIBER CEMENT PLANK LAP SIDING, TRIMS, FLASHINGS, AND ACCESSORIES FOR ENTIRETY OF BUILDING EXTERIOR. TRIM DOORS, WINDOWS AND CORNERS PER MANUFACTURER STANDARD.

**KEYNOTES**

- 101 PROVIDE INFILL ROOF AND WALL MATERIALS TO MATCH EXISTING ADJACENT CONSTRUCTION. MATCH CONSTRUCTION TYPE, ASSEMBLY, AND FINISH PROPERTIES OF ADJACENT MATERIALS TO REMAIN.

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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**EXTERIOR  
ELEVATIONS**

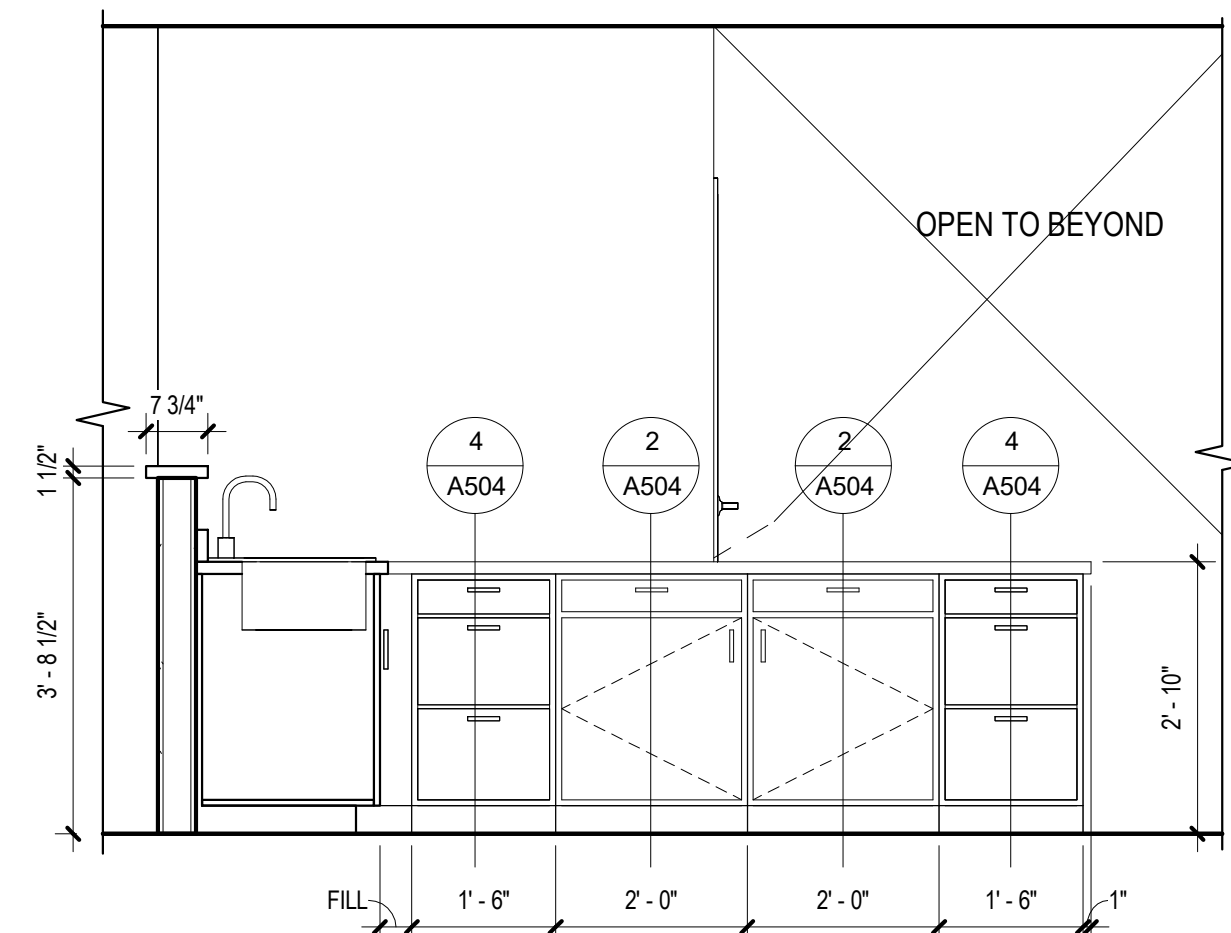
SHEET NUMBER:

**A200**

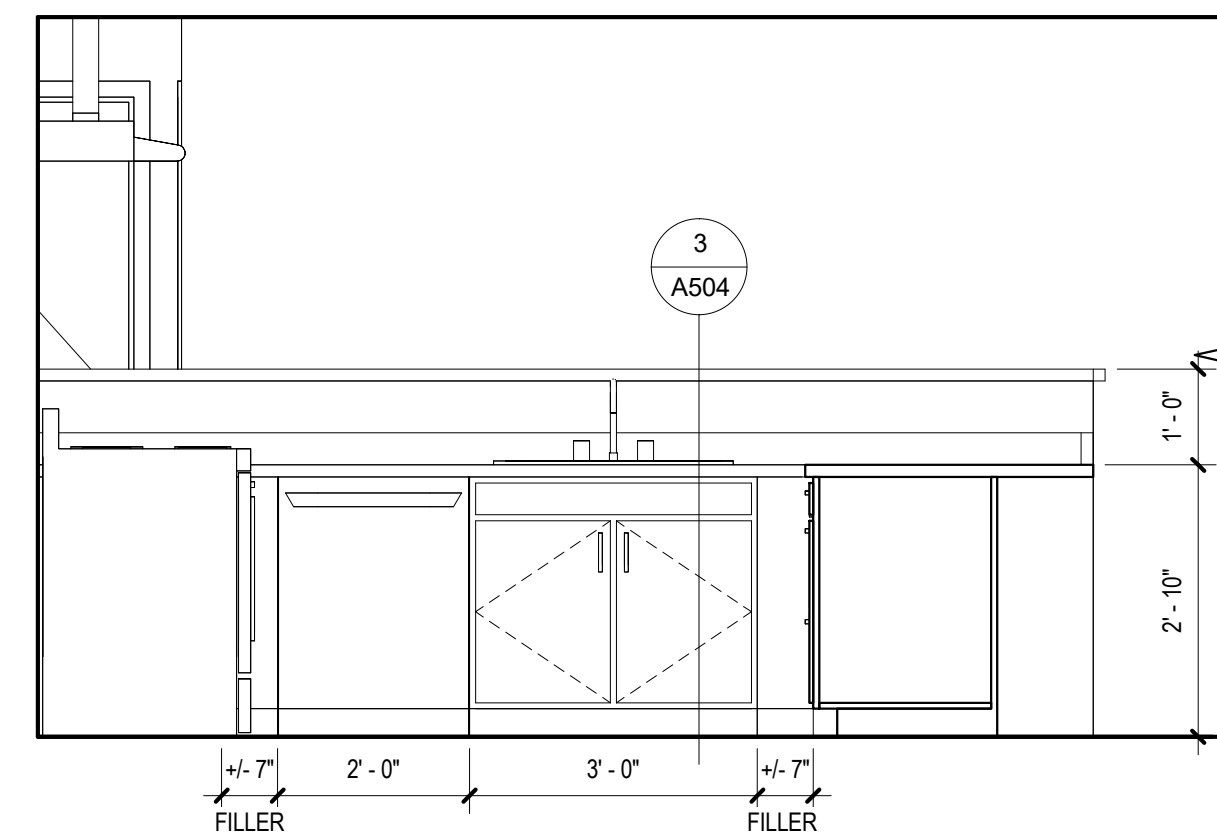
19 OF 67 SHEETS  
09/17/2025

**ALTERNATE INFORMATION**

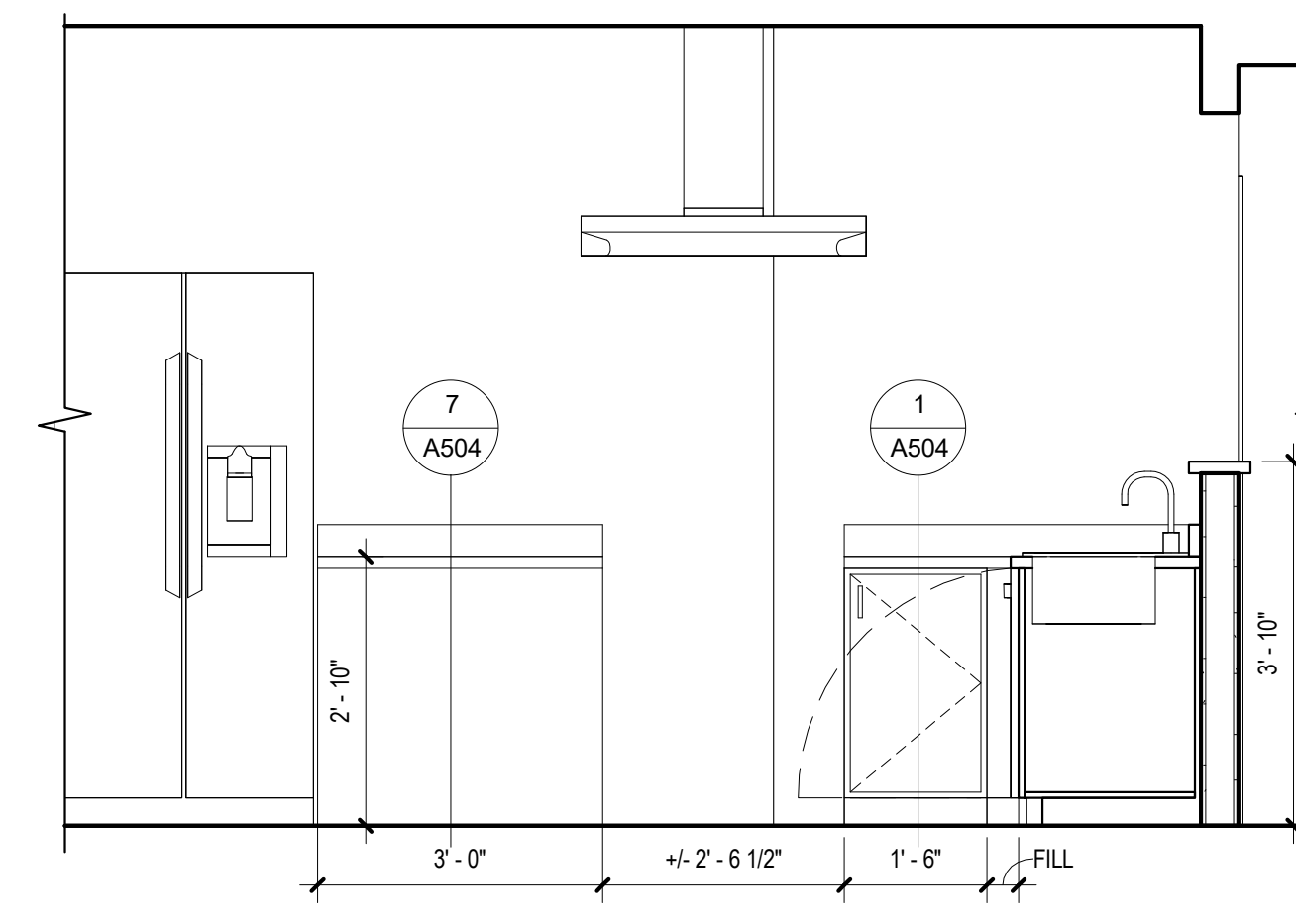
**ALTERNATE 1:**  
BUILDING 1803 DOES NOT HAVE A ROOF DORMER AND DOES NOT REQUIRE DORMER DEMOLITION AND ROOF PATCH AND REPAIR.



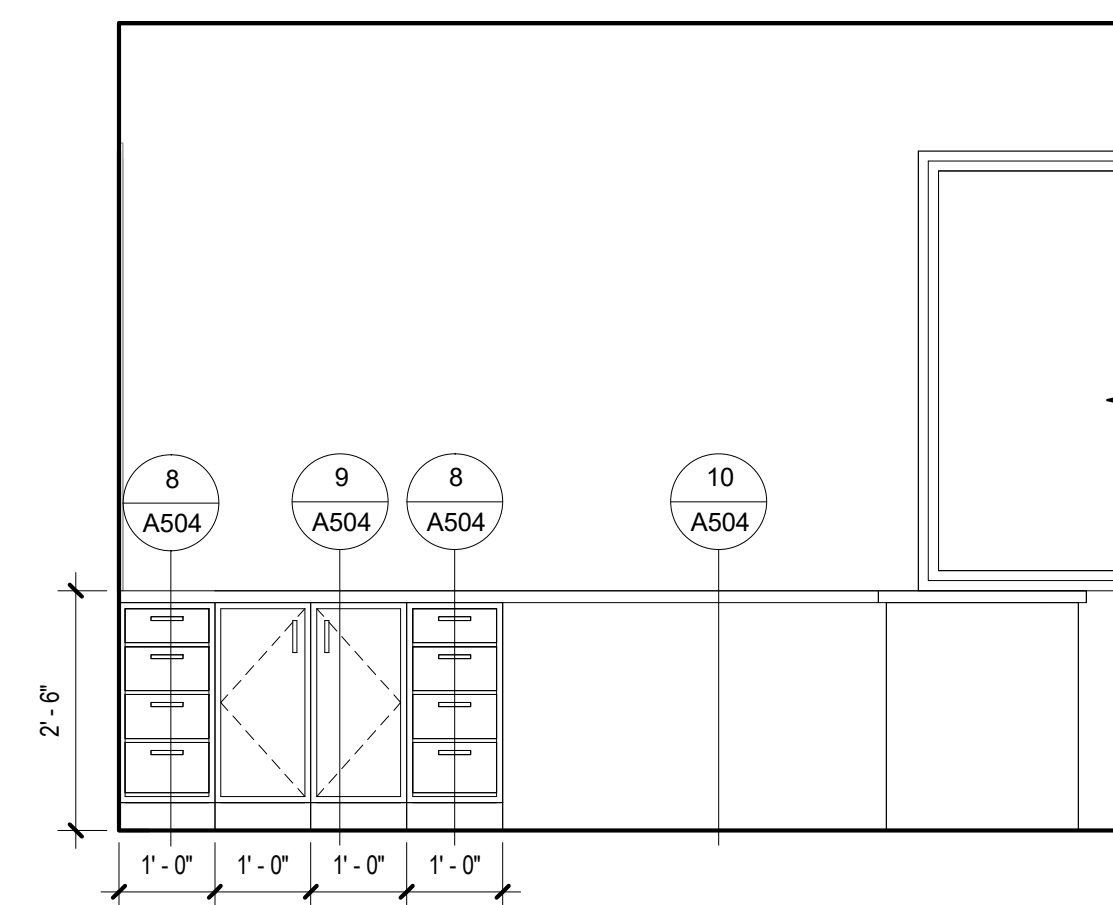
**1 KITCHEN ELEVATION**  
1/2" = 1'-0"



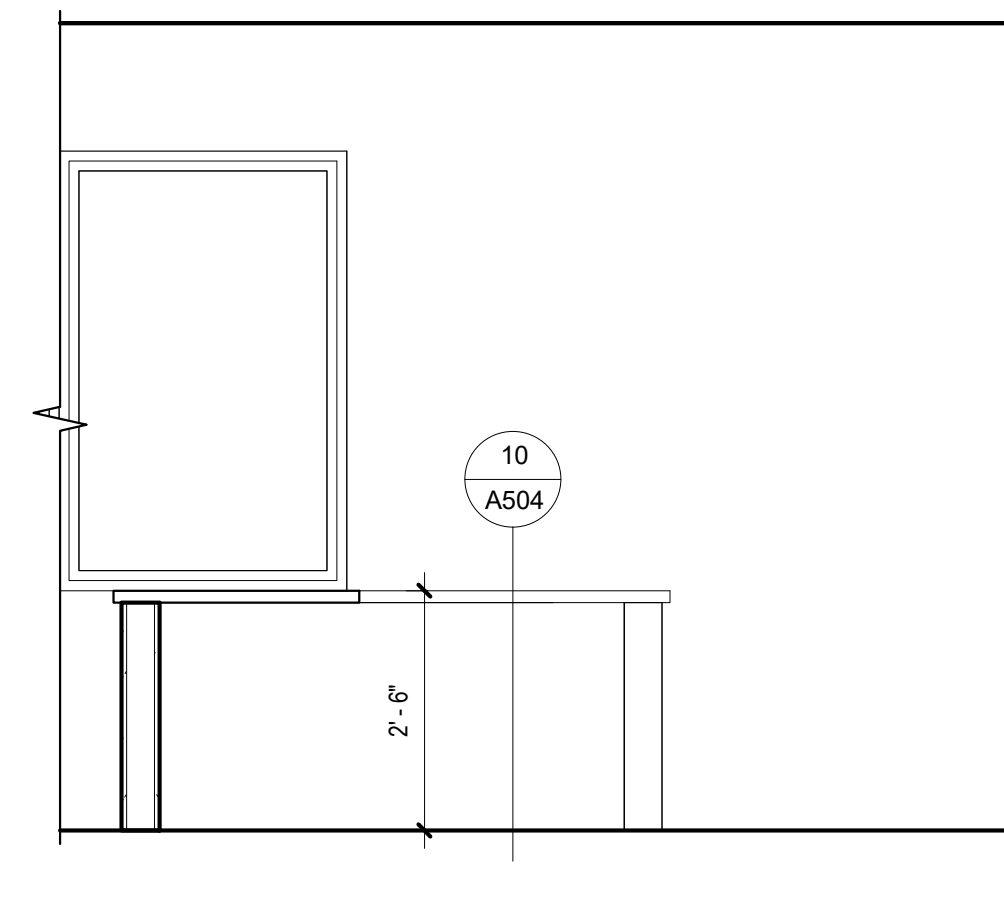
**2 KITCHEN ELEVATION**  
1/2" = 1'-0"



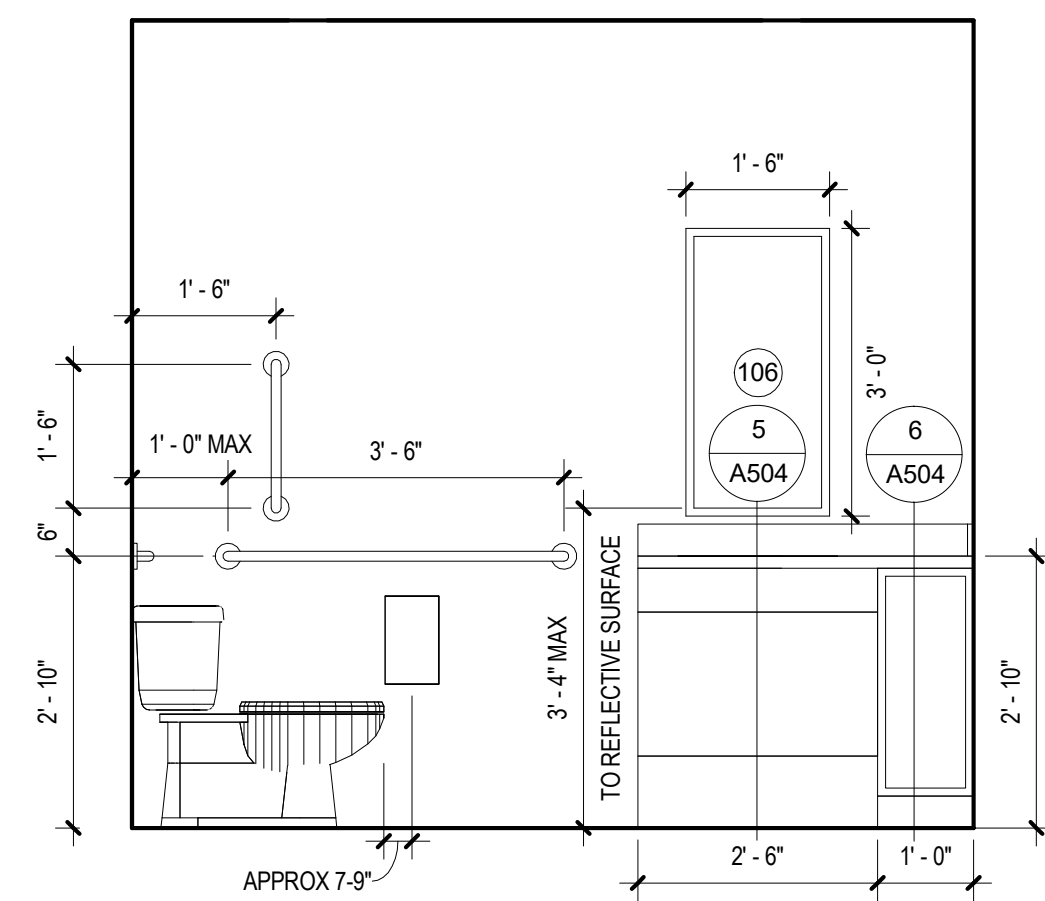
**3 KITCHEN ELEVATION**  
1/2" = 1'-0"



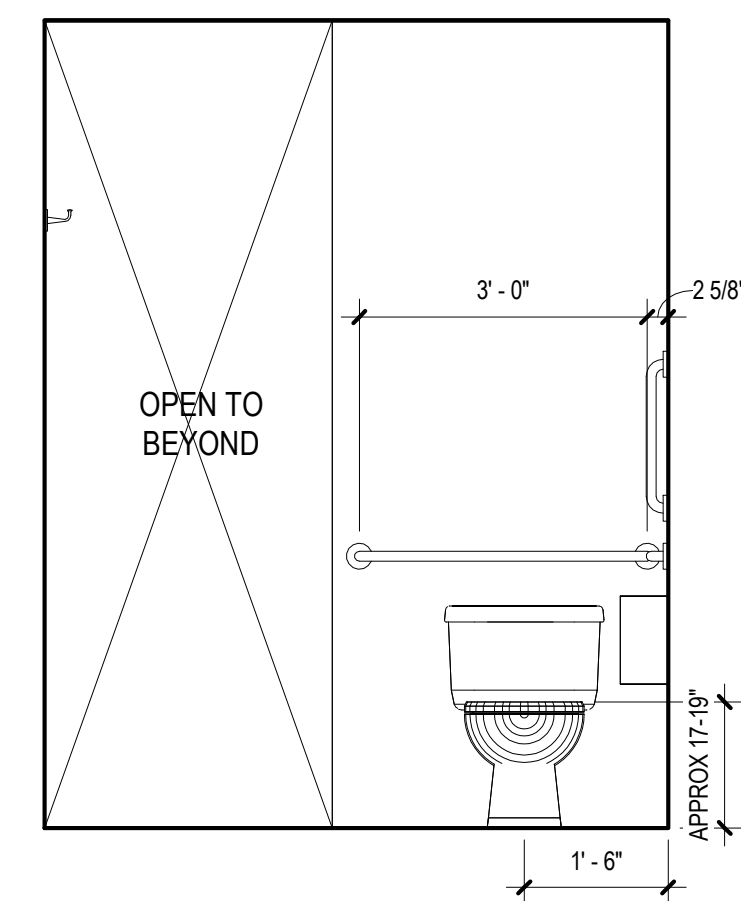
**4 NURSE STATION ELEVATION**  
1/2" = 1'-0"



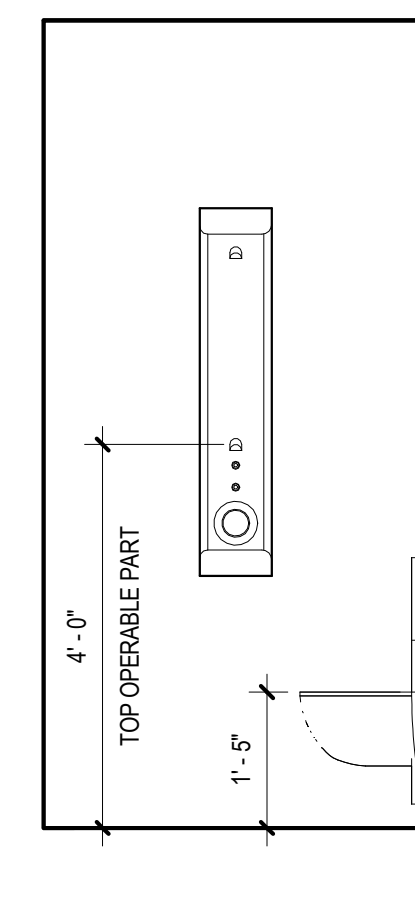
**5 NURSE STATION ELEVATION**  
1/2" = 1'-0"



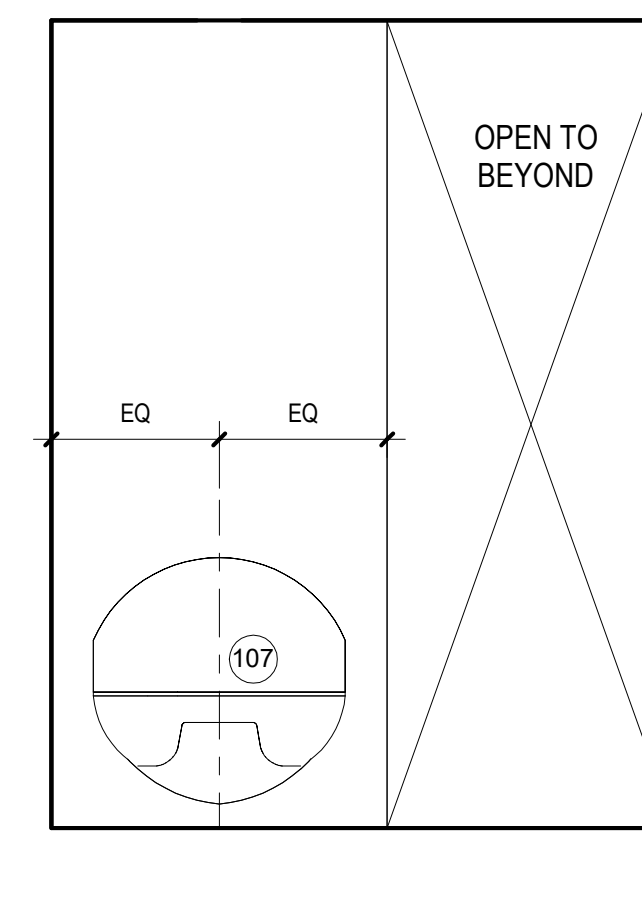
**6 BATHROOM ELEVATION**  
1/2" = 1'-0"



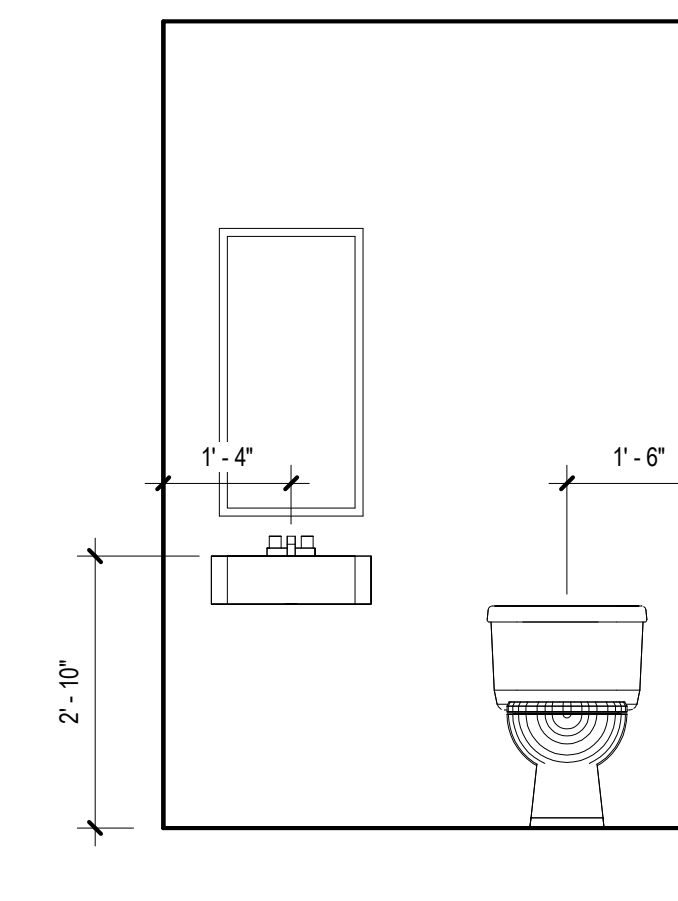
**7 BATHROOM ELEVATION**  
1/2" = 1'-0"



**8 SHOWER ELEVATION**  
1/2" = 1'-0"



**9 SHOWER SIDE ELEVATION**  
1/2" = 1'-0"

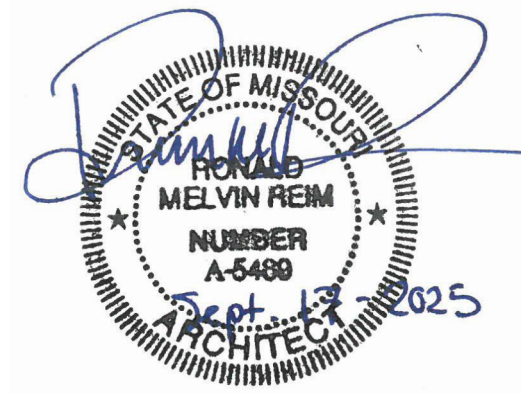


**10 STAFF TLT ELEVATION**  
1/2" = 1'-0"

**KEYNOTES**

- 106 LIGATURE-RESISTANT MIRROR, CENTER OVER SINK.
- 107 LIGATURE-RESISTANT SHOWER SEAT.

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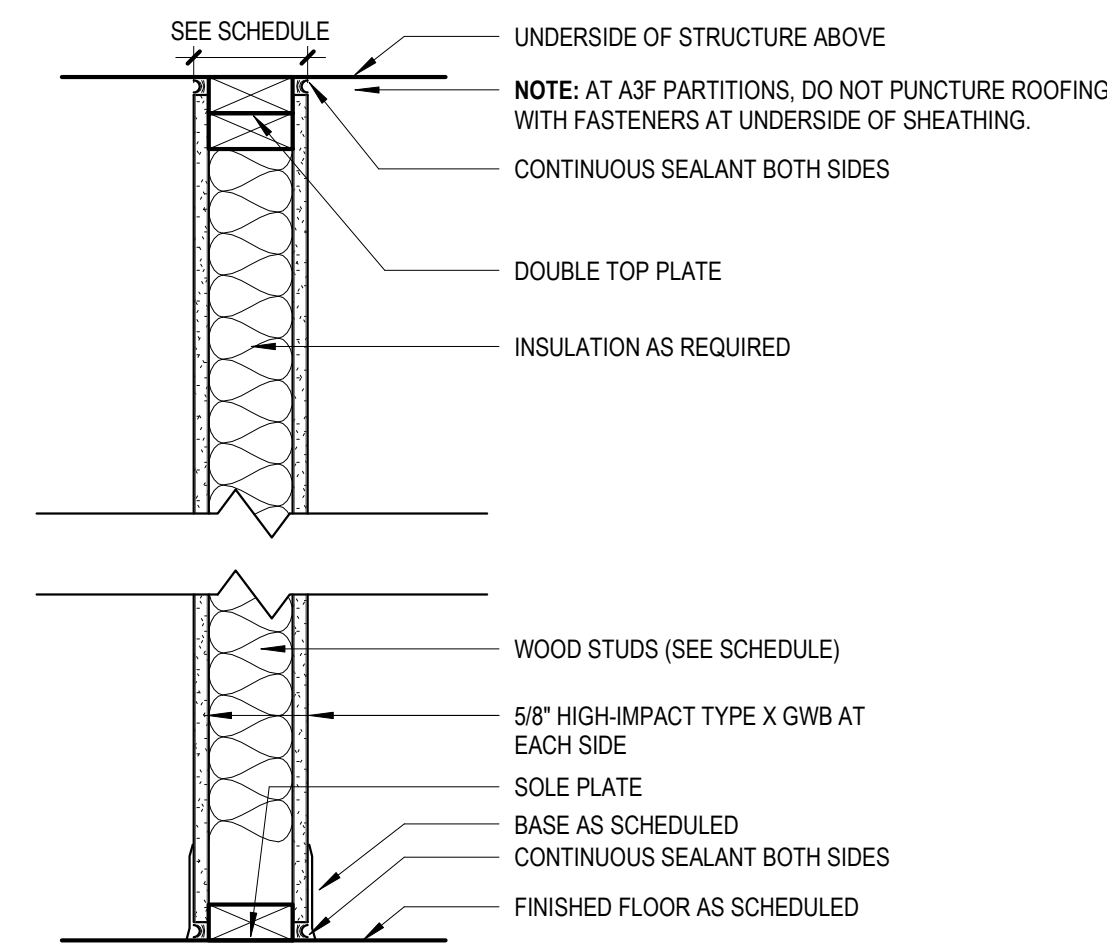
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**INTERIOR  
ELEVATIONS**

SHEET NUMBER:

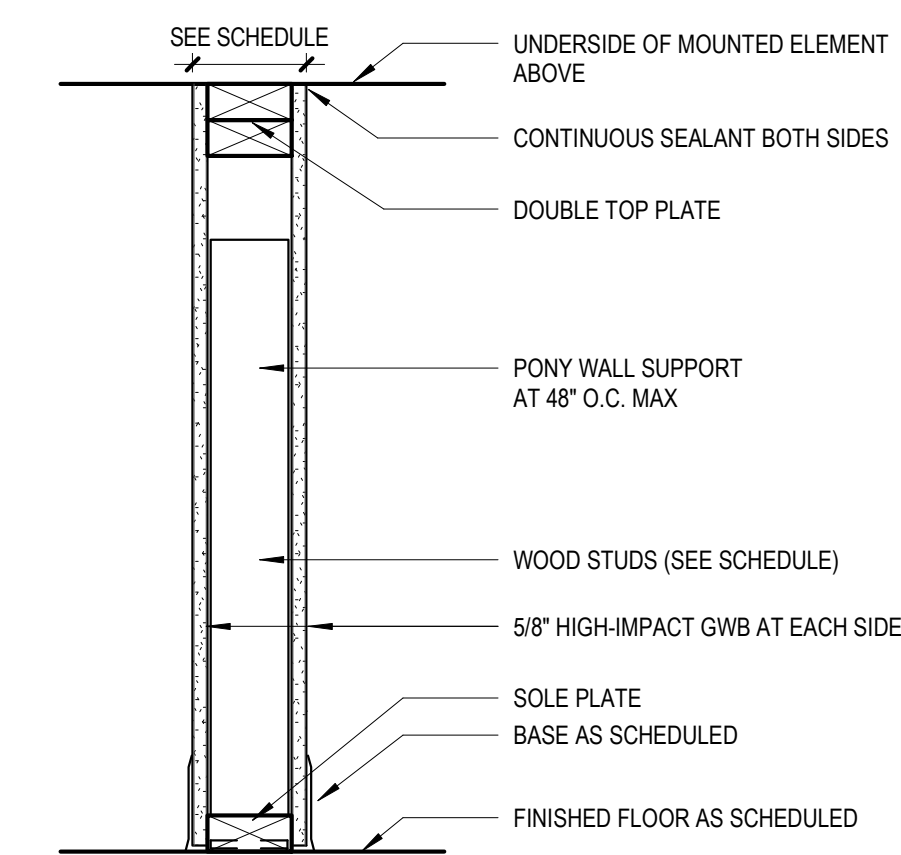
**A210**

20 OF 67 SHEETS  
09/17/2025



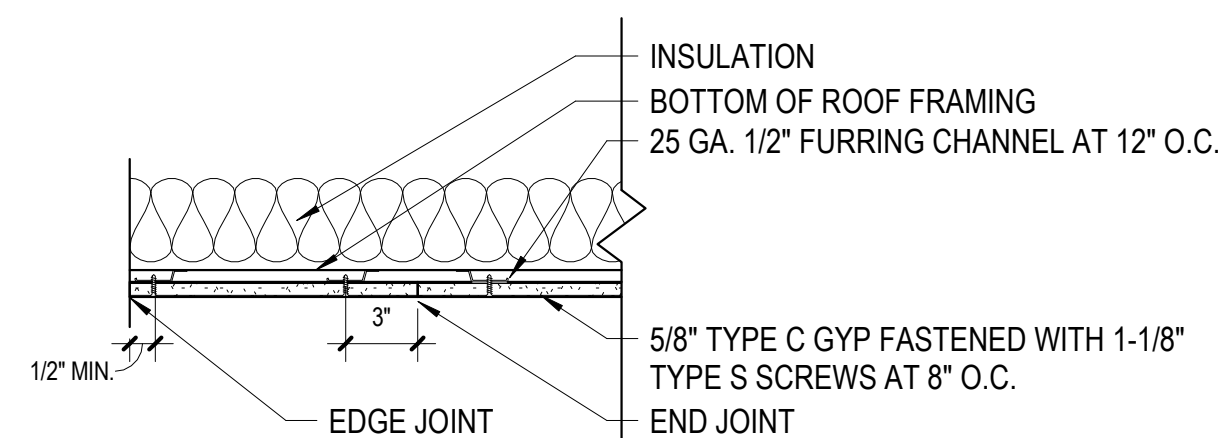
**8 'A' SERIES**  
1 1/2" = 1'-0"

TYPE	STUD SIZE	PARTITION WIDTH	FIRE RESISTANCE		ACOUSTIC REQUIREMENTS	
			RATING	TEST #	STC RATING	INSULATION
A3	3 1/2"	4 3/4"	NONE	N/A	NONE	N/A
A3F	3 1/2"	4 3/4"	1 HOUR	UL U305	34	3 1/2" FIBERGLASS
A6	6"	6 3/4"	NONE	N/A	NONE	N/A



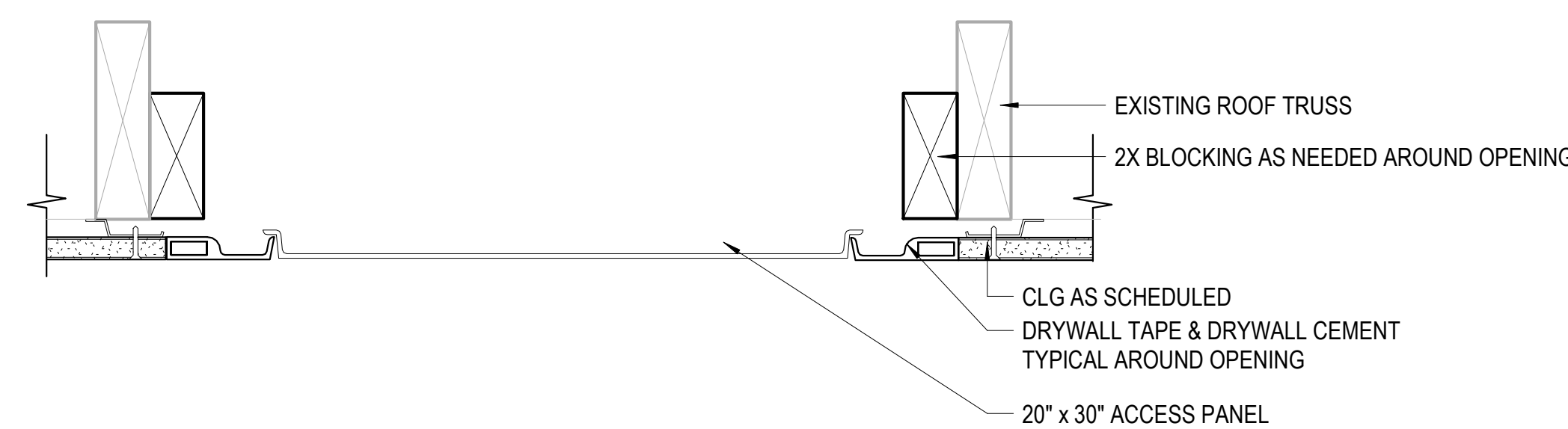
**9 'P' SERIES**  
1 1/2" = 1'-0"

TYPE	STUD SIZE	PARTITION WIDTH	FIRE RESISTANCE		ACOUSTIC REQUIREMENTS	
			RATING	TEST #	STC RATING	INSULATION
P3	3 1/2"	4 3/4"	NONE	N/A	NONE	N/A

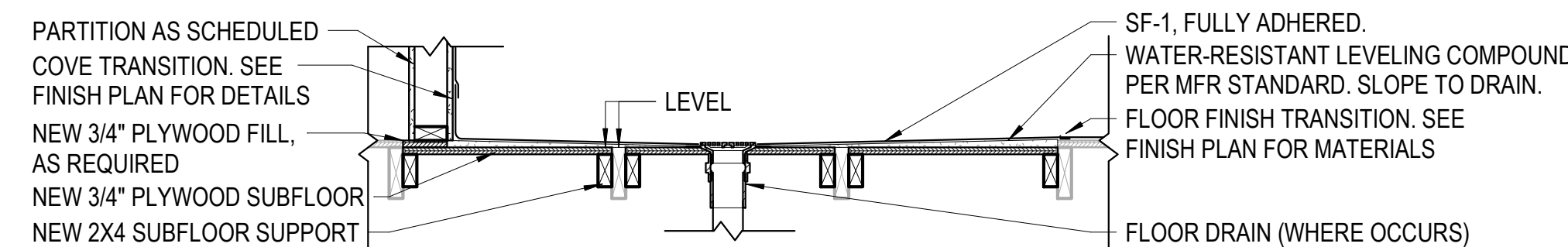


MEET REQUIREMENTS OF UL DESIGN P533:  
1 HOUR TRUSS ROOF-CEILING ASSEMBLY

**7 TYPICAL CEILING DETAIL**  
1 1/2" = 1'-0"



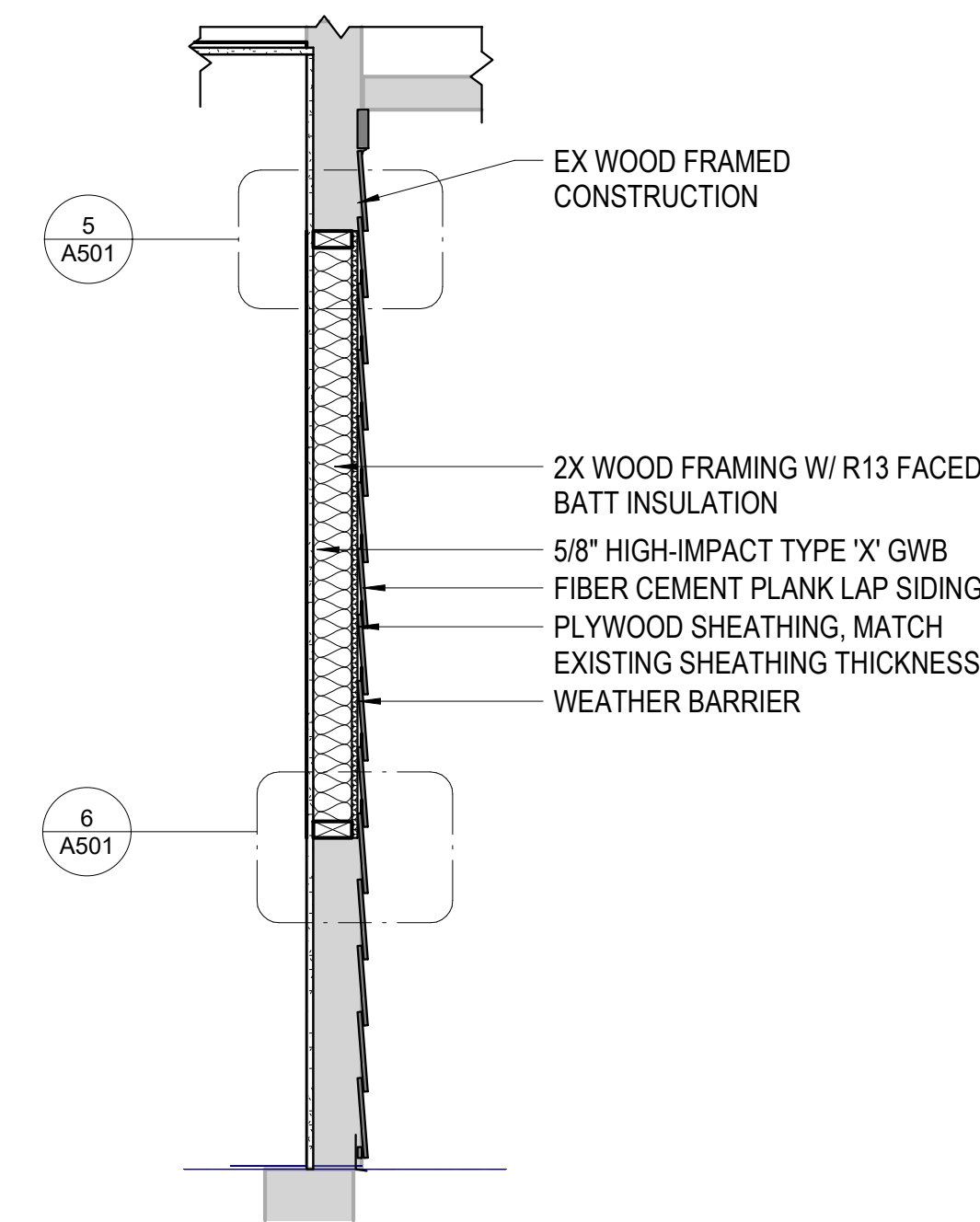
**10 ACCESS PANEL @ GYP. BD. SOFFIT**  
3" = 1'-0"



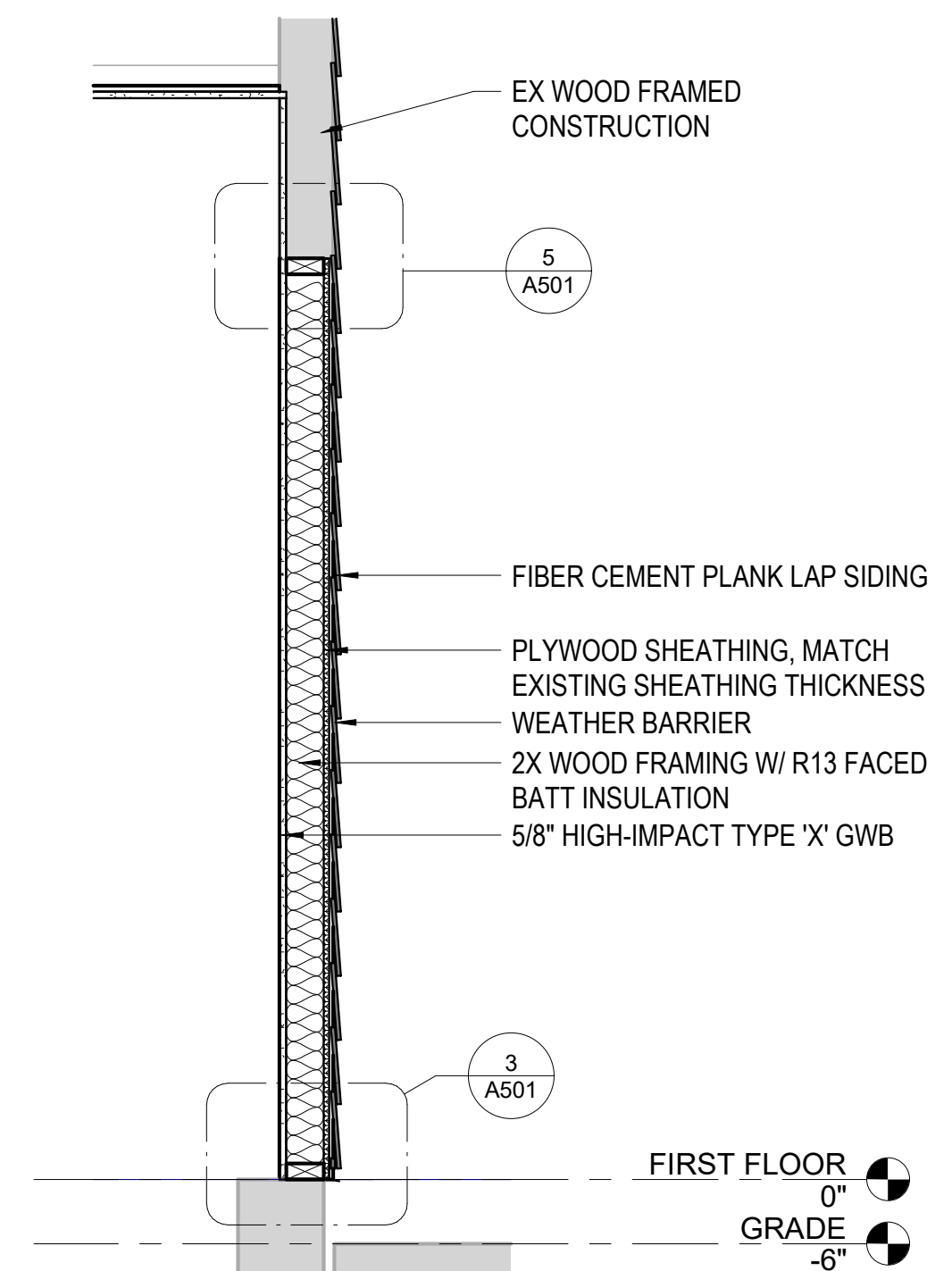
**PARTITION TERMINATION**  
SEE FINISH PLAN FOR LOCATIONS AND DETAILS

**FLOOR TRANSITION**  
SEE FINISH PLAN FOR LOCATIONS AND DETAILS

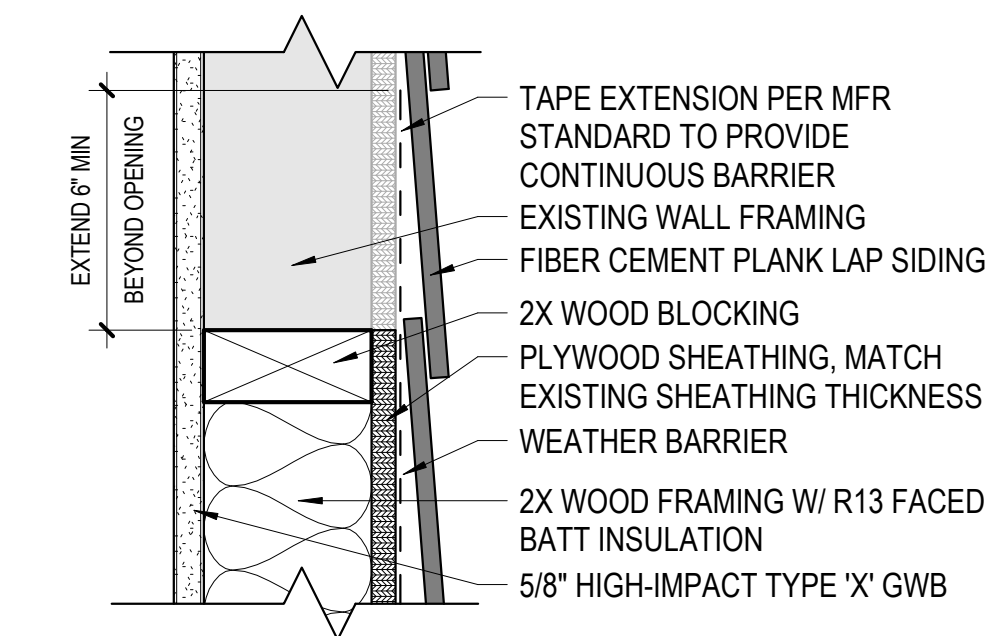
**4 TYPICAL SUBFLOOR MODIFICATION AT BATHROOM**  
3/4" = 1'-0"



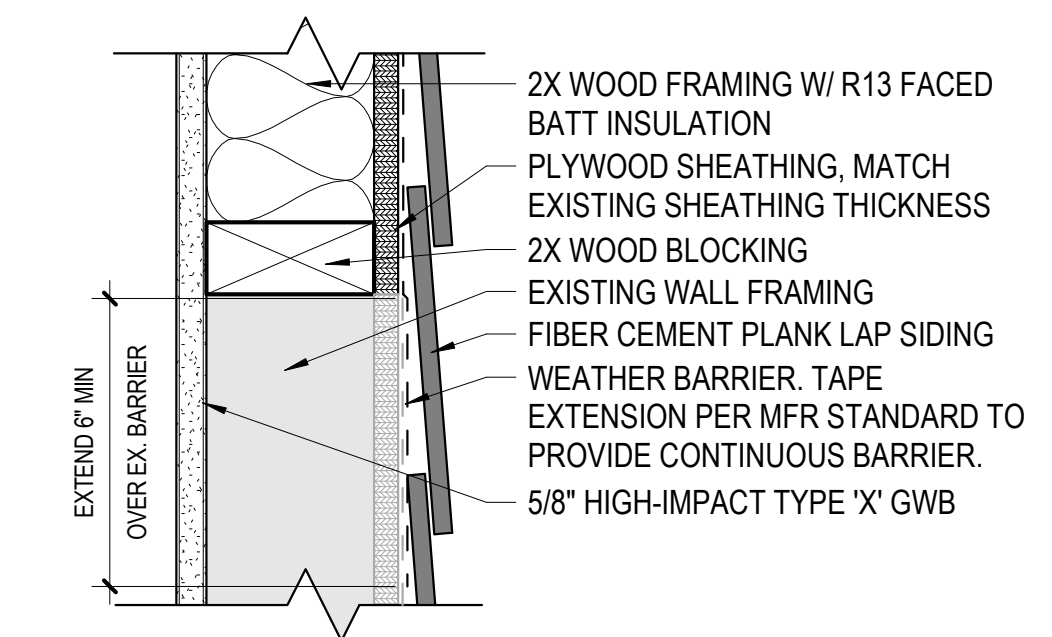
**1 WINDOW INFILL SECTION**  
3/4" = 1'-0"



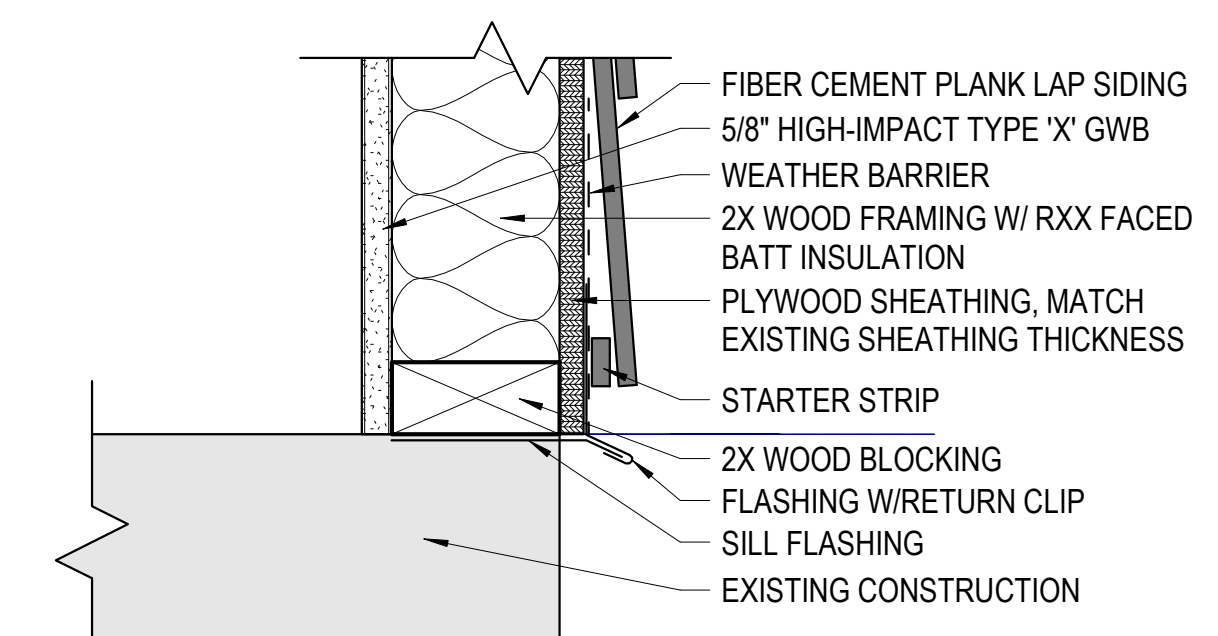
**2 DOOR INFILL SECTION**  
3/4" = 1'-0"



**5 WILL INFILL - HEAD**  
3" = 1'-0"

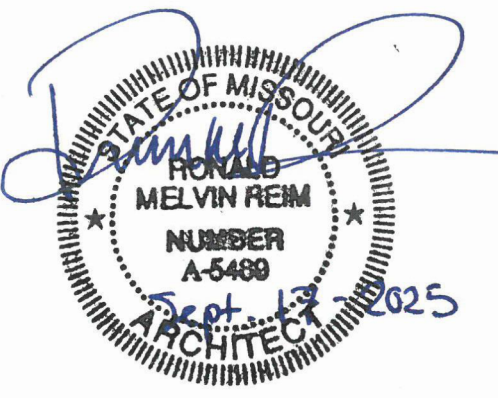


**6 WALL INFILL - WINDOW SILL**  
3" = 1'-0"



**3 WALL INFILL - DOOR SILL**  
3" = 1'-0"

**NOTE:**  
GC TO VERIFY EXACT HVAC UNIT LOCATION AND INSTALL ACCESS TRAP ACCORDINGLY. GC TO ALSO INSTALL ADDITIONAL ACCESS TRAP AS REQUIRED. GC TO NOTIFY ARCHITECTS PRIOR TO INSTALLATION.



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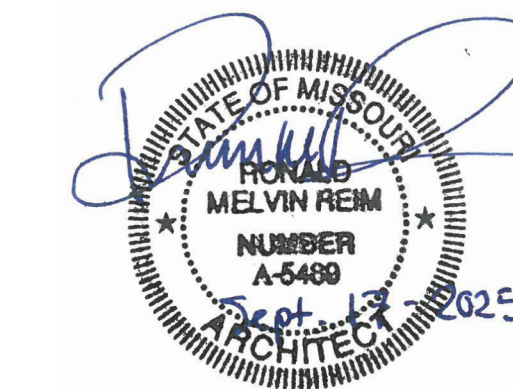
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DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**WALL SECTIONS  
AND DETAILS**

SHEET NUMBER:

**A501**

21 OF 67 SHEETS  
09/17/2025



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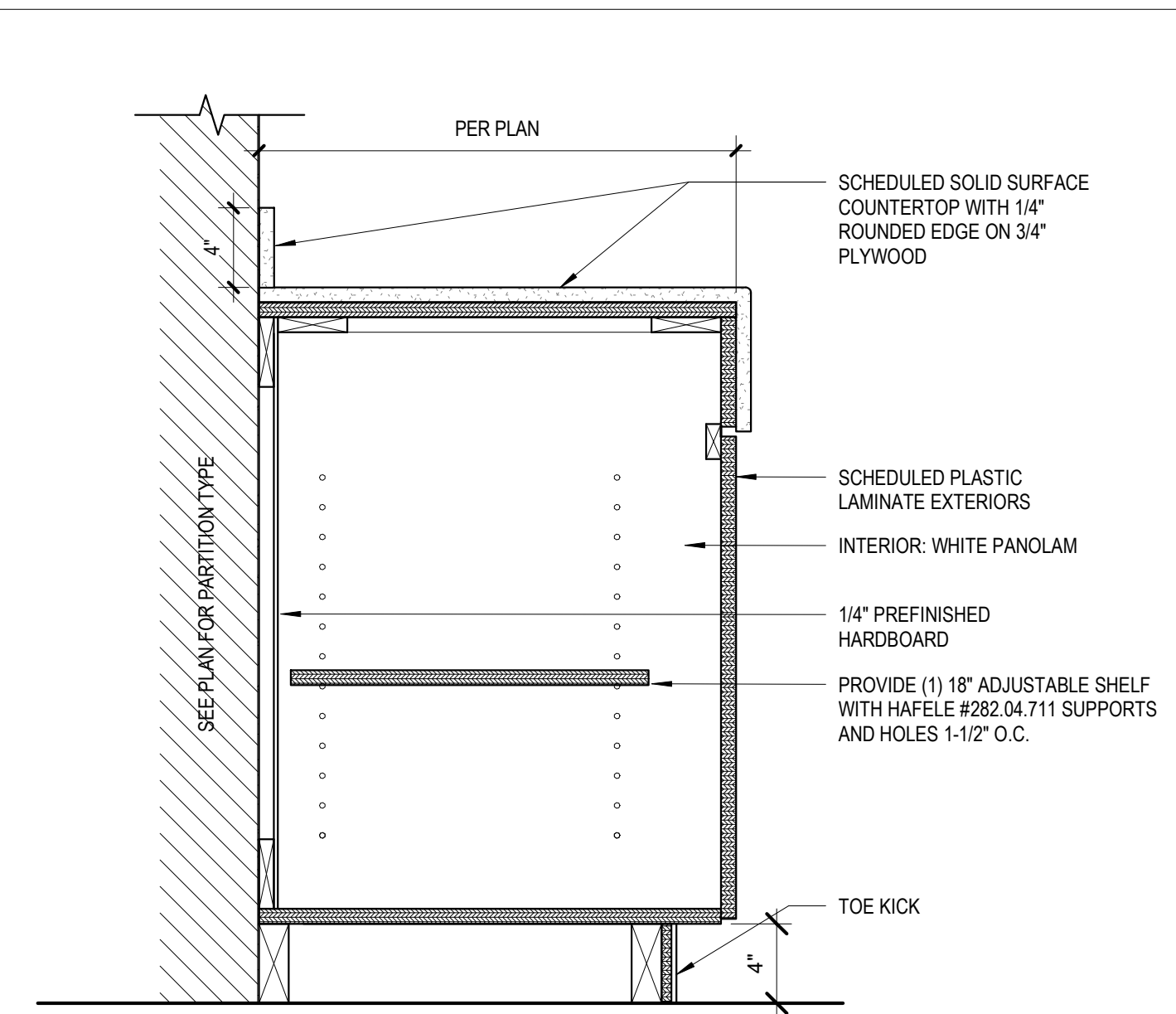
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DRAWN BY: JK  
CHECKED BY: RF  
DESIGNED BY: OCULUS

SHEET TITLE:  
**CASEWORK DETAILS**

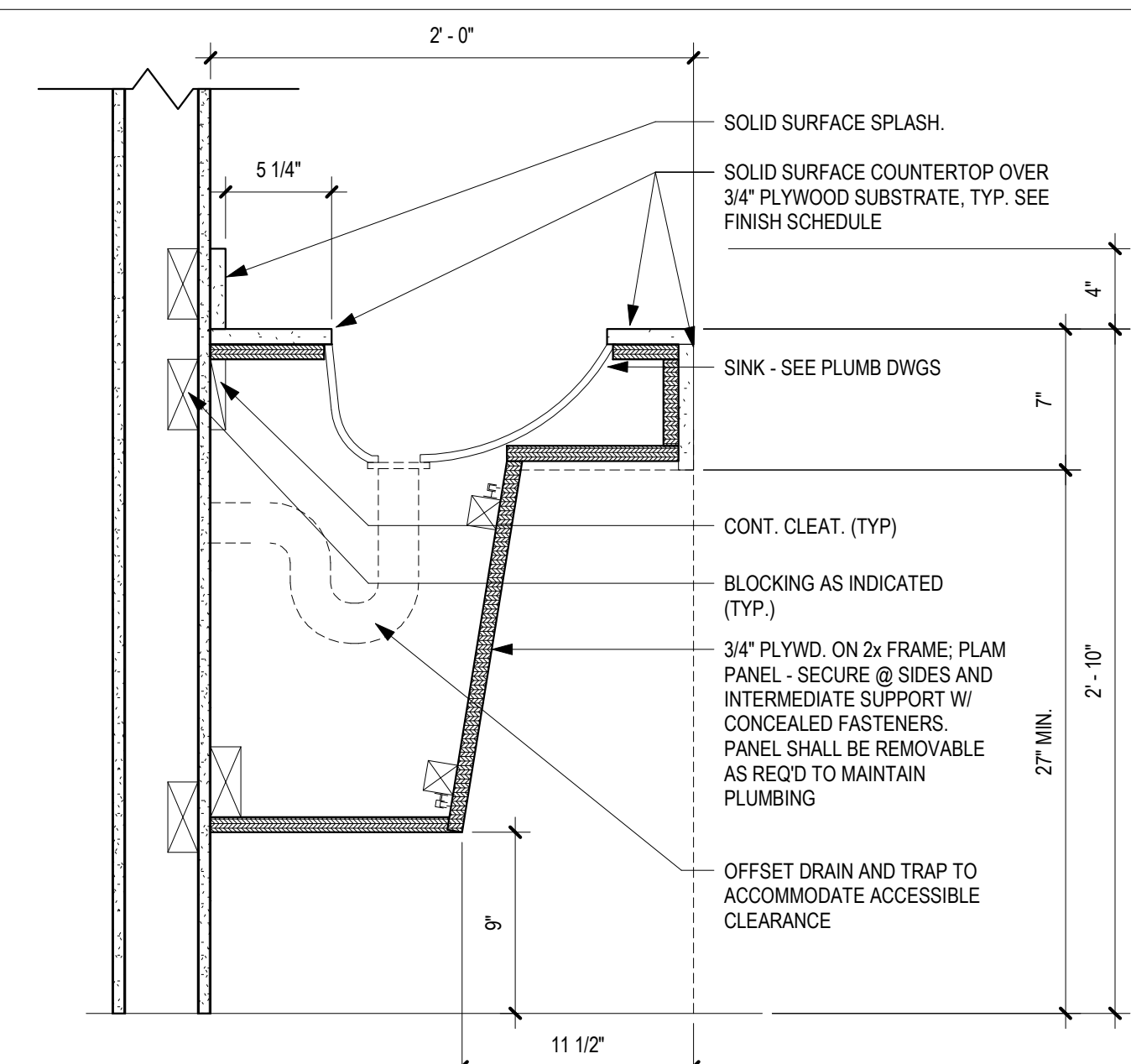
SHEET NUMBER:

**A504**

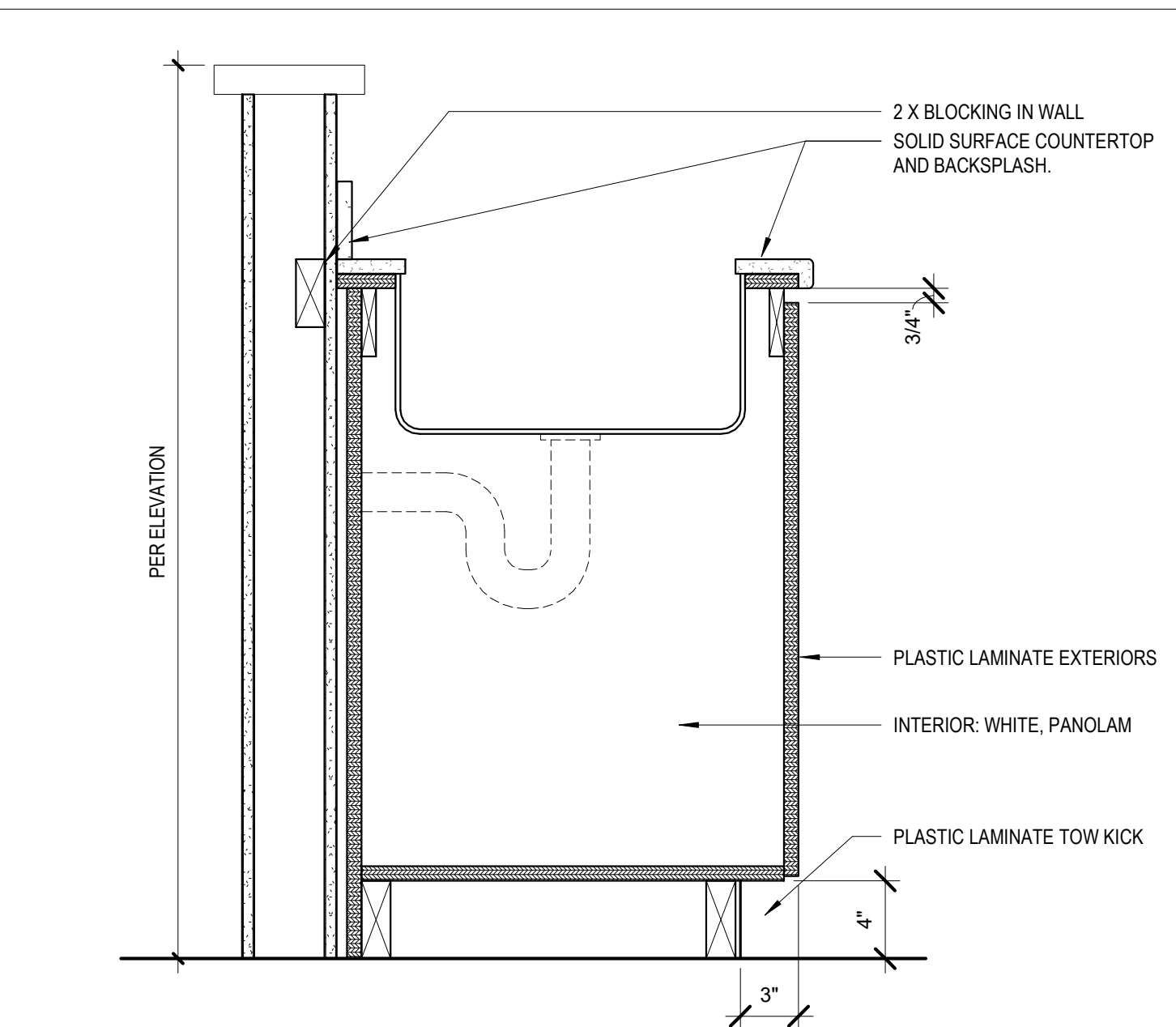
22 OF 67 SHEETS  
09/17/2025



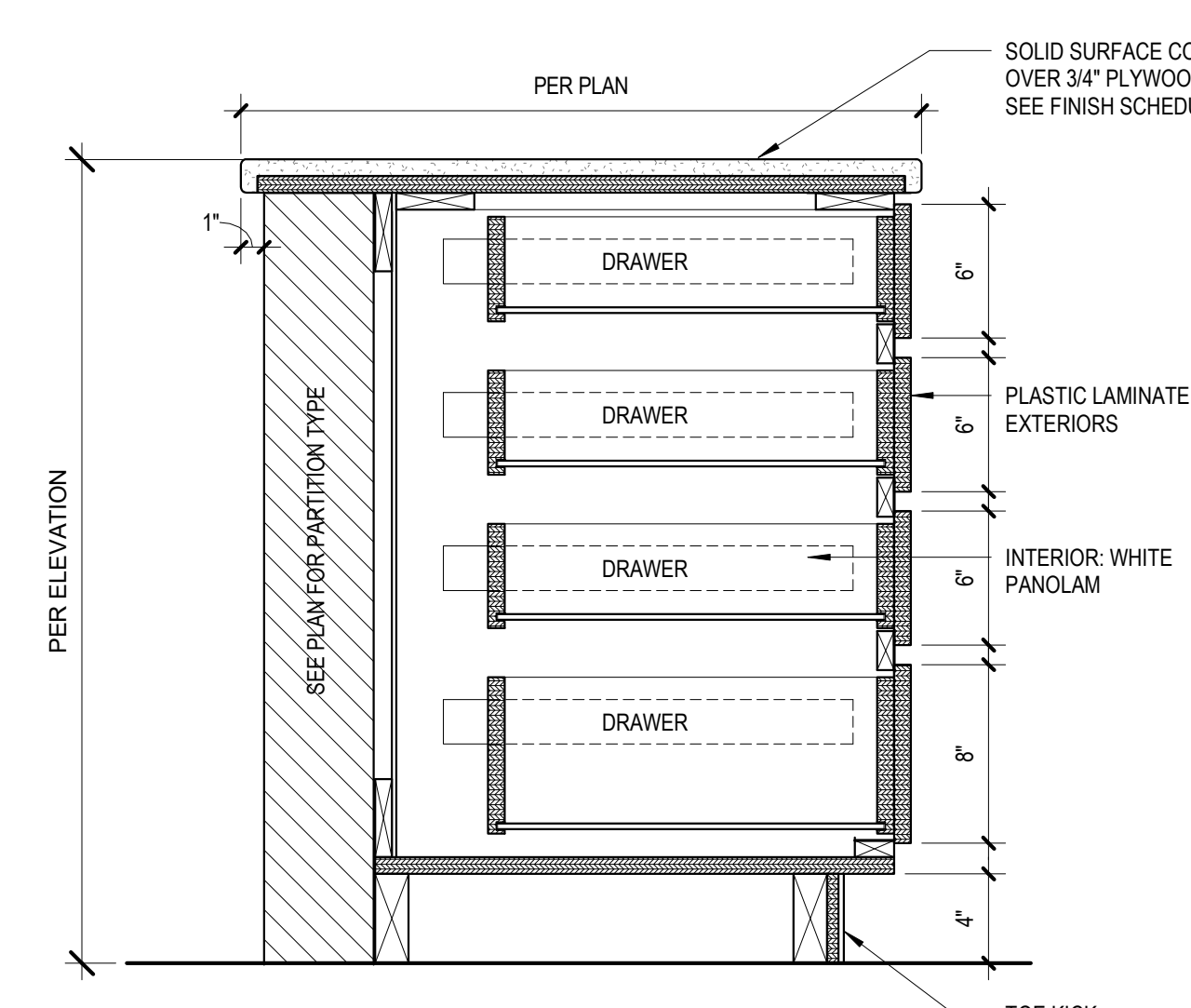
**6 BATHROOM BASE CABINET**  
1 1/2" = 1'-0"



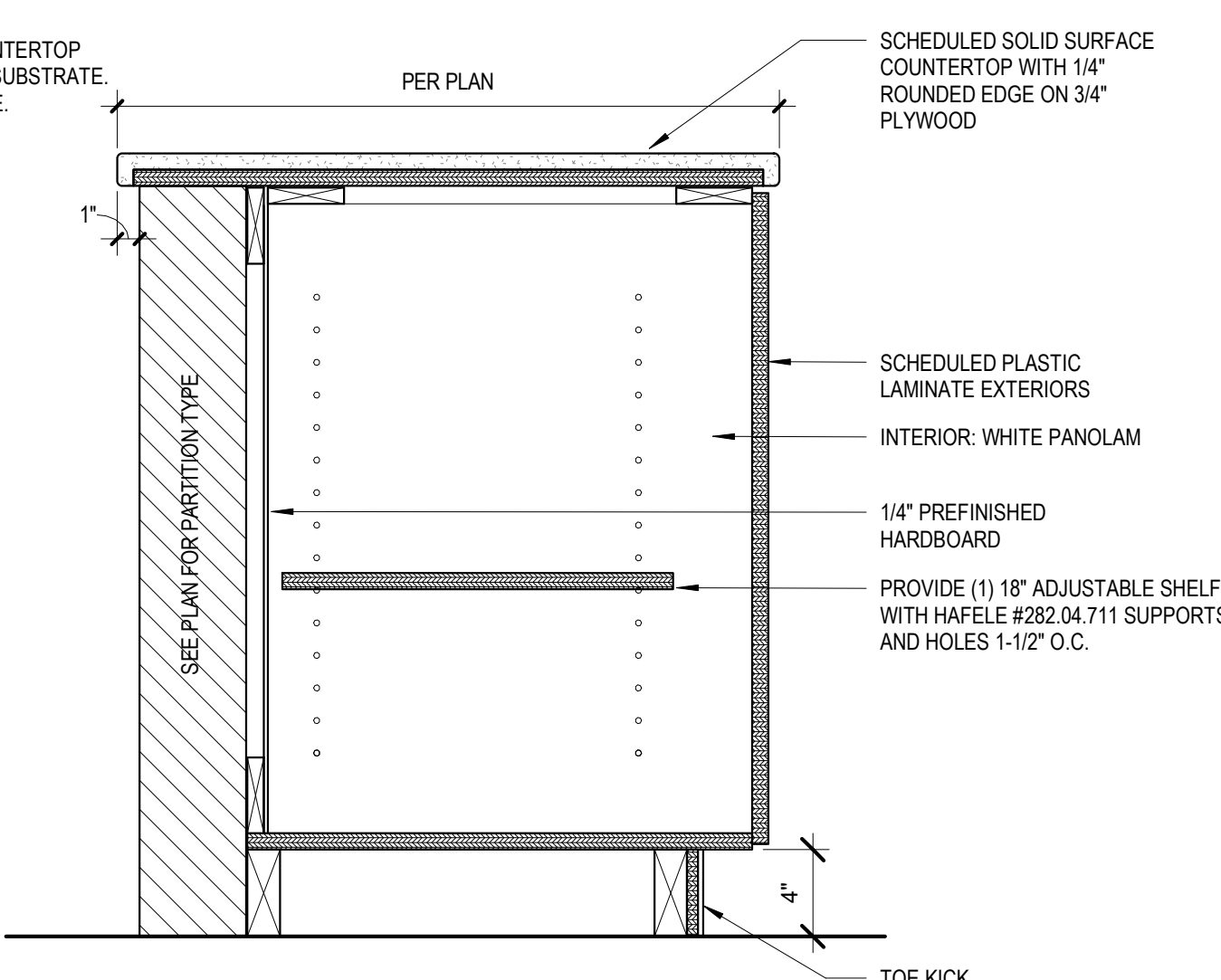
**5 BATHROOM SINK ENCLOSURE - ADA**  
1 1/2" = 1'-0"



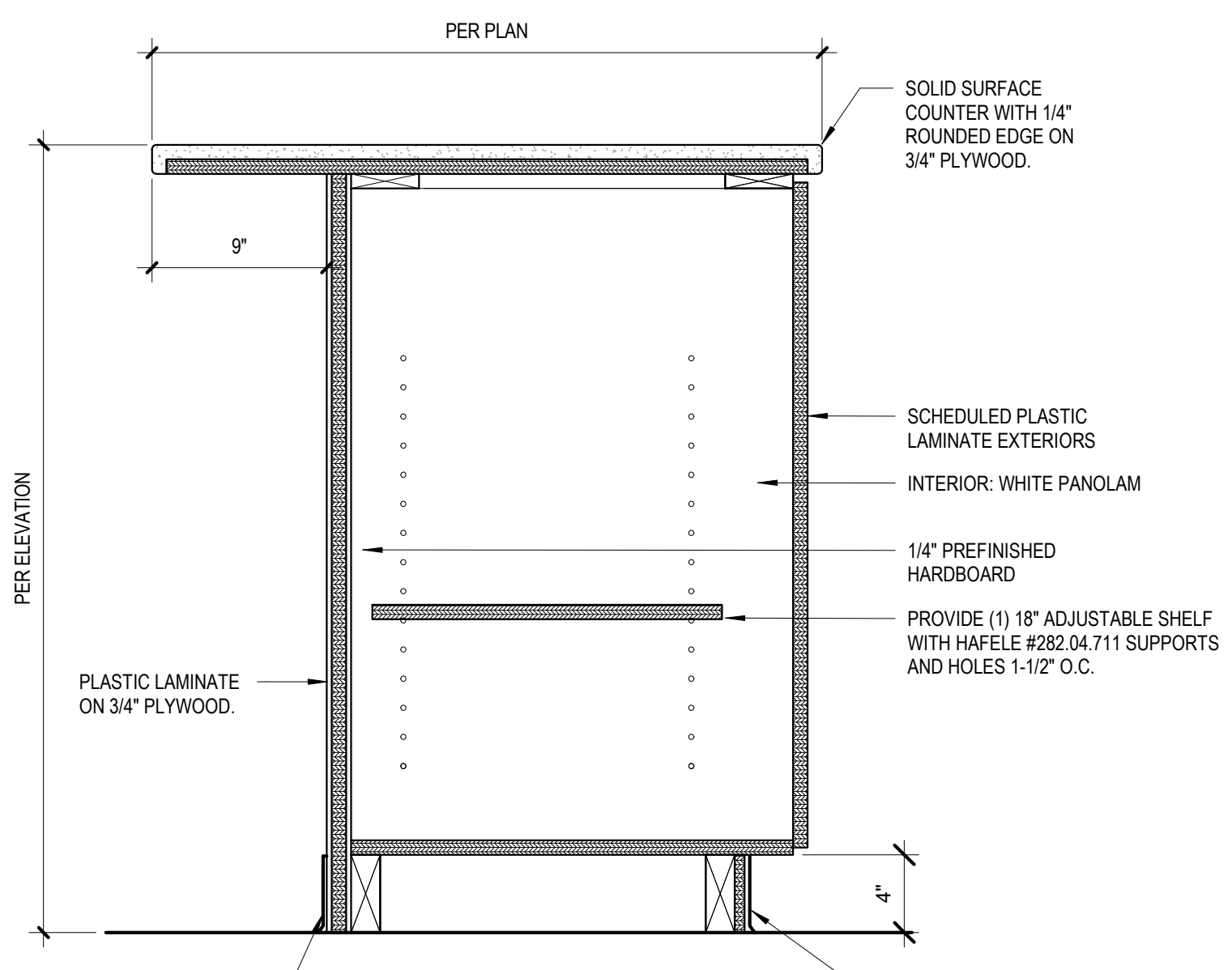
**3 SINK BASE CABINET**  
1 1/2" = 1'-0"



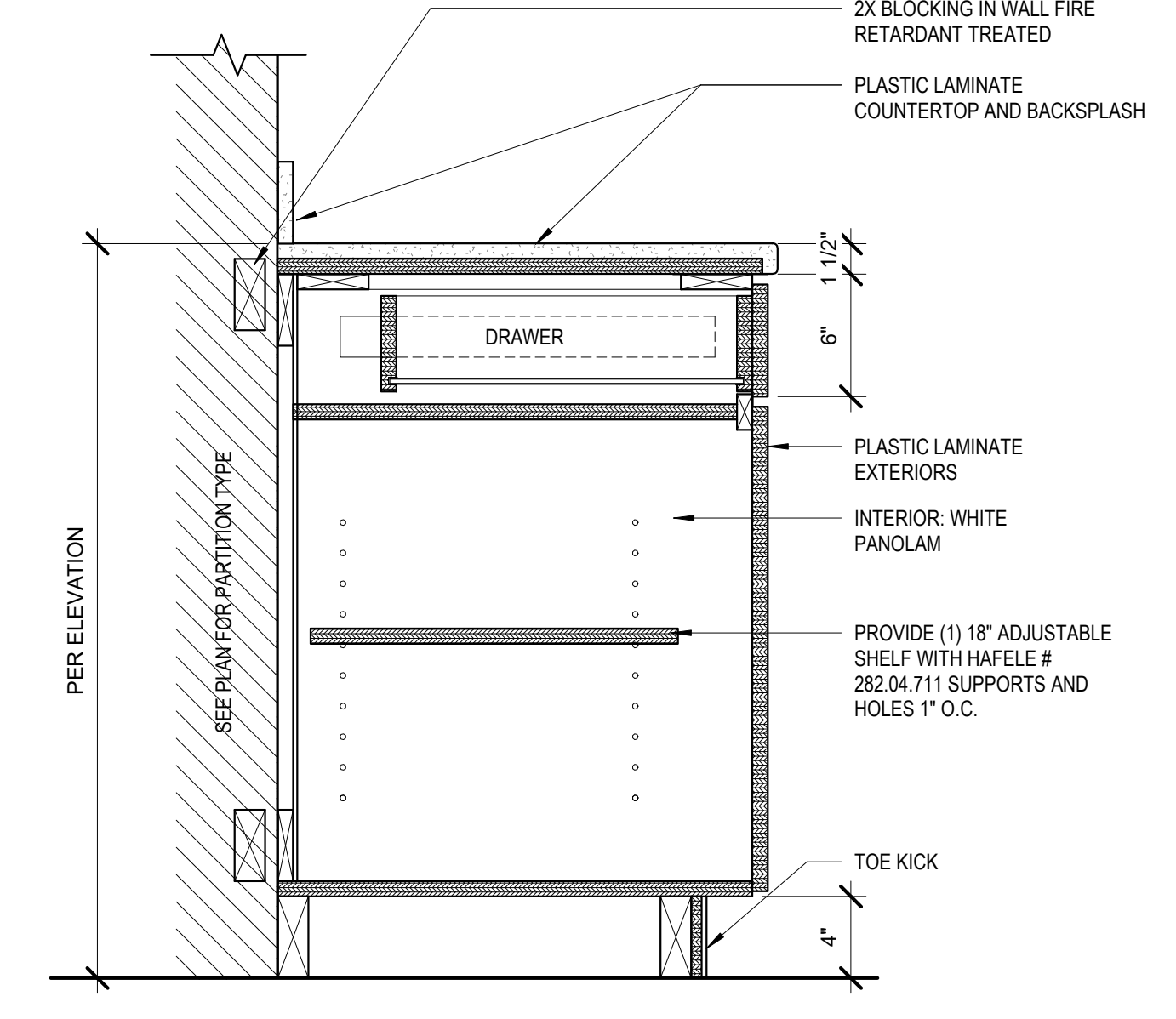
**8 NURSE STATION 4 DRAWER BASE CABINET SECTION**  
1 1/2" = 1'-0"



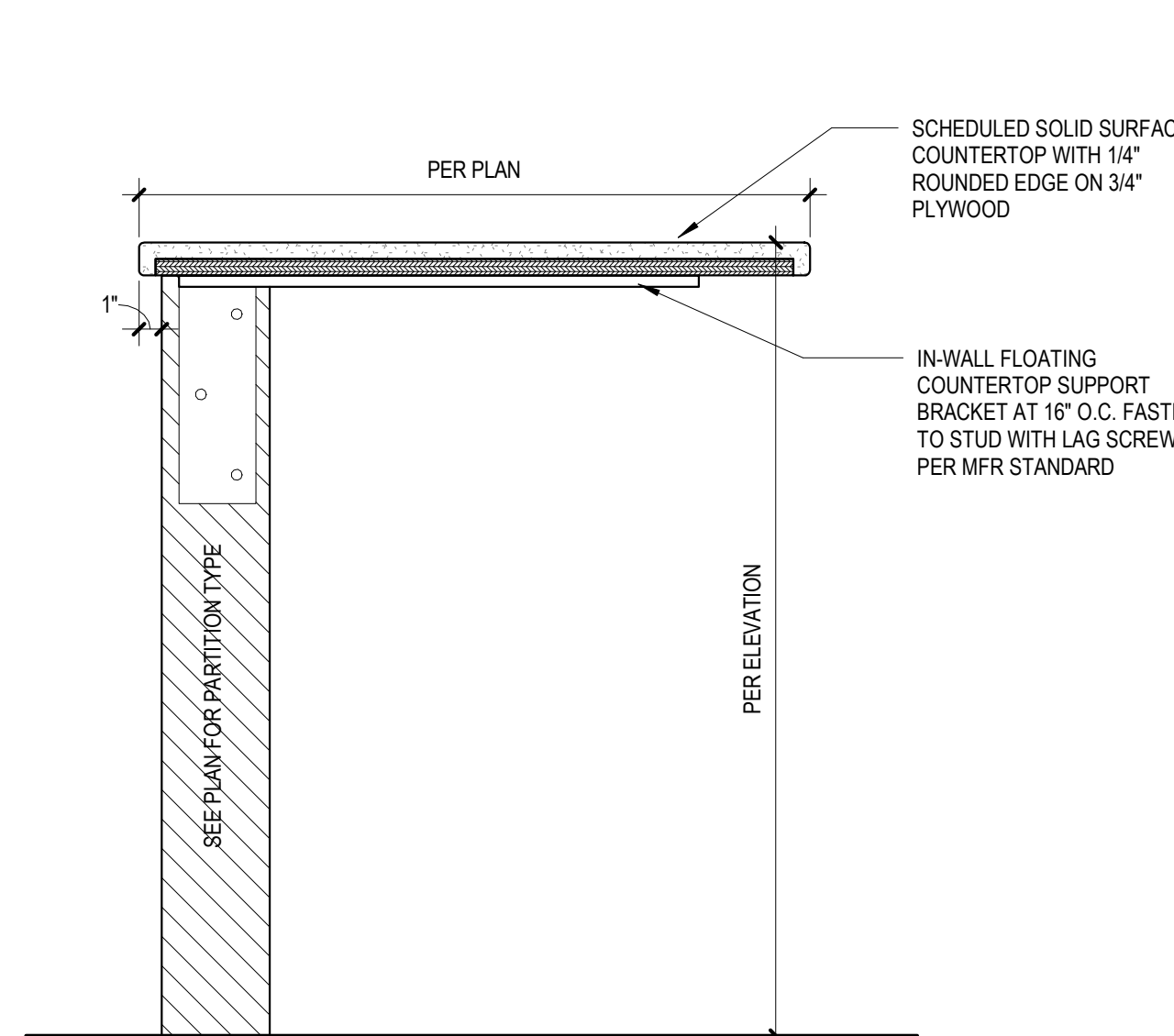
**9 NURSE STATION BASE CABINET**  
1 1/2" = 1'-0"



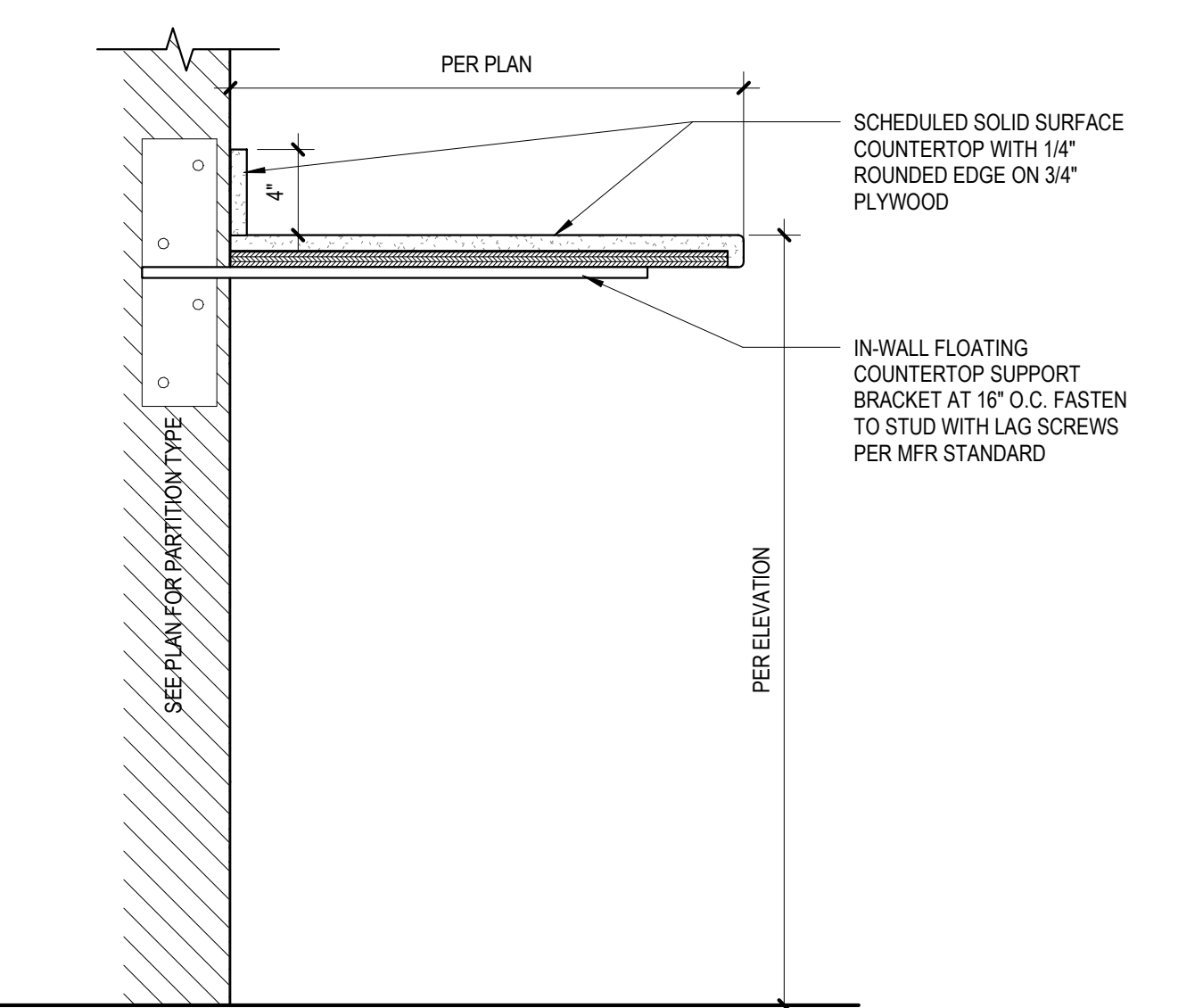
**11 SECTION AT ISLAND**  
1 1/2" = 1'-0"



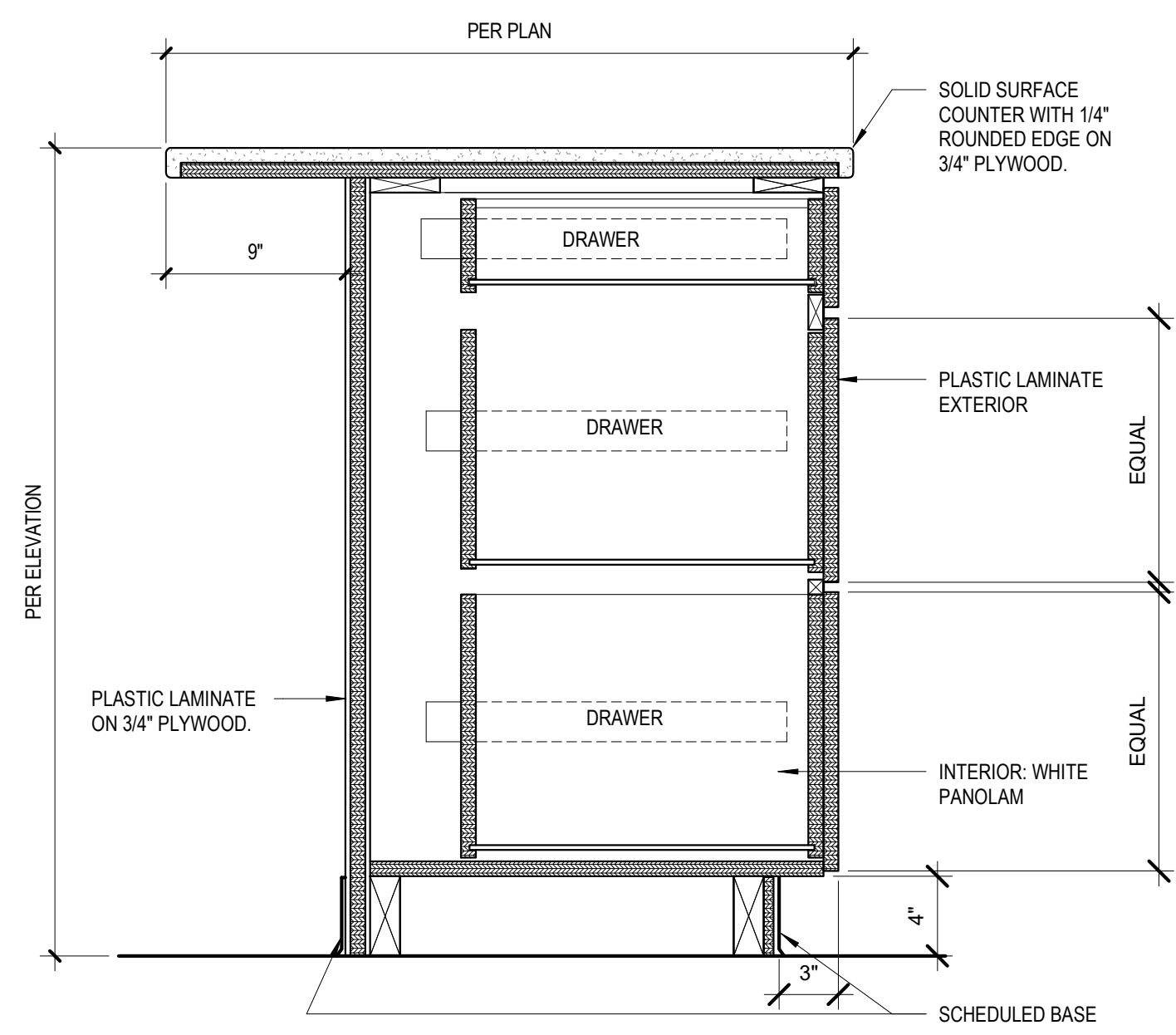
**2 1 DRAWER BASE CABINET SECTION**  
1 1/2" = 1'-0"



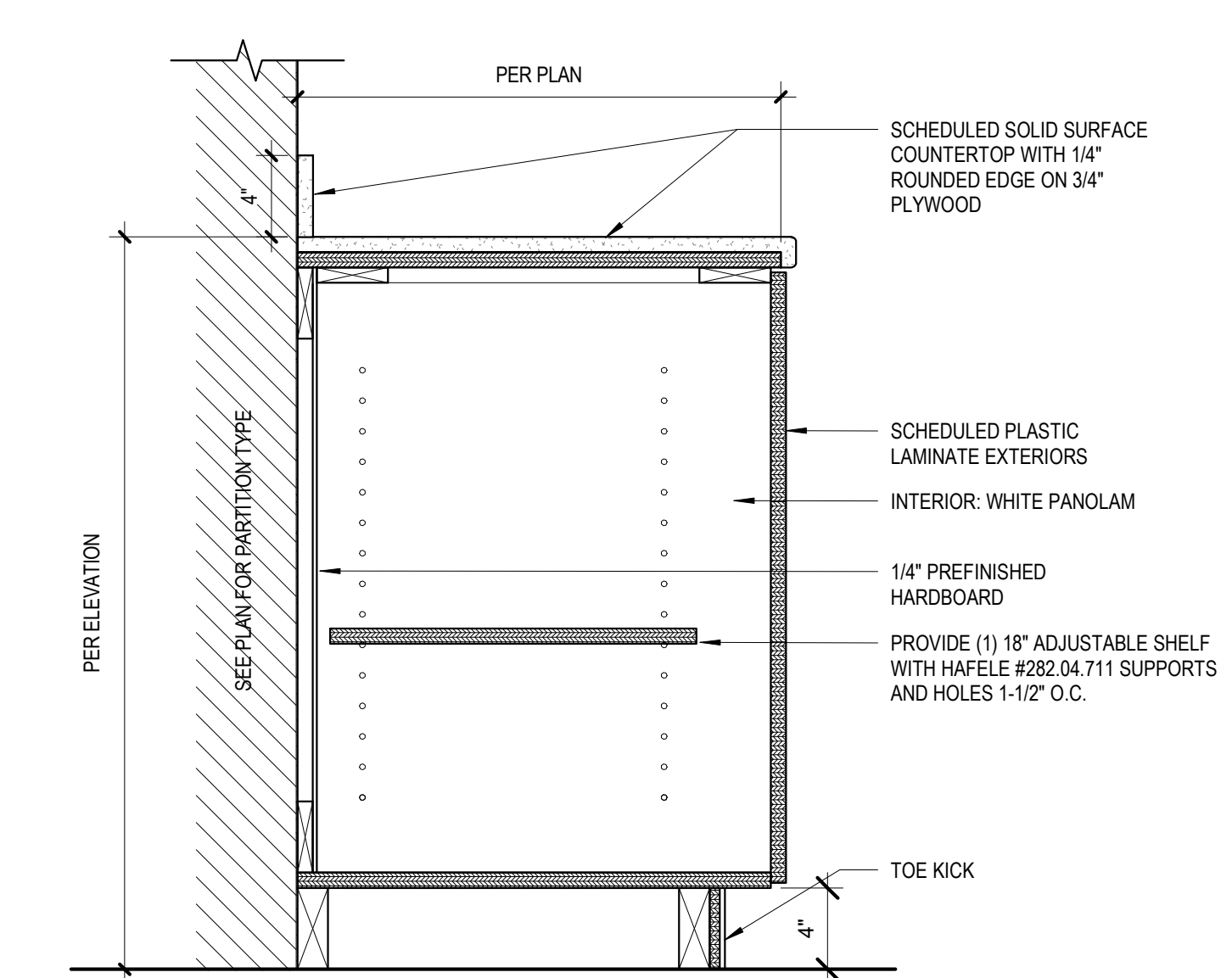
**10 NURSE STATION WORK SURFACE**  
1 1/2" = 1'-0"



**7 ADA KITCHEN WORK SURFACE**  
1 1/2" = 1'-0"



**4 SECTION AT ISLAND**  
1 1/2" = 1'-0"

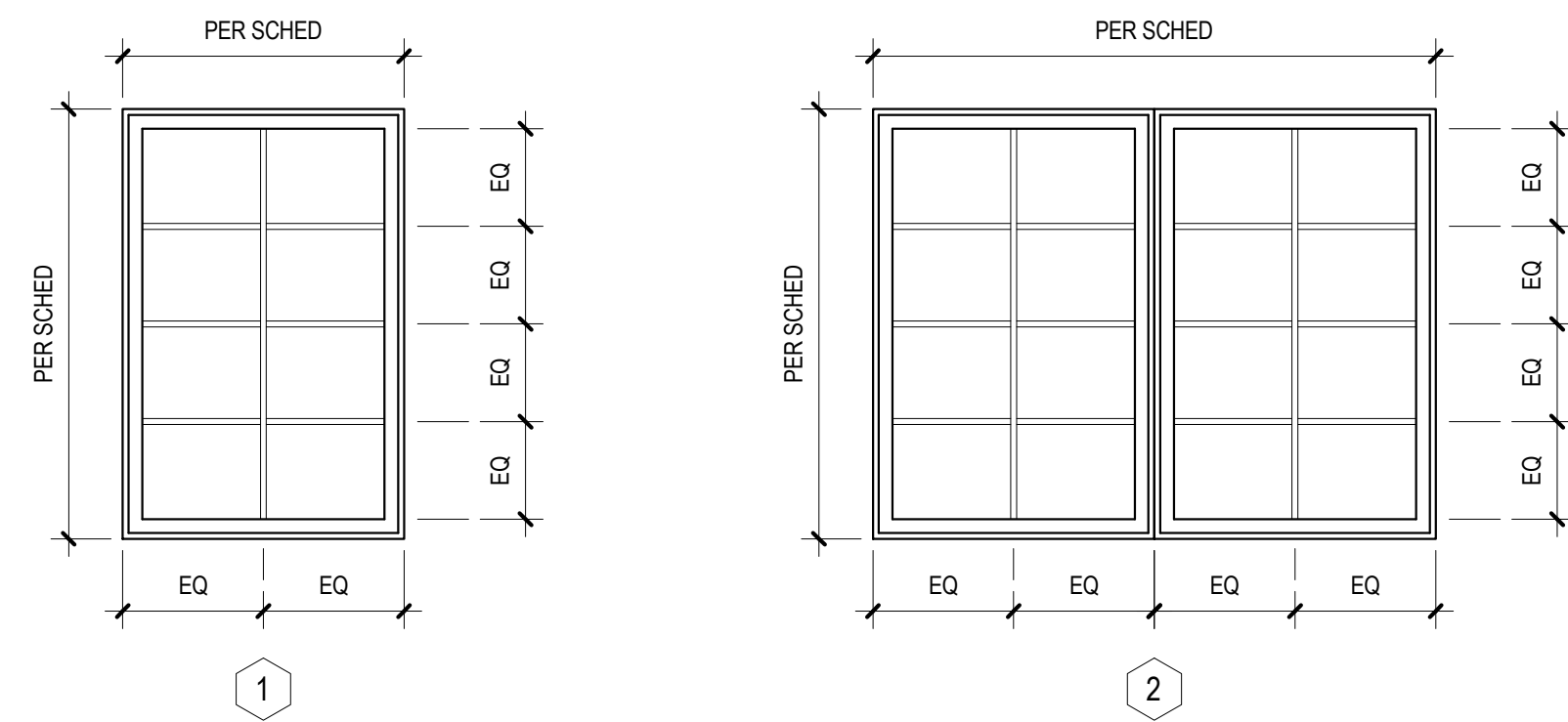


**1 BASE CABINET**  
1 1/2" = 1'-0"

## WINDOW SCHEDULE

TYPE	WIDTH	HEIGHT	DESCRIPTION	FRAME MATERIAL	GLAZING MATERIAL	REMARKS
1	3'-0"	4'-7"	SINGLE FIXED	FIBERGLASS	POLYCARBONATE	PROVIDE EGRESS FEATURES ON WINDOWS INSTALLED IN BEDROOMS WITH POSITION SWITCHES TO MONITOR TAMPER OR OPERATION.
2	6'-0"	4'-7"	FIXED SIDE-BY-SIDE	FIBERGLASS	POLYCARBONATE	

## WINDOW TYPES



## DOOR SCHEDULE

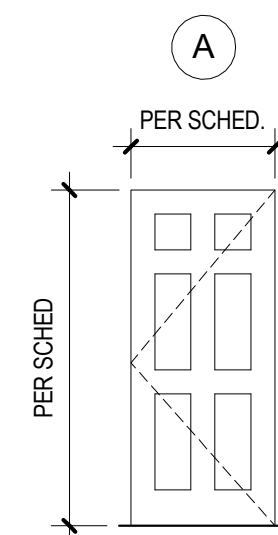
MARK	WIDTH	HEIGHT	THICKNESS	DOOR		FRAME		FIRE RATING	HARDWARE	COMMENTS
				TYPE	MATERIAL	TYPE	MATERIAL			
100A	3'-0"	6'-8"	1 3/4"	A	STL	A	HM	NONE	MAIN ENTRY	
106	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	STORAGE	
107	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	UTILITY	
108	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	20 MIN	BEDROOM	LIGATURE RESISTANT
109	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	20 MIN	BEDROOM	LIGATURE RESISTANT
110	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	20 MIN	BEDROOM	LIGATURE RESISTANT
111	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	20 MIN	BEDROOM	LIGATURE RESISTANT
112	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	BATHROOM	LIGATURE RESISTANT
113	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	BATHROOM	LIGATURE RESISTANT
115	2'-6"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	SECURE	
116	2'-6"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	SECURE	
122	3'-0"	6'-8"	1 3/4"	A	HM	A	WD-SC	NONE	STORAGE	

**DOOR ABBREVIATIONS:**  
 HM: HOLLOW METAL  
 STL: INSULATED STEEL  
 WD-SC: SOLID CORE WOOD

## DOOR NOTES

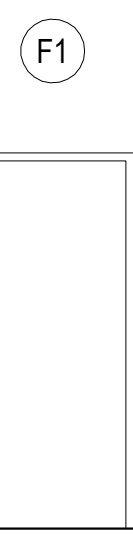
- ALL DOORS NOT LISTED ARE EXISTING DOORS TO REMAIN IN PLACE.
- REFER TO DEMOLITION PLANS FOR LOCATIONS OF ALL DEMO AND REMOVED DOORS, DOOR FRAMES AND HARDWARE, AS NOTED.
- REFER TO NEW WORK PLANS FOR LOCATIONS OF ALL NEW DOORS, DOOR FRAMES AND HARDWARE.
- SEALANT SHALL BE INSTALLED AT PERIMETER OF ALL EXTERIOR DOOR FRAMES ON BOTH THE EXTERIOR AND INTERIOR SIDE PROVIDING AN AIR, WEATHER AND WATERTIGHT SEAL. INSTALL BACKER RODS WHERE REQUIRED.
- PROVIDE MINERAL WOOL INSULATION IN ALL EXTERIOR HOLLOW METAL FRAMES.
- PAINT ALL EXTERIOR HOLLOW METAL DOORS TO MATCH PT-7. THE INTERIOR SIDE SHALL BE PAINTED PT-6. SEE SHEET A121 FOR ADDITIONAL INFORMATION.
- PAINT ALL INTERIOR DOORS AND FRAMES PT-6. SEE SHEET A121 FOR ADDITIONAL INFORMATION.
- ELECTRONIC HARDWARE LISTED IN SPECIFICATIONS ARE FOR BASIS OF DESIGN.
- THE DOOR SUBCONTRACTOR SHALL PROVIDE DOOR HARDWARE TEMPLATES TO THE DOOR MANUFACTURER FOR ALL DOORS TO BE ALARMED AND/OR CONNECTED TO CARD READERS FOR ACCESS CONTROL. TO MILL DOOR FRAMES AND SURFACES FOR LOCKS, BALANCED MAGNET SWITCHES, CRASH BARS, AND ALL OTHER HARDWARE.

## DOOR TYPES



**DOOR TYPE:** SINGLE FLUSH SWING, 6 PANEL  
**MATERIAL:** PER SCHEDULE  
**GLAZING:** NONE  
**RATING:** PER SCHEDULE

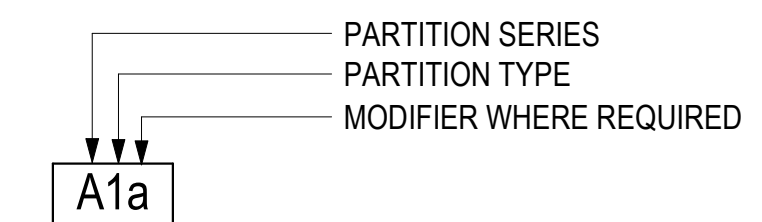
## FRAME TYPES



**FRAME TYPE:** 2" WELDED H.M. FRAME  
**FINISH:** PAINT TO MATCH DOOR  
**RATING:** PER SCHEDULE

## PARTITION NOTES

- SEAL ALL OPENINGS, GAPS, PENETRATIONS AND JOINTS IN ASSEMBLIES TYPES AS FOLLOW:
  - FIRE BARRIERS: SEAL IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED FOR THROUGH PENETRATION FIRESTOP SYSTEMS AND FIRE RESISTIVE JOINTS SYSTEMS.
  - OTHER LOCATIONS: SEAL AS INDICATED AND REQUIRED ELSEWHERE BY THE CONTRACT DOCUMENTS. SOUND SEAL ALL MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION PENETRATIONS OF SOUND PARTITIONS TO MEET THE REQUIREMENTS OF THE ROOM.
- SECTION TYPE REFERENCES APPLY TO THIS SHEET, UNLESS OTHERWISE NOTED.
- FIRE RATING TEST NUMBERS ARE FOR UNDERWRITERS' LABORATORIES (UL) ASSEMBLIES, UNLESS OTHERWISE NOTED
- SEE LIFE SAFETY PLAN FOR LOCATIONS AND RATINGS OF FIRE-RATED BARRIERS. REFERENCED TEST NUMBERS APPLY ONLY TO PARTITIONS INDICATED TO BE RATED.
- STC RATING APPLIES WHERE ASSEMBLY TAG QUALIFIER "S" IS INDICATED. PROVIDED SAB OF THICKNESS INDICATED ON SCHEDULE WHERE ASSEMBLY TAG QUALIFIER "S" IS INDICATED.
- ALL STUDS TO BE AT 16" O.C.
- PROVIDE STENCILED IDENTIFICATION OF RATED BARRIERS



## HARDWARE NARRATIVE

THE HARDWARE NARRATIVE INTENDS TO ILLUSTRATE THE FUNCTIONAL USE OF EACH DOOR AND ITS ASSOCIATED HARDWARE. IN ADDITION TO FUNCTION, EXAMPLE HARDWARE IS PROVIDED TO FURTHER DETAIL THE REQUIREMENTS OF THE DOOR. COORDINATE ADDITIONAL REQUIREMENTS WITH SPECIFICATIONS AND THE DOOR SCHEDULE. ALL HARDWARE PROVIDED TO CONFORM WITH ANTI-LIGATURE REQUIREMENTS.

### MAIN ENTRY

THIS DOOR WILL SERVE AS THE PRIMARY ENTRY FOR STAFF INTO THE BUILDING. IT WILL BE MONITORED FOR ACCESS AND MONITORING OF USE. THE DOOR WILL PROVIDE FREE EGRESS TO THE EXTERIOR.

- EXAMPLE HARDWARE:**
- 1 1/2 PAIR BUTT HINGES
  - PUSHBUTTON COMBINATION LOCKSET
  - CLOSER WITH INTERNAL STOP
  - GASKETING
  - DOOR SWEEP
  - DOOR POSITION SENSOR
  - WIRING HARNESS AND DIAGRAMS
  - POWER SUPPLY

### STORAGE

THIS DOOR PROVIDES ACCESS TO UNSECURED STORAGE AREAS.

- EXAMPLE HARDWARE:**
- 1 1/2 PAIR BUTT HINGES
  - PASSAGE LOCKSET
  - WALL STOP

### UTILITY

THIS DOOR PROVIDES ACCESS TO THE FACILITY LAUNDRY AND HOUSEKEEPING ROOM.

- EXAMPLE HARDWARE:**
- 1 1/2 PAIR BUTT HINGES
  - STOREROOM LOCKSET
  - CLOSER WITH HOLD OPEN
  - WALL STOP

### BEDROOM

THIS DOOR PROVIDES ACCESS TO AN INDIVIDUAL'S BEDROOM. THIS DOOR MUST BE QUICKLY REMOVABLE FROM THE PUSH-SIDE OF THE DOOR IN THE EVENT THAT THE DOOR IS WEDGED SHUT. THIS DOOR MAY BE MONITORED WHEN OPENED.

- EXAMPLE HARDWARE:**
- 1 1/2 PAIR INSTITUTIONAL 5-KNUCKLE OVERLAY HINGE
  - LIGATURE RESISTANT PRIVACY LOCKSET
  - CLOSER
  - WALL STOP
  - ACOUSTICAL GASKETING
  - ACOUSTICAL SWEEP
  - DOOR POSITION SENSOR
  - POWER SUPPLY
  - WIRING HARNESS AND DIAGRAM

### SECURE

THIS DOOR PROVIDES ACCESS TO SECURED STORAGE AREAS.

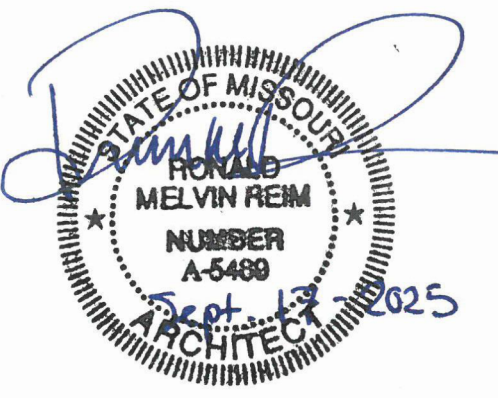
- EXAMPLE HARDWARE:**
- 1 1/2 PAIR BUTT HINGES
  - STOREROOM LOCKSET
  - CLOSER
  - WALL STOP

### BATHROOM

THIS DOOR PROVIDES ACCESS TO RESIDENT BATHROOMS. THIS DOOR MUST BE QUICKLY REMOVABLE FROM THE PUSH-SIDE OF THE DOOR IN THE EVENT THAT THE DOOR IS WEDGED SHUT.

- EXAMPLE HARDWARE:**
- 1 1/2 PAIR INSTITUTIONAL 5-KNUCKLE OVERLAY HINGE
  - LIGATURE RESISTANT PRIVACY LOCKSET
  - WALL STOP

STATE OF MISSOURI  
 MIKE KEHOE,  
 GOVERNOR



PROFESSIONAL SEAL



ONE SOUTH MEMORIAL DRIVE  
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OFFICE OF  
 ADMINISTRATION  
 DIVISION OF FACILITIES  
 MANAGEMENT,  
 DESIGN AND  
 CONSTRUCTION

DEPARTMENT OF MENTAL  
 HEALTH

BELLEFONTAINE  
 HABILITATION CENTER

BUILDING 1802  
 10695 BELLEFONTAINE RD  
 ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
 SITE # 7356  
 ASSET # 6517356071

REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
 DRAWN BY: JK  
 CHECKED BY: RF  
 DESIGNED BY: OCULUS

SHEET TITLE:  
**DOORS AND  
 WINDOWS**

SHEET NUMBER:

**A601**

23 OF 67 SHEETS  
 09/17/2025

## FIRE PROTECTION SYMBOLS & ABBREVIATIONS

	AIR VENT (AUTOMATIC)
	CHECK VALVE
	ELECTRONIC SUPERVISED INDICATING VALVE
	FLOW SWITCH
	FLOOR CONTROL VALVE ASSEMBLY
	BACKFLOW PREVENTER
	TEST AND DRAIN VALVE
	FIRE DEPARTMENT VALVE (FDV)
	COUPLING
	TEE
	ELBOW
	REDUCER
	SPRINKLER DRAIN LINE
	SPRINKLER WET PIPE
	SPRINKLER DRY PIPE
	SPRINKLER SUPPLY PIPE
	PIPING CAP
	BRANCH CONNECTION, TOP
	ELBOW TURNED DOWN
	ELBOW TURNED UP
	WET SYSTEM RISER
	DRY SYSTEM RISER
	FIRE DEPARTMENT CONNECTION-WALL MOUNT
	FIRE HYDRANT
	UNDERGROUND FIRE SERVICE
	PIPE BREAK
AP	ACCESS PANEL
AC	AIR COMPRESSOR
AS	AUTOMATIC SPRINKLERS
BFP	BACKFLOW PREVENTER
BTC	BRANCH TO CONNECTION
CI	CAST IRON
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
FEC	FIRE EXTINGUISHER CABINET
NIC	NOT IN CONTRACT
PIV	POST INDICATOR VALVE
TS	TAMPER SWITCH

## DRAWING REFERENCES

	<b>TITLE</b>	PLAN DETAIL REFERENCE TITLE
	<b>SCALE</b>	KEYED NOTE DESIGNATION
	True North	NORTH ARROW
	ID	PLAN MARK EQUIPMENT DESIGNATION REFER TO MEP SCHEDULE FOR CIRCUITING AND DEVICE REQUIREMENTS AND FLOOR PLANS FOR LOCATIONS
	SIM	EQUIPMENT NUMBER PLAN MARK ENLARGED PLAN REFERENCE SHEET NUMBER
	SECTION	
		INTERFACE, EXISTING TO NEW
		EXTENT OF DEMOLITION
	MATCHLINE	
	REVISION TAG	

	EXISTING TO REMAIN OR NEW WORK BY OTHERS (LIGHT, SOLID LINE)
	NEW WORK BY THIS CONTRACTOR (DARK, SOLID LINE)
	EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK, DASHED LINE, DEMOLITION PLANS)

## FIRE PROTECTION DEMOLITION NOTES

- ALTHOUGH ALL PIPING MAY NOT BE INDICATED ON THE FLOOR PLANS, IT IS THE INTENT THAT THE ENTIRE EXISTING SPRINKLER SYSTEM WITHIN THE SCOPE OF WORK IS TO BE DEMOLISHED BACK TO THE FIRE SERVICE ENTRANCE STUB UP FROM CRAWL SPACE. ALL PIPING HANGERS AND SUPPORTS SHALL BE REMOVED ALONG WITH THE PIPING.
- PROTECT PIPING WHICH IS NOT TO BE REMOVED FROM DAMAGE, DIRT AND DEBRIS.
- ALL FIRE EQUIPMENT AND MATERIALS NOT CLAIMED BY THE OWNER SHALL BE REMOVED FROM THE PREMISES AND PROPERLY DISPOSED OF BY THE DEMOLITION CONTRACTOR.
- THE CONTRACTOR SHALL PLUG OR CAP ALL PIPING OUTLETS NOT INTENDED FOR REUSE.
- CEILING REMOVAL, STORAGE, AND REPLACEMENT WILL BE MADE BY THE CONTRACTOR AND IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO REPAIR THE EXISTING SURFACES TO REMAIN WHERE THEIR WORK HAS BEEN COMPLETED. REPAIR INCLUDES BUT SHALL NOT BE LIMITED TO, ANY EXISTING WALL, CEILING, OR FLOOR THAT IS SCHEDULED TO REMAIN. REPAIR, PAINTING, AND PATCHING SHALL BE COMPLETED BY AN APPROPRIATE CONTRACTOR QUALIFIED FOR THIS TYPE OF WORK.
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION OPERATIONS, THE CONTRACTOR WILL NOTIFY BUILDING OWNER OF THE HAZARDOUS MATERIAL.
- ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH THESE DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH PROJECT'S PHASING SCHEDULE PRIOR TO ANY WORK

## FIRE STOPPING NOTES

- MATERIALS: USE ONLY FIRE STOP PRODUCTS THAT HAVE BEEN UL 1479, ASTM E-814, OR UL 2079 TESTED FOR SPECIFIC FIRE RATE CONSTRUCTION CONDITIONS CONFORMING TO CONSTRUCTION ASSEMBLY TYPE, PENETRATING ITEM TYPE, ANNULAR SPACE REQUIREMENTS, AND FIRE RATING INVOLVED FOR EACH SEPARATE INSTANCE.
- FOR SINGLE PENETRATIONS: A READY-TO-USE LATEX BASED INTUMESCENT SEALANT IS REQUIRED TO MAINTAIN THE FIRE RATING OF THE ASSEMBLY PENETRATED. THE SEALANT MUST HAVE UL LISTING FOR BOTH SLEEVED AND NON-SLEEVED APPLICATIONS.
- FOR LARGE OPENINGS: CONTAINING MULTIPLE PENETRATIONS (2 OR MORE), A READY-TO-USE FOAM INTUMESCENT BLOCK MATERIAL MUST BE ABLE TO BE REMOVED AND REINSTALLED WITHOUT COMPROMISING FIRE PROTECTION INTEGRITY. COMPLY WITH MANUFACTURER'S RECOMMENDED PROCEDURES AND PRECAUTIONS. DO NOT USE DAMAGED OR EXPIRED MATERIALS.
- MANUFACTURERS: JOHN'S MANVILLE INTERNATIONAL, 3M BRAND, CSD SEALING SYSTEMS, HILTI, CIBA-GEIGY, HEAVY-DUTY/NEALSON. REFER TO DIVISION 7 FOR FURTHER REQUIREMENTS.

## FIRE PROTECTION GENERAL NOTES

- ALL WORK SHALL BE PERFORMED, INSTALLED, AND TESTED IN COMPLIANCE WITH THE CODES AND AMENDMENTS ADOPTED BY THE INSPECTION AUTHORITY. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THIS PROJECT:
  - 2016 - INTERNATIONAL FIRE CODE
  - 2018 - INTERNATIONAL BUILDING CODE
  - OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
  - NATIONAL FIRE PROTECTION ASSOCIATION EDITIONS LISTED IN THE IBC OR MOST CURRENT EDITIONS OF THE FOLLOWING
    - 2016 NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- THE WORK CONSISTS OF FURNISHING ALL LABOR AND MATERIALS NECESSARY TO INSTALL, COMPLETE AND READY CONTINUOUS OPERATION, THE FIRE PROTECTION SYSTEMS, APPARATUS AND EQUIPMENT FOR THIS PROJECT, AS SHOWN ON THE DRAWINGS, PLUS AS REQUIRED BY NFPA 13 AND THE AUTHORITY HAVING JURISDICTION (AHJ).
- THE CONTRACTOR SHALL INCLUDE IN THEIR BID, A FULLY CODE COMPLIANT AND COORDINATED SPRINKLER SYSTEM. SPRINKLER LOCATIONS ARE SHOWN TO ESTABLISH, QUANTITY, AND DESIRED LOCATION. EXACT QUANTITY OF SPRINKLERS IS THE CONTRACTOR'S RESPONSIBILITY. PROJECT SHALL BE DESIGNED, CONSTRUCTED, AND TESTED PER THE NFPA STANDARDS AND/OR FM GLOBAL REQUIREMENTS.
- THESE DRAWINGS ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE, HOWEVER, LOCATIONS, DEPTHS, ELEVATIONS AND SIZES WERE TAKEN FROM DIFFERENT SOURCES AND ARE SUBJECT TO DEVIATION. THE CONTRACTOR SHALL ASSUME SOME DEVIATIONS AND INCLUDE OFFSETS, ADDITIONAL PIPING, ETC AT THE TIME OF BID.
- ALL SYSTEMS, EQUIPMENT, AND MATERIALS ARE TO BE INSTALLED IN A NEAT WORKMAN LIKE MANNER, WORK NOT DONE SO SHALL BE REMOVED AND REINSTALLED SATISFACTORILY.
- THE FIRE PROTECTION BID IS A DESIGN/BUILD CONTRACT. BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS AND VERIFY LOCATIONS, ELEVATIONS, AND SIZES OF ALL UTILITIES AT SITE PRIOR TO PROCEEDING WITH WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS, OR ERRORS MADE AS A RESULT OF THE FAILURE TO BECOME FULLY FAMILIAR WITH EXISTING CONDITIONS. EXISTING SYSTEMS AND STRUCTURE SHALL BE INVESTIGATED FOR BEST POSSIBLE ROUTING OF FIRE PROTECTION PIPING.
- WHEN PLACING NEW SPRINKLERS AND ROUTING NEW SPRINKLER PIPING, CONTRACTOR SHALL VERIFY LOCATIONS OF POTENTIAL OBSTRUCTIONS FROM MECHANICAL EQUIPMENT AND ARCHITECTURAL FEATURES PRIOR TO BID AND PRICE ACCORDINGLY TO MAKE ALLOWANCES IN BID.
- THE CONTRACTOR SHALL PERFORM A FLOW TEST PRIOR TO DESIGN AND SUBMITTAL OF THE HYDRAULICALLY CALCULATED SYSTEM. THE FLOW TEST SHALL NOT BE MORE THAN (6) 12 MONTHS OLD FROM THE DATE OF CONSTRUCTION.
- AT LEAST ONE HYDRAULIC CALCULATION SHALL BE PROVIDED PER SPRINKLER ZONE BASED ON THE CURRENT FLOW TEST. THE CALCULATION WILL INCLUDE HOSE ALLOWANCES AT THE BASE OF THE RISER PER NFPA 13 REQUIREMENTS BASED ON THE IDENTIFIED HAZARD. THERE WILL BE A 10% SAFETY ALLOWANCE PROVIDED FOR THE SPRINKLER SYSTEM BASED ON THE AVAILABLE PRESSURE AT THE SOURCE AND SYSTEM DEMAND. (10% OF THE SUM OF THE SPRINKLER DEMAND PLUS THE SAFETY FACTOR).
- THE CONTRACTOR SHALL SUBMIT ALL DRAWINGS AND CALCULATIONS TO THE FIRE DEPARTMENT, GOVERNING AGENCIES, AND INSURING AGENCY AND RECEIVE APPROVAL PRIOR TO SUBMITTING DESIGN SHOP DRAWINGS.
- SUBMIT ACCURATE AS-BUILT DRAWINGS TO THE ENGINEER AND OWNER.
- IF THIS CONTRACTOR DOES NOT CLEARLY UNDERSTAND THESE PLANS OR IS NOT COMPLETELY SURE OF THEIR MEANING, THIS CONTRACTOR SHOULD OBTAIN THE ENGINEER'S WRITTEN EXPLANATION AND/OR INTERPRETATION PRIOR TO SUBMITTING BIDS, SINCE THIS CONTRACTOR WILL BE HELD RIGIDLY TO THE INTERPRETATION OF THE ENGINEER.
- THESE PLANS ARE DIAGRAMMATIC IN NATURE SINCE THE ONLY AVAILABLE INFORMATION HAS BEEN OBTAINED FROM EXISTING PLANS, SPECIFICATIONS, AND FILED SURVEYS. THE EXACT LOCATION OF PIPING AND EQUIPMENT MAY DEVIATE FROM THE LOCATION INDICATED BY THESE DRAWINGS. EXTREME ACCURACY IS NOT GUARANTEED. THIS CONTRACTOR SHALL BE PREPARED TO MAKE ALTERATIONS TO EXISTING SERVICES TO FIT JOB CONDITIONS. THIS CONTRACTOR SHALL REPORT, IN WRITING, ANY DISCREPANCIES WHICH PREVENT THE INSTALLATION OF WORK AS SHOWN.
- IT IS ASSUMED THAT AREAS OUTSIDE THE SCOPE OF WORK ARE TESTED, MAINTAINED, AND MEET THE CODE REQUIREMENTS WHEN IT WAS INSTALLED, AND THE EXISTING SYSTEM IS ACCEPTED BY THE LOCAL AHJ. WORK PERFORMED WITHIN SCOPE OF WORK WILL PROVIDE A SYSTEM TO MEET THE REQUIREMENTS SET BY THE AHJ LIMITED BY THE BOUNDARY OF WORK.
- THE SPRINKLER CONTRACTOR PRIOR TO TIME OF BID SHALL EVALUATE THE SITE AND VERIFY ALL SPRINKLER PIPING AND EQUIPMENT THAT IS EXISTING TO REMAIN WITHIN OR SERVING THE SCOPE OF WORK, IS IN GOOD WORKING CONDITION.
- FURNISH AND INSTALL TAMPER SWITCHES ON ALL INDICATING VALVES AND FLOW SWITCHES PER NFPA 13 REQUIREMENTS AND PER THE DESIGN DOCUMENTS BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FURNISH DRAIN VALVES AND INSPECTOR'S TEST CONNECTIONS AS REQUIRED BY NFPA 13 REQUIREMENTS AND AT THE DISCRETION OF THE FIRE MARSHAL, ENGINEER OR GOVERNING AGENCY.
- ALL OPENINGS THROUGH FIRE RATED FLOORS, WALLS, OR PARTITIONS SHALL BE FIRE STOPPED WITH UL RATED ASSEMBLIES OF EQUAL OR GREATER FIRE RATING. REFER TO FIRE STOPPING NOTES FOR ADDITIONAL INFORMATION.
- COORDINATE WITH STRUCTURAL ENGINEER WHEN SAW-CUTTING THROUGH CONCRETE FLOOR OR WALL CONSTRUCTION. LEAVE SUFFICIENT REBAR EXPOSED TO THE NEW REINFORCING REPLACEMENT CONCRETE AND/OR OTHER STRUCTURAL ATTACHMENTS FOR NEW CONSTRUCTION.
- VALVES, TAMPER SWITCHES, OR ANY MECHANICAL/ELECTRICAL ITEM SHALL NOT BE LOCATED ABOVE A HARD CEILING, UNLESS PROVIDED WITH EQUIVALENTLY RATED ACCESS AND SIGNAGE MEETING NFPA 13 REQUIREMENTS.
- SPRINKLERS SHALL BE LOCATED IN THE CENTER OF CEILING TILES. COORDINATE FINAL LAYOUT WITH ARCHITECT, AND OTHER DISCIPLINES.
- EXTENDED COVERAGE SPRINKLERS ARE PERMITTED. CONTRACTOR SHALL VERIFY ADDITIONAL PRESSURE REQUIREMENTS IF THIS TYPE IS SELECTED.
- THE SPRINKLER CONTRACTOR SHALL OBTAIN AND UTILIZE THE ARCHITECTURAL REFLECTED CEILING PLAN FOR THE LOCATING OF SPRINKLER HEADS. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR CEILING DEVICE LOCATIONS AND THE SPECIFICATIONS FOR COORDINATION DRAWING REQUIREMENTS.
- PIPING SHALL BE INSTALLED AT LEAST 12" ABOVE FINISHED CEILING ELEVATION TO ALLOW FOR SUITABLE ACCESS ABOVE CEILING.
- INSTALL NO PIPING IN A LOCATION OR MANNER WHICH WILL ALLOW FREEZING.
- COORDINATE PIPE ROUTING NEAR ELECTRICAL EQUIPMENT PER NFPA 70. PIPING IS NOT TO BE ROUTED ABOVE ELECTRICAL PANELS, TRANSFORMERS, COMPUTER RACKS ETC. FIELD VERIFY AND COORDINATE WITH ELECTRICAL CONTRACTOR ALL EXISTING AND NEW ELECTRICAL LOCATIONS PRIOR TO DESIGN OF THE FIRE PROTECTION PLANS.
- ROUTING OF SPRINKLER MAINS, BRANCHLINES, AND HEADS SHALL BE THOROUGHLY COORDINATED WITH ALL OTHER DISCIPLINES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS. THIS IS OF THE UTMOST IMPORTANCE ESPECIALLY WHERE SPACE IS LIMITED. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND SUBMITTING COORDINATION DRAWINGS FOR APPROVAL/REVIEW.
- ADVISE THE ENGINEERS OF ANY CONFLICTS, ERRORS, OMISSIONS, ETC. AT LEAST 10 DAYS PRIOR TO BID DATE, TO ALLOW CLARIFICATION BY WRITTEN ADDENDUM.
- IF SEISMIC BRACING IS REQUIRED, FIRE PROTECTION CONTRACTOR SHALL FURNISH AND INSTALL ALL END OF BRANCH LINE RESTRAINTS PER NFPA 13 SECTION 9.3.
- SPRINKLER CONTRACTOR TO AVOID ROUTING PIPE THROUGH SHEAR WALLS. ANY SHEAR WALL PENETRATIONS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER. REFER TO STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS.
- THE FIRE SERVICE LEAD-IN, AND FIRE DEPARTMENT CONNECTION ARE EXISTING TO REMAIN IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE UNDERGROUND SERVICE MAINS, LEAD-IN CONNECTIONS, AND ALL HYDRANTS ARE COMPLETELY FLUSHED, PER NFPA 13, BEFORE CONNECTING THE FIRE SERVICE LINE TO THE FIRE SPRINKLER SYSTEM.
- WHEN WORK REQUIRES TEMPORARY INTERRUPTIONS OF FIRE PROTECTION SERVICES OR UTILITIES THE FOLLOWING ACTIONS WILL BE TAKEN:
  - COORDINATION WITH MAINTENANCE PERSONNEL TO SHUT OFF SERVICES AT NEAREST MAIN.
  - PROVIDE TEMPORARY AND ACCESSIBLE ISOLATION VALVES CLOSE TO THE POINT OF WORK.
  - ENSURE BUILDING OPERATIONS CONTINUE WITH MINIMAL INTERRUPTIONS AND OPERATION OF EXISTING SYSTEMS BE INTERFACED WITH AS LITTLE DISRUPTION AS POSSIBLE EXCEPT IN VACATED AREAS.
  - WORK INTERFERING WITH OPERATION OF DOWNTIME WILL BE SCHEDULED AFTER CONSULTATION WITH AND PERMISSION GIVEN BY OWNER 10 DAYS PRIOR TO ANTICIPATED INTERRUPTION OF SYSTEMS.
  - SUCH WORK MAY BE REQUIRED TO BE PERFORMED OUTSIDE OF NORMAL WORKING HOURS.
  - REFER TO FIRE WATCH NOTES FOR DISRUPTION OF FIRE SPRINKLER SYSTEMS IN OCCUPIED BUILDINGS WHEN DISRUPTION EXCEEDS 4 HOURS.

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MIKE KEHOE,  
GOVERNOR



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BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
SYMBOLS AND  
ABBREVIATIONS**

SHEET NUMBER:  
**FP000**  
24 OF 64 SHEETS  
09/17/2025



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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
FIRST FLOOR PLAN -  
DEMOLITION**

SHEET NUMBER:

**FPD101**

25 OF 64 SHEETS  
09/17/2025

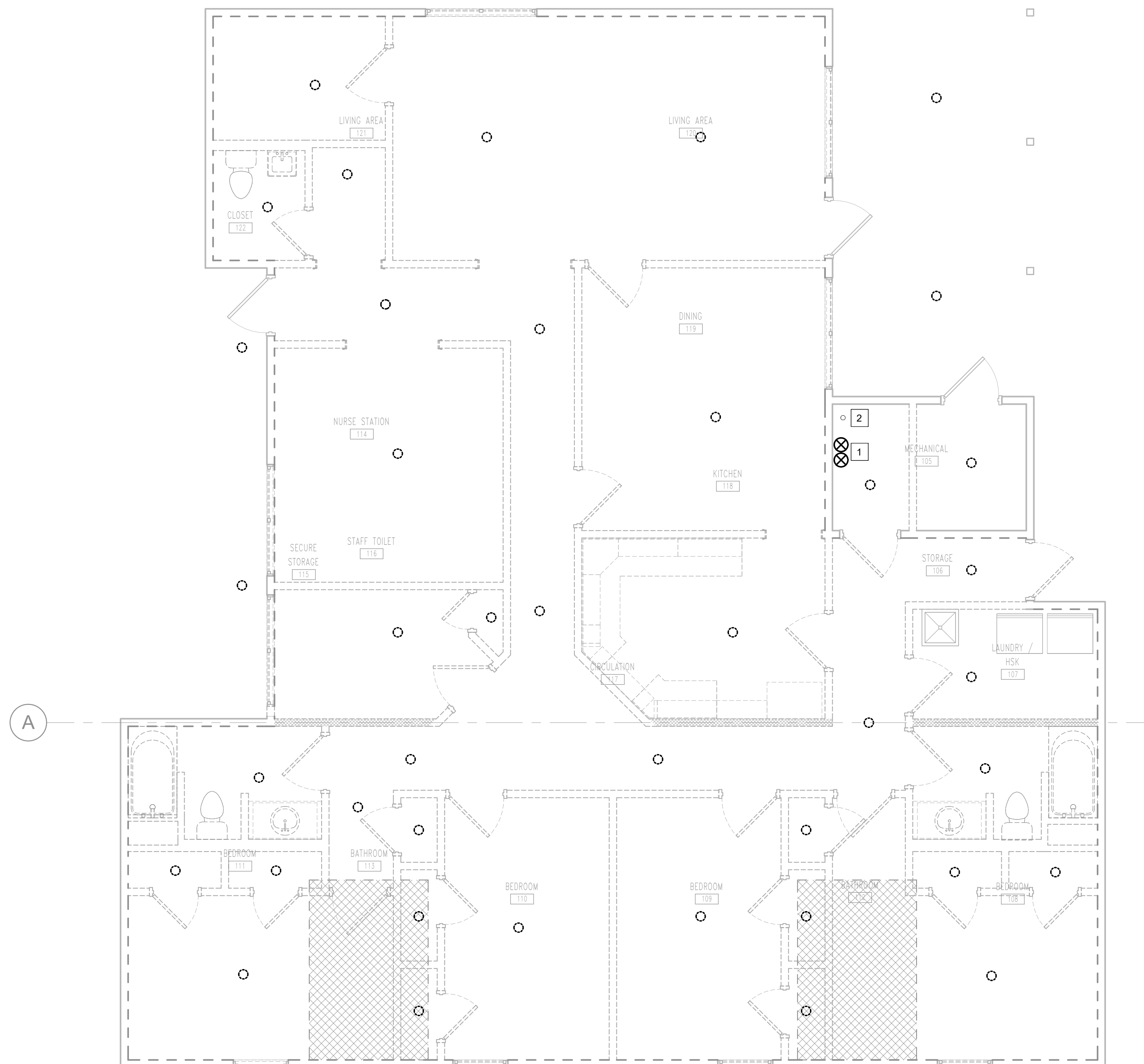
SPRINKLER LEGEND					
SYMBOL	K-FACTOR	ORIFICE SIZE	TEMPERATURE RATING	MODEL	DESCRIPTION
○	5.6	1/2"	135 °F	N/A	EXISTING, DEMO

**GENERAL NOTES**

- A. REMOVE EXISTING FIRE PROTECTION SYSTEM AND ASSOCIATED PIPING BACK TO WHERE THE FIRE SERVICE ENTERS THE BUILDING FROM THE CRAWL SPACE.
- B. REMOVED SPRINKLER HEADS ARE TO RETURNED TO OWNER.

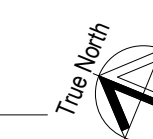
**SHEET KEYNOTES**

- 1. DEMO EXISTING ANTI-FREEZE SYSTEM RISERS AND ALL ASSOCIATED VALVES.
- 2. EXISTING TO REMAIN SERVICE ENTRANCE FIRE PROTECTION PIPE.



**1 FIRE PROTECTION FIRST FLOOR PLAN - DEMOLITION (UNIT 1802)**

1/4" = 1'-0"  
4 3 2 1 0 4 8  
SCALE: 1/4"=1'-0"





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SITE # 7356  
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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
SITE PLAN**

SHEET NUMBER:

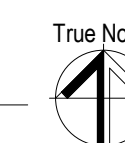
**FP101**

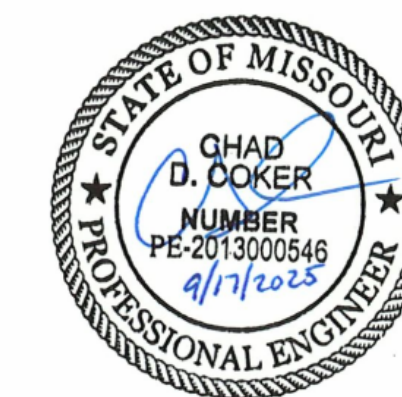
26 OF 64 SHEETS  
09/17/2025

**FIRE PROTECTION FLOW TEST**

DATE:	6 JUNE 2025 AT 8:10 AM
PERFORMED BY:	WB & BR
STATIC PRESSURE:	86 PSI
RESIDUAL PRESSURE:	54 PSI
FLOW:	1,808 GPM

NOTE: IT IS THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO VERIFY THE FLOW TEST AT TIME OF BID. THE FLOW TEST SHALL NOT BE OLDER THAN 12 MONTHS AT THE TIME OF SHOP DRAWING SUBMITTALS.





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DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
FIRST FLOOR PLAN -  
NEW WORK**

SHEET NUMBER:

**FP201**

27 OF 64 SHEETS  
09/17/2025

**GENERAL NOTES**

- FIRE PROTECTION CONTRACTOR TO PROVIDE A COMPLETE CODE COMPLIANT NFPA 13 WET SPRINKLER SYSTEM.
- PLANS ARE DIAGRAMMATIC. NOT ALL OFFSETS, TURN FITTINGS, TRIM DETAILS, ECT. MAY BE INDICATED BUT SHALL BE PROVIDED AS REQUIRED.
- ROUTING OF STANDPIPE, MAINS, LATERALS, AND OFFSETS SHALL BE THOROUGHLY COORDINATED WITH ALL OTHER DISCIPLINES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS. THIS IS OF THE UTMOST IMPORTANCE ESPECIALLY WHERE SPACE IS LIMITED. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND SUBMITTING COORDINATION DRAWINGS FOR APPROVAL/REVIEW.
- ALL PIPE 2" AND BELOW IN DIAMETER SHALL BE SCHEDULE 40. ALL PIPE 2 1/2" OR LARGER IN DIAMETER SHALL BE SCHEDULE 10 AT MINIMUM.
- ALL PIPE SIZES ARE SHOWN FOR BIDDING PURPOSES ONLY FINAL SIZES ARE TO BE DETERMINED BY HYDRAULIC CALCULATIONS.
- SPRINKLER PROTECTION FOR THE COMBUSTIBLE ATTIC SPACE IS REQUIRED. THE CONTRACTOR SHALL DESIGN THE ATTIC AS LIGHT HAZARD. STORAGE IN THE ATTIC SPACE IS NOT ANTICIPATED. ATTIC STRUCTURE IS COMBUSTIBLE WOOD FRAMING AND ATTIC DESIGN SHALL ACCOUNT FOR STRUCTURAL MEMBERS.
- INSULATION IS TO BE PROVIDED AT ROOF LEVEL OF ATTIC TO MAINTAIN 40°F MINIMUM TO PREVENT PIPE FREEZING. A DRY SYSTEM IS NOT ANTICIPATED.
- THE CRAWL SPACE SHALL MAINTAIN 40°F TO PREVENT FREEZING OF FIRE SPRINKLER SERVICE SUPPLY.

**SHEET KEYNOTES**

- FIRE PROTECTION RISER, SEE DETAIL 1 ON FP500.
- PROVIDE DRY SIDE WALLS SPRINKLERS TO PROTECT OVERHANG.
- 2" SYSTEM DRAIN, PIPED TO EXTERIOR.
- PROVIDE AUTOMATIC AIR VENT AT HIGHEST POINT OF THE SYSTEM.
- SPRINKLERS NOT REQUIRED IN SHOWERS.

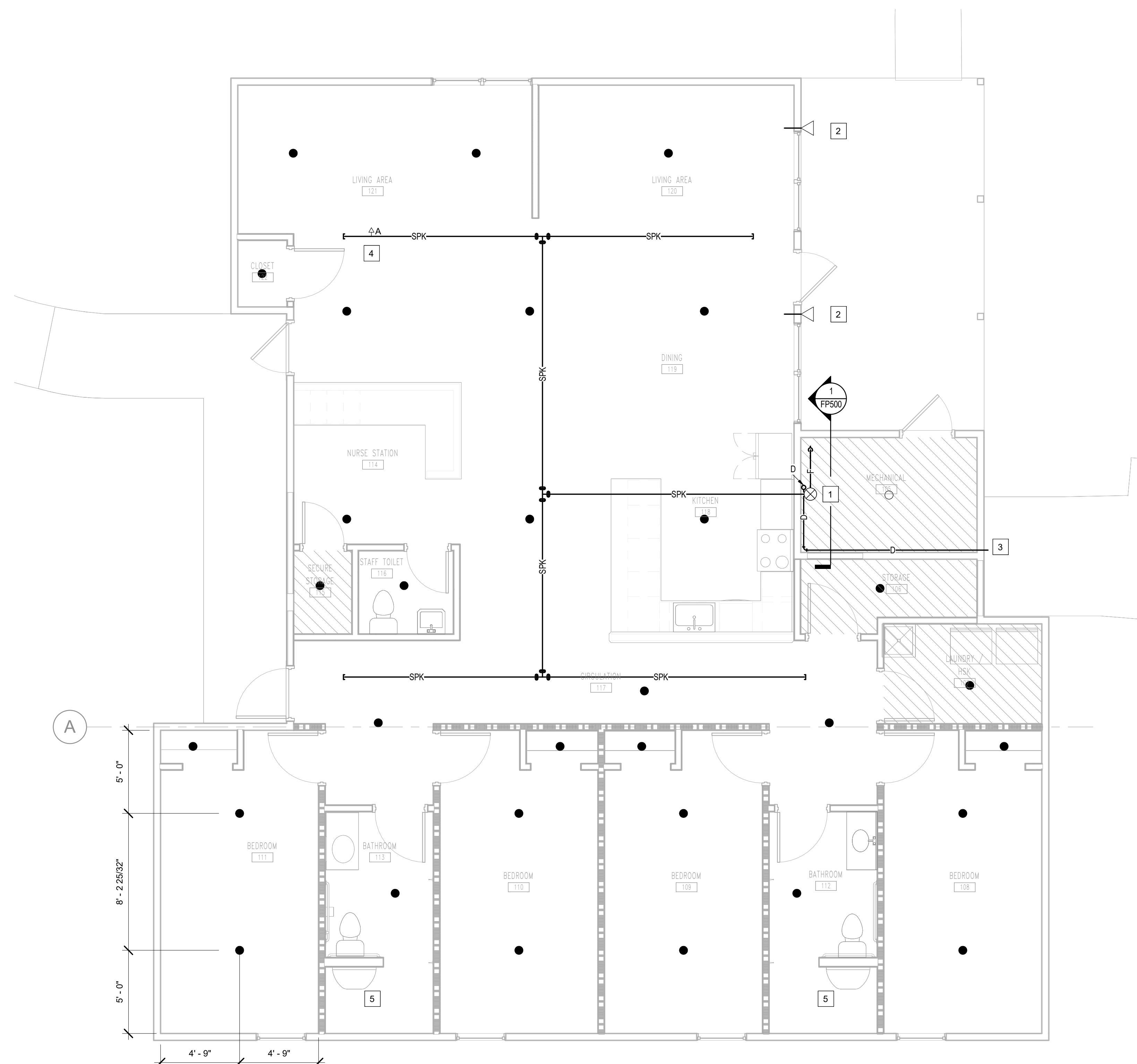
**HAZARD CLASSIFICATION LEGEND**

NFPA 13	
	FIRE PROTECTION CONTRACTOR SHALL PROVIDE A COMPLETE CODE COMPLIANT AUTOMATIC WET PIPE SYSTEM. ALL AREAS NOTED ARE TO BE CONSIDERED LIGHT HAZARD WITH A MINIMUM SPRINKLER DISCHARGE DENSITY OF 0.10 GPM/SQ. FT. FOR THE MOST HYDRAULICALLY REMOTE 1,500 SQ. FT. AND A 100 GPM HOSE STREAM, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
	FIRE PROTECTION CONTRACTOR SHALL PROVIDE A COMPLETE CODE COMPLIANT AUTOMATIC WET PIPE SYSTEM. ALL AREAS NOTED ARE TO BE CONSIDERED ORDINARY HAZARD GROUP 1 WITH A MINIMUM SPRINKLER DISCHARGE DENSITY OF 0.15 GPM/SQ. FT. FOR THE MOST HYDRAULICALLY REMOTE 1,500 SQ. FT. AND A 250 GPM HOSE STREAM. SPRINKLER HEAD SPACING SHALL NOT EXCEED MAXIMUM SPACING DISTANCES SET FORTH BY NFPA 13.

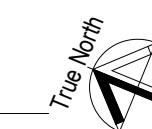
NOTE: SPRINKLER PROTECTION FOR THE COMBUSTIBLE ATTIC SPACE WILL BE REQUIRED. THE ATTIC WILL BE DESIGNED AS LIGHT HAZARD AND IS NOT ANTICIPATED TO INCLUDE ANY STORAGE. EXTERIOR OVERHANGS WILL BE PROTECTED WITH DRY SIDEWALL SPRINKLERS.

SPRINKLER LEGEND					
SYMBOL	K-FACTOR	ORIFICE SIZE	TEMPERATURE RATING	MODEL	DESCRIPTION
◁	5.6	1"	155 °F	TY2258	DRY H. SIDEWALL, QR, CHROME
●	5.6	1/2"	165 °F	TY3282	INSTITUTIONAL PENDENT, QR, EC, CHROME
○	5.6	1/2"	155 °F	TY3152	UPRIGHT, QR, CHROME

NOTE: SPRINKLER MODEL PROVIDED FOR BASIS OF DESIGN. CONTRACTOR TO PROVIDE EQUIVALENT MODEL.



**1 FIRE PROTECTION FIRST FLOOR PLAN (UNIT 1802)**  
1/4" = 1'-0"  
SCALE: 1/4"=1'-0"





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ASSET # 6517356071

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DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
CRAWL SPACE PLAN  
- NEW WORK**

SHEET NUMBER:

**FP301**

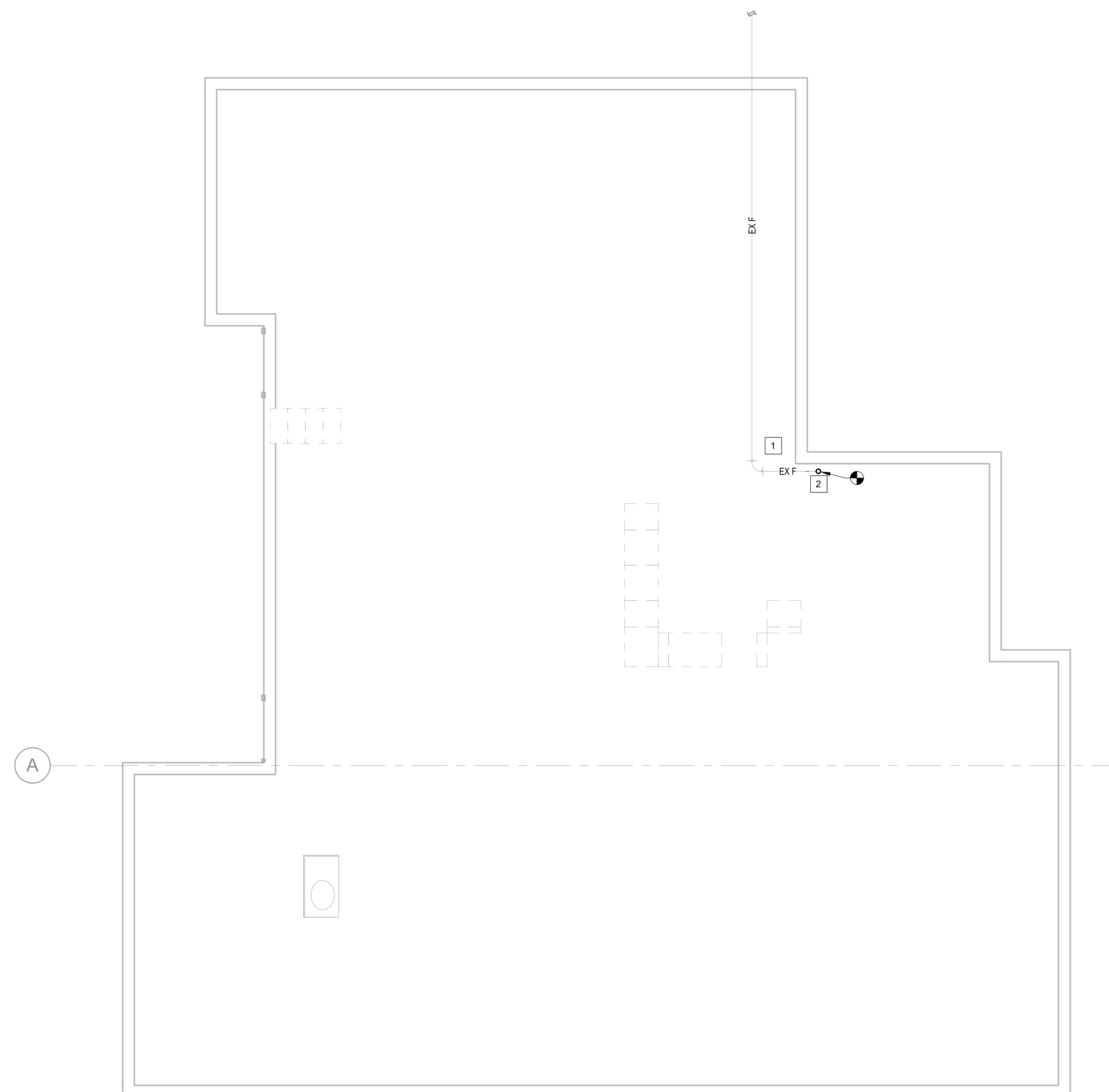
28 OF 64 SHEETS  
09/17/2025

**GENERAL NOTES**

- A. FIRE PROTECTION CONTRACTOR TO PROVIDE A COMPLETE CODE COMPLIANT NFPA 13 WET SPRINKLER SYSTEM.
- B. PLANS ARE DIAGRAMMATIC. NOT ALL OFFSETS, TURN FITTINGS, TRIM DETAILS, ECT. MAY BE INDICATED BUT SHALL BE PROVIDED AS REQUIRED.
- C. ROUTING OF STANDPIPE, MAINS, LATERALS, AND OFFSETS SHALL BE THOROUGHLY COORDINATED WITH ALL OTHER DISCIPLINES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS. THIS IS OF THE UTMOST IMPORTANCE ESPECIALLY WHERE SPACE IS LIMITED. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND SUBMITTING COORDINATION DRAWINGS FOR APPROVAL/REVIEW.
- D. ALL PIPE 2" AND BELOW IN DIAMETER SHALL BE SCHEDULE 40. ALL PIPE 2 1/2" OR LARGER IN DIAMETER SHALL BE SCHEDULE 10 AT MINIMUM.
- E. ALL PIPE SIZES ARE SHOWN FOR BIDDING PURPOSES ONLY FINAL SIZES ARE TO BE DETERMINED BY HYDRAULIC CALCULATIONS.
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- G. INSULATION IS TO BE PROVIDED AT ROOF LEVEL OF ATTIC TO MAINTAIN 40°F MINIMUM TO PREVENT PIPE FREEZING. A DRY SYSTEM IS NOT ANTICIPATED.
- H. THE CRAWL SPACE SHALL MAINTAIN 40°F TO PREVENT FREEZING OF FIRE SPRINKLER SERVICE SUPPLY.

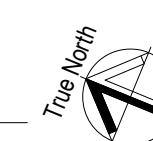
**SHEET KEYNOTES**

- # 1. FIRE PROTECTION SERVICE PIPE IN THE CRAWL SPACE IS EXISTING TO REMAIN.
- 2. 4" EXISTING FIRE PROTECTION SERVICE TO NEW RISER ABOVE.



**1 FIRE PROTECTION CRAWL SPACE PLAN (UNIT 1802)**

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





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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
ATTIC PLAN - NEW  
WORK**

SHEET NUMBER:

**FP401**

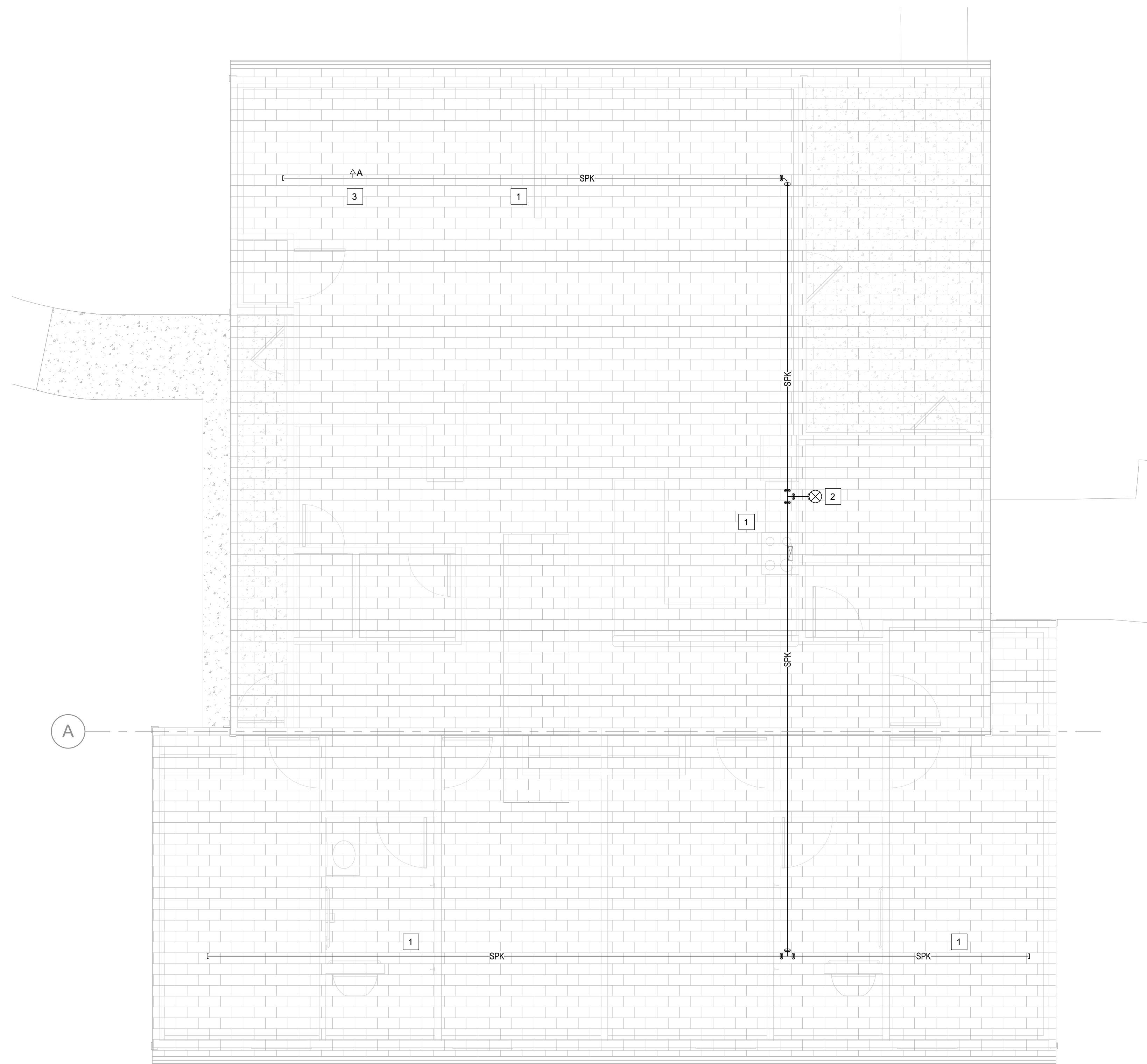
29 OF 64 SHEETS  
09/17/2025

**GENERAL NOTES**

- A. FIRE PROTECTION CONTRACTOR TO PROVIDE A COMPLETE CODE COMPLIANT NFPA 13 WET SPRINKLER SYSTEM.
- B. PLANS ARE DIAGRAMMATIC. NOT ALL OFFSETS, TURN FITTINGS, TRIM DETAILS, ECT. MAY BE INDICATED BUT SHALL BE PROVIDED AS REQUIRED.
- C. ROUTING OF STANDPIPE, MAINS, LATERALS, AND OFFSETS SHALL BE THOROUGHLY COORDINATED WITH ALL OTHER DISCIPLINES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS. THIS IS OF THE UTMOST IMPORTANCE ESPECIALLY WHERE SPACE IS LIMITED. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND SUBMITTING COORDINATION DRAWINGS FOR APPROVAL/REVIEW.
- D. ALL PIPE 2" AND BELOW IN DIAMETER SHALL BE SCHEDULE 40. ALL PIPE 2 1/2" OR LARGER IN DIAMETER SHALL BE SCHEDULE 10 AT MINIMUM.
- E. ALL PIPE SIZES ARE SHOWN FOR BIDDING PURPOSES ONLY FINAL SIZES ARE TO BE DETERMINED BY HYDRAULIC CALCULATIONS.
- F. SPRINKLER PROTECTION FOR THE COMBUSTIBLE ATTIC SPACE IS REQUIRED. THE CONTRACTOR SHALL DESIGN THE ATTIC AS LIGHT HAZARD. STORAGE IN THE ATTIC SPACE IS NOT ANTICIPATED. ATTIC STRUCTURE IS COMBUSTIBLE WOOD FRAMING AND ATTIC DESIGN SHALL ACCOUNT FOR STRUCTURAL MEMBERS.
- G. INSULATION IS TO BE PROVIDED AT ROOF LEVEL OF ATTIC TO MAINTAIN 40°F MINIMUM TO PREVENT PIPE FREEZING. A DRY SYSTEM IS NOT ANTICIPATED.
- H. THE CRAWL SPACE SHALL MAINTAIN 40°F TO PREVENT FREEZING OF FIRE SPRINKLER SERVICE SUPPLY.

**SHEET KEYNOTES**

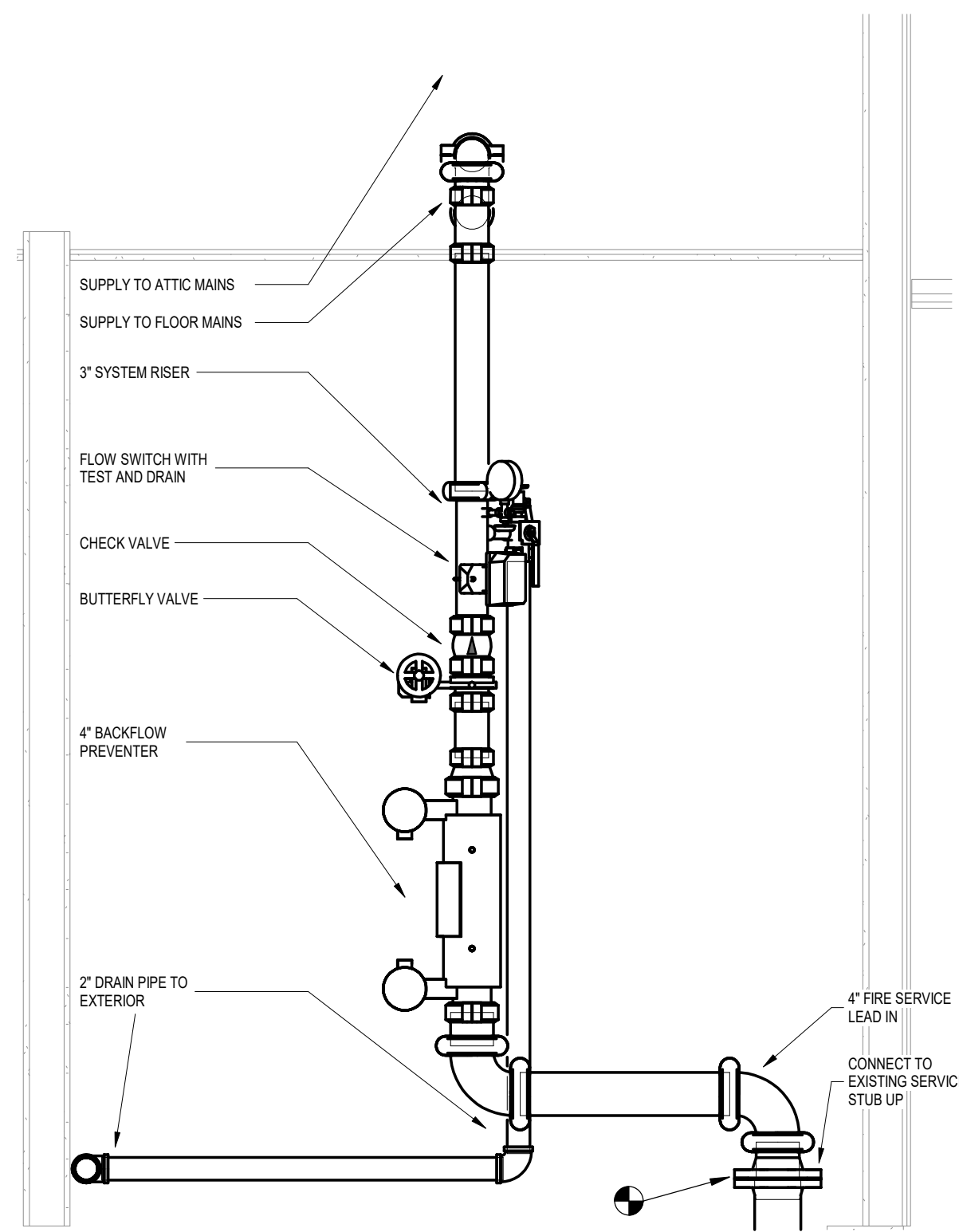
1. SEE ELEVATION VIEWS ON ARCHITECTURAL PLANS FOR THE SLOPE AND ELEVATION OF THE ROOF.
2. CONNECTION FROM EQUIPMENT ROOM SERVING THE ATTIC SPRINKLER MAINS.
3. PROVIDE AUTOMATIC AIR VENT AT HIGHEST POINT OF THE SYSTEM.



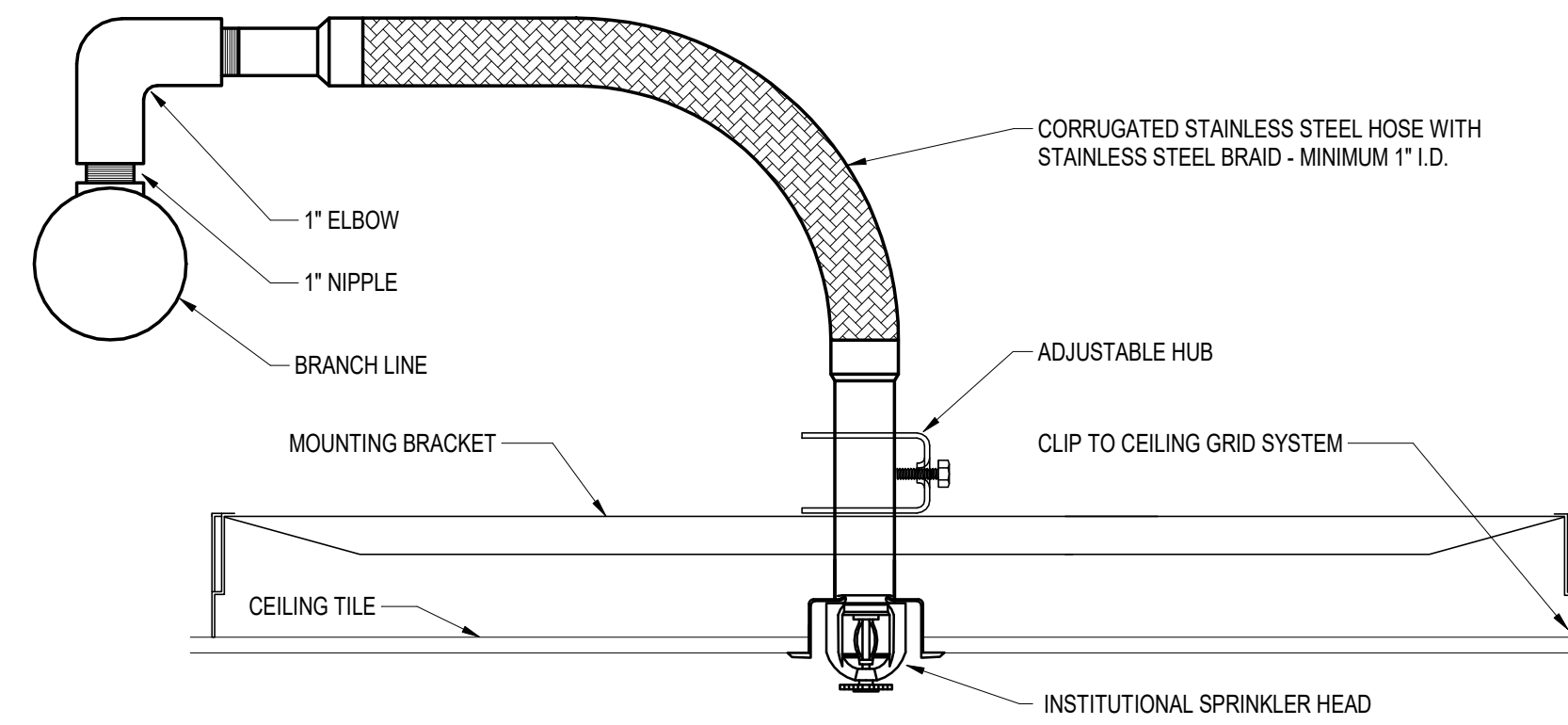
**1 FIRE PROTECTION ATTIC PLAN (UNIT 1802)**

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





**1 FIRE PROTECTION RISER**  
3/4" = 1'-0"



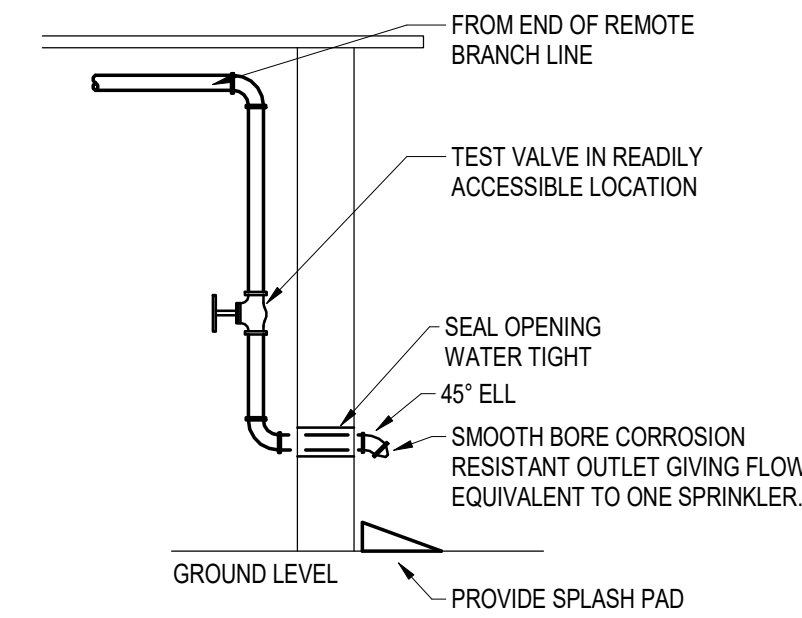
NOTES:  
ALL HEADS ON WET SYSTEM UTILIZE FLEXIBLE ASSEMBLY WHERE POSSIBLE WHEN CLEARANCES ARE TIGHT - FINISH DROPS ARE HARD PIPED.  
HYDRAULIC CALCULATIONS MUST SPECIFY EQUIVALENT LENGTH CORRESPONDING TO ORDER LENGTH OF FLEXIBLE DROP.  
THIS TYPE OF SPRINKLER TO BE INSTALLED IN AREAS WITH HARD CEILINGS.

**2 FLEXIBLE SPRINKLER DROP**  
NOT TO SCALE

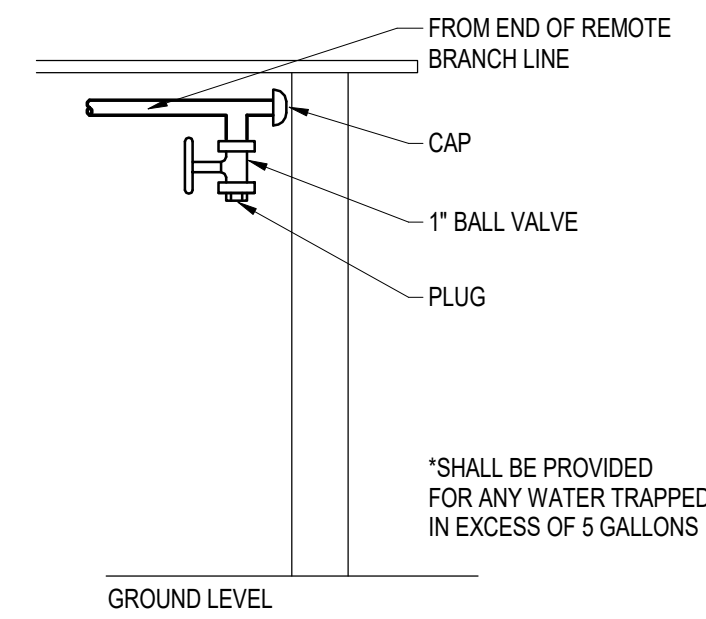
PIPE (IN.)	SEISMIC COEFFICIENT (C <sub>p</sub> )		
	C <sub>p</sub> ≤ 0.50	0.5 < C <sub>p</sub> ≤ 0.71	C <sub>p</sub> > 0.71
1	43	36	26
1 1/4	46	39	27
1 1/2	49	41	29
2	53	45	31

	NOMINAL PIPE SIZE (IN.)											
	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
STEEL PIPE (SCH. 40)	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE (SCH. 10)	N/A	12-0	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A

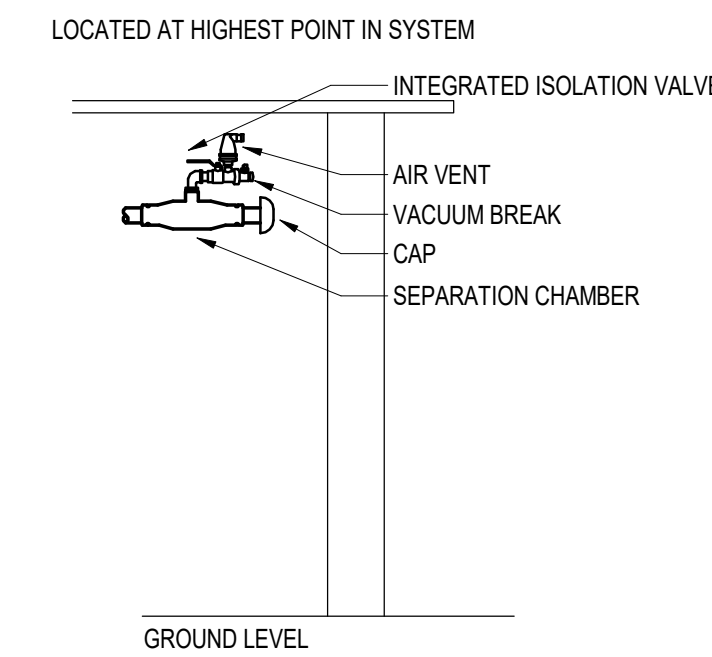
**3 SEISMIC BRACING**  
NOT TO SCALE



**4 REMOTE INSPECTION TEST**  
NOT TO SCALE



**5 AUXILIARY DRAIN**  
NOT TO SCALE



**6 AUTOMATIC AIR VENT**  
NOT TO SCALE



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10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: SKJ  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE PROTECTION  
DETAILS**

SHEET NUMBER:

**FP500**

30 OF 64 SHEETS  
09/17/2025



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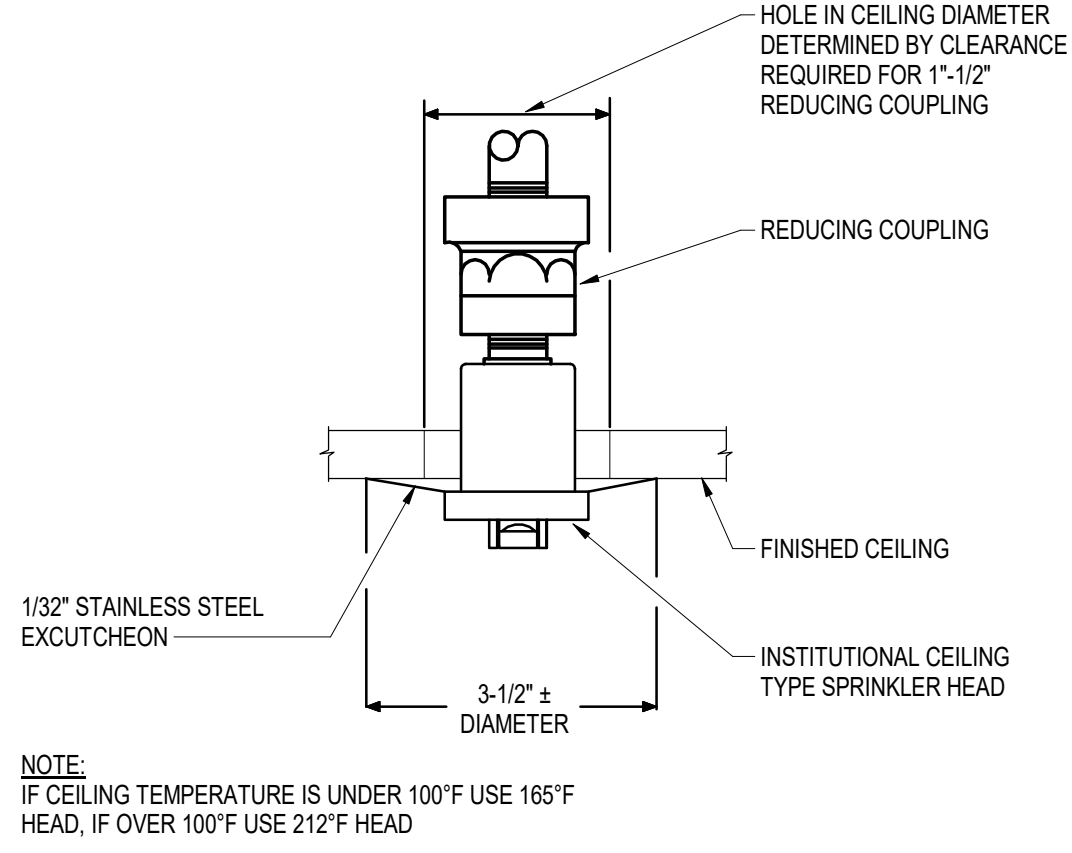
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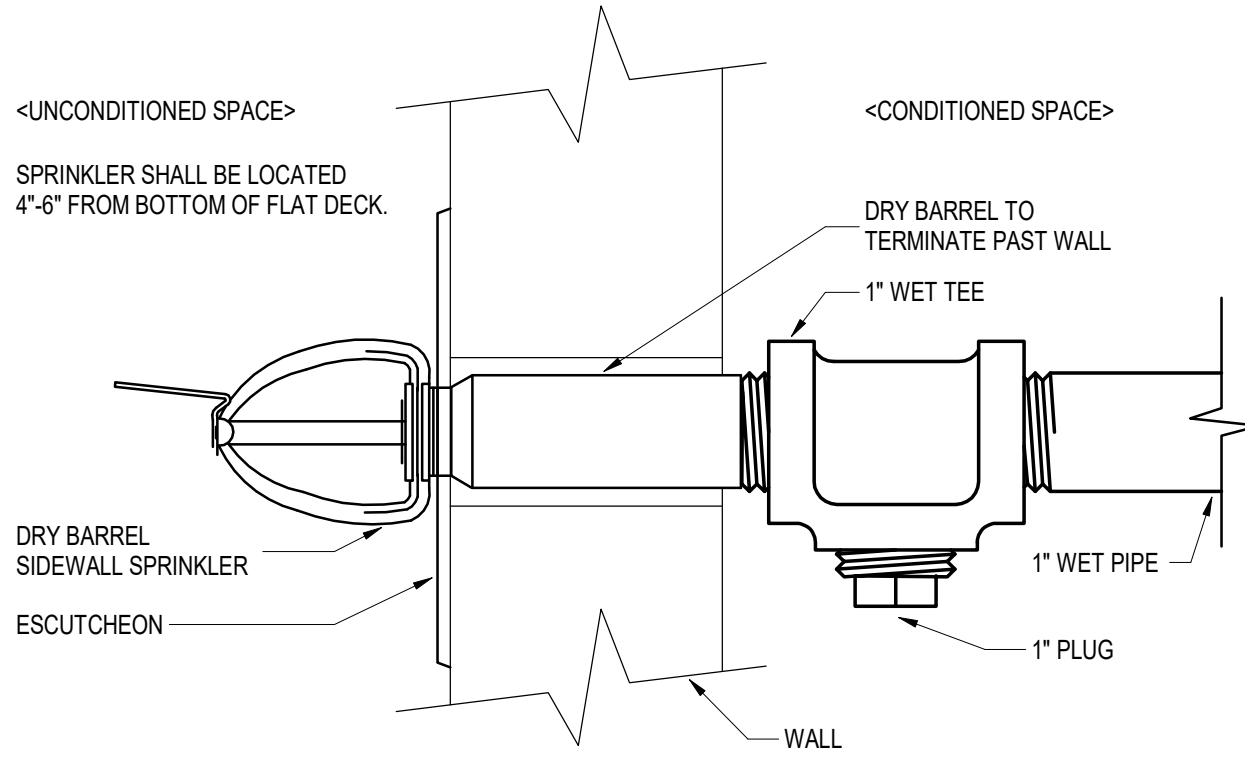
SHEET TITLE:  
**FIRE PROTECTION  
DETAILS**

SHEET NUMBER:  
**FP501**  
31 OF 64 SHEETS  
09/17/2025



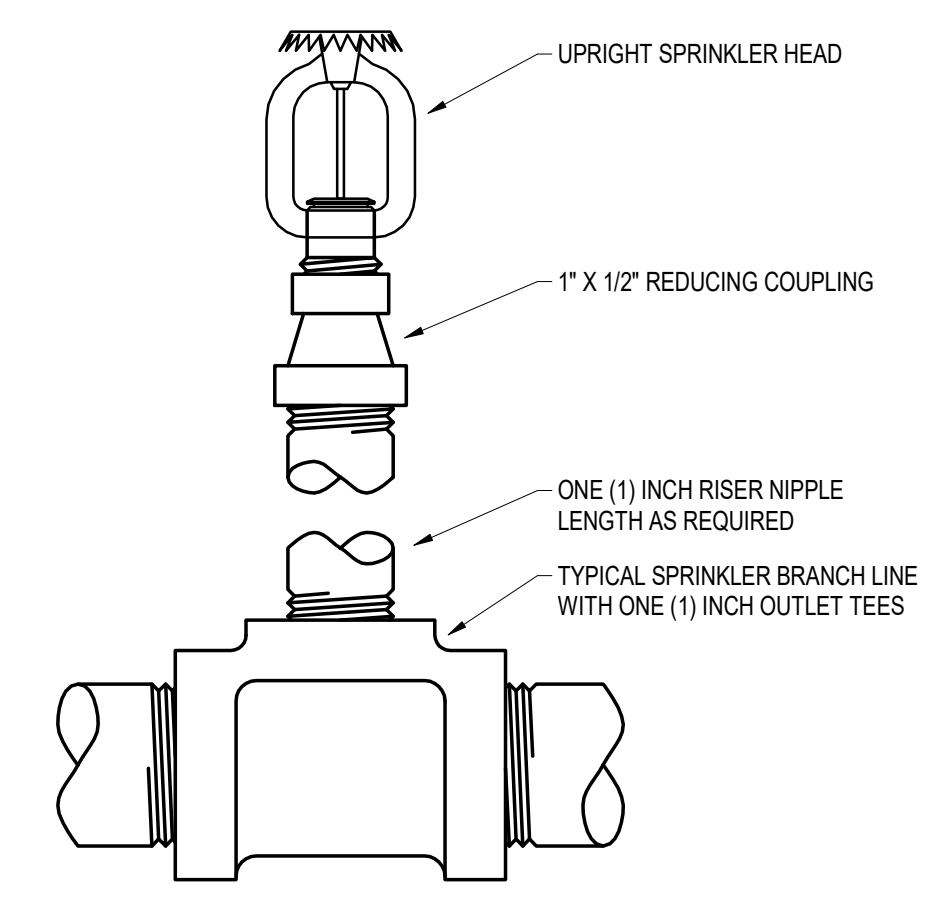
THIS TYPE OF SPRINKLER TO BE INSTALLED IN AREAS ALL AREAS

1 **INSTITUTIONAL SPRINKLER HEAD**  
NOT TO SCALE



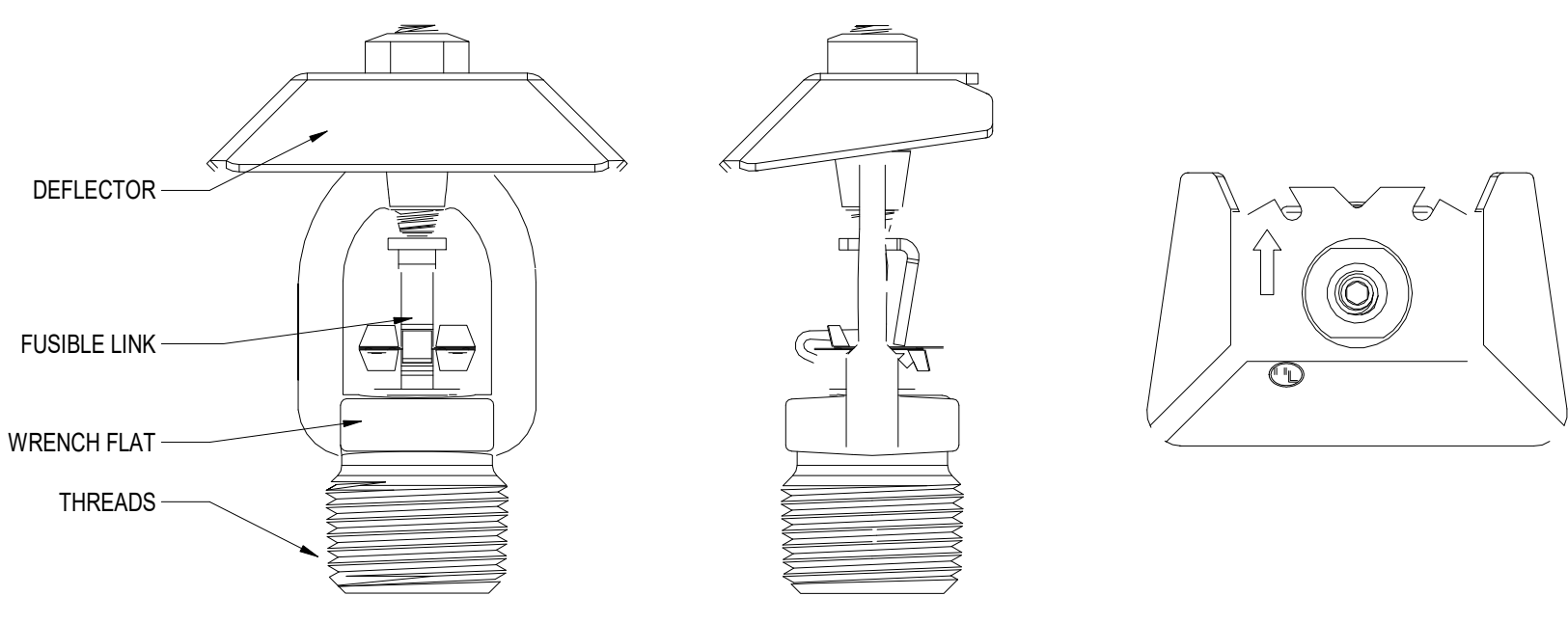
DRY BARREL LENGTH SHALL MATCH THE LISTING REQUIREMENTS FOR THE OUTSIDE TEMPERATURES IN THE REGION.  
THIS TYPE OF SPRINKLER TO BE INSTALLED IN EXTERIOR OVER HANGS OVER 4'-0"

2 **DRY BARREL SIDEWALL SPRINKLER**  
NOT TO SCALE



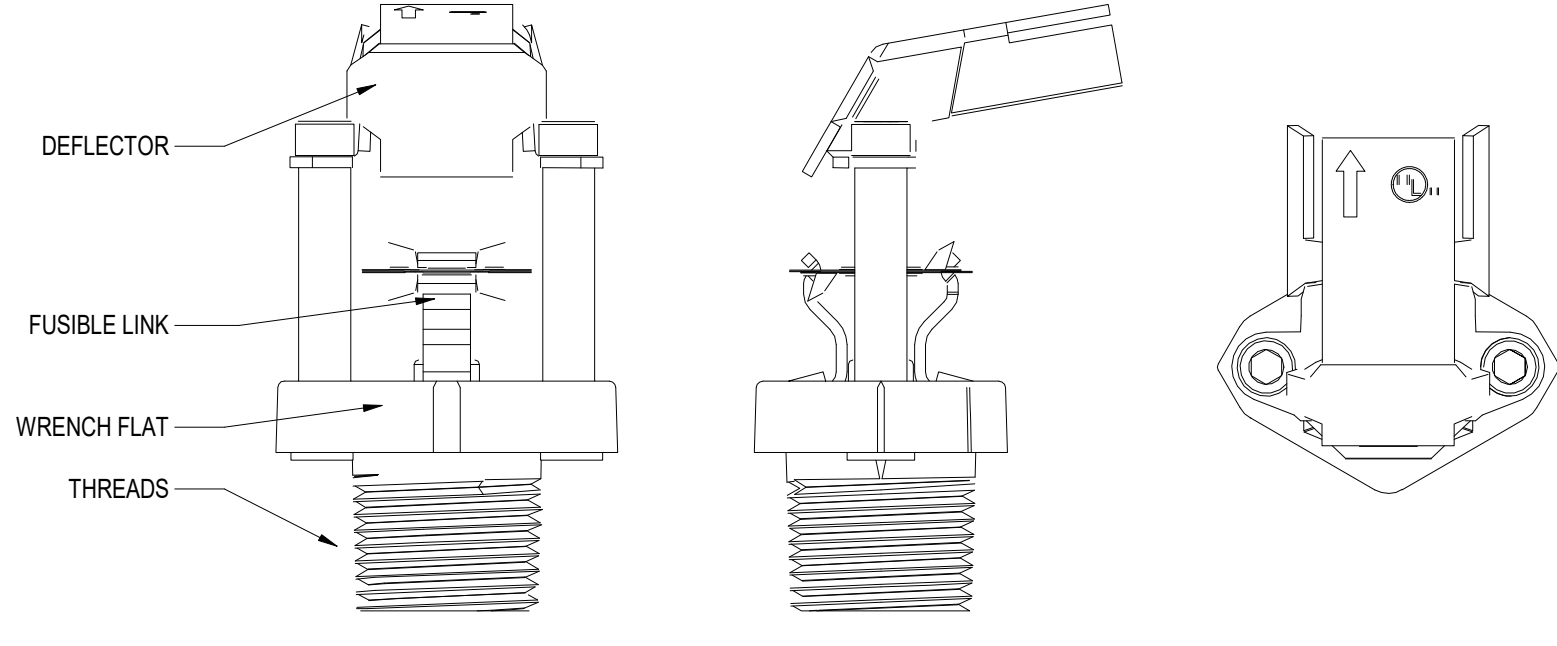
THIS TYPE OF SPRINKLER TO BE INSTALLED IN MECHANICAL SPACES

3 **UPRIGHT SPRINKLER**  
NOT TO SCALE



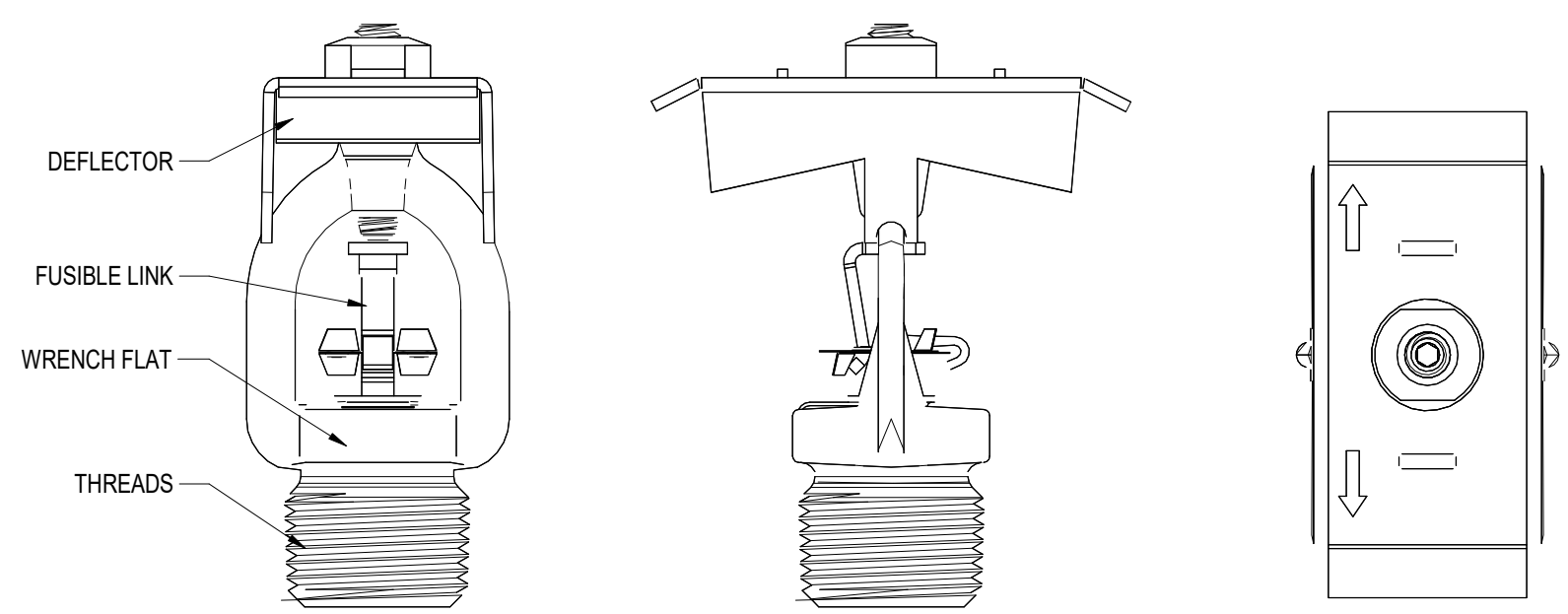
THIS TYPE OF SPRINKLER TO BE INSTALLED IN ATTIC SPACES

4 **HIP ATTIC SPRINKLER**  
NOT TO SCALE



THIS TYPE OF SPRINKLER TO BE INSTALLED IN ATTIC SPACES

5 **DS ATTIC SPRINKLER**  
NOT TO SCALE



THIS TYPE OF SPRINKLER TO BE INSTALLED IN ATTIC SPACES

6 **ATTIC BACK TO BACK**  
NOT TO SCALE

- ### GENERAL NOTES
- DUE TO THE LIMITED SPACE AVAILABLE FOR THE INSTALLATION OF ALL THE PLUMBING WORK, COORDINATION BETWEEN ALL OTHER TRADES IS OF UTMOST IMPORTANCE.
  - THIS CONTRACTOR SHALL VISIT THE PROJECT SITE AND VERIFY LOCATIONS, ELEVATIONS AND SIZES OF ALL UTILITIES AT SITE PRIOR TO PROCEEDING WITH WORK. EXISTING SYSTEMS AND STRUCTURE SHALL BE INVESTIGATED FOR BEST POSSIBLE ROUTING OF COLD WATER, HOT WATER, SANITARY WASTE AND VENT, STORM AND MEDICAL LABORATORY GAS PIPING.
  - THESE PLANS ARE DIAGRAMMATIC IN NATURE SINCE THE ONLY AVAILABLE INFORMATION HAS BEEN OBTAINED FROM EXISTING PLANS, SPECIFICATIONS, AND FIELD SURVEYS. THE EXACT LOCATION OF PIPING, FIXTURES AND EQUIPMENT MAY DEVIATE FROM THE LOCATION INDICATED ON THESE DRAWINGS. EXTREME ACCURACY IS NOT GUARANTEED. THIS CONTRACTOR SHALL BE PREPARED TO MAKE ALTERATIONS TO NEW AND/OR EXISTING SERVICES TO FIT JOB CONDITIONS. THIS CONTRACTOR SHALL FURNISH A COMPLETE CODE COMPLYING SYSTEM. THIS CONTRACTOR SHALL REPORT, IN WRITING, ANY DISCREPANCIES WHICH PREVENT THE INSTALLATION OF WORK AS SHOWN.
  - IF THIS CONTRACTOR DOES NOT CLEARLY UNDERSTAND THESE PLANS OR IS NOT COMPLETELY SURE OF THEIR MEANING, THIS CONTRACTOR SHOULD OBTAIN THE ENGINEER'S WRITTEN EXPLANATION AND/OR INTERPRETATION PRIOR TO SUBMITTING BIDS, SINCE THIS CONTRACTOR WILL BE HELD RIGIDLY TO THE INTERPRETATION OF THE ENGINEER.
  - IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO REPAIR THE EXISTING SURFACES TO REMAIN WHERE THEIR WORK HAS BEEN COMPLETED. REPAIR SHALL INCLUDE, BUT NOT LIMITED TO, ANY EXISTING WALL, CEILING OR FLOOR THAT IS SCHEDULED TO REMAIN. REPAIR, PAINTING, AND PATCHING SHALL BE COMPLETED BY AN APPROPRIATE CONTRACTOR QUALIFIED FOR THIS TYPE OF WORK.
  - THE OWNER SHALL MAINTAIN ALL SALVAGE RIGHTS OF FIXTURES, EQUIPMENT AND MATERIALS REMOVED, HOWEVER, ALL FIXTURES, EQUIPMENT AND MATERIALS NOT CLAIMED BY THE OWNER SHALL BE REMOVED FROM THE PREMISES AND PROPERLY DISPOSED OF BY THE DEMOLITION CONTRACTOR.
  - CEILING REMOVAL, STORAGE AND REPLACEMENT FOR NEW PIPING INSTALLATION SHALL BE BY THE GENERAL CONTRACTOR.
  - IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION OPERATIONS, THE CONTRACTOR WILL NOTIFY BUILDING OWNER OF THE HAZARDOUS MATERIAL.
  - TEMPORARY CONNECTION SHALL BE PROVIDED BY RESPECTIVE PLUMBING AND FIRE PROTECTION CONTRACTORS WHEN EXTENDED INTERRUPTIONS OF SERVICES AND UTILITIES SUCH AS WATER, WASTE AND FIRE PROTECTION WHICH SERVE OTHER AREAS ARE NECESSARY.
  - COORDINATE WITH MAINTENANCE PERSONNEL AS TO SOURCE OF UTILITIES AND TEMPORARILY DISCONNECT OR SHUT OFF SERVICES OR UTILITIES AT NEAREST MAIN. TEMPORARY AND ACCESSIBLE ISOLATION VALVES SHALL BE INSTALLED CLOSE TO THIS POINT OF WORK.
  - ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH THESE DRAWINGS.
  - ALL PIPING HANGERS AND SUPPORTS SHALL BE REMOVED ALONG WITH PIPING BEING REMOVED.
  - THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH PROJECTS PHASING SCHEDULE PRIOR TO COMMENCEMENT OF ANY WORK.
  - WHEN PLACING NEW PLUMBING FIXTURES, CONTRACTOR SHALL VERIFY LOCATIONS OF PLUMBING VENTS. OFFSET VENTS THAT TERMINATE WITHIN 25 FEET OF HVAC UNITS OUTDOOR AIR INTAKES. CONTRACTOR SHALL FIELD VERIFY PRIOR TO BID WHERE THE INTERFERENCES ARE PRICE ACCORDINGLY OR MAKE ALLOWANCES IN BID.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS, TRANSITIONS, OFFSETS, ETC., TO AVOID DUCTWORK, PIPING, EQUIPMENT OR STRUCTURE NEW OR EXISTING AND TO MAKE A COMPLETE AND FUNCTIONING SYSTEM.

### COMMON PIPING SYMBOLS & ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

	DIRECTION OF FLOW
	BRANCH CONNECTION, BOTTOM
	BRANCH CONNECTION, TOP
	ELBOW, TURNED DOWN
	ELBOW TURNED UP
	SHUTOFF VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	PRESSURE GAUGE
	UNION
	PIPING CAP
	RISER DESIGNATION
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITIES HAVING JURISDICTION
AP	ACCESS PANEL
BOP	BOTTOM OF PIPE
DIA	DIAMETER
DN	DOWN
EX OR EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
IE OR INV. ELEV	INVERT ELEVATION
NC	NORMALLY CLOSED
NTS	NOT TO SCALE
PSI	POUNDS PER SQUARE INCH
RPM	REVOLUTIONS PER MINUTE
RI	ROUGH-IN
SOV	SHUTOFF VALVE
TDH	TOTAL DYNAMIC HEAD
VIF	VERIFY IN FIELD

### DRAWING REFERENCES

	TITLE	PLAN DETAIL REFERENCE TITLE
	SCALE	
	#	KEYED NOTE DESIGNATION
	PLAN NORTH	NORTH ARROW
	TRUE NORTH	
	ID #	PLAN MARK EQUIPMENT DESIGNATION REFER TO MEP SCHEDULE FOR CIRCUITING AND DEVICE REQUIREMENTS AND FLOOR PLANS FOR LOCATIONS
	SIM	EQUIPMENT NUMBER
	1 A101	PLAN MARK ENLARGED PLAN REFERENCE
	1	SHEET NUMBER
	AD888	SECTION
		INTERFACE, EXISTING TO NEW
		EXTENT OF DEMOLITION
		MATCHLINE
	1	REVISION TAG

### LINE TYPE LEGEND

	EXISTING TO REMAIN OR NEW WORK BY OTHERS (LIGHT, SOLID LINE)
	NEW WORK BY THIS CONTRACTOR (DARK, SOLID LINE)
	EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK, DASHED LINE, DEMOLITION PLANS)

### PLUMBING ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

ADA	AMERICANS WITH DISABILITIES ACT
A.F.F.	ABOVE FINISH FLOOR
AP	ACCESS PANEL
BP	BOOSTER PUMP
BT	BATHTUB
BTC	BRANCH TO CONNECTION
CBV	CALIBRATED BALANCING VALVE
CI	CAST IRON
CO	CLEANOUT
CSS	CLINICAL SERVICE SINK
CW	COLD WATER
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DF	DRINKING FOUNTAIN
DI	DISINCHORIZED WATER
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EEW	EMERGENCY EYE WASH
ESEW	EMERGENCY SHOWER & EYE WASH
ESH	EMERGENCY SHOWER
ET	EXPANSION TANK
EWIC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
F.F.	FINISH FLOOR ELEVATION
FS	FLOOR SINK
G	NATURAL GAS
GGO	GRADE CLEANOUT
GD	GARBAGE DISPOSAL
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RETURN
HWRP	HOT WATER RETURN PUMP
HWST	HOT WATER STORAGE TANK
IE	INVERT ELEVATION
IM	ICE MAKER
IW	INDIRECT WASTE
LA	LAVATORY
MB	MOP BASIN
NIC	NOT IN CONTRACT
NP	NON-POTABLE
OB	OUTLET BOX
ORD	OVERFLOW ROOF DRAIN
PG	PRESSURE GAUGE
PRV	PRESSURE REDUCING VALVE
RD	ROOF DRAIN
RH	ROOF HYDRANT
RO	REVERSE OSMOSIS
RPZ	REDUCED PRESSURE BACKFLOW PREVENTER
S	SANITARY
SCW	SOFTENED COLD WATER
SH	SHOWER
SHW	SOFTENED HOT WATER
SK	SINK
SOV	SHUT OFF VALVE
SP	SUMP PUMP
SS	STAINLESS STEEL
SS	SANITARY STACK
SSD	SUBSOIL DRAINAGE
SSK	SHOP SINK
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TW	TREATED WATER
UR	URINAL
V	VENT
VIV	VALVE IN VERTICAL
VB	VACUUM BREAKER
VS	VENT STACK
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WD	WASHER DRAIN
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WHA	WATER METER
WS	WASTE STACK
WSV	WASTE STACK VENT
YCO	YARD CLEANOUT
YH	YARD HYDRANT

### PLUMBING SYMBOLS & ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

	TRAPPED CONNECTION
	STRAINER
	BALANCING VALVE
	CLEANOUT (CO)
	OS & Y GATE VALVE
	TEMPERATURE GAUGE
	THERMOSTATIC MIXING VALVE
	REDUCED PRESSURE BACKFLOW PREVENTER
	HOSE BIBB/WALL HYDRANT
	DOMESTIC COLD WATER PIPING (CW)
	DOMESTIC HOT WATER PIPING (HW)
	DOMESTIC HOT WATER RETURN PIPING (HWR)
	DRAIN PIPING
	NATURAL GAS PIPING
	SANITARY PIPING
	SOFTENED COLD WATER PIPING
	SOFTENED HOT WATER PIPING
	SUBSOIL DRAINAGE PIPING
	STORM PIPING
	TEMPERED WATER PIPING
	VENT PIPING
	WASTE PIPING
	FLEXIBLE CONNECTION
	FLOOR DRAIN/FLOOR SINK (FD/FS)
	CIRCULATION PUMP

SEISMIC USE GROUP ( 1 )      SEISMIC DESIGN CATEGORY ( D )

### SEISMIC CODE BLOCK

LISTING OF EQUIPMENT AND SYSTEM COMPONENTS	ANCHORAGE TO FLOORS, ROOFS, ETC.		SWAY BRACING		LOCATION OF PROFESSIONALLY SEALED ANCHORAGE AND SWAY BRACING DETAILS			COMMENTS
	NOT REQUIRED	PROJECT REQUIREMENT	NOT REQUIRED	PROJECT REQUIREMENT	DRAWING NO. OR SPEC. SECTION	SUBSEQUENT SUBMITTAL		
						SHOP DRAWINGS	SEPARATE PERMIT & PLANS	
MECHANICAL SYSTEM COMPONENTS:								
WATER HEATERS		o	o				o	
EXPANSION TANK		o	o				o	
PUMPS		o	o				o	
WATER PIPING	o			o			o	
MEDICAL GAS PIPING								
SANITARY AND VENT PIPING	o			o			o	

NOTE: THE CONTRACTOR'S ATTENTION IS CALLED TO THE REQUIREMENTS OF NOTE 1 ON THIS SHEET. CONTRACTOR SHALL SUBMIT THE REFERENCED DETAILS AND SHOP DRAWINGS WITH SUFFICIENT DETAIL AND SUFFICIENT TIME TO ENABLE THE ENGINEER TO REVIEW AND SUBMIT TO THE COUNTY. THE ENGINEER WILL SUBMIT THE DETAILS TO THE COUNTY IN AS EXPEDITIOUS A TIME FRAME AS POSSIBLE. NORMALLY THIS WILL NOT EXCEED 5 TO 10 BUSINESS DAYS. FAILURE TO SUBMIT OR DELAYED SUBMISSION ON THE CONTRACTOR'S PART WILL NOT EXCUSE THE CONTRACTOR FROM RESULTING DELAYS IN THE COMPLETION OF THE PROJECT OR FOR ANY COSTS RESULTING THEREFROM. BE ADVISED ACCORDINGLY.

- THE CONTRACTOR'S ALTERATION IS DIRECTED TO SPECIFICATION SECTION 13080 FOR ADDITIONAL APPLICABLE SEISMIC INFORMATION.
- FOR THE PURPOSES OF CALCULATIONS, THE FOLLOWING SHALL APPLY:
  - THE SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS, S, SHALL BE TAKEN AS 0.625
  - THE SPECTRAL RESPONSE ACCELERATION AT ONE SECOND PERIOD, S, SHALL BE TAKEN AS 0.18G.
  - THIS FACILITY SITE IS DESIGNATED A SITE CLASS DEFINITION D BASED ON GEOTECHNICAL ANALYSIS OF SITE.

- WHERE THIS COLUMN IS SELECTED, THE FOLLOWING SHALL APPLY:
  - THE CONTRACTOR SHALL SUBMIT DETAILS OF ANCHORAGE INCLUDING THE FOLLOWING:
    - SPECIFIC INFORMATION RELATING TO THE SPECIFIC TYPE AND SIZE OF ANCHORAGE (ANCHOR BOLTS, CLIPS, ETC.).
    - SPECIFIC LOCATION OF SUCH ANCHORAGE.
    - DETAILS OF SWAY BRACING AND ANCHORING OF EQUIPMENT TO INCLUDE:
      - MATERIALS USED.
      - ATTACHMENT OF THE BRACING TO THE STRUCTURE AND COMPONENT BEING BRACED.
      - LOCATION OF TRANSVERSE AND LONGITUDINAL SWAY BRACING AND ROD STIFFENERS.
  - ALL SHOP DRAWINGS SUBMITTED AS PART OF THE REQUIREMENTS OF THIS SHEET SHALL CONTAIN THE STAMP OF A REGISTERED MO. PROFESSIONAL ENGINEER.
  - THE CONTRACTOR MAY SUBMIT AUTHORIZED REPRODUCTIONS OF CERTAIN DETAILS AND TABLES FROM DESIGN MANUALS OR GOVERNMENTAL AGENCIES THAT PERTAIN TO SEISMIC SUPPORT AND BRACING, IF HE PROPOSES TO USE THEM FOR THE PROJECT. WHERE THIS OPTION IS ELECTED, THE DETAILS AND TABLES SUBMITTED SHALL:
    - THE DETAILS MUST BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER WHO PREPARED OR SUPERVISED THE PREPARATION OF THE DETAIL AND ASSOCIATED CALCULATIONS.
    - DEFINE THE COMPONENT, LOCATION, SIZE, ETC. TO EASILY IDENTIFY THE INTENT, ITEM TO BE BRACED OR ANCHORED, APPLICABLE COMPONENTS, AND THE LOCATION.
  - THE ENGINEER OF RECORD WILL FORWARD THE SUBMITTED DETAILS, IF ACCEPTABLE, TO THE COUNTY FOR APPROVAL ALONG WITH ANY REQUIRED COVER LETTERS OR PROFESSIONAL SEALS. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING THE SIGNED AND SEALED DRAWINGS NOTED IN C.1 ABOVE.
  - THE AUTHORIZED REPRODUCTIONS NOTED IN PART C ABOVE MAY BE OBTAINED FROM ANY OF THE FOLLOWING:
    - DETAILS APPROVED OR PUBLISHED BY THE CALIFORNIA STATE ARCHITECT, STRUCTURAL SAFETY INTERPRETIVE MANUAL, DOCUMENTS AND PUBLICATIONS. BOX 1015 NORTH HIGHLANDS, CA 95660 916-973-3700
    - LOOS & CO. NAPLES, FLORIDA 800-321-5667 www.earthquakebrace.com
    - SMACNA CHANTILLY, VIRGINIA 703-803-7980 www.smacna.org
    - B-LINE HIGHLAND, ILLINOIS 618-654-2184 www.cooperline.com
    - MASON INDUSTRIES, INC. HAUPPAUGE, NEW YORK 516-348-0282 www.mason-ind.com
    - TOLCO CORONE, CALIFORNIA 951-737-5599 www.tolco.com

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MIKE KEHOE,  
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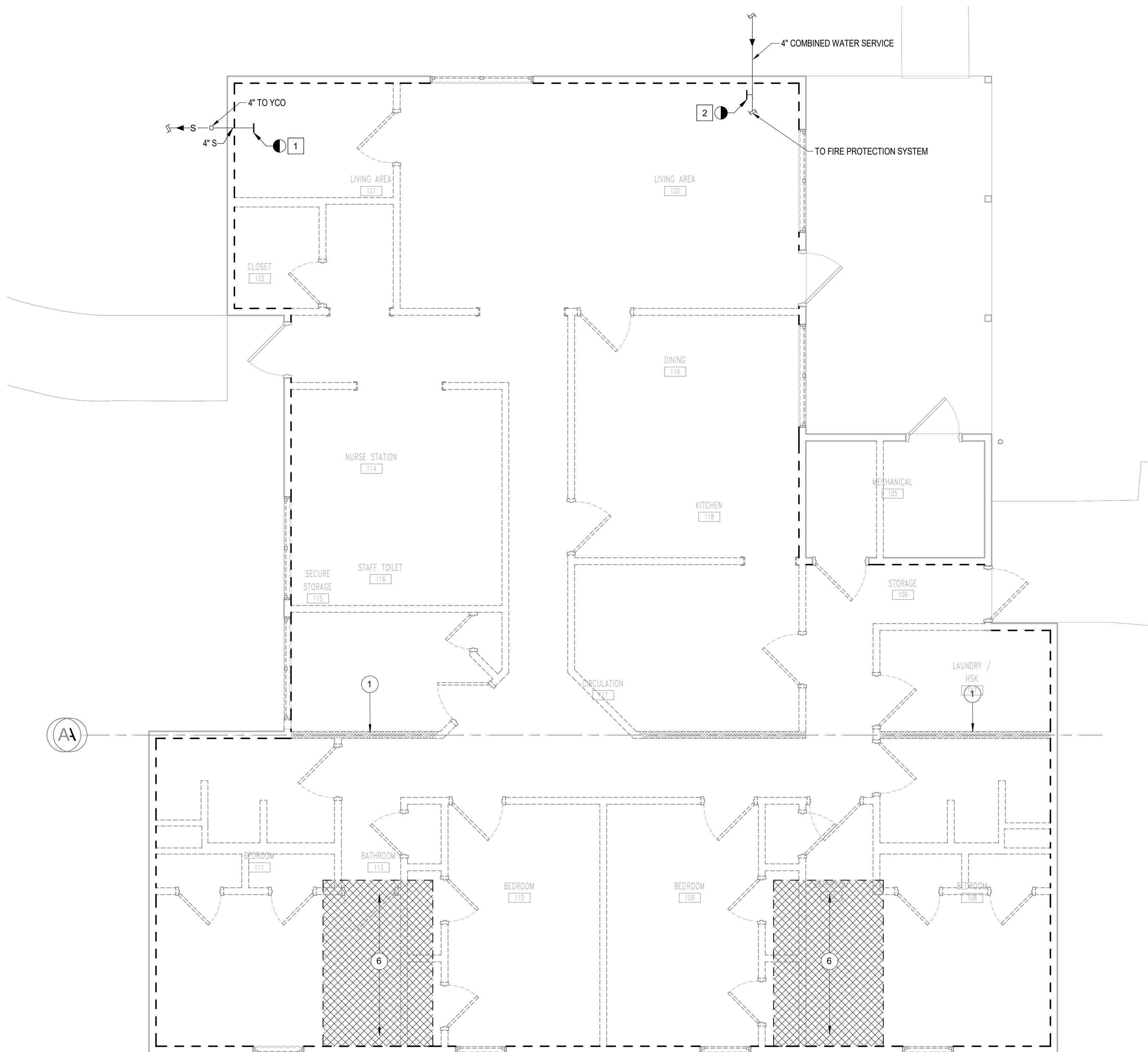
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CHECKED BY: DB  
DESIGNED BY: MAS

SHEET TITLE:  
**PLUMBING  
SYMBOLS AND  
ABBREVIATIONS**

SHEET NUMBER:

**P000**

32 OF 64 SHEETS  
09/17/2025



**GENERAL NOTES**

A. REFER TO ARCHITECTURAL DRAWINGS FOR A DESCRIPTION OF THE ALTERNATES.

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**SHEET KEYNOTES**

#

1. ALL EXISTING SANITARY PIPING IN CRAWL SPACE TO BE DEMOLISHED IN ENTIRETY TO THIS POINT AND TEMPORARILY CAPPED FOR CONNECTION DURING THE NEW WORK PHASE. CONTRACTOR TO FIELD VERIFY EXISTING INVERT ELEVATION.

2. ALL EXISTING DOMESTIC COLD WATER AND HOT WATER TO BE DEMOLISHED IN ENTIRETY TO THIS POINT AND TEMPORARILY CAPPED FOR CONNECTION DURING THE NEW WORK PHASE.

**1 PLUMBING UNDERFLOOR PLAN - DEMOLITION**  
 1/4" = 1'-0"

STATE OF MISSOURI  
 MIKE KEHOE,  
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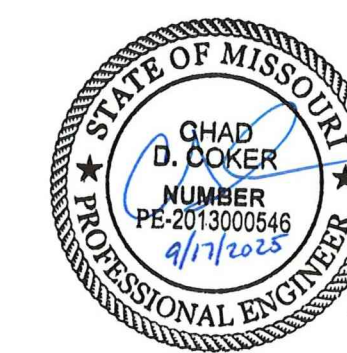
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CAD DWG FILE: \_\_\_\_\_  
 DRAWN BY: MAS  
 CHECKED BY: DB  
 DESIGNED BY: MAS

SHEET TITLE:  
**PLUMBING CRAWL  
 SPACE PLAN -  
 DEMOLITION**

SHEET NUMBER:  
**PD200**  
 33 OF 64 SHEETS  
 09/17/2025



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DRAWN BY: MAS  
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DESIGNED BY: MAS

SHEET TITLE:  
PLUMBING FIRST  
FLOOR PLAN -  
DEMOLITION

SHEET NUMBER:

**PD201**

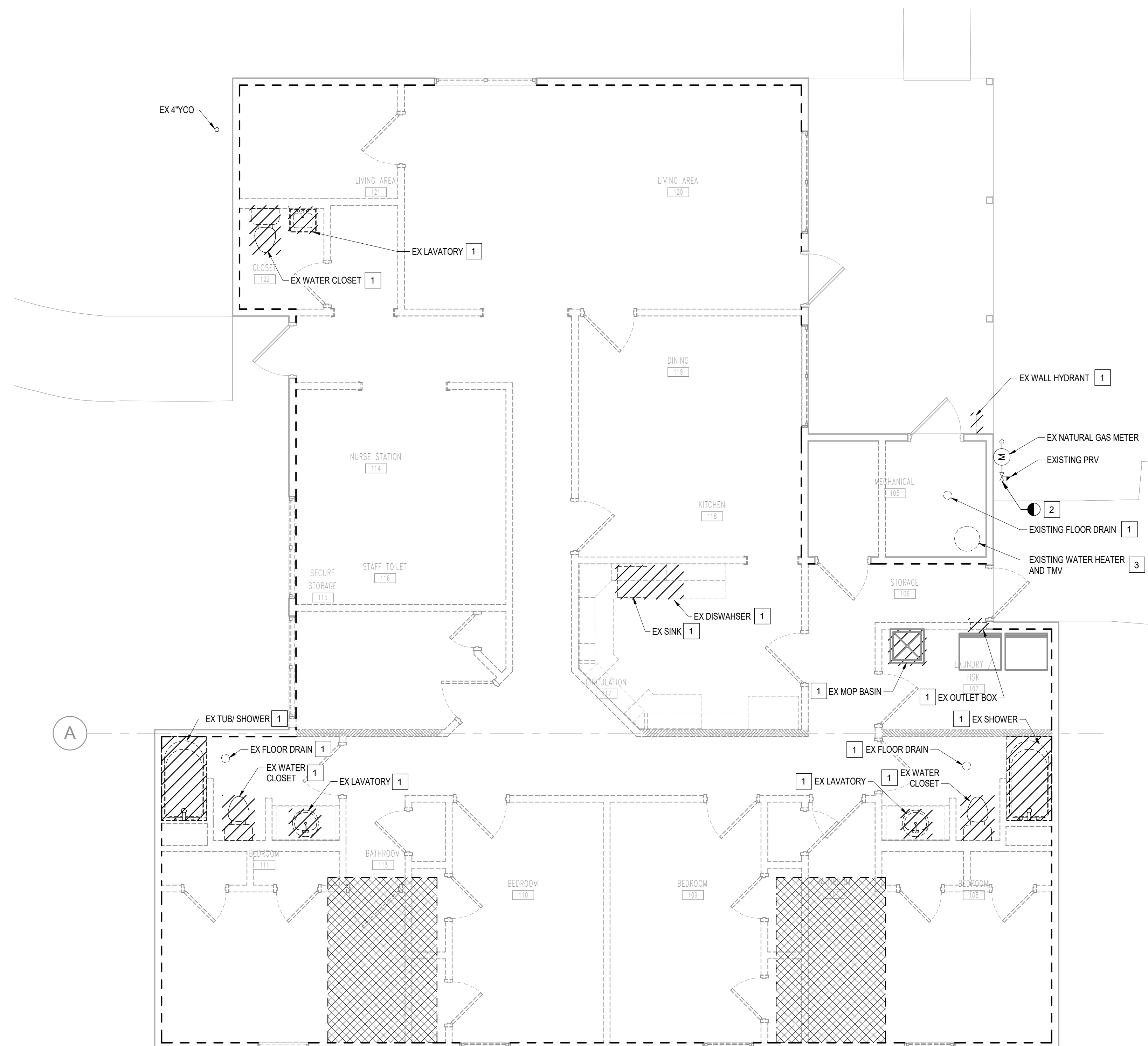
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09/17/2025

**GENERAL NOTES**

- A. REMOVE ALL EXISTING VENT PIPING TO EXISTING VTR LOCATION AND REMOVE THROUGH ROOF AND PATCH ROOF.
- B. REFER TO ARCHITECTURAL DRAWINGS FOR A DESCRIPTION OF THE ALTERNATES.

**SHEET KEYNOTES**

- 1. REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED COMPONENTS IN ENTIRETY. REMOVE SANITARY AND DOMESTIC WATER PIPING TO BELOW FLOOR. REFER TO KEYED NOTE 1 ON SHEET PD200. REMOVE EXISTING VENT PIPING TO NEAREST BRANCH. REFER TO GENERAL NOTE A ON THIS SHEET FOR CONTINUATION OF DEMOLITION.
- 2. REMOVE EXISTING NATURAL GAS PIPING TO THIS POINT AND TEMPORARILY CAP FOR CONNECTION DURING THE NEW WORK PHASE.
- 3. REMOVE EXISTING DOMESTIC WATER HEATER AND ALL ASSOCIATED COMPONENTS IN ENTIRETY. ASSOCIATED THERMOSTATIC MIXING VALVE AND DOMESTIC WATER PIPING TO BE REMOVED BELOW FLOOR. REFER TO KEYED NOTE 2 ON SHEET PD200 FOR CONTINUATION OF DEMOLITION.



**1 PLUMBING FIRST FLOOR PLAN - DEMOLITION**

1/4" = 1'-0"





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HABILITATION CENTER

BUILDING 1802  
10695 BELLEVILLE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: MAS  
CHECKED BY: DB  
DESIGNED BY: MAS

SHEET TITLE:  
**PLUMBING CRAWL  
SPACE PLAN - NEW  
WORK**

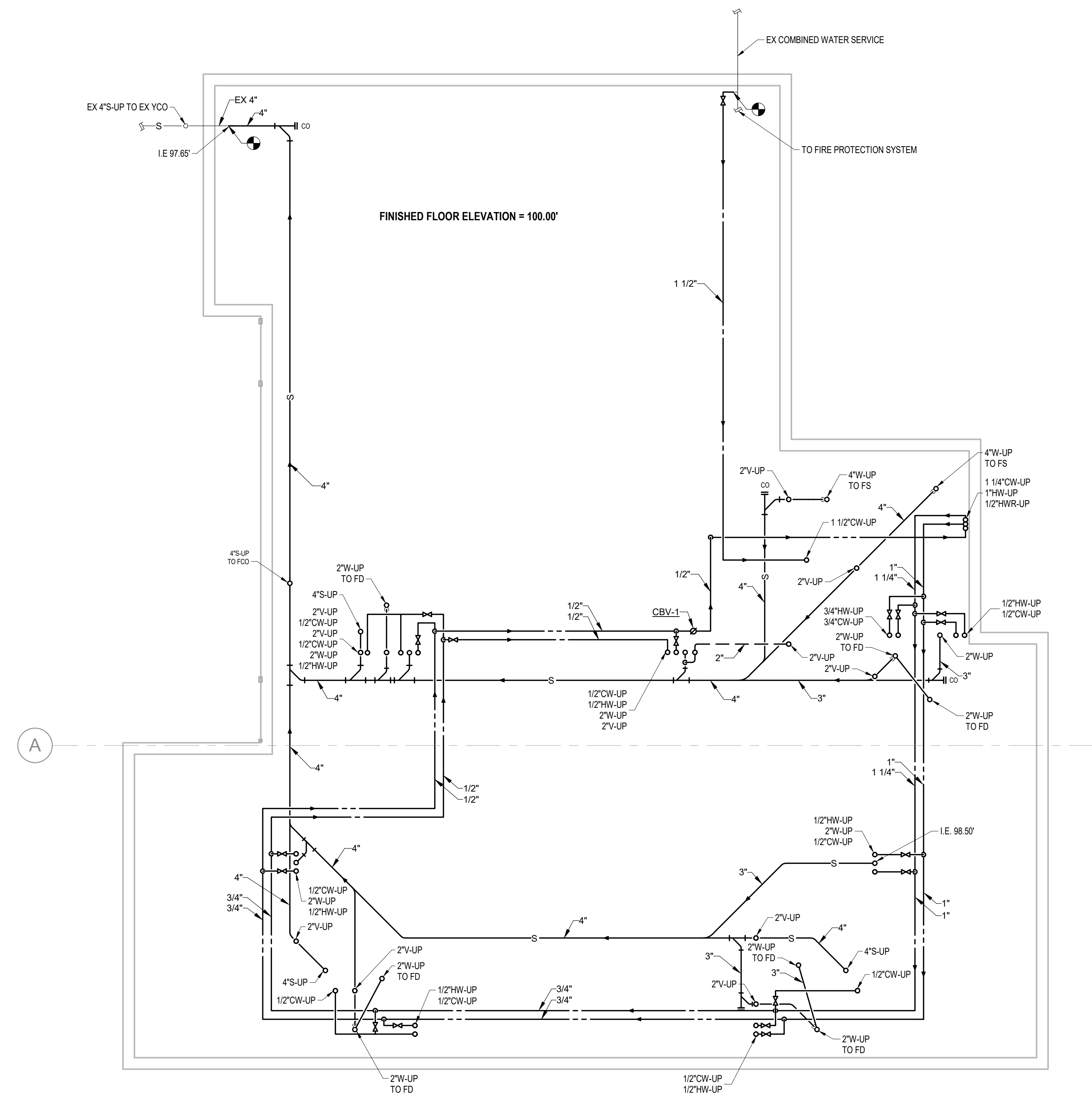
SHEET NUMBER:

**P200**

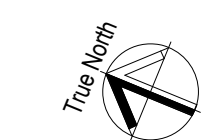
35 OF 64 SHEETS  
09/17/2025

**GENERAL NOTES**

A. REFER TO ARCHITECTURAL DRAWINGS FOR A DESCRIPTION OF THE ALTERNATES.



**1 PLUMBING CRAWL SPACE PLAN - DRAIN**  
1/4" = 1'-0"





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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: MAS  
CHECKED BY: DB  
DESIGNED BY: MAS

SHEET TITLE:  
**PLUMBING FIRST  
FLOOR PLAN - NEW  
WORK**

SHEET NUMBER:

**P201**

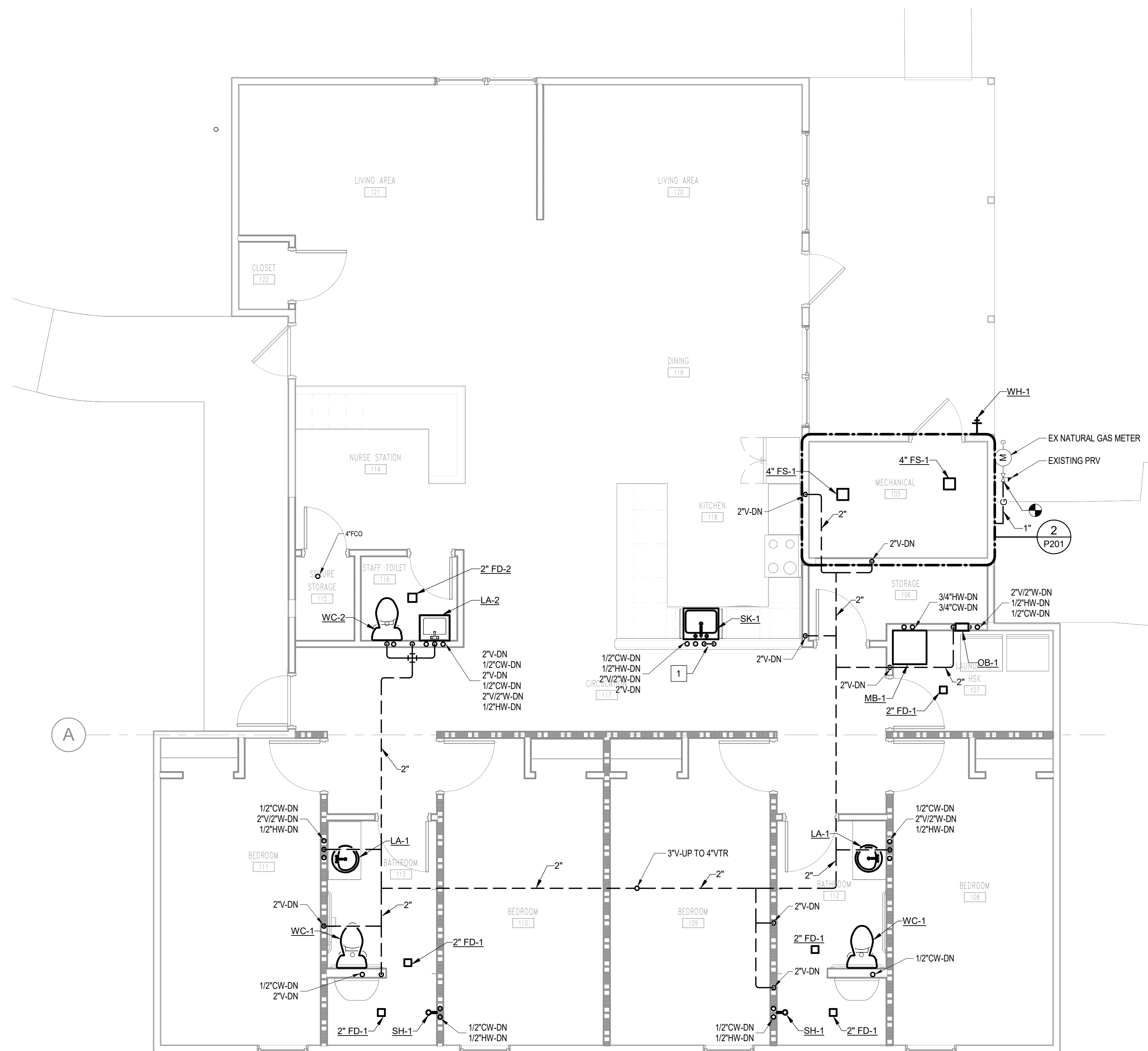
36 OF 64 SHEETS  
09/17/2025

**GENERAL NOTES**

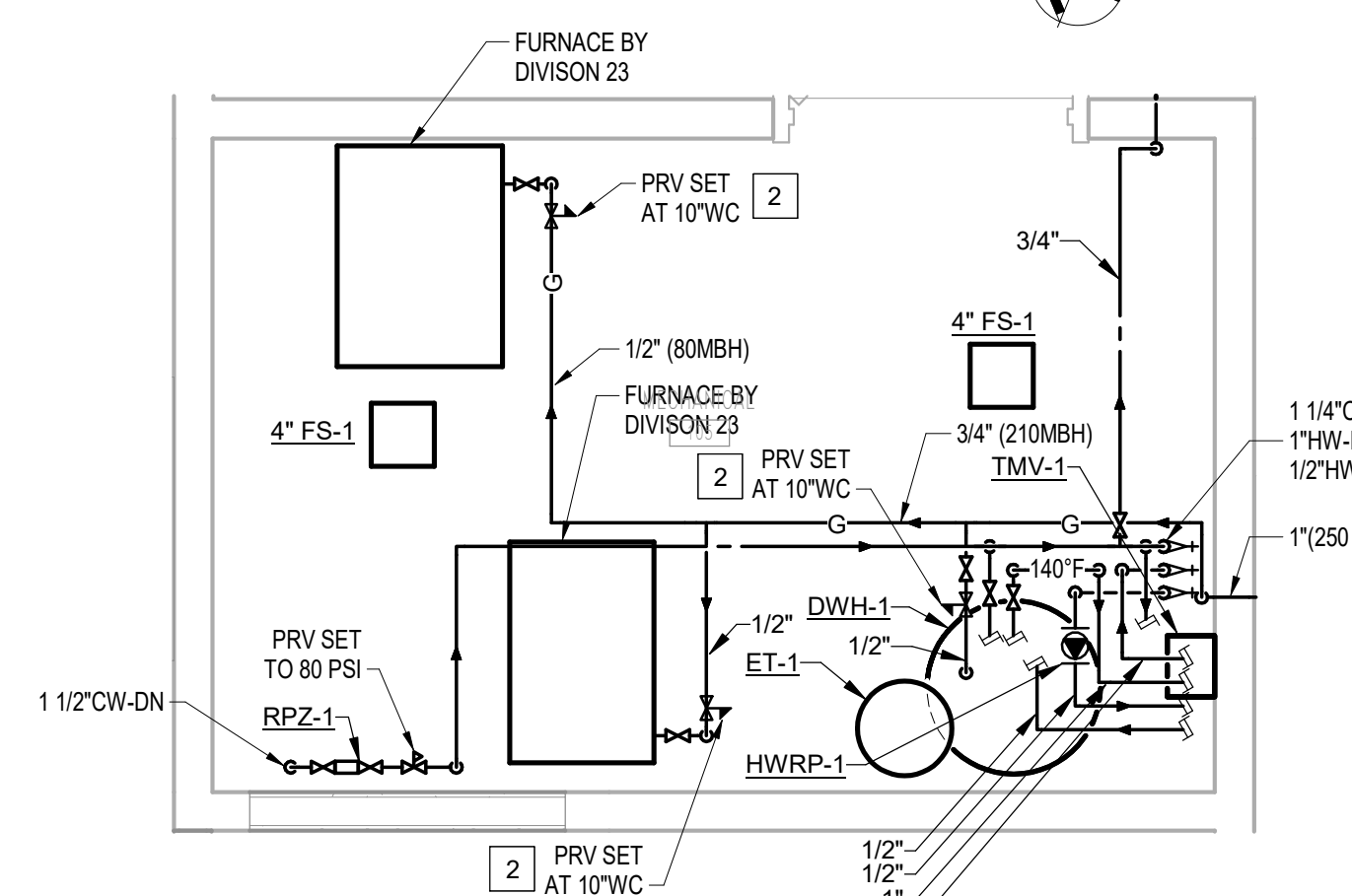
A. REFER TO ARCHITECTURAL DRAWINGS FOR A DESCRIPTION OF THE ALTERNATES.

**SHEET KEYNOTES**

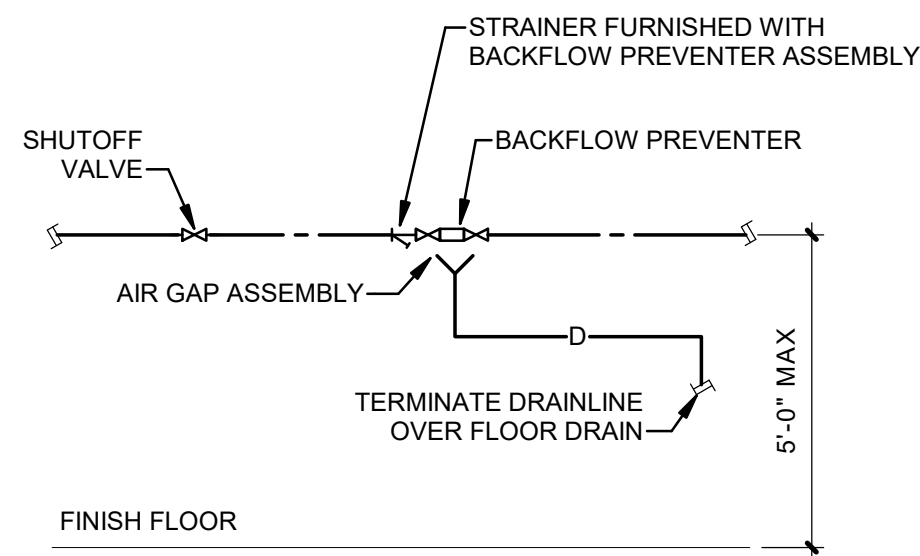
1. PROVIDE ISLAND VENT. REFER TO DETAIL #5 ON SHEET P501 FOR ADDITIONAL INFORMATION.
2. EXISTING EQUIPMENT DID NOT REQUIRE PRV'S BASED UPON THE EXISTING NATURAL GAS SYSTEM PRESSURE. PROVIDE PRV'S AS REQUIRED.



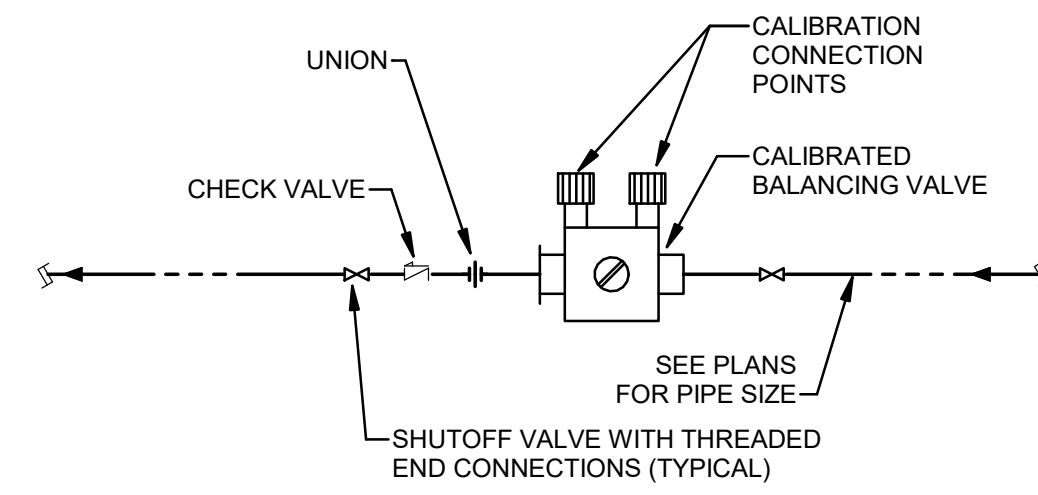
**1 PLUMBING FIRST FLOOR PLAN - NEW WORK**  
1/4" = 1'-0"



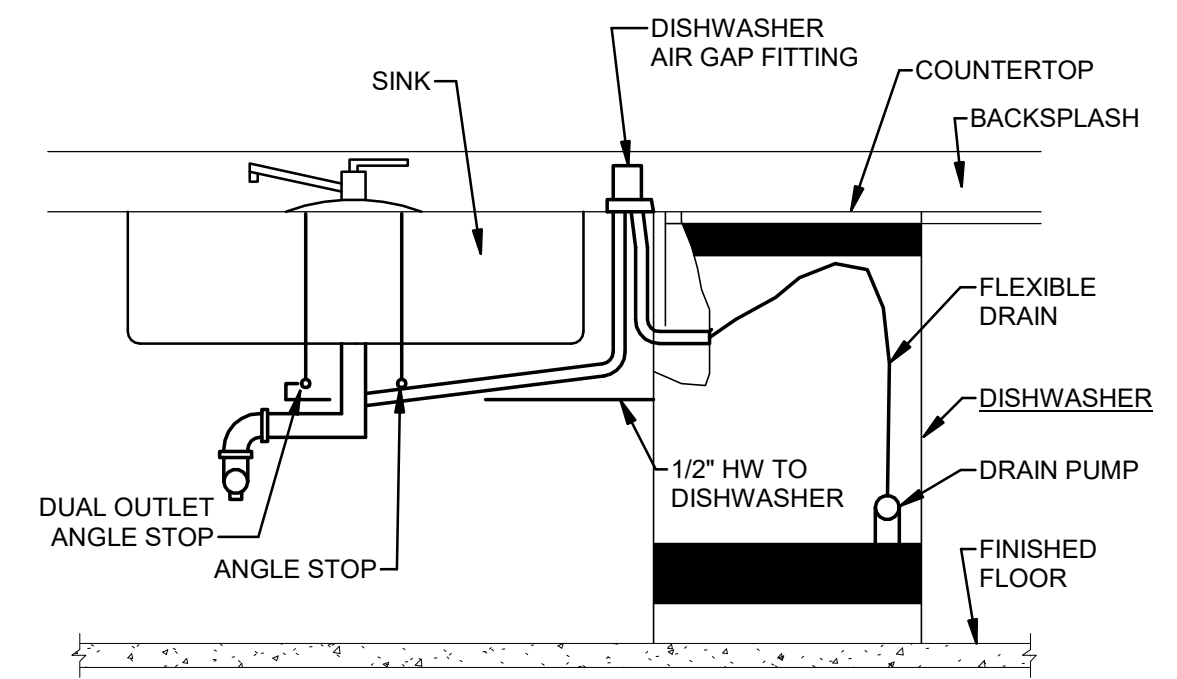
**2 PLUMBING FIRST FLOOR PLAN - NEW WORK ENLARGED PLAN**  
1/2" = 1'-0"



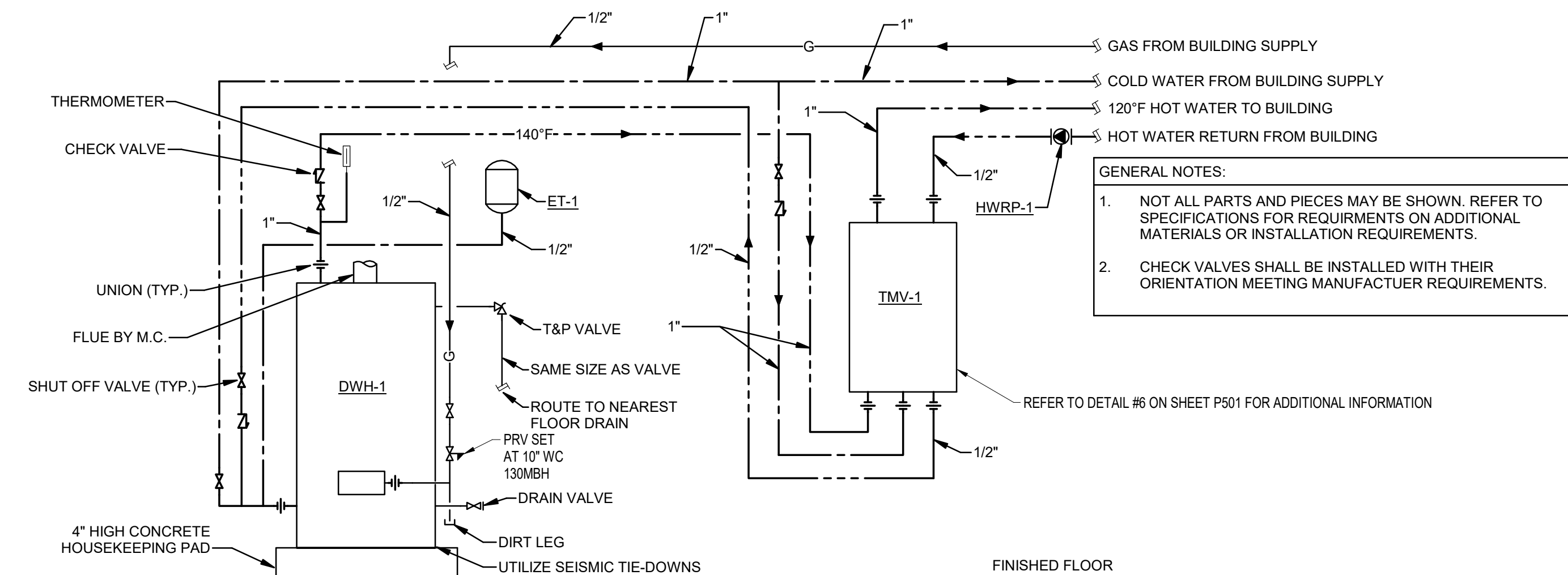
**1 BACKFLOW PREVENTER**  
NONE



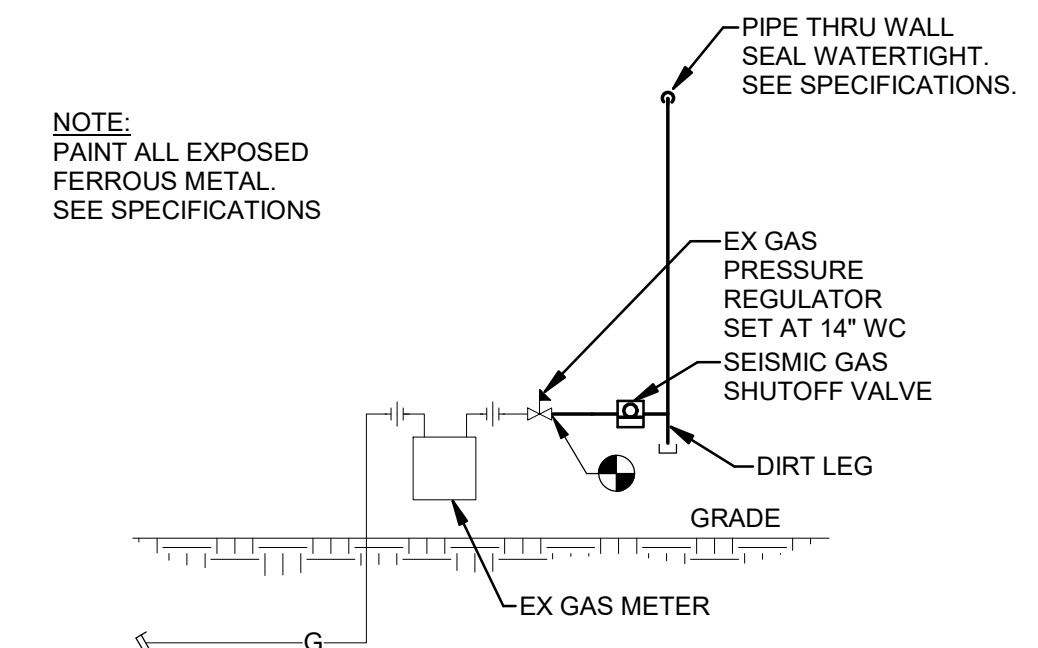
**2 CALIBRATED BALANCING VALVE**  
NONE



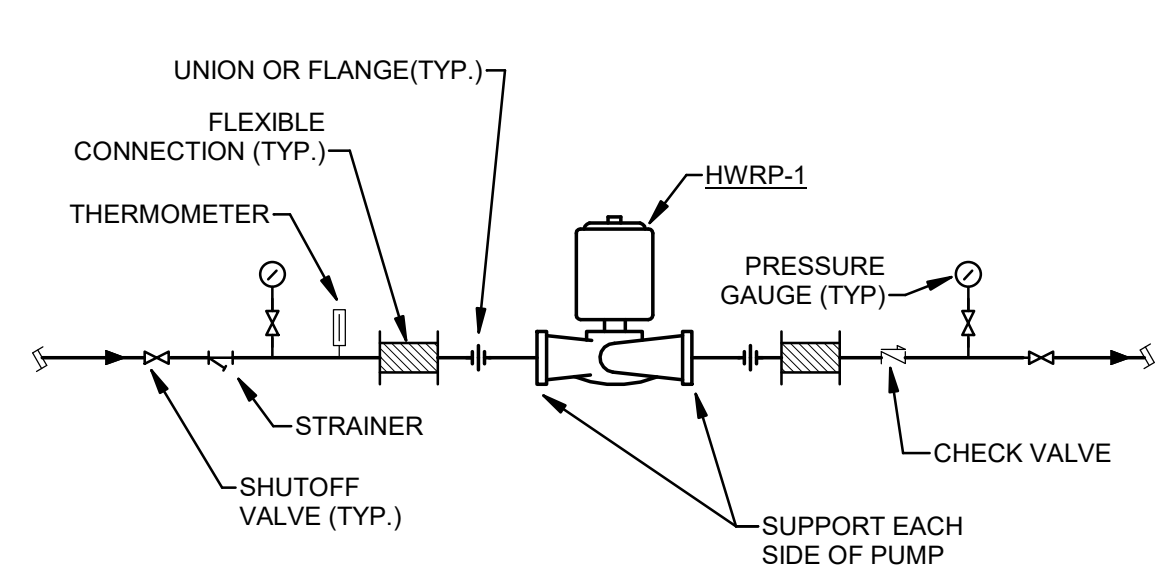
**3 DISHWASHER DRAIN**  
NONE



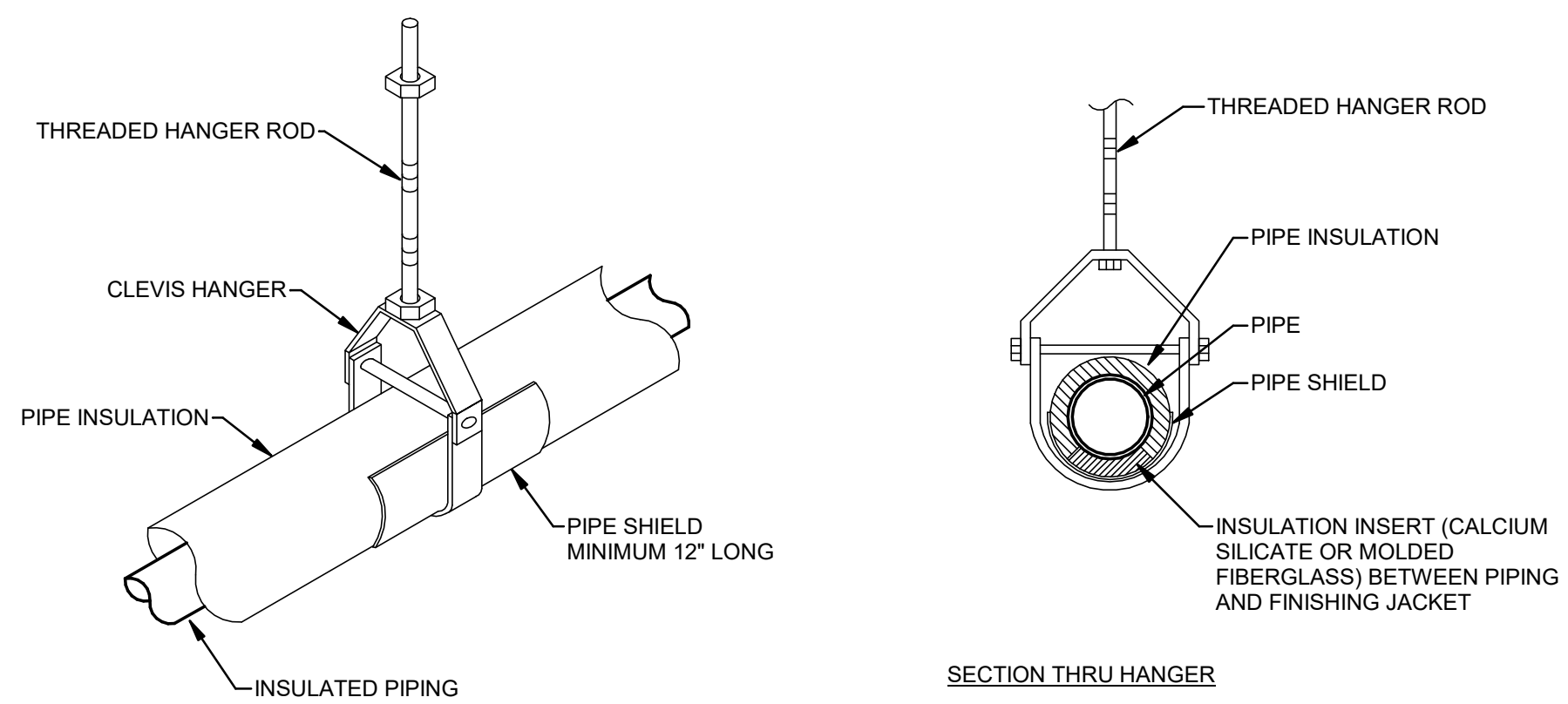
**4 DOMESTIC WATER HEATER - GAS WITH ALL-IN-ONE**  
TMV



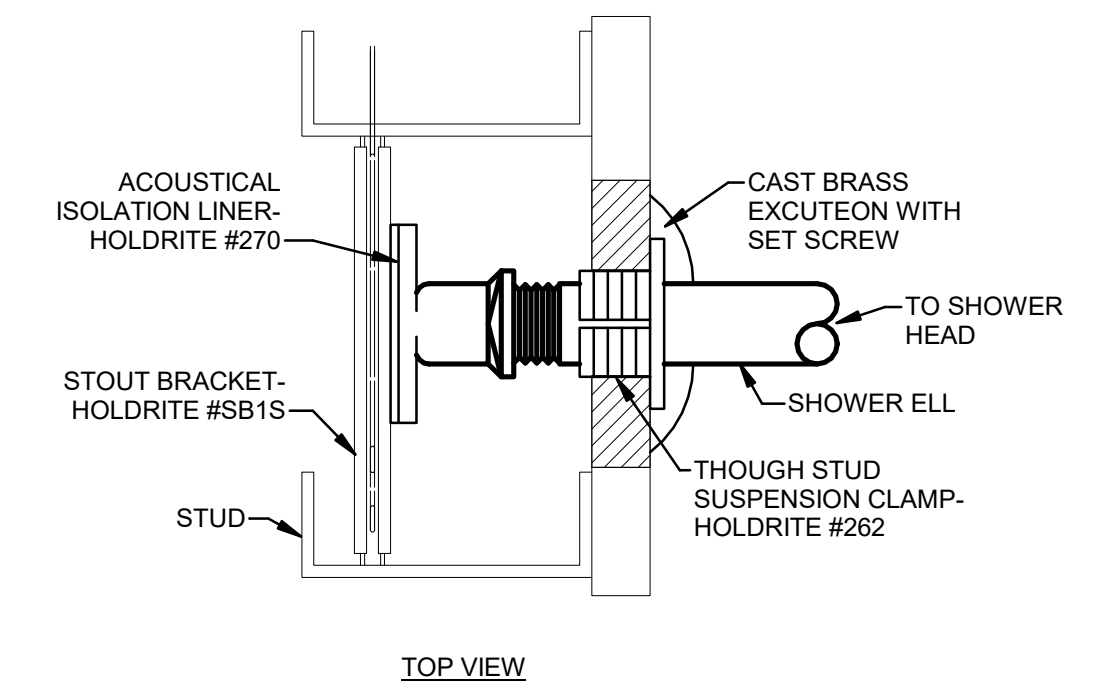
**5 GAS METER DETAIL**  
NONE



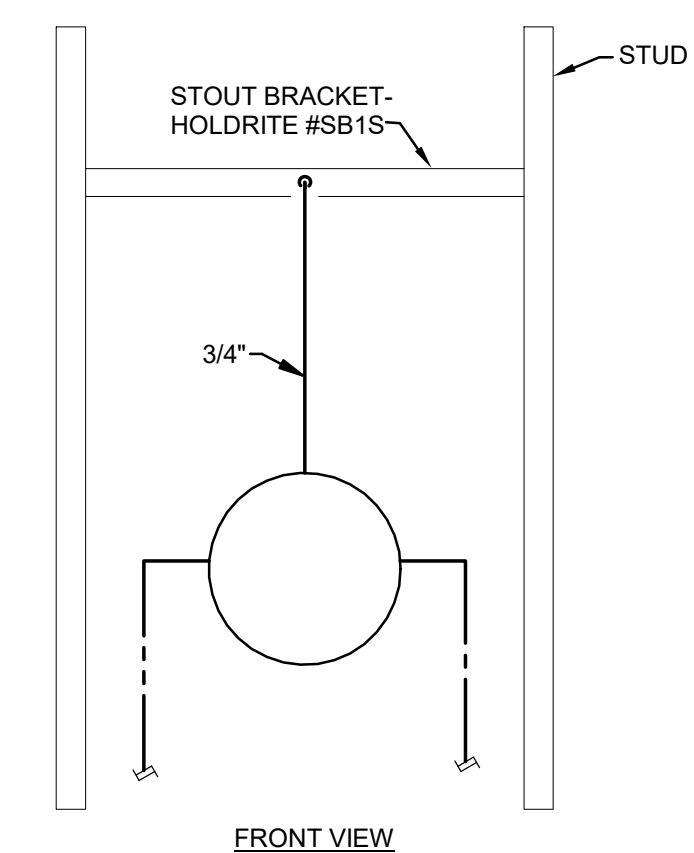
**6 HOT WATER RECIRCULATING PUMP**  
NONE



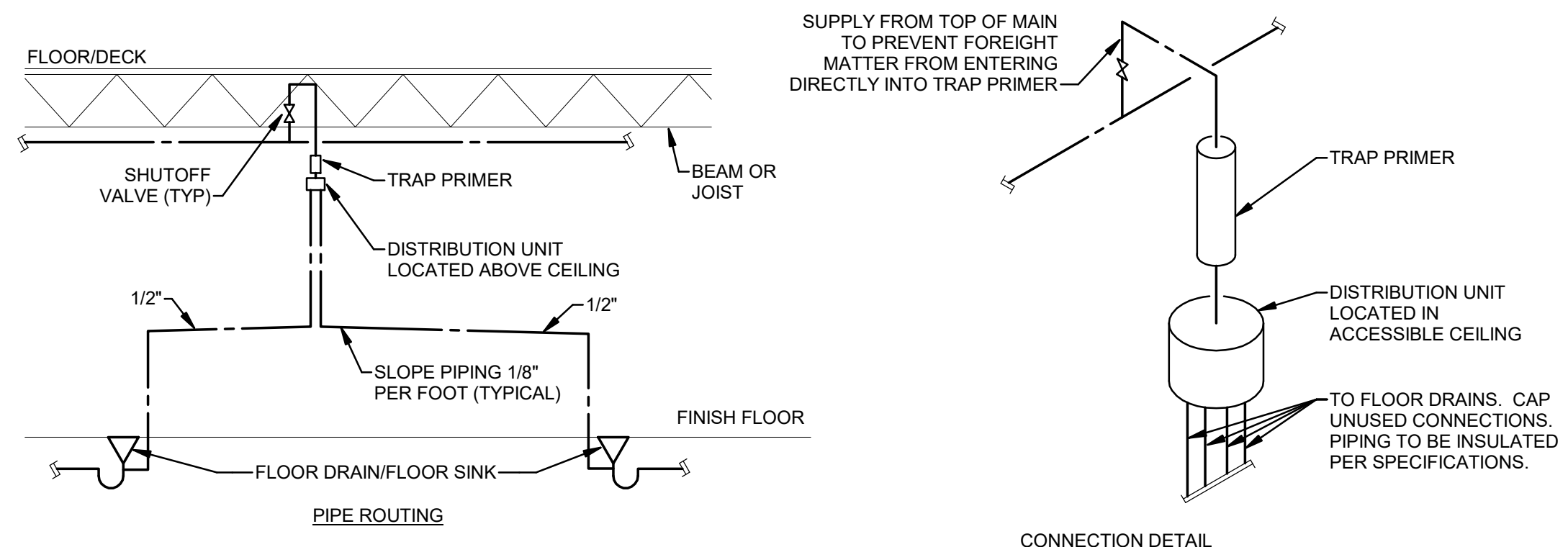
**7 INSULATED PIPE HANGER SUPPORT**  
NONE



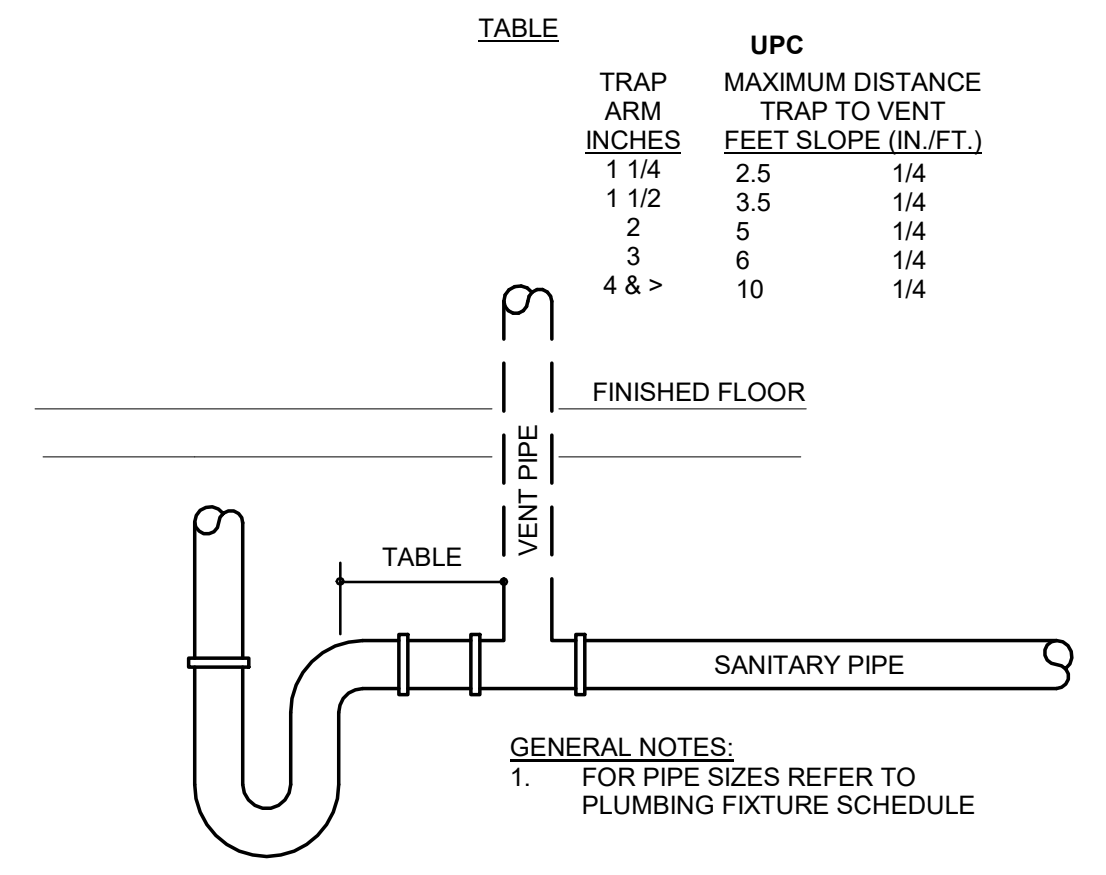
**8 SHOWER HEAD BRACING**  
NONE



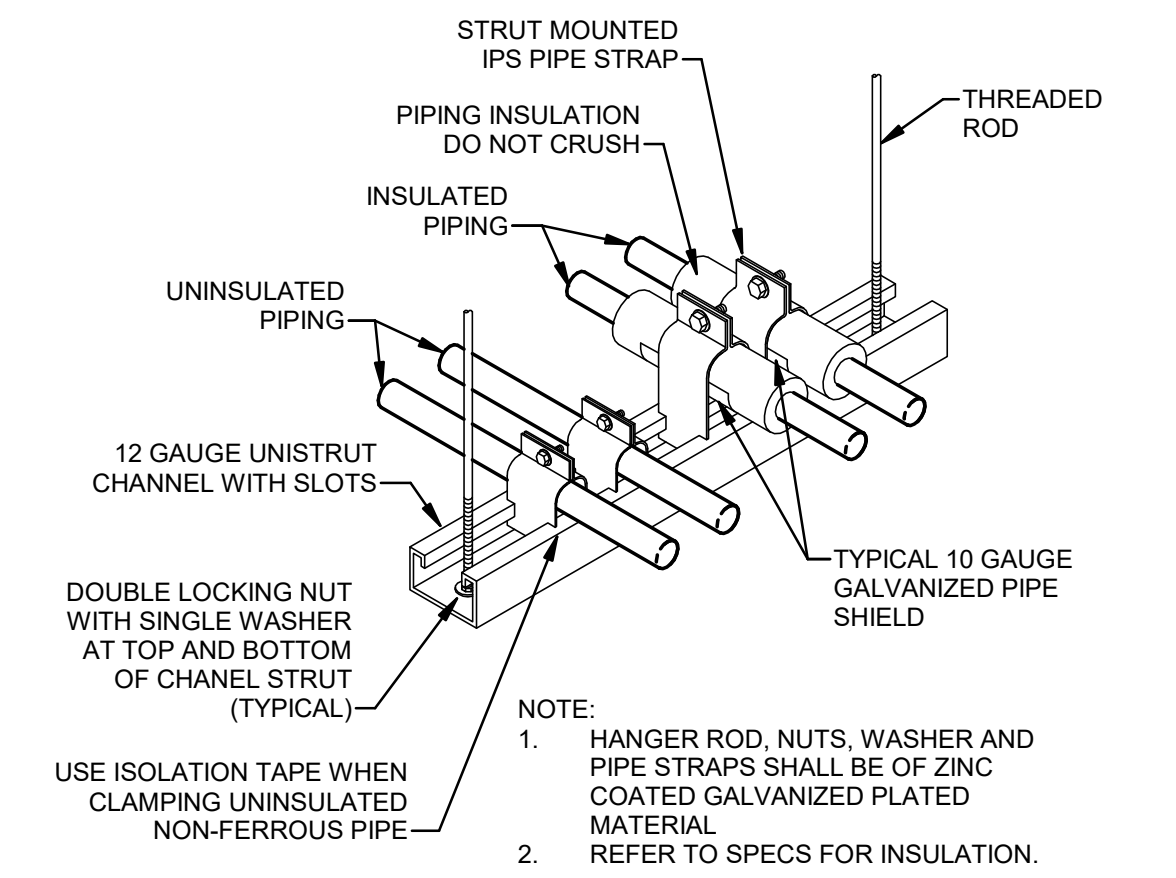
**9 TRAP PRIMER**  
NONE



**10 TRAP TO VENT MAXIMUM DISTANCE**  
NONE



**11 TRAPEZE PIPE SUPPORT**  
NONE



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ISSUE DATE: 09/17/2025

CAD DWG FILE:  
DRAWN BY: MAS  
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SHEET TITLE:  
**PLUMBING DETAILS**

SHEET NUMBER:

**P500**

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09/17/2025



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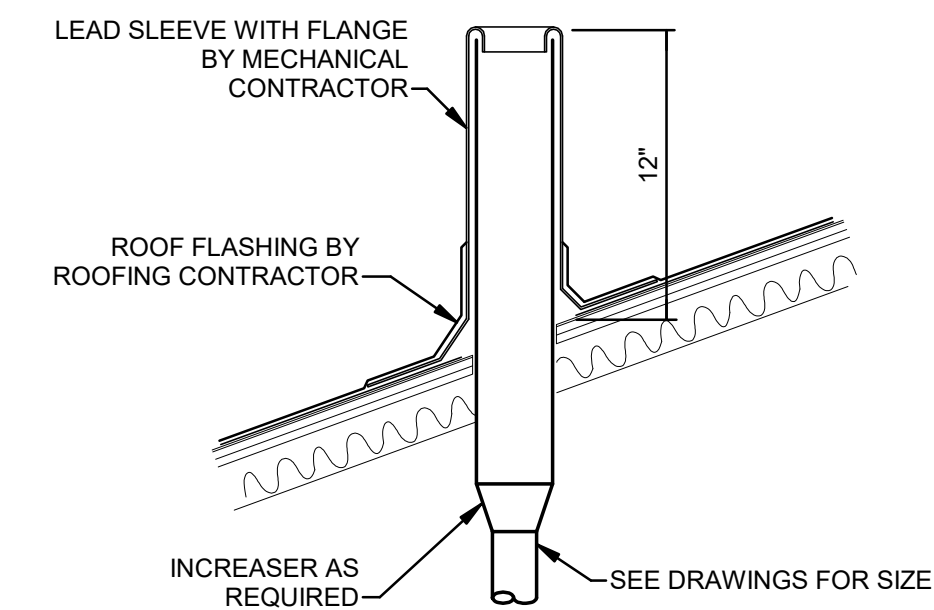
CAD DWG FILE:  
DRAWN BY: MAS  
CHECKED BY: DB  
DESIGNED BY: MAS

SHEET TITLE:  
**PLUMBING DETAILS  
CONTINUED**

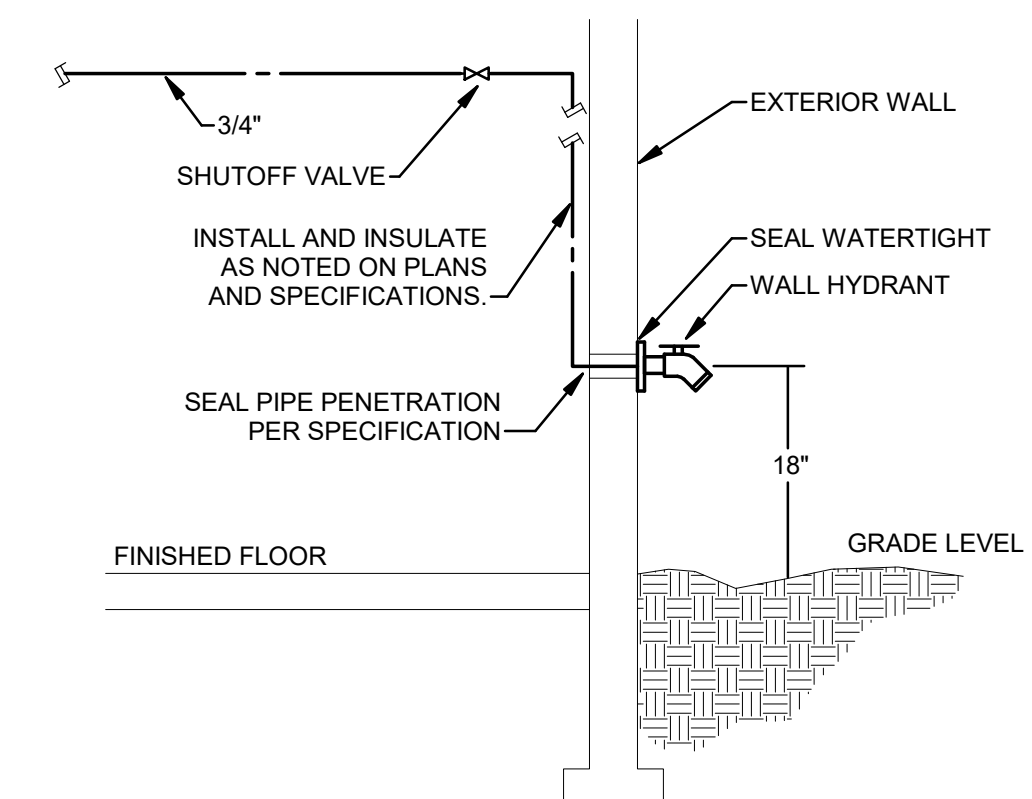
SHEET NUMBER:

**P501**

38 OF 64 SHEETS  
09/17/2025

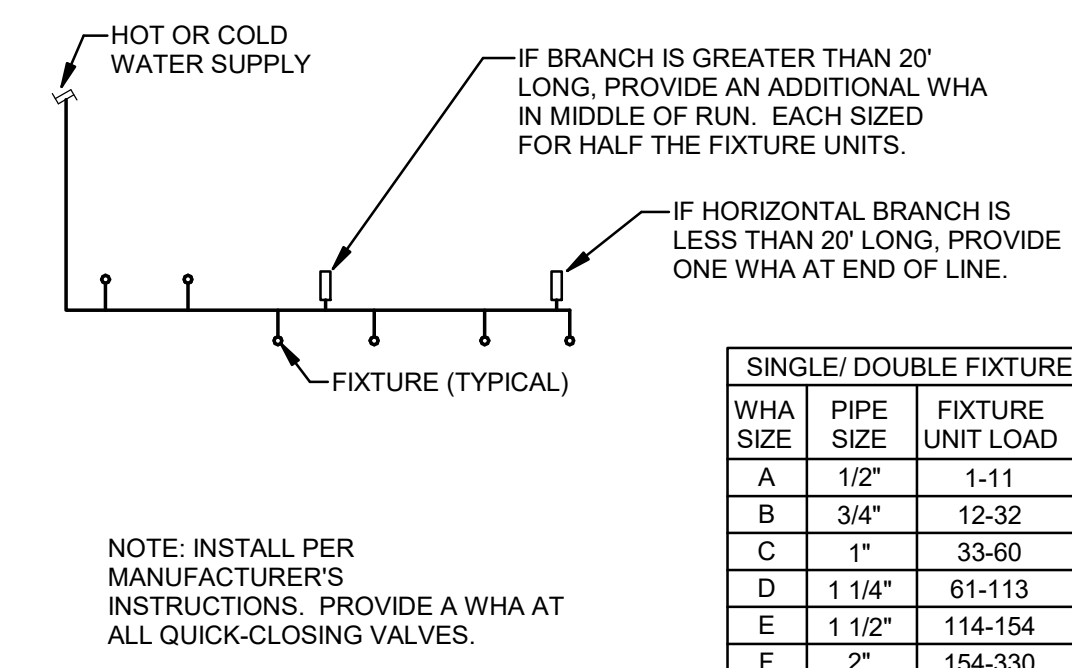


**1 VENT THRU PITCHED ROOF**  
NONE



GENERAL NOTES:  
1. CONTRACTORS SHALL COORDINATE LOCATION OF SHUT-OFF VALVE TO ENSURE ACCESSIBILITY.

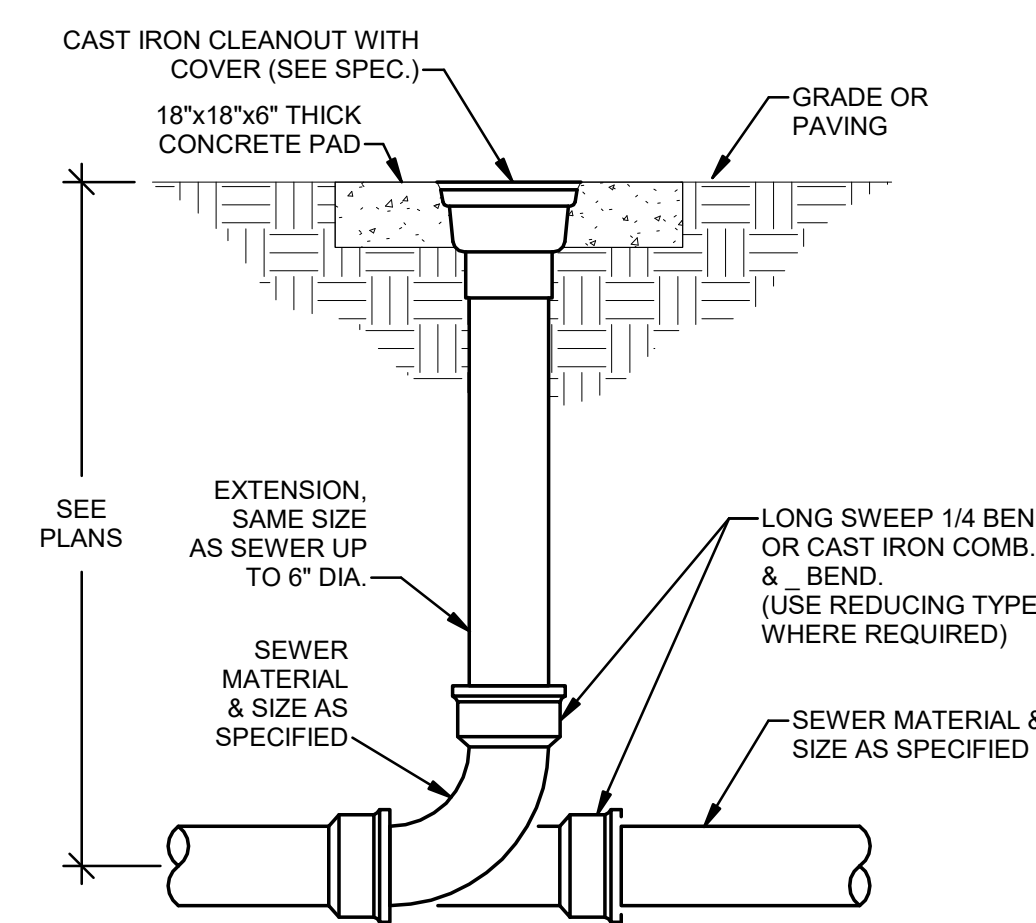
**2 WALL HYDRANT**  
NONE



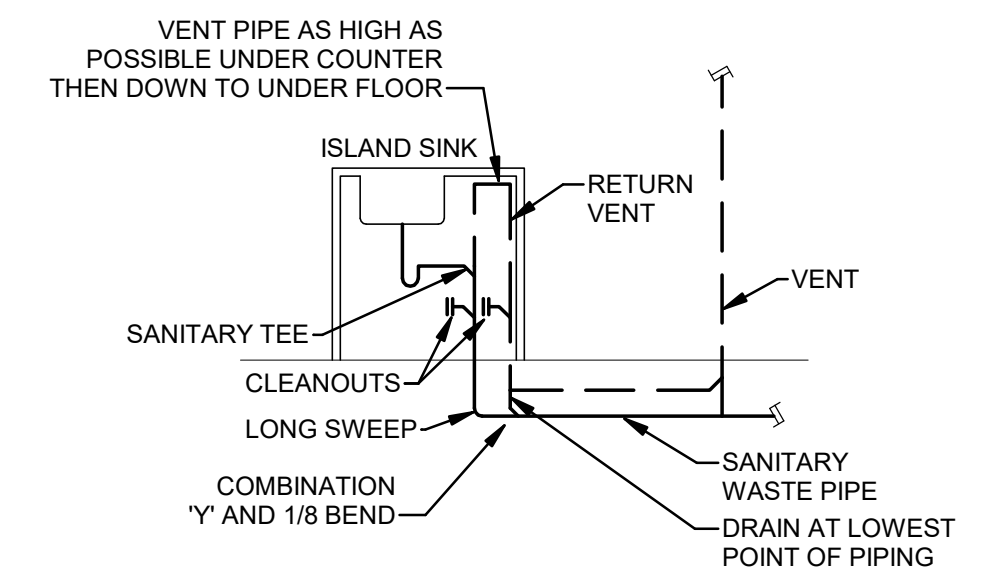
SINGLE/DOUBLE FIXTURE		
WHA SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1 1/4"	61-113
E	1 1/2"	114-154
F	2"	154-330

NOTE: INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE A WHA AT ALL QUICK-CLOSING VALVES.

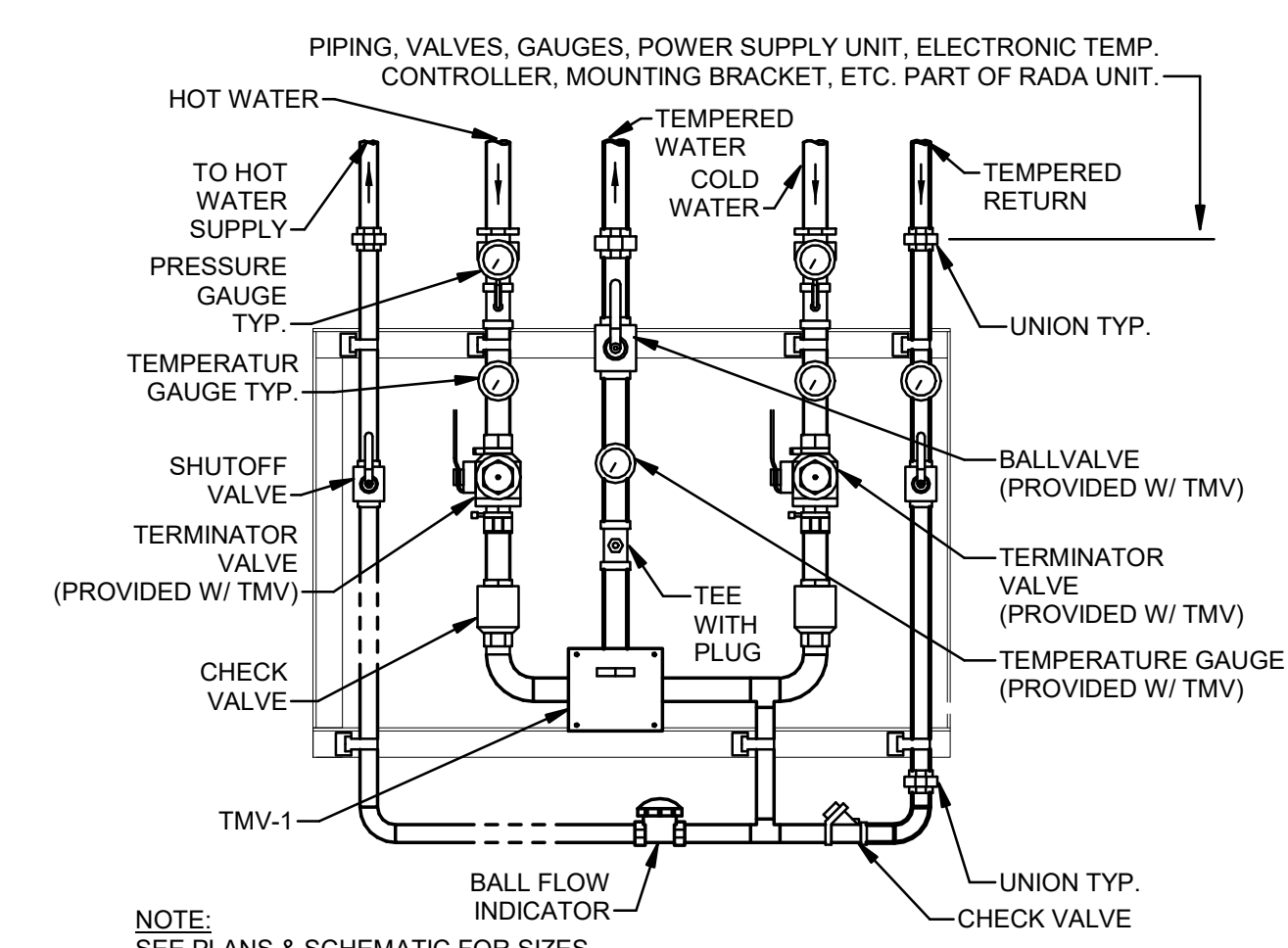
**3 WATER HAMMER ARRESTOR SCHEMATIC**  
NONE



**4 YARD CLEANOUT**  
NONE



**5 ISLAND SINK WASTE & LOOP VENT PIPING**  
NONE



**6 THERMOSTATIC MIXING VALVE**  
NONE

NONE

NONE



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SHEET TITLE:  
**PLUMBING  
SCHEDULES**

SHEET NUMBER:

**P600**

39 OF 64 SHEETS  
09/17/2025

**PLUMBING FIXTURE SCHEDULE**

PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	TRIM	DRAIN / TRAP	SUPPLIES	CARRIER	SEAT	HOT WATER	COLD WATER	TEMPERED WATER	SANITARY / WASTE	VENT	NOTES
LA-1	ANTI LIGATURE INTEGRAL LAVATORY	BY ARCHITECT	BY ARCHITECT	WHITEHALL MODEL WH3378-HC, MANUAL FAUCET W/ PUSHBUTTON FAUCET ON 4" CENTERS, 0.5 GPM LAMINAR FLOW	MCQUIRE 155WC OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	-	-	1/2"	1/2"	-	2"	2"	
LA-2	ADA WALL MOUNTED VITREOUS CHINA LAVATORY	AMERICAN STANDARD	91340004EC	CHICAGO FAUCETS MODEL #786-HGN8AE35-317AB, MANUAL FAUCET W/ 4" WRISTBLADE HANDLES, 1.5 GPM	MCQUIRE 155WC OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	JAY R. SMITH	-	1/2"	1/2"	-	2"	2"	INSULATE SUPPLY AND WASTE PIPING WITH TRUBRO #102 WHITE INSULATION KIT WITH #105 OFFSET DRAIN INSULATION KIT
MB-1	MOP BASIN	STERN-WILLIAMS	MTB-2424	T&S MODEL #B-0665-BSTR, WALL MOUNTED FAUCET	3" PVC P-TRAP	INTEGRAL SUPPLY STOPS	-	-	1/2"	1/2"	-	3"	2"	#1-35 HOSE AND WALL BRACKET, 3/8" HOSE WITH 3/4" CHROME COUPLING, TYPE 302 STAINLESS STEEL BRACKET WITH SPRING LOADED RUBBER GRIP.
OB-1	WASHING MACHINE OUTLET BOX WITH DRAIN	SIoux CHIEF	696-2303WR	-	2"	INTEGRAL	-	-	1/2"	1/2"	-	2"	2"	
SH-1	ADA SHOWER LIGATURE RESISTANT	BY ARCHITECT	BY ARCHITECT	WHITEHALL MODEL #WH418ADA-WHCHS, LIGATURE RESISTANT SHOWER SYSTEM W/ HANDHELD SHOWER, 1.5 GPM	FD-1	INTEGRAL	-	-	1/2"	1/2"	-	2"	2"	
SK-1	ADA SINGLE BOWL S/S SINK	ELKAY	DLR252210	CHICAGO FAUCETS MODEL #434-ABBN, MANUAL FAUCET W/ PULL-DOWN SPOUT, 1.5 GPM	GRID DRAIN/CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	-	-	1/2"	1/2"	-	2"	2"	
WC-1	ADA LIGATURE RESISTANT FLOOR MOUNTED TANK TYPE WATER CLOSET	WHITEHALL	WH2145_12-PBR	-	INTEGRAL	CHICAGO FAUCET LOOSE KEY STOPS	-	WHITEHALL	-	1/2"	-	4"	2"	
WC-2	ADA FLOOR MOUNTED TANK TYPE WATER CLOSET	AMERICAN STANDARD	2467.016	-	INTEGRAL	CHICAGO FAUCET LOOSE KEY STOPS	-	BEMIS	-	1/2"	-	4"	2"	
WH-1	FREEZE RESISTANT WALL HYDRANT	WOODFORD	B67	-	-	-	-	-	-	3/4"	-	-	-	

**WATER HEATER SCHEDULE**

PLAN MARK	MARK NUMBER	DESCRIPTION	MANUFACTURER	MODEL	STORAGE	RECOVERY	TEMPERATURE RISE	ELECTRICAL DATA	FUEL SOURCE	BTU/H	NOTES
DWH	1	DOMESTIC WATER HEATER	AO SMITH	BSS130	34 GAL	165 GPH	90°F	120V	NATURAL GAS	130,000	

**CIRCULATING PUMP SCHEDULE**

PLAN MARK	MARK NUMBER	DESCRIPTION	MANUFACTURER	MODEL	GPM	HEAD (FT.)	RPM	HP	ELECTRICAL DATA	NOTES
HWRP	1	HOT WATER RETURN PUMP	TACO	007E-SF4	1	4	4830	FRACTIONAL	120V/ 60Hz/ 1 PH	

**EXPANSION TANK SCHEDULE**

PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	SERVICE	NOMINAL SIZE		CAPACITY	VOLUME	NOTES
					DIAMETER	HEIGHT			
ET-1	EXPANSION TANK	AMTROL	ST-12	DOMESTIC HOT WATER	11"	15"	6.0 GAL	4.4 GAL	

**REDUCED PRESSURE BACKFLOW PREVENTER SCHEDULE**

PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	PEAK FLOW (GPM)	MAX PRESSURE DROP (PSI)	SIZE	NOTES
RPZ-1	REDUCED PRESSURE BACKFLOW PREVENTER	WATTS	LF009QT	15 GPM	22 PSI	1/2"	

**THERMOSTATIC MIXING VALVE SCHEDULE**

PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	LOCATION	FLOW		LEAVING TEMPERATURE	NOTES
					MINIMUM GPM	GPM @ 10PSI LOSS		
TMV-1	THERMOSTATIC MIXING STATION	MGI CONTROLS	SFMMV-1-T-OT	MECHANICAL 105	0.5 GPM	7	120°F	

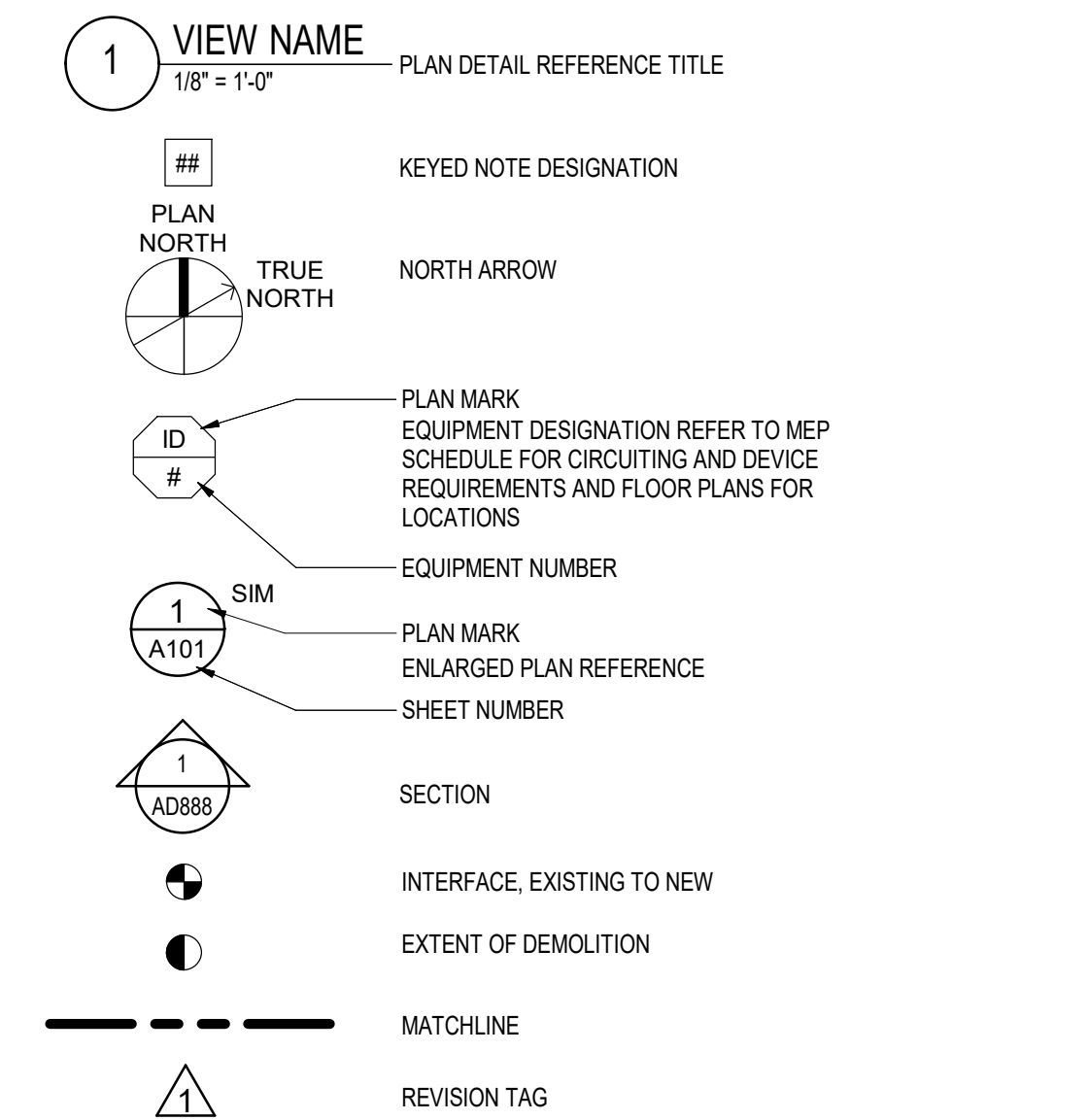
**DRAIN SCHEDULE**

PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	BODY	STRAINER	NOTES
FD-1	SQUARE FLOOR DRAIN	JAY R. SMITH	2005Y-NB	CAST IRON	NICKEL BRONZE	PROVIDE TRAP PRIMER CONNECTION
FD-2	SQUARE FLOOR DRAIN	WHITEHALL MANUFACTURER	HFD-6SQ-2NH-SSW	CAST IRON	STAINLESS STEEL	PROVIDE TRAP PRIMER CONNECTION
FS-1	FLOOR SINK	JAY R. SMITH	3100Y-12	CAST IRON	NICKEL BRONZE	PROVIDE TRAP PRIMER CONNECTION

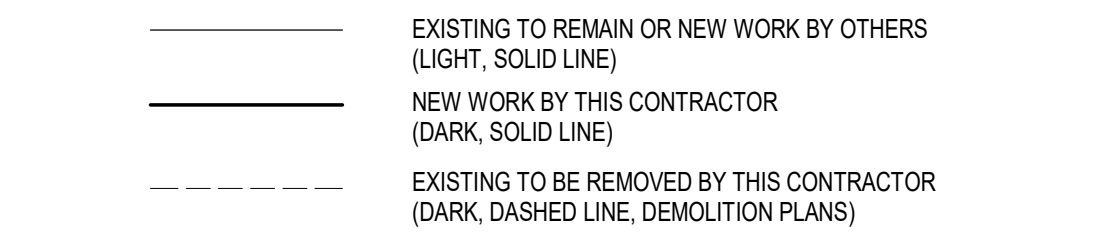
**BALANCING VALVE SCHEDULE**

PLAN MARK	DESCRIPTION	SIZE	ADJUSTED FLOW RATE	LOCATION	NOTES
CBV-1	CALIBRATED BALANCING VALVE	1/2"	1.0 GPM	CRAWL SPACE	

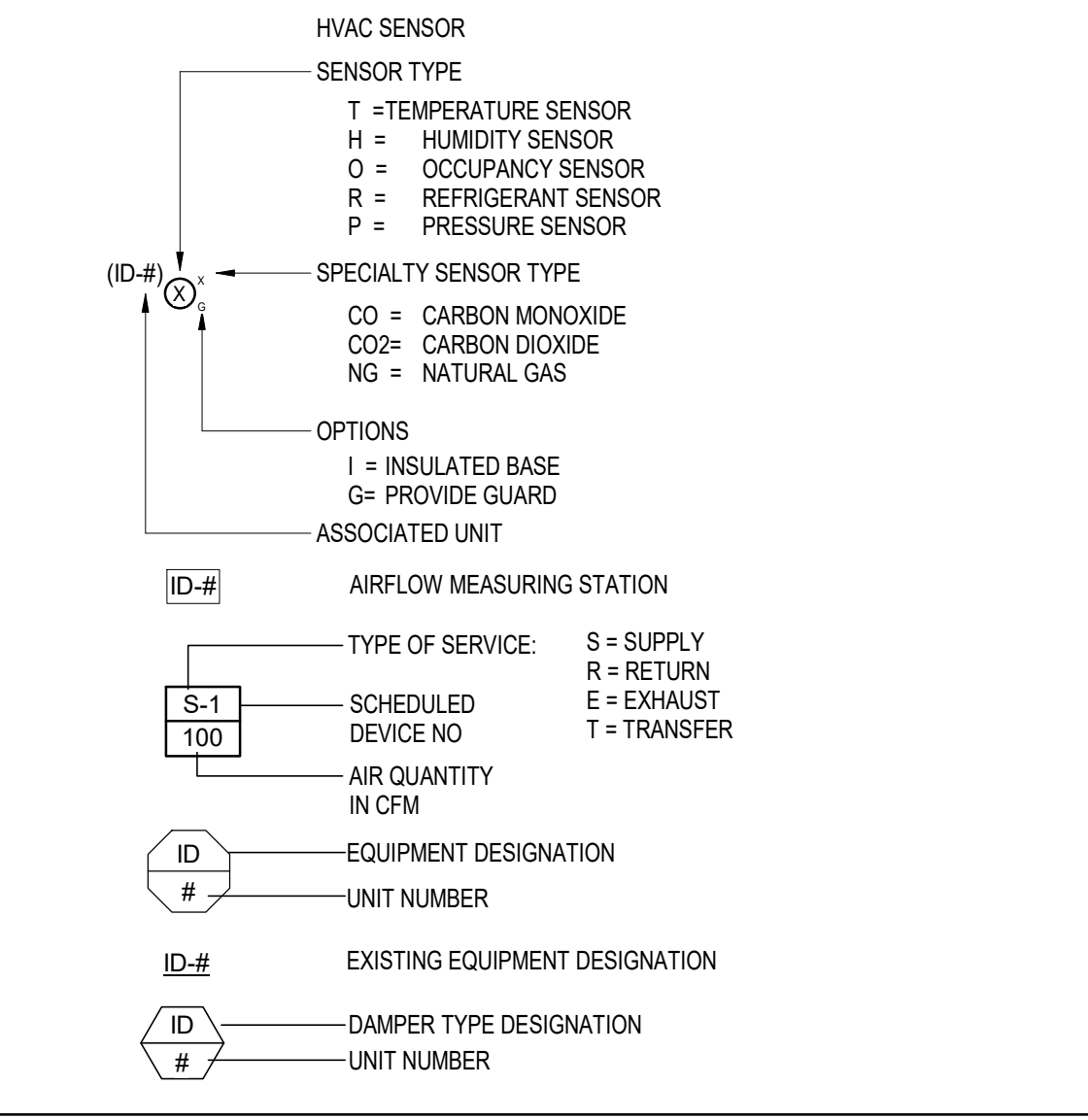
### DRAWING REFERENCES



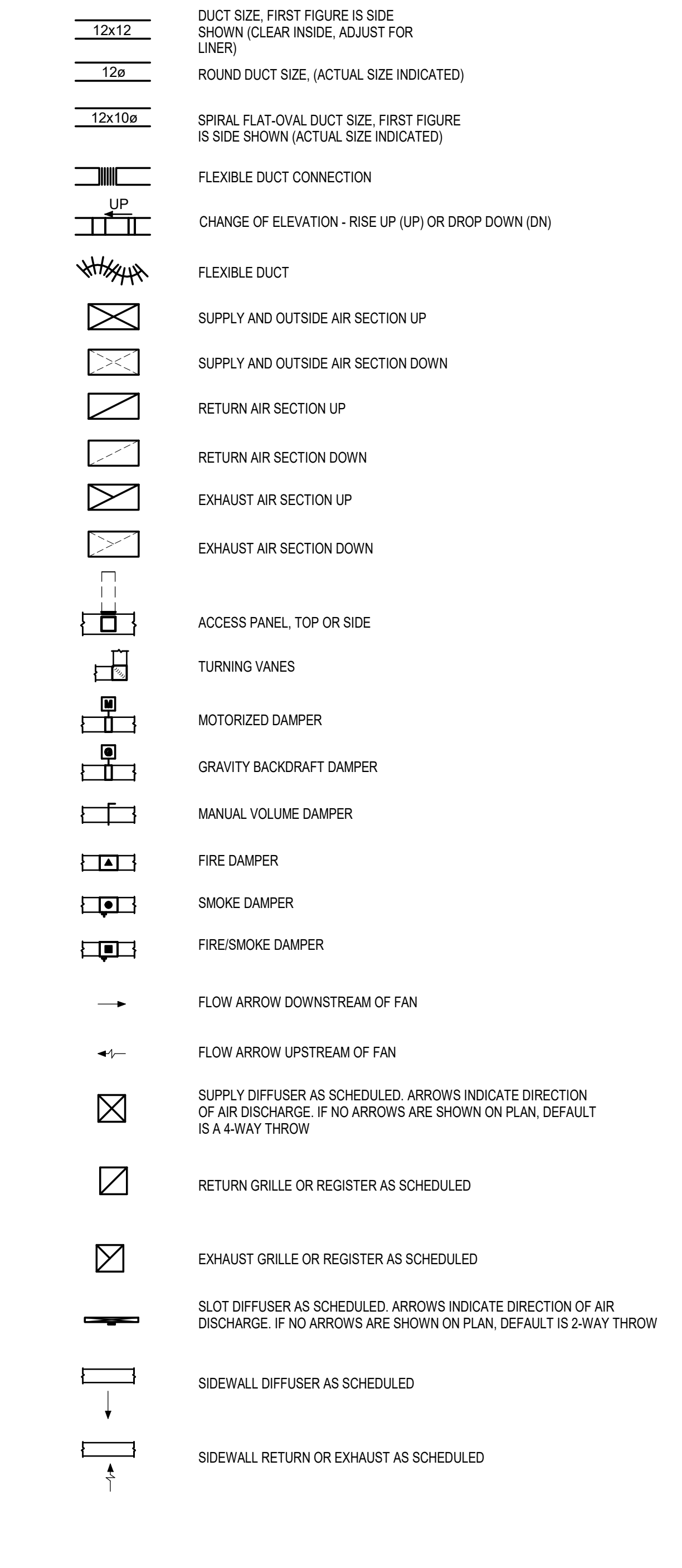
### LINE TYPE LEGEND



### MECHANICAL SYMBOLS



### DUCT SYSTEM SYMBOLS



### MECH EQUIPMENT DESIGNATION

MECH	EQUIPMENT DESIGNATION
ACC	AIR CURTAIN
ACC	AIR COOLED CONDENSER
ACU	AIR CONDITIONING UNIT
ACV	AIR CONTROL VALVE
AF	AIR FILTER
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
ATU	AIR TERMINAL UNIT
B	BOILER
BCU	BLOWER COIL UNIT
BS	BASKET STRAINER
BT	BUFFER TANK
CAV	CONSTANT AIR VOLUME
CB	CHILLED BEAM
CC	COOLING COIL
CCP	CHEMICAL FEED PUMP
CH	CHILLER
CP	CONDENSER WATER PUMP
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRP	CONDENSATE RETURN PUMP
CSG	CLEAN STEAM GENERATOR
CT	COOLING TOWER
CTF	COOLING TOWER FILTER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CVR	CONVECTOR
CWP	CHILLED WATER PUMP
DFH	DEAERATING FEEDWATER HEATER
DHU	DESSICANT DEHUMIDIFICATION UNIT
DMC	DUCT MOUNTED COIL
EAV	EXHAUST AIR VALVE
EF	EXHAUST FAN
EJ	EXPANSION JOINT
ERU	ENERGY RECOVERY UNIT
ET	EXPANSION TANK
EVC	EVAPORATIVE COOLER
F	FAN
FAV	FUME AIR VALVE
FC	FLUID COOLER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FFU	FAN FILTER UNIT
FSD	COMBINATION FIRE/SMOKE DAMPER
FT	FLASH TANK
FTR	FIN-TUBE RADIATION
FTU	FAN TERMINAL UNIT
FUR	GAS FIRED FURNACE (*NEED APPROVAL)
GMU	GLYCOL MAKEUP UNIT (*NEED APPROVAL)
GP	GLYCOL PUMP
GV	GRAVITY VENTILATOR
H	HUMIDIFIER
HC	HEATING COIL
HEV	HOOD EXHAUST VALVE
HPU	HEAT PUMP UNIT
HRU	HEAT RECOVERY UNIT
HWP	HEATING WATER PUMP
HX	HEAT EXCHANGER
L	LOUVER
MAU	MAKE-UP AIR UNIT
MD	MOTORIZED DAMPER
P	PUMP
PAC	PACKAGED AIR CONDITIONING UNIT
PCWP	PRIMARY CHILLED WATER PUMP
PG	PIPE GUIDE
PHWP	PRIMARY HEATING WATER PUMP
PHX	PLATE HEAT EXCHANGER
PRV	PRESSURE REGULATING VALVE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
RFN	RETURN FAN
RHC	TERMINAL REHEAT COIL
RP	RADIANT PANEL
RTU	ROOFTOP UNIT
RV	ROOF VENTILATOR (*NEED APPROVAL)
SA	SOUND ATTENUATOR
SAV	SUPPLY AIR VALVE
SCWP	SECONDARY CHILLED WATER PUMP
SD	SMOKE DAMPER
SF	SUPPLY FAN
SHWP	SECONDARY HEATING WATER PUMP
SPP	STEAM PRESSURE PUMP
SSCU	SPLIT SYSTEM CONDENSING UNIT (*NEED APPROVAL)
SSFU	SPLIT SYSTEM FAN/COIL UNIT (*NEED APPROVAL)
ST	STEAM TRAP
T	TANK
TCP	TEMPERATURE CONTROL PANEL
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
VI	VIBRATION ISOLATION
VRF	VRF INDOOR UNIT
VRHU	VRF HEAT RECOVERY UNIT (*NEED APPROVAL)
WCC	WATER COOLED CONDENSER
WSP	WATER SOURCE HEAT PUMP

### MECHANICAL ABBREVIATIONS

A	AIR OR AMP (PER CONTEXT)	JS	JOIST SPACE
ACC	ACCESSORIES	KW	KILOWATTS
ACD	ACCESS DOOR	L	LENGTH
AFS	ABOVE FINISHED FLOOR	LAT	LEAVING AIR TEMPERATURE
AFV	AIR FLOW SWITCH	LB(S)	POUNDS
AHRI	AIR CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE	LF	LINEAR FEET
AI	ANALOG SIGNAL INPUT	LRA	LOCKED ROTOR AMPS
AMB	AMBIENT	LS	LIGHT SPACE
AO	ANALOG SIGNAL OUTPUT	LVL	LEVEL
AP	ACCESS PANEL	LWT	LEAVING WATER TEMPERATURE
APD	AIR PRESSURE DROP	MAN	MANUAL
APLV	APPLICATION PART LOAD VALUE	MANU	MANUFACTURER
APPROX	APPROXIMATE	MAX	MAXIMUM
ARCH	ARCHITECTURE/ARCHITECT	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
AUX	AUXILIARY	MCA	MINIMUM CIRCUIT AMPS
AV	AUTOMATIC VENT	MCC	MOTOR CONTROL CENTER
AVG	AVERAGE	MECH	MECHANICAL
BDD	BACK DRAFT DAMPER	MERV	MINIMUM EFFICIENCY REPORTING VALUE (ASHRAE 52.2)
BFC	BELOW FINISHED CEILING	MFR	MANUFACTURER
BFP	BACKFLOW PREVENTER	MIN	MINIMUM OR MINUTE (PER CONTEXT)
BHP	BRAKE HORSEPOWER	MTD	MOUNTED
BI	BINARY SIGNAL INPUT	MTL	METAL
BMS	BUILDING MANAGEMENT SYSTEM	MTL	MANUAL VENT
BO	BINARY SIGNAL OUTPUT	NC	NORMALLY CLOSED OR NOISE CRITERIA (PER CONTEXT)
BOB	BOTTOM OF BEAM	NIC	NOT IN CONTRACT
BOD	BOTTOM OF DUCT	NO	NORMALLY OPEN OR NUMBER (PER CONTEXT)
BOP	BOTTOM OF PIPE	NOM	NOMINAL
BS	BEAM SPACE	NPLV	NON-STANDARD PART LOAD VALUE
BTU	BRITISH THERMAL UNIT	NPSH	NET POSITIVE SUCTION HEAD
BTUH	BRITISH THERMAL UNITS PER HOUR	NTS	NOT TO SCALE
BWE	BAKED WHITE ENAMEL	OA	OUTSIDE AIR
CAP	CAPACITY	OBD	OPPOSED BLADE DAMPER
CAV	CONSTANT AIR VOLUME	OC	ON CENTER
CFH	CUBIC FEET PER HOUR	OD	OUTSIDE DIAMETER
CFM	CUBIC FEET PER MINUTE	OT	OIL TRAP
CI	CAST IRON	PA	PIPE ANCHOR
CLG	COOLING DUCT (COLD DUCT)	PBD	PARALLEL BLADE DAMPER
CO	CLEAN OUT	PD	PRESSURE DROP
COMP	COMPRESSOR	PENT	PENTHOUSE
CONC	CONCRETE	PH	PHASE
COND	CONDENSATE	PHC	PREHEAT COIL
CONN	CONNECTION	PLBG	PLUMBING
CORR	CORRIDOR	PNEU	PNEUMATIC
CV	CONTROL VALVE	PPH	POUNDS PER HOUR
D	DEPTH	PRESS	PRESSURE
DB	DRY BULB	PRV	PRESSURE REGULATING VALVE
DEFL	DEFLECTION	PSI	POUNDS PER SQUARE INCH
DEG	DEGREES	PSIA	POUNDS PER SQUARE INCH ABSOLUTE
DEG F	DEGREES FAHRENHEIT	PSIG	POUNDS PER SQUARE INCH GAUGE
DES	DESIGN	QTY	QUANTITY
DIA	DIAMETER	RA	RETURN AIR
DIM	DIMENSION	RAD	RADIATED
DISCH	DISCHARGE	RD	ROOF DRAIN
DIV	DIVISION	REFR	REFRIGERANT
DN	DOWN	REQ	REQUIRED
DP	DIFFERENTIAL PRESSURE SENSOR	RH	RELATIVE HUMIDITY
DPS	DIFFERENTIAL PRESSURE SWITCH	RLA	RUNNING LOAD AMPS
DTL	DETAIL	RM	ROOM
DWG(S)	DRAWING(S)	RND	ROUND
EA	EXHAUST AIR OR EACH (PER CONTEXT)	RPM	REVOLUTIONS PER MINUTE
EAT	ENTERING AIR TEMPERATURE	SA	SUPPLY AIR
EER	ENERGY EFFICIENT RATIO	SAN	SANITARY
EFF	EFFICIENCY	SECN	SECTION
ELEC	ELECTRIC	SEER	SEASONAL ENERGY EFFICIENCY RATIO
ELEV	ELEVATION	SEG	SECURITY EXHAUST GRILLE
EQ	EQUAL	SENS	SENSIBLE
ESP	EXTERNAL STATIC PRESSURE	SF	SQUARE FOOT
EWB	ENTERING AIR WET BULB TEMPERATURE	SH	SENSIBLE HEAT
EWT	ENTERING WATER TEMPERATURE	SHIT	SHEET
EXH	EXHAUST	SND	SOUND
EXIST, EX	EXISTING	SOL	SOLENOID
EXT	EXTERNAL	SP	STATIC PRESSURE
F	FAHRENHEIT	SPT	STATIC PRESSURE DIFFERENTIAL
F&T	FLOAT AND THERMOSTATIC	SPT	STATIC PRESSURE TRANSMITTER
FC	FLEXIBLE CONNECTION	SQ	SQUARE
FD	FLOOR DRAIN	SRG	SECURITY RETURN GRILLE
FDC	FIRE DEPARTMENT CONNECTION	SSG	SECURITY SUPPLY GRILLE
FE	FLUE EXHAUST	SST	STAINLESS STEEL
FIN	FINISHED	STG	SECURITY TRANSFER GRILLE
FLR	FLOOR	STL	STEEL
PFM	FINS PER FOOT	STM	STEAM
FFM	FEET PER MINUTE	T&P	TEMPERATURE AND PRESSURE
FS	FLOW SWITCH	TC	TEMPERATURE CONTROL
FT	FEET	TD	THERMODYNAMIC OR TEMPERATURE DIFFERENTIAL (PER CONTEXT)
FT-HD	HEAD IN FEET	TDH	TOTAL DYNAMIC HEAD
GA	GAUGE	TEMP	TEMPERATURE
GAL	GALLONS	TOT	TOTAL
GALV	GALVANIZED	TPD	TOTAL PRESSURE DROP
GC	GENERAL CONTRACTOR	TSP	TOTAL STATIC PRESSURE
GPH	GALLONS PER HOUR	TYP	TYPICAL
GPM	GALLONS PER MINUTE	UC	UNDERCUT DOOR
H	HEIGHT	UG	UNDERGROUND
HD	HEAD	UNO	UNLESS NOTED OTHERWISE
HEV	HOSE END VALVE	V	VOLTS
HORIZ	HORIZONTAL	VAC	VACUUM
HP	HORSEPOWER	VD	VOLUME DAMPER (MANUAL)
HR	HOUR	VEL	VELOCITY
HTG	HEATING (HOT DECK)	VERT	VERTICAL
HVAC	HEATING, VENTILATING & AIR CONDITIONING	VFD	VARIABLE FREQUENCY DRIVE
HW	HOT WATER	VOL	VOLUME
HZ	HERTZ	VTR	VENT THRU ROOF
IB	INVERTED BUCKET	W	WATT OR WIDTH (PER CONTEXT)
IE	INVERT ELEVATION	W/	WITH
IN	INCHES	W/O	WITHOUT
INDIC	INDICATOR	WB	WET BULB
IPLV	INTEGRATED PART-LOAD VALUE	WC	WATER COLUMN
ISP	INTERNAL STATIC PRESSURE	WG	WATER GAUGE
		WPD	WATER PRESSURE DIFFERENTIAL
		WT	WEIGHT

### 00 SHEET LIST MECHANICAL

Sheet Number	Sheet Name
M000	MECHANICAL SYMBOLS & ABBREVIATIONS
M001	MECHANICAL SYMBOLS & ABBREVIATIONS
M101	MECHANICAL FIRST FLOOR PLAN - ZONING
MD200	MECHANICAL CRAWLSPACE PLAN - DEMOLITION
MD201	MECHANICAL FIRST FLOOR PLAN - DEMOLITION
M200	MECHANICAL CRAWL SPACE PLAN - HVAC
M201	MECHANICAL FIRST FLOOR PLAN - HVAC
M205	MECHANICAL ROOF PLAN - HVAC
M301	MECHANICAL FIRST FLOOR PLAN - PIPING
M500	MECHANICAL DETAILS
M501	MECHANICAL DETAILS
M600	MECHANICAL SCHEDULES

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PROJECT # 16224-M001  
SITE # 7356  
ASSET # 6517356071

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**MECHANICAL  
SYMBOLS &  
ABBREVIATIONS**

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SHEET NUMBER:

**M001**

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**PIPE LINE SYMBOLS**

	SHUT OFF VALVE (SEE SPECIFICATION FOR TYPE)
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	VALVE IN RISE (SEE SPECIFICATION FOR TYPE)
	MULTI-PURPOSE PUMP DISCHARGE VALVE
	CHECK VALVE
	GLOBE VALVE
	SOLENOID VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	MOTORIZED BUTTERFLY VALVE
	PRESSURE REDUCING VALVE (HYDRONIC)
	PRESSURE REGULATING VALVE (STEAM)
	CALIBRATED - ORIFICE BALANCING VALVE
	ACTIVE FLOW-LIMITING VALVE
	PLUG VALVE
	IN-LINE PUMP
	Y-PATTERN STRAINER
	Y-PATTERN STRAINER W/ BLOWDOWN VALVE
	UNION
	AIR VENT (M - MANUAL, A - AUTOMATIC)
	RELIEF VALVE
	VACUUM BREAKER
	PRESSURE AND TEMPERATURE TEST PORT
	THERMOMETER
	PRESSURE GAGE WITH COCK
	FLEX PIPE COUPLING
	PIPE ANCHOR
	PIPE GUIDE
	PITCH DOWN IN DIRECTION OF ARROW
	WATER METER
	STEAM TRAP

**PIPE SYSTEM ABBREVIATIONS**

BD	BLOW DOWN
CA	COMPRESSED AIR
CD	CONDENSATE (STEAM) DRAIN
CF	CHEMICAL FEED
CHR	CHILLED/HOT WATER RETURN
CHS	CHILLED/HOT WATER SUPPLY
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CW	COLD WATER, DOMESTIC
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRAIN
E	EQUALIZING LINE
FOF	FUEL OIL FILL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
G	NATURAL GAS
GLR	GLYCOL RETURN
GLS	GLYCOL SUPPLY
HPR	HIGH PRESSURE CONDENSATE RETURN (100 PSIG)
HPS	HIGH PRESSURE STEAM SUPPLY (100 PSIG)
HW	DOMESTIC HOT WATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
LPG	LIQUEFIED PETROLEUM GAS
LPR	LOW PRESSURE CONDENSATE RETURN (15 PSIG)
LPS	LOW PRESSURE STEAM SUPPLY (15 PSIG)
MPS	MEDIUM PRESSURE CONDENSATE RETURN (60 PSIG)
MPS	MEDIUM PRESSURE STEAM SUPPLY (60PSIG)
MU	MAKE-UP WATER (NON-POTABLE)
PC	PUMPED CONDENSATE
PD	PUMP DISCHARGE
PCWR	PRIMARY CHILLED WATER RETURN
PCWS	PRIMARY CHILLED WATER SUPPLY
PHWR	PRIMARY HEATING WATER RETURN
PHWS	PRIMARY HEATING WATER SUPPLY
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RV	REFRIGERANT VENT
HG	REFRIGERANT HOT GAS
SCWR	SECONDARY CHILLED WATER RETURN
SCWS	SECONDARY CHILLED WATER SUPPLY
SHWR	SECONDARY HEATING WATER RETURN
SHWS	SECONDARY HEATING WATER SUPPLY
SRV	STEAM RELIEF VENT
V	VENT

**COMMON PIPING SYMBOLS & ABBREVIATIONS**

NOT ALL SYMBOLS NECESSARILY USED FOR THIS PROJECT

	DIRECTION OF FLOW
	BRANCH CONNECTION, BOTTOM
	BRANCH CONNECTION, TOP
	ELBOW, TURNED DOWN
	ELBOW TURNED UP
	SHUTOFF VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	PRESSURE GAUGE
	UNION
	PIPING CAP
	RISER DESIGNATION
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITIES HAVING JURISDICTION
AP	ACCESS PANEL
BOP	BOTTOM OF PIPE
DIA	DIAMETER
DN	DOWN
EX OR EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
IE OR INV. ELEV	INVERT ELEVATION
NC	NORMALLY CLOSED
NTS	NOT TO SCALE
PSI	POUNDS PER SQUARE INCH
RPM	REVOLUTIONS PER MINUTE
RI	ROUGH-IN
SOV	SHUTOFF VALVE
TDH	TOTAL DYNAMIC HEAD
VIF	VERIFY IN FIELD

**MECHANICAL PROJECT GENERAL NOTES**

- ALL ELBOWS, FITTINGS, ETC., IN PIPING AND DUCTWORK REQUIRED TO CLEAR ALL JOB OBSTRUCTIONS ARE NOT NECESSARILY INDICATED. ALL NECESSARY TRANSITIONS, FITTINGS AND OFFSETS ARE REQUIRED WHETHER SHOWN OR NOT.
- BECAUSE OF THE LIMITED SPACE AVAILABLE TO INSTALL ALL OF THE MECHANICAL WORK, COORDINATION BETWEEN THE VARIOUS TRADES IS OF THE UTMOST IMPORTANCE. SEE SPECIFICATION 230100 FOR REQUIRED COORDINATION DRAWINGS.
- EXISTING CONDITIONS ARE BASED ON INFORMATION OBTAINED FROM PREVIOUS CONSTRUCTION DOCUMENTS AND INFORMAL FIELD OBSERVATION AND SHALL NOT BE CONSIDERED AS "AS BUILT." THE CONTRACTOR SHALL FIELD-VERIFY EXISTING CONDITIONS BEFORE THE ONSET OF CONSTRUCTION.
- DEMOLISH ALL PIPING, DUCTWORK EQUIPMENT, ETC., SHOWN TO BE REMOVED, IN ITS ENTIRETY, INCLUDING ALL HANGERS AND SUPPORTS.
- WHERE CONTRACTOR IS REQUIRED TO CONCEAL NEW WORK, REMOVE OR MODIFY EXISTING CONSTRUCTION OR EQUIPMENT, OR ATTACH TO EXISTING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR OR REPLACE EXISTING CONSTRUCTION AND MATERIALS TO MATCH CONDITIONS AT THE ONSET OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND REPLACE EXISTING CEILINGS AND WALLS REQUIRED FOR INSTALLATION OF MECHANICAL SYSTEMS.
- THE OWNER SHALL MAINTAIN ALL SALVAGE RIGHTS OF EQUIPMENT AND MATERIALS REMOVED. ALL EQUIPMENT AND MATERIALS NOT CLAIMED BY THE OWNER SHALL BE REMOVED FROM THE PREMISES BY THIS CONTRACTOR.
- CONTRACTOR SHALL PROVIDE SEISMIC BRACING AND MOUNTING OF EQUIPMENT AND MATERIALS IN COMPLIANCE WITH ALL LOCAL CODE REQUIREMENTS AND THE REQUIREMENTS OF SPECIFICATION SECTION SEISMIC PROTECTION.
- ALL WORK SHALL BE INSTALLED PER THE REFERENCE DETAILS, REGARDLESS OF WHETHER OR NOT THE DETAILS ARE CALLED OUT ON THE PLANS.
- THE CONTRACTOR SHALL VERIFY ALL REFRIGERANT PIPE SIZING AND ROUTINGS WITH THE EQUIPMENT MANUFACTURER. THE CONTRACTOR SHALL ALSO PROVIDE ALL REQUIRED REFRIGERANT ACCESSORIES AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS.
- DO NOT SCALE THE LOCATION OF HVAC CEILING ELEMENTS, SUCH AS AIR INLETS AND OUTLETS, FROM THE M-SERIES DRAWINGS. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT HVAC CEILING ELEMENT LOCATIONS. REFLECTED CEILING PLANS GOVERN THE LOCATION OF DIFFUSERS, REGISTERS, AND GRILLES. M-SERIES DRAWINGS GOVERN TYPE, STYLE, AND SIZE OF DIFFUSERS, REGISTERS, AND GRILLES.
- ALL DUCTWORK SHALL COMPLY WITH "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," 3RD EDITION, SMACNA 2005, EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE SPECIFIED. ANY PLAN REFERENCES TO "SMACNA FIGURE --" REFERS TO THIS STANDARD. SEE SPECIFICATIONS FOR SCHEDULE OF DUCT PRESSURE CLASS AND SEAL CLASS.
- IN GENERAL, THE FINAL FLEX DUCT RUNOUT TO EACH DIFFUSER, REGISTER, OR GRILLE IS NOT SIZED ON PLANS. FLEX DUCT RUNOUT SIZE SHALL MATCH AIR OUTLET NECK SIZE, UNO.
- IT IS THE INTENT OF THESE DRAWINGS THAT A MANUAL BALANCING DAMPER BE PROVIDED AT EVERY INDIVIDUAL DUCTED CONNECTION TO AN AIR DEVICE, UNLESS A BALANCING DAMPER IS SCHEDULED TO BE FURNISHED WITH AIR DEVICE. VAV BOXES WITH SINGLE DIFFUSERS ARE NOT REQUIRED TO HAVE A BALANCING DAMPER.
- ALL NEW DUCTWORK SIZES SHOWN ON PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ADJUST SHEET METAL SIZES AS NECESSARY TO ACCOMMODATE INTERNAL DUCT LINER, IF SPECIFIED.
- ALL EXISTING TEMPERATURE CONTROLS THAT ARE BEING DEMOLISHED OR DISABLED AS WORK OF THIS CONTRACT SHALL BE COMPLETELY REMOVED FROM BUILDING.
- CONTRACTOR SHALL HAVE THE DOCUMENTS REVIEWED COMPLETELY BY A CERTIFIED BALANCING CONTRACTOR FOR THE INCLUSION OF THE NECESSARY ADDITIONAL AIR AND HYDRONIC SYSTEM BALANCING DEVICES NOT SHOWN IN THESE DOCUMENTS FOR COMPLETE HVAC SYSTEM BALANCING. REFER TO SPECIFICATION SECTION 230593 FOR CONSTRUCTION DOCUMENT EXAMINATION REPORT.
- THE CONTRACTOR SHALL CONNECT THE NEW HVAC SYSTEM TO THE OWNER'S EXISTING BUILDING CONTROL SYSTEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- FOR ALL SUSPENDED HVAC EQUIPMENT THAT WEIGHS 31 LBS OR MORE, LOCATED IN OR ABOVE OCCUPIED SPACES, THE CONTRACTOR SHALL SUPPORT THE EQUIPMENT TO PREVENT IT FROM FALLING FROM OR THROUGH THE CEILING IN THE EVENT OF A TERRORIST ATTACK (EXPLOSION). THIS SHALL INCLUDE BUT IS NOT LIMITED TO ALL VAV BOXES, ETC. SUPPORTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF UFC 4-010-01 - DOD MINIMAL ANTI-TERRORISM STANDARDS FOR BUILDINGS.
- THESE PLANS ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL BE PREPARED TO MAKE SOME ALTERATIONS TO THE EXACT LOCATION OF DUCTWORK, PIPING AND EQUIPMENT FROM THE LOCATION INDICATED ON THESE DRAWINGS TO FIT ACTUAL JOB CONDITIONS.



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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: BV  
CHECKED BY: MVT  
DESIGNED BY: BV

SHEET TITLE:  
**MECHANICAL  
CRAWLSPACE PLAN  
- DEMOLITION**

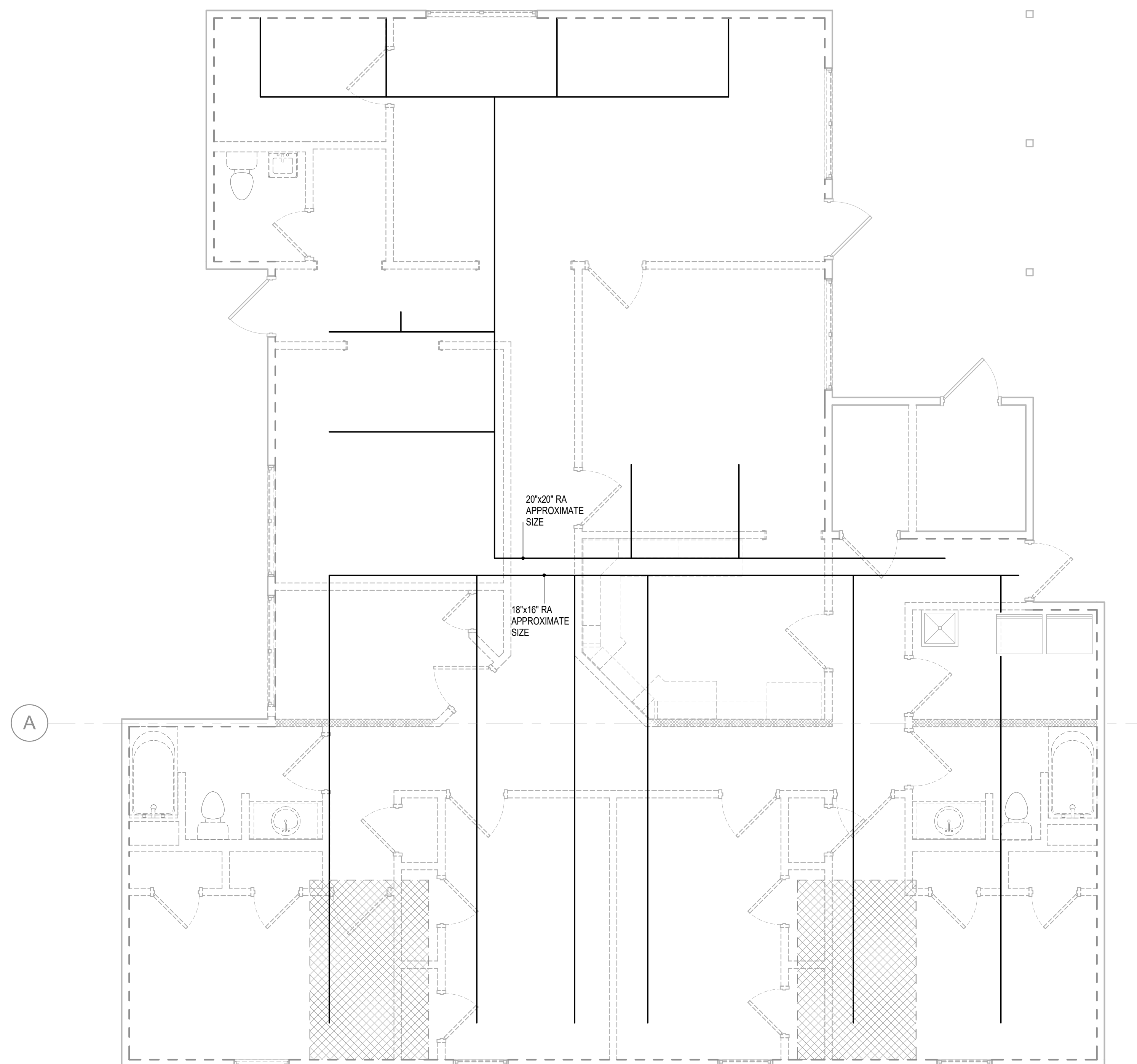
SHEET NUMBER:

**MD200**

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09/17/2025

**GENERAL DEMOLITION NOTES**

- A. ALL EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK AND ASSOCIATED GRILLES AND DIFFUSERS ARE TO BE DEMOLISHED INCLUDING HANGERS AND SUPPORTS.
- B. ALL EXISTING CONTROLS AND POWER WIRING OF EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED.
- C. EXISTING EXHAUST FANS SERVING BATHROOMS TO BE DEMOLISHED. PATCH AND SEAL EXISTING WALLS, ROOF, AND/OR SOFFIT PENETRATIONS TO MATCH EXISTING ADJACENT CONSTRUCTION.



**1 MECHANICAL CRAWLSPACE PLAN - DEMOLITION**  
1/4" = 1'-0"



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SHEET TITLE:  
MECHANICAL FIRST  
FLOOR PLAN -  
DEMOLITION

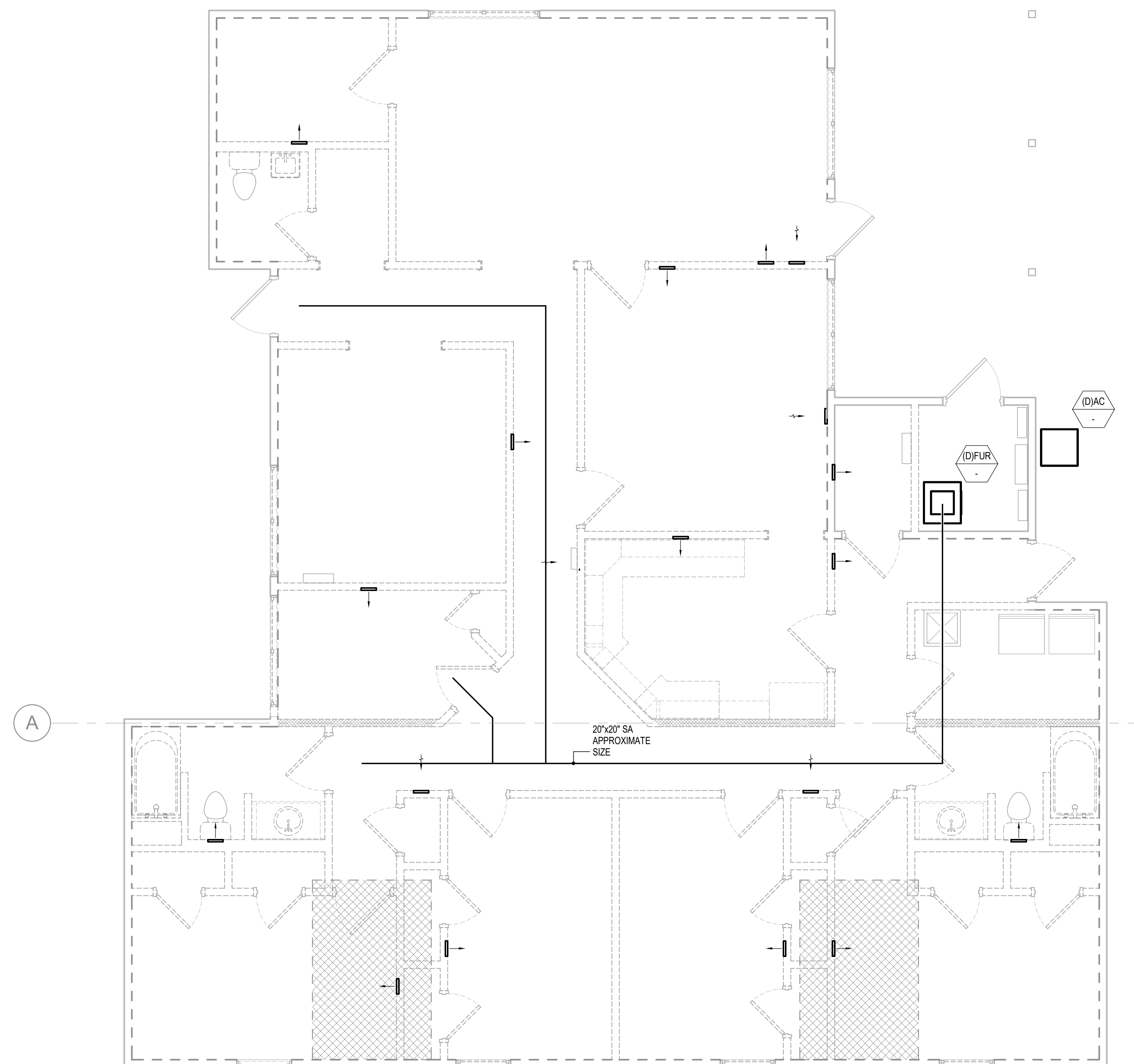
SHEET NUMBER:

**MD201**

43 OF 64 SHEETS  
09/17/2025

**GENERAL DEMOLITION NOTES**

- A. ALL EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK AND ASSOCIATED GRILLES AND DIFFUSERS ARE TO BE DEMOLISHED INCLUDING HANGERS AND SUPPORTS.
- B. ALL EXISTING CONTROLS AND POWER WIRING OF EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED.
- C. EXISTING EXHAUST FANS SERVING BATHROOMS TO BE DEMOLISHED. PATCH AND SEAL EXISTING WALLS, ROOF, AND/OR SOFFIT PENETRATIONS TO MATCH EXISTING ADJACENT CONSTRUCTION.



**1 MECHANICAL FIRST FLOOR PLAN - DEMOLITION**  
1/4" = 1'-0"



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**MECHANICAL FIRST  
FLOOR PLAN -  
ZONING**

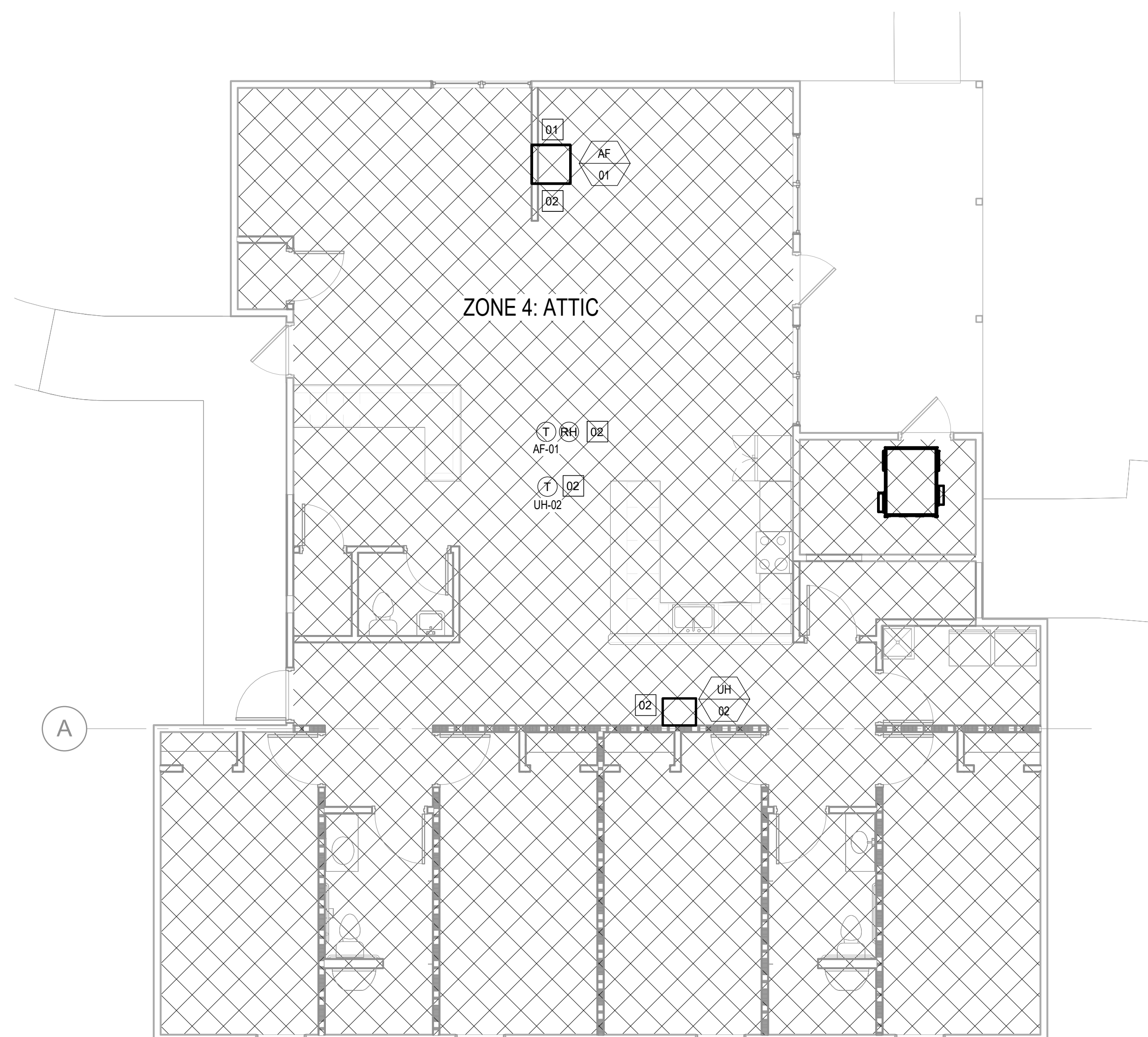
SHEET NUMBER:

**M101**

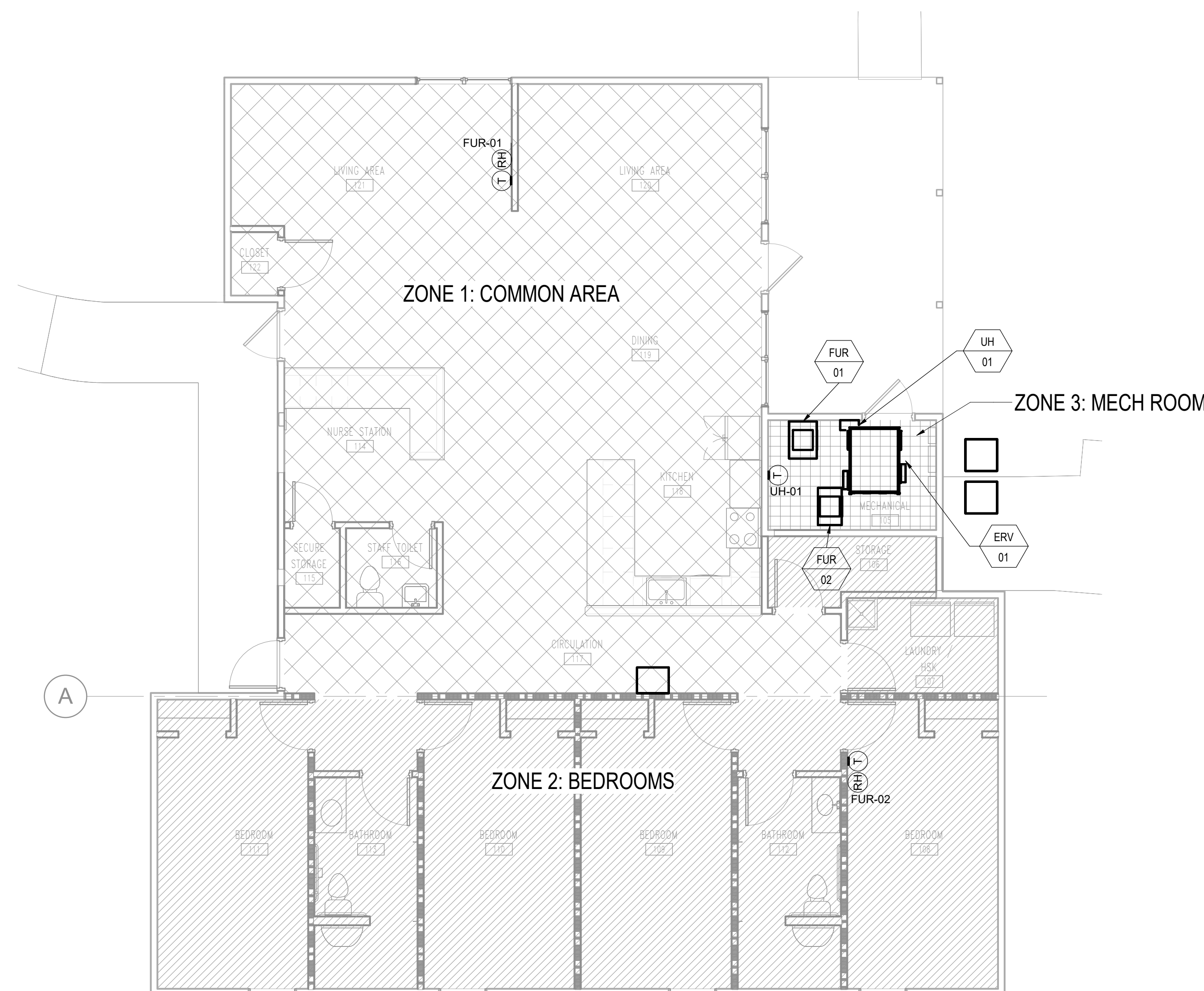
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09/17/2025

# SHEET KEYNOTES

1. PROVIDE LOCAL TEMPERATURE AND HUMIDITY SENSOR.
2. EQUIPMENT IS LOCATED IN THE ATTIC AND SERVING THE ATTIC SPACE.



**2** MECHANICAL ATTIC PLAN - ZONING  
3/16" = 1'-0"



**1** MECHANICAL FIRST FLOOR PLAN - ZONING  
3/16" = 1'-0"



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BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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DATE: \_\_\_\_\_  
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ISSUE DATE: 09/17/2025

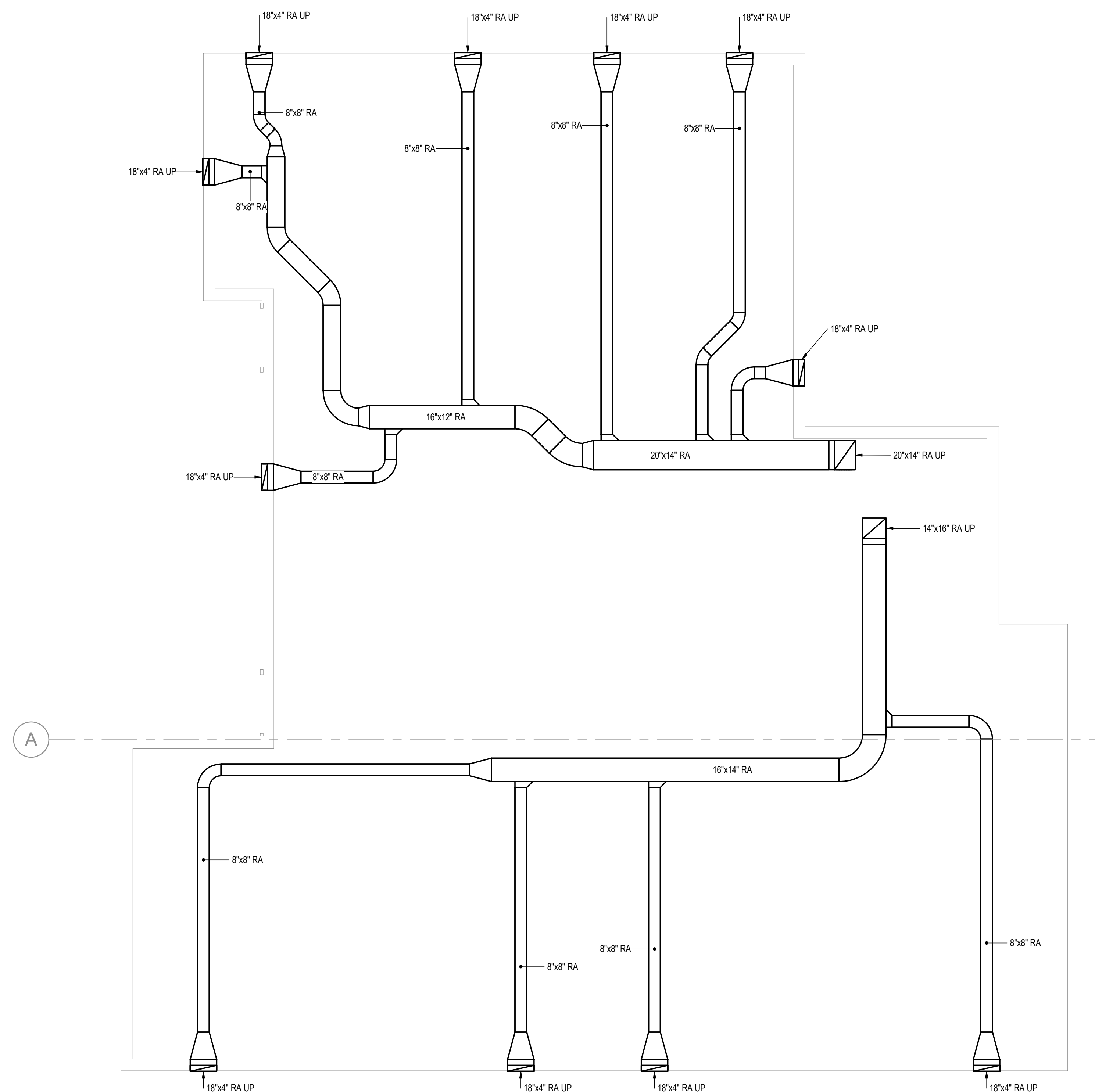
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DESIGNED BY: BV

SHEET TITLE:  
**MECHANICAL  
CRAWL SPACE PLAN  
- HVAC**

SHEET NUMBER:

**M200**

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09/17/2025



**1 MECHANICAL CRAWL SPACE PLAN - HVAC**  
1/4" = 1'-0"



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ISSUE DATE: 09/17/2025

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SHEET TITLE:  
MECHANICAL FIRST  
FLOOR PLAN - HVAC

SHEET NUMBER:

**M201**

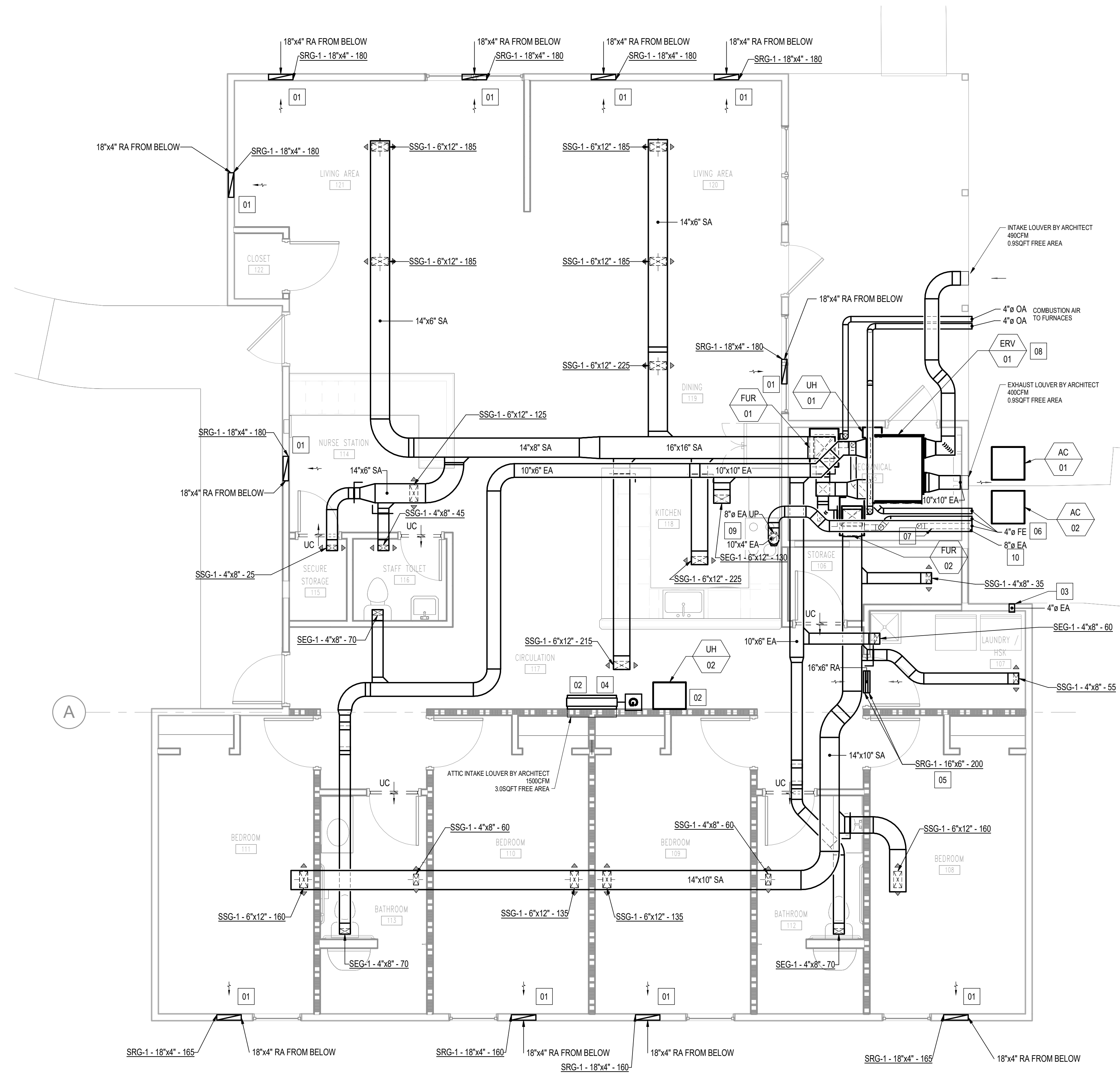
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09/17/2025

**GENERAL NOTES**

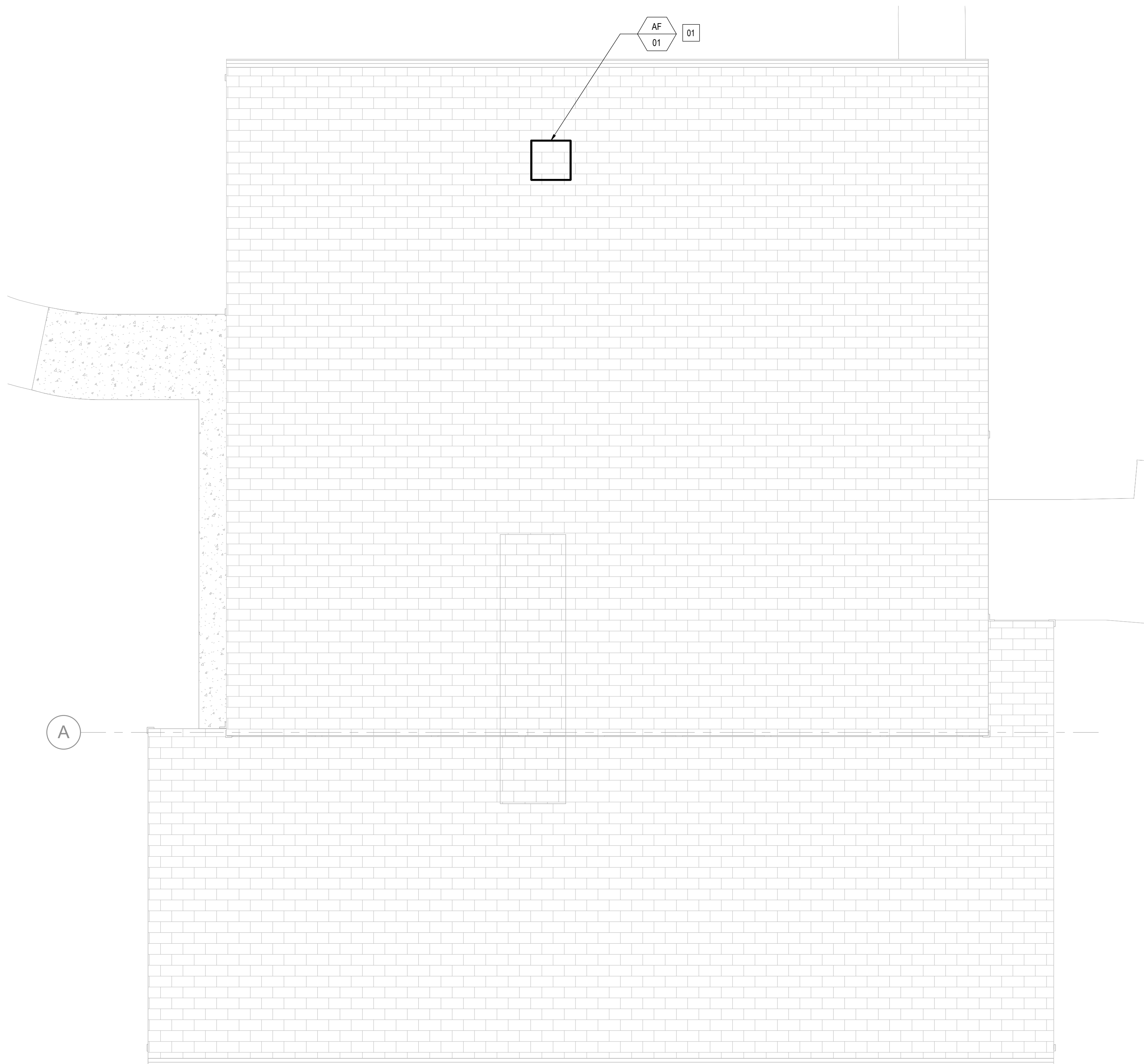
- VERIFY ALL DIMENSIONS, CLEARANCES AND INTERFERENCES AGAINST ON SITE CONDITIONS AND OTHER DISCIPLINE DRAWINGS PRIOR TO ORDERING MATERIAL. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT AND DUCT LOCATIONS WITH EXISTING CONDITIONS AND OTHER TRADES.
- SEE ZONING PLANS FOR SENSOR LOCATIONS.
- DIRECTIONAL BAFFLES SHALL BE INSTALLED INSIDE OF DIFFUSERS TO ACHIEVE AIRFLOW DIRECTIONS INDICATED ON PLANS.
- VOLUME DAMPERS SHALL BE PROVIDED IN THE SUPPLY DUCTWORK NEAR THE BRANCH TAKEOFF FROM THE MAIN. BALANCING DAMPERS AT THE GRILLE FACE ARE NOT BE PERMITTED UNLESS OTHERWISE INDICATED.
- INSULATION SHALL BE APPLIED WHERE INDICATED BY SPECIFICATIONS. DIMENSIONS ON PLANS INDICATE FREE-AREA DIMENSIONS OF THE INSIDE OF THE DUCT.
- DUCT AND EQUIPMENT ABOVE CEILING TO BE INSTALLED SO AS TO LEAVE ROOM TO INSTALL LIGHTS AND ASSOCIATED HARDWARE.
- ALL RETURN DIFFUSERS SHALL BE DUCTED TO MAIN.
- WHERE DUCT DIMENSION NOT SHOWN AT AIR DEVICE, PROVIDE CLEAR INTERNAL DIMENSION RUNOUT EQUAL TO AIR DEVICE NECK SIZE INDICATED.
- ALL DUCTS PASSING THROUGH FIRE RESISTANT WALLS RATED 1-HR AND LESS SHALL BE CONSTRUCTED FROM MINIMUM 26 GA SHEET METAL AND CONTINUOUS FROM THE AIR HANDLER AND THE AIR DEVICES.

**SHEET KEYNOTES**

- RETURN GRILLE IS MOUNTED LOW TO FLOOR.
- EQUIPMENT IS LOCATED IN THE ATTIC AND SERVING THE ATTIC SPACE.
- PROVIDE WALL VENT AT DRYER EXHAUST DUCT OUTLET FROM MANUFACTURER DRYERWALLVENT MODEL DWV4. PROVIDE FLEXIBLE CONNECTION FROM DRYER TO 4" RIGID DUCTWORK.
- PROVIDE BACKDRAFT DAMPER FOR ATTIC INTAKE LOUVER.
- GRILLES MOUNTED ABOVE THE LAUNDRY/HSK DOOR TO ALLOW FOR DRYER MAKEUP AIR.
- FLUE TERMINATION TO EXTEND OUT A MINIMUM OF 18" FROM EXTERIOR FACADE. PROVIDE WALL THIMBLE. PENETRATION MINIMUM 16" DIAMETER. LOCATION TO BE DICTATED BY ARCHITECT.
- FLUE EXHAUST FOR DOMESTIC WATER HEATER. SEE PLUMBING DRAWINGS FOR EXACT LOCATION.
- ERV-01 IS MOUNTED IN THE ATTIC SPACE ABOVE THE MECHANICAL ROOM.
- EXHAUST CONNECTION TO KITCHEN HOOD. SEE ARCHITECTURAL DRAWINGS FOR KITCHEN HOOD INFORMATION.
- PROVIDE VENT CAP FOR THE KITCHEN HOOD EXHAUST FROM MANUFACTURER SEIHO MODEL CFX.



**1 MECHANICAL FIRST FLOOR PLAN - HVAC**  
1/4" = 1'-0"



**GENERAL NOTES**

- A. VERIFY ALL DIMENSIONS, CLEARANCES AND INTERFERENCES AGAINST ON SITE CONDITIONS AND OTHER DISCIPLINE DRAWINGS PRIOR TO ORDERING MATERIAL. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT AND DUCT LOCATIONS WITH EXISTING CONDITIONS AND OTHER TRADES.
- B. SEE ZONING PLANS FOR SENSOR LOCATIONS.
- C. DIRECTIONAL BAFFLES SHALL BE INSTALLED INSIDE OF DIFFUSERS TO ACHIEVE AIRFLOW DIRECTIONS INDICATED ON PLANS.
- D. VOLUME DAMPERS SHALL BE PROVIDED IN THE SUPPLY DUCTWORK NEAR THE BRANCH TAKEOFF FROM THE MAIN. BALANCING DAMPERS AT THE GRILLE FACE ARE NOT BE PERMITTED UNLESS OTHERWISE INDICATED.
- E. INSULATION SHALL BE APPLIED WHERE INDICATED BY SPECIFICATIONS. DIMENSIONS ON PLANS INDICATE FREE-AREA DIMENSIONS OF THE INSIDE OF THE DUCT.
- F. DUCT AND EQUIPMENT ABOVE CEILING TO BE INSTALLED SO AS TO LEAVE ROOM TO INSTALL LIGHTS AND ASSOCIATED HARDWARE.
- G. ALL RETURN DIFFUSERS SHALL BE DUCTED TO MAIN.
- H. WHERE DUCT DIMENSION NOT SHOWN AT AIR DEVICE, PROVIDE CLEAR INTERNAL DIMENSION RUNOUT EQUAL TO AIR DEVICE NECK SIZE INDICATED.
- I. ALL DUCTS PASSING THROUGH FIRE RESISTANT WALLS RATED 1-HR AND LESS SHALL BE CONSTRUCTED FROM MINIMUM 26 GA SHEET METAL AND CONTINUOUS FROM THE AIR HANDLER AND THE AIR DEVICES.

**SHEET KEYNOTES**

- 1. ATTIC FAN AF-01 TO BE INSTALLED IN THE ROOF. SEE ARCHITECTURAL PLANS FOR SEALING AND FLASHING DETAILS.

**1 MECHANICAL ROOF PLAN - HVAC**  
1/4" = 1'-0"

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SHEET TITLE:  
**MECHANICAL ROOF  
PLAN - HVAC**

SHEET NUMBER:

**M205**

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09/17/2025



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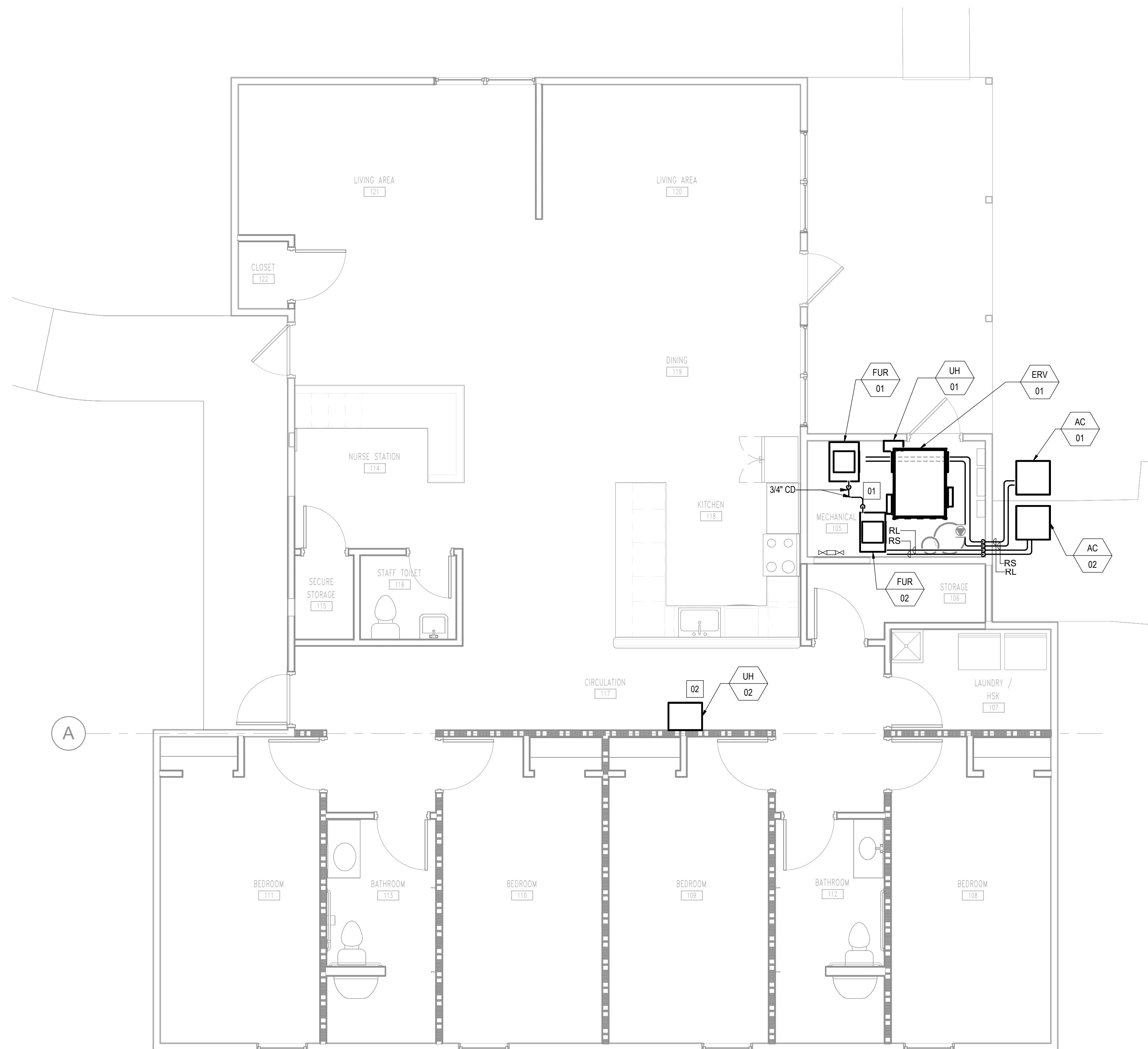
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**SHEET KEYNOTES**

- ROUTE 3/4" CONDENSATE DRAIN PIPING FROM FUR-01 AND FUR-02 TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM 105.
- EQUIPMENT IS LOCATED IN THE ATTIC AND SERVING THE ATTIC SPACE.

**1 MECHANICAL FIRST FLOOR PLAN - PIPING**  
1/4" = 1'-0"

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SHEET TITLE:  
**MECHANICAL FIRST  
FLOOR PLAN -  
PIPING**

SHEET NUMBER:

**M301**

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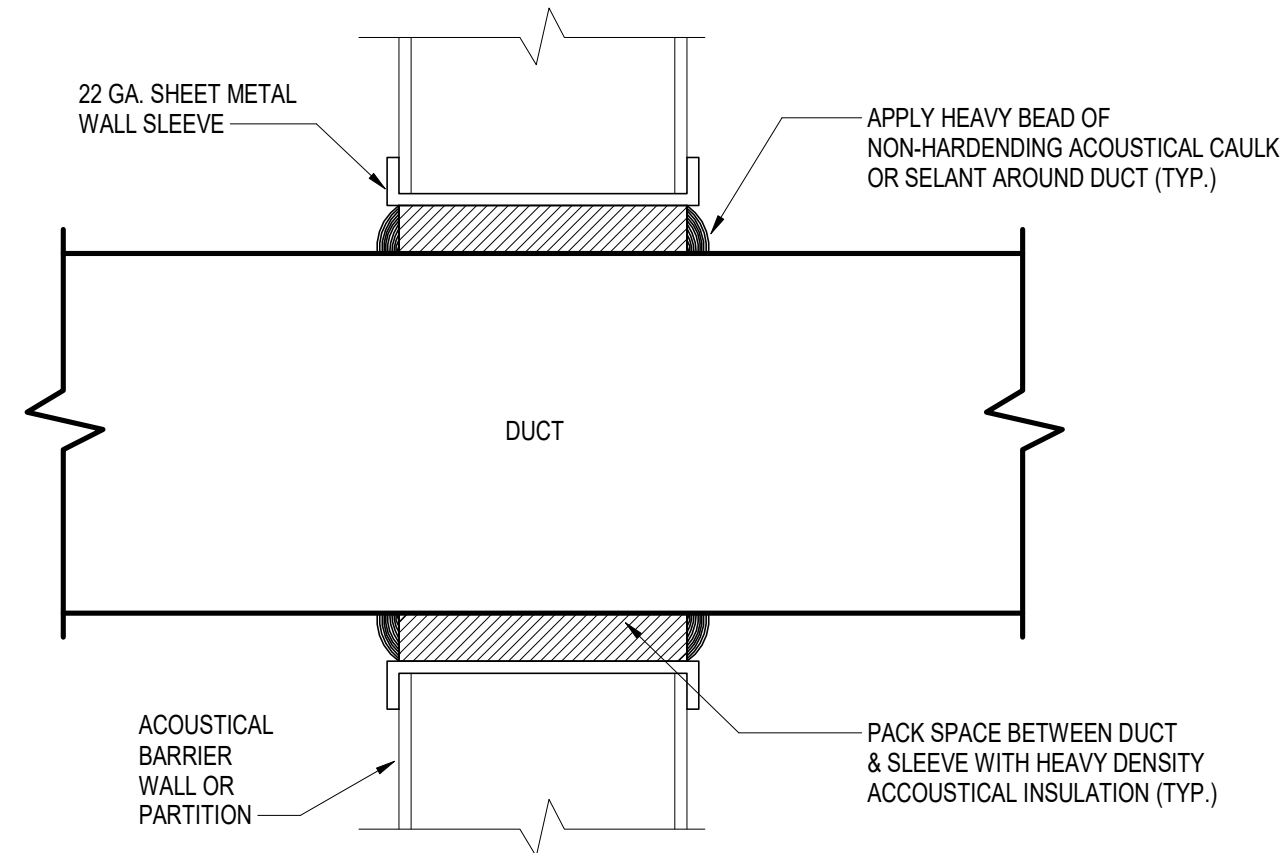
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SHEET TITLE:  
**MECHANICAL  
DETAILS**

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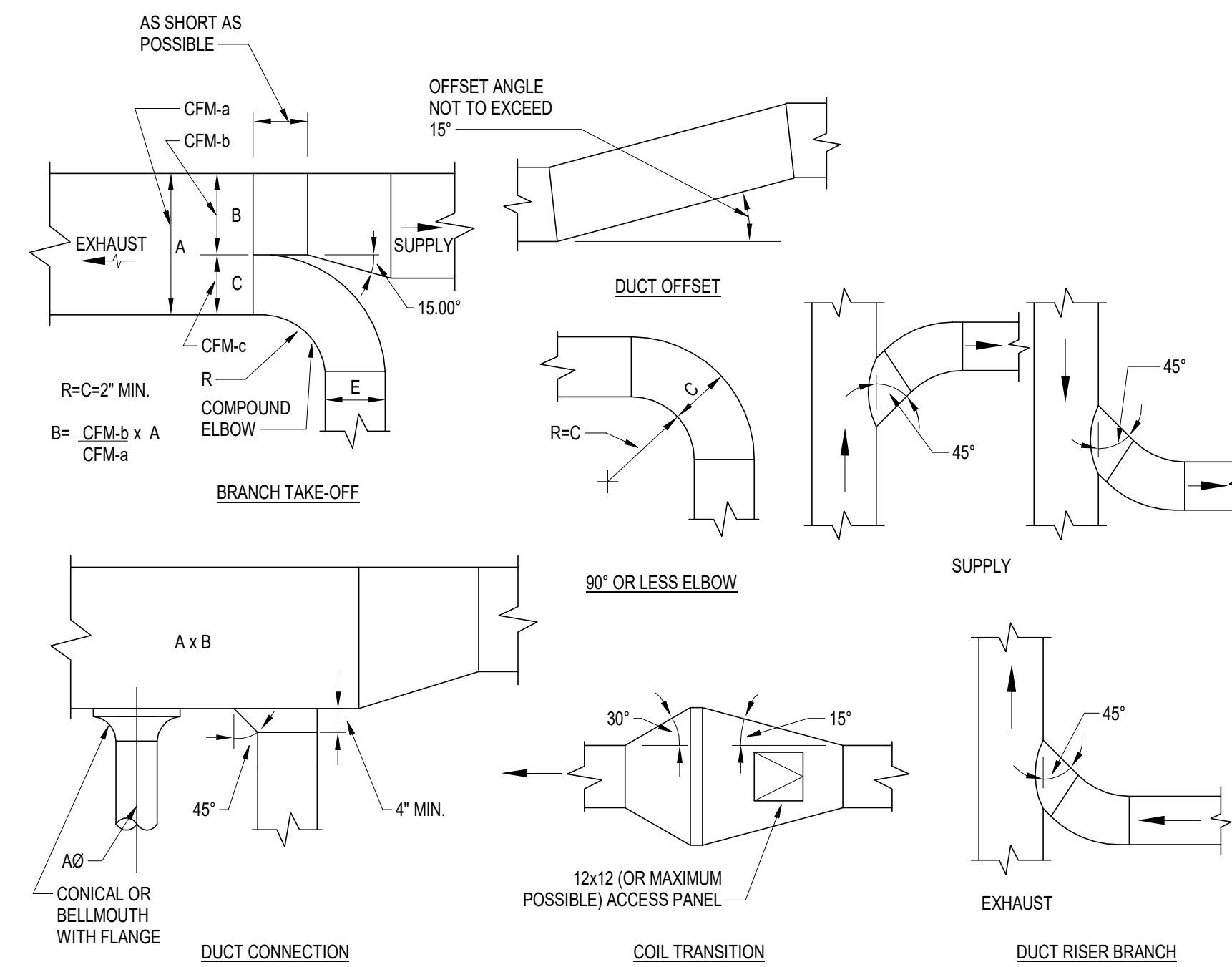
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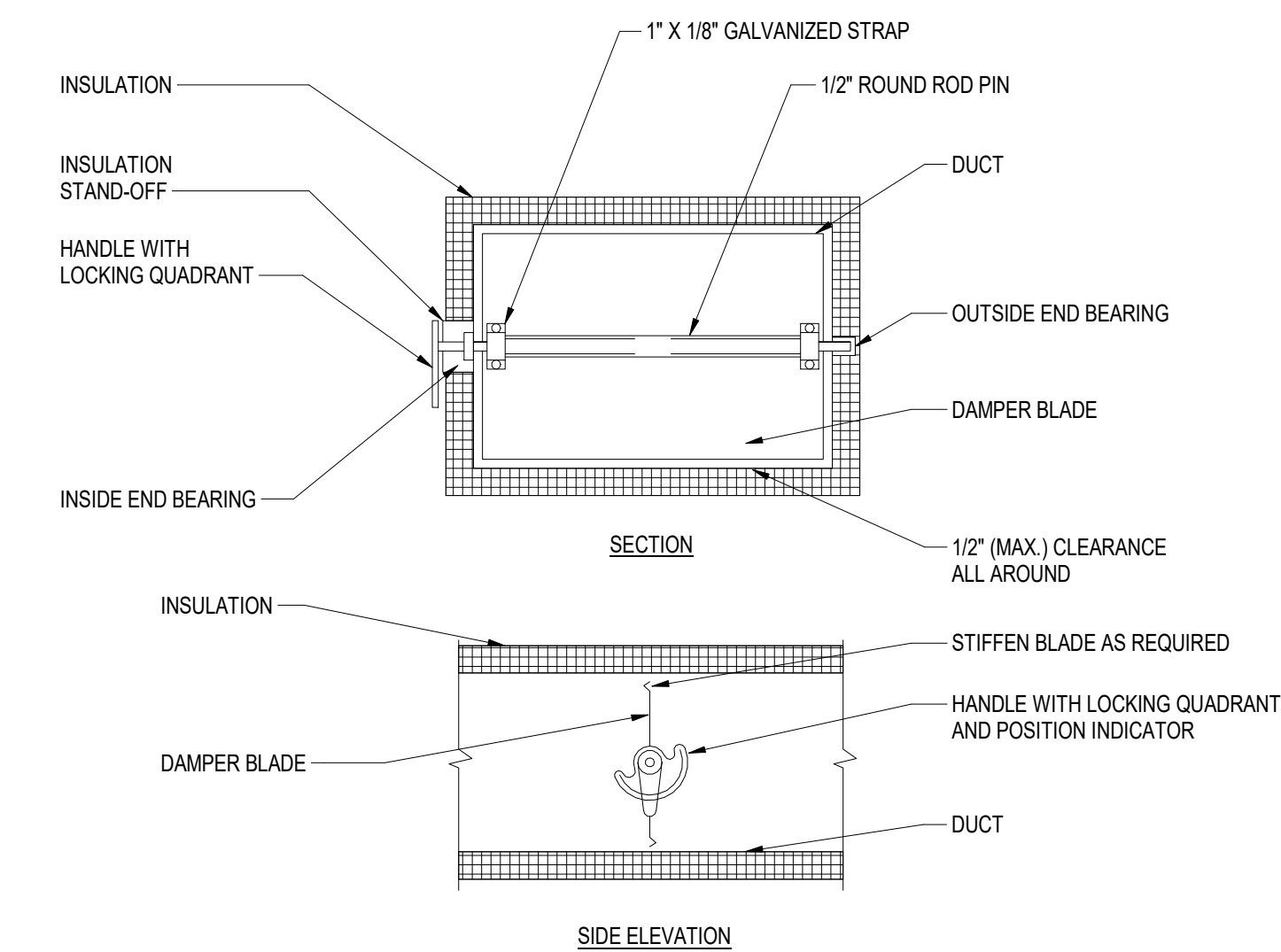


NOTE:  
1. THIS DETAIL APPLIES TO ALL DUCT PENETRATIONS WHERE PARTITION INCLUDES BATT INSULATION OR ACOUSTIC BLANKET.

1 **DUCT PENETRATION THROUGH NON-RATED WALL**  
NOT TO SCALE

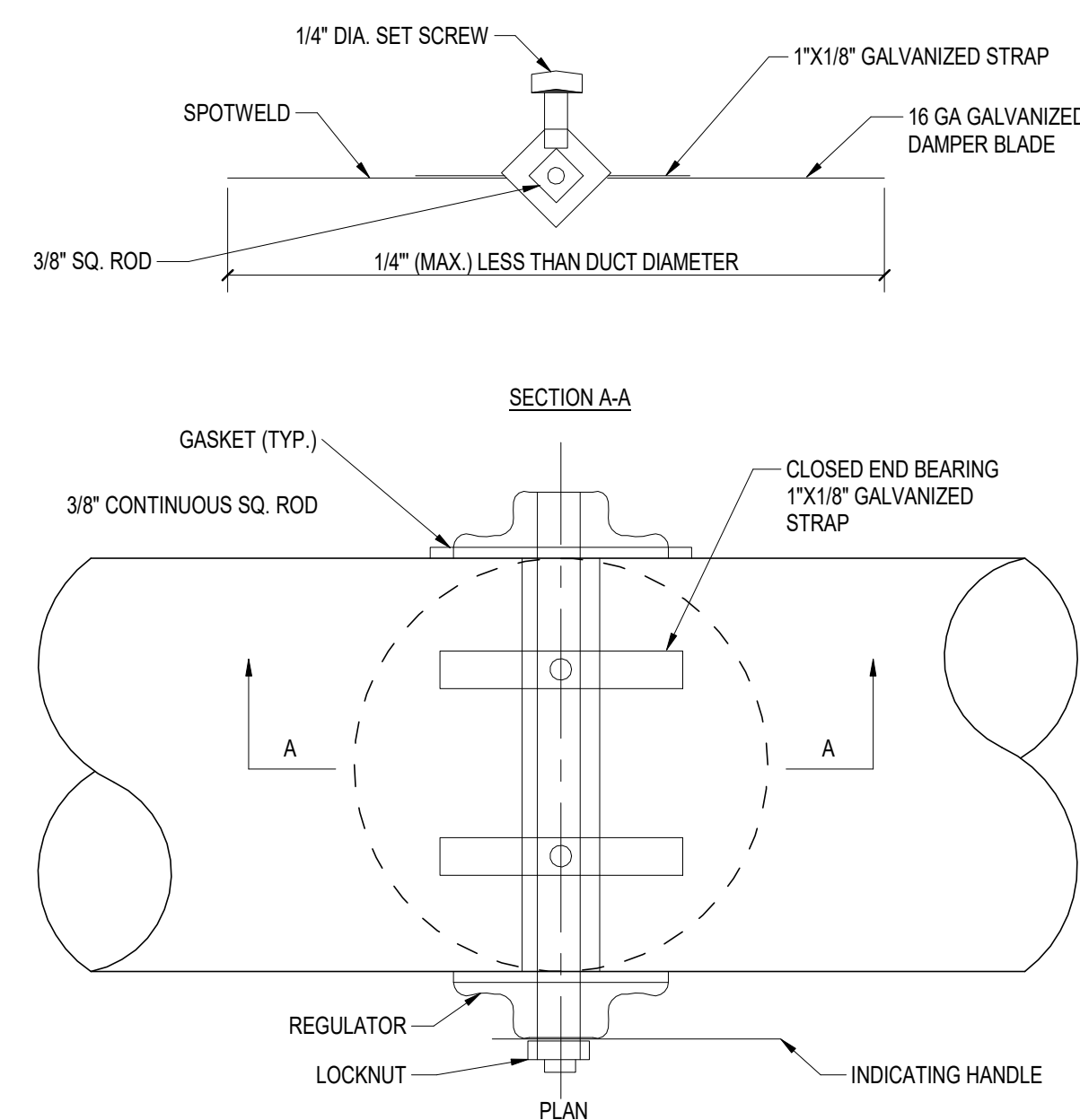


2 **LOW PRESSURE DROP DUCT FITTINGS DETAIL**  
NOT TO SCALE



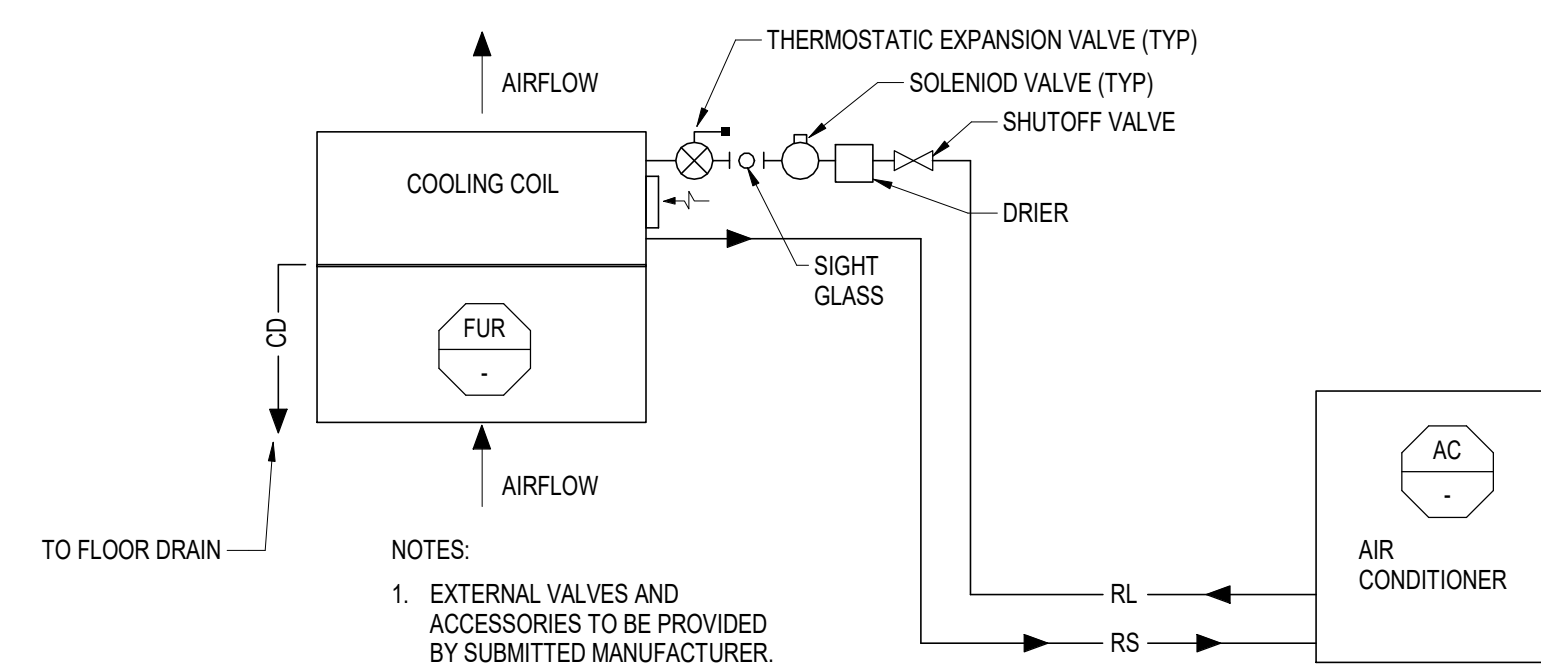
NOTES:  
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.  
2. DETAIL SHOWS SINGLE BLADE DAMPER. MULTI-BLADE DAMPERS INSTALLATIONS SHALL BE SIMILAR.  
3. LOCK DAMPER DURING AIR BALANCE AND MARK QUADRANT TO RECORD AIR BALANCED DAMPER POSITION.  
4. PROVIDE "HAT" SECTION AT QUADRANT FOR ALL EXTERNALLY INSULATED DUCTWORK.  
5. PROVIDE FLUORESCENT COLORED MARKERS ON CEILING AT ALL VOLUME DAMPERS LOCATIONS.

3 **RECTANGULAR MANUAL VOLUME DAMPER**  
NOT TO SCALE



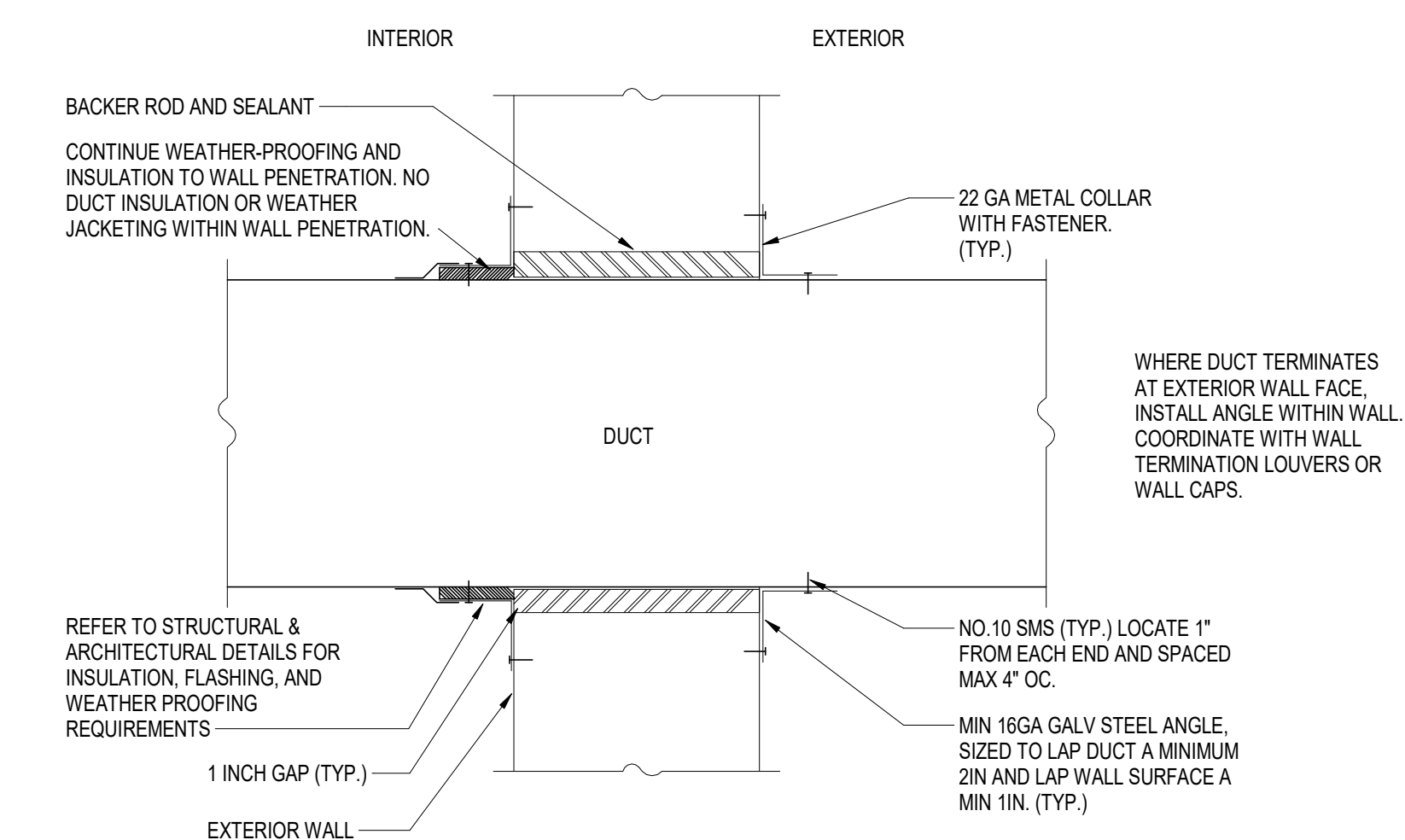
NOTES:  
1. LOCK DAMPER DURING AIR BALANCE AND MARK QUADRANT TO RECORD AIR BALANCED DAMPER POSITION.  
2. PROVIDE "HAT" SECTION AT QUADRANT FOR ALL EXTERNALLY INSULATED DUCTWORK.  
3. PROVIDE FLUORESCENT COLORED MARKERS AT ALL VOLUME DAMPERS LOCATIONS.

4 **ROUND VOLUME DAMPER UP TO 14 IN. DIAMETER**  
NOT TO SCALE



NOTES:  
1. EXTERNAL VALVES AND ACCESSORIES TO BE PROVIDED BY SUBMITTED MANUFACTURER.

5 **AIR CONDITIONER REFRIGERANT PIPING DIAGRAM**  
NOT TO SCALE



6 **DUCT PENETRATION THROUGH EXTERIOR WALL DETAIL**  
NOT TO SCALE



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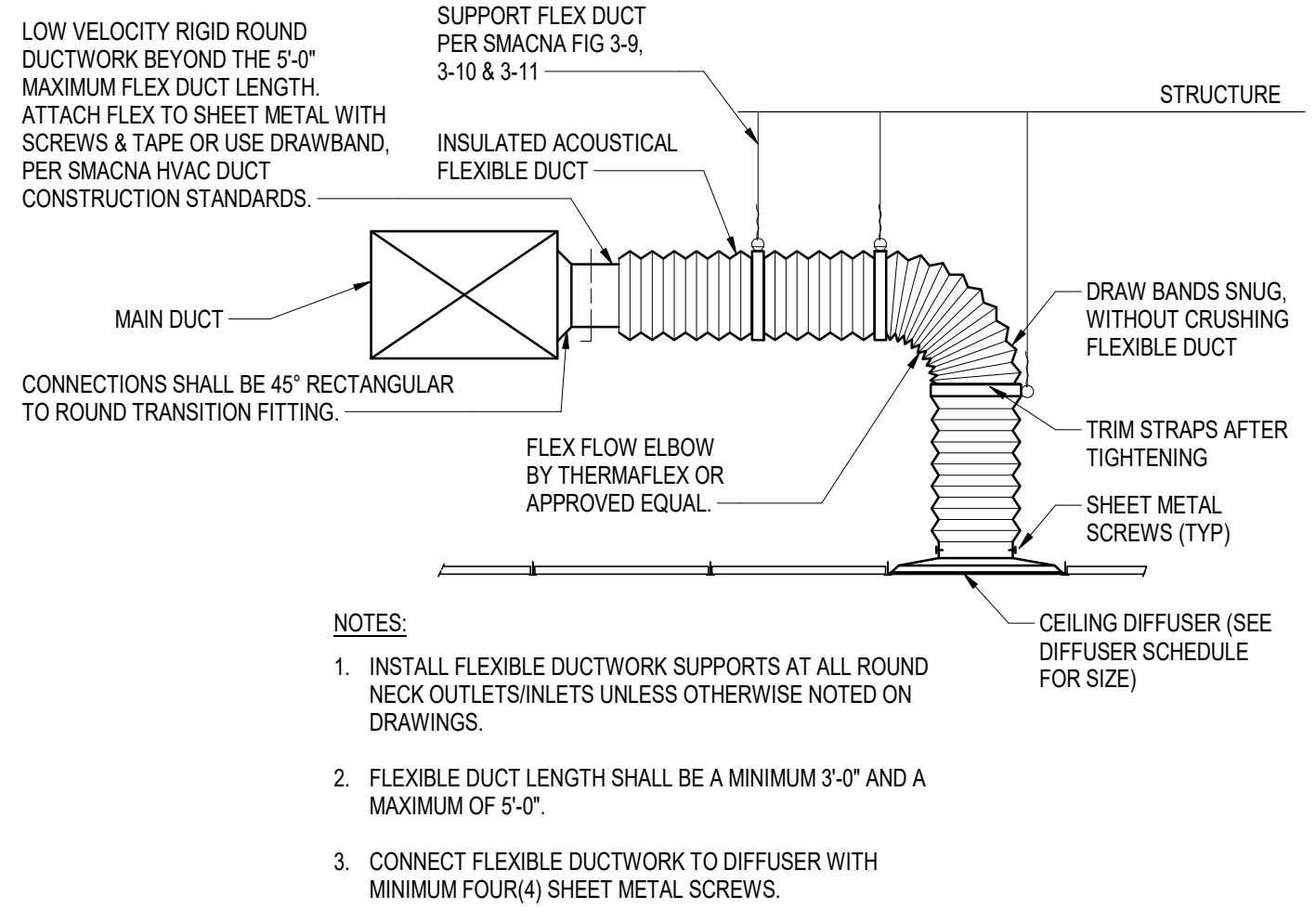
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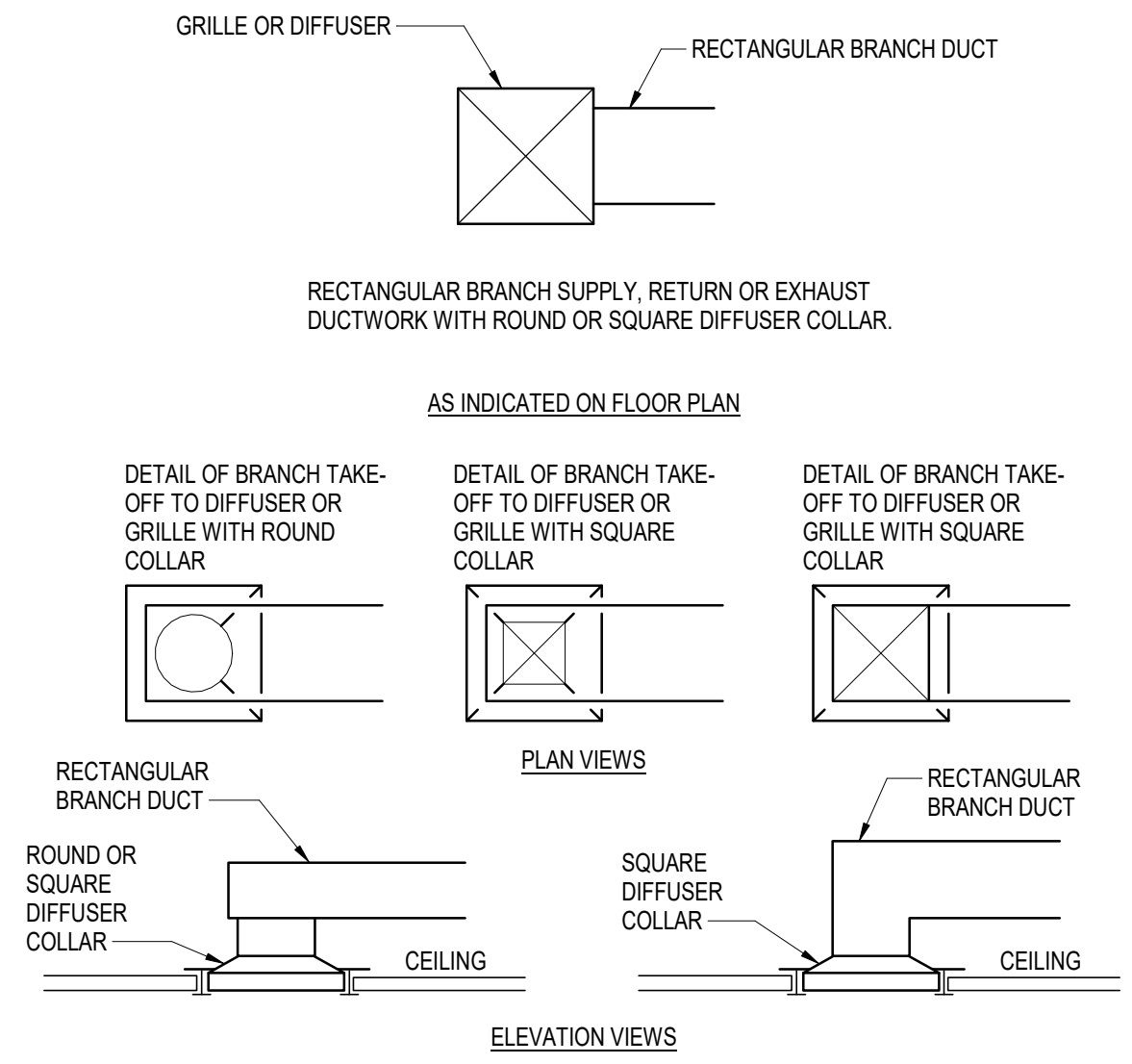
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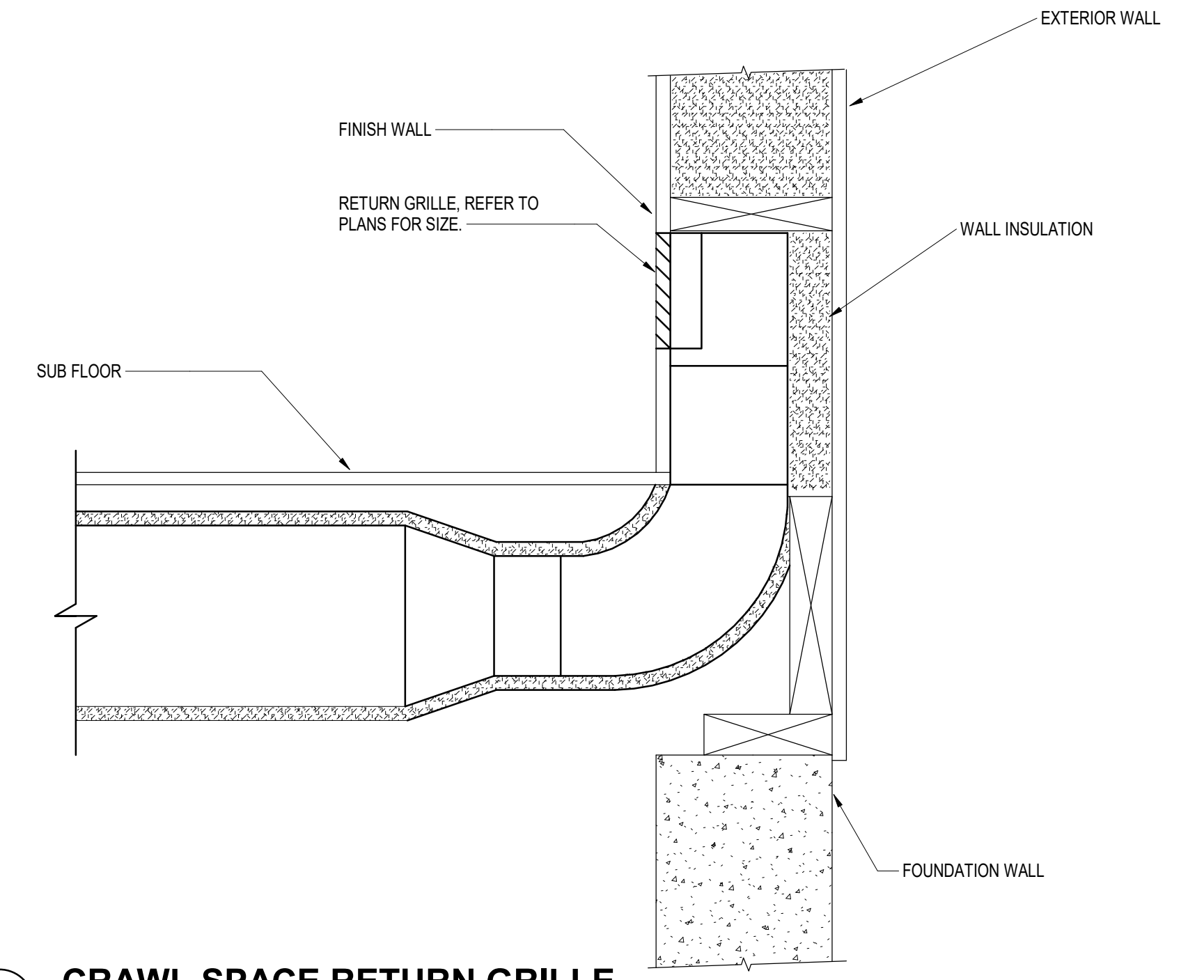
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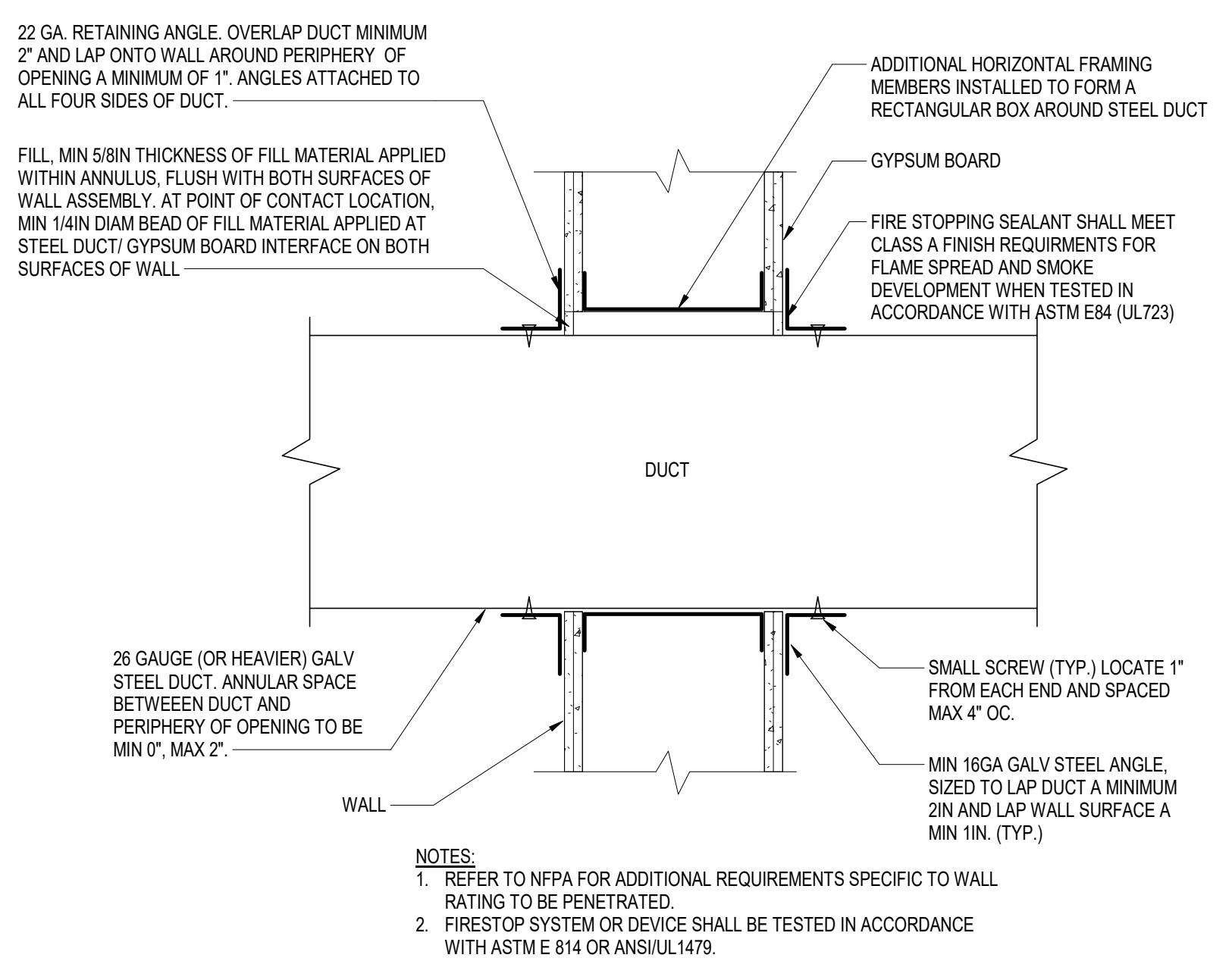
1 FLEXIBLE DUCT CONNECTION TO AIR OUTLET/INLET  
NOT TO SCALE



2 RIGID DUCTWORK CONNECTION TO AIR OUTLET/INLET  
NOT TO SCALE



3 CRAWL SPACE RETURN GRILLE  
NOT TO SCALE



4 DUCT PENETRATION THROUGH RATED WALL  
NOT TO SCALE

**MECHANICAL - FURNACE SCHEDULE**

**NOTES:**  
 1. PROVIDE WITH INTEGRAL CONDENSATE DRAIN PAN SWITCH TO SHUT UNIT OFF IF WATER IS DETECTED.  
 2. PROVIDE WITH INTEGRAL THERMOSTAT WITH WIRING LENGTH AS NEEDED BETWEEN UNIT AND THERMOSTAT SHOWN ON FLOOR PLANS.  
 3. HUMIDISTAT TO BE PROVIDED FOR UNIT. PROVIDE FAN SPEED MODULATION FOR DEHUMIDIFICATION MODE.

TYPE	EQUIPMENT NUMBER	MFR.	MODEL	TYPE	LOCATION: SPACE NAME/NUMBER	FAN DATA					HEATING DATA				COOLING COIL DATA						ELECTRICAL					DIMENSIONS (IN.)			NOTES	
						MIN OA (CFM)	HEATING (CFM)	COOLING (CFM)	DRIVE	FAN SPEED (RPM)	ESP (IN WC)	INPUT (BTU/H)	OUTPUT (BTU/H)	MIN DESIGN EFF (% @ FULL FIRE)	COIL MODEL	EAT DB (F)	LAT DB (F)	LAT WB (F)	TOTAL CAPACITY (MBH)	COIL ADP (IN WC)	REFRIGERANT	FLA (A)	MOCP (A)	VOLTAGE	FREQUENCY (HZ)	PHASE	L	W		H
FUR	01	TRANE	S8X1C080M5PSAB	VERTICAL	MECHANICAL 105	340	1600 CFM	1,600	DIRECT	1075	1.00	80,000	77,600	92	5TXCC009AS3	95 °F	58.8 °F	57.5 °F	50.6	0.40	R-454B	14	15	120 V	60 Hz	1	28"	21"	30"	ALL
FUR	02	TRANE	S8X1B040M2PSC	VERTICAL	MECHANICAL 105	150	800 CFM	800	DIRECT	1075	1.00	40,000	38,800	92	5TXCB003AS3	95 °F	58.2 °F	57.1 °F	26.0	0.40	R-454B	7	15	120 V	60 Hz	1	28"	18"	30"	ALL

**MECHANICAL - AIR CONDITIONER UNIT SCHEDULE**

**NOTES:**  
 1. PROVIDE EQUIPMENT PAD FOR MOUNTING ON GRADE.  
 2. PROVIDE LOCAL MEANS OF DISCONNECT.

TYPE	EQUIPMENT NUMBER	MFR.	MODEL	LOCATION	COOLING CAPACITY (BTU/HR)	AMBIENT AIR TEMP (°F)	EER2	SEER2	REFRIGERANT		COMPRESSOR	CONDENSER FAN	ELECTRICAL					OPERATING WEIGHT (LB)	DIMENSIONS			NOTES
									TYPE	QTY. (LBS)			QTY.	QTY.	MCA	MOCP (A)	VOLT		PH	HZ	WIDTH (IN)	
AC	01	TRANE	5TTR4048A1	GRADE	46,000	95.0	11.7	14.3	R-454B	5.0	1	1	23	35	208	1	60	257.00	24	24	24	ALL
AC	02	TRANE	5TTR402A1	GRADE	24,000	95.0	11.7	14.3	R-454B	3.6	1	1	14	25	208	1	60	156.00	24	24	24	ALL

**FURNACE WINDOOR COIL UNIT CONTROL SEQUENCE OF OPERATIONS.**

- HEATING**
  - THE SPACE TEMPERATURE SETPOINT SHALL BE ADJUSTABLE BY THE OCCUPANT AT THE THERMOSTAT BETWEEN A MINIMUM OF 68F AND A MAXIMUM OF 75F. THE SPACE TEMPERATURE SETPOINT SHALL BE EQUAL TO THE SPACE TEMPERATURE PLUS 1F.
  - ON A DECREASE IN SPACE TEMPERATURE BELOW THE OCCUPIED SPACE HEATING SETPOINT, THE GAS CONTROL VALVE SHALL ENGAGE STAGE 1 HEAT TO MAINTAIN THE OCCUPIED SPACE HEATING SETPOINT.
- COOLING**
  - THE SPACE TEMPERATURE SETPOINT SHALL BE ADJUSTABLE BY THE OCCUPANT AT THE THERMOSTAT BETWEEN A MINIMUM OF 72F AND A MAXIMUM OF 78F. THE SPACE TEMPERATURE SETPOINT SHALL BE EQUAL TO THE SPACE TEMPERATURE PLUS 1F.
  - ON AN INCREASE IN SPACE TEMPERATURE ABOVE THE OCCUPIED SPACE COOLING SETPOINT, THE DX COIL AND CONDENSING UNIT SHALL ENGAGE TO MAINTAIN THE OCCUPIED SPACE COOLING SETPOINT.
  - THE SPACE RELATIVE HUMIDITY SETPOINT SHALL BE ADJUSTABLE BY THE OCCUPANT AT THE HUMIDISTAT BETWEEN A MINIMUM 45% RH AND 55% RH. THE SPACE RH SETPOINT SHALL BE EQUAL TO THE SPACE RH PLUS/MINUS 2%.
  - ON AN INCREASE IN SPACE RH ABOVE THE OCCUPIED SPACE RH SETPOINT, THE FAN SPEED SHALL DECREASE TO MAINTAIN THE OCCUPIED SPACE RH SETPOINT.

**SECURITY GRILLE SCHEDULE**

ITEM	MANUFACTURER & MODEL NO.	TYPE	MOUNTING	MANUFACTURER'S BORDER TYPE	MAX. TOTAL PRESSURE (IN. W.C.)	OPPOSITE BLADE DAMPER PERMITTED (Y/N)	NOTES
<b>SUPPLY GRILLES</b>							
SSG-1	NAILOR SG-BM4	MEDIUM SECURITY SUPPLY GRILLES	WALL	STANDARD	0.08	SEE PLANS	1,2,3,4
<b>EXHAUST/RETURN GRILLES</b>							
SRG-1 SEG-1 STG-1	NAILOR SG-BM4	MEDIUM SECURITY RETURN GRILLES	WALL	STANDARD	0.05	SEE PLANS	1,2,3,4

- NOTES:**  
 1. ALL ROOMS TO BE NC-35 UNLESS SCHEDULED OTHERWISE  
 2. PROVIDE DUCT TO NECK TRANSITION AS REQUIRED.  
 3. MAXIMUM AVAILABLE DIFFUSER NC LEVEL TO BE 5 (FIVE) POINTS LOWER THAN NC CRITERION FOR ROOM SERVED.  
 4. REFER TO PLANS FOR SIZES.

**MECHANICAL - ENERGY RECOVERY VENTILATOR**

**NOTES:**  
 1. PROVIDE WITH INVERTER-READY OR INVERTER-DUTY MOTOR(S) FOR VARIABLE SPEED OPERATION.

TYPE MARK	EQUIPMENT NUMBER	MODEL	MANUFACTURER	LOCATION	SUPPLY FAN			EXHAUST FAN			TEMPERATURE (F) SUMMER				EFFECTIVENESS (%) SUMMER		TEMPERATURE (F) WINTER				EFFECTIVENESS (%) WINTER		FILTERS		ELECTRICAL				OPERATING WEIGHT (LB)	NOTES										
					SUPPLY CFM	ESP (IN-WG)	DRIVE	EXHAUST CFM	ESP (IN-WG)	DRIVE	ELECTRICAL DATA			OA DB	OA WB	SA DB	SA WB	EA DB	EA WB	SENSIBLE	TOTAL	OA DB	OA WB	SA DB	SA WB	EA DB	EA WB	SENSIBLE			TOTAL	SUPPLY	EXHAUST	FLA (A)	MOCP (A)	VOLTAGE	PHASE			
											MCA	VOLTAGE	PHASE																											
ERV	01	HE10INV	RENEWAIRE	ATTIC	490	0.20	DIRECT	2	208	1	400	0.20	DIRECT	2	208	1	95.5 °F	76.8 °F	81.5 °F	69.7 °F	75.0 °F	62.4 °F	83.8	65.2	6.6 °F	4.6 °F	49.9 °F	39.2 °F	70.0 °F	51.3 °F	83.8	82.5	MERV 8	MERV 8	4	15	208	1	236	ALL

**ENERGY RECOVERY VENTILATOR (ERV) SEQUENCE OF OPERATIONS**

- GENERAL:**
  - ERV SHALL INCLUDE SUPPLY FAN, EXHAUST FAN, OUTSIDE AIR DAMPER, AND EXHAUST AIR DAMPER.
- FAN CONTROL:**
  - SUPPLY AND EXHAUST FANS SHALL BE COUPLED WITH AND ENERGIZED/DE-ENERGIZED BY FURNACE SUPPLY FAN.
  - FANS SHALL ONLY OPERATE WHEN FURNACE FAN PROVES ON. INTERNAL CONTROLLER SHALL OPEN OUTDOOR AND EXHAUST AIR DAMPERS.
- SUPPLY FAN OCCUPIED:** SUPPLY FAN SHALL RUN CONTINUOUSLY AT 490CFM WHEN OCCUPIED AND BE DE-ENERGIZED WHEN UNOCCUPIED.
- SUPPLY FAN UNOCCUPIED:** THE SUPPLY FAN SHALL SHUT OFF.
- EXHAUST FAN OPERATION:**
  - THE EXHAUST FAN SPEED WILL BE CONTROLLED FOR SUPPLY FAN COMMAND TRACKING
  - THE CONTROLLER WILL ADJUST THE EXHAUST FAN ECM COMMAND TO TRACK THE SUPPLY FAN COMMAND.
  - THE MINIMUM (50%) AND MAXIMUM (200%) TRACKING RATES ARE ADJUSTABLE
  - THIS EXHAUST FAN OPERATION MODE SHALL BE USED TO MAINTAIN PROPORTIONAL SUPPLY AND EXHAUST FAN COMMANDS AS THE SUPPLY FAN MODULATES.

**MECHANICAL - ROOF MOUNTED ATTIC FAN SCHEDULE**

**NOTES:**  
 1. PROVIDE LOCAL TEMPERATURE AND HUMIDITY SENSOR.

TYPE	EQUIPMENT NUMBER	MANUFACTURER	MODEL	LOCATION	TYPE	FAN		ELECTRICAL					OPERATING WEIGHT (LB)	NOTES
						AIR FLOW (CFM)	ESP (IN-WG)	FLA (A)	VOLT (V)	PHASE	FREQUENCY (HZ)			
AF	01	QUIETCOOL	AFR PRO-1.3	ATTIC	AXIAL	1,250	0.5	1	120	1	60	31	ALL	

**ATTIC FAN CONTROL SEQUENCE OF OPERATIONS.**

- GENERAL OPERATION**
  - WHEN SPACE TEMPERATURE RISES ABOVE 92F (ADJ.), THE ATTIC FAN SHALL BE ENERGIZED.
  - WHEN SPACE TEMPERATURE FALLS BELOW 90F (ADJ.), THE ATTIC FAN SHALL BE DE-ENERGIZED.
  - WHEN SPACE HUMIDITY RISES ABOVE 60% RH (ADJ.), THE ATTIC FAN SHALL BE ENERGIZED.
  - WHEN SPACE HUMIDITY FALLS BELOW 50% RH (ADJ.), THE ATTIC FAN SHALL BE DE-ENERGIZED.
  - WHEN SPACE HUMIDITY RISES ABOVE 95% RH (ADJ.), THE ATTIC FAN SHALL BE DE-ENERGIZED.

**MECHANICAL - UNIT HEATER (ELECTRIC)**

**NOTES:**  
 1. PROVIDE REMOTE THERMOSTAT.  
 2. PROVIDE A LOCAL MEANS OF DISCONNECT.

TYPE MARK	EQUIPMENT NUMBER	MODEL	MANUFACTURER	LOCATION	SUPPLY CFM	ELECTRIC HEATING COIL		ELECTRICAL				NOTES
						CAPACITY (KW)	EAT (°F)	AMPS	VOLTAGE	PHASE		
UH	01	MUH0381	QMARK	MECHANICAL 105	350	3	65 °F	15	208	1	ALL	
UH	02	MSPH138124	QMARK	ATTIC	350	3	55 °F	15	208	1	ALL	

**UNIT HEATER CONTROL SEQUENCE OF OPERATIONS.**

- GENERAL OPERATION**
  - ON A CALL FOR HEATING, THE UNIT HEATER FAN AND COIL SHALL BE ENERGIZED.
  - UPON MEETING SET POINT TEMPERATURE, 65F (ADJ.) FOR MECHANICAL ROOM 105 AND 55F (ADJ.) FOR THE ATTIC, UNIT HEATER SHALL SHUT DOWN.

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BELLEFONTAINE  
 HABILITATION CENTER

BUILDING 1802  
 10695 BELLEFONTAINE RD  
 ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
 SITE # 7356  
 ASSET # 6517356071

REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
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 CHECKED BY: MVT  
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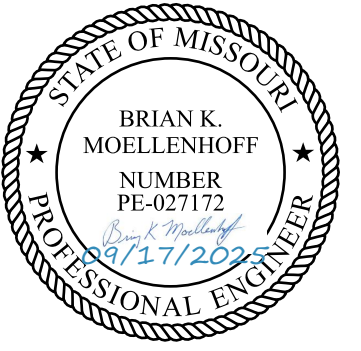
SHEET TITLE:  
**MECHANICAL  
 SCHEDULES**

SHEET NUMBER:

**M600**

51 OF 64 SHEETS  
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ISSUE DATE: 09/17/2025

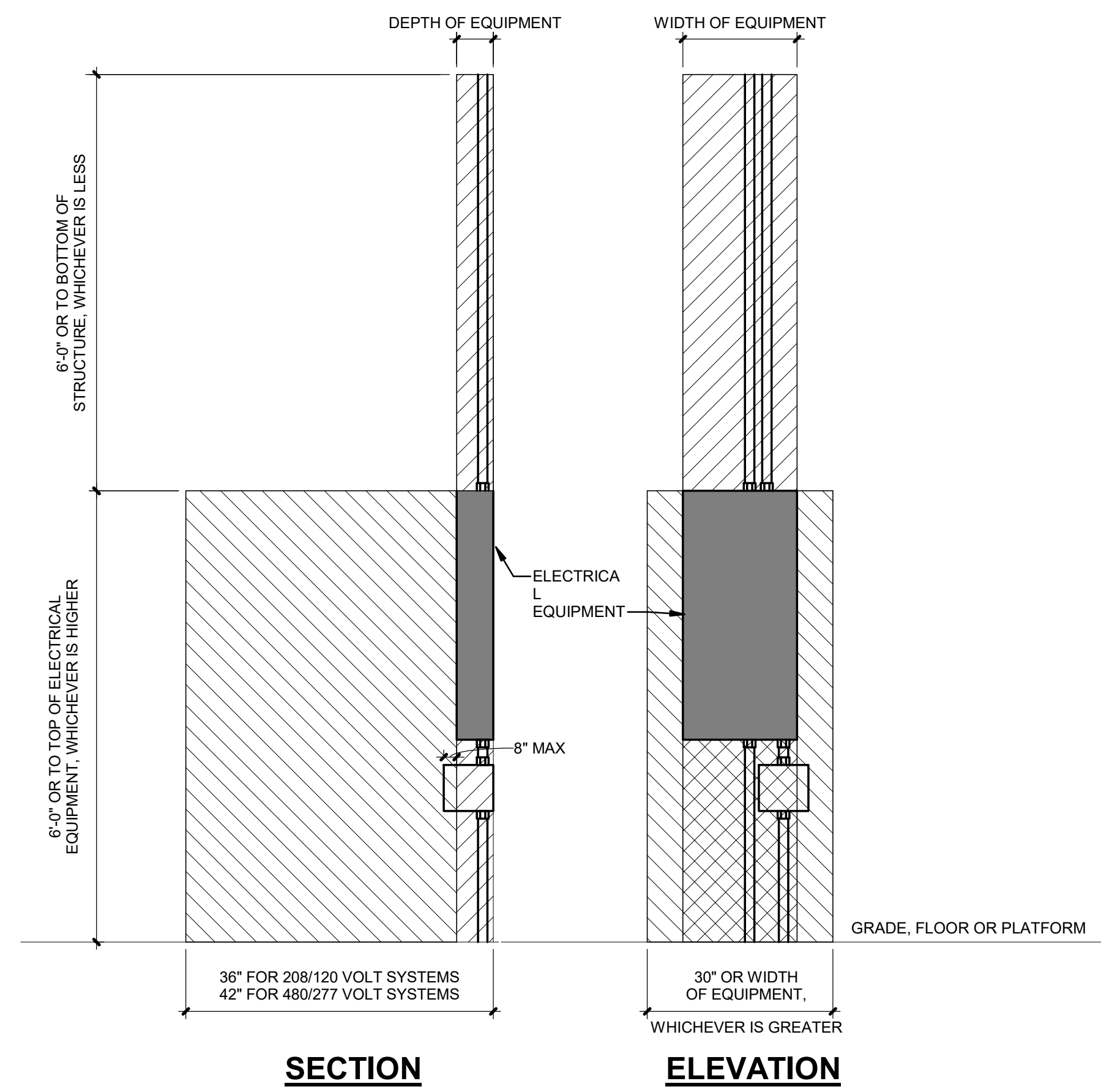
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DESIGNED BY: BKM

SHEET TITLE:  
**ELECTRICAL  
DETAILS**

SHEET NUMBER:

**E001**

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09/17/2025



**LEGEND**

WORKING SPACE REQUIRED PER 2011 NEC 110.26(A). ELECTRICAL EQUIPMENT LOCATED ABOVE OR BELOW OTHER RELATED EQUIPMENT SHALL NOT EXTEND MORE THAN 6" IN FRONT OF SUCH EQUIPMENT.

DEDICATED ELECTRICAL SPACE REQUIRED PER 2011 NEC 110.26(E).

**1 REQUIRED ELECTRICAL EQUIPMENT CLEARANCES**  
NOT TO SCALE

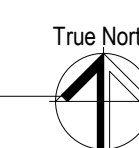


**GENERAL NOTES**

- (4) BUILDINGS WERE INCLUDED IN PREVIOUS STUDY: 1801, 1802, 1803 AND 1810. ONLY ONE (1) OF THE FOUR (4) BUILDINGS INCLUDED IN BASE BID. THE LAYOUT OF THE EXISTING BUILDINGS ARE THE SAME, THEREFORE PLAN VIEWS ARE ONLY SHOWN ONCE BUT ARE APPLICABLE TO MULTIPLE BUILDINGS.

**SHEET KEYNOTES**

- BASE BID - BUILDING 1802 TO BE RENOVATED.
- ALTERNATE 1 - BUILDING 1803 TO BE RENOVATED.
- ALTERNATE 2 - BUILDING 1801 TO BE RENOVATED.
- ALTERNATE 3 - BUILDING 1810 TO BE RENOVATED.



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PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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SHEET TITLE:  
**ELECTRICAL SITE  
PLAN**

SHEET NUMBER:  
**E101**  
54 OF 64 SHEETS  
09/17/2025



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SHEET TITLE:  
ELECTRICAL FIRST  
FLOOR PLAN -  
DEMOLITION

SHEET NUMBER:

**E200**

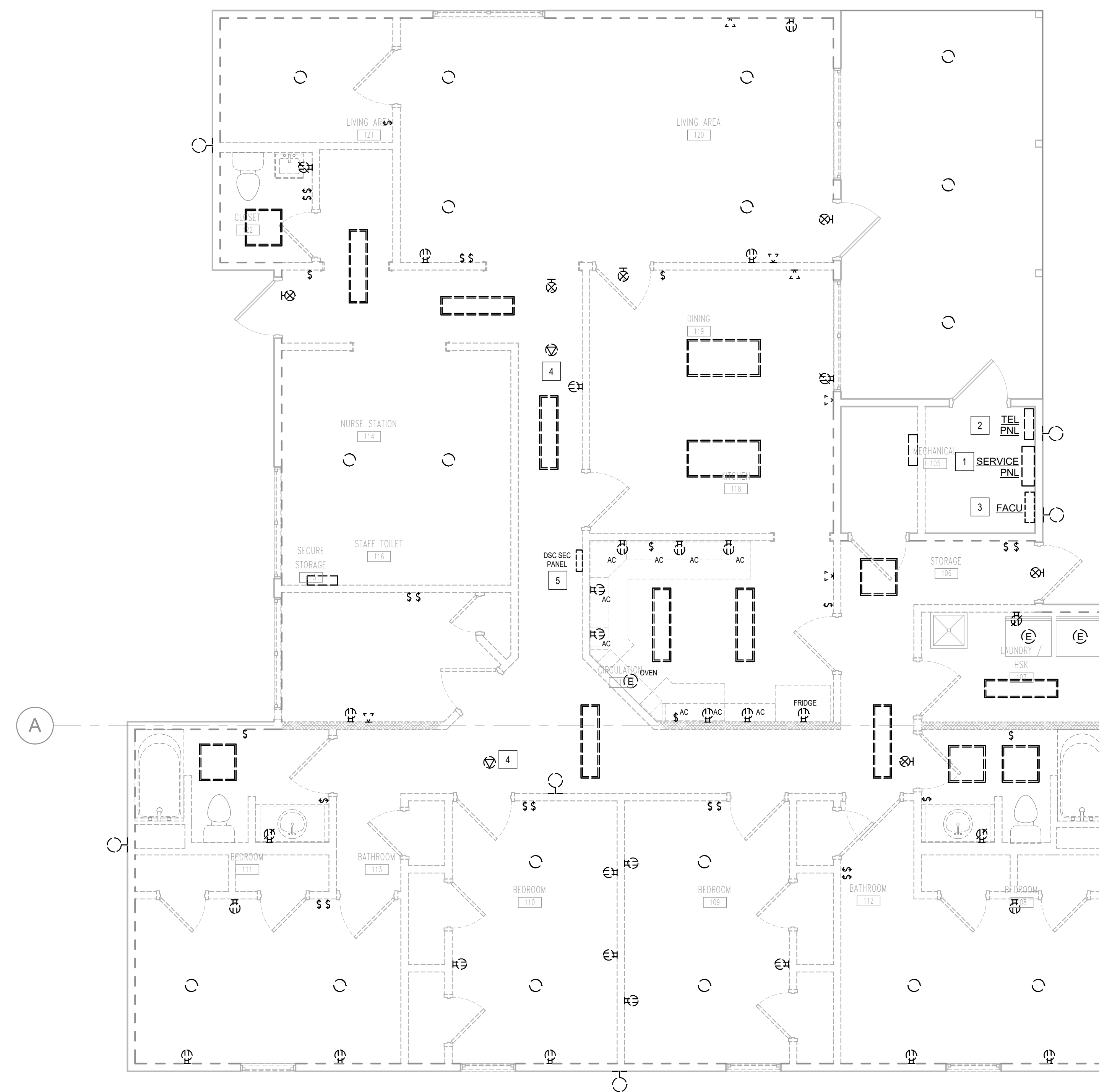
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09/17/2025

**GENERAL NOTES**

- ON DEMOLITION PLAN, ALL ITEMS SHOWN DASHED SHALL BE REMOVED. ALL DEVICES SHOWN "LIGHT" ARE EXISTING TO REMAIN.
- THE ELECTRICAL DEMOLITION DRAWINGS HAVE BEEN PREPARED UTILIZING EXISTING DRAWINGS AND SOME FIELD INVESTIGATION. THE DRAWINGS MAY NOT SHOW EVERY DEVICE TO BE DEMOLISHED OR ALL EXISTING CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING AND VERIFY EXISTING CONDITIONS AND WORK REQUIRED TO ACCOMPLISH THE RENOVATION AS DEPICTED ON THE DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING POWER TO ALL MECHANICAL EQUIPMENT REQUIRED TO BE DEMOLISHED IN ORDER TO ACCOMPLISH RENOVATION. SEE MECHANICAL DRAWINGS AND COORDINATE WITH MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING POWER TO DEVICES AND REMOVING EXISTING ELECTRICAL DEVICES ALONG WITH ASSOCIATED CONDUIT, WIRING, AND SUPPORTS TO ACCOMPLISH RENOVATION AS DEPICTED IN THESE PLANS.
- OUTAGES SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER AND GOVT FACILITIES STAFF. SUFFICIENT NOTICE SHALL BE GIVEN PRIOR TO PROPOSED OUTAGES AND SHALL BE APPROVED BY GOVT FACILITIES STAFF.

**# SHEET KEYNOTES**

- SERVICE PANELBOARD AND ALL ASSOCIATED POWER CONDUITS AND WIRING FEEDING DEVICES SHALL BE REMOVED UNLESS OTHERWISE NOTED. INCOMING SERVICE FEEDER SHALL REMAIN AND BE REUSED. SERVICE PANELBOARD WILL BE REPLACED. SEE NEW WORK PLAN.
- TELEPHONE SERVICE BOARD CAN BE REMOVED. COORDINATE WITH UTILITY, FACILITIES STAFF AND THE CONSTRUCTION MANAGER.
- EXISTING FIRE ALARM PANEL SHALL BE REMOVED AND REPLACED IN OTHER CONTRACT PROJECT. COORDINATE WITH THE CONSTRUCTION MANAGER.
- EXISTING WIRELESS ACCESS POINT SHALL BE REUSED. REMOVE AND SAVE FOR LATER INSTALLATION. COIL UP AND PROTECT EXISTING CABLE IN ATTIC FOR RE-USE. SEE NEW WORK PLAN.
- EXISTING DSC SECURITY PANEL SHALL BE REMOVED AND REPLACED WITH NEW SECURITY PANEL PER GOVT REQUIREMENTS. SEE NEW WORK.



**1 ELECTRICAL FIRST FLOOR PLAN - UNITS 1802 & 1803 DEMOLITION**  
1/4" = 1'-0"



**1 ELECTRICAL FIRST FLOOR PLAN - UNITS 1802 & 1803 POWER AND DATA**  
 1/4" = 1'-0"

**GENERAL NOTES**

- ON ELECTRICAL PLAN, CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY. ACTUAL CIRCUIT NUMBERS MAY VARY FROM CIRCUIT NUMBERS SHOWN ON PLAN. CONTRACTOR SEE THIS PLAN AND PANEL SCHEDULE FOR NEW BRANCH CIRCUITS TO BE INSTALLED.
- BRANCH CIRCUIT HOMERUNS SHALL BE 20A, #12 PHASE WIRE, #12 NEUTRAL WIRE, #12 GND WIRE IN 3/4" CONDUIT, MINIMUM SIZE.
- FOR 120V, 20A HOMERUN CIRCUITS THAT EXCEED 100 FOOT FEEDER LENGTH, OVERSIZE CONDUCTOR TO #10 DUE TO VOLTAGE DROP. FOLLOW NEC GUIDELINES FOR VOLTAGE DROP CALCULATIONS.
- ALL 120V RECEPTACLES SHOWN SHALL BE GFCI / TAMPER PROOF TYPE EXCEPT FOR LOCKED MECHANICAL / ELECTRICAL ROOM DEVICES AND SECURE STORAGE ROOM. RECEPTACLES DEDICATED TO POWERING CERTAIN EQUIPMENT MAY BE HEAVY-DUTY STANDARD TYPE AS APPROVED BY GOVT.
- GFCI RECEPTACLE CIRCUITS AND ALL BRANCH CIRCUITS SHALL HAVE DEDICATED NEUTRALS; COMMON NEUTRALS SHALL NOT BE ALLOWED.
- FOR CONDUITS CARRYING MORE THAN 6 CURRENT CARRYING CONDUCTORS, DERATE CONDUCTOR ALLOWABLE AMPACITY ACCORDING TO NEC 310.15 AND OVERSIZE CONDUCTORS AS REQUIRED.
- PROVIDE FIRE STOPPING AT ALL CONDUIT PENETRATIONS THROUGH FIRE-RATED WALLS AND CONDUIT SLEEVES THROUGH EXISTING FLOOR USE UL LISTED METHODS AND MATERIALS. SEE ARCHITECTURAL PLANS AND SPECIFICATIONS.
- FOR DATA OUTLETS SHOWN, ROUGH-IN 4X4 J-BOX WITH SINGLE PLASTER RING, 1-INCH WALL CONDUIT TO ABOVE CEILING WITH 90 DEG FITTING AND BUSHING. DATA OUTLETS SHALL BE PROVIDED PER FACILITY STANDARDS.
- UNLESS NOTED OTHERWISE, DATA OUTLETS SHALL BE "2D" HAVING TWO DATA JACKS.
- PROVIDE 120-24V TRANSFORMERS FOR POWERING MECHANICAL, FIRE ALARM, SECURITY AND OTHER LOW-VOLTAGE CONTROL SYSTEMS AS REQUIRED. COORDINATE WITH OTHER DISCIPLINES TO ENSURE ALL CONTROL POWER IS COVERED.

**SHEET KEYNOTES**

- RE-USE WIFI DEVICE SAVED FROM PREVIOUS PHASE, AND RE-INSTALL. RE-USE EXISTING CABLE.
- PROVIDE NEW 42-POLE 240/120V SINGLE PHASE PANELBOARD. NEW PANELBOARD SHALL BE CLEARLY LABELED WITH EQUIPMENT ID-TAG AND EACH RECEPTACLE AND SWITCH SHALL BE LABELED WITH CIRCUIT NUMBER PER FACILITIES STAFF DIRECTION.
- EXISTING FIRE ALARM PANEL SHALL BE REMOVED AND REPLACED IN OTHER CONTRACT PROJECT. COORDINATE WITH THE CONSTRUCTION MANAGER.
- FOR SECURITY CAMERAS SHOWN, ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ROUGH-IN ONLY OF BOXES AND CONDUIT STUBBED TO CRAWL SPACE OR ATTIC SPACE. COORDINATE WITH SECURITY CONTRACTOR. CAMERA LOCATIONS SHOWN ARE APPROXIMATE. VERIFY WITH SECURITY CONTRACTOR AND CONSTRUCTION MANAGER. SECURITY CONTRACTOR SHALL PULL POE CABLES, PROVIDE CONNECTIONS, AND PROVIDE RECORDER AND HEAD-END EQUIPMENT AS DIRECTED BY CONSTRUCTION MANAGER AND FACILITIES STAFF.
- SECURITY CONTRACTOR SHALL INSTALL NEW SECURITY PANEL PER GOVERNMENT FACILITIES REQUIREMENTS AND NEW LOW-VOLTAGE WIRING. THE EXACT LOCATION OF SECURITY PANEL SHALL BE VERIFIED BY CONSTRUCTION MANAGER AND FACILITIES STAFF.
- PROVIDE DEDICATED CIRCUIT AND DUPLEX TV OUTLETS AT 72-INCHES ABOVE FINISHED FLOOR ON WALL AS SHOWN. SEE ARCH DRAWINGS FOR FURTHER DETAIL.



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PROJECT # 16224-MO01  
 SITE # 7356  
 ASSET # 6517356071

REVISION: \_\_\_\_\_  
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 DRAWN BY: MLS  
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SHEET TITLE:  
**ELECTRICAL FIRST  
 FLOOR PLAN -  
 POWER**

SHEET NUMBER:

**E201**

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 09/17/2025



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SHEET TITLE:  
ELECTRICAL FIRST  
FLOOR PLAN -  
LIGHTING

SHEET NUMBER:

**E301**

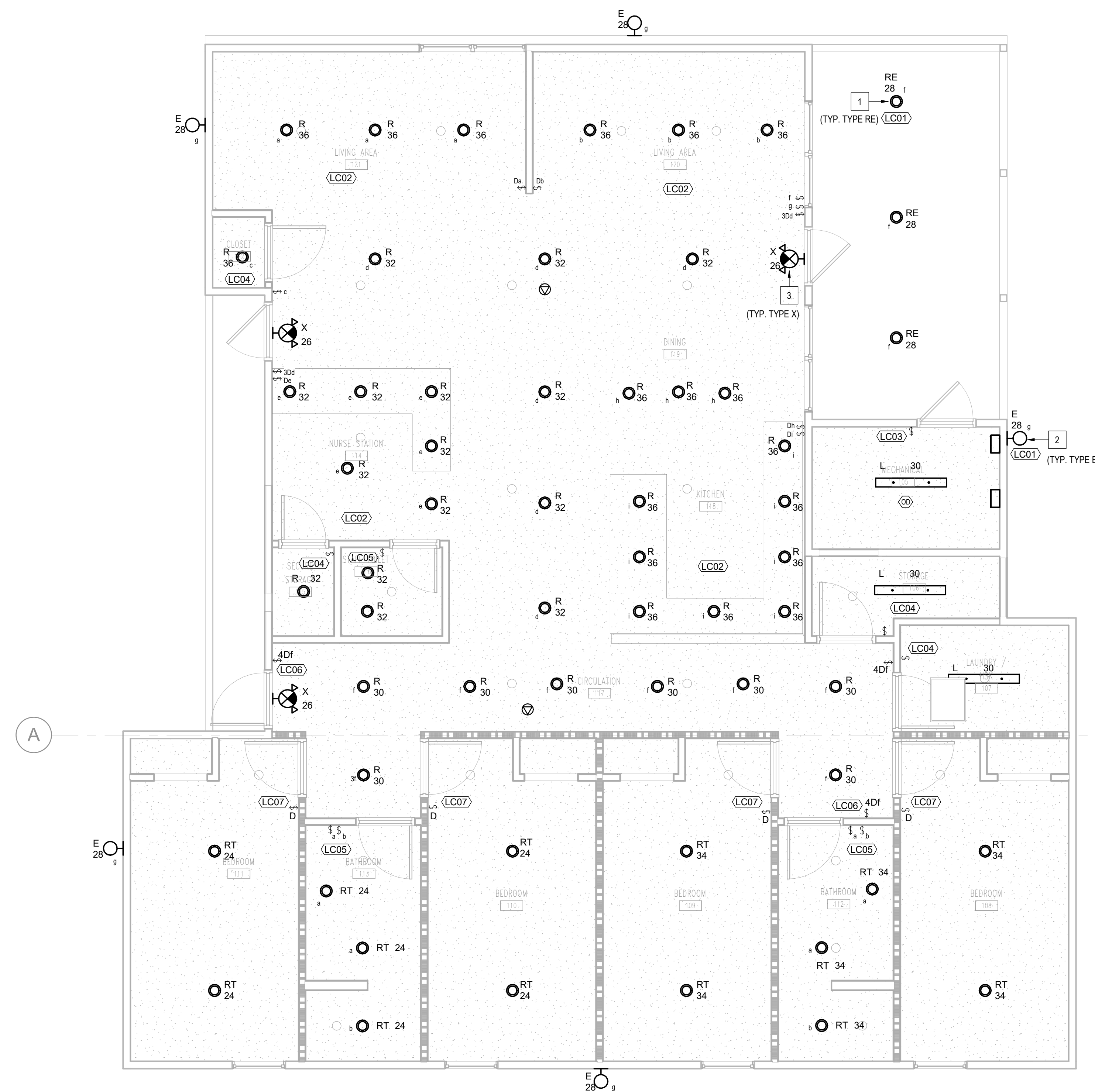
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09/17/2025

**GENERAL NOTES**

- A. FOR LIGHTING CIRCUITS, PROVIDE NEW BRANCH CIRCUITS, SWITCH LEGS, CONDUIT, AND WIRE AS REQUIRED TO POWER AND CONTROL FIXTURES SHOWN.
- B. EMERGENCY BATTERY LIGHTS AND EXIT/EMERGENCY BATTERY LIGHTS SHALL HAVE BUILT-IN RELAY TO SENSE LOSS OF NORMAL POWER. EMERGENCY LIGHTS SHALL TURN ON DURING LOSS OF NORMAL POWER REGARDLESS OF SWITCH POSITION.

**SHEET KEYNOTES**

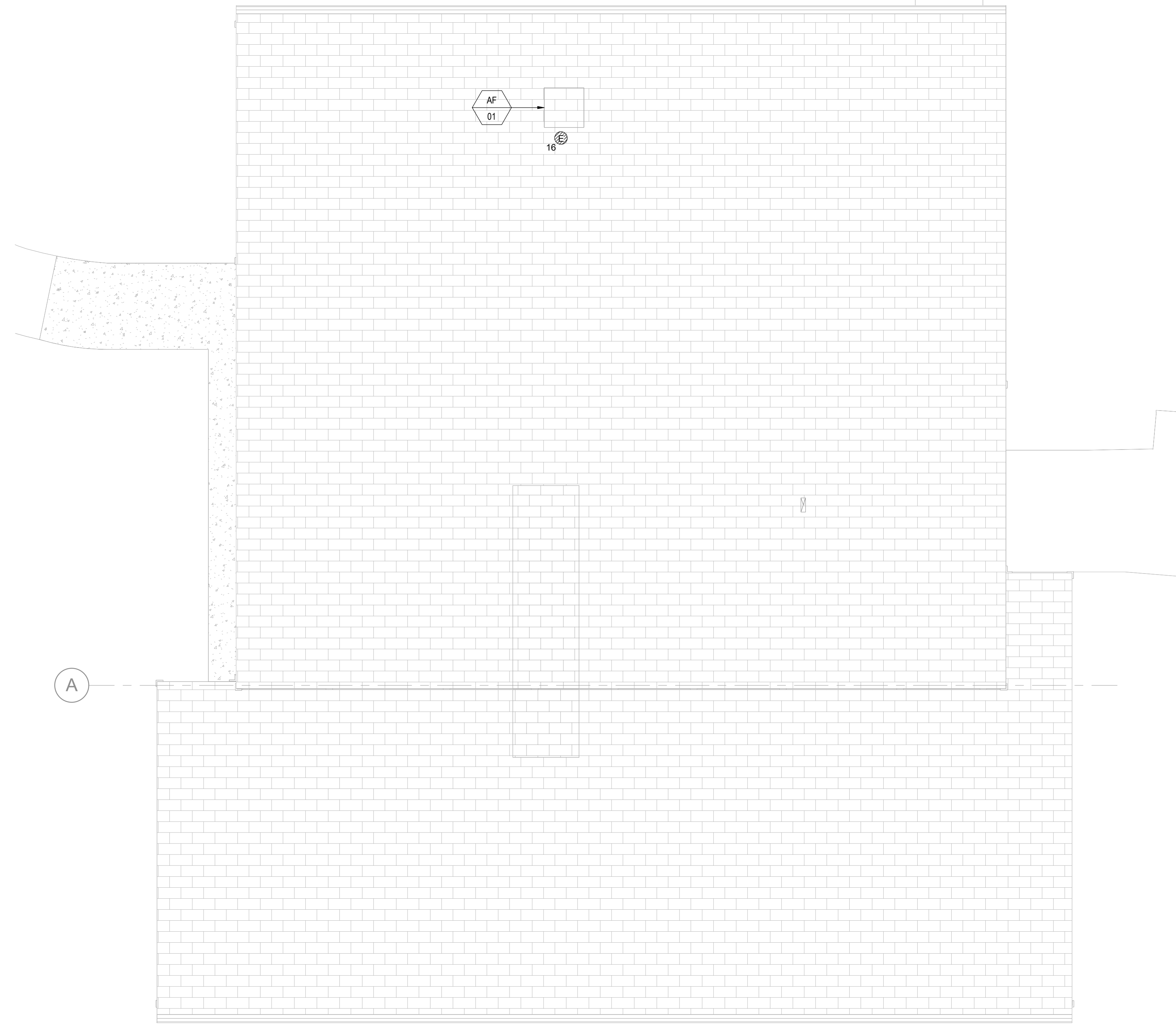
1. REPLACE EXISTING EXTERIOR RECESSED DOWNLIGHTS.
2. REPLACE EXTERIOR LIGHTS WITH 'E' TYPE FIXTURES. THESE EXTERIOR LIGHTS SHALL BE CONTROLLED VIA DUSK-DAWN SENSOR MOUNTED AT PATIO AREA. IN ADDITION, PROVIDE MANUAL OVER-RIDE SWITCH AT ENTRY DOOR.
3. REPLACE EXIT / FLOOD LIGHTS.



**1 ELECTRICAL FIRST FLOOR PLAN - UNITS 1802 & 1803 LIGHTING**  
1/4" = 1'-0"

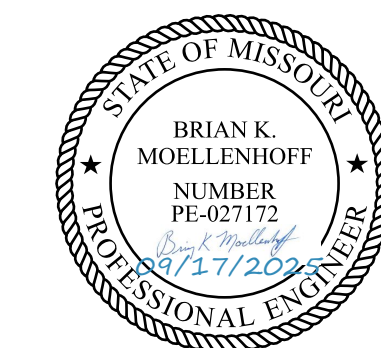
**GENERAL NOTES**

A. FOR BUILDING 1802, PROVIDE ELECTRICAL SUPPORT FOR DEMO AND MODIFICATION OF SKYLIGHT AND ROOF STRUCTURE AS SHOWN ON ARCH DRAWINGS.



**1** ELECTRICAL ROOF PLAN - BUILDING 1802  
1/4" = 1'-0"

STATE OF MISSOURI  
MIKE KEHOE,  
GOVERNOR



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SHEET TITLE:  
**ELECTRICAL ROOF  
PLAN - POWER**

SHEET NUMBER:

**E302**

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09/17/2025

(1802/1803)

PANEL: NL1
VOLTS: 120/240V/1PH/3W
PHASES: 1
WIRES: 3
MOUNTING: SURFACE
LOCATION: MECHANICAL 105
SUPPLY FROM:
KAIC: 10K AIC
MAIN BREAKER: 200 A
AMP BUSSING: 200
NEUTRAL BUS: 200 A

LIGHTING CONTROL SEQUENCE
S - "INDIVIDUAL ZONE WALL CONTROLLER". REFER TO FLOOR PLAN FOR QUANTITY OF ZONES SHOWN IN THE AREA. EACH ZONE SHALL HAVE A ITS OWN INDEPENDENT CONTROLLER WITHIN THE WALL CONTROLLER.
D - "INDIVIDUAL DIMMING ZONE WALL CONTROLLER". EACH ZONE SHALL ITS OWN INDEPENDENT CONTROLLER CAPABLE OF ON, OFF AND DIMMING WITHIN THE WALL CONTROLLER. REFER TO FLOOR PLAN FOR QUANTITY OF ZONES SHOWN IN THE AREA.
P - "PRESET SCENE CONTROLLER". NUMBER INDICATES QUANTITY OF PRESET SCENE CONTROLS. EACH PRESET SCENE SHALL EACH BE CAPABLE OF TURNING SCENE ON, OFF AND DIM.
DL F. Cd - "DAY LIGHT PHOTO SENSOR". MUST AUTOMATICALLY DIM INDICATED LUMINAIRES SHOWN ON FLOOR PLANS WITH DAY LIGHT ZONES. MAINTAIN MAXIMUM FOOT CANDLE RATING INDICATED AS MEASURED FROM +30" AFF.
MAN - MANUAL CONTROL. OCC - OCCUPANCY ON AND / OR VACANCY OFF. TC - TIME CLOCK. ETD - EMERGENCY TRANSFER DEVICE.

LIGHTING CONTROL NOTES:
1. LIGHT FIXTURE SHOP DRAWING AND LIGHTING CONTROL SHOP DRAWING SUBMITTAL SHALL BE SUBMITTED AT THE SAME TIME. APPROVAL WILL NOT BE GRANTED UNTIL BOTH ARE REVIEWED.
2. THE LIGHTING CONTROL SYSTEM SCHEDULE SHALL BE CONSIDERED A PERFORMANCE CRITERIA. PROVIDE ALL CONTROL DEVICES, WIRING, RACEWAY, PROGRAMMING, AND LABOR AS REQUIRED TO OBTAIN THE SEQUENCES IDENTIFIED FOR EACH SPACE.
3. PROVIDE CONTROL DRAWINGS, SEQUENCE DESCRIPTIONS, PUSHBUTTON CONFIGURATIONS (WITH LIGHTING LOADS IDENTIFIED) AND WIRING DIAGRAMS INDICATING THE PROPOSED LIGHTING CONTROLS WITHIN THE SHOP DRAWING SUBMITTAL FOR APPROVAL.
4. COORDINATE ALL BUTTON ENGRAVING WITH OWNER PRIOR TO ORDERING.
5. MOUNT AREA CONTROLLERS AND POWER PACKS ABOVE CEILING, NEAR WALL CONTROLLERS IN THE INTERIOR SIDE OF THE SPACE SERVED. ROOM CONTROLLERS SERVING CORRIDORS MAY BE LOCATED IN ELECTRICAL ROOMS.
6. PRIOR TO CONSTRUCTION CLOSEOUT, DEMONSTRATE LIGHTING CONTROLS TO OWNER FOR FINAL APPROVAL. MODIFY PROGRAMMING AND ILLUMINATION AS REQUIRED TO MEET OWNERS FINAL REQUIREMENTS.
7. EACH SWITCH LEG SHOWN ON LIGHTING DRAWINGS IS A ZONE, PROVIDE A TOGGLE/DIMMER SWITCH FOR EACH SWITCH LEG/ZONE SHOWN ON LIGHTING FLOOR PLANS.

EQUIPMENT DATA SCHEDULE - ELECTRICAL

Table with columns: MARK, EQUIPMENT, LOCATION, FURN. BY, BREAKER SIZE, MOTOR OR EQUIPMENT DATA, DISCONNECT SWITCH AT EQUIPMENT, STARTER, NOTES. Includes notes on magnetic and solid state starters, fire alarm interlock, and disconnect switch types.

EQUIPMENT DATA SCHEDULE NOTE

A. PRIOR TO START OF ELECTRICAL WORK, EC SHALL VERIFY NAMEPLATE INFORMATION ON ALL EQUIPMENT AND ENSURE THAT NAMEPLATE AMPS MATCH SCHEDULE AMPS AND THAT SCHEDULE BREAKER SIZE AND CONDUCTOR SIZE ARE CONSISTENT WITH ACTUAL NAMEPLATE INFORMATION OF EACH PIECE OF EQUIPMENT.

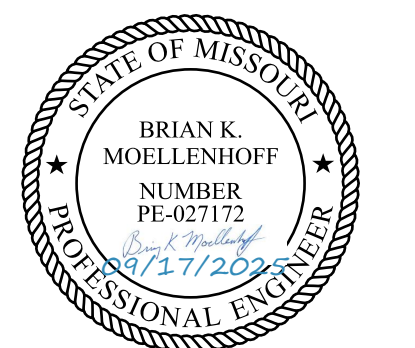
LIGHT FIXTURE SCHEDULE

Table with columns: MOUNTING, LISTING, LENS TYPE / COLOR, TRIM TYPE / COLOR, TEMPERATURE (K), COLOR RENDER INDEX (CRI), VOLTAGE, CONTROL, EMERGENCY CONTROL. Includes a detailed table of fixture specifications at the bottom.

LIGHT FIXTURE NOTE

A. EATON / COOPER FIXTURES ARE LISTED AS BASIS OF DESIGN. EQUIVALENT LIGHTS FROM THE FOLLOWING MANUFACTURERS: LITHONIA, PHILIPS, OR CREE, MAY BE USED AS APPROVED BY ENGINEER.

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PROJECT # 16224-MO01
SITE # 7356
ASSET # 6517356071

REVISION:
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DATE:
ISSUE DATE: 09/17/2025

CAD DWG FILE:
DRAWN BY: MLS
CHECKED BY: BKM
DESIGNED BY: BKM

SHEET TITLE:
ELECTRICAL
SCHEDULES

SHEET NUMBER:

E500

59 OF 64 SHEETS
09/17/2025

ANNOTATION		WALL	CEILING	FIRE ALARM NOTIFICATION APPLIANCES	WALL	CEILING	ADDRESSABLE INTERFACE MODULES
	MECHANICAL EQUIPMENT DESIGNATION "P-1" INDICATED			REFER TO LIST BELOW FOR SUBSCRIPT IDENTIFICATION WP = WEATHER PROOF HOUSING CA = CLEAN AGENT SYSTEM			INTERFACE DEVICE TYPE. REFER TO LIST BELOW FOR TYPE AND SUBSCRIPT IDENTIFICATION AIM = ADDRESSABLE INPUT MODULE AIO = ADDRESSABLE INPUT / OUTPUT MODULE, SUBSCRIPT NUMBER DENOTES NUMBER OF INPUTS AND OUTPUTS AOM = ADDRESSABLE OUTPUT CONTROL MODULE IM = ISOLATION MODULE
	DETAIL REFERENCE NUMBER "1" ON DRAWING "E-6"			COMBINATION HORN / STROBE, "CD" CANDELA INDICATED			
	SECTION OR ELEVATION REFERENCE LETTER "A" ON DRAWING "E-6"			VISIBLE STROBE ONLY, "CD" CANDELA INDICATED			
	FIRE ALARM EQUIPMENT DESIGNATION "FACU"			<b>SMOKE DETECTION - SIGNAL INITIATING DEVICES</b> SMOKE DETECTOR. REFER TO LIST BELOW FOR SUBSCRIPT IDENTIFICATION. NO SUBSCRIPT = PHOTOELECTRIC SMOKE DETECTOR BR = BEAM RECEIVER R = RELAY BASE BT = BEAM TRANSMITTER SB = SOUNDER BASE SF = SUBFLOOR LF = LOW FREQUENCY SOUNDER BASE I = IONIZATION AS = AIR SAMPLING PORT			<b>MANUAL FIRE ALARM &amp; FIRE SUPPRESSION BOX TYPES</b> PULL STATION <b>INTERFACE ALARM AND SUPERVISORY DEVICES</b> FLOW DETECTOR / SWITCH POST INDICATOR VALVE VALVE SUPERVISORY SWITCH
	SHEET KEYED NOTE DESIGNATION						<b>RELATED AND INTERFACED SYSTEM COMPONENTS</b> SURGE SUPPRESSOR
				<b>HEAT DETECTION - SIGNAL INITIATING DEVICES</b> HEAT DETECTOR TYPE. REFER TO LIST BELOW FOR SUBSCRIPT IDENTIFICATION R = RATE OF RISE FIXXX = FIXED TEMPERATURE/TEMPERATURE RATING R/C = RATE COMPENSATION R/F = COMBINATION RATE OF RISE / FIXED TEMPERATURE			
				HEAT DETECTOR = LINE TYPES			
				<b>GAS DETECTION - SIGNAL INITIATING DEVICES</b> GAS DETECTOR TYPE. REFER TO LIST BELOW FOR SUBSCRIPT IDENTIFICATION CO = CARBON MONOXIDE			

**WALL SURFACE MOUNTED**  **WALL RECESSED MOUNTED**

**FIRE ALARM EQUIPMENT**

**FA CONTROL UNITS**  
EVAC = VOICE EVACUATION FIRE ALARM CONTROL UNIT  
FACU = FIRE ALARM CONTROL UNIT, SUBSCRIPT "D" DENOTES DEDICATED FIRE ALARM CONTROL UNIT

**FA POWER, AMPLIFIER CABINETS**  
NAC = NOTIFICATION CIRCUIT POWER BOOSTER EXTENDER PANEL  
SUBSCRIPT NUMBER DENOTES UNIT NUMBER (WHERE APPLICABLE)  
AMP = REMOTELY LOCATED EVACUATION AMPLIFIER CABINET, SUBSCRIPT NUMBER DENOTES UNIT NUMBER (WHERE APPLICABLE)  
BATT = BATTERY CABINET

**FA COMMUNICATION EQUIPMENT**  
FAC = FIRE ALARM COMMUNICATOR

**FA ANNUNCIATORS**  
FAA = REMOTE FIRE ALARM ANNUNCIATOR

### FIRE ALARM GENERAL NOTES

- MAKE ALL INSTALLATIONS IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).
- REFER TO SPECIFICATIONS SECTION 283111 FOR ADDITIONAL INFORMATION PERTAINING TO THE FIRE ALARM SYSTEM.
- MOUNTING HEIGHTS INDICATED WITHIN PLANS AND SCHEDULES ARE DIMENSIONED TO THE CENTER LINE OF THE DEVICE, EQUIPMENT, ETC. UNLESS OTHERWISE NOTED.
- THE FIRE ALARM NEW WORK CONTENT SHOWN ON THE DRAWINGS REPRESENTS A SCHEMATIC LAYOUT WITH CERTAIN SPECIFIC REQUIREMENTS IDENTIFIED. CONTRACTOR SHALL PROVIDE ENGINEERED SHOP DRAWINGS (SIGNED AND SEALED) AND FINAL INSTALLATION IN COMPLIANCE WITH THIS FIRE ALARM DESIGN CONTENT AND REQUIREMENTS SET FORTH BY THESE DRAWINGS, AND ANY ADDITIONAL REQUIREMENTS ESTABLISHED BY CODE, THE AUTHORITIES HAVING JURISDICTION, OR UNFORESEEN CONDITIONS.
- THE ENGINEERED FIRE ALARM SHOP DRAWINGS SHALL INCLUDE ALL DEVICES, EQUIPMENT, AND APPURTENANCES AS REQUIRED BY APPLICABLE CODES OR AS NECESSARY FOR A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM INCLUDING INTERFACES WITH OTHER SYSTEMS AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
- SPECIAL REQUIREMENTS FOR CIRCUIT BREAKERS PROVIDING OVERCURRENT PROTECTION TO FIRE ALARM SYSTEM CLASS I CIRCUITS: PROVIDE VISUALLY-DISTINGUISHABLE RED CIRCUIT BREAKER(S) WITH LOCK-ON DEVICE AND "FIRE ALARM SYSTEM" LABEL.
- SIGNALING LINE CIRCUITS SHALL BE ROUTED IN A CLASS B CONFIGURATION.
- NOTIFICATION APPLIANCE CIRCUITS SHALL BE ROUTED IN A CLASS B CONFIGURATION.
- FIRE ALARM CIRCUITS SHALL BE ROUTED IN CONDUIT WHERE INACCESSIBLE. WHERE ROUTED ABOVE ACCESSIBLE CEILINGS, FIRE ALARM CIRCUITS SHALL CONSIST OF PLENUM RATED CABLE SUPPORTED EVERY 4'-0" BETWEEN DEVICES.
- CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILINGS, AND IN FLOOR SLABS, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT ROUTED IN MECHANICAL ROOMS, ELECTRICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE ROUTED EXPOSED.
- COORDINATE VERTICAL CONDUIT ROUTING TO WALL MOUNTED DEVICES TO ENSURE DEVICES LOCATED WITHIN AN 18-INCH HORIZONTAL DIMENSION WILL BE CENTER-ALIGNED VERTICALLY.
- FIELD COORDINATE ALL FIRE ALARM EQUIPMENT MOUNTING LOCATIONS WITH EXISTING CONDITIONS, AND TO AVOID ENCROACHMENT OF REQUIRED CLEARANCES, OPERATION AND ACCESS TO EQUIPMENT FROM OTHER TRADES. FIRE ALARM EQUIPMENT LOCATIONS SHOWN ON PLANS ARE DIAGRAMMATICAL ONLY AND MIGHT NOT BE EXACT.
- COORDINATE THE APPROPRIATE MOUNTING LOCATION WITH THE AFFECTED DISCIPLINES WHEN A FIRE ALARM SYSTEM COMPONENT/ EQUIPMENT/DEVICE IS SPECIFIED TO BE MOUNTED ONTO THE SURFACE OF ANOTHER DISCIPLINE'S EQUIPMENT.
- PENETRATIONS IN FIRE RATED WALLS AND FLOORS/CEILINGS SHALL BE SEALED BY A CERTIFIED FIRESTOPPING CONTRACTOR. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS MUST HAVE BEEN TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS.
- PERFORM ALL WELDING ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. FURNISH CERTIFICATES QUALIFYING EACH WELDER TO THE ARCHITECT OR ENGINEER PRIOR TO START OF WORK. THE ARCHITECT OR ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT NO ADDITIONAL EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.
- REPLACE OR REINSTALL ALL PORTIONS OF THE BUILDING (CEILING TILES, WALLS, ETC) REMOVED TO ACCOMMODATE THE INSTALLATION OF ANY ELECTRICAL DEVICE, EQUIPMENT, ETC., USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.

### FIRE ALARM DEMOLITION NOTES

- REMOVE, CAP AND RELOCATE EQUIPMENT, DEVICES, CONDUIT, WIRE, ETC., AS SHOWN AND SPECIFIED ON DRAWINGS, AND AS MAY BECOME NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. VISIBLY EXAMINE ALL EXISTING WALLS DESIGNATED FOR REMOVAL TO DETERMINE THE CONDUIT AND THE WIRING THAT WILL REQUIRE GAPPING AND REMOVAL, WHETHER OR NOT SUCH CONDITIONS ARE INDICATED ON THE DRAWINGS. FAILURE TO VISIT THE SITE AND TO TAKE ALL EXISTING CONDITIONS INTO ACCOUNT WILL NOT ALLOW FOR CHANGES TO THE SCOPE OF WORK.
- ALL EXISTING EQUIPMENT AND DEVICES TO REMAIN SHALL STAY IN-TACT AND OPERATIONAL DURING THE CONSTRUCTION PROCESS. MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING DEVICES, EQUIPMENT, ETC., TO REMAIN IN USE WHETHER NOTED ON THE PLANS OR NOT. IF A DEVICE REQUIRING POWER IS DISTURBED OR INTERRUPTED, RESTORE THE DEVICE TO ITS ORIGINAL OPERATIONAL STATE. ANY DEMOLITION WORK REQUIRING MODIFICATION OF EXISTING ELECTRICAL SYSTEMS SHALL NOT COMPROMISE THE SYSTEMS TO REMAIN. INSTALL NEW CONDUIT AND WIRING WHERE NECESSARY TO RESTORE POWER PER NEC REQUIREMENTS.
- THE FIRE ALARM DEMOLITION CONTENT SHOWS EXISTING CONDITIONS BASED ON FIELD OBSERVATIONS AND ORIGINAL DRAWINGS. ADDITIONAL COMPONENTS AND CONDITIONS THAT ARE NOT SHOWN ON THE DRAWINGS MAY EXIST AND MAY REQUIRE CERTAIN REMODELING OR ADJUSTMENTS THAT ARE NOT NOTED ON THE DRAWINGS. FIELD VERIFY THE LOCATIONS OF ALL EXISTING EQUIPMENT AND DEVICES SHOWN ON THE DRAWINGS PRIOR TO BIDDING.
- REMOVE ALL UNUSED WIRING AND CABLES BACK TO THEIR SOURCE. REMOVE ALL UNUSED CONDUIT THAT IS EXPOSED OR ABOVE ACCESSIBLE CEILINGS WHICH IS AFFECTED BY OR IS IN THE AREA OF THE DEMOLITION WORK. CONDUIT ABANDONED IN PLACE SHALL BE MARKED "ABANDONED".
- THE INTENTION OF THE FIRE ALARM DEMOLITION DRAWINGS IS TO DISCONNECT AND REMOVE ALL WORK MADE VOID BY THE SCOPE OF THE CONSTRUCTION AND ALTERATION. FIELD VERIFY EXACT MATERIAL QUANTITIES REQUIRED TO BE REMOVED.
- DISCONNECT AND REMOVE ALL EXISTING FIRE ALARM EQUIPMENT, DEVICES, ASSOCIATED RACEWAYS, SUPPORTING HARDWARE, AND WIRING, WHICH HAVE BEEN MADE OBSOLETE BY THE WORK OR IS SHOWN DASHED ON THE FIRE ALARM DEMOLITION DRAWINGS, UNLESS OTHERWISE NOTED. ALTHOUGH AN ATTEMPT HAS BEEN MADE TO INDICATE ALL OF THIS WORK, TOTAL ACCURACY IS NOT GUARANTEED. VISIBLY EXAMINE ALL AREAS AND WALLS AND CEILINGS SCHEDULED FOR REMOVAL TO DETERMINE EXISTING ELECTRICAL ITEMS TO REMAIN.
- WHERE FIRE ALARM EQUIPMENT, DEVICES, CONDUIT, BOXES, AND SUPPORTING HARDWARE ARE REMOVED, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR AND RESTORE ALL INTERIOR/EXTERIOR WALLS, CEILINGS, FLOORS, AND CONCRETE WORK REQUIRING PATCHING, PLASTERING, PAINTING AND ANY OTHER REPAIRS DUE TO ELECTRICAL WORK TO RESTORE THE ORIGINAL FINISH AND APPEARANCE, USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.
- NOT ALL EXISTING UTILITIES AND OR ELECTRICAL SYSTEMS ARE SHOWN ON PLANS. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. COORDINATE WITH THE CONTRACTING OFFICER PRIOR TO COMMENCING WORK.
- WHERE BURIED CONDUITS EXTENDING OUT OF A CONCRETE SLAB BECOME ABANDONED, CUT AND GRIND THE CONDUITS OFF FLUSH WITH TOP OF SLAB AND PLUG WITH NON-SHRINKWATERPROOF GROUT FILL.
- TAKE ALL REMOVED MATERIALS FROM THE PROJECT SITE, EXCEPT FOR THOSE TO BE RELOCATED, STORED, OR TURNED OVER TO THE OWNER.
- ACCEPTANCE OF CONTRACT MEANS INSTALLER ACCEPTS EXISTING CONDITIONS.
- COORDINATE ALL DEMOLITION WORK WITH ALL OTHER TRADES AND EXISTING CONDITIONS.
- PROVIDE BLANK COVER PLATE OR OVERSIZED VINYL COVER AS APPROVED BY OWNER'S REPRESENTATIVE, SUFFICIENT IN SIZE WITH MUD RING TO COVER UP THE OPENING WHERE A FLUSH DEVICE IS BEING REMOVED FROM WALLS THAT ARE TO REMAIN. PROVIDE A LABEL ON THE INTERIOR SIDE OF THE PLATE STATING "ABANDONED FIRE ALARM". BLANK COVER PLATE SHALL MATCH THE EXISTING SURFACE COLOR IT'S INSTALLED ON.
- LEGALLY DISPOSE OF HAZARDOUS MATERIALS OR OTHER EQUIPMENT. COMPLY WITH ALL FEDERAL STATE, AND LOCAL LAWS.

### FIRE STOPPING NOTES

- MATERIALS: USE ONLY FIRE STOP PRODUCTS THAT HAVE BEEN UL 1479, ASTM E-814, OR UL 2079 TESTED FOR SPECIFIC FIRE RATE CONSTRUCTION CONDITIONS CONFORMING TO CONSTRUCTION ASSEMBLY TYPE, PENETRATING ITEM TYPE, ANNULAR SPACE REQUIREMENTS, AND FIRE RATING INVOLVED FOR EACH SEPARATE INSTANCE.
- FOR SINGLE PENETRATIONS: A READY-TO-USE LATEX BASED INTUMESCENT SEALANT IS REQUIRED TO MAINTAIN THE FIRE RATING OF THE ASSEMBLY PENETRATED. THE SEALANT MUST HAVE UL LISTING FOR BOTH SLEEVED AND NON-SLEEVED APPLICATIONS.
- FOR LARGE OPENINGS: CONTAINING MULTIPLE PENETRATIONS (2 OR MORE), A READY-TO-USE FOAM INTUMESCENT BLOCK MATERIAL MUST BE ABLE TO BE REMOVED AND REINSTALLED WITHOUT COMPROMISING FIRE PROTECTION INTEGRITY. COMPLY WITH MANUFACTURER'S RECOMMENDED PROCEDURES AND PRECAUTIONS. DO NOT USE DAMAGED OR EXPIRED MATERIALS.
- MANUFACTURERS: JOHNS MANVILLE INTERNATIONAL, 3M BRAND, CSD SEALING SYSTEMS, HILTI, CIBA-GEIGY, HEAVY-DUTY/NEALSON. REFER TO DIVISION 7 FOR FURTHER REQUIREMENTS.
- CONTRACTOR: PENETRATIONS IN FIRE RATED WALLS AND FLOORS/CEILINGS SHALL BE SEALED BY A CERTIFIED FIRE STOPPING CONTRACTOR.

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PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: MTM  
DESIGNED BY: RMS

SHEET TITLE:  
FIRE ALARM  
SYMBOLS AND  
ABBREVIATIONS

SHEET NUMBER:

**FA000**

60 OF 64 SHEETS  
09/17/2025



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ISSUE DATE: 09/17/2025

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: MTM  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE ALARM FIRST  
FLOOR PLAN -  
DEMOLITION**

SHEET NUMBER:

**FAD101**

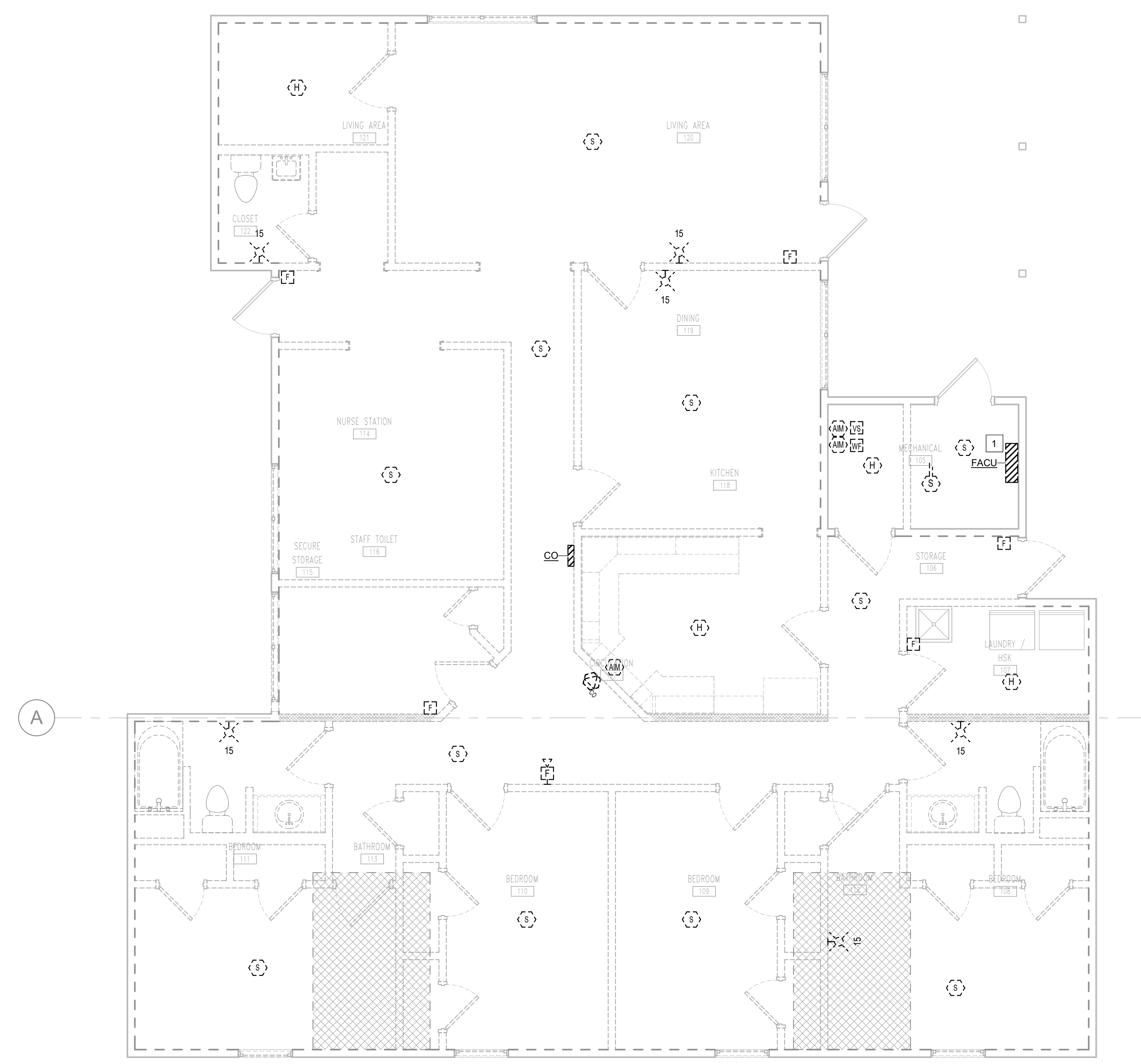
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09/17/2025

**GENERAL NOTES**

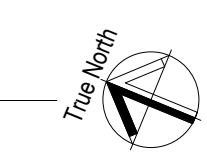
A. DISCONNECT AND REMOVE EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY OTHER THAN THE FIRE ALARM CONTROL PANEL.

**# SHEET KEYNOTES**

1. THE FIRE ALARM CONTROL PANEL WILL BE PROVIDED BY A SEPERATE PROJECT THAT IS OCCURRING ON THE CAMPUS. THE PANEL PROVIDED BY THE OTHER PROJECT WILL BE EXISTING TO REMAIN FOR THE NEW WORK ON THIS PROJECT.



**1 FIRE ALARM FIRST FLOOR PLAN - DEMOLITION (UNIT 1802)**





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CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: RMS  
CHECKED BY: MTM  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE ALARM FIRST  
FLOOR PLAN - NEW  
WORK**

SHEET NUMBER:

**FA101**

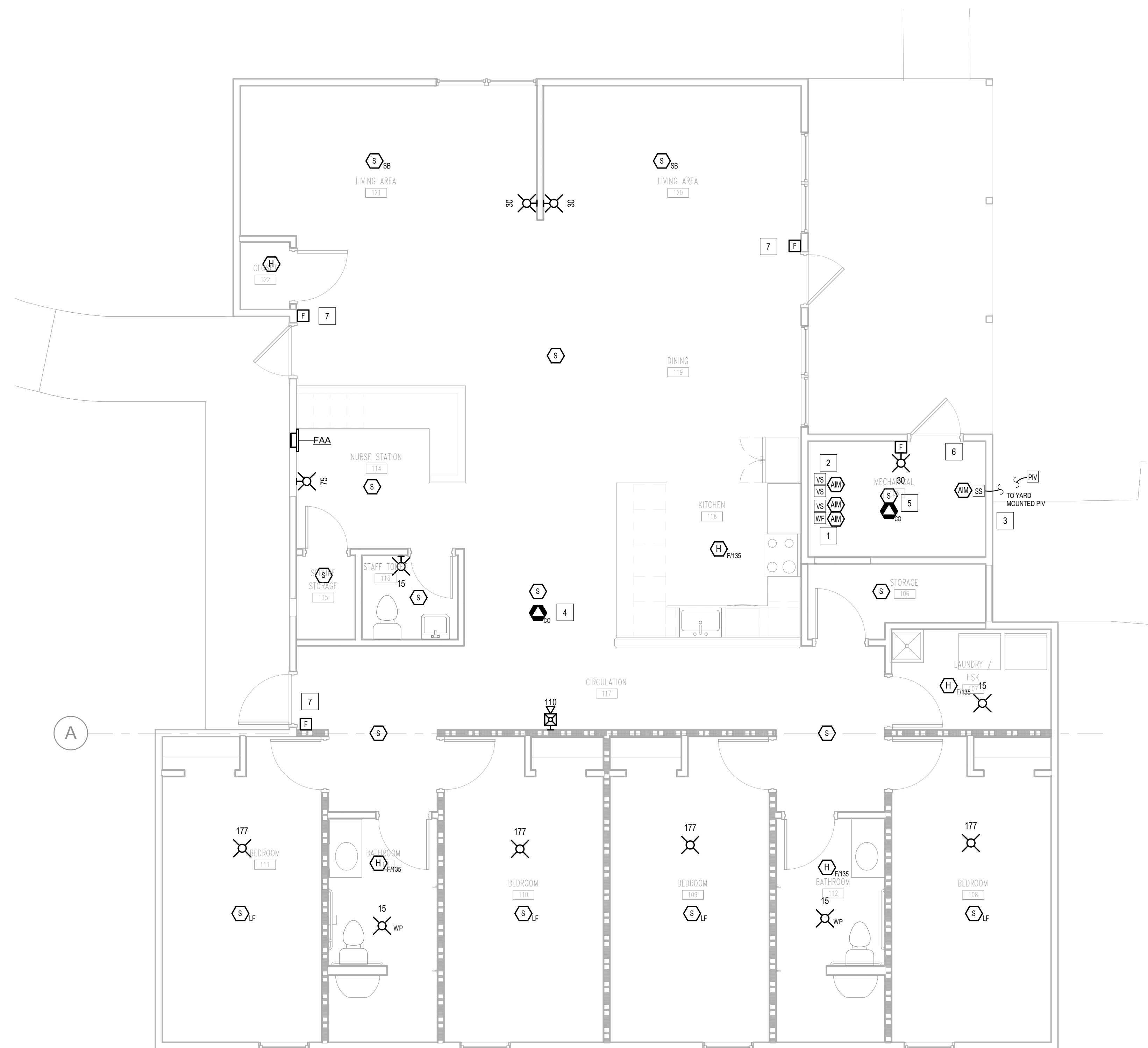
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09/17/2025

**GENERAL NOTES**

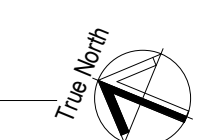
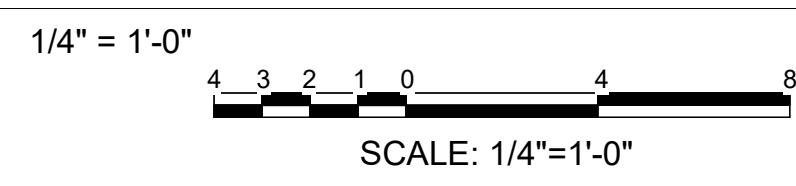
- A. PROVIDE 120V DEDICATED POWER FOR FIRE ALARM SYSTEM EQUIPMENT.
- B. NOTIFICATION DEVICES INSTALLED IN SLEEPING ROOMS SHALL PRODUCE A LOW FREQUENCY AUDIBLE SIGNAL, AS REQUIRED BY NFPA-72.
- C. PROVIDE A REMOTE INDICATOR/TEST SWITCH LOCATED IN DIRECT PROXIMITY OF DUCT DETECTOR WHERE DUCT DETECTOR IS INSTALLED ABOVE CEILING OR OTHERWISE NOT VISIBLE FROM A FLOOR STANDING POSITION. PROVIDE A LABEL ON REMOTE INDICATOR/TEST SWITCH INDICATING DEVICE TYPE AND ADDRESS, AS WELL AS THE AHU OR DAMPER SERVED DESIGNATION.
- D. ALL NOTIFICATION AND DETECTION LOCATED IN PRIVATE SPACES SHALL BE CEILING MOUNTED AND TAMPER RESISTANT CONSTRUCTION.

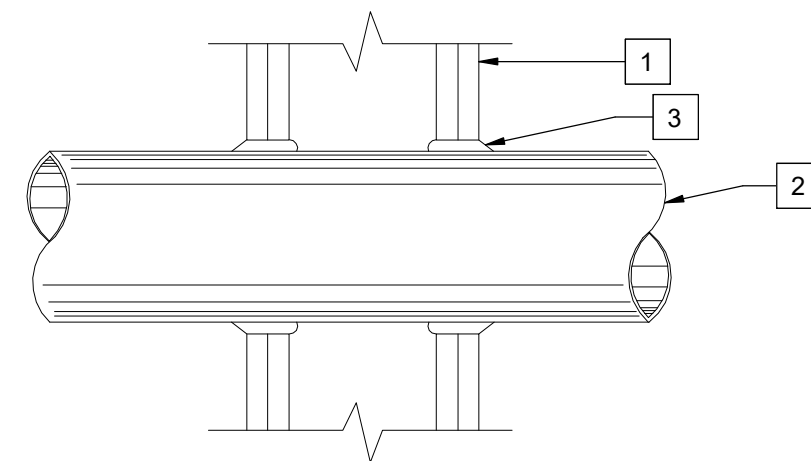
**# SHEET KEYNOTES**

1. PROVIDE ADDRESSABLE MONITOR MODULE TO MONITOR SPRINKLER SYSTEM TAMPER SWITCH AND FLOW SWITCH AS INDICATED. INSTALL MONITOR MODULES ADJACENT TO SPRINKLER SYSTEM DEVICES AS REQUIRED. COORDINATE WITH SPRINKLER SYSTEM INSTALLING CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS PRIOR TO ROUGH-IN.
2. PROVIDE ADDRESSABLE MONITOR MODULE TO MONITOR SPRINKLER SYSTEM TAMPER SWITCH DEVICE(S) AT BACKFLOW PREVENTER. PROVIDE MONITOR MODULE TO MONITOR SPRINKLER SYSTEM FLOW SWITCH DEVICE(S) AT BACKFLOW PREVENTER. COORDINATE WITH SPRINKLER SYSTEM INSTALLING CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS PRIOR TO ROUGH-IN.
3. PROVIDE MONITOR MODULE WITH A SURGE SUPPRESSION DEVICE TO MONITOR POST INDICATOR VALVE (PIV) TAMPER SWITCH. INSTALL DEVICES WITHIN BUILDING AT AN ACCESSIBLE LOCATION, AS CLOSE TO THE PIV AS POSSIBLE. PROVIDE 1-INCH SCHEDULE 40 PVC CONDUIT AND INSTALL UNDERGROUND FROM BUILDING PENETRATION ROUTED TO PIV LOCATION. REFER TO CIVIL SHEETS FOR POST INDICATOR VALVE EXACT LOCATION. FIELD VERIFY DEVICE LOCATIONS AND ROUTING PATH PRIOR TO ROUGH-IN.
4. PROVIDE CO DETECTOR WITH AN AUDIBLE BASE, PROGRAMMED FOR LOCAL ACTIVATION ONLY WITH A TEMPORAL 4 AUDIBLE PATTERN, PER NFPA72 CODE REQUIREMENTS FOR CO DETECTION.
5. INSTALL CARBON MONOXIDE DETECTOR IN MECHANICAL SPACE CONTAINING GAS FIRED EQUIPMENT. PROVIDE SUFFICIENT DEVICE QUANTITIES PER MANUFACTURER LISTED AREA OF COVERAGE AND INSTALLATION INSTRUCTIONS.
6. THE FIRE ALARM PANEL WILL BE PROVIDED BY A SEPERATE PROJECT THAT IS OCCURRING ON THE CAMPUS. THE PANEL PROVIDED BY THE OTHER PROJECT WILL BE EXISTING TO REMAIN FOR THE NEW WORK ON THIS PROJECT.
7. PROVIDE DEVICE WITH CLEAR LEXAN TAMPER RESISTANT COVER WITH INTEGRAL BATTERY POWERED LOCAL ALARM THAT SOUNDS WHEN COVER IS LIFTED.



**1 FIRE ALARM FIRST FLOOR PLAN (UNIT 1802)**



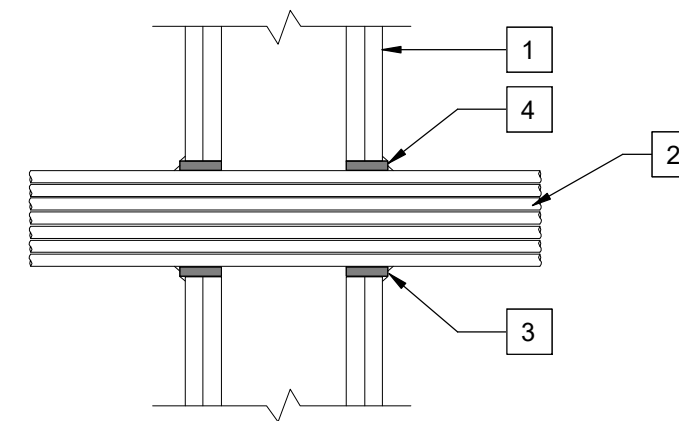


**KEYNOTES:**

- 1 WALL ASSEMBLY - THE 1, 2, 3, OR 4 HOUR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY.
- 2 CONDUIT - NOM 4" DIA OR SMALLER STEEL ELECTRICAL METALLIC TUBING. A MAX OF ONE CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDERS OF WALL ASSEMBLY.
- 3 FILL VOID OR CAVITY MATERIAL - CAULK FILL MATERIAL BEARING THE UL CLASSIFICATION MARKING INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4" DIAM BEAD OF CAULK APPLIED TO PERIMETER OF CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDERS OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE CONDUIT AND THE HOURLY FIRE RATINGS OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

MAX CONDUIT DIAM, IN.	ANNULAR SPACE, IN.	F RATING, HR.	T RATING, HR.
1	0 TO 3/16	1 OR 2	0, 1 OR 2
4	1/4 TO 1/2	3 OR 4	3 OR 4
1	0 TO 1-1/2	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

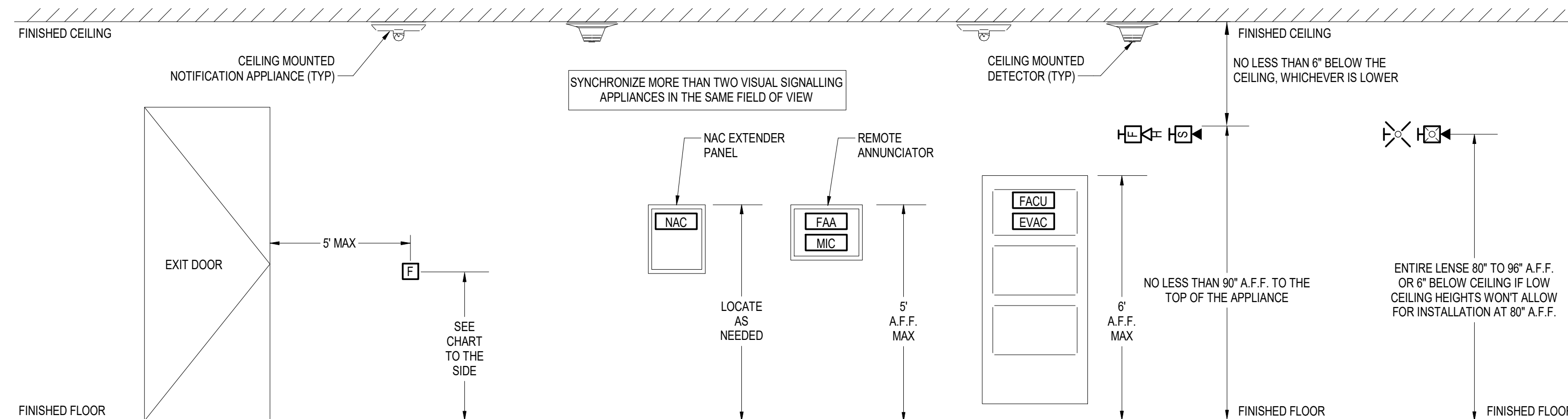
**1 CONDUIT PENETRATION THRU FIRE RATED WALL**  
NOT TO SCALE



**KEYNOTES:**

- 1 WALL ASSEMBLY - THE 1, 2, 3, OR 4 HOUR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY.
- 2 CABLES - MAX 4" DIAM TIGHT BUNDLE OF CABLES CENTERED IN CIRCULAR CUTOUTS IN GYPSUM WALLBOARD AND RIGIDLY SUPPORTED ON BOTH SIDERS OF WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR CABLES MAY BE USED:  
A. MAX 350 KCMIL SINGLE CONDUCTOR POWER CABLES; CROSS-LINKED POLYETHYLENE (XLPE) OR POLYVINYL CHLORIDE (PVC) INSULATION.  
B. MAX 7/8" NO. 12 AWG CABLES; PVC INSULATION AND JACKET.  
C. MAX 3/8" NO. 2/0 AWG MULTICONDUCTOR POWER AND CONTROL CABLES; XLPE OR PVC INSULATION, XLPE OR PVC JACKET.  
D. MAX 200 PAIR NO. 24 AWG TELECOMMUNICATION CABLES; PVC INSULATION AND JACKET.  
E. MAX 6/94 FIBER OPTIC CABLE; PVC INSULATION AND JACKET.
- 3 FILL VOID OR CAVITY MATERIAL - WRAP STRIP BEARING THE UL CLASSIFICATION MARKING -NOM 1/4" THICK INTUMESCENT ELECTROMETRIC MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL. SUPPLIED IN NOM 2" WIDE STRIPS. NOM 2" WIDE STRIP TIGHTLY WRAPPED AROUND CABLE BUNDLE (FOIL SIDE OUT) WITH SEAM BUTTED. WRAP STRIP LAYER SECURELY BOUND WITH STEEL WIRE TIE AND SLID INTO ANNULAR SPACE APPROX 1-1/4" SUCH THAT APPROX 3/4" OF THE WRAP STRIP PROTRUDES FROM THE WALL SURFACE ON EACH SIDE OF THE ASSEMBLY.
- 4 FILL VOID OR CAVITY MATERIAL - CAULK OR PUTTY BEARING THE UL CLASSIFICATION MARKING - MIN 1/4" DIAMETER CONTINUOUS BEAD OF CAULK OR PUTTY APPLIED TO THE WRAP STRIP/WALL INTERFACE AND TO THE EXPOSED EDGE OF THE WRAP STRIP APPROX 3/4" FROM THE WALL SURFACE ON EACH SIDE OF THE WALL ASSEMBLY. CAULK OR PUTTY TO BE FORCED INTO THE INTERSTICES OF THE CABLE BUNDLE TO THE MAX EXTENT POSSIBLE.

**2 CABLE PENETRATION THRU FIRE RATED WALL**  
NOT TO SCALE



**EQUIPMENT MOUNTING NOTES:**

1. THESE MOUNTING DIMENSIONS COMPLY WITH THE FOLLOWING CURRENT CODES & STANDARDS:  
A. NFPA 72  
B. THE IBC BUILDING CODE  
C. ADA AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
2. DO NOT INSTALL ANY EQUIPMENT OUTSIDE UNLESS IT IS LISTED FOR OUTDOOR USE.
3. ALL DEVICES & APPLIANCE HEIGHTS SHOULD BE CONSISTENT FOR THE ENTIRE PROJECT.
4. THE FIRE ALARM PANEL SHALL BE LOCATED IN A CLIMATE CONTROLLED AREA.
5. VERIFY ALL DIMENSIONS PROVIDED PER THE APPLICABLE SPECIFICATIONS AND STANDARDS FOR THIS PROJECT. INSTALLATION MUST COMPLY WITH LOCAL REQUIREMENTS AND GOVERNING MINIMUM STANDARDS FOR THIS SYSTEM.

**MANUAL PULL STATION MOUNTING HEIGHT REQUIREMENTS (FROM OPERABLE PART OF DEVICE)**

CODE	MINIMUM	MAXIMUM
NFPA-72	42"	48"
IBC	42"	48"
ADA	42"	* 44" / 48"

\*WITH OBSTRUCTION EXTENDING FROM WALL 20"-25" WITHOUT OBSTRUCTION

**3 TYPICAL DETECTOR MOUNTING GUIDELINES**  
NOT TO SCALE



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DEPARTMENT OF MENTAL  
HEALTH

BELLEFONTAINE  
HABILITATION CENTER

BUILDING 1802  
10695 BELLEFONTAINE RD  
ST. LOUIS, MO 63137

PROJECT # 16224-MO01  
SITE # 7356  
ASSET # 6517356071

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DATE: \_\_\_\_\_  
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ISSUE DATE: 09/17/2025

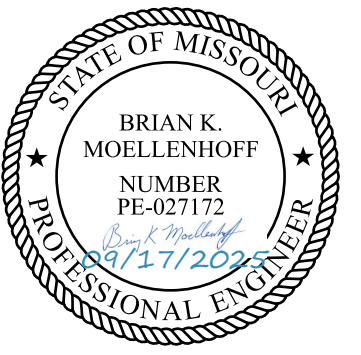
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DRAWN BY: RMS  
CHECKED BY: MTM  
DESIGNED BY: RMS

SHEET TITLE:  
**FIRE ALARM  
DETAILS**

SHEET NUMBER:

**FA500**

63 OF 64 SHEETS  
09/17/2025



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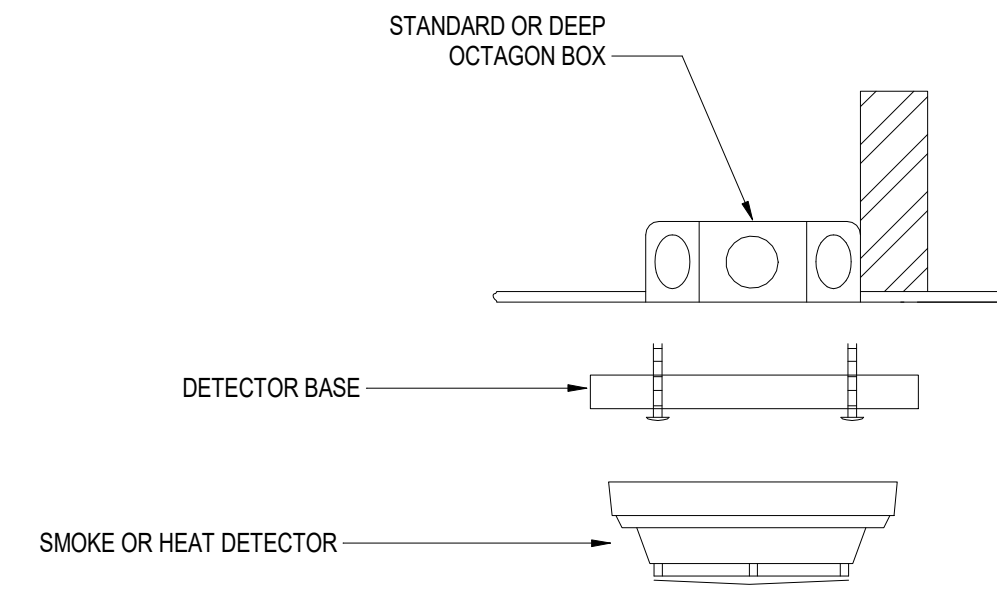
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09/17/2025

PLAN MARK	SYSTEM INPUT	SEQUENCE OF OPERATION				
		ACTIVATE ALARM INDICATION TO REMOTE SUPERVISING STATION VIA DONNELLY BUILDING CONNECTION	ACTIVATE SUPERVISORY INDICATION TO FIRE ALARM PANEL	ACTIVATE TROUBLE INDICATION TO FIRE ALARM PANEL	ACTIVATE AUDIBLE AND VISUAL ALARMS	ACTIVATE ASSOCIATED LOW FREQUENCY SOUNDER BASE
	FAILURE OR COMMUNICATION ERROR			●		
F	MANUAL PULL STATION	●			●	
S	SMOKE DETECTOR	●			●	●
H <sub>R</sub> H <sub>F</sub> F/XXX	HEAT DETECTOR	●			●	
CO	CO DETECTOR		●			●
W <sub>F</sub> A <sub>M</sub>	FIRE PROTECTION SYSTEM WATER FLOW SWITCH	●			●	
VS A <sub>M</sub>	FIRE PROTECTION SYSTEM TAMPER SWITCH		●			

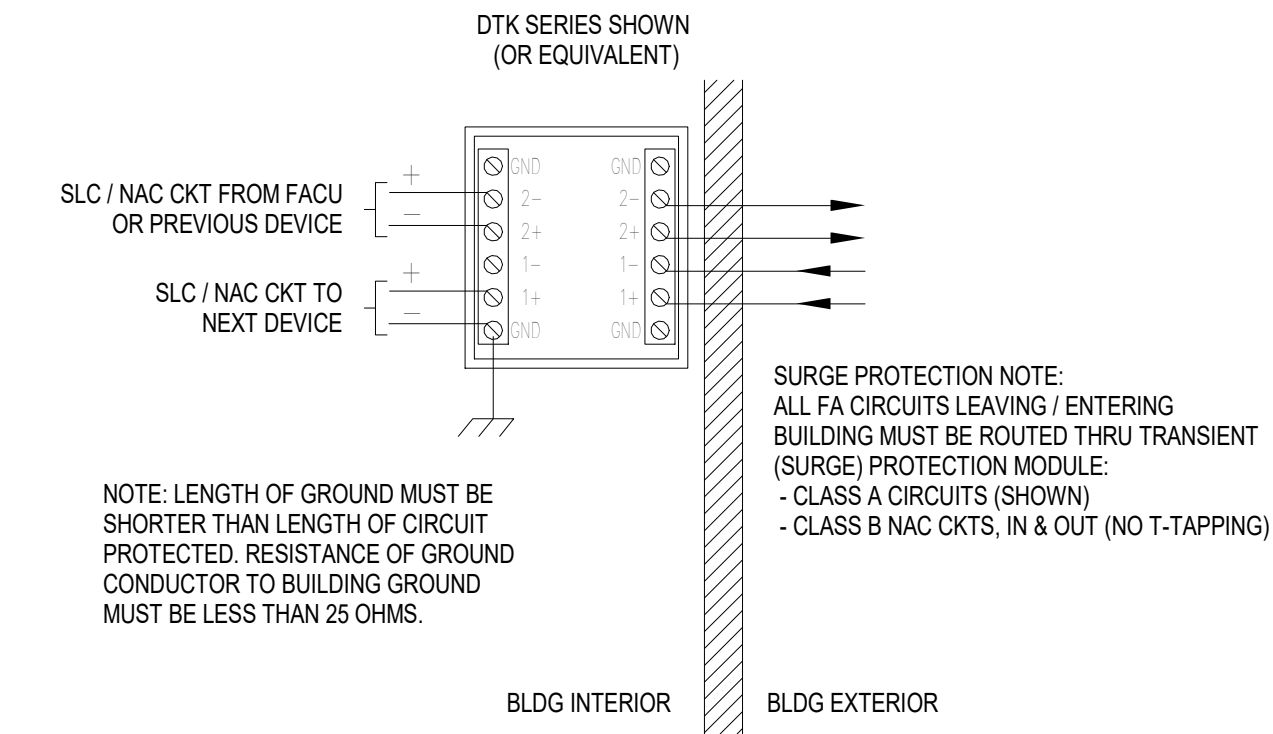
**GENERAL NOTES:**

- REFER TO FLOOR PLANS FOR DEVICE LOCATIONS AND ADDITIONAL INFORMATION.
- REFER TO SPECIFICATION SECTION 28 31 11 FOR DESCRIPTION OF FIRE ALARM SEQUENCE OF OPERATIONS.



**NOTES:**

- THE DETECTOR AND THE BASE MUST BE SUPPORTED INDEPENDENTLY OF THE CONDUCTORS.
- DO NOT HOLD THE DETECTORS AGAINST THE CEILING WITH FIRE ALARM CABLE.
- SCREW THE BASE INTO AN ELECTRIC BOX.



NOTE: LENGTH OF GROUND MUST BE SHORTER THAN LENGTH OF CIRCUIT PROTECTED. RESISTANCE OF GROUND CONDUCTOR TO BUILDING GROUND MUST BE LESS THAN 25 OHMS.

SURGE PROTECTION NOTE:  
ALL FA CIRCUITS LEAVING / ENTERING BUILDING MUST BE ROUTED THRU TRANSIENT (SURGE) PROTECTION MODULE:  
- CLASS A CIRCUITS (SHOWN)  
- CLASS B NAC CKTS, IN & OUT (NO T-TAPPING)

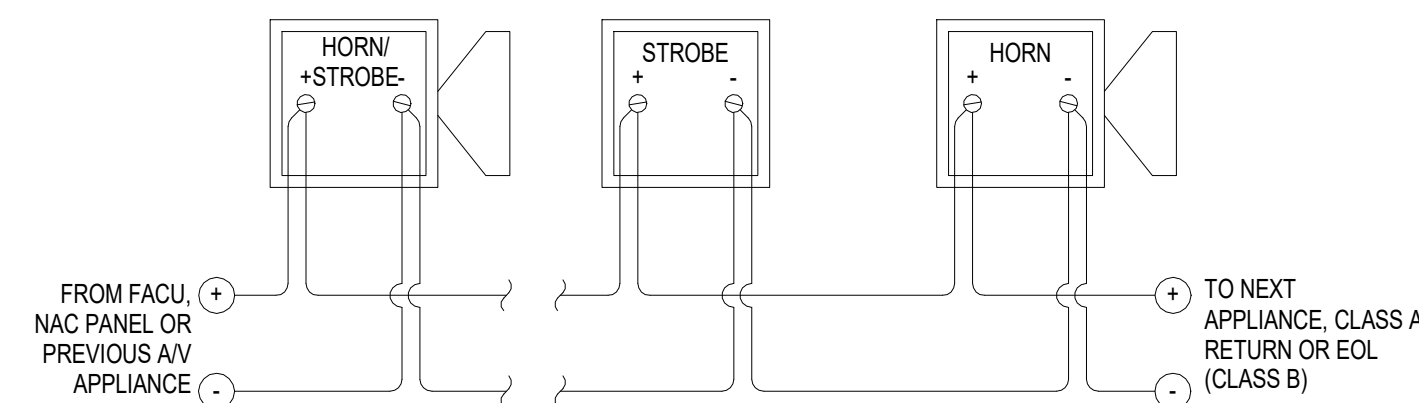
**NOTES:**

- PROTECTS (2) LOW VOLTAGE CIRCUIT PAIRS PER MODULE.
- OPTIONAL BASE ORDERED SEPARATELY.
- IDEAL FOR NAC, SLV, PIC AND IDC CIRCUITS.
- 70V SPEAKERS AND AUDIO EQUIPMENT.
- UL LISTED.

**1 FIRE ALARM MATRIX**  
NO SCALE

**2 TYPICAL DRYWALL DETECTOR MOUNTING**  
NOT TO SCALE

**3 SURGE PROTECTION DEVICE**  
NOT TO SCALE



**NOTES:**

- ALL STROBES IN THE SAME FIELD OF VIEW SHALL BE SYNCHRONIZED.
- BEFORE INSTALLING THE APPLIANCE, FIELD SELECT STROBE CANDELA AND HORN dBA SETTINGS PER THE CONSTRUCTION DOCUMENTS.
- TYPICAL FOR WALL AND CEILING MOUNTED MODELS.
- SEE MANUFACTURERS INSTALLATION INSTRUCTIONS FOR ADDITIONAL INFORMATION ON MOUNTING AND CONNECTION OPTIONS AND REQUIREMENTS.

**4 TYPICAL HORN/STROBE CIRCUIT WIRING**  
NOT TO SCALE

SHEET NUMBER:

**FA501**

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