

ADDENDUM 1

February 15, 2019

ADVANCED MANUFACTURING RENOVATION

LOCATION: Randolph Community College
Advanced Manufacturing Renovation
505 Industrial Park Ave.
Asheboro, NC 27205

OWNER: Randolph Community College
629 Industrial Park Ave.
Asheboro, NC 27205

ARCHITECT: Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, NC 27607
Phone: (919) 781-8582
Fax: (919) 781-3979

BIDS DUE: **Tuesday February 26, 2019 @ 3:00 p.m.**
Randolph Community College
Facilities Conference Room
629 Industrial Park Ave.
Asheboro, NC 27205

Please note, Project Addendums and Bidders List are available at www.smithsinnett.com under the “Documents” icon on the navigation bar.

Among other items, this Addendum addresses issues raised in the Pre-Bid Conference held on February 12th at 10:00 a.m. Pre-Bid notes and sign in sheet of those that attended are attached.

This Addendum, applicable to the work designed below, shall be understood to be and is an addendum and shall be part of and included in the contract for the above referenced project. All General, Supplementary and Special Conditions, etc., as originally specified or as modified below shall apply to these items.

Architectural – General

1. **GENERAL:** Refer to attached Pre-Bid Conference Agenda and Pre-Bid Conference Sign-in sheet.
2. **GENERAL:** 100% Payment Bond and 100% Performance Bond will be required for this project.
3. **GENERAL:** An Open Meeting was held to discuss Owner Preferred Manufacturers listed in the project. The reason given for the Owner Preferred Manufacturers was for continuity, connectivity and maintenance with the Owner’s existing systems. No objection was noted and the meeting closed.

4. **GENERAL:** Owner will be installing a Fire Alarm System as part of a separate contract. That work is not associated with this contract.

Architectural – Specifications

5. **REVISION:** Section 033000, Paragraph 2.7, Add Tex–Trude Xtreme Vapor Barrier as equal subject to meeting the requirements of the project and specifications.
6. **REVISION:** Add Specification Section 077200 Roof Accessories. See Attached.
7. **REVISION:** Add Specification Section 083613 Sectional Doors. See Attached.
8. **REVISION:** Section 101400
 - a) Paragraph 2.1.B.1.b. Delete sign size requirements. Refer to Sheet A6-01 for sign sizes.
 - b) Paragraph 2.1.B.1.e. Delete requirement for a frame. Signs are unframed.
9. **REVISION:** Section 333000, Paragraph 2.1.B.1, Add DRYLOK FastPlug Hydraulic Cement as an equal subject to meeting the requirements of the project and specifications.

Architectural - Drawings

1. **REVISION:** Sheet A0-01
 - a) All unused equipment, vents, piping, fans, etc. will need to be removed from the roof over the project area. Owner will patch the roof in these areas once the items are demolished. Note, all existing roof drains are to remain.
 - b) Demolition Note 4, remove reference to “Transom”.
 - c) Demolition Note 10, delete note completely. Owner will be taking care of this work.
 - d) Demolition Note 1, remove all reference to “Asbestos”. The project does not have any asbestos.
 - e) 1/A0-01, Revise key note from “9” to **3** at the slab cut trench areas where the new restrooms will be located at. Slab cut area is represented with a shaded hatch. Refer Demolition Legend for hatch types.
 - f) 1/A0-01, The (2) existing wall fans on the southside of the building will need to be infilled with Masonry. The fans are also noted on M1-01. One opening will only need CMU on the interior and the other will require Brick on the exterior and CMU on the interior. Owner will be providing the brick and CMU only for the Contractor to use. Contractor will need to provide the labor for installing and any other material required.
2. **REVISION:** Sheet A1-01
 - a) 1/A1-01, Revise wall between Classroom 108 and Men 109 / Women 110 to a 6” wall in order to accommodate the plumbing wall rough-in.
 - b) 1/A1-01, Delete AED Cabinet outside of Men 109.
 - c) 1/A1-01, in Classroom 104 and 108, the Marker Board and Projection Screen shall be Owner Provide and Contractor Installed. Contractor shall provide blocking for these items. Refer to 7/A5-01.
 - d) Note 4 under Notes, delete reference to Fire Rated Walls. The only Fire Rated Walls is the demising wall between this space and the adjacent Cosmetology Space.

- e) Note 11 under Notes, delete note completely.
- 3. **REVISION:** Sheet A1-03
 - a) 1/A1-03, The Owner will cut and remove the existing roof at all areas required by the Contractor. Contractor will be responsible for providing and setting all roof curbs. Owner will flash in existing roof to these new curbs. The Contractor will coordinate schedule with Owner as to when this work is needed to be complete.
- 4. **REVISION:** Sheet A4-01
 - a) 12/A4-01, Delete reference to wall tile.
- 5. **REVISION:** Sheet A5-01
 - a) 1/A5-01, Delete reference and requirement for Through Wall Flashing, Sheet Metal Receiver and Removable Counterflashing.

Plumbing - Drawings

- 1. **REVISION:** Sheet P1-02
 - a) 2/P1-02, Sewer shall tie into existing sewer line that is approximately 6' from the exterior wall. Contractor shall provide cleanout as shown.
 - b) 3/P1-02, Water service shall consist of a new RPZ located directly outside of the building as shown in the Drawings. The other scope of work, including the water meter shall be completed by the Owner.

Electrical - Drawings

- 2. **REVISION:** At the (4) locations indicated, provide a CAT-6 cable drop from the locations indicated to Mech/IT 113. Refer to attached sketch B01.
- 3. **REVISION:** The Bus Duct length shall be sufficient to support the equipment shown and noted with a minimum of 2 spares.

End of Addendum 1

Attached:

a. Pre Bid Sign In Sheet	1 page
b. Pre Bid Notes	3 pages
c. 077200 Roof Accessories Specification	5 pages
d. 083613 Sectional Door Specification	4 pages
e. B01 – Additional IT Drop Locations	1 page

Pre-Bid Conference Agenda**February 13, 2019 at 10:00 a.m.****ADVANCED MANUFACTURING RENOVATION**

Location: Randolph Community College
Advanced Manufacturing Renovation
629 Industrial Park Ave.
Asheboro, NC 27205

Owner: Randolph Community College
629 Industrial Park Ave.
Asheboro, NC 27205

Architect: Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, NC 27607
Phone: (919) 781-8582
Fax: (919) 781-3979

Robert Carmac, AIA - Project Architect

On behalf of the Owner and Smith Sinnett Architecture, we would like to thank you for your interest and attendance at this Pre-Bid Conference.

I Bid:

Sealed Bids from Single Prime Contractors will be received and publicly opened at:

3:00 p.m. on Tuesday February 26, 2019

Facilities Conference Room
Randolph Community College
629 Industrial Park Ave.
Asheboro, NC 27205

II Bid Day Documents:

1. Proposal Form Pages 1 through 2.
2. Minority Business Participation Form and/or Affidavit.
 - a. Identification of HUB Certified / Minority Business Participation Form Required.
 - i. Name on Form must be the exact name as provided to the NC Office for HUB.
 - b. Affidavit A or Affidavit B.
3. Bid envelope should be sealed with the following information listed on the outside of the envelope.
 - a. Bidder's Name and Address.
 - b. North Carolina Contractor's License Number.
 - c. Name of Project.
4. If awarded the Contract, the Bidder must provide an executed Performance Bond and Payment Bond for 100% of the Contract by a company licensed in North Carolina.
 - a. 2 separate Bonds must be provided.
5. Certificates of Insurance and matching endorsement must meet the requirements indicated in the Specifications. Refer to Article 34 of the General Conditions. 30 days notification by certified mail return receipt requested of any (including nonpayment of premium) cancellation, reduction or elimination of the required policies.
6. Any bids that have qualifying notes or comments will be rejected.

Pre-Bid Conference Agenda**February 13, 2019 at 10:00 a.m.**

III Bid Opening:

1. For mailed bids:
 - a. It's the contractor's responsibility to ensure the bid arrives prior to the bid opening time. If you wish to send your bid via US Mail, FedEx or UPS, please allow several days for delivery since the bid must be received (NOT postmarked) by the date and time stated in the solicitation.
 - b. Place the bid in a double envelope with "Sealed Bid Do Not Open" written on the envelope.
 - c. Sealed envelope will be held and unsealed at the bid opening time.
 - d. Project Name must be clearly marked on the outside of the sealed envelope.
2. For delivered bids:
 - a. The bid opening location is at the Facilities Conference Room, 629 Industrial Park Ave., Asheboro, NC 27205.
 - b. Plan to arrive min. 30 minutes in advance of the bid opening to allow time to locate the bid opening location and to find parking.

IV Schedule:

1. No bid may be withdrawn after the scheduled closing time for the receipt of bids for a period of 30 days.
2. Supplementary General Conditions:
 - a. Date of substantial completion: **150 consecutive calendar days** from anticipated Notice to Proceed.
3. The intent is for the RCC Board of Trustees to vote on the award of bid at their earliest meeting.

V Liquidated Damages:

1. Supplementary General Conditions:
 - a. **\$250.00 each calendar day** in excess of the stated completion time.

VI Examination of Bid Documents:

1. All Bidders are expected to fully examine and familiarize themselves with the Drawings, Specifications and Existing Conditions. All Bidders should read the scopes of the bid package. Any questions or clarifications should be directed to the Architect. No allowances will be made after the bids are received for any oversight due to failure to examine the documents.

VII Substitutions:

1. Substitutions or approvals of "Equals" will only be accepted if approved by the Architect in writing at least 10 days prior to the receipt of bids.
 - a. Request for substitutions will be received until February 16, 2019.

VIII Technical Questions:

1. Technical questions shall be submitted to Architect as soon as possible by email or phone.
rcarmac@smithsinnett.com
(919) 781-8582
2. Last day for Questions will be Monday February 18, at 5pm.
The Last Addendum will be issued Tuesday February 19, by 5pm.

Pre-Bid Conference Agenda**February 13, 2019 at 10:00 a.m.**

IX Construction Documents:

1. Construction Documents may be ordered from:
Smith Sinnett Architecture
4600 Lake Boone Trail, Suite 205
Raleigh, NC 27607
919-781-8582
2. Electronic Copies of the Plans and Specifications are available upon request and with a completed Plan Request Form found at www.smithsinnett.com under the Documents Tab.

X Addenda:

1. Addenda will be emailed to everyone on the Architect's plan holders list that has requested access to the Construction Documents
2. Addenda can also be downloaded from: www.smithsinnett.com under the Documents Tab.
3. An addenda will be issued to address any questions raised today.
4. All Addendums will be issued by email. Verify that email security will allow emails from rcarmac@smithsinnett.com and lbyrd@smithsinnett.com

XI Bidders List:

1. Bidders List can be downloaded from www.smithsinnett.com under the Documents Tab.

XII Architect's Description of the project:

1. Base Bid – General Scope
2. Alternates:
 - a. Alternate 1: Owner Preferred Manufacturer
 - b. Alternate 2: Overhead Rollup Door Replacement
 - c. Alternate 3: Storefront and Canopies
3. Allowances:
 - a. Allowance No. A-1: Contingency - \$25,000.00

XIII Open Meeting for Preferred Alternates:

1. Owner Preferred Manufacturer:
 - a. Door Hardware Locks - Schlage

SECTION 07 72 00 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Roof curbs.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for roof sheathing, wood cants, and wood nailers.

1.3 SUBMITTALS

- A. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show fabrication and installation details for roof accessories. Show layouts of roof accessories including plans and elevations. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other work.
- C. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 COORDINATION

- A. Coordinate layout and installation of roof accessories with **roofing membrane and base flashing and** interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
- B. With Architect's approval, adjust location of roof accessories that would interrupt **roof drainage routes**.

1.8 WARRANTY

- A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof accessories that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: **20** years from date of Final Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers listed in other Part 2 articles.

2.2 METAL MATERIALS

- A. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 coated **and mill phosphatized for field painting.**
- B. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, AZ50 coated.
- C. Prepainted, Metallic-Coated Steel Sheet: Steel sheet metallic coated by hot-dip process and prepainted by coil-coating process to comply with ASTM A 755/A 755M.
- D. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 coated.
- E. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coated.
- F. Exposed Finishes: High-Performance Organic Finish (2-Coat Fluoropolymer): Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions.
 - 1. Fluoropolymer 2-Coat System: Manufacturer's standard 2-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with physical properties and coating performance requirements
- G. High-Performance Organic Finish (2-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: Cleaned with inhibited chemicals; Chemical Finish: Conversion coating; Organic Coating: Manufacturer's standard 2-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with **AAMA 2604** and with coating and resin manufacturer's written instructions.
 - 1. Color and Gloss: As selected by Architect from manufacturer's full range
- H. Steel Tube: ASTM A 500, round tube, baked-enamel finished.
- I. Galvanized Steel Tube: ASTM A 500, round tube, hot-dip galvanized to comply with ASTM A 123/A 123M.
- J. Galvanized Steel Pipe: ASTM A 53/A 53M.

2.3 MISCELLANEOUS MATERIALS

- A. Polyisocyanurate Board Insulation: ASTM C 1289, 1 inch thick.
- B. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, complying with AWWA C2; not less than 1-1/2 inches thick.

2.4 ROOF CURBS

- A. Roof Curbs: Provide metal roof curbs, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported on roof curbs. Fabricate with welded or sealed mechanical corner joints, with **integral metal cant** and integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
1. **Available** Manufacturers:
 - a. Colony Custom Curbs.
 - b. Commodity Products Company, Inc.
 - c. Conn-Fab Sales, Inc.
 - d. Curbs Plus Inc.
 - e. Custom Curb, Inc.
 - f. LM Curbs.
 - g. Loren Cook Company.
 - h. Metallic Products Corporation.
 - i. Pate Company (The).
 - j. Roof Products & Systems Corporation.
 - k. Roof Products, Inc.
 - l. Thaler Metal Industries Ltd.
 - m. ThyCurb; Div. of Thybar Corporation.
 - n. Uni-Curb, Inc.
 - o. Vent Products Company, Inc.
 2. Load Requirements: Refer to actual cut sheet for selected product for load requirements.
 3. Material: Aluminum-zinc alloy-coated steel sheet, **0.079 inch**
 - a. Finish: High-performance organic coating
 4. Factory insulate curbs with **1-1/2-inch- glass**-fiber board insulation.
 5. Curb height may be determined by adding thickness of roof insulation and minimum base flashing height recommended by roofing membrane manufacturer. Fabricate units to minimum height of **12 inches**, unless otherwise indicated.
 6. Sloping Roofs: Where slope of roof deck exceeds 1:48, fabricate curb units with water diverter or cricket and with height tapered to match slope to level tops of units.

2.5 EQUIPMENT SUPPORTS

- A. Equipment Supports: Provide metal equipment supports, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Fabricate with welded or sealed mechanical corner joints, with **integral metal cant** and integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
1. **Available** Manufacturers:
 - a. Colony Custom Curbs.
 - b. Commodity Products Company, Inc.
 - c. Conn-Fab Sales, Inc.
 - d. Curbs Plus Inc.
 - e. Custom Curb, Inc.
 - f. LM Curbs.
 - g. Loren Cook Company.
 - h. Metallic Products Corporation.
 - i. Pate Company (The).
 - j. Roof Products & Systems Corporation.
 - k. Roof Products, Inc.
 - l. Thaler Metal Industries Ltd.
 - m. ThyCurb; Div. of Thybar Corporation.
 - n. Uni-Curb, Inc.

- o. Vent Products Company, Inc.
2. Material: Galvanized steel sheet, **0.079 inch** thick.
 - a. Finish: High-performance organic coating.
3. Factory-install continuous wood nailers **3-1/2 inches** wide at tops of equipment supports.
4. Metal Counterflashing: Manufacturer's standard removable counterflashing, fabricated of same metal and finish as equipment support.
5. Fabricate units to minimum height of **12 inches**, unless otherwise indicated.
6. Sloping Roofs: Where slope of roof deck exceeds 1:48, fabricate curb units with water diverter or cricket and with height tapered to match slope to level tops of units.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of work.
 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored and is ready to receive roof accessories.
 2. Verify dimensions of roof openings for roof accessories.
 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install roof accessories according to manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Install roof accessories to fit substrates and to result in watertight performance.
- C. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
 1. Coat concealed side of **uncoated aluminum** roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing exposed-to-view components of roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene underlayment.
 3. Bed flanges in thick coat of asphalt roofing cement where required by roof accessory manufacturers for waterproof performance.
- D. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
- E. Roof Curb Installation:
 1. Set roof curb so top surface of roof curb is level.
- F. Equipment Support Installation:
 1. Set equipment support so top surface of equipment support is level.
- G. Seal joints with **elastomeric** sealant as required by manufacturer of roof accessories.

3.3 TOUCH UP

- A. Touch up factory-primed surfaces with compatible primer ready for field painting in accordance with Division 09 Section "Painting".

- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.4 CLEANING

- A. Clean exposed surfaces according to manufacturer's written instructions.

END OF SECTION 07 72 00

SECTION 08 36 13 - SECTIONAL DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes **manually** operated sectional overhead doors.

1.3 DEFINITIONS

- A. Operation Cycle: One cycle of a door is complete when it is moved from the closed position to the fully open position and returned to the closed position.

1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide sectional overhead doors capable of withstanding the effects of gravity loads.
- B. Operation-Cycle Requirements: Provide sectional overhead door components and operators capable of operating for not less than **10,000** cycles.

1.5 SUBMITTALS

- A. Product Data: For each type and size of sectional overhead door and accessory.
- B. Shop Drawings: For special components and installations not dimensioned or detailed in manufacturer's product data.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Qualification Data: For Installer.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.
- B. Source Limitations: Obtain sectional overhead doors through one source from a single manufacturer.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of sectional overhead doors and accessories and are based on the specific system indicated. Other manufacturers' systems with equal performance and dimensional characteristics may be considered. Refer to Division 01 Section "Product Requirements."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Steel Doors with **Insulated** Steel Panels:
 - a. Amarr Garage Doors.
 - b. Arm-R-Lite.
 - c. Clopay Building Products Company; a Griffon Company.
 - d. Fimbel Door Corporation.
 - e. General American Door Company.
 - f. Haas Door; a Nofziger Company.
 - g. Martin Door Manufacturing.
 - h. Overhead Door Corp.
 - i. Raynor.
 - j. Wayne-Dalton Corp.
 - k. Windsor Door; a MAGNATRAX Corporation.

2.2 STEEL DOOR SECTIONS

- A. Construct door sections including face sheets and frames from zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet, complying with ASTM A 653/A 653M, **G60** coating designation.
1. Minimum Base-Metal (Uncoated) Thickness for Section Faces: Manufacturers Standard.
 2. Exterior-Section Face: Flat.
- B. Fabricate door panels from a single sheet to provide sections not more than 24 inches high and nominally 2 inches deep. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
1. For insulated doors, provide door sections with continuous thermal-break construction, separating faces of door.
- C. Enclose open sections with channel end stiles formed from not less than 0.064-inch- thick galvanized steel sheet and weld end stiles to door section in place. Provide intermediate stiles formed from not less than 0.064-inch- thick galvanized steel sheet, cut to door section profile, and welded in place.
1. Stile Spacing: Not more than 48 inches apart.
- D. Reinforce bottom section with a continuous channel or angle complying with bottom-section profile and allowing installation of astragal.
- E. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place.
- F. Provide reinforcement for hardware attachment.
- G. Thermal Insulation: Insulate inner core of steel sections with door manufacturer's standard polystyrene or polyurethane board insulation, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84; or with glass-fiber-board insulation. Secure insulation to door section. Enclose insulation completely within steel sections that incorporate the following inside facing material, with no exposed insulation material evident:
- H. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints and free of warp, twist, and deformation.
- I. Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
1. Surface Preparation: Clean galvanized surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants.
 - a. Pretreat zinc-coated steel, after cleaning, with a conversion coating of type suited to organic coating applied over it.

2. Apply manufacturer's standard primer and powder-coat finish to interior- and exterior-door faces after forming, according to coating manufacturer's written instructions for application, thermosetting, and minimum dry film thickness.
 - a. Color and Gloss: **As selected by Architect from manufacturer's full range.**

2.3 TRACKS, SUPPORTS, AND ACCESSORIES

- A. Tracks: Manufacturer's standard, galvanized steel track system, sized for door size and weight, designed for lift type indicated and clearances shown, and complying with ASTM A 653/A 653M for minimum G60 zinc coating. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced at 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design to ensure tight closure at jambs when door unit is closed. Weld or bolt to track supports.
 1. Provide tracks configured for the following lift types:
 - a. Standard.
- B. Track Reinforcement and Supports: Galvanized steel track reinforcement and support members, complying with ASTM A 36/A 36M and ASTM A 123/A 123M. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.
 1. Support and attach tracks to opening jambs with continuous angle welded to tracks and attached to wall. Support horizontal (ceiling) tracks with continuous angle welded to track and supported by laterally braced attachments to overhead structural members at curve and end of tracks.
 - a. Repair galvanized coating on tracks according to ASTM A 780.
- C. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of overhead door.
 1. Provide continuous flexible seals at door jambs for a weathertight installation.

2.4 HARDWARE

- A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.
- B. Hinges: Heavy-duty galvanized steel hinges of not less than 0.0747-inch- thick, uncoated steel at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is not possible. Provide double-end hinges where required, for doors exceeding 16 feet in width, unless otherwise recommended by door manufacturer.
- C. Rollers: Heavy-duty rollers with steel ball bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Provide 3-inch- diameter roller tires for 3-inch- wide track and 2-inch- diameter roller tires for 2-inch- wide track.
 1. Tire Material: **Case-hardened steel.**
- D. Push/Pull Handles: For push-up-operated or emergency-operated doors, provide galvanized steel lifting handles on each side of door.
- E. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.

2.5 COUNTERBALANCE MECHANISM

- A. Extension Spring: Counterbalance mechanism with aircraft-type steel cable over ball-bearing sheaves. Provide oil-tempered wired springs with internal safety rods. Combine operation with a spring bumper in each horizontal track to cushion door at end of opening operation.

- B. Cable Safety Device: Include a spring-loaded, steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if either cable breaks.
- C. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level shaft and prevent sag.
- D. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.6 MANUAL DOOR OPERATORS

- A. Push-up Operation: Lift handles and pull rope for raising and lowering doors, operating with a maximum 25-lbf lift or pull.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install door, track, and operating equipment complete with necessary hardware, jamb and head molding strips, anchors, inserts, hangers, and equipment supports according to Shop Drawings, manufacturer's written instructions, and as specified.
- B. Fasten vertical track assembly to framing, spaced not less than 24 inches apart. Hang horizontal track from structural overhead framing with angle or channel hangers fastened to framing by welding or bolting or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

3.2 ADJUSTING

- A. Lubricate bearings and sliding parts; adjust doors to operate easily, free from warp, twist, or distortion and with weathertight fit around entire perimeter.
- B. Touch-up Painting: Immediately after welding galvanized track to track supports, clean field welds and abraded galvanized surfaces and repair galvanizing to comply with ASTM A 780.

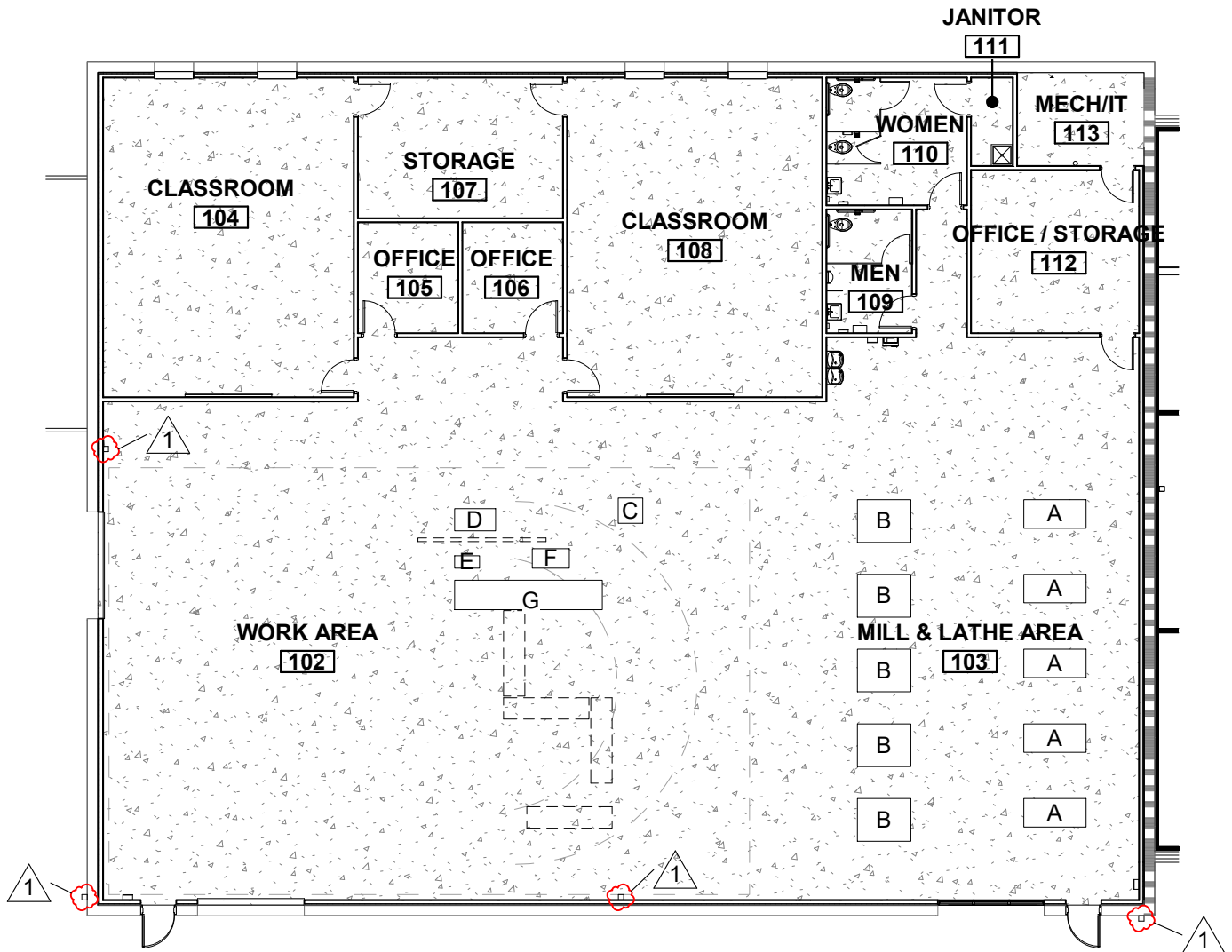
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1	BULLETIN 01 - IT DROP LOCATIONS
B01	1/16" = 1'-0"

B01

ADVANCED MANUFACTURING
RENOVATION

DRAWN BY:	LB	505 INDUSTRIAL PARK AVE
CHECKED BY:	RC	ASHEBORO, NC 27205
2018014	02/11/19	

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