MONTGOMERY COLLEGE - OFFICE OF PROCUREMENT
MACKLIN TOWER MBI FINANCE LAB SUITE 100, ROCKVILLE CAMPUS
RFP NO.: 620-011
RFP CLOSING DATE AND TIME: APRIL 7, 2020 @ 3:00 PM

ADDENDUM #1
Issued: March 27, 2020

THIS ADDENDUM IS TO PROVIDE ANSWERS TO THE FOLLOWING QUESTIONS:

NOTE: Similar requests for information that were received from different Contractors have been grouped under a single addendum item where appropriate, with a single comprehensive answer provided.

The following items offer clarifications that do not change any requirements of the RFP documents.

Item 2-1 Question: E5.02 Detail Notes. Please confirm that access to an on-site client workstation to perform these steps, by a factory authorized Lenel VAR, will be made available by Montgomery College.

Answer: The College will provide a connection to the server from a MCFNet connected workstation, vendor must be onsite to connect.

Item 2-2 Question: E5.02 Detail Notes. Please confirm that all necessary software licenses for the additional readers locations being installed are existing.

Answer: Software licenses for additional readers are available in the software already.

The following items offer clarification that do change the requirements of the RFP documents. PLEASE MAKE CHANGES TO THE RFP DOCUMENTS AS FOLLOWS:

Item 2-3 Question: E5.02 Detail Notes: Please clarify labor scope described here. If the ACUXL 16 Plus Intelligent Controller, LFSP FPO150/250 Cabinet, and Spare Lenel RRE-4 modules are existing, some of the scope items described will not be required.
Specifically, related to Note 5 – since the devices are existing (and presumed online) there will be no programming required to connect the system into the College Central System.

Answer: ACUXL16 Plus and FPO150/250 are existing, RRE-4s will need to be provided. ACU is connected to system currently so no programming is needed for this, but the RRE-4s will need to be programmed into the system.

Item 2-4 Question: E5.02, In Note 4 there are references to additional system design, shop drawings, calculations and programming. The scope of work as defined has both component and system design requirements already specified, and the RRE-4 control devices already installed in Rm MT0026C. Please clarify if this representation is accurate. Our understanding is that this will limit the scope of Note 4 to the programming needed to name/activate the new door devices being terminated on these existing boards, and configuring/testing their operation.

Answer: RRE-4s will need to be programmed in the system.

MONTGOMERY COLLEGE - OFFICE OF PROCUREMENT
MACKLIN TOWER MBI FINANCE LAB SUITE 100, ROCKVILLE CAMPUS
RFP NO.: 620-011
RFP CLOSING DATE AND TIME: APRIL 7, 2020 @ 3:00 PM

ADDENDUM #1
Issued: March 27, 2020

Item 2-5 Question: Refer to Specification Section 087100 Door Hardware, Page 15. Per Sheet E5.02, the 2 Lenel RRE-4 controls are existing. Please confirm these do not need to be provided as part of the hardware spec.

Answer: RRE-4 controllers will need to be provided. The ACUXL16 Plus and FPO150/250 are existing.

Item 2-6 Question: Refer to Specification Section 087100 Door Hardware, Page 14. Set #2 – shows as being used for Door 002, and does not indicate Electrified Hardware. However, A601 Door Schedule identifies HW Set #1 for Door 002. Please Clarify.

Answer: Door 002 is not a locking door and should use Hardware Set #2.

Item 2-7 Question: Refer to Specification Section 087100 Door Hardware, Page 14. Set #3 – shows one HID Reader. Based on lock Specification ML20932 x SEC and Drawing E2.01, it assumed this door requires both Entry and Exit Readers. Please Clarify.

Answer: Yes, this hardware set should have had 2 readers on it.

Item 2-8 Question: Our team went over the construction document and discover some inconsistency in the labeling of Drawing Index and E4.01 FRIST FLOOR PLAN-FIRE ALARM-NEW WORK is missing in the construction document.

Answer: The electrical section of the drawing index is incorrect. There is no fire alarm plan issued with the RFP documents. The List of Drawings has been reissued in its entirety and included in this Addendum.

Item 2-9 **DELETE** Part 6.2 on Page 002113-4 in its entirety and replace with the following:

6.2 Offerors must submit one original hard copy of Technical Proposal with original ink signatures, plus one electronic version of Technical Proposal saved as a PDF on a clearly marked compact disc (CD) or a clearly marked USB flash drive with the name of the firm and RFP No. The PDF must be a single, appropriately bookmarked and text-searchable PDF. Originals of technical proposal submission should be bound with binder clips or placed in three-ring binders and no spiral binding should be used.

Item 2-10 **DELETE** first paragraph on Page 002413-1 in its entirety and replace with the following:

Proposals, one original hard copy, plus one electronic version of Technical Proposal (Part A) saved as a PDF on a clearly marked compact disc (CD) or a clearly marked USB flash drive with the name of the firm and RFP No., and one original and two copies of Price Proposal (Part B) shall be submitted on the enclosed Proposal Forms, properly signed with the required attachments, if any, in the separately sealed envelopes and address to:

MONTGOMERY COLLEGE - OFFICE OF PROCUREMENT
MACKLIN TOWER MBI FINANCE LAB SUITE 100, ROCKVILLE CAMPUS
RFP NO.: 620-011
RFP CLOSING DATE AND TIME: APRIL 7, 2020 @ 3:00 PM

ADDENDUM #1
Issued: March 27, 2020

Item 2-11 **ADD** Specification Section 237313 INDOOR AIR HANDLING UNITS to the project manual.

Item 2-12 **EXTEND** the RFP closing date and time from 3:00 p.m. on April 1, 2020 to **3:00 p.m. on April 7, 2020.**

Index of Attachments to Addendum

List of Drawings or Portions Reissued in Entirety
LIST OF DRAWINGS

Specification Sections or Portions Reissued in Entirety
237313 Indoor Air Handling Units

Drawings Reissued in Entirety
COVER SHEET
G011 LIFE SAFETY PLANS
S1.01 PLANS & ELEVATIONS
S2.02 SECTIONS & DETAILS
A101 GROUND FLOOR PLAN
A112 FIRST FLOOR RCP
A607 FINISH SCHEDULE AND DETAILS
M0.01 MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES
M2.01 GROUND FLOOR PLAN – DUCTWORK – NEW WORK
M2.02 FIRST FLOOR PLAN – MECHANICAL – NEW WORK
P2.01 FIRST FLOOR PLAN – PLUMBING – NEW WORK
E2.01 – FIRST FLOOR PLAN – POWER & SPECIAL SYSTEMS – NEW WORK

Sketches
NONE

Items Issued for Informational Purposes
BKM Drawing Narrative dated 3/25/2020

Patrick Johnson, MBA
Director of Procurement

Please **sign** below to acknowledge receipt of this Addendum and return with the **Technical Proposal submission.** Failure to return this Acknowledgement of Addendum may deem a proposal nonresponsive.

MONTGOMERY COLLEGE - OFFICE OF PROCUREMENT
MACKLIN TOWER MBI FINANCE LAB SUITE 100, ROCKVILLE CAMPUS
RFP NO.: 620-011
RFP CLOSING DATE AND TIME: APRIL 7, 2020 @ 3:00 PM

ADDENDUM #1
Issued: March 27, 2020

NOTE: ACKNOWLEDGEMENT OF RECEIPT OF RFP ADDENDA WILL NOT BE ACCEPTED BY FACSIMILE OR E-MAIL.

_____	_____
Company Name	Authorized Signature
_____	_____
Date	Printed/Typed Signature

LIST OF DRAWINGS

GENERAL

G0.00 – COVER SHEET
G0.11 – SAFETY PLANS

STRUCTURAL

S0.01 – STRUCTURAL GENERAL NOTES & SPECIAL INSPECTION SCHEDULE
S1.01 – STRUCTURAL PLAN & ELEVATIONS
S2.01 – STRUCTURAL SECTIONS & DETAILS
S2.02 – STRUCTURAL SECTION & DETAILS

ARCHITECTURAL

A0.01 – LEGENDS, SYMBOLS & ABBREVIATIONS
A0.12 – PARTITION TYPES
A0.15 – TYPICAL PARTITION DETAILS
AD1.01 – DEMOLITION PLAN – GROUND FLOOR
AD1.02 - DEMOLITION PLAN – FIRST FLOOR
AD1.11 – DEMOLITION RCP – GROUND FLOOR
AD1.12 – DEMOLITION RCP – FIRST FLOOR
A1.01 – GROUND FLOOR PLAN
A1.02 – FIRST FLOOR PLAN
A1.12 – REFLECTED CEILING PLAN – FIRST FLOOR
A4.01 – ENLARGED PLANS & ELEVATIONS
A6.01 – DOOR SCHEDULES
A6.02 – FINISH SCHEDULE AND DETAILS
A6.03 – FINISH PLAN AN DSCHEDULE

MECHANICAL

M0.01 – MECHANICAL LEGEND ABBREVIATION AND GENERAL NOTES
M1.01 – GROUND FLOOR PLAN – MECHANICAL – DEMOLITION
M1.02 – FIRST FLOOR PLAN – MECHANICAL – DEMOLITION
M2.01 – GROUND FLOOR PLAN – DUCTWORK – NEW WORK
M2.02 – FIRST FLOOR PLAN – DUCTWORK – NEW WORK
M3.01 – GROUND FLOOR PLAN – HVAC PIPING – NEW WORK
M3.02 – FIRST FLOOR PLAN – HVAC PIPING – NEW WORK
M4.01 – PART MECHANICAL ROOM PLAN – MECHANICAL – NEW WORK
M5.01 – MECHANICAL SECTIONS
M6.01 – AUTOMATIC TEMPERATURE CONTROLS AND SCHEMATICS
M7.01 – MECHANICAL DETAILS
M8.01 – MECHANICAL SCHEDULES

PLUMBING

P2.01 – FIRST FLOOR PLAN – PLUMBING – NEW WORK

ELECTRICAL

E0.01 – ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES
E0.02 – LIGHTING FIXTURE SCHEDULE, SEQUENCE OF OPERATIONS AND LEGEND
E1.01 – BASE FLOOR PLAN – ELECTRICAL
E1.02 – GROUND FLOOR PLAN – ELECTRICAL – DEMOLITION
E1.03 – FIRST FLOOR PLAN – ELECTRICAL – DEMOLITION
E1.04 – SECOND FLOOR PLAN – ELECTRICAL
E2.01 – FIRST FLOOR PLAN – POWER AND SPECIAL SYSTEMS – NEW WORK
E3.01 – FIRST FLOOR PLAN – LIGHTING – NEW WORK
E4.01 – MECHANICAL ROOM PART PLANS – POWER – DEMOLITION AND NEW WORK
E5.01 – ELECTRICAL DETAILS
E5.02 – ELECTRICAL DETAILS
E6.01 – ELECTRICAL PANEL SCHEDULES

END OF LIST OF DRAWINGS

SECTION 237313 – INDOOR AIR HANDLING UNITS

PART 1 - GENERAL

1.1 SUMMARY

A. Scope: Extent of air handling unit work required by this Section is indicated on the drawings, by requirements of this Section, and all other Division-23 Sections.

B. Refer to requirements of Division-26.

1.2 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Provide air handling units that are the standard product of an equipment manufacturer regularly engaged in the production of such units who issues complete catalog information on such products. Units shall not be fabricated by the Contractor.

B. Certifications: Provide certified ratings of units based on tests performed in accordance with ARI 430.

C. Codes and Standards: Provide air handling units conforming to the following:

1. Air Movement and Control Association, Inc. (AMCA): Comply with applicable AMCA including:

   a. 210 Laboratory Methods of Testing Fans for Rating Purposes

   b. 500 Test Method for Louvers, Dampers, and Shutters

2. Air-Conditioning and Refrigeration Institute (ARI): Comply with applicable ARI including the following:

   a. 410 Forced-Circulation Air-Cooling and Air-Heating Coils

   b. 430 Central-Station Air-Handling Units

3. American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE): Construct and install refrigerant coils in accordance with ASHRAE 15, "Safety Code for Mechanical Refrigeration."

4. National Electrical Manufacturers Association (NEMA): Except for motors, provide electrical components required as part of air handling units, which comply with NEMA Standards.

5. National Fire Protection Association (NFPA): Provide air handling unit internal insulation having flame spread rating not over 25 and smoke developed rating no higher than 50; and complying with NFPA 90A, "Standard for the Installation of Air Conditioning and Ventilating Systems." Comply with NFPA 70, "National Electrical Code," as applicable for installation and electrical connections of ancillary electrical components of air handling units.

6. Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA): Comply with applicable SMACNA standards including "HVAC Duct Construction Standards - Metal and Flexible."

7. Underwriters Laboratories, Inc. (UL): Except for motors, provide electrical components required as part of air handling units, which have been listed and labeled by UL.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's technical product data for air handling units showing dimensions, weights, capacities, ratings, fan performance with operating point clearly indicated, motor electrical characteristics, and finishes of materials, and installation instructions.

B. Shop Drawings: Submit shop drawings showing unit dimensions, weight loadings, required clearances, field connection details and methods of support. Draw to a scale of one half inch to one foot (13 mm to 300 mm), using same sheet size as Contract Drawings. Include field fabricated mixing boxes, dampers and duct connections.

C. Maintenance Data: Submit maintenance instructions, including instructions for lubrication, filter replacement, motor and drive replacement, and spare parts lists. Include this data, product data, shop drawings, and wiring diagrams in operating and maintenance manuals.

1.4 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver air handling units with factory-installed shipping skids and lifting lugs; pack small components in factory-fabricated protective containers.

B. Handling: Handle air handling units carefully to avoid damage to components, enclosures, and finish. Do not install damaged components; replace and return damaged components to air handling unit manufacturer.

C. Storage: Store air handling units in clean dry place and protect from weather and construction traffic.

D. Unloading: Comply with manufacturer's rigging and installation instructions for unloading air handling units, and moving them to final locations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work, shall be limited to the following:

1. Daikin

2. Trane

3. York

4. Carrier

2.2 INDOOR AIR HANDLING UNITS

A. General:

1. Unit may consist of a fan section, chilled water cooling coil section, heating coil section, filter section, access section and mixing box or combination filter mixing box, as indicated on the drawings.

2. All units shall be supplied with a longitudinal structural steel perimeter base rail that shall serve as a housekeeping rail when unit is installed. Base rail shall be installed by the manufacturer at the factory. Perimeter lifting lugs for overhead lifting shall be provided. Slinging of units in lieu of lifting lugs is not acceptable.

3. Provide one additional set of replacement filters.

4. Provide magnehelic filter gauges for each filter bank, graduated to read from 0 to 3" W.G. (0 to 75 Pa).

5. At the contractor's discretion, the units may be shipped in component modules.

6. The units shall be disassembled and reassembled; see paragraph 3.02 of this section.

B. Unit Cabinet:

1. Unit panels for each section of unit shall be 2-inch (50 mm) thick, thermal break, double-walled assembly, foam injected insulation with an R-value of not less than R-13. Outer panel shall be constructed of 20 gauge (1.3 mm) painted, galvanized steel. Inner panel shall be constructed of 22 gauge (1 mm) G90 galvanized steel. Entire floor shall also be double-walled with the same liner as the side and roof panels.

2. Panel deflection shall not exceed L/240 ratio at 125% of design static pressure, maximum 5 inches of positive or 6 inches of negative static pressure. Deflection shall be measured at the panel midpoint.

3. Hinged access doors shall be full height insulated double-wall with heavy duty stainless steel hinges and chromed plated dogged fasteners to provide air-tight compression of the perimeter gasket. Doors shall be lift-off type, removable at hinge pin to provide maximum service access.

C. Fan Section:

1. The fan array will be arranged with high performance direct drive, single inlet, plenum fans with backwards inclined, high efficiency welded-aluminum or high-performance composite impeller with galvanized or aluminum support frame.

2. The fans are driven by long-life, low-temperature brushless DC electronically commutated motor (EC-Motor) with external rotor and integrated maintenance-free electronic circuitry and electronics. The motor is manufactured with maintenance-free, permanently lubricated ball bearings and shall be statically and dynamically balanced in accordance with ISO 1940 part 1. The motor shall be closed, protection level IP 54, thermal class 155 with permissible operating temperature of -13°F to 140°F. Motor efficiency class shall comply with IE4. Fan characteristic curves indicate measurements on a chamber test in accordance with ISO5801. The three-phase external rotor motor integrated into the fan hub meets the requirements for circulating electric machines set forth in DIN EN 60 034-1 (VDE 0530 Part 1).

3. Manual blank-off plates shall be provided to block fan airflow, one plate to be provided per array.

4. Fan Array shall be listed per UL 1995.

5. Fan assemblies shall be prewired with wire whips and plug connectors.

6. Fan system manufacturer must stock replacement parts in North America.

7. The fan bulkhead wall shall be constructed in a manner for easy field assembly, constructed of 14 gauge G90 formed sheet metal. The bend profile at each panel's seam shall provide vertical structural support for the bulkhead wall.

8. The control panel shall include an external disconnect and shall be UL or ETL listed. Each panel contains a lockable Hand/Off/Auto switch for optional manual speed control. The panel accepts a 0-10VDC signal when in Auto mode, and can be controlled locally when in Hand Mode.

9. There is a system alarm contact that the BAS can use to check the status of the Q-PAC System. There is a system enable contact that the BAS can use to enable or disable the Q-PAC System, along with a safety circuit terminations.

10. All Q-PAC components shall be sized to fit through a 20" x 40" access opening.

D. Coil Sections:

1. All coil sections shall be constructed of insulated mill galvanized steel panels. All coils must be easily removable from top or side of horizontal units and from the side of vertical units. Condensate drain pan shall be insulated double-wall stainless steel, sloped in two (2) directions toward drain fitting with a recessed vertical exit non-trapping design with integral elbow for side discharge and female pipe thread connection. A maximum of one drain shall be supplied for each cooling coil sections. Unless this drain pan is continuous between the fan and coil sections, the fan section shall not be allowed to have a drain. Moisture shall not carry over to the fan. Moisture eliminators downstream of cooling coils are not acceptable. Cooling unit shall be sized to ensure against moisture carry over without

the use of moisture eliminators.

2. All coils shall be tested at 325 psig (2210 kPa) air pressure while submerged in water. Coil performance shall be certified in accordance with ARI Standard 410. All coils shall have mill galvanized steel casings.

3. Chilled water coils shall be aluminum plate fins with belled collars and bonded to 1/2 inch (13 mm) OD copper tubes by mechanical expansion. Coils shall have steel or non-ferrous headers with MPT connections. Working pressure shall be 250 psig (1700 kPa) at 300°F (150°C). Coils shall be drainable and have non-trapping circuits. Headers shall have drain and vent connections. Vents and drains that are installed in coil return or supply bends promote coil tube fatigue and shall not be allowed.

4. Hot water coils shall be aluminum plate fins with belled collars bonded to 1/2 inch (13 mm) OD copper tubes by mechanical expansion. Coils shall have steel headers with MPT connections. Working pressures shall be 250 psig (1700 kPa) at 300°F (150°C). Headers shall have drain and vent connections.

5. Tube wall thicknesses shall not be less than 0.020 inches (.5 mm) and tube diameter on all coils shall not be less than 1/2 inch (13 mm) OD.

6. Chilled water coil face velocities shall not exceed 500 fpm (2.5 m/g) except where indicated on drawings.

7. Coil turbulators will not be acceptable.

E. Mixing Box Sections:

1. Each mixing box section where applicable, shall be designed and constructed to house the specific type of filter shown on the equipment schedule. A double-walled hinged access door shall be provided on the side of the section.

2. Mixing boxes shall have parallel blade, interconnecting outside air and return air dampers. All mixing boxes shall have a double-walled hinged access door.

3. All damper blades shall be double skin galvanized steel airfoil, mechanically fastened to a 1/2 inch (13 mm) diameter steel rod rotating in stainless steel bearing. (Dampers shall be sectionalized to limit blade length to no more than 48 inches (1200 mm) so as to minimize blade warpage and to assure tight closure.)

4. Return damper shall be rated for a maximum leakage rate per square foot of 4 cfm (2 L/s) @ 1" wc (250 Pa) and 9 cfm (4.2 L/s) @ 4" wc (1000 Pa). Provide ultra-low leak type for outside air damper.

F. Filters:

1. Rigid filter frames shall be welded galvanized steel, constructed as an integral part of the unit. Filter frames shall be galvanized steel and provide

positive seals around the filters.

2. Pre-filters shall be 2-inch (50 mm) thick non-woven cotton fabric, treated with adhesive and continuously laminated to a supported steel wire grid. Filters shall be 30% ASHRAE 52.1-1992 efficient with a minimum MERV of 8.

3. Cartridge filters shall be constructed by pleating a continuous sheet of fine-fiber media into closely spaced pleats with safe-edged aluminum separators. The filter shall be sealed into a metal frame assembled in a rigid manner. All cartridge filters to be furnished with a pre-filter to provide extended cartridge life. Manufacturer shall supply side access filter rack capable of holding cartridge filters and 2-inch (50 mm) pre-filters. Cartridge filters shall be 80–85% ASHRAE 52.1-1992 efficient with a minimum MERV of 13.

4. Filter sections shall have double walled hinged access doors.

5. Magnehelic gauges shall be provide for each filter bank.

G. Access and Plenum Sections:

1. Access and plenum sections shall be installed where indicated on the drawings.

2. Access sections shall have a double-walled hinged door.

2.3 MOTORS

A. See Division-23 Section, “Electrical Provisions for HVAC Equipment” for minimum motor efficiencies and other requirements.

PART 3 - EXECUTION

3.1 INSTALLATION OF AIR HANDLING UNITS

A. General: Install air handling units where indicated on the drawings, in accordance with equipment manufacturer's published installation instructions.

B. Access: Provide access space around air handling units for service as indicated on the drawings, but in no case less than that recommended by the manufacturer.

C. Mounting: Mount air handling units with internal factory furnished isolators in accordance with manufacturer's instructions.

D. Electrical Wiring: Install electrical devices furnished by manufacturer but not specified to be factory-mounted.

1. Verify that electrical wiring installation is in accordance with manufacturer's submittal and installation requirements of Division-26 sections.

E. Piping Connections: Provide piping, valves, accessories, gauges, supports, and

flexible connections as indicated on the drawings. Locate freezestats and trap air handling unit drain-pan connections according to manufacturer's recommendations.

F. Duct Connections: Provide ductwork, accessories, and flexible connections as required.

G. Extend condensate drain to nearest drain. Provide trap at drain pan at least 1" (25 mm) deeper than total supply fan pressure in inches of water column. For indoor units, provide a concrete pad of adequate height to allow for proper installation of condensate drain trap above floor.

H. Provide MERV 13 filter media at all return air inlet locations throughout the duration of construction. Filter media shall not be removed until final filters are installed in the air handling units.

3.2 AIR HANDLING UNIT DISASSEMBLY AND REASSEMBLY

A. Where required, the air handling units shall be disassembled by the mechanical contractor, transported with rigging as required to the assigned mechanical rooms located at the building interior, and reassembled in their permanent location. The air handling unit panels, doors, coils, fan base, superstructure, etc, shall be 100% bolted construction to facilitate the disassembly and reassembly procedure. Welded construction shall not be permitted. The manufacturer shall include costs for factory authorized representative(s) to supervise the complete disassembly and reassembly of the air handling units.

B. Upon reassembly of the units, the unit manufacturer representative(s) shall inspect the installation and certify that the unit meets the manufacturer’s standards. The inspection/certification shall include, but not be limited to, the following:

1. Pulley alignment and adjustment.

2. Superstructure inspection verifying all panels and unit frame are installed to manufacturer’s standards.

3. Spring isolator adjustment and certification.

4. Motor operated damper adjustment and operation verification.

5. Fan motor amperage reading with the fan operating at 60Hz.

6. Belt tension reading and adjustment.

7. Drain pan inspection.

8. Access door operation and adjustment.

9. Filter inspection.

10. Pressure test(s) of the entire unit shall be performed and the maximum allowable leakage shall be one percent (1%) at 125% times the unit operating pressure, but not less than six inches (6”) w.c.

C. The owner shall be invited to be present during all testing and inspections and shall be given a minimum of one week notice (5 business days) prior to testing and certification.

D. Upon completion of the inspection and testing, the manufacturer shall provide the installing contractor and the owner a type written report indicating deficiencies found. The deficiencies shall then be corrected to the satisfaction of the manufacturer and the owner.

E. Upon completion of the inspection, testing, certification and start-up, the manufacturer shall provide the owner with a signed letter indicating that all warranties, either implied or expressed, shall remain in effect for a period of two years from the date of final approval by the manufacturer and the owner. The letter shall include the unit serial number, model number, as well as the location and address of the installed units.

3.3 FUNCTIONAL PERFORMANCE TESTING AND VERIFICATION

A. General: In addition to the tests required during and after installation of all mechanical systems, as well as any other formal commissioning requirements, the unit manufacturer shall perform functional performance tests to verify that all systems are designed, installed, calibrated and adjusted to perform as required in the Contract.

B. Comply with all applicable specification sections including, but not be limited to, “Basic HVAC Requirements”, “Testing, Adjusting and Balancing”, “Automatic Temperature Controls” and “Commissioning”, where applicable.

C. Prior to functional performance testing, all indicating, recording and control devices shall be calibrated. A verification calibration report shall be provided with the final test report.

D. Provide functional performance testing to verify proper operation of each control sequence associated with the unit indicated throughout the contract documents.

E. Failure of Tests: Should any test, verification, or demonstration fail to meet the specification requirements, the component of the system causing the failure shall be repaired, replaced or readjusted. The failed test, verification, or demonstration shall then be repeated.

F. A “Functional Performance Test Verification Form” is included at the end of Section 230900. This form (electronic version is available upon request) shall be completed for each air handling unit provided under this contract.

G. Test Report: Upon satisfactory verification of calibration and functional performance tests, a copy of the final test results shall be bound in the operations and maintenance manual. The final report shall also include a full compliance statement, on company letterhead, indicating that all units are installed and functioning per the contract requirements including drawings, specifications, control sequences and accepted submittals.

H. The air handling unit installation shall not be considered complete until all functional performance verification forms, calibration reports and compliance

statement have been submitted and reviewed. Submit in accordance with the submittal requirements indicated elsewhere in these specifications.

3.4 EXTRA STOCK

A. Filters: Furnish one (1) extra set of filters for each air handling unit to the owner. In addition, install new filters at completion of air handling system work, and prior to testing, adjusting, and balancing work. Do not operate fans unless filters are in place.

END OF SECTION 237323

MONTGOMERY COLLEGE

MACKLIN TOWER

MBI FINANCE LAB SUITE 100

Rockville Campus

Building No. 206

QUINN EVANS
ARCHITECT

bkm

BURDETTE, KOEHLER, MURPHY & ASSOCIATES, INC.
MECHANICAL/ ELECTRICAL/ PLUMBING ENGINEERS

A+F ENGINEERS
STRUCTURAL ENGINEERS

BKM PROJECT NO. 19106.01

100% CONSTRUCTION DOCUMENTS

MARCH 06, 2020

DRAWING INDEX

DWG. No.	DESCRIPTION	DWG. No.	DESCRIPTION
CS	COVER SHEET		MECHANICAL DRAWINGS
G0.11	LIFE SAFETY PLANS	M0.01	MECHANICAL LEGEND ABBREVIATIONS & GENERAL NOTES
		M1.01	GROUND FLOOR PLAN - MECHANICAL - DEMOLITION
	STRUCTURAL DRAWINGS	M1.02	FIRST FLOOR PLAN - MECHANICAL - DEMOLITION
S0.01	STRUCTURAL GENERAL NOTES & SPECIAL INSPECTIONS SCHEDULE	M2.01	GROUND FLOOR PLAN - DUCTWORK - NEW WORK
S1.01	STRUCTURAL PLAN & ELEVATIONS	M2.02	FIRST FLOOR PLAN - DUCTWORK - NEW WORK
S2.01	STRUCTURAL SECTIONS & DETAILS	M3.01	GROUND FLOOR PLAN - HVAC PIPING - NEW WORK
S2.02	STRUCTURAL SECTIONS & DETAILS	M3.02	FIRST FLOOR PLAN - HVAC PIPING - NEW WORK
		M4.01	PART GROUND FLOOR PLAN - MECHANICAL - DEMOLITION & NEW WORK
	ARCHITECTURAL DRAWINGS	M5.01	MECHANICAL SECTIONS
A0.01	LEGENDS, SYMBOLS, ABBREVIATIONS	M6.01	HVAC PIPING DIAGRAMS - DEMOLITION
A0.12	PARTITION TYPES	M6.02	HVAC PIPING DIAGRAMS - NEW WORK
AD1.01	DEMOLITION PLAN - GROUND FLOOR	M6.03	HVAC PIPING DIAGRAMS - NEW WORK - ALTERNATE
AD1.02	DEMOLITION PLAN - FIRST FLOOR	M7.01	AUTOMATIC TEMPERATURE CONTROLS
AD1.11	DEMOLITION RCP - GROUND FLOOR	M8.01	MECHANICAL DETAILS
AD1.12	DEMOLITION RCP - FIRST FLOOR	M9.01	MECHANICAL SCHEDULES
A1.01	GROUND FLOOR PLAN		
A1.02	FIRST FLOOR PLAN		PLUMBING DRAWINGS
A1.12	FIRST FLOOR PLAN RCP	P2.01	FIRST FLOOR PLAN - PLUMBING - NEW WORK
A4.01	ENLARGED PLANS & ELEVATIONS		
A6.01	DOOR SCHEDULES		ELECTRICAL DRAWINGS
A6.03	FINISH PLAN & SCHEDULE	E0.01	ELECTRICAL LEGEND, ABBREVIATIONS & GENERAL NOTES
A6.07	FINISH SCHEDULE & DETAILS	E0.02	LIGHTING FIXTURE SCHEDULE, SEQUENCE OF OPERATIONS & LEGEND
A6.21	SIGNAGE TYPES & DETAILS - SYSTEM OVERVIEW & TYPICAL REQUIREMENTS	E1.01	BASEMENT FLOOR PLAN - ELECTRICAL
		E1.02	GROUND FLOOR PLAN - ELECTRICAL - DEMOLITION
		E1.03	FIRST FLOOR PLAN - ELECTRICAL - DEMOLITION
		E1.04	SECOND FLOOR PLAN - ELECTRICAL
		E201	FIRST FLOOR PLAN - POWER AND SPECIAL SYSTEMS - NEW WORK
		E3.01	FIRST FLOOR PLAN - LIGHTING - NEW WORK
		E4.01	MECHANICAL ROOM PART PLANS - POWER - DEMOLITION AND NEW WORK
		E5.01	ELECTRICAL DETAILS
		E5.02	ELECTRICAL DETAILS
		E6.01	ELECTRICAL PANEL SCHEDULES

PROJECT ALTERNATES

ADD ALTERNATE - PROVIDE HVAC PIPING MODIFICATION TO AIR HANDLING UNIT EQUIPMENT SERVING LIBRARY.

CODE SUMMARY

THE DESIGN AND CONSTRUCTION OF ALL STRUCTURES SHALL BE IN COMPLIANCE WITH THE LATEST ADOPTED EDITION OF CHAPTER 5 BUILDINGS AND BUILDING REGULATIONS (AMENDED EFFECTIVE 2020) OF THE ROCKVILLE CITY CODE, THE MARYLAND BUILDING PERFORMANCE STANDARDS (AMENDED EFFECTIVE JANUARY 1, 2020) AND THE MARYLAND STATE FIRE PREVENTION CODE (AMENDED EFFECTIVE JANUARY 1, 2020).

1. THE CITY OF ROCKVILLE INSPECTION SERVICES DIVISION ALSO ENFORCES THE FOLLOWING APPLICABLE CODES AND STANDARDS WITH AMENDMENTS:
   - 2016 NFPA 13, 13D, 13R SPRINKLER CODE
   - 2016 NFPA 72 ALARM AND SIGNALING CODE
   - 2018 NFPA 1 FIRE CODE
   - 2018 NFPA 101 LIFE SAFETY CODE
   - 2017 NFPA 70 NATIONAL ELECTRIC CODE (NEC)
   - 2018 NFPA 90A DUCT DETECTORS SMOKE DETECTION
   - 2015 INTERNATIONAL GREEN CONSTRUCTION CODE
   - 2018 INTERNATIONAL BUILDING CODE (IBC)
   - 2018 INTERNATIONAL PLUMBING CODE (IPC)
   - 2018 INTERNATIONAL MECHANICAL CODE (IMC)
   - 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
   - 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
   - 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
   - 2017 NATIONAL ELECTRICAL CODE (NFPA 70)
   - 2018 STATE OF MARYLAND FIRE PREVENTION CODE
   - CITY OF ROCKVILLE AMENDMENTS

2. BUILDING INFORMATION:
   - HEIGHT: 70 FT FROM THE GRADE PLANE TO THE HEIGHT OF THE HIGHEST ROOF SURFACE
   - THE BUILDING HEIGHT, AREA AND CONSTRUCTION TYPE WILL NOT BE MODIFIED AS A RESULT OF THE RENOVATIONS.
   - HEIGHT AND AREA REQUIREMENTS DO NOT NEED TO BE MET BASED ON THE EXTENT OF THE RENOVATION PER THE IEBC
   - NUMBER OF STORIES: 6 STORIES TOTAL
   - BUILDING AREA: 114,820 SQUARE FEET
   - FLOOR AREAUNDER CONSTRUCTION: 7,575 SQUARE FEET
   - CONSTRUCTION CLASSIFICATION: EXISTING TYPE IIB
   - OCCUPANCY CLASSIFICATION: BUSINESS USE GROUP B

3. EXIT ACCESS TRAVEL DISTANCE:
   - BUSINESS (NFPA 101 TABLE A.7.6): 300 FEET
4. COMMON PATH OF TRAVEL:
   - BUSINESS (NFPA 101 TABLE A.7.6): 100 FEET
5. DEAD END CORRIDORS:
   - BUSINESS (NFPA 101 TABLE A.7.6): 50 FEET
6. NUMBER OF EXITS (NFPA 101 SECTION 7.4):
   - OCCUPANT LOAD LESS THAN 500: MINIMUM OF TWO EXITS
7. EXIT REMOTENESS, FOR SPRINKLERED BUILDING (NFPA 101 SECTION 7.5.1.3):
   - EXIT DOORS/EXIT ACCESS DOORS NOT LESS THAN 1/3 THE MAXIMUM OVERALL DIAGONAL DIMENSION OF AREA SERVED
8. EXIT DISCHARGE:
   - NOT MORE THAN 50% OF THE REQUIRED NUMBER OF EXITS, AND NOT MORE THAN 50% OF THE REQUIRED EGRESS CAPACITY, SHALL DISCHARGE THROUGH AREAS ON THE LEVEL OF EXIT DISCHARGE (NFPA 101, SECTION 7.7.2, IBC SECTION 1027.1)
9. MINIMUM WIDTH OF EGRESS COMPONENTS:
   - DOORS (NFPA 101 SECTION 7.2.1.2.3.2): 32 INCHES
   - STAIRS (NFPA 101 TABLES 7.2.2.2.1.1 B AND A): 44 INCHES
   - CORRIDORS: BUSINESS (NFPA 101 SECTIONS 38.2.3 AND 12.2.3.8): 36 INCHES (LESS THAN 50 OCCUPANTS) 44 INCHES (50 OR MORE OCCUPANTS);
   - STORAGE (NFPA 101 SECTION 7.3.4): 36 INCHES
10. OCCUPANT LOAD FACTORS (NFPA 101, TABLE 7.3.1.2):

FUNCTION OF SPACE	FLOOR AREA IN SF / OCCUPANT	OCCUPANCY ABBREVIATION
BUSINESS	150 GROSS	BUS
ASSEMBLY - LESS CONCENTRATED	15 NET	A-15
CLASSROOM	20 NET	CLS

11. EGRESS CAPACITY FACTORS (NFPA 101, TABLE 7.3.3.1):
    - 0.3 INCHES PER PERSON FOR STAIRS
    - 0.2 INCHES PER PERSON FOR LEVEL EGRESS COMPONENTS
12. CALCULATED OCCUPANT LOAD PER FLOOR:

FLOOR LEVEL	OCCUPANT LOAD	AVAILABLE EGRESS
GROUND FLOOR	149	960
FIRST FLOOR	967	2,220
SECOND-SIXTH FLOOR	EXIST UNCHANGED	

13. FIRE-RESISTANCE RATINGS FOR TYPE IIB CONSTRUCTION: (IBC TABLE 601):

BUILDING ELEMENT	TYPE IIB
PRIMARY STRUCTURAL FRAME	0
EXTERIOR BEARING WALLS	0
INTERIOR BEARING WALLS	0
INTERIOR NONBEARING WALLS AND PARTITIONS	0
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0

14. EXIT ACCESS CORRIDORS:
    - CORRIDORS IN FULLY SPRINKLED GROUP A AND B OCCUPANCIES ARE NOT REQUIRED TO BE FIRE RESISTANCE RATED PER IBC TABLE 1020.1
15. VERTICAL OPENINGS:

    SHAFT ENCLOSURES FIRE RESISTANCE RATINGS (IBC SECTION 713.4):
    - NOT LESS THAN 1 HOUR WHERE CONNECTING LESS THAN FOUR STORIES
16. FIRE PROTECTION SYSTEMS
    - THE EXISTING BUILDING IS PARTIALLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13. THE AREA OF ANY ALTERATIONS WILL BE REQUIRED TO INCLUDE AN AUTOMATIC SPRINKLER SYSTEM TO COMPLY WITH THE REQUIREMENTS OF NFPA 13.
    - THE BUILDING HAS AN EXISTING FIRE ALARM SYSTEM. THERE ARE NO REQUIREMENTS FOR ADDITIONAL FIRE ALARM WORK IN THE AREA OF ALTERATION (IEBC 804.4) THE CURRENT LEVEL OF NOTIFICATION DEVICES IN THE AREA OF ALTERATION SHOULD BE MAINTAINED IN COMPLIANCE WITH NFPA 72 AND IBC 907.2.
    - THE BUILDING HAS AN EXISTING FIRE ALARM SYSTEM MANUFACTURED BY SIMPLEX MODEL 4100 ES. AUDIBLE AND VISUAL DEVICES WILL BE RELOCATED AND ADDED TO PROVIDE ADEQUATE COVERAGE TO ACCOMMODATE THE WALL REVISIONS. DUCT SMOKE DETECTORS WILL BE PROVIDED FOR THE AIR HANDLING UNIT AND ALSO TO THE ASSOCIATED DUCT WORK FOR CONTROL OF SMOKE DAMPERS.
17. INTERIOR FINISHES:
    BASED ON BUSINESS GROUP B, MATERIALS FOR THE ENTIRE BUILDING WILL MEET THE FOLLOWING CRITERIA:
    - ROOM WALLS AND CEILINGS: CLASS C; 75 - 200 FLAME SPREAD; 0 - 450 SMOKE-DEVELOPED.
    - EXIT ACCESS CORRIDORS: CLASS B; 26 - 75 FLAME SPREAD; 0 - 450 SMOKE-DEVELOPED.
    - VERTICAL EXITS: CLASS B; 26 - 75 FLAME SPREAD; 0 - 450 SMOKE-DEVELOPED.
    - FLOOR FINISHES IN EXIT ENCLOSURES: CLASS II; RADIANT FLUX NOT LESS THAN 2.2 KW/M^2 BUT LESS THAN 4.5 KW/M^2.
    - SEE FINISH SCHEDULE, A602, FOR FLAMESPREAD AND SMOKE DEVLOPMENT INFORMATION FOR INTERIOR WALL AND FLOOR FINISH MATERIALS.

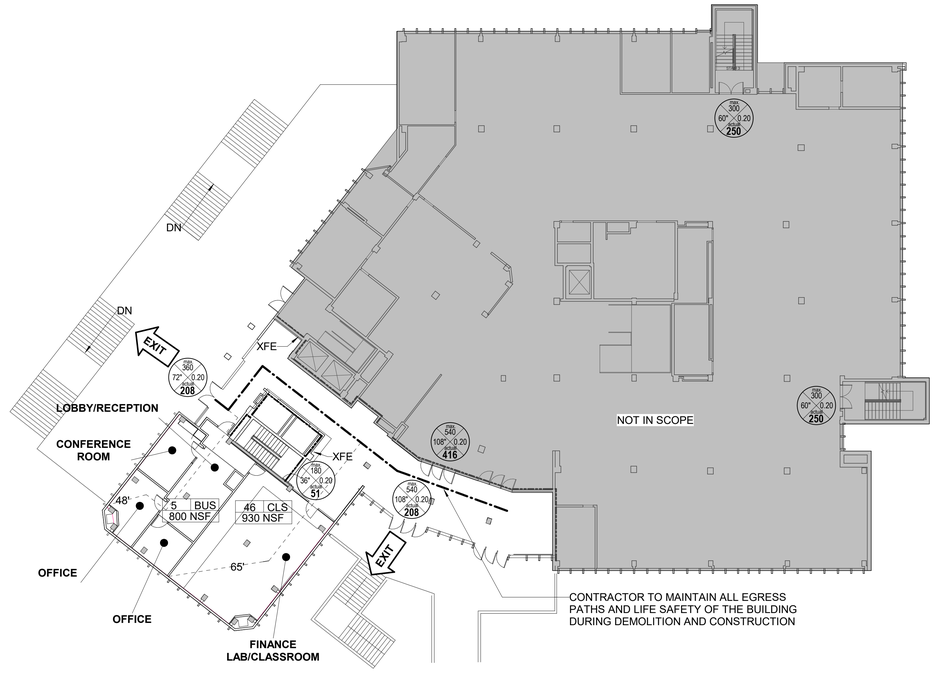
PLUMBING FIXTURE CALCULATIONS - IPC TABLE 403.1

USE CLASSIFICATION = BUSINESS B REQUIRED (TOTAL FIXTURE OCC LOAD FIRST FLOOR = 51, OCC LOAD PER SEX = 26 (51/2))

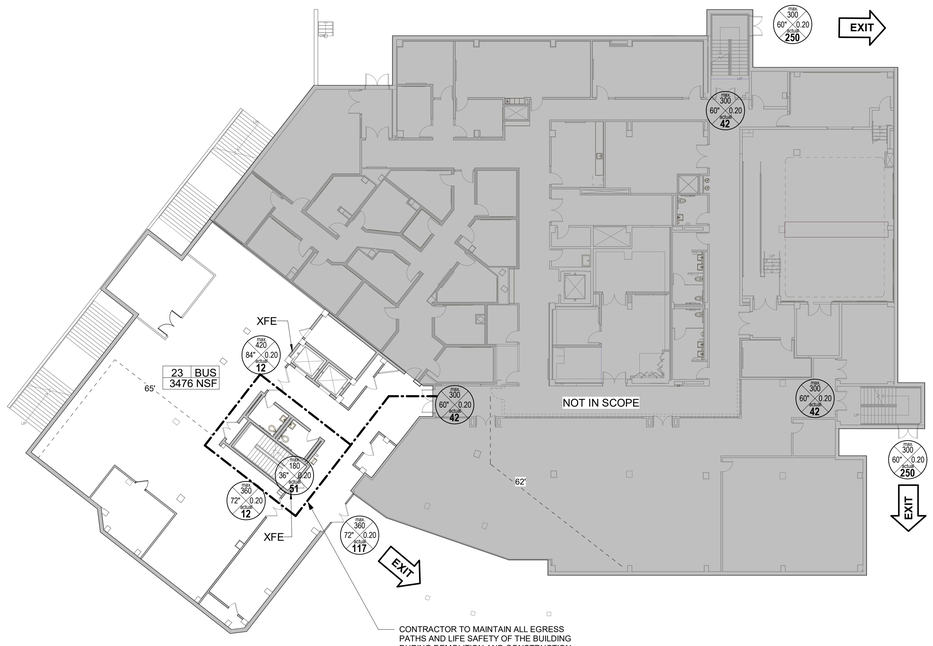
WOMEN TOILETS (1 PER 25 FOR 50 + 1 PER 50 REMAINING):	1 WC (2 FOR FIRST 50)
WOMEN SINKS (1 PER 40 FOR 80 + 1 PER 80 REMAINING):	1 LAV SINKS (1 FOR FIRST 40)
MEN TOILETS (1 PER 25 FOR 50 + 1 PER 50 REMAINING):	1 WC (1 FOR FIRST 25)
MEN SINKS (1 PER 40 FOR 80 + 1 PER 80 REMAINING):	1 LAV SINKS (1 FOR FIRST 25)
DRINKING FOUNTAINS (1 PER 100):	1 TOTAL
SERVICE SINKS (1 PER FLOOR):	1 TOTAL

TOTAL PROVIDED:

WOMEN TOILETS	1 WC
WOMEN SINKS	1 LAV SINKS
MEN TOILETS	1 WC
MEN SINKS	1 LAV SINKS
DRINKING FOUNTAINS	1 FOUNTAINS [+ WATER COOLER PER IPC 410.3]
SERVICE SINKS	1 TOTAL



2 / G011 FIRST FLOOR LIFE SAFETY
1/16" = 1'-0"



1 / G011 GROUND LEVEL LIFE SAFETY
1/16" = 1'-0"

LIFE SAFETY LEGEND:

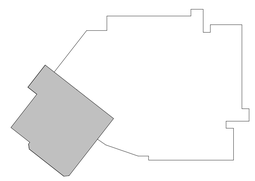
ROOM TAG
- ROOM IDENTIFIER
- ROOM AREA
- ROOM OCCUPANT LOAD FACTOR
- NO. OF OCCUPANTS

STAIR, OR DOOR EGRESS TAG
- STAIR OR DOOR IDENTIFIER
- STAIR OR DOOR CLEAR WIDTH
- EXIT CAPACITY FACTOR
- EXIT CAPACITY
- ACTUAL OCCUPANT LOAD

- 1-HOUR BARRIER
- 2-HOUR BARRIER
- COMMON PATH OF TRAVEL DISTANCE
- EXIT TRAVEL DISTANCE
- PATH INTO EXIT
- XFE — EXISTING FIRE EXTINGUISHER
- FE — FIRE EXTINGUISHER

LIFE SAFETY LEGEND - AREAS
1/16" = 1'-0"

KEY PLAN:



8' 0' 8' 16'
1/8" = 1' - 0" SCALE OF FEET

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P- 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER MBI SUITE RENOVATIONS

QUINN EVANS

QUINN EVANS ARCHITECTS

100 N. Charles Street
14th Floor
Baltimore, MD 21201

410.576.0440
www.quinnevans.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 13613
EXPIRATION DATE: 09/08/2021

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: NM

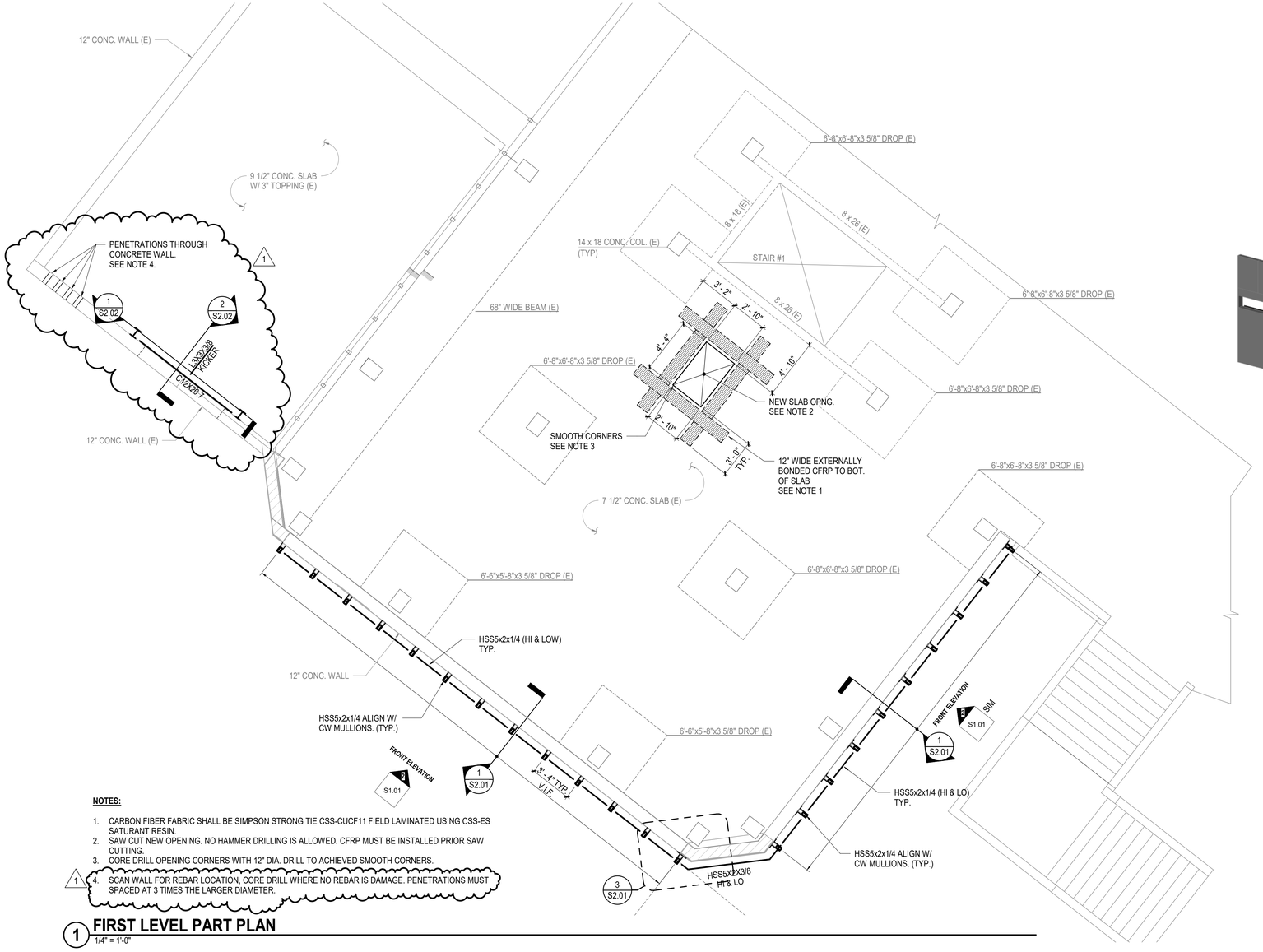
CHECKED BY: BO

DATE: 03/06/2020

SHEET TITLE: LIFE SAFETY PLANS

DRAWING NO: G011

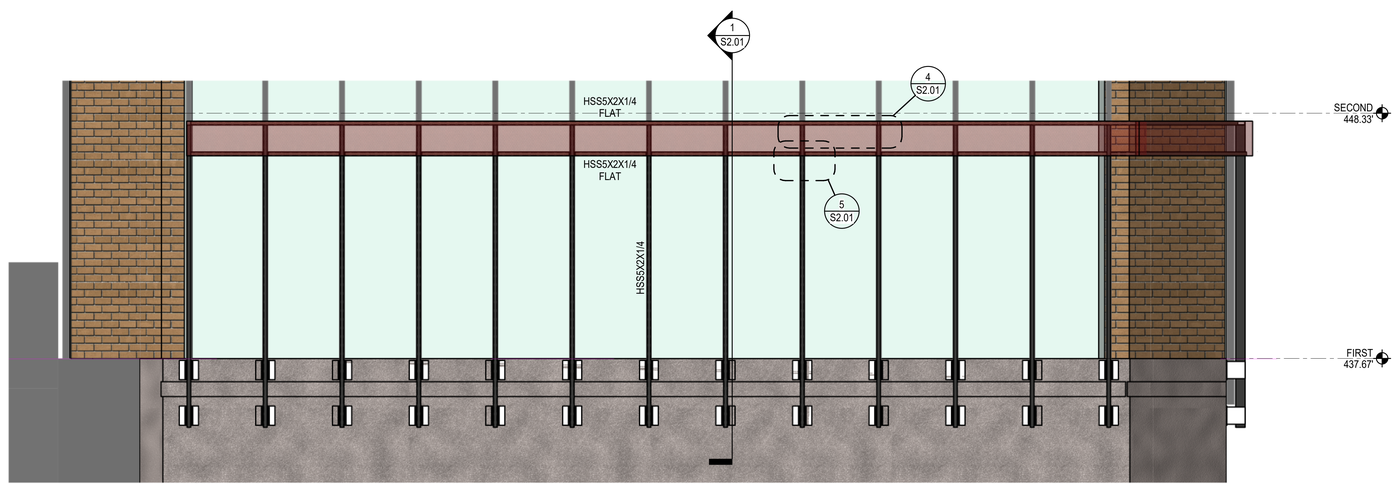
BKM# 19106.01



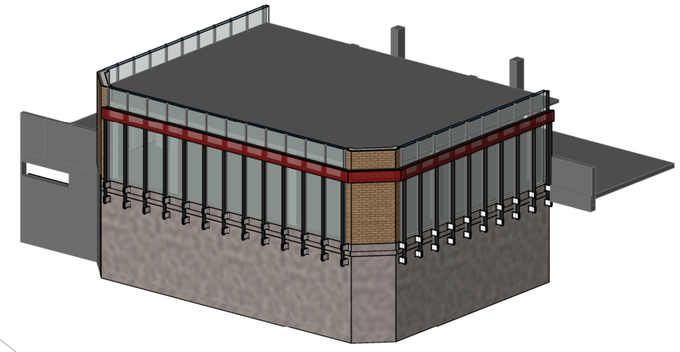
NOTES:

1. CARBON FIBER FABRIC SHALL BE SIMPSON STRONG TIE CSS-CUCF11 FIELD LAMINATED USING CSS-ES SATURANT RESIN.
2. SAW CUT NEW OPENING. NO HAMMER DRILLING IS ALLOWED. CFRP MUST BE INSTALLED PRIOR SAW CUTTING.
3. CORE DRILL OPENING CORNERS WITH 12" DIA. DRILL TO ACHIEVED SMOOTH CORNERS.
1. 4. SCAN WALL FOR REBAR LOCATION, CORE DRILL WHERE NO REBAR IS DAMAGE. PENETRATIONS MUST SPACED AT 3 TIMES THE LARGER DIAMETER.

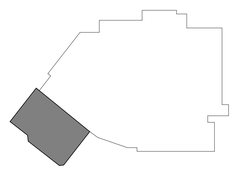
1 FIRST LEVEL PART PLAN
1/4" = 1'-0"



2 FRONT ELEVATION
3/8" = 1'-0"



3 ISOMETRIC



KEY PLAN
NOT TO SCALE

PROGRESS SUBMISSION - NOT FOR CONSTRUCTION

N

1/4" 0' 2' 4' 8' 12'

3/8" 0' 1' 2' 4' 6' 8'

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21204 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER BLDG. 206 MBI FINANCE LAB SUITE 100

QUINN EVANS ARCHITECTS
Architects
100 N. Charles Street, 14th Floor, Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS
Structural Engineers
1112 16TH STREET NW #920, WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 24086
EXPIRATION DATE: 02-01-2021

ISSUED FOR:

	DATE:	DESCRIPTION:
	2020-03-06	100% CD
1	2020-03-25	ADDENDUM #1

PROJECT NO: A+F # 18014.2

SCALE: AS NOTED

DRAWN BY:

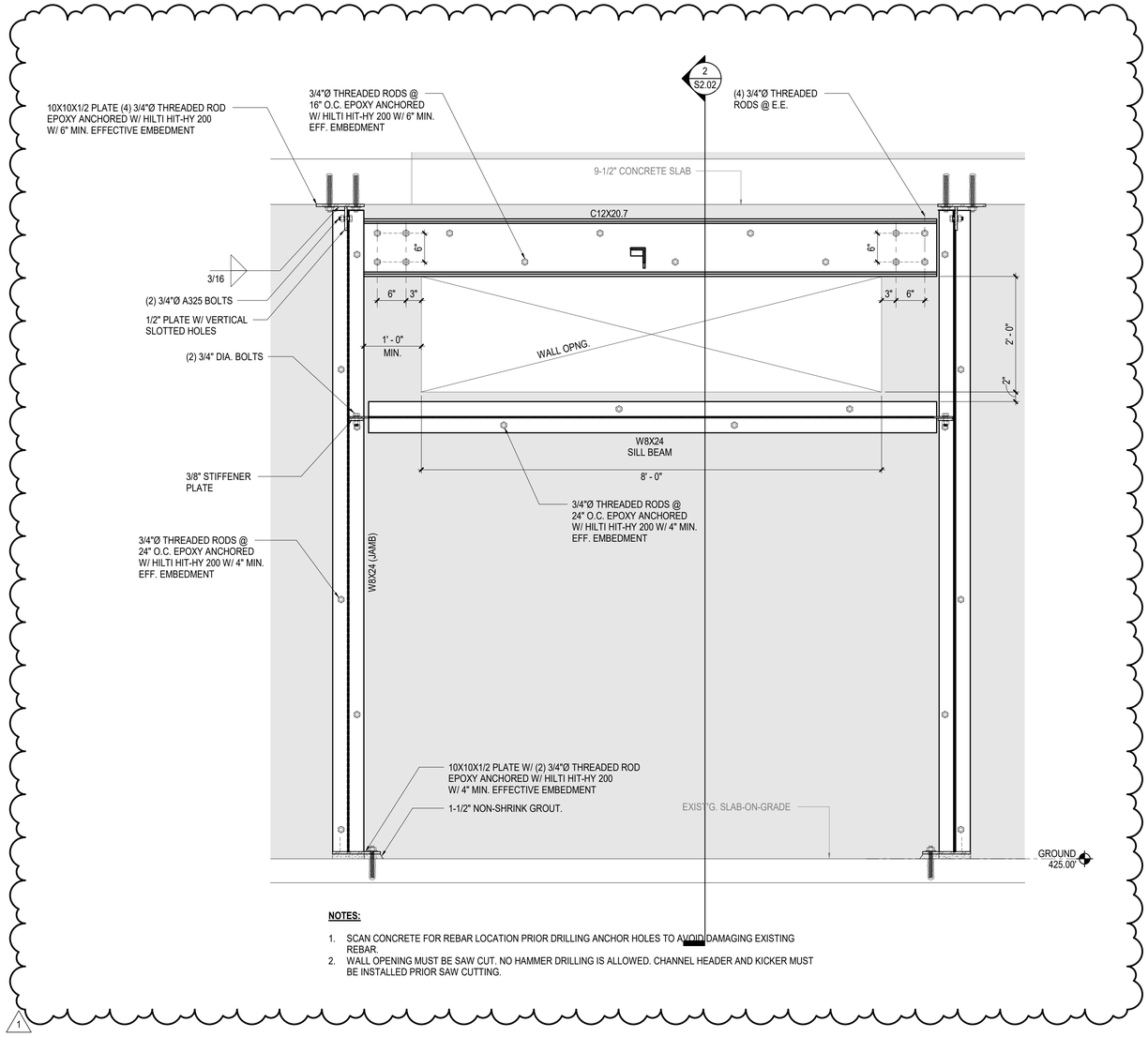
CHECKED BY:

DATE: 03/06/2020

SHEET TITLE:
PLANS & ELEVATION

DRAWING NO:
S1.01

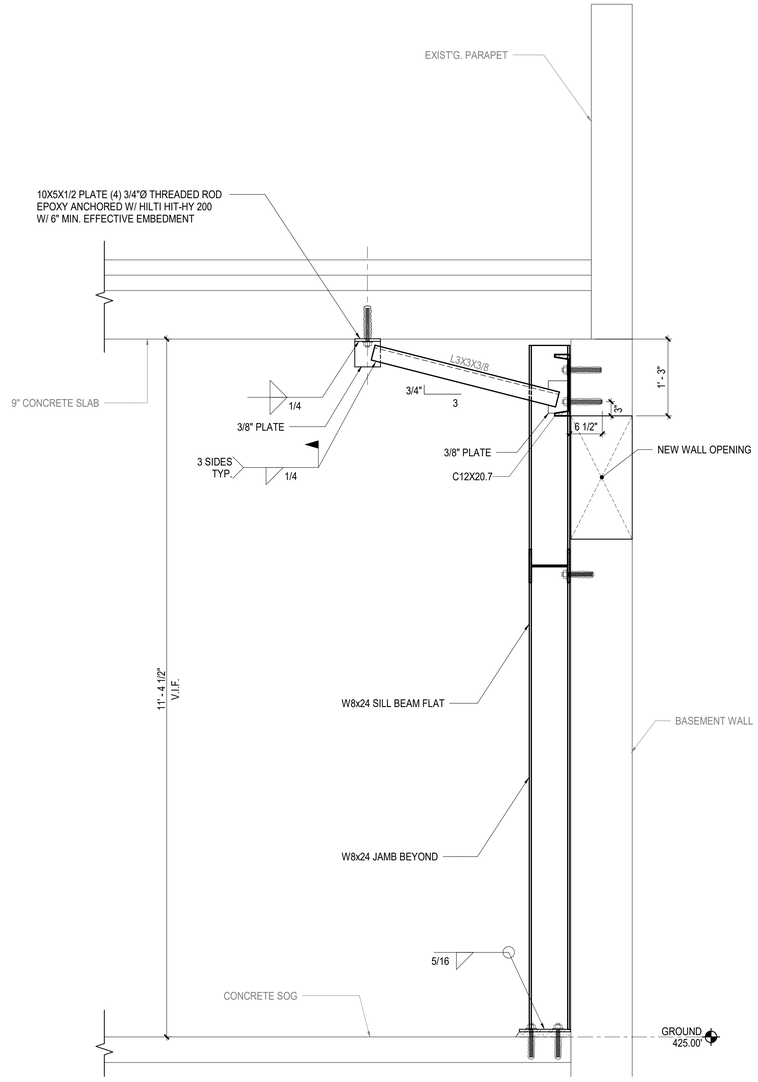
BKM# 19106.01



NOTES:

1. SCAN CONCRETE FOR REBAR LOCATION PRIOR DRILLING ANCHOR HOLES TO AVOID DAMAGING EXISTING REBAR.
2. WALL OPENING MUST BE SAW CUT. NO HAMMER DRILLING IS ALLOWED. CHANNEL HEADER AND KICKER MUST BE INSTALLED PRIOR SAW CUTTING.

1 WALL OPENING REINFORCING DETAIL
1" = 1'-0"



2 BRACE CONNECTION DETAIL
1" = 1'-0"

PROGRESS SUBMISSION - NOT FOR CONSTRUCTION

N

1" 0' 6" 1' 2' 3'

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore,
Maryland 21204 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER
BLDG. 206
MBI FINANCE LAB
SUITE 100

QUINN EVANS ARCHITECTS

Architects
100 N. Charles Street
14th Floor
Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS

Structural Engineers
1112 16TH STREET NW
#920
WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 24086
EXPIRATION DATE: 02-01-2021

ISSUED FOR:

	DATE:	DESCRIPTION:
	2020-03-06	100% CD
1	2020-03-25	ADDENDUM #1

PROJECT NO: A+F # 18014.2

SCALE: AS NOTED

DRAWN BY:

CHECKED BY:

DATE: 03/06/2020

SHEET TITLE:
SECTIONS & DETAILS

DRAWING NO:
S2.02

BKM# 19106.01

1 A101 GROUND LEVEL

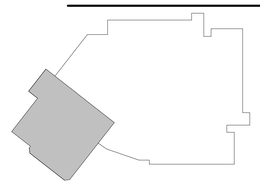
1/8" = 1'-0"

GENERAL NOTES	
G 1	PERFORM WORK IN ACCORDANCE WITH APPLICABLE LAWS, ORDINANCES, CODES AND REQUIREMENTS. GENERAL CONTRACTOR SHALL OBTAIN ALL PERMITS AND APPROVALS AS REQUIRED FOR THE COMPLETION OF THE WORK BY THE AUTHORITY HAVING JURISDICTION.
G 2	ALTHOUGH INTENDED TO CONVEY APPROPRIATE INFORMATION, THESE DRAWINGS HAVE BEEN PREPARED FROM LIMITED FIELD MEASUREMENTS. AS SUCH, DRAWINGS MAY CONTAIN DISCREPANCIES DUE TO CONCEALED CONDITIONS, INACCURACIES IN ORIGINAL DRAWINGS, INACCESSIBLE LOCATIONS, UNRECORDED BUILDING ALTERATIONS, AND OTHER CONFLICTING INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MEASUREMENTS. NOTIFY ARCHITECT REGARDING DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS PRIOR TO COMMENCING WORK.

NEW WORK LEGEND

- EXISTING WALL TO REMAIN
- GWB WALL
- EXTENT OF CONC SLABS
- EXISTING DOOR
- DOOR

KEY PLAN:



8' 0' 8' 16'

1/8" = 1' - 0" SCALE OF FEET

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P. 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER MBI SUITE RENOVATIONS

QUINN EVANS

QUINN EVANS ARCHITECTS

100 N. Charles Street
14th Floor
Baltimore, MD 21201

410.576.0440
www.quinnevans.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 13613
EXPIRATION DATE: 09/08/2021

ISSUED FOR:

.	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: NM

CHECKED BY: BO

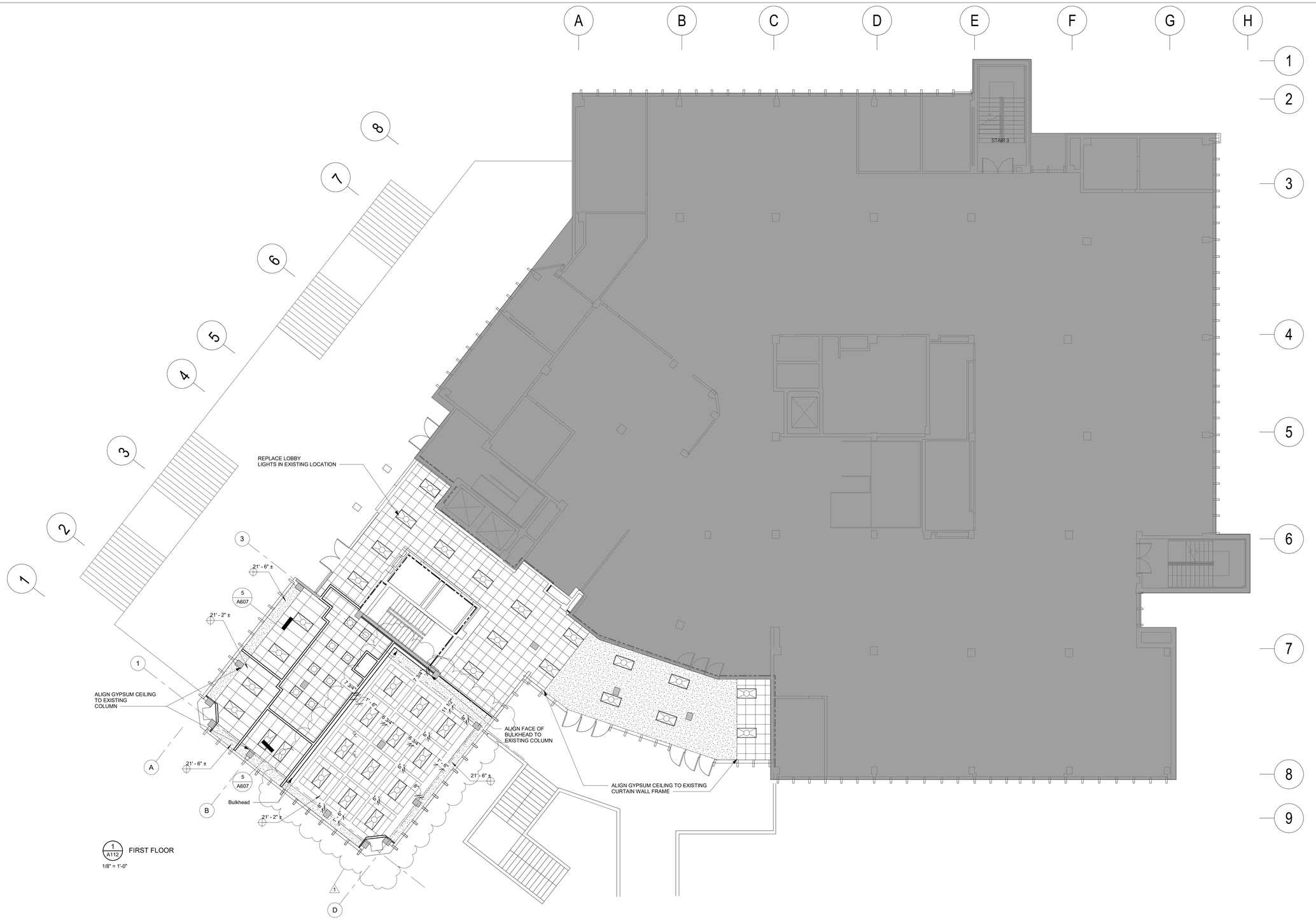
DATE: 03/06/2020

SHEET TITLE: GROUND FLOOR PLAN

DRAWING NO:

A101

BKM# 19106.01



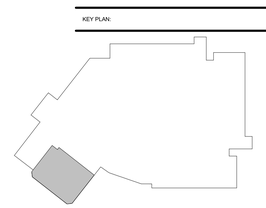
1 / A112 FIRST FLOOR

1/8" = 1'-0"

RCP LEGEND

- EXISTING TO REMAIN
- GWB WALL
- 2 x 4 ACOUSTIC PANEL
- GWB CEILING

KEY PLAN:



8' 0' 8' 16'

1/8" = 1' - 0" SCALE OF FEET

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER MBI SUITE RENOVATIONS

QUINN EVANS

QUINN EVANS ARCHITECTS

100 N. Charles Street
14th Floor
Baltimore, MD 21201

410.576.0440
www.quinnevans.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 13613
EXPIRATION DATE: 09/08/2021

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: NM

CHECKED BY: BO

DATE: 03/06/2020

SHEET TITLE: FIRST FLOOR RCP

DRAWING NO:

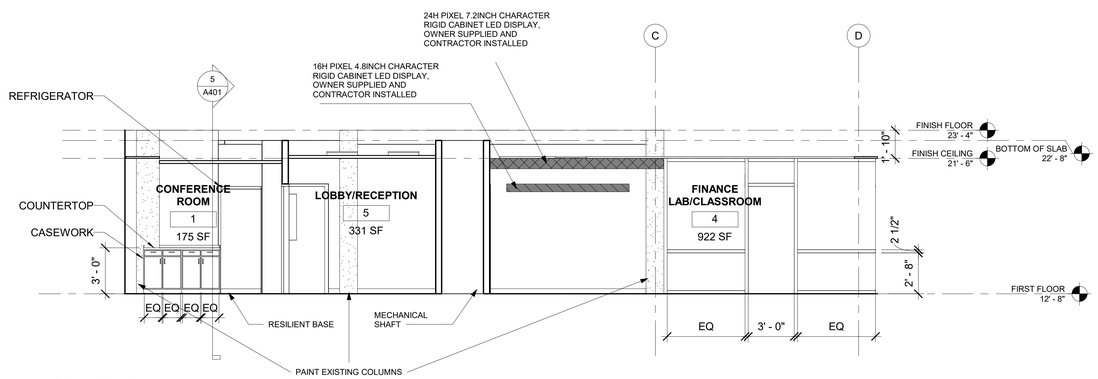
A112

BKM# 19106.01

Plotted By: James Weaver | 11/15/2019 9:26 AM
ARL: G:\19106.01\Drawings\Acad\Prototype\PRO XXX

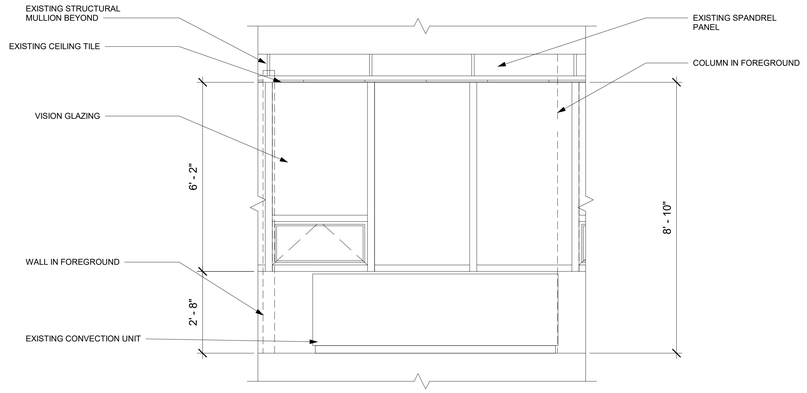
1 A401 FIRST FLOOR FURNITURE PLAN - Callout 1

1/4" = 1'-0" REFERRED FROM:



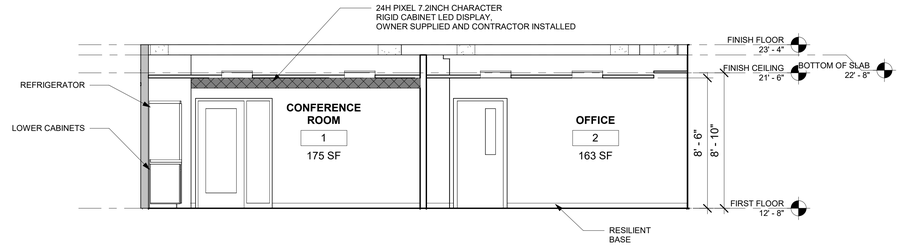
2 A401 Section 1

1/4" = 1'-0" REFERRED FROM:A401



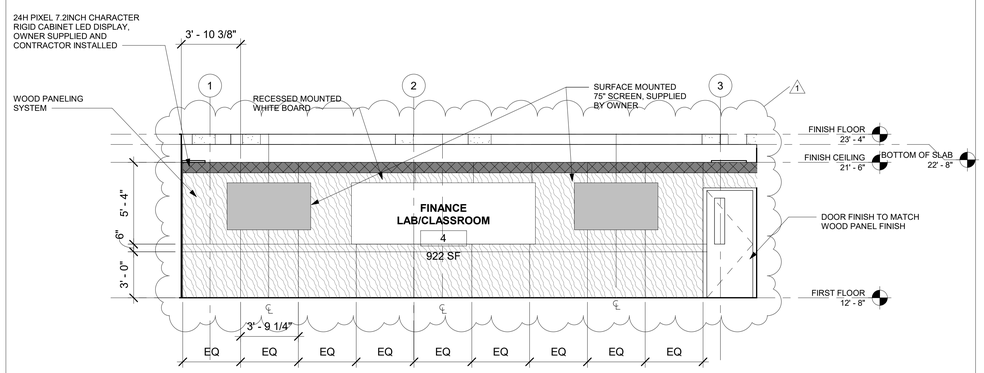
4 A401 EXISTING WINDOW ELEVATION

1/2" = 1'-0" REFERRED FROM:



5 A401 Section 3

1/4" = 1'-0" REFERRED FROM:A401



3 A401 Section 2

1/4" = 1'-0" REFERRED FROM:A401

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER MBI SUITE RENOVATIONS

QUINN EVANS

QUINN EVANS ARCHITECTS

100 N. Charles Street
14th Floor
Baltimore, MD 21201

410.576.0440
www.quinnevans.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 13613
EXPIRATION DATE: 09/08/2021

ISSUED FOR:

. DATE:	DESCRIPTION:
3/6/2020	100% CONSTRUCTION DOCUMENTS
1 3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: NM

CHECKED BY: BO

DATE: 03/06/2020

SHEET TITLE: ENLARGED PLANS AND ELEVATIONS

DRAWING NO:

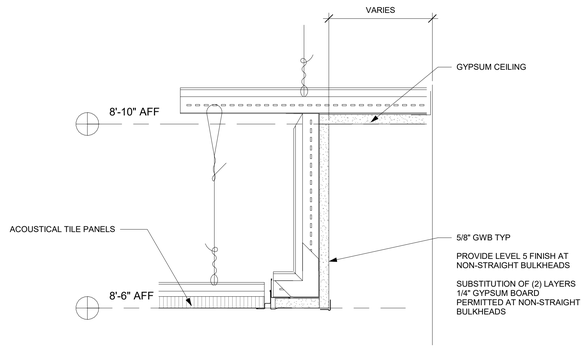
A401

BKM# 19106.01

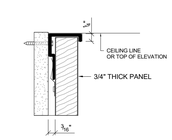
Plotted By: James Weaver | 11/15/2019 9:26 AM ARL G:\19106.01\Drawings\Acad\PrototypePRO XXX

MATERIAL SCHEDULE

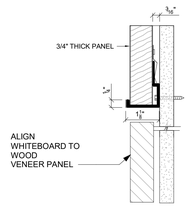
ITEM MARK	ITEM DESCRIPTION	MANUFACTURER	STYLE NAME/No.	COLOR/PATTERN	FINISH	SIZE	REMARKS	FLAME SPREAD	SMOKE DEVELOPED
AC-1	ACOUSTICAL CEILING TILE	ARMSTRONG	SQUARE MEDIUM TEXTURE #1	830 AND #1831	FINE FISSURED	24" x 48" x 5/8"	SUSPENSION TRACK TYPE SS-1, SEE SPECS	25 OR LESS	50 OR LESS
AC-2	ACOUSTICAL CEILING TILE	ARMSTRONG	SQUARE MEDIUM TEXTURE #1	830 AND #1831	FINE FISSURED	24" x 24" x 5/8"	SUSPENSION TRACK TYPE SS-1, SEE SPECS	25 OR LESS	50 OR LESS
CPT1	CARPET TILE FLOORING	KINETEX	TIMBER	1923 ASPEN	-	12" x 48"		CLASS 1	450 OR LESS
CPT2	CARPET TILE FLOORING	KINETEX	PROPEL II	1702 GUIDE	-	12" x 48"		CLASS 1	450 OR LESS
VB1	RESILIENT BASE	ROPPE	-	123 CHARCOAL	-	6" x 24", 12" x 24"	4" HIGH BULLNOSE BASE	0.45 W/cm2 OR MORE CLASS 1	450 OR LESS
PT-1	PAINT	BENJAMIN MOORE	#OC-62	BABY'S BREATH	EGGSHELL	-	WALL PAINT - TYP		
PT-2	PAINT	BENJAMIN MOORE	-	-	EGGSHELL	-	ACCENT WALLS - COLOR TO MATCH PANTONE 2617		
PT-3	PAINT	BENJAMIN MOORE	#OC-66	SNOW WHITE	FLAT FINISH	-	CEILING PAINT - TYP		
						-	-		
PLAM1	COUNTER PLAM	NEVAMAR	EASY ELEGANCE	VA5002T	-	-	-	55-70	95-130
PLAM2	CABINET PLAM	NEVAMAR	NEUTRAL GRAY	S6012T	-	-		55-70	95-130
PLAM1	BACKSPLASH	NEVAMAR	EASY ELEGANCE	VA5002T	-	-	-	55-70	95-130



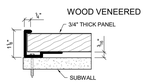
5 / A607 TRANSITION DETAIL - GWB SOFFIT
3" = 1'-0" REFERRED FROM:A112



TOP EDGE - NL770 EDGE TRIM

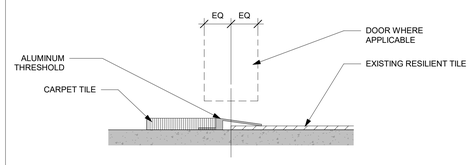


BOTTOM EDGE - NL770 EDGE TRIM

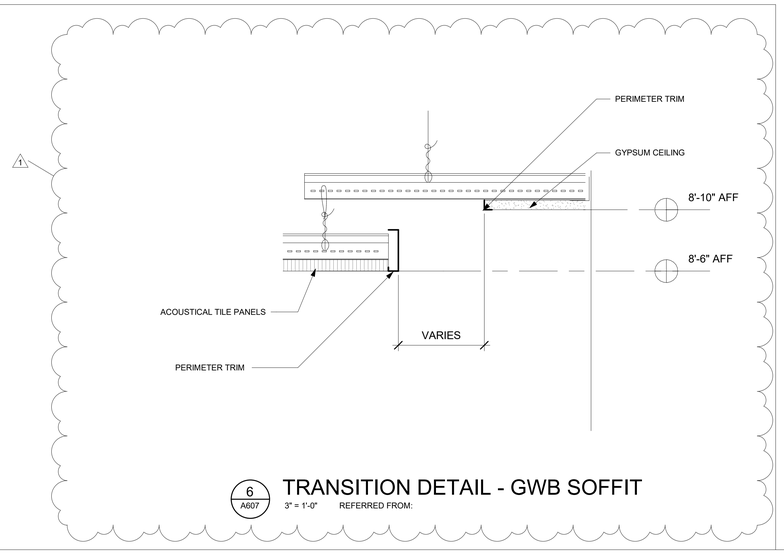


PLAN DETAIL - NL770 EDGE TRIM

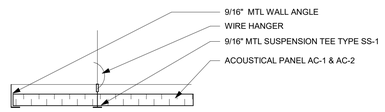
WOOD PANELING SYSTEM DETAILS
6" = 1'-0"



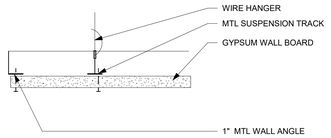
DETAIL - RESILIENT TILE TO CARPET TRANSITION
6" = 1'-0"



6 / A607 TRANSITION DETAIL - GWB SOFFIT
3" = 1'-0" REFERRED FROM:



CEILING TYPE C1 AND C2
3" = 1'-0"



CEILING TYPE C3
3" = 1'-0"

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER MBI SUITE RENOVATIONS

QUINN EVANS

QUINN EVANS ARCHITECTS

100 N. Charles Street
14th Floor
Baltimore, MD 21201

410.576.0440
www.quinnevans.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 13613
EXPIRATION DATE: 09/08/2021

ISSUED FOR:

.	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: NM

CHECKED BY: BO

DATE: 03/06/2020

SHEET TITLE: FINISH SCHEDULE AND DETAILS

DRAWING NO:

A607

BKM# 19106.01

PLUMBING GENERAL NOTES

1. MAKE ALL WATER CONNECTIONS TO FIXTURES ABOVE FLOOR.
2. LIMIT SANITARY AND WASTE PIPING DEAD END TO 12 INCHES FROM MAIN OR MAIN BRANCH.
3. PROVIDE A MINIMUM OF 24 INCHES CLEARANCE FOR RODDING OF CLEANOUTS.
4. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER DISCIPLINES PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL FLUSH TYPE CLEANOUTS WITH WALLS, EQUIPMENT, DUCTWORK, PIPE, STRUCTURAL MEMBERS, ETC.
6. ALL SPECIFICATIONS AND DRAWINGS (I.E., ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL) ARE COMPLEMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION.
7. ALL VERTICAL SANITARY SEWER AND STORM WATER PIPING WHICH TURN 90 DEGREES AFTER PASSING THROUGH A FLOOR SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE. ALL VOID OPENINGS AROUND PIPE SHALL BE FIRE STOPPED AS REQUIRED AND APPROVED BY LOCAL CODES.
8. COORDINATE ALL PIPING TO BE INSTALLED WITH OTHER TRADES (I.E., MECHANICAL, FIRE PROTECTION AND ELECTRICAL) TO ASSURE THAT ALL PIPING SYSTEMS ARE INSTALLED ABOVE FINISHED CEILING OR IN A CONCEALED SPACE. ALL CEILING HEIGHTS INDICATED ON ARCHITECTURAL AND/OR INTERIOR DESIGN DRAWINGS AND MINIMUM CLEARANCES REQUIRED BY LOCAL CODES SHALL BE MAINTAINED THROUGHOUT THE BUILDING.
9. ALL CUTTING, DRILLING AND PATCHING OF WALLS, FLOORS OR STRUCTURAL MEMBERS FOR THE INSTALLATION OF THE PLUMBING SYSTEMS SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR. STRUCTURAL COMPONENTS SHALL NOT BE CUT, DRILLED OR MODIFIED IN ANY WAY WITHOUT THE STRUCTURAL ENGINEER'S REVIEW AND APPROVAL.
10. ALL PIPING, SYSTEMS, VALVES AND EQUIPMENT SHALL BE PROPERLY IDENTIFIED.
11. COLD WATER SUPPLY MAINS AND BRANCHES SHALL BE INSULATED IN ACCORDANCE WITH THE SPECIFICATIONS.
12. ALL PIPING VALVES, AND ACCESSORIES SERVING EQUIPMENT SHALL BE INSTALLED TO ALLOW SERVICING OR REMOVAL WITHOUT DISCONNECTING ALL PIPING ACCESSORIES.
13. ALL VALVES SHALL HAVE THEIR NORMAL (IN OPERATION) POSITION IDENTIFIED, SUCH AS "NORMALLY OPEN" OR "NORMALLY CLOSED".
14. ALL ROUGH-IN AND FINAL CONNECTION FOR EQUIPMENT SPECIFIED BY OTHERS SHALL BE PROVIDED.
15. ALL EXPOSED PIPING AND FITTINGS SHALL BE CHROME PLATED.
16. ALL HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE INSTALLED AT THE HIGHEST POSSIBLE ELEVATION AND NOT LESS THAN 6" ABOVE FLOOR.
17. VERIFY EQUIPMENT LOCATIONS WITH OTHER CONSULTANTS OR SUPPLIERS BEFORE PROCEEDING WITH ANY ROUGH-IN.
18. ALL PIPING SHALL BE INSTALLED ABOVE CEILING OR IN A CONCEALED SPACE UNLESS NOTED OR INDICATED OTHERWISE.
19. THOUGH SOME PIPING OFFSETS ARE INDICATED, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL OFFSETS THAT ARE REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE SYSTEM WITHOUT INTERFERENCES.
20. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EXISTING INVERTS, LOCATIONS AND SIZES OF PIPES, DUCTWORK, LIGHTING AND STRUCTURAL MEMBERS PRIOR TO CONSTRUCTION.

SPRINKLER GENERAL NOTES

1. SPRINKLER CONTRACTOR SHALL PROVIDE COMPLETE SPRINKLER COVERAGE AND DETERMINE THE HAZARD CLASSIFICATION IN ALL AREAS INDICATED UNDER THIS CONTRACT. CONTRACTOR SHALL LOCATE SPRINKLER HEADS AND SIZE PIPING IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13, AND AUTHORITY HAVING JURISDICTION.
2. CONTRACTOR SHALL HYDRAULICALLY DESIGN AND INSTALL THE SPRINKLER SYSTEM IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13. SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13, AND THE AUTHORITY HAVING JURISDICTION.
3. CONTRACTOR SHALL PROVIDE AN INDEPENDENT FLOW TEST AS REQUIRED TO CONFIRM FLOW AND PRESSURE AVAILABILITY.
4. CONTRACT DRAWINGS FOR SPRINKLER WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT. CONTRACTOR SHOULD VISIT SITE TO DETERMINE EXACT QUANTITIES AND SCOPE OF WORK.
5. PRIOR TO THE INSTALLATION OF THE SPRINKLER SYSTEM, THE SPRINKLER CONTRACTOR SHALL COORDINATE PIPING, VALVES, SPRINKLER HEADS, ETC. WITH ALL NEW AND EXISTING DUCTWORK, PIPING, CABLE TRAYS, STRUCTURAL MEMBERS AND OTHER DISCIPLINES.
6. ALL PENETRATIONS IN EXISTING OR NEW FIRE RATED WALLS, CEILINGS AND FLOORS SHALL BE SEALED TO THE FULL THICKNESS OF THE PENETRATION WITH A MATERIAL OF EQUAL FIRE RESISTANCE.
7. ALL CUTTING, DRILLING AND PATCHING OF WALLS, FLOORS OR STRUCTURAL MEMBERS FOR THE INSTALLATION OF THE SPRINKLER SYSTEMS SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR. STRUCTURAL COMPONENTS SHALL NOT BE CUT, DRILLED OR MODIFIED IN ANY WAY WITHOUT THE STRUCTURAL ENGINEER'S REVIEW AND APPROVAL.
8. ALL CEILINGS, WALLS, FLOORS AND FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AND PAINTED TO MATCH EXISTING CONDITIONS AND FIRE RATING.
9. ACTUAL LOCATION OF EXISTING CEILING MOUNTED LIGHTS, RETURN AND SUPPLY DUCTS, AIR GRILLES AND DIFFUSERS, SPRINKLER HEADS, PIPING AND STRUCTURAL SUPPORTS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
10. ALL SPRINKLER PIPING INSTALLED IN FINISHED AREAS SHALL BE CONCEALED.
11. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES OR OMISSIONS ON THE DRAWINGS OR IN THE SPECIFICATIONS, HE SHALL NOTIFY THE ENGINEER OF SUCH CONDITIONS PRIOR TO THE BID DATE. OTHERWISE, IT WILL BE UNDERSTOOD THAT THE DRAWINGS AND SPECIFICATIONS ARE CLEAR AS TO WHAT IS INTENDED AND SHALL BE AS INTERPRETED BY THE ENGINEER.
12. EXISTING SYSTEMS SHALL REMAIN IN SERVICE UNTIL NEW WORK IS TESTED AND ACCEPTED. INTERRUPTION OF PROTECTION FOR THE PURPOSES OF MAKING TAPS OF EXISTING PIPING OR MAKING INTERCONNECTIONS BETWEEN NEW AND EXISTING WORK SHALL BE COORDINATED IN ADVANCE WITH THE OWNER.
13. CONTRACTOR SHALL MAKE MODIFICATIONS TO EXISTING SPRINKLER SYSTEM AS REQUIRED TO PROVIDE COVERAGE FOR THE NEW ARCHITECTURAL ARRANGEMENT (INCLUDING ALL OBSTRUCTIONS, SUCH AS LIGHTING FIXTURES, ETC.) IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13 AND LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO COMMENCING WORK. NEW SPRINKLER HEADS, WHERE NECESSARY, SHALL BE PROVIDED TO MATCH EXISTING STYLE. CONTRACTOR SHALL CENTER SPRINKLER HEADS IN CEILING TILES. CONTRACTOR SHALL PROVIDE NEW SPRINKLER BRANCH PIPING THROUGHOUT THE PROJECT AREA TO ACCOMMODATE DIFFUSER AND LIGHTING FIXTURE LAYOUTS.
14. SPRINKLER CONTRACTOR SHALL CENTER SPRINKLER HEADS IN CEILING TILES.
15. THE SPRINKLER SYSTEM SHALL REMAIN IN SERVICE AS LONG AS POSSIBLE DURING DEMOLITION ON THE FLOOR. WHEN THE SYSTEM IS TAKEN OUT OF SERVICE, THE OCCUPIED PORTION OF THE FLOOR SHALL REMAIN IN SERVICE. THE UNOCCUPIED PORTIONS SHALL HAVE A FIRE WATCH WHENEVER THE BUILDING IS OCCUPIED. THE FIRE WATCH INSTRUCTIONS CAN BE OBTAINED FROM THE UNIVERSITY FIRE MARSHAL.
16. THOUGH SOME PIPING OFFSETS ARE INDICATED, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL OFFSETS THAT ARE REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE FIRE PROTECTION AND SPRINKLER WORK WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE SYSTEM WITHOUT INTERFERENCES.
17. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS TO DETERMINE FINAL SIZING OF SPRINKLER MAINS AND BRANCH LINES AND OVERSIZED MAINS AND BRANCH LINES WILL BE NECESSARY TO OVERCOME FRICTION PRESSURE LOSSES.

MECHANICAL GENERAL NOTES

1. THE MECHANICAL AND PLUMBING CONTRACT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE SCOPE AND THE GENERAL ARRANGEMENT OF THE SYSTEMS. WHERE APPLICABLE THE FOLLOWING NOTES SHALL APPLY TO ALL MECHANICAL (HVAC, PLUMBING, PIPING AND FIRE PROTECTION) SYSTEMS.
2. THOUGH SOME DUCTWORK AND PIPING OFFSETS AND TRANSITIONS ARE INDICATED, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL OFFSETS AND TRANSITIONS REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCES.
3. PROVIDE APPROVED FIRE STOPPING MATERIAL AROUND ALL DUCTWORK AND PIPING PENETRATIONS (NEW AND EXISTING) THROUGH FIRE RATED FLOORS AND WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED FLOORS AND WALLS. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FLOORS AND FIRE RATED WALLS AND FIRE/SMOKE DAMPERS AT ALL PENETRATIONS THROUGH SHAFT ENCLOSURES.
4. SUPPORT ALL EQUIPMENT (I.E. AHU'S, FANS, AIR TERMINAL UNITS, ETC.) FROM STRUCTURE WITH SPECIFIED VIBRATION ISOLATION.
5. PROVIDE ACCESS PANELS WHERE REQUIRED FOR ADEQUATE ACCESS TO ALL CONCEALED EQUIPMENT, VALVES, DAMPERS AND CONTROLS.
6. ALL DUCT SIZES REFER TO INTERNAL FREE AREA. REFER TO DRAWINGS AND SPECIFICATIONS FOR INTERNAL INSULATION AND SOUND LINING PRIOR TO FABRICATION.
7. ALL DUCTWORK SHALL BE CONSTRUCTED OF RIGID SHEET METAL UNLESS OTHERWISE NOTED.
8. REFER TO DOOR SCHEDULE ON ARCHITECTURAL DRAWINGS FOR UNDER CUT DIMENSIONS AND DOOR LOUVER SIZES.
9. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATIONS AND BORDER TYPES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
10. INSTALL DUCTWORK AND PIPING MAINS TIGHT TO UNDERSIDE OF STRUCTURE UNLESS OTHERWISE INDICATED.
11. REFER TO MECHANICAL DETAILS FOR TYPICAL EQUIPMENT CONNECTIONS.
12. PIPING CONNECTIONS TO HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
13. PROVIDE CONDENSATE DRAIN PIPING FROM EACH AIR HANDLING UNIT TO NEAREST FLOOR DRAIN. PROVIDE CLEAN OUT AT EACH ELBOW. SIZE PER MANUFACTURER.
14. AIR CONDITIONING (A/C) CONDENSATE PIPING SHALL BE EXTENDED FROM ALL A/C CONDENSATE SOURCE EQUIPMENT (AHU'S, ETC.) AND CONNECTED TO THE NEAREST STORM WATER PIPE/DRAIN LOCATION. SIZE PER MANUFACTURER.
15. PATCH AND SEAL ALL REMAINING OPENINGS (NEW AND EXISTING) THROUGH FLOORS, CEILINGS, WALLS, AND ROOF RESULTING FROM DEMOLITION OR NEW WORK WITH MATERIALS AND FINISHES TO MATCH EXISTING CONSTRUCTION AND FIRE RATING.
16. AS AN INTEGRAL PART OF THESE DOCUMENTS, THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
17. PRIOR TO THE BALANCING OF SYSTEMS BY THE AABC CERTIFIED BALANCING CONTRACTOR, ALL HIGH PRESSURE AND LOW PRESSURE SYSTEMS SHALL BE TESTED BY THE MECHANICAL CONTRACTOR FOR DUCT LEAKAGE. DUCT LEAKAGE SHALL NOT EXCEED 1% FOR A DURATION OF TEN (10) MINUTES. SEE SPECIFICATIONS FOR ADDITIONAL TESTING CRITERIA. INSULATION MATERIALS SHALL NOT BE APPLIED UNTIL SYSTEMS HAVE BEEN WITNESSED, DOCUMENTED AND SUBMITTED TO MEET THE ABOVE TESTING REQUIREMENTS. REFER SPECIFICATIONS FOR SYSTEMS INDICATED AS LOW PRESSURE OR HIGH PRESSURE. THE BALANCE CONTRACTOR SHALL WITNESS AND CERTIFY ALL DUCT PRESSURE TESTS.
18. CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO THE BEGINNING OF ANY WORK. FAILURE TO VISIT THE SITE SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY.
19. CONTRACTOR SHALL USE CARE WHEN PERFORMING SELECTIVE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO BUILDING FINISHES, EQUIPMENT, FURNITURE, STRUCTURE, AND MECHANICAL/ELECTRICAL SYSTEMS AND EQUIPMENT. SHOULD ANY DAMAGE OCCUR THE CONTRACTOR SHALL RESTORE DAMAGED AREA/ITEMS TO ORIGINAL CONDITION TO MEET THE OWNER'S SATISFACTION.
20. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER ANY UTILITY OUTAGES. OWNER SHALL BE GIVEN A MINIMUM OF 72 HOURS NOTICE (THREE WORKING DAYS) FOR ANY OUTAGES.
21. HVAC SHALL BE MAINTAINED TO ALL AREAS OUTSIDE OF THE CURRENT PHASE OF THE RENOVATED AREA AT ALL TIMES. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO COORDINATE OUTAGES WITH THE OWNER A MINIMUM OF 72 HOURS (THREE WORKING DAYS) IN ADVANCE.
22. DEMOLITION AND NEW WORK THAT WILL RESULT IN DOWN TIME OF SERVICES (HVAC, PLUMBING, ETC.) SHALL BE PERFORMED AT PREMIUM TIME AS REQUIRED TO MINIMIZE DOWN TIME TO ADJACENT SPACES. COORDINATE ALL OUTAGES WITH OWNER.
23. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PHASING INFORMATION. ALL WORK AND ASSOCIATED OUTAGES SHALL BE COORDINATED WITH THE PHASING SCHEDULE AND THE OWNER.
24. SCHEDULE ALL WORK IN OCCUPIED SPACES WITH OWNER AT LEAST TWO (2) WEEKS PRIOR TO CONSTRUCTION.
25. RETURN TO OWNER, AT THEIR DISCRETION, ALL UNUSED MECHANICAL EQUIPMENT (I.E. AHU'S, FANS, VAV BOXES, AIR DEVICES, THERMOSTATS AND CONTROLS).
26. CONTRACTOR SHALL PRE-TEST AHU-9 AND ASSOCIATED TERMINAL UNITS (LOCATED IN MT 002) TO DOCUMENT EXISTING AIR FLOW (CFM) AND TOTAL STATIC PRESSURE DROP PRIOR TO START OF WORK. PROVIDE DOCUMENTATION OF TEST TO THE ENGINEER AND OWNER .
27. CONTRACTOR SHALL REBALANCE EXISTING AHU-9 AND ASSOCIATED TERMINAL UNITS (LOCATED IN MT 002) TO OBTAIN AIR QUANTITIES INDICATED. PROVIDE SHEAVE AND BELT ADJUSTMENT AND / OR REPLACEMENT AS REQUIRED. CLEAN EXISTING FAN AND REPAIR / REPLACE EXISTING FLEXIBLE DUCT CONNECTIONS.
28. CONTRACTOR SHALL TEST/BALANCE ALL AIR AND HYDRONIC EQUIPMENT AND DEVICES INDICATED ON THE DOCUMENTS. AIR SYSTEM EQUIPMENT AND DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO: AIR HANDLING EQUIPMENT (AHU'S, ETC.), FANS, AIR VOLUME TERMINAL UNITS, AIR DEVICES, DUCT MOUNTED VOLUME DAMPERS, ETC. HYDRONIC EQUIPMENT AND DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO: COILS, BALANCING VALVES, ETC. BALANCE ALL EQUIPMENT AND DEVICES TO THE AIR/WATER FLOWS (CFM OR GPM) INDICATED ON THE DOCUMENTS (WHERE FLOWS ARE NOT CLEARLY INDICATED, CONTACT THE A/E FOR CLARIFICATION).
29. WHERE PIPING PENETRATES CONCRETE WALL AND SLABS, PROVIDE GROUND PENETRATING RADAR (GPR) SCAN TO IDENTIFY THE LOCATION OF REBAR. SUBMIT RESULTS TO OWNER AND ENGINEER FOR REVIEW.
30. WHERE MOTOR STARTERS AND/OR VARIABLE FREQUENCY DRIVES (VFD'S) ARE INDICATED FOR MECHANICAL EQUIPMENT, THEY SHALL COMPLY WITH ALL REQUIREMENTS OUTLINED WITH THE ELECTRICAL SPECIFICATIONS FOR MOTOR STARTERS AND VFD'S. WHERE MOTOR STARTERS AND/OR VFD'S ARE PROVIDED BY THE MECHANICAL CONTRACTOR, OR AS A PORTION OF A PACKAGED MECHANICAL UNIT, THE ELECTRICAL SPECIFICATIONS SHALL ALSO APPLY. ALL VFD'S FOR THE PROJECT, WHETHER PROVIDED BY THE MECHANICAL OR ELECTRICAL CONTRACTOR, SHALL BE PROVIDED BY A SINGLE MANUFACTURER, AND SHALL INCLUDE THE SAME FEATURES AND OPTIONS.
31. THE CONTRACTOR SHALL PROVIDE TEMPORARY HEATING AND COOLING TO THE MBI SUITE AS REQUIRED IN ORDER TO FINISH WORK IN SUITE 002 IF NOT COMPLETED PRIOR TO 8/31/2020 OR ON A DATE COORDINATED WITH THE OWNER. THE TEMPORARY UNIT(S) SHALL HAVE A TOTAL COOLING CAPACITY OF 150 MBH AND HEATING CAPACITY OF 80 MBH. CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL PROVISIONS TO ACCOMMODATE TEMPORARY UNIT(S). CONTRACTOR SHALL TEMPORARILY USE LOUVERS TO ALLOW FOR UNIT VENTILATION. VENTILATION AIR SHALL BE PROVIDED TO ALL OCCUPIED SPACES AT ALL TIMES. THESE GUIDELINES ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INTENDED TO INDICATE ALL PHASING REQUIREMENTS. THE CONTRACTOR SHALL DEVELOP A CONSTRUCTION SCHEDULE FOR ACCEPTANCE AND APPROVAL BY THE OWNER.

MECHANICAL LEGEND

COLD WATER (CW)	UNION
HOT WATER (HW)	PIPING CAP
CHILLED WATER SUPPLY — CWS	CONCENTRIC REDUCER
CHILLED WATER RETURN — CWR	ECCENTRIC REDUCER
REFRIGERANT SUCTION — RS	MANUAL AIR VENT
REFRIGERANT LIQUID — RL	AUTOMATIC AIR VENT
REFRIGERANT GAS — RG	PIPE GUIDE OR SLEEVE
HEATING WATER SUPPLY — HS	PIPE ANCHOR
HEATING WATER RETURN — HR	PIPING ELBOW DOWN
CONDENSATE DRAIN LINE — CD	PIPING ELBOW UP
SANITARY PIPING	PIPE CONNECTION BOTTOM
STORM WATER PIPING — SW	PIPE CONNECTION TOP
CHECK VALVE	FLOOR CLEANOUT — CO
BALL VALVE	WALL CLEANOUT — CO
GATE VALVE	HOSE-END VALVE
BUTTERFLY VALVE	VALVE IN VERTICAL POSITION
BALANCING VALVE W/ FLOW METER FITTING (VENTURI TYPE)	FLOOR DRAIN — FD
2-PORT MODULATING CONTROL VALVE	SUPPLY AIR & OUTSIDE AIR DUCT UP (DASHED LINES FOR DOWN)
RELIEF VALVE	RETURN DUCT UP (DASHED LINES FOR DOWN)
BACKFLOW PREVENTER	EXHAUST DUCT UP (DASHED LINES FOR DOWN)
Y-STRAINER W/HOSE-END VALVE	FLEXIBLE CONNECTION
FLANGED CONNECTION	FLEXIBLE DUCT
GAUGE AND VALVE	DOUBLE THICKNESS TURNING VANES
TEMPERATURE/PRESSURE TEST PORT	EXISTING DUCTWORK
TEE	DUCTWORK TO BE REMOVED
THERMOMETER	

OPEN ENDED DUCT — OED	
DUCTWORK WITH SOUND LINING	
FLEXIBLE DUCT AND EQUIPMENT CONNECTOR	
NEW DUCTWORK	
DUCT TRANSITION ROUND TO RECTANGULAR — Ø	
DUCT TRANSITION	
CHANGE IN DUCT ELEVATION (R-RISE, D-DROP) — R, D	
DUCT SIZE (FIRST FIGURE IS SIDE SHOWN) — 12x20	
FLAT OVAL DUCT SIZE LABEL — 12x20 FO	
LINEAR SLOT DIFFUSER	
BALANCING DAMPER	
MOTOR OPERATED DAMPER — MOD	
FIRE DAMPER WITH ACCESS PANEL — FD	
COMBINATION FIRE/SMOKE DAMPER WITH SMOKE DETECTORS AND ACCESS PANEL — F/SD	
ACCESS DOOR — AD	
SMOKE DETECTOR — S	
THERMOSTAT — T	
LIMIT OF DEMOLITION	
CONNECT TO EXISTING	
CARBON DIOXIDE SENSOR — CO2	
FAN SWITCH	

MECHANICAL ABBREVIATIONS

ABOVE FINISHED FLOOR	AFF	EXTERNAL STATIC PRESSURE	ESP	MINIMUM	MIN
AIR FLOW MONITOR	AFM	EXISTING TO REMAIN	ETR	MAXIMUM OVERCURRENT PROTECTION	MOP
AIR HANDLING UNIT	AHU	ENTERING WATER TEMPERATURE	EWT	MEDIUM PRESSURE STEAM	MPS
AIR PRESSURE DROP	APD	FIRE PROTECTION	F	NORMALLY CLOSED	NC
ARCHITECTURAL	ARCH	FLEXIBLE CONNECTION / FORWARD CURVED	FC	NOT IN CONTRACT	NIC
AUTOMATIC TEMPERATURE CONTROLS	ATC	FAN COIL UNIT	FCU	NORMALLY OPEN / NUMBER	NO
AIR TERMINAL UNIT	ATU	FULL LOAD AMPS	FLA	OUTSIDE AIR	OA
BUILDING AUTOMATION SYSTEM	BAS	FINS PER INCH	FPI	OPEN END DUCT	OED
BACK-FLOW PREVENTER	BFP	FEET PER MINUTE	FPM	POUNDS PER SQUARE INCH	PSI
BRAKE HORSEPOWER	BHP	FEET	FT	PRESSURE	PRESS
BACKWARD INCLINED	BI	FACE VELOCITY	FV	QUANTITY	QTY
BRITISH THERMAL UNIT	BTU	GALLON(S)	GAL	RETURN AIR	RA
BRITISH THERMAL UNITS PER HOUR	BTUH	GALLONS PER MINUTE	GPM	RETURN AIR FAN	RAF
CAPACITY	CAP	HEIGHT	H	RELATIVE HUMIDITY	RH
CUBIC FEET PER HOUR	CFH	HORSEPOWER	HP	REDUCED PRESSURE BACK-FLOW PREVENTER	RPBFP
CUBIC FEET PER MINUTE	CFM	HEATING WATER SUPPLY	HS	REVOLUTIONS PER MINUTE	RPM
COLD WATER (DOMESTIC)	CW	HEATING WATER RETURN	HR	REMOVE EXISTING	RX
CHILLED WATER SUPPLY	CWS	HEATER	HTR	SUPPLY AIR	SA
CHILLED WATER RETURN	CWR	HEAT EXCHANGER	HX	STATIC PRESSURE	SP
CONNECT TO EXISTING	CX	HERTZ	HZ	STEAM	STM
DRY BULB	DB	INCH(ES)	IN	TESTING AND BALANCING	TAB
DIFFERENTIAL BYPASS VALVE	DBV	KILOWATT	KW	TOTAL STATIC PRESSURE	TSP
DESIGNATION	DESIG	LENGTH	L	TYPICAL	TYP
DOMESTIC HOT WATER	DHW	LEAVING AIR TEMPERATURE	LAT	UNLESS OTHERWISE NOTED	UON
DIAMETER	DIA	POUNDS	LBS	VOLTS	V
DOWN	DN	LOCKED ROTOR AMPS	LRA	VARIABLE AIR VOLUME	VAV
DIFFERENTIAL PRESSURE SENSOR	DPS	LOW PRESSURE STEAM	LPS	VARIABLE FREQUENCY DRIVE	VFD
DUAL TEMPERATURE SUPPLY	DTS	LEAVING WATER TEMPERATURE	LWT	WIDTH	W
DRAWING(S)	DWG	MAXIMUM	MAX	WET BULB	WB
EXHAUST AIR	EA	THOUSAND BRITISH THERMAL UNITS PER HOUR	MBH	WATER COLUMN	WC
ENTERING AIR TEMPERATURE	EAT	MINIMUM CIRCUIT AMPACITY	MCA	WATER GAUGE	WG
ENERGY EFFICIENCY RATIO	EER	MECHANICAL EQUIPMENT ROOM	MER	WATER PRESSURE DROP	WPD
EXHAUST FAN	EF	MAXIMUM FUSE SIZE	MFS		

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER
BLDG. 206
MBI FINANCE LAB
SUITE 100

QUINN EVANS ARCHITECTS
Architects
100 N. Charles Street, 14th Floor, Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS
Structural Engineers
1112 16TH STREET NW #920
WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.
EXPIRATION DATE:

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: SY

CHECKED BY: JMW

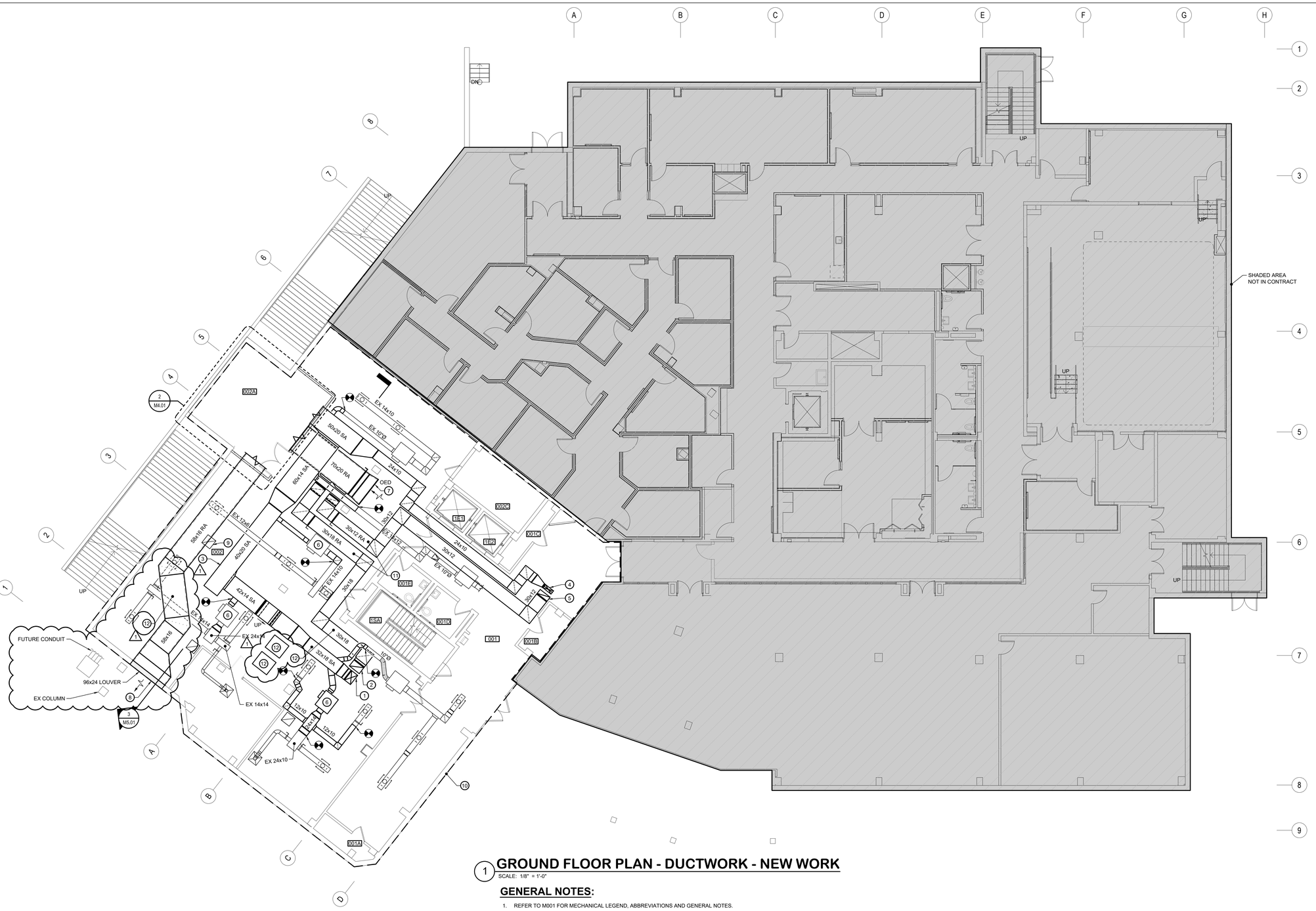
DATE: 03/06/2020

SHEET TITLE: MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES

DRAWING NO:

M0.01

BKM# 19106.01



1 GROUND FLOOR PLAN - DUCTWORK - NEW WORK

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

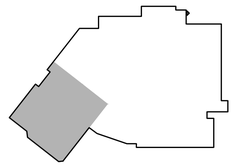
GENERAL NOTES:

1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. SUPPLY AIR DUCTWORK FROM AHU-9 TO TERMINAL UNITS SHALL BE DOUBLE WALL RECTANGULAR DUCT. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE NEW CONTROL WIRING AS REQUIRED FROM RELOCATED FAN POWERED TERMINAL UNIT TO EXISTING THERMOSTAT.
4. REFER TO GENERAL SPRINKLER NOTES ON M0.01 FOR SPRINKLER WORK RELATED TO THIS AREA.

DRAWING NOTES:

1. 28"x18" DOUBLE WALL RECTANGULAR SUPPLY AIR DUCTWORK UP TO MBI SUITE ABOVE.
2. 30"x18" RETURN AIR DUCTWORK UP TO MBI SUITE ABOVE.
3. PROVIDE DOUBLE WALL RECTANGULAR MEDIUM PRESSURE SUPPLY AIR DUCTWORK UP TO TERMINAL UNITS.
4. 24"x10" DOUBLE WALL SUPPLY AIR DUCTWORK UP THROUGH EXISTING SHAFT.
5. 30"x12" RETURN AIR DUCTWORK UP THROUGH EXISTING SHAFT. PROVIDE 1" SOUND LINING.
6. EXISTING FAN POWERED TERMINAL UNIT RELOCATED TO LOCATION INDICATED. PROVIDE NEW HANGING AND SUPPORTS AS REQUIRED.
7. 74"x24" OPEN ENDED RETURN AIR DUCTWORK WITH 1/2" ALUMINUM WIRE MECH SCREEN.
8. 96"x24" RELIEF AIR LOUVER THROUGH WALL. PROVIDE RUSKIN L375D STATIONARY LOUVER WITH BIRD AND INSECT SCREEN. PROVIDE LOUVER WITH MINIMUM 45% FREE AREA. COORDINATE FINAL LOUVER COLOR WITH ARCHITECT.
9. EXISTING CEILING MOUNTED AIR DEVICE. RE-INSTALL AIR DEVICE IN LOCATION INDICATED. TYPICAL.
10. MODIFY EXISTING SPRINKLER PIPING AS REQUIRED THROUGHOUT PROJECT AREA TO ACCOMMODATE NEW WORK. ALL SPRINKLER PIPING SHALL BE MODIFIED IN ACCORDANCE WITH NFPA 13 TO PROVIDE COMPLETE COVERAGE.
11. ROUTE NEW RETURN AIR DUCTWORK TIGHT TO STRUCTURE OVER EXISTING HVAC AND DOMESTIC WATER PIPING.
12. CONTRACTOR SHALL PROVIDE TEMPORARY HEATING AND COOLING UNIT(S) TO SERVE MBI SUITE ABOVE AS REQUIRED. SEE GENERAL NOTES ON M0.01 FOR ADDITIONAL REQUIREMENTS. PROVIDE TEMPORARY FLEXIBLE DUCTWORK TO SERVE 28x18 SUPPLY AIR DUCTWORK AND 30x18 RETURN AIR DUCTWORK UP TO MBI SUITE. EXTEND TEMPORARY FLEXIBLE DUCTWORK TO 58x16 RELIEF AIR DUCTWORK TO PROVIDE TEMPORARY VENTILATION UNTIL INSTALLATION OF AHU-9 IS COMPLETE.

ROOM NAME LIST	
001	EXISTING CORRIDOR
001A	CLOSET
001B	MECH
001C	ELEC
001D	MENS
001E	WOMENS
002	TEMPORARY SUITE
002A	MECH ROOM
002C	ELEVATOR MACHINE ROOM
1E1	ELEVATOR 1
1E2	ELEVATOR 2
1SA	STAIR 1



KEY PLAN

NOT TO SCALE

N

0 4' 8' 16' 24'

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

bkm

Burdette, Koehler, Murphy & Associates, Inc.

Mechanical / Electrical Engineers

6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209

P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER
BLDG. 206
MBI FINANCE LAB
SUITE 100

QUINN EVANS ARCHITECTS

Architects
100 N. Charles Street
14th Floor
Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS

Structural Engineers
1112 16TH STREET NW
#920
WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.
EXPIRATION DATE:

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: CS

CHECKED BY: JMW

DATE: 03/06/2020

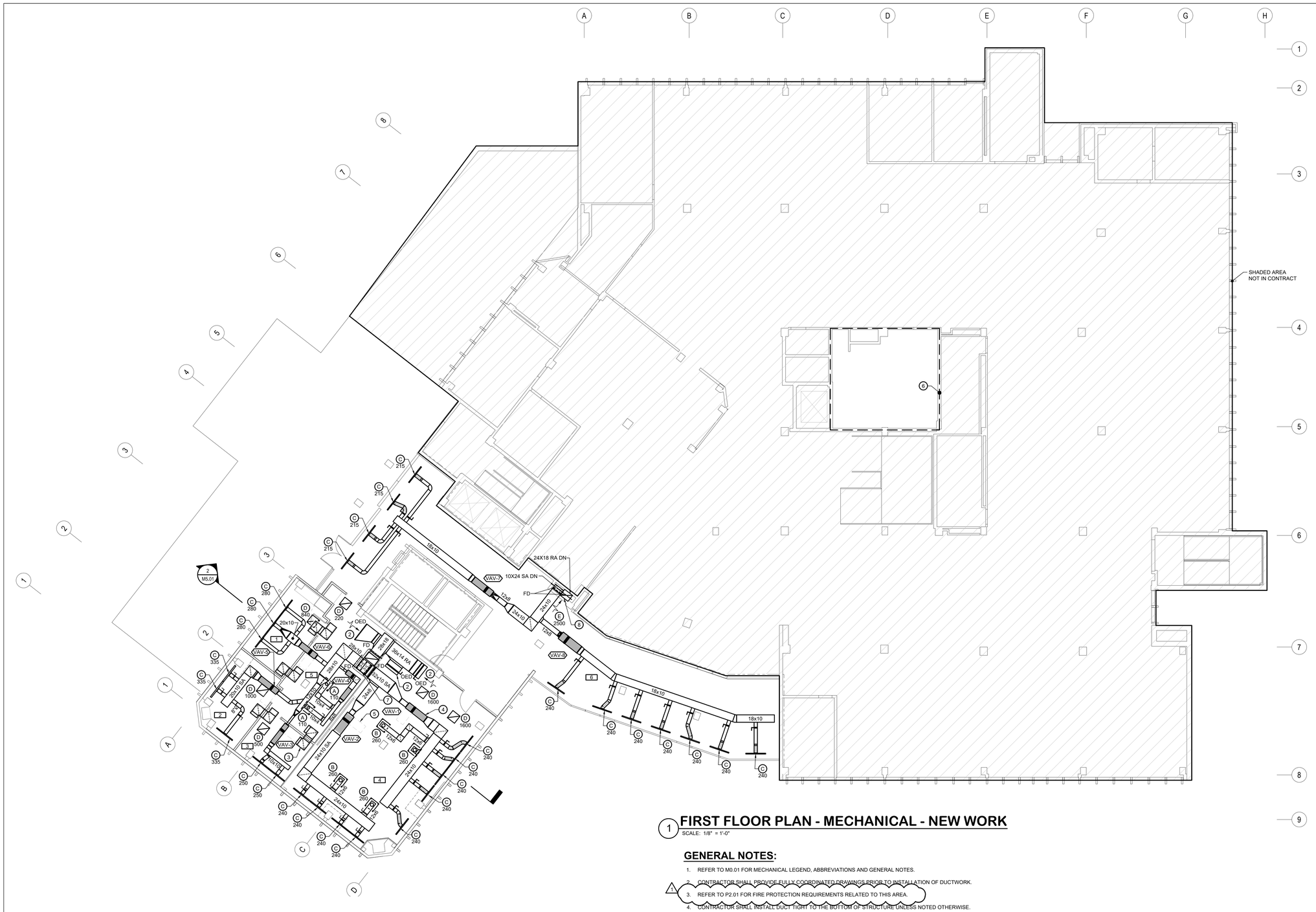
SHEET TITLE: GROUND FLOOR PLAN DUCTWORK NEW WORK

DRAWING NO:

M2.01

BKM# 19106.01

ROOM NAME LIST	
1	CONFERENCE ROOM
2	OFFICE
3	OFFICE
4	FINANCE LAB/CLASSROOM
5	LOBBY/RECEPTION
6	LOBBY ENTRANCE



1 FIRST FLOOR PLAN - MECHANICAL - NEW WORK

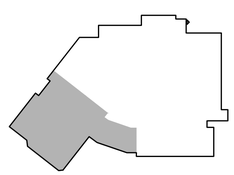
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO M0.01 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. CONTRACTOR SHALL PROVIDE FULLY COORDINATED DRAWINGS PRIOR TO INSTALLATION OF DUCTWORK.
3. REFER TO P2.01 FOR FIRE PROTECTION REQUIREMENTS RELATED TO THIS AREA.
4. CONTRACTOR SHALL INSTALL DUCT TIGHT TO THE BOTTOM OF STRUCTURE UNLESS NOTED OTHERWISE.
5. SUPPLY AIR DUCTWORK UPSTREAM OF TERMINAL UNITS SHALL BE DOUBLE WALL RECTANGULAR DUCT. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
6. SEE M3.02 FOR THERMOSTAT LOCATIONS.
7. CONTRACTOR SHALL PROVIDE TEMPORARY HEATING AND COOLING AS REQUIRED TO THE MBI SUITE. SEE GENERAL NOTES ON M0.01 FOR ADDITIONAL REQUIREMENTS.

DRAWING NOTES:

1. 36"x10" OPEN ENDED DUCT WITH 1/2" ALUMINUM WIRE MESH SCREEN. BALANCE TO 1,600 CFM.
2. 48"x12" OPEN ENDED DUCT WITH 1/2" ALUMINUM WIRE MESH SCREEN. BALANCE TO 3,500 CFM.
3. 20"x8" TRANSFER AIR DUCTWORK. PROVIDE TRANSFER AIR DUCT WITH 1" SOUND LINING. TYPICAL OF 4.
4. PROVIDE ENGINEERED DUCT SILENCER TO ACHIEVE NC VALVES INDICATED ON THE SCHEDULES. SILENCERS SHALL HAVE A MAXIMUM HEIGHT OF 10" AND BE PROVIDED BY RUSKIN ON VIBRO-ACOUSTICS. TYPICAL OF 8.
5. SINGLE DUCT TERMINAL UNIT WITH HEATING WATER REHEAT COIL. PROVIDE A MINIMUM 36" CLEARANCE IN FRONT OF TERMINAL UNIT CONTROLLER. TYPICAL OF 8.
6. REFER TO DRAWING M6.01 AND M6.02 FOR ADD ALTERNATE WORK RELATED TO THIS AREA.
7. 18x28 SUPPLY AIR DUCTWORK AND 10x28 SUPPLY AIR DUCTWORK TRANSITION DOWN TO AN 18x28 SUPPLY AIR DUCT DOWN TO GROUND FLOOR.
8. 24x10 SUPPLY AIR DUCTWORK AND 24x18 RETURN AIR DUCTWORK DOWN THROUGH EXISTING SHAFT. PROVIDE FIRE DAMPER AT EXISTING FLOOR OPENING.



KEY PLAN

NOT TO SCALE

N

0 4' 8' 16' 24'

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

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER
BLDG. 206
MBI FINANCE LAB
SUITE 100

QUINN EVANS ARCHITECTS
Architects
100 N. Charles Street, 14th Floor, Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS
Structural Engineers
1112 16TH STREET NW #920, WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.
EXPIRATION DATE:

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: CS

CHECKED BY: JMW

DATE: 03/06/2020

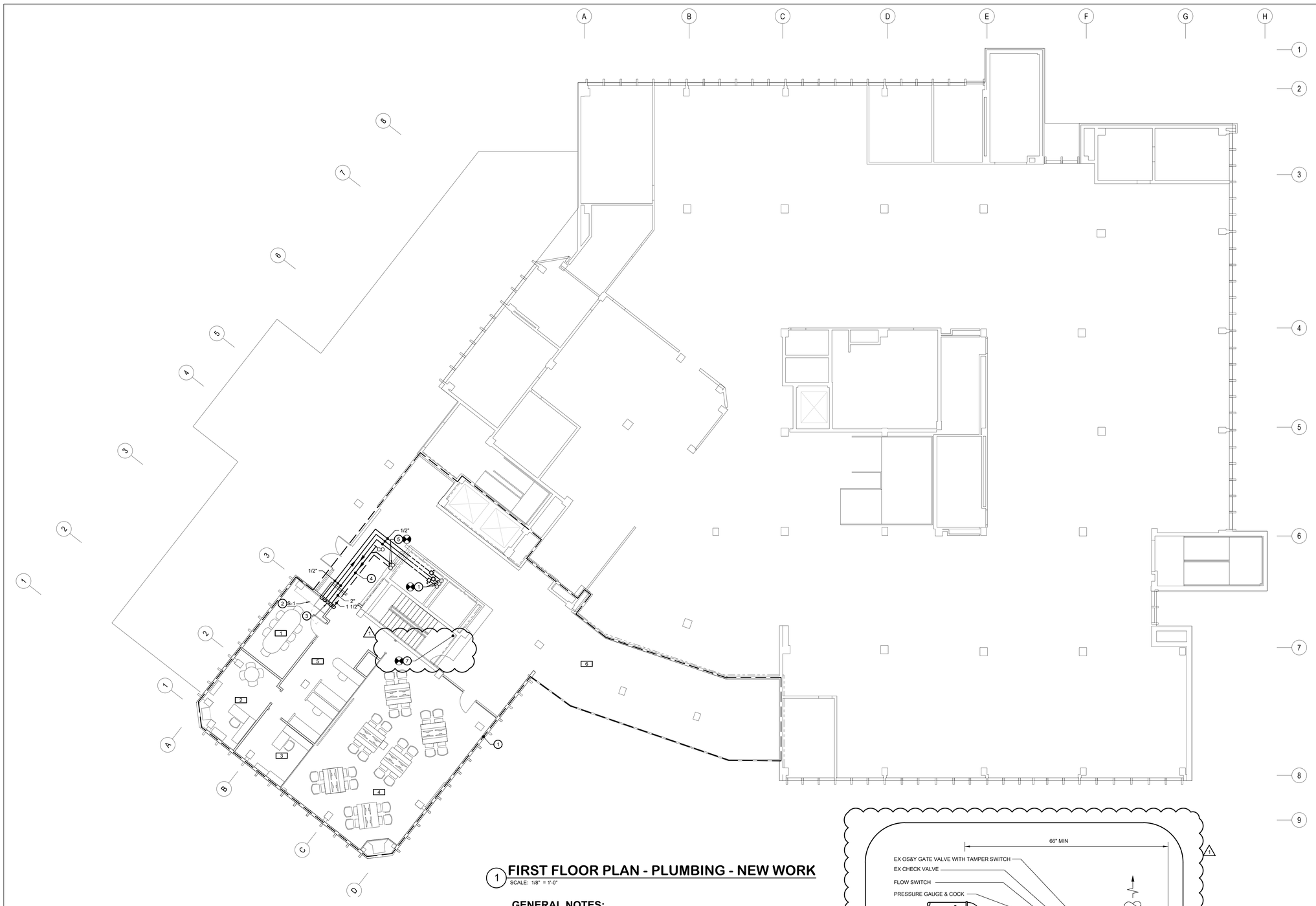
SHEET TITLE: FIRST FLOOR PLAN MECHANICAL NEW WORK

DRAWING NO:

M2.02

BKM# 19106.01

ROOM NAME LIST	
1	CONFERENCE ROOM
2	OFFICE
3	OFFICE
4	FINANCE LAB/CLASSROOM
5	LOBBY/RECEPTION
6	LOBBY ENTRANCE



1 FIRST FLOOR PLAN - PLUMBING - NEW WORK

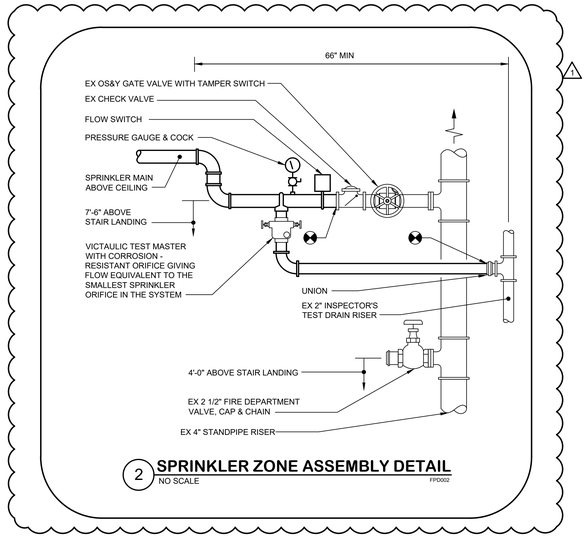
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO M0.01 FOR PLUMBING LEGEND, ABBREVIATIONS AND GENERAL NOTES.

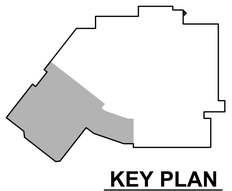
DRAWING NOTES:

1. EXTEND SPRINKLER PIPING AS REQUIRED TO PROVIDE COMPLETE COVERAGE OR PROJECT AREA PER NFPA 13. PROVIDE NEW SPRINKLER HEADS AND BRANCH PIPING AS REQUIRED. SPRINKLER HEADS SHALL BE RECESSED QUICK RESPONSE TYPE. COORDINATE SPRINKLER HEAD FINISH WITH OWNER AND ARCHITECT.
2. UNDER MOUNT PANTRY SINK PROVIDE ROUGE-IN AND FINAL CONNECTION. PROVIDE 19"x22" 18 GAUGE SINGLE COMPARTMENT SINK WITH 3-HOLE PUNCH. PROVIDE 8" GOOSENECK, 4" WRIST BLADE HANDLE, 8" FAUCET CENTERS, 2.5 GPM AERATOR, CHROME BASKET STRAINER, FLEXIBLE SUPPLIES, TAIL PIECE AND CAST BRASS P-TRAP, ELKAY LUSTERTONE OR EQUIVALENT.
3. 1/2" COLD WATER, 1/2" HOT WATER AND 1" VENT DOWN TO S-1, 2" SANITARY UP TO S-1 FROM FLOOR BELOW. PROVIDE THERMOSTATIC MIXING VALVE AT FIXTURE.
4. 2" SANITARY PIPING ROUTED IN PLENUM BELOW FLOOR. SLOPE SANITARY PIPING TOWARD EXISTING RISER AT 1% SLOPE.
5. 2" SANITARY AND 1" VENT PIPING CONNECTED TO EXISTING SANITARY AND VENT PIPING SERVING EXISTING ELECTRIC WATER COOLER.
6. 1/2" COLD WATER, 1/2" HOT WATER AND 1/2" HOT WATER RECIRCULATION PIPING EXTENDED FROM EXISTING RISER.
7. EXTEND NEW SPRINKLER PIPING FROM EXISTING 4" STAND PIPE RISER, INSTALL SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13. PROVIDE FLOW SWITCH, PRESSURE GAUGE AND VICTAULIC TEST MASTER EXTENDED TO EXISTING 2" INSPECTORS TEST DRAIN RISER.



2 SPRINKLER ZONE ASSEMBLY DETAIL

NO SCALE FPD002



KEY PLAN

NOT TO SCALE

N

0 4' 8' 16' 24'

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

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER BLDG. 206 MBI FINANCE LAB SUITE 100

QUINN EVANS ARCHITECTS
Architects
100 N. Charles Street, 14th Floor, Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS
Structural Engineers
1112 16TH STREET NW #920, WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.
EXPIRATION DATE:

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: SY

CHECKED BY: JMW

DATE: 03/06/2020

SHEET TITLE: FIRST FLOOR PLAN PLUMBING NEW WORK

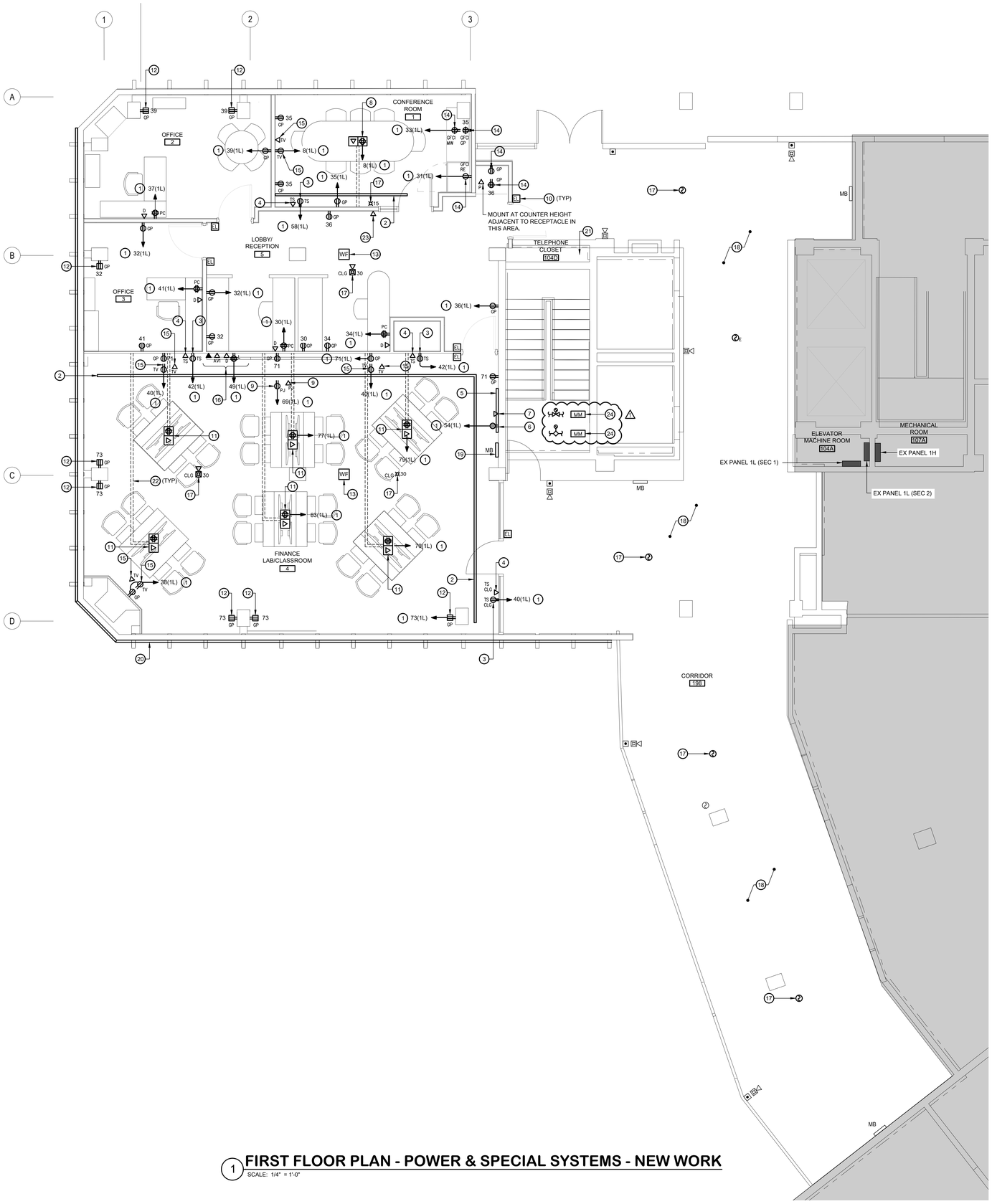
DRAWING NO:

P2.01

BKM# 19106.01

Plotted By: James Weaver | 3/23/2020 1:25 PM

ARL: G:\19106.01\Drawings\Acad\PP201 FIRST FLOOR PLAN PLUMBING N



1 FIRST FLOOR PLAN - POWER & SPECIAL SYSTEMS - NEW WORK

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

GENERAL NOTES:

1. REFER TO E0.01 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN HEAVY DASHED (– – –) SHALL BE REMOVED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.

DRAWING NOTES:

1. PROVIDE HOMERUN TO EXISTING SPARE CIRCUIT BREAKER SHOWN IN EXISTING PANEL 1L.
2. TICKER SIGN PROVIDED BY OTHERS. PROVIDE POWER AND DATA CONNECTIONS.
3. PROVIDE NEMA 5-20R RECEPTACLE FOR TICKER SIGN. COORDINATE LOCATION AND MOUNTING HEIGHT OF RECEPTACLE WITH TICKER SIGN PROVIDER/INSTALLER PRIOR TO INSTALLATION.
4. PROVIDE DATA OUTLET FOR TICKER SIGN. COORDINATE LOCATION AND MOUNTING HEIGHT OF DATA OUTLET WITH TICKER SIGN PROVIDER/INSTALLER PRIOR TO INSTALLATION.
5. WORLD CLOCK PROVIDED BY OTHERS.
6. PROVIDE NEMA 5-20R RECEPTACLE FOR WORLD CLOCK. COORDINATE LOCATION AND MOUNTING HEIGHT OF RECEPTACLE WITH WORLD CLOCK PROVIDER/INSTALLER PRIOR TO INSTALLATION.
7. PROVIDE DATA OUTLET FOR WORLD CLOCK. COORDINATE LOCATION AND MOUNTING HEIGHT OF DATA OUTLET WITH WORLD CLOCK PROVIDER/INSTALLER PRIOR TO INSTALLATION.
8. PROVIDE UNDER CARPET FLOOR WIRE SYSTEM MANUFACTURED BY CONNECTRAC (2.7 SERIES) FROM WALL TO FLOOR BOX CONNECTIONS AS REQUIRED. SYSTEM SHALL INCLUDE (1) QUAD RECEPTACLE, (2) DATA CONNECTIONS, WIREWAY, UNDER CARPET RAMP3, 24" WALL CHANNEL KIT, AND ALL ACCESSORIES. PROVIDE ALL COMPONENTS AND CONNECTIONS REQUIRED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM. PROVIDE (2) CAT 6 FROM VOICE/DATA OUTLETS TO EXISTING 2nd FLOOR IT ROOM 209C. COORDINATE OUTLET BOX AND WIREWAY ROUTING LOCATION WITH OWNER AND FINAL FURNITURE LOCATION.
9. PROVIDE DEVICE(S) FOR WALL MOUNTED PROJECTOR. COORDINATE LOCATION AND MOUNTING HEIGHT WITH PROJECTOR PROVIDER/INSTALLER.
10. ELECTRONIC DOOR RELEASE DEVICE. REFER TO ELECTRONIC DOOR ACCESS SYSTEM CONNECTION DIAGRAM ON DRAWING E5.02 FOR ADDITIONAL INFORMATION.
11. PROVIDE UNDER CARPET FLOOR WIRE SYSTEM MANUFACTURED BY CONNECTRAC (2.7 SERIES) FROM WALL TO FLOOR BOX CONNECTIONS AS REQUIRED. SYSTEM SHALL INCLUDE (1) QUAD RECEPTACLE, (4) DATA CONNECTIONS, WIREWAY, UNDER CARPET RAMP3, 24" WALL CHANNEL KIE, AND ALL ACCESSORIES. PROVIDE ALL COMPONENTS AND CONNECTIONS REQUIRED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM. PROVIDE (4) CAT 6 FROM DATA OUTLETS TO EXISTING 2nd FLOOR IT ROOM 209C. COORDINATE OUTLET BOX AND WIREWAY ROUTING LOCATION WITH OWNER AND FINAL FURNITURE LOCATION.
12. PROVIDE SURFACE MOUNTED RECEPTACLE ON COLUMN. SUPPLY FROM CEILING USING SURFACE METAL RACEWAY. ROUTE SURFACE METAL RACEWAY FROM CEILING DOWN TO RECEPTACLE MOUNTED ON BACKSIDE OF COLUMN (I.E. ON WINDOW SIDE) SO THAT RACEWAY DROP IS NOT VISIBLE AS MUCH AS POSSIBLE.
13. COORDINATE DEVICE LOCATION WITH COLLEGE IT PERSONNEL.
14. COORDINATE DEVICE LOCATION WITH CASEWORK.
15. MOUNT AT 80" A.F.F. COORDINATE FINAL MOUNTING HEIGHT WITH TV PROVIDER/INSTALLER.
16. PROVIDE DEVICES FOR LECTERN. COORDINATE LOCATION OF DEVICES WITH THE OWNER.
17. PROVIDE FIRE ALARM DEVICE CONNECTED TO EXISTING MAIN BUILDING FIRE ALARM SYSTEM.
18. REMOVE, PROTECT, AND REINSTALL ALL CEILING MOUNTED ELECTRICAL AND SPECIAL SYSTEM DEVICES AS REQUIRED DUE TO CEILING WORK ON THIS AREA.
19. MESSAGE BOARD DEVICE SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR. COORDINATE LOCATION WITH THE OWNER.
20. EXTERIOR TICKER SIGN PROVIDED BY OTHERS. PROVIDE POWER AND DATA CONNECTIONS. REFER TO DRAWING E1.02 FOR ADDITIONAL INFORMATION.
21. EXISTING CABLE RACEWAY PATH FROM GROUND FLOOR TO FIRST FLOOR AND FROM FIRST FLOOR TO SECOND FLOOR.
22. CONNECTRAC UNDER CARPET WIREWAY.
23. CONFERENCE ROOM SCHEDULING DEVICE SUPPLIED BY OWNER. PROVIDE JUNCTION BOX MOUNTED AT 48" AFF AND 1" CONDUIT FROM BOX TO ACCESSIBLE CEILING SPACE. PROVIDE (1) CAT 6 FROM EXISTING 2nd FLOOR IDF ROOM 209C TO OUTLET. COORDINATE BOX TYPE AND LOCATION WITH SYSTEM PROVIDER/INSTALLER.
24. PROVIDE MONITOR MODULE FOR SPRINKLER FLOW/TAMPER SWITCH. ⚠

KEY PLAN

NOT TO SCALE

N

0 2' 4' 8' 12'

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

bkm
Burdette, Koehler, Murphy & Associates, Inc.
Mechanical / Electrical Engineers
6300 Blair Hill Lane, Suite 400 | Baltimore, Maryland 21209
P: 410.323.0600 | www.bkma.com

PROJECT NAME:

Montgomery College

Central Administration
Office of Facilities
9221 Corporate Boulevard
Rockville, MD 20850
Telephone: 240-567-7363

MACKLIN TOWER BLDG. 206 MBI FINANCE LAB SUITE 100

QUINN EVANS ARCHITECTS
Architects
100 N. Charles Street 14th Floor Baltimore, MD 21201
410.576.0440
www.quinnevans.com

A+F ENGINEERS
Structural Engineers
1112 16TH STREET NW #920 WASHINGTON, DC 20036
202.628.1600
www.af-engineers.com

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 30474
EXPIRATION DATE: 01/23/2021

ISSUED FOR:

	DATE:	DESCRIPTION:
	3/6/2020	100% CONSTRUCTION DOCUMENTS
⚠1	3/25/2020	ADDENDUM #1

PROJECT NO: BKM # 19106.01

SCALE: AS NOTED

DRAWN BY: BKM

CHECKED BY: BKM

DATE: 03/06/2020

SHEET TITLE: FIRST FLOOR PLAN - POWER & SPECIAL SYSTEMS - NEW WORK

DRAWING NO:

E2.01

BKM# 19106.01

Addendum 1

Project:	MC RV MT MBI FINANCE LAB SUITE 100 RENOVATIONS	**Date:**	03/25/2020
		Reference:	
Title:	Addendum #1 Drawing Narrative	**BKM Project No:**	19106.01

COMMENTS:

General:

Cover Sheet

- Drawing Index has been updated to reflect the correct drawings included in the bid documents.
- Sheets with changes related to addendum #1 have been Identified.

G0.11 – Life Safety Plans

- The building height has been corrected to reflect the height form fire vehicle access to top occupiable floor.
- Notes regarding fire protections systems throughout the building have been revised.

Architectural:

A1.01 – Ground Floor Plan

- Wall sleeve and waterproofing notes added for new penetrations.

A1.12 – First Floor Reflected Ceiling Plan

- Classroom ceiling system has been modified to a cloud ceiling system.

A4.01 – Enlarged Plans and Elevations

- Enlarge Plan and Elevations have been revised.

A6.07 – Finish Schedules and Details

- Detail #6 – Transition Detail has been added.

Structural:

S1.01 – Plans and Elevations

- The louver opening has been relocated to reflect the new louver location.
- New penetrations have been provided for future conduit.

S2.02 – Sections and Details

- Wall opening detail has been revised.

Mechanical:

M0.01 "Mechanical Legend, Abbreviations, General Notes, Schedules and Details"

- General fire protection notes have been updated.
- Temporary heating and cooling requirements have been added to "General Notes"

M2.01 "Ground Floor Plan – Mechanical – New Work"

- The relief air louver and associated ductwork has been moved to accommodate future conduit penetrations.
- Temporary heating and cooling requirements have been indicated on the drawing.

M2.02 "First Floor Plan – Mechanical– New Work"

- Fire protection requirements in "General Notes" have been updated.
- Temporary heating and cooling requirements have been indicated on the drawing.

Plumbing:

P2.01 "First Floor Plan – Plumbing – New Work"

- Sprinkler Piping has been added throughout the project area.
- "Sprinkler Zone Assembly" detail has been added to show requirements for connection to existing standpipe.

Electrical:

E2.01 "First Floor Plan – Power & Special Systems – New Work"

- Note 24 has been added to provide monitor module for sprinkler flow/tamper switch.

Specifications:

23 73 10 – Indoor Packaged Air Handling Units

- Section 23 73 10 has been revised to reflect the basis of design air handling unit.

The related Drawings are attached with the changes clouded.
