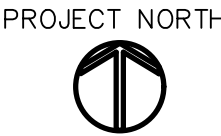
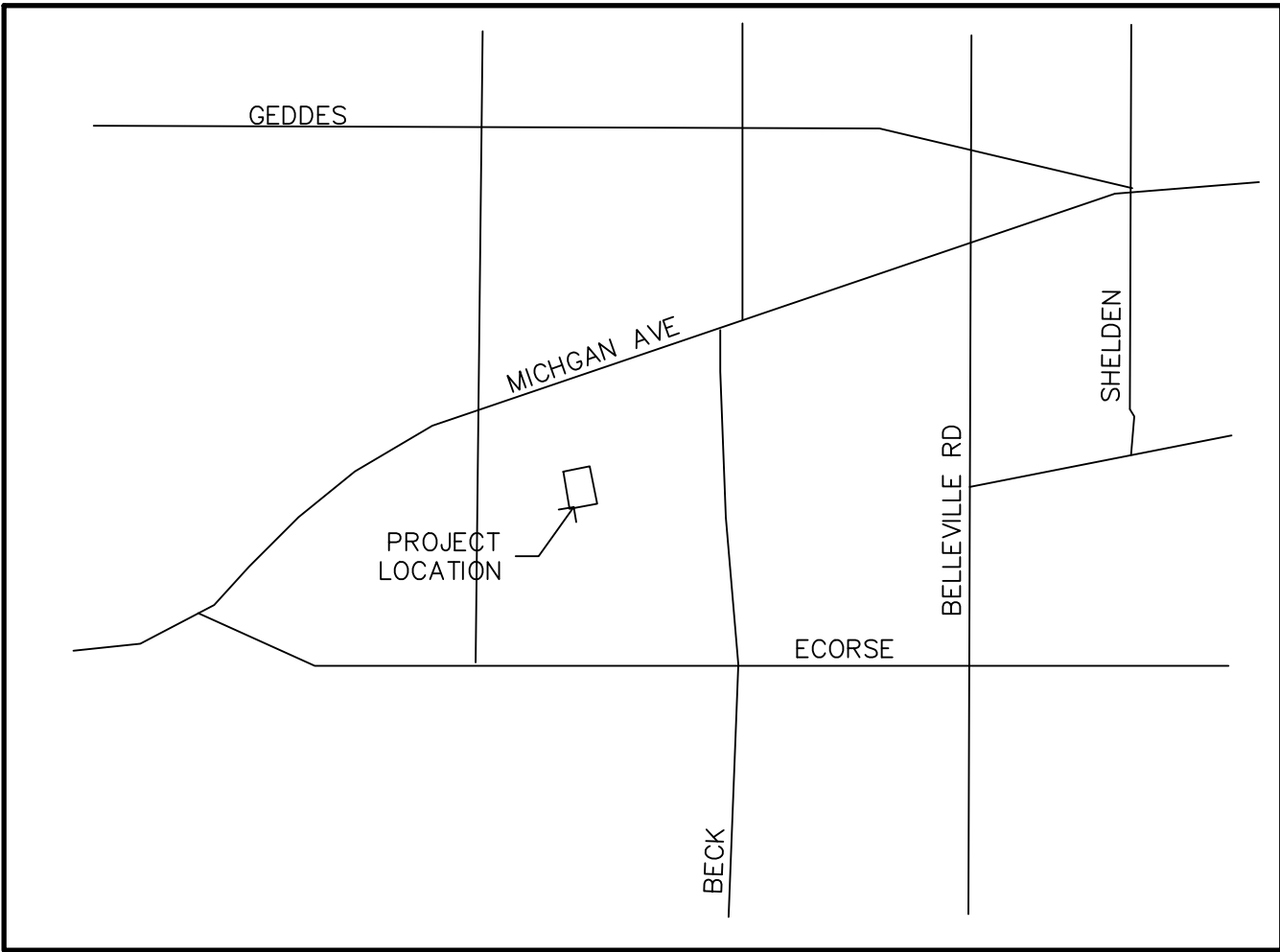


OFFICE RENOVATIONS TO
CONTRACTORS STEEL CO
48649 SCHOONER DR., VAN BUREN TWP., MI 48111

OFFICE RENOVATIONS TO
CONTRACTORS STEEL
48649 SCHOONER DR., VAN BUREN TWP., MI 48111

LOCATION MAP



DIRECTORY

ARCHITECT
HOPPE DESIGN
47032 McBRIDE
BELLEVILLE, MI 48111
734-218-2492

APPLICANT AND OWNER
CONTRACTORS STEEL CO
48649 SCHOONER DR
VAN BUREN TWP., MI

DRAWING INDEX

- CIVIL
DT TITLE SHEET
- STRUCTURAL
S001 STRUCTURAL NOTES
S002 SPECIAL INSPECTIONS
- ARCHITECTURAL
A001 SPECIFICATIONS
A002 CODE REVIEW
A101 PLANS
A201 SECTIONS, PLANS AND INTERIOR ELEVATIONS
A501 SCHEDULES
- MECHANICAL AND PLUMBING
M101 MECHANICAL PLANS
- PLUMBING
P101 PLUMBING PLANS
- ELECTRICAL
E101 LIGHTING AND POWER PLANS

LOADS AND REFERENCES		
DESIGN LOADS		
TABLE 1604.5	OCCUPANCY CATEGORY	II
	CEILING DEAD LOAD (PSF)	25.00
	CEILING LIVE LOAD (PSF)	125.00
	TOTAL UNFACTORED DESIGN CEILING LOAD (PSF)	
	25 + 125 =	150
SOILS		
	SELF SUPPORTING FOUNDATION (MINIMUM ALLOWABLE BEARING PRESSURE IN PSF)	3000
SEISMIC		
TABLE 1604.5	RISK CATEGORY	II
	SEISMIC IMPORTANCE FACTOR	1.00
FIGURE 1613.3.1(1)	I_s	
	S_{DS}	.1g
FIGURE 1613.3.1(2)	S_{D1}	.04g
SECTION 1613.3.2	SITE CLASS	D
SECTION 1613.3.4	SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION	0.1
SECTION 1613.3.4	ONE SECOND DESIGN SPECTRAL RESPONSE ACCELERATION	0.08
SECTION 1613.3.3, TABLE 1613.3.3(2)	F_A	1.6
SECTION 1613.3.3, TABLE 1613.3.3(2)	F_v	2.4
	S_{M1}	0.16
	F_s	0.12
SECTION 1613.3.1	SDC SEISMIC DESIGN CATEGORY	A
REFERENCES		
STRUCTURAL LOADS	ASCE-7	2010
CONCRETE	ACI 301	
	ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE	2010
	ACI SP 66	
	PORTLAND CEMENT ASSOCIATION "DESIGN AND CONTROL OF CONCRETE MIXTURE"	2011
MASONRY	ACI 530/ASCE 5	2013
	ACI 530.1/ASCE 8	
	NOMA TEK 3-4B "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION"	2005
BRICK	BIA "TECHNICAL NOTES ON BRICK CONSTRUCTION"	
STEEL	AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"	13TH EDITION
WELDING	AMERICAN WELDING SOCIETY AWS D1.1/D1.1M	2015
STEEL JOISTS	STEEL JOISTS INSTITUTE "STANDARD SPECIFICATION"	2015
METAL DECK	STEEL DECK INSTITUTE	1987
WOOD	"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"	2015
	ANSI/AP&P ANDS	
SOILS REPORT	TO BE PROVIDED BY DEVELOPER	

DESCRIPTION	MANUFACTURER	MODEL	STYLE	FINISH	COLOR	STANDARD/RESPONSIBILITY	COMMENTS	QUANTITY
DIVISION 3								
CONCRETE @ FOUNDATIONS, BASEMENT WALLS, EXTERIOR WALLS, PIER & COLUMNS, STRUCTURAL FRAMING	1800 PSF W/ 28 DAYS, 45 WATER/CEMENT RATIO, 1" MAX COARSE AGGREGATE #84 1.5% CY CEMENT CONTENT, 5.7% AIR ENTRAINMENT BY VOL, 3" SLUMP				NA	ASTM C94 ACI 318.30	AGGREGATE MAX NOT TO EXCEED 1/4 OF SLAB THICKNESS, NP CALCIUM CHLORIDE ADDITIVES	X
CONCRETE @ DRIVEWAYS, GARAGE FLOORS, PORCHES, PATIOS, STEPS, SLABS, CURBS, SIDEWALKS, CURBS	1800 PSF W/ 28 DAYS, 45 WATER/CEMENT RATIO, 1" MAX COARSE AGGREGATE #84 1.5% CY CEMENT CONTENT, 5.7% AIR ENTRAINMENT BY VOL, 3" SLUMP				NA	ASTM C94 ACI 318.30	AGGREGATE MAX NOT TO EXCEED 1/4 OF SLAB THICKNESS, FLOOR LEVEL TO BE 1/8" IN 10' MAX, NO CALCIUM CHLORIDE ADDITIVES, SAWCUT CONTROL JOINTS WITHIN 24 HOURS OF INSTALLATION OF CONCRETE	X
STEEL REINFORCING WELDED WIRE MESH	FLAT SHEETS, 48" WIDE, 1' WIDE		GRADE 60		NA	ASTM A10615, CRSI		X
EXTERIOR COMPOUND SONNENBLON			FLUORINE DYE		NA		TWO COATS ON SLABS, VERIFY COMPATIBILITY WITH FLOORING	
CONCRETE SINKER WATER BORNE	LAM CONSTRUCTION CHEMICALS		L & M GURE 1000		NA	ASTM C 309 TYPE 1 AND 2		
DIVISION 4								
CONCRETE MASONRY UNITS	NORMAL WEIGHT	GRADE N	8in 2000 PSI	8x16		ASTM C 90 C 146, NIMA ACI 530.1	EXPOSED CONCAVE TOOLED, CONTR. NATURAL, GROUT MORTAR, GROUT SOLID CMU CORES, SCHEDULED TO RECEIVE REBAR AND ALL CORES BELOW GRADE	X
MORTAR TYPE M-BELOW GRADE	PORTLAND CEMENT				NA	ASTM C 270, 2500 PS	NO WELL OR LAKE WATER IN MORTAR	X
MORTAR TYPE S	PORTLAND CEMENT		8in 2000 PSI		BY OWNER	ASTM C 270	NO WELL OR LAKE WATER IN MORTAR	X
MORTAR TYPE N-BRICK	PORTLAND CEMENT				BY OWNER	ASTM C 270	NO WELL OR LAKE WATER IN MORTAR	X
HORIZONTAL REINFORCING	OUR O-WALL	LADDER TYPE			NA	ASTM C 476, 3000 PS	NO WELL OR LAKE WATER IN MORTAR	X
REBAR	HECHAM OR HOLMAN AND BARNARD	TYPE 17K OR RB			NA	ASTM A62	1" GAUGE WIRE, PLACE AT 18" OC VERTICALLY UNO	X
POST TENSIONERS								
VAPOR BARRIER					NA	NA	POLYETHYLENE 5 MIL SLAB, 4 MIL WALLS, 2" O" OVERLAP BENEATH SLABS	
DIVISION 5								
STRUCTURAL STEEL			Fy= 50 KSI		NA	ASTM A 36, A992	HOLES TO BE DRILLED NOT BURNED	X
CHANNELS, ANGLES, PLATES			Fy= 36 KSI		NA	ASTM A36		
BOLTS					NA	ASTM A325 N HIGH STRENGTH F 1554	3/4" UNO, PROVIDE WASHERS BENEATH TURNED ELEMENTS	X
STRUCTURAL NUTS					NA	ASTM A563		
BOLT WASHERS					NA	ASTM F 436, A-36	HARDENED, HOT DIPPED GALVANIZED	
STEEL LINTELS			S 60		BY OWNER		ALL EXTERIOR LINTELS TO BE GALVANIZED AND PAINTED, INTERIOR LINTELS TO BE PAINTED, PRE-EMBED	X
STRUCTURAL LEVELING GROUT	LAM CONSTRUCTION CHEMICALS	CRYWEX 5000 PSI			NA	ASTM C1167		X
STEEL STUDS, 12, 14, 16 GA	CLARK DETRICH	Fy= 60 KSI			NA	ASTM C555	18" OC UNO	
STEEL STUDS, 18, 20 GA	CLARK DETRICH	Fy= 50 KSI			NA	ASTM C555	18" OC UNO	
STEEL TRACKS AND RUNNERS, 14, 16, 18, 20 GA	CLARK DETRICH	Fy= 50 KSI			NA	ASTM C555	18" OC UNO	
STEEL HAT CHANNEL, 25 GA	CLARK DETRICH	1 1/4" FLANGE 3/4" DEPTH			NA	A 653		
FURRING CHANNELS, 25 GA	CLARK DETRICH	1 1/4" FLANGE 3/4" DEPTH			NA	A 653		
PRIMER	TRUSCON	ST BRNDR			RED		NON ASPHALTIC, RUST INHIBITING	X
DIVISION 6								
TREATED LUMBER, BELOW GRADE					NA	AWPA UC 6A	80% RETENTION, ANONA FREE	
TREATED LUMBER, ABOVE GRADE					NA	AWPA UC 3B	80% RETENTION, ANONA FREE	
TREATED LUMBER, ABOVE GRADE	SAMPSON	G 188			NA		HOT DIPPED GALVANIZED OR STAINLESS STEEL	X
TREATED LUMBER IN CONTACT WITH SOILS FOR WOOD CONSTRUCTION						AWPA C2	80% RETENTION, ANONA FREE	
PLYWOOD SUB FLOORING	STURDIBOARD	T AND G			NA	APAT DOC P61		
WOOD PRESERVATIVE					NA		ACQ FOR DOUGLASS FIR OR CCKAY FOR SOUTHERN PINE	
TILE BACKER	GEORGIA PACIFIC	DINKSHIELD TILE BACKER 5/8"		NA	NA			X

GENERAL
IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION TO ACCOUNT FOR ALL FORCES, INCLUDING BUT NOT LIMITED TO FORCES FROM GRAVITY, EARTH, WIND AND UNBALANCED FORCES DUE TO CONSTRUCTION SEQUENCES.

THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND VERIFICATION OF STRUCTURAL MEMBERS ARE NOT SELF BRACING AND SHALL BE SHORED AND/OR BRACED BY THE CONTRACTOR AS NECESSARY UNTIL STABILIZED BY VIRTUE OF COMPLETED CONNECTIONS.

FIELD MEASURE AND VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE FABRICATION.

FOUNDATIONS
ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL, HAVING A MINIMUM SAFE BEARING CAPACITY. THE TESTING AND INSPECTION AGENCY SHALL VERIFY SOIL BEARING CAPACITY AT EACH FOOTING PRIOR TO INSTALLATION OF FOOTING. NOTIFY ENGINEER OF ANY VARIATION FROM ANTICIPATED BEARING CAPACITY FOR APPROPRIATE RE-DESIGN OR LOWERING OF FOOTING.

THE BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE 3'-6" MINIMUM BELOW FINISHED GRADE. IF THE BUILDING WILL BE UNDER CONSTRUCTION DURING FREEZING WEATHER, ALL INTERIOR FOUNDATIONS SHALL BE DEPRESSED 3'-6" BELOW CONSTRUCTION GRADE FOR FROST PROTECTION. IF SUCH ADDITIONAL FOOTING DEPTH WILL CAUSE UNDERMINING OF ADJACENT EXISTING FOOTINGS OR STRUCTURES, PROVIDE APPROPRIATE SHORING, BRACING OR UNDERPINNING AS REQUIRED OR LEAVE FOOTING ELEVATION AS DESIGNED AND PROVIDE CONTINUED PROTECTION AND HEAT TO PREVENT FORMATION OF FROST BELOW FOOTING AND ADJACENT TO FOOTING.

THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS AND ADJACENT STRUCTURES, PAVEMENTS, AND UTILITIES. ALL EXCAVATIONS SHALL BE KEPT FREE OF WATER. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL SHORING, BRACING, AND Dewatering THAT IS REQUIRED TO PROPERLY CONSTRUCT THE FOUNDATIONS AND PROTECT ADJACENT STRUCTURES, PAVEMENTS AND UTILITIES.

PRETREAT EXCAVATIONS WITH TERMITICIDE AND INSPECT EXCAVATIONS PRIOR TO POURING CONCRETE.

TEMPORARY BRACING MUST BE PROVIDED TO RESIST ALL LATERAL FORCES UNTIL STRUCTURAL SYSTEM IS SELF SUPPORTING.

CONCRETE SLABS
PLUMBING AND ELECTRICAL CONTRACTORS ARE TO PROVIDE ALL REQUIRED UNDERSLAB WORK PRIOR TO POURING THE FLOOR SLAB.

INSPECT ALL REINFORCING BEFORE POURING CONCRETE.

SLOPE SLABS TO FLOOR DRAINS. VERIFY DEPRESSIONS AND FLOOR FINISHES.

PROVIDE 3" CONCRETE COVER MINIMUM FROM TOP OF SLAB TO SLAB REINFORCING AND LAP ALL STEEL FABRIC SPLICES 6" MIN. REINFORCING SHALL BE CENTERED IN SLAB.

GENERAL BASE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY UNDER ALL SLABS ON GRADE.

REINFORCING
MINIMUM CONCRETE COVERING SHALL BE:
3" FOOTING BOTTOM
2" COLUMNS, BEAMS AND FORMED SURFACES IN DIRECT CONTACT WITH SOIL OR EXPOSED TO THE WEATHER, EXCEPT SLABS.
2" DECK SLAB TO TOP
1" DECK SLAB TO BOTTOM
1" INTERIOR FACES OF WALLS AND SLABS NOT EXPOSED TO WEATHER
3" INTERIOR SLABS

MASONRY
MASONRY WALLS ARE TO BE ADEQUATELY BRACED DURING CONSTRUCTION. SEE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION" BY THE COUNCIL FOR MASONRY WALL BRACING AND ALSO NOMA TEK 304B "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION" FOR RECOMMENDATIONS REGARDING BRACING.

PLACE LADDER TYPE HORIZONTAL JOINT REINFORCING WITH PREFORMED LAPPED CORNER REINFORCING.

ARC SPOT WELDS (PUDDLE WELDS) TO SUPPORTS SHALL HAVE A DIAMETER OF 3/8" MINIMUM OR AN ELONGATED WELD OF 3/4" MINIMUM WIDTH AND 3/4" MINIMUM LENGTH; WELD METAL SHALL PENETRATE ALL LAYERS OF DECK MATERIAL AT END LAPS AND HAVE ADEQUATE FUSION TO THE SUPPORTING MEMBERS. WELDING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARD "S" SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES" AWS D1.3.

UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE END OF THE UNITS AND AT INTERMEDIATE SUPPORTS AND TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY 3/8" DIAMETER PUDDLE WELDS AT 12" OC. SHEAR STUDS WELDED THROUGH DECK MAY BE USED IN PLACE OF 3/8" DIAMETER PUDDLE WELDS.

THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY BUTTON PUNCHING AT 24" OC UNO.

STRUCTURAL STEEL
UNLESS OTHERWISE NOTED, ALL BEAMS AND LINTELS BEARING ON MASONRY SHALL HAVE A MINIMUM BEARING LENGTH OF 7 1/2" AND SHALL HAVE A MINIMUM OF TWO BLOCK COURSES AT 32" LONG OF SOLID MASONRY UNDER THE BEARING SURFACE.

WHERE STEEL CONNECTIONS ARE NOT FULLY DETAILED ON THE DESIGN DRAWINGS (WITH ALL REQUIREMENTS FOR BOLTS, PLATES, WELDS, DIMENSIONS, ETC SHOWN) CONNECTIONS SHALL BE DESIGNED BY THE STEEL CONTRACTOR UNDER THE SUPERVISION OF A P.E. LICENSED IN THE STATE THAT HAS JURISDICTION OVER THE PROJECT.

WHERE TYPICAL OR INCOMPLETE CONNECTIONS ARE SHOWN ON THE DESIGN DRAWINGS, THOSE DETAILS SHALL BE USED AS A BASIS FOR CONNECTION DESIGN TO BE COMPLETED BY THE CONTRACTOR. ALTERNATE CONNECTIONS DESIGNED BY THE STEEL CONTRACTOR WILL BE PROVIDED IF REQUIRED DESIGN FORCES CANNOT BE ACHIEVED BY THE TYPICAL OR EXAMPLE CONNECTION, OR IF AUTHORIZATION TO ALTER THE DETAIL IS PROVIDED BY THE DESIGN ENGINEER.

WHERE CONNECTION FORCES ARE INDICATED ON THE DRAWINGS, PROVIDE CONNECTIONS DESIGNED TO RESIST THE FORCE SHOWN.

WHERE CONNECTION FORCES ARE NOT INDICATED ON THE DRAWINGS, PROVIDE CONNECTIONS DESIGNED TO RESIST FORCES AS FOLLOWS: FOR SHEAR CONNECTIONS IN NON-COMPOSITE MEMBERS, DESIGN CONNECTIONS TO RESIST 50% OF THE TOTAL ALLOWABLE UNIFORM LOAD SHOWN IN THE TABLES IN PART 3 OF THE AISC MANUAL OF STEEL CONSTRUCTION. FOR SHEAR CONNECTIONS IN COMPOSITE MEMBERS, DESIGN CONNECTIONS TO RESIST 75% OF THE TOTAL ALLOWABLE UNIFORM LOAD SHOWN IN THE TABLES IN PART 3 OF THE AISC MANUAL OF STEEL CONSTRUCTION. FOR MOMENT CONNECTIONS, DESIGN CONNECTIONS TO RESIST 100% OF MOMENT CAPACITY OF THE MEMBER.

ALL FULLY TENSIONED A490 BOLTS SHALL HAVE WASHERS BENEATH BOTH NUT AND HEAD. PROVIDE TEMPLATES TO LOCATE ANCHOR BOLTS AND BASE PLATES.

SHOP AND FIELD CONNECTIONS SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTING. BOLTED CONNECTIONS SHALL CONFORM TO ASTM A325-X USING LOAD INDICATOR WASHERS (LIW) OR LOAD INDICATOR BOLTS (LIB). BEAM CONNECTIONS SHALL PROVIDE SHEAR CAPACITY TO SUPPORT A REACTION R EQUAL TO HALF THE SHEAR CAPACITY OF BEAM. USE 1/2" DIA BOLTS, E70XX 1/2" WELD AND 3/8" ANGLE THICKNESS.

ALL WELDING SHALL BE PERFORMED USING THE ELECTRIC ARC METHOD IN ACCORDANCE WITH THE LATEST REVISION OF THE AWS D1.1. E70XX ELECTRODES CONFORMING TO AWS A5.1 OR A5.5 SHALL BE USED FOR SHIELDED METAL ARC METHOD AND Fx7-EXXX ELECTRODE CONFORMING TO AWS F5.17 FOR SUBMERGED ARC METHOD.

ALL WELDS SHALL BE PROVIDED AS SHOWN IN THE STRUCTURAL DETAILS UNLESS THICKER WELD IS REQUIRED DUE TO MATERIAL THICKNESSES. WHERE WELD IN NOT DETAILED, WELD SHALL BE DESIGNED BY A LICENSED ENGINEER RETAINED BY THE CONTRACTOR TO MEET CONNECTION CAPACITY REQUIREMENTS LISTED ABOVE. WELD SIZES SHALL BE INCREASED AS NEEDED TO MEET THE FOLLOWING MINIMUM WELD SIZE REQUIREMENTS BASED ON THE SMALLER MATERIAL THICKNESS OF THE PIECES OF STEEL BEING WELDED TOGETHER:

MATERIAL THICKNESS	MIN FILLET WELD SIZE (PROVIDE LARGER WELD IF REQUIRED FOR STRESS)
1/4" AND UNDER	3/8"
OVER 1/4" TO 3/8"	7/16"
OVER 3/8" TO 1/2"	1/2"
OVER 1/2" TO 3/4"	5/8"
OVER 3/4"	3/4"

IF PENETRATIONS THROUGH WEBS OF STEEL BEAMS WILL BE REQUIRED, CONTRACTOR TO NOTIFY ENGINEER OF RECORD.

SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS AND NON-STRUCTURAL STEEL.

STEEL JOISTS
PROVIDE AND INSTALL BRIDGING IN ACCORDANCE WITH STEEL JOISTS INSTITUTE STANDARDS. ALL ENDS OF BRIDGING LINES TERMINATING AT MASONRY WALLS SHALL BE ANCHORED THERETO IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE BRIDGING DOES NOT TERMINATE AT A MASONRY WALL, THE FIRST AND SECOND BAYS FROM THE END OF THE BRIDGING IS TO BE DIAGONAL X-BRIDGING. MANUFACTURER TO PROVIDE ADDITIONAL BRIDGING AS REQUIRED TO SATISFY SA UPLIFT REQUIREMENTS.

WHERE STEEL JOISTS SUPPORT MOVEABLE PARTITIONS, JOIST MANUFACTURER SHALL DESIGN JOIST FOR A MAXIMUM LIVE/SNOW LOAD DEFLECTION OF THE SMALLER OF 1/2" AND L/360.

JOIST MANUFACTURER SHALL LIMIT JOIST DEFLECTION DUE TO LIVE/SNOW LOAD TO L/360.

THE ENDS OF STEEL JOIST SHALL BEAR A MINIMUM DISTANCE OF 2 1/2 INCHES OVER STEEL SUPPORTS AND 4 INCHES OVER ALL OTHER SUPPORTS. THE ENDS SHALL BE FASTENED BY BOLTING AND OR WELDING.

ERECTION OF JOISTS AND JOIST BRIDGING SHALL CONFORM TO ALL REQUIREMENTS OF OSHA AND JOIST MANUFACTURER.

WOOD FRAMING
ALL LUMBER IN CONTACT WITH MASONRY OR STEEL TO BE PRESERVATIVE TREATED.

ALL FLUSH FRAMED CONNECTIONS ARE TO MADE USING JOIST HANGERS DESIGNED FOR THE SPECIFIC CONDITION UNLESS OTHER CONNECTIONS ARE PROVIDED.

SHOP DRAWINGS SHALL BE PROVIDED FOR ALL ENGINEERED WOOD MATERIAL INDICATING PRODUCTS, DETAILS, CONNECTIONS AND ACCESSORIES AS REQUIRED BY THE MANUFACTURE TO MEET PROJECT LOADING REQUIREMENTS.

OBSERVE ALL CODE REQUIREMENTS FOR BRIDGING, BORING, AND NOTCHING OF STUDS AND JOISTS. FOR BRIDGING, BORING AND NOTCHING OF ENGINEERED WOOD PRODUCTS OBSERVE ALL MANUFACTURER REQUIREMENTS.

BRIDGING SHALL BE PROVIDED FOR ALL ROOF RAFTERS.

ALL ROOF RAFTERS ARE TO BE 24" ON CENTER UNLESS OTHERWISE NOTED.

ROOF DESIGN NOTES:
A. VERTICAL WEB MEMBERS FOR ALL GABLE END TRUSSES SHALL BE DESIGNED TO RESIST A HORIZONTAL WIND LOAD RESULTING FROM THE DESIGNED WIND SPEED WITHOUT EXCEEDING THE DEFLECTION LIMIT OF L/600 OF THEIR RESPECTIVE VERTICAL SPANS.
B. BRIDGING FOR BOTTOM CHORDS SHALL BE DESIGNED TO DISTRIBUTE THE HORIZONTAL WIND LOAD PROPOSED ON THE COMPLETE BUILDING TO THE SHEAR WALLS AND SHALL BE DESIGNED FOR A TOTAL IMPOSED WIND LOAD ON BUILDING INCLUDING WINDWARD AND LEeward PRESSURE FROM THE DESIGNED WIND SPEEDS.

METAL STUD SIZING

ALLOWABLE HEIGHTS	
STUD SIZE	16" OC/ 33 KSI **
3 1/2" OR 4" X 20 GA	13'-11"
3 1/2" OR 4" X 18 GA	18'-2"
3 1/2" OR 4" X 16 GA	19'-6"

5 1/2" OR 6" X 20 GA	23'-11"
5 1/2" OR 6" X 18 GA	27'-2"
5 1/2" OR 6" X 16 GA	30'-0"

** HEIGHTS BASED ON 16" OC STUD SPACING, 5 PSF LATERAL LOAD, L/240 DEFLECTION, NON-STRUCTURAL APPLICATION. BRIDGING AT MIDPOINTS OR 8'-0" MAX

STUD SIZE	16" OC/33 KSI***	12" OC/33 KSI***
3 1/2" OR 4" X 20 GA	11'-0"	12'-3"
3 1/2" OR 4" X 18 GA	12'-0"	13'-3"
3 1/2" OR 4" X 16 GA	13'-0"	14'-3"

5 1/2" OR 6" X 20 GA	16'-4"	18'-0"
5 1/2" OR 6" X 18 GA	18'-0"	19'-8"
5 1/2" OR 6" X 16 GA	19'-3"	21'-3"
5 1/2" OR 6" X 12 GA	22'-9"	28'-0"

8" X 20 GA	20'-6"	22'-8"
8" X 18 GA	22'-6"	24'-9"
8" X 16 GA	24'-3"	26'-8"
8" X 12 GA	28'-9"	31'-8"

STUD SIZE	16" OC/50 KSI***	12" OC/50 KSI***
3 1/2" OR 4" X 20 GA	12'-0"	13'-6"
3 1/2" OR 4" X 18 GA	13'-3"	14'-8"
3 1/2" OR 4" X 16 GA	14'-3"	15'-8"

5 1/2" OR 6" X 20 GA	18'-0"	20'-0"
5 1/2" OR 6" X 18 GA	19'-8"	21'-8"
5 1/2" OR 6" X 16 GA	21'-3"	23'-4"
5 1/2" OR 6" X 12 GA	28'-0"	31'-0"

STATEMENT OF SPECIAL INSPECTIONS

STEEL CONSTRUCTION (TABLE 1704.3)	FREQUENCY		REFERENCE CRITERIA	
	CONT-INOUS	PERI-ODIC	REFERENCED STANDARD	IBC REFERENCE
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS:				
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 360, SECTION A3.3	—
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	—	X	—	—
2. INSPECTION OF HIGH-STRENGTH BOLTING				
A. SNUG TIGHT JOINTS	—	X		
B. SLIP-CRITICAL CONNECTIONS WITH MATCHMARKING, TWIST OFF BOLT OR DIRECT TENSION INDICATOR	X	X		
C. SLIP-CRITICAL CONNECTIONS WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS	X		AISC 360, SECTION M2.5	1704.3.3
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL				
A. IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	—	X	AISC 360, SECTION M5.5	
B. FOR OTHER STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X	APPLICABLE ASTM MATERIAL STANDARDS	
C. MANUFACTURER'S CERTIFIED MILL TEST REPORTS	—	X		
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS				
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS	—
MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	—	X	—	—
5. INSPECTION OF WELDING				
A. STRUCTURAL STEEL AND COLD FORMED STEEL DECK	—	—		
1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	X	—		
2) MULTIPASS FILLET WELDS	X	—		
3) SINGLE-PASS FILLET WELDS < 5/16"	X	—	AWS D1.1	1704.3.1
4) PLUG AND SLOT WELDS	X			
5) SINGLE-PASS FILLET WELDS < 5/16"	—	X		
5) FLOOR AND ROOF DECK WELDS	—	X	AWS D1.3	—
B. REINFORCING STEEL:				
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	—	X		
2) REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT	X	—	AWS D1.4 ACI 318: 3.5.2	—

3) SHEAR REINFORCEMENT	X	—
4) OTHER REINFORCING STEEL	—	X
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:	—	X
A. DETAILS SUCH AS BRACING AND STIFFENING	—	X
B. MEMBER LOCATIONS	—	X
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION	—	X

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION (TABLE 1704.4)	FREQUENCY		REFERENCE CRITERIA	
	CONT-INOUS	PERI-ODIC	REFERENCED STANDARD	IBC SECTION
1. INSPECTION OF REINFORCING STEEL AND PLACEMENT	—	X	ACI 318: 3.5, 7.1-7.7	1913.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B	—	—	AWS D1.4 ACI 318: 3.5.2	—
3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED	X	—	ACI 318: 8.13, 21.2.8	1911.5, 1912.1
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE		X	ACI 318:3.8.6, 8.1.3, 21.2.8	1912.1
5. VERIFYING USE OF REQUIRED DESIGN MIX	—	X	ACI 318: CH. 4, 5.2-5.4	1904.3, 1913.2, 1913.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIFIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913.1
7. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	—	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	—	X	ACI 318: 5.11-5.13	1913.9
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	—	X	ACI 318: 6.1.1	—

LEVEL 1 SPECIAL INSPECTION (TABLE 1704.5.1) INSPECTION TASK	FREQUENCY		REFERENCE CRITERIA		
	CONT-INOUS	PERI-ODIC	OBC SECTION	ACI 530/ ASCE 5/ TMS 402	ACI 530.1/ ASCE 6/ TMS 602
1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
A. PROPORTIONS OF SITE-PREPARED MORTAR	—	X	—	—	ART. 2.6a
B. CONSTRUCTION OF MORTAR JOINTS	—	X	—	—	ART. 3.3B
C. LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES	—	X	—	—	ART. 3.4, 3.6A
2. THE INSPECTION PROGRAM SHALL VERIFY:					
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	—	X	—	—	ART. 3.3F
B. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	—	X	—	SEC. 1.2.2(E), 1.16.1	—
C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT	—	X	—	SEC. 1.15	ART. 2.4, 3.4

D. WELDING OF REINFORCING BARS	X	—	—	SEC. 2.1.9.7.2, 3.3.3.4(B)	—
E. PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 DEG F) OR HOT WEATHER (TEMPERATURE ABOVE 90 DEG F)	—	X	SEC. 2104.3, 2104.4	—	ART. 1.8C, 1.8D
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
A. GROUT SPACE IS CLEAN	—	X	—	—	ART. 3.2D
B. PLACEMENT OF REINFORCEMENT AND CONNECTORS	—	X	—	SEC. 1.13	ART 3.4
C. PROPORTIONS OF SITE-PREPARED GROUT	—	X	—	—	ART. 2.6B
D. CONSTRUCTION OF MORTAR JOINTS	—	X	—	—	ART. 3.3B
4. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS	X	—	—	—	ART 3.5
5. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED	—	—	SEC. 2105.2.2, 2105.3	—	ART. 1.4
6. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED	—	X	—	—	ART. 1.5

REQUIRED VERIFICATION AND INSPECTION OF SOILS (TABLE 1704.7) VERIFICATION AND INSPECTION	FREQUENCY	
	CONT-INOUS	PERI-ODIC
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	—
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	—	X

VERIFY ALL DIMENSIONS IN FIELD
PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

SPECIAL INSPECTIONS

OFFICE RENOVATIONS TO
CONTRACTORS STEEL

48649 SCHOONER DR., VAN BUREN TWP., MI 48111

HOPPE DESIGN, LLC

47032 McBRIDE, BELLEVILLE, MI 48111
734-216-2492

REVISIONS

PROJECT: 2212
DATE: 8.30.22
DRAWN: WCH
CHECKED: WCH

S002

COPYRIGHT ALL RIGHTS RESERVED BY WAYDE C. HOPPE, ARCHITECT
NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION

UNIT	DESCRIPTION	MANUFACTURER	MODEL	STYLE	FINISH	COLOR	POWER	CONTACT	STANDARD/RESPONSIBILITY	COMMENTS	SUBMITTAL
DIVISION 1											
	FORM OF AGREEMENT	AAA A101								APPLIES TO ALL CONT. AND SUBS PROPRIETARY SPECIFICATIONS	
	GENERAL CONDITIONS	AAA A201									
	SUBSTITUTIONS										
ALL ITEMS LISTED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR FOR A COMPLETE SYSTEM UNLESS OTHERWISE NOTED. THE LISTED CONTACT IS A RECOMMENDED SUPPLIER ONLY.											
AN INCOMPLETE OR INCORRECT PROPRIETARY SPECIFICATION OR UNAVAILABILITY OF A PRODUCT DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO PROVIDE THE LISTED PRODUCT OR A COMPARABLY EQUAL PRODUCT AS APPROVED BY THE ARCHITECT. INACCURACIES IN THE PRODUCT SPREADSHEET SHALL BE REPORTED TO THE ARCHITECT DURING THE BIDDING PERIOD. ADDITIONAL COMPENSATION SHALL NOT BE ALLOWED FOR THE CONTRACTOR FOR INACCURACIES OR OMISSIONS REPORTED AFTER AWARD OF CONTRACT. ALLOWANCES FOR SELECTED PRODUCTS ARE LISTED IN THE WRITTEN SPECIFICATION.											
DIVISION 2											
	TOPSOIL			4" DEPTH	N/A	N/A	N/A			STOCKPILE/RE-USE EXISTING/ SUPPLEMENT WITH NEW 85% PURITY 80% GERMINATION, 1% WEED, 150 LBS PER ACRE, 4 LBS PER 1000SF	
	GRASS SEED	MICHIGAN STATE SEED SOLUTIONS	PRO SPORTS TURF MIXTURE	80% KENTUCKY BLUEGRASS 20% PERENNIAL	N/A	N/A	N/A	800-647-8873	D-1785		
	PVC CEMENT				N/A	N/A	N/A	800-348-7671	D-3034		
	PVC GRAVITY SEWER SOLVENT WELD BELL				N/A	N/A	N/A	800-348-7671	SOR-35		
DIVISION 3											
SS-1	SOLID SURFACE COUNTER	CORIAN					N/A		AWI 400	1 1/2" FULL BULL NOSE EDGE AT COUNTERTOPS	
PL-1	PLASTIC LAMINATE SHELVING- WOOD	NEVAMAR	3/4" HARDWOOD VENEER WITH 1 1/2" HARDWOOD EDGE	PAINTED		WHITE	N/A	800-638-4380		3/4" BIRCH VENEER PLYWOOD W/ 1 1/2" HARDWOOD EDGE- PAINTED	
CAB-1	METAL COAT ROD CABINETS- KITCHEN	MASTERPIECE	STAINLESS	BY OWNER	WOOD	PEENED	BY OWNER	N/A	734-789-7689	AWI 400/ ICMA	PROVIDE BRACKETS
	CABINET HARDWARE KITCHEN	MASTERPIECE	205 PULLS		FACTORY CHROME		N/A	734-789-7689			
DIVISION 7											
	EPDM	CARLSLE OR FIRESTONE	45 MIL REINFORCED			BLACK	N/A				
	FIBERGLASS INSULATION	OWENS CORNING		4"	N/A	N/A	N/A				
	FIBERGLASS INSULATION	OWENS CORNING		6"	N/A	N/A	N/A			PROVIDE STYROFOAM VENT BAFFLES	
	RIGID INSULATION PERIMETER	STYROFOAM FOAMULAR 400	RIGID	SEE DRAWINGS FOR DIMENSIONS	N/A	N/A	N/A				
	SEALANT- EXTERIOR						N/A		PFAS FREE	TWO COMPONENT POLYSULFIDE W/ BACKER ROD	
	SEALANT- INTERIOR			LATEX			N/A		PFAS FREE		
	SLIP SEALER				N/A	N/A	N/A				
DIVISION 8											
	DOOR INTERIOR OFFICE	USA FIRE DOOR	PC SOL OR STY SOLID CORE	CLEAR CHERRY	FACTORY STAIN	BY OWNER	N/A			ARCHITECTURAL STAIN GRADE CHERRY, PLAN SLICED, COLOR TO MATCH CABINETS	
	EXT WINDOW GLAZING	PPG	CLEAR SOLAR BAN 80				N/A		PFAS FREE		
	DOOR COMMERCIAL METAL	STEELCRAFT	INSULATED	18 GAUGE STEEL	PANT	BY OWNER	N/A			18 GAUGE STEEL FRAMES WITH WELDED CORNERS AND FRAME REINFORCEMENT. ALL JOINTS WELDED AND GROUND SMOOTH. THREE FRAME ANCHORS MIN. PER JAMB	
	DOOR HARDWARE FINISH					BY OWNER					
	OFFICE HARDWARE LOCKSET	SCHLAGE	AL 50 PD	JUPITER LEVER	LIFETIME	BY OWNER	N/A				
STORAGE	HARDWARE LOCKSET	SCHLAGE	AL 80 PD	JUPITER LEVER	LIFETIME	BY OWNER	N/A				
PASSAGE	HARDWARE LOCKSET	SCHLAGE	AL 10S	JUPITER LEVER	LIFETIME	BY OWNER					
PRIVATE	HARDWARE LOCKSET	SCHLAGE	AL 40S	JUPITER LEVER	LIFETIME	BY OWNER					
	HARDWARE EXIT	VON DUPRIN	9927 L X 992 L 06		US 20 D	US 20 D SATIN CHROME	N/A				
	HARDWARE CLOSER	LCN	4013 4113		ALUM	BY OWNER	N/A				
	HARDWARE HINGES	HAGER	BB127NRP 901A	4 1/2 X 4 1/2	US 20 D	BY OWNER	N/A				
	HARDWARE SWEEPS	NATIONAL GUARD				BY OWNER	N/A				
	HARDWARE	NATIONAL GUARD				BY OWNER	N/A				
	ASTRALGAL HARDWARE WEATHERSTRIPPING	NATIONAL GUARD	190V			BY OWNER	N/A				
	HARDWARE STRIKE	LOCKSET PROVIDER	EXTENDED	MATCH	MATCH	BY OWNER	N/A			EXTENDED STRIKE PLATE AT DEEP JAMB	
	ALUMINUM WINDOW	KAWNEER OR EQUAL	4 1/2"	TRIFAB	COLOR BY OWNER	BY OWNER	N/A			THERMALLY BROKEN	
DIVISION 9											
	GYP SUM BOARD	US GYPSUM			PRIME AND PAINT	BY OWNER	N/A			GLUE AND SCREW	
	GYP SUM GREENBOARD	US GYPSUM			PRIME AND PAINT	BY OWNER	N/A			GLUE AND SCREW	
ACT-2	LATEX CEILING TILE	USG	CLIMAPLUS CONN	24" X 48"	MILLENNIA WHITE	N/A					
T-1	LATEX CEILING GRID	USG	DX-DAL-24		WHITE	N/A					
	TILE	ARMSTRONG	CROSSVILLE	BY OWNER	BY OWNER	BY OWNER	N/A			LATEX ADHESIVE	
	T-1 GROUT	POLYBLEND			BY OWNER	BY OWNER	N/A			LATEX GROUT	
	T-2 TILE	ARMSTRONG	CROSSVILLE	BY OWNER	BY OWNER	BY OWNER	N/A			LATEX ADHESIVE	
	T-2 GROUT	POLYBLEND			BY OWNER	BY OWNER	N/A			LATEX GROUT	
V6-1	VINYL BASE	ROPPE	BY OWNER	BY OWNER	BY OWNER	BY OWNER	N/A				
P-1	PANT	SHERWIN WILLIAMS				BY OWNER	N/A		PFAS FREE	LATEX DRYWALL PRIMER, STAIN BLOCKING PRIMER ON STAINS, AND TWO COATS LOW LUSTER LATEX EGGSHELL	
	PAINT- BLOCK AND STUCCO	DEVCOE	BY OWNER	BY OWNER	BY OWNER	BY OWNER	N/A		PFAS FREE	ONE COAT FILLER AND SEALER, AND ONE COAT LATEX SATIN SHEEN.	
	PAINT	SHERWIN WILLIAMS				CEILING WHITE	N/A		PFAS FREE	THOROUGHLY CLEAN WITH WIRE BRUSH AND RINSE, THEN OIL BASED RUST INHIBITIVE METAL PRIMER. ALLOW TO DRY 24 HOURS. TWO COATS LOW LUSTER ACRYLIC	
	P-7 PAINT- ZINC COATED METAL	DEVCOE				BY OWNER	N/A		PFAS FREE	THOROUGHLY CLEAN AND REMOVE POWDERY OXIDE. GALVANIZED METAL PRIMER. TWO COATS LOW LUSTER ACRYLIC	
	PAINT- ALUMINUM					BY OWNER	N/A		PFAS FREE	THOROUGHLY CLEAN AND REMOVE POWDERY OXIDE. ALUMINUM PRIMER. TWO COATS SEMI-GLOSS ACRYLIC ENAMEL	
DIVISION 10											
	TOWEL PAPER DISP	BOBRICK	4262 282			CHROME	N/A			LOCATE IN ALL BATHROOMS	
	PAPER TOWEL DISPENSER/ DISPOSAL	BOBRICK	9-389			CHROME	N/A				
	SANITARY DISPOSAL	BOBRICK	270			CHROME	N/A				
	SOAP DISPENSER	BOBRICK	822			CHROME	N/A				
	MIRROR	BOBRICK	BEVELED EDGE			CHROME	N/A				
	GRAB BARS	BOBRICK	550 SERIES			CHROME	N/A				
	PHONE JACK					N/A	N/A				
	COMPUTER JACK					N/A	N/A				
	FIRE EXTINGUISHER	LARSON		2A:10BC			N/A				
DIVISION 11											
	DISHWASHER					BY OWNER					
	MICROWAVE	BY OWNER				BY OWNER	TSA			DEDICATED CIRCUIT	
	REFRIGERATOR	BY OWNER				BY OWNER				ICE MAKER, WATER DISPENSER, WATER SUPPLY	
	GARBAGE DISPOSAL	ISE	PRO 333	N/A	N/A	N/A	1 HP, 120/160				

DIVISION 15											
	FURNACE FILTER THERMOSTAT	HONEYWELL	F22F MEDIA ELECTRONIC/ DIGITAL	TSTAT CCP		N/A	WHITE				
	DUCTWORK/ DUCT INSULATION		GALV. STEEL 2"			N/A	N/A			SMACNA	
	DUCT INSULATION				75 LB DENSITY	N/A	N/A				FACTORY ATTACHED VINYL JACKET
	BACKFLOW PREVENTERS GAS PIPING	BEECO			1.5 LB DENSITY	N/A	N/A				SEMI RIGID FIRE RESISTANT COATING ON AIR SIDE
		REPUBLIC X-TRU COAT WITH POLYETHYLENE SHEATH BELOW GRADE	SCHED 40 BLACK STEEL			N/A	N/A			LOCAL CODE	SCREWED MALLEABLE IRON FITTINGS
	PUMPING ACCESS PANEL		12" X 12"	STEEL	PAINTED		BY OWNER	N/A			
	SANITARY PIPING			PVC SCHED 40 DWV		N/A	N/A			CURRENT CODE	INSULATED CAST IRON IN RETURN AIR PLENUM. WASTELINES SHALL NOT BE CELLULAR PVC
	POTABLE WATER AND CONDENSATE DRAIN PIPING					N/A	N/A				
	WATER VALVE	CRANE	440 GATE			N/A	N/A				
	PIPE INSULATION	MANVILLE	MICRO-LOK 650	DWV HARD COPPER		N/A	N/A				OR SCHED 40 PVC, JOBAH 88902
	DRAIN AND VENT PIPING					N/A	N/A				THREADED AIR GAP
	BALL VALVE					N/A	N/A				
	POTABLE WATER PIPING 1/2"		TYPE L COPPER			N/A	N/A				
	POTABLE WATER PIPING 1/2"		TYPE M COPPER			N/A	N/A				
	POTABLE WATER PIPING 2" TO 3/4"		TYPE K COPPER SOFT			N/A	N/A				UNDERSLAB PIPING
DIVISION 16											
	CONDUIT					N/A	N/A				
	EXPOSED WIRING	WIREMOLD	W500	3/4" EMT		N/A	N/A	588-530-8253			
	DUPLEX RECEPTACLE	HUBBELL	5302			WHITE	20A/120V 1P				STRAIGHT BLADE 2 POLE 3 WIRE NEMA CONFIGURATION 5-20R, 125V, 85°C GRADE
	FACE PLATES GFI	HUBBELL	GF5302-1			WHITE	N/A				2 POLE 3 WIRE GROUNDING TYPE, NEMA CONFIGURATION 5-20R
	WALL SWITCHES	HUBBELL				WHITE	20A/ 120/270V				TOGGLE OPERATED

OFFICE RENOVATIONS TO
CONTRACTORS STEEL

48649 SCHOONER DR., VAN BUREN TWP., MI 48111

HOPPE DESIGN, LLC

47032 MERIDE, BELLEVILLE, MI 48111

734-216-2492

REVISIONS

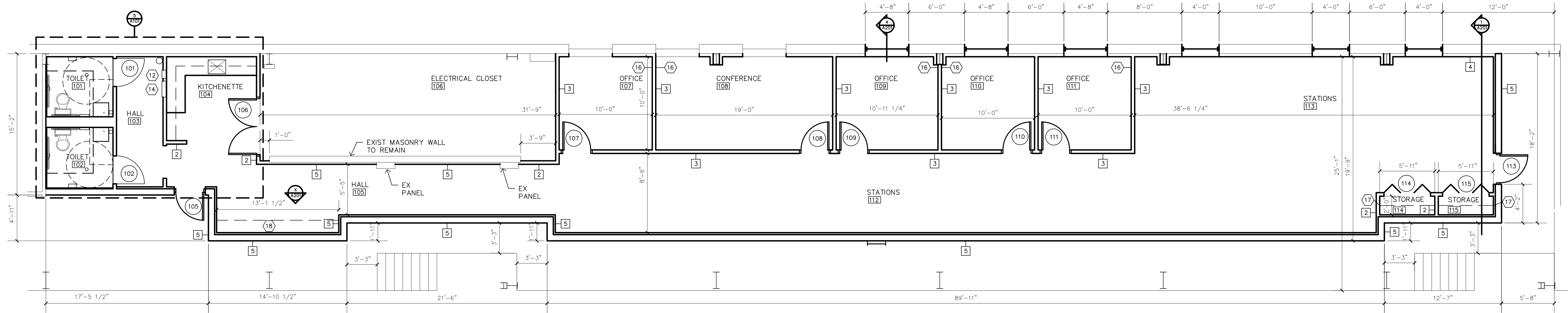
PROJECT: 2212
DATE: 8.30.22
DRAWN: WCH
CHECKED: WCH

PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

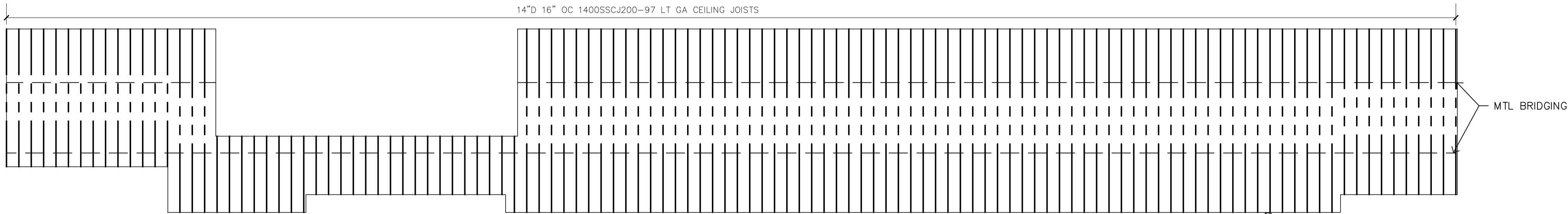
MATERIAL
SPECIFICATION

COPYRIGHT ALL RIGHTS RESERVED BY WAYDE C. HOPPE, ARCHITECT
NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION

A001



1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

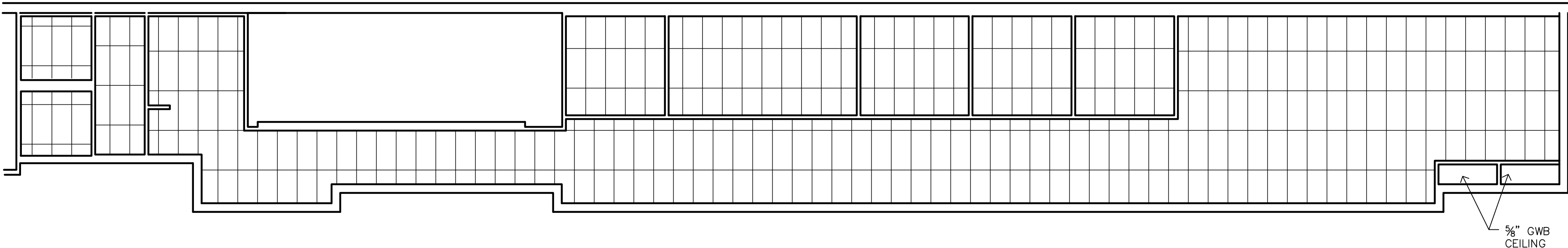


2 CEILING FRAMING PLAN
SCALE: 1/8" = 1'-0"

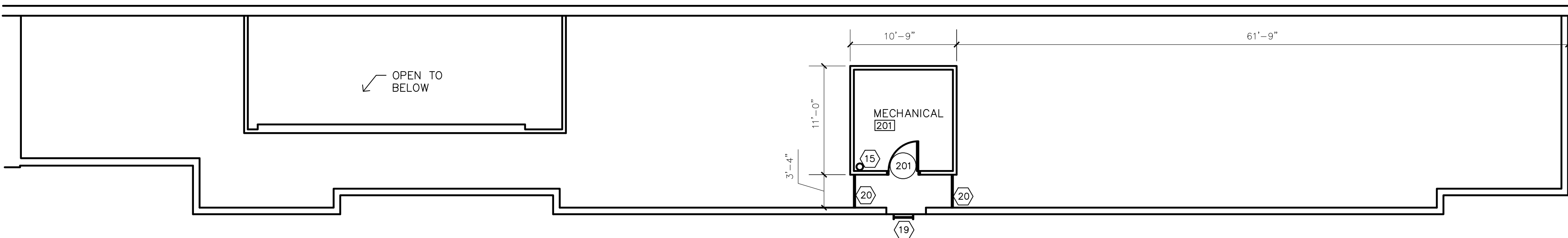


14 00SSCJ200-97 FLOOR JOISTS TO SUPPORT 25 PSF
DL + 125 PSF LL
DELTA LL = L/360
DELTA TL = L/240

PROVIDE 14 GA 50 KSI
CONTINUOUS RIM TRACK
WITH PRE-SPACED/PRE-ATTACHED
CLIPS @ 16" OC



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



4 MEZZANINE PLAN
SCALE: 1/8" = 1'-0"

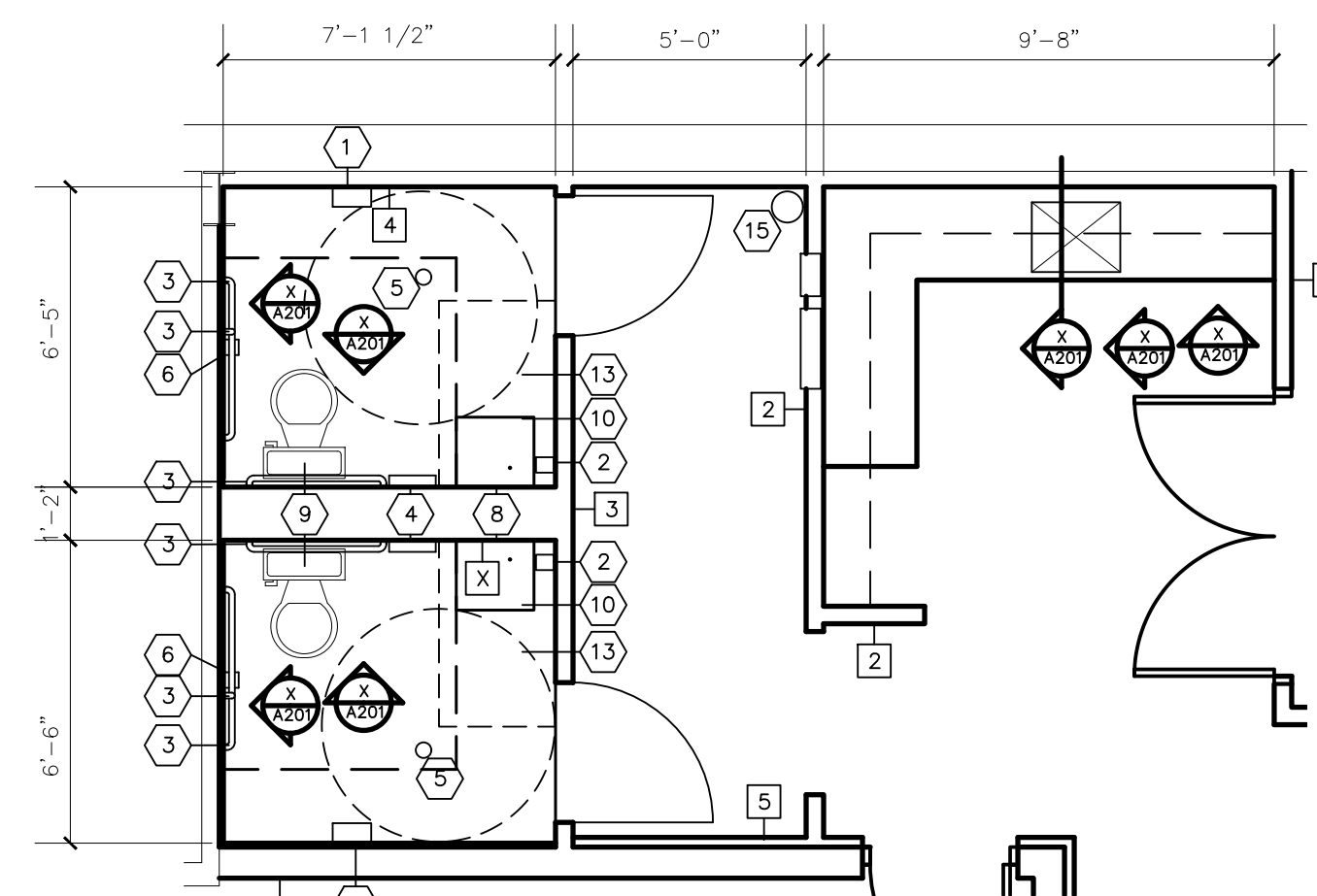


KEYNOTES (X)

1. ELECTRIC HAND DRYER
2. SOAP DISPENSER
3. GRAB BAR
4. FEMININE NAPKIN DISPOSAL
5. FLOOR DRAIN
6. TOILET PAPER DISPENSER
7. MOP HOLDER
8. MIRROR
9. TOILET
10. LAVATORY
11. SLOP SINK
12. ELECTRIC TANKLESS WATER HEATER
13. SOUND ATTENUATION INSULATION ABOVE CEILING
14. ELECTRIC PANEL
15. 2A-10B WALL HUNG FIRE EXTINGUISHER
16. PLYWOOD BACKING
17. ROD AND SHELF
18. WOOD SHELVING: 5 HIGH, PAINTED
19. SHIPS LADDER
20. METAL RAILING

WALL TYPES

1. 5/8" GWB ON 6" METAL STUDS 16" O.C. W/ 5" ACOUSTICAL FIBERGLASS INSULATION W/ 5/8" GWB. U419 1 HR RATING
2. 5/8" GWB ON 3 3/8" METAL STUDS 16" O.C. W/ 5/8" GWB.
3. 5/8" GWB ON 3 3/8" METAL STUDS 16" O.C. W/ 3 1/2" FIBERGLASS ACOUSTICAL INSUL W/ 5/8" GWB.
4. 5/8" GWB ON VB ON 3 3/8" MTL STUD ON EXISTING CMU
5. 5/8" GWB ON 2" RESILIENT HAT CHANNEL WITH 2" RIGID INSULATION ON 8" REINFORCED CMU
6. 8" REINFORCED CMU



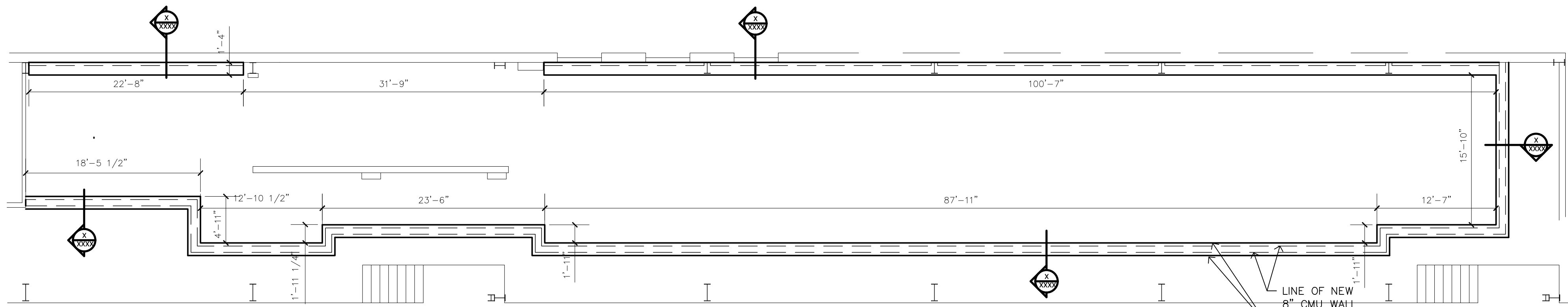
5 TOILETS AND
KITCHEN PLAN
SCALE: 1/4" = 1'-0"

PROVIDE WD BLOCKING AT ALL TOILET AND KITCHEN ACCESSORIES.

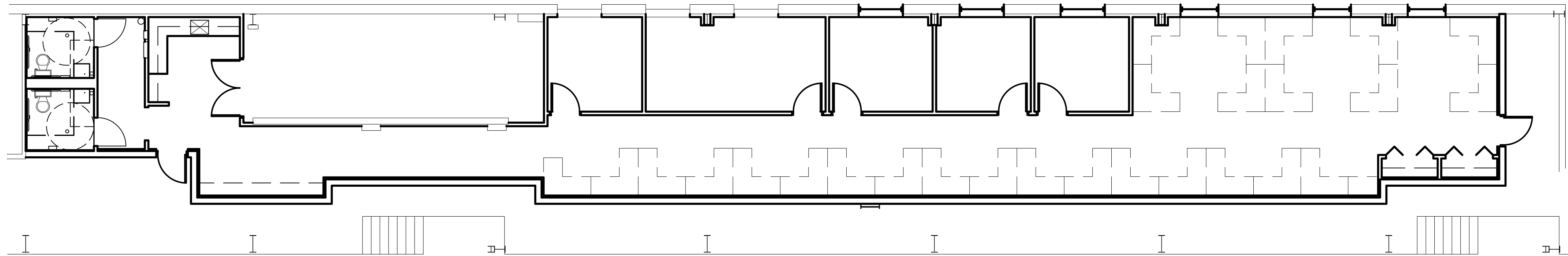


FLOOR PLAN

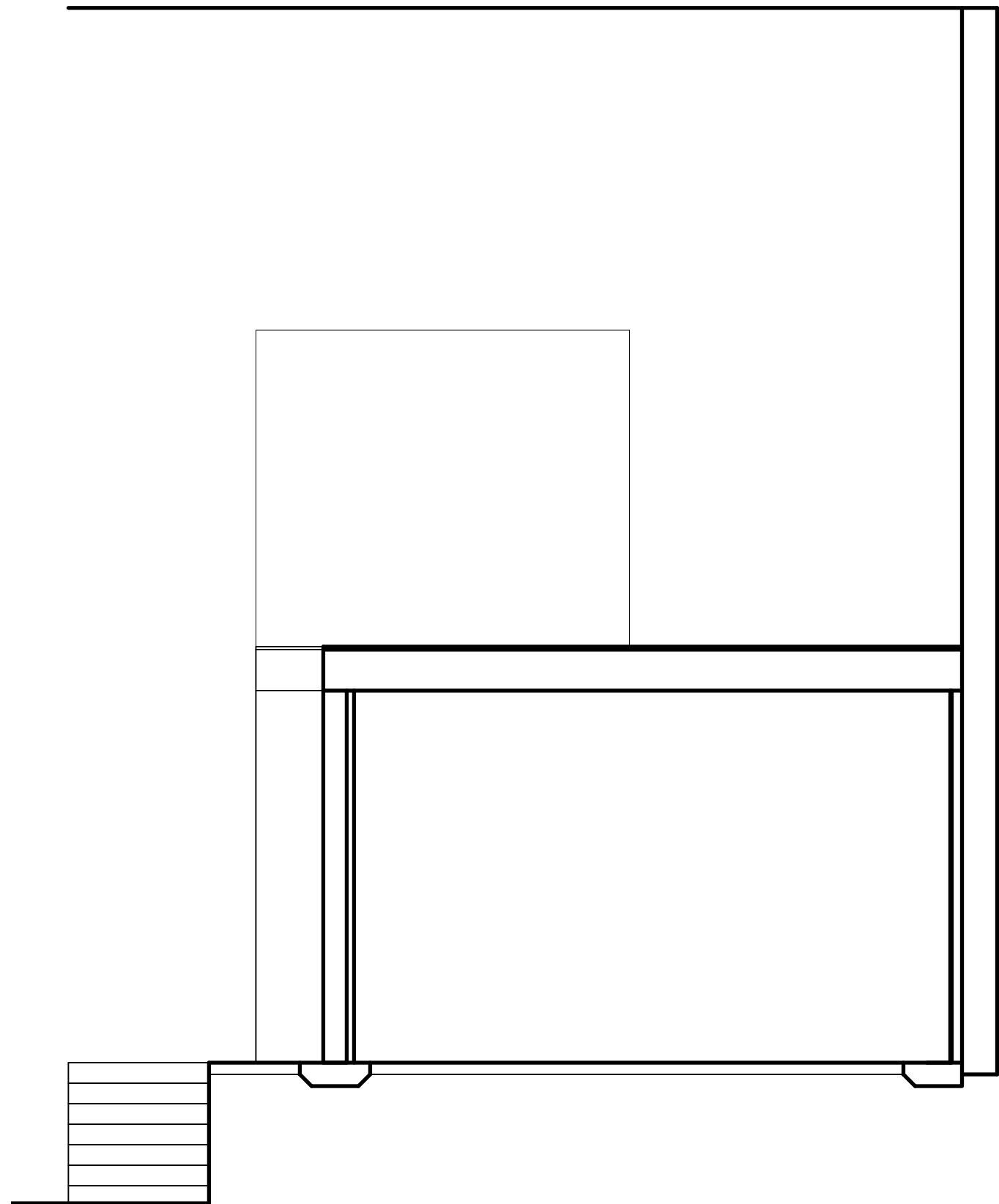
COPYRIGHT ALL RIGHTS RESERVED BY WAYDE C. HOPPE, ARCHITECT
NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION



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



2 FURNITURE PLAN
SCALE: 1/8" = 1'-0"



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

PRELIMINARY NOT TO BE USED FOR CONSTRUCTION
VERIFY ALL DIMENSIONS IN FIELD

SECTIONS AND DETAILS

COPYRIGHT ALL RIGHTS RESERVED BY WAYDE C. HOPPE, ARCHITECT
NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION

A201

HOPPE DESIGN, LLC
47032 MERIDIE, BELLEVILLE, MI 48111
734-216-2492

REVISIONS

PROJECT: 2212
DATE: 8.30.22
DRAWN: WCH
CHECKED: WCH

OFFICE RENOVATIONS TO
CONTRACTORS STEEL
48649 SCHOONER DR., VAN BUREN TWP., MI 48111

MECHANICAL KEYNOTES

LEGEND

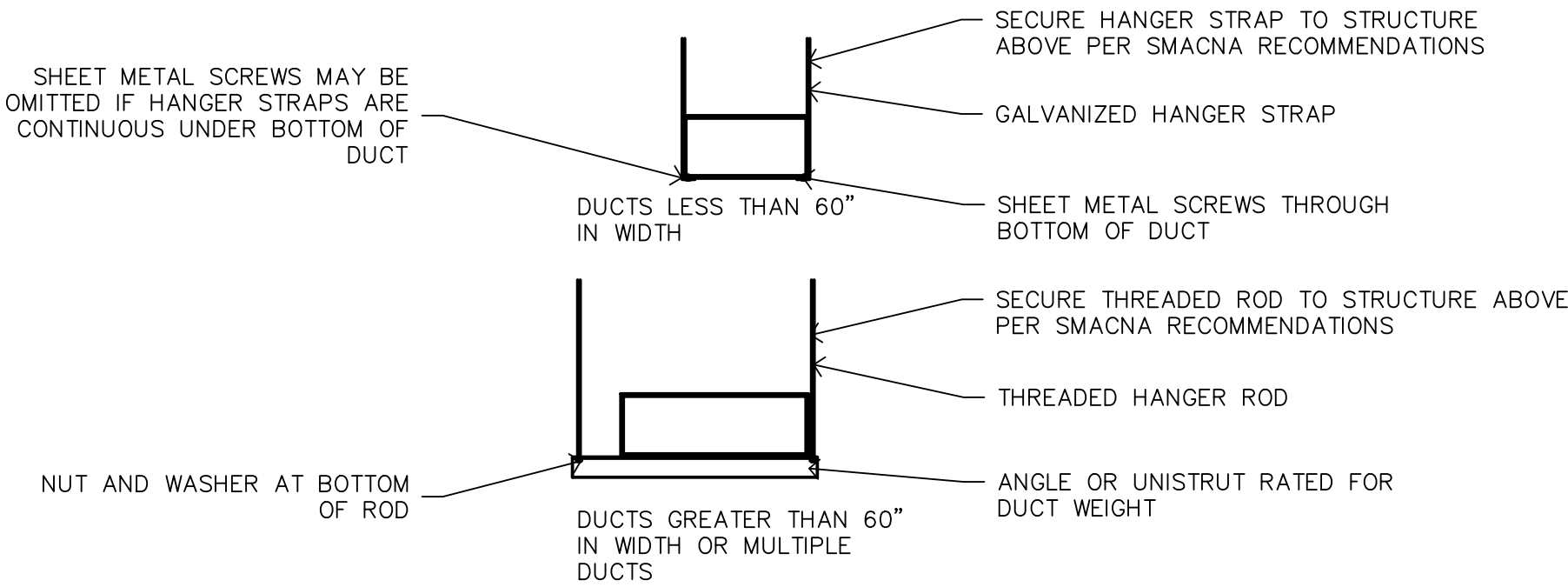
- GATE VALVE
- GLOBE VALVE
- BALL VALVE
- CHECK VALVE
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- LUBRICATED PLUG VALVE
- BAL. BALL VALVE W/
MEMORY STOP
- CIRCUIT SETTER
- PRESSURE REDUCING
VALVE
- PRESSURE TEMP. TEST
PORT
- PRESSURE GAUGE
- THERMOMETER
- EXPANSION JOINT W/
GUIDES
- AIR VENT
- Y-STRAINER
- PIPE FLEXIBLE CONNECTOR
- CONN. TO EXIST.
- DUCT FLEXIBLE CONNECTOR
- EXIST. FIRE DAMPER
- NEW FIRE DAMPER
- EXIST. SMOKE DAMPER
- NEW SMOKE DAMPER
- EXIST. COMB. FIRE SMOKE
DMPR
- NEW COMB. FIRE/SMOKE
DMPR
- MARK

CFM

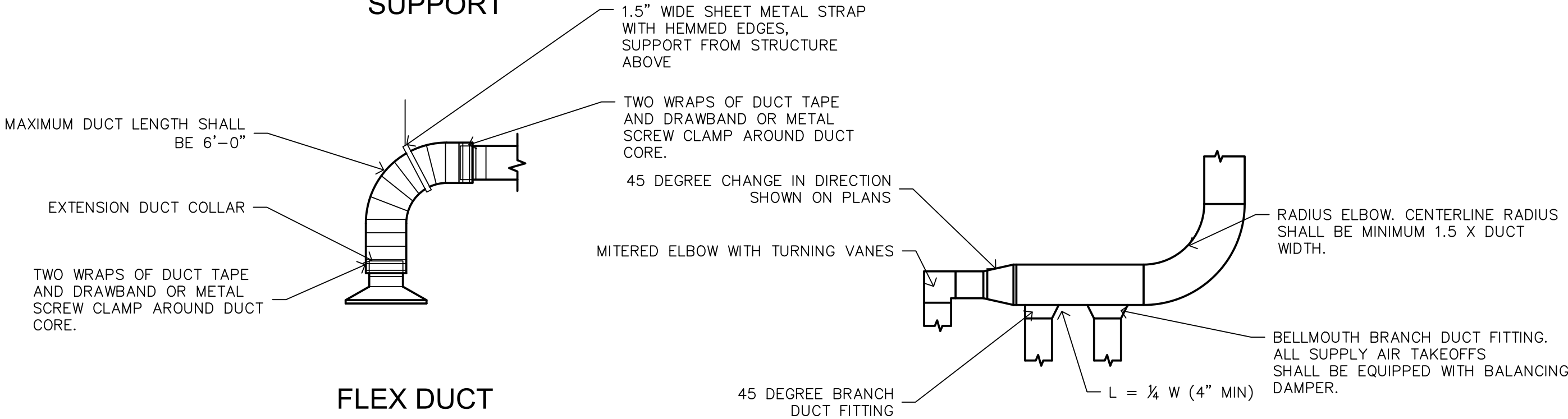
SUPPLY DIFFUSER
- RETURN GRILLE
- EXHAUST GRILLE

MECHANICAL NOTES

1. ALL WORK IS TO BE PROVIDED AND PERFORMED ACCORDING TO ALL STATE AND LOCAL CODES.
2. ALL EXHAUST OUTLETS AND OUTSIDE AIR INLETS SHALL BE A MINIMUM OF 15' APART.
3. EQUIPMENT NOISE SHALL NOT EXCEED 55 DECIBELS AT THE LOT LINE.
4. ALL DUCT WORK SHALL BE FABRICATED OF SHEET METAL AND IN ACCORDANCE WITH SMACNA STANDARDS.
5. ALL FLEX DUCT WORK SHALL BE THE INSULATED TYPE AND RUNS SHALL NOT EXCEED 6' MAXIMUM LENGTH. CONTRACTOR MAY USE FLEX DUCT TO CONNECT TO SUPPLY GRILLES.
6. PROVIDE MANUAL VOLUME DAMPER IN EACH BRANCH FOR BALANCING.
7. PROVIDE FIRE DAMPER WHERE THE DUCT PENETRATES THROUGH FIRE WALL.
8. RUN CONDENSATE LINE TO THE NEAREST FLOOR DRAIN.
9. CONTRACTOR TO FURNISH, LOCATE AND INSTALL THERMOSTAT FOR EACH ZONE.
10. INSTALL GAS PIPING, SIZES AS SHOWN.
11. EXISTING GAS PRESSURE TO BE VERIFIED BY THE CONTRACTOR AND SIZE GAS PIPING ACCORDINGLY.
12. DISCONNECT SWITCH SHALL BE PROVIDED WITH ALL UNITS.
13. PIPE SIZES ARE BASED ON 1# PRESSURE, CONTRACTOR TO FIELD VERIFY EXISTING GAS PRESSURE. VERIFY GAS PIPE SIZES, RESIZE IF NECESSARY.
14. CONTRACTOR TO PROVIDE GAS PRESSURE REGULATOR MAXITROL 325 SERIES FROM 1# DOWN TO 7" TO CONNECT GAS INLET OF HVAC UNITS OR AS RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT.
15. CONTRACTOR SHALL ADD CAPACITY REQUIRED FOR ANY APPLIANCES.
16. MECHANICAL CONTRACTOR TO SIZE ALL DUCTWORK AND EQUIPMENT RELATED TO NEW HVAC SYSTEM TO PROVIDE COMPLETE SYSTEM THAT IS IN COMPLIANCE WITH ALL CODES AND REGULATIONS.
17. MECHANICAL DRAWINGS ARE SCHEMATIC ONLY. HVAC CONTRACTOR IS RESPONSIBLE TO LOCATE PATH OF NEW DUCTWORK TO OPTIMIZE SUPPLY AND RETURN.
18. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE NEW ROOM TEMPERATURE SENSORS AND ALL NEW CONNECTIONS TO THE THERMOSTATS.
19. PROVIDE DUCT DETECTORS AS REQUIRED BY CODE

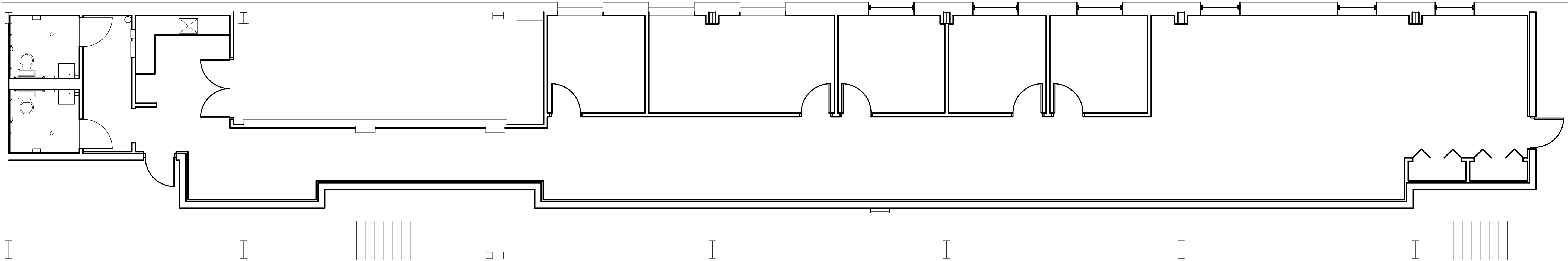


DUCTWORK SUPPORT



DUCTWORK CONSTRUCTION

FLEX DUCT INSTALLTION



1 HVAC PLAN
M101 SCALE: 3/16" = 1'-0"



PRELIMINARY NOT TO BE USED FOR CONSTRUCTION
VERIFY ALL DIMENSIONS IN FIELD

HVAC PLANS

COPYRIGHT ALL RIGHTS RESERVED BY WAYDE C. HOPPE, ARCHITECT
NOT TO BE COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION

M101

EXHAUST FAN SCHEDULE							
TYPE	MANUFACTURER	CATALOG NO.	CFM	EST E.S.P.	VOLTS/ PHASE	MOTOR	ACCESSORIES
EF-1	COOK	GC144	150	0.5	120/1	98W	DM, GBD, CG, RC, HK
EF2	COOK	GC75	75		120/1		DM, GBD, CB, HK
CG	WHITE ALUMINUM CEILING GRILLE		GK	GREASE TERMINATION KIT			
DM	DISCONNECT MEANS		HB	HINGED BASE			
GBD	GRAVITY BACKDRAFT DAMPER		RC	18" INSULATED ROOF CURB			
VSC	VARIABLE SPEED CONTROLLER		HK	HANGING KIT WITH VIBRATION INSULATOR			

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE										
TYPE	MANUFACTURER	CATALOG NO.	APP	FINISH	FRAME TYPE	VOLUME DAMPER	MAX NC (DB)	MIN THROW (F'T)	MAX THROW (F'T)	MAX PRESS. DROP
A	TITUS		SUP	WHITE	T-BAR/ FLANGE	YES	30	8	24	0.1
B	TITUS		RET	WHITE	T-BAR/ FLANGE	NO	30	-	-	0.1
C	TITUS		SUP	WHITE	FLANGE	NO	30	23	60	0.1
EX#	EXHAUST		RET	RETURN			SUP	SUPPLY		
1	THROWS ARE BASED ON 50 FEET PER MINUTE VELOCITY									
2	OPPOSED BLADE DAMPERS SHALL BE PROVIDED ON ALL DIFFUSERS REQUIRING VOLUME DAMPERS									
3	PROVIDE T-BAR OR FLANGE FRAME AS NOTED BY "T" OR "F" DESIGNATION IN DIFFUSER TAG ON PLANS									

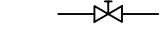
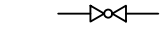
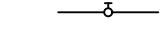
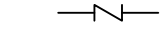
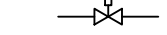
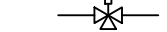

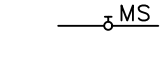
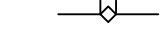
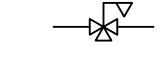
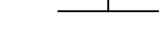


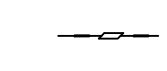
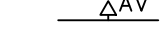
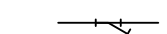
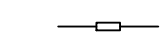






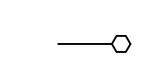

HOPPE DESIGN, LLC
47032 MERIDIE, BELLEVILLE, MI 48111
734-216-2492

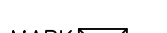
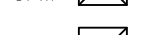

REVISIONS

PROJECT: 2212
DATE: 8.30.22
DRAWN: WCH
CHECKED: WCH

OFFICE RENOVATIONS TO
CONTRACTORS STEEL
48649 SCHOONER DR., VAN BUREN TWP., MI 48111

LEGEND

-  GATE VALVE
-  GLOBE VALVE
-  BALL VALVE
-  CHECK VALVE
-  2-WAY CONTROL VALVE
-  3-WAY CONTROL VALVE
-  LUBRICATED PLUG VALVE
-  BAL. BALL VALVE W/
MEMORY STOP
-  CIRCUIT SETTER
-  PRESSURE REDUCING
VALVE
-  PRESSURE TEMP. TEST
PORT
-  PRESSURE GAUGE
-  THERMOMETER
-  EXPANSION JOINT W/
GUIDES
-  AIR VENT
-  Y-STRAINER
-  PIPE FLEXIBLE CONNECTOR
-  CONN. TO EXIST.
-  DUCT FLEXIBLE CONNECTOR
-  EXIST. FIRE DAMPER
-  NEW FIRE DAMPER
-  EXIST. SMOKE DAMPER
-  NEW SMOKE DAMPER
-  EXIST. COMB. FIRE SMOKE
DMPR
-  NEW COMB. FIRE/SMOKE
DMPR
- MARK
CFM

 SUPPLY DIFFUSER
-  RETURN GRILLE
-  EXHAUST GRILLE

PLUMBING FIXTURE SCHEDULE														
TAG	MFR	MODEL NAME AND DESCRIPTION	FITTINGS	FLOW	WSFU'S		DFU'S	MIN PIPE CONNECTION SIZES				REMARKS	COLOR	
					C	H		W	V	CW	HW			
WC1	KOHLER	K-84325-L WALL HUNG ELONGATED WATER CLOSET WITH EXPOSED BATTERY SENSOR FLUSH VALVE WITH OVER-RIDE, WHITE OPEN FRONT TOILET SEAT, LESS COVER, WITH STAINLESS STEEL CHECK HINGE.	K-7531 EXPOSED HYBRID TOUCHLESS BATTERY POWERED FLUSH VALVE	1.28 GPF	10		4	4"	2"	1"	-	BARRIER FREE COMPLIANT; EXPOSED TOP SPUD CONNECTION; ZURN Z1201 SERIES CLOSET CARRIER, 500 LB SEAT CAPACITY	WHITE	
SK-1	ELKAY	LR3319	K-15571 FAUCET, LK-35 STRAINER, CR-19 STOPS AND SUPPLIES, 17 GA C.P.P. TRAP									3 FAUCET HOLES		
LAV1	KOHLER	K-1721 WALL HUNG SINK WITH GRID DRAIN; P-TRAP; STOP SUPPLY KIT; TRAP WRAP AND ASSE 1070 THERMOSTATIC MIXING VALVE	K-13460 TOUCHLESS FAUCET, CR-19 STOPS, AND SUPPLIES, OFFSET GRID DRAIN, 17 GA C.P.P. TRAP	0.5 GPM	1.5	1.5	1	1 1/2"	1 1/2"	1/2"	1/2"	BARRIER FREE COMPLIANT; BARRIER FREE TRAP, TRUEBRO LAV GUARD HW INSUL. KIT; SOLID BRASS FAUCET; Z1231 LAV CARRIER WITH UPRIGHTS	WHITE	
CO	ZURN	Z415-SZ1												
FD-1	ZURN	Z415-BZ	5" DIA. N.B. STRAINER											
GARB AGE DISPO SAL	ISE	PRO-333										1/ HP, 120/160		

WATER HEATER_B
TANKLESS ELECTRIC WATER HEATER RHEEM RTEX-06, 1 GPM AT 37 DEGREES TEMPERATURE RISE, 220V/6KW/25A/10AWG 1/2" NPT

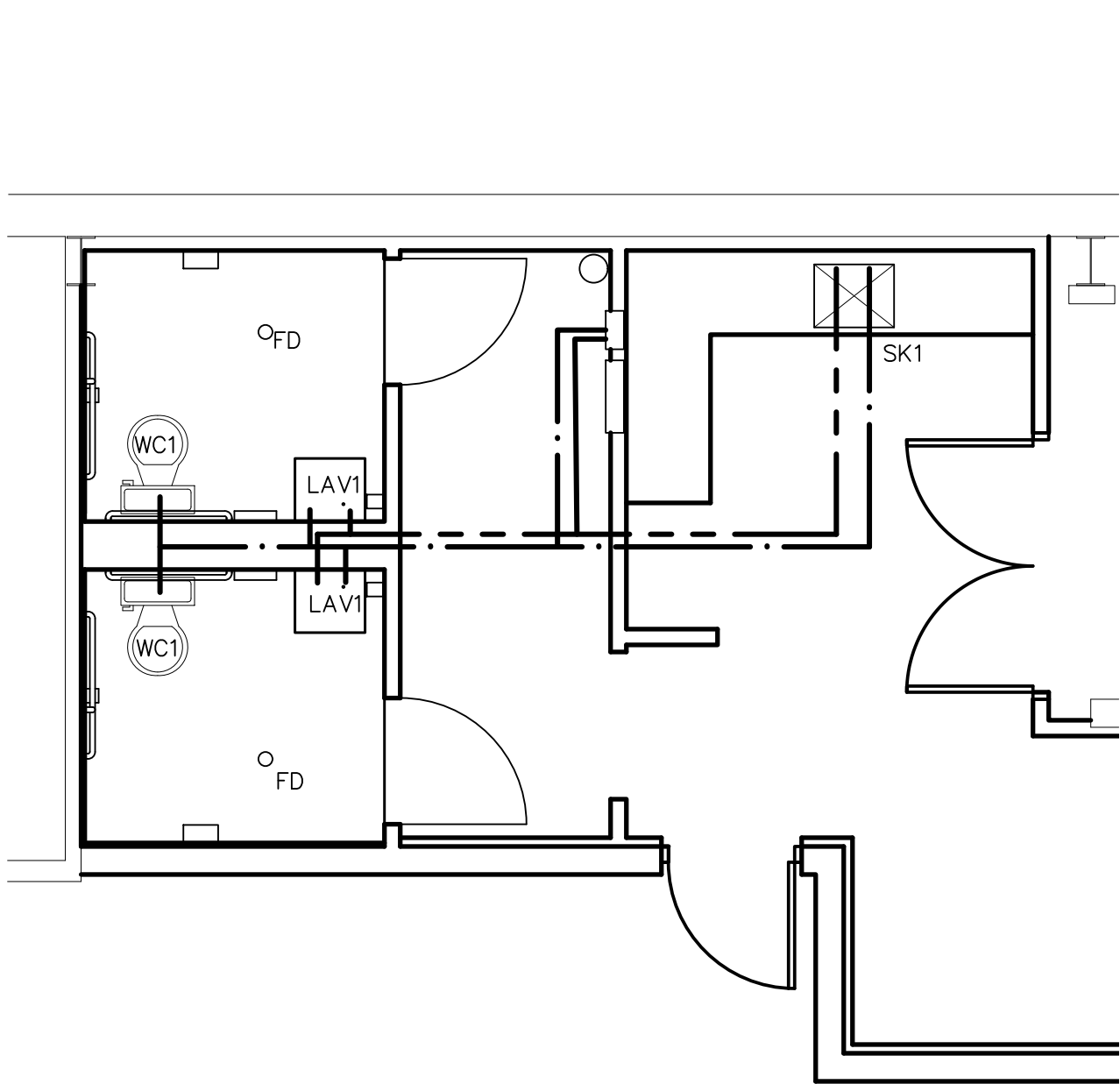
PLUMBING NOTES

- PLUMBING CONTRACTOR RESPONSIBLE TO SIZE ALL WASTE, SUPPLY, VENTS, DRAINS, TRAPS, ETC TO PROVIDE COMPLETE SYSTEM THAT IS IN COMPLIANCE WITH ALL CODES AND REGULATIONS.
- THE PLUMBING DRAWINGS ARE SCHEMATIC ONLY. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE FINAL LAYOUT AND ROUTING OF PIPING.
- NO PLUMBING PIPING SHALL BE ROUTED OVER ELECTRICAL PANELS.
- PLUMBING CONTRACTOR SHALL CONTACT THE SERVICE PROVIDER AND ARRANGE FOR NEW GAS SERVICE CONNECTION.
- PLUMBING CONTRACTOR SHALL CONTACT THE MUNICIPAL AUTHORITY TO ARRANGE FOR NEW WATER SERVICE CONNECTION.
- PROVIDE CLEANOUTS AT THE BASE OF ALL BASE STACKS, CHANGES IN DIRECTION GREATER THAN 45 DEGREES, AND 50 FEET ON CENTER FOR STRAIGHT RUNS.
- ALL PLUMBING SHALL COMPLY WITH BARRIER FREE REQUIREMENTS.
- PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS.
- WRAP ALL WATER PIPING WITH INSULATED PIPE WRAP.
- ALL LAMBS TONGUE DISCHARGE TO BE 36" ABOVE ADJACENT GRADE.
- PLUMBING CONTRACTOR TO VERIFY MICHIGAN PLUMBING CODE AND COUNTY HEALTH DEPARTMENT REQUIREMENT FOR BACKFLOW PREVENTERS, CHECK VALVES, VACUUM BREAKERS, AND INDIRECT WASTEWATER CONNECTIONS.

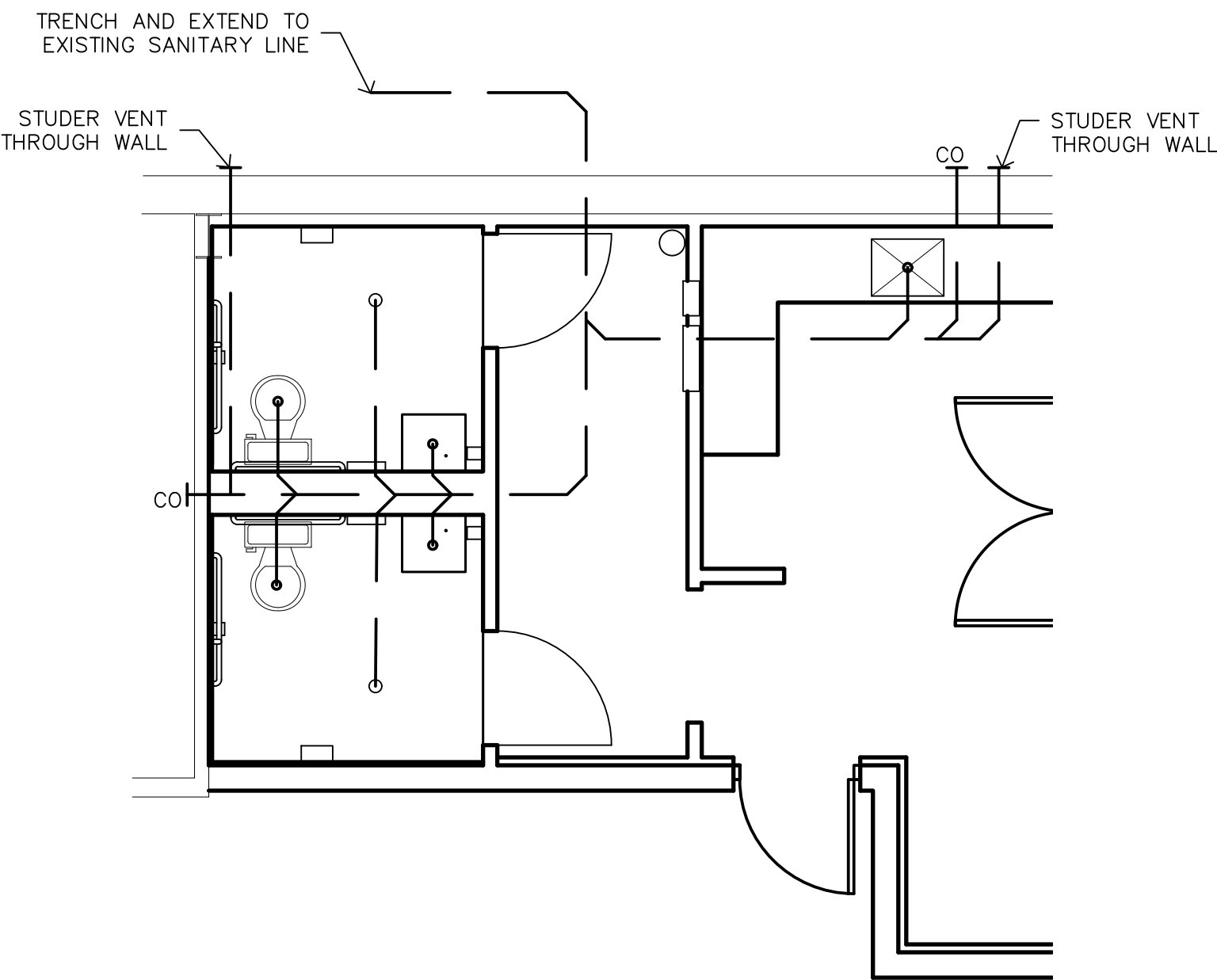
PLUMBING PIPING REQUIREMENTS

	HW	CW	WASTE
WATER CLOSET TANK	-	1 1/2"	3"
WATER CLOSET FLUSH VALVE	-	1"	3"-4"
URINALS	-	3/4"	2"
SERVICE SINK	1/2"	1/2"	3"
ELECTRIC WATER COOLER	1/2"	1/2"	1 1/2"
WASH BASIN	1/2"	1/2"	1 1/2"
SINKS/LAVATORIES	1/2"	1/2"	1 1/2"
SHOWER STALLS	1/2"	1/2"	3"
FLOOR DRAIN	1/2"	1/2"	3"

NOTE: PIPE SIZES SHOWN ARE MINIMUM STANDARD. PC SHALL VERIFY VARIANCES ON PLAN.



2
P101
SUPPLY PLAN
SCALE: 1/4" = 1'-0"
PROJECT NORTH



1
P101
SANITARY PLAN
SCALE: 1/4" = 1'-0"
SAWCUT EXISTING SLAB FOR NEW UNDERGROUND SANITARY PIPING. INSTALL NEW 4 REINF CONCRETE SLAB ON VB ON COMPACTED BASE
PROJECT NORTH

PLUMBING PLANS

HOPPE DESIGN, LLC
47032 McBRIDE, BELLEVILLE, MI 48111
734-216-2492


REVISIONS


PROJECT: 2212
DATE: 8.30.22
DRAWN: WCH
CHECKED: WCH


PRELIMINARY NOT TO BE USED FOR CONSTRUCTION
VERIFY ALL DIMENSIONS IN FIELD


P101


LEGEND


- 


SWITCH ON RHEOSTAT
- 


THREE WAY SWITCH
- 


SWITCH WITH PILOT
- 


SWITCH
- 


SPECIAL OUTLET
- 


DUPLEX OUTLET
- 


QUAD OUTLET
- 


WEATHERPROOF OUTLET
- 


GROUND FAULT INTERRUPTER
- 


TELEPHONE/ COMPUTER
- 


SMOKE DETECTOR
- 


TELEVISION/ CABLE
- 


CEILING MOUNTED LIGHT FIXTURE
- 


CEILING MOUNTED LIGHT FIXTURE RECESSED
- 


WALL MOUNTED LIGHT FIXTURE
- 


CEILING FAN/ LIGHT
- 


SCONCE
- 


MOTOR, ONE PHASE
- 


GROUND MNTD EXT. LIGHTING
- 


2x4 LAY IN LIGHT FIXTURE
- 


1 X 4 LIGHT FIXTURE
- 


PENDANT MOUNTED OVERSIZED FIXTURE
- 


EXIT SIGN
- 


EXIT SIGN/ EMERGENCY LIGHT
- 


FIRE ALARM PULL STATION
- 

HORN/ STROBE
- 

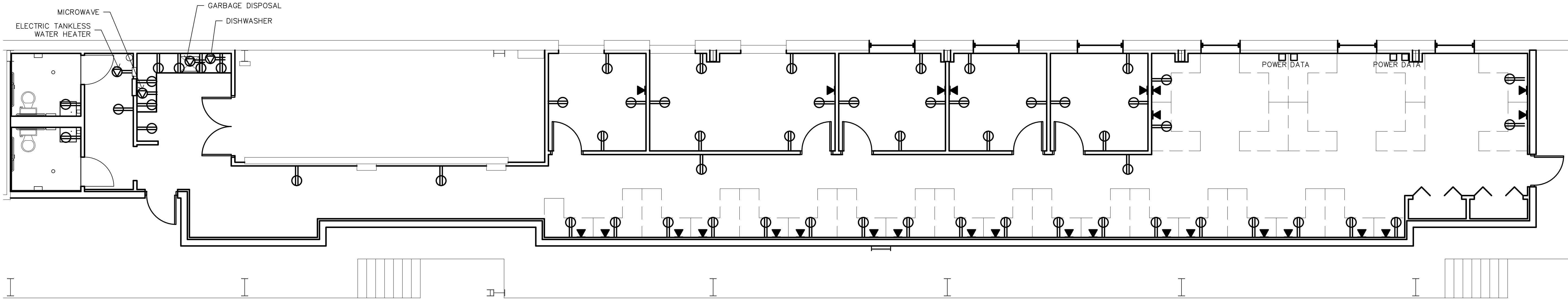
COMPUTER JACK
- 

RATE OF RISE HEAT DETECTOR
- 

DISCONNECT SWITCH
- 

DISCONNECT SWITCH WITH FUSE
- 

AUDIO JUNCTION BOX- PRE-WIRE PER DIRECTION OF OWNER




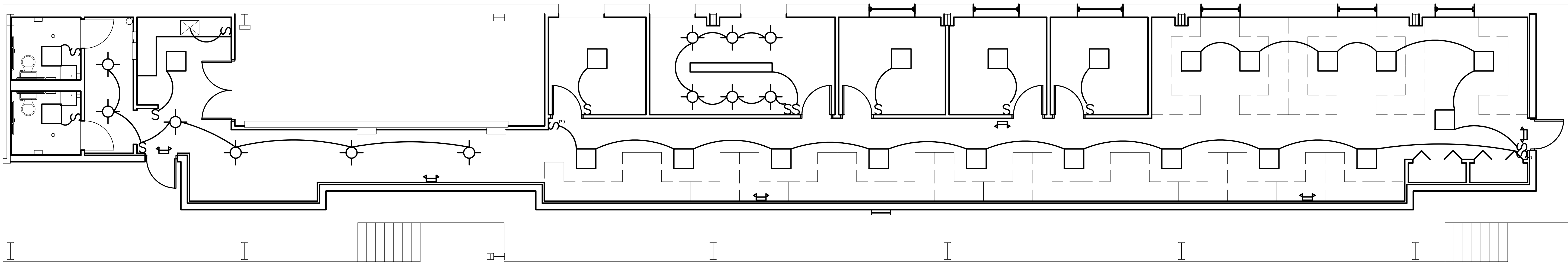
1

POWER PLAN

SCALE: 3/16" = 1'-0"

PROJECT NORTH





2

LIGHTING PLAN

SCALE: 3/16" = 1'-0"

PROJECT NORTH

