- SUCH WORK.

- CIRCUIT(S).

- REQUIREMENT.

 \Box

- ACTUALLY SUPPLIED.

- SHALL BE CONNECTED AND OPERABLE.

GENERAL NOTES:

1. THESE DRAWINGS ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT SPECIFICATION BOOK (PROJECT MANUAL).

2. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.

3. VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.

4. SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER - IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF

5. REVIEW ARCHITECTURAL, MECHANICAL, STRUCTRAL, KITCHEN AND OTHER DRAWINGS PRIOR TO BID. 6. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.

7. WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE OF COLORADO, NATIONAL CODES AND ORDINANCES, AND POUDRE SCHOOL DISTRICT TECHNICAL STANDARDS.

8. PROVIDE PERMITS AND INSPECTIONS REQUIRED.

9. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS. 10. FIELD VERIFY EXISTING EQUIPMENT OR CIRCUITS THAT ARE REMAINING TO BE RECONNECTED TO NEW OR EXISTING

SWITCHBOARDS/PANELBOARDS. PROVIDE SWITCHES, RECEPTACLES, CONDUIT, WIRE, ETC. AS REQUIRED TO RESTORE CONTINUITY OF

11. EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY". THE ELECTRICAL CONTRACTOR TO FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND TO INCLUDE IN HIS BID AN ALLOWANCE FOR REMOVAL AND/OR RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEM TO ALL OTHER WORK AS REQUIRED.

12. PROVIDE ELECTRICAL DEMOLITION REQUIRED. REFER TO ARCHITECTURAL AND ELECTRICAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. PROVIDE LABOR AND MATERIALS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING CIRCUITS.

13. PROVIDE ALL NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, J-BOXES, RECEPTACLES, SWITCHES, LIGHTS, FIRE ALARMS DEVICES, ETC. COMPLETE WITH ASSOCIATED CIRCUITING TO SOURCE. WHERE IT IS NOT FEASIBLE TO REMOVE THE ABOVE, OUTLET SHALL BE ABANDONED, WIRE REMOVED, BLANK COVER PLATES PROVIDED, AND COMPONENTS IDENTIFIED PER SPECIFICATIONS.

14. OWNER HAS RIGHT OF FIRST REFUSAL FOR EXISTING ELECTRICAL EQUIPMENT BEING REMOVED BUT NOT RELOCATED. ALL (E) EQUIPMENT, LIGHT FIXTURES, LAMPS, BALLASTS, ETC. BEING REMOVED SHALL BE DISCARDED BY CONTRACTOR IN ACCORDANCE WITH APPLICABLE EPA

15. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. 16. REVIEW ARCHITECTURAL, MECHANICAL, AND KITCHEN DRAWINGS AND PROVIDE LIGHTS, SWITCHES, RECEPTACLES, TELECOMM OUTLETS, EQUIPMENT CONNECTIONS, ETC. AND ASSOCIATED CIRCUITING IN NEW AND REMODELED AREAS AS REQUIRED.

17. INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.

18. FINAL CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT

19. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION, OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.

20. WHERE THE RE-USE OF EXISTING CONDUITS, WIRES, DEVICES, ETC, IS PERMISSIBLE, MAKE CERTAIN THAT THE WIRING FOR SAME IS CONTINUOUS FROM OUTLET TO OUTLET AND THAT SUCH CIRCUIT OR SYSTEMS SHALL PASS THROUGH NO OUTLET OR JUNCTION BOXES WHICH MAY BE RENDERED INACCESSIBLE BY THE STRUCTURAL CHANGES TO BE MADE TO THE BUILDING.

21. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY. 22. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE

CORRECTIONS NECESSARY AT NO COST TO OWNER. 23. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC.

24. MAINTAIN A CURRENT SET OF AS-BUILT RECORD DRAWINGS WHICH SHALL BE AVAILABLE FOR REVIEW DURING ENGINEER'S SITE OBSERVATIONS. UPON COMPLETION, PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS,

CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC. 25. FIRE ALARM SYSTEM IS A DESIGN BUILD SYSTEM THAT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING

JURISDICTION. SHOP DRAWINGS SHALL BE PREPARED AND STAMPED BY PERSONS WITH THE FOLLOWING QUALIFICATIONS: 1) FIRE PROTECTION P.E. OR 2) FIRE ALARM CERTIFIED BY NICET MINIMUM LEVEL III.

ELECTRICAL SHEET INDEX

#	TITLE
E0.1	ELECTRICAL COVER SHEET
ED1.1	AREA AL ELECTRICAL DEMO PLAN
ED1.2	AREA BL ELECTRICAL DEMO PLAN
ED1.3	AREA CL ELECTRICAL DEMO PLAN
ED1.4	AREA A ELECTRICAL DEMO PLAN
ED1.5	AREA B ELECTRICAL DEMO PLAN
ED1.6	AREA C ELECTRICAL DEMO PLAN
ED1.7	AREA D ELECTRICAL DEMO PLAN
ED1.8	AREA E ELECTRICAL DEMO PLAN
ED1.9	AREA F ELECTRICAL DEMO PLAN
ED1.10	AREA G ELECTRICAL DEMO PLAN
ED1.11	ELECTRICAL DEMO ROOF PLAN
ED1.12	ELECTRICAL DEMO ROOF PLAN
E1.1	AREA AL ELECTRICAL PLAN
E1.2	AREA BL ELECTRICAL PLAN
E1.3	AREA CL ELECTRICAL PLAN
E1.4	AREA A ELECTRICAL PLAN
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E1.10	AREA G ELECTRICAL PLAN
E1.11	ELECTRICAL ROOF PLAN
E1.12	ELECTRICAL ROOF PLAN
E4.1	ELECTRICAL ENLARGED PLANS
E4.2	ELECTRICAL ENLARGED PLANS
ED5.1	ELECTRICAL DEMO ONE-LINE DIAGRAM
E5.1	ELECTRICAL ONE-LINE DIAGRAM
E6.1	ELECTRICAL DIAGRAMS
E7.1	ELECTRICAL SCHEDULES
E7.2	ELECTRICAL SCHEDULES
E7.3	ELECTRICAL SCHEDULES

ISSUE LOG KEY: 'VISSUED AS PART OF A SET

''NOT PART OF SET **'*' ISSUED FOR INFORMATION ONLY**

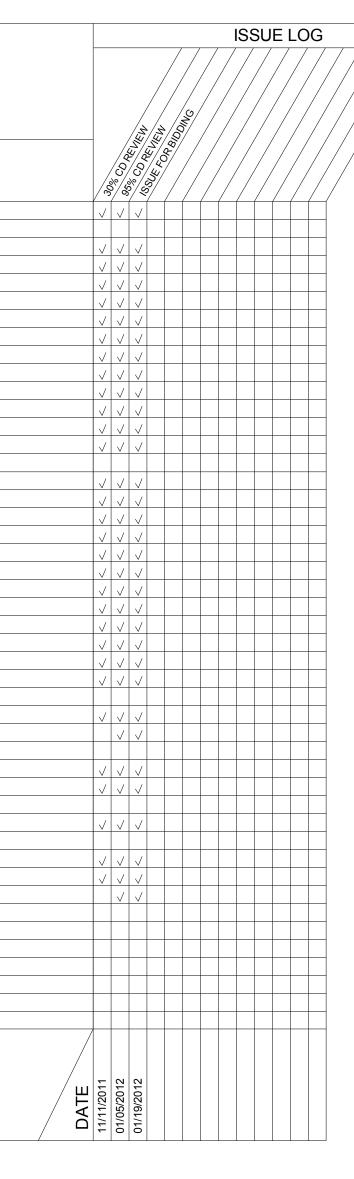
PHASING NOTES: 1. THIS PROJECT IS ANTICIPATED TO BE CONSTRUCTED OVER 2 SUMMERS. 2012 AND 2013.

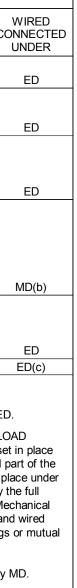
- 2. PHASE 1, SUMMER 2012, SHALL INCLUDE AREAS A,B,C (BOTH LEVELS) AND THE KITCHEN RENOVATION.
- 3. PHASE 2, SUMMER 2013, SHALL INCLUDE AREAS D,E,F,G.
- 4. REPLACEMENT OF SWITCHBOARD 'MDP' LOCATED IN BASEMENT ELECTRICAL ROOM SHALL OCCUR WITH PHASE 2.
- VENDORS AND CONTRACTORS SHALL PLAN TO TAKE DELIVERY OF PHASE 2 SCOPE 5
- MATERIAL AND EQUIPMENT (D,E,F,G) ONE YEAR AFTER PHASE 1 ORDERS.

	MECHANICAL EQUIPMENT W		NECTIONS	
	ITEM	FURNISHED UNDER	SET IN PLACE OR MTD. UNDER	WIRED CONNECTE UNDER
1.	Equipment motors and thermal overloads, resistance heaters. (3)	MD	MD	ED
2.	Motor controllers; magnetic starters, reduced voltage starters and overload relays.	ED	ED(a)	ED
3.	Disconnect switches, fused or unfused, h.p. rated switches, thermal overload switches and fuses, manual operating switches.	ED(a)	ED(a)	ED
4.	Pushbutton stations pilot lights, multi-speed switches, float switches, thermostats, control relays, time clocks, control transformers, control panels, motor valves, damper motors, solenoid valves, EP and PE switches and interlocks.	MD	MD(b)	MD(b)
5.	Contactors, 120V control circuit outlets for control panels and for boiler controls and for fire protection controls and smoke detectors.	ED	ED	ED
6.	Duct Detectors and Fire/Smoke Dampers	ED	MD	ED(c)
	= Mechanical Division	·		·
D	= Electrical Division			
a.	If furnished as part of factory wired equipment, the	nen wiring and co	onnections only by	ED.
b.	If float switches, line thermostats, p.e. switches, t CURRENT to any motor, the Mechanical Division and connected under the Electrical Division, exc mechanical equipment, or directly attached to du	n shall furnish the ept where such i	em. They shall be tems are an integ	e set in place ral part of the

mechanical equipment, or directly attached to ducts, piping, etc., they shall be set in place the Mechanical Division and connected by the Electrical Division. If they do not carry the load current to any motor, they shall be furnished, set in place and wired under the Mecl Division. Control devices carrying FULL LOAD CURRENT furnished by Mechanical and by Electrical shall be located at the device being controlled, unless shown on drawings o agreement is made between the contractors with no change in the contract price.

1) Wiring from fire alarm contacts to alarm system by ED; all control function wiring by MD. Wiring from alarm contacts to alarm system by ED; all control function wiring by MD. GENERAL NOTE: The above list does not attempt to include all components. All items necessary for a complete system shall be included in the base contract.





MD(b)	
ED	
ED(c)	
).	
DAD t in place bart of the lace under the full schanical d wired s or mutual	

θ-	
	SINGLE RECEPTACLE
¢	DUPLEX RECEPTACLE
	DUFLEX RECEFTACLE
_C O	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
⊕	DOUBLE DUPLEX RECEPTACLE
¢	GFCI DUPLEX RECEPTACLE
e	DUPLEX RECEPTACLE; HALF SWITCHED
	·
Œ	ISOLATED GROUND DUPLEX RECEPTACLE
	MULTI-OUTLET PLUG STRIP
Ð	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE
•	FLUSH FLOOR MOUNTED DOUBLE DUPLEX RECEPTACLE
Ð	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE; HALF SWITCHED
\mathbf{r}	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE AND TELECOM
C H	WALL MOUNTED SPECIAL OUTLET AS NOTED
\bigcirc	SPECIAL OUTLET AS NOTED
	JUNCTION BOX
$\exists \exists$	WALL MOUNTED JUNCTION BOX
J	FLOOR MOUNTED JUNCTION BOX
	DIVISION 15 EQUIPMENT POWER CONNECTION
TS	TIMER SWITCH
	FUSED DISCONNECT
N	NON FUSED DISCONNECT
×	MOTOR STARTER
СВ	ENCLOSED CIRCUIT BREAKER
PB	PULL BOX
•	PUSH BUTTON
ТС	TIME CLOCK
(PC)	PHOTO-CELL
	TRANSFORMER
	PANELBOARD OR LOADCENTER
С	CONTACTOR
	ELECTRIC MOTOR
	METER
$\overline{\mathbb{T}}$	THERMOSTAT
ATS	AUTOMATIC TRANSFER SWITCH
	CIRCUIT HOMERUN
	CONDUIT RUN
	CONDUIT RUN BELOW GRADE
— 0	CONDUIT UP
	CONDUIT DOWN
	SWITCH
S ³	THREE-WAY SWITCH
S ⁴	FOUR-WAY SWITCH
sJ	DOOR JAMB SWITCH
sĸ	KEY SWITCH
	VARIABLE SPEED SWITCH
	THERMAL OVERLOAD SWITCH
S ^T	
S'	DIMMER
	DIMMER THREE-WAY DIMMER
	THREE-WAY DIMMER LOW VOLTAGE SWITCH
	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH
	THREE-WAY DIMMER LOW VOLTAGE SWITCH
	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH
	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH
	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR
D D LV S C ABB AVC - 1	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR SREVIATIONS ABOVE FINISHED CEILING
D D ³ LV S ^O CC ABB AVC - 1 AFF - 7	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR
D D ³ LV S ^O CC ABB AVC - 1 AFF - 7	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR SREVIATIONS ABOVE FINISHED CEILING
D D IV S ^O OC ABB AVC - 1 AFF - 1 AFG - 1	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR
D D I I V S O C C A B B A V C - J A F G - J A F G - J A L - A	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE
D D I LV S O C C ABB AVC AFF - / AFG AFG	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM
D D I V S O C ABB AVC - 1 AFG - 1 AFG - 1 AFG - 1 AFG - 1 C - C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT
D D D S O O C A B F G - C C C C C C C C C C C C C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT
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D D S C ABB AVC AFG AFG AFG C C - C C C C T - C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT
D D S C ABB AVC AFF - / AFG AFG C C - C C C T - C DISP -	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT SURRENT TRANSFORMER
D D S C ABB AVC AFF - / AFG AFG C C - CC CKT - C DISP - DW - I	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT SURRENT TRANSFORMER GARBAGE DISPOSAL
D D D S O O C A F G A F G - C C C C C C C C C C C C C C C C C C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY
D D S C ABB AVC AFG AFG AFG C C C C C C C C C C C C C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER
D D S C ABB AVC AFG AFG AFG C C C C C C C C C C C C C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY
D D S C ABB AVC AFF - / AFG AFG AFG C C - CC CKT - C DISP - DW - 1 EM - E EWC - (E) - E	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR BREVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER
D D D S C AFF - / AFF - / AFF - / AFG - / AFG - / AFG - / C - C CT - C DISP - DW - 1 EWC - EWC - (E) - E FBO -	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS BEVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT SURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING
D D D S C AFF - / AFG - / AFG - / AFG - / AFG - / C - C(CT - C DISP - DW - I EM - E EWC - (E) - E FBO - GRD -	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR SREVIATIONS ABOVE GROUP CEILING ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER
D D D C S O C AFF - A AFG - A AFG - A AFG - A AFG - A AFG - A C - CA C -	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CURCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND GROUND FAULT CIRCUIT INTERRUPTER
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D D D D C S O C C AFF - A AFG - A AFG - A AFG - A AFG - A AFG - A C C C C C C C C C C C C C	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT URRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH OLATED GROUND ADD IN CONTRACT
D D D SO OC AFF AFF AFG AFG AFG AFG C CC CT DW EWC (E) FBO GFI IG NIC NIC NIC NIC	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CIRCUIT CIRCUIT CIRCUIT CIRCUIT ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH OLATED GROUND NOT IN CONTRACT IGHT LIGHT NT O SCALE
D D D SO OC AFF AFF AFG AFG AFG C CC CT CT DW EWC (E) FBO GRD GFI IG NIC - N NTS - REF	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CIRCUIT CURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH OLATED GROUND AOT IN CONTRACT IIGHT LIGHT NOT TO SCALE REFERE
D D D SO OC AFF AFF AFG AFG AFG C CC CT CT DW EWC (E) FBO GRD GFI IG NIC - N NTS - REF	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CIRCUIT CIRCUIT CIRCUIT CIRCUIT ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH OLATED GROUND NOT IN CONTRACT IGHT LIGHT NT O SCALE
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D D D SO OC AFG AFF AFG AFG AFG AFG C CC CT DW EWC CFI GRD GFI GFI IAW IG NIC NIC NIC NIC UG UNO	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT URRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH OLATED GROUND AOT IN CONTRACT IIGHT LIGHT NOT TO SCALE REFRIGERATOR TRANSIENT VOLTAGE SURGE SUPPRESSOR JNDERGROUND
D D D SO OC AFF AFF AFG AFG AFG C CC CT CT DW EWC GRD GRD GFI IG NIC NIC NIC NIC VOG UVP	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CELLING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT SURRENT TRANSFORMER GARBAGE DISPOSAL DISHWASHER EMERGENCY ELECTRIC WATER COOLER EXISTING FURNISHED BY OWNER GROUND GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH OLATED GROUND AOT IN CONTRACT IIGHT LIGHT NOT TO SCALE REFRIGERATOR TRANSIENT VOLTAGE SURGE SUPPRESSOR JNDERGROUND UNLESS NOTED OTHERWISE WEATHER PROOF
D D D SO OC AFG AFG AFG AFG AFG C CC CT CKT CT DW EWC GRD GRD GFI IG NIC NIC NIC NTS<-1 REF UG VP XP	THREE-WAY DIMMER LOW VOLTAGE SWITCH WALL OCCUPANCY SENSOR/SWITCH LARGE ROOM OCCUPANCY SENSOR REVIATIONS ABOVE FINISHED CELLING ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE LUMINUM BELOW FINISH GRADE ONDUIT CIRCUIT CIRCUIT CIRCUIT CIRCUIT CIRCUIT ELECTRIC WATER COOLER CIXISTING FURNISHED BY OWNER GROUND GROUND GROUND FAULT CIRCUIT INTERRUPTER N ACCORDANCE WITH COLATED GROUND ADT NO CONTRACT IIGHT LIGHT NOT TO SCALE REFRIGERATOR TRANSIENT VOLTAGE SURGE SUPPRESSOR JNDERGROUND UNLESS NOTED OTHERWISE MEATHER PROOF CIRCUIN PROOF
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POWER SYMBOLS

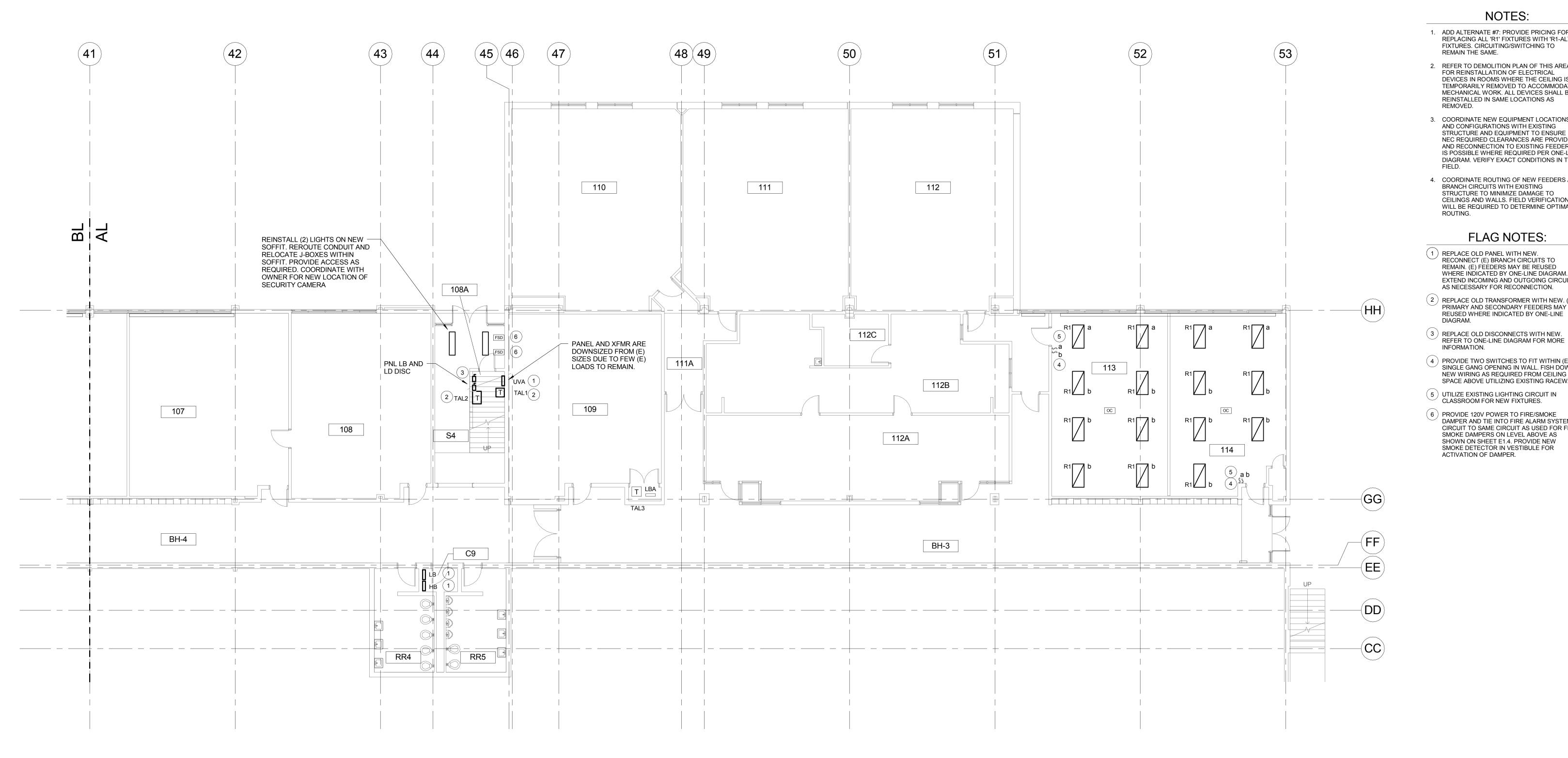
ELECTRICAL LEGEND

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	E-LINE DIAGRAM SYMBOLS
_ \	– DISCONNECT SWITCH
	FUSE
<u> </u>	
<u> </u>	CURRENT TRANSFORMER
<u></u>	POTENTIAL TRANSFORMER
(M)	METER
V	VOLT-METER
A	AMP-METER
SS	SURGE SUPPRESSION DEVICE
ð	SELECTOR SWITCH
 (GF)	GROUND FAULT PROTECTION
 	SHUNT TRIP
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
=	GROUND
\bigcirc	COLD WATER GROUND CONNECTION
Ι	BUILDING STEEL GROUND CONNECTION
LIGH	HTING SYMBOLS
	RECESSED LIGHTING FIXTURE
	DIRECTIONAL/ADJUSTABLE RECESSED LIGHT
<u> </u>	SURFACE MOUNTED LIGHT
Φ	PENDANT MOUNTED LIGHT
<u></u> О	WALL MOUNTED LIGHT
Ъ	WALL MOUNTED UP-LIGHT
\triangleright	MONO-POINT LIGHTING FIXTURE
	RECESSED STEP LIGHT
нон	FLUORESCENT STRIP LIGHT
	WALL MOUNTED LINEAR FLUORESCENT LIGH
	S FIXTURE WITH EMERGENCY BACKUP C
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_ € H	WALL MOUNTED EXIT SIGN W/ FACES & ARRC
	EMERGENCY LIGHTS
FIRE	E ALARM SYMBOLS
FACP	FIRE ALARM CONTROL PANEL
ANN	REMOTE ANNUNCIATOR PANEL
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
SH	COMBO SMOKE/HEAT DETECTOR
	DUCT SMOKE DETECTOR
DD F	
	DUCT SMOKE DETECTOR
DD F	DUCT SMOKE DETECTOR FIRE ALARM PULL STATION
DD F	DUCT SMOKE DETECTOR FIRE ALARM PULL STATION FIRE ALARM HORN
	DUCT SMOKE DETECTOR FIRE ALARM PULL STATION FIRE ALARM HORN FIRE ALARM STROBE
	DUCT SMOKE DETECTOR FIRE ALARM PULL STATION FIRE ALARM HORN FIRE ALARM STROBE FIRE ALARM COMBO HORN/STROBE
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NOTE: ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.				318 East Oak Street, Fort Collins, Colorado 80524-2915 Studio: 970.493.1220 Fax: 970.224.1314	1603 Capitol Avenue, Suite 205, Cheyenne, Wyoming 82001-4569 Studio: 307.632.9903 Fax: 307.634.6468	www.aplusarch.com
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Beaudin Ganze Solution sulting Engineers, Inc. (970) 949-6108 Tahoe: (970) 949-6108 Collins: (970) 221-5691 uperque: (970) 221-5691 (505) 323-9070	ISSUE FOR BIDDING	ter better and the secret of	n 2012	SHEET	νο. ΕΟ.	REVISIONS



1 AREA AL ELECTRICAL PLAN 1/8" = 1'-0"



NOTES:

1. ADD ALTERNATE #7: PROVIDE PRICING FOR REPLACING ALL 'R1' FIXTURES WITH 'R1-ALT' FIXTURES. CIRCUITING/SWITCHING TO REMAIN THE SAME.

2. REFER TO DEMOLITION PLAN OF THIS AREA FOR REINSTALLATION OF ELECTRICAL DEVICES IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE REINSTALLED IN SAME LOCATIONS AS

3. COORDINATE NEW EQUIPMENT LOCATIONS AND CONFIGURATIONS WITH EXISTING STRUCTURE AND EQUIPMENT TO ENSURE NEC REQUIRED CLEARANCES ARE PROVIDED AND RECONNECTION TO EXISTING FEEDERS IS POSSIBLE WHERE REQUIRED PER ONE-LINE DIAGRAM. VERIFY EXACT CONDITIONS IN THE

4. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL

FLAG NOTES:

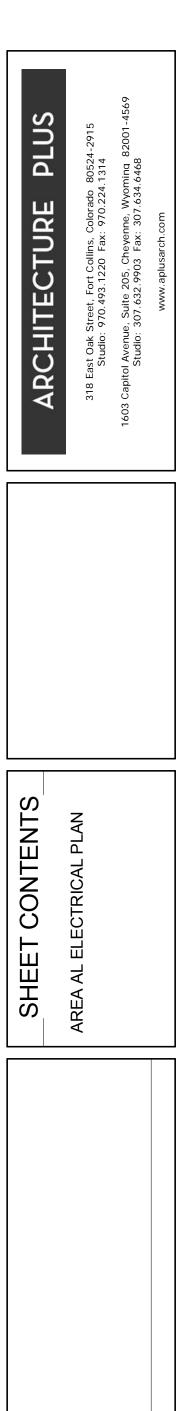
REMAIN. (E) FEÉDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR RECONNECTION.

(2) REPLACE OLD TRANSFORMER WITH NEW. (E) PRIMARY AND SECONDARY FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE

REFER TO ONE-LINE DIAGRAM FOR MORE

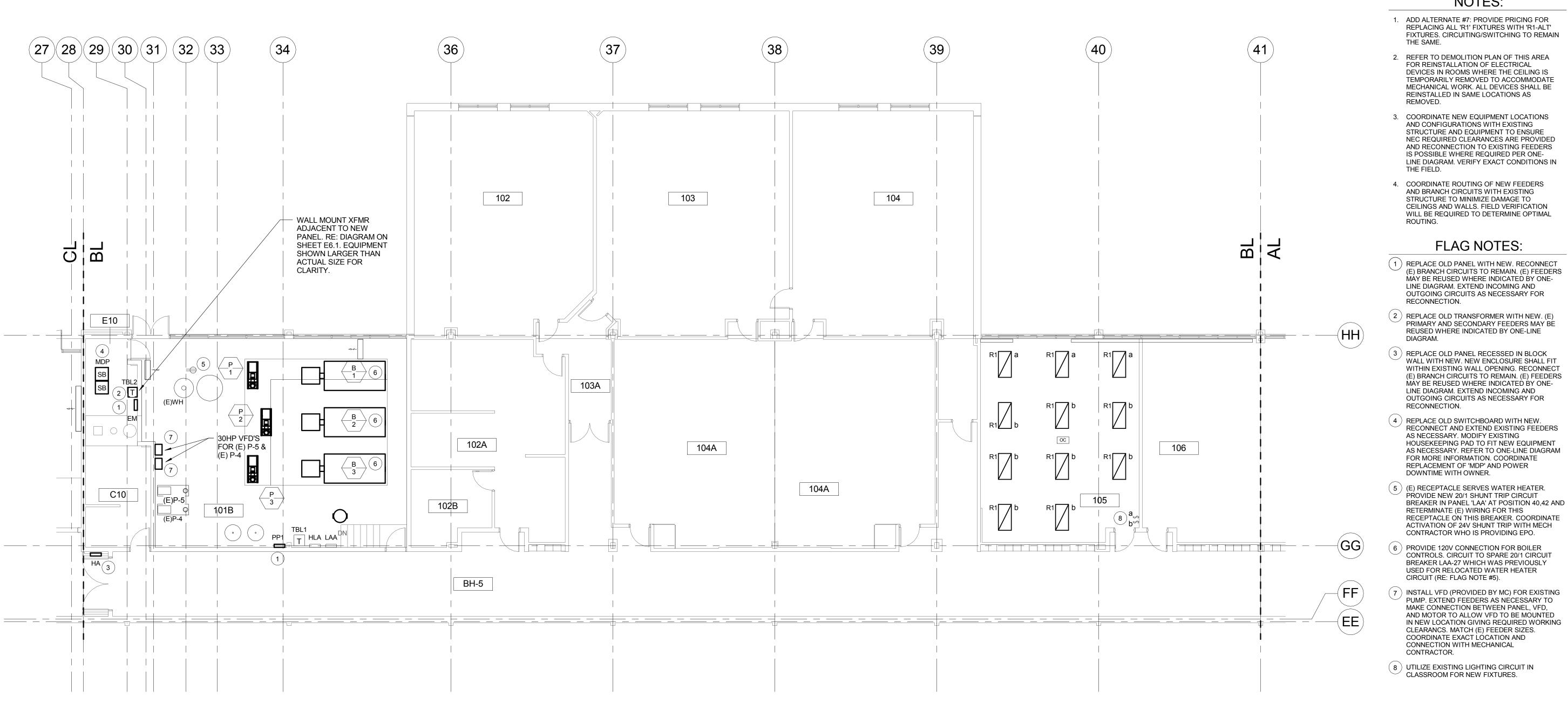
4 PROVIDE TWO SWITCHES TO FIT WITHIN (E) SINGLE GANG OPENING IN WALL. FISH DOWN NEW WIRING AS REQUIRED FROM CEILING SPACE ABOVE UTILIZING EXISTING RACEWAY. (5) UTILIZE EXISTING LIGHTING CIRCUIT IN

(6) PROVIDE 120V POWER TO FIRE/SMOKE DAMPER AND TIE INTO FIRE ALARM SYSTEM. CIRCUIT TO SAME CIRCUIT AS USED FOR FIRE SMOKE DAMPERS ON LEVEL ABOVE AS SHOWN ON SHEET E1.4. PROVIDE NEW SMOKE DETECTOR IN VESTIBULE FOR

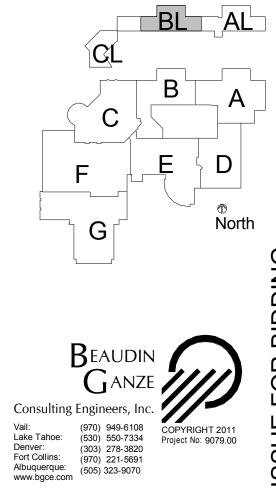


High School Renovations 201 Impala Drive Fort Collins, CO 80521 oudre Ũ BL AL ' В Ε D Ð North BEAUDIN GANZE DRAWN ACR BGR DATE 19 Jan 2012 COPYRIGHT 2011 Project No: 9079.00

E1.1



1 AREA BL ELECTRICAL PLAN 1/8" = 1'-0"





1. ADD ALTERNATE #7: PROVIDE PRICING FOR REPLACING ALL 'R1' FIXTURES WITH 'R1-ALT' FIXTURES. CIRCUITING/SWITCHING TO REMAIN

2. REFER TO DEMOLITION PLAN OF THIS AREA FOR REINSTALLATION OF ELECTRICAL DEVICES IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE

3. COORDINATE NEW EQUIPMENT LOCATIONS AND CONFIGURATIONS WITH EXISTING STRUCTURE AND EQUIPMENT TO ENSURE NEC REQUIRED CLEARANCES ARE PROVIDED AND RECONNECTION TO EXISTING FEEDERS IS POSSIBLE WHERE REQUIRED PER ONE-LINE DIAGRAM. VERIFY EXACT CONDITIONS IN

AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL

FLAG NOTES:

LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR

PRIMARY AND SECONDARY FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE

WALL WITH NEW. NEW ENCLOSURE SHALL FIT WITHIN EXISTING WALL OPENING. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEEDERS MÁY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR

RECONNECT AND EXTEND EXISTING FEEDERS HOUSEKEEPING PAD TO FIT NEW EQUIPMENT AS NECESSARY. REFER TO ONE-LINE DIAGRAM FOR MORE INFORMATION. COORDINATE

BREAKER IN PANEL 'LAA' AT POSITION 40,42 AND RECEPTACLE ON THIS BREAKER. COORDINATE ACTIVATION OF 24V SHUNT TRIP WITH MECH CONTRACTOR WHO IS PROVIDING EPO.

PROVIDE 120V CONNECTION FOR BOILER CONTROLS. CIRCUIT TO SPARE 20/1 CIRCUIT BREAKER LAA-27 WHICH WAS PREVIOUSLY USED FOR RELOCATED WATER HEATER

(7) INSTALL VFD (PROVIDED BY MC) FOR EXISTING PUMP. EXTEND FEEDERS AS NECESSARY TO MAKE CONNECTION BETWEEN PANEL, VFD, AND MOTOR TO ALLOW VFD TO BE MOUNTED IN NEW LOCATION GIVING REQUIRED WORKING CLEARANCS. MATCH (E) FEEDER SIZES.

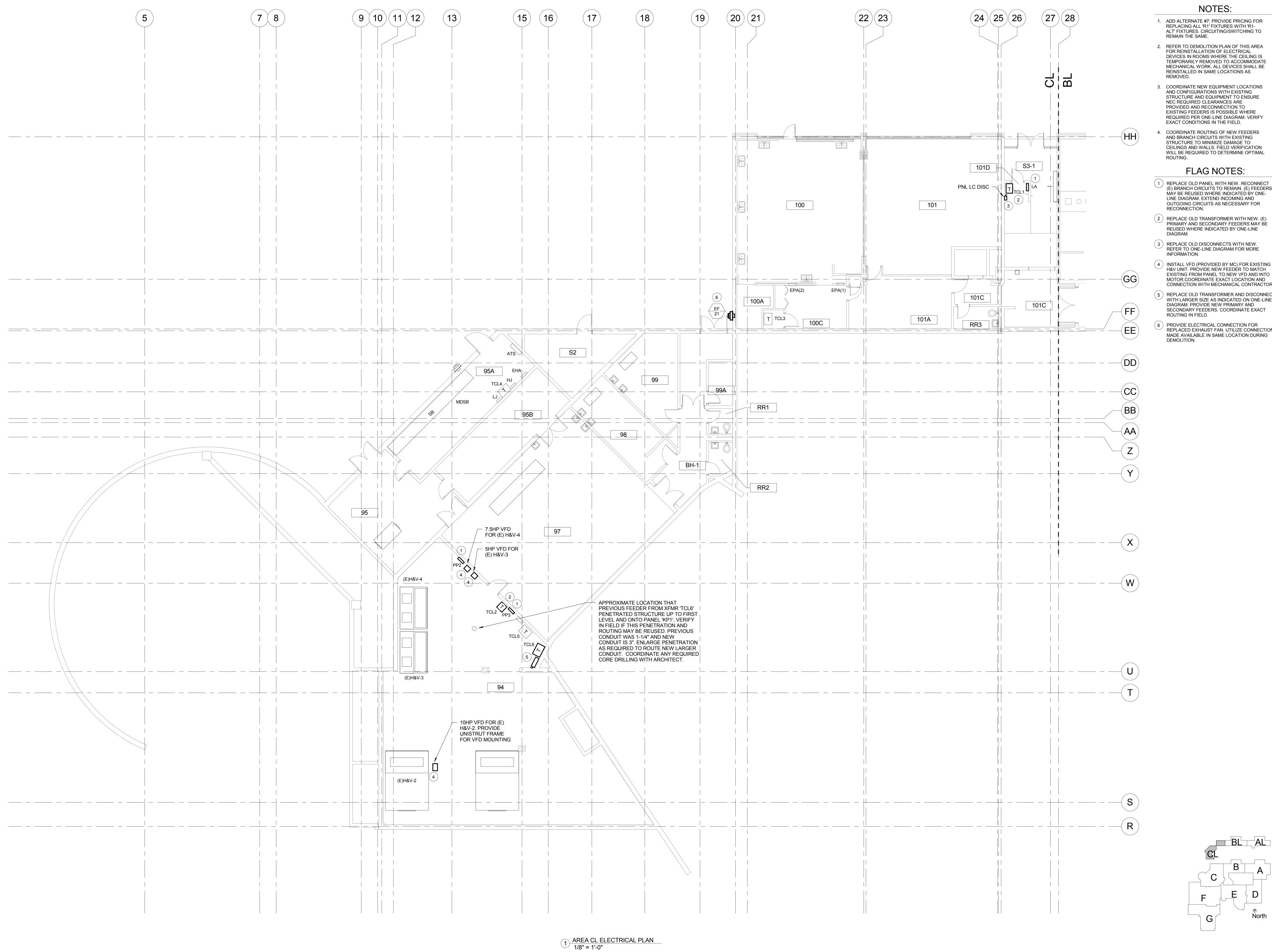


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E1.2



NOTES:

ALT' FIXTURES. CIRCUITING/SWITCHING TO

2. REFER TO DEMOLITION PLAN OF THIS AREA FOR REINSTALLATION OF ELECTRICAL DEVICES IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE

3. COORDINATE NEW EQUIPMENT LOCATIONS AND CONFIGURATIONS WITH EXISTING STRUCTURE AND EQUIPMENT TO ENSURE

4. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING

CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL

REPLACE OLD PANEL WITH NEW. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR

REUSED WHERE INDICATED BY ONE-LINE

REFER TO ONE-LINE DIAGRAM FOR MORE

(4) INSTALL VFD (PROVIDED BY MC) FOR EXISTING H&V UNIT. PROVIDE NEW FEEDER TO MATCH EXISTING FROM PANEL TO NEW VFD AND INTO MOTOR.COORDINATE EXACT LOCATION AND CONNECTION WITH MECHANICAL CONTRACTOR. REPLACE OLD TRANSFORMER AND DISCONNECT WITH LARGER SIZE AS INDICATED ON ONE-LINE DIAGRAM. PROVIDE NEW PRIMARY AND SECONDARY FEEDERS. COORDINATE EXACT

PROVIDE ELECTRICAL CONNECTION FOR REPLACED EXHAUST FAN. UTILIZE CONNECTION MADE AVAILABLE IN SAME LOCATION DURING

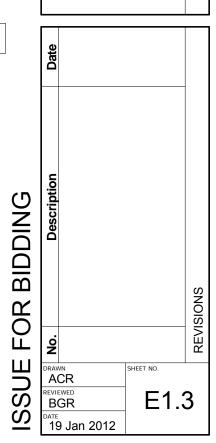


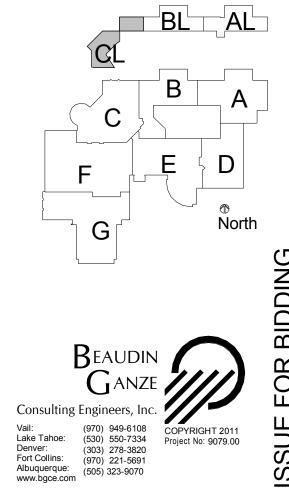
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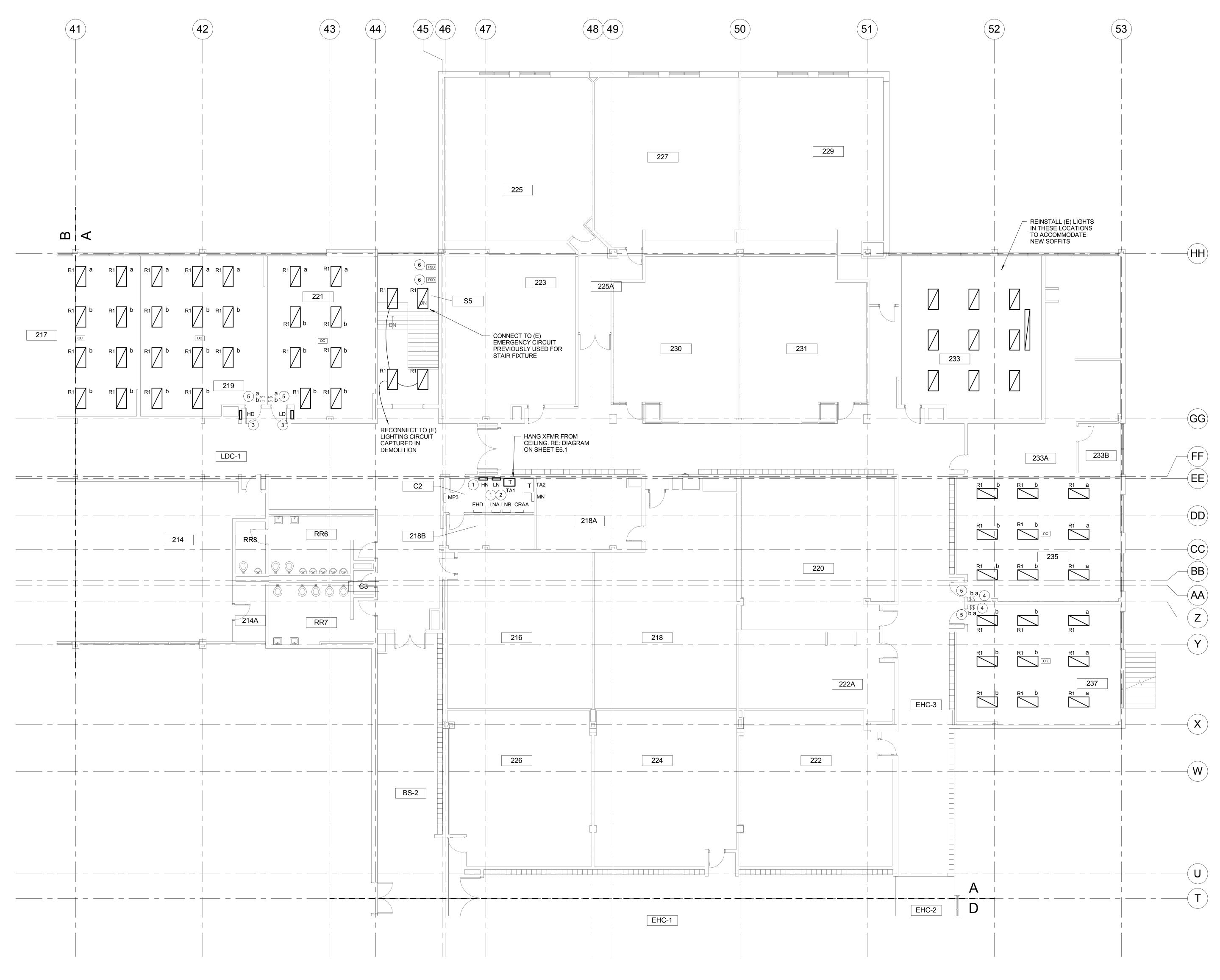


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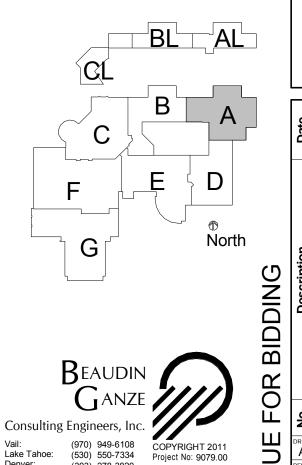


1 AREA A ELECTRICAL PLAN 1/8" = 1'-0"

- THE SAME.
- REINSTALLED IN SAME LOCATIONS AS REMOVED.
- THE FIELD.

ROUTING.

- (2) REPLACE OLD TRANSFORMER WITH NEW. MORE INFORMATION.
- WITHIN EXISTING WALL OPENING. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM.
- SINGLE GANG OPENING IN WALL. FISH DOWN
- 5 UTILIZE EXISTING LIGHTING CIRCUIT IN CLASSROOM FOR NEW FIXTURES.
- ABOVE STAIRWAY FOR ACTIVATION OF DAMPER.





NOTES:

1. ADD ALTERNATE #7: PROVIDE PRICING FOR REPLACING ALL 'R1' FIXTURES WITH 'R1-ALT' FIXTURES. CIRCUITING/SWITCHING TO REMAIN

2. REFER TO DEMOLITION PLAN OF THIS AREA FOR REINSTALLATION OF ELECTRICAL DEVICES IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE

3. COORDINATE NEW EQUIPMENT LOCATIONS AND CONFIGURATIONS WITH EXISTING STRUCTURE AND EQUIPMENT TO ENSURE NEC REQUIRED CLEARANCES ARE PROVIDED AND RECONNECTION TO EXISTING FEEDERS IS POSSIBLE WHERE REQUIRED PER ONE-LINE DIAGRAM. VERIFY EXACT CONDITIONS IN

4. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL

FLAG NOTES:

1 REPLACE OLD PANEL WITH NEW. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR RECONNECTION.

RECONNECT PRIMARY AND SECONDARY FEEDERS. REFER TO ONE-LINE DIAGRAM FOR

(3) REPLACE OLD PANEL RECESSED IN BLOCK WALL WITH NEW. NEW ENCLOSURE SHALL FIT

EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR RECONNECTION. (4) PROVIDE TWO SWITCHES TO FIT WITHIN (E)

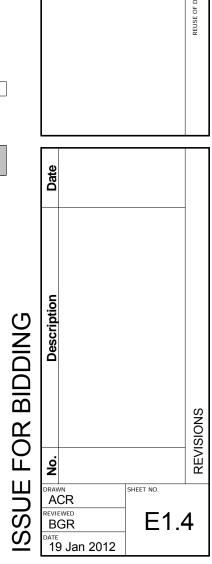
NEW WIRING AS REQUIRED FROM CEILING SPACE ABOVE UTILIZING EXISTING RACEWAY.

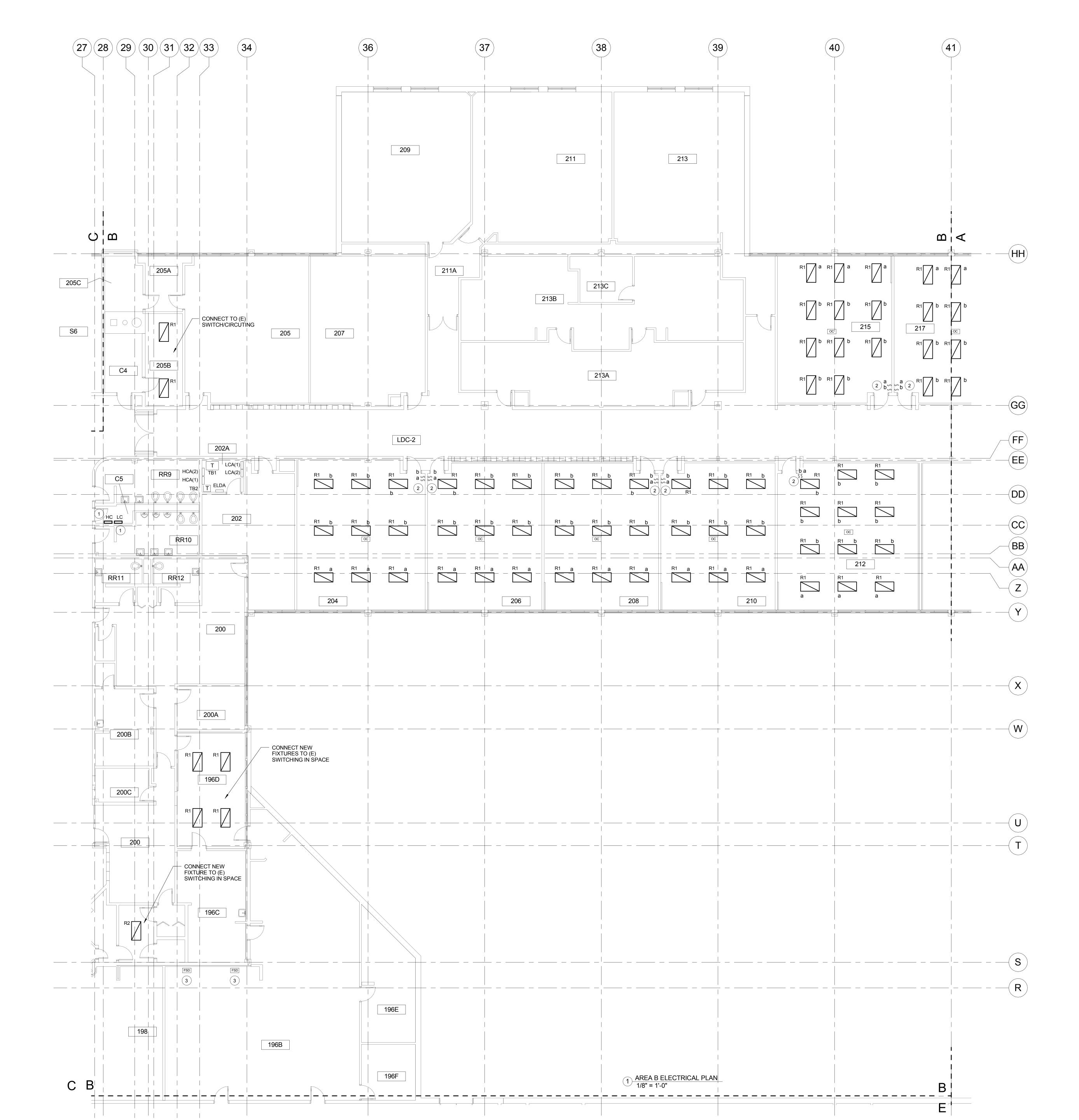
(6) PROVIDE 120V POWER TO FIRE/SMOKE DAMPER AND TIE INTO FIRE ALARM SYSTEM. CIRCUIT TO (E) SPARE 20/1 CIRCUIT BREAKER IN 'LNB'. TIE INTO (E) SMOKE DETECTOR



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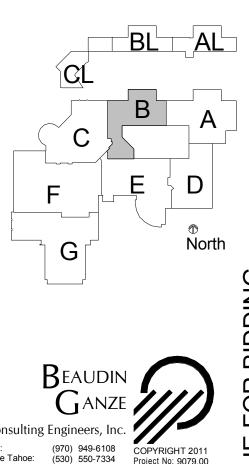


FIXTURES. CIRCUITING/SWITCHING TO REMAIN THE SAME. REINSTALLED IN SAME LOCATIONS AS REMOVED. AND CONFIGURATIONS WITH EXISTING FIELD.

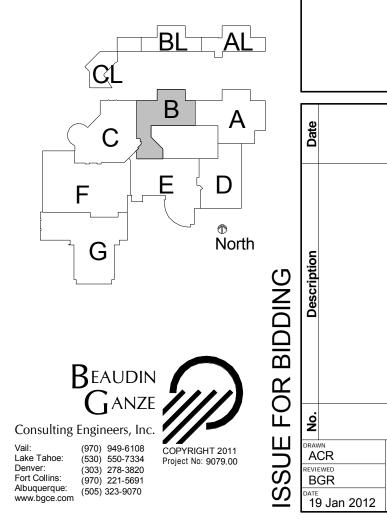
4. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL ROUTING.

(1) REPLACE OLD PANEL WITH NEW. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEÉDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR RECONNECTION. (2) UTILIZE EXISTING LIGHTING CIRCUIT IN

CLASSROOM FOR NEW FIXTURES. (3) PROVIDE 120V POWER TO FIRE/SMOKE DAMPER AND TIE INTO FIRE ALARM SYSTEM. CIRCUIT TO (E) SPARE 20/1 CIRCUIT BREAKER IN 'LCA(2)'. PROVIDE DUCT DETECTOR FOR ACTIVATION OF DAMPER.



E1.5



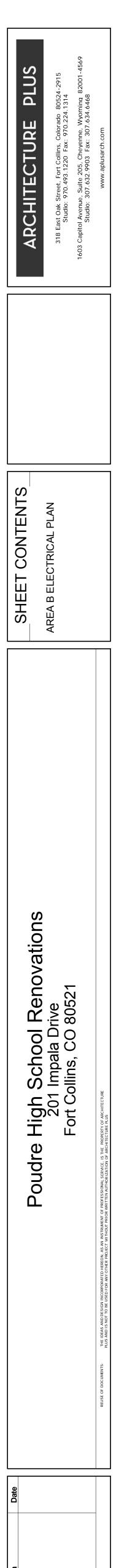
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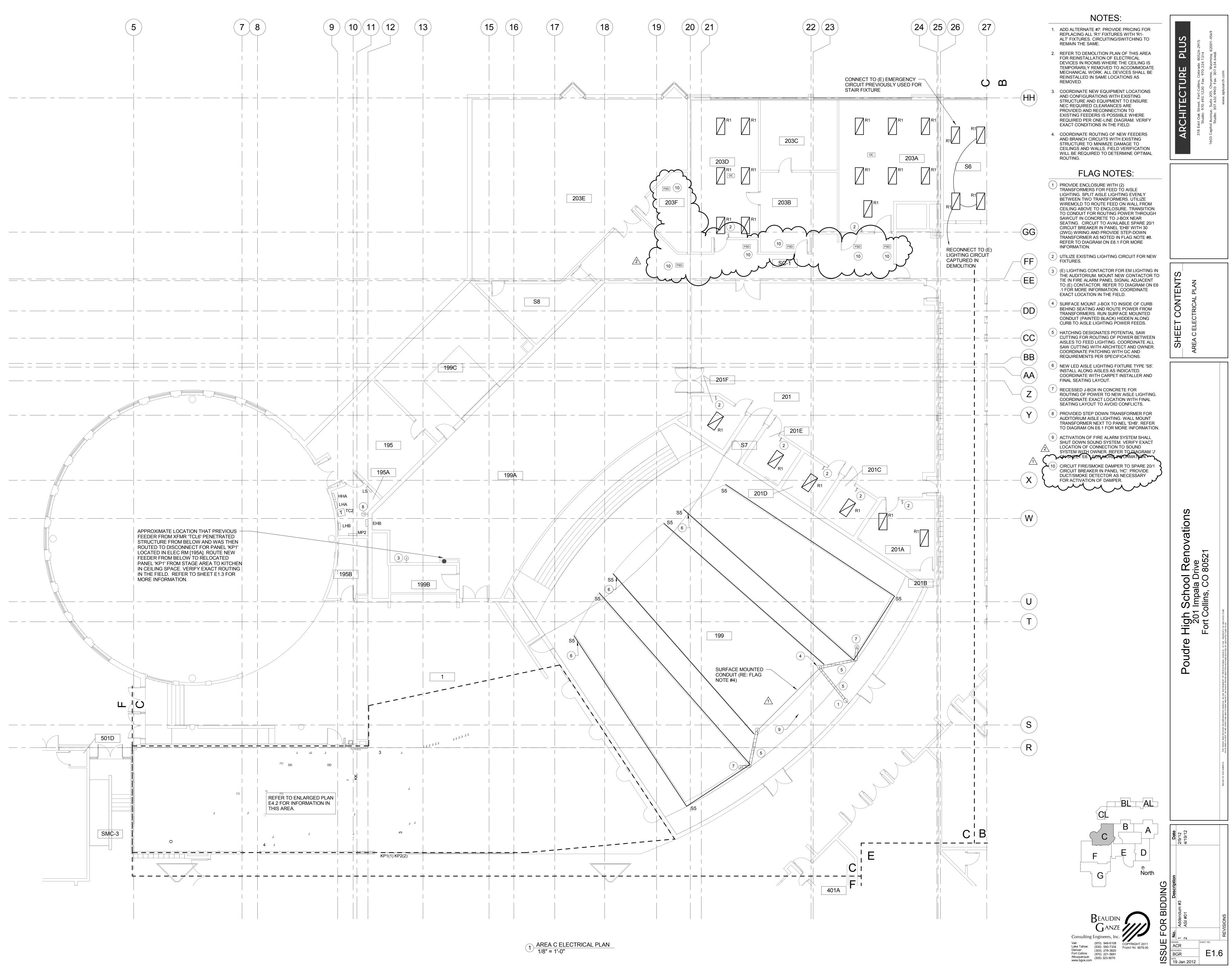
ADD ALTERNATE #7: PROVIDE PRICING FOR REPLACING ALL 'R1' FIXTURES WITH 'R1-ALT'

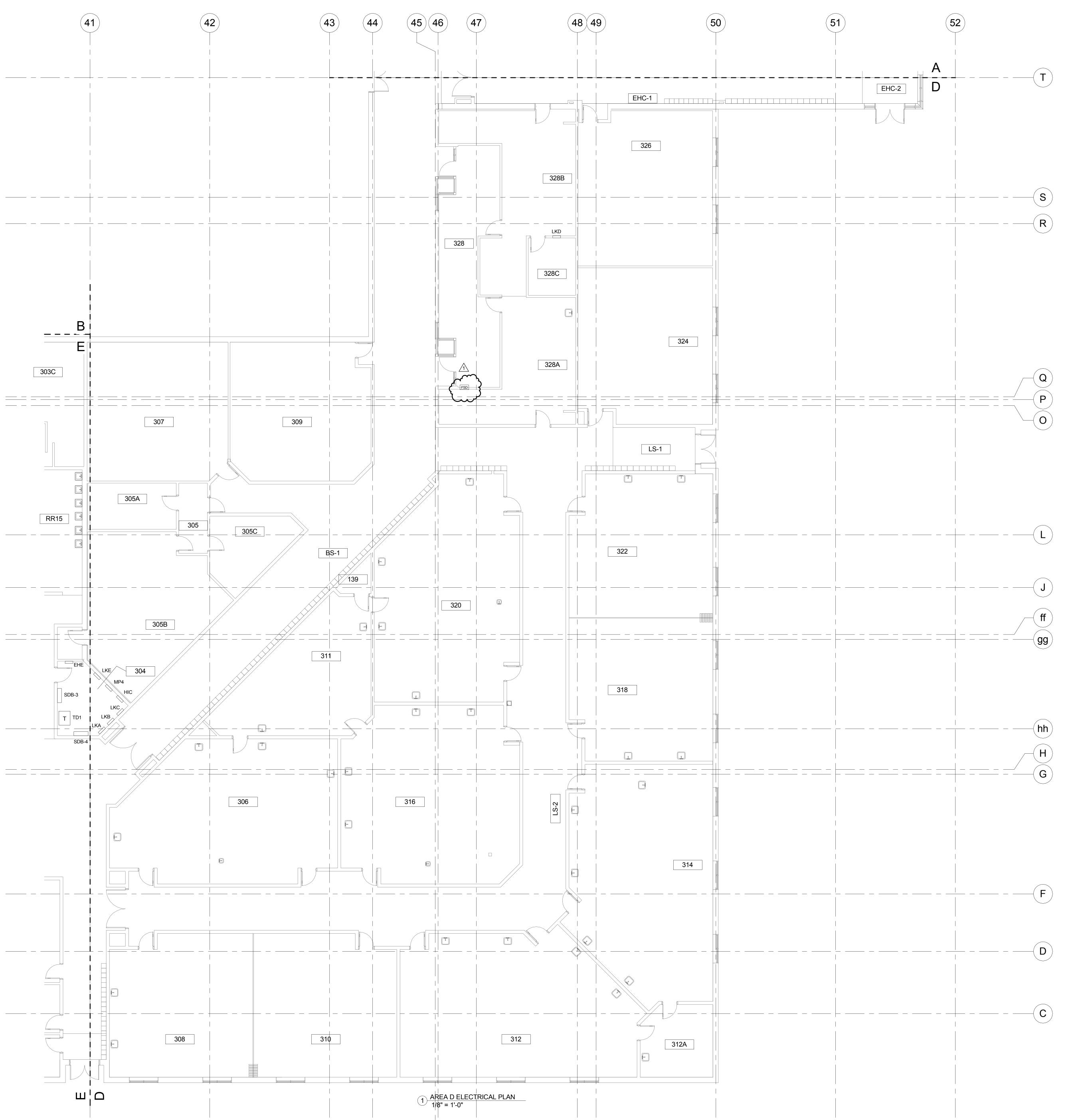
2. REFER TO DEMOLITION PLAN OF THIS AREA FOR REINSTALLATION OF ELECTRICAL DEVICES IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE

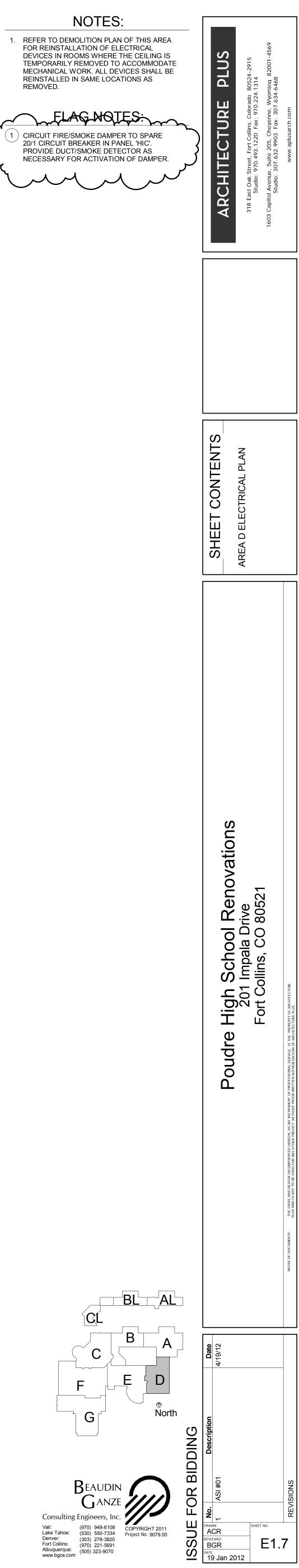
3. COORDINATE NEW EQUIPMENT LOCATIONS STRUCTURE AND EQUIPMENT TO ENSURE NEC REQUIRED CLEARANCES ARE PROVIDED AND RECONNECTION TO EXISTING FEEDERS IS POSSIBLE WHERE REQUIRED PER ONE-LINE DIAGRAM. VERIFY EXACT CONDITIONS IN THE

FLAG NOTES:

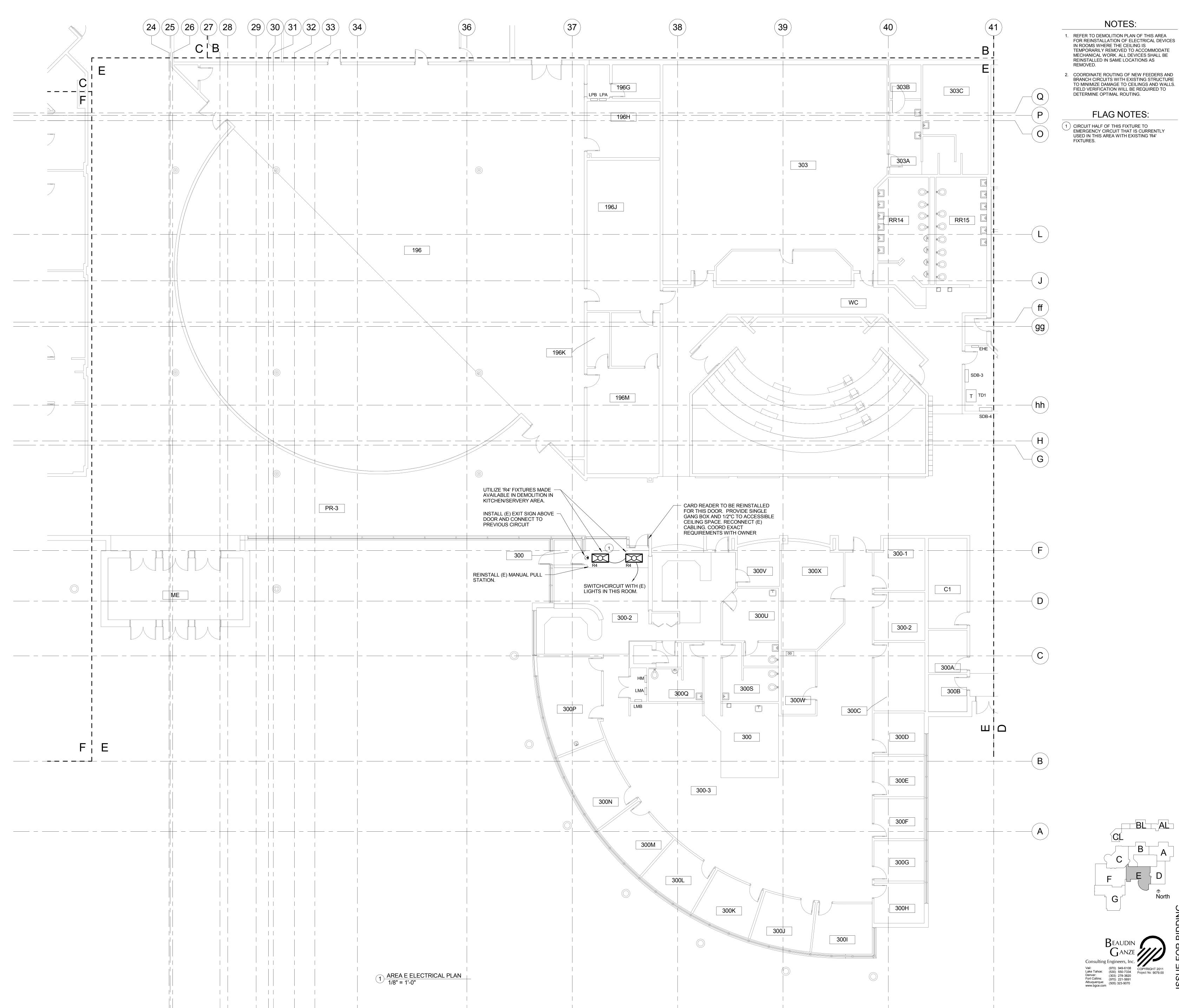








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IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE REINSTALLED IN SAME LOCATIONS AS

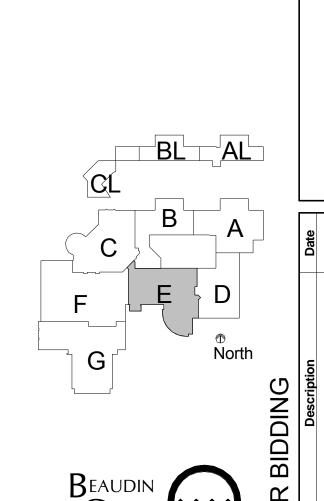
2. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL ROUTING.

FLAG NOTES:





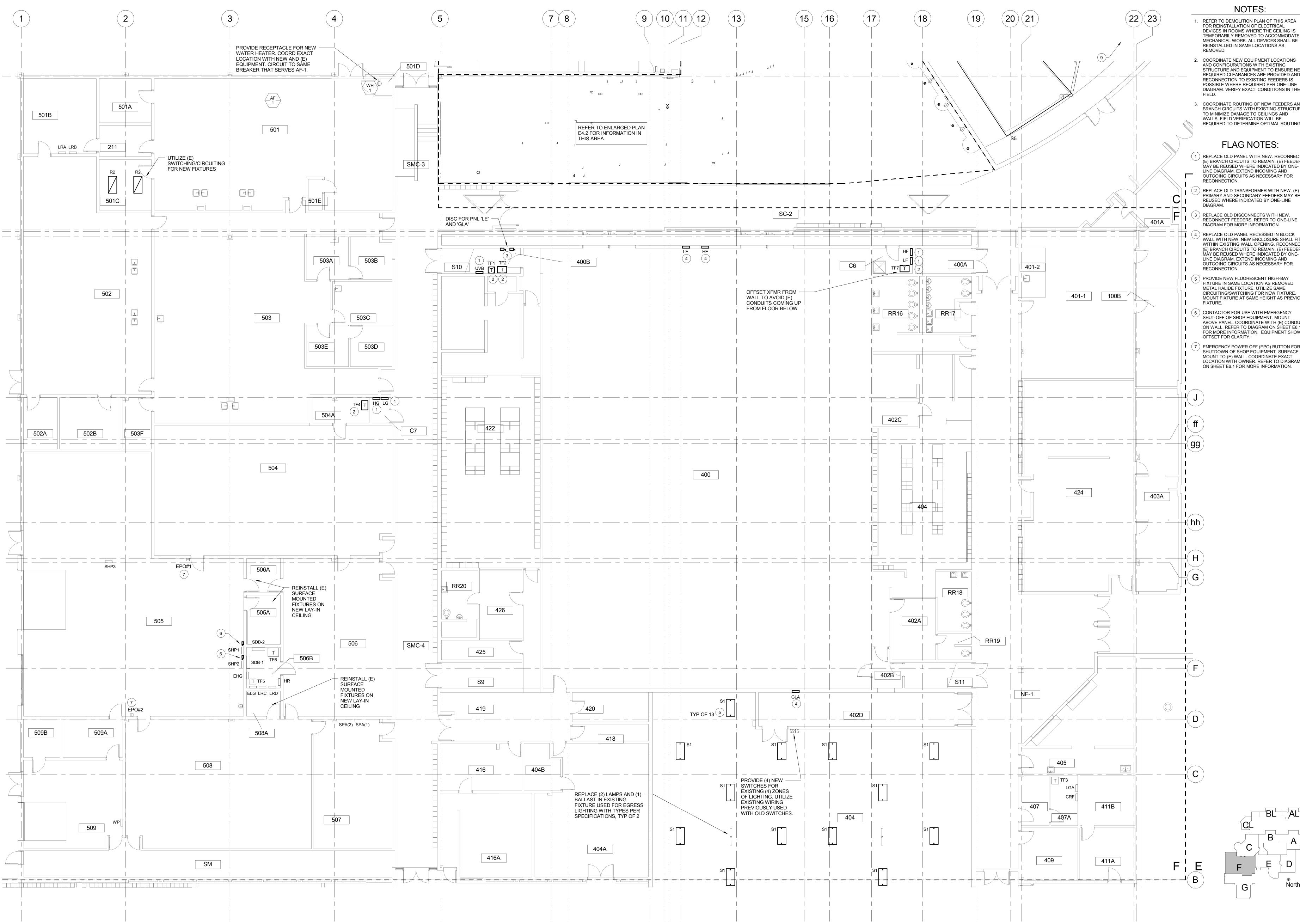




DRAWN ACR REVIEWED BGR DATE 19 Jan 2012

SHEET NO.

E1.8



1 AREA F ELECTRICAL PLAN 1/8" = 1'-0"

Consulting Engineers, In
 Vail:
 (970)
 949-6108

 Lake Tahoe:
 (530)
 550-7334

 Denver:
 (303)
 278-3820

 Fort Collins:
 (970)
 221-5691

 Albuquerque:
 (505)
 323-9070

 www.bgce.com
 (505)
 323-9070

NOTES:

DEVICES IN ROOMS WHERE THE CEILING IS TEMPORARILY REMOVED TO ACCOMMODATE MECHANICAL WORK. ALL DEVICES SHALL BE REINSTALLED IN SAME LOCATIONS AS

AND CONFIGURATIONS WITH EXISTING STRUCTURE AND EQUIPMENT TO ENSURE NEC REQUIRED CLEARANCES ARE PROVIDED AND RECONNECTION TO EXISTING FEEDERS IS POSSIBLE WHERE REQUIRED PER ONE-LINE DIAGRAM. VERIFY EXACT CONDITIONS IN THE

3. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND REQUIRED TO DETERMINE OPTIMAL ROUTING.

FLAG NOTES:

1 REPLACE OLD PANEL WITH NEW. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEEDERS MÁY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR

REPLACE OLD TRANSFORMER WITH NEW. (E) PRIMARY AND SECONDARY FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE

RECONNECT FEEDERS. REFER TO ONE-LINE

REPLACE OLD PANEL RECESSED IN BLOCK WALL WITH NEW. NEW ENCLOSURE SHALL FIT WITHIN EXISTING WALL OPENING. RECONNECT (E) BRANCH CIRCUITS TO REMAIN. (E) FEEDERS MAY BE REUSED WHERE INDICATED BY ONE-LINE DIAGRAM. EXTEND INCOMING AND OUTGOING CIRCUITS AS NECESSARY FOR

PROVIDE NEW FLUORESCENT HIGH-BAY FIXTURE IN SAME LOCATION AS REMOVED METAL HALIDE FIXTURE. UTILIZE SAME CIRCUITING/SWITCHING FOR NEW FIXTURE. MOUNT FIXTURE AT SAME HEIGHT AS PREVIOUS

SHUT-OFF OF SHOP EQUIPMENT. MOUNT ABOVE PANEL. COORDINATE WITH (E) CONDUIT ON WALL. REFER TO DIAGRAM ON SHEET E6.1 FOR MORE INFORMATION. EQUIPMENT SHOWN

EMERGENCY POWER OFF (EPO) BUTTON FOR SHUTDOWN OF SHOP EQUIPMENT. SURFACE MOUNT TO (E) WALL. COORDINATE EXACT LOCATION WITH OWNER. REFER TO DIAGRAM ON SHEET E6.1 FOR MORE INFORMATION.

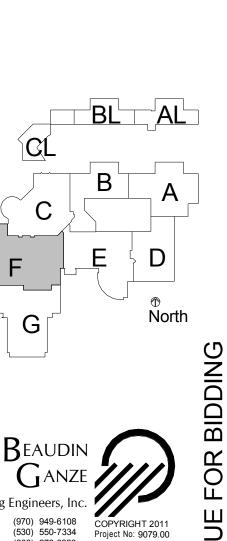


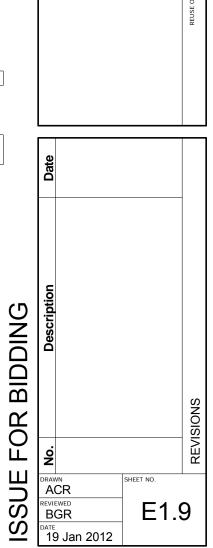
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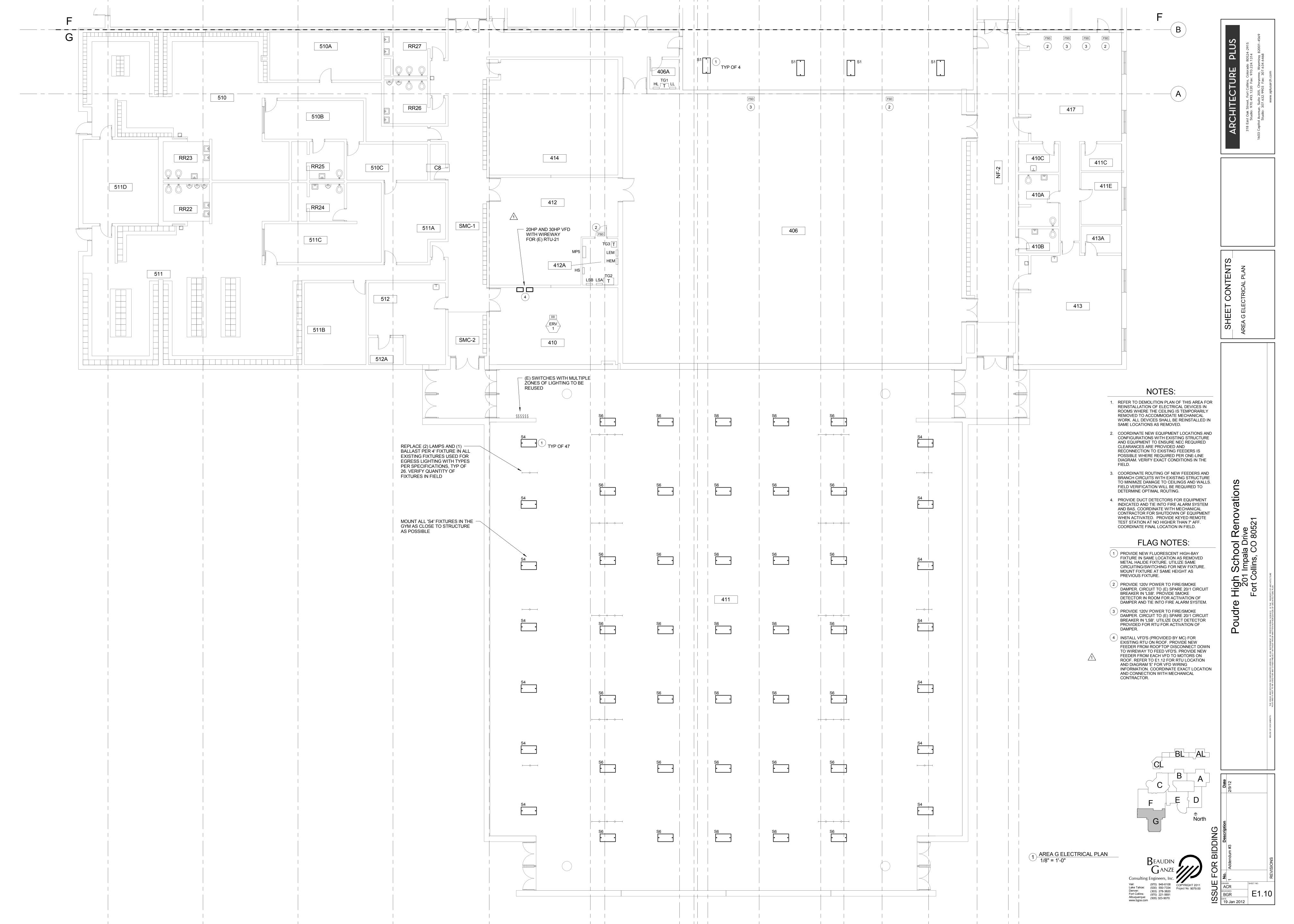


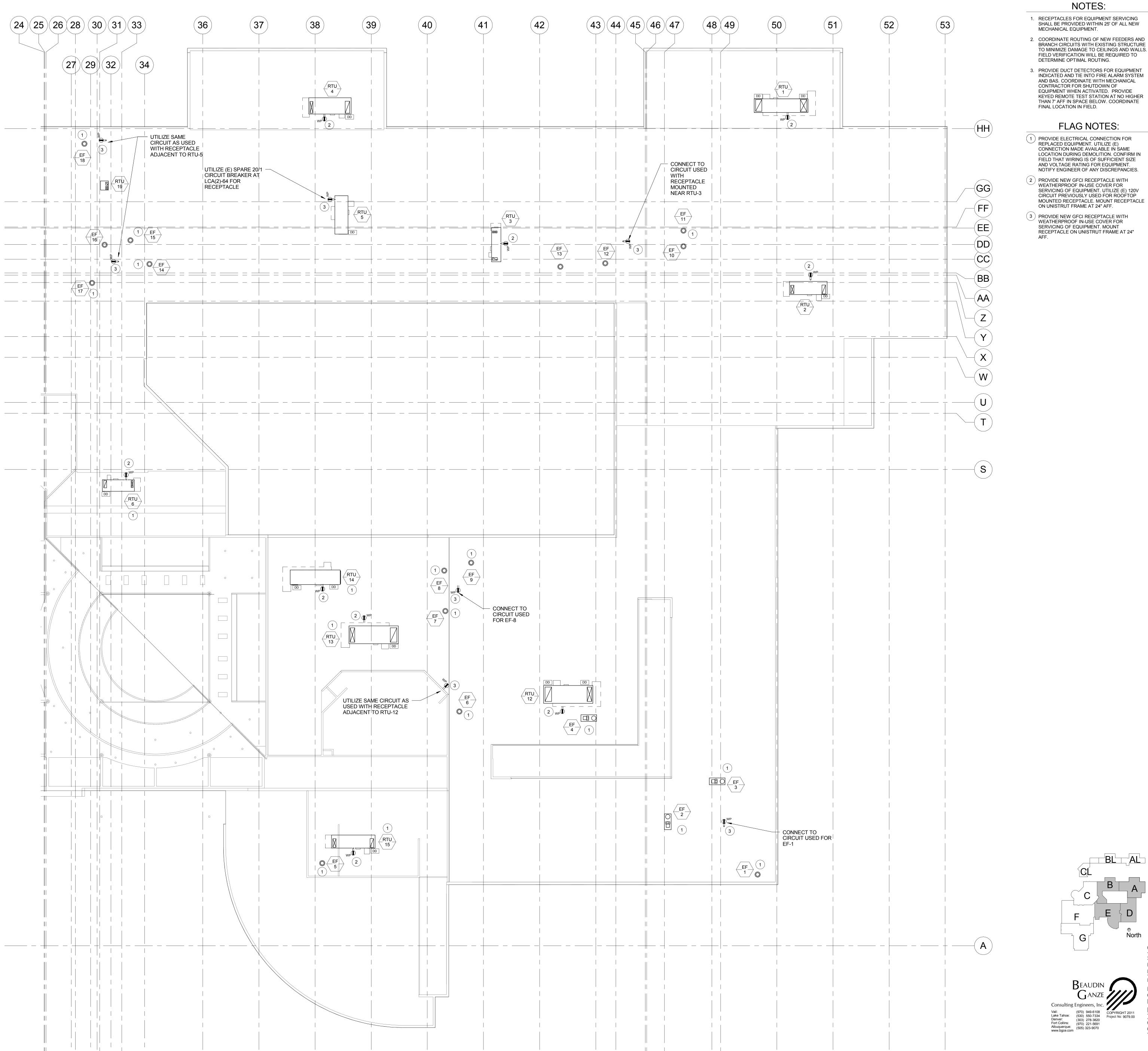
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NOTES:

1. RECEPTACLES FOR EQUIPMENT SERVICING SHALL BE PROVIDED WITHIN 25' OF ALL NEW

BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION WILL BE REQUIRED TO DETERMINE OPTIMAL ROUTING.

3. PROVIDE DUCT DETECTORS FOR EQUIPMENT INDICATED AND TIE INTO FIRE ALARM SYSTEM AND BAS. COORDINATE WITH MECHANICAL CONTRACTOR FOR SHUTDOWN OF EQUIPMENT WHEN ACTIVATED. PROVIDE KEYED REMOTE TEST STATION AT NO HIGHER THAN 7' AFF IN SPACE BELOW. COORDINATE

FLAG NOTES:

1 PROVIDE ELECTRICAL CONNECTION FOR REPLACED EQUIPMENT. UTILIZE (E) CONNECTION MADE AVAILABLE IN SAME LOCATION DURING DEMOLITION. CONFIRM IN FIELD THAT WIRING IS OF SUFFICIENT SIZE AND VOLTAGE RATING FOR EQUIPMENT. NOTIFY ENGINEER OF ANY DISCREPANCIES.

2 PROVIDE NEW GFCI RECEPTACLE WITH WEATHERPROOF IN-USE COVER FOR SERVICING OF EQUIPMENT. UTILIZE (E) 120V CIRCUIT PREVIOUSLY USED FOR ROOFTOP MOUNTED RECEPTACLE. MOUNT RECEPTACLE ON UNISTRUT FRAME AT 24" AFF.

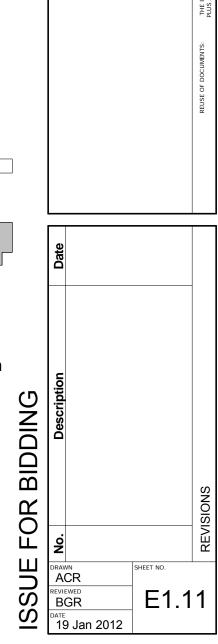
> WEATHERPROOF IN-USE COVER FOR SERVICING OF EQUIPMENT. MOUNT RECEPTACLE ON UNISTRUT FRAME AT 24"

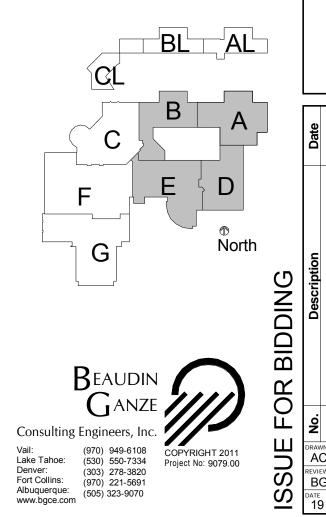


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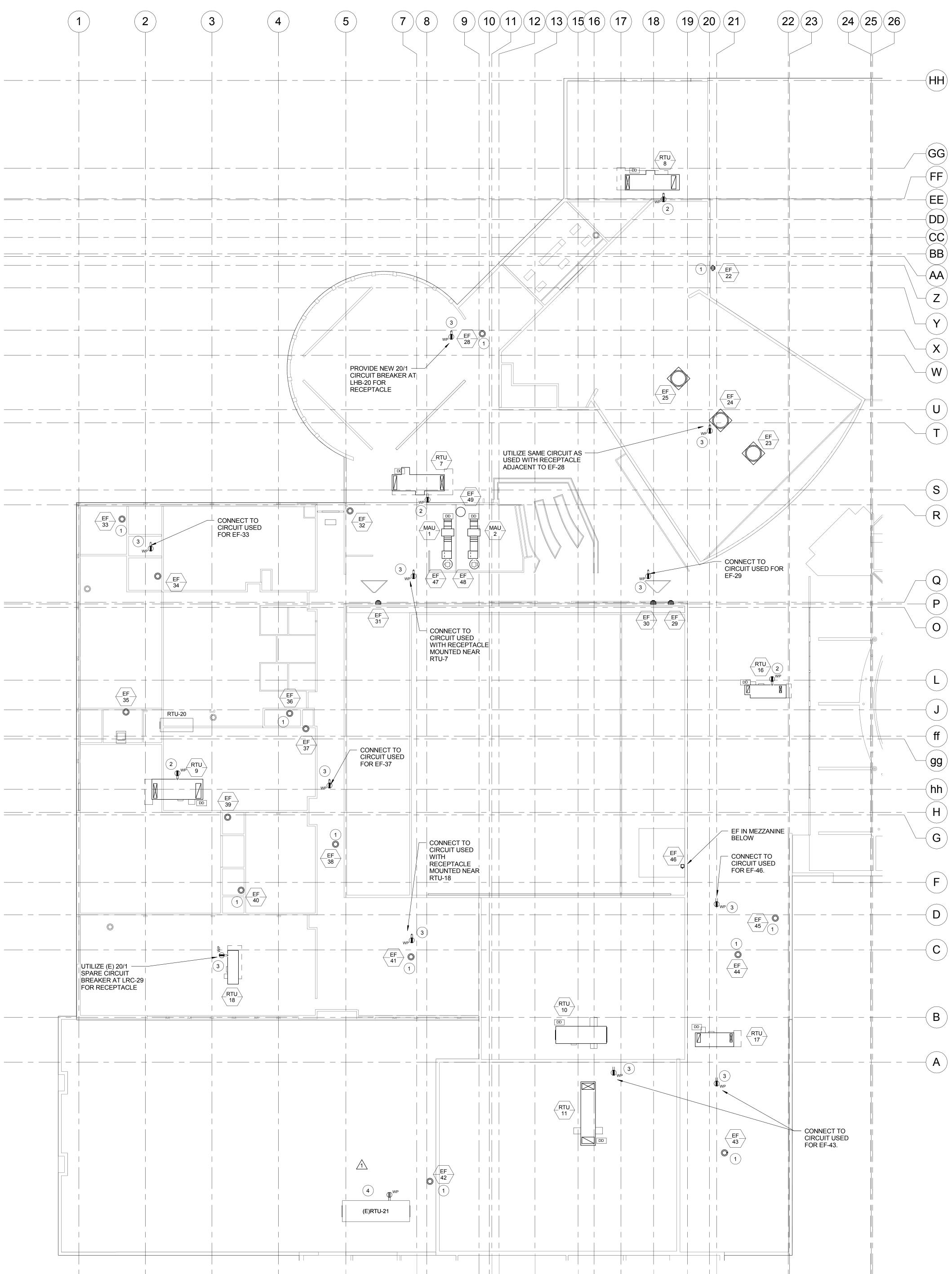
High School Renovations 201 Impala Drive Fort Collins, CO 80521

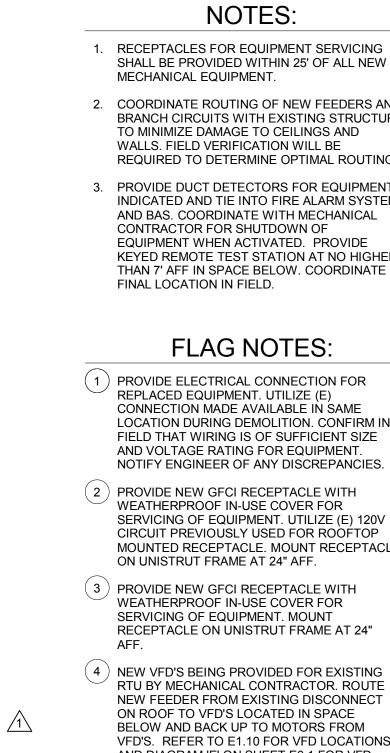
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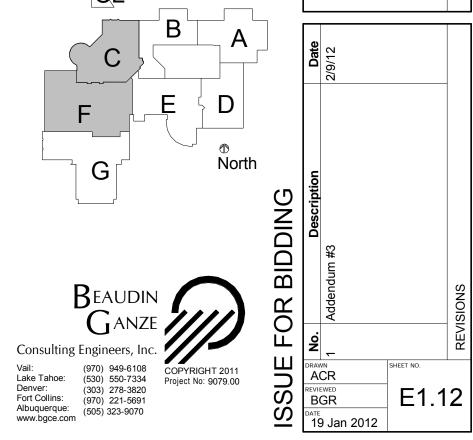




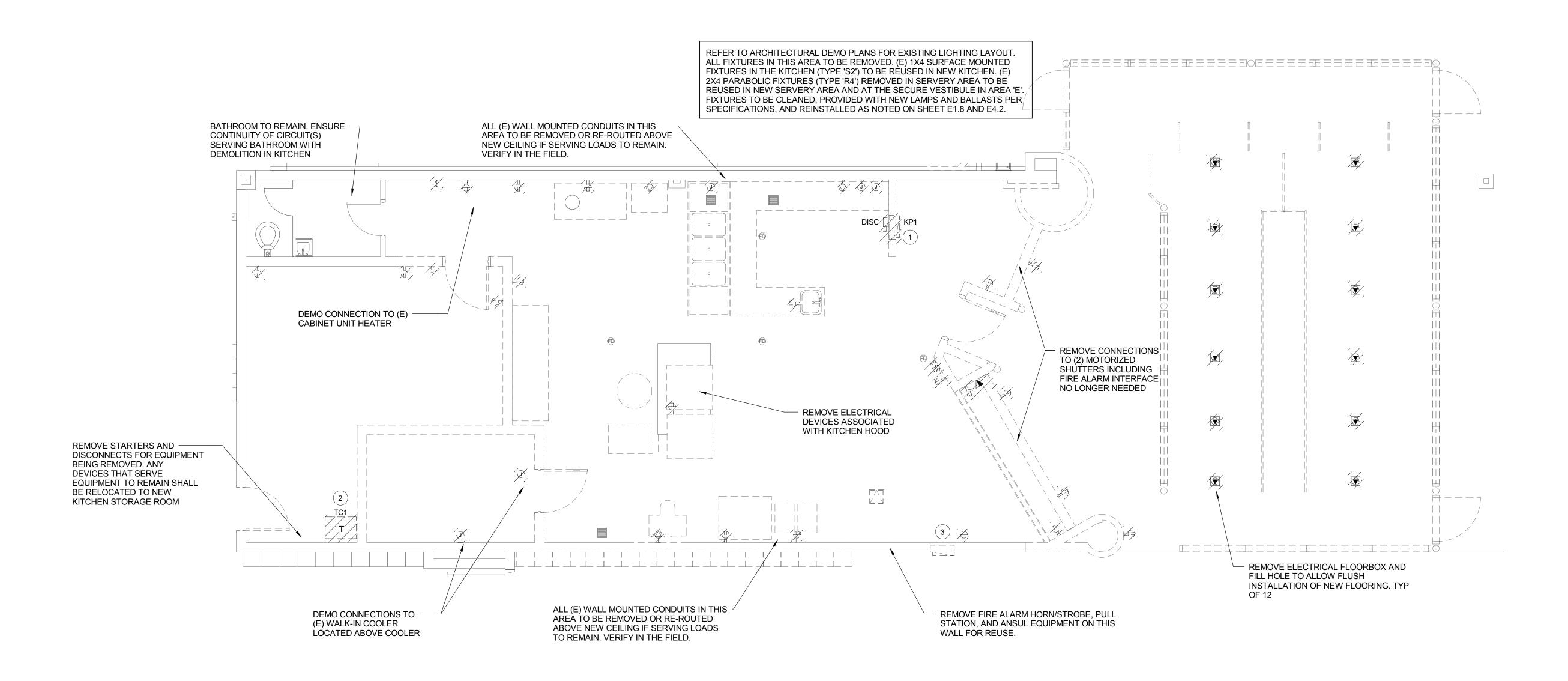
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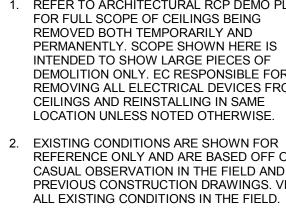


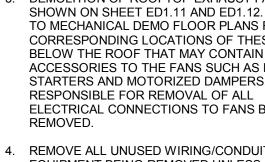
NOTES: 1. RECEPTACLES FOR EQUIPMENT SERVICING SHALL BE PROVIDED WITHIN 25' OF ALL NEW PLU 2. COORDINATE ROUTING OF NEW FEEDERS AND BRANCH CIRCUITS WITH EXISTING STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND REQUIRED TO DETERMINE OPTIMAL ROUTING. α 3. PROVIDE DUCT DETECTORS FOR EQUIPMENT 2 INDICATED AND TIE INTO FIRE ALARM SYSTEM AND BAS. COORDINATE WITH MECHANICAL EQUIPMENT WHEN ACTIVATED. PROVIDE CHITE KEYED REMOTE TEST STATION AT NO HIGHER THAN 7' AFF IN SPACE BELOW. COORDINATE α FLAG NOTES: CONNECTION MADE AVAILABLE IN SAME LOCATION DURING DEMOLITION. CONFIRM IN FIELD THAT WIRING IS OF SUFFICIENT SIZE AND VOLTAGE RATING FOR EQUIPMENT. NOTIFY ENGINEER OF ANY DISCREPANCIES. SERVICING OF EQUIPMENT. UTILIZE (E) 120V CIRCUIT PREVIOUSLY USED FOR ROOFTOP MOUNTED RECEPTACLE. MOUNT RECEPTACLE RECEPTACLE ON UNISTRUT FRAME AT 24" RTU BY MECHANICAL CONTRACTOR. ROUTE NEW FEEDER FROM EXISTING DISCONNECT ON ROOF TO VFD'S LOCATED IN SPACE BELOW AND BACK UP TO MOTORS FROM VFD'S. REFER TO E1.10 FOR VFD LOCATIONS AND DIAGRAM 'E' ON SHEET E6.1 FOR VFD S WIRING INFORMATION. Ζ ш \mathbf{O} ш ш С S High School Renovation 201 Impala Drive Fort Collins, CO 80521 oudre Ω











4. REMOVE ALL UNUSED WIRING/CONDUIT FROM EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED WITH A PULLSTRING.

- AS MUCH AS IS PRACTICAL. (3) REMOVE EXISTING PANEL IN BLOCK WALL. CIRCUITS TO REMAIN SHALL BE REFED FROM



NOTES:

1. REFER TO ARCHITECTURAL RCP DEMO PLAN FOR FULL SCOPE OF CEILINGS BEING PERMANENTLY. SCOPE SHOWN HERE IS INTENDED TO SHOW LARGE PIECES OF DEMOLITION ONLY. EC RESPONSIBLE FOR REMOVING ALL ELECTRICAL DEVICES FROM

REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.

3. DEMOLITION OF ROOFTOP EXHAUST FANS ARE SHOWN ON SHEET ED1.11 AND ED1.12. REFER TO MECHANICAL DEMO FLOOR PLANS FOR THE CORRESPONDING LOCATIONS OF THESE FANS BELOW THE ROOF THAT MAY CONTAIN ACCESSORIES TO THE FANS SUCH AS MOTOR STARTERS AND MOTORIZED DAMPERS. EC ELECTRICAL CONNECTIONS TO FANS BEING

FLAG NOTES:

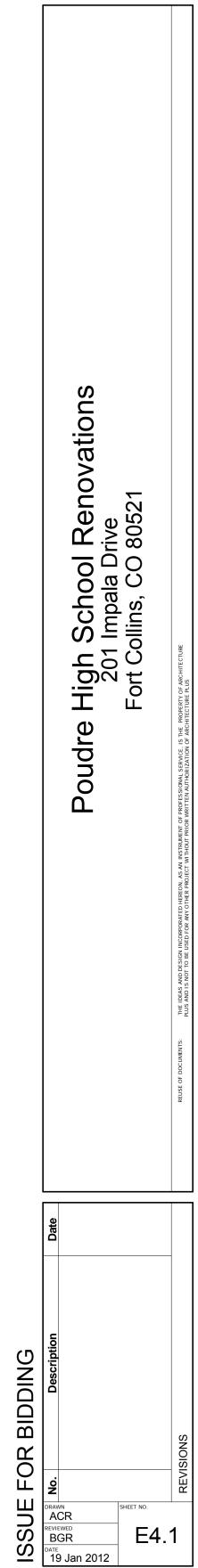
(1) EXISTING PANEL TO BE REMOVED AND REPLACED IN DIFFERENT LOCATION. REMOVE FEEDER FROM WALL TO ALLOW DEMO OF WALL. EXISTING CIRCUITS TO REMAIN SHALL BE REFED FROM NEW PANEL.

2 EXISTING TRANSFORMER TO BE REMOVED. REMOVE PRIMARY AND SECONDARY FEEDERS

NEW PANEL. HOLE LEFT FROM REMOVAL OF PANEL SHALL BE FILLED IN TO MATCH EXISTING WALL. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.

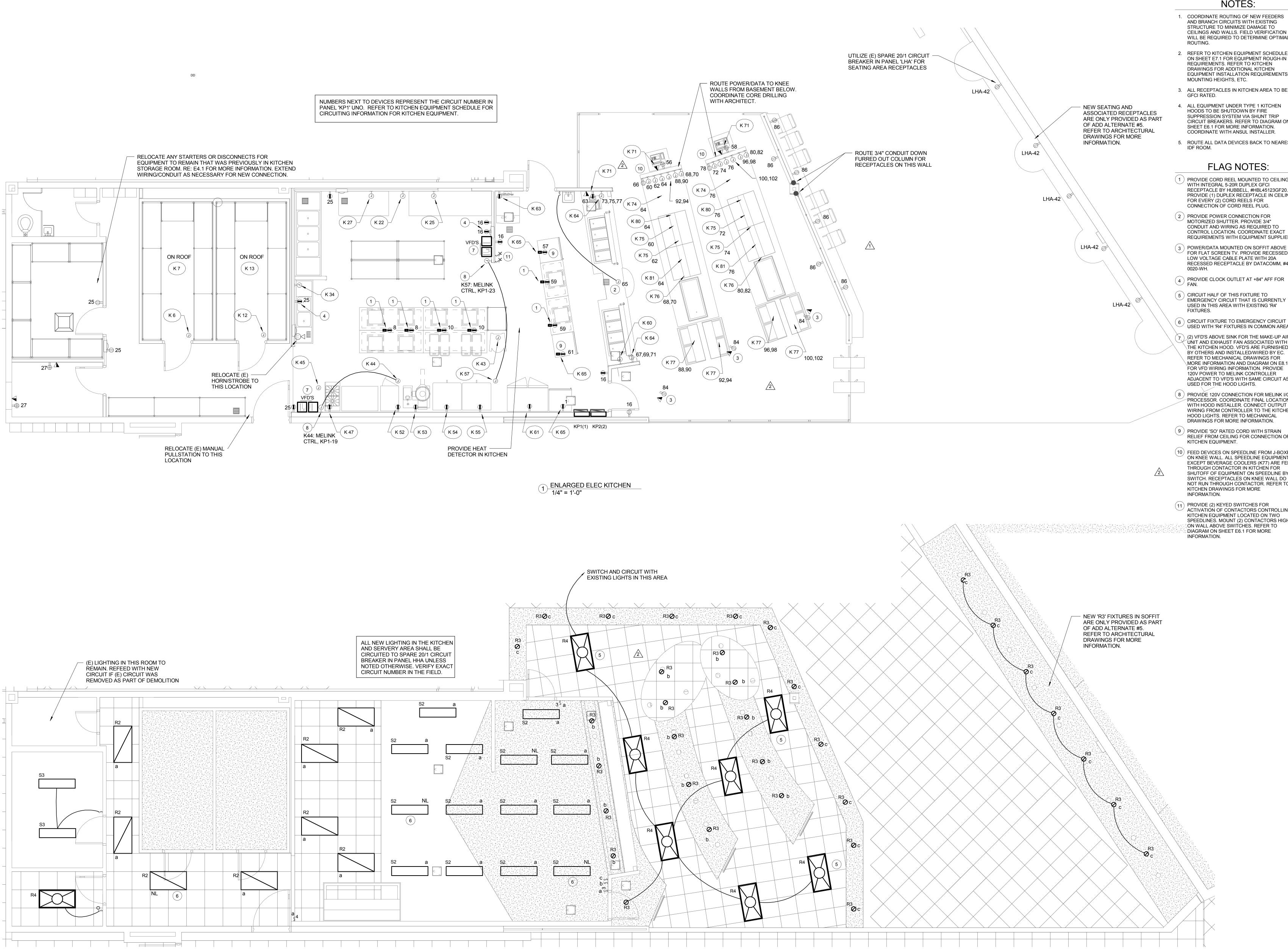


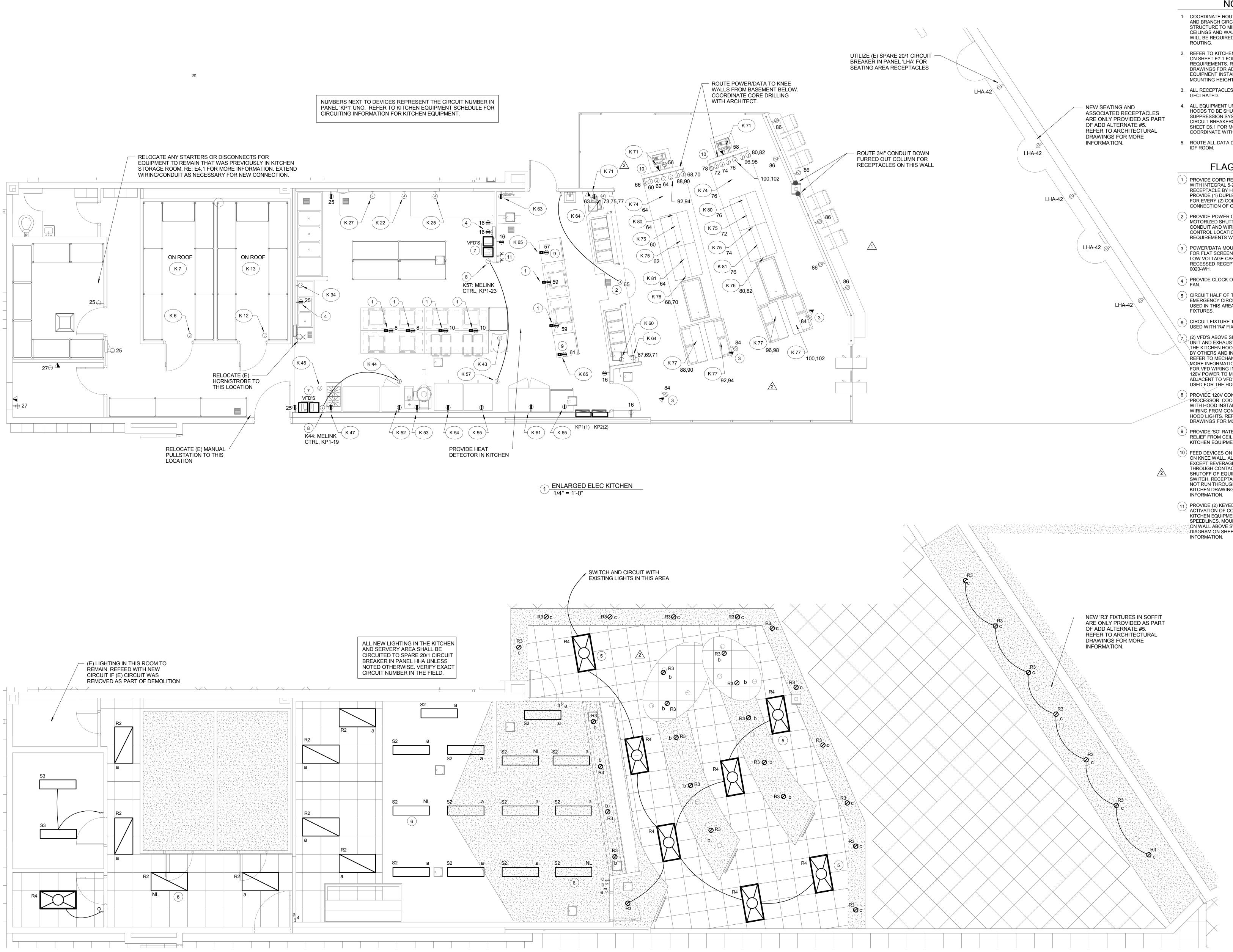
S Z ш \mathbf{O} SHEET ELECTI



BEAUDIN







2 ENLARGED RCP KITCHEN 1/4" = 1'-0"



NOTES: STRUCTURE TO MINIMIZE DAMAGE TO CEILINGS AND WALLS. FIELD VERIFICATION PLUS WILL BE REQUIRED TO DETERMINE OPTIMAL 2. REFER TO KITCHEN EQUIPMENT SCHEDULE ON SHEET E7.1 FOR EQUIPMENT ROUGH-IN REQUIREMENTS. REFER TO KITCHEN TURI DRAWINGS FOR ADDITIONAL KITCHEN EQUIPMENT INSTALLATION REQUIREMENTS, 3. ALL RECEPTACLES IN KITCHEN AREA TO BE CHITE(SUPPRESSION SYSTEM VIA SHUNT TRIP CIRCUIT BREAKERS. REFER TO DIAGRAM ON α SHEET E6.1 FOR MORE INFORMATION. COORDINATE WITH ANSUL INSTALLER. 5. ROUTE ALL DATA DEVICES BACK TO NEAREST FLAG NOTES: 1 PROVIDE CORD REEL MOUNTED TO CEILING WITH INTEGRAL 5-20R DUPLEX GFCI RECEPTACLE BY HUBBELL, #HBL45123GF20. PROVIDE (1) DUPLEX RECEPTACLE IN CEILING CONDUIT AND WIRING AS REQUIRED TO CONTROL LOCATION. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUPPLIED. (3) POWER/DATA MOUNTED ON SOFFIT ABOVE FOR FLAT SCREEN TV. PROVIDE RECESSED LOW VOLTAGE CABLE PLATE WITH 20A RECESSED RECEPTACLE BY DATACOMM, #45-. И Ш EMERGENCY CIRCUIT THAT IS CURRENTLY USED IN THIS AREA WITH EXISTING 'R4' 6 CIRCUIT FIXTURE TO EMERGENCY CIRCUIT USED WITH 'R4' FIXTURES IN COMMON AREA. (7) (2) VFD'S ABOVE SINK FOR THE MAKE-UP AIR HEET ÚNIT AND EXHAUST FAN ASSOCIATED WITH THE KITCHEN HOOD. VFD'S ARE FURNISHED BY OTHERS AND INSTALLED/WIRED BY EC. REFER TO MECHANICAL DRAWINGS FOR ШA $\overline{\mathbf{0}}$ MORE INFORMATION AND DIAGRAM ON E8.1 FOR VFD WIRING INFORMATION. PROVIDE ᆈᆋ 120V POWER TO MELINK CONTROLLER ADJACENT TO VFD'S WITH SAME CIRCUIT AS USED FOR THE HOOD LIGHTS. (8) PROVIDE 120V CONNECTION FOR MELINK I/O PROCESSOR. COORDINATE FINAL LOCATION WITH HOOD INSTALLER. CONNECT OUTPUT WIRING FROM CONTROLLER TO THE KITCHEN HOOD LIGHTS. REFER TO MECHANICAL RELIEF FROM CEILING FOR CONNECTION OF 10 FEED DEVICES ON SPEEDLINE FROM J-BOXES ON KNEE WALL. ALL SPEEDLINE EQUIPMENT EXCEPT BEVERAGE COOLERS (K77) ARE FED THROUGH CONTACTOR IN KITCHEN FOR SHUTOFF OF EQUIPMENT ON SPEEDLINE BY SWITCH. RECEPTACLES ON KNEE WALL DO NOT RUN THROUGH CONTACTOR. REFER TO KITCHEN DRAWINGS FOR MORE PROVIDE (2) KEYED SWITCHES FOR ACTIVATION OF CONTACTORS CONTROLLING KITCHEN EQUIPMENT LOCATED ON TWO SPEEDLINES. MOUNT (2) CONTACTORS HIGH ON WALL ABOVE SWITCHES. REFER TO S ation: High School Renova 201 Impala Drive Fort Collins, CO 80521 Ð oudre Δ 12 12 **M** Beaudin -//// GANZE H ACR REVIEWED BGR DATE 19 Jan 2012

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E4.2

PANEL	MOUNT	VOLT /	MIN BUS	MIN AIC			CIRCUIT BREAKER	S		
TAG	MOUNT	PHASE	RATING	RATING	MAIN	1-POLE	2-POLE	3-POLE	ENCLOSURE SIZE	SPECIFIC NOTE
EM	SURFACE	208/3	100	5,000	30/3 MB	12-20A	-	-	18 SPACES	(2)
GLA	RECESSED	208/3	100	5,000	MLO	23-20A	-	1-60A	30 SPACES	(1)
HA	RECESSED	480/3	100	14,000	MLO	17-20A	-	1-50A, 1-15A	30 SPACES	(1)
HB	SURFACE	480/3	100	10,000	MLO	14-20A	-	1-15A, 1-40A	30 SPACES	
HC	SURFACE	480/3	100	10,000	MLO	18-20A	-	1-15A	30 SPACES	
HD	RECESSED	480/3	100	10,000	MLO	21-20A	-	3-15A	30 SPACES	(1)
HE	RECESSED	480/3	125	10,000	MLO	9-20A	-	1-50A, 6-15A	30 SPACES	(1)(5)
HF	SURFACE	480/3	100	10,000	MLO	17-20A	-	1-50A, 1-15A	30 SPACES	(5)
HG	SURFACE	480/3	125	10,000	MLO	22-20A	_	1-50A, 1-30A, 1-20A, 1-15A	42 SPACES	(5)
HN	SURFACE	480/3	100	5,000	MLO	10-20A	-	1-50A	18 SPACES	
LA	SURFACE	208/3	100	5,000	90/3	36-20A	1-50A, 1-100A	_	42 SPACES	
LB	SURFACE	208/3	100	5,000	MLO	36-20A	-	_	42 SPACES	
LC	SURFACE	208/3	100	5,000	MLO	38-20A	1-30A, 1-40A	_	42 SPACES	
LD	RECESSED	208/3	100	5,000	MLO	23-20A	2-20A	_	30 SPACES	(1)
LE	RECESSED	208/3	100	5,000	MLO	26-20A	-	_	30 SPACES	(1)
LF	SURFACE	208/3	225	5,000	100/3 MB	40-20A	1-50A	-	42 SPACES	
								1 154 1 204		
LG	SURFACE	208/3	100	5,000	100/3 MB	21-20A	1-20A, 1-30A	1-15A, 1-20A, 3-30A	42 SPACES	(6)
LN	SURFACE	208/3	100	5,000	100/3 MB	24-20A	1-20A, 1-40A	-	30 SPACES	
PP1			1		REFER TO N	EW PANEL SCHED	ULE PROVIDED			
								1-15A, 1-20A, 3-30A,		
PP2	SURFACE	480/3	175	10,000	MLO	-	-	2-40A	42 SPACES	(3)(4)
PP3	SURFACE	208/3	100	5,000	50/3 MB	10-20A	-	-	18 SPACES	
UVA	SURFACE	208/3	100	5,000	50/3 MB	6-20A	6-20A	-	30 SPACES	(3)
UVB	SURFACE	208/3	100	5,000	50/3 MB	8-20A	5-20A	_	30 SPACES	(3)
	L NOTES: CIRCUIT BREAD			SIZES SHON				_OADS TO REMAIN WI	TH SPARES FOR FUT	URFUSE
В.										
C.										
D.										
SPECIFIC	NOTES:									
(1)	PANEL TO BE F					NG				
(2)	PANEL TO HAV									VDECION
(3) (4)						JIT BREAKER PRO		ZES INDICATED DO NO	JI MAICH (E) SIZES E	BY DESIGN.
(4)	50/3 CB PROVI									
(6)						N'T NEED TO BE R	EPLACED. CONFIRM	SIZE USED IN THE FIE	LD.	

LOAD SUMMARY 12 MONTH PEAK DEMAND

818 A

1023 A

680 KW

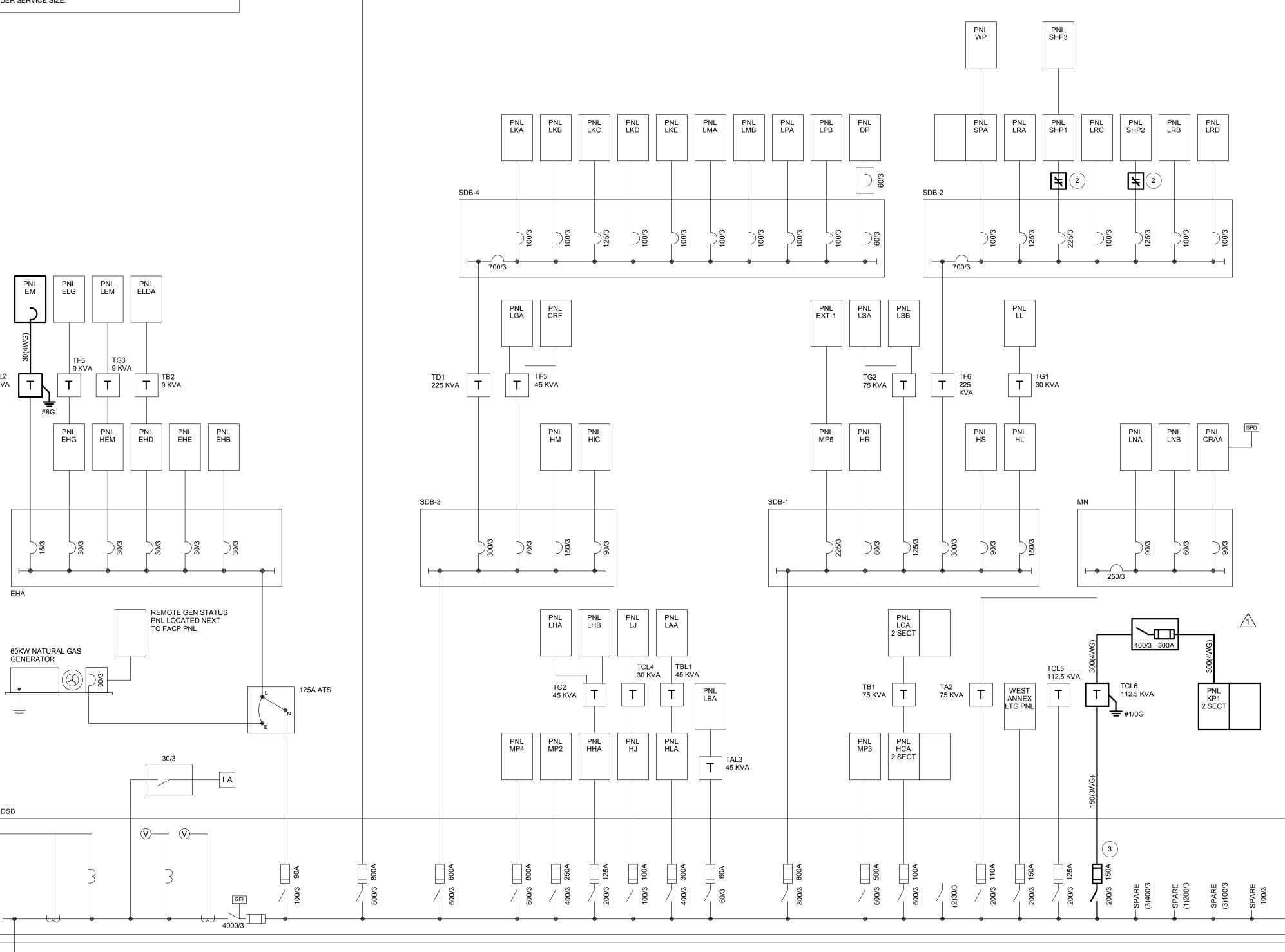
1132 KW 1362 A

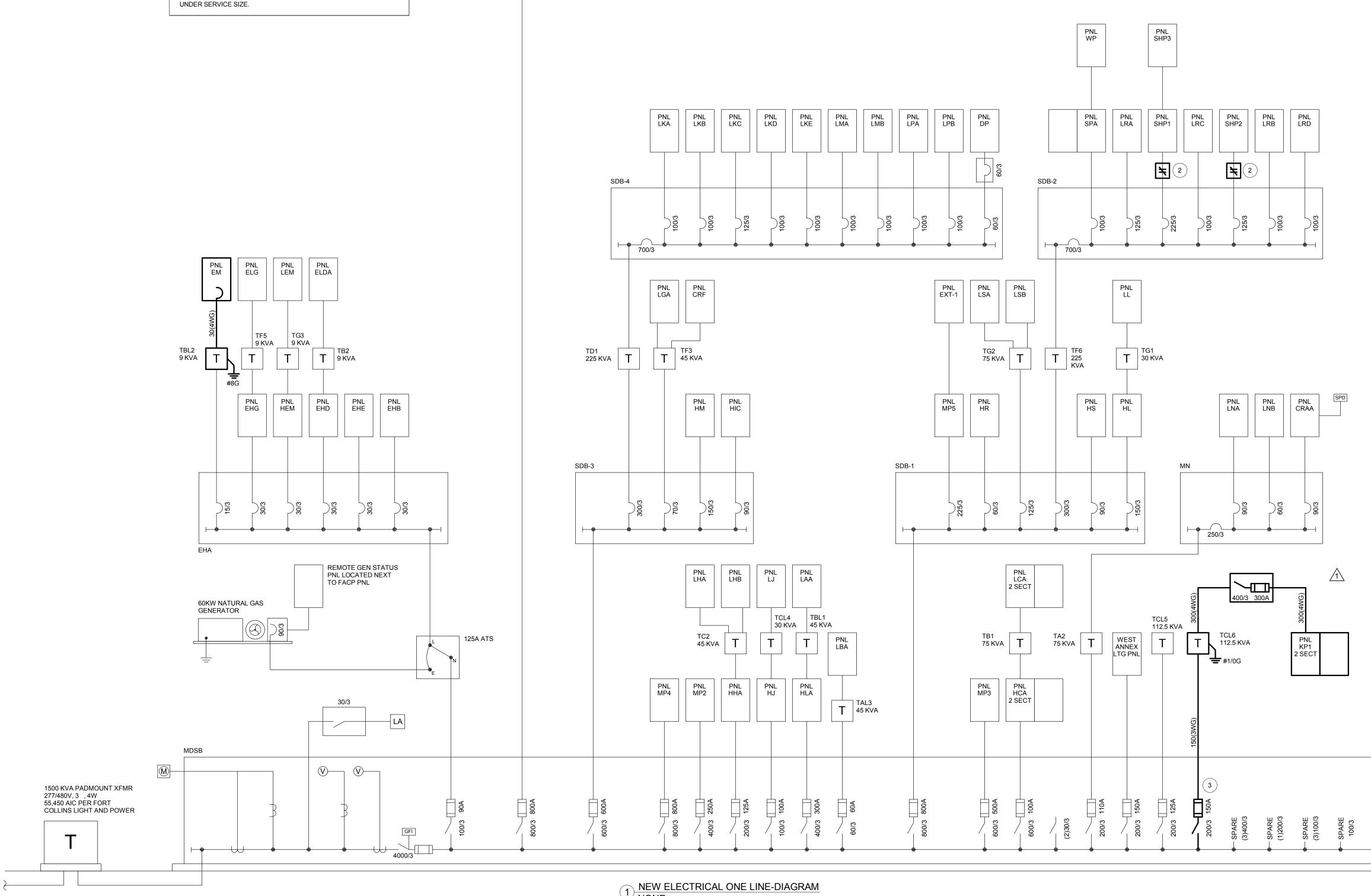
1982 KW 2385 A

850 KW

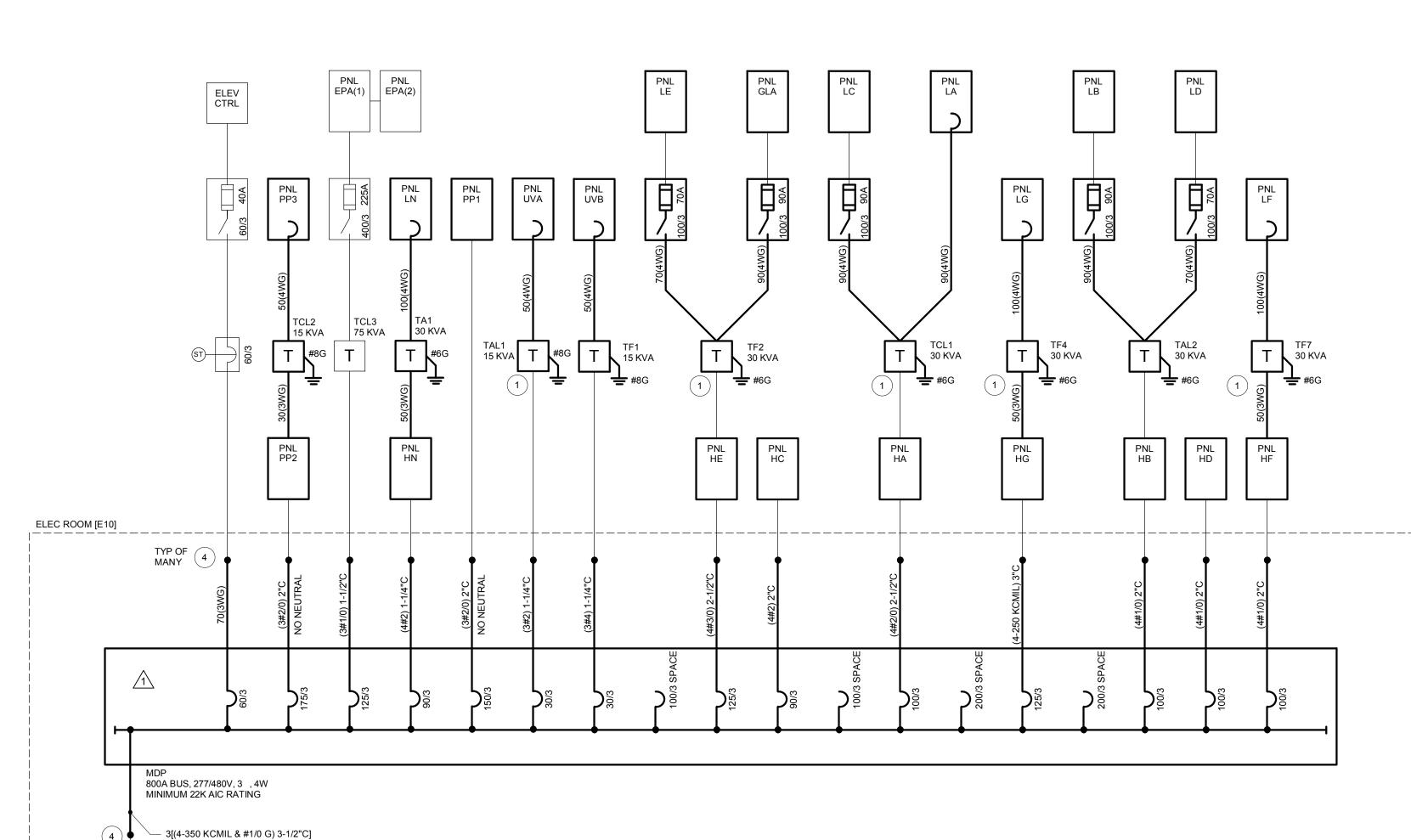
125% OF PEAK DEMAND NEW LOAD TO BUILDING TOTAL LOAD

EXISTING SERVICE IS 4000A. NEW LOAD PLUS EXISTING IS WELL

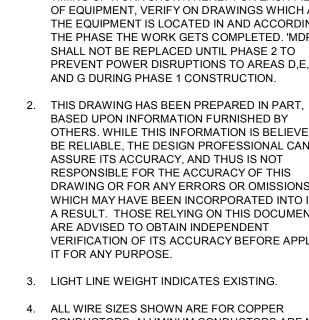




1 NEW ELECTRICAL ONE LINE-DIAGRAM NONE



<u>_____</u>



- ALLOWED.
- PANEL SCHEDULES PROVIDED ON SHEET E7.1. 6. METAL CONDUIT MAY ONLY BE USED AS THE

WIRE INCLUDED.

- (1) TRANSFORMER REPLACED WITH SMALLER SIZE BASED ON METERING DATA. (2) CONTACTOR FOR EMERGENCY SHUT-OFF OF
- (3) UTILIZE SPARE DISCONNECT WITH NEW 150A

<u>/1</u>

LOADS. (4) INTERCEPT EXISTING FEEDER IN ELECTRICAL

DOCUMENTS.



IDDING

E5.1

NOTES:

1. REFER TO PHASING NOTES ON SHEET E0.1 FOR TIMING OF WORK SHOWN HERE. FOR EACH PIECE OF EQUIPMENT, VERIFY ON DRAWINGS WHICH AREA THE EQUIPMENT IS LOCATED IN AND ACCORDINGLY THE PHASE THE WORK GETS COMPLETED. 'MDP' SHALL NOT BE REPLACED UNTIL PHASE 2 TO PREVENT POWER DISRUPTIONS TO AREAS D, E, F,

OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE DESIGN PROFESSIONAL CANNOT DRAWING OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT. THOSE RELYING ON THIS DOCUMENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING

CONDUCTORS. ALUMINUM CONDUCTORS ARE NOT

5. REFER TO PANELBOARD SCHEDULE ON THIS SHEET FOR INFORMATION ON PANELS BEING REPLACED. EXISTING PANELS THAT ARE BEING REUSED HAVE

EQUIPMENT GROUNDING CONDUCTOR WHEN INTERCEPTING AND MATCHING EXISTING FEEDERS. ALL OTHER FEEDERS SHALL HAVE GREEN GROUND

FLAG NOTES:

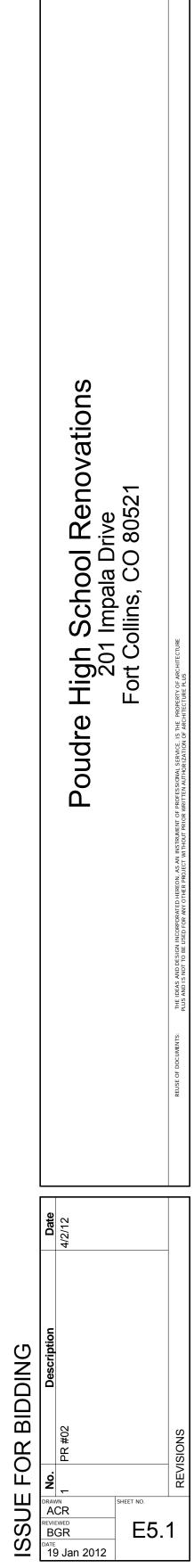
SHOP EQUIPMENT PANEL. REFER TO DIAGRAM ON SHEET E6.1 FOR MORE INFORMATION.

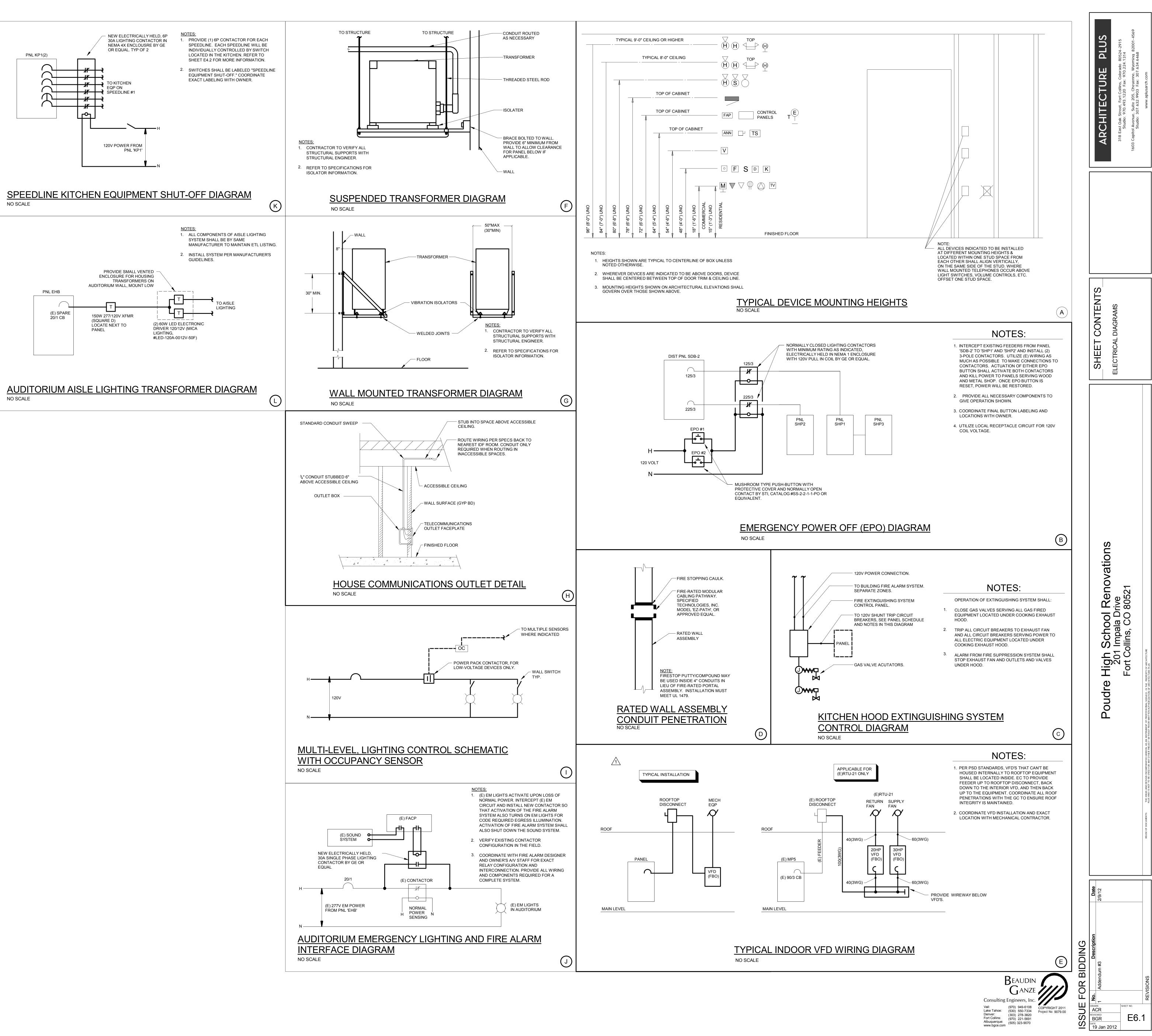
FUSES FOR NEW FEEDER TO SERVE KITCHEN

COM [E10] AND EXTEND AS NECESSARY TO FEED INTO NEW 'MDP'. PROVIDE J-BOX AS NECESSARY. VERIFY (E) FEEDER SIZE IN THE FIELD AND MATCH SIZE WITH NEW FEEDER. FEEDER SIZES SHOWN ARE BASED ON PREVIOUS CONSTRUCTION



_____ S Ш NC \mathbf{O} SHEET ELECTRIC/ DIAGRAM





DESCRIPTION ETED PR #02.	MOUNTING	RECESS DEPTH	QTY	LAMPS TYPE	INPUT WATTS	VOLT	MANUFACTURER	CATALOG NUMBER	SPECIF NOTE
-									
RECESSED FLUORESCENT VOLUMETRIC FIXTURE H SYLVANIA LOW BALLAST FACTOR INSTANT START LAST	RECESSED	4-3/4"	2	28W T8	58	277	COLUMBIA	TRA24-232G-CLO-E	
RECESSED LED FIXTURE	RECESSED	4-3/4"	-	LED AS SUPPLIED	50	277	CREE	CR24-50L-40K	(1)
RECESSED FLUORESCENT FIXTURE WITH LENS, WET ING, AND SYLVANIA LOW BALLAST FACTOR INSTANT RT BALLAST	RECESSED	3-3/4"	3	28W T8	63 W	277	COLUMBIA	WT24-332G-FA-A12-3EU	
ECESSED LED DOWNLIGHT WITH 1100 LUMEN DULE AND WET LISTING	RECESSED	6-3/4"	-	LED AS SUPPLIED	17.3	277	PRESCOLITE	LF6LED-6FLED5 40K	
STING 2X4 PARABOLIC FIXTURE TO BE RELOCATED	RECESSED	-	3	28W T8	63 W	277	-	-	(3)
/ PROFILE HIGH-BAY SUSPENDED FLUORESCENT 'URE WITH HUB MOUNT, WIREGUARD, AND TWO VANIA HIGH BALLAST FACTOR INSTANT START LASTS	SUSPENDED	-	6	28W T8	168 W	277	H.E. WILLIAMS	GL-4-632-HUB MT 3/4"-GC2/Y18/5-WG11-EB4/2-UNV	(1)(5)
STING SURFACE MOUNTED 1X4 FLUORESCENT URE IN KITCHEN TO BE RELOCATED	SURFACE	-	2	28W T8	56 W	277	-	-	(2)
WRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START LAST	SURFACE	-	2	28W T8	56 W	277	COLUMBIA	WC4-232-EU	
/ PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLAST TOR INSTANT START BALLAST	SUSPENDED	-	4	28W T8	112 W	277	H.E. WILLIAMS	GL-4-432-HUB MT 3/4"-GC2/Y18/5-WG11-EB4-UNV	(1)(5)
AND FIBER OPTIC AISLE LIGHT	SURFACE	-	-	LED AS SUPPLIED	.25W PER LED	12V DC	MICA LIGHTING	NLA-1870-R	(6)
/ PROFILE HIGH-BAY SUSPENDED FLUORESCENT TURE WITH HUB MOUNT, WIREGUARD, AND TWO VANIA HIGH BALLAST FACTOR INSTANT START LASTS	SUSPENDED	-	8	28W T8	224 W	277	H.E. WILLIAMS	GL-4-832-HUB MT 3/4"-GC2/Y18/5-WG11-EB4/4-UNV	(1)(5)
	RECESSED FLUORESCENT FIXTURE WITH LENS, WET NG, AND SYLVANIA LOW BALLAST FACTOR INSTANT RT BALLAST ECESSED LED DOWNLIGHT WITH 1100 LUMEN ULE AND WET LISTING TING 2X4 PARABOLIC FIXTURE TO BE RELOCATED PROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO 'ANIA HIGH BALLAST FACTOR INSTANT START ASTS TING SURFACE MOUNTED 1X4 FLUORESCENT JRE IN KITCHEN TO BE RELOCATED WRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START AST PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLAST 'OR INSTANT START BALLAST AND FIBER OPTIC AISLE LIGHT PROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO 'ANIA HIGH BALLAST FACTOR INSTANT START	RECESSED FLUORESCENT FIXTURE WITH LENS, WET NG, AND SYLVANIA LOW BALLAST FACTOR INSTANT RECESSEDRECESSEDCESSED LED DOWNLIGHT WITH 1100 LUMEN ULE AND WET LISTINGRECESSEDTING 2X4 PARABOLIC FIXTURE TO BE RELOCATEDRECESSEDPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO (ANIA HIGH BALLAST FACTOR INSTANT START ASTSSUSPENDEDTING SURFACE MOUNTED 1X4 FLUORESCENT JRE IN KITCHEN TO BE RELOCATEDSURFACEVRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START ASTSURFACEPROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLAST FOR INSTANT START BALLASTSUSPENDEDPROFILE HIGH-BAY SUSPENDED FLUORESCENT OR INSTANT START BALLASTSURFACEPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSUSPENDEDPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO (ANIA HIGH BALLAST FACTOR INSTANT STARTSUSPENDEDPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO (ANIA HIGH BALLAST FACTOR INSTANT STARTSUSPENDED	RECESSED FLUORESCENT FIXTURE WITH LENS, WET NG, AND SYLVANIA LOW BALLAST FACTOR INSTANT RT BALLAST RECESSED 3-3/4" RECESSED LED DOWNLIGHT WITH 1100 LUMEN ULE AND WET LISTING RECESSED 6-3/4" TING 2X4 PARABOLIC FIXTURE TO BE RELOCATED RECESSED - PROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTS SUSPENDED - TING SURFACE MOUNTED 1X4 FLUORESCENT JRE IN KITCHEN TO BE RELOCATED SURFACE - VRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START AST SURFACE - PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLAST OR INSTANT START BALLAST SUSPENDED - AND FIBER OPTIC AISLE LIGHT SURFACE - - PROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START SUSPENDED -	RECESSED FLUORESCENT FIXTURE WITH LENS, WET NG, AND SYLVANIA LOW BALLAST FACTOR INSTANT RT BALLAST RECESSED 3-3/4" 3 SCESSED LED DOWNLIGHT WITH 1100 LUMEN ULE AND WET LISTING RECESSED 6-3/4" - TING 2X4 PARABOLIC FIXTURE TO BE RELOCATED RECESSED - 3 PROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTS SUSPENDED - 6 TING SURFACE MOUNTED 1X4 FLUORESCENT JRE IN KITCHEN TO BE RELOCATED SUSPENDED - 2 VRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START AST SURFACE - 2 PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLAST 'OR INSTANT START BALLAST SUSPENDED - 4 NDD FIBER OPTIC AISLE LIGHT SURFACE - - - PROFILE HIGH-BAY SUSPENDED FLUORESCENT 'OR INSTANT START BALLAST SUSPENDED - 4 AND FIBER OPTIC AISLE LIGHT SURFACE - - - PROFILE HIGH-BAY SUSPENDED FLUORESCENT 'DR WITH HUB MOUNT, WIREGUARD, AND TWO 'ANIA HIGH BALLAST FACTOR INSTANT START SUSPENDED - 8	Recessed Fluorescent fixture with lens, wet NG, AND SYLVANIA LOW BALLAST FACTOR INSTANTRecessed3-3/4"328W T8Recessed Led Downlight with 1100 lumen ULE AND WET LISTINGRecessed6-3/4"-LED AS SUPPLIEDTING 2X4 PARABOLIC FIXTURE TO BE RELOCATEDRECESSED-328W T8PROFILE HIGH-BAY SUSPENDED FLUORESCENT URE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSSUSPENDED-611NG SURFACE MOUNTED 1X4 FLUORESCENT JRE IN KITCHEN TO BE RELOCATEDSUSPENDED-628W T8VRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START ASTSURFACE-228W T8PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSURFACE-228W T8PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSUSPENDED-428W T8PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSUSPENDED-428W T8PROFILE HIGH-BAY SUSPENDED FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSUSPENDED-428W T8AND FIBER OPTIC AISLE LIGHTSURFACELED AS SUPPLIEDPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT STARTSUSPENDED-828W T8	RECESSED FLUORESCENT FIXTURE WITH LENS, WET RG, AND SYLVANIA LOW BALLAST FACTOR INSTANT RT BALLASTRECESSED3-3/4"328W T863 WRECESSED LED DOWNLIGHT WITH 1100 LUMEN ULE AND WET LISTINGRECESSED6-3/4"-LED AS SUPPLIED17.3ING 2X4 PARABOLIC FIXTURE TO BE RELOCATED JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSRECESSED-328W T863 WPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSSUSPENDED-628W T8168 WPROFILE HIGH-BAY LOWESCENT JRE IN KITCHEN TO BE RELOCATEDSURFACE-228W T856 WPROFILE HIGH-BAY LOWESCENT JRE IN KITCHEN TO BE RELOCATEDSURFACE-228W T856 WPROFILE HIGH-BAY FLUORESCENT JRE IN KITCHEN TO BE RELOCATEDSURFACE-228W T856 WVIRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START ASTSURFACE-228W T8112 WPROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSUSPENDED-428W T8112 WAND FIBER OPTIC AISLE LIGHTSURFACELED AS SUPPLIED25W PER LEDPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO AND AND HIGH BALLASTSUSPENDED-828W T8224 W	RECESSED FLUORESCENT FIXTURE WITH LENS, WET NG, AND SYLVANIA LOW BALLAST FACTOR INSTANTRECESSED3.3/4*328W T863 W277RECESSED LED DOWNLIGHT WITH 1100 LUMEN ULE AND WET LISTINGRECESSED6-3/4*-LED AS SUPPLIED17.3277ING 2X4 PARABOLIC FIXTURE TO BE RELOCATED JRE WITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSRECESSED-328W T863 W277ING SURFACE MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSSUSPENDED-628W T8168 W277VRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START ASTSURFACE-228W T856 W277PROFILE HIGH-BAY FLUORESCENT INSTANT START ASTSSURFACE-228W T856 W277VRAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START ASTSURFACE-228W T856 W277PROFILE HIGH-BAY FLUORESCENT FIXTURE WITH MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLASTSUSPENDED-428W T8112 W277AND FIBER OPTIC AISLE LIGHTSURFACELED AS SUPPLIED25W PER LED12V DCPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO AND TWOSUSPENDED-828W T8224 W277	RECESSED FLUORESCENT FIXTURE WITH LENS, WET NG, AND SYLVANIA LOW BALLAST FACTOR INSTANTRECESSED3.3/4*328W T863 W277COLUMBIARECESSED LED DOWNLIGHT WITH 1100 LUMEN TE BALLASTRECESSED6-3/4*-LED AS SUPPLIED17.3277PRESCOLITETING 2X4 PARABOLIC FIXTURE TO BE RELOCATED REW TITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSRECESSED-328W T863 W277.PROFILE HIGH-BAY SUSPENDED F LUORESCENT REW TITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSSUSPENDED-628W T8168 W277H.E. WILLIAMSPROFILE HIGH-BAY SUSPENDED TAGESCENT REW TITH HUB MOUNT, WIREGUARD, AND TWO ANIA HIGH BALLAST FACTOR INSTANT START ASTSSURFACE-228W T856 W277-PROFILE HIGH-BAY FLUORESCENT REIN KITCHEN TO BE RELOCATEDSURFACE-228W T856 W277-VERAP FOR KITCHEN STORAGE WITH ACRYLIC LENS SYLVANIA LOW BALLAST FACTOR INSTANT START ASTSURFACE-228W T856 W277COLUMBIAPROFILE HIGH-BAY FLUORESCENT REW TITH HUB MOUNT, WIREGUARD, AND SYLVANIA HIGH BALLAST SUSPENDEDSUSPENDED-428W T8112 W277H.E. WILLIAMSRW TH HUB MOUNT, WIREGUARD, AND TWO AND FIDER OPTIC AISLE LIGHTSURFACELED AS SUPPLIED25W PER LED12V DCMICA LIGHTINGPROFILE HIGH-BAY SUSPENDED FLUORESCENT JRE WITH HUB MOUNT, WIREGUARD, AND TWO AND HIGH BALLAST FACTOR INST	ConstructionConstructionConstructionConstructionConstructionNo. AND SYLVANIA LOW BALLAST FACTOR INSTANTRECESSED3-3/4"328W T863 W277COLUMBIAWT24-332G-FA-A12-3EUNO. AND SYLVANIA LOW BALLAST FACTOR INSTANTRECESSED6-3/4"-LED AS SUPPLIED17.3277PRESCOLITELF8LED-6FLED5 40KICE AND WE'L USTINGRECESSED6-3/4"-LED AS SUPPLIED17.3277PRESCOLITELF8LED-6FLED5 40KTING 2X4 PARABOLIC FIXTURE TO BE RELOCATEDRECESSED-328W T863 W277PROFILE HIGH-BAY SUSPENDED FLUORESCENTSUSPENDED-628W T8168 W277H.E. WILLIAMS34"-GC2Y18/5WG11-EB4/2UNVANTSSUSPENDEDSUSPENDED-228W T856 W277ING SURFACE MOUNTED 1X4 FLUORESCENTSURFACE-228W T856 W277COLUMBIAWC4-232-EUING SURFACE MOUNTED 1X4 FLUORESCENTSURFACE-228W T856 W277COLUMBIAWC4-232-EURECENTEL HIGH-BAY FLUORESCENT FLOREWITH ACRYLIC LENSSURFACE-228W T8112 W277HE. WILLIAMS34"-GC2Y18/5WG11-EB4/2UNVRECENTEL HIGH-BAY FLUORESCENT FLOREWITH ACRYLIC LENSSURFACE-228W T8112 W277COLUMBIAWC4-232-EURECENTEL HIGH-BAY FLUORESCENT FLOREWITH ACRYLIC LENSSUSPENDED-428W T8112 W277HE. WI

SPECIFIC NOTES: (1) NO SUBSTITUTIONS

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(2) FIXTURES ARE EXISTING AND SHOWN HERE FOR REFERENCE ONLY. PROVIDE WITH NEW LAMPS AND BALLAST PRIOR TO REINSTALLATION. (3) FIXTURES ARE EXISTING AND SHOWN HERE FOR REFERENCE ONLY.

(4) CONFIRM FINISH WITH ARCHITECT. (5) FIXTURE UTILIZES HUB MOUNT TO CONNECT TO EXISTING STEM AND THEN CABLE SUSPENSION KIT TO PROVIDE EXTRA SUPPORT FROM STRUCTURE.
 (6) PROVIDE ALL NECESSARY TRANSITIONS, POWER FEEDS, TRANSFORMERS, END CAPS AND OTHER ACCESSORIES NEEDED FOR COMPLETE INSTALLATION OF FIXTURE.

MARK	DESCRIPTION	VOLT /	HP/	AMPS		CONNECTION		FEEDER	CIRCUIT	SPECIFIC NOTES
		PHASE	WATTS		HARDWIRED	RECEPTACLE	DISCONNECT			
K06	WALK IN FREEZER	120/1	1.2 KW	10.0	YES	-	20A 1P	20(2WG)	KP1-29	(3)
K07	WALK IN FREEZER CONDENSER	208/3	9.0 KW	25.0	YES	-	30A 3P	30(3WG)	LHA-42,44,46	(2)(6)
K12	WALK IN COOLER	120/1	840 W	7.0	YES	-	20A 1P	20(2WG)	KP1-31	(3)
K13	WALK IN COOLER CONDENSER	208/3	5.7 KW	16.0	YES	-	30A 3P	30(3WG)	KP1-30,32,34	(2)
K22	DISH MACHINE	208/3	14.4 KW	40.0	YES	-	60A 3P	50(3WG)	KP1-20,22,24	
K25	DISPOSAL	208/1	1.3 KW	6.0	YES	-	20A 2P	20(2WG)	KP1-26,28	
K27	BOOSTER HEATER	120/1	600 W	5.0	YES	-	20A 1P	20(2WG)	KP1-18	
K34	DISPOSAL	208/1	1.3 KW	6.0	YES	-	20A 2P	20(2WG)	KP1-12,14	
K43	MIXER	208/3	2.1 KW	6.0	YES	-	20A 3P	20(3WG)	KP1-2,4,6	
K44	EXHAUST HOOD	120/1	1.2 KW	10.0	YES	-	-	20(2WG)	KP1-19	(1)
K45	FIRE SUPPRESSION SYSTEM	120/1	600 W	5.0	YES	-	20A 1P	20(2WG)	KP1-21	
K47	RANGE, 2 BURNER	120/1	1.2 KW	10.0	-	NEMA 5-20R	-	20(2WG)	KP1-15	(1)
K52	STEAMER, CONVECTION	120/1	600 W	5.0	-	NEMA 5-20R	-	20(2WG)	KP1-11	(1)
K53	TILTING KETTLE	120/1	600 W	5.0	-	NEMA 5-20R	-	20(2WG)	KP1-9	
K54	CONVECTION OVEN, DOUBLE STACKED	120/1	600 W	5.0	-	NEMA 5-20R	-	20(2WG)	KP1-7	
K55	CONVECTION OVEN UPPER/LOWER	120/1	1.2 KW	10.0	-	NEMA 5-20R	-	20(2WG)	KP1-5	
K57	EXHAUST HOOD, TYPE 2	120/1	1.2 KW	10.0	YES	-	-	20(2WG)	KP1-23	
K60	MILK COOLER	120/1	1.2 KW	10.0	-	NEMA 5-20R	-	20(2WG)	KP1-79	
K61	REFRIGERATOR, 3 DOOR	120/1	2.4 KW	20.0	-	NEMA 5-20R	-	20(2WG)	KP1-3	
K63	ICE MACHINE	120/1	1.6 KW	13.8	-	NEMA 5-20R	-	20(2WG)	KP1-55	
K64	DUAL TEMP FOOD WELL	208/3	4.0 KW	16.0	YES	-	30A 3P	20(4WG)	RE: DRAWINGS	
K65	HEATED HOLDING CABINET	120/1	1.9 KW	16.0	-	NEMA 5-20R	-	20(2WG)	RE: DRAWINGS	
K71	CASHIER STANDS	120/1	1.2 KW	10.0	-	NEMA 5-20R	-	20(2WG)	RE: DRAWINGS	
K74	SALAD BAR, REFRIGERATED	120/1	600 W	5.0		NEMA 5-20R	-	20(2WG)	RE: DRAWINGS	(4)(5)
K75	MERCHANDISER, HEATED	120/1	1.5 KW	12.0		NEMA 5-20R	-	20(2WG)	RE: DRAWINGS	(4)(5)
K76	HOT FOOD WELLS	208/1	3.1 KW	15.0	_	NEMA 6-20R	-	20(2WG)	RE: DRAWINGS	(4)(5)
K77	MILK/BEVERAGE COOLER	208/120/1	3.1 KW	15.0	-	NEMA L14-20R	-	20(3WG)	RE: DRAWINGS	(5)
	MERCHANDISING RACKS,									
K80	LIGHTS MERCHANDISING RACK,	120/1	360 W	3.0	-	NEMA 5-20R	-	20(2WG)	RE: DRAWINGS	(4)(5)
K81	LIGHTS	120/1	360 W	3.0	-	NEMA 5-20R	-	20(2WG)	RE: DRAWINGS	(4)(5)
А. В. С.	NOTES: FIELD VERIFY ALL EQUIPMENT HARD WIRED EQUIPMENT COM E.C. SHALL COORDINATE ALL CO DISCONNECT REQUIREMENTS ANY EQUIPMENT UNDER HOOI SUPPRESSION SYSTEM IS ACT	NNECTIONS CONNECTION PRIOR TO D TIES INTO	S SHALL BE ON POINT L INSTALLAT	SEALTIG OCATIONS ION.	HT. S AND RECEPTAG	CLE CONFIGURA	TIONS WITH THE	E KITCHEN CONSUL	TANT. VERIFY EQUIP	

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		MECHA			UIPM	ENT	SCHEDULE (E	EXHAUST	FANS ONL	Y)						MECH	ANICA		UIPMENT SO				
MARK	DESCRIPTION	VOLT / PHASE	HP	WATTS	6 FLA	M	CA CONTROLS	DISCONNECT/ FUSE SIZE	FEEDER	CIRCUIT	SPECIFIC NOTES	MARK	DESCRIPTION	VOLT / PHASE	HP	WATTS	FLA	MCA	STARTER	DISCONNECT/ FUSE SIZE	FEEDER	CIRCUITING PANEL	
F-1	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		AF-1	AIR FILTER	120/1	1/6 HP	528 W	4.4	5.5	-	MOTER RATED SW	20(2WG)	LRB	(3)
F-2	EXHAUST FAN	120/1	1/2 HP	1.2 KW	9.8	12	.3 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		B-1	BOILER	480/3	5 HP	6.3 KW	7.6	9.5	-	30A 3P	20(3WG)	PP1-7,9,11	
-3	EXHAUST FAN	120/1	1/2 HP	1.2 KW	/ 9.8	12	.3 -	PROVIDED W/	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		B-2	BOILER	480/3	5 HP	6.3 KW	7.6	9.5	-	30A 3P	20(3WG)	PP1-13,15,17	
-4	EXHAUST FAN	120/1	1/2 HP	1.2 KW	/ 9.8	12	.3 -	PROVIDED W/	UTILIZE EXISTING	UTLIIZE EXISTING		B-3	BOILER	480/3	5 HP	6.3 KW	7.6	9.5	_	30A 3P	20(3WG)	PP1-19,21,23	
=-5	EXHAUST FAN	120/1	1/8 HP	348 W		3		EQP PROVIDED W/	FEEDER UTILIZE EXISTING			P-1	PUMP	480/3	1.5 HP	2.5 KW	3.0	3.8	NEMA 00	30A 3P	· · · · ·	PP1-14,16,18	
								EQP PROVIDED W/	FEEDER UTILIZE EXISTING	CIRCUIT UTLIIZE EXISTING					_						20(3WG)		
F-6	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 (PROV BY MC)	EQP	FEEDER	CIRCUIT		P-2	PUMP	480/3	1.5 HP	2.5 KW	3.0	3.8	NEMA 00	30A 3P	20(3WG)	PP1-20,22,24	
-7	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	CIRCUIT		P-3	PUMP	480/3	1.5 HP	2.5 KW	3.0	3.8	NEMA 00	30A 3P	20(3WG)	PP1-26,28,30	
-8	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		MAU-1	MAKE-UP AIR UNIT	480/3	1 HP	1.7 KW	2.1	2.6	VFD BY MC	30A 3P	20(3WG)	MP2-19,21,23	(2)
-9	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		MAU-2	MAKE-UP AIR UNIT	408/3	1.5 HP	2.5 KW	3.0	3.8	VFD BY MC	30A 3P	20(3WG)	MP2-2,4,6	(2)
10	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT T-STAT (PROV BY MC)	PROVIDED W/	30(2WG)	LNA	(4)	ERV-1	ENERGY RECOVERY	480/3	-	44.0 KW	-	52.9	PROVIDED W/ EQP	PROVIDED W/ EQP	60(3WG)	MP5-7,9,11	
11	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7	3 CONNECT T-STAT (PROV BY MC)	PROVIDED W/	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		RTU-1	ROOFTOP UNIT	480/3	_	101.3 KW	-	122.0	VFD PROVIDED W/	PROVIDED W/ EQP	125(3WG)	MP3-13,15,17	
12	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5		PROVIDED W/	30(2WG)	LNA	(4)	RTU-2	ROOFTOP UNIT	480/3	_	48.8 KW	_	58.8	VFD PROVIDED W/	PROVIDED W/	70(3WG)	MP3-19,21,23	
13	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7	3 -	PROVIDED W/	30(2WG)	SHARE CKT WITH		RTU-3	ROOFTOP UNIT	480/3	_	14.9 KW	_	18.0	VFD PROVIDED W/	PROVIDED W/	20(3WG)	MP3-1,3,5	
		120,1			0.0		-	EQP	30(2003)	EF-12									EQP VFD PROVIDED W/	EQP PROVIDED W/	, , ,		
14	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT TIMER SWITCH (PROV B) MC)	PROVIDED W/	20(2WG)	LCA(2)	(4)	RTU-4	ROOFTOP UNIT	480/3	-	76.6 KW	-	92.2	EQP VFD PROVIDED W/	EQP	125(3WG)	MP3-8,10,12	
·15	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT T-STAT (PROV BY MC)	PROVIDED W/	20(2WG)	SHARE CKT WITH EF-14		RTU-5	ROOFTOP UNIT	480/3	-	46.7 KW	-	56.3	EQP	EQP	60(3WG)	HCA(2)-14,16,18	
-16	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7		PROVIDED W/	30(2WG)	SHARE CKT WITH EF-17		RTU-6	ROOFTOP UNIT	480/3	-	37.8 KW	-	45.5	VFD PROVIDED W/ EQP	EQP	50(3WG)	MP2-8,10,12	(1)
17	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 -	PROVIDED W/	UTILIZE EXISTING	UTLIIZE EXISTING		RTU-7	ROOFTOP UNIT	480/3	-	61.1 KW	-	73.6	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	80(3WG)	MP2-14,16,18	
								EQP PROVIDED W/	FEEDER UTILIZE EXISTING	CIRCUIT UTLIIZE EXISTING		RTU-8	ROOFTOP UNIT	480/3	-	62.7 KW	-	75.5	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	80(3WG)	MP2-1,3,5	(1)
-18	EXHAUST FAN	120/1	1/8 HP			3		EQP	FEEDER UTILIZE EXISTING	CIRCUIT UTLIIZE EXISTING		RTU-9	ROOFTOP UNIT	480/3	-	65.7 KW	-	79.1	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	90(3WG)	SDB1-19,21,23	
-21	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 (PROV BY MC)	EQP	FEEDER	CIRCUIT		RTU-10	ROOFTOP UNIT	480/3	_	29.6 KW	-	35.7	VFD PROVIDED W/	PROVIDED W/	40(3WG)	HL-2,4,6	
-22	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		RTU-11	ROOFTOP UNIT	480/3	_	21.8 KW	_	26.3	VFD PROVIDED W/	PROVIDED W/	40(3WG)	MP5-25,27,29	
23	EXHAUST FAN	408/3	1 HP	1.7 KW	2.1	2	6 -	PROVIDED W/ EQP	30(3WG)	HHA	(3)	RTU-12	ROOFTOP UNIT	480/3		94.9 KW		114.3	EQP VFD PROVIDED W/	EQP PROVIDED W/	· · · · ·	MP4-14,16,18	
24	EXHAUST FAN	408/3	1 HP	1.7 KW	2.1	2	6 -	PROVIDED W/ EQP	30(3WG)	HHA	(3)				-		-		EQP VFD PROVIDED W/	EQP PROVIDED W/	150(3WG)		
25	EXHAUST FAN	408/3	1 HP	1.7 KW	/ 2.1	2	6 -	PROVIDED W/ EQP	30(3WG)	HHA	(3)	RTU-13	ROOFTOP UNIT	480/3	-	49.2 KW	-	59.3	EQP	EQP	70(3WG)	MP4-8,10,12	(1)
-28	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT T-STAT (PROV BY MC)	PROVIDED W/	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		RTU-14	ROOFTOP UNIT	480/3	-	88.0 KW	-	105.9	VFD PROVIDED W/ EQP	EQP	125(3WG)	MP4-38,40,42	(1)
-29	EXHAUST FAN	120/1	1/3 HP	864 W	7.2	9		PROVIDED W/	30(2WG)	LHB-29		RTU-15	ROOFTOP UNIT	480/3	-	53.4 KW	-	64.3	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	80(3WG)	MP4-2,4,6	(1)
-30	EXHAUST FAN	120/1	3/4 HP			17	3 -	EQP PROVIDED W/		LHB-18		RTU-16	ROOFTOP UNIT	480/3	-	30.2 KW	-	36.4	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	50(3WG)	MP2-7,9,11	
								EQP PROVIDED W/	30(2WG)			RTU-17	ROOFTOP UNIT	480/3	-	34.9 KW	-	42.0	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	50(3WG)	HL-8,10,12	
.31	EXHAUST FAN	120/1	1/3 HP	864 W	7.2	9	-	EQP PROVIDED W/	30(2WG)	LHB-27		RTU-18	ROOFTOP UNIT	480/3	-	29.0 KW	-	34.9	VFD PROVIDED W/ EQP	PROVIDED W/ EQP	40(3WG)	SDB1-25,27,29	
-32	EXHAUST FAN	120/1	1/20 HP	240 W	2.0	2	5 -	EQP	30(2WG)	LHB-27		RTU-19	ROOFTOP UNIT	208/1	_	2.8 KW	-	13.6	_	30A 2P	30(2WG)	LCA(2)	(4)
33	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7	3 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		WH-1	WATER HEATER	120/1		1.2 KW	10.0	12.5	_	CORD AND	20(2WG)	SHARE CKT WITH	
-34	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT TIMER SWITCH (PROV B)	PROVIDED W/	30(2WG)	LRB	(4)	GENERAL		120/1		1.2 1.00	10.0	12.0		PLUG	20(2003)	AF-1	
							MČ)	PROVIDED W/				B.	SEE SPECIFICATIONS FOR PROVIDE PHASE PROTECT	ION FOR ALL	THREE PH	ASE MOTO	RS ABOVE		OR STARTER COORD	DINATION.			
35	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7		EQP	30(2WG)		(4)	D.		SCONNECTS	WITH NEM	1A 3R RATIN	IG.						
36	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT T-STAT (PROV BY MC)	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT			UTILIZE (E) FEEDER FROM F								-		
37	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7	3 -	PROVIDED W/ EQP	30(2WG)	LG	(4)	(2)	This Schedule. Per Avail Refer to typical VFD WI Provide New 20/1 Circuit	RING DIAGRA	M ON SHE	ET E6.1 FO	r wiring II	NFORMAT	ION.	UNEET REQU	IREIVIEN I S. NOTIF	T ENGINEER OF ANY D	JOUREPANC
-38	EXHAUST FAN	120/1	1/4 HP	696 W	5.8	7	3 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		(0)	PROVIDE NEW 20/2 CIRCUIT										
-39	EXHAUST FAN	120/1	1/20 HP	240 W	2.0	2	CONNECT TIMER 5 SWITCH (PROV BY		20(2WG)	LRC	(4)			WIRING	SCH		= - CO	PPFR	•		7		
							MC)				(+)	AMPS	(2WG)			(3WC			(4WG)		_		
-40	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 CONNECT T-STAT (PROV BY MC)	EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		20	1Ø, 2 WIRE, GROUNE (2#12 & 1#12 G) 3/4"(1Ø, 3 WIRI	E, GROUND OR		ROUND	3Ø, 4 WIRE, GI				
-41	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT T-STAT (PROV BY MC)	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		30	(2#12 & 1#12 G) 3/4 ((2#10 & 1#10 G) 3/4"			(3#10 & 1#10	,		(4#12 & 1#12 (-		
-42	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 CONNECT T-STAT (PROV BY MC)	PROVIDED W/	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		40	(2#8 & 1#10 G) 3/4"C)		(3#8 & 1#10	G) 3/4"C		(4#8 & 1#10 (G) 1"C			
-43	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 -	PROVIDED W/ EQP	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		50 60	(2#6 & 1#10 G) 3/4"((2#4 & 1#10 G) 1"C			(3#6 & 1#10	,		(4#6 & 1#10 ((4#4 & 1#10 G)	,	-		
44	EXHAUST FAN	120/1	1/8 HP	348 W	2.9	3	6 CONNECT T-STAT (PROV BY MC)	PROVIDED W/	UTILIZE EXISTING FEEDER	UTLIIZE EXISTING CIRCUIT		70	(2#4 & 1#8 G) 1"C			(3#4 & 1#8 G	,		(4#4 & 1#10 G)		-		
									UTILIZE EXISTING			80	(2#2 & 1#8 G) 1"C			(3#2 & 1#8 G	6) 1 1/4"C		(4#2 & 1#8 G)	1 1/2"C			
45	EXHAUST FAN	120/1	1/25 HP	120 W	1	1	3 -	EQP	FEEDER	CIRCUIT		90 100	(2#2 & 1#8 G) 1"C (2#1 & 1#8 G) 1 1/4"(2		(3#2 & 1#8 G			(4#2 & 1#8 G) (4#1 & 1#8 G)		-		
46	EXHAUST FAN	120/1	1/6 HP	528 W	4.4	5	5 -	PROVIDED W/ EQP	20(2WG)	LRG	(4)	110	(2#1 & 1#8 G) 1 1/4"((2#1 & 1#6 G) 1 1/4"((3#1 & 1#8 G	,		(4#1 & 1#8 G) (4#1 & 1#6 G)		-		
-47	EXHAUST FAN	480/3	2 HP	2.8 KW	/ 3.4	4	3 VFD BY MC	30A 3P	20(3WG)	MP2-19,21,23	(2)	125	(2#1 & 1#6 G) 1 1/4"(c		(3#1 & 1#6 G	6) 1 1/2"C		(4#1 & 1#6 G)	1 1/2"C			
48	EXHAUST FAN	408/3	1 HP	1.7 KW	/ 2.1	2	6 VFD BY MC	30A 3P	20(3WG)	MP2-2,4,6	(2)	150 175	(2#1/0 & 1#6 G) 1 1/4'			(3#1/0 & 1#6	,		(4#1/0 & 1#6	,	-		
1	EXHAUST FAN	120/1	1/4 HP			7		PROVIDED W/		KP1-33		200	(2#2/0 & 1#6 G) 1 1/2' (2#3/0 & 1#6 G) 1 1/2'			(3#2/0 & 1# (3#3/0 & 1#	,		(4#2/0 & 1#6 (4#3/0 & 1#6	,	-		
-49		1 120/1		090 00	0.0	'	ŭ l	EQP	30(2WG)	NI 1-00		225				(3#4/0 & 1#			(4#4/0 & 1#4 G	0.4/01/0	1		
=-49										-		225 250	(2#4/0 & 1#4 G) 2"C			(3#4/0 & 1#	+ 0) 2 0) 2 1/2°C	_		

NOT USED
 REFER TO TYPICAL VFD WIRING DIAGRAM ON SHEET E6.1 FOR WIRING INFORMATION.
 PROVIDE NEW 20/3 CIRCUIT BREAKER IN PANEL 'HHA' TO SERVE EF-23, EF-24, AND EF-25.
 PROVIDE NEW 20/1 CIRCUIT BREAKER IN PANEL INDICATED TO SERVE NEW EXHAUST FAN.

(1) EQUIPMENT FED FROM SHUNT TRIP CIRCUIT BREAKER THAT IS ACTIVATED BY FIRE SUPPRESSION SYSTEM. (2) PROVIDE RELAY FOR SIGNALING SECURITY SYSTEM UPON LOSS OF POWER TO EQUIPMENT. REFER TO KITCHEN DRAWINGS FOR MORE INFORMATION.
 (3) WIRE HOOD LIGHTS THROUGH MELINK I/O PROCESSOR. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION. (3) EQUIPMENT WIRED THROUGH CONTACTOR FOR SHUT-OFF OF SPEEDLINE EQUIPMENT. REFER TO DIAGRAM ON E6.1 FOR MORE INFORMATION.
 (4) EQUIPMENT WIRED THROUGH CONTACTOR FOR SHUT-OFF OF SPEEDLINE EQUIPMENT. REFER TO DIAGRAM ON E6.1 FOR MORE INFORMATION.
 (5) EXTEND CONNECTION FROM J-BOX ON WALL TO EQUIPMENT WHICH IS PROVIDED WITH PLUG AND CORD. COORDINATE WITH KITCHEN CONTRACTOR.
 (6) PROVIDE HEAT TAPE FOR FREEZER CONDENSER DRAIN LINE PER KITCHEN EQUIPMENT DRAWING REQUIREMENTS.



ISSUE FOR BIDDING			
Description Description Description ACR BGR DATE 19 Jan 2012 Date 19 Jan 2012	Poudre High School Renovations 201 Impala Drive Fort Collins, CO 80521	SHEET CONTENTS ELECTRICAL SCHEDULES	ARCHITECTURE PLUS 318 East Oak Street, Fort Collins, Colorado 80524-2915 Studio: 970.493.1220 Fax: 970.224.1314 1603 Capitol Avenue, Suite 205, Cheyenne, Wyoming 82001-4569 Studio: 307.632.9903 Fax: 307.634.6468
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PANEL:									VO	LTAC	E:			277/480	V, 3PH	, 4W		
PANEL:			MP4						MI	VIMU	MBU	S:		800				
LOCATION:			ELEC D'	02			1		MA	IN:				MLO				
MOUNTING:			SURFAC	Έ					MI	UMIN	M AIC):		18,000A				
NO. LOAD		TYPE	LOAD DES		BREA	AKER		BUS	BRE	AKER	TYPE	1.04		CRIPTION		LOAD		NO.
A B	С	IIFL	LOAD DES	UNIF HON	POLE	TRIP	Α	В С	TRIP	POLE		LOP			А	В	С	
1 3 5			(3) SPARE		3	25	+	+ +	80	3	M M M	(2) RTI	J-15		17811	17811	17811	2 4 6
7 9 11			SPARE		3	40	+	+ +	70	3	M M M	(1) RTI	J-13		16426	16426	16426	8 10 12
13 15 17			SPARE		3	100	+		125	3	M M M	(1) RTU	J-12		31633	31633	31633	14 16 18
19 21			SPACE SPACE				+	+	200	3		(3) SP/	RE				01000	20 22
23 25 27 29			SPACE AIR COMPRE	SSOR	3	20	+	+ + +	175	3		(3) SP/	ARE					24 26 28 30
31 33			SPACE SPACE				+	+	150	3		(3) SP/	ARE					32 34
35 37 39			SPACE SPACE SPACE				+	+	125	3	M	(1) RTU	J-14		29333	29333		36 38 40
41			SPACE					+			М						29333	42
LOAD TYPE	PANEL	TOTAL	FEED THRU TOTAL	SUBFEED TOTAL		DER		DEMAND	FEEDEF	TOTAL		A.	BOLDI	GENER DADS ARE REVIS		S:		
LIGHTING	+	0			0			125%		0		А. В.	DOLD L					
) RECEPTACLES		0			0		1	NEC 220		0		C.						
M) LARGEST MOTOR		0			0			25%	1	0		D.						
) MOTORS (ALL)		285609			285609			100%	:	285609		E.						
) EQUIPMENT		0			0			100%		0					FIC NOTE	-		
) APPLIANCES	<u> </u>	0			0 PAN	IEL TO		0 . (KVA):	28	0 5.6		(1) (2) (3)	PROVID	AD UTILIZES EX E NEW CIRCUIT USLY USED CIRC	BREAKER F	OR NEW L	.OAD	
					PAN	EL TO	TAL	. (A):	34	44		(4)				2		

PANEL:			MP5								-		277/480)V, 3PI	H, 4W		
										-	MBU	5:	400				
LOCATION:			ELEC G	141A					MA	IN:			MLO				
MOUNTING:			SURFAC	Е					MI	NIMU	m aic):	9,747A				
NO. LOAD		TYPE			BRE	AKER	В	US	BRE	AKER	TYPE				LOAD		N
NO. A B	С	TYPE	LOAD DES	CRIPTION	POLE	TRIP		в С	TRIP	POLE	TYPE	LUAD	DESCRIPTION	А	В	С	
1							+					RTU-21 (E					1
3			(1) SPARE		3	35		+	90	3		CHANGE					
5 7 14653		м					+	+									
9 14653		M	(2) ERV-1		3	80		+	30	3	-	(1) SPARE	-				
11	14653	M			-			+		-			-				
13							+										
15			EX FAN 12		3	25		+	20	3		RTU-19					
17								+						_			
19 21			PNL EXT-1		3	100	+	+	15	3		EF-13					2
23					Ŭ	100		. +	10								
25 7266		М					+					SPACE					2
27 7266		М	(2) RTU-11		3	40		+				SPACE					2
29	7266	М						+				SPACE					3
LOAD TYPE	PANEL	TOTAL	FEED THRU	SUBFEED		DER	DE		FEEDEF]		_	ral not	'ES:		
-		-	TOTAL	TOTAL		OTAL				-			LD LOADS ARE REV	SED.			
		0			0			25% C 220		0	-	В. С.					
RECEPTACLES		0			0			5 220 5%		0	1	D.					
(I) MOTORS (ALL)		65757			65757			0%		65757	1	Б. Е.					
E) EQUIPMENT		0			0		1	00%		0	1		SPEC	IFIC NOT	ES:		
A) APPLIANCES		0			0			0		0]	(1) PR	EVIOUSLY USED CIR	CUIT BREA	KER NOW	A SPARE	
					PAN	IEL TO	TAL (۲VA):	65	5.8		(2) PR	OVIDE NEW CIRCUIT	BREAKER	FOR NEW	LOAD	
					DA		TAL (• • •	_	'9	1	(3)					
					PAN	IEL TO	AL (-y:	1 '	3		(5)					

		PP1							VO	LTAG	E:		277/480)V, 3PH	H, 4W	
PANEL:		PPI							MI	VIMU	MBU	S:	150			
LOCATION:		BOILER	R RM 101B						MA	IN:			MLO			
MOUNTING:		SURFA	CE						MI	VIMU	M AIC):	14,000			
LOAD				BRE	AKER	, 	BUS		BRE	AKER			1		LOAD	
NO. A B	C TY	PE LOAD DE	SCRIPTION	POLE		А	В	С	TRIP	POLE	TYPE	LOAD DES	SCRIPTION	Α		C I
1 3				3	15	+	+		20	3		(1) EXISTING	ì			
5		(E) SUMP P	JMP	3	15			+	20	3		COMPRESSO				
7 2100	Ν	Λ				+										
9 2100	N		1	3	20		+		15	3		(E) EX FAN - /	ART ROOM			
11 13 2100	2100 N					+		+			М			831		
15 2100 15 2100	N			3	20	T	+		20	3	M	P-1: PUMP		031	831	
17	2100 N			Ū				+		Ŭ	M					31
19 2100	Ν	Λ				+					М			831		
21 2100	Ν		1	3	20		+		20	3	М	P-2: PUMP			831	1
23	2100 N	Λ		_				+			М				8	31 :
25						+					M			831	001	
27 29		SPARE		3	20		+		20	3	M	P-3: PUMP			831	31
31		SPACE				+		+			IVI	SPACE			0	31
33		SPACE					+					SPACE				
35		SPACE						+				SPACE				
37		SPACE				+						SPACE				
39		SPACE					+					SPACE				
41		SPACE						+				SPACE				
LOAD TYPE	PANEL TOT	FEED THRU	SUBFEED		DER		EMAN		FEEDER				GENERA	AL NOTE	S:	
	FANEL TOT	TOTAL	TOTAL		TOTAL			,	FEEDER				IS REPLACED CO	OMPLETEL	Y.	
L) LIGHTING		0		0			125%			0		B.				
R) RECEPTACLES		0		0		N	IEC 220)		0		C.				
LM) LARGEST MOTOR	263	0		26379			25% 100%			0 26379		D. E.				
M) MOTORS (ALL) E) EQUIPMENT	263	0	+	0			100%			26379		E.	SPECIE		s.	
A) APPLIANCES		0		0			0			0		(1) THIS I C	AD IS REMOVED		-	LIC
	I	-	1			1							OLS ARE SWITC			
				PAN	IEL TO	TAL	(KVA	4):	26	5.4			OLS. COORD WI			R.
										- -		(2)				
				- PAN	IEL TO) AL	(A):		I 3	2		(3)				

PANEL:			SDB-1								GE: M BU	Q.	277/480 800	V, 3PH,	4W	
LOCATION:			ELEC 50	6B			-					З.	MLO			
							-									
MOUNTING:			SURFAC	E			J		IVIII	UIVIU	M AIC		22,666			
NO. LOAD	1	YPE	LOAD DES	CRIPTION		AKER	BL			AKER	TYPE	LOAD DES	CRIPTION		DAD	N
A B	C				POLE	TRIP	A E	C	TRIP	POLE				A	B C	2
3 5			PANEL MP5		3	225	+	+	300	3		DIST PANEL S	SDB-2			
7 9			PANEL HR		3	60	+		150	3		PANEL HL				1
11 13 15			PANEL HS		3	90	+		125	3		PANELS LSA,	LSB			1
17 19 21910 21 21910			(1) RTU-9		3	100	+					SPACE SPACE				1 2 2
23 25 9666 27 9666	21910	M M M	(1) RTU-18		3	40	+	+				SPACE SPACE SPACE				2
29	9666	М	00105					+				SPACE				3
31 33			SPACE SPACE				+ +					SPACE SPACE				3
35			SPACE					+				SPACE				3
37			SPACE				+	т				SPACE				3
39			SPACE				-					SPACE				4
41			SPACE					+				SPACE				2
			FEED THRU	SUBFEED	FEE	DER]	[GENERA	L NOTES:		
LOAD TYPE	PANEL TO	JTAL	TOTAL	TOTAL		OTAL	DEM	AND	FEEDEF	R TOTAL		A. BOLD LO	DADS ARE REVIS	SED.		
) LIGHTING		0			0		12	%		0		В.				
R) RECEPTACLES		0			0		NEC			0		C.				
M) LARGEST MOTOR		0			0		25			0	ļ	D.				
M) MOTORS (ALL)	94	4728			94728		100			94728	-	E.	ODECIE			
		0			0		100		+	0	-		E NEW CIRCUIT	C NOTES:		
A) APPLIANCES	<u> </u>	U) TAL (K		94	4.7		(1) PROVID (2) (3)				
					PAN		TAL (A):	1	14		(4)				

PANEL:			LHA									-	<u> </u>		120/208	V, 3P	H, 4V	/	
			= = = = = = = = = = = = = = = = = = = =				-				-	MBU	S:		100				
LOCATION:			ELEC 19							MA					100/3 C	В			
MOUNTING:			SURFAC	E			J			MI	IIMUI	M AIC):		7,617A				
NO. A B	СТ	YPE	LOAD DES	CRIPTION	BRE. POLE	AKER TRIP	A	BUS B	С	BRE/	KER POLE	TYPE	LOAI	D DES	CRIPTION	A	LOAD B	С	NO.
1 A B	C		RPT C122, C1	16 C117	1	20	+	Б	C	20	FOLE 1		VENDIN	G C1	12	A	D	C	2
3			RPT SAWS C1	,	1	20		+		20	1		VENDIN						4
5			RPT SAWS C1		1	20			+	20	1		VENDIN						6
7			RPT SAWS C1		1	20	+			20	1		VENDIN		-				8
9			000 447 0 000		_			+		20	1		SOUND	SYS	C114				10
11			220 117 SAW		2	20			+	20	1		SOUND	SYS	C114				12
13			RPT		1	20	+			20	1		RPT C1	13					14
15			RPT		1	20		+		20	1		VOICE S	SYSTE	EM C113				16
17			RPT C124		1	20			+	20	1		VOICE S	SYSTE	EM C113				18
19			RPT C123		1	20	+			20	1		RPT AU	DIO C	:114				20
21			RPT C123		1	20		+		20	1		RPT AU						22
23			EF-6		1	20			+	20	1		ROLL U	P DO	OR				24
25			EF-7		1	20	+												26
27			2 CUH-1 VEST	, C110	1	20		+		50	3		LTG BO	ARD					28
29			RPT		1	20			+										30
31			RPT C127		1	20	+			20	1		CAFETE					-	32
33			RPT C125		1	20		+		20	1		CAFETE						34
35			SPACE						+	20	1		CAFETE			_			36
37			SPACE SPACE				+			20	1	6	CAFETE				4000		38
39								+		20	1	R E	(1) SEA	TING	REC		1080	2200	40
41 43			SPACE SPACE				+		+	40	3	E	(0) 1/0-			3200		3200	42 44
45			SPACE				-	+		40	3	E	(2) K07:	FREE	ZER	3200	3200		44
47			SPACE						+			-	SPACE				5200		48
••			0.7.02										0.7.02						
LOAD TYPE	PANEL TO	DTAL	FEED THRU TOTAL	SUBFEED TOTAL		EDER FOTAL		DEMAND)	FEEDEF	TOTAL		A. E		GENERA	-	:5:		
L) LIGHTING		0			0			125%			0		B.						
R) RECEPTACLES	1	1080			1080		1	NEC 220)		1080		C.						
.M) LARGEST MOTOR		0			0			25%			0		D.						
M) MOTORS (ALL)		0			0			100%			0		E.						
E) EQUIPMENT	ę	9600			9600			100%			9600				SPECIFI		-		
A) APPLIANCES		0			0			0			0		. ,		DAD UTILIZES EX				
					PAN		TAL	(KVA	A) :	10	.7		(2) F (3)	PROVID	E NEW CIRCUIT	BREAKE	R FOR NE	W LOAD	
										3	•		(4)						
						IEL TO	ΓΔΙ	(\ \ \		i 3	U		(5)						

PANE				LHB							VO	LTAG	E:		120/208	V, 3P	Ή, 4۷	V	
FAINE	-L.			LUD							MIN	VIMU	MBU	S:	100				
LOCA	ATION:			ELEC 19	5A						MA	JN:			60/3 CB				
MOUI	NTING:			SURFAC	E						MIN	UMI	M AIC):	7,617A				
NO.	LOAD A B	С	TYPE	LOAD DES	CRIPTION	BRE/	AKER TRIP	A	BUS B	С	BRE/	AKER POLE	TYPE	LOAD DES	CRIPTION	A	LOAD B	С	NC
1		U		FUTURE STA	GELTGS	1	20	+		0	20	1		SERVING C10	6		D	U	2
3				FUTURE STA		1	20	-	+		20	1		SERVING C10	-				4
5				FUTURE STA	GE LTGS	1	20			+	20	1		SERVING C10	6, POP				6
7				VEDNOR		1	20	+			30	1		SERVING C10	,				8
9				UV-4		1	20		+		30	1		SERVING C10	6				1(
11				EF-19		1	20			+	30	1		FOOD SERVIC	CE CART				12
13				CP RTU-7,8		1	20	+			20	1		FLOOR SCRU	BBER				14
15				HALL VENDIN	G MACH	1	20		+		20	1		FLOOR SCRU	BBER				16
17				HALL VENDIN		1	20			+	20	1	М	(2) EF-29				864	18
19				HALL VENDIN		1	20	+			20	1	М	(2) ROOF REC	;	360			20
21				HALL VENDIN		1	20		+					SPACE					22
23				HALL VENDIN		1	20			+				SPACE					24
25 27	1104		M	HALL VENDIN		1	20 20	+						SPACE SPACE					26 28
27	1104	1656		(1) EF-32, EF- (1) EF-30	31	1	20		+	+				SPACE					- 20
23		1000	IVI	(I) EF-30			20												50
LOAD	TYPE	PANEL	TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEE SUBT	DER	D	EMAN	D	FEEDER	TOTAL		A. BOLD LC	GENERAL		ES:		
) LIGHTING	G		0			0			125%			0		B.					
R) RECEPT			0			0		N	IEC 22	0		0		C.					
M) LARGE	ST MOTOR		0			0			25%			0		D.					
M) MOTORS	S (ALL)		3984			3984			100%			3984		E.					
E) EQUIPME	ENT		0			0			100%			0			SPECIFIC	NOTE	S:		
A) APPLIAN	ICES		0			0			0			0			AD UTILIZES EXIS				
						PAN	EL TO	TAL	(KV	A):	4.	.0		(2) PROVID (3)	E NEW CIRCUIT E	BREAKE	R FOR NE	EW LOAD	
														(3)					

PANEL:			MP2									GE: M BU	e.		277/480 400	V, 3PH	l, 4W		
LOCATION:			ELEC C	144						MA	-		3.		400 MLO				—
							-												
MOUNTING:			SURFAC	E			J		l	MI	UMIV	M AIC):		8,000A				
LOAD					BREA	AKER		BUS		BREA	KER	TYPE					LOAD		N
NO. A B	С	TYPE	LOAD DES	CRIPTION	POLE	TRIP	А	В	С	TRIP	POLE	TTPE	LOA	AD DES	CRIPTION	Α	В	С	- IN
1 20913		М					+					М				1412			2
3 20913		М	(2) RTU-8		3	100		+		20	3	М	(2) MA	U-2, EF	-48		1412		4
5	20913	М							+			М						1412	
7 10066 9 10066		M				40	+			~~	•	M				12603	12603		
9 10066 11	10066	M	(2) RTU-16		3	40		+	+	60	3	M	(2) RTI	J-6			12603	12603	
13	10000	IVI					+		Ŧ			M				20387		12003	
15			(3) SPARE		3	70	T	+		90	3	M	(1) RT	17		20307	20387		
17			(3) SPARE		Ĭ	10		·	+	50	0	M	(1) KT	J-1			20001	20387	
19 1385		М					+												:
21 1385		М	(1) MAU-1, EF	-47	3	20		+		50	3		(3) SP/	ARE					2
23	1385	М	() -)						+				(-) -						1
25	_						+												2
27			SPARE		3	30		+		30	3		SPARE	1					2
29									+										:
			FEED THRU	SUBFEED	FEE	DER]			GENER	AL NOT	ES:		
LOAD TYPE	PANEL	IOTAL	TOTAL	TOTAL		OTAL		EMAND	,	FEEDER	TOTAL		Α.	BOLD L	DADS ARE REVIS	ED.			
LIGHTING		0			0			125%			0		В.						
) RECEPTACLES		0			0		N	EC 220)		0		C.						
M) LARGEST MOTOR		0			0			25%			0		D.						
N) MOTORS (ALL)		200298			200298		-	100%		2	200298		E.		0.000				
EQUIPMENT		0			0			100%			0								
) APPLIANCES		0			U			0			0		(1)		AD UTILIZES EXI				
					PAN	IEL TO	TAL	(KVA	A):	20	0.3		(2)		E NEW CIRCUIT				
										-			(3)			S. DICEN		// 0. ////L.	
					PAN	IEL TO	TAL	(A):		24	11		(5)						

PANEL:			MP3							LTAC	-		277/480)V, 3PF	H, 4W		
			_						MI	NIMU	MBU	S:	600				
LOCATION:			ELEC AL	.146					MA	IN:			MLO				
MOUNTING:			SURFAC	E					MI	VIMU	m aic):	13,000	4			
NO. A B	С	TYPE	LOAD DES	CRIPTION	BRE/ POLE	AKER TRIP	BUS A B	C		AKER POLE	TYPE	LOAD E	DESCRIPTION	A	LOAD B	С	N
1 4986 3 4986 5	4986	M M M	(2) RTU-3		3	25	+ +	+	50	3		SPARE				-	4
7 9 11			SPARE		3	50	+ +	+	110	3	M M M	(2) RTU-4		25539	25539	25539	
13 33794 15 33794 17	33794	M M M	(2) RTU-1		3	150	+ +	+	60	3		(3) SPARE					•
19 16287 21 16287 23 16287	16287	M M M	(1) RTU-2		3	70	+ +	+	20	3		SPARE				-	
25 27 29			(3) SPARE		3	60	+ +	+	80	3		(3) SPARE					
31 33 35			SPARE		3	70	+ +	+	30	3		(3) SPARE					
37 39 41			SPARE		3	30	+ +	+	90	3		SPARE				-	4
LOAD TYPE	PANEL	TOTAL	FEED THRU	SUBFEED		DER	DEMA		EEEDEE				GENE	RAL NOT	ES:		
-		-	TOTAL	TOTAL		OTAL				-			D LOADS ARE REVI	SED.			
) LIGHTING R) RECEPTACLES		0			0		125% NEC 2			0		В. С.					
M) LARGEST MOTOR		0			0		25%	20		0		D.					
M) MOTORS (ALL)	:	241818			241818		100%	, ,	:	241818		E.					
E) EQUIPMENT		0			0		100%	0	1	0		· · · ·	SPEC	IFIC NOT	ES:		
A) APPLIANCES		0			0		0			0		(1) NEV	V LOAD UTILIZES E>	KISTING CIF		KER	
					PAN	EL TO	TAL (KV	'A):	24	1.8		()	VIDE NEW CIRCUIT				
					PAN	EL TO	TAL (A):		29	9 1		(4)					

PAN	FI-										VC	OLTA	GE:			277/4
1 <i>P</i> AIN					HCA(2)						MI	NIMU	MBL	JS:		250
LOC	ATIC	DN:			ELEC B	134					M	AIN:				MLO
MOL	JNTI	NG:			SURFAC	СE]		М	NIMU	M AI	C:		3,800
NO.		LOAD		TYPE	LOAD DES	CRIPTION		AKER		BUS		AKER	TYPE	LOA	AD DES	SCRIPTION
1	A	В	С				POLE	TRIP	A +	В	C TRIP	POLE		_		
3					(1) SPARE		3	15		+	15	3		(1) SP/	ARE	
5 7									+		F					
9					(1) SPARE		3	15	т	+	15	3		(1) SP/	ARE	
11											F					
13 15 17					(1) SPARE		3	15	+	+	70	3	M M M	(2) RT	J-5	
			∎ ⊤		FEED THRU	SUBFEED	FEE	DER					<u>ואו</u> ר			GE
LC	DAD TYP	E	PANEL	TOTAL	TOTAL	TOTAL	SUBT	OTAL	D	EMAND	FEEDE	R TOTAL	·	Α.	BOLD L	OADS ARE F
(L) LIGHTI			<u> </u>	0			0			125%		0	-	В.		
(R) RECEF (LM) LARG			+	0			0		N	EC 220 25%	_	0	-	C. D.		
(M) MOTO			+	46785			46785			100%		46785	1	E.		-
(E) EQUIP			1	0			0			100%		0	1			SP
(a) appli <i>i</i>	ANCES			0			0			0		0		(1)		USLY USED
							PAN	IEL TO	TAL	(KVA)	: 4	6.8		(2)	PROVIE	DE NEW CIRO
							PAN	IEL TO	TAL	(A):		56		(4) (5)		
PAN	EL:				HL									16.		277/4
LOC		<u></u>			ELEC 40	064						AIN:				200/3
MOL					SURFAC							NIMU	M AI	C:		10,00
NO.		LOAD		TYPE		CRIPTION		AKER		BUS		AKER	TYPE			SCRIPTION
1	А	В	С		EXISTING		POLE	TRIP 20	A +	В	C TRIP	POLE	м	20/		
3					EXISTING		1	20	Ŧ	+	50	3	M	(2) RT	I-10	
5					EXISTING		1	20				-	M	(2) ((1)	5 10	
7					EXISTING		1	20	+				М	_		
9					EXISTING		1	20		+	50	3	M	(2) RT	J-17	
				1	EXISTING		1	20			F	1	Μ	1		
11					EXISTING		1	20	+							
					EXISTING EXISTING		1	20 20	+	+	30	3		(1) SP/		

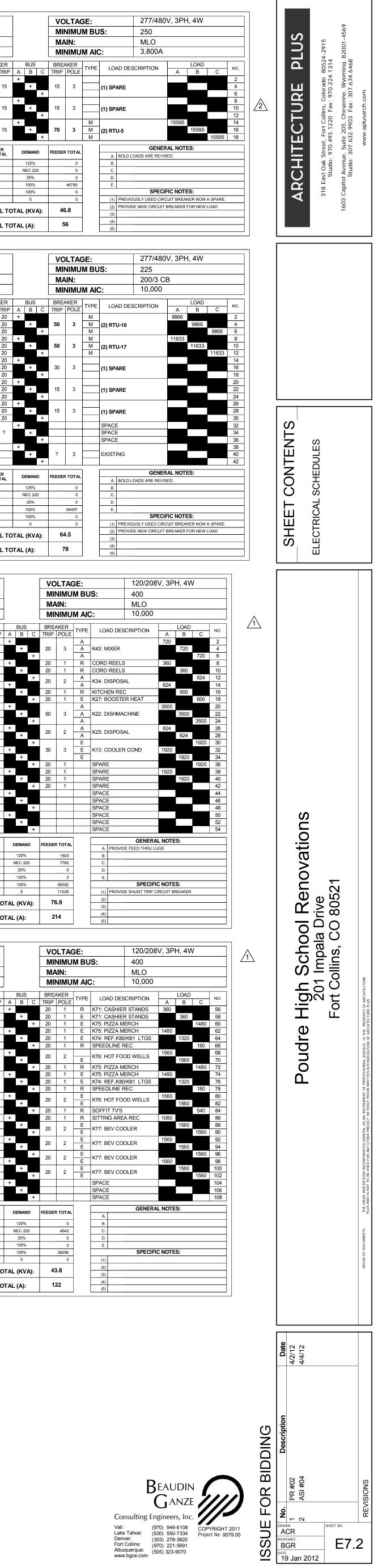
15			EXISTING				20	-	ł	3	0	3	(1) SPAR	E
17			EXISTING				20		-	F				
19			EXISTING				20	+				. –		
21			EXISTING				20	-	ł		5	3	(1) SPAR	E
23 25			EXISTING EXISTING				20 20	+	-	F				-
25			EXISTING				20 20		ł	1	5	3	(4) CDAE	-
29			EXISTING				20				5		(1) SPAR	E
31			Externite			1 4	20	+					SPACE	
33			EXISTING			3	?	_	ł				SPACE	-
35			_							F			SPACE	
37			SPACE					+						
39			SPACE					-	ł	1	?	3	EXISTIN	3
41			SPACE						-	F				
			FEED THRU	SUBFEED		FEEDEF	2							GEN
LOAD TYPE	PANEL	TOTAL	TOTAL	TOTAL		SUBTOT		DEM	AND	FEE	DER TO	TAL	A. B	OLD LOADS ARE RE
) LIGHTING		0)		0			12	5%			0	В.	
R) RECEPTACLES		0)		0			NEC	220			0	C.	
M) LARGEST MOTOR		0)		0			25	5%			0	D.	
M) MOTORS (ALL)		64497	,		644	197		10	0%		644	97	E.	
) EQUIPMENT	_	0			0				0%			0		SPE
) APPLIANCES		0)		0			()	_		0		REVIOUSLY USED CI
					F	PANEL	. то	TAL (M	(VA)	:	64.5			ROVIDE NEW CIRCU
					-			- ,-	. ,	_		-+	(3)	
					F	PANEL	. то	TAL (A):		78		(4)	
													(6)	
										VO	LTAC	GE:		120/208V
PANEL:			KP1							MIN	JIMU	MBL	IS·	400
							-		-					
LOCATION:			KITCHEN				-		L	MA				MLO
MOUNTING:			RECESS	ED						MIN	VIMU	M AI	C:	10,000
LOAD					BRE	AKER	-	BUS		BREA	KED			
NO. A B	C TY	/PE	LOAD DESC	RIPTION	POLE	-	A		С		POLE	TYPE	LOAD DE	SCRIPTION -
1 1600		ΕK	(65: HEATED (CAB	1	20	+		J			А		
3 1200			(61: REFRIGE		1	20		+		20	3	A	K43: MIXER	
5	1200	E K	(55: CONVEC	Γ OVEN	1	20			+			Α	1	
7 600		ΕK	(54: CONVEC	Γ OVEN	1	20	+			20	1	R	CORD REEL	S
9 600		A K	(53: TILTING M	ETTLE	1	20		+		20	1	R	CORD REEL	S
11	600	E ('	1) K52: STEAN	1ER	1	20			+	20	2	Α	K34: DISPOS	SAL
13	_		1) SHUNT TRI	Р			+					Α		
15 1200		E ('	1) K47: RANG	=	1	20		+						
17			1) SHUNT TRI	D					_	20	1	R	KITCHEN RE	
19 1200		E K			4				+	20 20	1 1	E	KITCHEN RE K27: BOOST	
21 600			(44: HOOD & N	/IELINK	1	20	+		+	20	1	E A	K27: BOOST	ER HEAT
23		ΕK	(44: HOOD & N (45: FIRE SUP	/IELINK PRESS	1	20	+					E A A		ER HEAT
	1200	E K	<pre><44: HOOD & N <45: FIRE SUP <57: HOOD & N</pre>	/IELINK PRESS	1 1	20 20			+ +	20	1	E A A A	K27: BOOST	ER HEAT
25 900	1200	E K L K R K	(44: HOOD & M (45: FIRE SUP (57: HOOD & M (ITCHEN REC	/IELINK PRESS	1 1 1	20 20 20	+	+		20	1	E A A A A	K27: BOOST	ER HEAT
23 25 900 27 720 29	1200	E K L K R K R C	<pre><44: HOOD & N <45: FIRE SUP <57: HOOD & N</pre>	/ELINK PRESS /ELINK	1 1	20 20		+	+	20 50	1 3	E A A A	K27: BOOST K22: DISHM/	ER HEAT ACHINE
25 900 27 720	1200 1200 1200	E K R K R C E K	(44: HOOD & M (45: FIRE SUP (57: HOOD & M (ITCHEN REC DFFICE REC	MELINK PRESS MELINK REEZER	1 1 1 1	20 20 20 20		+		20 50	1 3	E A A A A A	K27: BOOST K22: DISHM/	ER HEAT ACHINE SAL
25 900 27 720 29	1200 1200 1200	E K R K R C E K	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC K06: WALKIN F	AELINK PRESS AELINK REEZER COOLER	1 1 1 1	20 20 20 20 20 20	+	+	+	20 50 20	1 3 2	E A A A A E	K27: BOOST K22: DISHM/ K25: DISPOS	ER HEAT ACHINE SAL
25 900 27 720 29 1 31 840	1200 1200 1200	E K R K R C E K E K	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC K06: WALKIN F K12: WALKIN K	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1	20 20 20 20 20 20 20	+	+ +	+	20 50 20	1 3 2	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS	ER HEAT ACHINE SAL
25 900 27 720 29 731 33 696	1200 1200 1200	E K R K R C E K E K E E	K44: HOOD & M K45: FIRE SUF K57: HOOD & M KITCHEN REC DFFICE REC K06: WALKIN F K12: WALKIN C EF-49 DISHWA	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1	20 20 20 20 20 20 20 20	+	+ +	+	20 50 20 30	1 3 2 3	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE	ER HEAT ACHINE SAL
25 900 27 720 29 731 31 840 33 696 35 37 39 5	1200 1200 1200	E K R K R C E K E E S S S	K44: Hood & N K45: Fire Suf K57: Hood & N Kitchen Rec Dffice Rec K06: Walkin F K12: Walkin C EF-49 Dishwa Spare Spare Spare	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+	+ + + +	+ + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE	ER HEAT ACHINE SAL
25 900 27 720 29 731 31 840 33 696 35 37 39 41	1200 1200 1200	E K R K R C E K E K E S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC K06: WALKIN F K12: WALKIN C EF-49 DISHWA SPARE SPARE SPARE SPARE SPARE	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20	+	+ + + +	+	20 50 20 30 20 20	1 3 2 3 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE	ER HEAT ACHINE SAL
25 900 27 720 29 731 31 840 33 696 35 9 39 41 43 9	1200 1200 1200	E K R K R C E K E E S S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC K06: WALKIN F K12: WALKIN K EF-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPARE	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+	+ + +	+ + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	ER HEAT ACHINE SAL
25 900 27 720 29 720 31 840 33 696 35 1 37 1 39 1 41 1 43 1	1200 1200 1200	E K R K R C E K E E S S S S S S S S S S S S S S S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC C06: WALKIN F K12: WALKIN C F-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+	+ + + +	+ + + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPACE SPACE	ER HEAT ACHINE SAL
25 900 27 720 29 731 31 840 33 696 35 7 39 41 43 45 47 43	1200 1200 1200	E K R R C E K E E S S S S S S S S S S S S S S S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC C06: WALKIN F K12: WALKIN K F-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+ + + + +	+ + +	+ + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE	ER HEAT ACHINE SAL
25 900 27 720 29 720 31 840 33 696 35 9 37 9 41 9 45 9 47 9	1200 1200 1200	E K R K R C E K E E S S S S S S S S S S S S S S S S S S	(44: HOOD & N (45: FIRE SUP (57: HOOD & N (ITCHEN REC DFFICE REC (06: WALKIN F (12: WALKIN C (12: WA	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+	+ + +	+ + + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL
25 900 27 720 29 720 31 840 33 696 35 9 37 9 41 9 45 9 47 9 51 9	1200 1200 1200	E K R K R C E E K S S S S S S S S S S S S S S S S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC C06: WALKIN F K12: WALKIN C EF-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+ + + + +	+ + +	+ + + + + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL
25 900 27 720 29 720 31 840 33 696 35 9 37 9 41 9 45 9 47 9	1200 1200 1200	E K R K R C E E K S S S S S S S S S S S S S S S S S S S	(44: HOOD & N (45: FIRE SUP (57: HOOD & N (ITCHEN REC DFFICE REC (06: WALKIN F (12: WALKIN C (12: WA	AELINK PRESS AELINK REEZER COOLER	1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20	+ + + + +	+ + +	+ + + +	20 50 20 30 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL
25 900 27 720 29 720 31 840 33 696 35 7 39 7 41 7 43 43 45 47 49 51 53 7		E K R K R C E K E E S S S S S S S S S S S S S S S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC C06: WALKIN F K12: WALKIN C EF-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 5 7 7 7 7	20 20 20 20 20 20 20 20 20 20 20 20 20 2	+ + + +	+ + + + +	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20	1 3 2 3 1 1 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL R COND
25 900 27 720 29 720 31 840 33 696 35 9 37 9 41 9 45 9 47 9 51 9	1200 1200 1200	E K R K R C E K E E S S S S S S S S S S S S S S S S S S	K44: HOOD & N K45: FIRE SUP K57: HOOD & N KITCHEN REC DFFICE REC K06: WALKIN F K12: WALKIN C EF-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 5 5 8 5 8 5 8	20 20 20 20 20 20 20 20 20 20 20 20	+ + + +	+ + + +	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20	1 3 2 3 1 1 1	E A A A A E E	K27: BOOST K22: DISHM/ K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL R COND GENERAL
25 900 27 720 29 720 31 840 33 696 35 9 37 9 41 4 43 4 45 9 51 53 53 9 LOAD TYPE	1200 1200 1200 0 1200 0 1200 0 1200 120	E K R K R C E K E K E E S S S S S S S S S S S S S S S S S S	K44: HOOD & N K45: FIRE SUF K57: HOOD & N KITCHEN REC DFFICE REC C06: WALKIN F K12: WALKIN C EF-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 5 5 8 5 8 5	20 20 20 20 20 20 20 20 20 20 20 20 20 2	+ + + + +	+ + + + + DEMAND	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20	1 3 2 3 1 1 1 1 1 1 1 1 500	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL R COND GENERAL
25 900 27 720 29 720 31 840 33 696 35 37 39 41 43 44 43 45 47 49 53 53 LOAD TYPE	1200 1200 1200 0 1200 0 1200 0 1200 120	E K K K K K K K K K K K K K K	K44: HOOD & N K45: FIRE SUP K57: HOOD & N KITCHEN REC DFFICE REC C06: WALKIN F C12: WALKIN C F-49 DISHWA SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20 20 2	+ + + + +	+ + + + + DEMAND 125% NEC 220	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20	1 3 2 3 1 1 1 1 1 1 2 7780	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL R COND GENERAL
25 900 27 720 29 720 31 840 33 696 35 37 39 41 43 45 47 49 51 53 53 53 LOLIGHTING R) RECEPTACLES LM) LARGEST MOTOR	1200 1200 1200 0 1200 0 1200 0 1200 120	E K R K R K C C E K E E E S S S S S S S S S S S S S	(44: HOOD & N (45: FIRE SUP (57: HOOD & N (57: HOOD & N (11CHEN REC DFFICE REC (06: WALKIN C (12: WALKIN C SPARE SPARE SPARE SPARE SPARE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20 20 2	+ + + + +	+ + + + + DEMAND 125% NEC 220 25%	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20	1 3 2 3 1 1 1 1 1 1 1 7 780 0	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE SAL R COND GENERAL
25 900 27 720 29 720 31 840 33 696 35 37 39 41 43 44 43 45 47 49 53 53 LoAD TYPE LOAD TYPE L) LIGHTING R) RECEPTACLES LM) LARGEST MOTOR M) MOTORS (ALL)	1200	E K R K R K E K E K E E S S S S S S S S S S S S S S	(44: HOOD & N (45: FIRE SUP (57: HOOD & N (57: HOOD & N (11CHEN REC DFFICE REC (06: WALKIN C (12: WALKIN C SPARE SPARE SPARE SPARE SPARE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20 20 2	+ + + + +	+ + + + DEMAND 125% NEC 220 25% 100%	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20	1 3 2 3 1 1 1 1 1 1 1 7 7 80 0 0	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT ACHINE ACHINE AL R COND GENERAL DE FEED THRU LUG
25 900 27 720 29 720 31 840 33 696 35 7 39 41 43 45 47 49 51 53 53 5	1200 1200 1200 0 1200 0 1200 0 1200 120	E K R K R K R C E K E E S S S S S S S S S S S S S	(44: HOOD & N (45: FIRE SUP (57: HOOD & N (57: HOOD & N (11CHEN REC DFFICE REC (06: WALKIN C (12: WALKIN C SPARE SPARE SPARE SPARE SPARE SPACE	AELINK PRESS AELINK REEZER COOLER SHER SHER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 20 20 20 20 20 20 20 20 20 20 20 20 2	+ + + + +	+ + + + + DEMAND 125% NEC 220 25%	+ + + + + + + + + + + + + + + + + + + +	20 50 20 20 20 20 20 20 20 20	1 3 2 3 1 1 1 1 1 1 1 7 780 0	E A A A A E E	K27: BOOST K22: DISHM/ K25: DISPOS K13: COOLE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	ER HEAT

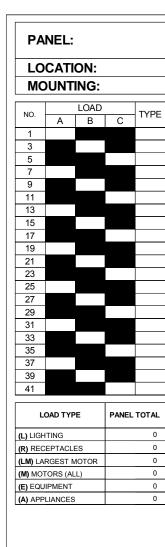
(M) MOTORS (ALL)	0	0		÷			10070			0		E .			
(E) EQUIPMENT	17296	39296		56592			100%			56592	1			SPE	CIFIC
(A) APPLIANCES	15756	0		15756			5			11029	1	(1) PF	ROVID	E SHUNT TF	RIP CI
<u>. , ,</u>						-	0.01	• •	70	5.9		(2)			
				PAN	IEL TO) AL	. (KV	A):		5.9		(3)			
				DAN	IEL TO	Т Л I	(^).		2	14		(4)			
				FAI			. (A).		-			(5)			
PANEL:		1/(D4/(0))]			VO		GE:			120/2	208
FANEL.		KP1(2)							MI	UMIV	MBU	S:		400	
LOCATION:		KITCHE	N						MA	IN:				MLO	
MOUNTING:		RECESS	SED						MI	NIMU	m aic):		10,00)0
LOAD	TYPE			BRE	AKER		BUS		BRE	AKER	TYPE				
NO. A B	C IYPE	LOAD DES	SCRIPTION	POLE	TRIP	Α	В	С	TRIP	POLE	TTPE	LOAD	DES	CRIPTION	N
55 1656	E	K63: ICE MAG	CHINE	1	20	+			20	1	R	K71: CAS	SHIEF	R STANDS	3
57 1600		K65: HEATED		1	20		+		20	1	E			R STANDS	3
59	360 R	CORD REELS		1	20			+	20	1	E	K75: PIZZ			
61 1600	E	K65: HEATED		1	20	+			20	1	E	K75: PIZZ			
63 360	R	K71: CASHIE		1	20	-	+		20	1	E			K81 LTG	S
65 67 1340	600 E E	MOTORIZED	SHUTTER	1	20	+		+	20	1	R	SPEEDLI	NE R	EC	
67 1340 69 1340		K64: DUAL TE		3	20	+	+		20	2	E	K76: HO1	r foc	DD WELLS	3
71 1340	1340 E	K04. DUAL II		3	20		т	+	20	1	R	K75: PIZZ	70 M	ERCH	
73 1340	E					+			20	1	E	K75: PIZZ			
75 1340		K64: DUAL TE	EMP WELL	3	20		+		20	1	E			K81 LTG	s
77	1340 E	1		-				+	20	1	R	SPEEDLI			
79 1200	E	K60: MILK CC	OOLER	1	20	+				_	Е	1/70 1107			
81		SPARE		1	20		+		20	2	Е	K/6: HUI	FOC	DD WELLS	5
83		SPARE		1	20			+	20	1	R	SOFFIT	ΓV'S		
85		SPARE		1	20	+			20	1	R	SITTING	ARE	A REC	
87		SPARE		1	20		+		20	2	E	K77: BE\	/ cod	OLER	
89		SPACE						+		_	E				
91		SPACE				+		1	20	2	E	K77: BE\	/ cod	OLER	
93 95		SPACE SPACE					+	+			E				
93		SPACE				+		Ŧ	20	2	E	K77: BE\	/ CO0	OLER	
99		SPACE					+				E				
101		SPACE						+	20	2	E	K77: BE\	/ COC	OLER	
103		SPACE				+						SPACE			
105		SPACE					+					SPACE			
107		SPACE						+				SPACE			
LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEE	DER		DEMAN	D	FEEDEF					GEN	ERA
	0			0	, -		125%			0	+	A. B.			
(L) LIGHTING (R) RECEPTACLES	4540			4540			NEC 22	0		4540	1	Б. С.			
(LM) LARGEST MOTOR	4340		<u> </u>	0			25%			4540	1	D.			
(M) MOTORS (ALL)	0			0			100%			0	1	E.			
(E) EQUIPMENT	39296			39296			100%			39296	1			SPE	CIFI
	0			0			0		1	0	1	(1)			
(A) APPLIANCES				0			0	۸۱.	4			(1)			

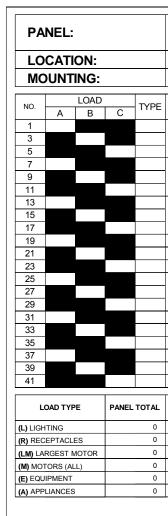
 PANEL TOTAL (KVA):
 43.8

 PANEL TOTAL (A):
 122

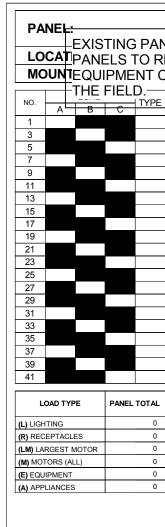
2







PANEL:			(E) MP5								LTAC		10.	277/480 400	V, 3F	PH, 4V	V	
LOCATION:			ELEC G1	41A						MA	-		13:	400 MLO				
MOUNTING:			SURFAC								NIMU	M AIC	C:	9,747A				
NO. A B		TYPE	LOAD DES	CRIPTION	BRE/ POLE	AKER TRIP	A	BUS B	С		AKER	TYPE	LOAD DES	SCRIPTION	A	LOAD B	С	NC
АВ 1 3 5			RTU-15		3	35	+	+	+	90	3		RTU-16		A	В	C	2 4 6
7 9 11			SPACE SPACE SPACE				+	+	+	30	3		RTU-18					8 1 1
13 15 17			EX FAN 12		3	25	+	+	+	20	3		RTU-19					14 10 14
19 21 23			PNL EXT-1		3	100	+	+	+	15	3		EF-13					2 2 2
25			SPACE				+						SPACE					2
27			SPACE					+					SPACE					2
29			SPACE						+				SPACE					3
LOAD TYPE	PANEL T	OTAL	FEED THRU TOTAL	SUBFEED TOTAL		DER TOTAL	D	EMAN	D	FEEDEF	R TOTAL		A.	GENERA		ES:		
) LIGHTING		0			0			125%			0		В.					
R) RECEPTACLES		0			0		N	IEC 22	0		0		C.					
.M) LARGEST MOTOR		0			0			25%			0	-	D.					
M) MOTORS (ALL)		0			0			100%			0	-	E.	ODEOIEI		-0.		
		0			0			100%			0	-	(1)	SPECIFI		:5:		
A) APPLIANCES	<u> </u>	0			-	IEL TO	TAL		A):	0.			(1) (2) (3)					
					ΡΔΝ	IEL TO	тлі	(/).		(0		(4)					



								VO	LTAC	E:		277/480	V, 3F	PH, 4V	V	
	(E) MP3							MI	VIMU	MBU	S:	600				
	ELEC AL	_146						MA	IN:			MLO				
	SURFAC	Έ						MIN	VIMU	M AIC):	13,000A	۱.			
			BREA	AKER		BUS	;	BREA	AKER	7.05			1	LOAD		
PE	LOAD DES	CRIPTION	POLE	TRIP	Α	В	С	TRIP	POLE	TYPE	LOAD DE	SCRIPTION	Α	В	С	NO
	SPACE				+											2
	SPACE					+		50	3		SPARE					4
	SPACE						+									6
					+											8
	SPARE		3	50		+		50	3		RTU-4					10
				L			+									12
					+											14
	RTU-1		3	70		+		60	3		RTU-3					16
							+									18
				+											20	
	RTU-2		70		+		20	3		SPARE					22	
							+									24
					+											26
	RTU-6		3	60		+		80	3		RTU-5					28
							+									30
	00405				+				~		D711.47					32
	SPARE		3	70		+		30	3		RTU-17					34
					+		+									36 38
	SPARE		3	30	Ŧ	+		90	3		SPARE					40
	SPARE		3	30		Ŧ	+	90	3		SPARE					40
							т									42
٩L	FEED THRU	SUBFEED		DER		DEMAN	ID	FEEDER				GENERA	L NOT	ES:		
	TOTAL	TOTAL		OTAL							A.					
0			0		.	125%			0		B.					
0			0			NEC 22	20		0		C.					
0						25%			0		D.					
0		0				100%			0		E.	SPECIFI		-6.		
0		0				100% 0			0			SPECIFI		L3:		
U			5		L	U			U		(1)					
			PAN	IEL TO	TAL	_ (KV	A):	0.	.0		(2)					
				-		•	,				(3)					
			PAN	IEL TO	TAL	_ (A):		()		(4)	_				
					. /-				J	(5)						

					1					_		077/400			,	
	(E) MP4								LTAC		-	277/480	IV, 3P	'H, 4V\	/	
	. ,							MI	VIMU	MBU	S:	800				
	ELEC D'	102						MA	IN:			MLO				
	SURFAC	Έ						MIN	UMI	M AIC):	18,000A	A			
			BRE	AKER		BUS		BREA	KER				1	LOAD		1
/PE	LOAD DES	CRIPTION	POLE		A	B	С		POLE	TYPE	LOAD DI	ESCRIPTION	A	B	С	NO.
					+						SPACE					2
	RTU-10		3	25		+					SPACE					4
							+				SPACE					6
					+											8
	SPARE		3	40		+		70	3		SPARE					10
							+									12
	SPARE		3	100	+			125	3		SPARE					14 16
	JFARE		3	100		+	+	120	3		OPARE					18
	SPACE				+											20
	SPACE					+		200	3		RTU-14					22
	SPACE						+		-							24
					+											26
	AIR COMPRE	SSOR	3	20		+		175	3		RTU-12					28
							+	1								30
	SPACE				+											32
	SPACE					+		150	3		RTU-11					34
	SPACE						+									36
	SPACE				+											38
	SPACE					+		125	3		RTU-13					40
	SPACE						+									42
AL	FEED THRU	SUBFEED	FEE	DER				FFFDFF	TOTAL			GENERA	L NOT	ES:		
AL	TOTAL	TOTAL	SUBT	OTAL	- L	DEMAN	ID.	FEEDEF	TOTAL		A.					
0			0			125%			0		В.					
0			0		1	NEC 22	20		0		C.					
0			0			25%			0		D.					
0			0			100%			0		E.					
0			0			100%			0			SPECIFIC NOTES:				
0			0			0			0		(1)					
			PAN	IEL TO	TAL	. (KV	A):	0.	0		(2)					
						,	.,.				(3)					
			PAN	IEL TO	TAL	. (A):		()		(4)					
						. /				J	(5)					

					1			VO	LTAC	E:		277/480	V, 3P	H, 4W		
	(E) SDB-	-1			<u> </u>						<u>.</u>					
												NLY EXIST				
												MECHANIC				
ТC	HANGES	ARE SH	OWN	HEF	RE.	CO	NFI	RM A	NLL E	XIST	ING CC	ONDITIONS	IN_			
			BREA	VKEB		BUS		BREA	KER				1			
/PE	LOAD DES	CRIPTION	POLE		A	B			POLE	TYPE	LOAD D	ESCRIPTION	A	B	С	NO.
					+									_	-	2
	PANEL MP5		3	225		+		300	3		DIST PANE	EL SDB-2				4
	1						+									6
					+											8
	PANEL HR		3	60		+		150	3		PANEL HL					10
							+									
					+			405	•							
	PANEL HS		3	90		+	+	125	3		PANELS L	SA, LSB				-
	SPACE				+		Ŧ				SPACE					-
	SPACE					+					SPACE					-
	SPACE				+				SPACE					24		
	SPACE				+						SPACE					26
	SPACE					+					SPACE					28
	SPACE						+				SPACE					30
	SPACE				+		_				SPACE					32
	SPACE					+					SPACE					34
	SPACE					-	+				SPACE					
	SPACE				+						SPACE					
	SPACE SPACE					+					SPACE SPACE		-			-
	SPACE						+				SPACE					42
TAL	FEED THRU TOTAL	SUBFEED TOTAL	FEE SUBT	DER	D	EMAN	ID	FEEDER	TOTAL			GENERA	L NOTE	S:		
0	-	-	0			125%			0		A. B.					
0			0		N	IEC 22	20		0		C.					
0			0			25%			0		D.					
0			0			100%			0		E.	_				
0			0			100%			0			SPECIFI	C NOTE	S:		
0						0			0		(1)					
			PAN	EL TO	TAL	(KV	A):	0.	0		(2)			LOAD A B C NO. A B C 2 4 4 6 8 10 12 14 16 18 20 22 24 4 10 12 14 16 18 20 22 24 24 26 28 30 30 32 34 36 38 40 40 42 OTES:		
			<u> </u>								(3)					
			PAN	EL TO	TAL	(A):		0)		(4)					
			L								(3)					

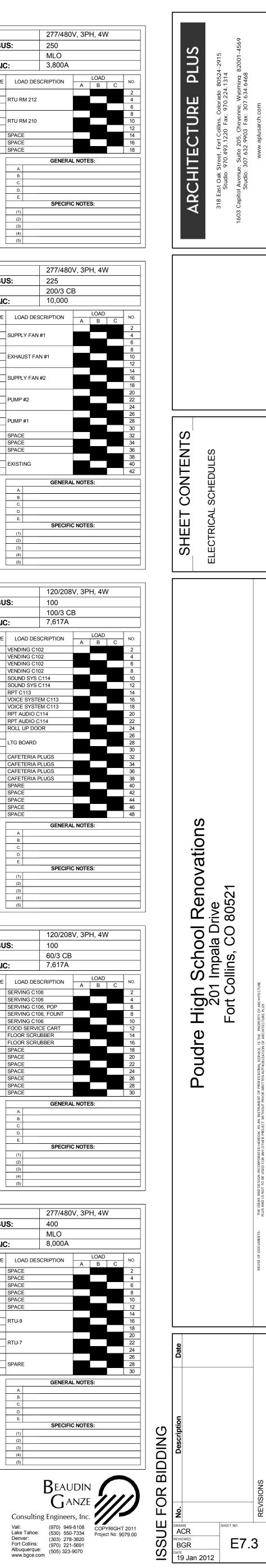
PANEL:				(0)						VO	LTAC	SE:			277/4
PANEL:			(E) HCA	(2)						MI	NIMU	MBU	S:		250
LOCATION:			ELEC B'	34			1			MA	IN:				MLO
MOUNTING:			SURFAC	E			1			MI	NIMU	M AIC):		3,800
LOAD					BREA	AKER	-	BUS		BRE	AKER				
NO. A B	С	TYPE	LOAD DES	CRIPTION	POLE		Α	В	С	TRIP	POLE	TYPE	LOAD E	DESC	CRIPTION
1							+								
3			RTU RM 206		3	15		+	+	15	3		RTU RM 2	12	
7 9 11			RTU RM 204		3	15	+	+	+	15	3		RTU RM 2	10	
13							+						SPACE		
15			RTU RM 208		3	15		+					SPACE		
17									+				SPACE		
LOAD TYPE	PANEL	TOTAL	FEED THRU TOTAL	SUBFEED TOTAL		DER		DEMAN	D	FEEDER					GENE
4.5.1.01177010		0	TOTAL	TOTAL	0			125%			0		A.		
(L) LIGHTING (R) RECEPTACLES		0			0		,	125% NEC 22	0		0		В. С.		
(LM) LARGEST MOTOR		0			0			25%	.0		0		0. D.		
(M) MOTORS (ALL)		0			0			100%			0		E.		
(E) EQUIPMENT		0			0			100%			0			_	SPEC
(A) APPLIANCES		0			0			0			0		(1)		
					DAN	ELTO	тлі		۷۱۰	0	.0		(2)		
					FAI			. (NV)	ну.		.0		(3)		
					PAN	EL TO	TAL	(A):		(D		(4)		
													(5)		

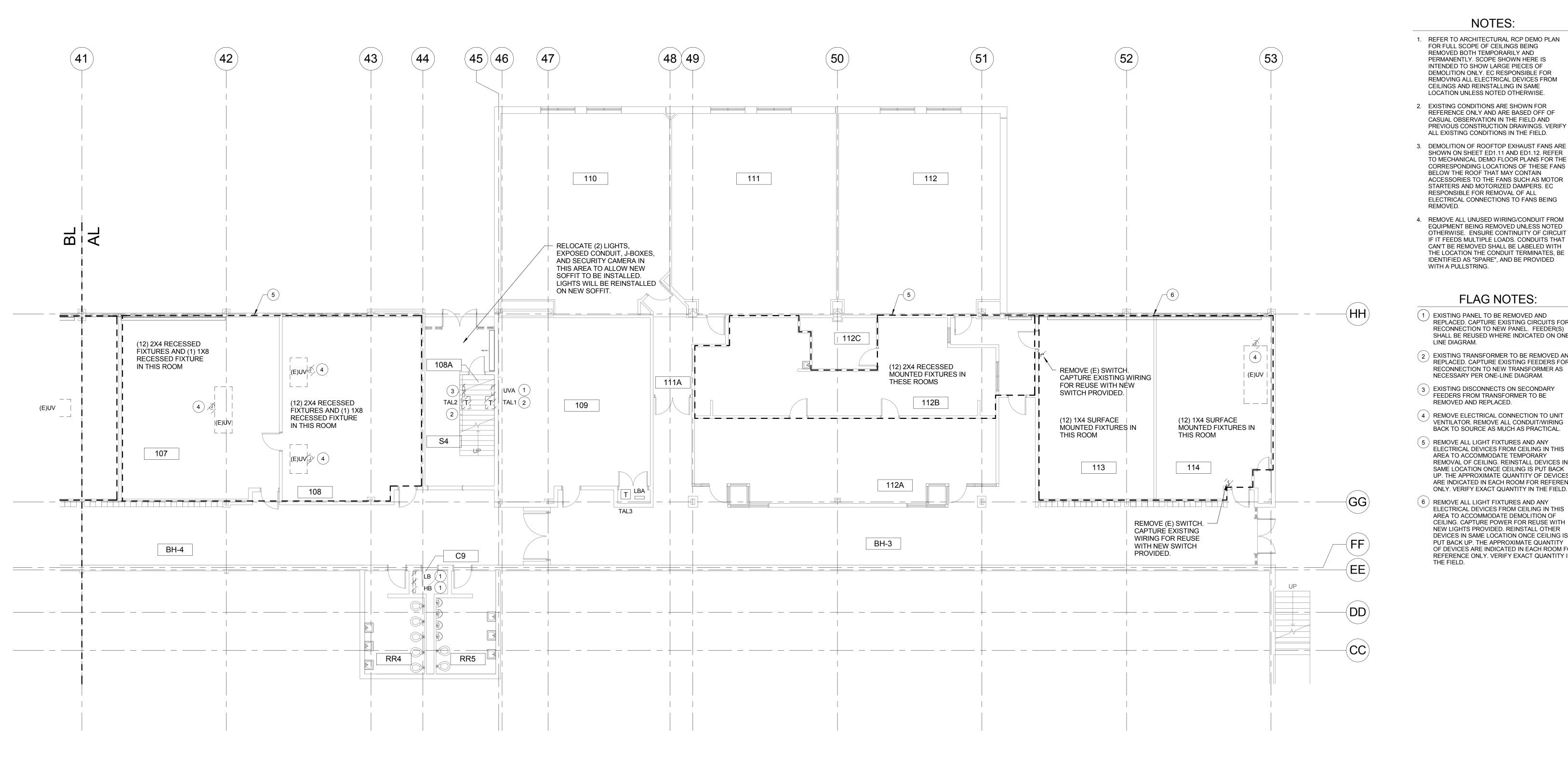
PA	NEL:				(E) HL									<u>GE:</u> M BU	e.		277/4 225
	CAT				ELEC 40	060							IN:		З.		225
MC	UNT	ING:			SURFAC	E			J			MI	NIMU	M AIC):		10,00
NO.	A	LOAD B	С	TYPE	LOAD DES	CRIPTION	BRE/	AKER TRIP	A	BUS B	С	BRE/	AKER POLE	TYPE	LOA	AD DES	CRIPTION
1		_	-		EXISTING		1	20	+		-						
3					EXISTING		1	20		+		30	3		SUPPL	Y FAN	#1
5					EXISTING		1	20			+						
7					EXISTING		1	20	+								
9					EXISTING		1	20		+		30	3		EXHAL	JST FA	N #1
11					EXISTING		1	20			+						
13					EXISTING		1	20	+								
15					EXISTING		1	20		+		30	3		SUPPL	Y FAN	#2
17					EXISTING		1	20			+						
19					EXISTING		1	20	+								
21					EXISTING		1	20		+		15	3		PUMP	#2	
23					EXISTING		1	20			+						
25					EXISTING		1	20	+								
27					EXISTING		1	20		+		15	3		PUMP	#1	
29					EXISTING		1	20			+						
31									+						SPACE	Ξ	
33					EXISTING		3	?		+					SPACE	E	
35											+				SPACE	=	
37					SPACE				+		_						
39					SPACE					+		?	3		EXISTI	ING	
41					SPACE						+						
		PF	PANEI	TOTAL	FEED THRU	SUBFEED		DER	г	DEMAN	ID	FEEDER	R TOTAL]			GENE
	-				TOTAL	TOTAL		OTAL							Α.		
(L) LIGH				0			0			125%			0		В.		
(R) REC				0			0			NEC 22	20		0		C.		
(LM) LA				0			0			25%			0		D.		
(M) MOT				0			0			100%			0	-	E.		
(E) EQU				0			0			100%			0	-			SPEC
(A) APP	LIANCES	3		0			0			0			0	-	(1)		
							PAN	IEL TO	TAL	. (KV	A):	0	.0		(2)		
							<u> </u>	-		•	,			-	(3)		
							PAN	IEL TO	TAL	. (A):		(D		(4)		
										. /				J	(5)		

					1				1								
PA	NEL				(E) LHA								DLTAC				120/
	~ • T				. ,								NIMU	MBU	IS:		100
LO	CAT	ION:			ELEC 19	5A						NI/	AIN:				100/
MC	DUNT	ING:			SURFAC	Е						MI	NIMU	M AI):		7,61
NO.	A	LOAD B	С	TYPE	LOAD DES	CRIPTION	BRE/	AKER TRIP	A	BUS B	С	BRE. TRIP	AKER	TYPE	LOA	D DES	SCRIPTIC
1			Ū		RPT C122, C1	16 C117	1	20	+		0	20	1		VENDI	NG C1	02
3					RPT SAWS C		1	20		+		20	1		VENDI		
5					RPT SAWS C		1	20			+	20	1		VENDI		
7					RPT SAWS C		1	20	+			20	1		VENDI		-
9					14 1 0/ 000 0			20		+		20	1		SOUNE		
11					220 117 SAW		2	20			+	20	1		SOUNE		
13					RPT		1	20	+		т	20	1		RPT C		0114
15					RPT		1	20		+		20	1				EM C113
17					RPT C124		1	20		т	+	20	1				EM C113
17					RPT C124		1	20	+		Ŧ	20	1		RPT A		
-							-	-	Ŧ			-					
21					RPT C123		1	20		+		20	1		RPT A		
23					EF-6		1	20			+	20	1		ROLL	JP DO	OR
25					EF-7		1	20	+								
27					2 CUH-1 VES	Г, C110	1	20		+		50	3		LTG B	DARD	
29					RPT		1	20			+						
31					RPT C127		1	20	+			20	1		CAFET	ERIA I	PLUGS
33					RPT C125		1	20		+		20	1		CAFET	ERIA I	PLUGS
35					SPACE						+	20	1		CAFET	ERIA I	PLUGS
37					SPACE				+			20	1		CAFET	'ERIA I	PLUGS
39					SPACE					+		20	1		SPARE	-	
41					SPACE						+				SPACE		
43					SPACE				+						SPACE		
45					SPACE					+					SPACE		
47					SPACE						+				SPACE		
			-	TOTAL	FEED THRU	SUBFEED	FEE	DER				FFFFF]			GEN
	OAD TY	PE	PANEL	TOTAL	TOTAL	TOTAL	SUBT	OTAL		EMAN	D	FEEDER	R TOTAL		Α.		
(L) LIGH	ITING			0			0			125%			0	1	В.		
(R) REC		ES		0			0		Ν	NEC 22	0		0	1	C.		
(LM) LA				0			0			25%			0	1	D.		
(M) MOT				0			0			100%			0		E.		
(E) EQU				0			0			100%			0				SPE
(A) APP				0			0			0			0		(1)		
							DAN	IEL TO	тлі		۷۱۰	0	.0		(2)		
										(114)	-y.	L	-		(3)		_
							PAN	IEL TO	TAL	(A):			0		(4)		_
														J	(5)		

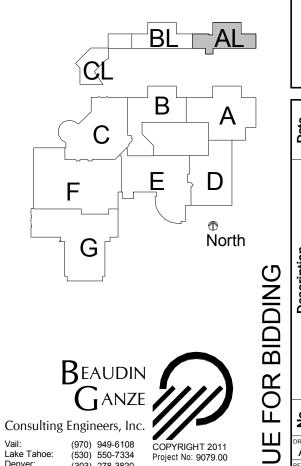
PAN	FI ·											VC	LTA	GE:			120/2
					(E) LHB							MI	NIMU	MBU	S:		100
LOC	ATION:				ELEC 19	5A						MA	NN:				60/3
MOU	INTING	:			SURFAC	E						MI	NIMU	M AIC):		7,61
	LOA	D		7 (05		ODIDTION	BREA	KER		BUS		BRE	AKER	7.05	1.045		
NO.	A B		С	TYPE	LOAD DES	CRIPTION	POLE	TRIP	Α	В	С	TRIP	POLE	TYPE	LOAL	D DES	SCRIPTIO
1					FUTURE STA	GE LTGS	1	20	+			20	1		SERVIN	G C10	06
3					FUTURE STA	GE LTGS	1	20		+		20	1		SERVIN	G C10	06
5					FUTURE STA	GE LTGS	1	20			+	20	1		SERVIN	G C10	06, POP
7					VEDNOR		1	20	+			30	1		SERVIN	G C10	06, FOUN
9					UV-4		1	20		+		30	1		SERVIN	G C10	06
11					EF-19		1	20			+	30	1				CE CART
13					CP RTU-7,8		1	20	+			20	1		FLOOR	SCRI	JBBER
15					HALL VENDIN		1	20		+		20	1		FLOOR	SCRI	JBBER
17					HALL VENDIN		1	20			+				SPACE		
19		_			HALL VENDIN	IG MACH	1	20	+						SPACE		
21					HALL VENDIN	IG MACH	1	20		+					SPACE		
23					HALL VENDIN		1	20			+				SPACE		
25					HALL VENDIN	IG MACH	1	20	+						SPACE		
27					SPARE		1	20		+					SPACE		
29					SPARE		1	20			+				SPACE		
LOA	D TYPE	Р	ANEL	TOTAL	FEED THRU	SUBFEED		DER	D	EMAN	ID	FEEDEF]			GEN
					TOTAL	TOTAL	SUBT	UTAL							A.		
(L) LIGHTIN				0			0			125%			0	4	В.		-
(R) RECEP				0			0		١	NEC 22	20		0		C.		
	EST MOTOR	!		0			0			25%			0	-	D.		
(M) MOTOR				0			0			100%			0	-	E.		
(E) EQUIPN				0			0			100%			0	-			SPE
(A) APPLIA	NCES			0			0			0			0	-	(1)		
							PAN	EL TO	TAL	(KV	A):	0	.0		(2)		
													•	1	(4)		
							PAN	EL TO	TAL	(A):			0		(5)		

PANEL:										VO	LTAC	E:			277/
PANEL:			(E) MP2							MI	VIMU	MBU	S:		400
LOCATION:			ELEC C	114A						MA	IN:				MLC
MOUNTING:			SURFAC	ЭE						MI	VIMU	M AIC):		8,00
NO. LOAD		TYPE		SCRIPTION	BREA	AKER		BUS		BREA	AKER	TYPE		DES	CRIPTIO
A B	С	TIFE		CRIFIION	POLE	TRIP	Α	В	С	TRIP	POLE	ITFE		DEG	
1			SPACE				+						SPACE		
3			SPACE					+					SPACE		
5			SPACE						+				SPACE		
7			SPACE				+						SPACE		
9			SPACE					+					SPACE		
11			SPACE						+				SPACE		
13							+								
15			RTU-8		3	70		+		90	3		RTU-9		
17									+						
19							+								
21			SPARE		3	20		+		50	3		RTU-7		
23									+						
25							+								
27			SPARE		3	30		+		30	3		SPARE		
29									+						
LOAD TYPE	PANEL	TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEE SUBT		D	EMAN	D	FEEDER					GEN
			TOTAL	TOTAL									Α.		
(L) LIGHTING		0			0			125%			0		B.		
(R) RECEPTACLES		0			0		N	NEC 22	20		0		C.		
(LM) LARGEST MOTOR		0			0			25%			0		D.		
(M) MOTORS (ALL)		0			0		-	100%			0		E.		
(E) EQUIPMENT		0			0			100%			0				SPE
(A) APPLIANCES		0			0			0			0		(1)		
					PAN	EL TO	TAL	(KV	A):	0.	.0		(2)		
									,				(3)		
)		(4)		





1) AREA AL ELEC DEMO PLAN 1/8" = 1'-0"





NOTES:

PERMANENTLY. SCOPE SHOWN HERE IS INTENDED TO SHOW LARGE PIECES OF DEMOLITION ONLY. EC RESPONSIBLE FOR REMOVING ALL ELECTRICAL DEVICES FROM CEILINGS AND REINSTALLING IN SAME

REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.

SHOWN ON SHEET ED1.11 AND ED1.12. REFER TO MECHANICAL DEMO FLOOR PLANS FOR THE CORRESPONDING LOCATIONS OF THESE FANS BELOW THE ROOF THAT MAY CONTAIN ACCESSORIES TO THE FANS SUCH AS MOTOR STARTERS AND MOTORIZED DAMPERS. EC ELECTRICAL CONNECTIONS TO FANS BEING

4. REMOVE ALL UNUSED WIRING/CONDUIT FROM EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED

FLAG NOTES:

(1) EXISTING PANEL TO BE REMOVED AND REPLACED. CAPTURE EXISTING CIRCUITS FOR RECONNECTION TO NEW PANEL. FEEDER(S) SHALL BE REUSED WHERE INDICATED ON ONE-

2 EXISTING TRANSFORMER TO BE REMOVED AND REPLACED. CAPTURE EXISTING FEEDERS FOR RECONNECTION TO NEW TRANSFORMER AS NECESSARY PER ONE-LINE DIAGRAM.

FEEDERS FROM TRANSFORMER TO BE

BACK TO SOURCE AS MUCH AS PRACTICAL.

ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE TEMPORARY REMOVAL OF CEILING. REINSTALL DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN THE FIELD.

ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE DEMOLITION OF CEILING. CAPTURE POWER FOR REUSE WITH NEW LIGHTS PROVIDED. REINSTALL OTHER DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN

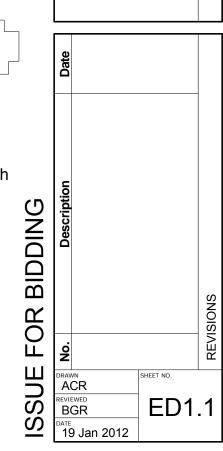


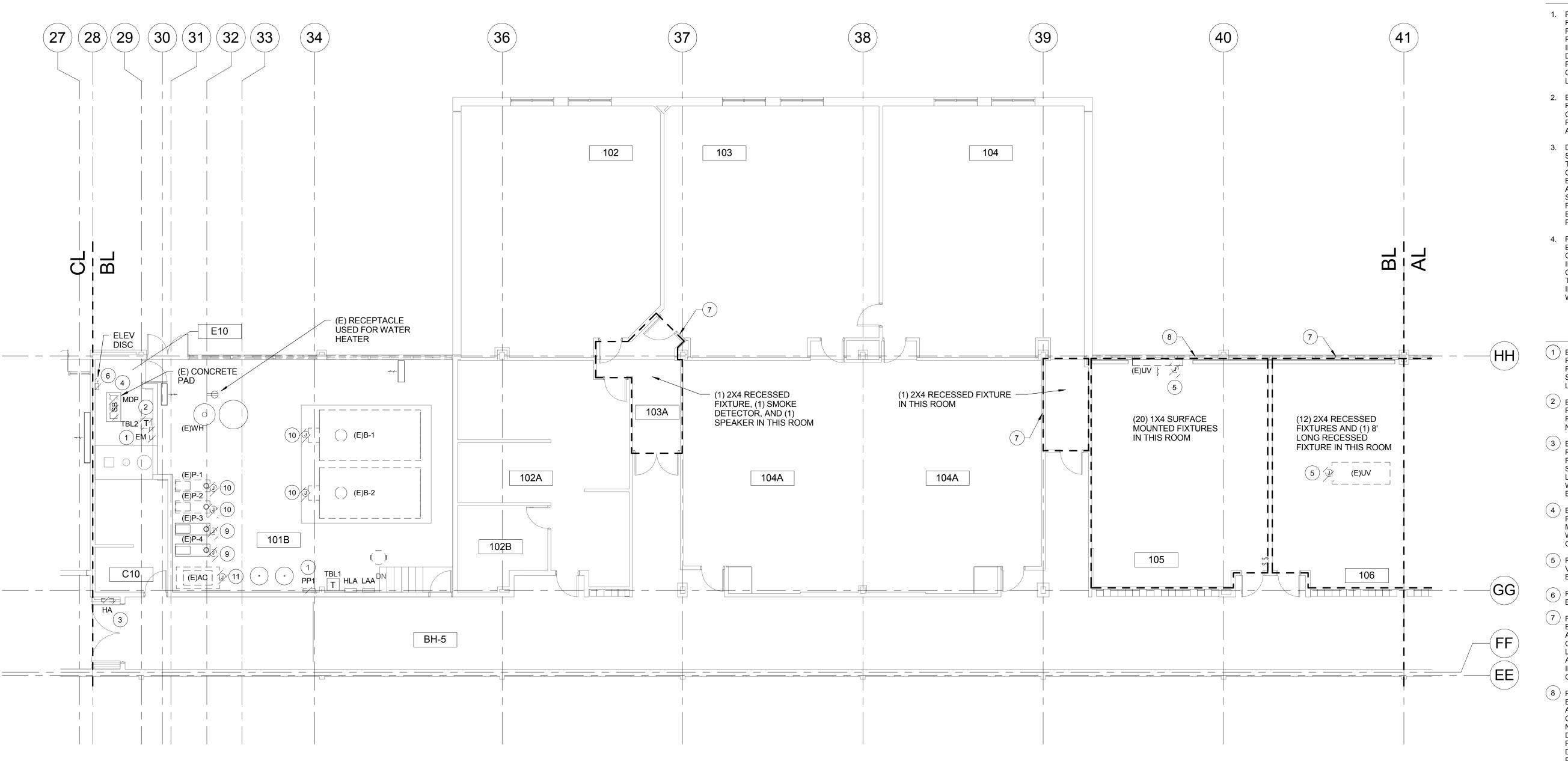
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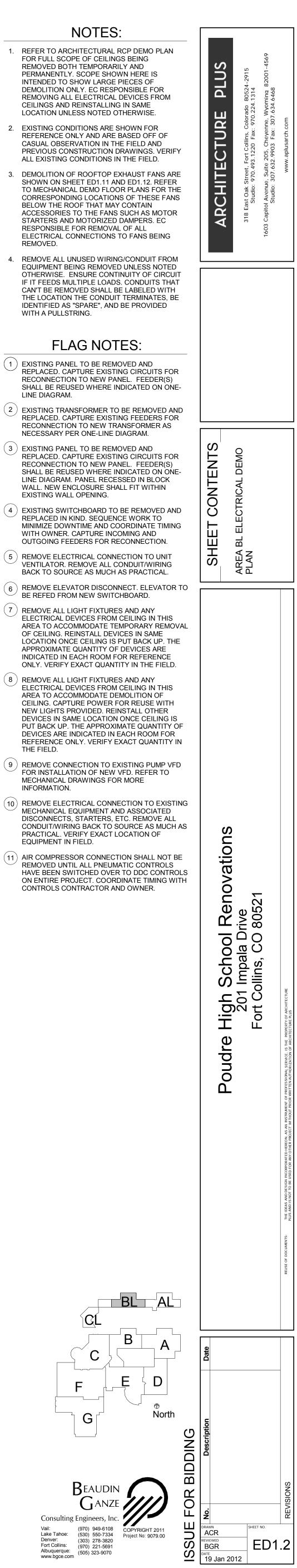
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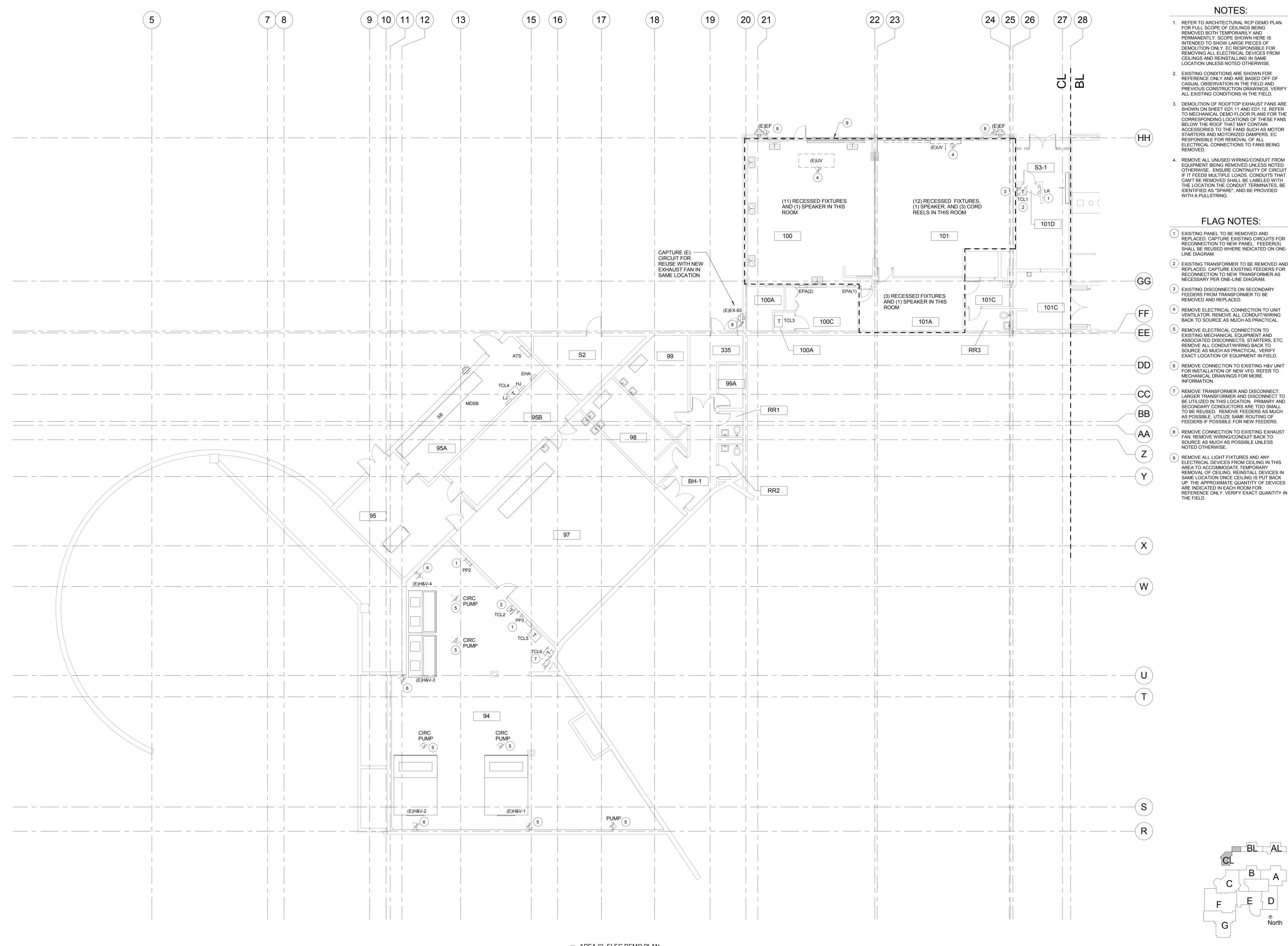




1 AREA BL ELEC DEMO PLAN / 1/8" = 1'-0"

- WITH A PULLSTRING. LINE DIAGRAM.
- THE FIELD. INFORMATION. EQUIPMENT IN FIELD.





1 AREA CL ELEC DEMO PLAN 1/8" = 1'-0"

Beaudin
GanzeConsulting Engineers, Inc.Vail:
Lake Tahoe:
Denver:
Fort Collins:
Albuquerque:
www.bgce.com(970)
(500)
(501)
(505)
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NOTES: FOR FULL SCOPE OF CEILINGS BEING PERMANENTLY. SCOPE SHOWN HERE IS

INTENDED TO SHOW LARGE PIECES OF DEMOLITION ONLY. EC RESPONSIBLE FOR REMOVING ALL ELECTRICAL DEVICES FROM CEILINGS AND REINSTALLING IN SAME LOCATION UNLESS NOTED OTHERWISE.

REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.

SHOWN ON SHEET ED1.11 AND ED1.12. REFER TO MECHANICAL DEMO FLOOR PLANS FOR THE CORRESPONDING LOCATIONS OF THESE FANS BELOW THE ROOF THAT MAY CONTAIN ACCESSORIES TO THE FANS SUCH AS MOTOR STARTERS AND MOTORIZED DAMPERS. EC RESPONSIBLE FOR REMOVAL OF ALL ELECTRICAL CONNECTIONS TO FANS BEING

4. REMOVE ALL UNUSED WIRING/CONDUIT FROM EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED

FLAG NOTES:

REPLACED. CAPTURE EXISTING CIRCUITS FOR RECONNECTION TO NEW PANEL. FEEDER(S) SHALL BE REUSED WHERE INDICATED ON ONE-

(2) EXISTING TRANSFORMER TO BE REMOVED AND REPLACED. CAPTURE EXISTING FEEDERS FOR RECONNECTION TO NEW TRANSFORMER AS NECESSARY PER ONE-LINE DIAGRAM.

FEEDERS FROM TRANSFORMER TO BE

VENTILATOR. REMOVE ALL CONDUIT/WIRING BACK TO SOURCE AS MUCH AS PRACTICAL.

) REMOVE ELECTRICAL CONNECTION TO EXISTING MECHANICAL EQUIPMENT AND ASSOCIATED DISCONNECTS, STARTERS, ETC. REMOVE ALL CONDUIT/WIRING BACK TO SOURCE AS MUCH AS PRACTICAL. VERIFY EXACT LOCATION OF EQUIPMENT IN FIELD.) REMOVE CONNECTION TO EXISTING H&V UNIT

FOR INSTALLATION OF NEW VFD. REFER TO MECHANICAL DRAWINGS FOR MORE

REMOVE TRANSFORMER AND DISCONNECT. LARGER TRANSFORMER AND DISCONNECT TO BE UTILIZED IN THIS LOCATION. PRIMARY AND SECONDARY CONDUCTORS ARE TOO SMALL TO BE REUSED. REMOVE FEEDERS AS MUCH AS POSSIBLE. UTILIZE SAME ROUTING OF FEEDERS IF POSSIBLE FOR NEW FEEDERS.

8 REMOVE CONNECTION TO EXISTING EXHAUST FAN. REMOVE WIRING/CONDUIT BACK TO SOURCE AS MUCH AS POSSIBLE UNLESS

9 REMOVE ALL LIGHT FIXTURES AND ANY ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE TEMPORARY REMOVAL OF CEILING. REINSTALL DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN



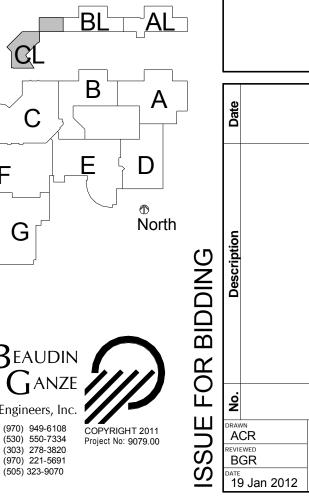
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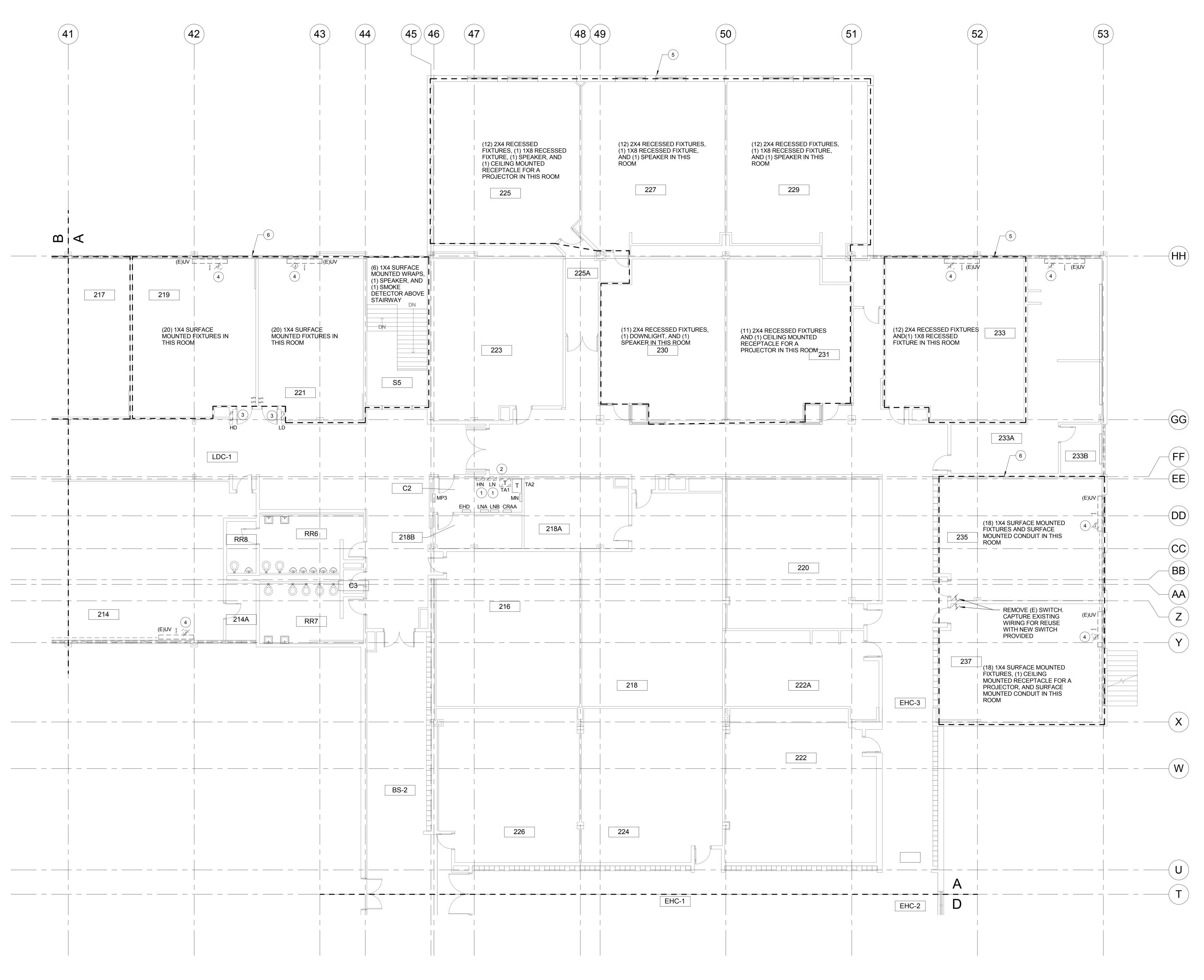
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SHEET NO.

ED1.3



1) AREA A ELEC DEMO PLAN 1/8" = 1'-0"

- CEILINGS AND REINSTALLING IN SAME LOCATION UNLESS NOTED OTHERWISE. 2. EXISTING CONDITIONS ARE SHOWN FOR ALL EXISTING CONDITIONS IN THE FIELD. 3. DEMOLITION OF ROOFTOP EXHAUST FANS ARE
- RESPONSIBLE FOR REMOVAL OF ALL REMOVED. 4. REMOVE ALL UNUSED WIRING/CONDUIT FROM

- LINE DIAGRAM. NECESSARY PER ONE-LINE DIAGRAM. (3) EXISTING PANEL TO BE REMOVED AND EXISTING WALL OPENING. (4) REMOVE ELECTRICAL CONNECTION TO UNIT VENTILATOR. REMOVE ALL CONDUIT/WIRING (5) REMOVE ALL LIGHT FIXTURES AND ANY
- (6) REMOVE ALL LIGHT FIXTURES AND ANY THE FIELD.

G



NOTES:

1. REFER TO ARCHITECTURAL RCP DEMO PLAN FOR FULL SCOPE OF CEILINGS BEING REMOVED BOTH TEMPORARILY AND PERMANENTLY. SCOPE SHOWN HERE IS INTENDED TO SHOW LARGE PIECES OF DEMOLITION ONLY. EC RESPONSIBLE FOR REMOVING ALL ELECTRICAL DEVICES FROM

REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY

SHOWN ON SHEET ED1.11 AND ED1.12. REFER TO MECHANICAL DEMO FLOOR PLANS FOR THE CORRESPONDING LOCATIONS OF THESE FANS BELOW THE ROOF THAT MAY CONTAIN ACCESSORIES TO THE FANS SUCH AS MOTOR STARTERS AND MOTORIZED DAMPERS. EC ELECTRICAL CONNECTIONS TO FANS BEING

EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED WITH A PULLSTRING.

FLAG NOTES:

(1) EXISTING PANEL TO BE REMOVED AND REPLACED. CAPTURE EXISTING CIRCUITS FOR RECONNECTION TO NEW PANEL. FEEDER(S) SHALL BE REUSED WHERE INDICATED ON ONE-

(2) EXISTING TRANSFORMER TO BE REMOVED AND REPLACED. CAPTURE EXISTING FEEDERS FOR RECONNECTION TO NEW TRANSFORMER AS

REPLACED. CAPTURE EXISTING CIRCUITS FOR RECONNECTION TO NEW PANEL. FEEDER(S) SHALL BE REUSED WHERE INDICATED ON ONE-LINE DIAGRAM. PANEL RECESSED IN BLOCK WALL. NEW ENCLOSURE SHALL FIT WITHIN

BACK TO SOURCE AS MUCH AS PRACTICAL.

ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE TEMPORARY REMOVAL OF CEILING. REINSTALL DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN THE FIELD.

ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE DEMOLITION OF CEILING. CAPTURE POWER FOR REUSE WITH NEW LIGHTS PROVIDED. REINSTALL OTHER DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN



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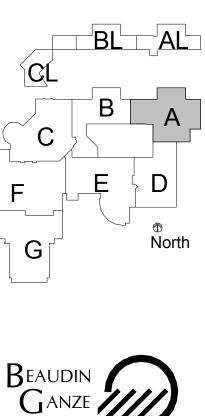


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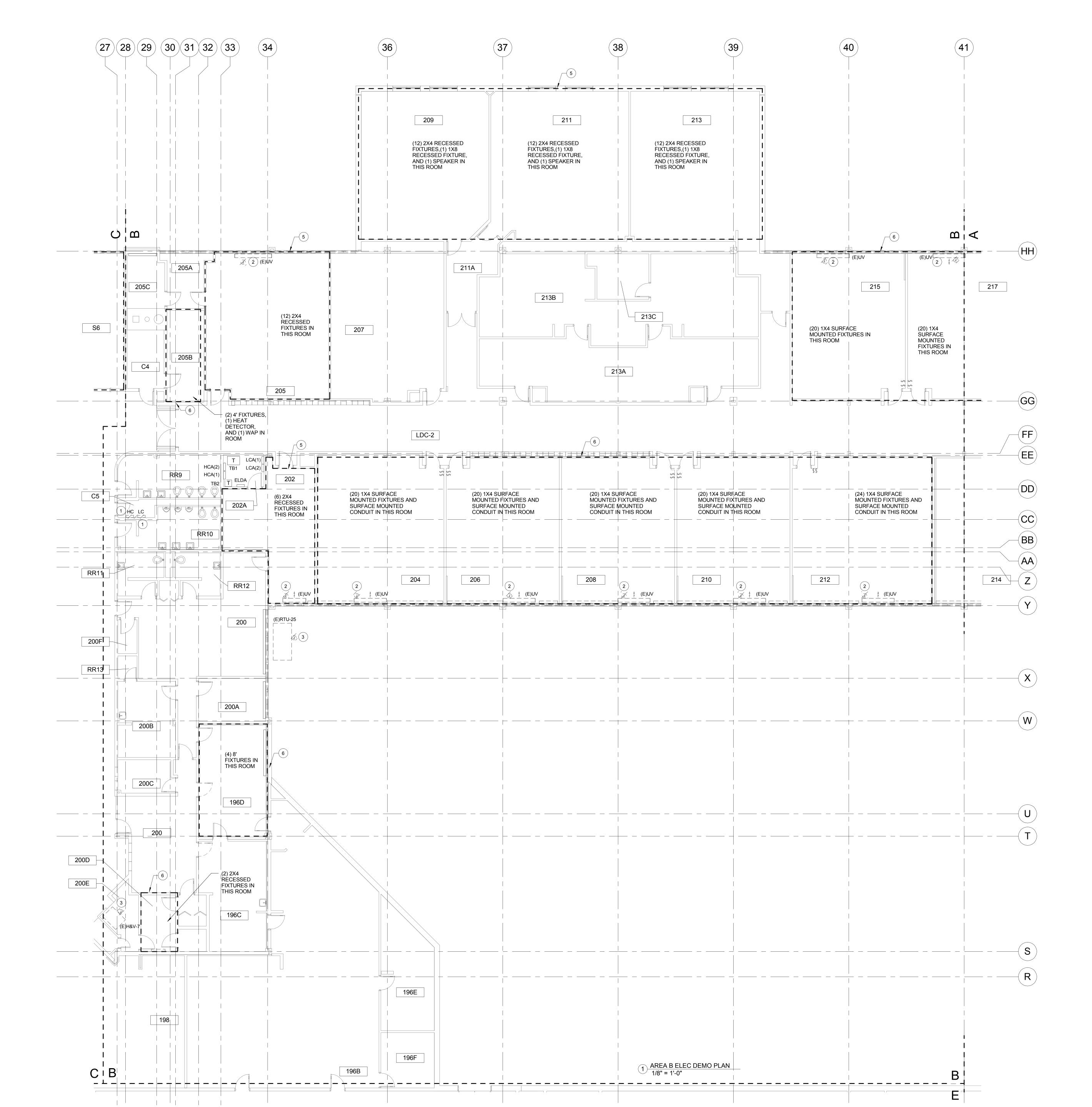
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ED1.4



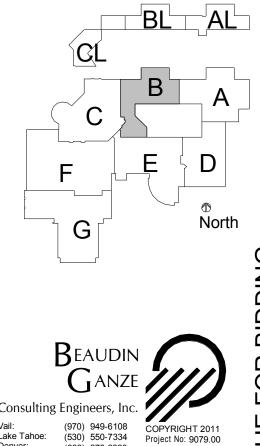
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H B C RAWN A C R M C R VIEWED B G R D ATE 19 Jan 2012



(1) EXISTING PANEL TO BE REMOVED AND ONE-LINE DIAGRAM. (3) REMOVE ELECTRICAL CONNECTION TO (4) NOT USED. ARE INDICATED IN EACH ROOM FOR IN THE FIELD. (6) REMOVE ALL LIGHT FIXTURES AND ANY

REMOVED.





NOTES:

1. REFER TO ARCHITECTURAL RCP DEMO PLAN FOR FULL SCOPE OF CEILINGS BEING REMOVED BOTH TEMPORARILY AND PERMANENTLY. SCOPE SHOWN HERE IS INTENDED TO SHOW LARGE PIECES OF DEMOLITION ONLY. EC RESPONSIBLE FOR REMOVING ALL ELECTRICAL DEVICES FROM CEILINGS AND REINSTALLING IN SAME LOCATION UNLESS NOTED OTHERWISE.

2. EXISTING CONDITIONS ARE SHOWN FOR REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.

3. DEMOLITION OF ROOFTOP EXHAUST FANS ARE SHOWN ON SHEET ED1.11 AND ED1.12. REFER TO MECHANICAL DEMO FLOOR PLANS FOR THE CORRESPONDING LOCATIONS OF THESE FANS BELOW THE ROOF THAT MAY CONTAIN ACCESSORIES TO THE FANS SUCH AS MOTOR STARTERS AND MOTORIZED DAMPERS. EC RESPONSIBLE FOR REMOVAL OF ALL ELECTRICAL CONNECTIONS TO FANS BEING

4. REMOVE ALL UNUSED WIRING/CONDUIT FROM EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED WITH A PULLSTRING.

FLAG NOTES:

REPLACED. CAPTURE EXISTING CIRCUITS FOR RECONNECTION TO NEW PANEL. FEEDER(S) SHALL BE REUSED WHERE INDICATED ON

REMOVE ELECTRICAL CONNECTION TO UNIT VENTILATOR. REMOVE ALL CONDUIT/WIRING BACK TO SOURCE AS MUCH AS PRACTICAL.

EXISTING MECHANICAL EQUIPMENT AND ASSOCIATED DISCONNECTS, STARTERS, ETC. REMOVE ALL CONDUIT/WIRING BACK TO SOURCE AS MUCH AS PRACTICAL. VERIFY EXACT LOCATION OF EQUIPMENT IN FIELD.

5 REMOVE ALL LIGHT FIXTURES AND ANY ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE TEMPORARY REMOVAL OF CEILING. REINSTALL DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES REFERENCE ONLY. VERIFY EXACT QUANTITY

ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE DEMOLITION OF CEILING. CAPTURE POWER FOR REUSE WITH NEW LIGHTS PROVIDED. REINSTALL OTHER DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN THE FIELD. REROUTE SURFACE MOUNTED CONDUIT ABOVE NEW CEILING IF SERVING LOADS TO REMAIN.



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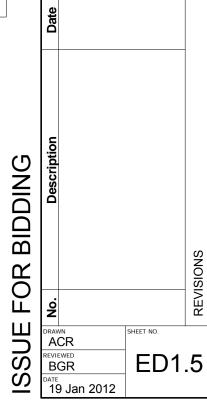


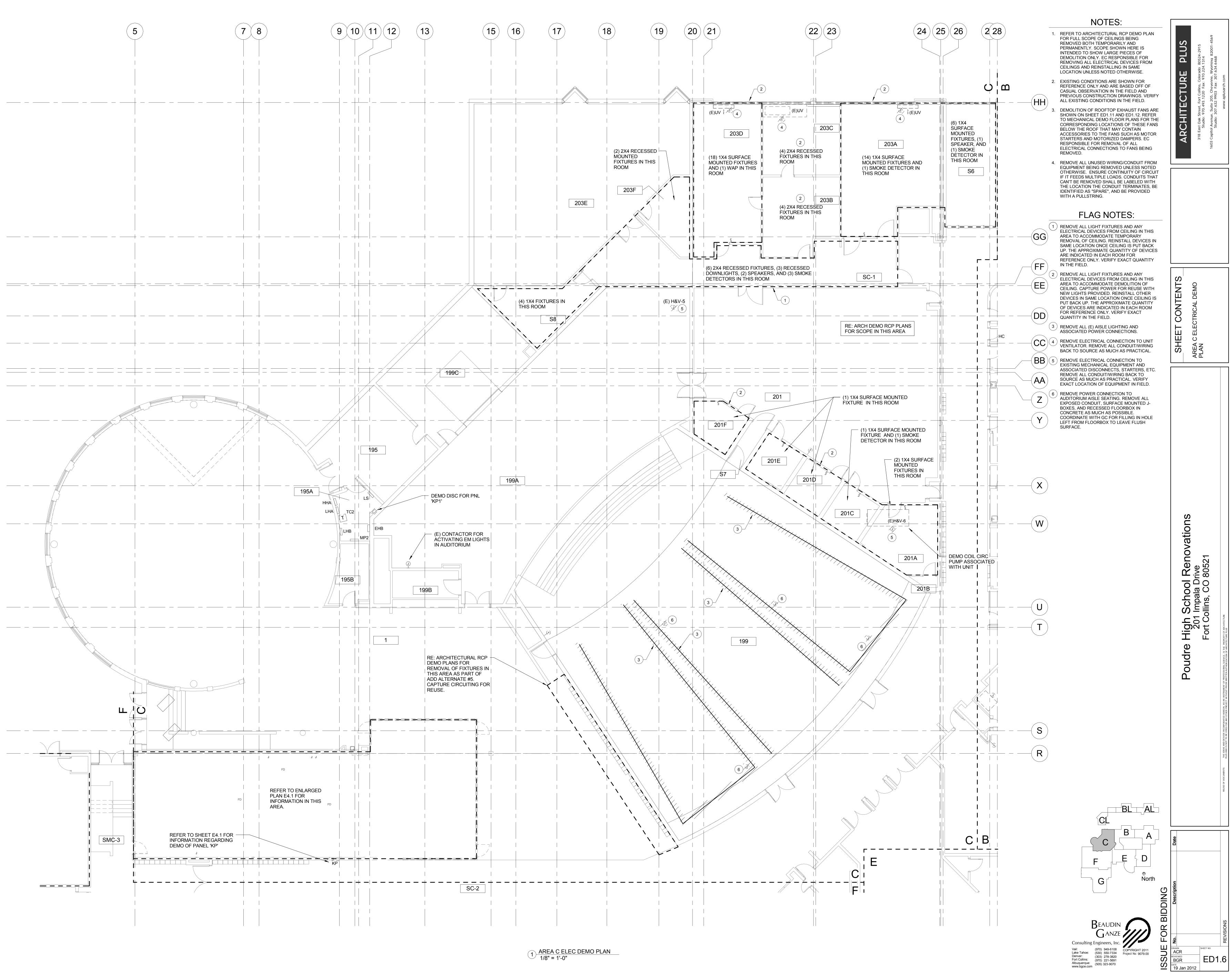
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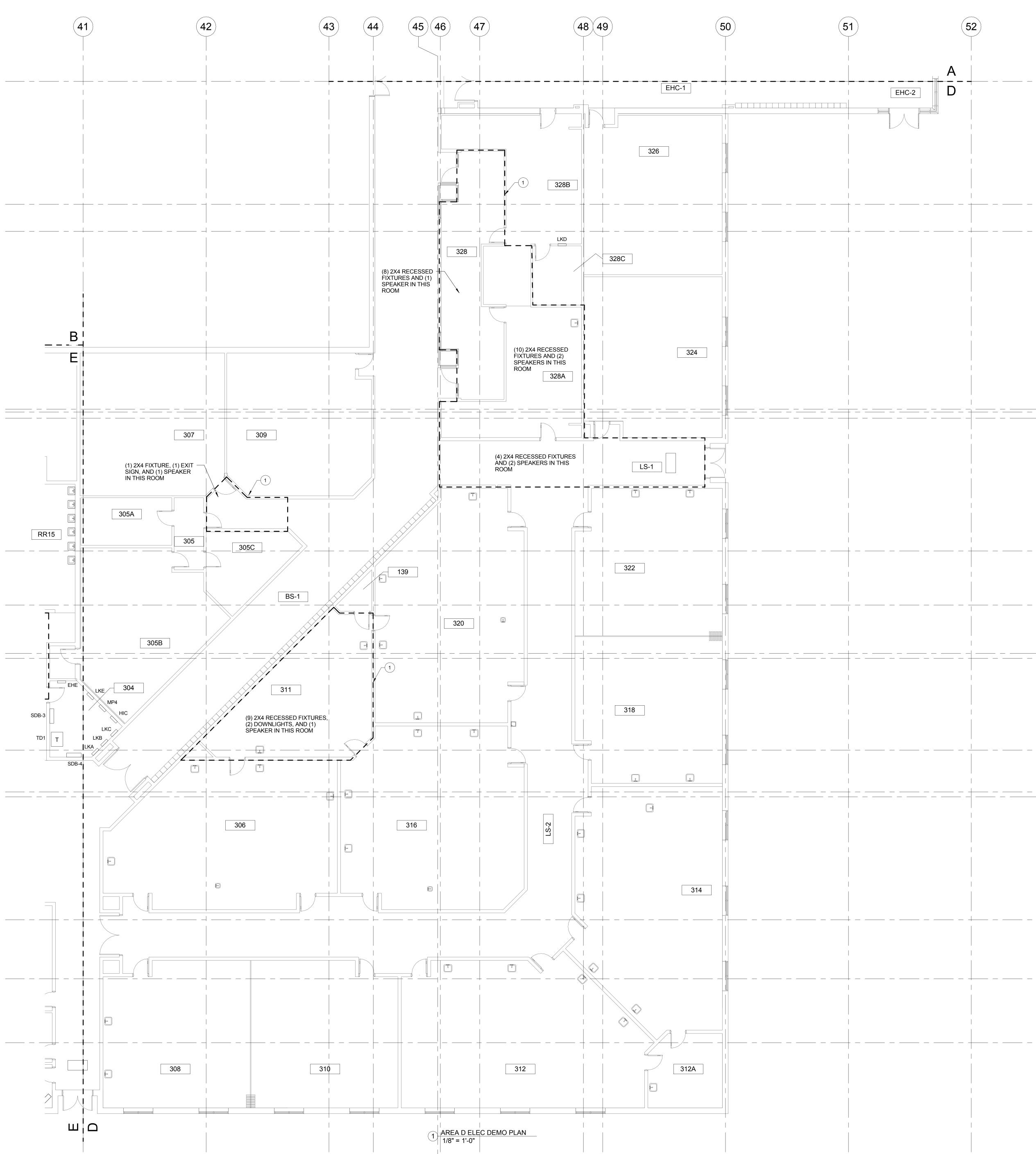
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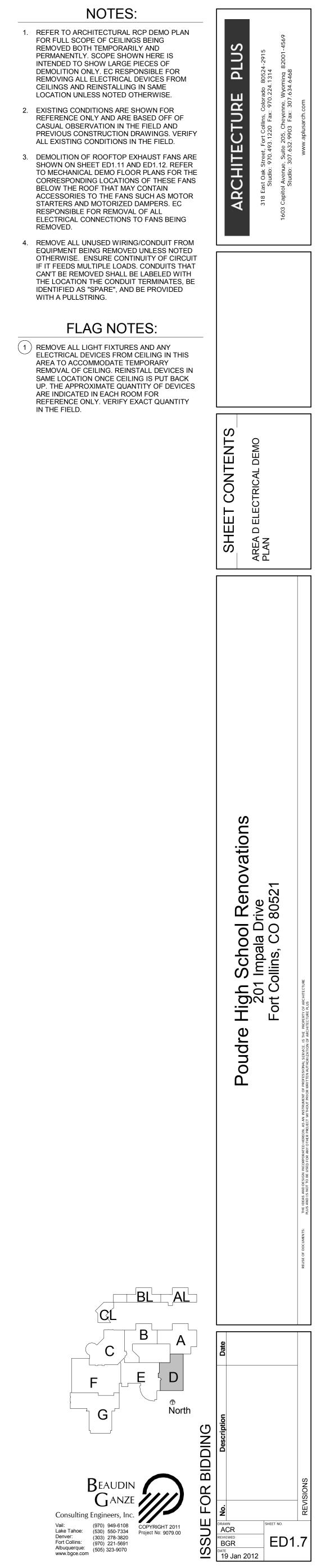
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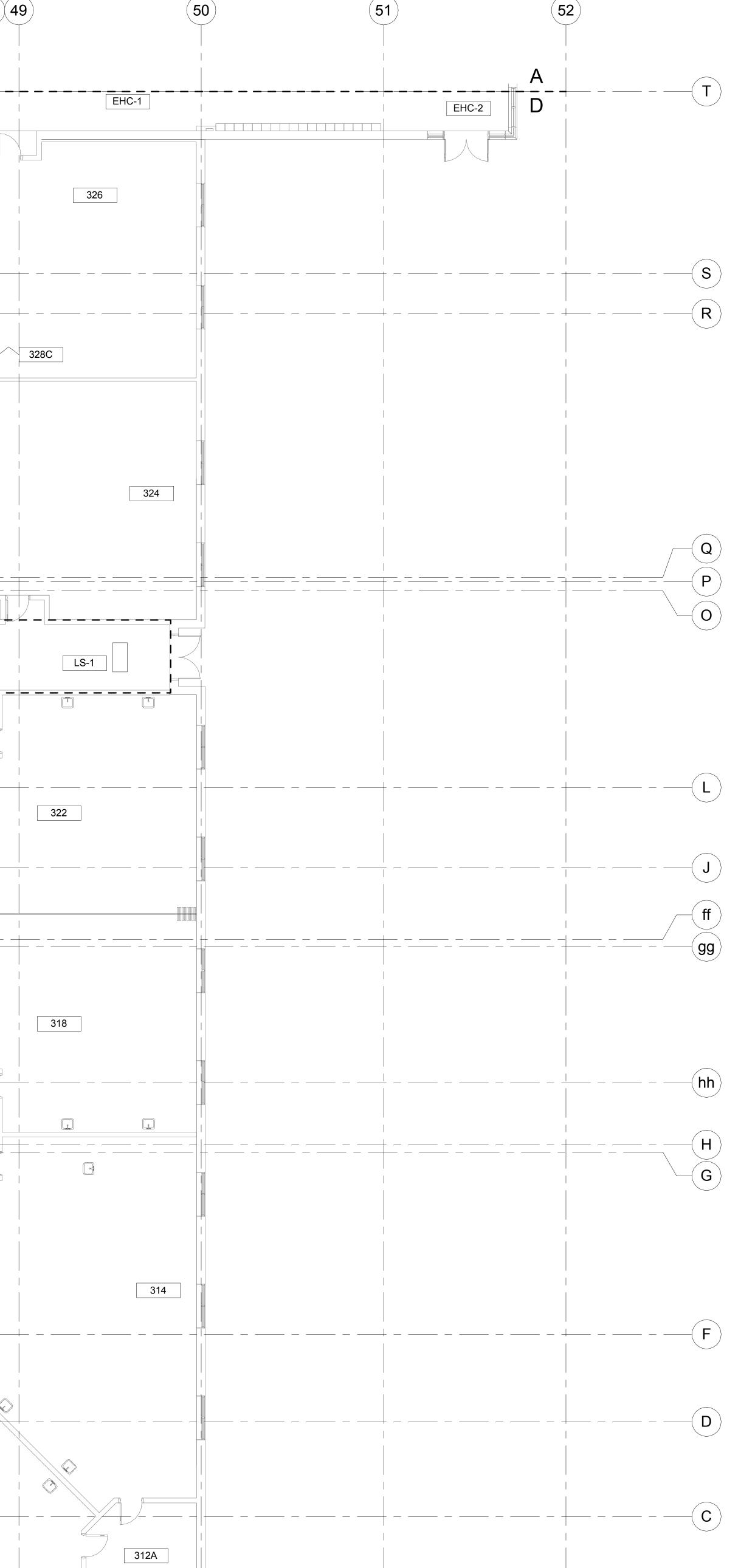


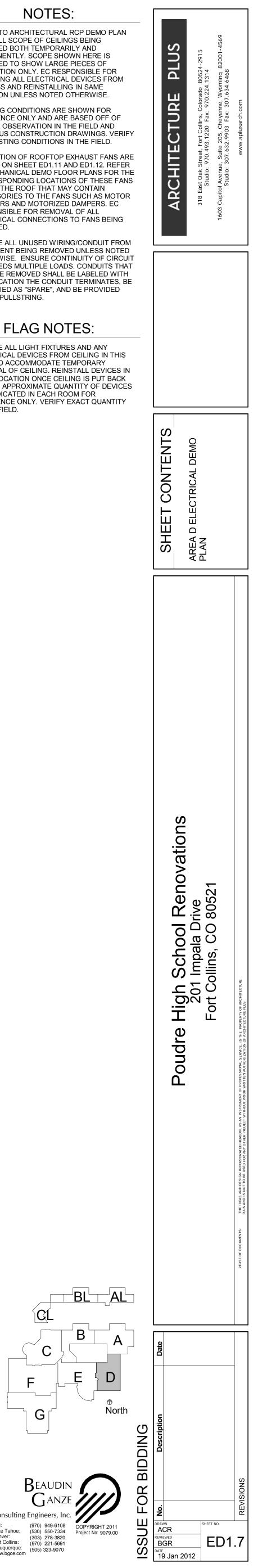


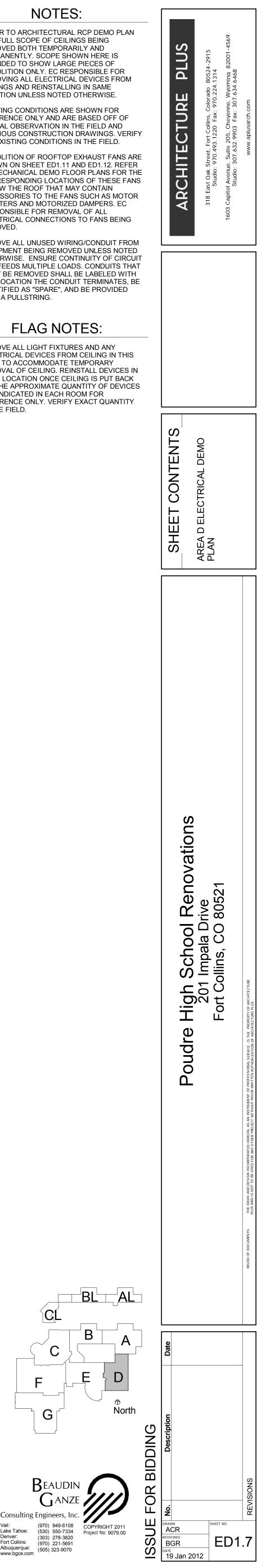


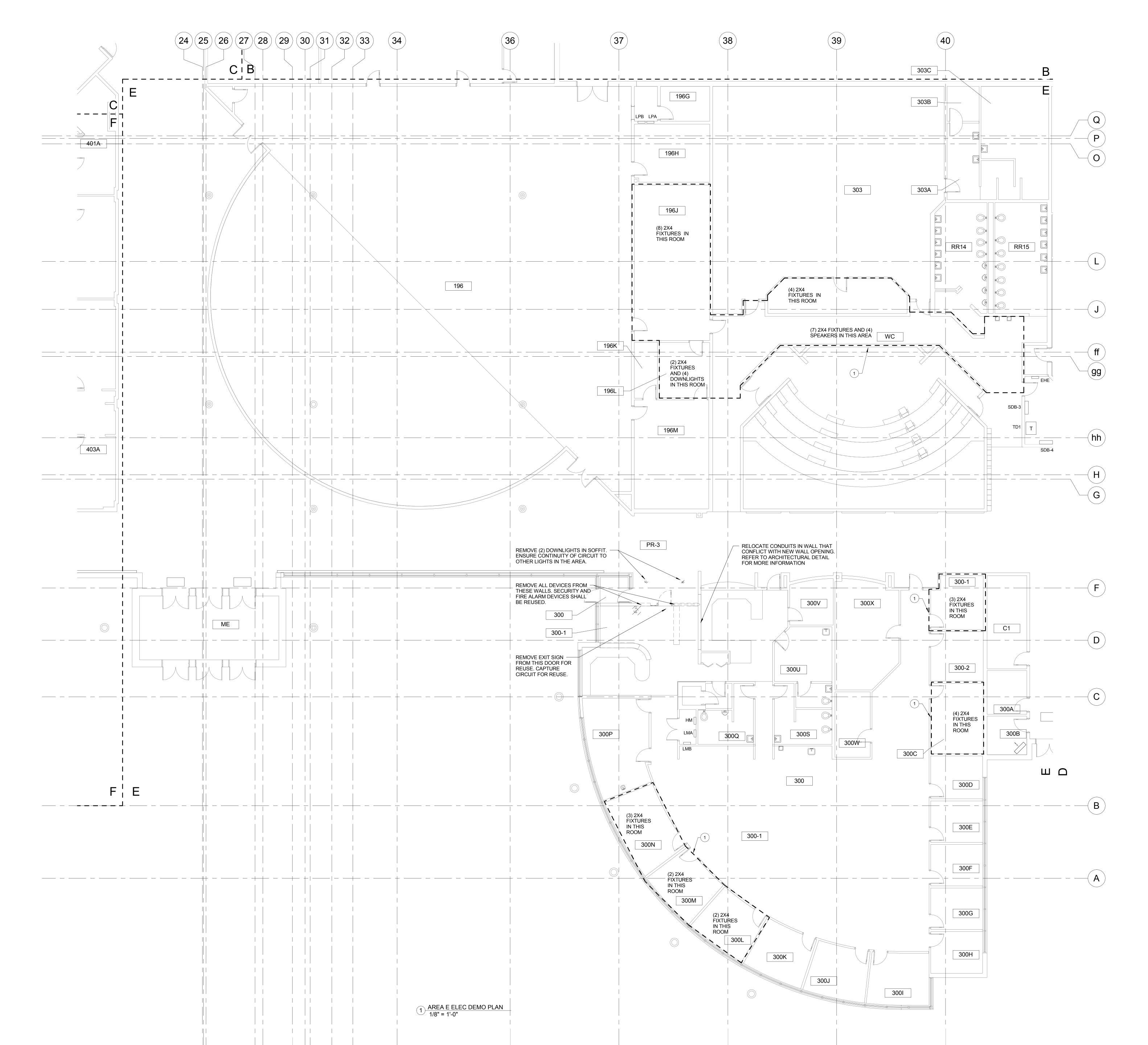












CEILINGS AND REINSTALLING IN SAME LOCATION UNLESS NOTED OTHERWISE. 2. EXISTING CONDITIONS ARE SHOWN FOR 3. DEMOLITION OF ROOFTOP EXHAUST FANS ARE RESPONSIBLE FOR REMOVAL OF ALL REMOVED. 4. REMOVE ALL UNUSED WIRING/CONDUIT FROM WITH A PULLSTRING.



NOTES:

1. REFER TO ARCHITECTURAL RCP DEMO PLAN FOR FULL SCOPE OF CEILINGS BEING REMOVED BOTH TEMPORARILY AND PERMANENTLY. SCOPE SHOWN HERE IS INTENDED TO SHOW LARGE PIECES OF DEMOLITION ONLY. EC RESPONSIBLE FOR REMOVING ALL ELECTRICAL DEVICES FROM

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SHOWN ON SHEET ED1.11 AND ED1.12. REFER TO MECHANICAL DEMO FLOOR PLANS FOR THE CORRESPONDING LOCATIONS OF THESE FANS BELOW THE ROOF THAT MAY CONTAIN ACCESSORIES TO THE FANS SUCH AS MOTOR STARTERS AND MOTORIZED DAMPERS. EC ELECTRICAL CONNECTIONS TO FANS BEING

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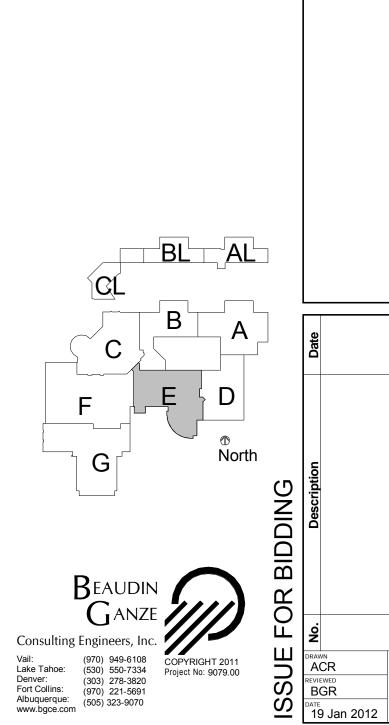
FLAG NOTES:

1 REMOVE ALL LIGHT FIXTURES AND ANY ELECTRICAL DEVICES FROM CEILING IN THIS AREA TO ACCOMMODATE TEMPORARY REMOVAL OF CEILING. REINSTALL DEVICES IN SAME LOCATION ONCE CEILING IS PUT BACK UP. THE APPROXIMATE QUANTITY OF DEVICES ARE INDICATED IN EACH ROOM FOR REFERENCE ONLY. VERIFY EXACT QUANTITY IN THE FIELD.

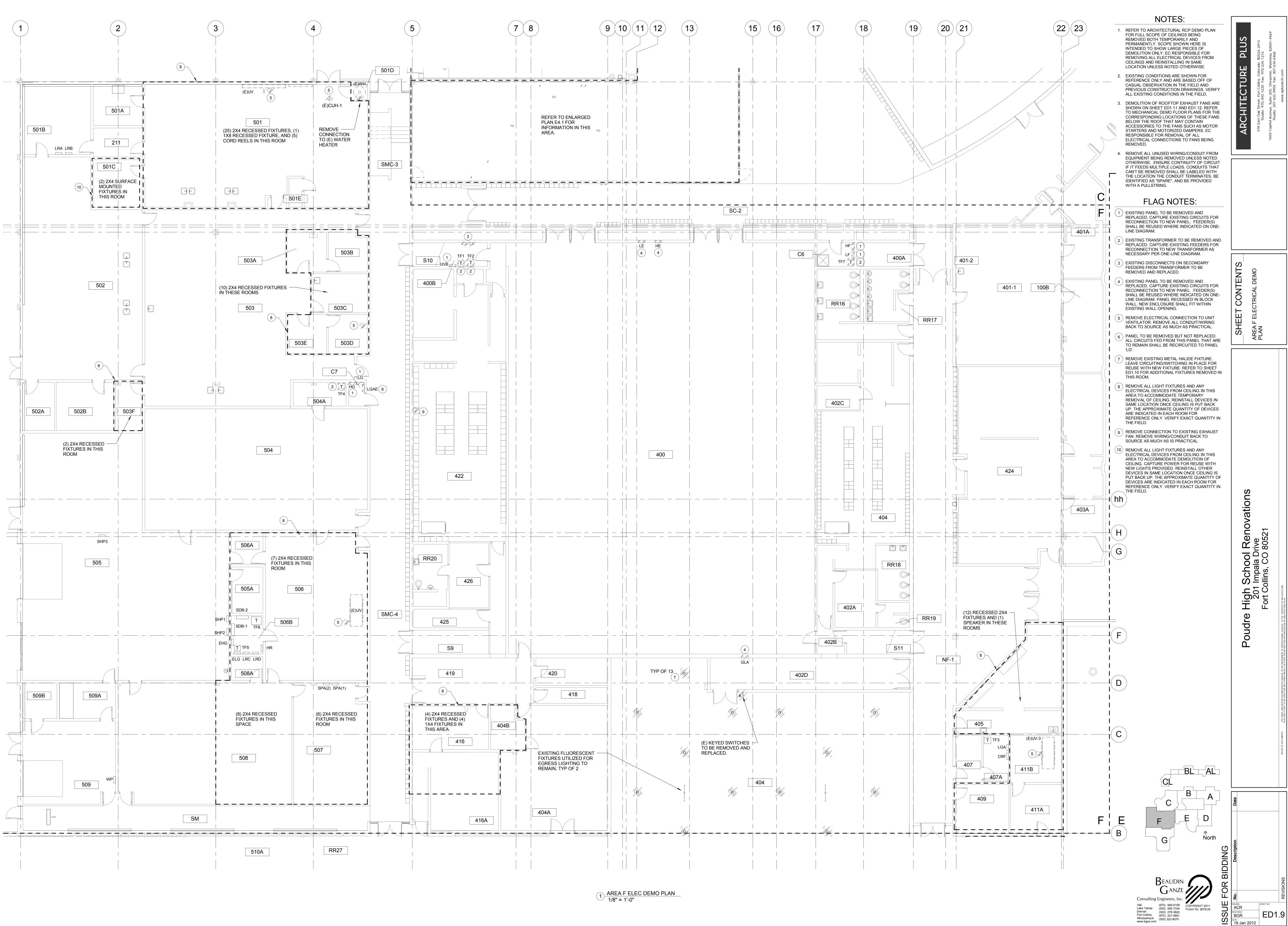


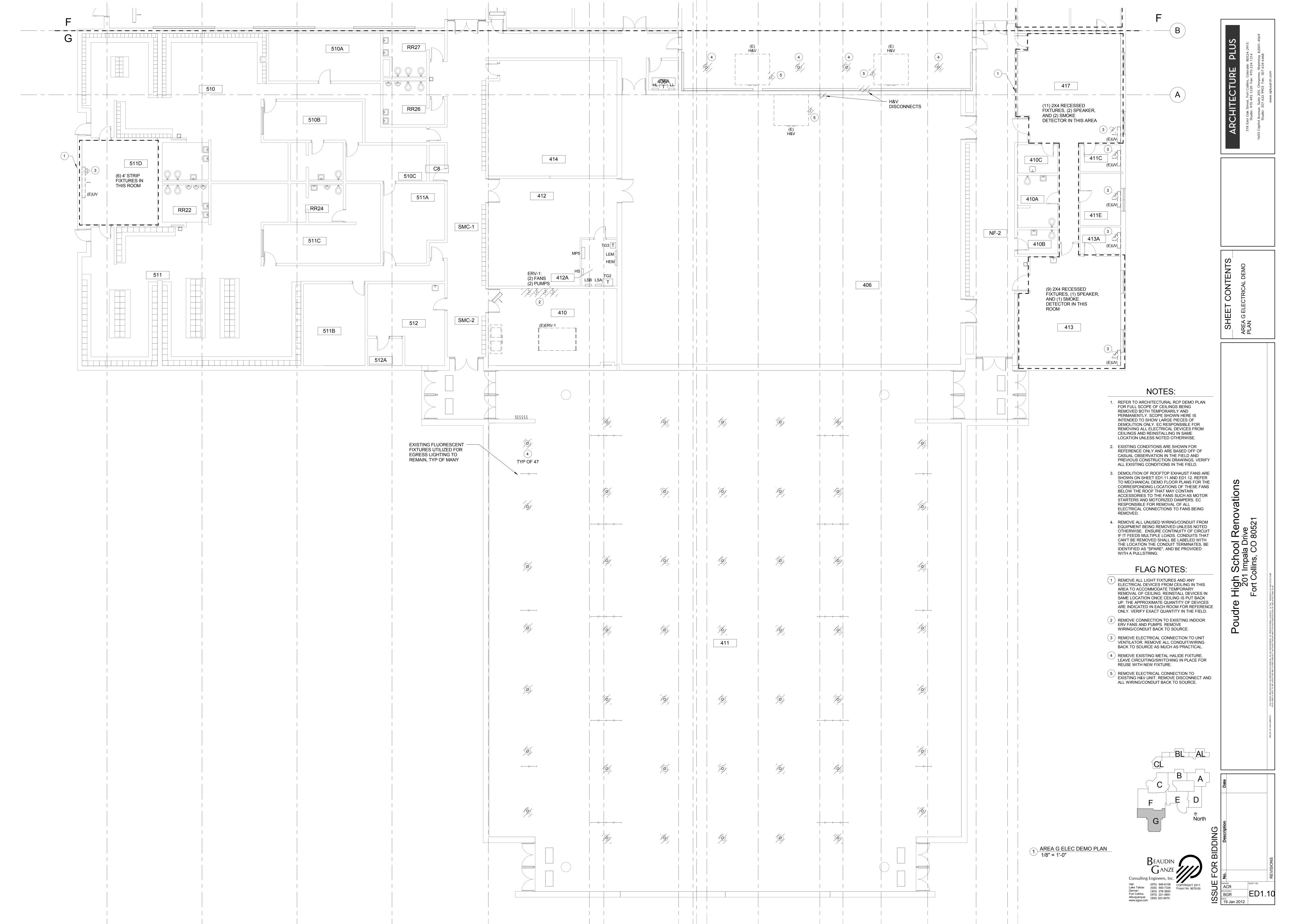
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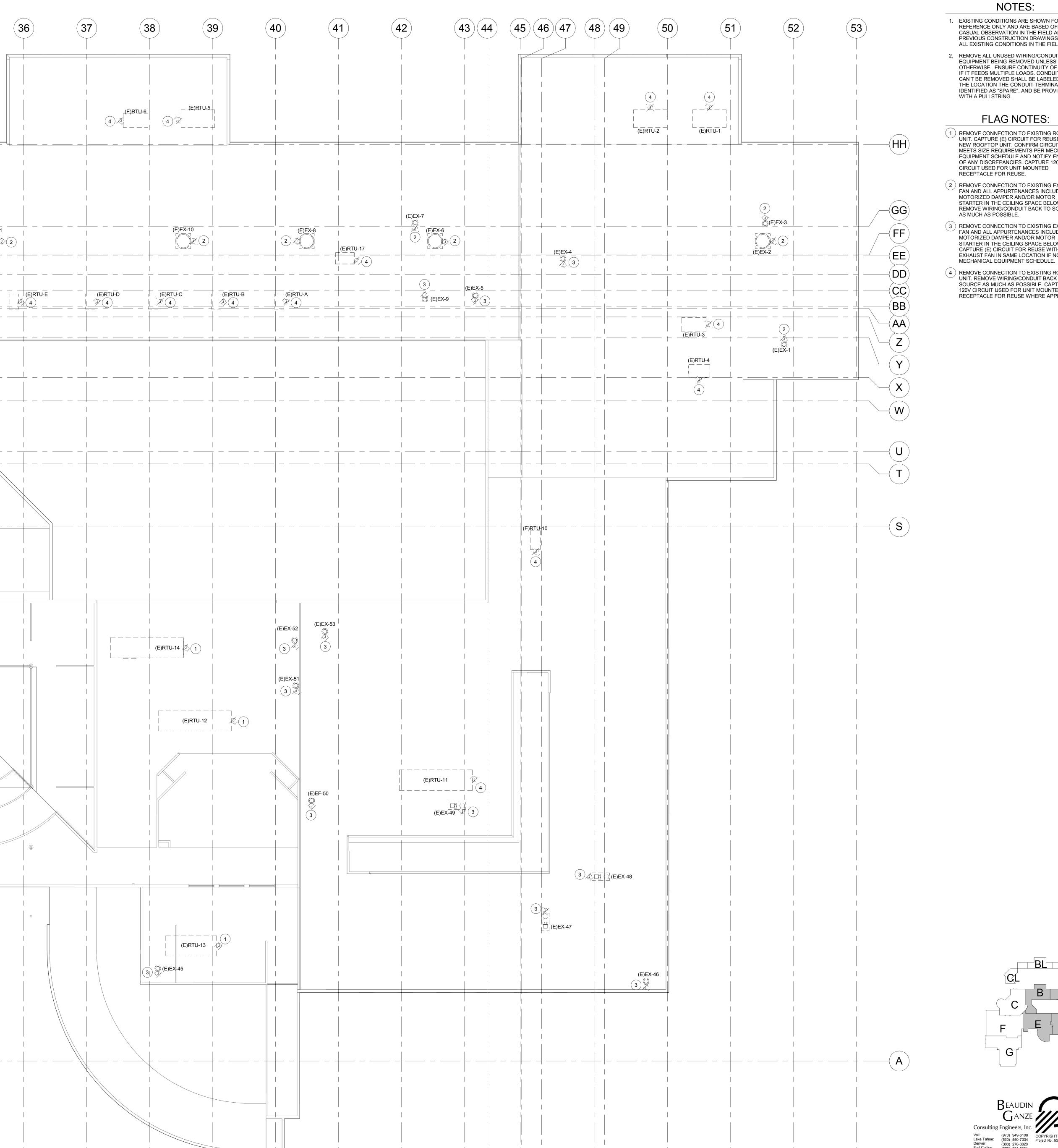


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NOTES:

1. EXISTING CONDITIONS ARE SHOWN FOR REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.

2. REMOVE ALL UNUSED WIRING/CONDUIT FROM EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED

FLAG NOTES:

1 REMOVE CONNECTION TO EXISTING ROOFTOP UNIT. CAPTURE (E) CIRCUIT FOR REUSE WITH NEW ROOFTOP UNIT. CONFIRM CIRCUIT MEETS SIZE REQUIREMENTS PER MECHANICAL EQUIPMENT SCHEDULE AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CAPTURE 120V CIRCUIT USED FOR UNIT MOUNTED

(2) REMOVE CONNECTION TO EXISTING EXHAUST FAN AND ALL APPURTENANCES INCLUDING ANY MOTORIZED DAMPER AND/OR MOTOR STARTER IN THE CEILING SPACE BELOW. REMOVE WIRING/CONDUIT BACK TO SOURCE AS MUCH AS POSSIBLE.

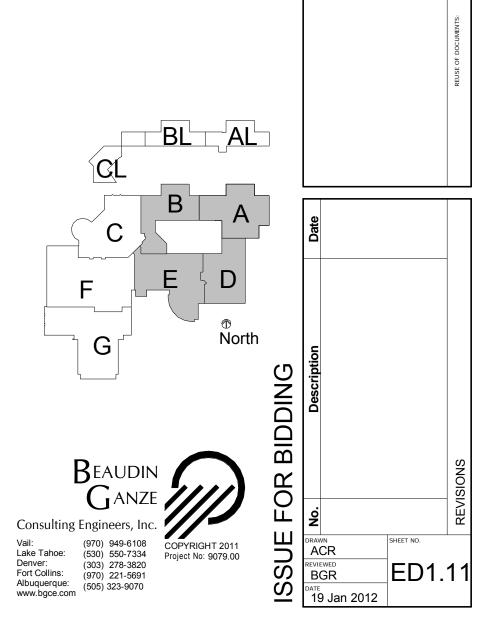
(3) REMOVE CONNECTION TO EXISTING EXHAUST FAN AND ALL APPURTENANCES INCLUDING ANY MOTORIZED DAMPER AND/OR MOTOR STARTER IN THE CEILING SPACE BELOW. CAPTURE (E) CIRCUIT FOR REUSE WITH NEW EXHAUST FAN IN SAME LOCATION IF NOTED ON

4 REMOVE CONNECTION TO EXISTING ROOFTOP UNIT. REMOVE WIRING/CONDUIT BACK TO SOURCE AS MUCH AS POSSIBLE. CAPTURE 120V CIRCUIT USED FOR UNIT MOUNTED RECEPTACLE FOR REUSE WHERE APPLICABLE.

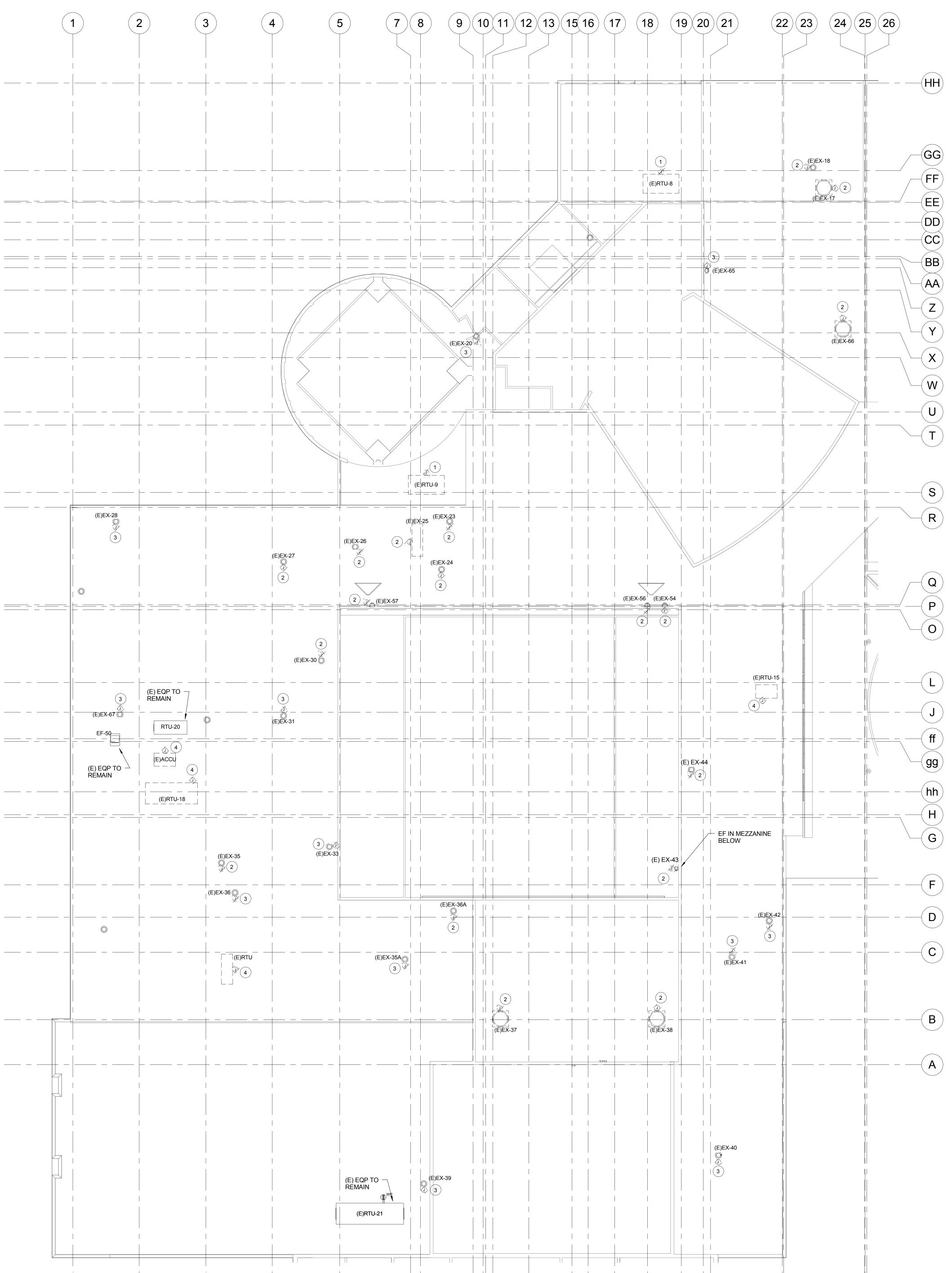


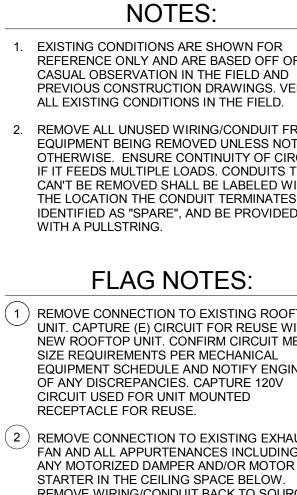
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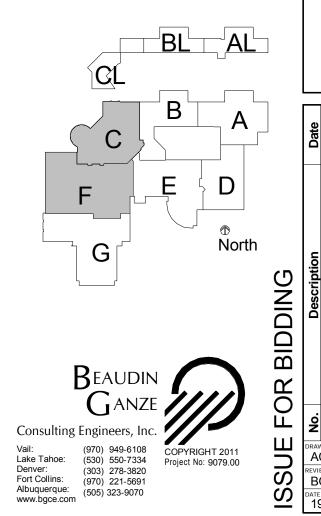
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(4) REMOVE CONNECTION TO EXISTING ROOFTOP

APPLICABLE.





NOTES:

REFERENCE ONLY AND ARE BASED OFF OF CASUAL OBSERVATION IN THE FIELD AND PREVIOUS CONSTRUCTION DRAWINGS. VERIFY

2. REMOVE ALL UNUSED WIRING/CONDUIT FROM EQUIPMENT BEING REMOVED UNLESS NOTED OTHERWISE. ENSURE CONTINUITY OF CIRCUIT IF IT FEEDS MULTIPLE LOADS. CONDUITS THAT CAN'T BE REMOVED SHALL BE LABELED WITH THE LOCATION THE CONDUIT TERMINATES, BE IDENTIFIED AS "SPARE", AND BE PROVIDED

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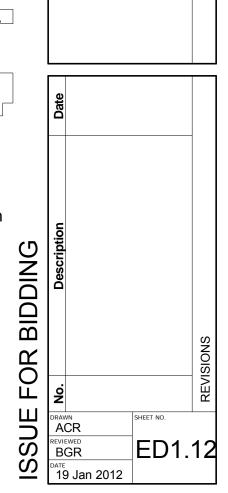
UNIT. REMOVE WIRING/CONDUIT BACK TO SOURCE AS MUCH AS POSSIBLE. CAPTURE 120V CIRCUIT USED FOR UNIT MOUNTED RECEPTACLE FOR REUSE WHERE

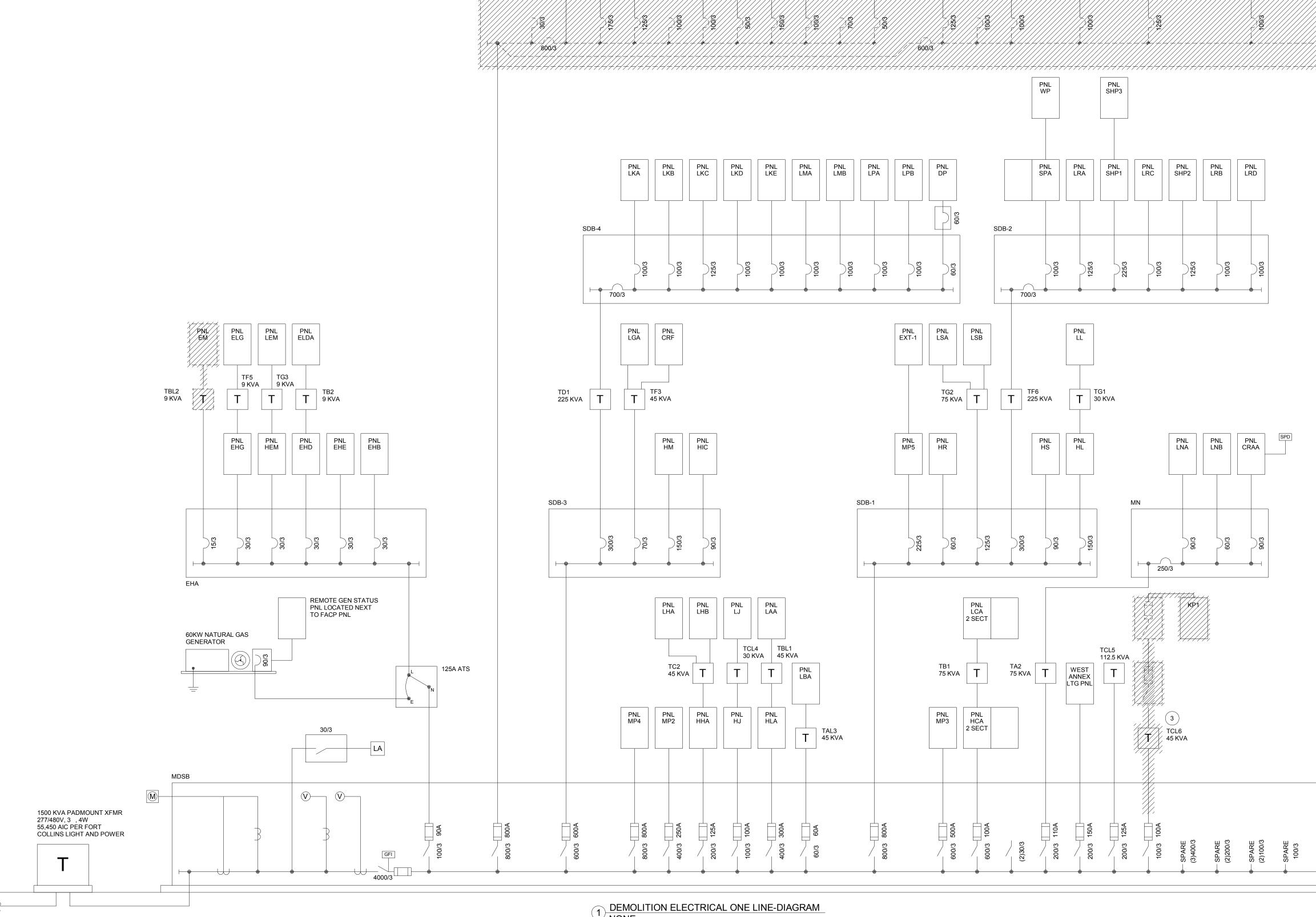


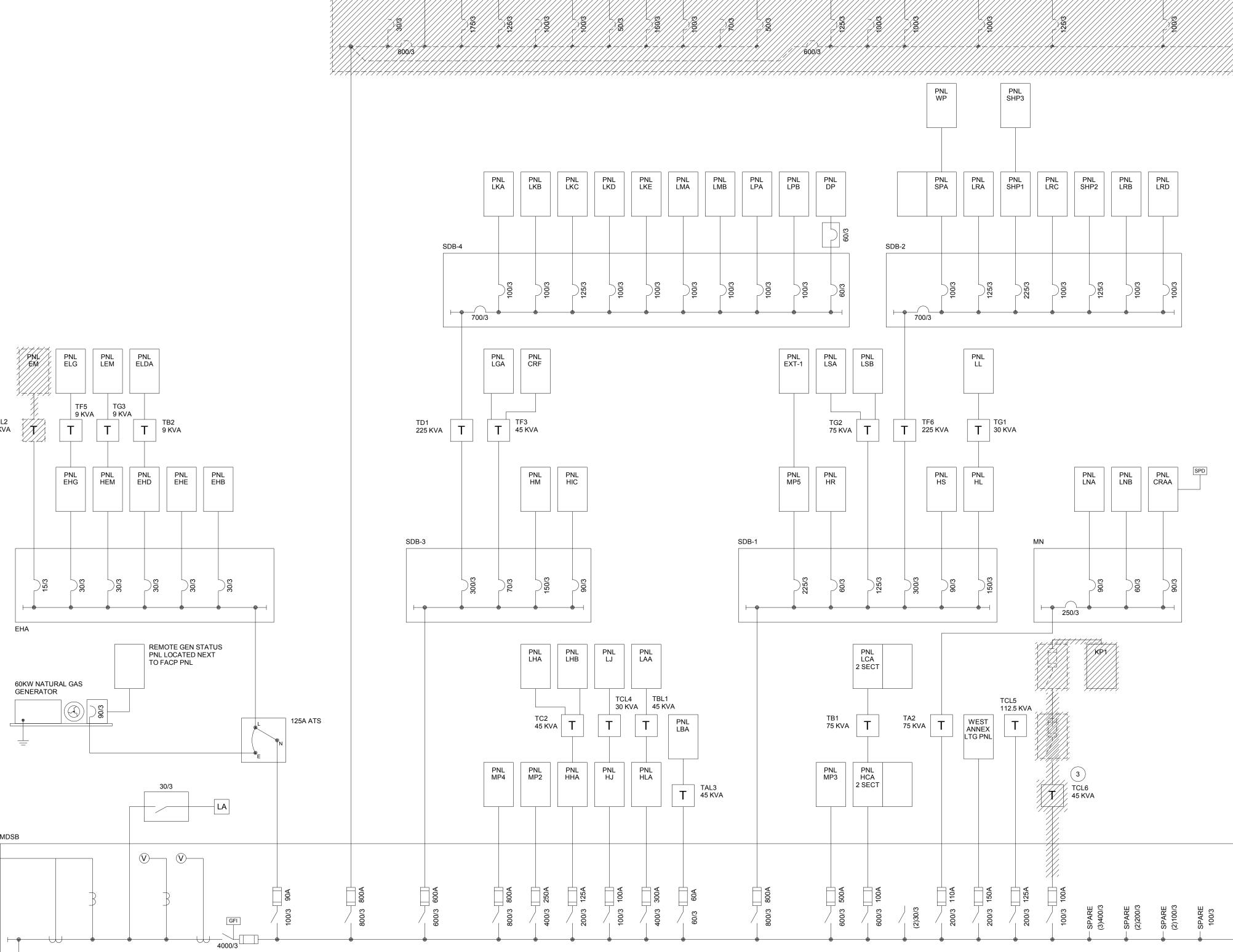
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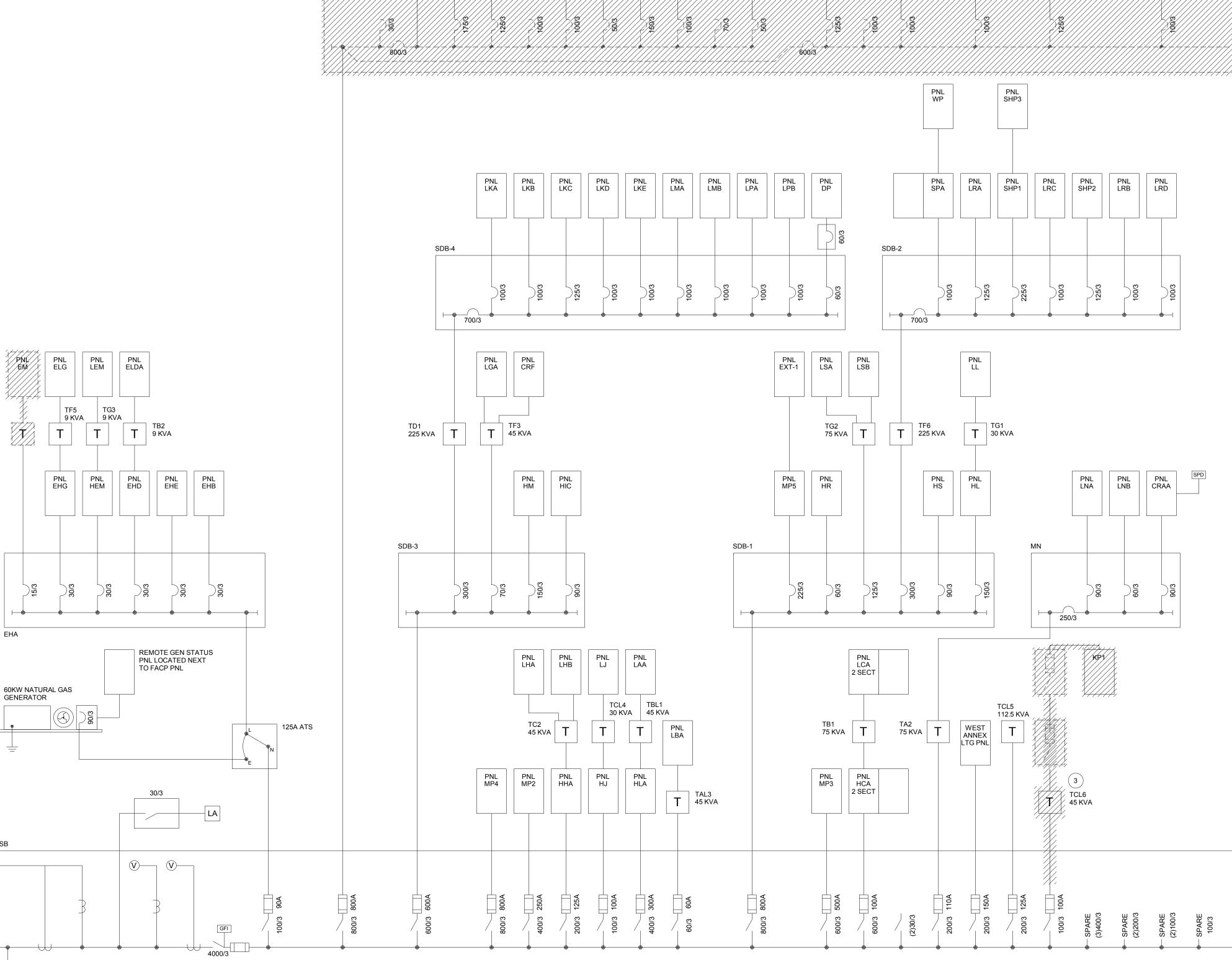


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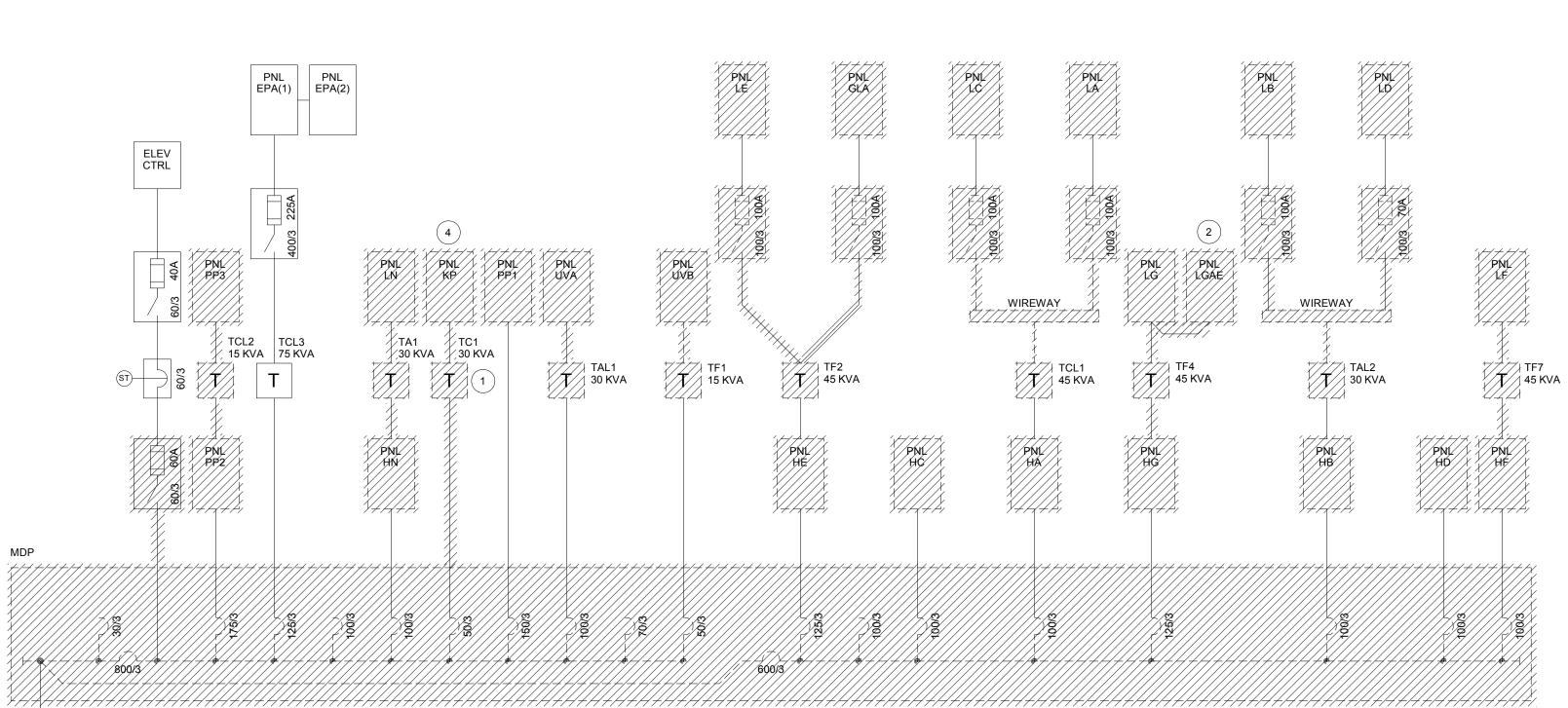








1 DEMOLITION ELECTRICAL ONE LINE-DIAGRAM NONE



- AND G DURING PHASE 1 CONSTRUCTION. 2. THIS DRAWING HAS BEEN PREPARED IN PART,
- ASSURE ITS ACCURACY, AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF THIS ARE ADVISED TO OBTAIN INDEPENDENT IT FOR ANY PURPOSE.
- 3. LIGHT LINE WEIGHT INDICATES EXISTING. 4. REMOVE ALL HATCHED EQUIPMENT AND FEEDERS AS INDICATED. REFER TO SHEET E5.1 FOR

- AS MUCH AS IS PRACTICAL.
- 'LG'. (3) TRANSFORMER TO BE REMOVED AND REPLACED
- LOADS. (4) PANEL TO BE REMOVED AND NOT REPLACED. ALL

'KP1'.



NOTES:

1. REFER TO PHASING NOTES ON SHEET E0.1 FOR TIMING OF WORK SHOWN HERE. FOR EACH PIECE OF EQUIPMENT, VERIFY ON DRAWINGS WHICH AREA THE EQUIPMENT IS LOCATED IN AND ACCORDINGLY THE PHASE THE WORK GETS COMPLETED. 'MDP' SHALL NOT BE REPLACED UNTIL PHASE 2 TO PREVENT POWER DISRUPTIONS TO AREAS D, E, F,

BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE DESIGN PROFESSIONAL CANNOT DRAWING OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT. THOSE RELYING ON THIS DOCUMENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING

INFORMATION ON EQUIPMENT BEING REPLACED.

FLAG NOTES: (1) TRANSFORMER TO BE REMOVED AND NOT REPLACED. REMOVE FEEDER BACK TO SOURCE

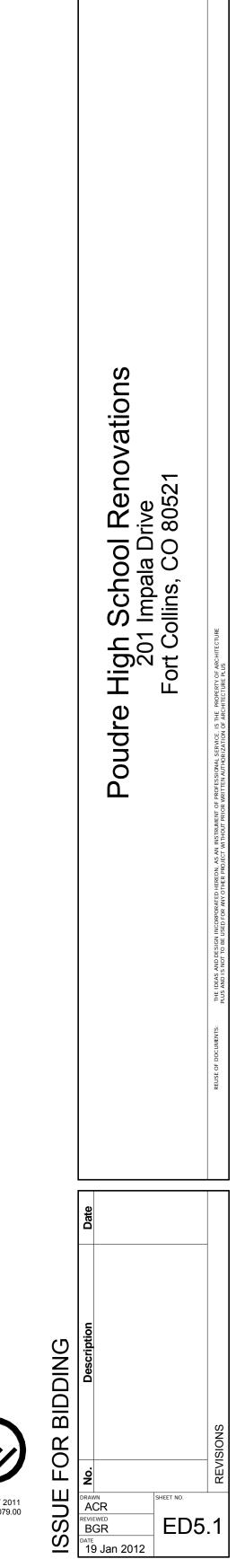
(2) PANEL TO BE REMOVED AND NOT REPLACED. ALL CIRCUITS TO REMAIN SHALL BE MOVED TO PANEL

WITH A LARGER SIZE TO SERVE NEW KITCHEN

CIRCUITS TO REMAIN SHALL BE MOVED TO PANEL



CONTENTS 0 ð SHEET ELECTRICA DIAGRAM





IDDING

	ITEM	FURNISHED UNDER	SET IN PLACE OR MTD. UNDER	WIRED CONNECT UNDEF
1.	Equipment motors and thermal overloads, resistance heaters. (3)	MD	MD	ED
2.	Motor controllers; magnetic starters, reduced voltage starters and overload relays.	ED	ED(a)	ED
3.	Disconnect switches, fused or unfused, h.p. rated switches, thermal overload switches and fuses, manual operating switches.	ED(a)	ED(a)	ED
4.	Pushbutton stations pilot lights, multi-speed switches, float switches, thermostats, control relays, time clocks, control transformers, control panels, motor valves, damper motors, solenoid valves, EP and PE switches and interlocks.	MD	MD(b)	MD(b)
5.	Contactors, 120V control circuit outlets for control panels and for boiler controls and for fire protection controls and smoke detectors.	ED	ED	ED
6.	Duct Detectors and Fire/Smoke Dampers	ED	MD	ED(c)
ED a. b.	 Electrical Division If furnished as part of factory wired equipment, the float switches, line thermostats, p.e. switches, the CURRENT to any motor, the Mechanical Division and connected under the Electrical Division, excert mechanical equipment, or directly attached to due the Mechanical Division and connected by the Electrical Division. Control devices carrying FULL LOAD C by Electrical shall be located at the device being agreement is made between the contractors with 1) Wiring from fire alarm contacts to alarm system 	time switches, et a shall furnish the ept where such if cts, piping, etc., ectrical Division. d, set in place an URRENT furnish controlled, unles no change in th	c., carry the FULI em. They shall be tems are an integ they shall be set If they do not ca d wired under the ned by Mechanica s shown on draw e contract price.	LOAD e set in plac ral part of th in place und rry the full Mechanica al and wired ings or muti

FIRE PROTECTION GENERAL NOTES:

Α.	THE FIRE SPRINKLER CONTRACTOR SHALL SERVE AS THE ENGINEER OF RECORD
	FOR ALL WORK PERFORMED UNDER THIS DIVISION. IF REQUIRED BYTHE AUTHORITY
	HAVING JURISDICTION, (A.H.J.) SUBMIT COMPLETE FIRE SPRINKLER SYSTEM SHOP
	DRAWINGS AND HYDRAULIC CALCULATIONS, GENERATED BY CONTRACTOR. SHOP
	DRAWINGS SHALL BE A MINIMUM 1/8" SCALE, AND SHALL SHOW DEVICE AND
	APPLIANCE LOCATIONS, BUILDING BACKGROUND INFORMATION, ROOM OCCUPANCY
	DESCRIPTIONS, DOOR SWINGS, FIRE RATINGS AND FIRE PROTECTION SYSTEM
	LAYOUT AND DETAILS. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE
	SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF [COLORADO].
	SUBMIT SHOP DRAWINGS AND HYDRAULIC CALCULATIONS TO THE BUILDING AND
	FIRE DEPARTMENTS AND OBTAIN THEIR APPROVAL BEFORE SUBMISSION TO THE
	ARCHITECT.

- B. WHERE REQUIRED BY THE A.H.J., ALL NEW SPRINKLER HEADS SHOULD HAVE THE CONNECTING MAIN AND BRANCH PIPE SIZES SHOWN 1) SHOW THE CONNECTING MAIN AND BRANCH PIPE SIZES FOR ALL RELOCATED AND EXISTING SPRINKLER HEADS. 2) CONFORM TO LIGHT HAZARD OCCUPANCY REQUIREMENTS OF NFPA 13.
- C. EXTEND THE EXISTING SPRINKLER SYSTEM, RELOCATE EXISTING AND ADD NEW SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13, ALL APPLICABLE CODES AND ORDINANCES AND PROJECT REQUIREMENTS TO COMPLETE THE NEW WORK. D. WORK SHALL BE PERFORMED BY A QUALIFIED FIRE SPRINKLER INSTALLER WITH A
- MINIMUM OF FIVE (5) YEARS EXPERIENCE IN SIMILAR INSTALLATIONS. E. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO AND DURING INSTALLATION.

8. IF NOT SPECIFICALLY DEFINED IN THESE CONSTRUCTION DOCUMENTS, MATERIALS AND/OR EQUIPMENT SHALL BE IDENTIFIED BY THE 11. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT, OWNER, AND ENGINEER.

ARCHITECT IF MODIFICATION OF HIS/HER WORK IS REQUIRED FOR COMPLIANCE.

FOR ALL DIMENSIONS.

5. EXAMINATION OF BIDDING DOCUMENTS.

AND SPECIFICATIONS

WRITTEN REQUESTS AS DESCRIBED ABOVE.

- PUBLICATIONS EXISTS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- CERTIFICATES OF COMPLETION.
- 16. SUBMIT RECORD DOCUMENTS TO ARCHITECT. DOCUMENTS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS,
- REROUTINGS, ETC.
- 19. ALL MATERIALS AND/OR EQUIPMENT SHALL BE HANDLED AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.
- ALLOWED.
- 23. PROVIDE 4" HIGH CONCRETE EQUIPMENT PADS BENEATH FLOOR MOUNTED MECHANICAL EQUIPMENT, IN ADDITION TO ANY BASE ASSEMBLIES REQUIRED OR RECOMMENDED BY THE MANUFACTURER.
- APPLICATION DATA FOR EACH TYPE OF PENETRATION ENCOUNTERED.
- PENETRATIONS IN ALL TYPES OF ROOF. INSTALLATION SHALL BE WATERTIGHT.
- 27. VERIFY ELECTRICAL SERVICE VOLTAGE AND PHASE AVAILABLE.
- THERMOSTAT INSTALLATION.
- 31. DUCTWORK NOTES:
- A. DIFFUSER NECK SIZE IS SAME AS FLEXIBLE DUCT SIZE.
- TO 1.5 DUCT WIDTH.

- C. ALL FLEXIBLE DUCTS SHALL NOT EXCEED EIGHT FEET IN LENGTH. PER MINUTE AT ANY CROSS-SECTION OF THE RETURN AIR PATH.
- 32. REFER TO PLUMBING FIXTURE CONNECTIONS SCHEDULE FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES.
- WALLS WITHOUT ACCESS PANELS. SIOUX CHIEF OR EQUIVALENT. BELLOWS TYPE NOT ACCEPTABLE.
- KNOWLEDGE OF EXISTING CONDITIONS.
- 35. EXISTING CONDITIONS
- AND EXISTING MECHANICAL SYSTEM TO ALL OTHER WORK AS REQUIRED. OWNER UNLESS NOTED OTHERWISE.
- D. SERVICE SHALL BE MAINTAINED TO EXISTING AREAS DURING CONSTRUCTION.

GENERAL NOTES:

1. THESE DRAWING NOTES ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT SPECIFICATION BOOK (PROJECT MANUAL).

2. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK. REFER TO ARCHITECTURAL DRAWINGS

3. ALL SUBCONTRACTORS SHALL BE LICENSED. EXPERIENCED, AND THOROUGHLY KNOWLEDGEABLE IN THEIR RESPECTIVE AREAS OF THE CONSTRUCTION INDUSTRY AND SHALL PERFORM IN A RESPONSIBLE MANNER WITH ESTABLISHED CONSTRUCTION SEQUENCE, SHALL RECOGNIZE THE PRIORITY OF THE CONSTRUCTION DOCUMENTS, AND SHALL INFORM THE PRIME CONTRACTOR OF POTENTIAL PROBLEMS WHEN THE CONSTRUCTION DOCUMENTS ARE UNCLEAR OR INCONSISTENT.

4. SUBCONTRACTORS SHALL BE RESPONSIBLE TO NOTIFY THE PRIME CONTRACTOR OF DISCREPANCIES OR CONFLICTS IN THE CONSTRUCTION DOCUMENTS FOUND DURING BIDDING AND/OR PRIOR TO PERFORMING THE WORK.

A. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY, AND NOT LATER THAN SEVEN (7) DAYS PRIOR TO THE DATE OF RECEIPT OF BIDS. SHALL MAKE WRITTEN REQUEST TO THE ARCHITECT FOR INTERPRETATION OR CORRECTION OF ANY DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS THEREIN WHICH HE MAY DISCOVER. THE ARCHITECT WILL ISSUE ANY INTERPRETATION OR CORRECTION AS AN ADDENDUM ONLY A WRITTEN INTERPRETATION OR CORRECTION BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON INTERPRETATIONS OR CORRECTIONS GIVEN BY ANY OTHER METHOD. IF DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS ARE NOT COVERED BY ADDENDUM OR WRITTEN DIRECTIVE, CONTRACTOR SHALL INCLUDE IN HIS BID, LABOR MATERIALS AND METHODS OF CONSTRUCTION RESULTING IN HIGHER COST. AFTER AWARD OF CONTRACT, NO ALLOWANCE OR EXTRA COMPENSATION WILL BE MADE ON BEHALF OF THE CONTRACTOR DUE TO HIS FAILURE TO MAKE THE

B. FAILURE TO REQUEST CLARIFICATION DURING THE BID PERIOD OF ANY INADEQUACY, OMISSION, OR CONFLICT WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES. THE SIGNING OF THE CONTRACT WILL BE CONSIDERED AS IMPLICITLY DENOTING THAT THE CONTRACTOR HAS A THOROUGH COMPREHENSION OF THE FULL INTENT AND SCOPE OF THE CONSTRUCTION CONTRACT DRAWINGS

PROVIDE A BASE BID WHICH SHALL INCLUDE ONLY SPECIFIED EQUIPMENT OR EQUIPMENT LISTED AS EQUIVALENT. NO SUBSTITUTIONS FOR THE LISTED EQUIPMENT SHALL BE ALLOWED IN THE BASE BID.

A. THE MANUFACTURER OF EQUIPMENT OR MATERIALS FIRST NAMED ON THE DRAWINGS IS THE BASIS OF DESIGN. OTHER MANUFACTURERS LISTED ARE CONSIDERED GENERAL EQUIVALENTS ONLY. B. COORDINATION OF GENERAL EQUIVALENTS AND SUBSTITUTIONS: WHERE CONTRACT DOCUMENTS PERMIT SELECTION FROM SEVERAL

GENERAL EQUIVALENTS, OR WHERE SUBSTITUTIONS ARE AUTHORIZED, COORDINATE CLEARANCE AND OTHER INTERFACE REQUIREMENTS WITH MECHANICAL AND OTHER WORK. 1) PROVIDE NECESSARY ADDITIONAL ITEMS SO THAT SELECTED OR SUBSTITUTED ITEM OPERATES EQUIVALENT TO THE BASIS OF

DESIGN AND PROPERLY FITS IN THE AVAILABLE SPACE ALLOCATED FOR THE BASIS OF DESIGN. 2) PROVIDE ALL FEATURES WHICH ARE STANDARD ON THE BASIS OF DESIGN PLUS ANY SPECIFIED OPTIONS.

3) BE RESPONSIBLE FOR ASSURING THAT PIPING, CONDUIT, DUCT, FLUE, AND OTHER SERVICE LOCATIONS FOR GENERAL EQUIVALENTS OR SUBSTITUTIONS DO NOT CAUSE ACCESS, SERVICE, OR OPERATIONAL DIFFICULTIES ANY GREATER THAT WOULD BE ENCOUNTERED WITH THE BASE DESIGN.

SUBCONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL UTILITY SERVICES AND COORDINATE AS REQUIRED BY THEIR RESPECTIVE AREA OF THE CONSTRUCTION, NOTIFYING THE PRIME CONTRACTOR OF VARIATIONS OR CONFLICTS.

SUBCONTRACTOR WITH SUFFICIENT TIME TO ALLOW SELECTION, PURCHASE, AND DELIVERY TO MAINTAIN CONSTRUCTION SCHEDULE.

9. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING, AND RACEWAY SYSTEMS PRIOR TO TRENCHING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.

10. OFFSET PIPING, DUCTWORK, ETC. AS NECESSARY TO ACCOMMODATE STRUCTURE, BEAMS, AND COLUMNS.

12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM HIS/HER WORK IN CONFORMANCE WITH ALL APPLICABLE CODES, ORDINANCES AND LIFE SAFETY FEATURES AS REQUIRED BY LOCAL, STATE, OR NATIONAL AUTHORITIES. THE CONTRACTOR SHALL VERIFY WITH THE

13. ALL WORK OF ALL TRADES MUST BE IN STRICT COMPLIANCE, OR EXCEED THE MINIMUM MATERIAL AND METHOD REQUIREMENTS OF THE 2006 INTERNATIONAL BUILDING, MECHANICAL, PLUMBING, FIRE AND 2008 NATIONAL ELECTRICAL CODES, MOST CURRENT NFPA, ALL LOCAL ORDINANCES AND AMENDMENTS AND MANUFACTURER'S INSTALLATION RECOMMENDATIONS. IF A CONFLICT BETWEEN THOSE

14. PAY FOR AND SECURE ALL REQUIRED PERMITS AND INSPECTIONS. PRIOR TO FINAL PAYMENT, TURN OVER TO ARCHITECT ALL

15. WARRANTY THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE WARRANTY SHALL BE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.

17. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION PRIOR TO ACCEPTANCE BY THE OWNER. 18. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. PERFORM AT A MINIMUM ALL CODE REQUIRED TESTS OR SYSTEMS. IF TESTS OF WORK ARE DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO ADDITIONAL COST TO OWNER.

20. FAILURE TO ORDER, OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE

21. TEMPORARY HEAT SHALL BE FURNISHED BY THE GENERAL CONTRACTOR. USE OF THE PERMANENT HEATING SYSTEM WILL NOT BE

22. COORDINATE ALL PENETRATIONS OF THE FLOOR SLAB PRIOR TO COMMENCING WORK. UTILIZE X-RAY AND VISUAL INVESTIGATION OF CONDITIONS AS REQUIRED PRIOR TO DRILLING OR CUTTING. COORDINATE ALL NEW PENETRATIONS WITH OTHER DIVISIONS OF THE WORK. ALL CONTRACTORS ARE INDIVIDUALLY RESPONSIBLE FOR ALL PENETRATIONS REQUIRED BY THEIR DIVISIONS.

24. FIRE STOPPING REQUIREMENT. PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASSES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC FOR FIRE STOPS ASTM-E-814. ACCEPTABLE MATERIALS INCLUDE: DOW CORNING RTV FIRE STOP FOAM FOR BARE PIPE, METAL CONDUIT. AND ELECTRICAL CABLE; 3M FIRE DAM 150 CAULK FOR BARE PIPE, METAL CONDUIT, AND BUILDING CONSTRUCTION GAPS; 3M CP-25 CAULK AND FS-195 INTUMESCENT STRIPS FOR INSULATED PIPES, PLASTIC PIPE OR CONDUIT, AND ELECTRICAL CABLE. SUBMIT UL LISTED

25. DUCTS, PIPING, AND CONDUITS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING COMPATIBLE WITH THE ROOFING SYSTEM. SEE ARCHITECTURAL DRAWINGS. IN THE ABSENCE OF ANY OTHER REQUIREMENTS, PROVIDE SHEET LEAD TYPE FLASHING FOR PLUMBING VENTS IN BUILT-UP ROOFS, TALL CONE WITH EPDM BOOT FOR PIPE AND CONDUIT IN SINGLE PLY MEMBRANE ROOFS, AND CURBED ROOF

26. COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND LANDSCAPING DRAWINGS PRIOR TO INSTALLATION.

28. MOUNT ALL STATS AT 48" A.F.F., UNLESS NOTED OTHERWISE. COORDINATE LOCATION WITH WALL FINISH, AND TO AVOID CASEWORK, FURNITURE, DOOR SWINGS, HEAT SOURCES, AND EXTERIOR WALLS. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO BEGINNING

29. PROVIDE ¼" GALVANIZED MESH SCREEN ON ALL COMBUSTION AIR DUCTS OR OPENINGS, AND ALL OPEN END RETURN AND EXHAUST DUCTS. 30. ALL RECTANGULAR DUCTWORK DIMENSIONS ARE OUTSIDE SHEET METAL DIMENSIONS. DUCT LINER HAS BEEN ACCOUNTED FOR.

B. UNLESS OTHERWISE NOTED, ALL CHANGES IN DIRECTION SHALL BE MADE WITH RADIUS ELBOWS WITH RADIUS TO CENTERLINE EQUAL

1) WHERE REQUIRED FOR SPACE CONSTRAINTS, PROVIDE SQUARE THROAT ELBOWS WITH SINGLE WIDTH (NON-AIRFOIL) TURNING

2) FOR DUCT DEPTHS OF 36" OR LESS, PROVIDE MANUFACTURED SINGLE WIDTH (NON-AIRFOIL) TURNING VANES, WITH SPACING IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS FOR "STANDARD SPACING". USE DOUBLE THICKNESS BLADES FOR DUCT DEPTHS GREATER THAN 36". USE NO TRAILING EDGES.

RETURN AIR PLENUM: THE HVAC SYSTEM WILL USE THE SPACE ABOVE THE CEILING ON EACH FLOOR AS A RETURN AIR PLENUM. CONFORM TO THE REQUIREMENTS OF NFPA AND LOCAL CODE REQUIREMENTS FOR ALL MATERIAL INSTALLED IN THE RETURN AIR PLENUM. PROVIDE A COMPLETE RETURN AIR PATH BETWEEN ALL RETURN AIR DEVICES (GRILLES ETC.) AND THEIR RESPECTIVE HVAC UNIT. MAXIMUM VELOCITY OF RETURN AIR IN PLENUM SHALL GENERALLY NOT EXCEED 250 FEET PER MINUTE, NOR EXCEED 750 FEET

33. PROVIDE SHOCK ARRESTERS AT ALL DOMESTIC HOT AND COLD WATER BRANCHES SERVING FIXTURES AND EQUIPMENT WITH QUICK CLOSING VALVES. SUCH FIXTURES AND EQUIPMENT INCLUDES FLUSH VALVE WATER CLOSETS, DISHWASHERS AND ICE MACHINES. SHOCK ARRESTERS SHALL BE CONSTRUCTED WITH A PISTON IN A SEALED COPPER TUBE CHAMBER, AND APPROVED FOR INSTALLATION WITHIN

34. EXAMINATION OF PREMISES/SITE - VISIT THE PREMISES SITE BEFORE SUBMITTING BID AS NO EXTRAS WILL BE ALLOWED FOR LACK OF

A. EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY". THE MECHANICAL CONTRACTOR SHALL FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND IS TO INCLUDE IN HIS BID AN ALLOWANCE FOR REMOVAL AND/OR RELOCATION OF EXISTING DUCTWORK, PIPING, FIXTURES, OR OTHER EQUIPMENT AND ADAPT NEW

B. EXISTING DUCTWORK, EQUIPMENT, PIPING, ETC. WHICH ARE NOT INDICATED FOR REUSE BECOME THE PROPERTY OF THE CONTRACTOR. HOWEVER, FIXTURES, PUMPS, FANS, FIRE PROTECTION EQUIPMENT, ETC. SHALL BECOME THE PROPERTY OF THE

SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER-IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.

#	TITLE	25 % %
M0.1	MECHANICAL COVER SHEET	
MD1.1	AREA AL HVAC DEMO PLAN	
MD1.2	AREA BL HVAC DEMO PLAN	
MD1.3	AREA CL HVAC DEMO PLAN	
MD1.4	AREA A HVAC DEMO PLAN	\checkmark
MD1.5	AREA B HVAC DEMO PLAN	\checkmark
MD1.6	AREA C HVAC DEMO PLAN	\checkmark
MD1.7	AREA D HVAC DEMO PLAN	\checkmark
MD1.8	AREA E HVAC DEMO PLAN	\checkmark
MD1.9	AREA F HVAC DEMO PLAN	\checkmark
MD1.10	AREA G HVAC DEMO PLAN	\checkmark
MD1.11	MECHANICAL DEMO ROOF PLAN	\checkmark
MD1.12	MECHANICAL DEMO ROOF PLAN	\checkmark
M1.1	AREA AL PLUMBING PLAN	√
M1.3	AREA CL PLUMBING PLAN	√
M1.4	AREA A PLUMBING PLAN	√
M1.5	AREA B PLUMBING PLAN	√
M2.1	AREA AL HVAC PLAN	
M2.2	AREA BL HVAC PLAN	
M2.3	AREA CL HVAC PLAN	
M2.4	AREA A HVAC PLAN	
M2.5	AREA B HVAC PLAN	
M2.6	AREA C HVAC PLAN	
M2.7	AREA D HVAC PLAN	
M2.8	AREA E HVAC PLAN	
M2.9	AREA F HVAC PLAN	
M2.10	AREA G HVAC PLAN	
M2.11	MECHANICAL ROOF PLAN	\checkmark
M2.12	MECHANICAL ROOF PLAN	\checkmark
M2.13	HVAC ZONE PLAN	\checkmark
M3.1	AREA AL HVAC PIPING PLAN	\checkmark
M3.2	AREA BL HVAC PIPING PLAN	√ √
M3.3	AREA CL HVAC PIPING PLAN	\checkmark
M3.4	AREA A HVAC PIPING PLAN	\checkmark
M3.5	AREA B HVAC PIPING PLAN	\checkmark
M3.6	AREA C HVAC PIPING PLAN	

M3.6 AREA C HVAC PIPING PLAN M3 7 AREA D HVAC PIPING PLAN M3.8 AREA E HVAC PIPING PLAN AREA F HVAC PIPING PLAN M3.9 M3.10 AREA G HVAC PIPING PLAN MECHANICAL ENLARGED PLANS M4.1 M4.2 MECHANICAL ENLARGED PLANS MECHANICAL ENLARGED PLANS M4.3 M4 4 MECHANICAL ENLARGED PLANS MECHANICAL CONTROL DIAGRAMS M5.1 M5.2 MECHANICAL CONTROL DIAGRAMS M5.3 MECHANICAL CONTROL DIAGRAMS M5.4 MECHANICAL CONTROL DIAGRAMS M5.5 MECHANICAL CONTROL DIAGRAMS M6.1 MECHANICAL DIAGRAMS M7.1 MECHANICAL SCHEDULES M7.2 MECHANICAL SCHEDULES M7.3 MECHANICAL SCHEDULES M7.4 MECHANICAL SCHEDULES ISSUE LOG KEY: 'VISSUED AS PART OF A SET ''NOT PART OF SET * ISSUED FOR INFORMATION ONLY

- NOT ALL AREAS REQUIRE PLUMBING WORK, AREAS WITH NO PLUMBING WORK HAVE BEEN REMOVED FROM THIS SET

PHASING NOTES: THIS PROJECT IS ANTICIPATED TO BE CONSTRUCTED OVER 2 SUMMERS. 2012 AND 1. 2013.

PHASE 1, SUMMER 2012, SHALL INCLUDE AREAS A,B,C (BOTH LEVELS) THE BOILER 2. PLANT AND KITCHEN RENOVATION.

3. PHASE 2, SUMMER 2013, SHALL INCLUDE AREAS D,E,F,G.

D,E,F,G MATERIAL AND EQUIPMENT.

CONTROLS CONTRACTOR SHALL ENSURE THAT (E)PNEUMATIC SYSTEMS SERVING 4. D,E,F,G REMAIN OPERATIONAL UNTIL CONSTRUCTION OF PHASE 2 BEGINS.

VENDORS AND CONTRACTORS SHALL ANTICIPATE 1 YEAR LATER DELIVERY OF

	0/	CFM Calcu	ulations by S	pace - per 2	006 IMC		
RTU	Type of Space	Zone	Zone	cfm/person	OA Required	Actual Design	Airflows CFM's
<u></u>	Type of space	<u>Area</u>	Population		<u>OA Required</u>	Supply	<u>0A</u>
RTU-1	Classrooms	18,240	592	15	8880	17,500	8,900
RTU-2	Classrooms	6,230	198	15	2970	7,200	3,000
RTU-3	Classroom	1,220	40	15	600	1,600	600
RTU-4	Classrooms	14,790	416	15	6240	12,500	6,300
RTU-5	Classrooms	4,370	150	15	2250	6,300	2,250
RTU-6	Offices	7,050	66	20	1320	4,000	1,350
RTU-7	Cafeteria	3,350	335	20	6700	9,400	6,700
RTU-8	Classrooms	13,990	226	15	3390	9,200	3,400
RTU-9	Classrooms	13,250	208	15	3120	10,900	3,200
RTU-10	Gym	5,520	165	20	3300	15,000	3,300
RTU-11	Gym	6,180	185	20	3700	10,000	3,700
RTU-12	Classrooms	20,380	409	15	6135	15,750	6,200
RTU-13	Classrooms	9,640	319	15	4785	6,700	4,800
RTU-14	Library	13,610	100	15	1500	18,000	1,500
RTU-15	Offices	6,640	54	20	1080	8,500	1,100
RTU-16	Classrooms	3,240	40	15	600	2,300	600
RTU-17	Classrooms	3,170	34	15	510	4,000	600
RTU-18	Computer Room	1,320	32	15	480	1,500	500

MECHANICAL SHEET INDEX

	ISSUE LOG										
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AFF -	ABOVE FINISHED FLOOR
AFG -	ABOVE FINISHED GRADE
BDD -	BACK DRAFT DAMPER
BFG -	BELOW FINISHED GRADE
BOP -	BOTTOM OF PIPE FROM FINISHED FLOOR
CFM -	CUBIC FEET PER MINUTE
CLG -	CEILING
CONN -	CONNECT
CO -	CLEANOUT
COTG -	CLEANOUT TO GRADE
DN -	DOWN

-SMS-

-SMR-

-HWS-

-HWR-

-CHS -

-CHR -

-CS--CR-

-G-

-MG-

- LPG --D-

-PC-

- FOV-

- FOF -

- GF -

- RFS -

- RFR -

-RS-

– RL –

-CW-

- NS -

-HW-

140° HW

-HWC-

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MOP SERVICE BASIN

ABBREVIATIONS/PLAN SYMBOLS (E) - EXISTING NIC - NOT IN CONTRACT EAT - ENTERING AIR TEMPERATURE OBD - OPPOSED BLADE VOLU FXH - FXHAUST DC - ON CENTER EWT - ENTERING WATER TEMPERATURE OSA - OUTSIDE AIR FBO - FURNISHED BY OWNER RA - RETURN AIR FCO - FLOOR CLEANOUT SA - SUPPLY AIR GPM - GALLONS PER MINUTE (WATER FLOW RATE) TYP - TYPICAL LAT - LEAVING AIR TEMPERATURE UNO - UNLESS NOTED OTHER LWT - LEAVING WATER TEMPERATURE W/ - WITH WCO - WALL CLEANOUT NFW (N)

			PLAN SYMBOLS		
	CONTROL PANEL	SP	DUCT STATIC PRESSURE SENSOR		FIRE RISER
CO2	CARBON DIOXIDE SENSOR	P	ROOM PRESSURE SENSOR	$\overline{}$	HVAC RISER
<u>©</u>	CARBON MONOXIDE SENSOR	EPO	EMERGENCY POWER OFF SWITCH	\bigoplus	SECTION CUT LETTER./ SHEET SHOWN ON.
Ē	THERMOSTAT	(P)	PLUMBING RISER		POINT OF DISCONNECTION
S	REMOTE TEMPERATURE SENSOR	—	HEATING WATER RISER	\otimes	POINT OF NEW CONNEC
H	HUMIDISTAT	$\langle - \rangle$	CHILLED WATER RISER		

	PIPING SYMBOLS	
SNOWMELT SUPPLY	— F — FIRE LINE	RESSURE REDUCING
SNOWMELT RETURN	-PW - PRESSURIZED WASTE	
HEATING WATER SUPPLY		
HEATING WATER RETURN		PUMP & EQUIPMENT C
CHILLED WATER SUPPLY	-AW - ACID WASTE PIPE	
CHILLED WATER RETURN	AV – ACID VENT PIPE	
CONDENSER SUPPLY	-GW - GREASE WASTE PIPE	× PIPE ANCHOR
CONDENSER RETURN	– ST – STORM DRAIN PIPE	
NATURAL GAS	- ST(OF) -STORM DRAIN OVERFLOW	
MEDIUM PRESSURE GAS	- SD - SECONDARY DRAIN	SAFETY RELIEF VALVE
LIQUID PROPANE GAS	- SO - SAND AND OIL WASTE	
DRAIN PIPE	- VAC - VACUUM PIPE	PRESSURE - TEMP. TAP
PUMPED CONDENSATE	- CA - COMPRESSED AIR PIPE	PRESSURE GAUGE W/
FUEL OIL VENT		
FUEL OIL FILL	SHUT OFF VALVE (BALL, GATE, BUTTERFLY)	VACUUM BREAKER
GLYCOL FEED	GLOBE VALVE	
RADIANT FLOOR SUPPLY		VERTICAL CLEANOUT
RADIANT FLOOR RETURN	FLOW CONTROL VALVE	E FLOOR DRAIN
REFRIGERANT SUCTION	D BALL VALVE	FLOOR SINK
REFRIGERANT LIQUID	PLUG OR BALANCING VALVE	O ROOF DRAIN
DOMESTIC COLD WATER	FLOW BALANCING VALVE	STRAINER W/ BLOW-OF
NON-SOFTENED DOMESTIC COLD WATER		
DOMESTIC HOT WATER	GATE OR GLOBE VALVE IN RISER	FS ≈ FLOW SWITCH
/ DOMESTIC HOT WATER (TEMP. SHOWN)	DRAIN VALVE W/ HOSE END	HOSE BIBB
HOT WATER CIRCULATION	Reference Control Valve	WH WALL HYDRANT
MEDICAL AIR PIPE	- HPS - HIGH PRESSURE STEAM SUPPLY	STEAM TRAP
OXYGEN PIPE	-HPR - HIGH PRESSURE STEAM RETURN	FT-FLOAT & THERMOS
NITROGEN PIPE	- LPS - LOW PRESSURE STEAM SUPPLY	TD-THERMODYNAMIC
NITROUS OXIDE PIPE	- LPR - LOW PRESSURE STEAM RETURN	IB-INVERTED BUCKET
	DUCTWORK SYMBOLS	
FIRE/SMOKE DAMPER	RETURN/EXHAUST DUCT DOWN	SUPPLY REGISTER
FIRE DAMPER	TURNING VANES SHOWN IN 90~ ELBOW.	

▲ _{F/S}	FIRE/SMOKE DAMPER			RETURN/EXHAUST DUCT DOWN		\triangleleft	SUPPLY REGISTER
۲	FIRE DAMPER		\sum	TURNING VANES SHOWN IN 90~ ELBOW.			RETURN AIR OR EXH
	EXHAUST FAN ON ROOF W/ DUCT THRU ROOF.	- 	_	MANUAL BALANCING DAMPER	CFM BRANG SIZE		SUPPLY GRILLE
SD	SMOKE DETECTOR	ſ	o— - —	MOTORIZED DAMPER	CFI BRAM SIZ		RETURN GRILLE
TC	TEMPERATURE CONTROLLER		UU 1	BACK DRAFT DAMPER			SECTION THRU SUPP
\square	ACCESS PANEL			AIR EXTRACTOR			SECTION THRU OA, R
	SUPPLY DUCT DOWN		12x24	DUCT SIZES ARE OUTSIDE SHEET METAL (WxD)			

SINGLE LINE/DOUBLE LINE DUCTWORK SYMBOLS

SINGLE LINE		DOUBLE LINE		SINGLE LINE	
	<u>45° WYE (ROUND)</u>		· -	\sim	90° RADIUS ELBOW.
	<u>90° TEE (ROUND)</u>			\sim	90° ELBOW W/TURNING VANES (RECTANGULAR)
	45° CONICAL WYE (ROUND)				45° RADIUS ELBOW.
	90° CONICAL TEE			\leftarrow	45° ELBOW (RECTANGULAR)
	DUCT SPLIT			R	DUCT RISE SYMBOL
RIGID	FLEX DUCT	RIGID FLEX		D	DUCT DROP SYMBOL
} →→	SIZE OR SHAPE TRANSITION				

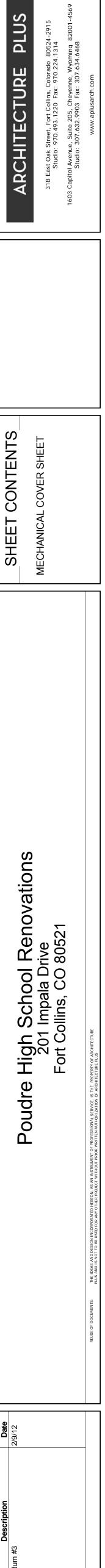
FIXTURE CONNECTION SCHEDULE									
FIXTURE	HW	CW	WASTE	VENT	FIXTURE HW				
WATER CLOSET (FLUSH VALVE)	-	1"	4"	2"	DRINKING FOUNTAIN / E.W.C				
WATER CLOSET (FLUSH TANK)	-	1/2"	4"	2"	KITCHEN SINK W/ DISPOSER 1/2"				
URINAL (BLOWOUT)	-	1"	2"	1-1/2"	BATHTUB / SHOWER 3/4"				
URINAL (WASHDOWN)	-	3/4"	2"	1-1/2"	CLOTHES WASHER ROUGH-IN 1/2"				
LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	DISHWASHER ROUGH-IN 1/2"				
SERVICE SINK	1/2"	1/2"	3"	2"	BAR SINK 1/2"				

1/2" 1/2" 3" 2" SIZES SHOWN ARE MINIMUM PIPE SIZES TO A SINGLE FIXTURE. MINIMUM PIPE SIZE TO 2 OR MORE FIXTURES IS 3/4". ALL FIXTURES LISTED ARE NOT NECESSARILY PROJECT. ALL SIZES UNO.

FLOOR DRAIN



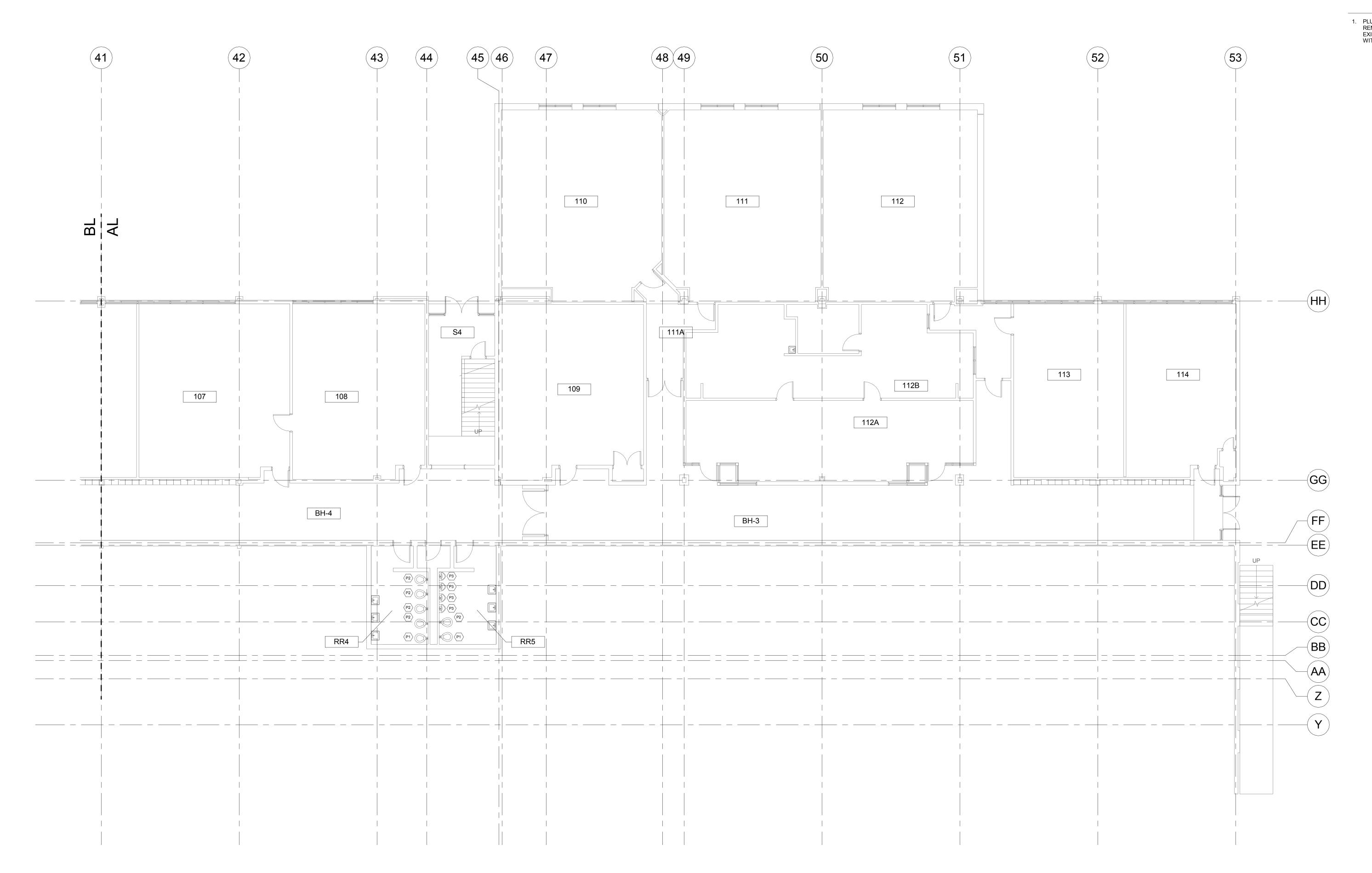
JME DAMPER		ARCHITECTURE PLUS	
CTION		OHEEL CONTENTS	
TATIC UST AIR REGISTER. Y AIR DUCT. , OR EXHAUST DUCT DOUBLE LINE \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow		tre Hinh School Renovations	
CW WASTE VENT 1/2" 11/2" 1-1/2" 1/2" 2" 1-1/2" 3/4" 2" 1-1/2" 1/2" 2" 1-1/2" 1/2" 2" 1-1/2" 1/2" 2" 1-1/2" 1/2" 1-1/2" 1-1/2" 1/2" 1-1/2" 1-1/2" 1/2" 1-1/2" 1-1/2" 1/2" 1-1/2" 1-1/2" USED ON THIS USED ON THIS Image: state s		Houdre H	000 -
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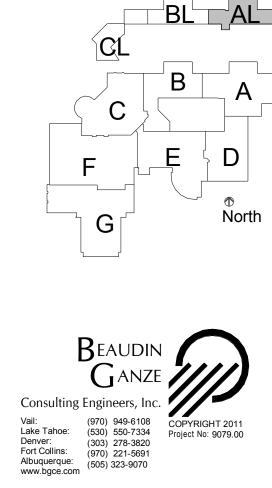


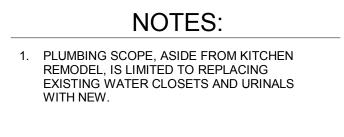
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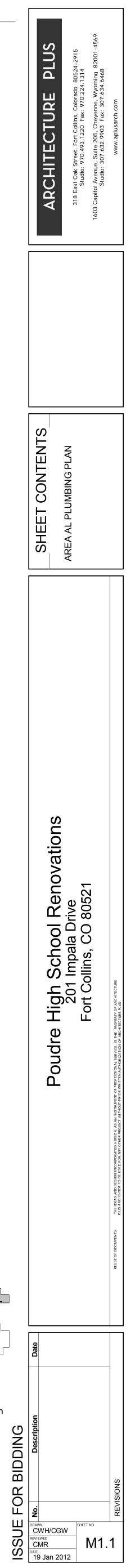
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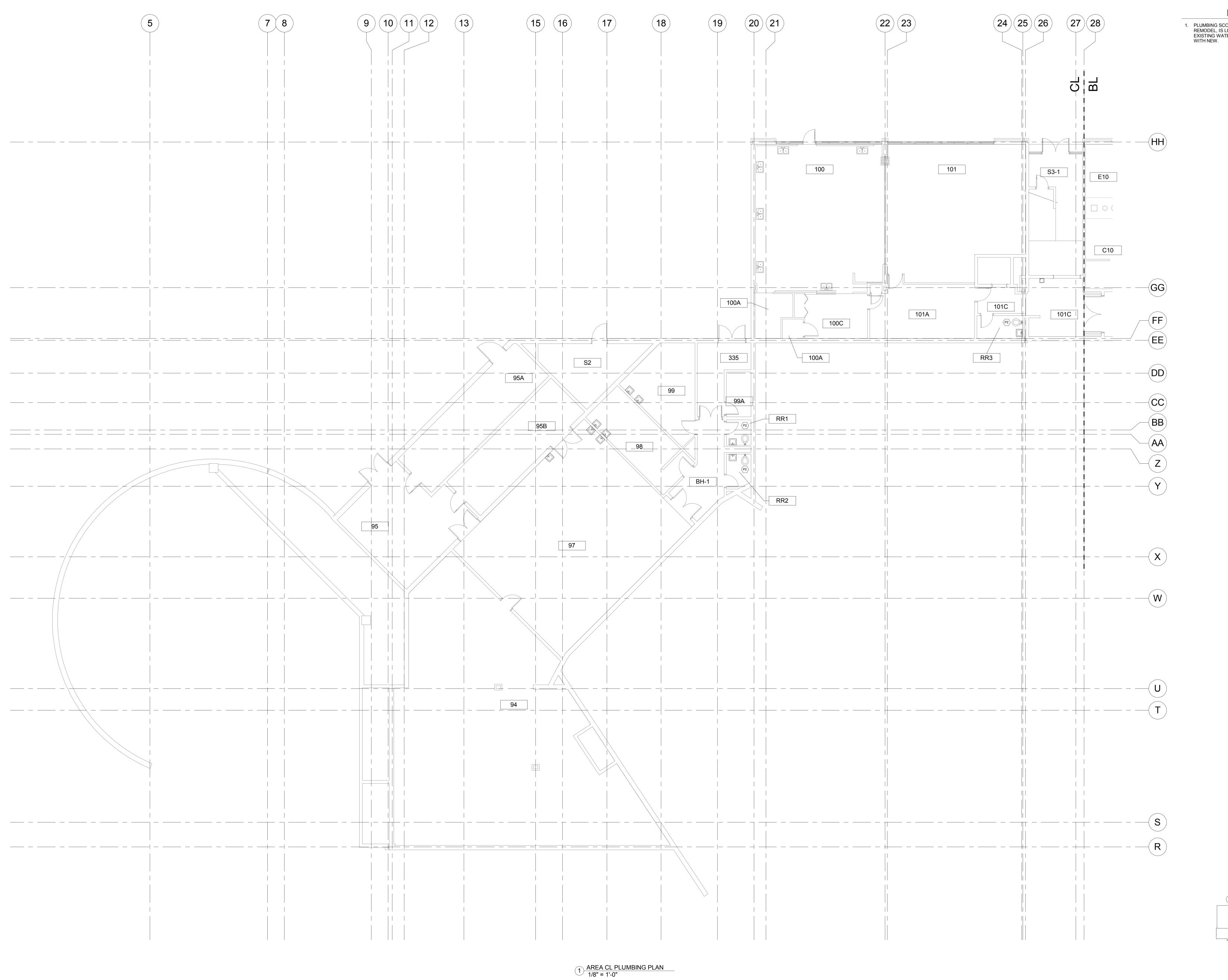


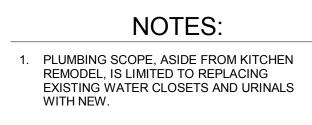
1 AREA AL PLUMBING PLAN 1/8" = 1'-0"

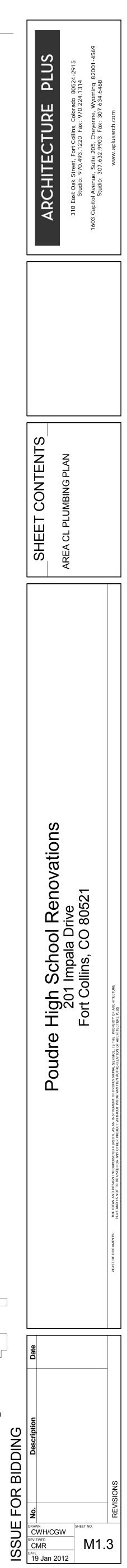


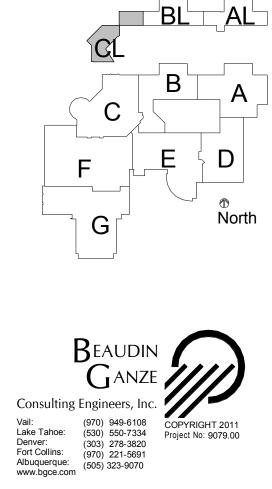


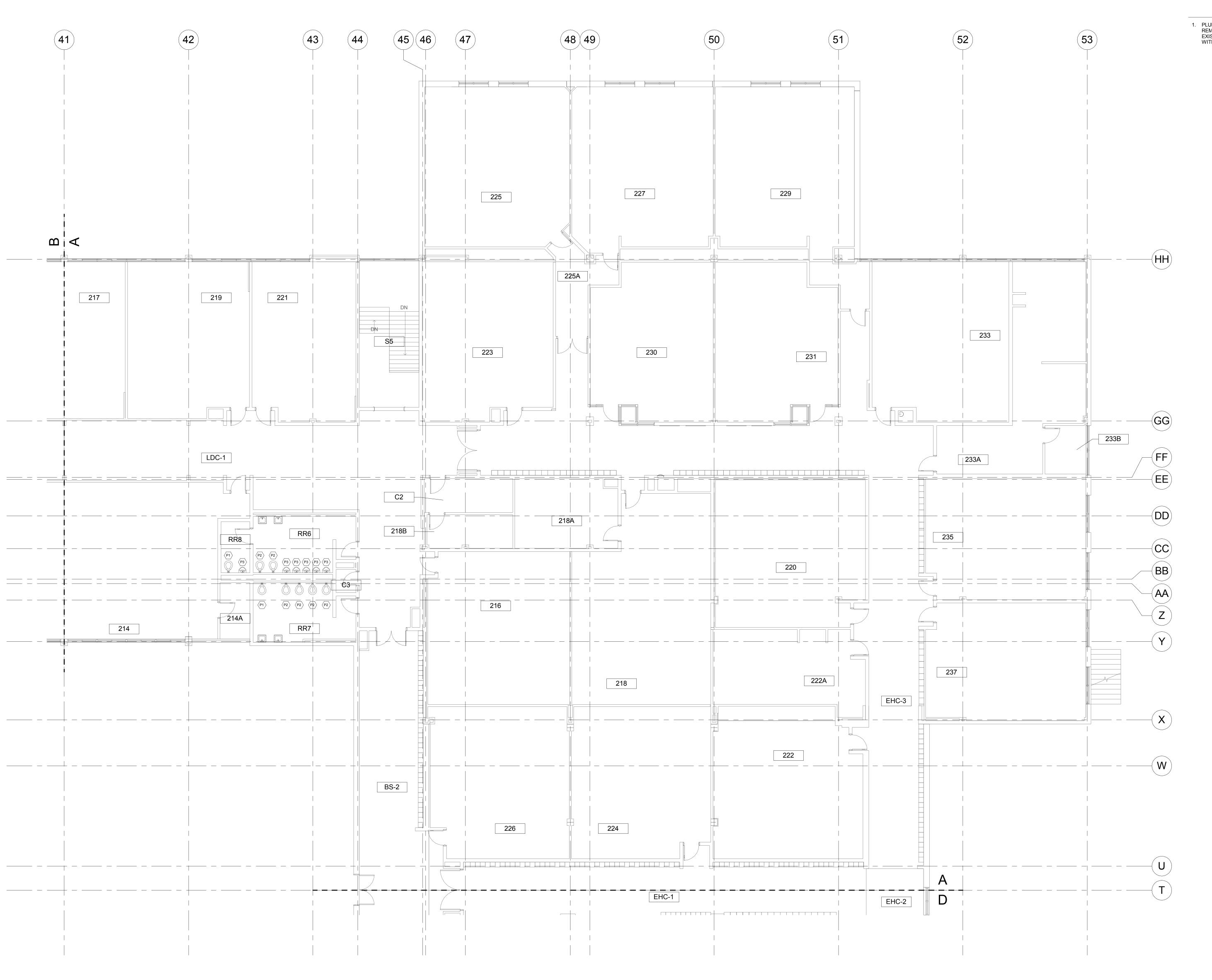




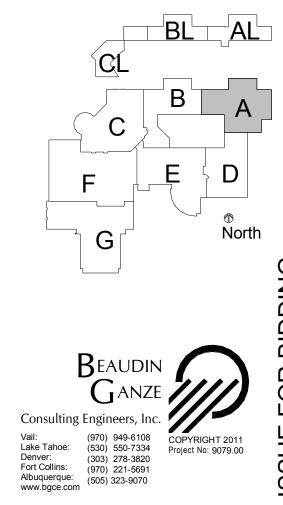


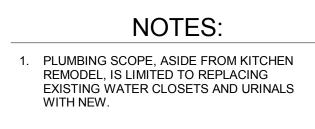


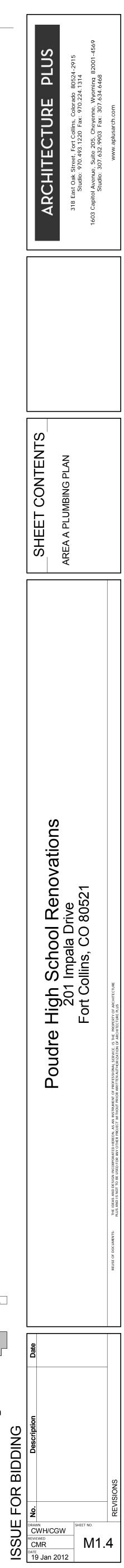


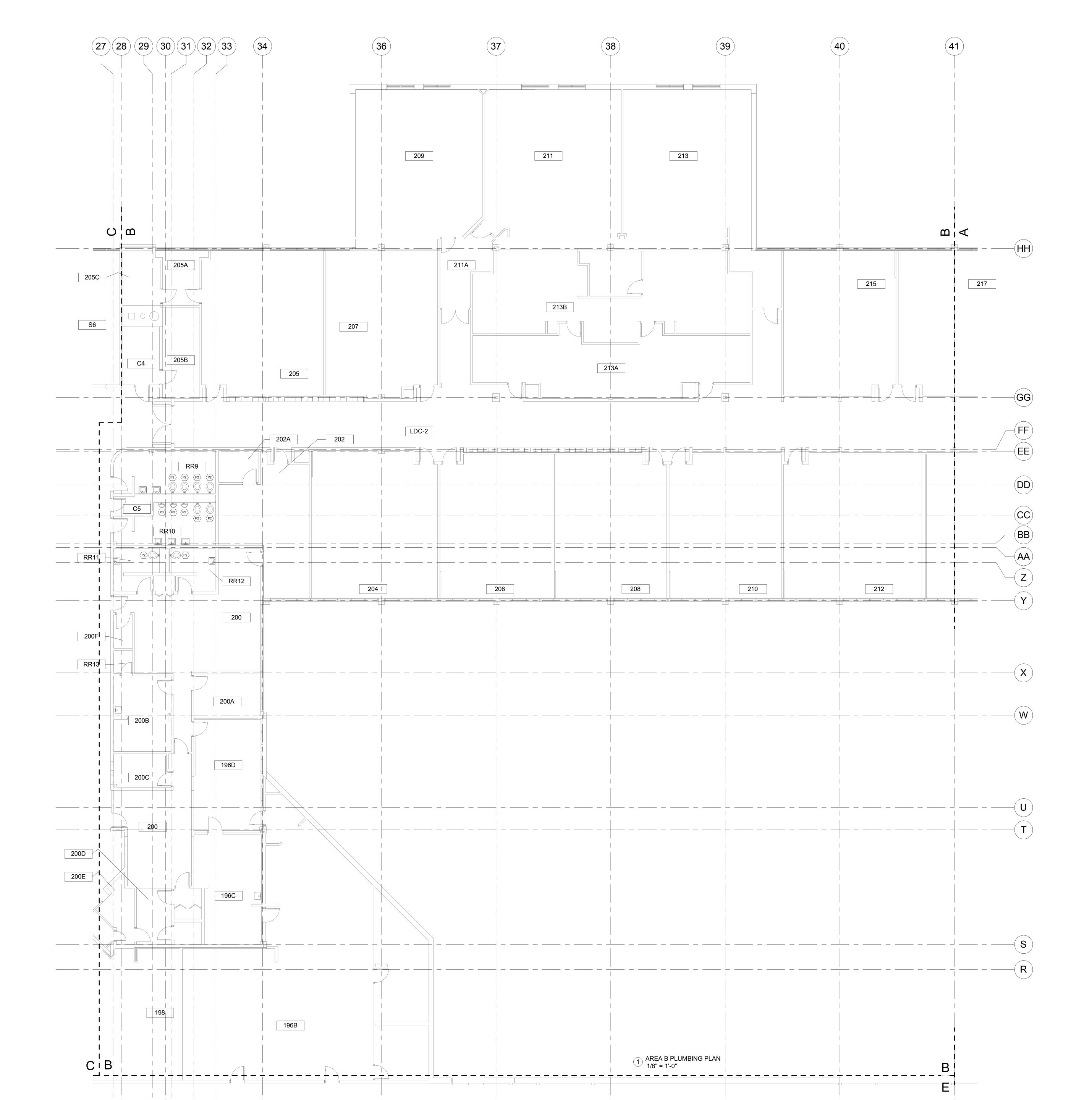


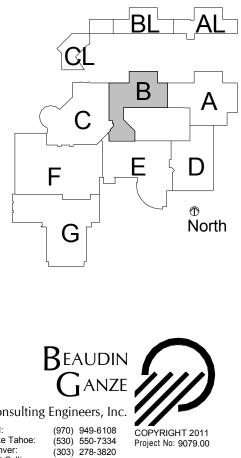
1 AREA A PLUMBING PLAN 1/8" = 1'-0"

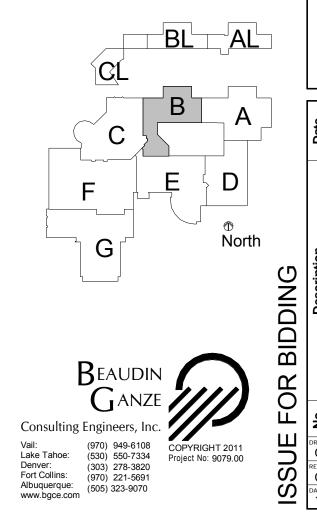


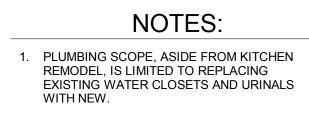


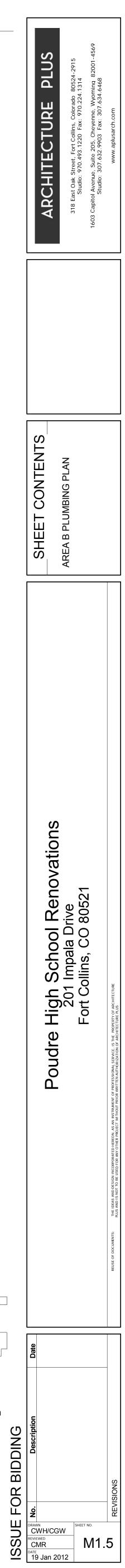


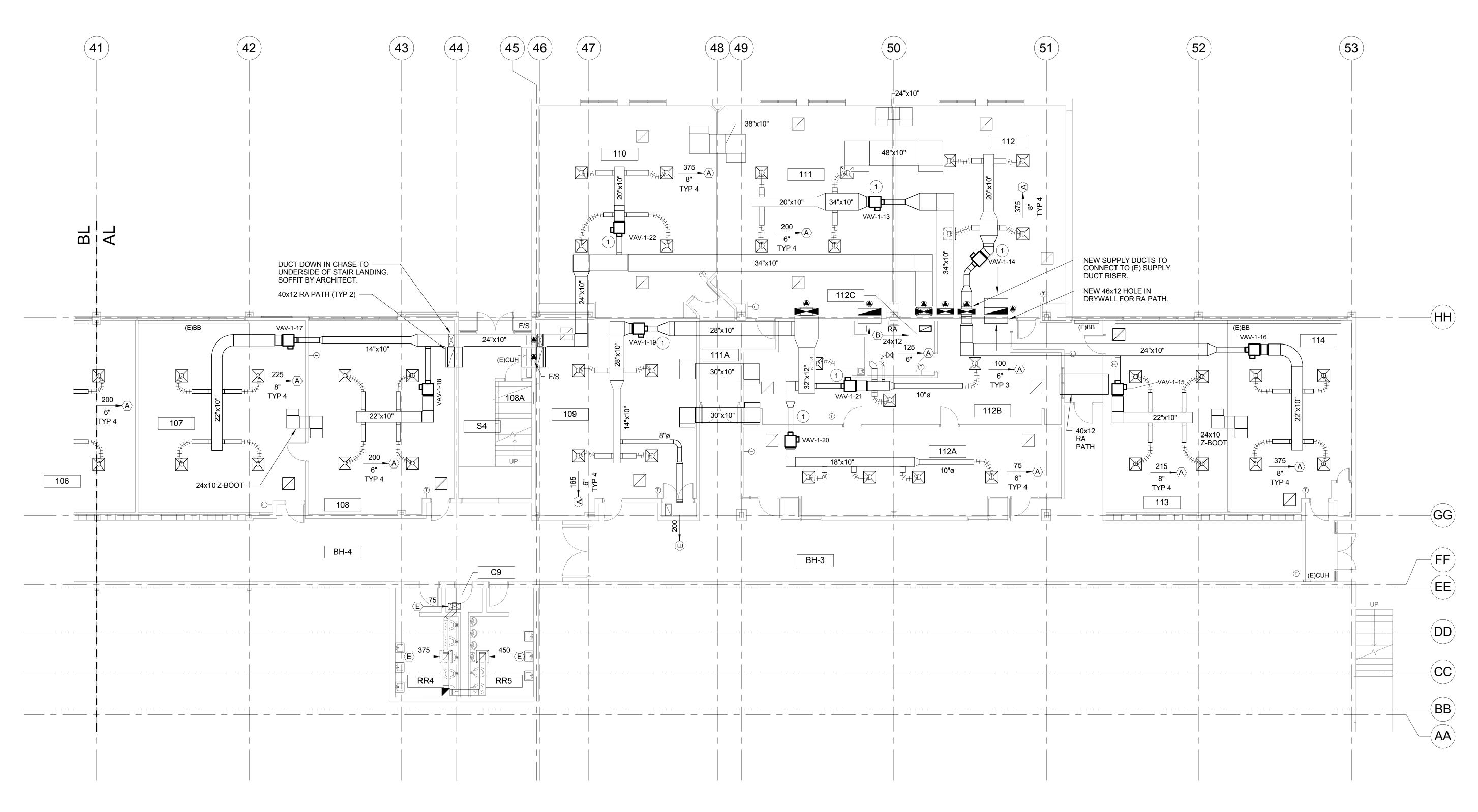




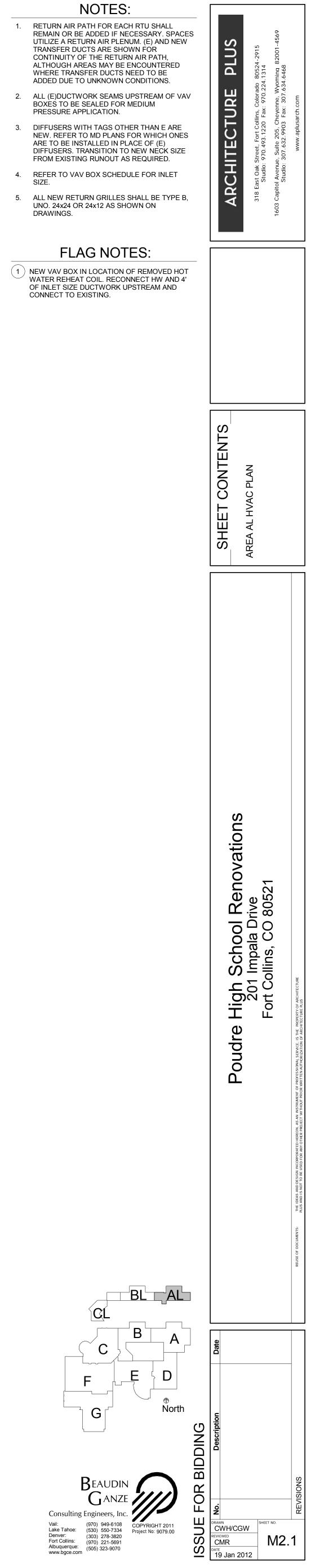


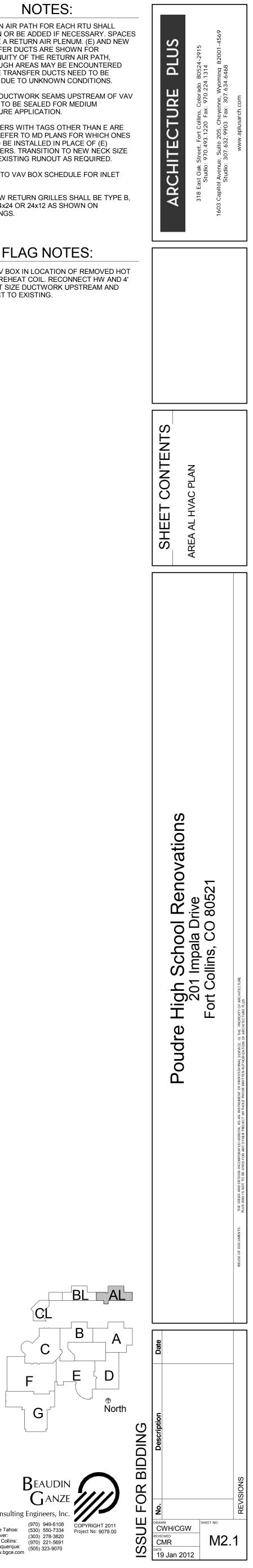




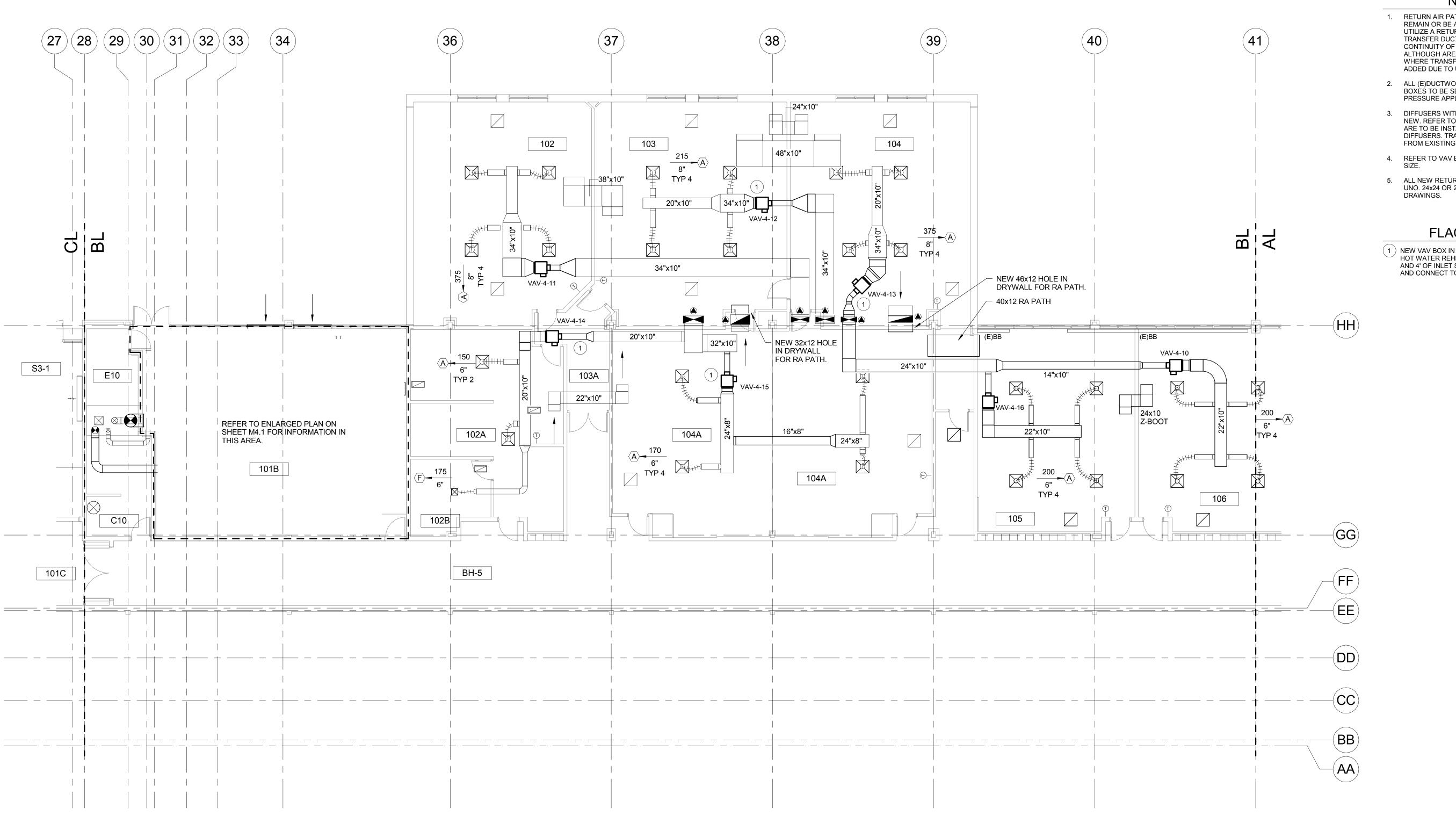


1 AREA AL HVAC PLAN 1/8" = 1'-0"

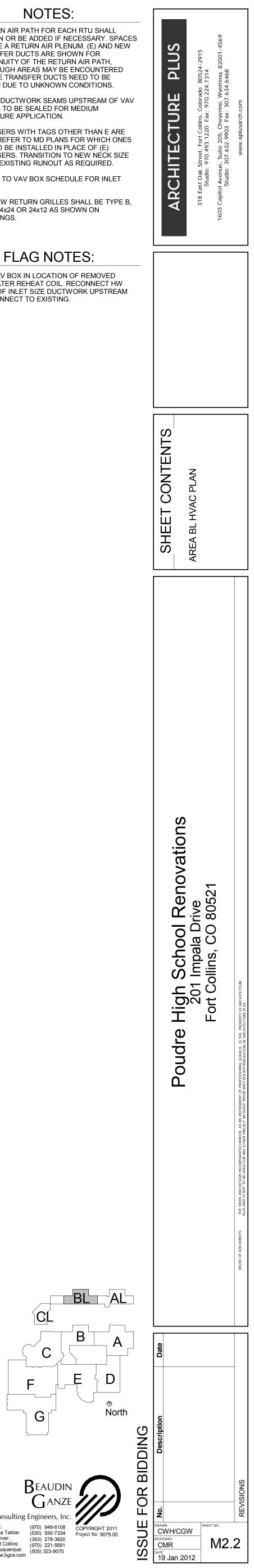


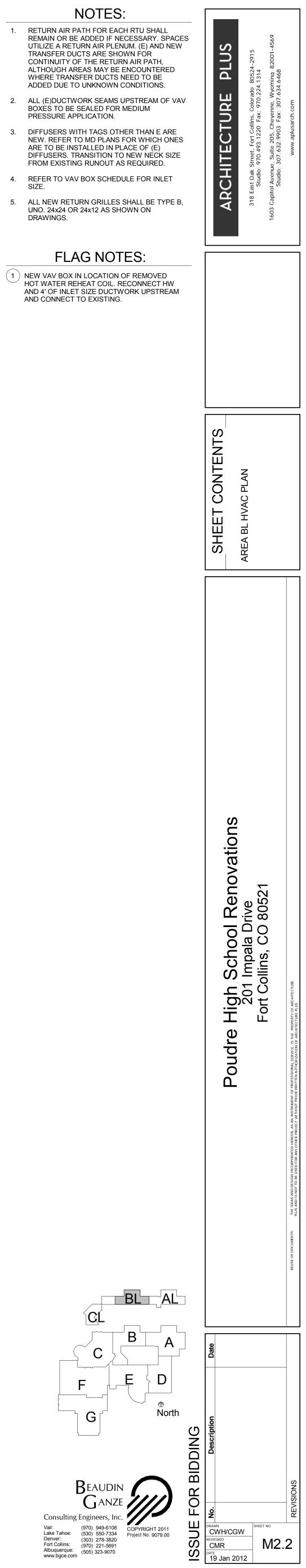


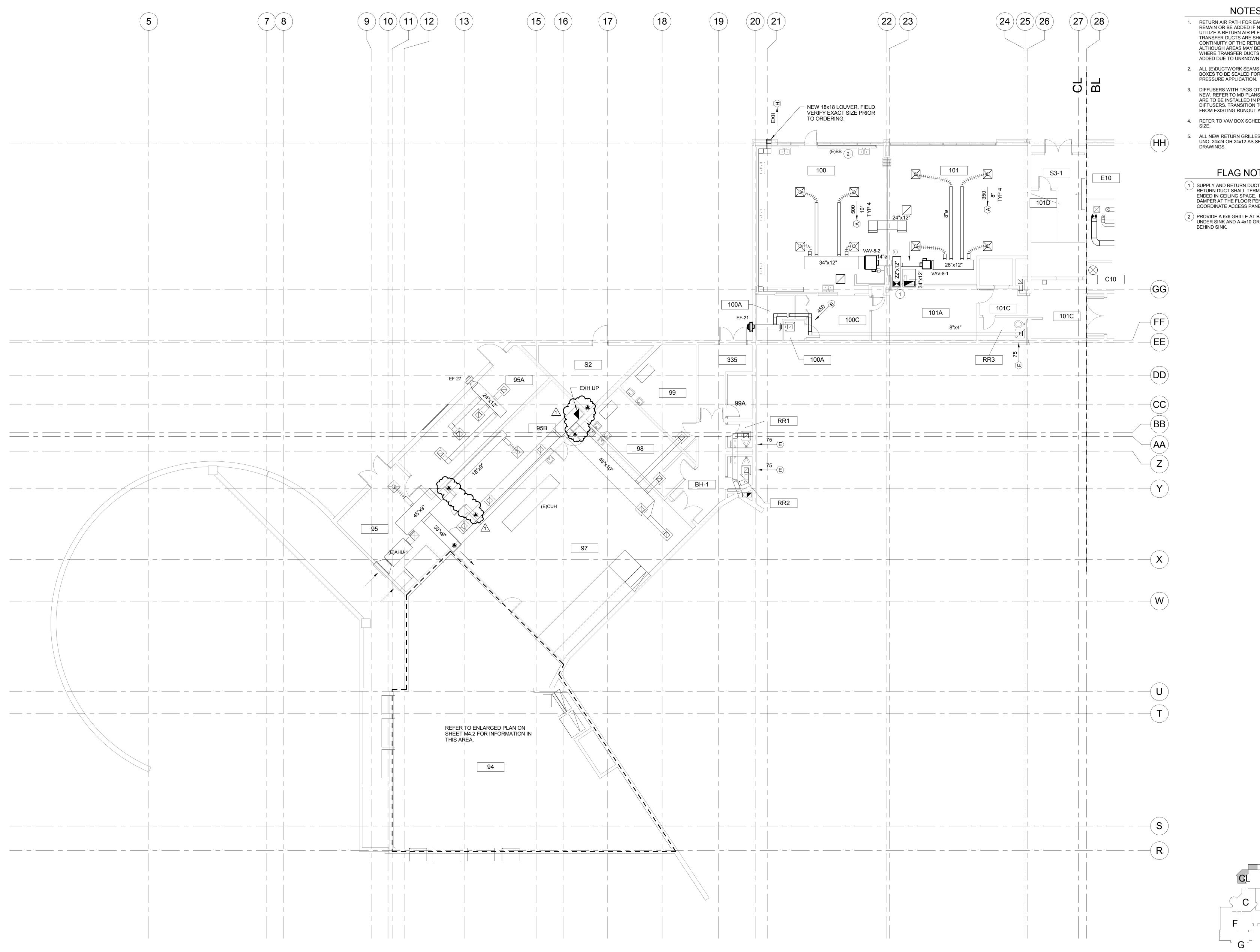




1 AREA BL HVAC PLAN 1/8" = 1'-0"

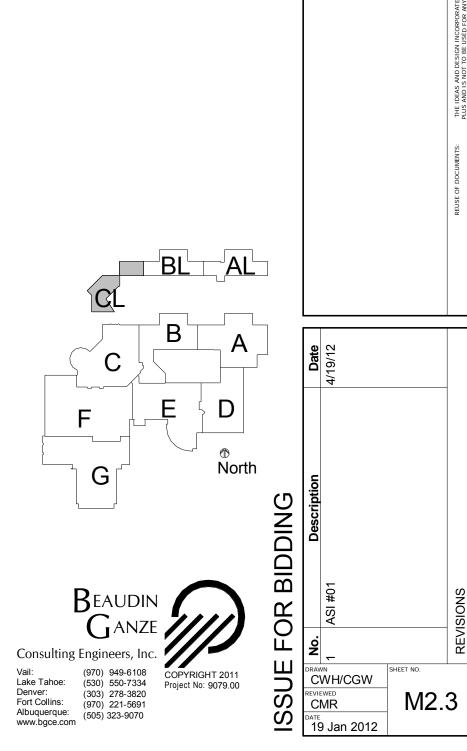


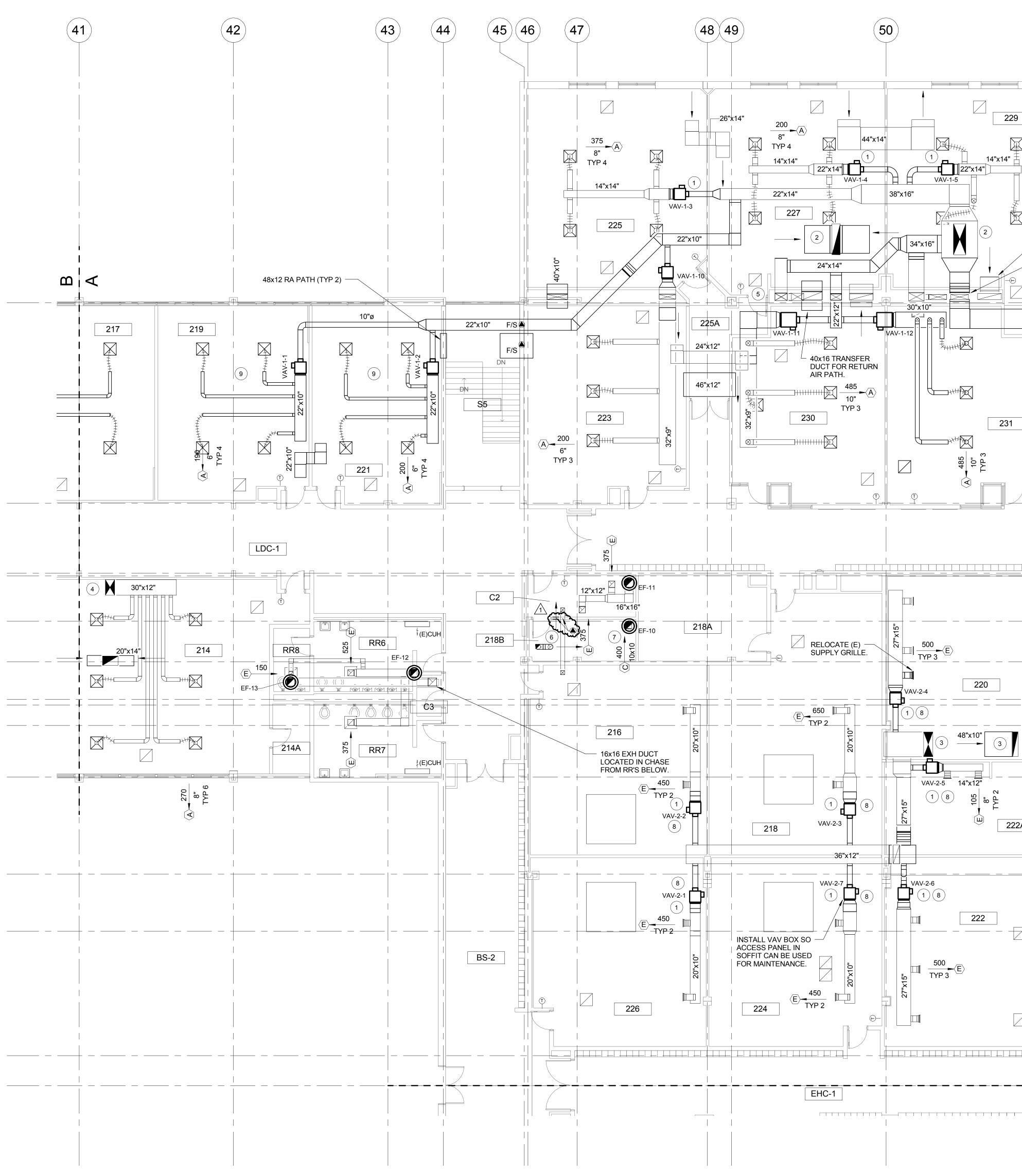




1 AREA CL HVAC PLAN 1/8" = 1'-0"

NOTES: 1. RETURN AIR PATH FOR EACH RTU SHALL REMAIN OR BE ADDED IF NECESSARY. SPACES UTILIZE A RETURN AIR PLENUM. (E) AND NEW TRANSFER DUCTS ARE SHOWN FOR CONTINUITY OF THE RETURN AIR PATH, Ы ALTHOUGH AREAS MAY BE ENCOUNTERED WHERE TRANSFER DUCTS NEED TO BE ADDED DUE TO UNKNOWN CONDITIONS. URE 2. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOXES TO BE SEALED FOR MEDIUM 3. DIFFUSERS WITH TAGS OTHER THAN E ARE NEW. REFER TO MD PLANS FOR WHICH ONES ARE TO BE INSTALLED IN PLACE OF (E) DIFFUSERS. TRANSITION TO NEW NECK SIZE CHITE FROM EXISTING RUNOUT AS REQUIRED. 4. REFER TO VAV BOX SCHEDULE FOR INLET α 5. ALL NEW RETURN GRILLES SHALL BE TYPE B, UNO. 24x24 OR 24x12 AS SHOWN ON FLAG NOTES: 1 SUPPLY AND RETURN DUCT UP CHASE. RETURN DUCT SHALL TERMINATE OPEN-ENDED IN CEILING SPACE. PROVIDE A FIRE DAMPER AT THE FLOOR PENETRATION. COORDINATE ACCESS PANELS WITH GC. 2 PROVIDE A 6x6 GRILLE AT BACK OF COUNTER UNDER SINK AND A 4x10 GRILLE IN LAMINATE _____ S FZ ш ONT AN \mathbf{O} \mathbf{O} ЕЦ Ψ 5 ati Reno 21 School Re mpala Drive lins, CO 800 High So 201 Im Fort Collir Ф σ Ο





1 AREA A HVAC PLAN 1/8" = 1'-0"

(52) (53) (51) 229 <u>375</u> <u>8</u>"►⟨A⟩ \sum SIZE. 14"x14" TYP 4 22"x14" VAV-1-5 (E) RETURN DUCT SHALL REMAIN OPEN-NT. ÈNDED IN PLENUM SPACE. - (E) SUPPLY DUCT IN CHASE SHALL CÓNNECT TO NEW SUPPLY DUCT. -(HH)E-1 38"x12" 36"x10" 375 HHH 8" \mathbf{x} ∇ 46"x12" VAV-1-7 TYP 4 /AV-1-6 9 233 ABOVE CEILING. (E)BB 24x14 DUCT IN CHASE. 231 225 PROVIDE 4" FILTER RACK. TYP 4 OF THIS AREA. VERIFY DIMENSIONS. $-(\mathbf{GG})$ 233B 30"x10' 190 FF —**⊷**⟨A⟩ 233A 6" (E)BB ____ EE, 375 8" ► (A) VAV-1-8 TYP 4 235 (\mathbf{CC}) 220 BB _____ 335 8" ~ (A) TYP 4 VAV-1-9 14"x12" 1 8 ⁸ 05 237 222A EHC-3 **X** 222 (\mathbf{W}) 500 TYP 3 (E)CUH-1 U A ____ D EHC-2

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 Consulting
 Engineers, Inc.

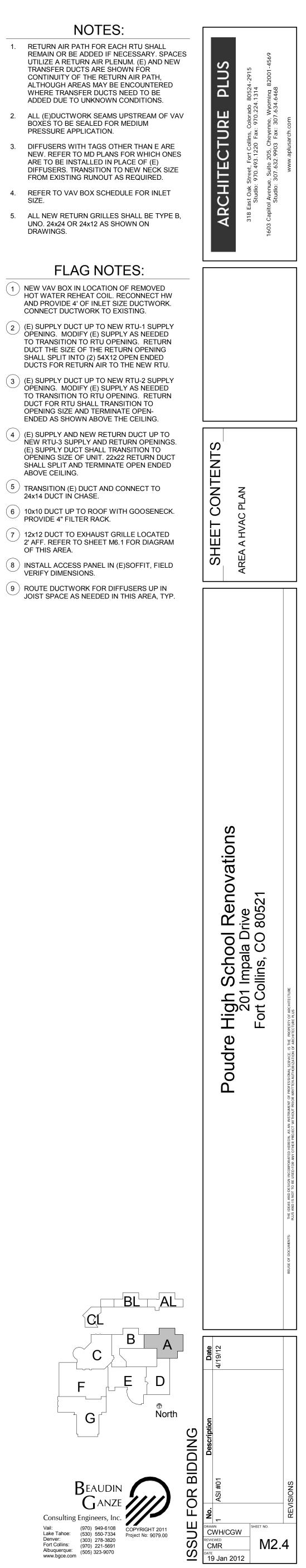
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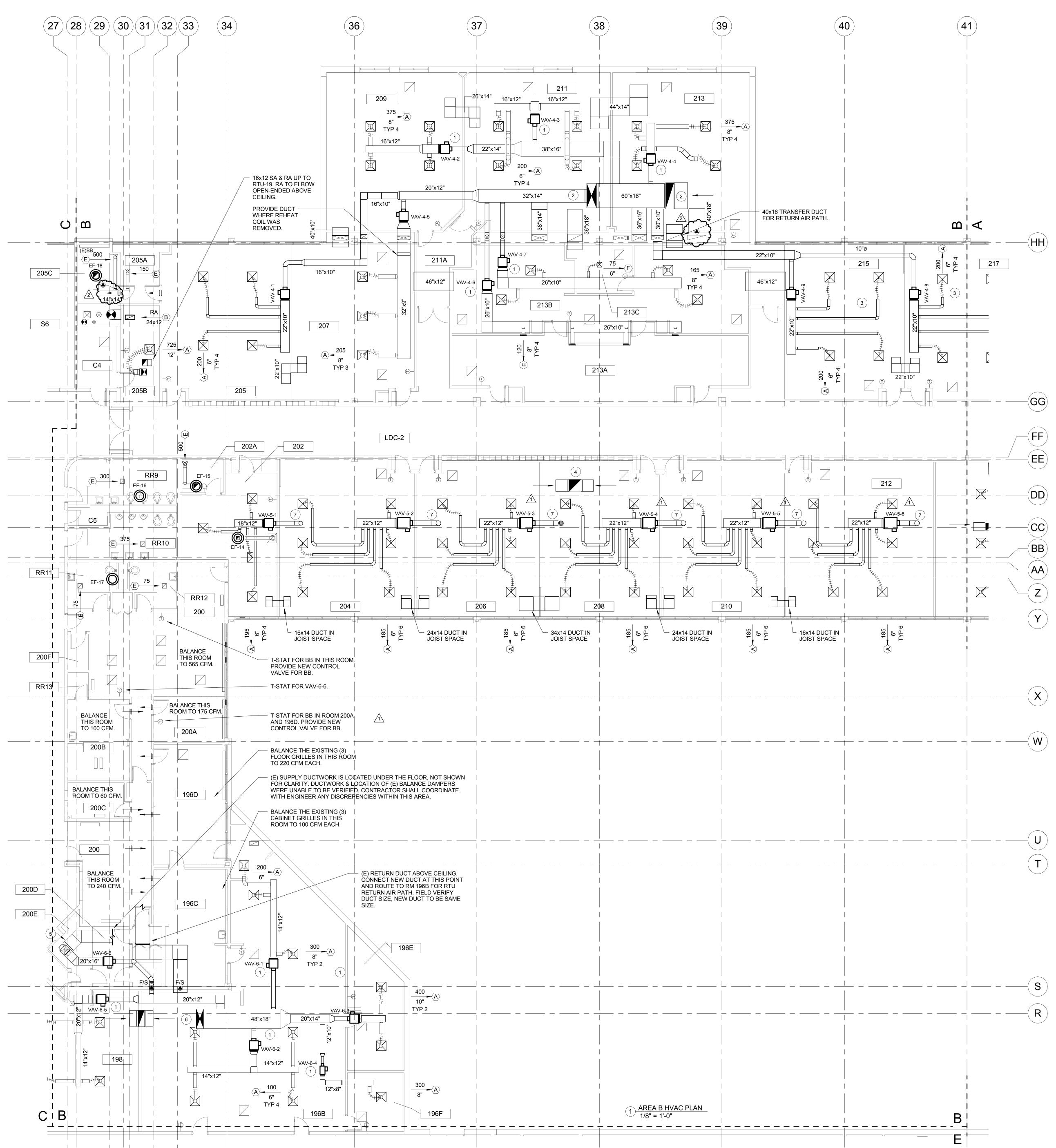
 Lake Tahoe:
 (530)
 550-7334

 Denver:
 (303)
 278-3820

 Fort Collins:
 (970)
 221-5691

 Albuquerque:
 (505)
 323-9070





3. DIFFUSERS WITH TAGS OTHER THAN E ARE NEW. REFER TO MD PLANS FOR WHICH ONES ARE TO BE INSTALLED IN PLACE OF (E) DIFFUSERS. TRANSITION TO NEW NECK SIZE FROM EXISTING RUNOUT AS REQUIRED. 4. REFER TO VAV BOX SCHEDULE FOR INLET SIZE. 5. ALL NEW RETURN GRILLES SHALL BE TYPE B, UNO. 24x24 OR 24x12 AS SHOWN ON DRAWINGS. FLAG NOTES: (1) NEW VAV BOX IN LOCATION OF REMOVED HOT WATER REHEAT COIL. RECONNECT HW AND 4' OF INLET SIZE DUCTWORK UPSTREAM AND CONNECT TO EXISTING. (2) (E) SUPPLY DUCT UP TO NEW RTU-4 SUPPLY OPENING. MODIFY (E) SUPPLY AS NEEDED TO TRANSITION TO RTU ÓPENING. 64x20 OPEN ENDED RETURN DUCT SHALL ELBOW UP AND TRANSITION TO RTU OPENING. (3) ROUTE DUCTWORK FOR DIFFUSERS UP IN

- TRANSITION TO OPENING. RETURN DUCT ABOVE THE CEILING.
- (5) 20x16 DUCT TO TURN DOWNWARD IN HVAC (E) UNDERGROUND DUCT. (6) (E) SUPPLY DUCT UP TO NEW RTU-6 OPENINGS.
- ABOVE CEILING.





NOTES:

1. RETURN AIR PATH FOR EACH RTU SHALL REMAIN OR BE ADDED IF NECESSARY. SPACES UTILIZE A RETURN AIR PLENUM. (E) AND NEW TRANSFER DUCTS ARE SHOWN FOR CONTINUITY OF THE RETURN AIR PATH, ALTHOUGH AREAS MAY BE ENCOUNTERED WHERE TRANSFER DUCTS NEED TO BE ADDED DUE TO UNKNOWN CONDITIONS.

2. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOXES TO BE SEALED FOR MEDIUM PRESSURE APPLICATION.

JOIST SPACE AS NEEDED IN THIS AREA, TYP. (4) 30x30 RETURN DUCT UP TO RTU-5 ON ROOF.

SHALL SPLIT INTO (2) 2816 OPEN-ENDED DUCTS

CLOSET. TRANSITION AND CONNECT DUCT TO

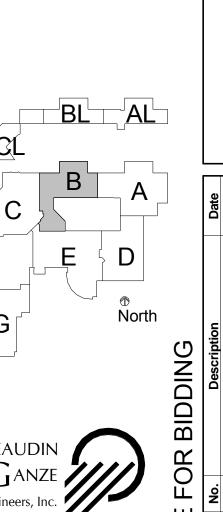
MÓDIFY (E) SUPPLY DROP AS NEEDED TO TRANSITION TO RTU OPENING. NEW 40x16 RETURN DROP SHALL TRANSITION FROM UNIT AND SPLIT TO 38x12 OPEN-ENDED DUCTS

(7) DUCT UP THROUGH ROOF TO ROOF-MOUNTED DUCTWORK. DUCT AND VAV SHALL BE ROUTE IN JOIST SPACE. 6" DIA. BRANCH DUCTS SHALL ROUTE FROM MAIN AND THROUGH JOIST WEBBINGS TO DIFFUSERS.

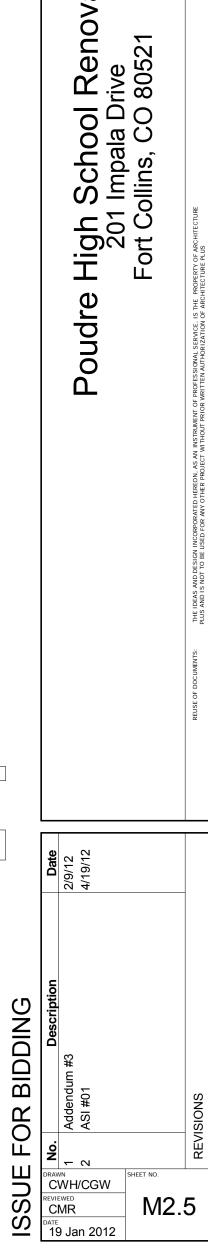


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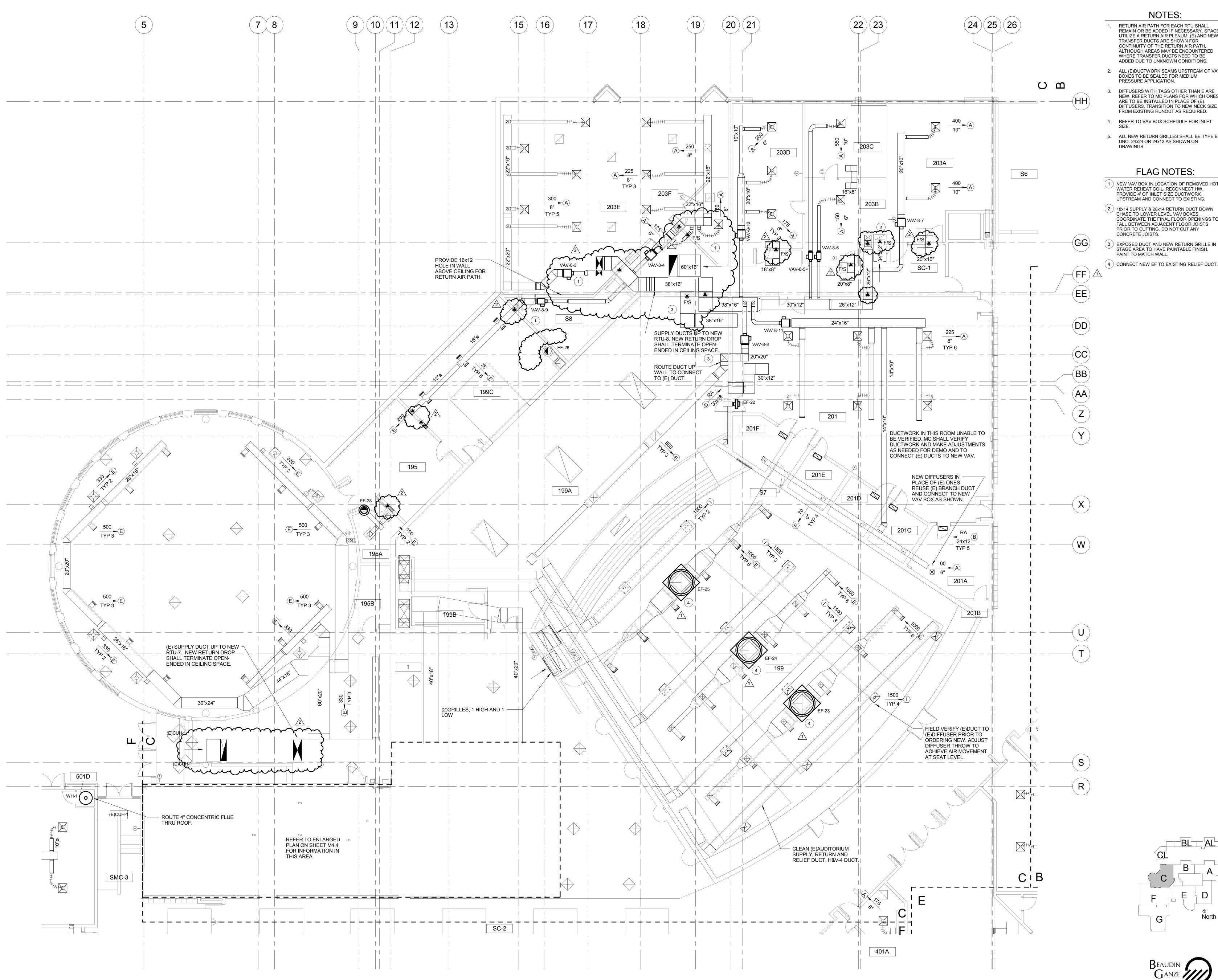




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M2.5



REMAIN OR BE ADDED IF NECESSARY. SPACES UTILIZE A RETURN AIR PLENUM. (E) AND NEW TRANSFER DUCTS ARE SHOWN FOR CONTINUITY OF THE RETURN AIR PATH, ALTHOUGH AREAS MAY BE ENCOUNTERED WHERE TRANSFER DUCTS NEED TO BE

2. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV

NEW. REFER TO MD PLANS FOR WHICH ONES ARE TO BE INSTALLED IN PLACE OF (E) DIFFUSERS. TRANSITION TO NEW NECK SIZE FROM EXISTING RUNOUT AS REQUIRED. 4. REFER TO VAV BOX SCHEDULE FOR INLET

5. ALL NEW RETURN GRILLES SHALL BE TYPE B,

FLAG NOTES:

(1) NEW VAV BOX IN LOCATION OF REMOVED HOT UPSTREAM AND CONNECT TO EXISTING.

COORDINATE THE FINAL FLOOR OPENINGS TO FALL BETWEEN ADJACENT FLOOR JOISTS

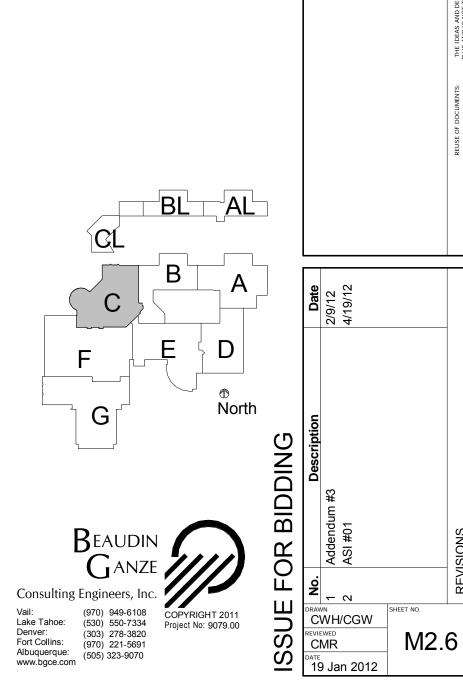
) EXPOSED DUCT AND NEW RETURN GRILLE IN STAGE AREA TO HAVE PAINTABLE FINISH.

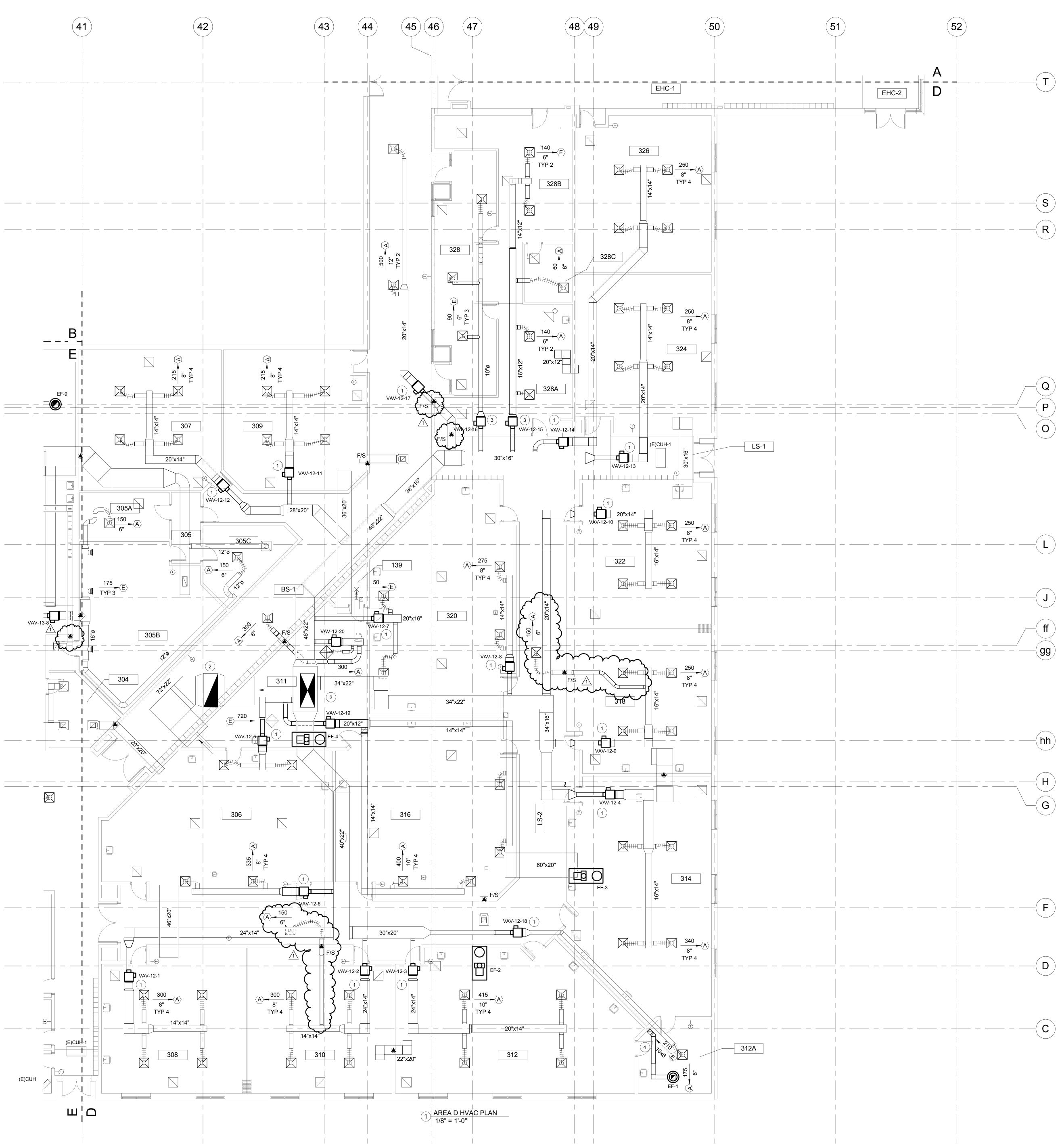
(4) CONNECT NEW EF TO EXISTING RELIEF DUCT.

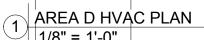


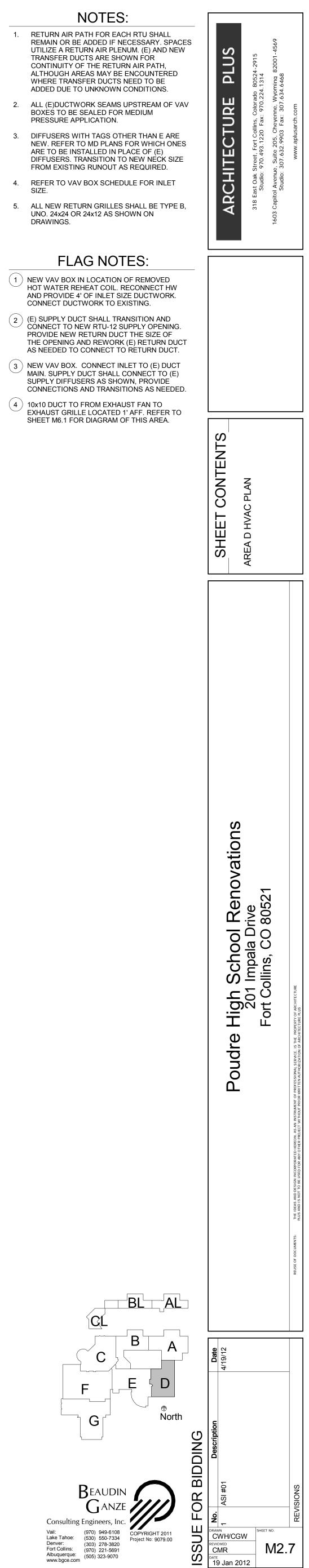
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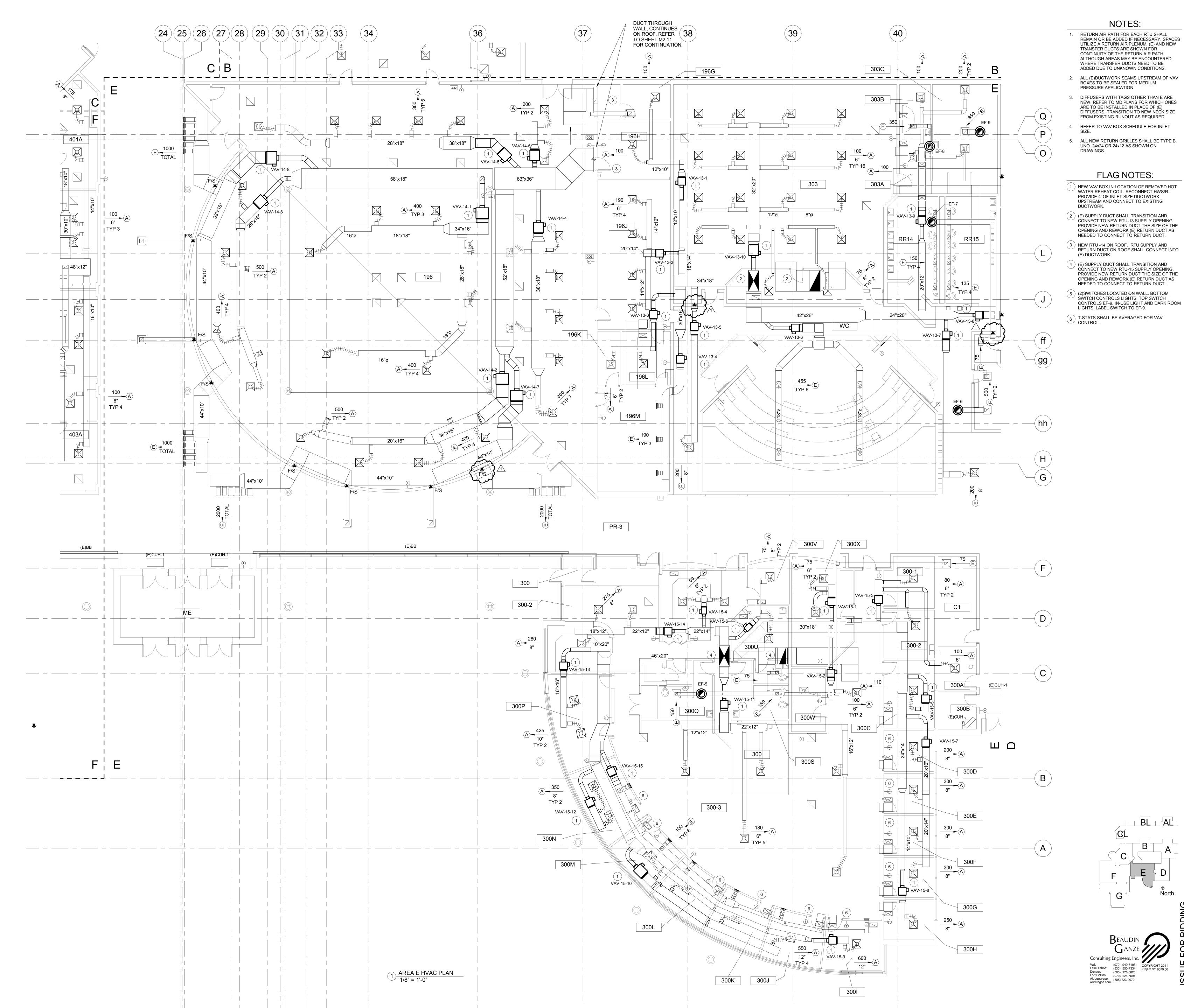












UTILIZE A RETURN AIR PLENUM. (E) AND NEW TRANSFER DUCTS ARE SHOWN FOR CONTINUITY OF THE RETURN AIR PATH, ALTHOUGH AREAS MAY BE ENCOUNTERED WHERE TRANSFER DUCTS NEED TO BE

2. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV

ARE TO BE INSTALLED IN PLACE OF (E) DIFFUSERS. TRANSITION TO NEW NECK SIZE FROM EXISTING RUNOUT AS REQUIRED. REFER TO VAV BOX SCHEDULE FOR INLET

ALL NEW RETURN GRILLES SHALL BE TYPE B,

FLAG NOTES:

1 NEW VAV BOX IN LOCATION OF REMOVED HOT WATER REHEAT COIL. RECONNECT HWS/R. PROVIDE 4' OF INLET SIZE DUCTWORK UPSTREAM AND CONNECT TO EXISTING

CONNECT TO NEW RTU-13 SUPPLY OPENING. PROVIDE NEW RETURN DUCT THE SIZE OF THE OPENING AND REWORK (E) RETURN DUCT AS NEEDED TO CONNECT TO RETURN DUCT.

CÓNNECT TO NEW RTU-15 SUPPLY OPENING. PROVIDE NEW RETURN DUCT THE SIZE OF THE OPENING AND REWORK (E) RETURN DUCT AS NEEDED TO CONNECT TO RETURN DUCT.

(2)SWITCHES LOCATED ON WALL. BOTTOM SWITCH CONTROLS LIGHTS. TOP SWITCH CONTROLS EF-9, IN-USE LIGHT AND DARK ROOM

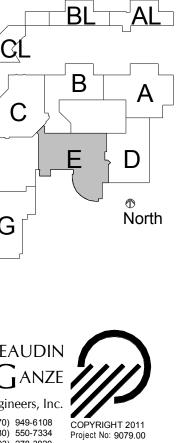


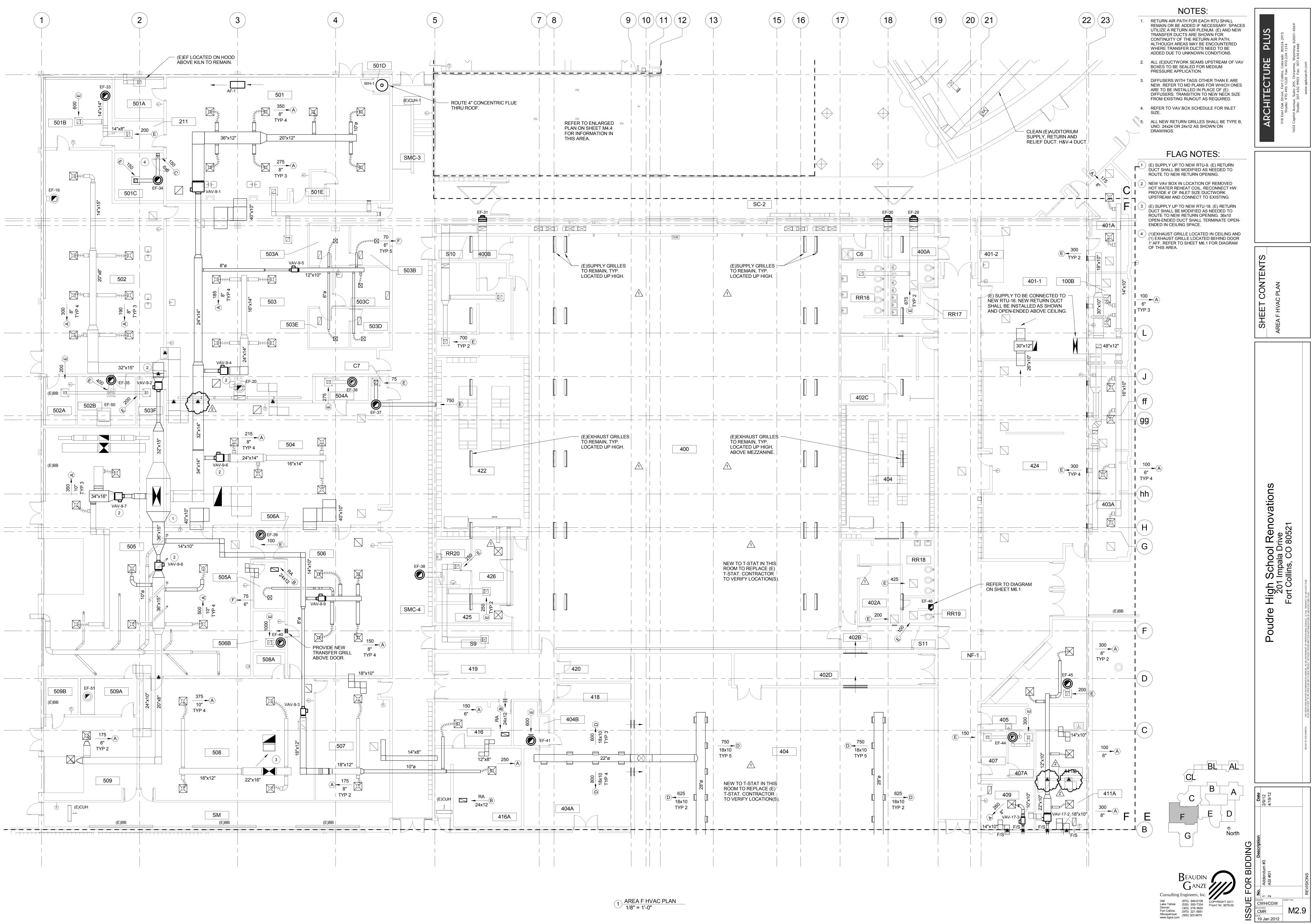
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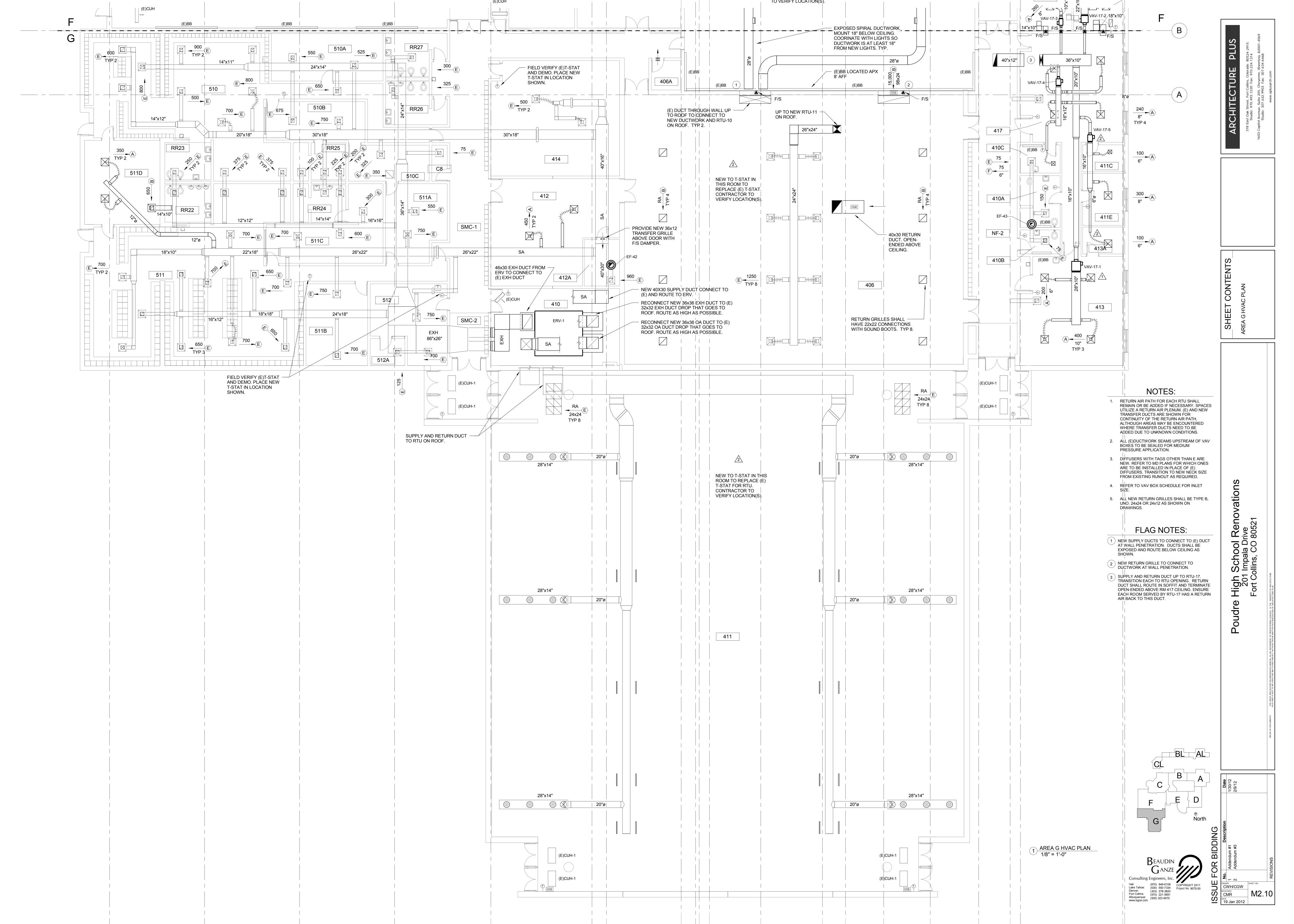


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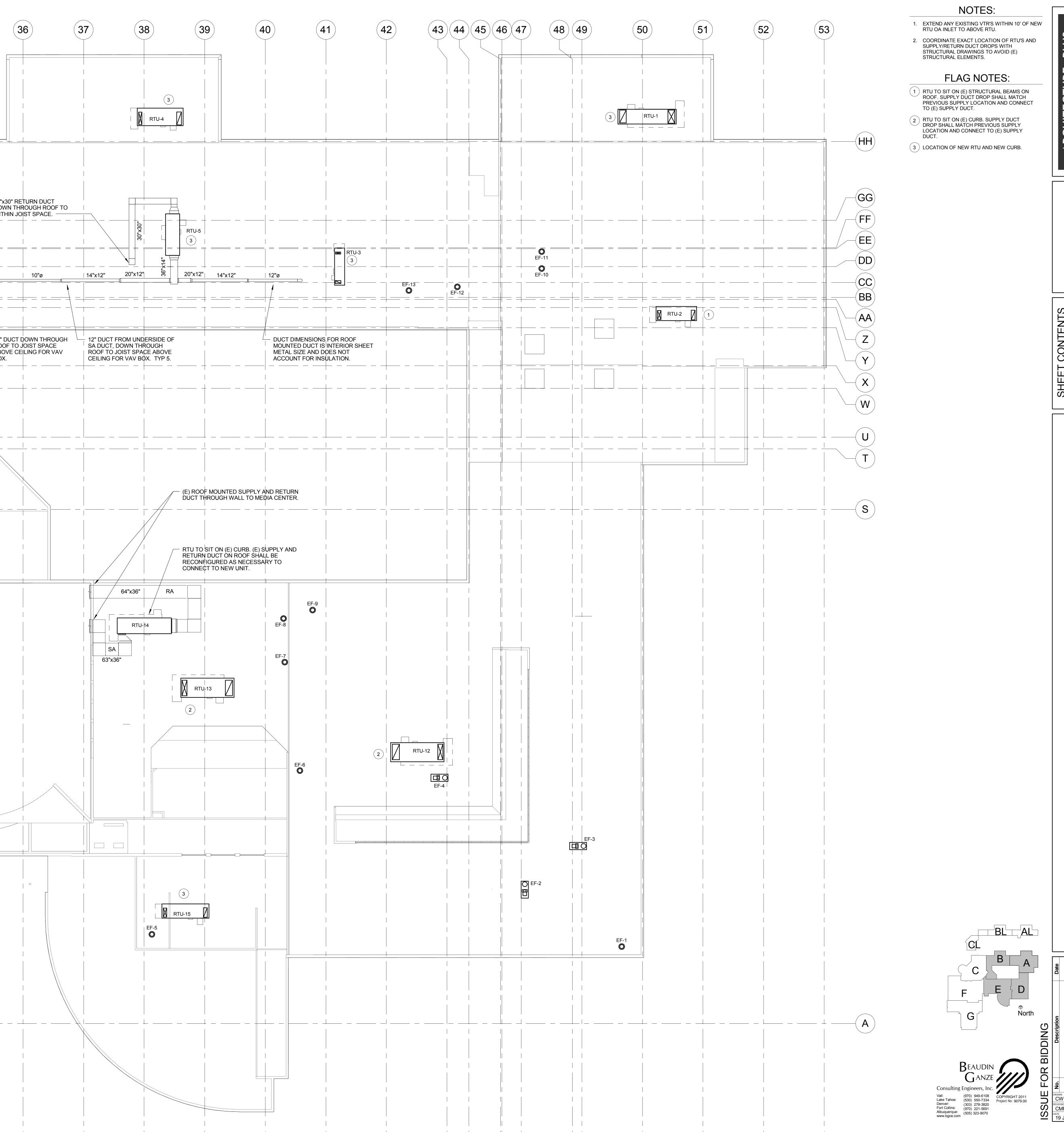








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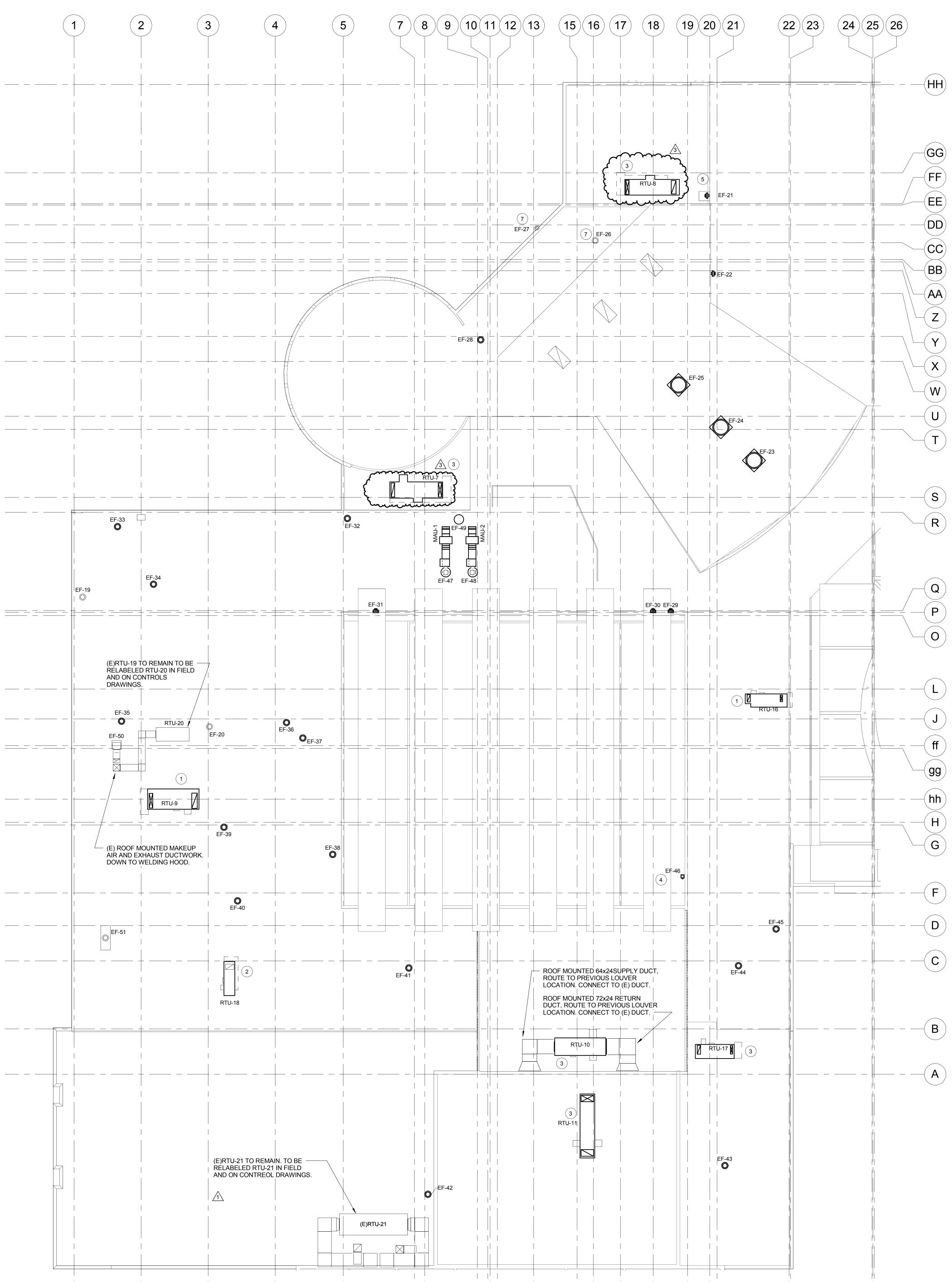
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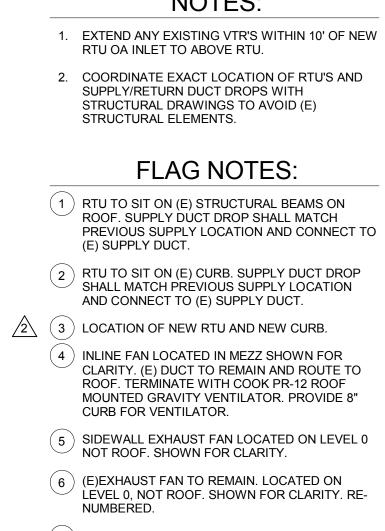
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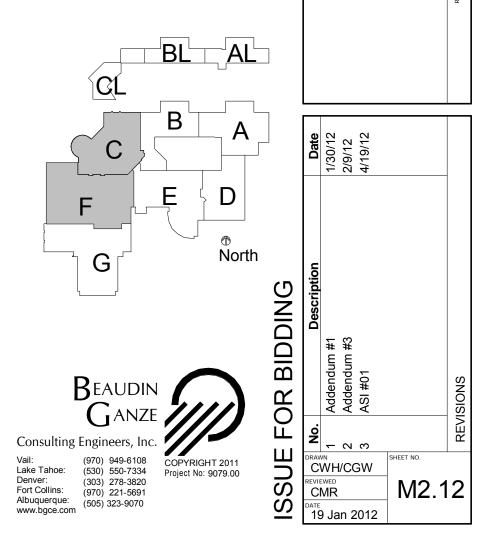
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NOTES:

1. EXTEND ANY EXISTING VTR'S WITHIN 10' OF NEW RTU OA INLET TO ABOVE RTU.

STRUCTURAL DRAWINGS TO AVOID (E) STRUCTURAL ELEMENTS.

FLAG NOTES:

4 INLINE FAN LOCATED IN MEZZ SHOWN FOR CLARITY. (E) DUCT TO REMAIN AND ROUTE TO ROOF. TERMINATE WITH COOK PR-12 ROOF MOUNTED GRAVITY VENTILATOR. PROVIDE 8"

(7) (E)EXHAUST FAN TO REMAIN. RE-NUMBERED.

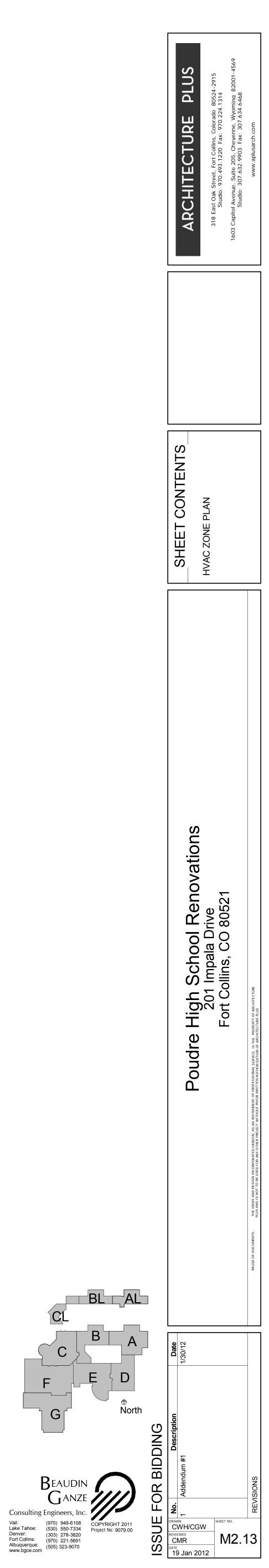


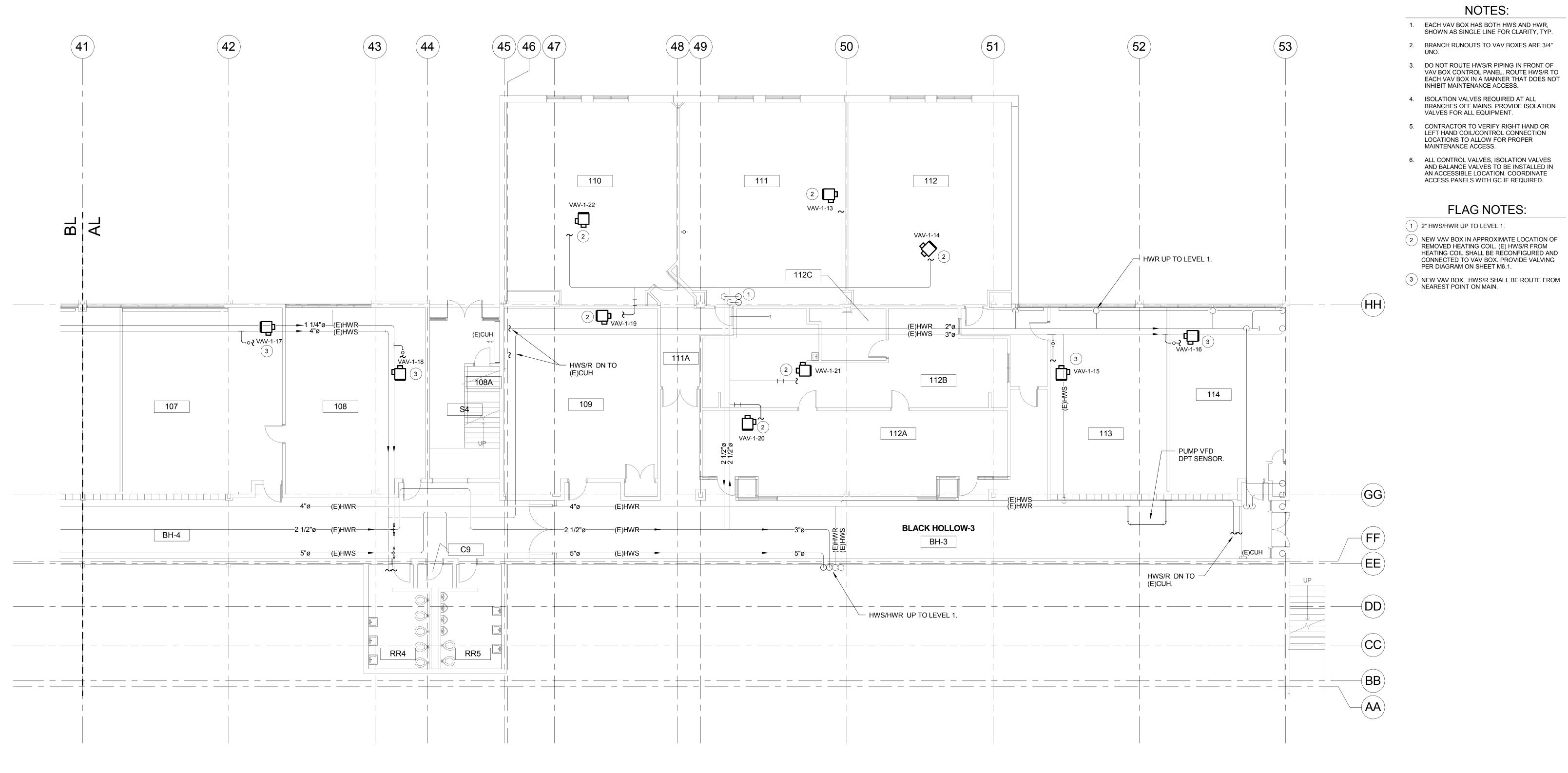
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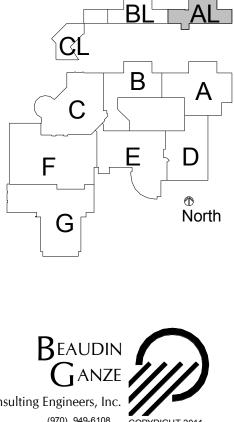


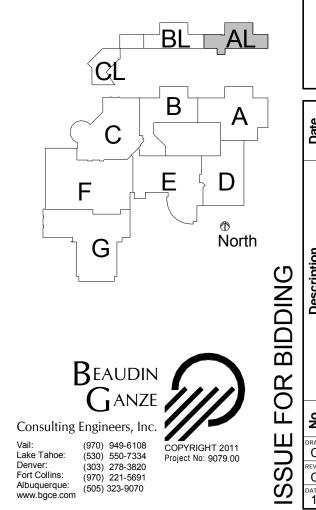






1 AREA AL HVAC PIPING PLAN 1/8" = 1'-0"





NOTES:

1. EACH VAV BOX HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY, TYP.

3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT INHIBIT MAINTENANCE ACCESS.

6. ALL CONTROL VALVES, ISOLATION VALVES AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

FLAG NOTES:

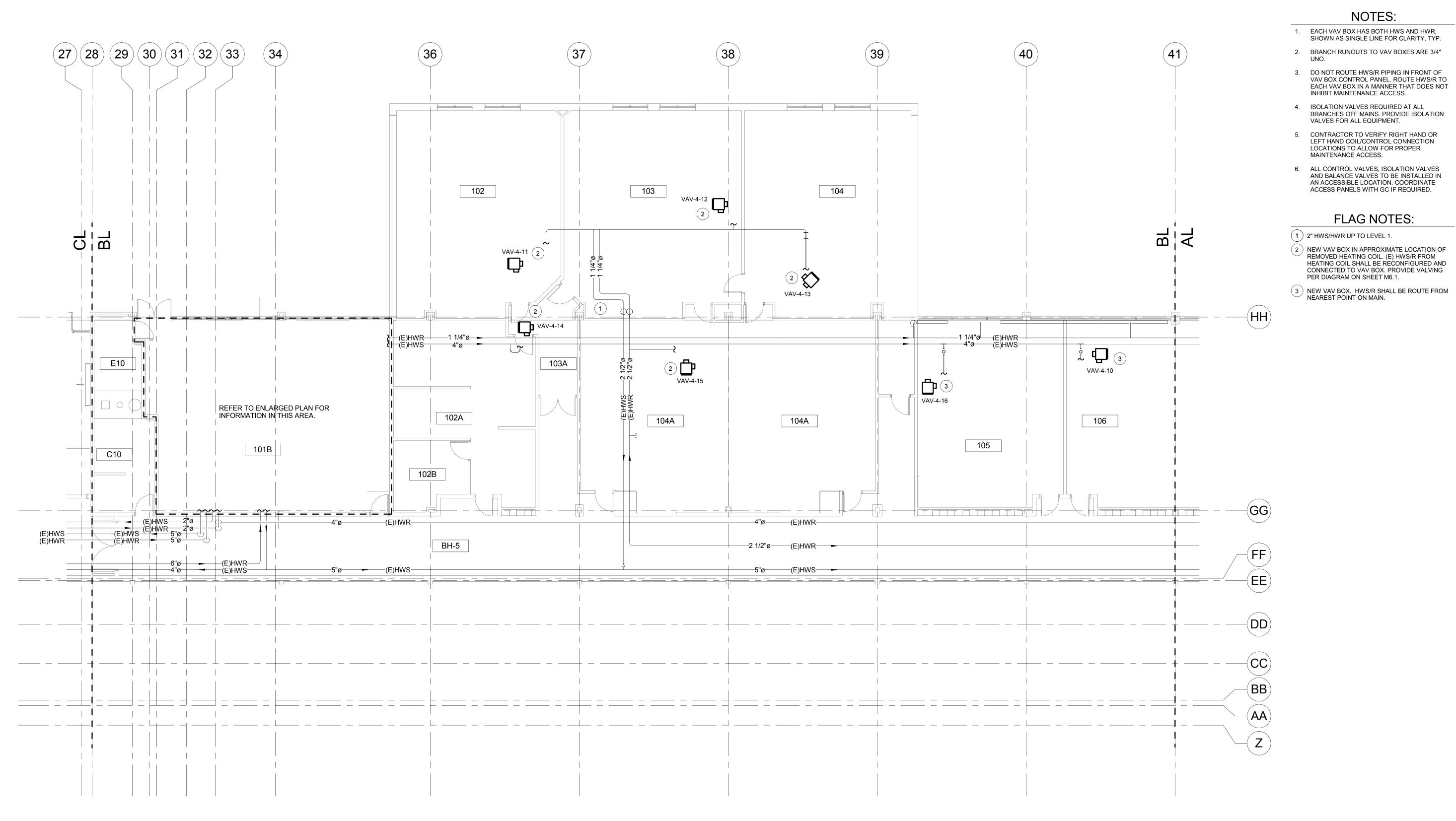


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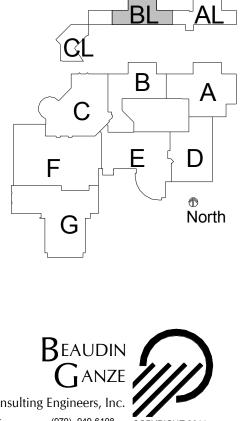
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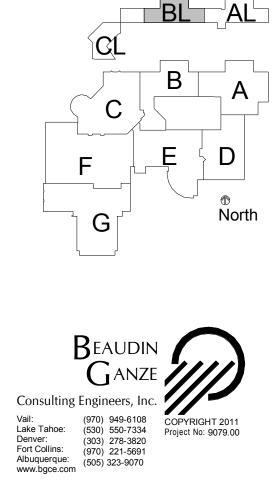
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H REVIEWED CMR DATE 19 Jan 2012 M3.1



1 AREA BL HVAC PIPING PLAN 1/8" = 1'-0"





NOTES:

3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT

LOCATIONS TO ALLOW FOR PROPER

AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

FLAG NOTES:

2) NEW VAV BOX IN APPROXIMATE LOCATION OF REMOVED HEATING COIL. (E) HWS/R FROM HEATING COIL SHALL BE RECONFIGURED AND CONNECTED TO VAV BOX. PROVIDE VALVING

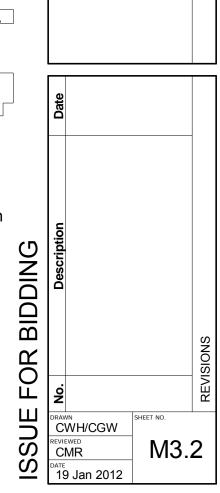


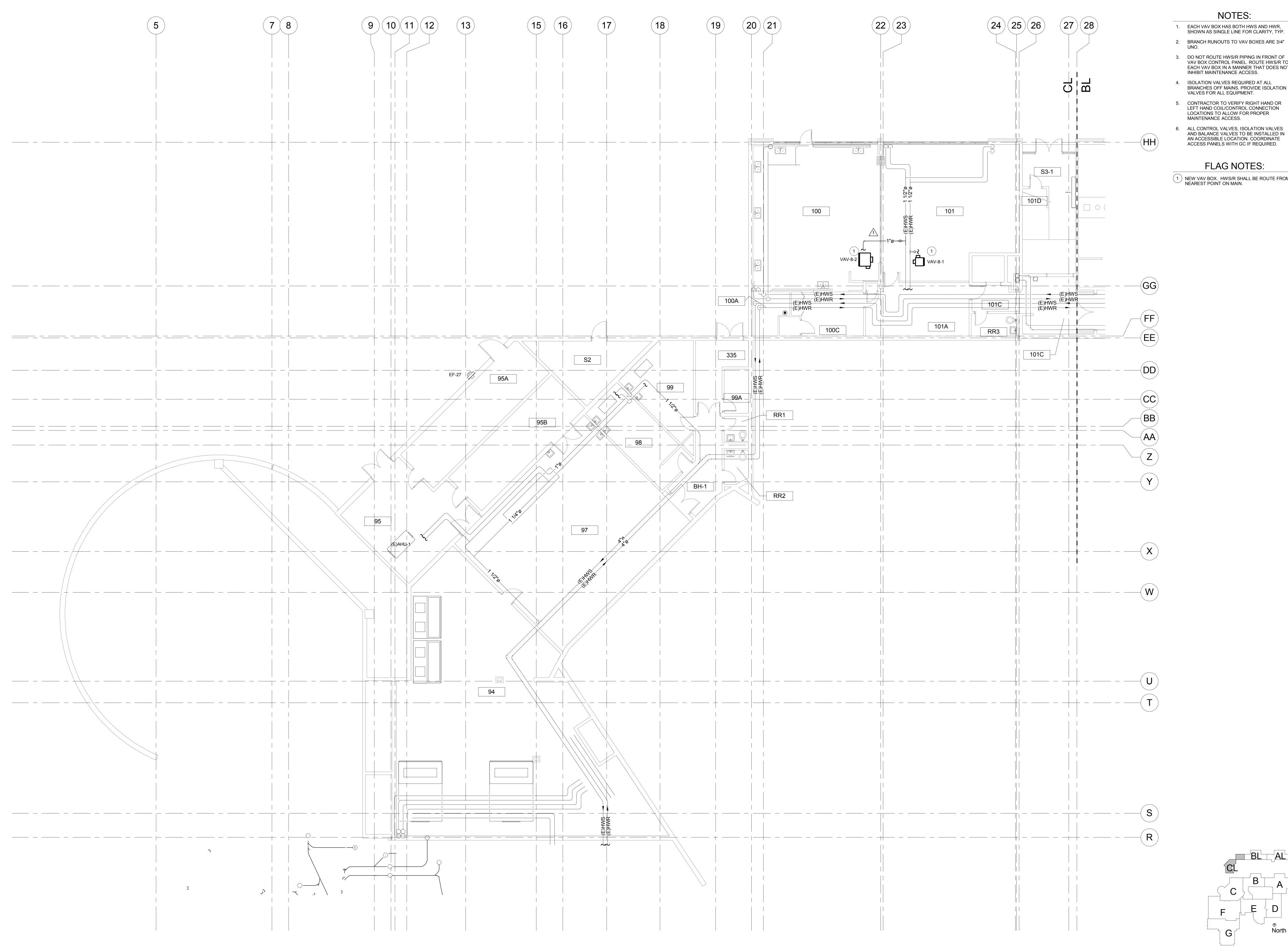
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1 AREA CL HVAC PIPING PLAN 1/8" = 1'-0"

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NOTES:

3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT

4. ISOLATION VALVES REQUIRED AT ALL BRANCHES OFF MAINS. PROVIDE ISOLATION

6. ALL CONTROL VALVES, ISOLATION VALVES AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

FLAG NOTES:

1 NEW VAV BOX. HWS/R SHALL BE ROUTE FROM NEAREST POINT ON MAIN.

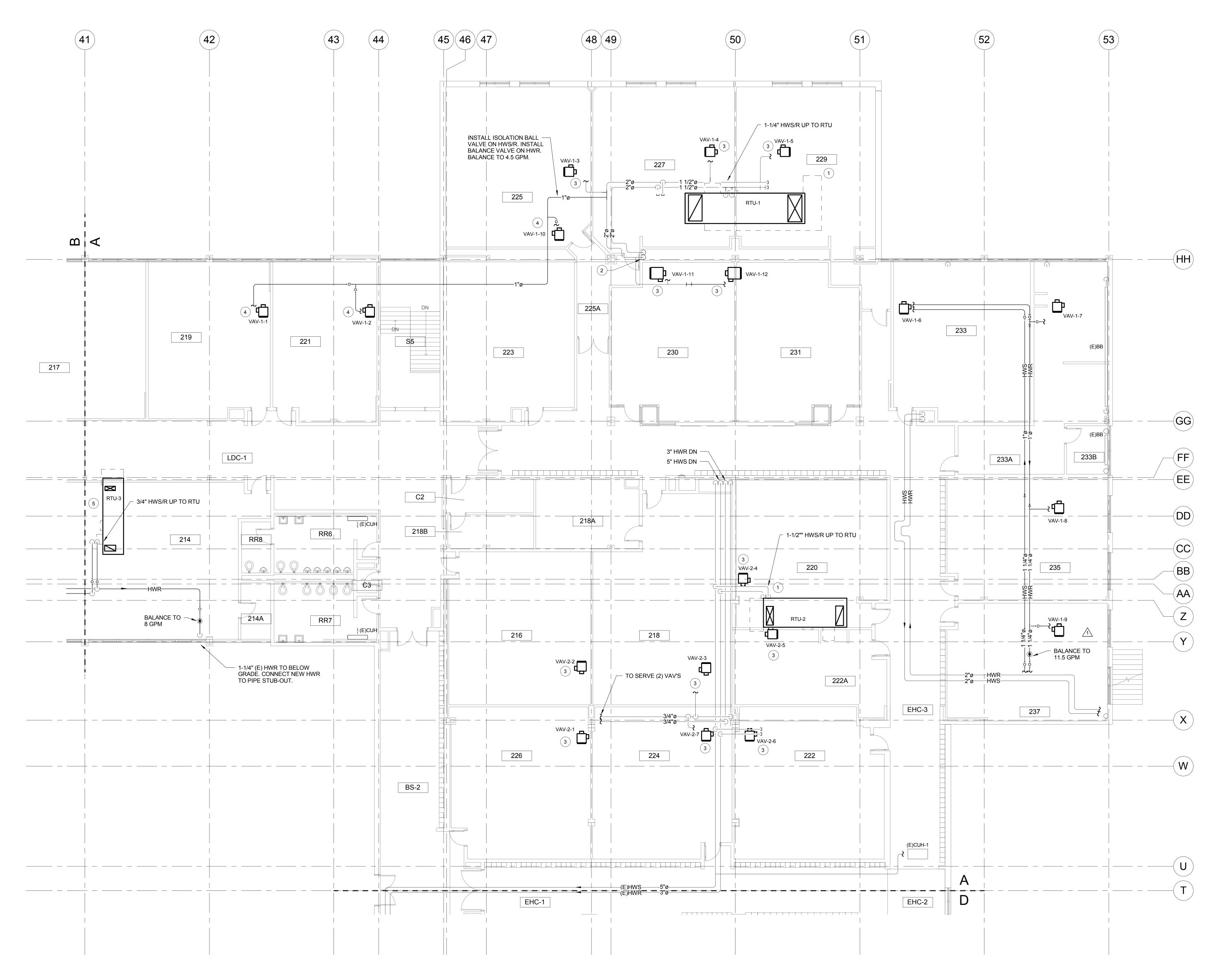


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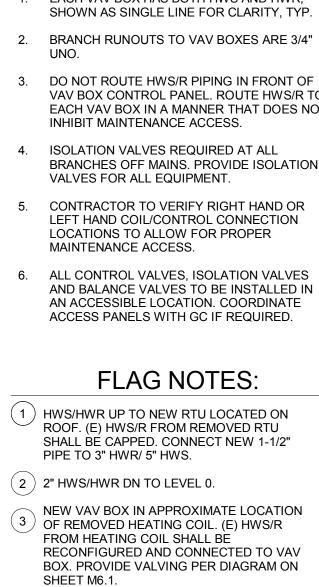
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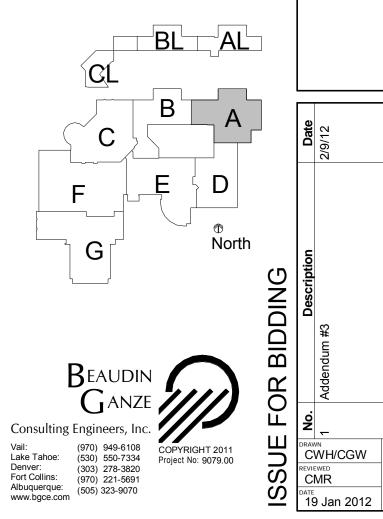
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(323-9070) \mathbf{r} DRAWN CWH/CGW CWH/CGW REVIEWED CMR DATE 19 Jan 2012 SHEET NO. M3.3



¹⁾ AREA A HVAC PIPING PLAN 1/8" = 1'-0"





SHEET NO.

M3.4



1. EACH VAV BOX HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY, TYP.

3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT

4. ISOLATION VALVES REQUIRED AT ALL BRANCHES OFF MAINS. PROVIDE ISOLATION

LEFT HAND COIL/CONTROL CONNECTION LOCATIONS TO ALLOW FOR PROPER

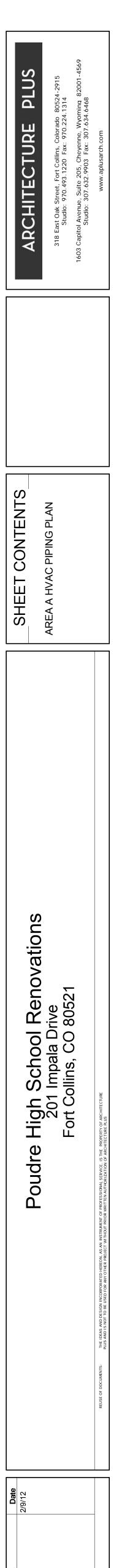
AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

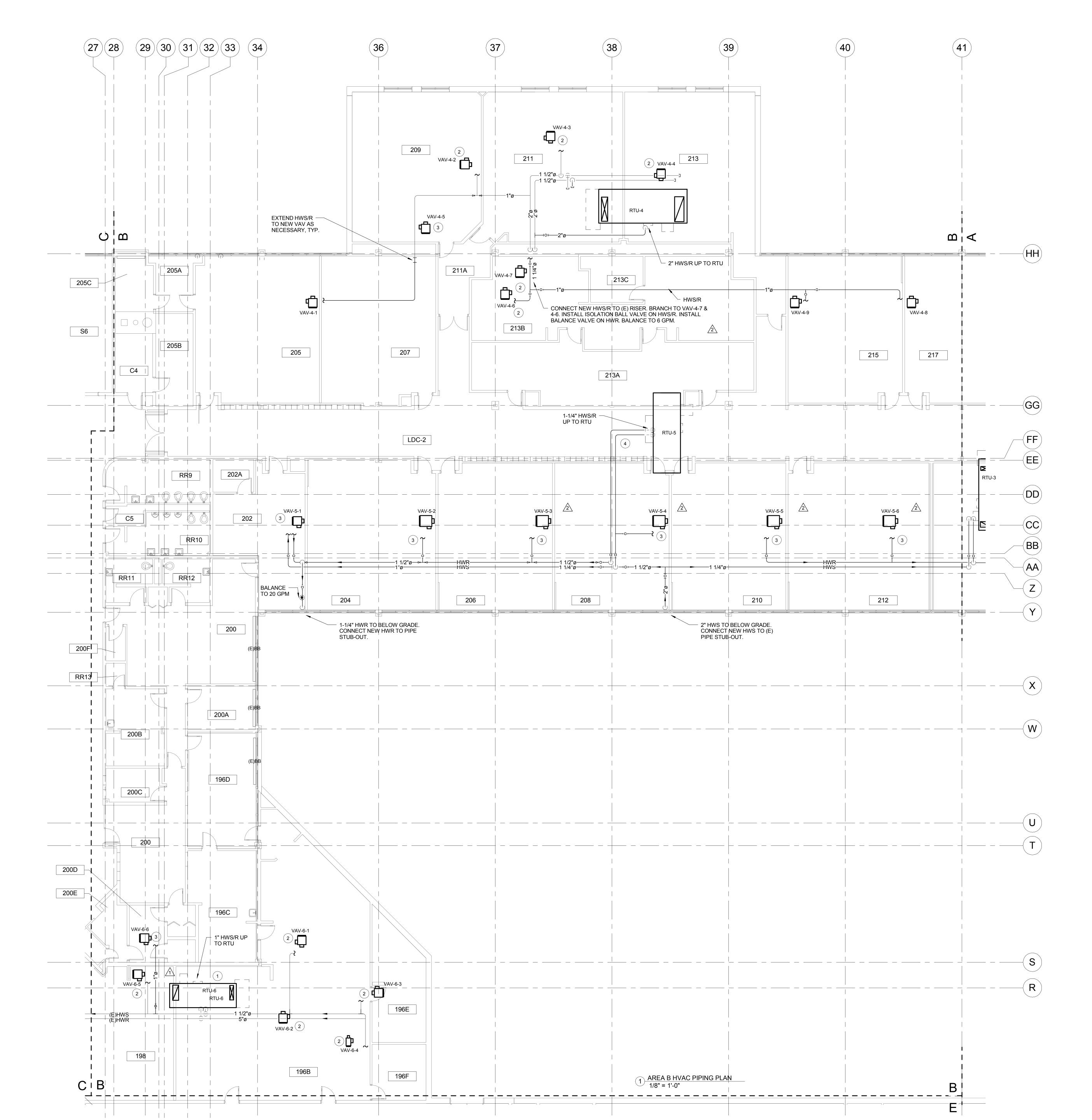
FLAG NOTES:

FROM HEATING COIL SHALL BE RECONFIGURED AND CONNECTED TO VAV BOX. PROVIDE VALVING PER DIAGRAM ON

(4) NEW VAV BOX. HWS/R SHALL BE ROUTE FROM NEAREST POINT ON MAIN. 5 HWS/HWR UP TO NEW RTU LOCATED ON ROOF. HWS/R SHALL BE ROUTE FROM

NEAREST POINT ON MAIN.





2. BRANCH RUNOUTS TO VAV BOXES ARE 3/4" UNO. 3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT INHIBIT MAINTENANCE ACCESS. 4. ISOLATION VALVES REQUIRED AT ALL BRANCHES OFF MAINS. PROVIDE ISOLATION VALVES FOR ALL EQUIPMENT. 5. CONTRACTOR TO VERIFY RIGHT HAND OR LEFT HAND COIL/CONTROL CONNECTION LOCATIONS TO ALLOW FOR PROPER MAINTENANCE ACCESS. 6. ALL CONTROL VALVES, ISOLATION VALVES AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED. FLAG NOTES:

1 HWS/HWR UP TO NEW RTU LOCATED ON ROOF. (E) HWS/R FROM REMOVED RTU SHALL BE RÉCONFIGURED FOR CONNECTION TO NEW UNIT. 2 NEW VAV BOX IN APPROXIMATE LOCATION OF REMOVED HEATING COIL. (E) HWS/R FROM HEATING COIL SHALL BE RECONFIGURED AND CONNECTED TO VAV BOX. PROVIDE VALVING PER DIAGRAM ON SHEET M6.1.

ON MAIN.

NOTES:

1. EACH VAV BOX HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY, TYP.

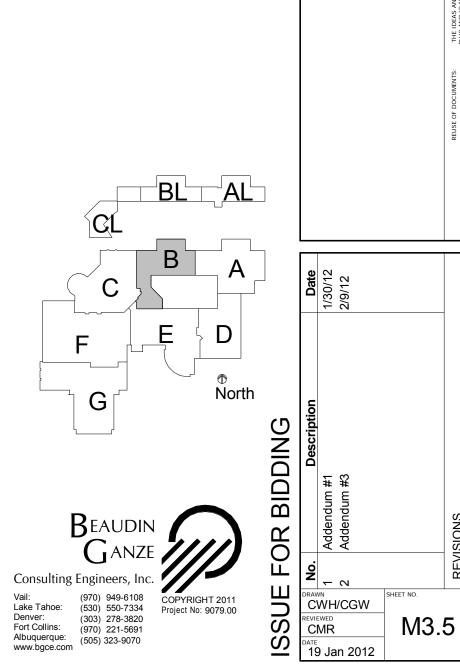
3 NEW VAV BOX. HWS/R SHALL BE ROUTE FROM NEAREST POINT ON MAIN.

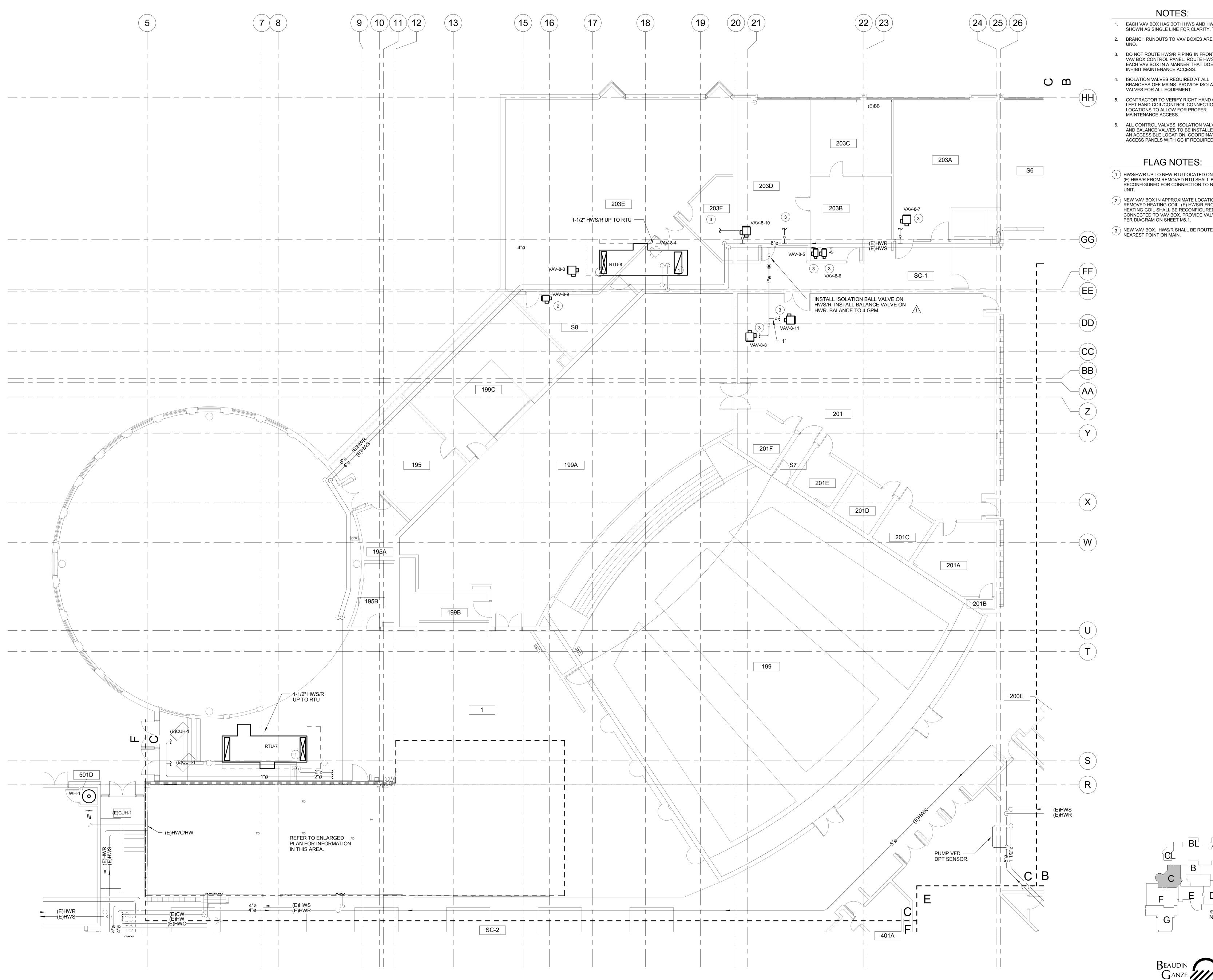
4 HWS/HWR UP TO NEW RTU LOCATED ON ROOF. HWS/R SHALL BE ROUTE FROM NEAREST POINT



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1. EACH VAV BOX HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY, TYP. 2. BRANCH RUNOUTS TO VAV BOXES ARE 3/4"

3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT

BRANCHES OFF MAINS. PROVIDE ISOLATION

CONTRACTOR TO VERIFY RIGHT HAND OR LEFT HAND COIL/CONTROL CONNECTION LOCATIONS TO ALLOW FOR PROPER

6. ALL CONTROL VALVES, ISOLATION VALVES AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

FLAG NOTES:

(1) HWS/HWR UP TO NEW RTU LOCATED ON ROOF. (E) HWS/R FROM REMOVED RTU SHALL BE RECONFIGURED FOR CONNECTION TO NEW

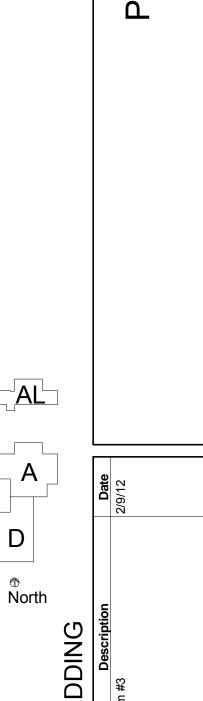
2 NEW VAV BOX IN APPROXIMATE LOCATION OF REMOVED HEATING COIL. (E) HWS/R FROM HEATING COIL SHALL BE RECONFIGURED AND CONNECTED TO VAV BOX. PROVIDE VALVING PER DIAGRAM ON SHEET M6.1. 3 NEW VAV BOX. HWS/R SHALL BE ROUTE FROM





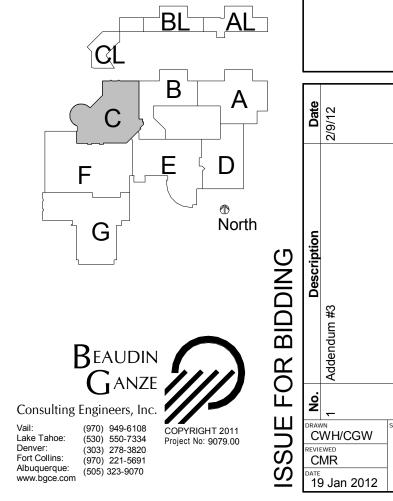
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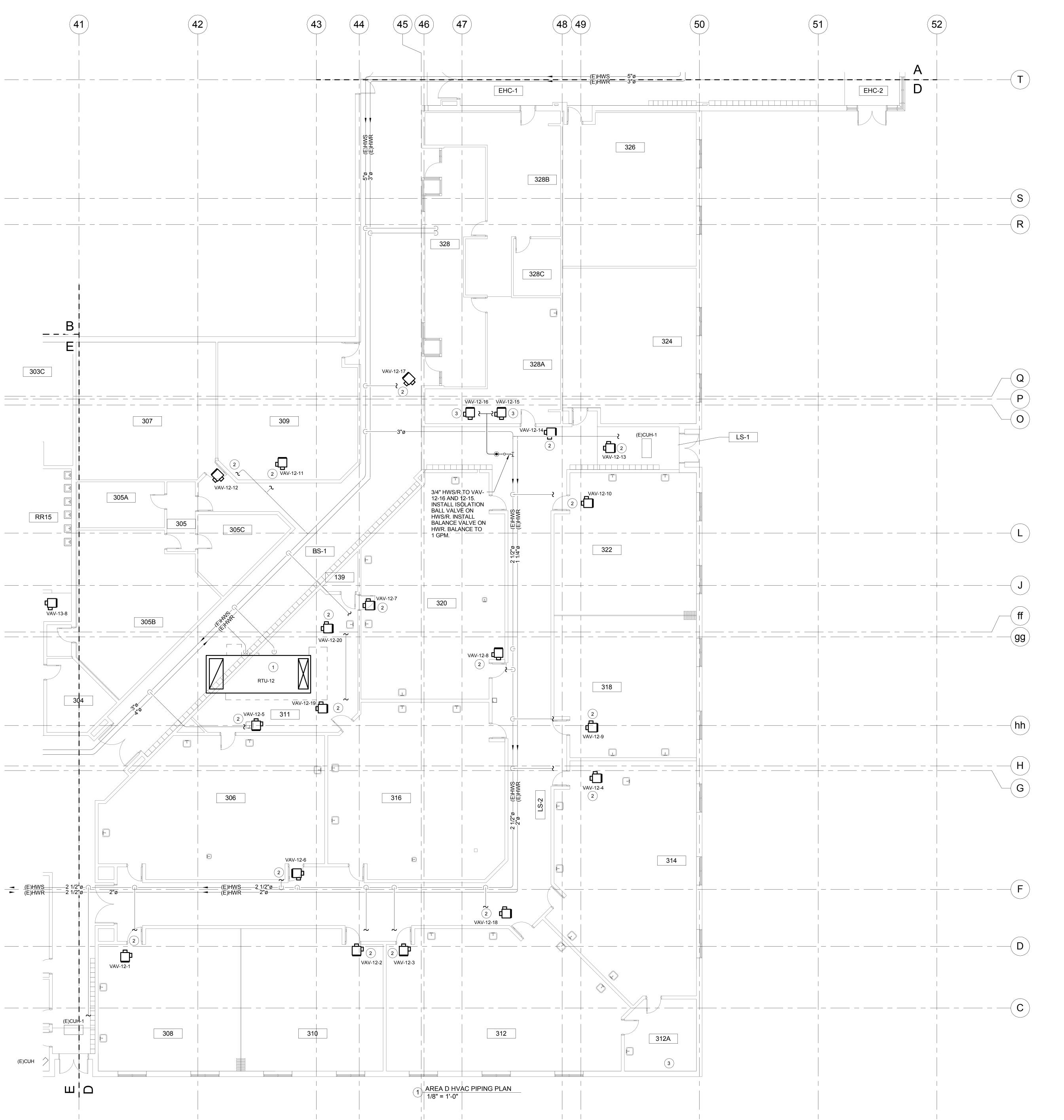


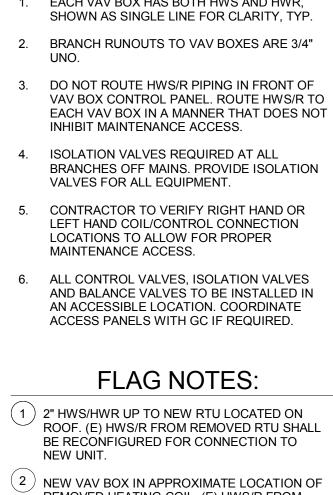


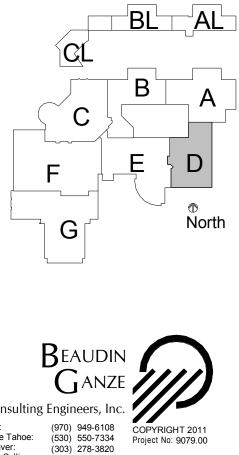
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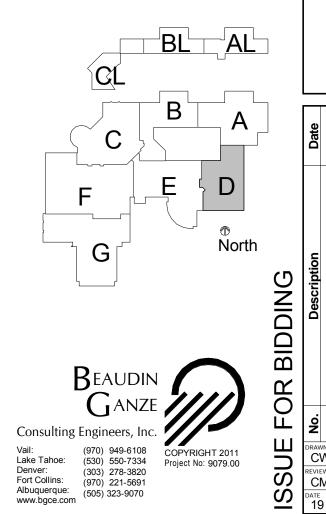
M3.6











1. EACH VAV BOX HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY, TYP.

3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT

BRANCHES OFF MAINS. PROVIDE ISOLATION

LEFT HAND COIL/CONTROL CONNECTION

AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

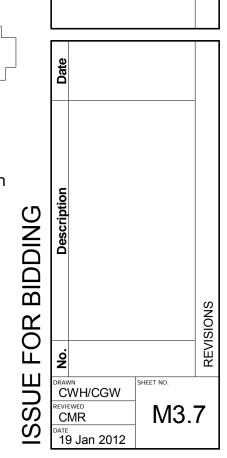
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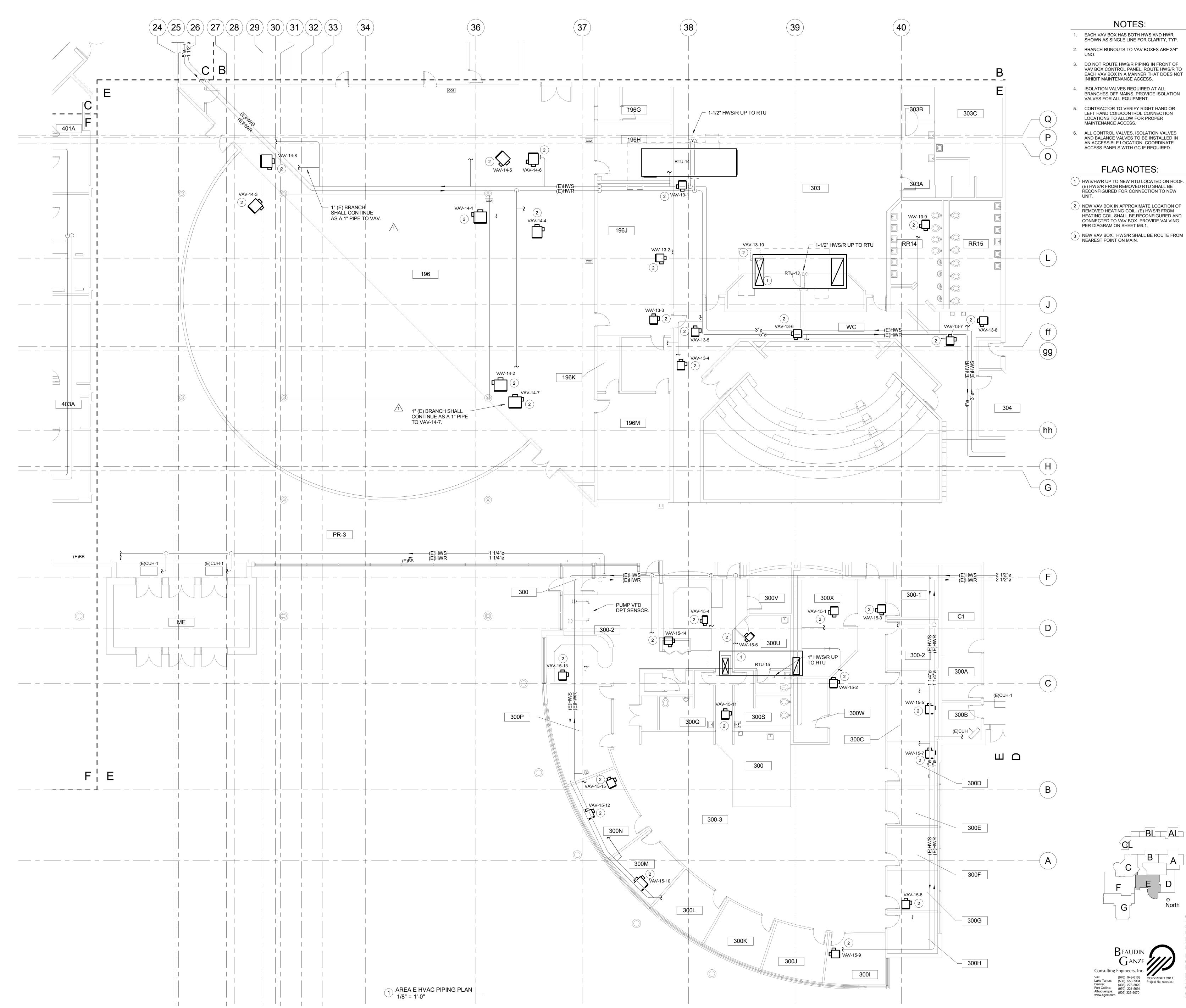
BE RECONFIGURED FOR CONNECTION TO

REMOVED HEATING COIL. (E) HWS/R FROM HEATING COIL SHALL BE RECONFIGURED AND CONNECTED TO VAV BOX. PROVIDE VALVING PER DIAGRAM ON SHEET M6.1. 3 NEW VAV BOX. HWS/R SHALL BE ROUTE FROM NEAREST POINT ON MAIN.



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3. DO NOT ROUTE HWS/R PIPING IN FRONT OF VAV BOX CONTROL PANEL. ROUTE HWS/R TO EACH VAV BOX IN A MANNER THAT DOES NOT

LOCATIONS TO ALLOW FOR PROPER

ALL CONTROL VALVES, ISOLATION VALVES AND BALANCE VALVES TO BE INSTALLED IN AN ACCESSIBLE LOCATION. COORDINATE ACCESS PANELS WITH GC IF REQUIRED.

FLAG NOTES:

REMOVED HEATING COIL. (E) HWS/R FROM HEATING COIL SHALL BE RECONFIGURED AND CONNECTED TO VAV BOX. PROVIDE VALVING PER DIAGRAM ON SHEET M6.1. (3) NEW VAV BOX. HWS/R SHALL BE ROUTE FROM



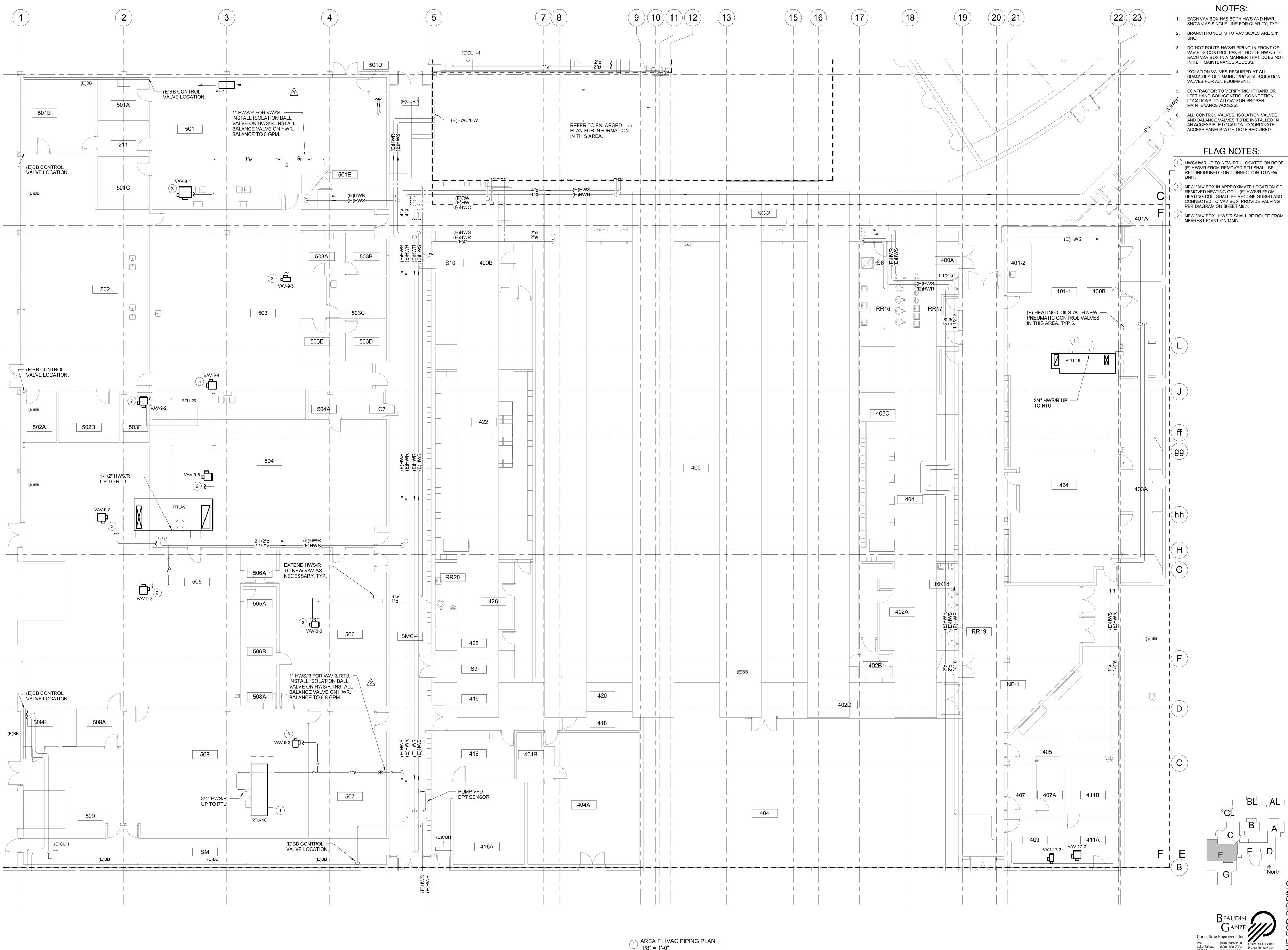


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BL_AL B A_{-} С E D North BEAUDIN GANZE DRAWN CWH/CGW CMH/CGW REVIEWED CMR DATE 19 Jan 2012 M3.8



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 (970) 949-6108

 Lake Tahoe:
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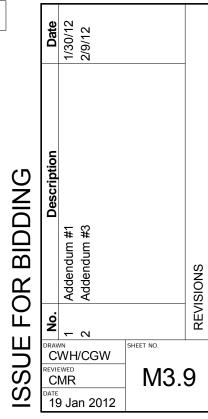
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 (970) 921-5691

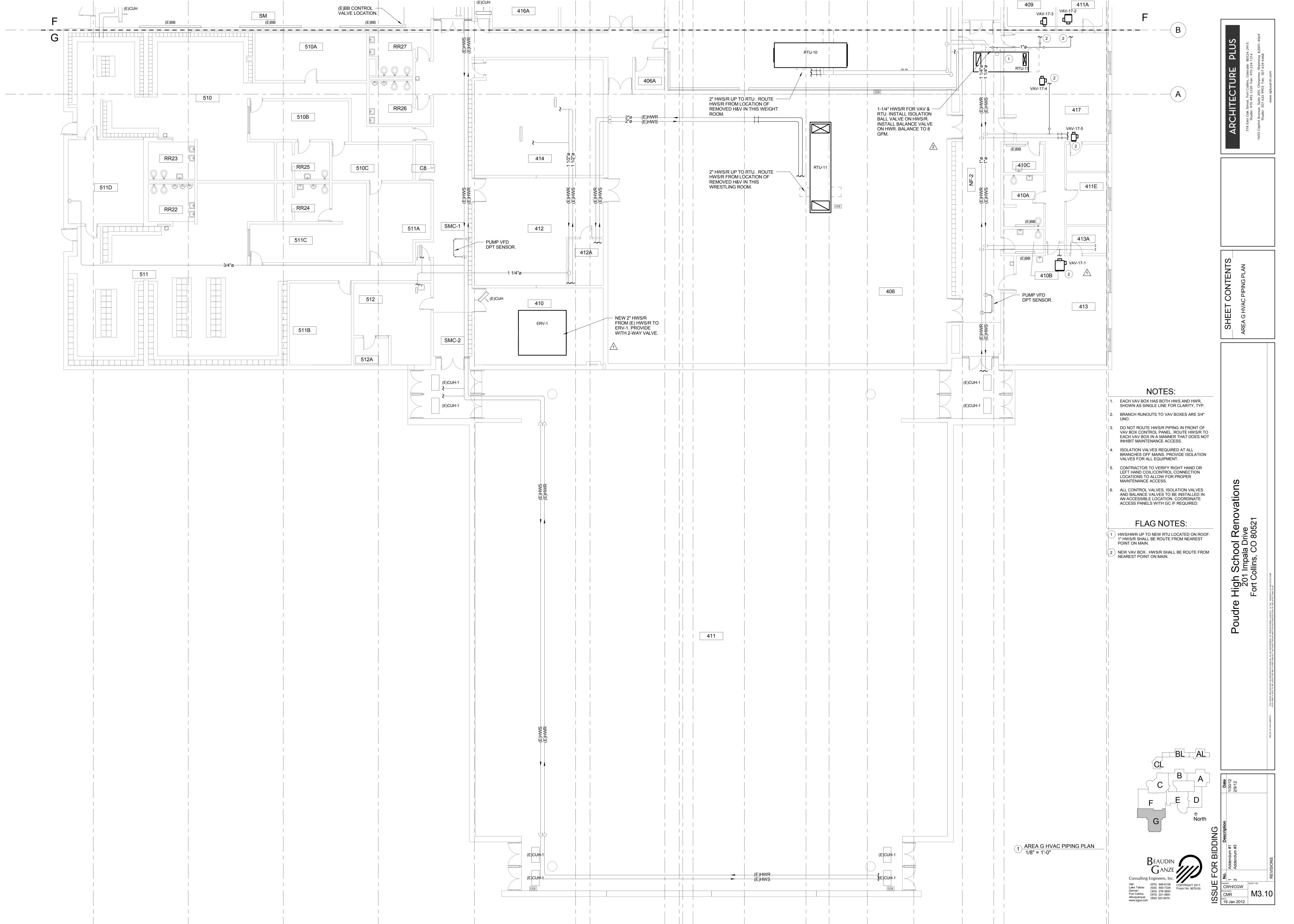
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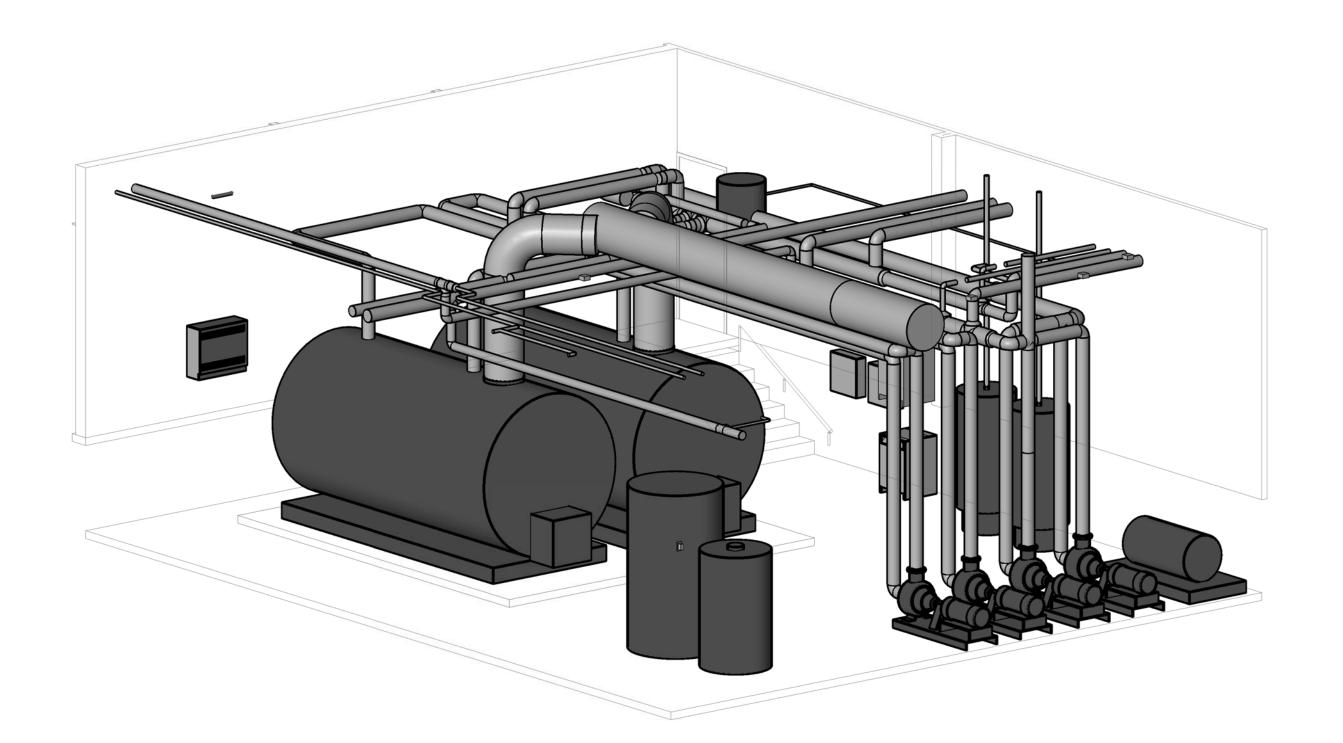
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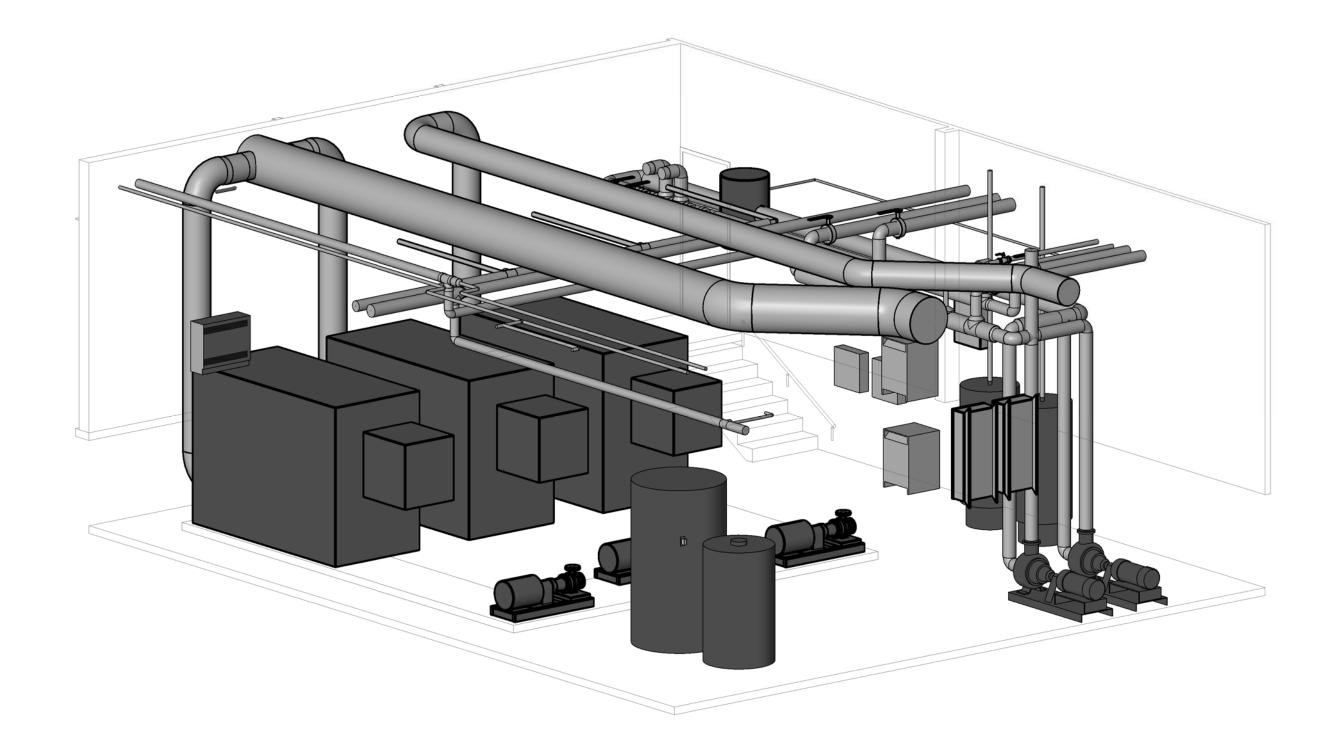
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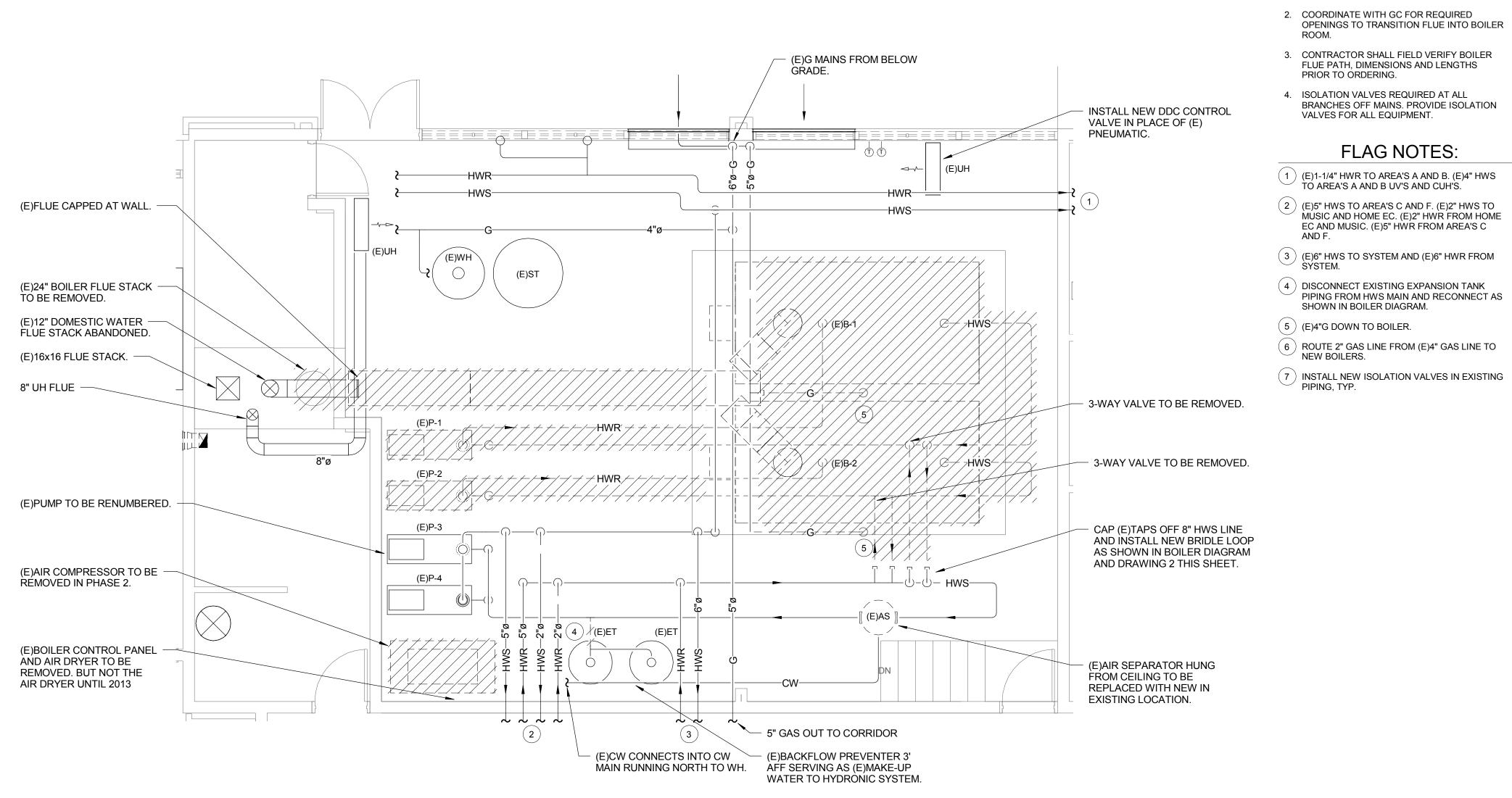


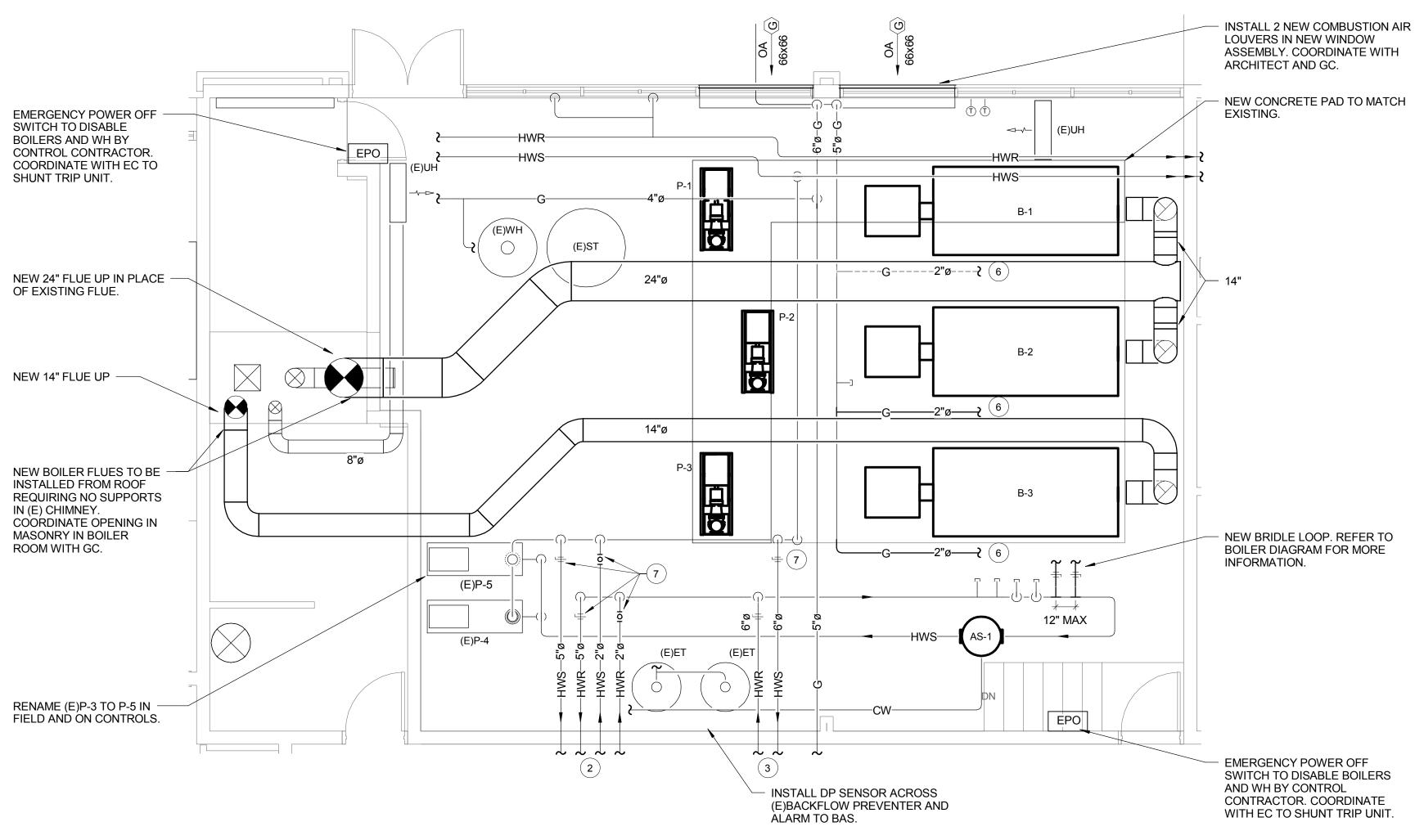


3 101B (E)BOILER ROOM



4 101B BOILER ROOM





1 ENLARGED MECH (E)BOILER ROOM 1/4" = 1'-0"

2 ENLARGED MECH BOILER ROOM 1/4" = 1'-0"



NOTES:

1. ALL NEW FLUE SHALL BE FED FROM ABOVE AND REQUIRE NO SUPPORTS IN (E)CHIMNEY. 2. COORDINATE WITH GC FOR REQUIRED OPENINGS TO TRANSITION FLUE INTO BOILER

3. CONTRACTOR SHALL FIELD VERIFY BOILER FLUE PATH, DIMENSIONS AND LENGTHS

4. ISOLATION VALVES REQUIRED AT ALL BRANCHES OFF MAINS. PROVIDE ISOLATION

FLAG NOTES: (1) (E)1-1/4" HWR TO AREA'S A AND B. (E)4" HWS TO AREA'S A AND B UV'S AND CUH'S. (E)5" HWS TO AREA'S C AND F. (E)2" HWS TO MUSIC AND HOME EC. (E)2" HWR FROM HOME EC AND MUSIC. (E)5" HWR FROM AREA'S C

(3) (E)6" HWS TO SYSTEM AND (E)6" HWR FROM 4 DISCONNECT EXISTING EXPANSION TANK PIPING FROM HWS MAIN AND RECONNECT AS SHOWN IN BOILER DIAGRAM.

(6) ROUTE 2" GAS LINE FROM (E)4" GAS LINE TO

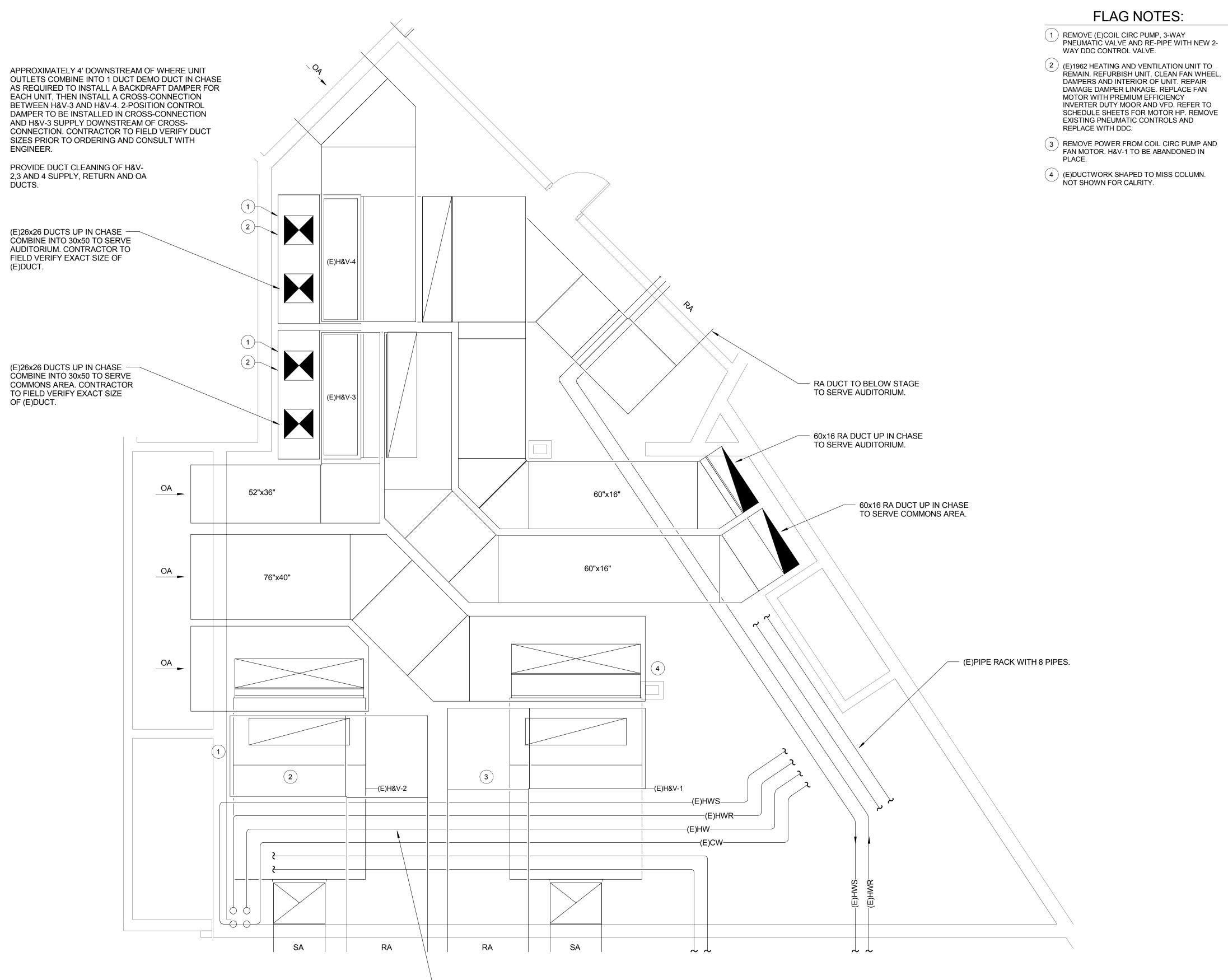


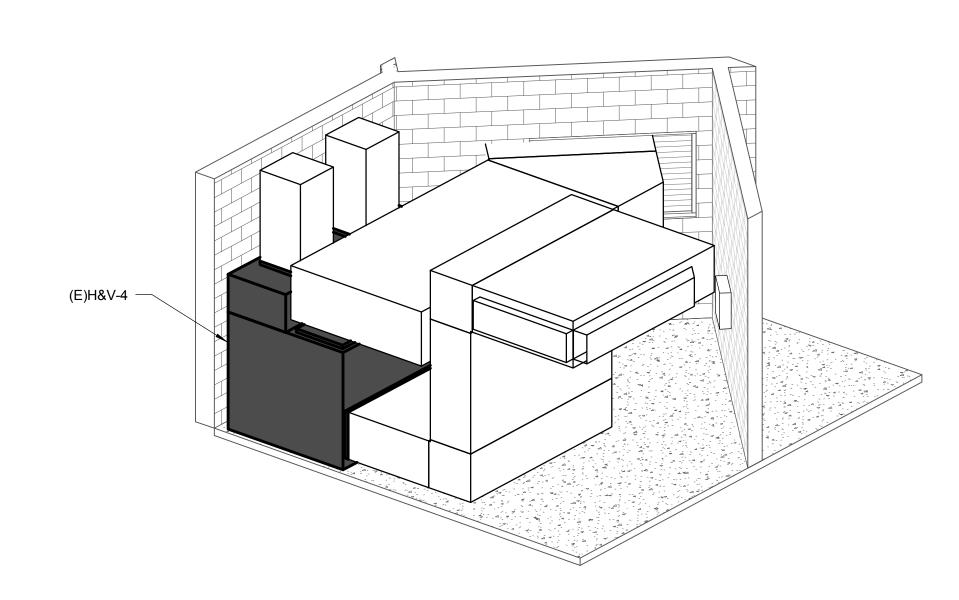
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A CWH/CGW REVIEWED CMR DATE 19 Jan 2012

M4.1





_____ 2-1/2" HWS, HWR, 2" CW AND 2" HW.

1 ENLARGED LEVEL 0 (E)MECH ROOM 1/4" = 1'-0"

3 CL500 (E)MECH RM



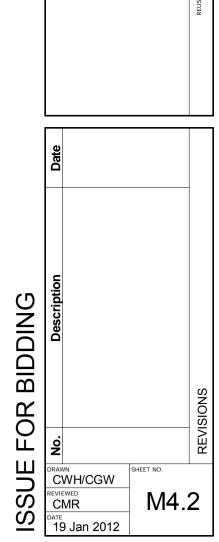
FLAG NOTES:

DAMAGE DAMPER LINKAGE. REPLACE FAN MOTOR WITH PREMIUM EFFICIENCY INVERTER DUTY MOOR AND VFD. REFER TO SCHEDULE SHEETS FOR MOTOR HP. REMOVE EXISTING PNEUMATIC CONTROLS AND



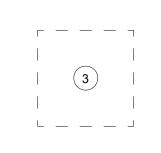
_____ CONTENTS Ш SHEET MECHANI PLANS

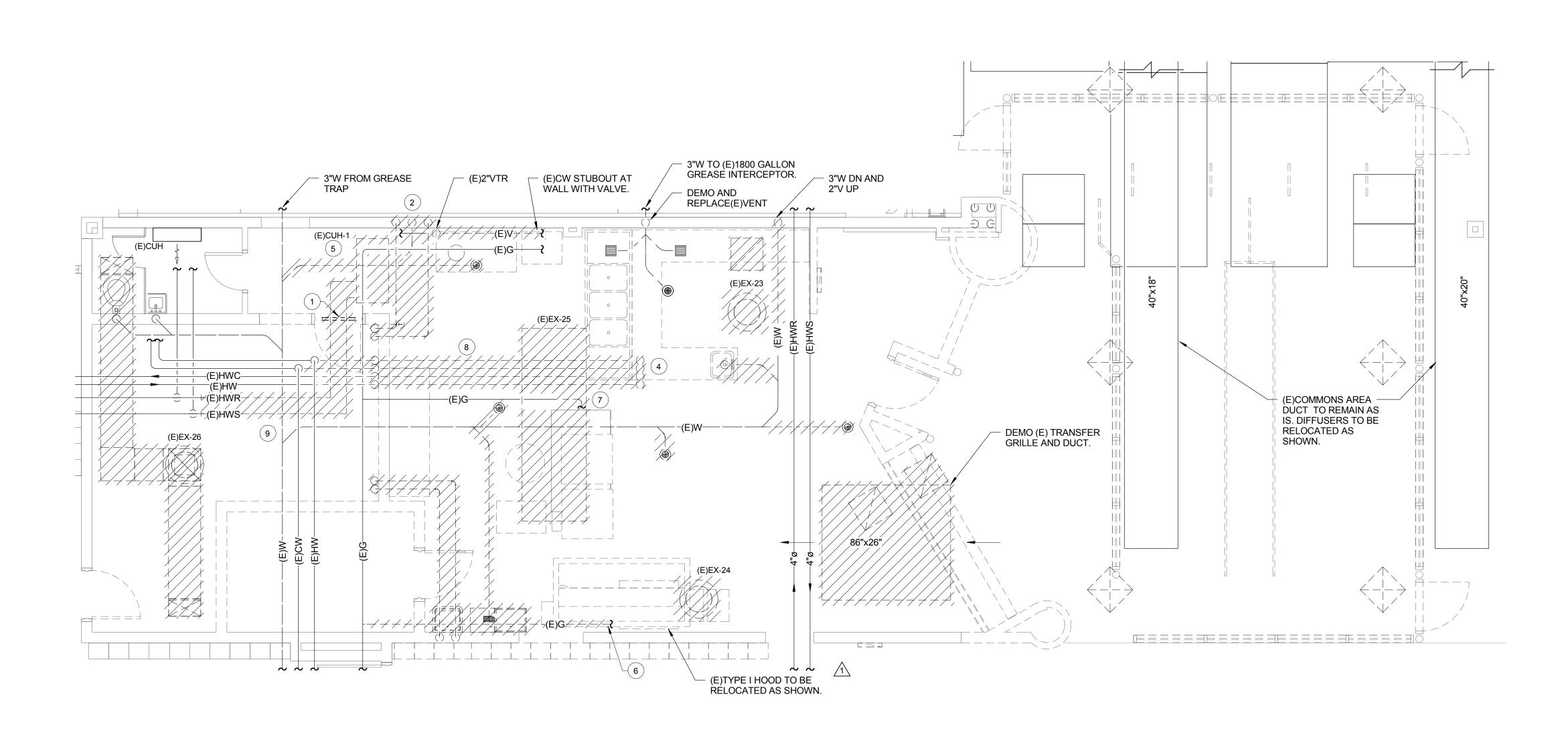
Poudre High School Renovations 201 Impala Drive Fort Collins, CO 80521



BEAUDIN GANZE







FLAG NOTES:

- 3 APPROXIMATE LOCATION OF GREASE TRAP ACCORDING TO 1994 KITCHEN DRAWINGS.

- 9 INSTALL HWS/R 3/4" STUBS WITH VALVES AND CAPS FOR FUTURE PSD WORK IN NEW CORRIDOR WEST OF NEW FREEZER.

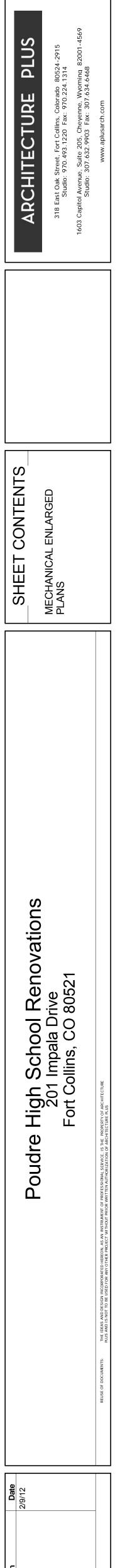


(1) (E)LOUVER LOCATED IN BOTTOM OF DOOR. 2 1/2"CW, 1/2"HW, 1-1/4"W AND 1-1/4"V CAPPED AND STUBBED AT WALL.

4 1-1/4"CW, 1-1/4"TEMP WATER, 1" 140 WATER AND 1"HWC UP THRU FLOOR FROM BELOW TO SERVE SINKS. SHOWN OFFSET FOR CLARITY. CAP AT FLOOR AT BOTH ENDS AND ABANDON IN PLACE. 5 REMOVE CUH-1 AS SHOWN AND CAP (E) HWR/HWS LINES.

(E)1-1/2" GAS LINE. 1"GAS LINE TO EACH FRYER AND TO GRILL. AUTOMATIC GAS SHUT-OFF VALVES.

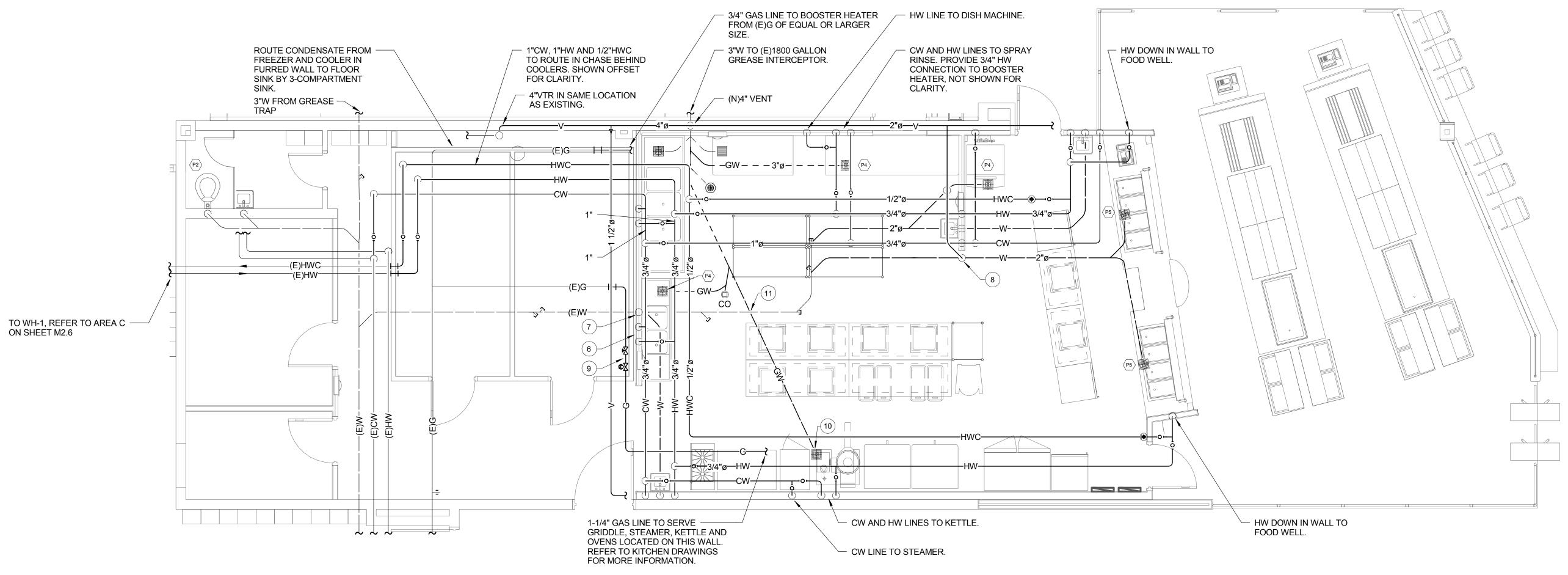
(7) (E)3" GAS LINE TO SERVE KITCHEN EQUIPMENT. 8 1-1/4"CW, 1-1/4"TEMP WATER, 1" 140 WATER AND 1"HWC ROUTE UNDERGROUND.

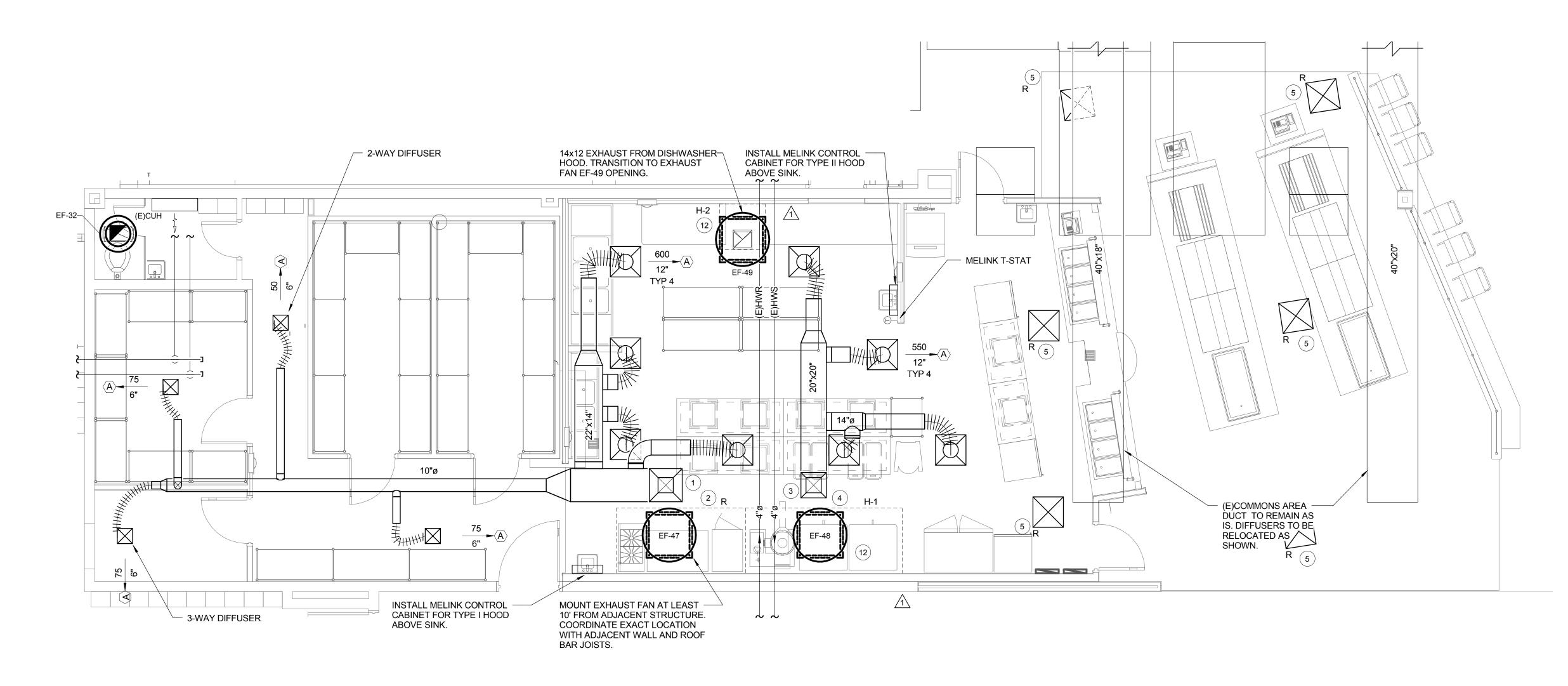




SHEET NO.

M4.3





2 ENLARGED HVAC KITCHEN 1/4" = 1'-0"

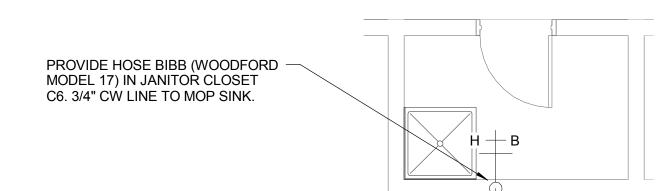
1 ENLARGED PLUMBING KITCHEN 1/4" = 1'-0"

	RECIRC BALANCING
2.	PLUMBING FIXTURE DRAWING, M-601 O PROVIDED BY KITC SUPPLIER. CONTRA WITH OWNER AND SUPPLIER FOR ALL TO STARTING WOR
3.	CONTRACTOR SHA INDIRECT WASTE R KITCHEN EQUIPMEI SINKS IN APPROPR THESE INDIRECT W WASTE SHALL BE R IN A MANNER THAT BE MOVED FOR CLI CREATE A TRIPPING
4.	COORDINATE WALF LOCATIONS WITH E LOCATION. CANNO

- 5. FLOOR SINKS TO BE INSTALLED UNDER THE SINKS THEY ARE SERVING, SHOWN OUTBOUND FOR CLARITY, TYP. 6. REFER TO KITCHEN CONSULTANT DRAWINGS FOR ROUGH-IN REQUIREMENT, CONNECTION
- SPECIFICATIONS. PROVIDE MIXING VALVE AT EACH HAND SINK TO PROVIDE 110 DEGREE WATER.
- 8. ISOLATION VALVES REQUIRED AT ALL BRANCHES OFF MAINS. PROVIDE ISOLATION VALVES FOR ALL EQUIPMENT.

1	26x26 UP TO MAU-1. COME CURB ABOVE.
2	TRANSITION RELOCATED TO GREASE EXHAUST FAN OPENING. PROVIDE CLEAI TRANSITIONS, ELBOWS AS IMC. WRAP WELDED CARE FIRE RATED WRAP REQUI TO COMBUSTIBLES.
3	23x25 UP TO MAU-2. COME CURB ABOVE.
4	TRANSITION 36x12 TYPE II EXHAUST FAN OPENING.
5	RELOCATE (E)DIFFUSER T CEILING GRID.
6	PROVIDE CW AND HW COI SINK AND SPRAY RINSE.
7	PROVIDE NEW 2"W CONNE DISPOSAL.
8	2"V UP IN WALL. SHOWN C
9	PRESSURE REGULATOR A VALVE. GAS CONTROL VA INTERLOCKED WITH FIRE SYSTEM IN RELOCATED T
10	NEW 2" GREASE WASTE F FLOOR TROUGH BY KEC.
11	NEW GREASE WASTE MUS NORMAL WASTE. FIELD VE AND INVERTS.
\frown	

(12) PROVIDE ALUMINUM DUCT FOR TYPE II AND DW HOOD.





NOTES:

1. BALANCE ALL DOMESTIC HOT WATER NG VALVES TO 1.0 GPM,

> RES NOT SPECIFIED ON THIS OR M-602 ARE TO BE CHEN EQUIPMENT RACTOR TO COORDINATE D KITCHEN EQUIPMENT REQUIREMENTS PRIOR RK.

ALL COORDINATE ALL REQUIREMENTS WITH ENT AND PROVIDE FLOOR RIATE LOCATIONS FOR WASTE. ALL INDIRECT ROUTED TO FLOOR SINKS T ALLOWS EQUIPMENT TO LEANING AND DOES NOT NG HAZARD.

ALK-IN COOLER FLOOR SINK EVAPORATOR COIL DRAIN

SIZES AND LOCATIONS AND EQUIPMENT

FLAG NOTES:

I. COMBO MAU-1 AND EF-47 OCATED TYPE I HOOD OUTLET UST FAN 16x16 DUCT E CLEANOUTS AT 30WS AS REQUIRED PER 2006 DED CARBON STEEL DUCT WITH P REQUIRING 0" CLEARANCE

-2. COMBO MAU-2 AND EF-48

TYPE II HOOD COLLAR TO 12x12 ENING.

FUSER TO LINE UP WITH NEW D HW CONNECTIONS TO BOTH

CONNECTION FOR

SHOWN OFFSET FOR CLARITY. ULATOR AND GAS CONTROL NTROL VALVE SHALL BE VITH FIRE SUPPRESSION DCATED TYPE I HOOD.

WASTE FROM FLOOR TROUGH. BY KEC.

ASTE MUST CROSSOVER (E) ... FIELD VERIFY EXACT ROUTE



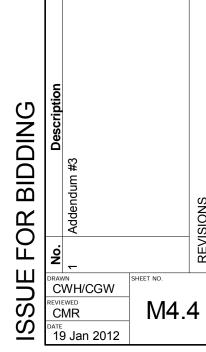
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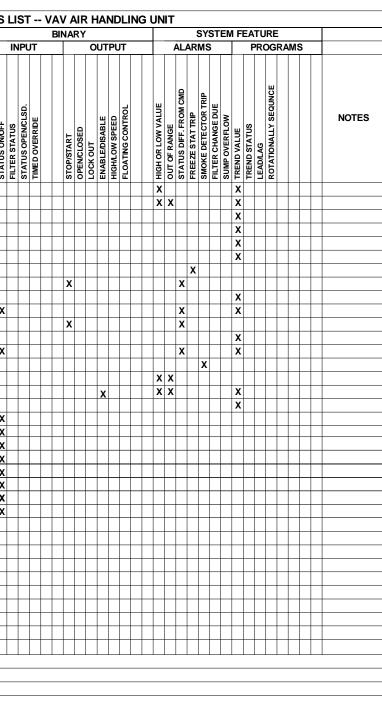
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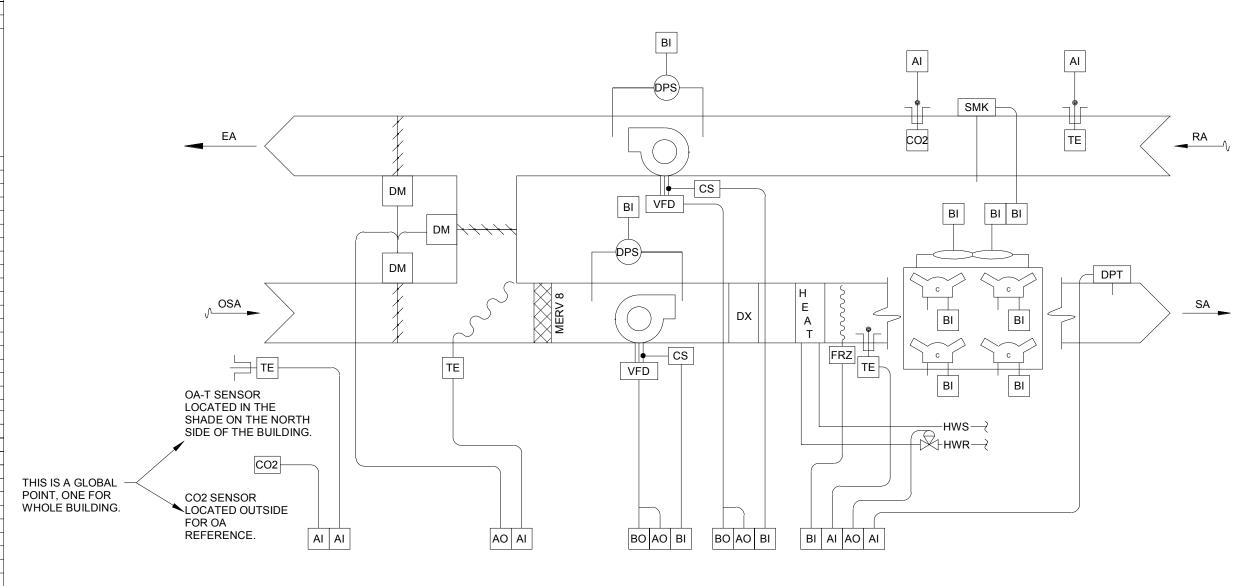


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SYSTEM POINT DESCRIPTION	GRAPHIC SCREEN	ANIMATED POINT ON GRAPHIC	TEMPERATURE	PRESSURE	RELATIVE HUMIDITY	KW	KWH	BTUHR	GPM	PERCENT	CFM	PPM	DDC (4-20 ma, 0-10 vdc)					STATUS	STATUS ON/OFF
RETURN AIR CO2	X											X							
OUTSIDE TEMP	X		Х															_	
MIXING DAMPERS	X	X											х					_	
MIXED AIR TEMP	X		X																
RETURN AIR TEMP	X		X															_	
HOT WATER VLV	X												x						
FREEZESTAT	x																	х	
SUPLY FAN S/S	+																-	_	
SUPPLY FAN VFD	x												x				+	_	
SUPPLY FAN STATUS	X	x		\vdash		\vdash				\vdash								-	Х
RETURN FAN S/S	^																-		
RETURN FAN VFD	x									-			x				+	_	
RETURN FAN STATUS	x	X		-									^				-		х
	x	^		-		-				-							-	х	^
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DUCT STATIC PRESS	X			^													_		
	-	v		-		-		_		-							_		v
	X	X		-		-				-							_		X
COMP #2 STATUS	X	X															-	-	X
COMP #3 STATUS	X	X															-		X
COMP #4 STATUS	X	X															-		X
SUPPLY FAN DP SWITCH	X	X		-		-	-			-							-		X
RETURN FAN DP SWITCH	X	X		-						-							_		Х
COND FAN #1 STATUS	X	X															_		Х
COND FAN #2 STATUS	X	X															_		Х
DX COOLING ALARM	X	X															_	X	
SUPPLY AIR SETPOINT	X	X	X														_		
																	_		
																	_		
																			_
GENERAL NOTES:																			

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SYSTEM POINT DESCRIPTION	GRAPHIC SCREEN	ANIMATED POINT ON GRAPHIC	TEMPERATURE	PRESSURE	RELATIVE HUMIDITY	KW	KWH	BTU HR	GPM	PERCENT	CFM		DDC (4-20 ma, 0-10 vdc)	
EXHAUST FAN STATUS	X	Х												
FIRE SUPPRESSION SHUT DN	X													
GAS VALVE	X												Х	
MELINK SYSTEM ALARM	X													
HIGH LIMIT CONTROL	X													Ļ
SUPPLY FAN STATUS	X	Х												Ļ
SUPPLY AIR TEMP	X		X											
SMOKE DETECTOR SHUT DN	X													
														L
														4
GENERAL NOTES:														





SEQUENCE OF CONTROL: PACKAGED VAV ROOFTOP

<u>OVERVIEW</u> VARIABLE VOLUME, DX COOLING, HW

- APPLIES TO :
- <u>RTU-1, 2, 4, 5, 6, 8, 9, 12, 13, 14, 15, 17</u>

THE SYSTEM CONSIST OF A BUILT UP AIR HANDLING UNIT COMPLETE WITH MIXING BOX, FILTER SECTION, HOT WATER COIL, DX COOLING COIL, AIR COOLED CONDENSING SECTION, SUPPLY FAN, RETURN FAN, AND VARIABLE FREQUENCY DRIVES. DAMPERS ON EA, RA, AND OA TO BE BY UNIT MANUFACTURER. PACKAGED COOLING CONTROLS TO BE BY MANUFACTURER. MANUFACTURER AND CONTROLS CONTRACTOR SHALL COORDINATE TO REPORT STATUS AND ALARMS OF PACKAGED COOLING CONTROLS TO BAS. ACTUATORS FOR DAMPERS. SENSORS AND ALL OTHER DEVICES TO BE SUPPLIED BY TEMPERATURE CONTROLS CONTRACTOR. DEVICES AND WIRING TO BE INSTALLED IN FIELD BY TEMPERATURE CONTROLS CONTRACTOR. COMPRESSOR AND CONDENSER FAN COUNT WILL VARY WITH EACH UNIT. CONTROLS CONTRACTOR TO COORDINATE WITH SUCCESSFUL MANUFACTURER FOR EXACT COUNT.

SCHEDULING: THE AIR HANDLING UNIT SHALL BE SCHEDULE THROUGH THE OPERATOR WORKSTATION INTERFACE. WHEN SCHEDULED TO BE IN OCCUPIED MODE, BOTH FANS SHALL OPERATE AND CONTROLLED DEVICES SHALL POSITION WITH RESPECT TO THEIR PI CONTROL LOOP

UNOCCUPIED MODE: FANS SHALL SHUT OFF RETURN DAMPER FULL OPEN, RELIEF AND OUTSIDE AIR DAMPERS CLOSED, HOT WATER VALVE OPEN TO COIL UNIT SHALL CYCLE TO MEET NIGHT SETBACK TEMPERATURE. UNIT SHALL RUN UNTIL THE COLDEST ZONE HAS REACHED 65 DEG F.

OCCUPIED / UNOCCUPIED SCHEDULE TBD BY OWNER. MORNING WARM-UP: MORNING WARM-UP SHALL BE BASED ON OPTIMUM START PROGRAMMING. SUPPLY FAN VFD SHALL CONTROL OFF STATIC PRESSURE. ALL VAV BOXES SHALL GO FULL OPEN. VAV BOX HEATING CONTROL VALVE SHALL BE OPEN. AIR HANDLING UNIT SHALL SUPPLY 70° (ADJ) AIR TO VAV BOXES. OA DAMPER SHALL BE CLOSED, RA DAMPER SHALL BE OPEN. AS EACH VAV BOX ZONE REACHES OCCUPIED SETPOINT THE VAV BOX HEATING COIL SHALL CLOSE AND THE VAV BOX AIRFLOW SHALL GO TO MINIMUM POSITION. MORNING WARMUP DISABLE/ENABLE SHALL BE ON GRAPHICS. TIME OF MORNING LIMIT SHALL ALSO

OCCUPIED MODE: RETURN FAN SHALL START AT MINIMUM VFD SPEED. UPON PROOF OF OPERATION FOR ONE MINUTE(ADJUSTABLE) THE SUPPLY FAN SHALL START. IF ANY ZONE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT THEN OPTIMUM START MORNING WARM-UP CYCLE ABOVE SHALL APPLY. IF MORNING WARM-UP IS NOT REQUIRED THE UNIT SHALL GO TO OCCUPIED CYCLE.

BE ON GRAPHICS.

MIXED AIR CONTROL: WHEN OUTSIDE AIR TEMPERATURE FALLS BELOW DISCHARGE AIR SETPOINT BY 2 DEGREES, MIXING DAMPERS SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT. MINIMUM OUTSIDE AIR DAMPER POSITION SHALL NOT BE ALLOWED TO GO BELOW 10% AIRFLOW, DAMPER POSITION TO BE COORDINATED WITH TAB CONTRACTOR DURING COMMISSIONING. CARBON DIOXIDE LEVELS SHALL BE MONITORED TO MODULATE OUTSIDE AIR DAMPERS TO MAINTAIN CARBON DIOXIDE LEVELS AT SETPOINT (500 PPM ABOVE THE OUTDOOR REFERENCE POINT). A SENSOR SHALL BE LOCATED IN RETURN DUCT MAIN. IF THE CO2 SENSOR IN THE RETURN DUCT MAIN IS ABOVE THE CO2 LEVEL SETPOINT, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN TO MAINTAIN CO2 LEVEL SETPOINT. CONTROL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR

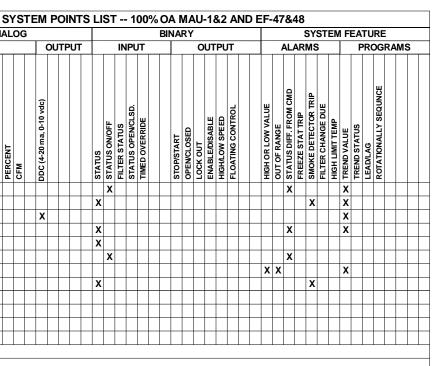
MAINTENANCE AND REPLACEMENT. CO2 RESET SCHEDULE: OA DAMPER POSITION SHALL BE RESET BASED ON THE FOLLOWING SCHEDULE. 100 PPM ABOVE OA REFERENCE CO2 LEVEL OA DAMPERS SHALL BE AT 10% OPEN. 500 PPM ABOVE OA REFERENCE CO2 LEVEL OA DAMPERS SHALL BE OPEN TO MINIMUM OUTDOOR AIR LISTED IN EQUIPMENT SCHEDULES. CONTROLS CONTRACTOR, TAB CONTRACTOR AND COMMISSIONING AGENT TO VERIFY THIS DAMPER POSITION IN FIELD.

INSTALL LOCATION THAT ALLOWS ACCESS FOR

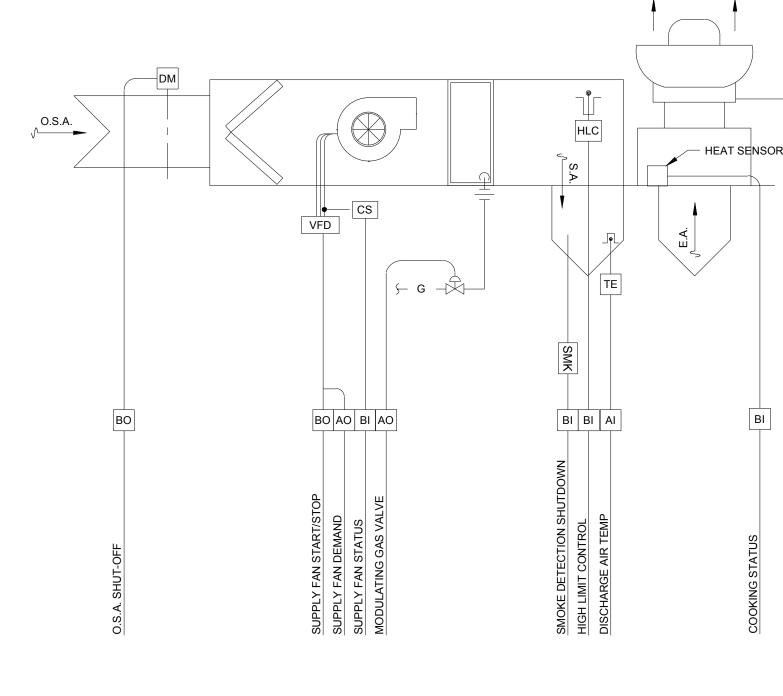
DISCHARGE AIR CONTROL ECONOMIZER MODE SHALL BE ENABLED WHENEVER OAT IS 2 DEGREES LESS THAN RAT. WHEN OAT EXCEEDS RAT, UNIT SHALL GO TO MINIMUM OA BASED ON CO2 SENSOR. WHEN ECONOMIZER MODE(100% OUTSIDE AIR) IS NO LONGER ABLE TO MAINTAIN DISCHARGE AIR TEMPERATURE(DAT) SETPOINT; THEN DX COOLING STAGE ONE THROUGH FOUR (OR MAX # OF COMPRESSORS) SHALL BE SEQUENCED TO MAINTAIN DAT SETPOINT. IF THE OA DAMPERS ARE IN MINIMUM POSITION AND THE MIXED AIR TEMPERATURE IS BELOW DAT SETPOINT THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN DAT SETPOINT.

DISCHARGE AIR TEMPERATURE RESET TO VARY FROM 55 TO 65 DEGREES (AD ILISTABLE) SHALL BE RESET BASED ON POLLING OF VAV BOXES ASSOCIATED WITH THAT RTU AND INCREASING SUPPLY AIR TEMPERATURE UNTIL AT LEAST ONE VAV BOX IS OPENED TO 95%

PACKAGED VAV ROOFTOP UNIT CONTROLS SCHEMATIC NONF



<u>OVERVIEW</u> VARIABLE VOLUME, 100% O.S.A. AND EXHAUST UNIT W/ GAS HEAT. APPLIES TO: - <u>MAU-1 & EF-47</u> : TYPE I HOOD - MAU-2 & EF-48 : TYPE II HOOD



2 MAKE UP AIR UNIT CONTROLS NONE

FAN CONTROL: THE SUPPLY FAN VFD SHALL BE MODULATED TO MAINTAIN DUCT STATIC PRESSURE AT SETPOINT. INITIAL SETPOINT 0.75" (ADJUSTABLE) (+/- .05"). STATIC PRESSURE SHALL BE RESET BASED ON VAV BOX WITH THE MOST COOLING OR HEATING DEMAND (ZONE AT 3 DEGREES ABOVE OR BELOW SETPOINT SHALL BE 100% OPEN VAV BOX). RECOMMENDED MINIMUM STATIC PRESSURE IS 0.5" (ADJUSTABLE). VERIFY DURING COMMISSIONING PROCESS. DISCHARGE AIR RESET SHALL BE DONE PRIOR TO STATIC PRESSURE RESET. RETURN FAN CONTROL: RETURN FAN SHALL TRACK SUPPLY FAN BY A

DIFFERENTIAL TO PROVIDE A SLIGHTLY POSITIVE (0.01-0.05") MIXING BOX PRESSURE. TAB CONTRACTOR, CONTROL CONTRACTOR AND COMMISSIONING AGENT TO CREATE A TRACKING CURVE BASED ON SUPPLY FAN SPEED OF 50-100% TO MAINTAIN POSITIVE MIXING BOX THROUGHOUT RANGE.

DEMAND LIMITING CONTROL: TEMPERATURE CONTROLS CONTRACTOR TO INSTALL LOAD MANAGEMENT SWITCH AVAILABLE FROM FORT COLLINS UTILITIES FOR COINCIDENT PEAK DEMAND CONTROL. UPON RECEIVING A SIGNAL FOR PEAK DEMAND CONTROL THE DX COOLING SHALL BE LOCKED OUT. FREEZE PROTECTION: WHEN 0A TEMP IS BELOW 40

> DEGREES IN UNOCCUPIED MODE THE HEATING VALVE SHALL MODULATE TO MAINTAIN MAT AT 55 DEGREES. FEATURES: DISCHARGE AIR TEMPERATURE SHALL BE TRENDED

> GENERATE AN ALARM SHOULD DISCHARGE AIR TEMPERATURE STRAY FROM DISCHARGE AIR TEMPERATURE SETPOINT BY 5 DEG OR MORE. GENERATE AN ALARM SHOULD FAN STATUS NOT MATCH FAN COMMAND. GENERATE AN ALARM AND OPEN HEATING VALVE TO 100% SHOULD FREEZE STAT TRIP AND DAMPERS SHALL GO TO UNOCCUPIED MODE POSITION. GENERATE AN ALARM SHOULD SMOKE DETECTOR TRIP AND SHUT UNIT DOWN, VALVES AND DAMPERS SHALL GO TO UNOCCUPIED MODE.

CONTROLS SCOPE OVERVIEW NOTES:

THIS SCOPE OF WORK CONSISTS OF A COMPLETE REPLACEMENT OF THE (E) CONTROLS EQUIPMENT WITH A (N) DIRECT DIGITAL CONTROL (DDC) SYSTEM. ALL (E) PNEUMATIC AND ELECTRIC CONTROLS SHALL BE FULLY REMOVED AND REPLACED WITH (N) EQUIPMENT. DUE TO TIME CONSTRAINTS THIS PROJECT IS ANTICIPATED TO BE COMPLETED IN TWO SEPARATE PHASES. SUMMER 2012 AND SUMMER 2013. PHASE ONE WILL BE AREAS A, B, AND C BOTH LEVELS. PHASE TWO WILL BE AREAS D, E, F, AND G THE EXISTING AIR COMPRESSOR AND PNEUMATIC CONTROLS SERVING AREAS D, E, F, AND G WILL NEED TO REMAIN ACTIVE UNTIL THE CONSTRUCTION FOR PHASE TWO IN THE SUMMER OF 2013 BEGINS. CONTRACTOR SHALL PLAN FOR TWO BAS SYSTEMS TO BE ACTIVE DURING THE TIME FRAME BETWEEN COMPLETION OF SUMMER 2012 CONSTRUCTION AND BEGINNING OF SUMMER 2013 CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT ALL COMMUNICATION LOOPS FOR AREAS D, E, F, AND G REMAIN OPERATIONAL AND ARE NOT DISTURBED BY THE CONSTRUCTION IN AREAS A, B, AND C DURING SUMMER 2012 CONSTRUCTION. FOR NEW ROOFTOP UNITS, FACTORY CONTROLS SHALL BE LIMITED TO PACKAGED COOLING EQUIPMENT STAGING. FACTORY CONTROLS SHALL INTERFACE WITH SUCCESSFUL BAS CONTRACTOR AND THEIR SYSTEM. ALL CONTROLS TO IMPLEMENT SEQUENCE, ASIDE FROM PACKAGED COOLING STAGING SHALL BE FIELD INSTALLED BY SUCCESSFUL BAS CONTRACTOR. FOR NEW THERMOSTAT / SPACE SENSOR INSTALLATION CONTRACTOR SHALL ASSUME UTILIZING WIREMOLD FOR CONCEALING CONTROL WIRE. REFER TO SPECIFICATIONS FOR MORE COMPLETE TEMPERATURE CONTROL REQUIREMENTS.

- CONTROLLED DEVICES (VALVES AND DAMPERS): 1. ALL CONTROL VALVES AND THEIR ACTUATORS SHALL BE REPLACED. ALL HEATING TERMINALS (COILS, FTR'S, CUH'S, ETC.) SHALL BE 2-WAY 1/4 TURN ANALOG CONTROL VALVES (BALL VALVES) U.N.O. BALL VALVES SHALL BE CHARACTERIZED CONTROL VALVE WITH DISC DESIGNED FOR EQUAL PERCENTAGE FLOW CHARACTERISTICS. LARGE HEATING TERMINALS SUCH AS HV & AHU COILS MAY BE SERVED WITH GLOBE TYPE CONTROL VALVES AT THE CONTRACTOR'S
- DISCRETION. 2. ALL ACTUATORS IN EXISTING RTUS AND H&VS TO REMAIN SHALL BE REPLACED. 3. ALL (E) 3-WAY HEATING WATER VALVES SHALL BE REPLACED WITH (N) 2-WAY MODULATING
- CONTROL VALVES. EXCEPTION: UNIT HEATERS AND CABINET UNIT HEATERS, REPLACE WITH BINARY 2-WAY CONTROL VALVE
- 4. ALL FREEZESTATS SHALL BE AUTOMATIC RESET 5. ALL UNITS SHALL HAVE INDIVIDUAL SCHEDULES. GLOBAL SCHEDULES FOR RTU'S, H&V'S, ETC ARE NOT ALLOWED.

CONTROL DEVICES: ALL SPACE TEMPERATURE SENSORS SHALL BE PROVIDED WITH WARMER/COOLER ADJUSTMENT. PROVIDE GUARD OVER DEVICES LOCATED IN GENERAL PUBLIC AREAS (I.E. CORRIDORS, GYMNASIUM, ETC).

EQUIPMENT NOT ON DDC:

BE PROVIDED WITH NEW STAND-ALONE ELECTRIC CONTROLS. 1. CABINET UNIT HEATER 2. UNIT HEATERS

3. INDIVIDUAL EXHAUST FANS AS NOTED IN THESE DRAWINGS. GRAPHICS:

AS INDICATED IN THE POINTS LISTS, ALL BAS POINTS SHALL BE REPRESENTED BY GRAPHIC DISPLAY ON THE WEB BASED INTERFACE. ITEMS SUCH AS PUMPS, FANS, BOILERS, CONTROL VALVES, AND DAMPER MOTORS SHALL BE REPRESENTED BY ANIMATED GRAPHIC DISPLAYS. GRAPHICAL FLOOR PLANS SHALL INDICATE AIRSIDE ZONE DESIGNATIONS AS WELL AS THEIR SPACE TEMPERATURE SETPOINT, SPACE TEMPERATURE. BACKGROUND COLOR OF ZONES SHALL BE CHANGED AS FOLLOWS:

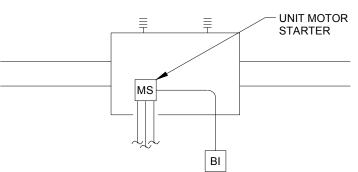
1. NONE - SPACE TEMPERATURE WITHIN 3°F OF SETPOINT. 2. RED - SPACE TEMPERATURE GREATER THAN 4°F ABOVE SETPOINT. 3. BLUE -SPACE TEMPERATURE LOWER THAN 4°F BELOW SETPOINT.

GRAPHICAL FLOOR PLANS SHALL ALSO INDICATE DE-CENTRALIZED EQUIPMENT BY LOCATION AND DESIGNATION. ANIMATED GRAPHICS ARE NOT REQUIRED ON THE GRAPHICAL FLOOR PLAN SCREEN. ADDITIONAL INFORMATION FOR A GIVEN ZONE OR PIECE OF EQUIPMENT SHALL BE EASILY ACCESSED BY DOUBLE-CLICKING ITS ASSOCIATED FLOOR PLAN GRAPHIC.

ADJUSTABILITY: ALL SETPOINTS, TIME DELAYS, DURATIONS, RESET SCHEDULES, AND OTHER CONTROL VARIABLES DESCRIBED IN THESE DRAWINGS AND SPECIFICATIONS SHALL BE ADJUSTABLE. CONSULT THE ENGINEER IF CHANGES TO DESIGN SUPPLY AIR TEMPS, MINIMUM, OR MAXIMUM TEMPERATURES ARE DESIRED VARIABLES REQUIRED FOR CONTROLS IMPLEMENTATION THAT ARE NOT DEFINED IN THE SEQUENCES OF CONTROL SHALL BE DEFINED BY CONTROLS CONTRACTOR IN THEIR SHOP DRAWING SUBMITTAL. CONTRACTOR'S SUGGESTED ADJUSTMENTS TO VARIABLES DEFINED IN THE SEQUENCES OF CONTROL, IF ANY, SHALL BE SUBMITTED IN THE CONTROLS SHOP DRAWINGS.

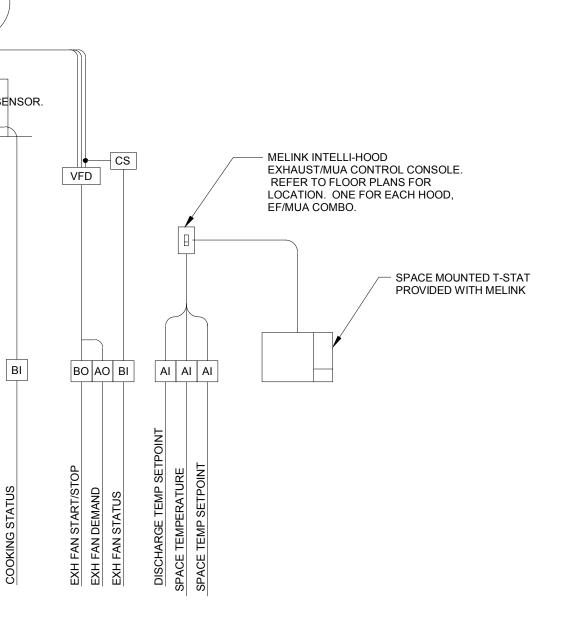
ADJUSTMENTS RESET: PROVIDE A SINGLE POINT SOFTWARE COMMAND FEATURE FOR EACH OF THE MAJOR SYSTEMS (I.E. CENTRAL HEATING PLANT AHU-X RTU-X FTC) TO RESET ALL OVERRIDDEN VARIABLES BACK TO DEFAULT VALUES. AUTOMATICALLY INDICATE DEFAULT VALUES ADJACENT TO ANY VALUES THAT HAVE BEEN OVERRIDDEN.

SCHEMATIC GRAPHICS: GRAPHICS ARE DIAGRAMMATIC IN NATURE. AHUS AND HVS MAYBE SHOWN AS DRAW-THROUGH GRAPHICALLY IN THESE DRAWINGS, BUT ARE BLOW - THROUGH IN FIELD (OR VICE VERSA).



EF-49 SHALL BE ACTIVATED BY MANUAL SWITCH

DISHWASHER EXHAUST FAN



SEQUENCE OF CONTROL: KITCHEN MUA AND EF UNIT

EDDESCRIPTION - MAKEUP AIR HANDLING UNIT AND EXHAUST FAN COMPLETE WITH FILTER SECTION, INDIRECT FIRED GAS FURNACE, VARIABLE VOLUME EXHAUST FAN AND VARIABLE VOLUME SUPPLY FAN. DAMPERS, MODULATING GAS CONTROL VALVES, AND THEIR ACTUATORS SHALL BE FACTORY PROVIDED. VFDS, SENSORS FOR HOOD HEAT AND PARTICULATES AND SPACE THERMOSTAT SHALL BE BY MELINK INTELLI-HOOD. REFER TO MELINK SPECIFICATION FOR SCOPE REQUIRED OF TEMPERATURE CONTROLS CONTRACTOR. A SEPARATE MELINK INTELLI-HOOD SYSTEM SHALL BE PROVIDED FOR EACH HOOD; THE RELOCATED TYPE I HOOD AND THE NEW TYPE II HOOD. TYPE I HOOD SHALL

HAVE HEAT AND OPTIC SENSORS INSTALLED IN EXISTING HOOD. TYPE II HOOD SHALL HAVE HEAT SENSOR INSTALLED IN NEW HOOD. BOTH FACTORY CONTROLLER AND MELINK INTELLI-HOOD SHALL BE CAPABLE OF COMMUNICATING TO THE BAS.

SCHEDULING - THIS UNIT IS NOT SCHEDULED AND SHALL BE INTERLOCKED WITH THE KITCHEN HOOD EXHAUST SYSTEM TO PROVIDE CONDITIONED MAKE UP AIR WHENEVER THE KITCHEN HOOD EXHAUST SYSTEM IS

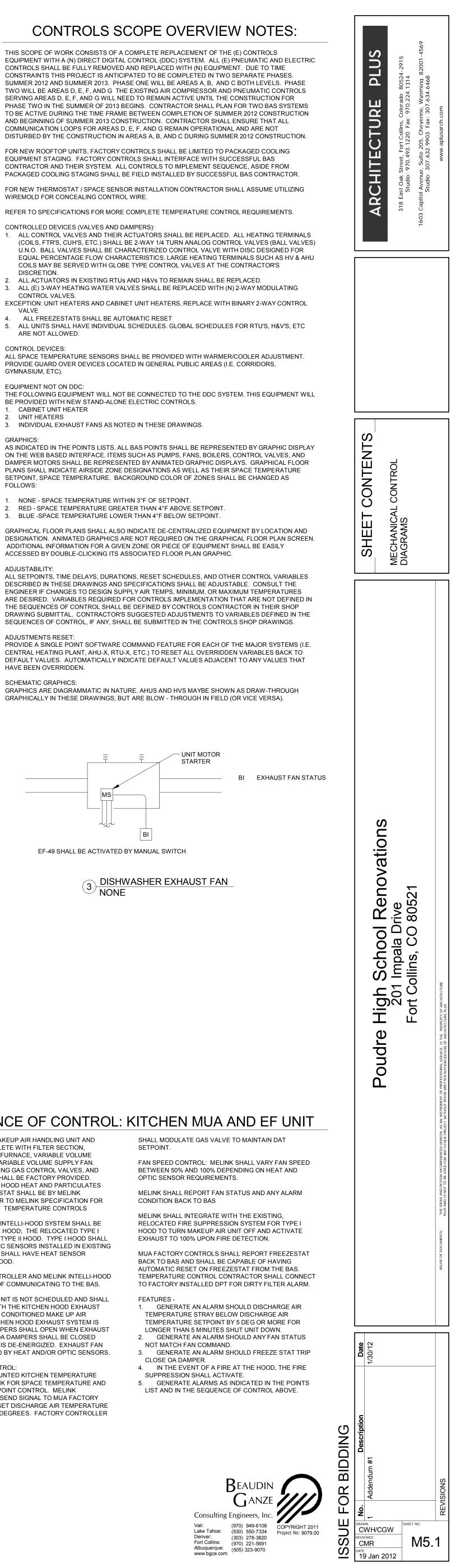
OPERATING. OA DAMPERS SHALL OPEN WHEN EXHAUST FAN IS ACTIVATED. OA DAMPERS SHALL BE CLOSED WHEN EXHAUST FAN IS DE-ENERGIZED. EXHAUST FAN SHALL BE ENERGIZED BY HEAT AND/OR OPTIC SENSORS. DISCHARGE AIR CONTROL: PROVIDE A WALL MOUNTED KITCHEN TEMPERATURE

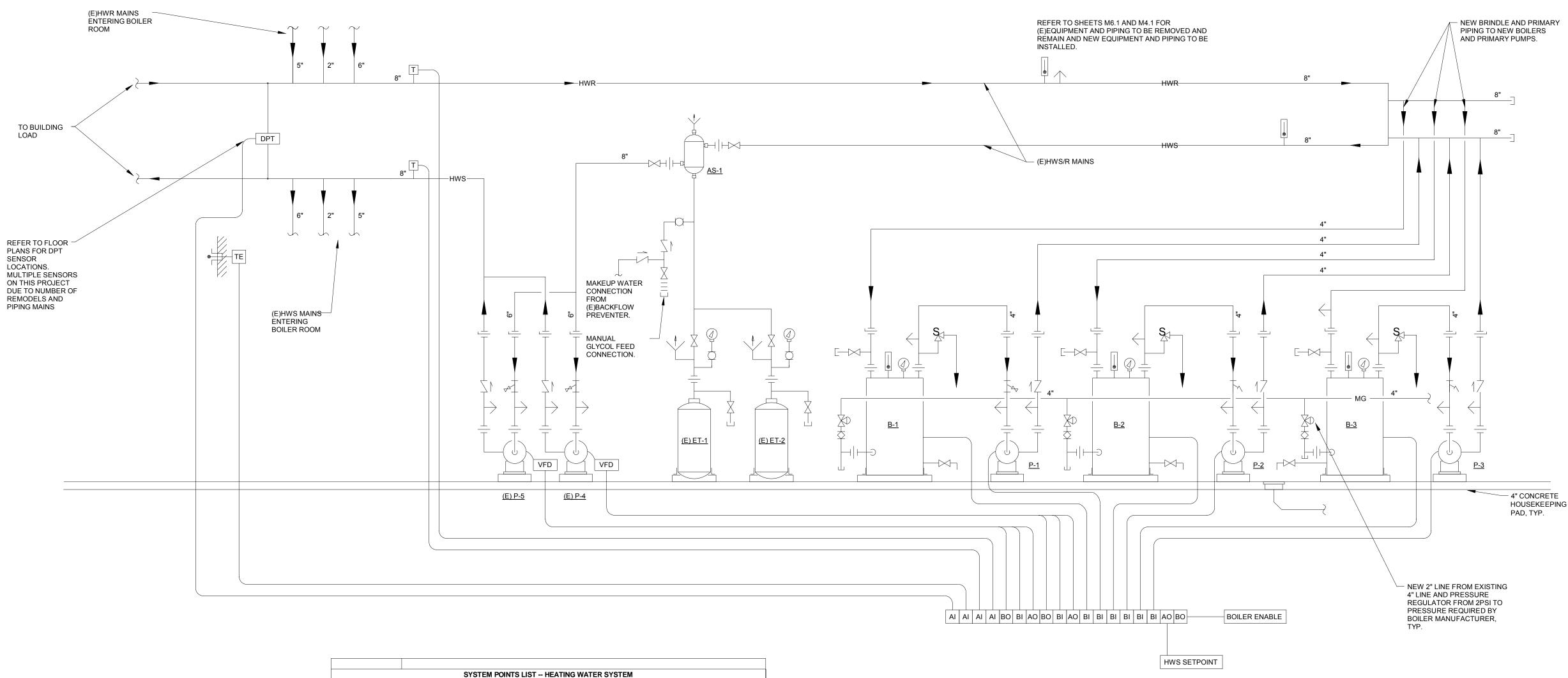
SENSOR FROM MELINK FOR SPACE TEMPERATURE AND DISCHARGE AIR SETPOINT CONTROL. MELINK CONTROLLER SHALL SEND SIGNAL TO MUA FACTORY CONTROLLER TO RESET DISCHARGE AIR TEMPERATURE BETWEEN 55 AND 85 DEGREES. FACTORY CONTROLLER

SHALL MODULATE GAS VALVE TO MAINTAIN DAT SETPOINT OPTIC SENSOR REQUIREMENTS. CONDITION BACK TO BAS MELINK SHALL INTEGRATE WITH THE EXISTING. EXHAUST TO 100% UPON FIRE DETECTION. FEATURES -

LONGER THAN 5 MINUTES SHUT UNIT DOWN NOT MATCH FAN COMMAND.

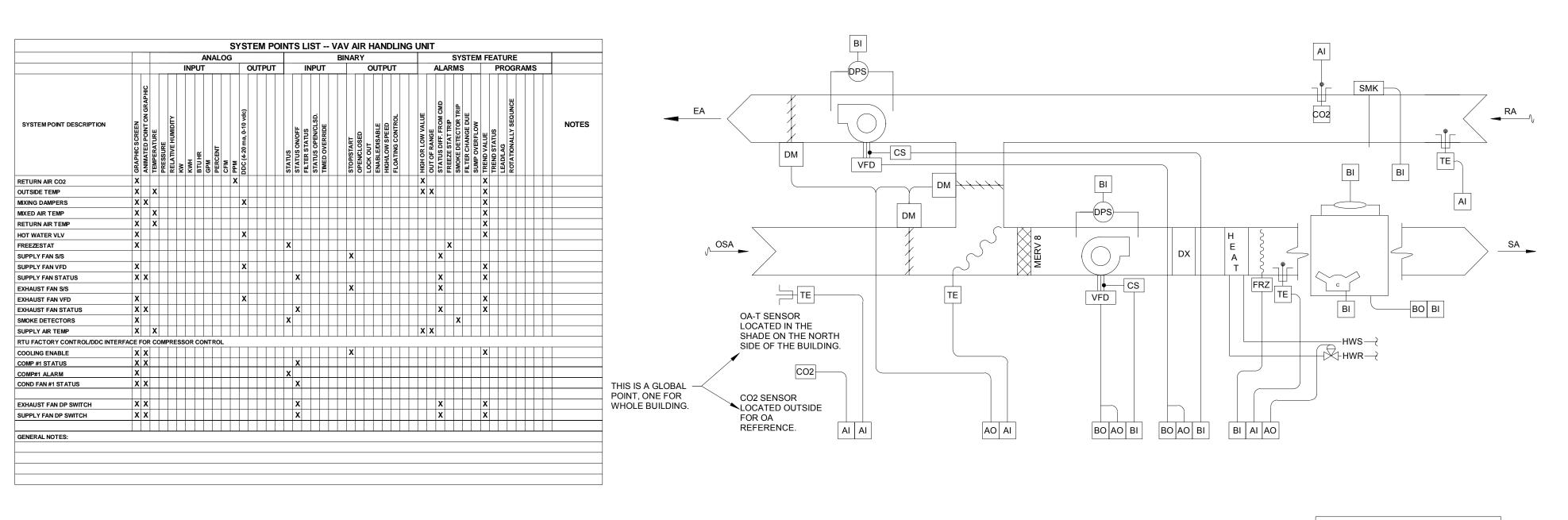
SUPPRESSION SHALL ACTIVATE.





NONE

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- SPACE MOUNTED THERMOSTAT W WARMER/COOLER ADJSUTMENT

2 VAV SINGLE ZONE PACKAGED RTU CONTROLS SCHEMATIC NONE

SPACE TEMPERATURE SPACE TEMP SETPOINT

-| AI |-----

HEATING WATER SYSTEM DDC CONTROLS SCHEMATIC

OVERVIEW: SINGLE ZONE VARIABLE VOLUME, DX COOLING, HW HEAT APPLIES TO - <u>RTU-3, 7, 16, 18</u>

SEQUENCE OF CONTROLS:

SEQUENCE OF OPERATION - CENTRAL HOT WATER THE SYSTEM CONSIST OF THREE CONDENSING BOILERS WITH ASSOCIATED CIRCULATING PUMPS, AND TWO EXISTING SECONDARY LOOP HOT WATER SUPPLY PUMPS. REFER TO BOILER ROOM FLOOR PLANS AND MECHANICAL DIAGRAM SHEET FOR EXISTING PIPING AND EQUIPMENT

CONNECTIONS. A HEAT TIMER MULTI-MOD PLATINUM CONTROL PANEL SHALL ACTIVATE AND CONTROL BOILER STAGING AND ASSOCIATED PRIMARY CIRCULATING PUMPS.

ENABLING: HOT WATER GENERATION SHALL BE ENABLED BY THE BAS UPON A FALL IN OUTDOOR AIR TEMPERATURE BELOW HOT WATER GENERATION SETPOINT (INITIALLY SET TO 60 DEG F ADJUSTABLE).

LOOP PRESSURE CONTROL: ONCE ENABLED, HOT WATER LOOP DIFFERENTIAL PRESSURE SHALL BE MAINTAINED AT SETPOINT, 10 PSI INITIAL (ADJUSTABLE, TO BE CONFIRMED WITH BALANCING CONTRACTOR AND COMMISSIONING PROCESS) BY FIRST STARTING THE LEAD HOT WATER PUMP AND MODULATING THE ASSOCIATED VFD. DUE TO MULTIPLE PIPING LOOPS IN THIS BUILDING, MULTIPLE DPT SENSORS WILL BE REQUIRED, WORST CASE DPT SENSOR SHALL CONTROL PUMP SPEED. WHEN LEAD HOT WATER PUMP IS AT 100% AND LOOP PRESSURE IS 2 PSI BELOW SETPOINT FOR MORE THAN 15 MINUTES THE LAG PUMP SHALL BE STAGED ON AT 60% AND THE LEAD

BELOW 40% THE LAG PUMP SHALL STAGE OFF. THE LEAD AND LAG POSITIONS OF HOT WATER PUMPS ARE TO ALTERNATE WEEKLY. ALL PARAMETERS SHALL BE ADJUSTABLE. TEMPERATURE CONTROL: SHOULD HOT WATER SUPPLY TEMPERATURE FALL BELOW SETPOINT PLUS

DIFFERENTIAL INITIATE OPERATION. LEAD BOILER AND ASSOCIATED BOILER CIRCULATING PUMP SHALL BE ENERGIZED. BAS SHALL ENERGIZE PUMP. BOILER CONTROLLER SHALL SEND SIGNAL TO BAS FOR SECOND AND THIRD PUMP TO BE ENERGIZED. HOT WATER PUMP SHALL INITIATE FIRST, AND AFTER A 2 MINUTE (ADJUSTABLE) DELAY UPON PROOF OF FLOW ENABLE LEAD HOT WATER BOILER. BOILERS HAVE A 5:1 TURNDOWN. BOILERS SHALL INITIATE AT 20% FIRE.

STAGED ON. THE SECOND BOILER AND ASSOCIATED BOILER CIRCULATING PUMP SHALL BE ENERGIZED TO PROVIDE ADDITIONAL HEAT TO MAINTAIN HOT WATER SUPPLY TEMPERATURE AT SETPOINT. HOT WATER PUMP SHALL INITIATE FIRST, AND AFTER A 2 MINUTE (ADJUSTABLE) DELAY UPON PROOF OF FLOW ENABLE HOT WATER BOILER. BOILER CONTROL PANEL SHALL MODULATE FIRING RATE OF BOTH BOILERS TO PROVIDE OPTIMUM EFFICIENCY AND STAGE THIRD BOILER IN THE SAME FASHION AS THE SECOND BOILER IF HEATING WATER SETPOINT IS STILL NOT MET WITH TWO BOILERS AT 40% FIRE. THE BOILER CONTROL PANEL SHALL THEN OPTIMIZE THE FIRING RATE OF ALL THREE BOILERS TO PROVIDE OPTIMUM EFFICIENCY BY STAGING THEM UP 20% AT A TIME. WHEN HOT WATER SUPPLY TEMPERATURE EXCEEDS HOT WATER SUPPLY TEMPERATURE SETPOINT BY 5 DEGREES, THEN FIRING RATE STAGES SHALL BE REDUCED TO MAINTAIN HOT WATER SUPPLY TEMPERATURE SETPOINT. THE LEAD AND LAG POSITIONS FOR BOILERS ARE TO ALTERNATE WEEKLY.

BAS SHALL SEND A RESET SIGNAL TO BOILER CONTROL PANEL. HOT WATER TEMPERATURE SETPOINT IS TO BE RESET FROM 110 DEG (ADJUSTABLE) TO 140 DEG F (ADJUSTABLE) AS OUTSIDE AIR TEMPERATURE FALLS FROM 60 DEG F (ADJUSTABLE) TO 20 DEG F (ADJUSTABLE).

WELL AS BOILER ALARM STATUS BACK TO BAS FOR REPORTING FREEZE PROTECTION MODE: IF DURING UNOCCUPIED HOURS THE OAT IS BELOW 40 DEGREES THE LEAD SECONDARY LOOP PUMP SHALL ENERGIZE AT MINIMUM SPEED AND

MODULATE TO MAINTAIN DPT SETPOINT. FEATURES: SHOULD ANY PUMP STATUS NOT MATCH PUMP COMMAND, GENERATE AN ALARM TO THE BAS. SHOULD HOT WATER SUPPLY TEMPERATURE FALL 10 OR MORE DEGREES

SEQUENCE OF CONTROLS:

THE SYSTEM CONSIST OF A ROOF TOP UNIT [RTU] COMPLETE WITH VFD SUPPLY FAN, VFD POWER EXHAUST FAN/RETURN FAN, DIGITAL SCROLL COMPRESSOR OR MULTIPLE COMPRESSORS, AND HOT WATER COIL.

SCHEDULING: THE BUILDING SCHEDULING SHALL OCCUR THROUGH THE OPERATOR WORKSTATION INTERFACE AT THE GLOBAL CONTROLLER. CONTROL

RTU SHALL INCLUDE PACKAGED COMPRESSOR CONTROLS FOR COOLING DAT CONTROL FROM FACTORY. ENABLE SIGNAL AND DAT RESET SIGNAL TO BE SENT FROM BUILDING BAS TO FACTORY COMPRESSOR CONTROLS. RTU FACTORY DX COOLING CONTROL SHALL REPORT CONDENSER FAN STATUS, COMPRESSOR STATUS AND ALARM CONDITION BACK TO BAS. DAMPERS SHALL BE FURNISHED AND INSTALLED BY RTU MANUFACTURER. ALSO INCLUDE TERMINAL STRIP FOR FIELD INSTALLED CONTROLS. TCC SHALL PROVIDE CONTROL VALVES, ACTUATORS, SENSORS AND ALL CONTROL WIRING AND INSTALL IN FIELD TO ACHIEVE SEQUENCE AND POINTS LIST AS OUTLINED.

OCCUPIED MODE: MIXED AIR CONTROL:

SETPOINT BY 2 DEGREES, MIXING DAMPERS SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT. MINIMUM OUTSIDE AIR DAMPER POSITION SHALL NOT BE ALLOWED TO GO BELOW 10% AIRFLOW. DAMPER POSITION TO BE COORDINATED WITH TAB CONTRACTOR DURING COMMISSIONING. RA CARBON DIOXIDE LEVELS SHALL BE MONITORED TO MODULATE OUTSIDE AIR DAMPERS TO MAINTAIN CARBON DIOXIDE LEVELS AT SETPOINT (500 PPM ABOVE THE OUTDOOR REFERENCE POINT). A SENSOR SHALL BE LOCATED IN RETURN DUCT MAIN WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN DISCHARGE AIR TEMPERATURE SETPOINT, THE OUTSIDE AIR DAMPERS SHALL BE OPEN

CO2 RESET SCHEDULE: OA DAMPER POSITION SHALL BE RESET BASED ON THE FOLLOWING SCHEDULE. 100 PPM ABOVE OA REFERENCE CO2 LEVEL OA DAMPERS SHALL BE AT 10% OPEN. 500 PPM ABOVE OA REFERENCE CO2 LEVEL OA DAMPERS SHALL BE OPEN TO MINIMUM OUTDOOR AIR LISTED IN EQUIPMENT SCHEDULES. CONTROLS CONTRACTOR, TAB CONTRACTOR

DISCHARGE AIR CONTROL: ECONOMIZER MODE SHALL BE ENABLED WHENEVER OAT IS 2 DEGREES LESS THAN RAT. WHEN OAT EXCEEDS RAT, UNIT SHALL GO TO MINIMUM OA BASED ON CO2 SENSOR. WHEN ECONOMIZER MODE(100% OUTSIDE AIR) IS NO LONGER ABLE TO MAINTAIN DISCHARGE AIR TEMPERATURE(DAT) SETPOINT; THE DX COOLING SHALL STAGE ON TO MAINTAIN DAT SETPOINT. IF THE OA DAMPERS ARE IN MINIMUM POSITION AND THE MIXED AIR TEMPERATURE IS BELOW DAT SETPOINT THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN DAT SETPOINT.

SUPPLY FAN VFD TO MAINTAIN SPACE TEMPERATURE SETPOINT. VFD SHALL NOT GO BELOW 50%. IF VFD IS AT 50% AND SPACE TEMPERATURE IS BELOW SETPOINT, DISCHARGE AIR TEMPERATURE SHALL BE RESET UPWARD.

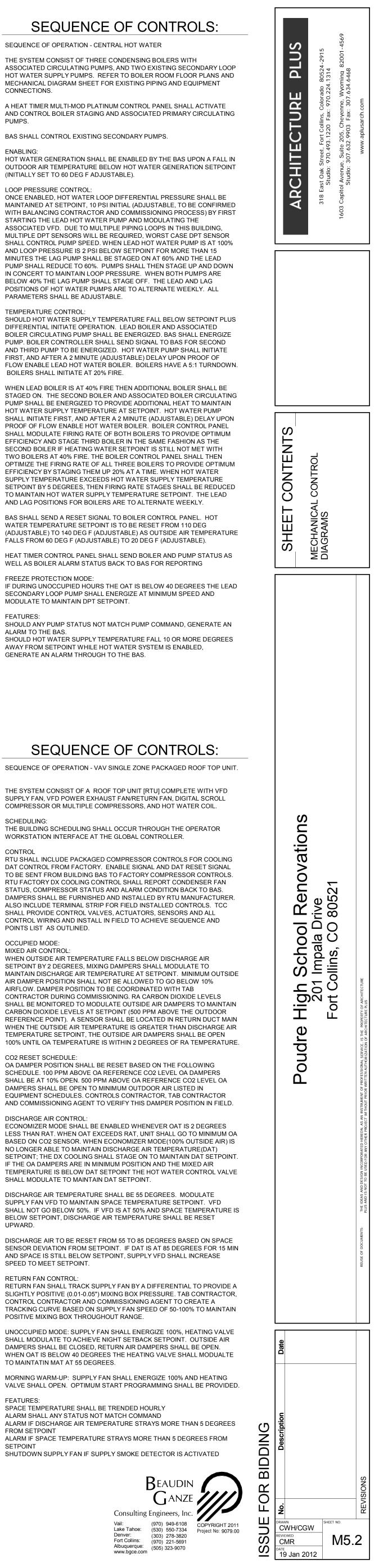
AND SPACE IS STILL BELOW SETPOINT, SUPPLY VFD SHALL INCREASE SPEED TO MEET SETPOINT.

RETURN FAN CONTROL: RETURN FAN SHALL TRACK SUPPLY FAN BY A DIFFERENTIAL TO PROVIDE A SLIGHTLY POSITIVE (0.01-0.05") MIXING BOX PRESSURE. TAB CONTRACTOR, CONTROL CONTRACTOR AND COMMISSIONING AGENT TO CREATE A TRACKING CURVE BASED ON SUPPLY FAN SPEED OF 50-100% TO MAINTAIN POSITIVE MIXING BOX THROUGHOUT RANGE.

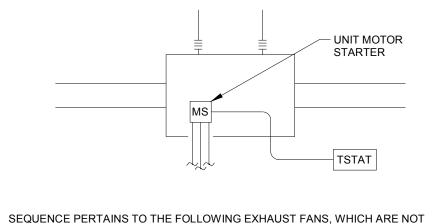
DAMPERS SHALL BE CLOSED, RETURN AIR DAMPERS SHALL BE OPEN. WHEN OAT IS BELOW 40 DEGREES THE HEATING VALVE SHALL MODUALTE TO MAINTATIN MAT AT 55 DEGREES.

FEATURES: SPACE TEMPERATURE SHALL BE TRENDED HOURLY ALARM SHALL ANY STATUS NOT MATCH COMMAND ALARM IF DISCHARGE AIR TEMPERATURE STRAYS MORE THAN 5 DEGREES FROM SETPOINT ALARM IF SPACE TEMPERATURE STRAYS MORE THAN 5 DEGREES FROM

SETPOINT



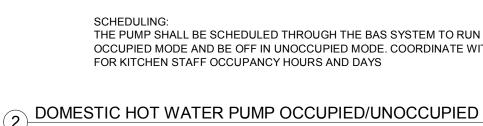
EXHAUST FAN THERMOSTAT CONTROL SCHEMATIC

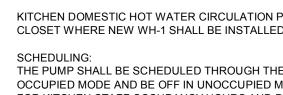


EXHAUST FANS SHALL BE CONTROLLED BY INDIVIDUAL SPACE MOUNTED COOLING THERMOSTAT SET AT 80°F (ADJ). UPON A RISE IN SPACE TEMPERATURE ABOVE SETPOINT PLUS DIFFERENTIAL, EXHAUST FANS SHALL ENABLE. CONVERSELY, UPON A DECREASE IN SPACE TEMPERATURE BELOW SETPOINT PLUS

INTENDED TO BE ON THE DDC SYSTEM: EXH FANS SERVING ELECTRICAL ROOM

DIFFERENTIAL, EXHAUST FANS SHALL DISABLE.





KITCHEN DOMESTIC HOT WATER CIRCULATION PUMP: EXISTING IN WATER HEATER CLOSET WHERE NEW WH-1 SHALL BE INSTALLED. REFER TO FLOOR PLANS THE PUMP SHALL BE SCHEDULED THROUGH THE BAS SYSTEM TO RUN DURING OCCUPIED MODE AND BE OFF IN UNOCCUPIED MODE. COORDINATE WITH OWNER

SEQUENCE OF OPERATION:

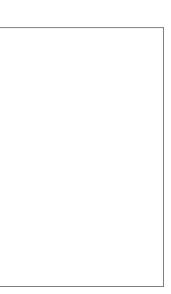
- MORNING WARMUP - ECONOMIZER COOLING APPLIES TO : HV-4 & EF-23, 24, 25 : AUDITORIUM HV-2 & EF: GYMNASIUM 400

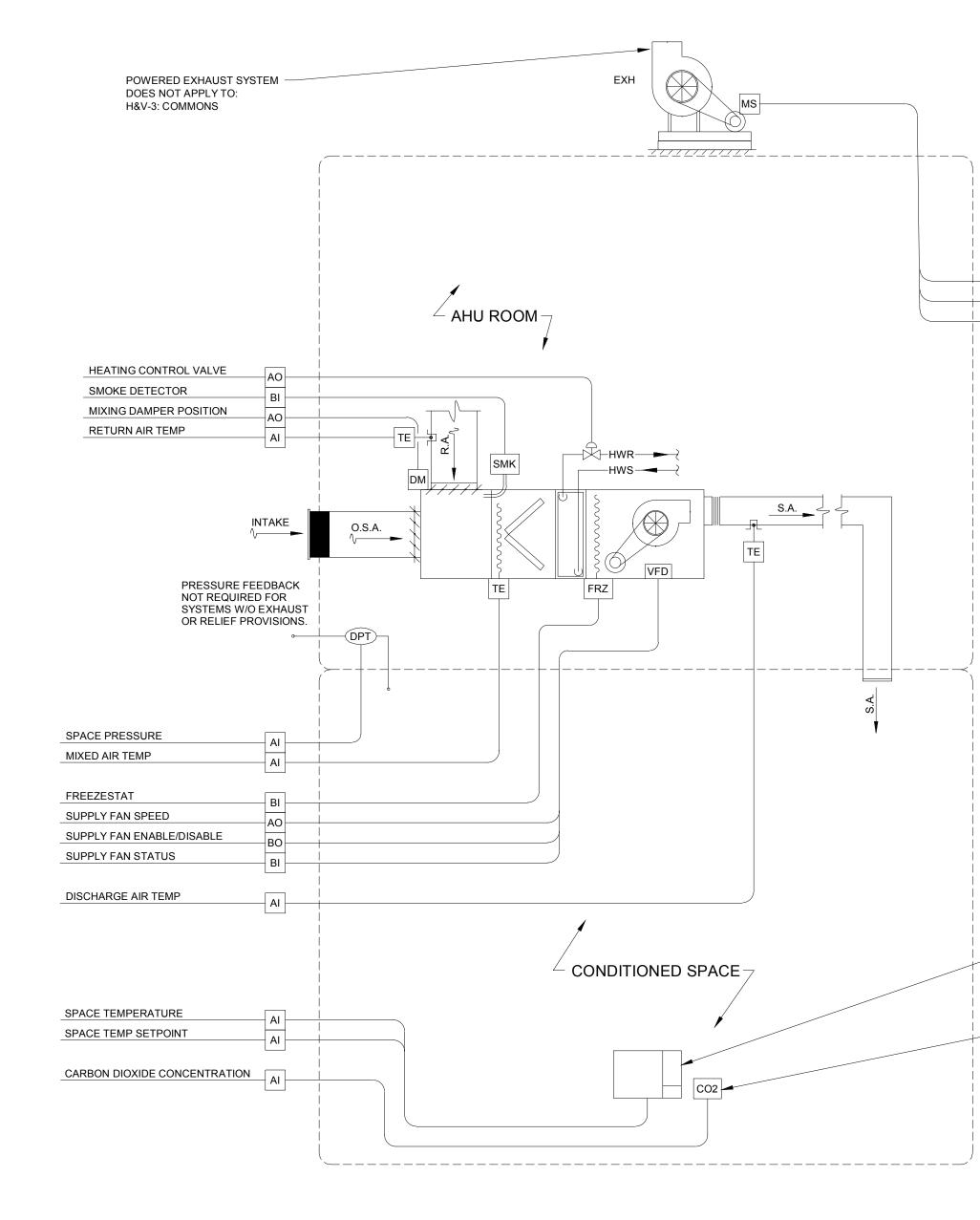
VARIABLE VOLUME UNIT WITH: - MIXING BOX - POWERED RELIEF (EXCEPT <u>H&V-3)</u> - DEMAND CONTROLLED VENTILATION - NIGHT VENT COOLING

OVERVIEW :

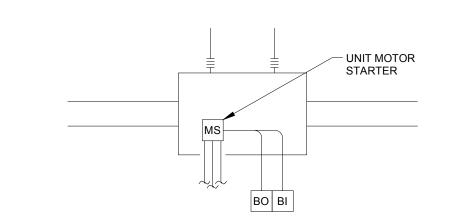
SINGLE ZONE, HEATING ONLY

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SYSTEM POINT DESCRIPTION	GRAPHIC SCREEN	ANIMATED POINT ON GRAPHIC	TEMPERATURE		KW	KWH	BTU HR	GPM	CEM	MA	DDC (4-20 ma, 0-10 vdc)		011111	SIATUS STATUS ON/DEE		FILIER STATUS STATUS OPENICI SD	TIMED OVERRIDE		STOP/START	OPEN/CLOSED		ENABLE/USABLE HIGHA OW SPEED	FLOATING CONTROL		HIGH OR LOW VALUE	OUT OF RANGE	STATUS DIFF. FROM CMD	FREEZE STAT TRIP	SMOKE DETECTOR TRIP	FILTER CHANGE DUE	SUMP OVERFLOW	TREND VALUE	TREND STATUS		ROTATIONALLY SEQUNCE				NOTES
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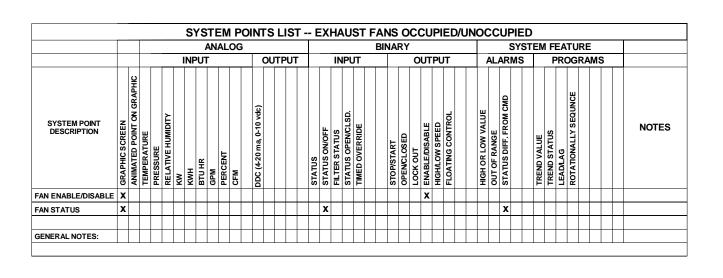
1 INDOOR H&V SINGLE ZONE VAV CONTROLS



DURING OCCUPIED HOURS, FAN SHALL ENABLE. CONVERSELY, DURING UNOCCUPIED HOURS, FAN SHALL DISABLE.

SHOULD FAN STATUS NOT MATCH FAN COMMAND, SEND AN ALARM THROUGH THE WEB INTERFACE.

OCCUPIED/UNOCCUPIED HOURS SHALL BE INDICATED BY THE DDC SYSTEM.



EXHAUST FAN OCCUPIED/

4 NONE

UNOCCUPIED CONTROL SCHEMATIC

THE DDC SYSTEM.

CUH AND UH CONTROL SCHEMATIC [/] NONE

OVERVIEW

OVERVIEW : REFER TO EXHAUST FAN SCHEDULE ON M7.2 FOR TYPE OF CONTROL FOR EACH EXHAUST FAN

SEQUENCE OF CONTROL: SINGLE ZONE VAV, HEATING AND VENTILATION ONLY

DESCRIPTION - THE SYSTEM CONSISTS OF AN EXISTING AIR HANDLING UNIT COMPLETE WITH MIXING BOX, FILTER SECTION, HOT WATER COIL, AND SUPPLY FAN TO BE PROVIDED WITH NEW MOTOR AND VARIABLE FREQUENCY DRIVE. A SEPARATE EXHAUST FAN SERVES BUILDING PRESSURE RELIEF. CONTRACTOR TO VERIFY ALL EXISTING EXHAUST FANS WITHIN PROJECT ARE CONTROLLED AND NOTIFY ENGINEER IMMEDIATELY IF UNCONTROLLED FANS ARE FOUND. DAMPERS, CONTROL VALVES, AND THEIR ACTUATORS, AS WELL AS ALL OTHER CONTROLS REQUIRED SHALL BE NEW EQUIPMENT FURNISHED AND INSTALLED BY THE TEMPERATURE CONTROLS CONTRACTOR.

SCHEDULING - OCCUPIED/UNOCCUPIED SCHEDULING APPLIES TO THESE SYSTEMS. SCHEDULES TO BE DETERMINED BY OWNER AND SHALL BE AVAILABLE THROUGH THE OPERATOR WORKSTATION INTERFACE.

SCHEDULING CONTROLS SPACE SETPOINT TEMPERATURE. DURING OCCUPIED MODE. AHU SHALL MAINTAIN SPACE TEMPERATURE AT SETPOINT DICTATED BY SPACE MOUNTED THERMOSTAT (I.E. 68-72°F HEATING, 76-80°F COOLING). DURING UNOCCUPIED MODE, AHU SHALL MAINTAIN SPACE TEMPERATURE AT SETBACK TEMPERATURE SETPOINT (I.E. 60°F HEATING, N/A COOLING UNLESS MORNING COOL-DOWN IS ENABLED, FURTHER DESCRIPTION BELOW)

OCCUPIED/UNOCCUPIED SCHEDULING ALSO CONTROLS VENTILATION. WHEN SCHEDULED IN THE OCCUPIED MODE, SUPPLY FAN SHALL OPERATE AND CONTROLLED DEVICES SHALL POSITION WITH RESPECT TO THEIR PI CONTROL LOOP. WHEN SCHEDULED IN THE UNOCCUPIED MODE, FANS SHALL BE SHUT-OFF, RETURN DAMPER FULL OPEN, OUTSIDE AIR DAMPERS CLOSED, AND HEATING WATER VALVE SHALL BE 100% OPEN. SUPPLY FAN SHALL BE PERMITTED TO OPERATE ON DEMAND FOR HEATING.

MORNING WARM-UP: MORNING WARM-UP SHALL BE BASED ON OPTIMUM START PROGRAMMING. SUPPLY FAN VFD SHALL CONTROL OFF STATIC PRESSURE. ALL VAV BOXES SHALL GO FULL OPEN. VAV BOX HEATING CONTROL VALVE SHALL BE OPEN. AIR HANDLING UNIT SHALL SUPPLY 70° (ADJ) AIR TO VAV BOXES. OA DAMPER SHALL BE CLOSED, RA DAMPER SHALL BE OPEN. AS EACH VAV BOX ZONE REACHES OCCUPIED SETPOINT THE VAV BOX HEATING COIL SHALL CLOSE AND THE VAV BOX AIRFLOW SHALL GO TO MINIMUM POSITION. MORNING WARMUP DISABLE/ENABLE SHALL BE ON GRAPHICS. TIME OF MORNING LIMIT SHALL ALSO BE ON GRAPHICS.

MORNING WARM-UP: MORNING WARM-UP SHALL BE BASED ON OPTIMUM START PROGRAMMING DURING MORNING WARM-UP, SUPPLY FAN VFD SHALL BE AT MAXIMUM SPEED (AS DETERMINED BY BALANCE CONTRACTOR). AIR HANDLING UNIT SHALL SUPPLY 85°F (ADJ) AIR. OSA DAMPER SHALL BE CLOSED, RA DAMPER SHALL BE OPEN. ZONE REACHES OCCUPIED SETPOINT, THE AHU HEATING COIL CONTROL VALVE SHALL CLOSE AND THE AHU FAN SPEED SHALL GO TO MINIMUM. MORNING WARMUP DISABLE/ENABLE SHALL BE ON GRAPHICS. TIME OF MORNING LIMIT SHALL ALSO BE ON GRAPHICS.

MORNING COOLDOWN: SHALL BE BASED UPON TREND DATA COLLECTED OVER THE PREVIOUS 7 DAYS (ADJ) TO DETERMINE WHETHER OR NOT MORNING COOLDOWN IS WARRANTED. MORNING COOLDOWN SHALL BE DEEMED WARRANTED IF:

1. DEMAND FOR COOLING OCCURRED ON THE MAJORITY OF THE DAYS IN PREVIOUS PERIOD POLLED. 2. -OR- DAILY MAXIMUM OUTSIDE AIR TEMPERATURE EXCEEDED SPACE TEMPERATURE SETPOINT FOR A MAJORITY OF THE DAYS THE IN PREVIOUS PERIOD POLLED.

WHEN DEEMED WARRANTED, MORNING COOLDOWN SHALL BE EXECUTED IN LIEU OF MORNING WARM-UP ROUTINE. THE MORNING COOLDOWN ROUTINE SHALL BE SCHEDULED TO OCCUR PRIOR TO OCCUPANCY. PROVIDE ADJUSTABLE DURATION TO PERMIT BUILDING OPERATOR TO TUNE TIME PERIOD REQUIRED TO FULLY EXECUTE COOLDOWN EXERCISE PRIOR TO OCCUPANCY. DURING MORNING COOLDOWN, HEATING WATER VALVE SHALL BE CLOSED AND BAS SHALL MODULATE MIXING BOX POSITION TO ACHIEVE COOLING DISCHARGE AIR TEMPERATURE. SUPPLY FAN SHALL STOP AND OSA DAMPER SHALL SHUT ONCE THE SPACE TEMPERATURE REACHES THE MORNING COOLDOWN SETPOINT (USER ADJ 60°F TO 68°F).MORNING COOLDOWN DISABLE/ENABLE SHALL BE ON GRAPHICS.

MIXED AIR CONTROL: MIXING BOX CONTROL IS CONTROLLED BY MULTIPLE CONTROL LOOPS- BCS SHALL HIGH SELECT CONTROL POSITION AMONGST THE FOLLOWING LOOPS:

OCCUPIED/UNOCCUPIED: DAMPER CLOSED DURING UNOCCUPIED AND OPEN TO MINIMUM POSITION DURING OCCUPIED. MINIMUM OUTSIDE AIR POSITIONS SHALL NOT BE LESS THAN 10% OSA DURING OCCUPIED PERIODS.

MIXED AIR TEMPERATURE CONTROL LOOP: WHEN OUTSIDE AIR TEMPERATURE FALLS BELOW DISCHARGE AIR SETPOINT BY 2 DEGREE MIXING DAMPERS SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT. DEMAND CONTROLLED VENTILATION LOOP: CARBON DIOXIDE LEVEL SHALL BE MONITORED TO MODULATE OUTSIDE AIR DAMPERS TO MAINTAIN CARBON DIOXIDE LEVELS AT SETPOINT (500 PPM ABOVE THE OUTDOOR REFERENCE POINT).

ECONOMIZER CONTROL LOOP: OPEN OUTSIDE AIR DAMPER, CLOSE RETURN AIR DAMPER. DURING ECONOMIZER MODE. COOLING IS VIA ECONOMIZER MODE ONLY, DISABLE ECONOMIZER COOLING WHEN OUTSIDE AIR

TEMPERATURES ARE GREATER THAN INDOOR SPACE TEMPERATURE SETPOINT.

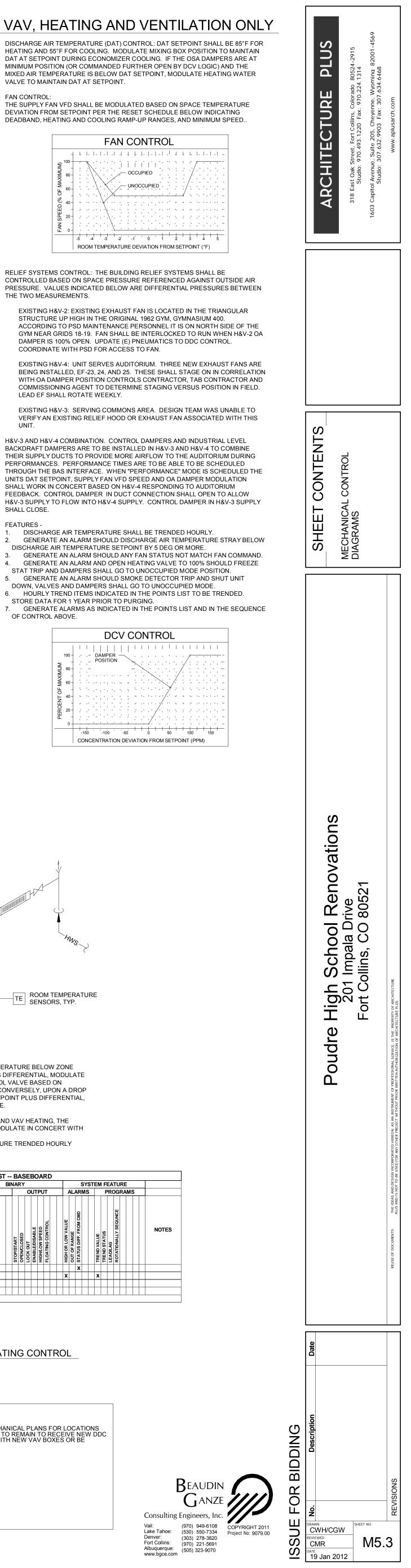
FAN CONTROL - OCCUPIED - UNOCCUPIED

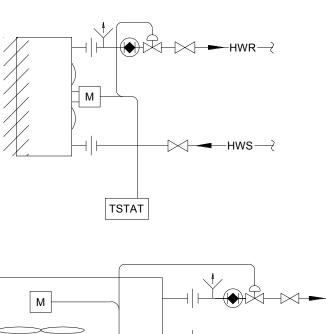
THE TWO MEASUREMENTS.

SHALL CLOSE.

FEATURES -

STORE DATA FOR 1 YEAR PRIOR TO PURGING.





EXHAUST FAN ENABLE/DISABLE

- INSTALL TEMPERATURE SENSOR

SET AT BAS IN RETURN DUCT IN

BSMT MECH ROOM FOR H&V-2, 3,

INSTALL C02 IN RETURN

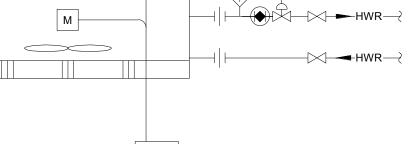
ROOM OF H&V-2, 3, AND 4

DUCT IN BSMT MECH

AND 4

EXHAUST FAN STATUS

EXHAUST FAN ALARM

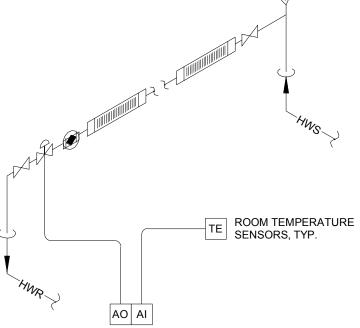


UPON A DROP IN TEMPERATURE BELOW SETPOINT PLUS DIFFERENTIAL, FAN SHALL ENERGIZE AND HEATING WATER CONTROL VALVE SHALL OPEN. CONVERSELY, UPON A RISE IN TEMPERATURE ABOVE SETPOINT PLUS DIFFERENTIAL, FAN SHALL BE DE-ENERGIZED AND HEATING WATER CONTROL VALVE SHALL CLOSE.

TSTAT

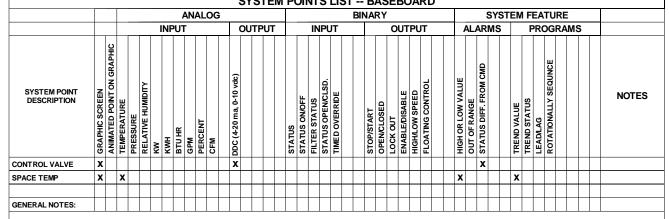
CABINET UNIT HEATERS AND UNIT HEATERS ARE NOT INTENDED TO BE ON

REFER TO EXISTING MECHANICAL PLANS FOR LOCATIONS OF EXISTING UNIT HEATERS TO RECEIVE NEW DDC CONTROL VALVE



UPON A DROP IN SPACE TEMPERATURE BELOW ZONE THERMOSTAT SETPOINT PLUS DIFFERENTIAL, MODULATE OPEN HEATING WATER CONTOL VALVE BASED ON DEVIATION FROM SETPOINT. CONVERSELY, UPON A DROP IN TEMPERATURE BELOW SETPOINT PLUS DIFFERENTIAL,

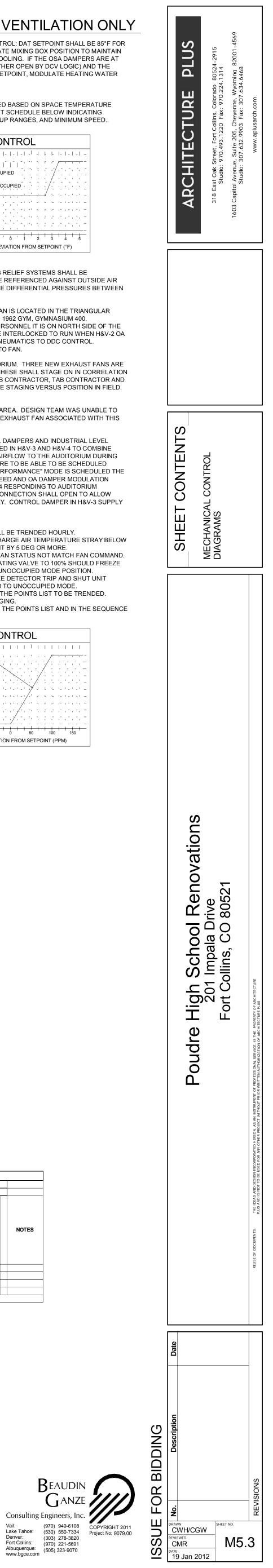
BASEBOARD VALVE SHALL MODULATE IN CONCERT WITH



6 BASEBOARD HEATING CONTROL NONE

OVERVIEW :

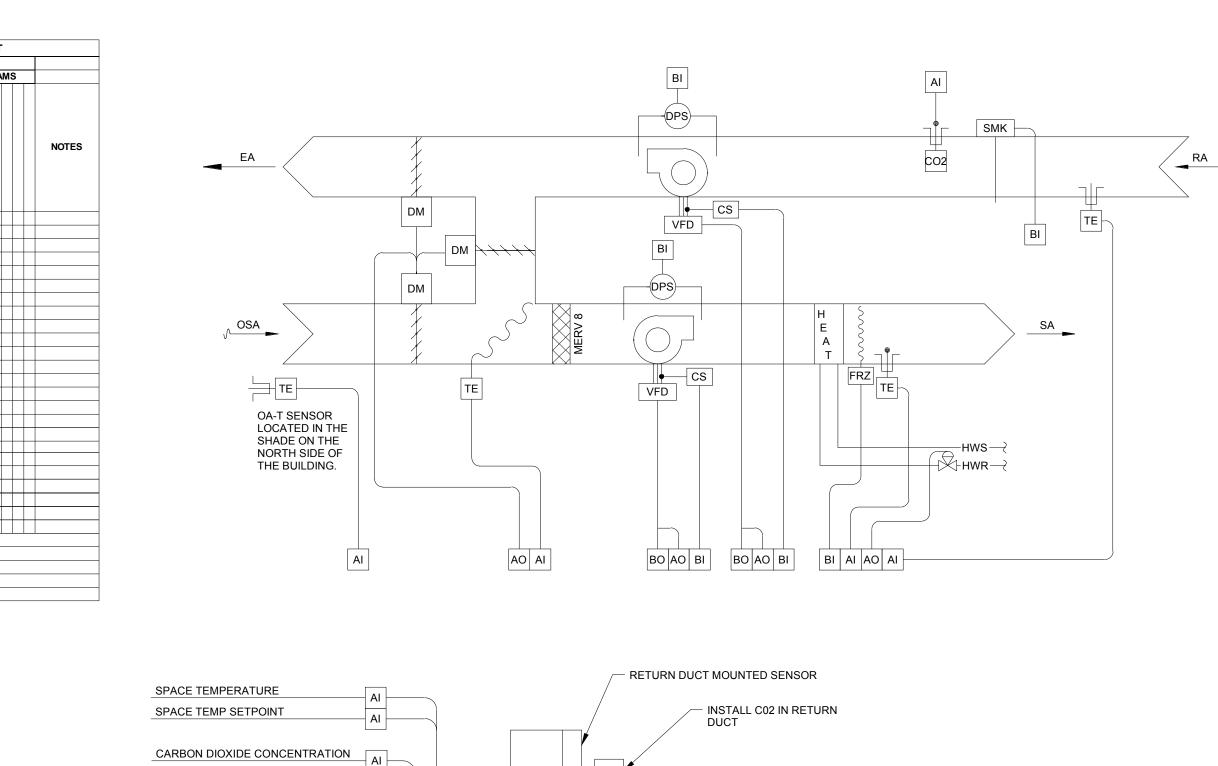
REFER TO EXISTING AND NEW MECHANICAL PLANS FOR LOCATIONS OF EXISTING BASEBOARD HEATERS TO REMAIN TO RECEIVE NEW DDC CONTROL VALVE AND INTERFACE WITH NEW VAV BOXES OR BE STAND ALONE.



CONTROL VALVE SHALL CLOSE. IN ZONES WITH BASEBOARD AND VAV HEATING, THE THE VAV HEATING VALVE. FEATURES-SPACE TEMPERATURE TRENDED HOURLY TEM POINTS LIST -- BASEBOAR

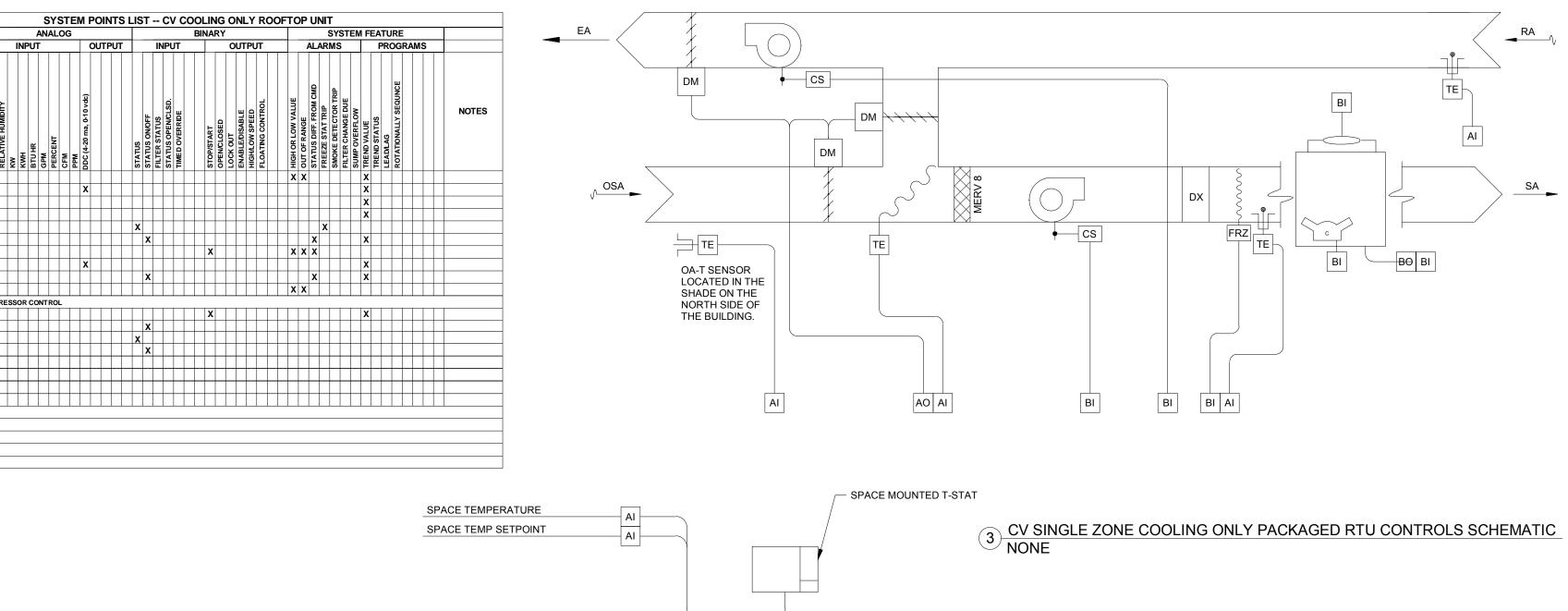
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					IN	PU'	Т				(OUTPUT		_	I	NF	TU				C	TUC	ΡU	Т		_	AL	.AR	RW	s			F	PR	OGF	RAN
SYSTEM POINT DESCRIPTION	GRAPHIC SCREEN		TEMPERATURE		KWH	BTU HR	GPM	PERCENT	CFM	PPM							TIMED OVERRIDE		STOP/START	OPEN/CLOSED	LOCK OUT	ENABLE/DISABLE	HIGH/LOW SPEED	FLOATING CONTROL	HIGH OR LOW VALUE		STATIS DIFF FROM CMD	FREEZE STAT TRIP	SMOKE DETECTOR TRIP	FILTER CHANGE DUE	SUMP OVERFLOW		TREND STATUS	LEAD/LAG	ROTATIONALLY SEQUNCE	
RETURN AIR CO2	X									Х															X							X				
OUTSIDE TEMP	X		х																						X	Х	(X				
MIXING DAMPERS	X	X									Х																					X				
MIXED AIR TEMP	X	,	Х																													X				
RETURN AIR TEMP	X		Х																													X				
HOT WATER VLV	X	,									X																					X				
FREEZESTAT	X	,)	(Х	2							
SUPLY FAN S/S																			X	()	(
SUPPLY FAN VFD	X	,									X																					X				
SUPPLY FAN STATUS	X	X													K)	(X				
RETURN FAN S/S																			X	()	(
RETURN FAN VFD	X										X																					X				
RETURN FAN STATUS	X	X)	K)	(X				
SMOKE DETECTORS	X)	(X	۲ - ۲						
SUPPLY AIR TEMP	X		Х																						X	X	(
SPACE PRESSURE	X	,		X																												X				
SPACE CO2	X									Х															X							X				
SPACE TEMP	X		Х																						X	X	(
SPACE TEMP SETPOINT	X		Х																																	
SUPPLY FAN DP SWITCH		X)	K)	(X				
RETURN FAN DP SWITCH		X													K)	(X				
COOLDOWN ENABLE	X	X																				X														
WARM-UP ENABLE	X	X													_							X														_
GENERAL NOTES:						-															_								-							

		_		_	_
SYSTEM POINT DESCRIPTION	GRAPHIC SCREEN	ANIMATED POINT ON GRAPHIC	TEMPERATURE	PRESSURE	RELATIVE HUMIDITY
OUTSIDE TEMP	Х		Х		
MIXING DAMPERS	Х	X			
MIXED AIR TEMP	Х		Х		
RETURN AIR TEMP	Х		Х		
FREEZESTAT	Х				
SUPPLY FAN STATUS	Х	Х			
SPACE TEMP	Х		Х		
SPACE TEMP SETPOINT	Х		Х		
EXHAUST FAN STATUS	Х	Х			
SUPPLY AIR TEMP	Х		Х		
RTU FACTORY CONTROL/DDC INTERFAC	E F	OR	c	OMF	R
COOLING ENABLE	Х	Х			
COMP #1 STATUS	Х	Х			
COMP#1 ALARM	Х				
COND FAN #1 STATUS	Х	X			
GENERAL NOTES:					





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				INI	PUT		~		TPUT		INPU				JTPU	т					ROGR		_				
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SYSTEM POINT DESCRIPTION	RAPHIC SCREEN	ANIMATED POINT ON GRAPHIC TEMPERATURE	RESSURE ELATIVE HUMIDITY	NHM	TU HR	PM ERCENT	W	DDC (4-20 ma, 0-10 vdc)		ratus Patus on/dee	FILTER STATUS STATUS OPEN/CLSD.	MED OVERRIDE	STOP/START OPE N/CI OSED	DCK OUT	VABLE/DISABLE IGH/LOW SPEED	-OATING CONTROL	IGH OR LOW VALUE	OUT OF RANGE STATUS DIFF. FROM CMD		TREND VALUE TREND STATUS	OTATIONALLY SEQUNCE			NOTES		PROPORTION	R OPTION TO UTILIZE AL ACTUTORS IN LIEU POINT ACTUATORS
SPACE TEMP	ອ X	< F X	<u> </u>	Z Z		0 -	ပ 	ă		i oi	ο III ίο	F	io C			Ē	т Х	0 0		FF- X					_	SHOWN.	
WAMER/COOLER	X	X																									
AIRFLOW	X						x																				
DAMPER OPEN	X															x										SPACE M	OUNTED T-STAT
DAMPER CLOSE																x											RMER/COOLER
VALVE OPEN	X															x										ADJUSTN	1ENT
VALVE CLOSE																x											
DISCHG AIR TEMP	X	X																									
GENERAL NOTES:																											
																									7		



SEQUENCE OF CONTROL: SINGLE ZONE VAV ROOFTOP, HEATING AND VENTILATION ONLY

FAN CONTROL:

DESCRIPTION - THE SYSTEM CONSISTS OF AN AIR HANDLING UNIT COMPLETE WITH MIXING BOX, FILTER SECTION, HOT WATER COIL, SUPPLY FAN WITH VARIABLE FREQUENCY DRIVE AND AN EXHAUST/RETURN FAN WITH VARIABLE FREQUENCY DRIVE.

CONTROL SEQUENCE APPLIES TO NEW RTUS 10 AND 11 AND EXISTING RTU-21. ALL SERVING GYMNASIUM TYPE OCCUPANCIES. SCHEDULING - OCCUPIED/UNOCCUPIED SCHEDULING APPLIES TO THESE SYSTEMS.

SCHEDULES TO BE DETERMINED BY OWNER AND SHALL BE AVAILABLE THROUGH THE OPERATOR WORKSTATION INTERFACE.

SCHEDULING CONTROLS SPACE SETPOINT TEMPERATURE. DURING OCCUPIED MODE. AHU SHALL MAINTAIN SPACE TEMPERATURE AT SETPOINT DICTATED BY SPACE MOUNTED THERMOSTAT (I.E. 68-72°F HEATING, 74-76°F COOLING). DURING UNOCCUPIED MODE, AHU SHALL MAINTAIN SPACE TEMPERATURE AT SETBACK TEMPERATURE SETPOINT (I.E. 60°F HEATING, N/A COOLING UNLESS MORNING COOL-DOWN IS ENABLED, FURTHER DESCRIPTION BELOW)

OCCUPIED/UNOCCUPIED SCHEDULING ALSO CONTROLS VENTILATION. WHEN SCHEDULED IN THE OCCUPIED MODE, SUPPLY FAN SHALL OPERATE AND CONTROLLED DEVICES SHALL POSITION WITH RESPECT TO THEIR PI CONTROL LOOP. WHEN SCHEDULED IN THE UNOCCUPIED MODE, FANS SHALL BE SHUT-OFF, RETURN DAMPER FULL OPEN, RELIEF AND OUTSIDE AIR DAMPERS CLOSED, AND HEATING WATER VALVE SHALL BE 100% OPEN. SUPPLY FAN SHALL BE PERMITTED TO OPERATE ON DEMAND FOR HEATING.

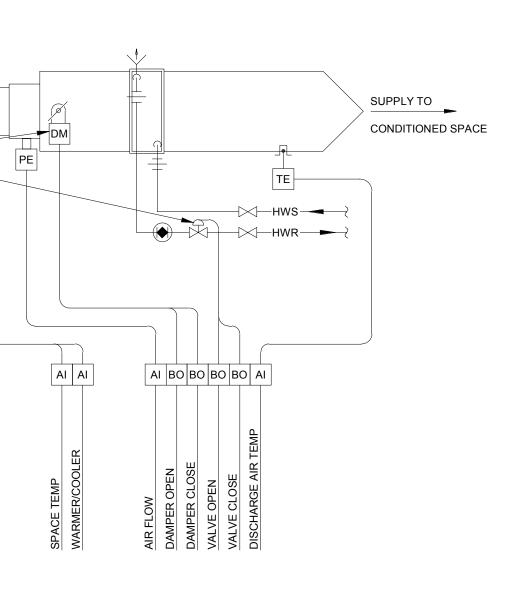
MORNING WARM-UP: SHALL BE SCHEDULED TO OCCUR PRIOR TO OCCUPANCY. PROVIDE ADJUSTABLE DURATION TO PERMIT BUILDING OPERATOR TO TUNE TIME PERIOD REQUIRED TO FULLY EXECUTE WARM-UP EXERCIES PRIOR TO OCCUPANCY. DURING MORNING WARM-UP. SUPPLY FAN VFD SHALL BE AT MAXIMUM SPEED (AS DETERMINED BY BALANCE CONTRACTOR). AIR HANDLING UNIT SHALL SUPPLY 85°F (ADJ) AIR. OSA DAMPER SHALL BE CLOSED, RA DAMPER SHALL BE OPEN. RETURN FAN SHALL AT MINIMUM SPEED. AS ZONE REACHES OCCUPIED SETPOINT, THE AHU HEATING COIL CONTROL VALVE SHALL CLOSE AND THE AHU SUPPLY FAN SPEED SHALL GO TO MINIMUM. MORNING WARM-UP SHALL BE ABLE TO BE DISABLED/ENABLED AT GRAPHICS.

MORNING COOLDOWN: SHALL BE BASED UPON TREND DATA COLLECTED OVER THE PREVIOUS 7 DAYS (ADJ) TO DETERMINE WHETHER OR NOT MORNING COOLDOWN IS WARRANTED. MORNING COOLDOWN SHALL BE DEEMED WARRANTED IF:

1. DEMAND FOR COOLING OCCURRED ON THE MAJORITY OF THE DAYS IN PREVIOUS PERIOD POLLED. 2. -OR- DAILY MAXIMUM OUTSIDE AIR TEMPERATURE EXCEEDED SPACE TEMPERATURE SETPOINT FOR A MAJORITY OF THE DAYS THE IN PREVIOUS PERIOD POLLED. WHEN DEEMED WARRANTED, MORNING COOLDOWN SHALL BE EXECUTED IN LIEU OF MORNING WARM-UP ROUTINE. THE MORNING COOLDOWN ROUTINE SHALL BE SCHEDULED TO OCCUR PRIOR TO OCCUPANCY. PROVIDE ADJUSTABLE DURATION TO PERMIT BUILDING OPERATOR TO TUNE TIME PERIOD REQUIRED TO FULLY EXECUTE COOLDOWN EXERCISE PRIOR TO OCCUPANCY. DURING MORNING COOLDOWN, HEATING WATER VALVE SHALL BE CLOSED AND BCS SHALL MODULATE MIXING BOX POSITION TO ACHIEVE COOLING DISCHARGE AIR TEMPERATURE. SUPPLY FAN SHALL STOP AND OSA DAMPER SHALL SHUT ONCE THE SPACE TEMPERATURE REACHES THE MORNING COOLDOWN SETPOINT (USER ADJ 60°F TO 68°F).

MORNING COOLDOWN SHALL BE ABLE TO BE DISABLED/ENABLED AT GRAPHICS. MIXED AIR CONTROL: MIXING BOX CONTROL IS CONTROLLED BY MULTIPLE CONTROL LOOPS-BAS SHALL HIGH SELECT CONTROL POSITION AMONGST THE FOLLOWING LOOPS:

OCCUPIED/UNOCCUPIED: DAMPER CLOSED DURING UNOCCUPIED AND OPEN TO MINIMUM POSITION DURING OCCUPIED. MINIMUM OUTSIDE AIR POSITIONS SHALL NOT BE LESS THAN 10% OSA DURING OCCUPIED PERIODS.



2 VAV w/ REHEAT (NEW TERMINAL BOX) CONTROLS NONE

MIXED AIR TEMPERATURE CONTROL LOOP: WHEN OUTSIDE AIR TEMPERATURE FALLS BELOW DISCHARGE AIR SETPOINT BY 2 DEGREE, MIXING DAMPERS SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT.

DEMAND CONTROLLED VENTILATION LOOP: CARBON DIOXIDE LEVEL SHALL BE MONITORED TO MODULATE OUTSIDE AIR DAMPERS TO MAINTAIN CARBON DIOXIDE LEVELS AT SETPOINT (500 PPM ABOVE THE OUTDOOR REFERENCE POINT). CO2 RESET SCHEDULE:

OA DAMPER POSITION SHALL BE RESET BASED ON THE FOLLOWING SCHEDULE. 100 PPM ABOVE OA REFERENCE CO2 LEVEL OA DAMPERS SHALL BE AT 10% OPEN. 500 PPM ABOVE OA REFERENCE CO2 LEVEL OA DAMPERS SHALL BE OPEN TO MINIMUM OUTDOOR AIR LISTED IN EQUIPMENT SCHEDULES. CONTROLS CONTRACTOR, TAB CONTRACTOR AND COMMISSIONING AGENT TO VERIFY THIS DAMPER POSITION IN FIELD.

ECONOMIZER CONTROL LOOP: OPEN OUTSIDE AIR DAMPER, CLOSE RETURN AIR DAMPER, AND OPEN RELIEF DAMPER (WHERE APPLICABLE), DURING ECONOMIZER MODE. COOLING IS VIA ECONOMIZER MODE ONLY, DISABLE ECONOMIZER COOLING WHEN OUTSIDE AIR TEMPERATURES ARE GREATER THAN INDOOR SPACE TEMPERATURE SETPOINT.

DISCHARGE AIR TEMPERATURE (DAT) CONTROL: DAT SETPOINT SHALL BE 80°F FOR HEATING AND 55°F FOR COOLING. MODULATE MIXING BOX POSITION TO MAINTAIN DAT AT SETPOINT DURING ECONOMIZER COOLING. IF THE OSA DAMPERS ARE AT MINIMUM POSITION (OR COMMANDED FURTHER OPEN BY DCV LOGIC) AND THE MIXED AIR TEMPERATURE IS BELOW DAT SETPOINT, MODULATE HEATING WATER VALVE TO MAINTAIN DAT AT SETPOINT. EXISTING RTU-21 FACE/BYPASS DAMPER TO HAVE THE BYPASS LOCKED CLOSED.

THE SUPPLY FAN VFD SHALL BE MODULATED BASED ON SPACE TEMPERATURE DEVIATION FROM SETPOINT PER THE RESET SCHEDULE BELOW INDICATING DEADBAND, HEATING AND COOLING RAMP-UP RANGES, AND MINIMUM SPEED.

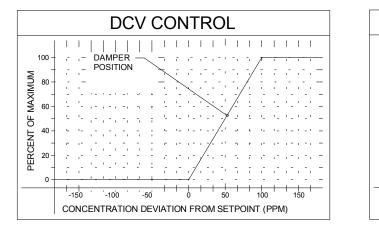
RETURN FAN CONTROL: RETURN FAN SHALL TRACK SUPPLY FAN BY A DIFFERENTIAL TO PROVIDE A SLIGHTLY POSITIVE (0.01-0.05") MIXING BOX PRESSURE. TAB CONTRACTOR, CONTROL CONTRACTOR AND COMMISSIONING AGENT TO CREATE A TRACKING CURVE BASED ON SUPPLY FAN

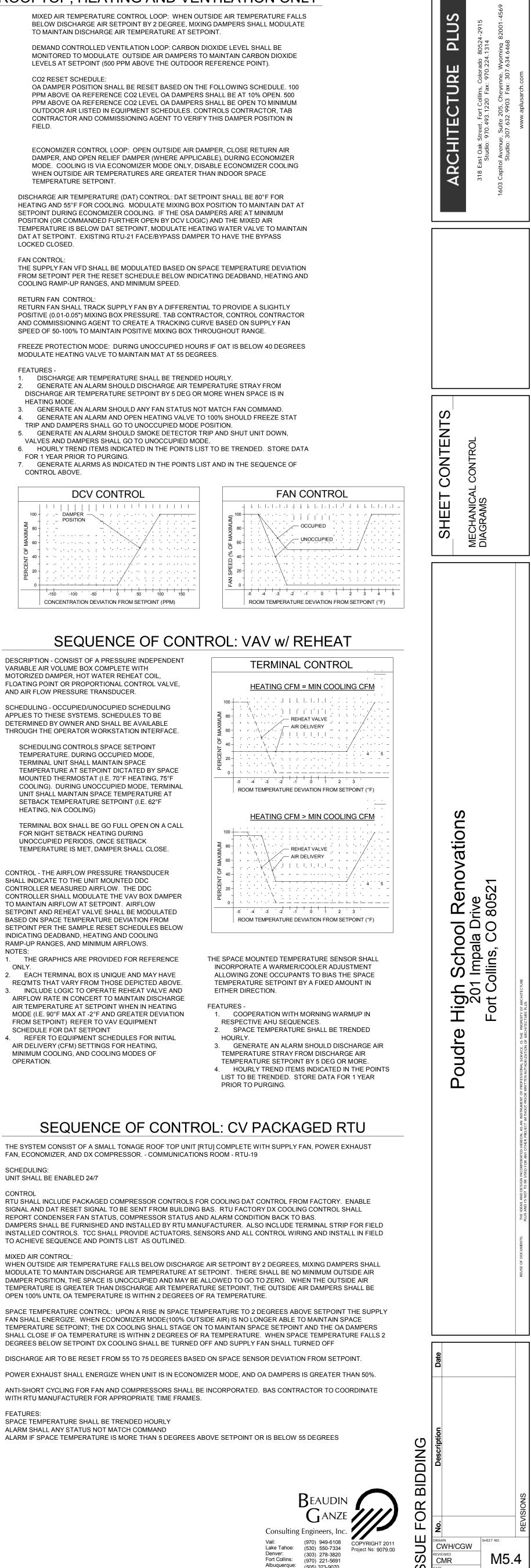
FREEZE PROTECTION MODE: DURING UNOCCUPIED HOURS IF OAT IS BELOW 40 DEGREES MODULATE HEATING VALVE TO MAINTAIN MAT AT 55 DEGREES.

FEATURES -DISCHARGE AIR TEMPERATURE SHALL BE TRENDED HOURLY. GENERATE AN ALARM SHOULD DISCHARGE AIR TEMPERATURE STRAY FROM

DISCHARGE AIR TEMPERATURE SETPOINT BY 5 DEG OR MORE WHEN SPACE IS IN HEATING MODE

- 3. GENERATE AN ALARM SHOULD ANY FAN STATUS NOT MATCH FAN COMMAND. 4. GENERATE AN ALARM AND OPEN HEATING VALVE TO 100% SHOULD FREEZE STAT
- TRIP AND DAMPERS SHALL GO TO UNOCCUPIED MODE POSITION. 5. GENERATE AN ALARM SHOULD SMOKE DETECTOR TRIP AND SHUT UNIT DOWN,
- VALVES AND DAMPERS SHALL GO TO UNOCCUPIED MODE. 6. HOURLY TREND ITEMS INDICATED IN THE POINTS LIST TO BE TRENDED. STORE DATA FOR 1 YEAR PRIOR TO PURGING.
- 7. GENERATE ALARMS AS INDICATED IN THE POINTS LIST AND IN THE SEQUENCE OF CONTROL ABOVE.





SEQUENCE OF CONTROL: VAV w/ REHEAT

DESCRIPTION - CONSIST OF A PRESSURE INDEPENDENT VARIABLE AIR VOLUME BOX COMPLETE WITH MOTORIZED DAMPER, HOT WATER REHEAT COIL, FLOATING POINT OR PROPORTIONAL CONTROL VALVE, AND AIR FLOW PRESSURE TRANSDUCER.

SCHEDULING - OCCUPIED/UNOCUPIED SCHEDULING APPLIES TO THESE SYSTEMS. SCHEDULES TO BE DETERMINED BY OWNER AND SHALL BE AVAILABLE THROUGH THE OPERATOR WORKSTATION INTERFACE.

SCHEDULING CONTROLS SPACE SETPOINT TEMPERATURE. DURING OCCUPIED MODE, TERMINAL UNIT SHALL MAINTAIN SPACE TEMPERATURE AT SETPOINT DICTATED BY SPACE MOUNTED THERMOSTAT (I.E. 70°F HEATING, 75°F COOLING). DURING UNOCCUPIED MODE, TERMINAL UNIT SHALL MAINTAIN SPACE TEMPERATURE AT SETBACK TEMPERATURE SETPOINT (I.E. 62°F HEATING, N/A COOLING)

TERMINAL BOX SHALL BE GO FULL OPEN ON A CALL FOR NIGHT SETBACK HEATING DURING UNOCCUPIED PERIODS, ONCE SETBACK TEMPERATURE IS MET, DAMPER SHALL CLOSE

CONTROL - THE AIRFLOW PRESSURE TRANSDUCER SHALL INDICATE TO THE UNIT MOUNTED DDC CONTROLLER MEASURED AIRFLOW. THE DDC CONTROLLER SHALL MODULATE THE VAV BOX DAMPER TO MAINTAIN AIRFLOW AT SETPOINT. AIRFLOW SETPOINT AND REHEAT VALVE SHALL BE MODULATED BASED ON SPACE TEMPERATURE DEVIATION FROM SETPOINT PER THE SAMPLE RESET SCHEDULES BELOW INDICATING DEADBAND, HEATING AND COOLING RAMP-UP RANGES, AND MINIMUM AIRFLOWS. NOTES: 1. THE GRAPHICS ARE PROVIDED FOR REFERENCE

- ONI Y 2. EACH TERMINAL BOX IS UNIQUE AND MAY HAVE REQ'MTS THAT VARY FROM THOSE DEPICTED ABOVE. 3. INCLUDE LOGIC TO OPERATE REHEAT VALVE AND AIRFLOW RATE IN CONCERT TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT WHEN IN HEATING
- MODE (I.E. 90°F MAX AT -2°F AND GREATER DEVIATION FROM SETPOINT) REFER TO VAV EQUIPMENT SCHEDULE FOR DAT SETPOINT 4. REFER TO EQUIPMENT SCHEDULES FOR INITIAL AIR DELIVERY (CFM) SETTINGS FOR HEATING,

MINIMUM COOLING, AND COOLING MODES OF

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EITHER DIRECTION. FEATURES -

- HOURLY.
- PRIOR TO PURGING.

SEQUENCE OF CONTROL: CV PACKAGED RTU

FAN, ECONOMIZER, AND DX COMPRESSOR. - COMMUNICATIONS ROOM - RTU-19

SCHEDULING: UNIT SHALL BE ENABLED 24/7

OPERATION.

CONTROL RTU SHALL INCLUDE PACKAGED COMPRESSOR CONTROLS FOR COOLING DAT CONTROL FROM FACTORY. ENABLE SIGNAL AND DAT RESET SIGNAL TO BE SENT FROM BUILDING BAS. RTU FACTORY DX COOLING CONTROL SHALL REPORT CONDENSER FAN STATUS, COMPRESSOR STATUS AND ALARM CONDITION BACK TO BAS. DAMPERS SHALL BE FURNISHED AND INSTALLED BY RTU MANUFACTURER. ALSO INCLUDE TERMINAL STRIP FOR FIELD INSTALLED CONTROLS. TCC SHALL PROVIDE ACTUATORS, SENSORS AND ALL CONTROL WIRING AND INSTALL IN FIELD TO ACHIEVE SEQUENCE AND POINTS LIST AS OUTLINED.

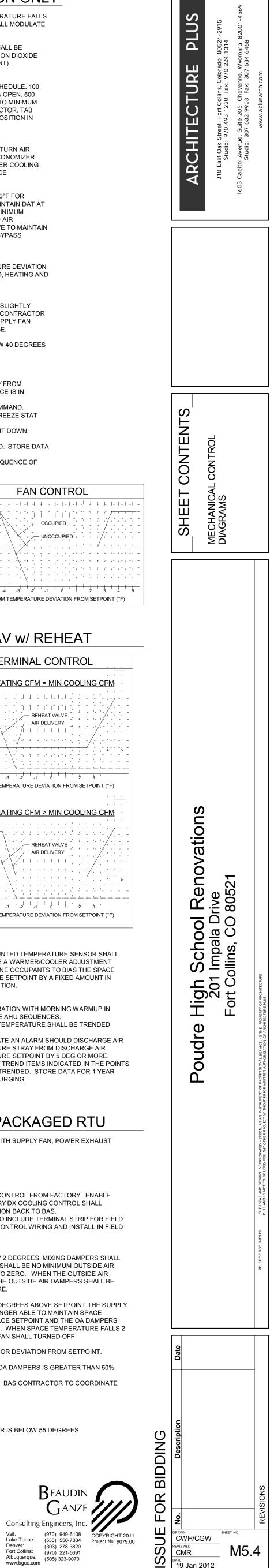
MIXED AIR CONTROL: WHEN OUTSIDE AIR TEMPERATURE FALLS BELOW DISCHARGE AIR SETPOINT BY 2 DEGREES, MIXING DAMPERS SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT. THERE SHALL BE NO MINIMUM OUTSIDE AIR DAMPER POSITION. THE SPACE IS UNOCCUPIED AND MAY BE ALLOWED TO GO TO ZERO. WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN DISCHARGE AIR TEMPERATURE SETPOINT. THE OUTSIDE AIR DAMPERS SHALL BE OPEN 100% UNTIL OA TEMPERATURE IS WITHIN 2 DEGREES OF RA TEMPERATURE.

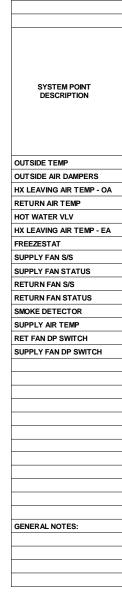
SPACE TEMPERATURE CONTROL: UPON A RISE IN SPACE TEMPERATURE TO 2 DEGREES ABOVE SETPOINT THE SUPPLY FAN SHALL ENERGIZE. WHEN ECONOMIZER MODE(100% OUTSIDE AIR) IS NO LONGER ABLE TO MAINTAIN SPACE TEMPERATURE SETPOINT: THE DX COOLING SHALL STAGE ON TO MAINTAIN SPACE SETPOINT AND THE OA DAMPERS SHALL CLOSE IF OA TEMPERATURE IS WITHIN 2 DEGREES OF RA TEMPERATURE. WHEN SPACE TEMPERATURE FALLS 2 DEGREES BELOW SETPOINT DX COOLING SHALL BE TURNED OFF AND SUPPLY FAN SHALL TURNED OFF DISCHARGE AIR TO BE RESET FROM 55 TO 75 DEGREES BASED ON SPACE SENSOR DEVIATION FROM SETPOINT.

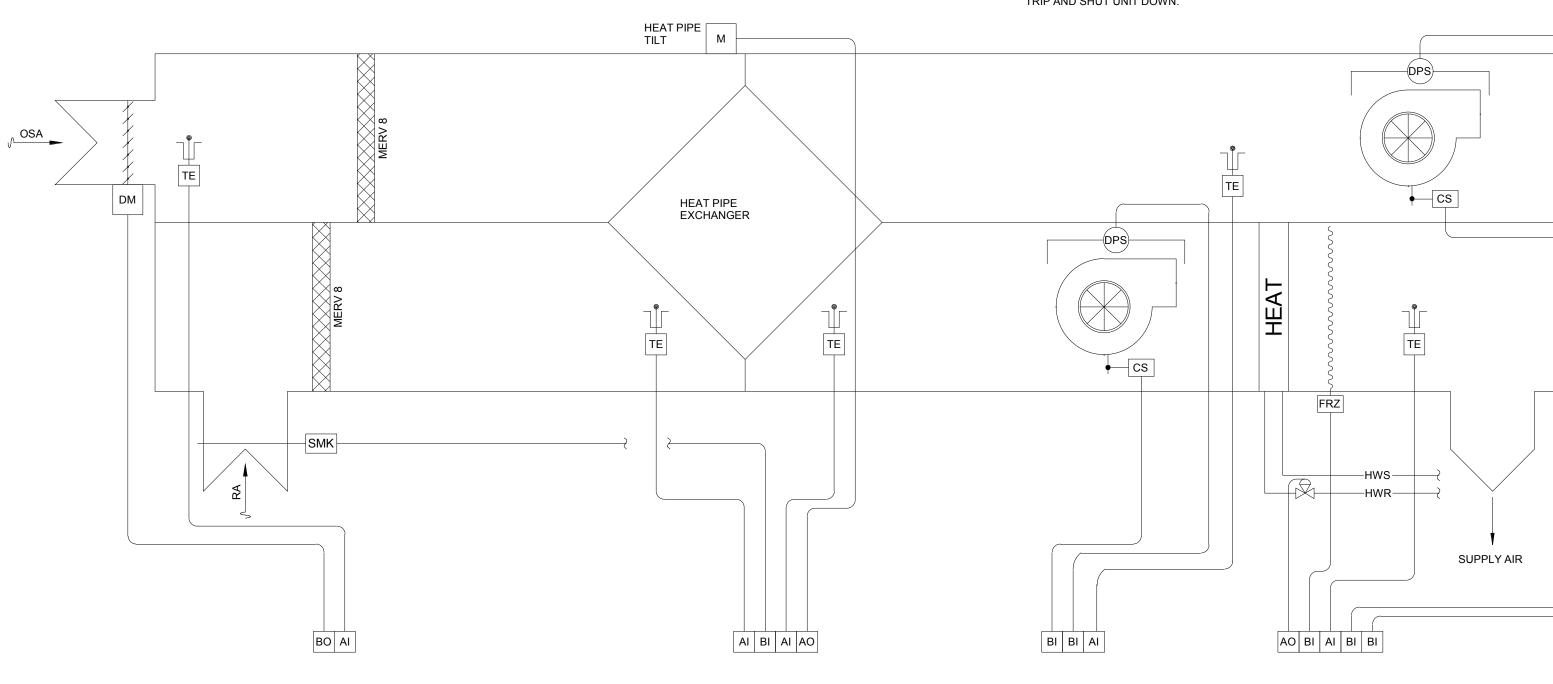
POWER EXHAUST SHALL ENERGIZE WHEN UNIT IS IN ECONOMIZER MODE, AND OA DAMPERS IS GREATER THAN 50%. ANTI-SHORT CYCLING FOR FAN AND COMPRESSORS SHALL BE INCORPORATED. BAS CONTRACTOR TO COORDINATE WITH RTU MANUFACTURER FOR APPROPRIATE TIME FRAMES.

FEATURES: SPACE TEMPERATURE SHALL BE TRENDED HOURLY

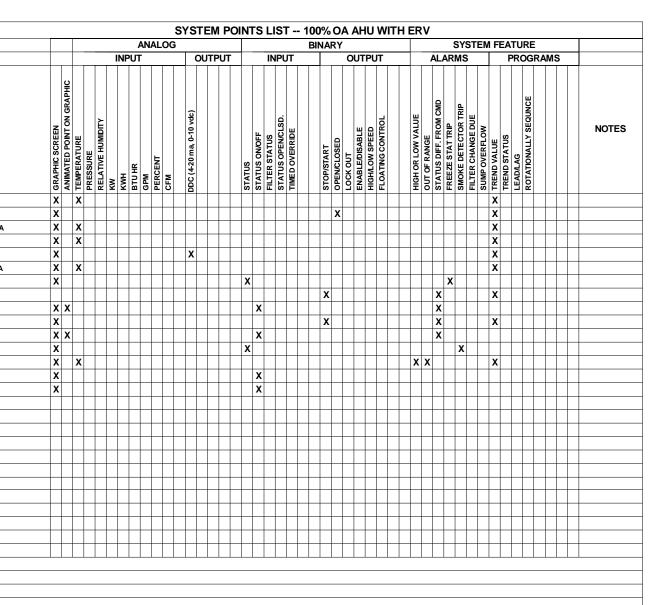
ALARM SHALL ANY STATUS NOT MATCH COMMAND ALARM IF SPACE TEMPERATURE IS MORE THAN 5 DEGREES ABOVE SETPOINT OR IS BELOW 55 DEGREES







SEQUENCE OF CONTROLS:



100% OA INDOOR AIR HANDLING UNIT WITH ENERGY RECOVERY VENTILATOR THE SYSTEM CONSIST OF AN INDOOR AIR HANDLING UNIT COMPLETE WITH SUPPLY FAN, RETURN FAN, ENERGY RECOVERY HEAT PIPE, ECONOMIZER, HYDRONIC HEATING COILS, PRE FILTER AND FINAL FILTER. CONTROLS SHALL BE FIELD INSTALLED BY TCC, WITH THE EXCEPTION OF ERV MANUFACTURER PROVIDED FACTORY HEAT PIPE CONTROLLER. ERV MANUFACTURER SHALL PROVIDE AN INTERFACE TO TEMPERATURE CONTROLS CONTROL CONTRACTOR TO ALLOW FULL COMMUNICATION OF POINTS BETWEENHEAT PIPE CONTROLLER AND BAS. COORDINATION BETWEEN TEMPERATURE CONTROLS CONTRACTOR AND ERV MANUFACTURER IS IMPERATIVE.

SCHEDULING: SCHEDULING SHALL BE PER OWNER.

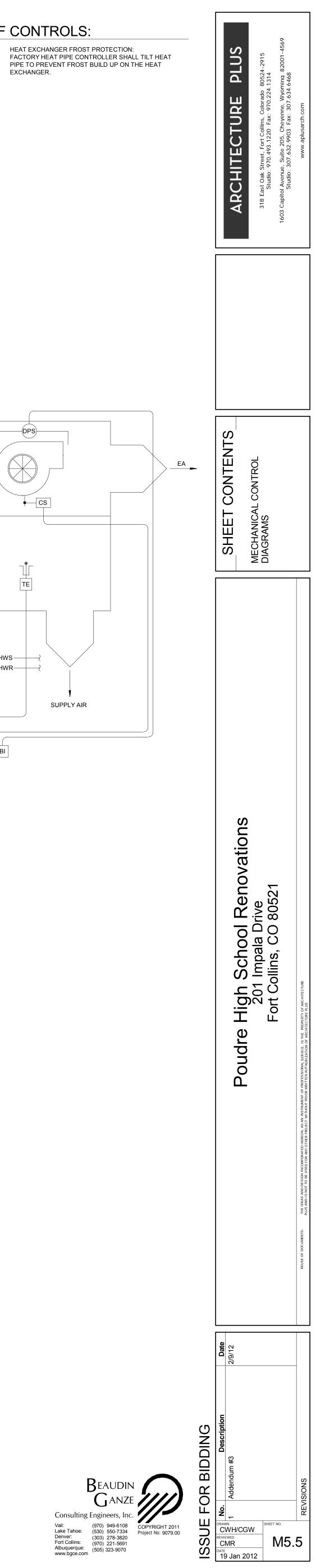
DISCHARGE AIR CONTROL: DISCHARGE AIR TEMPERATURE IS TO BE MAINTAINED AT SETPOINT BY TILTING THE HEAT PIPE AND MODULATING THE HOT WATER CONTROL VALVE. DISCHARGE AIR SETPOINT SHALL VARY BASED ON POLLING OF THE REHEAT COIL ZONES SERVED BY THIS UNIT. IF MAJORITY OF ZONES ARE ABOVE SETPOINT DAT SHALL BE 60 DEGREES (ADJUSTABLE), AS MAJORITY OF ZONES REACH SETPOINT THE DAT RESET UP TO 70 DEGREES (ADJUSTABLE). IF MAJORITY OF ZONES ARE BELOW SETPOINT, DAT SHALL BE 85 DEGREES (ADJUSTABLE), AS MAJORITY OF ZONES REACH SETPOINT DAT SHALL RESET DOWN TO 75 DEGREES (ADJUSTABLE). BAS SHALL SEND FACTORY HEAT PIPE CONTROLLER DAT RESET SIGNAL.

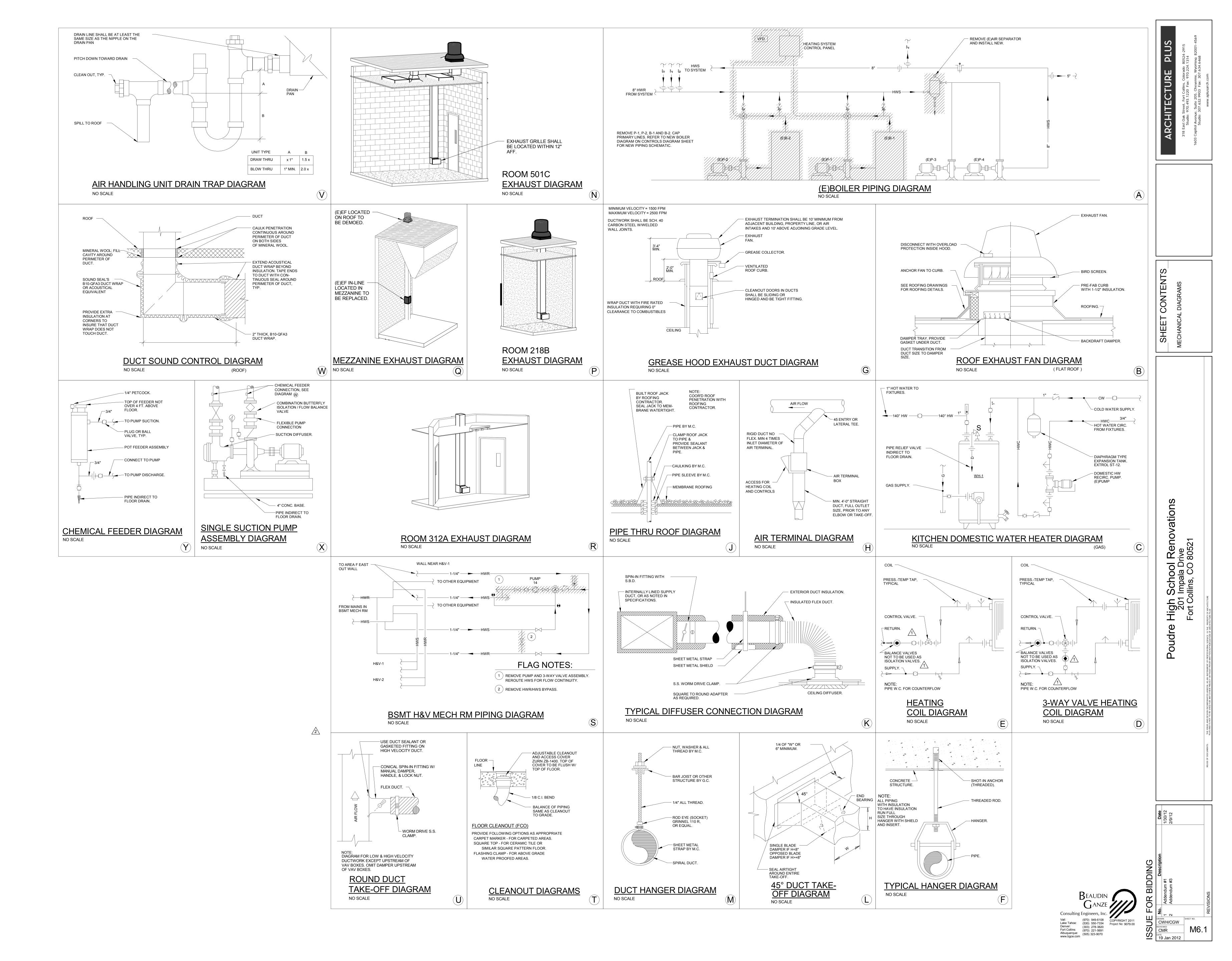
FEATURES: GENERATE AN ALARM SHOULD DISCHARGE AIR TEMPERATURE STRAY BELOW DISCHARGE AIR TEMPERATURE SETPOINT BY 10 DEG OR MORE. GENERATE AN ALARM SHOULD FAN STATUS NOT MATCH FAN COMMAND. GENERATE AN ALARM AND OPEN HEATING VALVE TO 100% SHOULD FREEZE STAT TRIP. GENERATE AN ALARM SHOULD SMOKE DETECTOR TRIP AND SHUT UNIT DOWN.

1 100% OA AHU WITH ENERGY RECOVERY VENTILATOR NONE

> THIS SHEET ADDED IN ITS ENTIRETY.

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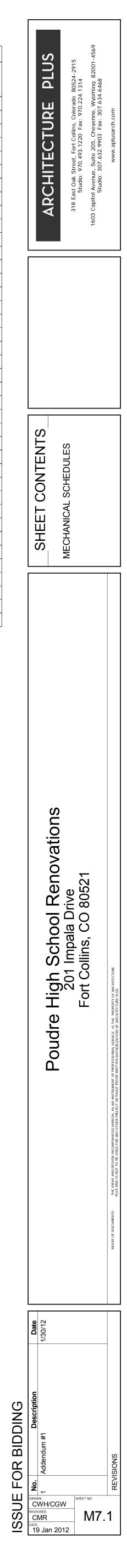




BAA DY	LOCATION/	INLET DIA.	MAX.	MIN.	MAX. HEATING		AIR CONDITIONS	V BOX SO	HEATING	COIL	ATER CONDITI	ONS			Accessories	DEMAN		LOC
MARK	TYPE	(IN.)	COOLING CFM	COOLING CFM	HEATING CFM	E.A.T. DB (°F)	L.A.T. DB (°F)	SENSIBLE MBH	E.W.T. (°F)	L.W.T. (°F)	GPM	PD	ROWS	MANUFACTURER	ACCESSORIES	REMARKS	MARK	1
1-1	Classroom	8	800	400	800	55 55	95 95	28.5 28.5	140 140	120.7 120.7	3.2 3.2	2.1	3	KRUEGER LMHS			13-1 13-2	Clas
1-3	Classroom	14	1400	700	1400	55	95	49.8	140	101.8	3.0	1.3	3	KRUEGER LMHS			13-3	0
1-4	Classroom	10 14	800	400	800	55 55	97 95	29.9 49.8	140 140	103.9 101.8	2.0 3.0	1.9	4	KRUEGER LMHS			13-4	Co
1-6	Classroom	10	900	450	900	55	95	32.0	140	114.7	3.0	1.3	3	KRUEGER LMHS			13-6	Aud
1-7	Office Classroom	14 10	1400 860	700 430	1400 860	55 55	95 95	49.8 30.6	140 140	101.8 113.6	3.0 2.6	1.3	3	KRUEGER LMHS			13-7 13-8	Co
1-9	Classroom	14	1500	750	1500	55	96	54.7	140	95.1	2.8	0.8	4	KRUEGER LMHS			13-9	Dar
1-10	Classroom Computer Lab	8	600 1455	300 730	300 730	55 55	92 86	9.9 20.1	140 140	111.7 101.4	0.8	0.3	2	KRUEGER LMHS			13-10	Clas
1-12	Computer Lab	12	1455	730	730	55	86	20.1	140	101.4	1.2	0.4	2	KRUEGER LMHS			14-2	Li
1-13	Classroom	10 14	850 1500	425 750	850 1500	55 55	95 96	30.3 54.7	140 140	113.4 95.1	2.6 2.8	1.1 0.8	3	KRUEGER LMHS			14-3	Li
1-15	Classroom	10	860	430	860	55	95	30.6	140	113.6	2.6	1.1	3	KRUEGER LMHS			14-5	Li
1-16	Classroom	14 10	1500 900	750 450	1500 900	55 55	96 95	54.7 32.0	140 140	95.1 114.7	2.8 3.0	0.8	4	KRUEGER LMHS			14-6	Li
1-18	Classroom	10	800	400	800	55	97	29.9	140	103.9	2.0	1.9	3	KRUEGER LMHS			14-8	Corr
1-19 1-20	Classroom	10 6	800	400	800	55 55	97 95	29.9 10.7	140 140	103.9 125.3	2.0 1.7	1.9 0.7	3	KRUEGER LMHS			15-1 15-2	
1-21	Office	6	425	212.5	425	55	95	15.1	140	112.3	1.2	0.7	3	KRUEGER LMHS			15-3	C
1-22 2-1	Classroom	14 8	1500 900	750 450	1500 450	55 55	96 85	54.7 12.0	140 140	95.1 108.2	2.8 0.9	0.8	4	KRUEGER LMHS			15-4	c
2-2	Classroom	8	900	450	450	55	85	12.0	140	108.2	0.9	0.3	2	KRUEGER LMHS			15-6	C
2-3 2-4	Classroom	10 12	1300 1500	650 750	650 750	55 55	90 86	20.2 20.7	140 140	117 101	2.0	0.8	2	KRUEGER LMHS			15-7 15-8	0
2-5	Classroom	4	210	105	105	55	95	3.7	140	130.6	0.9	0.5	1	KRUEGER LMHS			15-9	С
2-6 2-7	Classroom	12 8	1500 900	750 450	750 450	55 55	86 85	20.7	140 140	101 108.2	1.2 0.9	0.4	2	KRUEGER LMHS			15-10	C
4-1	Classroom	10	800	400	800	55	97	29.9	140	103.9	2.0	1.9	3	KRUEGER LMHS			15-12	C
4-2 4-3	Classroom	14 10	1400 800	700	1400 800	55 55	95 97	49.8 29.9	140 140	101.8 103.9	3.0 2.0	1.3	3	KRUEGER LMHS			15-13	C
4-4	Classroom	14	1400	700	1400	55	95	49.8	140	101.8	3.0	1.3	3	KRUEGER LMHS			15-15	C
4-5 4-6	Classroom Office	8	615 480	310 240	310 240	55 55	95 92	7.9	140 140	116.6 117.3	1.1 0.8	0.4	2	KRUEGER LMHS			17-1	Clas
4-7	Office	8	735	370	370	55	88	10.9	140	109.1	0.8	0.3	2	KRUEGER LMHS			17-3	C
4-8 4-9	Classroom	10 10	800	400	800 800	55 55	97 97	29.9 29.9	140 140	112 103.9	2.0 2.0	1.9	3	KRUEGER LMHS			17-4	Clas
4-10	Classroom	10	800	400	800	55	97	29.9	140	103.9	2.0	1.9	3	KRUEGER LMHS				
4-11	Classroom	14 10	1400 850	700	1400 850	55 55	95 95	49.8 30.3	140 140	101.8 113.4	3.0 2.6	1.3	3	KRUEGER LMHS				
4-13	Classroom	14	1500	750	1500	55	96	54.7	140	95.1	2.8	0.8	4	KRUEGER LMHS			$\underline{1}$	
4-14	Office Classroom	6	475 680	245 340	245 510	55 55	95 95	8.7 18.2	140 140	121.2 111.7	1.1 1.5	0.3	2	KRUEGER LMHS			<u> </u>	
4-16	Classroom	10	800	400	800	55	97	29.9	140	103.9	2.0	1.9	3	KRUEGER LMHS				
5-1	Copy Room Classroom	8	780 1100	390 550	390 1100	55 55	95 95	13.9 39.2	140 140	121.9 107.5	1.8 2.7	1.1	2	KRUEGER LMHS				
5-3	Classroom	12	1100	550	1100	55	95	39.2	140	107.5	2.7	1.5	3	KRUEGER LMHS				
5-4	Classroom	12 12	1100	550 550	1100	55 55	95 95	39.2 39.2	140 140	107.5 107.5	2.7 2.7	1.5	3	KRUEGER LMHS				
5-6	Classroom	12	1100	550	1100	55	95	39.2	140	107.5	2.7	1.5	3	KRUEGER LMHS				
6-1	Stacks Stacks	10 6	800 400	400 200	800 400	55 55	97 95	29.9 14.2	140 140	103.9 111	2.0 1.1	1.9 0.5	3	KRUEGER LMHS				
6-3	Office	10	800	400	800	55	97	29.9	140	103.9	2.0	1.9	3	KRUEGER LMHS				
6-4	Office Classroom	6	300 460	150 230	300 460	55 55	95 90	10.7 14.3	140 140	125.3 127	1.7 2.5	0.7	2	KRUEGER LMHS		3-WAY VALVE		
6-6	Office	16	2100	1050	2100	55	94	72.9	140	98.3	4.0	0.8	4	KRUEGER LMHS				
8-1	Classroom	14 16	1400 2000	700	1400 2000	55 55	95 96	49.8 73.0	140 140	101.8 99	3.0 4.0	1.3 0.8	3	KRUEGER LMHS		3-WAY VALVE		
8-3	Music Room	14	1500	750	1500	55	96	54.7	140	95.1	2.8	0.8	4	KRUEGER LMHS				
8-4 8-5	Music Room Office	12 6	1200 550	600 275	1200 550	55 55	95 95	42.7 19.6	140 140	109.7 118.6	3.2 2.1	1.9 1.7	3	KRUEGER LMHS				
8-6	Office Classroom	4	150 800	75 400	150 800	55 55	90 97	4.7 29.9	140 140	133.5 103.9	1.6 2.0	1.4	1	KRUEGER LMHS				
8-8	Auditorium Stage	22	2000	1000	1125	55	80	25.0	140	103.5	1.5	0.4	1	KRUEGER LMHS				
8-9 8-10	Storage Classroom	8	650 550	325 275	325 550	55 55	95 95	11.6 19.6	140	117.7 118.6	1.2 2.1	0.5	2	KRUEGER LMHS				
8-11	Music Room	12	1720	860	860	55	90	26.8	140	112	2.2	1.1	2	KRUEGER LMHS				
9-1 9-2	Classroom	16 14	2225 1770	1115 885	2225 1770	55 55	93 95	75.2 63.0	140 140	97.4 96.5	4.0 3.3	0.8	4	KRUEGER LMHS		3-WAY VALVE		
9-3	Classroom	10	750	375	375	55	85	10.0	140	132.7	3.1	1.8	1	KRUEGER LMHS				
9-4 9-5	Classroom Offices	8	740 350	370	740	55 55	95 90	26.3 5.5	140 140	120.2 127.4	3.0 1.0	1.9 0.8	3	KRUEGER LMHS				
9-6	Classroom	10	860	430	860	55	95	30.6	140	113.6	2.6	1.1	3	KRUEGER LMHS				
9-7 9-8	Wood Shop Wood Shop	12 22	1050 2350	525 1175	1050 2350	55 55	95 98	37.4 89.9	140 140	106.3 89	2.5 4.0	1.3 0.8	3	KRUEGER LMHS				
9-9	Classroom	8	675	340	340	55	95	12.1	140	118.7	1.3	0.6	2	KRUEGER LMHS				
12-1	Classroom	12 12	1200 1200	600 600	1200 1200	55 55	95 95	42.7 42.7	140 140	109.7 109.7	3.2 3.2	1.9 1.9	3	KRUEGER LMHS				
12-3	Classroom	14	1660	830	1660	55	95	59.1	140	95.2	3.0	0.9	4	KRUEGER LMHS				
12-4	Classroom	12 8	1350 670	675 335	1350 670	55 55	95 95	48.1 23.9	140 140	99.7 117.8	2.7 2.5	1.3	4	KRUEGER LMHS				
12-6	Classroom	8	670	335	670	55	95	23.9	140	117.8	2.5	1.3	3	KRUEGER LMHS				
12-7 12-8	Classroom Classroom	6	550 550	275 275	550 550	55 55	95 95	19.6 19.6	140 140	118.6 118.6	2.1 2.1	1.7 1.7	3	KRUEGER LMHS				
12-9	Classroom	10	1000	500	1000	55	95	35.6	140	105.3	2.3	0.8	4	KRUEGER LMHS				
12-10 12-11	Classroom Classroom	10 10	1000 850	500 425	1000 850	55 55	95 95	35.6 30.3	140 140	105.3 113.4	2.3 2.6	0.8	4	KRUEGER LMHS				
12-11	Classroom	10	850	425	850	55	95	30.3	140	113.4	2.6	1.1	3	KRUEGER LMHS				
12-13 12-14	Classroom Classroom	10 10	1000	500 500	1000	55 55	95 95	35.6 35.6	140 140	105.3 105.3	2.3 2.3	0.8 0.8	4	KRUEGER LMHS				
12-14	Office	8	620	310	310	55	95	11.0	140	116.6	1.1	0.8	2	KRUEGER LMHS				
12-16 12-17	Office Corridor	6 10	270 1000	135 500	70	55 55	95 95	2.5 35.6	140 140	120 105.3	1.3 2.3	0.5 0.8	2	KRUEGER LMHS				
12-17	Storage	6	175	175	175	55	95	6.9	140	105.3	0.8	0.8	2	KRUEGER LMHS				
12-19	Classroom	14	1600	800	1600 490	55 55	95 95	57.0 17.4	140 140	94.4 127.5	2.9	0.8	4	KRUEGER LMHS				
12-20	Classroom	8	650	325	21411	1			1/111	1 1 1 1 1	1	3.1	2					

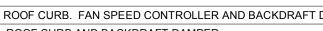
	VAV BOX SCHEDULE														
MAX MIN MAX HEATING COIL															
LOCATION/ TYPE	INLET DIA. (IN.)	COOLING	COOLING	HEATING	E.A.T.	SENSIBLE	WATER CONDITION ENSIBLE E.W.T. L.W.T. CDM					MANUFACTURER	ACCESSORIES	REMARKS	
<u></u>	(114.)	CFM	CFM	CFM	DB (°F)	L.A.T. DB (°F)	MBH	(°F)	(°F)	GPM	PD	ROWS			
Classroom	4	200	100	100	55	95	3.6	140	129.1	0.7	0.4	1	KRUEGER LMHS		
Computer Lab	8	760	380	380	55	87	10.8	140	108.8	0.8	0.3	2	KRUEGER LMHS		
Office	6	350	175	175	55	85	4.7	140	129.5	1.0	0.6	1	KRUEGER LMHS		
Office	6	300	150	150	55	85	4.0	140	124.6	0.6	0.2	1	KRUEGER LMHS		
Corridor	4	200	100	100	55	95	3.6	140	110	0.2	0.1	4	KRUEGER LMHS		
Auditorium	14	2730	1365	1365	55	85	36.4	140	103.1	2.2	0.8	2	KRUEGER LMHS		
Corridor	4	200	100	150	55	103	6.4	140	122	0.8	0.2	2	KRUEGER LMHS		
Classroom	8	825	415	415	55	95	14.8	140	123.4	2.0	1.4	2	KRUEGER LMHS		
Darkroom	8	600	300	300	55	95	10.7	140	115.9	1.0	0.4	2	KRUEGER LMHS		
Classroom	14	1750	875	1600	55	95	57.0	140	94.4	2.9	0.8	4	KRUEGER LMHS		
Library	22	2800	1400	2800	55	86	77.3	140	85.4	3.2	0.6	3	KRUEGER LMHS		
Library	22	2600	1300	2600	55	88	76.4	140	86.5	3.2	0.6	3	KRUEGER LMHS		
Library	22	2600	1300	2600	55	88	76.4	140	86.5	3.2	0.6	3	KRUEGER LMHS		
Library	14	2100	1050	2100	55	85	56.1	140	94	2.8	1.2	3	KRUEGER LMHS		
Library	12	1500	750	1500	55	85	40.1	140	97.6	2.2	1.0	3	KRUEGER LMHS		
Library	6	400	200	400	55	95	14.2	140	110	0.9	2.9	3	KRUEGER LMHS		
Corridor S	22	4000	2000	4000	55	85	106.8	140	80.2	4.0	0.8	4	KRUEGER LMHS		
Corridor W	22	2000	1000	2000	55	95	71.2	140	110	4.0	2.9	3	KRUEGER LMHS		
Office	4	150	75	115	55	95	4.1	140	133.4	1.4	1.1	1	KRUEGER LMHS		
Office	8	200	100	150	55	95	5.3	140	131.3	1.4	1.5	1	KRUEGER LMHS		
Office	6	260	130	195	55	97	7.3	140	119.4	0.8	0.2	2	KRUEGER LMHS		
Office	4	100	50	100	55	95	3.6	140	129.1	0.7	0.4	1	KRUEGER LMHS		
Office	4	110	55	85	55	95	3.0	140	124.2	0.4	0.1	1	KRUEGER LMHS		
Office	4	150	75	115	55	95	4.1	140	133.4	1.4	1.1	1	KRUEGER LMHS		
Office	12	1100	550	1100	55	95	39.2	140	107.5	2.7	12.5	3	KRUEGER LMHS		
Office	4	250	125	250	55	95	8.9	140	121.6	1.1	0.3	2	KRUEGER LMHS		
Office	8	550	275	550	55	95	19.6	140	118.6	2.1	1.7	3	KRUEGER LMHS		3-WAY VALVE
Office	22	2200	1100	2200	55	91	70.5	140	89.3	3.2	0.6	3	KRUEGER LMHS		3-WAY VALVE
Office	8	900	450	450	55	95	16.0	140	125.4	25	2.0	2	KRUEGER LMHS		
Office	8	700	350	700	55	95	24.9	140	118.8	2.7	1.5	3	KRUEGER LMHS		
Office	10	850	425	850	55	95	30.3	140	113.4	2.6	1.1	3	KRUEGER LMHS		
Office	10	830	415	830	55	95	29.5	140	112.8	2.5	1.0	3	KRUEGER LMHS		
Office	8	600	300	300	55	95	10.7	140	115.9	1.0	0.4	2	KRUEGER LMHS		
Classroom	14	1600	800	1600	55	95	57.0	140	94.4	2.9	0.8	4	KRUEGER LMHS		3-WAY VALVE
Office	10	1000	500	1000	55	95	35.6	140	105.3	2.3	0.8	4	KRUEGER LMHS		
Office	6	260	130	195	55	97	7.3	140	119.4	0.8	0.2	1	KRUEGER LMHS		
Classroom	10	950	475	950	55	95	33.8	140	116	3.2	1.5	3	KRUEGER LMHS		
Office	6	500	250	500	55	95	17.8	140	116.2	1.7	1.2	3	KRUEGER LMHS		

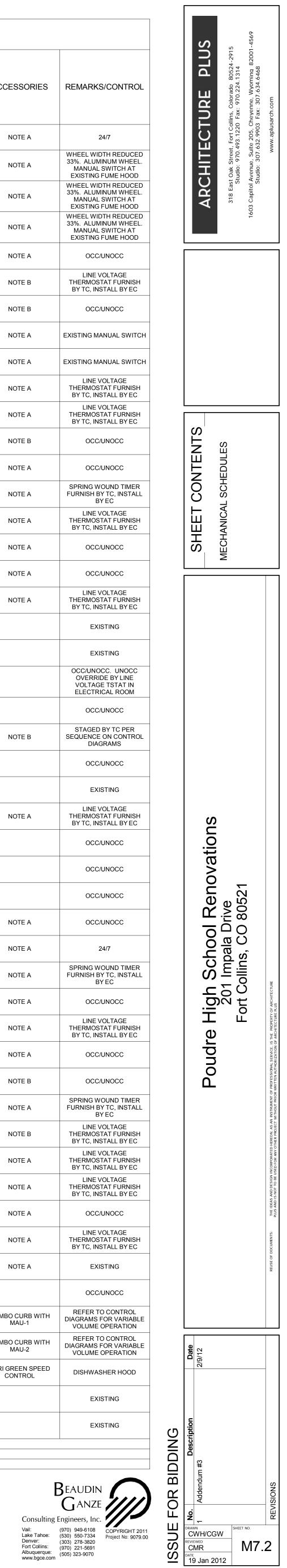




YMBOL	USE	PATTERN	FINISH	MANUFACTURER* & MODEL #	ACCESSORIES	REMARKS
A	SUPPLY 24x24	ADJ.	WHITE	TITUS TMSA 24x24	-	REFER TO DWGS FOR NECK SIZE
B	RETURN	FIXED	WHITE	TITUS PAR	-	-
$\langle \mathbf{C} \rangle$	EXHAUST	FIXED	WHITE	TITUS 350	-	REFER TO DWGS FOR GRILLE SIZE
$\langle D \rangle$	SUPPLY	FIXED	WHITE	TITUS 300	-	REFER TO DWGS FOR GRILLE SIZE
(E)			EXISTING GRI	LLE, TO BE REUSED. BAL	ANCE TO CFM NOTED ON DWGS.	
F	SUPPLY 12x12	ADJ.	WHITE	TITUS TMSA 12x12	-	REFER TO DWGS FOR NECK SIZE
G	COMBUSTION AIR	ADJUSTABLE	PER ARCHITECT	RUSKIN ELM6375DX	24 VOLT CONTROL DAMPER, 1" GLAZING FIN TO MATE WITH NEW WINDOW SYSTEM	
$\langle H \rangle$	EXHAUST	FIXED	PER ARCHITECT	RUSKIN ELF375DX		FIELD VERIFY DIMENSION IN FIELD PRIOR TO ORDERING
$\langle 1 \rangle$	SUPPLY	ADJUSTABLE	WHITE	TITUS XC310	FIELD VERIFY DUCT CONNECTION TO (E) DIFFUSER PRIOR TO ORDERING. COORDINATE WITH ENGINEER	NEW AUDITORIUM DIFFUSER

					EXH	AUST	FAN SCH	HEDULE					
							FAN		MO	TOR	_		
DR	MARK	TYPE	SERVICE	SONES	CFM	RPM	ES @ S.L. (IN WC)	© ALT (IN WC)	HP (WATT)	VOLT/ PHASE	MANUFACTURER & MODEL #	ACCESSORIES	RE
	EF-1	DOWNBLAST	STORAGE - 312A	4.3	210	1018	0.4	0.4	1/8	120/1	COOK 100C15DH	NOTE A	
DR -	EF-2	UTILITY SET	CHEM. LAB - 312		720	1992	1.2	1	1/2	120/1	COOK 120CF	NOTE A	WF 339
DR	EF-3	UTILITY SET	CHEM. LAB - 314		720	1992	1.2	1	1/2	120/1	COOK 120CF	NOTE A	E WF 339
	EF-4	UTILITY SET	PREP - 311		720	1992	1.2	1	1/2	120/1	COOK 120CF	NOTE A	E WF 339
DR -				40.0									E
_	EF-5 EF-6	DOWNBLAST	RR - 300Q, 300S & C1	5.3	450	910	0.6	0.5	1/8	120/1	COOK 100C15DH COOK 135C2B	NOTE A	
ON IN RING	EF-0 EF-7	DOWNBLAST	ELECTRICAL - 304 RR - 14 & 15	8.5	1,000	1144	0.4	0.3	1/6	120/1	COOK 135C2B	NOTE B	E
USER	EF-7 EF-8	DOWNBLAST	ROOM - 303A	6.3	350	1318	0.6	0.5	1/6	120/1	COOK 90C15DH	NOTE A	EXIS
	EF-9	DOWNBLAST	DARK ROOM - 303C	4.5	850	855	0.4	0.3	1/6	120/1	COOK 35C10D	NOTE A	EXI
	EF-9 EF-10			9.6	400								T
_	EF-10 EF-11	DOWNBLAST	ELECTRICAL - C2	6.0	750	1469	0.6	0.5	1/8	120/1	COOK 100C15DH	NOTE A	B TH
_	EF-11	DOWNBLAST	RR - 6, 7 & 8	7.6	1,050	1091	0.5	0.4	1/4	120/1	COOK 120C15D COOK 135C2B	NOTE A	E
_													
-	EF-13	DOWNBLAST	RR - 4, 5 & C9	8.0	900	1256	0.6	0.5	1/4	120/1	COOK 120C13D	NOTE A	SI
-	EF-14 EF-15	DOWNBLAST	TEACHER WORK - 202			1715	0.4	0.3	1/8	120/1		NOTE A	FU
-		DOWNBLAST	ELECTRICAL - 202A	8.2	500	1521	0.4	0.3	1/8	120/1	COOK 90C15DH	NOTE A	E
-	EF-16	DOWNBLAST	RR - 9 & 10	4.4	675	964	0.4	0.3	1/4	120/1	COOK 120C13D	NOTE A	
-	EF-17	DOWNBLAST	RR - 11 & 12 ELEV EQUIP & STORAGE -	3.8	150	980	0.4	0.3	1/8	120/1	COOK 100C15DH	NOTE A	
-	EF-18	DOWNBLAST	205C & 205A	10.3	650	1514	0.4	0.3	1/8	120/1	COOK 100C15DH	NOTE A	E
-	EF-19	EXISTING	2D STUDIO - 502				FAN TO REMAIN. F						
-	EF-20	EXISTING	2D/3D STUDIO - 503		EXISTI	NG EXHAUST	FAN TO REMAIN. F	RELABEL WITH NE	W NUMBER IN FI	ELD AND ON COI	NTROL GRAPHICS		С
_	EF-21	WALL MOUNTED	CLOSET & RR - 100A & RR3	8.8	525	1556	0.6	0.5	1/6	120/1	COOK 100W2B		
-	EF-22	WALL MOUNTED	RR - 1 & 2	5.0	150	1260	0.5	0.4	1/8	120/1	COOK 90W15DH		
-	EF-23, 24 & 25	DOWNBLAST	AUDITORIUM - 199	8.0	6,000	373	0.5	0.4	1	480/3	COOK 365C7B	NOTE B	SE
-	EF-26	EXISTING	UNIFORM & SCENERY STORAGE - 95B & 95		EXISTI	NG EXHAUST	FAN TO REMAIN. F	RELABEL WITH NE	W NUMBER IN FI	ELD AND ON CO	NTROL GRAPHICS		
-	EF-27	EXISTING	MAIN ELECTRIC - 95A		EXISTI	NG EXHAUST	FAN TO REMAIN. F	RELABEL WITH NE	W NUMBER IN FI	ELD AND ON CO	NTROL GRAPHICS		
-	EF-28	DOWNBLAST	ELECTRICAL - 195A	5.7	300	1253	0.4	0.3	1/8	120/1	COOK 90C15DH	NOTE A	TI
-	EF-29	WALL MOUNTED	RR - 16 & 17	9.9	1,350	1196	0.9	0.75	1/3	120/1	COOK 165WH4B		
-	EF-30	WALL MOUNTED	WOMAN'S LOCKERS - 404	13.8	1,860	1475	1.2	1	3/4	120/1	COOK 165WH6B		
-	EF-31	WALL MOUNTED	MEN'S LOCKERS - 422	13.5	1,400	1378	0.9	0.75	1/3	120/1	COOK 135W4B		
-	EF-32	DOWNBLAST	RR - 21	3.7	75	1362	0.4	0.3	1/20	120/1	COOK 70C15DH	NOTE A	
-	EF-33	DOWNBLAST	STORAGE - 501B & 211	5.3	800	1029	0.4	0.3	1/4	120/1	COOK 120C15D	NOTE A	SI
-	EF-34	DOWNBLAST	ROOM - 501C	5.7	300	1253	0.4	0.3	1/8	120/1	COOK 90C15DH	NOTE A	FU
-	EF-35	DOWNBLAST	502A, 502B & 503F	6.3	800	1122	0.5	0.4	1/4	120/1	COOK 120C15D	NOTE A	
-	EF-36	DOWNBLAST	ELEC - 504A	5.3	275	1086	0.4	0.3	1/8	120/1	COOK 100C15DH	NOTE A	TH
-	EF-37	DOWNBLAST	MEN'S LOCKERS - 422	5.6	825	1046	0.4	0.3	1/4	120/1	COOK 120C15D	NOTE A	
	EF-38	DOWNBLAST	RR & COACHES - 20 & 426	10.6	750	1725	0.6	0.5	1/4	120/1	COOK 100C3B	NOTE B	SI
-	EF-39	DOWNBLAST	TECH EQUIP - 506A	4.2	100	1435	0.4	0.3	1/20	120/1	COOK 70C15DH	NOTE A	FU
-	EF-40	DOWNBLAST	ELECTRICAL - 506B	7.4	1,000	1173	0.4	0.3	1/6	120/1	COOK 120C2B	NOTE B	TH
-	EF-41	DOWNBLAST	COMM/DATA - 404B	9.8	600	1454	0.4	0.3	1/8	120/1	COOK 100C15DH	NOTE A	TH E
_	EF-42	DOWNBLAST	ELEC ROOM - 412A	5.0	960	893	0.4	0.3	1/6	120/1	COOK 135C10D	NOTE A	TH
-	EF-43	DOWNBLAST	RR & TUBE FEEDING - 410A, B, & C	6.9	300	1607	0.6	0.5	1/8	120/1	COOK 90C15DM	NOTE A	
-	EF-44	DOWNBLAST	COMM/DATA & ELEC 407 & 407A	7.7	450	1468	0.4	0.3	1/8	120/1	COOK 90C15DH	NOTE A	TH
_	EF-45	DOWNBLAST	CONCESSIONS - 405	5.2	200	1039	0.4	0.3	1/25	120/1	COOK 100C10DH	NOTE A	
	EF-46	INLINE	RR & COACHES - 18, 19 & 402A	7.3	725	1725	0.4	0.3	1/6	120/1	COOK DB-8		F
_	EF-47	UP BLAST GREASE	TYPE I HOOD	9.1	2,700	1454	1.5	1.25	2	480/3	GREENHECK CUE-161-A	COMBO CURB WITH MAU-1	
-	EF-48	UP BLAST	TYPE II HOOD	14.4	2,200	1662	1.2	1	1	480/3	GREENHECK CUE-141-VG	COMBO CURB WITH MAU-2	
-	EF-49	UP BLAST	DISHWASHER HOOD	7.1	600	1354	0.6000	0.5000	1/4	120	GREENHECK CUE-099-VG	VARI GREEN SPEED CONTROL	[
	EF-50	EXISTING	FABRICATIONS - 505		EXISTI	NG EXHAUST	FAN TO REMAIN. F	RELABEL WITH NE	W NUMBER IN FI	ELD AND ON CO	NTROL GRAPHICS		
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				S		N	AIR DELIVE	ERY CAPAG		ETURN FAN			A	DX CONDITIONS	DIL	CONDENSING SECTION		AIR CONDIT	IONS		TING COIL	TIONS			_						
MARK	AREA SERVED	MIN. OUTSIDE AIR (CFM)	CFM	E.S.P. @ S.L. / ALT (IN W.C.)	WHEEL DIA / TYPE	R.P.M.	MOTOR (HP/BHP)	CFM	E.S.P. @ S.L. / ALT (IN W.C.)	WHEEL DIA / TYPE	R.P.M.	MOTOR (HP/BHP)	E.A.T. DB/WI (°F)	B L.A.T. DB/WB (°F)	TOTAL MBH	AMBIENT	E.A.T. DB (°F)	L.A.T. DB (°F)	SENSIBLE MBH	E.W.T. (°F)	L.W.T. (°F)	GPM	MAX. WTR P.D. (FT.)	Max. Air P.D. (IN.)	MCA	MOCP	VOLT/ PHASE	NUMBER OF COMPRESSORS	FILTER	APPROX. OPER. WEIGHT (LBS)	MANUFACTURE & MODEL #
RTU-1	A	8900	17,500	2.5	28" VAF	1263	20	17,500	1	20/20 FC	668	10	81.4/59	55.5/49.8	393	95	37	77.4	552.04	140	110	37	5.7	0.2	132.3	175	480/3	4	MERV 8	8700	ENGINEERED AIR FWB324/C/O/MV
RTU-2	A	3000	7200	2	16" VAF	2403	5	7200	1	20/18 FC	677	5	80.2/59	55.3/45.2	170	95	43	76	217	140	110	14.5	3.7	0.2	67.1	80	480/3	43	MERV 8	5700	ENGINEERED AIR FWB164/C/O/MV
RTU-3	RM 214	600	1600	0.5	11" VAF	2281	1	1600	.5	9/9 FC	1512	1	79.7/58	55.8/49.5	34	95	45.7	77.4	42	140	110	2.7	4.7	0.04	23.8	30	480/3	2), DIGITAL SCROLL 1ST STAGE, ON/OFF	MERV 8	2600	ENGINEERED AIR FWA32/C/O/MV
RTU-4	В	6300	12,500	2.5	22" VAF	1663	15	12,500	1	18/18 FC	785	7.5	81.3/58	55/48.5	293	95	37.3	79.5	446	140	110	27.8	5	0.15	96.3	125	480/3	SECOND 4	MERV 8	6000	ENGINEERED AIR FWA244/C/O/MV
RTU-5	В	2250	6300	2	16" VAF	2261	7.5	6300	1	18/18 FC	785	3	79.5/58	54.4/49.6	133	95	46.9	77.2	154	140	110	10	4.8	0.12	52.1	60	480/3	4	MERV 8	4500	ENGINEERED AIR FWA114/C/O/MV
RTU-6	В	1350	4000	2	12" VAF	2939	5	4000	1	12/12 FC	1112	2	79.2/58	54.6/48.5	84	95	61.9	77.1	76	140	110	4.8	3.5	0.08	40	50	480/3	4	MERV 8	4000	ENGINEERED AIR FWA74/C/O/MV
RTU-7	CAFETERIA	6700	9400	0.75	20" VAF	1585	7.5	9400	.5	20/18 FC	691	5	83.9/60	55.3/45.4	209	95	23.8	75	255	140	110	18	5.9	0.10	62.1	70	480/3	4	MERV 8	7000	ENGINEERED AIR FWA174/C/O/MV
RTU-8	С	3400	9200	2.5	18" VAF	2197	10	9200	1	20/18 FC	689	5	79.6/58	54.7/48.9	208	95	46.1	75.3	242	140	110	16.8	5.4	0.09	67.1	70	480/3	4	MERV 8	7000	ENGINEERED AIR FWA174/C/O/MV
RTU-9	F	3200	10,900	1.75	20" VAF	1862	10	10,900	1	20/18 FC	2788	7.5	78.7/59	55/49.3	235	95	51	74.4	241	140	110	17.3	2.5	0.12	79.1	100	480/3	4	MERV 8	3400	ENGINEERED AIR FWA204/C/O/MV
RTU-10	WEIGHT ROOM	3300	15,000	1.25	32" VAF	767	7.5	15,000	.5	18/18 FC	800	7.5	-	-	-	-	55.7	76.4	510	140	110	34.6	2.3	0.15	35.7	50	480/3	N/A	MERV 8	5500	ENGINEERED AIR LM15/C/O/MV
RTU-11	WRESTLING ROOM	3700	10,000	0.75	25" VAF	995	5	10,000	.5	18/18 FC	640	5	-	-	-	-	46	76.7	343	140	110	23	3.8	0.15	26.3	40	480/3	N/A	MERV 8	5100	ENGINEERED AIR LM10/C/O/MV
RTU-12	D	6200	15,750	1.75	22" VAF	1833	15	15,750	1	18/18 FC	806	10	79.9/55	54.6/45.4	350	95	44.5	75	376	140	110	26.4	3.2	0.11	121.8	150	480/3	4	MERV 8	11,000	ENGINEERED AIR FWA294/C/O/MV
RTU-13	E	4800	6700	2.25	18" VAF	2018	7.5	6700	1	12/12 FC	1087	5	84/59	54.7/48.6	158	95	23.6	76.9	131	140	110	14	3.8	0.17	59.3	70	480/3	4	MERV 8	5000	ENGINEERED AIR FWA134/C/O/MV
RTU-14	MEDIA CENTER	1500	18,000	1.5	28" VAF	1253	15	18,000	1	20/20 FC	789	5	76/55	54.5/48.5	157	95	64.6	75.6	259	140	110	17.5	2.4	0.08	113.4	150	480/3	4	MERV 8	8500	ENGINEERED AIR FWA304/C/O/MV
RTU-15	E	1100	8500	1.5	16" VAF	2566	10	8500	1	20/18 FC	683	5	76.6/57	55/49.4	161	95	67	76.8	90	140	110	5.4	6.8	0.07	64.3	80	480/3	4	MERV 8	5500	ENGINEERED AIR FWB134/C/O/MV
RTU-16	F	600	2300	1	11" VAF	3000	2	2300	1	10/10 FC	1317	1	78.3/58	54.2/49.5	49	95	53.1	77.5	44	140	110	2.7	4.3	0.09	36.4	40	480/3	2), DIGITAL SCROLL 1ST STAGE, ON/OFF SECOND	MERV 8	3500	ENGINEERED AIR FWA43/C/O/MV
RTU-17	G	600	4000	2	12" VAF	2952	5	4000	1	12/12 FC	1112	2	76.9/55	54.7/46.1	83	95	60.3	75.2	70	140	110	4.8	3.7	0.06	42	50	480/3	4	MERV 8	4000	ENGINEERED AIR FWA94/C/O/MV
RTU-18	RM 508	500	1500	0.5	11" VAF	2193	2	15,000	.5	9/9 FC	1242	1	79.2/58	55.5/49.3	32	95	48.4	76.2	40	140	110	2.7	3.2	0.08	23.8	30	480/3	2), DIGITAL SCROLL 1ST STAGE, ON/OFF SECOND	MERV 8	3400	ENGINEERED AIR FWA42/C/O/MV
RTU-19	DATA ROOM COOLING	0	725	0.5	11X10	825	0.25	-	-	-	-	-	78/60	54.2	-	95	-	-	-	-	-	-	-		13.6	20	208/1	1	MERV 8	444	TRANE 4TCC3024A1000A
RTU-21	1994 GYM	-	-	-	-	-	30					20		JNIT TO GET NEW DE	C CONTRO	LS AND VFDS. INSTALL INSTALL E	. VFDS IN MI BY EC.	ECH ROOM SF	ACE BELOW. VF	DS FURNISH	BY MC.	135									NEW HW CONTROL VALVE TO BE 3-WAY
(E) H&V-2	1962 GYM	-	-	-	-	-	10						EXISTING UN	IT TO GET NEW DDC		AND VFDS. INSTALL V C REFER TO M4.2 FOR			CE. VFDS FURNI	SH BY MC. IN	STALL BY	40									
(E) H&V-3	COMMONS	-	-	-	-	-	5						EXISTING UN	IT TO GET NEW DDC		AND VFDS. INSTALL V C REFER TO M4.2 FOR			CE. VFDS FURNI	SH BY MC. IN	STALL BY	15									
(E) H&V-4	AUDITORIUM	-	-	_	-	-	7.5						EXISTING UN	IT TO GET NEW DDC		AND VFDS. INSTALL V C REFER TO M4.2 FOR			CE. VFDS FURNI	SH BY MC. IN	STALL BY	30									
INERAL NOTES: A: B: C						-										ICRETE PAD. CURB SH															

MARK

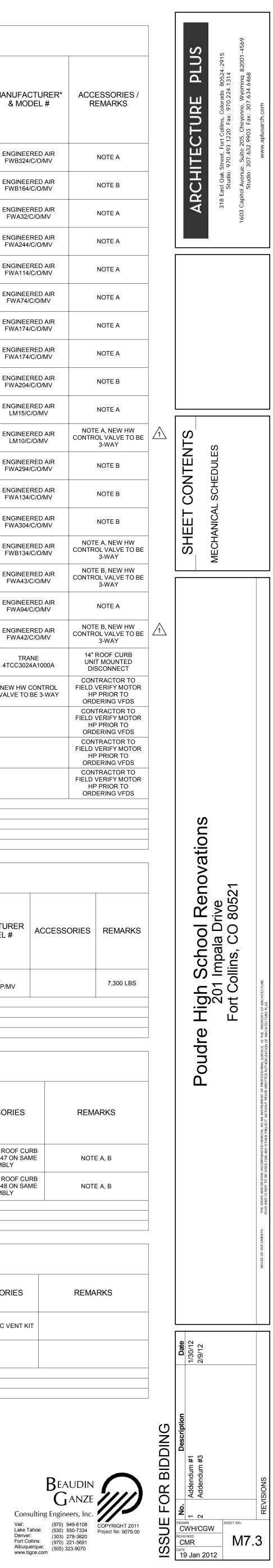
ERV-1 GENERAL N A: B: C:

													ENE	RGY F	RECOV	′ERY \	/ENTIL/	ATOR S	CHEDU	JLE										
					l	AIR DELIVER	(CAPACI	ITY			SUN	MER WHE	EL CONDITI	IONS		WINTER		6			HEATING	COIL		E	ELECTRIC	AL	FILTER	DATA		
K	AREA SERVED	TYPE		OUTDOO	R AIR FAN			EXHAU	ST FAN		OUTDC	OR AIR	EXHAL	JST AIR	OUTDO	OR AIR	EXHA	UST AIR	AIR CON	DITIONS	W	ATER CONDITI	IONS						MANUFACTURER	ACCESSO
.n	SERVED	TTPE	CFM	E.S.P. @ ALT (IN W.C.)	R.P.M.	MOTOR (HP/BHP)	CFM	E.S.P. @ ALT (IN W.C.)	R.P.M.	Motor (HP/BHP)	E.A.T. DB (°F)	L.A.T. DB (°F)	E.A.T. DB (°F)	L.A.T. DB (°F)	E.A.T. DB (°F)	L.A.T. DB (°F)	E.A.T. DB (°F)	L.A.T. DB (°F)	E.A.T. DB (°F)	L.A.T. DB (°F)	E.W.T. (°F)	L.W.T. (°F)	GPM	MOCP	MCA	VOLT/PH	TYPE (OA&EXH)	% EFF.	& MODEL #	ACCESSO
1	LOCKER ROOM	H&V	15,000	1.75	1276	15	15,000	1.5	1000	15	87.5/58	81.6/55.8	78	81	5	50.2	70	36.2	50.2	75.8	140	110	23.2	80	52.9	480/3	MERV 8	30	ENGA LM15/C/HRP/MV	
AL NOT	ES:				·		· · ·																	· · ·						

										MAK	E-UP AI	R UNIT S	SCHEDL	ILE				
						IVERY CAPAC	CITY			GAS-FIRE	DHEATING							
		MIN.			SL	JPPLY FAN			AIR COI	NDITIONS	GAS S	ECTION						
MARK	AREA SERVED	OUTSIDE AIR (CFM)	CFM	E.S.P. @ S.L. (IN W.C.)	E.S.P. @ ALT (IN W.C.)	WHEEL TYPE	R.P.M.	MOTOR (HP/BHP)	E.A.T. DB (°F)	L.A.T. DB (°F)	INPUT @ S.L. (MBH)	OUTPUT @ ALT (MBH)	VOLT/ PHASE	MCA	FILTER	APPROX. OPER. WEIGHT (LBS)	MANUFACTURER & MODEL #	ACCESSORIES
MAU-1	TYPE I HOOD	2,700	2,700	0.6	0.5	FC	860	1/0.77	-5	76.9	250	196	480/3	-	MERV 8	1,300	GREENHECK IGX-112-H22	COMBINATION ROOF CURB TO MOUNT EF-47 ON SAME ASSEMBLY
MAU-2	TYPE II HOOD	2,200	2,200	0.6	0.5	FC	1,299	1.5/0.93	-5	78.8	205	163	480/3	-	MERV 8	1,000	GREENHECK IGX-109-H12	COMBINATION ROOF CURB TO MOUNT EF-48 ON SAME ASSEMBLY
ENERAL NO	TES:	11			1			1		1		1 1	II		1			I
A:	MAU-1 AND MAU-2 S	HALL BE SUPPLI	ED WITH AN I	NVERTER DUTY	MOTOR FOR C	ONTROL BY A VE	D. VFD SHALL BE	E PROVIDED BY MELI	NK CONTROL SY	STEM. REFER TO	CONTROL DIAGR	AMS FOR REQUIR	REMENTS OF INTE	RFACE AND COM	MUNICATION FOR MAU-1 8	& MAU-2 WITH MELINK VARIABLE	E VOLUME CONTROLS AND POUDRE SCH	100L BAS
B:	WEIGHT DOES NOT II	NCLUDE CURB, E	EXHAUST FAN	NOR OTHER ACC	ESSORIES. PF	ROVIDE WEIGHT	TO CONTRACTOR	R FOR STRUCTURAL	STEEL COORDIN	ATION AT SHOP D	RAWING PHASE.							

WATER HEATER SCHEDULE (GAS-FIRED)

		STORAGE		WATER	INPUT		ELEC	TRICAL		
MARK	TYPE	CAPACITY (GAL.)	RECOVERY (GPH)	TEMP. RISE (°F)	@ S.L. (MBH)	output @ Alt. (MBH)	FLA	VOLT/ PH	MANUFACTURER & MODEL #	ACCESSORIES
WH-1	CONDENSING DIRECT VENT	100	309	100	199	183	-	120/1	BRADFORD WHITE EF-100T-199E-3N(A)	4" CONCENTRIC VENT KI
GENERAL N	OTES:									
A:	PROVIDE ACID N	NEUTRALIZING TAN	K ON CONDENSA	TE DISCHARGE						
B:										



						SCHED	ULE			
						MOTOR		MANUFACTURER		
ERVICE	TYPE	GPM	TDH (FT)	FLUID	HP (WATT)	RPM	VOLT/ PH	& MODEL #	ACCESSORIES	
HEAT	PRIMARY	230	10	30% GLYCOL	1.5	1160	480/3	TACO FI2507	-	6.75 INCI
HEAT	PRIMARY	230	10	30% GLYCOL	1.5	1150	480/3	TACO FI 2507	-	6.75 INCF
HEAT	PRIMARY	230	10	30% GLYCOL	1.5	1150	480/3	TACO FI 2507	-	6.75 INCH
HEAT	EXISTING SECONDARY LOOP PUMP	496	143	30% GLYCOL	30	-	-	TACO	PUMPS TO OPERATE IN PARALLE	PRC EXISTIN AND WIR
HEAT	EXISTING SECONDARY LOOP PUMP	496	143	30% GLYCOL	30	-	-	TACO	PUMPS TO OPERATE IN PARALLEL	PRC EXISTIN AND WIR
		-								
H H H	IEAT IEAT IEAT IEAT	IEAT PRIMARY IEAT PRIMARY IEAT PRIMARY IEAT PRIMARY IEAT EXISTING SECONDARY LOOP PUMP IEAT EXISTING SECONDARY LOOP	IEAT PRIMARY 230 IEAT PRIMARY 230 IEAT PRIMARY 230 IEAT PRIMARY 230 IEAT EXISTING SECONDARY LOOP 496 IEAT EXISTING SECONDARY LOOP 496	IEATPRIMARY23010IEATPRIMARY23010IEATPRIMARY23010IEATPRIMARY23010IEATEXISTING SECONDARY LOOP PUMP496143IEATEXISTING SECONDARY LOOP A96496143	IEATPRIMARY2301030% GLYCOLIEATPRIMARY2301030% GLYCOLIEATPRIMARY2301030% GLYCOLIEATPRIMARY2301030% GLYCOLIEATEXISTING SECONDARY LOOP49614330% GLYCOLIEATEXISTING SECONDARY LOOP49614330% GLYCOL	IEATPRIMARY2301030% GLYCOL1.5IEATPRIMARY2301030% GLYCOL1.5IEATPRIMARY2301030% GLYCOL1.5IEATPRIMARY2301030% GLYCOL1.5IEATPRIMARY2301030% GLYCOL1.5IEATEXISTING PUMP49614330% GLYCOL30IEATEXISTING SECONDARY LOOP49614330% GLYCOL30	HEATPRIMARY2301030% GLYCOL1.51160HEATPRIMARY2301030% GLYCOL1.51150HEATPRIMARY2301030% GLYCOL1.51150HEATPRIMARY2301030% GLYCOL1.51150HEATPRIMARY2301030% GLYCOL1.51150HEATEXISTING PUMP49614330% GLYCOL30-HEATEXISTING SECONDARY LOOP49614330% GLYCOL30-	HP (WATT) RPM PH HEAT PRIMARY 230 10 30% GLYCOL 1.5 1160 480/3 HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 HEAT SECONDARY LOOP 496 143 30% GLYCOL 30 - - HEAT SECONDARY LOOP 496 143 30% GLYCOL 30 - -	RVICE HYPE GPM IDH (F1) FLUID HP (WATT) RPM VOLT/ PH & MODEL # IEAT PRIMARY 230 10 30% GLYCOL 1.5 1160 480/3 TACO FI2507 IEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 IEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 IEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 IEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 IEAT SECONDARY LOOP 496 143 30% GLYCOL 30 - - TACO IEAT SECONDARY LOOP 496 143 30% GLYCOL 30 - - TACO	RVICE HPE GPM IDH (FT) FLUID HP (WATT) RPM VOLT/ PH & MODEL # Accessories HEAT PRIMARY 230 10 30% GLYCOL 1.5 1160 480/3 TACO FI2507 - HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 - HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 - HEAT PRIMARY 230 10 30% GLYCOL 1.5 1150 480/3 TACO FI2507 - HEAT SECONDARY LOOP 496 143 30% GLYCOL 30 - - TACO PUMPS TO OPERATE IN PARALLE HEAT SECONDARY LOOP 496 143 30% GLYCOL 30 - - TACO PUMPS TO OPERATE IN PARALLE

				HI	EATING CAPA	CITY			BUF	RNER			
MARK	SERVICE	BOILER TYPE	FUEL TYPE	INPUT @ S.L. (MBH)	OUTPUT @ ALT.	MINIMUM A.F.U.E.	L.W.T. (°F)	E.W.T. (°F)	HP	VOLT/ PH	VENT TYPE	MANUFACTURER* & MODEL #	ACCESSORIES
B-1	HEATING	FIRE TUBE CONDENSING STAINLESS	NG	4,129	3,547	92	140	110	5	480/3	AL29-4C	BUDERUS SB735-1200	FULLY MODULATING POWER FLAME BURNER C4-G-30
B-2	HEATING	FIRE TUBE CONDENSING STAINLESS	NG	4,129	3,547	92	140	110	5	480/3	AL29-4C	BUDERUS SB735-1200	FULLY MODULATING POWER FLAME BURNER C4-G-30
B-3	HEATING	FIRE TUBE CONDENSING STAINLESS	NG	4,129	3,547	92	140	110	5	480/3	AL29-4C	BUDERUS SB735-1200	FULLY MODULATING POWER FLAME BURNER C4-G-30

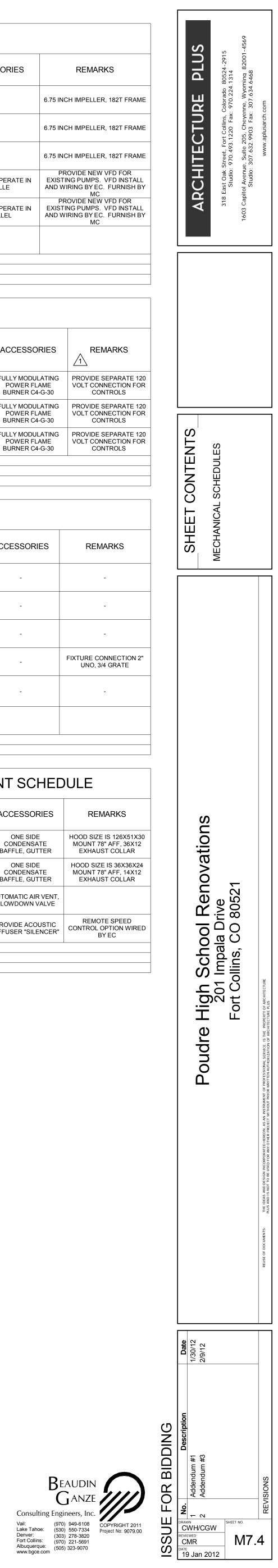
GENERAL NOTES: A: AFUE LISTED IS AT 110 DEGREE RETURN WATER TEMPERATURE AND 100% FIRE RATING AT SEA LEVEL. OUTPUT IS BASED ON UPSIZED BURNER LISTED IN ACCESSORIES.

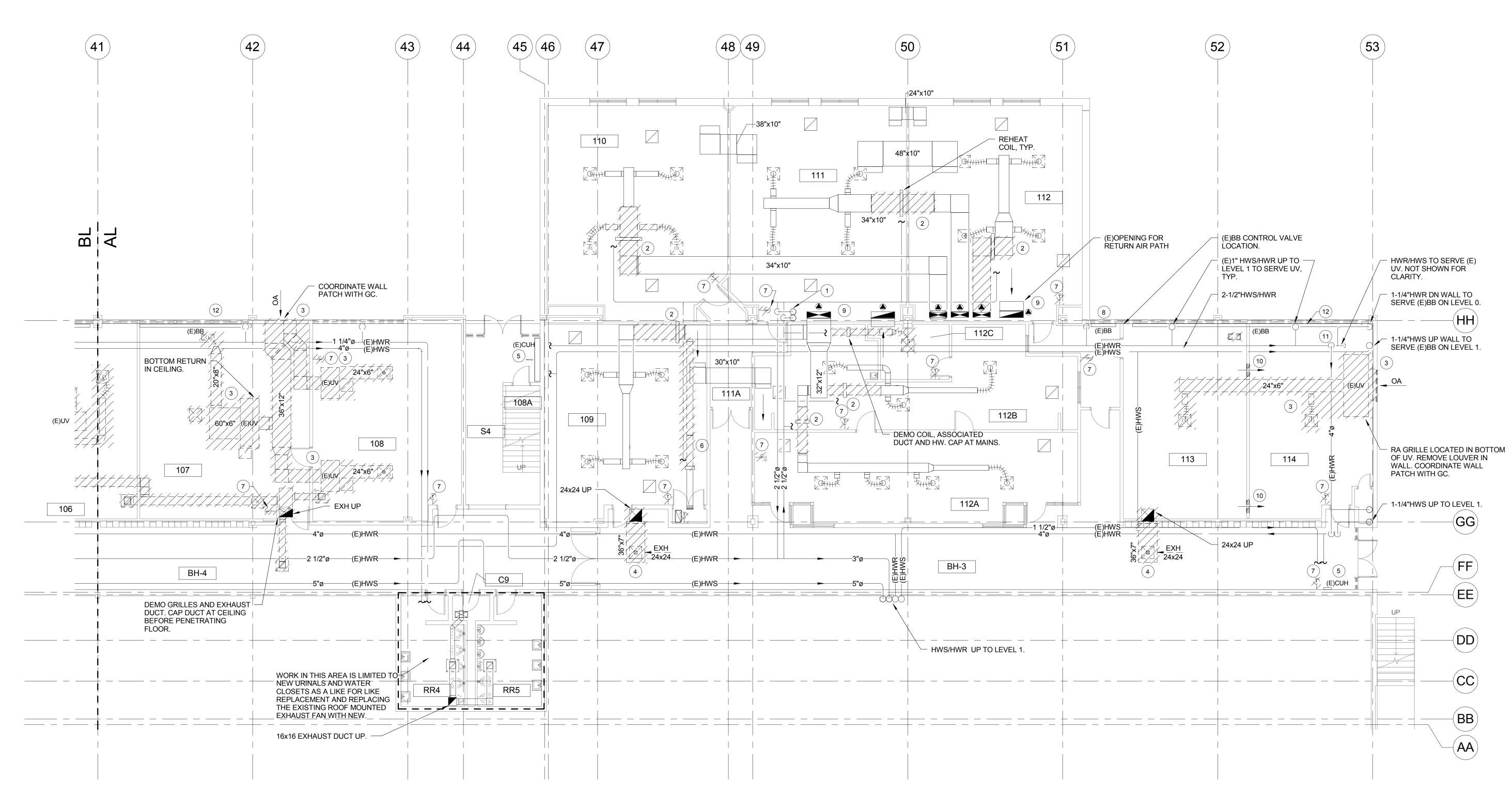
B:

				PLU	MBING FIXTUR	RE SCHEDULI	Ξ	
	SYMBOL	TYPE	A.D.A.	FINISH	MANUFACTURER & MODEL #	FAUCET TRIM MFR. & MODEL #	ACCESSORIES	
-	P1	WATER CLOSET	YES	WHITE	KOHLER K-4405	SLOAN 111-1.28	-	
-	P2	WATER CLOSET	NO	WHITE	KOHLER K-4406	SLOAN 111-1.28	-	
	P3	URINAL	YES	WHITE	KOHLER K-4904-ET	SLOAN 186-0.125	-	
•	P4	FLOOR SINK	N/A	NICKEL BRONZE	ZURN Z1900	-	-	
	P5	FUNNEL DRAIN	N/A	CAST IRON	ZURN Z326	-	-	
	GENERAL	NOTES:						
	A:							

MISCELLANEOUS MECHANICAL EQUIPMENT SCHEDULE

				ELEC	TRICAL	MANUFACTURER*	
MARK	SERVICE	TYPE	CAPACITY	HP	VOLT/ PH	& MODEL #	ACCESSORIES
H-1	CCOKING	TYPE II HOOD	1575 CFM	-	-	GREENHECK GD2	ONE SIDE CONDENSATE BAFFLE, GUTTER
H-2	DISHWASHER	TYPE II HOOD	600 CFM	-	-	GREENHECK GD2	ONE SIDE CONDENSATE BAFFLE, GUTTER
AS-1	HEATING WATER	TANGENTIAL	1,000 GPM	-	-	BELL & GOSSETT R8	AUTOMATIC AIR VEN BLOWDOWN VALVE
AF-1	CERAMICS	AIR CLEANER	1100 CFM	1/6	120/1	BAILEY AIR CLEANING SYSTEMS MODEL 750H	PROVIDE ACOUSTIC DIFFUSER "SILENCEI
GENERAL	NOTES:				1		
A:							
B:							

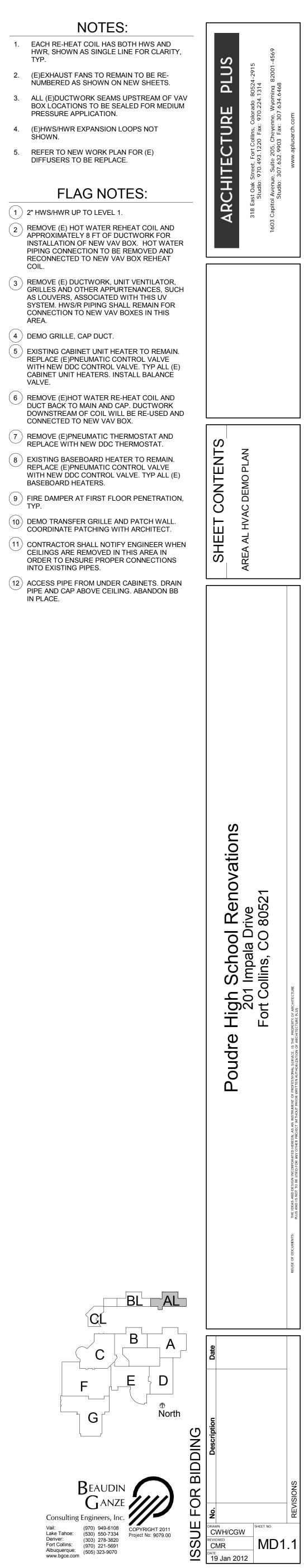


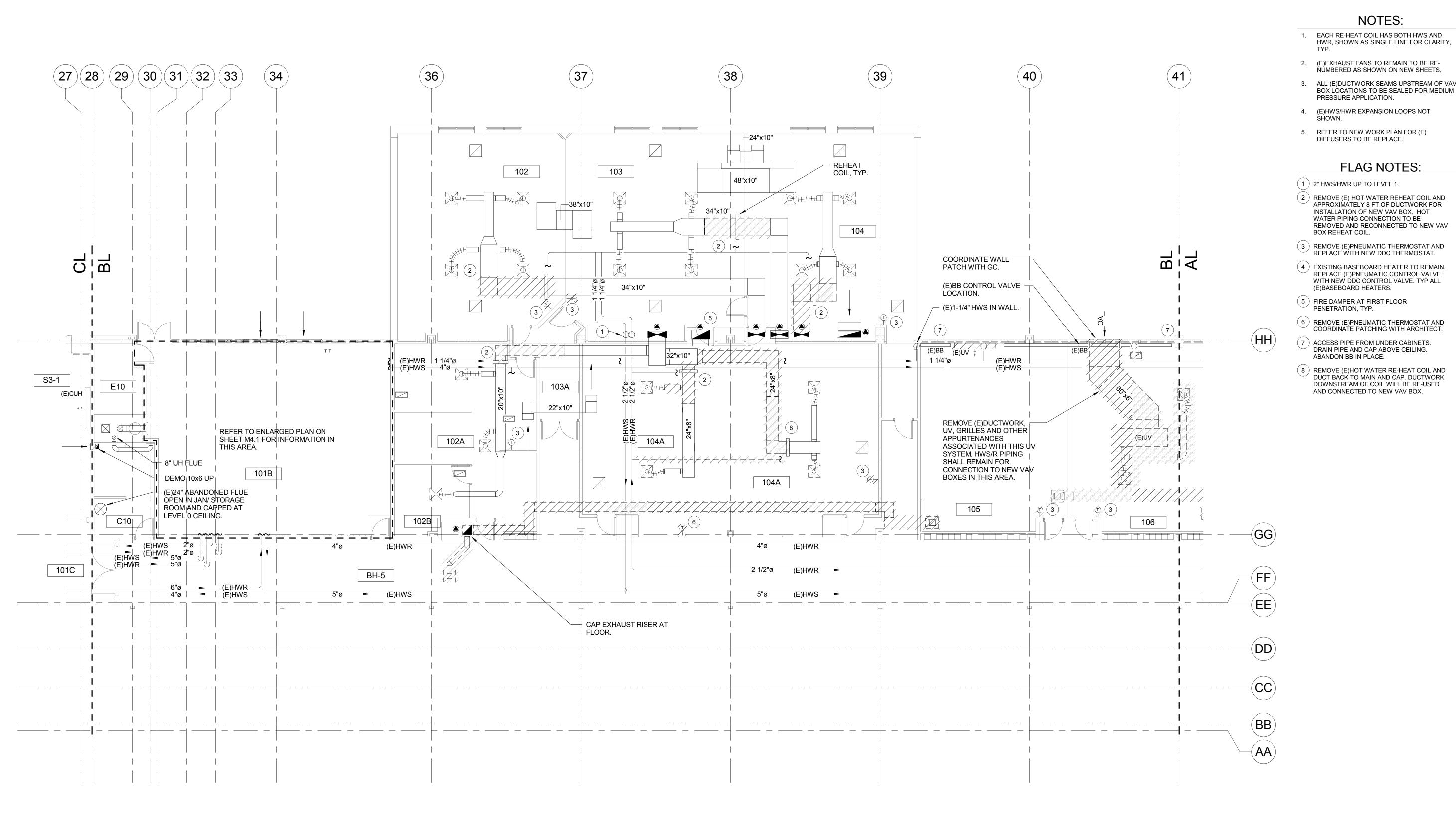


1 AREA AL HVAC DEMO PLAN 1/8" = 1'-0"

SHOWN. (1) 2" HWS/HWR UP TO LEVEL 1. COIL. AREA. (4) DEMO GRILLE, CAP DUCT. VALVE. BASEBOARD HEATERS.

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1 AREA BL HVAC DEMO PLAN 1/8" = 1'-0"





NOTES:

3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM

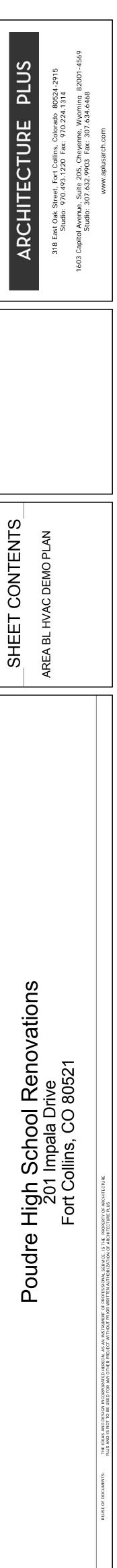
FLAG NOTES:

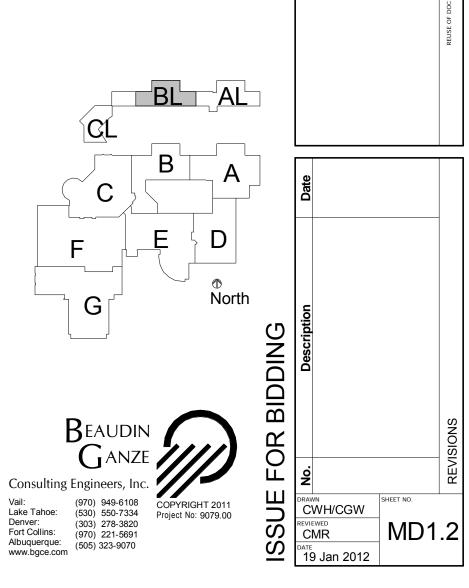
) REMOVE (E) HOT WATER REHEAT COIL AND APPROXIMÁTELY 8 FT OF DUCTWORK FOR INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV

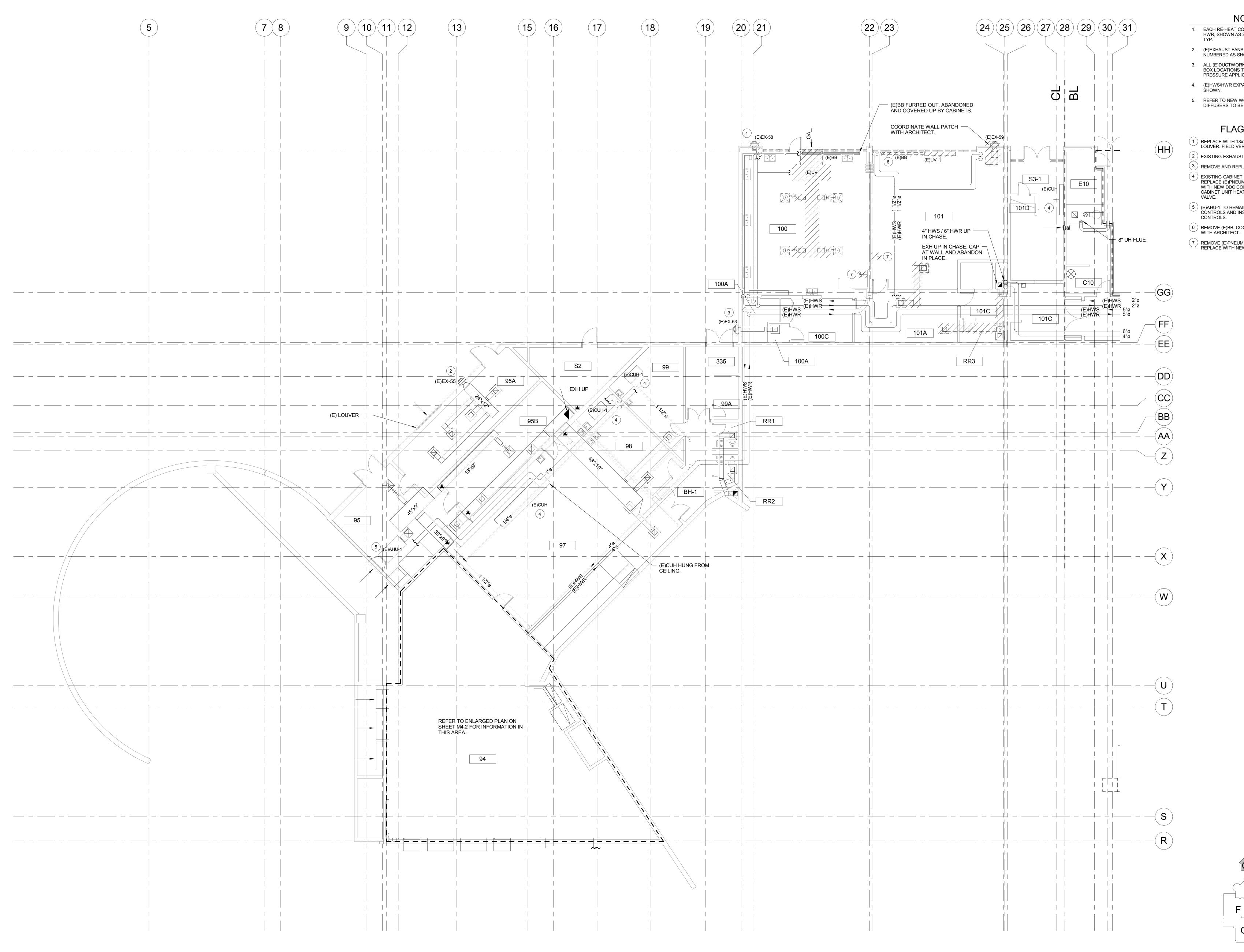
REPLACE WITH NEW DDC THERMOSTAT.

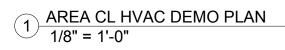
ACCESS PIPE FROM UNDER CABINETS.

DOWNSTREAM OF COIL WILL BE RE-USED









NOTES:

1. EACH RE-HEAT COIL HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY,

2. (E)EXHAUST FANS TO REMAIN TO BE RE-NUMBERED AS SHOWN ON NEW SHEETS. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM PRESSURE APPLICATION. 4. (E)HWS/HWR EXPANSION LOOPS NOT

5. REFER TO NEW WORK PLAN FOR (E) DIFFUSERS TO BE REPLACE.

FLAG NOTES:

(1) REPLACE WITH 18x18 RUSKIN ELF375DX LOUVER. FIELD VERIFY PRIOR TO ORDERING. 2) EXISTING EXHAUST FANS TO REMAIN.

REMOVE AND REPLACE (E)EXHAUST FAN. 4 EXISTING CABINET UNIT HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E) CABINET UNIT HEATERS. INSTALL BALANCE

(5) (E)AHU-1 TO REMAIN. REMOVE (E)PNEUMATIC CONTROLS AND INSTALL NEW DDC

(6) REMOVE (E)BB. COORDINATE WALL PATCH

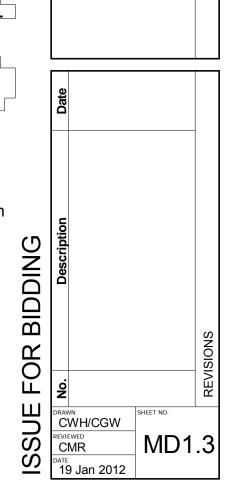
7 REMOVE (E)PNEUMATIC THERMOSTAT AND REPLACE WITH NEW DDC THERMOSTAT.

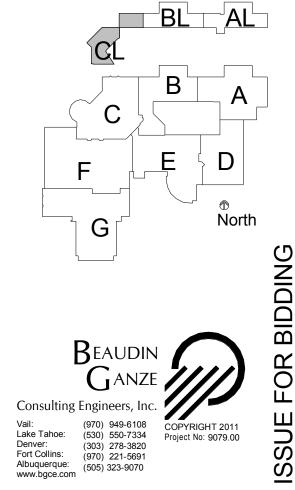


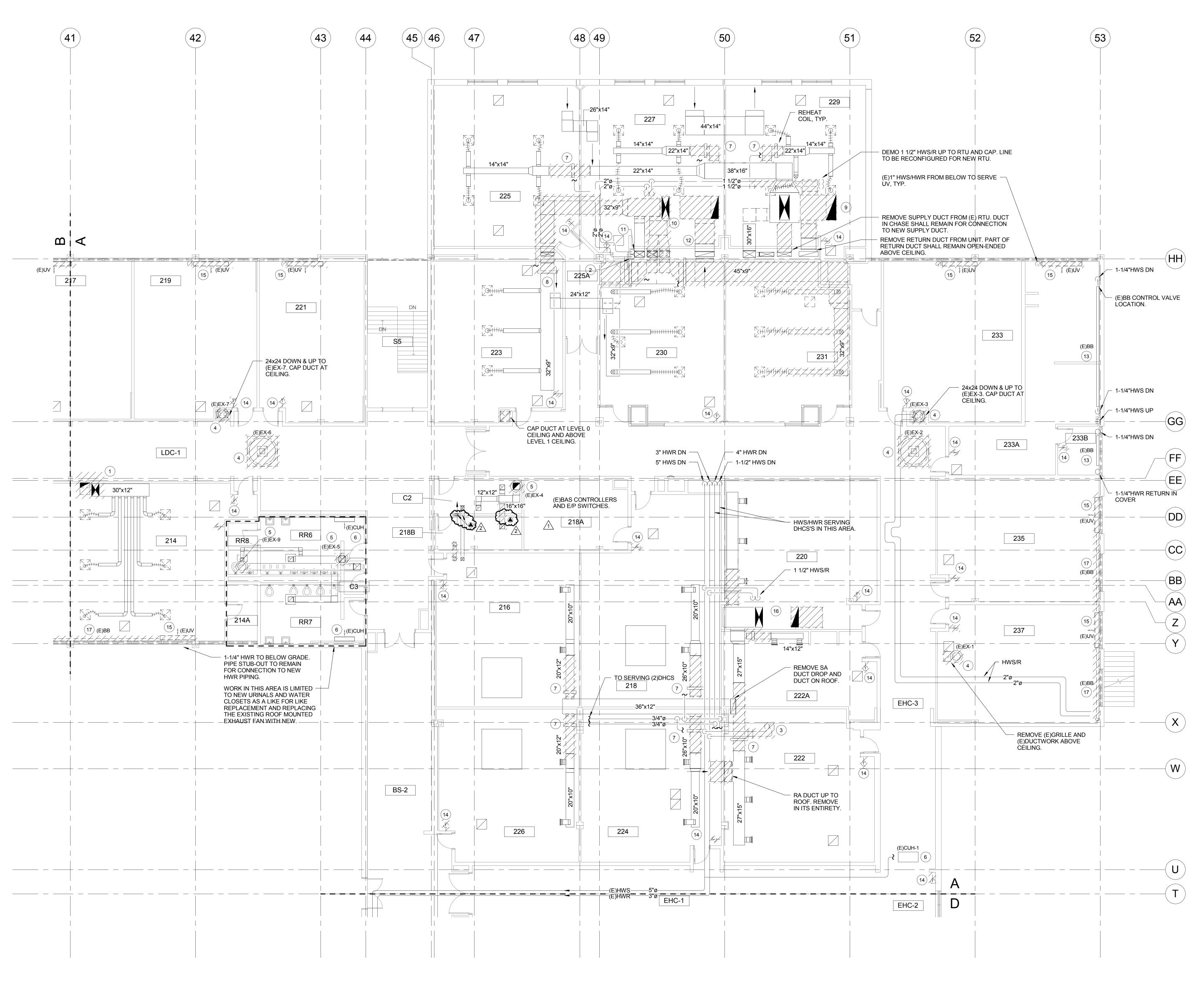
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> atic High School Renov 201 Impala Drive Fort Collins, CO 80521 Ф









1 AREA A HVAC DEMO PLAN 1/8" = 1'-0"

VALVE. DUCTWORK. REMAIN. RTU TO CHASE. DUCT IN CHASE SHALL REMAIN TO BE REUSED. (13) EXISTING BASEBOARD HEATER TO REMAIN. VALVE. (15) (E)UV TO BE REMOVED. CAP/DEMO ASSOCIATED PIPING AT FLOOR BELOW (OR (16) REMOVE (E) RTU. REMOVE ASSOCIATED

2. (E)EXHAUST FANS TO REMAIN TO BE RE-PRESSURE APPLICATION.

TYP.

- 4. (E)HWS/HWR EXPANSION LOOPS NOT SHOWN.
- 5. REFER TO NEW WORK PLAN FOR (E) DIFFUSERS TO BE REPLACE.
- (1) REMOVE (E) RTU. REMOVE ASSOCIATED
- FOR CONNECTION TO NEW RTU. (2) 2" HWS/HWR DN TO LEVEL 0.
- (3) 1-1/4" HWS/R UP TO RTU. PIPING TO BE
- (4) DEMO FAN AND CURB, REMOVE POWER. REFER TO ARCHITECT'S PLANS FOR ROOF PATCH DETAIL.
- (5) REMOVE AND REPLACE (E)EXHAUST FAN. BID SHALL INCLUDE NEW ROOF CURB.
- ROOF WORK WITH GC. (6) EXISTING CABINET UNIT HEATER TO REMAIN.

- (7) REMOVE (E) HOT WATER REHEAT COIL AND INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE BOX REHEAT COIL. (8) REMOVE (E) HOT WATER REHEAT COIL.
- REMAIN FOR CONNECTION TO NEW
- (9) REMOVE (E) RTU. REMOVE ASSOCIATED FOR CONNECTION TO NEW RTU. HWS/R APPROXIMATE LOCATION.
- (10) REMOVE (E) RTU, ASSOCIATED DUCTWORK REMAIN FOR CONNECTION TO NEW DUCTWORK. RETURN GRILLES SHALL (11) (E) 24x14 DUCT DOWN, TRANSITIONS TO 46x12

- 14 REMOVE (E)PNEUMATIC THERMOSTAT AND REPLACE WITH NEW DDC THERMOSTAT.
- HWS/HWR PIPING AND HEATING COIL
- REMOVE (E) BASEBOARD. REMOVE VALVES

- G
- Beaudin Ganze
 Consulting Engineers, Inc.

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 Lake Tahoe:
 (530) 550-7334

 Denver:
 (303) 278-3820

 Fort Collins:
 (970) 221-5691

 Albuquerque:
 (505) 323-9070

NOTES:

1. EACH RE-HEAT COIL HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY,

NUMBERED AS SHOWN ON NEW SHEETS. 3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM

FLAG NOTES:

DUCT CONNECTIONS AND DROPS AS NEEDED

DISCONNECTED AND DEMOED BACK TO MAIN.

CONTRACTOR TO VERIFY IF (E)CURB CAN BE USED PRIOR TO ORDERING. COORDINATE

REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E) CABINET UNIT HEATERS. INSTALL BALANCE

APPROXIMATELY 8 FT OF DUCTWORK FOR REMOVED AND RECONNECTED TO NEW VAV

REMOVE ASSOCIATED DUCTWORK AND HOT WATER PIPING BACK TO RESPECTIVE MAINS. REHEAT COIL WILL NOT BE REPLACED WITH A VAV BOX. ASSOCIATED SUPPLY DIFFUSER TO

DUCT CONNECTIONS AND DROPS AS NEEDED PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN

AND REHEAT COILS AS SHOWN. HOT WATER PIPING TO RTU AND REHEAT COILS SHALL BE DISCONNECTED AND REMOVED BACK TO MAIN. ASSOCIATED BRANCH DUCTS SHALL

IN CHASE DOWN TO LOWER LEVEL. DEMO 24x14 DUCT FROM RTU, DUCT IN CHASE TO REMAIN AND BE REUSED.

(12) (E) 42x16 DUCT FROM RTU. DUCT GOES DOWN CHASE AND IS OPEN-ENDED INTO CEILING SPACE. DUCT SHALL BE REMOVED FROM

REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E) BASEBOARD HEATERS. INSTALL BALANCE

CEILING ABOVE) AND COORDINATE PATCHING WITH ARCHITECT, TYP.

DUCT CONNECTIONS AND DROPS AS NEEDED FOR CONNECTION TO NEW RTU. DEMO LOCATED ABOVE CEILING. HWS/HWR WILL BE EXTENDED TO NEW HEATING COIL IN RTU.

AND PIPING BACK TO MAIN. COORDINATE WALL PATCH WITH ARCHITECT.



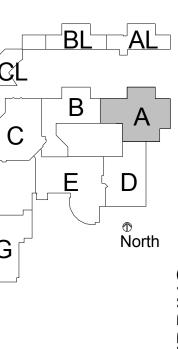
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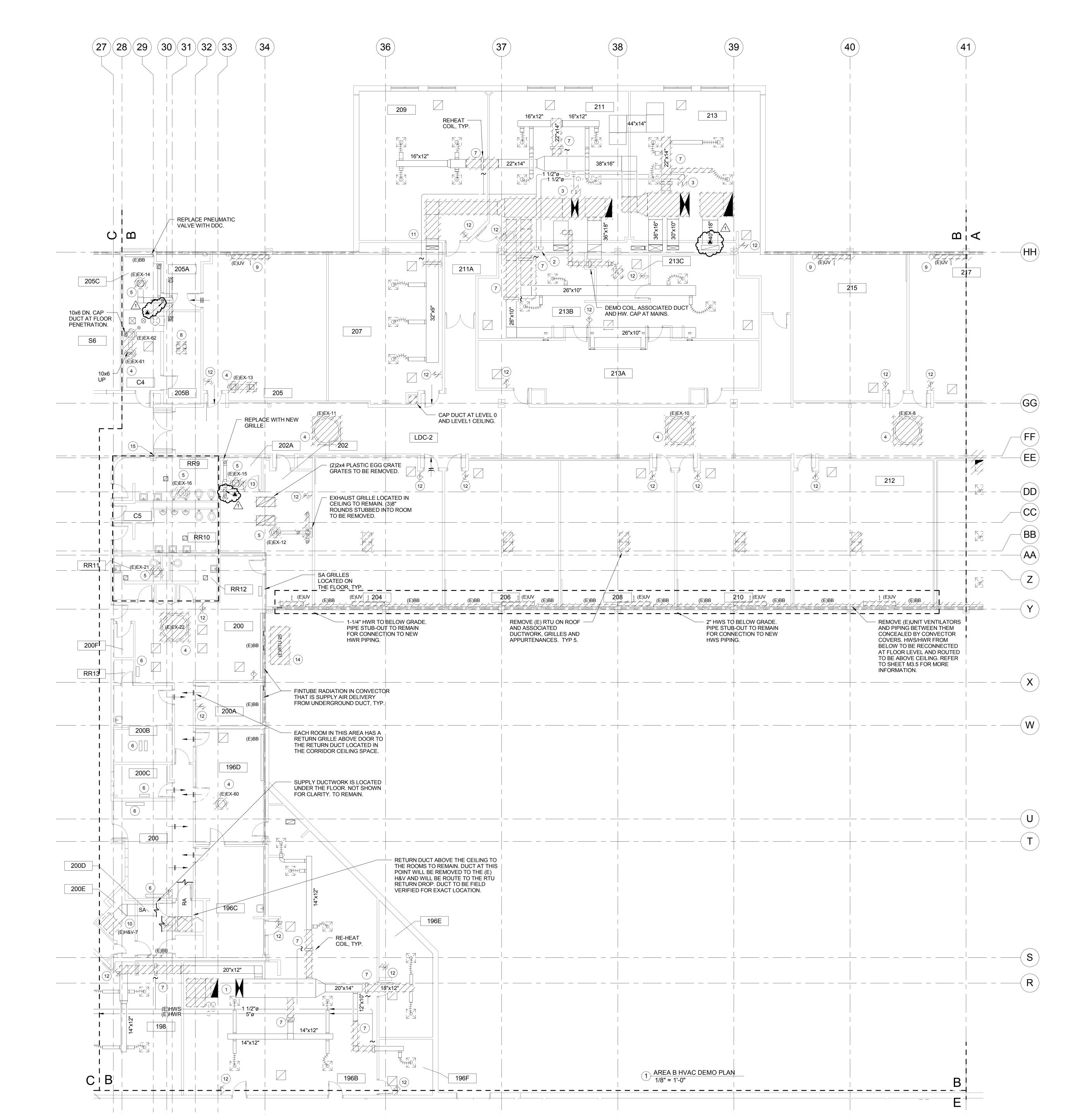
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2. (E)EXHAUST FANS TO REMAIN TO BE RE-NÚMBERED AS SHOWN ON NEW SHEETS. 3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM PRESSURE APPLICATION. 4. (E)HWS/HWR EXPANSION LOOPS NOT SHOWN. 5. REFER TO NEW WORK PLAN FOR (E) DIFFUSERS TO BE REPLACE. FLAG NOTES:) REMOVE (E) RTU. REMOVE ASSOCIATED DUCT CONNECTIONS AND DROPS AS NEEDED FOR CONNECTION TO NEW RTU. HWS/R PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN APPROXIMATE LOCATION. (2) 2" HWS/HWR DN TO LEVEL 0. REMOVE (E) RTU AND ASSOCIATED DUCTWORK AS SHOWN. HOT WATER PIPING TO RTU SHALL BE DISCONNECTED AND REMOVED BACK TO MAIN. (4) DEMO FAN, DAMPER, PNEUMATIC ACTUATOR AND CURB, REMOVE POWER. REFER TO ARCHITECT'S PLANS FOR ROOF PATCH DETAIL. (5) REMOVE AND REPLACE (E)EXHAUST FAN. BID SHALL INCLUDE NEW ROOF CURB. CONTRACTOR TO VERIFY IF (E)CURB CAN BE USED PRIOR TO ORDERING. COORDINATE ROOF WORK WITH GC. (6) (E)FLOOR SUPPLY DIFFUSER TO REMAIN. (7) REMOVE (E) HOT WATER REHEAT COIL AND APPROXIMATELY 8 FT OF DUCTWORK FOR INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV BOX REHEAT COIL. B DEMO EXISTING SPLIT SYSTEM FOR IT ROOM. NEW RTU TO BE INSTALLED. (9) (E)UV TO BE REMOVED. CAP/DEMO ASSOCIATED PIPING AND COORDINATE PATCHING WITH ARCHITECT, TYP. (10) REMOVE (E) H&V UNIT AND HWS/R CONNECTIONS BACK TO MAIN. UNDERGROUND SUPPLY DUCTWORK WILL BE REUSED AND CONNECTED TO NEW VAV BOX FOR THIS AREA. (11) REMOVE (E) HOT WATER REHEAT COIL AND HWS/R PIPING CONNECTIONS. REMOVE

- REPLACE WITH NEW LINE VOLTAGE
- THERMOSTAT. 14) DEMO DUCTWORK ASSOCIATED WITH RTU-25. COORDINATE WINDOW PATCHING WITH ARCHITECT.
- (15) WORK IN THIS AREA IS LIMITED TO NEW

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NOTES:

TYP.

1. EACH RE-HEAT COIL HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY,

DUCTWORK UPSTREAM OF COIL AS SHOWN FOR PLACEMENT OF NEW VAV BOX.

(12) REMOVE (E)PNEUMATIC THERMOSTAT AND REPLACE WITH NEW DDC THERMOSTAT. (13) REMOVE (E)PNEUMATIC THERMOSTAT AND

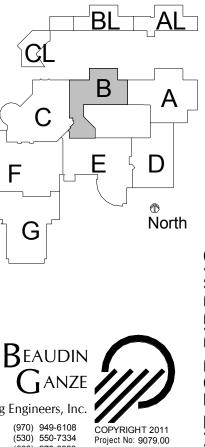
URINALS AND WATER CLOSETS AS A LIKE FOR LIKE REPLACEMENT AND REPLACING THE EXISTING ROOF MOUNTED EXHAUST FAN WITH NEW.

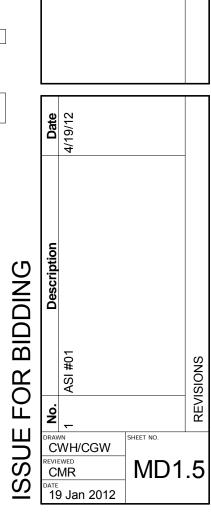


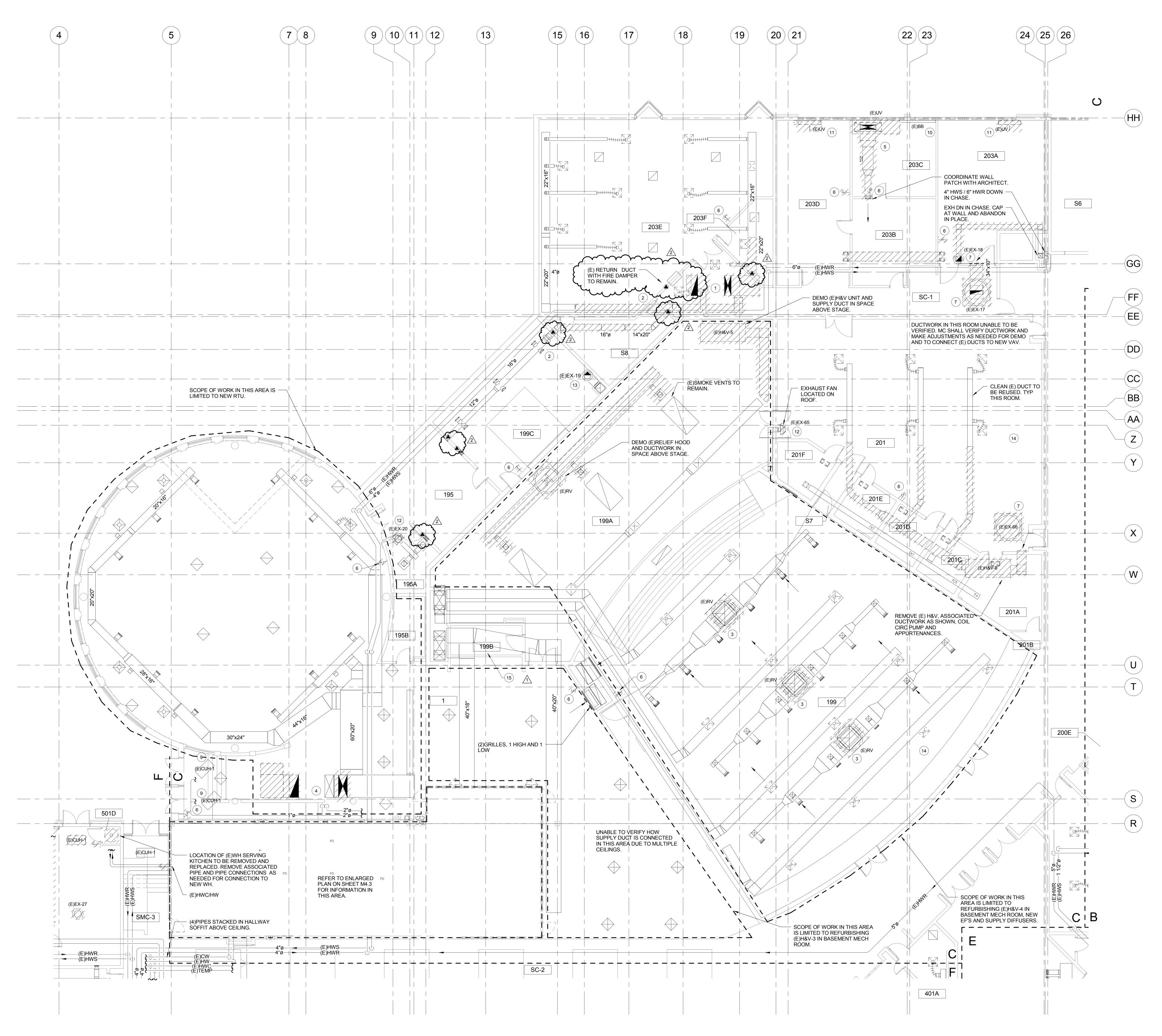
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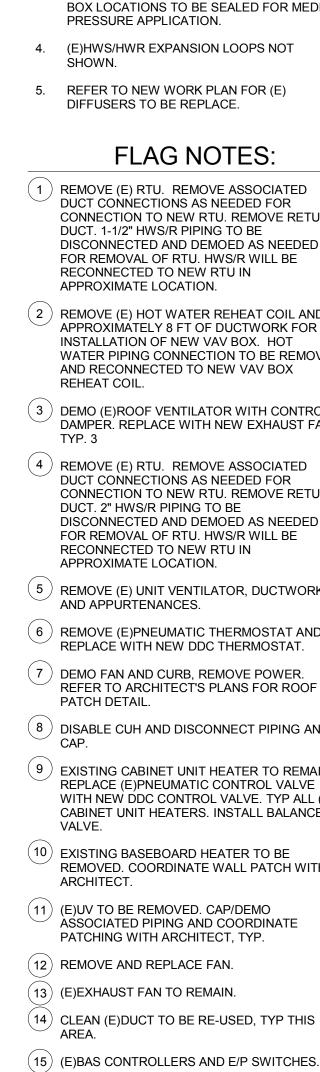
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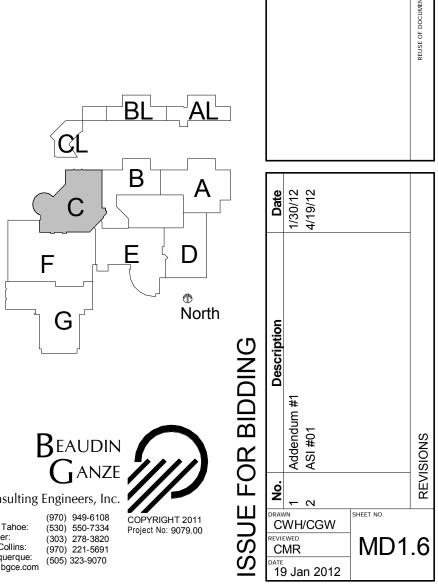


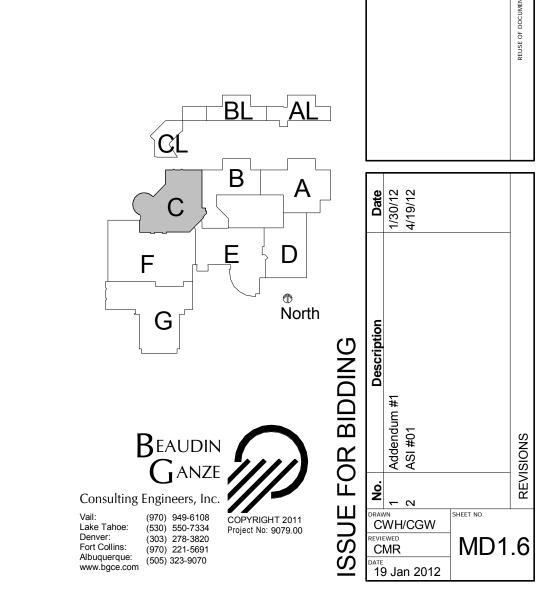


1 AREA C HVAC DEMO PLAN 1/8" = 1'-0"

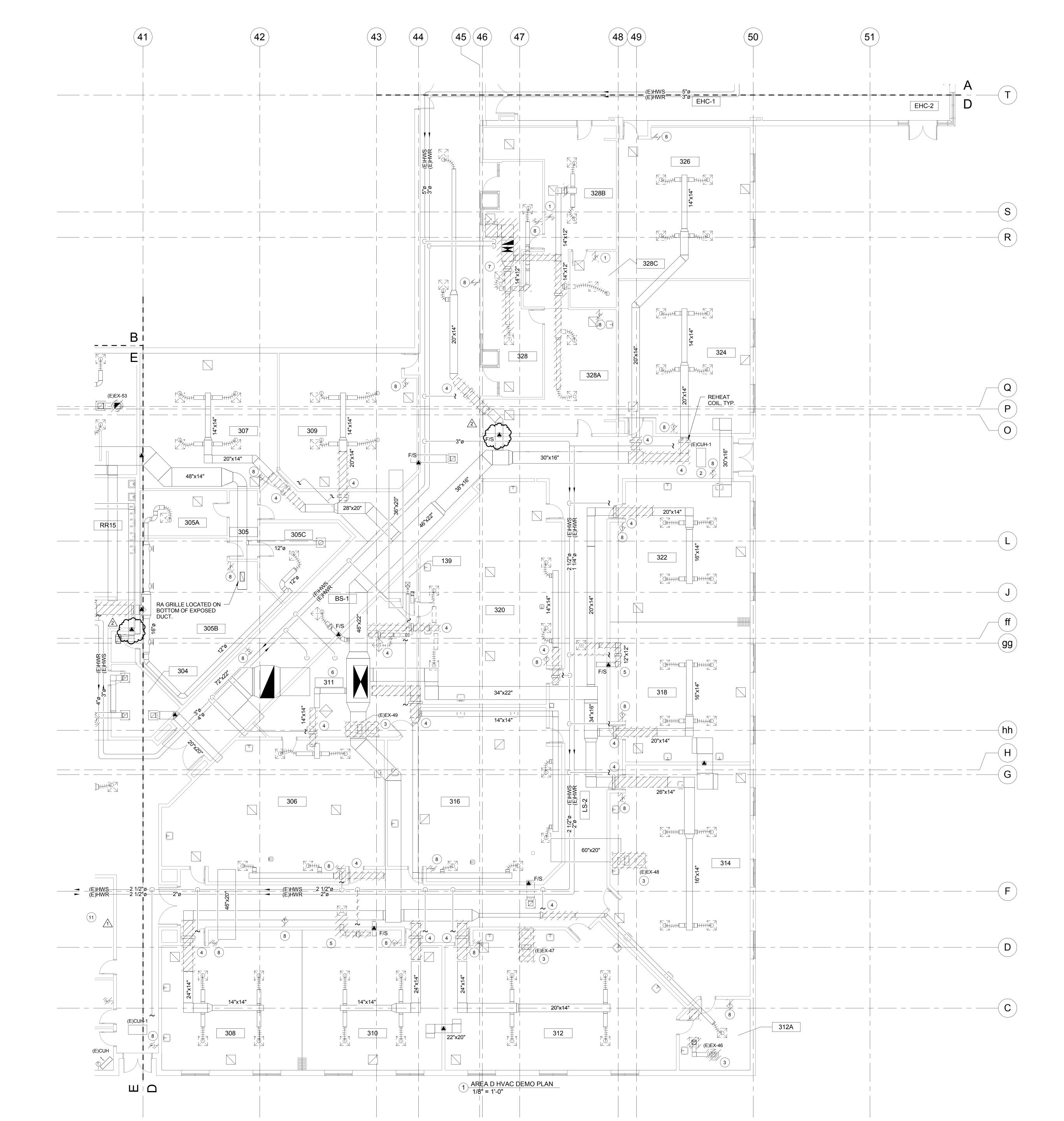


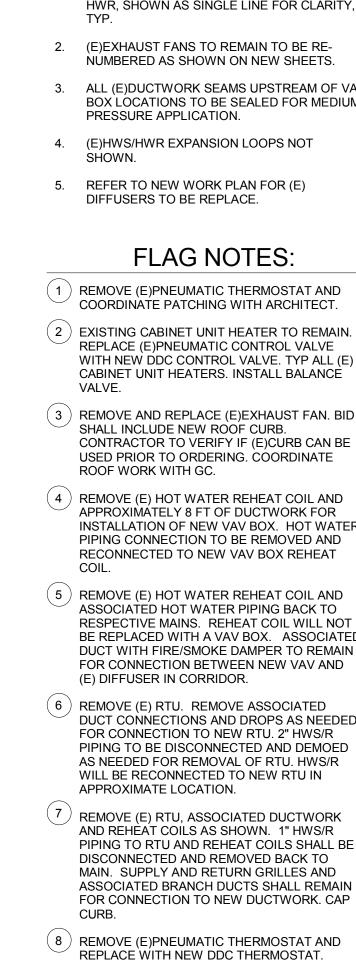
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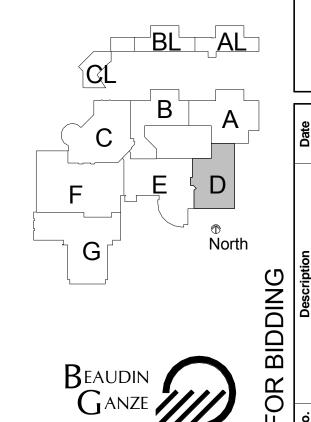




NOTES: 1. EACH RE-HEAT COIL HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY, 2. (E)EXHAUST FANS TO REMAIN TO BE RE-Δ NUMBERED AS SHOWN ON NEW SHEETS. 3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM Ë FLAG NOTES: α DUCT CONNECTIONS AS NEEDED FOR CONNECTION TO NEW RTU. REMOVE RETURN DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE (2) REMOVE (E) HOT WATER REHEAT COIL AND APPROXIMATELY 8 FT OF DUCTWORK FOR INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV BOX (3) DEMO (E)ROOF VENTILATOR WITH CONTROL DAMPER. REPLACE WITH NEW EXHAUST FAN, DUCT CONNECTIONS AS NEEDED FOR CONNECTION TO NEW RTU. REMOVE RETURN DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE (5) REMOVE (E) UNIT VENTILATOR, DUCTWORK E (6) REMOVE (E)PNEUMATIC THERMOSTAT AND REPLACE WITH NEW DDC THERMOSTAT. ш REFER TO ARCHITECT'S PLANS FOR ROOF . (8) DISABLE CUH AND DISCONNECT PIPING AND \cup ш (9) EXISTING CABINET UNIT HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE ш ()WITH NEW DDC CONTROL VALVE. TYP ALL (E) CABINET UNIT HEATERS. INSTALL BALANCE REMOVED. COORDINATE WALL PATCH WITH ASSOCIATED PIPING AND COORDINATE S atio High School Renov 201 Impala Drive Fort Collins, CO 80521 Ф udr ō Ω









NOTES:

1. EACH RE-HEAT COIL HAS BOTH HWS AND HWR, SHOWN AS SINGLE LINE FOR CLARITY,

NUMBERED AS SHOWN ON NEW SHEETS. 3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM

FLAG NOTES:

(2) EXISTING CABINET UNIT HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E)

(3) REMOVE AND REPLACE (E)EXHAUST FAN. BID CONTRACTOR TO VERIFY IF (E)CURB CAN BE USED PRIOR TO ORDERING. COORDINATE

APPROXIMATELY 8 FT OF DUCTWORK FOR INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV BOX REHEAT

RESPECTIVE MAINS. REHEAT COIL WILL NOT BE REPLACED WITH A VAV BOX. ASSOCIATED DUCT WITH FIRE/SMOKE DAMPER TO REMAIN FOR CONNECTION BETWEEN NEW VAV AND

DUCT CONNECTIONS AND DROPS AS NEEDED FOR CONNECTION TO NEW RTU. 2" HWS/R PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN

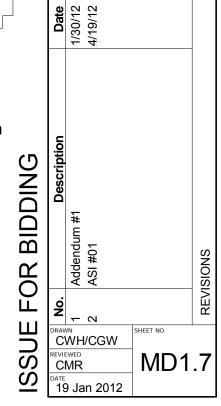
AND REHEAT COILS AS SHOWN. 1" HWS/R PIPING TO RTU AND REHEAT COILS SHALL BE DISCONNECTED AND REMOVED BACK TO MAIN. SUPPLY AND RETURN GRILLES AND ASSOCIATED BRANCH DUCTS SHALL REMAIN FOR CONNECTION TO NEW DUCTWORK. CAP

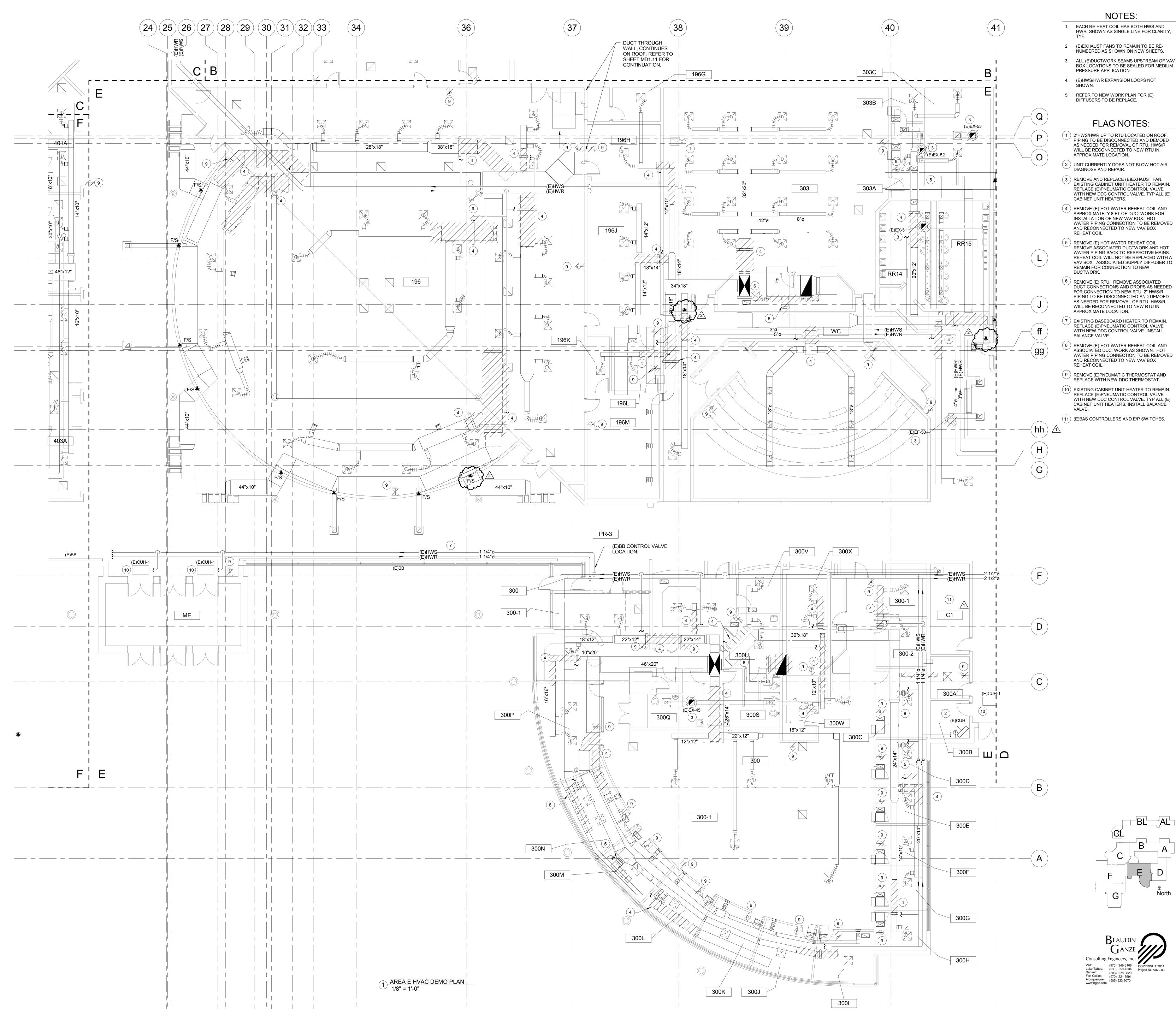


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NOTES:

HWR, SHOWN AS SINGLE LINE FOR CLARITY,

NUMBERED AS SHOWN ON NEW SHEETS. 3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM

FLAG NOTES:

2"HWS/HWR UP TO RTU LOCATED ON ROOF. PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN

) UNIT CURRENTLY DOES NOT BLOW HOT AIR.

EXISTING CABINET UNIT HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E)

INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV BOX

REMOVE ASSOCIATED DUCTWORK AND HOT WATER PIPING BACK TO RESPECTIVE MAINS. REHEAT COIL WILL NOT BE REPLACED WITH A VAV BOX. ASSOCIATED SUPPLY DIFFUSER TO

FOR CONNECTION TO NEW RTU. 2" HWS/R PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN

) EXISTING BASEBOARD HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. INSTALL

REMOVE (E) HOT WATER REHEAT COIL AND ASSOCIATED DUCTWORK AS SHOWN. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV BOX

REPLACE WITH NEW DDC THERMOSTAT. WITH NEW DDC CONTROL VALVE. TYP ALL (E)

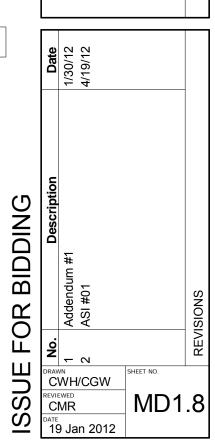


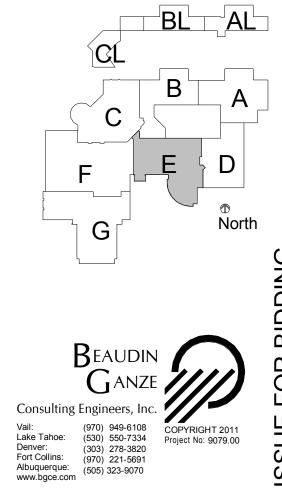
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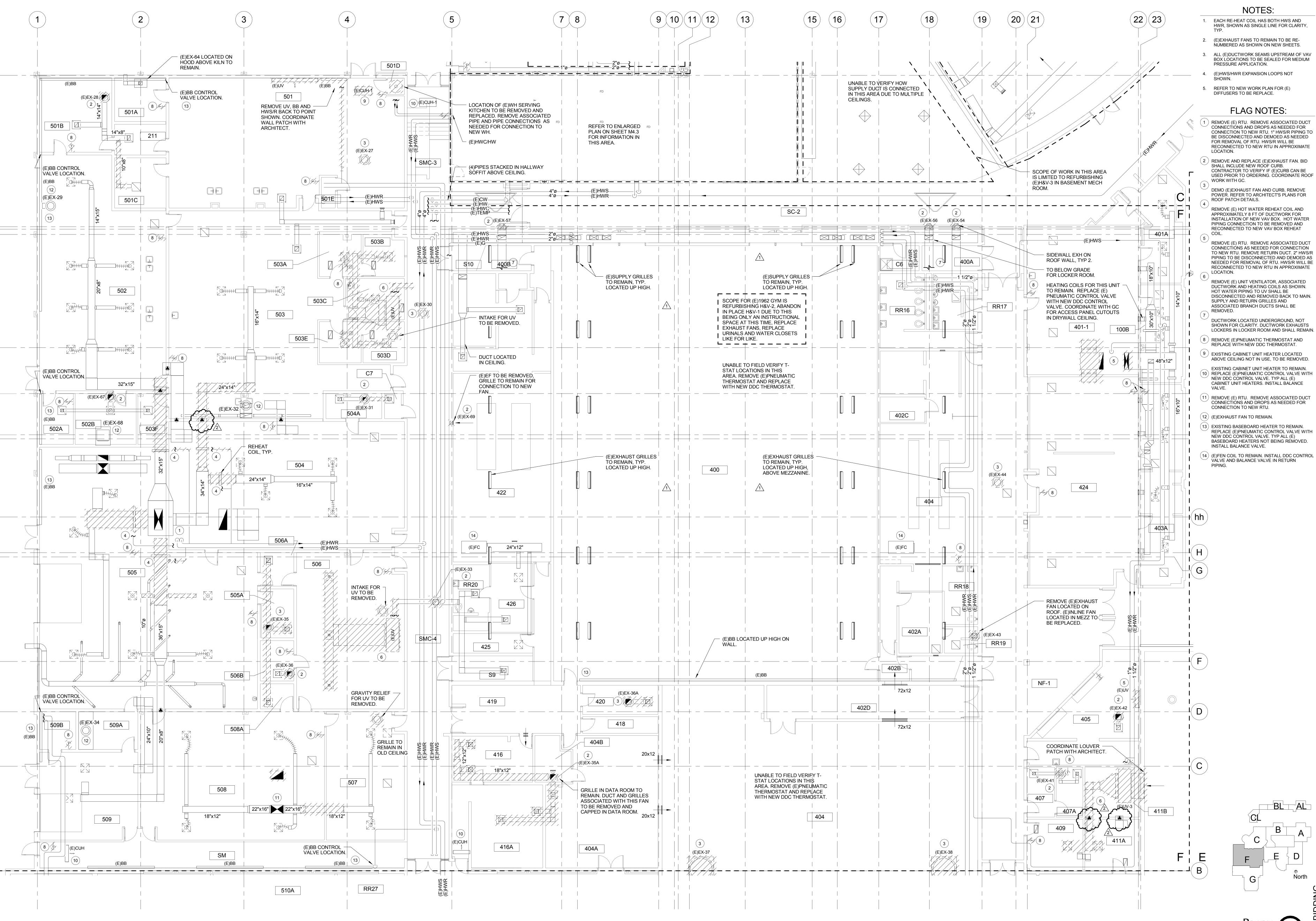
> High School Renovations 201 Impala Drive Fort Collins, CO 80521 Ф

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1 AREA F HVAC DEMO PLAN 1/8" = 1'-0"

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NOTES:

HWR, SHOWN AS SINGLE LINE FOR CLARITY,

NUMBERED AS SHOWN ON NEW SHEETS. 3. ALL (E)DUCTWORK SEAMS UPSTREAM OF VAV BOX LOCATIONS TO BE SEALED FOR MEDIUM

FLAG NOTES:

1) REMOVE (E) RTU. REMOVE ASSOCIATED DUCT CONNECTIONS AND DROPS AS NEEDED FOR CONNECTION TO NEW RTU. 1" HWS/R PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN APPROXIMATE

(2) REMOVE AND REPLACE (E)EXHAUST FAN. BID CONTRACTOR TO VERIFY IF (E)CURB CAN BE USED PRIOR TO ORDERING. COORDINATE ROOF

DEMO (E)EXHAUST FAN AND CURB, REMOVE POWER. REFER TO ARCHITECT'S PLANS FOR

APPROXIMATELY 8 FT OF DUCTWORK FOR INSTALLATION OF NEW VAV BOX. HOT WATER PIPING CONNECTION TO BE REMOVED AND RECONNECTED TO NEW VAV BOX REHEAT

REMOVE (E) RTU. REMOVE ASSOCIATED DUCT CONNECTIÓNS AS NEEDED FOR CONNECTION TO NEW RTU. REMOVE RETURN DUCT. 2" HWS/R PIPING TO BE DISCONNECTED AND DEMOED AS NEEDED FOR REMOVAL OF RTU. HWS/R WILL BE RECONNECTED TO NEW RTU IN APPROXIMATE

REMOVE (E) UNIT VENTILATOR, ASSOCIATED DUCTWORK AND HEATING COILS AS SHOWN. DISCONNECTED AND REMOVED BACK TO MAIN. ASSOCIATED BRANCH DUCTS SHALL BE

DUCTWORK LOCATED UNDERGROUND, NOT SHOWN FOR CLARITY. DUCTWORK EXHAUSTS LOCKERS IN LOCKER ROOM AND SHALL REMAIN.

ABOVE CEILING NOT IN USE, TO BE REMOVED. EXISTING CABINET UNIT HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E) CABINET UNIT HEATERS. INSTALL BALANCE

REMOVE (E) RTU. REMOVE ASSOCIATED DUCT CONNECTIONS AND DROPS AS NEEDED FOR

) EXISTING BASEBOARD HEATER TO REMAIN. REPLACE (E)PNEUMATIC CONTROL VALVE WITH NEW DDC CONTROL VALVE. TYP ALL (E) BASEBOARD HEATERS NOT BEING REMOVED.

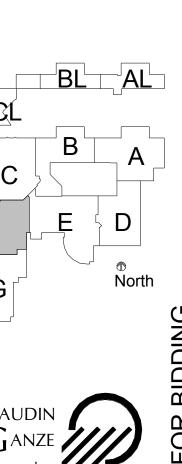


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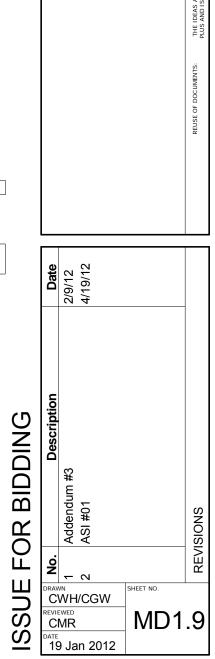


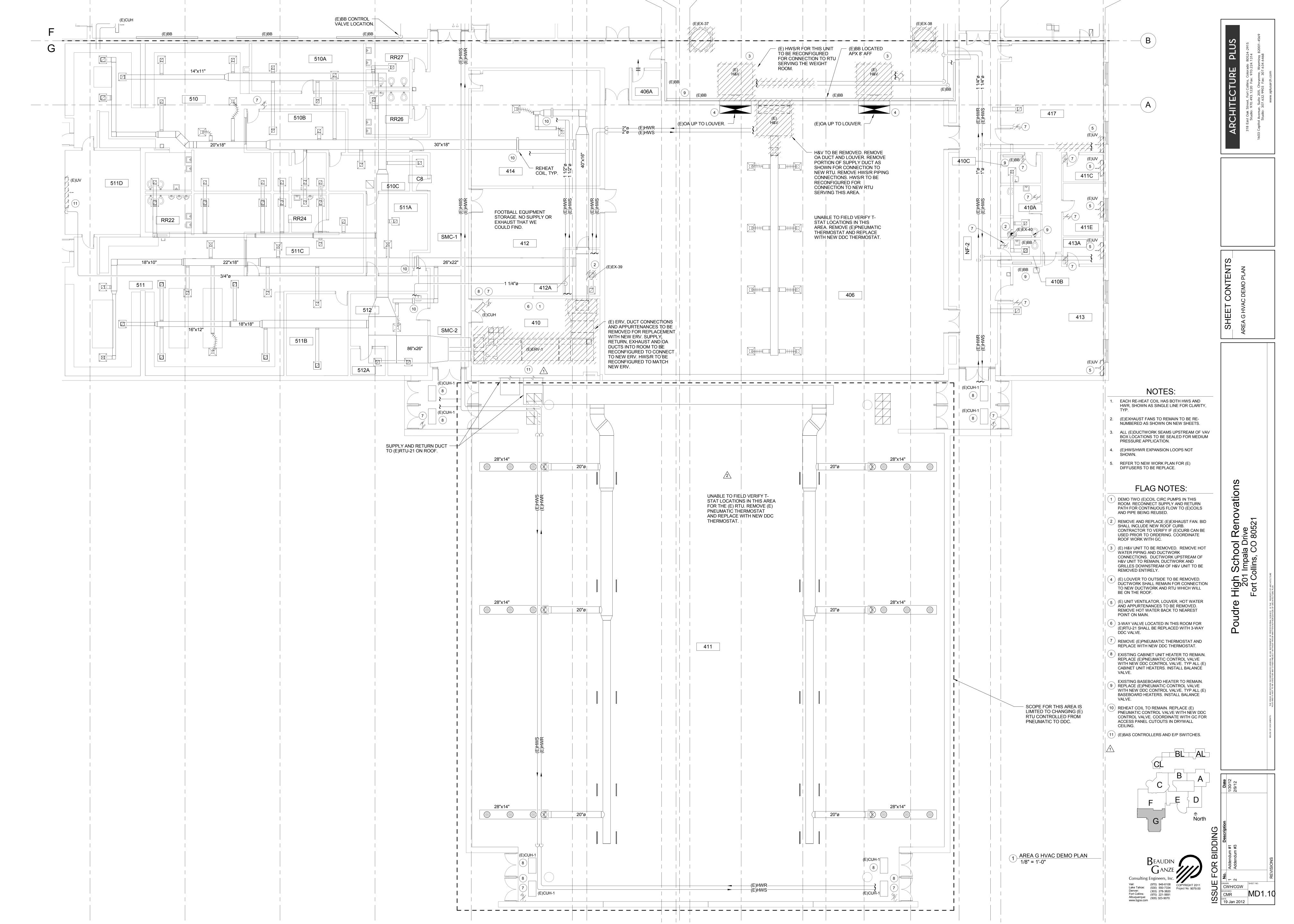
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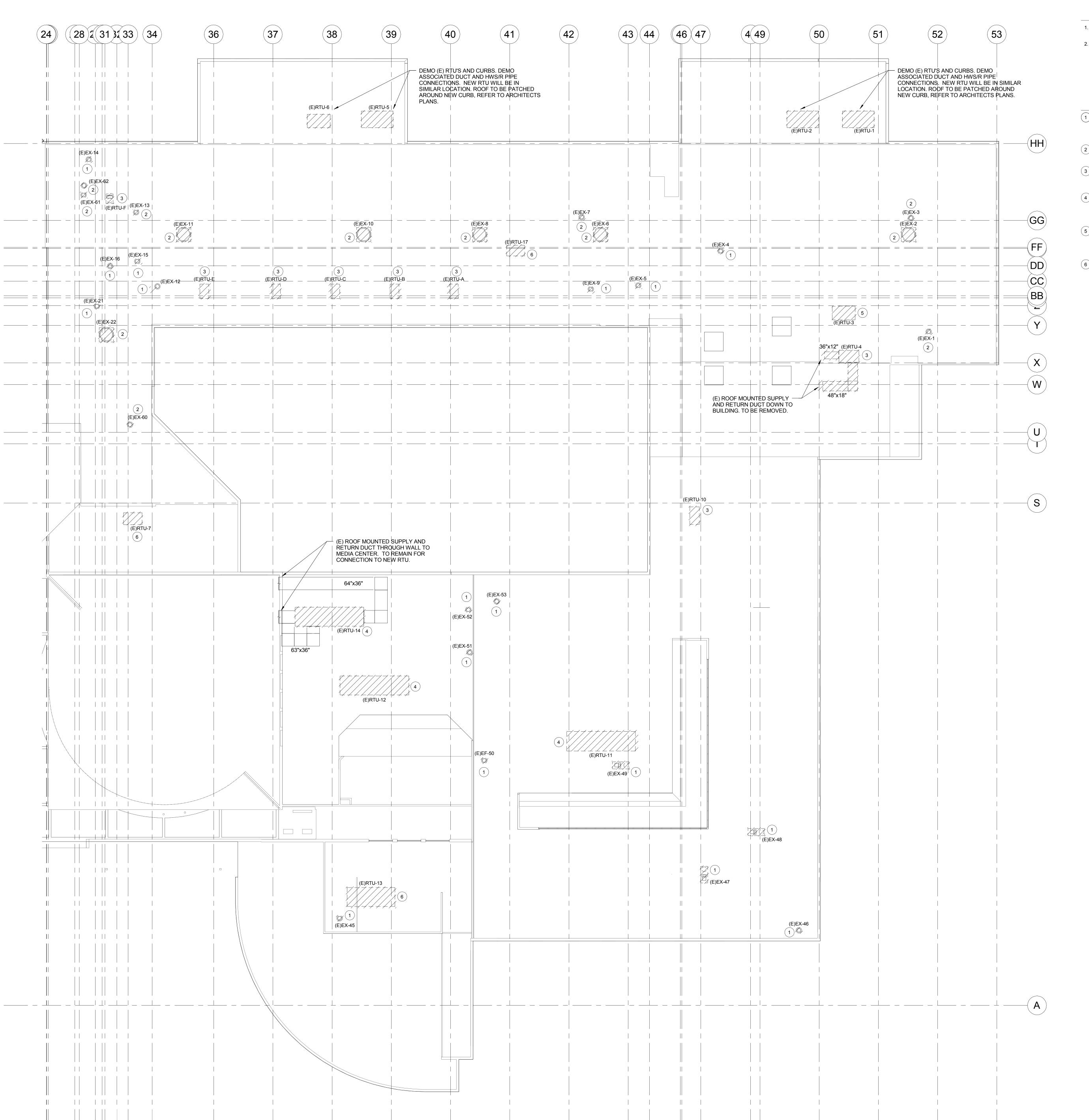
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NOTES: 1. (E)EXHAUST FANS TO REMAIN TO BE RE-NÚMBERED AS SHOWN ON NEW SHEETS. 2. (E) SLEEPERS USED TO SUPPORT CONDENSING UNITS FOR RTU'S TO BE REMOVED. REFER TO ARCHITECTS PLANS FOR ROOF PATCH DETAILS.

FLAG NOTES:

REMOVE AND REPLACE (E) EXHAUST FAN. BID SHALL INCLUDE NEW ROOF CURB. CONTRACTOR TO VERIFY IF (E)CURB CAN BE USED PRIOR TO ORDERING. COORDINATE ROOF WORK WITH GC.

(2) DEMO (E) FAN AND CURB, REMOVE POWER. REFER TO ARCHITECT'S PLANS FOR ROOF

PATCH DETAIL.

PATCH DETAILS.

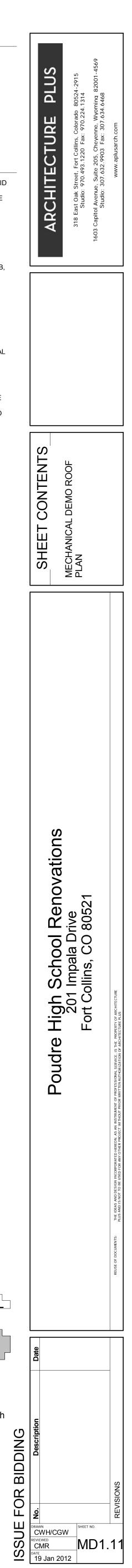
NEW RTU.

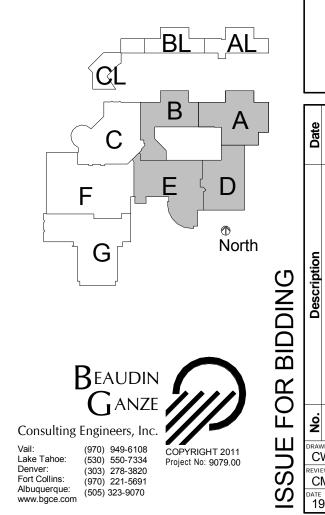
3 DEMO (E) RTU, DUCT CONNECTIONS AND ASSOCIATED HWS/R PIPING. DEMO (E) CURB, REFER TO ARCHITECTS PLANS FOR ROOF

4 DEMO (E) RTU, DUCT CONNECTIONS AND ASSOCIATED HWS/R PIPING. (E) CURB TO REMAIN FOR REUSE WITH NEW RTU. DUCTS AND HWS/R TO BE RECONFIGURED FOR CONNECTION TO NEW RTU.

(5) DEMO (E) RTU, DUCT CONNECTIONS AND ASSOCIATED HWS/R PIPING. (E) STRUCTURAL BEAMS ON ROOF TO REMAIN. DUCTS AND HWS/R TO BE RECONFIGURED FOR CONNECTION TO NEW RTU.

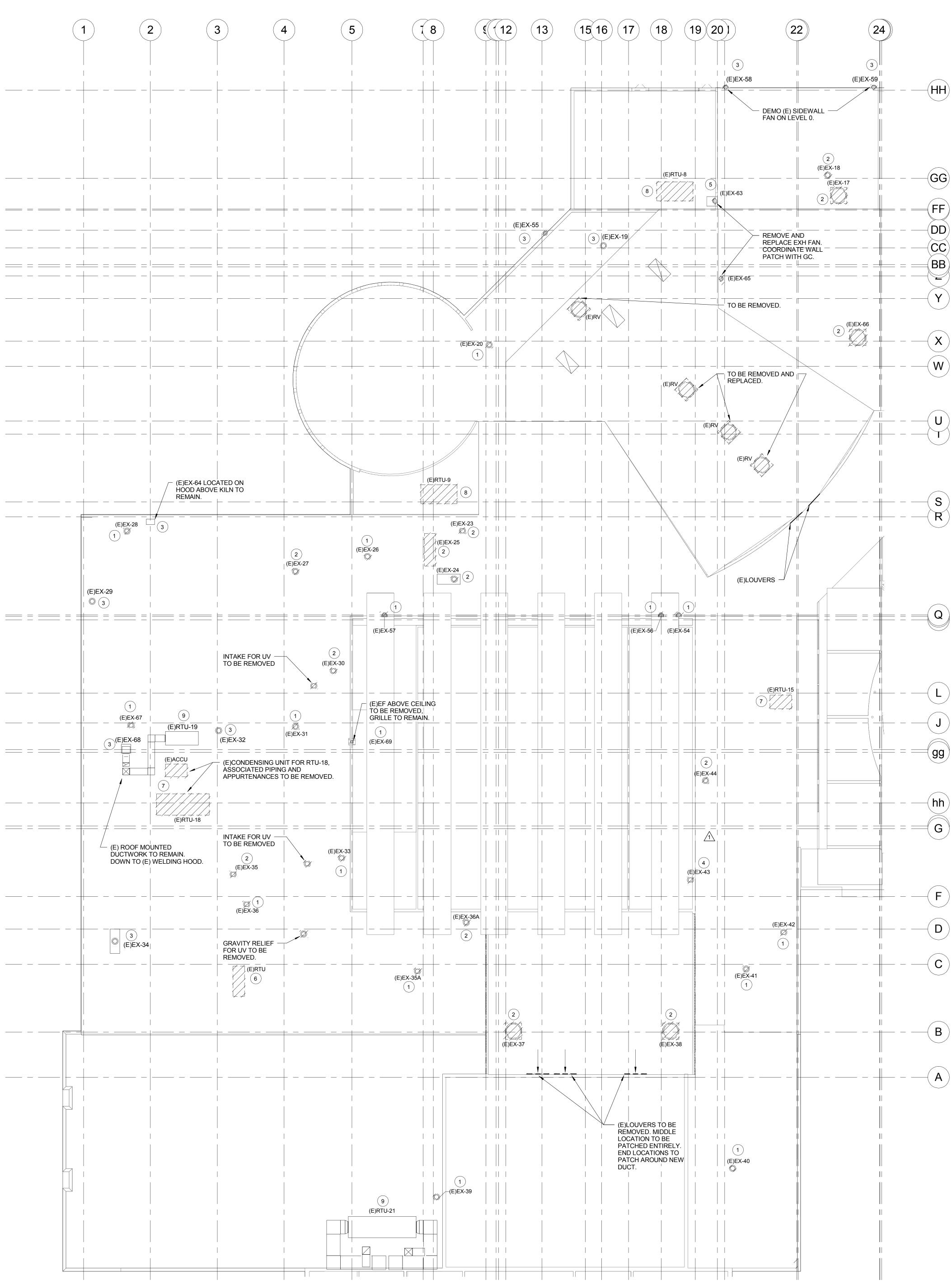
6 DEMO (E) RTU, DUCT CONNECTIONS AND ASSOCIATED HWS/R PIPING. (E) CURB TO BE REMOVED FOR INSTALLATION OF LARGER CURB FOR NEW UNIT. DUCTS AND HWS/R TO BE RECONFIGURED FOR CONNECTION TO

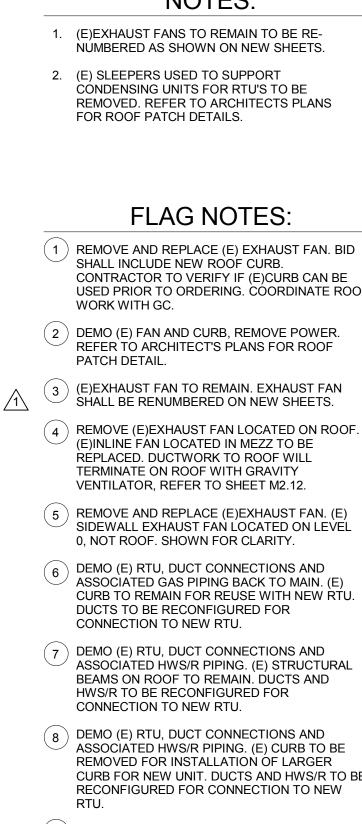




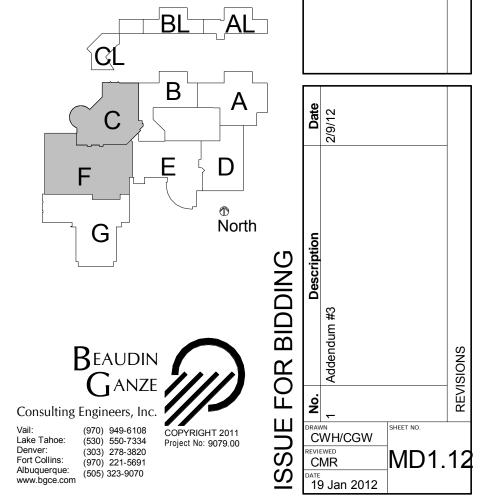
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CONTROLS.





NOTES: NUMBERED AS SHOWN ON NEW SHEETS. CONDENSING UNITS FOR RTU'S TO BE REMOVED. REFER TO ARCHITECTS PLANS

FLAG NOTES: 1 REMOVE AND REPLACE (E) EXHAUST FAN. BID SHALL INCLUDE NEW ROOF CURB. CONTRACTOR TO VERIFY IF (E)CURB CAN BE USED PRIOR TO ORDERING. COORDINATE ROOF

REFER TO ARCHITECT'S PLANS FOR ROOF

(E)EXHAUST FAN TO REMAIN. EXHAUST FAN SHALL BE RENUMBERED ON NEW SHEETS. (4) REMOVE (E)EXHAUST FAN LOCATED ON ROOF.

ASSOCIATED GAS PIPING BACK TO MAIN. (E) CURB TO REMAIN FOR REUSE WITH NEW RTU.

ASSOCIATED HWS/R PIPING. (E) STRUCTURAL BEAMS ON ROOF TO REMAIN. DUCTS AND

REMOVED FOR INSTALLATION OF LARGER CURB FOR NEW UNIT. DUCTS AND HWS/R TO BE RECONFIGURED FOR CONNECTION TO NEW

(9) (E)RTU TO REMAIN. REFURBISH WITH NEW DDC



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BIDDING