480 VOLT ROOF TOP UNIT SCHEDULE EDISON JR HIGH

MARK	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY (TONS)	HEATING CAPACITY INPUT (MBH)	CFM	TOTAL E.S.P. (IWG)	ELECTRICAL DATA				WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE	H.P.	M.C.A.	M.O.P.			
RTU-140,143,145	LENNOX	LGM036U4E	3	108/81	1200	1.3	460/3/60	1-1/2	11	15	962	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-154,161,213,221,222	LENNOX	LGM036U4E	3	108/81	1200	1.0	460/3/60	1-1/2	11	15	962	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-166,169	LENNOX	LGM036U4E	3	108/81	1200	0.8	460/3/60	1-1/2	11	15	962	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-138,139,141,142,144,149,150	LENNOX	LGM048U4E	4	108/81	1600	1.3	460/3/60	1-3/4	13	15	1009	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-210,214,215,216,217,218,219,226,227,228,229	LENNOX	LGM048U4E	4	108/81	1600	1.0	460/3/60	1-3/4	13	15	1009	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-146,147	LENNOX	LGM060U4E	5	108/81	2000	1.3	460/3/60	1-3/4	14	20	1033	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-211,212,220,225,230	LENNOX	LGM060U4E	5	108/81	2000	1.0	460/3/60	1-3/4	14	20	1033	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-165,168	LENNOX	LGM060U4E	5	108/81	2000	0.8	460/3/60	1-3/4	14	20	1033	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-136,137,148	LENNOX	LGM074U4E	6	150/113	2400	1.3	460/3/60	1-3/4	15	20	1033	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-223,224	LENNOX	LGM074U4E	6	150/113	2400	1.0	460/3/60	1-3/4	15	20	1033	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-151,162	LENNOX	LGM102U4E	8.5	240/156	3400	1.3	460/3/60	3-3/4	21	25	1490	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-152,153	LENNOX	LGM120U4E	10	240/156	4000	1.0	460/3/60	3-3/4	24	30	1525	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-167	LENNOX	LGM120U4E	10	240/156	4000	0.8	460/3/60	3-3/4	24	30	1525	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-163,164	LENNOX	LGM156U4M	13	360/234	5000	0.8	460/3/60	3	31	35	2690	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R

NOTES:
1. REFER TO PROJECT MANUAL SPECIFICATIONS FOR ADDITIONAL FEATURES, REQUIREMENTS, AND SEQUENCE OF OPERATION.
2. R410A REFRIGERANT.
3. INTERLOCK OUTDOOR AIR DAMPER WITH CO_2 SENSOR FOR PROVISIONAL DEMAND CONTROL VENTILATION.
4. INTERLOCK UNIT OPERATION WITH BUILDING MANAGEMENT SYSTEM FOR EMERGENCY SHUT DOWN. REFER TO PLANS FOR EMERGENCY SHUT DOWN SWITCH.
5. CONTROL DEVICES SHALL BE CAPABLE OF 2 STAGES OF COOLING AND UP TO TWO STAGES OF HEATING. REFER TO HEATING CAPACITIES LISTED ABOVE FOR UNITS WITH TWO STAGE HEATING.

ACCESSORIES:
A. FACTORY 24" ROOF CURB TO MATCH SPECIFIED UNIT. CONTRACTOR TO PROVIDE INSULATION IN BOTTOM OF CURB.
B. LOW AMBIENT KIT (COOLING AVAILABLE DOWN TO 0°F.)
C. CONCENTRIC DIFFUSER.
D. DIRTY FILTER SWITCH.
E. FACTORY OR FIELD SUPPLIED HAIL GUARD.
F. FACTORY INSTALLED ADDRESSABLE SMOKE DETECTOR, WITH ADDRESSABLE RELAY MODULE AND SAMPLING TUBE.
G. TIME DELAY.
H. CONTROL SYSTEM BY OWNER APPROVED CONTROL CONTRACTOR.
I. BAPI MODEL BA/CO-B4 CARBON MONOXIDE SENSOR.
J. ECONOMIZER WITH DUAL ENTHALPY CONTROL AND POWERED EXHAUST.
K. CONDENSATE OVERFLOW SENSOR.
L. SUPCO MODEL SLP0530 PRESSURE SENSOR.
M. TIE DOWN CLIPS
N. 2" MERV 13 FILTER.
O. HUMIDITROL (HOT GAS REHEAT FOR DEHUMIDIFICATION).
P. STAINLESS STEEL HEAT EXCHANGER
R. OUTSIDE AIR MOTORIZED DAMPER INTERLOCKED WITH CO2 SENSOR. DAMPER TO BE CONTROLLED VIA ROOF TOP UNIT CONTROLLER LOGIC FOR PROPORTIONAL DEMAND CONTROL VENTILATION. (DAMPER SHALL GO TO FULL CLOSED POSITION WHEN INDOOR FAN SHUTS DOWN).
S. CURB ADAPTER
T. SIDE DISCHARGE

208 VOLT ROOF TOP UNIT SCHEDULE EDISON JR HIGH

MARK	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY (TONS)	HEATING CAPACITY INPUT (MBH)	CFM	TOTAL E.S.P. (IWG)	ELECTRICAL DATA				WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE	H.P.	M.C.A.	M.O.P.			
RTU-159,160	LENNOX	LGM036U4E	3	108/81	1200	1.0	208/3/60	1-1/2	20	25	962	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-158	LENNOX	LGM048U4E	4	108/81	1600	1.0	208/3/60	1-3/4	26	35	1009	1,2,3,4,5	A,B,D,E,G,H,J,K,L,M,N,O,P,R
RTU-157	LENNOX	LGM074U4E	6	150/113	2400	1.0	208/3/60	1-3/4	30	45	1033	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R
RTU-156	LENNOX	LGM092U4E	7.5	180/117	3000	1.0	208/3/60	3-3/4	41	50	1460	1,2,3,4,5	A,B,D,E,F,G,H,J,K,L,M,N,O,P,R

NOTES:
1. REFER TO PROJECT MANUAL SPECIFICATIONS FOR ADDITIONAL FEATURES, REQUIREMENTS, AND SEQUENCE OF OPERATION.
2. R410A REFRIGERANT.
3. INTERLOCK OUTDOOR AIR DAMPER WITH CO_2 SENSOR FOR PROVISIONAL DEMAND CONTROL VENTILATION.
4. INTERLOCK UNIT OPERATION WITH BUILDING MANAGEMENT SYSTEM FOR EMERGENCY SHUT DOWN. REFER TO PLANS FOR EMERGENCY SHUT DOWN SWITCH.
5. CONTROL DEVICES SHALL BE CAPABLE OF 2 STAGES OF COOLING AND UP TO TWO STAGES OF HEATING. REFER TO HEATING CAPACITIES LISTED ABOVE FOR UNITS WITH TWO STAGE HEATING.

ACCESSORIES:
A. FACTORY 24" ROOF CURB TO MATCH SPECIFIED UNIT. CONTRACTOR TO PROVIDE INSULATION IN BOTTOM OF CURB.
B. LOW AMBIENT KIT (COOLING AVAILABLE DOWN TO 0°F.)
C. CONCENTRIC DIFFUSER.
D. DIRTY FILTER SWITCH.
E. FACTORY OR FIELD SUPPLIED HAIL GUARD.
F. FACTORY INSTALLED ADDRESSABLE SMOKE DETECTOR, WITH ADDRESSABLE RELAY MODULE AND SAMPLING TUBE.
G. TIME DELAY.
H. COMFORTSENSE 8500 SENSOR WITH CO2.
I. BAPI MODEL BA/CO-B4 CARBON MONOXIDE SENSOR.
J. ECONOMIZER WITH DUAL ENTHALPY CONTROL AND POWERED EXHAUST.
K. CONDENSATE OVERFLOW SENSOR.
L. SUPCO MODEL SLP0530 PRESSURE SENSOR.
M. TIE DOWN CLIPS
N. 2" MERV 13 FILTER.
O. HUMIDITROL (HOT GAS REHEAT FOR DEHUMIDIFICATION).
P. STAINLESS STEEL HEAT EXCHANGER
R. OUTSIDE AIR MOTORIZED DAMPER INTERLOCKED WITH CO2 SENSOR. DAMPER TO BE CONTROLLED VIA ROOF TOP UNIT CONTROLLER LOGIC FOR PROPORTIONAL DEMAND CONTROL VENTILATION. (DAMPER SHALL GO TO FULL CLOSED POSITION WHEN INDOOR FAN SHUTS DOWN).
S. CURB ADAPTER
T. SIDE DISCHARGE

MINI SPLIT SYSTEM OUTDOOR UNIT SCHEDULE

MARK (OUTDOOR UNIT)	UNITS SERVED	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SEER (EER)	ELECTRICAL DATA			WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE	MCA	MOCP			
HPU-1	FCU-1A,1B	LENNOX	MLB018S4M	19.0	20.0	22.0	208/1/60	20	25	150	1,2,3,4	A,B,C
HPU-2	FCU-2A,2B	LENNOX	MLB018S4M	19.0	20.0	22.0	208/1/60	20	25	150	1,2,3,4	A,B,C
HPU-3	FCU-3	LENNOX	MLB009S4S	9.0	10.0	20.5	208/1/60	15	15	80	1,2,3,4	A,B,C
HPU-4	FCU-4A,4B,4C,4D	LENNOX	MLB036S4M	36.0	36.4	21.8	208/1/60	35	50	255	1,2,3,4	A,B,C
HPU-5	FCU-5	LENNOX	MLB012S4S	12.0	12.0	21.5	208/1/60	15	15	80	1,2,3,4	A,B,C

NOTES:
1. COOLING CAPACITIES ARE BASED ON UNIT CFM SUPPLY AIR AND 80°F, EDB/67°F, EWB, WITH 95°F AIR ENTERING CONDENSER. EER IS BASED ON ARI CONDITIONS.
2. REFER TO PROJECT MANUAL SPECIFICATIONS FOR ADDITIONAL FEATURES AND REQUIREMENTS.
3. HEATING CAPACITIES ARE BASED ON 47°F O.A., 70°F EAT AT INDOOR FCU.
4. INTERLOCK OPERATION WITH INDOOR FCU'S, INDOOR UNIT POWERED BY OUTDOOR HEAT PUMP UNIT.

ACCESSORIES:
A. HAIL GUARDS.
B. R410A REFRIGERANT.
C. REDI-CHARGED REFRIGERANT PIPING.

MINI SPLIT SYSTEM FAN COIL UNIT SCHEDULE

MARK (INDOOR UNIT)	SERVED FROM	AREA SERVED	MANUFACTURER	MODEL NO.	CFM	NOMINAL COOLING (MBH)	NOMINAL HEATING (MBH)	ELECTRICAL		WT. (LBS.)	NOTES	ACCESSORIES
								VOLTAGE	RLA			
FC-1A,1B	HPU-1	CORRIDOR	LENNOX	M22A009S4S	300	9.0	9.9	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-2A,2B	HPU-2	CORRIDOR	LENNOX	M22A009S4S	300	9.0	9.9	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-3	HPU-3	OFFICE	LENNOX	M22A009S4S	255	9.0	9.9	208/1/60	0.9	32	1,2,3,4,7	A,B,C,D,E,F
FC-4A,4B,4C,4D	HPU-4	OFFICE	LENNOX	M22A009S4S	300	9.0	9.9	208/1/60	0.9	32	1,2,3,4,7	A,B,C,D,E,F
FC-5	HPU-5	CORRIDOR	LENNOX	M22A012S4	380	12.0	12.0	208/1/60	1.0	41	1,2,3,4,5	A,B,C,D,E,F

NOTES:
1. COOLING CAPACITY LISTED BASED ON 95°F O.A., 80°F DB/67°F WB EAT.
2. R410A REFRIGERANT.
3. POWERED FROM OUTDOOR HEAT PUMP.
4. HEATING CAPACITY LISTED BASED ON 47°F O.A., 70° EAT.
5. FAN CFM LISTED IS FOR WET COIL ON HI SETTING.
6. FAN CFM LISTED IS FOR WET COIL ON MEDIUM SETTING.
7. FAN CFM LISTED IS FOR WET COIL ON LOW SETTING.
8. INTERLOCK FAN COIL UNIT WITH BUILDING MANAGEMENT SYSTEM FOR EMERGENCY SHUT DOWN.

ACCESSORIES:
A. FILTERS. (CLEANABLE)
B. ELECTRONIC EXPANSION VALVE.
C. INTERLOCK OPERATION WITH OUTDOOR HEAT PUMP UNIT.
D. HARD WIRED, WALL-MOUNTED REMOTE CONTROLLER.
E. CONDENSATE PUMP.
F. SUPCO MODEL SLP2565 PRESSURE SENSOR LOCATED AT INDOOR UNIT.

GAS PIPING GENERAL NOTES:

A. WORK SHOWN ON THE DRAWINGS IS TO BE COORDINATED WITH WORK OF ALL OTHER TRADES AND ACTUAL CONDITIONS OF CONSTRUCTION.

B. FURNISH AND INSTALL INDIVIDUAL GAS SHUT-OFF VALVE, UNION, AND 6 INCH DIRT LEG AT EACH GAS FIRED APPLIANCE AND BUILDING PENETRATION THRU ROOF OR EXTERIOR WALLS.

C. GAS SHUT-OFF VALVE SHALL BE FULL SIZE OF REQUIRED EQUIPMENT BRANCH RUNOUT PIPE SIZE BASED ON GAS PRESSURE AND FURTHERMOST PIPE DISTANCE FROM GAS METER OR POINT OF PRESSURE REDUCTION. RUNOUT PIPE SHALL NOT BE REDUCED TO EQUIPMENT CONNECTION PIPE SIZE UNTIL IMMEDIATELY AHEAD OF CONNECTION TO EQUIPMENT. VALVES SHALL NOT BE LOCATED ABOVE CEILINGS.

D. BRANCH GAS PIPING SHALL BE CONNECTED TO THE TOP OR SIDE OF HORIZONTAL PIPING.

E. GAS PIPING SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS UNLESS PROPERLY SLEEVED AND VENTED TO THE OUTSIDE OF THE BUILDING. WHERE VERTICAL CHASES ENCLOSE PIPE RISERS, CHASES SHALL BE FIRE RATED AND VENTILATED AT THE TOP WITH FREE AREA VENTS EQUAL TO OR GREATER THAN ONE-HALF THE SERVICE PRESSURE IN INCHES WATER COLUMN TIMES THE NOMINAL DIAMETER OF THE PIPE. GAS PIPING JOINTS WITHIN CONCEALED SPACES SHALL BE WELDED.

F. GAS PIPING SHALL NOT BE INSTALLED BELOW BUILDING SLAB UNLESS SPECIFICALLY INDICATED. WHERE INDICATED TO BE BELOW SLAB, PIPING SHALL BE SLEEVED AND VENTED TO THE OUTSIDE.

G. INSTALL GAS PIPING AT UNIFORM GRADE OF 0.1 PERCENT SLOPE UPWARD TOWARDS RISERS.

H. USE ECCENTRIC REDUCERS TO MAKE REDUCTIONS IN PIPE SIZES IN HORIZONTAL PIPING. INSTALL FITTINGS WITH LEVEL SIDE ON BOTTOM OF PIPING.

I. INSTALL PIPING SO AS TO ALLOW FOR SERVICE AND MAINTENANCE OF EQUIPMENT AND APPLIANCES.

J. OPEN ENDS OF GAS PIPING SHALL BE CAPPED DURING CONSTRUCTION TO PREVENT INTRODUCTION OF FOREIGN MATERIALS. VALVE AND PIPING OUTLETS SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND LEFT CLOSED UNTIL FINAL CONNECTION TO EQUIPMENT OR APPLIANCES.

K. ANCHOR PIPING TO CONTROL PIPE MOVEMENT. LOCATION OF ANCHOR POINTS SHALL BE APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.

L. PROVIDE EXPANSION LOOP IN GAS PIPING WHERE BUILDING EXPANSION JOINTS ARE CROSSED.

M. PROVIDE DOUBLE 90 DEGREE OFFSETS IN PIPING RUNOUTS TO ROOF MOUNTED GAS FIRED EQUIPMENT AND ROOF PENETRATIONS. INSTALL PIPING WITH DISTANCE BETWEEN ELBOWS TO ALLOW FOR MOVEMENT OF PIPING SYSTEM.

N. PLUMBING CONTRACTOR SHALL WIRE BRUSH AND PAINT ALL GAS PIPE AND ACCESSORIES EXPOSED TO WEATHER. PAINT COLOR TO BE PER ARCHITECT'S DIRECTION, UNLESS SPECIFICALLY DICTATED BY LOCAL CODE.

O. GAS PIPING ROOF SUPPORTS TO BE SPACED AS REQUIRED FOR PIPE SIZE INSTALLED PER SPACING LISTED IN SPECIFICATIONS FOR PIPE HANGERS. PIPING SUPPORT SHALL ELEVATE PIPING ABOVE ROOF AND BE SET ON ROOF TREAD MAT EXTENDING A MINIMUM OF 6 INCHES BEYOND SUPPORT ON ALL SIDES. CONTAINMENT STRAP SHALL BE A MINIMUM OF TWO PIPE SIZE LARGER THAN INSTALLED PIPE SIZE AND ALLOW FOR TWO DEGREES OF PIPE MOVEMENT WITHOUT MOVING PIPE SUPPORT.

P. LOCATE PIPING SUPPORTS AWAY FROM PIPE JOINTS TO ALLOW FREE MOVEMENT OF PIPING WITHOUT INTERFERENCE OF PIPE SUPPORTS.

Q. GAS PIPE ROOF PENETRATION TO BE MADE THROUGH HOODED ROOF CURB OR OTHER METHOD APPROVED BY THE ARCHITECT AND ROOFING MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS TO MAINTAIN ROOF WARRANTY.

R. EACH ABOVE GROUND PORTION OF METAL PIPING GAS SYSTEM UPSTREAM OF EQUIPMENT SHUT-OFF VALVES SHALL BE ELECTRICALLY CONTINUOUS AND BONDED TO GROUNDING ELECTRODE PER NFPA 70 AND NFPA 54.

H.V.A.C. GENERAL DEMOLITION NOTES:

A. ALL CUTTING AND PATCHING SHALL BE DONE IN COMPLIANCE WITH ARCHITECT'S DIRECTIVE AS TO METHOD AND PROCEDURES.

B. THE CONTRACTOR SHALL SCHEDULE WORK WITH THE OWNER'S REPRESENTATIVE. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED AND SPACES CLEANED AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL MAKE PROVISIONS FOR PLASTIC SHEETING TO CONTROL CONSTRUCTION DUST WITHIN AREA OF CONSTRUCTION.

C. MECHANICAL UNITS SERVING AREA OF CONSTRUCTION SHALL BE "OFF" DURING WORK TO PREVENT CONSTRUCTION DUST FROM BEING DISTRIBUTED TO OTHER AREAS OF THE BUILDING. WHERE UNITS MUST CONTINUE TO OPERATE, RETURN AIR FROM AREA OF DEMOLITION SHALL BE FILTERED AT DUCT INLET. FILTERS SHALL BE CHANGED WHEN HOLDING CAPACITY IS REACHED.

D. ALL REMOVED HVAC EQUIPMENT SHALL BE RETURNED TO THE OWNER STORAGE LOCATION AS DIRECTED. CARE SHALL BE TAKEN IN THE REMOVAL OF EQUIPMENT TO MAINTAIN SALVAGE VALUE. WHERE EQUIPMENT IS FOUND TO BE DAMAGED OR BEYOND SERVICEABLE CONDITION, THE CONTRACTOR SHALL IDENTIFY EQUIPMENT TO THE OWNER FOR OBSERVATION PRIOR TO REMOVAL.

E. WHERE EXISTING ACTIVE SYSTEMS ARE FOUND TO BE DETERIORATED AND REQUIRING REPLACEMENT, PROVIDE A WRITTEN REPORT TO THE OWNER IDENTIFYING WORK REQUIRED. INCLUDE A PROPOSAL FOR PERFORMING THE WORK WITH COSTS AND SCHEDULE TO COMPLETION. DO NOT PROCEED WITH REPAIR WORK UNTIL THE OWNER HAS PROVIDED A WRITTEN DIRECTIVE ACCEPTING THE SUBMITTED PROPOSAL.

F. ABANDONED DUCTWORK AND PIPING SYSTEMS TO BE REMOVED THROUGHOUT AREA OF REMODEL. THIS INCLUDES SYSTEMS INVOLVED WITH THIS REMODEL WORK AND PREVIOUSLY ABANDONED AND MODIFIED SYSTEMS.

H.V.A.C. GENERAL NOTES:

A. WORK SHOWN ON THE DRAWINGS IS TO BE COORDINATED WITH WORK OF ALL OTHER TRADES AND ACTUAL CONDITIONS OF CONSTRUCTION.

B. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH CODE REQUIREMENTS AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, ADHERING TO REQUIRED CLEARANCES FOR OPERATION AND SERVICING.

C. ELECTRICAL REQUIREMENTS OF FURNISHED AND INSTALLED DIVISION 23 EQUIPMENT AND SYSTEM COMPONENTS SHALL BE PROVIDED IN WRITING BY THE DIVISION 23 CONTRACTOR TO THE DIVISION 26 CONTRACTOR FOR INCLUSION AND COORDINATION OF DIVISION 26 WORK.

D. PROVIDE FLEXIBLE DUCT CONNECTION TO EXHAUST FANS, SUPPLY FANS, ROOF TOP UNITS, FAN COIL UNITS, FURNACES, AIR HANDLING EQUIPMENT, ETC.

E. DUCTWORK CONSTRUCTION AND INSTALLATION SHALL BE PER MOST RECENT SMACNA STANDARDS FOR PRESSURE AND DUCT DIMENSION OF SYSTEM INSTALLATION. ALL DUCT JOINTS SHALL BE SEALED AS NOTED IN THE SPECIFICATIONS.

F. DUCT SIZES SHOWN ON DRAWING ARE INSIDE CLEAR.

G. MAKE TRANSITION FROM DUCTWORK SIZES SHOWN ON THE DRAWINGS TO EQUIPMENT DUCT CONNECTION SIZES. VERIFY EQUIPMENT CONNECTION SIZES WITH FACTORY CERTIFIED DRAWINGS. MAKE ALL TRANSITIONS PER MOST RECENT SMACNA STANDARDS.

H. ALL MAJOR BRANCH DUCTS SHALL BE CONSTRUCTED USING OPPOSED BLADE DAMPERS WITH LOCKING DEVICE OR WITH SPLITTER DAMPER WITH LOCKING DEVICE FOR BALANCE OF DUCT SYSTEM.

I. TURNING VANES SHALL BE INSTALLED IN ALL RECTANGULAR 90 DEGREE ELBOWS IN SUPPLY, RETURN AND EXHAUST DUCTWORK, AND AS INDICATED ON THE DRAWINGS.

J. USE MINIMUM LENGTH FLEXIBLE DUCT TO AIR DEVICES, (MAXIMUM 5 FT.). USE FLEX DUCT ONLY IN FULLY ACCESSIBLE CEILING SPACES. PROVIDE 90 DEGREE SHEET METAL ELBOW AT CEILING DIFFUSER NECK CONNECTION. PROVIDE SADDLE UNDER FLEXIBLE DUCT HANGER TO SUPPORT DUCT AND PREVENT "PINCHING" OF DUCTWORK. FLEXIBLE DUCT SHALL BE INSTALLED SO AS NOT TO REDUCE CROSS SECTION AREA OF DUCT.

K. WHERE DUCT RUNOUTS FROM SECTIONS OF MAIN DUCTWORK TO DIFFUSERS ARE UNEQUAL IN EQUIVALENT LENGTH AND RESULT IN SIGNIFICANT DIFFERENCES IN PRESSURE DROP WHICH REQUIRE PINCHING TAKEOFF DAMPER OR DAMPER AT GRILLE FACE, ADDITIONAL FLEXIBLE DUCT AND/OR ADDITIONAL CHANGES IN DIRECTION SHALL BE INSTALLED IN RUNOUT DUCT WITH LEAST PRESSURE DROP TO BRING DUCTS TO EQUIVALENT PRESSURE LOSSES.

L. WHERE DUCT TAKE-OFFS TO GRILLES ARE NEAR THE UNIT AND RESULT IN PRESSURE DROPS SIGNIFICANTLY LESS THAN THE FURTHERMOST DIFFUSER BRANCH, THE RUNOUT DUCT SIZE TO THE GRILLE SHALL BE REDUCED FROM THE SCHEDULED RUNOUT SIZE TO INCREASE THE PRESSURE DROP AND PREVENT THE NEED TO "PINCH" THE DAMPER AT THE TAKE-OFF AND/OR GRILLE FACE.

M. THE CONTRACTOR SHALL COORDINATE ROUTING AND SIZE OF DUCTWORK WITH ACTUAL FINAL BUILDING CONDITIONS OF STRUCTURE SIZE AND LOCATION, LIGHT LOCATIONS, ARCHITECTURAL FEATURES, AND WORK OF OTHER TRADES. WHERE DUCT SIZES MUST BE REVISED FROM THOSE SHOWN ON THE DRAWINGS, MAINTAIN SAME CROSS SECTIONAL AREA, VELOCITY, AND PRESSURE DROP. WHEN NECESSARY, REROUTE DUCT TO CLEAR OBSTRUCTIONS WITH MINIMUM NUMBER OF FITTINGS AND ELEVATION CHANGES. WHERE DUCT MUST BE SIGNIFICANTLY ALTERED FROM THAT SHOWN ON THE DRAWINGS, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING.

N. EXPOSED DUCTWORK AND ACCESSORIES IN FINISHED AREAS TO BE PAINTED AS DIRECTED BY ARCHITECT.

O. DIVISION 23 CONTRACTOR SHALL PROVIDE TEST AND BALANCE OF HVAC SYSTEMS. TEST AND BALANCE SHALL BE PERFORMED AND REPORTED AS DESCRIBED BY NEBB OR ABC. FILTERS SHALL BE NEW AND CLEAN, DUCTWORK CLEAN, AND EQUIPMENT CONTROLS AND DEVICES FULLY FUNCTIONAL AT THE TIME OF PERFORMING BALANCE WORK.

P. MAINTAIN MINIMUM 10'-0" CLEAR BETWEEN ANY FLUE, VENT OR TOILET EXHAUST AND OUTSIDE AIR INTAKES. WHERE HORIZONTAL DISTANCE CANNOT BE PROVIDED, EXTEND FLUE VENTS 3'-0" ABOVE OUTSIDE AIR INTAKE.

Q. SMOKE DETECTORS SHALL BE REQUIRED IN ALL HVAC UNITS WITH 2000 CFM AND GREATER CAPACITY. SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23. DIVISION 23 WORK SHALL COORDINATE WITH DIVISION 26 CONTRACTOR. INSTALL DETECTORS IN RETURN AIR. PROVIDE REMOTE INDICATOR AND TEST STATION WHERE UNITS ARE NOT READILY VISIBLE FOR INSPECTION.

R. INSTALL ALL MOTOR DRIVEN EQUIPMENT WITH VIBRATION ISOLATORS AND OR PADS TO REDUCE NOISE TRANSFER. TYPE AND METHOD OF ISOLATION SHALL BE IN CONFORMANCE WITH THOSE DESCRIBED IN THE SPECIFICATIONS FOR THE DUTY, TYPE, AND APPLICATION OF THE EQUIPMENT.

S. ALL EQUIPMENT SHALL BE PERMANENTLY LABELED WITH SIGNAGE SECURED TO EQUIPMENT.

T. CONDENSATE PIPING SHALL BE AS NOTED ON THE DRAWING, BUT IN NO CASE LESS THAN 3/4 INCHES.

U. ROUTE CONDENSATE PIPING TO APPROVED DISCHARGE LOCATION. PROVIDE CONDENSATE TRAP WITH CLEANOUTS AND VENT ON DISCHARGE SIDE OF TRAP FOR ALL UNITS WITH COOLING COILS. TRAP DEPTH SHALL BE A MINIMUM OF THE UNIT TOTAL PRESSURE PLUS 2 INCHES.

V. SUPPORT CONDENSATE PIPING ABOVE ROOF AS RECOMMENDED BY ROOFING MANUFACTURER TO MAINTAIN ROOF WARRANTY. SPACE SUPPORTS SAME AS NOTED FOR PIPE HANGERS.

W. CONDENSATE PIPING INSTALLED WITHIN THE BUILDING SHALL BE FULLY INSULATED AND PROVIDED WITH VAPOR BARRIER.

X. FIRE DAMPERS SHALL BE MINIMUM 98% FREE AREA DYNAMIC TYPE. PROVIDE FIRE DAMPERS IN ALL DUCT PENETRATIONS TO FIRE RATED ASSEMBLIES. PROVIDE ACCESS DOORS IN DUCTWORK AND FIRE RATED ASSEMBLIES FOR OBSERVATION AND MAINTENANCE OF DAMPERS. REFER ARCHITECTURAL DRAWINGS FOR LOCATION, RATING, AND ASSEMBLY DEFINITION OF FIRE RATED WALL, CEILING, AND FLOOR ASSEMBLIES.

Y. REFER TO ARCHITECTURAL DRAWINGS AND DIVISION 1 SPECIFICATIONS FOR DESCRIPTION OF ALTERNATES.

TULSA PUBLIC SCHOOLS

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CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA 7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
MECHANICAL GENERAL NOTES AND SCHEDULES

DATE: 07.03.2023

SHEET NO.
M001

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PARAGON ROOF TOP UNIT SCHEDULE PHASE I

FAN INFORMATION									ELECTRICAL INFORMATION					COOLING INFORMATION											REHEAT INFORMATION					GAS HEAT INFORMATION				
MARK	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR		MIXED AIR		LEAVING AIR			CAPACITY		IEER	ISMRE	DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	NOTES
														DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.			DB	WB	REHEAT	MAX						
RTU-155	CASRTU3-I.400-18-20T	CAPTIVEAIRE	18P-3	0	3400	3400	2661	0.5	5.00	3	460	42.9	45A	85.5°F	78.0°F	85.5°F	78.0°F	57.1°F	55.2°F	54.0°F	264.0 MBH	101.3 MBH	18.2	6.0	70.0°F	60.2°F	47.9 MBH	129.6 MBH	146.6 LBS/HR	NATURAL	395062	320000	78°F	ALL APPLY

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION WITH R-13 INSULATION-MINIMUM 20GA EXTERIOR WITH 14GA BASE

NOTES:
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. 15 DEGREE LOW AMBIENT OPERATION
16. HAIL GUARD FOR CONDENSING COIL
17. DOWN DISCHARGE/DOWN RETURN
18. OWNER PROVIDED CARBON MONOXIDE SENSOR
19. SUPCO MODEL SLP0530 PRESSURE SENSOR

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	SERVICE	MANUFACTURER	STYLE	MODEL NO.	MATERIAL	MOUNTING	FACE	NECK SIZE	FINISH	NOTES
A	SUPPLY	TITUS	SQUARE CEILING	TMS	STEEL	LAY-IN	24x24	PER PLANS	WHITE	1,2,5
B	RETURN	TITUS	1/2" SPACING-35° DEFLECTION	355RL	STEEL	LAY-IN	24x24	22x22	WHITE	1,2,3,4,5,6
C	RETURN	TITUS	1/2" SPACING-35° DEFLECTION	355RL	STEEL	LAY-IN	12x24	10x22	WHITE	1,2,3,4,5,6
D	SUPPLY	TITUS	EGGCRATE	50F	ALUMINUM	LAY-IN	24x24	22x22	WHITE	1,2,5
E	SUPPLY	TITUS	SQUARE CEILING	TMS	ALUMINUM	LAY-IN	24x24	PER PLANS	WHITE	1,2,5
F	RETURN	TITUS	1/2" SPACING-35° DEFLECTION	355RL	ALUMINUM	LAY-IN	24x24	22x22	WHITE	1,2,3,4,5,6
G	SUPPLY	TITUS	SQUARE STEP FACE	TMS	STEEL	LAY-IN	12X12	PER PLANS	WHITE	1,2,3,5,10
H	RETURN	TITUS	HVY DUTY,1/2",30°	33RL	STEEL	SURFACE	FLANGE	48x42	WHITE	2,7,11

NOTES:
1. COORDINATE LOCATION OF AIR DEVICES WITH CEILING GRID, LIGHT LOCATIONS, STRUCTURAL MEMBERS AND ARCH. FEATURES.
2. FINAL FINISH OF AIR DEVICES SHALL BE VERIFIED WITH OWNER.
3. PROVIDE PLENUM FOR DUCT CONNECTION OR SQUARE TO ROUND NECK, AS REQUIRED.
4. PAINT DUCT INTERIOR FLAT BLACK BEHIND AIR DEVICE.
5. PROVIDE OPPOSED BLADE DAMPER.

NOTES:
6. PROVIDE WITHOUT SCREW HOLES.
7. PROVIDE FOAM GASKET AT FRAME.
8. PROVIDE 1" FILTER FRAME AND FILTER.
9. COUNTER SUNK SCREW HOLES.
10. PANEL MOUNTED FRAME.
11. HEAVY DUTY MOUNTING FRAME

EXHAUST FAN SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL NO.	CFM	E.S.P. I.W.G.	MAX RPM	SONES	H.P. (WATTS)	ELECTRICAL VOLTAGE	TYPE	NOTES	ACCESSORIES
EF-1	MENS RR	COOK	GN-622	300	0.625	1400	3.0	(148)	115/1/60	CEILING	2,3,6,7	GBD,RH
EF-2	WOMENS RR	COOK	GN-622	300	0.625	1400	3.0	(148)	115/1/60	CEILING	2,3,6,7	GBD,RH
EF-3	UTILITY	COOK	GC-148	100	0.5	1075	3.0	(32)	115/1/60	CEILING	2,3,6,7	GBD,CB,RH
EF-4	RESTROOM	COOK	GC-148	100	0.5	1075	3.0	(32)	115/1/60	CEILING	2,3,6,7	GBD,CB,RH
EF-5	KITCHEN	CAPTIVE AIRE	DU180HFA	2350	1.50	1177	18.5	2.00	208/3/60	ROOF	6,7,9,10	VCB,HK
EF-6	KITCHEN	CAPTIVE AIRE	DU85HFA	1175	1.25	1261	17.5	1.00	208/1/60	ROOF	6,7,9,10	VCB,HK
EF-7	GIRL RR	COOK	ACED120C17D	1500	0.75	1725	14.3	1/3	208/1/60	ROOF	1,3,6,7	GBD,BS,CB
EF-8	BOYS RR	COOK	ACED120C17D	1500	0.75	1725	14.3	1/3	208/1/60	ROOF	1,3,6,7	GBD,BS,CB

NOTES:
1. TIMER CONTROLLED.
2. SWITCH WITH LIGHTS.
3. SPEED CONTROL SWITCH AT UNIT.
4. SPEED CONTROL WALL SWITCH.
5. BELT DRIVE.
6. DIRECT DRIVE.
7. VIBRATION ISOLATION MOUNTING.
8. WALL SWITCH.
9. INTERLOCK WITH HOOD CONTROL PANEL.
10. GREASE BOX AND CUP.

ACCESSORIES:
GBD-GRAVITY BACKDRAFT DAMPER
MBD-MOTORIZED BACKDRAFT DAMPER
BS-BIRD SCREEN
CB-CURB
DS-DISCONNECT SERVICE
RH-ROOF HOOD WITH 24" CURB

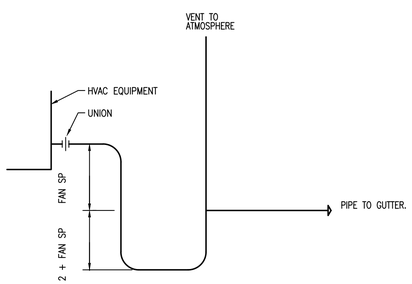
ACCESSORIES:
VCB-VENTED CURB
HK-HINGED KIT

MECHANICAL SYMBOL LEGEND

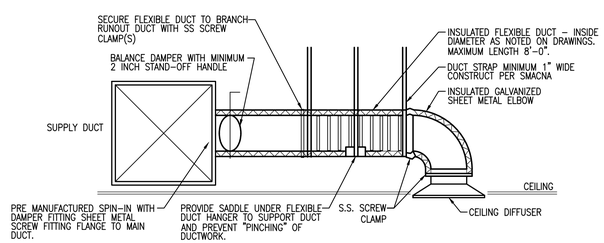
	SUPPLY DIFFUSER, 4-WAY THROW	—CH—	CHILLED WATER SUPPLY PIPING
	RETURN GRILLE	—CR—	CHILLED WATER RETURN PIPING
	EXHAUST GRILLE OR FAN	—H—	HEATING WATER SUPPLY PIPING
	SIDEWALL AIR DEVICE	—HR—	HEATING WATER RETURN PIPING
	RUNOUT BALANCE DAMPER	T	THERMOSTAT
	MANUAL DAMPER	S	SENSOR
	OPPOSED BLADE DAMPER, MOTORIZED	H	HUMIDISTAT
	FLEX DUCT RUNOUT	F	FIRE DAMPER
	DUCT TRANSITION (ONE LINE)	S	SMOKE DAMPER
	DOOR UNDERCUT	F/S	COMBINATION FIRE/SMOKE DAMPER

PRELIMINARY – NOT FOR CONSTRUCTION:
THESE DRAWINGS AND DOCUMENTS COMPRISE INFORMATION FOR THE DESCRIPTION OF THE SCOPE OF WORK IN SUPPORT OF THE ISSUED REQUEST FOR PROPOSAL. THESE DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION. AS REQUIRED IN THE REQUEST FOR PROPOSAL, CONSTRUCTION DOCUMENTS BY LICENSED ENGINEER MUST BE PROVIDED AS PART OF THE RFP SCOPE OF WORK.

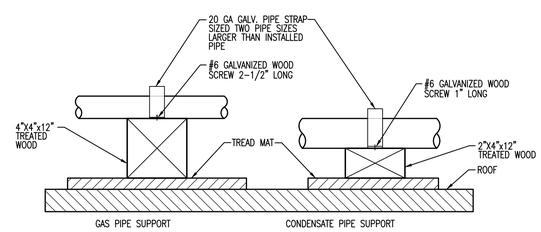
UTILITIES NOTE:
CONTRACTORS SHALL DIRECT ALL WORK WITH ALL UTILITY COMPANIES THROUGH TPS PERSONNEL. CONTRACTORS SHALL NOT CONTACT UTILITY COMPANIES DIRECTLY WITHOUT PRIOR APPROVAL OF OWNER.



3 CONDENSATE TRAP DIAGRAM
Scale: NTS
BLOW THROUGH



2 FLEXIBLE DUCT DIAGRAM
Scale: NTS



NOTE: PIPE SUPPORT TO BE SPACED PER SPECIFICATIONS FOR PIPE SIZE (10'-0" O.C. MAXIMUM SPACING) SUPPORT PIPE PARALLEL TO ROOF SLOPE.

1 PIPE SUPPORT DIAGRAM
Scale: NTS

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ENGINEER SEAL
REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA
7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
MECHANICAL DIAGRAMS AND SCHEDULES

DATE: 07.03.2023

SHEET NO.
M002

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GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

ELECTRICAL KEYNOTES: (EX)

E1. REMOVE EXISTING LIGHTING AND CEILING MOUNTED DEVICES: SPEAKERS, SECURITY SENSORS, ACCESS POINTS, FIRE ALARM AND DETECTION SYSTEMS. STORE FOR REINSTALLATION IN NEW WORK. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.

E2. REMOVE ELECTRICAL DISCONNECTS AND DAISY-CHAINED BRANCH CIRCUIT BACK TO SOURCE. TURN BREAKER "OFF" AND UPDATE PANEL INDEXES.

E3. FIELD VERIFY AND PROVIDE PATH FOR BRANCH PANEL FEEDER IN ACCESSIBLE CEILING CAVITY TO SERVE NEW ROOF MOUNTED PANEL. RE: E201.

E4. REMOVE EXISTING PANELBOARDS WITH RESIDENTIAL INTERIORS TO BE REPLACED WITH COMMERCIAL INTERIORS IN NEW WORK.

KEYNOTES: (X)

1. EXISTING EXHAUST SYSTEM TO REMAIN IN SERVICE DURING AND THROUGH CONSTRUCTION.

2. REMOVE EXHAUST DUCTWORK.

3. REMOVE ALL HYDRONIC PIPING FROM AIR HANDLER BACK TO BOILER ROOM.

4. REMOVE ALL VAV AND FAN COIL UNITS, ALL BRANCH HYDRONIC PIPING, SUPPORTS AND ALL ASSOCIATED DUCTWORK AND CONTROLS.

5. REMOVE EXISTING AIR HANDLER, ALL ASSOCIATED CONTROLS, SUPPORTS, DUCTWORK, VAV BOX AND HYDRONIC PIPING. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

6. REMOVE ALL CEILINGS AND GRID IN AREAS OF WORK.

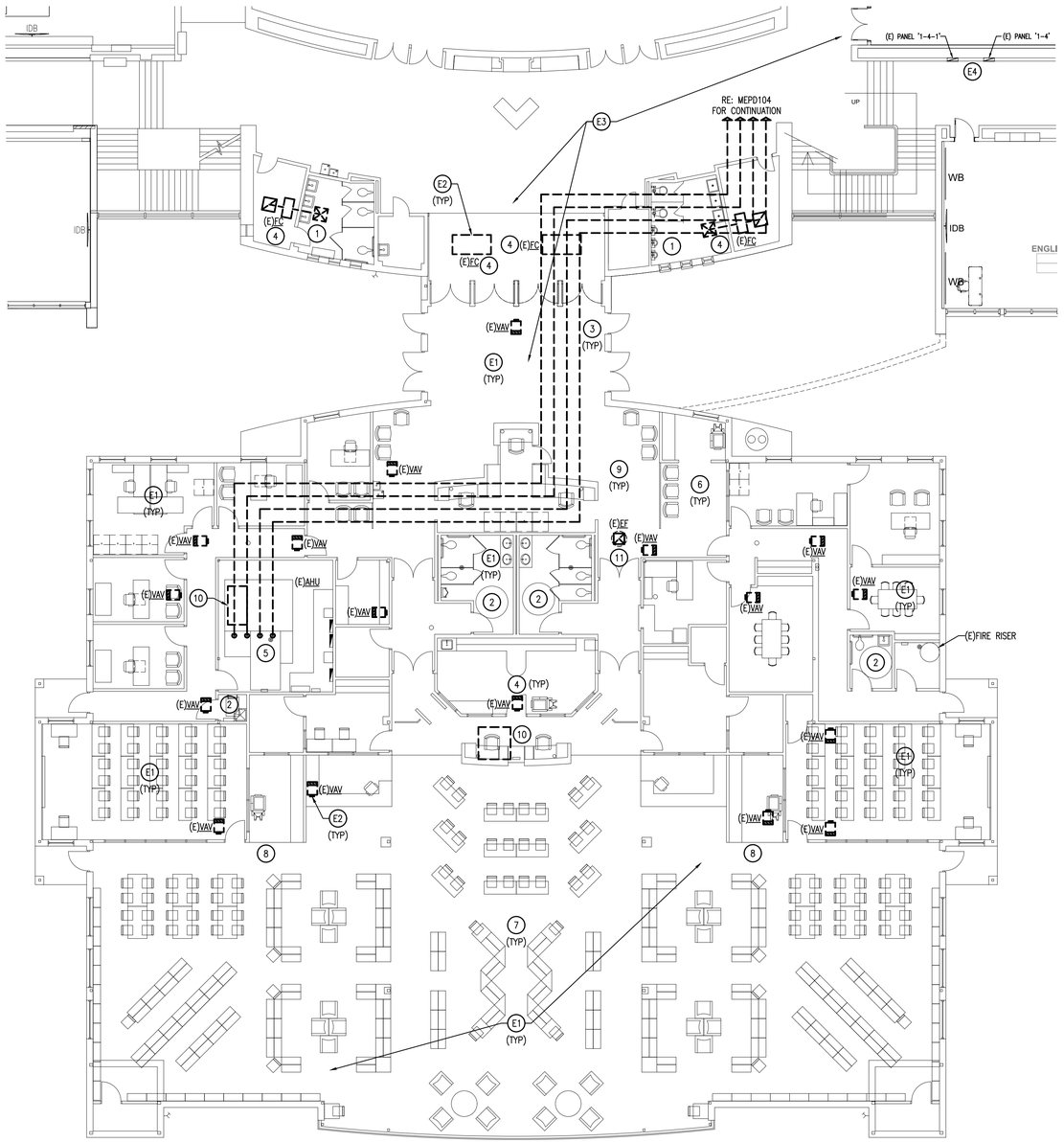
7. REMOVE ALL DUCTWORK, GRILLES, AND SUPPORTS IN AREAS OF WORK.

8. REMOVE RETURN AIR GRILLES AND PATCH SOFFIT WALLS AS DIRECTED BY OWNERS REPRESENTATIVE.

9. COORDINATE REMOVAL OF CEILINGS WITH FIRE PROTECTION CONTRACTOR FOR TEMPORARY SUPPORT OF SPRINKLER HEADS AND ELECTRICAL CONTRACTOR FOR REMOVAL AND STORAGE OF LIGHTS.

10. REMOVE OUTDOOR AIR INTAKE HOOD. INSTALL INSULATED SHEET METAL CAP ON CURB. INSTALL 2 INCH, 3 POUND DENSITY INSULATION FOR CAP. SLOPE CAP TO ONE SIDE FOR WATER RUN-OFF.

11. REMOVE EXISTING ROOF MOUNTED EXHAUST FAN. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER. CAP CURB WITH INSULATED SHEET METAL PANEL. SLOPE CAP TO ONE SIDE FOR WATER RUN-OFF. INSULATION SHALL BE 2 INCH, 3 POUND DENSITY.



1 PARTIAL MEP PLAN-DEMO

Scale: 3/32" = 1'-0"

FIRST LEVEL

NORTH

TULSA PUBLIC SCHOOLS

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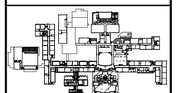
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA 7/3/2023

REGISTERED PROFESSIONAL ENGINEER THOMAS EDWARD McKENNA 20022 OKLAHOMA 7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



AREA OF WORK
FIRST LEVEL KEY PLAN

PROJECT TITLE

EDISON JR. HIGH RFP

REVISION

SHEET TITLE

FIRST LEVEL PARTIAL MEP PLAN-DEMO

DATE: 07.03.2023

SHEET NO.

MEPD101

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GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

ELECTRICAL KEYNOTES: (EX)

E1. REMOVE ELECTRICAL DISCONNECTS AND DAISY-CHAINED BRANCH CIRCUIT BACK TO SOURCE. TURN BREAKER "OFF" AND UPDATE PANEL INDEXES.

E2. REMOVE CORRIDOR LIGHT FIXTURES AND DISPOSE PER TPS REQUIREMENTS.

E3. REMOVE EXISTING LIGHTING AND CEILING MOUNTED DEVICES: SPEAKERS, SECURITY SENSORS, ACCESS POINTS, FIRE ALARM AND DETECTION SYSTEMS. STORE FOR REINSTALLATION IN NEW WORK. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.

E4. REMOVE EXISTING PANELBOARDS WITH RESIDENTIAL INTERIORS TO BE REPLACED WITH COMMERCIAL INTERIORS IN NEW WORK.

MECHANICAL KEYNOTES: (X)

1. REMOVE OUTSIDE CONDENSER AND FURNACE. REMOVE ALL ASSOCIATED DUCTWORK, SUPPORTS AND CONTROLS. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER. COORDINATE WITH PLUMBING CONTRACTOR FOR REMOVAL OF CONDENSATE AND GAS PIPE. PLUG FLOOR DRAIN. REMOVE OUTDOOR AIR INTAKE DUCTWORK AND REPAIR OPENING FROM OUTSIDE AIR DUCTWORK AS DIRECTED BY OWNER. RETURN FURNACE AND CONDENSER TO OWNER.

2. EXISTING EXHAUST SYSTEM TO REMAIN ACTIVE DURING AND AFTER CONSTRUCTION. REPAIR CEILINGS FROM REMOVAL OF FAN COIL UNITS.

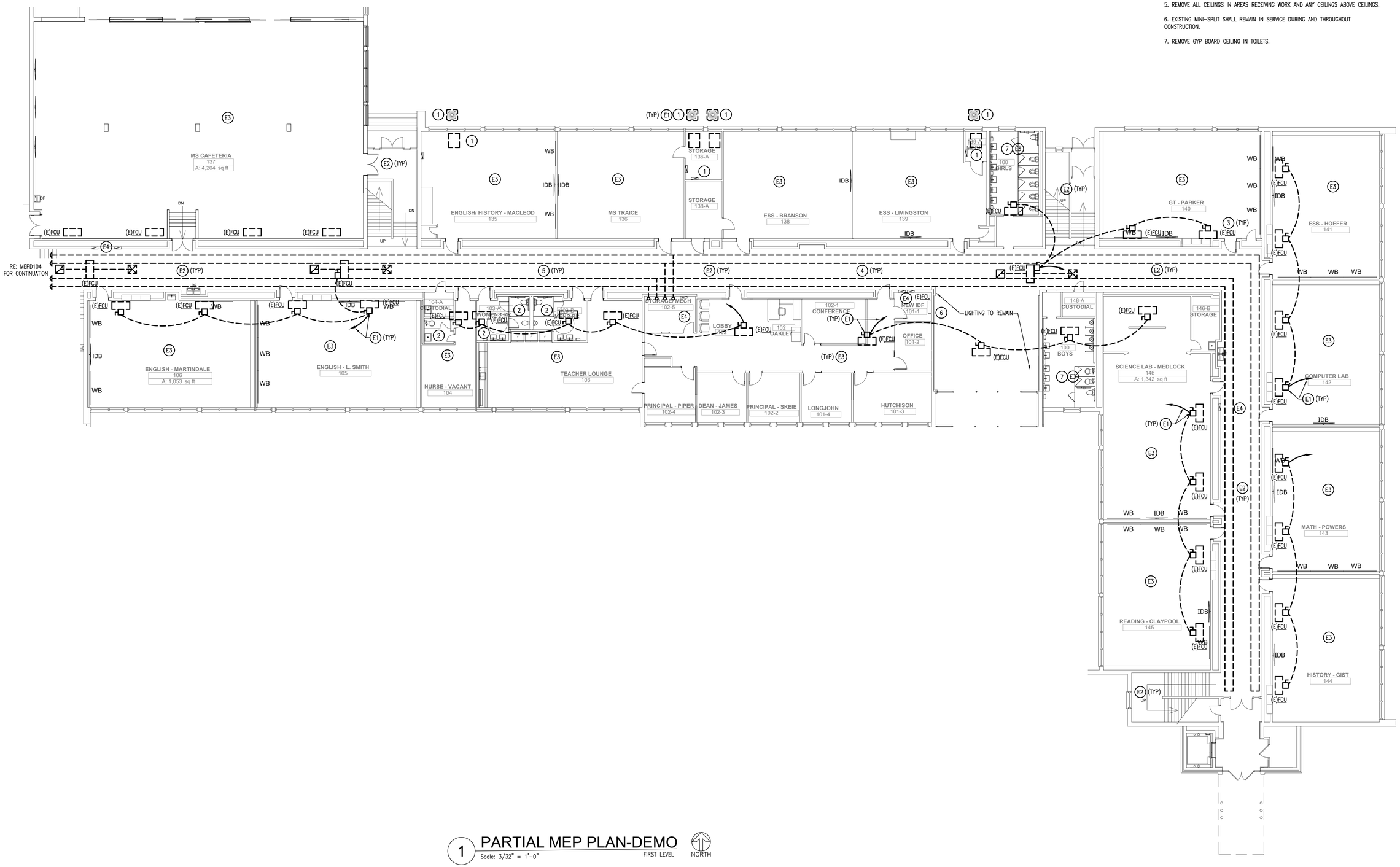
3. REMOVE HYDRONIC FAN COIL, ALL ASSOCIATED SUPPORTS, DUCTWORK AND CONTROLS. REMOVE CONDENSATE LINES AND REPAIR ANY OPENINGS IN WALLS FROM REMOVED PIPING. REMOVE ALL HYDRONIC BRANCH LINES SERVING FAN COIL. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

4. REMOVE ALL MAIN AND BRANCH HYDRONIC PIPING BACK TO BOILER ROOM.

5. REMOVE ALL CEILINGS IN AREAS RECEIVING WORK AND ANY CEILINGS ABOVE CEILINGS.

6. EXISTING MINI-SPLIT SHALL REMAIN IN SERVICE DURING AND THROUGHOUT CONSTRUCTION.

7. REMOVE GYP BOARD CEILING IN TOILETS.



1 PARTIAL MEP PLAN-DEMO
Scale: 3/32" = 1'-0"
FIRST LEVEL
NORTH

TULSA PUBLIC SCHOOLS

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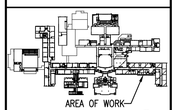
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
7/3/2023

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD MCKENNA
20622
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



FIRST LEVEL KEY PLAN

PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE
FIRST LEVEL PARTIAL MEP PLAN-DEMO

DATE: 07.03.2023

SHEET NO.
MEPD102

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GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

ELECTRICAL KEYNOTES: (EX)

E1. REMOVE ELECTRICAL DISCONNECTS AND DAISY-CHAINED BRANCH CIRCUIT BACK TO SOURCE. TURN BREAKER "OFF" AND UPDATE PANEL INDEXES.

E2. REMOVE CORRIDOR LIGHT FIXTURES AND DISPOSE PER TPS REQUIREMENTS.

E3. REMOVE EXISTING KITCHEN EXHAUST HOOD FANS AND MAKE-UP AIR UNITS BACK TO SOURCE.

E4. REMOVE EXISTING WIRING DEVICES AT DEMO WALL AND BRANCH CIRCUITS SERVING EQUIPMENT UNDER THE HOODS BACK TO SOURCE. SEAL RACEWAYS SERVED FROM UNDER SLAB CUT FLUSH WITH FLOOR.

E5. REMOVE EXISTING LIGHTING AND CEILING MOUNTED DEVICES: SPEAKERS, SECURITY SENSORS, ACCESS POINTS, FIRE ALARM AND DETECTION SYSTEMS. STORE FOR REINSTALLATION IN NEW WORK. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.

E6. REMOVE BOILER MECHANICAL ROOM EQUIPMENT, DISCONNECTING MEANS, RACEWAYS AND CONDUCTORS BACK TO SOURCE AND SWITCH BREAKER TO "OFF" POSITION. UPDATE PANEL INDEX.

E7. REMOVE/RELOCATE ROOM LIGHT SWITCH ON OPPOSITE WALL.

KEYNOTES: (X)

18. REMOVE CONCRETE SLAB FROM REMOVED CHILLERS. REPLACE SLAB WITH 3/4" CRUSHER GRAVEL.

19. REMOVE WALL. REPAIR FLOOR TO MATCH EXISTING OR AS DIRECTED BY OWNER.

20. REMOVE CONCRETE PAD AND REPAIR FLOOR TO MATCH EXISTING OR AS DIRECTED BY OWNER.

21. REMOVE DOOR AND INFILL OPENING.

22. REMOVE COOLER COMPRESSOR AND ALL ASSOCIATED CONTROLS, PIPING AND SUPPORTS. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

23. REMOVE EXISTING EVAPORATOR FROM WALK IN COOLER. REMOVE CONDENSATE PIPING AND COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

24. REMOVE PLUMBING FIXTURE, CAP WATER AND VENT BEHIND WALLS, CAP SEWER BELOW SLAB.

25. REMOVE AND STORE CLOTHES WASHER AND DRYER. REINSTALL WASHER AND DRYER IN NEW WORK.

KEYNOTES: (X)

1. REMOVE CHILLERS AND RETURN TO OWNER. REMOVE ALL ASSOCIATED CONTROLS, PIPING AND SUPPORTS. PATCH WALL FROM REMOVAL OF HYDRONIC PIPING AS DIRECTED BY OWNERS REPRESENTATIVE. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

2. REMOVE AIR SEPARATORS, ALL PIPING AND CONTROLS.

3. REMOVE HYDRONIC PUMPS AND ALL ASSOCIATED PIPING AND CONTROLS. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

4. REMOVE EXISTING BOILERS AND RETURN TO OWNER. REMOVE ALL EXISTING PIPING, SUPPORTS AND CONTROLS. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER. REMOVE GAS PIPE SERVING BOILERS BACK TO MAIN AND CAP. REMOVE FLUE PIPING THROUGH ROOF. REPAIR ROOF AS REQUIRED FROM ROOFING MANUFACTURER SO AS NOT TO VOID ROOFING WARRANTY.

5. REMOVE EXPANSION TANKS, ALL ASSOCIATED PIPING AND SUPPORTS.

6. EXISTING DOMESTIC WATER HEATERS TO REMAIN IN SERVICE.

7. REMOVE EXISTING AIR HANDLER ABOVE OFFICE CEILING. REMOVE ALL ASSOCIATED DUCTWORK, SUPPORTS, HYDRONIC PIPING AND CONTROLS. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER.

8. REMOVE ALL CEILING AND GRID IN AREAS OF WORK. COORDINATE WITH ELECTRICAL FOR REMOVAL AND STORAGE OF ALL LED LIGHTS.

9. REMOVE ALL HYDRONIC FAN COILS, HYDRONIC PIPING, CONDENSATE PIPING, SUPPORTS, CONTROLS AND ANY ASSOCIATED DUCTWORK.

10. REMOVE CONCENTRIC DIFFUSER AND CEILING TILES AND GRID. PREPARE AREA FOR INSTALLATION OF NEW DUCTWORK.

11. REMOVE EXISTING GRID AND CEILING. REMOVE EXISTING DUCTWORK, SUPPORTS AND GRILLES FROM EXISTING ROOF TOP UNIT. PREPARE AREA FOR INSTALLATION OF NEW DUCTWORK AND GRILLES.

12. EXISTING EXHAUST SYSTEM SHALL REMAIN ACTIVE DURING CONSTRUCTION.

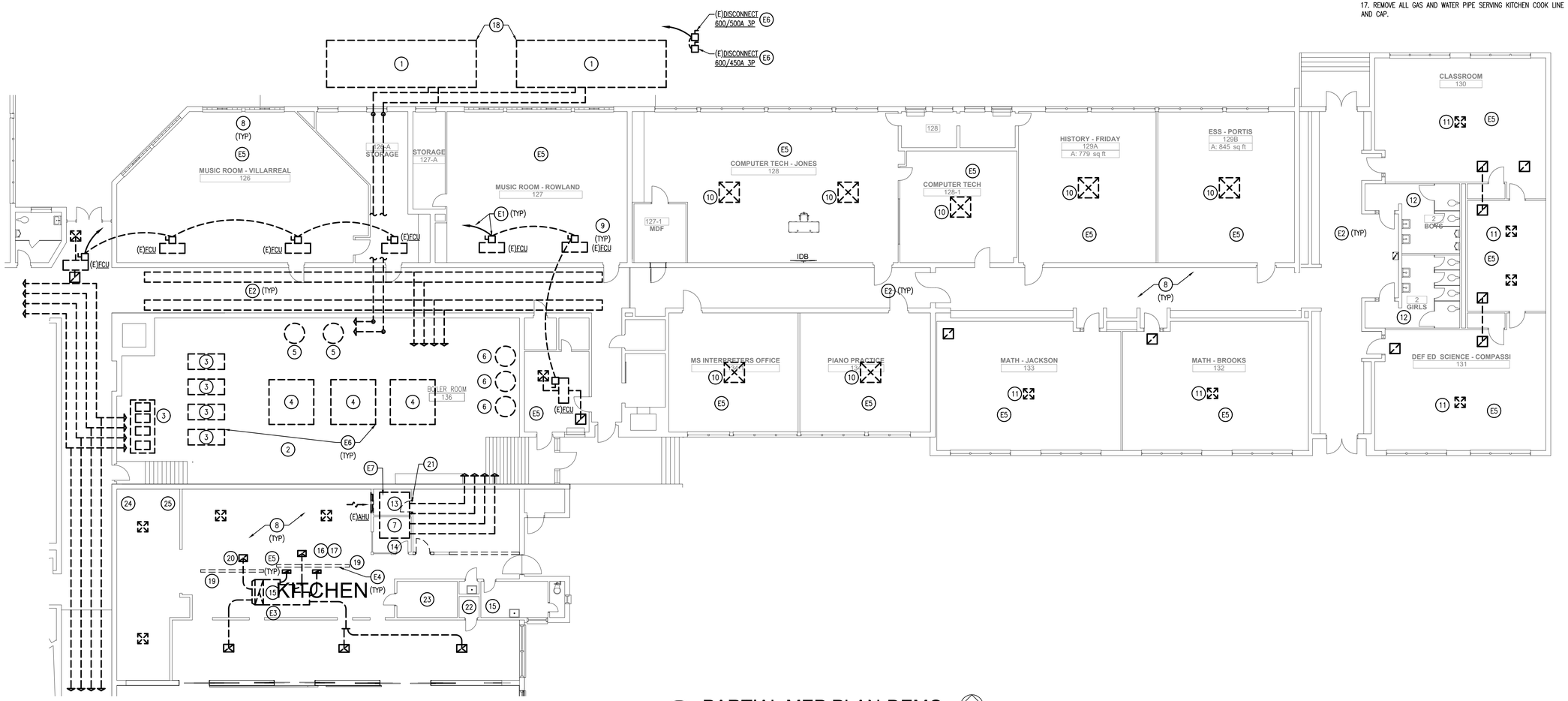
13. REMOVE ALL ROOF MOUNTED EQUIPMENT SERVING AIR HANDLER. REMOVE HYDRONIC PIPING SERVING AIR HANDLER ON ROOF. COORDINATE WITH ELECTRICAL FOR REMOVAL OF POWER AND PLUMBER FOR REMOVAL OF GAS PIPING.

14. REPAIR ROOF OPENING FROM REMOVAL OF ROOF TOP UNIT. INSTALL NEW DECK AND INSULATION AS DIRECTED BY EXISTING ROOFING MANUFACTURER SO AS NOT TO VOID ROOF WARRANTY. INSTALL INSULATED SHEET METAL PANEL OVER REMOVED MAKE UP AIR UNIT.

15. REMOVE ROOF MOUNTED KITCHEN HOOD ROOF MOUNTED EXHAUST FAN. INSTALL NEW ROOF DECKING AND INSULATION TO PATCH HOLE IN ROOF FROM REMOVED FAN. ALL ROOF REPAIR SHALL BE AS DIRECTED BY ROOFING MANUFACTURER SO AS NOT TO VOID ROOF WARRANTY.

16. REMOVE ALL KITCHEN HOODS AND ASSOCIATED DUCTWORK, SUPPORTS AND CONTROLS.

17. REMOVE ALL GAS AND WATER PIPE SERVING KITCHEN COOK LINE BACK TO SOURCE AND CAP.



1 PARTIAL MEP PLAN-DEMO
Scale: 3/32" = 1'-0"
FIRST LEVEL
NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL ELECTRICAL PLUMBING
1401 SOUTH BOSTON, SUITE 1, TULSA, OK 74119
(918) 384-0693/FAX (918) 384-3188 AEG@AEGINFO.COM
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA 7/3/2023

REGISTERED PROFESSIONAL ENGINEER THOMAS EDWARD McKENNA 20022 OKLAHOMA 7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
FIRST LEVEL PARTIAL MEP PLAN-DEMO

DATE: 07.03.2023

SHEET NO.
MEPD103

A:\2022\TPS\Edison Jr. High RFP\Dwg\MEPD103.dwg, 6/30/2023 11:01:29 AM, DawnSantee

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

ELECTRICAL KEYNOTES: (EX)

E1. REMOVE ELECTRICAL DISCONNECTS AND DAISY-CHAINED BRANCH CIRCUIT BACK TO SOURCE. TURN BREAKER "OFF" AND UPDATE PANEL INDEXES.

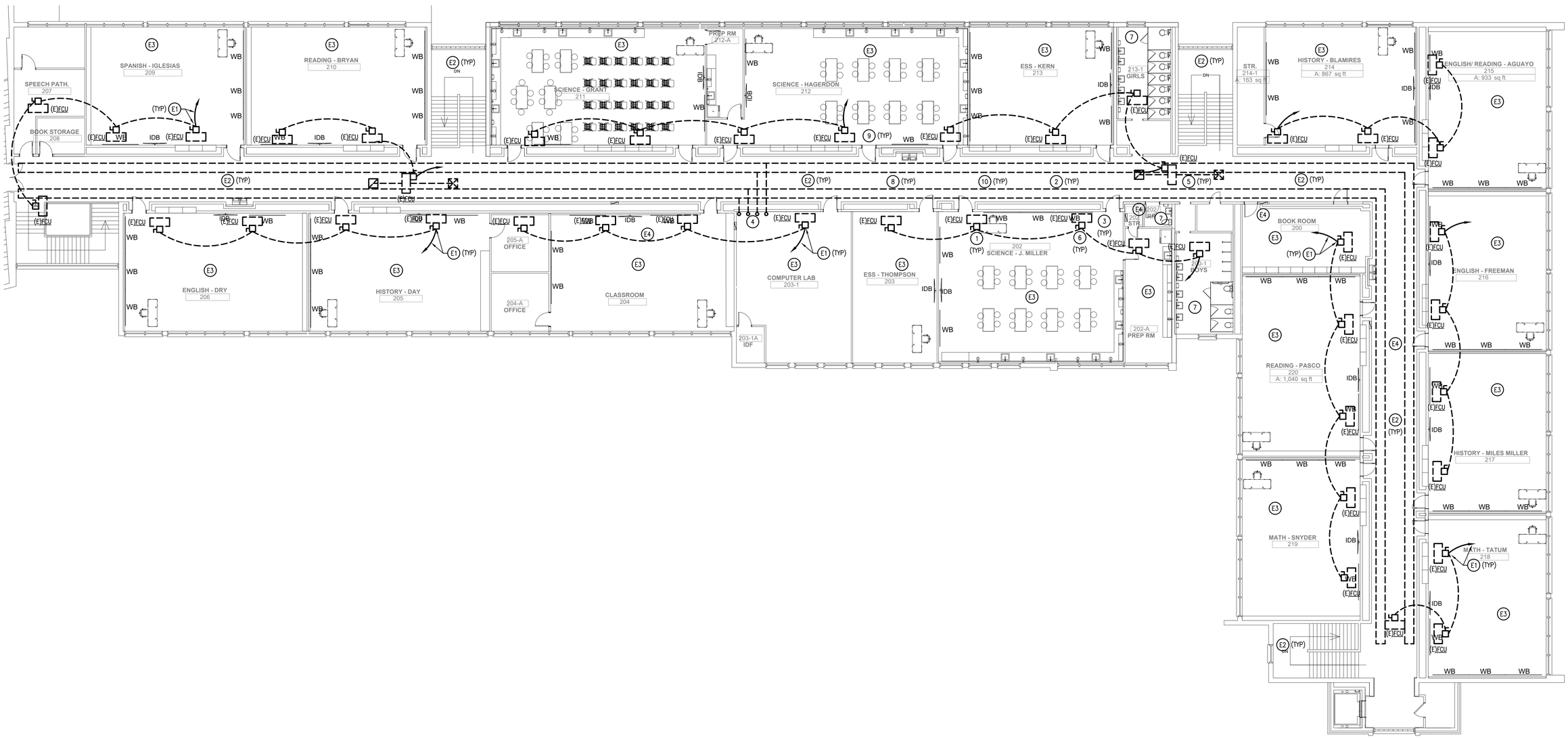
E2. REMOVE CORRIDOR LIGHT FIXTURES AND DISPOSE PER TPS REQUIREMENTS.

E3. REMOVE EXISTING LIGHTING AND CEILING MOUNTED DEVICES: SPEAKERS, SECURITY SENSORS, ACCESS POINTS, FIRE ALARM AND DETECTION SYSTEMS. STORE FOR REINSTALLATION IN NEW WORK. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.

E4. REMOVE EXISTING PANELBOARDS WITH RESIDENTIAL INTERIORS TO BE REPLACED WITH COMMERCIAL INTERIORS IN NEW WORK. (TYPICAL)

KEYNOTES: (X)

1. REMOVE ALL HYDRONIC FAN COILS FROM AREAS OF REMODEL.
2. REMOVE ALL HYDRONIC AND CONDENSATE PIPING FROM AREAS OF REMODEL.
3. REMOVE INDIVIDUAL CONDENSATE PIPE FROM HYDRONIC FAN COILS. REPAIR WALL PENETRATION AS DIRECTED BY OWNER. SEAL OPENING FROM REMOVED PIPING WITH WATERPROOF CAULKING.
4. HYDRONIC PIPE RISERS FROM 1ST FLOOR. REPAIR FLOOR AS DIRECTED BY OWNERS REPRESENTATIVE.
5. REMOVE ALL ABOVE CEILING HYDRONIC FAN COILS AND ALL ASSOCIATED DUCTWORK AND GRILLES.
6. REMOVE ALL CONTROLS ASSOCIATED WITH HYDRONIC FAN COILS TO BE REMOVED.
7. REMOVE GYP BOARD CEILING IN TOILETS.
8. REMOVE ALL CEILING GRID AND TILES, IN AREAS OF WORK. COORDINATE WITH ELECTRICAL FOR REMOVAL OR STORAGE OF LIGHTS AND LOW VOLTAGE.
9. REMOVE TRANSFER GRILLES. SEAL OPENINGS WITH SHEET METAL, BOTH SIDES OF CORRIDOR WALL. (TYP)
10. REMOVE ALL CEILINGS ABOVE LAY IN CEILING.



1 PARTIAL MEP PLAN-DEMO
Scale: 3/32" = 1'-0"
SECOND LEVEL
NORTH

TULSA PUBLIC SCHOOLS

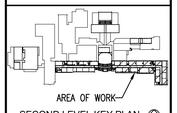
ALLIED ENGINEERING GROUP, LLC
MECHANICAL ELECTRICAL PLUMBING
1401 SOUTH BOSTON AVENUE, SUITE 400 TULSA, OK 74119
(918) 384-0693/FAX (918) 384-3188 AEG@AEGNET.COM
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA 7/3/2023

REGISTERED PROFESSIONAL ENGINEER THOMAS EDWARD McKENNA 20022 OKLAHOMA 7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



SECOND LEVEL KEY PLAN

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
SECOND LEVEL PARTIAL MEP PLAN-DEMO

DATE: 07.03.2023

SHEET NO.
MEPD104

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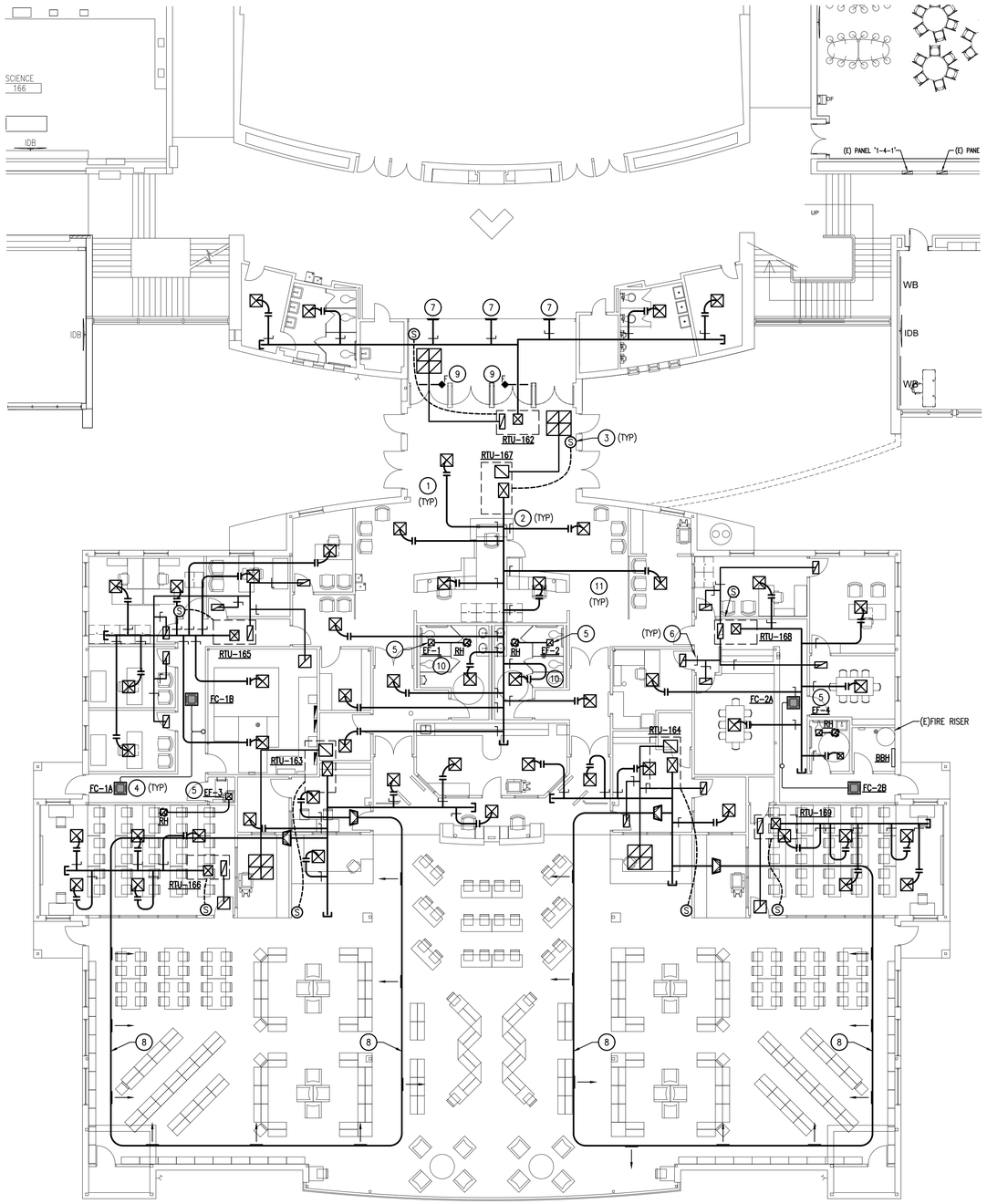


1 PARTIAL MECHANICAL PLAN-NEW

Scale: 3/32" = 1'-0"

FIRST LEVEL

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK.

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. MECHANICAL CONTRACTOR SHALL OBTAIN A COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

4. INSTALL MINI-SPLIT FAN COIL IN THIS APPROXIMATE LOCATION. ALL CONDENSATE SHALL BE FULLY INSULATED WITH A VAPOR BARRIER TYPE INSULATION.

5. INSTALL NEW EXHAUST SYSTEM. ALL EXHAUST DUCTWORK SHALL BE FULLY INSULATED.

6. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

7. INSTALL GRILLES IN VERTICAL WALL AT SOFFIT.

8. INSTALL DUCTWORK THROUGH JOIST WEBBING.

9. INSTALL FIRE DAMPER AT 2 HOUR FIRE RATED WALL.

10. INSTALL GYP BOARD CEILINGS IN TOILET. INSTALL ACCESS PANELS AS NEED TO ACCESS BALANCE DAMPERS AND ELECTRICAL J-BOX, WATER VALVES.

11. COORDINATE REINSTALLATION OF SPRINKLER HEADS WITH FIRE PROTECTION CONTRACTOR.

RUN OUT SCHEDULE

CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

CONTROL NOTE:

TPS CONTROLS CONTRACTOR SHALL PROVIDE SENSOR ON WALL TO MONITOR TEMPERATURE, HUMIDITY AND CO2. SENSOR SHALL BE INSTALLED AT 48 INCHES AFF. INSTALL CO SENSOR AT 60" AFF. DIRECTLY ABOVE SENSOR. PROVIDE LOCKING METAL COVER FOR ALL SENSORS LOCATED IN HIGH TRAFFIC AREAS, CAFETERIA, CORRIDORS, GYMS.

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

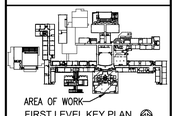
TULSA PUBLIC SCHOOLS

ALLED ENGINEERING GROUP, LLC
MECHANICAL-ELECTRICAL-PLUMBING-FIRE PROTECTION
1401 SOUTH BOSTON AVENUE, SUITE 1, TULSA, OK. 74119
(918) 384-0693/FAX (918) 384-3188 JEG@ALLEDENGINEER.COM
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE

FIRST LEVEL PARTIAL MECHANICAL PLAN-NEW

DATE: 07.03.2023

SHEET NO.

M101

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RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

CONTROL NOTE:

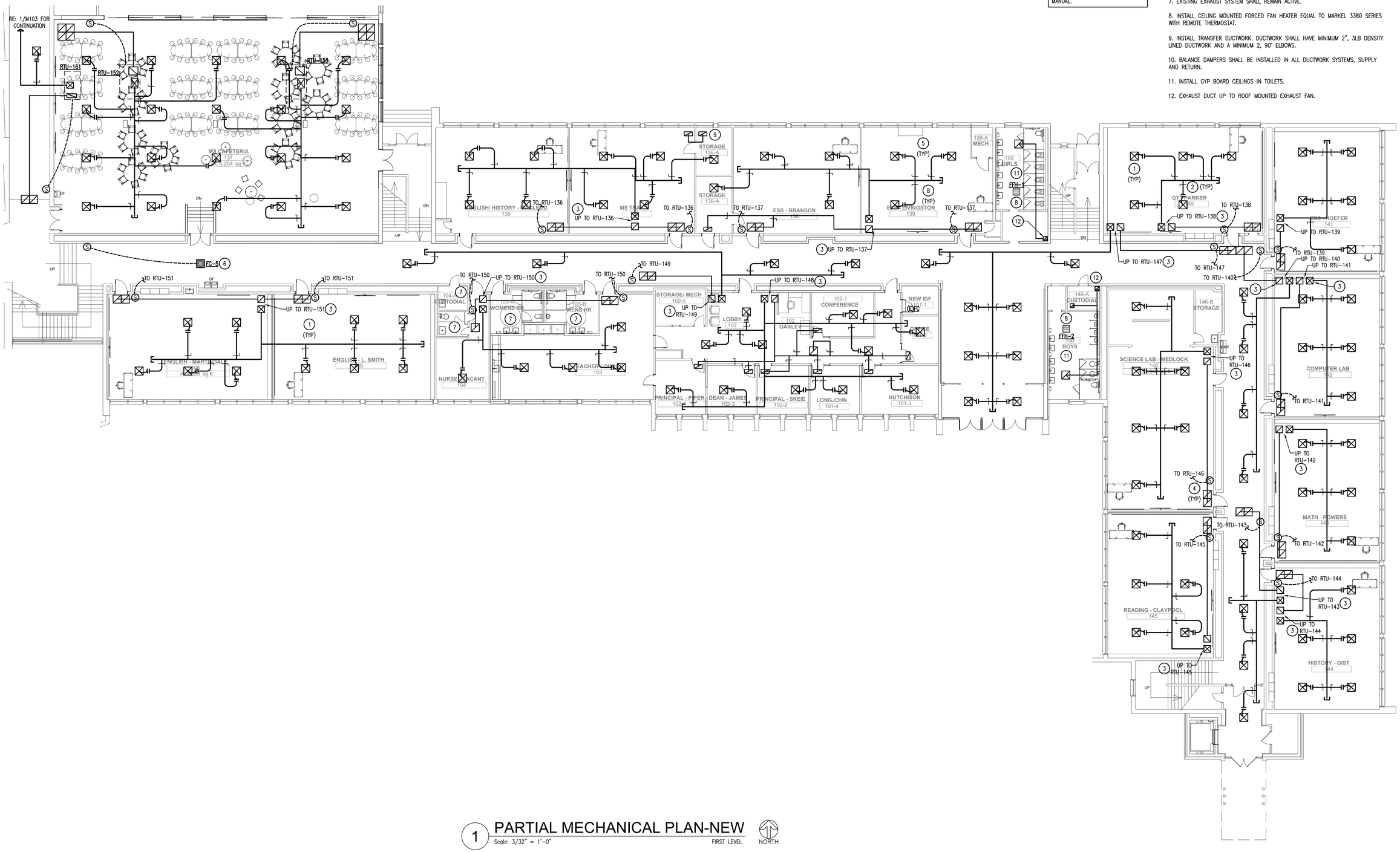
TPS CONTROLS CONTRACTOR SHALL PROVIDE SENSOR ON WALL TO MONITOR TEMPERATURE, HUMIDITY AND CO2. SENSOR SHALL BE INSTALLED AT 48 INCHES AFF. INSTALL CO SENSOR AT 60" AFF. DIRECTLY ABOVE SENSOR. PROVIDE LOCKING METAL COVER FOR ALL SENSORS LOCATED IN HIGH TRAFFIC AREAS, CAFETERIA, CORRIDORS, GYMS.

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK.
2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.
3. DUCTWORK UP TO ROOF MOUNTED RTU. COORDINATE FINAL LOCATION OF DUCT SHAFT WITH BUILDING STRUCTURE.
4. MECHANICAL CONTRACTOR SHALL OBTAIN A COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.
5. INSTALL CONTROLS IN ALL ROOMS SERVED BY ONE RTU.
6. INSTALL MINI-SPLIT FAN COIL IN THIS APPROXIMATE LOCATION. ALL CONDENSATE SHALL BE FULLY INSULATED WITH A VAPOR BARRIER TYPE INSULATION.
7. EXISTING EXHAUST SYSTEM SHALL REMAIN ACTIVE.
8. INSTALL CEILING MOUNTED FORCED FAN HEATER EQUAL TO MARKEL 3380 SERIES WITH REMOTE THERMOSTAT.
9. INSTALL TRANSFER DUCTWORK. DUCTWORK SHALL HAVE MINIMUM 2", 3LB DENSITY LINED DUCTWORK AND A MINIMUM 2, 90° ELBOWS.
10. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.
11. INSTALL GYP BOARD CEILINGS IN TOILETS.
12. EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN.



1 PARTIAL MECHANICAL PLAN-NEW

Scale: 3/32" = 1'-0"

FIRST LEVEL

NORTH

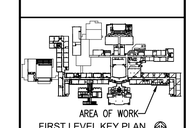
TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL-ELECTRICAL-PLUMBING
1401 SOUTH BOULDER, SUITE 400, TULSA, OK. 74119
(918) 384-0693/FAX (918) 384-3188 AEGMAIL@AEGPLC.COM
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA 7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE
FIRST LEVEL PARTIAL MECHANICAL PLAN-NEW

DATE: 07.03.2023

SHEET NO.
M102

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RUN OUT SCHEDULE

CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

CONTROL NOTE:

TPS CONTROLS CONTRACTOR SHALL PROVIDE SENSOR ON WALL TO MONITOR TEMPERATURE, HUMIDITY AND CO2. SENSOR SHALL BE INSTALLED AT 48 INCHES AFF. INSTALL CO SENSOR AT 60" AFF. DIRECTLY ABOVE SENSOR. PROVIDE LOCKING METAL COVER FOR ALL SENSORS LOCATED IN HIGH TRAFFIC AREAS, CAFETERIA, CORRIDORS, GYMS.

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

KEYNOTES: (X)

20. INSTALL NEW WALLS AND 2, 36" DOORS FOR EXISTING WASHER AND DRYER. TAKE WALLS TO ABOVE CEILING. WALLS SHALL BE STUD WITH GYP BOARD WALLS COVERED WITH FRP. COORDINATE COLOR OF FRP WITH OWNER. PROVIDE SHELF ABOVE WASHER AND DRYER.

21. INSTALL COOLER/FREEZER. OWNER TO PROVIDE AN ALLOWANCE FOR COOLER/FREEZER.

22. INSTALL 3'–0" NEW DOOR.

23. EXTEND EXISTING WALLS TO 6" ABOVE CEILING. INFILL SPACE BETWEEN WALLS AND INSTALL 2, 36" DOORS. COORDINATE WITH OWNER FOR LOOKS.

24. REPAIR WALLS AS DIRECTED BY OWNER.

KEYNOTES: (X)

1. INSTALL ACCESS PANEL IN CEILING AT LADDER ACCESS TO MEZZANINE.

2. INSTALL NEW DUCTWORK, SUPPORTS AND GRILLES FOR EXISTING ROOF TOP UNITS. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND SIZES OF EXISTING UNIT SUPPLY AND RETURN AIR DROPS.

3. INSTALL NEW DUCTWORK, SUPPORTS AND GRILLES FOR NEW ROOF TOP UNITS.

4. INSTALL NEW CEILING GRID AND TILES IN AREAS OF WORK.

5. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE.

6. INSTALL MINI–SPLIT FAN COILS IN THIS APPROXIMATE LOCATION. ROUTE CONDENSATE INTO BOILER ROOM FLOOR DRAIN. ALL CONDENSATE PIPING SHALL BE FULLY INSULATED WITH A VAPOR BARRIER TYPE INSULATION.

7. EXISTING EXHAUST SYSTEM SHALL REMAIN ACTIVE.

8. TRANSFER DUCT SHALL HAVE 2 INCH, 3 POUND DENSITY DUCT LINER.

9. INSTALL FORCED FAN HEATERS IN TOILETS WITH REMOTE THERMOSTATS EQUAL TO MARKELL 3380 SERIES. PROVIDE LOCKING METAL COVERS FOR ALL THERMOSTATS IN TOILETS.

10. INSTALL BASE BOARD HEATER.

11. ALL GRILLES IN KITCHEN SHALL BE ALUMINUM.

12. INSTALL GAS FIRED UNIT HEATER IN BOILER ROOM.

13. ALL CEILING TILE IN KITCHEN SHALL BE WASHABLE. REFERENCE PROJECT MANUAL.

14. INSTALL 2 NEW 8' KITCHEN EXHAUST HOOD, ALL SUPPORTS, CONTROLS AND DUCTWORK UP TO ROOF MOUNTED EXHAUST FAN. ALL KITCHEN HOOD AND ALL ACCESSORIES SHALL BE INSTALLED PER NFPA 96 REQUIREMENTS. COORDINATE PROCUREMENT WITH CAPTIVE AIRE REPRESENTATIVE ROD HAMMACK, 918–258–0291

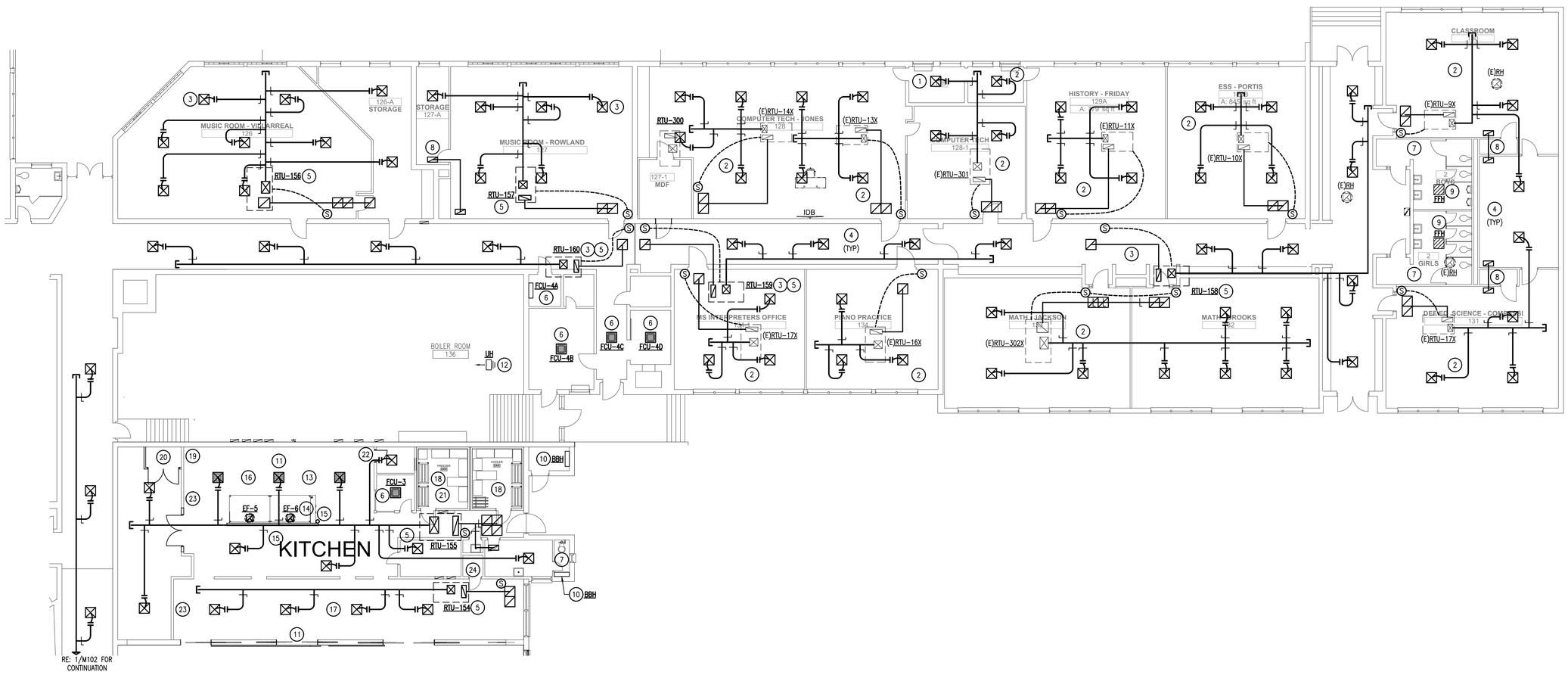
15. INSTALL NEW WALL FOR KITCHEN HOODS. WALL SHALL HAVE 6" STUDS AND EXTEND A MINIMUM OF 6 INCHES ABOVE CEILING AND A MINIMUM OF 18 FEET LONG.

16. ALL SUPPLY GRILLES WITHIN 10 FEET OF KITCHEN HOODS SHALL BE EGGCRATE.

17. ALL GRILLES/REGISTERS SERVING LINE SHALL BE ALUMINUM.

18. ROUTE CONDENSATE FROM COOLER/FREEZER TO CAN WASH ROOM.

19. CEILING HEIGHT IN KITCHEN SHALL BE AT 10 FEET.



1 PARTIAL MECHANICAL PLAN-NEW
Scale: 3/32" = 1'–0"
FIRST LEVEL
NORTH

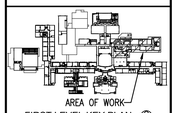
TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL ELECTRICAL PLUMBING
1401 SOUTH BOULDER, SUITE 1100, TULSA, OK. 74119
(918) 384–0593/FAX (918) 384–3188 AEGMAIL@AEGINFO.COM
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



FIRST LEVEL KEY PLAN

PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE
FIRST LEVEL PARTIAL MECHANICAL PLAN-NEW

DATE: 07.03.2023

SHEET NO.
M103

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RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

CONTROL NOTE:

TPS CONTROLS CONTRACTOR SHALL PROVIDE SENSOR ON WALL TO MONITOR TEMPERATURE, HUMIDITY AND CO2. SENSOR SHALL BE INSTALLED AT 48 INCHES AFF. INSTALL CO SENSOR AT 60" AFF. DIRECTLY ABOVE SENSOR. PROVIDE LOCKING METAL COVER FOR ALL SENSORS LOCATED IN HIGH TRAFFIC AREAS, CAFETERIA, CORRIDORS, GYMS.

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS REQUIRED IN PROJECT MANUAL.

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK.

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND–OFF HANDLE.

3. DUCTWORK DOWN TO 1ST FLOOR. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE.

4. MECHANICAL CONTRACTOR SHALL OBTAIN A COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. INSTALL CONTROLS IN ALL ROOMS SERVED BY ONE RTU.

6. INSTALL CEILING MOUNTED FORCED FAN HEATER EQUAL TO MARKEL 3380 SERIES WITH REMOTE THERMOSTAT.

7. EXISTING EXHAUST SYSTEM SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

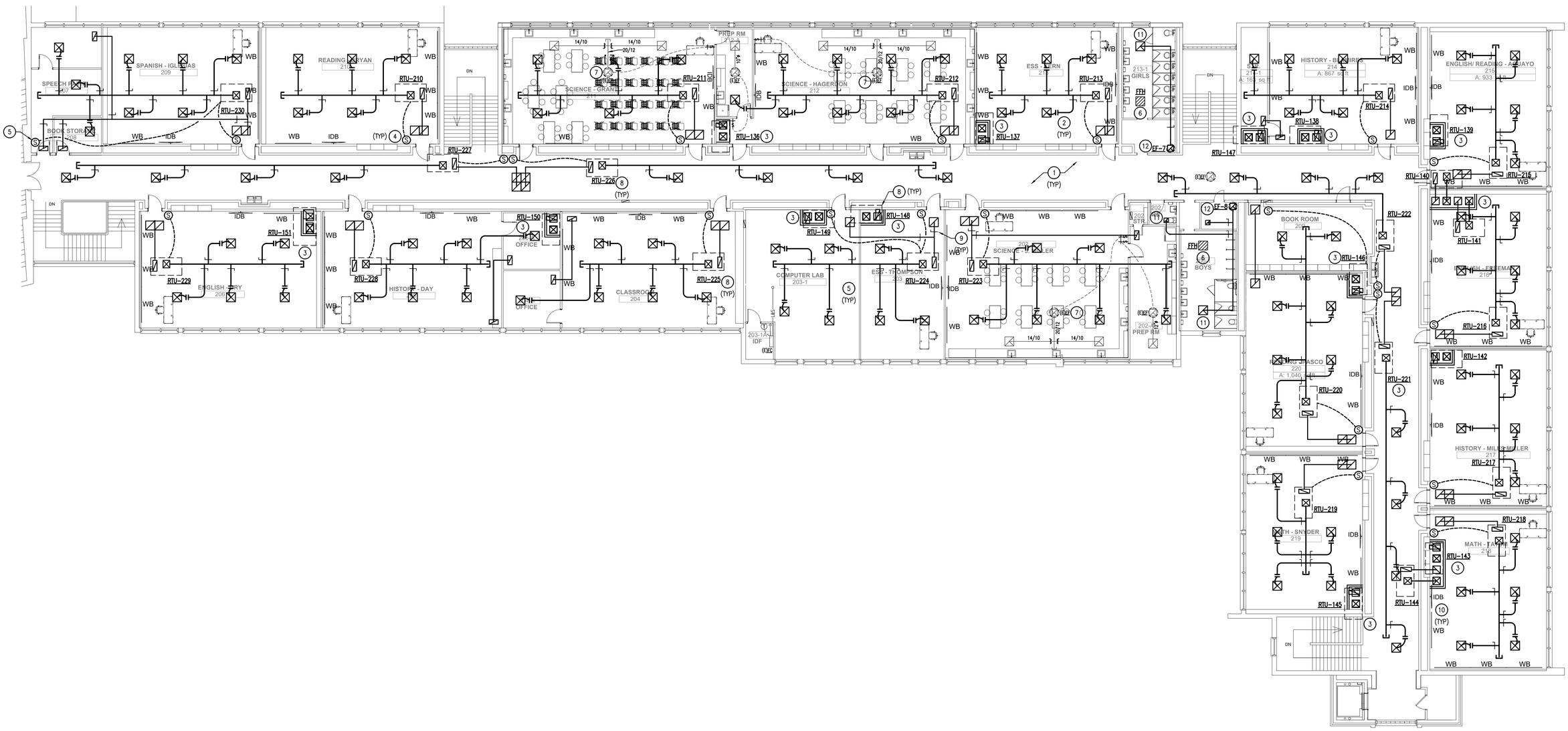
8. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

9. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

10. CONTRACTOR SHALL RELOCATE ANY WB OR IDB THAT CONFLICT WITH FINAL LOCATION OF DUCT SHAFTS. COORDINATE FINAL LOCATION OF WB OR IDB WITH TPS REPRESENTATIVE.

11. INSTALL GYP BOARD CEILINGS IN TOILETS.

12. INSTALL NEW EXHAUST SYSTEM FOR TOILETS. CONNECT EXHAUST DUCT FROM FIRST FLOOR IN SHAFT TO ROOF MOUNTED EXHAUST FAN.



1 PARTIAL MECHANICAL PLAN-NEW

Scale: 3/32" = 1'-0"

SECOND LEVEL

NORTH

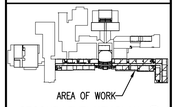
TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL ELECTRICAL PLUMBING
1401 SOUTH BOULDER, SUITE 400 TULSA, OK 74119
(918) 384-0693/FAX (918) 384-3188 AEGRAGER@AEGROUP.COM
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER GAYLE D. GWINUP 15478 OKLAHOMA 7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
SECOND LEVEL PARTIAL MECHANICAL PLAN-NEW

DATE: 07.03.2023

SHEET NO.
M201

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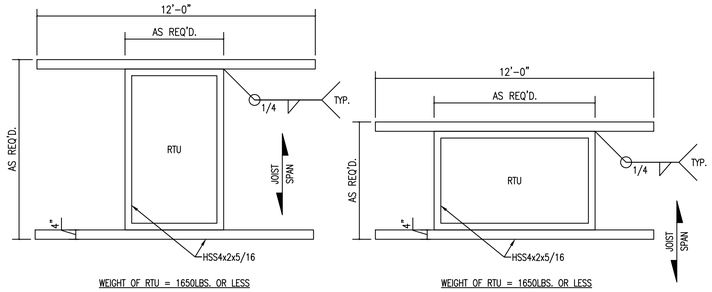
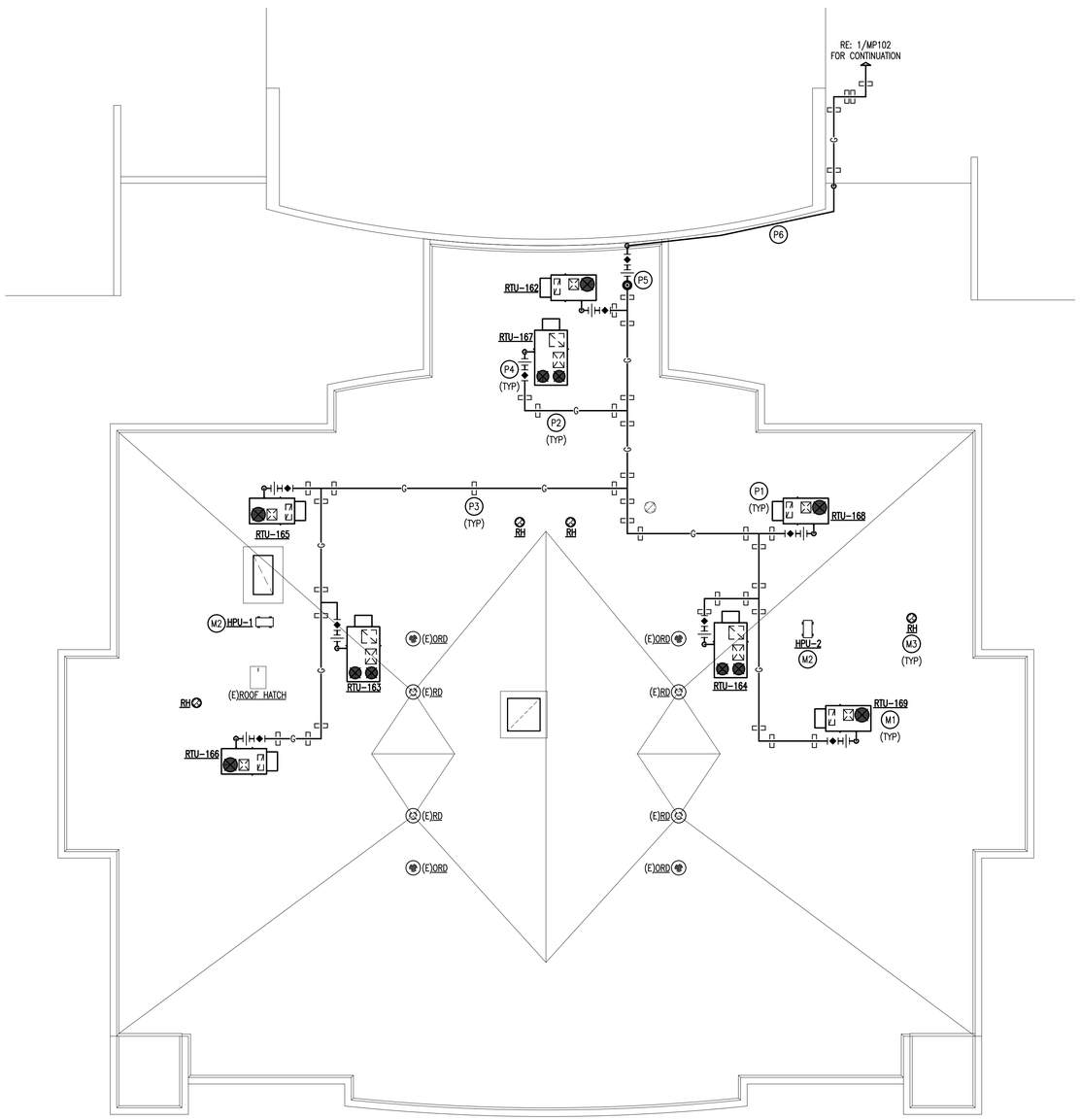


2 RTU FRAMING PLAN

Scale: NTS



1 MECHANICAL AND PLUMBING ROOF PLAN

Scale: 3/32" = 1'-0"

NORTH

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. CONTRACTOR SHALL VERIFY BUILDING STRUCTURE IS CAPABLE OF HOLDING WEIGHTS OF UNITS. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. INSTALL RTU PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS FOR SERVICE AND AIRFLOW REQUIREMENTS.

M2. INSTALL HPU ON ROOF AT THIS APPROXIMATE LOCATION. INSTALL HPU ON EQUIPMENT RAILS SECURED TO BUILDING. SECURE HPU TO RAILS. ROUTE CONDENSATE ON TREATED LUMBER SUPPORTS. PENETRATE THROUGH ROOF WITH HOODED ROOF CURB.

M3. COORDINATE FINAL LOCATION OF BUILDING EXHAUST ROOF HOODS WITH ALL OUTDOOR AIR INTAKES OF HVAC EQUIPMENT.

PLUMBING KEYNOTES: (PX)

P1. INSTALL CONDENSATE PIPING FOR ALL NEW RTU'S. ALL CONDENSATE PIPING SHALL BE SCHEDULE 40 GALVANIZED. ROUTE CONDENSATE TO NEAREST ROOF DRAIN OR GUTTER AND PROVIDE A TURN DOWN AT TERMINATION.

P2. PROVIDE AND INSTALL GAS PIPING TO UNITS. PAINT ALL GAS PIPING ON ROOF YELLOW.

P3. INSTALL TREATED LUMBER FOR SUPPORT OF GAS PIPE AND CONDENSATE PIPE. INSTALL TREAD MAT AT ALL SUPPORTS EXTENDING A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORT.

P4. PROVIDE UNION, SHUT-OFF VALVE, AND 6" DIRT LEG AT ALL POINTS OF CONNECTION FOR GAS PIPE TO GAS FIRED EQUIPMENT.

P5. INSTALL REGULATOR FOR GAS PIPING. NO REGULATOR SHALL BE INSTALLED CLOSER THAN 10 FEET TO ANY HVAC OUTDOOR AIR INTAKE. PROVIDE UNION AND SHUT-OFF VALVE AT ALL REGULATORS. THE REGULATOR SHALL REDUCE THE GAS PRESSURE FROM 10.0PSI TO 0.5PSI.

P6. SECURE GAS PIPING TO FACE OF VERTICAL WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL EXPOSED PIPING AND SUPPORTS ON VERTICAL WALLS AS DIRECTED BY OWNER.

CONDENSATE SIZE CHART

UNIT SIZE (TONS)	PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
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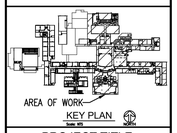
ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
MECHANICAL AND PLUMBING ROOF PLAN

DATE: 07.03.2023

SHEET NO.
MP101

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CONDENSATE SIZE CHART	
UNIT SIZE (TONS)	PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"

PLUMBING KEYNOTES: (PX)

P1. INSTALL CONDENSATE PIPING FOR ALL NEW RTU'S. ALL CONDENSATE PIPING SHALL BE SCHEDULE 40 GALVANIZED. ROUTE CONDENSATE TO NEAREST ROOF DRAIN OR GUTTER AND PROVIDE A TURN DOWN AT TERMINATION.

P2. PROVIDE AND INSTALL GAS PIPING TO UNITS. PAINT ALL GAS PIPING ON ROOF YELLOW.

P3. INSTALL TREATED LUMBER FOR SUPPORT OF GAS PIPE AND CONDENSATE PIPE. INSTALL TREAD MAT AT ALL SUPPORTS EXTENDING A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORT.

P4. PROVIDE UNION, SHUT-OFF VALVE, AND 6" DIRT LEG AT ALL POINTS OF CONNECTION FOR GAS PIPE TO GAS FIRED EQUIPMENT.

P5. INSTALL REGULATOR FOR GAS PIPING RUN-OUTS. NO REGULATOR SHALL BE INSTALLED CLOSER THAN 10 FEET TO ANY HVAC OUTDOOR AIR INTAKE. PROVIDE UNION AND SHUT-OFF VALVE AT ALL REGULATORS. THE REGULATOR SHALL REDUCE THE GAS PRESSURE FROM 2.0PSI TO 0.5PSI.

P6. CONNECT TO EXISTING GAS PIPING AT THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY EXACT SIZE AND LOCATION OF EXISTING GAS SERVICE PIPING.

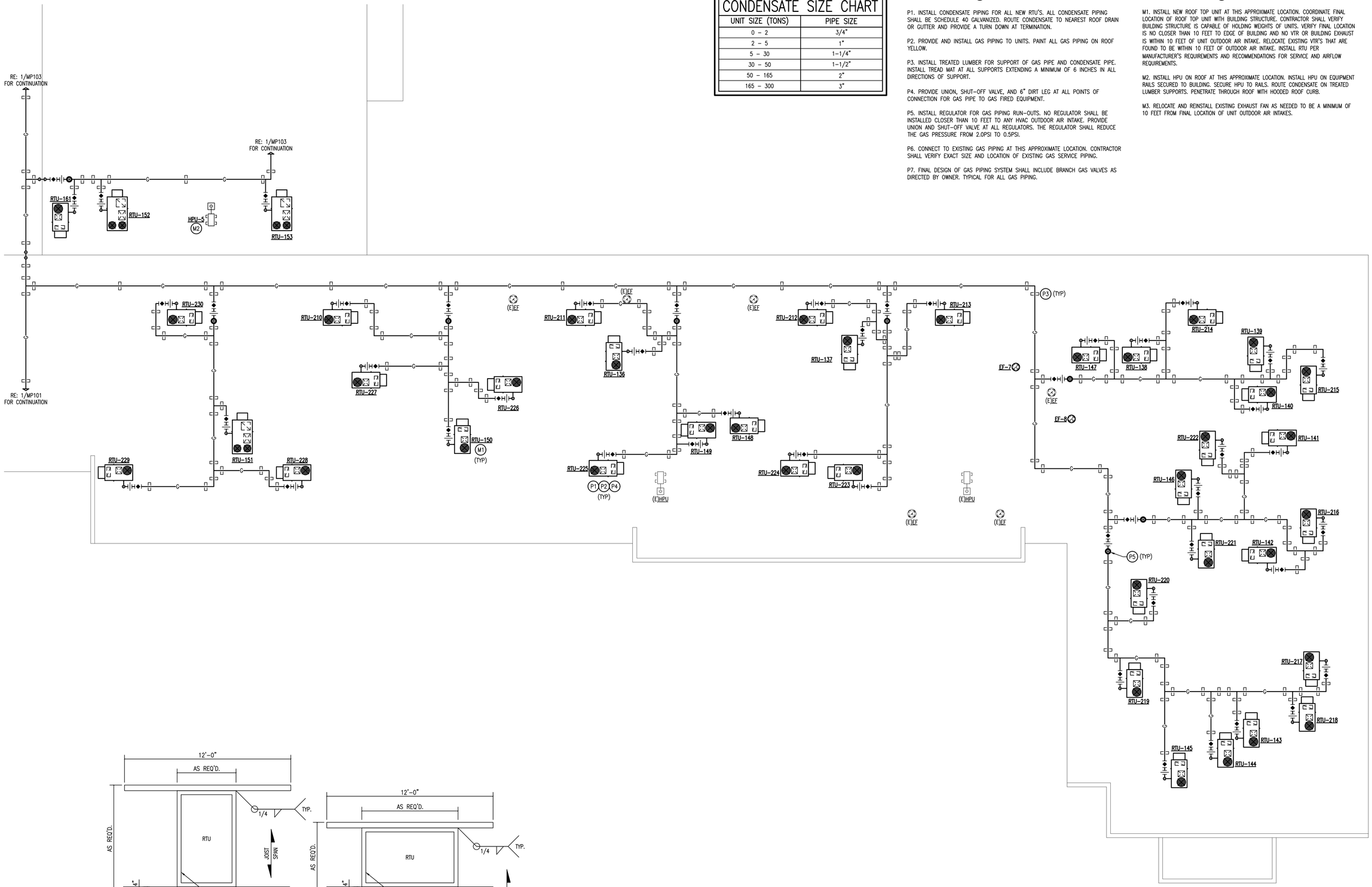
P7. FINAL DESIGN OF GAS PIPING SYSTEM SHALL INCLUDE BRANCH GAS VALVES AS DIRECTED BY OWNER. TYPICAL FOR ALL GAS PIPING.

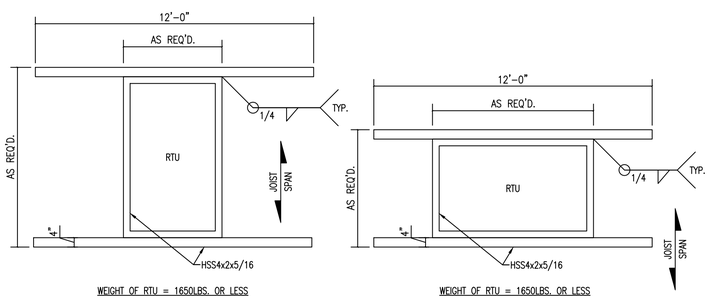
MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. CONTRACTOR SHALL VERIFY BUILDING STRUCTURE IS CAPABLE OF HOLDING WEIGHTS OF UNITS. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. INSTALL RTU PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS FOR SERVICE AND AIRFLOW REQUIREMENTS.

M2. INSTALL HPU ON ROOF AT THIS APPROXIMATE LOCATION. INSTALL HPU ON EQUIPMENT RAILS SECURED TO BUILDING. SECURE HPU TO RAILS. ROUTE CONDENSATE ON TREATED LUMBER SUPPORTS. PENETRATE THROUGH ROOF WITH HOODED ROOF CURB.

M3. RELOCATE AND REINSTALL EXISTING EXHAUST FAN AS NEEDED TO BE A MINIMUM OF 10 FEET FROM FINAL LOCATION OF UNIT OUTDOOR AIR INTAKES.





2 RTU FRAMING PLAN
Scale: NTS

1 MECHANICAL AND PLUMBING ROOF PLAN
Scale: 3/32" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

AEG
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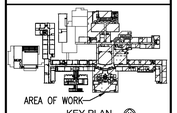
TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



KEY PLAN

PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE
MECHANICAL AND PLUMBING ROOF PLAN

DATE: 07.03.2023

SHEET NO.
MP102

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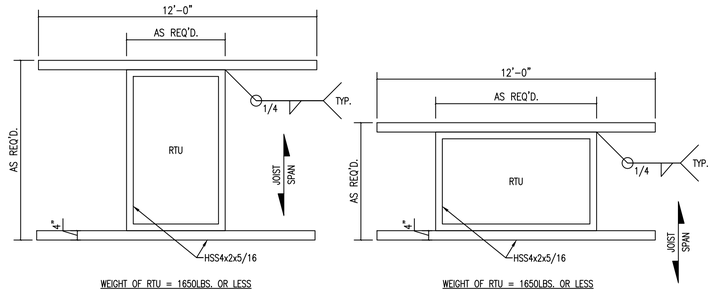


2 RTU FRAMING PLAN

Scale: NTS

PLUMBING KEYNOTES: (PX)

P1. INSTALL CONDENSATE PIPING FOR ALL NEW RTU'S. ALL CONDENSATE PIPING SHALL BE SCHEDULE 40 GALVANIZED. ROUTE CONDENSATE TO NEAREST ROOF DRAIN OR GUTTER AND PROVIDE A TURN DOWN AT TERMINATION.

P2. PROVIDE AND INSTALL GAS PIPING TO UNITS. PAINT ALL GAS PIPING ON ROOF YELLOW.

P3. INSTALL TREATED LUMBER FOR SUPPORT OF GAS PIPE AND CONDENSATE PIPE. INSTALL TREAD MAT AT ALL SUPPORTS EXTENDING A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORT.

P4. PROVIDE UNION, SHUT-OFF VALVE, AND 6" DIRT LEG AT ALL POINTS OF CONNECTION FOR GAS PIPE TO GAS FIRED EQUIPMENT.

P5. INSTALL REGULATOR FOR GAS PIPING RUN-OUTS. NO REGULATOR SHALL BE INSTALLED CLOSER THAN 10 FEET TO ANY HVAC OUTDOOR AIR INTAKE. PROVIDE UNION AND SHUT-OFF VALVE AT ALL REGULATORS. THE REGULATOR SHALL REDUCE THE GAS PRESSURE FROM 2.0PSI TO 0.5PSI.

P6. CONNECT TO EXISTING GAS PIPING AT THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY EXACT SIZE AND LOCATION OF EXISTING GAS SERVICE PIPING.

P7. FINAL DESIGN OF GAS PIPING SYSTEM SHALL INCLUDE BRANCH GAS VALVES AS DIRECTED BY OWNER. TYPICAL FOR ALL GAS PIPING.

P8. DROP THROUGH ROOF TO FEED KITCHEN COOKLINE. PENETRATE ROOF WITH HOODED ROOF CURB OR OTHER APPROVED METHOD BY ROOFING MANUFACTURER SO AS NOT TO VOID WARRANTY.

MECHANICAL KEYNOTES: (MX)

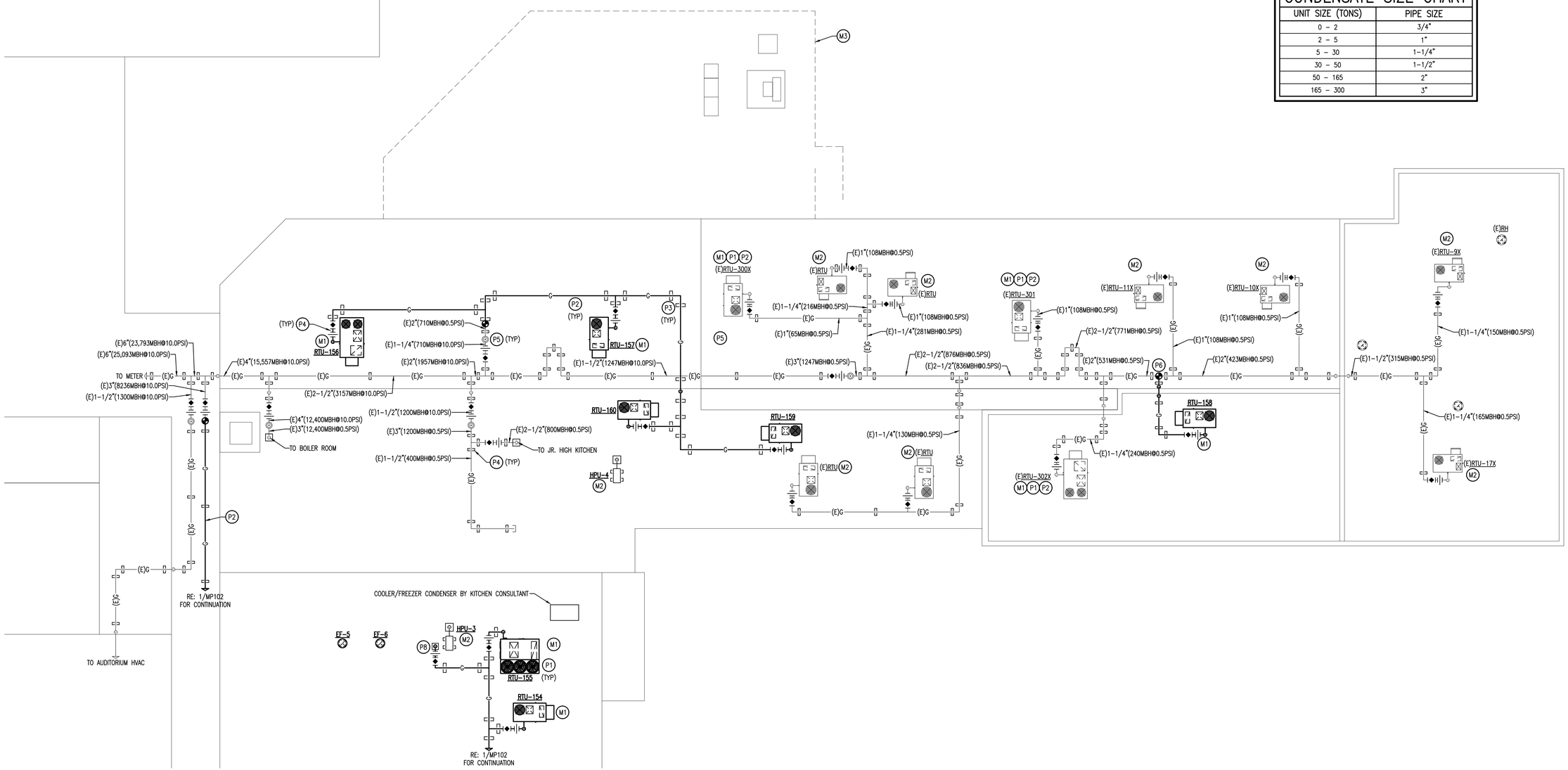
M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. CONTRACTOR SHALL VERIFY BUILDING STRUCTURE IS CAPABLE OF HOLDING WEIGHTS OF UNITS. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. INSTALL RTU PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS FOR SERVICE AND AIRFLOW REQUIREMENTS.

M2. INSTALL HPU ON ROOF AT THIS APPROXIMATE LOCATION. INSTALL HPU ON EQUIPMENT RAILS SECURED TO BUILDING. SECURE HPU TO RAILS. ROUTE CONDENSATE ON TREATED LUMBER SUPPORTS. PENETRATE THROUGH ROOF WITH HOODED ROOF CURB.

M3. REMOVE WALL AROUND CHILLERS AND FOOTINGS. REPAIR GROUND AS DIRECTED BY OWNER.

CONDENSATE SIZE CHART

UNIT SIZE (TONS)	PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"



1 MECHANICAL AND PLUMBING ROOF PLAN

Scale: 3/32" = 1'-0"

NORTH

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ALLIED ENGINEERING GROUP, LLC
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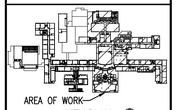
OKLAHOMA
7/3/2023

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



KEY PLAN

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
MECHANICAL AND PLUMBING ROOF PLAN

DATE: 07.03.2023

SHEET NO.
MP103

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LIGHT FIXTURE SCHEDULE (REVISE FOR PROJECT)

FIXTURE/TYPE		MANUFACTURER CATALOG NUMBER	VOLTS / WATTS	LAMP TYPE	MOUNTING	FIXTURE NOTES
	A	METALUX: 24CGT4550C LSI: SFP24-LED-50-UE-DIM-50	120 39	LED 5000K < 80CRI	RECESSED	2'x4' FLAT PANEL LED
	B	METALUX: 4ST2L4050R WILLIAMS: 75R-4-L50-8-50-VBY-2-DRV-UNV	120 38	LED 5000K < 80CRI	WALL MOUNT/SUSPENDED	4'-0" LED STRIP FIXTURE
	EM	LITHONIA: ELM2 LED HO SD SURE LITES: SEL25R16SD DUAL LITE: EV4I	120 –	LED	CEILING MOUNTED	EMERGENCY EGRESS LIGHT PROVIDE WEATHER-PROOF DUAL REMOTE HEAD AT EXITS SHOWN ON DRAWINGS ATTACH TO FIXTURES SPECIFIED
	RH	LITHONIA: ELA LED T QWP L0309 SD SURE LITES: SRP25DGY DUAL LITE: EVO-DW	120 8	LED	CEILING/SURFACE MOUNTED	WEATHER-PROOF/VANDEL RESISTANT REMOTE HEAD UNIVERSAL MOUNT AT EXTERIOR OF BUILDING. INTERCONNECT TO EXIT LIGHT 90-MIN EMERGENCY BATTERY BACKUP INDICATED ON DRAWINGS.
	X	LITHONIA: LQM S W 3 R 120/277 EL N SD SURE LITES: LPXR5SD DUAL LITE: EVCURWD4I-0	120 5	LED	CEILING, WALL, OR END MOUNTED	SINGLE OR DOUBLE FACE PER DRAWING. (90-MIN. BATTERY BACKUP)
	XH	LITHONIA: LHQM S W 3 R HO SD SURE LITES: LPXC25R3SD DUAL LITE: EVCURWD4I	120 8	LED	CEILING, WALL, OR END MOUNTED	SINGLE OR DOUBLE FACE PER DRAWING. (90-MIN. BATTERY BACKUP)

GENERAL NOTES:
A) CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ACCESSORIES REQUIRED FOR COMPLETE FIXTURE PACKAGE SHOWN ON SCHEDULES, DETAILS, PLANS, AND SPECIFICATIONS.
B) NO SUBSTITUTIONS ACCEPTED.
C) CONTRACTOR SHALL PROVIDE DIMMING DRIVERS IN LED FIXTURES REQUIRED FOR CONTROL SYSTEM COMPATIBILITY.
D) PROVIDE WIRE GUARDS IN GYMNASIUM LOCATIONS.
E) PROVIDE GYPSUM BOARD CEILING FRAMING KIT IN AREAS WITH HARD CEILING.

PRELIMINARY – NOT FOR CONSTRUCTION:
THESE DRAWINGS AND DOCUMENTS COMPRISE INFORMATION FOR THE DESCRIPTION OF THE SCOPE OF WORK IN SUPPORT OF THE ISSUED REQUEST FOR PROPOSAL. THESE DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION. AS REQUIRED IN THE REQUEST FOR PROPOSAL, CONSTRUCTION DOCUMENTS BY LICENSED ENGINEER MUST BE PROVIDED AS PART OF THE RFP SCOPE OF WORK.

UTILITIES NOTE:
CONTRACTORS SHALL DIRECT ALL WORK WITH ALL UTILITY COMPANIES THROUGH TPS PERSONNEL. CONTRACTORS SHALL NOT CONTACT UTILITY COMPANIES DIRECTLY WITHOUT PRIOR APPROVAL OF OWNER.

DEVICE SUBSCRIPT (REVISE FOR PROJECT)

'a'	LOWER CASE LETTER INDICATES DEVICE CONTROL ARRANGEMENT	LV	LOW VOLTAGE
AFF	ABOVE FINISHED FLOOR	LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT
AFG	ABOVE FINISHED GRADE	LGT	LIGHTING
A/C	HVAC	M	FRACTIONAL HP RATED SWITCH
APL	APPLIANCE	MTR	MOTOR
AF	AMP FUSE	NL	NIGHT LIGHT
AT	AMP TRIP	OCPD	OVER-CURRENT PROTECTION DEVICE
BMS	BUILDING MANAGEMENT SYSTEM	OHE	OVERHEAD ELECTRIC
BTC	BRANCH TO CONNECTION	OHT	OVERHEAD TELEPHONE
C	COMMUNICATION	(R)	REMOVE (260450)
CKT	CIRCUIT	(RR)	REMOVE AND REINSTALL (260450)
CT	CURRENT TRANSFORMER	(RS)	REMOVE AND SALVAGE (260450)
CTL	CONTROL	RCP	RECEPTACLE
D	DATA OUTLET	RI	ROUGH-IN ONLY
(E)	EXISTING TO REMAIN (260450)	S.E.R.	SERVICE ENTRANCE RATED
(ER)	EXISTING RELOCATED	SPD	SURGE PROTECTION DEVICE
EM	EMERGENCY CIRCUIT	S.T.	SHUNT-TRIP BREAKER
EPO	EMERGENCY POWER OFF	SW	SPLIT WIRED RECEPTACLE FOR HALF SWITCHING
EQ	EQUAL	U.C.	UNDER COUNTER
EWC	ELECTRIC WATER COOLER	UGE	UNDERGROUND ELECTRIC
FACP	FIRE ALARM CONTROL PANEL	UGT	UNDERGROUND TELEPHONE
GFCI	GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE	UGF	UNDERGROUND FIBER
GFI	GROUND FAULT CIRCUIT INTERRUPTING BREAKER PROTECTED	UNO	UNLESS NOTED OTHERWISE
GFP	FEED THROUGH GROUND FAULT CIRCUIT INTERRUPTING PROTECTED	WP	WEATHERPROOF WHILE IN USE
JB	JUNCTION BOX	WPS	WEATHERPROOF SPRING COVER DEVICE
K	KEY OPERATED		

ELECTRICAL GRAPHIC SYMBOL LEGEND (REVISE FOR PROJECT)

WALL MOUNTED DEVICES
- WALL MOUNTED, SIMPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- QUAD RECEPTACLE
- SURFACE MOUNTED, SPECIAL RECEPTACLE
- DUPLEX RECEPTACLE W/GFCI
- QUAD RECEPTACLE W/GFCI
- JUNCTION BOX
- PLUGMOLD

WALL MOUNTED, LOW-VOLTAGE DEVICES

FIRE ALARM DEVICES
- DD HVAC DUCT SMOKE DETECTOR
- CEILING MOUNTED, STROBE
- CEILING MOUNTED, HORN/STROBE COMBINATION

CONTROL DEVICES

SECURITY/ACCESS CONTROL LEGEND
- SS SUPCO ALARM SENSOR

RACEWAYS
- UNDERGROUND CONDUIT
- CONCEALED CONDUIT
- EXPOSED CONDUIT
- HOMERUN
- INTERCONNECTED HOMERUN CKT.

SWITCHES/MOTORS/TRANSFORMERS/ETC
- HEAVY-DUTY FUSED DISCONNECT SWITCH
- HEAVY-DUTY COMBINATION MOTOR STARTER/DISCONNECT

ELECTRICAL SCOPE OF WORK:

WORK INCLUDED: PROVIDE ELECTRICAL SYSTEMS DESIGN AND ENGINEER DRAWINGS SIGNED AND SEALED BY OKLAHOMA ELECTRICAL PROFESSIONAL ENGINEER. PROVIDE INSTALLATION AND MODIFICATIONS AS OUTLINED HEREIN AND REQUIRED FOR A COMPLETE AND PROPER WORKING SYSTEM FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT INSTALLED.

ENGINEER SHALL REFER TO THE TPS PROJECT MANUAL FOR THE FULL LISTED SCOPE AND GUIDELINE SPECIFICATIONS FOR ADDITIONAL WORK NOT SHOWN IN DRAWINGS.

ENGINEER SHALL BE RESPONSIBLE FOR ADDITIONAL SPECIFICATION REQUIRED FOR THE PROJECT. COORDINATE RACEWAY PATHWAYS AND PHASE OF ELECTRICAL CONSTRUCTION WITH OWNERS REPRESENTATIVE PRIOR TO FINAL SIGNED/SEALED CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.

ENGINEER SHALL PROVIDE SITE INVESTIGATION TO DETERMINE THE MAIN DISTRIBUTION SWITCHBOARDS AVAILABLE TO PROVIDE POWER FOR THE INDICATED MECHANICAL EQUIPMENT AND COORDINATE WITH AEP/PSO WHERE NEW POWER SYSTEMS ARE REQUIRED TO BE SERVED. FIELD VERIFY EXISTING CONDITIONS DURING DEMOLITION THAT COULD CHANGE THE SCOPE OF WORK AND PREPARE ADDITIONAL DRAWINGS AS REQUIRED.

ENGINEER SHALL COORDINATE WITH TPS REPRESENTATIVES FOR DATA, BUILDING MANAGEMENT SYSTEM CONTROLS, SECURITY ALARM SYSTEM AND FIRE ALARM SYSTEMS THAT REQUIRE ADDITIONAL EXPANSION AND POWER SUPPLIES TO COMPLETE THE PROJECT. PROVIDE DIRECTIVES ON DRAWINGS IN ACCORDANCE WITH NFPA 70, 72, 101 AND IBC.

A. REMOVE EXISTING DISTRIBUTION SYSTEM TO THE INDICATED CLASSROOM HVAC UNITS. REMOVE CONDUCTORS AND CAP EXISTING FEEDER CONDUIT IN ACCESSIBLE CEILING CAVITY BELOW REMOVED UNITS. REMOVE EXISTING SERVICE CONDUCTORS AND DISCONNECTS TO REPLACED ROOF TOP UNITS (RTU) AND PROVIDE NEW AS INDICATED IN MECHANICAL DRAWINGS.

B. PROVIDE ALL OVER-CURRENT PROTECTIVE DEVICES REQUIRED TO FEED ALL MECHANICAL UNITS, EXHAUST FANS AND MISCELLANEOUS EQUIPMENT IN FINAL MECHANICAL DRAWINGS.

C. PROVIDE COMPLETED CIRCUIT INDEX FOR ALL NEW AND EXISTING SWITCHBOARDS, DISTRIBUTION PANELS, AND BRANCH CIRCUIT PANELBOARDS. LOCATE INDEX INSIDE EQUIPMENT DOOR.

D. PROVIDE NEW BRANCH FEEDERS TO NEW AND REPLACED HVAC SYSTEMS.

E. REMOVE ALL FEEDERS TO ABANDONED EQUIPMENT, TO BE REMOVED IN DEMOLITION. ELECTRICAL LEGENDS TO INDICATE BREAKERS OR REVISED SECTIONS ARE 'SPARE'.

F. DOCUMENT AND PUBLISH DEMOLITION DRAWING OF ACTUAL EXISTING CONDITIONS INDICATING DEVICES AND LOCATIONS OF FIRE ALARM CONTROL PANEL, FIRE ALARM ANNUNCIATOR PANEL AND SECURITY CONTROL PANEL AND DEVICES.

G. PROVIDE NEW FIRE ALARM SYSTEM INITIATING AND ANNUNCIATION DEVICES AND CABLING BACK TO EXISTING FIRE ALARM CONTROL PANEL. INDICATE HOW HVAC DUCT DETECTORS TO COMMUNICATE WITH FACP. PROVIDE COMBINATION SMOKE/FIRE DAMPERS AND DUCT DETECTORS WHERE REQUIRED. SUBMIT FINAL DRAWINGS TO CITY FIRE MARSHAL FOR APPROVAL PRIOR TO INSTALLATION.

H. IDENTIFY AND DIRECT TO REINSTALL ALL EXISTING SECURITY SYSTEM DEVICES AND CABLING. INDICATE NEW ALARM SWITCH FOR EACH NEW HVAC UNIT AND ROUTE CABLING BACK TO MAIN SECURITY CONTROL PANEL LOCATED IN EXISTING MDF CLOSET. COORDINATE SENSORS FOR HVAC SYSTEM WITH DIVISION 23 CONTRACTOR.

I. ROUTE 3/4" EMT RACEWAY FOR NEW BUILDING MANAGEMENT SYSTEM CABLING FROM EXISTING THERMOSTAT LOCATIONS TO NEW UNITS AS DESCRIBED WITHIN THESE ILLUSTRATED DRAWINGS. COORDINATE WITH TPS CONTROLS CONTRACTOR FOR REQUIRED RACEWAY SYSTEMS AND SUPPORTS.

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CA: 3419 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD McKENNA
2022
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
ELECTRICAL GENERAL NOTES AND SCHEDULES

DATE: 07.03.2023

SHEET NO.
E001

J:\2022\TPS\Edison Jr. High RFP\Dwg\E001.dwg, 6/30/2023 11:33:10 AM, DBWilbanks

KEYNOTES: (X)

1. PROVIDE NEW LED LIGHTING SCHEDULED IN CORRIDOR AT INDICATED SPACING. REUSE EXISTING STEINEL POWER PACKS AND OCCUPANCY SENSORS. COORDINATE WITH EXISTING CEILING GRID MOUNTED DEVICES AND RELOCATE AS REQUIRED. PROVIDE NEW ACOUSTIC CEILING GRID TO MATCH EXISTING IN EMPTY LOCATIONS.

2. REPLACE EXISTING HORN/STROBE DEVICES WITH NEW SPEAKER/STROBE DEVICES THROUGHOUT. PROVIDE NEW 4"x4" DEEP BACK BOXES.

3. PROVIDE EMERGENCY LIGHTING UNITS IN CORRIDORS SPACED 50'-0" MAXIMUM TO ACHIEVE 1-FOOTCANDLE AVERAGE AT THE FLOOR.

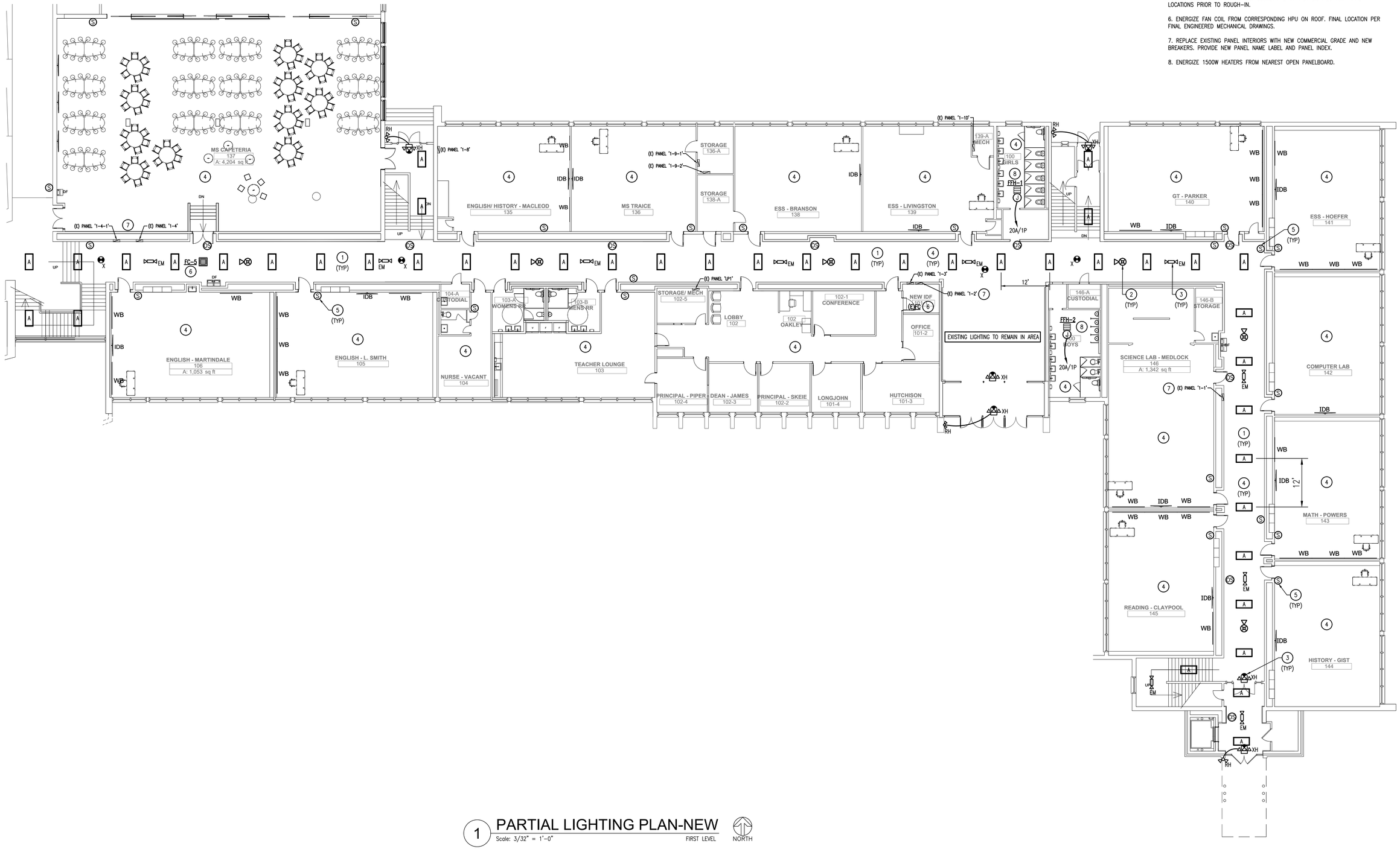
4. REINSTALL EXISTING LED LIGHTING, SPEAKERS, ACCESS POINTS, SECURITY SENSORS, SURVEILLANCE CAMERAS AND FIRE ALARM CEILING GRID DEVICES AND APPLIANCES TO ORIGINAL LOCATIONS.

5. SENSORS/THERMOSTATS: PROVIDE CONDUIT AND CONTROL VOLTAGE CONDUCTORS FOR SENSORS AND THERMOSTATS. COORDINATE WITH DIVISION 23 FOR FINAL LOCATIONS PRIOR TO ROUGH-IN.

6. ENERGIZE FAN COIL FROM CORRESPONDING HPU ON ROOF. FINAL LOCATION PER FINAL ENGINEERED MECHANICAL DRAWINGS.

7. REPLACE EXISTING PANEL INTERIORS WITH NEW COMMERCIAL GRADE AND NEW BREAKERS. PROVIDE NEW PANEL NAME LABEL AND PANEL INDEX.

8. ENERGIZE 1500W HEATERS FROM NEAREST OPEN PANELBOARD.



1 PARTIAL LIGHTING PLAN-NEW
Scale: 3/32" = 1'-0"
FIRST LEVEL
NORTH

TULSA PUBLIC SCHOOLS

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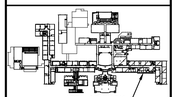
CA: 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD MCKENNA
20022
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



FIRST LEVEL KEY PLAN

PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE

FIRST LEVEL PARTIAL LIGHTING PLAN-NEW

DATE: 07.03.2023

SHEET NO.

E101

X:\2022\TPS\Edison Jr. High RFP\Dwg\E101.dwg, 6/30/2023 11:35:16 AM, DawnSartee

KEYNOTES: (X)

1. PROVIDE NEW LED LIGHTING SCHEDULED IN CORRIDOR AT INDICATED SPACING. REUSE EXISTING STEINEL POWER PACKS AND OCCUPANCY SENSORS. COORDINATE WITH EXISTING CEILING GRID MOUNTED DEVICES AND RELOCATE AS REQUIRED. PROVIDE NEW ACOUSTIC CEILING GRID TO MATCH EXISTING IN EMPTY LOCATIONS.

2. REPLACE EXISTING HORN/STROBE DEVICES WITH NEW SPEAKER/STROBE DEVICES THROUGHOUT. PROVIDE NEW 4"x4" DEEP BACK BOXES.

3. PROVIDE EMERGENCY LIGHTING UNITS IN CORRIDORS SPACED 50'-0" MAXIMUM TO ACHIEVE 1-FOOTCANDLE AVERAGE AT THE FLOOR.

4. REINSTALL EXISTING LED LIGHTING, SPEAKERS, ACCESS POINTS, SECURITY SENSORS, SURVEILLANCE CAMERAS AND FIRE ALARM CEILING GRID DEVICES AND APPLIANCES TO ORIGINAL LOCATIONS.

5. SENSORS/THERMOSTATS: PROVIDE CONDUIT AND CONTROL VOLTAGE CONDUCTORS FOR SENSORS AND THERMOSTATS. COORDINATE WITH DIVISION 23 FOR FINAL LOCATIONS PRIOR TO ROUGH-IN.

6. REPLACE EXISTING PANEL INTERIORS WITH NEW COMMERCIAL GRADE AND NEW BREAKERS. PROVIDE NEW PANEL NAME LABEL AND PANEL INDEX.

7. ENERGIZE FAN COIL FROM CORRESPONDING HPU ON ROOF. FINAL LOCATION PER FINAL ENGINEERED MECHANICAL DRAWINGS.

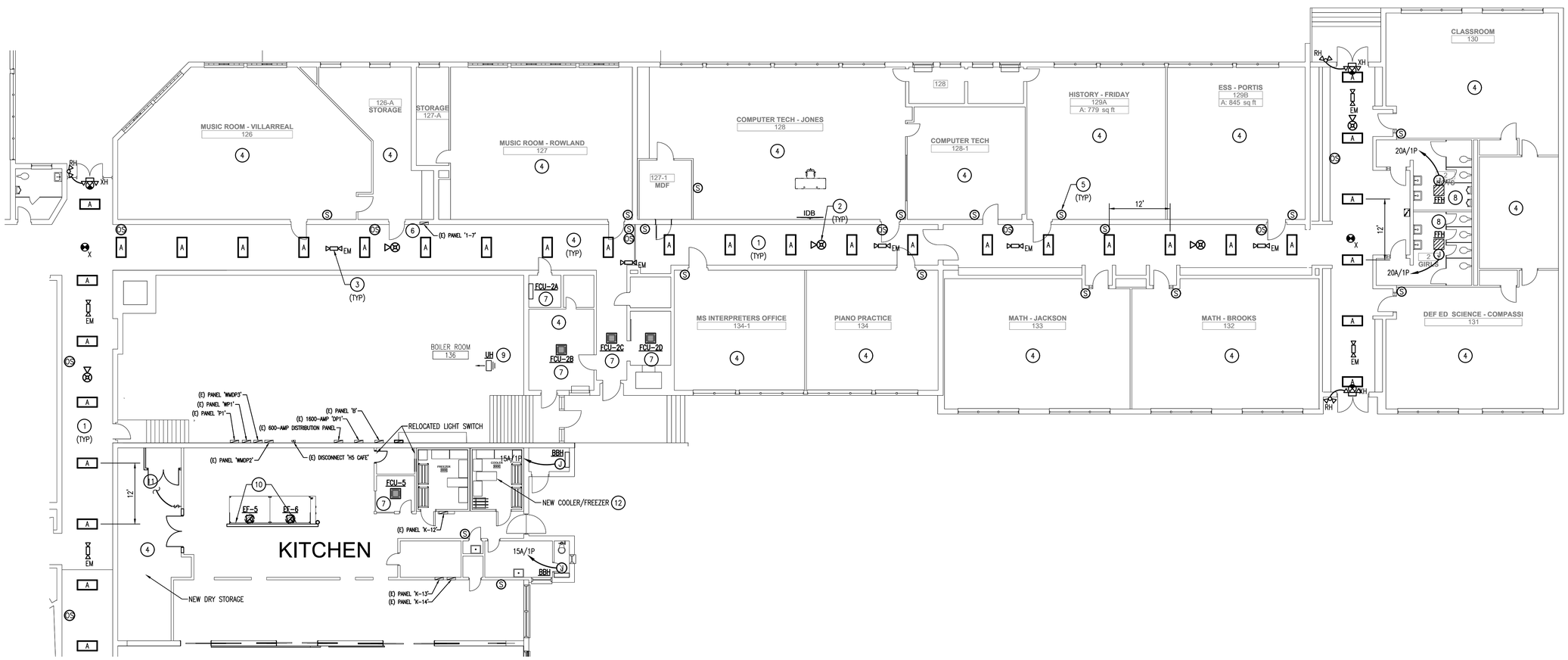
8. ENERGIZE 1500W HEATERS FROM NEAREST OPEN PANELBOARD.

9. PROVIDE CIRCUIT FROM NEAREST PANELBOARD FOR UNIT HEATER CONTROLS AND FAN.

10. RELOCATE EXISTING KITCHEN EQUIPMENT TO NEW WALL PER TPS MANAGER DIRECTIVES. PROVIDE REQUIRED WIRING DEVICES FLUSH IN NEW WALL WITH STAINLESS STEEL DEVICES/DISCONNECTS. LOCATE DEVICES AT HEIGHTS FOR CORD AND PLUG SETS. INSTALL EXISTING LIGHT FIXTURES IN NEW CEILING AREAS STORED DURING DEMO. PROVIDE WIRING AND INTERCONNECTS TO NEW KITCHEN EXHAUST HOOD INCLUDING LOW-VOLTAGE ALARMS AND FACP INTERFACE.

11. PROVIDE NEW LIGHT AND SWITCH AT NEW LAUNDRY ROOM ENCLOSURE.

12. PROVIDE WIRING TO COOLER/FREEZER EVAPORATORS AND DISCONNECTS PER MANUFACTURER'S SPECIFICATIONS.



1 PARTIAL ELECTRICAL PLAN-NEW
Scale: 3/32" = 1'-0"
FIRST LEVEL
NORTH

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ALLIED ENGINEERING GROUP, LLC
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CA: 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD MCKENNA
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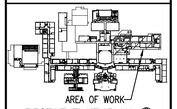
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
FIRST LEVEL PARTIAL ELECTRICAL PLAN-NEW

DATE: 07.03.2023

SHEET NO.
E102

A:\2022\TPS\Edison Jr. High RFP\Dwg\E102.dwg, 6/30/2023 11:33:25 AM, DawnSartee

KEYNOTES: (X)

1. PROVIDE NEW LED LIGHTING SCHEDULED IN CORRIDOR AT INDICATED SPACING. REUSE EXISTING STEINEL POWER PACKS AND OCCUPANCY SENSORS. COORDINATE WITH EXISTING CEILING GRID MOUNTED DEVICES AND RELOCATE AS REQUIRED. PROVIDE NEW ACOUSTIC CEILING GRID TO MATCH EXISTING IN EMPTY LOCATIONS.

2. REPLACE EXISTING HORN/STROBE DEVICES WITH NEW SPEAKER/STROBE DEVICES THROUGHOUT. PROVIDE NEW 4"x4" DEEP BACK BOXES.

3. PROVIDE EMERGENCY LIGHTING UNITS IN CORRIDORS SPACED 50'-0" MAXIMUM TO ACHIEVE 1-FOOTCANDLE AVERAGE AT THE FLOOR.

4. REINSTALL EXISTING LED LIGHTING, SPEAKERS, ACCESS POINTS, SECURITY SENSORS, SURVEILLANCE CAMERAS AND FIRE ALARM CEILING GRID DEVICES AND APPLIANCES TO ORIGINAL LOCATIONS.

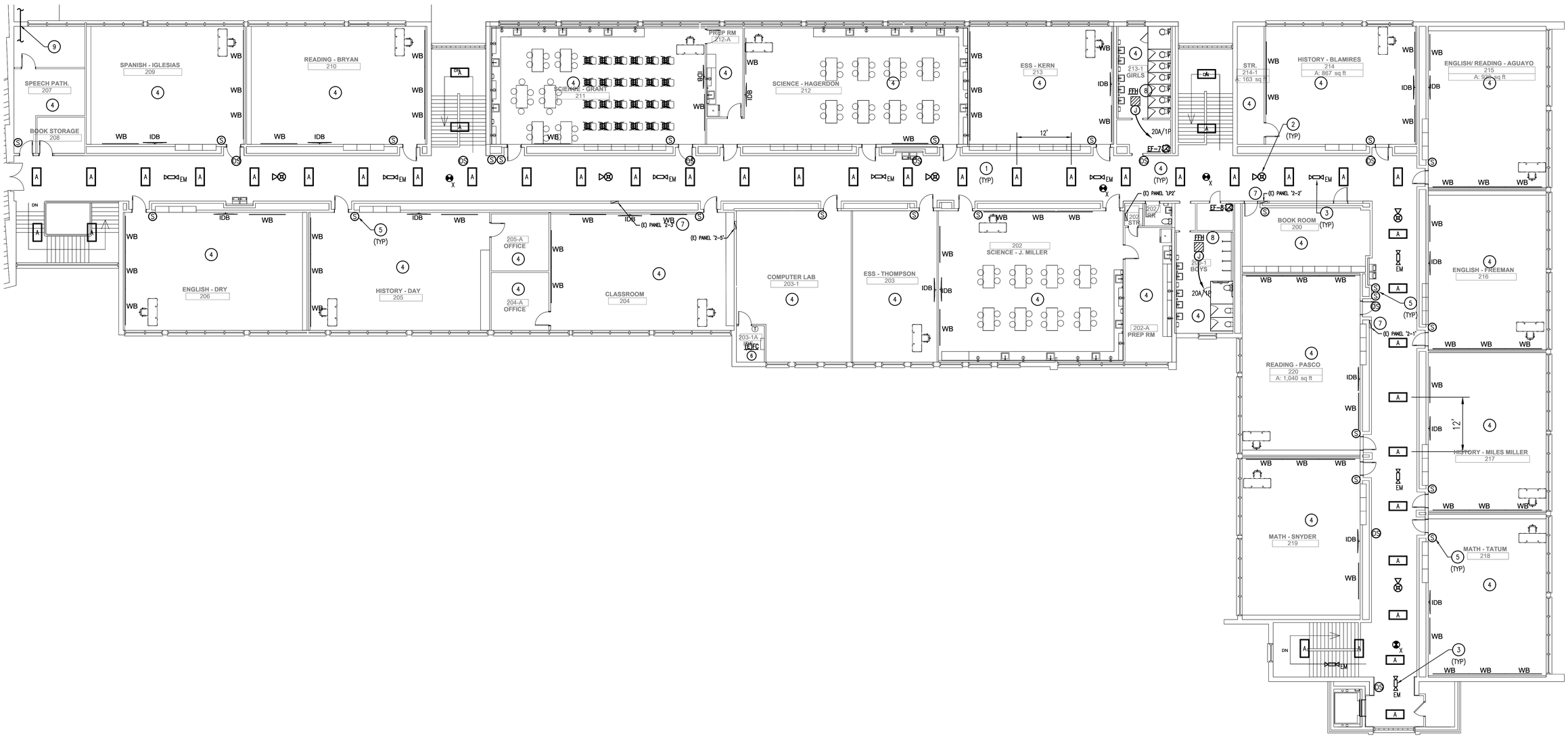
5. SENSORS/THERMOSTATS: PROVIDE CONDUIT AND CONTROL VOLTAGE CONDUCTORS FOR SENSORS AND THERMOSTATS. COORDINATE WITH DIVISION 23 FOR FINAL LOCATIONS PRIOR TO ROUGH-IN.

6. ENERGIZE FAN COIL FROM CORRESPONDING HPU ON ROOF. FINAL LOCATION PER FINAL ENGINEERED MECHANICAL DRAWINGS.

7. REPLACE EXISTING PANEL INTERIORS WITH NEW COMMERCIAL GRADE AND NEW BREAKERS. PROVIDE NEW PANEL NAME LABEL AND PANEL INDEX.

8. ENERGIZE 1500W HEATERS FROM NEAREST OPEN PANELBOARD.

9. FIELD VERIFY PATH FOR NEW FEEDER FROM 'RTUDP' ON ROOF TO 'RTUP13' ON LIBRARY ROOF.



1 PARTIAL ELECTRICAL PLAN-NEW

Scale: 3/32" = 1'-0"

SECOND LEVEL

NORTH

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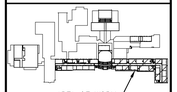
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD MCKENNA
20022
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



SECOND LEVEL KEY PLAN

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
SECOND LEVEL PARTIAL ELECTRICAL PLAN-NEW

DATE: 07.03.2023

SHEET NO.
E103

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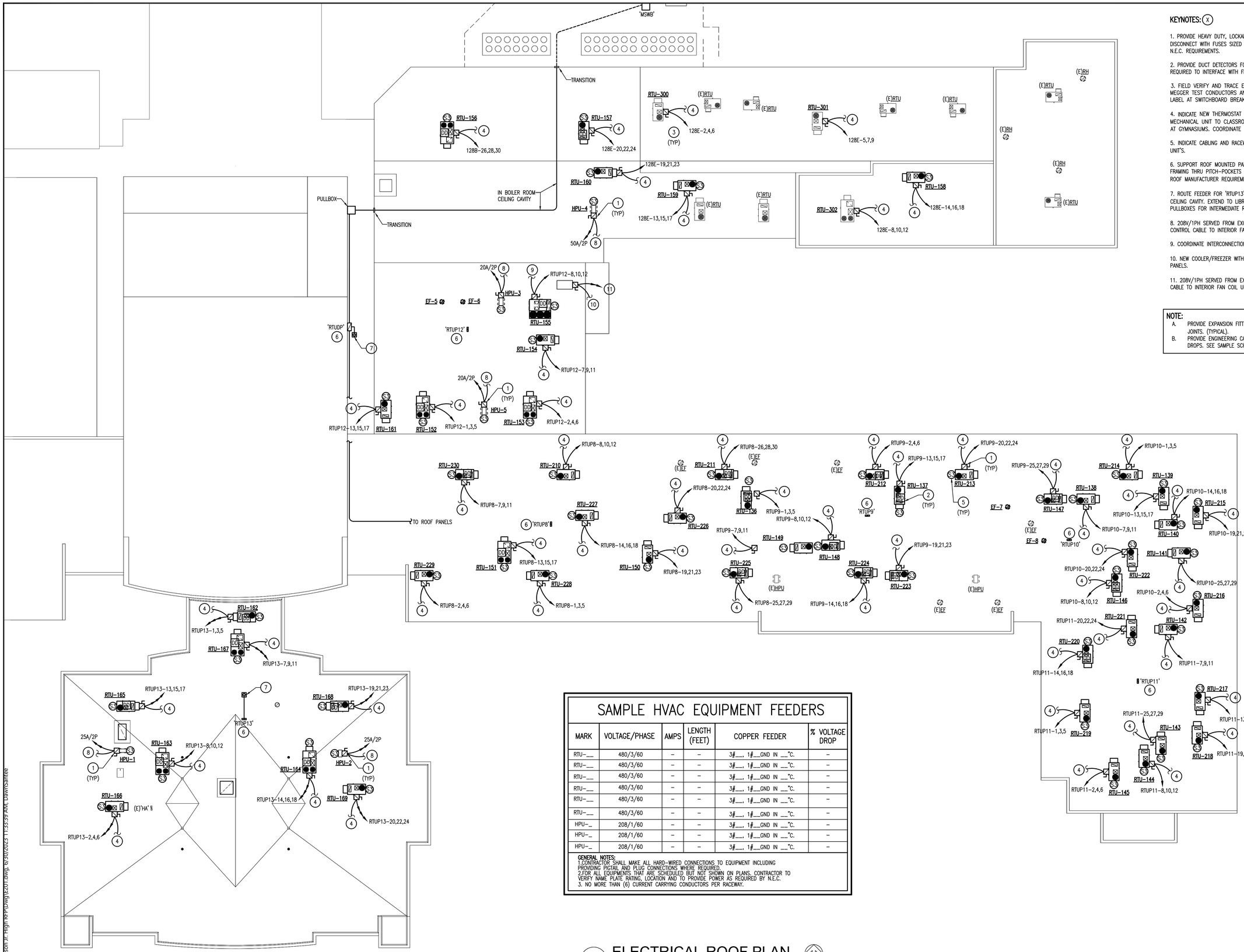

KEYNOTES: (X)

1. PROVIDE HEAVY DUTY, LOCKABLE AND FUSIBLE NEMA 3R RATED, 3-POLE FUSED DISCONNECT WITH FUSES SIZED PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND N.E.C. REQUIREMENTS.

2. PROVIDE DUCT DETECTORS FOR 2000 CFM UNITS. PROVIDE COMMUNICATION MODULE REQUIRED TO INTERFACE WITH FIRE ALARM PANEL.

3. FIELD VERIFY AND TRACE EXISTING CIRCUIT SERVING UNIT TO BE REPLACED. MEGGER TEST CONDUCTORS AND REPLACE AS REQUIRED. PROVIDE UNIT NUMBER LABEL AT SWITCHBOARD BREAKER AND DISCONNECT.

4. INDICATE NEW THERMOSTAT CABLING PER TPS GUIDELINES, ROUTE 3/4"C. FROM MECHANICAL UNIT TO CLASSROOM/ROOM THERMOSTAT. ROUTE TO NEAREST CORRIDOR AT GYMNASIUMS. COORDINATE LOCATIONS WITH OWNER PRIOR TO WORK.

5. INDICATE CABLING AND RACEWAYS TO SERVE ALARM SENSORS INSTALLED FOR ALL NEW UNIT'S.

6. SUPPORT ROOF MOUNTED PANELS WITH GALVANIZED METAL RACK AND SUPPORT FRAMING THRU PITCH-POCKETS TO BUILDING SUPER-STRUCTURE BELOW PER ORIGINAL ROOF MANUFACTURER REQUIREMENTS. RE: 2/E301.

7. ROUTE FEEDER FOR 'RTUP13' DOWN THRU PITCH-POCKET IN TO CORRIDOR ACCESSIBLE CEILING CAVITY. EXTEND TO LIBRARY/OFFICE CEILING TO ROOF PANEL LOCATION. PROVIDE PULLBOXES FOR INTERMEDIATE RUNS. RE: MEPD101.

8. 208V/1PH SERVED FROM EXISTING INTERIOR PANEL BELOW. ROUTE 120V 'HPU' CONTROL CABLE TO INTERIOR FAN COIL UNIT LOCATIONS PER MECHANICAL DRAWINGS.

9. COORDINATE INTERCONNECTION TO NEW KITCHEN EXHAUST HOOD CONTROLS.

10. NEW COOLER/FREEZER WITH ALARM CABLING TO INTERCONNECT WITH SECURITY PANELS.

11. 208V/1PH SERVED FROM EXISTING INTERIOR PANEL BELOW. ROUTE 120V CONTROL CABLE TO INTERIOR FAN COIL UNIT LOCATIONS PER MECHANICAL DRAWINGS.

NOTE:

A. PROVIDE EXPANSION FITTINGS IN ALL ELECTRICAL CONDUITS AT ROOF EXPANSION JOINTS. (TYPICAL).
B. PROVIDE ENGINEERING CALCULATIONS ON SCHEDULE OF RTU EQUIPMENT VOLTAGE DROPS. SEE SAMPLE SCHEDULE. RE: E401.

SAMPLE HVAC EQUIPMENT FEEDERS

MARK	VOLTAGE/PHASE	AMPS	LENGTH (FEET)	COPPER FEEDER	% VOLTAGE DROP
RTU-__	480/3/60	-	-	3#__, 1#__GND IN __"C.	-
RTU-__	480/3/60	-	-	3#__, 1#__GND IN __"C.	-
RTU-__	480/3/60	-	-	3#__, 1#__GND IN __"C.	-
RTU-__	480/3/60	-	-	3#__, 1#__GND IN __"C.	-
RTU-__	480/3/60	-	-	3#__, 1#__GND IN __"C.	-
RTU-__	480/3/60	-	-	3#__, 1#__GND IN __"C.	-
HPU-_	208/1/60	-	-	3#__, 1#__GND IN __"C.	-
HPU-_	208/1/60	-	-	3#__, 1#__GND IN __"C.	-
HPU-_	208/1/60	-	-	3#__, 1#__GND IN __"C.	-

GENERAL NOTES:
1.CONTRACTOR SHALL MAKE ALL HARD-WIRED CONNECTIONS TO EQUIPMENT INCLUDING PROVIDING PIGTAIL AND PLUG CONNECTIONS WHERE REQUIRED.
2.FOR ALL EQUIPMENTS THAT ARE SCHEDULED BUT NOT SHOWN ON PLANS. CONTRACTOR TO VERIFY NAME PLATE RATING, LOCATION AND TO PROVIDE POWER AS REQUIRED BY N.E.C.
3. NO MORE THAN (6) CURRENT CARRYING CONDUCTORS PER RACEWAY.

1 ELECTRICAL ROOF PLAN
Scale: 1/16" = 1'-0"
NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL-ELECTRICAL-PLUMBING
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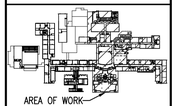
CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD McKENNA
2022
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma



PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
ELECTRICAL ROOF PLAN

DATE: 07.03.2023

SHEET NO.
E201

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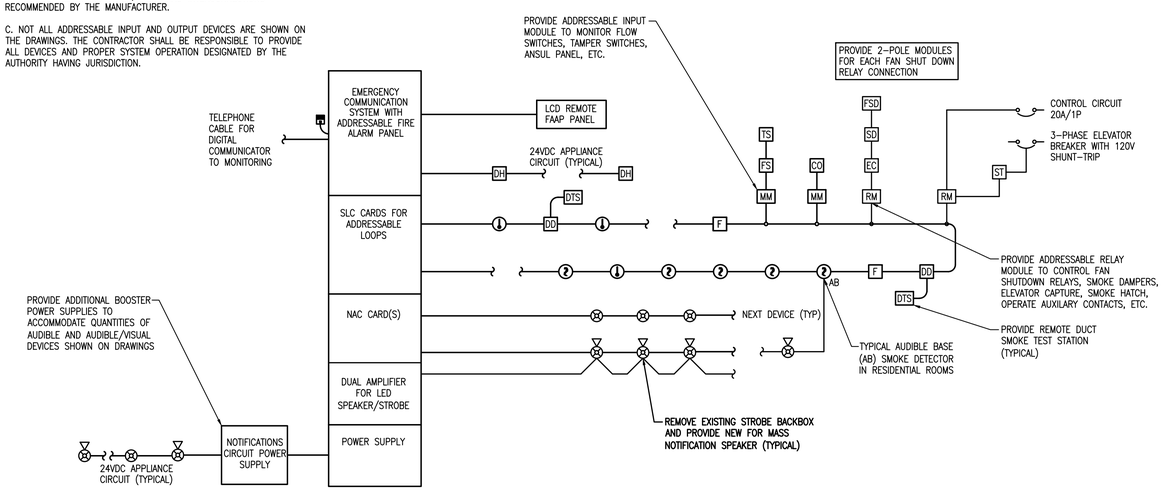
FIRE ALARM RISER NOTES:

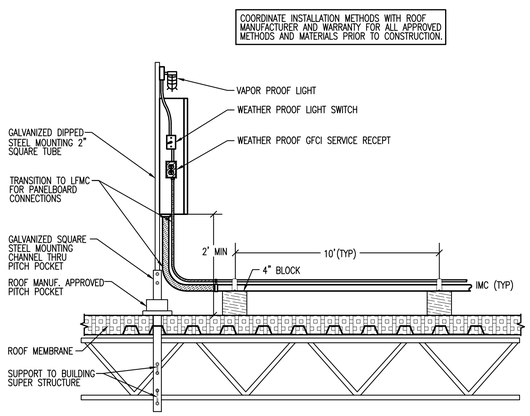
A. THIS SCHEMATIC IS FOR REQUIRED SYSTEM COMPONENT ILLUSTRATION ONLY. REFER TO FLOOR PLANS FOR PROPOSED DEVICE LOCATIONS AND ESTIMATED QUANTITIES.

B. PROVIDE ALL WIRING TYPES, SIZES AND INTERCONNECTIONS RECOMMENDED BY THE MANUFACTURER.

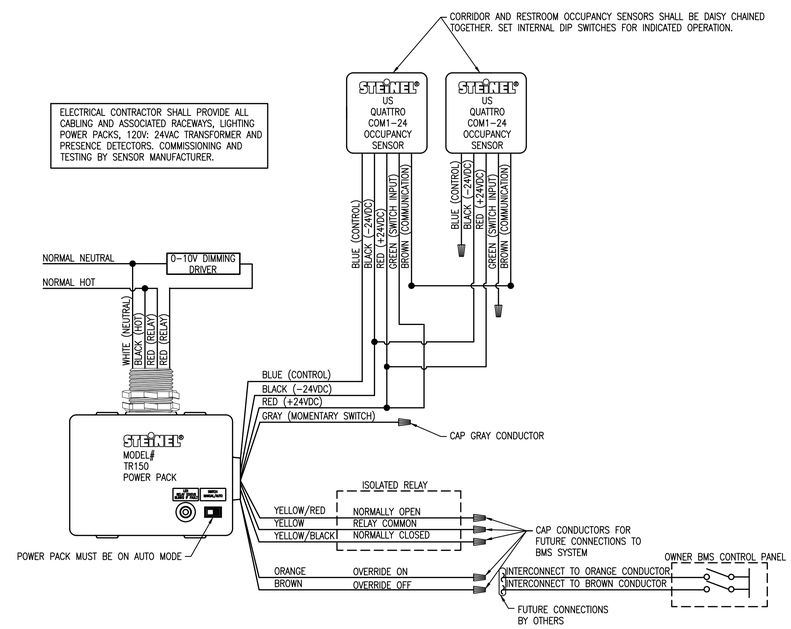
C. NOT ALL ADDRESSABLE INPUT AND OUTPUT DEVICES ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DEVICES AND PROPER SYSTEM OPERATION DESIGNATED BY THE AUTHORITY HAVING JURISDICTION.



3 FIRE ALARM RISER DIAGRAM
Scale: NTS



2 ROOF ELECTRICAL PANEL MOUNTING DETAIL
Scale: NTS



1 CORRIDOR LIGHTING CONTROL DETAIL
Scale: NTS

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20022
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
ELECTRICAL DETAILS

DATE: 07.03.2023

SHEET NO.
E301

A:\2022\TPS\Edison Jr. High RFP\Dwg\E301.dwg, 6/30/2023 11:53:46 AM, DawnSantee

XX	5	FEEDER SCHEDULE	
MARK	AMPACITY	COPPER CONDUCTORS	CONDUIT
F1	1000	(3) SETS OF (3) #750, (1) #2/0 GND	4"
F2	225	(4) #4/0, (1) #4 GND	2-1/2"
F3	225	(4) #350 (1) #4 GND	3"
F4	225	(4) #250 (1) #4 GND	2-1/2"

KEYNOTES: (X)

1. LOADS THAT ARE MARKED 'UNKNOWN' ARE TO BE TRACED TO THE LOAD IT IS SERVING AND LABELED WHAT THEY ARE SUPPLYING POWER TO.

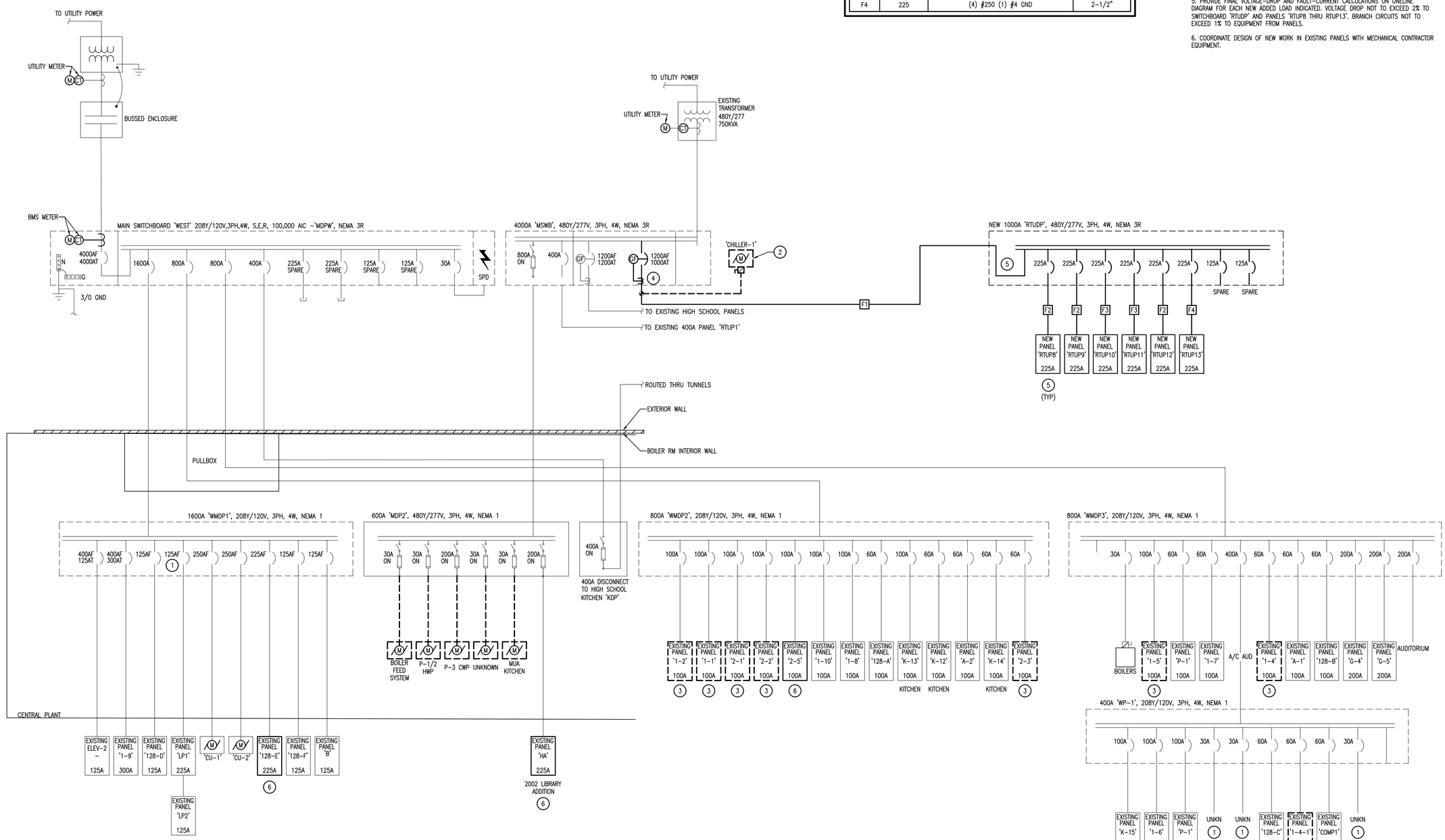
2. REMOVE EXISTING EQUIPMENT AND USE TO SERVE NEW RELOCATED HVAC LOADS. RE: E206

3. REPLACE EXISTING RESIDENTIAL PANEL INTERIORS WITH NEW COMMERCIAL GRADE AND NEW BOLT-ON BREAKERS. PROVIDE NEW PANEL LABEL AND PANEL INDEX.

4. TERMINATE NEW FEEDER TO EXISTING GFI CIRCUIT BREAKER FOR NEW SWITCHBOARD 'RTUDP'. REPLACE 900A TRIP UNIT WITH NEW 1000A TRIP UNIT.

5. PROVIDE FINAL VOLTAGE-DROP AND FAULT-CURRENT CALCULATIONS ON ONELINE DIAGRAM FOR EACH NEW ADDED LOAD INDICATED. VOLTAGE DROP NOT TO EXCEED 2% TO SWITCHBOARD 'RTUDP' AND PANELS 'RTUP8 THRU RTUP13'. BRANCH CIRCUITS NOT TO EXCEED 1% TO EQUIPMENT FROM PANELS.

6. COORDINATE DESIGN OF NEW WORK IN EXISTING PANELS WITH MECHANICAL CONTRACTOR EQUIPMENT.



1 EXISTING ONE-LINE DIAGRAM 'WEST' MAIN ELECTRICAL ROOM

Scale: NTS

TULSA PUBLIC SCHOOLS

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MECHANICAL ELECTRICAL PLUMBING
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CA 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER THOMAS EDWARD McKENNA 19022 OKLAHOMA 7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR. HIGH RFP

REVISION

SHEET TITLE
EXISTING ONE-LINE DIAGRAM

DATE: 07.03.2023

SHEET NO.
E401

A:\2022\TPS\Edison Jr. High\RFP\Dwg\E401.dwg, 6/30/2023 11:33:49 AM, DawnSantee

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE
LOCATION: ROOM 128 CLOSET

MODIFIED PANELBOARD '128B'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 125 AMP, MLO
AIC: 10,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	RECEPTS RM 130	20	1	–	A			–	2	20	A/C ?	2
3	RECEPTS RM 130	20	1	–		B		–	–	–	–	4
5	RECEPTS RM 129A	20	1	–			C	–	1	20	LIGHTS RM 127	6
7	UNKNOWN	20	1	–	A			–	1	20	LIGHTS RM 129A	8
9	LIGHTS RM 130	20	1	–		B		–	1	20	SPARE	10
11	LIGHTS RM 129	20	1	–			C	–	1	20	SPARE	12
13	SPARE	20	1	–	A			–	1	20	SPARE	14
15	SPARE	20	1	–		B		–	1	20	SPARE	16
17	SPARE	20	1	–			C	–	1	20	SPARE	18
19	SPARE	20	1	–	A			–	1	20	SPARE	20
21	DONS TRAILER	60	2	–		B		–	–	–	SPACE	22
23	–	–	–	–			C	–	–	–	SPACE	24
25	SPACE	–	–	–	A			4.92	3	50	RTU-156	26
27	SPACE	–	–	–		B		4.92	–	–	–	28
29	SPACE	–	–	–			C	4.92	–	–	–	30

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE
LOCATION: ROOM 128 CLOSET

EXISTING PANELBOARD '128B'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 125 AMP, MLO
AIC: 10,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	RECEPTS RM 130	20	1	–	A			–	2	20	A/C ?	2
3	RECEPTS RM 130	20	1	–		B		–	–	–	–	4
5	RECEPTS RM 129A	20	1	–			C	–	1	20	LIGHTS RM 127	6
7	UNKNOWN	20	1	–	A			–	1	20	LIGHTS RM 129A	8
9	LIGHTS RM 130	20	1	–		B		–	1	20	SPARE	10
11	LIGHTS RM 129	20	1	–			C	–	1	20	SPARE	12
13	SPARE	20	1	–	A			–	1	20	SPARE	14
15	SPARE	20	1	–		B		–	1	20	SPARE	16
17	SPARE	20	1	–			C	–	1	20	SPARE	18
19	SPARE	20	1	–	A			–	1	20	SPARE	20
21	DONS TRAILER	60	2	–		B		–	–	–	SPACE	22
23	–	–	–	–			C	–	–	–	SPACE	24
25	SPACE	–	–	–	A			–	–	–	SPACE	26
27	SPACE	–	–	–		B		–	–	–	SPACE	28
29	SPACE	–	–	–			C	–	–	–	SPACE	30

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'HA'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	LIGHTING	20	1	3.27	A			5.82	3	40	AHU-1 (HACR BREAKER)	2
3	LIGHTING	20	1	0.78		B		5.82	–	–	–	4
5	LIGHTING	20	1	3.27			C	5.82	–	–	–	6
7	LIGHTING	20	1	0.78	A			0.54	3	20	P-1 (HACR BREAKER)	8
9	LIGHTING	20	1	3.38		B		0.54	–	–	–	10
11	LIGHTING	20	1	1.67			C	0.54	–	–	–	12
13	LIGHTING	20	1	2.86	A			0.54	3	20	P-2 (HACR BREAKER)	14
15	LIGHTING	20	1	2.60		B		0.54	–	–	–	16
17	SPARE	20	1	–			C	0.54	–	–	–	18
19	SITE LIGHTING	20	1	1.16	A			16.67	3	100	T-1	20
21	SPARE	20	1	–		B		16.67	–	–	–	22
23	SPARE	20	1	–			C	16.67	–	–	–	24
25	SPARE	20	1	–	A			–	–	–	SPACE	26
27	SPARE	20	1	–		B		–	–	–	SPACE	28
29	SPACE	–	–	–			C	–	–	–	SPACE	30
31	SPACE	–	–	–	A			–	–	–	SPACE	32
33	SPACE	–	–	–		B		–	–	–	SPACE	34
35	SPACE	–	–	–			C	–	–	–	SPACE	36
37	SPACE	–	–	–	A			–	–	–	SPACE	38
39	SPACE	–	–	–		B		–	–	–	SPACE	40
41	SPACE	–	–	–			C	–	–	–	SPACE	42

	KVA	AMPS
PHASE A	31.65	–
PHASE B	30.33	–
PHASE C	28.51	–

	KVA	AMPS
CONNECTED	90.50	–
FEEDER	–	–

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE
LOCATION: ROOM 128 CLOSET

MODIFIED PANELBOARD '128E'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 250 AMP, MLO
AIC: 10,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	WATER HEATER	35	2	1.50	A			3.12	3	45	RTU-300	2
3	–	–	–	1.50		B		3.12	–	–	–	4
5	RTU-301	45	3	3.12			C	3.12	–	–	–	6
7	–	–	–	3.12	A			4.85	3	70	RTU-302	8
9	–	–	–	3.12		B		4.85	–	–	–	10
11	SPACE	–	–	–			C	4.85	–	–	–	12
13	RTU-159	25	3	2.40	A			3.12	3	30	RTU-158	14
15	–	–	–	2.40		B		3.12	–	–	–	16
17	–	–	–	2.40			C	3.12	–	–	–	18
19	RTU-160	25	3	2.40	A			3.60	3	35	RTU-157	20
21	–	–	–	2.40		B		3.60	–	–	–	22
23	–	–	–	2.40			C	3.60	–	–	–	24
25	SPACE	–	–	–	A			–	–	–	SPACE	26
27	SPACE	–	–	–		B		–	–	–	SPACE	28
29	SPACE	–	–	–			C	–	–	–	SPACE	30
31	SPACE	–	–	–	A			–	–	–	SPACE	32
33	SPACE	–	–	–		B		–	–	–	SPACE	34
35	SPACE	–	–	–			C	–	–	–	SPACE	36
37	SPACE	–	–	–	A			–	–	–	SPACE	38
39	SPACE	–	–	–		B		–	–	–	SPACE	40
41	SPACE	–	–	–			C	–	–	–	SPACE	42

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE
LOCATION: ROOM 128 CLOSET

EXISTING PANELBOARD '128E'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 250 AMP, MLO
AIC: 10,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	WATER HEATER	35	2	–	A			–	3	45	RTU-1	2
3	–	–	–	–		B		–	–	–	–	4
5	RTU-2	45	3	–			C	–	–	–	–	6
7	–	–	–	–	A			–	3	70	RTU-3	8
9	–	–	–	–		B		–	–	–	–	10
11	SPACE	–	–	–			C	–	–	–	–	12
13	SPACE	–	–	–	A			–	–	–	SPACE	14
15	SPACE	–	–	–		B		–	–	–	SPACE	16
17	SPACE	–	–	–			C	–	–	–	SPACE	18
19	SPACE	–	–	–	A			–	–	–	SPACE	20
21	SPACE	–	–	–		B		–	–	–	SPACE	22
23	SPACE	–	–	–			C	–	–	–	SPACE	24
25	SPACE	–	–	–	A			–	–	–	SPACE	26
27	SPACE	–	–	–		B		–	–	–	SPACE	28
29	SPACE	–	–	–			C	–	–	–	SPACE	30
31	SPACE	–	–	–	A			–	–	–	SPACE	32
33	SPACE	–	–	–		B		–	–	–	SPACE	34
35	SPACE	–	–	–			C	–	–	–	SPACE	36
37	SPACE	–	–	–	A			–	–	–	SPACE	38
39	SPACE	–	–	–		B		–	–	–	SPACE	40
41	SPACE	–	–	–			C	–	–	–	SPACE	42

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'LP32'

STORAGE ROOM 136

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 100 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	LIGHTING	20	1	1.25	A			1.21	1	20	FC-230, FC-106, FC-107, FC-108	2
3	LIGHTING	20	1	1.19		B		0.86	1	20	FC-109, FC-110, FC-231	4
5	LIGHTING	20	1	1.19			C	–	–	–	–	6
7	EMERGENCY, EXIT, NITE LIGHTS	20	1	0.50	A			–	–	–	–	8
9	LIGHTING	20	1	1.19		B		–	–	–	–	10
11	CHILLER RECEPTACLES	20	1	0.36			C	–	–	–	–	12
13	LIGHTING	20	1	1.19	A			–	–	–	–	14
15	SPARE	20	1	1.00		B		–	–	–	–	16
17	SPARE	20	1	1.00			C	–	–	–	–	18
19	SPARE	20	1	1.00	A			–	–	–	–	20
21	SPARE	20	1	1.00		B		–	–	–	–	22
23	SPARE	20	1	1.00			C	–	–	–	–	24
25	–	–	–	–	A			–	–	–	–	26
27	–	–	–	–		B		–	–	–	–	28
29	–	–	–	–			C	–	–	–	–	30
31	–	–	–	–	A			–	–	–	–	32
33	–	–	–	–		B		–	–	–	–	34
35	–	–	–	–			C	–	–	–	–	36
37	–	–	–	–	A			–	–	–	–	38
39	–	–	–	–		B		–	–	–	–	40
41	–	–	–	–			C	–	–	–	–	42

	KVA	AMPS
PHASE A	5.15	–
PHASE B	5.22	–
PHASE C	3.55	–

	KVA	AMPS
CONNECTED	13.90	–
FEEDER	–	–

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'LP13'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 100 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	LIGHTING	20	1	1.25	A			0.18	1	20	FC-202,FC-203,FC-204,FC-205	2
3	FC-198,FC-199,FC-200,FC-201	20	1	1.38		B		0.18	1	20	FC-224,FC-206,FC-207,FC-208	4
5	FC-194,FC-195,FC-196,FC-197	20	1	1.10			C	1.20	1	20	FC-209,FC-210,FC-211,FC-212	6
7	FC-190,FC-191,FC-192,FC-193	20	1	1.27	A			1.08	1	20	FC-213,FC-214,FC-215,FC-216	8
9	FC-186,FC-187,FC-188,FC-189	20	1	1.08		B		1.52	1	20	FC-217,FC-218,FC-225	10
11	SPARE	20	1	0.18			C	–	–	–	–	12
13	SPARE	20	1	0.18	A			–	–	–	–	14
15	SPARE	20	1	0.18		B		–	–	–	–	16
17	SPARE	20	1	0.18			C	–	–	–	–	18
19	SPARE	20	1	0.18	A			–	–	–	–	20
21	SPARE	20	1	0.18		B		–	–	–	–	22
23	SPARE	20	1	0.18			C	–	–	–	–	24
25	SPARE	20	1	0.18	A			–	–	–	–	26
27	SPARE	20	1	0.18		B		–	–	–	–	28
29	SPARE	20	1	0.18			C	–	–	–	–	30
31	SPARE	20	1	0.18	A			–	–	–	–	32
33	–	–	–	–		B		–	–	–	–	34
35	–	–	–	–			C	–	–	–	–	36
37	–	–	–	–	A			–	–	–	–	38
39	–	–	–	–		B		–	–	–	–	40
41	–	–	–	–			C	–	–	–	–	42

	KVA	AMPS
PHASE A	8.79	–
PHASE B	6.36	–
PHASE C	6.77	–

	KVA	AMPS
CONNECTED	21.90	–
FEEDER	–	–

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'LP33'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 100 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	FC-103,FC-104,FC-105	20	1	1.25	A			0.18	1	20	SPARE	2
3	FC-98,FC-99,FC-100,FC-101,FC-228	20	1	1.38		B		0.18	1	20	SPARE	4
5	FC-93,FC-94,FC-95,FC-96,FC-97	20	1	1.10			C	1.20	1	20	FC-226,FC-130,FC-131,FC-129	6
7	FC-144,FC-145,FC-227,FC-92	20	1	1.27	A			1.08	1	20	FC-132,FC-133,FC-134,FC-135	8
9	FC-140,FC-141,FC-142,FC-143	20	1	1.08		B		1.52	1	20	FC-136,FC-137,FC-138,FC-139,FC-229	10
11	SPARE	20	1	0.18			C	–	–	–	–	12
13	SPARE	20	1	0.18	A			–	–	–	–	14
15	SPARE	20	1	0.18		B		–	–	–	–	16
17	SPARE	20	1	0.18			C	–	–	–	–	18
19	SPARE	20	1	0.18	A			–	–	–	–	20
21	SPARE	20	1	0.18		B		–	–	–	–	22
23	SPARE	20	1	0.18			C	–	–	–	–	24
25	SPARE	20	1	0.18	A			–	–	–	–	26
27	SPARE	20	1	0.18		B		–	–	–	–	28
29	SPARE	20	1	0.18			C	–	–	–	–	30
31	SPARE	20	1	0.18	A			–	–	–	–	32
33	–	–	–	–		B		–	–	–	–	34
35	–	–	–	–			C	–	–	–	–	36
37	–	–	–	–	A			–	–	–	–	38
39	–	–	–	–		B		–	–	–	–	40
41	–	–	–	–			C	–	–	–	–	42

	KVA	AMPS
PHASE A	8.79	–
PHASE B	6.36	–
PHASE C	6.77	–

	KVA	AMPS
CONNECTED	21.90	–
FEEDER	–	–

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD '2-2'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 100 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	LIGHTING	20	1	1.25	A			0.94	1	20	FC-243, FC-244, FC-245, FC-246	2
3	LIGHTING	20	1	0.42		B		1.01	1	20	FC-239, FC-240, FC-241, FC-242	4
5	EMERGENCY, EXIT, NITE LIGHTS	20	1	0.50			C	1.11	1	20	FC-234, FC-235, FC-236, FC-237	6
7	FC-247, FC-248, FC-249, FC-299	20	1	1.14	A			1.11	1	20	FC-232,FC-271,FC-270,FC-269,FC-268	8
9	FC-250, FC-251, FC-300, FC-108	20	1	0.91		B		0.91	1	20	FC-262, FC-263, FC-264, FC-265	10
11	FC-252, FC-253, FC-254, FC-255	20	1	1.22			C	0.94	1	20	FC-266, FC-267, FC-302	12
13	FC-256, FC-257, FC-233, FC-301	20	1	1.28	A			–	–	–	–	14
15	FC-258, FC-259, FC-260, FC-261	20	1	1.08		B		–	–	–	–	16
17	SPARE	20	1	1.00			C	–	–	–	–	18
19	SPARE	20	1	1.00	A			–	–	–	–	20
21	SPARE	20	1	1.00		B		–	–	–	–	22
23	SPARE	20	1	1.00			C	–	–	–	–	24
25	SPARE	20	1	1.00	A			–	–	–	–	26
27	SPARE	20	1	1.00		B		–	–	–	–	28
29	SPARE	20	1	1.00			C	–	–	–	–	30
31	SPARE	20	1	1.00	A			–	–	–	–	32
33	–	–	–	–		B		–	–	–	–	34
35	–	–	–	–			C	–	–	–	–	36
37	–	–	–	–	A			–	–	–	–	38
39	–	–	–	–		B		–	–	–	–	40
41	–	–	–	–			C	–	–	–	–	42

	KVA	AMPS
PHASE A	8.79	–
PHASE B	6.36	–
PHASE C	6.77	–

	KVA	AMPS
CONNECTED	21.90	–
FEEDER	–	–

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PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE

EXISTING PANELBOARDS

DATE: 07.03.2023

SHEET NO.

E501

Z:\2022\TPS\Edison Jr. High RFP\DWG\E501.dwg, 6/30/2023 11:33:32 AM, Dawn.Sanfee

PEDESTAL/SURFACE MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE
LOCATION: ROOF

NEW PANELBOARD 'RTUDP'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 1000 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	PANEL 'RTUP8'	225	3	39.62	A	35.21	3	225	PANEL 'RTUP9'	2
	–	–	–	39.62	B	35.21	–	–	–	
	–	–	–	39.62	C	35.21	–	–	–	
3	PANEL 'RTUP10'	225	3	31.58	A	32.13	3	225	PANEL 'RTUP11'	4
	–	–	–	31.58	B	32.13	–	–	–	
	–	–	–	31.58	C	32.13	–	–	–	
5	PANEL 'RTUP12'	225	3	26.87	A	41.57	3	225	PANEL 'RTUP13'	6
	–	–	–	26.87	B	41.57	–	–	–	
	–	–	–	26.87	C	41.57	–	–	–	
7	SPARE	100	3	0.10	A	0.10	3	30	SPARE	8
	–	–	–	0.10	B	0.10	–	–	–	
	–	–	–	0.10	C	0.10	–	–	–	
9	–	–	–	–	A	–	–	–	–	10
	–	–	–	–	B	–	–	–	–	
	–	–	–	–	C	–	–	–	–	

	KVA	AMPS
PHASE A	206.98	747.22
PHASE B	206.98	747.22
PHASE C	206.98	747.22

	KVA	AMPS
CONNECTED	620.94	747.22
FEEDER	–	–

ROOF MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE

NEW PANELBOARD 'RTUP11'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RTU-219	20	3	3.60	A	3.60	3	20	RTU-145	2
3	–	–	–	3.60	B	3.60	–	–	–	4
5	–	–	–	3.60	C	3.60	–	–	–	6
7	RTU-142	20	3	3.60	A	3.60	3	20	RTU-144	8
9	–	–	–	3.60	B	3.60	–	–	–	10
11	–	–	–	3.60	C	3.60	–	–	–	12
13	RTU-217	20	3	3.60	A	3.88	3	20	RTU-220	14
15	–	–	–	3.60	B	3.88	–	–	–	16
17	–	–	–	3.60	C	3.88	–	–	–	18
19	RTU-218	20	3	3.60	A	3.05	3	20	RTU-222	20
21	–	–	–	3.60	B	3.05	–	–	–	22
23	–	–	–	3.60	C	3.05	–	–	–	24
25	RTU-143	20	3	3.60	A	–	–	–	–	26
27	–	–	–	3.60	B	–	–	–	–	28
29	–	–	–	3.60	C	–	–	–	–	30

	KVA	AMPS
PHASE A	32.13	116.00
PHASE B	32.13	116.00
PHASE C	32.13	116.00

	KVA	AMPS
CONNECTED	96.39	116.00
FEEDER	–	–

ROOF MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE

NEW PANELBOARD 'RTUP12'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RTU-152	30	3	7.20	A	7.20	3	30	RTU-153	2
3	–	–	–	7.20	B	7.20	–	–	–	4
5	–	–	–	7.20	C	7.20	–	–	–	6
7	RTU-154	20	3	3.60	A	5.82	3	25	RTU-155	8
9	–	–	–	3.60	B	5.82	–	–	–	10
11	–	–	–	3.60	C	5.82	–	–	–	12
13	RTU-161	20	3	3.05	A	–	–	–	–	14
15	–	–	–	3.05	B	–	–	–	–	16
17	–	–	–	3.05	C	–	–	–	–	18
19	–	–	–	–	A	–	–	–	–	20
21	–	–	–	–	B	–	–	–	–	22
23	–	–	–	–	C	–	–	–	–	24
25	–	–	–	–	A	–	–	–	–	26
27	–	–	–	–	B	–	–	–	–	28
29	–	–	–	–	C	–	–	–	–	30

	KVA	AMPS
PHASE A	26.87	97.00
PHASE B	26.87	97.00
PHASE C	26.87	97.00

	KVA	AMPS
CONNECTED	80.61	97.00
FEEDER	–	–

SURFACE MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE

NEW PANELBOARD 'RTUP13'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 10,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RTU-162	20	3	3.88	A	3.05	3	20	RTU-166	2
3	–	–	–	3.88	B	3.05	–	–	–	4
5	–	–	–	3.88	C	3.05	–	–	–	6
7	RTU-167	30	3	6.65	A	8.59	3	40	RTU-163	8
9	–	–	–	6.65	B	8.59	–	–	–	10
11	–	–	–	6.65	C	8.59	–	–	–	12
13	RTU-165	20	3	3.88	A	8.59	3	40	RTU-164	14
15	–	–	–	3.88	B	8.59	–	–	–	16
17	–	–	–	3.88	C	8.59	–	–	–	18
19	RTU-168	20	3	3.88	A	3.05	3	20	RTU-169	20
21	–	–	–	3.88	B	3.05	–	–	–	22
23	–	–	–	3.88	C	3.05	–	–	–	24
25	–	–	–	–	A	–	–	–	–	26
27	–	–	–	–	B	–	–	–	–	28
29	–	–	–	–	C	–	–	–	–	30

	KVA	AMPS
PHASE A	41.57	150.07
PHASE B	41.57	150.07
PHASE C	41.57	150.07

	KVA	AMPS
CONNECTED	124.71	150.07
FEEDER	–	–

ROOF MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE

NEW PANELBOARD 'RTUP8'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RTU-228	20	3	3.60	A	3.60	3	20	RTU-229	2
3	–	–	–	3.60	B	3.60	–	–	–	4
5	–	–	–	3.60	C	3.60	–	–	–	6
7	RTU-230	20	3	3.88	A	3.60	3	20	RTU-210	8
9	–	–	–	3.88	B	3.60	–	–	–	10
11	–	–	–	3.88	C	3.60	–	–	–	12
13	RTU-151	25	3	5.82	A	3.60	3	20	RTU-227	14
15	–	–	–	5.82	B	3.60	–	–	–	16
17	–	–	–	5.82	C	3.60	–	–	–	18
19	RTU-150	20	3	3.60	A	4.16	3	20	RTU-226	20
21	–	–	–	3.60	B	4.16	–	–	–	22
23	–	–	–	3.60	C	4.16	–	–	–	24
25	RTU-225	20	3	3.88	A	3.88	3	20	RTU-211	26
27	–	–	–	3.88	B	3.88	–	–	–	28
29	–	–	–	3.88	C	3.88	–	–	–	30
31	–	–	–	–	A	–	–	–	–	32
33	–	–	–	–	B	–	–	–	–	34
35	–	–	–	–	C	–	–	–	–	36
37	–	–	–	–	A	–	–	–	–	38
39	–	–	–	–	B	–	–	–	–	40
41	–	–	–	–	C	–	–	–	–	42

	KVA	AMPS
PHASE A	39.62	143.03
PHASE B	39.62	143.03
PHASE C	39.62	143.03

	KVA	AMPS
CONNECTED	118.86	143.03
FEEDER	–	–

ROOF MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE

NEW PANELBOARD 'RTUP9'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RTU-136	20	3	4.16	A	3.88	3	20	RTU-229	2
3	–	–	–	4.16	B	3.88	–	–	–	4
5	–	–	–	4.16	C	3.88	–	–	–	6
7	RTU-149	20	3	3.60	A	4.16	3	20	RTU-210	8
9	–	–	–	3.60	B	4.16	–	–	–	10
11	–	–	–	3.60	C	4.16	–	–	–	12
13	RTU-137	20	3	4.16	A	4.16	3	20	RTU-227	14
15	–	–	–	4.16	B	4.16	–	–	–	16
17	–	–	–	4.16	C	4.16	–	–	–	18
19	RTU-223	20	3	4.16	A	3.05	3	20	RTU-226	20
21	–	–	–	4.16	B	3.05	–	–	–	22
23	–	–	–	4.16	C	3.05	–	–	–	24
25	RTU-147	20	3	3.88	A	–	–	–	–	26
27	–	–	–	3.88	B	–	–	–	–	28
29	–	–	–	3.88	C	–	–	–	–	30

	KVA	AMPS
PHASE A	35.21	127.11
PHASE B	35.21	127.11
PHASE C	35.21	127.11

	KVA	AMPS
CONNECTED	105.63	127.11
FEEDER	–	–

ROOF MOUNTED
GROUND BUS
NEMA 3R ENCLOSURE

NEW PANELBOARD 'RTUP10'

VOLT: 480Y/277V, 3PH, 4 WIRE
AMPS: 225 AMP, MLO
AIC: 22,000

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RTU-214	20	3	3.60	A	3.60	3	20	RTU-216	2
3	–	–	–	3.60	B	3.60	–	–	–	4
5	–	–	–	3.60	C	3.60	–	–	–	6
7	RTU-238	20	3	3.60	A	3.88	3	20	RTU-146	8
9	–	–	–	3.60	B	3.88	–	–	–	10
11	–	–	–	3.60	C	3.88	–	–	–	12
13	RTU-139	20	3	3.60	A	3.05	3	20	RTU-222	14
15	–	–	–	3.60	B	3.05	–	–	–	16
17	–	–	–	3.60	C	3.05	–	–	–	18
19	RTU-215	20	3	3.60	A	3.05	3	20	RTU-226	20
21	–	–	–	3.60	B	3.05	–	–	–	22
23	–	–	–	3.60	C	3.05	–	–	–	24
25	RTU-141	20	3	3.60	A	–	–	–	–	26
27	–	–	–	3.60	B	–	–	–	–	28
29	–	–	–	3.60	C	–	–	–	–	30

	KVA	AMPS
PHASE A	31.58	114.01
PHASE B	31.58	114.01
PHASE C	31.58	114.01

	KVA	AMPS
CONNECTED	94.74	114.01
FEEDER	–	–

TULSA PUBLIC SCHOOLS

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CA: 3479 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD MCKENNA
12022
OKLAHOMA
7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

SHEET TITLE

NEW PANELBOARDS

DATE: 07.03.2023

SHEET NO.

E502

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SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'LP2'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 125 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	SPARE	20	1	–	A			–	1	20	HAND DRYER	2
3	SPARE	20	1	–		B		–	1	20	HAND DRYER	4
5	SPARE	20	1	–			C	–	1	20	REFRIGERATOR	6
7	SPARE	20	1	–	A			–	1	20	STORAGE RECEPTS	8
9	SPARE	20	1	–		B		–	1	20	RM. 202 RECEPTS	10
11	SPARE	20	1	–			C	–	1	20	RM. 202 RECEPTS	12
13	SPARE	20	1	–	A			–	1	20	HAND DRYER	14
15	SPARE	20	1	–		B		–	1	20	HAND DRYER	16
17	RM. 213 RECEPT	20	1	–			C	–	1	20	HAND DRYER	18
19	SPARE	20	1	–	A			–	1	20	SPARE	20
21	SPARE	20	1	–		B		–	1	20	SPARE	22
23	RM. 212 RECEPT	20	1	–			C	–	1	20	IDF RECEPTS 203-1A	24
25	SPARE	20	1	–	A			–	1	20	IDF RECEPTS 203-1A	26
27	STORAGE 212A RECEPTS	20	1	–		B		–	1	20	ISIMET PANEL	28
29	RM. 212 ISIMET PANEL	20	1	–			C	–	1	20	RM. 212 RECEPTS	30

RECESSED MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'K13'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 200 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	COUNTER LIGHTS	20	1	–	A			–	1	20	WARMER BY HAND SINK	2
3	SMALL MIXER (SALAD DEPT.)	20	1	–		B		–	1	20	WASTE KING	4
5	FOOD SHREDDER	20	1	–			C	–	1	20	LIGHTS COUNTER #1	6
7	WASHER	20	1	–	A			–	1	20	RECEPT S. WALL	8
9	RECEPT FOR POT SINK	20	1	–		B		–	1	20	RECEPT N. WALL	10
11	NEW OVENS	20	1	–			C	–	1	20	FREEZER	12
13	RECEPT FREEZER	20	1	–	A			–	1	20	SOAP DISPENSER	14
15	RECEPT FREEZER	20	1	–		B		–	1	20	COLD PLATE COMP EAST (OFF)	16
17	RECEPT S. WALL	20	1	–			C	–	1	20	RECEPTS N. WALL	18
19	RECEPT S. WALL	20	1	–	A			–	1	20	FREEZER DINING ROOM	20
21	RECEPT S. WALL	20	1	–		B		–	1	20	RECEPTS DISH ROOM N. WALL	22
23	RECEPT PASTRY DEPT.	20	1	–			C	–	1	20	LIGHTS CENTER	24
25	DRYER	30	2	–	A			–	1	20	W. FANS MILK COOLER/SERVING LINE	26
27	–	–	–	–		B		–	1	20	E. FANS MILK COOLER	28
29	SMALL MIXER (PASTRY DEPT.)	20	1	–			C	–	1	20	RECEPTS S. WALL	30
31	RECEPTS OFFICE	20	1	–	A			–	3	30	FOOD WARMER EAST	32
33	E. COMP ICE CREAM CAB	20	1	–		B		–	–	–	–	34
35	SPARE	20	1	–			C	–	–	–	–	36
37	FOOD WARMER CENTER	30	3	–	A			–	3	30	FOOD WARMER WEST	38
39	–	–	–	–		B		–	–	–	–	40
41	–	–	–	–			C	–	–	–	–	42

RECESSED MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD '2-5'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 125 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	RM. E101 RECEPTS EAST	20	1	–	A			–	1	20	RECEPTS E101 & E102	2
3	RM. E101 RECEPTS EAST	20	1	–		B		–	1	20	RECEPTS E102 & E103	4
5	RM. E101 POWER POLES	20	1	–			C	–	1	20	RECEPTS E103 & E104	6
7	RM. E101 POWER POLES	20	1	–	A			–	1	20	LIGHTS E101	8
9	RM. E101 RECEPTS NORTH WALL	20	1	–		B		–	1	20	LIGHTS E102	10
11	RM. E101 RECEPTS WEST WALL	20	1	–			C	–	1	20	LIGHTS E103	12
13	RM. E101 RECEPTS WEST WALL	20	1	–	A			–	1	20	RECEPTS IDF SERVER ROOM E101	14
15	FCU RM. E101	20	1	–		B		–	1	20	RECEPTS 101,102,103,104 INSIDE WALL	16
17	STORAGE 112A REFRIGERATOR	20	1	1.00			C	–	1	20	SPARE	18
19	SURGE PROTECTION	20	3	–	A			–	1	20	SPARE	20
21	–	–	–	–		B		–	1	20	SPARE	22
23	–	–	–	–			C	–	1	20	SPARE	24
25	RM 211 ISIMET PANEL	20	1	1.00	A			–	1	20	SPARE	26
27	RM. 211 RECEPTS	20	1	0.54		B		–	1	20	SPARE	28
29	RM. 211 RECEPTS	20	1	0.54			C	0.70	1	20	EF-4	30
31	EF-1	20	1	0.70	A			0.70	1	20	EF-5	32
33	EF-2	20	1	0.70		B		0.50	1	20	ELECTRIC WATER COOLER	34
35	EF-3	20	1	0.70			C	–	1	–	SPACE	36
37	SPACE	–	–	–	A			–	–	–	SPACE	38
39	SPACE	–	–	–		B		–	–	–	SPACE	40
41	SPACE	–	–	–			C	–	–	–	SPACE	42

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD '1-9-2'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 125 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	A/C 139	20	3	–	A			–	3	60	A/C 136	2
3	–	–	–	–		B		–	–	–	–	4
5	–	–	–	–			C	–	–	–	–	6
7	A/C RECEPT	20	1	–	A			–	3	20	A/C 138	8
9	RM. 138 FURNACE	20	1	–		B		–	–	–	–	10
11	A/C RECEPT	20	1	–			C	–	–	–	–	12
13	FIRE ALARM PANEL	20	1	–	A			–	1	20	LIGHTS	14
15	IDF #3 RECEPTS	20	1	–		B		–	–	–	–	16
17	COUNSELOR'S OFFICE	20	1	–			C	–	2	20	UNKNOWN	18
19	UNKNOWN	20	1	–	A			–	–	–	–	20
21	UNKNOWN	20	1	–		B		–	1	20	UNKNOWN	22
23	SPACE	–	–	–			C	–	1	20	SPACE	24

SURFACE MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD '1-9-1(C)'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 400 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	FC-107F,108A,107A	20	1	–	A			–	1	20	FC RM 146A,146B	2
3	CORRIDOR LIGHTING	20	1	–		B		–	1	20	CORRIDOR LIGHTING	4
5	FC-RM 100,101,102,103	20	1	–			C	–	1	30	FC RM 139,140	6
7	FC	20	1	–	A			–	1	30	FC RM 143,149, ELEV LIGHTS/PUMP	8
9	FC RM 105,106	30	1	–		B		–	1	20	CORRIDOR LIGHTS	10
11	–	30	1	–			C	–	1	20	HALL LIGHTS	12
13	UNKNOWN	20	3	–	A			–	1	20	FC RM 141,142	14
15	–	–	–	–		B		–	3	20	A/C 138	16
17	–	–	–	–			C	–	–	–	–	18
19	–	20	1	–	A			–	–	–	–	20
21	–	20	1	–		B		–	1	20	UNKNOWN	22
23	–	20	1	–			C	–	1	20	UNKNOWN	24
25	–	30	2	–	A			–	1	20	PRINTER	26
27	–	–	–	–		B		–	1	20	PRINTER	28
29	–	20	1	–			C	–	–	–	OPEN	30
31	–	20	1	–	A			–	–	–	OPEN	32
33	–	20	1	–		B		–	1	20	UNKNOWN	34
35	–	20	1	–			C	–	1	20	UNKNOWN	36
37	–	30	2	–	A			–	3	100	PANEL '1-9-2'	38
39	–	–	–	–		B		–	–	–	–	40
41	–	20	1	–			C	–	–	–	–	42

RECESSED MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD '1-10'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: ___ AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	RM. 138,139 RECEPT	20	1	–	A			–	1	20	RM. 139 LIGHTS	2
3	RM. 138 RECEPT/CONFERENCE	20	1	–		B		–	1	20	RM. 138 LIGHTS	4
5	RM. 139 FURNACE	20	1	–			C	–	1	20	RM. 139 LIGHTS	6
7	SPARE	20	1	–	A			–	1	20	SPARE	8
9	SPARE	20	1	–		B		–	1	20	SPARE	10
11	SPARE	20	1	–			C	–	1	20	SPARE	12
13	SPARE	20	1	–	A			–	1	20	SPARE	14
15	SPARE	20	1	–		B		–	1	20	SPARE	16
17	SPARE	20	1	–			C	–	1	20	SPARE	18
19	SPARE	20	1	–	A			–	1	20	SPARE	20
21	SPACE	–	–	–		B		–	–	–	SPACE	22
23	SPACE	–	–	–			C	–	–	–	SPACE	24
25	SPACE	–	–	–	A			–	–	–	SPACE	26
27	SPACE	–	–	–		B		–	–	–	SPACE	28
29	SPACE	–	–	–			C	–	–	–	SPACE	30

RECESSED MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'K-12'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 200 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	CAFE LIGHTS	20	1	–	A			–	1	20	KITCHEN LIGHTS	2
3	CAFE LIGHTS	20	1	–		B		–	1	20	KITCHEN LIGHTS	4
5	CAFE LIGHTS	20	1	–			C	–	1	20	KITCHEN LIGHTS	6
7	CAFE LIGHTS	20	1	–	A			–	1	20	CAFE LIGHTS	8
9	CAFE LIGHTS	20	1	–		B		–	1	20	KITCHEN LIGHTS	10
11	CAFE LIGHTS	20	1	–			C	–	1	20	SNACK BAR RECEPT	12
13	CAFE LIGHTS	20	1	–	A			–	1	20	SNACK BAR RECEPT	14
15	CAFE LIGHTS	20	1	–		B		–	1	20	UNKNOWN	16
17	SNACK BAR RECEPT	20	1	–			C	–	1	20	CABLE TV FAC ROOM	18
19	CAFE LIGHTS	20	1	–	A			–	1	20	WALK-IN EVAP FAN	20
21	CAFE LIGHTS	20	1	–		B		–	1	20	CAFE BATHROOM AND DOOR BELL	22
23	CAFE LIGHTS	20	1	–			C	–	1	20	UNKNOWN	24
25	SPLIT RECEPT	20	1	–	A			–	1	20	UNKNOWN	26
27	KITCHEN LIGHTS	20	1	–		B		–	1	20	UNKNOWN	28
29	KITCHEN LIGHTS	20	1	–			C	–	1	20	CEILING RECEPTS	30
31	KITCHEN LIGHTS	20	1	–	A			–	1	20	UNKNOWN	32
33	KITCHEN LIGHTS	20	1	–		B		–	1	20	UNKNOWN	34
35	KITCHEN LIGHTS	20	1	–			C	–	1	20	UNKNOWN	36
37	SPACE	–	–	–	A			–	–	–	SPACE	38
39	SPACE	–	–	–		B		–	–	–	SPACE	40
41	SPACE	–	–	–			C	–	–	–	SPACE	42

RECESSED MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD 'K-14'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 60 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	SNACK BAR ICE CREAM COMP	20	1	–	A			–	1	20	COOK'S REFRIGERATOR	2
3	SNACK BAR MILK COMP	20	1	–		B		–	1	20	STORE ROOM REFRIGERATOR	4
5	MILK REFRIGERATOR (OFF)	20	1	–			C	–	1	20	W. MILK	6
7	ICE CREAM COMP	20	1	–	A			–	1	20	MILK BOX COMP	8
9	E. PASS THRU COOLER	20	1	–		B		–	1	20	ICE MAKER	10
11	REFRIGERATOR	20	1	–			C	–	1	20	OVENS	12
13	TWO-SIDE REFRIGERATOR	20	1	–	A			–	1	20	SPACE	14
15	SPARE	20	1	–		B		–	1	20	SPACE	16
17	SPACE	20	1	–			C	–	1	20	SPACE	18

RECESSED MOUNTED
GROUND BUS
NEMA 1 ENCLOSURE

EXISTING PANELBOARD '1-8'

VOLT: 208Y/120V, 3PH, 4 WIRE
AMPS: 125 AMP, MLO
AIC: (E)

CKT	DESCRIPTION	BRKR	PL	KVA	PHASE			KVA	PL	BRKR	DESCRIPTION	CKT
1	SPARE	20	1	–	A			–	1	20	RM. 136 RECEPT	2
3	SPARE	20	1	–		B		–	1	20	RM. 137 RECEPT	4
5	SPARE	20	1	–			C	–	1	20	RM. 136 LIGHTS	6
7	SPARE	20	1	–	A			–	1	20	RM. 137 LIGHTS	8
9	SPARE	20	1	–		B		–	1	20	RM. 136 FURNACE	10
11	SPARE	20	1	–			C	–	1	20	RM. 136 LIGHTS	12
13	SPARE	20	1	–	A			–	1	20	SPARE	14
15	SPARE	20	1	–		B		–	1	20	SPARE	16
17	SPARE	20	1	–			C	–	1	20	SPARE	18
19	SPARE	20	1	–	A			–	1	20	SPARE	20
21	SPACE	–	–	–		B		–	–	–	SPACE	22
23	SPACE	–	–	–			C	–	–	–	SPACE	24
25	SPACE	–	–	–	A			–	–	–	SPACE	26
27	SPACE	–	–	–		B		–	–	–	SPACE	28
29	SPACE	–	–	–			C	–	–	–	SPACE	30

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REGISTERED PROFESSIONAL ENGINEER
THOMAS EDWARD McKENNA
2022
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7/3/23

TULSA PUBLIC SCHOOLS
EDISON JR. HIGH
Tulsa, Oklahoma

PROJECT TITLE
EDISON JR.
HIGH RFP

REVISION

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NEW PANELBOARDS

DATE: 07.03.2023

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