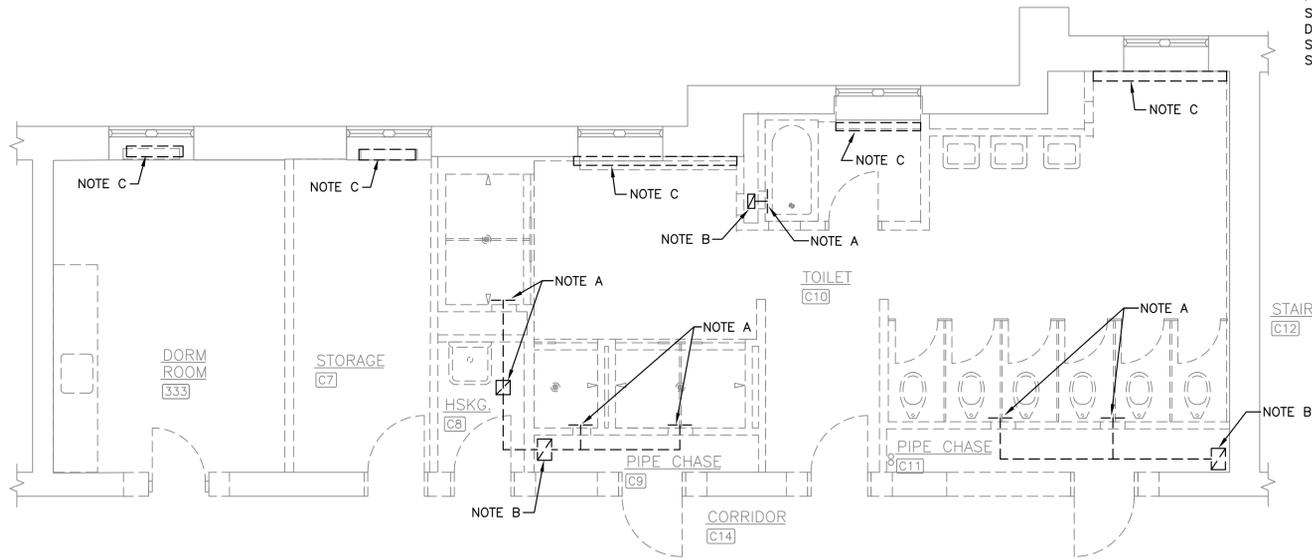


GENERAL NOTES

- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY DUCT AND PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- EXISTING BAR JOISTS ARE NOT SHOWN. ADJUST DUCT AND PIPING RISER LOCATIONS AS REQD. TO AVOID EXIST. JOISTS, SUBJECT TO ADVANCE APPROVAL OF THE A/E. SEE ARCH. DRAWINGS FOR NOTES REGARDING A SPECIAL COORDINATION SITE VISIT PRIOR TO DRILLING OR CUTTING THE EXIST. SLABS, AND PRIOR TO INSTALLATION OF MTL. TRACKS.

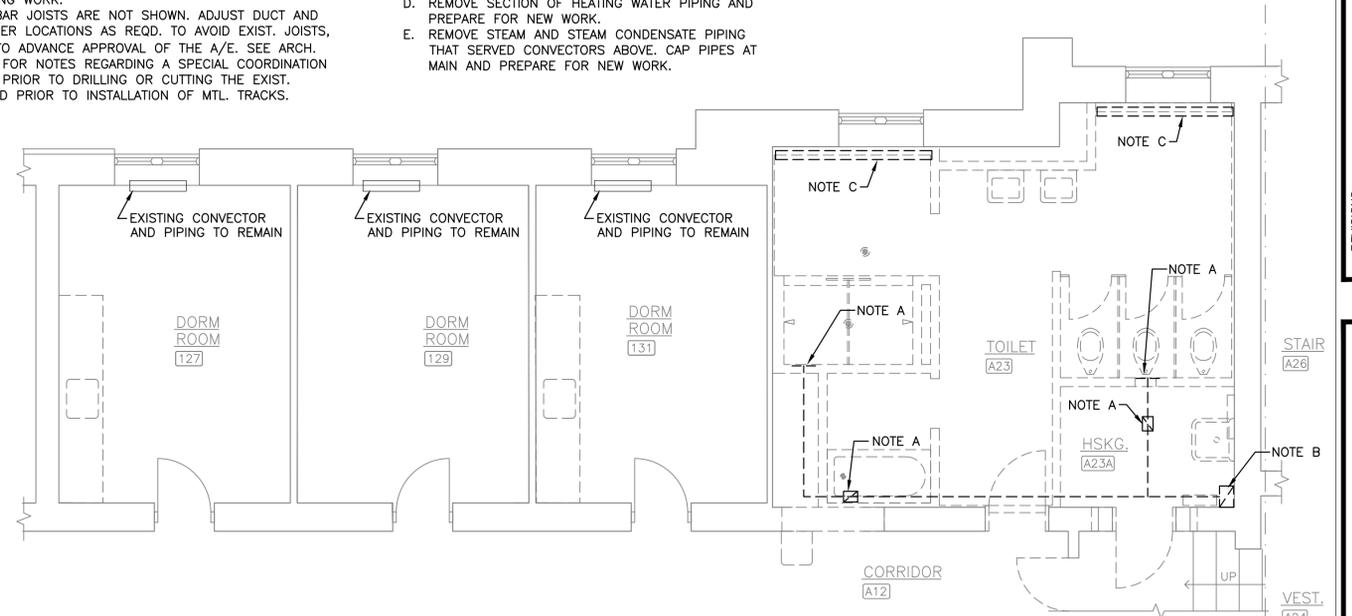
DEMO NOTES THIS SHEET

- A. REMOVE EXHAUST REGISTERS.
- B. REMOVE EXHAUST DUCT AND SUPPORTS IN CHASE AND THROUGH FLOOR ABOVE. SEE ARCHITECTURAL DRAWINGS FOR CONCRETE INFILL OF OPENING.
- C. REMOVE HEATING CONVECTOR AND ASSOCIATED PIPING.
- D. REMOVE SECTION OF HEATING WATER PIPING AND PREPARE FOR NEW WORK.
- E. REMOVE STEAM AND STEAM CONDENSATE PIPING THAT SERVED CONVECTORS ABOVE. CAP PIPES AT MAIN AND PREPARE FOR NEW WORK.



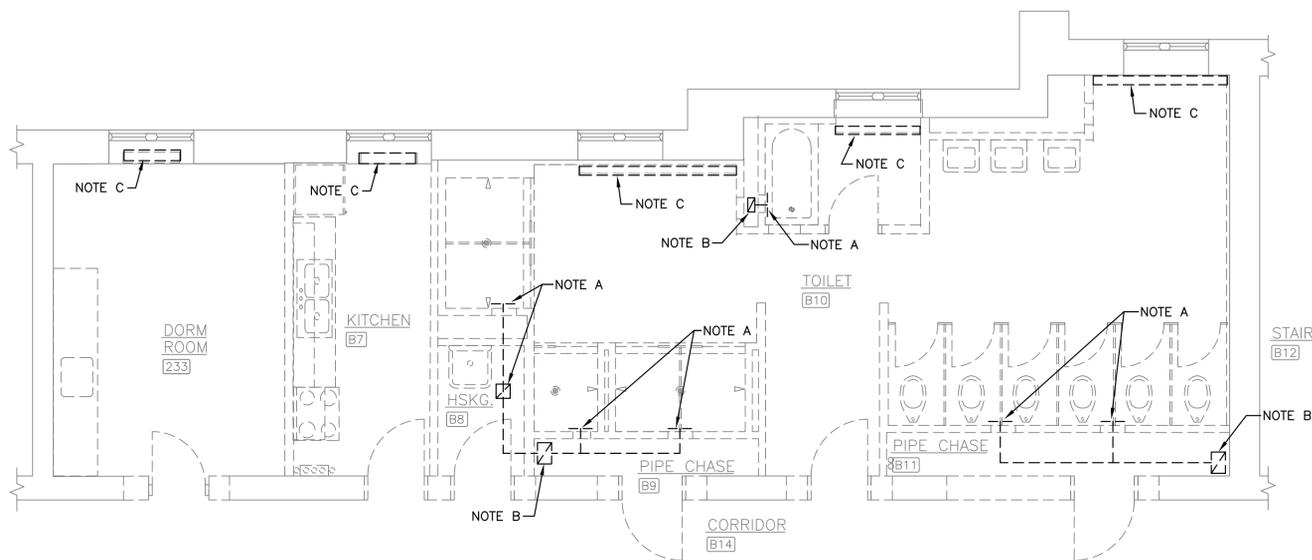
PARTIAL THIRD FLOOR PLAN – MECHANICAL DEMOLITION

1/4" = 1'-0"



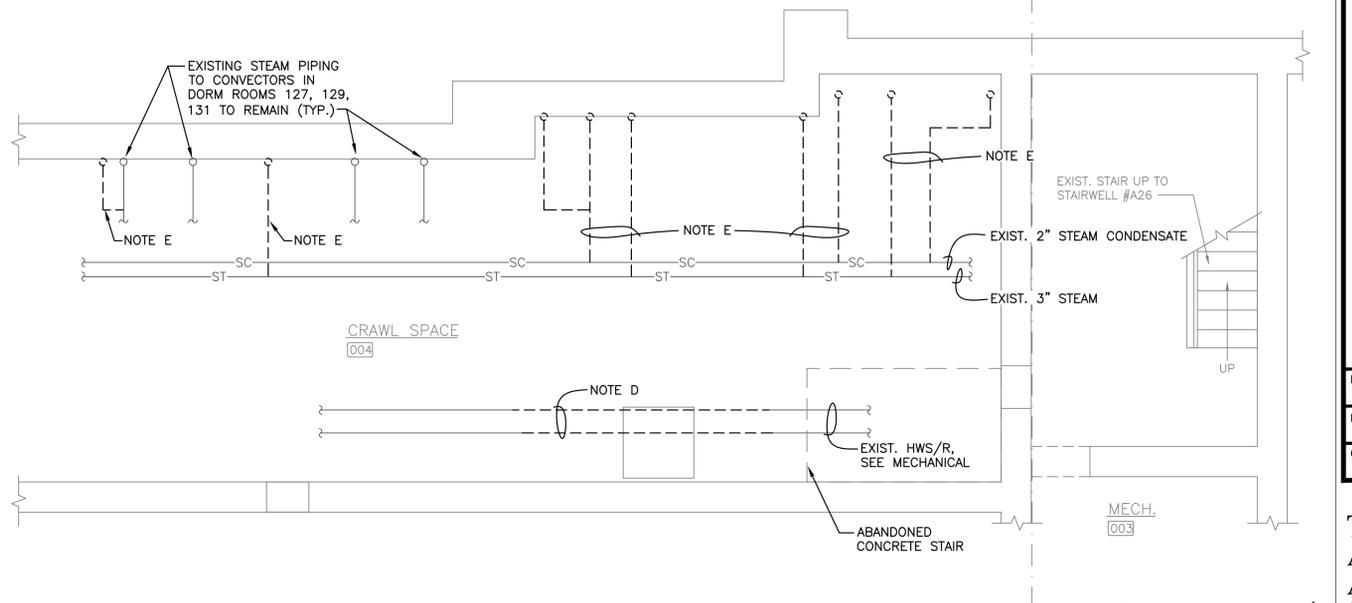
PARTIAL FIRST FLOOR PLAN – MECHANICAL DEMOLITION

1/4" = 1'-0"



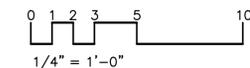
PARTIAL SECOND FLOOR PLAN – MECHANICAL DEMOLITION

1/4" = 1'-0"



PARTIAL CRAWLSPACE PLAN – MECHANICAL DEMOLITION

1/4" = 1'-0"



UBO NOTATION:

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513



DATE
REVISIONS

PARTIAL FLOOR PLANS - MECHANICAL DEMOLITION
**MAIN EGGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I**
Virginia Polytechnic Institute & State University

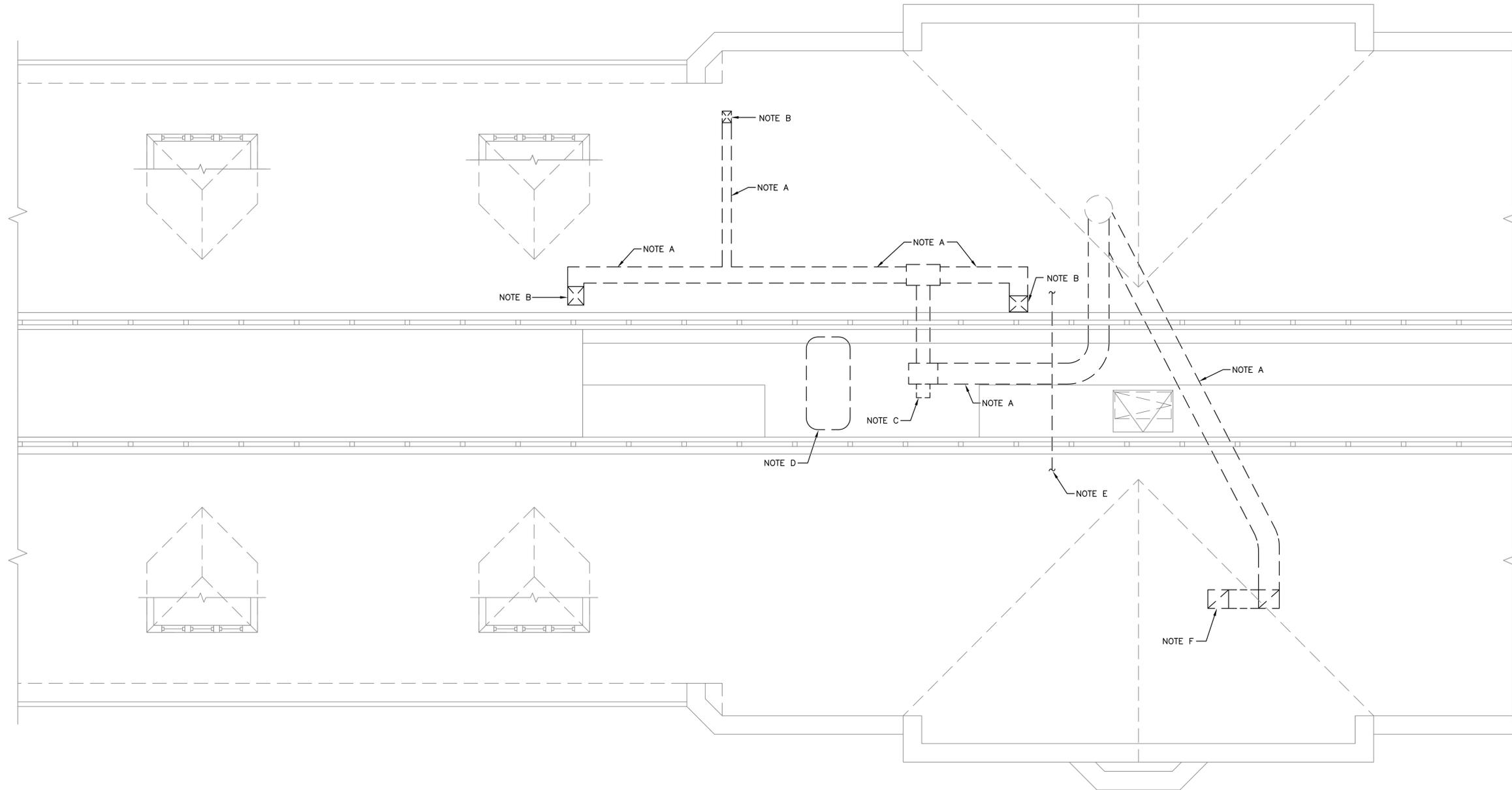
DESIGNED BY: JMM
DRAWN BY: DAR
CHECKED BY: JMM, CBL

The Architects Alliance Inc.
Blacksburg, Virginia

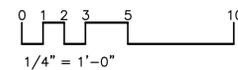
PROJECT NO: 116645
DATE: 1/25/26
M1

DEMO NOTES THIS SHEET

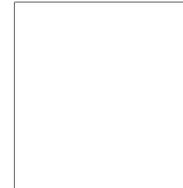
- A. REMOVE ALL EXHAUST DUCTWORK IN ATTIC. REMOVE SUPPORTS AND DAMPERS.
- B. REMOVE EXHAUST DUCT THROUGH THIRD FLOOR CEILING.
- C. REMOVE EXHAUST FAN, SUPPORTS, AND ASSOCIATED DEVICES.
- D. REMOVE ABANDONED HEATING WATER EXPANSION TANK, PIPES, SUPPORTS, AND ASSOCIATED COMPONENTS.
- E. REMOVE PLUMBING VENT PIPE ALONG WALKWAY AND REROUTE ABOVE WALKWAY WITH MINIMUM 7'-0" HEADROOM.
- F. REMOVE EXHAUST DUCT THROUGH THIRD FLOOR CEILING. SEE ARCHITECTURAL DRAWINGS FOR PATCHING.



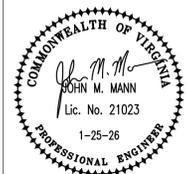
PARTIAL ATTIC PLAN — MECHANICAL DEMOLITION
 1/4" = 1'-0"



UBO NOTATION:



MANN & ASSOCIATES, INC.
 306 Market Street, 2524
 Roanoke, VA, 24011
 540-344-5513



DATE
 REVISIONS

PARTIAL ATTIC PLAN - MECHANICAL DEMOLITION

**MAIN EGGLESTON
 TOILET/SHOWER ROOM RENOVATION - PHASE I**

Virginia Polytechnic Institute & State University

DESIGNED BY:
 JMM

DRAWN BY:
 DAR

CHECKED BY:
 JMM, CBL

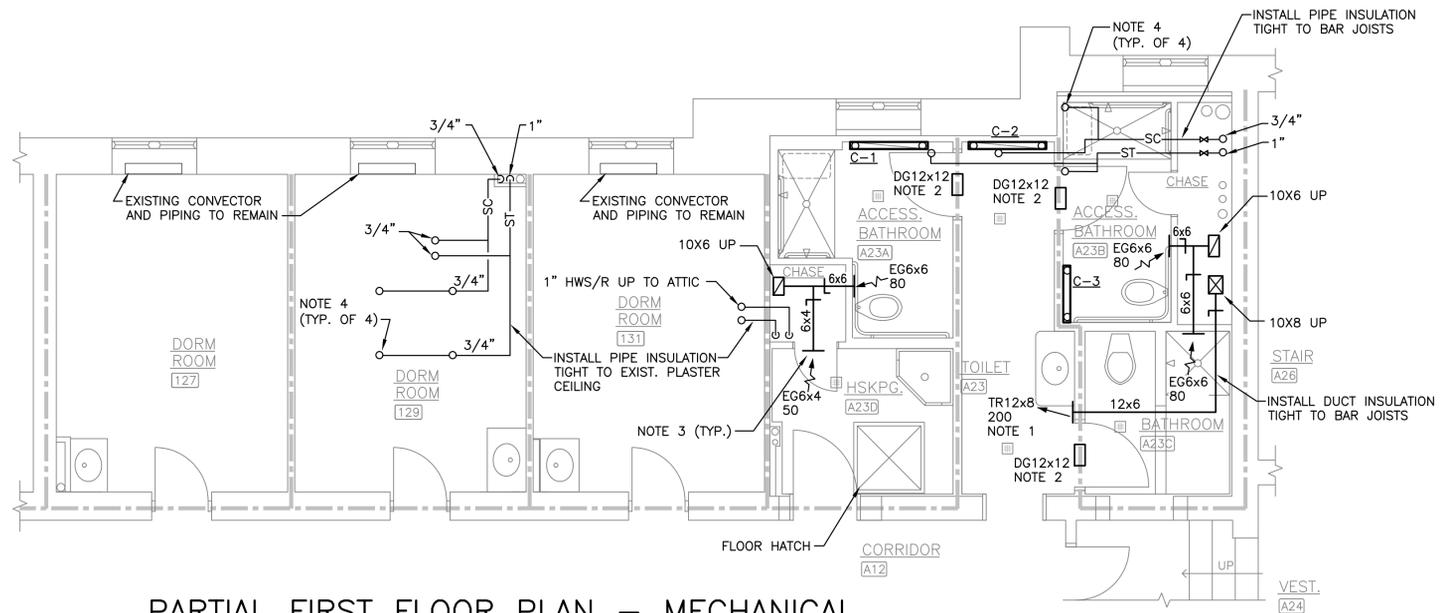
The Architects Alliance Inc.
 Blacksburg, Virginia

PROJECT NO:
 116645

DATE:
 1/25/26

M2

DATE
REVISIONS



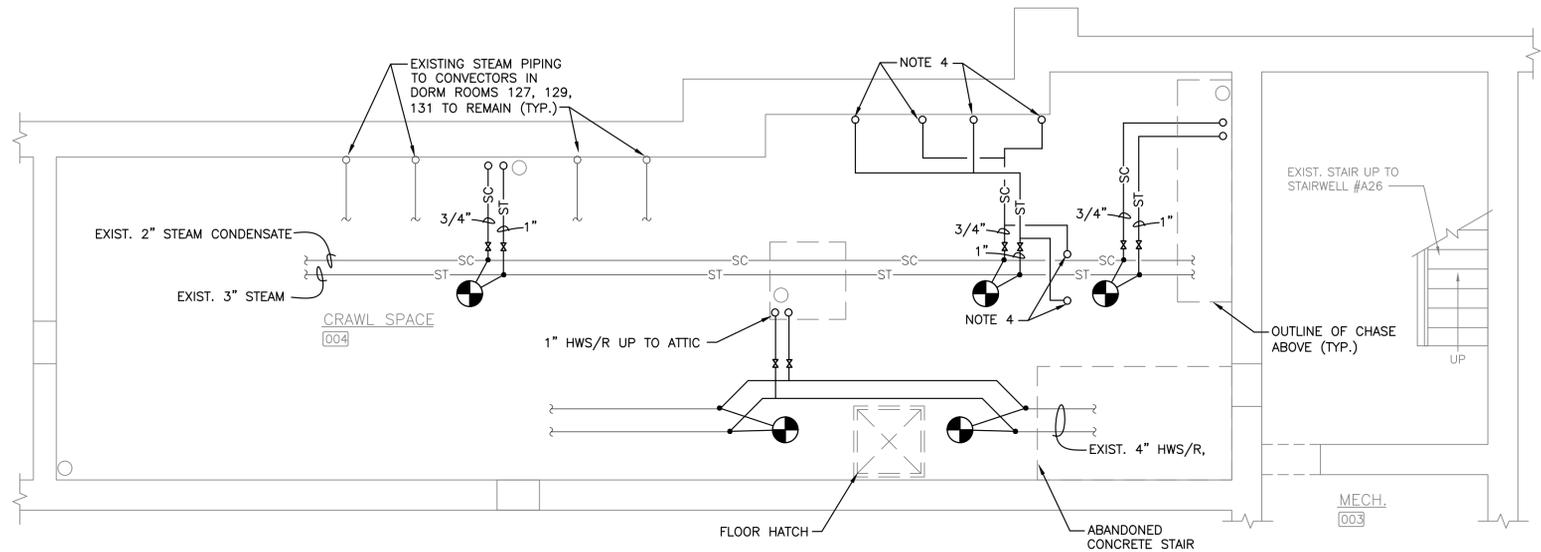
PARTIAL FIRST FLOOR PLAN - MECHANICAL
1/4" = 1'-0"

GENERAL NOTES

- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY DUCT AND PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- EXISTING BAR JOISTS ARE NOT SHOWN. ADJUST DUCT AND PIPING RISER LOCATIONS AS REQD. TO AVOID EXIST. JOISTS, SUBJECT TO ADVANCE APPROVAL OF THE A/E. SEE ARCH. DRAWINGS FOR NOTES REGARDING A SPECIAL COORDINATION SITE VISIT PRIOR TO DRILLING OR CUTTING THE EXIST. SLABS, AND PRIOR TO INSTALLATION OF MTL TRACKS.
- INSTALL PIPING AND DUCTWORK AS HIGH AS POSSIBLE, BETWEEN AND THROUGH BAR JOISTS. WHERE PIPING AND DUCTWORK MUST BE INSTALLED BELOW BAR JOISTS, MOUNT TIGHT TO BOTTOM OF GYPBOARD, ALLOWING FOR INSULATION THICKNESS WHERE REQUIRED.

NOTES THIS SHEET

1. PROVIDE FIRE DAMPER AT SUPPLY REGISTER IN RATED WALL.
2. PROVIDE DOOR GRILLE WITH INTEGRAL FIRE DAMPER.
3. INSTALL SUPPLY REGISTERS AND EXHAUST GRILLES 2" BELOW CEILING. CEILINGS SHALL BE INSTALLED AS HIGH AS POSSIBLE.
4. PROVIDE 3/4" RUNOUTS UP TO CONVECTORS.



PARTIAL CRAWLSPACE PLAN - MECHANICAL
1/4" = 1'-0"

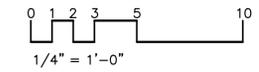
PARTIAL FLOOR PLANS - MECHANICAL
MAIN EGGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I
 Virginia Polytechnic Institute & State University

DESIGNED BY: JMM
 DRAWN BY: DAR
 CHECKED BY: JMM, CBL

The Architects Alliance Inc.
 Blacksburg, Virginia

MANN & ASSOCIATES, INC.
 306 Market Street
 Roanoke, VA, 24011
 540-344-5513

UBO NOTATION:



PROJECT NO: 116645
 DATE: 1/25/26
M3

FAN SCHEDULE													
UNIT	CFM	S.P.	DRIVE	RPM	MOTOR			MAX SONES	SELECTION BASED ON GREENHECK	WEIGHT LBS.	AREA SERVED	CONTROL	NOTES
					HP/WATTS	VOLTS	PH						
SF-1	950	1.2	DIRECT	1800	3/4 HP	120	1	13	SQ-130HP	68	TOILET MAKE-UP AIR	BAS, CONTINUOUS	1,2,3,4,5
EF-1	1350	1.2	DIRECT	1725	1.0 HP	120	1	16	SQ-140HP	91	TOILET EXHAUST AIR	BAS, CONTINUOUS	1,2,4,5

- SCHEDULE NOTES:** ALL SELECTIONS AT 2100' ELEVATION
1. INLINE CENTRIFUGAL FAN, ALUMINUM WHEEL, SPEED CONTROLLER, ELECTRICAL DISCONNECT. PROVIDE FLEX CONNECTORS AT INLET AND OUTLET DUCT CONNECTIONS.
 2. PROVIDE BASE MOUNT VIBRATION ISOLATORS FOR INSTALLATION ON STAND IN ATTIC.
 3. INTAKE MOTOR OPERATED DAMPER TO BE INTERLOCKED AND OPEN WHEN FAN IS ENERGIZED.
 4. PROVIDE FILTER BOX WITH ANGLE FILTERS, MERV 8. INSULATE FILTER BOX.
 5. PROVIDE STARTER, CONTROL TRANSFORMER, AND HOA SWITCH. COORDINATE REQUIREMENTS WITH BAS.

HEAT PIPE						
UNIT	AIRSTREAM	AIRFLOW CFM	AIR PRESSURE DROP	DUCT CONNECTION WIDTH	DUCT CONNECTION HEIGHT	AREA SERVED
HP-1	OUTSIDE SUPPLY	950	0.34	14"	30"	TOILET MAKE-UP AIR
	EXHAUST	1350	0.37	19"	30"	TOILET EXHAUST AIR

- SCHEDULE NOTES:**
1. HEATPIPE TECHNOLOGIES MODEL HRM, HA-AMG-10612A-03000-01420-0800X-01890.
 2. OVERALL 45"x33"x9" DIMENSIONS. UNIT MUST FIT THROUGH NOMINAL 30"x48" ATTIC ACCESS HATCH.
 3. COPPER TUBES, ALUMINUM FINS, GALVANIZED FLANGED CASING, R410A REFRIGERANT.
 4. PROVIDE CONDENSATE PAN.
 5. PROVIDE INSULATED DUCT ACCESS DOORS FOR CLEANING ALL PORTIONS OF COIL.

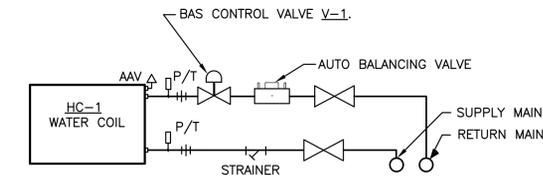
HYDRONIC HEATING COIL						
UNIT	AIRFLOW CFM	CAPACITY MBH	FLOW RATE GPM	DUCT WIDTH	DUCT HEIGHT	AREA SERVED
HC-1	950	82	8.2	18"	18"	TOILET MAKE-UP AIR

- SCHEDULE NOTES:**
1. COIL BY MODINE/HEATCRAFT OR EQUAL.
 2. MAXIMUM 450 FPM AIR VELOCITY, 0.15" AIR PRESSURE DROP, 1.5' WATER PRESSURE DROP.
 3. BASED ON 180F HEATING WATER, 0F ENTERING AIR, 80F LEAVING AIR.
 4. COPPER TUBES, ALUMINUM FINS, GALVANIZED FLANGED CASING.

CONVECTOR						
UNIT	CAPACITY MBH	MAXIMUM OVERALL LENGTH	CABINET DEPTH	CABINET HEIGHT	AREA SERVED	
C-1	2.5	44"	4"	32"	ACC. BATHROOM A23A	
C-2	2.5	44"	4"	32"	TOILET A23	
C-3	2.5	44"	4"	32"	ACC. BATHROOM A23B	
C-4	3.5	44"	4"	32"	BATHROOM B7B	
C-5	3.5	44"	4"	32"	BATHROOM B7C	
C-6	6.0	44"	4"	32"	TOILET B10	
C-7	2.5	44"	4"	32"	ACC. BATHROOM B10A	
C-8	3.5	44"	4"	32"	BATHROOM C7B	
C-9	3.5	44"	4"	32"	BATHROOM C7C	
C-10	6.0	44"	4"	32"	TOILET C10	
C-11	2.5	44"	4"	32"	ACC. BATHROOM C10A	

- SCHEDULE NOTES:**
1. CONVECTOR EQUAL TO VULCAN SFG-A, SLOPED TOP, LOUVERED INLET, INTEGRAL STAMPED PENCIL-PROOF LOUVERS, 16 GAUGE STAINLESS-STEEL.
 2. OVERALL LENGTH INCLUDES EXTENSIONS, END POCKETS, AND ACCESS PANELS AS REQUIRED FOR STEAM VALVE AND TRAP. STEAM VALVE AND TRAP SHALL BE CONCEALED WITHIN THE CABINET.
 3. ELEMENT PIPE CONNECTIONS TO BE MINIMUM 12" ABOVE THE FLOOR TO ALLOW HEIGHT FOR VALVE AND TRAP CONNECTIONS.
 4. CAPACITY BASED ON LOW PRESSURE STEAM, 5 TO 10 PSI.
 5. 3/4" RUNOUTS WITH UNIONS AT CONNECTIONS.
 6. PROVIDE AMERICAN STEAM THERMOSTATIC CONTROL VALVE WITH DIAL AND REMOTE SENSOR AT CONVECTOR INLET. PROVIDE THERMOSTATIC STEAM TRAP ON CONVECTOR OUTLET.

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
-----	ITEM TO BE REMOVED
10x6	10X6 DUCT
ER6 75	6" EXHAUST REGISTER, 75 CFM
HWS/R	HOT WATER SUPPLY/RETURN PIPING
D	CONDENSATE DRAIN
ST	LOW PRESSURE STEAM
SC	STEAM CONDENSATE
SE	SUPPLY FAN
EE	EXHAUST FAN
HP	HEAT PIPE
HC	HEATING COIL
DISCONNECT/RECONNECT TO EXISTING	
MOD	MOTOR OPERATED DAMPER
DG	DOOR GRILLE
TR	HIGH SIDEWALL SUPPLY REGISTER
ER	EXHAUST REGISTER
CR	CEILING REGISTER
EXIST.	EXISTING
O.A.	OUTSIDE AIR
F DPR	FIRE DAMPER
AFMS	AIRFLOW MEASURING STATION
MANUAL BALL VALVE	
CONTROL VALVE	
AAV	AUTOMATIC AIR VENT
P/T	PRESSURE/TEMPERATURE PORT



HEATING COIL CONNECTION DETAIL
SCHEMATIC TYPICAL FOR HEATING COIL HC-1

MECHANICAL OUTLINE SPECIFICATIONS

SECTION 15000

1. ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND CURRENT VIRGINIA TECH DESIGN AND CONSTRUCTION STANDARDS.
2. PROVIDE COMPLETE SUBMITTAL INFORMATION FOR EQUIPMENT AND DEVICES. SEE OUTLINE SPECIFICATION SECTION 01330.
3. RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS. SEE OUTLINE SPECIFICATION SECTION 01770.
4. PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT. SEE OUTLINE SPECIFICATION SECTION 01782.
5. MECHANICAL EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY.
6. 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.
7. ALL WORK SHALL BE NEW AND IS INCLUDED IN THE CONTRACT UNLESS SPECIFICALLY NOTED TO BE EXISTING OR NOT IN CONTRACT.
8. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT.
9. 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 DRAWINGS. 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.
10. THE EXISTING BUILDING WILL BE OCCUPIED DURING THE ENTIRE PERIOD OF CONSTRUCTION. COORDINATE ALL WORK WITH THE OWNER IN ORDER TO MINIMIZE DISRUPTION OF THE USE OF THE EXISTING BUILDING. SEE OUTLINE SPECIFICATION SECTION 01000 FOR ADDITIONAL LIMITATIONS ON WORK HOURS AND ACCESS.
11. SEE OUTLINE SPECIFICATION SECTION 02220 FOR ADDITIONAL INFORMATION PERTAINING TO DEMOLITION.
12. SEAL ALL DUCTS IN THE AREA OF WORK FOR THE DURATION OF THE WORK SO THAT NO FOREIGN MATERIAL WILL ENTER THE HVAC SYSTEM.
13. 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.
14. SEE SHEET T1 FOR IMPORTANT NOTES PERTAINING TO ASBESTOS-CONTAINING AND LEAD-CONTAINING MATERIALS.
15. CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
16. COORDINATE ALL WORK WITH FIRE RATED ASSEMBLIES. PROVIDE FIRESTOPPING AT PENETRATIONS OF RATED ASSEMBLIES AND AT FLOORS. FIRESTOP ALL DUCT AND PIPE PENETRATIONS OF FLOOR SLABS (INCLUDING ATTIC FLOOR) AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS. ALL MATERIALS LOCATED IN RETURN AIR PLENUMS SHALL BE LISTED FOR INSTALLATION IN PLENUMS. SEE OUTLINE SPECIFICATION SECTION 07840.
17. COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
18. PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
19. 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. SEE OUTLINE SPECIFICATION SECTION 08310.
20. THE DESIGN SHOWN IS BASED ON THE MANUFACTURERS AND MODELS SCHEDULED AND IS INTENDED ONLY TO SHOW THE GENERAL SIZE, CONFIGURATION, LOCATION, CONNECTIONS AND/OR SUPPORT FOR EQUIPMENT OR SYSTEMS SPECIFIED WITH RELATION TO THE OTHER BUILDING SYSTEMS.
21. DUCTWORK SHALL BE INSTALLED TO PERMIT THE INSTALLATION OF CEILINGS AND LIGHT FIXTURES AT THE INDICATED HEIGHTS. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR COORDINATION. ADJUST DUCT LOCATIONS TO AVOID INTERFERENCE WITH EXIST. EMBEDDED JUNCTION BOXES. ROUTE DUCTWORK IN THE ATTIC AND IN CHASES TO ALLOW ACCESS AND TO MAINTAIN A CLEAR WALKING PATH. SEE ARCHITECTURAL DRAWINGS FOR ATTIC ACCESS WALKWAY LOCATION.
22. GALVANIZED SHEET METAL DUCTWORK CONSTRUCTION AND SUPPORT SHALL COMPLY WITH SMACNA STANDARDS. PROVIDE TURNING VANES OR LONG RADIUS ELBOWS AND MANUAL DAMPERS FOR BALANCING. AT EACH TAKEOFF TO A REGISTER, 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.
23. INSULATE ALL DUCTWORK. 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, K-VALUE OF 0.26, MINIMUM INSTALLED R6.
24. PROVIDE INSULATED DUCT ACCESS DOOR FOR ALL COMPONENTS REQUIRING SERVICE OR MONITORING.
25. EXHAUST GRILLES (EG) TO BE METALALRE ALUMINUM RH SERIES FOR SURFACE MOUNT. SIDEWALL SUPPLY REGISTERS (TR) TO BE ALUMINUM MODEL V4004, DOUBLE DEFLECTION WITH ALUMINUM DAMPER, FOR WALL OR CEILING TILE MOUNTING. REGISTERS TO HAVE FACTORY-APPLIED BRIGHT WHITE FINISH. DOOR GRILLES (DG) TO BE SIGHT-PROOF, BRUSHED STAINLESS STEEL, ANEMOSTAT MODEL FLDL-UL WITH 90 MINUTE FIRE DAMPER.
26. FILTER BOX SHALL BE PRE-FABRICATED FOR FAN/DUCT MOUNTING, ANGLE FILTERS, STANDARD 2" THICK, 20x25x2, MERV 8 FILTER SIZES. GALVANIZED CONSTRUCTION WITH DUCT FLANGES FOR MOUNTING AND WITH HINGED, GASKETED, AND LATCHED DOOR. INSULATE FILTER BOXES.
27. FIRE DAMPERS SHALL BE 1-1/2 HR, UL LISTED, STYLE B/BC OUT OF AIRSTREAM, DYNAMIC TYPE, EQUAL TO RUSKIN DIBD2-OW. FIRE DAMPERS SHALL BE OUT-OF-FLOOR TYPE TO MINIMIZE SIZE OF OPENING IN EXISTING CONCRETE FLOORS. PROVIDE INSULATED DUCT ACCESS DOOR ADJACENT TO ALL DAMPERS. COORDINATE MOUNTING ANGLES AND SLEEVE LENGTH WITH RATED FLOOR AND WALL CONSTRUCTION AND INSTALL PER MANUFACTURER'S UL INSTALLATION INSTRUCTIONS. PROVIDE ACCESS TO FIRE DAMPERS AND PERMANENT LABEL WITH 1/2" HIGH LETTERS.
28. PROVIDE IDENTIFICATION MARKINGS FOR EQUIPMENT, PIPING AND CONTROLS. NAMEPLATES SHALL BE PLASTIC LAMINATE WITH 1/4" LETTERS.
29. HEATING WATER AND CONDENSATE DRAIN PIPING SHALL BE ASTM B88, 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.
30. STEAM PIPING: STEEL PIPING PER ASTM A53 SHALL BE SCHEDULE 40 FOR STEAM AND SCHEDULE 80 FOR STEAM CONDENSATE AND PUMPED CONDENSATE. SCREWED, FLANGED OR WELDED FITTINGS FOR 125 PSI SERVICE.
31. ISOLATION VALVES FOR WATER PIPING SHALL BE QUARTER TURN, FULL PORT BALL VALVES. MSS SP-110, XOMOX CLASS 150 WITH LEVER HANDLE AND THREADED ENDS. SOLDERED ENDS SHALL NOT BE USED. PROVIDE EXTENDED STEMS FOR PIPE INSULATION. STEAM AND CONDENSATE GATE VALVES, CAST STEEL, CLASS 150, 500 F. VALVES FOR 2" AND LARGER PIPING SHALL BE FLANGED BUTTERFLY VALVES, HIGH PERFORMANCE TYPE BY XOMOX, WITH HAND WHEEL.
32. 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 WITH GALVANIZED INSULATION SHIELDS. SEAL ALL JOINTS OF CONDENSATE DRAIN PIPE INSULATION WITH MANUFACTURER'S APPROVED VAPOR BARRIER MASTIC OR TAPE. HEATING WATER PIPING LESS THAN 1.5" DIA. - 1.5" THICK, HEATING WATER PIPING GREATER THAN 1.5" DIA. - 2" THICK. STEAM PIPING - 2.5" THICK, STEAM CONDENSATE PIPING - 1.5" THICK. CONDENSATE DRAIN PIPING - 3/4" THICK. LABEL WITH PIPE MARKERS AT 20' INTERVALS. LABEL DIRECTION OF FLOW.
33. ALL CONVECTOR PIPING SHALL BE CONCEALED WITHIN THE UNIT. COORDINATE ALL PIPE PENETRATIONS WITH THE WATERPROOFING SYSTEM AND CERAMIC TILE INSTALLATION, TO INSURE A WATERTIGHT INSTALLATION.
34. PROVIDE FLEXIBLE CONNECTORS AT CONNECTION OF DUCTWORK TO FANS.
35. INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA MECHANICAL CODE, TABLE 305.4.
36. TEST AND BALANCE ALL EQUIPMENT FOR PROPER OPERATION, AIRFLOW, WATER FLOW, PRESSURES, CAPACITY, ACCEPTABLE SPACE TEMPERATURES AND NOISE LEVELS. PERFORM TAB AND RECORD RESULTS PER AABC OR NEBB STANDARDS AND SUBMIT REPORT FOR REVIEW. INDEPENDENT CERTIFIED TAB CONTRACTOR SHALL BE USED.
37. START-UP EQUIPMENT AND PERFORM FUNCTIONAL TEST IN ALL OPERATING MODES. PROGRAM CONTROLS AND INSTRUCT OWNER'S MAINTENANCE PERSONNEL ON THE OPERATION OF EQUIPMENT AND CONTROLS. PROVIDE FINAL FILTER CHANGE.

BAS CONTROLS-SEQUENCE OF OPERATION

CONTROLS WILL BE PROVIDED BY THE UNIVERSITY UNDER SEPARATE CONTRACT USING THE CAMPUS BAS SYSTEM VENDOR. THE CONTRACTOR SHALL COORDINATE ALL WORK OF THIS PROJECT WITH THE CONTROLS VENDOR.

CONTROLS WILL INCLUDE ALL DDC CONTROLLERS, SOFTWARE, PROGRAMMING, SENSORS, DAMPERS, ACTUATORS, TRANSFORMERS, WIRING, INTERLOCKS AND OTHER DEVICES TO ENABLE THE SEQUENCE OF OPERATION. CONTROLS SHALL BE COORDINATED WITH THE EQUIPMENT PROVIDED. CONTROL VALVES AND CONTROL DAMPER ACTUATORS SHALL BE FURNISHED BY THE CONTROLS VENDOR, AND SHALL BE INSTALLED BY THE CONTRACTOR AS PART OF THIS CONTRACT.

SF-1, EF-1, HEATING COIL, AND HEAT PIPE: INLINE FANS FOR TOILET VENTILATION AND EXHAUST SHALL RUN CONTINUOUSLY AND BE CONTROLLED AND MONITORED BY BAS SYSTEM. THE MOTOR OPERATED DAMPER AT THE OUTSIDE AIR INLET SHALL BE OPEN WHENEVER SF-1 IS OPERATING. THE HEATING COIL CONTROL VALVE V-1 SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN 70F LEAVING AIR TEMPERATURE.

THE AIRFLOW MONITORING STATIONS SHALL MEASURE AND MONITOR THE OUTSIDE AIR SUPPLY AIRFLOW AND THE EXHAUST AIRFLOW.

UPON DETECTION OF TEMPERATURES BELOW 35F ENTERING OR LEAVING THE HEATING COIL HC-1, THE SUPPLY FAN SF-1 SHALL BE DE-ENERGIZED AND THE MOTOR OPERATED DAMPER CLOSED TO PREVENT FREEZING THE COIL.

PROVIDE DUCT TEMPERATURE SENSORS AT THE INLET AND OUTLET OF THE HEAT PIPE HP-1 SUPPLY AIR AND EXHAUST AIR, AND THE HEATING COIL HC-1 TO MONITOR PERFORMANCE.

SF-1, EF-1, HEATING COIL, AND HEAT PIPE: INLINE FANS FOR TOILET VENTILATION AND EXHAUST SHALL RUN CONTINUOUSLY AND BE CONTROLLED AND MONITORED BY BAS SYSTEM. THE MOTOR OPERATED DAMPER AT THE OUTSIDE AIR INLET SHALL BE OPEN WHENEVER SF-1 IS OPERATING. THE HEATING COIL CONTROL VALVE V-1 SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN 70F LEAVING AIR TEMPERATURE.

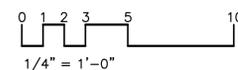
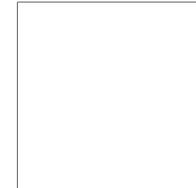
THE AIRFLOW MONITORING STATIONS SHALL MEASURE AND MONITOR THE OUTSIDE AIR SUPPLY AIRFLOW AND THE EXHAUST AIRFLOW.

UPON DETECTION OF TEMPERATURES BELOW 35F ENTERING OR LEAVING THE HEATING COIL HC-1, THE SUPPLY FAN SF-1 SHALL BE DE-ENERGIZED AND THE MOTOR OPERATED DAMPER CLOSED TO PREVENT FREEZING THE COIL.

PROVIDE DUCT TEMPERATURE SENSORS AT THE INLET AND OUTLET OF THE HEAT PIPE HP-1 SUPPLY AIR AND EXHAUST AIR, AND THE HEATING COIL HC-1 TO MONITOR PERFORMANCE.

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513

UBO NOTATION:



DATE

REVISIONS

SCHEDULES, DETAILS, & OUTLINE SPECIFICATIONS - MECHANICAL

MAIN EGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I
Virginia Polytechnic Institute & State University

DESIGNED BY:
JMM

DRAWN BY:
DAR

CHECKED BY:
JMM, CBL

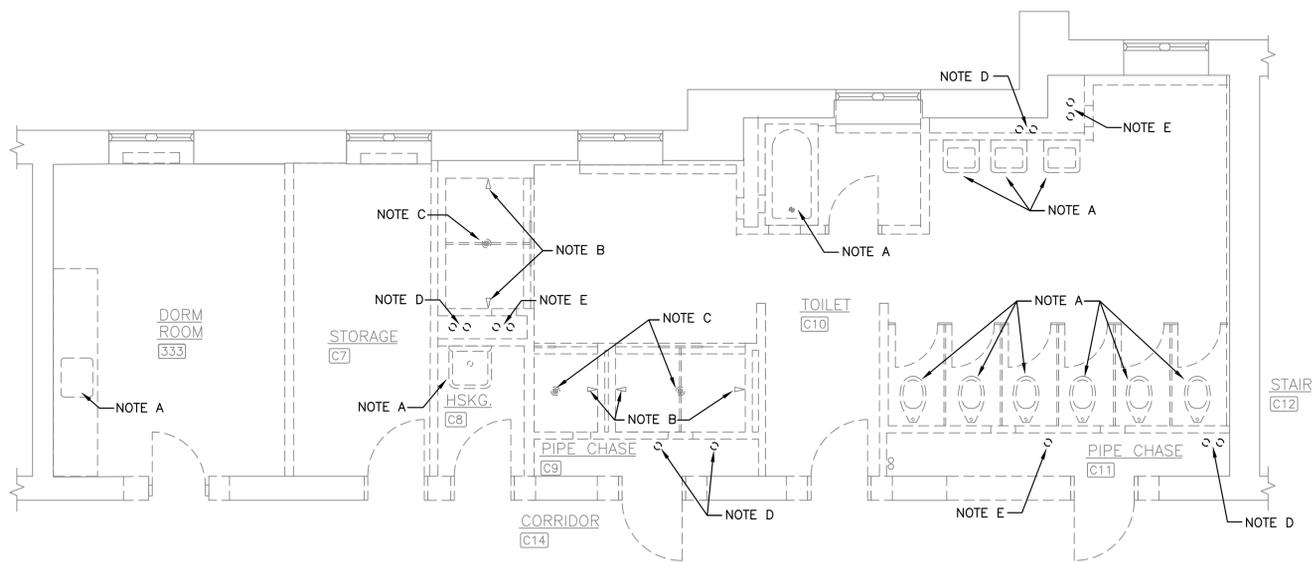
The
Architects
Alliance
Inc.

Blacksburg,
Virginia

PROJECT NO:
116645

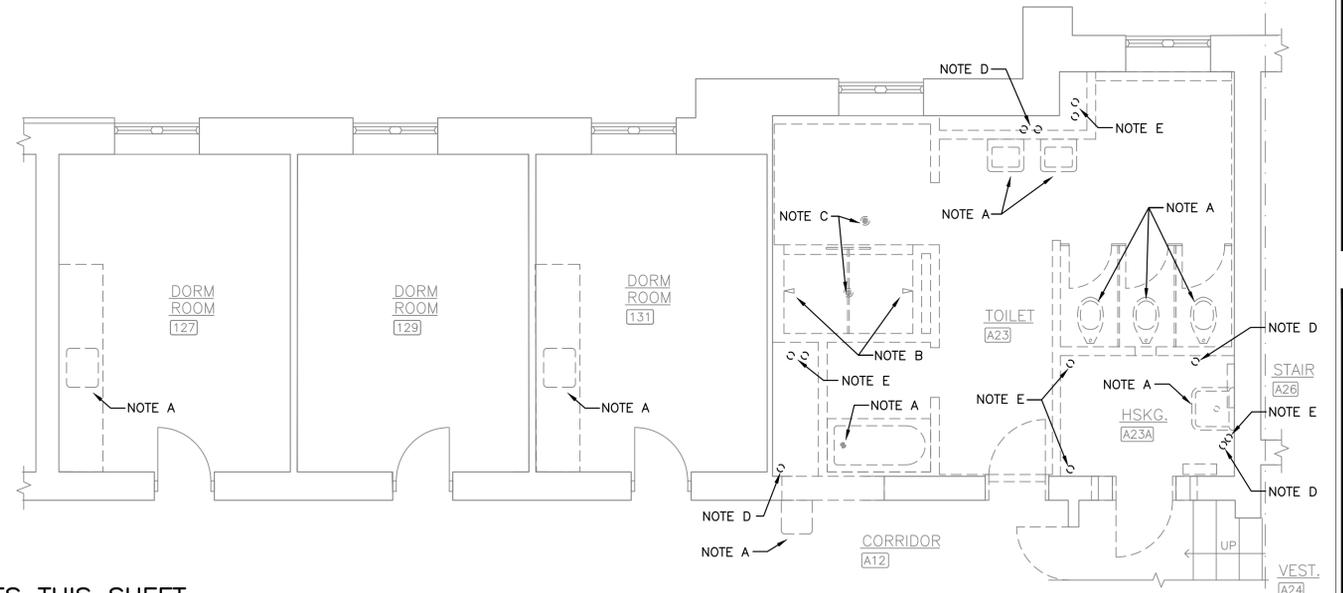
DATE:
1/25/26

M6



**PARTIAL THIRD FLOOR PLAN –
PLUMBING DEMOLITION**

1/4" = 1'-0"

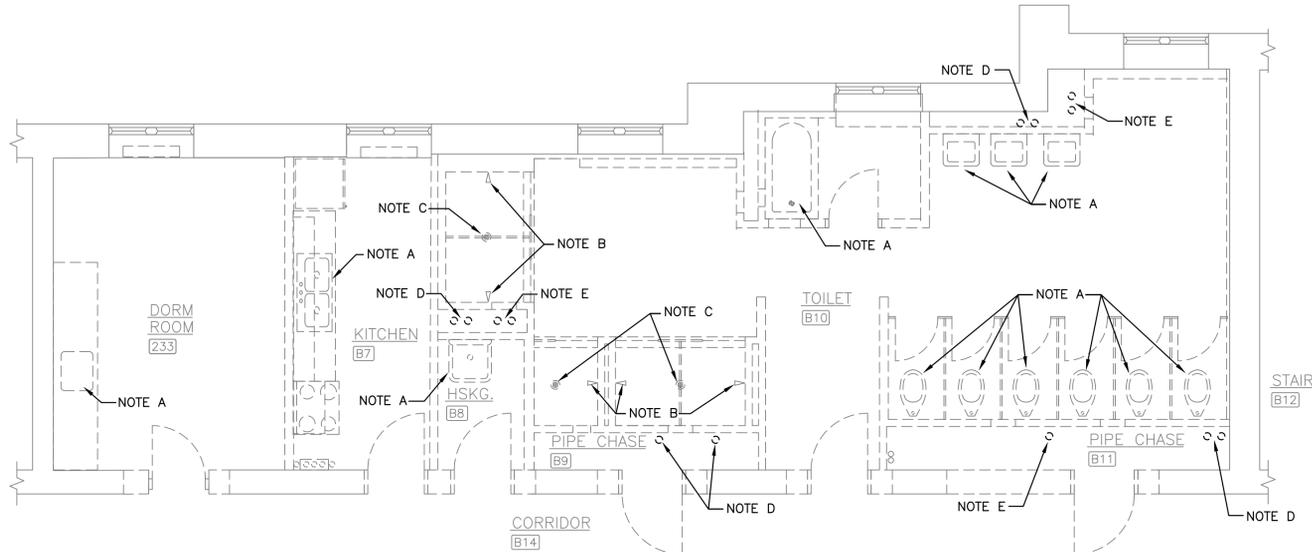


**PARTIAL FIRST FLOOR PLAN –
PLUMBING DEMOLITION**

1/4" = 1'-0"

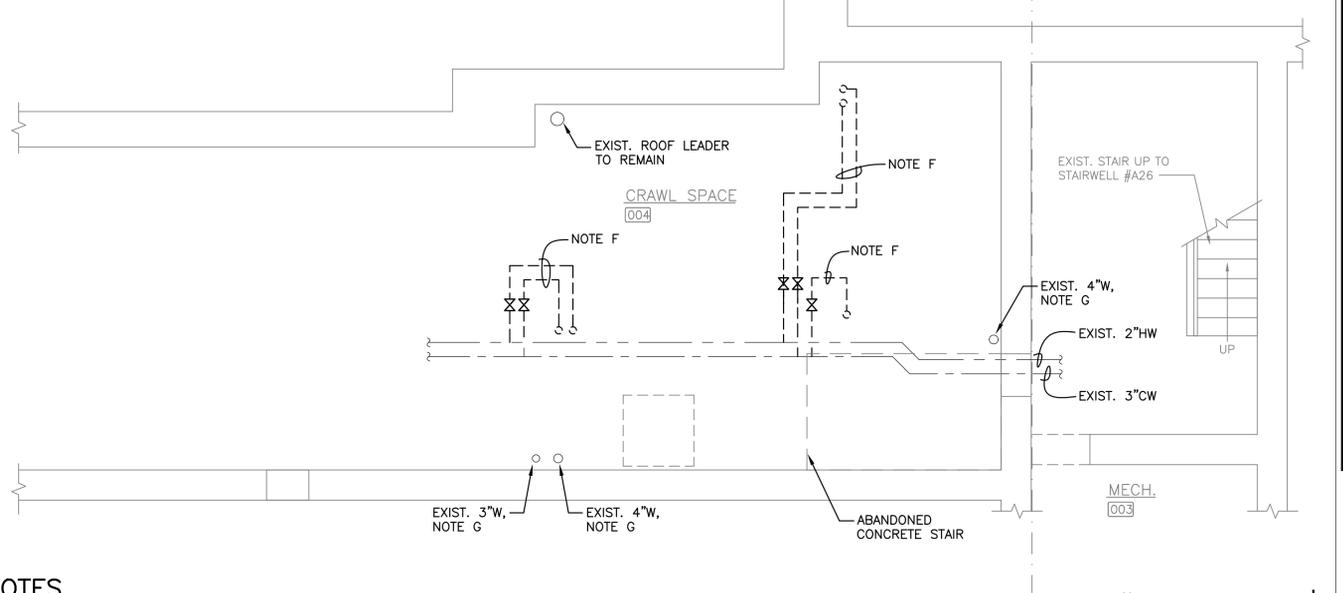
DEMO NOTES THIS SHEET

- A. REMOVE PLUMBING FIXTURE AND ASSOCIATED PIPING, CARRIERS, TRIM, AND SUPPORTS.
- B. REMOVE SHOWER VALVE AND ASSOCIATED PIPING, SHOWER HEADS, AND SUPPORTS.
- C. REMOVE FLOOR DRAIN AND ASSOCIATED PIPING AND SUPPORTS.
- D. REMOVE WASTE STACK AND ASSOCIATED VENT STACK. REMOVE ALL PIPING AND SUPPORTS IN CHASES.
- E. REMOVE CW AND HW PIPING RISERS AND VALVES. REMOVE ALL WATER PIPING AND SUPPORTS IN CHASES.
- F. REMOVE CW AND HW PIPING IN CRAWLSPACE AND UP IN CHASE. CAP BRANCHES AT MAIN PIPE.
- G. REMOVE ALL SANITARY WASTE PIPE IN CRAWLSPACE BACK TO CAST IRON PIPE AT CRAWLSPACE FLOOR. VERIFY EXISTING PIPE IS ACTIVE AND AUGER AS REQUIRED FOR FULL UNOBSTRUCTED FLOW.



**PARTIAL SECOND FLOOR PLAN –
PLUMBING DEMOLITION**

1/4" = 1'-0"

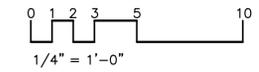


**PARTIAL CRAWLSPACE PLAN –
PLUMBING DEMOLITION**

1/4" = 1'-0"

GENERAL NOTES

- REMOVE ALL EXIST. PLUMBING PIPING LOCATED WITHIN THE TOILET-SHOWER ROOM RENOVATION AREAS. REMOVE ALL UNUSED PLUMBING PIPING IN THE CRAWLSPACE WORK AREA. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING PLUMBING PIPING TO BE REMOVED.
- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.



UBO NOTATION:

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513



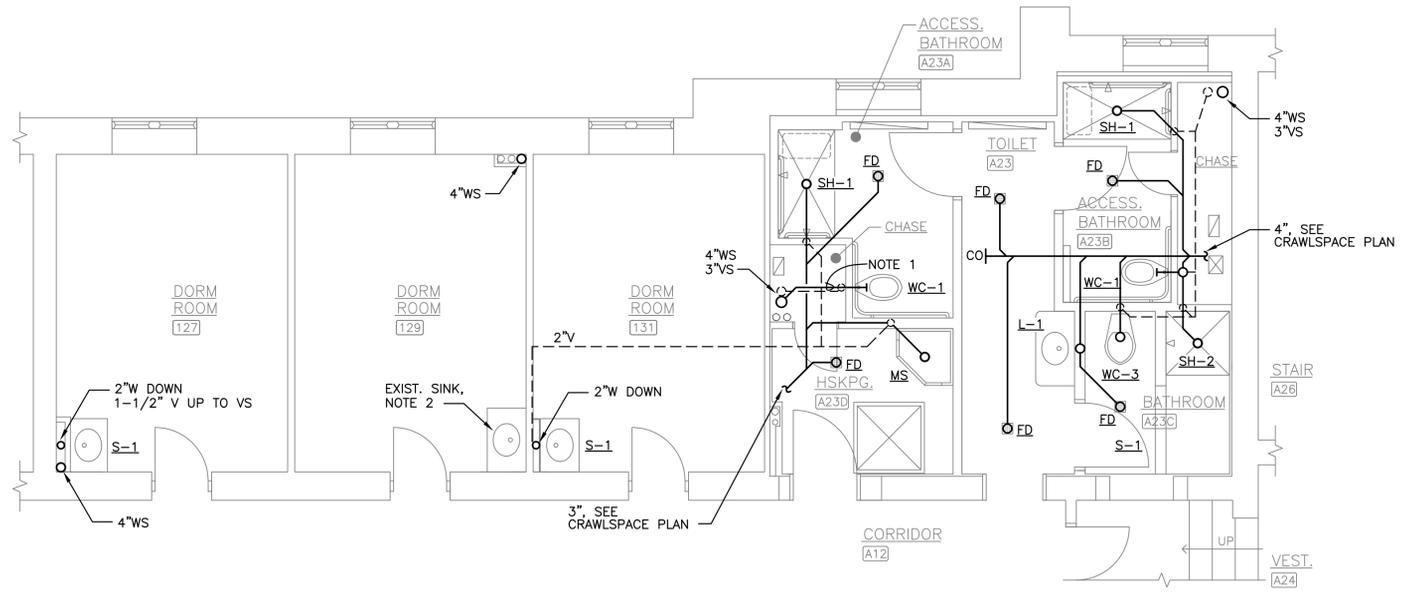
DATE
REVISIONS

PARTIAL FLOOR PLANS - PLUMBING DEMOLITION
**MAIN EGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I**
Virginia Polytechnic Institute & State University

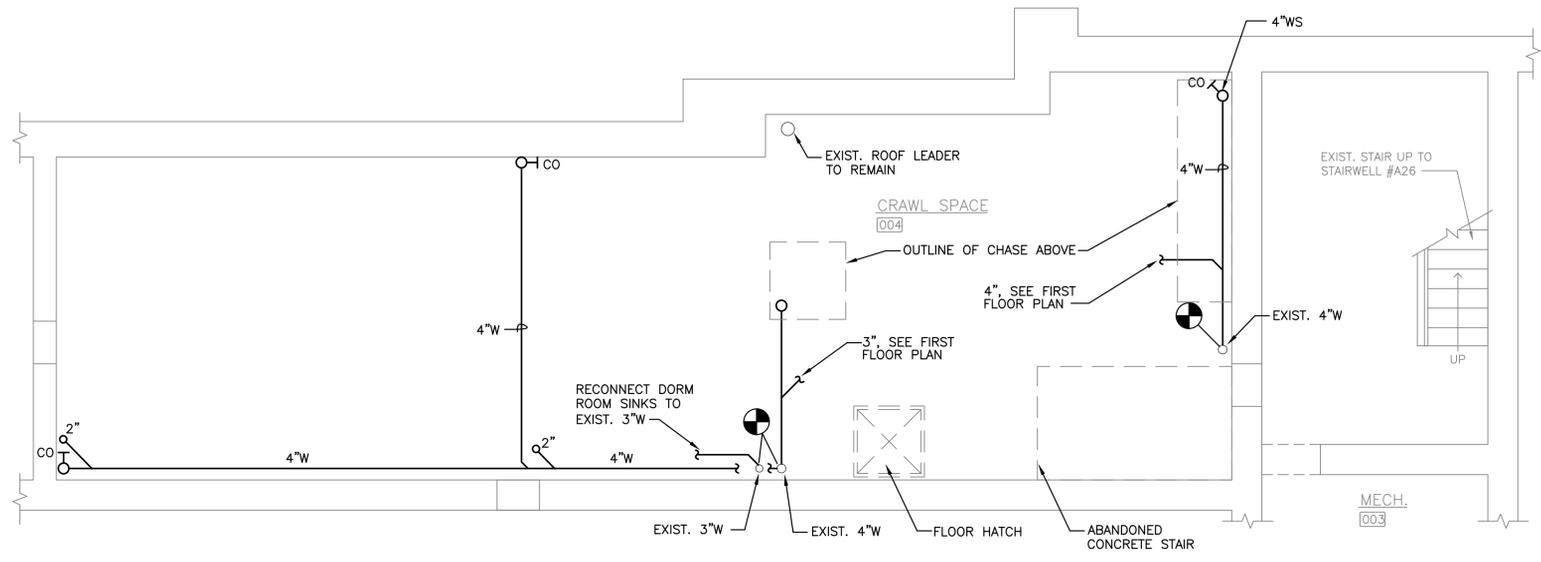
DESIGNED BY: JMM
DRAWN BY: DAR
CHECKED BY: JMM, CBL

The Architects Alliance Inc.
Blacksburg, Virginia

PROJECT NO:
116645
DATE:
1/25/26
P1



PARTIAL FIRST FLOOR PLAN – SANITARY
 1/4" = 1'-0"



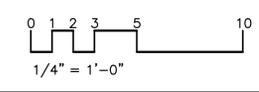
PARTIAL CRAWLSPACE PLAN – SANITARY
 1/4" = 1'-0"

GENERAL NOTES

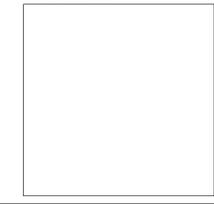
- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY DUCT AND PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- EXISTING BAR JOISTS ARE NOT SHOWN. ADJUST DUCT AND PIPING RISER LOCATIONS AS REQD. TO AVOID EXIST. JOISTS, SUBJECT TO ADVANCE APPROVAL OF THE A/E. SEE ARCH. DRAWINGS FOR NOTES REGARDING A SPECIAL COORDINATION SITE VISIT PRIOR TO DRILLING OR CUTTING THE EXIST. SLABS, AND PRIOR TO INSTALLATION OF MTL. TRACKS.
- INSTALL PIPING AND P-TRAPS AS HIGH AS POSSIBLE, BETWEEN AND THROUGH BAR JOISTS. WHERE PIPING MUST BE INSTALLED BELOW BAR JOISTS, MOUNT TIGHT TO BOTTOM OF GYPBOARD, ALLOWING FOR PIPE INSULATION THICKNESS WHERE REQUIRED.
- SEE SANITARY AND VENT RISER DIAGRAM ON SHEET P6 FOR PIPE SIZES.

NOTES THIS SHEET

1. SANITARY WASTE PIPE FROM WATER CLOSET CARRIER ROUTED ABOVE FLOOR IN CHASE.
2. RECONNECT WASTE PIPE IN CRAWL SPACE.



UBO NOTATION:



MANN & ASSOCIATES, INC.
 306 Market Street
 Roanoke, VA, 24011
 540-344-5513



DATE
REVISIONS

PARTIAL FLOOR PLANS - SANITARY
**MAIN EGGLESTON
 TOILET/SHOWER ROOM RENOVATION - PHASE I**
 Virginia Polytechnic Institute & State University

DESIGNED BY:
JMM

DRAWN BY:
DAR

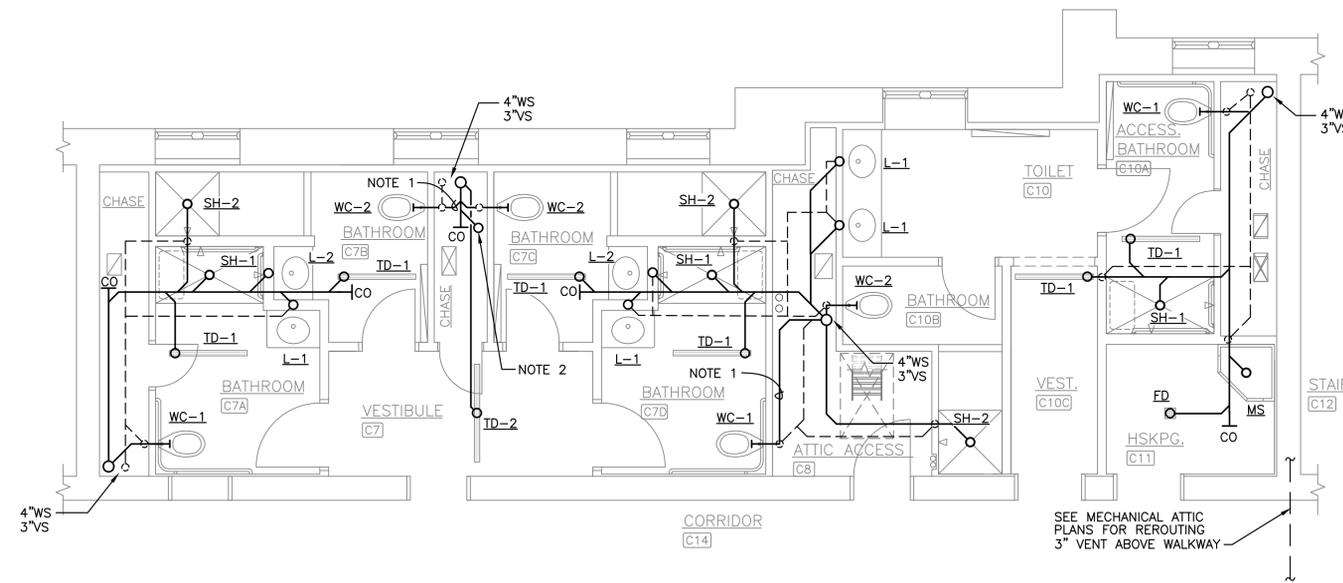
CHECKED BY:
JMM, CBL

The Architects Alliance Inc.
 Blacksburg, Virginia

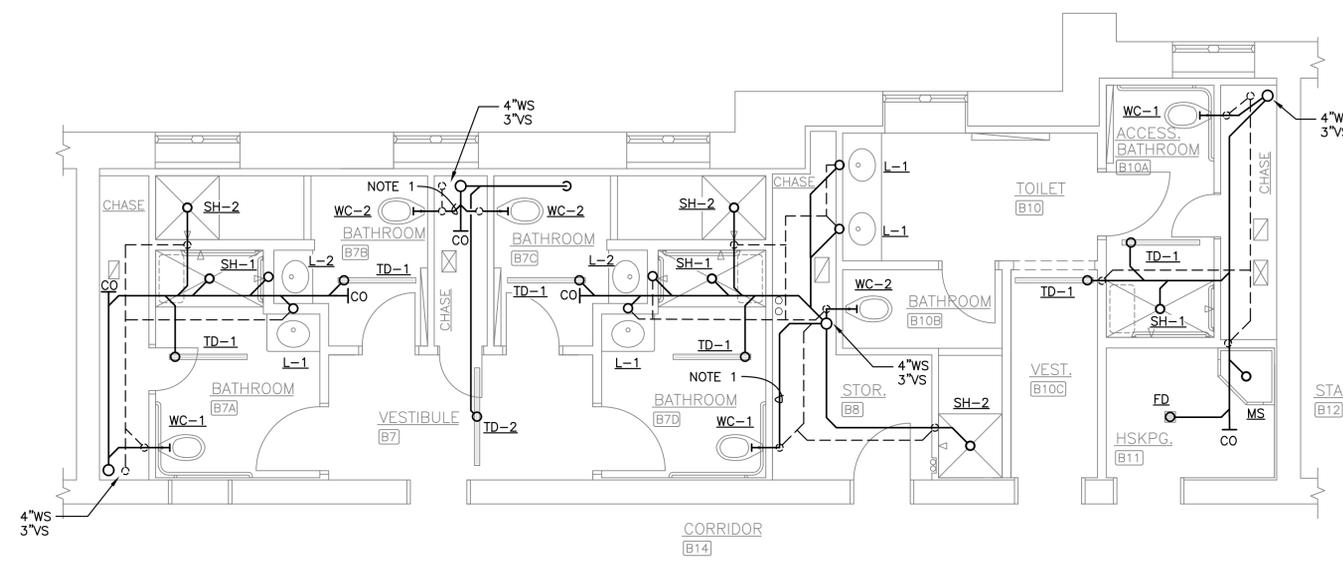
PROJECT NO:
116645

DATE:
1/25/26

P2



PARTIAL THIRD FLOOR PLAN – SANITARY
 1/4" = 1'-0"



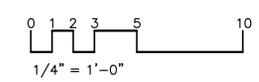
PARTIAL SECOND FLOOR PLAN – SANITARY
 1/4" = 1'-0"

GENERAL NOTES

- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY DUCT AND PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- EXISTING BAR JOISTS ARE NOT SHOWN. ADJUST DUCT AND PIPING RISER LOCATIONS AS REQD. TO AVOID EXIST. JOISTS, SUBJECT TO ADVANCE APPROVAL OF THE A/E. SEE ARCH. DRAWINGS FOR NOTES REGARDING A SPECIAL COORDINATION SITE VISIT PRIOR TO DRILLING OR CUTTING THE EXIST. SLABS, AND PRIOR TO INSTALLATION OF MTL. TRACKS.
- INSTALL PIPING AND P-TRAPS AS HIGH AS POSSIBLE, BETWEEN AND THROUGH BAR JOISTS. WHERE PIPING MUST BE INSTALLED BELOW BAR JOISTS, MOUNT TIGHT TO BOTTOM OF GYPBOARD, ALLOWING FOR PIPE INSULATION THICKNESS WHERE REQUIRED.
- SEE SANITARY AND VENT RISER DIAGRAM ON SHEET P6 FOR PIPE SIZES.

NOTES THIS SHEET

1. SANITARY WASTE PIPE FROM WATER CLOSET CARRIER ROUTED ABOVE FLOOR IN CHASE.
2. OPEN SIGHT HUB DRAIN FOR CONDENSATE DRAIN. PROVIDE TRAP SEAL IN HUB DRAIN. SEE ATTIC PLAN ON MECHANICAL DRAWINGS FOR CONDENSATE DRAIN PIPE.



UBO NOTATION:



MANN & ASSOCIATES, INC.
 306 Market Street, 2524
 Roanoke, VA, 24011
 540-344-5513



DATE
 REVISIONS

PARTIAL FLOOR PLANS - SANITARY
**MAIN EGGLESTON
 TOILET/SHOWER ROOM RENOVATION - PHASE I**
 Virginia Polytechnic Institute & State University

DESIGNED BY:
 JMM

DRAWN BY:
 DAR

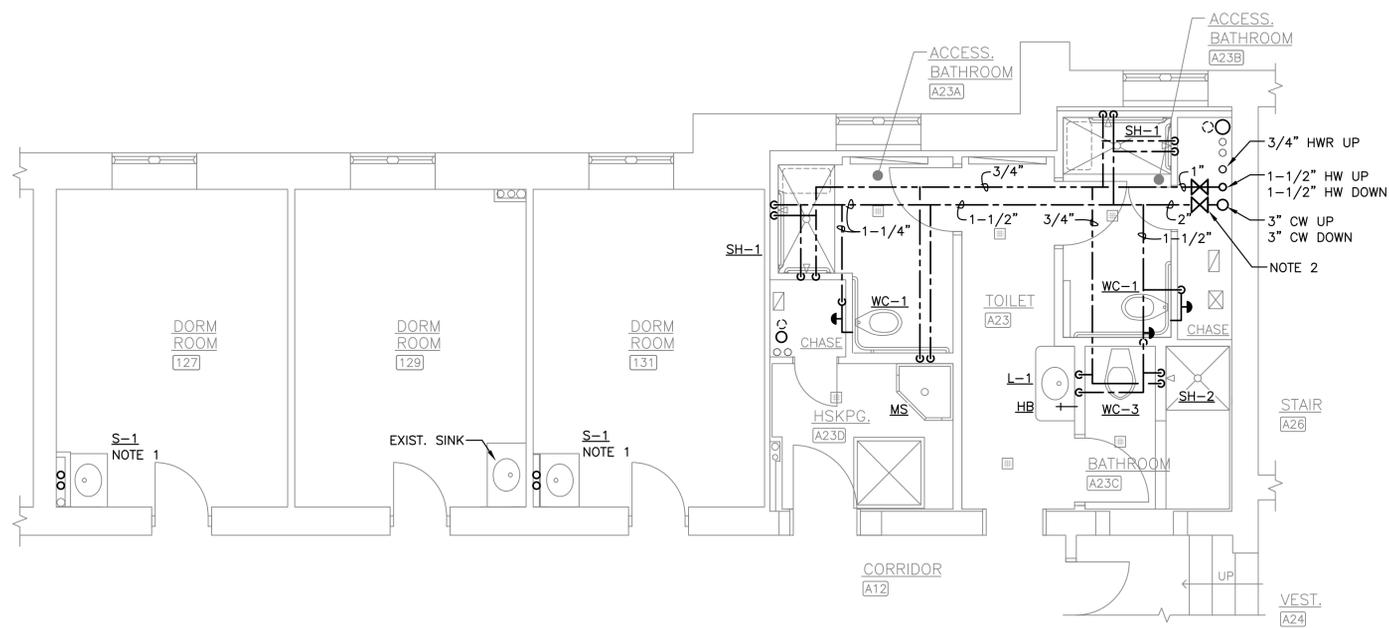
CHECKED BY:
 JMM, CBL

The Architects Alliance Inc.
 Blacksburg, Virginia

PROJECT NO:
 116645

DATE:
 1/25/26

P3



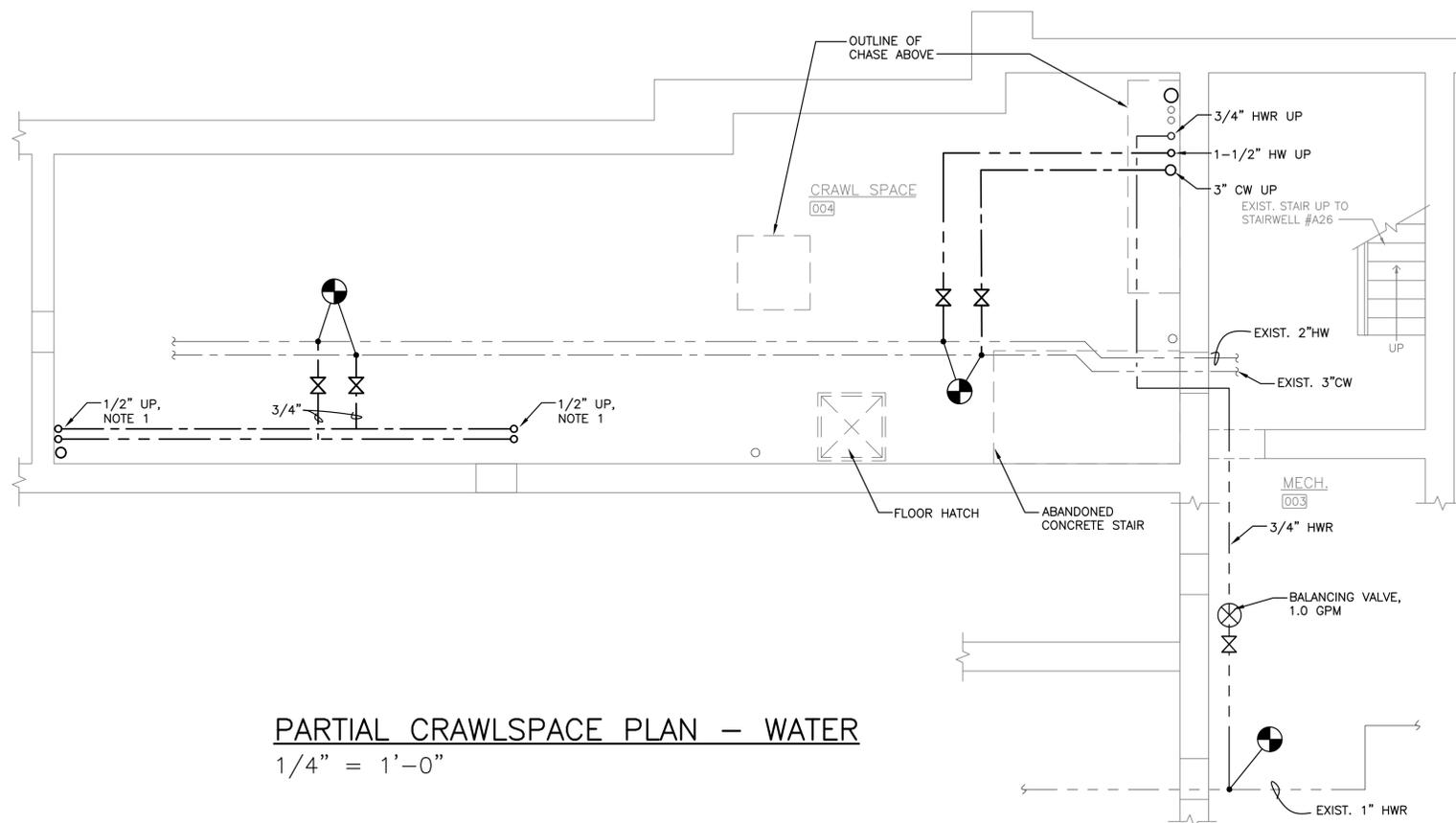
PARTIAL FIRST FLOOR PLAN – WATER
 1/4" = 1'-0"

GENERAL NOTES

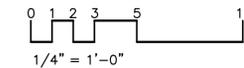
- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY DUCT AND PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- EXISTING BAR JOISTS ARE NOT SHOWN. ADJUST DUCT AND PIPING RISER LOCATIONS AS REQD. TO AVOID EXIST. JOISTS, SUBJECT TO ADVANCE APPROVAL OF THE A/E. SEE ARCH. DRAWINGS FOR NOTES REGARDING A SPECIAL COORDINATION SITE VISIT PRIOR TO DRILLING OR CUTTING THE EXIST. SLABS, AND PRIOR TO INSTALLATION OF MTL. TRACKS.
- INSTALL PIPING AND P-TRAPS AS HIGH AS POSSIBLE, BETWEEN AND THROUGH BAR JOISTS. WHERE PIPING MUST BE INSTALLED BELOW BAR JOISTS, MOUNT TIGHT TO BOTTOM OF GYPBOARD, ALLOWING FOR PIPE INSULATION THICKNESS WHERE REQUIRED.

NOTES THIS SHEET

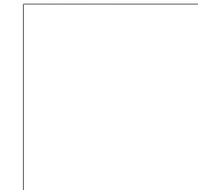
1. CONNECT HOT AND COLD WATER PIPES TO SINK IN DORM ROOMS. PROVIDE NEW STOPS AND SUPPLIES FOR THE LAVATORY.
2. LOCATE VALVES TO BE ACCESSIBLE IN CHASE.



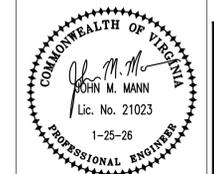
PARTIAL CRAWLSPACE PLAN – WATER
 1/4" = 1'-0"



UBO NOTATION:



MANN & ASSOCIATES, INC.
 306 Market Street
 Roanoke, VA, 24011
 540-344-5513



DATE
REVISIONS

PARTIAL FLOOR PLANS - WATER

**MAIN EGGLESTON
 TOILET/SHOWER ROOM RENOVATION - PHASE I**

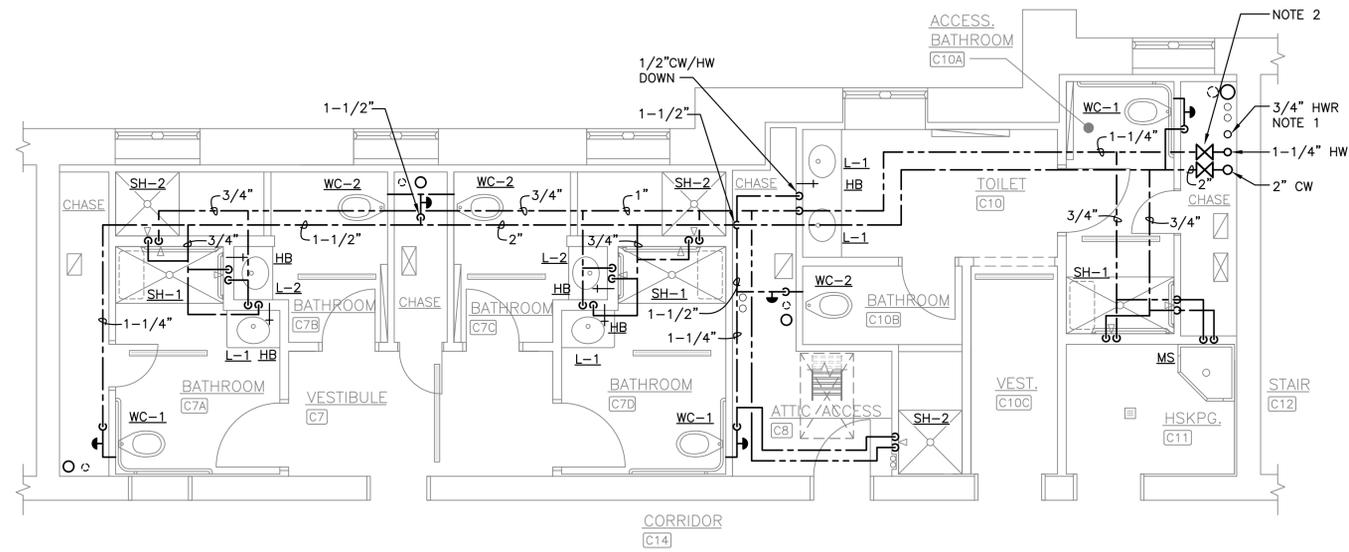
Virginia Polytechnic Institute & State University

DESIGNED BY: JMM
DRAWN BY: DAR
CHECKED BY: JMM, CBL

The Architects Alliance Inc.
 Blacksburg, Virginia

PROJECT NO: 116645
DATE: 1/25/26
P4

DATE
REVISIONS



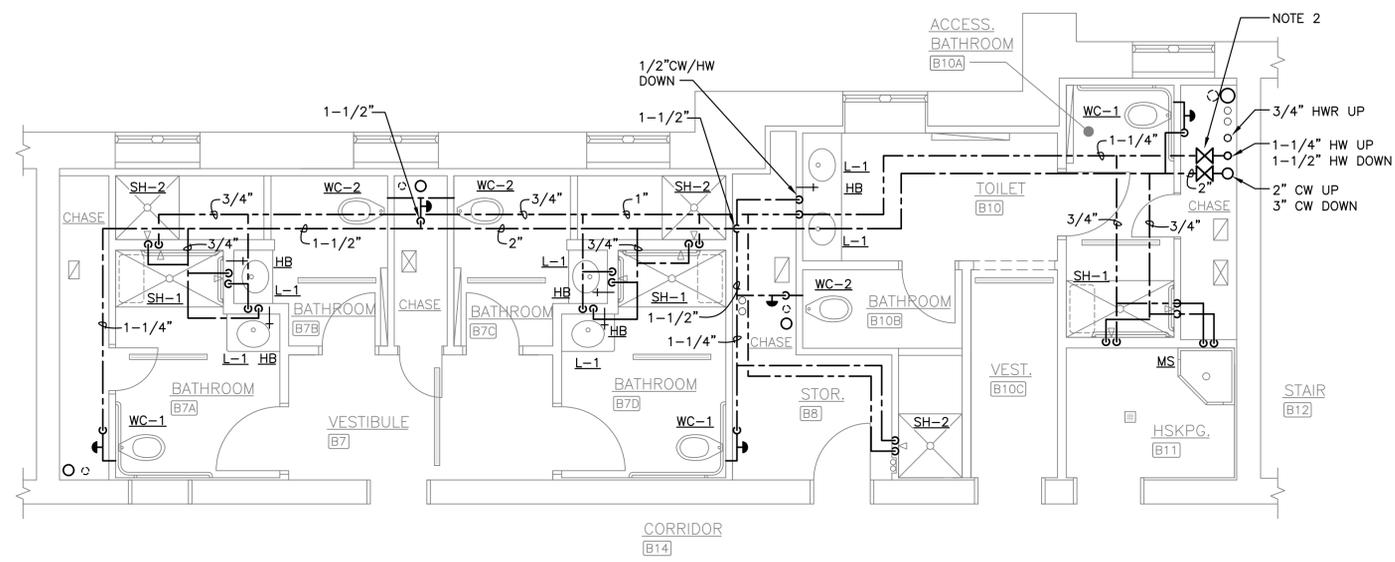
GENERAL NOTES

- SEE ARCHITECTURAL DRAWINGS FOR KEY PLANS.
- SEE TOILET ELEVATIONS AND DETAILS ON THE ARCHITECTURAL DRAWINGS FOR INSTALLATION NOTES AND MOUNTING HEIGHTS.
- VERIFY DUCT AND PIPE SIZES, ITEMS TO BE REPLACED, AND OTHER EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- EXISTING BAR JOISTS ARE NOT SHOWN. ADJUST DUCT AND PIPING RISER LOCATIONS AS RECD. TO AVOID EXIST. JOISTS, SUBJECT TO ADVANCE APPROVAL OF THE A/E. SEE ARCH. DRAWINGS FOR NOTES REGARDING A SPECIAL COORDINATION SITE VISIT PRIOR TO DRILLING OR CUTTING THE EXIST. SLABS, AND PRIOR TO INSTALLATION OF MTL. TRACKS.
- INSTALL PIPING AND P-TRAPS AS HIGH AS POSSIBLE, BETWEEN AND THROUGH BAR JOISTS, EXCEPT NO PIPING ALLOWED IN ATTIC FLOOR JOISTS, WHERE PIPING MUST BE INSTALLED BELOW BAR JOISTS, MOUNT TIGHT TO BOTTOM OF GYPBOARD, ALLOWING FOR PIPE INSULATION THICKNESS WHERE REQUIRED.

NOTES THIS SHEET

1. CONNECT HWR PIPE TO HW PIPE AT TOP OF THIRD FLOOR CHASE. PROVIDE SHUTOFF VALVE ON HWR.
2. LOCATE VALVES TO BE ACCESSIBLE IN CHASE.

PARTIAL THIRD FLOOR PLAN – WATER
1/4" = 1'-0"



PARTIAL SECOND FLOOR PLAN – WATER
1/4" = 1'-0"

PARTIAL FLOOR PLANS - WATER
**MAIN EGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I**
Virginia Polytechnic Institute & State University

DESIGNED BY:
JMM

DRAWN BY:
DAR

CHECKED BY:
JMM, CBL

The Architects Alliance Inc.
Blacksburg, Virginia

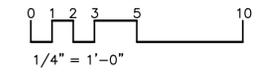
PROJECT NO:
116645

DATE:
1/25/26

P5

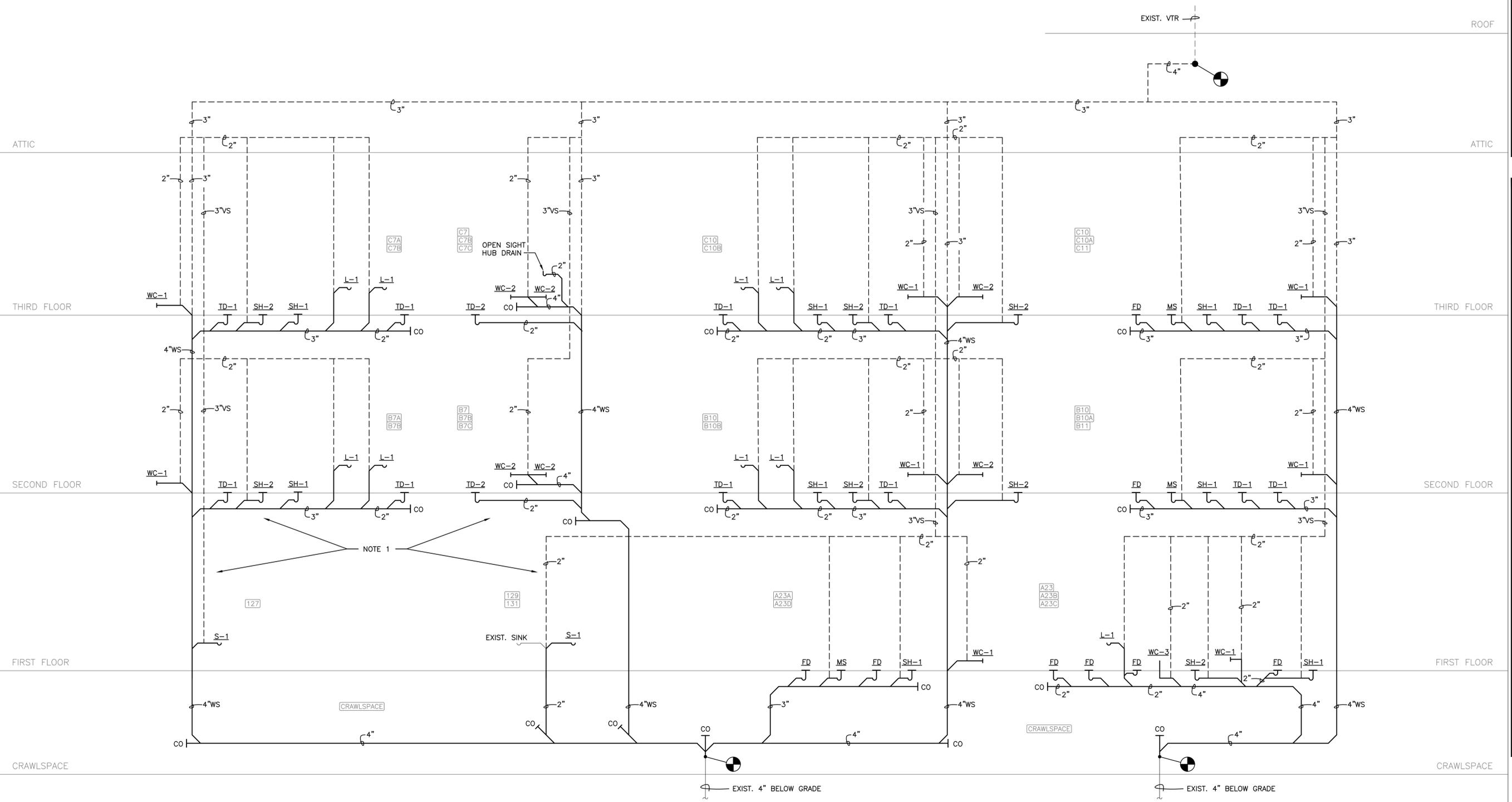
MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA, 24011
540-344-5513

UBO NOTATION:



NOTES THIS SHEET

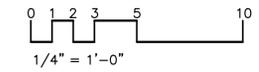
1. PROVIDE CAST IRON PIPING IN DORM ROOMS.
SEE PLUMBING OUTLINE SPECIFICATIONS.



SANITARY WASTE & VENT DIAGRAMS
SCHEMATIC

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA, 24011
540-344-5513

UBO NOTATION:



DATE
REVISIONS

SANITARY WASTE AND VENT DIAGRAMS
**MAIN EGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I**
 Virginia Polytechnic Institute & State University

DESIGNED BY: JMM
DRAWN BY: DAR
CHECKED BY: JMM, CBL

The Architects Alliance Inc.
Blacksburg, Virginia

PROJECT NO: 116645
DATE: 1/25/26
P6

PLUMBING FIXTURE SCHEDULE SEE FIXTURE SCHEDULE NOTE 1

MARK	DESCRIPTION	FIXTURE WASTE	VENT	C.W.	H.W.	MANUFACTURER	MODEL	CATALOG NO.	REMARKS	MTG HGT
WC-1	WALL WATER CLOSET, FLUSH VALVE-ACCESSIBLE	4"	2"	1"	---	AMERICAN STANDARD	AFWALL	2257.101	WALL MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. JOSAM 14504 CARRIER FOR NARROW CHASE, BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LB32 SENSOR TOILET FLUSH VALVE. SEE SCHEDULE NOTE 3.	16-1/2" TO RIM
WC-2	WALL WATER CLOSET, FLUSH VALVE	4"	2"	1"	---	AMERICAN STANDARD	AFWALL	2257.101	WALL MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. JOSAM 14504 CARRIER FOR NARROW CHASE, BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LB32 SENSOR TOILET FLUSH VALVE.	15" TO RIM
WC-3	FLOOR WATER CLOSET, FLUSH VALVE	4"	2"	1"	---	AMERICAN STANDARD	MADERA	3451.001	FLOOR MOUNTED, TOP SPUD, ELONGATED FRONT, 1.28 GPF. BEMIS 1955SSCT SEAT. PROVIDE TOTO ECOPOWER TET1LB32 SENSOR TOILET FLUSH VALVE.	15" TO RIM
L-1	OVAL LAVATORY-ACCESSIBLE	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER	PENNINGTON	K-2196-1	DROP-IN OVAL LAVATORY, TOTO ECOPOWER TEL105-D10E SENSOR FAUCET, 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. PROVIDE COLD WATER PIPING AND HOSE BIBB BELOW EACH LAVATORY.	COUNTER TOP, SEE ARCH.
L-2	OVAL LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER	PENNINGTON	K-2196-1	DROP-IN OVAL LAVATORY, TOTO ECOPOWER TEL105-D10E SENSOR FAUCET, THERMOSTATIC MIXING VALVE, 0.5 GPM AERATOR, OFFSET GRID DRAIN STRAINER, ANGLE SUPPLIES & STOPS, SEE FIXTURE SCHEDULE NOTE 2. PROVIDE COLD WATER PIPING AND HOSE BIBB BELOW EACH LAVATORY.	COUNTER TOP, SEE ARCH.
S-1	DORM ROOM SINK	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER	PENNINGTON	K-2196-4	DROP-IN OVAL LAVATORY, MOEN FAUCET 8210F05, 2-1/2" LEVER HANDLES, 4" CENTERS, 0.5 GPM AERATOR, GRID DRAIN STRAINER, ANGLE SUPPLIES & STOPS, COORDINATE PIPING WITH VANITY.	COUNTER TOP, SEE ARCH.
SH-1	ROLL-IN SHOWER ACCESSIBLE	2"	1-1/2"	1/2"	1/2"	MOEN	POSI-TEMP	8372HD(IPS) T8370 TRIM	SINGLE-HANDLE PRESSURE BALANCED SHOWER VALVES, INTEGRAL SHUT-OFF VALVES, ADA COMPLIANT. COMMERCIAL, ALL METAL CHROME TRIM KIT. PROVIDE QUANTITY OF TWO SHOWER VALVES: ONE ON LONG WALL FOR HANDSHOWER AND ONE ON SHORT WALL FOR FIXED SHOWERHEAD. MOEN MODEL 3668EP HANDSHOWER WITH 24" SLIDE BAR, 59" METAL HOSE, AND DROP ELL, 1.75 GPM, CHROME FINISH. FIXED SHOWER HEAD, NIAGARA MODEL EARTH N2915-CH WITH MOEN CL123815 CHROME SHOWER ARM. SEE SHOWER ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR MOUNTING DIMENSIONS.	
SH-2	SHOWER	2"	1-1/2"	1/2"	1/2"	MOEN	POSI-TEMP	8372HD(IPS) T8370 TRIM	SINGLE-HANDLE PRESSURE BALANCED SHOWER VALVE, INTEGRAL SHUT-OFF VALVES. COMMERCIAL, ALL METAL CHROME TRIM KIT. FIXED SHOWER HEAD, NIAGARA MODEL EARTH N2915-CH WITH MOEN CL123815 CHROME SHOWER ARM. SEE SHOWER ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR MOUNTING DIMENSIONS.	
SH-1 SH-2 FD	SHOWER DRAIN AND FLOOR DRAIN	2"	1-1/2"	---	---	SCHLUTER	---	KERDI-DRAIN	PVC BODY, 4" SQUARE STAINLESS STEEL "CLASSIC #6E" COVER. PROVIDE AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS WITH ALL ACCESSORIES, INCLUDING SEALING AND BONDING COMPONENTS, AS REQUIRED FOR A COMPLETE DRAINAGE ASSEMBLY COMPATIBLE WITH THE MEMBRANE WATERPROOFING SYSTEM. PROVIDE WITH PROSET TRAP GUARD.	
TD-1 TD-2	TRENCH DRAIN	2"	1-1/2"	---	---	SCHLUTER	---	KERDI-LINE	SCHLUTER KERDI-LINE LINEAR DRAIN, 2 1/8" WIDTH, WITH GRATE FRAME ASSEMBLY, "SOLID" GRATE DESIGN. ALL COMPONENTS SHALL BE STAINLESS STEEL, WITH BRUSHED FINISH FOR ALL EXPOSED SURFACES. PROVIDE AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS WITH ALL ACCESSORIES, INCLUDING SEALING AND BONDING COMPONENTS, AS REQUIRED FOR A COMPLETE DRAINAGE ASSEMBLY COMPATIBLE WITH THE MEMBRANE WATERPROOFING SYSTEM. PROVIDE WITH PROSET TRAP GUARD TD-1: 44" LENGTH, OFFSET DRAIN. TD-2: 55" LENGTH, CENTER DRAIN	
HB	HOSE BIBB	---	---	1/2"	---	CHICAGO	---	293-E27CP	INSIDE SILL FITTING, POLISHED CHROME FINISH, SOLID BRASS BODY CONSTRUCTION, 1/2" NPT FEMALE INLET, 3/4" MALE HOSE THREAD OUTLET, SLOW COMPRESSION RENEWABLE CARTRIDGE, VACUUM BREAKER. PROVIDE QUICK-CONNECT FITTING PER UNIVERSITY STANDARDS. PROVIDE COLD WATER PIPING AND HOSE BIBB BELOW EACH LAVATORY.	16"
MS	MOP SINK	3"	2"	1/2"	1/2"	FIAT	MOP BASIN	TSBC1611	TERRAZO CORNER BASIN, 32"x32"x12", MOEN 8124 WALL MOUNTED FAUCET WITH VACUUM BREAKER AND BUCKET HOOK, 832-AA HOSE AND BRACKET, 889-CC MOP HANGER, QDC-3-2 QUICK CONNECTOR.	FLOOR MOUNTED

- FIXTURE SCHEDULE NOTES:**
- 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.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
----	ITEM TO BE REMOVED
----	DOMESTIC COLD WATER PIPING
----	DOMESTIC HOT WATER PIPING
----	HOT WATER RECIRC PIPING
----	SANITARY PIPING
----	VENT PIPING
⊖	PIPE TURN DOWN
⊕	PIPE TURN UP
⊗	ISOLATION VALVE
FD □	FLOOR DRAIN
⊕	NEW TO EXISTING CONNECTION
↑	SHOCK ARRESTOR
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RECIRCULATING
EXIST.	EXISTING
W	SANITARY WASTE
V	SANITARY VENT
WS	WASTE STACK
VS	VENT STACK
CO	CLEANOUT
⊗	BALANCING VALVE
TD	TRENCH DRAIN

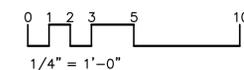
PLUMBING OUTLINE SPECIFICATIONS

SECTION 15100

- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND VIRGINIA TECH DESIGN AND CONSTRUCTION GUIDELINES.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR FIXTURES, EQUIPMENT AND DEVICES. SEE OUTLINE SPECIFICATION SECTION 01330.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS. SEE OUTLINE SPECIFICATION SECTION 01770.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT. SEE OUTLINE SPECIFICATION SECTION 01782.
- 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.
- ALL WORK SHALL BE NEW AND IS INCLUDED IN THE CONTRACT UNLESS SPECIFICALLY NOTED TO BE EXISTING OR N.I.C. (NOT IN CONTRACT) OR BY OWNER.
- 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.
- THE EXISTING BUILDING WILL BE OCCUPIED DURING THE ENTIRE PERIOD OF CONSTRUCTION. COORDINATE ALL WORK WITH THE OWNER IN ORDER TO MINIMIZE DISRUPTION OF THE USE OF THE EXISTING BUILDING. SEE OUTLINE SPECIFICATION SECTION 01000 FOR ADDITIONAL LIMITATIONS ON WORK HOURS AND ACCESS.
- SEE OUTLINE SPECIFICATION SECTION 02220 AND DEMOLITION NOTES ON SHEET D1 FOR ADDITIONAL INFORMATION PERTAINING TO DEMOLITION.
- 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.
- SEE SHEET T1 FOR IMPORTANT NOTES PERTAINING TO ASBESTOS-CONTAINING AND LEAD-CONTAINING MATERIALS.
- 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. FIRESTOP ALL DUCT AND PIPE PENETRATIONS OF FLOOR SLABS (INCLUDING ATTIC FLOOR) AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS. ALL MATERIALS LOCATED IN RETURN AIR PLENUMS SHALL BE LISTED FOR INSTALLATION IN PLENUMS. SEE OUTLINE SPECIFICATION SECTION 07840.
- 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. SEE OUTLINE SPECIFICATION SECTION 08310.
- THE DESIGN SHOWN IS BASED ON THE MANUFACTURERS AND MODELS SCHEDULED AND IS INTENDED ONLY TO SHOW THE GENERAL SIZE, CONFIGURATION, LOCATION, CONNECTIONS AND/OR SUPPORT FOR EQUIPMENT OR SYSTEMS SPECIFIED WITH RELATION TO THE OTHER BUILDING SYSTEMS.
- PROVIDE SLEEVES FOR ALL PIPE PENETRATIONS IN MASONRY WALLS AND CONCRETE FLOOR SLABS. ANCHOR SLEEVES TO ADJACENT STRUCTURE.
- 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: SCHEDULE 40 PVC, DWV, ASTM D2665. FITTINGS SHALL BE PVC WITH SOLVENT WELD JOINTS WITH ASTM D 2564 SOLVENT CEMENT. MATCH PIPING MATERIAL WHERE CONNECTING TO EXISTING.
- SANITARY WASTE AND VENT PIPING IN DORM ROOMS: FOR PIPING ABOVE DORM CEILING AND IN DORM CHASE, USE CAST IRON PIPE AND FITTINGS, HUBLESS, CISPI 301, AND RUBBER GASKETS, ASTM C564. PROVIDE HEAVY DUTY COUPLINGS EQUAL TO CHARLOTTE MODEL HD WITH FOUR STAINLESS STEEL CLAMPS, WITH 3/8" HEX-HEAD SCREW.
- INSTALL ALL PIPING ABOVE CEILINGS AS HIGH AS POSSIBLE. COORDINATE PIPING WITH DUCTS & ELECTRICAL WORK TO PERMIT INSTALLATION OF THE SUSPENDED CEILINGS AT THE SPECIFIED HEIGHTS. RELOCATE EXIST. PIPING AS REQUIRED FOR INSTALLATION OF THE SUSPENDED CEILINGS AT THE SPECIFIED HEIGHTS. ALL PIPING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS, EXCEPT IN CRAWLSPACE AND ATTIC.
- 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.
- PROVIDE SURESEAL TRAP SEALER IN ALL FLOOR DRAINS AND HUB DRAINS.
- WATER HAMMER ARRESTERS: ASSE 1010, INSTALLED WHERE INDICATED AND IN LOCATION CONCEALED FROM PUBLIC VIEW. PROVIDE ACCESS TO WATER HAMMER ARRESTER.
- INSULATE ALL NEW WATER PIPING WITH FIBERGLASS PIPE WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. REPAIR EXISTING PIPE INSULATION WHERE DAMAGED DURING THIS PROJECT. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, K-VALUE OF 0.24. FOR HW AND HWR PIPES LESS THAN 1.5" DIA. - 1" THICK, HW AND HWR PIPING GREATER THAN 1.5" DIA. - 1.5" THICK. FOR CW PIPES LESS THAN 1.5" DIA. - 1/2" THICK, CW PIPING GREATER THAN 1.5" DIA. - 1" THICK. SEAL COLD WATER PIPE INSULATION WITH VAPOR BARRIER MASTIC. INSULATION SHALL BE CONTINUOUS AT HANGERS WITH RIGID BLOCKS AND GALVANIZED INSULATION SHIELDS.
- 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 POLISHED CHROME FINISH. TRAPS SHALL BE 17 GAUGE WITH CLEANOUT PLUG.
- WATER SUPPLY TO FIXTURES TO INCLUDE CHROME ESCUTCHEONS, ANGLE SUPPLY VALVE WITH QUARTER-TURN LOOSE KEY. FLEXIBLE SUPPLIES TO BE CHROME PLATED COPPER TUBE RISERS OR BRAIDED STAINLESS STEEL.
- PROVIDE CHROME ESCUTCHEONS AT PIPE PENETRATIONS OF WALLS AND FLOORS.
- LABEL WATER PIPES PER ASME A13.1. LABEL DIRECTION OF FLOW.
- VERIFY AND DEMONSTRATE TO OWNER THE OPERATION OF ALL EQUIPMENT AND CONTROLS.
- 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 VA TECH REQUIREMENTS.

MANN & ASSOCIATES, INC.
306 Market Street
Roanoke, VA 24011
540-344-5513

UBO NOTATION:



DATE

REVISIONS

SCHEDULES & OUTLINE SPECIFICATIONS - PLUMBING

**MAIN EGLESTON
TOILET/SHOWER ROOM RENOVATION - PHASE I**
Virginia Polytechnic Institute & State University

DESIGNED BY:
JMM

DRAWN BY:
DAR

CHECKED BY:
JMM, CBL

**The
Architects
Alliance
Inc.**

Blacksburg,
Virginia

PROJECT NO:
116645

DATE:
1/25/26

P7