

2027 Brown School Rd, St Joseph, MI 49085

# MEP Engineer / Project Manager:

**IGNYTE DESIGN** 38 COMMERCE SW, SUITE 450 GRAND RAPIDS, MI 49503

WWW.IGNYTE.DESIGN

## Architect:

PURE ARCHITECTS GRAND RAPIDS, MI 616.485.5715

WWW.PUREARCHITECTS.COM

# Structural Engineer:

**ABONMARCHE** 95 W MAIN STREET BENTON HARBOR, MI 49022 269.343.5351

WWW.ABONMARCHE.COM

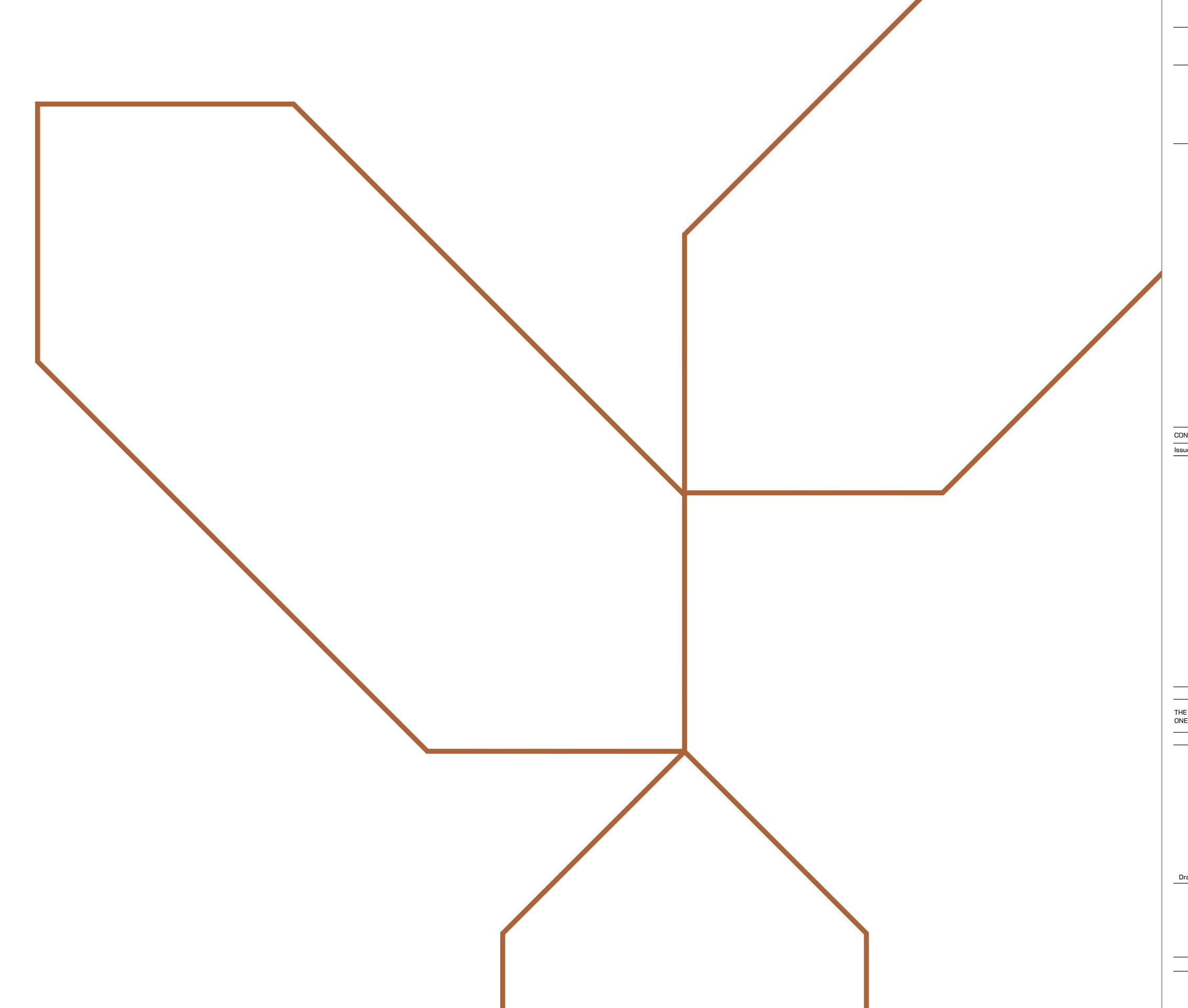
# **Construction Manager:**

**ELITE COMPANIES** KALAMAZOO, MI 269.920.1347

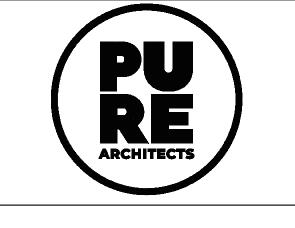
WWW.ELITE-COMPANIES.COM

# **Applicable Codes:**

- 2015 MICHIGAN BUILDING CODE
- 2015 MICHIGAN MECHANICAL CODE
- 2018 MICHIGAN PLUMBING CODE 2015 MICHIGAN ENERGY CODE
- 2017 NATIONAL ELECTRIC CODE







CONSTRUCTION DOCUMENTS Issued For:

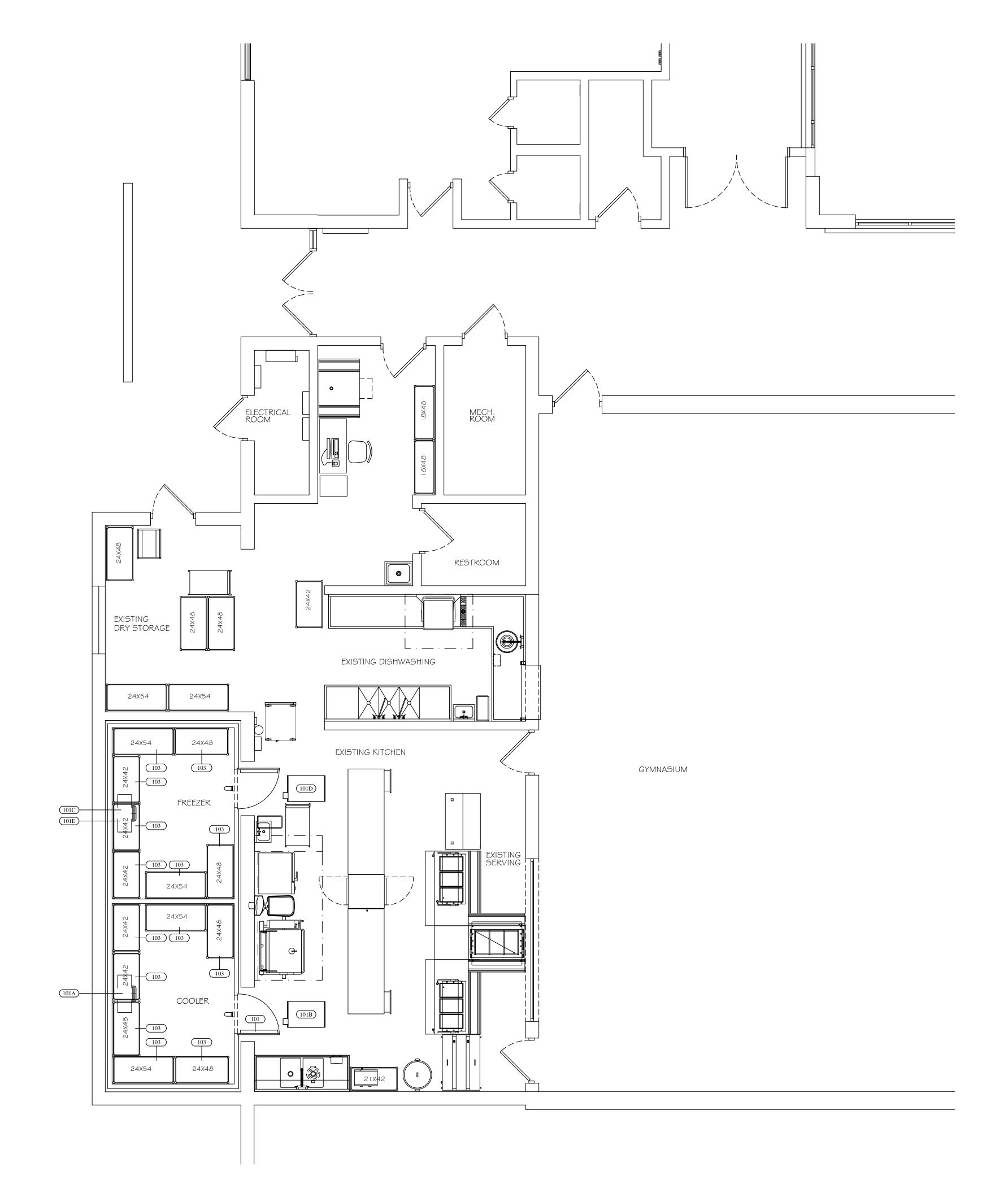
STAMP

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. SCALE



**COVER SHEET** 

Project No: 22.019.02



EQUIPMENT SCHEDULE												
Item Qty DESCRIPTION CW (in)	HW (in)	INDIRECT DIRECT DRAIN DRAIN (IN)	GAS (in)	MBTUH	EXH DUCT	EXH CFM	MUA DUCT	MUA CFM	Volts	Ph	Amps load	Equipment Remarks
101 1 WALK-IN COOLER/FREEZER									120	1	(2) 8.0	INSULATED FLOOR: SEE REFRIGERATION PLAN
101A 1 COOLER COIL		FFD							120	1	5.0	
101B 1 COOLER COMPRESSOR									208	3	10.0	ROOF CURBS BY FSEC
101C 1 FREEZER COIL		FFD							208	1	15.0	
101D 1 FREEZER COMPRESSOR									208	3	15.0	ROOF CURBS BY FSEC
101E 1 FREEZER COIL HEAT TAPE									120	1	5.0	
102 1 SPARE NUMBER												
103 14 SHELVING - POLYMER												



- 1. FSEC SHALL VERIFY ROUGHIN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC.
- TRADES TO REUSE EXISTING ROUGHINS WHERE APPLICABLE.
- 3. TRADES SHALL DISCONNECT, REMOVE, STORE & RECONNECT ANY <u>EXISTING</u> EQUIPMENT AS REQUIRED FOR CONSTRUCTION PURPOSES.
- 4. EQUIPMENT NOT BEING REUSED TO BE DISCONNECTED BY TRADES AND STORED OR DISCARDED BY THE FSEC AS DIRECTED BY OWNER.
- 5. EQUIPMENT DESIGNATED AS <u>RELOCATED</u> SHALL
  BE DISCONNECTED BY THE TRADES AND
  RELOCATED BY THE FSEC AS PER PLANS AND SPECIFICATIONS.

FOODSERVICE DESIGN BY:

Food Service
Consultants
JRA FOOD SERVICE CONSULTANTS, LLC
401 HALL STREET SW - SUITE 185H
GRAND RAPIDS, MI 49503
PH: (616) 454-4433

ARCHITECT:

PROJECT:
ST. JOSEPH PUBLIC SCHOOI
BROWN ELEMENTARY
2027 BROWN SCHOOL RD

SHEET TITLE:
FOOD SERVICE
EQUIPMENT
FLOOR PLAN
SCALE 1/4" = 1'-0"

	ЩО	
DATE CODE	PROJECT PHASE	BY
06/01/23 SJBE1FP	SCHEMATIC DESIGN	СМ
06/22/23 SJBE2FP	CONSTRUCTION DOCUMENTS	АН

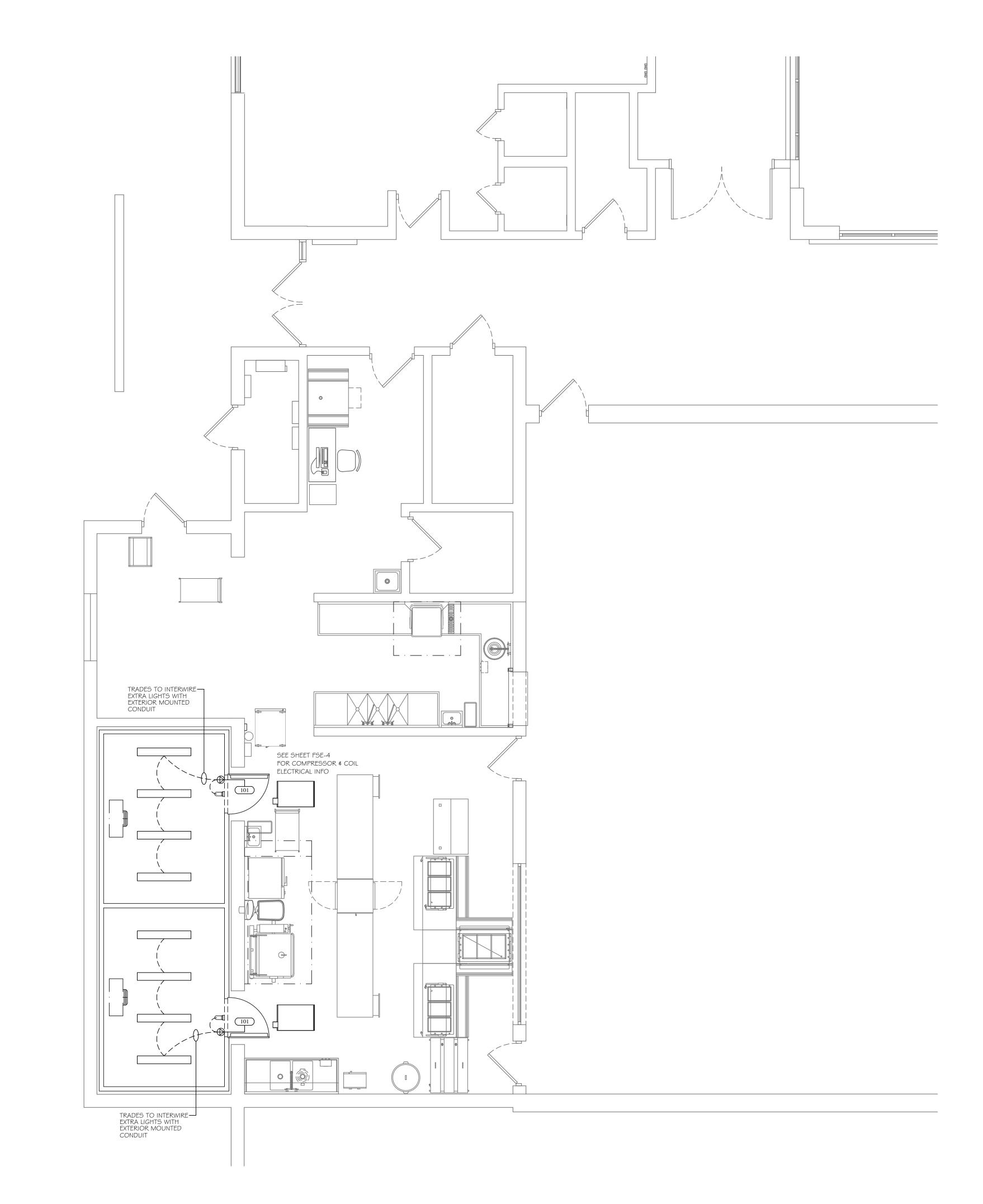
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SHEET NUMBER:

FSE-1

# NOTE

- 1. FSEC SHALL VERIFY ROUGHIN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC.
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  BE DISCONNECTED BY THE TRADES AND
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	EQUIPMENT SCHEDULE										
Item	EQUIPMENT DESCRIPTION	VOLTS	PH	AMPS LOAD	DIRECT BY EC	CORDSET BY FSEC	AFF (in)	REMARKS			
101	WALK-IN COOLER/FREEZER	120	1	8.0	X		DFA	TRADES WIRE TO JB FOR LIGHTS, DOOR HEATER			

FOODSERVICE DESIGN BY:

FOOD SERVICE CONSULTANTS, LLC 401 HALL STREET SW - SUITE 185H GRAND RAPIDS, MI 49503 PH: (616) 454-4433

AKCHIIECI:

ST. JOSEPH PUBLIC SCHOO BROWN ELEMENTARY 2027 BROWN SCHOOL RD

SHEET TITLE:
FOOD SERVICE
ELECTRICAL
FLOOR PLAN
SCALE 1/4" = 1'-0"

DATE CODE	PROJECT PHASE	BY
5/22/23 JBE2E	CONSTRUCTION DOCUMENTS	АН

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SHEET NUMBER:

FSE-2

# FSEC TO PIPE COIL DRAIN LINES TO FFD

# | EQUIPMENT DESCRIPTION | CW (in) | HW (in) | AFF (in) | DIRECT | DRAIN (in) | AFF (in) | FFD | FSEC PIPE COIL TO FFD | FSEC P

FOODSERVICE DESIGN BY:

FOOD SERVICE
Consultants

JRA FOOD SERVICE CONSULTANTS, LLC
401 HALL STREET SW - SUITE 185H
GRAND RAPIDS, MI 49503
PH: (616) 454-4433

AKCHIIECI:

PROJECT:
ST. JOSEPH PUBLIC SCHOOL
BROWN ELEMENTARY
2027 BROWN SCHOOL RD

SHEET TITLE:
OOD SERVICE
LUMBING
LOOR PLAN

DATE	PROJECT	BY
CODE	PHASE	
06/22/23 SJBE2P	CONSTRUCTION DOCUMENTS	АН
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FSE-3

NOT

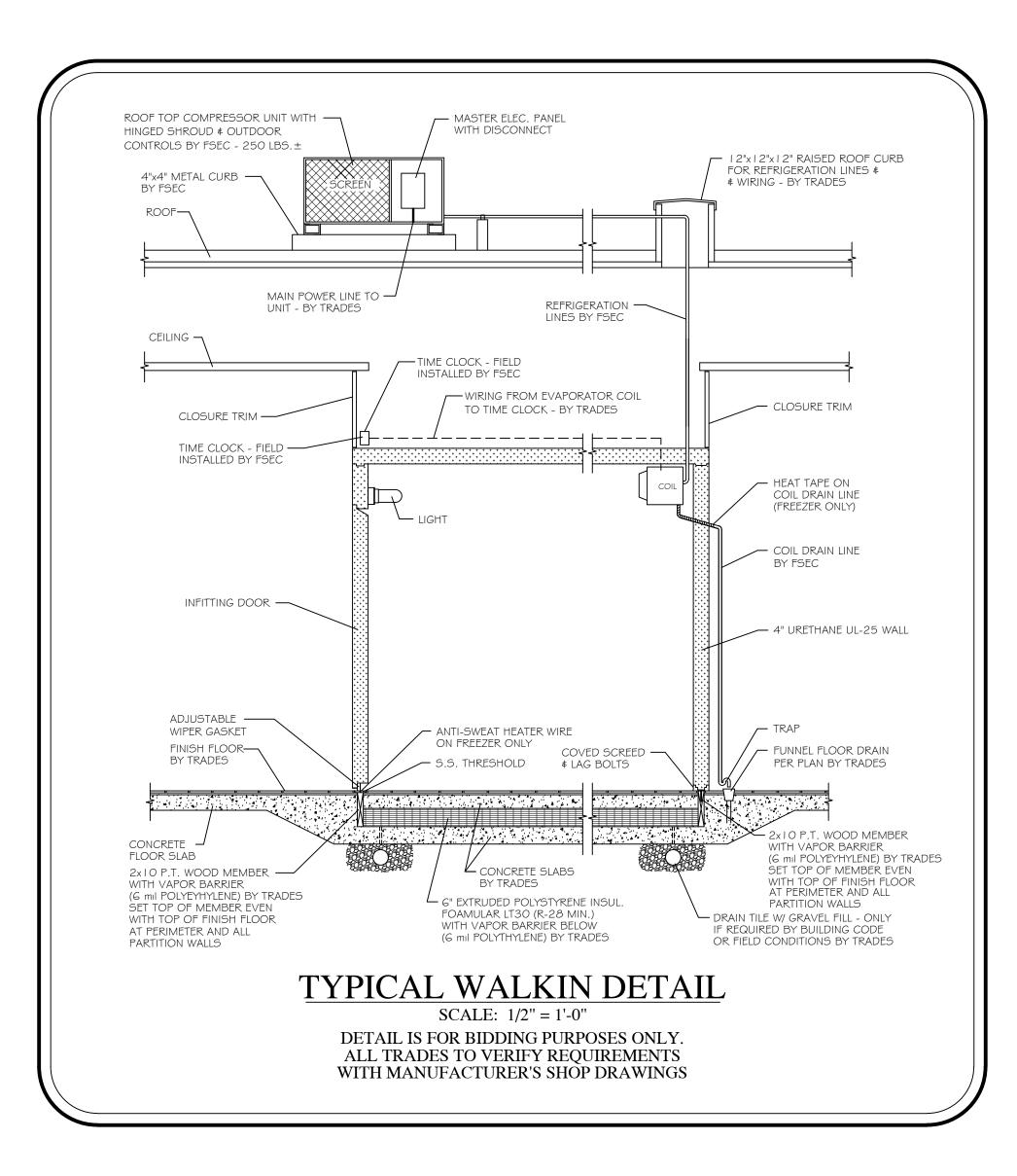
1. FSEC SHALL VERIFY ROUGHIN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC.

2. TRADES TO REUSE EXISTING ROUGHINS WHERE APPLICABLE.

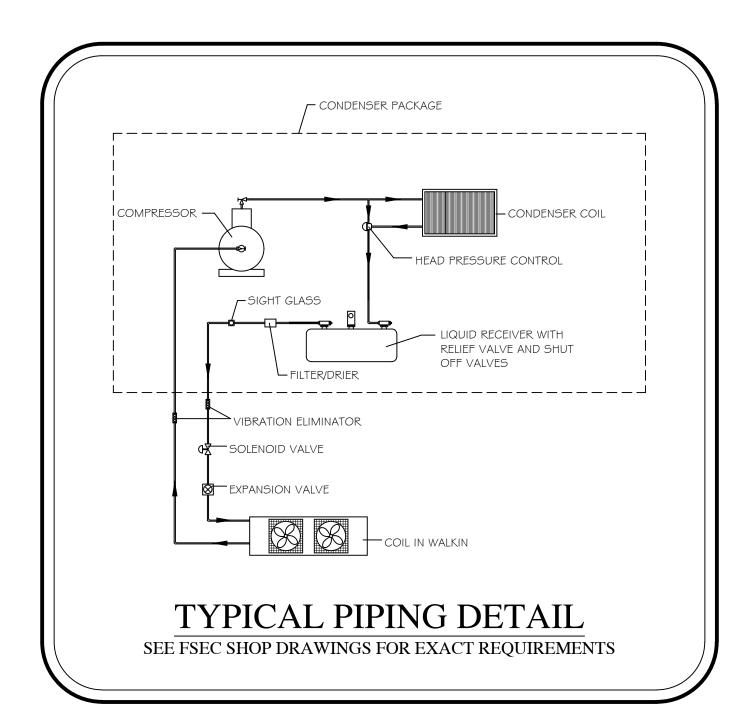
3. TRADES SHALL DISCONNECT, REMOVE, STORE & RECONNECT ANY EXISTING EQUIPMENT AS REQUIRED FOR CONSTRUCTION PURPOSES.

4. EQUIPMENT NOT BEING REUSED TO BE DISCONNECTED BY TRADES AND STORED OR DISCARDED BY THE FSEC AS DIRECTED BY OWNER.

5. EQUIPMENT DESIGNATED AS <u>RELOCATED</u> SHALL
BE DISCONNECTED BY THE TRADES AND
RELOCATED BY THE FSEC AS PER PLANS AND SPECIFICATIONS.



			ELECT	ΓRICAL	CONNE	CTIONS SCHE	DULE	
CONN.	VOLTS	PH	KW	HP	HP AMPS CONNECTION			REMARKS
E101A	120	1			5.0	DIRECT	DFA	WIRING FROM COIL TO TIME CLOCK
E101B	208	3			10.0	DIRECT	ROOF	
E101C	208	1			15.0	DIRECT	DFA	WIRING FROM COIL TO TIME CLOCK
E101D	208	3			15.0	DIRECT	ROOF	
E101E	120	1			5.0	DIRECT	DFA	FREEZER COIL HEAT TAPE
		•						



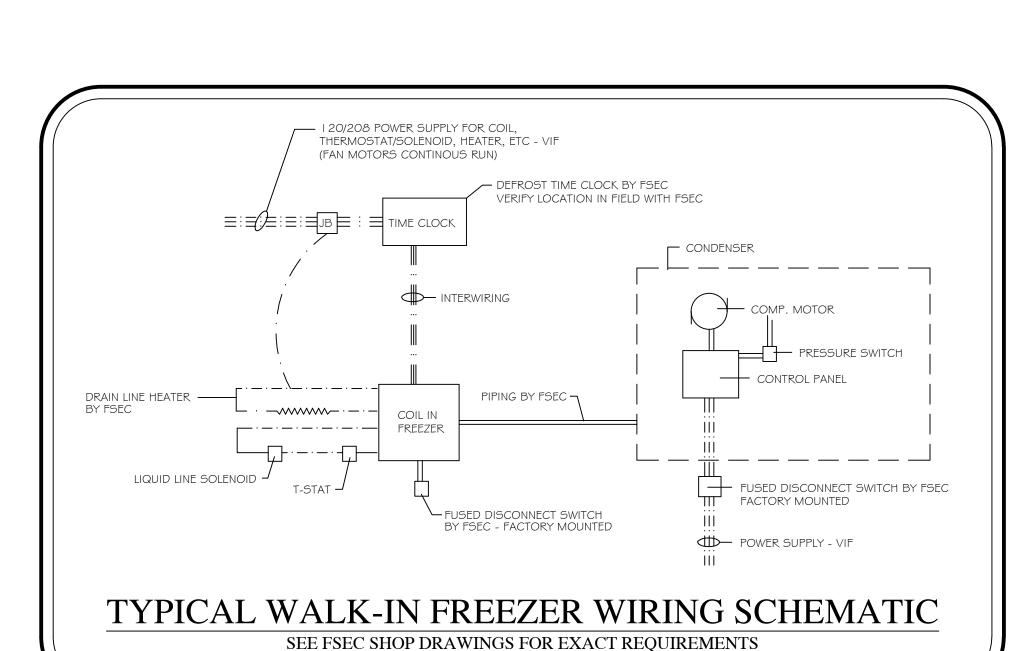
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- 2. TRADES TO REUSE EXISTING ROUGHINS WHERE APPLICABLE.
- 3. TRADES SHALL DISCONNECT, REMOVE, STORE & RECONNECT ANY EXISTING EQUIPMENT AS REQUIRED FOR CONSTRUCTION PURPOSES.
- 4. EQUIPMENT NOT BEING REUSED TO BE DISCONNECTED BY TRADES AND STORED OR DISCARDED BY THE FSEC AS DIRECTED BY OWNER.
- 5. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE DISCONNECTED BY THE TRADES AND RELOCATED BY THE FSEC AS PER PLANS AND SPECIFICATIONS.

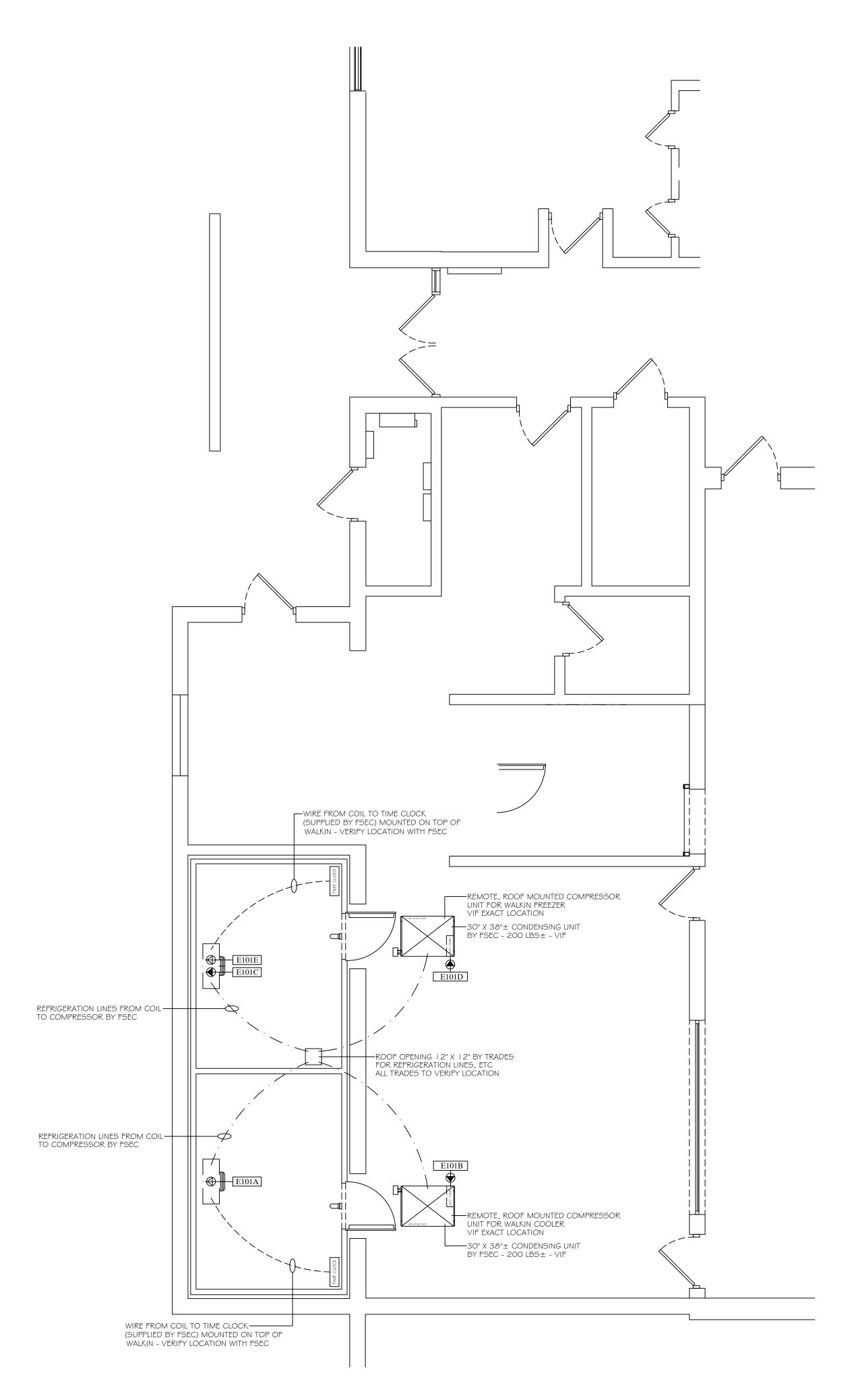
# REFRIGERATION NOTES

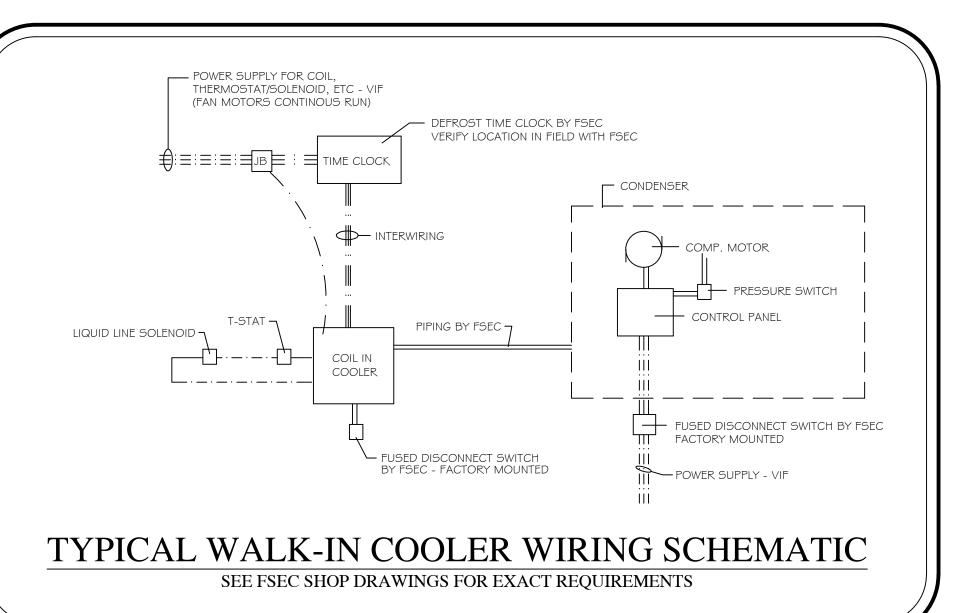
- FOODSERVICE EQUIPMENT TRADES A. FSEC SHALL PROVIDE AND INSTALL WALKIN AND REFRIGERATION SYSTEM WITH COIL, CONDENSER, INSULATED LINES, OUTDOOR CONTROL PACKAGE, HINGED SHROUD, CONTROLS, CURBS, ETC. EVACUATE, CHARGE, TEST,
- ADJUST, ETC. PER G.S.. B. PROVIDE DIRECT EXPANSION TYPE COILS WITH ELECTRIC DEFROST SIMILAR TO BOHN CO. "LET" SERIES WITH LIQUID LINE SOLENOID VALVE, SUCTION LINE "P" TRAP, AND THERMOSTAT PIPED AND WIRED TO THE JUNCTION BOX
- FOR POSITIVE PUMP DOWN. PROVIDE TRAPPED COIL DRAIN LINES. . PROVIDE AIR COOLED CONDENSER PACKAGE SIMILAR TO COPELAND CO. "C" SERIES WITH OUTDOOR CONTROLS, HINGED SHROUD, AND FLOODED HEAD PRESSURE CONTROL SYSTEM. ALL INTERNAL PIPING SHALL BE PRE-PIPED TO OUTSIDE OF ENCLOSURE WITH DRIER, SIGHT GLASS AND
- VIBRATION ELIMINATORS FOR SUCTION AND LIQUID LINES. D. PROVIDE INSULATED, REFRIGERANT GRADE OR TYPE "L" COPPER LINE SETS WITH SILVER SOLDER.
- E. ALL LINES SHALL BE SECURELY SUPPORTED AND ANCHORED WITH CLAMPS FSEC TO VERIFY ALL DIMENSIONS AND DATA IN FIELD 2. GENERAL TRADES A. PROVIDE 12" X 12" ROOF OPENING AND RAISED CURB - VIF.
- B. PROVIDE STRUCTURAL SUPPORT FOR CONDENSOR UNIT VIF. C. PROVIDE FLOOR CONSTRUCTION AND INSULATION AS PER PLAN D. PROVIDE PRESSURE TREATED WOOD THERMAL BREAKS UNDER ALL WALKIN

WALLS UP THRU AND 1/8" ABOVE QUARRY TILE FLOOR TO TOUCH SCREEDS.

- E. PROVIDE A MINIMUM OF 4" FROM CENTERLINE OF THERMAL BREAK TO ADJACENT BUILDING WALLS (TO CREATE AIR SPACE TO WALKIN WALL). F. PROVIDE THREE LAYERS OF 2" OWENS/CORNING FOAMULAR 150 SERIES
- EXTRUDED POLYSTYRENE WITH R-VALUE OF 10 EACH AND DENSITY TO SUPPORT CONCRETE. G. INSULATION MUST BE TIGHT AGAINST ALL THERMAL BREAKS AFTER CONCRETE IS POURED.
- H. PROVIDE A 6 MIL POLYETHYLENE SHEET WATERTIGHT SEAL UNDER THE ENTIRE INSULATED SUBFLOOR AND UP ALL VERTICAL EXTERIOR SIDES IN CONTACT WITH THERMAL BREAKS.
- I. PROVIDE POWER AND WIRING PER CODE FOR REFRIGERATION SYSTEM AND CONNECT TO CONTROL PANEL AND DISCONNECT (BY FSEC) ON ROOF TOP CONDENSING UNIT.
- J. INSTALL ALL WIRING PER CODE TO SUPPLY POWER FOR COILS, TIME CLOCKS, SOLENOID/THERMOSTAT, DRAIN LINE HEATER, ETC VIF K. PROVIDE POWER AND INTERWIRE INTERIOR LIGHTS WITH
- EXTERIOR CONDUIT. L. CONNECT DRAIN LINE HEATER (PROVIDED BY FSEC) IN FREEZER THROUGH J.B.
- M. PROVIDE FUNNEL FLOOR DRAINS PER PLAN WITH MINIMUM
  PITCH 4" FROM WALKIN WALLS. PIPING SHALL NOT INTERFERE WITH INSULATED SUBFLOOR.







FOODSERVICE

DESIGN BY:

Food Service Consultants

GRAND RAPIDS, MI 49503 PH: (616) 454-4433

JRA FOOD SERVICE CONSULTANTS, LLC

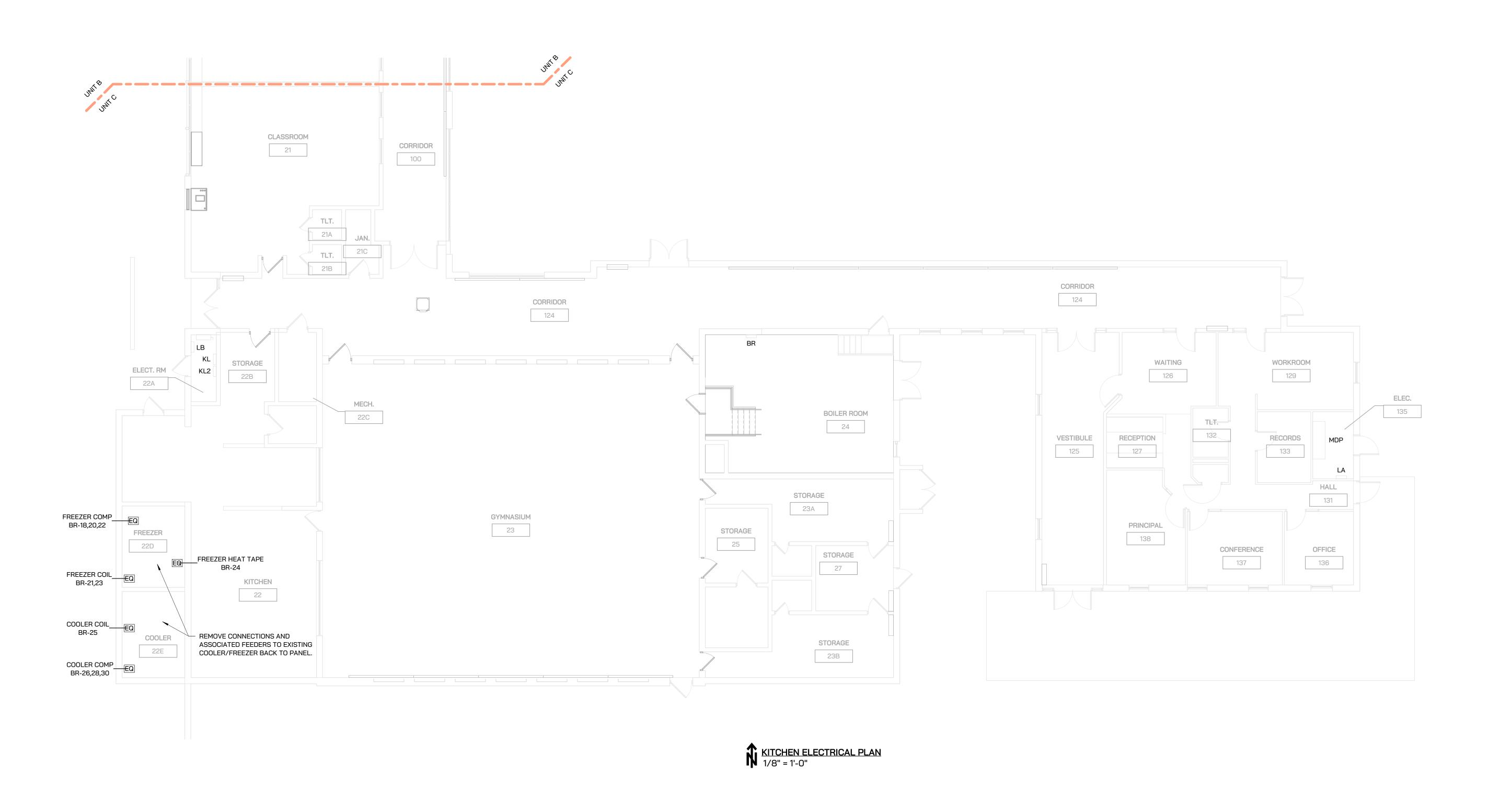
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DATE CODE	PROJECT PHASE	BY
06/22/23 SJBE2R	CONSTRUCTION DOCUMENTS	АН
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**SHEET NUMBER:** 

	PANEL: BR  LOCATION: CORRIDOR 12  FED FROM: MDP	24				VOLTS: RATING:		8 WYE, 3	PH, 4W			A.I.C. RATING: MOUNTING: Recessed	
СКТ	CIRCUIT DESCRIPTION	TRIP	POLES		A	E	3			POLES	TRIP	CIRCUIT DESCRIPTION	СКТ
1				3699	1701								2
3	P-1	60 A	3			3699	1701			3	35 A	AHU-1	4
5								3699	1701				6
7				3699	1701								8
	P-2	60 A	3			3699	1701			3	25 A	AHU-2	10
11								3699	1701				12
	B-1	25 A	1	2400	360					1		ROOF CONV. RECEPTACLE	14
	B-2	25 A	1			2400	180			1	20 A	RECEPTACLE BOILER ROOM 24	16
17	CP-AHU2	20 A	1					528	167				18
19	CP-AHU1	20 A	1	528	167	050	407			3	20 A	HVAC FREEZER 22D	20
21	HVAC FREEZER 22D	20 A	2			250	167	050	F00	1	00.4	LIVAO EDEEZED OOD	22
23 25	HVAC COOLER 22E	20 A	1	500	167			250	500	1	20 A	HVAC FREEZER 22D	24 26
25 27	HVAC COULER 22E	20 A	l l	500	167		167			3	20 A	HVAC COOLER 22E	28
29							107		167	3	20 A	HVAC GOOLER 22E	30
31									107				32
33													34
35													36
37													38
39													40
41													42
			AL LOAD: AL AMPS:		20 VA 6 A	1396	62 VA 3 A	1241	D VA 3 A				
	CLASSIFICATION		NECTED		DEM	IAND FA	CTOR	ESTIM.	ATED D	EMAND		PANEL TOTALS	
HVAC			40752 V			100.00%			10752 V				
RECEP	TACLE		540 VA			100.00%	Ď		540 VA			TOTAL CONN. LOAD: 41292 VA	
												AL EST. DEMAND LOAD: 41292 VA	
												TOTAL CONN. LOAD (A): 115 A	
											TO	OTAL EST. DEMAND (A): 115 A	
IOTES	:				1								



# **ELECTRICAL SPECIFICIATION**

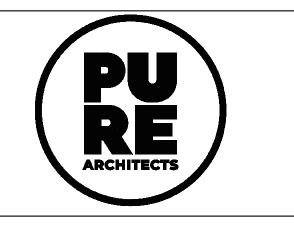
- CONTRACTOR TO PROCURE ALL REQUIRED BUILDING PERMITS AND INSPECTIONS TO COMPLETE PROJECT.
- ALL WORK SHALL BE PERFORMED IN ACCORDINANCE WITH THE MICHIGAN ELECTRICAL CODE.
- PROVIDE NEW ELECTRICAL SERVICES FROM CONSUMERS ENERGY AS INDICATED. COORDINATE SCOPE OF WORK AND PROVIDE ALL WORK TO PROVIDE A FULLY FUNCTIONAL ELECTRICAL SERVICE.
- REMOVE ALL ELECTRICAL EQUIPMENT, WIRE, CONDUIT, ETC ASSOCIATED WITH DEMOLISHED EQUIPMENT.
- REMOVE ALL ABANDONDED ELECTRICAL CONDUIT AND WIRE BACK TO SOURCE. PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:
- A. CONDUIT.
- CONDUCTORS.
- WIRING DEVICES INCLUDING COVERPLATES. DISCONNECT SWITCHES, ENCLOSED CIRCUIT BREAKERS AND FUSED SWITCHES.
- PANELBOARDS. AND SWITCHBOARDS PATCH, REPAIR, AND PAINT ANY OPENINGS THROUGH ROOF, CEILINGS, WALLS, OR FLOORS TO MATCH EXISTING CONDITION.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ALL DEMOLISHED EQUIPMENT. MINIMUM CONDUIT SIZE SHALL BE 1/2" TRADE SIZE.
- USE THE CONDUIT TYPE SUITABLE FOR THE ENVIRONMENT IN WHICH IS IS LOCATED:
- A. INDOORS: EMT WITH SET SCREW FITTINGS. MC CABLE IS ACCEPTABLE FOR BRANCH CIRCUITS WHERE CONCEALED. OUTDOORS: RIGID GALVANIZED STEEL.
- UNDERGROUND: RIGID NON METALLIC SCHEDULE 80 PVC. CONDUIT EXITING FROM UNDERGROUND SHALL TRANSITION TO EMT/RGS PRIOR TO BEING EXPOSED.
- PROVIDE CONDUIT SLEEVES FOR LOW VOLTAGE DATA CABLING. ALL CABLING SHALL BE IN CONDUIT UNLESS ABOVE AN ACCESSIBLE CEILING WHERE "J" HOOKS ARE ACCEPTABLE.

PROVIDE GROUNDING ELECTRODE SYSTEM AND EQUIPMENT GROUNDING PER THE NATIONAL ELECTRIC CODE.

- ALL BOXES SHALL BE RECESSED IN WALLS AND CONDUIT CONCEALED WHERE POSSIBLE.
- MINIMUM CONDUCTOR SIZE FOR POWER SHALL BE #12 AWG. ANY BRANCH CIRCUITS OVER 100' IN LENGTH SHALL BE #10 AWG MINIMUM FOR VOLTAGE DROP. PROVIDE THHN-2 COPPER INDOORS AND THWN-2 COPPER OUTDOORS, UNLESS NOTED OTHERWISE OR DICTATED OTHERWISE BY THE NEC.
- PANELBOARDS SHALL BE FULLY RATED, SERIES RATED PANELS ARE NOT ACCEPTABLE. HAVE HINGED SWING DOOR-IN-DOOR. LOAD CENTERS ARE NOT ACCEPTABLE. SQUARE D NQOD OR EQUAL FOR 208/120V BRANCH PANELBOARDS. SQUARE D NF OR EQUAL FOR 480/277V PANELBOARDS. PROVIDE TYPED PANELBOARD CIRCUIT LABEL CARDS. UPDATE ALL EXISTING LABEL CARDS AS REQUIRED.
- RECEPTACLES SHALL BE TAMPER-RESISTANT EXTRA HEAVY DUTY GRADE, 20AMP MINIMUM. WHITE IN COLOR UNLESS NOTED OTHERWISE. ALL DEVICE COVERS SHALL MATCH DEVICE COLOR UNLESS STAINLESS STEEL COVERS ARE SPECIFIED.
- WEATHERPROOF RECEPTACLE COVERS SHALL BE METAL, WHILE-IN-USE TYPE.
- IT IS UNDERSTAND AND AGREED BY THE INSTALLER THAT WORK HEREIN DESCRIBED SHALL BE COMPLETE IN EVERY DETAIL, EVEN THOUGH EVERY ITEM INVOLVED IS NOT PARTICULARLY MENTIONED. INSTALLER SHALL BE HELD TO PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR THE WORK INTENDED AND DESCRIBED FOR A COMPLETE AND OPERATIONAL SYSTEM. SUCH MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO, CONDUIT, FITTINGS, COVERPLATES, WIRING, BREAKERS, CONTROL DEVICES, LIGHTING ACCESSORIES, ETC. THIS ALSO INCLUDES EQUIPMENT REQUIRED BY STATE AND LOCAL CODES.







ADDENDUM #2 10.20.2022 7.11.2023 CONSTRUCTION DOCUMENTS

STAMP

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. SCALE

**Drawing Title:** 

KITCHEN PLANS

Project No: 22.019.02

E150