

SECTION 01300**SUBMITTALS****PART 1 GENERAL****1.01 SUMMARY**

- A.** Section includes methods and requirements for submittals.

1.02 RELATED SECTIONS

- A.** Where submittals are specified or required.

1.03 CODES AND STANDARDS (NOT USED)**1.04 SUBMITTALS**

- A.** Progress Schedule

1. Within ten (10) days after issuance of the Notice to Proceed, prepare and submit three (3) paper copies and one (1) electronic copy in the format specified in Section 01310 - Progress Schedules of the proposed progress schedule to the Authority for review and approval. Refer to Section 01310 – Progress Schedules for detailed construction schedule requirements.
2. If so required, revise the schedule until it is approved by the Authority.
3. Update the Schedule monthly, depicting progress to the last working day of the month, and submit three (3) paper copies and one (1) electronic copy to the Authority not later than the fifth working day of the month, and prior to the application for progress payment. Failure to provide monthly schedule updates will be grounds for the Authority to withhold progress payment approval.
4. Prepare the Schedule in the form of a horizontal bar chart showing in detail the proposed sequence of the Work and identifying construction activities for each structure and for each portion of Work.
5. Time scale the Schedule, identifying the first working day of each week. Provide the Schedule with estimated dates for Early Start, Early Finish, Late Start and Late Finish. Schedule the Work to complete the Project within the Contract Time. The Late Finish Date shall equal the Contract Completion Date.
6. Show durations (number of days) and float on the Schedule for each activity. Define float as the measure of leeway in starting or completing a scheduled activity without adversely affecting the project completion date established by the Contract

Documents.

7. Show all changes since the previous submittal on the updated Schedule.
8. Revisions to the Schedule must have the prior approval of the Authority.

B. Equipment and Material Orders Schedule

1. Prepare and submit three (3) copies of the schedule of principal items of equipment and materials to be purchased to the Authority for review and acceptance.
2. If so required, revise the Schedule until it is approved by the Authority.
3. Update the Schedule monthly and submit three (3) paper copies and one (1) electronic copy to the Authority not later than the fifth working day of every month with the application for progress payment.
4. Base the updated Schedule on the Progress Schedule developed under the requirements of this Section.
5. Schedule shall be in tabular form with appropriate spaces to insert the following information for principal items of equipment and materials:
 - a. Dates on which Shop Drawings are requested and received from the Manufacturer.
 - b. Dates on which certification is received from the Manufacturer and transmitted to the Authority.
 - c. Dates on which Shop Drawings are submitted to the Authority and returned by the Authority for revision.
 - d. Dates on which Shop Drawings are revised by Manufacturer and resubmitted to the Authority.
 - e. Dates on which Shop Drawings are returned by the Authority annotated as either "No Exceptions Taken" or "Make Corrections Noted".
 - f. Dates on which accepted Shop Drawings are transmitted to Manufacturer.
 - g. Dates of Manufacturer's scheduled delivery.
 - h. Dates on which delivery is actually made.

C. Working Drawings

1. Within thirty (30) days after the Notice to Proceed, prepare and submit three (3)

paper copies and one (1) electronic copy of the Preliminary Schedule of Working Drawing submittals to the Authority for review and acceptance. If so required, revise the schedule until it is approved by the Authority.

2. Working Drawings include, but are not limited to, Shop Drawings, layout drawings in plan and elevation, installation drawings, elementary wiring diagrams, interconnecting wiring diagrams, Manufacturer's data, etc. Secure all of the information, details, dimensions, drawings, etc., necessary to prepare the Working Drawings required and necessary under this Contract and to fulfill other requirements of this Contract. Secure such information, details, drawings, etc., from possible sources including the Contract Drawings, Working Drawings prepared by the Subcontractors, Suppliers, etc.
3. Working Drawings shall accurately and clearly present the following:
 - a. All working and installation dimensions.
 - b. Arrangement and sectional views.
 - c. Units of equipment in the proposed positions for installation, details of required attachments and connections, and dimensioned locations between units and in relation to the structures.
 - d. Necessary details and information for making connections between the various trades including, but not limited to, power supplies and interconnecting wiring between units, accessories, appurtenances, etc.
4. Working Drawings shall be prepared and submitted electronically. Working Drawings shall conform to recognized drafting standards and be neat, legible and drawn to a large enough scale to show in detail the required information.
5. Contract Drawings are used for engineering and general arrangement purposes only and are not to be submitted as Working Drawings.
6. Shop Drawings
 - a. Prepare and submit Shop Drawings for review by the Authority for all fabricated work and for all manufactured items required to be furnished by the Contract Documents.
 - i. Include drawings and descriptive information to show kind, size, arrangement, operation of component materials devices; external connections, anchorages, and supports; performance characteristics, and dimensions needed for installation and correlation with other materials and equipment. Modify drawings and diagrams to delete information which is not

applicable.

- b. Structural and all other layout drawings prepared specifically for the Project shall have a plan scale of not less than 1/4 inch = 1 foot.
- c. Where Manufacturer's publications in the form of catalogs, brochures, illustrations or other data sheets are submitted in lieu of prepared Shop Drawings, such submittals shall specifically indicate the item for which approval is requested. Items shall be clearly identified, and irrelevant information shall be clearly crossed out. Submittals showing only general information are not acceptable.

7. Layout and Installation Drawings

- a. Prepare and submit for review by the Authority layout and installation drawings for all pipes, valves, fittings, sewers, drains, heating and ventilation ducts, all electrical, heating, ventilating and other conduits, plumbing lines, electrical cable trays, lighting fixture layouts, and circuiting, instrumentation, interconnection wiring diagrams, communications, power supply, alarm circuits, etc., under this Contract. The final dimensions, elevation, location, etc., of pipe, valves, fittings, sewers, ducts, conduits, electrical cable trays, equipment, etc., may depend upon the dimensions of equipment and valves to be furnished.
- b. Layout and installation drawings are required for both interior and exterior piping, valves, fittings, sewers, drains, heating and ventilation ducts, conduits, plumbing lines, electrical cable trays, etc.
- c. Layout and installation drawings shall show connections to structures, equipment, sleeves, valves, fittings, etc.
- d. Drawings shall show the location and type of all supports, hangers, foundations, etc., and the required clearances to operate valves, equipment, etc.
- e. The drawings for pipes, ducts, conduits, etc., shall show all three (3) inch and larger electrical conduits and pressure piping, electrical cable trays, heating and ventilation ducts or pipes, structures, manholes or any other feature within four (4) feet (measured as the clear dimension) from the pipe duct, conduit, etc., for which the profile is drawn.
- f. Provide coordination drawing files to the Authority in electronic format. Where design files are provided in the current AutoCAD format, all layout and coordination drawings shall be provided to the Authority in the current AutoCAD format. Coordination drawings by the Contractor and all subcontractors shall be part of the same AutoCAD model. Where design files are

provided in CADD format, all layout and coordination drawings shall be provided to the Authority in the current AutoCAD format.

- g. Be responsible for custody of the AutoCAD model and provide access to the model for editing by subcontractors as required. Utilize a hosting service that allows for concurrent editing of the AutoCAD model.
- h. Provide the Authority access to the AutoCAD model throughout the Work at no additional cost to the Authority. The Authority reserves the right to make changes to the model associated with RFIs or Change Orders throughout the Contract. The Contractor will be notified of any changes made to the AutoCAD model by the Authority.

8. The Contractor's Responsibilities

- a. Submittals from the subcontractors, Manufacturers and Suppliers shall be sent directly to the Contractor for checking. Thoroughly check drawings for accuracy and conformance to the intent of the Contract Documents. Drawings found to be inaccurate or otherwise in error shall be returned to the Subcontractors, Manufacturers, or Suppliers for correction before submitting them to the Authority.
- b. Submittals shall be bound, dated, properly labeled and consecutively numbered. Information on the label shall indicate Specification Section number, Drawing number, the Subcontractor's, Manufacturer's or Supplier's name and the name or type of item the submittal covers. Each part of a submittal shall be marked and tabulated.
- c. Submit Working Drawings as a single complete package including all associated drawings relating to a complete assembly of the various parts necessary for a complete unit or system.
- d. Submit Shop Drawings as a single complete package for any operating system and include all items of equipment and any mechanical units involved or necessary for the functioning of such system. Where applicable, include elementary wiring diagrams showing circuit functioning and necessary interconnection wiring diagrams for construction.
- e. Thoroughly check submittals for accuracy and conformance to the intent of the Contract Documents before submitting to the Authority. Submittals shall bear the Contractor's stamp of approval certifying that they have been so checked. Submittals without the Contractor's stamp of approval will not be reviewed by the Authority and will be returned.
- f. If the submittals contain any departures from the Contract Documents, specific

mention thereof shall be made in the letter of transmittal. Otherwise, the review of such submittals shall not constitute approval of the departure.

- g. No materials or equipment shall be ordered, fabricated, shipped or any work performed until the Authority returns the submittals, herein required, annotated as "No Exceptions Taken" or "Make Corrections Noted".
- h. Where stated in the Specifications, provide required certifications, including American Iron and Steel certification, and Build America-Buy America certification, with submittals.
- i. Coordinate the layout and installation drawings, and ensure that coordination is sequenced and checked such that all drawings accurately represent the final locations of pipe, duct, valves and other appurtenances, and that no interferences or other conflicts between these systems exist in the final layouts.

9. Redline Drawings

- a. Maintain current Redline Drawings onsite for the Authority's review. Redline Drawings shall be updated monthly at a minimum. Electronic Redline Drawings will be acceptable for monthly payment applications.
- b. Prior to final payment, furnish the Authority one (1) complete set of all accepted Redline Drawings, including redline Shop Drawings for equipment, piping, electrical work, heating system, ventilating system, air conditioning system, instrumentation system, plumbing system, structural, interconnection wiring diagrams, etc. Submit Final Redline Drawings of the Contract Drawings electronically in the format in which the Contract Drawings were provided as specified herein. Submit Final Redline Drawings of the Shop Drawings in PDF format.
- c. Redline Drawings furnished shall be corrected to include any departures from previously accepted Redline Drawings.
- d. Redline Drawings shall include locations of all conduit, piping, embedded conduits, sleeves, and similar items. Provide loop drawings in ISA format for all instrumentation. Provide complete custom point to point wiring diagrams and electrical diagrams with wire, conduit and termination point numbers clearly identified.
- e. Provide Redline Drawings to the Authority in electronic and paper copies. For Contract Drawings provided in Revit format Redline Drawings shall be provided in Revit format. For Design Drawings provided in CADD format Redline Drawings shall be provided in AutoCAD 2019 or the current version used by the Authority.

D. Operations and Maintenance Manuals

1. Operation and Maintenance manuals shall be provided in accordance with Section 01730 – Operations and Maintenance Data.

E. Certified Shop Test Reports

1. Each piece of equipment for which pressure, head, capacity, rating, efficiency, performance, function or special requirements are specified or implied shall be tested in the shop of the Manufacturer in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents and applicable test codes and standards. Keep the Authority advised of the scheduling of shop tests so that the Authority may arrange for the witnessing or inspection at the proper time and place. Unless otherwise specified, notify the Authority a minimum of fourteen (14) days in advance of conducting shop tests.
2. Secure from the Manufacturers seven (7) copies of the actual test data, the interpreted results and a complete description of the testing facilities and testing setup, all accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company and notarized. Forward these reports to the Authority for review.
3. In the event any equipment fails to meet the test requirements, the Manufacturer shall make all necessary changes, adjustments or replacements and the tests shall be repeated, at no additional cost to the Authority, until the equipment test requirements are acceptable to the Authority.
4. No equipment shall be shipped to the Project until the Authority notifies the Contractor, in writing, that the shop test reports are acceptable.

F. Samples

1. Furnish for review all samples as required by the Contract Documents or requested by the Authority.
2. Samples shall be of sufficient size or quantity to clearly illustrate the quality, type, range of color, finish or texture and shall be properly labeled to show the nature of the material, trade name of Manufacturer and location of the work where the material represented by the sample will be used.
3. Samples shall be checked for conformance to the Contract Documents before being submitted to the Authority and shall bear the Contractor's stamp of approval certifying that they have been so checked. Transportation charges on samples submitted to the Authority shall be prepaid by the Contractor.

4. The Authority's review will be for compliance with the Contract Documents and the Authority's comments will be transmitted to the Contractor with reasonable promptness.
5. Accepted samples will establish the standards by which the completed Work will be judged.

G. Construction Photographs

1. Submit photographs in accordance with Section 01380 – Construction Video Recording and Photographs.

H. Project Management Information System (PMIS) and Electronic Submittal Requirements

1. An internet-based PMIS for construction document control shall be used by the Contractor and the Authority for tracking and management of construction documents including submittals, schedules, pay applications, RFIs and Change Orders. The PMIS shall be provided by the Contractor for use by the Authority and its representative and shall be maintained and hosted for the duration of the Contract and through the end of the Contract warranty period by the Contractor.
 - a. Provide training to the Authority and its representative on the selected PMIS by the Contractor's software provider. In addition to paper copies noted above, provide electronic versions of all submittals for review by the Authority. Electronic submittals shall be in PDF format conforming to the following requirements:
 - b. PDF Version & Format: Adobe Version PDF 1.7 (ISO 32000-1), PDF/A- 2b.
 - c. Resolution: 300 dpi or higher.
 - d. Color: Same as original document.
 - e. File Image: Text searchable.
 - f. Reproducibility: PDF file shall provide true copy of the original that contains all details of the document from which it was made.
 - g. Engineering Plans: PDF page size shall be the same size as the original printed engineering drawing document.
2. The PMIS will sequentially number submittals. Re-submittals shall have original number with an alphabetic suffix.
 - a. Identify Contract, the Contractor, the Subcontractor and/or Supplier; pertinent

drawing sheet and detail number(s), and Specification Section number, as appropriate. On standard drawings or data sheets, clearly indicate model, option being proposed, and strike out all non-relevant data.

- b. All proposed product lists, Shop Drawings, product data, Manufacturer's instructions and Manufacturer's certificates shall be in accordance with the requirements of the Work as specified.
 - c. Apply the Contractor's stamp and sign or initial.
- 3. All technical submittals or calculations shall bear the stamp and signature of a Professional Engineer licensed in the Commonwealth of Massachusetts.
 - 4. Schedule submittals in accordance with the Progress Schedule (refer to Section 01310 – Progress Schedules) and deliver to the Authority. Coordinate submission of related items.
 - 5. Identify variations from the Contract Documents on Shop Drawings submitted for review.
 - 6. Provide three (3) inch by five (5) inch space for the Authority's review stamp.
 - 7. Revise and resubmit submittals within fourteen (14) days. Identify in writing all changes made since previous submittal.
 - 8. Comply with detailed submittal requirements specified in the technical Specification Sections.

I. Fire Safety Plan

- 1. Prepare and submit for review and approval a fire safety plan in conformance with NFPA 241.

1.05 PROCEDURE FOR REVIEW

- A. Transmit submittals in sufficient time to allow the Authority at least thirty (30) days for review and processing.
- B. Transmit four (4) copies of all technical data or drawings to be reviewed.
- C. Submittals shall be accompanied by a letter of transmittal containing date, project title, the Contractor's name, number and titles of submittals, a list of relevant Specification Sections, notification of departures from any Contract requirement, and any other pertinent data to facilitate review.
- D. Submittals will be annotated by the Authority in one of the following ways:

1. "Code 1" – No Exceptions Taken
 2. "Code 2" – Make Corrections Noted
 3. "Code 3" – Revise and Resubmit
 4. "Code 4" – Rejected – See Remarks
 5. "Code 5" – Reviewed for Informational Purposes Only
- E. If a submittal is satisfactory to the Authority in full or in part, the Authority will annotate the submittal "Code 1", "Code 2", or "Code 3". In the case of "Code 3" a partial resubmittal or additional information is required as specifically requested.
- F. If a full resubmittal is required, the Authority will annotate the submittal "Code 4".
- G. Resubmit submittals in part if they are returned "Code 3" or in full if they are returned "Code 4" as required by the Authority until submittals are acceptable to the Authority. It is understood that the Authority may charge the Contractor the Authority's charges for review in the event a submittal is not accepted (either "Code 1" or "Code 2") by the third submittal for a system or piece of equipment. These charges shall be for all costs associated with engineering review, meetings with the Contractor or Manufacturer, etc., commencing with the fourth submittal of a system or type of equipment submitted for a particular Specification Section.
- H. Acceptance of a Working Drawing by the Authority will constitute acceptance of the subject matter for which the Working Drawing was submitted and not for any other structure, material, equipment or appurtenances indicated.
- I. The Authority's Review
1. The Authority's review of the Contractor's submittals shall in no way relieve the Contractor of any of its responsibilities under the Contract. An acceptance of a submittal shall be interpreted to mean that the Authority has no specific objections to the submitted material, subject to conformance with the Drawings and Specifications.
 2. The Authority's review will be confined to general arrangement and compliance with the Contract Drawings and Contract Specifications only, and will not be for the purpose of checking dimensions, weights, clearances, fittings, tolerances, interferences, coordination of trades, etc.

1.06 PROJECT ELECTRONIC DATA PROTOCOL

- A. General Provisions: The Project Electronic Data Protocol (Protocol) establishes the procedures relative to the transmission or exchange of Electronic Data for the Project.

A Protocol will be established specifically for this Contract.

- B. Provide and utilize the Project Management Information System (PMIS) construction document control system.
- C. Upon final completion, transfer all documents maintained using the PMIS to the Authority in electronic format.
- D. Definitions

- 1. Electronic Data – Electronic Data is defined as information communications, Drawings, or designs created or stored for the Project in electronic or digital form.
- 2. Confidential Information – Confidential Information is defined as Electronic Data that the transmitting party has designated as confidential and clearly marked with an indication such as “Confidential” or “Business Proprietary”.
- 3. Written or In Writing – In addition to definitions in the Contract Documents, “written” or “in writing” shall mean any communication, including without limitation a notice, consent or interpretation, prepared and sent to an address provided in this Protocol using a transmission method sent forth in this Protocol that permits the recipient to print or store the communication. Communications transmitted electronically are presumed received if sent in conformance with the Protocol established for this Contract.

E. Transmission of Electronic Data

- 1. The transmission of Electronic Data constitutes a warrant by the transmitting party to the receiving party that the transmitting party (1) is the copyright owner of the Electronic Data, (2) has permission from the copyright owner to transmit the Electronic Data for its use on the Project, or (3) is authorized to transmit Confidential Information.
- 2. The receiving party agrees to keep Confidential Information strictly confidential and not to disclose it to any other person except to (1) its employees, (2) those who need to know the content of the Confidential Information to perform services or construction solely and exclusively for the Project, or (3) its consultants and the Contractor(s) whose contracts include similar restrictions on the use of Confidential Information.
- 3. For exchanging electronic data, the Contractor and the Authority shall use the Contractor provided internet-based Program Management Information System (PMIS). The PMIS website address shall be furnished by the Contractor within ten (10) days after Notice to Proceed. To access the PMIS website, acquire and maintain for the duration of the Contract, and through the end of the Contract warranty

period: high-speed internet service suitable for transferring electronic data; and internet browsing software such as Microsoft Edge 142.0 or greater.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****