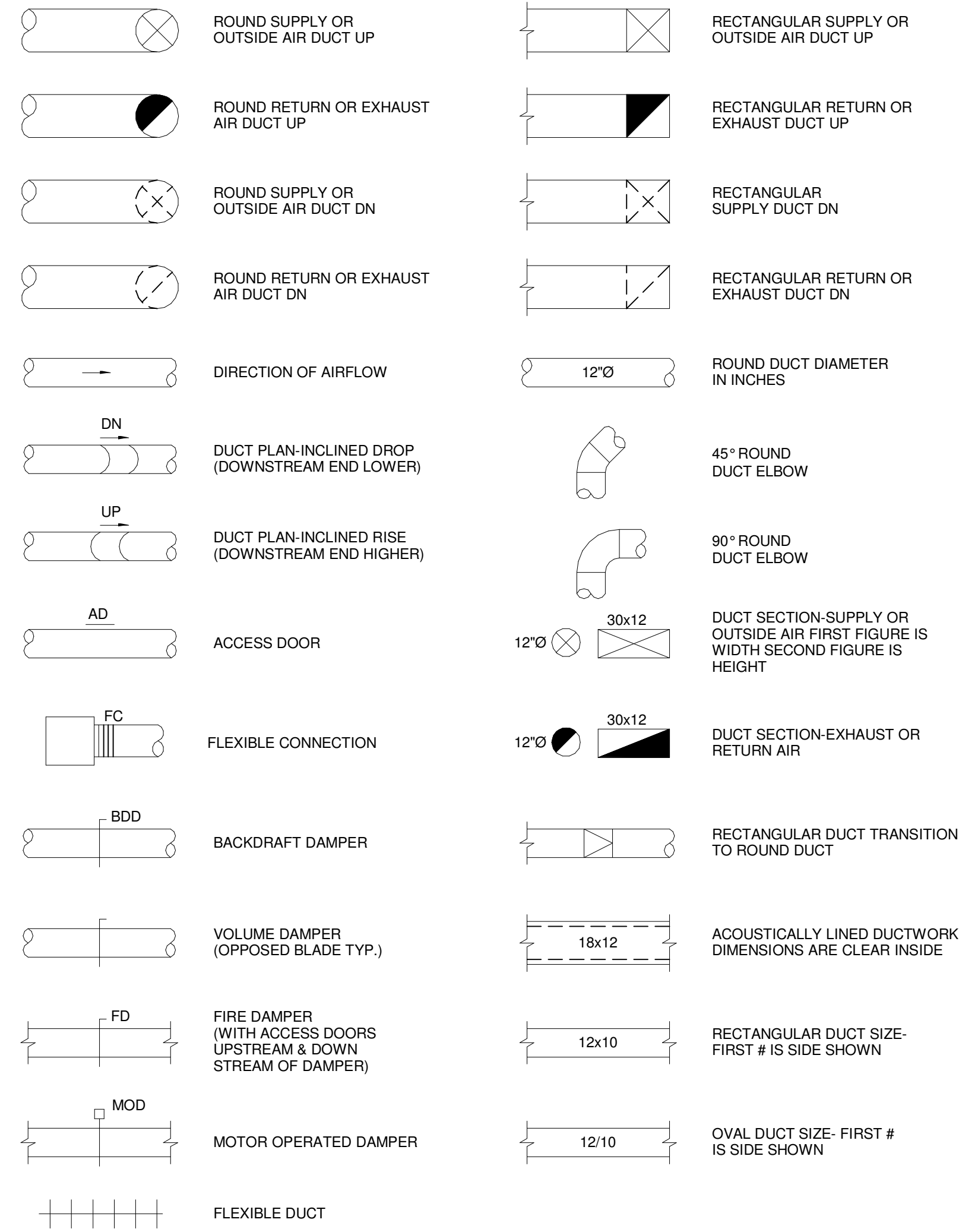
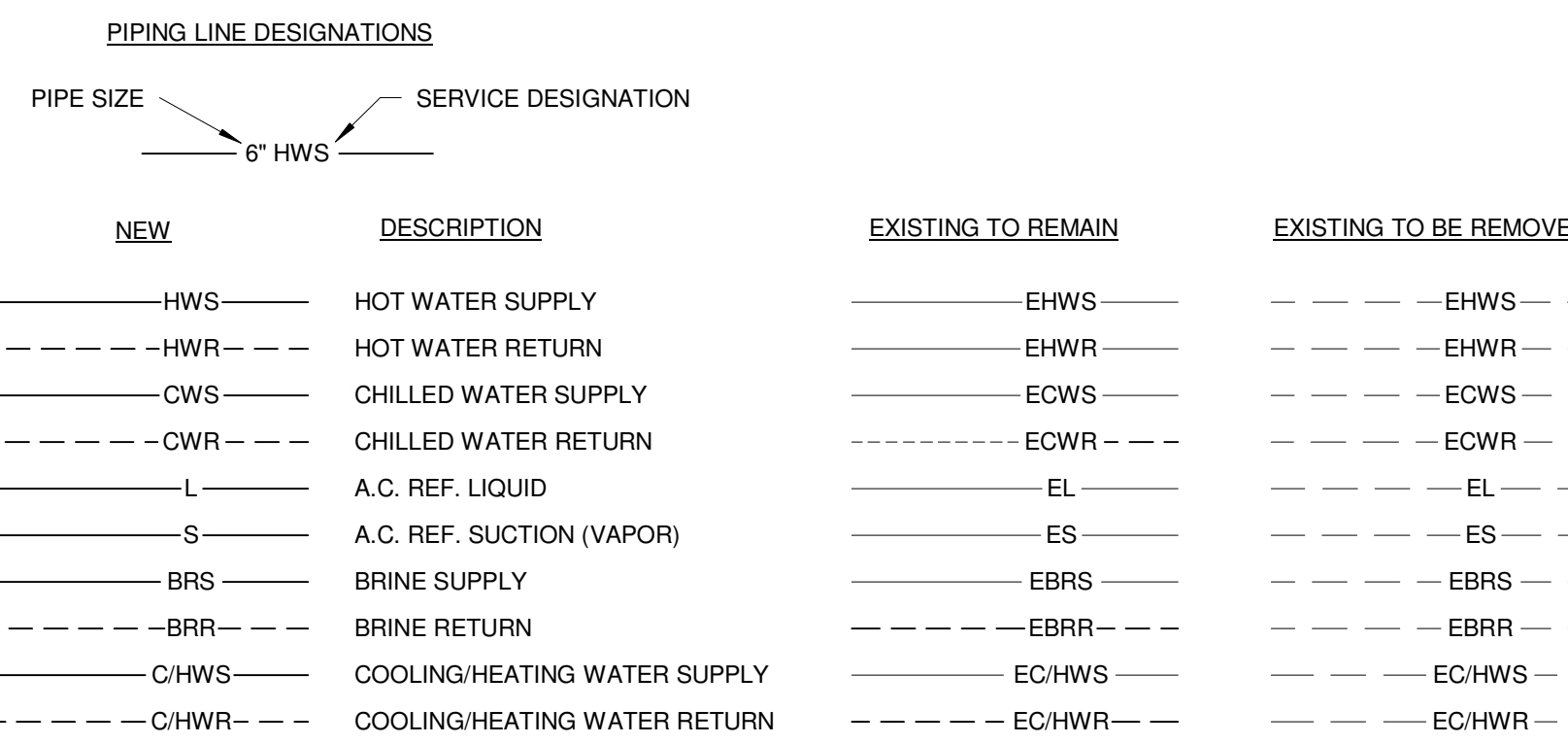


**DUCTWORK STANDARDS**



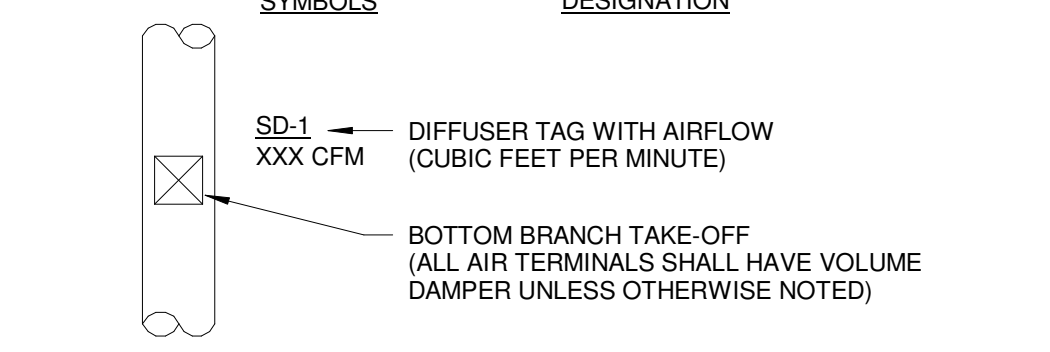
**PIPING SERVICE LEGEND**



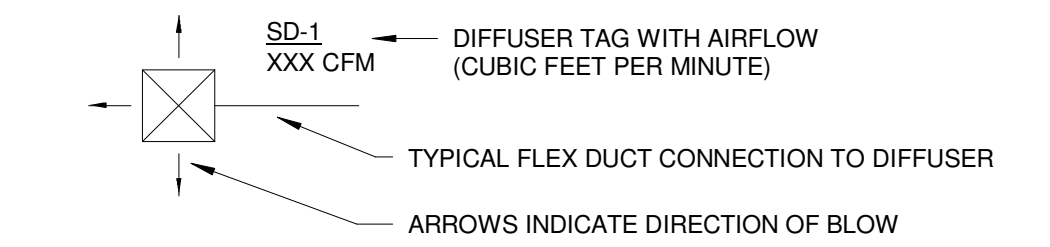
**GRILLE, REGISTERS, DIFFUSERS & AIRFLOW**

ABBREV.	DESIGNATION	ABBREV.	DESIGNATION
EG	EXHAUST GRILLE	EA	EXHAUST AIR
RD	RETURN DIFFUSER	OA	OUTDOOR AIR
RG	RETURN GRILLE	RA	RETURN AIR
RR	RETURN REGISTER	RLA	RELIEF AIR
SD	SUPPLY DIFFUSER	SA	SUPPLY AIR
LSD	LINEAR SUPPLY DIFFUSER		
SG	SUPPLY GRILLE		
TD	TRANSFER DIFFUSER		
TG	TRANSFER GRILLE		
TR	TRANSFER REGISTER		
VD	VOLUME DAMPER		

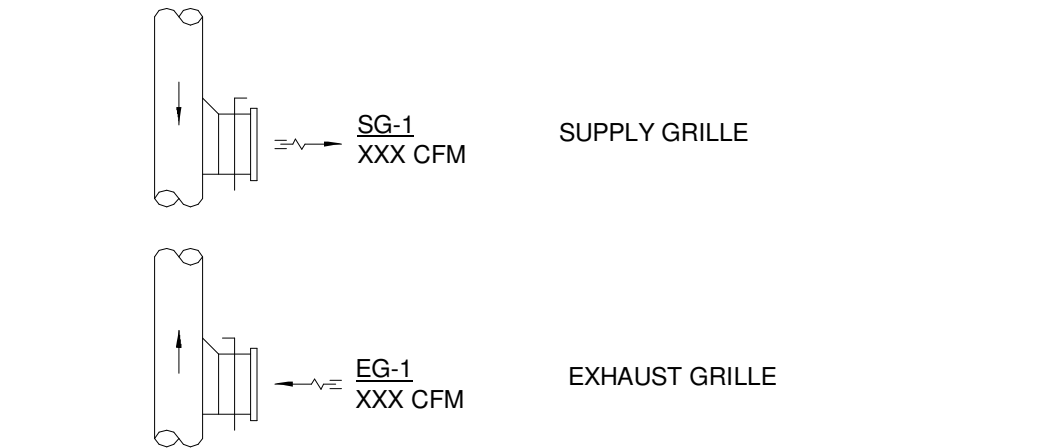
**TYPICAL BOTTOM OF DUCT DIFFUSER DROP**



**TYPICAL CEILING DIFFUSER**



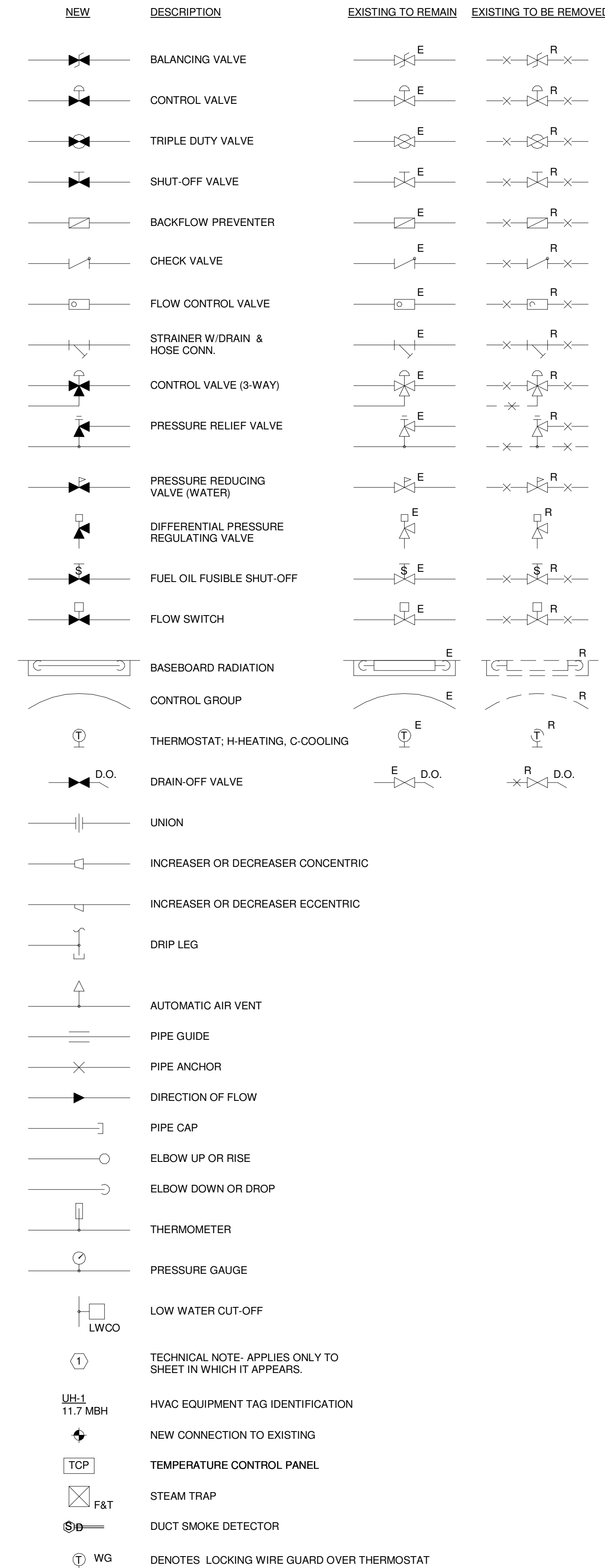
**TYPICAL REGISTER/GRILLE**



**EQUIPMENT TAG LEGEND**

TAG	DESIGNATION
ACCU-1	AIR COOLED CONDENSING UNIT DESIGNATION
AHU-1	AIR HANDLING UNIT DESIGNATION
AS-1	AIR SERPERATOR DESIGNATION
B-1	BOILER DESIGNATION
BPD-1	BYPASS DAMPER DESIGNATION
BT-1	BRINE TANK DESIGNATION
CH-1	CHILLER UNIT DESIGNATION
CONV-1	CONVECTOR UNIT DESIGNATION
CU-1	CONDENSING UNIT DESIGNATION
CUH-1	CABINET UNIT HEATER DESIGNATION
DS-1	DUCT SILENCER DESIGNATION
EE-1	EXHAUST FAN DESIGNATION
EVU-1	EVAPORATOR UNIT DESIGNATION
FC-1	FAN COIL DESIGNATION
FTB-1	FINNED TUBE RADIATION DESIGNATION
HC-1	HEATING COIL DESIGNATION
HE-1	HEAT EXCHANGER DESIGNATION
HRU-1	HEAT RECOVERY UNIT DESIGNATION
HR-1	HEATING RECOVERY BOX DESIGNATION
IE-1	INDOOR EVAPORATOR DESIGNATION
P-1	PUMP DESIGNATION
RF-1	RETURN FAN DESIGNATION
SEF-1	SMOKE EXHAUST FAN DESIGNATION
SE-1	SUPPLY FAN DESIGNATION
TSH-1	TOE SPACE HEATER DESIGNATION
UH-1	UNIT HEATER DESIGNATION
UV-1	UNIT VENTILATOR DESIGNATION
VAV-1	VARIABLE AIR VOLUME BOX DESIGNATION
XT-1	EXPANSION TANK DESIGNATION
ZD-1	ZONE DAMPER DESIGNATION

**HEATING AND VENTING SYMBOLS**



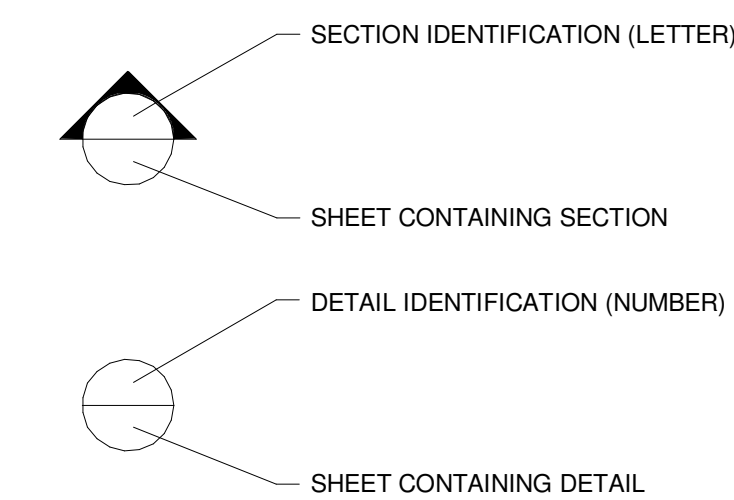
**MISCELLANEOUS ABBREVIATIONS**

ABBREV.	DESIGNATION
A	ANCHOR
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
AWT	AVERAGE WATER TEMPERATURE
BD	BAROMETRIC DAMPER
BDD	BACKDRAFT DAMPER
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNITS
BV	BRICK VENT
CD	COOLING CONDENSATE DRAINAGE
CFM	CUBIC FEET PER MINUTE
D	DRAIN
DB	DRY BULB
EAT	ENTERING AIR TEMP.
ECC	ECCENTRIC
EL	ELEVATION
EWT	ENTERING WATER TEMPERATURE
FA	FRESH AIR
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HWBB	HOT WATER BASEBOARD
HZ	HERTZ
LAT	LEAVING AIR TEMP.
LF	LINEAL FEET
LRA	LOCKED ROTOR AMPS
LWCO	LOW WATER CUT-OFF
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MD	MANUAL DAMPER
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MV	MANUAL VENT
N.C.	NORMALLY CLOSED
OA	OUTSIDE AIR
OSV	OIL SAFETY VALVE
PD	PRESSURE DROP
RIC	RUN IN COVER
RPM	REVOLUTIONS PER MINUTE
SP	STATIC PRESSURE
TOS	TOP OF STEEL
TV	TURNING VANES
TYP.	TYPICAL
V	VENT
VD	VOLUME DAMPER
W	WITH
WB	WET BULB
ZD	ZONE DAMPER
E	EXISTING TO REMAIN
ER	EXISTING RELOCATED
NR	NEW TO REPLACE EXISTING IN EXISTING LOCATION
R	EXISTING TO BE REMOVED
RR	REMOVE & RELOCATE EXISTING

**GENERAL NOTES**

- ALL NEW SPACE THERMOSTATS SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR (AFF).
- EQUIPMENT, DUCTWORK AND PIPING LOCATIONS SHOWN ARE APPROXIMATE EXCEPT WHERE DIMENSIONED. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR TO AVOID INTERFERENCES.
- FLEXIBLE CONNECTIONS SHALL BE PROVIDED BETWEEN MOTORIZED UNITS AND DUCTWORK CONNECTIONS.
- PROVIDE ACCESS DOORS IN EQUIPMENT AND DUCTWORK FOR ACCESS TO DAMPERS, MOTORS, FILTERS, FANS AND ON BOTH SIDES OF HEATING COILS.
- PIPING SHALL BE RUN AS DIRECT AS POSSIBLE, PARALLEL TO & FORMING RIGHT ANGLES TO THE LINES OF THE BUILDING, SUPPORTED FROM THE STRUCTURE, FREE FROM POCKETS & SAGS & FITTED TO LOW POINT DRAINS.
- LOCATE ALL VALVES FOR EASY ACCESS & OPERATION. DO NOT LOCATE VALVES W/STEMS BELOW HORIZONTAL.
- ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WEATHERTIGHT.
- ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
- DUCTWORK SHALL BE COORDINATED TO PREVENT ANY INTERFERENCES W/ PLUMBING, PIPING, ELECTRICAL, STRUCTURAL, FIRE PROTECTION, ARCHITECTURAL AND OTHER WORK.
- ALL DUCT SIZES SHOWN ARE CLEAR INTERNAL DIMENSIONS.
- CONTRACTOR TO FIELD VERIFY ALL EXISTING DUCT SIZES, PIPE SIZES, LOCATIONS, ETC. INCLUDING LOCATIONS & ARRANGEMENTS OF SAME. COORDINATE NEW WORK WITH EXISTING CONDITIONS.

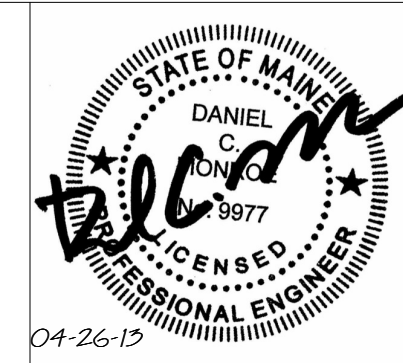
**SECTION & DETAIL MARKERS**



1	CONSTRUCTION DOCUMENTS	01-21-2013
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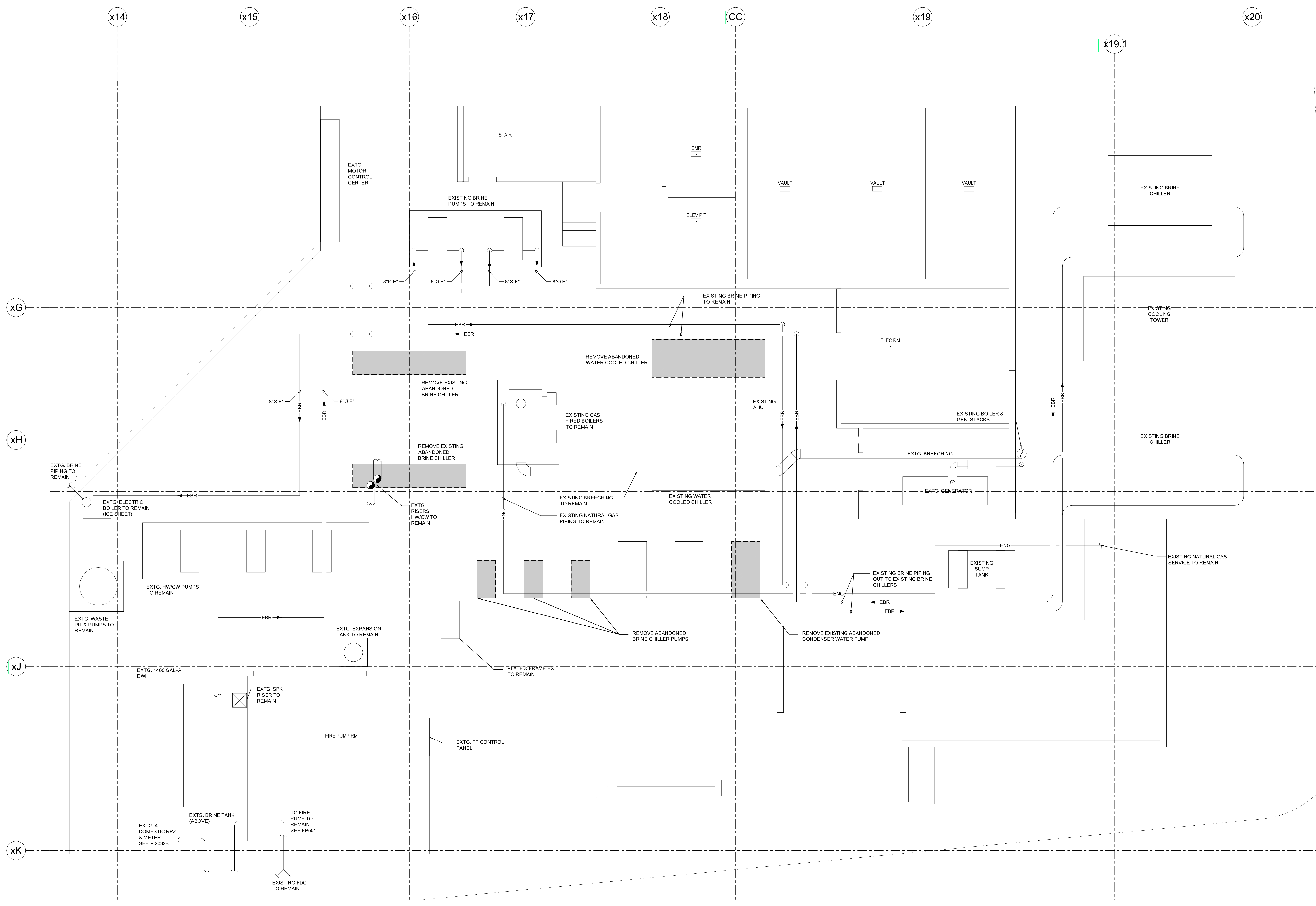
PROJECT: PORTLAND, ME

MECHANICAL LEGEND

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PROJECT No. 3757.00	GRAPHIC SCALE 1" = 1'
SCALE AS NOTED	
PROJECT MANAGER: JRB	SHEET No. M0.01
DRAWN BY: CGB	
CHECKED BY: DMON	

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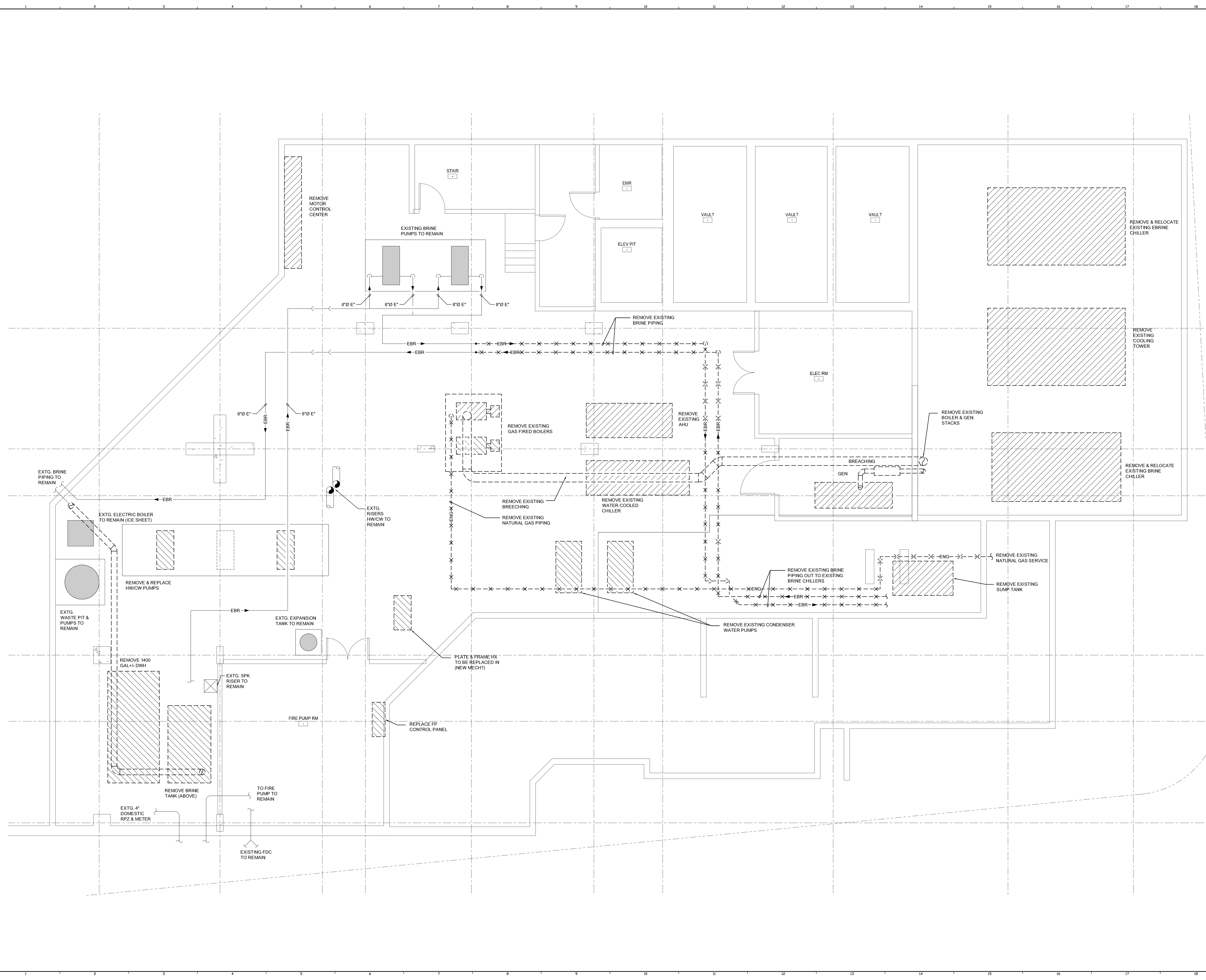
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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**  
 PROJECT: PORTLAND, ME  
**MECHANICAL LEVEL MECHANICAL REMOVALS PLAN PHASE 1**

SHEET TITLE:	MECHANICAL LEVEL MECHANICAL REMOVALS PLAN PHASE 1
WBRC CAD FILE:	3757.00 - MD2.03
PROJECT No.:	3757.00
SCALE:	1/4" = 1'-0"
PROJECT MANAGER:	JRB
DRAWN BY:	CGB
CHECKED BY:	DMON
SHEET No.:	MD2.03A

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PROJECT: PORTLAND, ME  
MECHANICAL LEVEL MECHANICAL REMOVALS PLAN

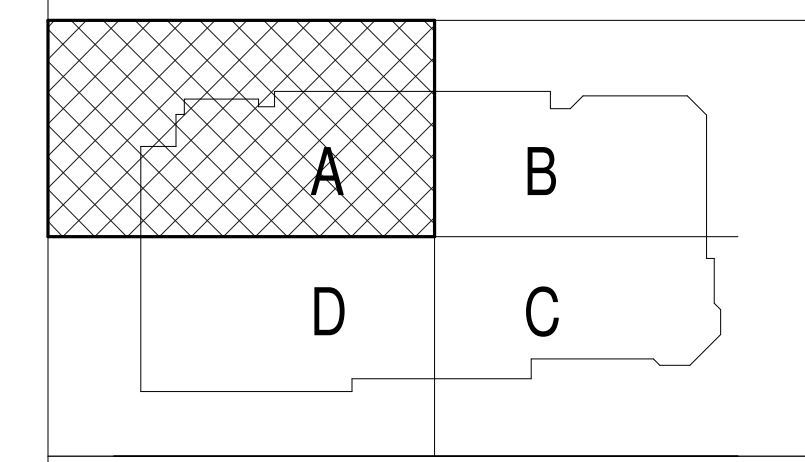
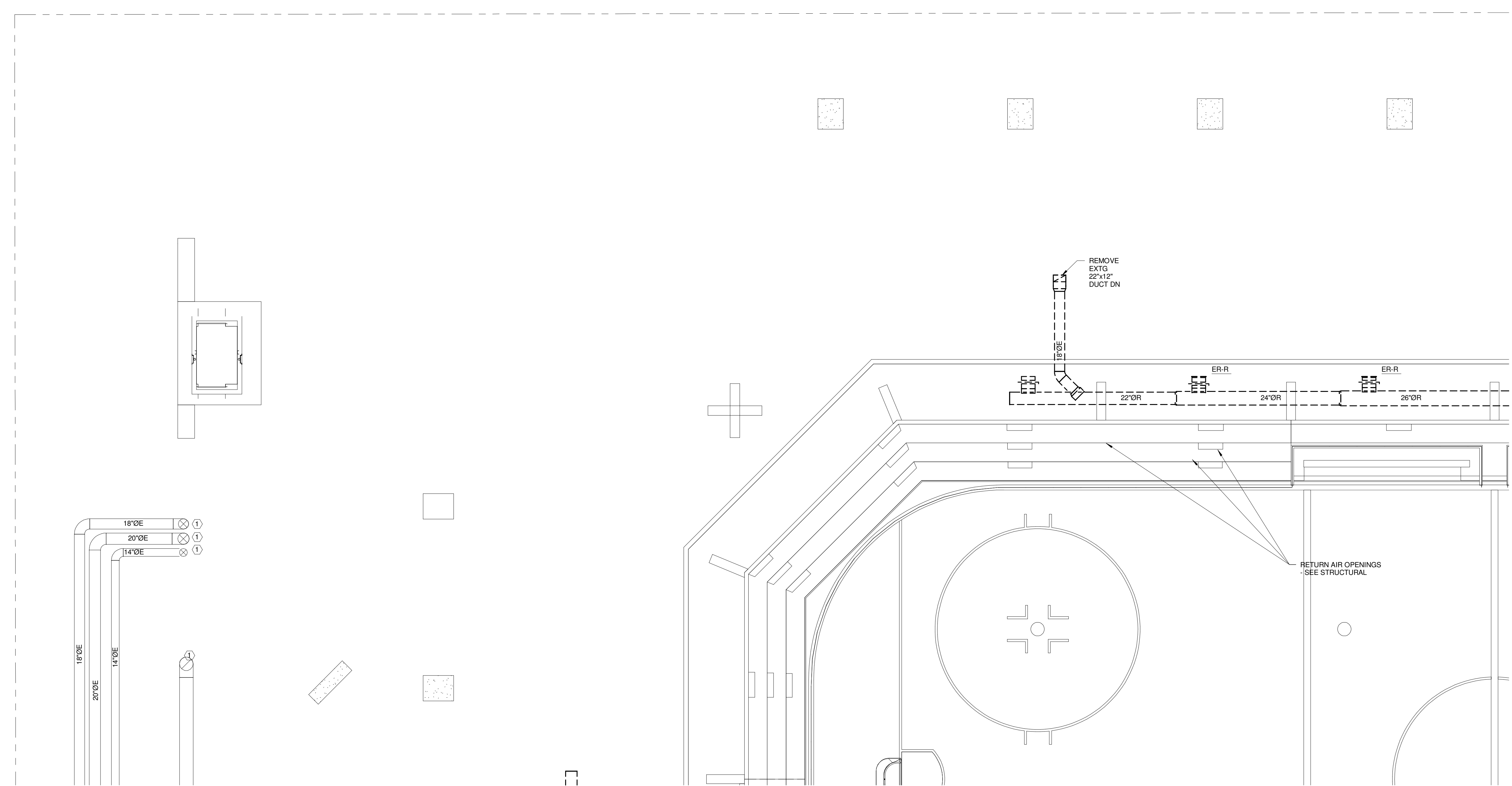
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PROJECT MANAGER:	JRF
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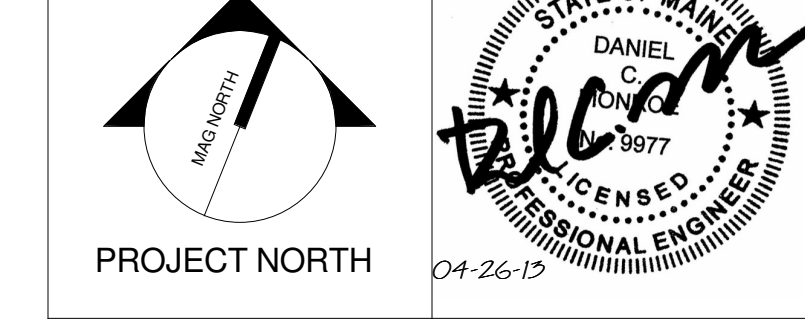
- ① CAP & SEAL DUCT @ FLOOR



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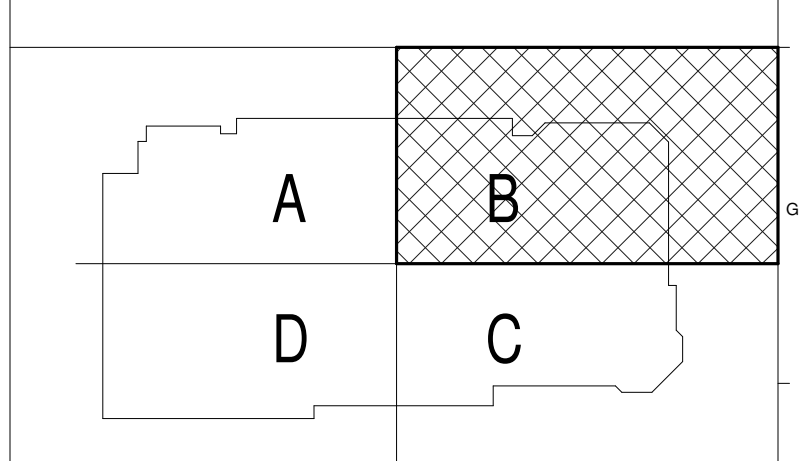
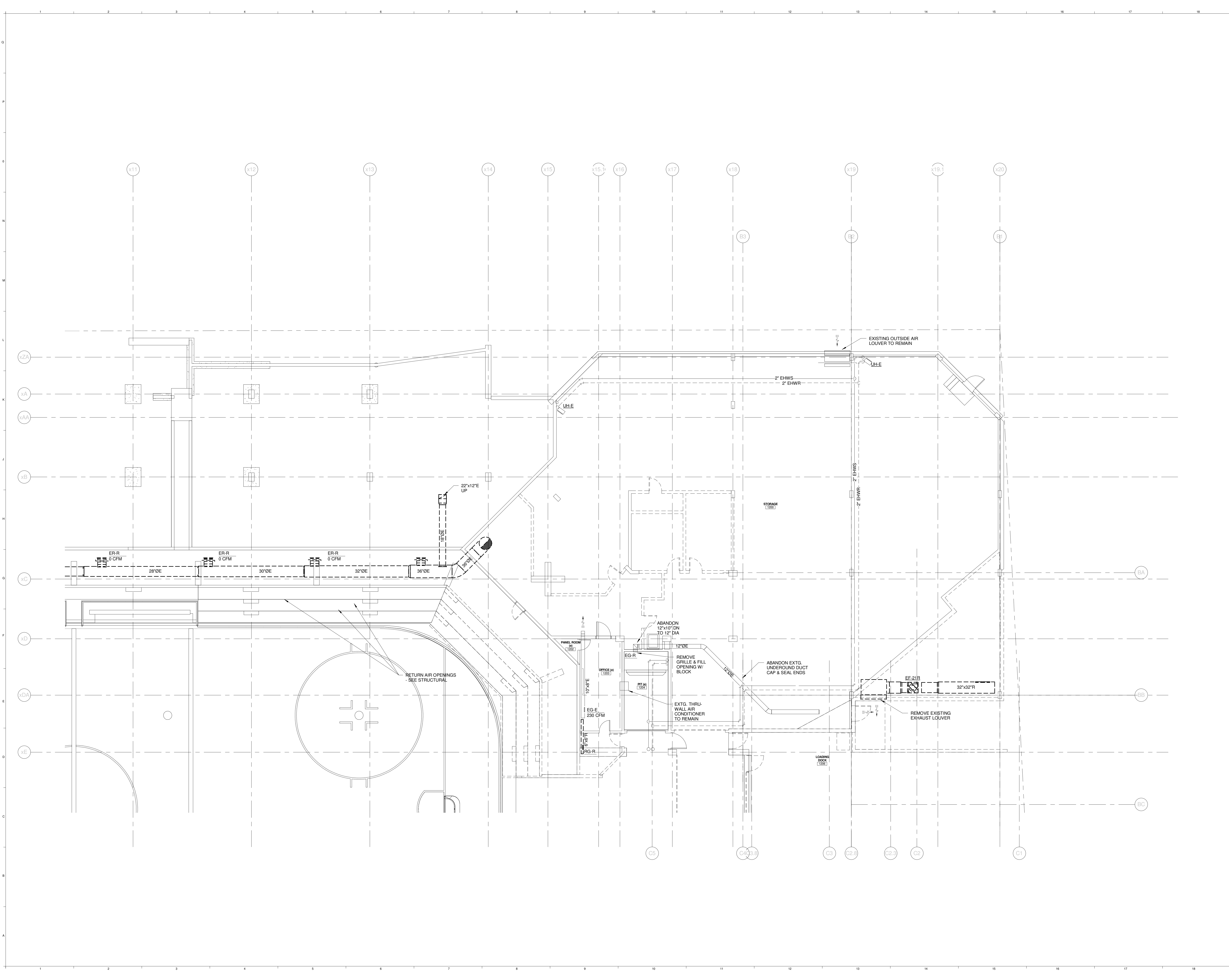
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DRAWN BY: CGB	CHECKED BY: DMON



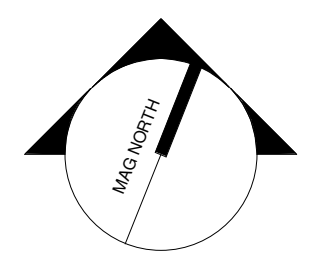
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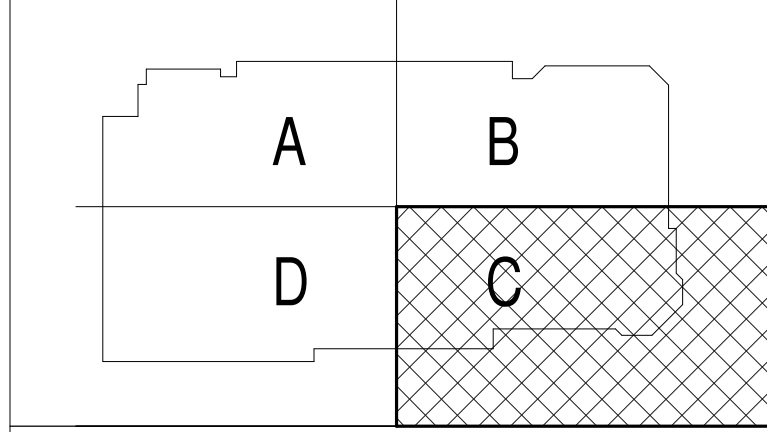
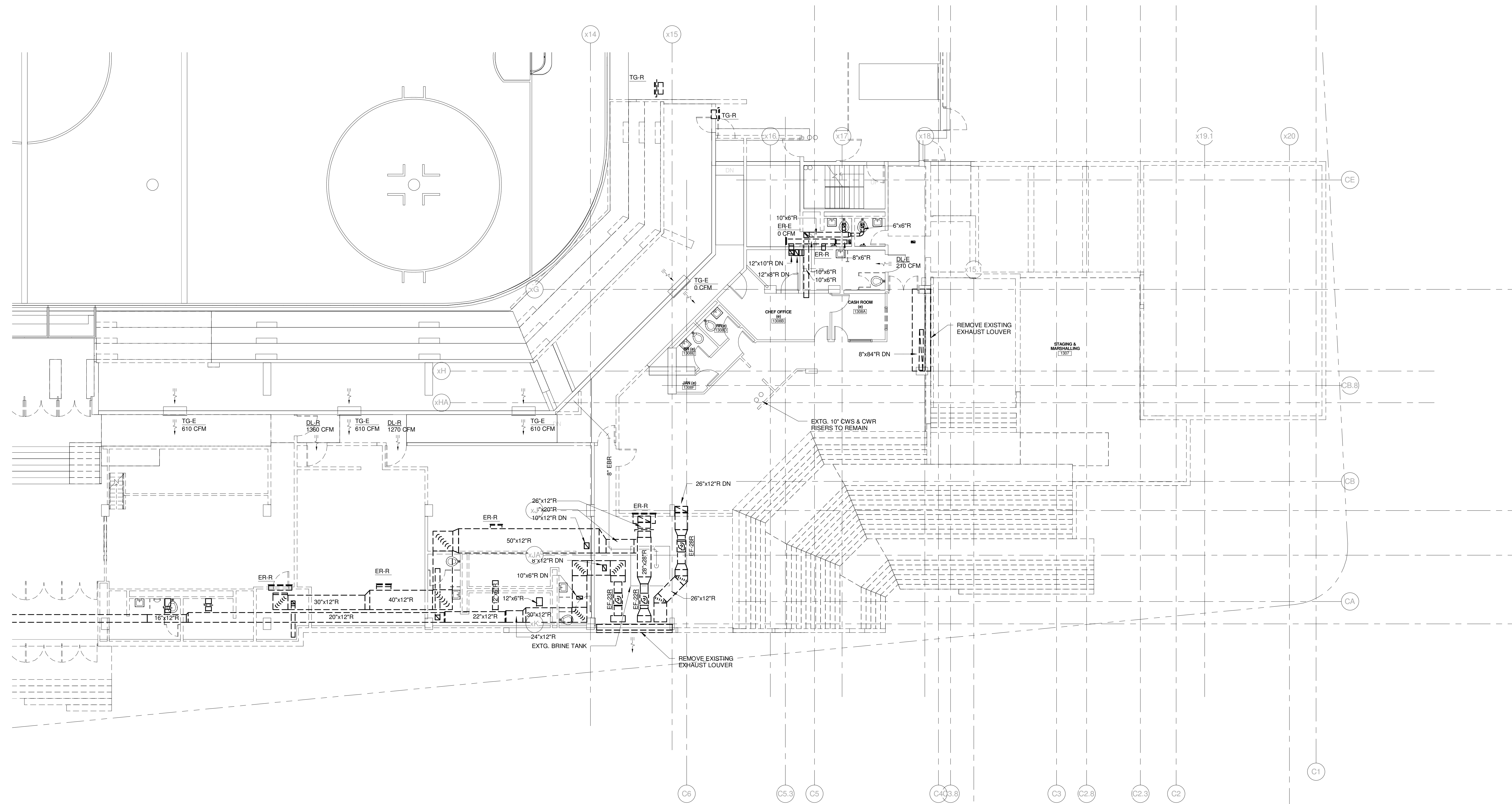
**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**  
PROJECT: PORTLAND, ME  
**EVENT LEVEL MECHANICAL DEMO PLAN - QUAD B**

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SHEET No.	MD2.12B

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PROJECT: PORTLAND, ME  
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EVENT LEVEL MECHANICAL DEMO PLAN - QUAD C

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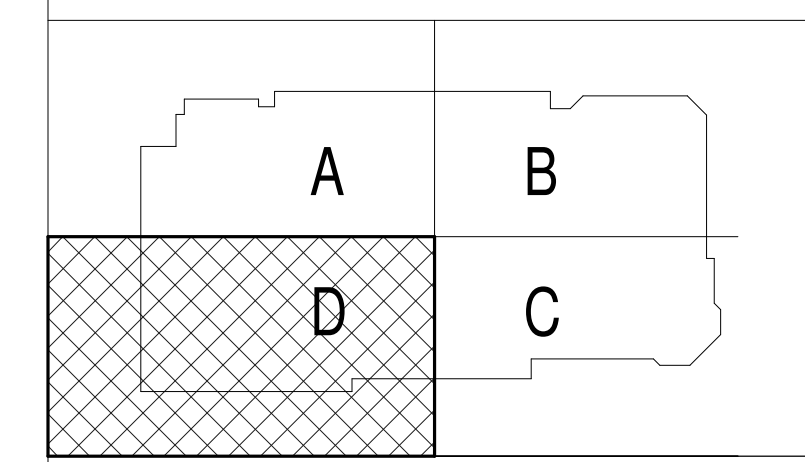
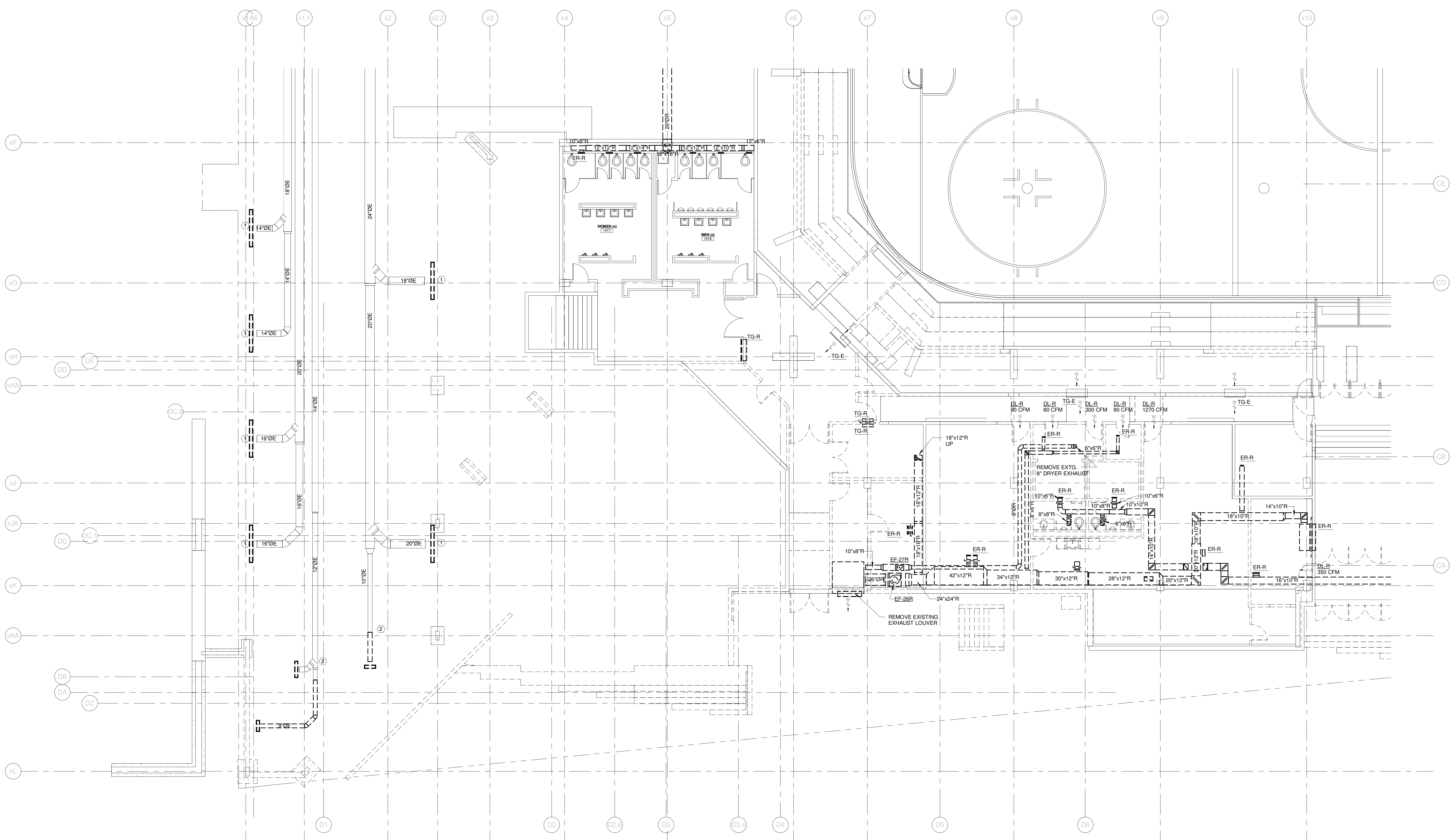
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- ① CAP & SEAL DUCT @ FLOOR
- ② CAP & SEAL DUCT, ABANDON IN PLACE



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EVENT LEVEL MECHANICAL DEMO PLAN - QUAD D

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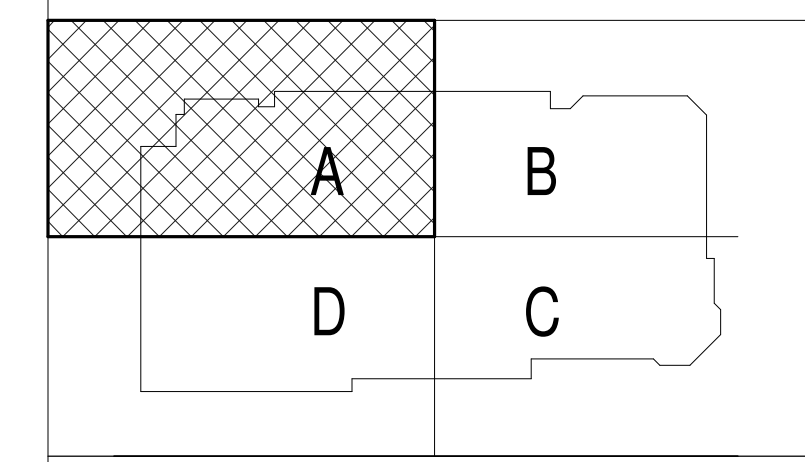
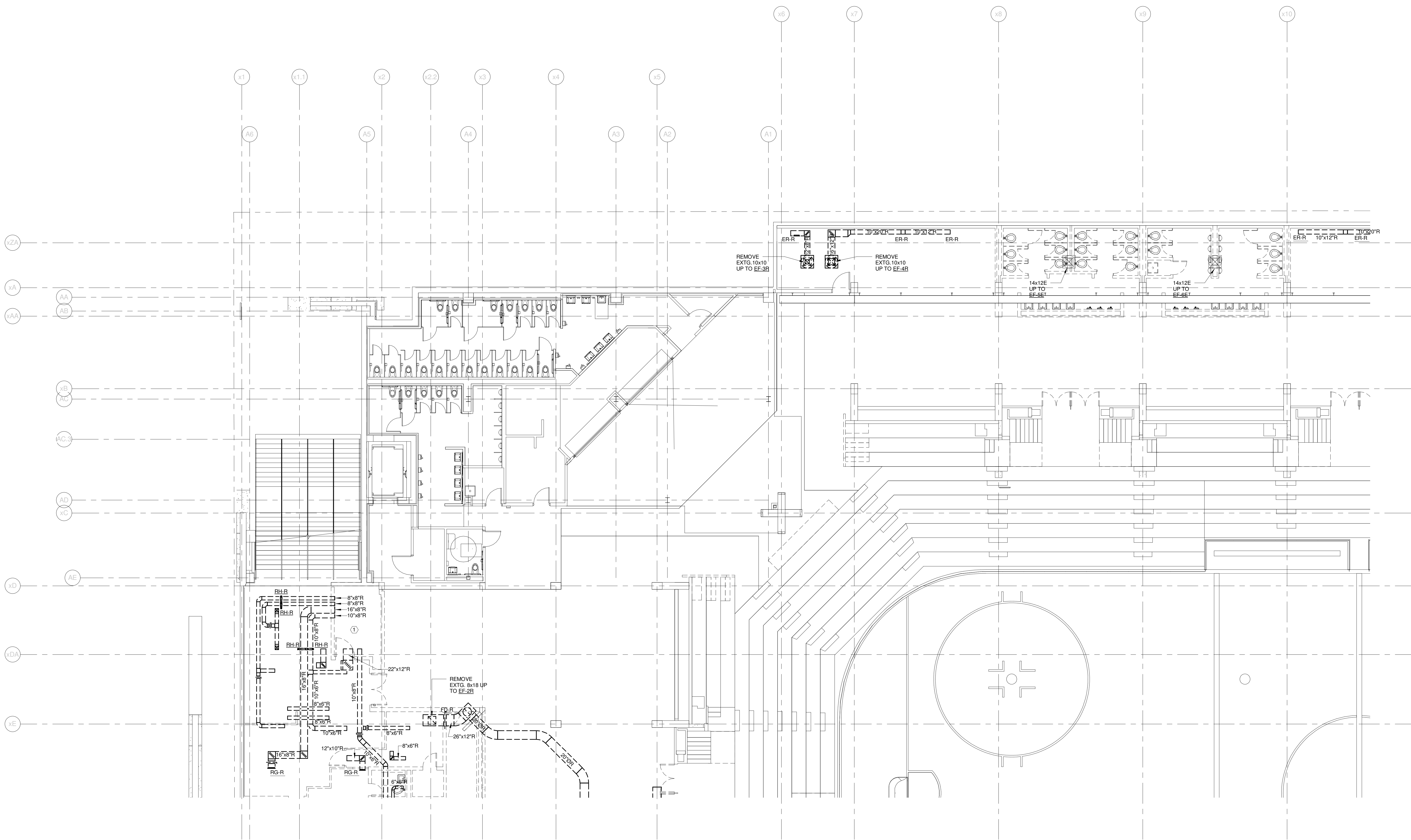
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PROJECT: PORTLAND, ME

CONCOURSE LEVEL  
MECHANICAL DEMO PLAN -  
QUAD A

SHEET TITLE

WBRC CAD FILE: 375700 - 0002 Mechanical.rvt

PROJECT No. 3757.00 GRAPHIC SCALE: 1" = 1'-0"

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PROJECT MANAGER: JRB SHEET No. MD2.21B

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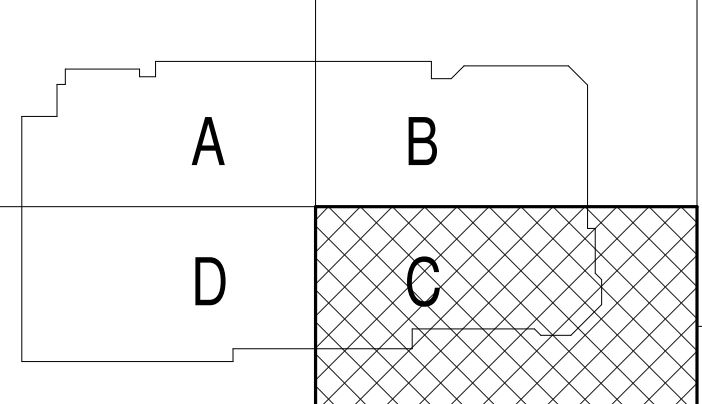
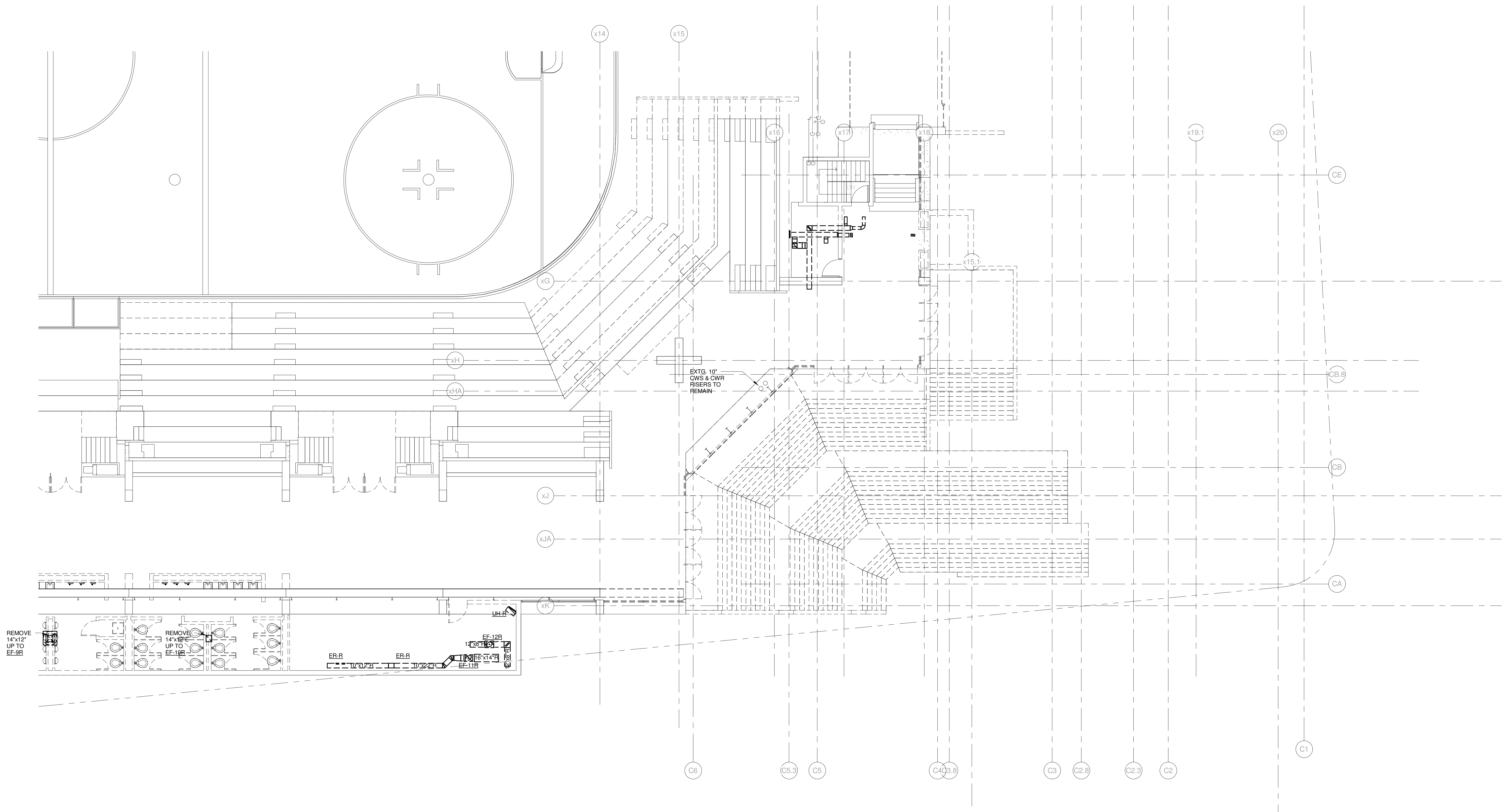
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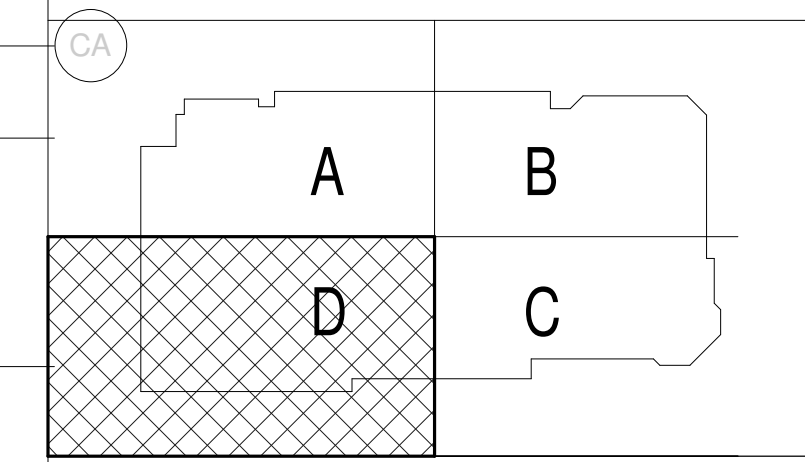
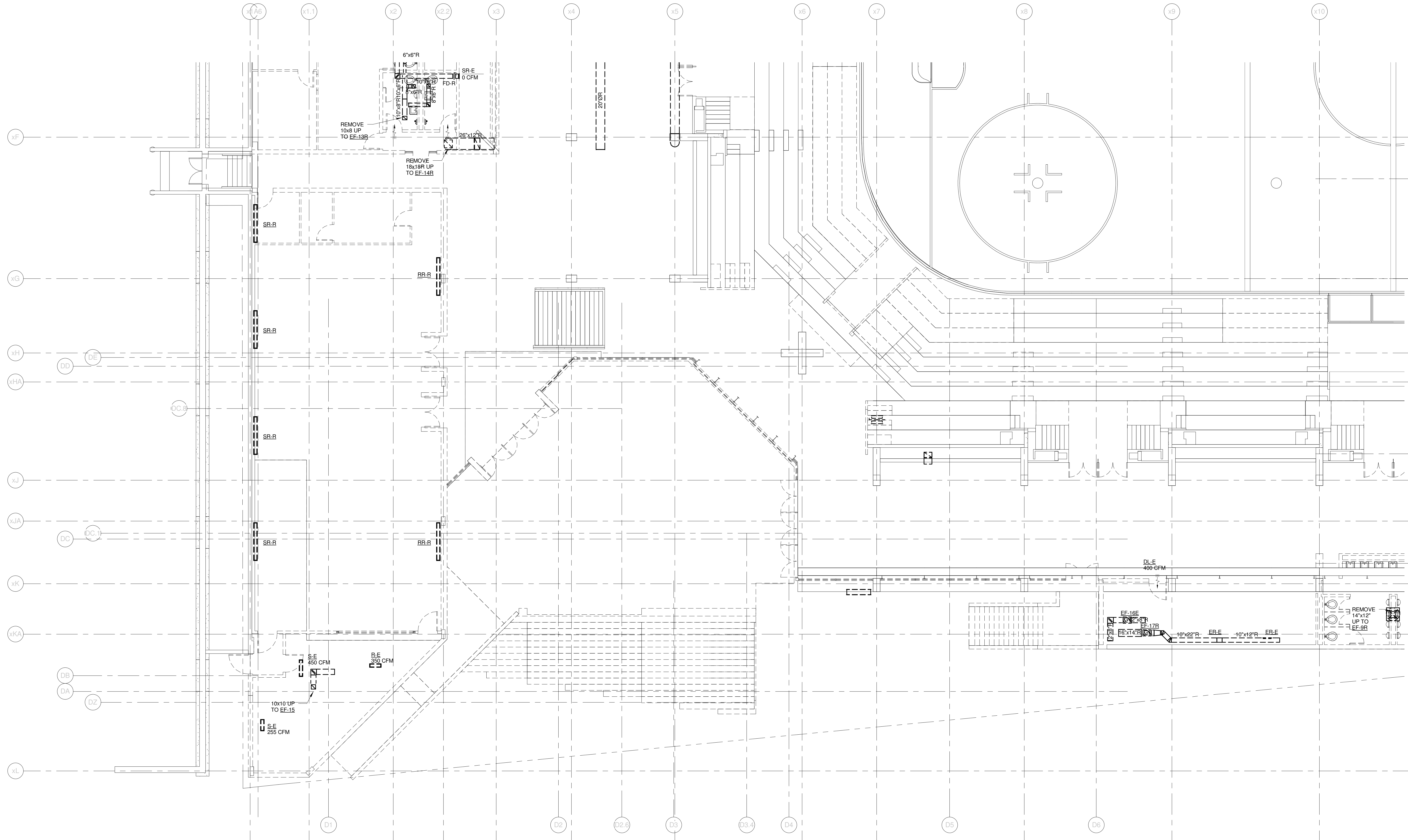
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PROJECT: PORTLAND, ME  
**CONCOURSE LEVEL  
MECHANICAL DEMO PLAN -  
QUAD C**

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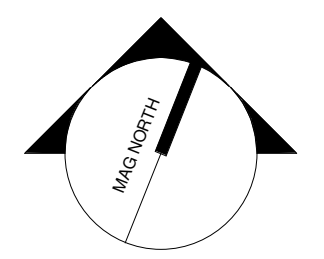
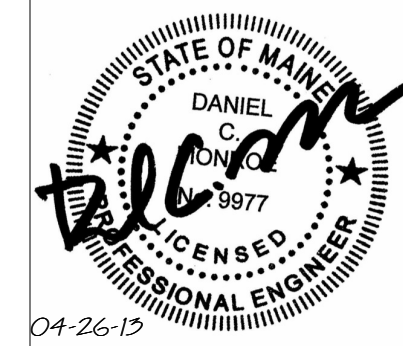
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CUMBERLAND COUNTY CIVIC CENTER RENOVATION  
PROJECT: PORTLAND, ME

CONCOURSE LEVEL  
MECHANICAL DEMO PLAN -  
QUAD D

SHEET TITLE	WBRC CAD FILE: 375700 - 0002 Mechanical.rvt	GRAPHIC SCALE	1" = 1'-0"
PROJECT No.	3757.00	SCALE	1/8" = 1'-0"
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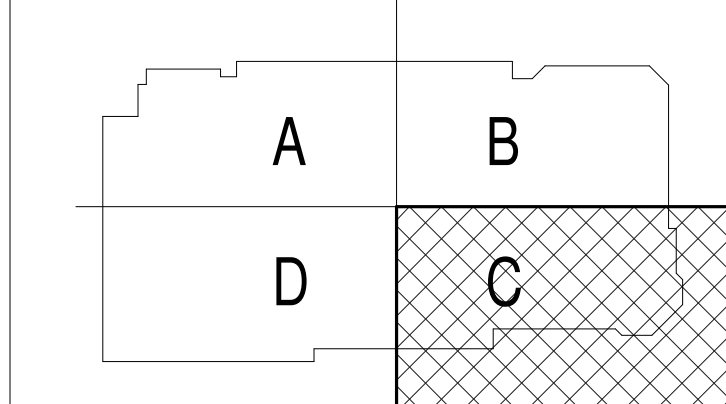
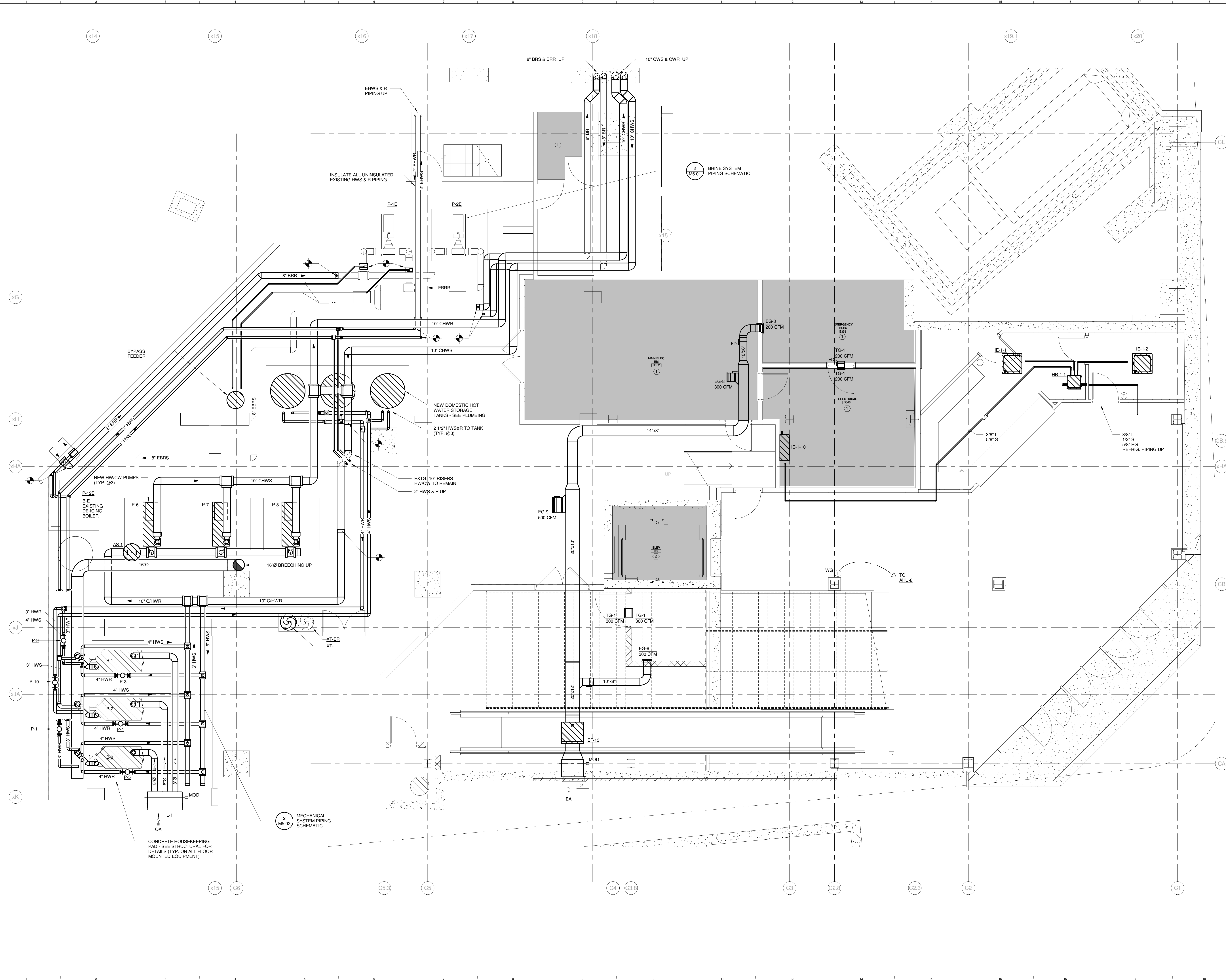
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**GENERAL NOTES:**

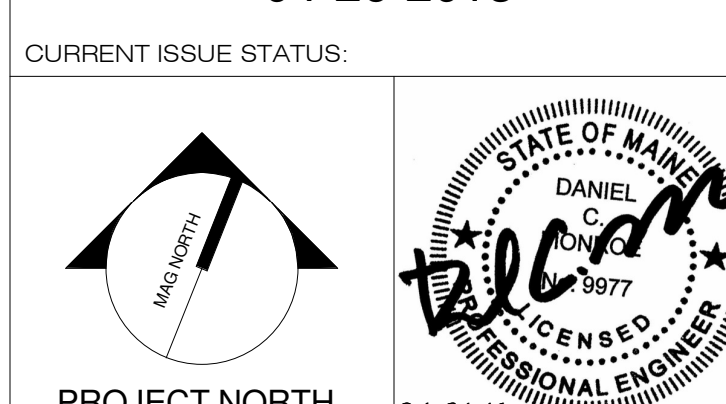
- 1. ALL VRF REFRIGERANT PIPING BRANCHES BETWEEN HEAT RECOVERY BOX & EVAPORATOR SHALL BE 1/4" LIQUID & 1/2" SUCTION UNLESS NOTED OTHERWISE

**TECHNICAL NOTES:**

- 1. SPACE RESERVED FOR ELECTRICAL - NO PIPING OR DUCTWORK PERMITTED
- 2. ELEVATOR - NO PIPING OR DUCTWORK PERMITTED



1	RFIR #173	03-06-2013
0	CONSTRUCTION DOCUMENTS	01-21-2013
REV.	DESCRIPTION	DATE
	RFIR #289	
	04-26-2013	



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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME  
**MECHANICAL LEVEL MECHANICAL PLAN**

SHEET TITLE	MECHANICAL LEVEL MECHANICAL PLAN	
WBRC CAD FILE	375700 - 0002 Mechanical.rvt	
PROJECT No.	3757.00	GRAPHIC SCALE 0" = 1'
SCALE	1/4" = 1'-0"	
PROJECT MANAGER	JRB	SHEET No.
DRAWN BY	COB	<b>M2.03B</b>
CHECKED BY	DMON	

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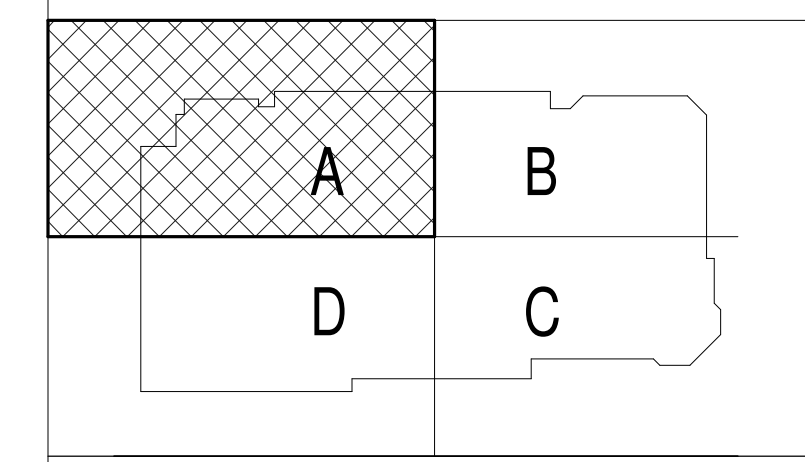
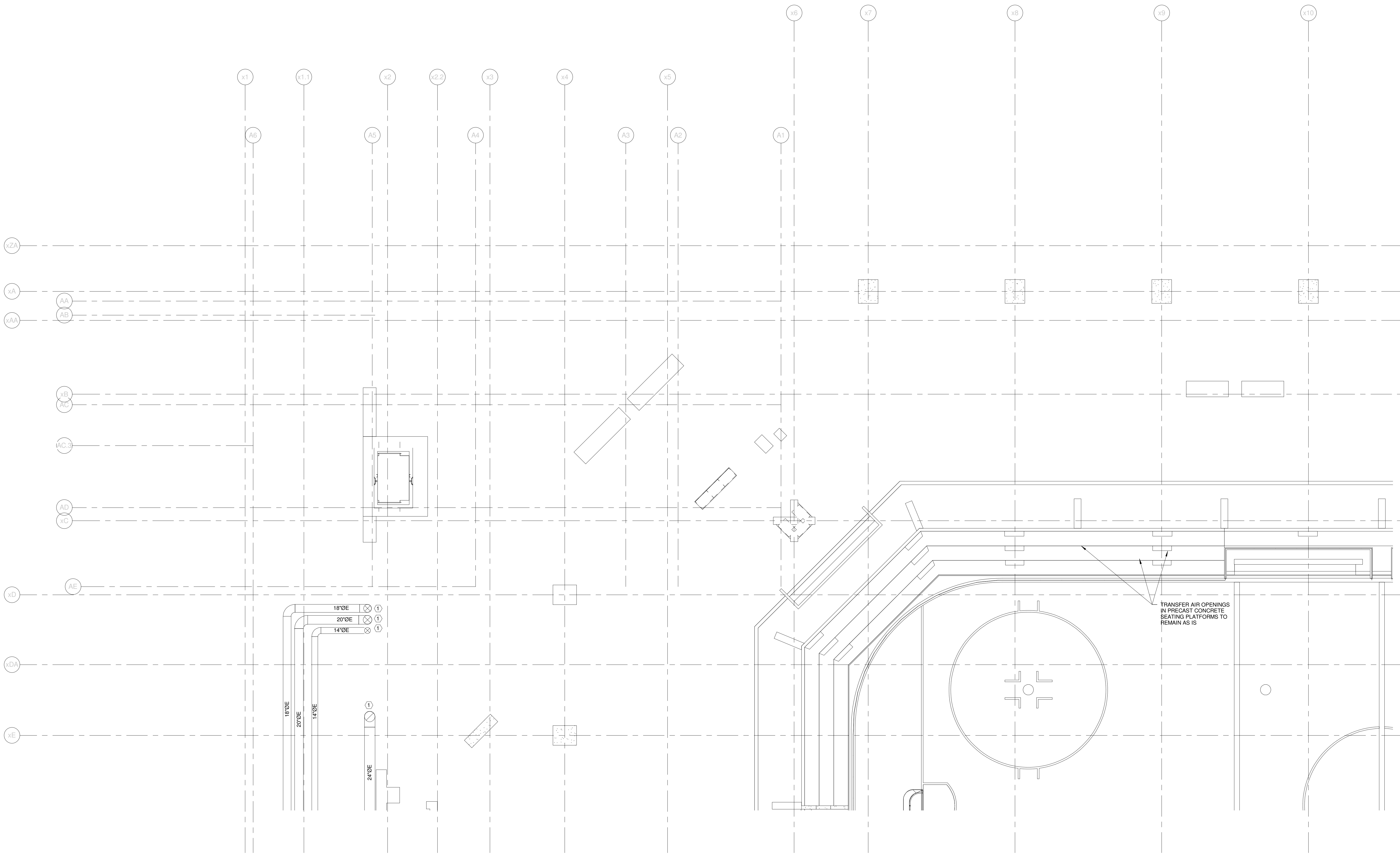


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TECHNICAL NOTES:

- ① CAP & SEAL DUCT @ FLOOR



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0	CONSTRUCTION DOCUMENTS	01-21-2013
	RFIR #289	
	04-26-2013	

CURRENT ISSUE STATUS:

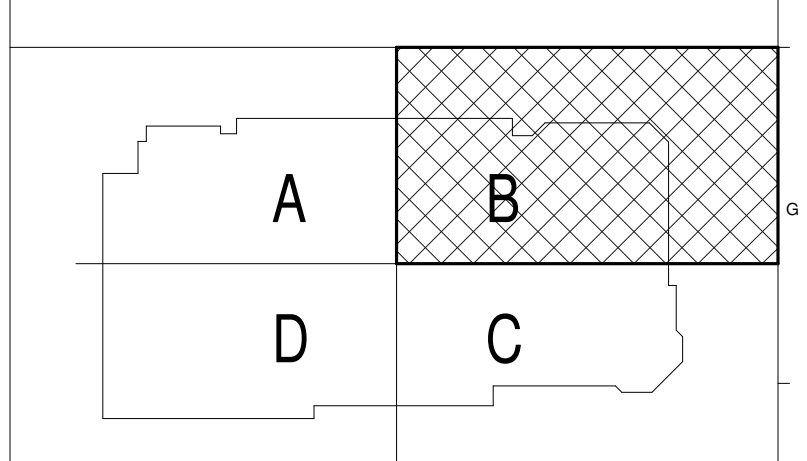
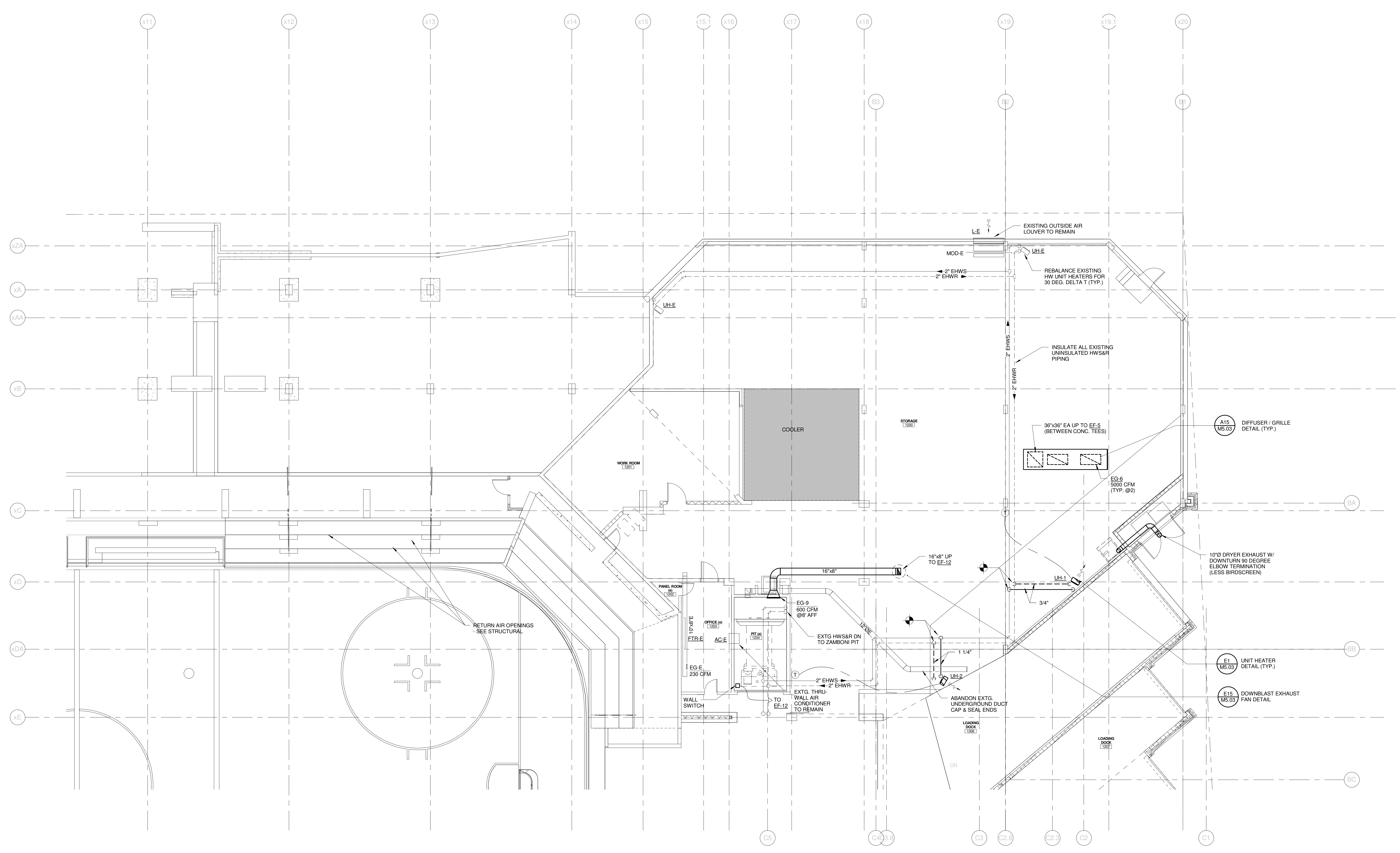
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PROJECT: PORTLAND, ME  
**EVENT LEVEL MECHANICAL PLAN - QUAD A**

WBRC CAD FILE:	375700 - 0002 Mechanical.rvt	GRAPHIC SCALE:	0'
PROJECT No.:	3757.00	SCALE:	1/8" = 1'-0"
PROJECT MANAGER:	JRB	SHEET No.:	M2.11B
DRAWN BY:	COB		
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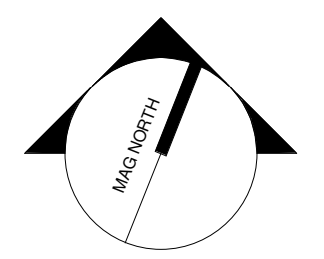
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0	CONSTRUCTION DOCUMENTS	01-21-2013
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CUMBERLAND COUNTY CIVIC CENTER RENOVATION  
PROJECT: PORTLAND, ME  
**EVENT LEVEL MECHANICAL PLAN - QUAD B**

SHEET TITLE	M2.12B
WBRC CAD FILE	375700 - 0202 Mechanical.rvt
PROJECT No.	3757.00
SCALE	1/8" = 1'-0"
PROJECT MANAGER	JRB
DRAWN BY	COB
CHECKED BY	DMON

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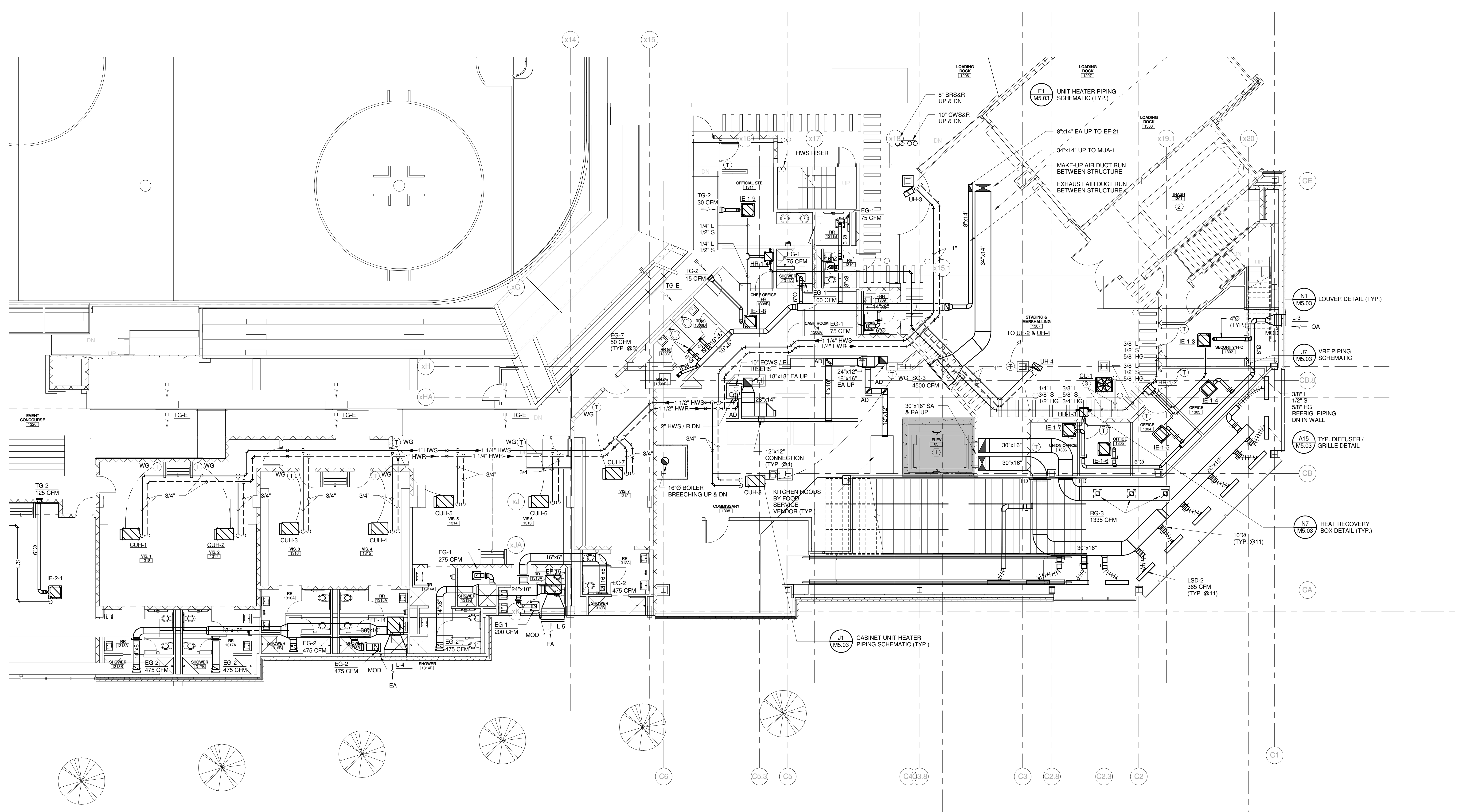
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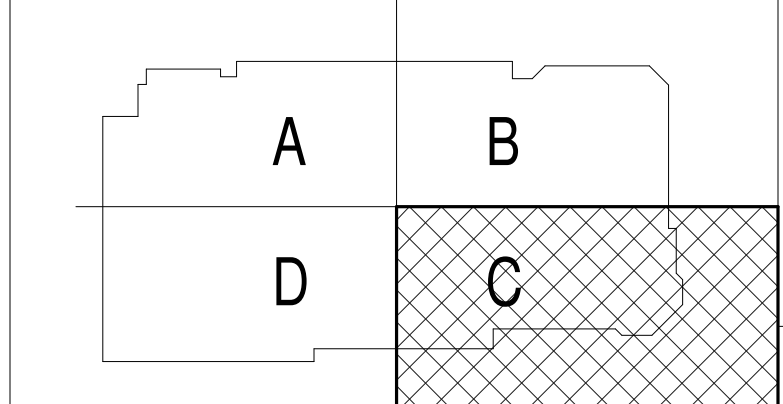
1. ALL VRF REFRIGERANT PIPING BRANCHES BETWEEN HEAT RECOVERY BOX & EVAPORATOR SHALL BE 1/4" LIQUID & 1/2" SUCTION UNLESS NOTED OTHERWISE

**TECHNICAL NOTES:**

1. RUN EXPOSED DUCT IN THIS ROOM TIGHT TO STRUCTURE W/ "PAINT GRIP" FINISH FOR FIELD PAINTING.
2. OZONE GENERATOR FOR TRASH COMPACTOR.
3. INSTALL CU-1 ON FIELD BUILT STEEL RACK 3' AFF. DISCHARGE OF CONDENSING UNIT SHALL BE TOWARD LOADING DOCKS. MAINTAIN 12" MINIMUM CLEARANCE BETWEEN CONDENSING UNIT AND COLUMN.



- N1 M5.03 LOUVER DETAIL (TYP.)
- L-3 OA
- J M5.03 VRF PIPING SCHEMATIC
- C-B.8
- A15 M5.03 TYP. DIFFUSER / GRILLE DETAIL
- C-B
- N7 M5.03 HEAT RECOVERY BOX DETAIL (TYP.)
- CA
- J1 M5.03 CABINET UNIT HEATER PIPING SCHEMATIC (TYP.)



4	RFIR #293	04-22-2013
3	RFIR #255	04-17-2013
2	SI #60.1	04-03-2013
1	RFIR #204	03-26-2013
0	CONSTRUCTION DOCUMENTS	01-21-2013

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**RFIR #289**  
**04-26-2013**

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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME

**EVENT LEVEL MECHANICAL PLAN - QUAD C**

SHEET TITLE	EVENT LEVEL MECHANICAL PLAN - QUAD C	
WBRC CAD FILE	375700 - 0002 Mechanical.dwg	GRAPHIC SCALE 1" = 1'-0"
PROJECT No.	3757.00	SCALE 1/8" = 1'-0"
PROJECT MANAGER	JRB	SHEET No.
DRAWN BY	CGB	<b>M2.13B</b>
CHECKED BY	DMON	

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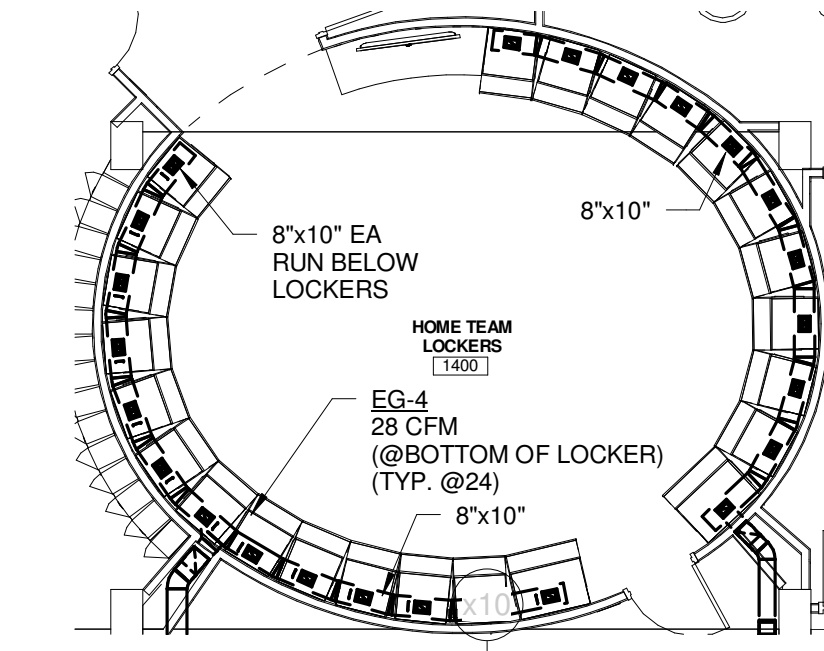
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**GENERAL NOTES:**

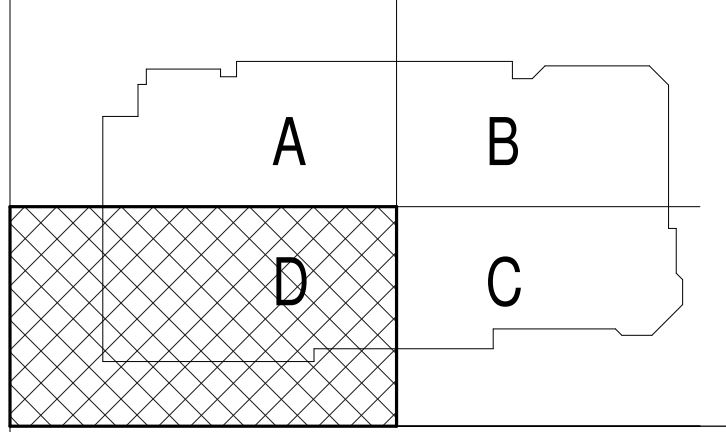
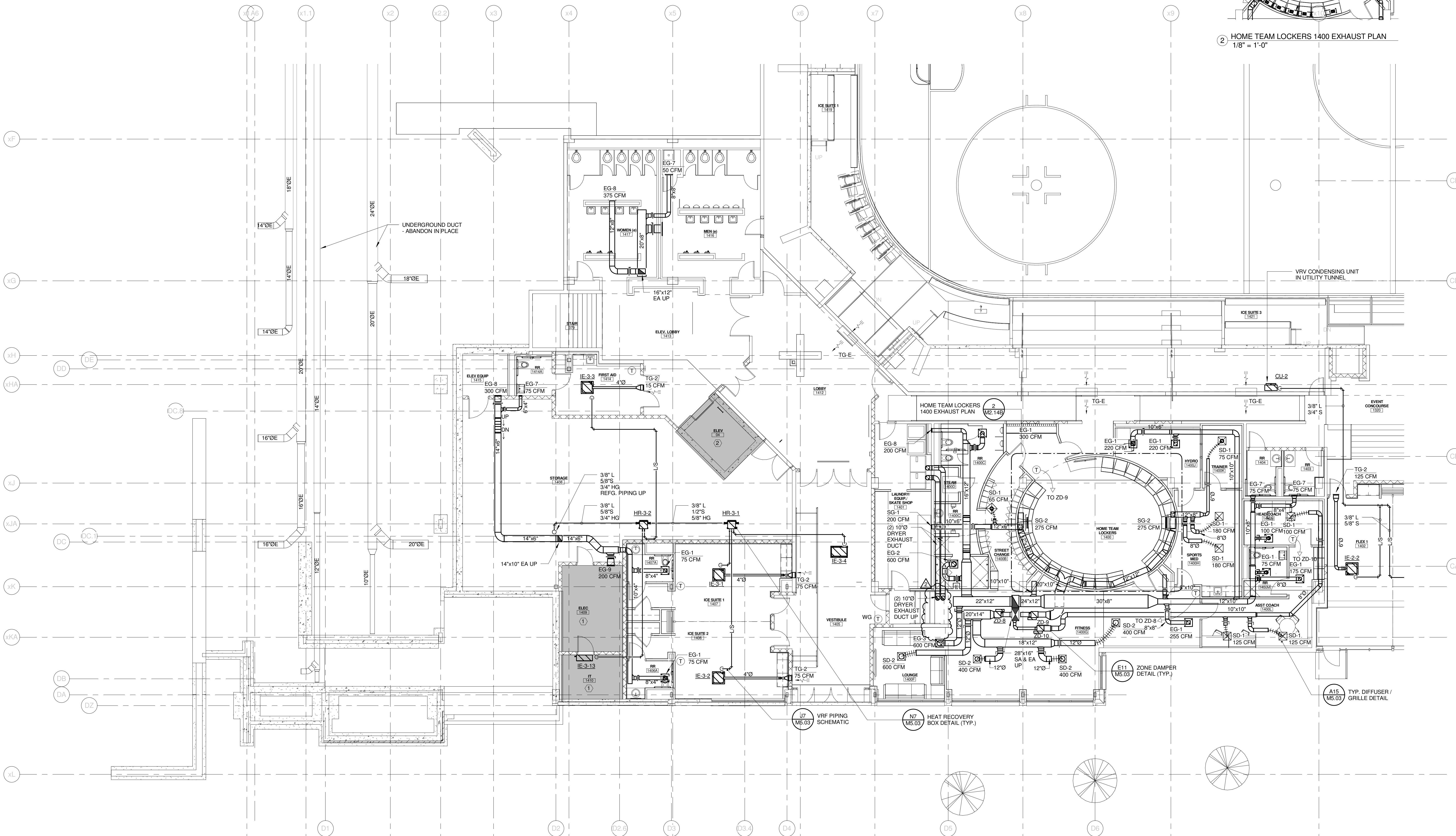
1. ALL VRF REFRIGERANT PIPING BRANCHES BETWEEN HEAT RECOVERY BOX & EVAPORATOR SHALL BE 1/4" LIQUID & 1/2" SUCTION UNLESS NOTED OTHERWISE

**TECHNICAL NOTES:**

1. SPACE RESERVED FOR ELECTRICAL - NO PIPING OR DUCTWORK PERMITTED
2. ELEVATOR - NO PIPING OR DUCTWORK PERMITTED



2 HOME TEAM LOCKERS 1400 EXHAUST PLAN  
 1/8" = 1'-0"



2	RFIR #289	04-26-2013
1	SI #036	02-14-2013
0	CONSTRUCTION DOCUMENTS	01-23-2013

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**RFIR #289**  
**04-26-2013**

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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME  
**EVENT LEVEL MECHANICAL PLAN - QUAD D**

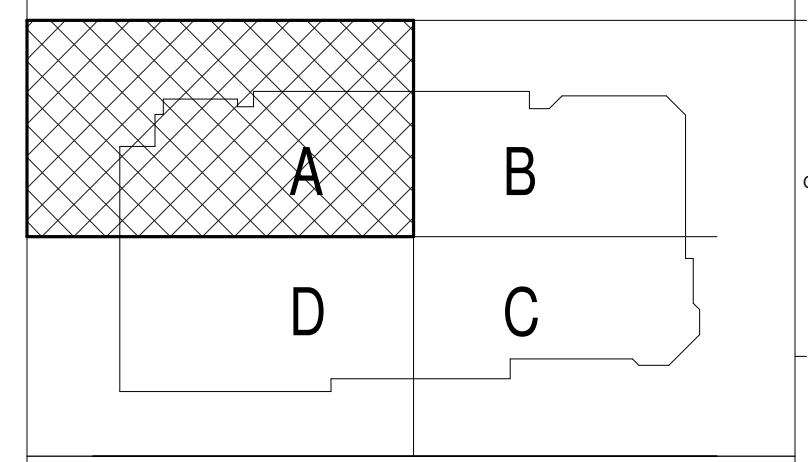
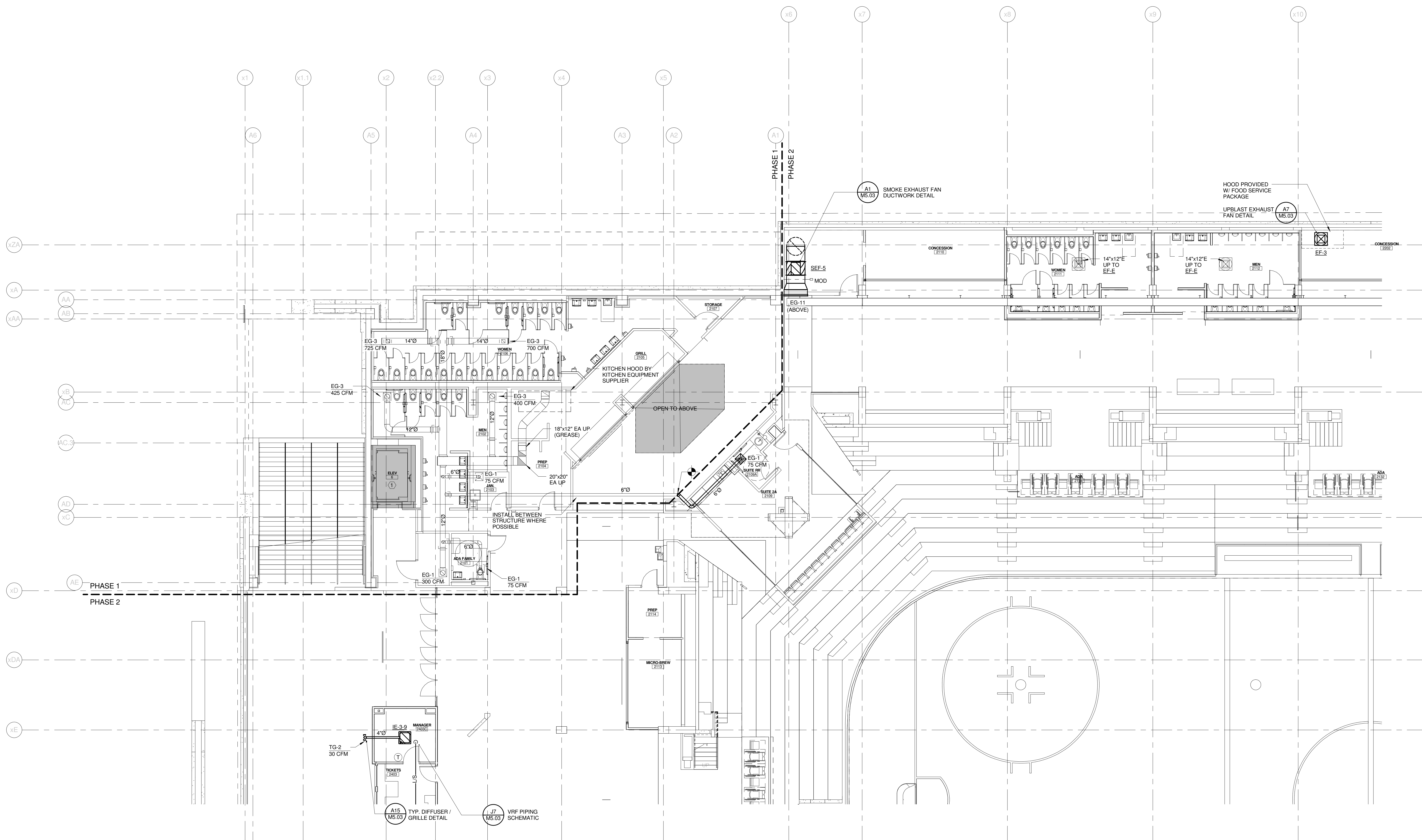
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PROJECT No.	375700 GRAPHIC SCALE 1" = 1'-0"
SCALE	1/8" = 1'-0"
PROJECT MANAGER	JRB
DRAWN BY	COB
CHECKED BY	DMON
<b>SHEET No. M2.14B</b>	





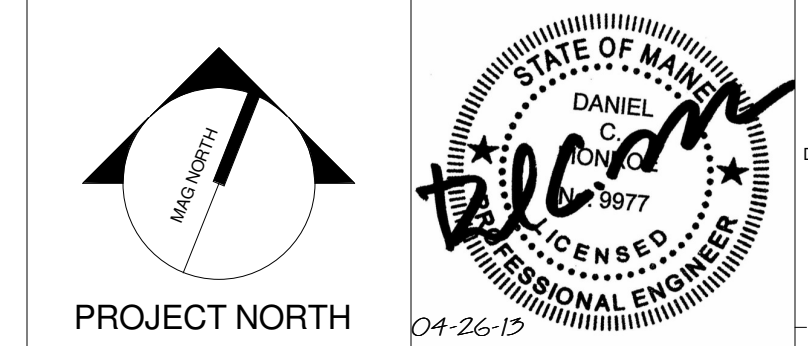
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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME  
**CONCOURSE LEVEL MECHANICAL PLAN - QUAD A**

SHEET TITLE	WBRC CAD FILE: 375700 - 0002 Mechanical.rvt
PROJECT No.	3757.00
SCALE	1/8" = 1'-0"
PROJECT MANAGER	JRB
DRAWN BY	COB
CHECKED BY	DMON
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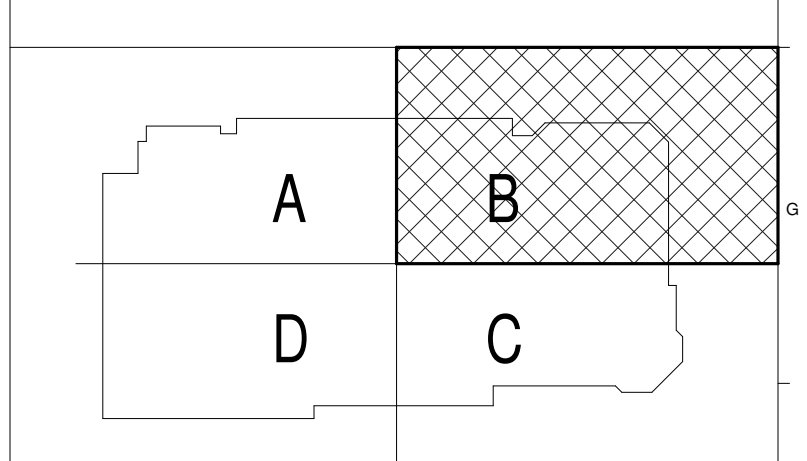
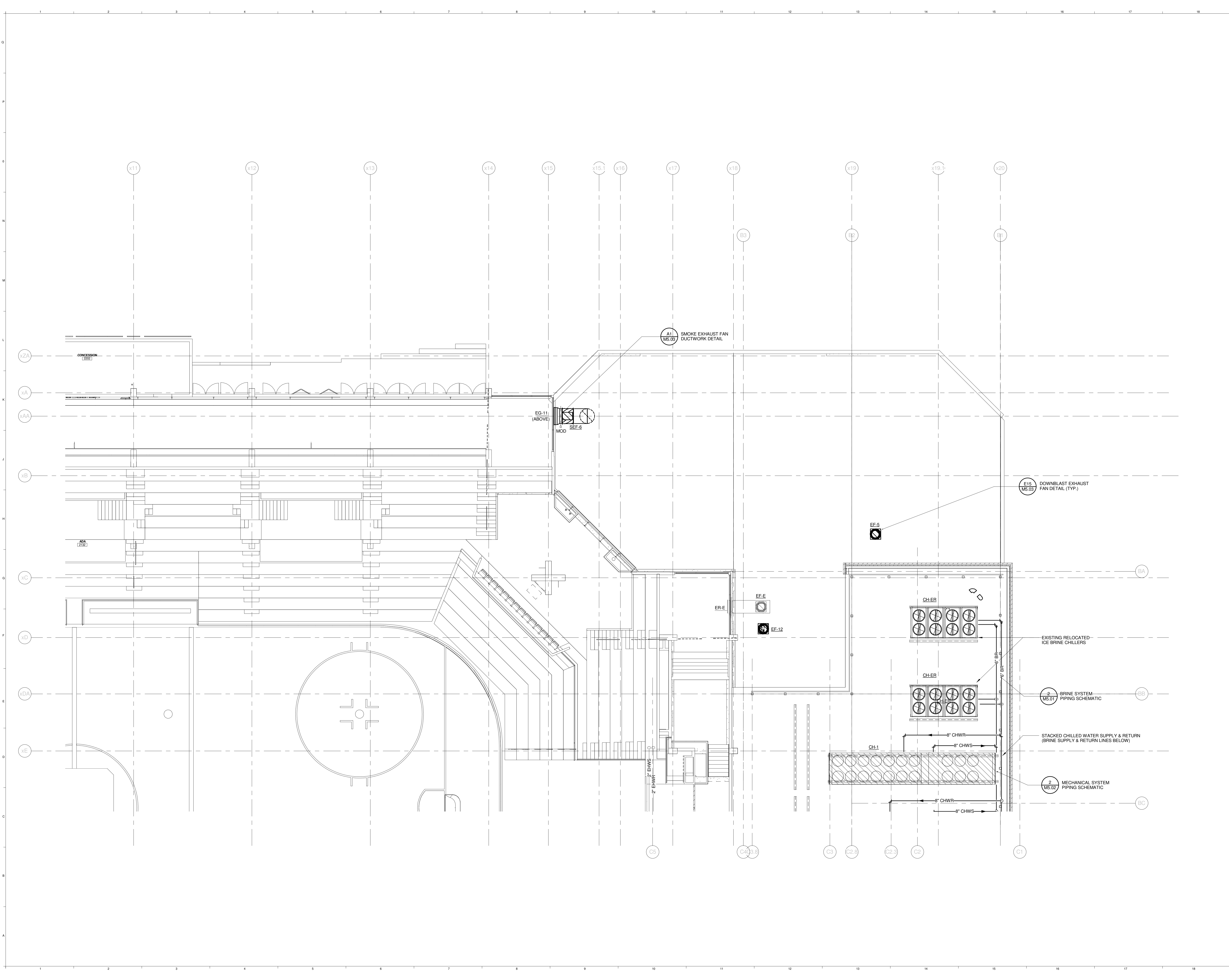
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CUMBERLAND COUNTY CIVIC CENTER RENOVATION

PROJECT: PORTLAND, ME

CONOURSE LEVEL  
MECHANICAL PLAN - QUAD B

SHEET TITLE	WBRC CAD FILE	375700 - 0002 Mechanical.rvt
PROJECT No.	3757.00	GRAPHIC SCALE
SCALE	1/8" = 1'-0"	1"
PROJECT MANAGER	JRB	SHEET No.
DRAWN BY	COB	M2.22B
CHECKED BY	DMON	

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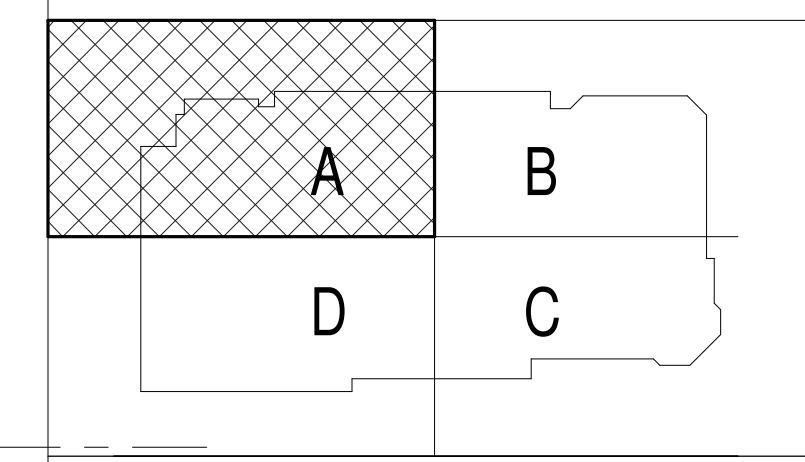
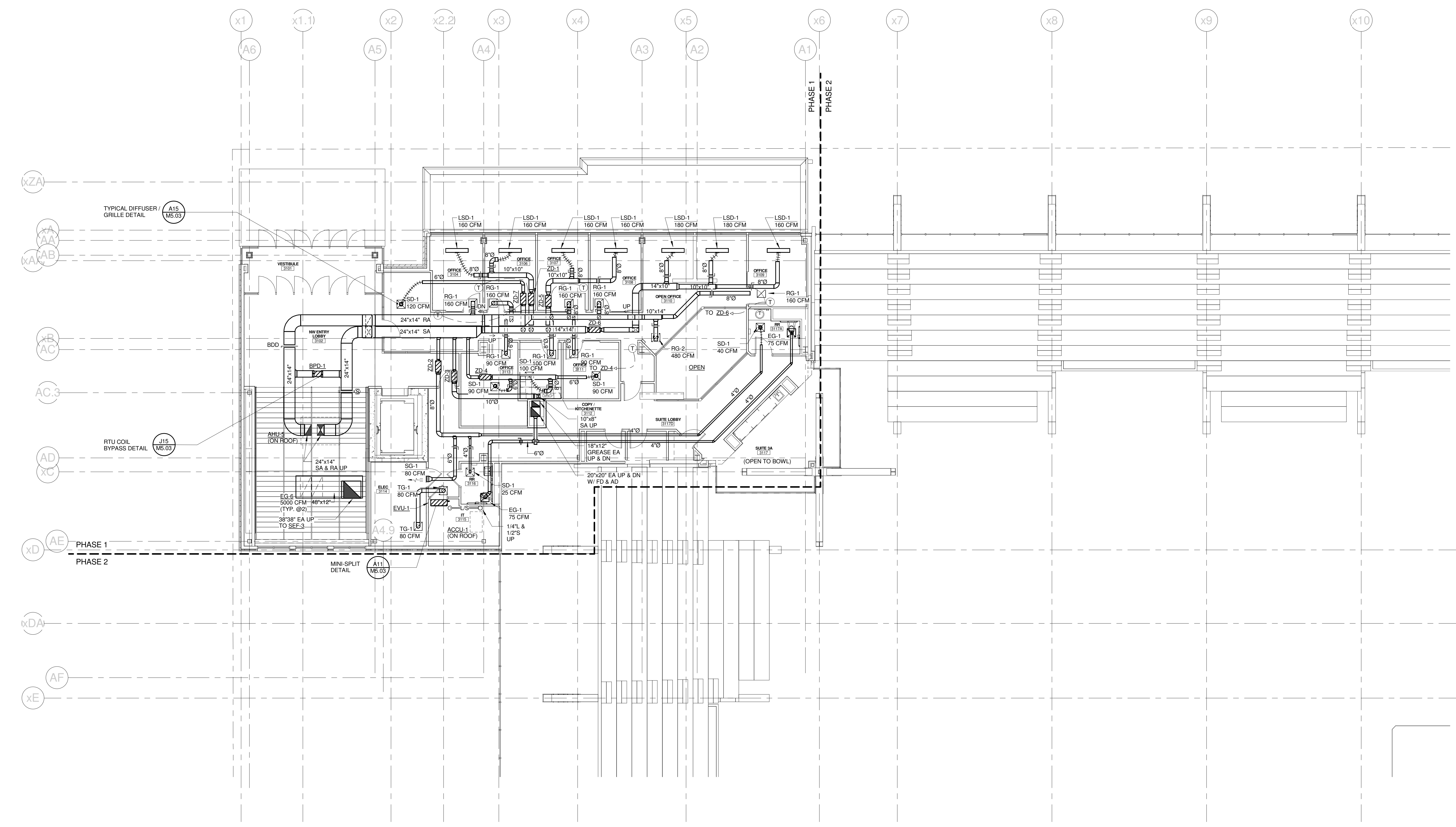


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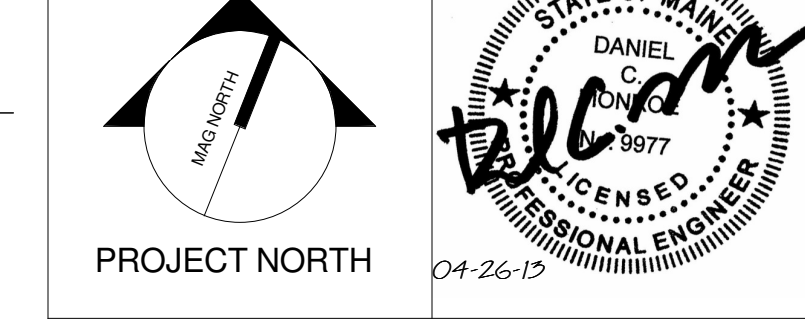


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3	SI #14.1	01-25-2013
2	CONSTRUCTION DOCUMENTS	01-21-2013
1	SI #009	12-05-2012
0	TW ENTRY CONSTRUCTION DOCS	10-31-2012

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**02-14-2013**

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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME

**MIDSUITES LEVEL  
MECHANICAL LEVEL - QUAD A  
PHASE 1**

SHEET TITLE: M2.31A

WBRC CAD FILE: 375700 - 0202 Mechanical.rvt

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

PROJECT MANAGER: JRB

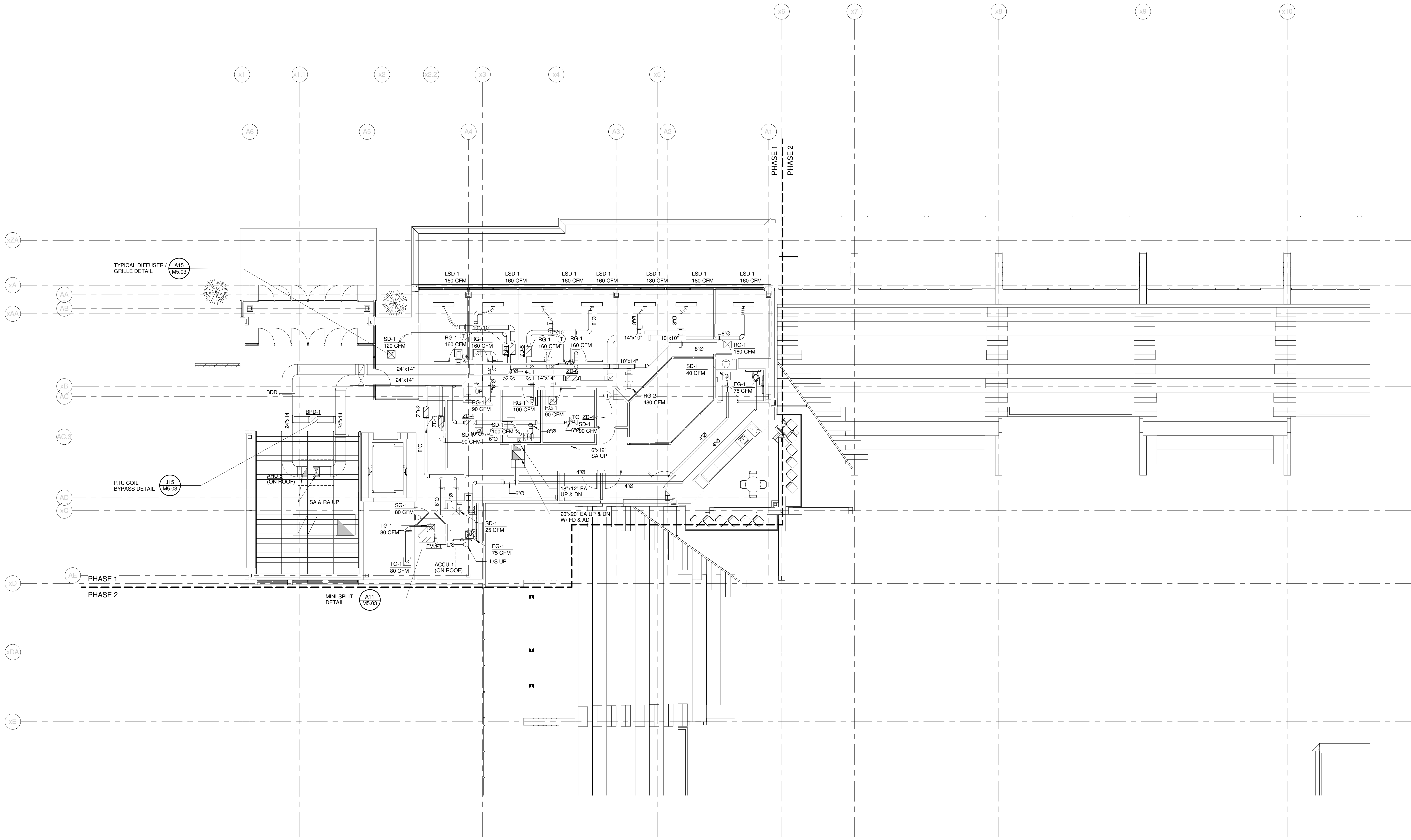
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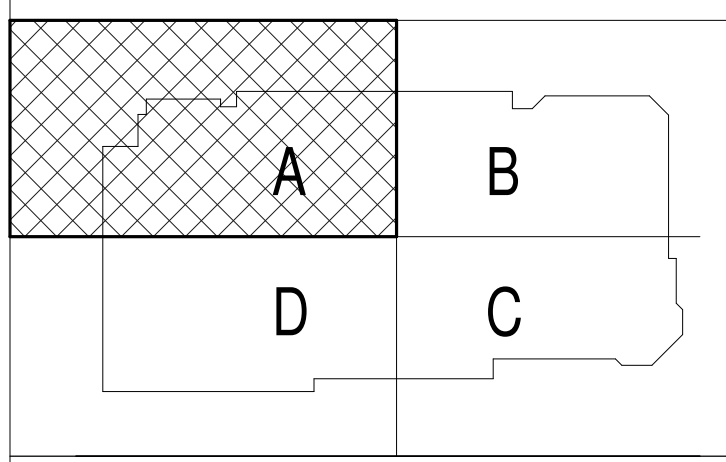
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TYPICAL DIFFUSER /  
GRILLE DETAIL  
A15  
MS.03

RTU COIL  
BYPASS DETAIL  
J15  
MS.03

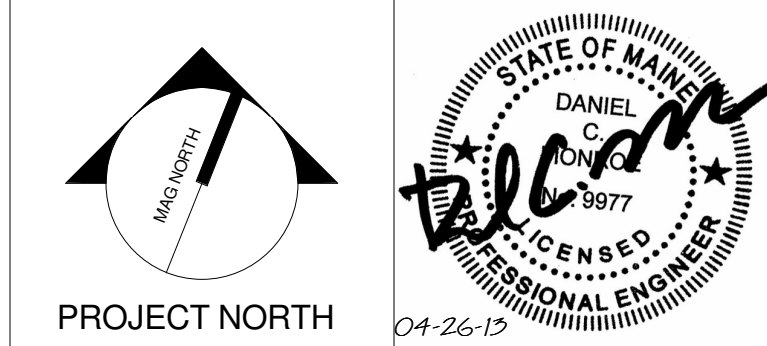
MINI-SPLIT  
DETAIL  
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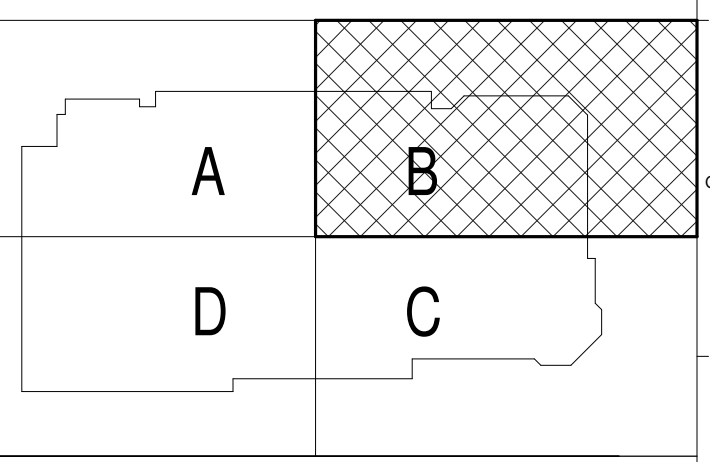
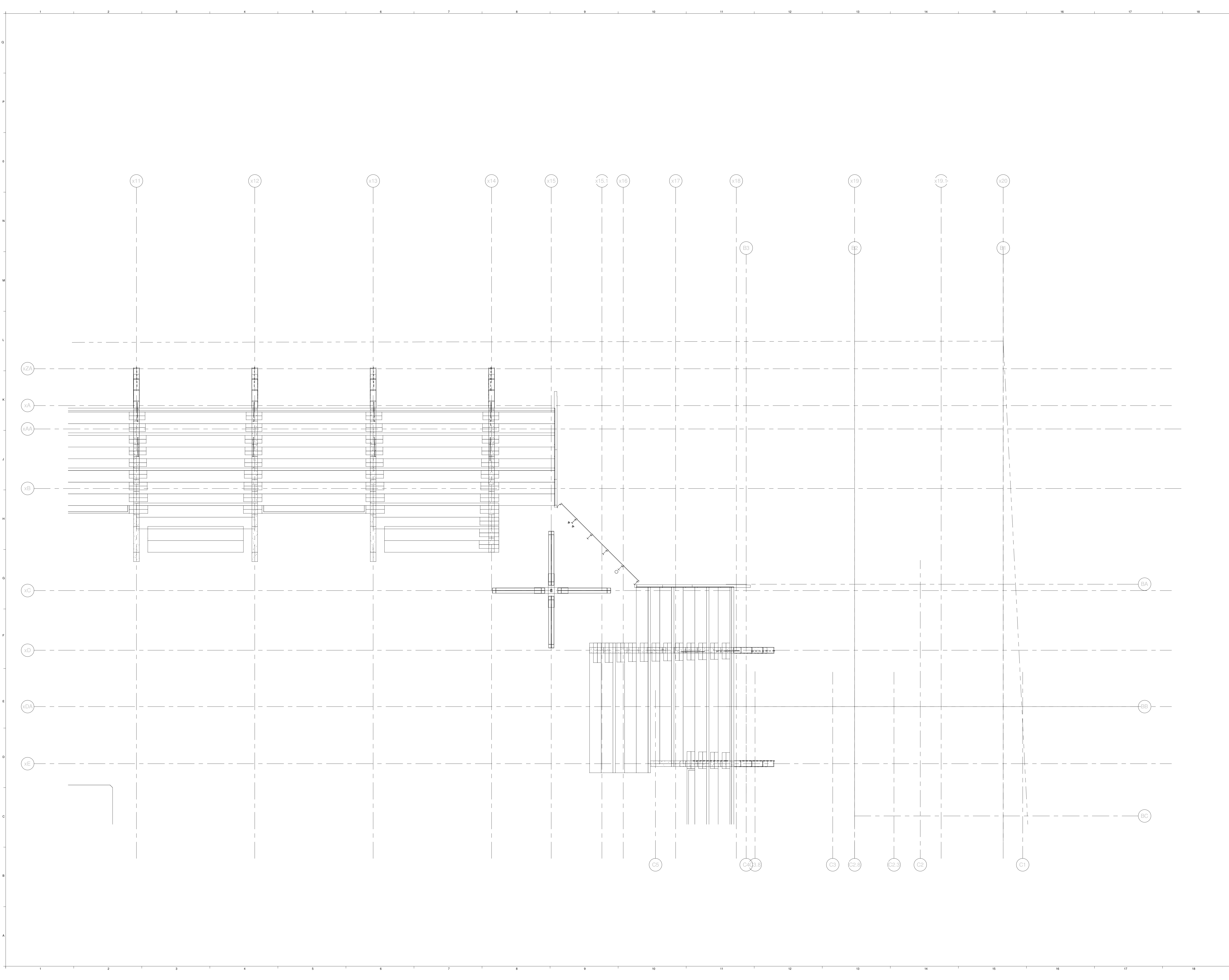
**CUMBERLAND COUNTY CIVIC  
CENTER RENOVATION**

PROJECT: PORTLAND, ME  
**MIDSUITES LEVEL  
MECHANICAL PLAN - QUAD A**

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PROJECT No.	3757.00
SCALE	1/8" = 1'-0"
PROJECT MANAGER	JRB
DRAWN BY	CGB
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SHEET No.	<b>M2.31B</b>

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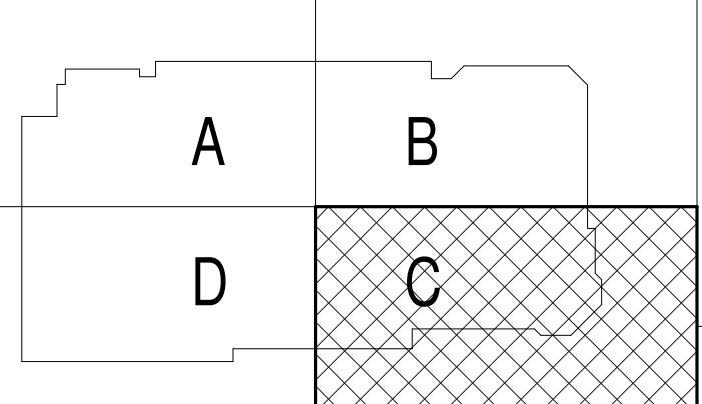
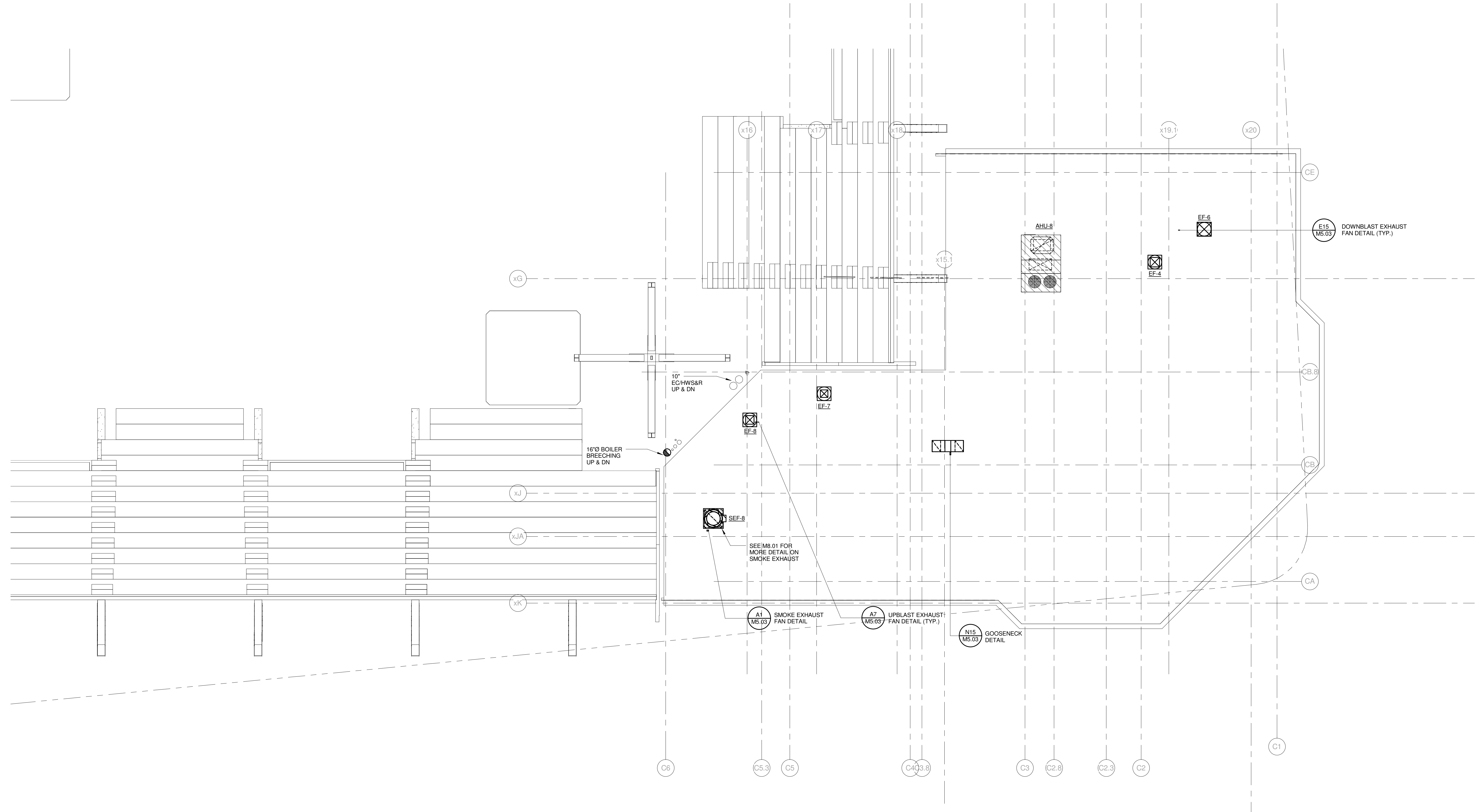
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PROJECT: PORTLAND, ME  
SHEET TITLE: NOT USED

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SCALE:	1/8" = 1'-0"
PROJECT MANAGER:	JRB
DRAWN BY:	COB
CHECKED BY:	DMON
SHEET No.	M2.32B

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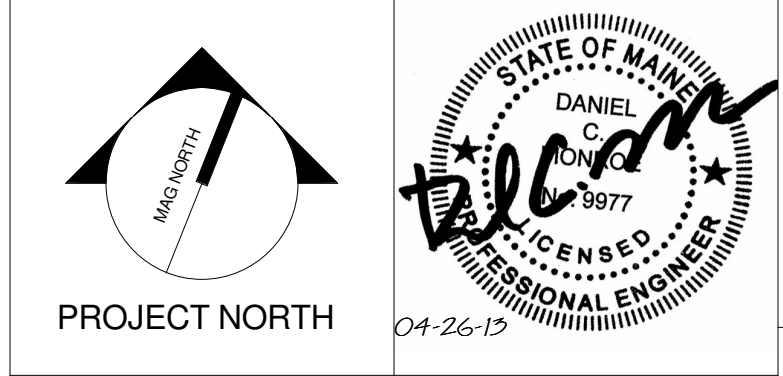
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CUMBERLAND COUNTY CIVIC CENTER RENOVATION  
PROJECT: PORTLAND, ME  
MIDSUITES LEVEL  
MECHANICAL PLAN - QUAD C

SHEET TITLE:  
WBRC CAD FILE: 375700 - 0002 Mechanical.rvt  
PROJECT No.: 3757.00 GRAPHIC SCALE: 1" = 1'-0"  
SCALE: 1/8" = 1'-0"  
PROJECT MANAGER: JRB  
DRAWN BY: CGB  
CHECKED BY: DMON  
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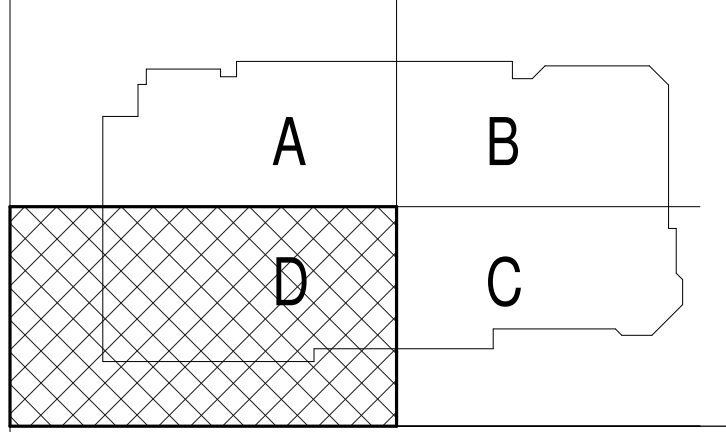
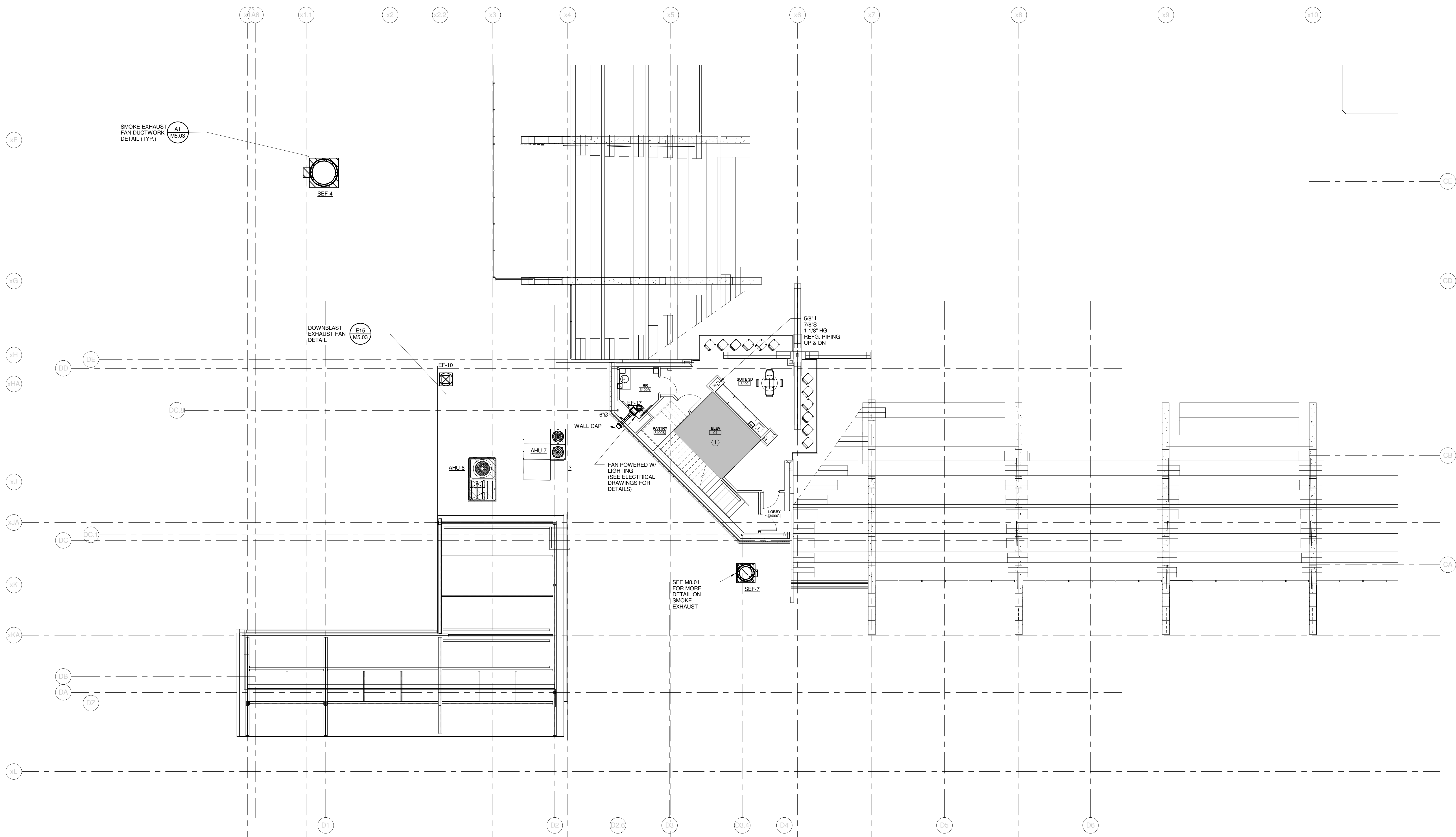


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**TECHNICAL NOTES:**

- ① SPACE RESERVED FOR ELECTRICAL - NO PIPING OR DUCTWORK PERMITTED
- ② ELEVATOR - NO PIPING OR DUCTWORK PERMITTED



REV.	DESCRIPTION	DATE
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**RFIR #289**  
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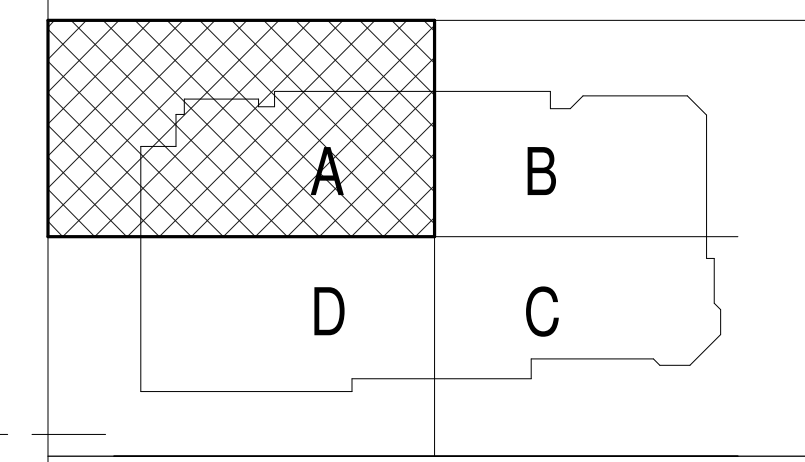
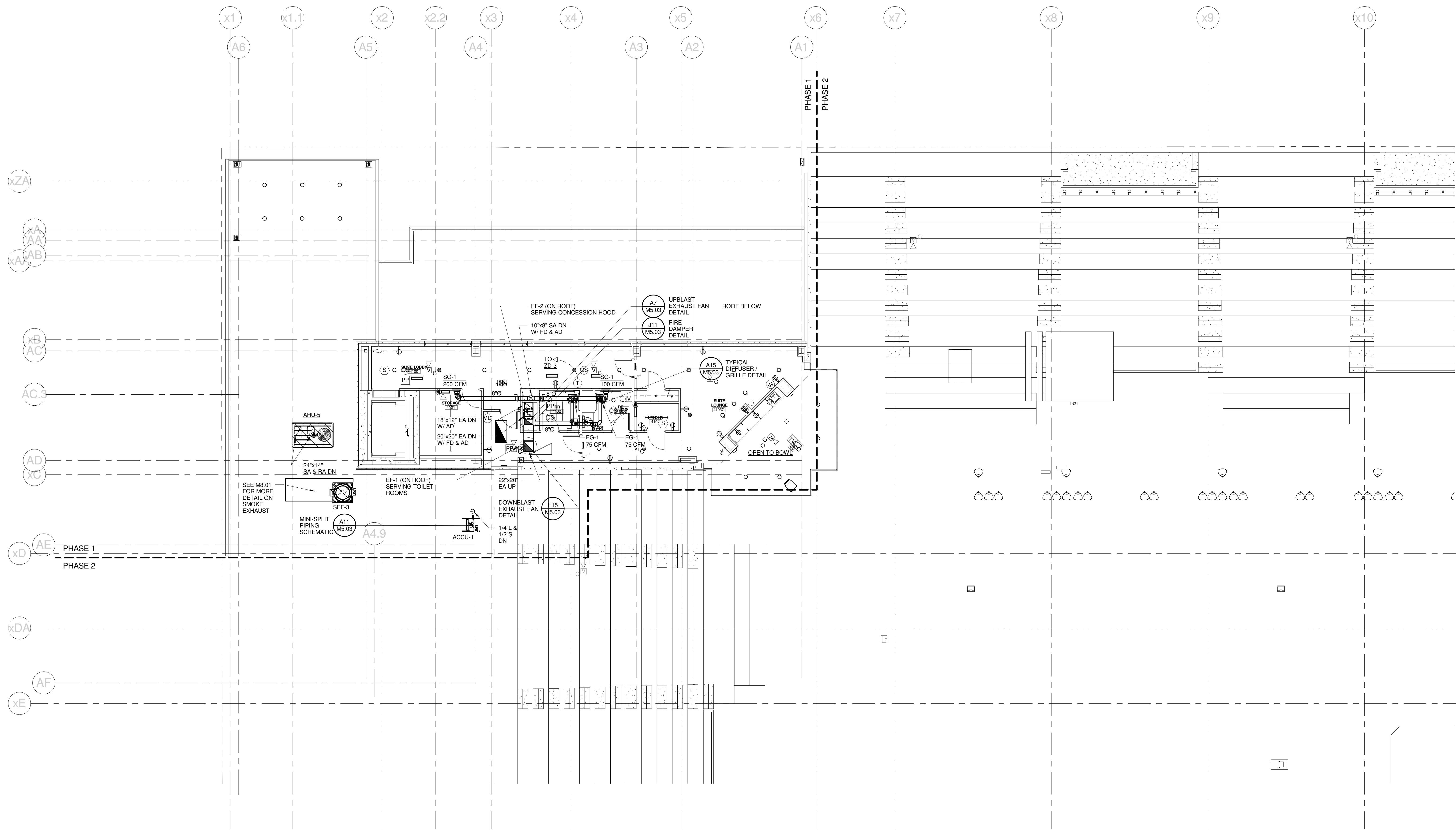
**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME  
**MIDSUITES LEVEL  
MECHANICAL PLAN - QUAD D**

WBRC CAD FILE: 375700 - 0002 Mechanical.rvt	GRAPHIC SCALE: 1" = 10'
PROJECT No: 3757.00	SCALE: 1/8" = 1'-0"
PROJECT MANAGER: JRB	SHEET No: M2.34B
DRAWN BY: CGB	CHECKED BY: DMON

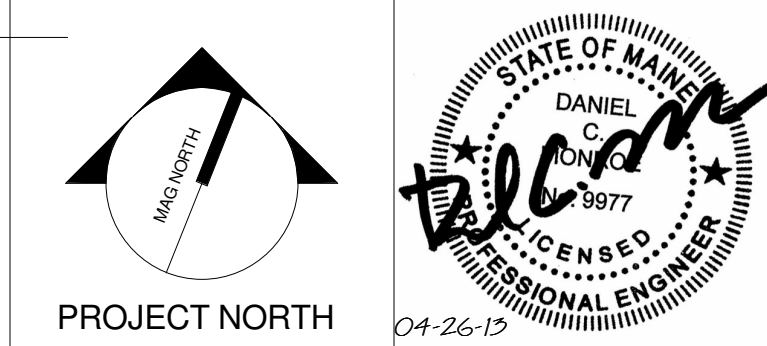
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1	CONSTRUCTION DOCUMENTS	01-21-2013
0	NW ENTRY CONSTRUCTION DOCS	10-31-2012
REV.	DESCRIPTION	DATE
	<b>RFIR #289</b>	
	<b>04-26-2013</b>	

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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME  
**UPPER SUITES LEVEL  
MECHANICAL PLAN - QUAD A  
PHASE 1**

SHEET TITLE:	UPPER SUITES LEVEL MECHANICAL PLAN - QUAD A PHASE 1
WBRC CAD FILE:	375700 - 0002 Mechanical.rvt
PROJECT No.:	3757.00
SCALE:	1/8" = 1'-0"
PROJECT MANAGER:	JRB
DRAWN BY:	COB
CHECKED BY:	DMON
SHEET No.:	<b>M2.41A</b>

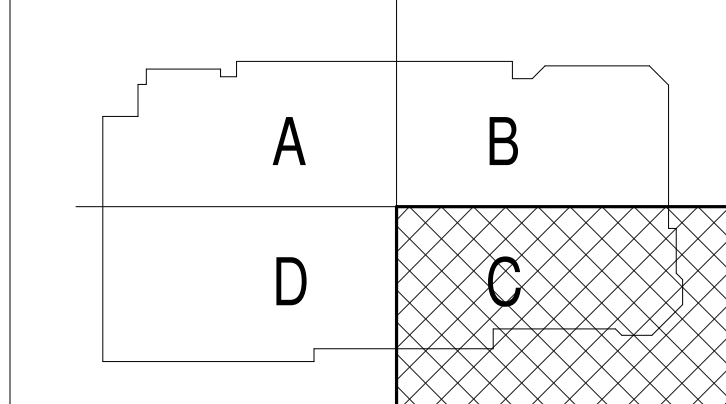
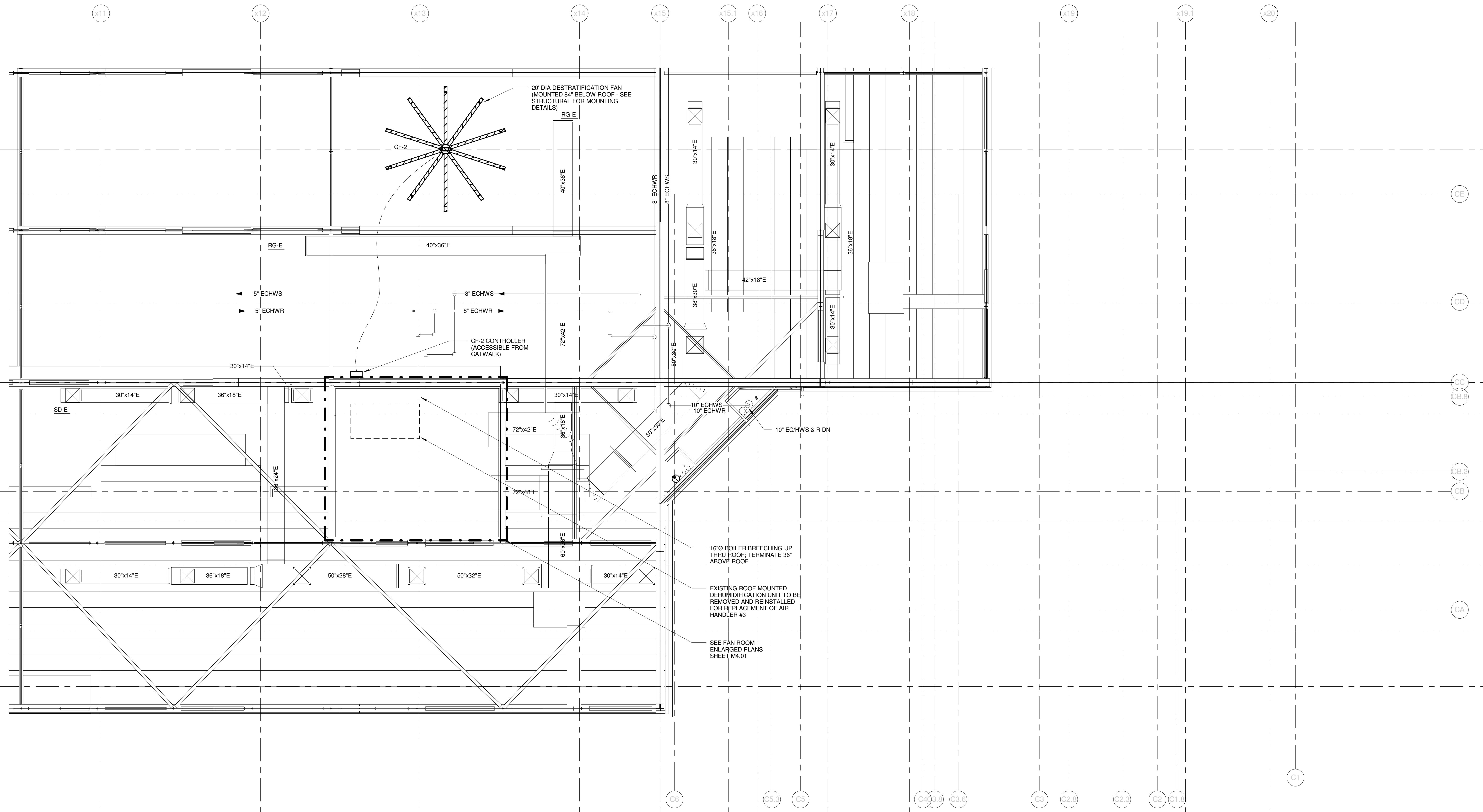




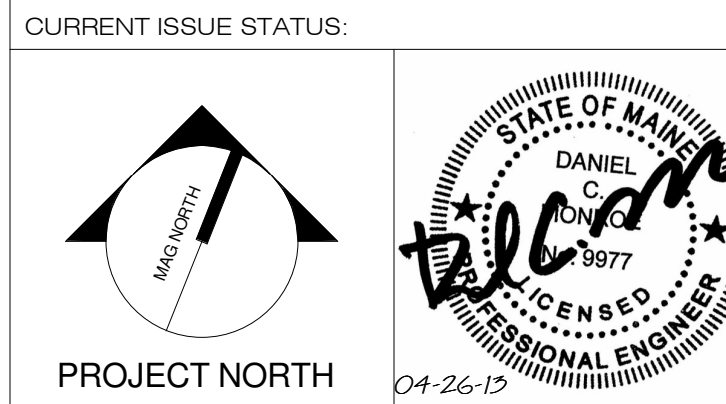


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	<b>04-26-2013</b>	



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**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

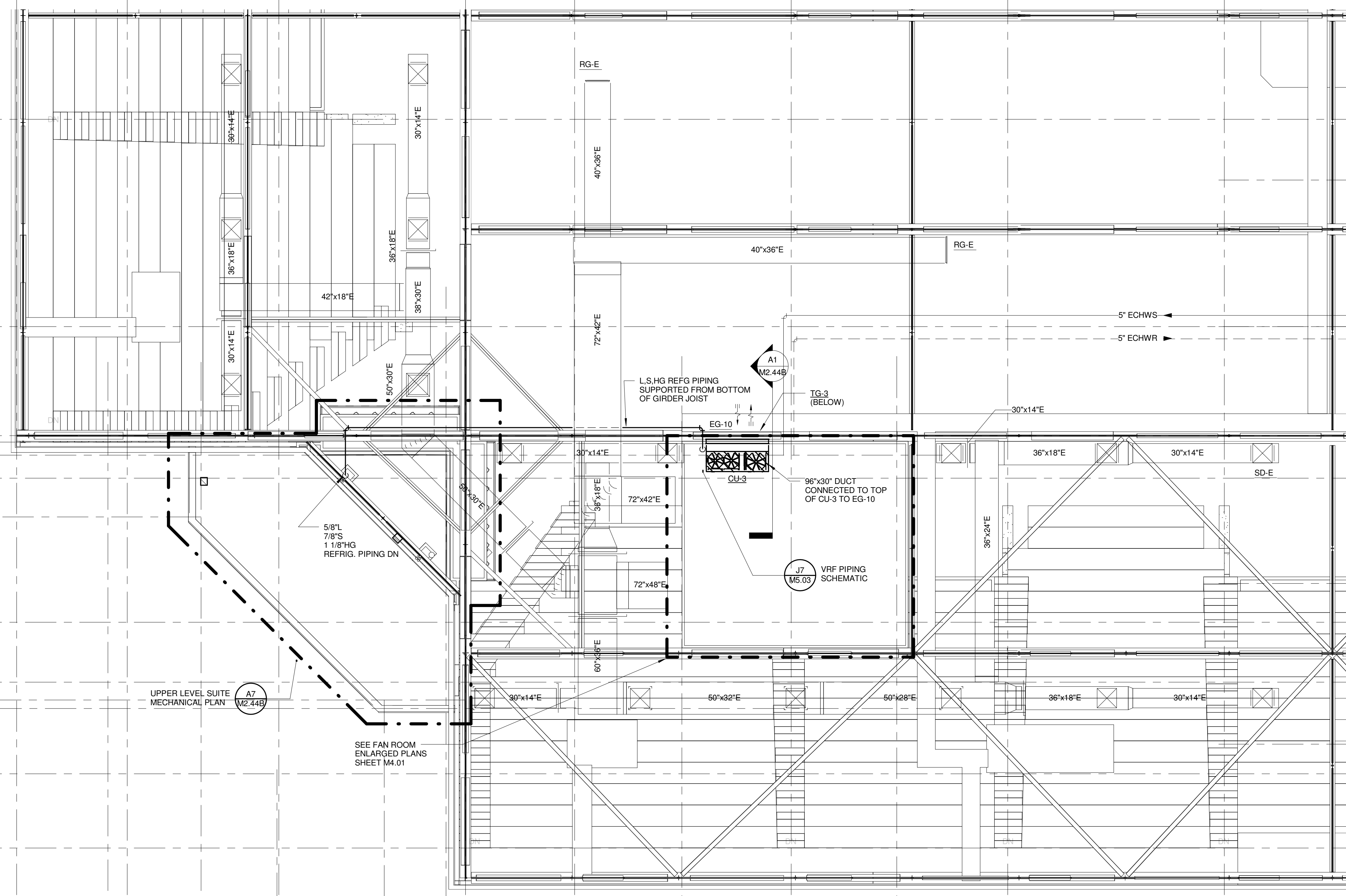
PROJECT: PORTLAND, ME  
**FAN ROOM MECHANICAL PLAN - QUAD C**

SHEET TITLE	
WBRC CAD FILE	375700 - 0000 Mechanical.rvt
PROJECT No.	3757.00
SCALE	1/8" = 1'-0"
PROJECT MANAGER	JRB
DRAWN BY	COB
CHECKED BY	DMON
SHEET No.	<b>M2.43B</b>

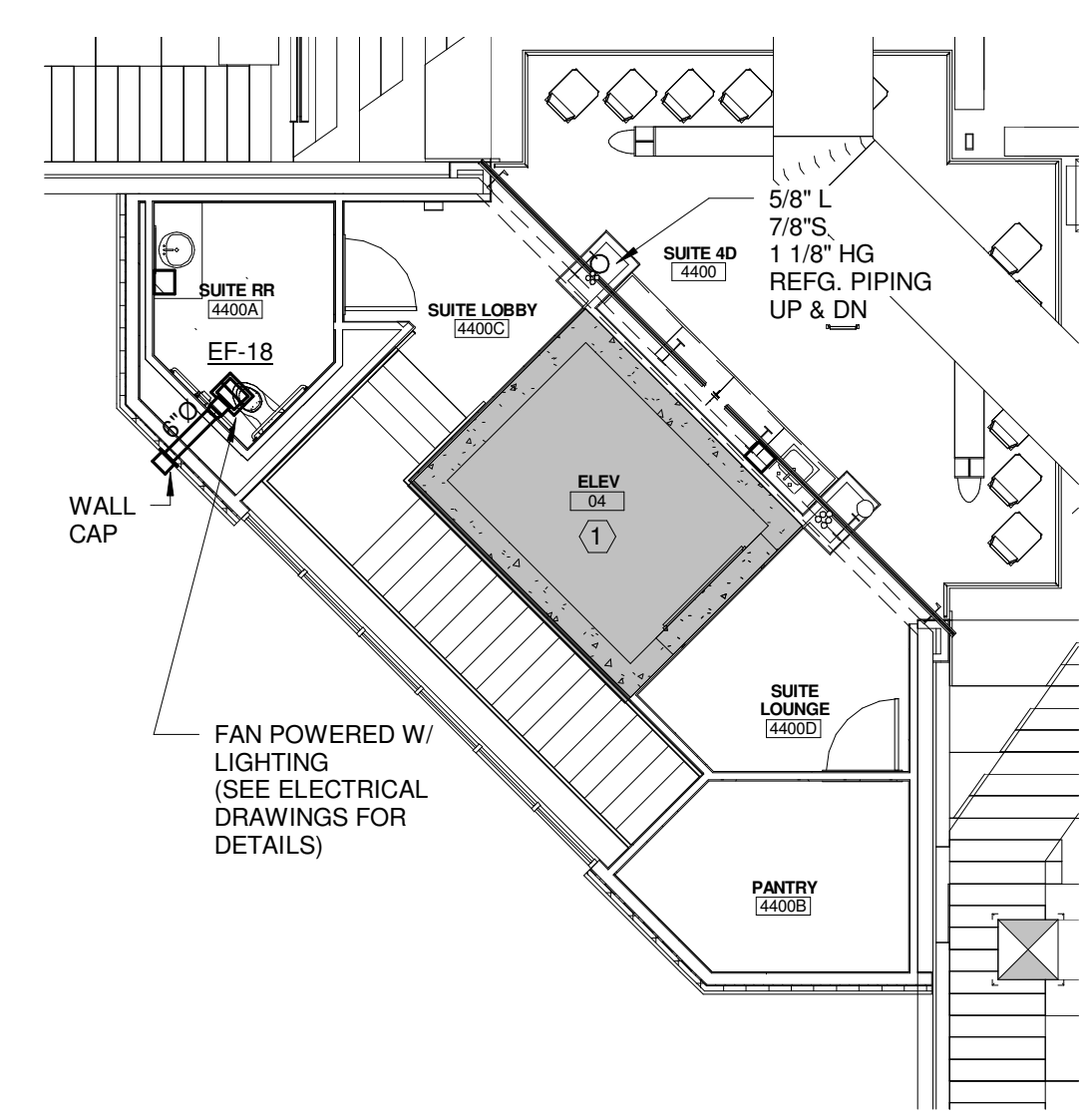
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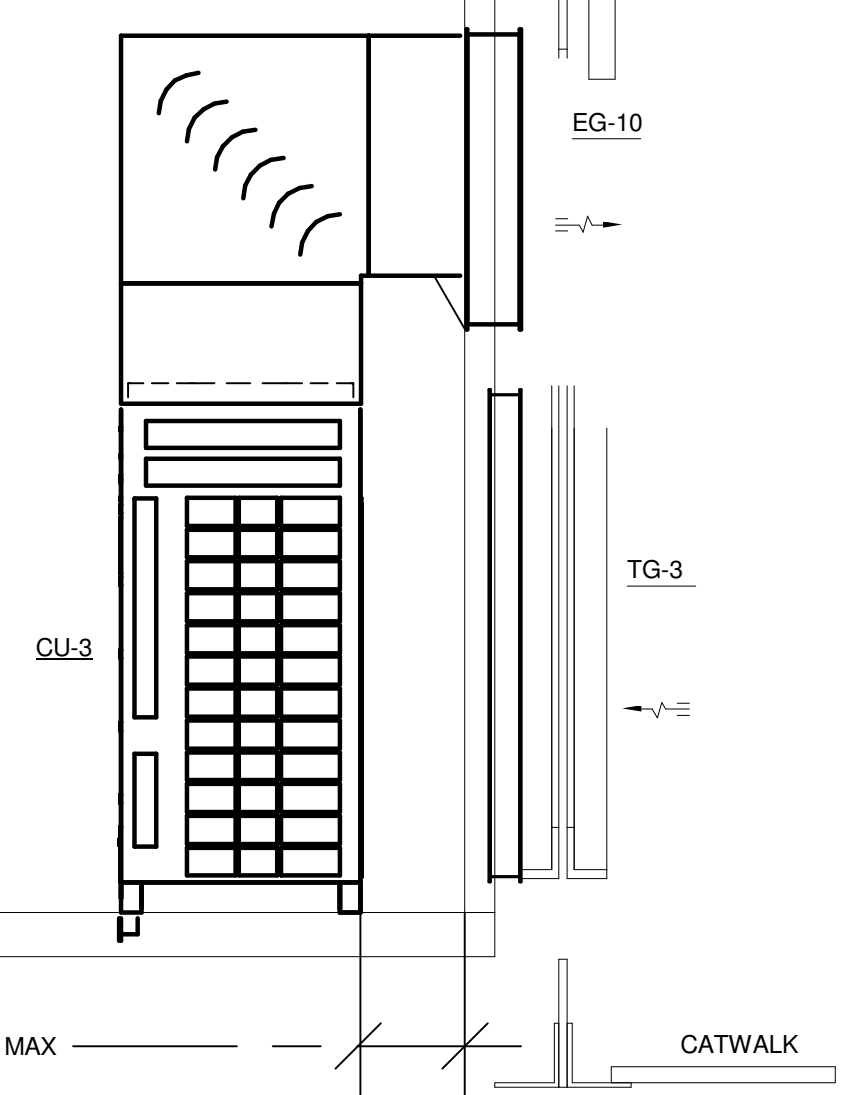
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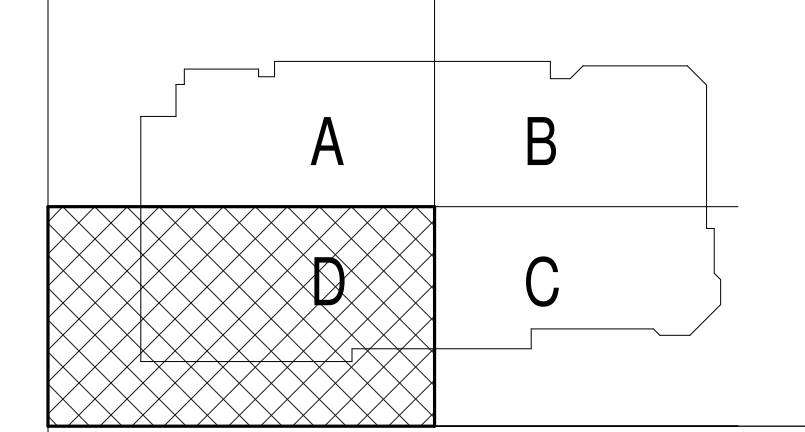
**F7 FAN ROOM MECHANICAL PLAN QUAD D**  
 1/8" = 1'-0"



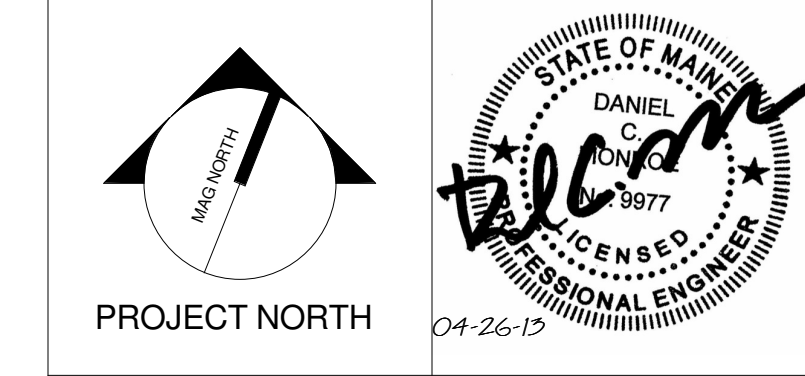
**A7 UPPER SUITE LEVEL MECHANICAL PLAN**  
 1/8" = 1'-0"



**A1 CU-3 ELEVATION**  
 1/2" = 1'-0"



REV.	DESCRIPTION	DATE
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	RFIR #289	
	04-26-2013	

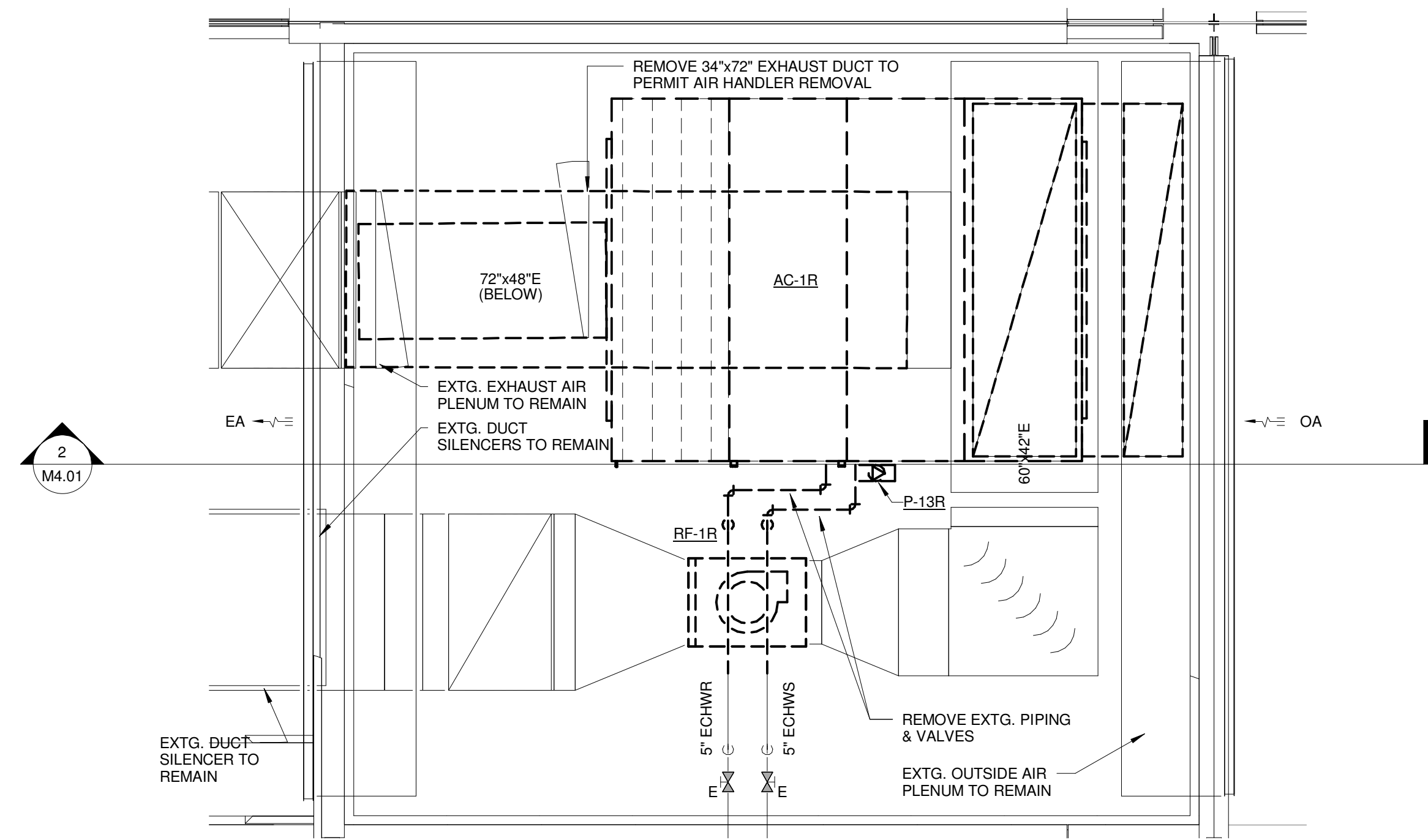


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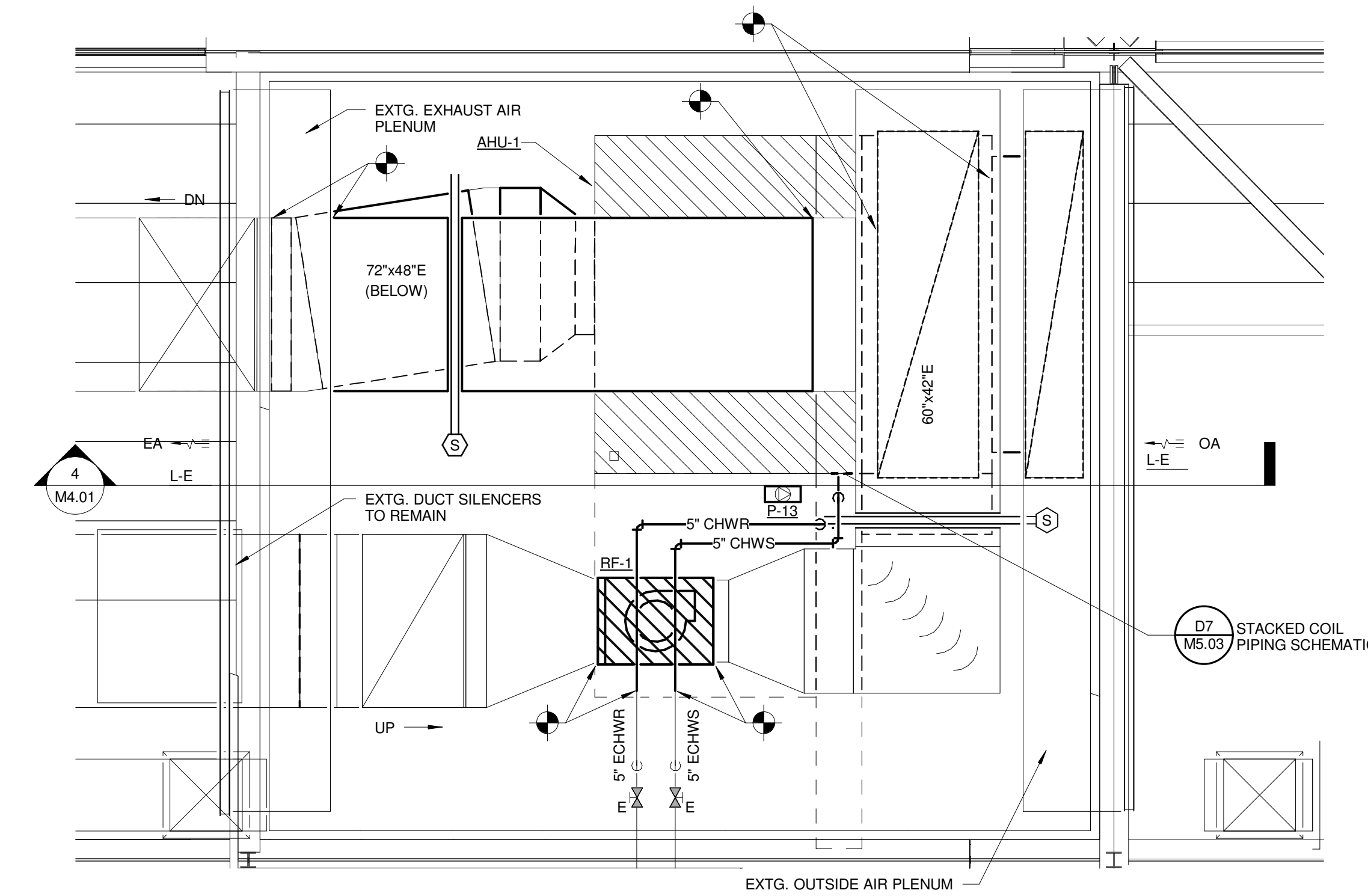
**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**  
 PROJECT: PORTLAND, ME  
**FAN ROOM MECHANICAL PLAN - QUAD D**

SHEET TITLE	FAN ROOM MECHANICAL PLAN - QUAD D
WBRC CAD FILE	375700 - 0002 Mechanical.dwg
PROJECT No.	3757.00
SCALE	As indicated
PROJECT MANAGER	JRB
DRAWN BY	COB
CHECKED BY	DMON
SHEET No.	<b>M2.44B</b>

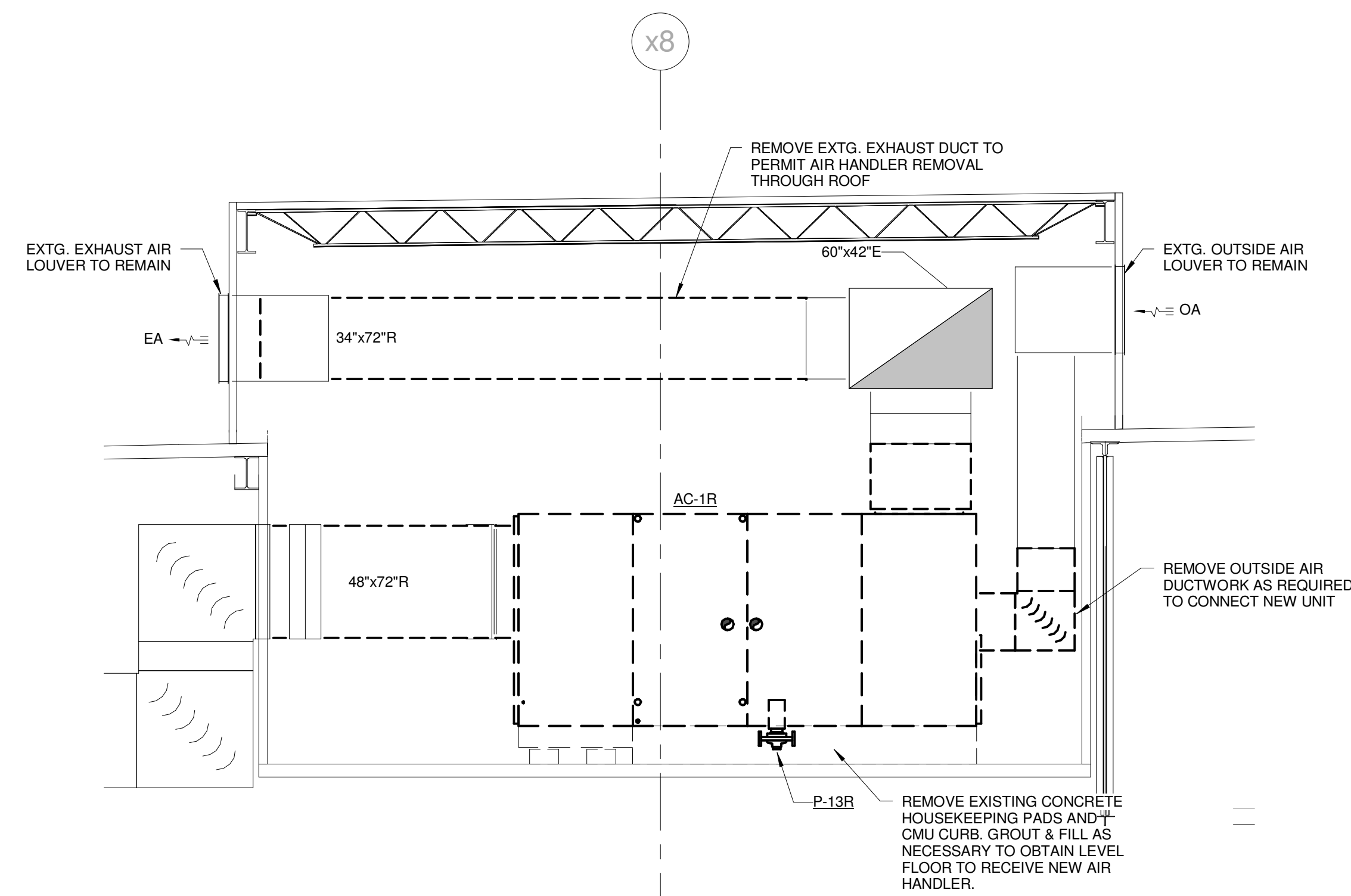
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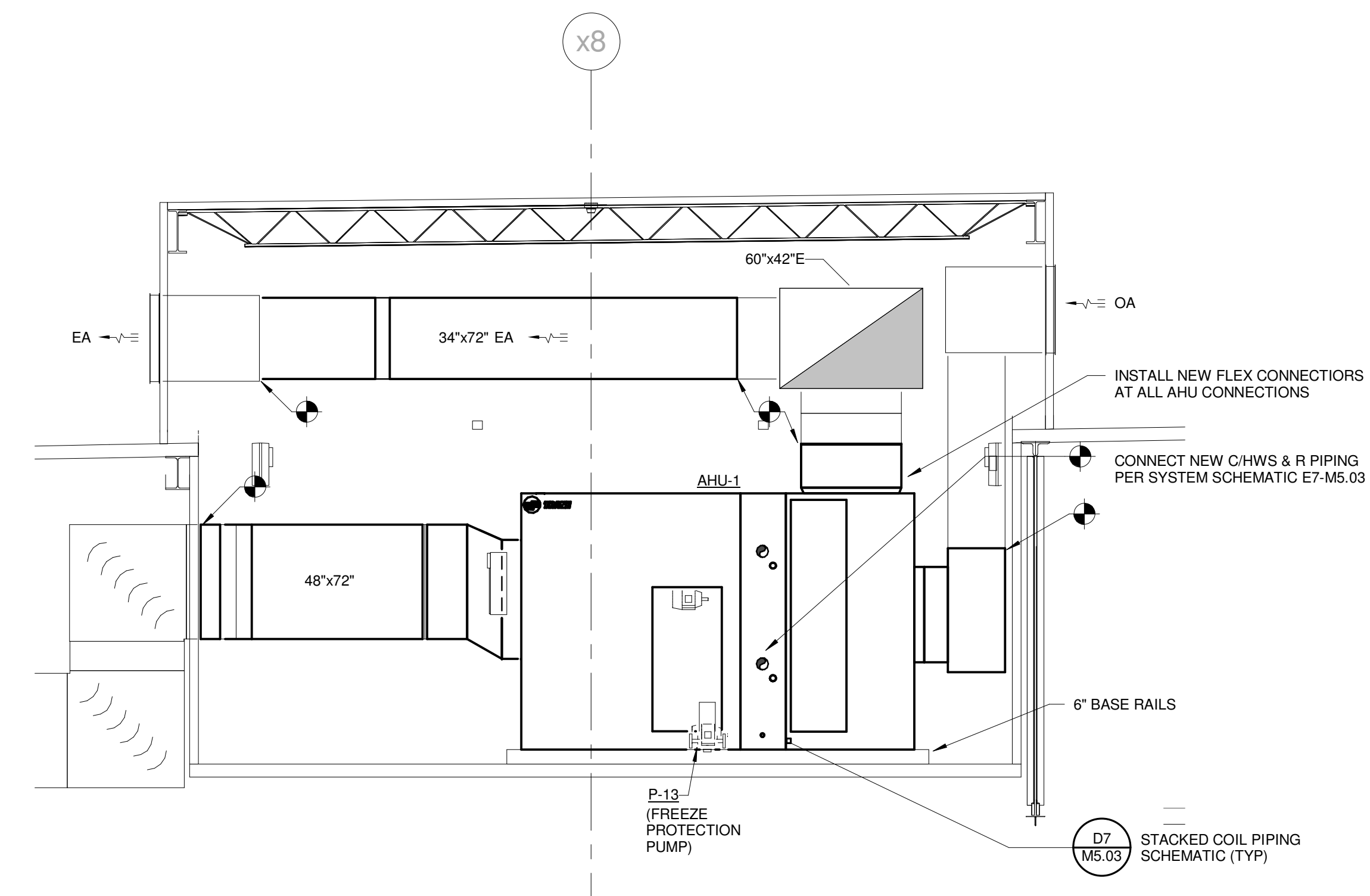
① QUAD 'A' FAN ROOM ENLARGED DEMO PLAN  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"



③ QUAD 'A' FAN ROOM ENLARGED PLAN  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"



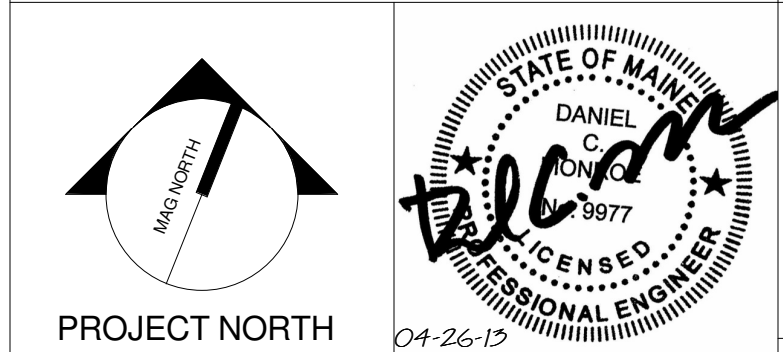
② QUAD 'A' FAN ROOM DEMO SECTION  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"



④ QUAD 'A' FAN ROOM SECTION  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"

REV.	DESCRIPTION	DATE
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	RFIR #289	
	04-26-2013	

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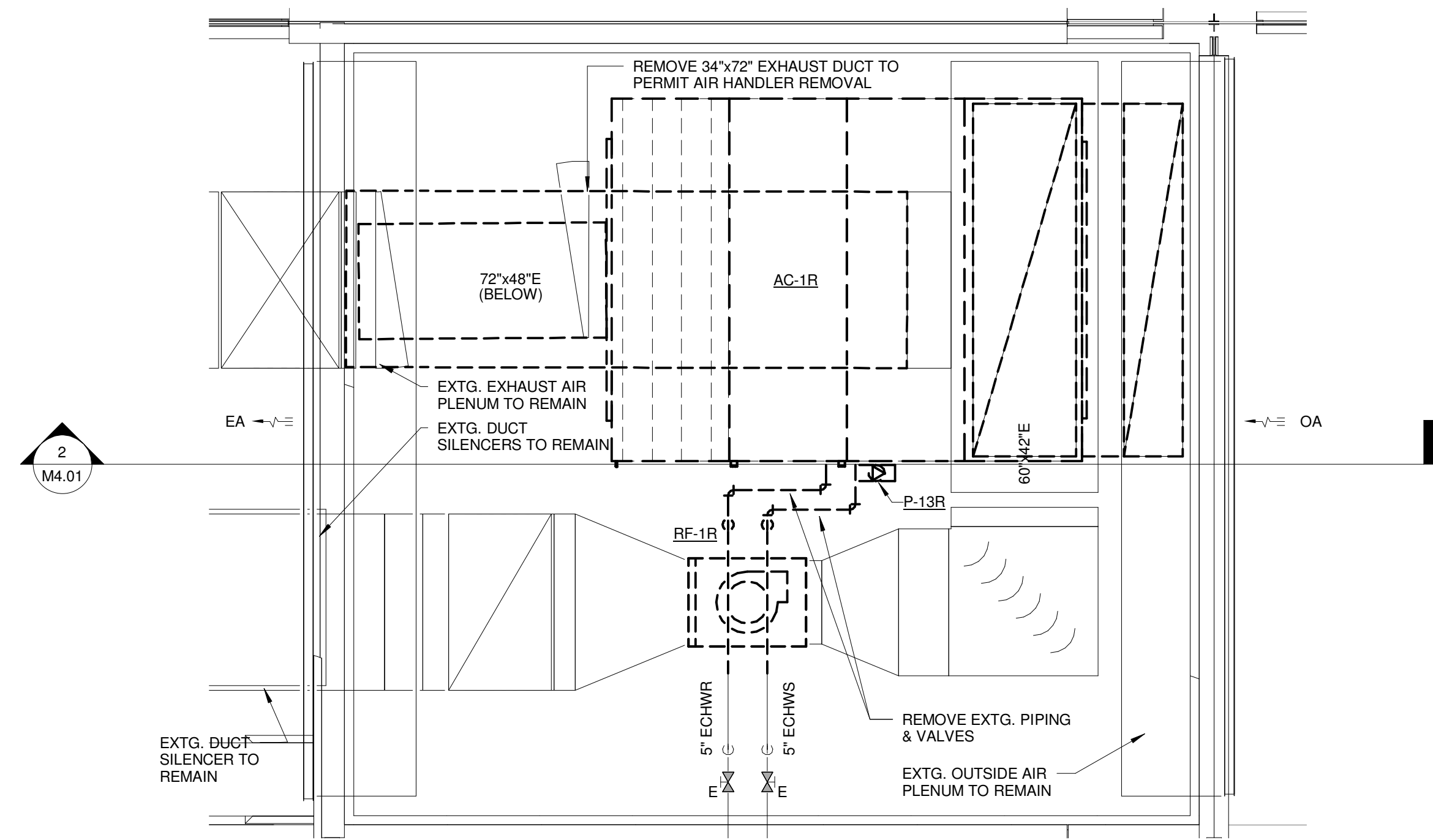
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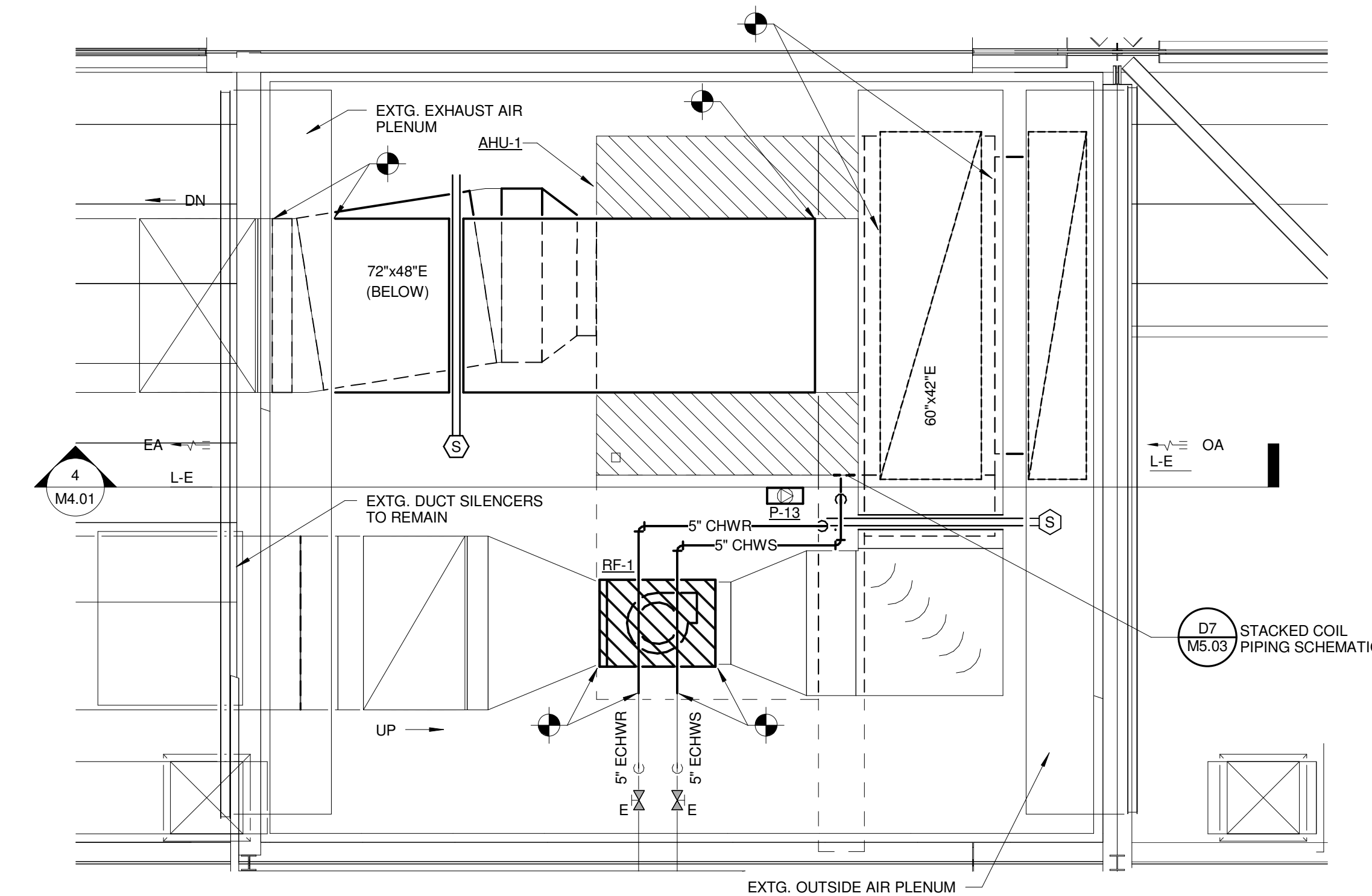
PROJECT: PORTLAND, ME

MECHANICAL ENLARGED PLAN

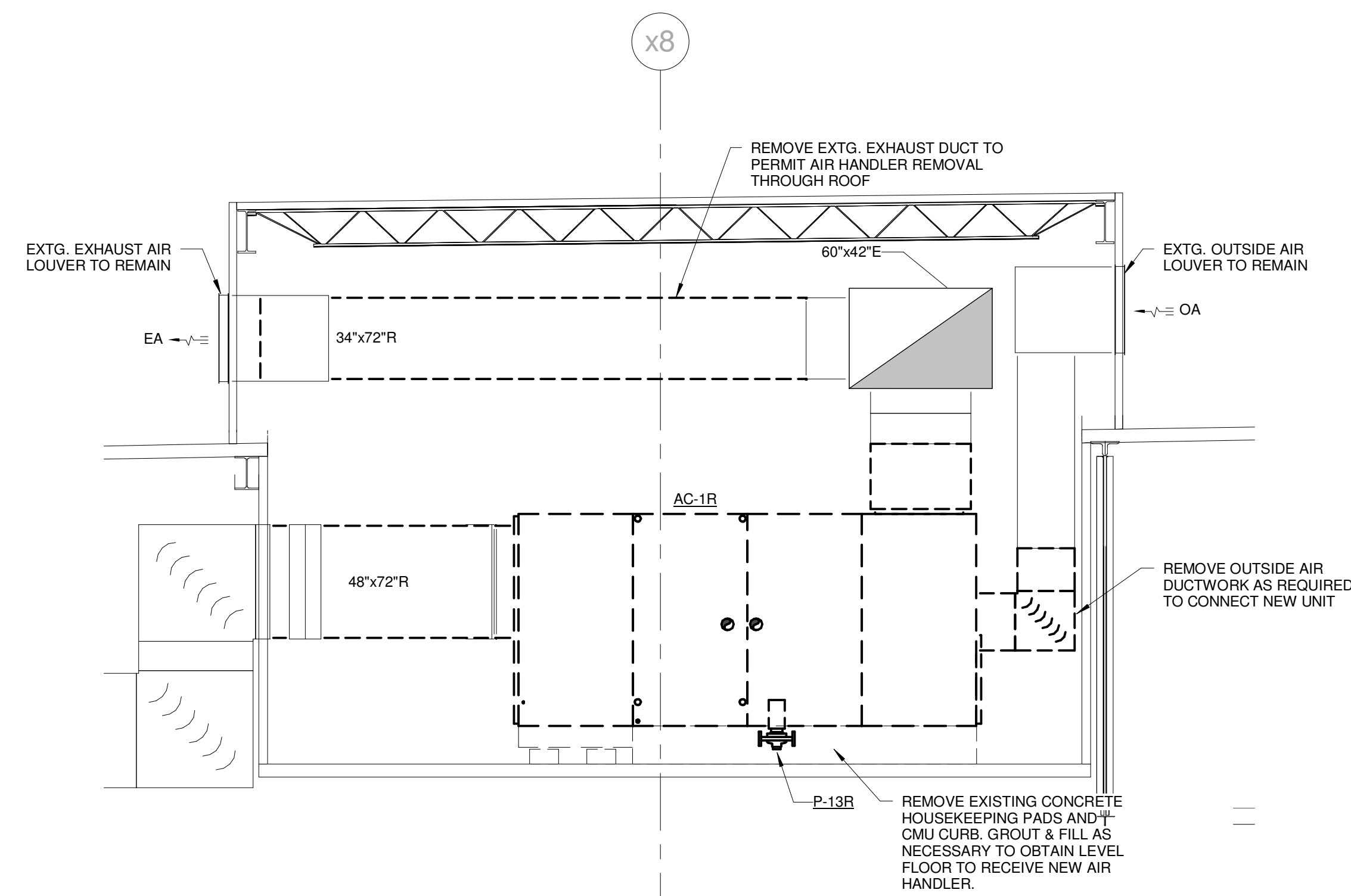
PROJECT No.	3757.00	GRAPHIC SCALE	0'	1'
SCALE	1/4" = 1'-0"			
PROJECT MANAGER	JRB	SHEET No.	M4.01	
DRAWN BY	COB			
CHECKED BY	DMON			



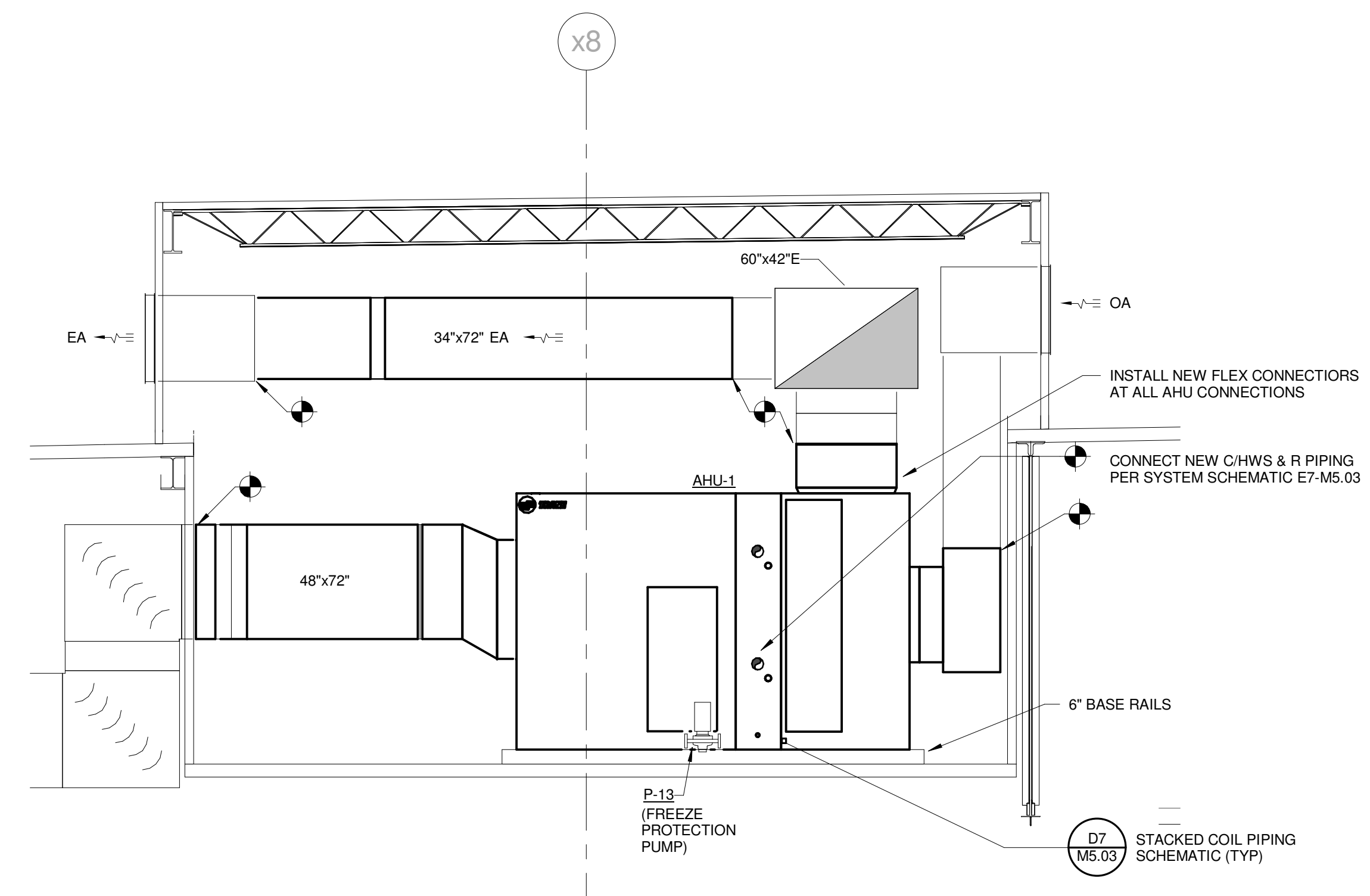
QUAD 'A' FAN ROOM ENLARGED DEMO PLAN  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"



QUAD 'A' FAN ROOM ENLARGED PLAN  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"



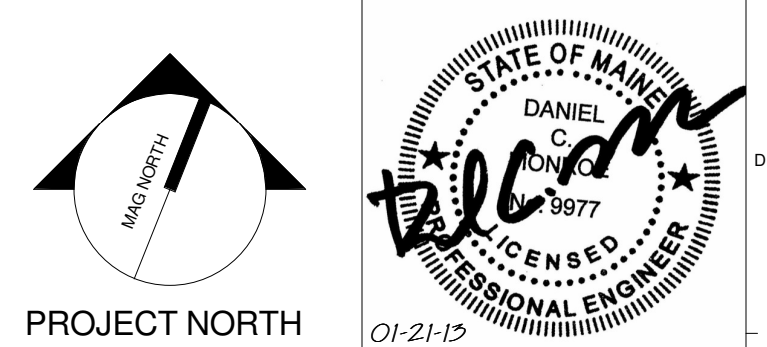
QUAD 'A' FAN ROOM DEMO SECTION  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"



QUAD 'A' FAN ROOM SECTION  
(QUADS 'B', 'C', & 'D' SIM.)  
1/4" = 1'-0"

REV.	DESCRIPTION	DATE
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1	CONSTRUCTION DOCUMENTS	01-21-2013

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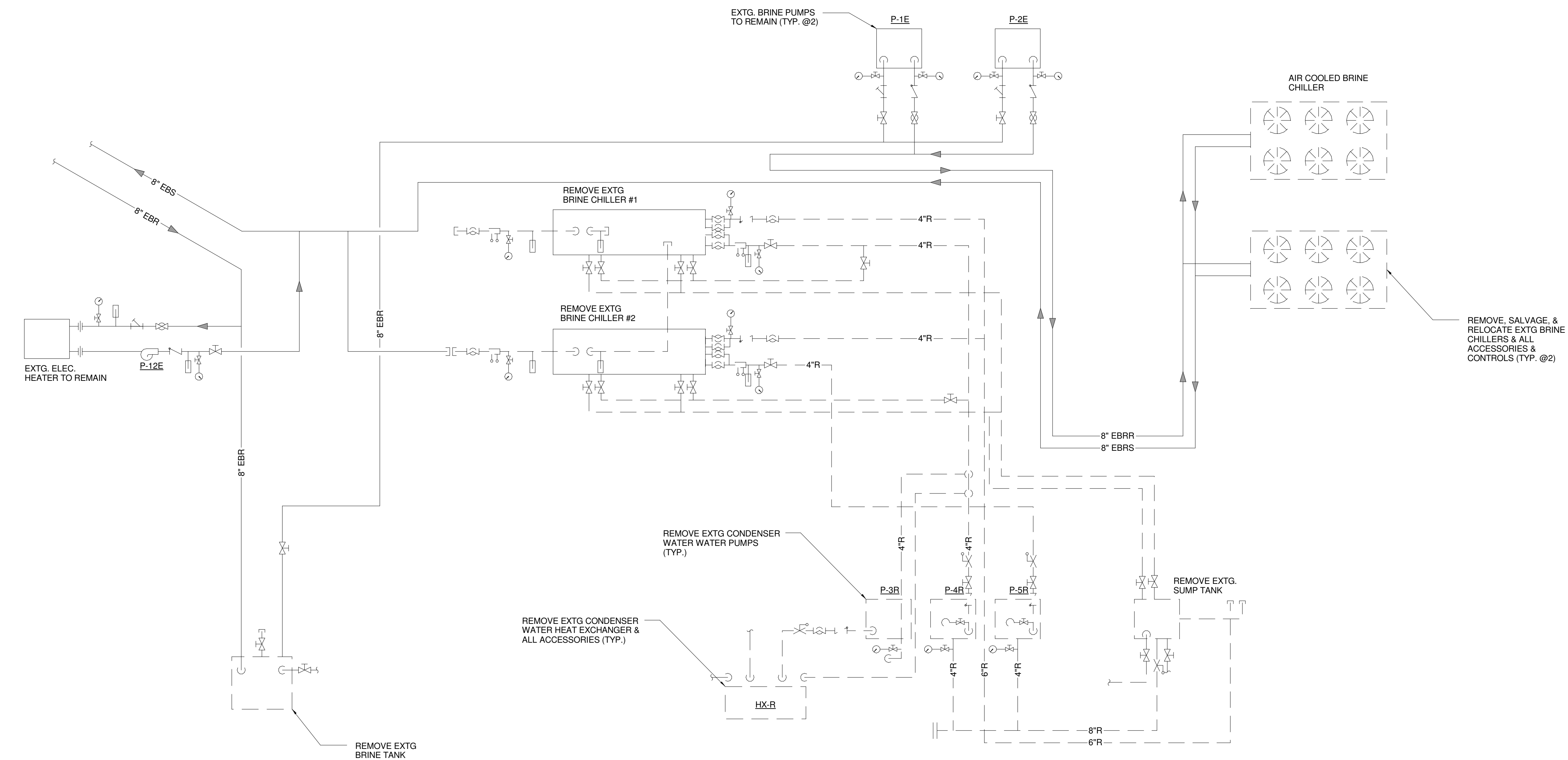
PROJECT: PORTLAND, ME  
MECHANICAL ENLARGED PLAN

WBRC CAD FILE: 375700 - 0002 Mechanical.rvt	GRAPHIC SCALE: 0'
PROJECT No. 3757.00	SCALE: 1/4" = 1'-0"
PROJECT MANAGER: JRB	SHEET No. M4.01
DRAWN BY: COB	
CHECKED BY: DMON	

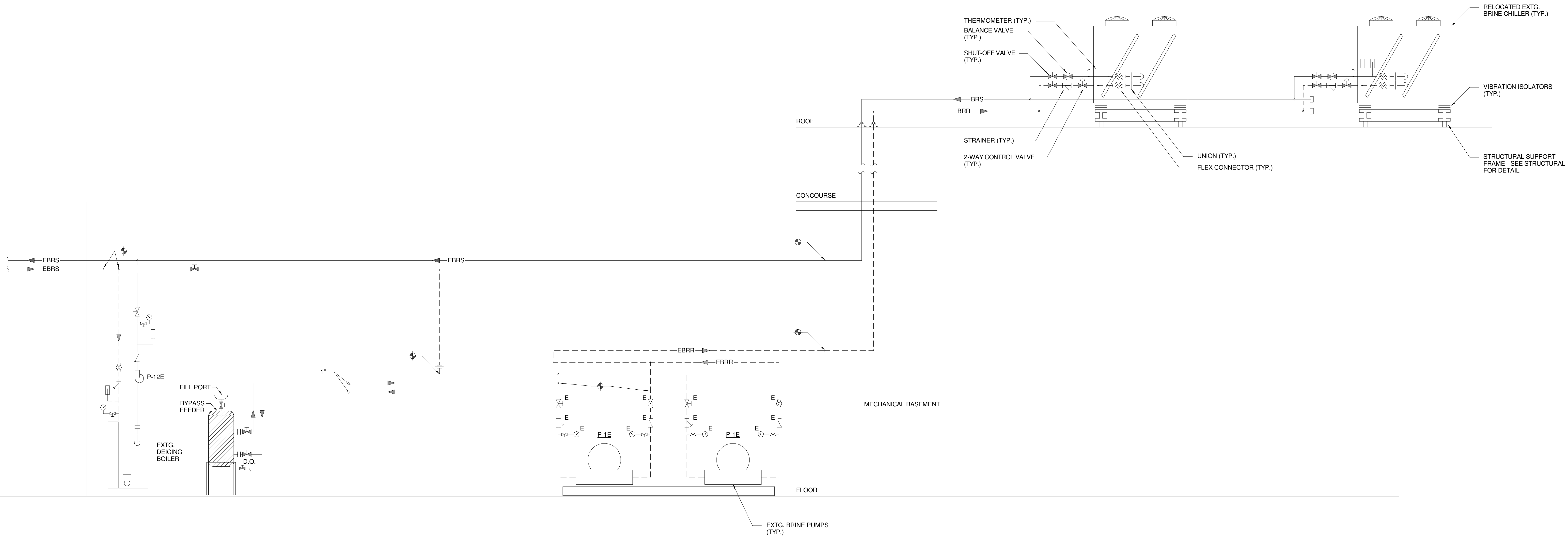


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**1** EXTG BRINE PIPING SCHEMATIC  
NOT TO SCALE

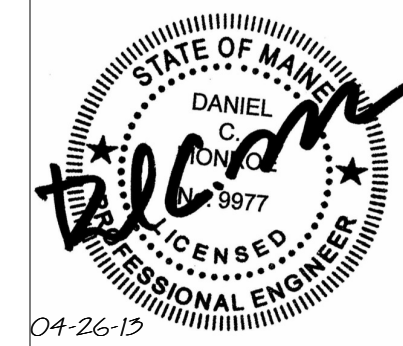


**2** NEW BRINE PIPING SCHEMATIC  
NOT TO SCALE

1	RFIR #173	03-06-2013
0	CONSTRUCTION DOCUMENTS	01-21-2013

**RFIR #289**  
**04-26-2013**

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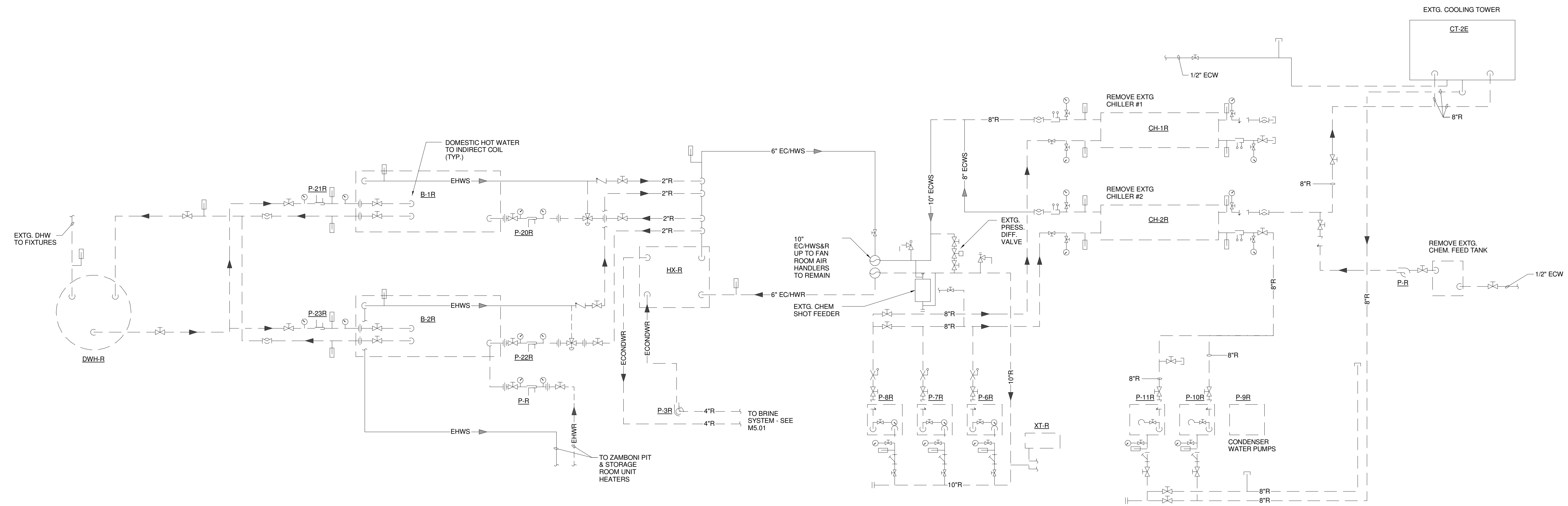
**CUMBERLAND COUNTY CIVIC CENTER RENOVATION**

PROJECT: PORTLAND, ME

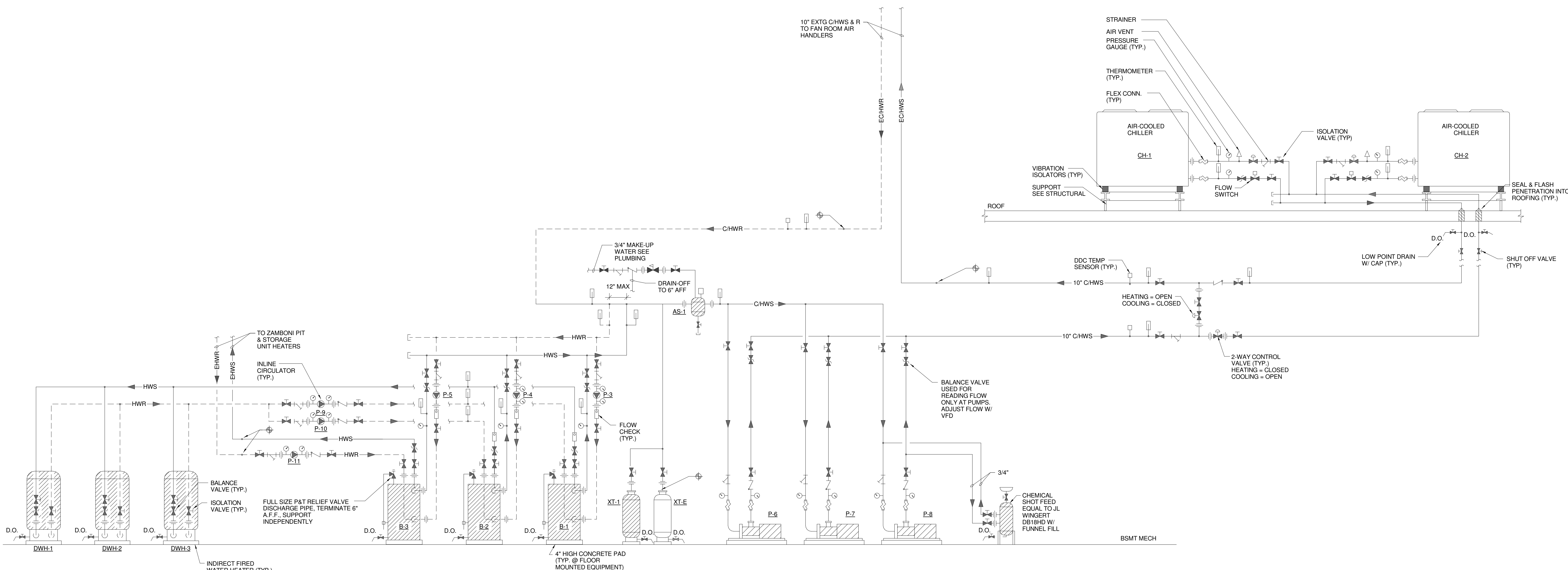
**MECHANICAL SCHEMATICS**

SHEET TITLE	WBRC CAD FILE: 375700 - 0002 Mechanical.rvt	GRAPHIC SCALE	1" = 1'
PROJECT No.	3757.00	SCALE	AS NOTED
PROJECT MANAGER	JRB	SHEET No.	M5.01
DRAWN BY	COB	CHECKED BY	DMON

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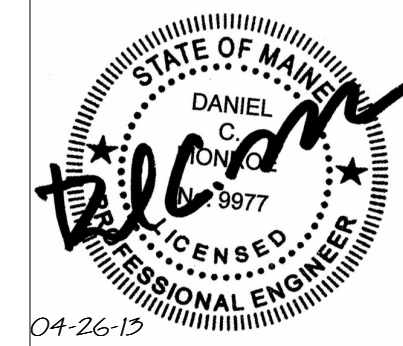
1 EXTG MECHANICAL SYSTEM SCHEMATIC  
 NOT TO SCALE



2 MECHANICAL SYSTEM PIPING SCHEMATIC  
 NOT TO SCALE

REV.	DESCRIPTION	DATE
0	CONSTRUCTION DOCUMENTS	01-21-2013
1	RFIR #289	04-26-2013

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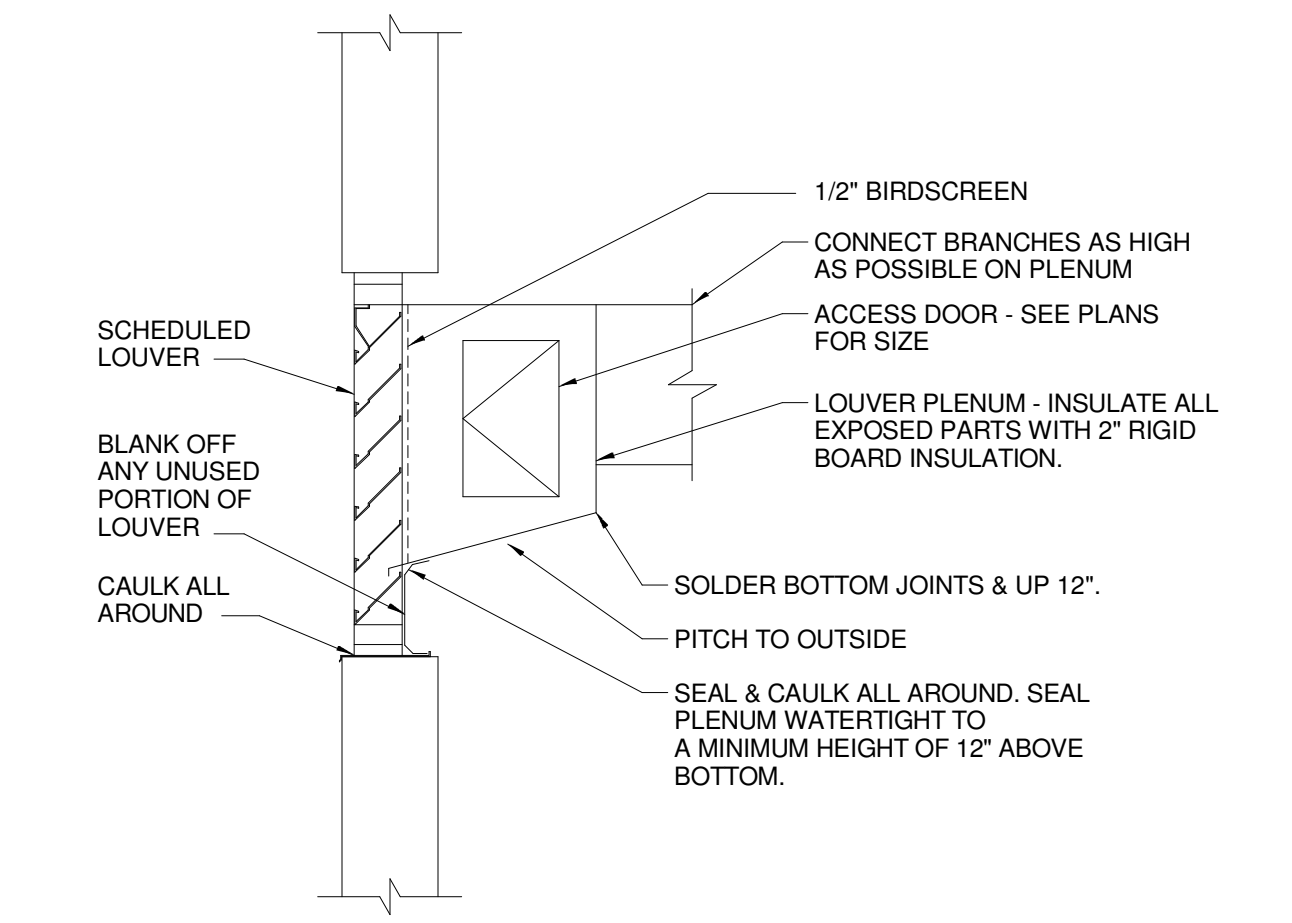
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CUMBERLAND COUNTY CIVIC CENTER RENOVATION  
 PORTLAND, ME

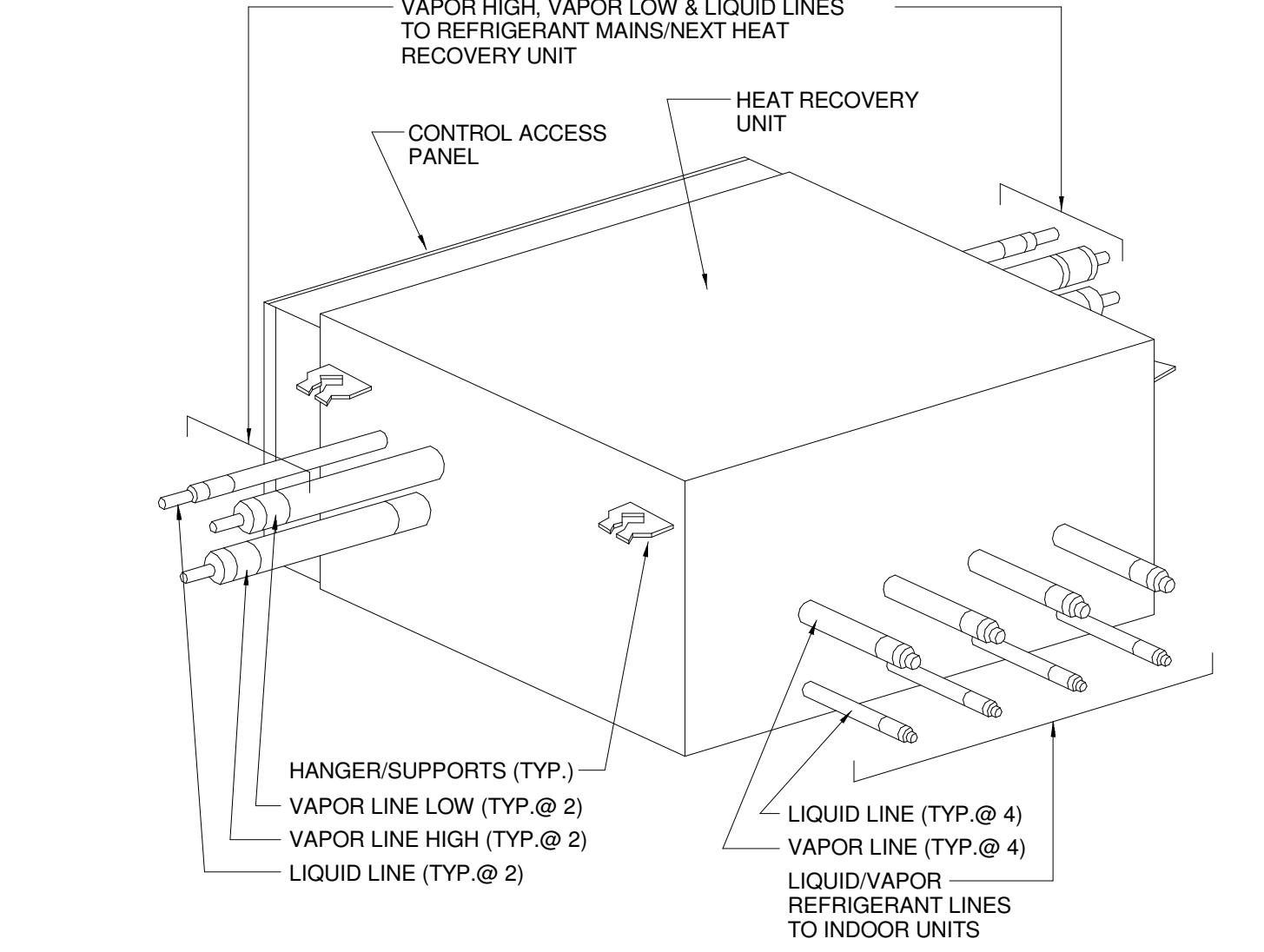
MECHANICAL SCHEMATIC

SHEET TITLE	MECHANICAL SCHEMATIC
WBRC CAD FILE	375700 - 0002 Mechanical.rvt
PROJECT No.	3757.00
SCALE	AS NOTED
PROJECT MANAGER	JRB
DRAWN BY	CGB
CHECKED BY	DMON
SHEET No.	M5.02

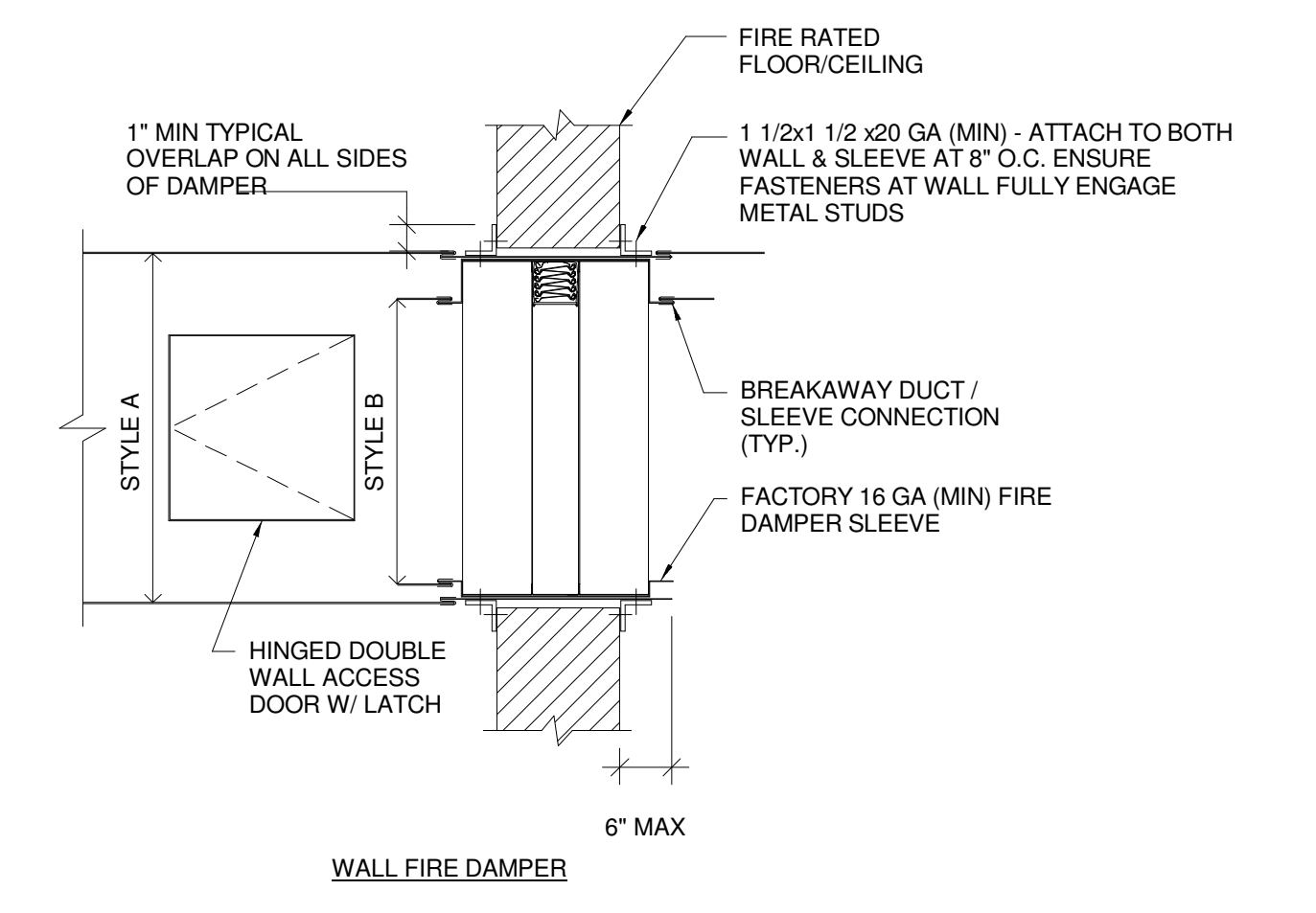
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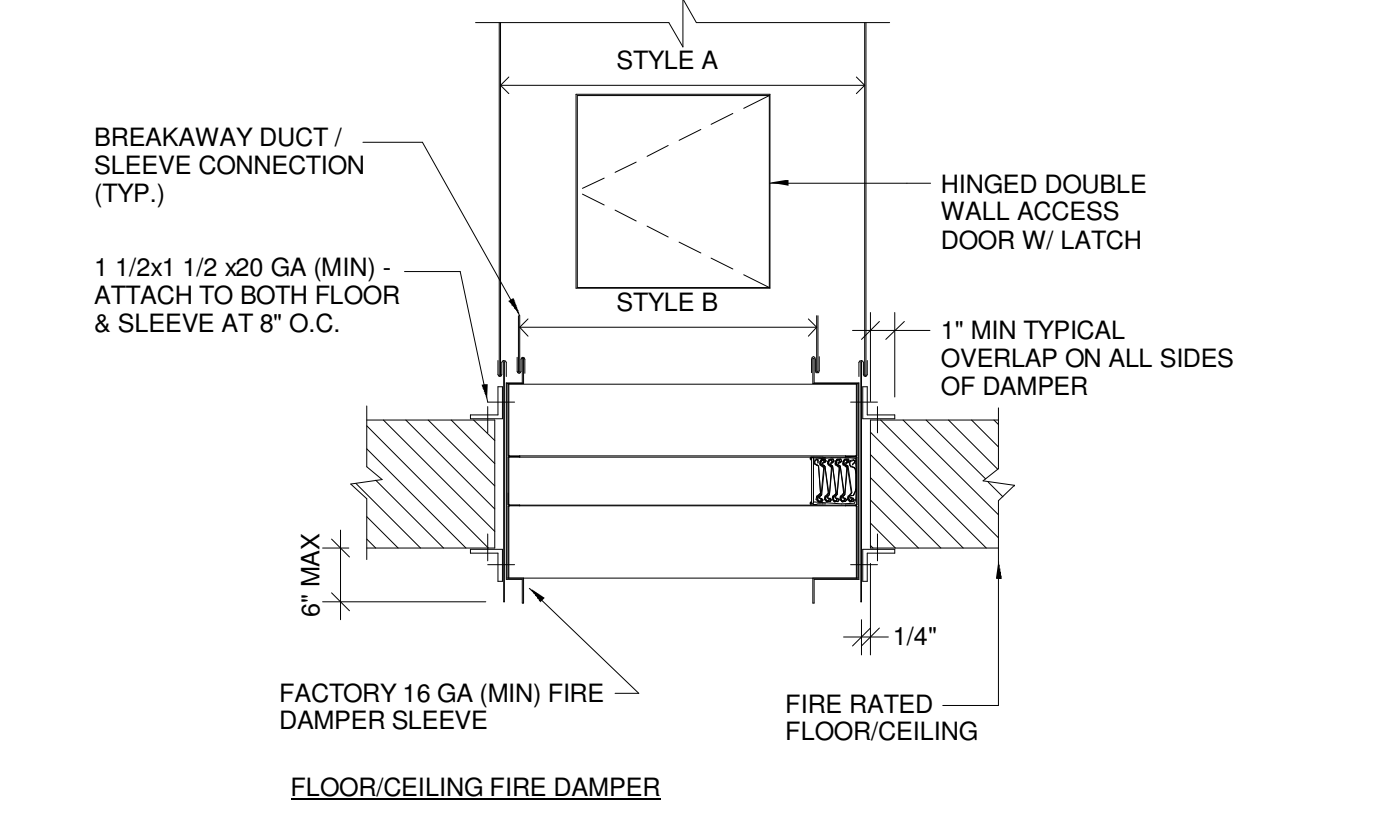
N1 LOUVER DETAIL  
NOT TO SCALE



N7 HEAT RECOVERY BOX DETAIL  
NOT TO SCALE



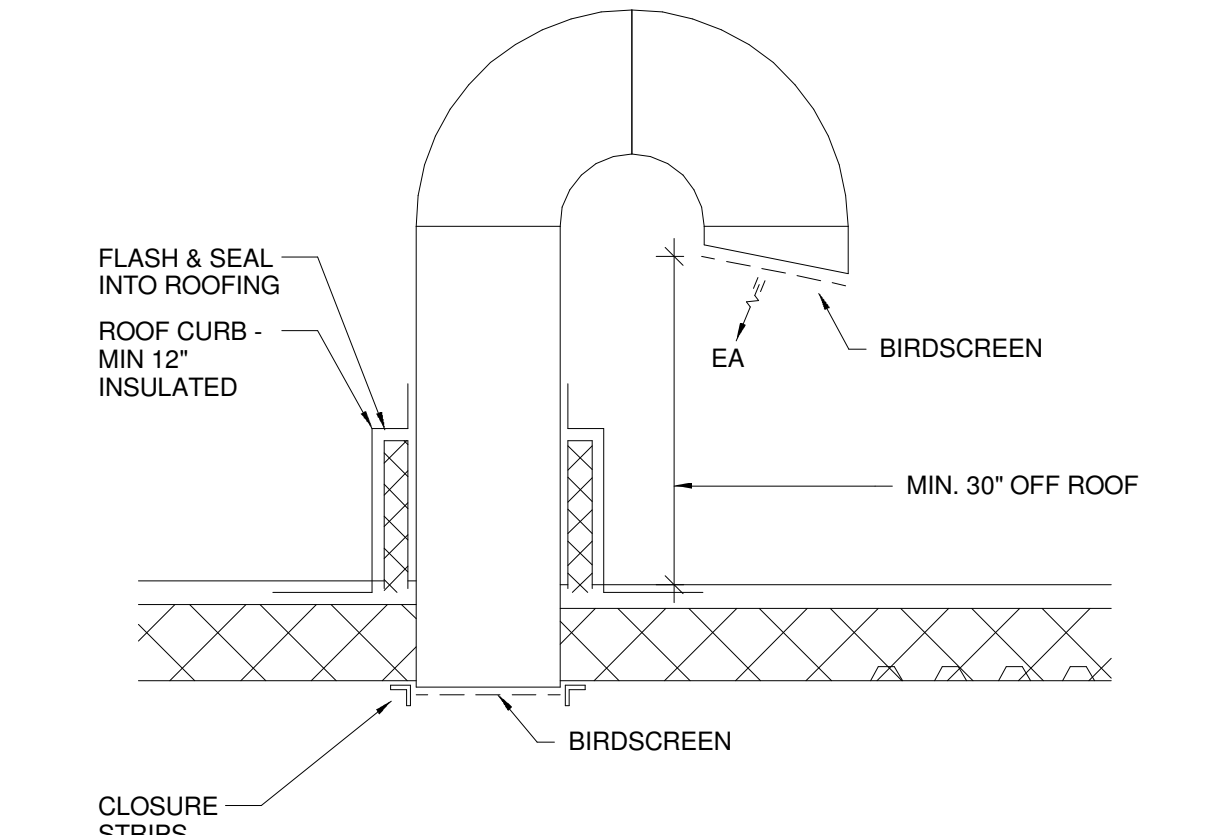
WALL FIRE DAMPER



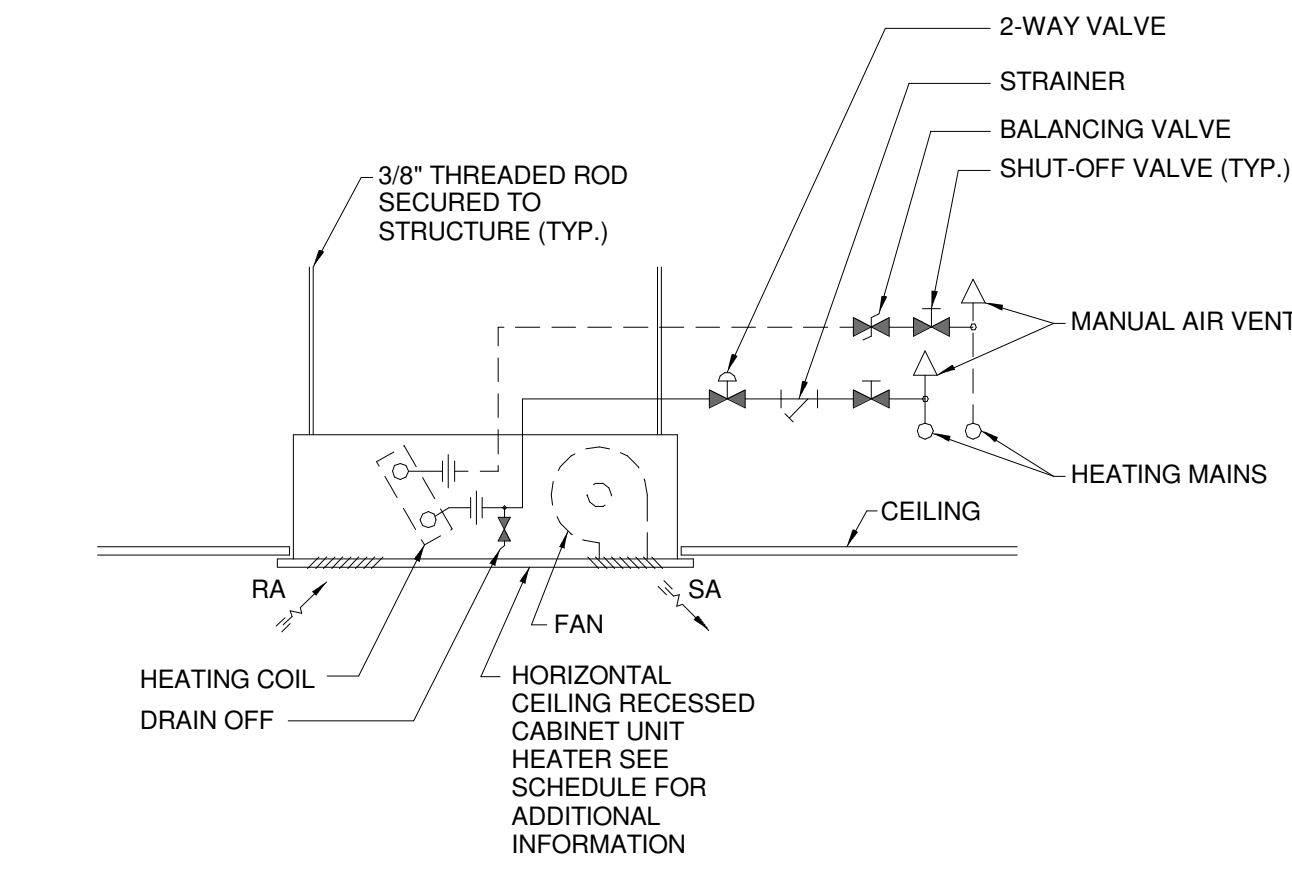
FLOOR/CEILING FIRE DAMPER

- FIRE DAMPER NOTES:**
1. MAKE OPENING 1/8" PER FOOT LARGER THAN DAMPER DIMENSIONS WITH 1/4" MIN. REGD.
  2. DAMPER CONSTRUCTED AND TEST PER UL 555, UL LABELED, 1-1/2 HOUR FIRE RATING W/ 165 DEG. F FUSIBLE LINK
  3. SEAL BETWEEN WALL AND SLEEVE W/ APPROVED FIRE STOP MATERIAL
  4. REFER TO FIRE DAMPER INSTALLATION INSTRUCTION FOR SPECIFIC INSTALLATION REQUIREMENTS
  5. FIRE DAMPERS SHALL BE TYPE "B" W/ CURTAIN OUT OF AIRSTREAM UNLESS OTHERWISE NOTED
  6. TEST & INSPECT FIRE DAMPER FOR PROPER OPERATION & RESTORE AFTER TESTING.
  7. PROVIDE DUCT ACCESS DOOR AT FIRE DAMPER

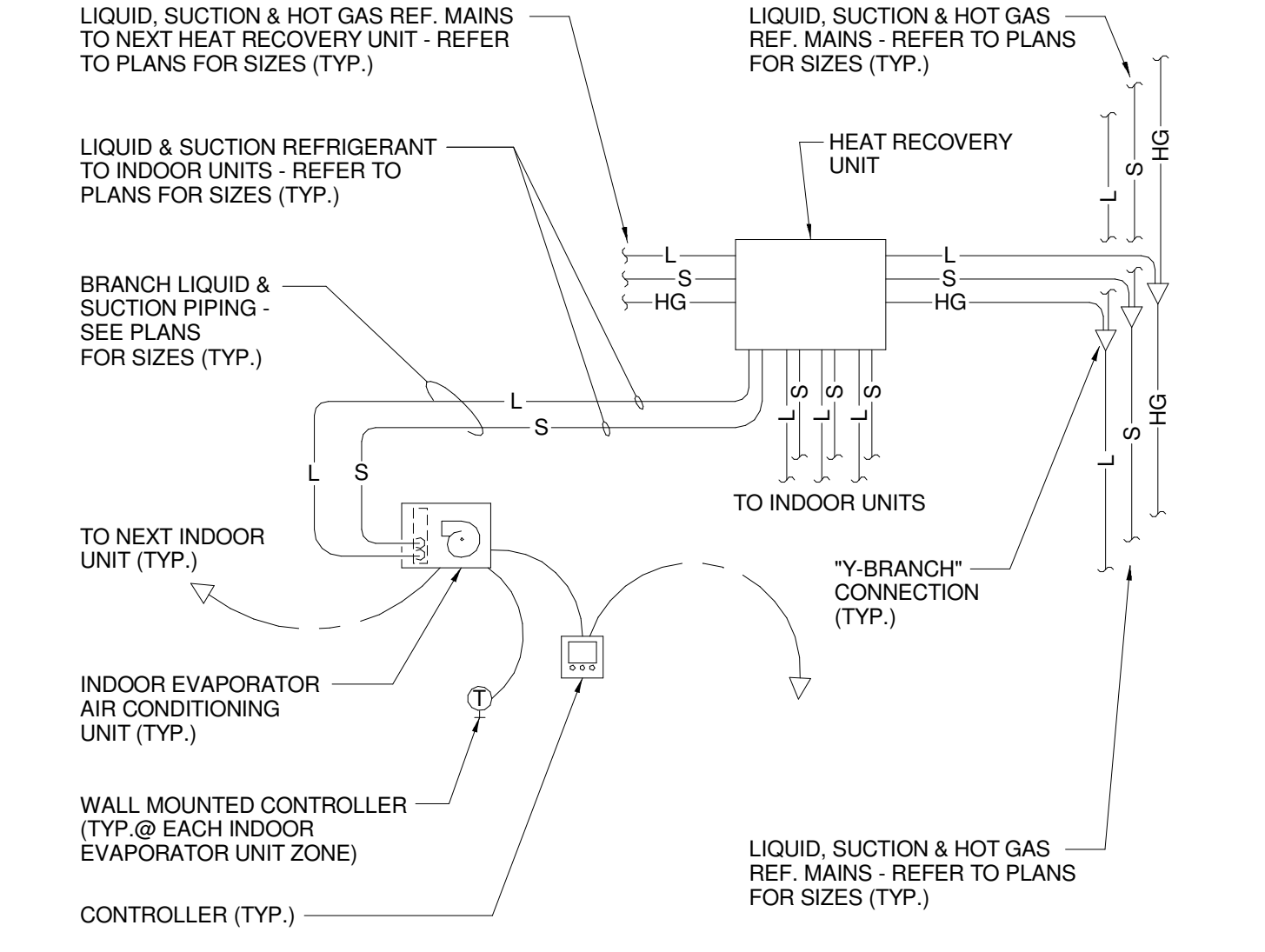
J11 FIRE DAMPER DETAIL  
NOT TO SCALE



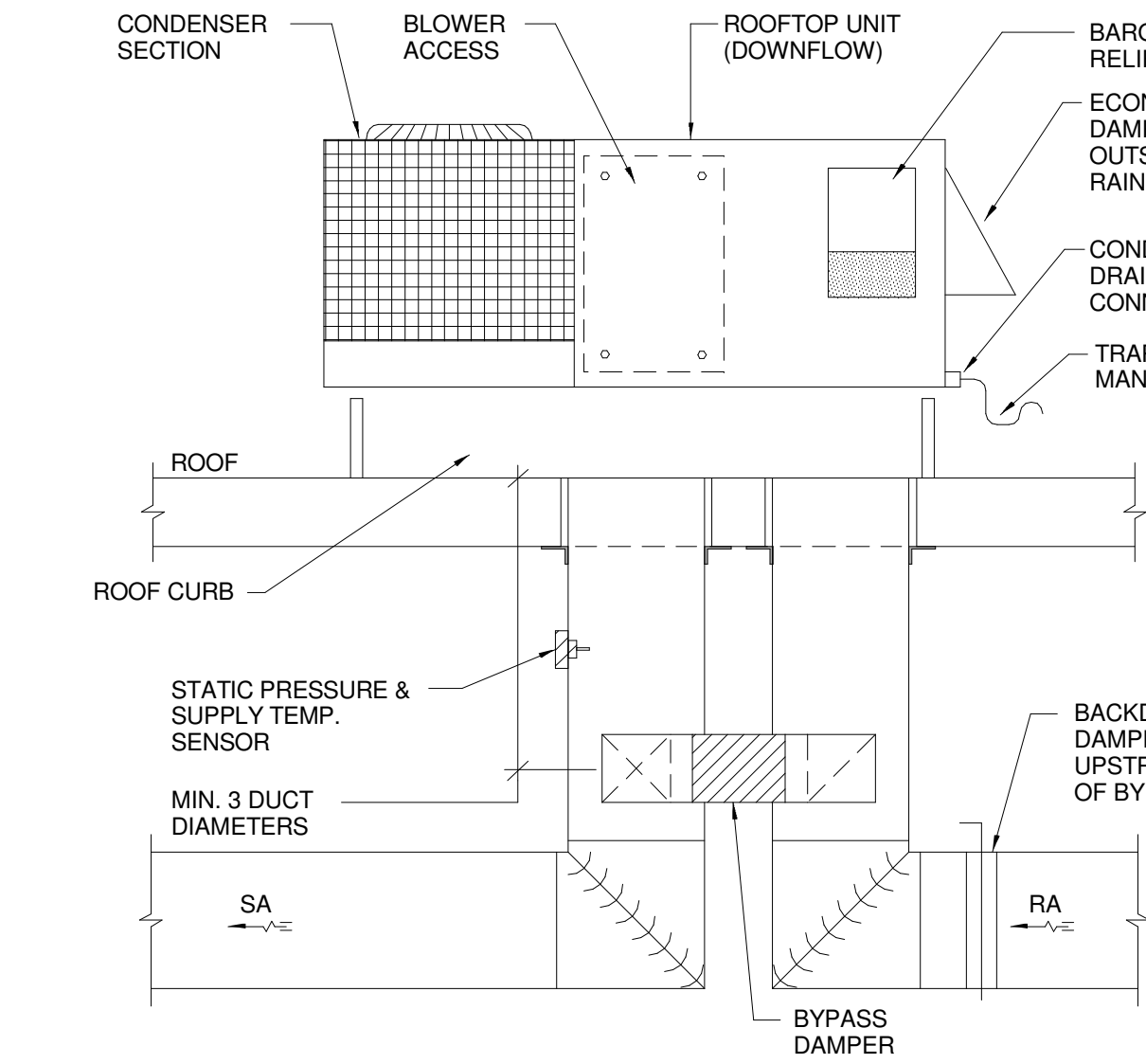
N15 GOOSENECK DETAIL  
NOT TO SCALE



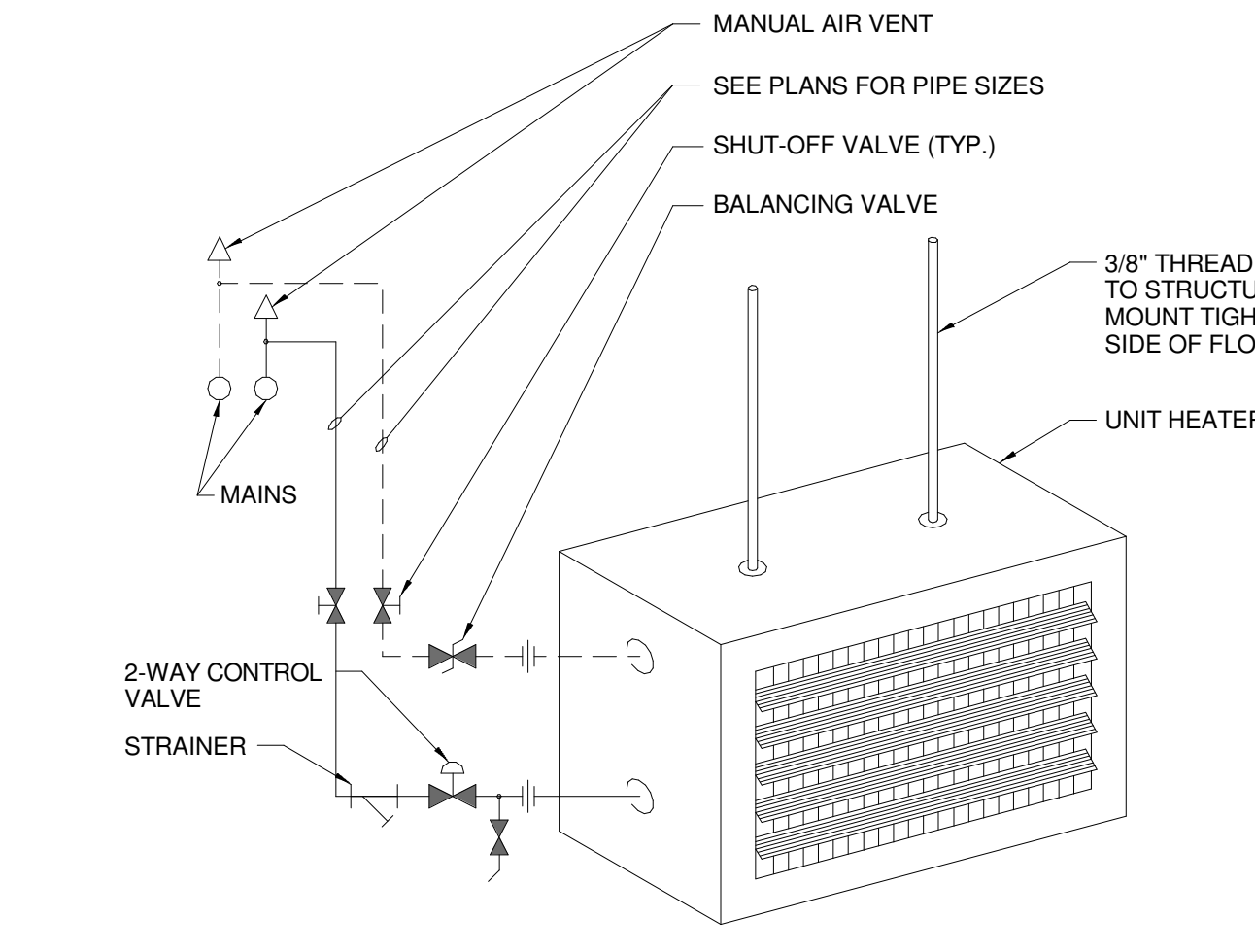
J1 CABINET UNIT HEATER PIPING SCHEMATIC  
NOT TO SCALE



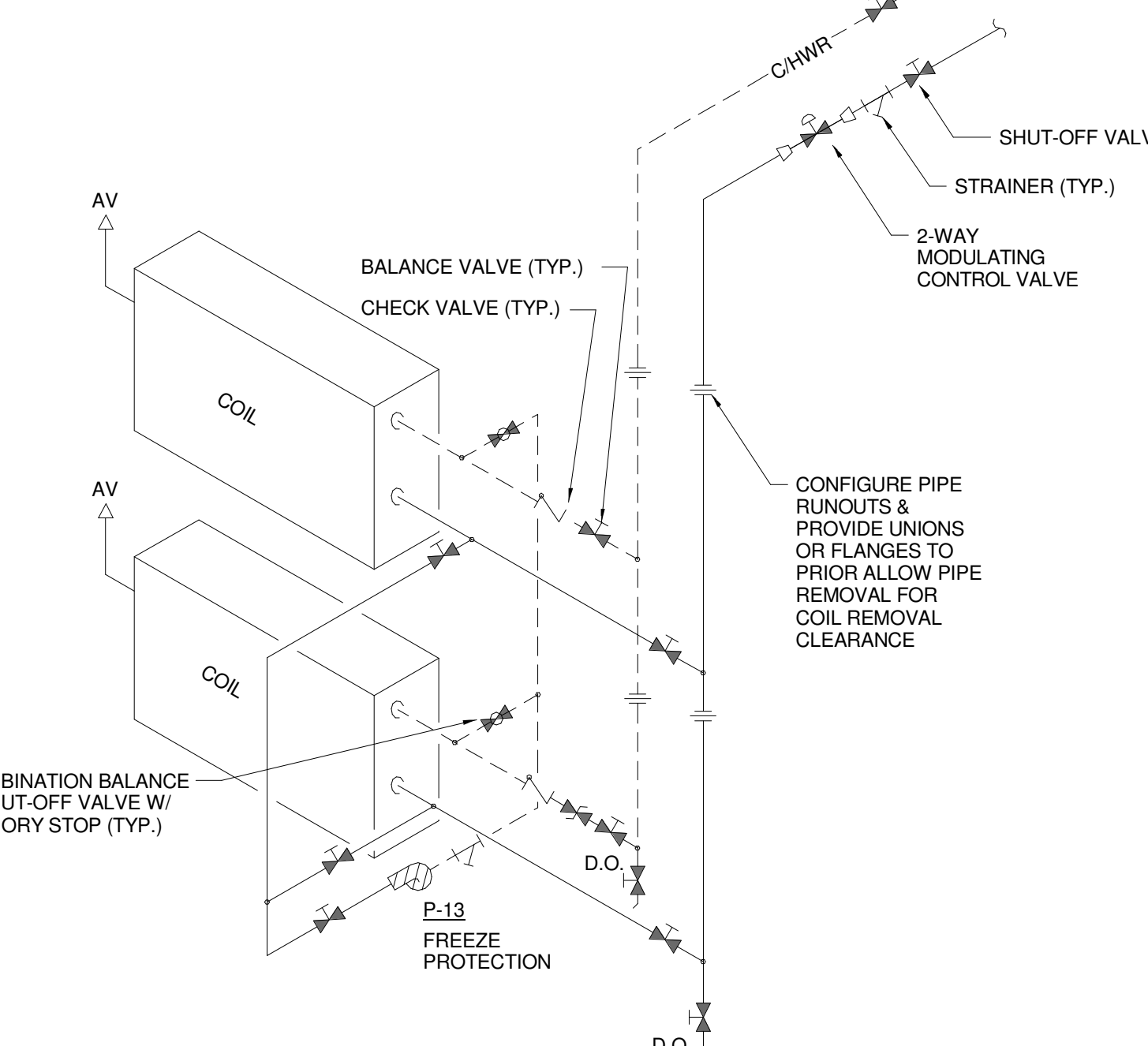
J7 VRF PIPING SCHEMATIC  
NOT TO SCALE



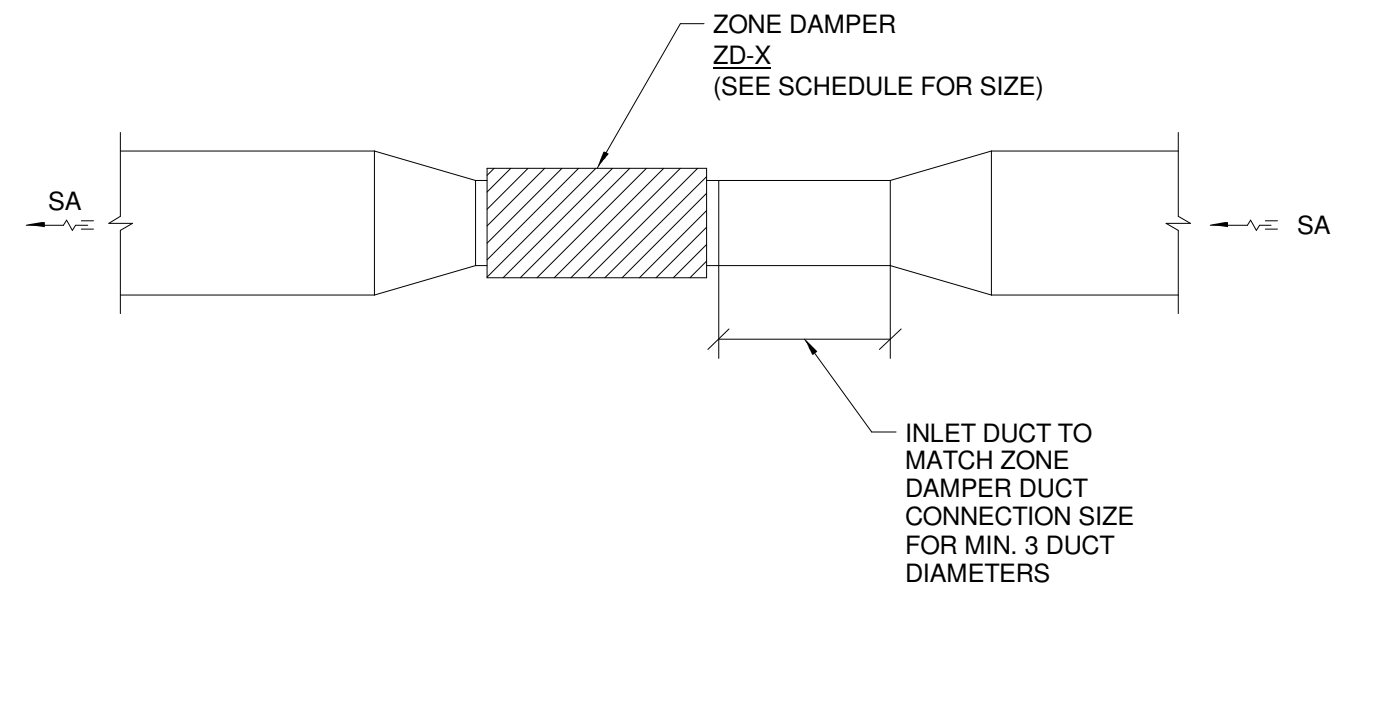
J15 ROOFTOP UNIT BYPASS DETAIL  
NOT TO SCALE



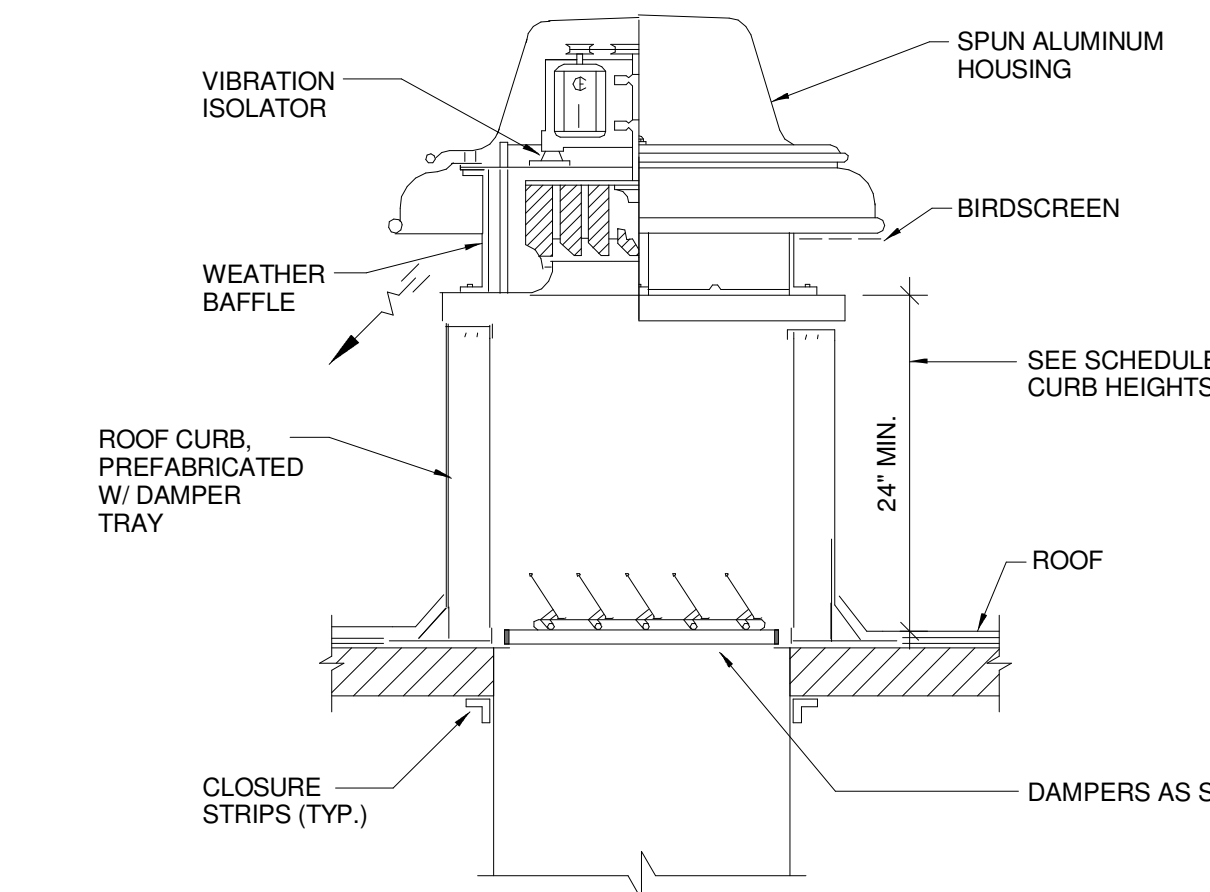
E1 UNIT HEATER PIPING SCHEMATIC  
NOT TO SCALE



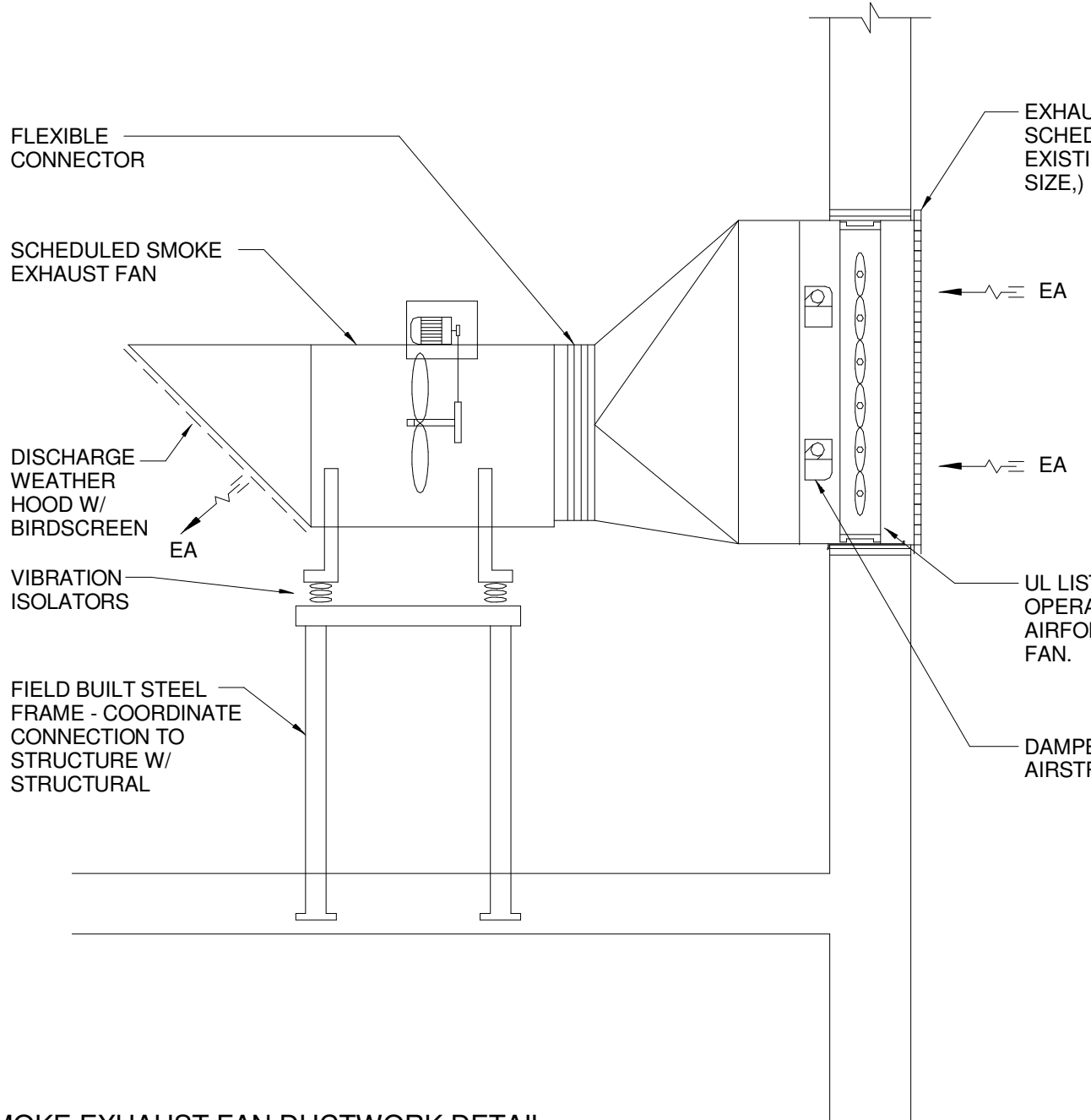
D7 STACKED COIL PIPING SCHEMATIC  
NOT TO SCALE



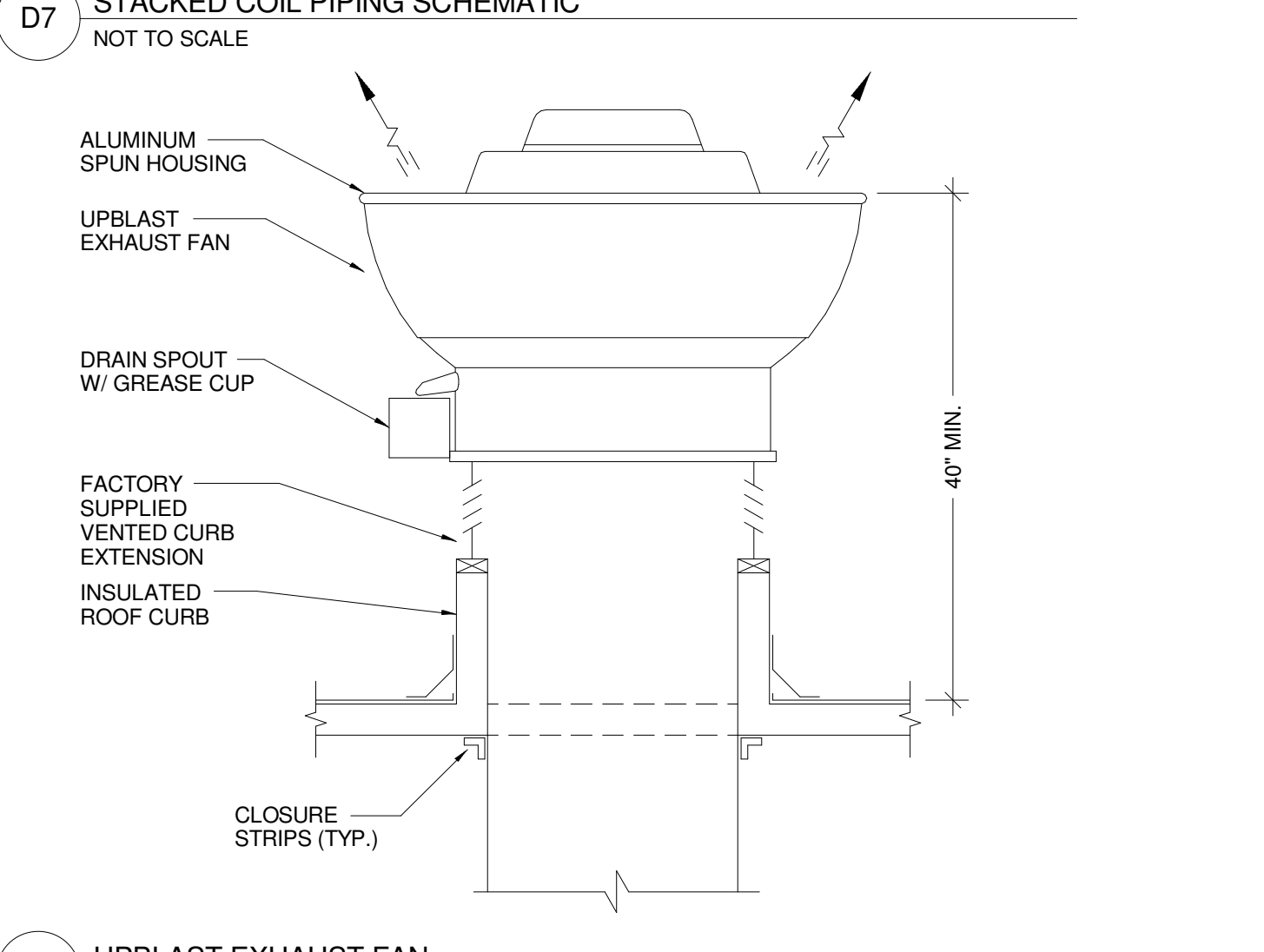
E11 ZONE DAMPER DETAIL  
NOT TO SCALE



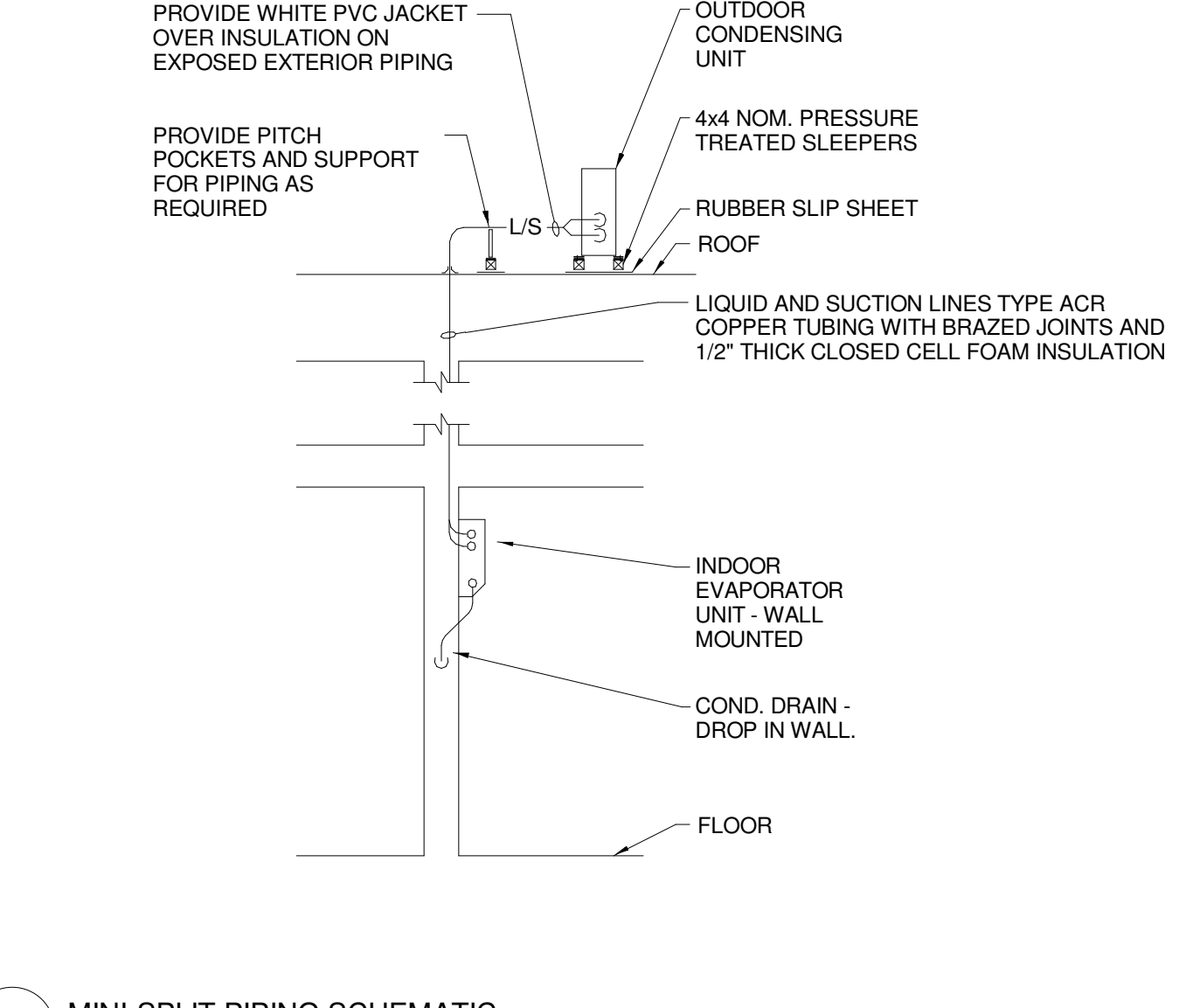
E15 DOWNBLAST EXHAUST FAN DETAIL  
NOT TO SCALE



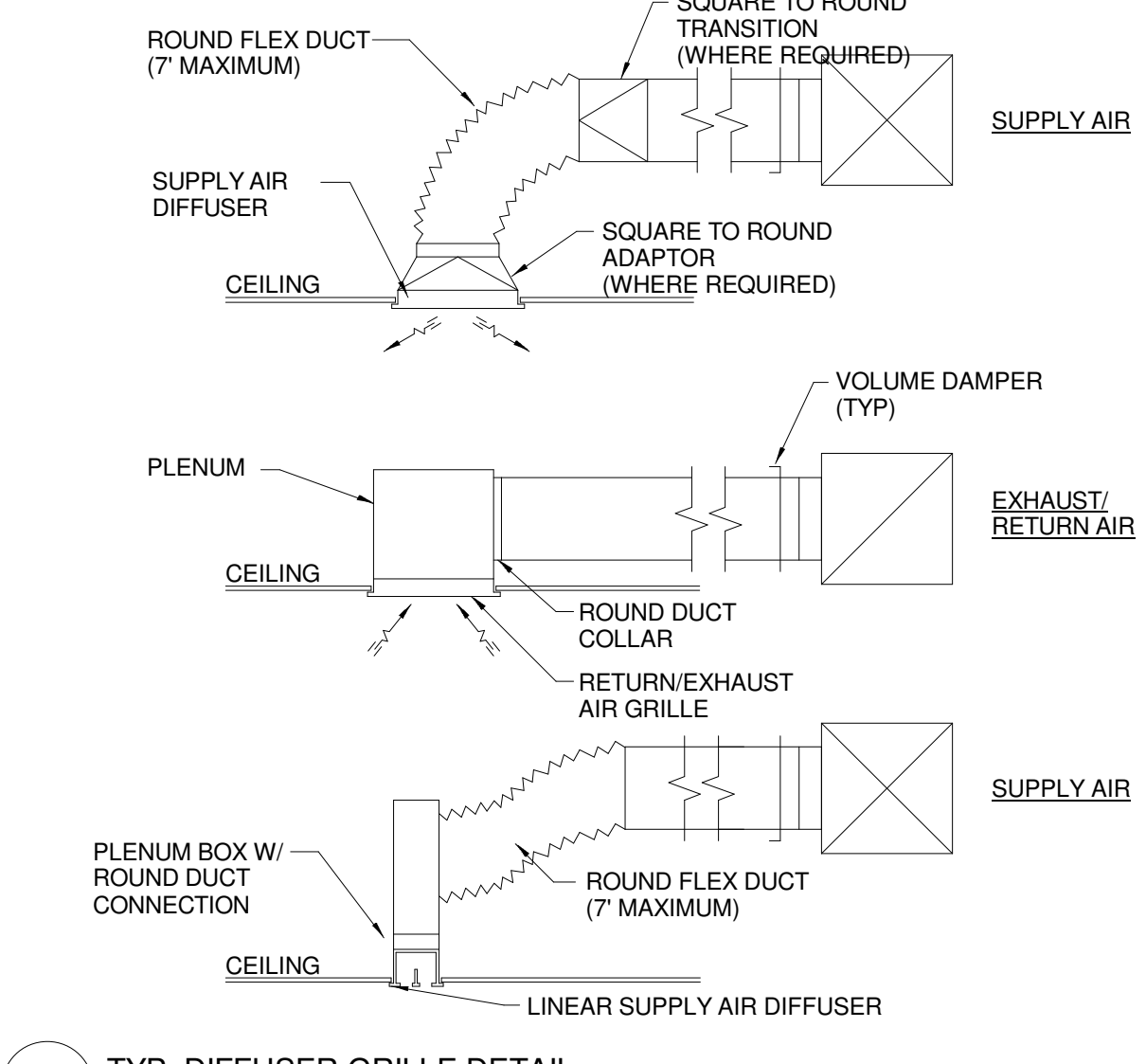
A1 SMOKE EXHAUST FAN DUCTWORK DETAIL  
NOT TO SCALE



A7 UPBLAST EXHAUST FAN  
NOT TO SCALE



A11 MINI-SPLIT PIPING SCHEMATIC  
NOT TO SCALE

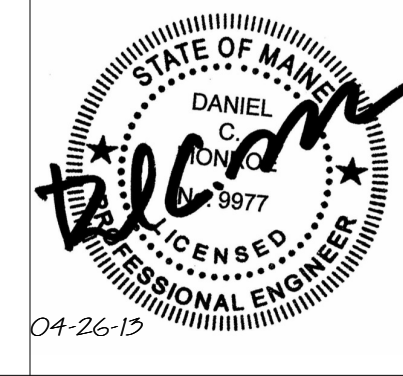


A15 TYP. DIFFUSER GRILLE DETAIL  
NOT TO SCALE

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CUMBERLAND COUNTY CIVIC CENTER RENOVATION

MECHANICAL DETAILS

PROJECT:	PORTLAND, ME
SHEET TITLE:	MECHANICAL DETAILS
WBRC CAD FILE:	375700 - 0002 Mechanical.rvt
PROJECT No.:	3757.00
SCALE:	AS NOTED
PROJECT MANAGER:	JRB
DRAWN BY:	COB
CHECKED BY:	DMON
SHEET No.:	M5.03



UNIT	SERVES	LOCATION	MODEL	# PORTS	CONN. LOAD CAP. (MBH)	TOTAL CONN. LOAD (MBH)	ELECTRICAL			MOP/MCA (A)	REFRIGERANT TYPE	REFRIGERANT PIPING SIZES (IN)				NET UNIT WEIGHT (LBS)	NOTES
							POWER INPUT (W)	POWER	HP			LIQUID	SUCTION	LIQUID	SUCT. H. (IN/OUT)		
HR-1-1	IE-1.1, 1-2, 1-10	QUAD "C"	PRHR031A	3	192	-	40	208/160	15/0.2	R-410A	3/8	5/8	1/2	7/8	1-1/8	45	(1)
HR-1-2	IE-1.3, 1.4, 1-5	QUAD "C"	PRHR031A	3	192	-	40	208/160	15/0.2	R-410A	3/8	5/8	1/2	7/8	1-1/8	45	(1)
HR-1-3	IE-1.6, 1-7	QUAD "C"	PRHR021A	2	192	-	26	208/160	15/0.2	R-410A	3/8	5/8	3/8	3/4	7/8	40	(1)
HR-1-4	IE-1.8, 1-9	QUAD "C"	PRHR021A	2	192	-	26	208/160	15/0.2	R-410A	3/8	5/8	3/8	3/4	7/8	40	(1)
HR-3-1	IE-3.1, 3-2, 3-4	QUAD "D"	PRHR031A	3	192	-	40	208/160	15/0.2	R-410A	3/8	5/8	1/2	7/8	1-1/8	45	(1)
HR-3-2	IE-3.3, 3-13	QUAD "D"	PRHR021A	2	192	-	26	208/160	15/0.2	R-410A	3/8	5/8	3/8	3/4	7/8	40	(1)
HR-3-3	IE-3.5, 3-11, 3-12	QUAD "D"	PRHR031A	3	192	-	40	208/160	15/0.2	R-410A	3/8	5/8	1/2	7/8	1-1/8	45	(1)
HR-3-4	IE-3.6, 3-7, 3-8	QUAD "D"	PRHR031A	3	192	-	40	208/160	15/0.2	R-410A	3/8	5/8	1/2	7/8	1-1/8	45	(1)
HR-3-5	IE-3.9, 3-10	QUAD "D"	PRHR021A	2	192	-	26	208/160	15/0.2	R-410A	3/8	5/8	3/8	3/4	7/8	40	(1)

HEAT RECOVERY UNIT SCHEDULE NOTES:  
 ① BASED ON LG "MULTI V III"

UNIT	SERVICE	SIZE (W"xH")	MODEL #	TYPE	SQ. FT. FREE AREA	CFM	FPM	APD	NOTES
L-1	BOILER & COMBUSTION AIR	48x32	ELF445DXH	DRAINABLE	4.83	-	-	-	(1) (2) (3)
L-2	EF-13 EXHAUST AIR	32x32	ELF445DXH	DRAINABLE	4.83	1,300	444	0.04	(1) (2) (3)
L-3	VRF EVAPORATOR OUTSIDE AIR	16x16	ELF445DXH	DRAINABLE	0.73	135	185	<0.02	(1) (2) (3)
L-4	EF-14 EXHAUST AIR	48x16	ELF445DXH	DRAINABLE	2.66	1,900	715	0.08	(1) (2) (3)
L-5	EF-15 EXHAUST AIR	48x16	ELF445DXH	DRAINABLE	2.66	1,900	715	0.08	(1) (2) (3)

LOUVER SCHEDULE NOTES:  
 ① BASED ON RUSKIN  
 ② COLOR/FINISH AS SELECTED BY ARCHITECT  
 ③ BIRD SCREEN

TAG	SERVING	O.A. CFM	TOTAL CFM	INDOOR EVAPORATOR UNIT				ELECTRICAL			WEIGHT (LBS)	NOTES	
				MODEL NO.	CLG. COND. F (DB/WB)	T. CLG. MBH	S. CLG. MBH	HTG. MBH	POWER	MCA			FLA
IE-1-1	TICKETING B347	30	265	ARNU053TRC2	80/67	5.3	3.8	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-2	OFFICE B350	15	212	ARNU053TRC2	80/67	5.3	3.8	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-3	SECURITY	30	265	ARNU053TRC2	80/67	7.7	5.6	8.5	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-4	OFFICE	15	212	ARNU053TRC2	80/67	5.3	3.8	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-5	OFFICE	15	212	ARNU053TRC2	80/67	5.3	3.8	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-6	LUNION OFFICE	15	212	ARNU053TRC2	80/67	5.3	3.8	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-7	OFFICE	15	212	ARNU053TRC2	80/67	5.3	3.8	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-8	CHEF OFFICE	15	212	ARNU053TRC2	80/67	5.1	3.6	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-9	OFFICIAL SUITE	30	265	ARNU053TRC2	80/67	5.1	3.6	5.2	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-1-10	IT B348	0	494	ARNU245SEL2	80/67	23.0	16.6	22.9	208/160	0.29	-	30	(1) (2) (4)
IE-2-1	FLEX 1	125	671	ARNU283TRC2	80/67	27.1	19.6	26.5	208/160	0.22	0.15	50	(1) (2) (4) (5) (6)
IE-2-2	FLEX 2	125	671	ARNU283TRC2	80/67	27.1	19.6	26.5	208/160	0.22	0.15	50	(1) (2) (4) (5) (6)
IE-3-1	ICE SUITE 1	75	304	ARNU123TRC2	80/67	9.5	6.9	10.1	208/160	0.25	0.20	34	(1) (2) (4) (5)
IE-3-2	ICE SUITE 2	75	388	ARNU183TRC2	80/67	15.0	10.8	15.9	208/160	0.25	0.20	34	(1) (2) (4) (5)
IE-3-3	FIRST AID	15	212	ARNU053TRC2	80/67	4.4	3.1	4.5	208/160	0.25	0.20	30	(1) (2) (3) (4) (5) (6)
IE-3-4	VESTIBULE	0	484	ARNU093TRC2	80/67	7.6	5.3	7.9	208/160	0.81	0.64	50	(1) (2) (4) (5)
IE-3-5	MERCHANDISE FLEX SPACE	0	600	ARNU153TRC2	80/67	12.2	9.5	12.6	208/160	0.81	0.64	50	(1) (2) (4) (5)
IE-3-6	PHONES	30	265	ARNU053TRC2	80/67	5.8	4.2	6.1	208/160	0.25	0.20	30	(1) (2) (4) (5)
IE-3-7	ASSISTANT MANAGER OFFICE	15	212	ARNU053TRC2	80/67	4.3	3.1	4.5	208/160	0.25	0.20	30	(1) (2) (3) (4) (5)
IE-3-8	TICKETS	40	283	ARNU093TRC2	80/67	7.4	5.3	7.9	208/160	0.25	0.20	30	(1) (2) (4) (5)
IE-3-9	MANAGER OFFICE	15	212	ARNU053TRC2	80/67	4.2	3.0	4.5	208/160	0.25	0.20	30	(1) (2) (3) (4) (5)
IE-3-10	MAIN LOBBY	0	1,095	ARNU483TRC2	80/67	37.4	26.9	39.4	208/160	0.81	0.64	56	(1) (2) (4) (5)
IE-3-11	VESTIBULE / LOBBY	0	1,059	ARNU423TRC2	80/67	33.4	24.0	34.4	208/160	0.81	0.64	56	(1) (2) (4) (5)
IE-3-12	VESTIBULE	0	1,059	ARNU423TRC2	80/67	33.0	23.7	34.4	208/160	0.81	0.64	56	(1) (2) (4) (5)
IE-3-13	IT 1410	0	371	ARNU153SEL2	80/67	12.0	8.5	12.8	208/160	0.29	-	20	(1) (2) (4)

DUCTED AIR CONDITIONER SCHEDULE NOTES:  
 ① BASED ON LG  
 ② BASED ON HIGH FAN SPEED  
 ③ BASED ON LOW FAN SPEED  
 ④ INTEGRAL CONDENSATE LIFT PUMP KIT  
 ⑤ R-410A REFRIGERANT  
 ⑥ OUTSIDE AIR DUCTING KIT

UNIT	AREA(S) SERVED	MODEL	CFM	ESP	MOTOR HP	BRAKE	VOLTS/∅	FAN RPM	NOTES
SEF-1	BOWL	72-TUBSC	75,000	0.20	20.0	16.8	460/360	524	(1) (2) (3) (4) (5)
SEF-2	BOWL	72-TUBSC	75,000	0.20	20.0	16.8	460/360	524	(1) (2) (3) (4) (5)
SEF-3	NW ENTRY STAIR	30-TUBSC	10,000	0.20	2.0	1.7	460/360	1048	(1) (2) (3) (4) (5)
SEF-4	WEST LOBBY	54-TUBSC	50,000	0.20	15.0	12.9	460/360	777	(1) (2) (3) (4) (5)
SEF-5	CONCOURSE QUAD 'A'	42-TIB	30,000	0.40	10.0	8.19	460/360	1004	(1) (2) (3) (4) (5) (6)
SEF-6	CONCOURSE QUAD 'B'	42-TIB	30,000	0.40	10.0	8.19	460/360	1004	(1) (2) (3) (4) (5) (6)
SEF-7	CONCOURSE QUAD 'C'	42-TUBSC	30,000	0.20	10.0	8.38	460/360	1026	(1) (2) (3) (4) (5)
SEF-8	CONCOURSE QUAD 'D'	42-TUBSC	30,000	0.20	10.0	8.38	460/360	1026	(1) (2) (3) (4) (5)

EXHAUST FAN SCHEDULE NOTES:  
 ① BASED ON LOREN COOK  
 ② 13-1/2" HIGH INSULATED ROOF CURB  
 ③ PREMIUM EFFICIENT TECF MOTOR  
 ④ UL LISTED FOR SMOKE CONTROL  
 ⑤ BELT GUARD & WEATHER-PROOF MOTOR COVER  
 ⑥ FLOOR LEGS AND SPRING ISOLATORS

UNIT	SERVED BY	AREAS SERVED	MODEL	MAX. CFM	DUCT SIZE DIA.	FPM	NOTES
ZD-1	AHU-5	OFFICES	VADB-06-B	320	8"	947	(1)
ZD-2	AHU-5	TOILET ROOMS / ELEC	VADB-06-B	145	8"	771	(1)
ZD-3	AHU-5	UPPER SUITE LOBBY	VADB-06-B	300	8"	888	(1)
ZD-4	AHU-5	INTERIOR OFFICES	VADB-06-B	280	8"	828	(1)
ZD-5	AHU-5	EXTERIOR OFFICES	VADB-06-B	320	8"	947	(1)
ZD-6	AHU-5	EXTERIOR OFFICES	VADB-10-B	520	10"	977	(1)
ZD-7	AHU-5	RECEPTION	VADB-06-B	120	6"	638	(1)
ZD-8	AHU-7	FITNESS & LOUNGE	VCCF-14	2,000	14"	-	(1)
ZD-9	AHU-7	HOME LOCKER ROOM	VCCF-10	1,250	10"	-	(1)
ZD-10	AHU-7	COACH OFFICES	VCCF-06	350	6"	-	(1)

VARIABLE VOLUME BOX SCHEDULE NOTES:  
 ① BASED ON TRANE VARITRAC  
 ② BASED ON TRANE SINGLE DUCT VAV.

UNIT	SERVICE	MODEL #	NOM. TONS	COIL AREA SQ. FT.	ROWS	FPI	HTG. MBH	CLG. MBH	COP	EER
CU-1	SE OFFICE VRF	ARUB072DT3	6.0	-	2	14	73.6	74.4	3.52	12.4
CU-2	FLEX ROOMS	ARUN053S2	4.5	-	2	17	53.0	54.3	3.90	9.0
CU-3	TICKETING & VRF	ARUB192DT3	16.0	-	2	14	197.9	199.1	3.55	11.65

UNIT	QTY	CFM	RPM	HP	FLA	TYPE	QTY	RLA	LRA	REFG.
CU-1	1	6,300	1050	1.0	2.1	INV. SCROLL	1	14.9	-	R-410A
CU-2	2	3,885	950	1.6	1.0	INV. SCROLL	1	25.9	-	R-410A
CU-3	3	14,800	1050	(2/3/4)/1.0	4.7	INV. SCROLL	3	(10/5/9.5)/10.2	-	R-410A

UNIT	POWER	MCA	MAX FUSE	WEIGHT LBS	LIQUID	SUCTION	HOT GAS	NOTES
CU-1	460/360	14.9	25	420	3/8	5/8	3/4	(1) (2) (3) (4) (5) (6)
CU-2	208/160	34.0	60	234	3/8	3/4	N/A	(1) (2) (4) (5) (6)
CU-3	460/360	25.2x14.9	35x25	1,035	1/2x3/8	3/4x5/8	1-1/8x3/4	(1) (2) (4) (5) (6)

AIR COOLED CONDENSING UNIT SCHEDULE NOTES:  
 ① BASED ON LG  
 ② THERMAL EXPANSION VALVE KIT  
 ③ 90 DEG. DISCHARGE AIR HOOD W/ SCREEN  
 ④ DISCONNECT SWITCH W/ SINGLE POINT POWER  
 ⑤ CENTRAL CONTROLLER FOR VRF SYSTEM  
 ⑥ PERFORMANCE BASED ON 30°F DESIGN AMBIENT TEMP IN HEATING & 90°F DESIGN AMBIENT IN COOLING.

TAG	SERVES	MODEL	GPM	SIZE	DIA	HEIGHT	WEIGHT (LBS)	NOTES
AS-1	C/HW LOOP	4910-AD	1400	10"	24"	57"	713	(1)

AIR SEPARATOR SCHEDULE NOTES:  
 ① BASED ON TACO

TAG	SERVES	CFM	MODEL	DUCT SIZE	FPM	NOTES
BPD-1	AHU-5	1600	VARB-14-A	14"	1497	(1) (2)

BYPASS DAMPER SCHEDULE NOTES:  
 ① BASED ON LOCHINVAR CREST  
 ② CFM BASED ON 80% OF RTU AIRFLOW

UNIT	MODEL	NAT. GAS INPUT (MBH)	NET 1-B-R (MBH)	AHRI EFFICIENCY (%)	POWER	NOTES
B-1	FBN2000	2000	1600	92	120/160	(1) (2) (3) (4)
B-2	FBN2000	2000	1600	92	120/160	(1) (2) (3) (4)
B-3	FBN2000	2000	1600	92	120/160	(1) (2) (3) (4)

BOILER SCHEDULE NOTES:  
 ① BASED ON LOCHINVAR CREST  
 ② CONDENSATE NEUTRALIZATION KIT  
 ③ STAINLESS STEEL COMMON VENT KIT  
 ④ SEALED COMBUSTION

### ROOFTOP UNIT SCHEDULE

UNIT	NOMINAL COOLING TONS	INDOOR FAN PERFORMANCE				MIN. O.A. CFM	VOLTS/PH/V	COMPRESSOR		ELECTRICAL		MCA	MFS	SERVES
		CFM	ESP	BHP	MOTOR			DRIVE	QTY	FLA	INDOOR FAN			
AHU-5	5	2,005	1.22	1.0	1.0	300								



### EXPANSION TANK SCHEDULE

TAG	SERVICE	MODEL #	TANK VOLUME	TANK DIA.	TANK HEIGHT	ACCEPTANCE VOLUME	NOTES
XT-1	CHANGEOVER SYSTEM LOOP	CA-800	211 GAL	30"	89 3/4"	211 GAL	(1)

EXPANSION TANK SCHEDULE NOTES:  
 (1) BASED ON TACO

### AIR HANDLING UNIT SCHEDULE

SUPPLY FAN											
UNIT	SERVES	CFM	MIN. O.A. CFM	TSP IN. WC	ESP IN. WC	BHP	HP	POWER	TYPE	DIA.	RPM
AHU-1	BOWL	4000	10000	3.06	1.50	29.9	40.0	460/360	BELT/AF	40"	836
AHU-2	BOWL	4000	10000	3.06	1.50	29.9	40.0	460/360	BELT/AF	40"	836
AHU-3	BOWL	4000	10000	3.06	1.50	29.9	40.0	460/360	BELT/AF	40"	836
AHU-4	BOWL	4000	10000	3.06	1.50	29.9	40.0	460/360	BELT/AF	40"	836

HYDRONIC COIL (HEATING MODE)											
UNIT	AREA SQ. FT.	ROWS	FPF	EAT	LAT	EWT	LWT	GPM	WPD	APD IN. WC	MODEL
AHU-1	78.75	6	147	50	99	110	85	175	2.4	0.74	880 PRIMA FLO-H
AHU-2	78.75	6	147	50	99	110	85	175	2.4	0.74	880 PRIMA FLO-H
AHU-3	78.75	6	147	50	99	110	85	175	2.4	0.74	880 PRIMA FLO-H
AHU-4	78.75	6	147	50	99	110	85	175	2.4	0.74	880 PRIMA FLO-H

HYDRONIC COIL (COOLING MODE)											
UNIT	AREA SQ. FT.	ROWS	FPI	EAT	LAT	EWT	LWT	GPM	WPD	APD IN. WC	TOTAL MBH
AHU-1	78.75	6	147	77/64	49/48	41	51	350	9.5	0.91	1759 PRIMA FLO-H
AHU-2	78.75	6	147	77/64	49/48	41	51	350	9.5	0.91	1759 PRIMA FLO-H
AHU-3	78.75	6	147	77/64	49/48	41	51	350	9.5	0.91	1759 PRIMA FLO-H
AHU-4	78.75	6	147	77/64	49/48	41	51	350	9.5	0.91	1759 PRIMA FLO-H

PRE-FILTER							
UNIT	AREA SQ. FT.	LOCATION AIRSTREAM	FILTER EFF% & MERV RATING	MEAN APD IN. WC.	MODEL	CABINET SIZE (HxW)	UNIT WEIGHT (LBS.)
AHU-1	151.1	SUPPLY	30% MERV 8	0.56	CSAA-80	107.5"x140.5"	9070 (1) (2) (3) (4)
AHU-2	151.1	SUPPLY	30% MERV 8	0.56	CSAA-80	107.5"x140.5"	9070 (1) (2) (3) (4)
AHU-3	151.1	SUPPLY	30% MERV 8	0.56	CSAA-80	107.5"x140.5"	9070 (1) (2) (3) (4)
AHU-4	151.1	SUPPLY	30% MERV 8	0.56	CSAA-80	107.5"x140.5"	9070 (1) (2) (3) (4)

AIR HANDLING UNIT SCHEDULE NOTES:  
 (1) BASED ON TRANE  
 (2) PROVIDE SUPPLY FAN W/ 2" DEFLECTION SPRINGS.  
 (3) PREMIUM EFFICIENCY TEFC MOTOR  
 (4) 6" BASE RAILS

### GAS FIRED MAKE UP AIR UNIT SCHEDULE

TAG	MODEL NO.	CONFIGURATION	FAN PERFORMANCE				HEATING PERFORMANCE				WEIGHT (LBS.)	NOTES	
			VOLTS/Ø	CFM	ESP	MOTOR HP	RPM	INPUT (MBH)	TEMP RISE °F	FUEL			BURNER TYPE
MAU-1	IGX-115-H22	OUTDOOR/DOWNFLOW	460/3/60	4500	0.75	3.0	810	500	82	NG	INDIRECT	1677	(1) (2) (3) (4) (5) (6)

MAKE UP AIR UNIT SCHEDULE NOTES:  
 (1) BASED ON GREENHECK  
 (2) PREMIUM EFFICIENT TEFC, INVERTER DUTY MOTOR  
 (3) WEATHER HOOD W/ BIRDSCREEN, V-BANK FILTER HOUSING, INSULATED, 2" FILTERS, MOTORIZED INLET DAMPER W/ ACTUATOR  
 (4) GAS MANIFOLD 7"-14" WC, 4 STAGE FURNACE CONTROL DOWN TO 4:1 TURNDOWN

(5) CONTROLS FOR INTEGRATION OF MAKEUP AIR UNIT WITH EXHAUST HOODS AND FANS PROVIDED IN FOOD SERVICE PACKAGE.  
 (6) PROVIDE 24" HIGH, INSULATED, VIBRATION ISOLATION ROOF CURB

### AIR COOLED CHILLER SCHEDULE

UNIT	MODEL #	NOMINAL TONS	CAPACITY TONS	AMB. TEMP.	REFRIG.	EER	IPLV	CAPACITY CONTROL
CH-1	RTAC300	300	292	95	R134A	10.0	14.4	VFD
CH-2	RTAC300	300	292	95	R134A	10.0	14.4	VFD

FANS											
UNIT	QTY	FAN DIA.	CFM	RLA	COMP. TYPE	# COMP.	COMP. TONS	RLA	LRA	REFRIG	
CH-1	20	30"	9605	3.0	CKT #1	SCREW	2	100/100	162/162	346/346	460
					CKT #2	SCREW	1	100	162	346	200
CH-2	20	30"	9605	3.0	CKT #1	SCREW	2	100/100	162/162	346/346	460
					CKT #2	SCREW	1	100	162	346	200

WATER SIDE									
UNIT	GPM	PD	LWT	EWT	EVAP. TYPE	FLUID	WATER	INLET	OUTLET
CH-1	700	11.5	41	51	2-PASS	WATER	WATER	8"	8"
CH-2	700	11.5	41	51	2-PASS	WATER	WATER	8"	8"

ELECTRICAL						
UNIT	POWER	KW INPUT	MCA	MOP	WEIGHT LBS	NOTES
CH-1	460/3/60	365	592	700	21,700	72 100 (1) (2) (3) (4) (5) (6)
CH-2	460/3/60	365	592	700	21,700	72 100 (1) (2) (3) (4) (5) (6)

AIR COOLED CONDENSING UNIT SCHEDULE NOTES:  
 (1) BASED ON TRANE  
 (2) PROVIDE HEAD PRESSURE CONTROL, WATER FLOW SWITCH, FACTORY MOUNTED STAND-ALONE DDC CONTROLS W/ DYNA-VIEW TOUCH SCREEN INTERFACE PANEL, LONTALK INTERFACE, NEOPRENE VIBRATION ISOLATORS, FACTORY MOUNTED REFRIG. SHUT OFF VALVES, EVAPORATOR INLET STRAINER & EVAPORATOR INSULATION & FACTORY INSTALLED REFRIG. PIPING  
 (3) SINGLE POINT POWER, FACTORY MOUNTED DISCONNECT SWITCH & WYE-DELTA CLOSED TRANSITION STARTERS.  
 (4) CHILLER NOT SERVED BY EMERGENCY POWER  
 (5) EVAPORATOR HEATERS W/ THERMOSTATS (FIELD POWERED 120V CIRCUIT REQUIRED)  
 (6) LOW NOISE FANS & COMPRESSORS

### PUMP SCHEDULE

TAG	SERVES	MODEL	TYPE	GPM	HEAD FT.	MOTOR HP	RPM	POWER	NOTES
P-1E	EXISTING BRINE PUMP	-	-	1000	-	30	-	460/3/60	
P-2E	EXISTING BRINE PUMP	-	-	1000	-	30	-	460/3/60	
P-3	BOILER B-1 INJECTION	KV3006	VERT. INLINE	122	18	1	1750	460/3/60	(1) (3) (6)
P-4	BOILER B-2 INJECTION	KV3006	VERT. INLINE	122	18	1	1750	460/3/60	(1) (3) (6)
P-5	BOILER B-3 INJECTION	KV3006	VERT. INLINE	122	18	1	1750	460/3/60	(1) (3) (6)
P-6	C-HW LOOP PRIMARY	FI5011	FRAME	700	90	30	1750	460/3/60	(1) (2) (4)
P-7	C-HW LOOP STANDBY	FI5011	FRAME	700	90	30	1750	460/3/60	(1) (2) (4)
P-8	C-HW LOOP STANDBY	FI5011	FRAME	700	90	30	1750	460/3/60	(1) (2) (4)
P-9	DOM. HW PRODUCTION	KV2007	VERT. INLINE	92	40	2	1750	460/3/60	(1) (5) (6)
P-10	DOM. HW PRODUCTION	KV2007	VERT. INLINE	92	40	2	1750	460/3/60	(1) (5) (6)
P-11	HW LOOP TO ZAMBONI & UNIT HEATERS	KV2007	VERT. INLINE	65	55	2	1750	460/3/60	(1) (2) (3) (5) (6)
P-12E	EXISTING DE-ICING BOILER	-	-	60	-	1	-	460/3/60	
P-13	AHU-1 FREEZE PROTECTION	1911	INLINE	40	12	1/3	1750	460/3/60	(1)
P-14	AHU-2 FREEZE PROTECTION	1911	INLINE	40	12	1/3	1750	460/3/60	(1)
P-15	AHU-3 FREEZE PROTECTION	1911	INLINE	40	12	1/3	1750	460/3/60	(1)
P-16	AHU-4 FREEZE PROTECTION	1911	INLINE	40	12	1/3	1750	460/3/60	(1)

PUMP SCHEDULE NOTES:  
 (1) BASED ON TACO  
 (2) PREMIUM EFFICIENT TEFC MOTOR COMPATIBLE W/ VFD.  
 (3) BASED ON 30°F AT  
 (4) TWO C-HW PUMPS DESIGNED TO OPERATE IN PARALLEL TO MAINTAIN PEAK FLOW RATE OF 1400 GPM  
 (5) BASED ON 40°F AT  
 (6) PREMIUM EFFICIENCY TEFC MOTOR

### HEATER SCHEDULE

UNIT	AREA SERVED	TYPE	MODEL	CFM	MBH	GPM	WPD	HP	POWER	RPM	EWT	LWT	NOTES
CUH-1	VISITOR LOCKER 1	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-2	VISITOR LOCKER 2	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-3	VISITOR LOCKER 3	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-4	VISITOR LOCKER 4	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-5	VISITOR LOCKER 5	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-6	VISITOR LOCKER 6	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-7	VISITOR LOCKER 7	RECESSED CEILING	RC-1200-03	335	18.9	1.5	0.16	1/15	115/160	1050	180"	153"	(1) (2)
CUH-8	COMMISSARY	RECESSED CEILING	RC-1200-03	330	27.3	1.5	0.26	1/15	115/160	1050	180"	150"	(1) (2) (3)
UH-1	QUAD 'B' STORAGE	HORIZONTAL	HS-72	1170	40.3	2.7	0.09	1/30	115/160	1070	180"	150"	(1) (2) (4)
UH-2	LOADING DOCK	HORIZONTAL	HS-204	2900	114.1	7.6	0.32	1/4	115/160	1140	180"	150"	(1) (2) (4)
UH-3	STAGING AREA	HORIZONTAL	HS-144	2200	80.2	5.3	0.17	1/4	115/160	1140	180"	150"	(1) (2) (4)
UH-4	STAGING AREA	HORIZONTAL	HS-144	2200	80.2	5.3	0.17	1/4	115/160	1140	180"	150"	(1) (2) (4)

HEATER SCHEDULE NOTES:  
 (1) BASED ON STERLING  
 (2) COLOR AS SELECTED BY ARCHITECT  
 (3) HIGH CAPACITY 2-ROW HW COIL  
 (4) BASED ON 180°F EWT & 30°F DELTA T

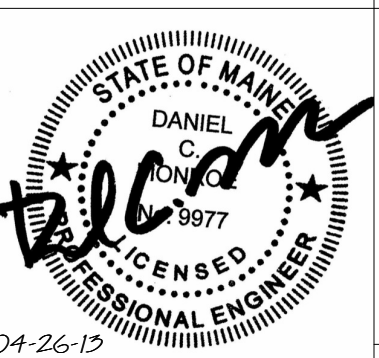
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REV.	DESCRIPTION	DATE
2	RFIR #255	04-17-2013
1	CONSTRUCTION DOCUMENTS	01-21-2013
0	NW ENTRY CONSTRUCTION DOCS	10-31-2012

RFIR #289  
 04-26-2013

CURRENT ISSUE STATUS:



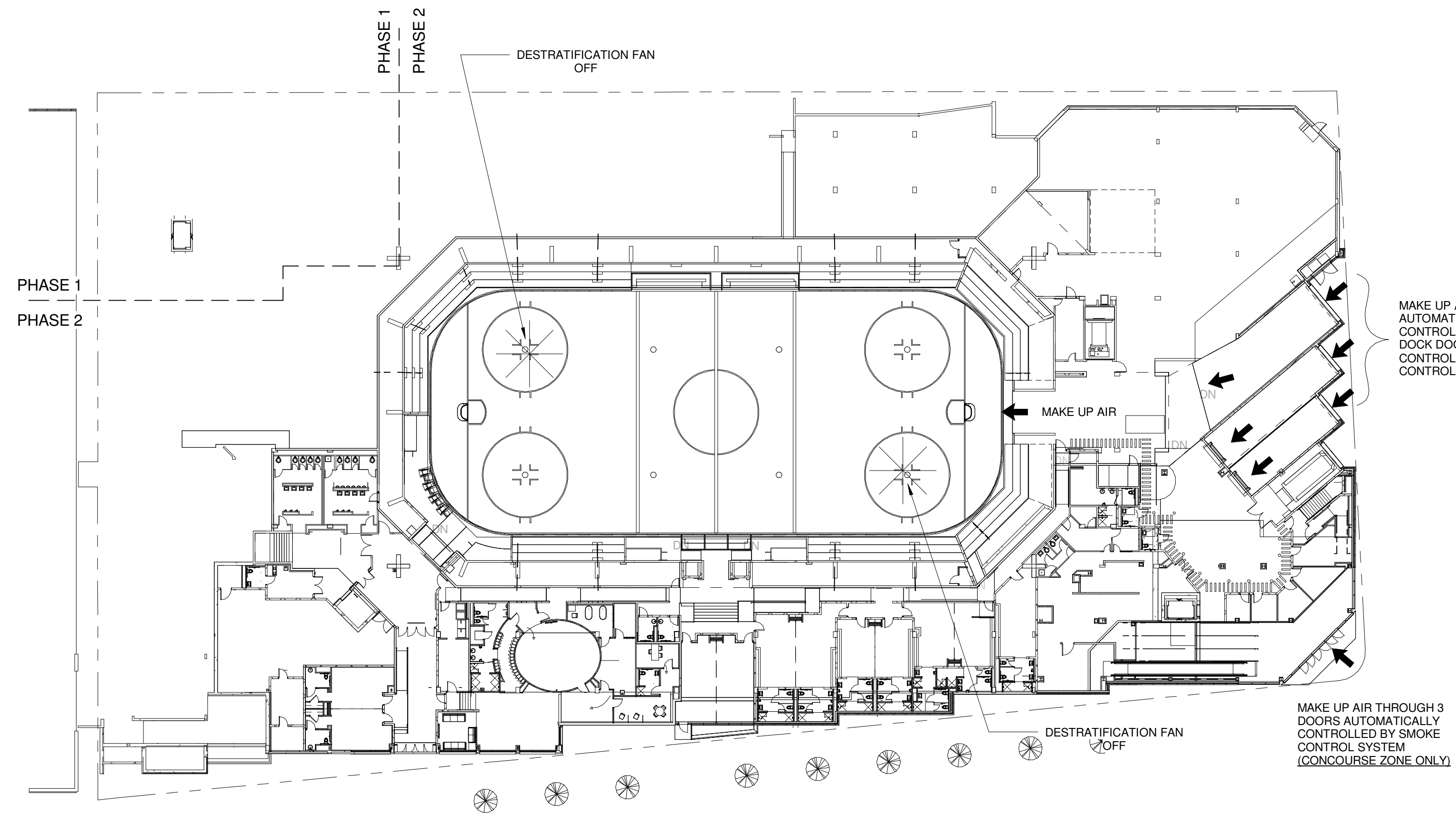
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### CUMBERLAND COUNTY CIVIC CENTER RENOVATION

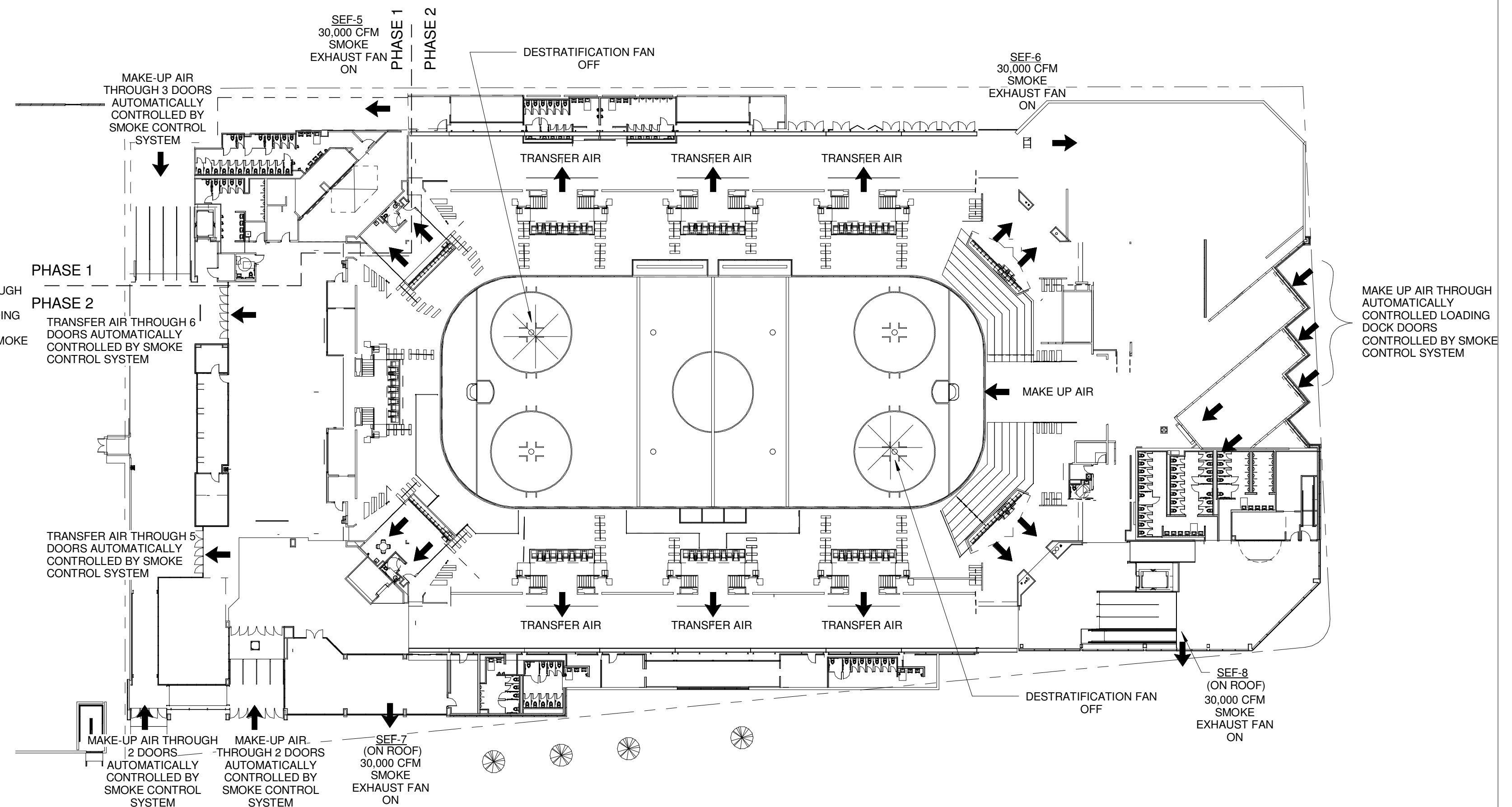
PORTLAND, ME

### MECHANICAL SCHEDULES

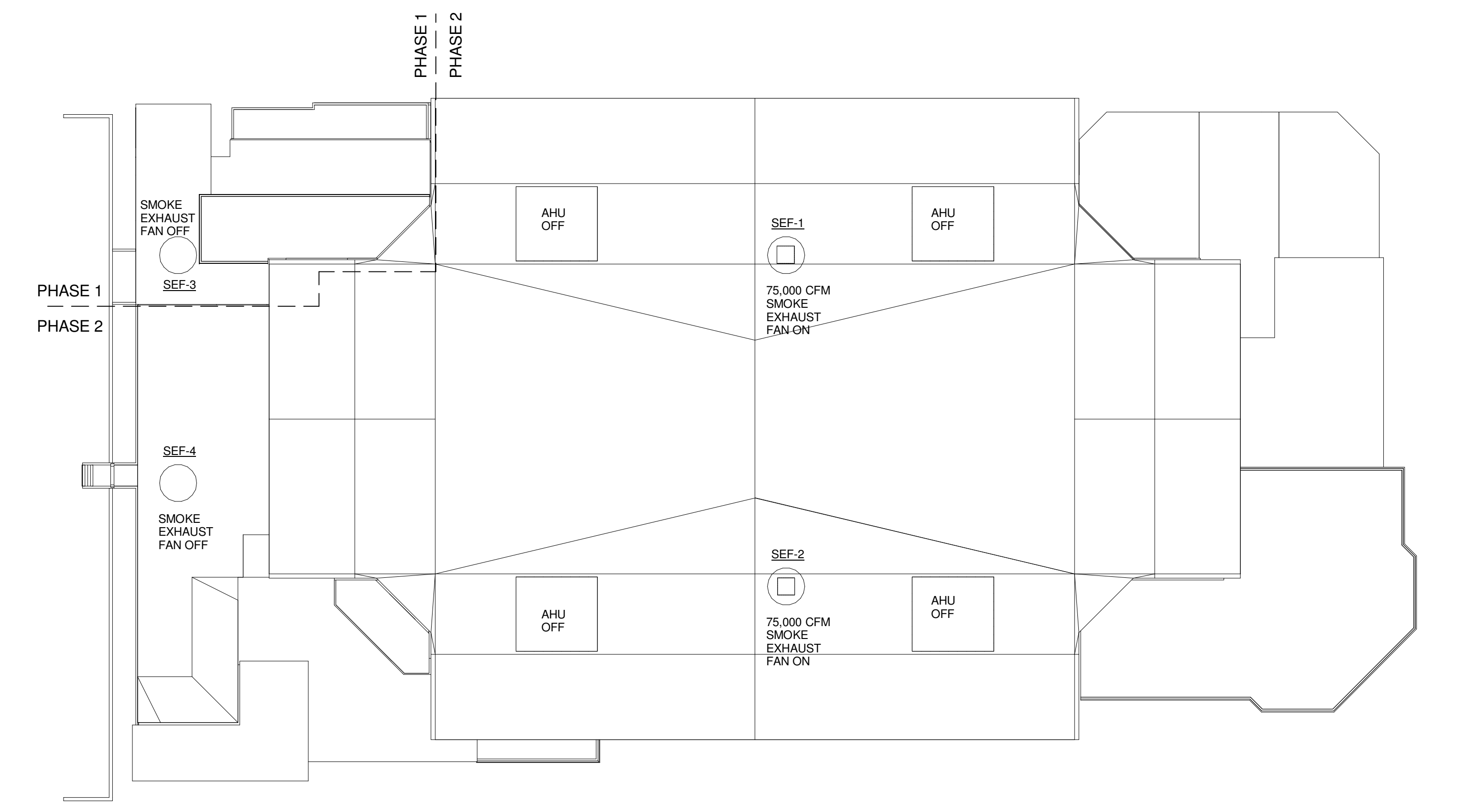
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SCALE	1/4" = 1'-0"	
PROJECT MANAGER	JRB	SHEET No.
DRAWN BY	COB	<b>M6.02</b>
CHECKED BY	DMON	



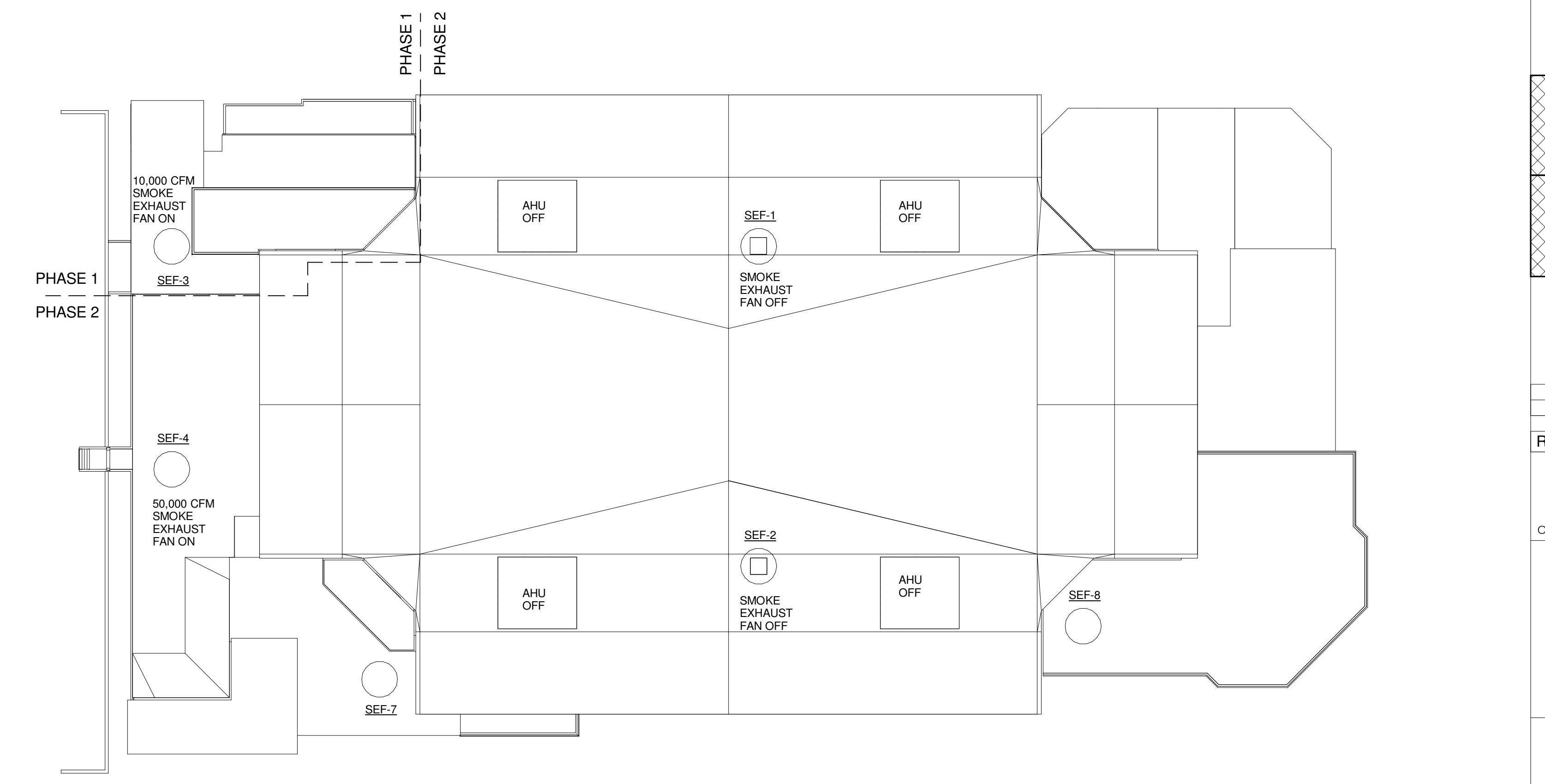
1 BOWL SMOKE CONTROL - EVENT LEVEL AIRFLOWS  
1/32" = 1'-0"



2 CONCOURSE SMOKE CONTROL - CONCOURSE LEVEL AIRFLOWS  
1/32" = 1'-0"



3 BOWL SMOKE CONTROL - ROOF LEVEL AIRFLOWS  
1/32" = 1'-0"



4 CONCOURSE SMOKE CONTROL - ROOF LEVEL AIRFLOWS  
1/32" = 1'-0"

	A	B
	D	C

2	SI #073	04-02-2013
1	CONSTRUCTION DOCUMENTS	01-21-2013
0	NW ENTRY CONSTRUCTION DOCS	10-31-2012

REV. DESCRIPTION DATE  
RFIR #289  
04-26-2013

CURRENT ISSUE STATUS:



PROJECT NORTH  
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SARASOTA, FLORIDA 941-556-0757

CUMBERLAND COUNTY CIVIC CENTER RENOVATION

PROJECT: PORTLAND, ME  
MECHANICAL SMOKE CONTROL SCHEMATICS

SHEET TITLE	
WBRC CAD FILE: 375700 - 0002 Mechanical.rvt	
PROJECT No. 3757.00	GRAPHIC SCALE 1" = 1'-0"
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PROJECT MANAGER: JRB	SHEET No. M8.01
DRAWN BY: CGB	
CHECKED BY: DMON	