

IDEA PUBLIC SCHOOLS UPPER VALLEY - MECHANICAL UPGRADES

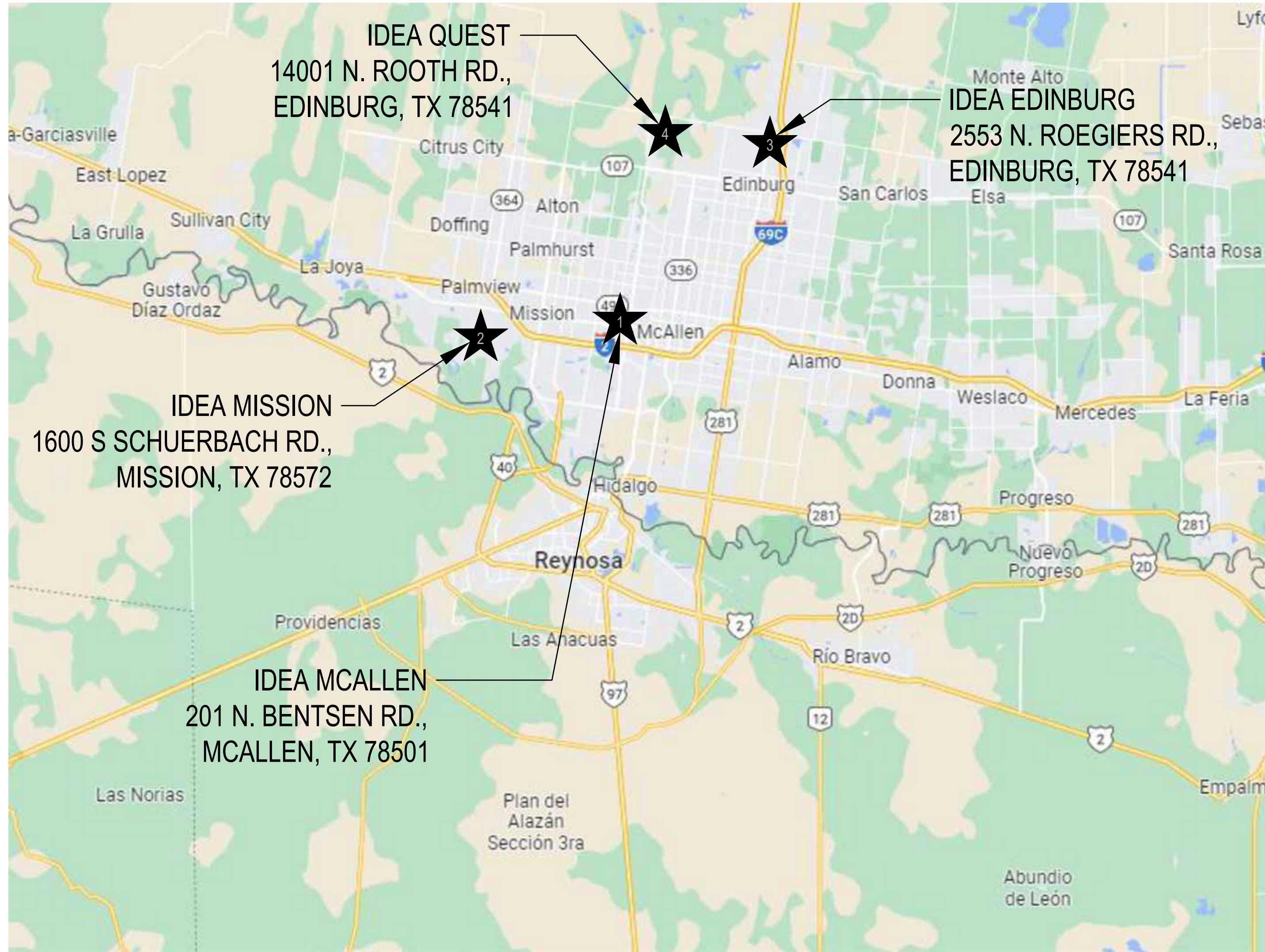
RIO GRANDE VALLEY, TEXAS

NO. REVISION: BY:

RFP # 23-URMU-0424



TEXAS



VICINITY MAP - RIO GRANDE VALLEY



SCOPE OF WORK:

SCOPE OF WORK: REFER TO DRAWINGS FOR DETAILED SCOPE OF WORK.

1. PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH NEW FULLY OPERATIONAL MECHANICAL AND CONTROLS SYSTEMS FOR THE PROJECT "IDEA PUBLIC SCHOOLS, IDEA UPPER VALLEY HVAC IMPROVEMENTS", INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
2. DEMOLITION WORK: DEMOLISH LISTED EQUIPMENT AND MATERIALS. THE OWNER HAS THE RIGHT OF FIRST REFUSAL. DISPOSE OF REMOVED ITEMS THAT THE OWNER NO LONGER WISHES TO KEEP.
 - a. WHERE INDICATED REMOVE EXISTING AIR-COOLED CONDENSING UNIT, AND SAVE FOR REUSE ON A NEW EQUIPMENT SUPPORT SYSTEM TO RAISE IT HIGHER OFF THE GROUND.
 - b. REMOVE LISTED HVAC, ELECTRICAL, AND CONTROLS EQUIPMENT, INCLUDING AIR-COOLED CONDENSING UNITS, PACKAGED DX UNITS, SPLIT SYSTEMS, MINI-SPLIT SYSTEMS, AND EXHAUST FANS. REMOVE PIPING CONNECTIONS, REFRIGERANT SPECIALTIES, PIPING SUPPORTS, AS INDICATED IN PLANS TO MAKE ROOM FOR NEW EQUIPMENT. EVACUATE REFRIGERANT AND DELIVER TO OWNER.
 - c. DESIGN INTENT IS TO RETAIN AND REUSE EXISTING REFRIGERANT PIPING TO EXTENT POSSIBLE, PROVIDED THE SIZES ARE APPROPRIATE AND APPROVED BY MANUFACTURER OF HVAC EQUIPMENT. FOR REPLACED EQUIPMENT, REMOVE REFRIGERANT PIPING INSULATION, AND PREPARE PIPING FOR RE-INSULATION AND JACKETING.
 - d. FOR REPLACED RTUS, REMOVE EXISTING ROOF CURBS, ASSOCIATED MATERIALS, AND ACCESSORIES SUCH AS HANGERS, SUPPORTS, MOUNTING HARDWARE, CONDENSATE DRAIN PIPING, PIPING, CONTROLS, CONDUIT & POWER WIRING, ETC.
 - e. WHERE INDICATED, SAVE EXISTING POWER AND CONTROL WIRING, CONDUITS, AND CIRCUIT BREAKERS FOR REUSE. VERIFY SIZE AND CONDITION OF CIRCUIT BREAKERS, CONDUITS AND WIRING TO BE REUSED. DEMOLISH ELECTRICAL EQUIPMENT AND OTHER MISCELLANEOUS MATERIALS AS NOTED IN THE DRAWINGS.
 - f. RETAIN AND REUSE CONTROLS TO EXTENT POSSIBLE. COORDINATE WITH OWNER'S CONTROLS CONTRACTOR TO DISCONNECT AND RECONNECT CONTROLS AS NEEDED. DEMOLISH CONTROLS AS INDICATED AND PROVIDE NEW CONTROLS FOR DX PACKAGED UNITS.
 - g. SAVE EXISTING SMOKE DETECTORS, WIRING AND SAFETIES FOR REUSE. DOCUMENT DEVICES THAT ARE NOT IN WORKING ORDER
 - h. CLEAR AREA AND PREPARE FOR NEW WORK.
3. NEW WORK: PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH NEW FULLY OPERATIONAL MECHANICAL AND CONTROLS SYSTEMS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - a. WHERE INDICATED RAISE AND REINSTALL EXISTING AIR-COOLED CONDENSING UNIT ON A NEW EQUIPMENT SUPPORT. SEE STRUCTURAL DRAWINGS.
 - b. REPLACE HVAC, ELECTRICAL, AND CONTROLS EQUIPMENT, RELATED TO AIR-COOLED CONDENSING UNITS, PACKAGED DX UNITS, SPLIT SYSTEMS, MINI-SPLIT SYSTEMS, AND EXHAUST FANS.
 - c. PROVIDE MODIFICATION OF DUCTWORK, REFRIGERANT PIPING, INSULATION, CONTROLS, AND ELECTRICAL SYSTEMS.
 - d. AS INDICATED, PROVIDE CLEANING AND VACUUMING OF EXISTING REFRIGERANT PIPING TO BE REUSED. PROVIDE NEW REFRIGERANT PIPING SPECIALTIES, PIPE INSULATION, JACKETING, PIPE SUPPORTS, AND MISCELLANEOUS ACCESSORIES.
 - e. FOR RTUS, PROVIDE NEW ROOF CURBS, ROOFING WORK, SUPPORT ASSEMBLY, DUCT TRANSITIONS, CONDENSATE DRAIN PIPING, MISCELLANEOUS MATERIALS, UTILITIES AND ACCESSORIES.
 - f. PROVIDE ALL OTHER ACCESSORIES TO DELIVER A COMPLETE AND OPERATIONAL SYSTEM.
 - g. TESTING, ADJUSTING, AND BALANCING.
 - h. CUTTING AND PATCHING AND TOUCHUP PAINTING AS REQUIRED.
 - i. CONCRETE WORK AS NEEDED.
 - j. ASSISTANCE WITH COMMISSIONING SERVICES PER SPECIFICATIONS.
 - k. BUILDING AUTOMATION SYSTEM (BAS): SEE SPECIFICATIONS FOR DETAILS.
 - 1) RETAIN AND REUSE CONTROLS FOR REPLACED ACCUS, SPLIT SYSTEMS, EFS.
 - 2) FOR REPLACED RTUS, PROVIDE NEW CONTROLS, CONTROLLERS, PROGRAMING OF SEQUENCES, GRAPHICS, SENSORS CONTROLS RELAYS, CONTACTORS, POWER TO DDC PANELS, DAMPERS, INTERFACE CARDS, AND OTHER CONTROLS EQUIPMENT.
 - l. SHOP DRAWING SUBMITTALS FOR ALL MECHANICAL SYSTEMS INCLUDING BUT NOT LIMITED TO EQUIPMENT, DUCTWORK AND PIPING. THESE INCLUDE COORDINATION DRAWINGS FOR PLACING OF MECHANICAL SYSTEMS IN RELATION TO WORK BY OTHER DISCIPLINES.
 - m. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WINDSTORM CERTIFICATION INSPECTIONS AND CERTIFICATIONS FOR EXTERIOR MOUNTED EQUIPMENT. CONTRACTOR MUST NOTIFY INSPECTOR PRIOR TO INSTALLING EQUIPMENT, AND APPRISE INSPECTOR OF WORK SCHEDULING INVOLVING EQUIPMENT REQUIRING WIND INSPECTION / CERTIFICATION, SO THAT INSPECTIONS MAY BE CARRIED OUT AT REQUIRED STAGE(S) OF CONSTRUCTION. COST FOR INSPECTION SHALL BE BORNE BY THE CONTRACTOR. INSPECTOR SHALL BE CERTIFIED BY THE TEXAS DEPARTMENT OF INSURANCE (SEE WWW.TDI.STATE.TX.US FOR A LIST OF CERTIFIED INSPECTORS).
 - n. COORDINATE ELECTRICAL WORK WITH DIV. 26 AS REQUIRED.
 - o. COORDINATE FIRE ALARM RELATED WORK WITH FIRE ALARM CONTRACTOR. PROVIDE SMOKE DETECTORS, WIRING AND CONTROLS FOR UNITS, 2000 CFM AND LARGER, WHERE NONE EXIST.
4. PAINTING: SEE DIVISION 9 SPECIFICATIONS. PAINT ALL EXPOSED PIPING, DUCTWORK, INSULATION, HANGERS, ACCESSORIES IN INTERIOR EXPOSED AREAS. PAINT EXTERIOR PIPE SUPPORTS. COORDINATE PAINT TYPE, COLOR AND SCOPE OF WORK WITH ARCHITECT.
5. COMMISSIONING: PROVIDE ASSISTANCE WITH COMMISSIONING SERVICES PER SPECIFICATIONS. THIS INCLUDES COMPLETING SYSTEMS READINESS CHECKLISTS, PERFORMING FUNCTIONAL TESTING, PROVIDING OPERATOR TRAINING, ETC.

DATE OF ISSUE

MARCH 15, 2024

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ED RIVERA	VICE-CHAIR
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IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES
RIO GRANDE VALLEY



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DATE: MARCH 15, 2024

CHECKED BY: B.B.

DRAWN BY: D.G.

PROJECT NO.: 23V78

CAD FILE:

SHEET:

COVER

LEGEND

	EXISTING EQUIPMENT TO REMAIN
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

NO. REVISION: BY:

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**IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES**

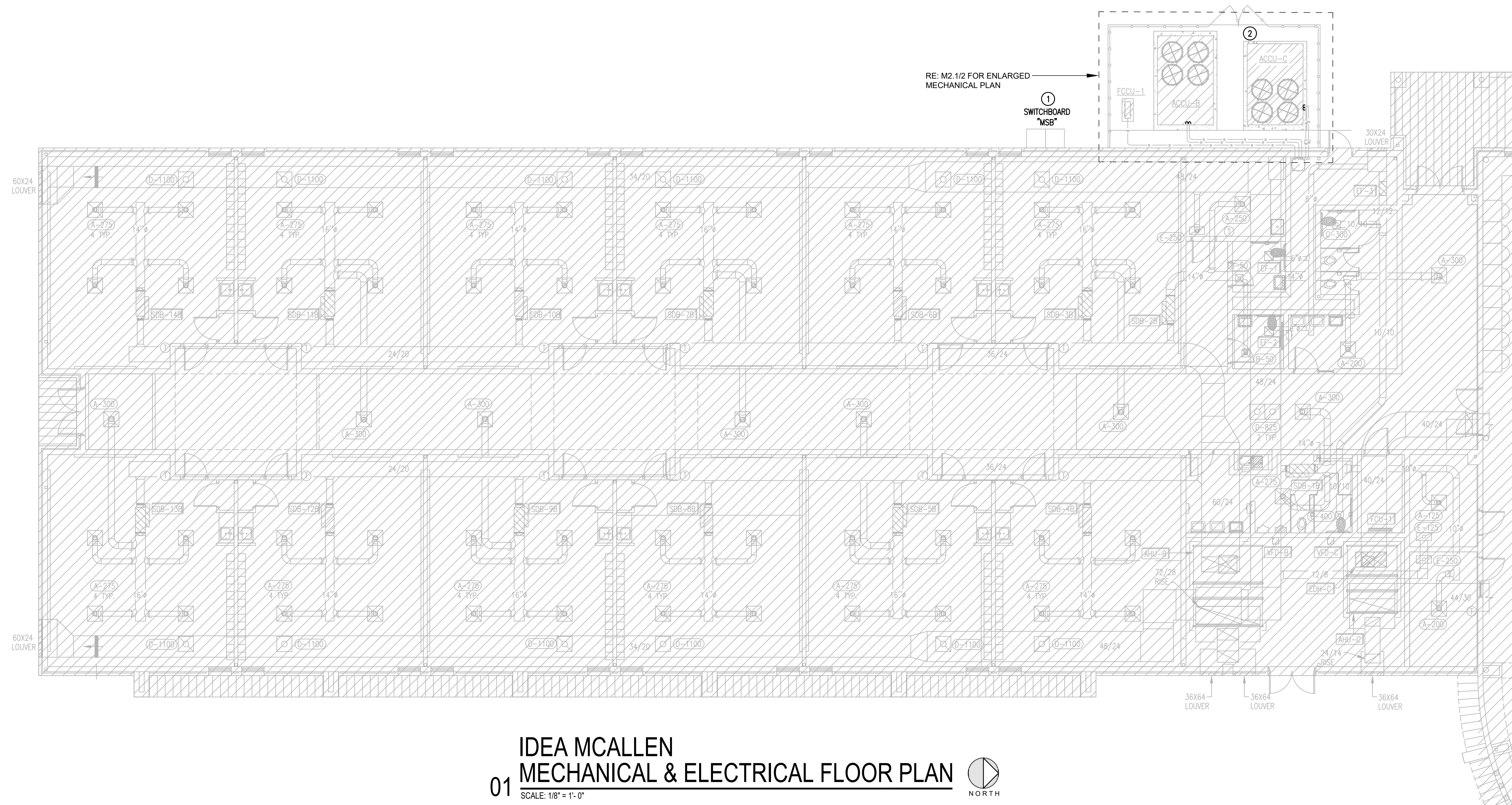
MCALLEN



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ME2.1



**01 IDEA MCALLEN
MECHANICAL & ELECTRICAL FLOOR PLAN**
SCALE: 1/8" = 1'-0"



IDEA MCALLEN PHASE I EXISTING ACCU SCHEDULE

MARK	SERVING	NOMINAL TONS	ELECTRICAL V-PH-HZ	FANS HP	CIRCUIT		WEIGHT (LBS.)	NOTES	EXISTING MANUFACTURER	EXISTING MODEL NUMBER
					MCA	MOCP				
ACCU-C	AHU-C	30	480-3-Ø	1.25	60.7	70	1300	ALL	YORK	J30YDC00A4BT1A

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE EXISTING.
2. VERIFY ACCU WEIGHT, AND REFRIGERANT PIPE SIZES WITH MANUFACTURER.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	EXISTING MCA	EXISTING MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
ACCU-C	60.7	90	480V/3PHASE	100A, 3P3F, 70AF, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#4 & #8G	1) EXTEND EXISTING	MSB

- GENERAL NOTES:
A) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

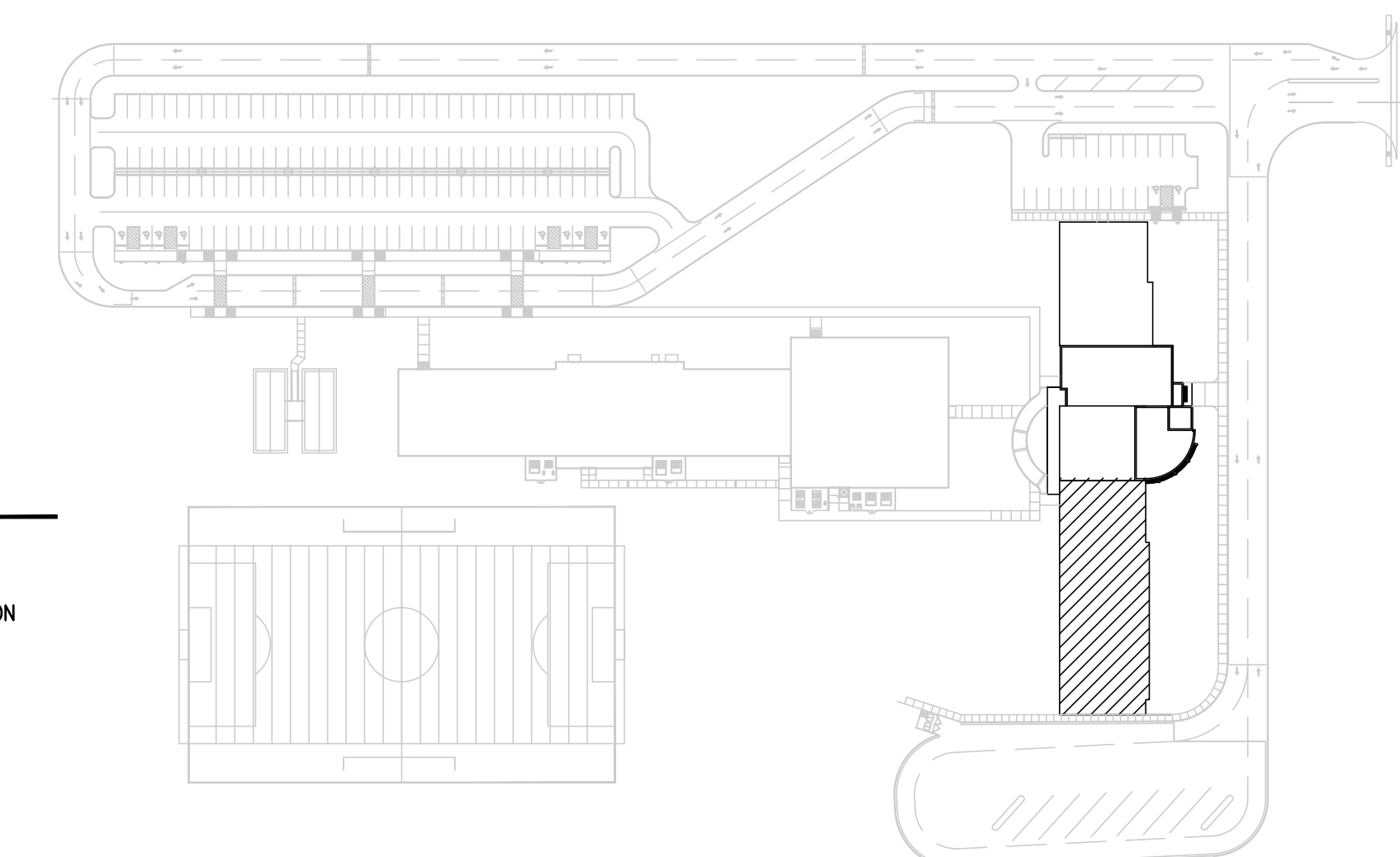
- NOTES:
1) PROVIDE A NEMA 3R J-BOX TO SPLICE AND EXTEND EXISTING BRANCH CIRCUIT TO NEW POINT OF CONNECTION.

MECHANICAL KEYED NOTES:

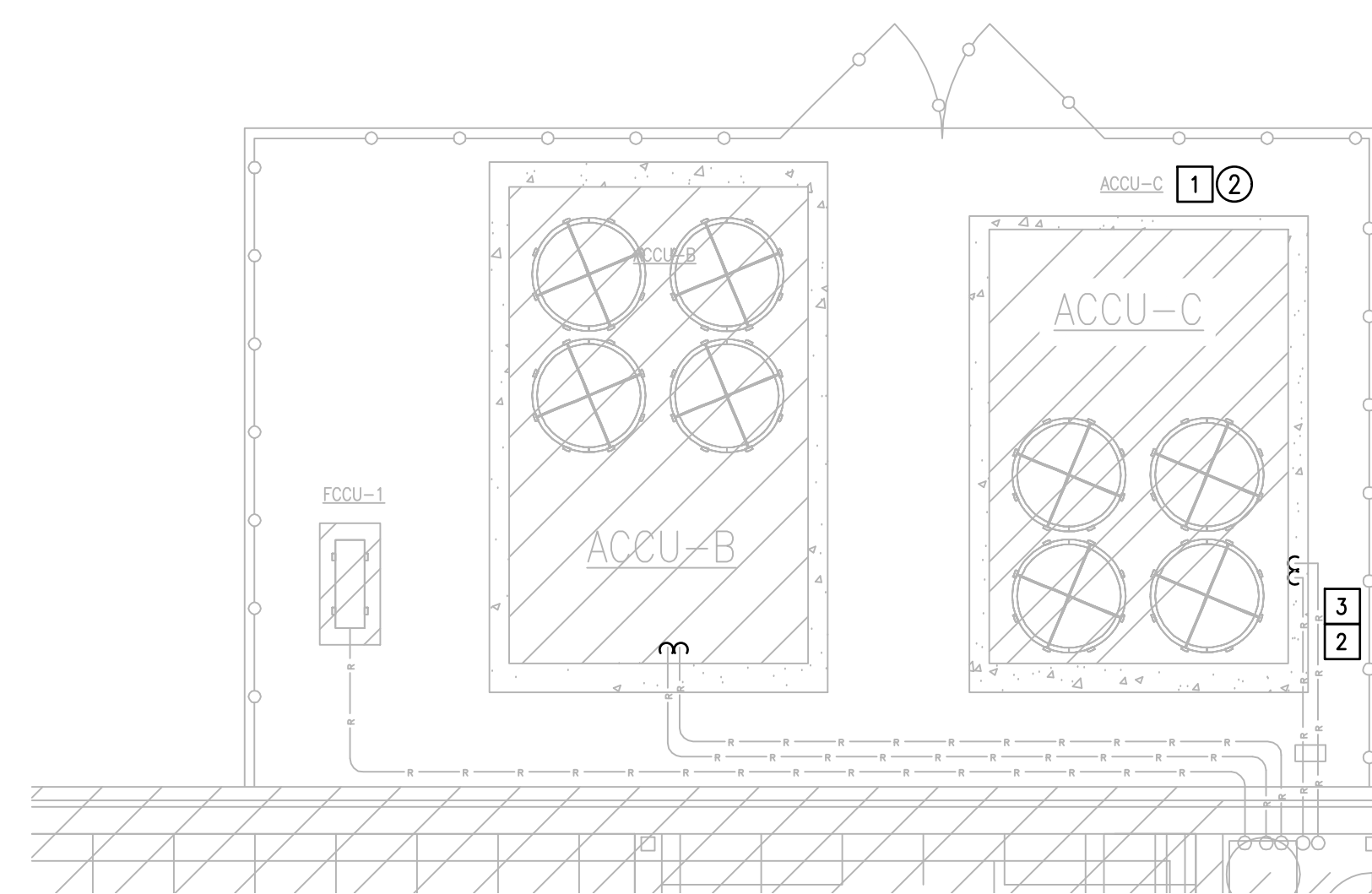
- DISCONNECT AND TEMPORARILY REMOVE CONDENSING UNIT FOR PROVISION OF NEW MOUNTING STRUCTURE PER STRUCTURAL. REINSTALL EXISTING CONDENSING UNIT ON NEW MOUNTING STRUCTURE. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' ELEVATED CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM. CLEAN AND VACUUM EXISTING REFRIGERANT PIPING PRIOR TO INSTALLATION. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, SIGHT GLASSES, ETC.
- PROVIDE REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
- PROVIDE NEW 1" INSULATION T ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.

ELECTRICAL KEYED NOTES:

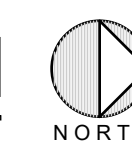
- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- DISCONNECT EXISTING HVAC EQUIPMENT TO BE RAISED. SEE EQUIPMENT CONNECTION SCHEDULE.



KEY PLAN



**02 IDEA MCALLEN ENLARGED
MECHANICAL & ELECTRICAL PLAN**
SCALE: 1/4" = 1'-0"



LEGEND

	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

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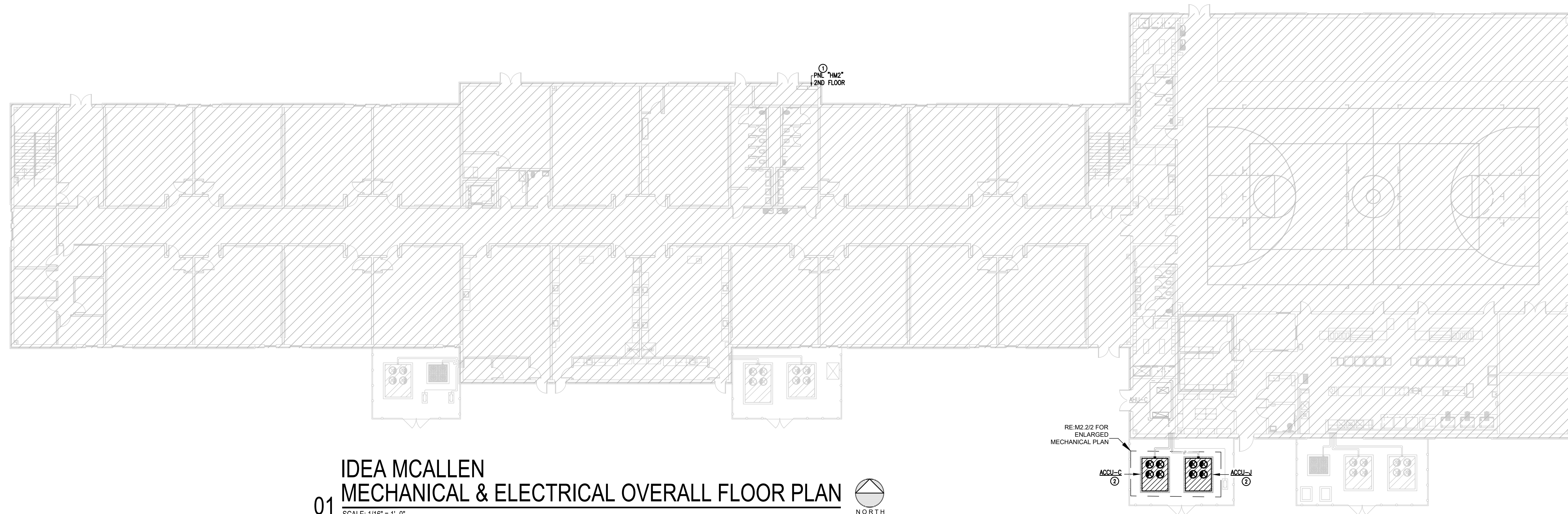
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MECHANICAL KEYED NOTES:

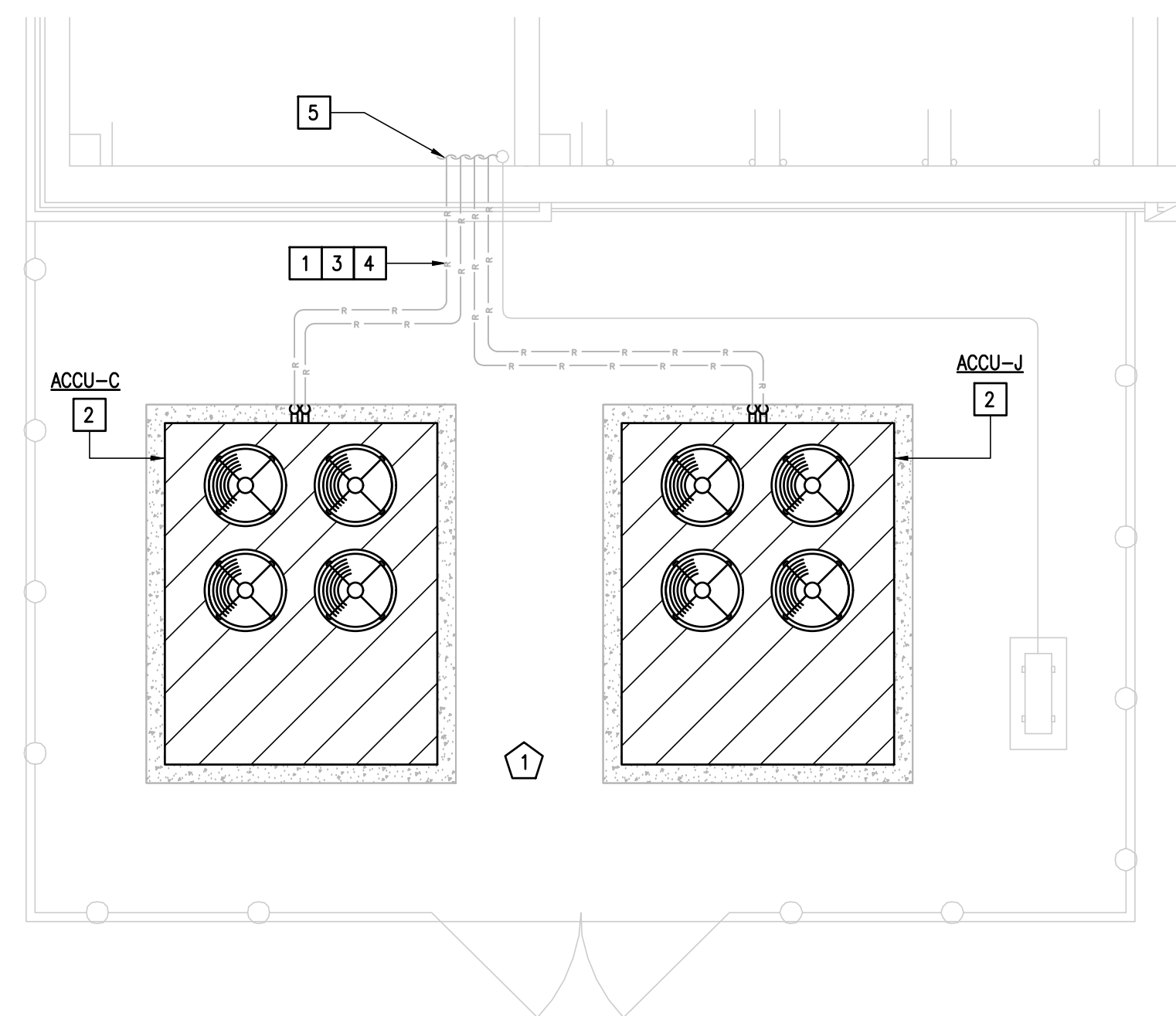
- RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- DEMOLISH EXISTING AIR COOLED CONDENSING UNIT AND INSULATE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- PROVIDE NEW REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
- PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.

ELECTRICAL KEYED NOTES:

- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.



01 IDEA MCALLEN MECHANICAL & ELECTRICAL OVERALL FLOOR PLAN
SCALE: 1/16" = 1'-0"



02 IDEA MCALLEN ENLARGED MECHANICAL & ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

IDEA MCALLEN PHASE II ACCU SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL MBTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER AT ARI	NUMBER OF CIRCUITS	(CIRCUIT)		WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
										MCA	MOCP				
ACCU-C	AHU-C	YORK	J30YDC00A4BT1A	324	30	100	460-3-60	11.1	2	63.5	70	1875	ALL	YORK	YD360C00A4EEB2
ACCU-J	AHU-J	YORK	J30YDC00A4BT1A	324	30	100	460-3-60	11.1	2	63.5	70	1875	ALL	YORK	YD360C00A4EEB2

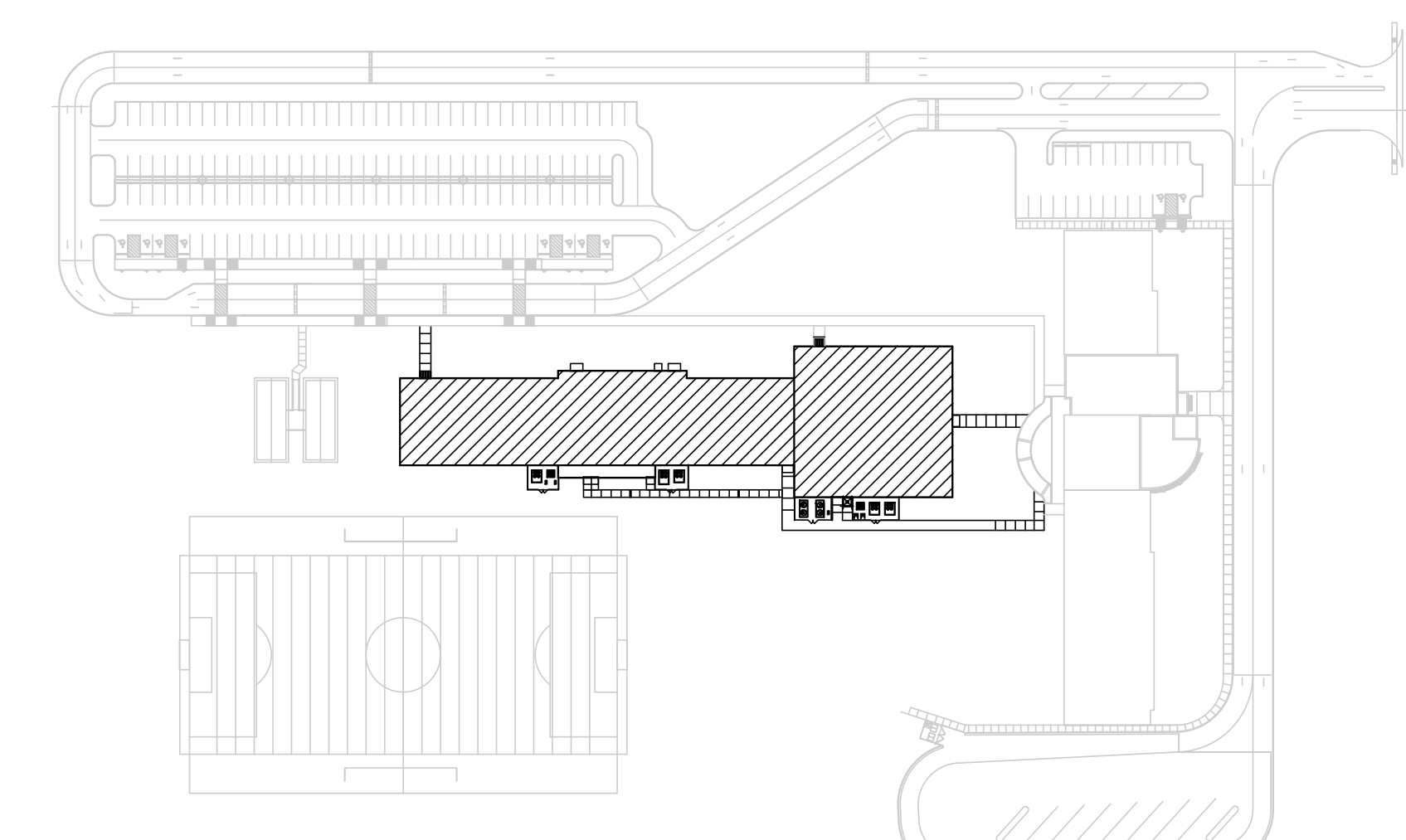
- NOTES:
- MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL" - SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 - EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
 - PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
 - PROVIDE BACNET INTERFACE.
 - SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
 - INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
 - PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT. PROVIDE ALL NEW REFRIGERANT SPECIALTIES, EXPANSION VALVES, ETC.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75" COPPER)	NEW BRANCH CIRCUIT (75" COPPER)	EXISTING POWER SOURCE
ACCU-C	63.5	70	1) 70	480V/3PHASE	100A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#3 & #8G	RETAIN EXISTING	HM2
ACCU-J	63.5	70	1) 70	480V/3PHASE	100A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#3 & #8G	RETAIN EXISTING	HM2

- GENERAL NOTES:
- LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 - PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

- NOTES:
- RETAIN AND REUSE EXISTING CIRCUIT BREAKER.



KEY PLAN

IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

MCALLEN



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PROJECT NO.: 23V78
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ME2.2

IDEA MISSION BUILDING A - MINI-SPLIT CASSETTE INDOOR UNIT SCHEDULE

MARK	SERVED BY	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	LOCATION	MIN CFM	MAX CFM	ELECTRICAL V-PH-HZ	COOLING		WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
								TOTAL (BTU/H)	EAT DBWB				
CC-2	ACCU-5	EMI AMERICA SERIES	CACA12	C128	268	406	208-1-60	12,000	80/67	45	ALL	DAIKIN	FFQ12W2VJU

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. PROVIDE INVERTER DRIVEN COMPRESSOR FOR IMPROVED HUMIDITY CONTROL.
 3. PROVIDE WALL MOUNTED AND WIRED 7-DAY PROGRAMMABLE T-STAT IN LIEU OF WIRELESS REMOTE.
 4. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.

IDEA MISSION BUILDING A - MINI-SPLIT CONDENSER SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL COOLING (BTU/H)	COND DB	ELECTRICAL V-PH-HZ	SEER2	COMPR TYPE	MCA	MOCP	WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER

- NOTES:
1. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.
 2. PROVIDE CONDENSER COIL CORROSION PROTECTION.
 3. INSTALL UNIT ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD AS NECESSARY TO ACCOMMODATE FOR NEW EQUIPMENT.
 4. PROVIDE INSULATION FOR BOTH LIQUID AND SUCTION LINES.
 5. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND PIPING RECOMMENDATIONS.
 6. 1 YEAR PARTS WARRANTY AND 10 YEAR COMPRESSOR PARTS LIMITED WARRANTY.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
CC-2	-	15	2)	208V/1PHASE	30A, 3PNF, 240V, NEMA 1	RETAIN EXISTING.	REMOVE EXISTING	1/2" - 2#12 & #12G	LC
ACCU-5	7.8	15	1) 15	208V/1PHASE	30A, 3PNF, 240V, NEMA 4X SS	RETAIN EXISTING.	1/2" - 2#12 & #12G	RETAIN EXISTING	LC

- GENERAL NOTES:
- A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 - B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

- NOTES:
- 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
 - 2) EXISTING CIRCUIT BREAKER TO REMAIN A SPARE. OBTAIN POWER FROM ACCU.

MECHANICAL KEYED NOTES:

- 1 DEMOLISH EXISTING CASSETTE UNIT. PROVIDE NEW CASSETTE UNIT AT THIS APPROXIMATE LOCATION. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- 2 DEMOLISH EXISTING THERMOSTAT. PROVIDE NEW THERMOSTAT AS SHOWN. MOUNT 48" ABOVE FINISHED FLOOR & COORDINATE WITH ARCHITECT AND OWNER TO MEET ADA REQUIREMENTS. PROVIDE CLEAR LOCKING COVER FOR ALL SENSORS.
- 3 DEMOLISH EXISTING REFRIGERANT PIPING. PROVIDE NEW REFRIGERANT PIPING. AND ROUTE TO INDOOR UNIT. COORDINATE ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION. ROUTE INSIDE WALL TO AVOID EXPOSED PIPING WITHIN THE SPACE. (TYPICAL)
- 4 PROVIDE REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
- 5 PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 6 DEMOLISH EXISTING ACCU AND INSTALL NEW AIR COOLED CONDENSING UNIT AND INSULATED REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNT UNIT ON EXISTING CONCRETE PAD. PAD SHALL BE MINIMUM 6" LARGER THAN EQUIPMENT FOOTPRINT ON ALL SIDES. EXTEND CONCRETE PAD AS NECESSARY. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO EXISTING CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 7 RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.
- 8 RETAIN EXISTING CONDENSATE DRAIN LINE. RECONNECT EXISTING CONDENSATE DRAIN LINE TO NEW CASSETTE UNIT. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS.

ELECTRICAL KEYED NOTES:

- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2 DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.

LEGEND

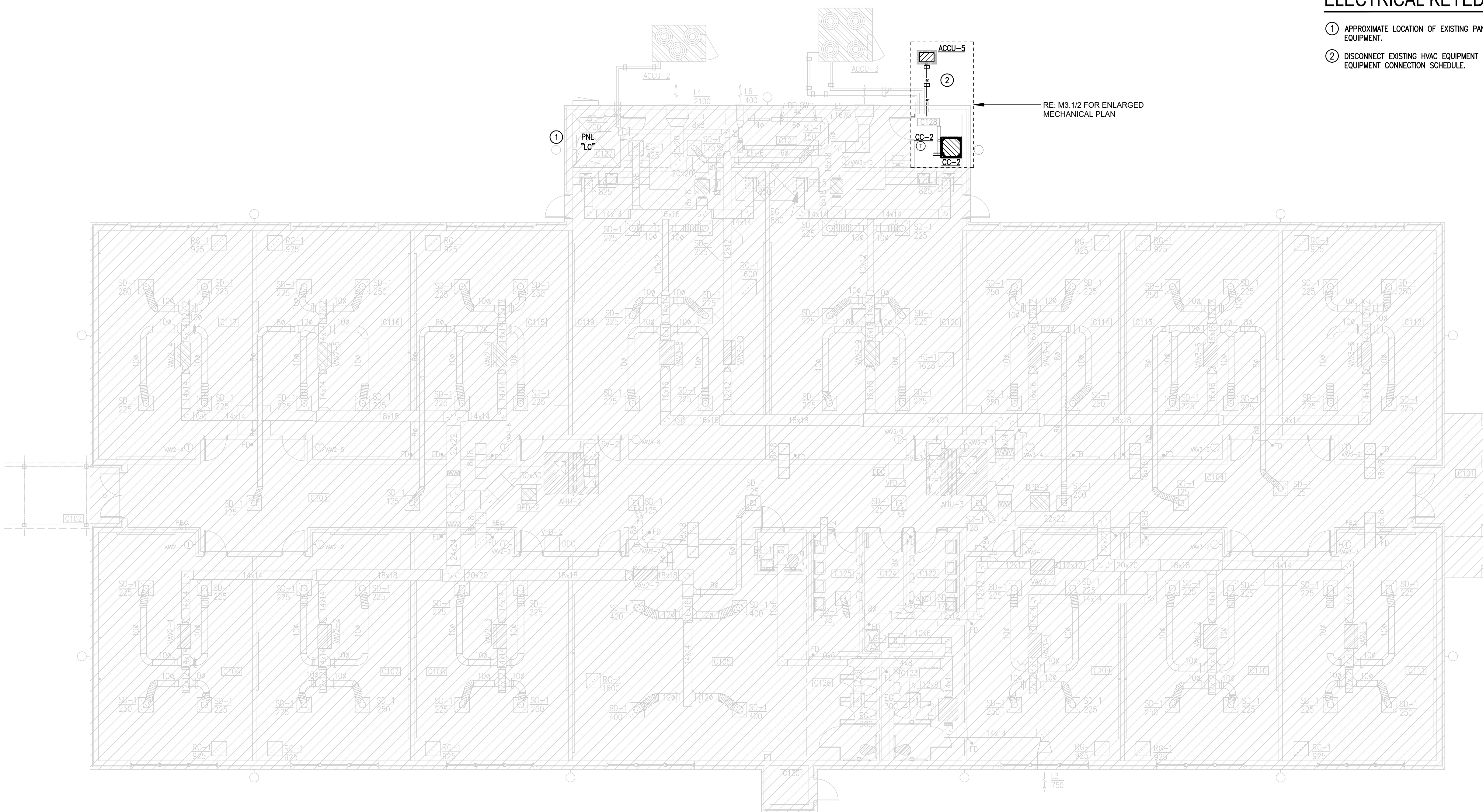
	EXISTING SUPPLY DIFFUSER TO REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

NO. REVISION: BY:

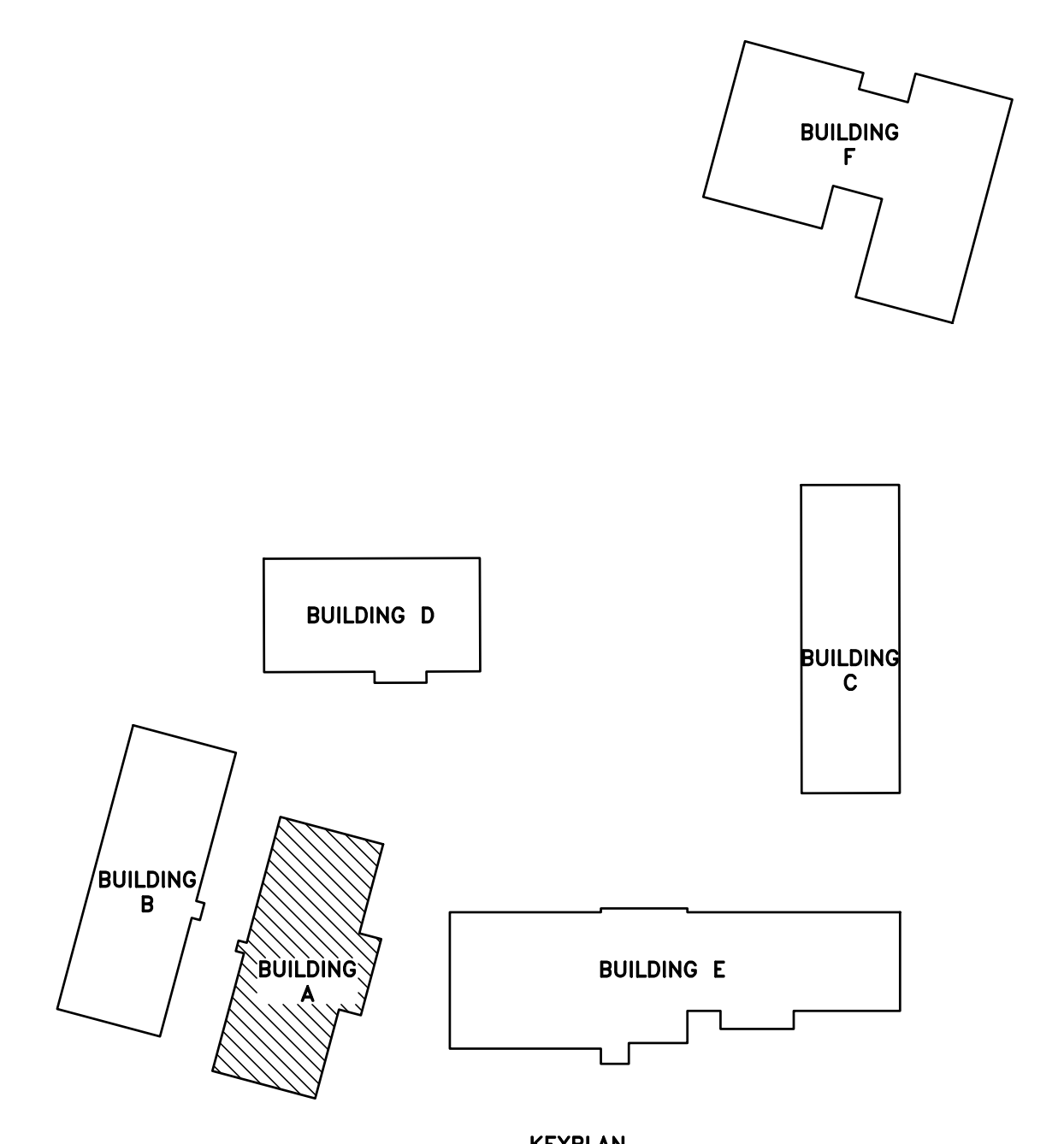
RFP # 23-URMU-0424



03.15.2023
TEXAS



IDEA MISSION ENLARGED MECHANICAL & ELECTRICAL PLAN
SCALE: 1/12" = 1'-0" NORTH



IDEA MISSION BUILDING A MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 1/8" = 1'-0" NORTH

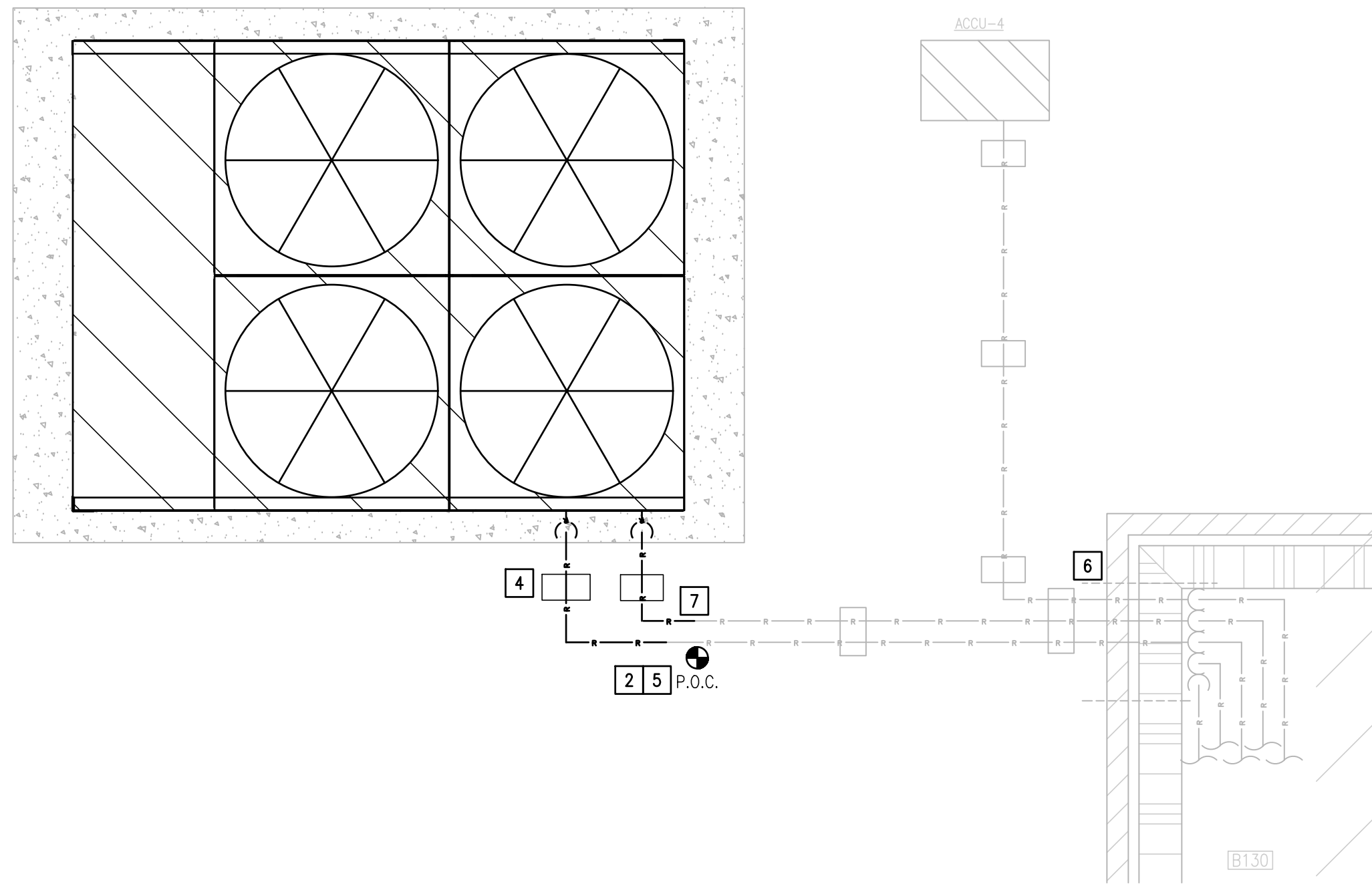
**IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES**

MISSION



DATE: MARCH 15, 2024
CHECKED BY: B.B.
DRAWN BY: D.G.
PROJECT NO.: 23V78
CAD FILE:
SHEET: **ME3.1**

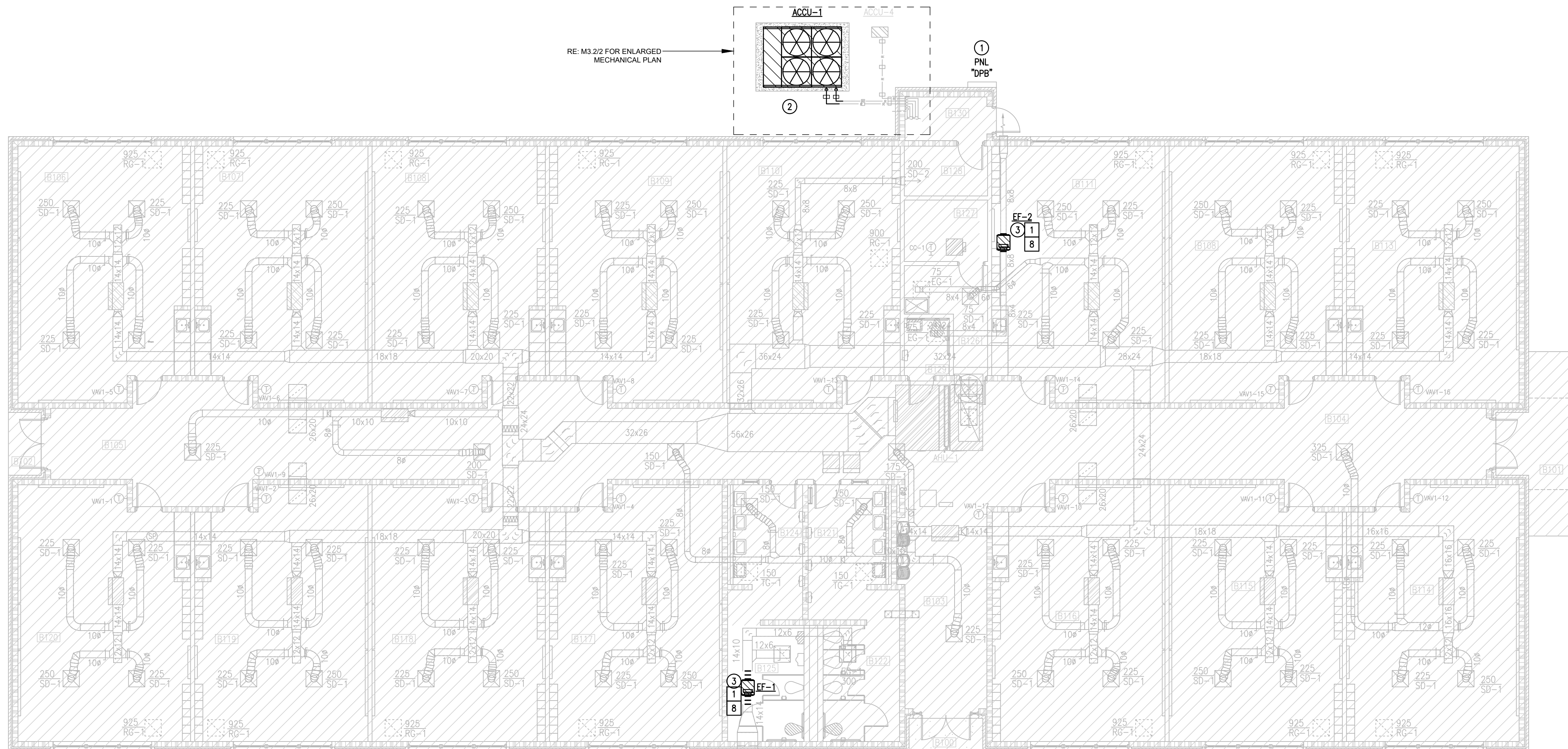
ACCU-1 3



02 IDEA MISSION BUILDING B ENLARGED MECHANICAL & ELECTRICAL PLAN
SCALE: 1/2" = 1'-0"



RE: M3.2 FOR ENLARGED MECHANICAL PLAN



01 IDEA MISSION BUILDING B MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



IDEA MISSION - BUILDING B ACCU SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL BTUH	COND DB	ELECTRICAL V-PH-HZ	EER / IEER AT ARI	STEPS OF CAPACITY	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
									MCA	MOCP				
ACCU-1	AHU-1	YORK	YCU0080E84KCBSX	872,640	105	460-3-60	9.656/16.300	6	160.4	175	3941	ALL	YORK	YLUAD078ZJ46

NOTES:

1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
3. PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
4. PROVIDE BACNET INTERFACE.
5. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
6. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
7. PROVIDE FACTORY INSTALLED HOT GAS BYPASS. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT. PROVIDE ALL NEW REFRIGERANT SPECIALTIES, EXPANSION VALVES, ETC.
8. PROVIDE EVAPORATOR DEFROST CONTROLLER FOR MINIMUM CIRCUIT.

IDEA MISSION BUILDING B - EXHAUST FAN SCHEDULE

MARK	SERVING	TYPE	STATUS	ELECTRICAL V-PH-HZ	DRIVE	CFM	INPUT WATTS	MOTOR HP	RPM	E.S.P. IN. H2O	SOUND IN SONES	WEIGHT (LBS)	CONTROL NOTES	NOTES	MANUFACTURER	MODEL NUMBER
EF-1	STUDENTS RESTROOMS	SUSPENDED IN-LINE	TO BE REPLACED	120-1-60	DIRECT	600	-	1/2	859	0.32	3.2	55.0	A	ALL	GREENHECK	SQ-120-VG
EF-2	STAFF RESTROOM & JANITOR ROOM	SUSPENDED IN-LINE	TO BE REPLACED	120-1-60	DIRECT	150	-	1/15	1572	0.32	4.6	47.0	A	ALL	GREENHECK	SQ-70-VG

NOTES:

1. PROVIDE FACTORY MOUNTED DISCONNECT.
2. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
3. PROVIDE OSHA MOTOR AND BELT GUARD.
4. PROVIDE AUTOMATIC BELT TENSIONER.
5. PROVIDE INSULATED HOUSING FOR SOUND ATTENUATION.
6. PROVIDE SPRING TYPE VIBRATION ISOLATORS FOR SUSPENDED INLINE TYPE FANS.

CONTROL NOTES:

- A. CONNECT TO EXISTING DDC SYSTEM. RECREATE EXISTING CONTROL POINTS AND SCHEDULING WITH NEW EQUIPMENT.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
ACCU-1	160.4	175	1) 175	480V/3PHASE	CIRCUIT BREAKER WITHIN SIGHT	RETAIN EXISTING.	2" - 3#2/0 & #6G	RETAIN EXISTING	DPB

GENERAL NOTES:

- A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
- B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

NOTES:

- 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.

LEGEND

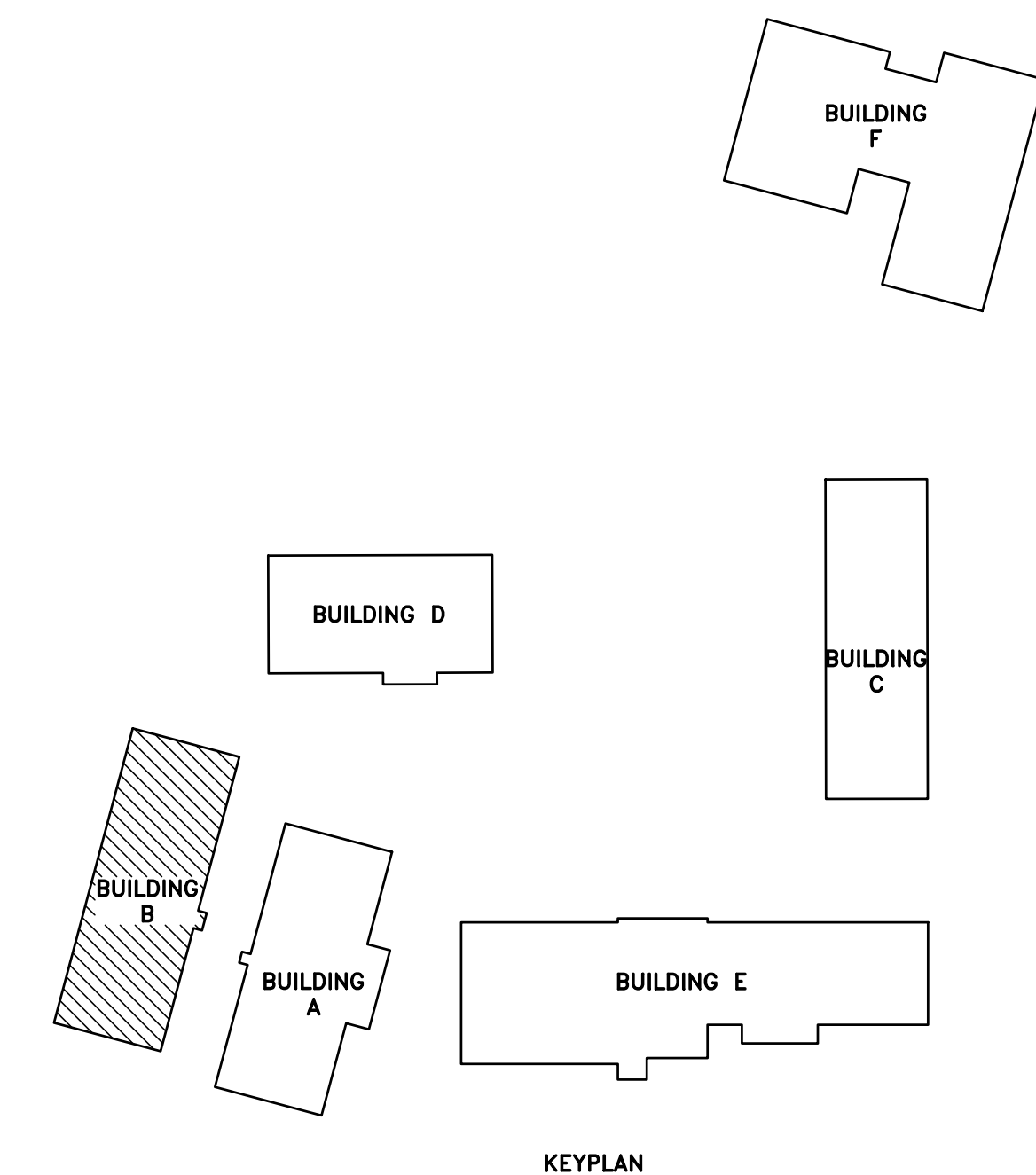
	EXISTING SUPPLY DIFFUSER TO BE REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW DUCTWORK
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

MECHANICAL KEYED NOTES:

1. DEMOLISH EXISTING EXHAUST FAN. REPLACE WITH NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCT TRANSITIONS TO EXHAUST FAN WHERE NECESSARY. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
2. RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
3. DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
4. PROVIDE NEW REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
5. PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
6. RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.
7. RECONNECT EXISTING PIPING TO NEW PIPING AT THIS LOCATION. ROUTE AS SHOWN AND CONNECT TO UNITS' CONNECTIONS.
8. TEMPORARILY REMOVE THE CEILING AROUND THE AREA OF WHERE EXISTING EXHAUST FAN IS TO BE REPLACED. RESTORE THE CEILING BACK TO ITS ORIGINAL CONDITION AFTER REPLACEMENT OF EXHAUST FAN.

ELECTRICAL KEYED NOTES:

1. APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
2. DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.
3. DISCONNECT EXISTING EXHAUST FAN FOR REPLACEMENT. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.



NO. REVISION: BY:

RF # 23-URMU-0424



03.15.2023

TEXAS

IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

MISSION



1126 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 361-206-3435
TEXAS REGISTERED
ENGINEERING FIRM
E-15998

DATE: MARCH 15, 2024
CHECKED BY: B.B.
DRAWN BY: D.G.
PROJECT NO.: 23V78
CAD FILE:
SHEET:

ME3.2

KEYPLAN

LEGEND

	EXISTING SUPPLY DIFFUSER TO BE REMAIN
	EXISTING RETURN AIR GRILLE TO BE REMAIN
	EXISTING DUCTWORK TO BE REMAIN
	EXISTING EQUIPMENT TO BE REMAIN
	NEW DUCTWORK
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO BE REMAIN

NO. REVISION: BY:

RFP # 23-URMU-0424



03.15.2023

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IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

MISSION



DATE: MARCH 15, 2024
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DRAWN BY: D.G.
PROJECT NO.: 23V78
CAD FILE:
SHEET:

ME3.3

IDEA MISSION - BUILDING C ACCU SCHEDULE (BASE BID)

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL BTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER / IEER AT ARI	NUMBER OF CIRCUITS	FAN FLA	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
											MCA	MOC				
ACCU-5	AHU-5	CARRIER	38AUZB25ADP6 A0A0A0	428,100	40	105	460-3-60	11.5	2		83.6	100	2273	ALL	CARRIER	38APD040

NOTES:

1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
3. PROVIDE 6INCH HIGH CONCRETE PAD FOR CONDENSING UNIT.
4. PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
5. PROVIDE DIGITAL SCROLL COMPRESSOR OR MULTI-STAGE COMPRESSOR.
6. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 28.
7. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
8. MOUNT ON 4" CONCRETE HOUSEKEEPING PAD AND MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. BOLT CONDENSING UNIT DOWN TO CONCRETE PAD.
9. PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT.
10. PROVIDE STAINLESS STEEL COIL CASING AND DRAIN PAN.
11. UNIT SHALL BE R-13 DOUBLE WALL SEALED PANEL.

IDEA MISSION - BUILDING C ACCU SCHEDULE (ALTERNATE #1)

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL BTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER / IEER AT ARI	NUMBER OF CIRCUITS	FAN FLA	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
											MCA	MOC				
ACCU-4	AHU-4	CARRIER	38AUZB25A	172,500	15	105	460-3-60	11	2		29.7	40	731	ALL	CARRIER	38AUDU16

NOTES:

1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
3. PROVIDE 6INCH HIGH CONCRETE PAD FOR CONDENSING UNIT.
4. PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
5. PROVIDE DIGITAL SCROLL COMPRESSOR OR MULTI-STAGE COMPRESSOR.
6. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 28.
7. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
8. MOUNT ON 4" CONCRETE HOUSEKEEPING PAD AND MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. BOLT CONDENSING UNIT DOWN TO CONCRETE PAD.
9. PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT.
10. PROVIDE STAINLESS STEEL COIL CASING AND DRAIN PAN.
11. UNIT SHALL BE R-13 DOUBLE WALL SEALED PANEL.

EQUIPMENT CONNECTION SCHEDULE:

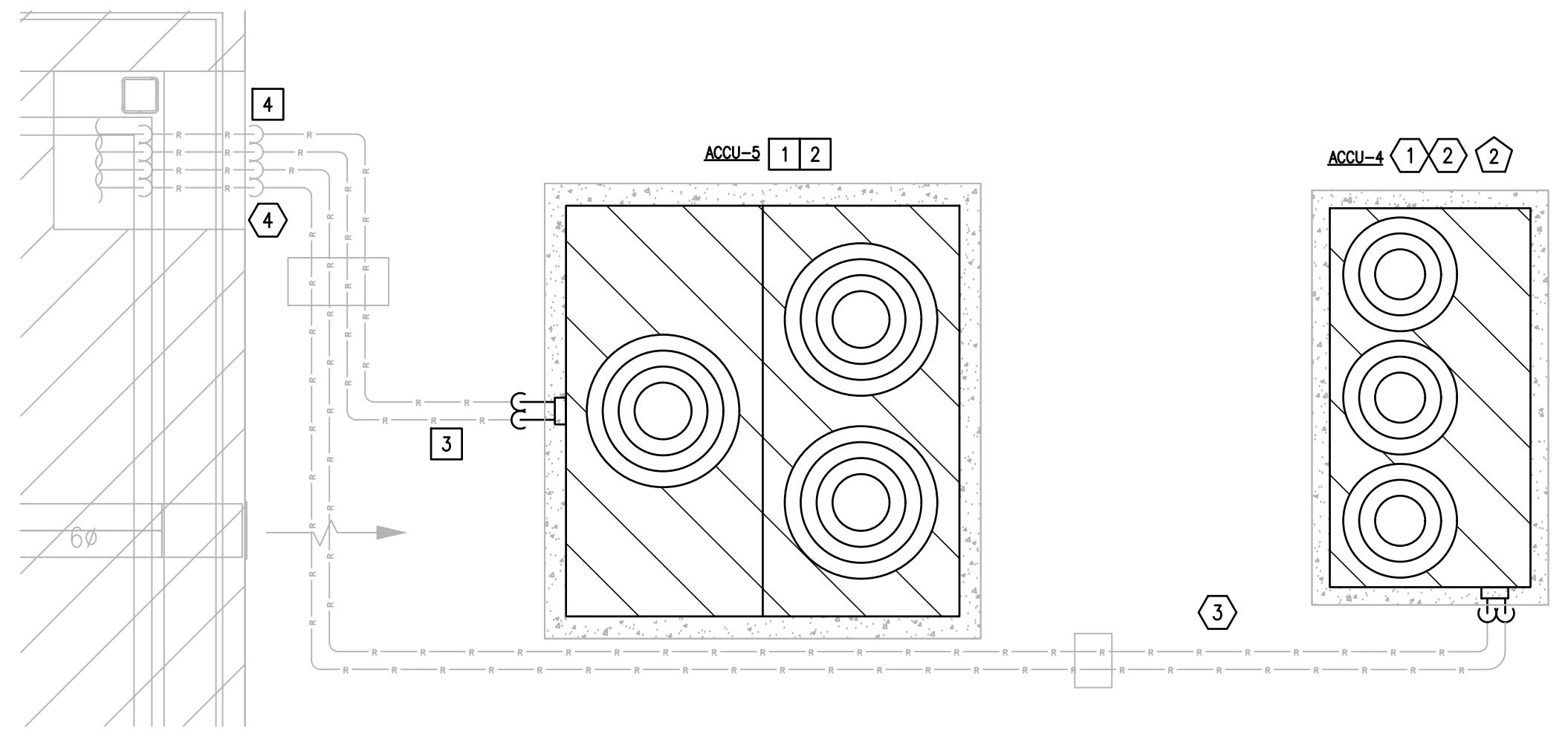
DESIGN	NEW MCA	EXISTING MOC	NEW MOC	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
ACCU-5	83.6	100	1) 100	480V/3PHASE	100A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1.25" - 3#3 & #8G	RETAIN EXISTING	DPD
ALTERNATE #1									
ACCU-4	29.7	50	2) 40	480V/3PHASE	60A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	3/4" - 3#8 & #10G	RETAIN EXISTING	MK

GENERAL NOTES:

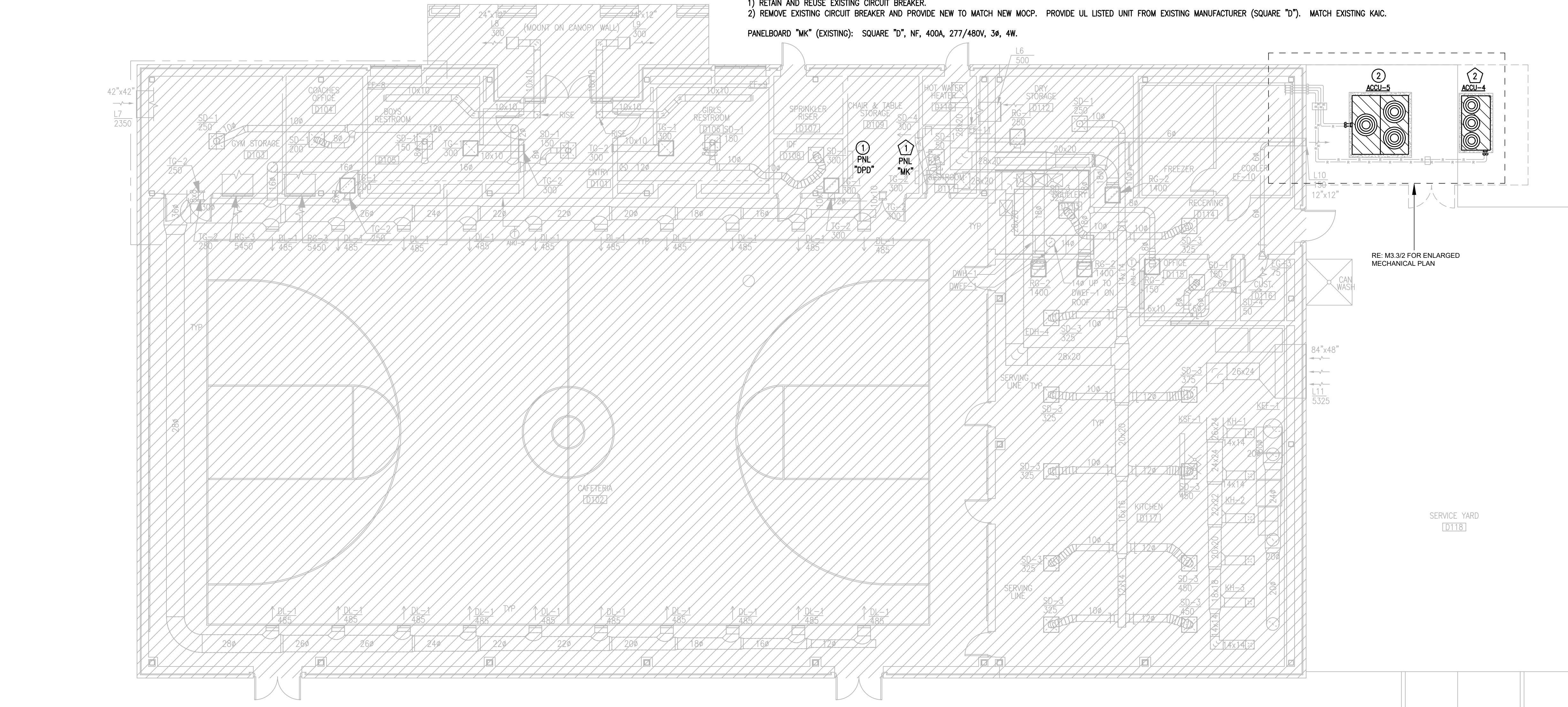
- A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
- B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

NOTES:

- 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
 - 2) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW TO MATCH NEW MOC. PROVIDE UL LISTED UNIT FROM EXISTING MANUFACTURER (SQUARE "D"). MATCH EXISTING KAIC.
- PANELBOARD "MK" (EXISTING): SQUARE "D", NF, 400A, 277/480V, 3ø, 4W.



02 IDEA MISSION BUILDING C ENLARGED MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 3/8" = 1'-0"



01 IDEA MISSION BUILDING C MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



MECHANICAL KEYED NOTES:

- 1) RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- 2) DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 3) PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 4) RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.

MECHANICAL KEYED NOTES (ALTERNATE #1):

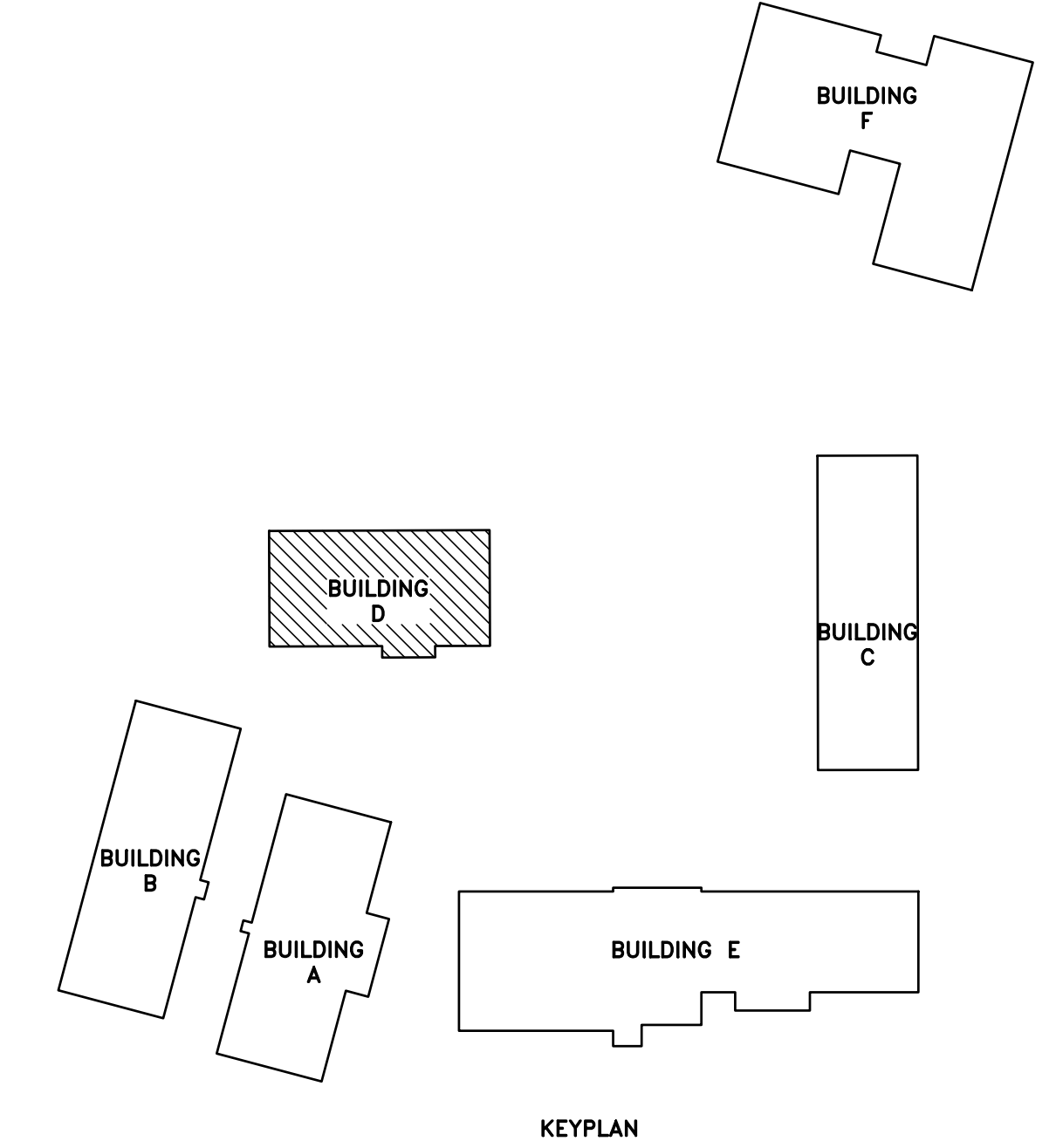
- 1) RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- 2) DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 3) PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 4) RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.

ELECTRICAL KEYED NOTES:

- 1) APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2) DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.

ALTERNATE #1 ELECTRICAL KEYED NOTES:

- 1) APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2) DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.



IDEA MISSION - BUILDING E ACCU SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL MBTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER AT ARI	NUMBER OF CIRCUITS	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
										MCA	MOCP				
ACCU-B	AHU-B	YORK	J20YDC00A4BLH2A	201	20	105	460-3-60	13.8	2	40.8	50	930	ALL	YORK	YD240C00A4ELM5
ACCU-C	AHU-C	YORK	L30YDC00A4BT1A1	314	30	105	460-3-60	11.1	2	63.5	70	1875	ALL	YORK	YD360C00A4EEB2

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
 3. PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
 4. PROVIDE BACNET INTERFACE.
 5. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
 6. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
 7. PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT. PROVIDE ALL NEW REFRIGERANT SPECIALTIES, EXPANSION VALVES, ETC.

IDEA MISSION - BUILDING E ACCU SCHEDULE (ALTERNATE #2)

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL MBTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER / IEER AT ARI	NUMBER OF CIRCUITS	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
										MCA	MOCP				
ACCU-A	AHU-A	YORK	J20YDC00A4BLH2A	201	20	105	460-3-60	13.8	2	40.8	50	930	ALL	YORK	YD240C00A4ELM5
ACCU-D	AHU-D	YORK	J50YDC00A4BT1A1	522	50	105	460-3-60	11.4	2	90.7	100	2299	ALL	YORK	YD600C00A4EEB2

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
 3. PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
 4. PROVIDE BACNET INTERFACE.
 5. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
 6. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
 7. PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT. PROVIDE ALL NEW REFRIGERANT SPECIALTIES, EXPANSION VALVES, ETC.

LEGEND

	EXISTING SUPPLY DIFFUSER TO BE REMAIN
	EXISTING RETURN AIR GRILLE TO BE REMAIN
	EXISTING DUCTWORK TO BE REMAIN
	EXISTING EQUIPMENT TO BE REMAIN
	NEW DUCTWORK
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO BE REMAIN

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
ACCU-B	40.8	50	2) 50	480V/3PHASE	CIRCUIT BREAKER WITHIN SIGHT	RETAIN EXISTING.	1" - 3#8 & #10G	RETAIN EXISTING	MDP1
ACCU-C	63.5	110	1) 70	480V/3PHASE	CIRCUIT BREAKER WITHIN SIGHT	RETAIN EXISTING.	REMOVE EXISTING WIRING	3) 1.25" - 3#3 & #8G	MDP1

ALTERNATE #2

ACCU-A	40.8	50	2) 50	480V/3PHASE	CIRCUIT BREAKER WITHIN SIGHT	RETAIN EXISTING.	1" - 3#8 & #10G	RETAIN EXISTING	MDP1
ACCU-D	90.7	90	1) 100	480V/3PHASE	CIRCUIT BREAKER WITHIN SIGHT	RETAIN EXISTING.	REMOVE EXISTING WIRING	3) 1.25" - 3#3 & #8G	MDP1

- GENERAL NOTES:
- A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 - B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

- NOTES:
- 1) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW TO MATCH NEW MOCP. PROVIDE UL LISTED UNIT FROM EXISTING MANUFACTURER (SQUARE "D"). MATCH EXISTING KAIC.
 - 2) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
 - 3) RETAIN AND REUSE EXISTING RACEWAY.

PANELBOARD "MDP1" (EXISTING): SQUARE "D", I-LINE, 800A, 277/480V, 3φ, 4W.

MECHANICAL KEYED NOTES:

- 1) RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- 2) DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 3) PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 4) RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.

ALTERNATE #2 MECHANICAL KEYED NOTES:

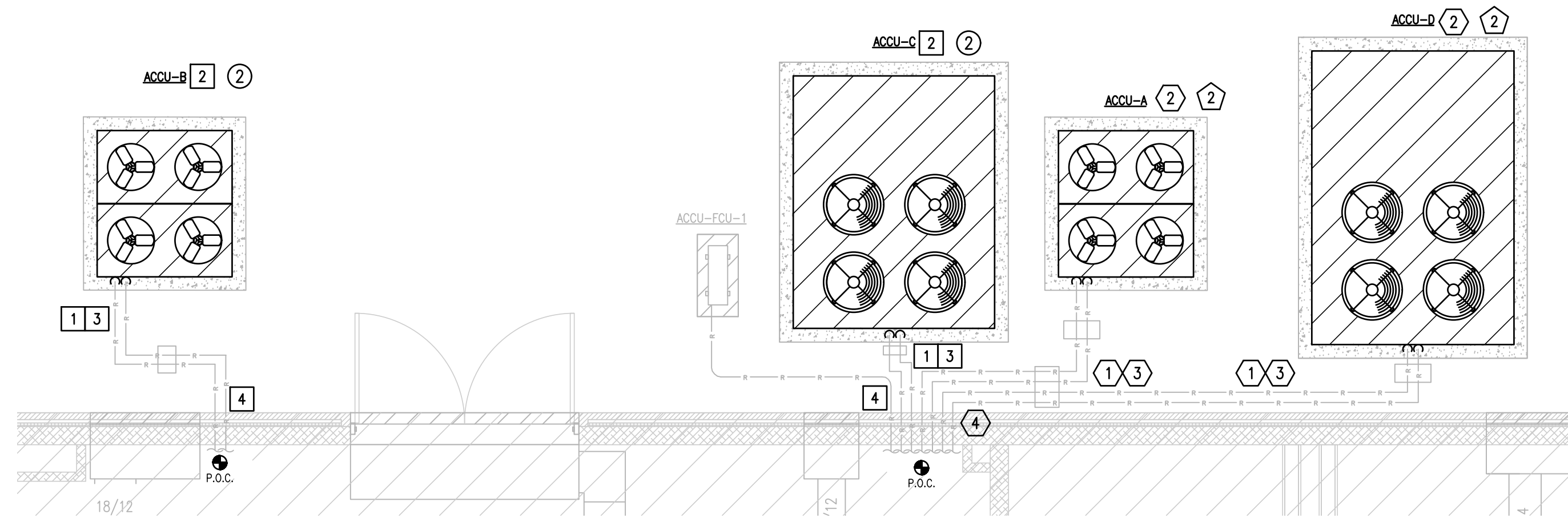
- 1) RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- 2) DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 3) PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 4) RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.

ELECTRICAL KEYED NOTES:

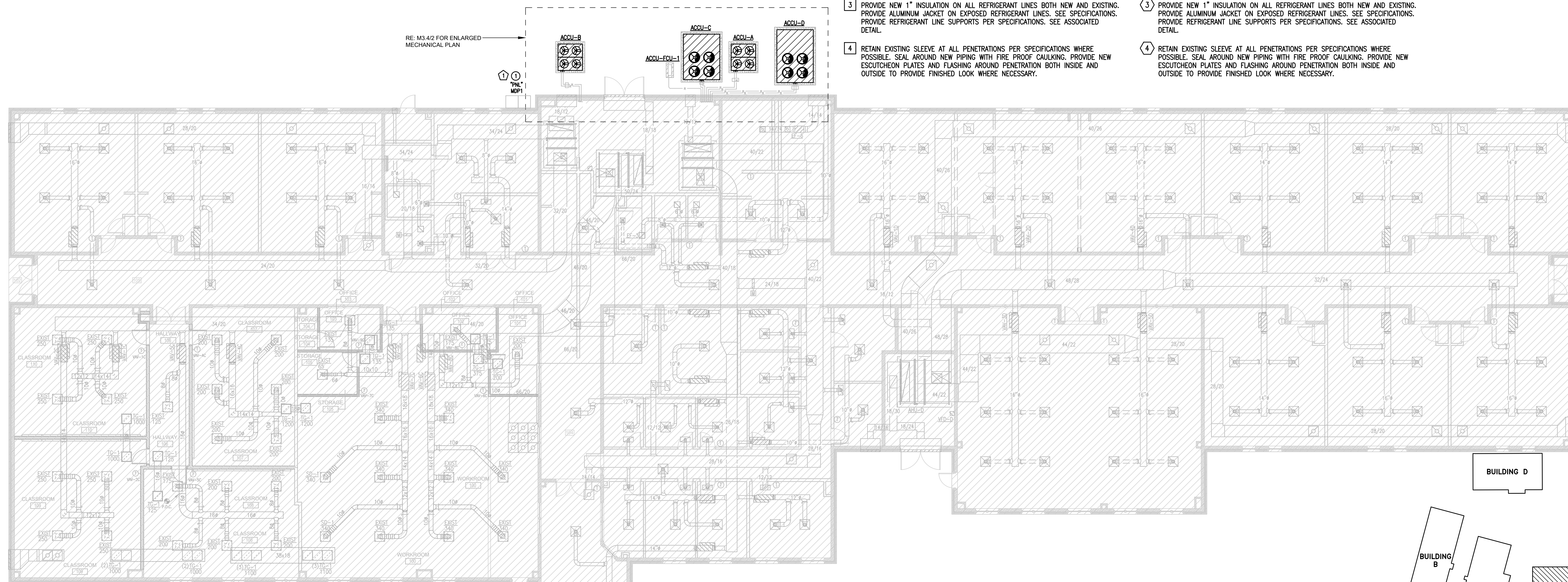
- 1) APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2) DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.

ALTERNATE #2 ELECTRICAL KEYED NOTES:

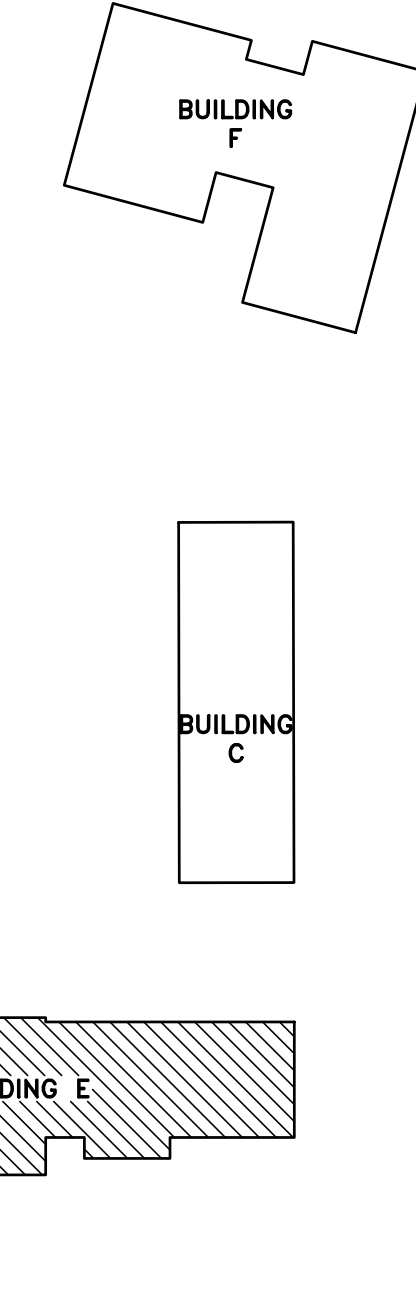
- 1) APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2) DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.



02 IDEA MISSION BUILDING E ENLARGED MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



01 IDEA MISSION BUILDING E MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 3/32" = 1'-0"



NO. REVISION: BY:
RFP # 23-URMU-0424
CESAR A. GONZALEZ
108611
03.15.2023

TEXAS

IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

MISSION

ethos engineering
1126 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 361-206-3435
TEXAS REGISTERED
ENGINEERING FIRM
E-15998

DATE: MARCH 15, 2024
CHECKED BY: B.B.
DRAWN BY: D.G.
PROJECT NO.: 23V78
CAD FILE:
SHEET:

ME3.4

IDEA EDINBURG - ACCU SCHEDULE

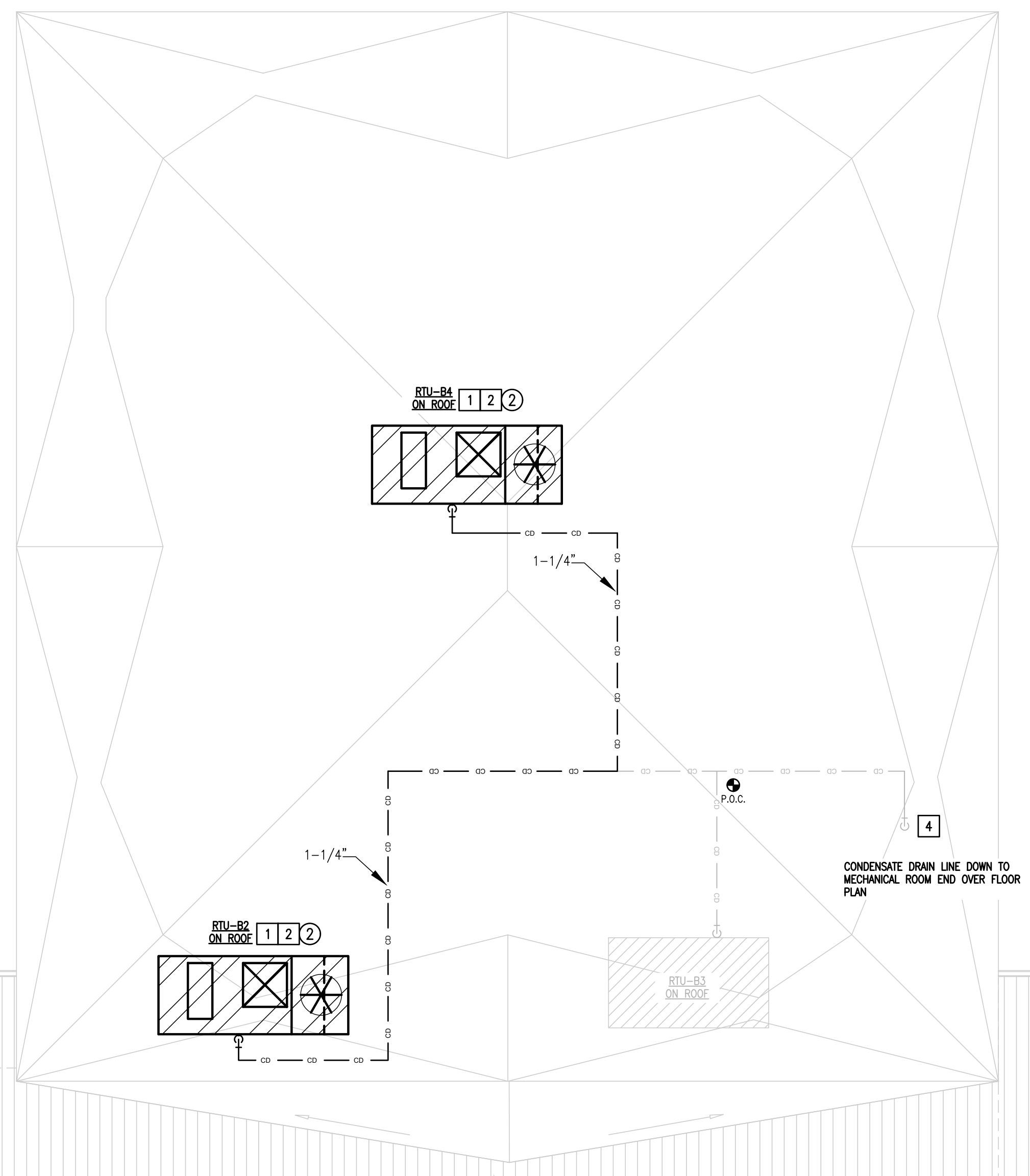
MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL MBTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER AT ARI	STEPS OF CAPACITY	(CIRCUIT) MCA	MOCP	WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
ACCU-B1	AHU-B1	JONHSON CONTROLS	J20YD00044AA B2A	209	20	100	480-3-60	13.8	2	40.8	50	930	ALL	JONHSON CONTROLS	YD240C00A4EEES

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
 3. PROVIDE LOUVERED HAIL GUARD, LOW AMBIENT KIT, SIGHT GLASS, SERVICE VALVES, FILTER DRYER, SOLENOID VALVES, TXVS, ANTI-SHORT CYCLE TIMER
 4. PROVIDE CONDENSER COIL COATING AS PER SPECIFICATIONS.
 5. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
 7. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
 8. MOUNT ON 4" CONCRETE HOUSEKEEPING PAD AND MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. BOLT CONDENSING UNIT DOWN TO CONCRETE PAD.
 9. PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES PER CONDENSING UNIT.

IDEA EDINBURG -BUILDING B DX ROOF TOP UNIT SCHEDULE

MARK	NOMINAL TONS	EXISTING MODEL #	SUPPLY CFM	OA CFM	ESP (INCHES)	MIN. HP	MCA A	MOCP A	ELECTRICAL V-PH-HZ	AIR ON COND.	COOLING				HEATING		ROOF CURB	CONVENIENCE OUTLETS	MIN. EER/IEER	WEIGHT (LBS.)	NOTES	MANUFACTURER, MODEL NUMBER
											TOTAL MBTUH	SENSIBLE MBTUH	EAT DB/WB	LAT DB/WB	KW	STAGES						
RTU-B2	18	J15ZJC00Q4AZZ20003A	4300	1400	1.5	3	38	60	480-3-60	105	185	110	78.5/68.6	55.1/55.1	-	-	NEW	YES	11.4 / 20.2	3500	ALL	DAIKIN DPS018A
RTU-B4	18	J15ZJE36R4AZZ20002A	4300	1200	1	3	52.4	60	480-3-60	105	185	107	77.8/68.5	55.0/55.0	30	SCR	NEW	YES	11.2 / 20.1	3700	ALL	DAIKIN DPS018A

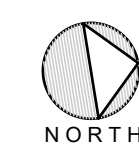
- NOTES:
1. COPPER CONDENSATE TRAP, TXV, FREEZE-STAT OPTIONS. PROVIDE NEW ROOF CURB WITH WINDSTORM CERTIFICATION.
 2. HOODED/LOUVERED HAIL GUARDS, ECOATED CONDENSER COILS, MOTORIZED OA AND RADAMPERS WITH ECONOMIZER CONTROL, INVERTER COMPRESSOR FOR MODULATING COOLING AND PRECISE DISCHARGE AIR TEMPERATURE CONTROL.
 3. PROVIDE 2" DOUBLE WALL CONSTRUCTION WITH R-13 INSULATION, STAINLESS STEEL DRAIN PANS, 2" MERV 8 GALVANIZED PRE-FILTER FRAMES, 4" MERV 13 DISPOSABLE AFTER-FILTERS, AND HINGED ACCESS DOORS.
 4. FACTORY-INSTALLED FACTORY-POWERED CONVENIENCE ELECTRICAL OUTLETS. COORDINATE WITH ELECTRICAL CONTRACTOR.
 5. HEATING KW IN RTU SCHEDULE IS RATED HEATING CAPACITY. NOT NOMINAL KW.
 6. FACTORY MOUNTED VARIABLE SPEED DRIVE AND MOTOR SHAFT GROUNDING RINGS.
 7. FACTORY UNITARY CONTROLLERS AND BACNET INTERFACE. REFER TO EQUIPMENT SPECIFICATIONS AND CONTROLS SEQUENCE OF OPERATIONS FOR MORE INFORMATION.
 8. EQUIPMENT MANUFACTURER, CONTRACTOR, AND CONTROLS CONTRACTOR TO COORDINATE PROVISION AND INSTALLATION OF SENSORS TO ENSURE THESE ARE ALL PROVIDED PROPERLY.
 9. FOR RTU-B1 AND B2: TRUE VAV OPERATION TO MODULATE FAN SPEED BASED ON DUCT MOUNTED STATIC PRESSURE SENSOR.
 10. FOR RTU-B1 AND B2: CO2 BASED DEMAND CONTROLLED VENTILATION USING RETURN DUCT MOUNTED CO2 SENSOR.
 11. FOR RTU-B4: VAV OPERATION TO MODULATE FAN SPEED BASED ON SPACE TEMPERATURE AND RETURN AIR SENSORS. CO2 BASED DCV IS NOT REQUIRED.
 12. FOR RTU-B4: WALL MOUNTED TEMPERATURE AND HUMIDITY SENSORS, HOT GAS REHEAT COILS WITH TWO POINT TEMPERATURE CONTROL FOR DEHUMIDIFICATION.
 13. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR THE PACKAGED ROOFTOP UNIT.
 14. PROVIDE IBC COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB AND CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
 - 1) ATTACHMENT OF EQUIPMENT TO CURB OR PAD.
 - 2) CURB TO STRUCTURE.
 - 3) CURB AND ATTACHMENT HARDWARE STRENGTH.
 REFER TO STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS.



IDEA EDINBURG BUILDING B MECHANICAL & ELECTRICAL ROOF PLAN

01

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



EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW HP	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
RTU-B2	3HP	38	50	1) 60	480V/3PHASE	60A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#8 & #10G	RETAIN EXISTING	HC
RTU-B4	3HP	52.4	70	2) 60	480V/3PHASE	REMOVE EXISTING	60A, 3P3F, 60AF, 600V, NEMA 3R	1" - 3#4 & #10G	RETAIN EXISTING	HK
ACCU-B1	-	40.8	60	1) 50	480V/3PHASE	60A, 3P3F, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#6 & #10G	RETAIN EXISTING	HC

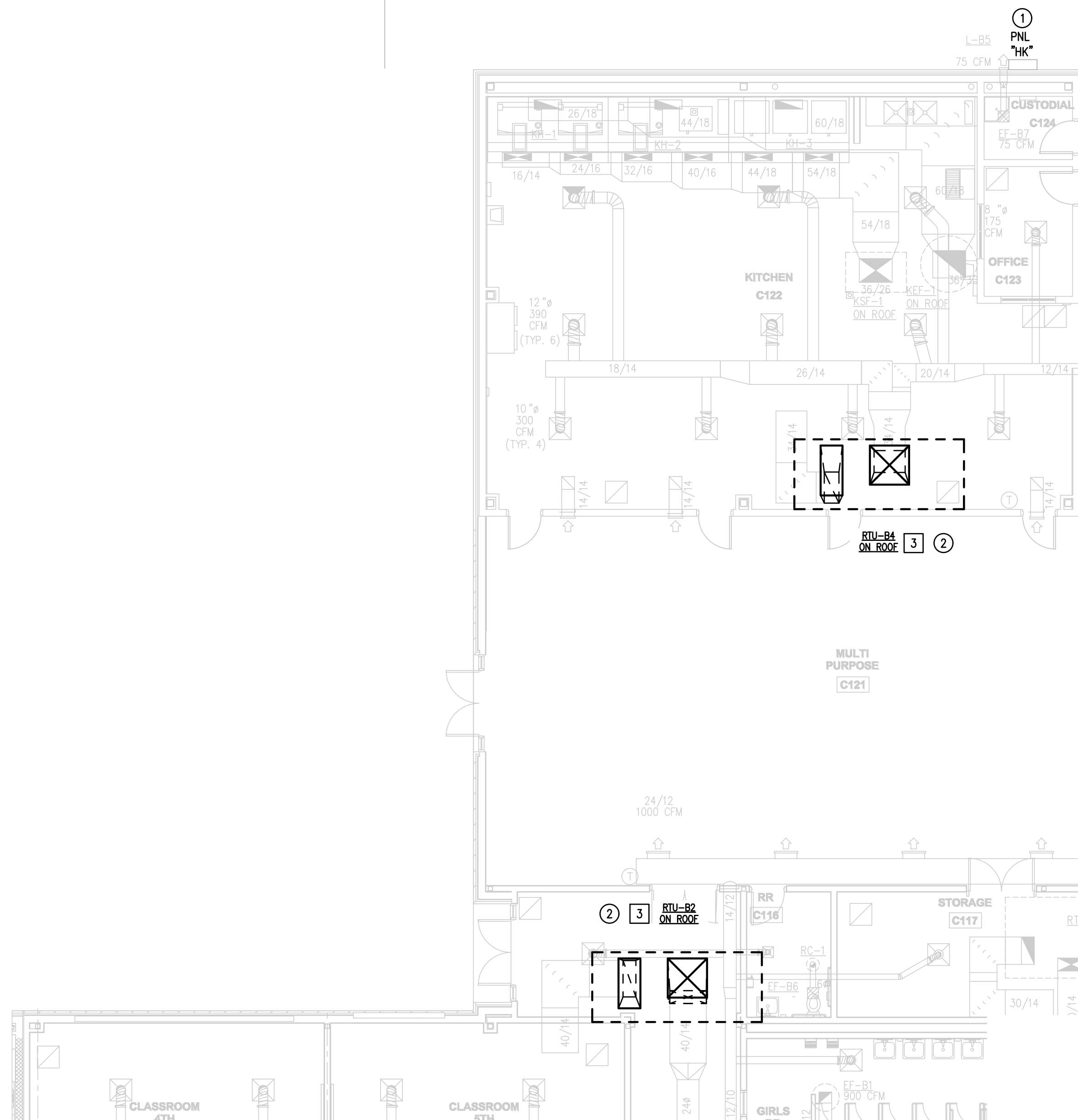
- GENERAL NOTES:
- 1) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 - 2) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

- NOTES:
- 1) SWAP EXISTING CIRCUIT BREAKERS TO MATCH NEW MOCP.
 - 2) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.

PANELBOARD "HC" (EXISTING): SIEMENS, TYPE P3, 400A, 277/480V, 3ø, 4W.

ELECTRICAL KEYED NOTES:

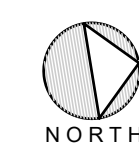
- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2 DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.
- 3 APPROXIMATE LOCATION OF EXISTING NOTIFIER NFS-320 FIRE ALARM CONTROL PANEL (SEE KEY PLAN). PRIME CONTRACTORS SHALL CONTACT PRE-APPROVED SUBCONTRACTORS TO WORK ON SUCH SYSTEM AS BUT NOT LIMITED TO: SUPERIOR ALARMS (956) 793-9771.
- 4 APPROXIMATE LOCATION OF EXISTING PANELBOARD "HC" (SEE KEY PLAN).



IDEA EDINBURG BUILDING B MECHANICAL & ELECTRICAL FLOOR PLAN

02

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

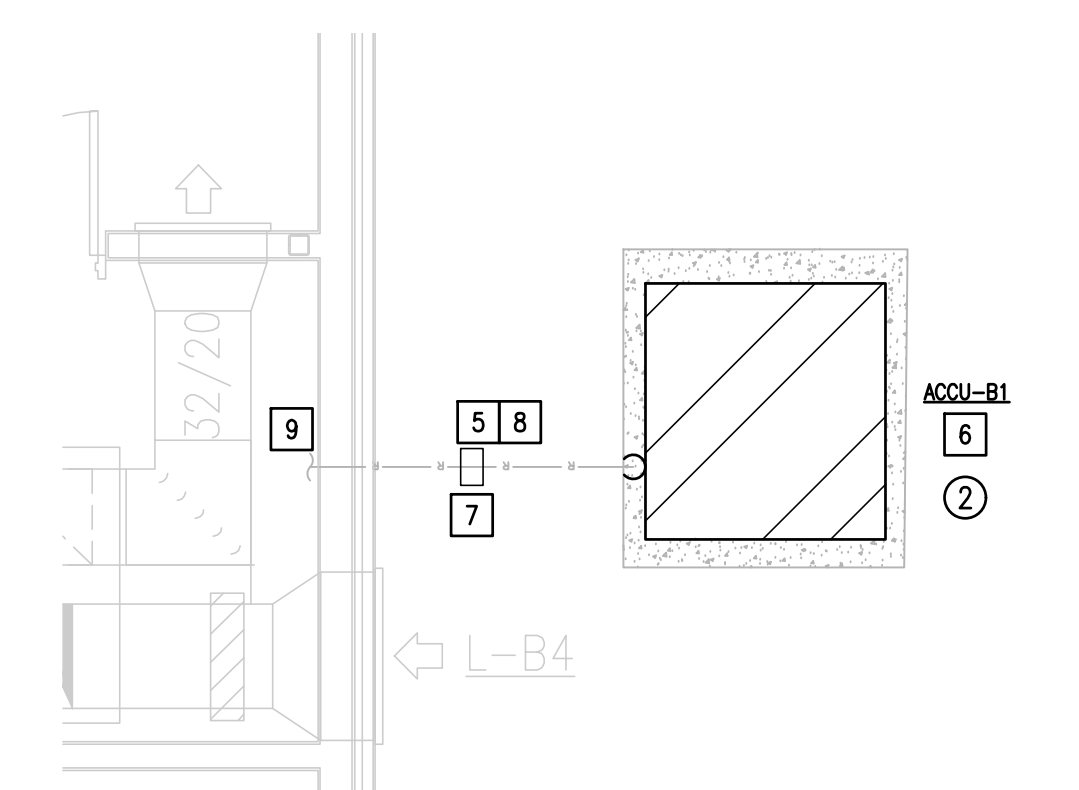


LEGEND

	EXISTING SUPPLY DIFFUSER TO REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

MECHANICAL KEYED NOTES:

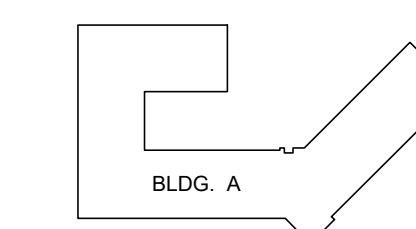
- 1 DEMOLISH EXISTING RTU AND PROVIDE NEW RTU ON NEW ROOF CURB AS SCHEDULED. ORIENT RTU'S TO OPTIMIZE CONNECTION TO EXISTING DUCTWORK. SEAL ALL OPENINGS AND ENSURE THAT INSTALLATION IS WEATHER-TIGHT. PROVIDE COPPER CONDENSATE DRAIN LINES WITH P-TRAPS AND CONNECT TO EXISTING CONDENSATE SYSTEM. PROVIDE PIPING SUPPORTS AS DETAILED. DEMOLISH EXISTING CURB AND PROVIDE NEW ROOF CURB TO INSTALL EQUIPMENT ON ROOF. SECURE EQUIPMENT TO ROOF CURB AND TO ROOF STRUCTURE AS PER DIV. 7 SPECIFICATIONS. ATTACHMENTS SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES. PROVIDE NEW DOC CONTROLS FOR RTU AS SCHEDULED. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- 2 PROVIDE CONVENIENCE ELECTRICAL OUTLET AT INDICATED RTU. COORDINATE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ELECTRICAL CONTRACTOR.
- 3 CONNECT EXISTING FULL SIZE DUCT WORK FROM CEILING SPACE BELOW TO NEW RTU SA AND RA OPENINGS. TRANSITION AS NECESSARY.
- 4 ROUTE FULL SIZE CONDENSATE TO EXISTING ROOF PENETRATION SYSTEM. SEE ASSOCIATED DETAIL. COORDINATE INSTALLATION WITH PLUMBING CONTRACTOR. PROVIDE COPPER CONDENSATE PIPING ON ROOF AND PROVIDE SUPPORTS AS PER DETAIL. REFER TO DETAIL SHEET. (TYPICAL)
- 5 RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- 6 DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC. VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 7 PROVIDE NEW REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
- 8 PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 9 RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.



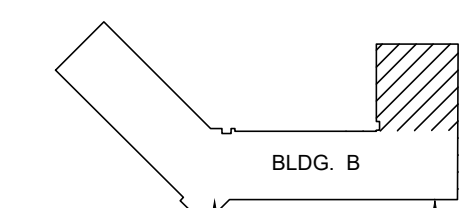
ENLARGED MECHANICAL & ELECTRICAL FLOOR PLAN

03

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



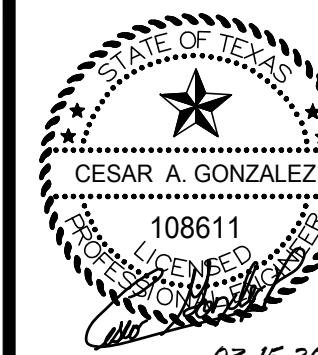
KEYPLAN



KEYPLAN

NO. REVISION: BY:

RFP # 23-URMU-0424



03.15.2023
TEXAS

**IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES**

EDINBURG



1126 SOUTH COMMERCE ST.
HARLINGEN, TX
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TEXAS REGISTERED
ENGINEERING FIRM
E-15698

DATE: MARCH 15, 2024

CHECKED BY: B.B.

DRAWN BY: D.G.

PROJECT NO.: 23V78

CAD FILE:

SHEET:

ME4.1

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW HP	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
RTU-B1	5HP	59	80	1) 80	480V/3PHASE	100A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#4 & #8G	RETAIN EXISTING	NHA

GENERAL NOTES:
 A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

NOTES:
 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.

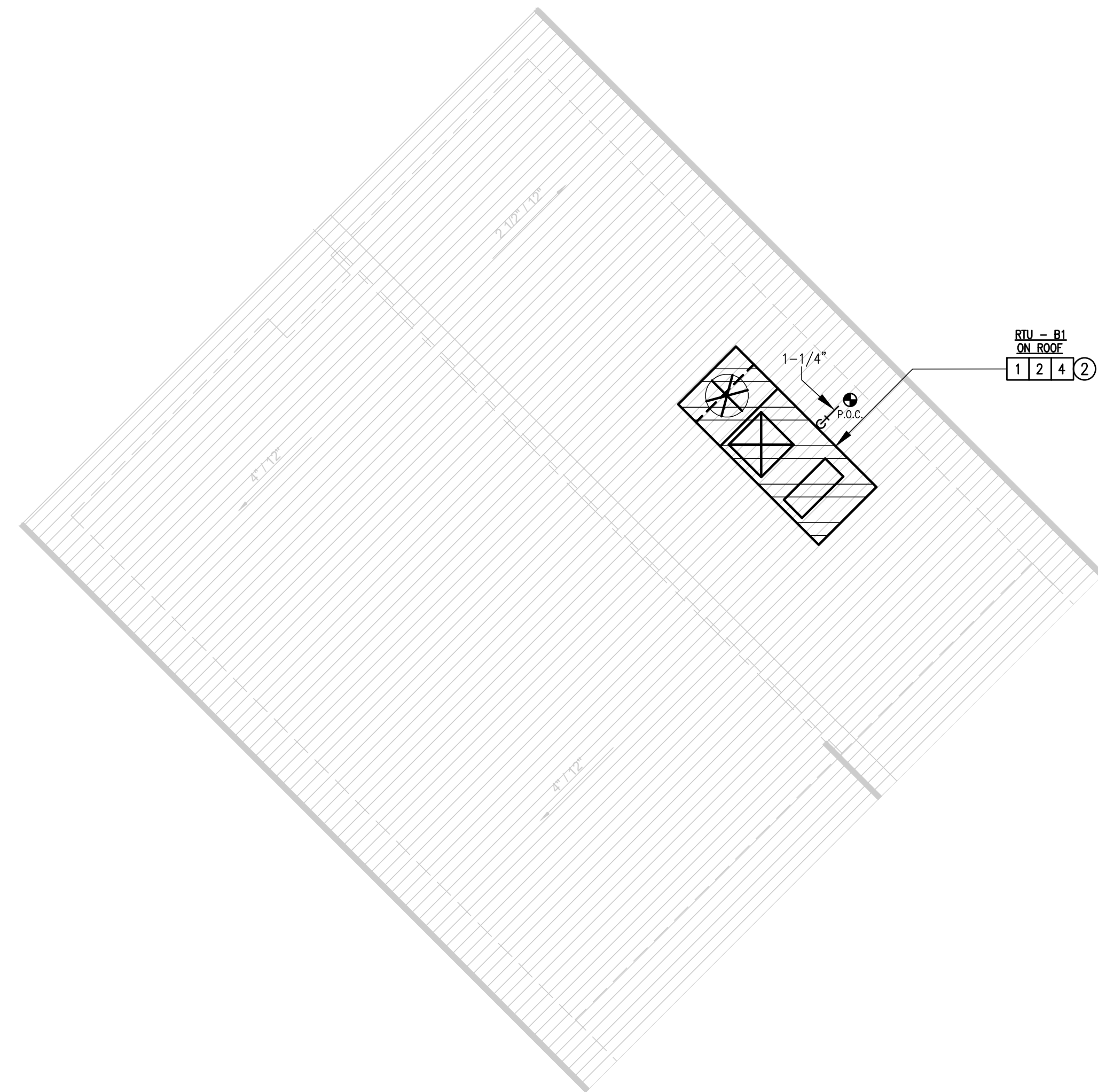
LEGEND

	EXISTING SUPPLY DIFFUSER TO REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED

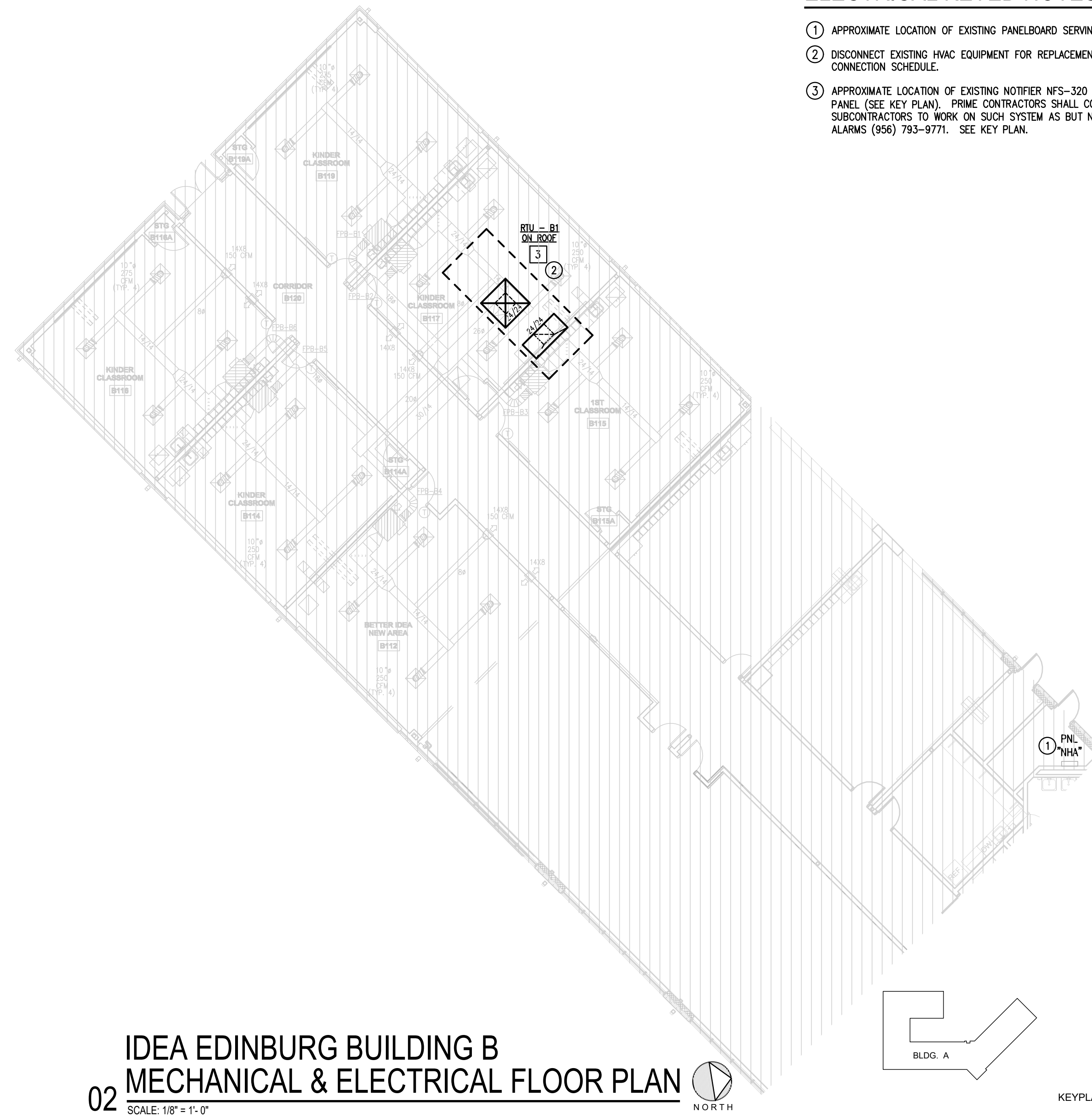
IDEA EDINBURG - BUILDING B DX ROOF TOP UNIT SCHEDULE

MARK	NOMINAL TONS	EXISTING MODEL #	SUPPLY CFM	OA CFM	ESP (INCHES)	MIN. HP	MCA A	MOCP A	ELECTRICAL V-PH-HZ	AIR ON COND.	COOLING				HEATING		ROOF CURB	CONVENIENCE OUTLETS	MIN. EER/EER	WEIGHT (LBS.)	NOTES	MANUFACTURER, MODEL NUMBER
											TOTAL MBTUH	SENSIBLE MBTUH	EAT DBWB	LAT DBWB	KW	STAGES						
RTU-B1	25	J25ZJC0044AZZ20002A	6000	2000	1.5	5	59	80	460-3-60	105	280	155	77.5/68.7	53.9/53.9	-	-	NEW	YES	10.5 / 17.4	3600	ALL	DAIKIN DPS025A

NOTES:
 1. COPPER CONDENSATE TRAP, TXV, FREEZE-STAT OPTIONS. PROVIDE NEW ROOF CURB WITH WINDSTORM CERTIFICATION.
 2. HOODED/LOUVERED HALL GUARDS, ECOATED CONDENSER COILS, MOTORIZED OA AND RA DAMPERS WITH ECONOMIZER CONTROL, INVERTER COMPRESSOR FOR MODULATING COOLING AND PRECISE DISCHARGE AIR TEMPERATURE CONTROL.
 3. PROVIDE 2" DOUBLE WALL CONSTRUCTION WITH R-13 INSULATION, STAINLESS STEEL DRAIN PANS, 2" MERV 8 GALVANIZED PRE-FILTER FRAMES, 4" MERV 13 DISPOSABLE AFTER-FILTERS, AND HINGED ACCESS DOORS.
 4. FACTORY-INSTALLED FACTORY-POWERED CONVENIENCE ELECTRICAL OUTLETS. COORDINATE WITH ELECTRICAL CONTRACTOR.
 5. HEATING KW IN RTU SCHEDULE IS RATED HEATING CAPACITY, NOT NOMINAL KW.
 6. FACTORY MOUNTED VARIABLE SPEED DRIVE AND MOTOR SHAFT GROUNDING RINGS.
 7. FACTORY UNITARY CONTROLLERS AND BACNET INTERFACE. REFER TO EQUIPMENT SPECIFICATIONS AND CONTROLS SEQUENCE OF OPERATIONS FOR MORE INFORMATION.
 8. EQUIPMENT MANUFACTURER, CONTRACTOR, AND CONTROLS CONTRACTOR TO COORDINATE PROVISION AND INSTALLATION OF SENSORS TO ENSURE THESE ARE ALL PROVIDED PROPERLY.
 9. FOR RTU-B1 AND B2: TRUE VAV OPERATION TO MODULATE FAN SPEED BASED ON DUCT MOUNTED STATIC PRESSURE SENSOR.
 10. FOR RTU-B1 AND B2: CO2 BASED DEMAND CONTROLLED VENTILATION USING RETURN DUCT MOUNTED CO2 SENSOR.
 11. FOR RTU-B4: VAV OPERATION TO MODULATE FAN SPEED BASED ON SPACE TEMPERATURE AND RETURN AIR SENSORS. CO2 BASED DCV IS NOT REQUIRED.
 12. FOR RTU-B4: WALL MOUNTED TEMPERATURE AND HUMIDITY SENSORS, HOT GAS REHEAT COILS WITH TWO POINT TEMPERATURE CONTROL FOR DEHUMIDIFICATION.
 13. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR THE PACKAGED ROOFTOP UNIT.
 14. PROVIDE IBC COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB AND CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
 1) ATTACHMENT OF EQUIPMENT TO CURB OR PAD.
 2) CURB TO STRUCTURE.
 3) CURB AND ATTACHMENT HARDWARE STRENGTH.
 REFER TO STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS.
 EQUIPMENT OR CURB MANUFACTURER IS ALSO RESPONSIBLE FOR PROVIDING ENGINEERED INSTALLATION DRAWINGS FOR ITEMS 1 AND 2 LISTED ABOVE.
 BOTH THE ENGINEERED ANALYSIS AND THE ENGINEERED INSTALLATION DRAWINGS SHALL BE PERFORMED SPECIFICALLY FOR THIS BUILDING AND PROJECT SITE AND STAMPED AND SEALED BY A TEXAS LICENSED ENGINEER. SUBMITTALS WILL NOT BE APPROVED UNTIL ALL DOCUMENTATION LISTED ABOVE IS PROVIDED ACCURATELY.



01 IDEA EDINBURG BUILDING B
 MECHANICAL & ELECTRICAL ROOF PLAN
 SCALE: 1/8" = 1'-0"



02 IDEA EDINBURG BUILDING B
 MECHANICAL & ELECTRICAL FLOOR PLAN
 SCALE: 1/8" = 1'-0"

MECHANICAL KEYED NOTES:

- 1) DEMOLISH EXISTING RTU AND PROVIDE NEW RTU ON NEW ROOF CURB AS SCHEDULED. ORIENT RTU'S TO OPTIMIZE CONNECTION TO EXISTING DUCTWORK. SEAL ALL OPENINGS AND ENSURE THAT INSTALLATION IS WEATHER-TIGHT. PROVIDE COPPER CONDENSATE DRAIN LINES WITH P-TRAPS. PROVIDE PIPING SUPPORTS AS DETAILED. DEMOLISH EXISTING CURB AND PROVIDE NEW ROOF CURB TO INSTALL EQUIPMENT ON ROOF. SECURE EQUIPMENT TO ROOF CURB AND TO ROOF STRUCTURE AS PER DIV. 7 SPECIFICATIONS. ATTACHMENTS SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES. PROVIDE NEW DDC CONTROLS FOR RTU AS SCHEDULED. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- 2) PROVIDE CONVENIENCE ELECTRICAL OUTLET AT INDICATED RTU. COORDINATE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ELECTRICAL CONTRACTOR.
- 3) CONNECT EXISTING FULL SIZE DUCT WORK FROM CEILING SPACE BELOW TO NEW RTU SA AND RA OPENINGS. TRANSITION AS NECESSARY.
- 4) PROVIDE FULL SIZE CONDENSATE AND ROUTE TO EXISTING ROOF PENETRATION SYSTEM. SEE ASSOCIATED DETAIL. COORDINATE INSTALLATION WITH PLUMBING CONTRACTOR.

ELECTRICAL KEYED NOTES:

- 1) APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2) DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.
- 3) APPROXIMATE LOCATION OF EXISTING NOTIFIER NFS-320 FIRE ALARM CONTROL PANEL (SEE KEY PLAN). PRIME CONTRACTORS SHALL CONTACT PRE-APPROVED SUBCONTRACTORS TO WORK ON SUCH SYSTEM AS BUT NOT LIMITED TO: SUPERIOR ALARMS (956) 793-9771. SEE KEY PLAN.

NO. REVISION: BY:

RFP # 23-URMU-0424



TEXAS

IDEA PUBLIC SCHOOLS
 UPPER RGV MECHANICAL UPGRADES

EDINBURG



1126 SOUTH COMMERCE ST.
 HARLINGEN, TX
 PHONE: 956-226-2435
 TEXAS REGISTERED
 ENGINEERING FIRM
 E-15998

DATE: MARCH 15, 2024
 CHECKED BY: B.B.
 DRAWN BY: D.G.
 PROJECT NO.: 23V78
 CAD FILE:
 SHEET:

ME4.2

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW HP	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
ALTERNATE #3										
RTU-A2	3HP	38	50	1) 60	480V/3PHASE	60A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1" - 3#8 & #10G	RETAIN EXISTING	HC2

GENERAL NOTES:
 A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

NOTES:
 1) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW TO MATCH NEW MOCP. PROVIDE UL LISTED UNIT FROM EXISTING MANUFACTURER (SIEMENS). MATCH EXISTING KAIC.
 PANELBOARD "HCA" (EXISTING): SIEMENS, TYPE P4, 800A, 277/480V, 3#, 4W.

IDEA EDINBURG - BUILDING A DX ROOF TOP UNIT SCHEDULE - ALTERNATE #3

MARK	NOMINAL TONS	EXISTING MODEL #	SUPPLY CFM	OA CFM	ESP (INCHES)	MIN. HP	MCA A	MOCP A	ELECTRICAL V-PH-HZ	AIR ON COND.	COOLING				HEATING		ROOF CURB	CONVENIENCE OUTLETS	MIN. EER/PLV	WEIGHT (LBS.)	NOTES	MANUFACTURER, MODEL NUMBER
											TOTAL MBTUH	SENSIBLE MBTUH	EAT DB/WB	LAT DB/WB	KW	MBTUH						
RTU-A2	18	J18ZJC00C4AZZ0001A	4550	1400	1.5	3	38	60	460-3-60	105	186	109	77.3/68.3	55.9/55.4	NA	NA	NEW	YES	11.4/20.2	3500	ALL	DAIKIN DPS018A

- NOTES:
- COPPER CONDENSATE TRAP, TXV, FREEZE-STAT OPTIONS. PROVIDE NEW ROOF CURB WITH WINDSTORM CERTIFICATION.
 - HOODED/LOUVERED HAIL GUARDS, ECOATED CONDENSER COILS, MOTORIZED OA AND RA DAMPERS WITH ECONOMIZER CONTROL, INVERTER COMPRESSOR FOR MODULATING COOLING AND PRECISE DISCHARGE AIR TEMPERATURE CONTROL.
 - PROVIDE 2" DOUBLE WALL CONSTRUCTION WITH R-13 INSULATION, STAINLESS STEEL DRAIN PANS, 2" MERV 8 GALVANIZED PRE-FILTER FRAMES, 4" MERV 13 DISPOSABLE AFTER-FILTERS, AND HINGED ACCESS DOORS.
 - FACTORY-INSTALLED FACTORY-POWERED CONVENIENCE ELECTRICAL OUTLETS. COORDINATE WITH ELECTRICAL CONTRACTOR.
 - FACTORY MOUNTED VARIABLE SPEED DRIVE AND MOTOR SHAFT GROUNDING RINGS.
 - TRUE VAV OPERATION TO MODULATE FAN SPEED BASED ON DUCT MOUNTED STATIC PRESSURE SENSOR.
 - CO2 BASED DEMAND CONTROLLED VENTILATION USING RETURN DUCT MOUNTED CO2 SENSOR.
 - FACTORY UNITARY CONTROLLERS AND BACNET INTERFACE. REFER TO EQUIPMENT SPECIFICATIONS AND CONTROLS SEQUENCE OF OPERATIONS FOR MORE INFORMATION.
 - EQUIPMENT MANUFACTURER, CONTRACTOR, AND CONTROLS CONTRACTOR TO COORDINATE. PROVISION AND INSTALLATION OF SENSORS TO ENSURE THESE ARE ALL PROVIDED PROPERLY.
 - PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR THE PACKAGED ROOFTOP UNIT.
 - PROVIDE IBC COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB AND CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
 - ATTACHMENT OF EQUIPMENT TO CURB OR PAD.
 - CURB TO STRUCTURE.
 - CURB AND ATTACHMENT HARDWARE STRENGTH.
 REFER TO STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS. EQUIPMENT OR CURB MANUFACTURER IS ALSO RESPONSIBLE FOR PROVIDING ENGINEERED INSTALLATION DRAWINGS FOR ITEMS 1 AND 2 LISTED ABOVE. BOTH, THE ENGINEERED ANALYSIS AND THE ENGINEERED INSTALLATION DRAWINGS SHALL BE PERFORMED SPECIFICALLY FOR THIS BUILDING AND PROJECT SITE AND STAMPED AND SEALED BY A TEXAS LICENSED ENGINEER. SUBMITTALS WILL NOT BE APPROVED UNTIL ALL DOCUMENTATION LISTED ABOVE IS PROVIDED ACCURATELY.

LEGEND

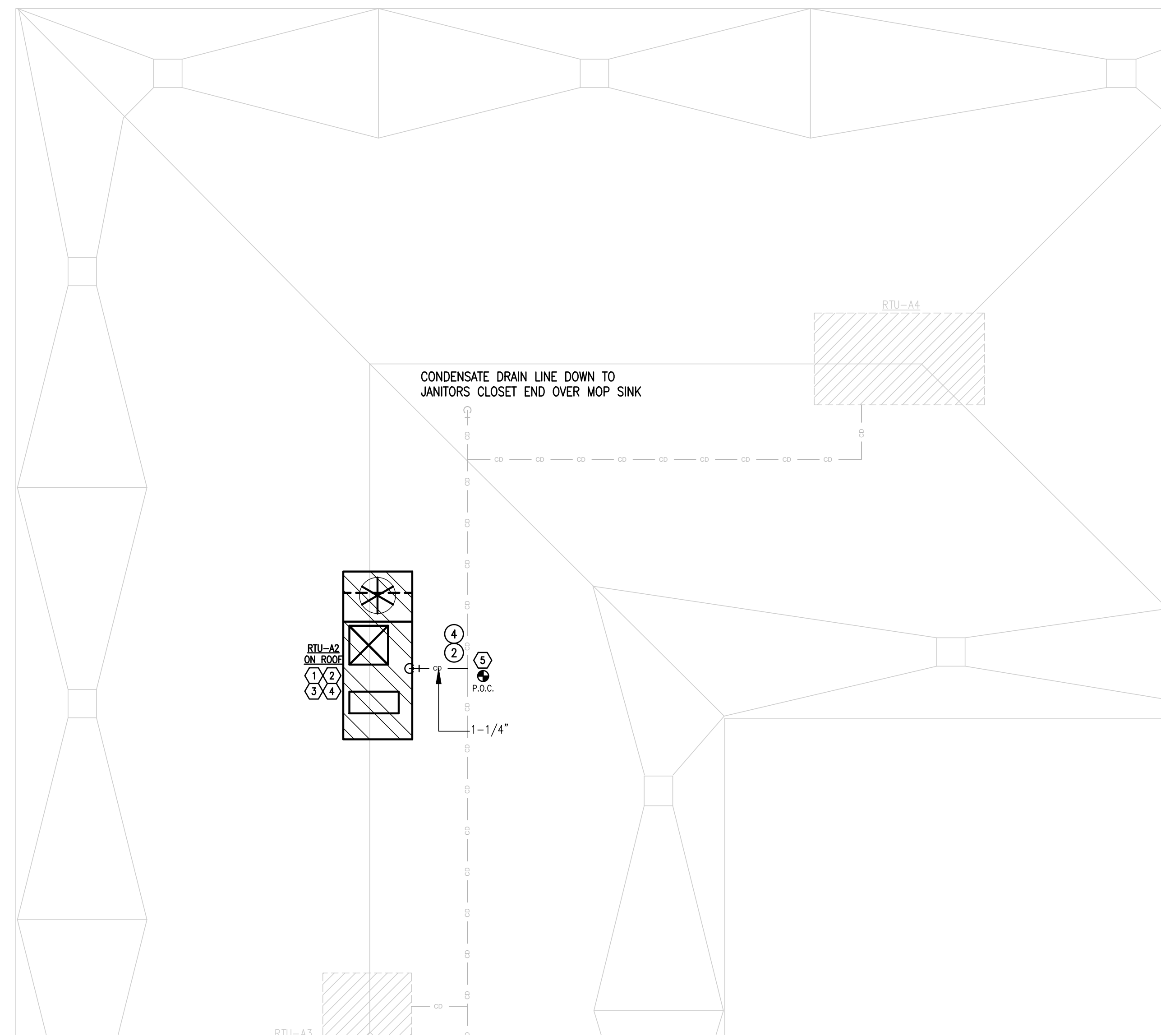
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

ALTERNATE #3 ELECTRICAL KEYED NOTES:

- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.
- APPROXIMATE LOCATION OF EXISTING NOTIFIER NFS-320 FIRE ALARM CONTROL PANEL (SEE KEY PLAN). PRIME CONTRACTORS SHALL CONTACT PRE-APPROVED SUBCONTRACTORS TO WORK ON SUCH SYSTEM AS BUT NOT LIMITED TO: SUPERIOR ALARMS (956) 793-9771.
- REMOVE EXISTING ROOF MOUNTED CONVENIENCE RECEPTACLE COVER PLATE AND PROVIDE NEW WHILE "N-USE" COVER PLATE HUBBELL MODEL NO. WP26E.

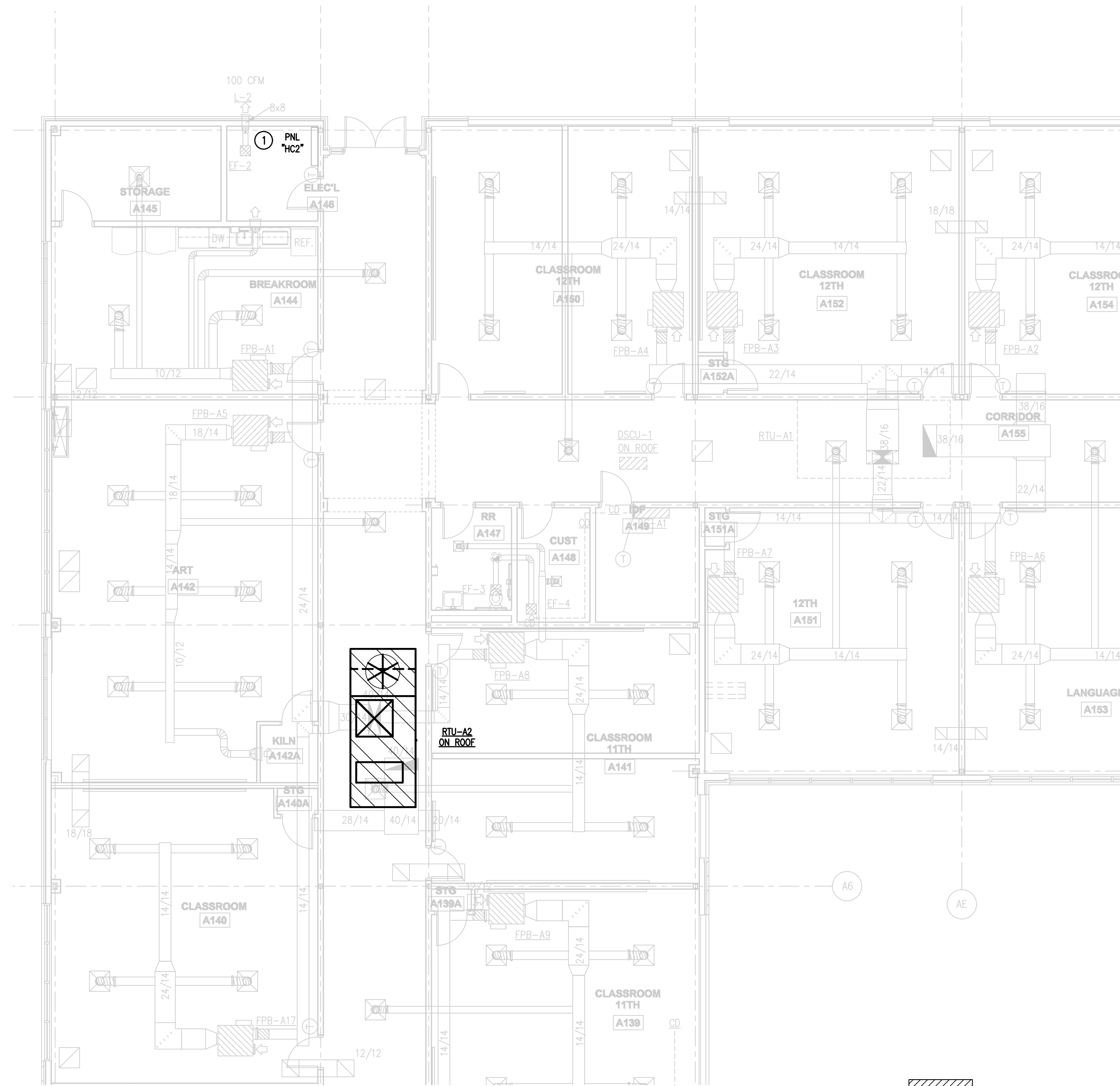
ALTERNATE #3 MECHANICAL KEYED NOTES:

- DEMOLISH EXISTING RTU AND PROVIDE NEW RTU ON NEW ROOF CURB AS SCHEDULED. ORIENT RTU'S TO OPTIMIZE CONNECTION TO EXISTING DUCTWORK. SEAL ALL OPENINGS AND ENSURE THAT INSTALLATION IS WEATHER-TIGHT. PROVIDE COPPER CONDENSATE DRAIN LINES WITH P-TRAPS, AND EXTEND TO NEAREST CONDENSATE DRAIN RECEPTOR. PROVIDE PIPING SUPPORTS AS DETAILED. DEMOLISH EXISTING CURB AND PROVIDE NEW ROOF CURB TO INSTALL EQUIPMENT ON ROOF. SECURE EQUIPMENT TO ROOF CURB AND TO ROOF STRUCTURE AS PER DIV. 7 SPECIFICATIONS. ATTACHMENTS SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES. PROVIDE NEW DDC CONTROLS FOR RTU AS SCHEDULED. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- PROVIDE CONVENIENCE ELECTRICAL OUTLET AT INDICATED RTU. COORDINATE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ELECTRICAL CONTRACTOR.
- CONNECT EXISTING FULL SIZE DUCT WORK FROM CEILING SPACE BELOW TO NEW RTU SA AND RA OPENINGS. TRANSITION AS NECESSARY.
- ROUTE FULL SIZE CONDENSATE TO EXISTING ROOF PENETRATION SYSTEM. SEE ASSOCIATED DETAIL. COORDINATE INSTALLATION WITH PLUMBING CONTRACTOR.
- CONNECT NEW CONDENSATE PIPING TO EXISTING AT THIS APPROXIMATE LOCATION.



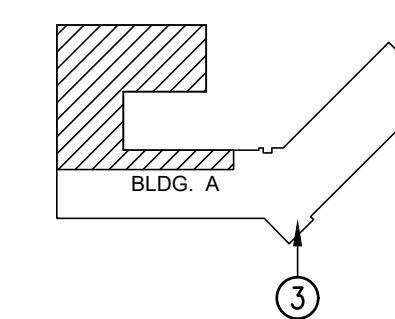
01 IDEA EDINBURG BUILDING A MECHANICAL & ELECTRICAL ROOF PLAN

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



01 IDEA EDINBURG BUILDING A MECHANICAL & ELECTRICAL FLOOR PLAN

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



KEYPLAN

NO. REVISION: BY:

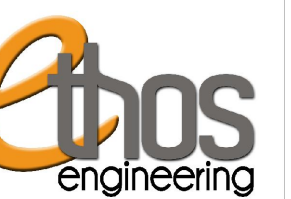
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03.15.2023 TEXAS

IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

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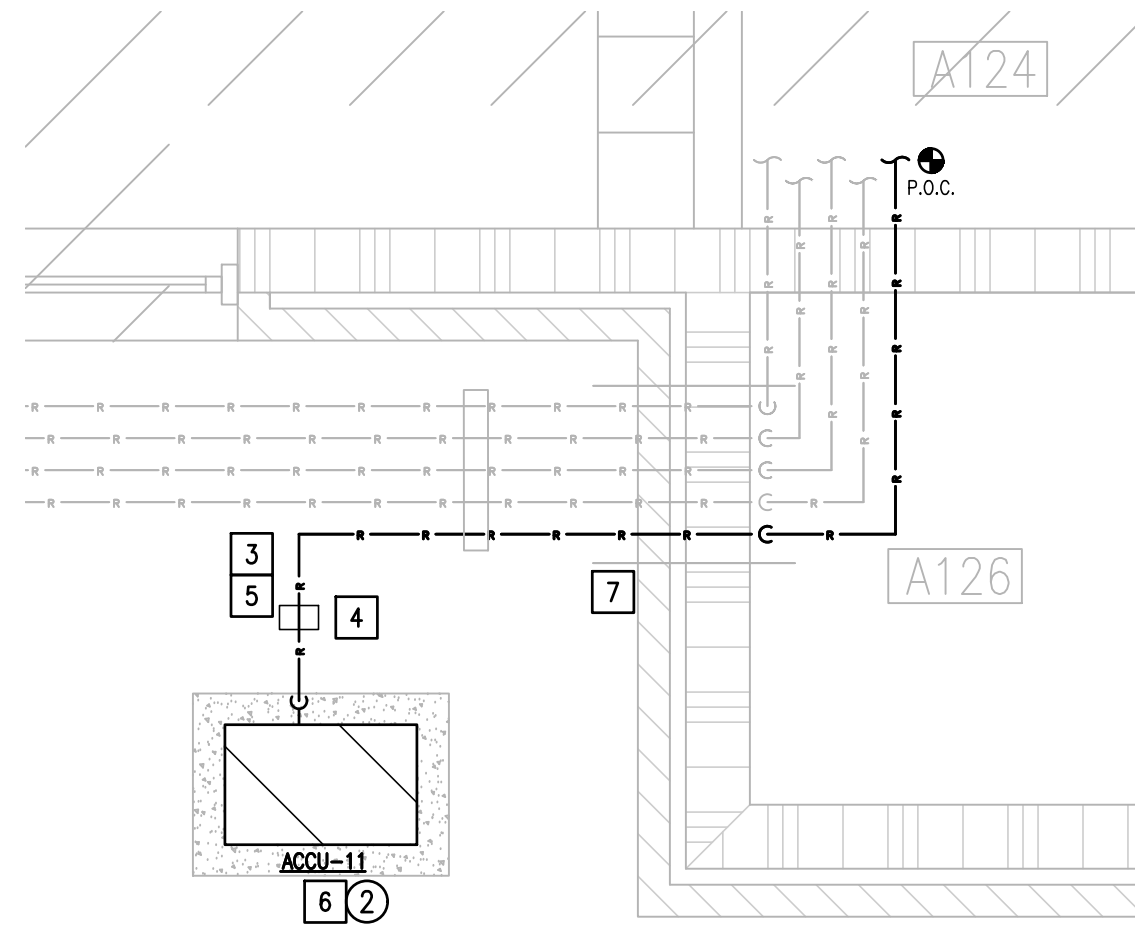


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02 IDEA QUEST ENLARGED MECHANICAL & ELECTRICAL PLAN

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



IDEA QUEST BUILDING A - MINI-SPLIT CASSETTE INDOOR UNIT SCHEDULE

MARK	SERVED BY	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	LOCATION	MIN CFM	MAX CFM	ELECTRICAL V-PH-HZ	COOLING		WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
								TOTAL (BTU/H)	EAT DB/WB				
CC-1	ACCU-11	EMI AMERICA SERIES	CACA12	C128	268	406	208-1-60	12,000	80/67	45	ALL	DAIKIN	FFQ12W2VJU

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. PROVIDE INVERTER DRIVEN COMPRESSOR FOR IMPROVED HUMIDITY CONTROL.
 3. PROVIDE MOUNTING BRACKET.
 4. PROVIDE WALL MOUNTED AND WIRED 7-DAY PROGRAMMABLE T-STAT IN LIEU OF WIRELESS REMOTE.
 5. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.

IDEA QUEST BUILDING A - MINI-SPLIT CONDENSER SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL COOLING (BTU/H)	COND DB	ELECTRICAL V-PH-HZ	SEER2	COMPR TYPE	MCA	MOCP	WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
ACCU-11	CC-1	EMI AMERICA SERIES	S1CA2	12,000	95	208-1-60	19.5	INVERTER DRIVEN TWIN ROTARY	7.8	15	64	ALL	DAIKIN	RX12M1VJU

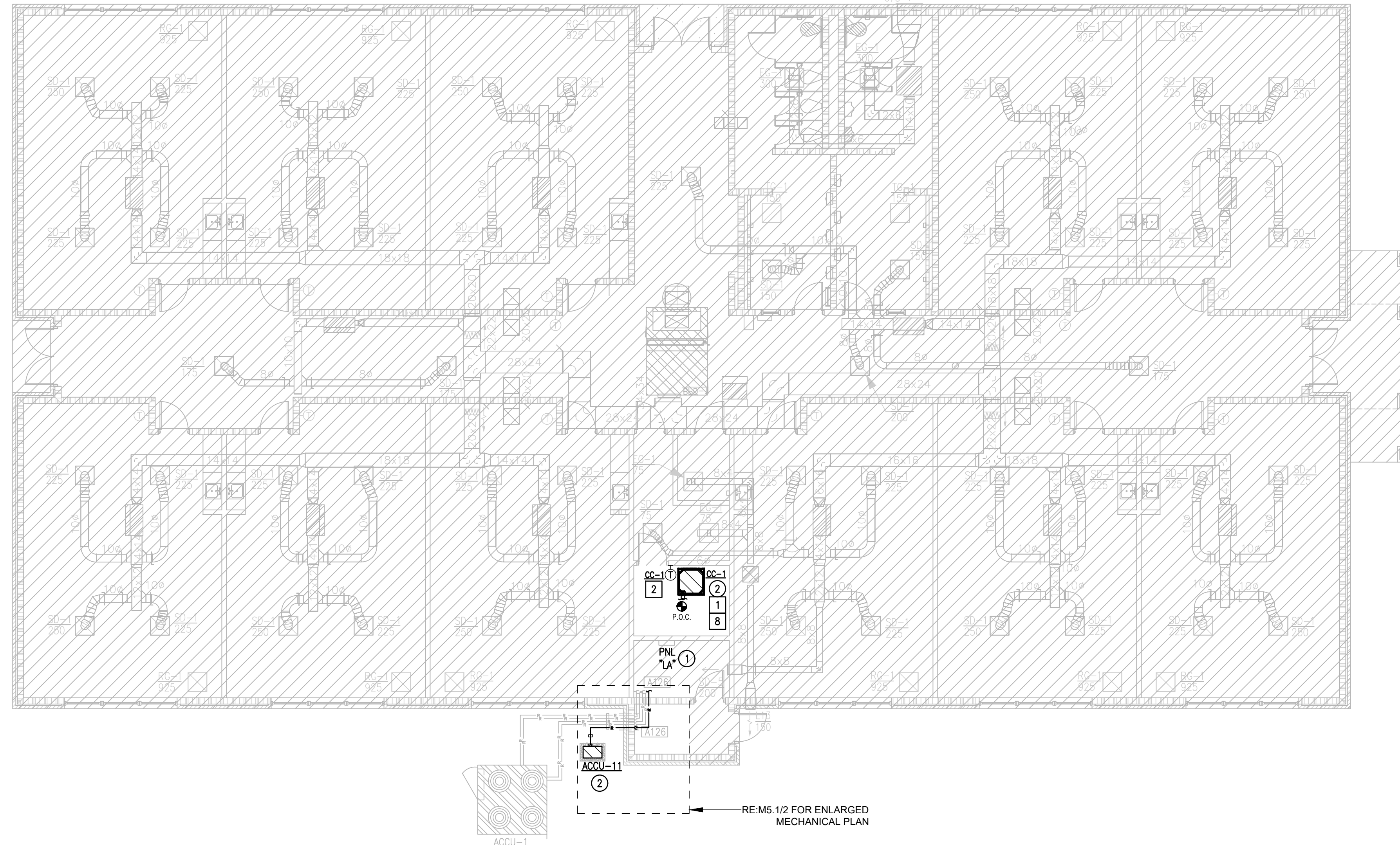
- NOTES:
1. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.
 2. PROVIDE CONDENSER COIL CORROSION PROTECTION.
 3. INSTALL UNIT ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD AS NECESSARY TO ACCOMMODATE FOR NEW EQUIPMENT.
 4. PROVIDE INSULATION FOR BOTH LIQUID AND SUCTION LINES.
 5. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND PIPING RECOMMENDATIONS.
 6. 1 YEAR PARTS WARRANTY AND 10 YEAR COMPRESSOR PARTS LIMITED WARRANTY.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
CC-1	-	15	2)	208V/1PHASE	30A, 3PNF, 240V, NEMA 1	RETAIN EXISTING.	REMOVE EXISTING	1/2" - 2#12 & #12G	LA
ACCU-11	7.8	15	1) 15	208V/1PHASE	30A, 3PNF, 240V, NEMA 4X SS	RETAIN EXISTING.	1/2" - 2#12 & #12G	RETAIN EXISTING	LA

- GENERAL NOTES:
- A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 - B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

- NOTES:
- 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
 - 2) EXISTING CIRCUIT BREAKER TO REMAIN A SPARE. OBTAIN POWER FROM ACCU.



01 IDEA QUEST BUILDING A MECHANICAL & ELECTRICAL FLOOR PLAN

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



LEGEND

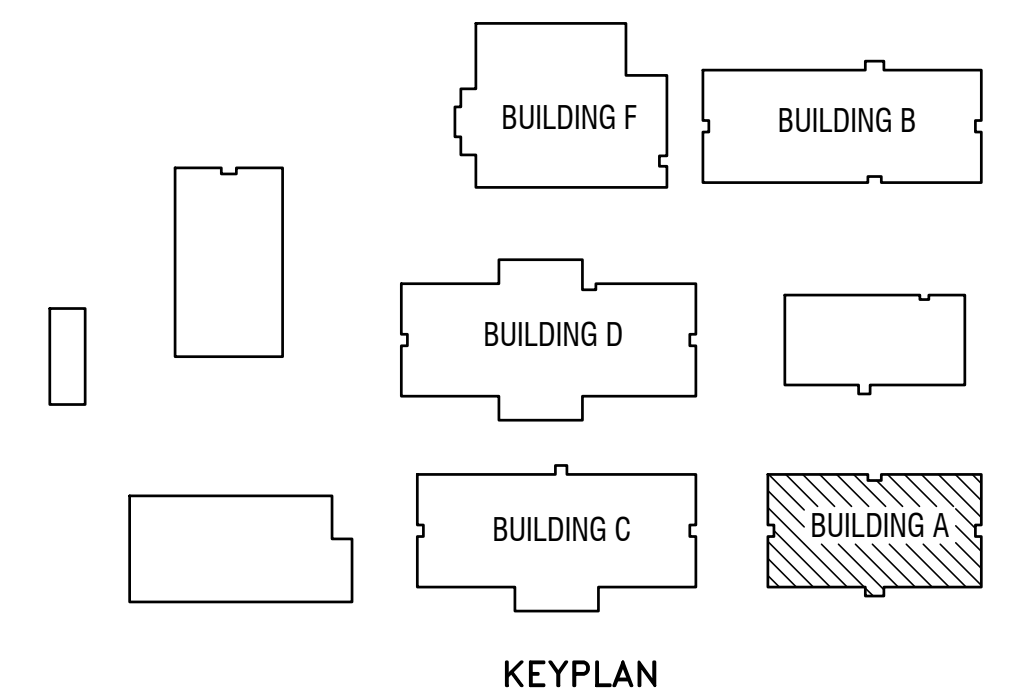
	EXISTING SUPPLY DIFFUSER TO REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

MECHANICAL KEYED NOTES:

- 1) DEMOLISH EXISTING CASSETTE UNIT. PROVIDE NEW CASSETTE UNIT AT THIS APPROXIMATE LOCATION. REFER TO PROVIDED SCHEDULE AND TAG SPECIFICATIONS FOR MORE INFORMATION.
- 2) DEMOLISH EXISTING THERMOSTAT. PROVIDE NEW THERMOSTAT AS SHOWN. MOUNT 48" ABOVE FINISHED FLOOR & COORDINATE WITH ARCHITECT AND OWNER TO MEET ADA REQUIREMENTS. PROVIDE CLEAR LOCKING COVER FOR ALL SENSORS.
- 3) DEMOLISH EXISTING REFRIGERANT PIPING. PROVIDE NEW REFRIGERANT PIPING AND ROUTE TO INDOOR UNIT. COORDINATE ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION. ROUTE INSIDE WALL TO AVOID EXPOSED PIPING WITHIN THE SPACE. (TYPICAL)
- 4) PROVIDE REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
- 5) PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 6) DEMOLISH EXISTING ACCU AND INSTALL NEW AIR COOLED CONDENSING UNIT AND INSULATED REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNT UNIT ON EXISTING CONCRETE PAD. PAD SHALL BE MINIMUM 6" LARGER THAN EQUIPMENT FOOTPRINT ON ALL SIDES. EXTEND CONCRETE PAD AS NECESSARY. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC. VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO EXISTING CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 7) RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.
- 8) RETAIN EXISTING CONDENSATE DRAIN LINE. RECONNECT EXISTING CONDENSATE DRAIN LINE TO NEW CASSETTE UNIT. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS.

ELECTRICAL KEYED NOTES:

- 1) APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2) DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.



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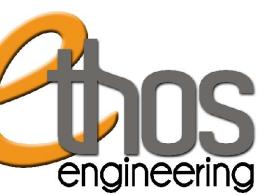


03.15.2023

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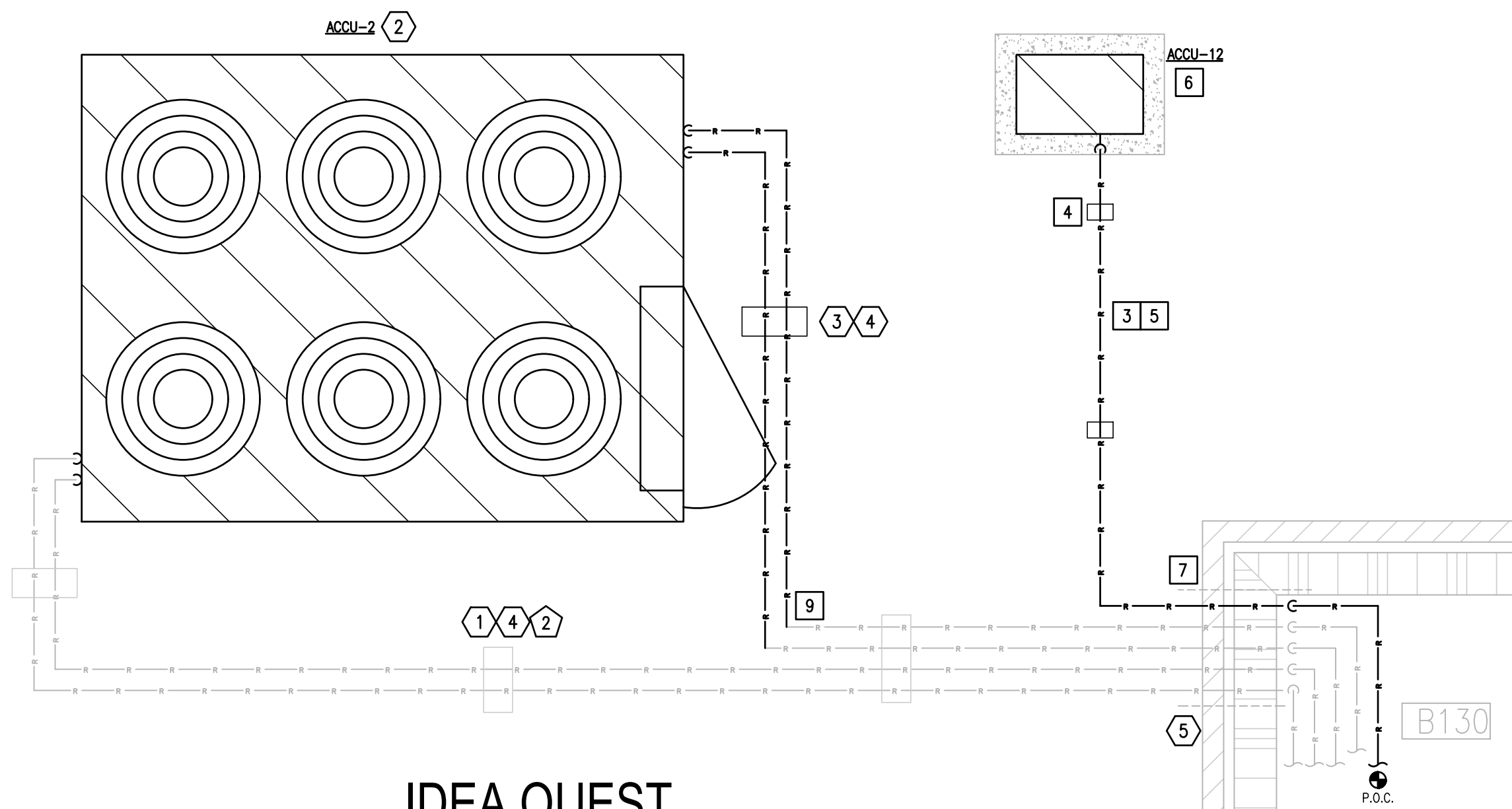
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SHEET:

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IDEA QUEST ENLARGED MECHANICAL & ELECTRICAL PLAN

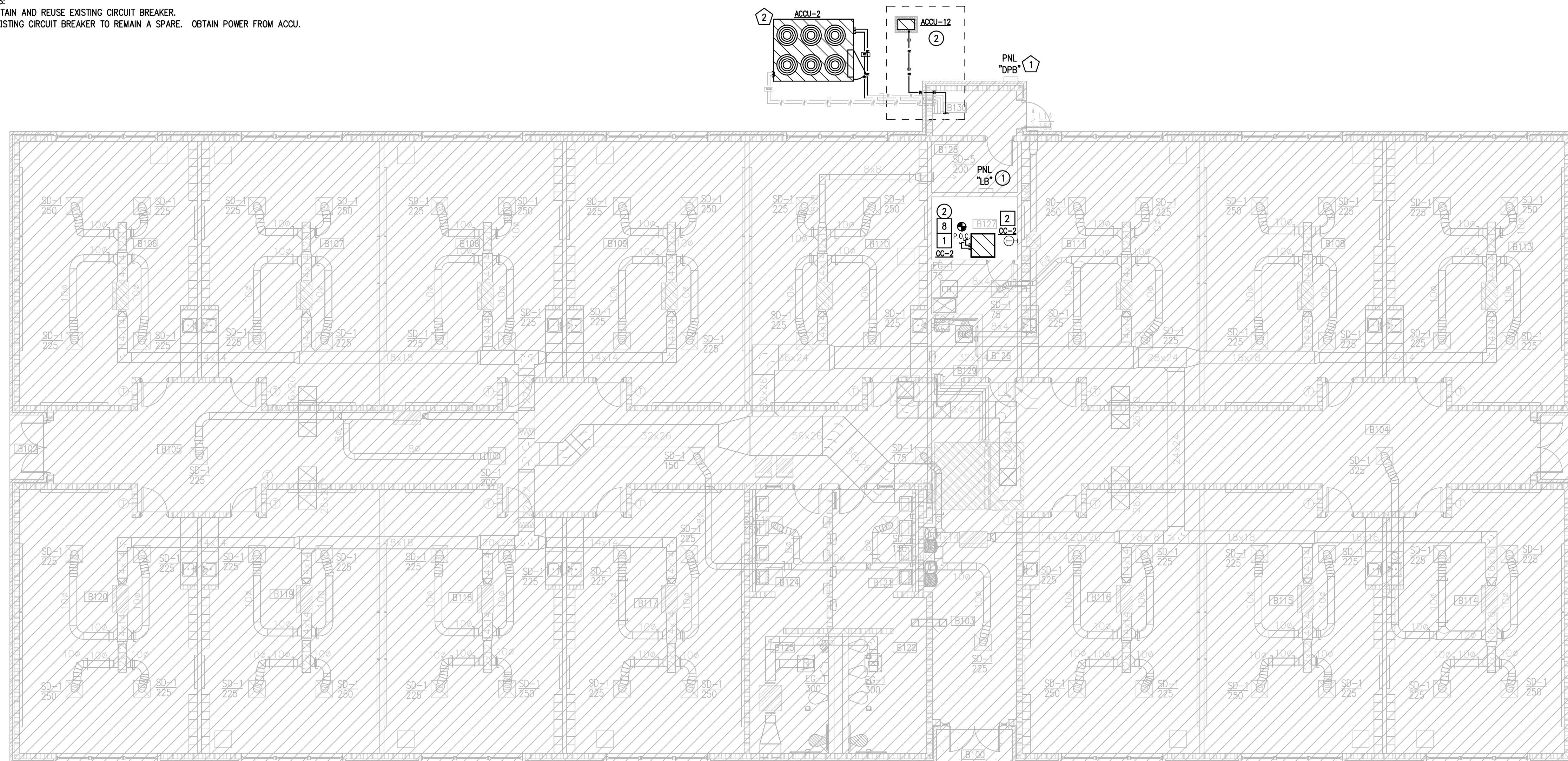
02 SCALE: 1/2" = 1'-0"

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
CC-2	-	15	2)	208V/1PHASE	30A, 3PNF, 240V, NEMA 1	RETAIN EXISTING.	REMOVE EXISTING	1/2" - 2#12 & #12G	LB
ACCU-12	7.8	15	1) 15	208V/1PHASE	30A, 3PNF, 240V, NEMA 4X SS	RETAIN EXISTING.	1/2" - 2#12 & #12G	RETAIN EXISTING	LB
ALTERNATE #3									
ACCU-2	120	125	1) 125	480V/3PHASE	CIRCUIT BREAKER WITHIN SIGHT	RETAIN EXISTING.	1.5" - 3#1 & #6G	RETAIN EXISTING	DPB

GENERAL NOTES:
 A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

NOTES:
 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
 2) EXISTING CIRCUIT BREAKER TO REMAIN A SPARE. OBTAIN POWER FROM ACCU.



IDEA QUEST BUILDING B MECHANICAL & ELECTRICAL FLOOR PLAN

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

IDEA QUEST - BUILDING B ACCU SCHEDULE (ALTERNATE #3)

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL BTUH	NOMINAL TONS	COND DB	ELECTRICAL V-PH-HZ	EER / IEER AT ARI	STEPS OF CAPACITY	FAN FLA	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
											MCA	MOCP				
ACCU-2	AHU-2	TRANE	RAUC064BZ	786,870	60	95	460-3-60	11.2	4	1.8	120	125	3462	ALL	TRANE	RAUJC60

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
 3. PROVIDE CONDENSER COIL HAIL GUARDS, E-COATED COILS, AND LOW AMBIENT CONTROL.
 4. PROVIDE DIGITAL SCROLL COMPRESSOR OR MULTI-STAGE COMPRESSOR.
 5. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
 6. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
 7. PROVIDE FACTORY INSTALLED APR VALVE. PROVIDE THERMOSTAT TO PROVIDE 2 STAGES OF MODULATION PER CONDENSING UNIT. PROVIDE ALL NEW REFRIGERANT SPECIALTIES, EXPANSION VALVES, ETC.
 8. PROVIDE EVAPORATOR DEFROST CONTROLLER FOR MINIMUM CIRCUIT.

IDEA QUEST BUILDING B - MINI-SPLIT CASSETTE INDOOR UNIT SCHEDULE

MARK	SERVED BY	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	LOCATION	MIN CFM	MAX CFM	ELECTRICAL V-PH-HZ	COOLING		WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
								TOTAL (BTUH)	EAT DBWB				
CC-2	ACCU-12	EMI AMERICA SERIES	CACA12	C128	268	406	208-1-60	12,000	80/67	45	ALL	DAIKIN	FFQ12W2VJU

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. PROVIDE INVERTER DRIVEN COMPRESSOR FOR IMPROVED HUMIDITY CONTROL.
 3. PROVIDE WALL MOUNTED AND WIRED 7-DAY PROGRAMMABLE T-STAT IN LIEU OF WIRELESS REMOTE.
 4. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.

IDEA QUEST BUILDING B - MINI-SPLIT CONDENSER SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL COOLING (BTUH)	COND DB	ELECTRICAL V-PH-HZ	SEER2	COMPR TYPE	MCA	MOCP	WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER

- NOTES:
1. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.
 2. PROVIDE CONDENSER COIL CORROSION PROTECTION.
 3. INSTALL UNIT ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD AS NECESSARY TO ACCOMMODATE FOR NEW EQUIPMENT.
 4. PROVIDE INSULATION FOR BOTH LIQUID AND SUCTION LINES.
 5. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND PIPING RECOMMENDATIONS.
 6. 1 YEAR PARTS WARRANTY AND 10 YEAR COMPRESSOR PARTS LIMITED WARRANTY.

LEGEND

	EXISTING SUPPLY DIFFUSER TO BE REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

MECHANICAL KEYED NOTES:

1. DEMOLISH EXISTING CASSETTE UNIT. PROVIDE NEW CASSETTE UNIT AT THIS APPROXIMATE LOCATION. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
2. DEMOLISH EXISTING THERMOSTAT. PROVIDE NEW THERMOSTAT AS SHOWN. MOUNT 48" ABOVE FINISHED FLOOR & COORDINATE WITH ARCHITECT AND OWNER TO MEET ADA REQUIREMENTS. PROVIDE CLEAR LOCKING COVER FOR ALL SENSORS.
3. DEMOLISH EXISTING REFRIGERANT PIPING. PROVIDE NEW REFRIGERANT PIPING AND ROUTE TO INDOOR UNIT. COORDINATE ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION. ROUTE INSIDE WALL TO AVOID EXPOSED PIPING WITHIN THE SPACE. (TYPICAL)
4. PROVIDE REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
5. PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
6. DEMOLISH EXISTING ACCU AND INSTALL NEW AIR COOLED CONDENSING UNIT AND INSULATED REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNT UNIT ON EXISTING CONCRETE PAD. PAD SHALL BE MINIMUM 6" LARGER THAN EQUIPMENT FOOTPRINT ON ALL SIDES. EXTEND CONCRETE PAD AS NECESSARY. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC. VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO EXISTING CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
7. RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.
8. RETAIN EXISTING CONDENSATE DRAIN LINE. RECONNECT EXISTING CONDENSATE DRAIN LINE TO NEW CASSETTE UNIT. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS.
9. RECONNECT EXISTING PIPING TO NEW PIPING AT THIS LOCATION. ROUTE TO NEW UNIT'S CONNECTIONS.

ALTERNATE #4 MECHANICAL KEYED NOTES:

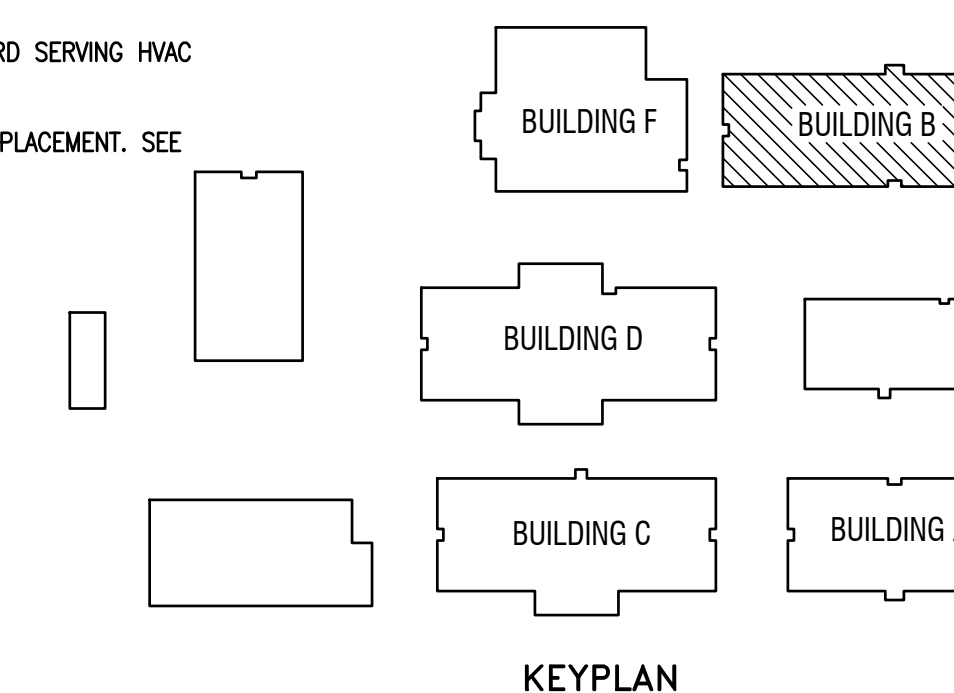
1. RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
2. DEMOLISH EXISTING AIR COOLED CONDENSING UNIT. PROVIDE NEW AIR COOLED CONDENSING UNIT AND INSULATE REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND EXTEND EXISTING HOUSEKEEPING CONCRETE PADS AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC. VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
3. PROVIDE NEW REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
4. PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
5. RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.

ELECTRICAL KEYED NOTES:

1. APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
2. DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.

ALTERNATE #3 ELECTRICAL KEYED NOTES:

1. APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
2. DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.



NO. REVISION: BY:

RFP # 23-URMU-0424



TEXAS

IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

EDINBURG



1128 SOUTH COMMERCE ST.
 HARLINGEN, TX
 PHONE: 361-208-3435
 TEXAS REGISTERED
 ENGINEERING FIRM
 E-15998

DATE: MARCH 15, 2024
 CHECKED BY: B.B.
 DRAWN BY: D.G.
 PROJECT NO.: 23V78
 CAD FILE:
 SHEET:

ME5.2

IDEA QUEST BUILDING C - EXHAUST FAN SCHEDULE

MARK	SERVING	TYPE	STATUS	ELECTRICAL V-PH-HZ	DRIVE	CFM	INPUT WATTS	MOTOR HP	RPM	E.S.P. IN. H2O	SOUND IN SONES	WEIGHT (LBS)	CONTROL NOTES	NOTES	MANUFACTURER	MODEL NUMBER
EF-5	RESTROOM	SUSPENDED IN-LINE	TO BE REPLACED	120-1-60	DIRECT	750	-	1/8	860	0.34	3.4	59.0	A	ALL	GREENHECK	SQ-130

NOTES:

1. PROVIDE FACTORY MOUNTED DISCONNECT.
2. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
3. PROVIDE OSHA MOTOR AND BELT GUARD.
4. PROVIDE AUTOMATIC BELT TENSIONER.
5. PROVIDE INSULATED HOUSING FOR SOUND ATTENUATION.
6. PROVIDE SPRING TYPE VIBRATION ISOLATORS FOR SUSPENDED INLINE TYPE FANS.

CONTROL NOTES:

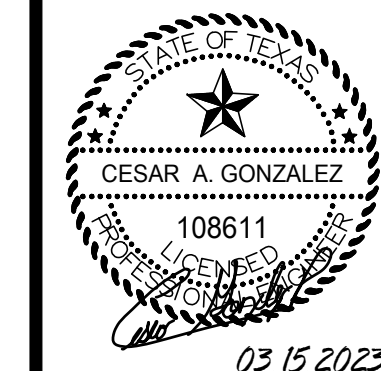
- A. CONNECT TO EXISTING DDC SYSTEM. RECREATE EXISTING CONTROL POINTS AND SCHEDULING WITH NEW EQUIPMENT.

LEGEND

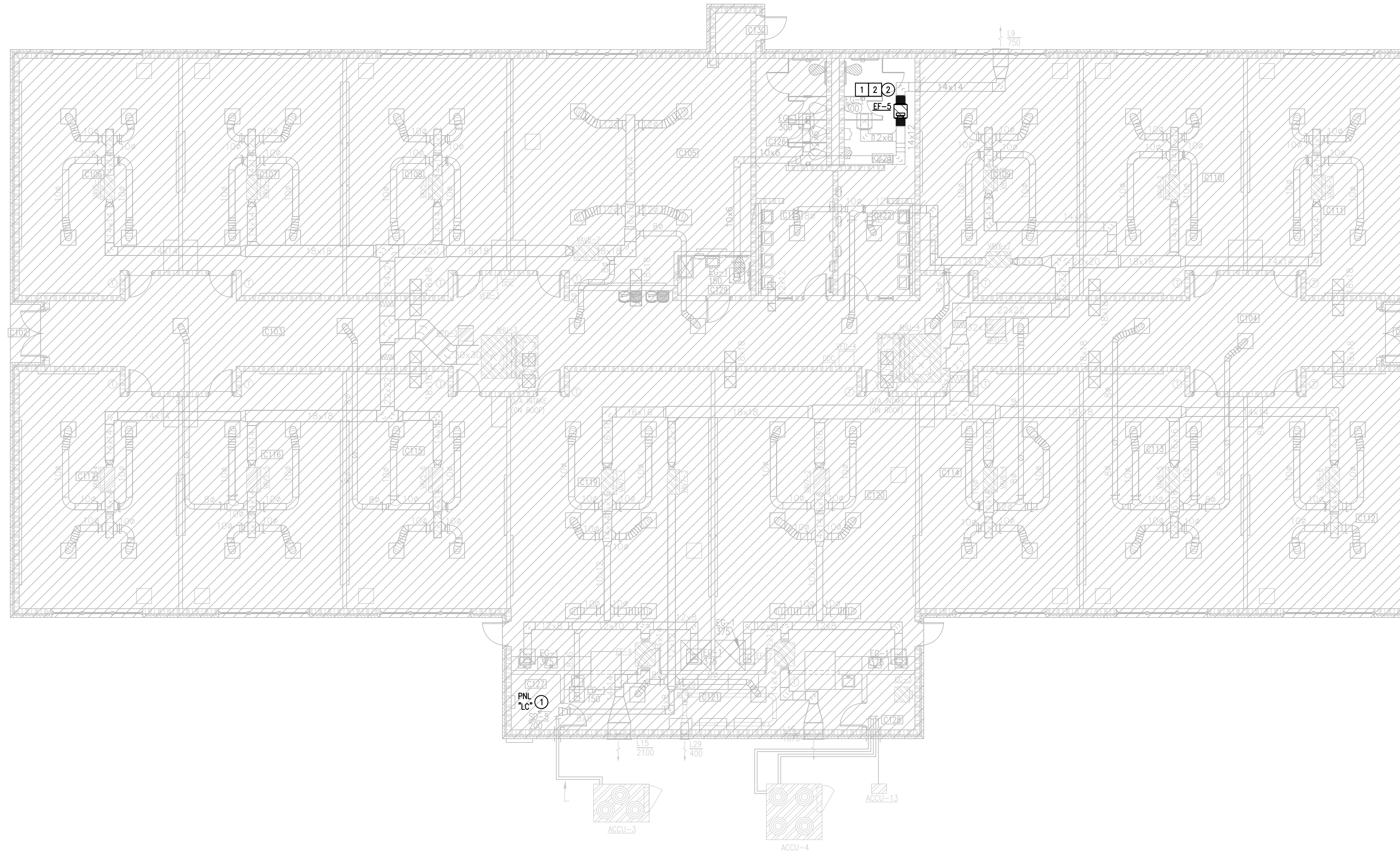
	EXISTING SUPPLY DIFFUSER TO REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW DUCTWORK
	NEW EQUIPMENT

NO. REVISION: BY:

RFP # 23-URMU-0424



TEXAS



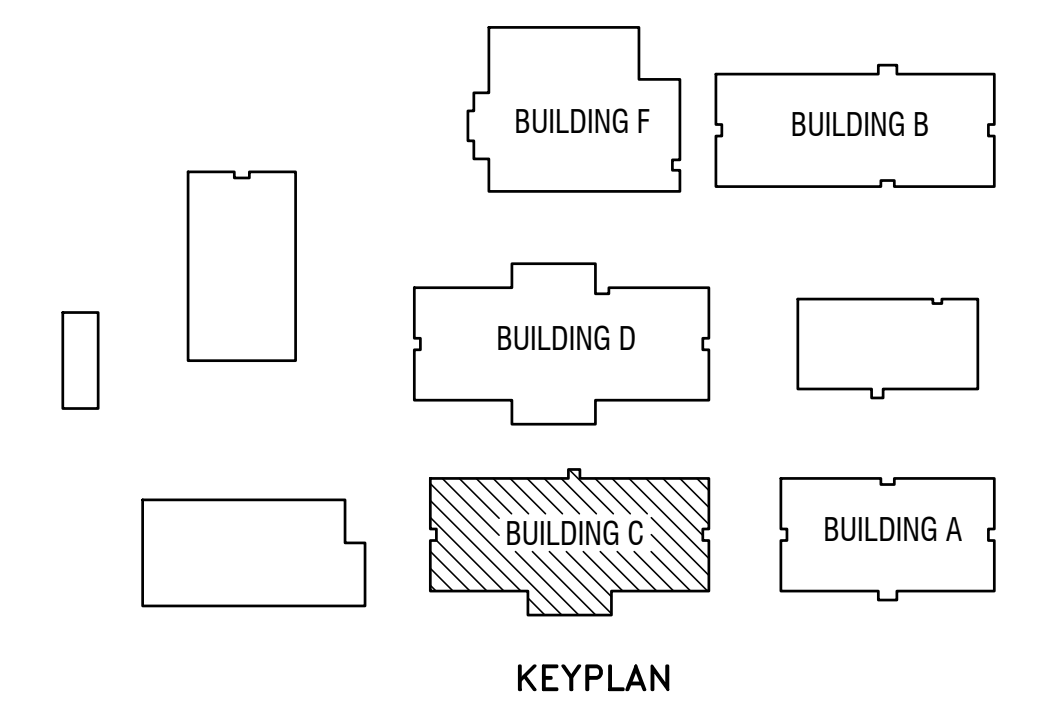
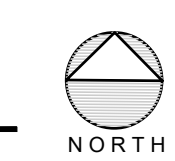
MECHANICAL KEYED NOTES:

- 1 DEMOLISH EXISTING EXHAUST FAN. REPLACE WITH NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCT TRANSITIONS TO EXHAUST FAN WHERE NECESSARY. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- 2 TEMPORARILY REMOVE THE CEILING AROUND THE AREA OF WHERE EXISTING EXHAUST FAN IS TO BE REPLACED. RESTORE THE CEILING BACK TO ITS ORIGINAL CONDITION AFTER REPLACEMENT OF EXHAUST FAN.

ELECTRICAL KEYED NOTES:

- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2 DISCONNECT EXISTING EXHAUST FAN FOR REPLACEMENT. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.

01 IDEA QUEST BUILDING C MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



**IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES**

EDINBURG



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DATE: MARCH 15, 2024

CHECKED BY: B.B.

DRAWN BY: D.G.

PROJECT NO.: 23V78

CAD FILE: .

SHEET: ME5.3

IDEA QUEST BUILDING D - MINI-SPLIT CONDENSER SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL COOLING (BTU/H)	COND DB	ELECTRICAL V-PH-HZ	SEER2	COMPR TYPE	MCA	MOC	WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
ACCU-14	CC-4	EMI AMERICA SERIES	S1CA2	12,000	95	208-1-60	19.5	INVERTER DRIVEN TWIN ROTARY	7.8	15	64	ALL	DAIKIN	RX12VMVJU

NOTES:

- ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.
- PROVIDE CONDENSER COIL CORROSION PROTECTION.
- INSTALL UNIT ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD AS NECESSARY TO ACCOMMODATE FOR NEW EQUIPMENT.
- PROVIDE INSULATION FOR BOTH LIQUID AND SUCTION LINES.
- INSTALL PER MANUFACTURER'S INSTRUCTIONS AND PIPING RECOMMENDATIONS.
- 1 YEAR PARTS WARRANTY AND 10 YEAR COMPRESSOR PARTS LIMITED WARRANTY.

IDEA MISSION BUILDING D - MINI-SPLIT CASSETTE INDOOR UNIT SCHEDULE

MARK	SERVED BY	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	LOCATION	MIN CFM	MAX CFM	ELECTRICAL V-PH-HZ	COOLING TOTAL (BTU/H)	EAT DB/WB	WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
CC-4	ACCU-14	EMI AMERICA SERIES	CACA12	C128	268	406	208-1-60	12,000	80/67	45	ALL	DAIKIN	FFQ12WZVJU

NOTES:

- MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
- PROVIDE INVERTER DRIVEN COMPRESSOR FOR IMPROVED HUMIDITY CONTROL.
- PROVIDE WALL MOUNTED AND WIRED 7-DAY PROGRAMMABLE T-STAT IN LIEU OF WIRELESS REMOTE.
- ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.

ELECTRICAL KEYED NOTES:

- APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.
- DISCONNECT EXISTING EXHAUST FAN FOR REPLACEMENT. RETAIN AND REUSE EXISTING BRANCH CIRCUIT.

MECHANICAL KEYED NOTES:

- DEMOLISH EXISTING EXHAUST FAN. REPLACE WITH NEW EXHAUST FAN AT THIS APPROXIMATE LOCATION. PROVIDE NEW DUCT TRANSITIONS TO EXHAUST FAN WHERE NECESSARY. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- DEMOLISH EXISTING CASSETTE UNIT. PROVIDE NEW CASSETTE UNIT AT THIS APPROXIMATE LOCATION. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- DEMOLISH EXISTING THERMOSTAT. PROVIDE NEW THERMOSTAT AS SHOWN. MOUNT 48" ABOVE FINISHED FLOOR & COORDINATE WITH ARCHITECT AND OWNER TO MEET ADA REQUIREMENTS. PROVIDE CLEAR LOCKING COVER FOR ALL SENSORS.
- DEMOLISH EXISTING REFRIGERANT PIPING. PROVIDE NEW REFRIGERANT PIPING, AND ROUTE TO INDOOR UNIT. COORDINATE ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION. ROUTE INSIDE WALL TO AVOID EXPOSED PIPING WITHIN THE SPACE. (TYPICAL)
- PROVIDE REFRIGERANT LINE SUPPORTS. SEE ASSOCIATED DETAIL. (TYPICAL)
- PROVIDE NEW 1" INSULATION ON ALL REFRIGERANT LINES BOTH NEW AND EXISTING. PROVIDE ALUMINUM JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- DEMOLISH EXISTING ACCU AND INSTALL NEW AIR COOLED CONDENSING UNIT AND INSULATED REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNT UNIT ON EXISTING CONCRETE PAD. PAD SHALL BE MINIMUM 6" LARGER THAN EQUIPMENT FOOTPRINT ON ALL SIDES. EXTEND CONCRETE PAD AS NECESSARY. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC, VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO EXISTING CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.
- RETAIN EXISTING CONDENSATE DRAIN LINE. RECONNECT EXISTING CONDENSATE DRAIN LINE TO NEW CASSETTE UNIT. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS.
- TEMPORARILY REMOVE THE CEILING AROUND THE AREA OF WHERE EXISTING EXHAUST FAN IS TO BE REPLACED. RESTORE THE CEILING BACK TO ITS ORIGINAL CONDITION AFTER REPLACEMENT OF EXHAUST FAN.

LEGEND

	EXISTING SUPPLY DIFFUSER TO BE REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

IDEA QUEST BUILDING D - EXHAUST FAN SCHEDULE

MARK	SERVING	TYPE	STATUS	ELECTRICAL V-PH-HZ	DRIVE	CFM	INPUT WATTS	MOTOR HP	RPM	E.S.P. IN. H2O	SOUND IN SONES	WEIGHT (LBS)	CONTROL NOTES	NOTES	MANUFACTURER	MODEL NUMBER
EF-8	RESTROOM C 123	SUSPENDED IN-LINE	TO BE REPLACED	120-1-60	DIRECT	675	-	1/4	1182	0.41	4.5	45.0	A	ALL	GREENHECK	SQ-100-VG
EF-13	RESTROOM - D130	CEILING MOUNTED	TO BE REPLACED	120-1-60	DIRECT	75	30	-	596	0.35	2.5	10.0	A	ALL	GREENHECK	SP-B110-ES

NOTES:

- PROVIDE FACTORY MOUNTED DISCONNECT.
- MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
- PROVIDE OSHA MOTOR AND BELT GUARD.
- PROVIDE AUTOMATIC BELT TENSIONER.
- PROVIDE INSULATED HOUSING FOR SOUND ATTENUATION.
- PROVIDE SPRING TYPE VIBRATION ISOLATORS FOR SUSPENDED INLINE TYPE FANS.

CONTROL NOTES:

- CONNECT TO EXISTING DDC SYSTEM. RECREATE EXISTING CONTROL POINTS AND SCHEDULING WITH NEW EQUIPMENT.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOC	NEW MOC	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
CC-4	-	20	2)	208V/1PHASE	30A, 3PNF, 240V, NEMA 1	RETAIN EXISTING.	REMOVE EXISTING	1/2" - 2#12 & #12G	LD
ACCU-14	7.8	20	1) 15	208V/1PHASE	30A, 3PNF, 240V, NEMA 4X SS	RETAIN EXISTING.	1/2" - 2#12 & #12G	RETAIN EXISTING	LD

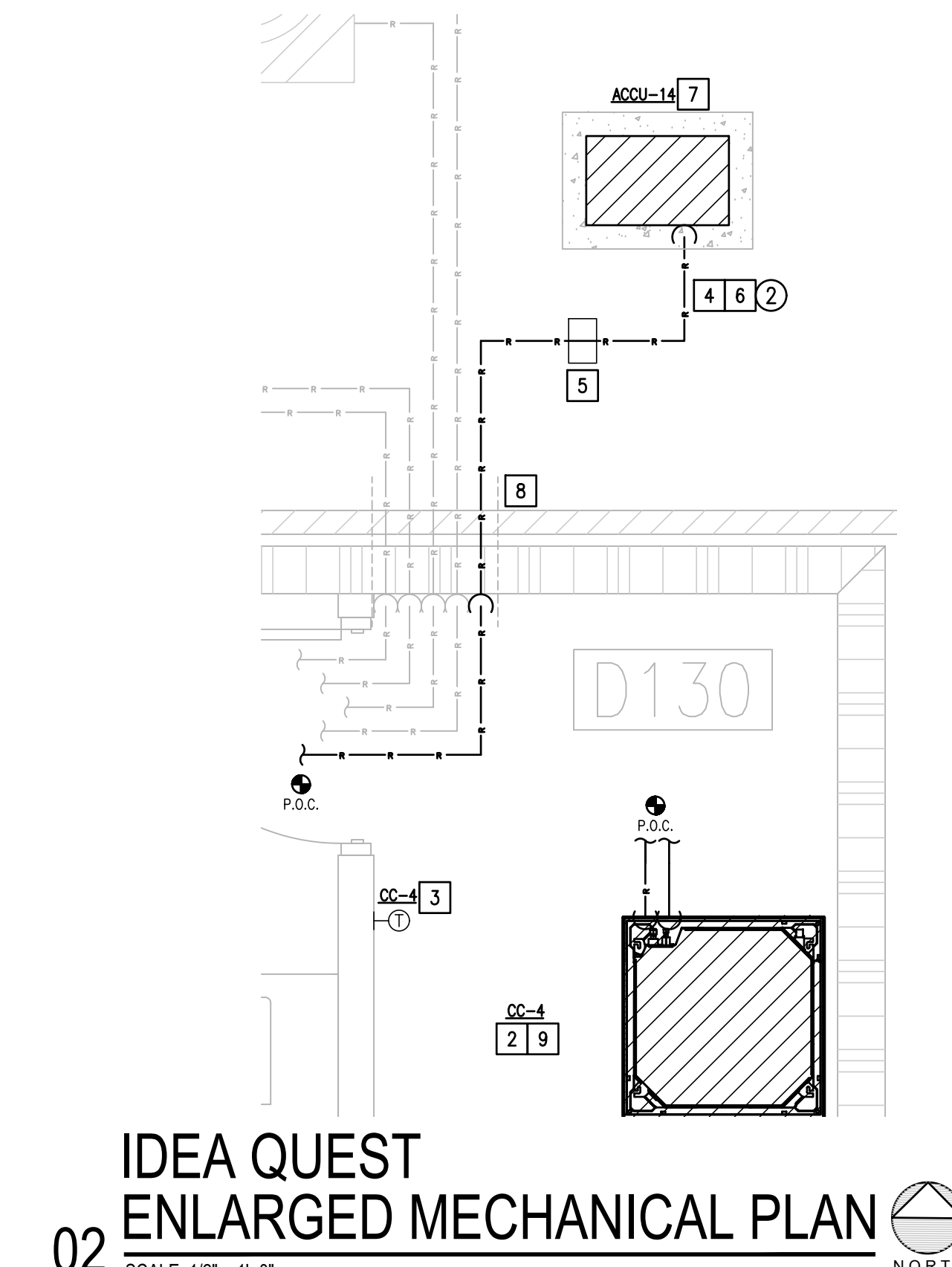
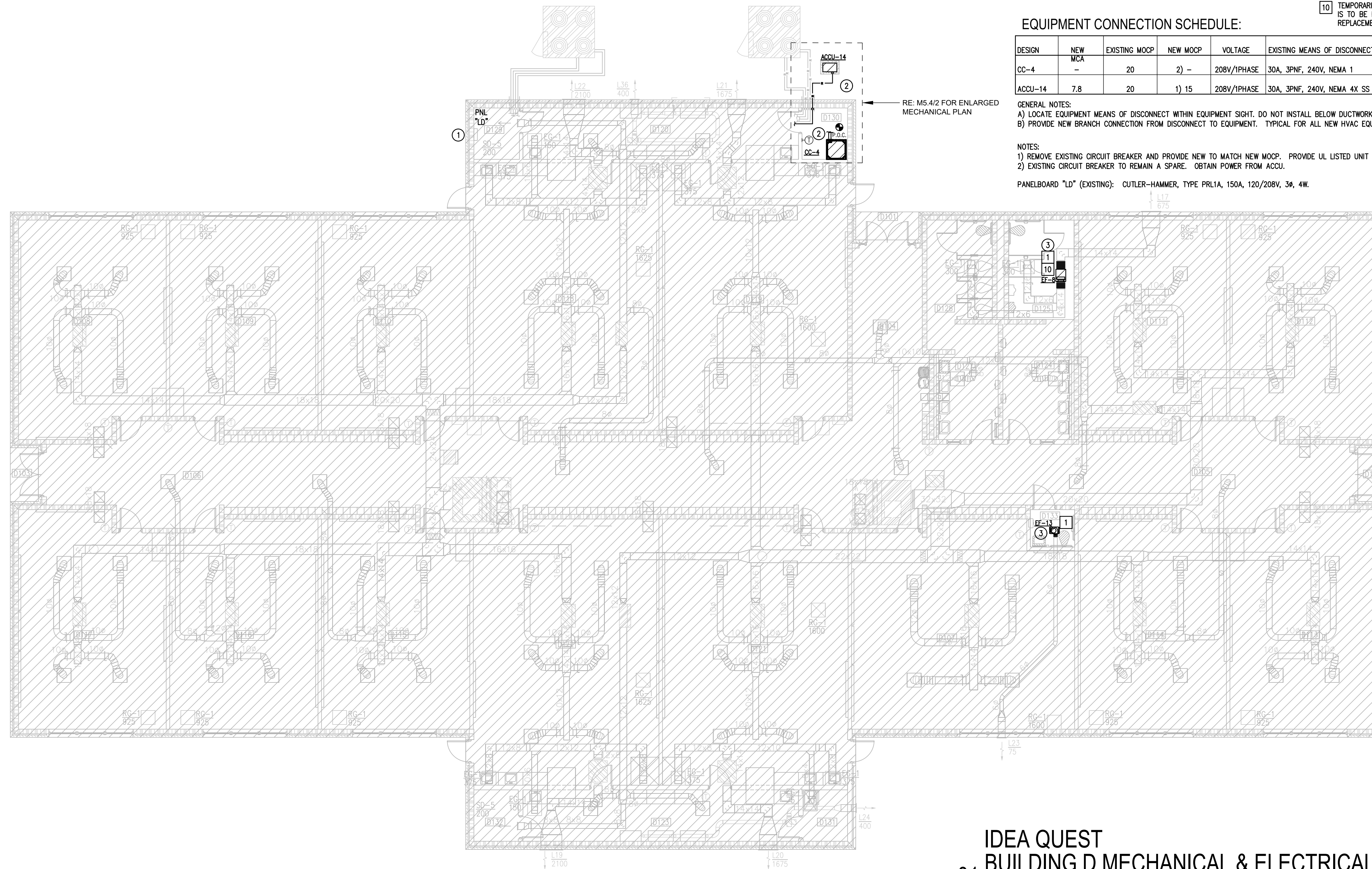
GENERAL NOTES:

- LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
- PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

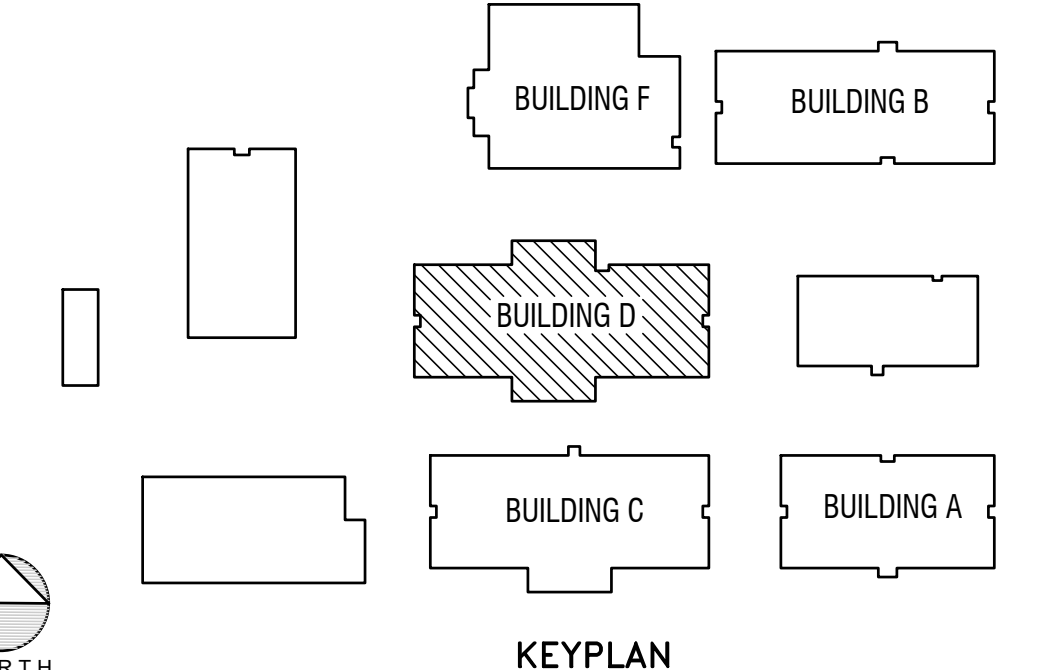
NOTES:

- REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW TO MATCH NEW MOC. PROVIDE UL LISTED UNIT FROM EXISTING MANUFACTURER (CUTLER-HAMMER). MATCH EXISTING KAIC.
- EXISTING CIRCUIT BREAKER TO REMAIN A SPARE. OBTAIN POWER FROM ACCU.

PANELBOARD "LD" (EXISTING): CUTLER-HAMMER, TYPE PRL1A, 150A, 120/208V, 3ø, 4W.



IDEA QUEST ENLARGED MECHANICAL PLAN
SCALE: 1/2" = 1'-0"



IDEA QUEST BUILDING D MECHANICAL & ELECTRICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

NO. REVISION: BY:
RFP # 23-URMU-0424



IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

EDINBURG

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1128 SOUTH COMMERCE ST.
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TEXAS REGISTERED
ENGINEERING FIRM
E-15598

DATE: MARCH 15, 2024
CHECKED BY: B.B.
DRAWN BY: D.G.
PROJECT NO.: 23V78
CAD FILE:
SHEET: **ME5.4**

IDEA QUEST BUILDING F - MINI-SPLIT CASSETTE INDOOR UNIT SCHEDULE

MARK	SERVED BY	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	LOCATION	MIN CFM	MAX CFM	ELECTRICAL V-PH-HZ	COOLING		WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
								TOTAL (BTU/H)	EAT DB/WB				
CC-16	ACCU-16	EMI/AMERICA SERIES	CACA12	C128	268	406	208-1-60	12,000	80/67	45	ALL	DAIKIN	FFQ12W2VJU

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. PROVIDE INVERTER DRIVEN COMPRESSOR FOR IMPROVED HUMIDITY CONTROL.
 3. PROVIDE WALL MOUNTED AND WIRED 7-DAY PROGRAMMABLE T-STAT IN LIEU OF WIRELESS REMOTE.
 4. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.

IDEA QUEST BUILDING F - MINI-SPLIT CONDENSER SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL COOLING (BTU/H)	COND DB	ELECTRICAL V-PH-HZ	SEER2	COMPR TYPE	MCA	MOCP	WEIGHT (LBS)	NOTES	MANUFACTURER	MODEL NUMBER
ACCU-16	CC-16	EMI/AMERICA SERIES	S1CA2	12,000	95	208-1-60	19.5		7.8	15	64	ALL	DAIKIN	RX12MMVJU

- NOTES:
1. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE CIRCUIT POWER FROM SERVICE TO OUTDOOR UNIT AND WIRE TO INDOOR UNIT.
 2. PROVIDE CONDENSER COIL CORROSION PROTECTION.
 3. INSTALL UNIT ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD AS NECESSARY TO ACCOMMODATE FOR NEW EQUIPMENT.
 4. PROVIDE INSULATION FOR BOTH LIQUID AND SUCTION LINES.
 5. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND PIPING RECOMMENDATIONS.
 6. 1 YEAR PARTS WARRANTY AND 10 YEAR COMPRESSOR PARTS LIMITED WARRANTY.

EQUIPMENT CONNECTION SCHEDULE:

DESIGN	NEW MCA	EXISTING MOCP	NEW MOCP	VOLTAGE	EXISTING MEANS OF DISCONNECT	NEW MEANS OF DISCONNECT	EXISTING BRANCH CIRCUIT (75' COPPER)	NEW BRANCH CIRCUIT (75' COPPER)	EXISTING POWER SOURCE
CC-16	-	15	2) -	208V/1PHASE	30A, 3PNF, 240V, NEMA 1	RETAIN EXISTING.	REMOVE EXISTING.	1/2" - 2#12 & #12G	LF
ACCU-16	7.8	15	1) 15	208V/1PHASE	30A, 3PNF, 240V, NEMA 4X SS	RETAIN EXISTING.	1/2" - 2#12 & #12G	RETAIN EXISTING.	LF
ACCU-9	87	100	1) 100	480V/3PHASE	100A, 3PNF, 600V, NEMA 3R	RETAIN EXISTING.	1.25" - 3#2 & #8G	RETAIN EXISTING.	DPF

- GENERAL NOTES:
- A) LOCATE EQUIPMENT MEANS OF DISCONNECT WITHIN EQUIPMENT SIGHT. DO NOT INSTALL BELOW DUCTWORK OR PLUMBING LINES.
 - B) PROVIDE NEW BRANCH CONNECTION FROM DISCONNECT TO EQUIPMENT. TYPICAL FOR ALL NEW HVAC EQUIPMENT.

- NOTES:
- 1) RETAIN AND REUSE EXISTING CIRCUIT BREAKER.
 - 2) EXISTING CIRCUIT BREAKER TO REMAIN A SPARE. OBTAIN POWER FROM ACCU.

IDEA QUEST - BUILDING F ACCU SCHEDULE

MARK	SERVING	EXISTING MANUFACTURER	EXISTING MODEL NUMBER	TOTAL MBTUH	COND DB	ELECTRICAL V-PH-HZ	EER / SEER AT ARI	STEPS OF CAPACITY	COMPRESSOR AMPS	(CIRCUIT)		WEIGHT (LBS.)	NOTES	MANUFACTURER	MODEL NUMBER
										MCA	MOCP				
ACCU-9	AHU-9	TRANE	RAUCC404B20000 D000020	507.2	105	480/3/60	11.7	4	18.6	87	100	3120	ALL	TRANE	RAUJ40

- NOTES:
1. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
 2. PROVIDE HOT GAS BYPASS LINES FOR MINIMUM CIRCUIT.
 3. EER SHALL EXCEED IECC MINIMUM EFFICIENCY AT DESIGN CONDITIONS.
 4. PROVIDE LOUVERED HAIL GUARD, LOW AMBIENT KIT, SIGHT GLASS, SERVICE VALVES, FILTER DRYER, SOLENOID VALVES, TXVS, ANTI-SHORT CYCLE TIMER AND E-COATED CONDENSER COIL.
 5. PROVIDE FREEZE STAT/DEFROST CONTROLLER TO PROTECT COMPRESSOR WHEN ICE BUILD-UP IS DETECTED IN THE EVAPORATOR COIL.
 6. PROVIDE CONDENSER COIL COATING AS PER SPECIFICATIONS.
 7. SAFETY DISCONNECT TO BE PROVIDED BY DIV. 26.
 8. INSULATE REFRIGERANT LINES AS PER SPECIFICATIONS. PROVIDE UV RESISTANT PAINTED JACKETING AROUND INSULATION FOR ALL EXTERIOR EXPOSED LINES.
 9. MOUNT ON 4" CONCRETE HOUSEKEEPING PAD AND MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. BOLT CONDENSING UNIT DOWN TO CONCRETE PAD.

LEGEND

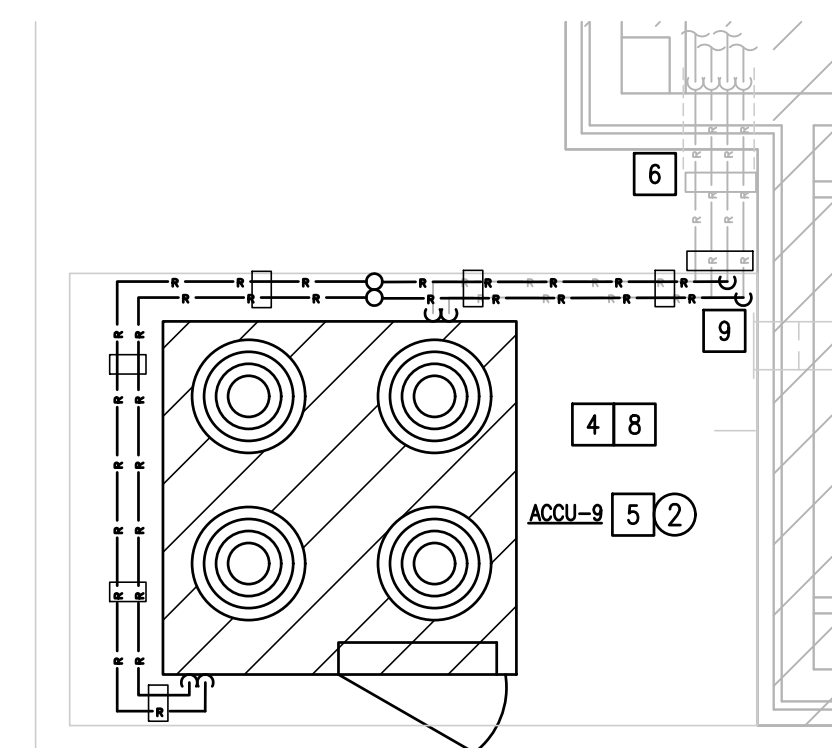
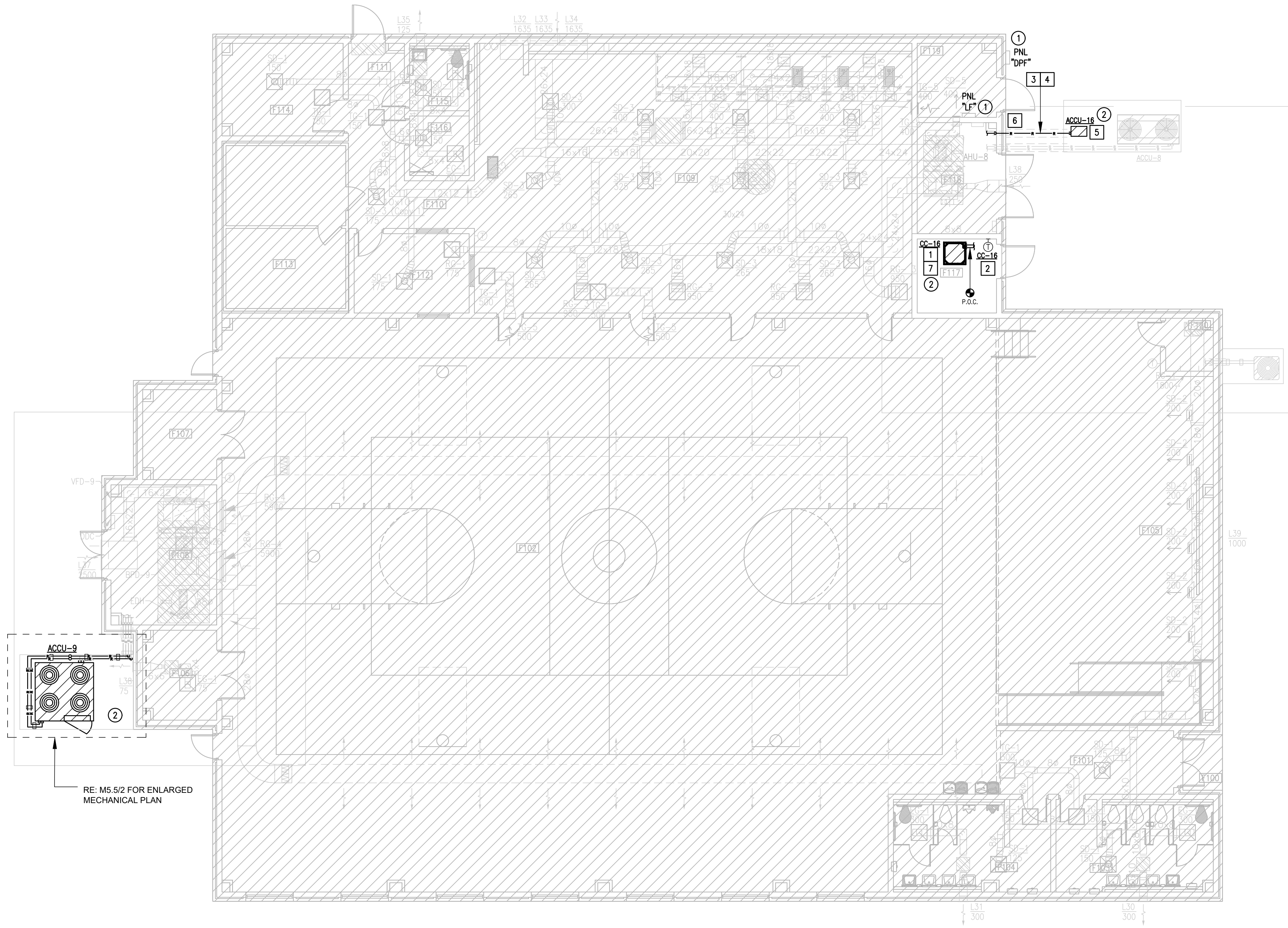
	EXISTING SUPPLY DIFFUSER TO BE REMAIN
	EXISTING RETURN AIR GRILLE TO REMAIN
	EXISTING DUCTWORK TO REMAIN
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
	PIPING TO BE INSTALLED
	EXISTING PIPING TO REMAIN

MECHANICAL KEYED NOTES:

- 1 DEMOLISH EXISTING CASSETTE UNIT. PROVIDE NEW CASSETTE UNIT AT THIS APPROXIMATE LOCATION. REFER TO PROVIDED SCHEDULE AND TAB SPECIFICATIONS FOR MORE INFORMATION.
- 2 DEMOLISH EXISTING THERMOSTAT. PROVIDE NEW THERMOSTAT AS SHOWN. MOUNT 48" ABOVE FINISHED FLOOR & COORDINATE WITH ARCHITECT AND OWNER TO MEET ADA REQUIREMENTS. PROVIDE CLEAR LOCKING COVER FOR ALL SENSORS.
- 3 DEMOLISH EXISTING REFRIGERANT PIPING. PROVIDE NEW REFRIGERANT PIPING. AND ROUTE TO INDOOR UNIT. COORDINATE ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION. ROUTE INSIDE WALL TO AVOID EXPOSED PIPING WITHIN THE SPACE. (TYPICAL)
- 4 PROVIDE NEW 1" INSULATION & ALUMINUM METAL JACKET ON EXPOSED REFRIGERANT LINES. SEE SPECIFICATIONS. PROVIDE NEW REFRIGERANT LINE SUPPORTS PER SPECIFICATIONS. SEE ASSOCIATED DETAIL.
- 5 DEMOLISH EXISTING ACCU AND INSTALL NEW AIR COOLED CONDENSING UNIT AND INSULATED REFRIGERANT PIPING PER SPECIFICATIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNT UNIT ON EXISTING CONCRETE PAD. PAD SHALL BE MINIMUM 6" LARGER THAN EQUIPMENT FOOTPRINT ON ALL SIDES. EXTEND CONCRETE PAD AS NECESSARY. REFRIGERANT PIPING SHOWN IS STRICTLY SCHEMATIC. VERIFY NUMBER OF CIRCUITS AND PIPE SIZES WITH MANUFACTURER'S DATA. BOLT EQUIPMENT DOWN TO EXISTING CONCRETE SLAB. ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING THE LOCAL WIND PRESSURES.
- 6 RETAIN EXISTING SLEEVE AT ALL PENETRATIONS PER SPECIFICATIONS WHERE POSSIBLE. SEAL AROUND NEW PIPING WITH FIRE PROOF CAULKING. PROVIDE NEW ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION BOTH INSIDE AND OUTSIDE TO PROVIDE FINISHED LOOK WHERE NECESSARY.
- 7 RETAIN EXISTING CONDENSATE DRAIN LINE. RECONNECT EXISTING CONDENSATE DRAIN LINE TO NEW CASSETTE UNIT. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS.
- 8 RETAIN EXISTING REFRIGERANT PIPING FOR REINSTALLATION. CLEAN AND VACUUM REFRIGERANT PIPING. REPLACE ALL REFRIGERANT SPECIALTIES, SERVICE VALVES, GASKETS, EXPANSION VALVES, ETC. PROVIDE NEW PIPING CONNECTIONS FROM EXISTING LINES TO UNITS' CONNECTIONS. VERIFY PIPING SIZES AND PIPING MATERIAL TO BE TYPE-L COPPER (TYPE-K FOR 1-5/8" AND HIGHER). IF NOT PROVIDE NEW. RECONNECT TO EXISTING PIPING TO CREATE A FULLY OPERATIONAL SYSTEM.
- 9 RECONNECT EXISTING PIPING TO NEW PIPING AT THIS LOCATION. ROUTE OVER EXISTING PIPING AS SHOWN AND CONNECT TO UNIT'S CONNECTIONS.

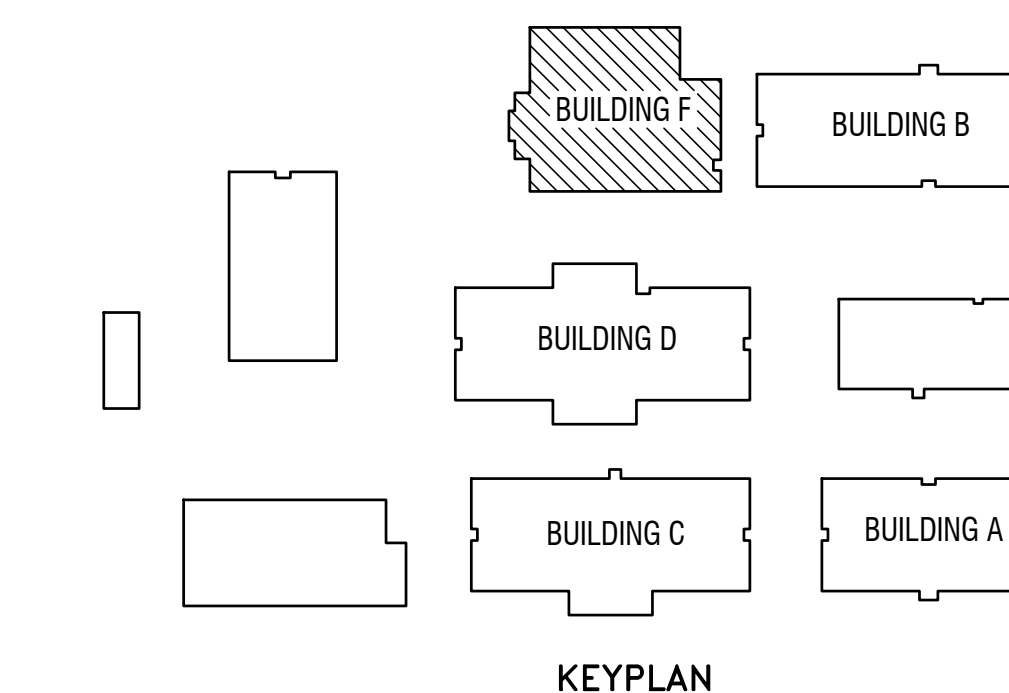
ELECTRICAL KEYED NOTES:

- 1 APPROXIMATE LOCATION OF EXISTING PANELBOARD SERVING HVAC EQUIPMENT.
- 2 DISCONNECT EXISTING HVAC EQUIPMENT FOR REPLACEMENT. SEE EQUIPMENT CONNECTION SCHEDULE.



IDEA QUEST ENLARGED MECHANICAL & ELECTRICAL PLAN

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



IDEA QUEST BUILDING F MECHANICAL & ELECTRICAL FLOOR PLAN

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

NO. REVISION: BY:

RFP # 23-URMU-0424



TEXAS

IDEA PUBLIC SCHOOLS
UPPER RGV MECHANICAL UPGRADES

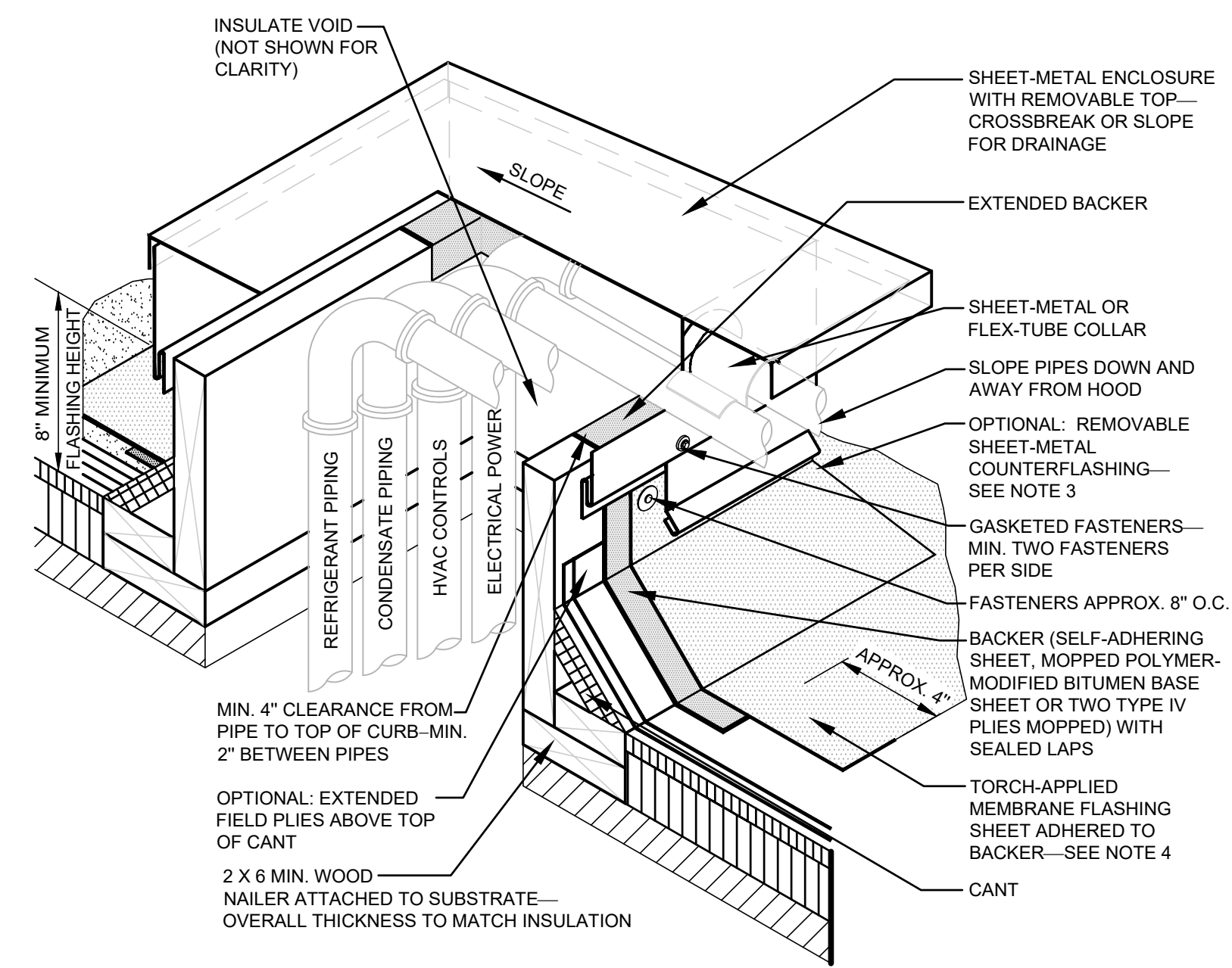
EDINBURG

ethos
engineering

1128 SOUTH COMMERCE ST.
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PHONE: 361-205-3435
TEXAS REGISTERED
ENGINEERING FIRM
E-15998

DATE: MARCH 15, 2024
CHECKED BY: B.B.
DRAWN BY: D.G.
PROJECT NO.: 23V78
CAD FILE:
SHEET:

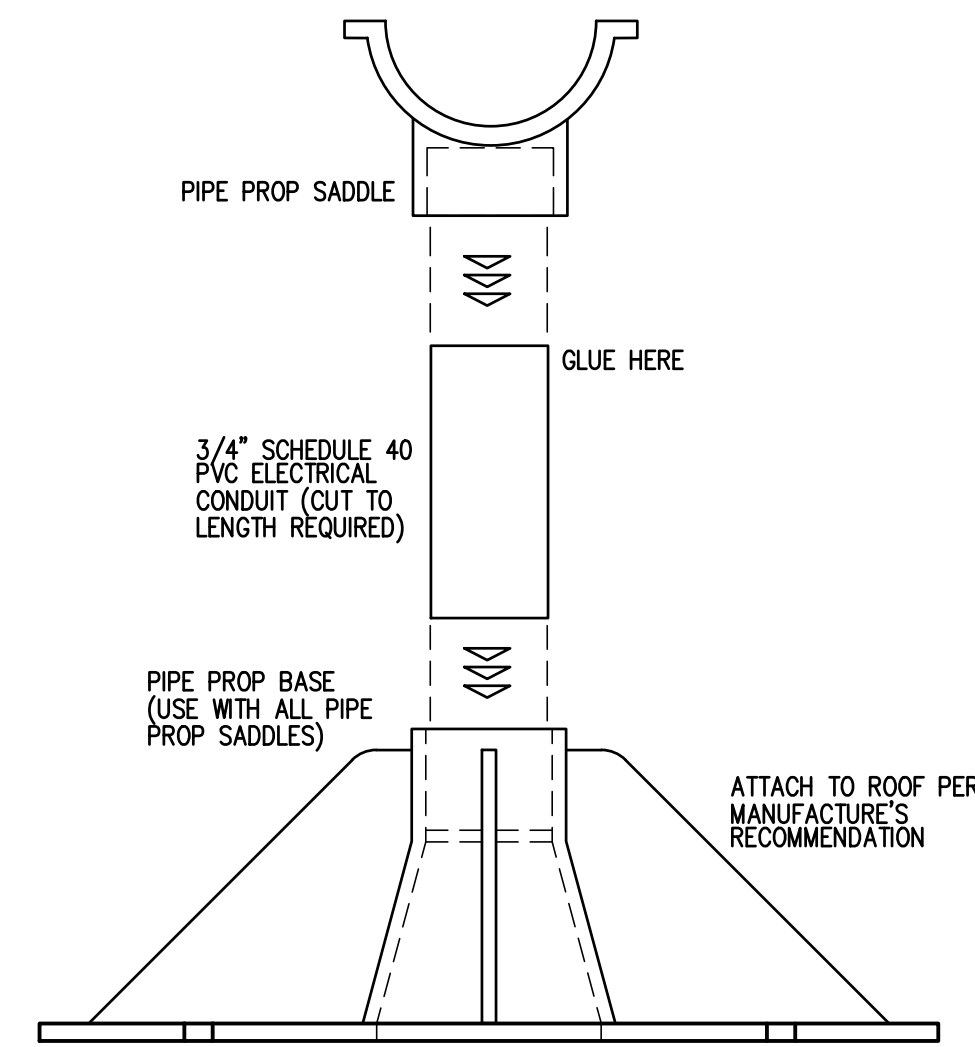
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- NOTES:
- THIS DETAIL ILLUSTRATES ANOTHER METHOD OF ELIMINATING PITCH POCKETS AND AN OPTIONAL METHOD OF GROUPING PIPING THAT MUST PENETRATE THE ROOF.
 - MANY MANUFACTURERS OFFER PREFABRICATED BOOTS AND OTHER MATERIALS FOR THIS PURPOSE. SPECIFICS ABOUT THESE PROPRIETARY DESIGNS VARY GREATLY, AND INDIVIDUAL MANUFACTURERS' SPECIFICATIONS SHOULD BE CONSULTED FOR THEIR USE.
 - WHERE THE SHEET-METAL ENCLOSURE OVERLAPS THE BASE FLASHING AT LEAST 3 INCHES, THE REMOVABLE SHEET-METAL COUNTERFLASHING IS NOT REQUIRED.
 - WHEN POTENTIAL FIRE HAZARDS CAN BE MITIGATED, NRCA CONSIDERS IT ACCEPTABLE TO INSTALL TORCH-APPLIED POLYMER-MODIFIED BITUMEN SHEET OVER THE SPECIFIED BACKER FLASHING USING THE DIRECT TORCHING METHOD PROVIDED LOW OUTPUT (50,000 BTU OUTPUT OR LESS) TORCHING EQUIPMENT IS USED. WHEN POTENTIAL FIRE HAZARDS CANNOT BE ADEQUATELY MITIGATED, TORCH-APPLIED POLYMER-MODIFIED BITUMEN SHEET SHALL BE INSTALLED USING INDIRECT TORCHING METHODS, SUCH AS THE TORCH-AND-FLOP APPLICATION METHOD.
 - FOR ROOF SYSTEMS WITH FACTORY-APPLIED GRANULE SURFACING, PROPERLY PREPARE CAP SHEET TO RECEIVE FLASHING.
 - REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

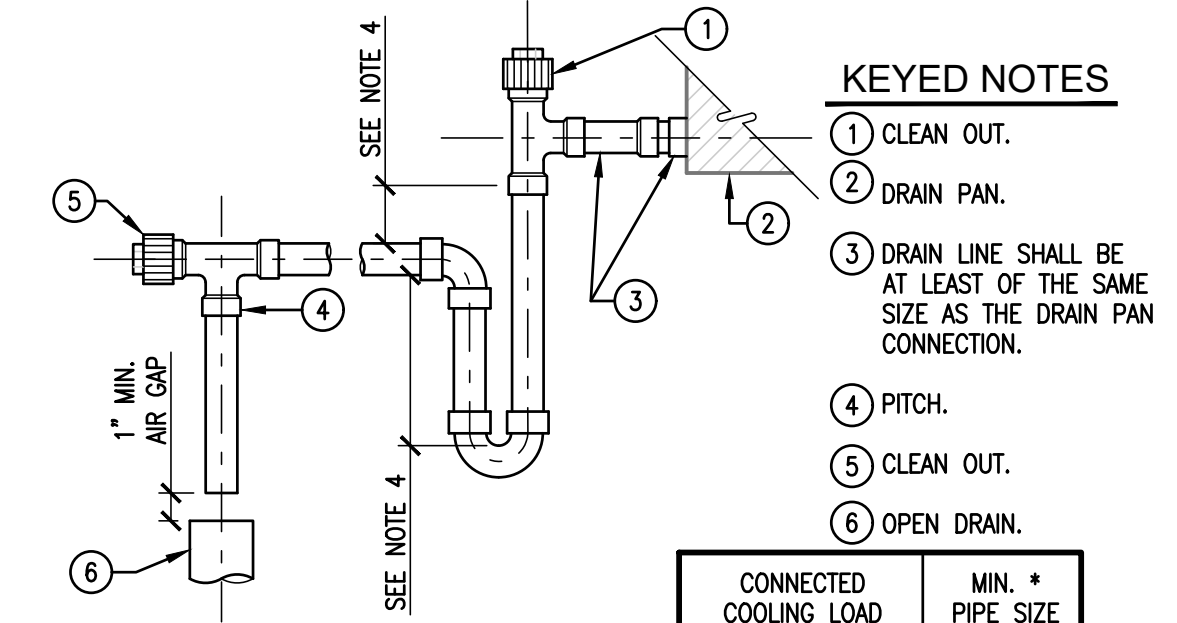
01 HVAC PIPING ROOF PENETRATION DETAIL

SCALE: NOT TO SCALE



02 CONDENSATE PIPE SUPPORT DETAIL

SCALE: NOT TO SCALE



NOTES:

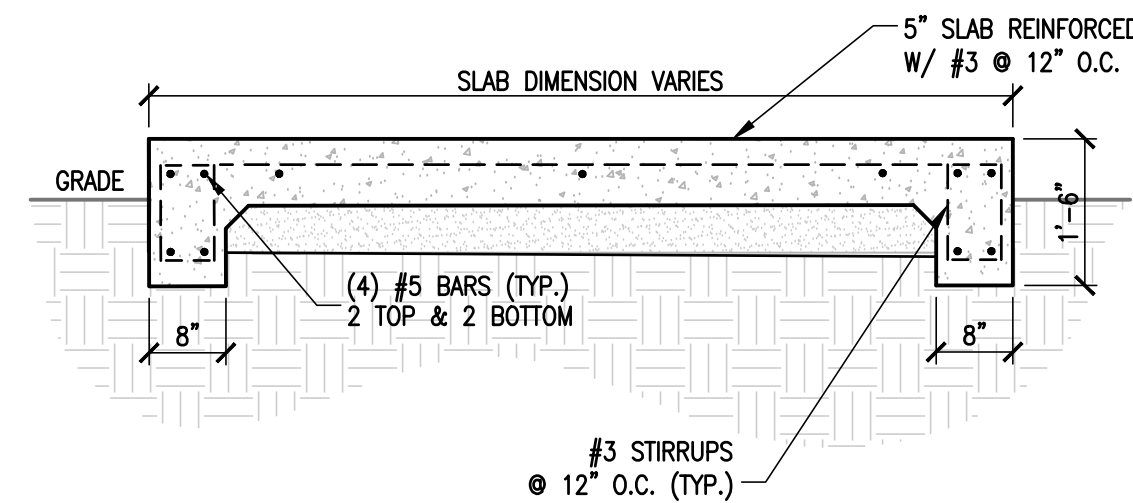
- MANUALLY PRIME TRAP BEFORE START UP.
- SUPPORT DRAIN LINES TO PREVENT SAG.
- ALLOW SUFFICIENT SPACE BELOW PAN FOR TRAP AND PITCH TO DRAIN.
- COORDINATE WITH MANUFACTURER OF AHU.

CONNECTED COOLING LOAD	MIN. PIPE SIZE
UP TO 2 TON	3/4"
2-5	1"
5-30	1-1/4"
30-50	1-1/2"
50-160	2"
160-300	3"
300-430	4"

* NOT SMALLER THAN OUTLET SIZE.

03 CONDENSATE DRAIN TRAP PIPE

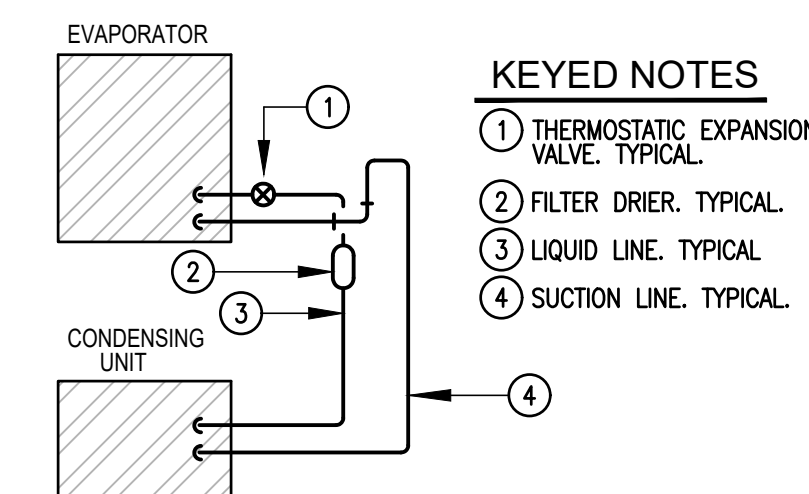
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NOTE:
STRIP TOPSOIL AND REMOVE ALL DEBRIS. GRADE BEAMS TO EXTEND A MINIMUM OF 6" INTO UNDISTURBED SOIL. TOP OF SLAB TO BE A MINIMUM OF 3" ABOVE EXISTING FINISHED GRADE. GRADE AROUND SLAB TO INSURE DRAINAGE. PROVIDE MINIMUM 6" CRUSHED STONE UNDER SLAB.

04 EXTERIOR CONCRETE PAD DETAIL

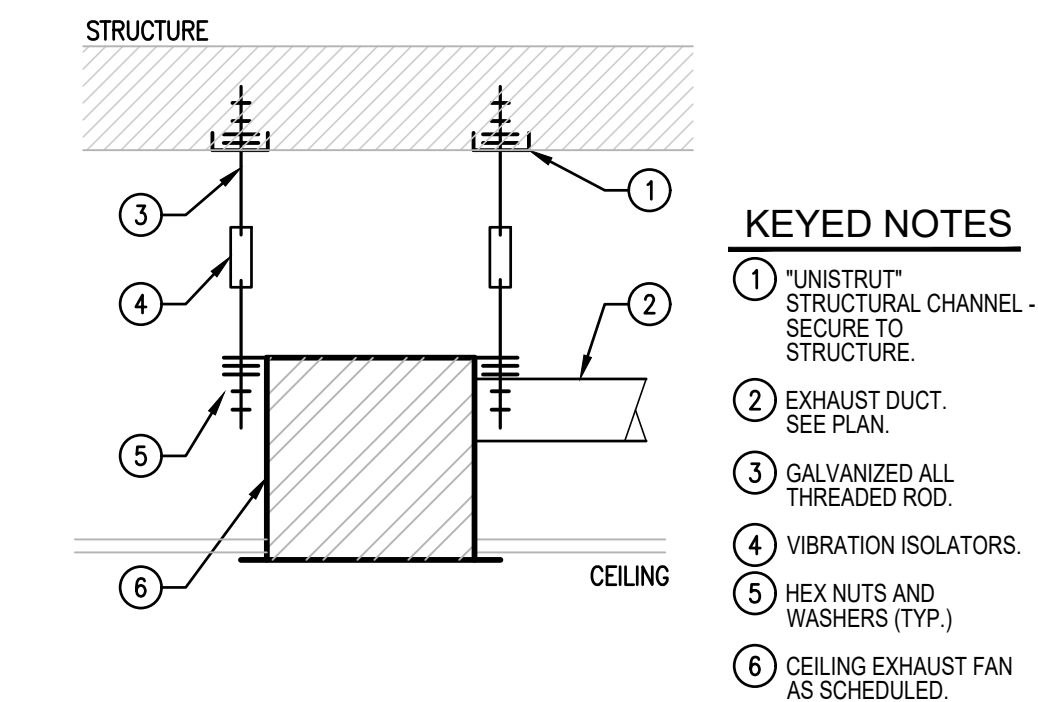
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NOTE: SIZE REFRIGERANT PIPING PER MFR. RECOMMENDATION.

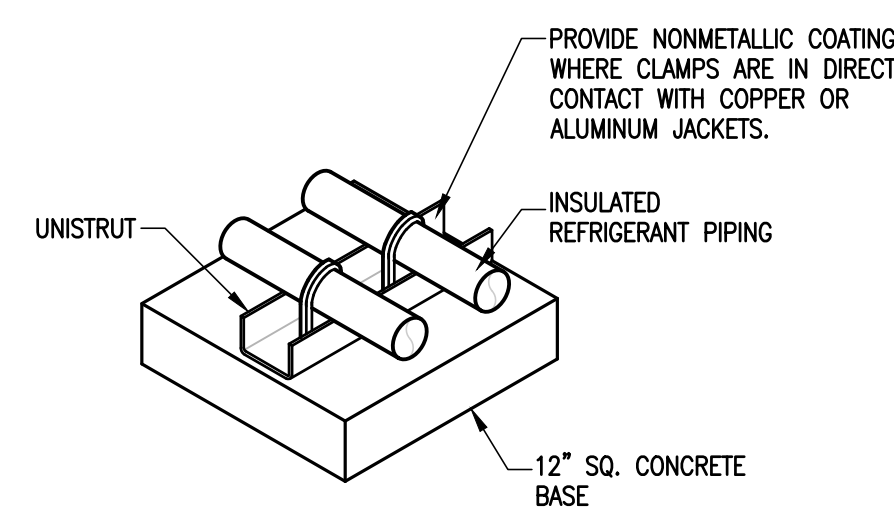
05 REFRIGERANT PIPING DETAIL

SCALE: NOT TO SCALE



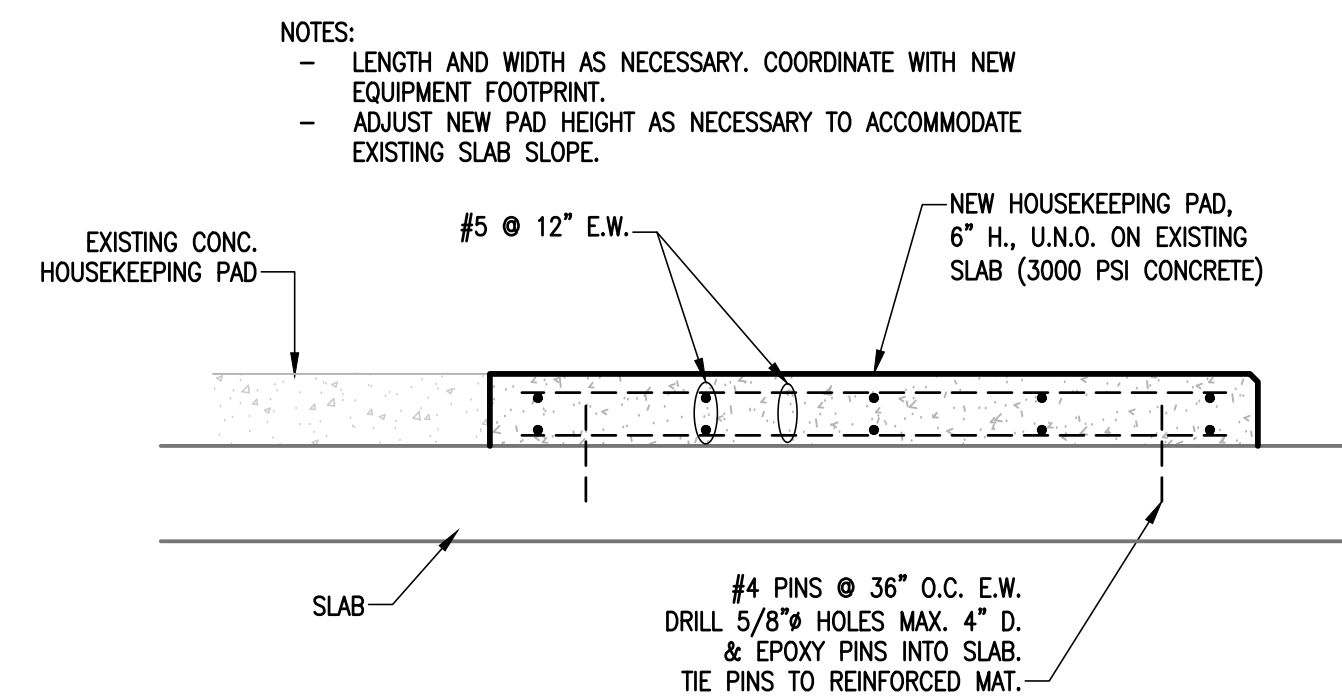
06 CEILING EXHAUST FAN MOUNTING DETAIL

SCALE: NOT TO SCALE



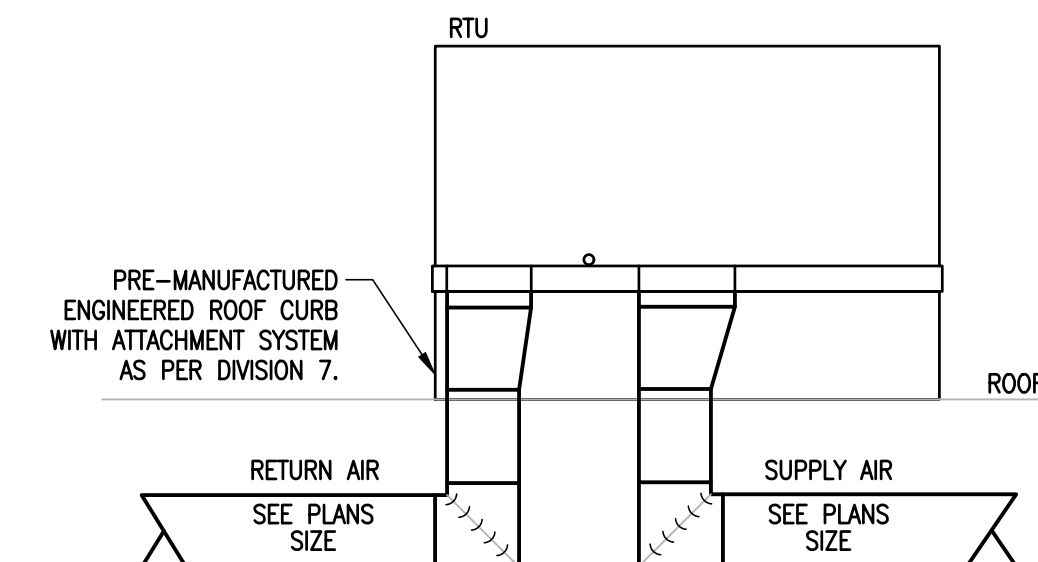
07 REFRIGERANT PIPING SUPPORT DETAIL

SCALE: NOT TO SCALE



08 HOUSEKEEPING PAD EXTENSION DETAIL

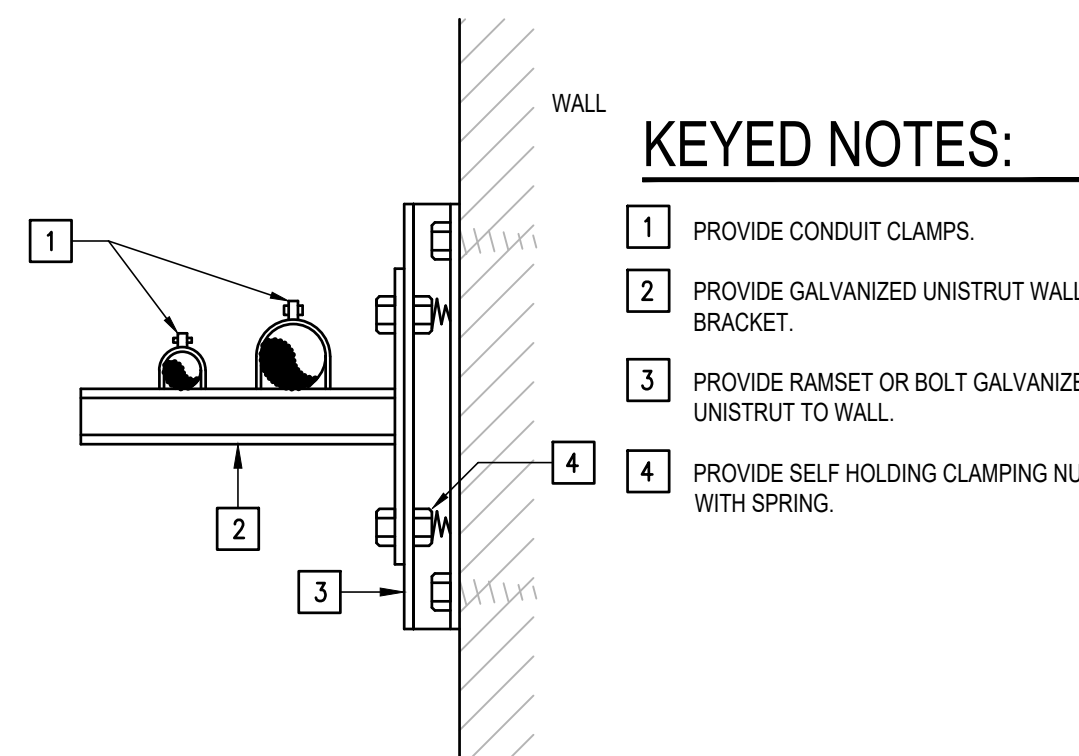
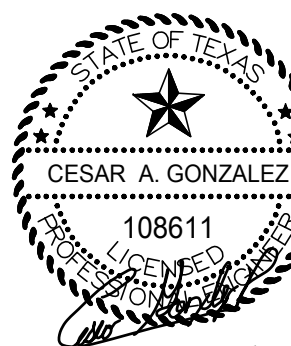
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09 ROOFTOP UNIT DETAIL

SCALE: NOT TO SCALE

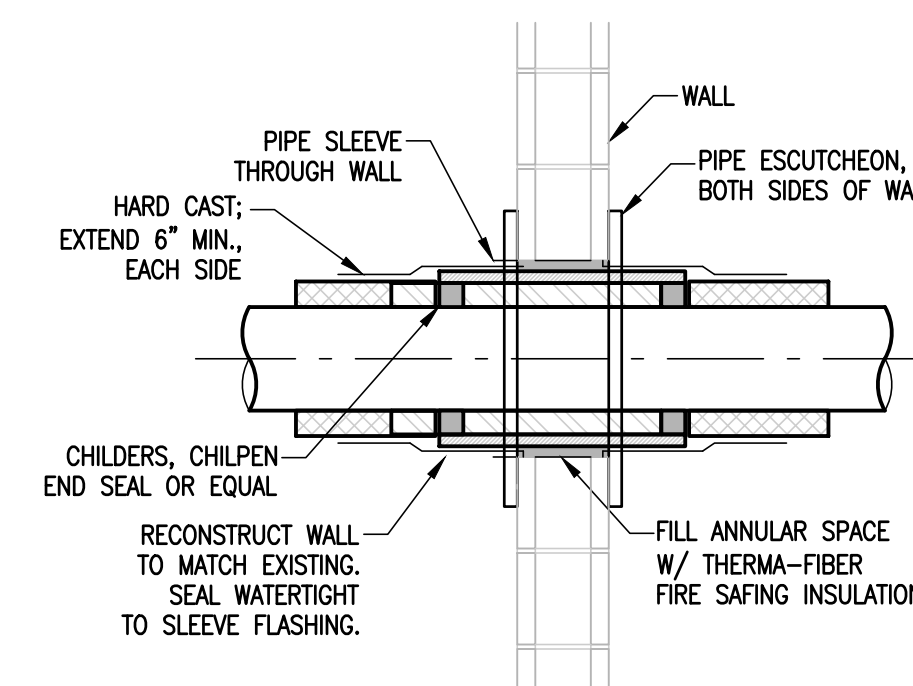




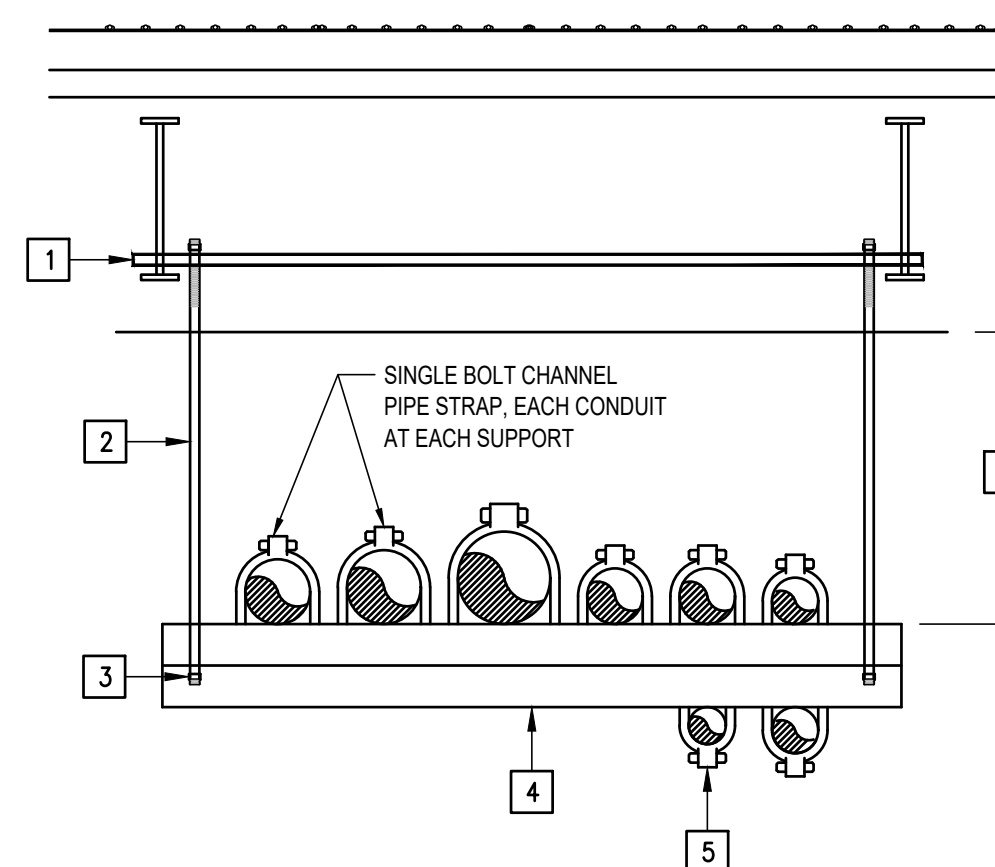
KEYED NOTES:

- 1 PROVIDE CONDUIT CLAMPS.
- 2 PROVIDE GALVANIZED UNISTRUT WALL BRACKET.
- 3 PROVIDE RAMSET OR BOLT GALVANIZED UNISTRUT TO WALL.
- 4 PROVIDE SELF HOLDING CLAMPING NUT WITH SPRING.

01 RACEWAY RUNS SUPPORT DETAIL
SCALE : NOT TO SCALE



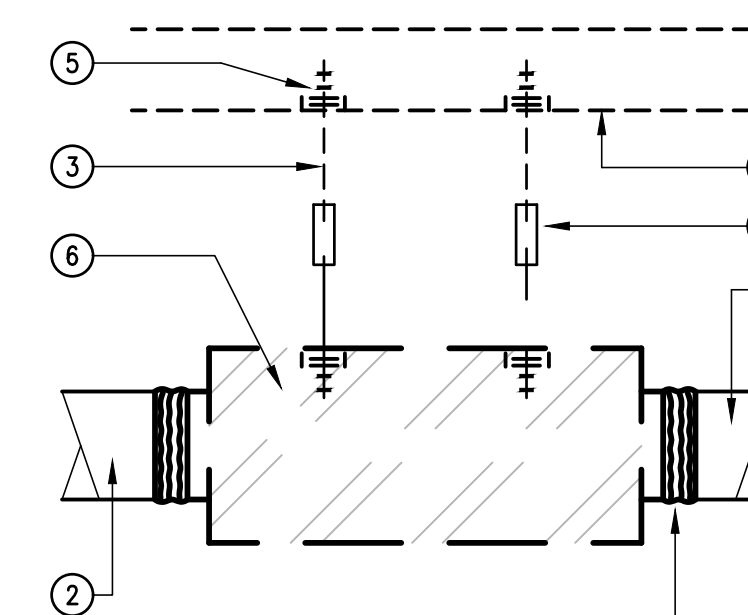
02 PIPE PENETRATION DETAIL
SCALE : NOT TO SCALE



KEYED NOTES:

- 1 PROVIDE UNISTRUT STRUCTURAL CHANNEL SECURED TO JOIST AT BOTH ENDS.
- 2 PROVIDE 1/2" GALVANIZED ROD MINIMUM.
- 3 PROVIDE LOCKNUT.
- 4 PROVIDE GALVANIZED UNISTRUT 8'-0" O/C MAXIMUM.
- 5 PROVIDE 0'-1" MAXIMUM SIZE ON BOTTOM OF UNISTRUT.
- 6 VARIES.

03 HORIZONTAL RACEWAYS SUPPORT DETAIL
SCALE : NOT TO SCALE



KEYED NOTES

- 1 "UNISTRUT" STRUCTURAL CHANNEL - SECURE TO STRUCTURE.
- 2 EXHAUST DUCT. SEE PLAN.
- 3 GALVANIZED ALL THREADED ROD.
- 4 VIBRATION ISOLATORS.
- 5 HEX NUTS AND WASHERS (TYP.)
- 6 INLINE EXHAUST FAN AS SCHEDULED.
- 7 FLEXIBLE CONNECTION.

04 INLINE EXHAUST FAN DETAIL
SCALE : NOT TO SCALE



KEYED NOTES:

- 1 PROVIDE ROOF SUPPORT BLOCK PIPE PIER MODEL NO. PP30 EVERY 10'-0".
- 2 EXISTING ROOF.
- 3 PROVIDE RACEWAYS AS SPECIFIED.

15 ROOF MOUNTED RACEWAYS SUPPORT DETAIL
SCALE : NOT TO SCALE



NOTE: ATTACH NAMEPLATES TO ALL ELECTRICAL GEAR AS NOTED ON SECTION 260553.

06 EQUIPMENT IDENTIFICATION LABEL DETAIL
SCALE : NOT TO SCALE

GENERAL STRUCTURAL NOTES IDEA MCALLEN

THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS OR DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL & MECHANICAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONTRACTOR MEANS AND METHODS OF CONSTRUCTION OR SITE SAFETY. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CONTROLLING PROVISIONS OF THE 2018 EDITION OF THE **INTERNATIONAL BUILDING CODE (IBC)**.

DESIGN CRITERIA

1. BASIS FOR DESIGN AND CODE COMPLIANCE

A. GOVERNING BUILDING CODE.....IBC 2018 EDITION

2. WIND DESIGN BASED ON:

A. ASCE 7-16 REQUIREMENTS

DESIGN WIND SPEED138 MPH
 RISK CATEGORY III
 WIND EXPOSURE CATEGORY C
 INTERNAL PRESSURE COEFFICIENT (GCp1) +/-0.18
 Kzt 1.0
 Kd 0.85

EXISTING CONDITIONS

- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. DIMENSIONS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL OBTAIN ALL FIELD MEASUREMENTS AS NECESSARY TO COORDINATE NEW CONSTRUCTION TO EXISTING CONDITIONS.
- IF EXISTING CONDITIONS DIFFER FROM THE DRAWINGS, INFORM THE ENGINEER AND ADDITIONAL DETAILS OR INTERPRETATION WILL BE PROVIDED. DO NOT PROCEED WITHOUT VERIFICATION.
- THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS.

DEMOLITION NOTES

- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING STRUCTURE AND SURROUNDING BUILDINGS DURING CONSTRUCTION.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY WATERTIGHTNESS OF THE BUILDING DURING DEMOLITION AND RECONSTRUCTION.
- GENERAL CONTRACTOR SHALL COORDINATE WITH ENGINEER ITEMS THAT ARE UNCLEAR PRIOR TO ANY DEMOLITION.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO DETERMINE DEMOLITION REQUIREMENTS AT THIS PROJECT. CONTRACTOR SHALL INCLUDE IN THEIR BID ALL THE DEMOLITION REQUIREMENTS TO COMPLETE THIS PROJECT.
- GENERAL CONTRACTOR SHALL LOCATE AND LABEL ALL UTILITIES BEFORE COMMENCEMENT OF DEMOLITION & CONSTRUCTION ACTIVITIES. UTILITIES SHALL BE CLEARLY MARKED SO THAT ANY SUBCONTRACTOR VISITING THIS SITE CAN EASILY IDENTIFY UTILITIES. ANY COSTS TO REPAIR DAMAGES IF UTILITIES ARE NOT PROPERLY IDENTIFIED, ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING DEBRIS & MATERIAL AWAY FROM SITE ACCORDING TO GOVERNING LOCAL, STATE OR FEDERAL REGULATIONS.
- ANY AREA DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

SAFETY

- PERFORM ALL WORK IN A SAFE AND CONSCIENTIOUS MANNER TO PREVENT INJURIES.
- CONTRACTOR SHALL MAINTAIN OSHA STANDARDS FOR JOB SAFETY AND WORKER PROTECTION, INCLUDING, BUT NOT LIMITED TO ADEQUATE PROTECTION, BARRICADES, SIGNS, ETC.
- THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY. THE ENGINEER EXPRESSLY EXCLUDES ANY RESPONSIBILITY FOR CONTRACTOR SAFETY OR SAFETY OF JOBSITE.

STRUCTURAL STEEL

- TOP OF BEAM/PLATE (TOB OR TOP) IS USED INTERCHANGEABLY ON PLANS. REFERENCE APPLICABLE SECTION FOR CLARIFICATION.
- STRUCTURAL STEEL WIDE FLANGE MEMBERS SHALL CONFORM TO ASTM SPECIFICATION A 572 AND/OR ASTM A 992 (Fy = 50 KSI) UNLESS OTHERWISE SHOWN OR NOTED. PLATE AND ANGLES MAY BE A36 (Fy = 36 KSI).
- ALL STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM SPECIFICATION A-500, GRADE B (Fy=46 KSI). STEEL PIPE SHALL COMPLY WITH ASTM A53 TYPE E OR S (Fy=35 KSI).
- ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- ALL BOLTS SHALL BE 3/4 DIAMETER ASTM A325. WASHERS SHALL BE PROVIDED AT OVERSIZED HOLES AND AT SLOTTED CONNECTIONS AT EXPANSION JOINTS. A325 CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE. ANCHOR BOLTS MAY BE ASTM A307 UNLESS NOTED OTHERWISE.
- REFER TO MANUFACTURER & MECHANICAL PLANS FOR VERIFICATION OF ALL BOLTS, BLOCKING ANCHORS, ETC., FOR THE ANCHORAGE OF THEIR RESPECTIVE ITEMS.
- ALL BEAMS SHALL BE FULL LENGTH WITHOUT SPLICES UNLESS INDICATED ON PLANS OR APPROVED BY THE ENGINEER IN WRITING.
- ALL SHOP AND FIELD WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED AND CERTIFIED TO MAKE THE REQUIRED WELDS IN ACCORDANCE WITH THE LATEST AMERICAN WELDING SOCIETY SPECIFICATIONS (A.W.S. D-1.1).
- WELDS SHALL BE MADE WITH COVERED MILD STEEL ELECTRODES COMPLYING WITH AWS D1 72 CODE AND SERIES E 70XX.
- ERECTION CONNECTORS SHALL BE PROVIDED IN ORDER TO PROPERLY ALIGN AND BE TRUE AND PLUMB WHEN WELDS ARE MADE.

FASTENERS

- CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER ANCHOR DIAMETER AND EMBEDMENT DEPTH NOTED ON THE DRAWINGS. POST-INSTALLED ANCHORS SHALL BE UTILIZED ONLY WHERE SPECIFIED. ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.
- ALL ANCHORS NOTED BELOW SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS, AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.
- SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT NOTED BELOW. SPECIAL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT TESTING LABORATORY PERFORMING QA/QC SERVICES ON PROJECT.
- EXPANSION BOLTS (EB) IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - KWK BOLT III (ICC-ES ESR-2302) BY HILTI (CONCRETE)
 - KWK BOLT III (ICC-ES ESR-1385) BY HILTI (MASONRY)
 - STRONG-BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG-TIE (CONCRETE)
- WEDGE-ALL ANCHOR (ICC-ES ESR-1396) BY SIMPSON STRONG-TIE (MASONRY)

FASTENERS CONTINUED

- HEAVY DUTY SLEEVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED OR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. EXPANSION BOLTS (EB) SHALL NOT BE SUBSTITUTED FOR SLEEVE ANCHORS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER. ACCEPTABLE PRODUCTS:
 - HSL-3 (ICC-ES ESR-1545) BY HILTI (CONCRETE)
- SCREW ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - KWK HUS-EZ (ICC-ES ESR-3027) BY HILTI (CONCRETE)
 - KWK HUS-EZ (ICC-ES ESR-3056) BY HILTI (MASONRY)
 - TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG-TIE (CONCRETE)
 - TAPCON ANCHORS (ICC-ES ESR-1671) (MASONRY)
 - POWERS WEDGE BOLT (ICC-ES ESR-1678) (MASONRY)
- UNDERCUT ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - HDA (ICC-ES ESR-1546) BY HILTI (CONCRETE)
 - TORQ-CUT (ICC-ES ESR-2705) BY SIMPSON STRONG-TIE (CONCRETE)
- POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - X-U (ICC-ES ESR-2269) BY HILTI (CONCRETE/MASONRY/STEEL)
 - POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TIE (CONCRETE/MASONRY)
- ADHESIVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ACCEPTABLE PRODUCTS:
 - HIT-RE 500-V3 (ICC-ES ESR-3814) BY HILTI (CONCRETE)
 - HIT-HY 270 (ICC-ES ESR-4143) BY HILTI (MASONRY)
 - SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)
 - SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)
- BOLTS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. EXPANSION BOLTS/SLEEVE ANCHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER.
- HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, Fy=36 KSI.
- SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT.
- REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS INDEPENDENT OF THE CONTRACTOR, THE ARCHITECT, OR THE ENGINEER, SHALL BE PROVIDED BY A SPECIAL INSPECTOR EMPLOYED BY THE OWNER ACCORDING TO CHAPTER 17 OF THE IBC 2018. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SEND WRITTEN REPORTS TO THE OWNER, THE ARCHITECT, THE ENGINEER AND THE CONTRACTOR. THE REPORTS SHALL INDICATE IF WORK INSPECTED WAS DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE SPECIAL INSPECTOR SHALL BRING THE DISCREPANCIES TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF THEIR KNOWLEDGE, IN OR NOT IN CONFORMANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC 2018.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

REQUIRED VERIFICATION AND INSPECTION OF ANCHORS

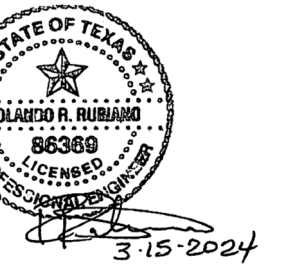
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
CAST-IN-PLACE, POST-INSTALLED, MECHANICAL AND EPOXY SET ANCHORS:		
AS APPLICABLE, THE INSPECTION PROGRAM SHALL VERIFY THE ANCHOR TYPE, EMBEDMENT, TIGHTENING TORQUE, DIMENSIONS, HOLE DEPTH & DIAMETER AND CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE CURRENT ICC-ES EVALUATION REPORT	FREQUENCY OF INSPECTION SHALL BE IN ACCORDANCE WITH THE CURRENT ICC-ES EVALUATION REPORT, OR PER THE SPECIAL INSPECTION REQUIREMENTS OF THE ANCHOR SUBSTRATE, WHICHEVER IS MORE STRINGENT	

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS		X
INSPECTION OF HIGH STRENGTH BOLTING		X
INSPECTION OF WELDING:		
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	X	
MULTIPASS FILLET WELDS	X	
SINGLE-PASS FILLET WELDS		X
FLOOR AND ROOF DECK WELDS		X
INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS		X

NO. REVISION: BY:

RFP # 23-URMU-0424



TEXAS

IDEA UPPER VALLEY
MECHANICAL UPGRADES

RIO GRANDE VALLEY



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DATE: MARCH 15, 2024

CHECKED BY: B.D.

DRAWN BY: B.E.

PROJECT NO.: 1178-40

CAD FILE:

SHEET: S1.1



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E-15598

DATE: MARCH 15, 2024

CHECKED BY: B.D.

DRAWN BY: B.E.

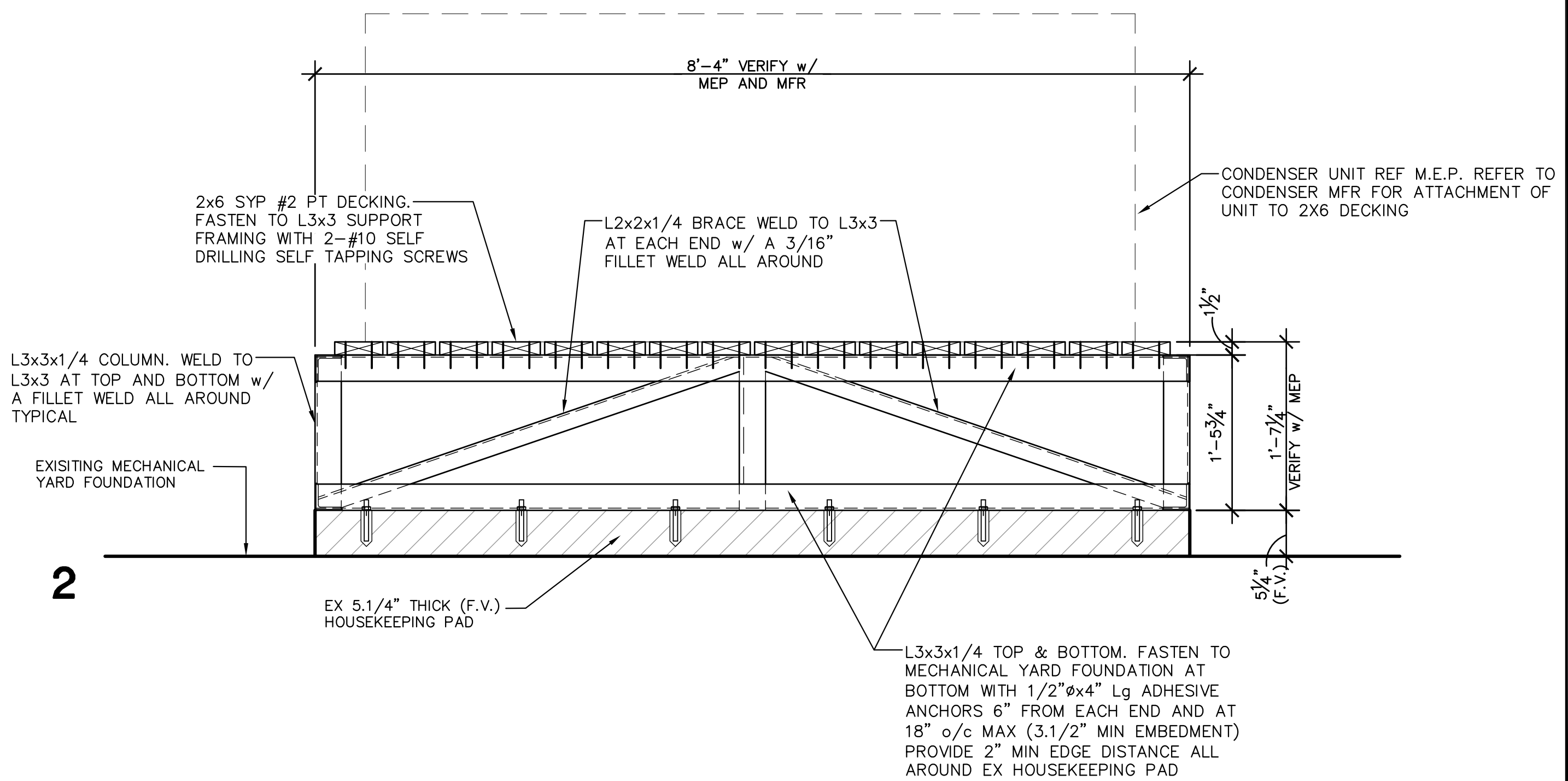
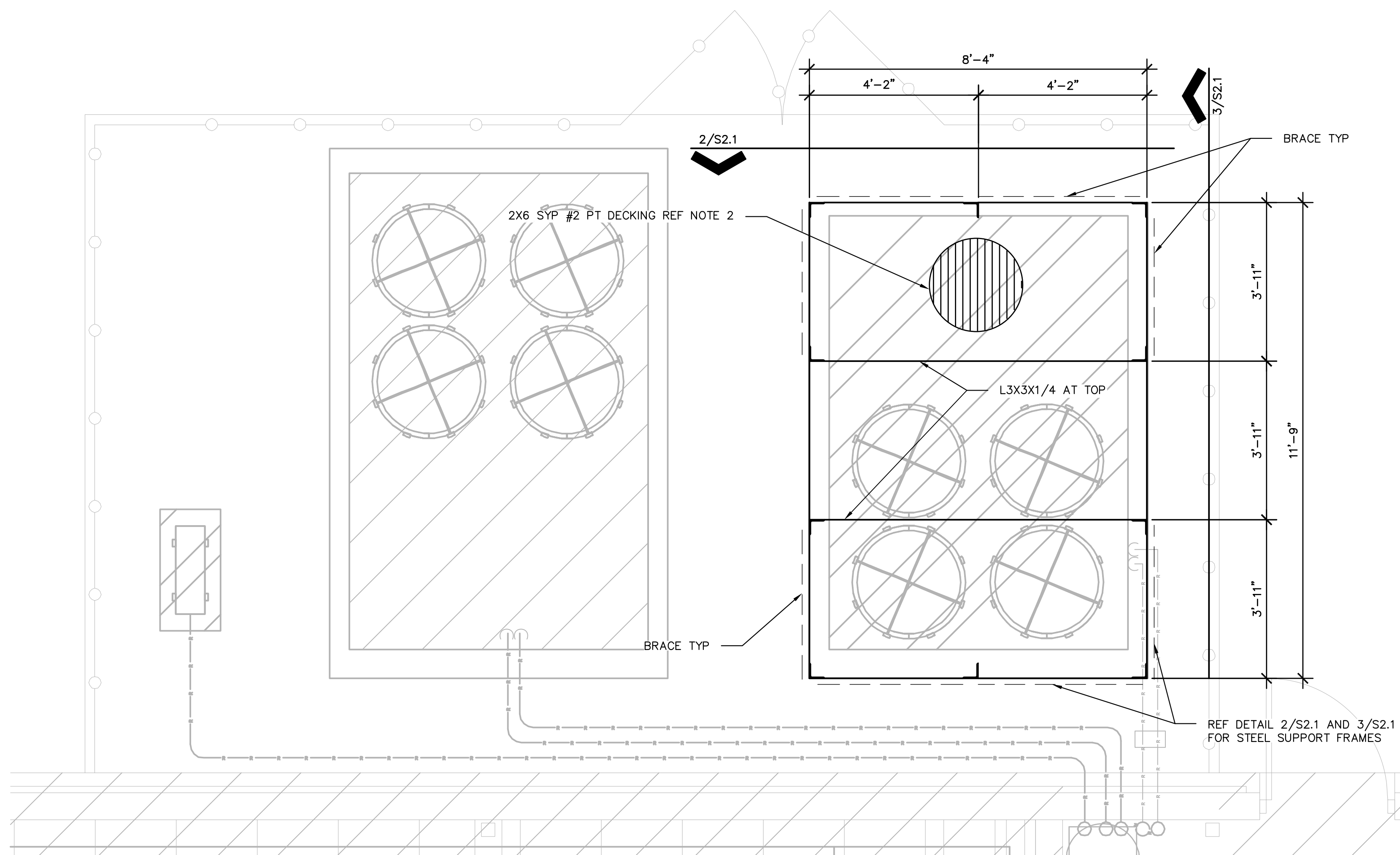
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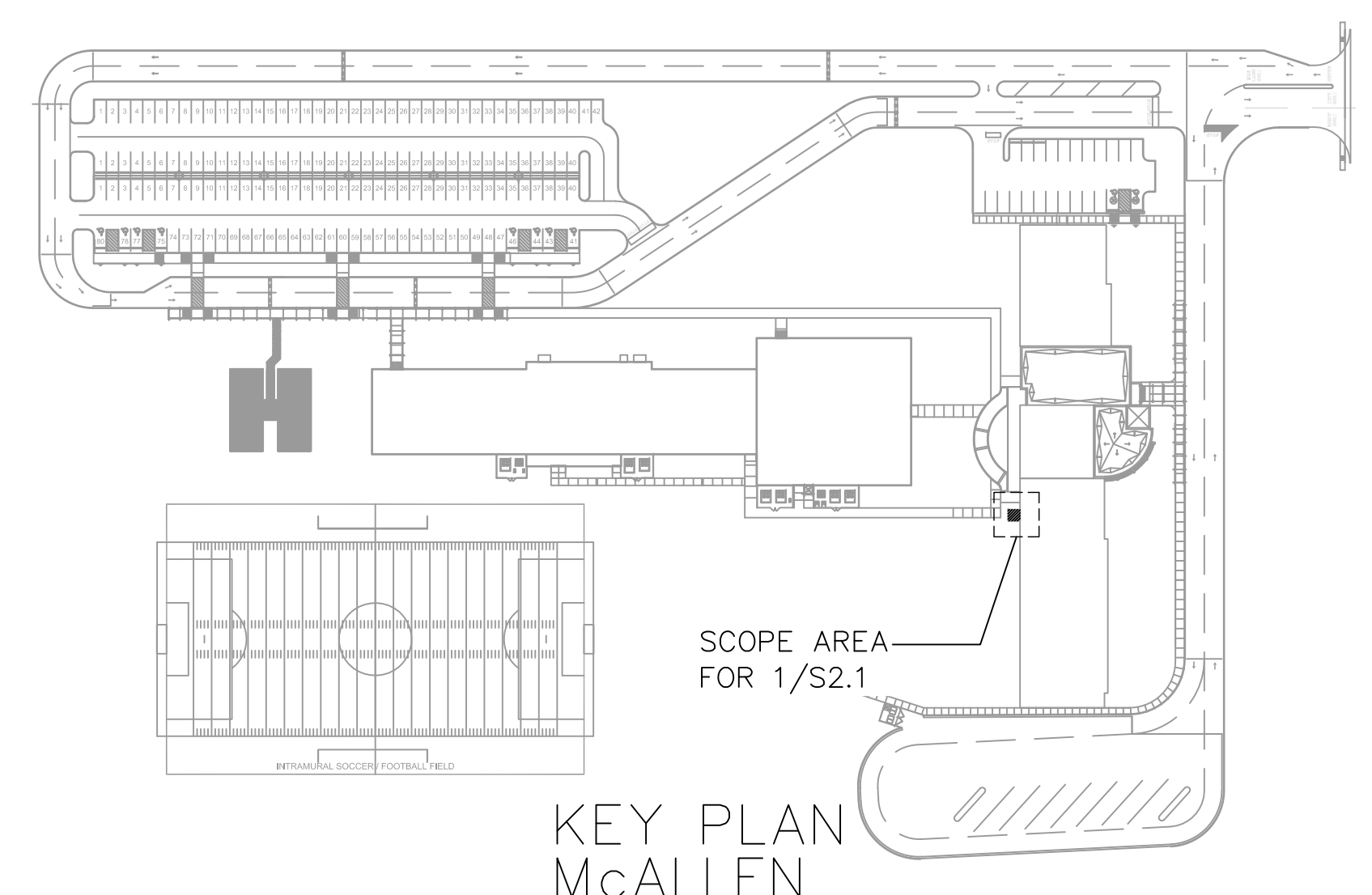
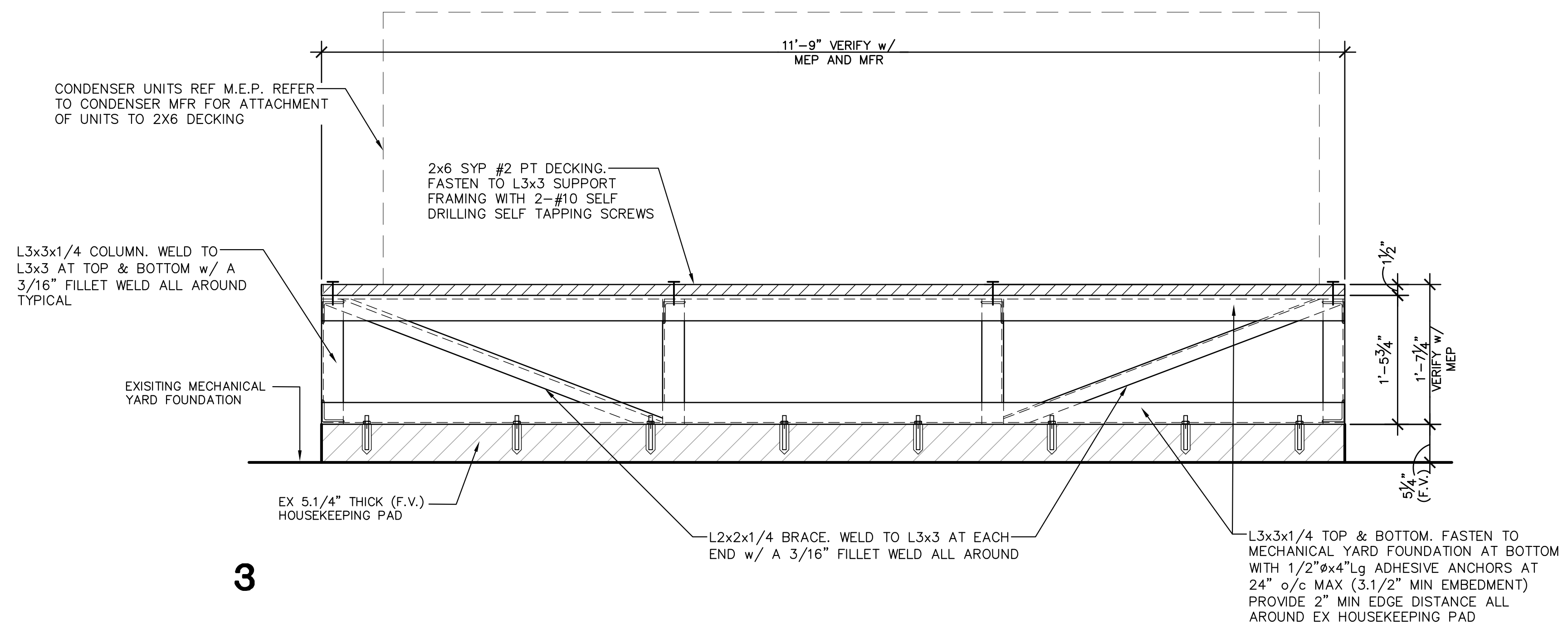
S2.1

IDEA MCALLEN
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1 **STRUCTURAL STEEL CONDENSER SUPPORT FRAME PLAN**
 1/2" = 1'-0" McALLEN BUILDING A **PLAN NORTH**

- NOTES:
1. ALL STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED UNLESS NOTED OTHERWISE.
 2. 2X6 SYP #2 PT DECKING. FASTEN TO L3X3 SUPPORT FRAMING WITH 2-#10 SELF DRILLING SELF TAPPING SCREWS.



KEY PLAN
McALLEN

3



1128 SOUTH COMMERCE ST.
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E-15598

DATE: MARCH 15, 2024

CHECKED BY: B.D.

DRAWN BY: B.E.

PROJECT NO.: 1178-40

CAD FILE: -

SHEET: S3.1



1 PARTIAL STRUCTURAL RENOVATION FRAMING PLAN

3/32" = 1'-0"

IDEA EDINBURG
BUILDING B

NOTES:

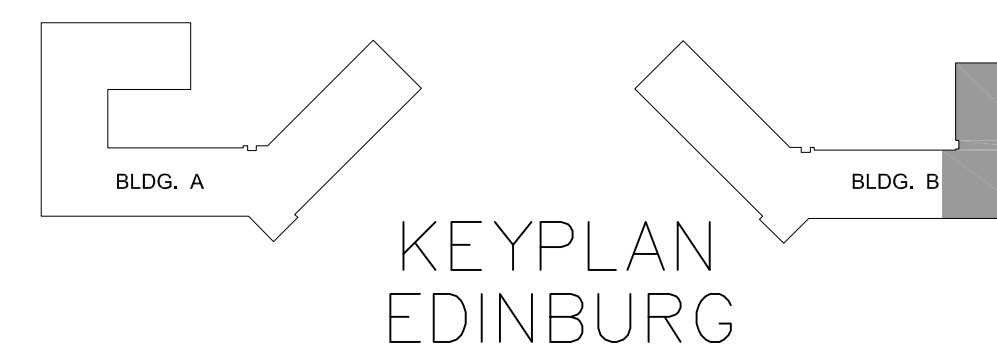
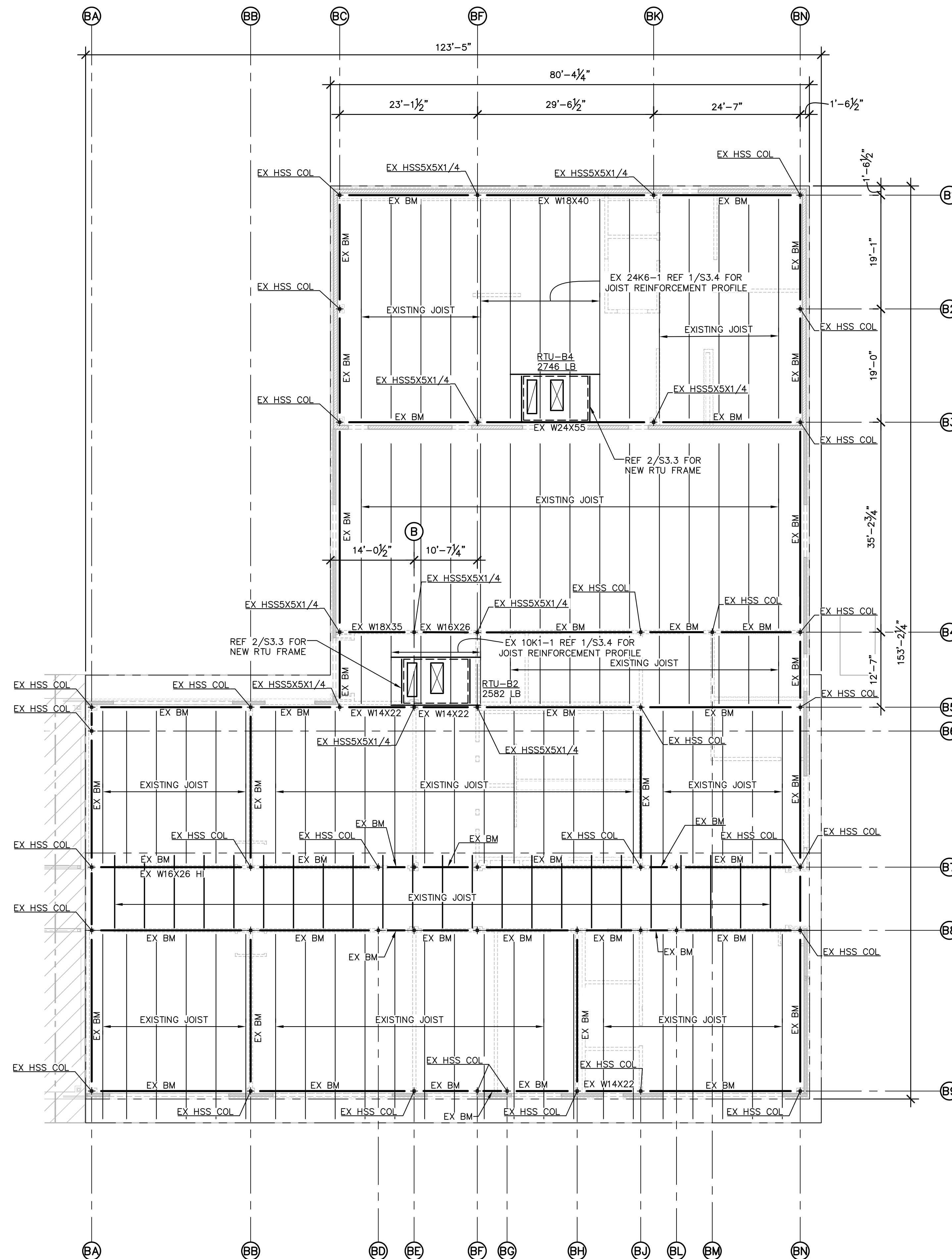
1. SCOPE OF WORK:

- A - MODIFY EXISTING ROOF OPENING FRAME AS REQUIRED TO INSTALL NEW FRAME FOR NEW OPENING SIZE.
- B - INSTALL NEW ROOF OPENING FRAME PER DETAIL 2/S3.3.
- C - INSTALL NEW METAL ROOF DECK AS REQUIRED TO CLOSE-OFF AREAS BETWEEN NEW AND EXISTING ROOF OPENINGS.
- D - INSTALL NEW ROOFING INTEGRATED WITH EXISTING ROOF AND ONTO NEW RTU CURBS AS REQUIRED FOR A COMPLETE WATERPROOF INSTALLATION (BY OTHERS).

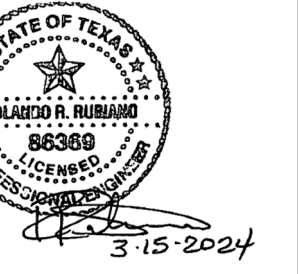
2. NEW ROOF DECK SHALL BE 1.5B 22GA GALV DECK BY VULCRAFT OR APPROVED EQUAL. (p=0.155 IN²/FT; Sp=0.186 IN³/FT; In=0.183 IN⁴/FT; Sn=0.192 IN³/FT; Fy=33KSI). ATTACH DECK TO SUPPORTS USING 5/8" PUDDLE WELDS ON A 36/5 PATTERN AND 4-#10 TEK SCREW SIDE LAP FASTENERS.

- 3. PRIOR TO INSTALLATION OF MECHANICAL EQUIPMENT, NOTIFY ENGINEER IF EQUIPMENT WEIGHTS OR LOCATIONS VARY FROM THAT SHOWN ON PLAN TO ALLOW VERIFICATION OF STRUCTURAL CAPACITY OF FRAMING MEMBERS.
- 4. REFER TO MECHANICAL AND MANUFACTURER'S DRAWINGS FOR FASTENING OF THE ROOF CURB AND HVAC UNITS TO RTU SUPPORT FRAMES.
- 5. EXISTING FRAMING PLANS WERE DEVELOPED BASED ON STRUCTURAL RECORD DRAWINGS TITLED "IDEA PUBLIC SCHOOLS IDEA EDINBURG-PHASE II" SHEET S3.2 DATED 09/03/12 BY HINOJOSA ENGINEERING INC. CONTRACTOR SHALL REFER TO RECORD DRAWINGS FOR ADDITIONAL INFORMATION REQUIRED.
- 6. ALL STRUCTURAL STEEL NOTED ON FRAMING PLAN IS EXISTING UNLESS NOTED OTHERWISE.
- 7. REFERENCE 1/S3.4 FOR EXISTING JOIST REINFORCING PROFILES.
- 8. GENERAL CONTRACTOR WILL NEED TO CONTACT GRA TO SCHEDULE FIELD OBSERVATIONS TO OBSERVE EXISTING BAR JOIST AT NEW RTU LOCATIONS. CONTRACTOR WILL NEED TO PROVIDE A LIFT OR LADDERS ON SITE TO BE USED AS DIRECTED BY GRA PERSONNEL TO GAIN ACCESS TO EXISTING BAR JOISTS.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.



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E-15598

DATE: MARCH 15, 2024

CHECKED BY: B.D.

DRAWN BY: B.E.

PROJECT NO.: 1178-40

CAD FILE:
SHEET:

S3.2



PLAN NORTH

1 PARTIAL STRUCTURAL RENOVATION

3/16" = 1'-0"

IDEA EDINBURG
BUILDING B

NOTES:

1. SCOPE OF WORK:

- A - MODIFY EXISTING ROOF OPENING FRAME AS REQUIRED TO INSTALL NEW FRAME FOR NEW OPENING SIZE.
- B - INSTALL NEW ROOF OPENING FRAME PER DETAIL 2/S3.3.
- C - INSTALL NEW METAL ROOF DECK AS REQUIRED TO CLOSE-OFF AREAS BETWEEN NEW AND EXISTING ROOF OPENINGS.
- D - INSTALL NEW ROOFING INTEGRATED WITH EXISTING ROOF AND ONTO NEW RTU CURBS AS REQUIRED FOR A COMPLETE WATERPROOF INSTALLATION (BY OTHERS).

2. NEW ROOF DECK SHALL BE 1.5B 22GA GALV DECK BY VULCRAFT OR APPROVED EQUAL. (p=0.155 IN²/FT; Sp=0.186 IN³/FT; In=0.183 IN⁴/FT; Sn=0.192 IN³/FT; Fy=33KSI). ATTACH DECK TO SUPPORTS USING 5/8" PUDDLE WELDS ON A 36/5 PATTERN AND 4-#10 TEK SCREW SIDE LAP FASTENERS.

3. PRIOR TO INSTALLATION OF MECHANICAL EQUIPMENT, NOTIFY ENGINEER IF EQUIPMENT WEIGHTS OR LOCATIONS VARY FROM THAT SHOWN ON PLAN TO ALLOW VERIFICATION OF STRUCTURAL CAPACITY OF FRAMING MEMBERS.

4. REFER TO MECHANICAL AND MANUFACTURER'S DRAWINGS FOR FASTENING OF THE ROOF CURB AND HVAC UNITS TO RTU SUPPORT FRAMES.

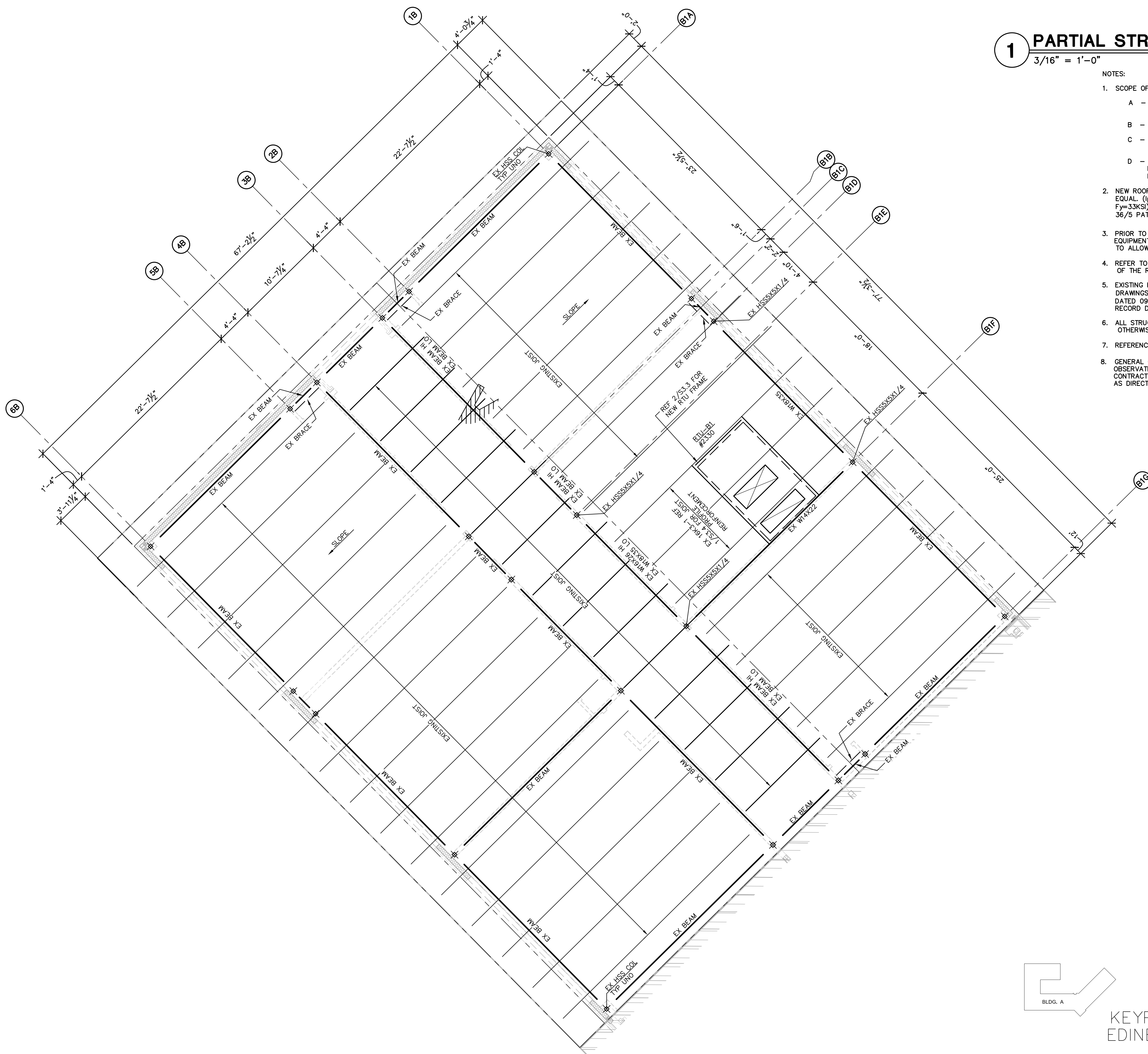
5. EXISTING FRAMING PLANS WERE DEVELOPED BASED ON STRUCTURAL RECORD DRAWINGS TITLED "IDEA PUBLIC SCHOOLS IDEA EDINBURG-PHASE II" SHEET S3.2 DATED 09/03/12 BY HINOJOSA ENGINEERING INC. CONTRACTOR SHALL REFER TO RECORD DRAWINGS FOR ADDITIONAL INFORMATION REQUIRED.

6. ALL STRUCTURAL STEEL NOTED ON FRAMING PLAN IS EXISTING UNLESS NOTED OTHERWISE.

7. REFERENCE 1/S3.4 FOR EXISTING JOIST REINFORCING PROFILES.

8. GENERAL CONTRACTOR WILL NEED TO CONTACT GRA TO SCHEDULE FIELD OBSERVATIONS TO OBSERVE EXISTING BAR JOIST AT NEW RTU LOCATIONS. CONTRACTOR WILL NEED TO PROVIDE A LIFT OR LADDERS ON SITE TO BE USED AS DIRECTED BY GRA PERSONNEL TO GAIN ACCESS TO EXISTING BAR JOISTS.

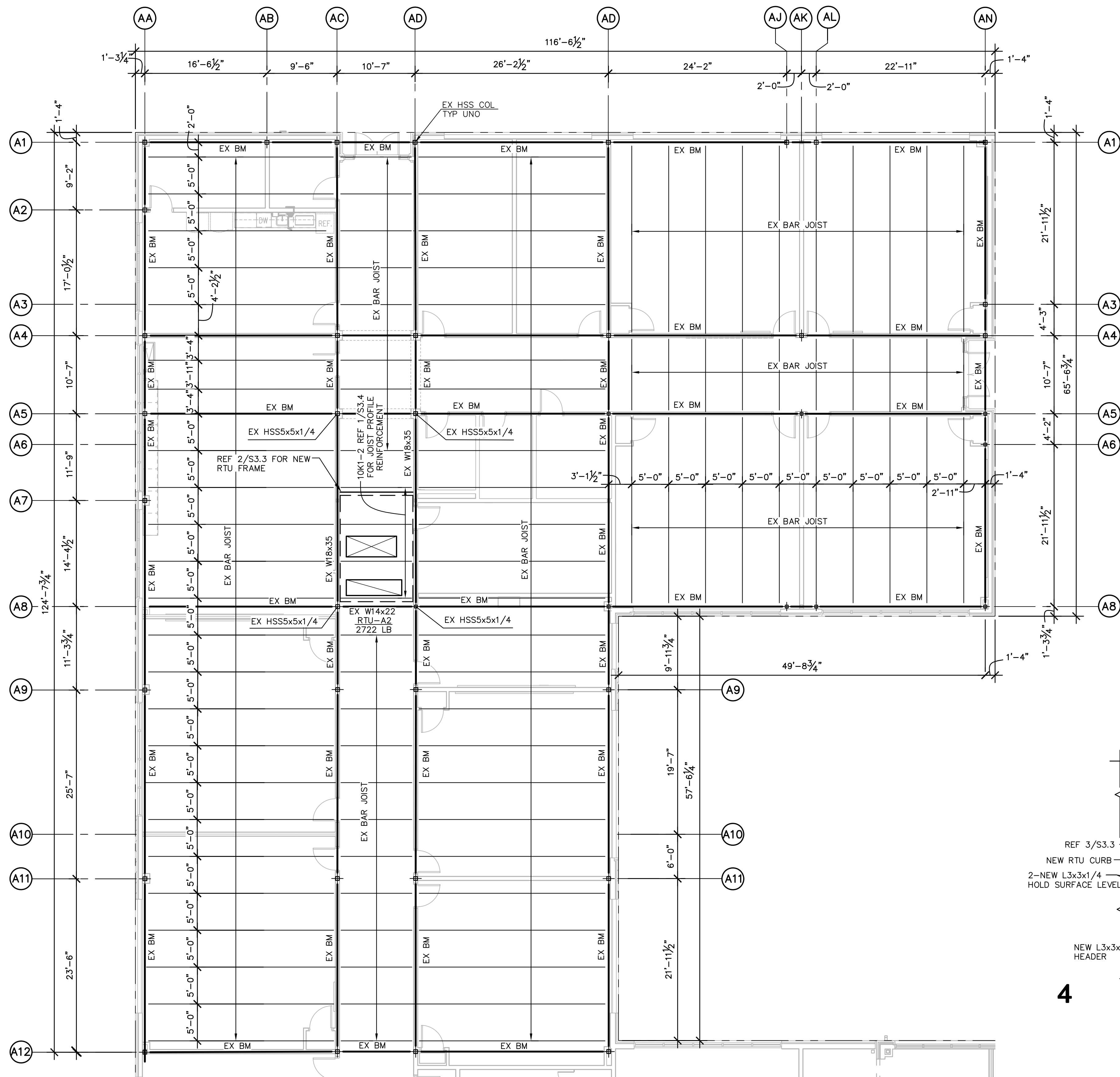
CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.



KEYPLAN
EDINBURG

IDEA EDINBURG

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1 PARTIAL FRAMING PLAN

1/8" = 1'-0"

IDEA EDINBURG BUILDING A

NOTES:

1. SCOPE OF WORK:

- A - MODIFY EXISTING ROOF OPENING FRAME AS REQUIRED TO INSTALL NEW FRAME FOR NEW OPENING SIZE.
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3. PRIOR TO INSTALLATION OF MECHANICAL EQUIPMENT, NOTIFY ENGINEER IF EQUIPMENT WEIGHTS OR LOCATIONS VARY FROM THAT SHOWN ON PLAN TO ALLOW VERIFICATION OF STRUCTURAL CAPACITY OF FRAMING MEMBERS.

4. REFER TO MECHANICAL AND MANUFACTURER'S DRAWINGS FOR FASTENING OF THE ROOF CURB AND HVAC UNITS TO RTU SUPPORT FRAMES.

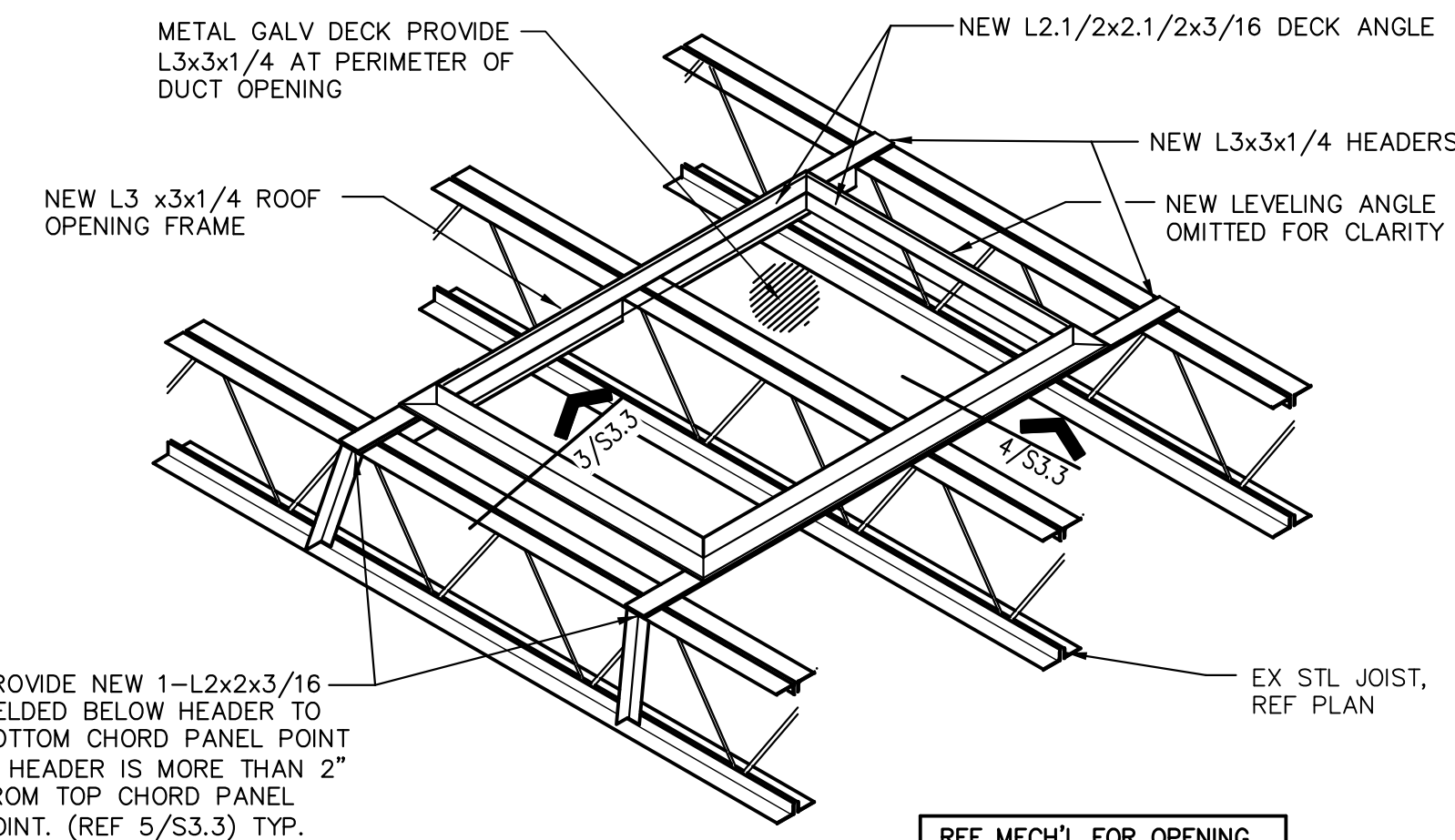
5. EXISTING FRAMING PLANS WERE DEVELOPED BASED ON STRUCTURAL RECORD DRAWINGS TITLED "IDEA PUBLIC SCHOOLS IDEA EDINBURG-PHASE II" SHEET S3.1 DATED 09/03/12 BY HINOJOSA ENGINEERING INC. CONTRACTOR SHALL REFER TO RECORD DRAWINGS FOR ADDITIONAL INFORMATION REQUIRED.

6. ALL STRUCTURAL STEEL NOTED ON FRAMING PLAN IS EXISTING UNLESS NOTED OTHERWISE.

7. REFERENCE 1/S3.4 FOR EXISTING JOIST REINFORCING PROFILE.

8. GENERAL CONTRACTOR WILL NEED TO CONTACT GRA TO SCHEDULE FIELD OBSERVATIONS TO OBSERVE EXISTING BAR JOIST AT NEW RTU LOCATIONS. CONTRACTOR WILL NEED TO PROVIDE A LIFT OR LADDERS ON SITE TO BE USED AS DIRECTED BY GRA PERSONNEL TO GAIN ACCESS TO EXISTING BAR JOISTS.

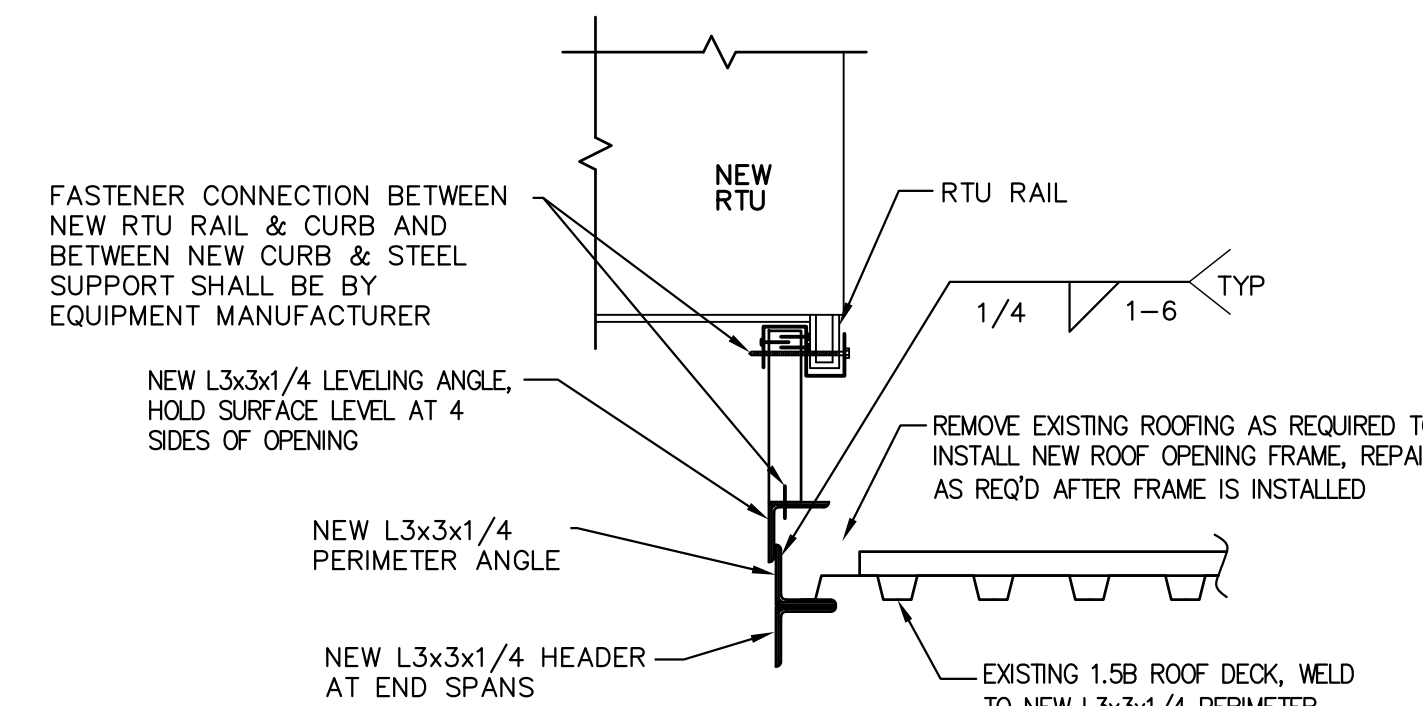
CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.



2 ROOF OPENING FRAME DETAIL

PROVIDE NEW 1-L2x2x3/16 WELDED BELOW HEADER TO BOTTOM CHORD PANEL POINT IF HEADER IS MORE THAN 2" FROM TOP CHORD PANEL POINT. (REF 5/S3.3) TYP.

REF MECH'L FOR OPENING SIZE, LOCATION & DUCT OPENING REQUIREMENTS



3 NEW RTU SUPPORT FRAME

FASTENER CONNECTION BETWEEN NEW RTU RAIL & CURB AND BETWEEN NEW CURB & STEEL SUPPORT SHALL BE BY EQUIPMENT MANUFACTURER

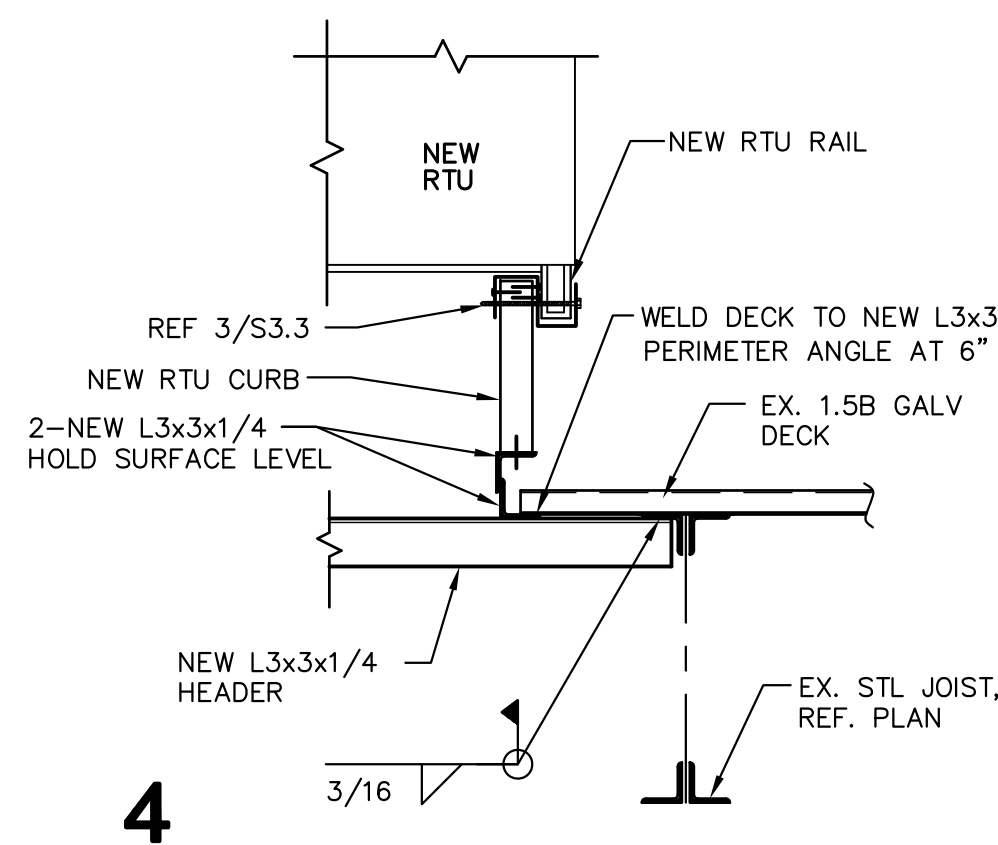
NEW L3x3x1/4 LEVELING ANGLE, HOLD SURFACE LEVEL AT 4 SIDES OF OPENING

NEW L3x3x1/4 PERIMETER ANGLE

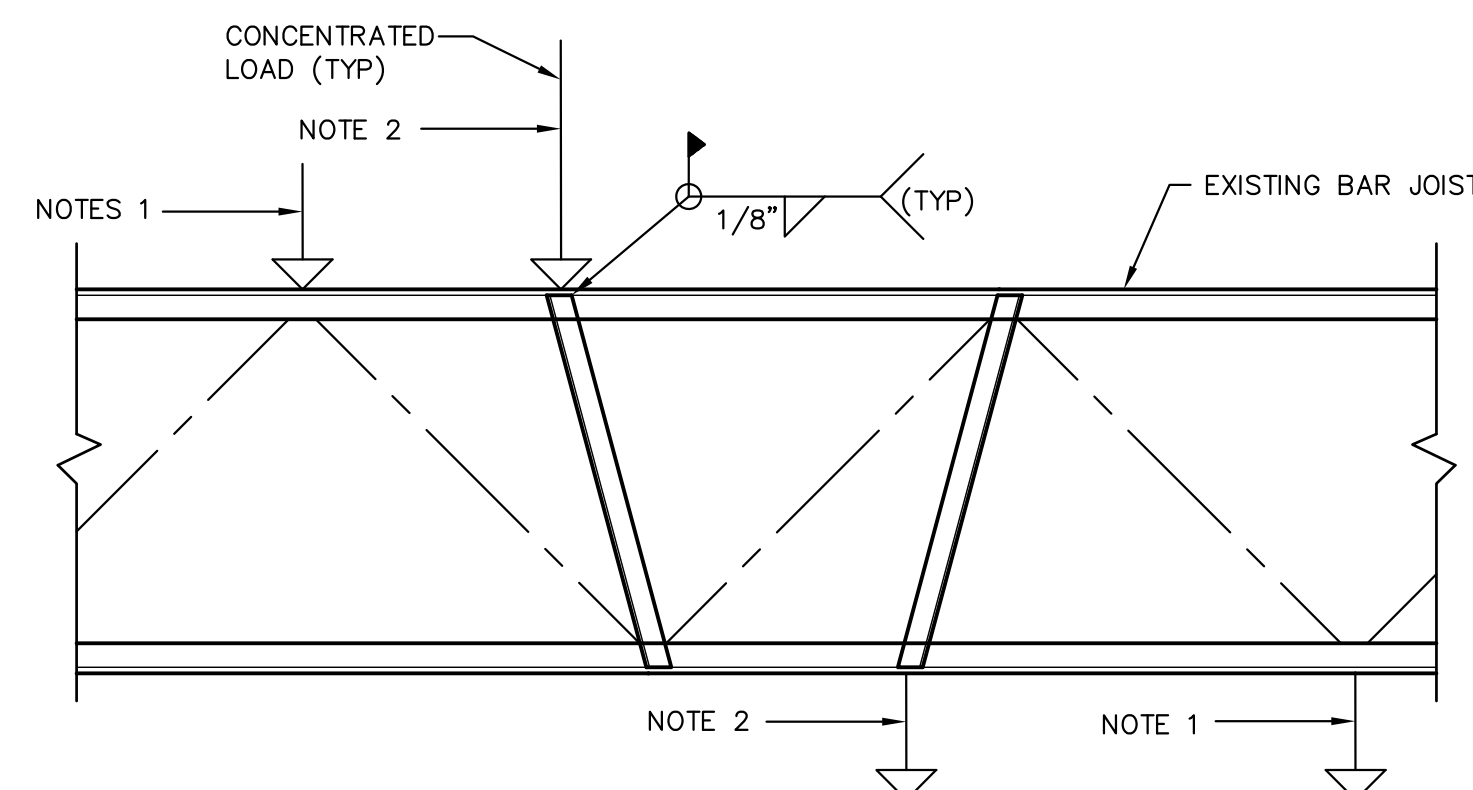
NEW L3x3x1/4 HEADER AT END SPANS

REMOVE EXISTING ROOFING AS REQUIRED TO INSTALL NEW ROOF OPENING FRAME, REPAIR AS REQ'D AFTER FRAME IS INSTALLED

EXISTING 1.5B ROOF DECK, WELD TO NEW L3x3x1/4 PERIMETER ANGLE AT 6° o/c



4



5 TYP. CONCENTRATED LOAD DETAIL



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CHECKED BY: B.D.

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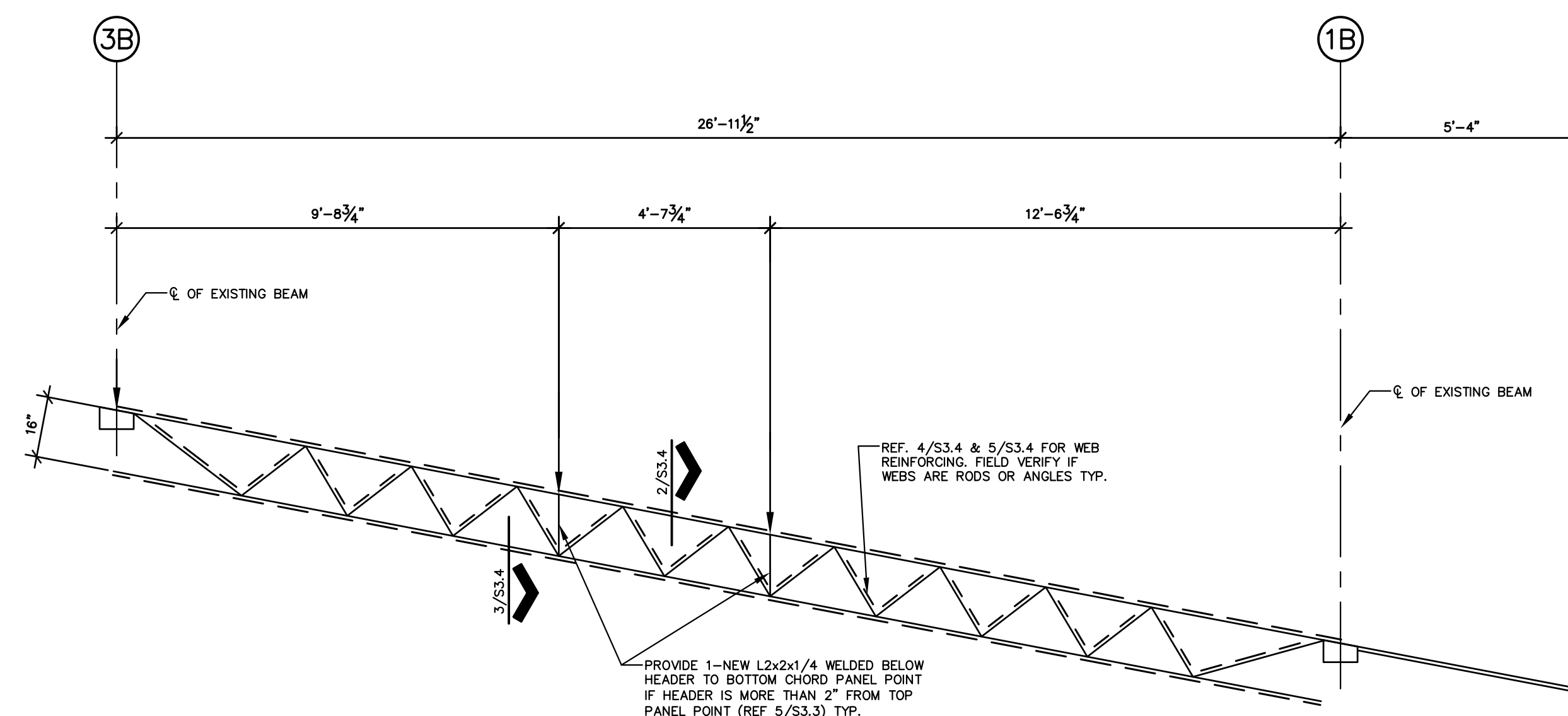
PROJECT NO.: 1178-40

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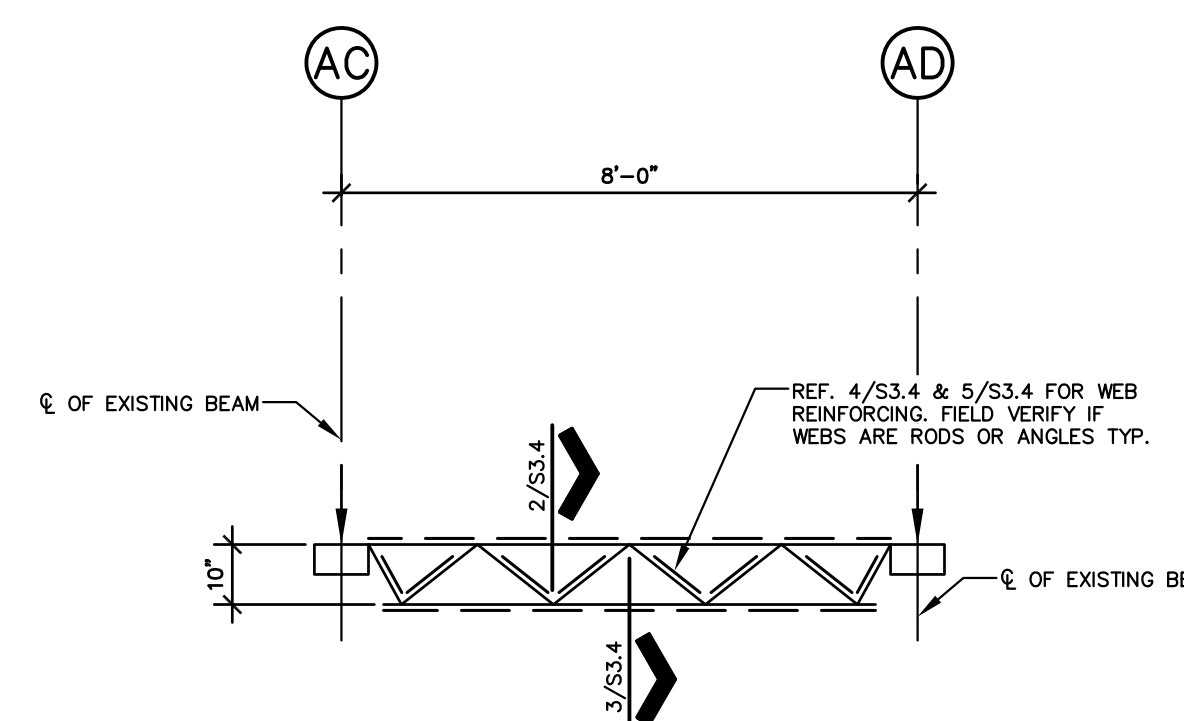
SHEET:

S3.4

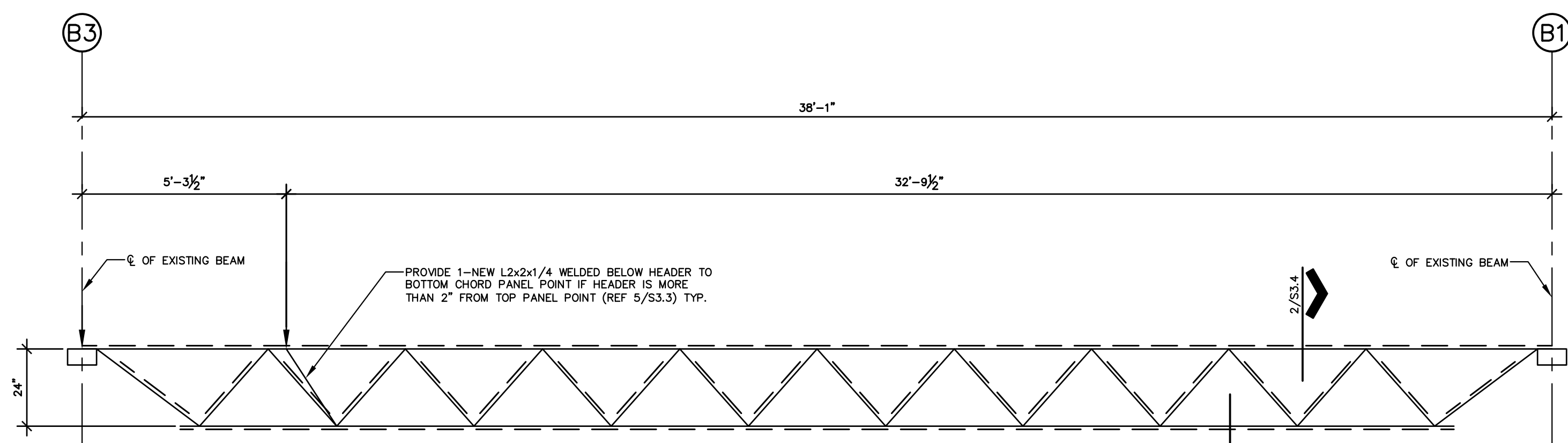
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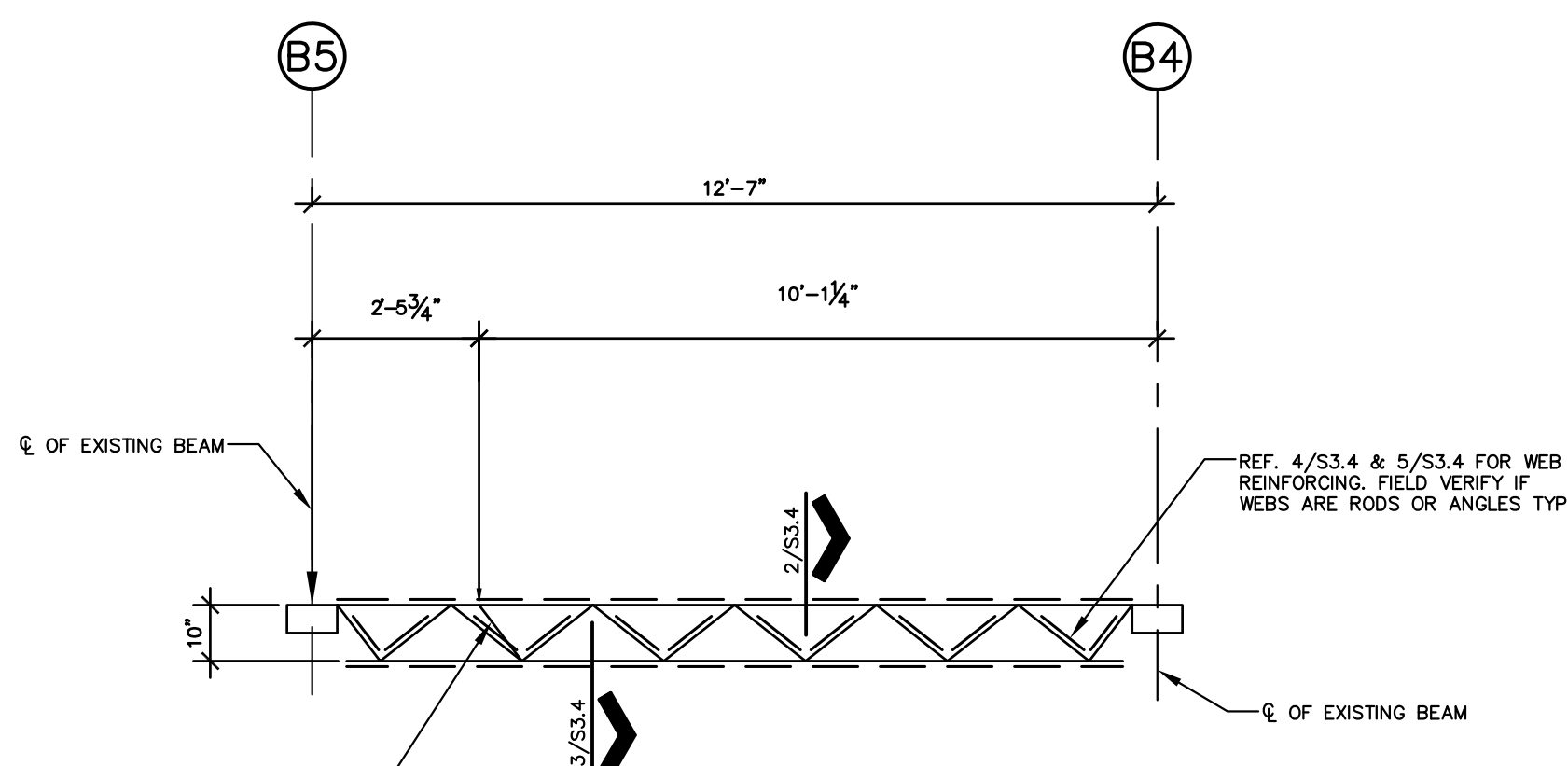
16K3-1



10K1-2
BUILDING A



24K6-1
BUILDING B



10K1-1
BUILDING B

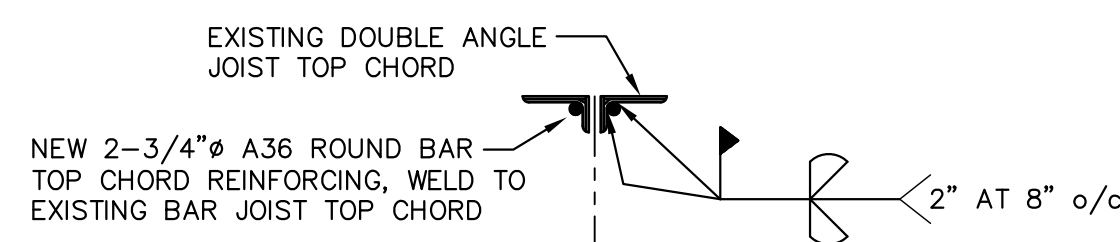
1 EXISTING JOIST REINFORCING PROFILES

3/8" = 1'-0"

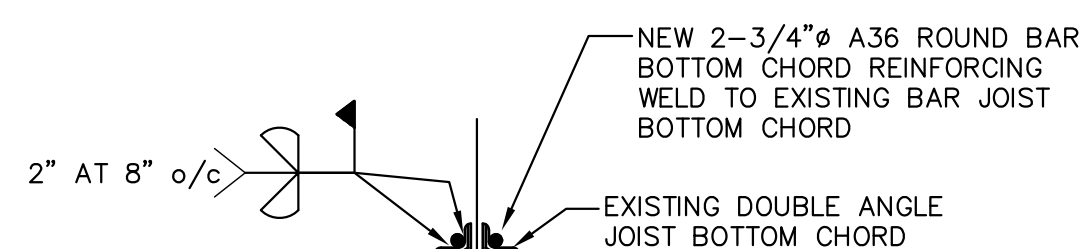
IDEA EDINBURG
BUILDING A

NOTES:

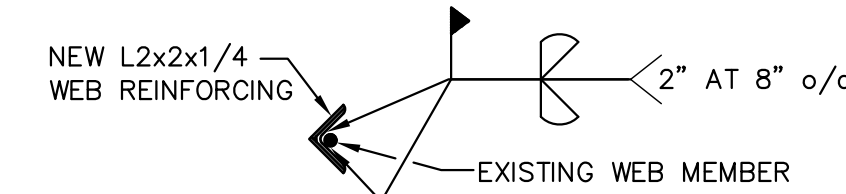
1. ALL EXISTING JOIST REINFORCEMENT PROFILES ARE SCHEMATIC AND PROVIDED FOR PRICING PURPOSES. ALL DIMENSIONS AND JOIST WEB LAYOUTS WILL NEED TO BE FIELD VERIFIED AFTER EXISTING JOIST ARE EXPOSED IN THE FIELD.
2. GENERAL CONTRACTOR WILL NEED TO CONTACT GRA TO SCHEDULE FIELD OBSERVATIONS TO OBSERVE EXISTING BAR JOIST AT NEW RTU LOCATIONS. CONTRACTOR WILL NEED TO PROVIDE A LIFT OR LADDERS ON SITE TO BE USED AS DIRECTED BY GRA PERSONNEL TO GAIN ACCESS TO EXISTING BAR JOISTS.
3. ONCE GRA HAS ANALYZED THE EXISTING BAR JOIST, THE JOIST REINFORCEMENT JOIST PROFILES ON 1/S3.4 WILL BE REVISED AS REQUIRED, INCORPORATING REPAIR DETAILS 2-5/S3.4.
4. REFERENCE PLAN FOR DEDUCTIVE ALTERNATES. CONTRACTOR TO REFER TO BID PROPOSAL FOR FURTHER INSTRUCTIONS.



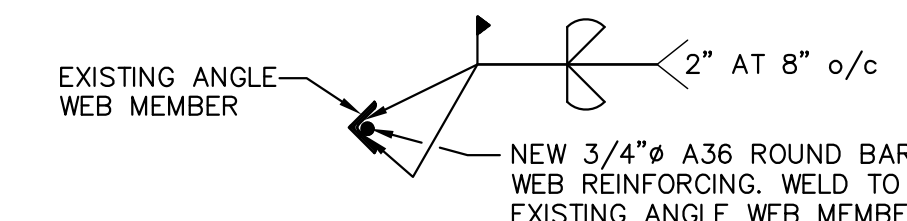
2 TYPICAL TOP CHORD REINFORCEMENT



3 TYPICAL BOTTOM CHORD REINFORCEMENT



4 TYPICAL ROD WEB MEMBER REINFORCEMENT



5 TYPICAL ANGLE WEB MEMBER REINFORCEMENT