

DOUGLAS COUNTY SCHOOL DISTRICT
CC MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENT

1446 MUIR DIVE
GARDNERVILLE, NEVADA 89460

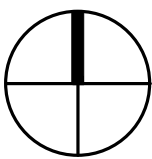
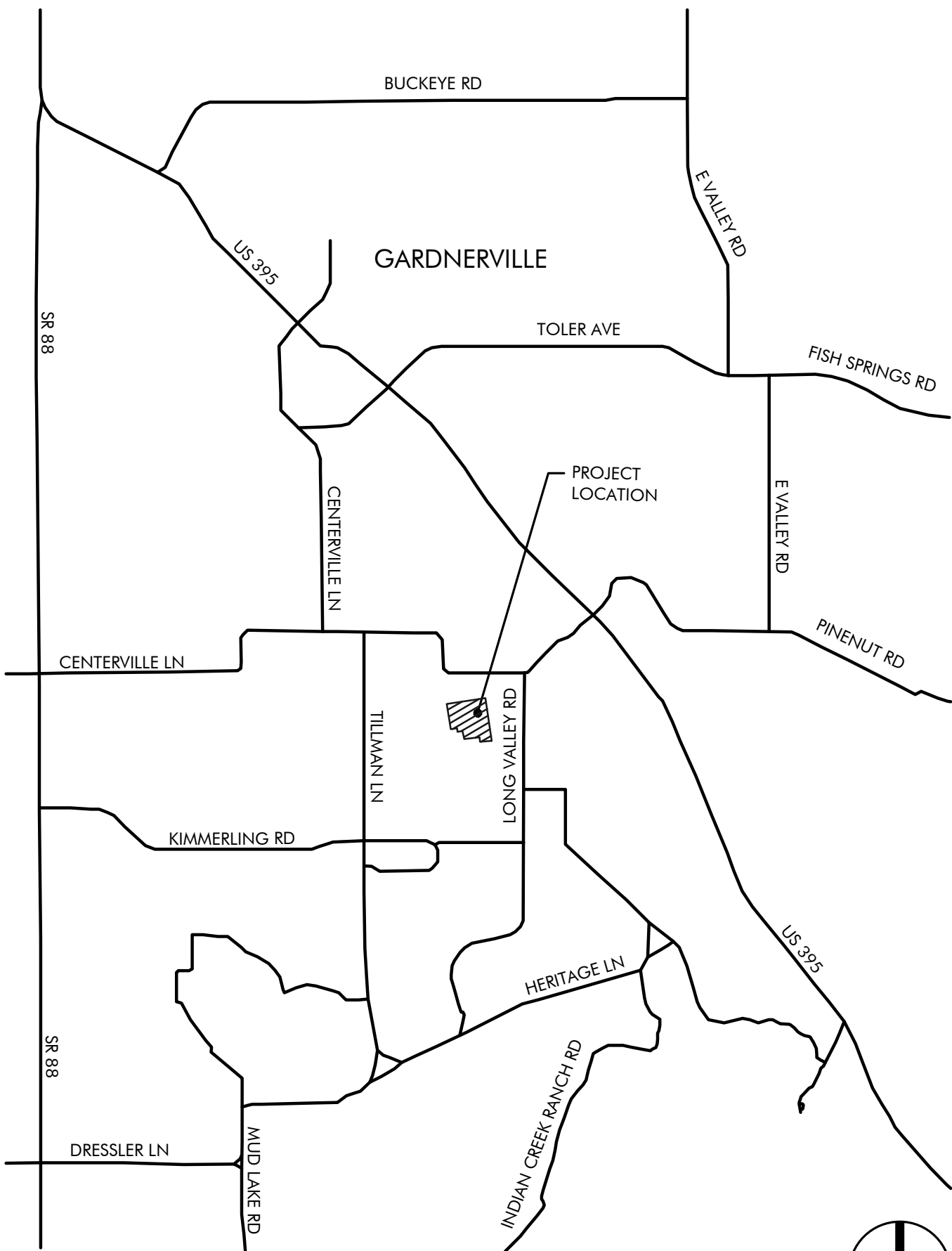
FOR
DOUGLAS COUNTY SCHOOL DISTRICT
1126 AIRPORT ROAD, BUILDING E-1
MINDEN, NEVADA 89423



Douglas County
School District

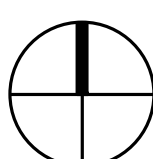
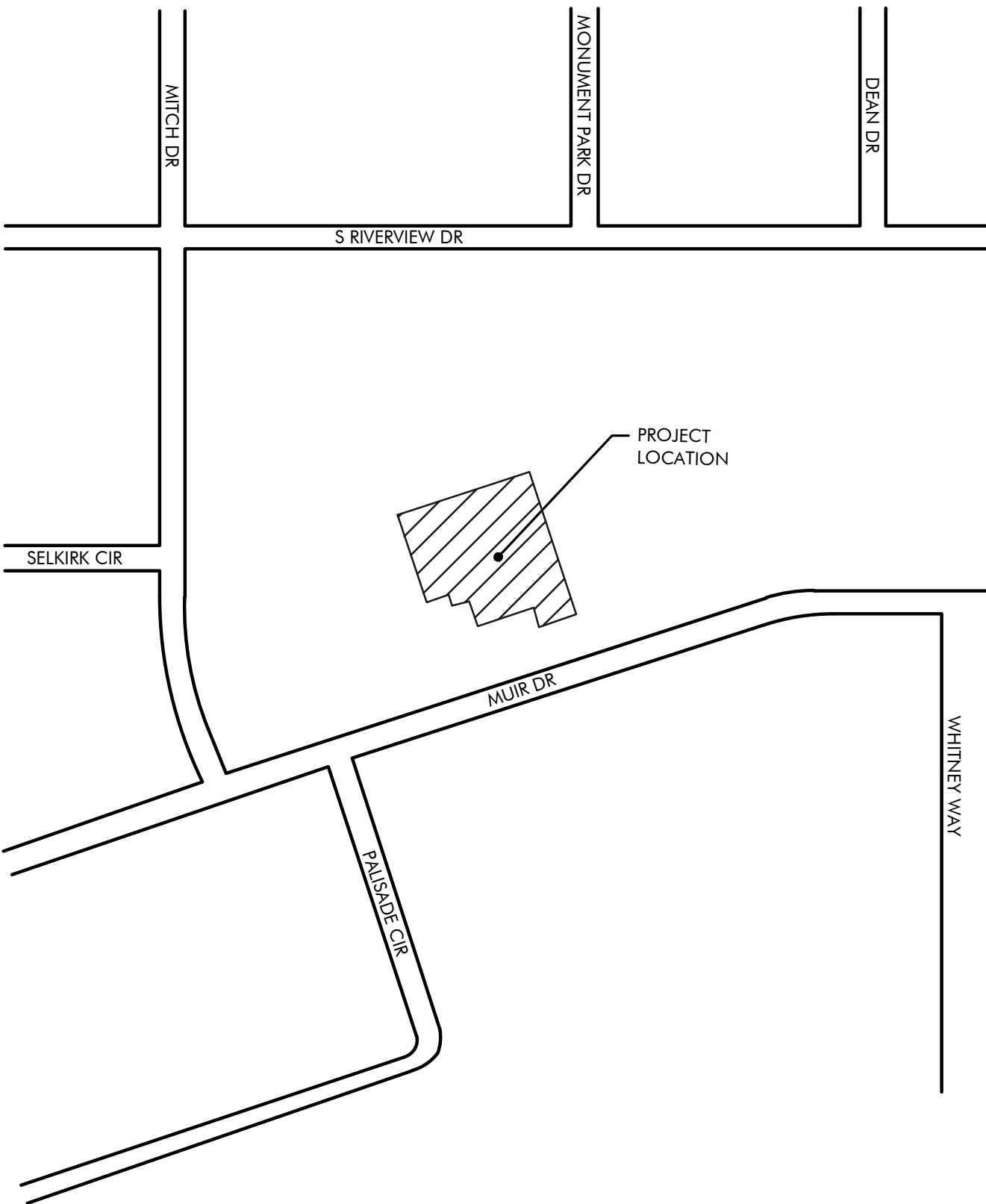
VICINITY MAP

GARDNERVILLE, NEVADA



NO SCALE

LOCATION MAP



NO SCALE

DIRECTORY

OWNER

DOUGLAS COUNTY SCHOOL DISTRICT
1126 AIRPORT ROAD, BUILDING E-1
MINDEN, NV 89423

CONTACTS: PHIL DEMUS
FACILITIES DIRECTOR
(775) 782-5134

CONSULTANTS

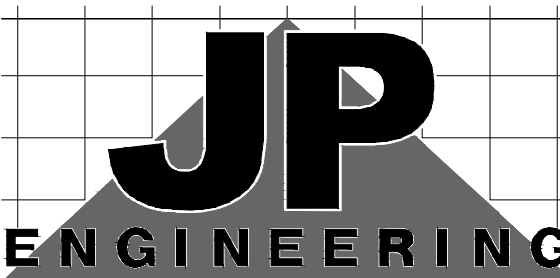
MECHANICAL



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CONTACT: CHUN LEE, P.E.
PROJECT MANAGER

ELECTRICAL



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CONTACT: MARK TATRO
PRINCIPAL

STRUCTURAL CONSULTANT

CFBR STRUCTURAL GROUP, LLC

1650 Meadow Wood Lane
Reno, Nevada 89502
(775) 525-1113

CONTACT: CHRIS ROPER, SE, PE
PRINCIPAL ENGINEER

GENERAL NOTES

- THE PROJECT SPECIFICATIONS AND DRAWINGS ARE A DOCUMENT SET AND SHOULD NOT BE SEPARATED. INFORMATION AND REFERENCES ARE CONTAINED IN ALL SPECIFICATIONS AND DRAWINGS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FULLY UNDERSTAND THE COMPLETE SET OF SPECIFICATIONS AND THE DRAWINGS FOR THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE INFORMATION CONTAINED IN THE SPECIFICATIONS AND DRAWINGS, INCLUDING ALL OTHER DISCIPLINES (ARCHITECTURAL, ELECTRICAL, STRUCTURAL, ETC.) PRIOR TO BID AND CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL THE NEW EQUIPMENT, DUCTWORK, AND PIPING AROUND ALL EXISTING OBSTACLES INCLUDING: ELECTRICAL CONDUIT, DOMESTIC WATER PIPING, WASTE AND VENT PIPING, CHILLED AND HEATING WATER PIPING, AND FIRE SPRINKLER PIPING. PROVIDE OFFSETS TO AVOID RELOCATION OF OTHER UTILITIES. RELOCATE UTILITIES IF THEY ARE IN CONFLICT WITH THE MECHANICAL SYSTEM INSTALLATION, CAUSE DEVIATIONS IN THE DESIGN INTENT, UNSATISFACTORY OPERATION, NOISY CONDITIONS, OR INTERFERE WITH MAINTENANCE. IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE ANY UTILITY RELOCATION WITH THE APPROPRIATE SUBCONTRACTOR.
- THE INFORMATION INDICATED ON THESE DRAWINGS AS EXISTING IS BASED UPON INFORMATION TAKEN FROM AS-BUILT DRAWINGS, FIELD INVESTIGATION, AND INFORMATION OBTAINED FROM SUBMITTAL DATA, ETC. THE PLANS DO NOT GUARANTEE ACCURACY BUT ARE ONLY AN INDICATION OF EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT CONDITIONS SUCH AS EQUIPMENT PLACEMENT, DUCTWORK (SIZE, ROUTING, AND ELEVATION), PIPING (SIZE, ROUTING, AND ELEVATION), ETC. THE DRAWINGS ARE INTENDED TO PROVIDE THE CONTRACTOR AN INDICATION OF THE SYSTEM INSTALLED IN THE FACILITY TO DATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ADJUSTMENTS TO THE DRAWING INFORMATION AS REQUIRED TO MATCH EXISTING FIELD CONDITIONS.

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ROOFING NOTES

- EXISTING ROOFING IS A GARLAND MEMBRANE ROOFING THAT IS STILL UNDER WARRANTY. ALL NEW WORK TO BE DONE BY CERTIFIED GARLAND ROOFING CONTRACTOR TO MAINTAIN WARRANTY.
- ALL ROOFING TO BE DONE BY QUALIFIED CONTRACTOR
- ALL NEW ROOFING WORK TO HAVE A 2-YEAR PARTS AND LABOR WARRANTY AND MAINTAIN EXISTING WARRANTY

BUILDING CODES

- 2024 INTERNATIONAL BUILDING CODE
- 2024 INTERNATIONAL FIRE CODE
- 2024 UNIFORM MECHANICAL CODE
- 2024 INTERNATIONAL ENERGY CONSERVATION CODE
- 2024 UNIFORM PLUMBING CODE
- 2023 NATIONAL ELECTRICAL CODE



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CONSULTANT:

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C.C. MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENTS

TITLE SHEET

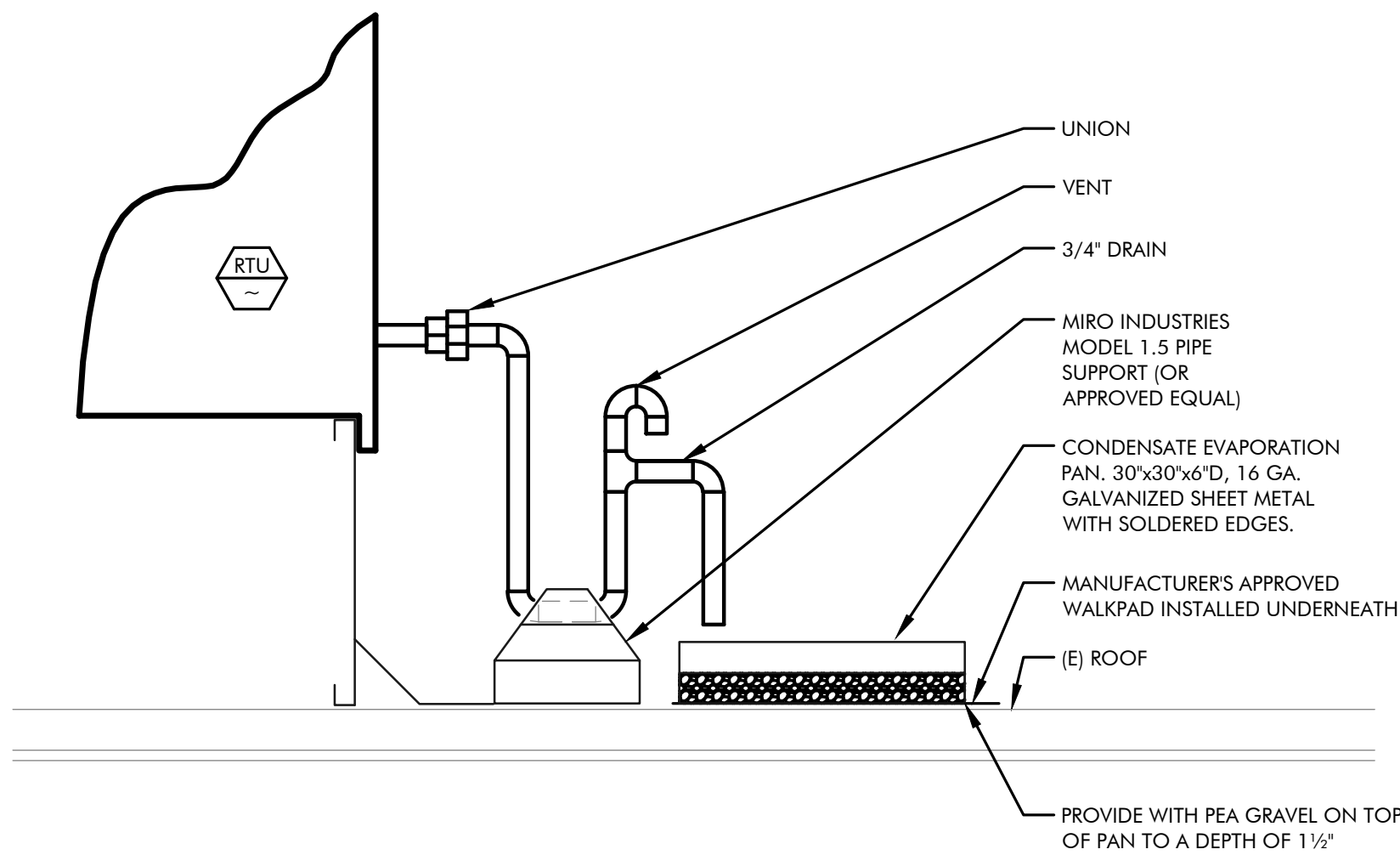
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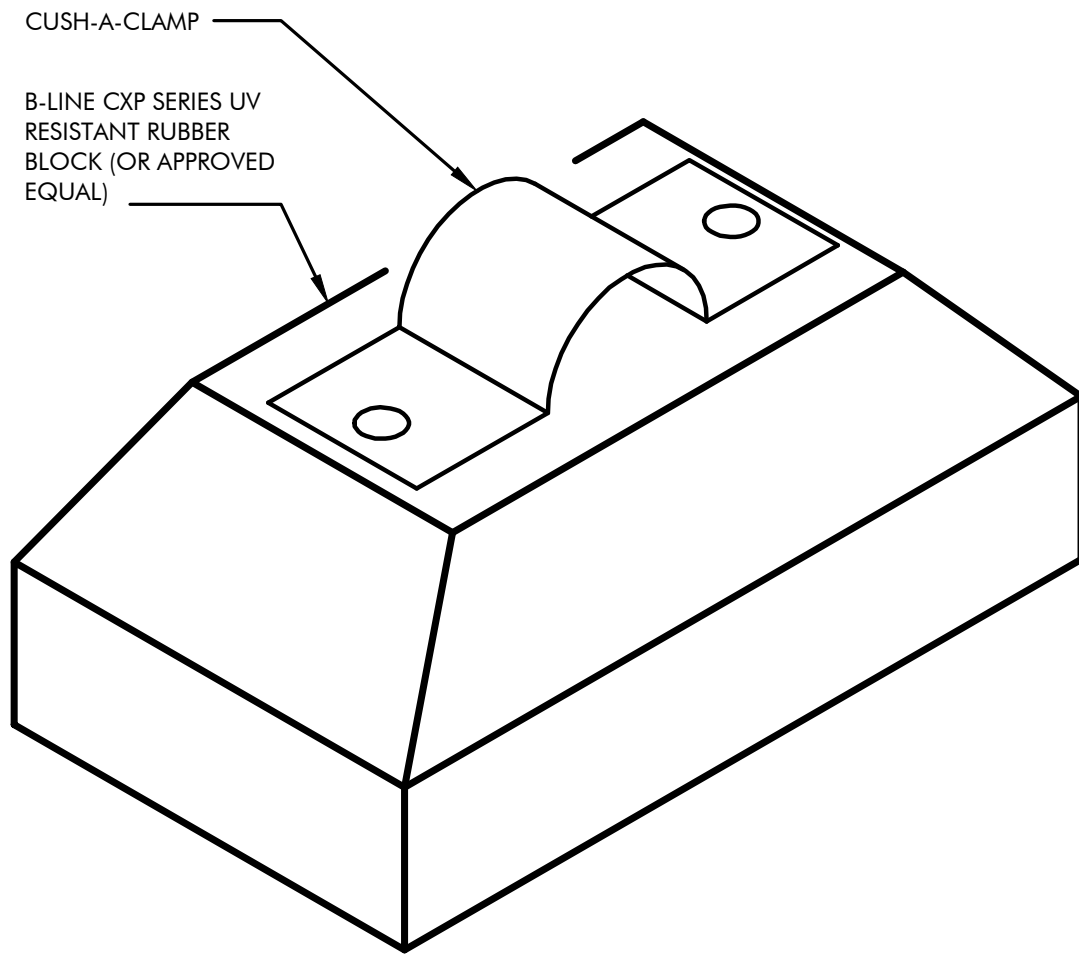
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CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

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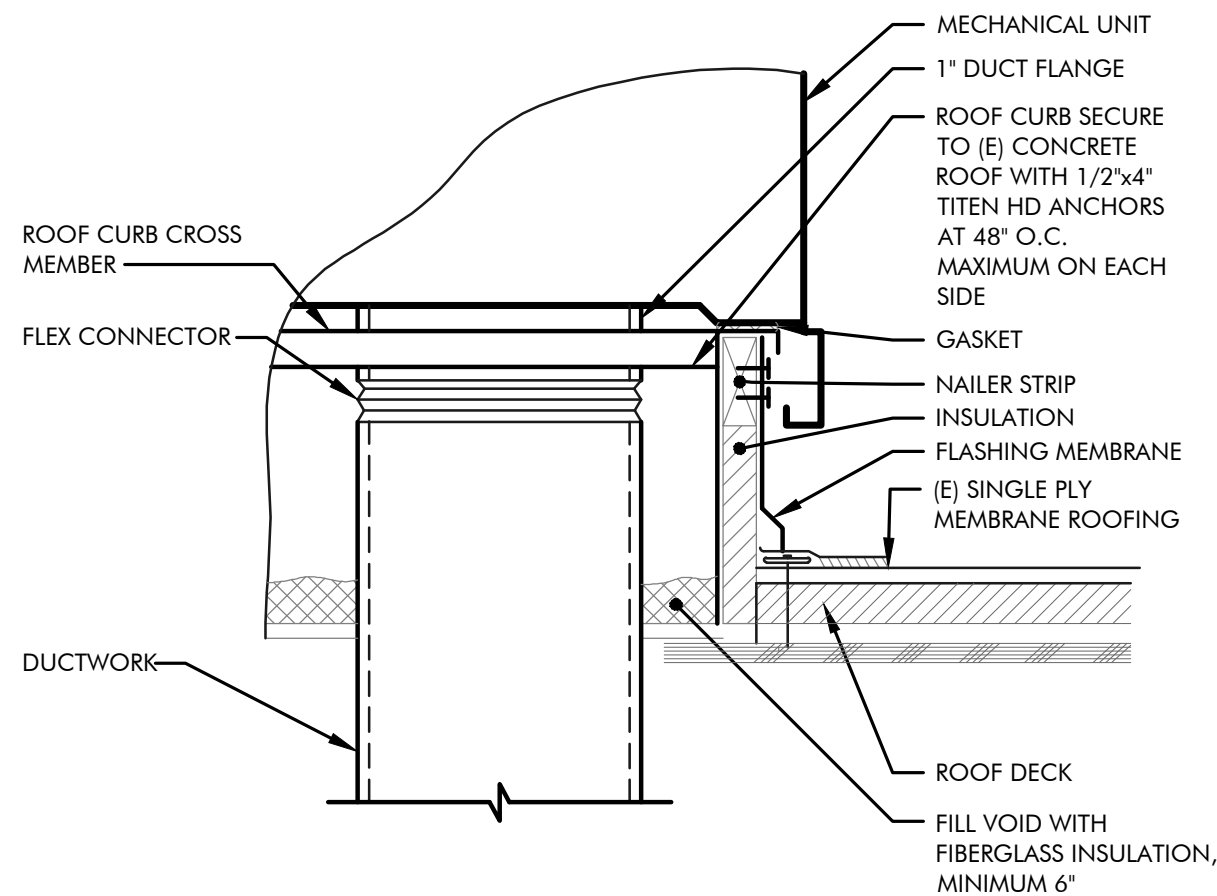
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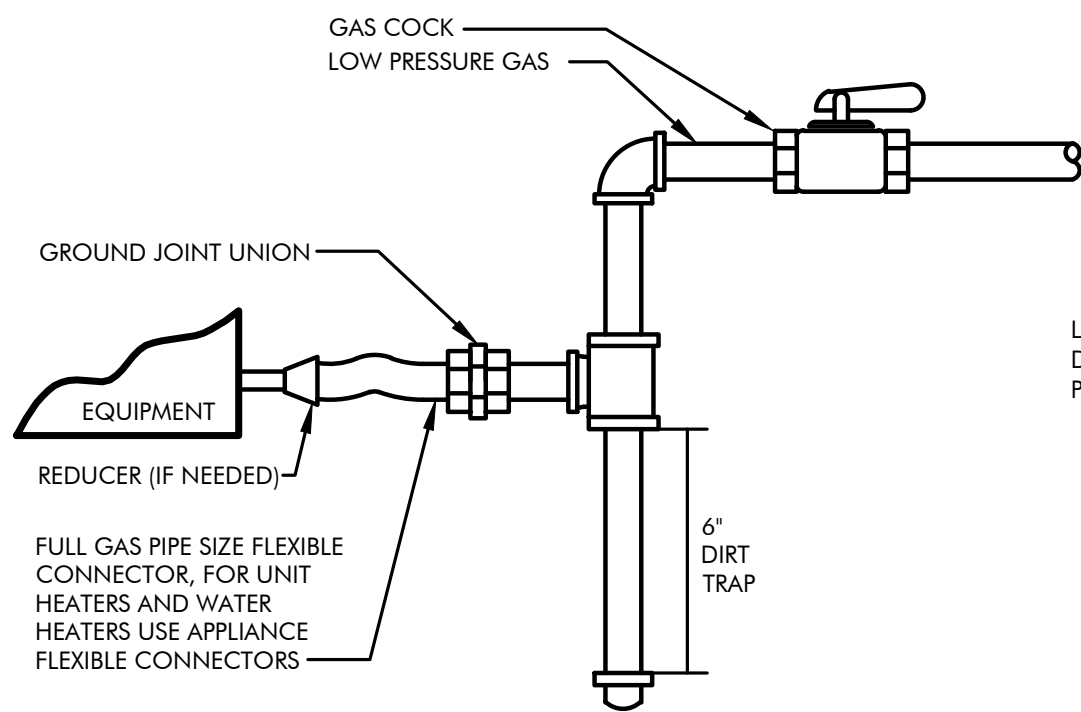
1 ROOFTOP UNIT CONDENSATE DRAIN DETAIL
M0.1 SCALE: NONE



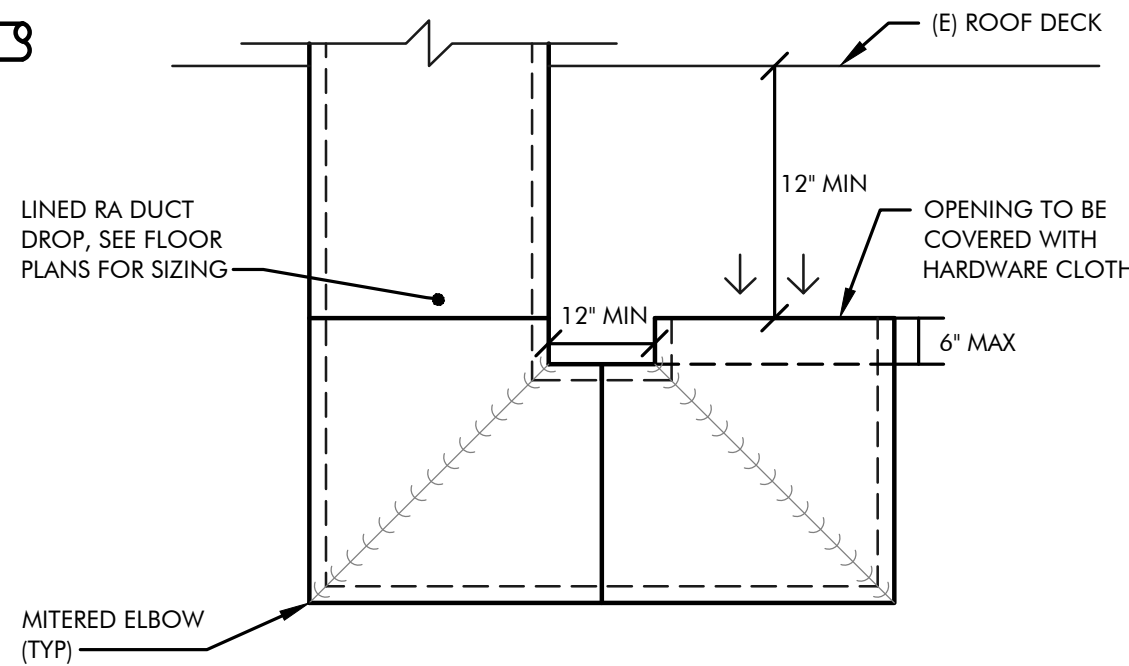
2 PIPE SUPPORT DETAIL
M0.1 SCALE: NONE



3 ROOF CURB DETAIL
M0.1 SCALE: NONE



4 GAS CONNECTION DETAIL
M0.1 SCALE: NONE



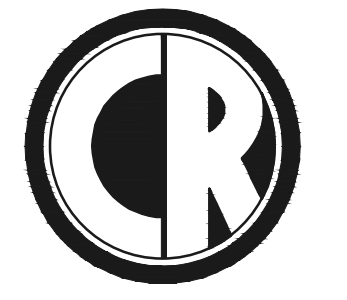
5 RETURN AIR DROP DETAIL (AC-6)
M0.1 SCALE: NONE

MECHANICAL ABBREVIATIONS

ACFM	ACTUAL CUBIC FEET PER MINUTE
AF	AIR FILTER
AFF/AFG	ABOVE FINISHED FLOOR/GRADE
A	AMPERE
APD	AIR PRESSURE DROP
BFF/BFG	BELOW FINISHED FLOOR/GRADE
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE
(D)	DEMOLISH
DB,WB	DRY BULB, WET BULB TEMPERATURE
dBA	DECIBELS, A-WEIGHTED MEASUREMENT
DG	DOOR GRILLE
DIA	DIAMETER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
EFF	EFFICIENCY
EER	ENERGY EFFICIENCY RATIO
(E)	EXISTING
EAT/LAT	ENTERING/LEAVING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
EWI/LWT	ENTERING/LEAVING WATER TEMPERATURE
FLA	FULL LOAD AMPERES
FPM	FEET PER MINUTE
FT	FOOT
FT ²	SQUARE FOOT
FT ³	CUBIC FOOT
GA	GAUGE
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HZ	HERTZ
IN	INCH
IN ²	SQUARE INCH
IN ³	CUBIC INCH
KW	KILOWATT
LB5	POUNDS
LRA	LOCKED ROTOR AMPERES
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
(N)	NEW
NC	NOISE CRITERIA
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
R	REGISTER
RPM	REVOLUTIONS PER MINUTE
TDH	TOTAL DYNAMIC HEAD
TG	TRANSFER GRILLE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
V	VOLTS
VAV	VARIABLE AIR VOLUME TERMINAL UNIT WITH VAV REHEAT
W	WATT
WC/WG	WATER COLUMN/GAUGE

MECHANICAL SYMBOL LEGEND

SYMBOL	ABBR.	DESCRIPTION
	SA	SUPPLY AIR
	RA	RETURN AIR
	EA	EXHAUST AIR
	OA	OUTSIDE AIR
		POSITIVE PRESSURE DUCT SECTION - FIRST SIZE IS TOP
		NEGATIVE PRESSURE DUCT SECTION - FIRST SIZE IS TOP
		DUCT SIZE - FIRST SIZE IS SIDE SHOWN
	(L)	LINED DUCT
		FLEXIBLE DUCT
		FLEXIBLE DUCT CONNECTOR
	MVD	MANUAL VOLUME DAMPER
	OBD	OPPOSED BLADE DAMPER
	PBD	PARALLEL BLADE DAMPER
	(M)	MOTORIZED ACTUATOR
	(B)	SPRING WOUND BYPASS TIMER @ 48" AFF
	(T)	TSTAT THERMOSTAT OR TEMPERATURE SENSOR @ 48" AFF
	SD	SMOKE DETECTOR
	CD	CEILING DIFFUSER
	LD	LINEAR DIFFUSER
	SW	SIDE WALL DIFFUSER
	EG/RG	EXHAUST/RETURN GRILLE
	BV	BALL VALVE
	BFV	BUTTERFLY VALVE
	CV	CHECK VALVE
	FCV	FLOW CONTROL (BALANCE) VALVE
	GV	GATE VALVE
	PRV	PRESSURE REDUCING VALVE
	PTRV	PRESSURE AND TEMPERATURE RELIEF VALVE
	TCV	TEMPERATURE CONTROL VALVE (2-WAY OR 3-WAY)
		UNION
		PIPE BREAK
		PIPE CAP OR PLUG
	ELL	PIPE ELBOW
		PIPE ELBOW DOWN
		PIPE ELBOW UP
		PIPE TEE
		PIPE RISER
		PIPE DROP
		PIPE BRANCH, TOP CONNECTION
		PIPE BRANCH, BOTTOM CONNECTION
	FLEX	FLEXIBLE PIPE CONNECTOR
		PRESSURE GAUGE, TEMPERATURE GAUGE
	PT	PRESSURE AND TEMPERATURE TEST PORT
	P	PUMP
	D	EQUIPMENT OR CONDENSATE DRAIN PIPING
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT



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DOUGLAS COUNTY SCHOOL DISTRICT
C.C. MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENTS
MECHANICAL ABBREVIATIONS, LEGEND,
CALCULATIONS, AND SCHEDULES

GAS-FIRED DX COOLING ROOFTOP UNIT SCHEDULE

AC	UNIT DATA											ELECTRICAL			COOLING				HEATING					EXISTING ELECTRICAL			EXISTING HEATING	EXISTING UNIT OPERATING WEIGHT (LBS)	OPTIONS	
	NEW UNIT MANUFACTURER	NEW UNIT MODEL	NEW UNIT MAX OPERATING WEIGHT (LB)	AIRFLOW (ACFM)	MINIMUM OUTSIDE AIR (ACFM)	NON-ECONOMIZER MAXIMUM OUTSIDE AIR (ACFM)	E.S.P. (IN-WG)	EER	IEER	REFRIGERANT	REFRIGERANT LOAD (LB)	NEW UNIT			CAPACITY (MBH)		EAT (°F db/wb)	LAT (°F db)	AMBIENT DESIGN (°F db/wb)	UNIT GAS INPUT (MBH)	CAPACITY (MBH)	EAT (°F)	LAT (°F)	AMBIENT DESIGN (°F)	EXISTING UNIT					EXISTING UNIT GAS INPUT (MBH)
												VOLTS/Ø/Hz	MCA	MOCP	TOTAL	SENSIBLE									VOLTS/Ø/Hz	MCA	MOCP			
1	TRANE	TCD600D40	6,200	18,050	2,200	6,200	2.0	10.5	15.3	454B	57.2	460/3/60	122	125	460.47	460.47	84/58	57	100/61	NO HEAT					460/3/60	131	150	N/A	7,500	A,B,C,D,E,F,G,H,I,J,K,M,N
3	TRANE	TCD480D4T	6,600	15,000	2,500	6,200	2.0	11.0	15.6	454B	57.2	460/3/60	107	125	402.74	402.74	86/58	57	100/61	800	570	40	81	0	460/3/60	88	100	400	7,300	A,B,C,D,E,F,G,H,I,J,K,L,M,N
5	TRANE	TCD330D40	4,950	8,850	1,500	4,100	2.5	11.0	15.4	454B	31.0	460/3/60	83	100	284.23	284.23	88/58	53	100/61	NO HEAT					460/3/60	81	90	N/A	6,300	A,B,C,D,E,F,G,H,I,J,K,M,N
6	TRANE	TCD480D40	5,000	13,950	1,000	5,300	2.0	10.5	15.4	454B	31.0	460/3/60	94	110	351.31	351.31	85/58	57	100/61	NO HEAT					460/3/60	108	125	N/A	7,130	A,B,C,D,E,F,G,H,I,J,K,M,N
NOTES:					UNIT OPTIONS:																									
1. ALL CAPACITIES LISTED ARE AT 4,400 FEET ELEVATION					A. MANUFACTURER'S 20-INCH HIGH SEISMIC ROOF CURB					F. MANUFACTURER'S MODULATING COMPRESSOR					K. FACTORY MOUNTED AND WIRED DUCT MOUNTED SMOKE DETECTOR IN SA SIDE OF UNIT TO SHUT OFF UNIT UPON DETECTION OF SMOKE. DETECTOR TO HAVE AN EXTRA SET OF CONTACTS FOR CONNECTION TO EXISTING FACP. DETECTOR SHALL BE INSIDE OF UNIT.															
2. ALL ELECTRICAL COMPONENTS SHALL BE UL OR ETL LISTED					B. MECHANICAL EQUIPMENT RESTRAINT AS REQUIRED BY 2024 IBC AND ASCE 7-22.					G. MANUFACTURER'S BACNET CONTROLLER TO BE MONITORED BY BMS, OUTSIDE AIR SETPOINTS TO BE PROVIDED THROUGH BMS.					L. MODULATING GAS HEAT															
3. EXISTING OPERATING WEIGHT INCLUDES EXISTING CURB WEIGHT					C. LOW AMBIENT KIT					H. MANUFACTURER'S 5,000 AMP SCCR PROTECTION.					M. MANUFACTURER'S INTERNAL UL LISTED REFRIGERANT LEAK DETECTOR.															
4. NEW OPERATING WEIGHT INCLUDES EXISTING CURB, NEW UNIT WEIGHT, AND ADAPTER CURB					D. FULLY MODULATING, 0-100% ECONOMIZER WITH DRY BULB CONTROL WITH 100% POWER EXHAUSTER. BUILDING PRESSURE TUBING TO BE INSTALLED BY CONTRACTOR.					I. MANUFACTURER'S COIL/HAIL GUARD					N. PROVIDE AND INSTALL MANUFACTURER'S SEPARATELY POWERED 120V GFCI CONVENIENCE OUTLET IN A WEATHER PROOF ENCLOSURE.															
5. SEE ELECTRICAL FOR DISCONNECT REQUIREMENTS					E. MANUFACTURER'S DANFOSS TR150 VFD ON SUPPLY AND EXHAUST FANS					J. 2", MERV 13, PLEATED FILTER. INSTALL NEW FILTERS AFTER COMMISSIONING OF UNIT																				
6. ADDITIONAL TEST AND BALANCE REQUIREMENTS, SEE CONTROLS SHEET M6.2 AND M6.3																														

REVISIONS:

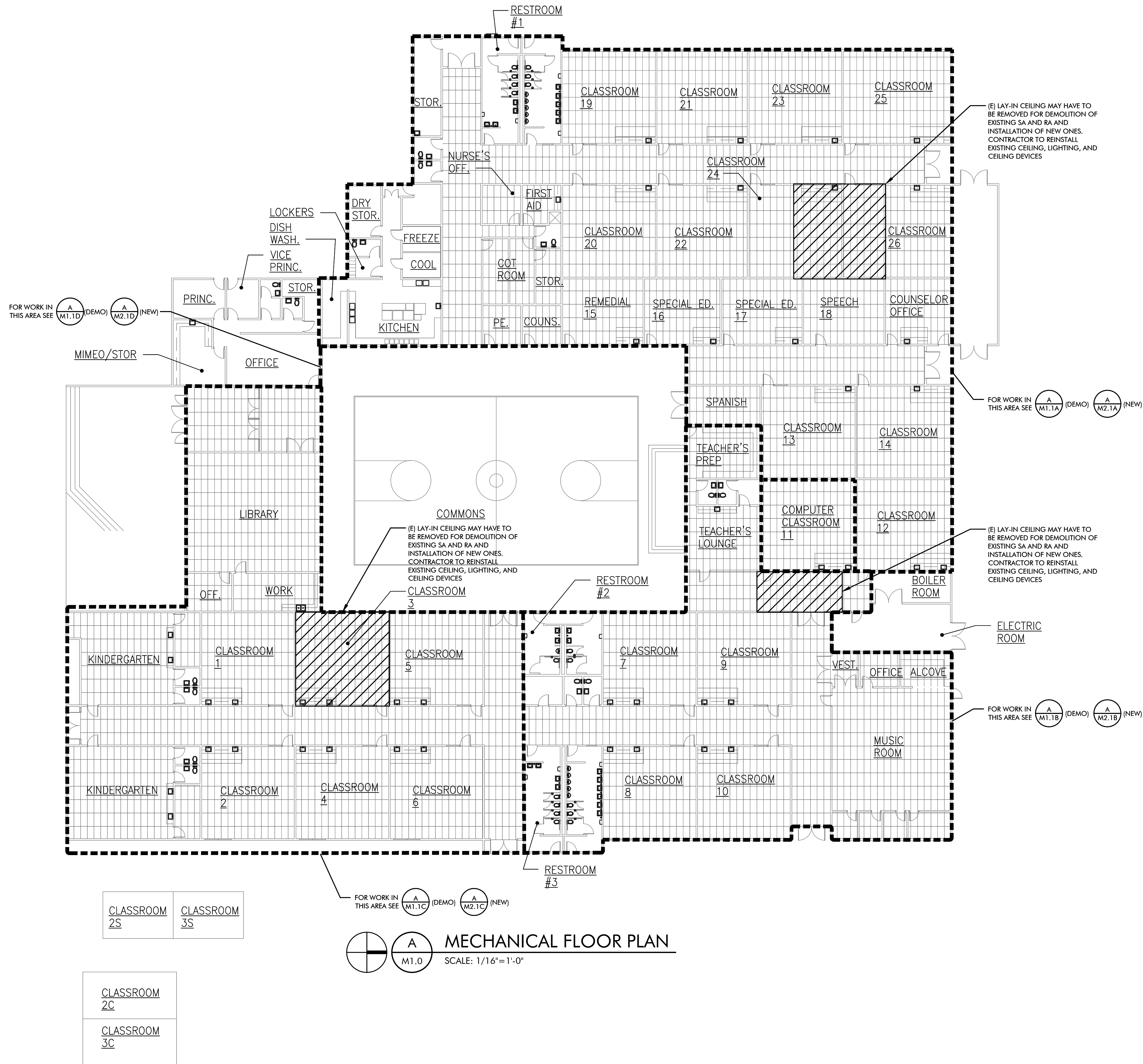
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DRAWN BY: TDF
DESIGNED BY: TDF
CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M0.1

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12/9/2025 2:31 PM By: T. Fregan



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OVERALL MECHANICAL FLOOR PLAN

REVISIONS:

REV.	DESCRIPTION	DATE
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CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M1.0

KEYED NOTES:

1 (E) RETURN GRILLE



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AREA 'A' ENLARGED MECHANICAL
DEMOLITION FLOOR PLAN

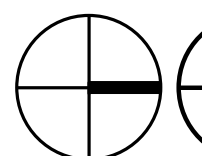
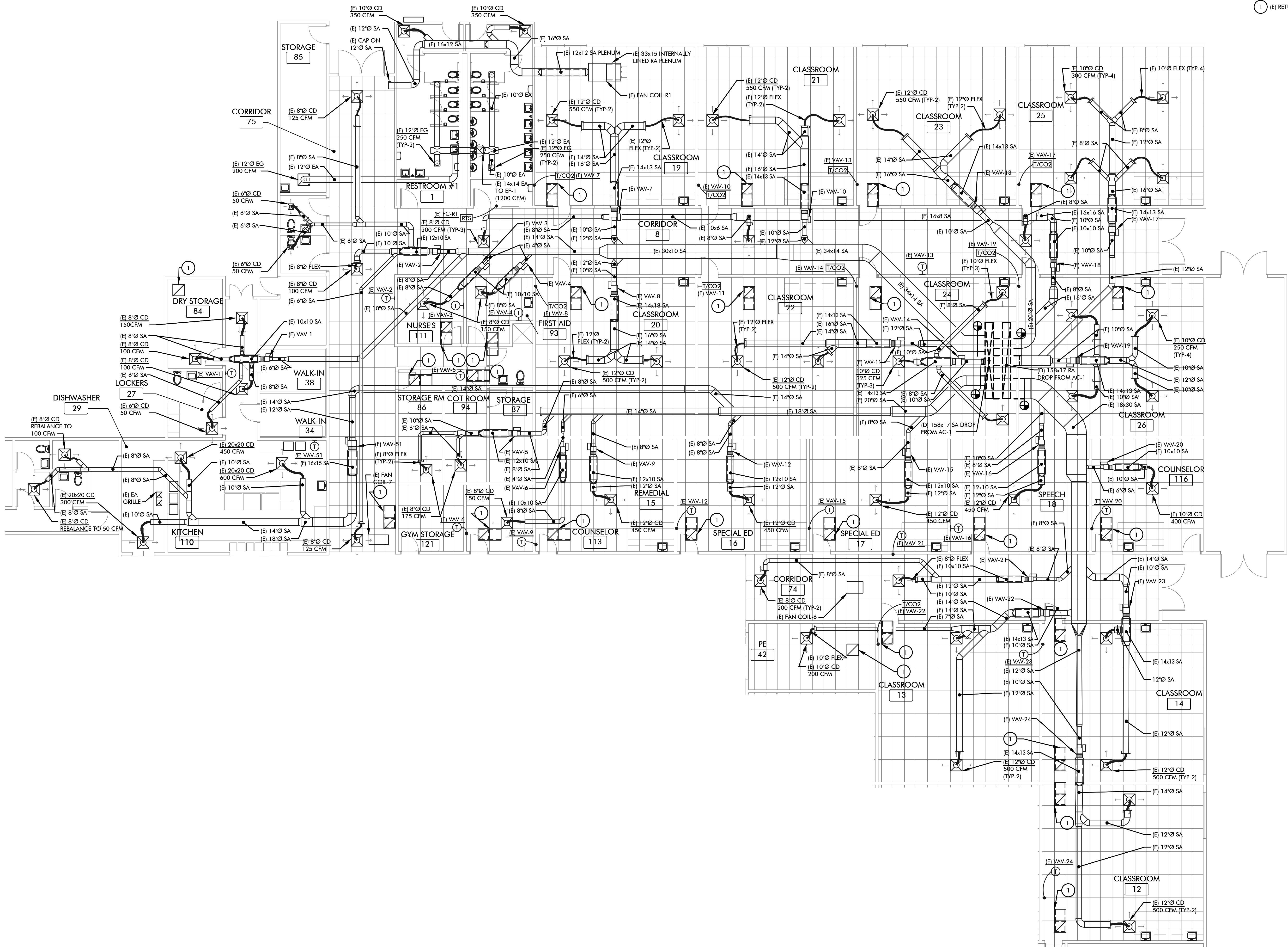
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REV.	DESCRIPTION	DATE
1	PLAN CHECK COMMENTS	12/9/25

DRAWN BY: TDF
DESIGNED BY: TDF
CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M1.1A

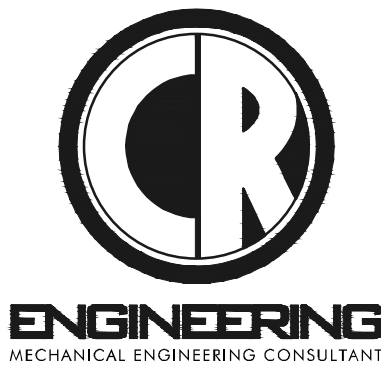


AREA 'A' ENLARGED MECHANICAL DEMOLITION FLOOR PLAN

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

KEYED NOTES:

1 (E) RETURN GRILLE



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AREA 'B' ENLARGED MECHANICAL
DEMOLITION FLOOR PLAN

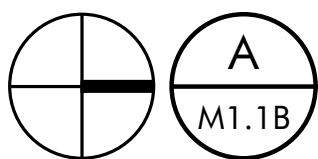
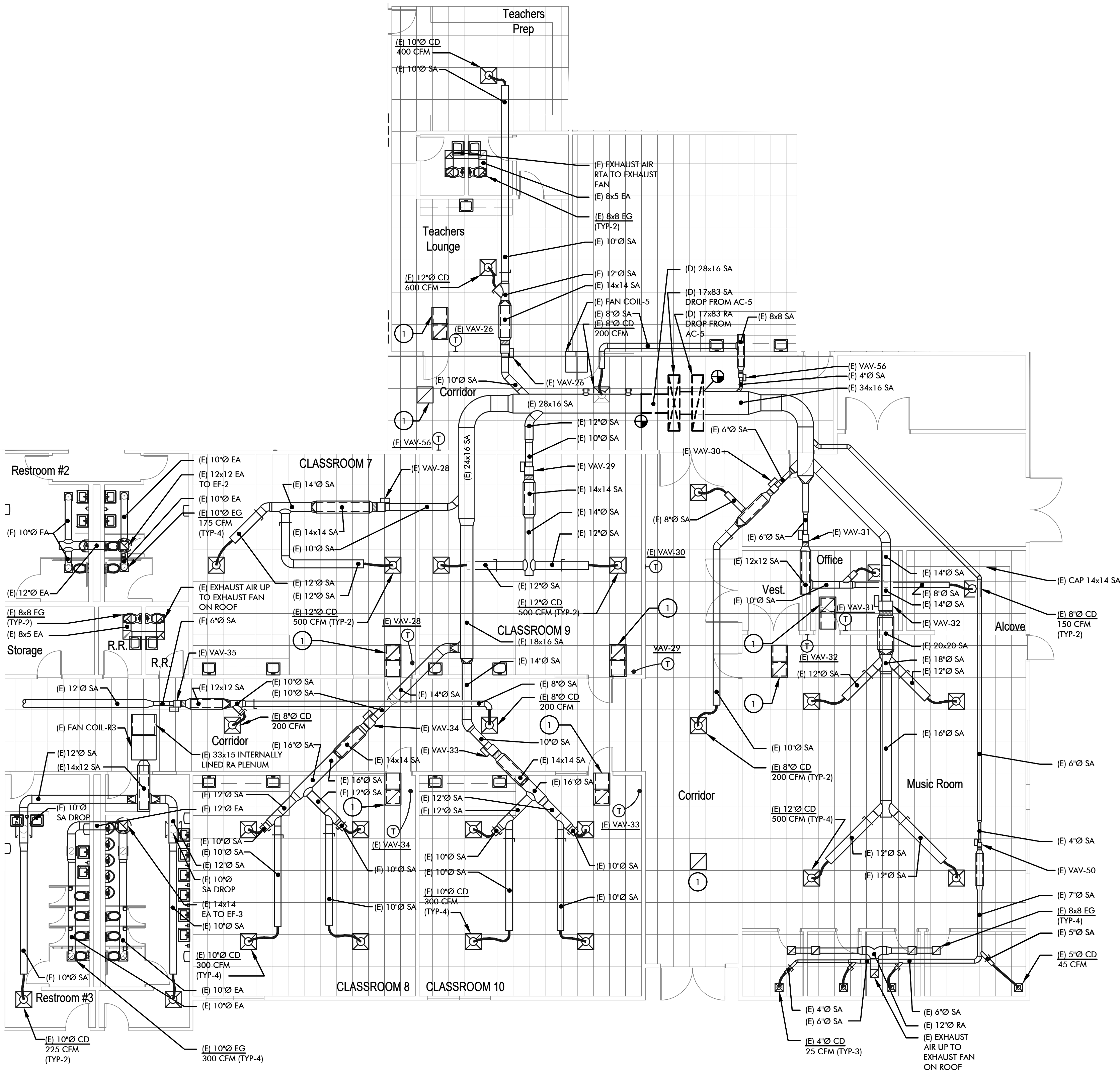
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DRAWN BY: TDF
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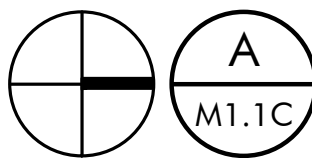
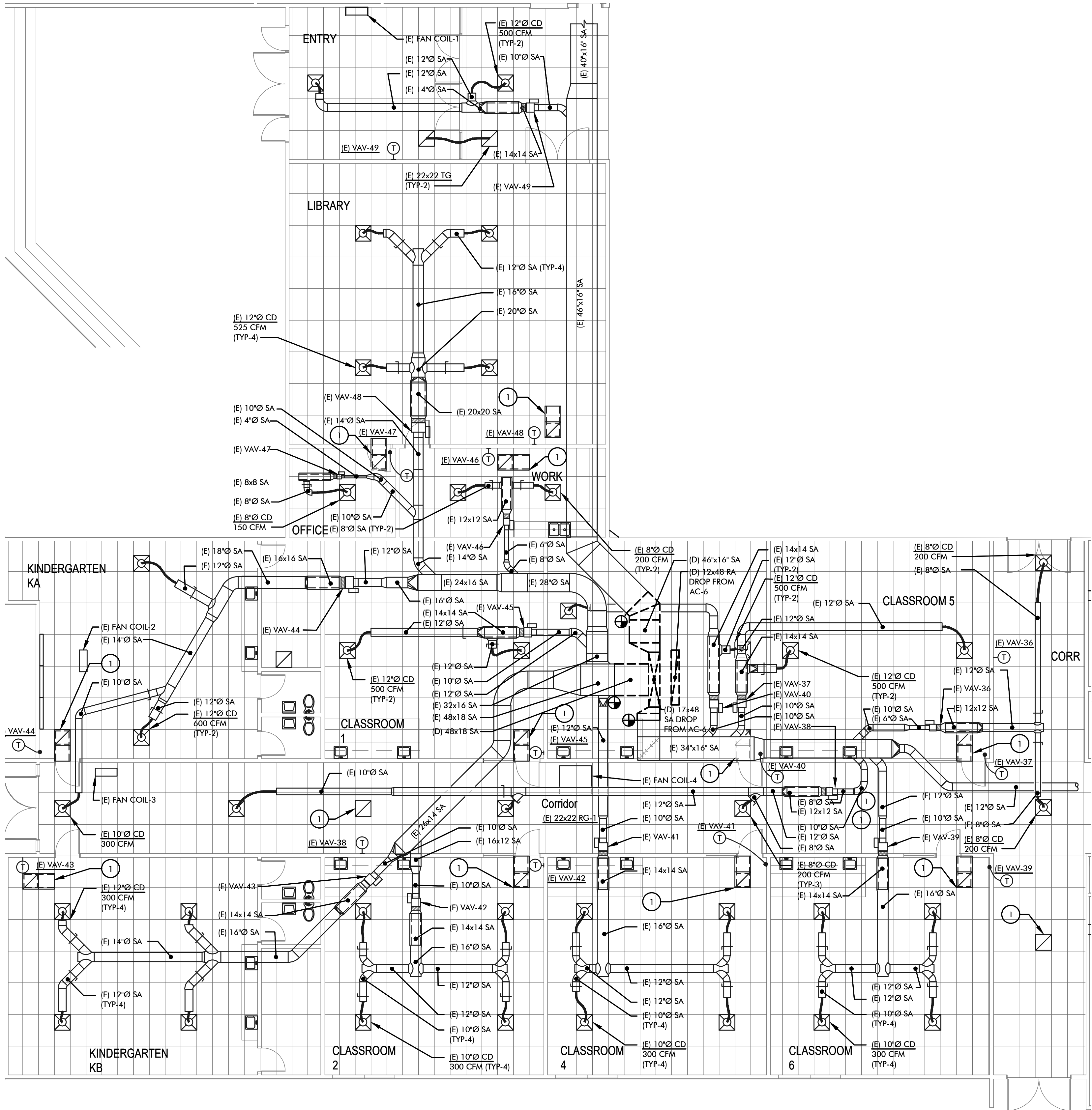
M1.1B



AREA 'B' ENLARGED MECHANICAL DEMOLITION FLOOR PLAN

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

W:\2025\162625.dwg(C: Mendley ES) 1/2/25 M1.1C ENLARGED MECHANICAL DEMO FLOOR PLAN.dwg
12/9/2025 2:31 PM By: T. Freigan



AREA 'C' ENLARGED MECHANICAL DEMOLITION FLOOR PLAN
SCALE: 1/8"=1'-0"

KEYED NOTES:

- 1 (E) RETURN GRILLE



ENGINEERING
MECHANICAL ENGINEERING CONSULTANT

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SEAL:



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CONSULTANT:

DOUGLAS COUNTY SCHOOL DISTRICT
C.C. MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENTS
AREA 'C' ENLARGED MECHANICAL
DEMOLITION FLOOR PLAN

REVISIONS:

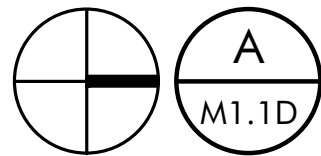
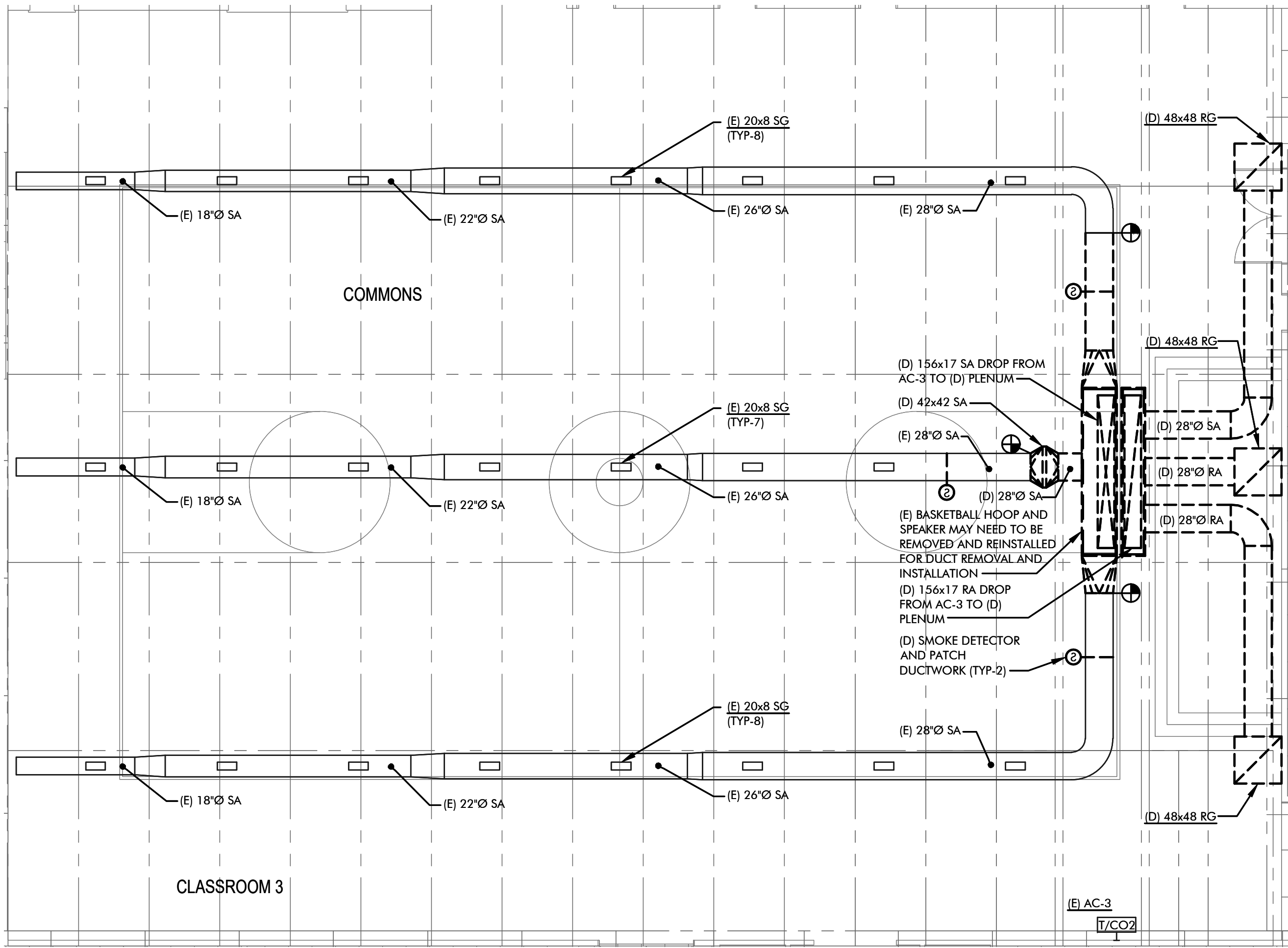
REV.	DESCRIPTION	DATE
1	PLAN CHECK COMMENTS	12/9/25

DRAWN BY: TDF
DESIGNED BY: TDF
CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M1.1C

W:\2025\162625.dwg(CC-MechEng ES) 6/26/25 M1.1D ENLARGED MECHANICAL DEMO FLOOR PLAN.dwg
12/9/2025 2:31 PM By: T. Fregan



AREA 'D' ENLARGED MECHANICAL DEMOLITION FLOOR PLAN

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

PROJECT NOTE:

- MULTI-PURPOSE ROOM FLOORING TO BE PROTECTED WHILE WORK IS BEING PERFORMED



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CONSULTANT:

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ROOFTOP UNIT REPLACEMENTS

AREA 'D' ENLARGED MECHANICAL
DEMOLITION FLOOR PLAN

REVISIONS:

REV.	DESCRIPTION	DATE
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-	-	-

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M1.1D



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CONSULTANT:



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

MECHANICAL DEMOLITION
ROOF PLAN

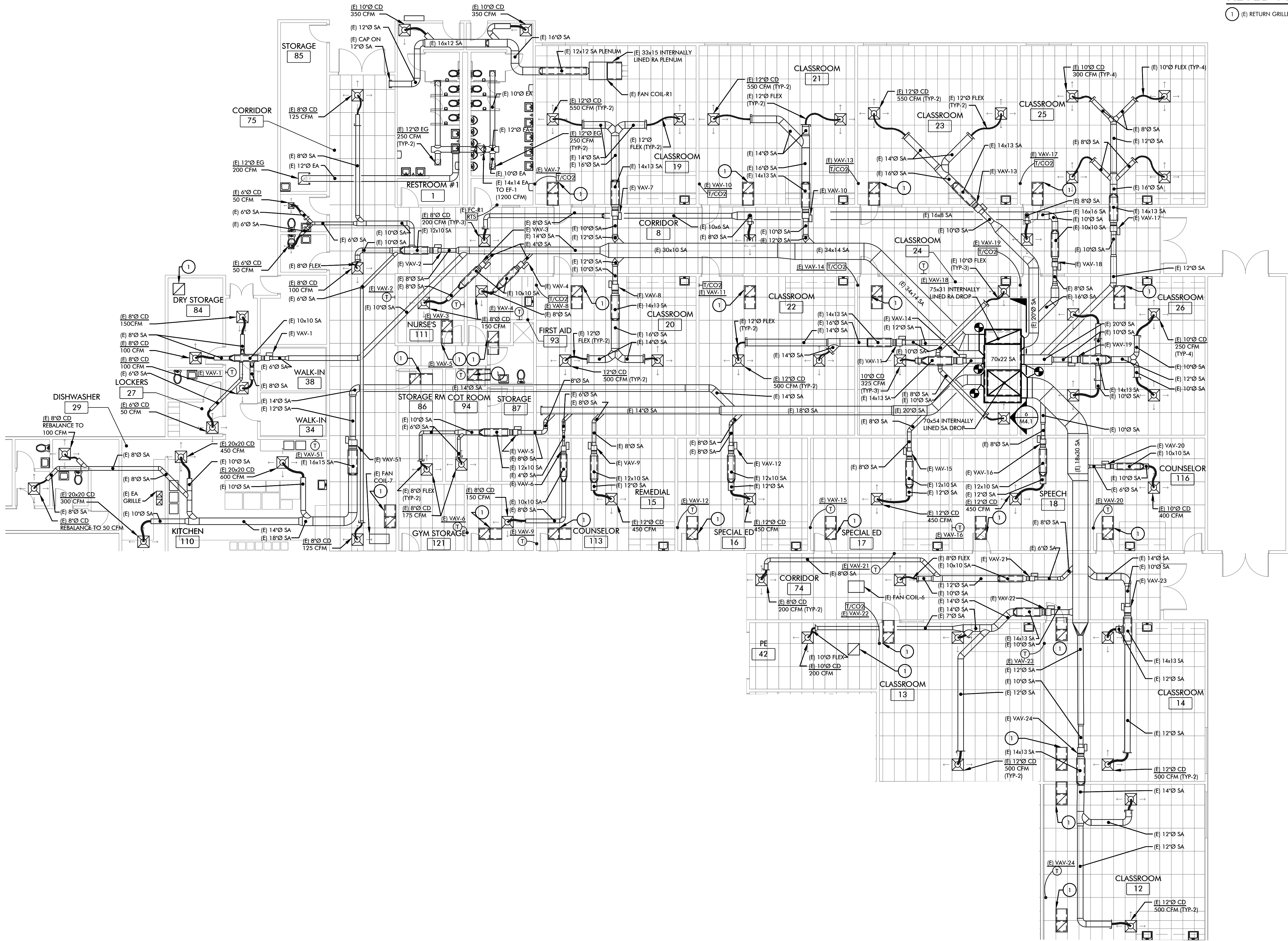
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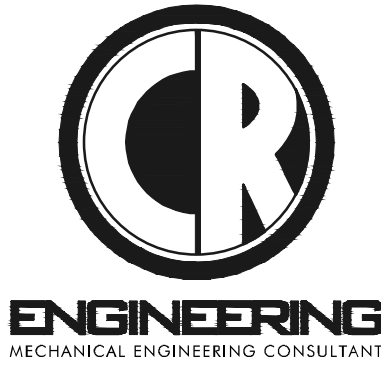
M1.2

KEYED NOTES:

1 (E) RETURN GRILLE



AREA 'A' ENLARGED MECHANICAL FLOOR PLAN
SCALE: 1/8"=1'-0"



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ROOFTOP UNIT REPLACEMENTS
AREA 'A' ENLARGED MECHANICAL FLOOR
PLAN

REVISIONS:

REV.	DESCRIPTION	DATE

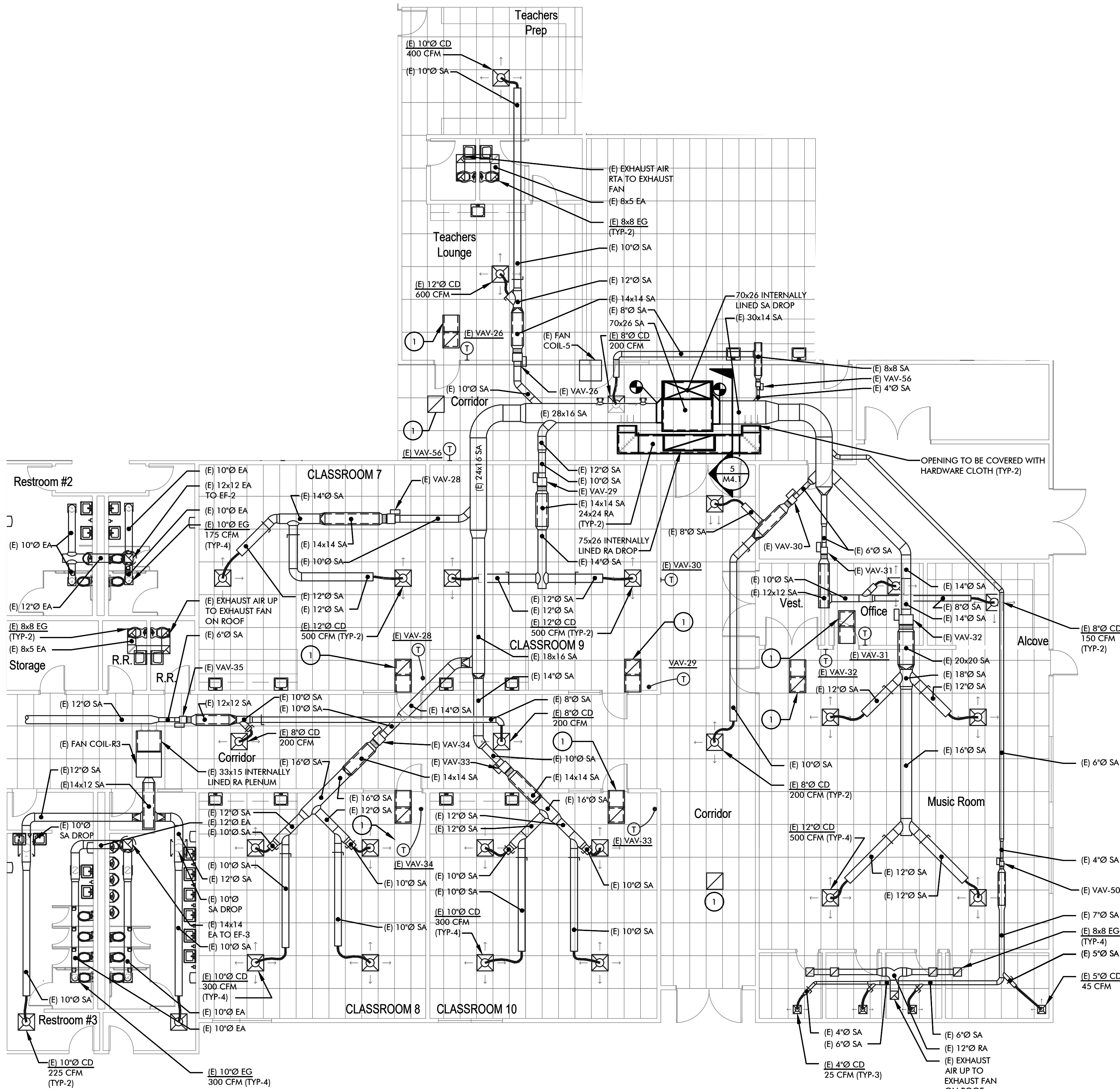
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DESIGNED BY: TDF
CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

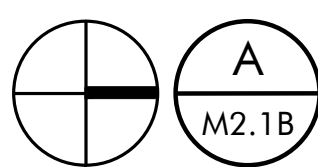
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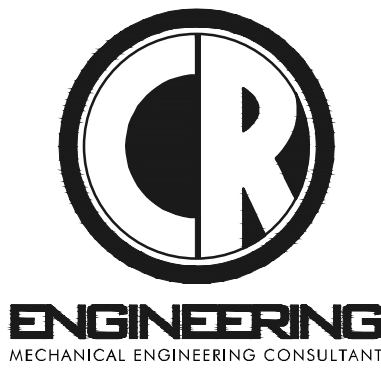
M2.1A

KEYED NOTES:

1 (E) RETURN GRILLE



 A AREA 'B' ENLARGED MECHANICAL FLOOR PLAN
M2.1B SCALE: 1/8" = 1'-0"



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AREA 'B' ENLARGED MECHANICAL
FLOOR PLAN

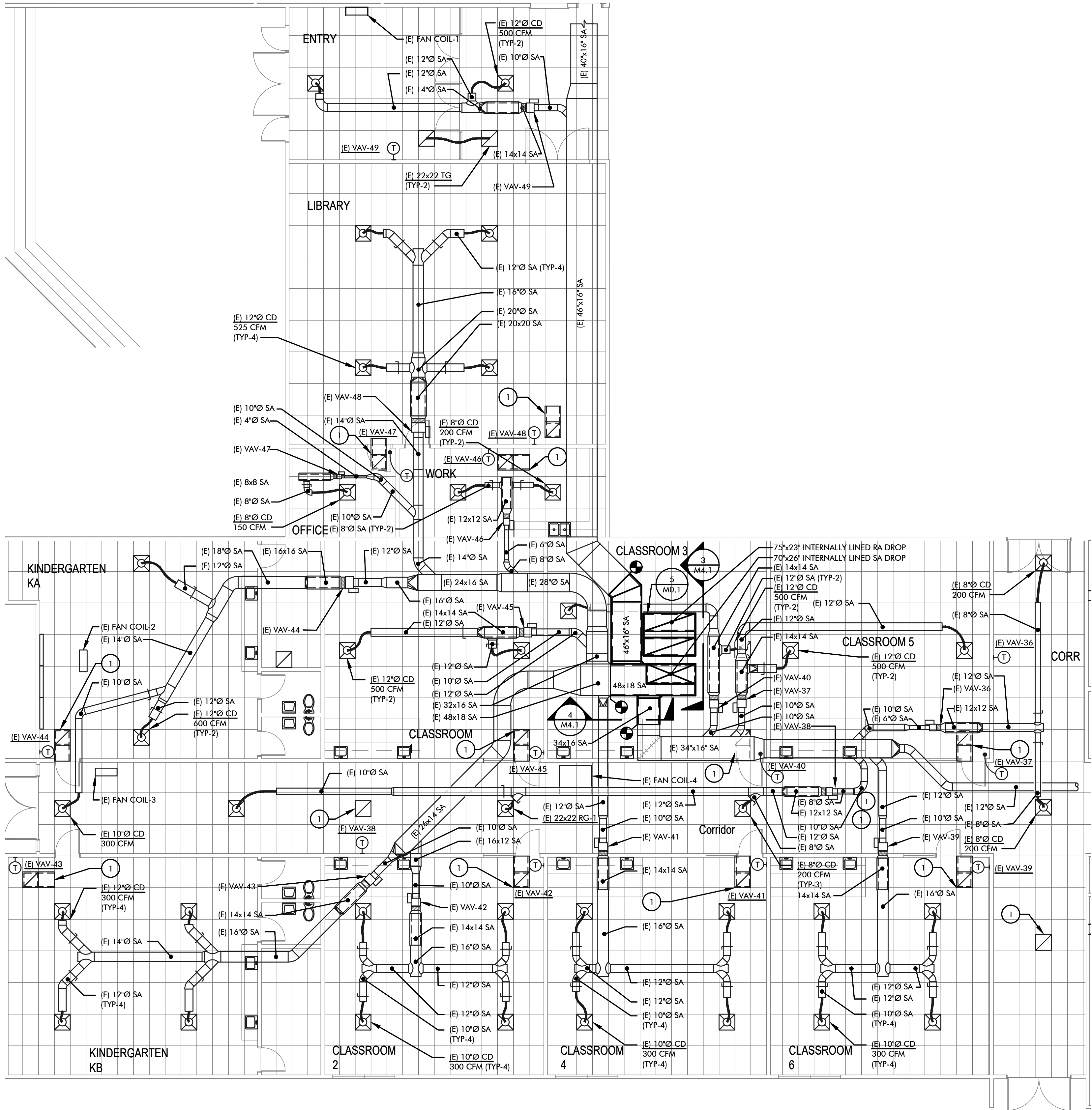
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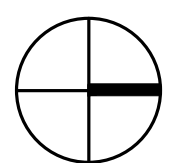
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1	PLAN CHECK COMMENTS	12/9/25

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APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

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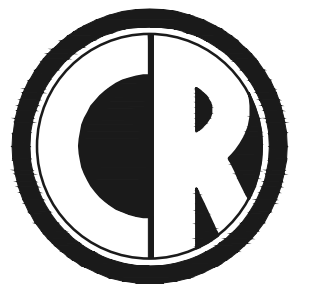
M2.1B



 **A** AREA 'C' ENLARGED MECHANICAL FLOOR PLAN
M2.1C SCALE: 1/8" = 1'-0"

KEYED NOTES:

- 1 (E) RETURN GRILLE



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ROOFTOP UNIT REPLACEMENTS
AREA 'C' ENLARGED MECHANICAL FLOOR
PLAN

REVISIONS:

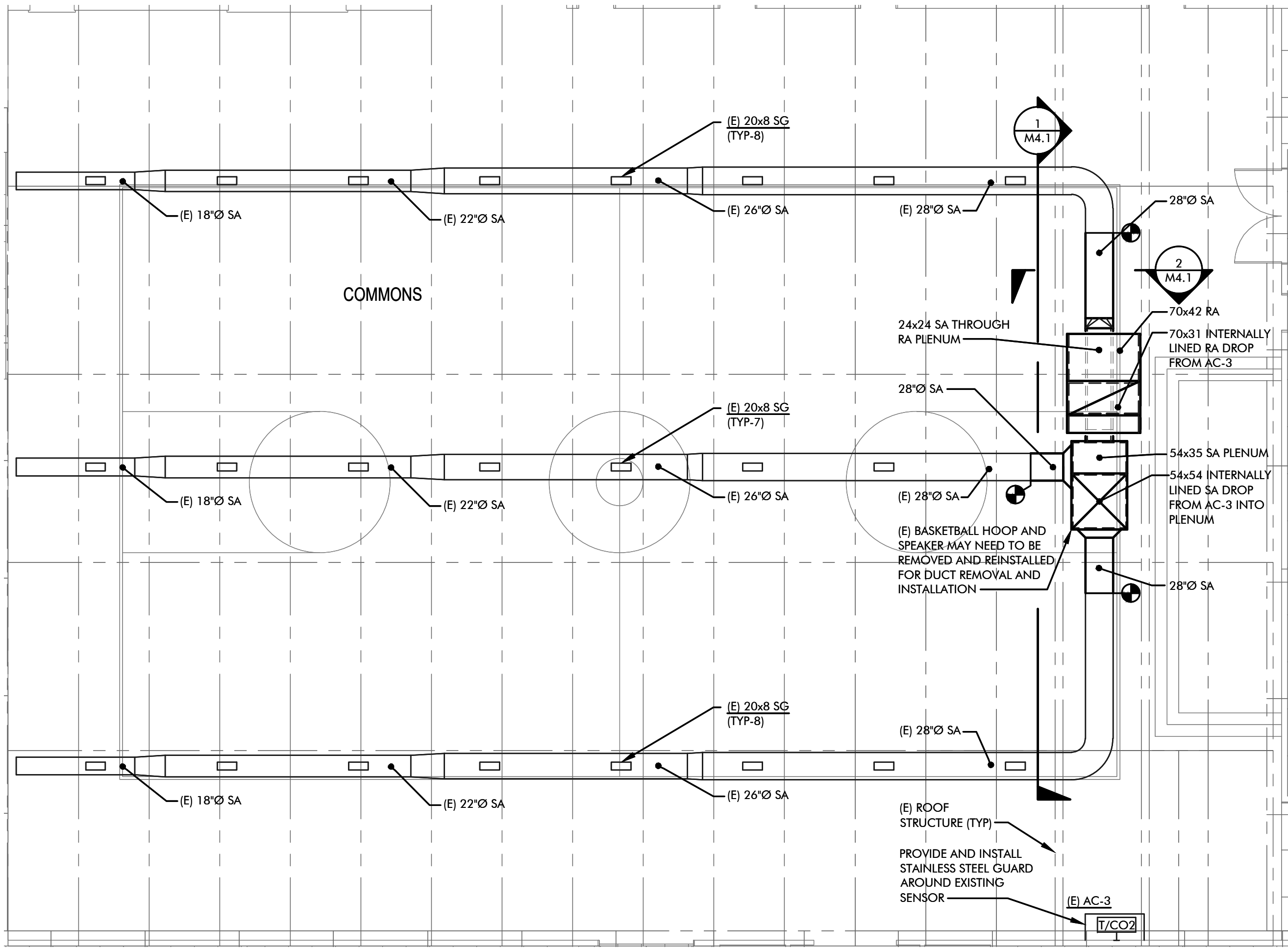
REV.	DESCRIPTION	DATE

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CHECKED BY: CWL
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DATE: 11/21/25
PROJECT NO: 162625

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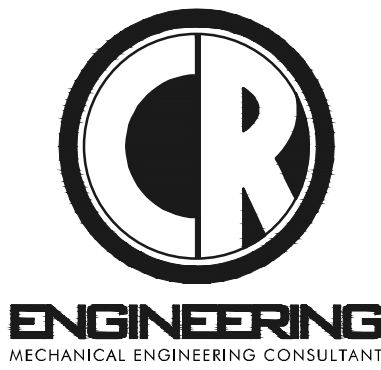
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12/9/2025 2:31 PM By: T. Fregan



AREA 'D' ENLARGED MECHANICAL FLOOR PLAN
SCALE: 1/8"=1'-0"

PROJECT NOTE:

- MULTI-PURPOSE ROOM FLOORING TO BE PROTECTED WHILE WORK IS BEING PERFORMED.
- EXPOSED DUCTWORK TO BE PREPPED AND PAINTED TO MATCH EXISTING DUCTWORK.
- EXPOSED DUCTWORK TO BE SELF-SEALING ROUND DUCT CONNECTOR SYSTEM, DUCTMATE SPIRALMATE (OR APPROVED EQUAL).



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ROOFTOP UNIT REPLACEMENTS
AREA 'D' ENLARGED MECHANICAL FLOOR PLAN

REVISIONS:

REV.	DESCRIPTION	DATE
1	PLAN CHECK COMMENTS	12/9/25
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DRAWN BY: TDF
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APPROVED BY: CLR
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PROJECT NO: 162625

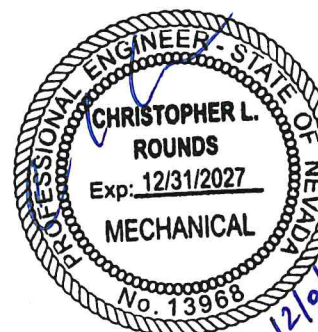
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MECHANICAL ROOF PLAN

REVISIONS:

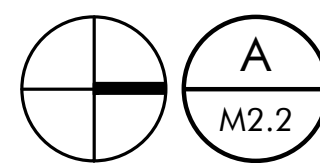
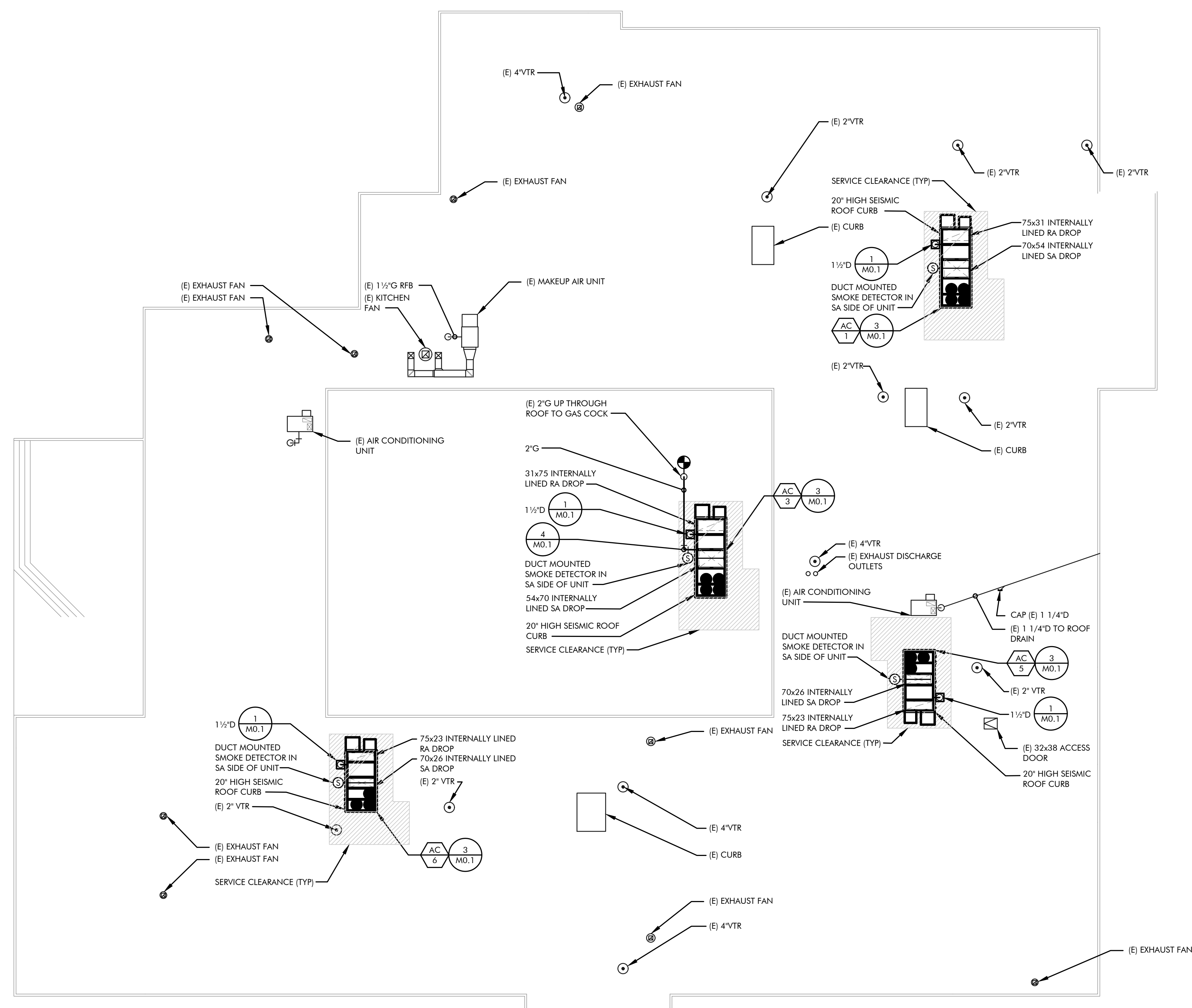
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1	PLAN CHECK COMMENTS	12/9/25

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DRAWN BY:	TDF
DESIGNED BY:	TDF
CHECKED BY:	CWL
APPROVED BY:	CLR
DATE:	11/21/25
PROJECT NO:	162625

SHEET NUMBER:

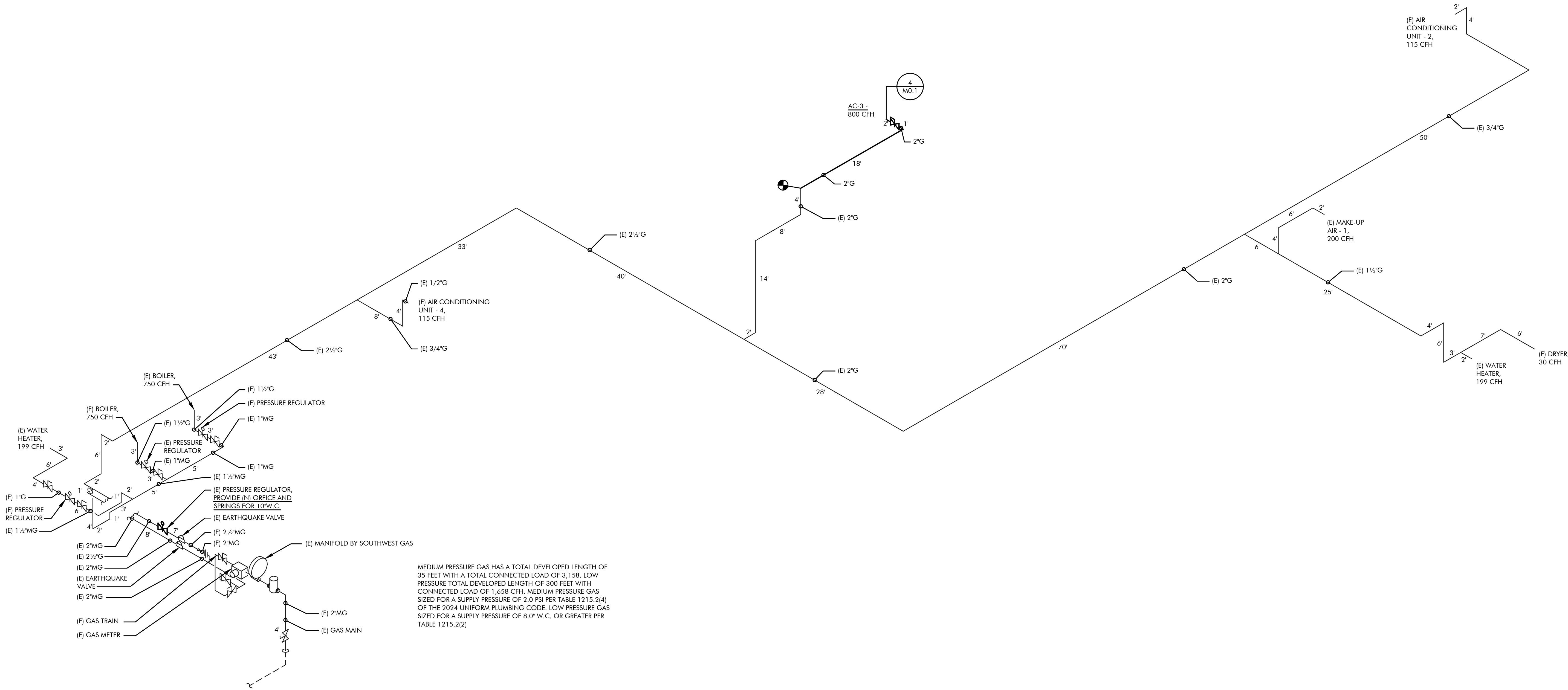
M2.2



MECHANICAL ROOF PLAN

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

W:\2025\162625.dwg\CC-Mendeley ES\162625-M3.1 GAS ISO.dwg
12/9/2025 2:31 PM By: T. Freigan



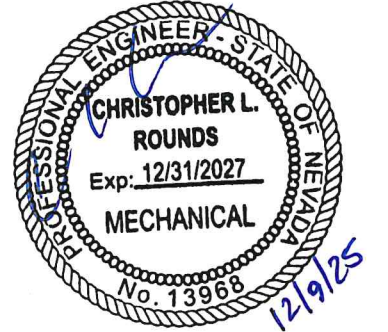
A GAS ISOMETRIC
M3.1 SCALE: NONE



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GAS ISOMETRIC

REVISIONS:

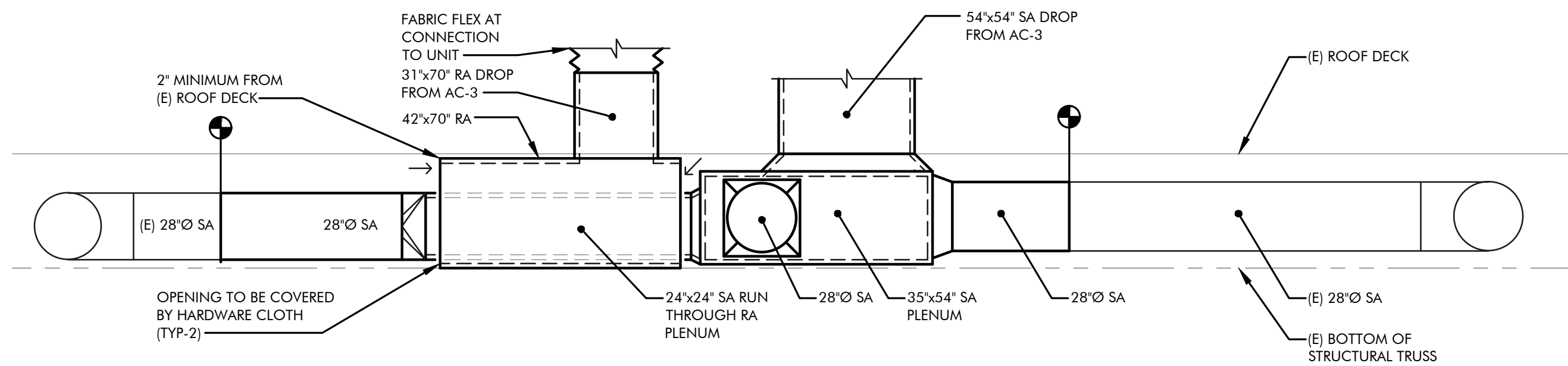
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PROJECT NO: 162625

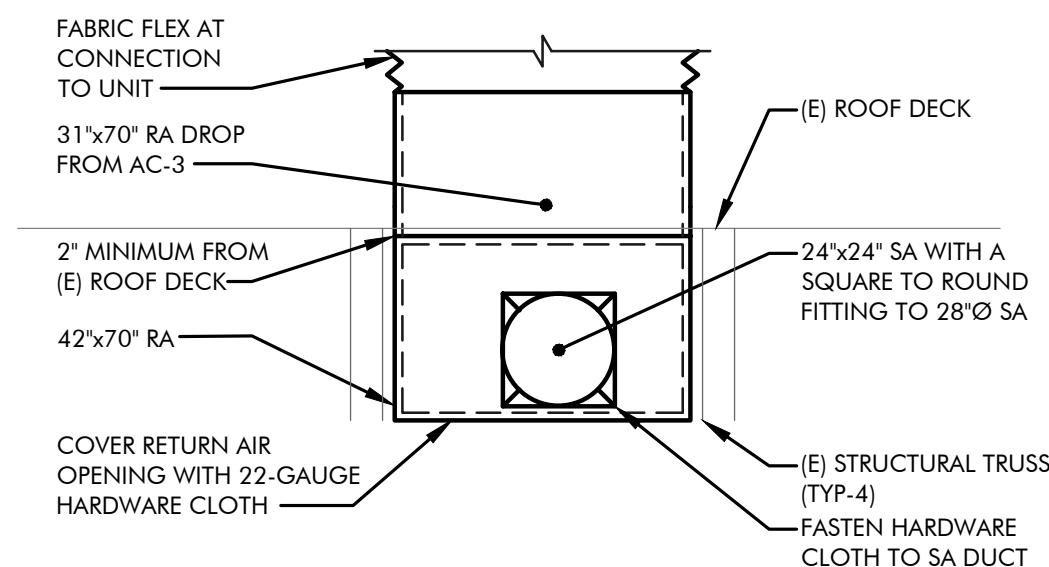
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M3.1

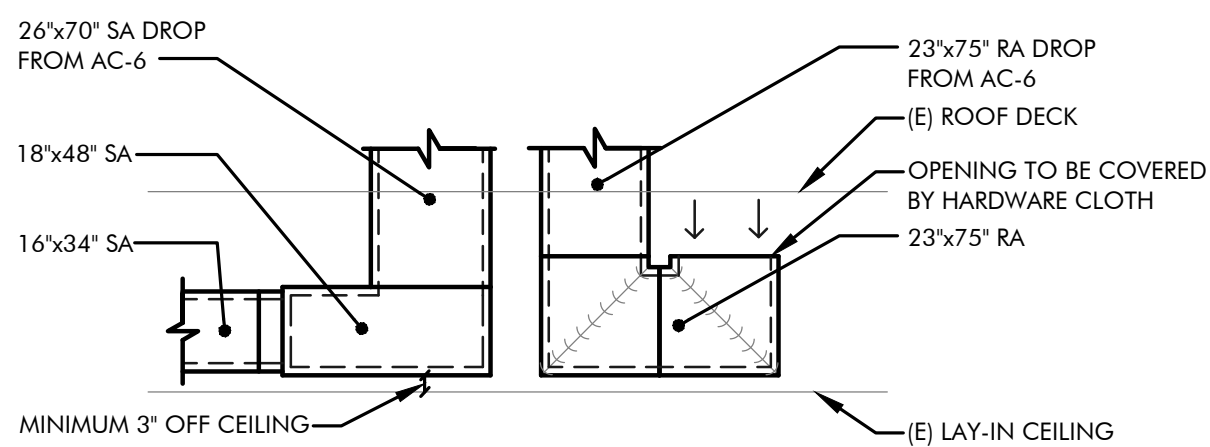
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12/9/2025 2:31 PM By: T J Fiegan



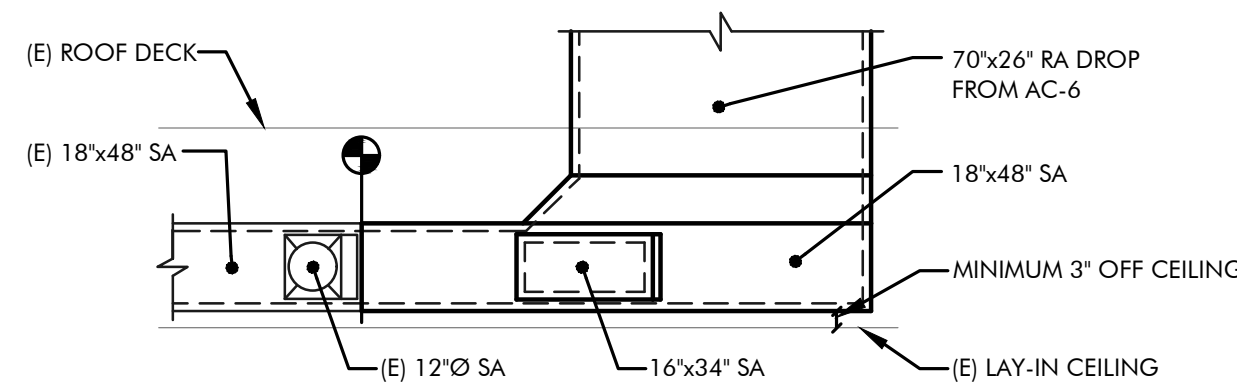
1 AC-3 DROP MECHANICAL SECTION 1
M4.1 SCALE: 1/4" = 1'-0"



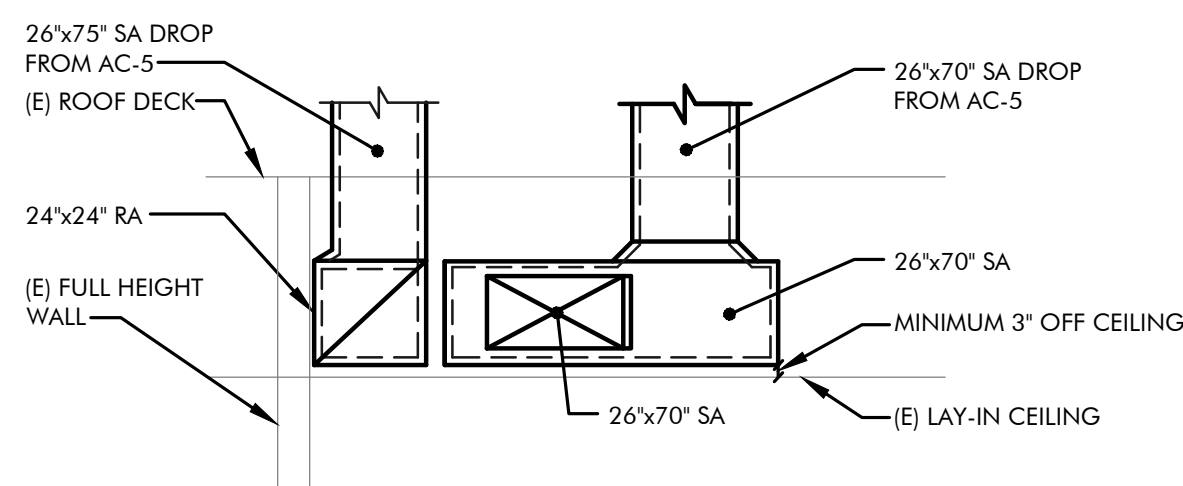
2 AC-3 DROP MECHANICAL SECTION 1
M4.1 SCALE: 1/4" = 1'-0"



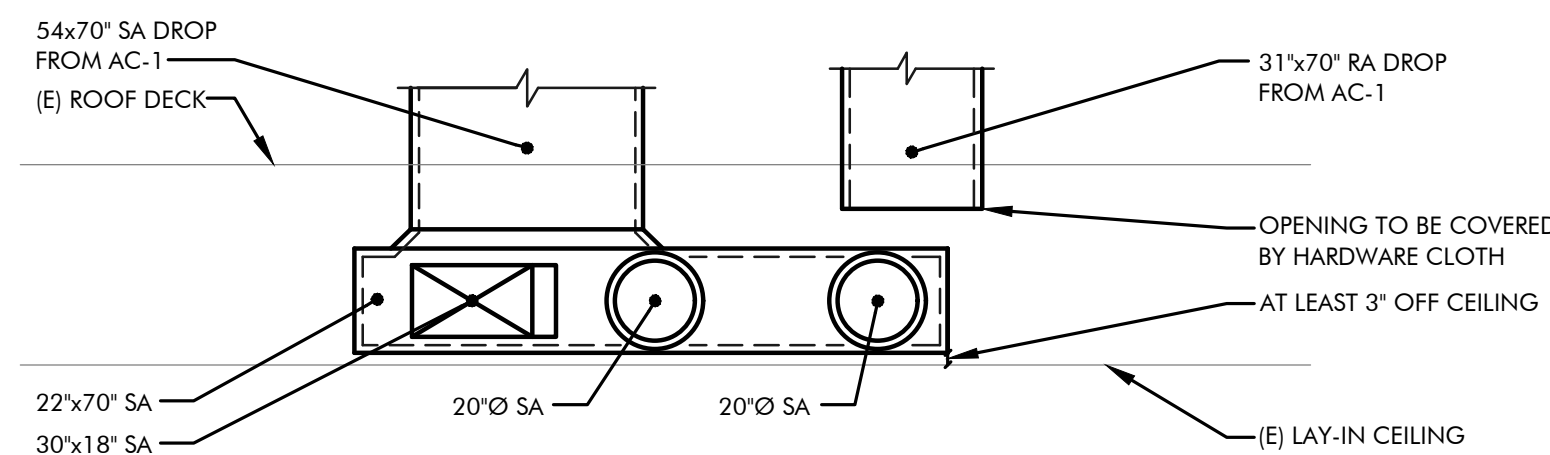
3 AC-6 DROP MECHANICAL SECTION 1
M4.1 SCALE: 1/4" = 1'-0"



4 AC-6 DROP MECHANICAL SECTION 2
M4.1 SCALE: 1/4" = 1'-0"



5 AC-5 DROP MECHANICAL SECTION 1
M4.1 SCALE: 1/4" = 1'-0"



6 AC-1 DROP MECHANICAL SECTION 1
M4.1 SCALE: 1/4" = 1'-0"



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ROOFTOP UNIT REPLACEMENTS

MECHANICAL SECTIONS

REVISIONS:

REV.	DESCRIPTION	DATE
-	-	-
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APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M4.1

CONTROLS ABBREVIATIONS

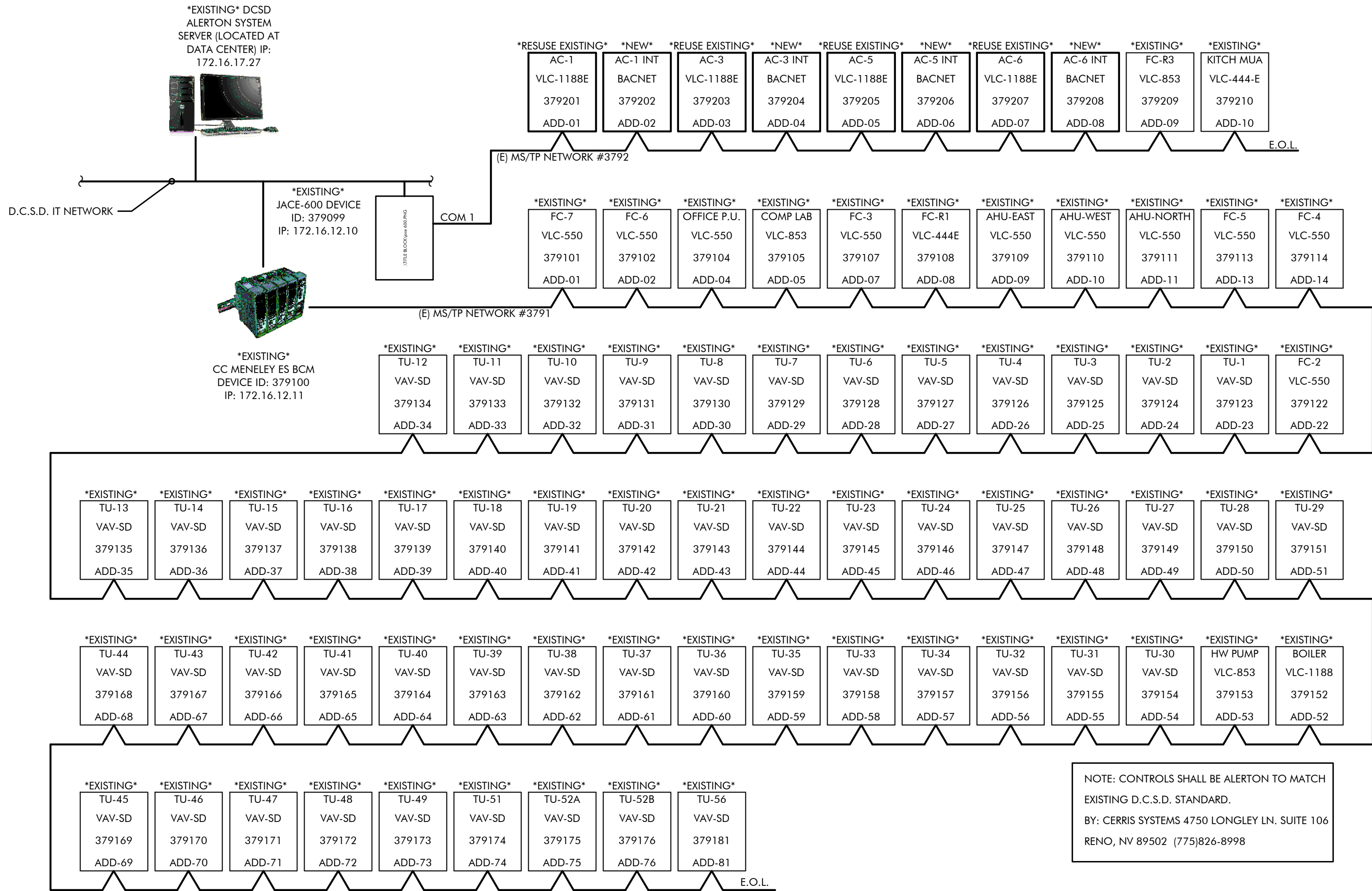
AFF/AFG	ABOVE FINISHED FLOOR/GRADE
BSP	BUILDING STATIC PRESSURE SENSOR (WITH PROBES) CO CARBON MONOXIDE
CHS/CHR	CHILLED WATER SUPPLY/RETURN PIPING
CWS/CWR	CONDENSER WATER SUPPLY/RETURN PIPING
CR	STEAM CONDENSATE RETURN PIPING
DDC	DIRECT DIGITAL CONTROL SYSTEM
(E)	EXISTING
EA	EXHAUST AIR
HWS/HWR	HOT WATER SUPPLY/RETURN PIPING
HTS/HTR	HIGH TEMPERATURE HOT WATER SUPPLY/RETURN PIPING
LPS/MPS	LOW/MEDIUM PRESSURE STEAM
MAX	MAXIMUM
MOD	MODULATING ACTUATOR (SPRING RETURN - U.N.O.)
MIN	MINIMUM
(N)	NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
PCR	PUMPED STEAM CONDENSATE RETURN PIPING
RA	RETURN AIR
RL	REFRIGERANT LIQUID PIPING
RS	REFRIGERANT SUCTION PIPING
(RX)	REMOVE EXISTING
SA	SUPPLY AIR
TCP	TEMPERATURE CONTROL PANEL
(TR)	TO REMAIN
TWS/TWR	TEMPERED WATER SUPPLY/RETURN PIPING
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VFD	VARIABLE FREQUENCY DRIVE
2-POS	TWO-POSITION ACTUATOR (SPRING RETURN - U.N.O.)

CONTROLS SYMBOL LEGEND

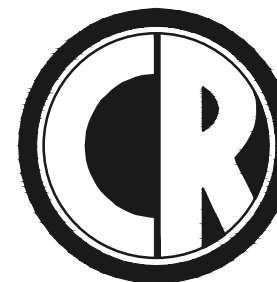
SYMBOL	ABBR.	DESCRIPTION
	AS	AVERAGING SENSOR
	BSP	BUILDING STATIC PRESSURE SENSOR (WITH PROBES)
	CO ₂	CARBON DIOXIDE SENSOR
	CS	CURRENT SENSOR/SWITCH
	DP	DIFFERENTIAL PRESSURE SENSOR
	DSP	DUCT STATIC PRESSURE SENSOR
	DS	DISCONNECT SWITCH (FUSED)
	ESD	EMERGENCY SHUT-DOWN SWITCH (BREAK-GLASS TYPE)
	FD	FIRE DAMPER
	FSD	COMBINATION FIRE/SMOKE DAMPER
	FMS	FLOW MEASURING STATION
	FS	FLOW SWITCH
	H	ALARM HORN
	HDS	HIGH STATIC PRESSURE SENSOR
	M	MOTORIZED ACTUATOR
	MS	MOTOR STARTER
	NOX	NITROGEN OXIDE SENSOR
	OA	OUTSIDE AIR TEMPERATURE/HUMIDITY SENSOR
	OS	OCCUPANCY SENSOR
	OSP	OUTDOOR STATIC PRESSURE SENSOR
	R	RELAY (POLES AND VOLTAGE AS REQUIRED)
	RLS	REFRIGERANT LEAK SENSOR
	RTS	ROOM TEMPERATURE SENSOR
	S	ALARM STROBE
	SD	SMOKE DAMPER
	SD	SMOKE DETECTOR (PRODUCTS OF COMBUSTION DETECTOR)
	TS	TEMPERATURE SENSOR (PENCIL TYPE)
	TSTAT	THERMOSTAT OR TEMPERATURE SENSOR @ 48" AFF
	TX	TRANSFORMER (SIZE & VOLTAGE AS REQUIRED)
		BY ELECTRICAL CONTRACTOR
		BY PLUMBING CONTRACTOR
		BY MECHANICAL CONTRACTOR
		SPRING WOUND BYPASS TIMER @ 48" AFF
	OBD	OPOSED BLADE DAMPER
	PBD	PARALLEL BLADE DAMPER
	TCV	TEMPERATURE CONTROL VALVE (2-WAY OR 3-WAY)
		PRESSURE SENSOR, TEMPERATURE SENSOR WITH WELL
		PRESSURE GAUGE, TEMPERATURE GAUGE
	P	PUMP
	POC	POINT OF CONNECTION
		POINT OF DISCONNECT
		POWER WIRING BY ELECTRICAL CONTRACTOR
		CONTROL WIRING

CONTROL NOTE

- ALL WIRING TO BE IN CONDUIT. PLENUM RATED CABLE WITH J-HOOKS IS ALLOWED FOR ABOVE CEILING INSTALLATION.
- CONTROL SYSTEM CONTRACTOR SHALL PROVIDE A COMPLETE DIRECT DIGITAL CONTROL SYSTEM. PROVIDE AND INSTALL ALL NECESSARY WIRING TO MAKE SYSTEM OPERATIONAL. ALL WIRING SHALL BE IN CONDUIT WITH ANY SPLICES MADE IN JUNCTION BOXES. CONTROL DIAGRAMS AND SEQUENCE OF OPERATION ON REFER TO DRAWINGS.
- CONTROLS CONTRACTOR SHALL CONNECT NEW CONTROLLERS TO THE CONTROL NETWORK AND ADD NEW GRAPHICS. COORDINATE ALL WORK WITH LCSD MAINTENANCE PRIOR TO BID.
- THE THERMOGRAPHIC FLOOR PLAN SHALL BE UPDATED WITH THE NEW FLOOR PLAN AND ZONING, INCLUDING THE ROOM TEMPERATURE SENSORS.
- CONTROLS CONTRACTOR TO COORDINATE UNIT LABELING ON GRAPHICS, THERMOSTAT, AND CONTROLLER WITH LCSD MAINTENANCE PRIOR TO INSTALLATION.
- CONTROLS CONTRACTOR:
CERRIS SYSTEMS
4750 LONGLEY LANE #106
RENO, NV 89502



1 SYSTEM ARCHITECTURE
M6.1 SCALE: NONE



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BID SET

CONSULTANT:

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ROOFTOP UNIT REPLACEMENTS
MECHANICAL CONTROL DIAGRAMS
AND SEQUENCE OF OPERATION

REVISIONS:

REV.	DESCRIPTION	DATE
1	PLAN CHECK COMMENTS	12/9/25
-	-	-
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SHEET NUMBER:

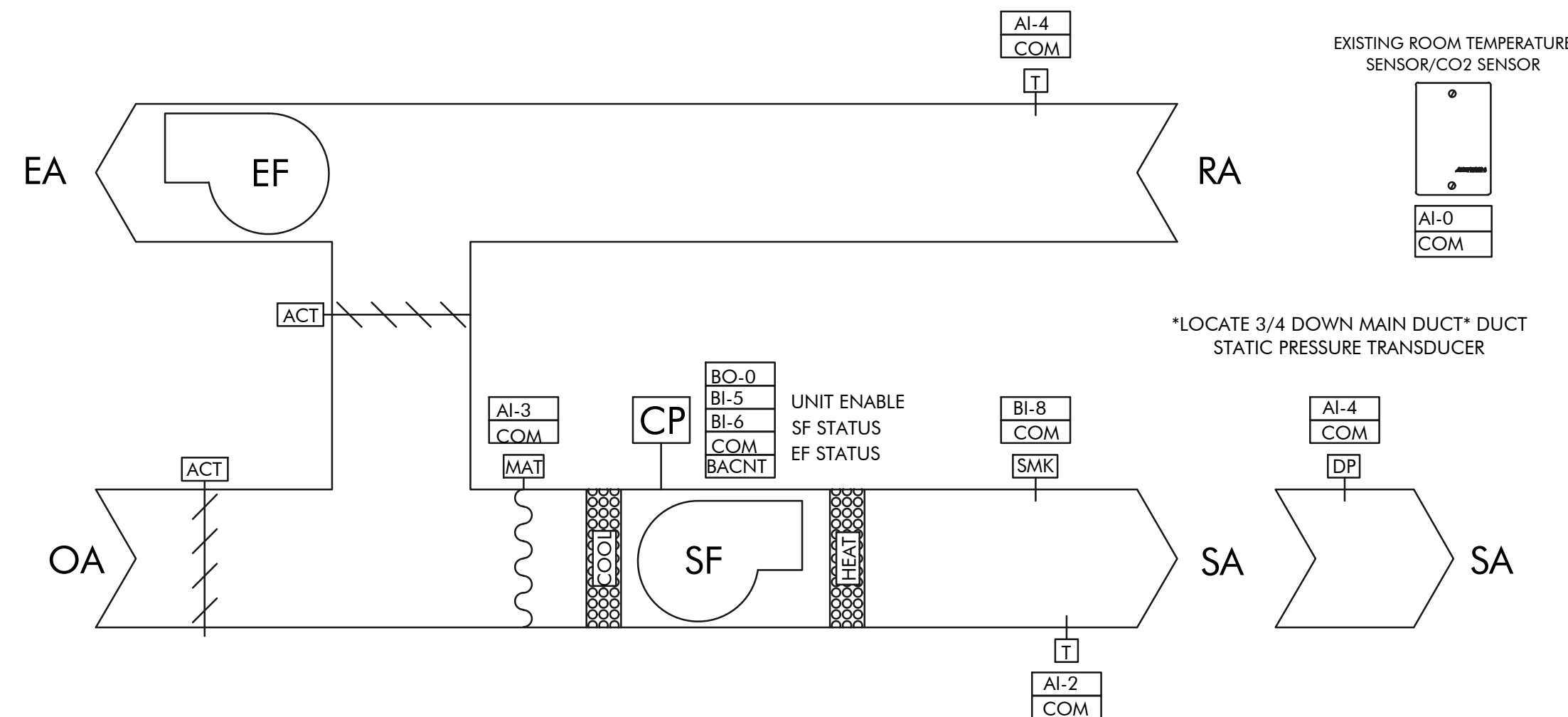
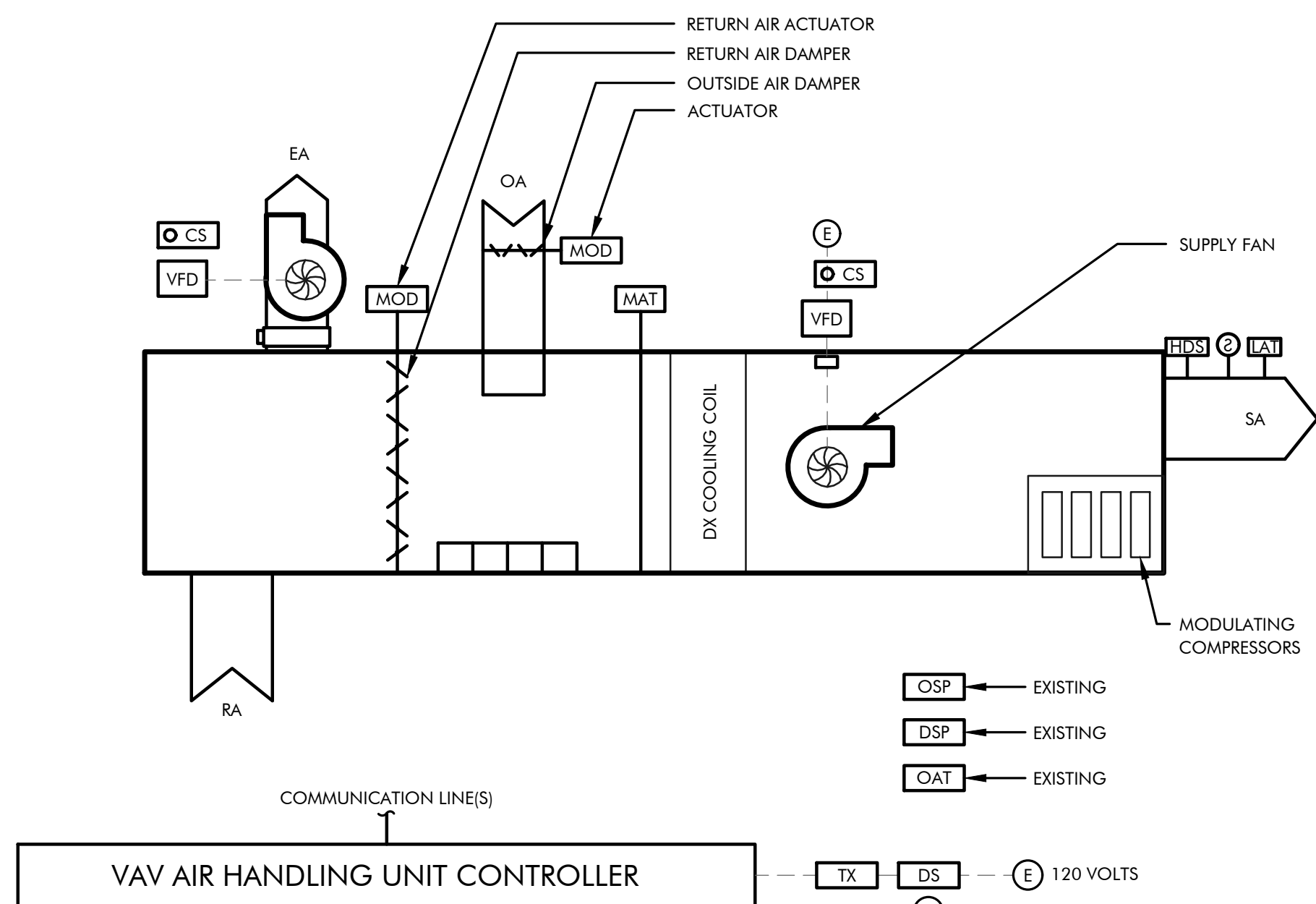
M6.1

- 1.1 OCCUPIED MODE
 - A. THE ROOFTOP UNIT SUPPLY FAN SHALL BE ENABLED AT THE OCCUPIED TIME (UNLESS IT IS ENABLED EARLIER UTILIZING THE OPTIMUM START PROGRAM). THE SUPPLY FAN VFD SHALL BE MODULATED FROM 20% TO 100% OF MAXIMUM SPEED (FROM 12 TO 60 HZ) AS REQUIRED TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT (APPROXIMATELY 1.0" W.C., ADJUSTABLE - AS DETERMINED BY TEST AND BALANCE CONTRACTOR).
 - B. THE SUPPLY FAN SHALL BE SHEAVED AND BALANCED SUCH THAT WHEN BALANCED TO THE DESIGN SUPPLY AIR CFM (DURING MINIMUM OUTSIDE AIR MODE), THE SUPPLY FAN VFD IS OPERATING AS CLOSE AS POSSIBLE TO 100% SPEED (TO MAXIMIZE THE CONTROL RANGE ON THE SUPPLY FAN VFD). ON ROOFTOP UNITS WITH CO2 CONTROL THIS TESTED CONDITION SHALL BE ESTABLISHED AT THE LOWEST OUTSIDE AIR CONDITION.
 - C. BMS SHALL SEND SIGNAL TO ROOFTOP UNIT CONTROLLER TO ENABLE COOLING. ROOFTOP CONTROLLER SHALL CONTROL COMPRESSORS TO MAINTAIN THE SUPPLY AIR TEMPERATURE (55°F, ADJUSTABLE THROUGH BMS).
- 1.2 ECONOMIZER MODE
 - A. THE ECONOMIZER MODE SHALL BE ENABLED WHENEVER THE OUTSIDE AIR TEMPERATURE IS 2°F BELOW THE RETURN AIR TEMPERATURE (WITH A 2°F DEADBAND, DISABLED WHEN OUTSIDE AIR TEMPERATURE EQUALS THE RETURN AIR TEMPERATURE). DURING ECONOMIZER MODE THERE SHALL BE AN ADDITIONAL CONTROL PARAMETER THAT MANAGES THE OUTSIDE AIR AND RETURN AIR DAMPER POSITIONS SUCH THAT THE MIXED AIR TEMPERATURE DOES NOT FALL BELOW THE MIXED AIR TEMPERATURE LOW LIMIT SETPOINT (50°F, ADJUSTABLE) AT ANY TIME.
 - B. WHENEVER THE ROOFTOP UNIT IS OPERATING IN ECONOMIZER MODE THE ECONOMIZER DAMPERS SHALL BE FULLY OPEN BEFORE THE UNIT MODULATES ITS COMPRESSORS ON.
 - C. WHENEVER THE OUTSIDE AIR TEMPERATURE IS BELOW 30°F, THE OUTSIDE AIR ECONOMIZER DAMPER SHALL BE LIMITED SUCH THAT IT DOES NOT EXCEED 50% OPEN, AND THE UNIT COMPRESSORS SHALL BE OFF.
 - D. POWER EXHAUST FAN VFD SHALL MAINTAIN BUILDING PRESSURE OF 0.02" W.C. (ADJUSTABLE).

A. SEE OUTSIDE AIR TABLE BELOW

VAV ROOFTOP UNIT (AC-5)					
MODE	OA (CFM)	RA (CFM)	OA DAMPER POSITION (TBD BY TAB)	RA DAMPER POSITION (TBD BY TAB)	SA AIRFLOW (CFM)
MINIMUM OA	1,500	7,350			8,850
50% OA	2,050	6,800			8,850
75% OA	3,075	5,775			8,850
MAXIMUM OA (NON ECONOMIZER MODE)	4,100	4,750			8,850
ECONOMIZER OA	8,850	0			8,850

VAV ROOFTOP UNIT (AC-6)					
MODE	OA (CFM)	RA (CFM)	OA DAMPER POSITION (TBD BY TAB)	RA DAMPER POSITION (TBD BY TAB)	SA AIRFLOW (CFM)
MINIMUM OA	1,000	12,950			13,950
50% OA	2,650	11,300			13,950
75% OA	3,975	9,975			13,950
MAXIMUM OA (NON ECONOMIZER MODE)	5,300	8,650			13,950
ECONOMIZER OA	13,950	0			13,950



M6.2 SCALE: NONE



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CONSULTANT

DOUGLAS COUNTY SCHOOL DISTRICT
C.C. MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENTS

MECHANICAL CONTROL DIAGRAMS
AND SEQUENCE OF OPERATION

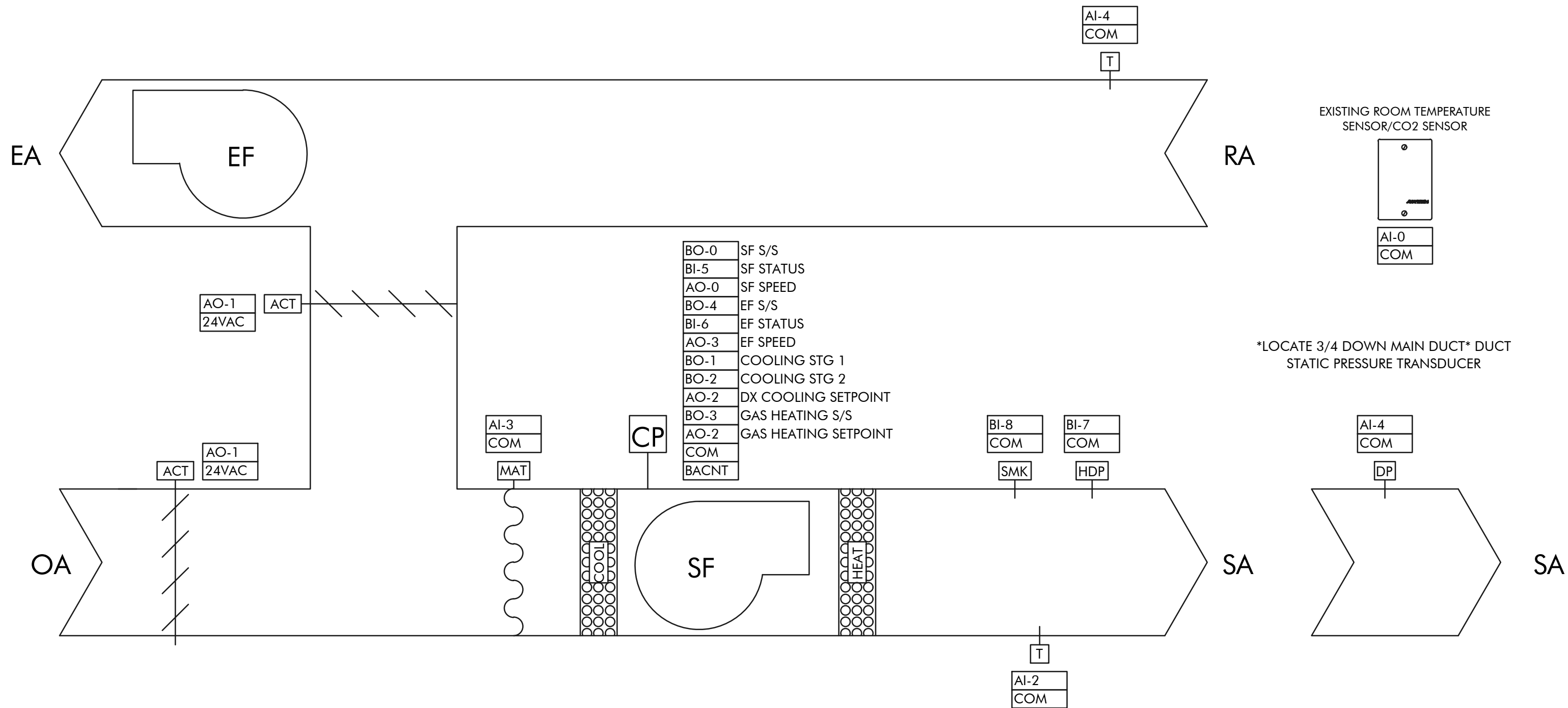
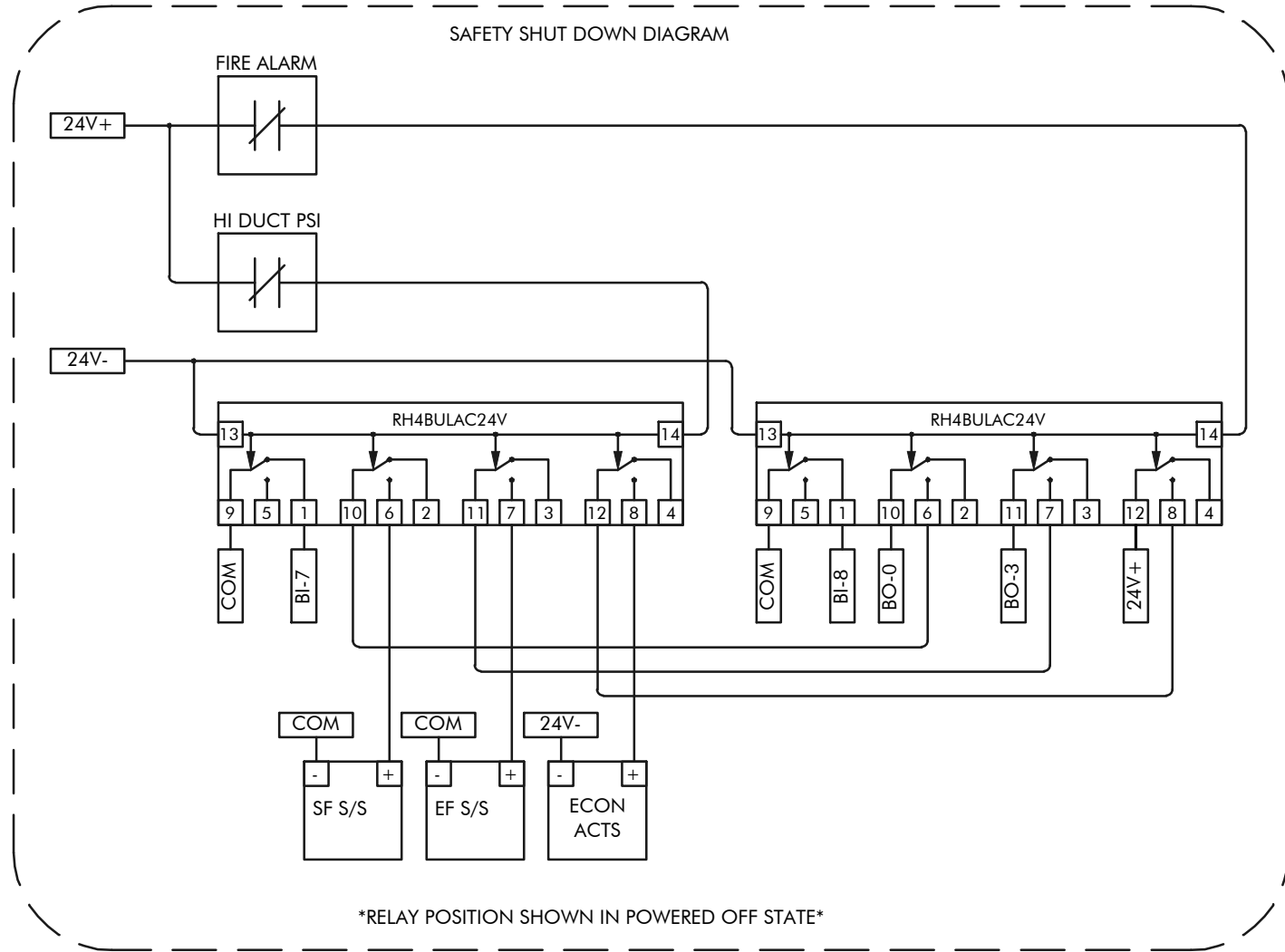
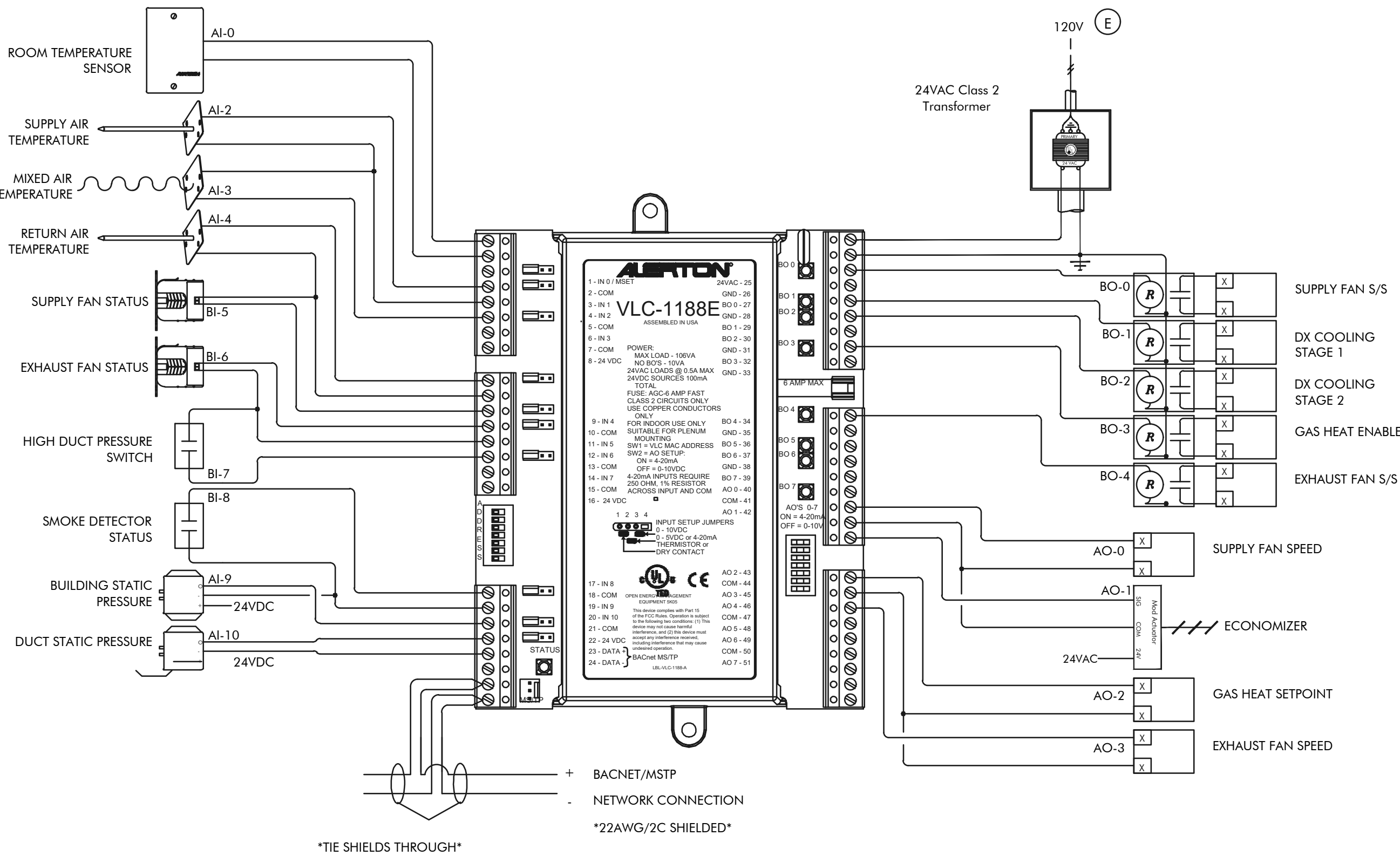
REV.	DESCRIPTION	DATE
1	PLAN CHECK COMMENTS	12/9/25
-	-	-
-	-	-
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-	-	-
-	-	-

DRAWN BY: TDF
DESIGNED BY: TDF
CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M6.2

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12/9/2025 2:31 PM By: T J Fritgen



VAV ROOFTOP UNIT (AC-3) WITH CO2 CONTROL SEQUENCE OF OPERATION

1.1 OCCUPIED MODE

- THE ROOFTOP UNIT SUPPLY FAN SHALL BE ENABLED AT THE OCCUPIED TIME (UNLESS IT IS ENABLED EARLIER UTILIZING THE OPTIMUM START PROGRAM). THE SUPPLY FAN VFD SHALL BE MODULATED FROM 20% TO 100% OF MAXIMUM SPEED (FROM 12 TO 60 HZ) AS REQUIRED TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT (APPROXIMATELY 1.0" W.C., ADJUSTABLE - AS DETERMINED BY TEST AND BALANCE CONTRACTOR).
- THE SUPPLY FAN SHALL BE SHEAVED AND BALANCED SUCH THAT WHEN BALANCED TO THE DESIGN SUPPLY AIR CFM (DURING MINIMUM OUTSIDE AIR MODE), THE SUPPLY FAN VFD IS OPERATING AS CLOSE AS POSSIBLE TO 100% SPEED (TO MAXIMIZE THE CONTROL RANGE ON THE SUPPLY FAN VFD). ON ROOFTOP UNITS WITH CO2 CONTROL THIS TESTED CONDITION SHALL BE ESTABLISHED AT THE LOWEST OUTSIDE AIR CONDITION.
- BMS SHALL SEND SIGNAL TO ROOFTOP UNIT CONTROLLER TO ENABLE COOLING. ROOFTOP CONTROLLER SHALL CONTROL COMPRESSORS TO MAINTAIN THE SUPPLY AIR TEMPERATURE (55°F, ADJUSTABLE THROUGH BMS).

1.2 ECONOMIZER MODE

- THE ECONOMIZER MODE SHALL BE ENABLED WHENEVER THE OUTSIDE AIR TEMPERATURE IS 2°F BELOW THE RETURN AIR TEMPERATURE (WITH A 2°F DEADBAND, DISABLED WHEN OUTSIDE AIR TEMPERATURE EQUALS THE RETURN AIR TEMPERATURE). DURING ECONOMIZER MODE THERE SHALL BE AN ADDITIONAL CONTROL PARAMETER THAT MANAGES THE OUTSIDE AIR AND RETURN AIR DAMPER POSITIONS SUCH THAT THE MIXED AIR TEMPERATURE DOES NOT FALL BELOW THE MIXED AIR TEMPERATURE LOW LIMIT SETPOINT (50°F, ADJUSTABLE) AT ANY TIME.
- WHENEVER THE ROOFTOP UNIT IS OPERATING IN ECONOMIZER MODE THE ECONOMIZER DAMPERS SHALL BE FULLY OPEN BEFORE THE UNIT MODULATES ITS COMPRESSORS ON.
- WHENEVER THE OUTSIDE AIR TEMPERATURE IS BELOW 30°F, THE OUTSIDE AIR ECONOMIZER DAMPER SHALL BE LIMITED SUCH THAT IT DOES NOT EXCEED 50% OPEN, AND THE UNIT COMPRESSORS SHALL BE OFF.
- POWER EXHAUST FAN VFD SHALL MAINTAIN BUILDING PRESSURE OF 0.02" W.C. (ADJUSTABLE).

1.3 CO2 CONTROL OF MINIMUM OUTSIDE AIR

- THE OUTSIDE AIR DAMPER POSITION SHALL BE MODULATED TO MAINTAIN THE INDOOR CO2 LEVEL SETPOINT (500 PPM, ADJUSTABLE, ABOVE THE OUTDOOR CO2 LEVEL) WITH A 200 PPM DIFFERENTIAL THAT IS EVENLY SPLIT ACROSS THE SETPOINT) AND SHALL BE RESTRICTED TO MODULATE BETWEEN THE FIXED UPPER LIMIT AND LOWER LIMIT CFM VALUES (UPPER LIMIT CFM DELIVERED AT OR ABOVE 600 PPM OVER OUTDOOR CO2 LEVEL AND LOWER LIMIT CFM DELIVERED AT OR BELOW 400 PPM OVER OUTDOOR CO2 LEVEL).

1.4 UNOCCUPIED MODE

- THE ROOFTOP UNIT FANS ARE DISABLED, THE CONTROL VALVES ARE CLOSED, THE OUTSIDE AIR DAMPER IS CLOSED, THE EXHAUST DAMPER IS CLOSED, AND THE RETURN AIR DAMPER IS OPEN.

1.5 UNOCCUPIED COOLING MODE

- THE ROOFTOP UNIT SUPPLY FAN IS ENABLED, THE OUTSIDE AIR DAMPERS ARE FULLY CLOSED, THE RETURN AIR DAMPER IS FULLY OPEN, AND THE EXHAUST FAN IS DISABLED. THE ROOFTOP UNIT SUPPLY AIR TEMPERATURE IS CONTROLLED TO THE OCCUPIED MODE SETPOINT (55°F, ADJUSTABLE).
- IF THE OUTSIDE AIR TEMPERATURE IS BELOW THE ECONOMIZER MODE ENABLE SETPOINT, THE ROOFTOP UNIT AND THE RETURN FAN SHALL OPERATE IN ACCORDANCE WITH THE NORMAL ECONOMIZER MODE CONTROL SEQUENCE.

1.6 UNOCCUPIED HEATING MODE

- THE ROOFTOP UNIT SUPPLY FAN IS ENABLED, THE OUTSIDE AIR DAMPERS ARE FULLY CLOSED, THE RETURN AIR DAMPER IS FULLY OPEN, AND THE EXHAUST FAN IS DISABLED. THE ROOFTOP UNIT SUPPLY AIR TEMPERATURE IS CONTROLLED TO THE OCCUPIED MODE SETPOINT (55°F, ADJUSTABLE).
- MODULATING GAS VALVE SHALL MODULATE THROUGH UNITS CONTROLLER TO MAINTAIN UNOCCUPIED ROOM TEMPERATURE.

1.7 OCCUPIED HEATING MODE

- THE ROOFTOP UNIT SUPPLY FAN IS ENABLED, THE OUTSIDE AIR DAMPERS ARE FULLY CLOSED, THE RETURN AIR DAMPER IS FULLY OPEN, AND THE EXHAUST FAN IS DISABLED. THE ROOFTOP UNIT SUPPLY AIR TEMPERATURE IS CONTROLLED TO THE OCCUPIED MODE SETPOINT (55°F, ADJUSTABLE).
- MODULATING GAS VALVE SHALL MODULATE THROUGH UNITS CONTROLLER TO MAINTAIN OCCUPIED ROOM TEMPERATURE.
- UNIT SHALL LIMIT LEAVING AIR TEMPERATURE TO 90°F (ADJUSTABLE THROUGH BMS).

1.8 UNOCCUPIED OVERRIDE MODE

- WHENEVER ONE OF THE ROOM SENSOR OVERRIDE BUTTONS IS PRESSED DURING THE UNOCCUPIED TIME PERIOD THE ROOFTOP UNIT SHALL BE ENABLED AND CONTROLLED IN THE NORMAL OCCUPIED MODE FOR A PERIOD OF 2 HOURS (ADJUSTABLE). THE VAV TERMINAL THAT INITIATED THE OVERRIDE (AND ANY OTHER TERMINALS THAT ARE SUBSEQUENTLY OVERRIDDEN) SHALL CONTROL TO THE OCCUPIED MODE ROOM TEMPERATURE SETPOINT. ALL OTHER VAV TERMINALS ASSOCIATED WITH THAT ROOFTOP UNIT SHALL CONTROL TO THE UNOCCUPIED MODE ROOM TEMPERATURE SETPOINT (I.E. BE CONTROLLED AT THE MINIMUM CFM SETPOINT WITH THE REHEAT VALVE MODULATED AS REQUIRED TO MAINTAIN THE UNOCCUPIED MODE HEATING SETPOINT).

1.9 OPTIMUM START MODE (MORNING WARM-UP AND MORNING COOL-DOWN MODES)

- DURING MORNING WARM-UP AND/OR MORNING COOL-DOWN MODES THE ROOFTOP UNIT SHALL OPERATE IN ACCORDANCE WITH THE APPROPRIATE UNOCCUPIED MODE SEQUENCE (UNOCCUPIED HEATING MODE OR UNOCCUPIED COOLING MODE) AND SHALL BE ENABLED AT SUCH A TIME THAT ALL ZONES ARE AT THE OCCUPIED MODE SETPOINT AT THE OCCUPIED TIME. THE OPTIMUM START PERIOD SHALL BE LIMITED TO A MAXIMUM OF FOUR HOURS (ADJUSTABLE).

1.10 SAFETIES

- WHENEVER THE TEMPERATURE AT THE AVERAGING SENSOR (LOCATED DOWNSTREAM OF THE HEATING COIL) FALLS BELOW SETPOINT (40°F, ADJUSTABLE) THE OUTSIDE AIR AND EXHAUST DAMPERS SHALL CLOSE, THE RETURN AIR DAMPER SHALL OPEN. ONCE THE OUTSIDE AIR TEMPERATURE RISES TO 40°F THE ROOFTOP UNIT SHALL BE RELEASED TO OPERATE IN THE NORMAL MODE.
- WHENEVER THE MANUAL RESET FREEZE THERMOSTAT (LOCATED DOWNSTREAM OF THE HEATING COIL) FALLS BELOW SETPOINT (APPROXIMATELY 35°F) THE SUPPLY FAN SHALL BE DISABLED, THE OUTSIDE AIR AND EXHAUST DAMPERS SHALL CLOSE, THE RETURN AIR DAMPER SHALL OPEN, THE HEATING WATER VALVE SHALL BE FULLY OPEN, THE CHILLED WATER VALVE SHALL BE FULLY OPEN, AND AN ALARM CONDITION SHALL BE INDICATED.
- THE SUPPLY FAN HIGH STATIC PRESSURE SENSOR/CONTROL (MANUAL RESET) SHALL DISABLE THE FANS WHENEVER THE DUCT STATIC PRESSURE EXCEEDS SETPOINT (3.5" W.C.).
- THE DUCT-MOUNTED SMOKE DETECTOR SHALL DISABLE THE FANS AND DAMPERS WHENEVER SMOKE IS DETECTED.

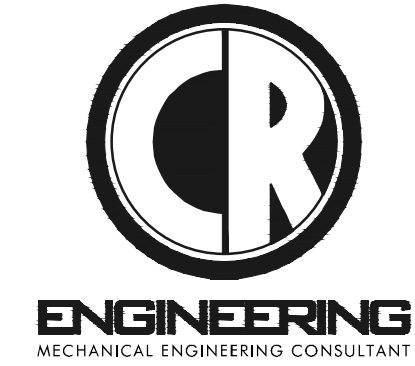
1.11 DUCT STATIC PRESSURE SETPOINT RESET

- THE DUCT STATIC PRESSURE SETPOINT SHALL BE RESET BASED ON THE VAV BOX WITH THE HIGHEST DUCT STATIC PRESSURE DEMAND (RESET LOWER UNTIL ONLY ONE VAV BOX DAMPER IS REQUIRED TO BE FULLY OPEN). THE DUCT STATIC PRESSURE SETPOINT SHALL BE RESET BETWEEN THE UPPER LIMIT SETPOINT (APPROXIMATELY 1.0" W.C., ESTABLISHED BY THE TEST AND BALANCE CONTRACTOR) AND THE LOWER LIMIT SETPOINT (APPROXIMATELY .50" W.C.).

1.12 TESTING AND BALANCING ADDITIONAL REQUIREMENTS

- SEE OUTSIDE AIR TABLE BELOW

VAV ROOFTOP UNIT (AC-3)					
MODE	OA (CFM)	RA (CFM)	OA DAMPER POSITION (TBD BY TAB)	RA DAMPER POSITION (TBD BY TAB)	SA AIRFLOW (CFM)
MINIMUM OA	2,500	12,500			15,000
50% OA	3,100	11,900			15,000
75% OA	4,650	10,350			15,000
MAXIMUM OA (NON ECONOMIZER MODE)	6,200	8,800			15,000
ECONOMIZER OA	15,000	0			15,000



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SEAL:



BID SET

CONSULTANT:

DOUGLAS COUNTY SCHOOL DISTRICT
C.C. MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENTS
MECHANICAL CONTROL DIAGRAMS
AND SEQUENCE OF OPERATION

REVISIONS:

REV.	DESCRIPTION	DATE
1	PLAN CHECK COMMENTS	12/9/25

DRAWN BY: TDF
DESIGNED BY: TDF
CHECKED BY: CWL
APPROVED BY: CLR
DATE: 11/21/25
PROJECT NO: 162625

SHEET NUMBER:

M6.3



AC UNIT	FAN COIL
AC-1	(E) FC-6
	(E) FC-7
AC-5	(E) FC-5
AC-6	(E) FC-4



CONSULTANT:

MECHANICAL CONTROL DIAGRAMS AND SEQUENCE OF OPERATION

SHEET NUMBER:

M6.4

STRUCTURAL DESIGN CRITERIA

CODE: 2024 INTERNATIONAL BUILDING CODE (IBC)
STRUCTURAL RISK CATEGORY III (ELEMENTARY SCHOOL)

SNOW LOADS:
ROOF SNOW LOAD, S: 30 PSF (PER ORIGINAL DESIGN)

WIND LOADS:
BASIC WIND SPEED, V: 130 MPH
EXPOSURE CATEGORY: C

SEISMIC LOADS:
Ss: 2.22
S1: 0.69
SITE CLASS: CD
Ss0: 1.83
Ip: 1.00
SEISMIC DESIGN CATEGORY: D

GENERAL

- A. THESE GENERAL NOTES APPLY TO ALL WORK SHOWN IN THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR AND ALL INVOLVED PARTIES SHALL BE DIRECTLY RESPONSIBLE FOR READING AND COMPLYING WITH ALL INFORMATION PROVIDED IN THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
- B. THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES AND TYPICAL DETAILS SHOWN IN THE DRAWINGS, WHETHER OR NOT SPECIFIC FLAGGING OR REFERENCE HAS BEEN MADE TO THE APPLICABLE GENERAL NOTE OR TYPICAL DETAIL. PROJECT SPECIFIC NOTES AND DETAILS SHOWN ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- C. ALL WORK SHALL COMPLY WITH THE MINIMUM STANDARDS OF THE CURRENT ADOPTED BUILDING CODE, THE LATEST EDITION OF ASTM OR OTHER INDUSTRY STANDARDS REFERENCED, AND ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS AND REGULATIONS. FOR ITEMS, METHODS, AND/OR MATERIALS NOT SHOWN, ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE REGULATING AGENCIES THAT HAVE AUTHORITY OVER SUCH PORTIONS OF WORK.
- D. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, PREPARATION AND EXECUTION OF A SAFETY PROGRAM AND DESIGN AND INSTALLATION OF BRACING, SHORING, FORMS AND SCAFFOLDING. THE CONTRACTOR SHALL RETAIN HIS OWN ENGINEER WHERE REQUIRED FOR MEANS AND METHODS AS WELL AS ANY OTHER DELEGATED DESIGN ITEMS.
- E. THE CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, ELEVATIONS, GRADES AND CONDITIONS WITH ARCHITECTURAL AND OTHER DRAWINGS (I.E. CIVIL, MECHANICAL, PLUMBING, ELECTRICAL, ETC.) PRIOR TO CONSTRUCTION. THE ARCHITECT AND ENGINEER (A/E) SHALL BE NOTIFIED OF ANY DISCREPANCIES, OMISSIONS OR INCONSISTENCIES NO REVISIONS OR CLARIFICATIONS CAN BE MADE WHERE NECESSARY.
- F. IN THE EVENT EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT FROM THOSE SHOWN IN THE DRAWINGS, THE A/E SHALL BE NOTIFIED SO REVISIONS OR CLARIFICATIONS CAN BE MADE WHERE NECESSARY.
- G. NO CHANGES OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS WILL BE ALLOWED WITHOUT WRITTEN AUTHORIZATION FROM THE A/E. ANY DESIRED CHANGES OR DEVIATIONS SHALL BE PRESENTED TO THE A/E FOR REVIEW WITH NO GUARANTEE THAT THE SUBSTITUTION WILL BE ALLOWED.
- H. DO NOT SCALE THE DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND MAY NOT SCALE ACCURATELY. STRUCTURAL DRAWINGS AND GRAPHICS ARE INTENDED TO BE VIEWED AND PRINTED IN COLOR; PRINTING OR VIEWING IN BLACK-AND-WHITE IS NOT RECOMMENDED.
- I. THE CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR COORDINATING THE FOLLOWING TYPES OF ITEMS WHICH ARE TYPICALLY SHOWN ON MECHANICAL, PLUMBING, FIRE SPRINKLER, AND ELECTRICAL DRAWINGS: SIZES AND LOCATIONS OF EQUIPMENT AND DISTRIBUTION SYSTEMS (DUCTWORK, CONDUIT, CABLE TRAY, PIPING, ETC.) AND ALL ASSOCIATED SLEEVES, PENETRATIONS, OPENINGS, HANGERS, INSERTS, BRACES, ETC.
- J. OPENINGS, POCKETS, HOLES, CANS, ETC. SHALL NOT BE PLACED IN ANY SLAB, BEAM, COLUMN, WALL, OR OTHER STRUCTURAL MEMBER UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS OR WRITTEN PERMISSION IS OBTAINED FROM THE A/E.

PERFORMANCE SPECIFICATION (DELEGATED DESIGN) ITEMS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETAINING HIS OWN ENGINEER WHERE NECESSARY AND PROVIDING FOR COMPLETE DESIGN AND CONSTRUCTION OF THE FOLLOWING ITEMS:
1. SUPPORT, BRACING AND ANCHORAGE OF MECHANICAL, ELECTRICAL, SPRINKLER, OR OTHER DISTRIBUTION / PIPING SYSTEMS NOT SPECIFICALLY DETAILED IN THESE DRAWINGS.
- B. THE ITEMS LISTED ABOVE ARE NOT INTENDED TO BE ALL INCLUSIVE AND ONLY REPRESENT STRUCTURAL PORTIONS OF THE WORK. ADDITIONAL PERFORMANCE SPECIFICATION ITEMS MAY BE REQUIRED. REFER TO THE DESIGN DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ITEMS AND REQUIREMENTS.
- C. WHERE CALLED OUT, SIZES OF SUCH ITEMS IN THESE DRAWINGS ARE MINIMUMS TO BE VERIFIED BY THE FINAL DESIGN PROVIDED BY THE CONTRACTOR, HIS SUBCONTRACTOR OR HIS CONSULTANT.
- D. WHERE SEPARATE PERFORMANCE SPECIFICATION ITEMS INTERACT, THE DESIGN OF EACH ITEM SHALL INCLUDE THE INTERACTION EFFECTS AND SHALL BE COORDINATED WITH ONE ANOTHER.
- E. PERFORMANCE SPECIFICATION SYSTEMS, COMPONENTS AND THEIR ATTACHMENTS SHALL BE DESIGNED TO ACCOMMODATE SEISMIC DRIFT OF THE MAIN STRUCTURAL FRAME WHICH MAY BE ASSUMED TO EQUAL 1.5% OF THE STORY HEIGHT.
- F. PERFORMANCE SPECIFICATION ITEMS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED) AND SUBMITTED TO THE A/E FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL

- A. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AISC MANUAL OF STEEL CONSTRUCTION. ALL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO AISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS AND AISC 341 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.
- B. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
1. STRUCTURAL STEEL SHAPES, PLATES AND RODS: ASTM A36 (Fy = 36 KSI), TYP. U.N.O. USE ASTM 512, GR. 50 (Fy = 50 KSI) WHERE NOTED.
- C. HIGH-STRENGTH BOLTS (HSB) MAY BE TYPE N (THREADS INCLUDED) TYP. U.N.O. AND MAY BE INSTALLED SNUG-TIGHT IN ACCORDANCE WITH RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS. AT THE CONTRACTOR'S OPTION, TWIST-OFF TENSION-CONTROL BOLTS MAY BE USED TO SIMPLIFY INSTALLATION.
- D. ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY SPECIFICATIONS FOR THE MATERIAL BEING WELDED AND ALL WELDING SHALL BE PERFORMED BY APPROPRIATELY CERTIFIED WELDERS. ALL WELDERS AND FABRICATION SHOPS SHALL BE APPROVED BY THE BUILDING AUTHORITY HAVING JURISDICTION. WELDING ELECTRODES SHALL BE E70XX UNLESS NOTED OTHERWISE.
- E. HEADED AND THREADED STUDS SHALL BE NELSON STUD ANCHORS (NSA) OR APPROVED EQUAL. OF THE SIZES INDICATED ON THE DRAWINGS, WITH FLUXED ENDS AUTOMATICALLY END WELDED PER THE MANUFACTURER'S REQUIREMENTS.
- F. ALL STRUCTURAL AND MISCELLANEOUS STEEL WORK SHALL BE SHOP PRIMED AND TOUCHED UP IN THE FIELD AFTER ERECTION EXCEPT STEEL TO BE EMBEDDED IN CONCRETE, SPRAY FIRE PROOFED, GALVANIZED, OR WHERE REQUIRED FOR SPECIAL CONNECTIONS LIKE FIELD WELDS OR AT CONTACT FACES OF CONNECTIONS USING HIGH STRENGTH BOLTS. COORDINATE PRIMER WITH FINISH REQUIREMENTS TO ENSURE PRIMER IS COMPATIBLE WITH TOPCOATS. PROVIDE 3" MINIMUM CONCRETE COVER FOR ALL STEEL EXPOSED TO EARTH. STEEL SUBJECT TO PERMANENT EXTERIOR EXPOSURE SHALL BE HOT-DIP GALVANIZED OR PRIMED AND PAINTED WITH A HIGH QUALITY PAINT SYSTEM SUITABLE FOR PERMANENT EXTERIOR EXPOSURE. COORDINATE ALL PAINT COLORS WITH THE OWNER.

DEMOLITION NOTES

- A. SAFETY NOTE:
1. THE CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL, STATE AND NATIONAL CONSTRUCTION SAFETY STANDARDS AND REQUIREMENTS.
2. THE A/E AND OWNER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH ANY SUCH REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL FORMWORK, BRACING AND SHORING REQUIRED.
- B. SHORE OR BRACE THE STRUCTURE (BEAMS, COLUMNS, WALLS, ETC.) AS REQUIRED TO MAINTAIN STABILITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION AND THROUGH COMPLETION OF THE NEW CONSTRUCTION.
- C. ALL DIMENSIONS GIVEN TO EXISTING STRUCTURE ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. WHERE ACTUAL CONDITIONS DEVIATE FROM DETAILS SHOWN ON THE DRAWINGS, NOTIFY THE A/E FOR INSTRUCTIONS BEFORE PROCEEDING WITH THE WORK.
- D. ANY CONFLICTING ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE A/E PRIOR TO FURTHER DEMOLITION.
- E. DEMOLITION AND REMOVAL OF EXISTING CONSTRUCTION SHALL BE MADE IN SUCH A MANNER AS TO AVOID DAMAGE TO ADJACENT CONSTRUCTION.

QUALITY ASSURANCE (STATEMENT OF SPECIAL INSPECTIONS)

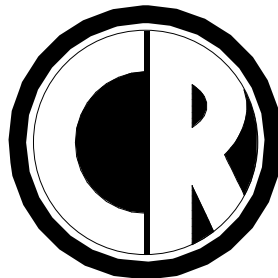
- A. QUALITY ASSURANCE WILL BE ACCOMPLISHED THROUGH THE USE OF SPECIAL INSPECTION & MATERIALS TESTING IN ACCORDANCE WITH THE BUILDING CODE.
- B. WHERE REQUIRED BY THE BUILDING AUTHORITY HAVING JURISDICTION (AHJ), THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AHJ AND OWNER IN ACCORDANCE WITH THE BUILDING CODE.
- C. SPECIAL INSPECTION AND ASSOCIATED MATERIALS TESTING SHALL BE PERFORMED FOR THE PROCESSES AND MATERIALS REQUIRED FOR CONSTRUCTION. THE TYPE AND FREQUENCY OF INSPECTIONS AND TESTS AS WELL AS THE FREQUENCY AND DISTRIBUTION OF RELATED REPORTS SHALL BE AS INDICATED IN THE CONTRACT DOCUMENTS AND AS REQUIRED BY ALL APPLICABLE CODES AND STANDARDS.
- D. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHALL FURNISH REPORTS TO THE A/E, OWNER AND AHJ. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN IF UNCORRECTED, TO THE A/E, OWNER AND AHJ. AT THE CONCLUSION OF WORK THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT TO THE A/E, OWNER AND AHJ INDICATING THE WORK REQUIRING SPECIAL INSPECTION HAS INSPECTED AND IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.
- E. SPECIAL INSPECTIONS IN ACCORDANCE WITH CURRENT ACCEPTED BUILDING CODE SHALL BE REQUIRED FOR THE FOLLOWING ITEMS:
1. STEEL CONSTRUCTION PER BUILDING CODE SECTION 1705.2:
a. PERIODIC VISUAL INSPECTION OF FIELD WELDS
- F. THE SPECIAL INSPECTIONS LISTED ABOVE ARE NOT INTENDED TO BE ALL INCLUSIVE AND ONLY REPRESENT SPECIAL INSPECTIONS FOR THE WORK SHOWN ON STRUCTURAL DRAWINGS. ADDITIONAL SPECIAL INSPECTIONS OF ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS MAY BE REQUIRED. REFER TO THE APPROPRIATE DESIGN DISCIPLINES FOR ADDITIONAL INFORMATION.

STANDARD ABBREVIATIONS			
AB	ANCHOR BOLT	JT	JOINT
AFF	ABOVE FIN FLR	K	KIPS
ASG	AGGREGATE	KSF	KIPS PER SQUARE INCH
ALT	ALTERNATE	L	ANGLE
ALUM	ALUMINUM	LBS	POUNDS
APPROX	APPROXIMATELY	LLV	LONG LEGS VERTICAL
ARCH	ARCHITECT	LLH	LONG LEGS HORIZONTAL
BFF	BELOW FIN FLR	LT WT	LIGHT WEIGHT
BLDG	BUILDING	MAX	MAXIMUM
BLKG	BLOCKING	NB	MACHINE BOLT
BM	BEAM	MECH	MECHANICAL
BN	BOUNDARY NAIL	MFR	MANUFACTURER
BO	BOTTOM OF	MISC	MISCELLANEOUS
BOT	BOTTOM	MIN	MINIMUM
B/S	BOTH SIDES	MTL	METAL
CIP	CAST IN PLACE	(N)	NEW
CJ	CONTROL JOINT	NA	NOT APPLICABLE
CJP	COMPLETE JOINT	NS	NEAR SIDE
	PENETRATION	NSA	NELSON STUD ANCHOR
	CENTERLINE	NTS	NOT TO SCALE
CL	CLEAR	OC	ON CENTER
CLG	CLEAR	OD	OUTSIDE DIAMETER
CLR	CLEAR	OH	OPPOSITE HAND
CMU	CONG MASONRY UNIT	OMU	OPEN WEB STEEL JOIST
COL	COLUMN	PERP	PERPENDICULAR
CONC	CONCRETE	PL	PLATE
CONN	CONNECTION	PLF	POUNDS PER FOOT
CONST	CONSTRUCTION	PLY	PLYWOOD
CONT	CONTINUOUS	PSI	POUNDS PER SQUARE INCH
CTSK	COUNTERSUNK	PSF	POUNDS PER SQUARE FOOT
CY	CUBIC YARDS	PT	PRESSURE TREATED,
DBL	DOUBLE		POST TENSIONED
DF	DOUGLAS FIR	REINF	REINFORCING
DIA	DIAMETER	REQD	REQUIRED
DJ	DOVEILED JOINT	SCH	SCHEDULE
DWG	DRAWING	SHTG	SHEATHING
EA	EACH	SM	SIMILAR
EF (E/F)	EACH FACE	SOS	SLAB ON GRADE
ELEV	ELEVATION	SS	STAINLESS STEEL
ELEC	ELECTRICAL	STAGG	STAGGERED
EN	EDGE NAIL	STD	STANDARD
ES	EACH SIDE	STIFF	STIFFENER
EW (E/W)	EACH WAY	STL	STEEL
(E)	EXISTING	STRUC	STRUCTURAL
EXT	EXTERIOR	SYM	SYMMETRICAL
FF	FINISH	T	TRIMMER
FN	FINISHED FLOOR	TN	TOENAIL
FLR	FLOOR	TO	TOP OF
FN	FACE NAIL	TYP	TYPICAL
FO	FACE OF	T&G	TONGUE & GROOVE
FS	FAR SIDE	T&B	TOP & BOTTOM
FT	FEET	UNO	UNLESS NOTED OTHERWISE
FTS	FOOTING	VERT	VERTICAL
GA	GAGE, GAUGE	VIF	VERIFY IN FIELD
GALV	GALVANIZED	WF	WIDE FLANGE
GLB	GLULAM BEAM	WVF	WELDED WIRE FABRIC
HDR	HEADER	W	WITH
HORIZ	HORIZONTAL	W/O	WITHOUT
HSB	HIGH STRENGTH BOLT	#	AT
ID	INSIDE DIAMETER	#	NUMBER, POUNDS
IN	INCHES	#	AND
INT	INTERIOR	+/-	PLUS OR MINUS
JG	STEEL JOIST GIRDER		

SHEET INDEX		
Sheet Number	Sheet Name	Sheet Issue Date
S0.1	GENERAL NOTES & TYP. DETAILS	11/21/2025
S1.0	MECHANICAL ROOF FRAMING PLAN	11/21/2025

2 Typ. RTU Subframing Detail
3/4" = 1'-0"

1 Typ. Steel Joist Reinforcement
3/4" = 1'-0"

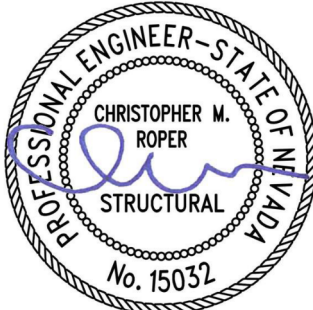


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SEAL:



EXP: 12/31/2025
PERMIT: 11/21/2025

CONSULTANT:

CFBR STRUCTURAL GROUP, LLC

1650 MEADOW WOOD LN., RENO, NV 89502
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DOUGLAS COUNTY SCHOOL DISTRICT
C.C. MENELEY ELEMENTARY SCHOOL
ROOFTOP UNIT REPLACEMENTS

GENERAL NOTES & TYP. DETAILS

REVISIONS:

REV.	DESCRIPTION	DATE
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-	-	-

DRAWN BY: ZG
DESIGNED BY: ZG
CHECKED BY: CR
APPROVED BY: CR
DATE: 11/21/2025
PROJECT NO: 25_113

SHEET NUMBER:

S0.1



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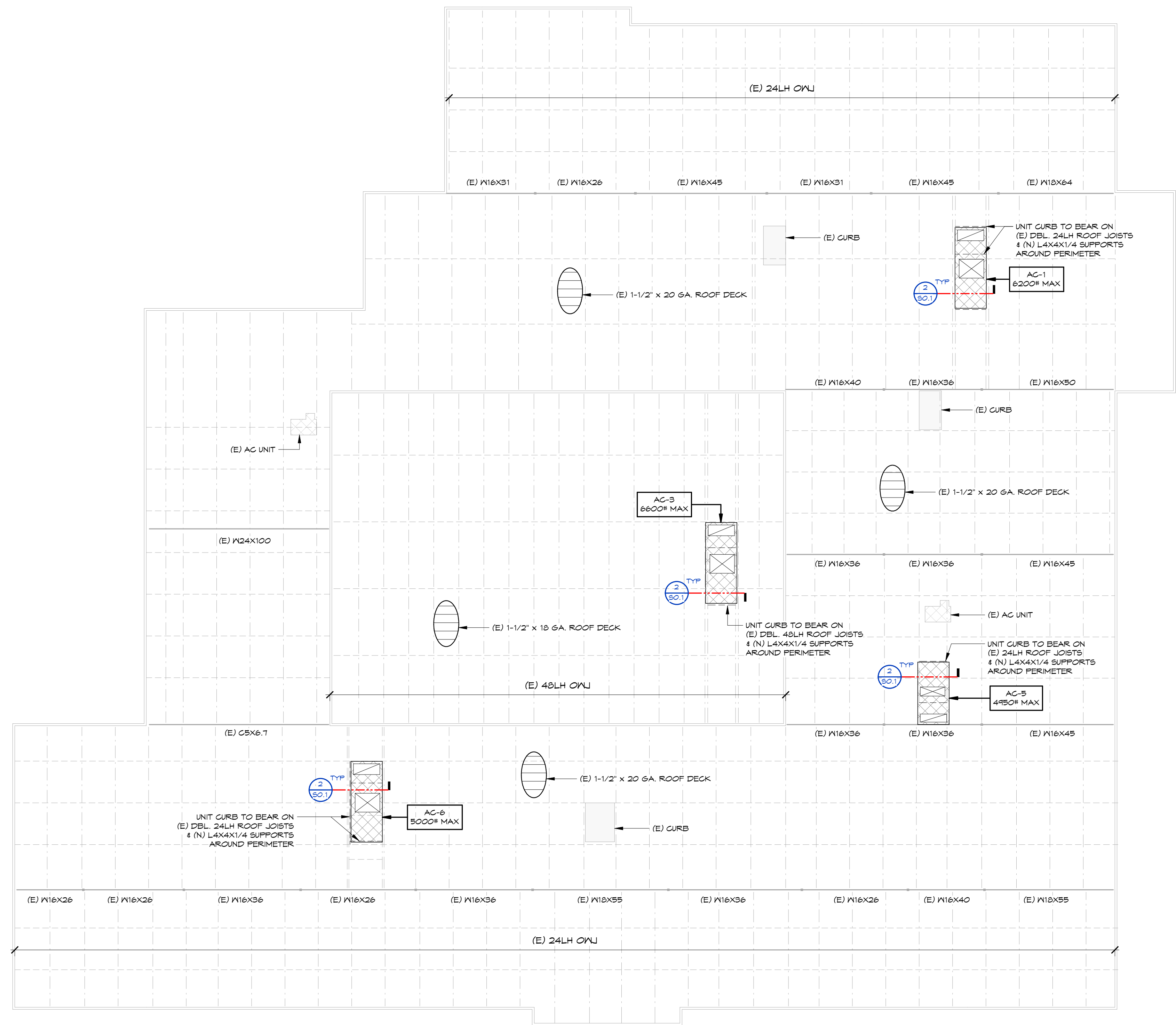


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MECHANICAL ROOF FRAMING PLAN

REV.	DESCRIPTION	DATE
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S1.0

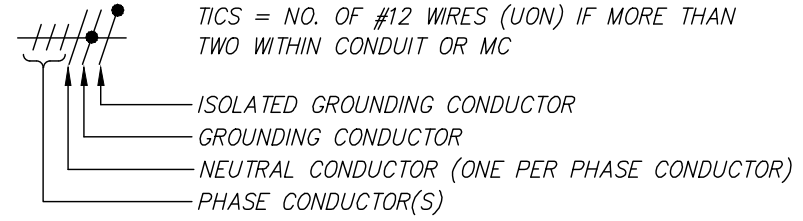


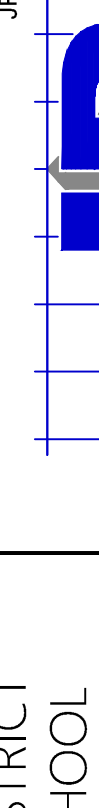
1 MECHANICAL ROOF FRAMING PLAN
1/16" = 1'-0"

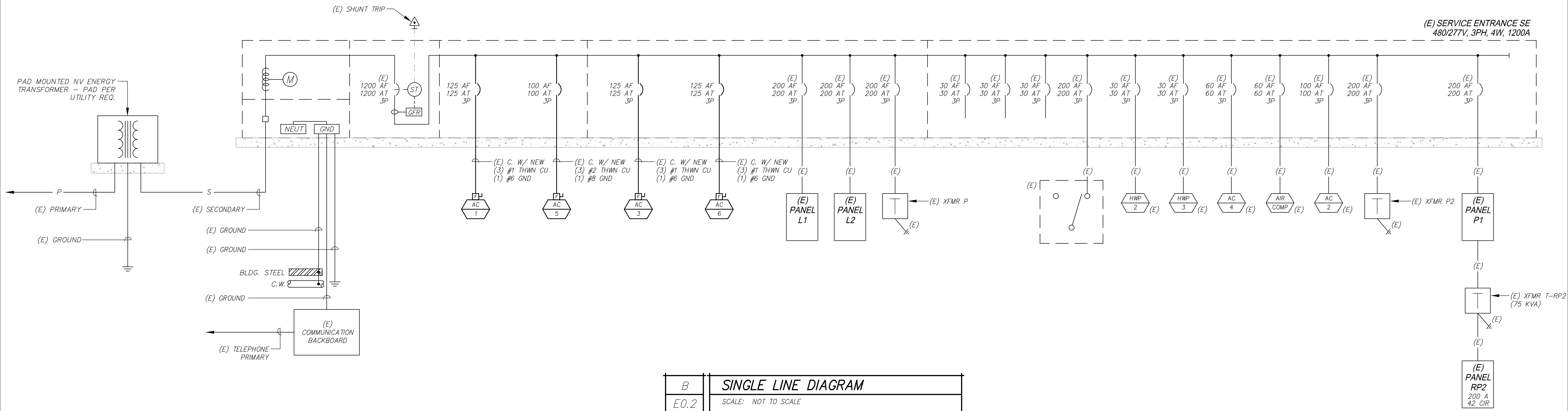
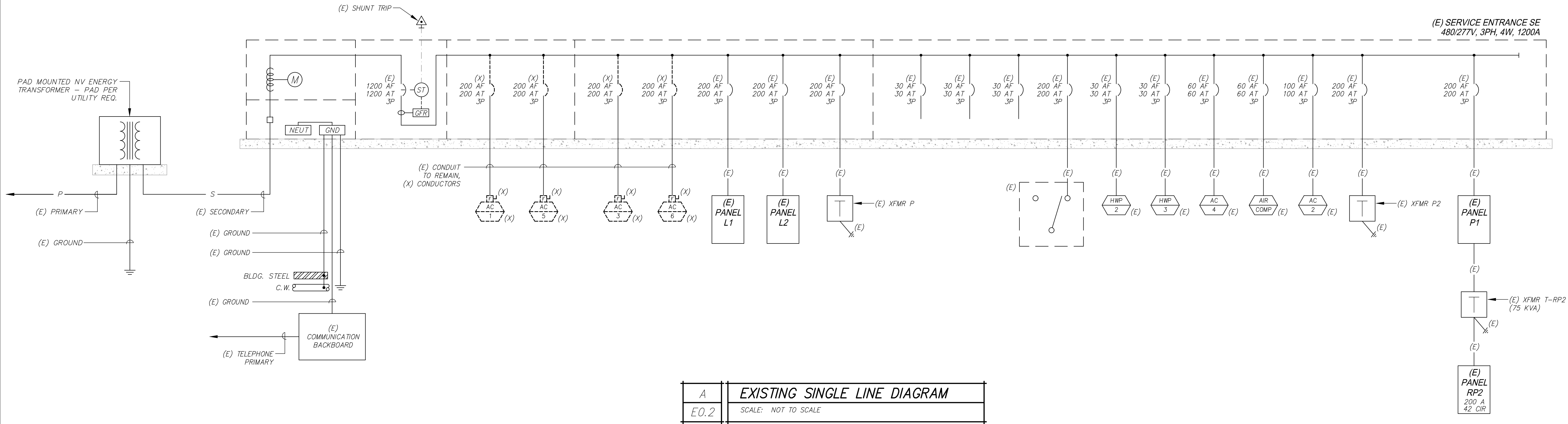
PLOT DATE:

SPECIFICATIONS

ITEM	DESCRIPTION	ITEM	DESCRIPTION
26.1	STANDARDS AND CODES: ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.	26.21	CODE COMPLIANCE: A. WORKING CLEARANCE: • THE CONTRACTOR SHALL VERIFY THAT ALL ELECTRICAL EQUIPMENT MEETS THE CLEARANCE REQUIREMENTS OF NEC 110.26. DRAWINGS REPRESENT CLEARANCES ARE MET AS DESIGNED, ANY DEVIATION SHALL ALSO MEET THIS REQUIREMENT. • ELECTRICAL SWITCHBOARDS RATED 1200 AMPS OR GREATER, IN EXCESS OF 6 FEET IN LENGTH, SHALL REQUIRE TWO (2) EXITS FROM THE ELECTRICAL ROOM UNLESS NEC 110.26(c)(2)(a) OR 110.26(c)(2)(b) ARE MET. B. TRANSFORMERS: • TRANSFORMERS RATED GREATER THAN 112.5 KVA SHALL BE PLACED IN ELECTRICAL ROOMS WITH A 1-HOUR FIRE RATING PER NEC 450.21(B) WHERE THEY DO NOT MEET THE TRANSFORMER SECTION. TRANSFORMERS AS SPECIFIED IN THIS SECTION MEET NEC 450.21(B) EXCEPTION #2 AND ARE NOT REQUIRED TO BE PLACED IN A 1-HOUR RATED ROOM.
26.2	COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE PLANS TOGETHER WITH THE SPECIFICATIONS.	26.22	CIRCUITING: ALL WIRING SHALL BE IN CONDUIT, MINIMUM 3/4", CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS MAY BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM -24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. METAL-CLAD CABLE (TYPE MC) IS NOT ACCEPTABLE. TYPE MC CABLE MAY NOT BE USED FOR HOMERUNS. ENT IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY.
26.3	PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORKING PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.	26.23	WIRING: WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG. WHERE ALUMINUM IS ALLOWED BY WRITTEN AUTHORIZATION BY THE ENGINEER, WIRE SHALL BE TERMINATED IN AN INSULATED CUL/AL RATED COMPRESSION TERMINAL FITTING (MAC-ADAPT OR EQUAL). INSULATION SHALL BE THW, THWN OR THHN.
26.4	DRAWINGS: DATA PRESENTED ON THESE DRAWINGS SHALL BE FIELD VERIFIED SINCE ALL DIMENSIONS, LOCATIONS, AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS. REVIEW ALL ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL AND SPECIALTY SYSTEMS DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS ON CONDITIONS SHOWN THEREON. DO NOT SCALE ELECTRICAL PLANS FOR FIXTURE, DEVICE OR APPLIANCE LOCATIONS. USE CONFIGURED DIMENSIONS IF GIVEN OR CHECK ARCHITECTURAL OR MECHANICAL DRAWINGS.	26.24	FUSES: FUSES SHALL BE SIZED PER ACTUAL NAMEPLATE OF EQUIPMENT SERVED. FUSES SHALL BE DUAL-ELEMENT, CURRENT-LIMITING, AND SHALL BE INTERCHANGEABLE BETWEEN FRAME SIZES WITH STANDARD FACTORY FUSE REDUCERS. FUSES SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED: a. CIRCUITS 601 TO 6000 AMPERES SHALL BE PROTECTED BY CURRENT LIMITING BUSSMANN LOW-PEAK TIME-DELAY FUSES KRP-C – UL CLASS L b. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS) OR LPS-RK (600 VOLTS) – UL CLASS RK1 c. ALL INDIVIDUAL MOTOR CIRCUITS RATED 480 AMPERES OR LESS SHALL BE PROTECTED BY BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS) OR LPS-RK (600 VOLTS) – UL CLASS RK1 OR L d. CIRCUIT BREAKER PANELS SHALL BE PROTECTED BY BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS), LPS-RK (600 VOLTS) OR BUSSMANN LOW-PEAK KRP-C TIME-DELAY FUSES – UL CLASS RK1 OR L e. ALL DUAL-ELEMENT FUSES SHALL HAVE SEPARATE OVERLOAD AND SHORT-CIRCUIT ELEMENTS. f. PROVIDE SPARE FUSE CABINET AFTER THE COMPLETION OF THE PROJECT WITH ONE SET OF SPARE FUSES FOR EVERY SIZE USED.
26.5	COPYRIGHT: THESE PLANS, SPECIFICATIONS AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE COPYRIGHT MATERIALS OF JP ENGINEERING. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND SIMILAR LAWS ARE RESERVED TO JP ENGINEERING. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF JP ENGINEERING AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF JP ENGINEERING.	26.25	UTILITY SERVICES: PROVIDE POWER AND COMMUNICATIONS SYSTEM SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES. PROVIDE EXCAVATION, RACEWAY, STRUCTURES, GROUNDING, ETC. AS REQUIRED. CONTACT SERVING UTILITIES AND OBTAIN THEIR PROJECT SPECIFIC REQUIREMENTS PRIOR TO BID. UTILITY WORK INDICATED HEREIN IS FOR BIDDING ASSISTANCE ONLY. THESE PLANS DO NOT PURPORT TO INDICATE ALL WORK REQUIRED. (UTILITY SERVICE CHARGES PAID BY OTHERS)
26.6	LOCATIONS: INDICATED LOCATIONS OF ALL OUTLETS AND EQUIPMENT ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OUTLET, EQUIPMENT OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER, AT NO ADDED COST.	26.26	TEMPORARY CONSTRUCTION POWER: PROVIDE TEMPORARY ELECTRICAL POWER AND LIGHTING FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT. PROVIDE TEMPORARY SERVICE AND DISTRIBUTION AS REQUIRED. COMPLY WITH THE NEC AND OSHA REQUIREMENTS. (ENERGY COSTS BY OTHERS).
26.7	RECORD DRAWINGS: CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM INDICATING THE FOLLOWING ADDITIONAL INFORMATION: EXACT ROUTING OF ALL CONDUITS LARGER THAN 1" EXACT LOCATION OF ALL SERVICE GROUNDING/BONDING CONNECTIONS CONTRACTORS NAME, ADDRESS AND TELEPHONE NUMBER RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.	26.27	SUBSTITUTIONS: PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY WITH ENGINEER. SUBSTITUTIONS MAY BE SUBMITTED A MINIMUM OF 10 WORKING DAYS PRIOR TO BID FOR CONSIDERATION. PROPOSED SUBSTITUTIONS PROVIDED LATER WILL NOT BE REVIEWED OR ALLOWED. BID SUBSTITUTED MATERIAL WILL ONLY BE ALLOWED IF ACCEPTED IN WRITING BY ENGINEER.
26.8	EXAMINATION OF SITE AND EXISTING CONDITIONS: BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE, FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS, AND EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.	26.28	IDENTIFICATION: PROVIDE ENGRAVED NAMEPLATES FOR ALL SWITCHBOARDS, PANELS, TRANSFORMERS, DISCONNECTS, MOTOR STARTERS, CONTACTORS, TIME SWITCHES AND CABINETS. NAMEPLATES SHALL INCLUDE THE FOLLOWING INFORMATION AS APPLICABLE: DESIGNATION (i.e. PANEL A) FUNCTION (i.e. AIR HANDLER AH-1) VOLTAGE, PHASE, WIRE (i.e. 480 VOLT, 3ø, 4W) FEEDER SIZE (i.e. 4-4#/0 THHN CU IN 2" C) SOURCE (i.e. SWITCHBOARD TMB) NAMEPLATES SHALL BE WHITE LETTERS ON BLACK FOR NORMAL EQUIPMENT AND WHITE LETTERS ON RED FOR EMERGENCY EQUIPMENT.
26.9	EXISTING OUTLETS: EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN. EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.	26.29	GUARANTEE: THE COMPLETE ELECTRICAL SYSTEM, AND ALL PORTIONS THEREOF, SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. LAMPS ARE EXEMPT FROM THIS GUARANTEE, BUT SHALL BE NEW AT TIME OF FINAL ACCEPTANCE.
26.10	EXISTING SWITCHGEAR: REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED. MODIFY AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES.	26.30	COORDINATION: THE CIVIL, ARCHITECTURAL, MECHANICAL, KITCHEN AND INTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 16 RESPONSIBILITIES. ELECTRICAL CONTRACTOR SHOULD NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS AND ADDENDA.
26.11	DEMOLITION: PROVIDE COMPLETE ELECTRICAL DEMOLITION: REMOVE EXISTING OUTLETS AND EQUIPMENT IN CONFLICT WITH NEW CONDITIONS. REMOVE EXISTING WORK REMOVED FROM SERVICE MAY BE ABANDONED IN PLACE IF IN A CONCEALED LOCATION. REMOVE ALL WIRE FROM ABANDONED RACEWAYS. CONTRACTOR SHALL INSURE CONTINUITY OF EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS. EXTEND AND/OR RELOCATE AS NECESSARY. SHIFT/RELOCATE EXISTING EQUIPMENT AND CIRCUITING AS REQUIRED TO ACCOMMODATE NEW WORK.	26.31	FIRE ALARM: EXISTING FIRE ALARM SYSTEM TO REMAIN: MAINTAIN IN CONSTANT OPERATION DURING THIS PROJECT. NEW COMPONENTS AND CIRCUITING SHALL BE FACTORY-CERTIFIED AS BEING PROJECT-SPECIFIC COMPATIBLE WITH EXISTING SYSTEM. ALL CONNECTIONS TO EXISTING SYSTEM SHALL BE PERFORMED BY FACTORY-CERTIFIED TECHNICIAN AND SHALL BE ACCEPTED BY OWNER'S SYSTEM-MONITORING AGENCY. PLANS DO NOT INDICATE ALL DEVICES, CONNECTIONS OR CIRCUITING REQUIRED FOR A COMPLETE SYSTEM. SUBMIT PROPOSED DESIGN TO THE FIRE MARSHAL AND RECEIVE APPROVAL PRIOR TO ROUGH-IN.
26.12	SALVAGE: ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY OWNER SHALL BE DELIVERED TO OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.	26.32	ONGOING OPERATION: CONDUCT WORK TO MINIMIZE DISRUPTION OF OWNER'S ONGOING OPERATIONS. PROVIDE BARRICADES, NOISE ABATEMENT AND DUST CONTAINMENT MEASURES TO ENSURE THE SAFETY AND COMFORT OF PATRONS, STAFF AND WORKERS. INTERRUPTIONS OF EXISTING POWER, COMMUNICATIONS OR FIRE ALARM SYSTEMS SHALL BE PERFORMED ONLY AT SUCH TIMES AS DIRECTED BY RESIDENT ENGINEER. OUTAGES SHALL BE MOMENTARY IN NATURE. EACH SUCH OUTAGE (OR OPERATION WHICH MAY POSE RISK OF AN ACCIDENTAL OUTAGE) SHALL BE SCHEDULED 48 HOURS IN ADVANCE.
26.13	TESTING: PRIOR TO PLACING IN SERVICE, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENS, GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER MADE GROUNDS SHALL BE MEGGER-TESTED.		
26.14	GROUNDING: TEST EXISTING SERVICE NEUTRAL FOR ADEQUACY AND FOR GROUND CONTINUITY. GROUND ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. EQUIPMENT GROUNDS HAVE NOT BEEN SHOWN ON DRAWINGS – WHERE GROUND WIRES HAVE BEEN SHOWN THEY INDICATE AN INSULATED GROUND.		
26.15	EQUIPMENT STANDARDS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE CONFIGURATIONS SERVING UTILITY STANDARDS. WIRING SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.		
26.16	MATCH EXISTING: EXISTING EQUIPMENT AND SYSTEMS SHALL BE CONSIDERED A MINIMUM STANDARD TO BE MET, IF NOT OTHERWISE EXCEEDED BY THESE PLANS AND SPECIFICATIONS. NEW MATERIALS AND EQUIPMENT SHALL MATCH EXISTING IN APPEARANCE AND FUNCTION.		
26.17	TAMPER-PROOF: ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.		
26.18	DISTRIBUTION EQUIPMENT: DISTRIBUTION EQUIPMENT SHALL BE DEAD-FRONT, PANELBOARD OR SWITCHBOARD TYPE AS INDICATED, UL-LABELED AND ENCLOSED IN A NEMA HOUSING APPROPRIATE TO ITS LOCATION AND APPLICATION WITH HINGED WIREWAY COVERS. BUSSING, DEVICE FINGERS AND LUGS SHALL BE COPPER UNLESS INDICATED ON DRAWINGS. AIC RATINGS SHOWN ON PLANS ARE MINIMUM RATINGS. CIRCUIT BREAKERS SHALL BE IN EXCESS OF THE AVAILABLE FAULT CURRENT. SERIES-RATING OF UPSTREAM AND DOWNSTREAM CIRCUIT BREAKERS TO ACHIEVE REQUIRED FAULT CURRENT RATINGS IS PROHIBITED UNLESS APPROVED BY ENGINEER IN WRITING.		
26.19	PANELBOARDS: PANELS SHALL HAVE FLUSH MONO-FLAT TRIM, LOCKING DOOR-IN-DOOR HINGED COVERS AND BUILT-IN CIRCUIT BREAKERS. FLUSH-MOUNTED PANELS SHALL HAVE EMPTY CONDUITS STUBBED TO ACCESSIBLE ATTIC SPACE. ONE 1" CONDUIT FOR EACH FOUR SPARE/SPACE CIRCUITS. PROVIDE ONE TYPED AND ONE SPARE PANEL SCHEDULE FOR OWNER'S USE. SCHEDULES SHALL BE TWO COLUMN TYPE WITH ODD CIRCUIT NUMBERS ON THE LEFT AND EVEN NUMBERS ON THE RIGHT.		
26.20	SUBMITTALS: BEFORE ORDERING ANY EQUIPMENT, CONTRACTOR SHALL SUBMIT ELECTRONIC PDF COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, SWITCHGEAR, PANELS, MOTOR CONTROLLERS, WIRING DEVICES, ETC. PROPOSED FOR THIS PROJECT.		

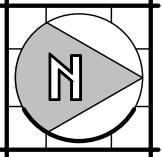
MASTER SYMBOL LIST					
SIGNAL OUTLETS		RECEPTACLES		ABBREVIATIONS	
	TELEPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON		DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF		CENTERLINE
	TELEPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, WALL MOUNT +54" AFF UON		DOUBLE DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF	AFF	ABOVE FINISHED FLOOR
	DATA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON		HALF SWITCHED DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF (TOP HALF SWITCHED)	AIC	AMPERES INTERRUPTING CAPACITY
	VOICE/DATA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON		DUPLEX GFCI: 20A, 125V, GFCI, NEMA 5-20 GFR, +18" AFF	AFc	ABOVE FINISH CEILING
	TELEVISION: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON		DUPLEX I.G.: 20A, 125V, ISO. GND., NEMA 5-20 IG +18" AFF (WHITE WITH ORANGE TRIANGLE, UON)	BMS	BUILDING MANAGEMENT SYSTEM
	CAMERA: 4S BOX WITH SINGLE GANG MUD RING UON, CEILING MOUNTED UON		DOUBLE DUPLEX I.G.: 20A, 125V, ISO. GND., NEMA 5-20 IG +18" AFF (WHITE WITH ORANGE TRIANGLE, UON)	C	CONDUIT
	MICROPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON		SPECIAL RECEPTACLE - AS INDICATED ON PLANS, +18" AFF	CB	CIRCUIT BREAKER
	VOLUME CONTROL: 4S BOX WITH SINGLE GANG MUD RING UON, +48" TO TOP UON	NOTE: DIAMOND SYMBOLS INDICATES DEDICATED CIRCUIT.		CLG	CEILING
	SPEAKER: 8" COAXIAL WITH BACK BOX AND GRILLE, CEILING MOUNTED UON	EQUIPMENT		CIR	CIRCUIT
	3/4" (UON) STUB INTO ACCESSIBLE CEILING SPACE		SWITCHBOARD	DPDT	DOUBLE POLE DOUBLE THROW
SWITCHES			PANELBOARD: SURFACE MOUNTED	DPST	DOUBLE POLE SINGLE THROW
S	SINGLE POLE: 20A, 120/277V, +48" TO TOP UON		PANELBOARD: FLUSH MOUNTED	(E)	EXISTING TO REMAIN
S ₂	TWO POLE: 20A, 120/277V, +48" TO TOP UON		TRANSFORMER	ELEV	ELEVATOR
S ₃	THREE WAY: 20A, 120/277V, +48" TO TOP UON		RELAY (120V COIL , STEP DN XFMR IF REQUIRED, UON)	EMT	ELECTRICAL METALLIC TUBING
S ₄	FOUR WAY: 20A, 120/277V, +48" TO TOP UON		CONTACTOR (120V COIL, STEP DN XFMR IF REQUIRED, UON)	EPO	EMERGENCY POWER OFF SYSTEM
S _X	X INDICATES EMERGENCY CIRCUIT		COMBINATION MAGNETIC STARTER/FUSED DISCONNECT	FBO	FURNISHED BY OTHERS
S _P	P INDICATES PILOT LIGHT (LIGHTED WHEN ON)		NON-FUSIBLE DISCONNECT SWITCH	FPEN	FUSE PER EQUIPMENT NAMEPLATE
S _L	L INDICATES PILOT LOCATOR (LIGHTED WHEN OFF)		FUSIBLE DISCONNECT SWITCH	FLUOR	FLUORESCENT
S _K	K INDICATES KEY OPERATED SWITCH		PULLBOX: SIZE AS REQUIRED BY NEC	FU	FUSE: DUAL-ELEMENT, TIME DELAY
S _M	MANUAL MOTOR STARTER: 20A, 120/277V, POLES AND HEATERS AS REQUIRED		JUNCTION BOX: SIZE AS REQUIRED BY NEC	GFI/GFCI	GROUND FAULT INTERRUPTER
S _{MC}	MOMENTARY CONTACT: 20A, 120/277V, SPDT CENTER NORMALLY OFF UON, +48" TO TOP UON		SURFACE RACEWAY WITH OR WITHOUT DEVICES	GND	GROUND
D	DIMMER: 600 WATT UON, ELECTRONIC SLIDER, WITH ON/OFF TOGGLE, +48" TO TOP UON (PLANS SHALL INDICATE TYPE: FLUOR, INCAND OR LOW-VOLTAGE)		TELEPOWER POLE	HOA	HAND-OFF-AUTOMATIC
	MOTION/OCCUPANCY SENSOR SWITCH WITH OFF-AUTO SELECTOR - WALL MOUNTED AT +48" TO TOP UON	CIRCUITING		HID	HIGH INTENSITY DISCHARGE
	ULTRASONIC MOTION/OCCUPANCY SENSOR SWITCH CEILING MOUNTED		CONDUIT IN WALL OR ABOVE CEILING	IG	ISOLATED GROUND
	ARROWS INDICATE DIRECTION AND COVERAGE PROVIDE WITH POWER PACK PER MANUFACTURERS REQUIREMENTS		CONDUIT IN FLOOR OR BELOW GRADE	INCAND	INCANDESCENT
	PHOTO ELECTRIC SWITCH: 1600VA UON		METAL CLAD CABLE (MC)	K	kcmil (300K = 300 kcmil)
METHODS			OVERHEAD SERVICE	LTG	LIGHTING
	SHADING INDICATES: FIXTURE, OUTLET, EQUIPMENT, ETC. ON EMERGENCY 'X' OR NIGHT LIGHT 'NL' CIRCUIT		PRIMARY	LV	LOW VOLTAGE
	DEVICE MOUNTED IN MULTIPLE UNDER COMMON COVER MAXIMUM HEIGHT ON WALL SHALL BE +48" TO TOP UON		SECONDARY	MCP	MOTOR CIRCUIT PROTECTOR
	DEVICES MOUNTED IN OR ABOVE COUNTER/BACKSPASH: MAXIMUM HEIGHT ON WALLS SHALL BE +48" TO TOP UON		TELEPHONE	MC	MULTI-CONDUCTOR CABLE
	FLUSH FLOOR MOUNTED WIRING DEVICES		TELEVISION	(N)	NEW
	FLUSH FLOOR MOUNTED WIRING DEVICES IN SINGLE MULTI-COMPARTMENT BOX		LOW VOLTAGE AND/OR CONTROL CIRCUITING	NC	NORMALLY CLOSED
	RECEPTACLE MOUNTED IN CEILING OR CASEWORK		EMERGENCY CIRCUIT	NEUT	NEUTRAL
	FINE DASHING INDICATES EXISTING EQUIPMENT AND DEVICES TO BE REMOVED		STUB OUT: MARK AND CAP (SITE)	NL	NIGHT LIGHT
DESIGNATIONS			CIRCUITING UP OR DOWN	NO	NORMALLY OPEN
	LIGHT FIXTURE: F1 = TYPE (SEE FIXTURE SCHEDULE)			NTS	NOT TO SCALE
	SHEET NOTE				

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A	ROOF ELECTRICAL DEMOLITION PLAN
E1.1	SCALE: 1/16" = 1'-0"



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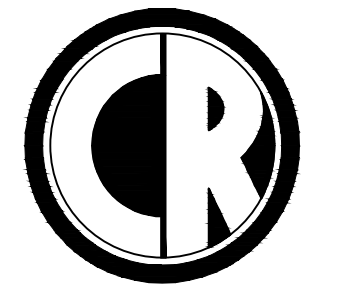
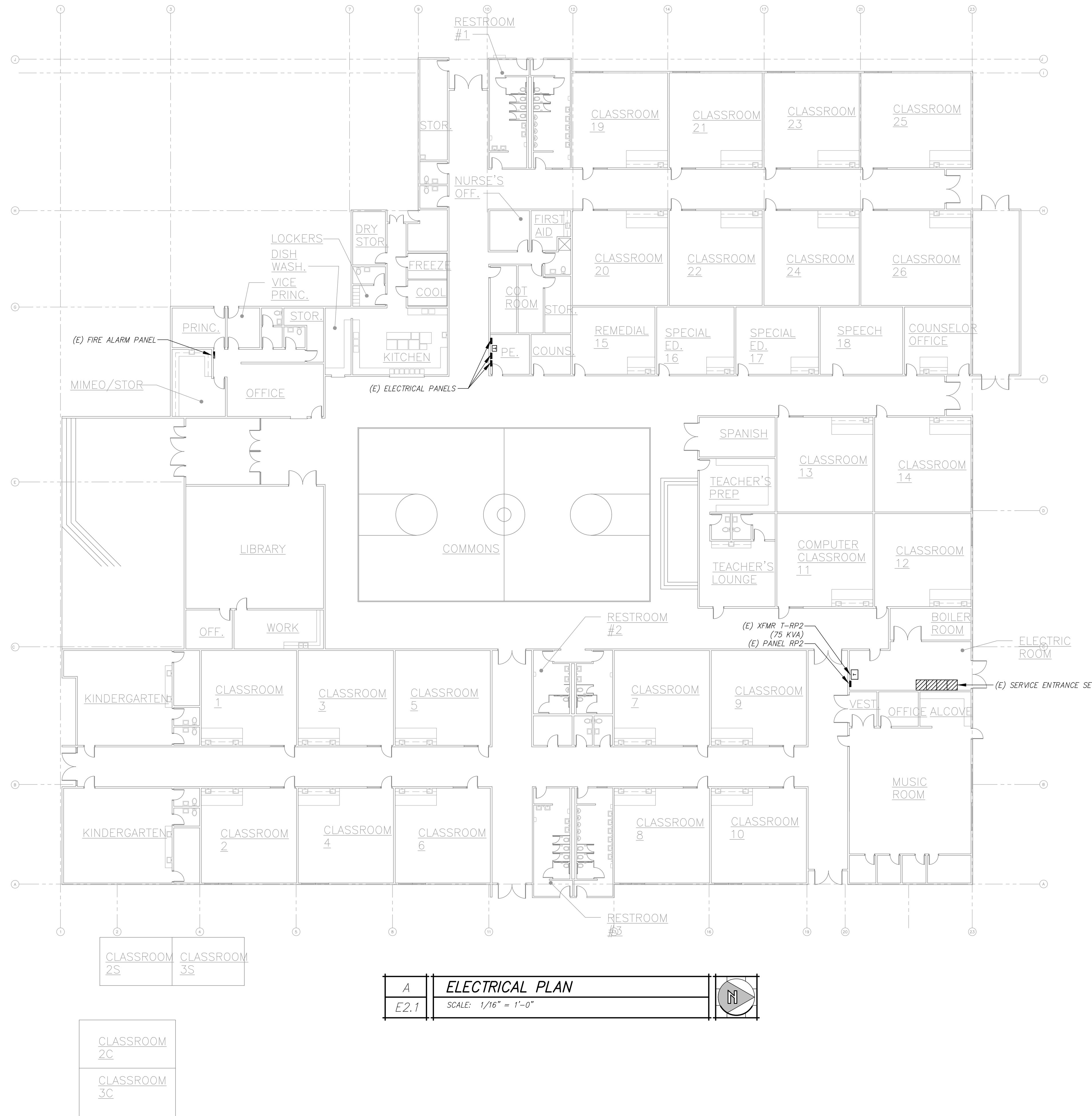
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ROOFTOP UNIT REPLACEMENTS
ROOF ELECTRICAL DEMOLITION PLAN

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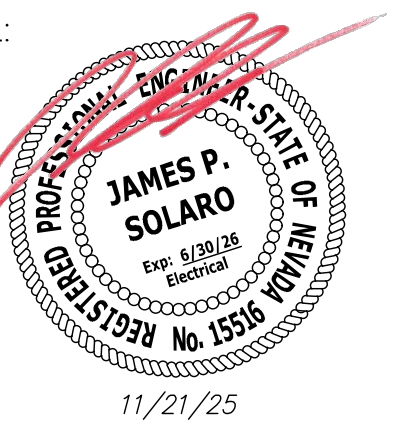


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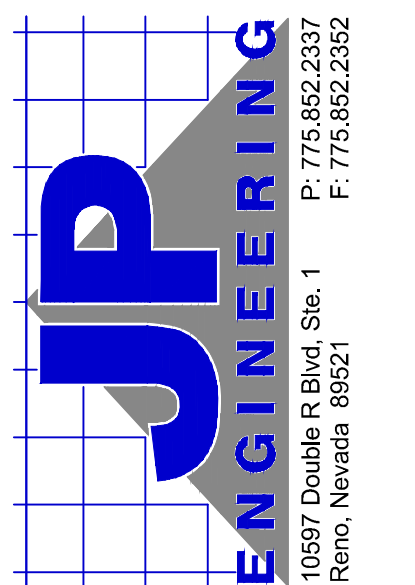
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ELECTRICAL PLAN

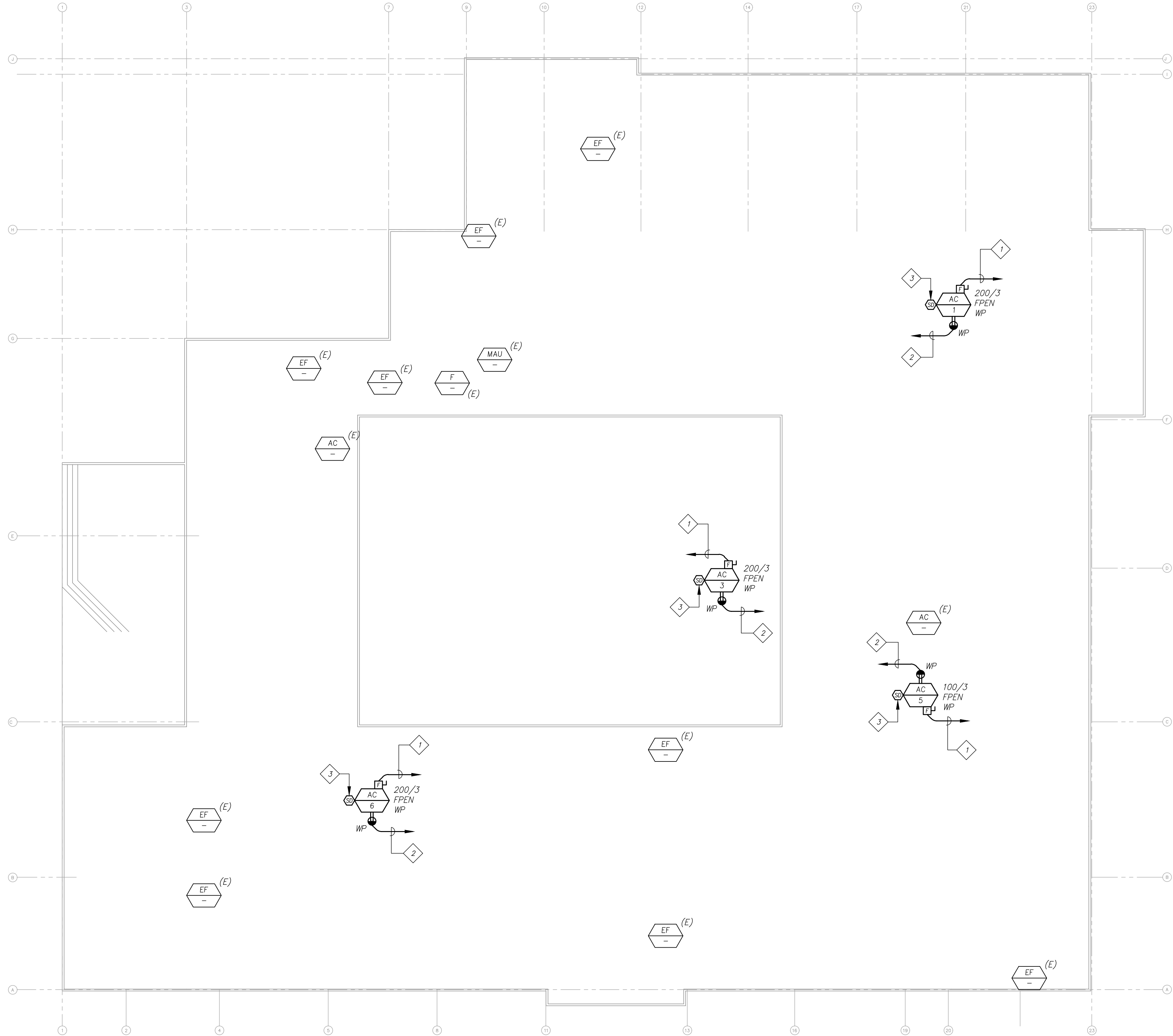
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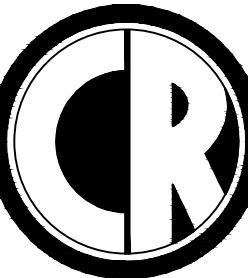
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E2.2

ROOF ELECTRICAL PLAN

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

N

SHEET NOTES	
1	CONTRACTOR SHALL UTILIZE EXISTING CONDUIT MADE AVAILABLE FROM DEMOLITION. SEE SINGLE LINE DIAGRAM B/E0.2 FOR NEW CONDUCTOR AND GROUND REQUIREMENTS.
2	UTILIZE EXISTING BRANCH CIRCUITRY MADE AVAILABLE THROUGH DEMOLITION.
3	CONTRACTOR SHALL INTERCONNECT NEW DUCT-MOUNTED SMOKE DETECTORS TO EXISTING FIRE ALARM SYSTEM, EXISTING FIRE ALARM SYSTEM IS EDWARDS EST 3.

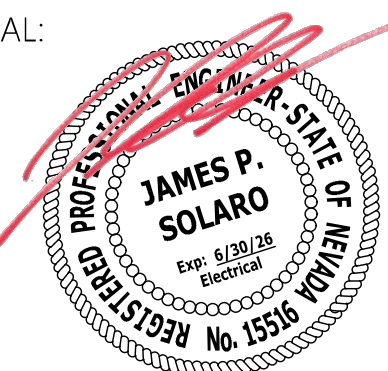


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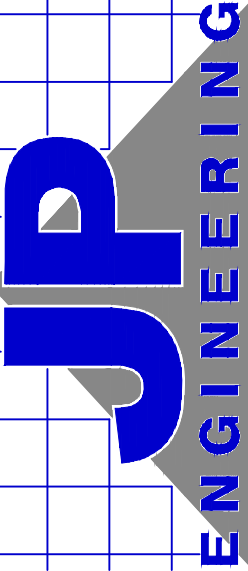
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ROOF ELECTRICAL PLAN

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E2.2