

PROJECT TEAM

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CODES

1. BUILDING CODE: 2015 IBC
2. MECHANICAL CODE: 2024 IMC
3. PLUMBING CODE: 2024 UPC
4. ELECTRICAL CODE: 2023 NEC
5. FIRE CODE: 2015 IFC
6. LIFE SAFETY CODE: 2015 NFPA 101
7. ADA GUIDELINES: 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, ICC A117.1; IOWA ADMINISTRATIVE CODE IAC 661-302

PROJECT LOCATION



ALTERNATE BID ITEMS

ALTERNATE #1: KITCHEN HOOD REPLACEMENT
REPLACE THE EXISTING TYPE 1 KITCHEN HOODS WHERE INDICATED ON PLANS.

ALTERNATE #2: WAREWASH ROOM IMPROVEMENTS
REPLACE THE WAREWASH ROOM EXHAUST FAN, MODIFY DUCTWORK TO INCREASE EXHAUST AIRFLOW, AND REBALANCE SPACE TO REDUCE HUMIDITY LEVELS IN THE SPACE.

IWCC STUDENT CENTER KITCHEN HVAC REPLACEMENT

2700 College Rd
Council Bluffs, IA 51503

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PROFESSIONAL SEALS

I, SHANE HOSS, AM THE COORDINATING ENGINEER FOR THE KITCHEN HOOD REPLACEMENT PROJECT.		I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. <i>Shane M. Hoss</i> 09/14/2026 (DATE) SHANE HOSS MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026 PAGES OR SHEETS COVERED BY THIS SEAL: ELECTRICAL WORK ON ME SHEETS.

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Revision Schedule		
Revision #	Description	Date

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MISC. ELECTRICAL SYMBOLS

	PLAN OR DETAIL NOTE IDENTIFICATION
	DETAIL IDENTIFICATION
	CIRCUIT TAG, SEE ASSOCIATED SCHEDULE
	SURFACE MOUNTED RACEWAY
	CONDUIT CONCEALED IN WALLS OR CEILING, CROSSHATCHES INDICATE NUMBER OF CONDUCTORS EXCEPT NO CROSSHATCHES INDICATE 2 CONDUCTORS (GROUND WIRES ARE NOT SHOWN)
	TELEPHONE RACEWAY
	TELEVISION RACEWAY
	FIBER OPTICS RACEWAY
	DATA SYSTEM RACEWAY
	PROVIDE HDMI CABLE IN CONDUIT
	EMERGENCY POWER AND LIGHTING CIRCUIT
	SOUND SYSTEM RACEWAY
	CONDUIT DOWN
	CONDUIT UP
	WIEMOLD SURFACE MOUNTED RACEWAY
	CONDUIT TO BE REMOVED
	EXPOSED CONDUIT
	UNDERGROUND PRIMARY ELECTRICAL
	UNDERGROUND SECONDARY ELECTRICAL
	OVERHEAD ELECTRICAL
	GROUNDING CONDUCTOR
	LOW VOLTAGE ELECTRICAL
	CLOCK SYSTEM RACEWAY
	CONDUIT SEAL-OFF FITTING
	EXISTING CONDUIT, VERIFY EXACT LOCATION
	UTILITY CO. POWER POLE
	GROUND CONNECTION

LIGHTING SYMBOLS

	RECESSED OR SURFACE MOUNTED LIGHT FIXTURE, NUMBER = TYPE, LETTER = SWITCH
	HATCHING INDICATES EMERGENCY LIGHT FIXTURE, NUMBER = TYPE
	WALL MOUNTED LIGHT FIXTURE, NUMBER = TYPE
	LIGHT FIXTURE, NUMBER = TYPE
	HATCHING INDICATES EMERGENCY LIGHT FIXTURE, NUMBER = TYPE
	PENDANT MOUNTED LIGHT FIXTURE, NUMBER = TYPE
	WALL MOUNTED LINEAR LIGHT FIXTURE, NUMBER = TYPE
	LINEAR LIGHT FIXTURE, NUMBER = TYPE
	SINGLE FACED EXIT LIGHT, NUMBER = TYPE, HATCH INDICATES ILLUMINATED FACE, ARROW = CHEVRON DIRECTION
	DOUBLE FACED EXIT LIGHT, NUMBER = TYPE, HATCH INDICATES ILLUMINATED FACE, ARROW = CHEVRON DIRECTION
	EXIT LIGHT WITH TWO EMERGENCY LIGHTING HEADS, NUMBER = TYPE, HATCH INDICATES ILLUMINATED FACE, ARROW = CHEVRON DIRECTION
	POLE MOUNTED LIGHT FIXTURE, NUMBER = TYPE
	LIGHTING TRACK, TRIANGLE INDICATES LIGHT FIXTURE HEAD, PROVIDE NUMBER OF HEADS AS SHOWN, NUMBER = TYPE
	CEILING FAN
	STRIP LIGHT FIXTURE, NUMBER = TYPE
	EXISTING POLE MOUNTED LIGHT FIXTURE
	DOUBLE POLE SWITCH
	KEYED SWITCH
	SWITCH WITH LIGHTED HANDLE FOR PILOT
	SWITCH MOUNTED ON WIEMOLD BOX WITH WIEMOLD TO ABOVE ACCESSIBLE CEILING
	MOMENTARY CONTACT SWITCH
	SINGLE POLE SWITCH, 3-WAY SWITCH AND 4-WAY SWITCH
	LINE VOLTAGE DIMMER SWITCH
	CEILING MOUNTED OCCUPANCY SENSOR
	AUTOMATIC WALL SWITCH WITH OCCUPANCY SENSOR
	WALL MOUNTED OCCUPANCY SENSOR
	LIGHTING CONTROL TAG, LETTER INDICATES TAG IN LIGHTING CONTROL, SCHEDULE
	LIGHTING CONTROL LOAD CONTROLLER, LETTER INDICATES LIGHTING CONTROLLED ZONE
	LOW-VOLTAGE SWITCH, WHERE PRESENT, LETTER INDICATES LIGHTING CONTROL, ZONE, SEE LIGHTING CONTROL, SCHEDULE
	EMERGENCY LIGHTING RELAY, SEE DETAIL
	CEILING MOUNTED PHOTOCELL
	WALL MOUNTED PHOTOCELL

POWER SYMBOLS

	DUPLEX CONVENIENCE RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE MOUNTED ON WIEMOLD BOX WITH WIEMOLD TO ABOVE ACCESSIBLE CEILING
	SPLIT WIRED DUPLEX RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE MOUNTED HORIZONTAL
	4-PLEX CONVENIENCE RECEPTACLE
	CEILING MOUNTED RECEPTACLE
	SINGLE OUTLET OR CONNECTION, SEE PLAN AND SCHEDULE
	THERMOSTAT
	GENERATOR
	MOTOR CONNECTION, SEE PLAN AND SCHEDULE
	PUSH-BUTTON
	MOTOR CONTROL, PUSH-BUTTON STATION
	JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	DRY-TYPE TRANSFORMER
	PAD MOUNTED TRANSFORMER
	ELECTRICAL RELAY
	MAGNETIC MOTOR STARTER
	COMBINATION MAGNETIC MOTOR STARTER/DISCONNECT SWITCH, FUSED UNLESS OTHERWISE NOTED
	VARIABLE FREQUENCY DRIVE
	HORSEPOWER RATED MANUAL MOTOR CONTROLLER WITH TOGGLE SWITCH
	MANUAL MOTOR STARTER WITH HORSEPOWER RATED TOGGLE SWITCH
	HORSEPOWER RATED TOGGLE SWITCH WITH PLUG FUSE AND FUSISTAT ADAPTER, SIZE AS REQUIRED FOR LOAD
	TIME CLOCK
	DISCONNECT SWITCH - FUSED
	DISCONNECT SWITCH - NON FUSED
	SURFACE MOUNTED PANELBOARD
	RECESSED MOUNTED PANELBOARD
	DISTRIBUTION PANEL
	SWITCHBOARD

ABBREVIATIONS

A	AMPERES
AC	4" ABOVE COUNTERTOP OR BACKSPLASH TO CENTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BD	BOARD
BFG	BELOW FINISHED GRADE
C	CONDUIT
CU	COPPER
E	INDICATES EXISTING TO REMAIN
EB	INDICATES EXISTING J-BOX AND CONDUIT IN WALL TO BE REUSED
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
F OR FRAC	FRACTIONAL
FCU	FAN COIL UNIT
GND	GROUND
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
HPF	HIGH POWER FACTOR
HZ	HERTZ
KVA	KILOVOLT AMPERES
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
P	POLE
PART	PARTIAL CIRCUIT
PVC	POLY VINYL CHLORIDE NON-METALLIC RACEWAY, SCHEDULE 40 OR SCHEDULE 80
R	REMOVE EQUIPMENT, INCLUDING MOUNTING HARDWARE, AND CONDUIT AND CONDUCTORS TO SOURCE OF SUPPLY, UNLESS OTHERWISE NOTED
RL	REMOVE AND RELOCATE ITEM, EXTEND EXISTING CONDUIT AND/OR CABLING AS REQUIRED TO NEW LOCATION, UNLESS OTHERWISE NOTED, SEE PLANS FOR NEW LOCATION
RR	REMOVE AND REPLACE WITH NEW DEVICE, REUSE BOX AND CONDUIT IN WALL AND PROVIDE NEW CONDUIT AND WIRING TO DEVICE AS REQUIRED
RMC	STEEL RIGID METAL CONDUIT
RTU	ROOF TOP UNIT
SD	SMOKE DAMPER
SS	STAINLESS STEEL
SWBD	SWITCHBOARD
TYP	TYPICAL
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WP	INDICATES WEATHERPROOF
XFMR	TRANSFORMER

ELECTRICAL GENERAL NOTES

- PROVIDE TEMPORARY POWER, LIGHTING, AND HEATING AS REQUIRED FOR CONSTRUCTION. COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES.
- FIRE SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, CEILING AND FLOORS.
- COORDINATE LOCATION OF WIRING DEVICES, TELECOM OUTLETS, FIRE ALARM DEVICES, ETC. WITH MILLWORK, TILE LAYOUT, AND OTHER WALL FINISHES PRIOR TO ROUGH-IN.
- ALIGN ADJACENT WALL MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES. DEVICES SHALL BE ALIGNED VERTICALLY WHEN INSTALLED AT DIFFERING HEIGHTS AND INSTALL ALL ADJACENT DEVICES AT THE SAME HEIGHT TO CENTER, NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN TRADES PRIOR TO ROUGH-IN.
- CONCEAL ALL CONDUITS IN WALL, CHASES, ABOVE CEILINGS, BELOW FLOOR, OR IN ADJACENT STORAGE, OR UNFINISHED SPACES. WHERE POSSIBLE, RUN EXPOSED CONDUITS VERTICALLY, WHERE POSSIBLE, TO ABOVE ACCESSIBLE CEILING, CONNECT HORIZONTALLY ABOVE CEILING.
- PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY THE NEC.
- UTILIZE EXISTING CONCEALED CONDUIT AND FLUSH MOUNTED BOXES WHERE POSSIBLE.
- INSTALL NEW DEVICES IN EXISTING BACKBOXES WHERE POSSIBLE. REUSE CONDUITS/SURFACE RACEWAYS AS AVAILABLE. PROVIDE GANGED COVERPLATES AND/OR BLANK COVERPLATES AS REQUIRED.
- POWER TO EXISTING AREAS NOT WITHIN THE SCOPE OF THIS PROJECT SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR SHORT TERM OUTAGES NECESSARY FOR RECONNECTION OF EXISTING CIRCUITS. COORDINATE AND SCHEDULE OUTAGES WITH THE OWNER AND GOVERNMENT.

ELECTRICAL DEMOLITION GENERAL NOTES

- THESE PLANS INDICATE MAJOR ITEMS OF DEMOLITION IN THE PROJECT AND ARE NOT INTENDED TO INDICATE ALL DEMOLITION REQUIRED TO COMPLETE THE WORK. REMOVE ITEMS INDICATED ON THE DEMOLITION SHEETS AND ADDITIONAL ITEMS AS REQUIRED FOR DEMOLITION WORK. DEMOLITION SHALL BE COMPLETE INCLUDING, BUT NOT LIMITED TO, REMOVAL OF DESIGNATED EQUIPMENT AND ASSOCIATED CONDUIT, CABLES, CONDUCTORS, BOXES, DEVICES, MOUNTING HARDWARE, ETC. PATCH AND REPAIR WALLS AS REQUIRED TO MATCH THE ADJACENT FINISH.
- REMOVE ALL DEVICES AND FIXTURES AND ALL ASSOCIATED WIRING AND EXPOSED CONDUIT, IN WALLS AND CEILING SPACES WHICH ARE BEING REMOVED. MAINTAIN CIRCUIT CONTINUITY FOR ALL DEVICES, EQUIPMENT, AND FIXTURES WHICH REMAIN.
- FLUORESCENT LAMPS THAT ARE REMOVED SHALL BE BOXED AND RECYCLED IN ACCORDANCE WITH FEDERAL AND STATE ENVIRONMENTAL GUIDELINES.
- FLUORESCENT BALLASTS THAT ARE MARKED AS "CONTAINS NO PCPB" SHALL BE DISPOSED OF BY THE CONTRACTOR. BALLASTS THAT CONTAIN PCPB OR THAT ARE NOT MARKED "CONTAINS NO PCPB" SHALL BE BOXED AND/OR PALLETIZED AND RECYCLED IN ACCORDANCE WITH FEDERAL AND STATE ENVIRONMENTAL GUIDELINES.
- EXISTING COMMUNICATIONS, COMPUTER NETWORKING, OR OTHER SPECIAL SYSTEMS CABLES SHALL BE SECURED AND PROTECTED DURING CONSTRUCTION. ANY CABLE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER (THE ENTIRE CABLE SHALL BE REPLACED AND TESTED FOR PROPER OPERATION IN THE PRESENCE OF THE OWNER).
- OWNER SHALL HAVE FIRST SALVAGE RIGHTS FOR ALL FIXTURES, EQUIPMENT, DEVICES, PANELS, ETC. BEING REMOVED. CONTRACTOR SHALL DISPOSE OF ALL ITEMS NOT SALVAGED BY SURFACES.
- ALL ABANDONED COMMUNICATIONS CABLING, CONDUITS/RACEWAYS, DEVICES, AND EQUIPMENT SHALL BE REMOVED. PATCH AND COVER SURFACES AS REQUIRED TO MATCH EXISTING SURFACES.

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AHU-XX	AIR HANDLING UNIT, XX = UNIT NUMBER
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
B-X-X	BLOWER, XX = UNIT NUMBER
BC-XX	BLOWER COIL, XX = UNIT NUMBER
BLDG	BUILDING
BO	BOTTOM OF DUCT
BP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CFM	CUBIC FEET PER MINUTE
CHAS	CANADIAN STANDARDS ASSOCIATION
CLUX-XX	FORMERLY A.C.A.
CU-XX	CONDENSING UNIT, XX = UNIT NUMBER
CU-XX	CABINET UNIT HEATER, XX = UNIT NUMBER
DCW	DOMESTIC COLD WATER
DEG	DEGREE
DEMO	DEMOLITION
DHW	DOMESTIC HOT WATER
DHW-C	DOMESTIC HOT WATER CIRCULATOR
DIA	DRAWING
DW	DRAIN
DW-XX	DOMESTIC WATER HEATER, XX = UNIT NUMBER
EF-XX	EXHAUST FAN, XX = UNIT NUMBER
ERV-XX	ENERGY RECOVERY VENTILATOR, XX = UNIT NUMBER
ET-XX	EXPANSION TANK, XX = UNIT NUMBER
EXIST	EXISTING
F-XX	FURNACE, XX = UNIT NUMBER
FCU-XX	FAN COIL UNIT, XX = UNIT NUMBER
FD	FIRE DAMPER
FM	FEET PER MINUTE
FSD	FIRE & SMOKE DAMPER
FT	FEET OR FOOT
FT-XX	FIN TUBE, XX = UNIT NUMBER
G	NATURAL GAS
GAL	GALLON
GPH	GALLONS PER HOUR
GM	GALLONS PER MINUTE
HP	HEAT PUMP
HP-XX	HEAT PUMP, XX = UNIT NUMBER
HPR	HEAT PUMP RETURN
HRS	HEAT PUMP SUPPLY
HUX-XX	HORIZONTAL UNIT HEATER, XX = UNIT NUMBER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
ID	INSIDE DIAMETER
IN	INCH
KV	KILOVOLT
KW	KILOWATT
LB	POUND
LTO	LIGHTING
MAX	MAXIMUM
MAU-XX	MAKE-UP AIR UNIT, XX = UNIT NUMBER
MIN	MINIMUM
MTR	MOTOR
MU	MAKE-UP WATER
MECH	MECHANICAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
P-XX	PUMP, XX = UNIT NUMBER
PSI	POUNDS PER SQUARE INCH
PTAC-XX	PACKAGED TERMINAL AIR CONDITIONER, XX = UNIT NUMBER
PTHP-XX	PACKAGED TERMINAL HEAT PUMP, XX = UNIT NUMBER
PWR	POWER
QTY	QUANTITY
RTU	RETURN AIR
RFM	REVOLUTIONS PER MINUTE
RTN	RETURN
RTU-XX	ROOF TOP UNIT, XX = UNIT NUMBER
SA	SUPPLY AIR
SD	SMOKE DAMPER
SEC	SECOND (SECONDARY)
SHT	SHEET
SS	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STM	STEAM
SWBD	SWITCHBOARD
TEMP	TEMPERATURE
TESTAT	THERMOSTAT
TYP	TYPICAL
UG	UNDERGROUND
UTL	UTILITY
V	VENT
VAV-XX	VARIABLE AIR VOLUME TERMINAL, XX = UNIT NUMBER
VFD-XX	VARIABLE FREQUENCY DRIVE, XX = UNIT NUMBER
VOL	VOLUME
VTR	VENT THROUGH ROOF
W	WITH
W/O	WITHOUT
WG	WATER GAUGE
WT	WEIGHT
XA	EXHAUST AIR
XFMR	TRANSFORMER

PROJECT DESIGN CRITERIA	
LOCATION:	COUNCIL BLUFFS, IA
CITY/STATE:	
APPLICABLE CODES:	
BUILDING	2015 IBC*
MECHANICAL	2015 IMC*
PLUMBING	2015 UPC*
FUEL GAS	2015 IFGC
ENERGY	2012 IECC
ELECTRICAL	2017 NEC
"WITH AMENDMENTS"	
LATITUDE:	
DEG. N. LAT.	41.28
ELEVATION:	
FT. ABOVE SEA LEVEL	1,253
ASHRAE DESIGN CONDITIONS:	
0.4% DB(MCWB) COOLING	93.3/78.4° F
99.9% DB (HEATING)	-1.5° F

MECHANICAL SYMBOLS

	NOTE REFERENCE
	KITCHEN EQUIPMENT TAG
	TEMPERATURE SENSOR
	THERMOSTAT
	HUMIDITY SENSOR
	STATIC PRESSURE SENSOR
	DIFFERENTIAL PRESSURE SENSOR
	DETAIL IDENTIFICATION
	CONNECTION - NEW TO EXISTING
	SECTION IDENTIFICATION
	ELECTRICAL PANEL
	VARIABLE FREQUENCY DRIVE
	PIPING ABOVE FLOOR OR ABOVE GROUND, SYMBOL INDICATES TYPE OF SERVICE
	EXISTING PIPING
	EXISTING PIPING TO BE REMOVED
	SOIL AND WASTE PIPING ABOVE GRADE
	SEWER AND WASTE PIPING BELOW GRADE
	RAINWATER PIPING
	OVERFLOW RAINWATER PIPING
	VENT PIPING ON PLUMBING RISER
	DOMESTIC COLD WATER PIPING
	SOFTENED WATER PIPING
	DOMESTIC HOT WATER PIPING
	140° DOMESTIC HOT WATER PIPING
	HOT WATER CIRCULATING PIPING
	140° HOT WATER CIRCULATING PIPING
	GAS PIPING
	REFRIGERANT PIPING (PAIR)
	CONDENSATE DRAIN PIPING
	HOT WATER HEATING SUPPLY PIPING
	HOT WATER HEATING RETURN PIPING
	CHILLED WATER SUPPLY PIPING
	CHILLED WATER RETURN PIPING
	HEAT PUMP SYSTEM SUPPLY PIPING
	HEAT PUMP SYSTEM RETURN PIPING
	ELBOW DOWN AND ELBOW UP
	TEE DOWN AND TEE UP
	BALL VALVE
	VALVE IN VERTICAL PIPING
	BUTTERFLY VALVE
	PIPING STRAINER
	UNION
	CHECK VALVE
	2-WAY TEMPERATURE CONTROL VALVE
	3-WAY TEMPERATURE CONTROL VALVE
	PRESSURE REDUCING AND REGULATING VALVE
	AUTOMATIC FLOW CONTROL VALVE
	GAS METER
	WATER METER
	FLOOR DRAIN
	FLOOR SINK
	ROOF DRAIN
	OVERFLOW ROOF DRAIN
	DOWNSPOUT NOZZLE
	WALL HYDRANT
	HOSE BIBB
	CLEANOUT
	BELOW FLOOR OR UNDER GROUND P-TRAP
	P-TRAP THAT SERVES FIXTURE ON FLOOR ABOVE
	P-TRAP
	PIPE CAP
	PIPE BREAK MARK
	ROUND DUCTWORK SECTION
	SUPPLY OR FRESH AIR DUCTWORK SECTION
	RETURN OR EXHAUST AIR DUCTWORK SECTION
	TURNING VANES IN DUCT
	MANUAL VOLUME DAMPER IN DUCT (ADJUSTABLE)
	MOTORIZED DAMPER IN DUCT
	FIRE DAMPER AND ACCESS DOOR INTO DUCT
	SMOKE DAMPER AND ACCESS DOOR INTO DUCT
	FIRE/SMOKE DAMPER AND ACCESS DOOR INTO DUCT
	CEILING DIFFUSER WITH REGAIN BOX, FLEXIBLE DUCT TO BE A MAXIMUM 3'-0" LONG
	SUPPLY REGISTER
	RETURN OR EXHAUST AIR GRILLE
	VARIABLE AIR VOLUME BOX, XXX INDICATES BOX DESIGNATION
	HIGH EFFICIENCY TAKE-OFF WITH DAMPER, SEE SPECIFICATION
	HIGH EFFICIENCY TAKE-OFF WITHOUT DAMPER, SEE SPECIFICATION
	DUCTWORK
	SPIRAL DUCTWORK
	EXISTING DUCTWORK
	EXISTING DUCTWORK TO BE REMOVED
	RECTANGULAR DUCT BREAK MARK
	ROUND DUCT BREAK MARK

ALL MECHANICAL SHEETS GENERAL NOTES

- NO PIPING SHALL BE INSTALLED ABOVE ANY ELECTRICAL PANEL.
- COORDINATE LOCATION OF ALL PIPING WITH STRUCTURE, LIGHTS, DUCTWORK AND EXACT LOCATION OF EQUIPMENT/PLUMBING FIXTURES.
- PROVIDE SHUT-OFF VALVE IN WATER PIPING AT EASILY ACCESSIBLE LOCATION BEFORE CONNECTION AT EQUIPMENT / PLUMBING FIXTURE.
- DO NOT INSTALL ANY PIPING IN FRONT OF BLOCK ACCESS TO ANY ACCESS DOOR.
- ALL PLUMBING FIXTURES AND ACCESSORIES SHALL BE APPROVED BY OWNER.
- PROVIDE A MINIMUM 10'-0" CLEARANCE BETWEEN PLUMBING VENT AND ALL FRESH AIR INTAKES.
- FIELD VERIFY EXACT LOCATION OF ALL EXISTING PIPING BEFORE BEGINNING CONSTRUCTION.
- ALL RO WATER PIPING TO BE CPVC SCHEDULE 80 PIPING AND THREADED FITTINGS AND JOINTS (NO COPPER PIPING).
- REFER TO FOOD SERVICE DRAWINGS AND APPROVED EQUIPMENT SHOP DRAWING SUBMITTALS FOR EXACT REQUIREMENTS PRIOR TO ROUGH-IN.
- MECHANICAL CONTRACTOR TO VERIFY EXACT LOCATION OF EQUIPMENT WITH EQUIPMENT SUPPLIER AND ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
- ALL HEAT PUMP PIPING SHALL BE COPPER.
- THE CONTRACTOR SHALL PROVIDE NEW SUPPORTS AS NECESSARY FOR ALL EXISTING DATA, TELEPHONE AND OTHER LOW VOLTAGE CABLES TO PREVENT DAMAGE. ANY CABLE DAMAGED BY THIS CONTRACTOR OR ANY SUB-CONTRACTORS SHALL BE REPLACED IN ITS ENTIRETY AND RETESTED BY THIS CONTRACTOR AT NO COST TO THE OWNER.

DUCTWORK GENERAL NOTES

- ENGINEER SHALL HAVE FINAL APPROVAL OF ALL GRILLE, DIFFUSER, AND THERMOSTAT LOCATIONS.
- COORDINATE ALL AIR DEVICE MOUNTING FRAMES WITH LIGHTING AND CEILING TYPES.
- ALL WALL MOUNTED DEVICES SHALL BE COORDINATED WITH ARCHITECTURAL INTERIOR ELEVATIONS AND EXISTING WALL MOUNTED DEVICES.
- ALL DUCT TAPS CALLED FOR REMOVAL THAT ARE NOT TO BE RE-USED IN NEW PLANS SHALL BE REMOVED BACK TO THE DUCT MAIN AND PATCHED AND SEALED WITH A FIRE RESISTANT ADHESIVE.
- DUCT SIZES AS SHOWN ON PLAN INDICATE THE FREE AREA DIMENSIONS.
- FLEXIBLE DUCTS SHALL NOT BE USED ABOVE NON-LAYIN CEILINGS UNLESS BOTH ENDS OF THE FLEXIBLE CONNECTIONS CAN BE REACHED BY REMOVING AN ACCESS PANEL, LIGHT FIXTURE, OR THE AIR DEVICE.
- PROVIDE FRAMED 12" X 12" BIRD SCREEN AT ALL DUCTS TERMINATING WITHOUT AN AIR DEVICE, AT INDOOR FACE OF LOUVERS, AND AT UNDUCTED AIRFLOW OPENINGS AT EQUIPMENT.
- CONTRACTOR SHALL PAINT THE INSIDE OF DUCTS VISIBLE THROUGH RETURN AND EXHAUST GRILLES WITH A FLAT BLACK PAINT TO LIMIT VISIBILITY.
- PROVIDE MANUAL VOLUME DAMPER IN EACH AIR DEVICE RUNOUT DUCT AS FAR FROM THE AIR DEVICE AS POSSIBLE UNLESS AN OPPOSED BLADE DAMPER IS CALLED FOR ON THE AIR DEVICE.
- INSTALL TURNING VANES IN ALL ELBOWS GREATER THAN 45 DEGREES IN SUPPLY, RETURN, AND EXHAUST DUCTS. DO NOT INSTALL IN GREASE, COMBUSTION AIR, OR OTHER DUCTS WHERE DISALLOWED BY CODE.
- ALL FIRE, SMOKE, AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER U.L. TESTED AND LISTED INSTALLATION DETAILS.
- ALL DUCTWORK SHALL BE LABELED PER THE SPECIFICATIONS.

PIPING GENERAL NOTES

- DIELECTRIC UNIONS SHALL BE PROVIDED WHEN JOINING PIPES OF DISSIMILAR MATERIALS.
- ALL WALL MOUNTED DEVICES SHALL BE COORDINATED WITH ARCHITECTURAL INTERIOR ELEVATIONS AND EXISTING WALL MOUNTED DEVICES.
- ISOL

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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SHEET NOTES

- 1 DISCONNECT POWER AND FIRE ALARM CONNECTIONS FROM EXISTING HOOD. REMOVE BACK TO THE NEAREST JUNCTION BOX.

MECHANICAL SHEET NOTES

- 1 REMOVE EXISTING KITCHEN EXHAUST HOOD AND CONNECTED MAKEUP AIR FENM, INCLUDING ASSOCIATED HANGERS, CONTROLS, AND FIRE SUPPRESSION COMPONENTS. DISCONNECT EXISTING DUCTWORK, PIPING, AND WIRING AS REQUIRED FOR INSTALLATION OF NEW HOOD. PROTECT EXISTING SERVICES TO REMAIN. PATCH AND REPAIR ADJACENT CONSTRUCTION DISTURBED BY DEMOLITION.
- 2 REMOVE EXISTING MAKEUP AIR DUCT CONNECTION WHERE INDICATED BY HATCH. PREPARE EXISTING DUCT TO REMAIN FOR RECONNECTION IN NEW PLAN. TYPICAL ALL MAKEUP AIR CONNECTIONS.
- 3 REMOVE EXISTING GREASE EXHAUST AIR DUCT CONNECTION WHERE INDICATED BY HATCH. PREPARE EXISTING DUCT TO REMAIN FOR RECONNECTION IN NEW PLAN. TYPICAL ALL GREASE EXHAUST AIR CONNECTIONS.
- 4 KITCHEN HOOD REPLACEMENT AND ASSOCIATED WORK SHALL BE PRICED AS PART OF ADD ALTERNATE #1.
- 5 REMOVE EXISTING EXHAUST AIR DEVICE AND CONNECTED DUCTWORK WHERE INDICATED BY HATCH.
- 6 REMOVE EXISTING SUPPLY AIR DEVICE AND CONNECTED DUCTWORK WHERE INDICATED BY HATCH.
- 7 REMOVE EXISTING EXHAUST DUCTWORK WHERE INDICATED BY HATCH. PREPARE EXISTING DUCTWORK TO REMAIN FOR RECONNECTION.
- 8 SCOPE OF WORK WITHIN DISHWASHER SPACE SHALL BE PRICED AS PART OF ADD ALTERNATE #2.
- 9 DISCONNECT DOMESTIC WATER PIPING FROM HOT WATER WASHDOWN SYSTEM IN REMOVED HOODS. PREPARE FOR RECONNECTION IN NEW PLANS.



IWCC STUDENT CENTER KITCHEN HVAC REPLACEMENT



2700 College Rd
Council Bluffs, IA 51503

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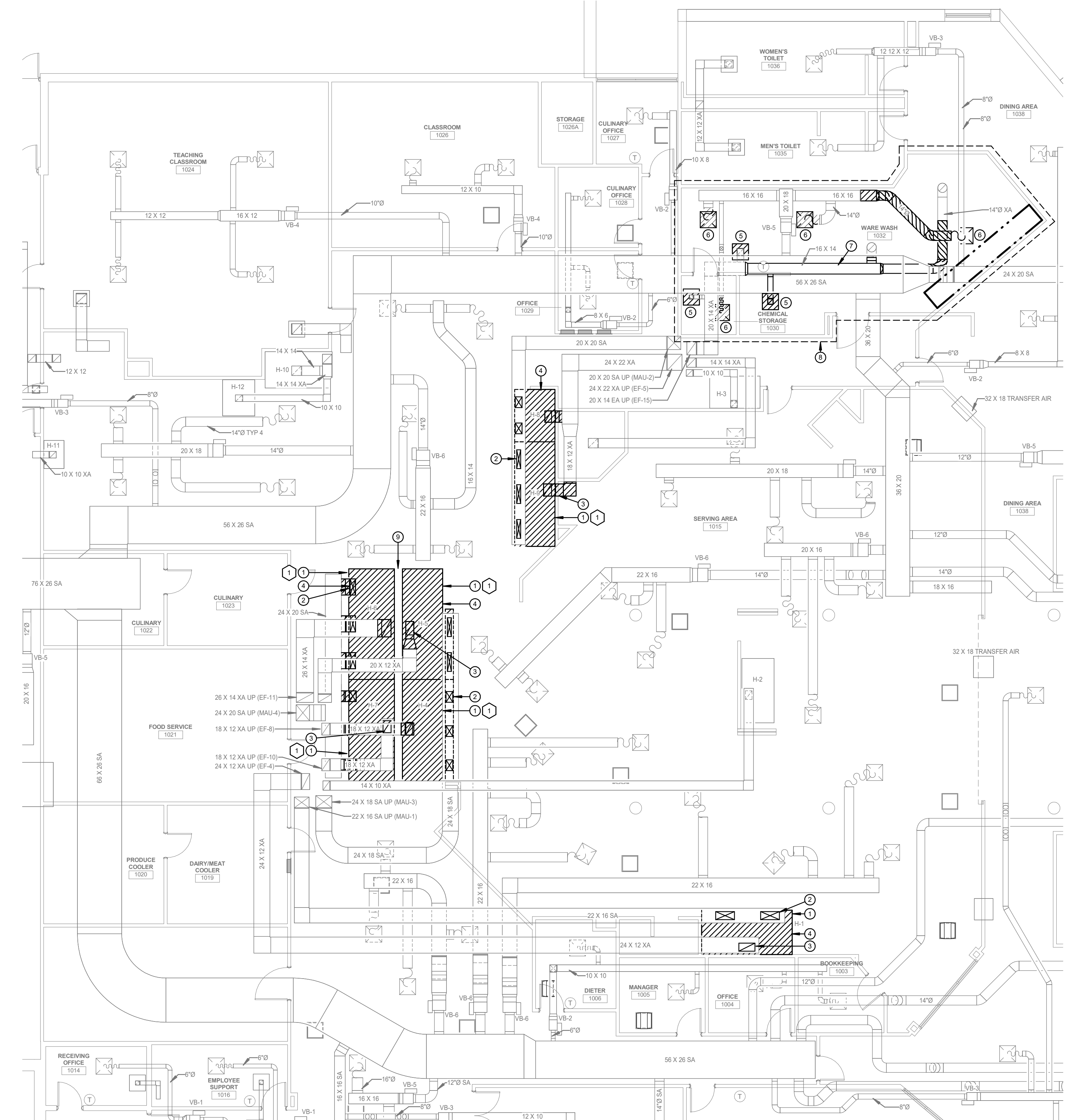
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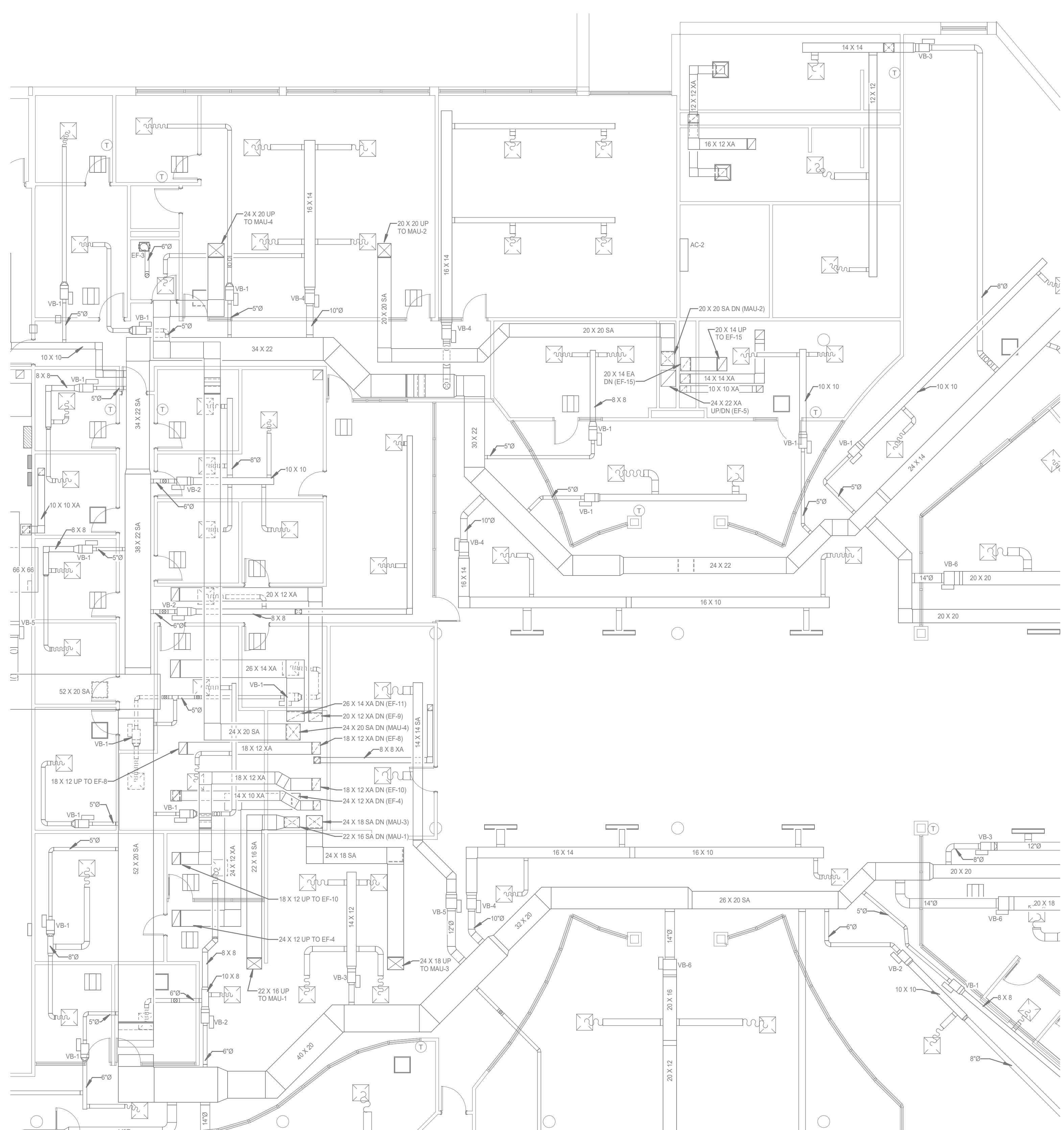
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A1 MECHANICAL/ELECTRICAL DEMOLITION PLAN - FIRST FLOOR
1/8" = 1'-0"



A10 MECHANICAL/ELECTRICAL DEMOLITION PLAN - SECOND FLOOR
1/8" = 1'-0"



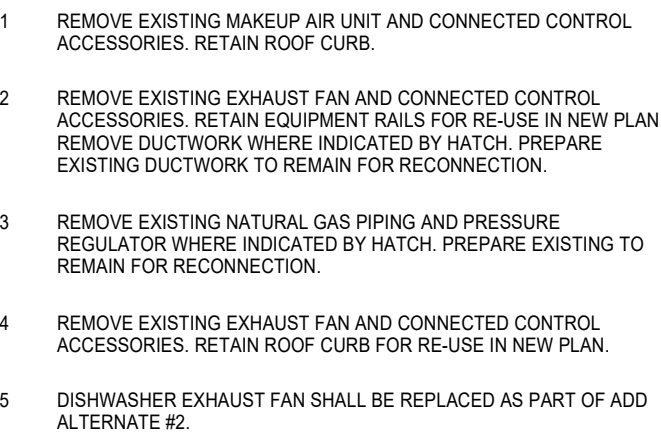
KEY PLAN

REV #	DESCRIPTION	DATE
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PROJECT NUMBER:	2026-124
ISSUE DATE:	09/14/2026
DRAWN BY:	WWW/CDE
CHECKED BY:	JLV/SMH

SHEET NAME
MECHANICAL/ELECTRICAL DEMOLITION
PLAN - FIRST & SECOND FLOORS

SHEET NUMBER
MED1.1



WCC STUDENT CENTER KITCHEN HVAC REPLACEMENT



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KEY PLAN

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SHEET NAME
MECHANICAL/ELECTRICAL DEMOLITION
PLAN - ROOF

SHEET NUMBER

MED1.2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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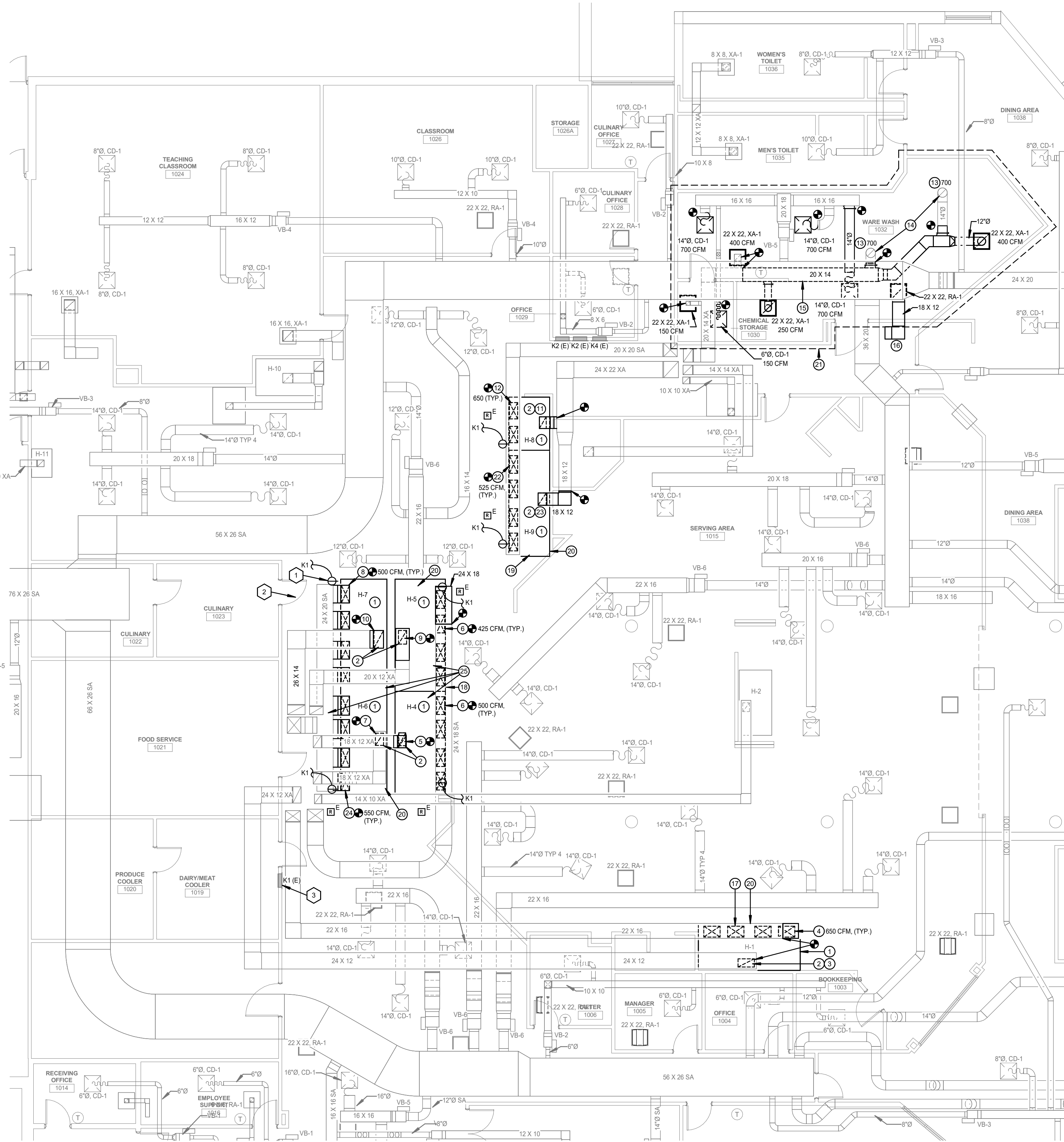
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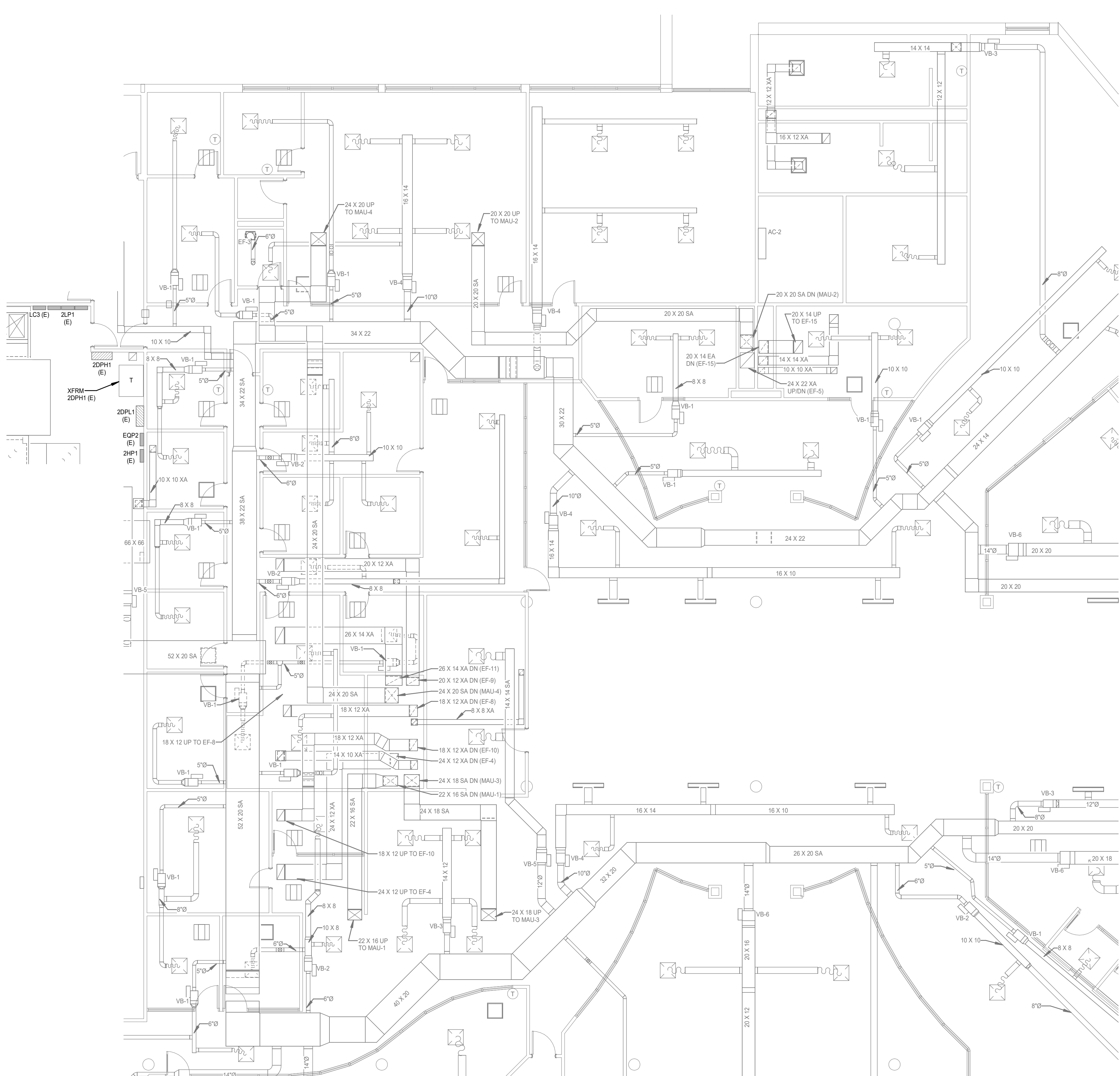
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C1 FIRST FLOOR MECHANICAL PLAN
1/8" = 1'-0"



C10 SECOND FLOOR MECHANICAL PLAN
1/8" = 1'-0"



SHEET NOTES

- RE-CONNECT EXISTING CIRCUIT TO NEW HOOD. VERIFY THAT ALL EXISTING CIRCUITS SERVING EQUIPMENT UNDER THE HOOD IS CONNECT TO SHUNT TRIP BREAKER AND OPERATES PROPERLY. (TYPICAL)
- RE-CONNECT EXISTING FIRE ALARM MONITORING CIRCUIT TO NEW HOOD. (TYPICAL)
- EXISTING BRANCH CIRCUIT PANEL BOARD, GE MGFS4248BX, 400A, 208Y/120V, 3Ø, 4W. PROVIDE NEW BREAKERS AS REQUIRED, LA LISTED FOR USE WITH PANEL. UPDATE PANEL DIRECTORY WITH ANY NEW OR REARRANGED LOADS. TURN OVER SPARE BREAKERS TO THE OWNER.

MECHANICAL SHEET NOTES

- INSTALL NEW TYPE I KITCHEN HOOD AT HEIGHT INDICATED. LEVEL AND SECURELY SUPPORTED FROM THE BUILDING STRUCTURE WITH THREADED RODS AND MANUFACTURER-RECOMMENDED SUPPORTS. DO NOT SUPPORT HOOD FROM THE CEILING SYSTEM OR DUCTWORK. COORDINATE HOOD LOCATION AND MOUNTING HEIGHT WITH COOKING EQUIPMENT. REQUIRED OVERHANGS, CEILING, AND MANUFACTURER'S LISTING. PROVIDE A COMPLETE LISTED FIRE-SUPPRESSION SYSTEM AND NEW AUTOMATIC GAS SHUTOFF VALVE. INTERLOCK FIRE-SUPPRESSION SYSTEM ACTIVATION TO AUTOMATICALLY CLOSE THE GAS VALVE AND DE-ENERGIZE ELECTRIC COOKING EQUIPMENT BENEATH THE HOOD. GAS AND ELECTRICAL SERVICE SHALL REQUIRE MANUAL RESET. COORDINATE GAS VALVE SIZE, LOCATION, PRESSURE RATING, AND INTERLOCK REQUIREMENTS WITH THE PLUMBING CONTRACTOR AND FIRE-SUPPRESSION SYSTEM SUPPLIER.
- CONNECT NEW HOOD EXHAUST COLLAR TO EXISTING GREASE EXHAUST DUCT. PROVIDE NEW DUCT TRANSITION AS REQUIRED. CONSTRUCTED OF MINIMUM 18-GAUGE CARBON STEEL OR 18-GAUGE STAINLESS STEEL MATCHING EXISTING DUCT MATERIAL. PROVIDE CONTINUOUS LIQUIDTIGHT EXTERNAL WELDS AT ALL JOINTS AND CONNECTIONS. FIELD VERIFY EXISTING DUCT SIZE, MATERIAL, AND LOCATION PRIOR TO FABRICATION. DO NOT USE SCREWS OR OTHER FASTENERS THAT PENETRATE THE DUCT INTERIOR.
- CONNECT 24 X 12 EXHAUST DUCT TO KITCHEN HOOD COLLAR.
- 24 X 16 SUPPLY AIR CONNECTION TO SUPPLY AIR PLENUM. BALANCE TO CFM LISTED ON PLAN.
- CONNECT 19 X 10 EXHAUST DUCT TO KITCHEN HOOD COLLAR.
- 26 X 12 SUPPLY AIR CONNECTION TO SUPPLY AIR PLENUM. BALANCE TO CFM LISTED ON PLAN.
- CONNECT 26 X 14 EXHAUST DUCT TO KITCHEN HOOD COLLAR.
- 26 X 12 SUPPLY AIR CONNECTION TO SUPPLY AIR PLENUM. BALANCE TO CFM LISTED ON PLAN.
- CONNECT 20 X 12 EXHAUST DUCT TO KITCHEN HOOD COLLAR.

MECHANICAL SHEET NOTES

- CONNECT 18 X 12 EXHAUST DUCT TO KITCHEN HOOD COLLAR.
- CONNECT 17 X 10 EXHAUST DUCT TO KITCHEN HOOD COLLAR.
- 24 X 14 SUPPLY AIR CONNECTION TO SUPPLY AIR PLENUM.
- BALANCE TO CFM LISTED ON PLAN.
- CONTRACTOR SHALL FIELD VERIFY EXISTING DUCT SIZE AND PROVIDE TRANSITIONS AS REQUIRED TO MAKE CONNECTION TOWARDS THE DISHWASHER AND GRILLE CONNECTIONS.
- RETURN AIR TRANSFER DUCT WITH 12" DUCT LINER.
- CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION OF THE MANUAL PULL STATION AND REPLACE WITH NEW. INTERLOCK WITH KITCHEN HOOD K4-1.
- CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION OF THE MANUAL PULL STATION AND REPLACE WITH NEW. INTERLOCK WITH KITCHEN HOODS H-8 & H-9.
- CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION OF THE MANUAL PULL STATION AND REPLACE WITH NEW. INTERLOCK WITH KITCHEN HOODS H-8 & H-9.
- SCOPE OF WORK WITHIN DISHWASHER SPACE SHALL BE PRICED AS PART OF ADD ALTERNATE #2.
- 26 X 12 SUPPLY AIR CONNECTION TO SUPPLY AIR PLENUM. BALANCE TO CFM LISTED ON PLAN.
- CONNECT 18 X 12 EXHAUST DUCT TO KITCHEN HOOD COLLAR.
- 26 X 12 SUPPLY AIR CONNECTION TO SUPPLY AIR PLENUM. BALANCE TO CFM LISTED ON PLAN.
- CONNECT HOT WATER WASHDOWN SYSTEM TO EXISTING DOMESTIC COLD AND HOT WATER CONNECTIONS.



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KEY PLAN

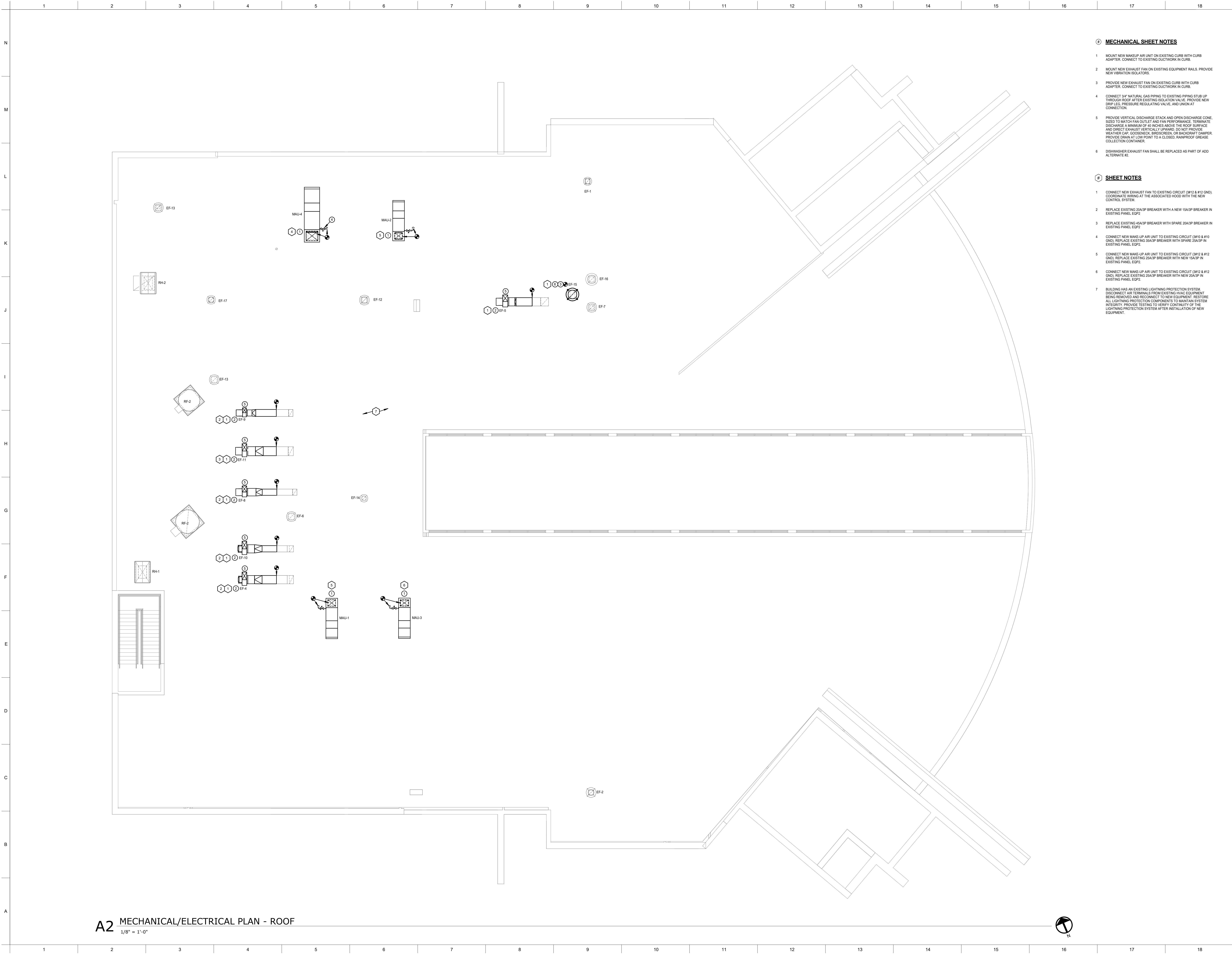
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SHEET NAME:
MECHANICAL/ELECTRICAL PLAN - FIRST
& SECOND FLOORS

SHEET NUMBER

ME1.1

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MECHANICAL SHEET NOTES

- 1 MOUNT NEW MAKEUP AIR UNIT ON EXISTING CURB WITH CURB ADAPTER. CONNECT TO EXISTING DUCTWORK IN CURB.
- 2 MOUNT NEW EXHAUST FAN ON EXISTING EQUIPMENT RAILS. PROVIDE NEW VIBRATION ISOLATORS.
- 3 PROVIDE NEW EXHAUST FAN ON EXISTING CURB WITH CURB ADAPTER. CONNECT TO EXISTING DUCTWORK IN CURB.
- 4 CONNECT 3/4" NATURAL GAS PIPING TO EXISTING PIPING STUB UP THROUGH ROOF AFTER EXISTING ISOLATION VALVE. PROVIDE NEW DRIP LEG, PRESSURE REGULATING VALVE AND UNION AT CONNECTION.
- 5 PROVIDE VERTICAL DISCHARGE STACK AND OPEN DISCHARGE CONE, SIZED TO MATCH FAN OUTLET AND FAN PERFORMANCE. TERMINATE DISCHARGE A MINIMUM OF 40 INCHES ABOVE THE ROOF SURFACE AND DIRECT EXHAUST VERTICALLY UPWARD. DO NOT PROVIDE WEATHER CAP, GOSSENCK, BRIDGESON, OR BACKDRAFT DAMPER. PROVIDE DRAIN AT LOW POINT TO A CLOSED, RAINPROOF GREASE COLLECTION CONTAINER.
- 6 DISHWASHER EXHAUST FAN SHALL BE REPLACED AS PART OF ADD ALTERNATE #2.

SHEET NOTES

- 1 CONNECT NEW EXHAUST FAN TO EXISTING CIRCUIT (B#12 & #12 GND). COORDINATE WIRING AT THE ASSOCIATED HOOD WITH THE NEW CONTROL SYSTEM.
- 2 REPLACE EXISTING 20A/3P BREAKER WITH A NEW 15A/3P BREAKER IN EXISTING PANEL EQ#2.
- 3 REPLACE EXISTING 45A/3P BREAKER WITH SPARE 20A/3P BREAKER IN EXISTING PANEL EQ#2.
- 4 CONNECT NEW MAKE-UP AIR UNIT TO EXISTING CIRCUIT (B#10 & #10 GND). REPLACE EXISTING 35A/3P BREAKER WITH SPARE 25A/3P IN EXISTING PANEL EQ#2.
- 5 CONNECT NEW MAKE-UP AIR UNIT TO EXISTING CIRCUIT (B#12 & #12 GND). REPLACE EXISTING 25A/3P BREAKER WITH NEW 15A/3P IN EXISTING PANEL EQ#2.
- 6 CONNECT NEW MAKE-UP AIR UNIT TO EXISTING CIRCUIT (B#12 & #12 GND). REPLACE EXISTING 25A/3P BREAKER WITH NEW 20A/3P IN EXISTING PANEL EQ#2.
- 7 BUILDING HAS AN EXISTING LIGHTNING PROTECTION SYSTEM. DISCONNECT AIR TERMINALS FROM EXISTING HVAC EQUIPMENT BEING REMOVED AND RECONNECT TO NEW EQUIPMENT. RESTORE ALL LIGHTNING PROTECTION COMPONENTS TO MAINTAIN SYSTEM INTEGRITY. PROVIDE TESTING TO VERIFY CONTINUITY OF THE LIGHTNING PROTECTION SYSTEM AFTER INSTALLATION OF NEW EQUIPMENT.



**IWCC STUDENT
CENTER KITCHEN
HVAC REPLACEMENT**



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KEY PLAN

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CHECKED BY:	JLV/SMH
SHEET NAME	
MECHANICAL / ELECTRICAL PLAN - ROOF	

SHEET NUMBER	
ME1.2	

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MAKE UP UNIT SCHEDULE

NOTES:

1. DOUBLE WALL CONSTRUCTION. 1" INSULATION.
2. INLET GAS PRESSURE OF 6-14 IN. W.G. PROVIDE WITH DEDICATED GAS REGULATOR.
3. 16:1 TURNDOWN.
4. DIRECT DRIVE FAN.
5. STAINLESS STEEL HEAT EXCHANGER WITH POWER VENTING.
6. 2" MERV FILTER.
7. REFER TO CONTROLS SEQUENCE FOR INTERFACE WITH TOXIC GAS DETECTION AND DDC SYSTEMS.

MARK	SERVES	LOCATION	CFM	EXT. S.P. (IN. W.G.)	MOTOR HP	HEATING DATA				ELECTRICAL DATA				WEIGHT (LBS.)	MANUFACTURER	MODEL NUMBER	NOTES	
						TYPE	EAT (°F)	LAT (°F)	INPUT (MBH)	OUTPUT (MBH)	VOLTS	PHASE	MCA					MOP
MAU-1	H-1	ROOF	2600	2.02	1.5	NATURAL GAS	-20.0	70.0	274.7	252.7	208	3	8.9	15	795	GREENHECK	DGX-P116H12-01	ALL
MAU-2	H-8 & H-9	ROOF	3200	2.095	2	NATURAL GAS	-20.0	70.0	338.1	311.0	208	3	10.1	15	808	GREENHECK	DGX-P115H12-MF	ALL
MAU-3	H-4 & H-5	ROOF	3400	2.123	3	NATURAL GAS	-20.0	70.0	389.2	330.5	208	3	13.9	20	826	GREENHECK	DGX-P115H12-MF	ALL
MAU-4	H-6 & H-7	ROOF	4200	1.978	3	NATURAL GAS	-20.0	70.0	463.7	408.2	208	3	15.2	25	1108	GREENHECK	DGX-P116H12-MF	ALL

FAN SCHEDULE

NOTES:

1. ALUMINUM UPBLAST FAN. PROVIDE DISCONNECT SWITCH, BIRD SCREEN, 16" PREFABRICATED ROOF CURB, AND GRAVITY BACKDRAFT DAMPER.
2. PROVIDE STATIC PRESSURE CORRECTION FOR BACKDRAFT DAMPER PROVIDED WITH FAN.
3. FAN LOCATED ON EXISTING CURB. PROVIDE ADAPTER AS REQUIRED.
4. SPEED CONTROLLER.
5. ULULIA 765 LISTED FOR POWER VENTILATORS FOR RESTAURANT EXHAUST APPLIANCES.
6. 1" DRAIN CONNECTION WITH GREASE TRAP.
7. STEEL SCROLL, ALUMINUM WHEEL....

MARK	SERVES	TYPE	DRIVE	CFM	EXT. S.P. (IN. W.G.)	ELECTRICAL DATA										FAN RPM	MAX DBA	MOUNTING	WEIGHT (LBS.)	MANUFACTURER	MODEL NO.	NOTES
						DISCONNECT	CONTROLLER	HP	VOLTS	PHASE	FLA	MCA	MOP									
EF-4	H-1	UTILITY VENT SET	DIRECT	3135	1.875	INTEGRAL	HOOD	2	208	3		4.25	15	2037	72	ROOF	172	GREENHECK	USF-15-B6	4-8		
EF-5	H-8 & H-9	UTILITY VENT SET	DIRECT	4215	1.8	INTEGRAL	HOOD	3	208	3		13.25	20	1547	73	ROOF	242	GREENHECK	USF-18-B6	4-8		
EF-8	H-4	UTILITY VENT SET	DIRECT	2060	2.25	INTEGRAL	HOOD	2	208	3		9.38	15	1559	65	ROOF	221	GREENHECK	USF-16-B6	4-8		
EF-9	H-5	UTILITY VENT SET	DIRECT	2550	2.4	INTEGRAL	HOOD	2	208	3		9.38	15	2413	74	ROOF	154	GREENHECK	USF-13-B6	4-8		
EF-10	H-6	UTILITY VENT SET	DIRECT	2350	2.4	INTEGRAL	HOOD	3	208	3		9.38	15	1559	72	ROOF	306	GREENHECK	USF-20-B6	4-8		
EF-11	H-7	UTILITY VENT SET	DIRECT	4080	3.25	INTEGRAL	HOOD	5	208	3		13.25	20	1559	72	ROOF	325	GREENHECK	USF-20-B6	4-8		
EF-15	WAREWASH	UPBLAST	DIRECT	2600	2	INTEGRAL	HOOD	2	208	3		8	15	1489	70	ROOF	165	GREENHECK	CUE-180HP-VG	1-4		

KITCHEN HOOD SCHEDULE

NOTES:

1. 300 SERIES STAINLESS STEEL CONSTRUCTION.
2. UL 170 COMPLIANT W/OD EXHAUST FIRE DAMPER.
3. LISTED FOR ZERO CLEARANCE.
4. STAINLESS STEEL BAFFLE FILTERS.
5. WALL MOUNTED UTILITY CONTROL CABINET.
6. HOOD MOUNTED UTILITY CONTROL CABINET.
7. INTEGRAL LED LIGHT FIXTURE.
8. REMOVABLE GREASE CUP W/ CONCEALED GREASE TROUGH.
9. PROVIDE WITH COMMON HOT WATER WASH SYSTEM SERVING H-4 THRU H-7.
10. HOOD CONTROLS THROUGH H-9 UTILITY CONTROL CABINET.

MARK	LOCATION	TYPE	HOOD DIMENSIONS				CFM	S.P. (IN. W.G.)	MOUNTING HEIGHT (IN.)	EXHAUST CONNECTION (IN.)	MAKEUP AIR SUPPLY PLENUM				LIGHT FIXTURE		WEIGHT (LBS.)	MANUFACTURER AND MODEL	NOTES		
			LENGTH (IN.)	WIDTH (IN.)	HEIGHT (IN.)						LOCATION	TYPE	CFM	S.P. (IN. W.G.)	SUPPLY CONNECTION (IN.)	COOKING LOAD					
					FRONT	BACK											TYPE	QUANTITY			
H-1	SERVING AREA	CANOPY	135	48	30	30	3135	0.49	80	24 X 12	FRONT	AIR CURTAIN SUPPLY	2600	0.01	(4) 24 X 16	HEAVY	ROUND LED	3	428	ACCUREX XB5W-135-00-S	1-5, 7, 8
H-4	FOOD PREP	CANOPY	141	60	30	30	2056	0.48	80	19 X 10	FRONT	AIR CURTAIN SUPPLY	2000	0.01	(4) 26 X 12	MEDIUM	ROUND LED	4	1485	ACCUREX XB4E-S-141-00-S	1-4, 6-9
H-5	FOOD PREP	CANOPY	141	60	30	30	2550	0.565	80	20 X 12	FRONT	AIR CURTAIN SUPPLY	1700	0.01	(4) 26 X 12	MEDIUM	ROUND LED	4	1485	ACCUREX XW4E-S-141-00-S	1-4, 6-9
H-6	FOOD PREP	CANOPY	141	54	30	30	2350	0.529	80	18 X 12	FRONT	AIR CURTAIN SUPPLY	2000	0.01	(4) 26 X 12	MEDIUM	ROUND LED	4	1344	ACCUREX XB4E-S-141-00-S	1-4, 6-9
H-7	FOOD PREP	CANOPY	141	54	30	30	4080	0.918	80	26 X 14	FRONT	AIR CURTAIN SUPPLY	2200	0.01	(4) 26 X 12	MEDIUM	ROUND LED	4	1448	ACCUREX XW4E-S-141-00-S	1-4, 6-9
H-8	FOOD PREP	CANOPY	75	48	30	30	1812	0.518	80	17 X 10	FRONT	AIR CURTAIN SUPPLY	1300	0.02	(2) 24 X 14	HEAVY	ROUND LED	2	258	ACCUREX XB5W-75-00-S	1-4, 6, 7, 10
H-9	FOOD PREP	CANOPY	144	48	30	30	2400	0.41	80	18 X 12	FRONT	AIR CURTAIN SUPPLY	2100	0.01	(4) 26 X 12	HEAVY	ROUND LED	3	730	ACCUREX XB5W-144-00-S	1-4, 6-8

DIFFUSER, GRILLE, AND REGISTER SCHEDULE

NOTES:

1. FRAME TYPE SHALL BE PROVIDED PER CEILING TYPE AND CEILING MODULE DIMENSIONS.
2. NECK SIZES PER PLANS.
3. MAX SOUND LEVEL SHALL BE NC 25.
4. PROVIDE BLACKOUT PANEL ON TRANSFER GRILLES.

MARK	FUNCTION	FACE SIZE (IN. X IN.)		DAMPER	MATERIAL	FINISH	DESCRIPTION	MANUFACTURER	MODEL	NOTES
CD-1	CEILING DIFFUSER	24 X 24	-	-	ALUMINUM	WHITE	3/8" SQUARE DIFFUSER, ROUND NECK	TITUS	TMS-AA	1-3
RA-1	RETURN GRILLE	24 X 24	-	-	ALUMINUM	WHITE	DOVERED FACED; 3/4" BLADE SPACING; 3/8" FIXED DEFLECTION, BLADES IN PARALLEL WITH SHORT DIMENSION. LAY-IN TYPE WITH TRM FRAME.	TITUS	350FS	ALL
XA-1	EXHAUST GRILLE	24 X 24	-	-	ALUMINUM	WHITE	DOVERED FACED; 3/4" BLADE SPACING; 3/8" FIXED DEFLECTION, BLADES IN PARALLEL WITH SHORT DIMENSION. LAY-IN TYPE WITH TRM FRAME.	TITUS	350FS	1-3

KITCHEN HOOD EXHAUST AND MAKEUP AIR CONTROL SEQUENCE

1. PROVIDE FACTORY HOOD CONTROLLER TO CONTROL AND INTERLOCK THE KITCHEN HOODS, GREASE-EXHAUST FANS, MAKEUP-AIR UNIT, FAN VFDs, COOKING-EQUIPMENT GAS VALVE, AND APPLICABLE ELECTRICAL COOKING EQUIPMENT, AND TO INTERFACE WITH THE HOOD FIRE-SUPPRESSION SYSTEM. ALL REQUIRED CONTROLS AND SAFETY INTERLOCKS SHALL OPERATE INDEPENDENTLY OF THE BAS.

2. THE BAS SHALL NOT START, STOP, RESET, OR MODULATE THE KITCHEN VENTILATION SYSTEM. LOSS OF BAS COMMUNICATION SHALL NOT AFFECT HOOD SYSTEM OPERATION OR ANY REQUIRED SAFETY INTERLOCK.

3. UPON LOCAL ENABLE OF A HOOD SYSTEM OR AUTOMATIC DETECTION OF COOKING ACTIVITY, START THE ASSOCIATED GREASE-EXHAUST FAN AND MAKEUP-AIR UNIT. PROVE EXHAUST AIRFLOW BEFORE ENABLING THE ASSOCIATED COOKING EQUIPMENT.

4. THE FACTORY HOOD CONTROLLER SHALL MODULATE THE GREASE EXHAUST AND MAKEUP-AIR FAN SPEEDS IN RESPONSE TO HOOD TEMPERATURE SENSORS. FAN SPEEDS SHALL VARY BETWEEN THE MINIMUM AND MAXIMUM VALUES ESTABLISHED BY THE MANUFACTURER AND VERIFIED DURING TESTING AND BALANCING. MAKEUP AIR SHALL TRACK TOTAL EXHAUST DEMAND TO MAINTAIN THE SCHEDULED AIR BALANCE, MAINTAIN CAPTURE AND CONTAINMENT AT ALL OPERATING CONDITIONS.

5. THE MAKEUP-AIR UNIT FACTORY CONTROLLER SHALL MODULATE HEATING TO MAINTAIN A 55°F DISCHARGE-AIR TEMPERATURE SETPOINT, ADJUSTABLE AT THE FACTORY CONTROLLER. UNIT SAFETIES AND HEATING CONTROLS SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER.

6. UPON LOSS OF PROVEN GREASE EXHAUST AIRFLOW, DISABLE THE ASSOCIATED COOKING EQUIPMENT, CLOSE THE ASSOCIATED COOKING-EQUIPMENT GAS VALVE, AND INITIATE AN ALARM.

7. UPON ACTIVATION OF THE HOOD FIRE-SUPPRESSION SYSTEM, CLOSE THE COOKING-EQUIPMENT GAS VALVE, DE-ENERGIZE PROTECTED ELECTRICAL COOKING EQUIPMENT, SHUT DOWN ASSOCIATED MAKEUP AIR, AND OPERATE THE GREASE EXHAUST FAN AT FULL DESIGN SPEED UNLESS OTHERWISE REQUIRED BY THE LISTED FIRE-SUPPRESSION SYSTEM. REQUIRE MANUAL RESET BEFORE RETURNING TO NORMAL OPERATION.

8. THE CONTROLS CONTRACTOR SHALL PROVIDE A BAS GRAPHIC FOR THE COMPLETE KITCHEN VENTILATION SYSTEM SHOWING EACH HOOD, ASSOCIATED GREASE-EXHAUST FAN, MAKEUP-AIR UNIT, AND COOKING-EQUIPMENT GAS VALVE. DISPLAY THE MONITORED POINTS LISTED HEREIN AND PROVIDE LINKS TO APPLICABLE TRENDS AND EQUIPMENT DETAILS.

9. PROVIDE A MONITOR-ONLY BAS INTERFACE FOR THE FOLLOWING:

A. EACH GREASE-EXHAUST FAN RUN STATUS, AIRFLOW PROOF, VFD SPEED FEEDBACK, AND FAULT.

B. MAKEUP-AIR UNIT RUN STATUS, VFD SPEED FEEDBACK, DISCHARGE-AIR TEMPERATURE, DIRTY-FILTER ALARM, AND UNIT FAULT.

C. HOOD CONTROL PANEL OPERATING MODE AND COMMON ALARM.

D. HOOD FIRE-SUPPRESSION SYSTEM ACTIVATION.

E. COOKING-EQUIPMENT GAS-VALVE STATUS, WHERE AVAILABLE.

D14

KITCHEN HOOD EXHAUST AND MAKEUP AIR CONTROLS

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KEY PLAN

PROJECT NUMBER:

2026-124

ISSUE DATE:

09/14/2026

DRAWN BY:

Author

CHECKED BY:

Checker

SHEET NAME

MECHANICAL SCHEDULES & CONTROLS

SHEET NUMBER

ME3.1

D14 KITCHEN HOOD EXHAUST AND MAKEUP AIR CONTROLS

N.T.S.