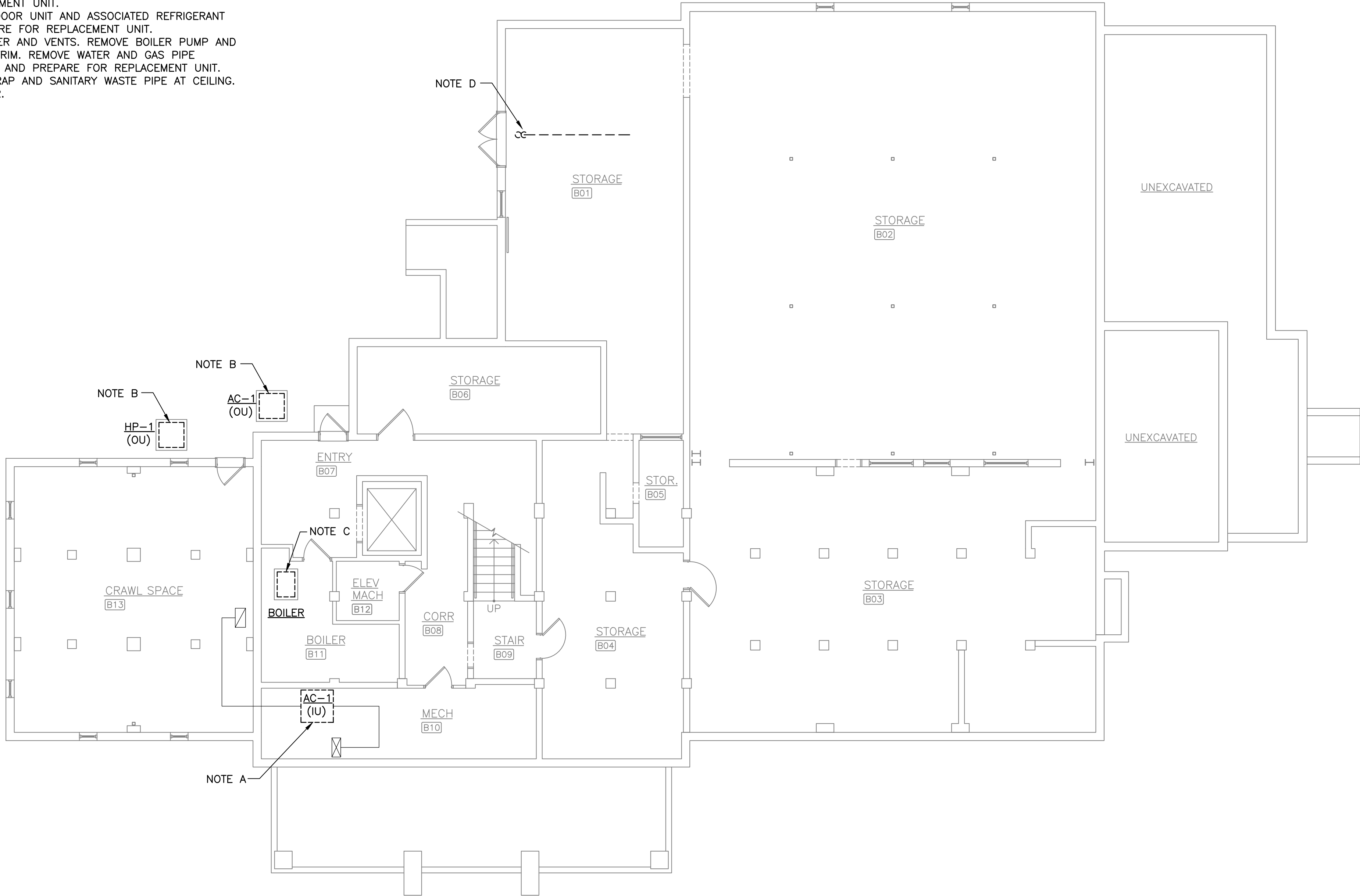


DEMO NOTES THIS SHEET

- A. REMOVE AIR HANDLING UNIT AND HEATING COIL. REMOVE DUCT, PIPE, AND CONTROL CONNECTIONS AND PREPARE FOR REPLACEMENT UNIT.  
B. REMOVE OUTDOOR UNIT AND ASSOCIATED REFRIGERANT LINES. PREPARE FOR REPLACEMENT UNIT.  
C. REMOVE BOILER AND VENTS. REMOVE BOILER PUMP AND ASSOCIATED TRIM. REMOVE WATER AND GAS PIPE CONNECTIONS AND PREPARE FOR REPLACEMENT UNIT.  
D. REMOVE P-TRAP AND SANITARY WASTE PIPE AT CEILING. CAP AT RISER.



BASEMENT PLAN – MECHANICAL DEMOLITION

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

DATE: JUNE 20, 2025

REVISIONS	Δ	
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Renovations to  
**THE VINTON WAR MEMORIAL**  
814 E Washington Ave Vinton, Virginia 24179

DRAWN BY: DAR  
CHECKED BY: JMM

BASEMENT  
PLAN -  
MECHANICAL  
DEMOLITION

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540-344-5515

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Lic. No. 21023  
6-20-25  
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FIRST FLOOR  
PLAN -  
MECHANICAL  
DEMOLITION

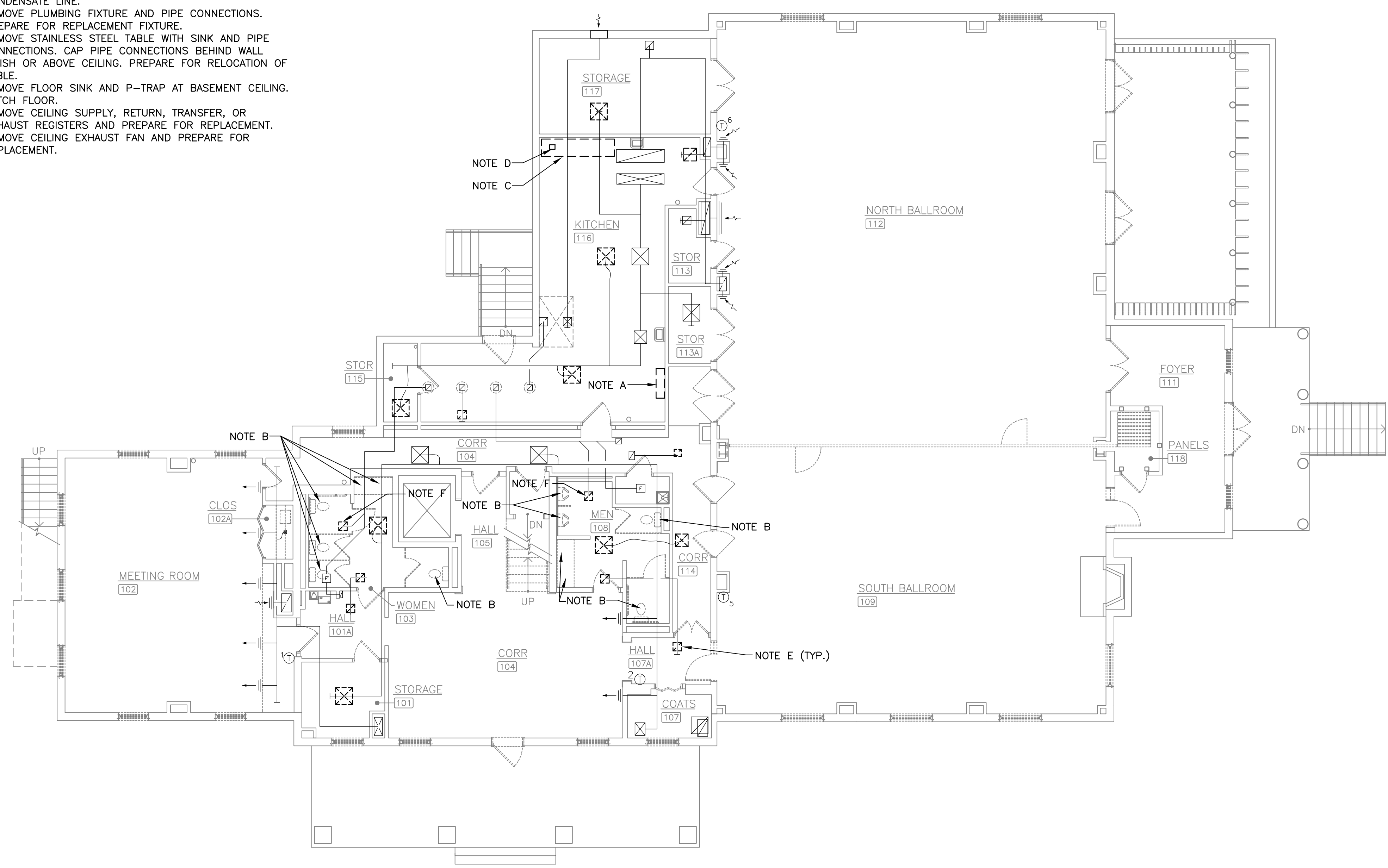
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DEMO NOTES THIS SHEET

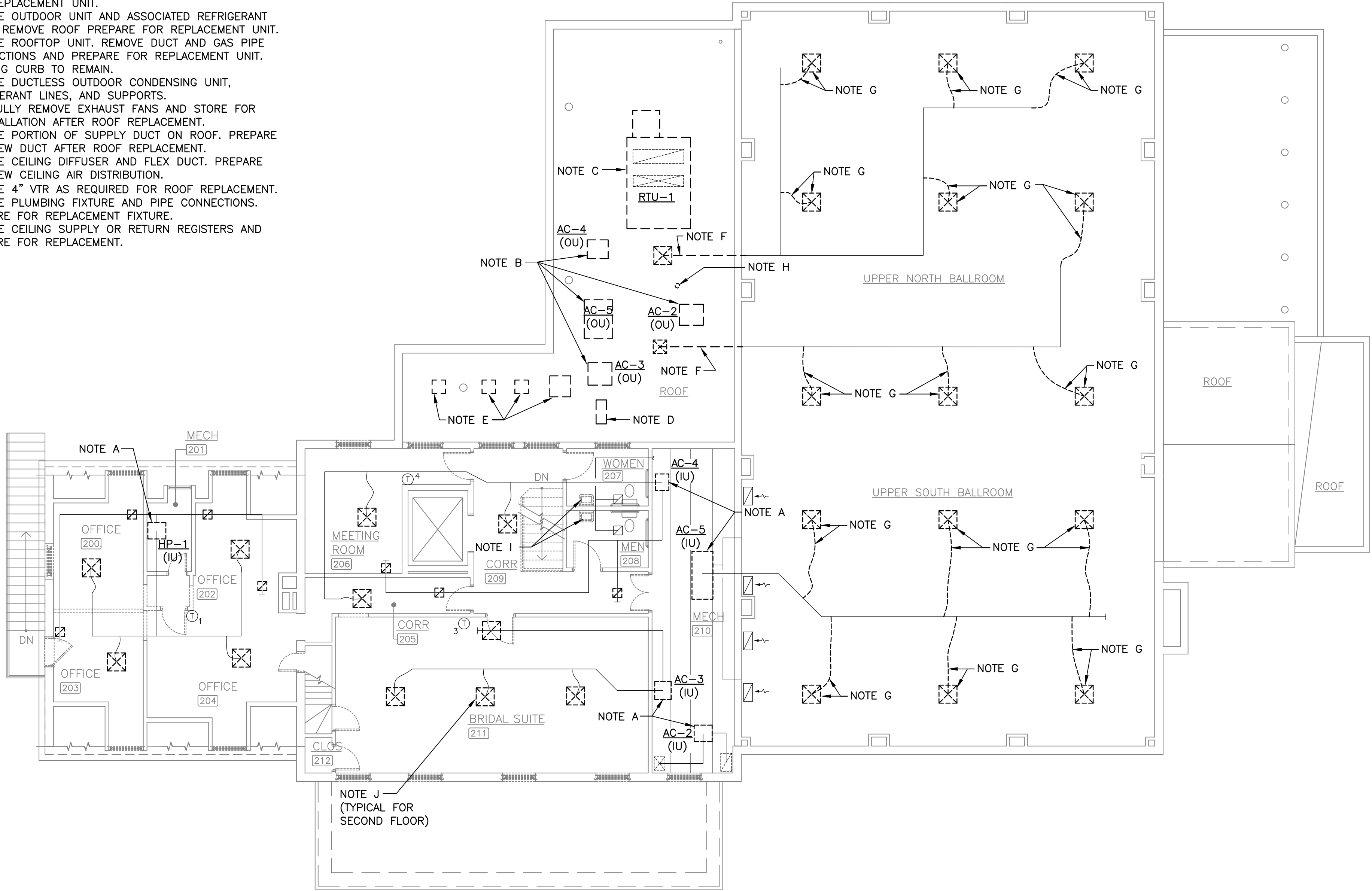
- A. REMOVE WALL MOUNTED DUCTLESS UNIT, CONTROLS, AND CONDENSATE LINE.
- B. REMOVE PLUMBING FIXTURE AND PIPE CONNECTIONS. PREPARE FOR REPLACEMENT FIXTURE.
- C. REMOVE STAINLESS STEEL TABLE WITH SINK AND PIPE CONNECTIONS. CAP PIPE CONNECTIONS BEHIND WALL FINISH OR ABOVE CEILING. PREPARE FOR RELOCATION OF TABLE.
- D. REMOVE FLOOR SINK AND P-TRAP AT BASEMENT CEILING. PATCH FLOOR.
- E. REMOVE CEILING SUPPLY, RETURN, TRANSFER, OR EXHAUST REGISTERS AND PREPARE FOR REPLACEMENT.
- F. REMOVE CEILING EXHAUST FAN AND PREPARE FOR REPLACEMENT.



FIRST FLOOR PLAN – MECHANICAL DEMOLITION  
SCALE: 1/8" = 1'-0"

DEMO NOTES THIS SHEET

- A. REMOVE AIR HANDLING UNIT AND HEATING COIL. REMOVE DUCT, PIPE, AND CONTROL CONNECTIONS AND PREPARE FOR REPLACEMENT UNIT.
- B. REMOVE OUTDOOR UNIT AND ASSOCIATED REFRIGERANT LINES. REMOVE ROOF. PREPARE FOR REPLACEMENT UNIT.
- C. REMOVE ROOFTOP UNIT. REMOVE DUCT AND GAS PIPE CONNECTIONS AND PREPARE FOR REPLACEMENT UNIT. EXISTING CURB TO REMAIN.
- D. REMOVE DUCTLESS OUTDOOR CONDENSING UNIT, REFRIGERANT LINES, AND SUPPORTS.
- E. CAREFULLY REMOVE EXHAUST FANS AND STORE FOR REINSTALLATION AFTER ROOF REPLACEMENT.
- F. REMOVE PORTION OF SUPPLY DUCT ON ROOF. PREPARE FOR NEW DUCT AFTER ROOF REPLACEMENT.
- G. REMOVE CEILING DIFFUSER AND FLEX DUCT. PREPARE FOR NEW CEILING AIR DISTRIBUTION.
- H. REMOVE 4" VTR AS REQUIRED FOR ROOF REPLACEMENT.
- I. REMOVE PLUMBING FIXTURE AND PIPE CONNECTIONS. PREPARE FOR REPLACEMENT FIXTURE.
- J. REMOVE CEILING SUPPLY OR RETURN REGISTERS AND PREPARE FOR REPLACEMENT.



SECOND FLOOR PLAN – MECHANICAL DEMOLITION

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

DATE: JUNE 20, 2025

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SECOND FLOOR  
PLAN -  
MECHANICAL  
DEMOLITION

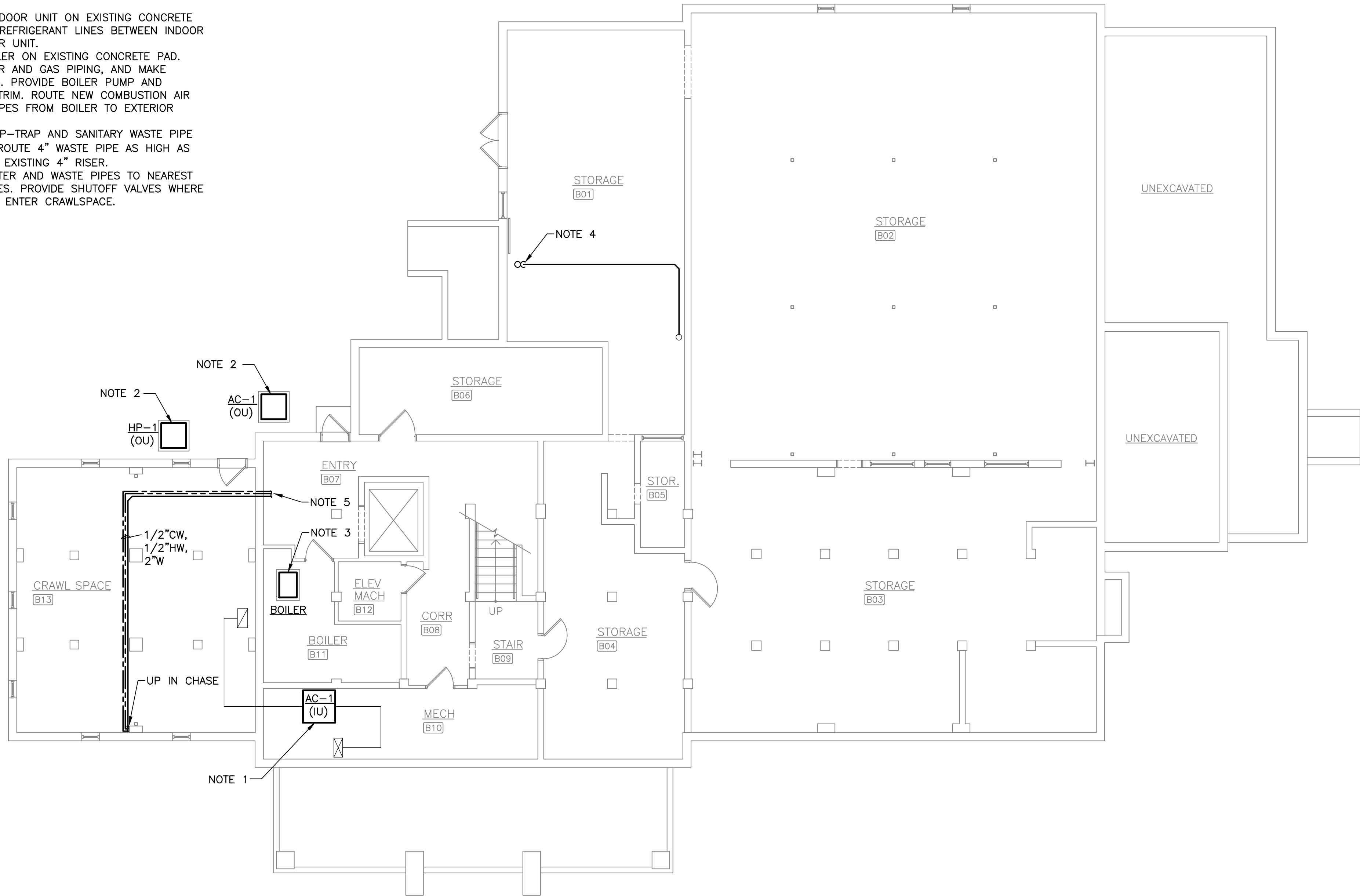
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NOTES THIS SHEET

1. PROVIDE HORIZONTAL AIR HANDLING UNIT. MODIFY DUCTWORK AND PIPING, AND MAKE CONNECTIONS TO UNIT.
2. PROVIDE OUTDOOR UNIT ON EXISTING CONCRETE PAD. ROUTE REFRIGERANT LINES BETWEEN INDOOR AND OUTDOOR UNIT.
3. PROVIDE BOILER ON EXISTING CONCRETE PAD. MODIFY WATER AND GAS PIPING, AND MAKE CONNECTIONS. PROVIDE BOILER PUMP AND ASSOCIATED TRIM. ROUTE NEW COMBUSTION AIR AND VENT PIPES FROM BOILER TO EXTERIOR WALL.
4. FLOOR SINK P-TRAP AND SANITARY WASTE PIPE AT CEILING. ROUTE 4" WASTE PIPE AS HIGH AS POSSIBLE TO EXISTING 4" RISER.
5. CONNECT WATER AND WASTE PIPES TO NEAREST EXISTING PIPES. PROVIDE SHUTOFF VALVES WHERE WATER PIPES ENTER CRAWLSPACE.



BASEMENT PLAN – MECHANICAL

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

DATE: JUNE 20, 2025

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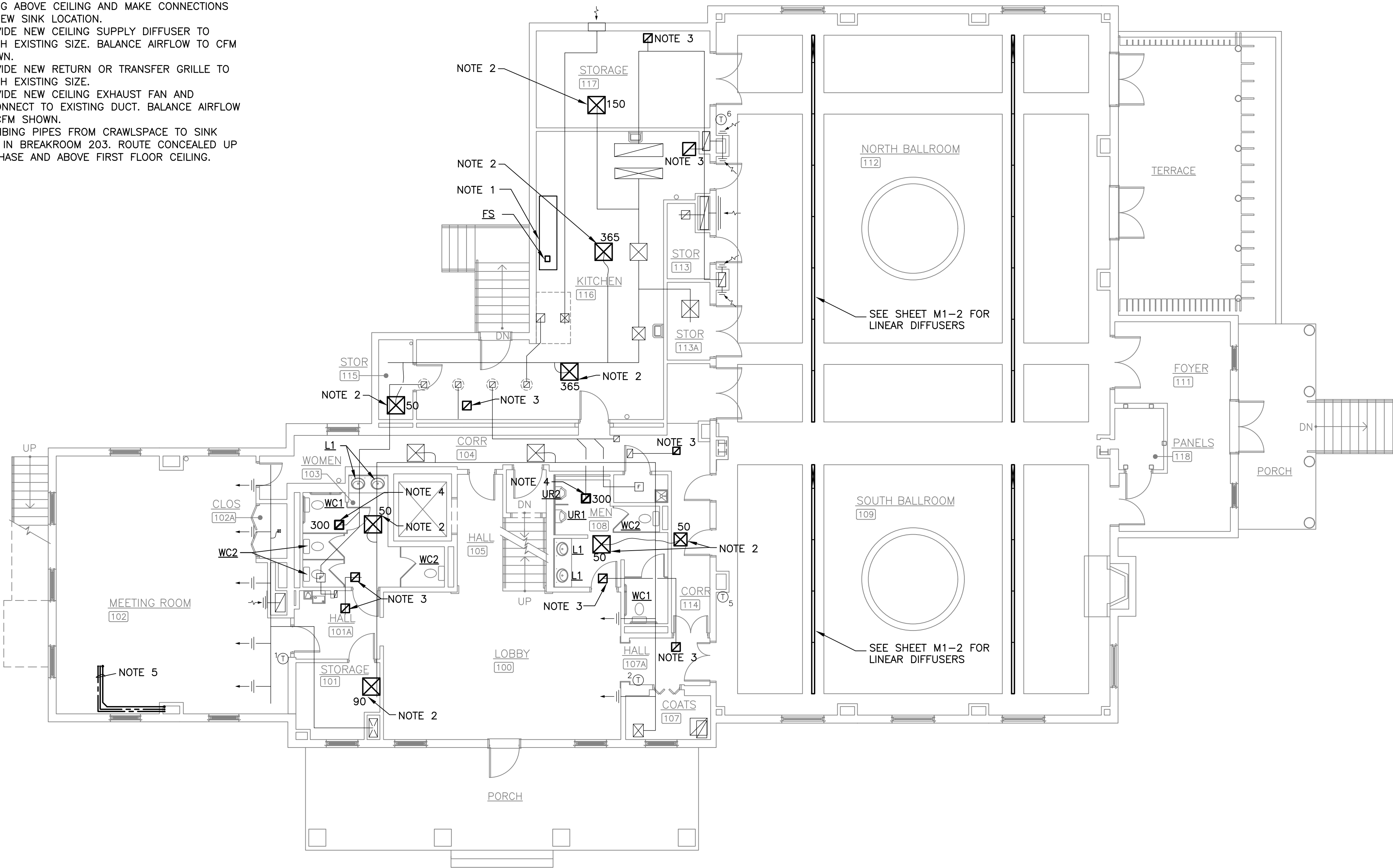
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FIRST FLOOR  
PLAN -  
MECHANICAL

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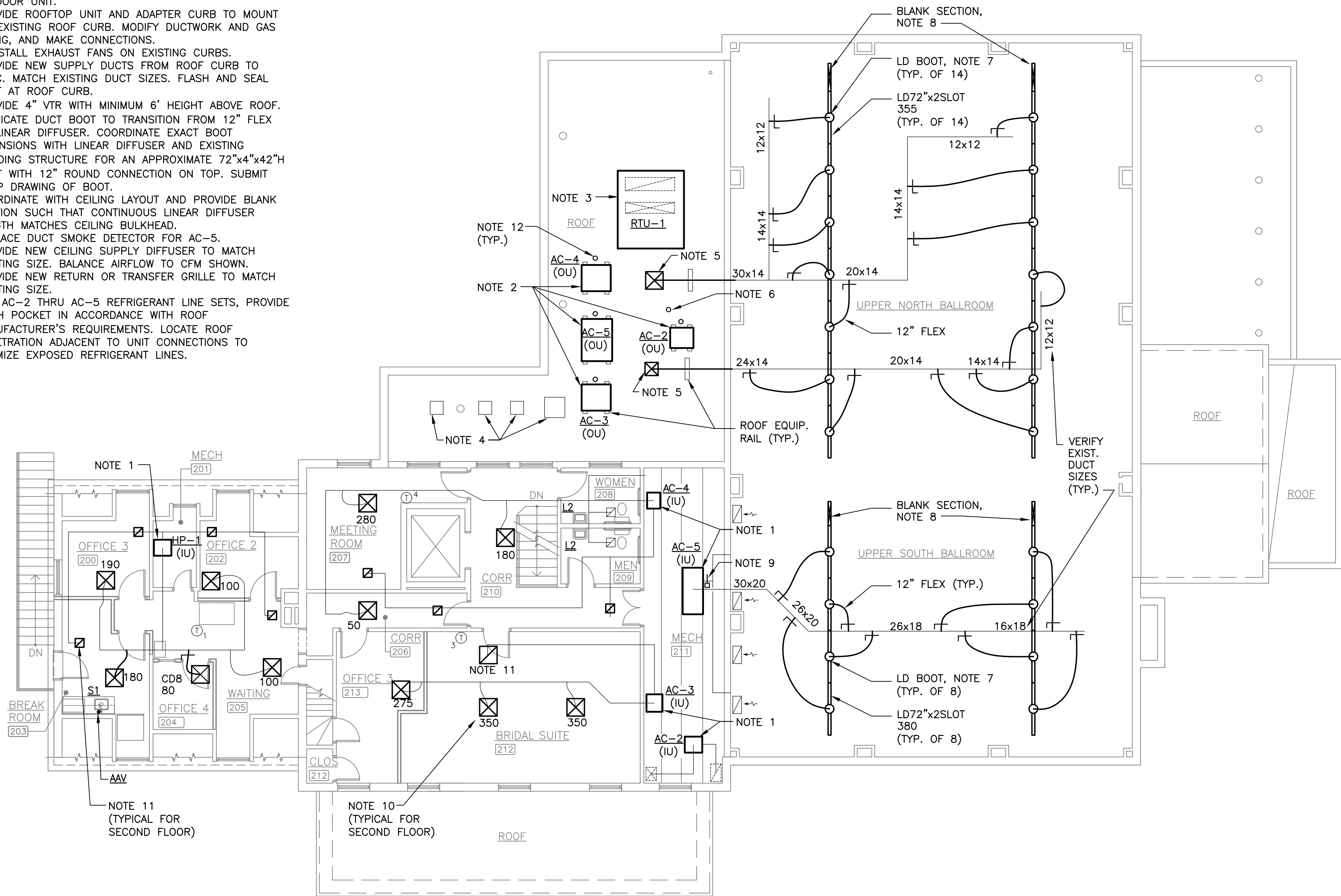
1. RELOCATED STAINLESS STEEL TABLE AND SINK. CONNECT TO EXISTING COLD AND HOT WATER PIPING ABOVE CEILING AND MAKE CONNECTIONS AT NEW SINK LOCATION.
2. PROVIDE NEW CEILING SUPPLY DIFFUSER TO MATCH EXISTING SIZE. BALANCE AIRFLOW TO CFM SHOWN.
3. PROVIDE NEW RETURN OR TRANSFER GRILLE TO MATCH EXISTING SIZE.
4. PROVIDE NEW CEILING EXHAUST FAN AND RECONNECT TO EXISTING DUCT. BALANCE AIRFLOW TO CFM SHOWN.
5. PLUMBING PIPES FROM CRAWLSPACE TO SINK S-1 IN BREAKROOM 203. ROUTE CONCEALED UP IN CHASE AND ABOVE FIRST FLOOR CEILING.



FIRST FLOOR PLAN – MECHANICAL

NOTES THIS SHEET

1. PROVIDE VERTICAL AIR HANDLING UNIT. MODIFY DUCTWORK AND PIPING, AND MAKE CONNECTIONS TO UNIT.
2. PROVIDE OUTDOOR UNIT ON NEW ROOF EQUIPMENT RAIL. ROUTE REFRIGERANT LINES BETWEEN INDOOR AND OUTDOOR UNIT.
3. PROVIDE ROOFTOP UNIT AND ADAPTER CURB TO MOUNT ON EXISTING ROOF CURB. MODIFY DUCTWORK AND GAS PIPING, AND MAKE CONNECTIONS.
4. REINSTALL EXHAUST FANS ON EXISTING CURBS.
5. PROVIDE NEW SUPPLY DUCTS FROM ROOF CURB TO ATTIC. MATCH EXISTING DUCT SIZES. FLASH AND SEAL DUCT AT ROOF CURB.
6. PROVIDE 4" VTR WITH MINIMUM 6' HEIGHT ABOVE ROOF.
7. FABRICATE DUCT BOOT TO TRANSITION FROM 12" FLEX TO LINEAR DIFFUSER. COORDINATE EXACT BOOT DIMENSIONS WITH LINEAR DIFFUSER AND EXISTING BUILDING STRUCTURE FOR AN APPROXIMATE 72"x4"x42"H BOOT WITH 12" ROUND CONNECTION ON TOP. SUBMIT SHOP DRAWING OF BOOT.
8. COORDINATE WITH CEILING LAYOUT AND PROVIDE BLANK SECTION SUCH THAT CONTINUOUS LINEAR DIFFUSER LENGTH MATCHES CEILING BULKHEAD.
9. REPLACE DUCT SMOKE DETECTOR FOR AC-5.
10. PROVIDE NEW CEILING SUPPLY DIFFUSER TO MATCH EXISTING SIZE. BALANCE AIRFLOW TO CFM SHOWN.
11. PROVIDE NEW RETURN OR TRANSFER GRILLE TO MATCH EXISTING SIZE.
12. FOR AC-2 THRU AC-5 REFRIGERANT LINE SETS, PROVIDE PITCH POCKET IN ACCORDANCE WITH ROOF MANUFACTURER'S REQUIREMENTS. LOCATE ROOF PENETRATION ADJACENT TO UNIT CONNECTIONS TO MINIMIZE EXPOSED REFRIGERANT LINES.



SECOND FLOOR PLAN – MECHANICAL

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

DATE: JUNE 20, 2025

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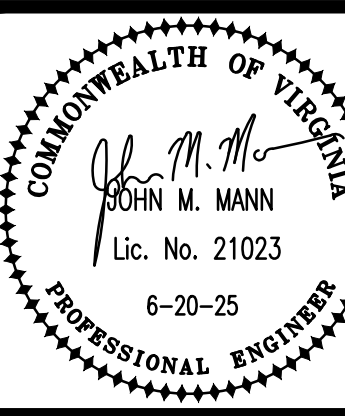
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SECOND FLOOR  
PLAN -  
MECHANICAL

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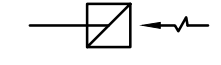

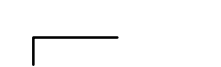
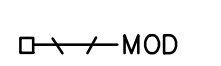


SPLIT–SYSTEM AIR CONDITIONING UNITS																		
UNIT	SUPPLY FAN				AH ELECTRICAL		COOLING		CONDENSING UNIT ELEC.				HYDRONIC HEATING			SELECTION BASED ON LENNOX	AREA SERVED	NOTES
	SUPPLY CFM	OUTSIDE AIR (CFM)	ESP (IN. WATER)	MOTOR HP	VOLTAGE	MCA/MOP	TOTAL (MBH)	SENSIBLE (MBH)	COMPRESSOR	VOLTAGE	PHASE	MCA/MOP	CAPACITY MBH	FLOW RATE GPM	MAX. P.D. FT. H2O			
AC–1	1400	140/450	0.5	1.0	208/1	10/15	49.3	36.0	2–STAGE	208	1	24.0/40	65	5.0	6.0	CBK48MVT–048 / ML17KC2–048	MEETING ROOM	1 THRU 9
AC–2	1200	150	0.5	1/2	208/1	5/15	35.4	26.3	VARIABLE	208	1	22.0/25	45	3.0	6.0	CBK48MVT–036 / SL25KCV–036	LOBBY	1 THRU 10
AC–3	1000	100/320	0.5	1/2	208/1	5/15	35.4	26.3	VARIABLE	208	1	22.0/25	45	3.0	6.0	CBK48MVT–036 / SL25KCV–036	MEETING A	1 THRU 10
AC–4	600	80	0.5	1/2	208/1	5/15	23.2	17.7	VARIABLE	208	1	14.0/20	31	2.5	6.0	CBK48MVT–018/024 / SL25KCV–024	MEETING B	1 THRU 10
AC–5	3200	200/1250	1.0	3.0	208/3	14/20	115.8	83.4	2–STAGE	208	3	49.0/80	160	13.0	6.0	EL120KASD / EL120KCSST	SOUTH BALLROOM	1 THRU 10, 12
HP–1	700	60	0.5	1/2	208/1	41/45 NOTE 11	24.0	18.0	VARIABLE	208	1	16.0/25	SEE NOTE 11 FOR HEATER			CBK48MVT–018/024 / SL22KVL–024	OFFICES	1 THRU 8, 11

- SCHEDULE NOTES:
- AIR HANDLER, ECM MOTOR, DX COIL, COPPER TUBES, ALUMINUM FINS. TXV REFRIGERANT METERING DEVICE, SLOPED CONDENSATE PAN.
  - AIR CONDITIONING UNIT: VARIABLE OR TWO–STAGE COMPRESSOR, MATCHED WITH INDOOR COIL, R–454B REFRIGERANT.
  - PROVIDE LOW AMBIENT COOLING ACCESSORIES FOR COOLING DOWN TO 30F AMBIENT.
  - RATED AT ENTERING AIR TEMPERATURES OF 80°F/67°F COOLING AND 70°F HEATING.
  - COORDINATE THERMOSTAT CONTROLLER WITH DELTA HVAC CONTROLS.
  - PROVIDE MANUFACTURER’S PREFABRICATED FILTER FRAME FOR 1” PLEATED FILTER.
  - PROVIDE CONDENSATE OVERFLOW DETECTION SWITCH IN SECONDARY DRAIN CONNECTION TO DE–ENERGIZE AIR HANDLER.
  - AIR HANDLER TO BE VERTICAL CONFIGURATION, EXCEPT AH–1 TO BE HORIZONTAL..
  - MANUFACTURER’S HYDRONIC HEATING COIL ON AH OUTLET, 0.2” APD, 180F EWT, COPPER TUBES, ALUMINUM FINS.
  - PROVIDE ROOF EQUIPMENT RAILS TO SUPPORT OUTDOOR CONDENSING UNIT.
  - HEAT PUMP SPLIT–SYSTEM. AIR HANDLER WITH 8 KW SUPPLEMENTAL HEATER AND SINGLE–POINT ELECTRICAL CONNECTION.
  - RETURN AIR DUCT SMOKE DETECTOR TO DEENERGIZE UNIT.

ROOF TOP UNIT SCHEDULE (RTU)																				
UNIT	CFM	OUTSIDE AIR CFM	EXT. SP (IN WG)	SUPPLY FAN		COOLING CAPACITY				GAS HEATING CAPACITY		COMPRESSOR DATA			ELECTRICAL MCA/MOP	EFFICIENCY EER/IEER	SELECTION BASED ON LENNOX	AREA SERVED	NOTES	EST. UNIT WEIGHT LBS.
				FAN RPM	HP	TOTAL MBH	SENSIBLE MBH	EAT		INPUT MBH	OUTPUT MBH	QTY. – TYPE	V	PH						
								DB °F	WB °F											
AC–6	6000	400/1900	1.0	890 VFD	5.0	177	135	80	67	260/169	210/137	3 SINGLE–STAGE	208	3	68/80	10.8/14.0	LGX–180	NORTH BALLROOM	1 THRU 10	2300

- SCHEDULE NOTES:
- LENNOX XION COMMERCIAL PACKAGED ROOFTOP UNIT, UL LISTED, SCROLL COMPRESSORS, R–454B REFRIGERANT, MULTI–STAGE BELT DRIVE FAN, INSULATED CABINET, ASHRAE 90.1 COMPLIANT, MERV 8 FILTER.
  - NATURAL GAS HEATER, TWO–STAGE.
  - HUMIDITROL DEHUMIDIFICATION SYSTEM WITH HOT GAS REHEAT COIL.
  - LOW AMBIENT CONTROL KIT.
  - 2–STAGE HEAT, 2–STAGE COOL, DEHUMIDIFICATION, BACNET CONTROLLER FOR CONNECTION TO DELTA HVAC CONTROLS.
  - COMPARATIVE ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF.
  - RETURN AIR DUCT SMOKE DETECTOR TO DEENERGIZE UNIT.
  - REFRIGERANT DETECTION SYSTEM.
  - COORDINATE WITH EXISTING ROOF OPENING AND PROVIDE ADDITIONAL SUPPORT STRUCTURE AND/OR INSULATED ADAPTER CURB.
  - VFD MANUAL BYPASS KIT.

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
	9" CEILING DIFFUSER SUPPLYING 200 CFM
	RETURN OR EXHAUST REGISTER OR GRILLE
	THERMOSTAT OR SENSOR, 48" AFF
	MANUAL VOLUME DAMPER
	MOTOR OPERATED DAMPER
CD	CEILING DIFFUSER
LD	LINEAR DIFFUSER
AC (IU)	AIR CONDITIONER INDOOR UNIT
AC (OU)	AIR CONDITIONER OUTDOOR UNIT
HP	HEAT PUMP UNIT

## BOILER

BOILER: LOCHINVAR KNIGHT XL MODEL KBX0500N, 500 MBH INPUT, 485 MBH OUTPUT, 97% EFFICIENCY, MODULATING BURNER WITH 10:1 TURNDOWN, 120V 3.1FLA 3.9MCA, STAINLESS STEEL WATER TUBE HEAT EXCHANGER, LCD DISPLAY, BACNET CONTROLS FOR CONNECTION TO EXISTING DELTA CONTROLLER.  
PROVIDE MANUFACTURER’S RECOMMENDED BOILER PUMP AND PIPING TRIM: TACO MODEL 2400–70–3P, 120V 1/2 HP. TRIM TO INCLUDE STRAINER, GAGES, CHECK VALVE, RELIEF VALVE, AND SYSTEM SENSOR. PROVIDE OUTDOOR AIR SENSOR AND OUTDOOR AIR RESET CONTROL. PROVIDE CONDENSATE NEUTRALIZATION KIT.

## CEILING EXHAUST FAN

BATHROOM CEILING EXHAUST FAN: REPLACE CEILING EXHAUST FAN IN WOMEN 103 AND MEN 108, 300 CFM, 0.25”ESP, EC MOTOR, WHITE EXHAUST GRILLE, VARIABLE SPEED CONTROLLER, 2.0 MAX SONES.

## MECHANICAL OUTLINE SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR EQUIPMENT AND DEVICES.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.
- MECHANICAL EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY AND FIVE YEAR COMPRESSOR WARRANTY.
- DRAWINGS INDICATE GENERAL LAYOUT OF PIPING, DUCTWORK AND EQUIPMENT. THE CONTRACTOR SHALL INVESTIGATE ALL STRUCTURAL, ELECTRICAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE THE MECHANICAL WORK ACCORDINGLY. PROVIDE ADDITIONAL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED TO PROPERLY COMPLETE THE WORK, WHETHER OR NOT SUCH COMPONENTS ARE INDICATED ON THE DRAWINGS.
- ALL WORK SHALL BE NEW AND IS INCLUDED IN THE CONTRACT UNLESS SPECIFICALLY NOTED TO BE EXISTING OR NOT IN CONTRACT.
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT.
- MOST EXISTING DUCTWORK AND PIPING IS NOT SHOWN ON THESE DRAWINGS. WHERE EXISTING DUCTWORK AND PIPING IS SHOWN, IT IS FOR INFORMATION PURPOSES AND IS BASED ON EXISTING RECORDS. VERIFY EXISTING CONSTRUCTION IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. IF EXISTING DUCTWORK OR PIPING ARE SMALLER THAN INDICATED SIZE, NOTIFY THE A/E IMMEDIATELY.
- IN ADDITION TO DEMOLITION WORK INDICATED, PROVIDE MISCELLANEOUS SELECTIVE DEMOLITION OF EXISTING CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION OF THE PROPOSED CONSTRUCTION. REMOVE ALL COMPONENTS WHICH ARE NOT REQUIRED FOR THE PROPOSED CONSTRUCTION, INCLUDING HANGERS, ANCHORS, MOUNTING BRACKETS, AND OTHER MISCELLANEOUS COMPONENTS. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL MISCELLANEOUS DEMOLITION.
- CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
- COORDINATE ALL WORK WITH FIRE RATED ASSEMBLIES. PROVIDE FIRESTOPPING AT PENETRATIONS OF RATED ASSEMBLIES AND AT FLOORS. SEAL AIRTIGHT ALL PIPE AND DUCT PENETRATIONS OF NON–RATED ASSEMBLIES. ALL MATERIALS LOCATED IN RETURN AIR PLENUMS SHALL BE LISTED FOR INSTALLATION IN PLENUMS.
- COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
- PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
- METAL ACCESS DOORS SHALL BE PROVIDED AS REQUIRED FOR ALL COMPONENTS REQUIRING ACCESS. COORDINATE LOCATIONS WHERE ACCESS DOORS WILL BE REQUIRED FOR VALVES, DAMPERS, SENSORS OR OTHER DEVICES.
- GALVANIZED SHEET METAL DUCTWORK CONSTRUCTION SHALL COMPLY WITH SMACNA STANDARDS WITH TURNING VANES OR LONG RADIUS ELBOWS AND MANUAL DAMPERS FOR BALANCING. INDICATED DUCT SIZES ARE INTERIOR AIRFLOW DIMENSIONS AND SHEET METAL SIZE MUST BE INCREASED ACCORDINGLY WHERE DUCT LINER IS SPECIFIED TO BE USED. AT EACH TAKEOFF TO A SUPPLY DIFFUSER, PROVIDE LOW–LOSS CONICAL OR TAPERED 45 DEGREE RECTANGULAR BRANCH TAKEOFF WITH MANUAL DAMPER. MANUAL VOLUME DAMPER TO HAVE LOCKING HANDLE WITH EXTENDED SHAFT AND STANDOFF FOR INSULATION THICKNESS. DUCTS SHALL BE FASTENED AND SEALED PER MECHANICAL CODE AND ENERGY CODE FOR 2.0 INCHES STATIC PRESSURE AND SMACNA SEAL CLASS A.
- INSULATE ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK. INSULATE TOP OF SUPPLY AIR CEILING DIFFUSERS. SEAL ALL INSULATION JOINTS VAPOR TIGHT. INSULATE WITH FIBERGLASS DUCT WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, MINIMUM INSTALLED R6. DUCTWORK IN ATTIC AND CRAWL SPACE SHALL HAVE MINIMUM INSTALLED R8 INSULATION PER ENERGY CODE. INSULATE EXTERIOR DUCTS WITH 6 LBS/CUFT RIGID DUCT INSULATION, MINIMUM R8, AND COVER WITH WATERTIGHT ALUMINUM SHEET METAL JACKET.
- FLEXIBLE DUCTS SHALL HAVE STEEL WIRE HELIX REINFORCEMENT, CONTINUOUS INNER LINER, R6 (R8 FOR ATTICS) FIBERGLASS INSULATION AND OUTER JACKET TO COMPLY WITH UL 181, CLASS 1. DIAMETER OF FLEX DUCT SHALL MATCH DIFFUSER INLET SIZE. SUPPORT EVERY FOUR FEET WITH MAXIMUM OF 1” SAG. MAXIMUM LENGTH IS EIGHT FEET.
- CEILING DIFFUSERS LAY–IN (CD) AND CEILING DIFFUSERS SURFACE MOUNT (CDS) TO HAVE FLUSH FACE LOUVERS, EXTRUDED ALUMINUM WITH ALUMINUM DAMPER, KRUEGER 55HR SERIES FOR LAY–IN CEILING, FOUR WAY THROW UNLESS INDICATED OTHERWISE. LINEAR DIFFUSERS (LD) TO BE ALUMINUM KRUEGER MODEL 1900 SERIES WITH MUD FLANGE FRAME FOR FRAMELESS APPEARANCE, LENGTH AND NUMBER OF SLOTS AS INDICATED, 1” SLOT WIDTH, VERTICAL/HORIZONTAL THROW ADJUSTMENT, CONCEALED MOUNTING, WHITE FINISH FOR FIELD PAINTING, INACTIVE BLANK SECTION AND END CAPS FOR CONTINUOUS INSTALLATION, VISIBLE INTERIOR COMPONENTS SHALL HAVE BLACK FINISH, CUSTOM FABRICATED INSULATED SUPPLY BOOT WITH TOP INLET. RETURN GRILLES IN BALLROOMS SHALL BE REPLACED WITH CUSTOM GRILLES.
- PRIOR TO CEILING REMOVAL, VERIFY EXISTING CEILING AIR DEVICE SIZE AND TYPE. PROVIDE REPLACEMENT CEILING DIFFUSERS AND GRILLES AS SPECIFIED ABOVE.
- PROVIDE IDENTIFICATION MARKINGS FOR EQUIPMENT, PIPING AND CONTROLS. NAMEPLATES SHALL BE PLASTIC LAMINATE WITH 1/4” LETTERS.
- CONDENSATE LINES TO BE PVC WITH TRAP AND CLEANOUT TEE AT COOLING COIL. INSULATE WITH 3/4” PIPE WRAP. ROUTE TO NEAREST FLOOR DRAIN OR SERVICE SINK AND TERMINATE WITH AIR GAP FOR AN INDIRECT CONNECTION.
- REFRIGERANT LINES SHALL BE COPPER TUBING SIZED PER MANUFACTURER’S INSTRUCTIONS. SUPPORT LINES ON ROOF WITH CADDY PYRAMID PIPE SUPPORT BY NVENT. INSULATE REFRIGERANT LINES PER ENERGY CODE WITH THICKNESS BASED ON LINE SIZE AND MAXIMUM LINE TEMPERATURE, 1” MINIMUM THICKNESS. INSULATE WITH FLEXIBLE ELASTOMERIC CELLULAR INSULATION, SEAL JOINTS WITH VAPOR BARRIER MASTIC. INSULATION SHALL BE CONTINUOUS AT HANGERS. APPLY TWO COATS OF UV RESISTANT PROTECTIVE FINISH ON EXTERIOR LINES. PROVIDE LOCKING CAPS ON ALL REFRIGERANT SERVICE VALVES.
- HEATING WATER PIPING SHALL BE ASTM 88, TYPE L COPPER TUBING WITH SOLDERED FITTINGS. INSTALL PIPING, HANGERS AND SUPPORTS PER ASME B31.9 AND VMC TABLE 305.4. PROVIDE MANUAL AIR VENTS AT HIGH POINTS, DRAINS AT LOW POINTS. PROVIDE UNIONS AT ALL EQUIPMENT CONNECTIONS AND ON EACH SIDE OF CONTROL VALVES.
- INSULATE PIPING PER ENERGY CODE REQUIREMENTS WITH FIBERGLASS PIPE WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, K–VALUE OF 0.24. INSULATION SHALL BE CONTINUOUS AT HANGERS. PROVIDE GALVANIZED INSULATION SHIELDS FOR PIPES LARGER THAN 1” DIAMETER. HEATING WATER PIPING – 2” THICK. CONDENSATE DRAIN PIPING – 3/4” THICK. LABEL WITH PIPE MARKERS.
- ISOLATION VALVES FOR WATER PIPING LESS THAN 2” SHALL BE FULL PORT BRONZE BALL VALVES, MSS SP–110, RATED FOR 250 PSI AND 250 F, WITH LEVER HANDLE AND THREADED ENDS. SOLDERED ENDS SHALL NOT BE USED. VALVES FOR 2” AND LARGER PIPING SHALL BE FLANGED BUTTERFLY VALVES, HIGH PERFORMANCE TYPE.
- GOOSENECK DUCTS SHALL HAVE 135 DEGREE TURN AND TERMINATE WITH 1/2” GALVANIZED WIRE MESH A MINIMUM OF 12” ABOVE THE ROOF. PAINT GOOSENECK DUCT TO MATCH ADJACENT ROOF FINISH. PROVIDE ROOF CURB AND FLASHING FROM DUCT TO CURB. COORDINATE WITH ROOFER FOR FLASHING OF ROOF CURB.
- PROVIDE NEW FLEXIBLE CONNECTORS AT CONNECTION OF DUCTWORK TO AIR HANDLING EQUIPMENT.
- ROOF EQUIPMENT RAILS FOR OUTDOOR UNITS AND DUCTWORK TO BE EQUAL TO MODEL TEMS–3 BY THYBAR. PREFABRICATED, HEAVY 14 GAGE GALVANIZED CONSTRUCTION, 16” HEIGHT (12” MINIMUM HEIGHT ABOVE ROOF MEMBRANE), WOOD NAILER AND CONTINUOUS 18 GAGE COUNTER FLASHING COVER. LENGTH AS REQUIRED TO SPAN THREE ROOF JOISTS. COORDINATE WITH ROOFER AND ROOF MANUFACTURER FOR INSTALLATION REQUIREMENTS TO MAINTAIN ROOF WARRANTY.
- COMBUSTION AIR AND VENT PIPES SHALL BE SCHEDULE 40 PVC PIPE, SIZED PER BOILER MANUFACTURER AND TERMINATED WITH APPROVED WALL CAP.
- INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA MECHANICAL CODE, TABLE 305.4.
- DUCT SMOKE DETECTOR IN MAIN RETURN DUCT OF AIR HANDLING SYSTEMS OF 2000 CFM OR GREATER. DETECTOR SHALL BE 24 VOLT TO DEENERGIZE FAN. PROVIDE SPARE CONTACTS FOR CONNECTION TO FIRE ALARM SYSTEM.
- TEST AND BALANCE ALL EQUIPMENT FOR PROPER OPERATION, AIRFLOW, CAPACITY, ACCEPTABLE SPACE TEMPERATURES AND NOISE LEVELS. MEASURE AND BALANCE AIR DISTRIBUTION SYSTEMS TO AIRFLOWS SHOWN ON THE PLANS. PERFORM TAB AND RECORD RESULTS PER AABC OR NEBB STANDARDS AND SUBMIT REPORT FOR REVIEW. INDEPENDENT AABC/NEBB CERTIFIED TAB CONTRACTOR SHALL BE USED.
- START–UP EQUIPMENT AND PERFORM FUNCTIONAL TEST IN HEATING AND COOLING MODES. PROGRAM THERMOSTATS AND INSTRUCT OWNER’S MAINTENANCE PERSONNEL ON THE OPERATION OF EQUIPMENT AND CONTROLS. PROVIDE FINAL FILTER CHANGE.

DATE: JUNE 20, 2025

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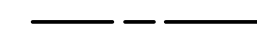


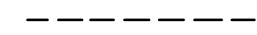
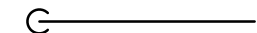
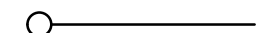
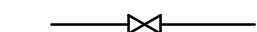




PLUMBING FIXTURE SCHEDULE <small>SEE FIXTURE SCHEDULE NOTE 1</small>										
MARK	DESCRIPTION	FIXTURE WASTE	VENT	C.W.	H.W.	MANUFACTURER	MODEL	CATALOG NO.	REMARKS	MTG HGT
WC1	WALL WATER CLOSET, FLUSH VALVE--ACCESSIBLE	4"	2"	1"	----	AMERICAN STANDARD	AFWALL	2257.101	WALL MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LA32 SENSOR TOILET FLUSH VALVE. VERIFY EXISTING CONDITIONS AND COMPATIBILITY WITH EXISTING CARRIER PRIOR TO ORDERING FIXTURE. SEE SCHEDULE NOTE 3.	16-1/2" TO RIM
WC2	WALL WATER CLOSET, FLUSH VALVE	4"	2"	1"	----	AMERICAN STANDARD	AFWALL	2257.101	WALL MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LA32 SENSOR TOILET FLUSH VALVE. VERIFY EXISTING CONDITIONS AND COMPATIBILITY WITH EXISTING CARRIER PRIOR TO ORDERING FIXTURE.	15" TO RIM
UR1	URINAL--ACCESSIBLE	2"	1-1/2"	3/4"	----	AMERICAN STANDARD	WASHBROOK	6590.001	TOTO ECOPOWER TEU1LA12 SENSOR URINAL FLUSH VALVE, 0.5 GPF, OVERRIDE BUTTON. PROVIDE FLOOR MOUNTED CARRIER.	17" TO RIM
UR2	URINAL	2"	1-1/2"	3/4"	----	AMERICAN STANDARD	WASHBROOK	6590.001	TOTO ECOPOWER TEU1LA12 SENSOR URINAL FLUSH VALVE, 0.5 GPF, OVERRIDE BUTTON. PROVIDE FLOOR MOUNTED CARRIER.	24" TO RIM
L1	OVAL UNDERMOUNT LAVATORY --ACCESSIBLE	1-1/2"	1-1/4	1/2"	1/2"	AMERICAN STANDARD	OVALYN	0496100.020	UNDERMOUNT WHITE OVAl LAVATORY, DELTA MODEL DSP-L-25892LF-CZ, CHAMPAGNE BRONZE FINISH, ARCADIA COLLECTION, TWO-HANDLE DECK MOUNT, THERMOSTATIC MIXING VALVE, 0.5 GPM AERATOR, OFFSET GRID DRAIN STRAINER, TRUBRO MODEL #102-Z WASTE & WATER PIPE INSULATION. ANGLE SUPPLIES & STOPS, SEE FIXTURE SCHEDULE NOTE 2.	COUNTER TOP, SEE ARCH.
L2	WALL LAVATORY --ACCESSIBLE	1-1/2"	1-1/4	1/2"	1/2"	KOHLER (ALTERNATE) (KOHLER)	MODERNLIFE (PINOIR)	K-77768-8-0 (K-2035-4)	WALL MOUNT WHITE LAVATORY, RECTANGULAR BASIN, DELTA MODEL DSP-L-25892LF-CZ, CHAMPAGNE BRONZE FINISH, ARCADIA COLLECTION, TWO-HANDLE DECK MOUNT, THERMOSTATIC MIXING VALVE, 0.5 GPM AERATOR, OFFSET GRID DRAIN STRAINER, TRUBRO MODEL #102-Z WASTE & WATER PIPE INSULATION. ANGLE SUPPLIES & STOPS, SEE FIXTURE SCHEDULE NOTE 2.	34" SEE ARCH.
S1	SINK, SINGLE BOWL ADA SIDE APPROACH	1-1/2"	1-1/4"	1/2"	1/2"	ELKAY	CROSSTOWN	ECTRU21179T	UNDERMOUNT STAINLESS STEEL BOWL, PROVIDE ELKAY FAUCET LK6000 WITH SINGLE HANDLE, PULL-DOWN SPRAYER, BASKET STRAINER, SUPPLIES & STOPS.	COUNTER TOP MOUNTED
FD	FLOOR DRAIN	2", 3"	----	----	----	JAY R. SMITH	----	2005	PROVIDE WITH ROUND BRONZE TOP. PROVIDE SURE SEAL TRAP SEAL.	----
FS	FLOOR SINK	4"	----	----	----	JAY R. SMITH	PVCEPTOR	305	12"x12" HALF GRATE AND DOME BOTTOM STRAINER, 200F MAXIMUM DRAIN WATER TEMPERATURE.	----

**FIXTURE SCHEDULE NOTES:**

- SUBMIT PLUMBING FIXTURE SHOP DRAWINGS FOR OWNER, ARCHITECT, INTERIOR DESIGNER, AND PLUMBING ENGINEER REVIEW AND APPROVAL. SEE ARCHITECTURAL DRAWINGS FOR INSTALLATION DETAILS, DIMENSIONS, AND CLEARANCES.
- PROVIDE THERMOSTATIC MIXING VALVE SET AT 109°F MAX., WILKINS MODEL ZW1070, ASSE 1070. MOUNTED BELOW FIXTURE. MOUNT HIGH UNDER LAVATORY TO CONCEAL FROM VIEW.
- INSTALL FLUSH VALVES TO MAINTAIN 1-1/2" MINIMUM CLEARANCE BELOW GRAB BAR.

**REPLACEMENT FIXTURES:**

VERIFY EXISTING CONDITIONS PRIOR TO ORDERING REPLACEMENT FIXTURES. PROVIDE ALL NEW TRIM TO INCLUDE P--TRAPS, FLEX SUPPLIES, STOP VALVE, ESCUTCHEONS, AND ASSOCIATED INSTALLATION COMPONENTS.

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	SANITARY PIPING
	VENT PIPING
	PIPE TURN DOWN
	PIPE TURN UP
	ISOLATION VALVE
	SANITARY WASTE PIPING
	COLD WATER
	HOT WATER
	AIR ADMITTANCE VALVE

## PLUMBING OUTLINE SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- ALL DOMESTIC WATER SYSTEM COMPONENTS, PIPING, FITTINGS, SOLDER, VALVES, FAUCETS, AND MATERIALS IN CONTACT WITH DRINKING WATER SHALL BE CERTIFIED LEAD-FREE TO MEET NSF/ANSI STANDARD 61/372 CONTAINING LESS THAN 0.25% LEAD BY WEIGHT.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR FIXTURES, EQUIPMENT AND DEVICES.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.
- PLUMBING EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY.
- DRAWINGS INDICATE GENERAL LAYOUT OF PIPING AND EQUIPMENT. COORDINATE INSTALLATION WITH OTHER TRADES AND PROVIDE ADDITIONAL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR CRITICAL INSTALLATION DIMENSIONS.
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT. VERIFY SITE CONDITIONS INCLUDING LOCATION FOR CONNECTIONS OF WATER AND SANITARY WASTE PIPING.
- MOST EXISTING PIPING IS NOT SHOWN ON THESE DRAWINGS. WHERE EXISTING PIPING IS SHOWN, IT IS FOR INFORMATION PURPOSES AND IS BASED ON EXISTING DRAWINGS. VERIFY EXISTING CONSTRUCTION IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. IF EXISTING PIPES ARE SMALLER THAN INDICATED SIZE, NOTIFY THE A/E IMMEDIATELY.
- IN ADDITION TO DEMOLITION WORK INDICATED, PROVIDE MISCELLANEOUS SELECTIVE DEMOLITION OF EXISTING CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION OF THE PROPOSED CONSTRUCTION. REMOVE ALL COMPONENTS WHICH ARE NOT REQUIRED FOR THE PROPOSED CONSTRUCTION INCLUDING HANGERS, ANCHORS, MOUNTING BRACKETS, AND OTHER MISCELLANEOUS COMPONENTS. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL MISCELLANEOUS DEMOLITION.
- CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
- COORDINATE ALL WORK WITH FIRE RATED ASSEMBLIES. PROVIDE FIRESTOPPING AT PENETRATIONS OF RATED ASSEMBLIES AND AT FLOORS. SEAL AIRTIGHT ALL PIPE AND DUCT PENETRATIONS OF NON-RATED ASSEMBLIES. ALL MATERIALS LOCATED IN RETURN AIR PLENUMS SHALL BE LISTED FOR INSTALLATION IN PLENUMS.
- COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
- PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
- MOUNT ALL EQUIPMENT PLUMB AND LEVEL WITH SUBSTANTIAL FASTENERS SUITABLE FOR THE LOAD. ALL COMPONENTS SHALL BE RIGIDLY ANCHORED FOR LONG LIFE UNDER HARD USE.
- METAL ACCESS DOORS SHALL BE PROVIDED AS REQUIRED FOR ALL COMPONENTS REQUIRING ACCESS. COORDINATE LOCATIONS WHERE ACCESS DOORS WILL BE REQUIRED FOR CLEANOUTS, VALVES, SHOCK ARRESTORS OR OTHER DEVICES.
- PROVIDE SLEEVES FOR ALL PIPE PENETRATIONS IN MASONRY WALLS AND CONCRETE. ANCHOR SLEEVES TO ADJACENT STRUCTURE. SLEEVE ALL PIPES AT FOOTINGS AND FOUNDATION WALLS.
- INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA PLUMBING CODE, TABLE 308.5.
- WATER PIPING, ABOVE GROUND: COPPER, TYPE L, ASTM B 88M, SOLDER FITTINGS. FLUSH CLEAN AND DISINFECT.
- SANITARY WASTE AND VENT PIPING, ABOVE GROUND: SCHEDULE 40 PVC, DWV, ASTM D2665. FITTINGS SHALL BE PVC WITH SOLVENT WELD JOINTS WITH ASTM D 2564 SOLVENT CEMENT.
- INSTALL CLEANOUTS IN ACCORDANCE WITH VIRGINIA PLUMBING CODE. CLEANOUTS SHALL BE SAME MATERIAL AS DRAIN PIPING. LOCATE AT CHANGES OF DIRECTION GREATER THAN 45 DEGREES IN HORIZONTAL RUNS, AT BASE OF STACKS, AND NEAR THE JUNCTION OF THE BUILDING DRAIN AND THE BUILDING SEWER.
- ISOLATION VALVES FOR WATER PIPING SHALL BE QUARTER TURN BALL VALVES, MSS SP-110, CLASS 150 WITH LEVER HANDLE AND THREADED ENDS. SOLDERED ENDS SHALL NOT BE USED.
- CIRCUIT SETTERS FOR HOT WATER RECIRCULATING SYSTEM SHALL BE B&G MODEL CB, BALANCING BALL VALVE WITH INTEGRAL VALVED READ-OUT PORTS, MEMORY STOP AND CALIBRATED NAMEPLATE. START-UP AND PERFORM FUNCTIONAL TESTING OF RECIRCULATING SYSTEM AND BALANCE WATER FLOW.
- PROVIDE ASSE 1072 SURESEAL TRAP SEALER IN ALL FLOOR DRAINS.
- AIR ADMITTANCE VALVES PER ASSE 1051 AND INSTALLED IN AN ACCESSIBLE AND VENTILATED LOCATION FOR PROPER OPERATION. LOCATE A MINIMUM OF 4" ABOVE FIXTURE DRAIN. AAV TO BE UL LISTED WHEN INSTALLED IN A RETURN AIR PLENUM.
- INSULATE ALL NEW AND DISTURBED EXISTING WATER PIPING WITH FIBERGLASS PIPE WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, K-VALUE OF 0.24. MINIMUM THICKNESS OF 1" THICKNESS FOR HOT WATER AND 1/2" FOR COLD WATER. SEAL COLD WATER PIPE INSULATION WITH VAPOR BARRIER MASTIC. INSULATION SHALL BE CONTINUOUS AT HANGERS. PROVIDE GALVANIZED INSULATION SHIELDS FOR PIPES LARGER THAN 1" DIAMETER.
- PLUMBING FIXTURES SHALL BE WHITE VITREOUS CHINA UNLESS INDICATED OTHERWISE AND SHALL BE IN COMPLIANCE WITH ASME 112.18, ASME A112.19.2 AND ANSI A117.1, AND MEET ADA REQUIREMENTS WHERE REQUIRED. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND CAULK TO WALL AND FLOOR SURFACES WITH COLOR TO MATCH FIXTURE. FURNISH AND INSTALL FIXTURES COMPLETE WITH ALL TRIM INCLUDING SUPPLIES, CHROME ESCUTCHEONS, WASTE AND VENT CONNECTIONS, FITTINGS, CARRIERS, HANGERS AND SUPPORTS. BOLT CAPS, FAUCETS, VALVES AND TRAPS. ALL TRIM SHALL BE BRASS WITH CHAMPAGNE BRONZE FINISH. TRAPS SHALL BE 17 GAUGE WITH CLEANOUT PLUG.
- WATER SUPPLY TO FIXTURES TO INCLUDE CHROME ESCUTCHEONS, ANGLE SUPPLY VALVE WITH QUARTER TURN HANDLE. FLEXIBLE SUPPLIES TO BE CHROME PLATED COPPER TUBE RISERS OR BRAIDED STAINLESS STEEL.
- PROVIDE CHROME ESCUTCHEONS AT PIPE PENETRATIONS OF WALLS AND FLOORS.
- PERFORM TESTING OF WATER, SANITARY AND VENT PIPES PER VIRGINIA PLUMBING CODE. DISINFECT WATER PIPING PER LOCAL HEALTH DEPARTMENT REQUIREMENTS. PROVIDE ALL NECESSARY TESTS AND COORDINATE INSPECTIONS AND APPROVAL PER LOCAL REQUIREMENTS.

DATE: JUNE 20, 2025

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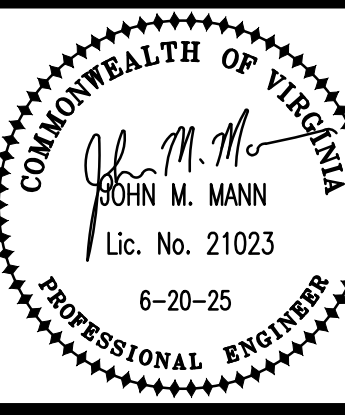
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