

No.	Date	Description

Revision Schedule

JOB NO.  
17064

DRWN: CHK  
K.F.M.

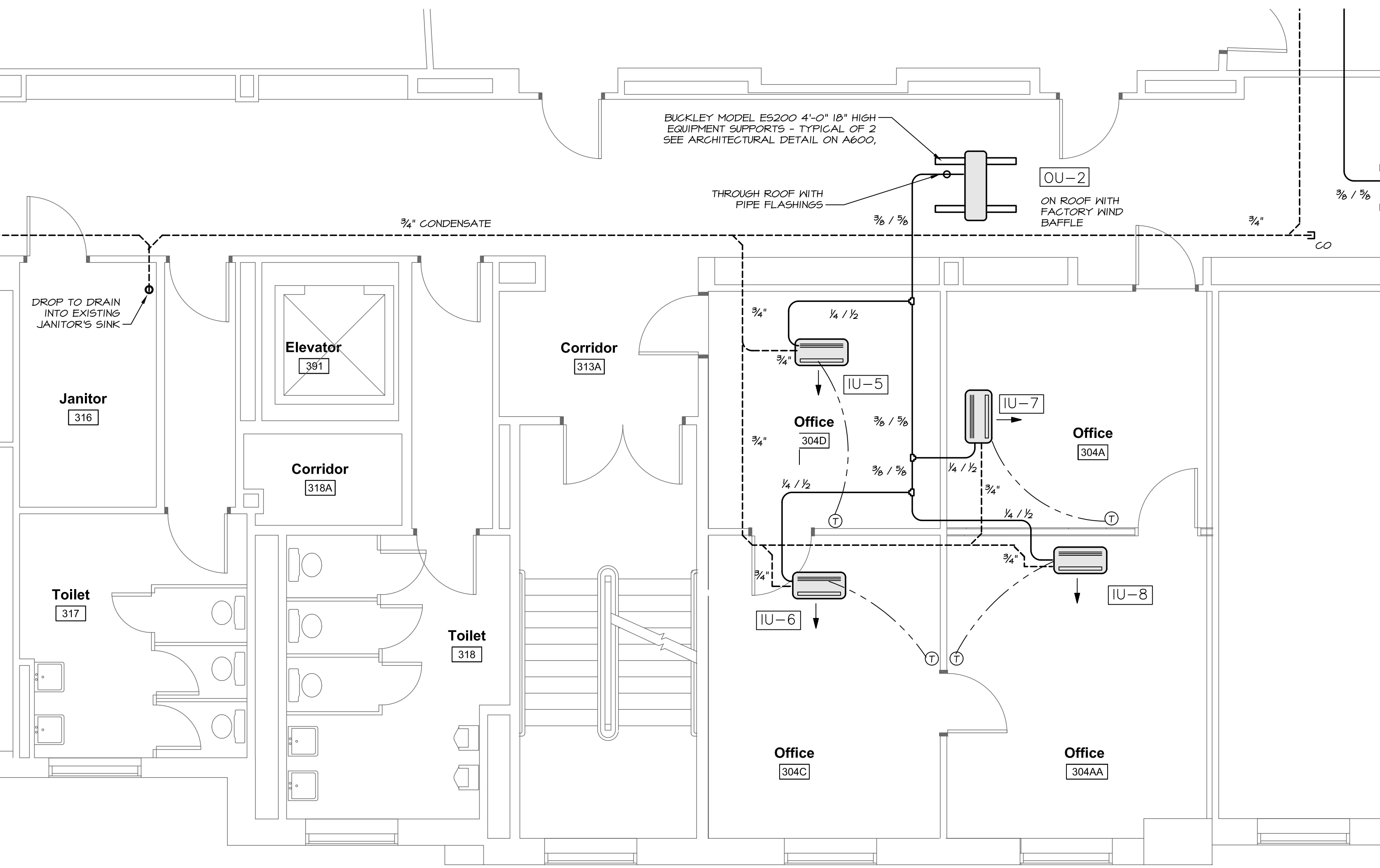
SCALE:  
1/4"=1'-0"

ISSUE  
08/04/17

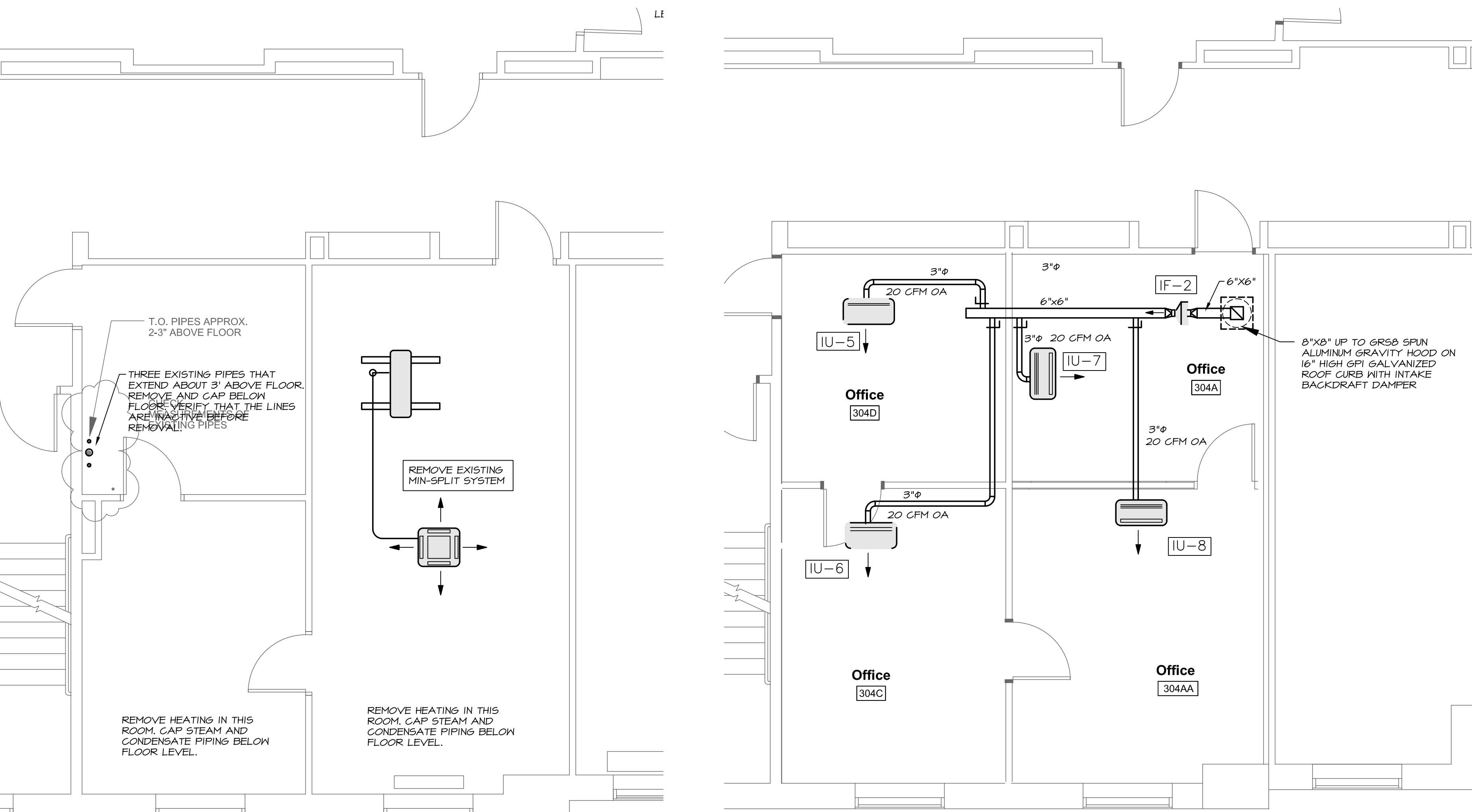
TITLE  
PIPING  
FIRE SPRINKLER  
SHEETMETAL  
ROOMS 304

SHEET

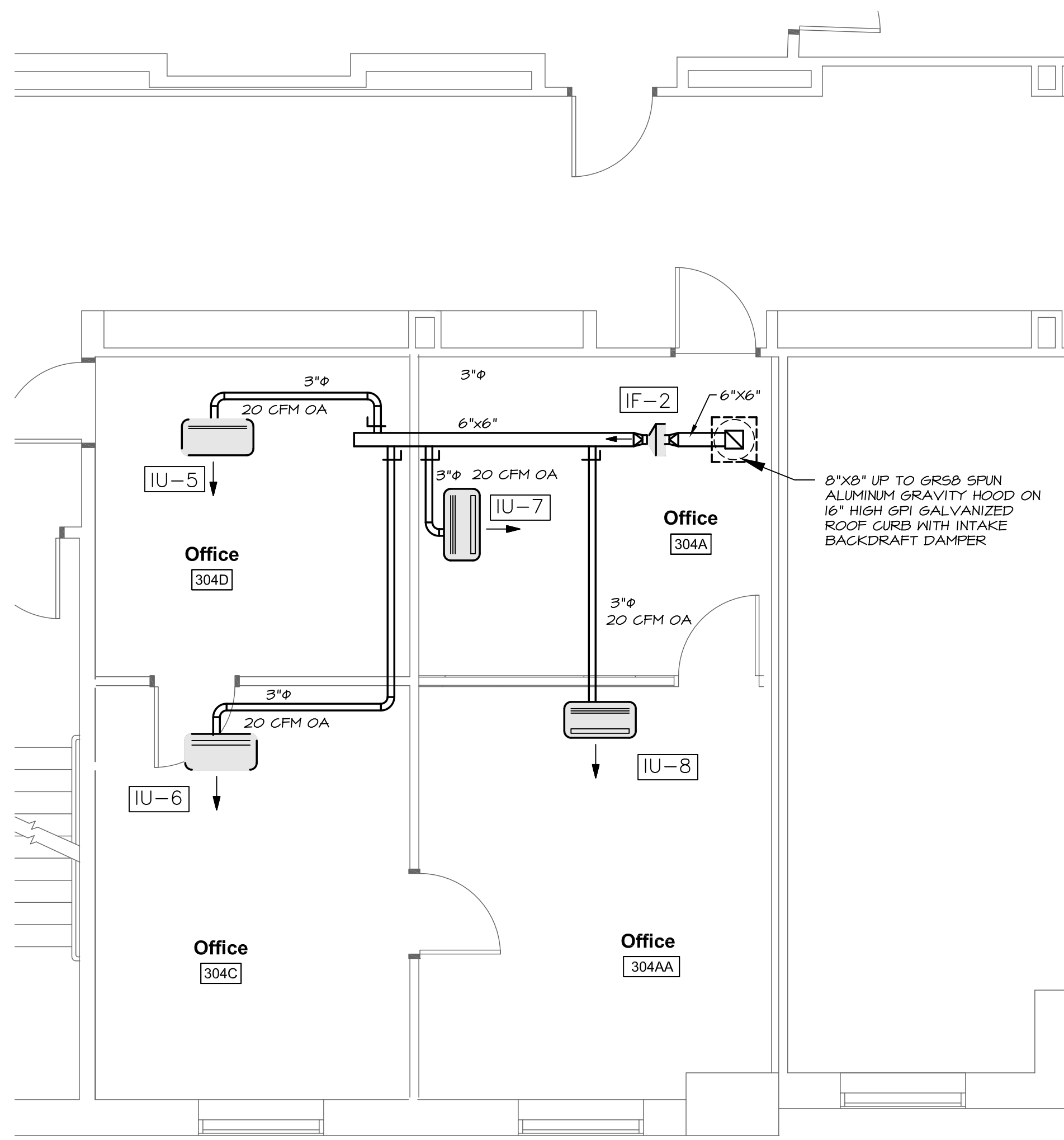
**M101**



**1 MECHANICAL REFRIGERANT & CONDENSATE PIPING PLAN**  
SCALE: 1/4" = 1'-0"



**2 MECHANICAL DEMOLITION PLAN**  
SCALE: 1/4" = 1'-0"

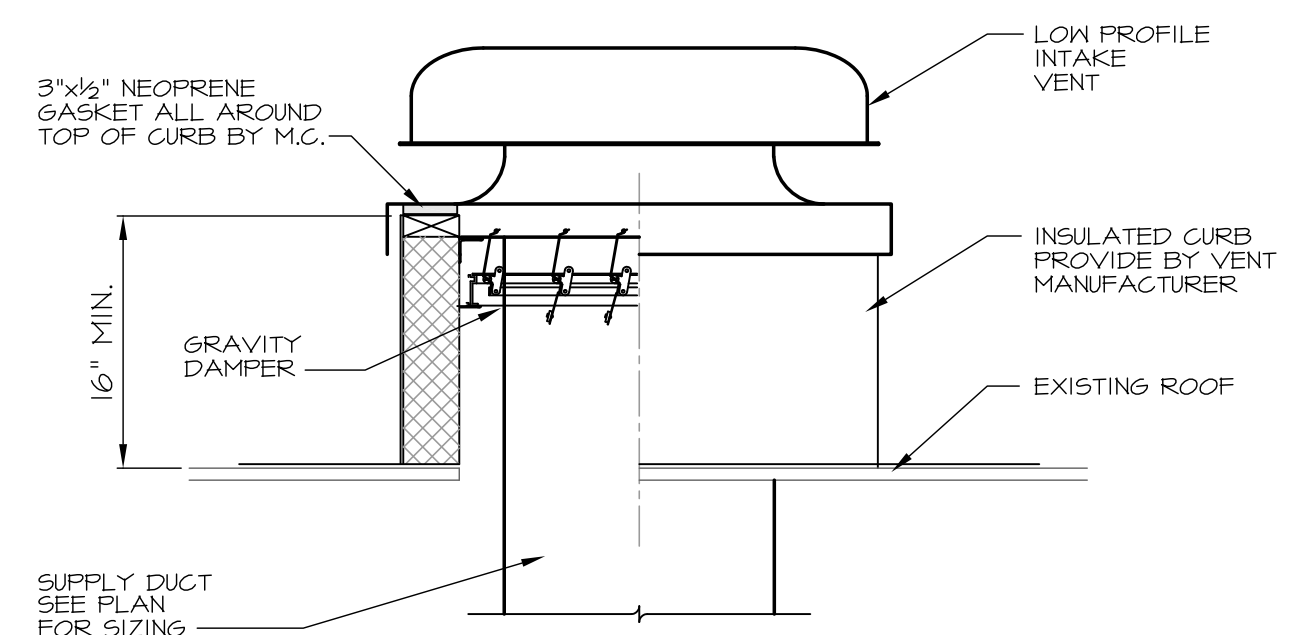


**3 MECHANICAL VENTILATION & HEATING PIPING PLAN**  
SCALE: 1/4" = 1'-0"

HEAT PUMP OUTDOOR UNIT SCHEDULE											
TAG	DESIGN MANUFACTURER & MODEL	NOMINAL SIZE	REFRIGERANT	ELECTRIC			SEER	HSPF	WEIGHT	REMARKS	
				POWER	MCA	MOP					
OU-2	DAIKIN PUMY-P36NKMUI	3.0 TONS	410A	208/60/1	31	40	15.6	10.5	264 LBS	WITH FRONT WIND BAFFLE AND BACNet INTEGRATION, OR EQUAL BY TRANE, SAMSUNG OR DAIKIN	

HEAT PUMP INDOOR UNIT SCHEDULE											
TAG	DESIGN MANUFACTURER & MODEL	TYPE	COOLING CAPACITY BTUH	HEATING CAPACITY BTUH	CFM	MCA	MOP	WEIGHT	REMARKS		
IU-6	MITSUBISHI PMFY-P06NBUM-ER5	CEILING CONCEALED 1-WAY THROU	8,000	9,000	230-345	0.25	15	31 LBS	WITH THERMOSTAT, OR EQUAL BY TRANE, SAMSUNG OR DAIKIN		
IU-7	MITSUBISHI PMFY-P06NBUM-ER5	CEILING CONCEALED 1-WAY THROU	6,000	6,700	230-301	0.25	15	31 LBS	WITH THERMOSTAT, OR EQUAL BY TRANE, SAMSUNG OR DAIKIN		
IU-8	MITSUBISHI PMFY-P06NBUM-ER5	CEILING CONCEALED 1-WAY THROU	8,000	9,000	230-345	0.25	15	31 LBS	WITH THERMOSTAT, OR EQUAL BY TRANE, SAMSUNG OR DAIKIN		

IN-LINE FAN SCHEDULE									
TAG	DESIGN MANUFACTURER & MODEL	TYPE	CFM	ESP	SONES	ELECTRIC		REMARKS	
						POWER	FLA		
IF-2	FANTECH FG4XL	IN-LINE FAN	80	0.4	1.1 MAX	115 / 60 / 1	0.65	WITH BACKDRAFT DAMPER	



**4 INTAKE VENT**  
NO SCALE

LEGEND	
—	MANUAL DAMPER - LOCKING QUADRANT
⊙	THERMOSTAT
CO	CLEAN OUT
---	REFRIGERANT PIPING
---	CONDENSATE PIPING

- SHEETMETAL NOTES**
- All ductwork to be fabricated and installed per SMACNA Low Pressure Ductwork Standards.
  - Ductwork is shown diagrammatically and does not indicate all the offsets, rises and drops that will be required.
  - All Outside Air Ductwork from the Air Intake Hood to the Indoor Air Handlers to be 1/2" Foil Faced Duct Wrap.
  - Install heavy duty locking quadrant at takeoffs from the main duct.
  - Provide and install Buckley Equipment support as shown on plan view. Coordinate with Roofing Contractor. Refer to installation detail on A600.
  - Provide and install roof curb, intake backdraft damper and spun aluminum aluminum gravity hood as shown on plan.
  - Start and Test all equipment per manufacturer's recommendations.
  - Provide 1-year warranty on all parts, labor and refrigerant.
  - Provide 5-year warranty on compressors (parts only).
  - Provide Owner with Maintenance Manuals - Neatly bound.

- CONTROL NOTES**
- It will be the Mechanical Contractor's responsibility to provide and install all controls and all control wiring. Mechanical Contractor to subcontract ATC work to:  
IB Controls (Brian Lajeunesse) brian@ibcontrols.com  
3 Pope Road  
Winham, ME 04062  
207-843-0080
  - All control wiring that is run in concealed spaces to be plenum rated.
  - All control wiring that is run exposed shall be in electrical conduit provided and installed by the ATC contractor.
  - All thermostats to be provided by the Equipment Manufacturer and installed by the ATC contractor.
  - All zone valves and transformers to be provided by the ATC contractor for installation by mechanical contractor.
  - Heat Pump Manufacturer to supply BACnet gateway for integration into the campus Building Management System
  - Sequence of operation
    - On a call for heating enable heating.
    - On a call for cooling enable cooling.
    - During the occupied cycle enable IF-2.
    - Monitor and control IF-2 through the Building Management System.

- PIPING NOTES**
- Piping is shown diagrammatically and does not indicate all the offsets, rises and drops that will be required.
  - All refrigerant piping to be Type "K" copper or ACR Tube
  - All condensate piping to be Schedule 40 PVC.
  - Insulate all refrigerant piping with 1/2" closed cell insulation (Armaflex or equal).
  - All outdoor refrigerant piping to be painted with paint approved by insulation manufacturer

- GENERAL NOTES**
- All systems are to be to meet the following Codes and Standards.
    - ASHRAE 90.1 2007 - Energy Standard for Commercial Buildings.
    - ASHRAE 60.1 2007 - Standard for Indoor Air Quality in Commercial Buildings.
    - 2009 IECC - International Energy Conservation Code.
    - NFPA - National Fire Protection Association Standards.

- FIRE SPRINKLER NOTES**
- Provide all design services, construction documents, labor, transportation, equipment, permits, materials, tools, inspections, incidentals, tests and perform all operations in connection with the modification of the existing Fire Sprinkler System in the building.
  - Comply with requirements of all Authorities Having Jurisdiction.
  - Rearrange sprinkler coverage as required for new partitions.
  - Coordinate with interfacing trades
  - Submit equipment and components for review. Prepare sprinkler drawings and Record Drawings.
  - Provide 1 year guarantees and warranties on all new work.
  - The Automatic Sprinkler System shall meet the standards of the most recent edition of the National Fire Protection Association's (NFPA) - NFPA 13 Standard for the Installation of Sprinkler Systems.
    - Rooms to have sprinkler head relocations include; Room 304 A, AA, C, & D



**MECHANICAL SYSTEMS ENGINEERS**  
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10 FOREST FALLS DRIVE, YARMOUTH, MAINE 04096  
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Project 1713

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