

May 01, 2025 - 10:31am T:\Projects\2024\24-141 - ACM Makers Space Dust Collection and Weld Fume Extraction Systems\WOOD SHOP Drawings\24-141 - H6.dwg

SECTION 23 05 00 - BASIC MECHANICAL REQUIREMENTS - SPEC ON DRAWINGS

SCOPE

- 1.1 IT IS THE INTENT OF THIS SPECIFICATION AND ACCOMPANYING DRAWINGS TO DESCRIBE AND INDICATE THE MANUFACTURE, ERECTION AND INSTALLATION OF THE EQUIPMENT AND CONNECTION TO THE SAME SPECIFIED HEREIN AND SHOWN ON THE DRAWINGS. IT IS NOT INTENDED THAT THE SPECIFICATIONS AND DRAWINGS DESCRIBE AND INDICATE EACH PIECE OF EQUIPMENT REQUIRED FOR INSTALLATION, FOR WHERE ITEMS ARE INTENDED OR REQUIRED FOR A SATISFACTORY INSTALLATION AND ARE THE ACCEPTED PRACTICE OF THE TRADE, THEY SHALL BE CONSIDERED TO BE BOTH SPECIFIED AND INDICATED.
- 1.2 THIS SPECIFICATION AND THE CONTRACT DRAWINGS ARE INTENDED TO BE UTILIZED BY THE HVAC CONTRACTOR TO INSTALL CERTAIN HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT, BUT ARE NOT TO BE INTERPRETED TO CONTAIN CERTAIN BASIC SYSTEM INSTALLATION KNOWLEDGE ESSENTIAL FOR A COMPLETE AND QUALITY INSTALLATION. BY PROVIDING A BID TO THE PRIME GENERAL CONTRACTOR, THIS HVAC CONTRACTOR IS CERTIFYING THAT HE/SHE HAS EXPERIENCE IN INSTALLATIONS OF HVAC SYSTEMS OF COMPARABLE SIZE AND POSSESSES KNOWLEDGE AND EMPLOYS KNOWLEDGEABLE PERSONNEL TO ENSURE THE HVAC INSTALLATION IS COMPLETE IN ALL RESPECTS.
- 1.3 THE CONTRACTOR IS TO FURNISH LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETELY INSTALL EACH SYSTEM INDICATED ON THE PLANS AND AS HERE WITHIN SPECIFIED.
- 1.4 THE CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL WORK IN CLOSE COOPERATION WITH ALL TRADES WORKING ON THIS PROJECT.
- 1.5 WORK AND MATERIALS ARE TO BE INSTALLED SUBJECT TO THE APPROVAL OF THE ENGINEER AND THE OWNER.
- 1.6 THE CONTRACTOR IS TO CAREFULLY EXAMINE THE SITE, PLANS AND SPECIFICATIONS AND INCLUDE LABOR AND EQUIPMENT NECESSARY TO PERFORM, BUT NOT NECESSARILY LIMITED TO THE BELOW SPECIFIED WORK AND THE WORK INDICATED ON THE DRAWINGS.
- 1.7 NOTE: "FURNISH AND INSTALL" MEANS THE FURNISHING OF EQUIPMENT, MATERIALS AND LABOR REQUIRED FOR COMPLETE OPERATING SYSTEMS.

WORK NOT INCLUDED

- 2.1 ELECTRICAL CONSTRUCTION WHICH INCLUDES BUT IS NOT LIMITED TO THE DISCONNECTION OF THE EXISTING ELECTRICALLY POWERED EQUIPMENT, REMOVAL OF ALL CIRCUITS RENDERED DEAD INCLUDING THE POWER WIRING, CONDUITS, HANGERS, ETC., INSTALLATION OF NEW CIRCUITS TO POWER EQUIPMENT PROVIDED BY THE MECHANICAL CONTRACTOR. REFER TO THE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

GENERAL

- 3.1 THE TERMS "M.C.", "H.C.", "THE CONTRACTOR", "THIS CONTRACTOR" OR "MECHANICAL/HVAC CONTRACTOR" MENTIONED IN THESE SPECIFICATIONS REFERS TO THE MECHANICAL PRIME CONTRACTOR RESPONSIBLE FOR THE WORK AND EQUIPMENT INCLUDED IN THESE DRAWINGS AND SPECIFICATIONS.
- 3.2 THE CONTRACTOR IS TO FURNISH EQUIPMENT, LABOR, MATERIALS, TOOLS, SERVICES AND FACILITIES NECESSARY FOR INSTALLATION OF THE PROJECT, IN GENERAL, AS NOTED UNDER "SCOPE" AND MORE FULLY SPECIFIED HEREIN. THE CONTRACTOR IS TO CAREFULLY EXAMINE THE SITE, EXISTING CONDITIONS, PLANS AND SPECIFICATIONS BEFORE SUBMITTING HIS PROPOSAL AS HE WILL BE HELD RESPONSIBLE FOR THE COMPLETE INSTALLATION IN EVERY DETAIL.
- 3.3 WHERE THE WORD "ARCHITECT" OR "ENGINEER" APPEARS IN THIS SPECIFICATION, IT MEANS ENGINEER, AND OWNER.
- 3.4 APPLICABLE REQUIREMENTS OF THE "GENERAL CONDITIONS" AND "GENERAL REQUIREMENTS" APPLY TO THIS ENTIRE SPECIFICATION AND ARE TO HAVE THE SAME FORCE AND AFFECT AS IF PRINTED HEREWITH IN FULL. THE GENERAL CONDITIONS ARE TO BE AS PROVIDED BY THE COLLEGE.
- 3.5 WORK AND MATERIALS ARE TO BE INSTALLED SUBJECT TO THE APPROVAL OF THE ENGINEER AND THE OWNER'S REPRESENTATIVE. WHERE THE WORD "ENGINEER" APPEARS IN THIS SPECIFICATION, IT MEANS ENGINEER, ARCHITECT, AND/OR THE OWNER'S REPRESENTATIVE.
- 3.6 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR WORK, MATERIAL, AND EQUIPMENT FURNISHED FOR THE CONTRACT, INCLUDING THOSE OF HIS SUB-CONTRACTORS, UNTIL COMPLETION OF THE PROJECT AND FINAL ACCEPTANCE. DAMAGED WORK OR MATERIALS ARE TO BE REPLACED. THE CONTRACTOR IS TO PROVIDE NECESSARY STORAGE SHEDS FOR THE PROTECTION OF THE MATERIAL AND EQUIPMENT FOR THE CONTRACT.
- 3.7 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE HEALTH AND SAFETY OF ALL WORKERS, VISITORS, BYSTANDERS OR ANY PERSONS EXPOSED TO THIS JOBSITE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY TRAINING, CONSTRUCTION TECHNIQUES, PROPER USE OF EQUIPMENT, ETC. THAT MAY POSE A RISK. NOTHING SHOWN ON THE DRAWINGS OR SPECIFICATIONS IS TO BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM THIS RESPONSIBILITY.
- 3.8 THE DRAWINGS ARE INDICATIVE OF THE CHARACTER AND SCOPE OF THE WORK AND ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW ALL DETAILS. THE CONTRACTOR IS TO REPORT AMBIGUITIES OR DISCREPANCIES TO THE ENGINEER FOR WRITTEN CLARIFICATION BEFORE SUBMITTING A BID. IMPORTANT: THE DRAWINGS ARE DIAGRAMMATIC AND ARE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR IS NOT TO FABRICATE PIPING OR DUCTWORK FROM THESE DRAWINGS. THE CONTRACTOR IS TO REVIEW THE GENERAL AND STRUCTURAL DRAWINGS TO DETERMINE THE SPACE AVAILABLE PRIOR TO FABRICATING PIPING AND DUCTWORK.
- 3.9 DUE TO THE SMALL SCALE OF THE DRAWINGS, ALL REQUIRED OFFSETS AND FITTINGS MAY NOT BE SHOWN BUT SHALL BE PROVIDED AT NO CHANGE IN THE CONTRACT PRICE.
- 3.10 AS MANY OF THE LINES AS COULD PRACTICALLY BE SHOWN ON THE DRAWINGS HAVE BEEN IDENTIFIED, BUT SOME HAVE BEEN OMITTED FOR CLARITY. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUCH PIPING AND/OR DUCTWORK THAT MAY BE REQUIRED OR DIRECTED TO EFFECT PROPER CONNECTIONS TO ALL APPARATUS, EQUIPMENT, AND FIXTURES IN ACCORDANCE WITH THE MANUFACTURER'S DETAILED DRAWINGS AND INSTRUCTIONS.
- 3.11 CONSTRUCTION IS TO BE EXECUTED WITH THE MAXIMUM SPEED CONSISTENT WITH GOOD WORKMANSHIP.
- 3.12 BEFORE COMMENCING WORK, THE CONTRACTOR IS TO CAREFULLY EXAMINE THE EXISTING ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AS WELL AS ALL DRAWINGS PROVIDED WITH THIS SET. IF ANY DISCREPANCIES OCCUR BETWEEN THE DRAWINGS, OR BETWEEN THE DRAWINGS AND SPECIFICATIONS, HE IS TO REPORT SUCH DISCREPANCIES TO THE ENGINEER IN WRITING AND OBTAIN WRITTEN INSTRUCTION AS TO THE MANNER IN WHICH TO PROCEED. NO DEPARTURES FROM THE CONTRACT DRAWINGS ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- 3.13 DURING THE COURSE OF CONSTRUCTION, CONFLICTS AND DISCREPANCIES WHICH THE CONTRACTOR FAILED TO NOTIFY THE ENGINEER OF ARE TO BE INTERPRETED BY THE

ENGINEER SO AS TO OBTAIN A CONSISTENT AND WORKMANLIKE INSTALLATION. THE CONTRACTOR IS BOUND BY THE ENGINEER'S DECISION AND IS TO CARRY OUT THE WORK AT NO ADDITIONAL COST TO THE OWNER.

- 3.14 MATERIAL AND EQUIPMENT TO BE FURNISHED UNDER THE CONTRACT IS TO BE NEW AND CONFORM TO THE GRADE, QUALITY, STYLE, SIZE AND STANDARDS AS SPECIFIED HEREIN. EQUIPMENT IS TO BE THE LATEST STANDARD PRODUCT AS ADVERTISED IN PRINTED CATALOGS BY REPUTABLE MANUFACTURERS FOR THE PURPOSE INTENDED AND HAVE REPLACEMENT PARTS AVAILABLE.

- 3.15 THE CONTRACTOR IS TO ASSUME SOLE RESPONSIBILITY FOR STRUCTURAL, MECHANICAL, AND ELECTRICAL CHANGES REQUIRED TO ACCOMMODATE SUBSTITUTED MATERIAL OR EQUIPMENT.

- 3.16 EQUIPMENT, MATERIAL OR APPARATUS OF ANY ONE SYSTEM IS TO BE THE PRODUCT OF ONE MANUFACTURER, OR EQUIVALENT PRODUCTS OF A NUMBER OF MANUFACTURERS WHICH ARE SUITABLE FOR USE AS INDICATED IN THE VARIOUS SYSTEMS. SIMILAR EQUIPMENT, MATERIAL OR APPARATUS OF THE SAME OR SIMILAR TYPE ARE TO BE AS MANUFACTURED BY THE SAME MANUFACTURER.

- 3.17 EQUIPMENT IS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR TYPE AND CAPACITY OF EACH PIECE OF EQUIPMENT. THE CONTRACTOR IS TO OBTAIN THESE INSTRUCTIONS FROM THE MANUFACTURER AND INCLUDE SAME WITH THE SUBMISSION OF THE EQUIPMENT. THE TYPE, CAPACITY, AND APPLICATION OF EQUIPMENT ARE TO BE SUITABLE AND CAPABLE OF SATISFACTORY OPERATION FOR THE PURPOSE INTENDED.

- 3.18 THE CONTRACTOR IS TO GIVE REQUISITES, NOTICES, OBTAIN AND PAY FOR PERMITS, AND PAY DEPOSITS AND FEES NECESSARY FOR THE INSTALLATION AND TESTS AND INSPECTION OF WORK PROVIDED UNDER THIS SPECIFICATION. THESE TESTS ARE TO BE CONDUCTED AS REQUIRED BY THE REGULATIONS OF THE LOCAL AND/OR STATE AUTHORITIES.

PROJECT MANAGEMENT

- 4.1 MANAGEMENT OF THE PROJECT IS TO BE PROVIDED. IT IS ESSENTIAL THAT SUCH MANAGEMENT IS PROVIDED, FOR WITHOUT IT, POOR QUALITY, WASTE, SHORTCUTS AND DELAYS WILL RESULT. IT IS IMPORTANT THE WORK OF THIS PROJECT BE COMPLETED DURING THE PERIOD SPECIFIED.

PROJECT RECORD DOCUMENTS

- 5.1 DURING THE PROGRESS OF THE WORK, THE MECHANICAL CONTRACTOR, ASSIGNED AND MAJOR SUB-CONTRACTORS EMPLOYED BY THEM, ARE TO MAINTAIN A CURRENT (DAILY) RECORD SET OF CONTRACT DRAWINGS (PRINTS) AND SPECIFICATIONS, INDICATING THEREON WORK INSTALLED AT VARIANCE WITH SUCH CONTRACT DOCUMENTS, INCLUDING WORK COVERED BY SUPPLEMENTAL CONTRACTS, ADDENDA, CHANGE ORDERS OR OTHER BONA FIDE SOURCES.

- 5.2 AT THE COMPLETION OF THE CONSTRUCTION WORK AND PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR IS TO FURNISH THE OWNER A COMPLETE SET OF "AS-BUILT" RED-LINED PRINTS INDICATED THEREON CHANGES AND REVISIONS FROM THE ORIGINAL CONTRACT DOCUMENTS AND SUCH ADDITIONAL DETAILS AS TO PROVIDE A COMPLETE REFERENCE DOCUMENT FOR USE BY OWNER. IF VARIATIONS AND DETAILS CANNOT BE SHOWN CLEARLY THEREON, THEN THE CONTRACTOR IS TO PREPARE SUPPLEMENTAL DRAWINGS ADEQUATE TO IMPART THE INFORMATION.

- 5.3 INDICATIONS ON "RECORD" DRAWINGS ARE TO BE EXECUTED IN A LEGIBLE MANNER BY THE CONTRACTOR.

COMPLIANCE WITH CODES LAWS AND REGULATIONS

- 6.1 WORK IS TO CONFORM TO APPLICABLE CODES INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

- A. THE INTERNATIONAL MECHANICAL CODE/2021 (OR MOST RECENT EDITION ADOPTED BY THE AUTHORITY HAVING JURISDICTION).
- B. INTERNATIONAL ENERGY CONSERVATION CODE/2021 (OR EDITION MOST RECENTLY ADOPTED BY THE AUTHORITY HAVING JURISDICTION).
- C. THE NATIONAL ELECTRIC CODE (EDITION MOST RECENTLY ADOPTED BY THE AUTHORITY HAVING JURISDICTION) OF THE NATIONAL FIRE PROTECTION ASSOCIATION.
- D. THE NATIONAL FIRE CODES (EDITION MOST RECENTLY ADOPTED BY THE AUTHORITY HAVING JURISDICTION) OF THE NATIONAL FIRE PROTECTION ASSOCIATION.
- E. APPLICABLE SECTIONS OF THE NATIONAL FIRE PROTECTION AGENCY (NFPA) 2012 VERSION, INCLUDING NFPA-96 & 101.
- F. ALL OTHER APPLICABLE LOCAL, STATE AND NATIONAL CODES.

- 6.2 IF AN ABOVE-NAMED CODE HAS BEEN REPLACED BY AN UPDATED VERSION AND HAS BEEN ADOPTED BY THE AUTHORITY HAVING JURISDICTION, THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR COMPLYING WITH THE SAME.

- 6.3 MATERIALS AND EQUIPMENT UNDER THE CONTRACT ARE TO BE NEW AND BEAR THE UNDERWRITER'S LABORATORIES LABEL WHEREVER A STANDARD HAS BEEN ESTABLISHED BY THAT AGENCY.

CUTTING AND PATCHING

- 7.1 EXTERIOR WALL OPENINGS FOR PENETRATION OF DUCTWORK, ARE TO BE FRAMED AND REINFORCED BY THE HVAC CONTRACTOR.

- 7.2 NO CUTTING IS TO BE DONE WHICH MAY IN ANY WAY AFFECT THE BUILDING STRUCTURALLY.

- 7.3 PATCHING (IF REQUIRED) IS TO MATCH ADJACENT SURFACES, AND IS TO BE FINISHED WITH THE SAME MATERIAL, PAINT, ETC., AS ADJACENT SURFACES.

COORDINATION

- 8.1 THE CONTRACTOR IS TO COORDINATE WITH OTHER CONTRACTORS AND ARRANGE THE WORK TO ELIMINATE CONFLICTS WITH THE CONDUIT, PIPING AND EQUIPMENT OF OTHER CONTRACTS.

- 8.2 THE CONTRACTOR IS TO REVIEW EXISTING CONDITIONS AND THE INTENT OF THE WORK INDICATED ON THESE DRAWINGS AND ARRANGE SUCH WORK TO AVOID EXISTING INTERFERENCES INCLUDING INTERFERENCES WITH EXISTING PIPING, STRUCTURE, DUCTWORK, ETC.

- 8.3 ALTHOUGH THE DRAWINGS ARE TO BE INDICATIVE OF GENERAL ROUTINGS, THE ACTUAL LOCATION OF PIPES, DUCTWORK AND EQUIPMENT ARE TO BE DETERMINED AT THE SITE. THE CONTRACTOR IS TO CONFER WITH THE VARIOUS OTHER CONTRACTORS ON THE PROJECT AS TO THE LOCATIONS OF DIFFERENT LINES OF PIPES, DUCTS, AND EQUIPMENT INSTALLED UNDER OTHER CONTRACTS BEFORE FABRICATION OF DUCTWORK OR ERECTING ANY WORK IN ORDER TO AVOID INTERFERENCE. THE CONTRACTOR IS TO INSURE PROPER SECURING AND ANCHORING OF WORK.

- 8.4 CHANGES NECESSARY DUE TO LACK OF COORDINATION OR BECAUSE OF POOR WORKMANSHIP ARE TO BE MADE AT NO ADDITIONAL COST TO THE OWNER, I.E., SHOULD ANY CONTRACTOR PROCEED WITH THE INSTALLATION OF EQUIPMENT, PIPE, ETC., PRIOR TO COORDINATING WITH THE OTHER CONTRACTORS AND THAT EQUIPMENT, PIPE, ETC., PREVENTS PROPER INSTALLATION OF WORK OF OTHER TRADES, THE OFFENDING CONTRACTOR IS TO REMOVE AND REPLACE HIS WORK AT HIS OWN COST.

- 8.5 WHERE THE MECHANICAL CONTRACTOR IS INSTALLING NEW ELECTRICALLY OPERATED EQUIPMENT HE IS TO FURNISH TO THE ELECTRICAL SUB-CONTRACTOR PERTINENT INFORMATION REGARDING ELECTRICAL REQUIREMENTS OF THE MOTOR OPERATED AND ELECTRICAL CONTROL EQUIPMENT TO BE FURNISHED UNDER THE MECHANICAL CONTRACT. INFORMATION IS TO INCLUDE ELECTRICAL CHARACTERISTICS, EXACT ROUGH-IN DIMENSIONS, INFORMATION ON REMOTE CONTROL EQUIPMENT, SPECIAL INSTRUCTIONS OF THE MANUFACTURER AND WIRING DIAGRAMS IF REQUIRED.

- 8.6 CONNECTIONS TO MECHANICAL EQUIPMENT IS TO BE MADE IN A NEAT AND WORKMANLIKE MANNER, PLACING THE EQUIPMENT IN PROPER OPERATING CONDITION, WITH SUITABLE PROVISIONS FOR MAINTENANCE OR REPLACEMENT, WHEN AVAILABLE, THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS ARE TO BE FOLLOWED IN MAKING FINAL DECISIONS.

SITE SPECIFIC REQUIREMENTS

- 9.1 WORK IN THE EXISTING EDUCATIONAL FACILITY WILL REQUIRE SPECIAL CLEARANCES THAT ARE INDICATED WITHIN THE GENERAL CONDITIONS OF THE CONTRACT. THE CONTRACTOR AND ALL SUB-CONTRACTORS AND THEIR EMPLOYEES WORKING ON SITE AT THIS PROJECT ARE REQUIRED TO ADHERE TO THE GENERAL CONDITIONS AND THE REQUIREMENTS THEREIN.

- 9.2 WORK IN THE EXISTING EDUCATIONAL FACILITY WILL REQUIRE THAT THE CONTRACTOR COORDINATE ALL WORK WITH THE STAFF AND FACILITY DIRECTORS OF THE COLLEGE TO IMPLMENT THE WORK AS SHOWN WITHOUT CAUSING A DISRUPTION TO THE ADJACENT SPACES AND THE OCCUPIED BUILDING AND OPERATIONS.

WORK IN THE EXISTING BUILDING

- 10.1 UNLESS OTHERWISE NOTED, ALL MATERIALS AND EQUIPMENT REMOVED BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OFF-SITE.

- 10.2 A COMPLETE SET OF AS-BUILT DRAWINGS OUTLINING THE EXISTING HVAC SYSTEMS WERE NOT AVAILABLE FOR USE DURING DESIGN. EXISTING CONDITIONS ARE SHOWN USING INACCURATE ORIGINAL DRAWINGS AND LIMITED SITE SURVEY. THE CONTRACTOR IS TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS, CONSTRAINTS, LIMITATIONS AND AVAILABLE SPACE AND INCLUDE ALL REQUIRED TRANSITIONS, OFFSETS AND RELOCATIONS OF EXISTING EQUIPMENT, PIPING OR DUCTWORK AS IS NECESSARY FOR A COMPLETE INSTALLATION AS SHOWN ON THE DRAWINGS.

- 10.3 CONTRACTOR IS TO TAKE ALL NECESSARY PRE-CAUTIONS AND PROVIDE ALL NECESSARY ITEMS TO PROTECT THE BUILDING AND EQUIPMENT IN CLOSE PROXIMITY TO THE AREA BEING DISTURBED TO PROTECT IF FROM DAMAGE. ANY DAMAGE CAUSED DURING THE COURSE OF CONSTRUCTION BECOMES THE CONTRACTORS RESPONSIBILITY TO REPAIR OR REPLACE.

SUBMISSIONS

- 11.1 GENERAL: PROVIDE SUBMITTALS IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT AND THIS SECTION.

- 11.2 APPROVAL: IS TO BE OBTAINED FOR ALL EQUIPMENT AND MATERIAL BEFORE DELIVERY TO THE JOB SITE. DELIVERY, STORAGE OR INSTALLATION OF EQUIPMENT OR MATERIAL WHICH HAS NOT HAD PRIOR APPROVAL WILL NOT BE PERMITTED AT THE JOB SITE.

- 11.3 ALL MATERIALS, APPLIANCES, MACHINES AND FIXTURES ARE TO SATISFY COMPLETELY ALL THE SPECIFICATION REQUIREMENTS IN EACH CASE AND ARE TO BE OF THE BEST AVAILABLE QUALITY AND GRADE. EQUIPMENT OF EQUAL QUALITY WITH A SATISFACTORY RECORD OF PERFORMANCE WILL B CONSIDERED FOR REVIEW.

- 11.4 MARK SUBMITTALS WITH APPLICABLE PROJECT NAME, SPECIFICATION SECTION # (AND PARAGRAPH IF APPLICABLE) AND DRAWING REFERENCE/TAG. SUBMISSIONS ARE TO BE COORDINATED WITH THE CONTRACT DRAWINGS AND BE MARKED AND CLEARLY LABELED USING TAG DESCRIPTIONS AS INDICATED THERE ON. WHERE MULTIPLE MODELS ARE INDICATED ON THE SUBMISSION, THE SUBMISSION IS TO BE MARKED UP BY THE CONTRACTOR TO INDICATE WHICH MODEL IS BEING PROPOSED. UNMARKED, UNLABELED SUBMISSIONS WILL BE REJECTED.

- 11.5 THE SUBMITTALS ARE TO BE COMPLETE WITH NECESSARY CONSTRUCTION AND FUNCTIONAL DETAILS REQUISITE FOR A THOROUGH EVALUATION. SUCH ITEMS AS ARE REJECTED ARE TO BE PROMPTLY RESUBMITTED IN CONFORMITY WITH THE SPECIFICATION REQUIREMENTS. CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS DURING THIS REVIEW WILL NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO BE RESPONSIBLE FOR: CONFIRMING AND CORRELATING QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF OTHER TRADES AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

- 11.6 SUBMITTALS FOR INDIVIDUAL SYSTEMS AND EQUIPMENT ASSEMBLIES, WHICH CONSIST OF MORE THAN ONE ITEM OR COMPONENTS ARE TO BE MADE FOR THE SYSTEM OR ASSEMBLY AS A WHOLE. PARTIAL SUBMITTALS WILL NOT BE CONSIDERED FOR APPROVAL.

- 11.7 ELECTRONIC SUBMISSIONS WILL BE ACCEPTED IF THE SUBMISSION CONTAIN LESS THAN 10 PRINTED PAGES. IF THE SUBMISSION IS LARGER THAN 10 PAGES, ONE HARD COPY IS TO BE SENT DIRECTLY TO THE ENGINEER IN ADDITION TO THE STANDARD ELECTRONIC DELIVERY.

- 11.8 DELIVER ELECTRONIC SUBMISSIONS TO THE COLLEGE CONTRACT REPRESENTATIVE WHO WILL FORWARD THEM TO REBECCA BERKEY AT REBECCAB@EASTHILLSENG.COM AND ALL HARD COPY SUBMISSIONS TO EAST HILLS ENGINEERING ASSOCIATES LLC, 541 MAIN STREET, WINDBER, PA 15963.

- 11.9 SHOP DRAWINGS INFORMATION AND DATA ARE TO BE SUBMITTED FOR THE FOLLOWING ITEMS PRIOR TO INSTALLATION:

- A. AIR BALANCE REPORT
- B. BLAST GA
- C. COPIES OF WARRANTY CARDS
- D. DEDICATED OUTSIDE AIT UNITS (DOAU)
- E. DUCT MOUNTED MAGNET
- F. DUCT CONSTRUCTION METHODS AND MATERIALS
- G. DUCT SUPPORTS
- H. DUCTWORK AND FITTINGS
- I. ENCLOSURE-LESS DUST COLLECTOR

- J. EQUIPMENT START-UP FORMS
- K. FILTERS
- L. FIRE SUPPRESSION SYSTEM WITH SPARK DETECTION
- M. GRILLES, REGISTERS AND DIFFUSERS
- N. LETTER OF CERTIFICATION THAT INSTRUCTIONS HAVE BEEN GIVEN
- O. OPERATION AND MAINTENANCE MANUALS
- P. RECORD DRAWINGS
- Q. SHOP DRAWINGS OF THE DUCT SYSTEM
- R. SHOP DRAWINGS OF THE FLOOR SWEEPS
- S. SLIDE GATE ACCESS DOORS

- 11.10 IN THE EVENT OF A DISPUTE AS TO WHETHER OR NOT A PARTICULAR ITEM OF EQUIPMENT OR MATERIAL MEETS THE SPECIFICATION REQUIREMENTS, THE DECISION OF THE ENGINEER IS FINAL. REFER TO SUBSTITUTIONS AS HEREINAFTER SPECIFIED.

- 11.11 THE HVAC CONTRACTOR IS TO FURNISH SHOP DRAWINGS FOR ELECTRICALLY OPERATED EQUIPMENT THAT HAS BEEN CLEARED WITH THE ENGINEER TO THE ELECTRICAL CONTRACTOR INDICATING ELECTRICAL CHARACTERISTICS AND INCLUDING NECESSARY WIRING DIAGRAMS.

- 11.12 CLOSEOUT SUBMITTALS:

- A. OPERATION AND MAINTENANCE DATA: PROVIDE OPERATION AND MAINTENANCE DATA IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT, SECTION 01-78-00 - CLOSE OUT SUBMITTALS AND PER PART 3 OF THIS SECTION - OPERATIONS AND MAINTENANCE MANUALS.

- B. WARRANTIES AND BONDS: PROVIDE WARRANTIES AND BONDS IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT, PER PART 3 OF THIS SECTION - WARRANTIES AND BONDS.

- C. AS-BUILT DRAWINGS: PROVIDE RECORD DOCUMENTATION (AS-BUILT DRAWINGS) IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT.

1. AT THE COMPLETION OF THE CONSTRUCTION WORK AND AS A CONDITION OF ITS ACCEPTANCE, FURNISH TO THE ARCHITECT THESE MARKED-UP DOCUMENTS TO BE USED BY THE OWNER AS A RECORD OF EXACT LOCATIONS OF INSTALLED SYSTEMS. THE MARKED-UP DRAWINGS MAY BE UTILIZED BY THE ARCHITECT TO PREPARE "AS-CONSTRUCTED" AUTOCAD DRAWINGS.

SUBSTITUTIONS

- 12.1 THE VARIOUS MATERIALS AND PRODUCTS SPECIFIED IN THE SPECIFICATIONS BY NAME OR DESCRIPTION ARE GIVEN TO ESTABLISH A STANDARD OF QUALITY AND OF COST FOR BID PURPOSES. IT IS NOT THE INTENT TO LIMIT THE ACCEPTANCE TO ANY ONE MATERIAL OR PRODUCT SPECIFIED BUT RATHER TO NAME OR DESCRIBE A MATERIAL OR PRODUCT AS THE ABSOLUTE MINIMUM STANDARD THAT IS DESIRED AND ACCEPTABLE. A MATERIAL OR PRODUCT OF THE LESSER QUALITY WOULD NOT BE ACCEPTABLE.

- 12.2 IMPORTANT: WHERE A PRODUCT IS NAMED BY MANUFACTURER AND MODEL NUMBER AND OTHER MANUFACTURER'S NAMES ARE LISTED (IN PARENTHESES), THOSE NAMES IN PARENTHESES ARE CONSIDERED TO BE SUBSTITUTE MANUFACTURERS WHOSE EQUIPMENT MAY BE ACCEPTABLE, PROVIDED THAT THEY MEET THE INTENT OF THE SPECIFICATION, AND MEET OR EXCEED REQUIRED CAPACITIES.

- 12.3 EQUIPMENT IS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DATA AND RECOMMENDATIONS.

- 12.4 WHERE EQUIPMENT IS NOT SPECIFIED, IT IS INTENDED THAT ONLY FIRST GRADE MATERIAL BE USED. ONLY NEW EQUIPMENT IN GOOD CONDITION WILL BE ACCEPTED. EQUIPMENT IS SUBJECT TO INSPECTION AND APPROVAL OF THE ENGINEER. ITEMS INSTALLED PRIOR TO APPROVAL BY THE ENGINEER ARE AT THE CONTRACTOR'S RISK. THE ENGINEER MAY REQUIRE NON-APPROVED ITEMS TO BE REMOVED AND REPLACED WITH SPECIFIED ITEMS.

- 12.5 EXTREMELY IMPORTANT: RESUBMISSION OF ITEMS REJECTED OR MARKED "REVISE AND RESUBMIT" WILL BE REVIEWED ONE TIME BY THE ENGINEER AT NO COST TO THE CONTRACTOR. SHOULD THE RESUBMITTAL BE REJECTED OR MARKED "REVISE AND RESUBMIT", THE CONTRACTOR WILL BE INVOICED FOR ANY ADDITIONAL TIME SPENT BY THE ENGINEER AT HIS CURRENT BILLING RATE.

- 12.6 THE CONTRACTOR IS TO ASSUME SOLE RESPONSIBILITY FOR STRUCTURAL, MECHANICAL, AND ELECTRICAL CHANGES REQUIRED TO ACCOMMODATE SUBSTITUTED MATERIAL OR EQUIPMENT.

- 12.7 SHOULD IT BE SHOWN BY PRINTED DATA THAT ANY SUBSTITUTED PIECE OF EQUIPMENT USES MORE ENERGY (NATURAL GAS, ELECTRICITY, ETC.) THEN THE PIECE OF EQUIPMENT UPON WHICH DESIGN WAS BASED, THE SUBSTITUTED PIECE OF EQUIPMENT WILL BE REJECTED.

RECEIPT OF EQUIPMENT

- 13.1 NEW EQUIPMENT BEING USED ON THIS PROJECT, WHETHER DELIVERED TO JOBSITE OR TO THE CONTRACTOR'S PLACE OF BUSINESS IS TO BE EXAMINED (TO DETERMINE IF THE EQUIPMENT WAS DAMAGED) PRIOR TO SIGNATURE OF RECEIPT BY THE CONTRACTOR'S REPRESENTATIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FILE DAMAGE CLAIMS WITH THE MOVER (TRUCK, RAILROAD, ETC.) AT TIME OF RECEIPT OF DAMAGED EQUIPMENT.

STORAGE OF MATERIAL

- 14.1 THE CONTRACTOR IS TO ERECT AND MAINTAIN PROPER FACILITIES FOR PROTECTING MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACTOR DURING EACH PHASE OF CONSTRUCTION UNTIL ACCEPTANCE BY THE ENGINEER. ANY DAMAGED MATERIALS OR EQUIPMENT IS TO BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER AND THE OWNER'S REPRESENTATIVE.

- 14.2 PROTECTION IS TO INCLUDE SHEDS OR OTHER BUILDINGS AS REQUIRED FOR PROTECTION OF MATERIALS AND EQUIPMENT. IN THE EVENT THE AVAILABLE AREAS ON THE SITE ARE INADEQUATE, THE CONTRACTOR IS TO, AT HIS OWN EXPENSE, PROVIDE SUITABLE STORAGE UNDER ROOF AT OTHER LOCATIONS.

PROTECTION OF EQUIPMENT

- 15.1 IT IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT EQUIPMENT, PIPING, INSULATION, CONTROLS AND SIMILAR ITEMS OF EQUIPMENT FROM DIRT, GRIME, PLASTER AND WATER DURING EACH PHASE OF CONSTRUCTION. THIS PROTECTION IS TO BE PROVIDED BY COVERING WITH TRANSPARENT PLASTIC SHEETING, CAPS OR AS REQUIRED TO THE SATISFACTION OF THE ENGINEER.

ELECTRICAL REQUIREMENTS FOR EQUIPMENT INSTALLATION

- 16.1 UNLESS SPECIFIED AS BEING FURNISHED BY THE EQUIPMENT MANUFACTURER AS AN ACCESSORY WITH THE EQUIPMENT, THE MECHANICAL CONTRACTOR IS TO FURNISH



HVAC SPECIFICATIONS – 1 of 2

DUST COLLECTION & WELD FUME EXTRACTION
WOOD SHOP & WELDING AREA
FOR
ALLEGANY COLLEGE, LAVALLE BUILDING
37 LANE AVENUE, LAVALLE, MARYLAND 21502



BRETT N. YONISH, P.E.
CHRISTOPHER G. ALBRIGHT, P.E.

541 MAIN STREET
WINDBER, PA 15963
(814) 467-6877

REVISIONS		
MARK	BY	DATE

DATE: 5/01/2025	DRAWING NO. H-6
DRAWN BY: S.M.M.	
CHECKED BY: C.G.A.	
PROJECT NO. 24-141	