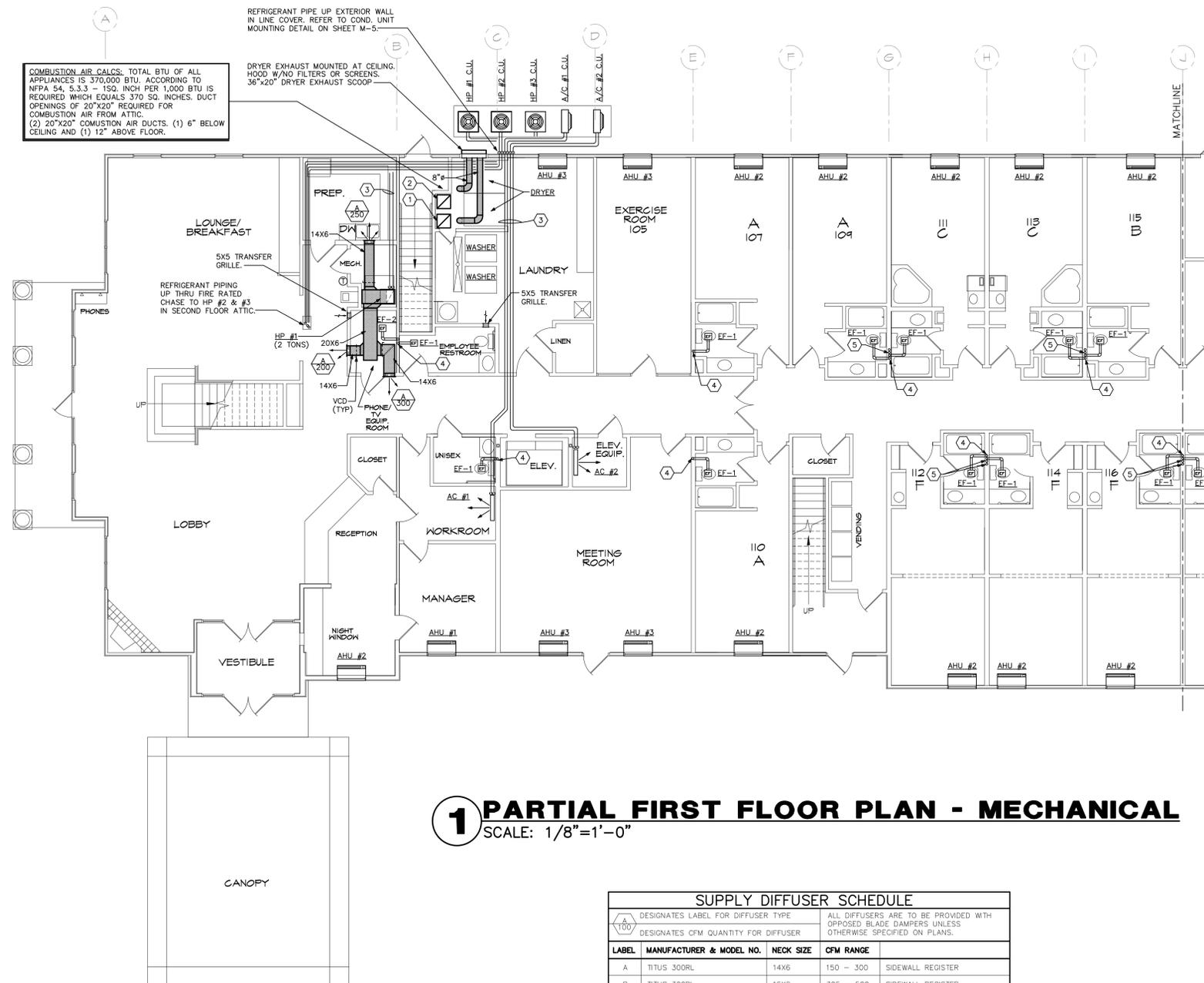


**MECHANICAL SPECIFIC NOTES**

- ① 20X20 COMBUSTION AIR DUCT, TERMINATE 6" BELOW CEILING. ROUTE UP THRU FIRE RATED CHASE ON SECOND FLOOR TO VENTED ATTIC SPACE.
- ② 20X20 COMBUSTION AIR DUCT, TERMINATE 12" ABOVE FLOOR. ROUTE UP THRU FIRE RATED CHASE ON SECOND FLOOR TO VENTED ATTIC SPACE.
- ③ REFRIGERATION PIPING ABOVE CEILING. CONTRACTOR SHALL SIZE ALL REFRIGERATION PIPING AS PER MANUFACTURED RECOMMENDATIONS.
- ④ 3"Ø TOILET EXHAUST UP THRU CORRIDOR WALL TO ROOF. REFER TO TYPICAL EXHAUST RISER ON SHEET M-5.

NOTE:  
ALL TOILET ROOM DOORS SHALL HAVE A 3/4" DOOR UNDERCUT FOR TOILET ROOM MAKE-UP AIR.

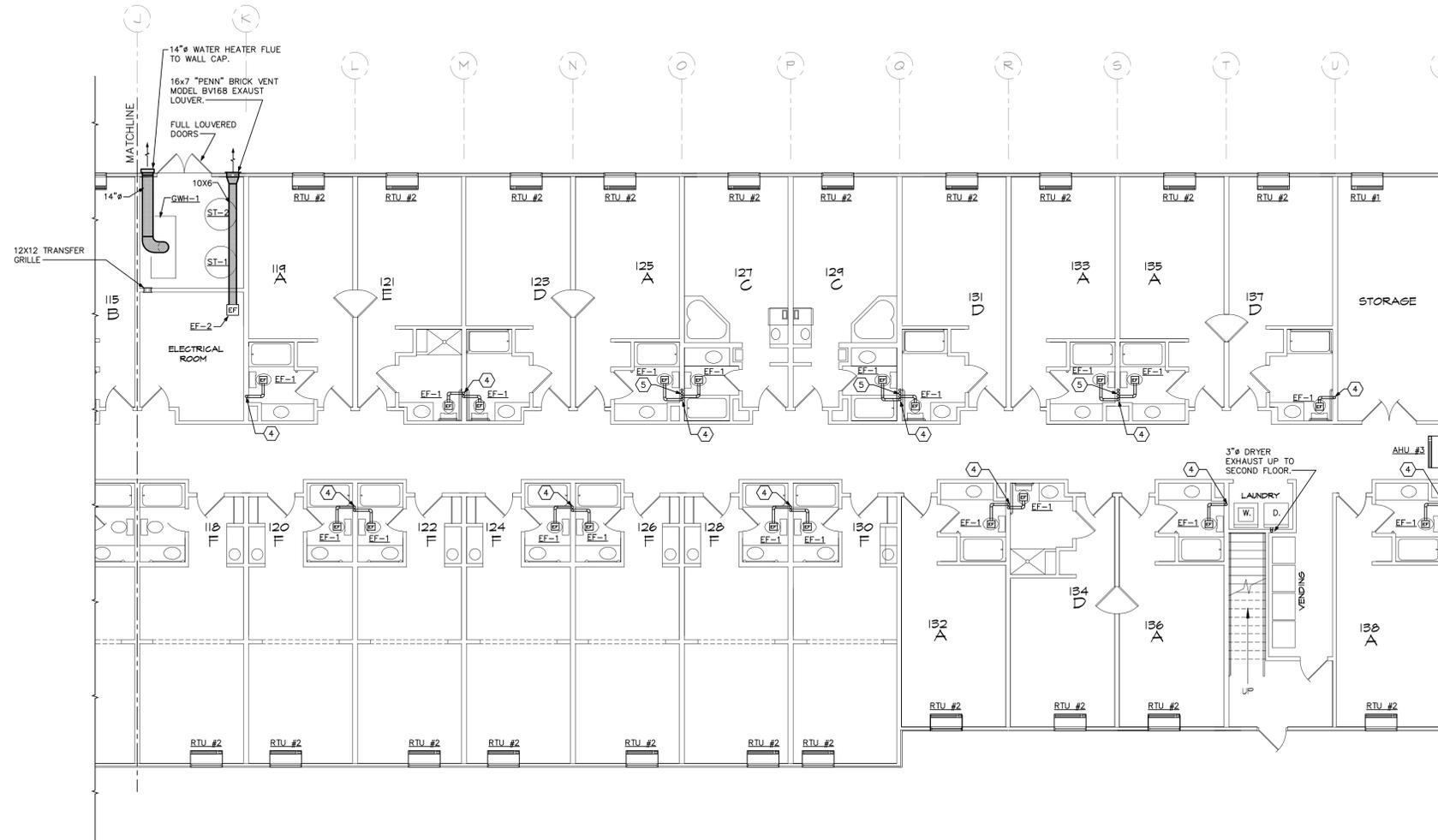


**1 PARTIAL FIRST FLOOR PLAN - MECHANICAL**  
SCALE: 1/8"=1'-0"

SUPPLY DIFFUSER SCHEDULE				
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	DESIGNATES LABEL FOR DIFFUSER TYPE
				DESIGNATES CFM QUANTITY FOR DIFFUSER
A	TITUS 300RL	14X6	150 - 300	SIDEWALL REGISTER
B	TITUS 300RL	16X6	305 - 500	SIDEWALL REGISTER

- MECHANICAL SPECIFIC NOTES**
- ① 20x20 COMBUSTION AIR DUCT. TERMINATE 6" BELOW CEILING. ROUTE UP THRU FIRE RATED CHASE ON SECOND FLOOR TO VENTED ATTIC SPACE.
  - ② 20x20 COMBUSTION AIR DUCT. TERMINATE 12" ABOVE FLOOR. ROUTE UP THRU FIRE RATED CHASE ON SECOND FLOOR TO VENTED ATTIC SPACE.
  - ③ REFRIGERATION PIPING ABOVE CEILING. CONTRACTOR SHALL SIZE ALL REFRIGERATION PIPING AS PER MANUFACTURED RECOMMENDATIONS.
  - ④ 3" TOILET EXH. UP THRU WALL TO ROOF. REFER TO TYPICAL EXHAUST RISER ON SHEET M-5.

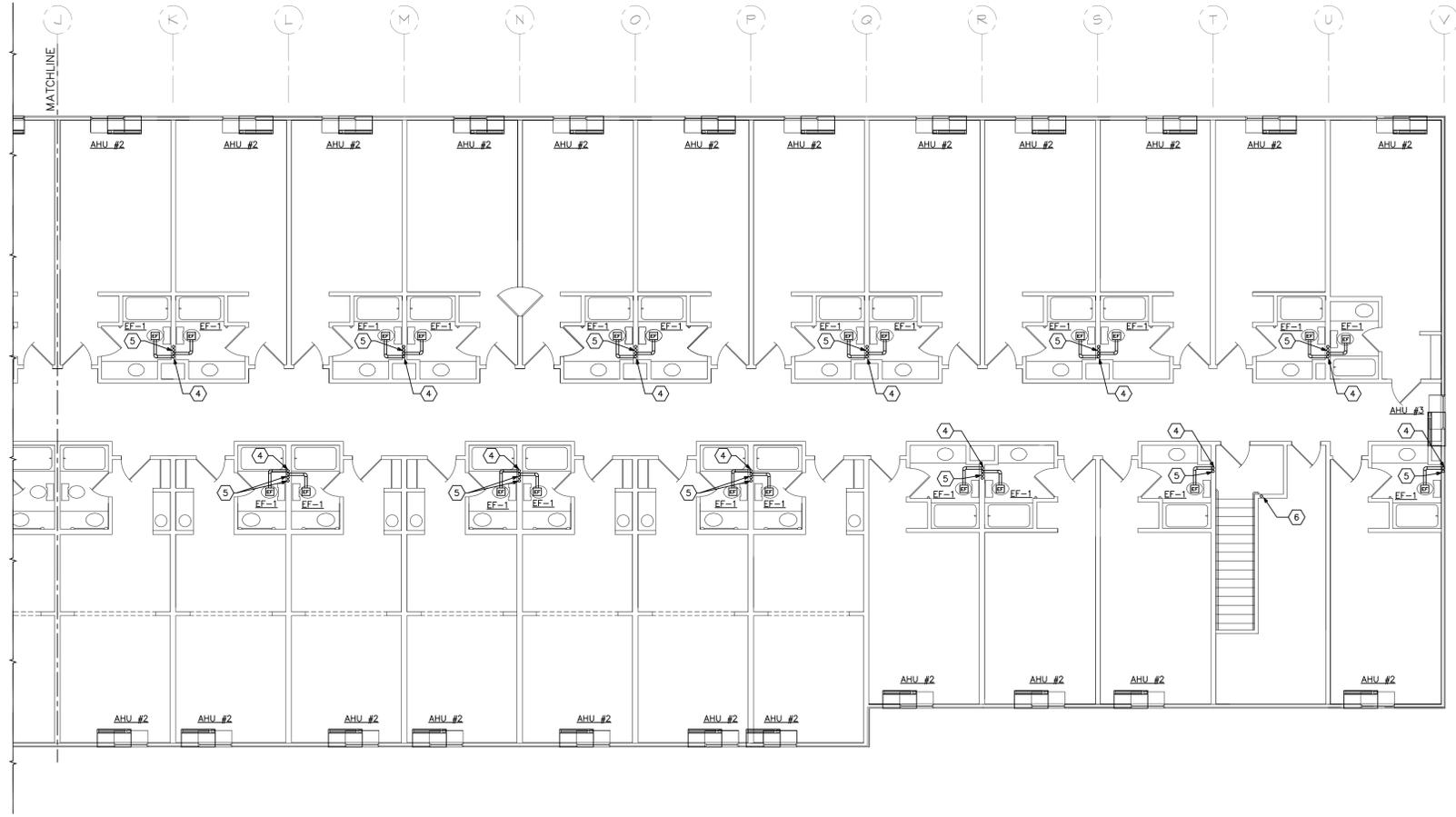
NOTE:  
ALL TOILET ROOM DOORS SHALL HAVE A 3/4" DOOR UNDERCUT FOR TOILET ROOM MAKE-UP AIR.



**1 PARTIAL FIRST FLOOR PLAN - MECHANICAL**  
SCALE: 1/8"=1'-0"



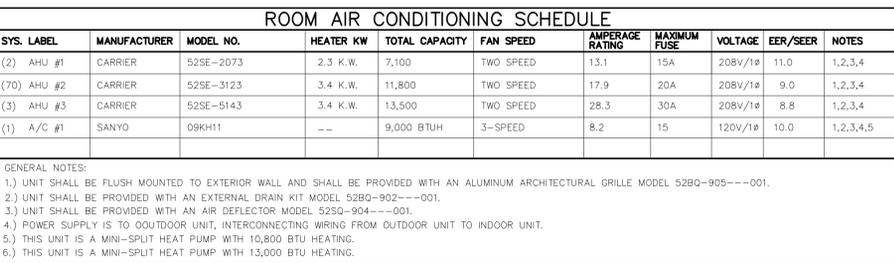
- MECHANICAL SPECIFIC NOTES**
- ① 20X20 COMBUSTION AIR DUCT. TERMINATE 6" BELOW CEILING. ROUTE UP THRU FIRE RATED CHASE ON SECOND FLOOR TO VENTED ATTIC SPACE.
  - ② 20X20 COMBUSTION AIR DUCT. TERMINATE 12" ABOVE FLOOR. ROUTE UP THRU FIRE RATED CHASE ON SECOND FLOOR TO VENTED ATTIC SPACE.
  - ③ REFRIGERATION PIPING ABOVE CEILING. CONTRACTOR SHALL SIZE ALL REFRIGERATION PIPING AS PER MANUFACTURED RECOMMENDATIONS.
  - ④ 3" TOILET EXHAUST UP THRU WALL TO ROOF. REFER TO TYPICAL EXHAUST RISER ON SHEET M-5.
  - ⑤ 3" TOILET EXHAUST FROM BELOW AND UP TO ROOF. REFER TO TYPICAL EXHAUST RISER ON SHEET M-5.
  - ⑥ 3" DRYER VENT FROM BELOW AND UP THRU ROOF TO ROOF CAP.



**1 PARTIAL SECOND FLOOR PLAN - MECHANICAL**  
 SCALE: 1/8"=1'-0"

# 1 COND. UNIT MOUNTING DETAIL

NO SCALE



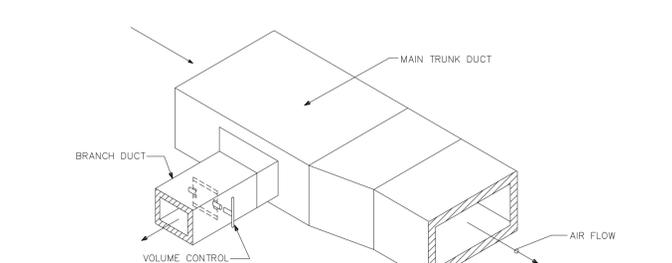
# 2 TYPICAL TOILET EXHAUST RISER

NO SCALE



# 3 HP #1 & 2 MOUNTING DETAIL

NO SCALE



## ROOM AIR CONDITIONING SCHEDULE

SYS. LABEL	MANUFACTURER	MODEL NO.	HEATER KW	TOTAL CAPACITY	FAN SPEED	AMPERAGE RATING	MAXIMUM FUSE	VOLTAGE	EER/SEER	NOTES
(2) AHU #1	CARRIER	52SE-2073	2.3 K.W.	7,100	TWO SPEED	13.1	15A	208V/1Ø	11.0	1,2,3,4
(70) AHU #2	CARRIER	52SE-3123	3.4 K.W.	11,800	TWO SPEED	17.9	20A	208V/1Ø	9.0	1,2,3,4
(3) AHU #3	CARRIER	52SE-5143	3.4 K.W.	13,500	TWO SPEED	28.3	30A	208V/1Ø	8.8	1,2,3,4
(1) A/C #1	SANYO	09KH11	--	9,000 BTUH	3-SPEED	8.2	15	120V/1Ø	10.0	1,2,3,4,5

GENERAL NOTES:  
 1.) UNIT SHALL BE FLUSH MOUNTED TO EXTERIOR WALL AND SHALL BE PROVIDED WITH AN ALUMINUM ARCHITECTURAL GRILLE MODEL 52B0-905---001.  
 2.) UNIT SHALL BE PROVIDED WITH AN EXTERNAL DRAIN KIT MODEL 52B0-902---001.  
 3.) UNIT SHALL BE PROVIDED WITH AN AIR DEFLECTOR MODEL 52S0-904---001.  
 4.) POWER SUPPLY IS TO OUTDOOR UNIT, INTERCONNECTING WIRING FROM OUTDOOR UNIT TO INDOOR UNIT.  
 5.) THIS UNIT IS A MINI-SPLIT HEAT PUMP WITH 10,800 BTU HEATING.  
 6.) THIS UNIT IS A MINI-SPLIT HEAT PUMP WITH 13,000 BTU HEATING.

## GENERAL MECHANICAL NOTES

- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS: SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1 MECHANICAL REFRIGERATION.
- THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES TO INSURE AN ORDERLY PROGRESS OF THIS WORK.
- THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT.
- CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.
- ALL MATERIAL SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.
- ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1-1/2" STANDARD DUCT FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER ALL FLEX TO BE R-6.
- ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.
- DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.
- ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE TITUS, METALARE, AIRGUIDE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.
- THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE, HONEYWELL OR EQUAL.
- REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER-JOINT TYPE FITTINGS, USE 95/5 SOLDER. REFRIGERANT LINES SHALL SIZED AS PER MANUFACTURER RECOMMENDATIONS.
- ARMAFLEX 3/4" INSULATION SHALL BE USED FOR SUCTION LINES, FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.
- ALL BRANCH TAKE-OFFS TO BE PROVIDED W/MANUAL VOLUME DAMPERS. ALL ELBOWS AND TEES MUST BE FURNISHED W/TURNING VANES. PROVIDE 45° BRANCH TAKE-OFF AS PER BRANCH DUCT TAKE-OFF DETAIL.
- PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.
- PROVIDE SMOKE DETECTORS WITH ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.
- PROVIDE TYPE "B" FIRE DAMPERS IN ALL DUCTS OR OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, TENANT SEPARATION, PARTITIONS, FLOOR OR ROOF SLABS AND AT O/A INTAKES. PROVIDE RADIATION RADIATION DAMPERS IN RATED CEILING FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY.
- HVAC CONTRACTOR SHALL PROVIDE AN INDEPENDENT TEST AND BALANCE REPORT FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS, AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLS, RETURN GRILLS, AND EXHAUST GRILLS, AND THE LEAVING AND ENTERING AIR TEMPERATURE (T) FROM SUPPLY GRILLS AND EVAPORATORS.
- THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEERS BEFORE INSTALLATION.
- ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
- MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- NO COMBUSTIBLE MATERIALS ARE ALLOWED IN RETURN AIR PLENUMS OR ABOVE CEILING USED AS RETURN AIR PLENUM. IF SPACE WITH RETURN AIR PLENUM HAS ANY DECK TO DECK PARTITIONS, AIR TRANSFER DUCTS MUST BE INSTALLED. REFER TO PLUMBING PLANS FOR ALL CONDENSATE PIPING.
- CONTRACTOR SHALL INSTALL ALL OUTDOOR EQUIPMENT TO WITHSTAND A SUSTAINED 120 MPH WIND WITH A GUST FACTOR OF 30%. PROVIDE A LISTED PRE-ENGINEERED ASSEMBLY, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CERTIFICATION OF ROOF MOUNTING.
- PROVIDE ALL NECESSARY CONTRACTORS, RELAYS, ETC., FOR A COMPLETE OPERATING A/C UNIT.

## MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT

Prescriptive [ ] Performance [X] Energy Cost Budget [ ]

Exterior Design Conditions

winter dry bulb	18° F
summer dry bulb	97° F

Interior Design Conditions

winter dry bulb	68° F
summer dry bulb	74° F
relative humidity	52.9%

Building Heating Load 931,700 BTU  
 Building Cooling Load 974,400 BTU

Mechanical Spacing Conditioning System

Unitary

Description of unit	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heating efficiency	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling efficiency	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heat output of unit	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling output of unit	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.

Boiler N/A  
 total boiler output, if oversized, state reason.

Chiller N/A  
 total chiller capacity, if oversized, state reason.

List equipment efficiencies

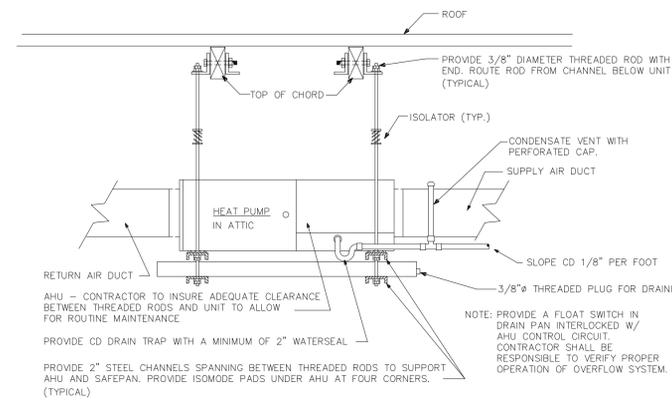
motor horsepower	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
number of phases	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
minimum efficiency	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
motor type	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
# of poles	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.

DESIGNER STATEMENT:<sup>1</sup>  
 To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of ASHRAE Standard 90.1 1989.

SIGNED: \_\_\_\_\_  
 NAME: \_\_\_\_\_  
 TITLE: \_\_\_\_\_

# 4 BRANCH DUCT DETAIL

NO SCALE



## FAN SCHEDULE

LABEL	TYPE OF UNIT - AREA SERVED	MANUFACTURER & MODEL NO.	CFM	SP	MOUNTING ARRANGEMENT	MOTOR H.P.	ENCLOSURE TYPE	RPM	VOLTAGE	NOTES
EF-1	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z6	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1Ø	1,2
EF-2	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z7	190	.125"	CEILING MOUNTED	68 WATTS	OPEN DRIP PROOF	1640	115V/1Ø	1

NOTES: 1.) REFER TO ELECTRICAL PLANS FOR CONTROL.  
 2.) FAN SHALL BE PROVIDED WITH FACTORY CEILING RADIATION FIRE DAMPER.

## AIR COOLED HEAT PUMP SCHEDULE

HEAT PUMP										AIR HANDLING UNIT										INTEGRATED ELECTRIC HEATING			
CU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CAPACITY COOLING	SENSIBLE CAPACITY COOLING	TOTAL CAPACITY HEATING	COMP. RLA	FAN FLA	VOLTAGE	MOCP	EER/SEER	WEIGHT	AHU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CFM	O/A CFM	E.S.P.	BLOWER SPEED	FAN HP	VOLTAGE	MOCP W/HEAT	WEIGHT	HEATER KW	VOLTAGE	NOTES
HP #1	CARRIER 38YMA024301	23,800	17,600	12,900	10.1	0.9	208V/1Ø	20A	11.0	205 lbs.	HP #1&3	CARRIER FB4ANB024005	800	80	0.3"	MED.	.25 HP	208V/1Ø	40A	98 lbs.	3.8	208V/1Ø	1 THRU 6
HP #2&3	CARRIER 38YMA048301	47,500	34,800	32,600	26.5	0.9	208V/1Ø	50A	11.0	301 lbs.	HP #2	CARRIER FB4ANB048015	1,650	160	0.3"	MED.	.75 HP	208V/1Ø	60A	154 lbs.	7.5	208V/1Ø	1 THRU 6

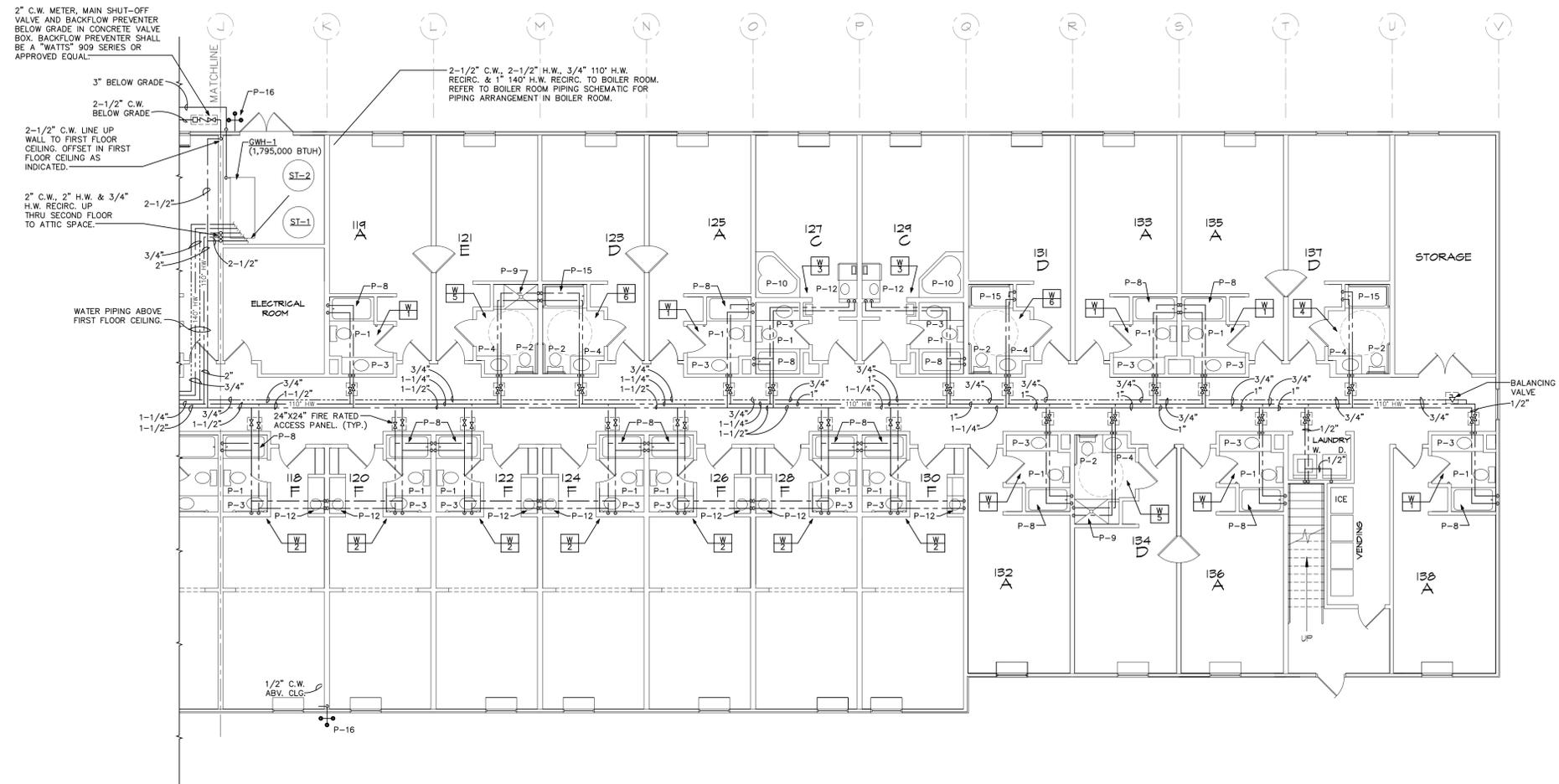
GENERAL NOTES:  
 \* ALL RATINGS ARE AT ARI ENTERING CONDITIONS UNLESS OTHERWISE NOTED.  
 \* PROVIDE VIBRATION ISOLATION FOR UNITS.  
 \* EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COIL OR FILTER PRESSURE DROP.  
 \* CONTRACTOR MAY SUBSTITUTE MANUFACTURER FOR APPROVED EQUAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ANY CLEARANCE REQUIREMENTS ARE MET FOR ANY SUBSTITUTIONS.

ABBREVIATION LEGEND:  
**MOCP** - MAX. OVERCURRENT PROTECTION (DUAL ELEMENT TYPE FUSE)  
**O/A** - OUTSIDE AIR  
**HP** - HORSE POWER  
**RLA** - RUNNING LOAD AMPS  
**FLA** - FULL LOAD AMPS

SPECIFIC NOTES:  
 1) SIZE AND RUN REFRIGERANT PIPING AS PER MANUFACTURERS PUBLISHED RECOMMENDATIONS.  
 2) INSULATE REFRIGERANT SUCTION LINE WITH 3/4" ARMAFLEX OR APPROVED EQUAL.  
 3) INSTALL FILTER DRYER AND STRAINER IN REFRIGERANT LIQUID LINE.  
 4) PROVIDE FIELD INSTALLED ACCESSORIES, AND 5 MINUTE TIME DELAY SWITCH.  
 5) PROVIDE 5 YEAR WARRANTY ON COMPRESSOR AND 1 YEAR WARRANTY ON ALL PARTS AND LABOR.  
 6) HEATER SHALL BE PROVIDED WITH 24 VOLT CONTROL.

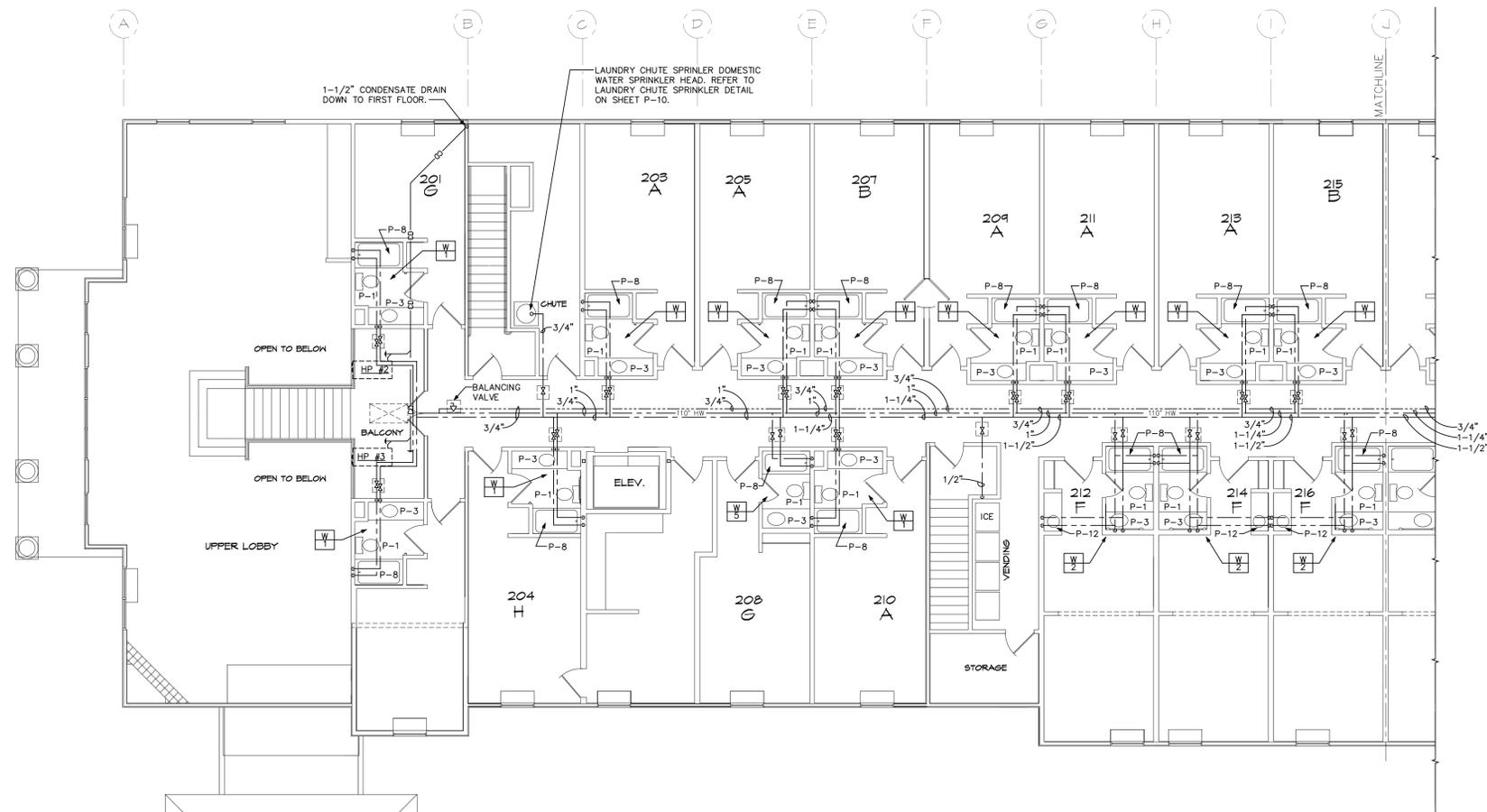
SEQUENCE OF OPERATION FOR HEATING  
 FIRST STAGE  
 WHEN THE THERMOSTAT CALLS FOR HEATING, THE INDOOR FAN MOTOR, OUTDOOR FAN MOTORS AND THE COMPRESSOR (FULLY LOADED) ARE ENERGIZED. THE REVERSING VALVE SOLENOID IS ENERGIZED IN THE HEATING MODE.  
 SECOND STAGE  
 IF ADDITIONAL HEAT IS REQUIRED, THE ELECTRIC HEAT SHALL BE ENERGIZED.





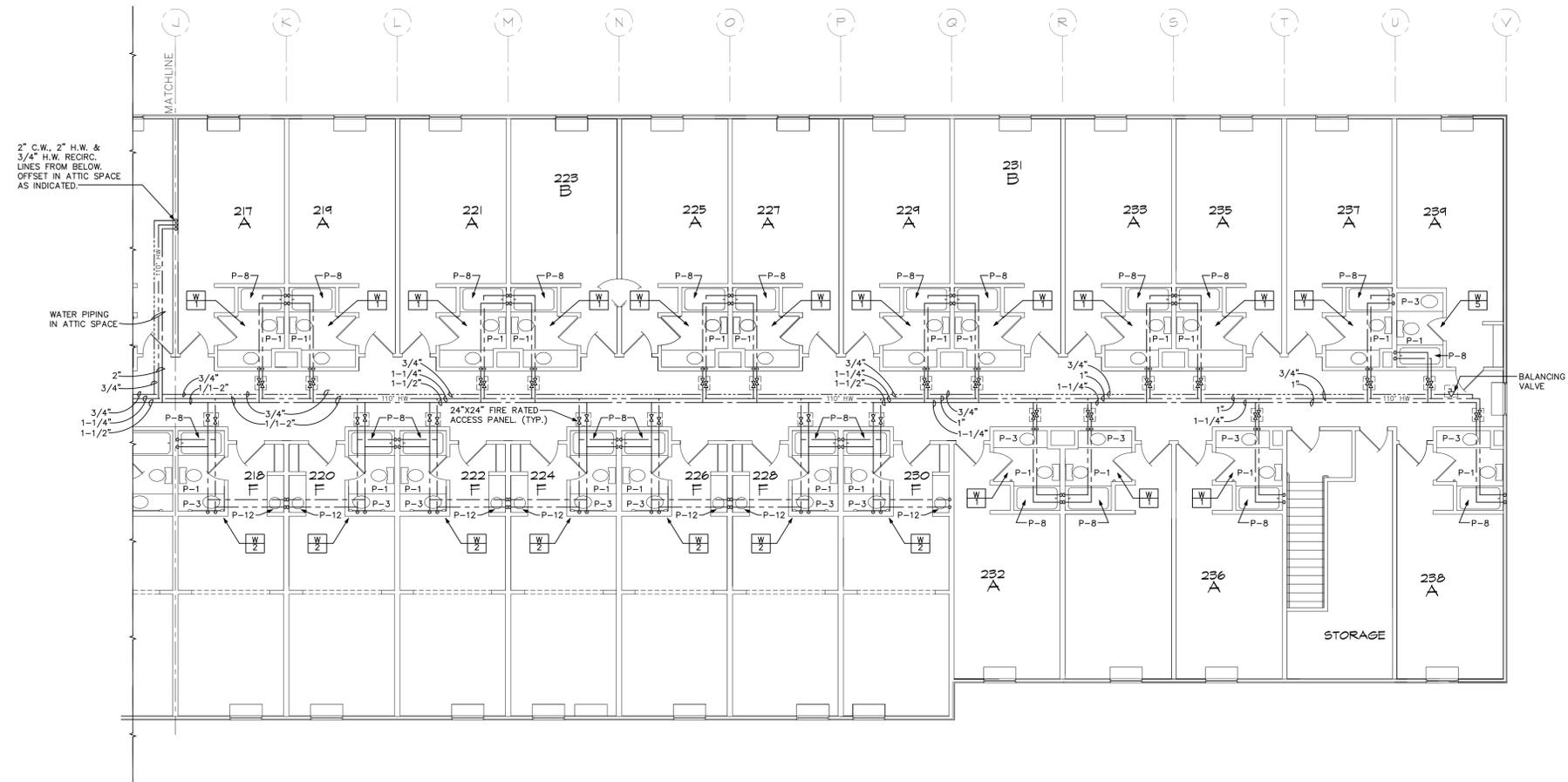
( WATER SUPPLY AND GAS PIPING )

**1 PARTIAL FIRST FLOOR PLAN - PLUMBING**  
 SCALE: 1/8"=1'-0"



( WATER SUPPLY PIPING )

**1 PARTIAL SECOND FLOOR PLAN - PLUMBING**  
 SCALE: 1/8"=1'-0"

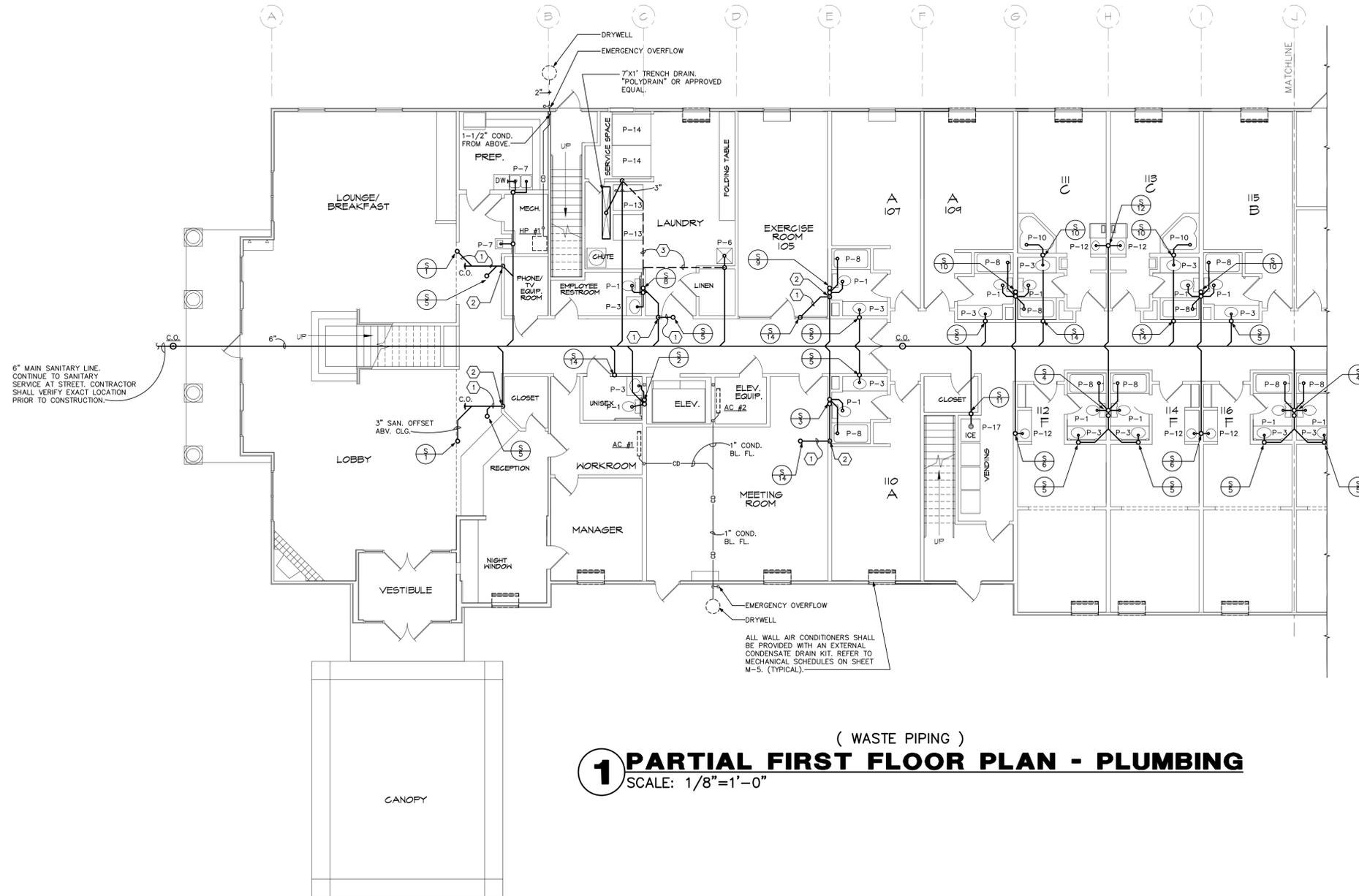


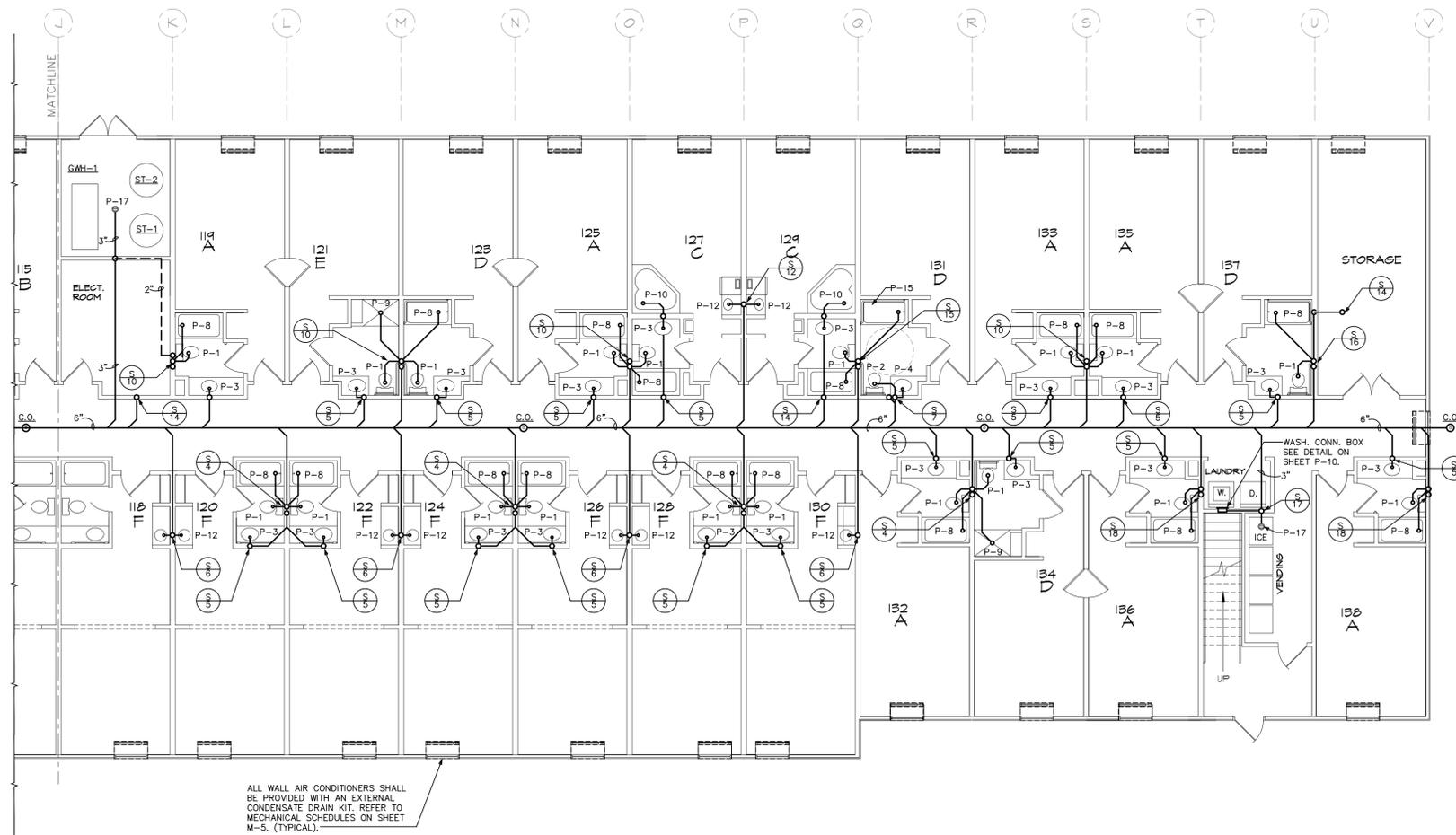
( WATER SUPPLY PIPING )

**1 PARTIAL SECOND FLOOR PLAN - PLUMBING**  
 SCALE: 1/8" = 1'-0"

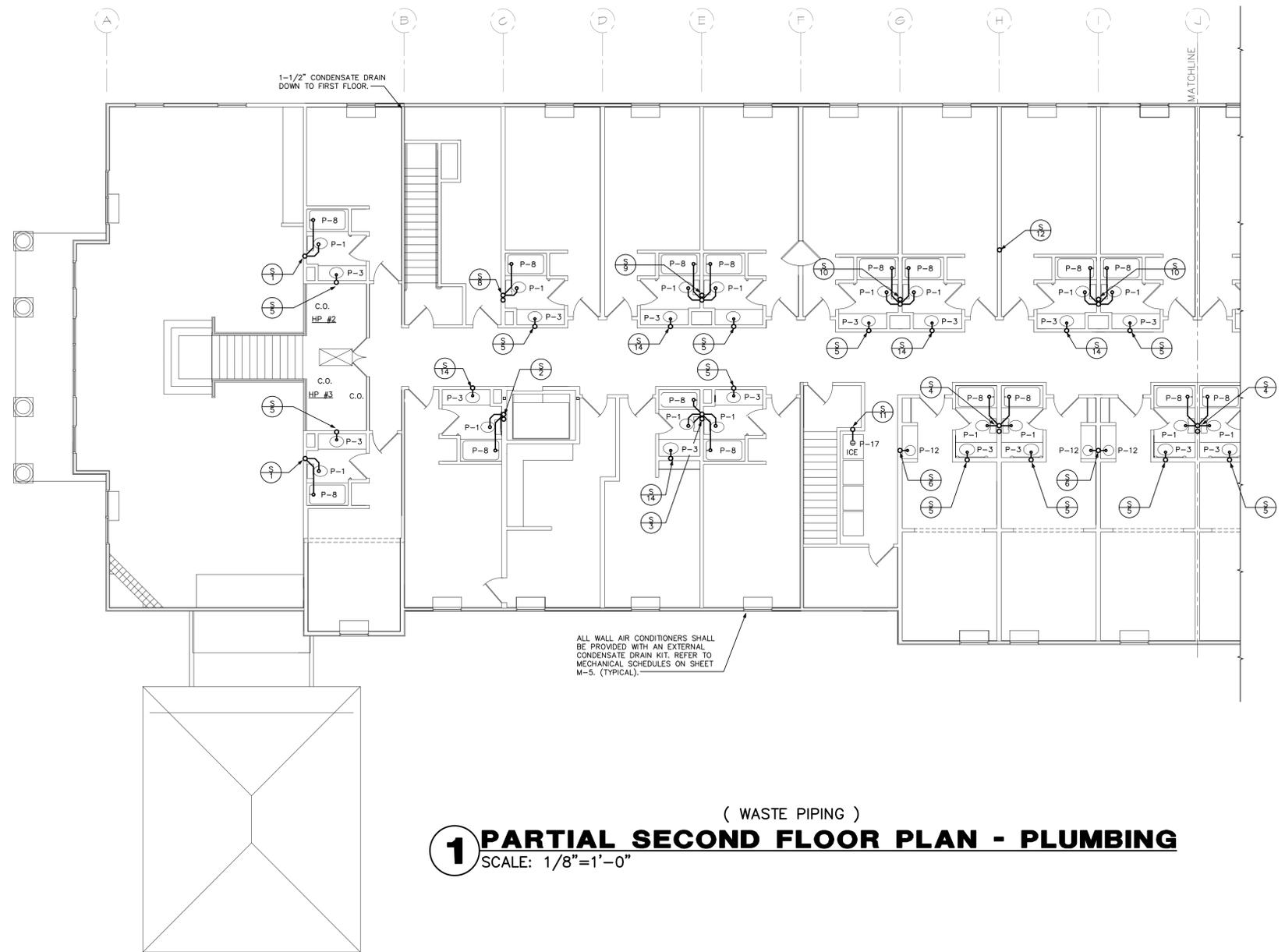
**PLUMBING SPECIFIC NOTES**

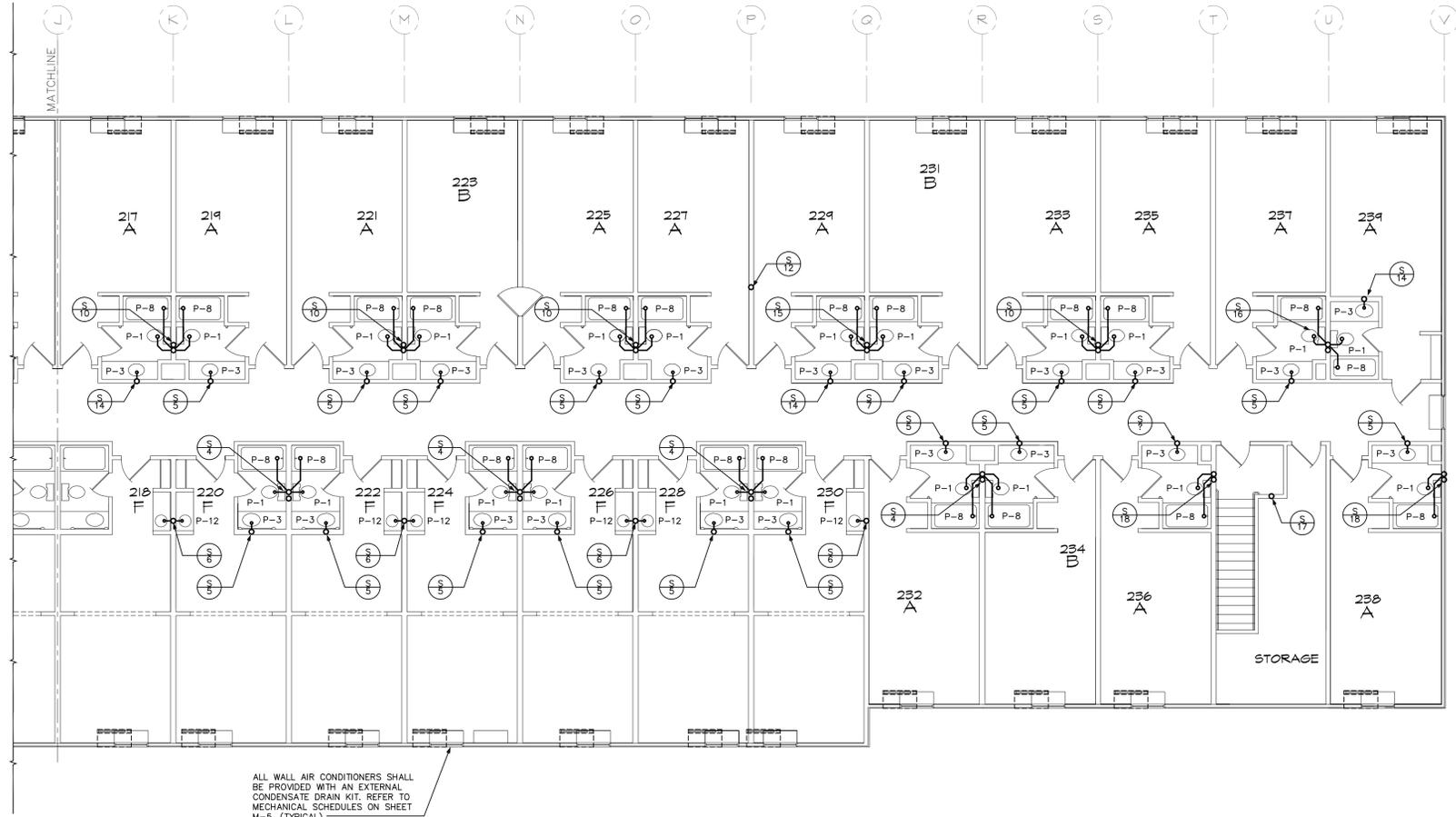
- ① SANITARY PIPE IN FIRST FLOOR CEILING. OFFSET AS INDICATED.
- ② SANITARY LINE DOWN IN WALL. OFFSET BELOW FLOOR AS INDICATED.
- ③ VENT PIPING ABOVE CEILING. OFFSET TO LOCATION SHOWN AND RISE UP TO SECOND FLOOR.





( WASTE PIPING )  
**1 PARTIAL FIRST FLOOR PLAN - PLUMBING**  
 SCALE: 1/8"=1'-0"



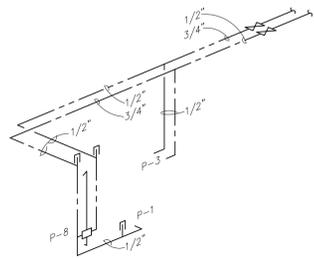


ALL WALL AIR CONDITIONERS SHALL BE PROVIDED WITH AN EXTERNAL CONDENSATE DRAIN KIT. REFER TO MECHANICAL SCHEDULES ON SHEET M-5. (TYPICAL).

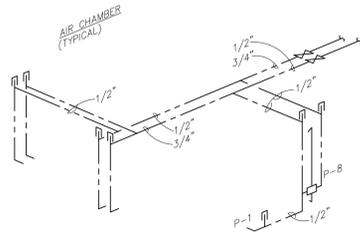
( WASTE PIPING )

**1 PARTIAL SECOND FLOOR PLAN - PLUMBING**

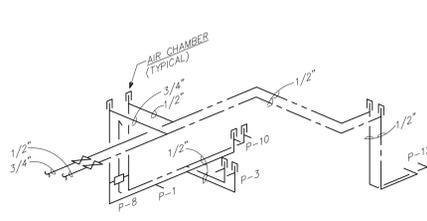
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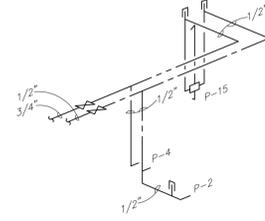
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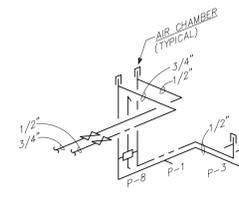
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W3



W4



W5

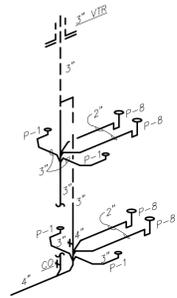
**1 TYPICAL WATER ISOMETRICS**  
NO SCALE



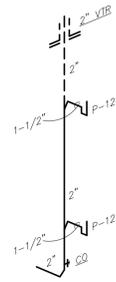
S1

S2 SIMILAR

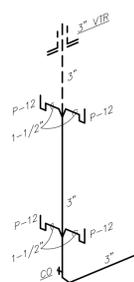
S3 SIMILAR



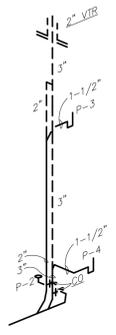
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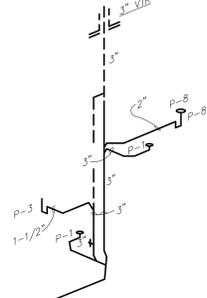
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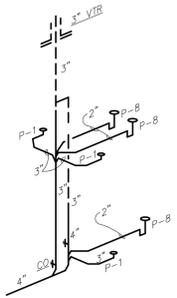
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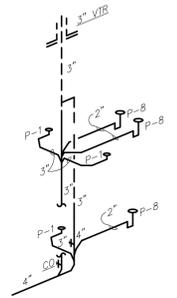
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S8

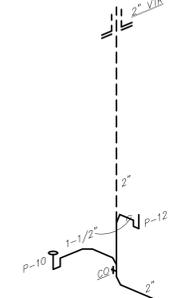


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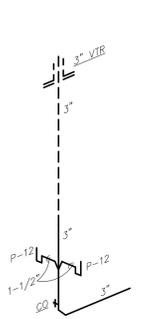
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S15 SIMILAR

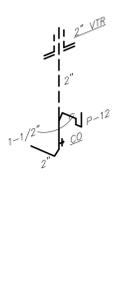


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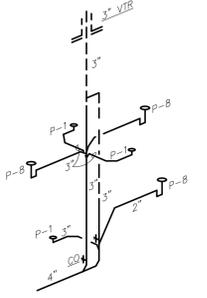
S12 SIMILAR



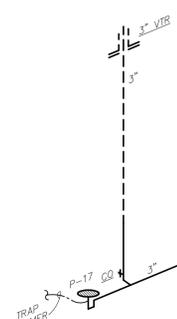
S12



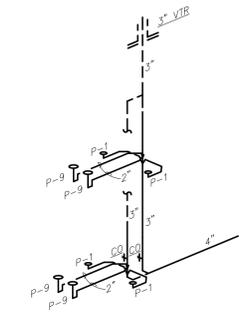
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S16

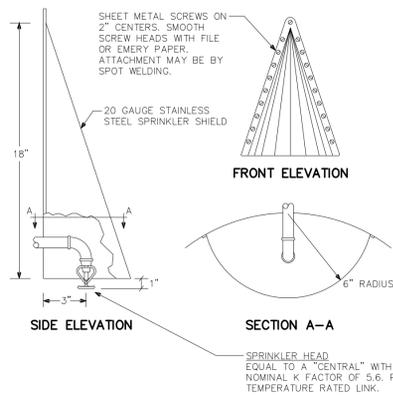


S17



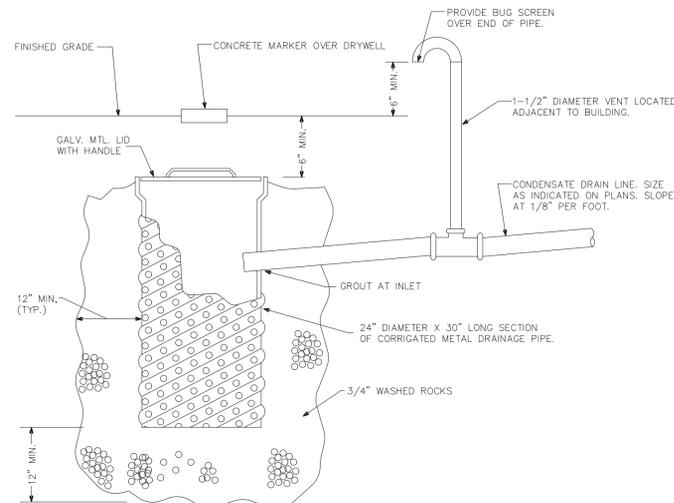
S18

**2 TYPICAL SANITARY ISOMETRICS**  
NO SCALE



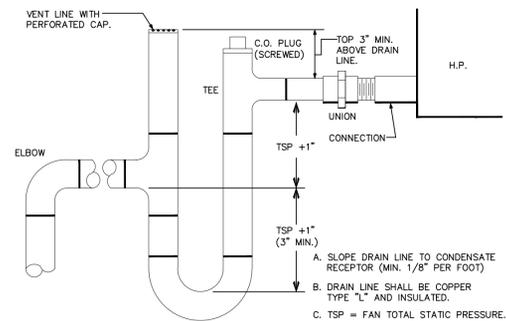
# 1 LAUNDRY CHUTE SPRINKLER DETAIL

NO SCALE



# 4 DRYWELL DETAIL

NO SCALE



# 3 COND. P-TRAP DETAIL

NO SCALE

## PLUMBING FIXTURE SCHEDULE

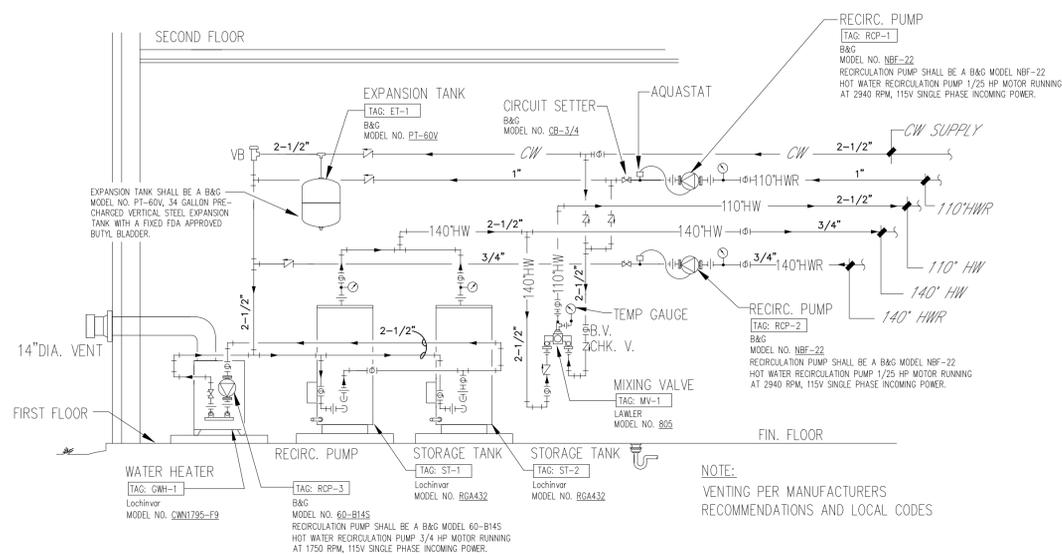
- P-1 (WATER CLOSET)**  
SHALL BE AN AMERICAN STANDARD MODEL NEW CADET II AQUAMETER 2174.139 ELONGATED 1.6 GPF, VITREOUS CHINA, SIPHON ACTION BOWL, CLOSE-COUPLED TANK, SPEED CONNECT TANK/BOWL COUPLING SYSTEM TOILET AND AN OLSONITE # 95 OPEN FRONT SEAT LESS COVER.
- P-2 (HANDICAPPED WATER CLOSET)**  
SHALL BE AN AMERICAN STANDARD MODEL CADET II 2216.143 ELONGATED 18" HIGH, 1.6 GPF, VITREOUS CHINA, SIPHON ACTION BOWL, CLOSE-COUPLED TANK, SPEED CONNECT TANK/BOWL COUPLING SYSTEM TOILET AND AN OLSONITE # 95 OPEN FRONT SEAT LESS COVER.
- P-3 (COUNTER TOP LAVATORY)**  
SHALL BE AN AMERICAN STANDARD MODEL RONDALYN 0491.019 VITREOUS CHINA SELF-RIMMING STYLE CLASSIC ROUND SHAPE. HERITAGE FAUCET 5401.152H TO INCLUDE AN OMNI PRESSURE COMPENSATING 0.5 GPM FLOW RESTRICTOR.
- P-4 (HANDICAPPED COUNTER TOP LAVATORY)**  
SHALL BE AN AMERICAN STANDARD MODEL RONDALYN 0491.019 VITREOUS CHINA SELF-RIMMING STYLE CLASSIC ROUND SHAPE. PROVIDE A 5401.172H HERITAGE CENTERSET FAUCET WITH 4" WRIST BLADE HANDLES TO INCLUDE AN OMNI PRESSURE COMPENSATING 0.5 GPM FLOW RESTRICTOR. AQUASEAL VALVES AND CHROME FINISH. GRID DRAIN, OFFSET PERFORATED WHEELCHAIR LAVATORY DRAIN ASSEMBLY WITH 1-1/2" TAILPIECE. MCGUIRE #155WC.
- P-5 (DOUBLE BOWL KITCHEN SINK)**  
SHALL BE AN ELKAY LUSTERTONE MODEL LH-3322-C SELF RIMMING DOUBLE COMPARTMENT STAINLESS STEEL SINK WITH LK2433 HI-ARC FAUCET TO INCLUDE AN OMNI PRESSURE COMPENSATING 2.0 GPM FLOW RESTRICTOR.
- P-6 (MOP SINK)**  
SHALL BE AN AMERICAN STANDARD MODEL LAKEWELL 7692.049 ENAMELED CAST IRON SERVICE SINK WITH 47076-07 RIM GUARD AND 7298.152 HERITAGE SERVICE SINK FAUCET TO INCLUDE AN OMNI PRESSURE COMPENSATING 2.0 FLOW RESTRICTOR WITH BUCKET HOOKS AND 7798.186 TRAP STANDARD WITH STRAINER.
- P-7 (HANDICAPPED ELECTRIC WATER COOLER)**  
SHALL BE AN OASIS MODEL PLF81WME, 8.0 GPH, 4.8 FLA AT 120 VOLT WITH A 1/5 HP COMPRESSOR.
- P-8 (HANDICAPPED TUB)**  
SHOWER MIXING VALVE (HOT AND COLD WATER)  
SHALL BE A SPEAKMAN SENTINEL MARK II REGENCY MODEL # SM-1400-AF-SS ANTI-SCALD BALANCED PRESSURE SHOWER VALVE WITH AN INLINE OMNI PRESSURE COMPENSATING 2.5 GPM FLOW RESTRICTOR. TUB BY OWNER.
- P-9 (HANDICAPPED SHOWER)**  
SHOWER MIXING VALVE (HOT AND COLD WATER)  
SHALL BE A SPEAKMAN SENTINEL MARK II REGENCY MODEL # SM-1400-AF-SS ANTI-SCALD BALANCED PRESSURE SHOWER VALVE WITH AN INLINE OMNI PRESSURE COMPENSATING 2.5 GPM FLOW RESTRICTOR. SHOWER STALL BY OWNER.
- P-10 (JACUZZI)**  
JACUZZI SHALL BE AN AMERICAN STANDARD "CONER SENSORIUM" 3570.399 WITH A 1 H.P. MOTOR.
- P-11 (HANDICAPPED SHOWER)**  
SHOWER SHALL INCLUDE AN SPEAKMAN MODEL VS-1970-SS SENTINEL MARK II REGENCY CONCEALED ANTI-SCALD BALANCED PRESSURE SHOWER VALVE AND HAND HELD SPRAY COMBINATION TO INCLUDE AN INLINE OMNI PRESSURE COMPENSATING 2.5 GPM FLOW RESTRICTOR. SHOWER STALL BY OWNER.
- P-12 (BAR SINK)**  
SHALL BE AN ELKAY LUSTERTONE MODEL DLH-2222-10-C SINGLE BOWL STAINLESS STEEL SELF-RIMMING SINK WITH LK2432 HI-ARC FAUCET TO INCLUDE AN OMNI PRESSURE COMPENSATING 2.0 GPM FLOW RESTRICTOR.
- P-13 (COMMERCIAL WASHER MACHINE)**  
SHALL BE A "MILNOR" - MARK II MODEL 30020 MSP, 50 LBS. WASHING MACHINE.
- P-14 (COMMERCIAL DRYING MACHINE)**  
SHALL BE A "CISSEL" NO-PILOT 50-LB. ENRGY-SAVING GAS FIRED DRYER, 180,000 BTUH.
- P-15 (HANDICAPPED TUB/SHOWER COMBINATION)**  
SHOWER SHALL INCLUDE AN SPEAKMAN MODEL VS-1970-SS SENTINEL MARK II REGENCY CONCEALED ANTI-SCALD BALANCED PRESSURE SHOWER VALVE AND HAND HELD SPRAY COMBINATION TO INCLUDE AN INLINE OMNI PRESSURE COMPENSATING 2.5 GPM FLOW RESTRICTOR. TUB BY OWNER.
- P-16 (FREEZE PROOF EXTERIOR HOSE BIBB W/VACUUM BREAKER)**  
SHALL BE A "JOSAM" HADYASAN I W/VACUUM BREAKER, SERIES 71000, CAST BRONZE BOX TYPE NON-FREEZE WALL HYDRANT.
- P-17 (3" FLOOR DRAIN)**  
SHALL BE A JOSAM 30003-A-50 SERIES COATED CAST IRON FLOOR DRAIN. TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEJLOC INVERTIBLE, NON-PUNCTURING FLASHING COLLAR, WEPPHILES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPERFLO STRAINER.

- NOTES:
- 1.) ALL PLUMBING FIXTURES SHALL BE AS SPECIFIED OR APPROVED EQUAL.
  - 2.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
  - 3.) ALL HANDICAP PLUMBING FIXTURES SHALL BE INSTALLED AS PER LATEST A.D.A. REQUIREMENTS.
  - 4.) ALL PLUMBING FIXTURES SHALL COMPLY WITH SFBC TABLE 46-R2.

PLUMBING ABBREVIATION LEGEND					
DN.	DOWN	C.C.	CENTER TO CENTER	F.U.	FIXTURE UNITS
EXT.	EXTERIOR	N.T.S.	NOT TO SCALE	H.B.	HOSE BIBBS
F.D.	FLOOR DRAIN	MFR.	MANUFACTURER	C.O.	CLEANOUT
F.F.	FINISH FLOOR	S.O.V.	SHUT OFF VALVE	E.W.H.	ELECTRIC WATER HEATER
A.F.F.	ABOVE FINISH FLOOR	W.C.	WATER CLOSET	JAN.SK.	JANITOR SINK
V.T.R.	VENT THRU ROOF	LAV.	LAVATORY	P & T	PRESSURE & TEMPERATURE
TYP.	TYPICAL	SK.	SINK	RWL.	RAIN WATER LEADER
R.D.	ROOF DRAIN	D.W.	DISH WASHER		
REV.	REVISION	E.D.F.	ELECTRIC DRINKING FOUNTAIN		
O.C.	ON CENTER	UR.	URINAL		

## GENERAL PLUMBING NOTES

1. Drawings are diagrammatic and shall not be scaled. Refer to architectural plans and elevations for exact location of all plumbing fixtures, equipment, etc.. Plumbing contractor shall furnish and install all items required for a complete and acceptable working installation.
2. All work and materials shall comply with the latest edition of the National, State, and all local codes and Ordinances having jurisdiction.
3. The plumbing contractor shall visit the site and thoroughly familiarize himself with all existing conditions. All execution and backfill as required for this phase of construction shall be a part of this contract.
4. All material shall be new.
5. All work shall be performed by a licensed plumbing contractor in a first class workmanlike manner. The completed system shall be fully operative and accepted by engineer/architect.
6. All required insurance shall be provided for protection against public liability or property damage for the duration of the work.
7. The plumbing contractor shall secure and pay all permit fees, inspections, and tests.
8. All work shall be coordinated with other trades to avoid interference with the progress of construction.
9. The plumbing contractor shall guarantee all materials and workmanship free from defects for a period of not less than (1) one year from date of acceptance. Correction of any defects shall be completed without additional charge and shall include replacement or repair of any other phase of the installation which may have been damaged thereby.
10. Verify location, size and inverts of all existing utilities prior to start of construction. Advise architect/engineer of any discrepancies.
11. All fixtures shall be provided with readily accessible stops.
12. Water piping shall be CPVC.
13. Soil, wastes and vent piping shall be PVC #40 DMV. Waste and vent piping above slab shall be PVC, if approved by local authorities having jurisdiction, otherwise cast iron. PVC shall not be installed in A/C return air plenum or penetrate fire rated walls or floors.
14. Air conditioning condensate drain piping shall be PVC #40 or copper drain waste and bent pipe and fittings. Insulate all condensate piping except exterior piping. Install all condensate piping for air conditioning units as required per local codes.
15. Furnish and install approved air chambers at each plumbing fixture and PDI approved shock arresters on main lines and risers.
16. Dialectic couplings, equal to EPDC, are required between all dissimilar metal piping and equipment connections.
17. Isolate copper pipe from hanger supports with isolator pad (hair felt lining) Super Strut model C 715/16. Fill all voids between pipe and wall/floor sleeves with fire rated foam. Chase Technology Corporation - CTC PR-855 or 3M, CP-25 caulking or 303 putty.
18. All fire rated floor and wall penetrations shall be properly protected from fire, smoke, and water by filling all voids between pipe and wall/floor sleeves with fire rated foam. Chase Technology Corporation - CTC PR-855 or 3M, CP-25 caulking or 303 putty.
19. Provide access panels for all concealed valves and all water hammer arresters. Access panels in rated walls must maintain the same rating and must match the finish of the wall.
20. Insulate lines as follows:
  - a) Cold, Hot & Hot Water Recirculating piping: 1" thick fiberglass.
  - b) Condensate piping: 1/2" thick armalflex preformed.

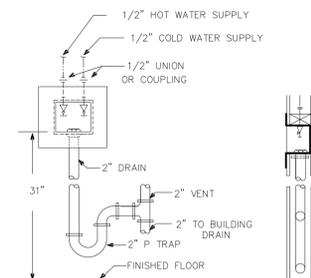


# 5 BOILER ROOM PIPING SCHEMATIC

NO SCALE

## GWH-1 (GAS WATER HEATER) & ST-1/ST-2 (STORAGE TANKS) SCHEDULE

WATER HEATER SHALL BE A LOCHINVAR MODEL CWN1795-F9 COPPER-FIN GAS FIRED COMMERCIAL WATER HEATER, 1,795,000 BTU INPUT TO PRODUCE 1767 GALLONS PER HOUR OF HOT WATER AT 100° RISE. WATER HEATER SHALL INCLUDE A FLOW SWITCH, MANUAL RESET HIGH LIMIT AND A B&G MODEL 60-B145 RATED FOR 90 GPM @ 15' TDH TO CIRCULATE BETWEEN HEATER AND TANK. PROVIDE (2) TWO LOCHINVAR MODEL RGA432, 432 GALLON CAPACITY LOCK TEMP JACKETED AND INSULATED GLASSLINED STORAGE TANK. 5 YEAR LIMITED WARRANTY ON STORAGE AGAINST TANK FAILURE. WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE SECTIONS 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION.



# 2 WASHER CONN. BOX DETAIL

NO SCALE

## PLUMBING SYMBOLS LEGEND

- ⊕ FLOOR DRAIN
- ⊙ HOSE BIBB
- ⊖ CLEANOUT
- ⊕ RELIEF VALVE
- ⊕ AIR CHAMBER
- ⊕ UNION
- ⊕ SOIL OR WASTE LINE
- ⊕ SANITARY VENT LINE
- ⊕ DOMESTIC COLD WATER
- ⊕ DOMESTIC HOT WATER
- ⊕ DOMESTIC WATER RECIRCULATION
- ⊕ PRESSURE & TEMP. RELIEF LINE
- ⊕ CONDENSATE DRAIN LINE
- ⊕ RAIN WATER LEADER
- ⊕ GAS LINE
- ⊕ SAFEWASTE LINE
- ⊕ FIRE PROTECTION
- ⊕ SHUT OFF VALVE
- ⊕ SAFEPAN LINE
- ⊕ FIRE SPRINKLER HEAD
- ⊕ PIPE TURN UP
- ⊕ PIPE TURN DOWN
- ⊕ P-TRAP