

SECTION 15732 - PACKAGED ROOFTOP AIR-CONDITIONING UNITS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Shop Drawings.
- B. Comply with ASHRAE 15.
- C. EER: Equal to or greater than prescribed by the energy code adopted by the Authority Having Jurisdiction.
- D. Warranties: Submit a written warranty, signed by the manufacturer, agreeing to the repair or replacement of components that fail within 5 years of Substantial Completion.

PART 2 - PRODUCTS

2.1 PACKAGED UNITS, 5 TO 20 TONS

- A. Factory assembled and tested, consisting of compressors, condensers, evaporator coils, condenser and evaporator fans, refrigeration and temperature controls, filters, and dampers.
 - 1. Refer to Rooftop Heating/Cooling Unit Schedule on drawing M600 for capacities, and manufacturers.
 - 2. Evaporator Fans: Belt or direct driven, forward curved centrifugal.
 - 3. Exhaust/Relief Fans: Direct drive, forward curved centrifugal or propeller.
 - 4. Condenser Fans: Direct drive propeller.
 - 5. Refrigerant Coils: Aluminum fins and copper coil.
 - 6. Compressors: Serviceable hermetic or fully hermetic, with safety controls, hot gas bypass, and timed off controls.
 - 7. Heat Exchangers: Gas fired, with gas controls, electronic ignition, high limit cutout, and forced draft proving switch.
 - 8. Economizer controls (Comparative Enthalpy, 100% capacity).
 - 9. Smoke Detectors: Photoelectric in supply and/or return as called for in schedule on sheet M600.
 - 10. Operating Controls: Two stage heating and two stage cooling on units 7-1/2 tons and over.
 - 11. Roof curb.
 - 12. Control Wiring from T-stat to rooftop unit: Shall be 18ga / 7 conductor, rated for plenum applications.
 - 13. Control Wiring from T-stat to remote sensor: Shall be a separate 18ga / 2 conductor shielded, rated for plenum applications.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install units level and plumb and firmly anchored.
- B. Connect gas piping to burner with pipe same size as gas train inlet, and provide union with sufficient clearance for burner removal and service.
- C. Install ducts to termination in roof mounting frames. Terminate ducts through roof structure.
- D. Connect units to wiring systems and to ground.

END OF SECTION 15732

SECTION 15810 - DUCTS AND ACCESSORIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for fire and smoke dampers.
- B. Comply with NFPA 90A for systems serving spaces more than 25,000 cu. ft. in volume or building Types II, IV, and V construction more than 3 stories in height.
- C. Comply with NFPA 90B for systems serving spaces in 1 or 2 family dwellings or serving spaces less than 25,000 cu. ft.
- D. Comply with NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations," for kitchen hood ducts.
- E. Comply with UL 181 and UL 181A for ducts and closures.
- F. Testing, Adjusting, and Balancing Agency Qualifications: AABC certified (to be furnished by Tenant).

PART 2 - PRODUCTS

2.1 DUCTS

- A. Spiral Duct: Spiral Lock Seam, without insulation, G90 galvanized finish, ASTM A-653/924
 - 1. Basis of Design Manufacturers: Lindab SPIROsafe, alternates to the basis of design must be submitted for review.
 - 2. Fittings: Factory produced standing seam construction with internal sealing. Fittings with a major axis of 36" or smaller shall be 20 gauge. Fittings with a major axis of 37"-48" shall be 18 gauge.
- B. Galvanized Steel Sheet: Forming steel, ASTM A 653/653M, G90 coating designation.
- C. Duct Liner: ASTM C 1071, Type II, with an airstream surface coated with a temperature resistant coating. Thickness: 1-1/2 inch. R-value : 8.
 - 1. Adhesive: ASTM C 916, Type I.
 - 2. Mechanical Fasteners: Galvanized steel pin, length as required to penetrate liner plus a 1/8 inch projection maximum into the airstream.
- D. Joint and Seam Tape: Comply with UL 181A.
- E. Joint and Seam Sealant: Comply with UL 181A.
- F. Rectangular Metal Duct Fabrication: Comply with SMACNA's "HVAC Duct Construction Standard" for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.

2.2 ACCESSORIES

- A. Volume-Control Dampers: Factory fabricated volume control dampers, complete with required hardware and accessories. Single blade and multiple opposed blade, standard leakage rating, and suitable for horizontal or vertical applications.
- B. Fire Dampers: Factory-fabricated fire dampers, complete with required hardware and accessories. UL labeled according to UL 555, "Fire Dampers".
- C. Flexible Connectors: Flame retardant or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1.
- D. Flexible Ducts: Factory fabricated, insulated, round duct, with an outer jacket enclosing 2 inch thick, glass fiber insulation, R-value: 6.0, around a continuous inner liner.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Duct System Pressure Class: Construct and install each duct system with 2 inch positive and negative duct pressure classifications.
- B. Conceal ducts from view in finished and occupied spaces. Except where noted as exposed.
- C. Avoid passing through electrical equipment spaces and enclosures.
- D. Support and connect metal ducts according to SMACNA's "HVAC Duct Construction Standard".
- E. Install duct accessories according to applicable portions of details of construction as shown in SMACNA standards.
- F. Install liner and/or insulation on ductwork per the material schedule on sheet M010.
- G. Install volume control dampers in lined duct with methods to avoid damage to liner and to avoid erosion of duct liner.
- H. Install fire and smoke dampers according to manufacturer's UL approved written instructions.
- I. Install fusible links in fire dampers.
- J. Provide saddle taps at tees for exposed ductwork.

3.2 TESTING, ADJUSTING, AND BALANCING

- A. The Tenant will supply an independent balance agent to to balance and adjust the HVAC installation. The balance agent will be responsible for any pulley or belt changes required.
- B. The GC is to have trained staffed available during the balancing to correct issues noted by the balance agent.
- C. The balance agent is to balance airflow within distribution systems, including submains, branches, and terminals to indicated quantities +/- 10%. The hood exhaust system shall be balanced to a tolerance of -0+10% and the make-up air system to a tolerance of -10+0%.
- D. The balance agent is to supply a copy of the balance report to the Tenant, engineer and general contractor for review.

END OF SECTION 15810

SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: None.

PART 2 - PRODUCTS

2.1 OUTLETS AND INLETS

- A. All air terminal devices:
 - 1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
 - 2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
 - 3. Material: As scheduled.
 - 4. Finish: As scheduled.
 - 5. Mounting: As scheduled.

PART 3 - EXECUTION

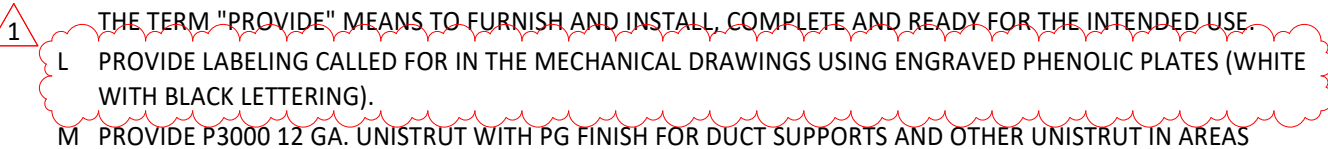
3.1 INSTALLATION

- A. Coordinate location and installation with duct installation and installation of other ceiling and wall mounted items.
- B. Locate ceiling diffusers, registers, and grilles, as indicated on the architectural "reflected ceiling plans." Unless otherwise indicated, locate units in center of acoustical ceiling panels.

END OF SECTION 15855

HVAC GENERAL NOTES

- A. GENERAL NOTES APPLY TO HVAC SHEETS.
- B. WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE ARCHITECTURAL SHEETS FOR THE PREVAILING CODES.
- C. CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.
- D. COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.
- E. DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- F. DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.
- G. PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.
- H. COORDINATE ROOF WORK WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- I. UNLESS NOTED OTHERWISE RECTANGULAR DUCT ELBOWS GREATER THAN 45° SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES AND RECTANGULAR DUCT ELBOWS 45° OR LESS SHALL BE RADIUSSED ELBOWS WITH AN INSIDE RADIUS OF AT LEAST 1/2 THE WIDTH OF THE DUCT.
- J. REPLACE AIR FILTERS WITH NEW, CLEAN MERV 8 AIR FILTERS AT TURNOVER.
- K. THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
- L. PROVIDE LABELING CALLED FOR IN THE MECHANICAL DRAWINGS USING ENGRAVED PHENOLIC PLATES (WHITE WITH BLACK LETTERING).
- M. PROVIDE P3000 12 GA. UNISTRUT WITH PG FINISH FOR DUCT SUPPORTS AND OTHER UNISTRUT IN AREAS EXPOSED TO VIEW. SLOTTED UNISTRUT AND OTHER UNISTRUT WITH HOLES IS NOT ACCEPTABLE.



HVAC MATERIAL SCHEDULE

	APPLICATION	ALLOWABLE MATERIAL
DUCT	CONCEALED, GENERAL EXHAUST	RECT. OR ROUND AS SHOWN
	CONCEALED, RETURN	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, SUPPLY	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, TYPE I HOOD EXHAUST	RECTANGULAR 16 GA. BLACK IRON W/ WRAP OR UL 1978 FACTORY-MANUFACTURED DUCT W/ WRAP (SUBMIT SHOP DRAWINGS FOR FACTORY-MANUFACTURED DUCT PRIOR TO ORDERING FOR APPROVAL)
	EXPOSED GENERAL EXHAUST	RECTANGULAR, NO EXPOSED DUCT-SEALING MASTIC
	EXPOSED RETURN	RECTANGULAR, NO EXPOSED DUCT-SEALING MASTIC
	EXPOSED SUPPLY	RECT. LINED OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC

HVAC ABBREVIATIONS

- (E) EXISTING
- ABV ABOVE
- ADA AMERICANS WITH DISABILITIES ACT
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AHJ AUTHORITY HAVING JURISDICTION
- BFF BELOW FINISHED FLOOR
- BFG BELOW FINISHED GRADE
- BOH BACK OF HOUSE
- CLG CEILING
- CTE CONNECT TO EXISTING
- DN DOWN
- EXT'G EXISTING
- FLR FLOOR
- FOH FRONT OF HOUSE
- GYP GYPSUM BOARD
- NTS NOT TO SCALE
- O/H OVERHEAD
- OBD OPPOSED BLADE DAMPER
- TYP TYPICAL
- U/G UNDERGROUND
- UNO UNLESS NOTED OTHERWISE
- VFD VARIABLE FREQUENCY DRIVE
- VSC VARIABLE SPEED CONTROLLER
- W/ WITH
- WIC WALK-IN COOLER

- CO2AS TENANT'S CO2 ALARM SUPPLIER
- GC GENERAL CONTRACTOR
- HES TENANT'S HVAC EQUIPMENT SUPPLIER
- HS TENANT'S HOOD SUPPLIER
- KES TENANT'S KITCHEN EQUIPMENT SUPPLIER
- LL LANDLORD
- SPS TENANT'S SODA POP SUPPLIER
- TAB TENANT'S TEST AND BALANCE VENDOR
- TCC TENANT'S CABLING CONTRACTOR
- TDC TENANT'S DUCT CLEANER
- TEMS TENANT'S ENERGY MANAGEMENT SYSTEM SUPPLIER
- TLS TENANT'S LIGHT/LAMP SUPPLIER
- TMB TENANT'S MENU BOARD SUPPLIER
- TMS TENANT'S MILLWORK SUPPLIER
- TP TENANT'S PHONE SUPPLIER
- TRS TENANT'S RAILING SUPPLIER
- TSV TENANT'S SIGN VENDOR
- TUV TENANT'S UV SNAITIZER SUPPLIER
- WCS TENANT'S WALK-IN COOLER SUPPLIER
- WHS TENANT'S WATER HEATER SUPPLIER

HVAC SYMBOLS

- CEILING DIFFUSER
- CEILING-MOUNTED RETURN OR EXHAUST REGISTER
- SUPPLY REGISTER
- RETURN GRILLE
- FLEXIBLE DUCT
- MITERED CORNER WITH TURNING VANES
- DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH/HEIGHT) RECTANGULAR TO ROUND DUCT TRANSITION
- DUCT-MOUNTED SMOKE DETECTOR
- MOTOR-OPERATED DAMPER
- MANUAL VOLUME DAMPER
- GREASE DUCT CLEANOUT
- MITERED CORNER WITHOUT TURNING VANES
- GRIDPOINT THERMOSTAT
- GRIDPOINT ZONE SENSOR MODULE
- GRIDPOINT SUPPLY PROBE
- PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M600 FOR EQUIPMENT INFORMATION
- AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET
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Contents:

HVAC SPECIFICATIONS

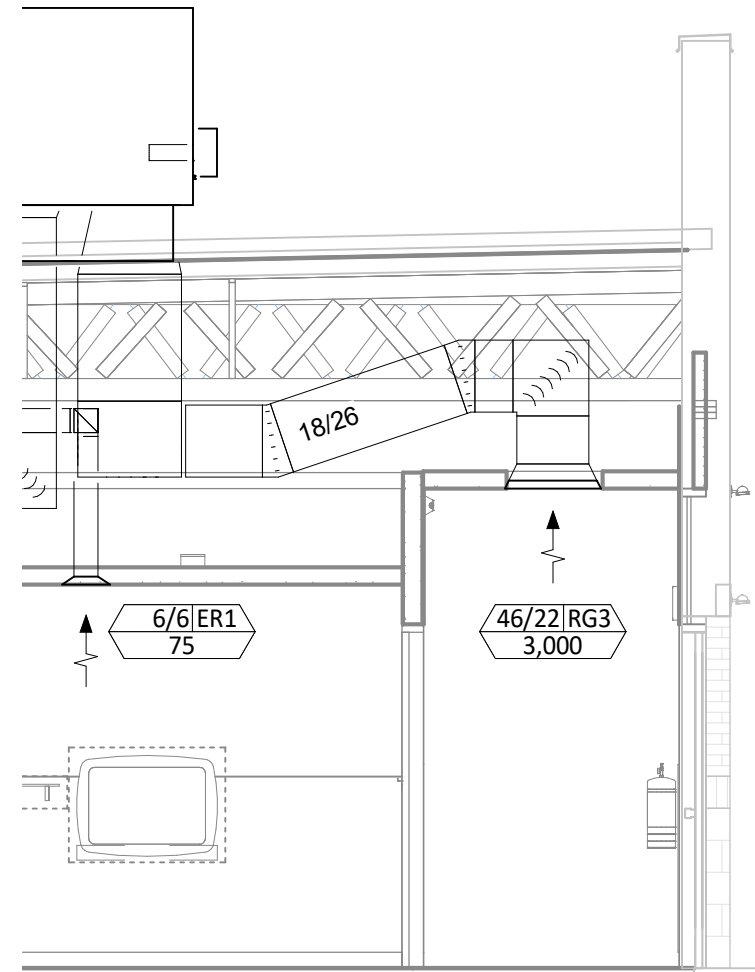
M010

HVAC PLAN NOTES

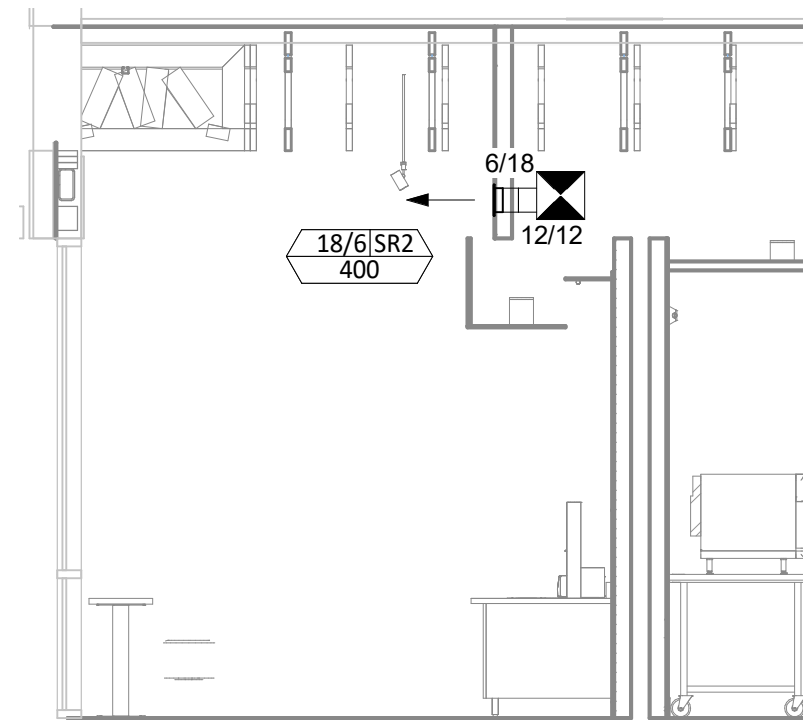
- SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
- PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS BLACK. TYPICAL.
- PENETRATIONS THROUGH SHEAR WALL SHALL BE LIMITED TO 10" DIAMETER (OR A GROUP OF PENETRATIONS ALL CONTAINED WITHIN 10" DIAMETER). IF LARGER PENETRATIONS OR GROUPS OF PENETRATIONS ARE REQUIRED COORDINATE WITH STRUCTURAL ENGINEER FOR APPROPRIATE BRACING. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATION.
- 26/14 DUCT UP FOR TRANSITION TO RTU-1 RETURN CONNECTION IN ROOF CURB. RTU-1 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-1 OPERATION.
- 26/18 DUCT UP FOR TRANSITION TO RTU-2 RETURN CONNECTION IN ROOF CURB. RTU-2 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-2 OPERATION.
- 26/14 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-1 SUPPLY CONNECTION IN ROOF CURB.
- 26/18 DUCT UP FROM BUILDING SUPPLY TO RTU-2 SUPPLY CONNECTION. TRANSITION IN ROOF CURB.
- 14/14 DUCT UP THROUGH ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION IN ROOF CURB.
- 24/10 DUCT UP FROM HOOD THROUGH ROOF TO EF-1 COMPLIANT WITH NFPA 96. PROVIDE RADIUS ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT.
- 8/6 DUCT UP THROUGH ROOF TO EF-2.
- 28/6 DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 3.
- 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS.
- INSTALL GRIDPOINT THERMOSTATS FURNISHED BY TEMS FOR RTU-1 AND RTU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-1 AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-2 AT THIS LOCATION 66" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 66" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.
- INSTALL KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 2, 4, AND 9/M700. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.

HVAC PLAN NOTES

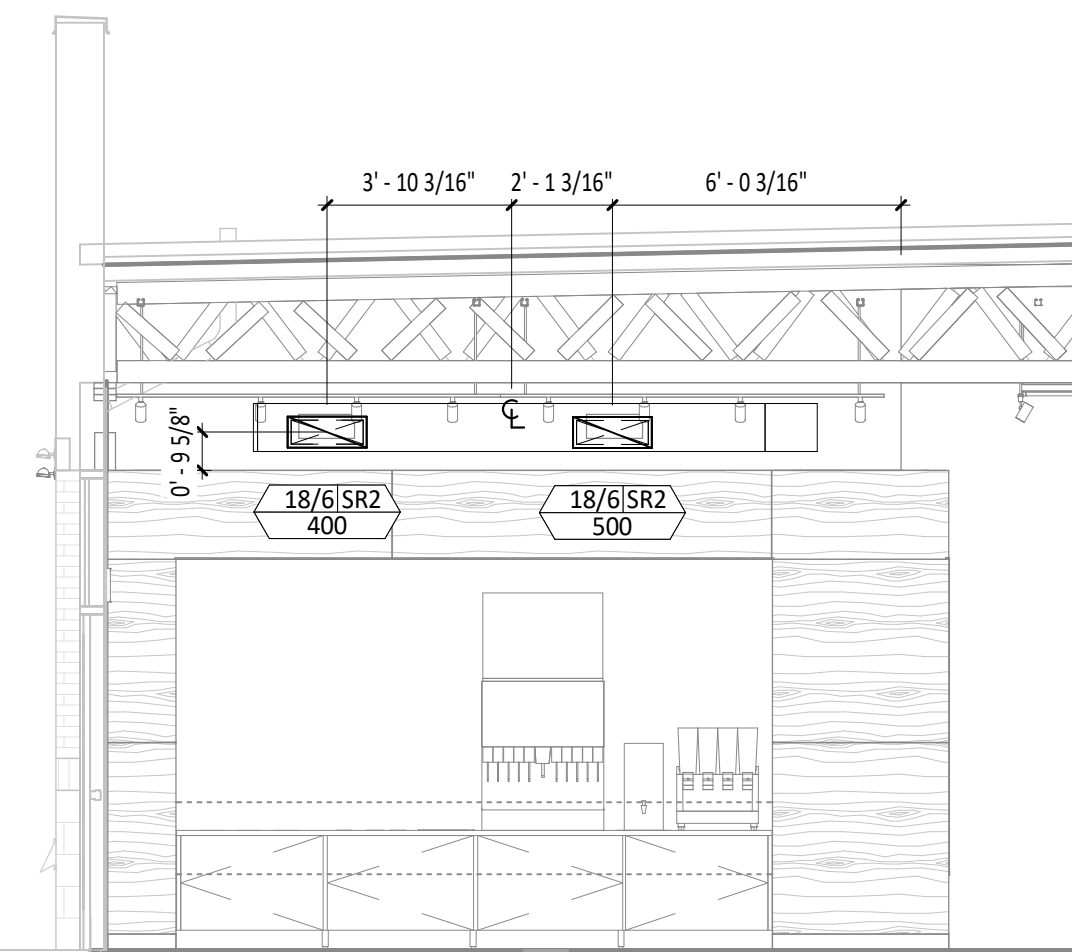
- INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.
- INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MAKER IS EXPOSED TO PUBLIC VIEW CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
- INSTALL ROOFTOP EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- INSTALL EXHAUST FAN EF-1 PER DETAIL 5/M700 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL GREASE VIROGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN, EF-1.
- PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 1/M700. TYPICAL.
- PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
- INSTALL REME HALO AIR PURIFIER FURNISHED BY TUV IN RTU PER DETAIL 6/M700. SEE ELECTRICAL DRAWINGS FOR POWER CONNECTION INFORMATION. INSTALL UV WARNING STICKERS ON FACE OF ENCLOSURE PER DETAIL AND ON ANY RTU ACCESS DOOR(S) THROUGH WHICH THE REME HALO WOULD BE VISIBLE IF OPENED.
- MAINTAIN 10" CLEARANCE BETWEEN WATER HEATER FLUE TERMINATION AND OUTSIDE AIR INTAKES. MAINTAIN 10" CLEARANCE BETWEEN WATER HEATER COMBUSTION AIR INTAKE AND EXHAUST FAN EF-1 DISCHARGE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION ON WATER HEATER FLUE AND COMBUSTION AIR TERMINATIONS.
- ADJUST SUPPLY REGISTERS SO THAT SUPPLY AIR HITS WALL ON OPPOSITE SIDE OF ROOM AT APPROXIMATELY 7' AFF WITH NO DRAFTS FELT IN THE DINING ROOM.



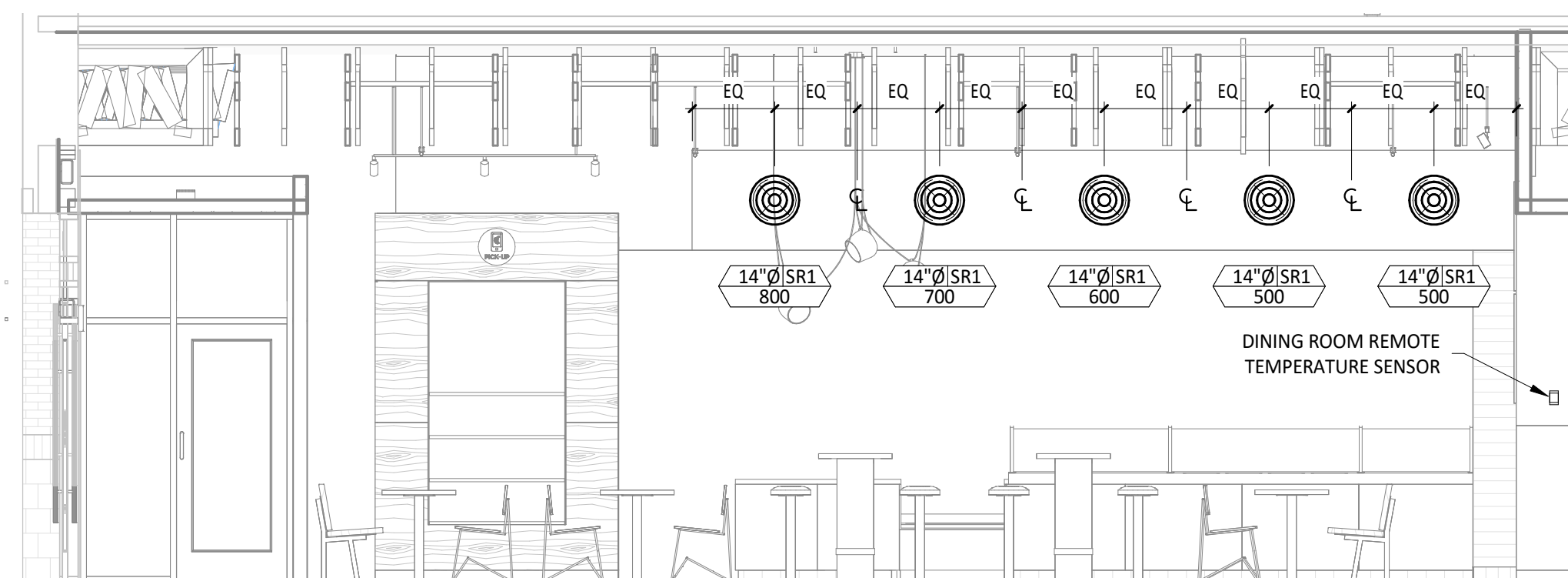
6 M100
1/4" = 1'-0"



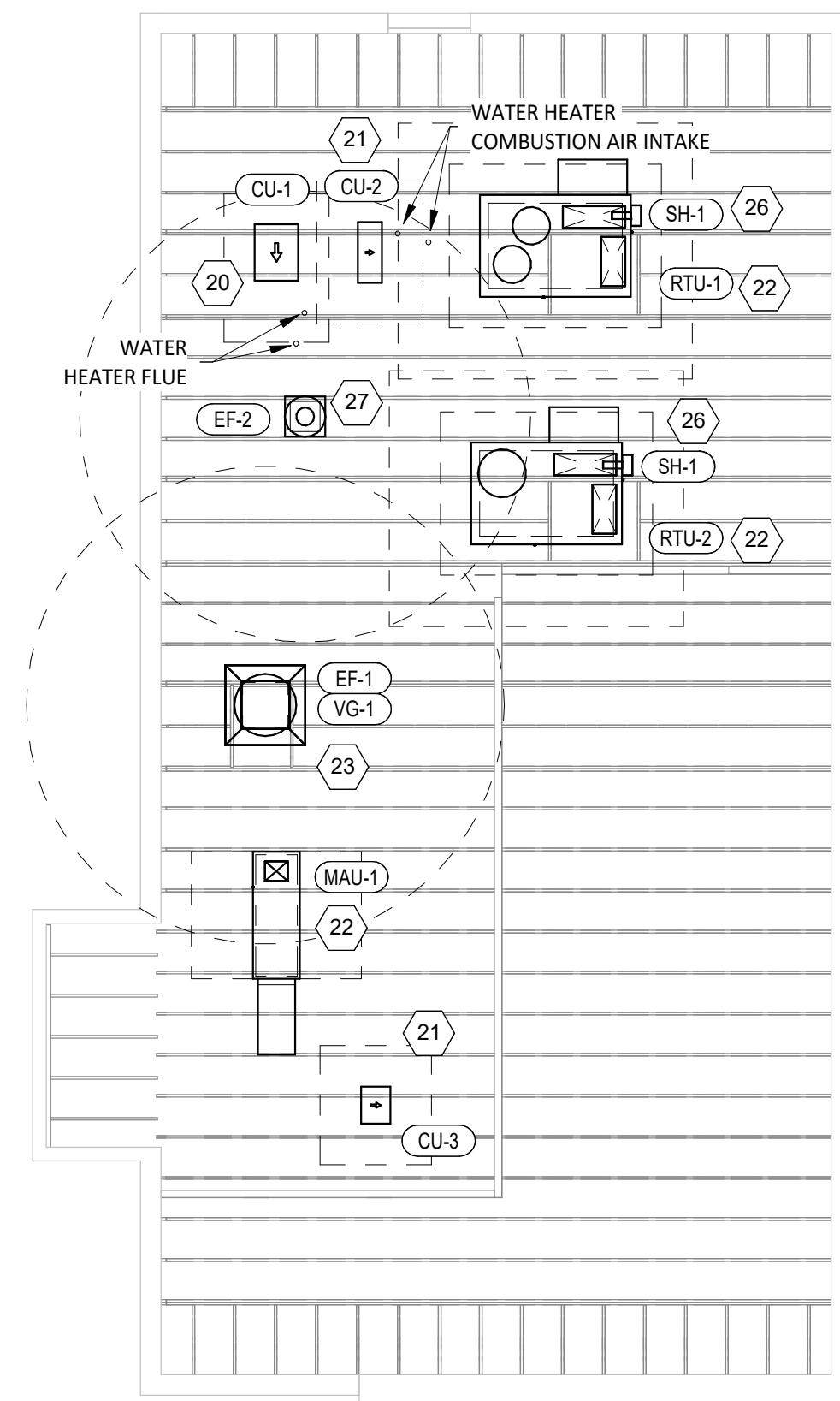
5 M100
1/4" = 1'-0"



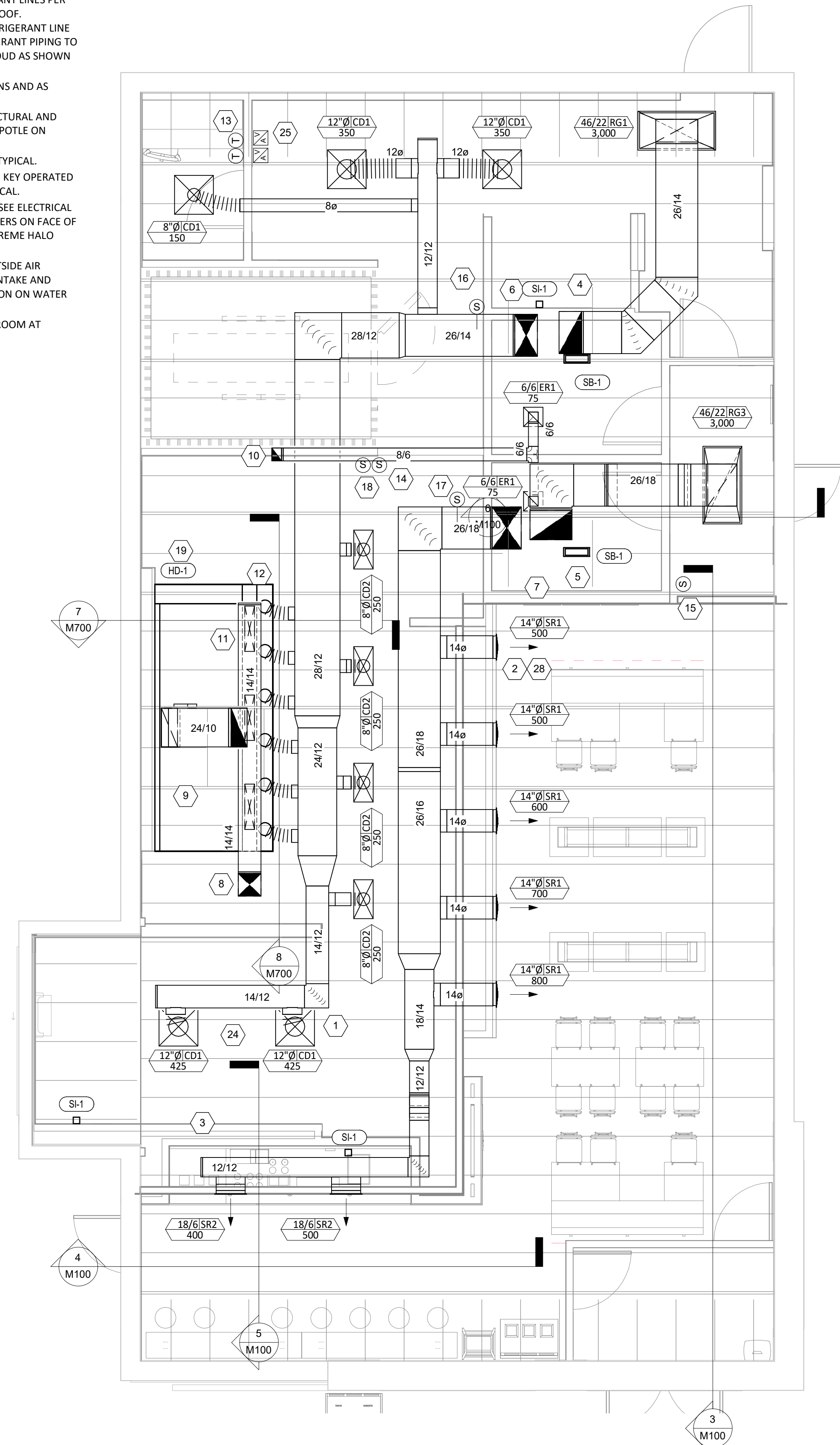
4 M100
1/4" = 1'-0"



3 M100
1/4" = 1'-0"



2 M100
1/8" = 1'-0"



1 M100
1/4" = 1'-0"

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Contents:
 HVAC PLAN

M100

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Contents:
 HVAC SCHEDULES

M600

TAG	SUPPLY FLOW	RETURN FLOW	EXHAUST FLOW	SUBTOTAL
EF-1	0 CFM	0 CFM	2,550 CFM	-2,550 CFM
EF-2	0 CFM	0 CFM	150 CFM	-150 CFM
MAU-1	1,300 CFM	0 CFM	0 CFM	1,300 CFM
RTU-1	0 CFM	0 CFM	0 CFM	0 CFM
RTU-2	4,000 CFM	3,000 CFM	0 CFM	1,000 CFM
NET PRESSURIZATION				-400 CFM

CONTROL FUNCTIONS	
A.	THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.
B.	THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENTLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.
C.	THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

SANITIZING EQUIPMENT SCHEDULE							
TAG	COUNT	DESCRIPTION	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					MANUFACTURER	MODEL	
SB-1	2	BATHROOM AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	BRU ASSEMBLY	SEE ELECTRICAL SHEETS FOR CONNECTION INFORMATION
SH-1	2	HVAC AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	REME-HALO	SEE DETAIL 6/M700 FOR INSTALLATION INFORMATION.
SI-1	3	ICE MACHINE TREATMENT SYSTEM	TUV	GC	RGF ENVIRONMENTAL GROUP	IMS-B-GA	SEE PLUMBING DRAWINGS FOR INSTALLATION INFORMATION.

FAN SCHEDULE											
TAG	DESCRIPTION	AIRFLOW	E.S.P.	WEIGHT	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					MOTOR POWER	V/P/H			MANUFACTURER	MODEL	
EF-1	UPBLAST UL762 EXHAUST FAN	2,550 CFM	1.20 in-wg	400 lb	2 hp	208/3/60	HS	GC	CAPTIVE-AIRE	DU180HFA	DIRECT DRIVE UL762 UPBLAST EXHAUST FAN FURNISHED WITH WEATHERPROOF DISCONNECT AND VENTED ROOF CURB
EF-2	DOWNBLAST RESTROOM EXHAUST FAN	150 CFM	0.60 in-wg	100 lb	0.18 hp	120/1/60	HS	GC	CAPTIVE-AIRE	DR12HFA	DIRECT DRIVE DOWNBLAST RESTROOM EXHAUST FAN FURNISHED WITH INTEGRAL DISCONNECT, SPEED CONTROL, BACKDRAFT DAMPER, AND CURB

VIROGUARD SCHEDULE							
TAG	COUNT	DESCRIPTION	DUCT CONNECTION SIZE	FAN	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN MANUFACTURER
VG-1	1	VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM	16" X 16"	CAPTIVE-AIRE DU180HFA	TDC	GC	ENVIROMATIC

CONDENSING UNIT SCHEDULE															
TAG	DESCRIPTION	NOMINAL CAPACITY	NUMBER OF		REFRIGERANT		WEIGHT	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
			COMPRESSORS	CIRCUITS	TYPE	CHARGE		MOCP	FLA	V/P/H			MANUFACTURER	MODEL	
CU-1	CONDENSING UNIT - WALK-IN COOLER		1	1	R-404A	10.4 lb	250 lb	15 A	9 A	208/3/60	WCS	GC	HARFORD	KPCL99MZOP-3E	FURNISHED WITH WALK-IN COOLER
CU-2	REMOTE CONDENSER - LOW CAPACITY ICE MAKER		0	1	R-404A	11.46 lb	100 lb			120/1/60	KES	GC	HOSHIZAKI	URC-9F	FURNISHED WITH ICE MAKER
CU-3	REMOTE CONDENSER - SODA MACHINE ICE MAKER		0	1	R-404A	3.86 lb	100 lb			120/1/60	KES	GC	HOSHIZAKI	URC-5F	FURNISHED WITH ICE MAKER

MAKEUP AIR UNIT SCHEDULE														
TAG	DESCRIPTION	AIRFLOW	E.S.P.	HEATING			WEIGHT	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
				INPUT	OUTPUT	EAT		MOTOR POWER	V/P/H			MANUFACTURER	MODEL	
MAU-1	DIRECT-FIRED MAKEUP AIR UNIT	1,300 CFM	0.50 in-wg	225,000 Btu/h	220,000 Btu/h	21 °F	650 lb	1 hp	208/3/60	HS	GC	CAPTIVE-AIRE	A1-D.250-15D	12.5:1 MAX TURNDOWN. FURNISHED WITH DISCONNECT, ROOF CURB, SCREEN INTAKE, AND WASHABLE ALUMINUM FILTERS

TAG	DESCRIPTION	MAX COOKING TEMP.	AIRFLOW	E.S.P.	EXHAUST PLENUM						PERFORATED SUPPLY PLENUMS						NO. OF LIGHT FIXTURES	WEIGHT	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS		
					DUCT COLLARS						MAU PLENUM			AC PLENUM							MANUFACTURER	MODEL			
					NO.	WIDTH	LENGTH	LENGTH	WIDTH	LENGTH	WIDTH	AIRFLOW	NO.	WIDTH	LENGTH	AIRFLOW								NO.	DIAMETER
HD-1	TYPE I CANOPY HOOD WITH PERFORATED MAU AND AC SUPPLY PLENUMS	600 °F	2,550 CFM	0.97 in-wg	1	10"	2' - 0"	12' - 9"	4' - 3"	13' - 9"	1' - 7"	1,300 CFM	3	6"	2' - 4"	700 CFM	6	8"	8	1,150 lb	HS	GC	CAPTIVE-AIRE	5424 ND-2-ACPSP-F	MAT'L: 18 GA. TYPE 430 SS. FURNISHED WITH VERTICAL END PANELS, VAPORPROOF INCANDESCENT LIGHT FIXTURES, 16" TALL HE SS FILTERS, INTEGRAL UTILITY CABINET, ANSUL SYSTEM, DUCT COLLAR TEMPERATURE SENSOR, PREWIRE PACKAGE, SPARE FIRE SYSTEM DRY CONTACT, AND 4-POLE 20A CONTACTOR

ROOFTOP UNIT SCHEDULE-1																											
TAG	DESCRIPTION	NOMINAL CAPACITY [TONS]	EER	AIRFLOW			NET COOLING CAPACITY					HEATING CAPACITY			# OF COMPRESSORS	# OF CIRCUITS	REFRIG. TYPE	REFRIG. CHARGE	APPROX. WEIGHT [lbs]	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
				TOTAL [CFM]	OA [CFM]	ESP [IN. W.C.]	TOTAL [MBH]	SENSIBLE [MBH]	EAT [DEG. F]	COND. EAT [DEG. F]	INPUT [MBH]	OUTPUT [MBH]	EAT [DEG. F]	MOCP						FLA	V/P/H	MANUFACTURER			MODEL		
RTU-1	KITCHEN ROOFTOP UNIT	8.5	12	3400	500	0.8	95	65	76	66	97	224	181	58	2	2	R-410A	19.8	1300	50 A	39.0 A	208/3/60	HES	GC	CARRIER	48FC_M09	FURNISHED WITH HINGED ACCESS PANELS, STANDARD ECONOMIZER W/ DUAL ENTHALPY CONTROLS, BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, MERV-8 FILTERS, CURB, HAIL GUARD, DISCONNECT, & UNIT-MOUNTED NON-POWERED CONVENIENCE RECEPTACLE
RTU-2	DINING ROOFTOP UNIT	10	12	4000	1000	0.8	119	82	78	67	97	250	205	51	2	2	R-410A	25.6	1500	60 A	52.0 A	208/3/60	HES	GC	CARRIER	48FC_N12	FURNISHED WITH HINGED ACCESS PANELS, STANDARD ECONOMIZER W/ DUAL ENTHALPY CONTROLS, BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, MERV-8 FILTERS, CURB, HAIL GUARD, DISCONNECT, & UNIT-MOUNTED NON-POWERED CONVENIENCE RECEPTACLE

FOR
 CONSTRUCTION

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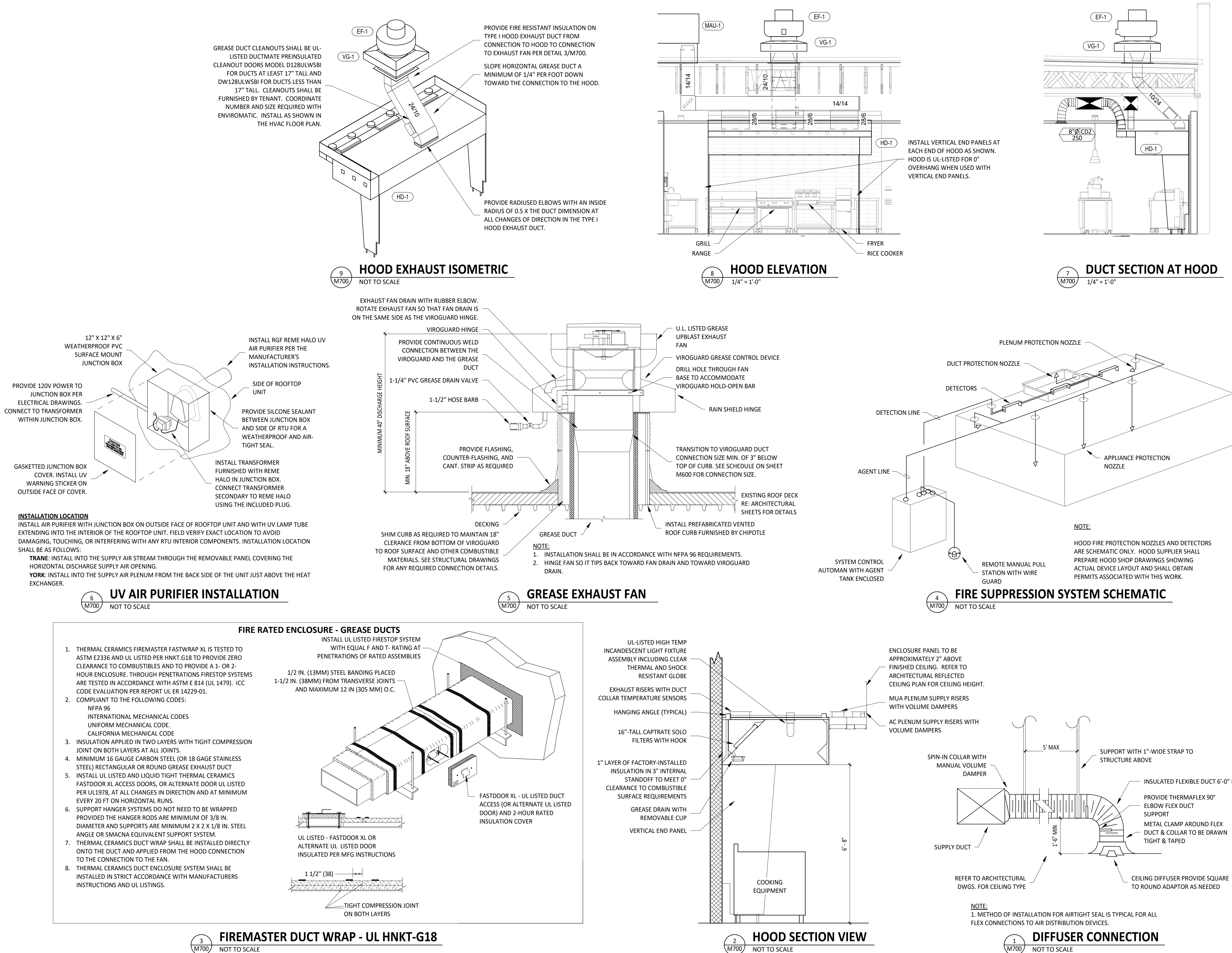
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Project No:
 2301016

Contents:

HVAC DETAILS

M700



SECTION 1505 - COMMON PIPING REQUIREMENTS

- PART 1 - GENERAL
- A. SECTION REQUIREMENTS
- Comply with the requirements of the Building Code and the local authority having jurisdiction.
- PART 2 - PRODUCTS
- 2.1 SUPPORTING DEVICES
- A. Hanger and Pipe Attachments: Factory fabricated with galvanized coatings; nonmetallic coated for hangers in direct contact with copper tubing.
- B. Building Attachments: Powder actuated type, drive pin attachments with pullout and shear capacities appropriate for supported loads and building materials; UL listing and FM approval for fire protection systems.
- C. Mechanical Anchor Fasteners: Insert-type attachments with pullout and shear capacities appropriate for supported loads and building materials; UL listing and FM approval for fire protection systems.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install piping free of sags and bends.
- B. Install fittings for changes in direction and branch connections.
- C. Install sleeves for pipes passing through concrete and masonry walls, gypsum board partitions, and concrete floor and roof slabs.
- D. Exterior Wall, Pipe Penetrations: Mechanical sleeve seals installed in steel or cast iron pipes for wall sleeves.
- E. Fire Barrier Penetrations: Seal pipe penetrations with through-penetration firestop systems.
- F. Install unions adjacent to each valve and at final connection to each piece of equipment.
- G. Install dielectric unions and flanges to connect piping materials of dissimilar metals in gas piping.
- H. Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals in water piping.
- I. Provide full ring escutcheons at plumbing penetrations through walls or ceilings. Tightly seal escutcheons to the adjacent surface.
- 3.2 HANGERS AND SUPPORTS
- A. Install building attachments within concrete or to structural steel. Install additional attachments at concentrated loads, including valves, flanges, guides, strainers, expansion joints, and at changes in direction of piping.
- B. Install powder actuated drive pin fasteners in concrete after concrete is cured. Do not use in lightweight concrete or in slabs less than 4 inches thick.
- C. Install mechanical anchor fasteners in concrete after concrete is cured. Do not use in lightweight concrete or in slabs less than 4 inches thick.
- D. Support fire protection system piping independent of other piping.
- E. Load Distribution: Install hangers and supports so piping live and dead loading and stresses from movement will not be transmitted to connected equipment.
- END OF SECTION 1505

SECTION 15080 - MECHANICAL INSULATION

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Submittals: None.
- B. Quality Assurance: Labeled with maximum flame-spread rating of 25 and maximum smoke developed rating of 50 according to ASTM E 84.
- PART 2 - PRODUCTS
- 2.1 PIPE INSULATION
- A. Preformed Glass Fiber Pipe Insulation: ASTM C 547, Class 1, with factory applied, all purpose, vapor retarder jacket.
- B. Polyolefin Pipe Insulation: Unicellular polyethylene, preformed pipe insulation. Comply with ASTM C 534, Type I, except for density.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install vapor barriers on insulated pipes with surface operating temperatures below 60 deg F.
- B. Insulate fittings, valves, and specialties.
- C. Seal vapor barrier penetrations for hangers, supports, anchors, and other projections.
- D. Coat glass fiber pipe insulation ends with vapor barrier coating.
- E. Roof Penetrations: Apply insulation for interior applications to a point even with the top of the roof flashing.
- F. Exterior Wall Penetrations: For penetrations of below grade exterior walls, terminate insulation flush with mechanical sleeve seal.
- G. Interior Walls and Partitions Penetrations: Apply insulation continuously through walls and partitions, except fire rated walls and partitions.
- H. Fire Rated Walls and Partitions Penetrations: Terminate insulation at penetrations through fire rated walls and partitions. Seal around penetration with through penetration firestop systems.
- I. Floor Penetrations: Terminate insulation at the underside of the floor assembly and at the floor support at top of floor. Seal around penetration with through penetration firestop systems.
- J. Glass Fiber Insulation Installation: Bond insulation to pipe with adhesive. Seal seams and joints with vapor barrier compound.
- K. Interior Piping System Applications: Insulate the following piping systems:
- Domestic cold, hot, and recirculation water pipes.
 - Exposed sanitary drains and water supply pipes for public hand sinks.
 - Refrigerant piping.
- L. Do not apply insulation to the following systems, materials, and equipment:
- Flexible connectors.
 - Fire protection piping systems.
 - Sanitary drainage and vent piping.
 - Chrome plated pipes and fittings, except for plumbing fixtures for the disabled.
 - Piping specialties, including air chambers, unions, strainers, check valves, plug valves, and flow regulators.
- M. Pipe Insulation Thickness Application Schedule: Insulate piping with the following materials and thicknesses:
- Domestic Hot and Recirculation water pipes: 1-inch preformed glass fiber pipe insulation.
 - Domestic Cold Water: 1/2-inch preformed glass fiber pipe insulation.
 - P-Trap and Fixture Supplies for public hand sinks: ADA-compliant pre-formed insulation.
- END OF SECTION 15080

SECTION 15110 - VALVES

- PART 1 - GENERAL (Not Applicable)
- PART 2 - PRODUCTS
- 2.1 GENERAL DUTY VALVES
- A. End Connections: Threads shall comply with ANSI B1.20.1. Flanges shall comply with ANSI B16.1 for cast iron valves and ANSI B16.24 for bronze valves. Solder-joint connections shall comply with ANSI B16.18.
- B. Ball Valves: Rated for 150 psig saturated steam pressure, 400 psig WOG pressure; 2 piece construction; with bronze body, standard (or regular) port, chrome plated brass ball, replaceable "Teflon" or "TFE" seats and seals, blowout proof stem, and vinyl covered steel handle.
- C. Plug Valves: Rated at 150 psig WOG; bronze body, with straightaway pattern, square head, and threaded ends.
- D. Swing Check Valves: Class 125, cast bronze body and cap; with horizontal swing, Y-pattern, and bronze disc.
- E. Valves for Copper Tube: Solder ends, except provide threaded ends for heating hot water and low pressure steam service.
- F. Valves for Steel Pipe: Threaded ends.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Use gate and ball valves for shutoff duty and ball for throttling duty.
- B. Locate valves for easy access and provide separate support where necessary.
- C. Install accessible valves for each fixture and item of equipment.
- D. Install valves in horizontal piping with stem at or above center of pipe.
- E. Install valves in a position to allow full stem movement.
- F. Install check valves for proper direction of flow in horizontal position with hinge pin level.
- END OF SECTION 15110

SECTION 15140 - DOMESTIC WATER PIPING

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Performance Requirements: Unless otherwise indicated minimum pressure requirements for water piping are as follows:
- Service Entrance Piping: 100 psig.
 - Domestic Water Piping: 80 psig.
- B. Comply with NSF 14 "Plastic Piping Components and Materials."
- C. Comply with NSF 61 "Drinking Water System Components -- Health Effects."
- PART 2 - PRODUCTS
- 2.1 PIPES AND TUBES (See Material Schedule on sheet P010 for where these materials are to be used)
- A. Hard Copper Tube: ASTM B 88, Types L and M, water tube, drawn temper.
- B. PVC Plastic, Water Pipe: ASTM D 1785, Schedule 80, plain ends.
- 2.2 FITTINGS
- A. Wrought Copper, Solder Joint Pressure Fittings: ASME B 16.22.
- B. Cast Copper Alloy, Solder Joint Pressure Fittings: ASME B 16.18.
- C. Bronze Flanges: ASME B 16.24, Classes 150 and 300.
- D. Copper Unions: ASME B 16.18, cast copper alloy body, hexagonal stock, with ball and socket joint, metal to metal seating surfaces, and solder joint, threaded, or solder joint and threaded ends. Threads complying with ASME B 1.20.1.
- E. PVC Plastic, Schedule 80, Socket Type Pipe Fittings: ASTM D 2467.
- 2.3 JOINING MATERIALS
- A. Solder Filler Metal: ASTM B 32, lead free.
- B. Brazing Filler Metals: AWS A5.8, alloys to suit system requirements.
- C. Solvent Cements: As recommended by manufacturer.
- D. Plastic Pipe Seals: ASTM F 477, elastomeric gasket.
- PART 3 - EXECUTION
- 3.1 VALVE APPLICATIONS
- A. Install gate valves close to main on each branch and riser serving two or more plumbing fixtures or equipment connections and where indicated.
- B. Install gate or ball valves on inlet to each plumbing equipment item, on each supply to each plumbing fixture not having stops on supplies, and elsewhere as indicated.
- C. Install drain valve at base of each riser, at low points of horizontal runs, and where required to drain water distribution piping system.
- D. Install swing check valve on discharge side of each pump and elsewhere as indicated.
- E. Install ball valves in each hot water circulating loop and discharge side of each pump.
- 3.2 PIPING INSTALLATIONS
- A. Install hangers and supports at intervals indicated in the applicable plumbing code and as recommended by pipe manufacturer.
- B. Support vertical piping at each floor.
- 3.3 INSPECTING AND CLEANING
- A. Inspect and test piping systems following procedures of authorities having jurisdiction.
- B. Clean and disinfect water distribution piping following procedures of authorities having jurisdiction.
- END OF SECTION 15140

SECTION 15150 - SANITARY WASTE AND VENT PIPING

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Minimum Pressure Requirement for Soil, Waste and Vent: 10 feet head.
- B. Comply with NSF 14 "Plastic Piping Components and Related Materials".
- PART 2 - PRODUCTS
- 2.1 PIPES AND TUBES
- A. PVC Plastic, DWV Pipe: ASTM D 2665, Schedule 40, plain ends.
- 2.2 FITTINGS
- A. PVC Plastic, DWV Pipe Fittings: ASTM D 2665, made to ASTM D 3311; socket type; drain, waste, and vent pipe patterns.
- PART 3 - EXECUTION
- 3.1 PIPING INSTALLATION
- A. Install cleanout and extension to grade at connection of building sanitary drain and building sanitary sewer.
- B. Locate drainage piping runouts as close as possible to bottom of floor slab supporting fixtures or drains.
- 3.2 INSPECTION
- A. Inspect and test piping systems following procedures of authorities having jurisdiction.
- END OF SECTION 15150

SECTION 15198 - NATURAL GAS PIPING

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Quality Assurance: Comply with NFPA 54 and the Plumbing Code.
- PART 2 - PRODUCTS
- 2.1 PIPE, TUBE, AND SPECIALTIES
- A. Steel Pipe: ASTM A 53, Type S (Seamless), Grade B, Schedule 40, plain ends.
- B. Malleable Iron Threaded Fittings: ASME B16.3, Class 150.
- C. Manual Valves: Comply with standards listed or, if appropriate, to ANSI Z21.15.
- D. Gas Stops: AGA certified, bronze-body, plug type with bronze plug, for 2-psig or less natural gas. Include AGA stamp, flat or square head or lever handle, and threaded ends complying with ASME B1.20.1.
- E. Gas Valves: 150-psig WOG, cast-iron or bronze body, bronze plug, straightaway pattern, square head, tapered-plug type.
- F. Gas Pressure Regulators: ANSI Z21.18, single stage, steel jacketed, corrosion resistant pressure regulators. Include atmospheric vent, elevation compensator. Regulator pressure ratings, inlet and outlet pressures, and flow volume in cubic feet per hour of natural gas at specific gravity are as indicated.
- G. Line Gas Pressure Regulators: Inlet pressure rating not less than system pressure.
- H. Flexible Connectors: ANSI Z21.24, copper alloy.
- I. Strainers: Bronze body, Y-pattern, full size of connecting piping. Include stainless-steel screens with 3/64 inch perforations and a pressure rating of 125-psig; minimum, WOG working pressure.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Close equipment shutoff valves before turning off gas to premises or section of piping. Perform leakage test as specified to determine that all equipment is turned off in affected piping section.
- B. Install shutoff valve, downstream from gas meter, outside building at gas service entrance.
- C. Install gas stops for shutoff to appliances with NPS 2" or smaller low pressure gas supply.
- D. Drips and Sediment Traps: Install drips at points where condensate may collect. Include outlets of gas meters. Locate where readily accessible to permit cleaning and emptying. Do not install where condensate would be subject to freezing.
- E. Install gas piping at uniform slope of 0.1 percent upward toward risers.
- F. Connect branch piping from top or side of horizontal piping.
- G. Install strainers on supply side of each control valve, gas pressure regulator, solenoid valve, and elsewhere as indicated.
- H. Install valves in accessible locations, protected from damage.
- I. Install gas valve upstream from each gas pressure regulator. Where two gas-pressure regulators are installed in series, valve is not required at second regulator.
- J. Connect gas piping to equipment and appliances with shutoff valves and unions. Install gas valve upstream from and within 36 inches of each appliance using gas. Install union or flanged connection downstream from valve.
- K. Inspect, test, and purge piping according to NFPA 54, Part 4, "Gas Piping Inspection, Testing, and Purging", and requirements of authorities having jurisdiction.
- END OF SECTION 15198

SECTION 15410 - PLUMBING FIXTURES

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- Submittals: None.
- A. Comply with requirements of Public Law 102-486, "Energy Policy Act", regarding water flow rate and water consumption of plumbing fixtures.
- B. Comply with applicable standards below:
- Enameled, Cast Iron Fixtures: ASME A112.19.1M.
 - National Sanitation Foundation Construction: NFS2.
 - Porcelain Enameled Fixtures: ASME A112.19.4M.
 - Slip Resistant Bathing Surfaces: ASTM F 462.
 - Stainless Steel Fixtures: ASME A112.19.3M.
 - Vitreous China Fixtures: ASME A112.19.2M.
- PART 2 - PRODUCTS
- 2.1 Refer to the fixture schedule on drawing P600
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install fixtures with flanges and gasket seals.
- B. Install flushometer valves for accessible water closets and urinals with handle mounted on wide side of compartment. Install other actuators in locations that are easy for the disabled to reach.
- C. Fasten wall hanging plumbing fixtures securely to supports attached to building substrate when supports are specified, and to building wall construction where no support is indicated.
- D. Fasten floor mounted fixtures to substrate. With fixtures having holes for securing fixture to wall construction, fasten to reinforcement built into walls.
- E. Fasten wall mounted fittings to reinforcement built into walls.
- F. Fasten counter mounted plumbing fixtures to casework.
- G. Secure supplies to supports or substrate within pipe space behind fixture.
- H. Set mop basins in leveling bed of cement groud.
- I. Install individual supply inlets, supply stops, supply risers, and tubular brass traps with cleanouts at fixture.
- J. Install water supply stop valves in accessible locations.
- K. Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes, unless otherwise indicated or required by the Authority Having Jurisdiction.
- L. Install full-ring escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep pattern escutcheons where required to conceal protruding pipe fittings.
- M. Install piping connections between plumbing fixtures and piping systems and plumbing equipment. Install insulation on supplies and drains of fixtures for the disabled.
- N. Ground equipment. Tighten electrical connectors and terminals according to UL 486A and UL 486B.
- END OF SECTION 15410

SECTION 15554 - FLUES AND VENTS

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Submittals: None.
- PART 2 - PRODUCTS
- 2.1 GAS VENTS
- A. Vent/air intake for high efficiency domestic water heater. Follow manufacturer's recommendations for sizing and material.
- B. Accessories: Tees, elbows, increasers, draft hood connectors, metal cap with bird barrier, adjustable roof flashing, storm collar, support assembly, thimbles, firestopping spacers, and fasteners; fabricated of similar materials and designs as vent-pipe straight sections.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install vents according to stipulated minimum clearances from combustibles.
- B. Seal between sections of positive pressure vents using only sealants recommended by manufacturer.
- C. Support vents at intervals to support the weight of the vent and all accessories, without exceeding loading of appliances.
- END OF SECTION 15554

PLUMBING SYMBOLS

- ELBOW UP
- ELBOW DOWN
- DOMESTIC COLD WATER
- DOMESTIC FILTERED COLD WATER
- DOMESTIC SOFTENED COLD WATER
- DOMESTIC HOT WATER (110 DEGREES)
- DOMESTIC HOT WATER RECIRC.
- GAS
- GAS (ON ROOF)
- SANITARY WASTE
- GREASE WASTE
- SANITARY VENT
- CONDENSATE DRAIN
- PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER
- WATER METER
- GAS METER
- EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET P600 FOR EQUIPMENT INFORMATION
- VALVE
- SOLENOID-OPERATED VALVE
- WALL HYDRANT/ROOF HYDRANT
- CHECK VALVE
- CIRCUIT-SETTER BALANCE VALVE RATED FOR POTABLE WATER
- FLOOR DRAIN
- FLOOR SINK
- CLEANOUT

PLUMBING ABBREVIATIONS

- (E) EXISTING
- ABV ABOVE
- ADA AMERICANS WITH DISABILITIES ACT
- AFB ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AHJ AUTHORITY HAVING JURISDICTION
- BFF BELOW FINISHED FLOOR
- BFG BELOW FINISHED GRADE
- BOH BACK OF HOUSE
- CLG CEILING
- CTE CONNECT TO EXISTING
- CW DOMESTIC COLD WATER
- DN DOWN
- EXT'G EXISTING
- FCO FLOOR CLEANOUT
- FD FLOOR DRAIN
- FLR FLOOR
- FOH FRONT OF HOUSE
- FS FLOOR SINK
- FW DOMESTIC FILTERED COLD WATER
- GCO GRADE CLEANOUT
- GI GREASE INTERCEPTOR
- GT GREASE TRAP
- GW GREASE WASTE
- GYP GYPSUM BOARD
- HW DOMESTIC HOT WATER
- NTS NOT TO SCALE
- O/H OVERHEAD
- SAN SANITARY WASTE

PLUMBING ABBREVIATIONS

- ST STORM SEWER
- SW DOMESTIC SOFTENED COLD WATER
- TYP TYPICAL
- UG UNDERGROUND
- UNO UNLESS NOTED OTHERWISE
- W/ WITH
- WIC WALK-IN COOLER
- CO2AS TENANT'S CO2 ALARM SUPPLIER
- GC GENERAL CONTRACTOR
- HES TENANT'S HVAC EQUIPMENT SUPPLIER
- HS TENANT'S HOOD SUPPLIER
- KES TENANT'S KITCHEN EQUIPMENT SUPPLIER
- LL LANDLORD
- SPS TENANT'S SODA POP SUPPLIER
- TAB TENANT'S TEST AND BALANCE VENDOR
- TCC TENANT'S CABLING CONTRACTOR
- TDC TENANT'S DUCT CLEANER
- TEMS TENANT'S ENERGY MANAGEMENT SYSTEM SUPPLIER
- TLS TENANT'S LIGHT/LAMP SUPPLIER
- TMB TENANT'S MENU BOARD SUPPLIER
- TMS TENANT'S MILLWORK SUPPLIER
- TP TENANT'S PHONE SUPPLIER
- TRS TENANT'S RAILING SUPPLIER
- TSV TENANT'S SIGN VENDOR
- TUV TENANT'S UV SNAITIZER SUPPLIER
- WCS TENANT'S WALK-IN COOLER SUPPLIER
- WHS TENANT'S WATER HEATER SUPPLIER

PLUMBING GENERAL NOTES

- A GENERAL NOTES APPLY TO PLUMBING SHEETS.
- B PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE PLUMBING CODE, LOCAL HEALTH DEPARTMENT STANDARDS, AND THE AUTHORITY HAVING JURISDICTION. SEE ARCHITECTURAL SHEETS FOR THE PREVAILING CODES.
- C PIPING LAYOUTS ON DRAWINGS ARE SCHEMATIC. EXACT LOCATIONS ARE TO BE COORDINATED WITH THE EXISTING CONDITIONS AND THE WORK OF OTHER TRADES.
- D CONCEAL PIPING UNLESS NOTED OTHERWISE. WATER SUPPLY PIPES SHALL BE INSTALLED LEVEL.
- E PROVIDE SHUT-OFF VALVES FOR ISOLATION OF FIXTURE GROUPS AS SHOWN ON DRAWINGS IN ADDITION TO STOP VALVES AT EACH FIXTURE.
- F PROVIDE STOP VALVES AT FIXTURES.
- G PROVIDE TRAP PRIMERS FOR FLOOR DRAINS AS SHOWN ON SHEET P100.
- H WHERE THE WATER OR GAS SUPPLY LINE SIZE SHOWN IN THE PLUMBING DIAGRAMS DIFFERS FROM THE FIXTURE OR EQUIPMENT CONNECTION SIZE, PROVIDE LINE SIZE PIPE TO WITHIN 6" OF THE FIXTURE OR EQUIPMENT BEFORE TRANSITIONING TO THE CONNECTION SIZE.
- I PIPING IN EXTERIOR WALLS SHALL BE INSTALLED BETWEEN THE INSULATION AND THE INTERIOR WALL FINISHING MATERIAL.
- J INSULATE THE HOT AND COLD WATER, CONDENSATE DRAINAGE, AND STORM PIPING PER THE SPECIFICATIONS AND DETAIL 8/P700.
- K PROVIDE GAS SHUT-OFF VALVES AT EACH PIECE OF EQUIPMENT. PROVIDE ACCESSIBLE DIRT LEG AT THE BOTTOM OF VERTICAL SECTIONS OF GAS PIPE AND AT THE CONNECTION TO EACH PIECE OF EQUIPMENT.
- L PLUMBING FIXTURES, ACCESSORIES, AND MATERIALS PROVIDED FOR DOMESTIC WATER SHALL BE LEAD FREE.
- M PRIOR TO TURNOVER PERFORM A VIDEO INSPECTION OF THE SANITARY AND GREASE LINES FROM THE MAIN LINES WITHIN THE TENANT SPACE TO THE MAIN SEWER TO VERIFY THAT THE SANITARY WASTE SYSTEM IS CONNECTED, CLEAN, AND FREE OF SAGS, BELLIES, BREAKS, AND DEBRIS. DELIVER A REPORT AND COPY OF THE VIDEO TO THE TENANT'S CONSTRUCTION MANAGER PRIOR TO TURNOVER.
- N THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
- O PRIOR TO CONNECTION TO ANY EXISTING SEWER SYSTEM PERFORM A DIE TEST TO VERIFY THE TYPE OF SYSTEM AND THE DIRECTION OF FLOW. REPORT ANY DEVIATION FROM THE CONSTRUCTION DOCUMENTS TO THE TENANT'S CONSTRUCTION MANAGER.
- P PROVIDE SANITARY AND GREASE WASTE PIPES AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS NOTED OTHERWISE.
- Q INSTALL SHUTOFF AND ISOLATION VALVES SHOWN TO BE ABOVE CEILINGS IN ACCESSIBLE LOCATIONS WITHIN 12" OF LAY-IN CEILINGS.

PLUMBING MATERIAL SCHEDULE

APPLICATION	ALLOWABLE MATERIAL
NATURAL GAS PIPE	
CONCEALED	SCH. 40 STEEL PIPE, MALLEABLE IRON THREADED FITTINGS
EXPOSED	SCH. 40 STEEL PIPE, MALLEABLE IRON THREADED FITTINGS, PAINTED
SANITARY WASTE & VENT PIPE	
ABOVE GROUND HAND SINK DRAINS	BRASS WITH CHROME FINISH
ABOVE GROUND PREP SINK AND WARE WASHING SINK DRAINS	PVC PLASTIC DWV PIPE AND FITTINGS
ABOVE GROUND, CONCEALED	PVC PLASTIC DWV PIPE AND FITTINGS
BELOW GROUND	PVC PLASTIC DWV PIPE AND FITTINGS
WATER SUPPLY PIPE	
ABOVE GRADE	TYPE L COPPER TUBE

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Project No.

2301016

Contents:

PLUMBING SPECIFICATIONS

P010

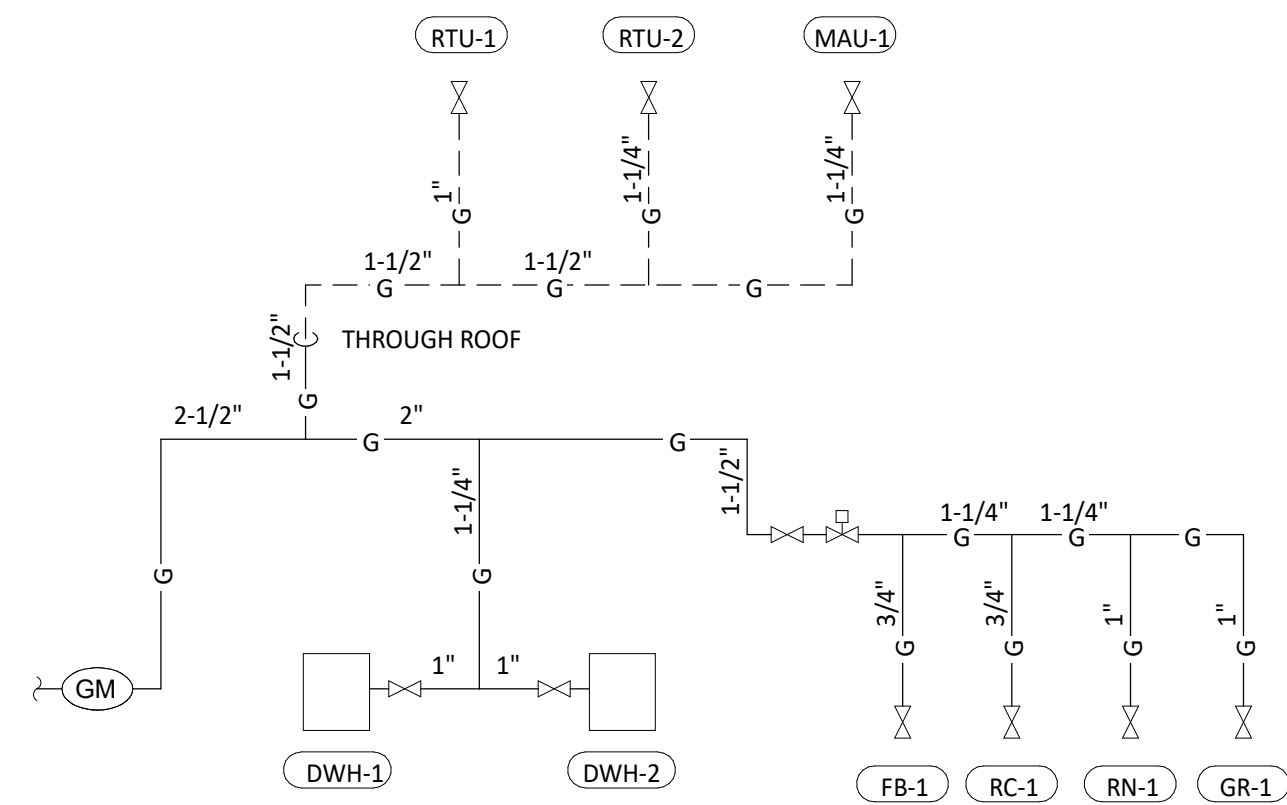
PLUMBING SUPPLY PLAN NOTES

- SEE CIVIL UTILITY PLAN FOR CONTINUATION OF 1-1/2" DOMESTIC WATER SERVICE.
- PROVIDE 1/2" FILTERED WATER TO THE BAG-IN-BOX SODA CARBONATOR AT 102" AFF. SODA CARBONATOR SHALL HAVE AN INTEGRAL ASSE 1022-RATED CARBONATED BEVERAGE BACKFLOW PREVENTION DEVICE.
- PROVIDE WATER HEATERS DWH-1 AND DWH-2 PER DETAIL 1/P700.
- PROVIDE WATER FILTERS MOUNTED TO WALL PER DETAIL 11/P700. PROVIDE 1/2" SUPPLY PIPES FROM FILTERS TO ICE MAKER AND SODA CARBONATOR AS SHOWN.
- PROVIDE 1/2" FILTERED WATER ROUGH-IN TO THE ICE MAKER AT 56" AFF. PROVIDE 6' LONG STAINLESS STEEL FLEXIBLE BRAIDED WASHING MACHINE WATER CONNECTOR WITH MINIMUM 0.43" ID (BRASSCRAFT SL12-72WA F OR EQUAL) FOR FINAL CONNECTION TO ICE MAKER.
- PROVIDE DOMESTIC WATER ROUGH-INS FOR THE MOP BASIN FAUCET AT 36" AFF. PROVIDE DOMESTIC WATER ROUGH-INS FOR THE CHEMICAL DISPENSER FAUCET (HB-1) AT 64" AFF DIRECTLY ABOVE THE MOP BASIN FAUCET. SEE ARCHITECTURAL ELEVATION FOR ADDITIONAL INFORMATION.
- PROVIDE NEW GAS METER. SEE CIVIL UTILITY PLAN FOR ON-SITE GAS ROUTING.
- PROVIDE GAS CONNECTIONS TO THE COOKING EQUIPMENT PER DETAIL 7/P700.
- SUPPORT THE GAS PIPE ON THE ROOF PER DETAIL 5/P700. WOOD BLOCKING IS NOT AN ACCEPTABLE METHOD OF SUPPORTING THE GAS PIPE.
- PROVIDE ACCESSIBLE LINE-SIZED GAS VALVE, DIRT LEG, AND UNION AT GAS CONNECTION TO THE EQUIPMENT.
- REFER TO ARCHITECTURAL DRAWINGS FOR PAINTING OF INTERIOR AND EXTERIOR EXPOSED GAS PIPE.
- PROVIDE DOMESTIC WATER ROUGH-INS FOR THE CHEMICAL DISPENSER FAUCET (HB-1) AT 52" AFF. SEE ARCHITECTURAL ELEVATION FOR ADDITIONAL INFORMATION.
- PROVIDE DOMESTIC WATER ROUGH-INS FOR THE VICTORY WASH DISPENSER FAUCET (HB-2) AT 52" AFF. SEE ARCHITECTURAL ELEVATION FOR ADDITIONAL INFORMATION.
- PROVIDE ROUGH-INS TO RESTROOM HAND SINKS AS SHOWN IN DETAIL 14/P700.
- PROVIDE KITCHEN EQUIPMENT GAS SHUTOFF 6" BELOW THE CEILING PER DETAIL 4/P700.
- CONNECT CHEMICAL DISPENSER TO HB-1. CHEMICAL DISPENSER HAS AN INTEGRAL AIR GAP AS IS SHOWN IN DETAIL 10/P700.
- PROVIDE ASSE 1016/1070 POINT-OF-USE THERMOSTATIC MIXING VALVE, WATTS LFUSG-B, ON WATER SUPPLY TO KITCHEN HAND SINKS. PROVIDE ANGLE STOP BELOW SINK, FASTEN MIXING VALVE TO WALL, AND MAKE FINAL CONNECTION FROM ANGLE STOPS TO MIXING VALVE AND FROM MIXING VALVE TO FAUCET USING BRAIDED STAINLESS STEEL HOSE. ADJUST MIXING VALVE FOR A DISCHARGE TEMPERATURE OF APPROXIMATELY 110° F.
- PROVIDE ACCESSIBLE VALVE IN WATER SUPPLY TO FIXTURE AS SHOWN.
- PROVIDE GAS CONNECTION TO THE RICE COOKER PER DETAIL 6/P700.
- PROVIDE GAS ROUGH-IN TO FRYER BEHIND RICE COOKER TABLE SO THAT VALVES AND DIRT LEG ARE ACCESSIBLE ONCE FRYER IS SECURED INTO PLACE.
- PROVIDE 1/2" FILTERED WATER ROUGH-IN TO THE ICE MAKER AT 24" AFF. PROVIDE 6' LONG STAINLESS STEEL FLEXIBLE BRAIDED WASHING MACHINE WATER CONNECTOR WITH MINIMUM 0.43" ID (BRASSCRAFT SL12-72WA F OR EQUAL) FOR FINAL CONNECTION TO ICE MAKER.
- INSTALL RGF IMSB ICE MAKER SANITIZER FURNISHED BY TUV PER CHIPOTLE'S INSTALLATION INSTRUCTIONS.
- PROVIDE 3/4" DOMESTIC HOT AND COLD WATER ROUGH-INS FOR THE PREP SINK (SK-2) FAUCET AT 24" AFF TO ALLOW FOR THE VICTORY WASH CHEMICAL DOCK TO BE INSTALLED DIRECTLY BELOW THE PREP SINK BASIN.
- PROVIDE 3/4" HOT WATER TO THE DISH MACHINE. MAKING FINAL CONNECTION USING 3/4" COPPER PIPE ONCE DISH MACHINE IS IN ITS FINAL LOCATION (FLEXIBLE CONNECTION IS NOT ACCEPTABLE). PROVIDE WATER HAMMER ARRESTOR ON HOT WATER LINE. PROVIDE AN ACCESSIBLE SHUTOFF VALVE AND UNION BELOW THE DISH MACHINE AND INSTALL THE STRAINER FURNISHED WITH THE DISH MACHINE IN AN ACCESSIBLE LOCATION AT THE CONNECTION TO THE UNIT.
- PROVIDE ROOF HYDRANT RH-1 WITH BOTTOM OF NOZZLE INSTALLED 24" ABOVE THE BOTTOM OF ROOF DECK. PROVIDE ACCESSIBLE ISOLATION VALVE IN WATER SUPPLY TO ROOF HYDRANT. SUPPORT ROOF HYDRANT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE FILTERED DOMESTIC WATER ROUGH-IN FOR THE SPEED FILL POT FILLER FAUCET (PF-1) AT 40" AFF. SEE ARCHITECTURAL ELEVATION FOR DETAIL.
- PROVIDE WATER SERVICE ENTRY PER DETAIL 16/P700.
- INSTALL RGF IMSB ICE MAKER SANITIZER FURNISHED BY TUV PER CHIPOTLE'S INSTALLATION INSTRUCTIONS. LOCATE IMSB BELOW UTENSIL COUNTER IN A LOCATION THAT DOES NOT INTERFERE WITH THE ROLLING RACK BELOW THE UTENSIL COUNTER.
- PENETRATIONS THROUGH SHEAR WALL SHALL BE LIMITED TO 10" DIAMETER (OR A GROUP OF PENETRATIONS ALL CONTAINED WITHIN 10" DIAMETER). IF LARGER PENETRATIONS OR GROUPS OF PENETRATIONS ARE REQUIRED COORDINATE WITH STRUCTURAL ENGINEER FOR APPROPRIATE BRACING. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATION.
- PROVIDE ACCESSIBLE TRAP PRIMER ABOVE LAY-IN CEILING AS SHOWN. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A SERVICE VALVE AT THE TRAP PRIMER INLET. PROVIDE 1/2" DISTRIBUTION PIPE(S) TO FLOOR DRAIN TRAP PRIMER CONNECTION(S) AS SHOWN. HORIZONTAL DISTRIBUTION PIPING SHALL HAVE CONTINUOUS SLOPE TO THE FLOOR DRAIN(S)

PLUMBING GAS CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE	EQUIVALENT LENGTH	INPUT	
DWH-1	WATER HEATER (GAS TANKLESS)	3/4"	50'	199,000 Btu/h	
DWH-2	WATER HEATER (GAS TANKLESS)	3/4"	50'	199,000 Btu/h	
FB-1	GAS FRYER	3/4"	85'	90,000 Btu/h	
GR-1	GAS GRIDDLE	3/4"	95'	110,000 Btu/h	
MAU-1	DIRECT-FIRED MAKEUP AIR UNIT	1/2"	100'	225,000 Btu/h	
RC-1	RICE COOKER	3/4"	90'	33,000 Btu/h	
RN-1	6 BURNER RANGE	3/4"	95'	192,000 Btu/h	
RTU-1	KITCHEN ROOFTOP UNIT	3/4"	70'	224,000 Btu/h	
RTU-2	DINING ROOM ROOFTOP UNIT	3/4"	65'	250,000 Btu/h	
GRAND TOTAL				MAX: 100	1,522,000 Btu/h

- NOTES:
 1. PRESSURE REQUIRED AFTER METER: 7" W.C.
 2. DISTANCES ARE APPROXIMATE

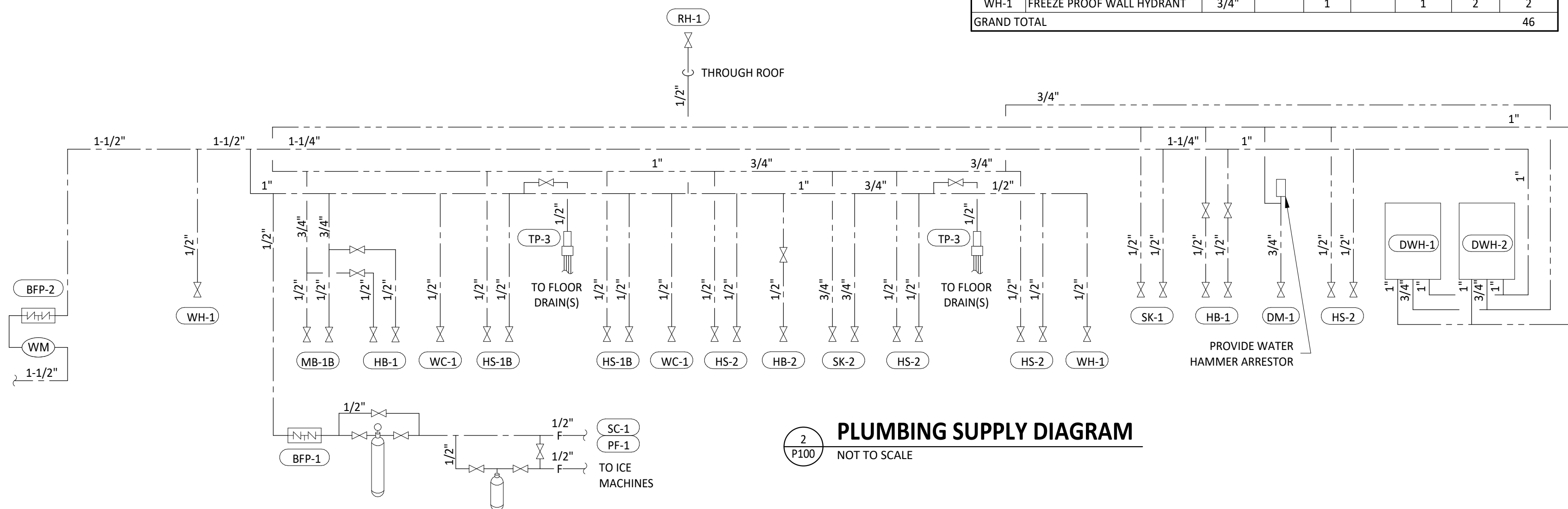


GAS DISTRIBUTION DIAGRAM

3 P100 NOT TO SCALE

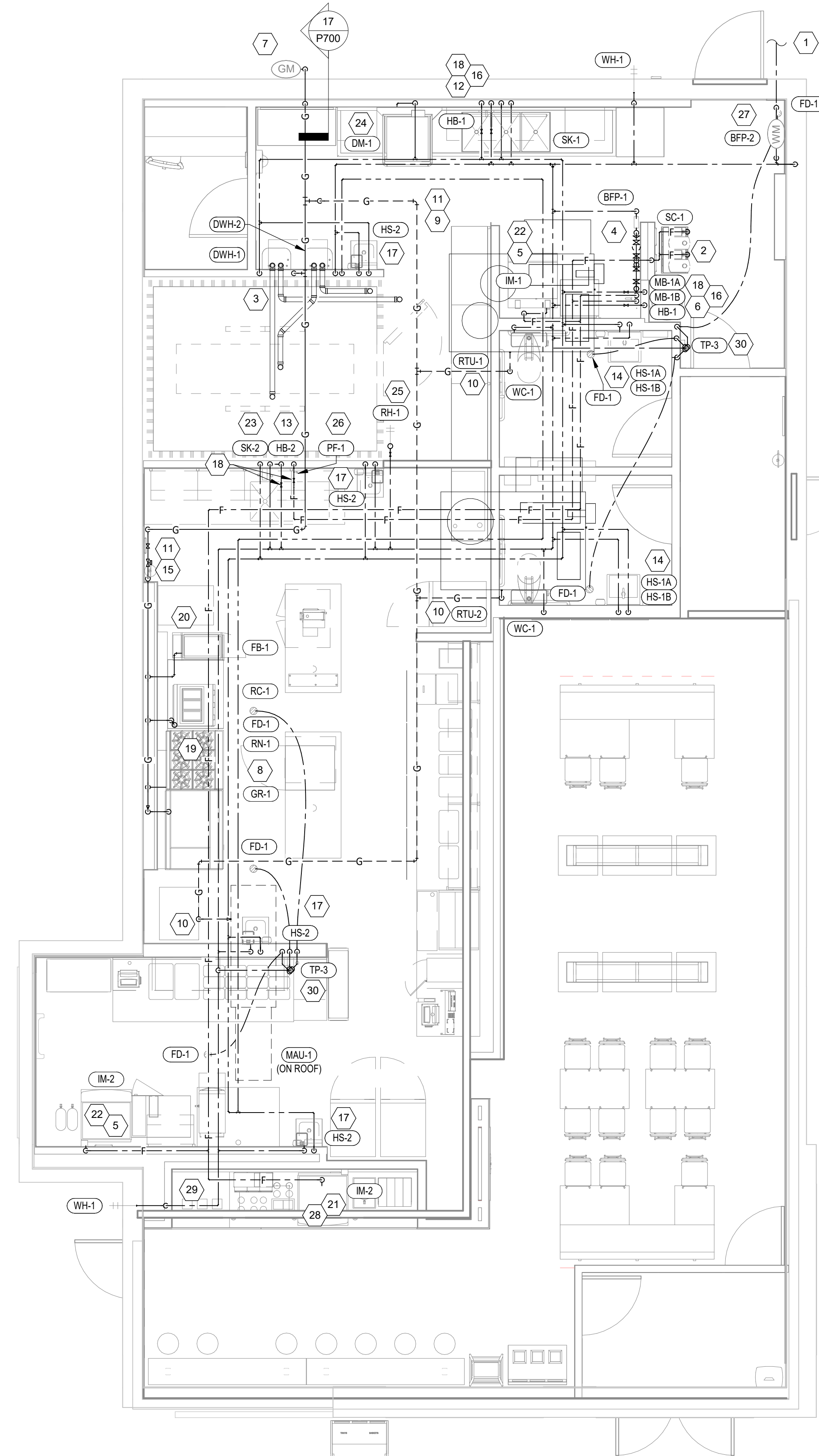
PLUMBING FIXTURE SUPPLY CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE		WSFU		TOTAL COUNT	TOTAL WSFU
		CW	HW	CW	HW		
BFP-1	RPZ BACKFLOW PREVENTER	1/2"		0	0	1	0
BFP-2	RPZ BACKFLOW PREVENTER	1 1/2"		0	0	1	0
DM-1	DISH SANITIZING MACHINE (PUMPED OUTLET)	0"	3/4"	0	3	1	3
ET-1	EXPANSION TANK	3/4"		0	0	1	0
HB-1	CHEMICAL DISPENSER HOSE BIB	1/2"	1/2"	2.25	2.25	3	2
HB-2	VEGETABLE WASH HOSE BIB	1/2"		1.5		1	1.5
HS-1B	RESTROOM HAND SINK FAUCET	1/2"	1/2"	1.5	1.5	2	2
HS-2	KITCHEN HAND SINK	1/2"	1/2"	1.5	1.5	2	4
IM-1	ICE MAKER - BOH	1/2"		1		1	1
IM-2	ICE MAKER - SODA	1/2"		1		1	2
MB-1B	MOP SINK FAUCET	1/2"	1/2"	2.25	2.25	3	1
PF-1	SPEED FILL FAUCET	3/8"		1.5		1	1.5
RH-1	FREEZE PROOF ROOF HYDRANT	3/4"		1		1	1
SC-1	BAG-IN-BOX SODA RACK WITH CARBONATORS	1/2"		1		1	1
SK-1	THREE COMPARTMENT SINK	1/2"	1/2"	3	3	4	1
SK-2	PREP SINK	3/4"	3/4"	3	3	4	1
TP-3	TRAP PRIMER (THREE-FOUR FLOOR DRAINS)	1/2"		0		0	2
WC-1	WATER CLOSET	1/2"		2		2	2
WH-1	FREEZE PROOF WALL HYDRANT	3/4"		1		1	2
GRAND TOTAL							46



PLUMBING SUPPLY DIAGRAM

2 P100 NOT TO SCALE



PLUMBING SUPPLY PLAN

1 P100 1/4" = 1'-0"

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Contents:
PLUMBING PLAN
WATER & GAS

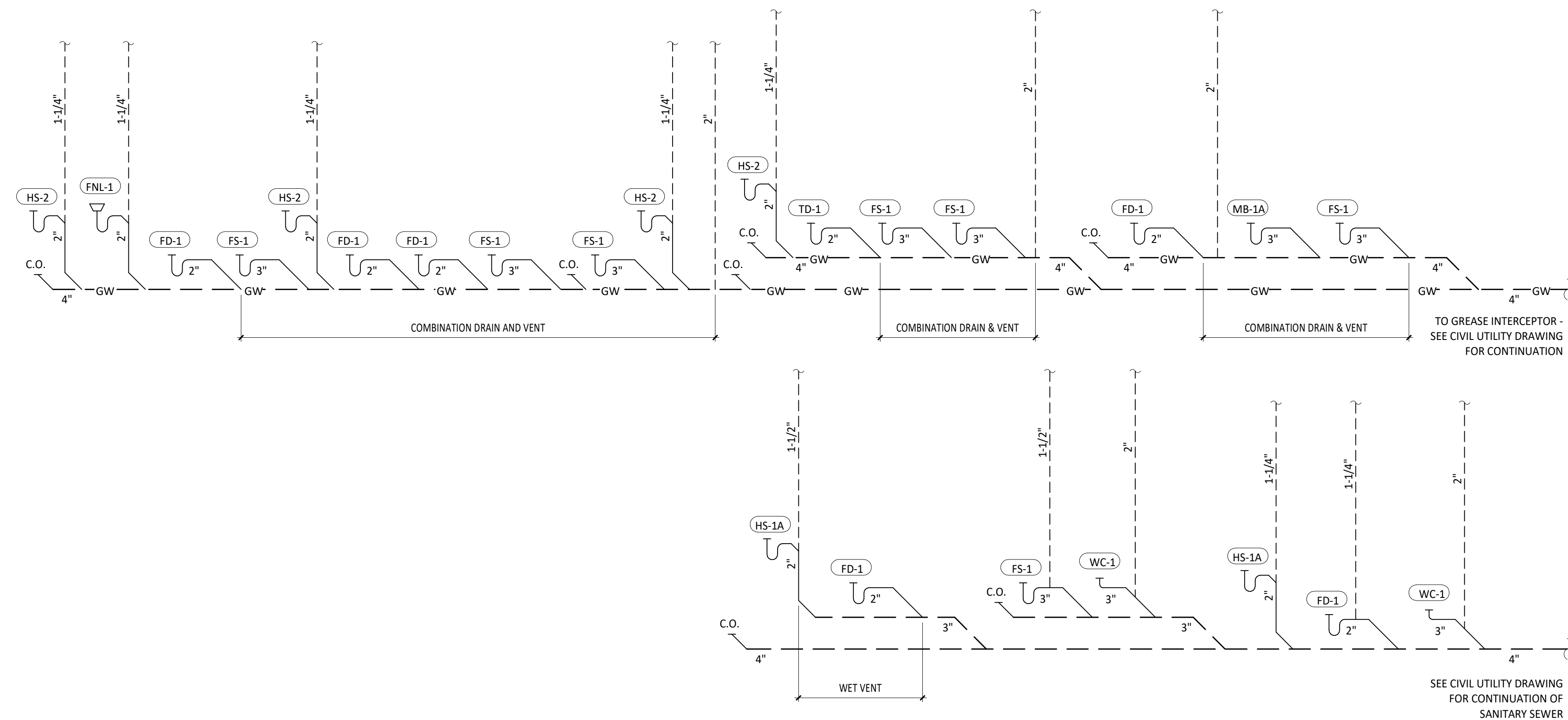
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PLUMBING WASTE AND VENT PLAN NOTES

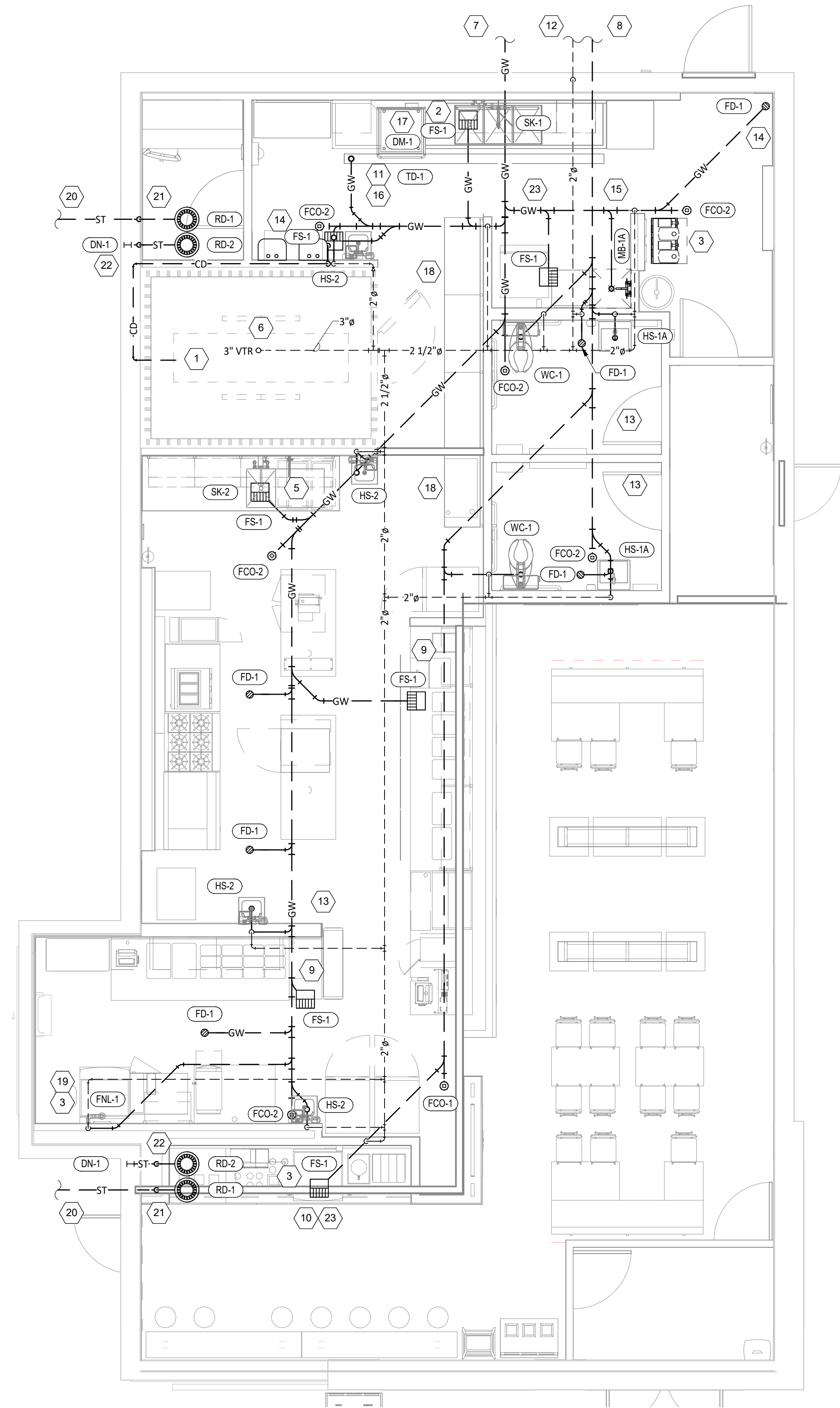
- PROVIDE 3/4" CONDENSATE DRAIN FROM THE WALK-IN COOLER EVAPORATOR TO THE FLOOR SINK BELOW AS SHOWN. SLOPE CONDENSATE DRAIN A MINIMUM OF 1" PER FOOT. HOLD EXPOSED CONDENSATE DRAIN IN WALK-IN COOLER AS HIGH AS POSSIBLE. CONCEAL DRAIN PIPING WITHIN FRAMED WALLS AS SHOWN. DISCHARGE THROUGH AN AIR GAP. MAKE FINAL CONNECTION TO EVAPORATOR INSIDE WALK-IN COOLER USING A UNION. CONDENSATE DRAIN SHOULD PENETRATE WALL AT POINT OF DISCHARGE AT 8" AFF.
- PROVIDE DRAIN CONNECTIONS TO THE THREE COMPARTMENT SINK PER DETAIL 2/P700.
- COORDINATE ROUTING OF SODA BUNDLES WITH COCA-COLA TECHNICIAN FROM BAG-IN-BOX AREA TO EACH SODA FOUNTAIN. OTHER THAN WITHIN THE WALLS DOWN TO THE DRYER BOX THE SODA BUNDLE SHALL BE ROUTED OVERHEAD WITHOUT CONDUIT. COORDINATE SUPPORT AND ROUTING OF THE SODA LINE BUNDLES WITH COCA-COLA TECHNICIAN DURING ROUGH IN AND PROVIDE NECESSARY SUPPORTS. SEE ARCHITECTURAL DRAWINGS FOR SODA BUNDLE TERMINATION LOCATION AND PROVIDE TERMINATION PER DETAIL 12/P700.
- NOT USED.
- PROVIDE DRAIN LINES FROM THE FOOD PREP SINK TO THE FLOOR SINK. PROVIDE AN AIR GAP AT THE DISCHARGE TO THE FLOOR SINK.
- PROVIDE A 3" VENT THROUGH THE ROOF PER DETAIL 3/P700.
- PROVIDE GREASE INTERCEPTOR GI-1. SEE CIVIL UTILITY PLAN FOR GI-1 LOCATION AND FOR CONTINUATION OF 4" GREASE WASTE PIPE TO GI-1.
- SEE CIVIL UTILITY PLAN FOR CONTINUATION OF 4" SANITARY SEWER.
- PROVIDE 3/4" VALVED DRAIN FROM HOT FOOD TABLE TO THE FLOOR SINK. DRAIN THROUGH AN AIR GAP.
- PROVIDE INSULATED COPPER DRAIN LINES FROM THE TEA TRAY DRAIN AND THE SODA MACHINE DRAIN TO THE FLOOR SINK. DRAIN THROUGH AN AIR GAP. HOLD TEA TRAY DRAIN AS HIGH AS POSSIBLE AND SECURE TO STRUCTURE BELOW THE UTENSIL COUNTER.
- TRIM TRENCH DRAIN ENDS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION SO THAT GRATE FITS WITHOUT GAPS. INSTALL TRENCH DRAIN WITH SLIGHT POSITIVE SLOPE TOWARD THE DRAIN CONNECTION TO AVOID STANDING WATER IN TRENCH DRAIN.
- PROVIDE 2" VENT TO GREASE INTERCEPTOR GI-1. SEE CIVIL UTILITY PLAN FOR GI-1 LOCATION.
- DO NOT PROVIDE WALL CLEANOUTS ON TILE OR PUBLICLY-VISIBLE WALLS. IF A WALL CLEANOUT IS REQUIRED ON THESE SURFACE COORDINATE THE EXACT LOCATION WITH CHIPOTLE'S CONSTRUCTION MANAGER.
- PROVIDE INDIRECT WASTE AND CONDENSATE DRAINS FROM FIXTURES OTHER THAN KITCHEN SINKS CONCEALED IN THE WALL AS SHOWN IN DETAIL 9/P700.
- PROVIDE DRAIN FROM WATER FILTER BFP TO MOP BASIN CONCEALED IN THE WALL AS SHOWN IN DETAIL 9/P700.
- PROVIDE TRENCH DRAIN AS SHOWN IN DETAIL 15/P700.
- INSTALL DRAIN HOSE FURNISHED WITH DISH MACHINE FROM DISH MACHINE OUTLET TO FLOOR SINK. HOLD DRAIN HOSE TIGHT TO WALL AND SECURE TO 3-COMP SINK DRAIN TO MAINTAIN AN AIR GAP AT THE FLOOR SINK.
- PROVIDE CONDENSATE TRAP ON RTU PER DETAIL 13/P700.
- SEE DETAIL 18/P700 FOR DRAINS FROM TEA TRAY, ICE MAKER, AND SODA MACHINE TO FUNNEL DRAIN.
- SEE CIVIL UTILITY PLAN FOR CONTINUATION OF 4" STORM SEWER.
- PROVIDE 3" STORM DRAIN CONDUCTOR FROM PRIMARY ROOF DRAIN RD-1 DOWN IN WALL TO 4" STORM DRAIN BELOW GRADE. INTERIOR HORIZONTAL STORM DRAIN CONDUCTORS SHALL BE SLOPED A MINIMUM OF 1/2" PER FOOT.
- PROVIDE 3" STORM DRAIN CONDUCTOR FROM SECONDARY ROOF DRAIN RD-2 TO DOWNSPOUT NOZZLE DN-1 MOUNTED AT 12" AFG. INTERIOR HORIZONTAL STORM DRAIN CONDUCTORS SHALL BE SLOPED A MINIMUM OF 1/2" PER FOOT.
- PROVIDE PVC DRAIN PIPES FROM THE ICE MACHINE TO THE FLOOR SINK PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE A CODE-APPROVED AIR GAP AT THE DISCHARGE TO THE FLOOR SINK. SECURE ICE MAKER DRAIN PIPES TO THE BOTTOM OF THE ICE MAKER.

PLUMBING FIXTURE WASTE CONNECTIONS

TAG	DESCRIPTION	CONNECTION SIZE - WASTE	DFU	COUNT	TOTAL DFU
DM-1	DISH SANITIZING MACHINE (PUMPED OUTLET)	5/8"	7	1	7
FCO-1	FLOOR CLEANOUT (3")	3"	0	1	0
FCO-2	FLOOR CLEANOUT (4")	4"	0	6	0
FD-1	FLOOR DRAIN	2"	2	6	12
FNL-1	FUNNEL DRAIN	2"	2	1	2
FS-1	FLOOR SINK	3"	5	7	35
GI-1	GREASE INTERCEPTOR	4"	0	1	0
HS-1A	RESTROOM HAND SINK	2"	1	2	2
HS-2	KITCHEN HAND SINK	2"	1	4	4
MB-1A	MOP BASIN	3"	2	1	2
SK-1	THREE COMPARTMENT SINK	2"	0	1	0
SK-2	PREP SINK	2"	0	1	0
TD-1	TRENCH DRAIN	2"	2	1	2
WC-1	WATER CLOSET	3"	4	2	8
GRAND TOTAL					74



2 SANITARY WASTE & VENT DIAGRAM
NOT TO SCALE



1 SANITARY WASTE & VENT PLAN
1/4" = 1'-0"

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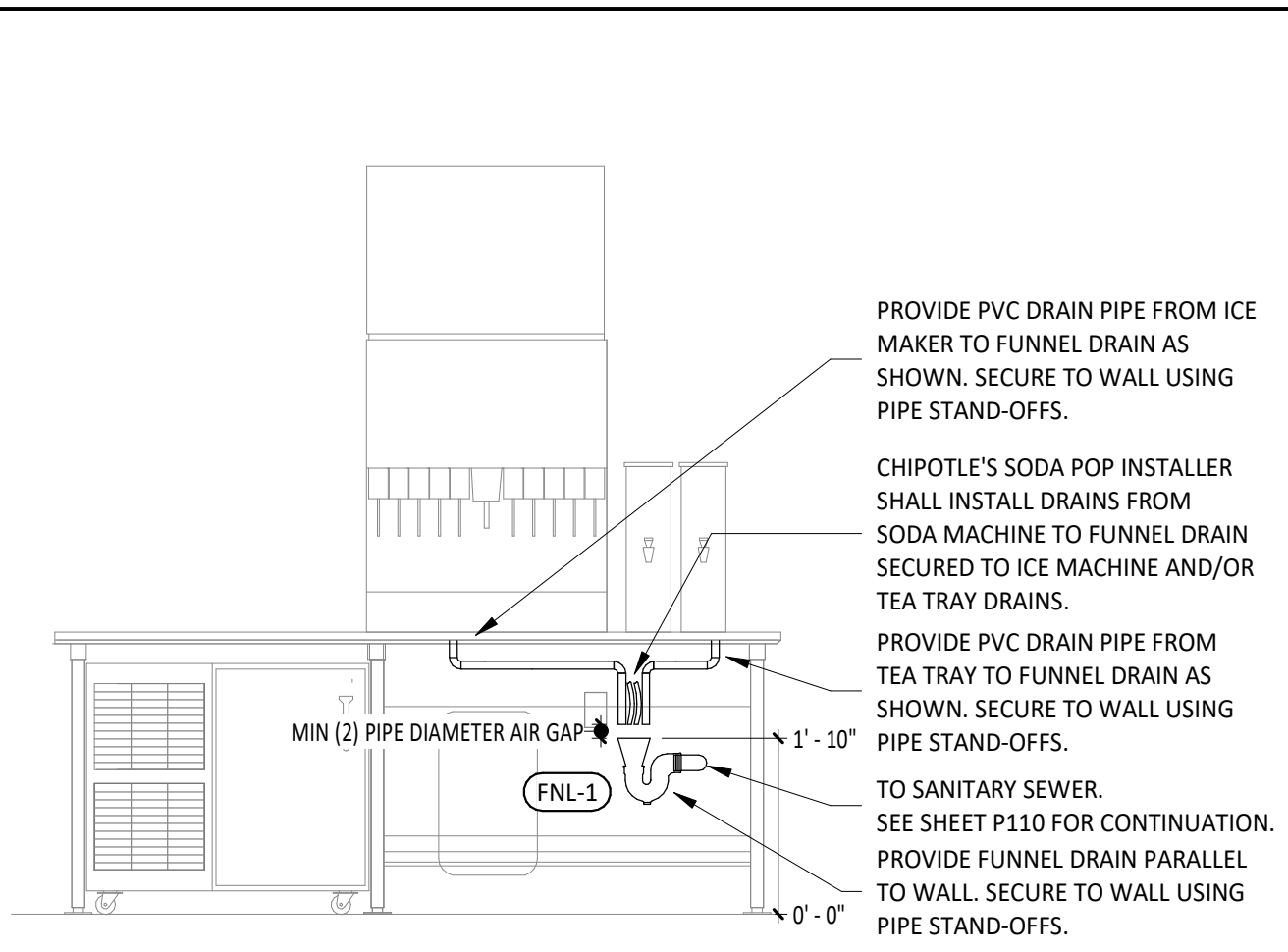
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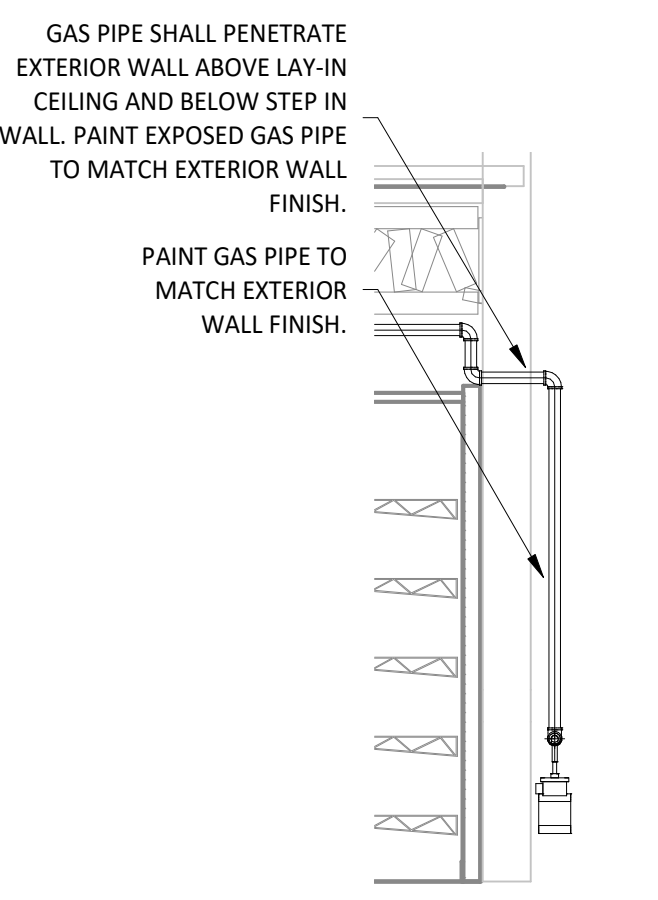
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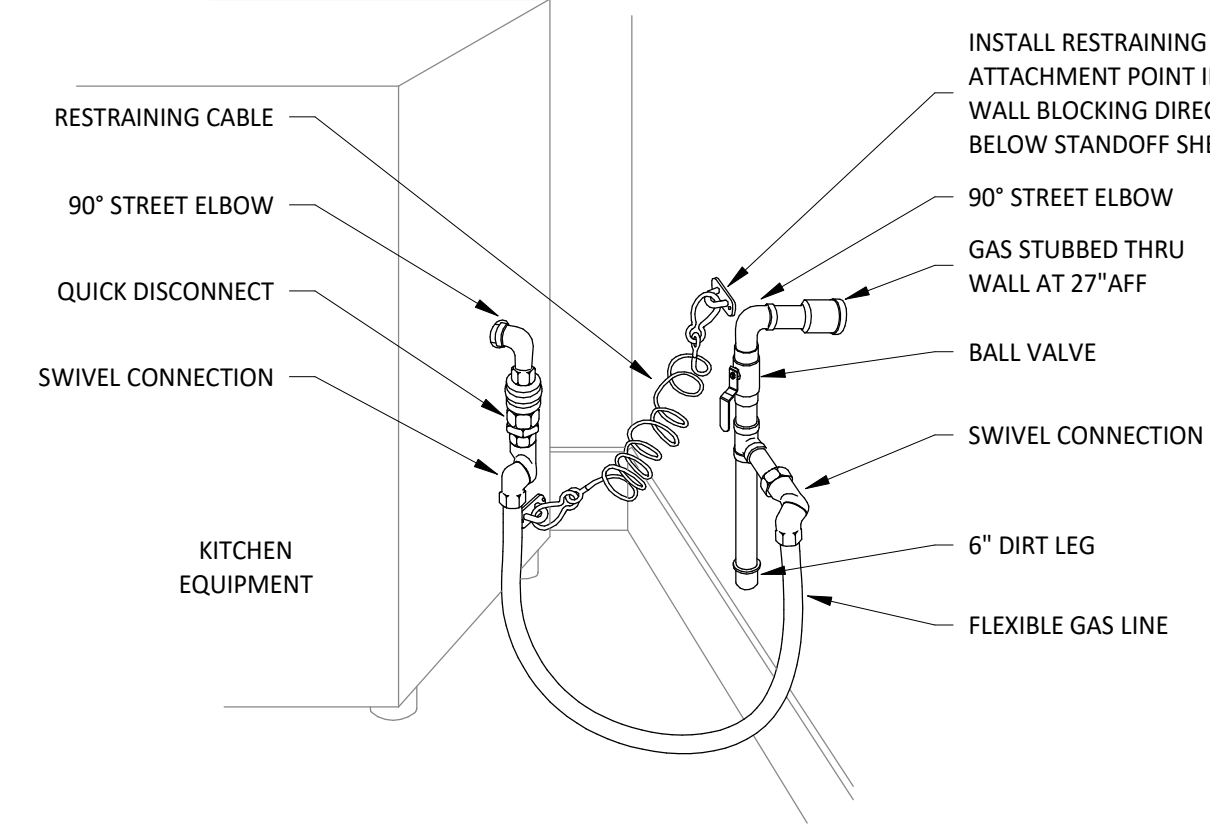
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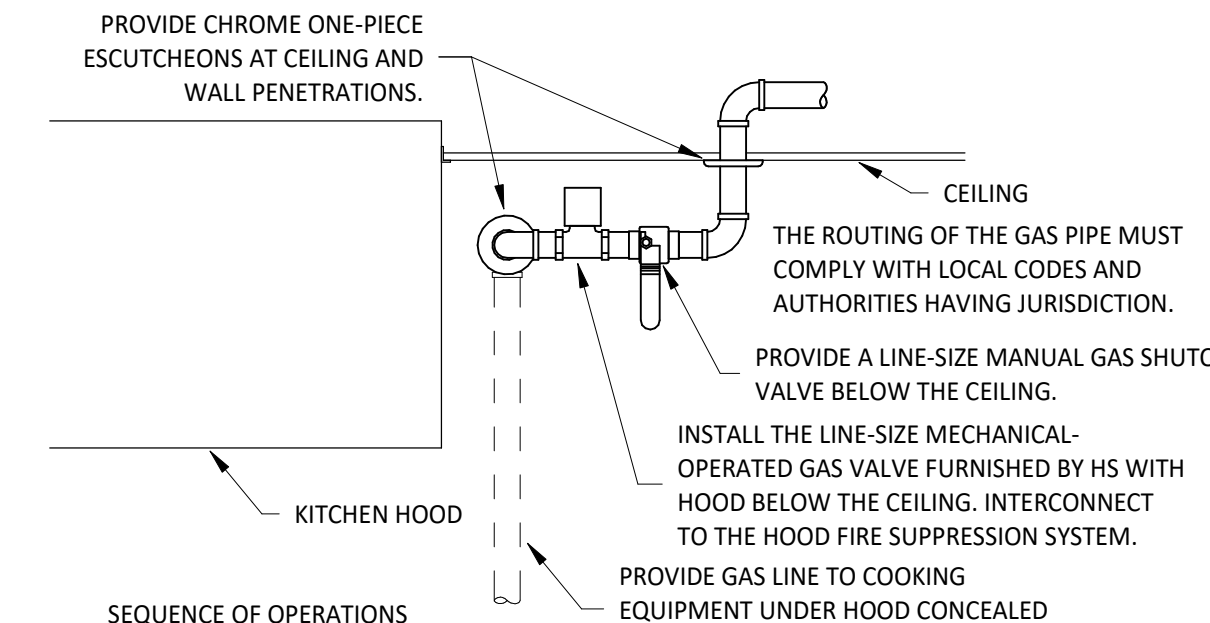
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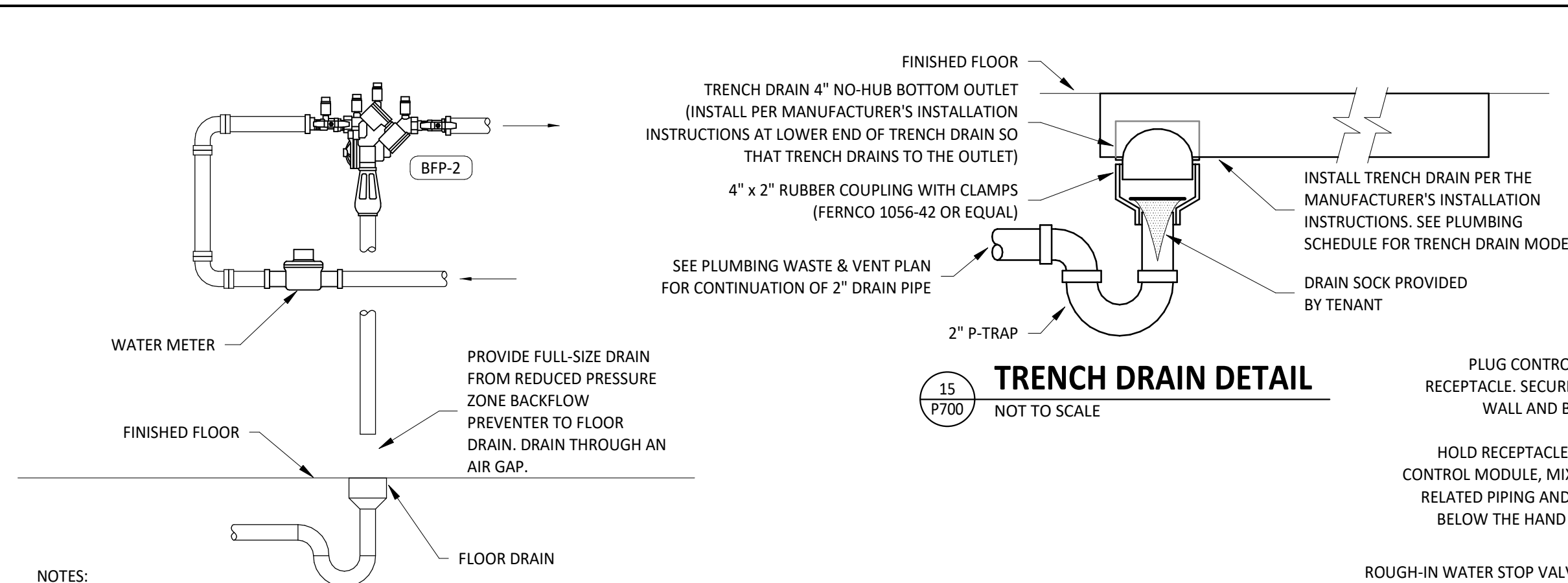
17 GAS METER SECTION
NOT TO SCALE



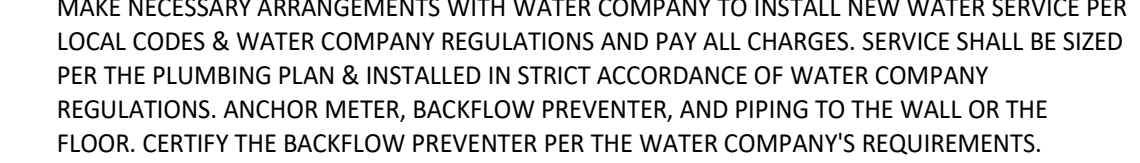
7 KITCHEN GAS EQUIPMENT DETAIL
NOT TO SCALE



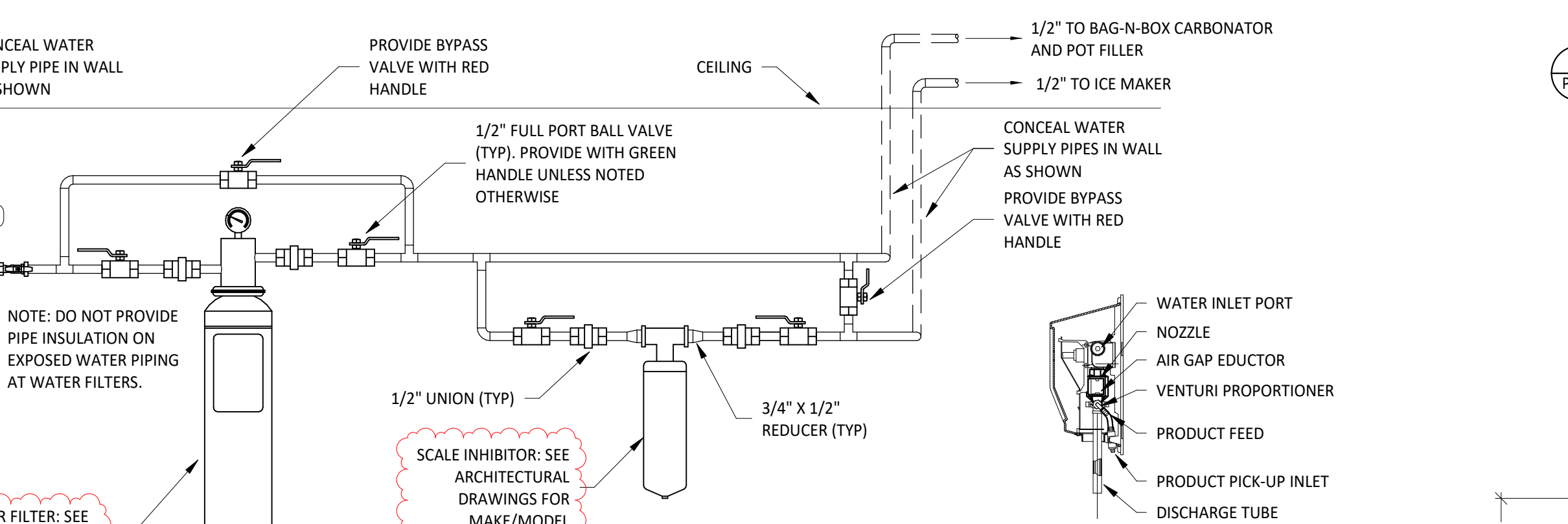
4 KITCHEN GAS SHUTOFF DETAIL
NOT TO SCALE



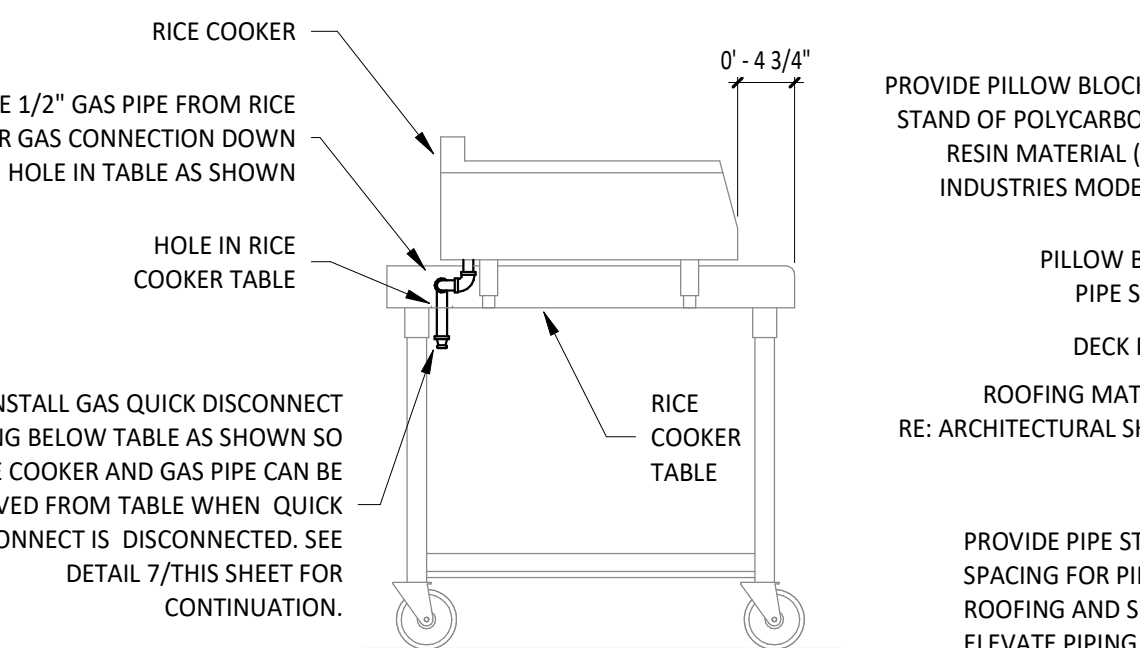
15 TRENCH DRAIN DETAIL
NOT TO SCALE



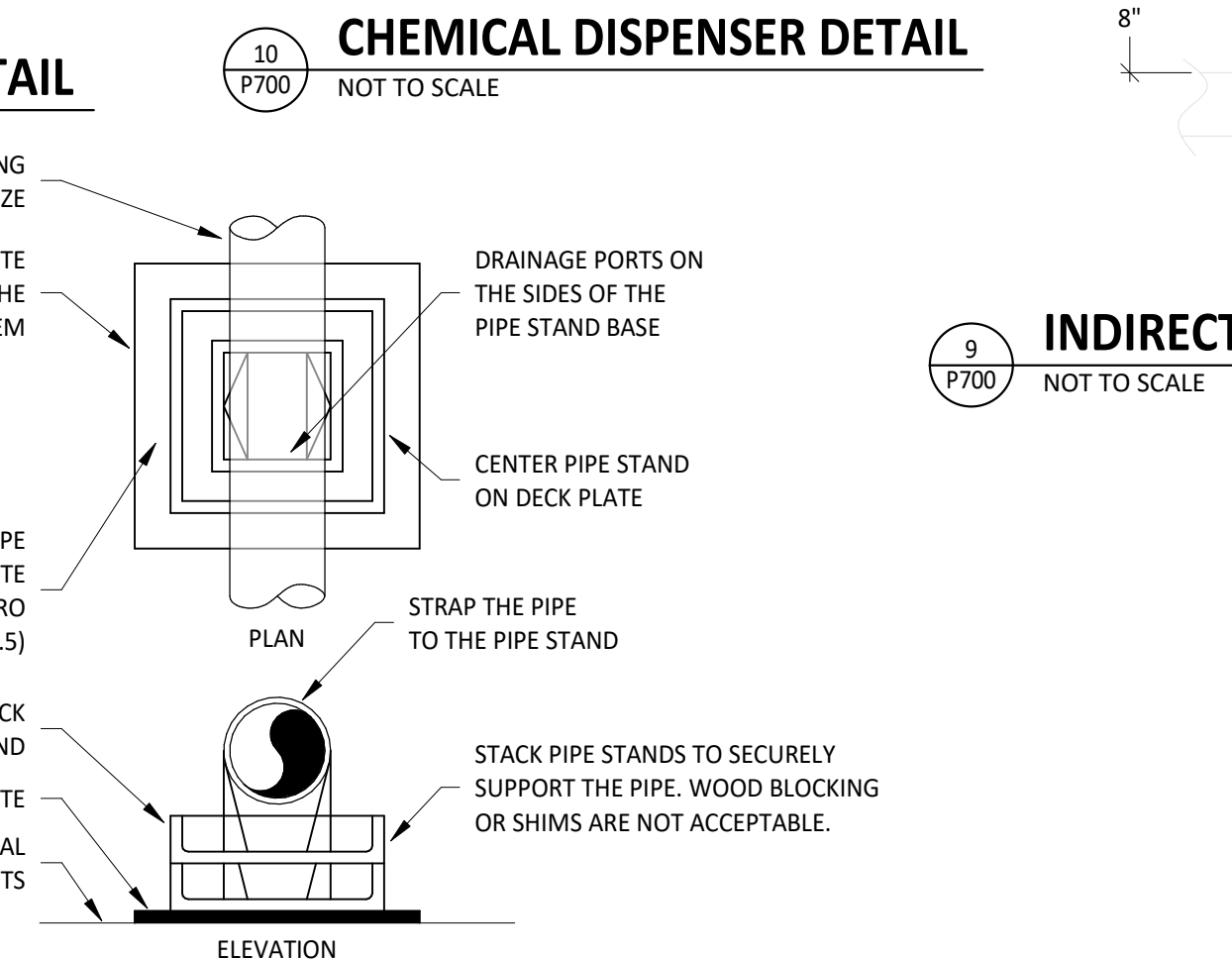
16 WATER SERVICE ENTRY DETAIL
NOT TO SCALE



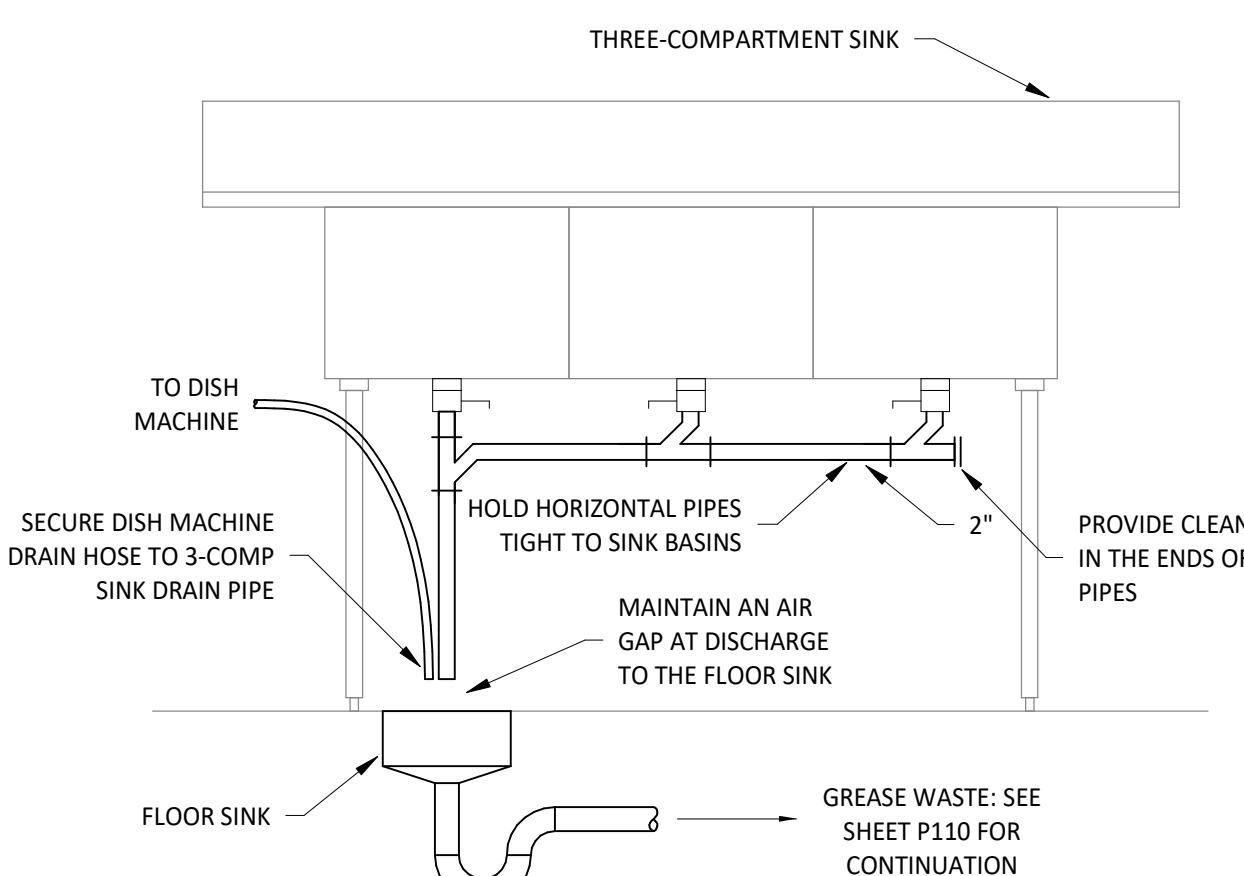
11 WATER FILTRATION DETAIL
NOT TO SCALE



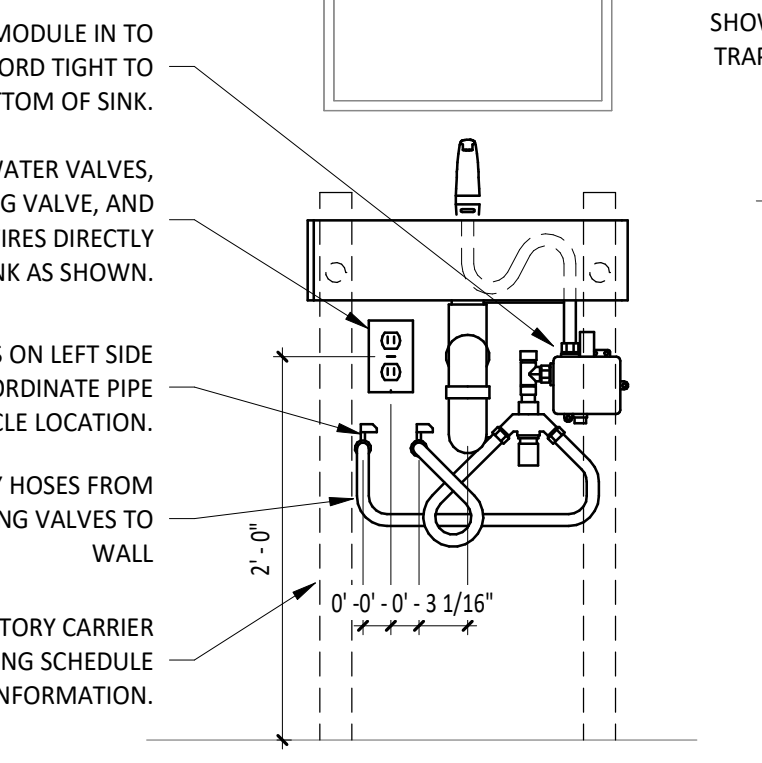
6 RICE COOKER GAS CONNECTION DETAIL
NOT TO SCALE



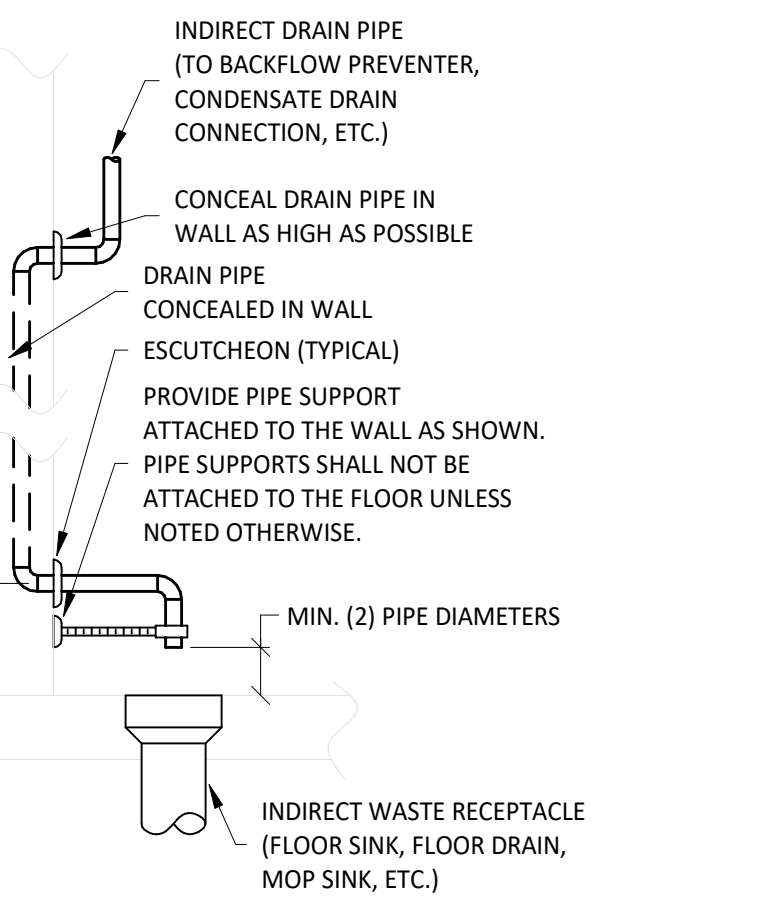
5 ROOFTOP PIPING SUPPORT
NOT TO SCALE



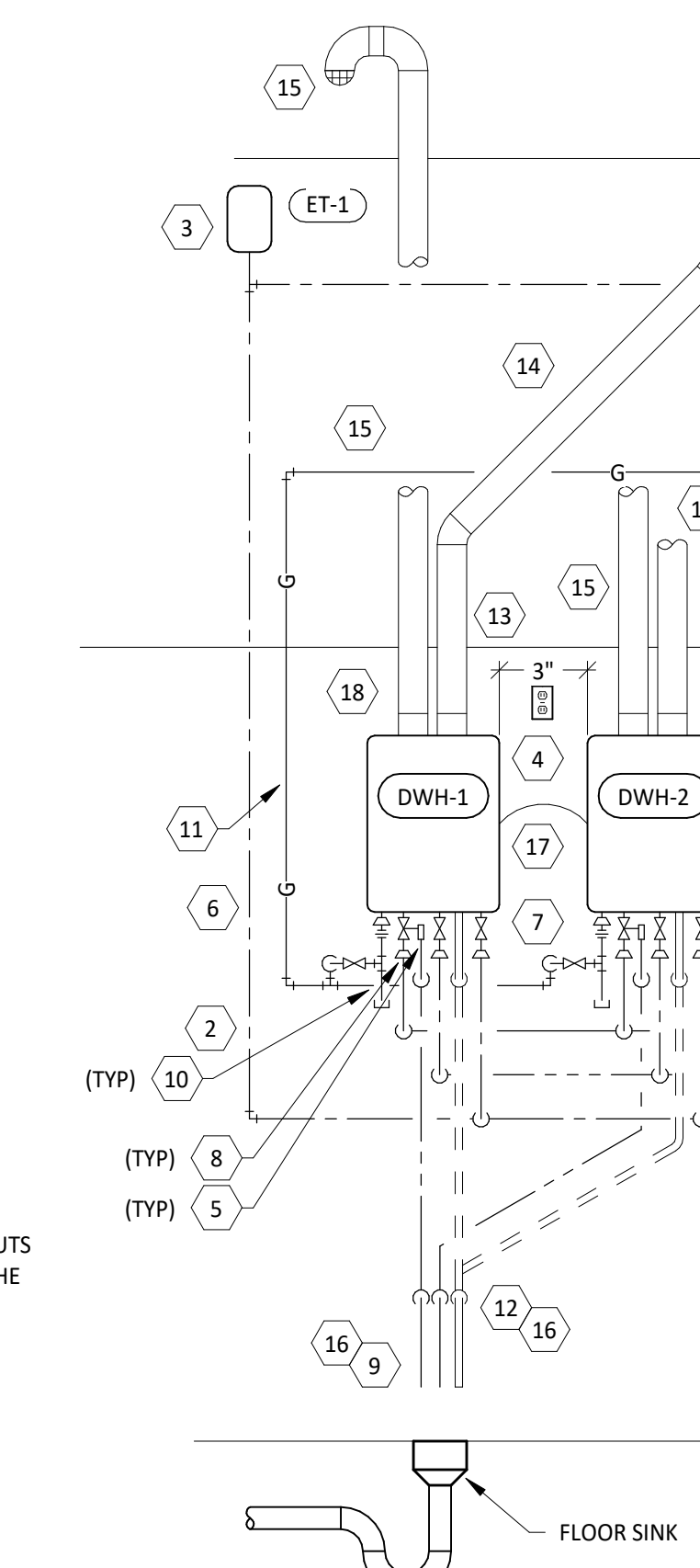
2 WARE-WASHING SINK DETAIL
NOT TO SCALE



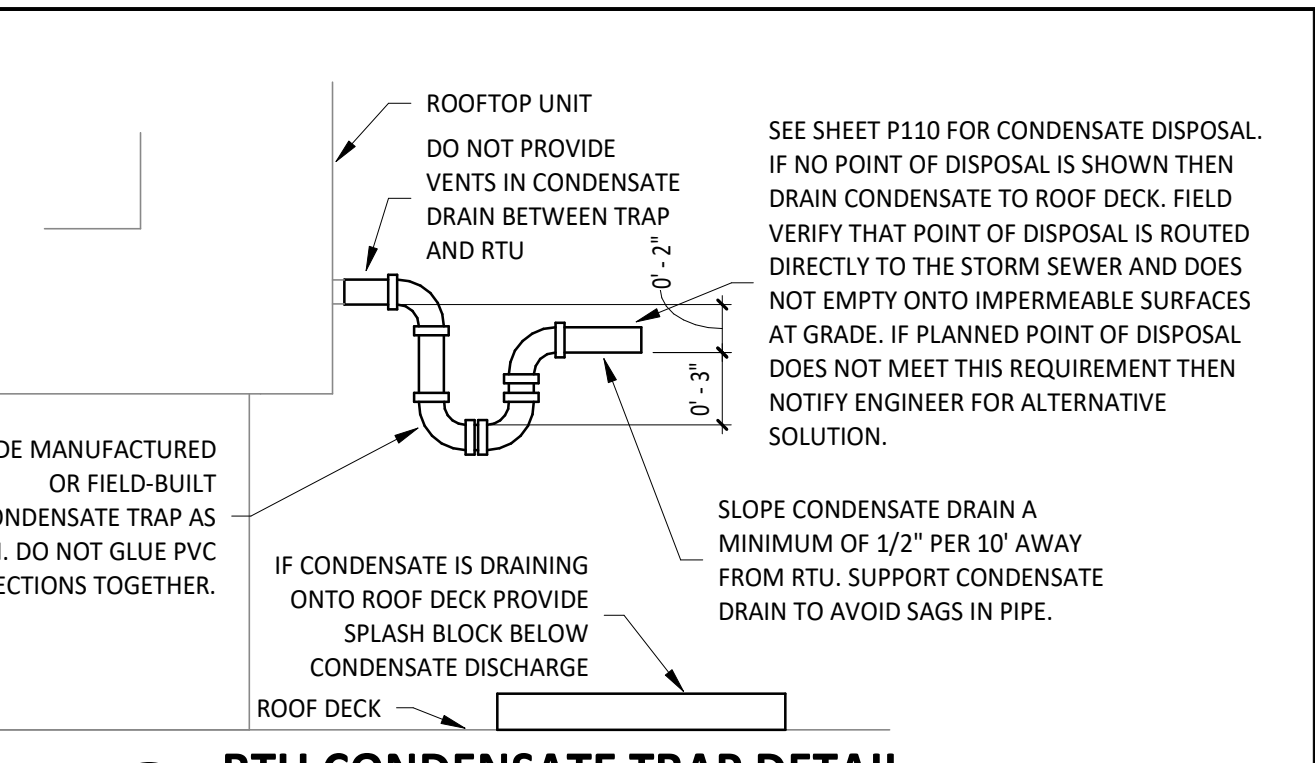
14 RESTROOM HAND SINK DETAIL
NOT TO SCALE



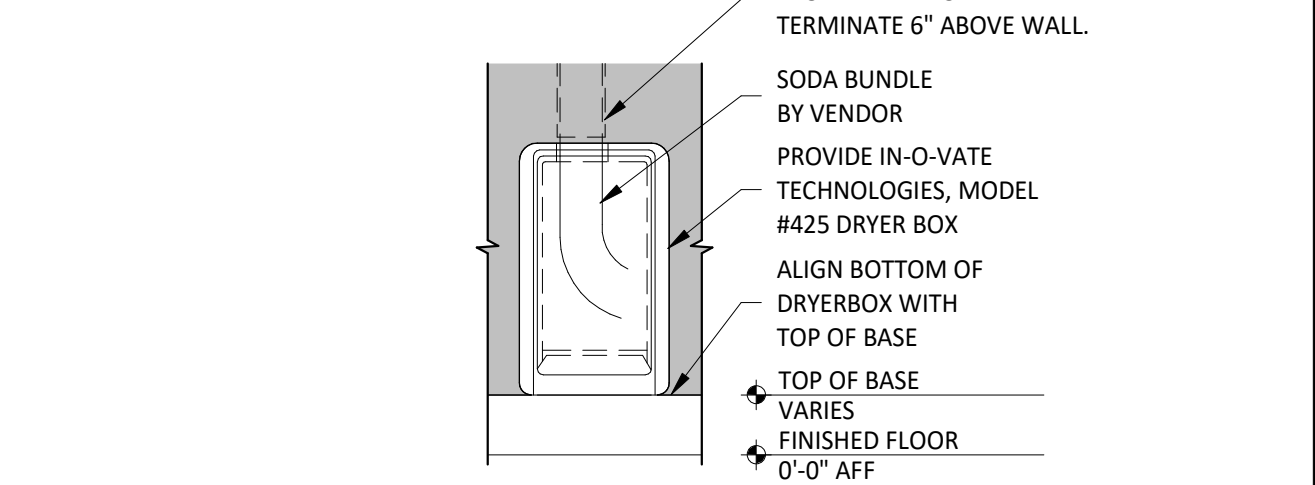
9 INDIRECT WASTE PIPING DETAIL
NOT TO SCALE



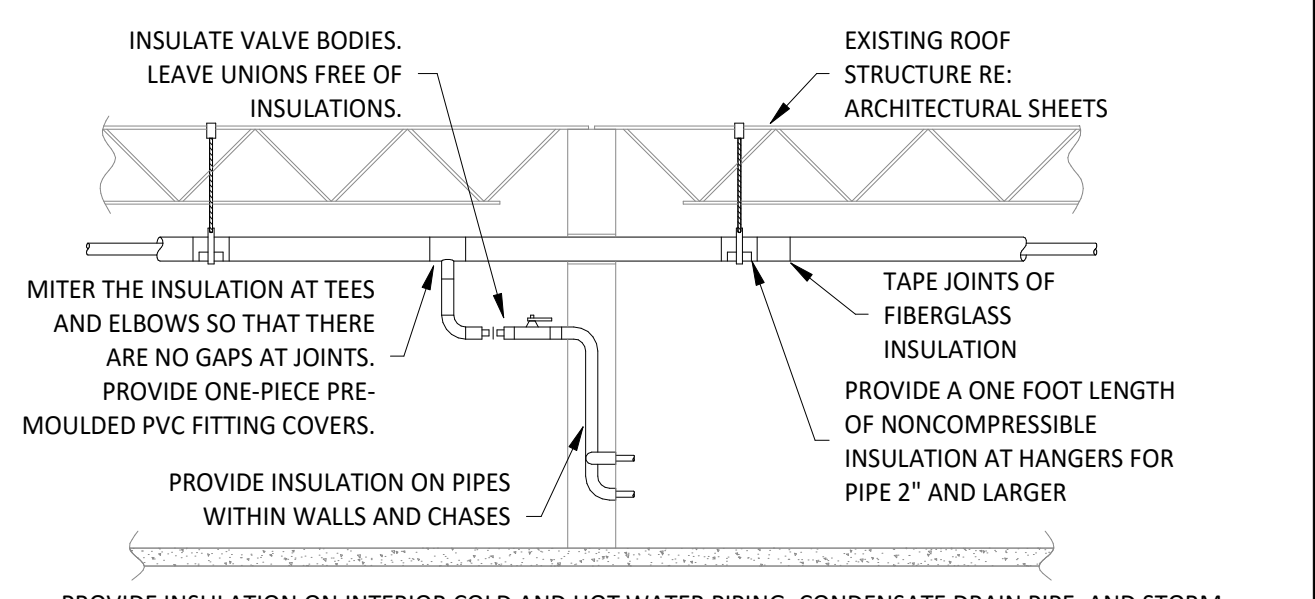
1 WATER HEATER DETAIL
NOT TO SCALE



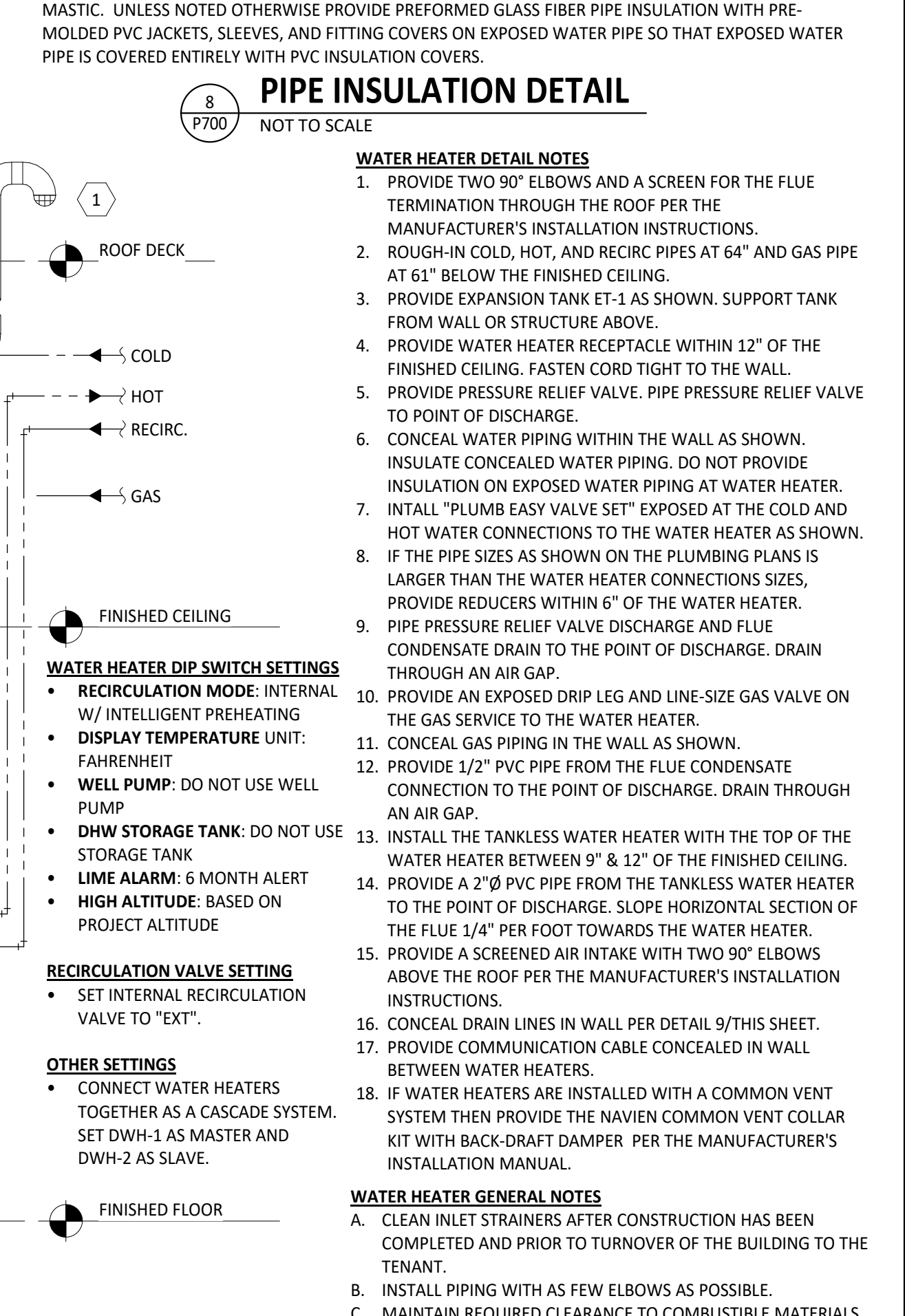
13 RTU CONDENSATE TRAP DETAIL
NOT TO SCALE



12 SODA TERMINATION DETAIL
NOT TO SCALE



8 PIPE INSULATION DETAIL
NOT TO SCALE



WATER HEATER GENERAL NOTES
A. CLEAN INLET STRAINERS AFTER CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO TURNOVER OF THE BUILDING TO THE TENANT.
B. INSTALL PIPING WITH AS FEW ELBOWS AS POSSIBLE.
C. MAINTAIN REQUIRED CLEARANCE TO COMBUSTIBLE MATERIALS.
D. ADJUST WATER HEATER TO A SETPOINT OF 120° F.

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FOR CONSTRUCTION

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06/14/2023	PERMIT SET
01/31/2024	CONSTRUCTION SET

Revisions:

1	01/31/2024	DB UPDATES
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Drawn: Checked:

DAA	DAA
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Project No:
2301016

Contents:

PLUMBING DETAILS

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