

EXISTING BUILDING INTERIORS  
3350 PEACHTREE ROAD  
ATLANTA, GEORGIA

SECTION 21 0100

GENERAL FIRE PROTECTION REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide the necessary interface with other Divisions to provide a complete project. Carefully check the Documents of this Division with those Documents of other Divisions. Determine the requirements of any interfacing materials or equipment being furnished and/or installed by those Sections and Divisions and provide proper installation and required interface.
- B. No deviation from the Contract Documents shall be made without the written consent of the Architect and Engineer.
- C. All Specifications and Drawings are to be considered together as the Contract Documents. Any work shown in one and not the other, or is implied by either, shall be provided to make a complete project. Should conflicts exist between the Specifications and Drawings or there is an item shown or noted for which is not clearly defined, immediately submit a request for clarification. Under no circumstance will conflicts between the Specifications and Drawings be grounds for additional cost to the Contract after the Contract is established.
- D. The Drawings are schematic and are not intended to show the exact location of piping, equipment, etc.
- E. Dimensions and information regarding accurate locations of equipment, and structural limitations and finish shall be coordinated and verified with other Divisions of Work. Be prepared to furnish dimensions and information regarding the Work of this Division to other trades.
- F. The right is reserved to relocate any sprinkler head a maximum of 10'-0" before it is permanently installed without incurring additional cost to the Contract.

1.02 REFERENCE STANDARDS

- A. All work shall comply with the most recently revised versions of all local, state and federal codes, ordinances of the authority having jurisdiction, laws, rules and regulations. Any modifications required by any of the above shall be made without any additional cost to the Owner. Where requirements between governing Codes and Regulations vary, the more restrictive provision shall apply.
- B. Nothing contained in the Contract Documents shall be construed as authority or permission to disregard legal requirements and regulations. The Contractor shall thoroughly review the Documents and bring any such conflicts to the attention of the Architect and Engineer prior to Installation.
- C. All materials, installation, and workmanship shall comply standards and/or codes of the following:
  - 1. International Building Code – 2018 edition, with latest Georgia amendments
  - 2. International Mechanical Code - 2018 edition, with latest Georgia amendments
  - 3. International Plumbing Code - 2018 edition, with latest Georgia amendments

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4. International Gas Code - 2018 edition, with latest Georgia amendments
5. International Fire Code - 2018 edition, with latest Georgia amendments
6. International Energy Conservation Code - 2009 edition, with latest Georgia amendments
7. National Electrical Code, 2017 Edition
8. National Fire Codes
9. Georgia 120-3-3
10. State of Georgia (ANSI 117.1) Handicap Code
11. ANSI - American National Standards Institute
12. ASTM - American Society of Testing and Materials
13. NEMA - National Electrical Manufacturer's Association
14. OSHA - Occupational Safety and Health Act
15. UL - Underwriter's Laboratories
16. ASHRAE - American Society of Heating and Air Conditioning Engineers
17. SMACNA - Sheet Metal and Air Conditioning Contractors' Nat'l Assoc.

D. All materials shall be new and shall bear the label of UL.

1.03 EXISTING CONDITIONS

- A. Where work is to be performed in an existing facility, the contractor shall visit the site prior to bid and be familiar with all existing conditions. Special attention shall be given to work to be performed above an existing ceiling.
- B. Where existing slabs are to be cut or core drilled, the contractor shall x-ray the existing slabs to avoid cutting or disrupting existing conduits, cables, plumbing or structural members.
- C. Fire protection service to the building shall not be interrupted without written consent of the building owner.
- D. No allowance will be made for lack of knowledge of existing conditions.
- E. At the completion of the project, all work under this Division shall be completely integrated with the existing systems and left in perfect operating condition.
- F. Where work under this Division disrupts the continuity of any existing to remain electrical circuit or feeder, the Contractor shall repair/replace as necessary to return to a perfectly functional and safe operating condition.
- G. Prior to any demolition or construction, the Contractor shall have the existing conditions inspected by an EPA, OSHA certified asbestos abatement agency to identify the presence of asbestos. Should any asbestos be found it shall be brought to the immediate attention of the Architect and Owner and specifically identified in writing.

1.04 DEFINITIONS

- A. Provide: to furnish, install and connect.
- B. Furnish: to supply all materials, labor, equipment, testing apparatus, controls, tests, accessories and all other items customarily required for the proper and complete application.
- C. Install: to join, unite, fasten, link, attach, set-up or connect together, complete, tested, and ready for normal satisfactory operation.

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- D. Engineer: The Engineer of record.
- E. Contract Documents: the complete set of Specifications and Drawings of all Divisions.
- F. Work: labor, materials, equipment, accessories, controls and other items required for a complete installation.
- G. Concealed: embedded in masonry or other construction, installed in furred spaces, within double partitions or hung ceilings, in trenches, in crawl spaces or in enclosures.
- H. Exposed: not installed underground or concealed.
- I. Equal: equal in quality, workmanship, materials, weight, size, design and efficiency of the specified product, conforming with manufacturers.
- J. Supply: to purchase, procure, acquire and deliver complete with related accessories.
- K. Authority Having Jurisdiction (AHJ): applicable local, state and federal authorities having jurisdiction over any part of the Scope within this Division and other Divisions.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Manufacturer's names and catalog numbers specified in the Contract Documents are intended to describe the material and set the standard of quality. All bids shall be based on material specified. Request for approval of material not specified shall be considered if the request is in written form and submitted to the Architect no later than fourteen (14) days prior to the bid date. All requests shall conform to the provisions of the general and supplementary conditions.
- B. When specific names are not stated, only the best available quality of material or equipment shall be submitted for review and used in the installation.

### 2.02 BASIS OF DESIGN

- A. Where a product is designated as "BASIS OF DESIGN", the Contractor is notified that mechanical, electrical, structural, architectural, space conditions and/or other features of the overall project design have been based on the requirements of the "BASIS OF DESIGN" product.
- B. Where a product is substituted for a "BASIS OF DESIGN" product, the Contractor is notified that changes in project design may be mandatory in order to permit use and installation of the substitute product. Shop drawing submittal for a substitute product shall include a complete schedule of changes in project design, if any, which must be made in order to permit use and installation of the substitute product. The Contractor shall bear all expenses related to the use of a substitute product.

### 2.03 SHOP DRAWINGS AND PRODUCT DATA

- A. The Contractor shall obtain complete shop drawings, product data and samples from the manufacturers, suppliers, vendors, and all Division 21 Subcontractors, for all materials

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and equipment as specified herein in various Sections of the Specifications, and shall submit data and details of such materials and equipment for review by the Architect and Engineer. Prior to submission of the shop drawings, product data and samples to the Architect and Engineer, the Contractor shall thoroughly review the shop drawings, product data and samples and certify they are in compliance with the Contract Drawings. Further, the Contractor shall check all materials and equipment upon their arrival on the Project site and verify their condition and compliance with the Contract Documents. Any Work which proceeds prior to receiving reviewed shop drawings shall be modified as required to comply with the Contract Documents and the shop drawings. A minimum period of ten (10) working days, exclusive of transmittal time, will be required in the Engineer's office each time a shop drawing, product data and/or sample is submitted or resubmitted for review. This time period shall be considered by the Contractor when scheduling his Work. The initial shop drawing review for equipment and materials may be expedited through the mutual consent of the Contractor, Architect, Engineer, and Owner providing the Contractor agrees to submit complete, certified, documented, and coordinated shop drawings for review in accordance with the requirements of the Contract Documents.

- B. The review of shop drawings, product data, and samples by the Architect and Engineer shall not relieve the Contractor of the responsibility for dimensions or errors that may be contained therein, or for deviations from requirements in the Contract Documents. It shall be clearly understood that the noting of some errors by the Engineer but overlooking others does not grant the Contractor permission to proceed in error.
- C. All shop drawings and product data/submittals shall be submitted in compliance with the requirements of the general and supplementary conditions. No more than four (4) copies of submittal data will be reviewed. Any additional copies will be returned unmarked. The responsibility of copying review comments on any additional copies will rest solely with the Contractor.
- D. All product data/submittals shall bear the name of the manufacturer to be used.
- E. All shop drawings and submittals shall include a stamped indication signifying that the submittal has been reviewed for compliance with the Contract Documents by the Contractor. This stamped indication also represents the fact that the Contractor has checked this submittal for its interaction with all other Divisions and certifies by his signature or initials that all coordination has taken place. The stamp shall include the date, name of the Contracting Firm, the signature of the Contractor, certification of compliance and approval. This stamp shall be on the submittal before the Engineer will review it.
- F. The Engineer will review an individual submittal not more than twice. If the submittal is rejected again on the second review, the Contractor will bare all responsibility for paying for the Engineer's time for additional reviews. Such payments to the Engineer shall be withheld from the next monthly pay application.
- G. Shop drawings and/or product data shall be submitted for the following for review:
  - 1. Fire protection piping system layouts. These drawings must include associated equipment, drawn to scale based on submittals for that equipment, must be dimensioned, and must include piping and equipment elevation tags (distance above finished floor to bottom).  
The Contractor is encouraged to develop their own shop drawings, without having had the Engineer's CAD files (as previously stated, the Engineer's drawings are schematic/diagrammatic in nature). Should the Contractor insist on

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using the Engineer's CAD files in the procurement of shop drawings, the Contractor must pay the Engineer \$150.00 per sheet for the CAD files. The Contractor shall give the Engineer a written release, acceptable to the Engineer, signed by a corporate officer of the Contractor. This release shall also include a copyright statement indicating that these drawings or electronic data contained will not be used on any other project. The release and payment for the files must be received PRIOR to delivery of the CAD files.

2. Equipment, including but not limited to pipe, fittings, hangers, seismic devices, sprinkler heads, valves, fire department connections, hose equipment, pumps, controllers, heat tracing, insulation, piping specialties, etc.

#### 2.04 AS-BUILT DRAWINGS

- A. The Contractor shall maintain on a daily basis at the Project site a complete set of "Record Drawings". The "Record Drawings" shall consist of a set of black-line or blue-line prints or AutoCAD files of the Contractor Coordination Drawings for this Division. The prints shall be marked, or the AutoCAD file electronically updated to show the precise location of all work and equipment, and all changes and deviations in the work from that shown on the Contract Documents. This requirement shall not be construed as authorization for the Contractor to make changes in the layout or work without definite instructions from the Architect or Engineer. The continuously updated coordination drawings (shop drawings previously described) shall be used to produce the final "Record Drawings" which shall be delivered to the Owner in AutoCAD electronic format (CD) upon Project completion.
- B. Record dimensions shall clearly and accurately delineate the work as installed; locations shall be suitably identified by at least two dimensions to permanent structures.
- C. The Contractor and Subcontractor shall mark all "Record Drawings" on the drawings with a rubber stamp impression or an AutoCAD image that states such.

### PART 3 - EXECUTION

#### 3.01 INSTALLATION

- A. The equipment selections used in the preparation of the Contract Documents will fit into the physical spaces provided and indicated, allowing ample room for access, servicing, removal and replacement of parts, etc. Adequate space shall be allowed for clearance in accordance with the Code requirements and the requirements of the local Authorities having jurisdiction, and the equipment manufacturer 's recommendations.
- B. In the preparation of Drawings, a reasonable effort to accommodate acceptable equipment manufacturer's space requirements has been made. However, since space requirements and equipment arrangement vary according to each manufacturer, the responsibility for initial access, maintenance access, code required access, and proper fit rests with the Contractor.
- C. Physical dimensions and arrangements of equipment to be installed shall be subject to the Architect's and Engineer's review.
- D. The General Contractor and all Subcontractors shall coordinate the installation of ductwork, conduit, busway, piping, cable trays, etc., installation with lighting fixtures, special ceiling construction, air distribution equipment, and the structure. Provide

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additional rises, drops and offsets as required. If after installed, new ductwork, conduit, busway, piping or cable is found to be in conflict with the architecture, structure, or other trade Work which is either existing or shown on the Contract Documents, the ductwork, conduit, busway, piping or cable shall be relocated without additional cost to the Owner.

- E. No piping, equipment, etc., shall be installed in the eight (8) inch high zone directly above the ceiling in tenant areas to allow for tenant build-out and flexibility unless otherwise specifically shown on the Drawings or prior written authorization is received from the Engineer.
- F. Accessibility and Clearance:
  - 1. Piping, etc. shall be installed in accessible locations, avoiding obstructions, preserving headroom, and keeping openings and passageways clear.
  - 2. Minor adjustments in the locations of equipment shall be made where necessary, providing such adjustments do not adversely affect functioning of the equipment.
- G. Scaffolds and staging for installation of fire protection work shall be provided under the work of this Division.

3.02 STRUCTURAL FITTINGS

- A. Furnish and install the necessary sleeves, inserts, hangers, anchor bolts, and related structural items. Install at the proper time.
- B. Openings may have been indicated on the Architectural and Structural drawings. Should any additional openings or holes be required, the same shall be provided at no additional cost to the Owner.
- C. Location: At a time in advance of the work, verify openings shown on the Architectural and Structural drawings, and coordinate any additional openings.
- D. If the work of this Section requires modification of the Architectural or Structural drawings, furnish new instructions as to requirements for these openings. Submit for review and coordination to Architect.
- E. Sleeves shall be supplied for all piping passing through walls or slabs and shall be placed before concrete is poured.
- F. Equipment supports for fire protection work shall be fastened to the structure by inserts, anchor bolts, bolting to drilled and tapped structural members, or be welded to the structure.
  - 1. Welding shall be done by the electric arc method with fully competent welders. Supporting members shall be shop coated with a suitable primer.
  - 2. Surfaces damaged by installation of supports shall be touched up with primer to match shop coat. Any drilling of structural members shall be approved by the Architect.
- G. Flashing:
  - 1. Wherever piping passes through the roof or outer walls, base flashing and counterflashing shall be provided.
  - 2. Such flashing shall be properly installed by skilled workmen, and shall include grouting, mastic or tar application, or other means to insure a permanent, waterproof, neat and workmanlike installation.

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- 3. Insofar as possible, flashing shall comply with and be similar to requirements for flashing in General Construction Work.
- H. Anchor bolts and inserts shall be galvanized and of adequate size and strength for installation of electrical work and shall be placed in forms before concrete is poured.
  - 1. Placement of bolts in bases shall be done under other Division. Furnish detail drawings, templates, and anchor bolts for bases to the General Contractor in time to avoid delaying work schedules.
  - 2. Expansion shields shall only be used with specific approval of the Architect. Wooden or soft metal plugs shall not be used.
- I. Cutting and patching:
  - 1. All additional cutting, patching and reinforcement of construction of building, subject to review by the Architect, shall be performed under this Section.
  - 2. Refer to appropriate Division for requirements.
- 3.03 WEATHERPROOF EQUIPMENT
  - A. Fire protection devices or equipment located in damp; semi-exposed areas shall be weather-resistant. Enclosures shall comply with NEMA Type 3R requirements.
- 3.04 CLEANING
  - A. Brush and clean work prior to concealing, painting and acceptance. Perform in stages if directed.
  - B. Painted exposed work soiled or damaged: Clean and repair to match adjoining work before final acceptance.
  - C. Remove dust and debris from inside and outside of material and equipment.
- 3.05 TESTS AND DEMONSTRATIONS
  - A. All systems shall be tested in the presence of the Owner or an Owner designated representative upon completion of the Work and demonstrates that the installation is in accordance with the Contract Documents.
  - B. All motors shall be checked and adjusted for correct direction of rotation.
  - C. Any work found not to be in compliance with the Contract documents shall be repaired or replaced without incurring additional cost to the Contract price.
  - D. Provide all instruction to the Owner on maintenance and operation of all systems and equipment provided under this Division.
- 3.06 WARRANTIES
  - A. The warranty period for all systems, equipment, components, work, etc. shall be no less than one (1) year, unless specified otherwise hereinafter. The warranty shall include parts and labor.
  - B. The Contractor shall, without cost to the Owner, remedy any defects within a reasonable time to be specified in notice from the Architect. In default thereof, the Owner may have such work done and charge all costs to the Contractor.

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- C. The start of the Contractor's warranty period, as defined in the General Conditions, shall commence on the issue of a "Certificate of Substantial Completion", by the Owner or the Owner's Representative for each item of material, equipment or system.
- D. The Subcontractor shall confer with the General Contractor prior to the bid date concerning the project schedule and determine if there is a need to operate any items of equipment or systems for temporary heating and/or cooling or other reasons prior to "Substantial Completion". All required extended warranty costs for equipment, materials, and systems shall be included in the Subcontractor's bid.

END OF SECTION