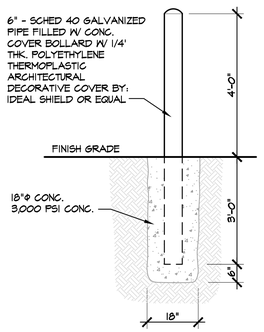
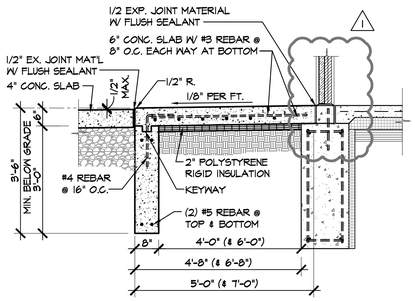
FOUNDATIONS AND EARTHWORK:

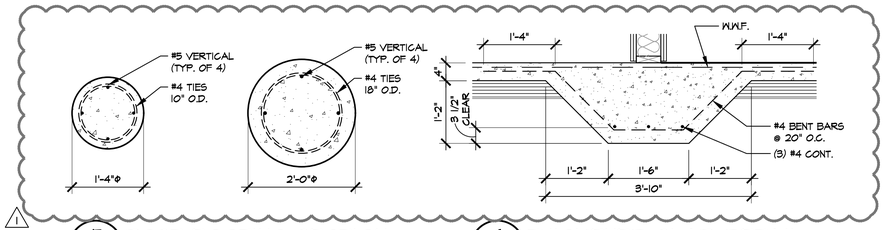
1. FOOTINGS & FOUNDATIONS ARE DESIGNED TO BEAR ON UNDISTURBED SOIL, COMPACTED FILL MATERIAL, OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) WITH A NET BEARING CAPACITY OF 1,500 PSF. VERIFY BEARING CAPACITY OF SOIL AT BOTTOM OF EXCAVATIONS BEFORE CONSTRUCTING FOOTINGS. IF ACTUAL BEARING CAPACITY IS LESS THAN THE DESIGN CAPACITY IMMEDIATELY NOTIFY ARCHITECT. INCREASE DEPTH OF FOOTINGS OR OVER EXCAVATE UNSUITABLE SOILS AND REPLACE WITH COMPACTED FILL OR CLSM MAYBE REQUIRED AS DIRECTED BY THE ARCHITECT.
2. DESIGN AND INSTALL TEMPORARY SYSTEMS FOR EXCAVATION DEWATERING AND EXCAVATION BRACING AS REQUIRED FOR PROPER EXECUTION OF THE WORK. REMOVE TEMPORARY SYSTEMS AFTER CONSTRUCTION IS COMPLETED UNLESS INDICATED OR APPROVED.
3. PREPARE SUBGRADE AND CONSTRUCT BUILDING PAD IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND / OR GEOTECHNICAL REPORT IF AVAILABLE. PROOF ROLL SUBGRADE TO DISCOVER WEAK OR UNSUITABLE SOILS. PLACE FILL IN MAXIMUM 8 INCH LIFTS AND COMPACT TO 95% OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557-02 (MODIFIED PROCTOR TEST). FILL UNDER FOUNDATIONS AND BACKFILL IN EXCAVATIONS SHALL BE COARSE SAND, GRAVEL, OR CRUSHED STONE. SUBGRADE UNDER SLABS-ON-GRADE SHALL BE MINIMUM 4 INCH DEEP, CRUSHED STONE PLACED TO A TOLERANCE OF +0 TO 3/4 INCH.
4. DO NOT CONSTRUCT FOOTINGS OR SLABS ON FROZEN SOILS, ON FROST, OR IN EXCAVATIONS CONTAINING STANDING WATER. KEEP EXCAVATIONS DRY AND PROTECT SUBGRADES, FOOTINGS, AND SLABS FROM FROST HEAVE.
5. CENTER FOOTINGS UNDER COLUMNS AND WALLS UNLESS DETAILED OTHERWISE. TOP AND BOTTOM OF FOOTINGS SHALL BE LEVEL. STEP FOOTINGS WHERE IT IS NECESSARY TO CHANGE BEARING ELEVATIONS.
6. BEAR EXTERIOR FOOTINGS, FOOTINGS ADJACENT TO THE BUILDING PERIMETER AND FOOTINGS IN AREAS WHICH WILL REMAIN UNHEATED DURING NORMAL OCCUPANCY, AT A MINIMUM FROST DEPTH OF 3'-6" BELOW GRADE. BEAR INTERIOR FOOTINGS AT ELEVATIONS INDICATED.
7. REFERENCE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR SLEEVES, INSERTS, ANCHORS, AND OTHER MATERIALS TO BE EMBEDDED IN FOUNDATIONS.



3 S-1 **BOLLARD DETAIL**
SCALE: 1/2" = 1'-0"

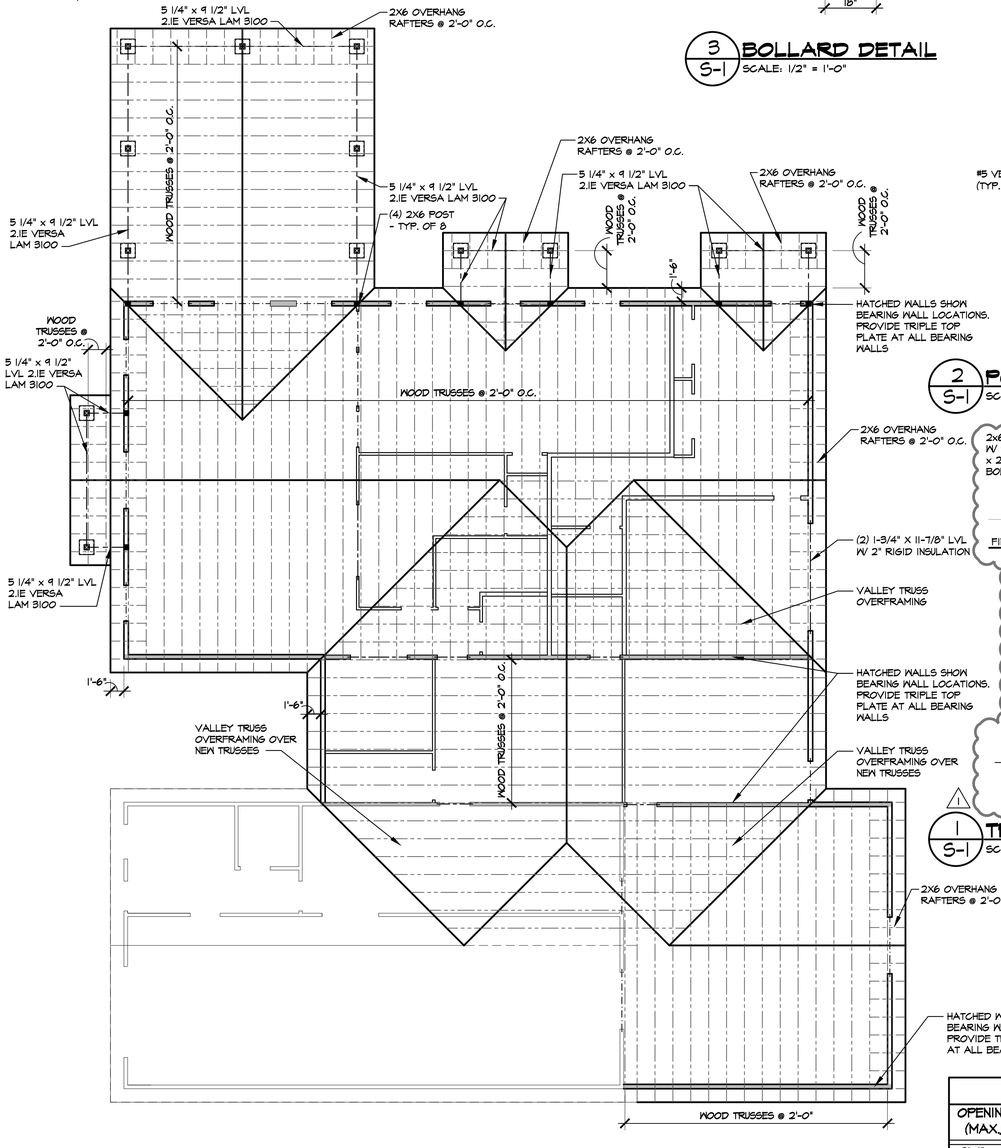


4 S-1 **FROST SLAB SECTION**
SCALE: 1/2" = 1'-0"



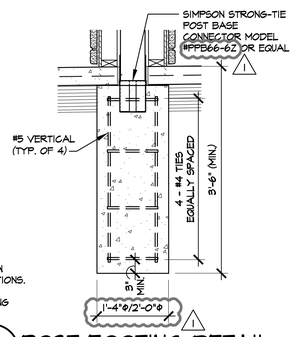
5 S-1 **POST FOOTING SECTION**
SCALE: 3/4" = 1'-0"

6 S-1 **THICKENED SLAB DETAIL**
SCALE: 3/4" = 1'-0"

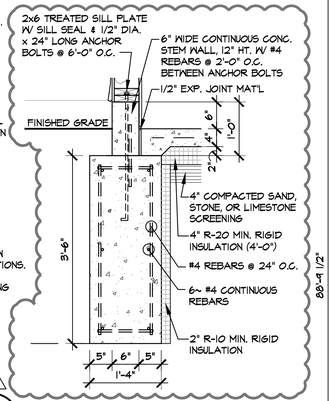


PLAN NORTH

ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

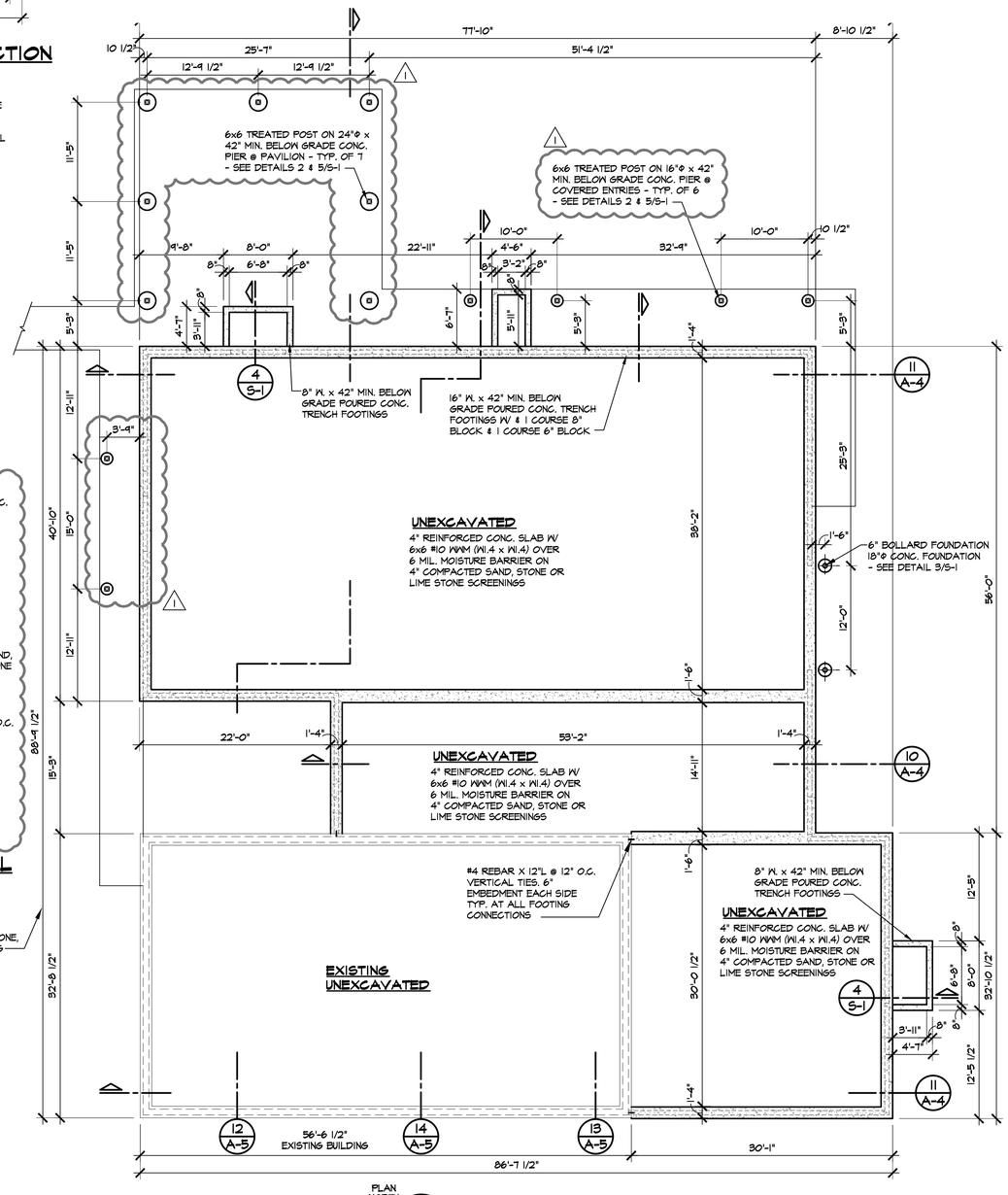


2 S-1 **POST FOOTING DETAIL**
SCALE: 3/4" = 1'-0"



1 S-1 **TRENCH FOOTING DETAIL**
SCALE: 3/4" = 1'-0"

HEADER SCHEDULE		
OPENING (MAX.)	MEMBER SIZE	BEARING
3'-4"	(2) 2X8 SPF #1/#2	1-1/2"
4'-0"	(2) 2X10 SPF #1/#2	3"
5'-4"	(2) 2X12 SPF #1/#2	3"
6'-8"	(2) 2X12 SPF #1/#2	3"
9'-4"	(2) 1-3/4" X 11-1/4" LVL	3"
11'-4"	(2) 1-3/4" X 11-1/4" LVL	3"



PLAN NORTH

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

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FOUNDATION & ROOF FRAMING PLANS & DETAILS

NOT FOR CONSTRUCTION

06-23-2023	ADDENDUM NO.1 △
06-21-2023	BIDS
DATE:	ISSUED FOR:
DRAWN	JLM
REVIEW'D	JSJ

20222

S-1

1 OF 1

CONCRETE:

1. CONCRETE, CONCRETE PLACEMENT, AND REINFORCING SHALL COMPLY WITH THE LATEST EDITION OF APPLICABLE STANDARDS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE CONCRETE REINFORCING INSTITUTE (CRSI).
2. STRUCTURAL CONCRETE BELOW GRADE SHALL BE 3500 psi COMPRESSIVE STRENGTH MINIMUM @ 28 DAYS. CURBS AND SLABS ON GRADE SHALL BE 4000 psi COMPRESSIVE STRENGTH MINIMUM @ 28 DAYS WITH 4 TO 6 PERCENT AIR ENTRAINMENT. REFER TO DRAWINGS FOR SIZES AND THICKNESSES.
3. PROVIDE EXPANSION JOINTS WITH 1/2 INCH EXPANSION MATERIAL AT LOCATIONS AS NOTED ON DRAWINGS. TOOL CONTROL JOINTS IN SURFACE AT 1/4 THE DEPTH OF THE TOTAL SLAB THICKNESS AT LOCATIONS AS NOTED SHOWN ON DRAWINGS.
4. ALL CONCRETE NOT OTHERWISE SPECIFIED SHALL BE CONTROLLED STONE, GRAVEL OR SLAG CONCRETE TO TEST AT LEAST 3000 PSI IN STANDARD 6" X 12" CYLINDERS AT 28 DAYS AND HAVE NOT LESS THAN 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND NOT OVER 6 1/2 GALLONS OF WATER PER SACK OF CEMENT. MAXIMUM SLUMP SHALL BE 4".
5. REINFORCING BARS, UNLESS OTHERWISE SPECIFIED, SHALL MEET ASTM A615, GRADE 60.
6. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST ACI-318-08 CODE. ALL BARS SHALL BE DETAILED, FABRICATED, SUPPORTED IN FORMS AND SPACED WITH ACCESSORIES FOLLOWING THE REQUIREMENTS OF THE "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 318-08)". PLACING OF BARS SHALL CONFORM TO THE LATEST CRSI RECOMMENDED PRACTICES FOR PLACING REINFORCING BARS.
7. REBARS THAT COME INTO CONTACT WITH FORM OIL WILL PREVENT THEM FROM PROPERLY BONDING WITH POURED CONCRETE. ALL REBARS THAT HAVE BEEN COMPROMISED AS A RESULT OF IMPROPER OR POOR APPLICATION OF FORM OIL MUST BE SAND BLASTED OR REPLACED TO MAINTAIN STRUCTURAL INTEGRITY OF THE POUR.
8. ALL CONCRETE SLABS ON THE GROUND THAT ARE NOT OTHERWISE PROVIDED FOR SHALL HAVE TEMPERATURE REINFORCEMENT CONSISTING OF ONE LAYER OF 6" X 6" W1.4 X W1.4 WELDED WIRE FABRIC.
9. WIRE FABRIC MUST LAP ONE FULL MESH AT SIDE AND END LAPS AND BE WIRED TOGETHER. MESH SHALL EXTEND WELL INTO SUPPORTING BEAMS AND WALLS FOR ANCHORAGE (UNLESS AN EXPANSION JOINT IS CALLED FOR).
10. LAP ALL BAR SPLICES 36 BAR DIAMETERS (UNLESS OTHERWISE CALLED FOR) BUT NOT LESS THAN 15". BEND ALL WALL FOOTING BARS 15" AROUND ALL CORNERS.
11. MINIMUM CONCRETE COVER ON REINFORCING BARS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

CONCRETE DEPOSITED AGAINST GROUND:	3"
FORMED SURFACES EXPOSED TO WEATHER:	1 1/2" FOR #5 & SMALLER
OR EARTH:	2" FOR #6 BARS & LARGER

ALL OTHER SURFACES:
SLABS, WALLS, AND JOISTS: 3/4"
BEAMS, GIRDER, AND COLUMNS: 1 1/2"

WOOD FRAMING ATTACHMENT NOTES:

1. ALL FASTENERS FOR THE FRAMING OF THE FLOOR DECK TO BE "SIMPSON STRONG TIE" FASTENERS OR APPROVED EQUAL.
2. ALL METAL FASTENERS OR CONNECTORS INTO OR IN CONTACT WITH MOISTURE TREATED LUMBER SHALL BE STAINLESS STEEL. THIS INCLUDES NAILS, SCREWS, ANCHOR BOLTS, LAG BOLTS, METAL HANGERS, CONNECTORS, ETC.
3. WHERE SUPPORTED BY ATTACHMENT TO AN EXTERIOR WALL, DECK SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AND DESIGNED FOR BOTH VERTICAL AND LATERAL LOADS AS APPLICABLE. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY THE USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL.
4. COLUMN AND POST-END CONNECTIONS SHALL BE FASTENED TO RESIST LATERAL AND NET INDUCED UPLIFT FORCES.
5. COLUMNS SHALL BE RESTRAINED TO PREVENT LATERAL DISPLACEMENT AT THE BOTTOM END.
6. WHERE POSTS AND BEAM CONSTRUCTION IS USED TO SUPPORT FLOOR FRAMING, POSITIVE CONNECTIONS SHALL BE PROVIDED TO ENSURE AGAINST UPLIFT AND LATERAL.
7. THE ENDS OF EACH JOIST OR BEAM SHALL HAVE AT LEAST 1 1/2" OF BEARING ON WOOD OR METAL.
8. JOISTS FRAMING INTO THE SIDE OF A WOOD BEAM SHALL BE SUPPORTED BY APPROVED FRAMING ANCHORS.
9. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE ABLE TO RESIST A SINGLE CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP.
10. INDIVIDUAL STAIR TREADS SHALL BE ABLE TO RESIST (1) 300 POUND CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQUARE INCHES.
11. STAIRCASES MUST BE ABLE TO RESIST 40 POUNDS PER SQUARE FOOT OF TREAD AREA 3'-0" x 5'-0".

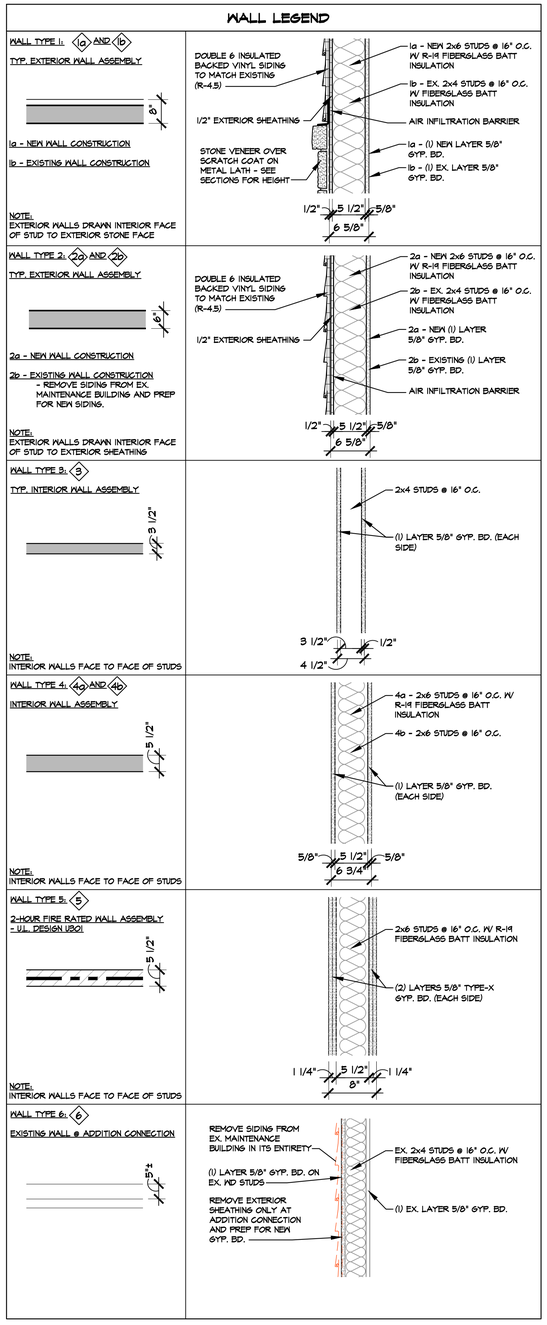
MASONRY:

1. CONFORM TO THE LATEST EDITION OF SPECIFICATIONS FOR MASONRY STRUCTURES, ACI 530.1.
2. COMPRESSIVE STRENGTH OF MASONRY, FM': 1500psi
3. REINFORCEMENT: ASTM A615, GRADE 60.
4. MORTAR: ASTM C270 TYPE M OR S MADE FROM PORTLAND CEMENT AND HYDRATED LIME.
5. PROVIDE LINTELS OVER OPENINGS IN MASONRY WALLS IN ACCORDANCE WITH LINTEL SCHEDULE (IF & WHERE APPLICABLE).
6. INSTALL REINFORCEMENT WHERE SHOWN AND GROUT CORES SOLID. PROVIDE WIRE BAR SUPPORTS AND SPACERS TO MAINTAIN PROPER POSITION OF REINFORCEMENT. LAP REINFORCEMENT 48 BAR DIAMETERS.
7. PROVIDE 3 COURSES OF SOLID OR GROUTED MASONRY IMMEDIATELY BELOW BEAM AND LINTEL BEARINGS.
8. DO NOT CONSTRUCT CHASES OR RISERS WITHIN 2 FEET OF CENTERLINE OF BEAM BEARING OR OTHER CONCENTRATED LOAD.
9. CONSTRUCT CORNERS AND WALL INTERSECTIONS IN RUNNING BOND.

WATER & MOISTURE PROTECTION

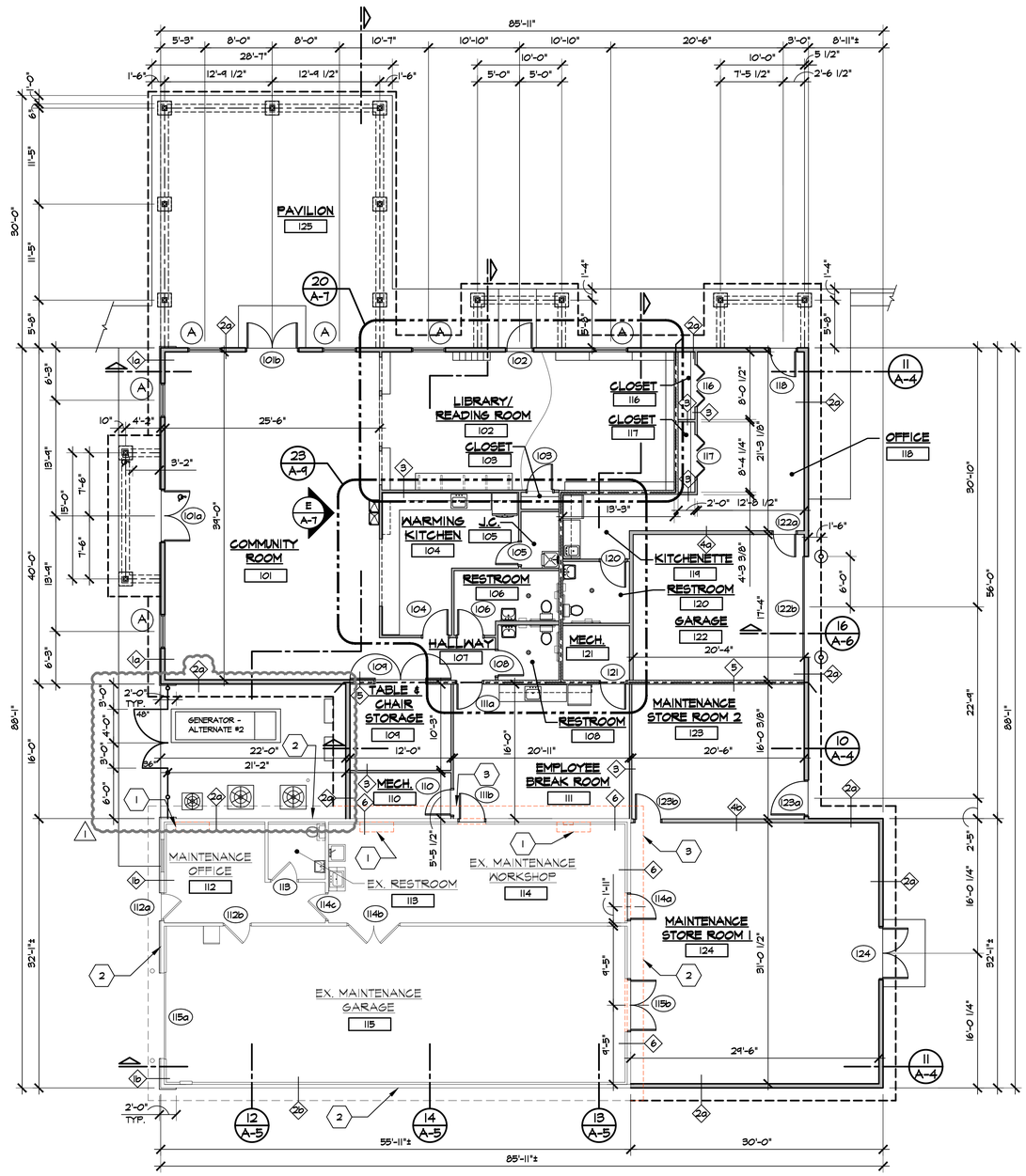
1. PROVIDE FOUNDATION WATERPROOFING WHERE CRAWL & / OR BASEMENT WALLS ARE BELOW BELOW GRADE AND INSTALL 4" PERFORATED PLASTIC FOUNDATION DRAINS ONE EACH SIDE OF FOOTINGS WITH CROSS OVERS AT A MINIMUM OF ONE PER WALL. SLOPE DRAINS TO ON-SITE DRY WELL W/ SUMP PUMP OR NATURAL DRAINAGE COURSES.
2. ALL EXTERIOR WALLS SHALL HAVE WATER-RESISTIVE BARRIER OF NOT FEWER THAN ONE LAYER OF NO. 15 ASPHALT FELT, COMPLYING WITH ASTM D226 FOR TYPE I FELT OR OTHER APPROVED MATERIALS, (I.E. TYVEK BUILDING WRAP) ATTACHED TO SHEATHING W/ MANUFACTURER'S APPROVED CAP NAILS, OVERLAP ALL SEAMS (HORIZONTAL & VERTICAL) A MIN. OF 6" AND SEAL W/ MANUFACTURER'S APPROVED TAPE. WRAP ALL WINDOWS, DOORS, VENTS, ETC. OPENINGS WITH APPROVED BUILDING AIR INFILTRATION BARRIER PRIOR TO INSTALLATION.
3. MOISTURE VAPOR RETARDERS SHALL BE INSTALLED IN ALL FRAMED WALLS, FLOORS, AND ROOF / CEILINGS, COMPRISING ELEMENTS OF THE BUILDING THERMAL ENVELOPE, INSTALLED ON THE WARM-IN-WINTER SIDE OF THE INSULATION. SEALED AT ALL OUTLETS AND PENETRATIONS. CLASS AS SPECIFIED ON PLANS.
   CLASS I = SHEET POLYETHYLENE, NON-PERFORATED ALUMINUM FOIL WITH A PERM RATING OF LESS THAN OR EQUAL TO 0.1
   CLASS II = KRAFT-FACED FIBERGLASS BATTS OR PAINT WITH A PERM RATING GREATER THAN 0.1 AND LESS THAN OR EQUAL TO 1.0.
   CLASS III = LATEX OR ENAMEL PAINT WITH A PERM RATING OF GREATER THAN 1.0 AND LESS THAN OR EQUAL TO 10.0.
4. ALL BUILDING EXTERIOR ROOF SURFACE PENETRATIONS WITH POTENTIAL EXPOSURE TO WEATHER SHALL BE FLASHED AND/OR CAULKED AS PER CODE AND/OR INDUSTRY-RECOGNIZIED PROPER CONSTRUCTION TECHNIQUES.
5. ALL FLASHING SHALL BE TURNED OUT AT LOWER EDGE TO DIRECT WATER OUT & AWAY FROM STRUCTURE.
6. INSULATING MATERIALS, WHERE EXPOSED, SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450.

WALL LEGEND



WOOD FRAMING NOTES:

1. ALL MAIN FRAMING MEMBERS, JOISTS, RAFTERS, BEAMS, HEADERS, ETC., SHALL BE NO. 2 AND BETTER HEM-FIR, OR EQUAL.
2. ALL WALL STUDS SHALL BE STUD GRADE SPRUCE-PINE-FIR. SILL PLATES, ETC., SHALL BE NO. 2 AND BETTER SPRUCE-PINE-FIR (SPF) OR EQUAL.
3. NON-STRUCTURAL NAILERS, BLOCKING, BRIDGING, ETC., SHALL BE CONSTRUCTION GRADE SPRUCE-PINE-FIR (SPF) OR WHITE WOODS.
4. WOODS FOR GLUED LAMINATED BEAM CONSTRUCTION MUST BE OF GRADE 24F WESTERN SPECIES OR BETTER (FB = 2400 PSI, FV = 140 PSI, E = 1,700,000 PSI.)



TREATED LUMBER & CONNECTOR NOTES:

1. FOR ALL AWPA PRESSURE TREATED WOOD:

   TREATMENT DENSITY, MOISTURE CONTENT IN GRADE BASE VALUES, SOUTHERN YELLOW PINE (SYP) GRADE NO. 2 OR BETTER

   MOISTURE TREATED LUMBER TIMBERS & PLYWOOD
   FOR ABOVE GROUND USE - 0.25 CCA (pct)
   GROUND / FRESH WATER CONTACT - 0.40 CCA (pct)

   STRUCTURAL POLES - 0.60 CCA (pct)

2. ALL METAL FASTENERS, CONNECTORS INTO OR IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE STAINLESS STEEL (NAILS, SCREWS, ANCHOR BOLTS, LAG BOLTS, METAL HANGERS, ETC.)

PLAN NORTH

FLOOR PLAN

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

SQUARE FOOTAGES

MAINTENANCE	3,580 S.F. (1,807 EX. + 1,723 PROPOSED)
COMMUNITY CENTER:	1,725 S.F.
LIBRARY:	600 S.F.
SUBSTATION W/ GARAGE:	871 S.F.
TOTAL SQUARE FOOTAGE	6,732 S.F.

DEMOLITION NOTES:

1. REMOVE MECHANICAL UNITS IN THEIR ENTIRETY. INFILL OPENING WITH 2X4 WD. STUDS, BATT INSULATION, AND PATCH EXTERIOR SHEATHING PRIOR TO INSTALLATION OF NEW EXTERIOR FINISHES. PATCH GYP. BD. AND PREP TO BE PAINTED.
2. REMOVE VINYL SIDING IN ITS ENTIRETY AND PREP FOR NEW EXTERIOR FINISHES.
3. CUT BACK OVERHANGS OF EXISTING MAINTENANCE BUILDING AT THE LOCATION OF CONNECTION OF ADDITION.

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FLOOR PLAN & NOTES

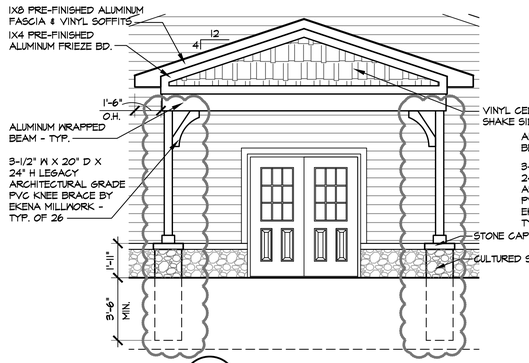
NOT FOR CONSTRUCTION

DATE:	ISSUED FOR:
06-23-2023	ADDENDUM NO.1
06-21-2023	BIDS
DRAWN	JLM
REVIEW'D	JSJ

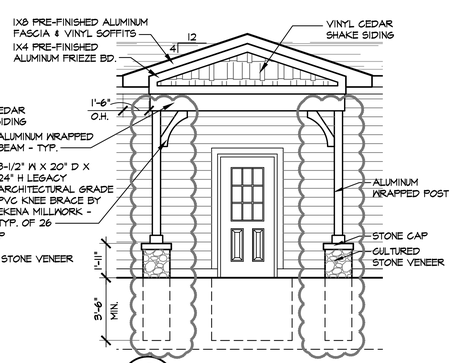
20222

A-1

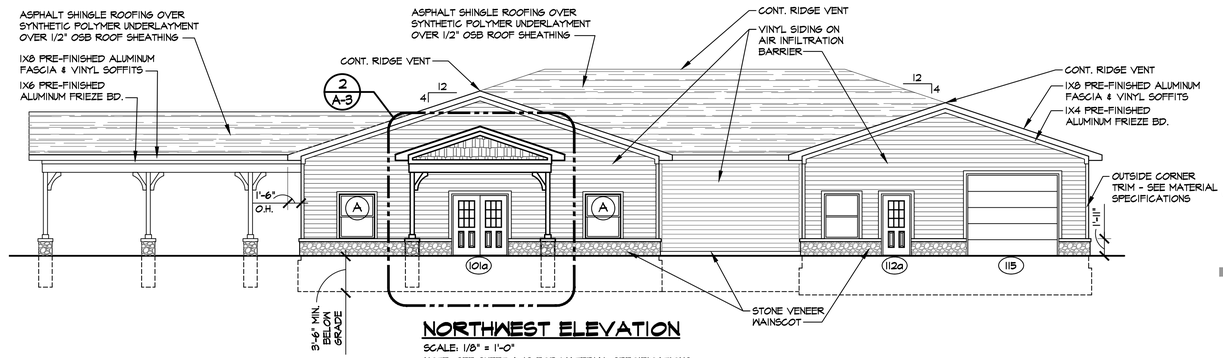
1 OF 12



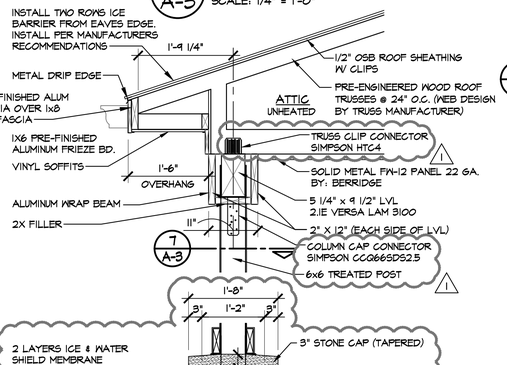
2 A-3 **ENTRY CANOPY**
SCALE: 1/4" = 1'-0"

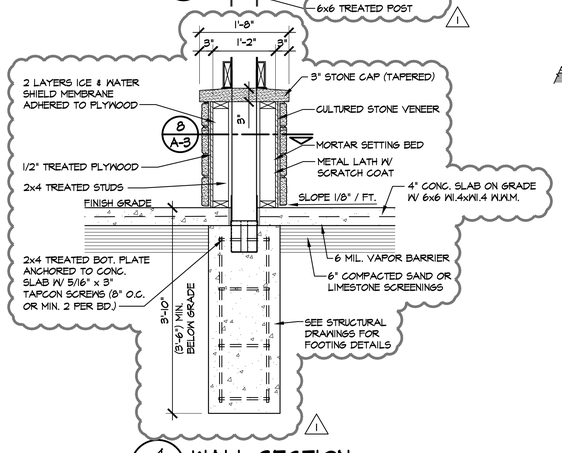


3 A-3 **ENTRY CANOPY**
SCALE: 1/4" = 1'-0"

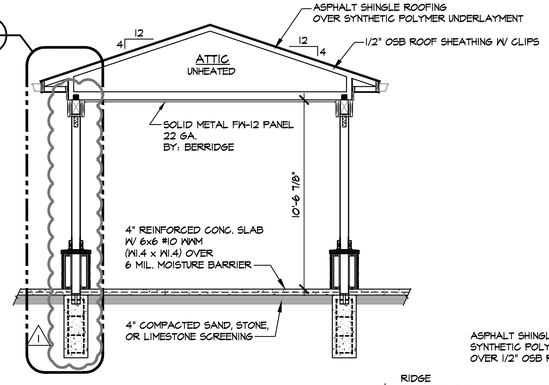


NORTHWEST ELEVATION
SCALE: 1/8" = 1'-0"
NOTE: SEE SHEET A-12 FOR MATERIAL SPECIFICATIONS

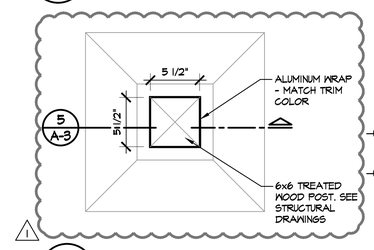




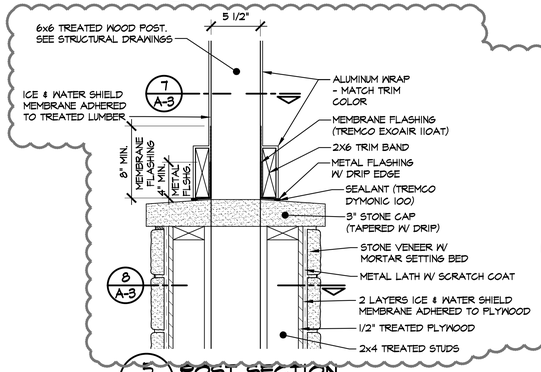
4 A-3 **WALL SECTION**
SCALE: 3/4" = 1'-0"



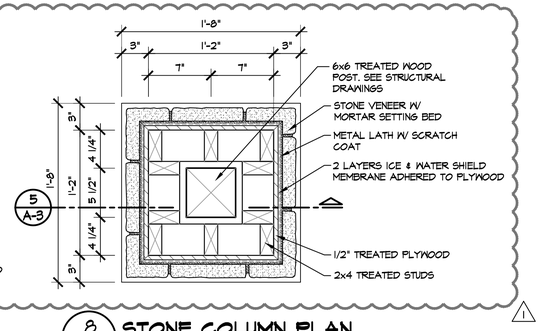
6 A-3 **ENTRY CANOPY SECTION**
SCALE: 1 1/2" = 1'-0"



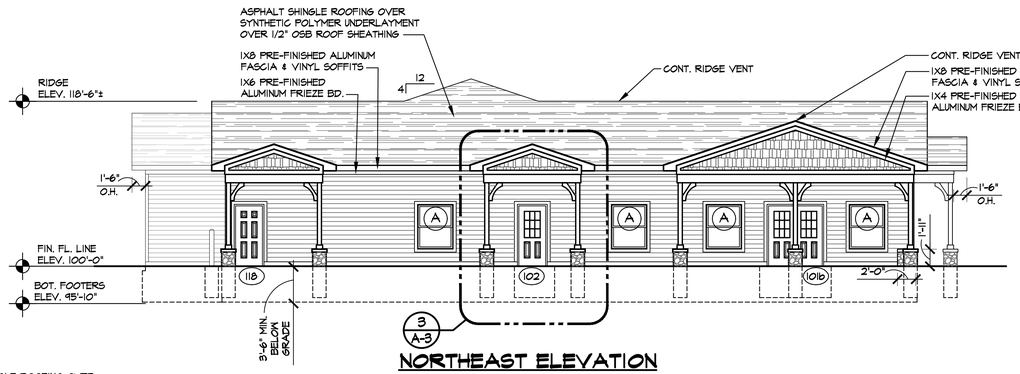
7 A-3 **POST WRAP DETAIL**
SCALE: 1 1/2" = 1'-0"



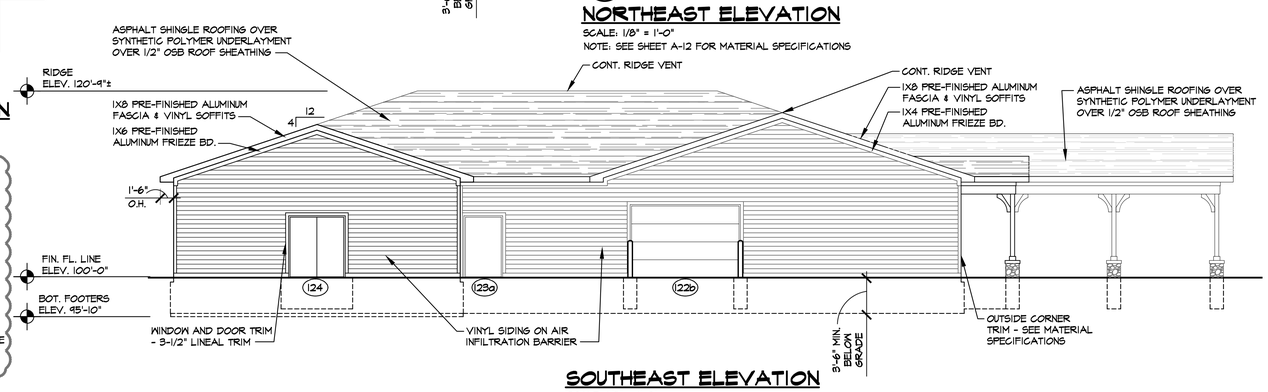
5 A-3 **POST SECTION**
SCALE: 1 1/2" = 1'-0"



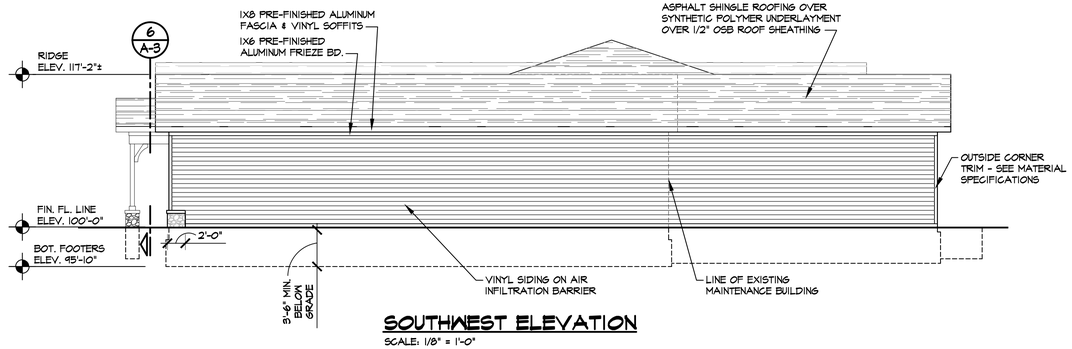
8 A-3 **STONE COLUMN PLAN**
SCALE: 1 1/2" = 1'-0"



NORTHEAST ELEVATION
SCALE: 1/8" = 1'-0"
NOTE: SEE SHEET A-12 FOR MATERIAL SPECIFICATIONS



SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"
NOTE: SEE SHEET A-12 FOR MATERIAL SPECIFICATIONS



SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"
NOTE: SEE SHEET A-12 FOR MATERIAL SPECIFICATIONS

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NANCY WAIN, EXEC. DIRECTOR
MONROE HOUSING COMMISSION
20 NORTH ROESSLER STREET
MONROE, MICHIGAN 48162
TELEPHONE: (734) 242-5880

EXTERIOR ELEVATIONS & DETAILS

NOT FOR CONSTRUCTION

06-23-2023	ADDENDUM NO.1
06-21-2023	BIDS
DATE:	ISSUED FOR:
DRAWN	JLM
REVIEW'D	JSJ

20222

A-3

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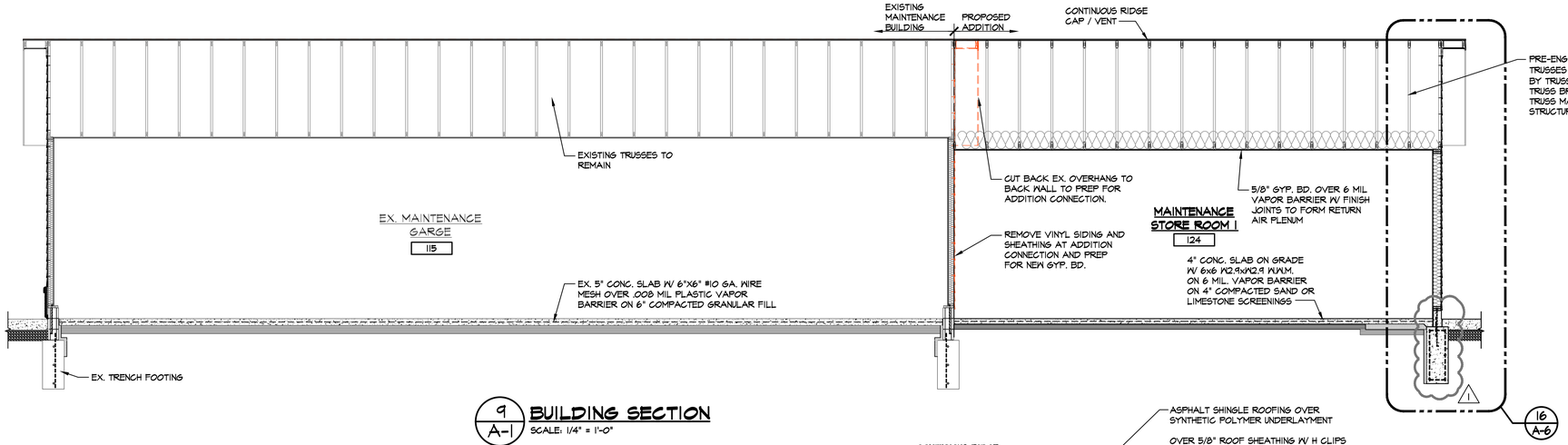
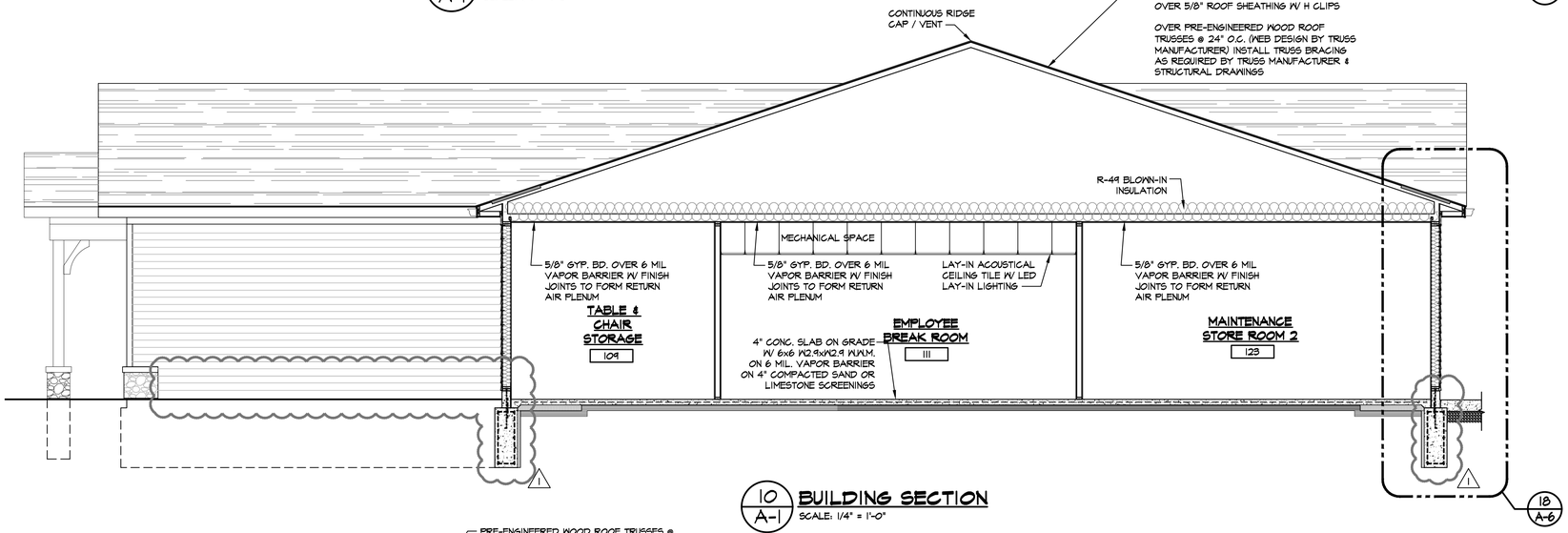


9 A-1 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"



10 A-1 **BUILDING SECTION**
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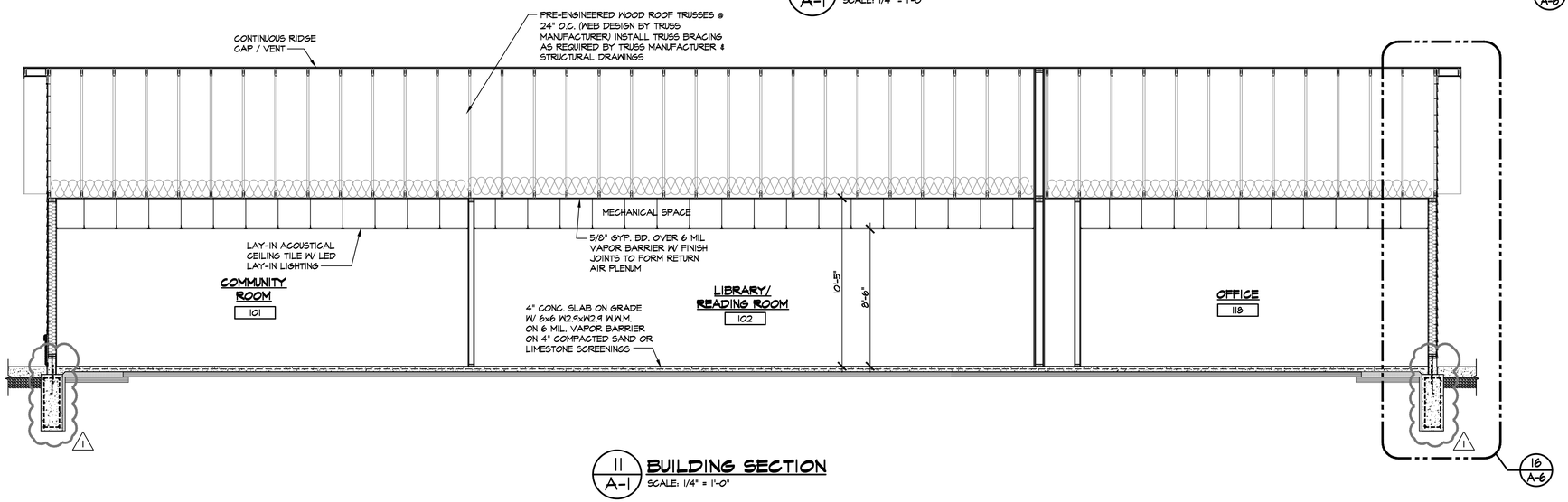

11 A-1 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

JAMES S. JACOBS ARCHITECTS, PLLC
25 WASHINGTON STREET
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FAX: (734) 241-1181
EMAIL: jim@jsjacobsarch.com

GREENWOOD MAINTENANCE BUILDING ADDITION FOR:

MONROE HOUSING COMMISSION: GREENWOOD TOWNHOUSES
900 GREENWOOD AVENUE
MONROE, MICHIGAN 48162

PROPERTY CONTACT:
NANCY WAIN, EXEC. DIRECTOR
MONROE HOUSING COMMISSION
20 NORTH ROESSLER STREET
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TELEPHONE: (734) 242-5880

BUILDING SECTIONS

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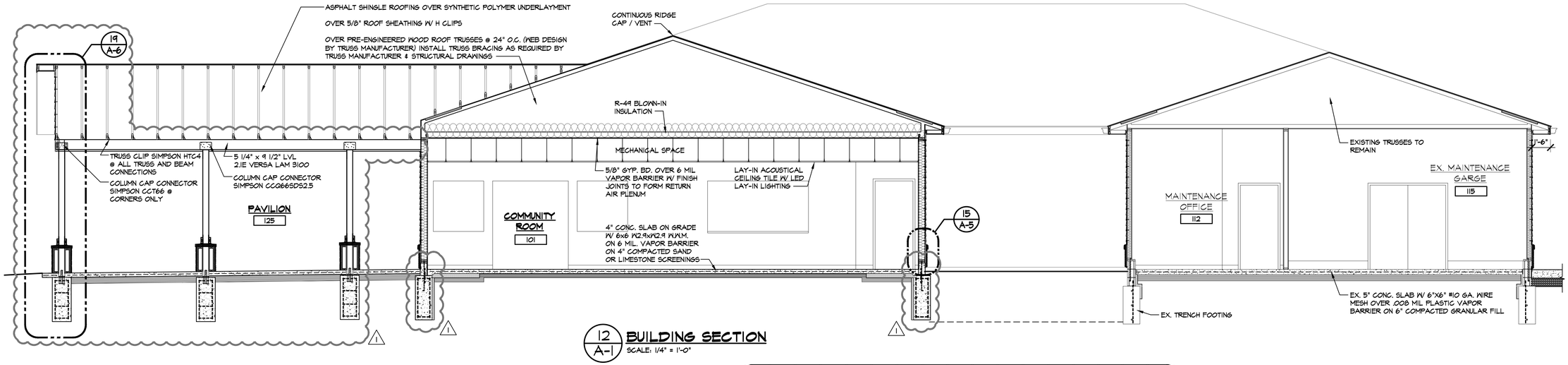

12 A-1 **BUILDING SECTION**
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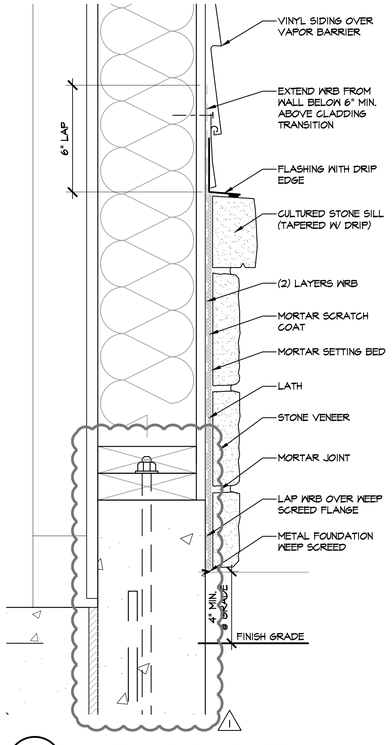

15 A-5 **STONE BASE DETAIL**
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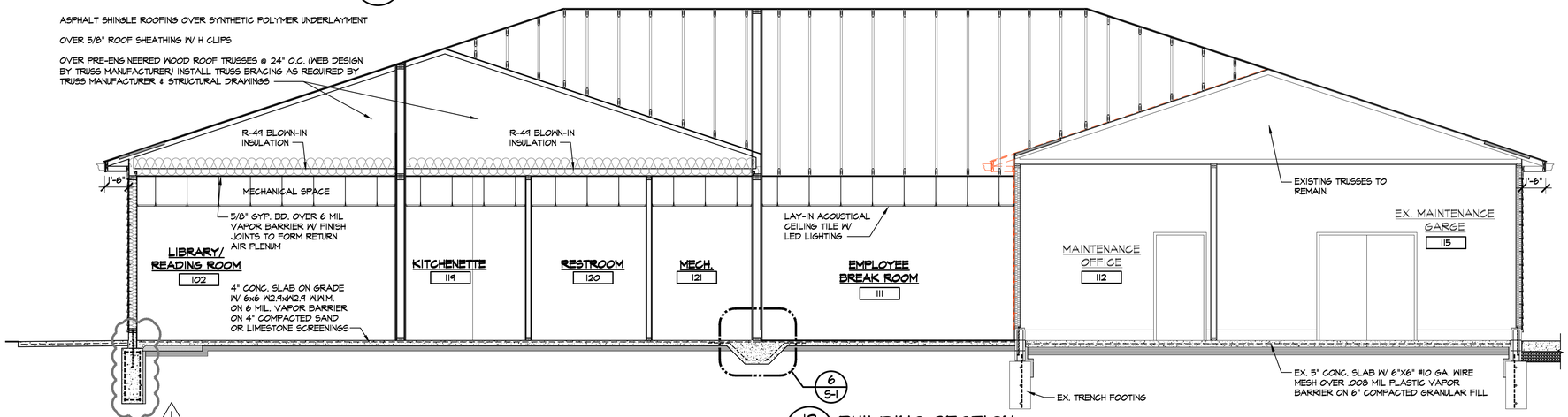
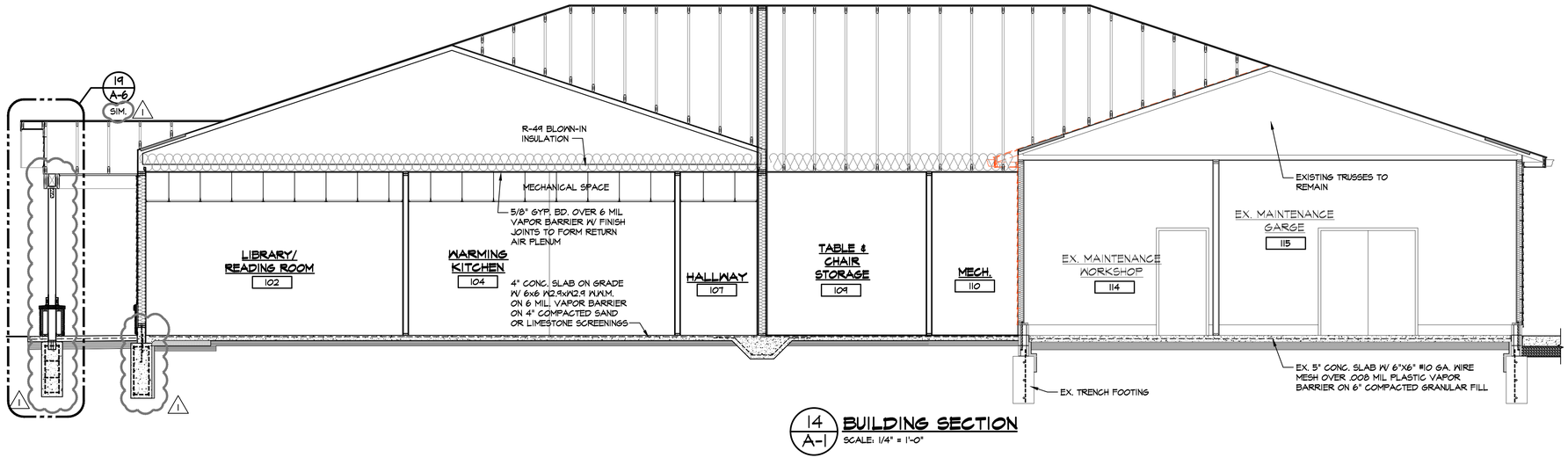


13 A-1 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"



14 A-1 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

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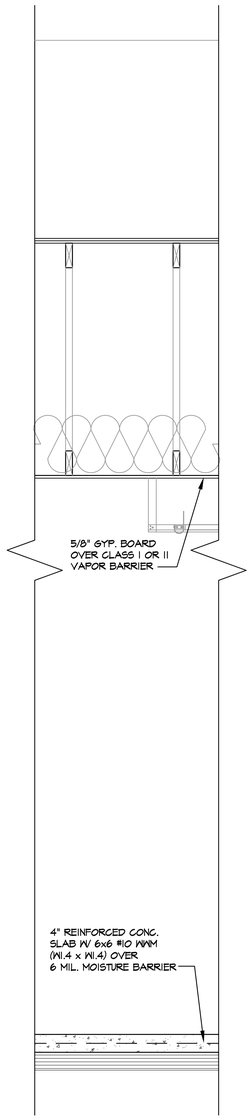
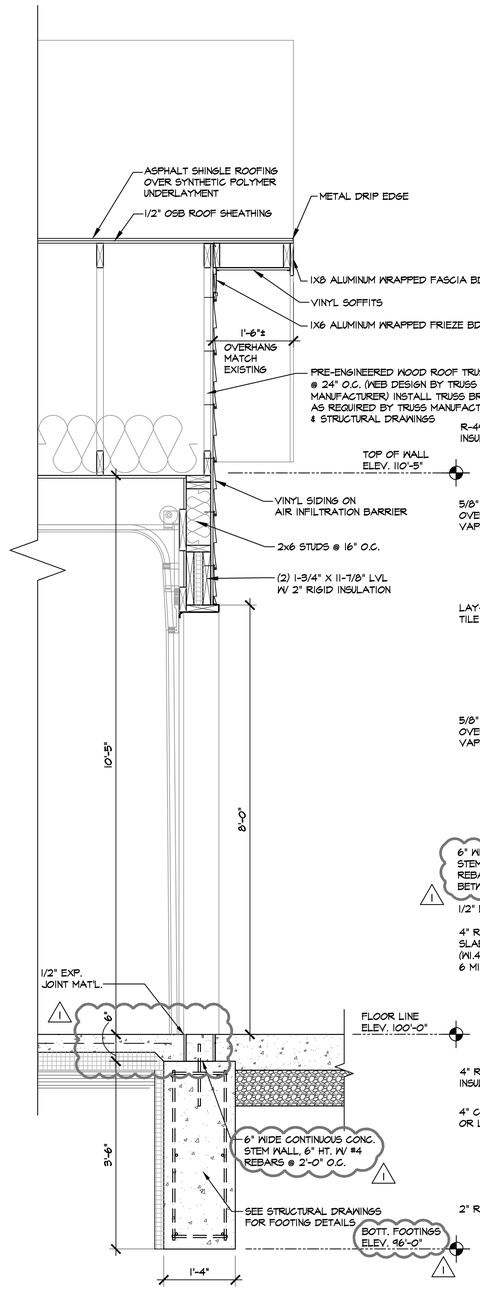
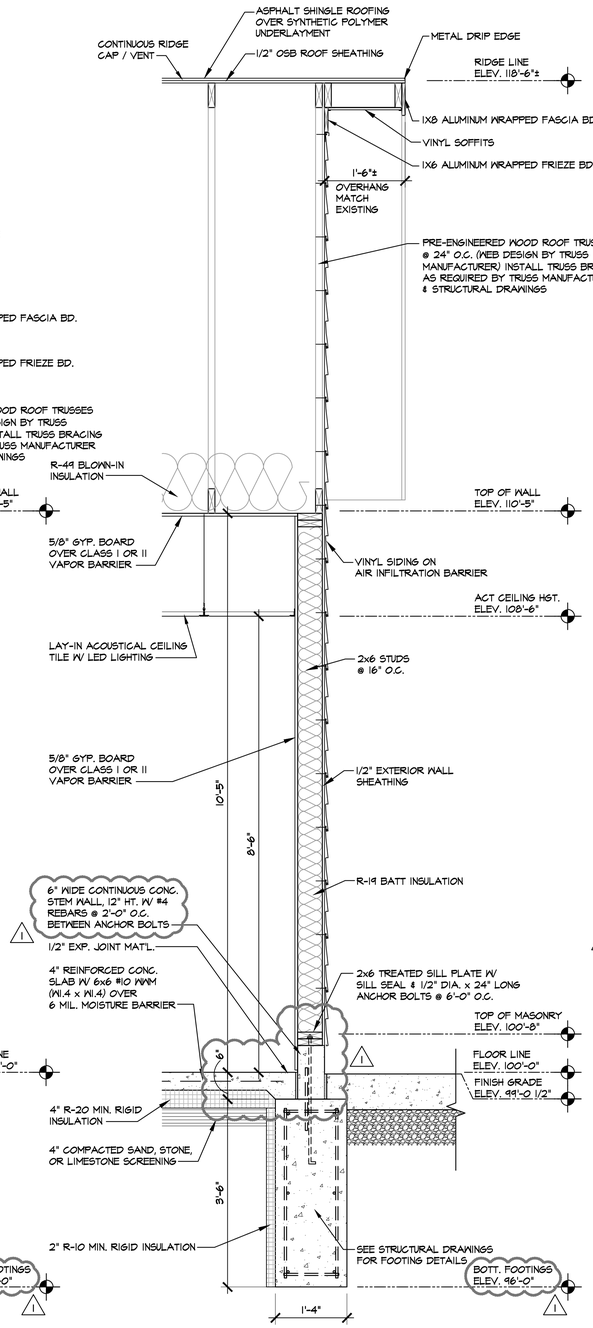
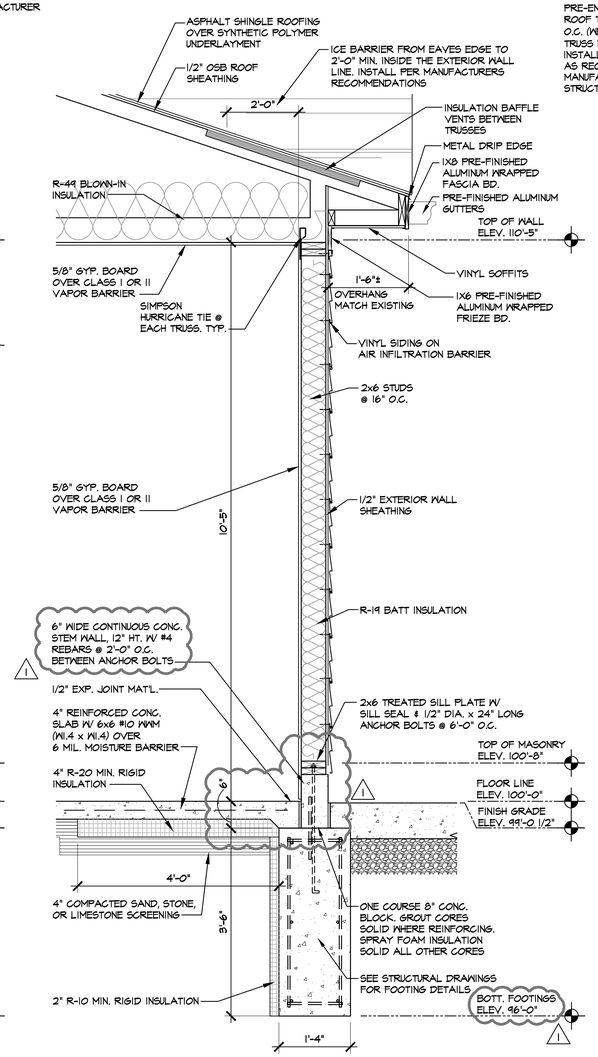




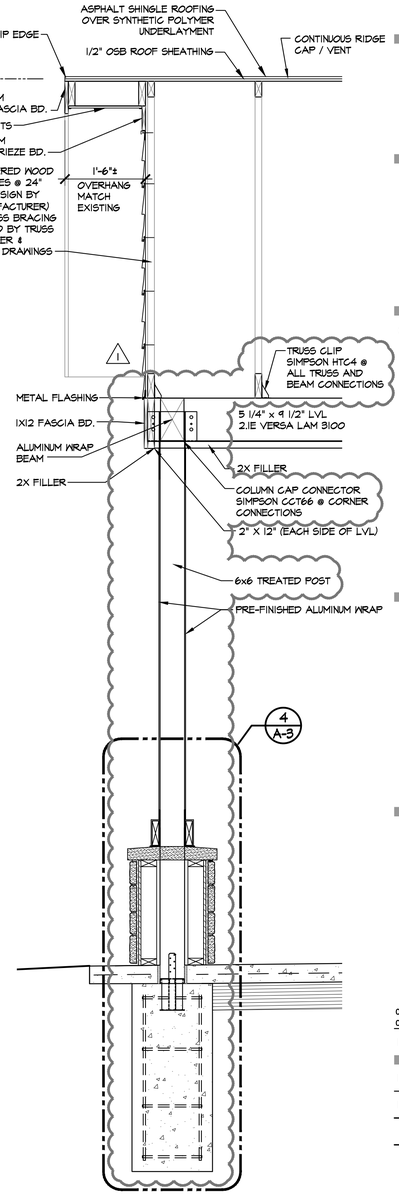
16 / A-1 **WALL SECTION**
SCALE: 3/4" = 1'-0"



17 / A-4 **WALL SECTION**
SCALE: 3/4" = 1'-0"



18 / A-4 **WALL SECTION**
SCALE: 3/4" = 1'-0"



19 / A-5 **WALL SECTION**
SCALE: 3/4" = 1'-0"

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GREENWOOD MAINTENANCE
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WALL SECTIONS

NOT FOR CONSTRUCTION

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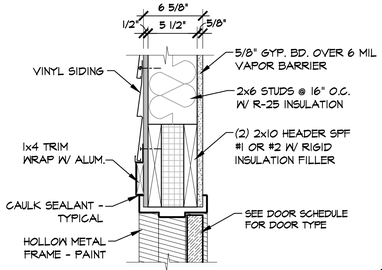
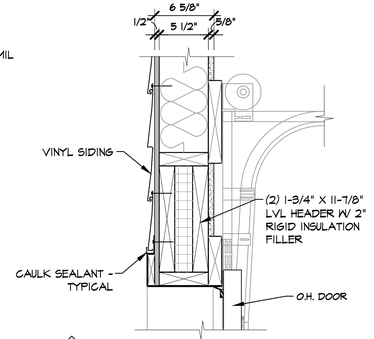


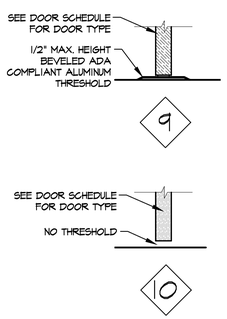
1 DOOR HEAD DETAIL

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



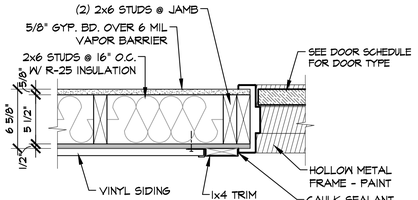
5 DOOR HEAD DETAIL

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



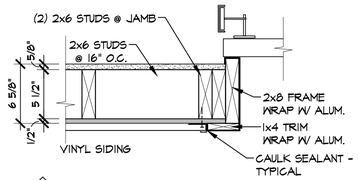
DOOR SILL DETAILS

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



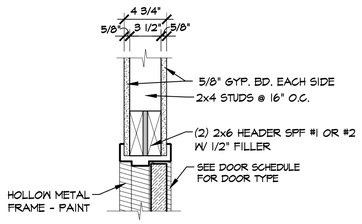
2 DOOR JAMB DETAIL

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



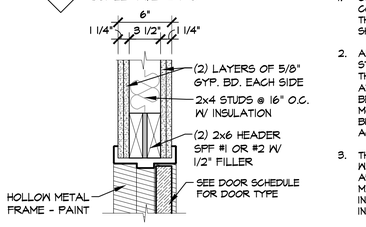
6 DOOR JAMB DETAIL

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



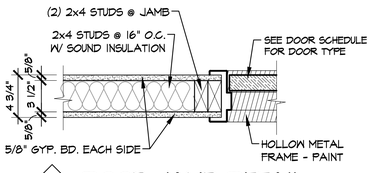
3 DOOR HEAD DETAIL

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



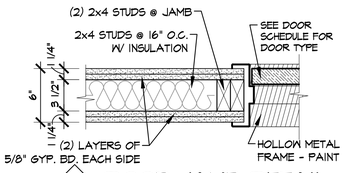
7 DOOR HEAD DETAIL

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



4 DOOR JAMB DETAIL

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



8 DOOR JAMB DETAIL

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

DOOR GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS AND NOTIFY ARCHITECT IMMEDIATELY IF THAT WHICH EXISTS DIFFERS FROM THAT WHICH IS SHOWN ON DRAWINGS.
2. ALL WORK TO COMPLY WITH CURRENT FEDERAL, STATE AND LOCAL CODES, LAWS AND ORDINANCES. THE REQUIREMENTS OF ICC/ANSI A117.1 AND THE AMERICANS WITH DISABILITIES ACT (ADA) ARE TO BE FULLY SATISFIED. ALL WORK SHALL MEET THE MOST STRINGENT REQUIREMENTS OF BOTH INCLUDING, BUT NOT LIMITED TO CLEARANCES, LIMITATIONS, ACCESSORIES, ETC.
3. THESE DRAWINGS ARE PREPARED IN ACCORDANCE WITH THE LIMITED SERVICES FOR WHICH THE ARCHITECT WAS CONTRACTED. THE ARCHITECT MAKES NO REPRESENTATION THAT THE INTERPRETATION OF THESE DOCUMENTS WILL RESULT IN COMPLETE COMPLIANCE WITH THE ADA.
4. ALL DOORS REQUIRED TO BE LABELED SHALL BE SET IN LABELED FRAMES AND IDENTIFIED WITH UL LABEL AND BE PROVIDED WITH APPROVED SELF-CLOSING DEVICES AND POSITIVE LATCHING HARDWARE.
5. ALL DESIGNATED EXIT DOORS SHALL BE EQUIPPED WITH THE REQUIRED EGRESS HARDWARE.
6. FURNISH HARDWARE AS SCHEDULED WITHOUT SUBSTITUTION, NO ALTERNATES WILL BE APPROVED.
7. PROVIDE COMBINATED CYLINDERS AND CUT KEYS; KEYED TO OWNERS' MASTER SYSTEM. INCLUDE KEY CONFERENCE AND KEY SYSTEM SCHEDULE. FURNISH A KEYED CYLINDER AND TWO CUT KEYS FOR EACH LOCKING DEVICE SPECIFIED, PROVIDE TWO MASTER KEYS.
8. FURNISH AND PROVIDE ALL NECESSARY REINFORCEMENTS, BRACKETS, FASTENERS, SPACERS AND FILLERS TO PROVIDE A COMPLETE FUNCTIONING OPENING.

DOOR SCHEDULE

NO.	DOOR SIZE	DOOR MATERIAL	DOOR FINISH	DOOR TYPE	FRAME MATERIAL	FRAME FINISH	FRAME TYPE	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	FIRE RATING	HARDWARE SET	REMARKS
101a	(2) 3'-0" x 6'-8" x 1 3/4"	INSUL. STEEL / GL.	PREFINISHED	B	H.M.	PREFINISHED	2	1	2	9	---	1	
101b	(2) 3'-0" x 6'-8" x 1 3/4"	INSUL. STEEL / GL.	PREFINISHED	B	H.M.	PREFINISHED	2	1	2	9	---	2	
102	3'-0" x 6'-8" x 1 3/4"	INSUL. STEEL / GL.	PREFINISHED	A	H.M.	PREFINISHED	1	1	2	9	---	7	
103	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	4	
104	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	5	
105	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	13	
106	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	3	
108	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	3	
109	(2) 3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	D	H.M.	PREFINISHED	2	7	8	9	90 MIN.	12	
110	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	E	H.M.	PREFINISHED	1	3	4	10	---	14	
111a	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	7	8	9	90 MIN.	9	
111b	3'-0" x 6'-8" x 1 3/4"	STEEL	PAINT	F	H.M.	PAINT	1	3	4	10	---	4	
112a	3'-0" x 6'-8" x 1 3/4"	---	---	---	---	---	---	---	---	---	---	---	EXISTING TO REMAIN
112b	3'-0" x 6'-8" x 1 3/4"	---	---	---	---	---	---	---	---	---	---	---	EXISTING TO REMAIN
113	3'-0" x 6'-8" x 1 3/4"	---	---	---	---	---	---	---	---	---	---	---	EXISTING TO REMAIN
114a	(2) 3'-0" x 6'-8" x 1 3/4"	STEEL	PAINT	F	H.M.	PAINT	1	3	4	10	---	4	
114b	3'-0" x 6'-8" x 1 3/4"	---	---	---	---	---	---	---	---	---	---	---	EXISTING TO REMAIN
114c	3'-0" x 6'-8" x 1 3/4"	---	---	---	---	---	---	---	---	---	---	---	EXISTING TO REMAIN
115a	10'-0" WIDE X 10'-0" HIGH O.H.	---	---	---	---	---	---	---	---	---	---	---	EXISTING TO REMAIN
115b	(2) 3'-0" x 6'-8" x 1 3/4"	INSUL. STEEL	PAINT	G	H.M.	PAINT	2	1	2	9	---	10	
116	(2) 2'-6" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	E	---	---	---	---	---	10	---	16	
117	(2) 2'-6" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	E	---	---	---	---	---	10	---	16	
118	3'-0" x 6'-8" x 1 3/4"	INUSL. STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	1	2	9	---	8	
120	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	3	
121	3'-0" x 6'-8" x 1 3/4"	STEEL	PAINT	F	H.M.	PAINT	1	7	8	9	90 MIN.	15	
122a	3'-0" x 6'-8" x 1 3/4"	STEEL	PREFINISHED	C	H.M.	PREFINISHED	1	3	4	10	---	6	
122b	12'-0" WIDE X 8'-0" HIGH O.H.	STEEL	PAINT	I	---	---	---	5	6	---	---	---	HARDWARE SUPPLIED BY OVERHEAD DOOR MANUFACTURER
123a	4'-0" x 6'-8" x 1 3/4"	INSUL. STEEL	PAINT	H	H.M.	PAINT	3	1	2	9	---	8	
123b	3'-0" x 6'-8" x 1 3/4"	STEEL	PAINT	F	H.M.	PAINT	1	---	---	---	---	5	
124	(2) 3'-0" x 6'-8" x 1 3/4"	INSUL. STEEL	PAINT	G	H.M.	PAINT	2	1	2	9	---	11	

OVERHEAD DOOR SPECS

HAAS, MODEL 2010 OR EQUAL
HEAVY DUTY STEEL INSULATED
NO GLAZING
COLOR: POLAR WHITE
R= 17.66 (U=0.883)

OVERHEAD DOOR OPENER:
LIFTMASTER #_50IL5, 3/4 HP
WALL CONTROL & TWO REMOTES

DOOR HARDWARE SETS

MANUFACTURER LISTINGS

PRODUCTS	ACCEPTABLE MANUFACTURERS
LOCKS	YALE 5400 / BEST 93K
EXIT DEVICES	YALE / SARGENT
HINGES	BOMMER / HAGER
CLOSER	NORTON 7500 / SARGENT 351 / LCN
TRIM	ROCKWOOD / BALDWIN
THRESHOLDS	NATIONAL GUARD / ZERO / REESE
WEATHERSTRIP	NATIONAL GUARD

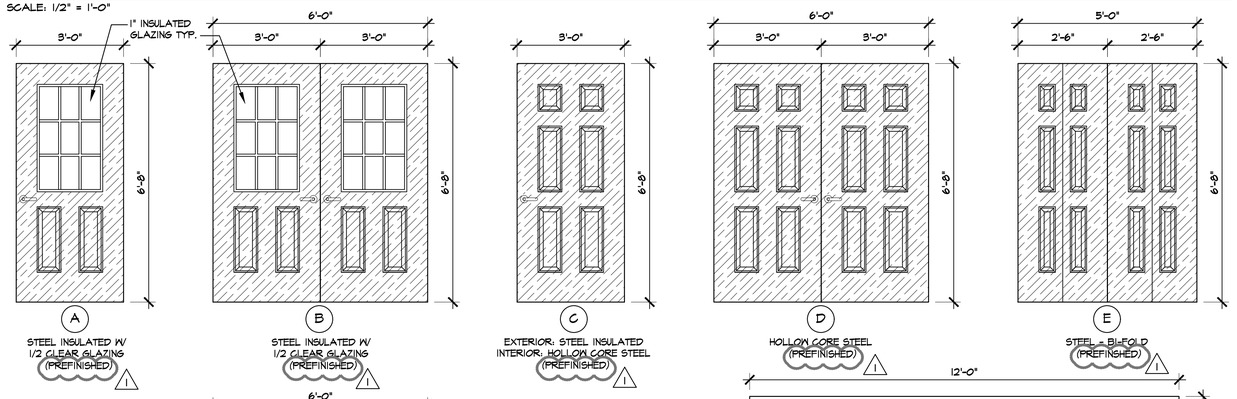
NOTES:
1. CONTRACTOR TO COORDINATE HARDWARE OPERATIONS WITH OWNER.
2. SEE SHEET A-12 FOR HARDWARE SETS.

ABBREVIATIONS

ALUM.	ALUMINUM
ANOD.	ANODIZED
A.T.	ALUMINUM THRESHOLD
GL.	GLASS
M.T.	MARBLE THRESHOLD
MTL.	METAL
R.S.	REDI-CER STRIP
S.C.	SOLID CORE

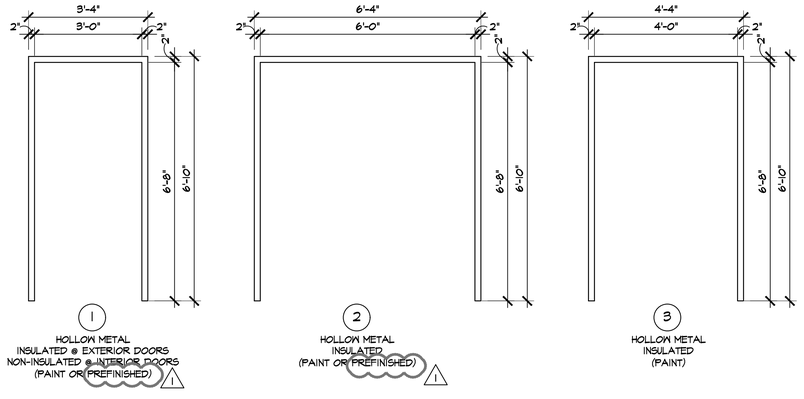
DOOR TYPES

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



FRAME TYPES

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



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DOOR SCHEDULE & NOTES

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HARDWARE SETS

HARDWARE GROUP NO. 1
FOR USE ON DOOR #(S): 101a
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2 EA	CONT. HINGE	224XY	628	IVE
1 EA	THUMBTURN CYLINDER	4066	130	ADA
4 EA	SINGLE DUMMY TRIM	T12 QUA	619	FAL
1 EA	DEADLOCK X THRESHOLD BOLT X HEADER BOLT	MS1850S X 4015 X 4085	628	ADA
1 EA	CYLINDER	AS REQUIRED(*)		
2 EA	OH STOP	1005	619	GLY
1 EA	SURFACE CLOSER	SC71A REG OR PA AS REQ	689	FAL
1 EA	SURF. AUTO OPERATOR	9131	ANGLR	LCN
2 EA	ACTUATOR, TOUCH	8310-853T	630	LCN
2 EA	KICK PLATE	8400 8" X 1" LDW B-CS	630	IVE
1 EA	GASKETING	429AA-S	AA	ZER
2 EA	DOOR SWEEP	39A	A	ZER
2 EA	MEETING STILE SEAL	8194AA	AA	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

AUTO OPERATOR TOGGLED ON/OFF VIA SWITCH

HARDWARE GROUP NO. 2
FOR USE ON DOOR #(S): 101b
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2 EA	CONT. HINGE	224XY	628	IVE
1 EA	PANIC HARDWARE	CD-25-C-L-DT-QUA	619	FAL
1 EA	PANIC HARDWARE	CD-25-C-L-NL-QUA	619	FAL
3 EA	CYLINDER	AS REQUIRED(*)		
2 EA	SURFACE CLOSER	SC71A SS	689	FAL
2 EA	KICK PLATE	8400 8" X 1" LDW B-CS	630	IVE
1 EA	GASKETING	429AA-S	AA	ZER
2 EA	MEETING STILE SEAL	8194AA	AA	ZER
2 EA	DOOR SWEEP	8198AA	AA	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 3
FOR USE ON DOOR #(S): 106, 108, 120
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	PRIVACY LOCK	W8015 QUA	619	FAL
1 EA	SURFACE CLOSER	SC81A REG OR PA AS REQ FC	689	FAL
1 EA	MOP PLATE	8400 4" X 1" LDW B-CS	630	IVE
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CCV	619	IVE
3 EA	SILENCER	SR64/SR65 AS REQ'D	GRY	IVE

HARDWARE GROUP NO. 4
FOR USE ON DOOR #(S): 103, 111b, 114a
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	CLASSROOM LOCK	W561P6 QUA(*)	619	FAL
1 EA	SURF OH STOP	4505	652	GLY
3 EA	SILENCER	SR64/SR65 AS REQ'D	GRY	IVE

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 5
FOR USE ON DOOR #(S): 104, 123b
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	CLASSROOM LOCK	W561P6 QUA(*)	619	FAL
1 EA	WALL STOP	WS406/407CCV	619	IVE
3 EA	SILENCER	SR64/SR65 AS REQ'D	GRY	IVE

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 6
FOR USE ON DOOR #(S): 122a
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	CLASSROOM LOCK	W561P6 QUA (*)	619	FAL
1 EA	SURF OH STOP	4505	652	GLY
1 EA	SURFACE CLOSER	SC81A REG OR PA AS REQ FC	689	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	GASKETING	4885BK PSA	BK	ZER
1 EA	DOOR SWEEP	39A	A	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 7
FOR USE ON DOOR #(S): 102
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1 EA	CONT. HINGE	224XY	628	IVE
1 EA	CLASSROOM LOCK	T561P6 QUA (*)	619	FAL
1 EA	SURFACE CLOSER	SC71A SS	689	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	GASKETING	429AA-S	AA	ZER
1 EA	DOOR SWEEP	8198AA	AA	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 8
FOR USE ON DOOR #(S): 118, 123a
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1 EA	CONT. HINGE	224XY	628	IVE
1 EA	CLASSROOM LOCK	T561P6 QUA (*)	619	FAL
1 EA	SURFACE CLOSER	SC71A REG OR PA AS REQ	689	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CCV	619	IVE
1 EA	GASKETING	429AA-S	AA	ZER
1 EA	DOOR SWEEP	39A	A	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 9
FOR USE ON DOOR #(S): 111a
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	CLASSROOM LOCK	W561P6 QUA (*)	619	FAL
1 EA	SURFACE CLOSER	SC81A REG OR PA AS REQ FC	689	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CCV	619	IVE
1 EA	GASKETING	4885BK PSA	BK	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 10
FOR USE ON DOOR #(S): 115b
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
2 EA	MANUAL FLUSH BOLT	FB358/FB458 (AS REQ'D)	626	IVE
1 EA	DUST PROOF STRIKE	DP2	626	IVE
1 EA	CLASSROOM LOCK	W561P6 QUA (*)	619	FAL
2 EA	SURF OH STOP	450S	652	GLY
2 EA	KICK PLATE	8400 8" X 1" LDW B-CS	630	IVE
1 EA	OVERLAPPING ASTRAGAL	131A-S	A	ZER
1 EA	GASKETING	4885BK PSA	BK	ZER
2 EA	DOOR SWEEP	39A	A	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 11
FOR USE ON DOOR #(S): 124
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2 EA	CONT. HINGE	224XY	628	IVE
1 EA	CONST LATCHING BOLT	FB51P/FB61P (AS REQ'D)	630	IVE
1 EA	CLASSROOM LOCK	T561P6 QUA(*)	619	FAL
1 EA	COORDINATOR	COR X FL (MB AS REQ'D)	628	IVE
2 EA	SURFACE CLOSER	SC71A SSH0	689	FAL
2 EA	KICK PLATE	8400 8" X 1" LDW B-CS	630	IVE
1 EA	OVERLAPPING ASTRAGAL	131A-S	A	ZER
1 EA	GASKETING	429AA-S	AA	ZER
2 EA	DOOR SWEEP	8198AA	AA	ZER
1 EA	THRESHOLD	655A	A	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 12
FOR USE ON DOOR #(S):
109
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	AUTO FLUSH BOLT	FB31P/FB41P (AS REQ'D)	630	IVE
1 EA	DUST PROOF STRIKE	DP2	626	IVE
1 EA	CLASSROOM LOCK	W561P6 QUA (*)	619	FAL
1 EA	COORDINATOR	COR X FL (MB AS REQ'D)	628	IVE
2 EA	SURFACE CLOSER	SC81A REG OR PA AS REQ FC	689	FAL
2 EA	KICK PLATE	8400 8" X 1" LDW B-CS	630	IVE
2 EA	WALL STOP	WS406/407CCV	619	IVE
1 EA	GASKETING	4885BK PSA	BK	ZER
1 EA	MEETING STILE GASKETING	8042SBK PSA	BK	ZER

TEMPLATE CLOSERS TO ALLOW 180 DEGREE SWING

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 13
FOR USE ON DOOR #(S): 105
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	STOREROOM LOCK	W581P6 QUA (*)	619	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CCV	619	IVE
3 EA	SILENCER	SR64/SR65 AS REQ'D	GRY	IVE

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 14
FOR USE ON DOOR #(S): 110
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	STOREROOM LOCK	W581P6 QUA(*)	619	FAL
1 EA	SURFACE CLOSER	SC81A REG OR PA AS REQ FC	689	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CCV	619	IVE
3 EA	SILENCER	SR64/SR65 AS REQ'D	GRY	IVE

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

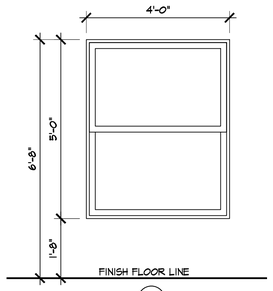
HARDWARE GROUP NO. 15
FOR USE ON DOOR #(S): 121
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BBI 4.5 X 4.5	646	IVE
1 EA	STOREROOM LOCK	W581P6 QUA (*)	619	FAL
1 EA	SURFACE CLOSER	SC81A REG OR PA AS REQ FC	689	FAL
1 EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CCV	619	IVE
1 EA	GASKETING	4885BK PSA	BK	ZER

(*) VERIFY KEYING REQUIREMENTS WITH OWNER PRIOR TO ORDERING

HARDWARE GROUP NO. 16
FOR USE ON DOOR #(S): 116, 117
PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1 EA	BIFOLD HARDWARE	200FD SERIES	628	JOH



WINDOW SIZE: 48" x 60"
R.O.: 48.5" x 60.5"

WINDOW TYPE

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

WINDOW NOTES:

- SOLID VINYL (WHITE)
- FUSION-WELDED FRAME AND SASH
- 3/4" INSULATING DUAL PANE GLAZING
- LOW E ARGON
- U VALUE = 0.30, SHGC = 0.49
- FULL INSECT SCREEN
- SINGLE HUNG

INTERIOR FINISH CLASSIFICATIONS

INTERIOR WALL AND CEILING FINISHES SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84, AND SHALL BE GROUPED IN THE FOLLOWING CLASSES IN ACCORDANCE WITH THEIR FLAME SPREAD AND SMOKE-DEVELOPED INDEXES:

CLASS A: FLAME SPREAD 0-25; SMOKE-DEVELOPED 0-450
CLASS B: FLAME SPREAD 26-75; SMOKE-DEVELOPED 0-450
CLASS C: FLAME SPREAD 76-200; SMOKE-DEVELOPED 0-450

USE GROUP B (BUSINESS) - SECTION 803, TABLE 803.11

CLASS A FINISH: EXIT ENCLOSURES/PASSAGEWAYS (NON-SPRINKLED)

CLASS B FINISH: EXIT ENCLOSURES/PASSAGEWAYS (SPRINKLED)
CORRIDORS (NON-SPRINKLED)

CLASS C FINISH: ROOMS/ENCLOSED SPACES (SPRINKLED)
ROOMS/ENCLOSED SPACES (NON-SPRINKLED)
CORRIDORS (SPRINKLED)

INTERIOR FLOOR FINISH REQUIREMENTS: MINIMUM CRITICAL RADIANT FLUX NOT LESS THAN CLASS II, AND SHOULD COMPLY WITH THE DOC FF-1 "PILL TEST" (CPSC 16 CFR, PART 1630).

BUILDINGS EQUIPPED WITH AUTOMATIC SPRINKLER SYSTEM: CLASS II MATERIALS ARE PERMITTED IN ANY AREA WHERE CLASS I MATERIALS ARE REQUIRED AND MATERIALS COMPLYING WITH THE DOC FF-1 "PILL TEST" (CPSC 16 CFR, PART 1630) ARE PERMITTED IN ANY AREA WHERE CLASS II MATERIALS ARE REQUIRED.

NOTE: BUILDING IS NOT EQUIPPED WITH AUTOMATIC SPRINKLER SYSTEM.

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ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR: SEALED CONCRETE	FLOOR: LUXURY VINYL TILE	FLOOR: CARPET TILES	FLOOR: WOOD	FLR. BASE: VINYL BASE	WALLS: GYPSUM BOARD - PAINT	CEILING: GYPSUM BOARD - PAINT	CEILING: ACT AND GRID	CEILING HEIGHT IN FEET AND INCHES (VERIFY HEIGHT)	REMARKS
											LEGEND X - EXISTING FINISH MATERIAL ● - NEW FINISH MATERIAL
101	COMMUNITY ROOM		●			●	●		●	8'-6"	
102	LIBRARY / READING ROOM		●	●		●	●		●	8'-6"	
103	CLOSET		●			●	●	●		10'-5"	
104	WARMING KITCHEN		●			●	●		●	8'-6"	
105	JANITOR'S CLOSET (J.C.)	●				●	●		●	8'-6"	
106	RESTROOM		●			●	●		●	8'-6"	
107	HALLWAY		●			●	●		●	8'-6"	
108	RESTROOM		●			●	●		●	8'-6"	
109	TABLE & CHAIR STORAGE	●				●	●		●	8'-6"	ALTERNATE #2 - EPOXY FLOORING
110	MECHANICAL	●					●	●		10'-5"	
111	EMPLOYEE BREAK ROOM		●			●	●		●	8'-6"	
112	EX. MAINTENANCE OFFICE		X			X	X	X		11'-1"±	
113	EX. RESTROOM		X			X	X	X		11'-1"±	
114	EX. MAINTENANCE WORKSHOP	X					X	X		11'-1"±	
115	EX. MAINTENANCE GARAGE	X					X	X		11'-1"±	
116	CLOSET		●			●	●	●		10'-5"	
117	CLOSET		●			●	●	●		10'-5"	
118	OFFICE		●			●	●		●	8'-6"	
119	KITCHENETTE		●			●	●		●	8'-6"	
120	RESTROOM		●			●	●		●	8'-6"	
121	MECHANICAL	●					●	●		10'-5"	
122	GARAGE	●					●	●		10'-5"	
123	MAINTENANCE STORE ROOM 2	●				●	●	●		10'-5"	ALTERNATE #2 - EPOXY FLOORING
124	MAINTENANCE STORE ROOM 1	●				●	●	●		10'-5"	ALTERNATE #2 - EPOXY FLOORING
125	PAVILION										

GENERAL INTERIOR FINISH NOTES

1. ALL NEW INTERIOR FINISHES ARE TO BE SELECTED BY OWNER AND SHALL COMPLY WITH INTERIOR FINISH CLASSIFICATIONS AS STATED ABOVE. OWNER TO COORDINATE ALL FINISHES AND COLOR SELECTIONS WITH THE CONTRACTOR.
2. CONTRACTOR TO PREP ALL SURFACES AS NECESSARY WHICH WILL BE RECEIVING NEW FINISHES.
3. TOILET ROOM & JANITOR'S CLOSET WALLS SHOULD HAVE A SMOOTH, HARD, NON-ABSORBENT FINISH PER CODE. PROVIDE EPOXY PAINT AS A MINIMUM ON ALL WALLS.

MATERIAL SPECIFICATIONS - EXTERIOR

ITEM	BRAND / MANUFACTURER	MODEL / TYPE	COLOR	REMARKS
VINYL SIDING	CERTAINTEED	CEDARBOARDS INSULATED SIDING - DOUBLE 6" CLAPBOARD	SAVANNAH WICKER (54)	- AVAILABLE AT MONROE ALUMINUM
SHAKE VINYL SIDING	CERTAINTEED	CEDAR IMPRESSIONS - TRIPLE 5" STRAIGHT EDGE SAWMILL SHINGLES	BUCKSKIN	- AVAILABLE AT MONROE ALUMINUM
VINYL TRIM	CERTAINTEED	CEDARBOARDS ACCESSORIES - 1-1/4" CORNERPOST (51412) - 1-1/4" INSIDE CORNERPOST (51446) - 3-1/2" LINEAL W/ FOAM INSERT (54707)	SNOW (31)	- AVAILABLE AT MONROE ALUMINUM
STONE VENEER	STONECRAFT INDUSTRIES		HERITAGE BUCKTOWN	- AVAILABLE AT MONROE ALUMINUM
ROOF SHINGLES	GAF	TIMBERLINE HDZ SHINGLES	WEATHERED WOOD	- AVAILABLE AT MONROE ALUMINUM

MATERIAL SPECIFICATIONS - INTERIOR

ITEM	BRAND / MANUFACTURER	MODEL / TYPE	COLOR	REMARKS
CABINETS	SHENANDOAH CABINETRY	BRECKENRIDGE SIZE AS SHOWN ON DRAWINGS	PAINTED - SAGE	- CUSHIONCLOSE SYSTEM ON DOORS AND DRAWERS - ALL PLYWOOD CONSTRUCTION ONLY - FULL OVERLAY DOORS - AVAILABLE AT LOWES
COUNTERTOP	FORMICA		BASALT SLATE 3690-34 SCOVATO FINISH	- PENCIL EDGE - EXPOSED EDGES FINISHED
HANDLES / PULLS	BRAINERD	BAR PULL BAR096N-SS-CD	STAINLESS STEEL	- 3-3/4" CENTER TO CENTER - INSTALL ON BOTH DRAWERS AND DOORS AS SHOWN ON ELEVATIONS - AVAILABLE AT LOWES
FAUCET - BREAK ROOM & KITCHENETTE	DELTA	KESSLER - 16932-SSSD-DST	STAINLESS	- NO SUBSTITUTIONS - SINGLE HOLE INSTALLATION / NO DECK PLATE - NO SOAP DISPENSER - AVAILABLE AT LOWES
FAUCET - WARMING KITCHEN	MISENO	MODEL #MNO28ISS	STAINLESS STEEL	- NO SUBSTITUTIONS - SINGLE HOLE INSTALLATION / NO DECK PLATE - NO SOAP DISPENSER - AVAILABLE AT LOWES
LUXURY VINYL TILE	SHAW CONTRACT	DIFFUSE ECOLOGIX - 24"X24" OR EQUAL	AS SELECTED BY OWNER/ARCHITECT	- DIRECT GLUE
CARPET TILE	SHAW CONTRACT	TERRAIN II 20 MIL. - 6"X48"	AS SELECTED BY OWNER/ARCHITECT	- 20 MIL DIRECT GLUE
RUBBER BASE	FLEXCO	VINYL WALL BASE	AS SELECTED BY OWNER/ARCHITECT	- 4" HIGH COVED BASE WITH PRE-MOLDED CORNERS - AVAILABLE AT LOWES
PAINT	SHERWIN WILLIAMS	PROMAR 200	AGREEABLE GRAY 243-C1	- EG-SHEL FINISH - SEE NOTE #1
CEILING TILE	ARMSTRONG	SCHOOL ZONE FINE FISSURED	#1713, SQUARE LAY-IN	
CEILING GRID	ARMSTRONG	"PRELUDE XL"	WHITE	
PLASTIC LAMINATE LIBRARY	FORMICA		WHITE	- EXPOSED EDGES FINISHED

NOTES:
1. SHERWIN WILLIAMS - USE MANUFACTURER'S RECOMMENDED PAINT FOR INTERIOR APPLICATIONS. COLOR AS SELECTED BY ARCHITECT/ OWNER. PROVIDE (3) COAT SYSTEM - (1) PRIMER COAT AND (2) FINISH COATS. ALLOW FOR (1) BASE COLOR.
2. MATERIALS LISTED ARE THE BASIS OF DESIGN. SUBSTITUTIONS MUST COMPLY WITH SECTION 012500 - SUBSTITUTION PROCEDURES OF THE SPECIFICATIONS.

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MONROE HOUSING COMMISSION:
GREENWOOD TOWNHOUSES
900 GREENWOOD AVENUE
MONROE, MICHIGAN 48162

PROPERTY CONTACT:
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ROOM FINISH SCHEDULE, MATERIAL SPECIFICATIONS, & NOTES

NOT FOR CONSTRUCTION

06-23-2023	ADDENDUM NO.1 1
06-21-2023	BIDS
DATE:	ISSUED FOR:
DRAWN	JLM
REVIEW'D	JSJ

20222

A-12

12 OF 12

FANS

SCHEDULE BASED ON GREENHECK

MARK	SERVICE	CFM	SP IN. W.C.	HP	RPM	MAX. TIP SPEED FPM	MAX. OUTLET VEL. FPM	MAX. SOUND RATING	DRIVE	MODEL	POWER	REMARKS
F-1	TOILET EXHAUST	75	0.375	80 W	769	--	--	2 SONES	DIRECT	SP-B110	120	WITH SPEED CONTROL
F-2	TOILET EXHAUST	75	0.375	80 W	769	--	--	2 SONES	DIRECT	SP-B110	120	WITH SPEED CONTROL
F-3	TOILET EXHAUST	75	0.375	80 W	769	--	--	2 SONES	DIRECT	SP-B110	120	WITH SPEED CONTROL
F-4	JANITOR EXHAUST	75	0.375	80 W	769	--	--	2 SONES	DIRECT	SP-B110	120	WITH SPEED CONTROL

GRILLES REGISTERS AND DIFFUSERS

SCHEDULE BASED ON PRICE

MARK	USAGE	STYLE	MODEL	SIZE	DESCRIPTION OF BLOW	DAMPER	REMARKS
A	SUPPLY	SURFACE MOUNT CEILING	SCDA	12x12x6"ø NECK	4-WAY	N	
B	SUPPLY	LAY-IN CEILING	SCDA	24x24x8"ø NECK	4-WAY	N	
C	SUPPLY	SIDEWALL	520D	8x4	DOUBLE DEFLECTION	Y	
D	SUPPLY	SIDEWALL	520D	10x6	DOUBLE DEFLECTION	Y	
E	SUPPLY	SPIRAL DUCT GRILLE	SDG GV AS VCS3	12x5	DOUBLE DEFLECTION	Y	WITH AIR SCOOP
F	RETURN	LAY-IN CEILING	80	12x24	--	N	
G	RETURN	SIDEWALL	530	12x6	--	N	
H	RETURN	SIDEWALL	530	22x10	--	N	

DUCTLESS SPLIT SYSTEM AIR CONDITIONING UNIT

SCHEDULE BASED ON TRANE

	INDOOR UNIT									CONDENSING UNIT			
MARK	FAN CFM LOW	FAN CFM MED	FAN CFM HIGH	EAT D.B. ° F	EAT W.B. ° F	HEATING MBH	COOLING TOTAL MBH	AUXILARY HEAT	MODEL	MARK	AMBIENT ° F	MODEL	POWER
AC-1	320	370	425	80	67	N.A.	12	N.A.	TPLA0A012	CU-4	95	TRUZA012	208-230/1/60
AC-2	320	370	425	80	67	N.A.	12	N.A.	TPLA0A012	CU-5	95	TRUZA012	208-230/1/60

NOTES:
1. OUTSIDE AIR CONNECTION, 40 CFM EACH.
2. DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR.
3. INDOOR UNIT SUPPLIED WITH CONDENSATE PUMP.
4. INSTALL REFRIGERANT PIPING FROM OUTDOOR UNIT TO INDOOR UNIT PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
5. INDOOR UNIT IS POWERED FROM THE OUTDOOR UNIT.
6. CONTROL TO BE VIA WIRED THERMOSTAT.

Vent Summary Sheet

Project Name: MHC Greenwood Maintenance Addition **Date:** 4/26/2023
Project Number: JD23039 **Rev.** none

Rm#	Room Name	1	Ventilation Based on People			Ventilation Based on Area			Adjusted O.A. CFM	Total Ventilation CFM	Room Exhaust
		A.C.	No. of People	CFM/Person	Vent. CFM	Floor Area	CFM/Sq. Ft.	Vent. CFM			
112	Maintenance Office	52	1	5	5	173	0.06	10	15	15	0
113	Maint Toilet	8	0	5	0	46	0.06	3	3	3	75
114	Workshop	78	2	5	10	426	0.06	26	36	36	0
124	Maint Store Room 1	108	2	5	10	515	0.06	31	41	41	0
123	Maint Store Room 2	69	1	5	5	328	0.06	20	25	25	0
111	Employee Break	61	4	5	20	332	0.06	20	40	40	0
110	Mech	12	0	5	0	66	0.06	4	4	4	0
	Sub Totals Furnace 1:				**50**			**137**	**188**	**187**	**75**

Rm#	Room Name	1	Ventilation Based on People			Ventilation Based on Area			Adjusted O.A. CFM	Total Ventilation CFM	Room Exhaust
		A.C.	No. of People	CFM/Person	Vent. CFM	Floor Area	CFM/Sq. Ft.	Vent. CFM			
101	Community Room	195	48	5	240	1,062	0.06	64	304	304	0
102	Library / Reading	106	6	5	30	578	0.06	35	65	65	0
104	Warming Kitchen	39	3	5	15	212	0.06	13	28	28	0
105	Jan Closet	6	0	5	0	30	0.06	2	2	2	75
106	ADA Toilet	15	0	5	0	83	0.06	5	5	5	75
108	Toilet	9	0	5	0	47	0.06	3	3	3	75
109	Table & Chair Storage	23	0	5	0	123	0.06	7	7	7	0
	Sub Totals Furnace 2:				**285**			**128**	**414**	**415**	**225**

Rm#	Room Name	1	Ventilation Based on People			Ventilation Based on Area			Adjusted O.A. CFM	Total Ventilation CFM	Room Exhaust
		A.C.	No. of People	CFM/Person	Vent. CFM	Floor Area	CFM/Sq. Ft.	Vent. CFM			
118	Office	58	2	5	10	319	0.06	19	29	29	0
119	Kitchenette	16	0	5	0	90	0.06	5	5	5	0
120	Restroom	11	0	5	0	59	0.06	4	4	4	75
121	Mech	10	0	5	0	53	0.06	3	3	3	0
	Sub Totals Furnace 3:				**10**			**31**	**41**	**41**	**75**

FURNACES, COILS AND CONDENSING UNITS

SCHEDULE BASED ON TRANE

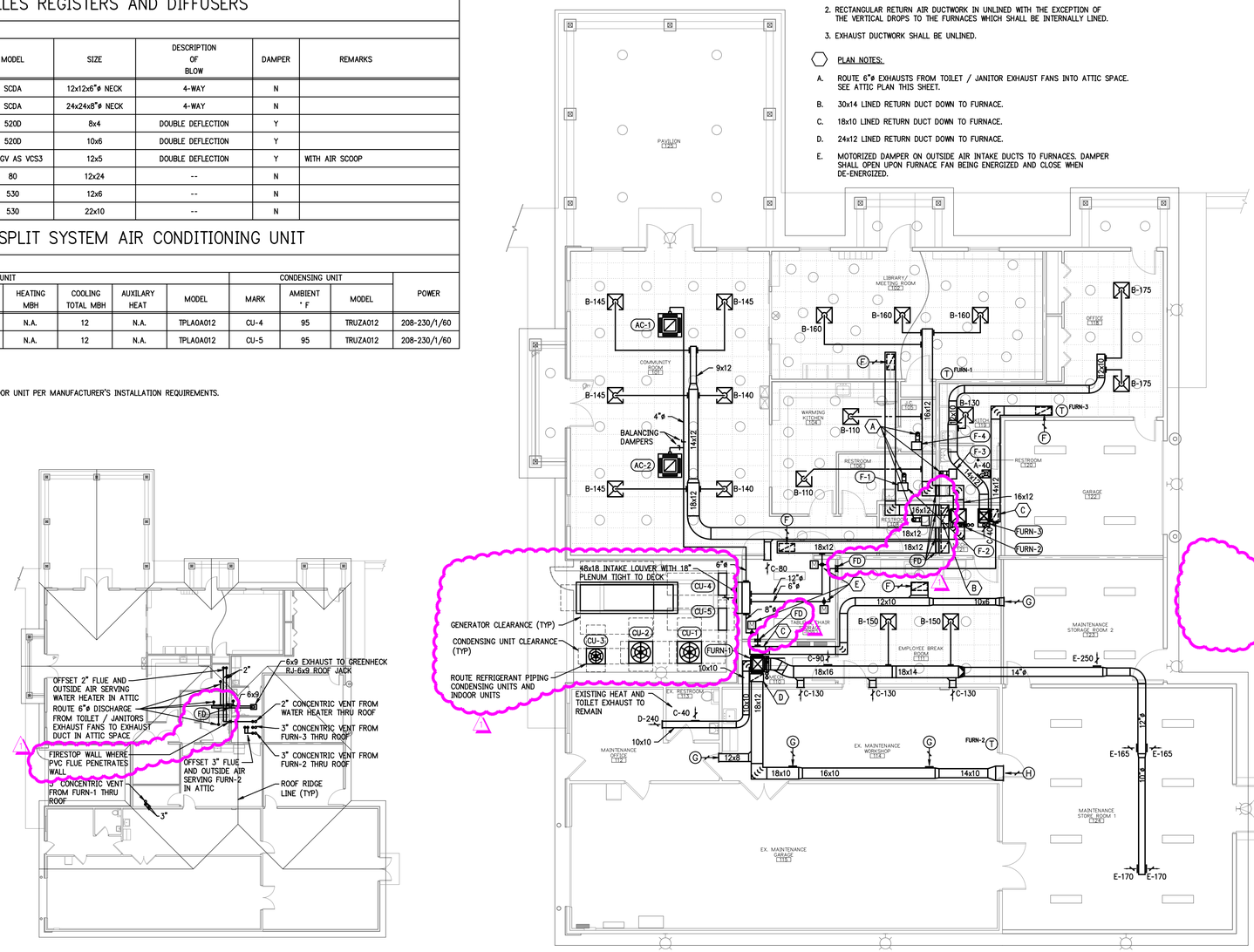
MARK	FURNACE							COOLING COIL				CONDENSING UNIT			REMARKS
	MODEL	CFM	SP IN WC	MBH INPUT	MBH OUTPUT	HP	POWER	MODEL	EAT °F DBT/WBT	MBH SENS.	MBH TOTAL	MODEL	AMBIENT	POWER	
FURN-1	S9X2D120U5	1,980	0.60	120/78	113.4/75.6	1	120/1/60	4TXCD006	80/67	36	48	4TTA4048	95°F	208/230/1/60	190 CFM OA
FURN-2	S9X2D120U5	1,640	0.60	120/78	113.4/75.6	1	120/1/60	4TXCD006	80/67	36	48	4TTA4048	95°F	208/230/1/60	415 CFM OA
FURN-3	S9X2B040U3	560	0.60	40/26	39/25	1/2	120/1/60	4TXCB002	80/67	12	18	4TTA4018	95°F	208/230/1/60	45 CFM OA

GENERAL NOTES:

1. RECTANGULAR SUPPLY AIR DUCTWORK SHALL BE INTERNALLY LINED. DUCT SIZES ARE SHEET METAL SIZE AND INCLUDE INSULATION.
2. RECTANGULAR RETURN AIR DUCTWORK IN UNLINED WITH THE EXCEPTION OF THE VERTICAL DROPS TO THE FURNACES WHICH SHALL BE INTERNALLY LINED.
3. EXHAUST DUCTWORK SHALL BE UNLINED.

PLAN NOTES:

A. ROUTE 6"ø EXHAUSTS FROM TOILET / JANITOR EXHAUST FANS INTO ATTIC SPACE. SEE ATTIC PLAN THIS SHEET.
B. 30x14 LINED RETURN DUCT DOWN TO FURNACE.
C. 18x10 LINED RETURN DUCT DOWN TO FURNACE.
D. 24x12 LINED RETURN DUCT DOWN TO FURNACE.
E. MOTORIZED DAMPER ON OUTSIDE AIR INTAKE DUCTS TO FURNACES. DAMPER SHALL OPEN UPON FURNACE FAN BEING ENERGIZED AND CLOSE WHEN DE-ENERGIZED.



FLOOR PLAN - HVAC

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

ATTIC PLAN - HVAC

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

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GREENWOOD MAINTENANCE BUILDING ADDITION FOR:

MONROE HOUSING COMMISSION: GREENWOOD TOWNHOUSES
900 GREENWOOD AVENUE
MONROE, MICHIGAN 48162

PROPERTY CONTACT:
NANCY WAIN, EXEC. DIRECTOR
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FLOOR PLANS HVAC

NOT FOR CONSTRUCTION

DATE:	ISSUED FOR:
06-23-2023	ADDENDUM NO.1
06-21-2023	BIDS
DRAWN	JDS
REVIEW'D	DCH

20222

M-1

Plotted by: Jeff Stringham Plot Date: 6/23/2023 11:13 AM Save Date: 6/23/2023 11:05 AM File Name: JD23039-M-1.DWG

OUTLINE MECHANICAL SPECIFICATIONS

DIVISION 22 & 23 - BASIC MECHANICAL REQUIREMENTS

A. General:

These are Outline Specifications and not intended to cover all necessary items, but are to serve only as a guide. It is intended that complete Mechanical Systems as described herein will be furnished and installed.

Contractor shall visit the job site and examine all existing conditions.

All work shall be installed in accordance with local and state codes and regulations and shall receive the approval of the inspection department having jurisdiction.

All work specified herein shall carry the Contractor's Warranty for workmanship and materials for a period of one year minimum (or as specified) from the date of final acceptance or beneficial use by the Owner, whichever occurs first. The Contractor shall remedy the defects and reimburse the Owner for all damage to other work, whether caused by the defects or the work of correcting same. Provide an extended four (4) year replacement warranty for the refrigeration compressors after the first year full replacement warranty (parts and labor). The four (4) year warranty shall be for compressor replacement only; all labor charges will be the responsibility of the Owner.

All work shall be done by mechanics skilled in the particular trade involved, under responsible supervision and with the best modern practices.

All materials shall be new and of the grade and quality specified. Only the best material of each class specified shall be used.

In new construction, the General Contractor will provide duct openings and pipe shaft openings where shown on the architectural or structural drawings and also where indicated and sized by this Contractor.

In existing construction, this Contractor shall do all cutting, core drilling, and patching as required for complete installation unless openings are indicated on the architectural drawings. This Contractor shall hire the General Contractor to do all patching to match existing conditions.

This Contractor shall provide all miscellaneous steel and hardware as required to support, hang and secure all equipment as furnished, relocated or revised by him, unless such materials are specifically called out to be provided by other Contractors.

Manufacturer's directions shall be followed in all cases where the manufacturers of articles used in this Contract furnish directions covering specific points not shown on the drawings or mentioned in the specifications.

All work installed under this contract shall be tested in the presence of and to the satisfaction of the inspecting authority having jurisdiction and the Owner's Representative.

Mechanical shop drawings, fixture cuts, and schedules shall be submitted for review, in general, before starting the work involved, so as to cause no delay in this work or that of any other Contractor or Subcontractor. Shop drawings may be submitted in electronic format utilizing PDF files. The submittal shall be organized by specification section and contain all required information within a PDF document for each specification section. If hard copies of shop drawings are submitted, a minimum of six copies shall be submitted. All shop drawings whether electronic or hard copies shall bear the stamp of approval of the Contractor as evidence that the submittals have been approved by him.

This Contractor shall cooperate fully with the Owner in scheduling and making connections into existing service lines so as to cause the least possible inconvenience and shortest interruption of service. Contractor shall include any time and materials necessary for draining, venting, purging and refilling the existing system to permit connection of the new or removal of existing equipment, piping, etc.

This Contractor to remove all unused ductwork, piping, etc. from the area and remove it from the premises. The Owner shall be given the option of retaining any removed items. The Contractor shall, in general, keep the site clean and free of all debris generated by his work.

Before running any ducts, piping, etc. within the building, this Contractor shall assure himself that they can be installed as contemplated without trapping or interfering with columns, beams, piping, fixtures, etc. Contractor to verify all measurements and conditions at job site before proceeding with the work.

Of necessity, openings, supporting steel, field-built curbs, electrical data, space requirements, etc. were designed around specific parameters. It shall become the Contractor's responsibility to change as necessary, through the Architect and interested Contractors on the job, all required parameters, so that openings, supporting steel, curbs, electrical data, etc. will fit the equipment supplied. Any additional cost will be the sole responsibility of this Contractor.

Removed material may contain asbestos or lead. Contractor to advise Owner's Representative of any material which he suspects may contain either asbestos or lead. Any costs involved with necessary testing of installed materials will be the Owner's responsibility. Removal of any materials which prove to contain asbestos or lead will be the Owner's responsibility.

Reduction of Lead in Drinking Water Act (PL 111-380): Products intended to dispense water for human consumption through drinking or cooking shall comply with the following:

- A weighted average lead content of not more than 0.25% as determined by NSF/ANSI 372, and
- NSF/ANSI 61.
- Product shall be certified compliant with these requirements by an American National Standards Institute (ANSI) accredited certification organization.
- Acceptable Product Marking: NSF®-61 and NSF®-372 (or NSF®-61-G) or other accepted certifier marks demonstrating third party certification with these requirements.

Clean and disinfect water distribution piping as follows:

- During construction pipe openings shall be plugged to minimize dirt accumulation in the lines.
- Purge new potable water distribution piping systems and parts of existing potable water systems that have been altered, extended or repaired prior to use.
- Use purging and disinfection procedure prescribed by authority having jurisdiction or, if a method is not prescribed by that authority, the procedure described in either AWWA C651 or AWWA C652 or as described below:

- Flush piping system with clean, potable water until dirty water does not appear at outlets.
- Fill system or part thereof with water/chlorine solution containing at least 50 parts per million of chlorine. Isolate (valve off) and allow to stand for 24 hours.
- Drain system or part thereof of previous solution and refill with water/chlorine solution containing at least 200 parts per million of chlorine. Isolate and allow to stand for 3 hours.
- Flush system with clean, potable water until chlorine does not remain in water coming from system following allowed standing time.
- Submit water samples in sterile bottles to authority having jurisdiction. Repeat procedure if biological examination made by the authority shows evidence of contamination.

- Prepare and submit reports for purging and disinfecting activities and deliver to owner.

B. Scope of Work:

Plumbing

HVAC

C. Electrical:

The Electrical Contractor will provide all power wiring, starters and disconnects unless equipment is provided with starters or disconnect switches as part of the assembly. The Mechanical Contractor shall furnish all special control items, control and interlock wiring, and motors required for the operation of all equipment provided under his sections of work.

In general, all motors under 1/2 horsepower will be 120/1/60. For electrical power characteristics of other motors, see the mechanical drawings and schedules.

Motors 1/2 HP and over will be provided with across-the-line starters with overload protection unless otherwise specified. All motors under 1/2 HP shall have integral overload protection. All motors must conform to current NEMA Standards.

Where electrical requirements and/or motor horsepowers for the equipment supplied varies from that shown on the mechanical drawings or as specifically called out in the Mechanical Specifications, the Electrical Drawings and Specifications shall govern and be adhered to as to electrical power characteristics for the supplied equipment.

All open drive motors shall be of the high efficiency type with a minimum power factor of 82%.

D. Contract Closeout:

Testing and Adjustment:

Contractor shall operate all parts of the entire system, make any and all adjustments and repairs, and shall leave the entire work tested and ready for operation by the Owner and/or operation and final testing and balancing by the Testing and Balancing Contractor.

Operating Instructions:

Contractor shall provide four complete manuals in hardbacked binders, each containing all operating, servicing, lubrication, etc. information and parts lists for all equipment installed under his Contract. In addition, each manual shall contain a copy of each approved equipment submittal along with contact information for the supplier. Where diagrams are too large for the binder, arrange manila pockets with reinforced holes to hold folded drawings. Manuals to be submitted for approval at least 30 days before completion of the work.

Contractor shall arrange for technical instruction of the Owner's Maintenance Personnel for such time as is reasonably required to acquaint them with their duties. Instruction period shall be after all systems are in operation, and have been tested, balanced and adjusted.

Record Drawings:

Contractor shall keep an accurate record of all deviations from contract drawings. He shall neatly and correctly enter, in colored pencil, any deviations on drawings affected during the progress of the project and shall keep drawings available for inspection. At completion of job and before final acceptance, make any final corrections to drawings and deliver same to the Owner's Representative.

Balancing:

This Contractor shall provide for approval, prior to final acceptance by the Owner's Representative, balancing reports. These reports shall include individual air flow measurements at all outlets, total air quantity handled, motor amperage, and voltage name plate data, actual operating amperage and voltage, and a statement that the control system has been checked and verified for operation.

A qualified Balancing Contractor shall be used to perform these services. Contractor shall use a Balancing Contractor who is a fully certified member of the National Environmental Balancing Bureau or the Associated Air Balance Council or an independent firm whose principals are registered Professional Engineers.

The above tests and adjustments are made to accomplish the conditions as set forth in the Drawings and Specifications

Mechanical Contractor shall include the cost of balancing in his bid.

E. Hangers and Supports for Piping and Equipment:

All piping materials furnished and all procedures followed in fabrication and erection shall comply with the applicable sections of the Local Building code, applicable Pressure Piping Code, and requirement of applicable sections of "Building Services Piping", ASME B31.9, latest revision and addenda.

Contractor shall furnish and install all adjustable hangers, special pipe supports spring hangers, anchors, guides, clamps, rods, miscellaneous iron supports and appurtenances as required to securely and properly hang or support the piping systems. On insulated piping, hangers to be oversized to fit on the outside of insulation with a heavy gauge protection pipe saddle or shield. Vertical lines shall be supported by pipe clamp type supports designed for this purpose at each floor level. Hangers to be equivalent to Anvil International No. 260 clevis type, or for bare copper pipe, Anvil International Fig. CT-99C.

Steel Pipe Maximum Spacing:

- Thru 1-1/4": 7' Max
- 1-1/2": 9' Max
- 2": 10' Max

Copper Tubing Maximum Spacing:

- Thru 3/4": 5' Max
- 1": 6' Max

Rigid Pvc Pipe (Up to 140T) Maximum Spacing:

- Thru 1-1/4": 2-1/2' Max
- 1-1/2" & 2": 3' Max
- 2-1/2": 3-1/2' Max
- 3": 3-1/2' Max
- 4": 3-1/2' Max

Pipe:Hanger and Rod Size Shall be as Follows:

- 3/4" to 2" inclusive: 3/8" rod
- 2-1/2" to 3-1/2" inclusive: 1/2" rod
- 4" and 5": 5/8" rod

Contractor shall do all excavating and backfilling in connection with his work. No piping shall be laid in water. Backfill within building or under paving exterior to building shall be clean fine sand, as approved by the Owner's Representative, to proper finished grade. Backfill outside of building lines shall be tamped sand to 24 inches above pipe with remaining backfill being clean earth to proper finished grade.

Sleeves shall be installed by Contractor wherever pipes pass through wood, concrete or masonry slabs, walls, floors or ceilings. Openings around exposed and concealed pipes or in sleeves for pipes passing through floor slabs, fire-rated walls, smoke partitions, or fire rated ceilings must be sealed with a noncombustible fire stop material. Seal at both sides of wall. Insulation shall not extend through sleeve. Pack sleeve opening with STI SpecSeal or equivalent. Depth of fill material shall provide same fire rating as floor or wall penetrated. Fiberglass is not acceptable except as a backing for the above materials.

Where a copper pipe connects to a steel pipe, the connection shall be made with a dielectric union or flanges with dielectric bolt sets. Dielectric couplings shall not be used. When connections are made at coils or similar situations which include such items as steel or cast iron balancing cocks, valves, etc. it is suggested that all piping in these areas to be steel with dielectric unions or flanges when connecting to copper mains, and/or a copper header coil. Where copper pipes cross iron pipes and in all similar conditions where isolation is necessary to eliminate electrolysis, the pipe shall be isolated with a PVC sheathing.

Flashing for vent pipe through membrane roof shall be by Roofing Contractor. Install vent piping penetrating roofed areas to maintain integrity of roof assembly.

Sanitary piping shall be cleaned by flushing with water. Domestic water shall be flushed and chlorinated as required by AWWA C-601.

Solder used for connections in copper tubing shall be 95/5 tin antimony or 94/6 or 96/4 tin-silver solder with recommended flux.

Escutcheon plate for finished areas shall be chrome-plated escutcheon plates and for unfinished areas, black iron escutcheon plates are acceptable.

F. Roof Curbs and Supports:

Provide a roof curb for each flue, air intake and exhaust vent. Curb shall be constructed to conform to the roof pitch and form a level top surface. Curb shall be of box section design, 18 gauge galvanized steel with continuous welded corner seams and factory installed 1-1/2 x 1-1/2 wood nailer. Curb shall be insulated with 1-1/2 inches, three pound density rigid fiberglass board with internal metal liner.

In general, the top of the installed curb shall be approximately 12 inches above finished roof. Coordinate roof insulation thickness with General Contractor. Curbs for outside air intakes, or equipment with outside air intakes, shall be tall enough to maintain bottom of intake a minimum of 36 inches above finished roof.

For roof mount equipment provide equipment support constructed with 2 x 8 wood nailers, galvanized steel counter flashing, etc. Support to finish approximately 12 inches above finished roof, have a minimum width of 8 inches, and extend beyond the full length of the equipment to bear over the next closest structural support. Equipment installed on curb shall be secured to curb.

For piping passing through roof, provide for the curb an acrylic ABS thermoplastic cap, graduated step neoprene sleeves and adjustable stainless steel bands to make a watertight installation.

Acceptable manufacturers are Pate Manufacturing Company, Custom Curb, Inc., Roof Products and Systems Corporation, Thybar, Vent Products or Shipman.

DIVISION 22 - PLUMBING

SECTION 22 0523 - GENERAL DUTY VALVES FOR PLUMBING PIPING

A. Manufacturers:

Check: Caleffi, Crane, Walworth, Nibco, Stockham or Milwaukee

Lubricated Plug: Homestead or Flowserve Nordstrom

Ball: Smith, Crane, Apollo, Watts, Nibco or Milwaukee

B. Domestic Water:

Ball - 600 psi, screwed ends, bronze body, brass/S.S. Trim - Nibco T-585-80-LF, 2" and smaller.

Check - 200 psi, screwed ends, bronze body and trim - Nibco T-413-Y-LF, 2" and smaller.

C. Natural Gas Shutoff:

125 psi, screwed - semi-steel body - Nordstrom 142 or Ball Valve -screwed - bronze body - Teflon trim - Nibco T-585-70-UL and T-280-70-UL - 2" and smaller.

SECTION 22 0700 - PLUMBING INSULATION

A. General:

All work shall be done by experienced insulation applicators in strict accordance with manufacturer's latest recommendations and shall be finished in a neat and workmanlike manner. Thermal conductivity shall not exceed 0.24 BTUH per square foot F° /inch. Insulation shall be equivalent to Owens-Corning Fiberglass 25 ASJ/SSL.

All insulation shall have a composite rating including insulation adhesives, jacket, etc. as follows. The composite assembly shall have a flame spread rating not over 25 and a smoke developed rating not higher than 50.

Pipe fittings shall be covered with preformed insulating fittings such as Zeston 25/50 rated PVC insulated fitting cover (pearl gray finish).

At hangers and supports of insulated pipe, provide high density insulation (maximum deflection 1/8 inches) and 12 inches long, 22 gauge galvanized sheet metal shields covering 50% of the circumference.

B. Piping:

Hot Service:

Domestic Hot Water Piping:
- 1-1/4 Inch and Smaller: 1 inch thick

Domestic hot water storage tanks (must comply with energy conservation requirements of ASHRAE Standard 90 latest edition) minimum 2-1/2 inches.

All lavatories and sinks with exposed P-trap, hot and cold water angle stops and supplies shall be insulated with "TrueBro" Handi-Lab-Guard insulation kit, Model #102W.

Cold Service:

Domestic Cold Water Piping and Valves:
- 1 1/4 Inch and Smaller: 1/2 inch

Condensate Drain Lines: 1/2 inch

SECTION 22 1116 - DOMESTIC WATER PIPING:

A. Domestic Water Inside Building Underground:

Copper type "K" soft annealed tubing 3 inches and smaller, no joints if possible. If necessary, joints to be brazed.

B. Domestic Water Inside Building Aboveground:

Copper type "L" hard tempered 1/2 inch through 3 inches with soldered or press-fit joints and wrought copper fittings.

SECTION 22 1119 - DOMESTIC WATER PIPING SPECIALTIES

A. Wall Hydrant:

WH - Woodford 65 freezeproof with vacuum breaker install approximately 18 inches above grade.

Approved Manufacturers: Woodford, Zurn and Jay R. Smith

B. Thermometer:

Adjustable angle, 9 inches long; H. O. Trerice BX9 1403.

SECTION 22 1316 - SANITARY WASTE & VENT PIPING

A. Sanitary Waste and Vent Inside Building Underground:

Asphalt-coated service weight cast iron, hubless end. Joints, "Clamp-All" Model #125, "Husky" 4000 or "Mission" Heavy Weight.

Plastic PVC, Schedule 40 ASTM D2665, DWV with solvent welded socket joints.

B. Sanitary Waste and Vent Aboveground:

Asphalt-coated service weight cast iron, hubless end. Joints, "Clamp-All" Model #125, "Husky" 4000 or "Mission" Heavy Weight.

Asphalt-coated service weight cast iron, hubless end, 3 inches and smaller. Joints, neoprene rubber gasket with stainless steel clamp.

Plastic PVC, Schedule 40, ASTM D2665, DWV with solvent welded socket joints. (Not allowable in return air plenums.)

C. Condensate Drain and Relief Valve Discharge:

Copper type "L" hard tempered with soldered or press-fit joints and wrought copper fittings.

SECTION 22 1319 - SANITARY WASTE PIPING SPECIALTIES

A. Floor Drains:

FD-1 - Zurn ZN-415-6B with 6 inches diameter strainer. Provide with ASSE 1072 compliant barrier-type trap seal protection device.

FD-2 - Zurn Z-415-6B-HD-Y with 6 inches diameter strainer, sediment bucket and heavy duty grate, 3 inches diameter. Provide with ASSE 1072 compliant barrier-type trap seal protection device.

Approved Manufacturers: Zurn, Josam, Mifab, Jay R. Smith and Wade.

B. Cleanouts:

CO - Cleanout plug for cast iron hub and spigot shall be screwed brass.

CO - Cleanout plug for cast iron no hub shall be a blind plug.

CO - Cleanout plug for PVC shall be a cleanout adapter with cleanout plug.

FCO - Finished floor cleanout, Zurn ZN-1400-T.

FCO - Floor cleanout for carpeted area, Zurn ZN-1400-T-CM.

FCO - Floor cleanout for PVC pipe, Zurn ZN-1404.

COTG - Exterior cleanout, Zurn Z-1406-HD-VP.

WCO - Wall cleanout, Zurn ZS-1469.

Approved Manufacturers: Zurn, Josam, Mifab, Jay R. Smith and Wade.

SECTION 22 1600 - NATURAL GAS PIPING

A. Natural Gas Aboveground Less Than 5 PSI:

Black steel, Schedule 40, ASTM A-53, screwed 1/2 inch through 2 inches with 150# malleable iron joints. Black steel, Schedule 40 ASTM A-53, butt welded, standard weight welded fittings - 2-1/2" and larger with 150# welded neck flange.

B. Natural Gas Underground Service:

Polyethylene ASTM D-2513 with copper tracing strip, approved by gas utility. Heat fusion joints approved by gas utility.

Black steel, Schedule 40, ASTM A-53, butt welded, coated and wrapped X-Tru-Coat with forged steel, Schedule 40, butt welded coated and wrapped joints. Provide Cathodic protection with magnesium anodes.

SECTION 22 4000 - PLUMBING FIXTURES

A. General:

Fixtures shall be acid resisting and white.

Fixtures shall have supplies with stops with removable keys.

Mounting height of fixture shall be as shown on Architectural Drawing.

B. Water Closet, WC-1: - Kohler K-3979 (ADA, floor set, tank type - handle on left)

Supply: Brass Craft SCR-1912-DL-C
Seat: Olsonite 95-SSC

C. Water Closet, WC-2: - Kohler K-3979-RA (ADA, floor set, tank type - handle on right)

Supply: Brass Craft SCR-1912-DL-C
Seat: Olsonite 95-SSC

D. Lavatory, LV-1: - Kohler K-2032 (20 inches x 18 inches wall hung)

Faucet: Kohler K-15199-4NDRA-CP (single lever type) (0.5 gpm)
Supplies: Brass Craft SCR-1912-AC
Trap: Dearborn Brass 707-1
Strainer: Kohler K-7129-A
Carrier: Zurn Z-1231
Drain and Supplies Insulation Kit: True Bro Model #102W
Temperature Control Valve (ASSE 1070): Powers Hydroguard LFe480

E. Electric Water Cooler, EWC-1: - Oasis PGBACSL (ADA, split level)

Carrier: Zurn Z-1225-BL
Trap: Dearborn Brass 707-1
Supply: Brass Craft SCR-1912-AC

F. Janitor (Mop) Sink, MS-1:

Fiat Products MSB-2424 (24 inches x 24 inches) provided with strainer, vinyl bumper guards on all exposed sides, mop hanger, tailpiece, 30 inches long hose and faucet with vacuum breaker.

Faucet: Chicago 540-LD897-SWXF204CP
Check Valves: Provide on CW and HW supply lines to faucet

G. Sink, SK-1: - Elkay LR-2219 (Single compartment)

Faucet: Elkay LKD-2442 (Hi Arc type)
Supplies: Brass Craft OCR-1912-AC
Trap: Dearborn Brass 704A-1, 1-1/2 inches - 17 gauge
Strainer: Elkay LK-35

H. Sink, SK-2: - Elkay LR-3122 (Single compartment)

Faucet: Elkay LKD-2442 (Hi Arc type)
Supplies: Brass Craft OCR-1912-AC
Trap: Dearborn Brass 704A-1, 1-1/2 inches - 17 gauge
Strainer: Elkay LK-35

I. Water Heater:

Water heater shall be of capacity and characteristics as indicated on the drawings. Tank shall be insulated per ASHRAE 90A-latest edition. Relief valve shall be temperature and pressure ASME type. Unit shall be completely factory wired, piped, tested, approved for installation requiring only connections of water and power source for operation.

DIVISION 23 - HVAC

SECTION 23 0700 - HVAC INSULATION

A. General:

All work shall be done by experienced insulation applicators in strict accordance with manufacturer's latest recommendations and shall be finished in a neat and workmanlike manner. Thermal conductivity shall not exceed 0.24 BTUH per square foot F° /inch. Insulation shall be equivalent to Owens-Corning Fiberglass 25 ASJ/SSL.

All insulation shall have a composite rating including insulation adhesives, jacket, etc. as follows. The composite assembly shall have a flame spread rating not over 25 and a smoke developed rating not higher than 50.

Pipe fittings shall be covered with preformed insulating fittings such as Zeston 25/50 rated PVC insulated fitting cover (pearl gray finish).

At hangers and supports of insulated pipe, provide high density insulation (maximum deflection 1/8 inches) and 12 inches long, 22 gauge galvanized sheet metal shields covering 50% of the circumference.

Refrigeration piping insulation material shall be a highly flexible, closed cell EPDM rubber based elastomeric product. Insulation shall be Aeracell SSPT or AC, Armaflex UT/Solaflex or K Flex Solar HT. Thermal conductivity of the insulation shall not exceed 0.245 BTUH square foot F degree/inch at 75° mean temperature. Insulation shall have a maximum 25/50 fire/smoke rating and be applied according to manufacturer's instructions. All joints must be sealed and the piping supported with inserts and galvanized exterior shields. Sizing per schedule.

B. Piping:

Cold Service:

Condensate Drain Lines: 1/2 inch

Refrigerant Piping: 1 inch

Piping insulation exposed to weather shall have insulation thickness increased by 1 inch and be wrapped with a 0.016 inch thick aluminum cover.

C. Ductwork:

Externally insulate all outside air intake ductwork with 1-1/2 inches thick semi-rigid fiberglass insulation with foil reinforced Kraft vapor barrier equivalent to OCF 703-FRK.

Externally insulate all supply ductwork above ceilings and round runouts to diffusers with 1-1/2 inches thick flexible duct wrap with foil reinforced Kraft vapor barrier equivalent to OCF ED-100-FRK-25.

Internally insulated ducts do not require exterior insulation.

SECTION 23 0923 - TEMPERATURE CONTROLS

A. Furnish and install as described a complete system of temperature controls as manufactured by Automated Logic, TAC, Johnson Controls, Trane, Siemens or HVAC equipment supplier. This system shall be installed complete in all respects by competent mechanics, regularly employed by the manufacturer of the temperature control equipment.

B. All electrical wiring to be in accordance with the National Electrical Code. The HVAC Contractor is responsible for all control and interlock wiring required for the complete installation that is not shown on the Electrical Drawings.

C. The Control Contractor is responsible for all power wiring for the complete control system. All 120 volt circuits shall be from the nearest receptacle panel with the maximum load on any single circuit being 1400 watts.

D. All exposed temperature control and interlock wiring and all power wiring regardless of voltage, shall at a minimum be run in EMT. Conduit system in Mechanical and Electrical Rooms below eight feet above floor shall be IMC. Provide Myers Hub fittings as required to connect to temperature control equipment. See Electrical Division for additional conduit requirements. Concealed low voltage wiring, such as communication wire, thermostat wire, etc. shall be plenum grade, fastened securely to building structure. See Electrical Specification for additional low voltage wiring requirements. Low voltage wiring shall not be laid directly on the ceiling or be attached to any other electrical conduits.

E. On completion of the job, the Control Contractor shall completely adjust, ready for use, all thermostats and relays provided under his Contract. The Control Contractor shall provide a complete instruction manual covering the function and operation of all control components on the job. This manual shall be furnished to the Owner's operating personnel and a competent technician shall be provided for instruction purposes after the system is substantially complete and ready for operation.

SECTION 23 2000 - HVAC PIPING

A. Refrigerant Piping:

Type ACR hard copper with streamline fittings and Alco or Sporlan specialties. Bone-dry nitrogen shall be bled into lines while soldering. Extra care shall be taken to insure cleanliness. System shall be pressure and vacuum tested. A good refrigeration solder such as Sil-Fos shall be used in making joints. Install purge, charging and service valves as per manufacturer's recommendations and standards. Refrigeration piping shall in all cases conform to the air conditioning equipment manufacturer's recommendations and standards. Pre-charge refrigerant piping may be used if systems are 5 tons or less and length of piping is 50 feet or less. After start-up, replace liquid line filter driers, if necessary.

B. Condensate Drain and Relief Valve Discharge:

Copper type "L" hard tempered with soldered or press-fit joints and wrought copper fittings.

SECTION 23 3000 - AIR DISTRIBUTION SYSTEM

A. Sheet Metal Ductwork:

Shall be fabricated and installed in accordance with the latest ASHRAE and SMACNA recommendations and in the best practices of good workmanship. All ductwork shall be constructed of prime hot dip galvanized sheet steel. All joints, longitudinal and transverse seams and connections shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes.

While the drawings are to be adhered to as closely as possible, the right is reserved to vary the run and sizes of ducts during the progress of the work as may be found necessary or desirable to avoid local interferences.

Openings around exposed or concealed ductwork passing through walls, or partitions, when not protected by fire dampers or doors properly installed, shall be sealed with a sheet metal collar on both sides of the wall.

On all air handling units, fans, air conditioning units, etc. duct connections shall be flexible connections using Ventglas 30 ounce, or Duralon 24 ounce material. Canvas will not be acceptable.

For final connections of ductwork operating at pressures below 2" W.G. to supply air distribution items, UL approved pre-insulated flexible duct with exterior vapor barrier may be used. The length of flexible duct shall not exceed 3-1/2 feet and shall not be used for more than a final elbow connection to the unit. Duct to be Wiremold WK Acoustical Duct, or equal as manufactured by Owens-Corning, Johnson, Johns-Manville or Genflex. Secure with adhesive and metal bands. Installation to be in accordance with the latest SMACNA flexible duct installation standards.

Paint inside of ductwork exposed behind all registers and grilles flat black.

B. Spin-in Fittings:

Shall be equal to Flexmaster U.S.A. Inc., Type FLDE with balancing damper and air scoop.

C. Manual Balancing Damper:

In square or rectangular ductwork at pressures below 2" W.G., dampers less than 1 sq. ft. in area or less than 12 inches high shall be Titus Model AG-35B or equivalent by Grille, Register and Diffuser Manufacturer. Damper in square or rectangular ductwork larger than the above shall be Ruskin Type OD-35 or equivalent by Vent Products, Air Balance, Pottorff, Louver and Damper, Inc., Greenheck, Cesco or Air Control.

D. Motor-Operated Damper:

Damper shall be Ruskin Type CD-36 low leakage, opposed blade operation with heavy galvanized steel frame, 16 gauge galvanized steel blades, and self-lubricating bearings. The damper shall be anti-leak construction with aluminum jamb seals and vinyl blade edge seals. Equivalent dampers by above manufacturers are acceptable.

E. Register, Grille and Diffuser:

Units shall be as shown on the drawings with each register and diffuser containing manual volume control damper. Ceiling unit to have off-white finish, sidewall unit to have prime coat finish. Exhaust register shall be fabricated of all aluminum construction. Unit shall be by Titus, Carnes, Price, Anemostat or Krueger.

F. Flue:

Flue shall be of PVC per furnace manufacture or engineered flue designed for class IV positive pressure, condensing appliances. Provide flue supports, spacers, storm collars, counterflashing cap, etc. to insure a weatherproof and fireproof installation.

G. Internal Duct Insulation:

Internally insulate all rectangular supply ducts operating at pressures less than 2" W.G. Insulation shall be 1 inches thick and shall meet the Erosion Test Method described in UL Publication No. 181. All linings including coatings and adhesives when tested on a composite basis shall have a flame spread rating of 25 or less and a smoke developed rating of 50 or less. External duct dimensions are given and do include an allowance for insulation thickness. Where round ductwork is indicated, dimensions given are internal duct diameter and shall be externally insulated. Insulation shall be a product of Owens-Corning, Johns-Manville, Armstrong, Knauf or Certain-Teed.

H. Louver:

Greenheck Type ESD-403 extruded aluminum with 1/2 inches birdscreen in an extruded aluminum frame and having a 204-R1 etch and anodized aluminum finish with one coat of lacquer. Louver shall bear the AMCA certified rating seal.

Equivalent louvers by Airolite, Greenheck, Louvers & Dampers, Inc., Construction Specialties, American Warming and Ventilating Company, Ruskin, All-Lite or Pottorff will be acceptable. Paint duct behind louver dull black.

I. Fire Dampers:

Fabricate in accordance with NFPA 90A and UL 555, and as indicated. The fire damper shall be constructed of galvanized steel and in full conformance with the requirements of the Underwriter's Laboratories "Standard for Fire Dampers", UL-555 and shall carry the UL label for 1-1/2 hour rating and 160°F fusible link unless a higher temperature link is required due to location of damper or temperature of air transported in duct. Damper shall be enclosed in a 20 gauge steel sleeve that exceeds the depth of the wall or floor opening by two inches (2 inches) minimum on each side. Where the damper is mounted outside the wall, floor or behind a grille, register or diffuser, a 10 gauge steel sleeve shall be used. The 10 gauge sleeve shall go continuously through the opening and also contain the damper. Fire dampers shall be installed in the wall openings utilizing break-away connections, angles and practices required to be in compliance with the manufacturer's UL approved installation instructions.

Fire damper in ductwork with velocities below 2000 FPM and pressures up to 2 inches W.G. positive pressure shall be Type B damper with blades out of airstream and have an equivalent free area at least the same as the duct and shall have a maximum pressure drop of 0.1 inch with a 2000 FPM velocity through the damper.

Fire damper at a grille, register or diffuser for wall installation shall be Type A damper and be the full size of the grille, register or diffuser. Retaining angle on side of wall which will receive a grille or register may be installed with one side towards the fire damper as long as it does not interfere with the operation and safe closing of fire damper blades. This will provide for a register to be flush mounted against wall. All retaining angles which are exposed must have mitered corners.

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900 GREENWOOD AVENUE
MONROE, MICHIGAN 48162

PROPERTY CONTACT:
NANCY WAIN, EXEC. DIRECTOR
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MECHANICAL SPECIFICATIONS

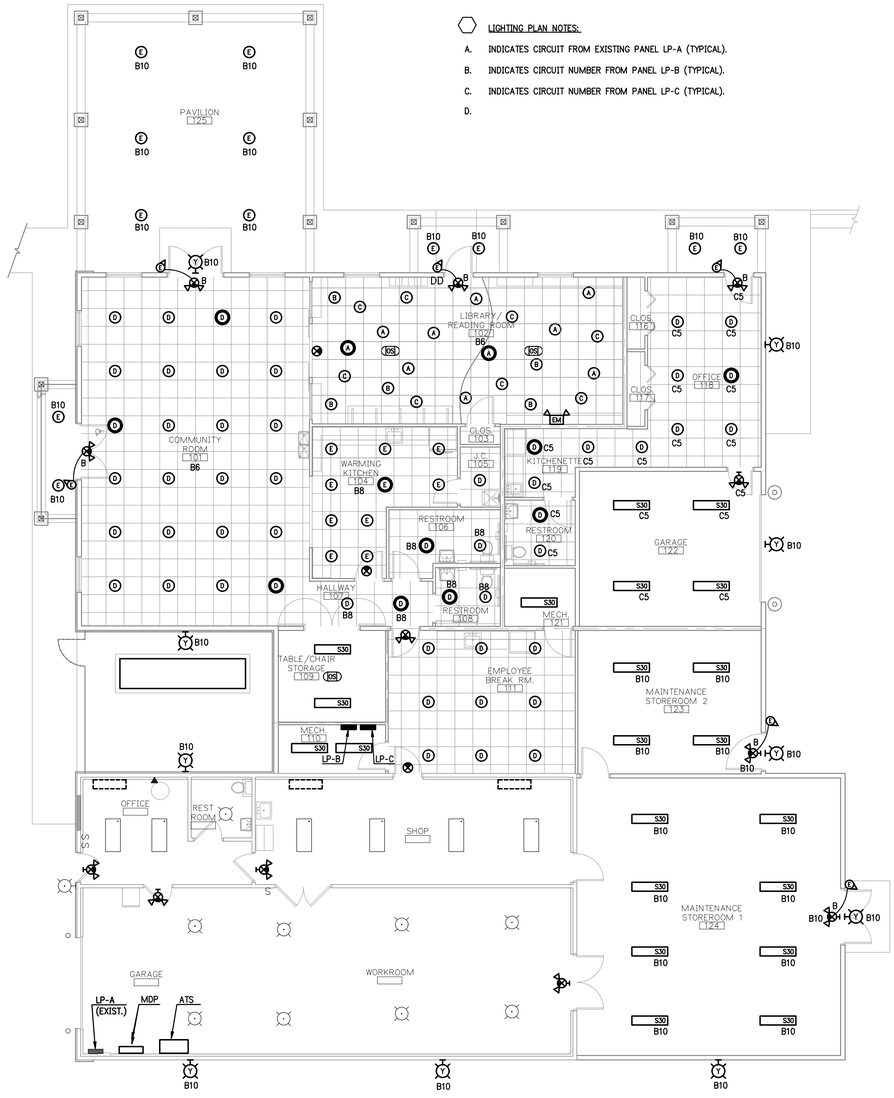
NOT FOR CONSTRUCTION

06-23-2023	ADDENDUM NO.1
06-21-2023	BIDS
DATE:	ISSUED FOR:
DRAWN	JDS
REVIEW'D	DCH

20222

M-2

Plotted by: Jeff Stringham Plot Date: 6/23/2023 11:13 AM Save Date: 6/23/2023 11:11 AM File Name: JD23039-M-2.DWG



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

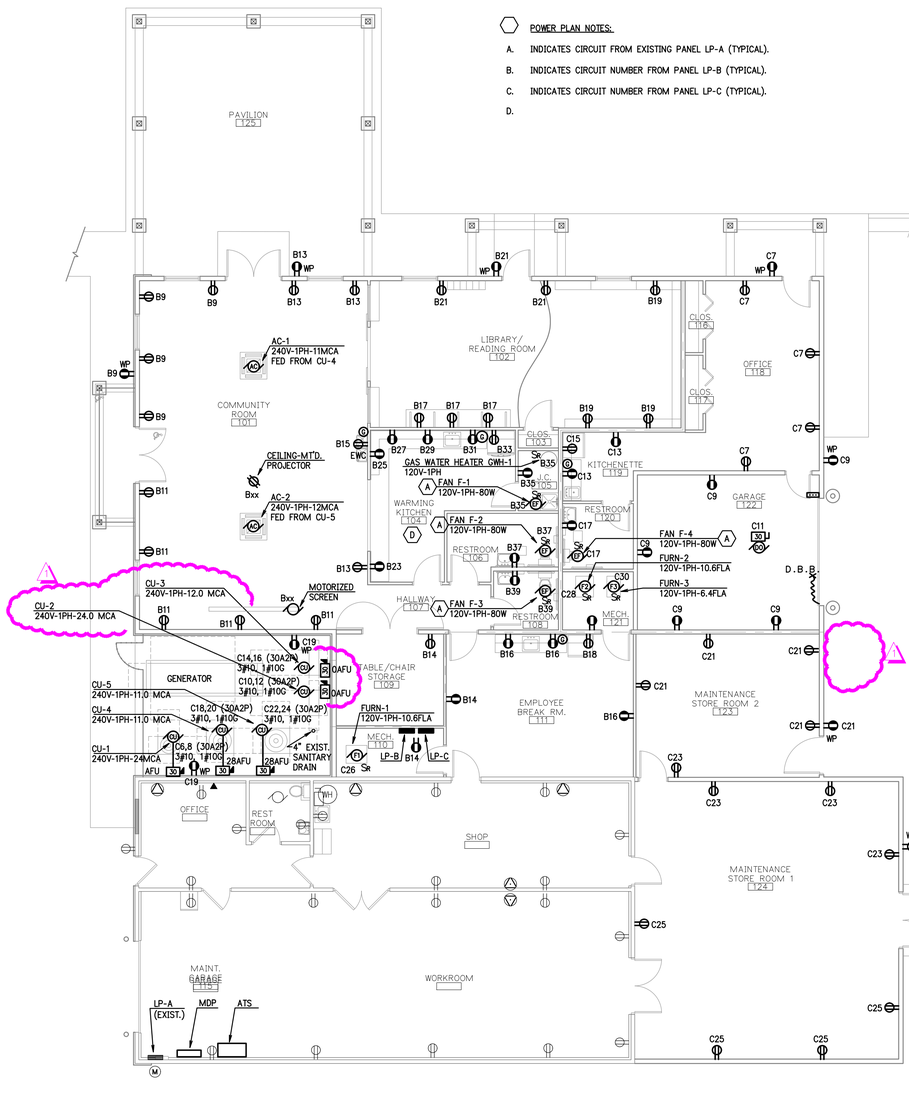
LIGHTING PLAN NOTES:

A. INDICATES CIRCUIT FROM EXISTING PANEL LP-A (TYPICAL).

B. INDICATES CIRCUIT NUMBER FROM PANEL LP-B (TYPICAL).

C. INDICATES CIRCUIT NUMBER FROM PANEL LP-C (TYPICAL).

D.



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

POWER PLAN NOTES:

A. INDICATES CIRCUIT FROM EXISTING PANEL LP-A (TYPICAL).

B. INDICATES CIRCUIT NUMBER FROM PANEL LP-B (TYPICAL).

C. INDICATES CIRCUIT NUMBER FROM PANEL LP-C (TYPICAL).

D.

PLAN NOTES:

A. INTERLOCK FAN WITH LIGHTS.

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FLOOR PLANS LIGHTING & POWER

NOT FOR CONSTRUCTION

DATE:	ISSUED FOR:
06-23-2023	⚠ ADDENDUM NO.1
06-21-2023	BIDS
DRAWN	RKB
REVIEW'D	DTK

20222

E-3

Electrical Service Load Summary

Load Description	Connected Load	Demand Load
Lighting	5,880 VA	5,880 VA
Receptacle	15,720 VA	12,860 VA
Mechanical	6,784 VA	6,784 VA
Heat	4,500 VA	4,500 VA
Air Conditioning	33,120 VA	33,120 VA
Equipment	9,000 VA	9,000 VA
Kitchen Equipment	3,120 VA	3,120 VA
Grand Total	**78,124 VA**	**75,264 VA**

SERVICE VOLTAGE: 120/240V-1PH-3W
SERVICE AMPACITY: 400A
DEMAND AMPACITY AT SERVICE VOLTAGE: 314 A

2023-06-14

LP-A (EXIST.)

200A — VOLTAGE: 120/240V-1PH-3W — SURFACE

NOTES	USE	LOAD	BKR AMP	BKR No	PH	BKR No	BKR AMP	LOAD	USE	NOTES
	GARAGE - LIGHTS	1,200	20	1	A	2	20	1,120	OFFICE & WORKROOM - LIGHTS	
	GARAGE - RECEPTS.	900	20	3	B	4	20	720	WORKROOM EAST - RECEPTS.	
	GARAGE - RECEPTS.	900	20	5	A	6	20	720	WORKROOM WEST & SOUTH - RECEPTS.	
	OFFICE & RESTROOM - RECEPTS.	1,080	20	7	B	8	20	360	GARAGE WEST - RECEPTS.	
	AIR COMPRESSOR	1,000	20	9	A	10	20		NORTH WORKROOM - HEATER & A/C	
	"	1,000	2P	11	B	12	2P		(DEMO)	
	BATH - HEATER	1,500	20	13	A	14	20		OFFICE - HEATER & A/C	
	WORK ROOM -	1,500	20	15	B	16	2P		(DEMO)	
	? - HEATER & A/C	1,500	2P	17	A	18	30	1,500	WATER HEATER	
	SEWAGE PUMP	1,000	20	19	B	20	2P	1,500	"	
	?	1,500	30	21	A	22	30		HEATER AC	
	"	1,500	2P	23	B	24	2P		(DEMO)	
				25	A	26				
				27	B	28				
				29	A	30				

TOTAL CONNECTED LOAD: 20,500 W — 85 AMPS

2023-06-14

LP-B

200A MLO — VOLTAGE: 120/240V-1PH-3W — SURFACE

NOTES	USE	LOAD	BKR AMP	BKR No	PH	BKR No	BKR AMP	LOAD	USE	NOTES
	A/C-1 - COMMUNITY ROOM 101	1,320	30	1	A	2	20		SPARE	
	"	1,320	2P	3	B	4	20		SPARE	
	A/C-2 - COMMUNITY ROOM 101	1,440	30	5	A	6	20	1,840	LIGHTS - COMMUNITY RM. & LIBRARY	
	"	1,440	2P	7	B	8	20	1,120	LIGHTS - WARMING KIT, RST.RMS,BREAK RM	
	COMMUNITY 101 - RECEPTACLES NE WALL	900	20	9	A	10	20	1,160	LIGHTS - MAINT. STORERMS & EXTERIOR	
	COMMUNITY 101 - RECEPTACLES NW WALL	900	20	11	B	12	20		SPARE	
	COMMUNITY 101 - RECEPTACLES SOUTH WALL	900	20	13	A	14	20	1,000	WARMING KITCHEN 104 - RECEPT. WEST	
	COMMUNITY RM. 101 - EWC	800	20	15	B	16	20	1,000	WARMING KITCHEN 104 - RECEPT. WEST	
	LIBRARY 103 - RECEPTACLES WEST WALL	900	20	17	A	18	20	1,000	WARMING KITCHEN 104 - RECEPT. NORTH	
	LIBRARY 103 - RECEPTACLES WEST WALL	900	20	19	B	20	20	1,000	WARMING KITCHEN 104 - RECEPT. NORTH	
	LIBRARY 103 - RECEPTACLES EAST WALL	540	20	21	A	22	20	1,000	WARMING KITCHEN 104 - RECEPT. NORTH	
	SPARE		20	23	B	24	20	1,000	WARMING KITCHEN 104 - REFRIGERATOR	
	SPARE		20	25	A	26	20	460	JAN. CLOS. 105 - RECEPT, FAN, GWHTR.	
	SPARE		20	27	B	28	20	520	RESTROOMS 106,108 - RECEPT. & FAN	
	SPARE		20	29	A	30	20		SPARE	
	SPARE		20	31	B	32	20		SPARE	
	SPARE		20	33	A	34	20		SPARE	
	SPARE		20	35	B	36	20		SPARE	
	SPARE		20	37	A	38	20		SPARE	
	SPARE		20	39	B	40	20		SPARE	
	SPARE		20	41	A	42	20		SPARE	

TOTAL CONNECTED LOAD: 22,460 W — 94 AMPS

2023-06-14

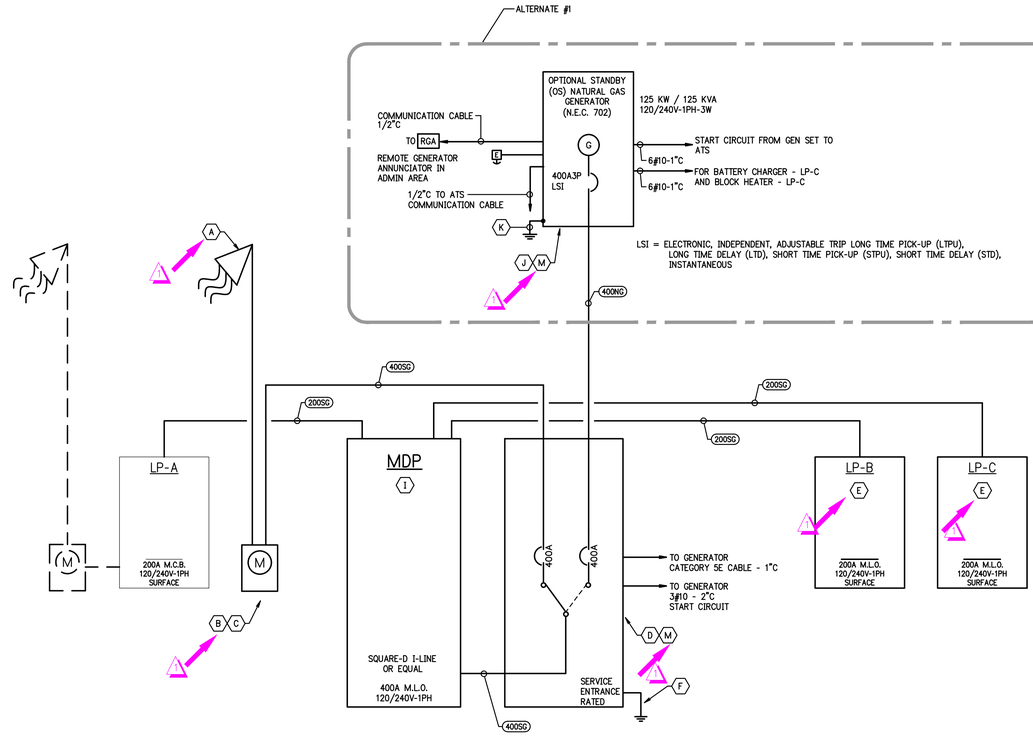
LP-C

200A MLO — VOLTAGE: 120/240V-1PH-3W — SURFACE

NOTES	USE	LOAD	BKR AMP	BKR No	PH	BKR No	BKR AMP	LOAD	USE	NOTES
	SPARE		20	1	A	2	20		SPARE	
	SPARE		20	3	B	4	20		SPARE	
	PUBLIC SERV - LIGHTS	560	20	5	A	6	30	2,220	CU-1	
	OFFICE 118 - RECEPTACLES	900	20	7	B	8	2P	2,220		
	GARAGE 122 - RECEPTACLES	720	20	9	A	10	30	2,220	CU-2	
	GARAGE 122 - DOOR OPERATOR	1,200	20	11	B	12	2P	2,220		
	KITCHENETTE 119 - RECEPTACLES	360	20	13	A	14	20	1,080	CU-3	
	KITCHENETTE 119 - REFRIGERATOR	1,200	20	15	B	16	2P	1,080		
	RESTROOM 120 - RECEPT. & FAN	260	20	17	A	18	20	1,320	CU-4	
	SPARE		20	19	B	20	2P	1,320		
	MAINTENANCE STOREROOM 2 - RECEPTS.	900	20	21	A	22	20	1,440	CU-5	
	MAINTENANCE STOREROOM 3 - RECEPTS.	900	20	23	B	24	2P	1,440		
	MAINTENANCE STOREROOM 3 - RECEPTS.	720	20	25	A	26	30	1,272	FURN-1	
	SPARE		20	27	B	28	2P	1,272	FURN-2	
	SPARE		20	29	A	30	20	768	FURN-3	
	SPARE		20	31	B	32	20		SPARE	
	SPARE		20	33	A	34	20		SPARE	
	SPARE		20	35	B	36	20		SPARE	
	SPARE		20	37	A	38	20		SPARE	
	SPARE		20	39	B	40	20		SPARE	
	SPARE		20	41	A	42	20		SPARE	

TOTAL CONNECTED LOAD: 27,592 W — 115 AMPS

2023-06-14



PANEL RISER

SCALE: NONE

FEEDER SCHEDULE

MARK	1 PHASE - 2 WIRE WITH GROUND	MARK	1 PHASE OR 3 PHASE - 3 WIRE WITH GROUND		
	COPPER		COPPER	COMPACT ALUMINUM	
20SG	2#12, 1#12G - 1/2"C	20G	3#12, 1#12G - 1/2"C		
30SG	2#10, 1#10G - 1/2"C	30G	3#10, 1#10G - 1/2"C		
50SG	2#8, 1#10G - 1"C	50G	3#8, 1#10G - 1"C		
60SG	2#6, 1#10G - 1"C	60G	3#6, 1#10G - 1"C		
80SG	2#4, 1#8G - 1"C	80G	3#4, 1#8G - 1"C		
100SG	2#2, 1#8G - 1-1/4"C	100G	3#2, 1#8G - 1-1/4"C	3#1, 1#6G - 1-1/4"C	
		125G	3#1, 1#6G - 1-1/4"C	3#2/0, 1#4G - 1-1/2"C	
		150G	3#1/0, 1#6G - 1-1/2"C	3#3/0, 1#4G - 2"C	
		175G	3#2/0, 1#6G - 1-1/2"C	3#4/0, 1#4G - 2"C	
		200G	3#3/0, 1#6G - 2"C	3#250kcmil, 1#4G -2-1/2"	
		225G	3#4/0, 1#4G - 2"C	3#300kcmil, 1#2G - 2-1/2"C	
		250G	3#250kcmil, 1#4G - 2-1/2"C	3#350kcmil, 1#2G - 2-1/2"C	
		300G	3#350kcmil, 1#4G - 2-1/2"C	3#500kcmil, 1#2G - 3"C	
		400G	3#500kcmil, 1#2G - 3"C	2(3#250kcmil, 1#1G - 2-1/2"C)	
		F400G	3#600kcmil, 1#2G - 3-1/2"C	2(3#250kcmil, 1#1G - 2-1/2"C)	
		500G	2(3#250kcmil, 1#2G - 2-1/2"C)	2(3#350kcmil, 1#1/0G - 2-1/2"C)	
		600G	2(3#350kcmil, 1#1G - 2-1/2"C)	2(3#500kcmil, 1#2/0G - 3"C)	
		800G	2(3#500kcmil, 1#1/0G - 3"C)	3(3#400kcmil, 1#3/0G - 3"C)	
		F800G	2(3#600kcmil, 1#1/0G - 3-1/2"C)	3(3#400kcmil, 1#3/0G - 3"C)	
		1000G	3(3#400kcmil, 1#2/0G - 3"C)	3(3#600kcmil, 1#4/0G - 3"C)	
		1200G	4(3#350kcmil, 1#3/0G - 2-1/2"C)	4(3#500kcmil, 1#250kcmilG - 3"C)	
		1600G	4(3#600kcmil, 1#4/0G - 3-1/2"C)	6(3#400kcmil, 1#350kcmilG - 3"C)	
		2000G	5(3#600kcmil, 1#250kcmilG - 3-1/2"C)	6(3#600kcmil, 1#400kcmilG - 3-1/2"C)	

ONE LINE DIAGRAM NOTES:

A. COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY (D.T.E.) PRIOR TO INSTALLATION.

B. COORDINATE UTILITY UTILITY SERVICE CONNECTION POINT WITH D.T.E. PRIOR TO ROUGH-IN/INSTALLATION.

C. COORDINATE METER BASE ARRANGEMENT WITH D.T.E. PRIOR TO ROUGH-IN/INSTALLATION.

D. GROUND PER D.T.E.. GROUNDING REQUIREMENTS.

E. SEE PANEL SCHEDULES ON THIS SHEET.

F. SEE MAIN SERVICE GROUNDING DETAILS ON SHEET E-5.

G. RESERVED

H. RESERVED

I. PROVIDE LABEL TO PANEL INDICATING "MAXIMUM AVAILABLE FAULT CURRENT OF _____ CALCULATION PERFORMED ON 2-16-2023" PER NEC 2017 ARTICLE 110.24

J. SEE GENERATOR PAD DETAIL ON SHEET E-2.

K. SEE GENERATOR GROUNDING DETAIL ON SHEET E-2.

L. RESERVED

M. TRANSFER SWITCH U.L. WITHSTAND AND CLOSING RATING SERIES RATED WITH UPSTREAM CURRENT LIMITING FUSE PROTECTION ON NORMAL POWER FEED.

N. RESERVED

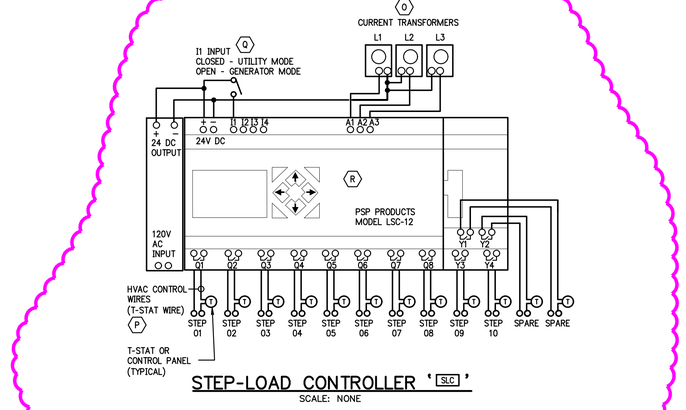
O. PROVIDE C.T.'s AND INSTALL IN THE MDP. INTEGRATE THE C.T.'s TO THE STEP-LOAD CONTROLLER.

P. PROVIDE CONTROL WIRING TO THE HVAC EQUIPMENT AS INDICATED BELOW. THIS EQUIPMENT WILL BE STEP-LOADED ONTO THE GENERATOR AFTER THE GENERATOR IS RUNNING. PROVIDE STEP-LOAD RELAYS AS REQUIRED TO INTERFACE THE EQUIPMENT:

STEP 01: SPARE	STEP 07: AC-1
STEP 02: CU-1/FURN-1	STEP 08: AC-2
STEP 03: CU-2/FURN-2	STEP 09: SPARE
STEP 04: CU-3/FURN-3	STEP 10: SPARE
STEP 05: CU-4/FURN-4	STEP 11: SPARE
STEP 06: CU-5/FURN-5	STEP 12: SPARE

Q. INTEGRATE THE STEP LOAD CONTROLLER WITH THE TRANSFER SWITCH FOR INDICATION OF POWER FROM THE ALTERNATE SOURCE.

R. PROGRAM AND COMMISSION THE STEP LOAD CONTROLLER FOR FULL FUNCTION AND OPERATION.



STEP-LOAD CONTROLLER 'SLC'

SCALE: NONE

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PANEL RISER & PANEL SCHEDULES

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E-4

Plotted by: Jeff Stringham Plot Date: 6/23/2023 11:14 AM Save Date: 6/22/2023 12:45 PM File Name: JD23039-E-4 EOL.DWG