

Bay Arenac ISD Dining Room Addition
and Interior Renovations
Bay City, Michigan

TSSF Architects, Inc.
122 N. Washington Ave.
Saginaw, MI 48607

ADDENDUM NO. 4
Date: August 5, 2026
TSSF Project # 2538

This addendum authorizes the following revisions to the plans and specifications for the above-named project and will be considered fully a part of said documents.

ARCHITECTURAL:

- Item A1:** See revised Cover Sheet T1.0 (re-issued): Signed and sealed as requested.
- Item A2:** See revised sheet A0.1 (re-issued): See revisions shown clouded.
- A. Added (FULLY SPRINKLERED) note to the addition as this was the original intended design.
 - B. Added Allowable Building Height and Area table for the addition.
 - C. Added non-opaque information to energy code table.
 - D. Added note regarding direction and exception for 2-hr fire separation at addition.
- Item A3:** See revised sheet A2.0 (re-issued): Added information on 2-hr. separation and Wall Type "D".
- Item A4:** See revised sheet A6.0 (re-issued): See added wall section 4/A6.0 for 2-hr wall separation.

ELECTRICAL:

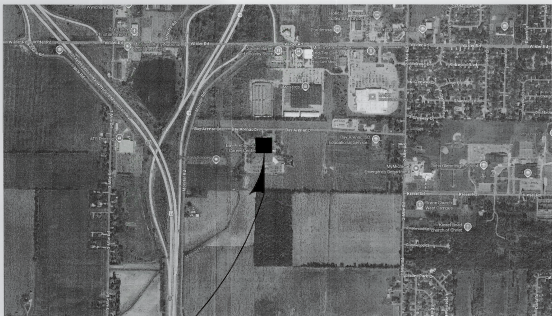
- Item E1:** See revised sheet E0.0 (re-issued): Revised Electrical Fixture Schedule
- Item E2:** See revised sheet E1.0 (re-issued): Revised Receptacle Control Matrix and notations on plan.
- Item E3:** See revised sheet E5.0 (re-issued): Added Split-Circuit Receptacle Detail

ATTACHMENTS: Sheets T1.0 A0.1, A2.0, A6.0, E0.0, E1.0, E5.0



DINING ROOM ADDITION AND RENOVATIONS FOR: BAY ARENAC ISD

4155 MONITOR RD.
BAY CITY, MICHIGAN 48706



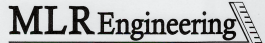
SITE LOCATION MAP
NO SCALE

Architect:



TSSF ARCHITECTS, INC.
ARCHITECTS INTERIORS PLANNERS
122 N. WASHINGTON AVENUE SAGINAW, MICHIGAN

Civil:



MLR Engineering
CIVIL ENGINEERING & CONSULTING SERVICES
134 S. Main Street, Suite 1, Freeland, Michigan 48623
Phone: (989) 239-2354
www.mlrengineering.com

Structural:



SNYDER & STALEY ENGINEERING, P.L.C.
CONSULTING ENGINEERS
3085 BAY ROAD, SUITE 6
SAGINAW, MI 48603
PH: (989) 797-1710 FAX: (989) 797-1715

Mechanical / Electrical:



KTS
ENGINEERING GROUP
491 E. WRIGHT AVE.
SHEPHERD, MI 48883
Ph. (989) 567-1100
info@KTSEngineeringGroup.com

DRAWING INDEX:

COVER Title Sheet, Drawing Index, General Notes

CIVIL

- C1.0 Topographical Survey
- C1.1 Demolition Plan
- C2.0 Site Plan
- C2.1 Grading Plan
- C3.0 Detail Sheet

ARCHITECTURAL

- A0.1 Life Safety Plan
- A0.2 General Information Sheet
- A0.3 General Information Sheet
- A0.4 General Information Sheet
- D2.0 Demolition Plan
- A1.0 Architectural Site Plan
- A2.0 Partial First Floor Plan
- A3.0 Schedules, Elevation and Details
- A4.0 Partial Roof Plan
- A5.0 Exterior Elevations
- A6.0 Building Sections
- A7.0 Wall Sections
- A8.0 Interior Elevations and Details
- A9.0 Partial Reflected Ceiling Plan
- FF2.0 Partial First Floor Finish Plan

STRUCTURAL

- S0.1 Specifications and Details
- S1.0 Foundation and Roof Framing Plan
- S2.0 Details

MECHANICAL

- M0.0 Specifications
- M0.1 Specifications
- MD1 Mechanical Demolition Plan
- M1.0 Main Floor Plan – HVAC
- M1.1 Roof Plan – HVAC
- M2.0 Schedules

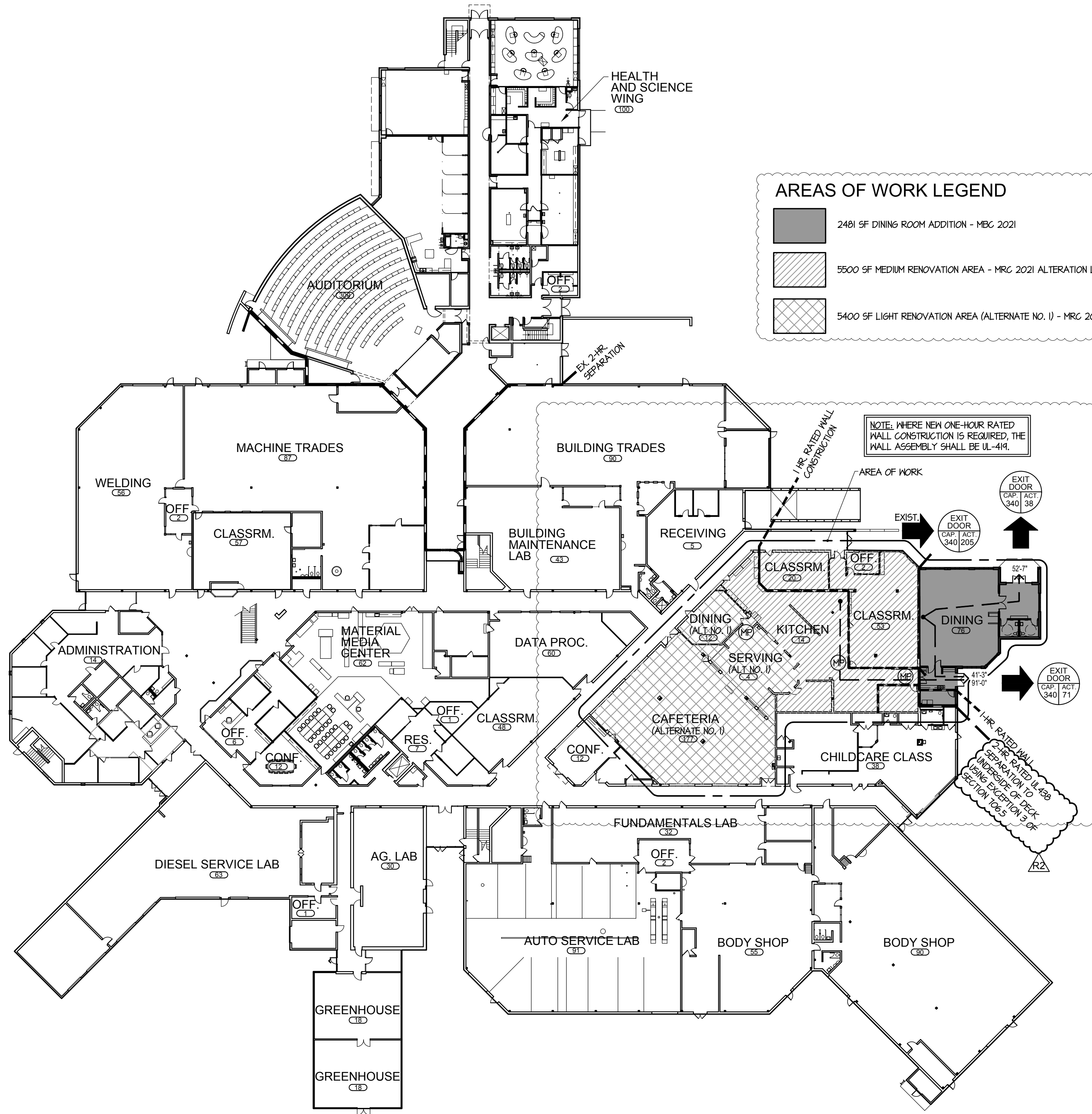
PLUMBING

- P0.0 Specifications
- PD1 Plumbing Demolition Plans
- P1.0 Main Floor Plan – Plumbing Underground
- P1.1 Overhead Plumbing Plan
- P1.2 Roof Plumbing Plan
- P2.0 Schedule and Details

ELECTRICAL

- E0.0 Electrical Specifications and Notes
- ED1 Electrical Power Demolition Plan
- ED2 Electrical Lighting Demolition Plan
- E1.0 Main Floor Power Plan
- E1.1 Roof Power Plan
- E2.0 Main Floor Lighting Plan
- E3.0 Electrical Riser Diagram
- E4.0 Schedules
- E5.0 Schedules





MASTER FIRST FLOOR PLAN
SCALE: 1/32" = 1'-0"

AREAS OF WORK LEGEND

- 2481 SF DINING ROOM ADDITION - MRC 2021
- 5500 SF MEDIUM RENOVATION AREA - MRC 2021 ALTERATION LEVEL 2
- 5400 SF LIGHT RENOVATION AREA (ALTERNATE NO. 1) - MRC 2021 ALTERATION LEVEL 1

NOTE: WHERE NEW ONE-HOUR RATED WALL CONSTRUCTION IS REQUIRED, THE WALL ASSEMBLY SHALL BE UL-419.

APPLICABLE CODES
2021 MICHIGAN BUILDING CODE
2021 MICHIGAN REHABILITATION CODE
2021 MICHIGAN ENERGY CODE
2023 MICHIGAN ELECTRICAL CODE
2021 MICHIGAN MECHANICAL CODE
2021 MICHIGAN PLUMBING CODE
2012 LIFE SAFETY CODE
2016 SCHOOL FIRE SAFETY RULES
FIRE ALARM NFPA 72 2022
ASHRAE STANDARD 90.1-2019 ZONE 5
ICC A117.1 - 2017 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

2021 MICHIGAN BUILDING CODE

BUILDING USE GROUP	E (Educational)
TYPE OF CONSTRUCTION	2B
FIRE SUPPRESSION PROVIDED	FULLY SPRINKLERED
ACTUAL BUILDING HEIGHT	2 Story, 28'-0"
Existing First Floor	128,550 Sq. Ft.
Addition (FULLY SPRINKLERED)	2,481 Sq. Ft.
Area of Renovations	8,227 Sq. Ft.
Existing Second Floor	47,518 Sq. Ft.
Total Area	178,549 Sq. Ft.
OCCUPANT LOAD (PER TABLE 1004.5) (ADDITION ONLY)	76
MAXIMUM LENGTH OF EXIT TRAVEL (PER TABLE 1017.2)	250'-0" MAX.
MAXIMUM LENGTH OF DEAD END CORRIDOR (PER SECT. 1020.5)	50'-0"
MINIMUM WIDTH OF EGRESS COMPONENTS	
EXIT ACCESS CORRIDORS (PER SECT. 1020.3)	MIN 44"
COMMON PATH OF TRAVEL WITH ONE EXIT ACCESS	.OL > 30 = 75
DOORS (PER SECT. 1010.1.1)	32" MIN. CLR.
FIRE RESISTANCE RATINGS OF EGRESS COMPONENTS	
EXIT ACCESS CORRIDORS (PER TABLE 1020.1)	1 HR
STAIRSHAFTS	NOT APPLICABLE
HORIZONTAL EXITS (PER 1024.3)	1 HR
AREAS OF REFUGE	NOT APPLICABLE
FIRE RESISTANCE RATINGS OF FIRE SEPARATIONS	
SHAFTS-OTHER THAN STAIRS	NOT APPLICABLE
STORAGE ROOMS GREATER THAN 100 SQ. FT. (PER TABLE 509)	1 HR.
FIRE RESISTANCE RATINGS OF FIRE SEPARATIONS	
STRUCTURAL ELEMENT (PER TABLE 601)	
PRIMARY STRUCTURAL FRAME	0 HR.
NON-BEARING WALLS - EXTERIOR	0 HR.
NON-BEARING WALLS - INTERIOR	0 HR.
ROOF CONSTRUCTION	0 HR.
BEARING WALLS - EXTERIOR	0 HR.
BEARING WALLS - INTERIOR	0 HR.

ALLOWABLE BUILDING HEIGHT	3 Story, 75'-0"
ALLOWABLE BUILDING AREA	58,000 Sq. Ft. (ADDITION ONLY)

LIFE SAFETY AREA LEGEND

- EXIT 34" EGRESS MINIMUM CLEARANCE
- TRAVEL DISTANCE
- EXIT (w/ NUMBER OF OCCUPANTS)
- ACTUAL OCCUPANT EGRESS COUNT
- 1-HOUR RATED FIRE BARRIER
- 2-HOUR RATED FIRE BARRIER
- FIRE EXTINGUISHER - MULTI-PURPOSE DRY CHEMICAL

OCCUPANT CALCULATIONS

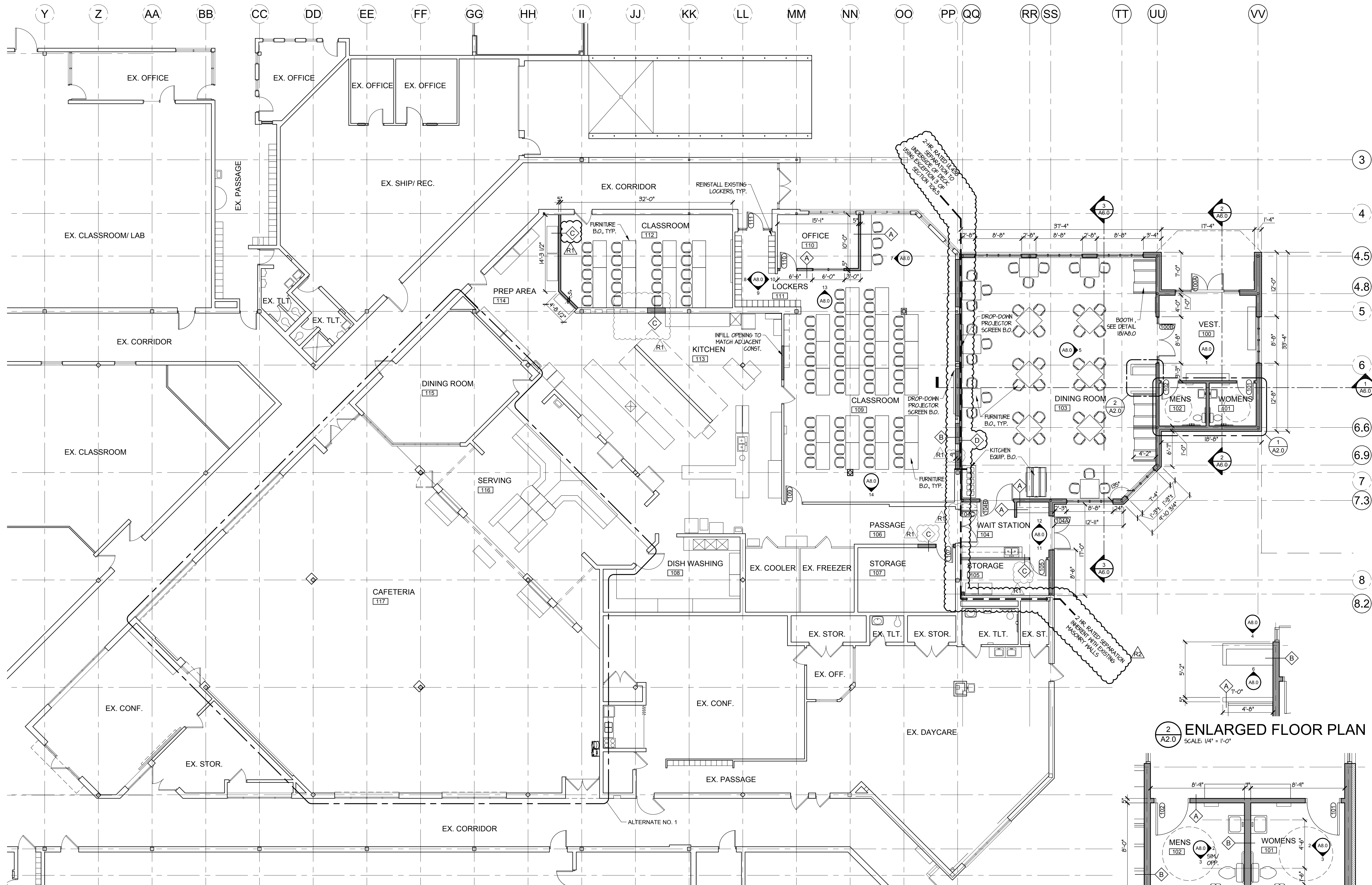
FUNCTION OF SPACE	FACTOR	OCCUPANTS
EDUCATION	1:20 NET	73
ASSEMBLY A-2	1:15 NET	91
KITCHEN	1:200 GROSS	14
OFFICE	1:150 GROSS	2
TOTAL PROJECT OCCUPANT LOAD		180

REQUIRED EGRESS WIDTH

TOTAL EGRESS WIDTH REQUIRED:
180 MAX INTERIOR OCCUPANT x 2" = 36"
TOTAL EGRESS WIDTH PROVIDED:
THREE 68" CLEAR DOOR EXIT LEAFS = 204"
NUMBER OF EXITS REQUIRED : 2

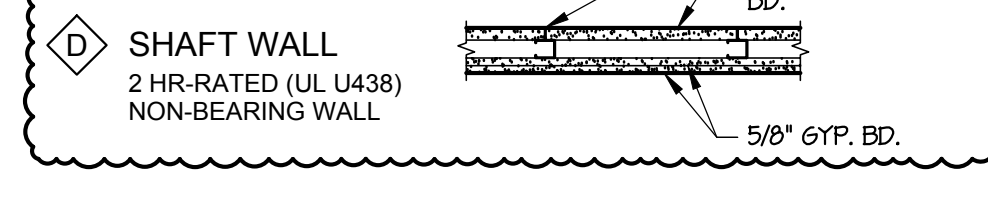
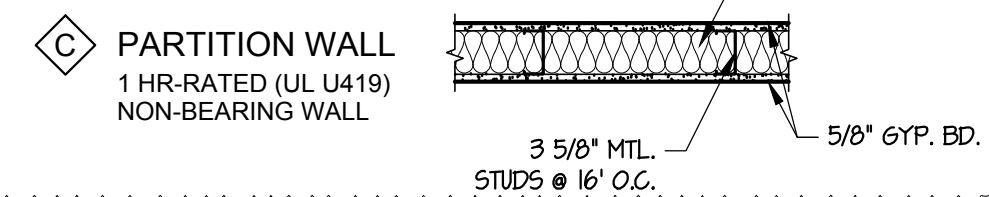
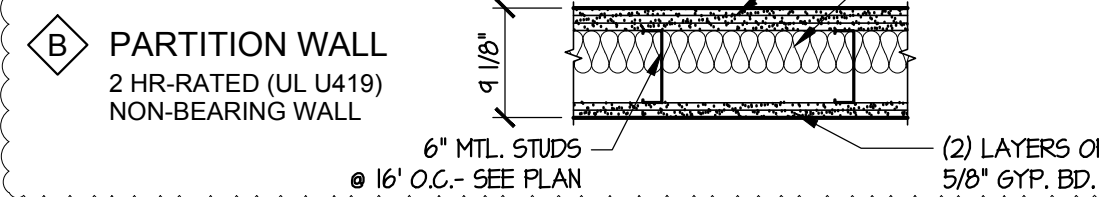
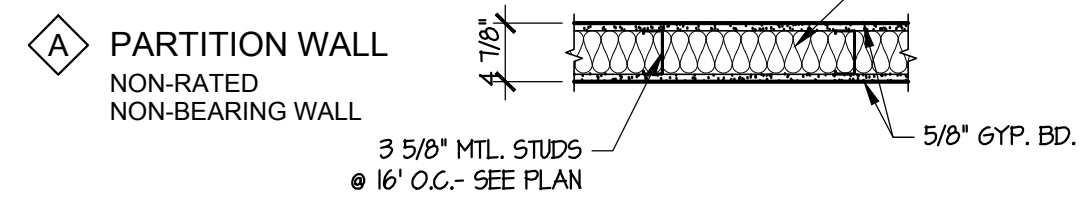
PRESCRIPTIVE METHOD - OPAQUE SURFACES

DESCRIPTION/ NAME	ROOF		WALL			FLOOR		SLAB	DOOR	ONE		PROPOSED INSULATION	CRITERIA INFORMATION							
	INSULATION ABOVE DECK	METAL BUILDING	ATTIC AND OTHER	MASS		METAL BUILDING	STEEL-FRAMED	WOOD FRAMED/ OTHER BELOW GRADE WALL	MASS	STEEL JOIST				WOOD FRAMED/ OTHER UNHEATED	HEATED	SWINGING	NON-SWINGING	R-VALUE OPTION	U-VALUE OPTION	HIGH-REFLECTANCE/ EMITTANCE ROOF
MEMBRANE ROOF	X											R-32ci	R-30ci							
MASONRY WALL w/ MTL. STUD BACKUP					X							R-15 + R-10ci	R-13 + R-10ci							
METAL PANELS w/ MTL. STUD BACKUP					X							R-15 + R-10ci	R-13 + R-10ci							
SLAB ON GRADE								X				R-15 (24" BELOW)	R-15 (24" BELOW)							
INSULATED H.M. DOOR									X			U-0.37	U-0.37							
PRESCRIPTIVE METHOD - NON-OPAQUE SURFACES																				
EXTERIOR WINDOWS												U-0.28	U-0.30							



WALL TYPES

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

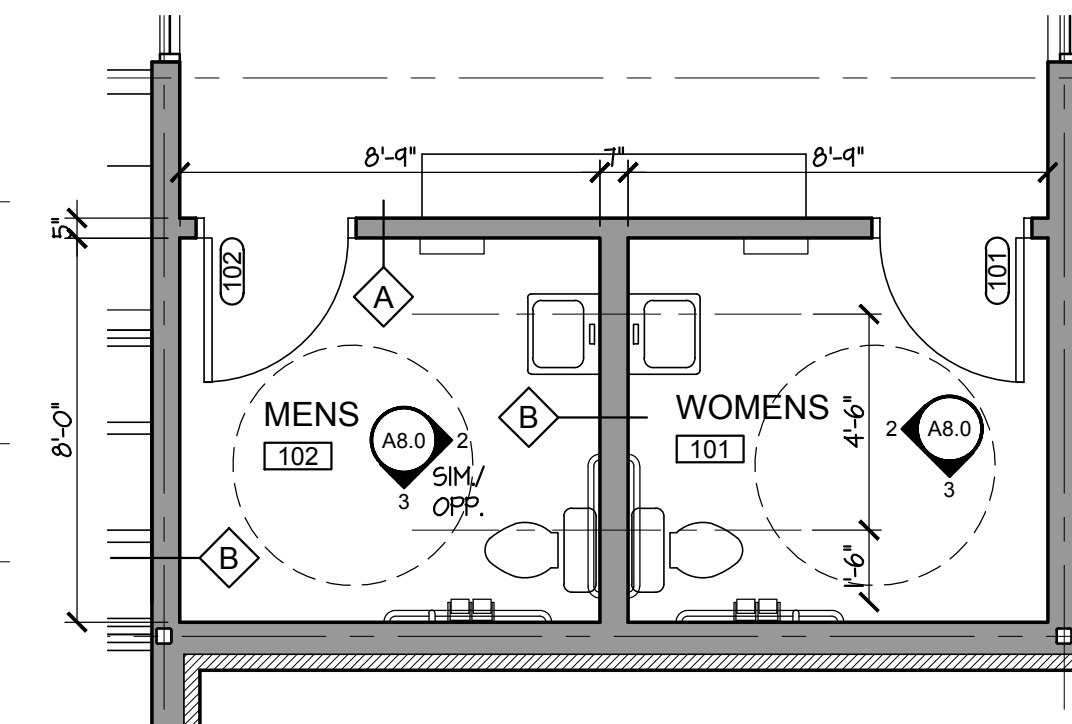


PARTIAL FIRST FLOOR PLAN

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

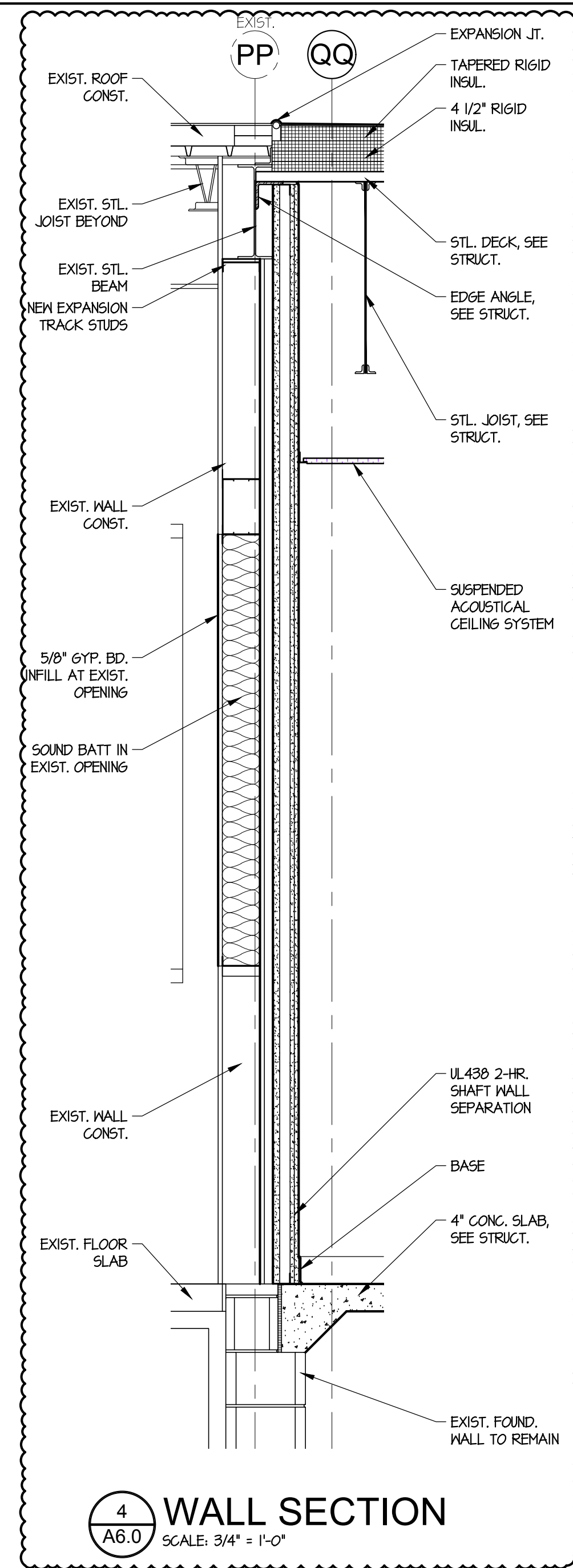
2 ENLARGED FLOOR PLAN

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

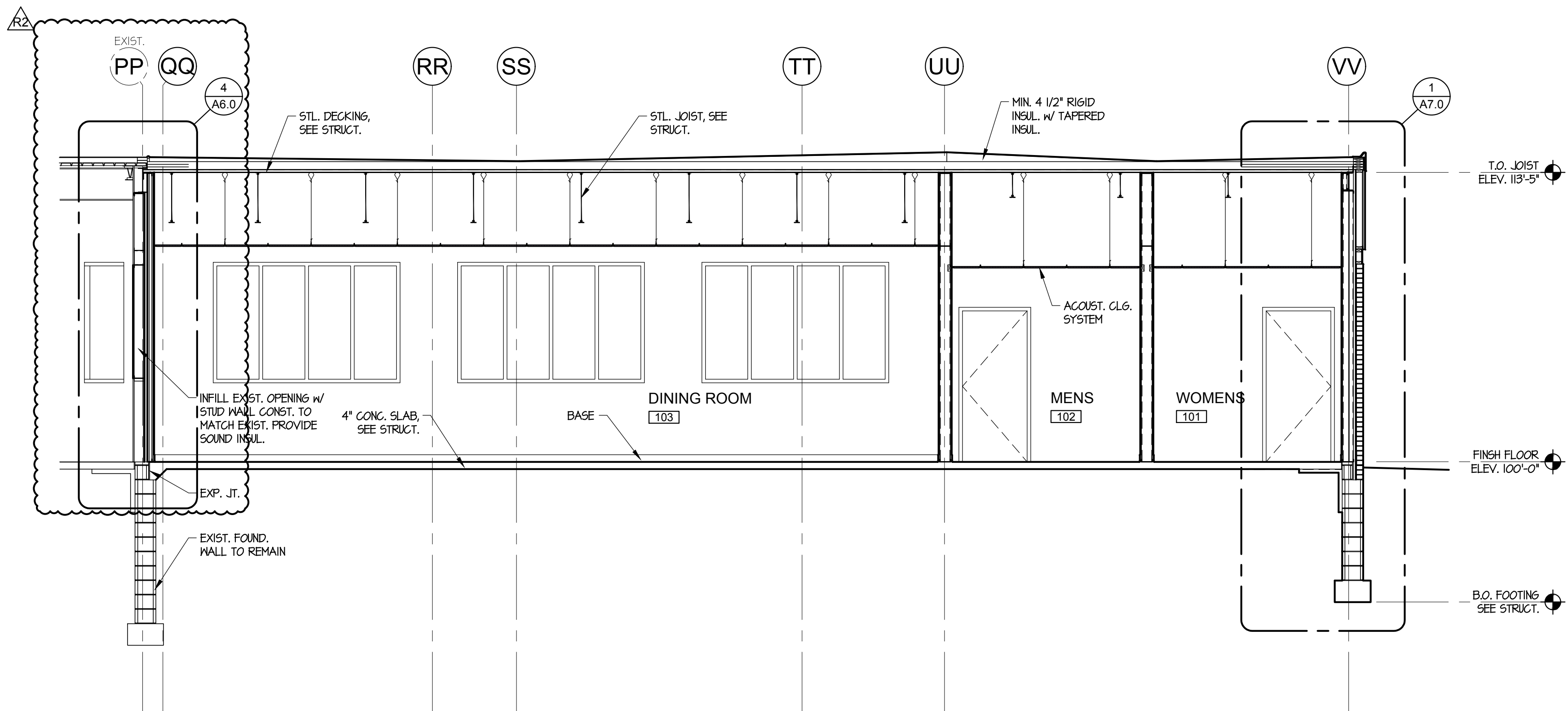


1 ENLARGED FLOOR PLAN

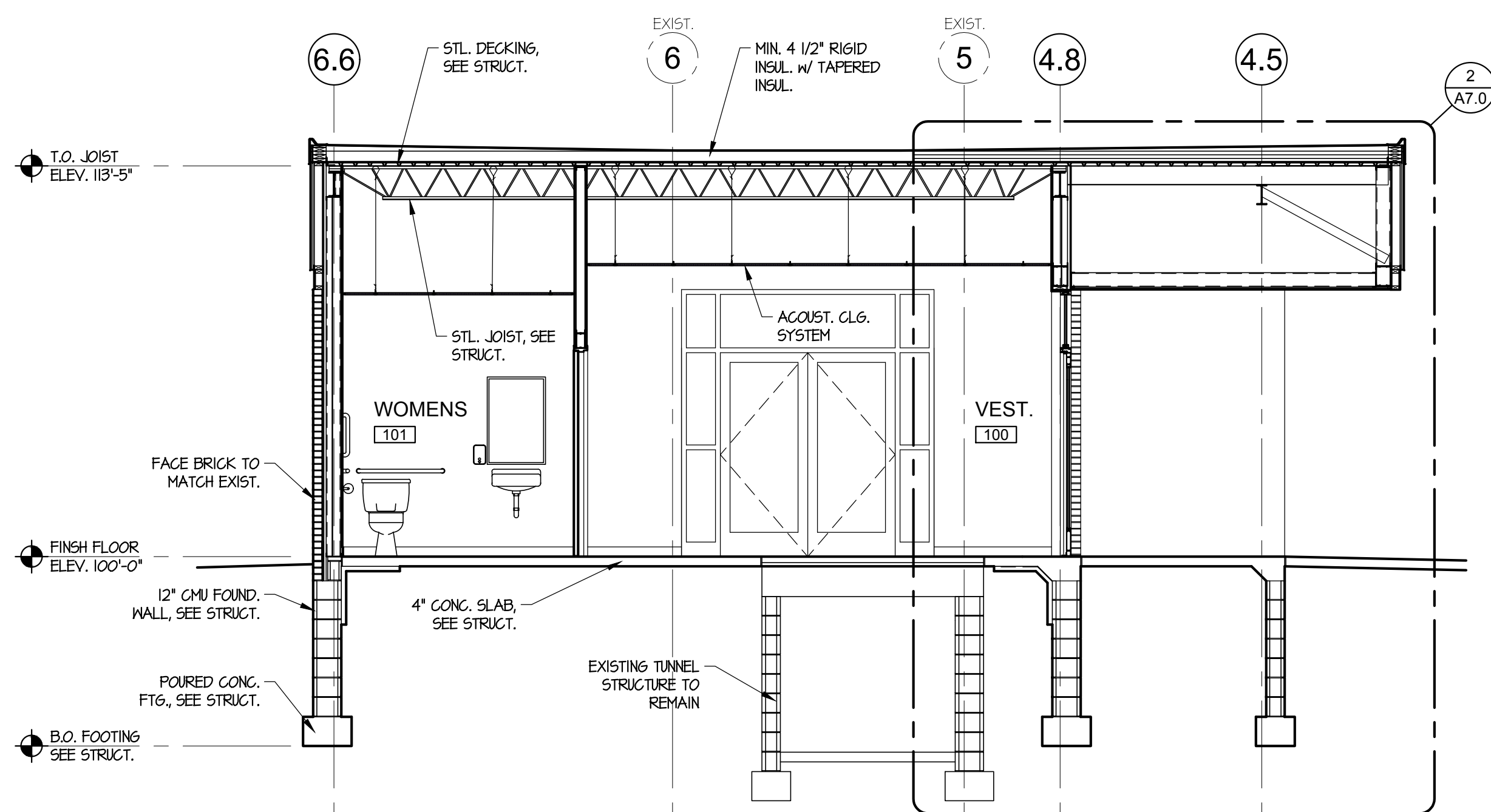
SCALE: 1/4" = 1'-0"



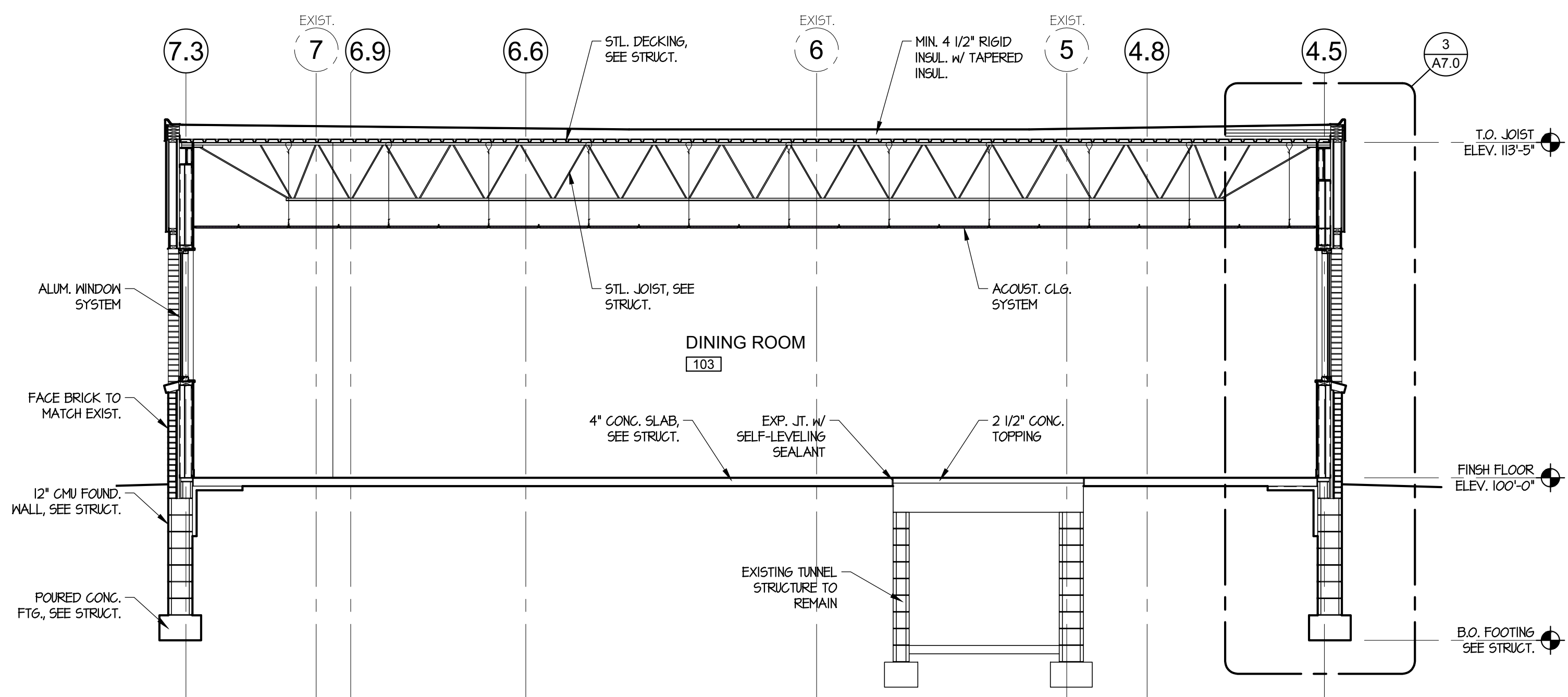
4 WALL SECTION
SCALE: 3/4" = 1'-0"



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



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



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

GENERAL ELECTRICAL NOTES & SPECIFICATIONS:

1. EXECUTE THE WORK REQUIRED IN A MANNER EVIDENCED AS THE "BEST TRADE PRACTICES" CONTRIBUTING TO EFFICIENCY OF OPERATION, MINIMUM MAINTENANCE, ACCESSIBILITY AND AESTHETICS OF THE INSTALLATION.

2. MECHANICAL AND ELECTRICAL PLANS ARE DIAGRAMMATIC IN NATURE, INTENDED TO INDICATE DESIGN INTENT ONLY. CONTRACTOR IS RESPONSIBLE TO COORDINATE SPECIFIC LOCATIONS OF ITEMS AND ADJUST AS REQUIRED TO ACCOMMODATE CODE REQUIREMENTS, MANUFACTURER'S INSTALLATION REQUIREMENTS, AND THE WORK OF OTHER TRADES.

3. MECHANICAL AND ELECTRICAL INFORMATION IS PRESENTED ON AN X-REFERENCED BACKGROUND PLAN. IN CASE OF CONFLICT BETWEEN BACKGROUND PLAN AND ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL FLOOR PLAN SHALL GOVERN.

4. RUN ALL PIPING, CONDUIT, ETC. CONCEALED IN WALLS WHENEVER POSSIBLE AND AVOID EXPOSED INSTALLATION UNLESS SPECIFICALLY REQUIRED (TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS). IN ANY LOCATIONS WHERE CONCEALMENT IS NOT POSSIBLE, CONTACT ENGINEER PRIOR TO INSTALLATION FOR PERMISSION FROM ENGINEER.

5. THE ENGINEER WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES. ENGINEER IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK; AND WILL NOT BE RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THOSE DOCUMENTS PREPARED BY THE ENGINEER.

6. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH CURRENT CODES, INCLUDING: MICHIGAN BUILDING CODE, MICHIGAN PLUMBING CODE, MICHIGAN MECHANICAL CODE, NATIONAL ELECTRICAL CODE (NEC), MICHIGAN BUILDING REHABILITATION CODE (WHEN APPLICABLE), NFPA CODES, LIFE SAFETY CODE (WHEN APPLICABLE), AMERICANS WITH DISABILITIES ACT (ADA), MICHIGAN BARRIER FREE CODES, MICHIGAN ENERGY CODE, MICHIGAN DEPARTMENT OF PUBLIC HEALTH CODES (WHEN APPLICABLE), AND ALL OTHER LOCAL, STATE, AND FEDERAL APPLICABLE CODES. THE CONTRACTOR SHALL UTILIZE THE LATEST ADOPTED EDITIONS OF ALL CODES.

7. IF BIDDING CONTRACTOR WOULD LIKE TO SUBSTITUTE ANY SPECIFIED ELECTRICAL DEVICES, LIGHT FIXTURES, CONTROLLERS, PANELS, DISCONNECTS, VFD'S, ELEC. GEAR, ETC., THEY MUST PROVIDE SUBMITTAL TYPE DRAWINGS TO THE ENGINEER A MINIMUM OF 7 DAYS PRIOR TO BIDDING THE PROJECT. IF THESE APPROVAL DRAWINGS ARE NOT SUBMITTED AND APPROVED, THE SPECIFIED EQUIPMENT MUST BE USED - NO EXCEPTIONS.

8. EQUIPMENT AND MATERIALS SHALL BE UL APPROVED AND SPECIFICATION GRADE.

9. ELECTRICAL CONTRACTORS SHALL SECURE PERMITS AND INSPECTIONS REQUIRED BY STATE AND LOCAL LAWS AND ORDINANCES AND PAY ALL FEES AND EXPENSES IN CONNECTION THEREWITH AS A PART OF THEIR WORK UNDER THIS CONTRACT.

10. UPON COMPLETION OF WORK, FURNISH OWNER CERTIFICATES OF FINAL INSPECTION AND APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

11. ALL CONDUCTORS SHALL BEAR IDENTIFICATION AS TO SIZE AND TYPE OF INSULATION AND SHALL BE EQUIPPED WITH WIRE MARKERS INDICATING THE CIRCUIT NUMBER, WIRE NUMBER AND/OR PHASE LETTER.

12. IDENTIFY ELECTRICAL EQUIPMENT WITH THE NAME OF THE EQUIPMENT, THE EQUIPMENT CONTROLLED, OR THE SYSTEM INVOLVED. DISCONNECT SWITCHES AND MOTOR STARTERS SHALL HAVE NAMEPLATES TO INDICATE THE EQUIPMENT THEY CONTROL. ALL ELECTRICAL EQUIPMENT POWER PANELS SHALL HAVE NAMEPLATES DESIGNATING THEIR NAMES AND VOLTAGE RATING, SUCH AS LP-A, 120/208 VOLT, 3 PHASE, 4 WIRE. NAMEPLATES SHALL BE ENGRAVED THREE-LAYER PLASTIC, BLACK LETTERS ON WHITE BACKGROUND FOR NORMAL POWER AND WHITE LETTERS ON RED BACKGROUND FOR EMERGENCY/STANDBY POWER PANELS AND ASSOCIATED EQUIPMENT. NO HANDWRITTEN OR PRINTED LABELING WILL BE ACCEPTED AS FINAL RECORD UPON PROJECT COMPLETION. NAMEPLATES SHALL BE A MINIMUM OF 1" X 3", OR AS NOTED ON NAMEPLATE SCHEDULE IF THERE IS ONE ON DRAWINGS. AS A TEXT SIZE MINIMUM:

A. SWITCHBOARD OR PANELBOARD MAINS: 1" HIGH

B. SWITCHBOARD OR PANELBOARD BRANCHES: ½" HIGH

C. STARTERS/DISCONNECTS: ½" HIGH

D. MANUAL MOTOR STARTERS: ¼" HIGH

13. PANEL SCHEDULES SHALL BE TYPEWRITTEN AND INSTALLED FOR EVERY PANEL, BE IT NEW OR EXISTING. FOR EXISTING PANELS, CIRCUITRY SHALL BE VERIFIED PRIOR TO UPDATING PANEL SCHEDULE. HANDWRITTEN SCHEDULES, AND/OR CROSSED OFF EXISTING SCHEDULES ARE NOT ACCEPTABLE.

14. ALL WORK AND MATERIALS SHALL BE GUARANTEED IN WRITING FOR (1) YEAR FROM PROJECT COMPLETION UNLESS A FURTHER GUARANTEE IS NOTED ELSEWHERE.

15. ALL SWITCHES, RECEPTACLES, SMALL MANUAL MOTOR STARTERS, OR TOGGLE SWITCHES SHALL HAVE THE CIRCUIT NUMBER IDENTIFIED ON THE DEVICE COVER PLATE USING CLEAR ADHESIVE TAPE LABELS WITH ¼" HIGH PRINTED BLOCK CHARACTERS IN BLACK. NO HANDWRITTEN LABELS WILL BE ACCEPTED AS FINAL RECORD.

16. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH CONDITIONS OF WHICH WILL AFFECT THE WORK HE IS TO PERFORM. THE SUBMISSION OF A PROPOSAL BY THIS CONTRACTOR SHALL BE CONCLUSIVE EVIDENCE THAT THIS CONTRACTOR HAS VISITED THE SITE AND HAS GIVEN PROPER CONSIDERATION AND EVALUATION OF THESE CONDITIONS IN THE PREPARATION OF HIS PROPOSAL. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE ON HIS BEHALF FOR EXTRA EXPENSE INCURRED DUE TO FAILURE OR NEGLECT ON HIS PART TO MAKE THIS VISIT AND EXAMINATION.

17. WHERE ACTIVE SEWERS, GAS, ELECTRIC, OR OTHER SERVICES ARE ENCOUNTERED DURING THE PERFORMANCE OF THIS CONTRACT, THE CONTRACTOR SHALL PROTECT, BRACE AND SUPPORT THEM AS REQUIRED. DO NOT PREVENT, INTERRUPT OR DISTURB OPERATION OF EXISTING SERVICES THAT ARE TO REMAIN. RELOCATE EXISTING SERVICES IF/AS REQUIRED.

18. THE CONTRACTOR SHALL CHECK THE UTILITY COMPANIES AND MUNICIPAL AGENCIES FOR EXACT LOCATIONS OF SERVICES WHICH THEY MAY EXPECT TO ENCOUNTER.

19. IN GENERAL, MOUNTING HEIGHTS ABOVE FINISHED FLOOR TO THE CENTERLINE OF BOXES AND EQUIPMENT SHALL BE AS PER AMERICANS WITH DISABILITIES ACT, AND MICHIGAN BARRIER FREE CODES.

20. WORK SHALL BE PERFORMED BY SKILLED MECHANICS WELL VERSED IN THEIR PARTICULAR TRADES.

21. RESPONSIBILITY FOR CARE AND PROTECTION OF ELECTRICAL WORK RESTS WITH THE CONTRACTOR UNTIL IS HAS BEEN TESTED AND ACCEPTED.

22. CONTRACTOR IS TO CHECK DOOR SWINGS WITH ARCHITECTURAL PLANS AND MOUNT LIGHT SWITCHES, CONTROLS, ETC., ACCORDINGLY. VERIFY WITH LATEST ARCHITECTURAL DRAWINGS.

23. ELECTRICAL EQUIPMENT SHALL BE SQUARE D, SIEMENS, EATON, G.E. OR MATCH EXISTING.

24. DISCONNECT SWITCHES SHALL BE NEMA HEAVY DUTY, FUSIBLE OR NON-FUSIBLE AS NOTED ON PLANS, WITH A NEMA 3R ENCLOSURE WHEN MOUNTED OUTDOORS.

25. THE NEUTRAL CONDUCTOR OF THE WIRING SYSTEM TOGETHER WITH THE CONDUIT SYSTEM AND SERVICE EQUIPMENT SHALL BE GROUNDED AND SIZED PER NEC ARTICLE 250 – SEE DETAIL ON DRAWINGS ALSO.
26. HOLES THROUGH WALLS OR PARTITIONS REQUIRED FOR ELECTRICAL WORK SHALL BE NEATLY CUT TO SIZE. CONDUITS PENETRATING OUTSIDE WALLS SHALL BE SEALED ACCORDINGLY. UNDERGROUND CONDUITS SHALL HAVE LINK SEALS. PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE FIRE STOPPED BY APPROVED METHODS AND MATERIALS. NO BEAMS OR OTHER STRUCTURAL MEMBERS SHALL BE DRILLED, BURNED, OR CUT.

27. LOCATIONS OF WIRING DEVICES SUCH AS LIGHT SWITCHES, DUPLEX RECEPTACLES, THERMOSTATS, ETC., SHALL BE COORDINATED WITH OTHER TRADES.

28. IN GENERAL, ALL MOTORS ARE FURNISHED AND INSTALLED UNDER THE MECHANICAL SECTION OF THE SPECIFICATIONS. ALL STARTERS, FUSED SWITCHES, SAFETY SWITCHES, INCLUDING ALL POWER WIRING SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.

29. OUTLET BOXES IN THE SAME WALL BUT SERVING DIFFERENT ROOMS SHALL BE AT LEAST 4" APART TO MINIMIZE NOISE TRANSMISSION. WHEN LOCATED ON FIRE WALLS, THEY SHALL BE 24" APART.

30. LIGHTING AND CONTROL WIRING SHALL BE TESTED FOR SHORTS AND OPENS AND SHALL BE GIVEN A COMPLETE OPERATIONAL TEST.

31. THE CONTRACTOR SHALL TEST ALL CIRCUITS AS SOON AS CONDUCTORS ARE INSTALLED AND MAKE FINAL TESTS WHEN ALL WORK IS COMPLETE. IF CIRCUITS ARE NOT PROPERLY CONTROLLED AND INSULATED AT TIME OF EACH FINAL TEST, THE NECESSARY REPAIRS AND TESTS SHALL BE MADE AT THE CONTRACTORS EXPENSE.

32. ELECTRICAL EQUIPMENT SHALL MEET INSTALLATION STANDARDS PROVIDED IN NEC ARTICLE 110. COORDINATE LOCATIONS OF M.E.P. ITEMS WITH CONTRACTORS PRIOR TO CONSTRUCTION TO ASSURE THAT CLEARANCES ARE MET. LACK OF COORDINATION BETWEEN CONTRACTORS WILL NOT RESULT IN EXTRA MONIES AWARDED FOR RELOCATION OF M.E.P. ITEMS.

33. CHECK FINAL LOCATIONS OF LIGHT FIXTURES AND CEILING ELECTRICAL ITEMS WITH GRILLES AND REGISTERS, CAMERAS, FANS, SPRINKLER HEADS, ETC. COORDINATE WITH RESPECTIVE CONTRACTORS PRIOR TO INSTALLATION. NO MONIES WILL BE AWARDED TO CONTRACTORS HAVING TO RELOCATE ITEMS DUE TO LACK OF COORDINATION BETWEEN CONTRACTORS. MECHANICAL AND ELECTRICAL PLANS SHOW SCHEMATIC LOCATIONS ONLY – REFERENCE ARCHITECTURAL REFLECTIVE CEILING PLANS.

34. ANY DISCREPANCIES BETWEEN ARCHITECTURAL DRAWINGS AND ELECTRICAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

35. CONTRACTOR SHALL MAINTAIN AND KEEP AN UP-TO-DATE SET OF DRAWINGS REFLECTING "AS BUILT" CONDITIONS OF THEIR WORK. CONTRACTOR SHALL INDICATE EXACT DIMENSIONS AND ELEVATIONS FOR ALL UNDERGROUND AND/OR CONCEALED WORK. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL DELIVER TO THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR THE "AS BUILT" DRAWINGS. AS BUILT DRAWINGS MUST BE IN THE POSSESSION OF THE C.M. OR G.C. PRIOR TO FINAL PAYMENT TO THE E.C.

36. THE WIRING METHOD(S) USED SHALL BE SUITABLE FOR THE INSTALLATION AND USE IN CONFORMITY WITH THE PROVISIONS PROVIDED BY THE NEC, LISTED OR LABELED EQUIPMENT SHALL BE USED OR INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING. REFER TO NEC, SECTION 110.3(A) AND (B).

37. THE MAIN SERVICE DISCONNECTS SHALL BE IDENTIFIED AS THE MAIN SERVICE DISCONNECTION MEANS PER NEC 2023, ARTICLE 230.70(B).

38. CONTRACTOR SHALL CHECK ELECTRICAL FLOOR PLANS FOR "ISLAND" TYPE ELECTRICAL OUTLETS AND INSTALL UNDER-FLOOR CONDUITS AND WIRING ACCORDINGLY. SEE PLANS.

39. ARC-FLASH HAZARD WARNING SHALL BE PROVIDED AT ALL ELECTRICAL PANELS PER NEC 2023, SECTION 110.16

40. FIRST CLASS WORKABLE SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR. IF, IN THE OPINION OF THE CONTRACTOR, CHANGES IN THE DRAWINGS OR SPECIFICATIONS ARE REQUIRED TO PRODUCE FIRST-CLASS WORKABLE SYSTEMS, CONTRACTOR SHALL REQUEST AN INTERPRETATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. IF THE CONTRACTOR FAILS TO MAKE SUCH A REQUEST, NO EXCUSE WILL THEREAFTER BE ENTERTAINED FOR FAILURE TO PROVIDE FIRST-CLASS WORKABLE SYSTEMS. ENGINEER HAS THE FINAL SAY AS TO WHAT IS CONSIDERED "FIRST CLASS WORKABLE SYSTEMS".

41. SHOP DRAWINGS ARE TO BE THOROUGHLY CHECKED (AND NOTED SO ON FRONT COVER) BY THE CONTRACTOR PRIOR TO SUBMITTING THEM TO THE ARCHITECT/ENGINEER. REVIEW BY THE ENGINEER SHALL NOT BE CONSTRUED AS A COMPLETE CHECK, BUT ONLY THAT THE GENERAL METHOD OF CONSTRUCTION AND DETAILING IS SATISFACTORY. REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS WHICH MAY EXIST. SHOP DRAWINGS ARE TO BE SUBMITTED VIA INTERNET IN PDF FORM. NO HARD COPIES WILL BE ACCEPTED. IF E.C. DOES NOT REVIEW DRAWINGS AND NOTES SAME ON FRONT COVER PRIOR TO SUBMITTAL TO ARCHITECT/ENGINEER, THEY WILL BE REJECTED.

42. ELECTRICAL CONTRACTOR IS TO REFER TO THE TEMPERATURE CONTROL SECTION OF THE SPECIFICATIONS AND THE MECHANICAL EQUIPMENT SCHEDULE FOR DEFINITION OF WHICH TRADES ARE RESPONSIBLE FOR HVAC INTERLOCKS AND OPERATIONAL SWITCHES.

43. ALL ROOF EQUIPMENT THAT HAS POWER TO IT MUST BE PROVIDED WITH A DUPLEX RECEPTACLE (WP AND GFI) WITHIN 25 FEET OF THE UNIT. MOUNT RECEPTACLES ON HOUSING, CIRCUIT WITH NEARBY RECEPTACLES BELOW, AND NOT WITH ROOF UNIT PER NEC NOTE: ROOF RECEPTACLES MAY OR MAY NOT BE SHOWN ON PLANS

44. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO CHECK THE RELATED MECHANICAL/KITCHEN/ REFRIGERATION/ELEVATOR/ETC. DRAWINGS TO SEE WHAT DISCONNECT SWITCHES/STARTERS/RELAYS/ETC. ARE PACKAGED IN BY THE SPECIFIC EQUIPMENT SUPPLIERS. IF NONE ARE SPECIFICALLY NOTED THE E.C. IS RESPONSIBLE TO PROVIDE AND INSTALL AS REQUIRED FOR SEQUENCES OF OPERATION. E.C. IS TO REVIEW MECHANICAL/KITCHEN/REFRIGERATION/ELEVATOR/ETC. SEQUENCES OF OPERATION, FOUND IN SECTIONS OF THE DRAWINGS AND SPECIFICATIONS OTHER THAN THE ELECTRICAL SECTIONS FOR SAID SEQUENCES. DISCONNECT SWITCHES/STARTERS/RELAYS/ETC. MAY OR MAY NOT BE SHOWN ON THE ELECTRICAL DRAWINGS.

45. MANUALS: PER MICHIGAN ENERGY CODES (SPECIFICALLY ASHRAE 90.1 STANDARDS), CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER. THE MANUALS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:

A. SUBMITTAL DATA FOR ALL ELECTRICAL EQUIPMENT CLEARLY STATING EQUIPMENT RATING, EXACTLY WHAT MODELS, ACCESSORIES, OPTIONS ARE INSTALLED.

B. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.

C. NAMES AND ADDRESSES AND PHONE NUMBERS/EMAIL ADDRESSES FOR AT LEAST ONE QUALIFIED SERVICE AGENCY FOR EACH PIECE OF EQUIPMENT. A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

46. WIRING TO BE MINIMUM #12 (FOR RUNS OVER 100 FEET, MINIMUM #10).

47. ALL EQUIPMENT INSTALLED AS PART OF THIS PROJECT SHALL BE NEW, REFURBISHED EQUIPMENT MAY BE USED WHERE NEC ALLOWS.

48. CONTRACTOR IS RESPONSIBLE TO PERFORM THE SHORT CIRCUIT STUDY FOR THE PROJECT AND THAT ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED TO MEET THOSE REQUIREMENTS.	49. ALL ABOVE GROUND WIRING TO BE INSTALLED IN EMT (THINWALL CONDUIT) UNLESS ROMEX IS EXPLICITLY ALLOWED.	50. OCCUPANCY AND TOGGLE SWITCHES AS WELL AS RECEPTACLES SHALL BE SPECIFICATION GRADE, COLOR TO BE CHOSEN BY ARCHITECT DURING SHOP DRAWING STAGE.	51. DEVICE PLATES FOR SWITCHES, RECEPTACLES, TELEPHONE, COMPUTER, ETC., SHALL BE AS MANUFACTURED PASS AND SEYMOUR, HUBBELL, OR BRYANT. THEY SHALL BE 0.040" THICK BRUSHED STAINLESS STEEL UNLESS NOTED OTHERWISE. FOR EXISTING PROJECTS, COVER PLATES SHALL MATCH OTHERS IN THE AREA UNLESS NOTED OTHERWISE.	52. ALL BUSSING AND WIRING TO BE COPPER. NO ALUMINUM IS ALLOWED ON THIS PROJECT.	53. ALL NEW ELECTRICAL DEVICES AND ASSOCIATED OUTLET BOXES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. ALL CONDUIT AND WIRING SHALL BE CONCEALED. SURFACE RACEWAY AND ASSOCIATED BOXES SHALL ONLY BE PERMITTED WHERE NOTED AND SHALL BE DISCUSSED WITH C.M. OR G.C. PRIOR TO INSTALLATION.	54. CONNECT ALL EMERGENCY AND EXIT BATTERY PACKS TO NEARBY LIGHTING CIRCUITS AHEAD OF SWITCHES PER NEC 50 EMERGENCY/EXIT LIGHTS OPERATE ON LOSS OF POWER.	55. ELECTRICAL CONTRACTOR SHALL "RING OUT" ALL CIRCUITS IN EXISTING PANELBOARDS AFFECTED BY THE WORK OF THIS PROJECT AND PROVIDE UPDATED TYPED PANELBOARD DIRECTORIES. PROVIDE BLANK COVERS WHERE BREAKERS HAVE BEEN REMOVED.
END OF ELECTRICAL NOTES/SPECIFICATIONS							
"	INCHES	LT	LIGHT	"	INCHES	LT	LIGHT
#	NUMBER	LTG	LIGHTING	#	NUMBER	LTG	LIGHTING
1P	1 POLE (2P, 3P, 4P, ETC.)	LV	LOW VOLTAGE	1P	1 POLE (2P, 3P, 4P, ETC.)	LV	LOW VOLTAGE
@	AT	M.C.	MECHANICAL CONTRACTOR	@	AT	M.C.	MECHANICAL CONTRACTOR
A	AMPERE	M.E.P.	MECHANICAL ELECTRICAL PLUMBING	A	AMPERE	M/C	MOMENTARY CONTACT
A.F.F.	ABOVE FINISHED FLOOR	MAGS	MAGNETIC STARTER	A.F.F.	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ACLG	ABOVE CEILING	MCC	MOTOR CONTROL CENTER	ACLG	ABOVE CEILING	MCP	MAIN CIRCUIT BREAKER
ADO	AUTOMATIC DOOR OPENER	MDC	MAIN DISIRBUTION CENTER	ADO	AUTOMATIC DOOR OPENER	MDF	MAIN DISTRIBUTION PANEL
AF	AMP FRAME	MFR	MANUFACTURER	AF	AMP FRAME	MFS	MAIN FUSED DISCONNECT SWITCH
AFCI	ARC FAULT COMBINATION CIRCUIT INTERRUPTER	MH	MAIN HOLE	AFCI	ARC FAULT COMBINATION CIRCUIT INTERRUPTER	MIC	MICROPHONE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM	AFG	ABOVE FINISHED GRADE	MISC	MISCELLANEOUS
AHU	AIR HANDLING UNIT	MLO	MAIN LUGS ONLY	AHU	AIR HANDLING UNIT	MMS	MANUAL MOTOR STARTER
AL	ALUMINUM	MOA	MULTIOUTLET ASSEMBLY	AL	ALUMINUM	MSBD	MAIN SWITCHBOARD
ALT	ALTERNATE	MOUNT	MOUNT	ALT	ALTERNATE	MSP	MOTOR STARTER PANELBOARD
AMP	AMPERE	MT	EMPTY CONDUIT	AMP	AMPERE	MTR	MOTOR, MOTORIZED
AMPL	AMPLIFIER	MTC	MOTOR, MOTORIZED	AMPL	AMPLIFIER	MTS	MANUAL TRANSFER SWITCH
ANUN	ANNUNCIATOR	N.C.	NORMALLY CLOSED	ANUN	ANNUNCIATOR	N.O.	NORMALLY OPEN
APPROX	APPROXIMATELY	NEC	NATIONAL ELECTRICAL CODE	APPROX	APPROXIMATELY	NEMA	NATIONAL ELEC MFR'S ASSOCIATION
AQ-STAT	AQUA-STAT	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH	AQ-STAT	AQUA-STAT	NIC	NOT IN CONTRACT
ARCH	ARCHITECT, ARCHITECTURAL	NL	NIGHT LIGHT	ARCH	ARCHITECT, ARCHITECTURAL	NPF	NORMAL POWER FACTOR
AS	AMP SWITCH	NTS	NOT TO SCALE	AS	AMP SWITCH	OH	OVERHEAD
AT	AMP TRIP	OL	OVERLOADS	AT	AMP TRIP	P	PLATE
ATS	AUTOMATIC TRANSFER SWITCH	PA	PUBLIC ADDRESS	ATS	AUTOMATIC TRANSFER SWITCH	PB	PULL BOX OR PUSHBUTTON
AUTO	AUTOMATIC	PE	PNEUMATIC ELECTRIC	AUTO	AUTOMATIC	PED	PEDESTAL
AUX	AUXILIARY	PF	POWER FACTOR	AUX	AUXILIARY	PH	PHASE
AV	AUDIO VISUAL	PIV	POST INDICATING VALVE	AV	AUDIO VISUAL	PNL	PANEL
AWG	AMERICAN WIRE GAUGE	PP	POWER POLE	AWG	AMERICAN WIRE GAUGE	PR	PAIR
B.F.	BOTTLE FILLER	PROJ	PROJECTION	B.F.	BOTTLE FILLER	PRV	POWER ROOF VENTILATOR
B.M.S.	BUILDING MANAGEMENT SYSTEM	PRT	POTENTIAL TRANSFORMER	B.M.S.	BUILDING MANAGEMENT SYSTEM	RCPT	RECEPTACLE
BATT	BATTERY	PVC	POLYVINYL CHLORIDE (CONDUIT)	BATT	BATTERY	REQD	REQUIRED
BLDG	BUILDING	PWR	POWER	BLDG	BUILDING	QUAN	QUANTITY
C	CONDUIT	RQPT	RECEPTACLE	C	CONDUIT	REX	REMOVE EXISTING
CAB	CABINET	RM	ROOM	CAB	CABINET	RSC	RIGID STEEL CONDUIT
CAT	CATALOG	RTU	ROOF TOP UNIT	CAT	CATALOG	S/N	SOLID NEUTRAL
CAT6	CATEGORY 6 CABLEING	S/S	STOP/START PUSHBUTTONS	CAT6	CATEGORY 6 CABLEING	SEC	SECONDARY
CATV	CABLE TELEVISION	SHT	SHEET	CATV	CABLE TELEVISION	SIM	SIMILAR
CB	CIRCUIT BREAKER	SP	SPARE	CB	CIRCUIT BREAKER	SPEC	SPECIFICATION
CCTV	CLOSED CIRCUIT TELEVISION	SR	SPEAKER	CCTV	CLOSED CIRCUIT TELEVISION	SS	STAINLESS STEEL
CK	CIRCUIT	SSW	SELECTOR SWITCH	CK	CIRCUIT	STA	STATION
CL	CONNECTED LOAD	STD	STANDARD	CL	CONNECTED LOAD	SURF	SURFACE MOUNTED
COF	COFFEE MAKER	SW	SWITCH	COF	COFFEE MAKER	SWB	SWITCHBOARD
COMB	COMBINATION	SWBD	SWITCHBOARD	COMB	COMBINATION	SWL	SWITCH WITH LIGHTS
CONN	CONNECTION	SYM	SYMMETRICAL	CONN	CONNECTION	SYS	SYSTEM
CONST	CONSTRUCTION	T-STAT	THERMOSTAT	CONST	CONSTRUCTION	TEL	TELEPHONE
CONT	CONTINUATION, CONTINUOUS	TEL	TELEPHONE	CONT	CONTINUATION, CONTINUOUS	TEL/DATA	TELEPHONE/DATA
CONTR	CONTRACTOR	TERM	TERMINAL	CONTR	CONTRACTOR	TL	TWIST LOCK
CP	CIRCULATING PUMP	TR	TAMPER RESISTANT	CP	CIRCULATING PUMP	TTC	TELEPHONE TERMINAL CABINET
CT	CURRENT TRANSFORMER	TV	TELEVISION	CT	CURRENT TRANSFORMER	TVTC	TELEVISION TERMINAL CABINET
CTR	CENTER	UC	UNDER COUNTER	CTR	CENTER	UCR	UNDER COUNTER REFRIGERATOR
CU	COPPER	UE	UNDERGROUND ELECTRICAL	CU	COPPER	UG	UNDERGROUND
DCP	DOMESTIC WATER CIRCULATING PUMP	UH	UNIT HEATER	DCP	DOMESTIC WATER CIRCULATING PUMP	UL	UNDERWRITERS LABORATORIES
DEPT	DEPARTMENT	UL	HAND-OFF-AUTO SWITCH	DEPT	DEPARTMENT	UT	UNDERGROUND TELEPHONE
DET	DETAIL	UTIL	UTILITY	DET	DETAIL	UV	UNIT VENTILATOR
DIA	DIAMETER	V	VOLT	DIA	DIAMETER	VA	VOLT-AMPERES
DISC	DISCONNECT	VDT	VIDEO DISPLAY TERMINAL	DISC	DISCONNECT	VERT	VERTICAL
DIST	DISTRIBUTION	VFD	VARIABLE FREQUENCY DRIVE	DIST	DISTRIBUTION	VIF	VERIPY IN FIELD
DL	DEMAND LOAD	VOL	VOLUME	DL	DEMAND LOAD	W	WATT
DN	DOWN	W	WATT	DN	DOWN	W.G.	WIRE GUARD
DPK	DAMPER	W/G	WIRE GUARD	DPK	DAMPER	W/	WITH
DS	DISCONNECT SWITCH	W/O	WITHOUT	DS	DISCONNECT SWITCH	WH	WATER HEATER
DWG	DRAWING	WP	WEATHERPROOF	DWG	DRAWING	XFMR	TRANSFORMER
E.C.	ELECTRICAL CONTRACTOR	XFR	TRANSFER	E.C.	ELECTRICAL CONTRACTOR	t	CENTER LINE
E.L.E.C.	ELECTRICAL	Δ	ANGLE	E.L.E.C.	ELECTRICAL	Δ	DELTA
ELEV	ELEVATOR			ELEV	ELEVATOR		
ELU	EMERGENCY LIGHTING UNIT			ELU	EMERGENCY LIGHTING UNIT		
EM	EMERGENCY			EM	EMERGENCY		
EMS	ENERGY MANAGEMENT SYSTEM			EMS	ENERGY MANAGEMENT SYSTEM		
EMT	ELECTRICAL METALLIC TUBING			EMT	ELECTRICAL METALLIC TUBING		
EP	ELECTRIC PNEUMATIC			EP	ELECTRIC PNEUMATIC		
EQUIP	EQUIPMENT			EQUIP	EQUIPMENT		
EW	ELECTRIC WATER COOLER			EW	ELECTRIC WATER COOLER		
EXH	EXHAUST			EXH	EXHAUST		
EXIST	EXISTING			EXIST	EXISTING		
EXP	EXPLOSION PROOF			EXP	EXPLOSION PROOF		
FA	FIRE ALARM			FA	FIRE ALARM		
FAAP	FIRE ALARM ANNUNCIATOR PANEL			FAAP	FIRE ALARM ANNUNCIATOR PANEL		
FABP	FIRE ALARM BOOSTER SUPPLY PANEL			FABP	FIRE ALARM BOOSTER SUPPLY PANEL		
FACP	FIRE ALARM CONTROL PANEL			FACP	FIRE ALARM CONTROL PANEL		
FASP	FIRE ALARM SLAVE PANEL			FASP	FIRE ALARM SLAVE PANEL		
FCU	FAN COIL UNIT			FCU	FAN COIL UNIT		
FIXT	FIXTURE			FIXT	FIXTURE		
FLR	FLOOR			FLR	FLOOR		
FU	FUSE			FU	FUSE		
FUDS	FUSED DISCONNECT SWITCH			FUDS	FUSED DISCONNECT SWITCH		
G.C.	GENERAL CONTRACTOR			G.C.	GENERAL CONTRACTOR		
GA	GAUGE			GA	GAUGE		
GAL	GALLON			GAL	GALLON		
GALV	GALVANIZED			GALV	GALVANIZED		
GEN	GENERATOR			GEN	GENERATOR		
GFI	GROUND FAULT CIRCUIT INTERRUPTER			GFI	GROUND FAULT CIRCUIT INTERRUPTER		
GFP	GROUND FAULT PROTECTION			GFP	GROUND FAULT PROTECTION		
GND	GROUND			GND	GROUND		
GRS	GALVANIZED RIGID STEEL (CONDUIT)			GRS	GALVANIZED RIGID STEEL (CONDUIT)		
GYP	GYPSUM BOARD			GYP	GYPSUM BOARD		
H.V.A.C.	HEATING, VENTILATING & AIR CONDITIONING			H.V.A.C.	HEATING, VENTILATING & AIR CONDITIONING		
HOA	HAND-OFF-AUTO SWITCH			HOA	HAND-OFF-AUTO SWITCH		
HORIZ	HORIZONTAL			HORIZ	HORIZONTAL		
HP	HORSEPOWER			HP	HORSEPOWER		
HPF	HIGH POWER FACTOR			HPF	HIGH POWER FACTOR		
HT	HEIGHT			HT	HEIGHT		
HTR	HEATER			HTR	HEATER		
HV	HIGH VOLTAGE			HV	HIGH VOLTAGE		
I/W	INTERLOCK WITH			I/W	INTERLOCK WITH		
IC	INTERRUPTING CAPACITY			IC	INTERRUPTING CAPACITY		
IG	ISOLATED GROUND			IG	ISOLATED GROUND		
IMC	INTERMEDIATE METAL CONDUIT			IMC	INTERMEDIATE METAL CONDUIT		
IR	INFRARED			IR	INFRARED		
J-BOX	JUNCTION BOX			J-BOX	JUNCTION BOX		
KV	KILOVOLT			KV	KILOVOLT		
KVA	KILOVOLT-AMPERE			KVA	KILOVOLT-AMPERE		
KVAR	KILOVOLT- AMPERE RECTIVE			KVAR	KILOVOLT- AMPERE RECTIVE		
KW	KILOWATT			KW	KILOWATT		
KWC	KILOWATT CONNECTED			KWC	KILOWATT CONNECTED		
KWD	KILOWATT DEMAND			KWD	KILOWATT DEMAND		
KWH	KILOWATT HOUR			KWH	KILOWATT HOUR		
LOC	LOCATE OR LOCATION			LOC	LOCATE OR LOCATION		
LP	LIGHTNING PDETECTION			LP	LIGHTNING PDETECTION		

ABBREVIATIONS

PHASE LINE TYPES

- NEW
- EXISTING
- DEMOLISHED

ELECTRICAL FIXTURE LEGEND

- DUPLEX RECEPTACLE AT 46" AFF
- DUPLEX RECEPTACLE AT 18" AFF
- SPLIT-CIRCUIT DUPLEX RECEPTACLE AT 18" AFF
- QUAD RECEPTACLE AT 18" AFF
- JUNCTION BOX
- DISCONNECT SWITCH, NON-FUSED, HEAVY DUTY, HP-RATED - ASSUME 30 AMP SWITCH UNO ON ONE LINE DIAGRAM OR FLOOR PLANS.
- MANUAL MOTOR STARTER

DATA LEGEND

- ▽

DATA ROUGH-IN

LIGHTING DEVICE SCHEDULE

- DIMMER SWITCH
- LOW VOLTAGE SWITCH
- WALL OCCUPANCY SENSOR SWITCH
- SWITCH
- CEILING MOUNTED OCCUPANCY SENSOR
- ROOM CONTROLLER

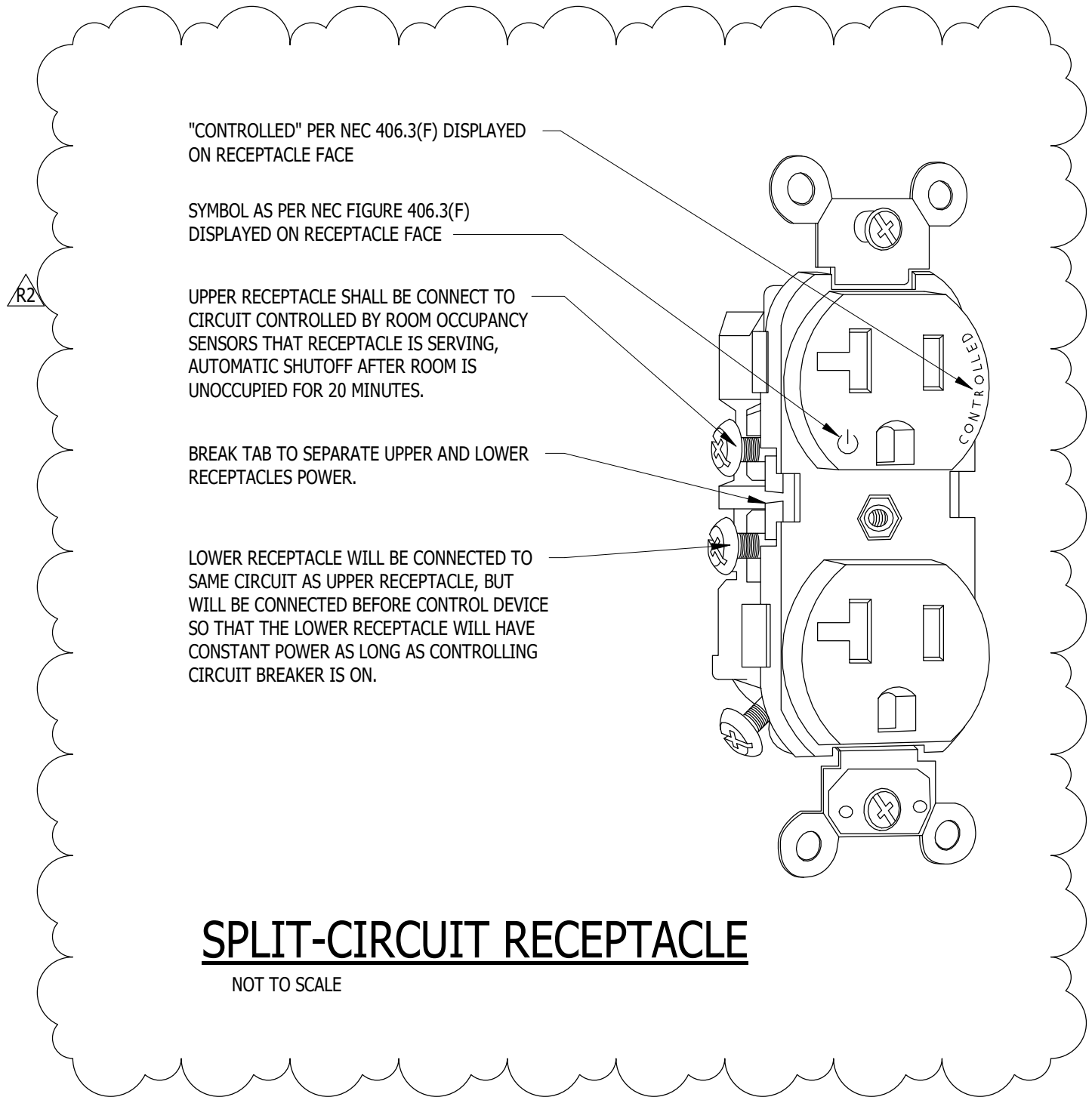
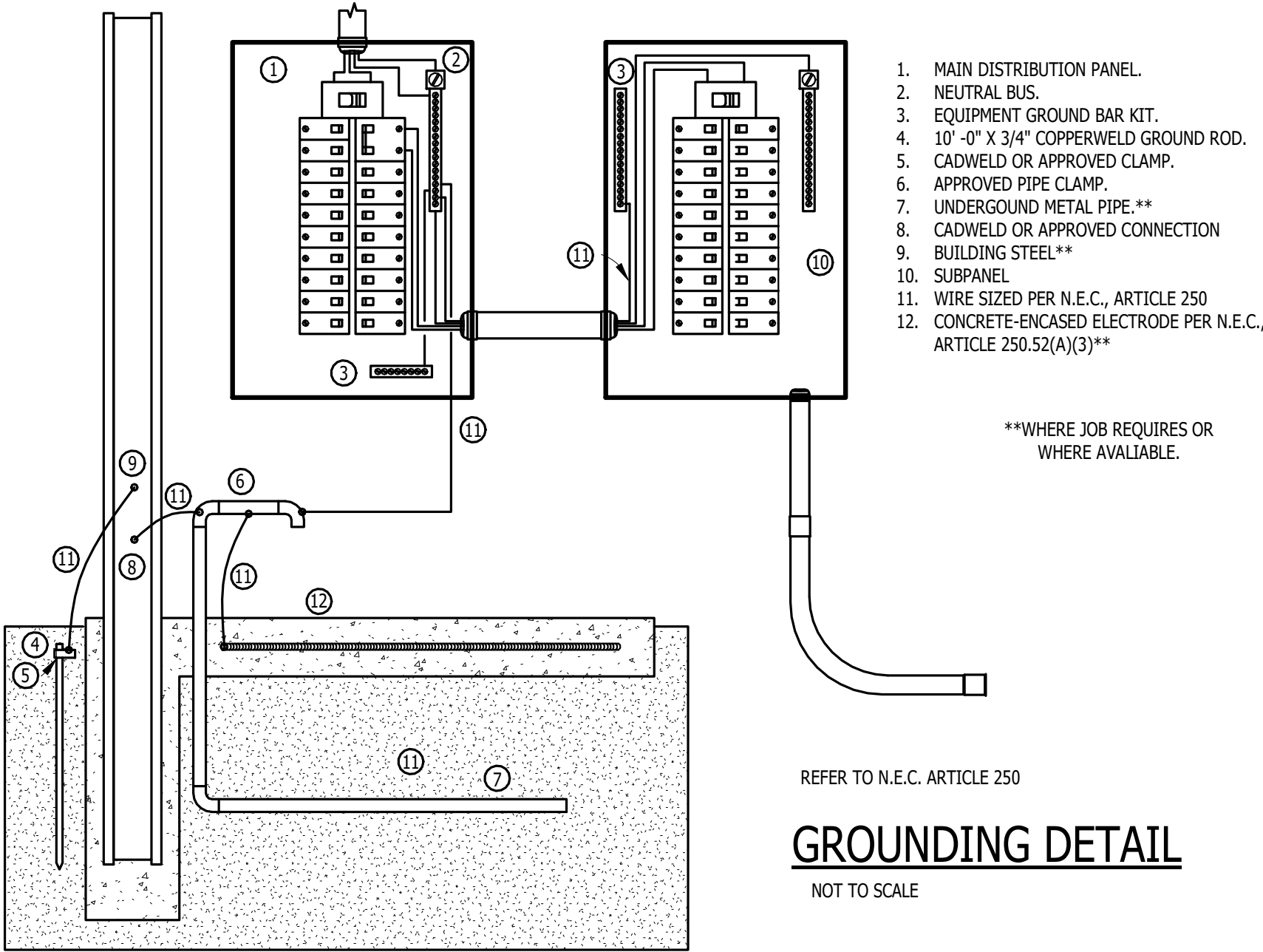
LIGHTING FIXTURE LEGEND

- EXIT SIGN
- PENDANT FIXTURE
- RECESSED DOWN ROUND FIXTURE
- 2' X 2' FIXTURE
- 2' X 2' FIXTURE WITH BATTERY-BACKUP
- 2' X 4' FIXTURE
- WALL SCONCE



RECEPTACLE CONTROL MATRIX				
KEYNOTE	TYPE	SENSOR	FULL OFF TIME	NOTES
A	OCCUPANCY SENSOR	AUTO ON/OFF	20 MINS	RECEPTACLE CONTROL SHALL ONLY CONTROL SPLIT-CIRCUIT RECEPTACLES.

1. POWERED THROUGH OUTSIDE UNIT "CU-1".
2. E.C. TO USE EXISTING CIRCUIT FOR NEW RECEPTACLES.
3. RECEPTACLE FOR ELECTRIC WATER HEATER "EWH-1" LOCATED ABOVE CEILING. E.C. TO COORDINATE RECEPTACLE WITH "EWH-1" INSTALLER.
4. ELECTRIC HAND DRYER SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR, ALONG TO "WORLD DRY" SANITIZE+DRY. FINISH TO BE DECIDED BY OWNER. 120/160. 950 WATTS. DEDICATED 15 AMP CIRCUIT. HEIGHT PER ARCHITECTURAL DRAWINGS.
5. POWER FOR COFFEE STATION, VERIFY LOCATION WITH OWNER.
6. PORTABLE SALAD BAR, VERIFY LOCATION WITH OWNER.
7. E.C. VERIFY POWER FOR DROP DOWN SCREEN. E.C. TO VERIFY LOCATION WITH OWNER.
8. HOT SERVING LINE, E.C. TO VERIFY LOCATION WITH OWNER.



FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE

COPPER CONDUCTORS							ALUMINUM CONDUCTORS				
OVERCURRENT DEVICE RATING (AMPERES)	WIRE SIZE (AWG OR KCMIL)		CONDUIT SIZE				WIRE SIZE (AWG OR KCMIL)		CONDUIT SIZE		
	PHASE & NEUTRAL	GROUND	SINGLE PHASE 2 WIRE+G (1PH,1IN,1G)	SINGLE PHASE 3 WIRE+G (2PH,1IN,1G)	THREE PHASE 3 WIRE+G (3PH,1G)	THREE PHASE & NEUTRAL 4 WIRE+G (3PH,1IN,1G)	PHASE & NEUTRAL	GROUND	SINGLE PHASE 3 WIRE+G (2PH,1IN,1G)	THREE PHASE 3 WIRE+G (3PH,1G)	THREE PHASE & NEUTRAL 4 WIRE+G (3PH,1IN,1G)
15-20	12	12	3/4"	3/4"	3/4"	3/4"	NOT ACCEPTABLE				
25-30	10	10	3/4"	3/4"	3/4"	3/4"					
35-40	8	10	3/4"	3/4"	3/4"	3/4"					
45-50	8 (6)	10	3/4"	3/4"	3/4"	3/4"					
60	6 (4)	10	3/4"(1)	3/4"(1)	3/4"(1)	3/4"(1)					
70	4	8	1"	1 1/4"	1 1/4"	1 1/4"					
80	4 (3)	8	1"	1 1/4"	1 1/4"	1 1/4"					
90-100	3 (2)	8	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1	6	1 1/2"	1 1/4"	1 1/2"
110	2 (1)	6	-	1 1/4"	1 1/4"	1 1/4" (1 1/2")	1/0	4	-	1 1/2"	2"
125	1 (1/0)	6	-	1 1/4" (1 1/2")	1 1/4" (1 1/2")	1 1/2"	2/0	4	-	1 1/2"	2"
150	1/0	6	-	1 1/2"	1 1/2"	1 1/2"	3/0	4	-	2"	2 1/2"
175	2/0	6	-	2"	2"	2"	4/0	4	-	2"	2 1/2"
200	3/0	6	-	2"	2"	2 1/2"	250	4	-	2"	3"
225	4/0	4	-	2"	2"	2 1/2"	300	2	-	2 1/2"	3"
250	250	4	-	2 1/2"	2 1/2"	2 1/2"	350	2	-	2 1/2"	3"
300	350	4	-	2 1/2"	2 1/2"	3"	500	2	-	3"	3 1/2"
350	500	3	-	3"	3"	3"	2-4/0	2-1/0	-	2-2"	2-2"
400	500	3	-	3"	3"	3"	2-250	2-1/0	-	2-2"	2-2 1/2"
450	2-4/0	2-2	-	2-2"	2-2"	2-2 1/2"	2-300	2-1/0	-	2-2 1/2"	2-3"
500	2-250	2-2	-	2-2 1/2"	2-2 1/2"	2-2 1/2"	2-350	2-1/0	-	2-2 1/2"	2-3"
600	2-350	2-1	-	2-2 1/2"	2-2 1/2"	2-3"	2-500	2-2/0	-	2-3"	2-3 1/2"
700	2-500	2-1/0	-	2-3"	2-3"	2-3"	2-600	2-3/0	-	2-3"	2-3 1/2"
800	3-500	2-1/0	-	2-3"	2-3"	2-3 1/2"	3-400	3-3/0	-	3-3"	3-3 1/2"
1000	3-400	3-2/0	-	3-3"	3-3"	3-3"	3-600	3-4/0	-	3-3 1/2"	3-3 1/2"
1200	3-600	3-3/0	-	3-3 1/2"	3-3 1/2"	3-3 1/2"	4-500	4-250	-	4-3"	4-3 1/2"
1600	4-600	4-4/0	-	4-3 1/2"	4-3 1/2"	4-3 1/2"	5-600	5-350	-	5-3 1/2"	5-4"
2000	5-600	5-250	-	5-3 1/2"	5-3 1/2"	5-3 1/2"	6-600	6-400	-	6-3 1/2"	6-4"

- NOTES:
- CONTRACTOR TO SIZE FEEDERS AND BRANCH CIRCUITS BASED ON THIS SCHEDULE AND OVER CURRENT DEVICE SIZE, UNLESS NOTED OTHERWISE.
 - CONDUCTORS ARE BASED ON THHN/THWN UP TO AND INCLUDING #4/0. LARGER THAN #4/0 ARE BASED ON TYPE XHHW.
 - CONDUCTORS ARE BASED ON 90°C, 600V. INSULATED COPPER WIRE APPLIED AT 75° FOR TERMINATION RATED 60/75°C OR 75°C. FOR TERMINATION RATED 60°C, USE CONDUCTORS AND CONDUIT SIZED INDICATED IN PARENTHESES.
 - CONDUIT SIZES ARE VALID FOR EMT OR RGS. CONDUIT SIZES SHALL BE ADJUSTED AS REQUIRED FOR OTHERS TYPES OF CONDUIT.
 - ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE REQUIRED WIRE SIZES TO ACCOMMODATE MECHANICAL EQUIPMENT LUG SIZES.
 - SIZE OF DISCONNECT SWITCH LOCATED AT EQUIPMENT SHALL BE SIZED BASED UPON OVERCURRENT PROTECTION OF THAT DEVICE.
 - OBTAIN APPROVAL FROM ENGINEER PRIOR TO INSTALLING DIFFERENT SIZE/QUANTITY OF CONDUCTORS TO OBTAIN AN EQUIVALENT AMPACITY.
 - SPLICE FROM ALUMINUM TO COPPER PRIOR TO ENTERING EQUIPMENT LISTED FOR USE WITH COPPER CONDUCTORS ONLY OR USE COPPER CONDUCTORS FOR THE ENTIRE LENGTH OF FEEDER.

BRANCH CIRCUIT VOLTAGE DROP WIRING SCHEDULE FOR SINGLE PHASE CIRCUITS

BRANCH CIRCUIT RATING(A)	WIRE SIZE	MAXIMUM BRANCH CIRCUIT LENGTH (IN FEET)				
		120V	208V	240V	277V	480V
20A	12	83	143	165	191	331
	10	128	222	256	295	511
	8	201	348	402	464	804
	6	313	542	625	721	1250
30A	10	85	148	170	197	341
	8	134	232	268	309	536
	6	208	361	417	481	833
	4	313	542	625	721	1250

- NOTES:
- THE ABOVE TABLE VALUES ARE BASED ON COPPER CONDUCTORS, IN STEEL CONDUIT, WITH A LOAD FACTOR OF .85 PER NEC CHAPTER 9, TABLE 9.
 - PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHERE BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.
 - CONDUCTOR SIZES ARE BASED ON MAXIMUM OF 9 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT.
 - LIMITS FOR CONDUCTOR LENGTHS SHOWN ARE BASED ON A MAXIMUM BRANCH CIRCUIT LOADING OF 64% OF THE BRANCH BREAKER RATING AND A MAXIMUM OF 3% VOLTAGE DROP TO COMPLY WITH ASHRAE 90.1 AND THE NEC. FOR CIRCUITS LOADED GREATER THAN 64% OF BRANCH BREAKER RATING, THE CONTRACTOR SHALL PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

DINING ROOM ADDITION AND RENOVATIONS FOR:

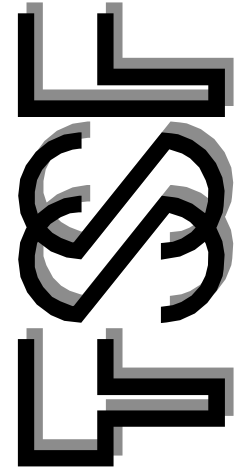
BAY ARENAC ISD

BAY CITY, MICHIGAN

TSSF ARCHITECTS, INC.

ARCHITECTS INTERIORS PLANNERS

122 N. WASHINGTON AVENUE SAGINAW , MICHIGAN



CODE REVIEW RESPONSE

R2

NO.

08/05/26

DATE

DRAWN BY JWA

DATE 03/17/2026

APPROVED KTS

SHEET NO.

E5.0

PROJECT NO.
2538