

**SECTION 01340****SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES****PART 1 GENERAL**

## 1.01 SCOPE OF WORK

- A. The Department has established a "Pre-Approved Product List" for products to be used in the construction of water and sewer facilities. The "Pre-Approved Product List" lists manufacturer's product models pre-approved by the Department which meet the minimum requirements established in the Department's design and construction standards and specifications. However, not all products that may be used in the construction of water and sewer facilities that meet the Department's design and construction standards and specifications are listed in the "Pre-Approved Product List." The "Pre-Approved Product List" is not an exclusive collection of all qualified and approved products. For those products that are not on the "Pre-Approved Product List," the Contractor shall submit shop drawings as specified herein.
  
- B. Contractors and suppliers can submit the "Pre-Approved Product List(s)" for the products that they intend to use in the construction of the water and sewer facilities for the Project. Products listed in the "Pre-Approved Product List" do not require the submittal of shop drawings to the Department. The "Pre-Approved Product List(s)" must be stamped, reviewed and initialed by the Contractor and by his engineer, if applicable, prior to submittal to the Department. A "Submittal Summary Sheet" must accompany all "Pre-Approved Product List" submittals. Both forms can be found in the Department website at [www.miamidade.gov/water/pre-approved-product-list.asp](http://www.miamidade.gov/water/pre-approved-product-list.asp).
  
- B. Shop Drawings (including Pre-Approved Product List submittals) shall be submitted prior to any project construction activity. In a timely fashion, well before the contemplated ordering for fabrication of special order or long-lead items or construction use of any standard element of the work, the Contractor shall furnish Shop Drawings for the review and approval of MDWASD.
  
- C. It is the Contractor's sole responsibility, upon the first occasion of submittal of a particular element of the work, to submit Shop Drawings of an element which match and fulfill the requirements and intent of the Plans and Specifications. Any delays or costs caused, either directly or indirectly, by non-timely submissions; submission of items differing significantly from the intent of the Plans and/or Specifications; repeated submission of, or argument over, rejected elements or changes required for acceptance; arguments with the criteria or requirements of the Plans or Specifications; or any other such similar activities shall be at the expense of the Contractor.

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- D. It is the intent of the Contract Documents that the Contractor shall, in the first instance, submit Shop Drawings of elements which meet or exceed the requirements of the Contract Documents and fit with the other elements of the work and the existing conditions. Delays or the inability to obtain shop drawing approval may subject the Contractor to costs for liquidated or actual damages as specified in the Contract.
- E. The approval of Pre-Approved product sheets, shop drawings and data will be general and shall mean that upon examination of the drawings, no variations from the approved project drawings and project requirements have been discovered, and approval will not relieve the Contractor of his responsibilities as defined above. The Department's review will not constitute an approval of dimensions, quantities and details of the material, equipment or item shown.

#### 1.02 CONTRACTOR SUBMITTALS

- A. The Contractor shall submit a minimum of four (4) hardcopies of the shop drawing submittal package to the Water and Sewer Department Document Control Section. PDF files of the entire submittal package along with the hard copies are encouraged to simplify the approval process.
- B. The Shop Drawing submittal package shall include a transmittal, submittal registry and the pre-approved product list or shop drawing sheets stamped by the Contractor.
- C. The Contractor shall meet with the Department Engineer (Construction Manager) the after Project Award to begin the shop drawing submittal process and establish a schedule for submittal and approval.
- D. Where there is a deviation from the Specifications, the Contractor shall note it and state the reasons why a deviation is required.

#### 1.03 DESCRIPTION OF WORK

- A. Submit to the Engineer for review and approval, Shop Drawings, test reports and data on materials, equipment, and material samples as required for the proper control of work, and as specified in the Specification sections. Shop Drawings shall be submitted for all materials and equipment to be furnished.
- B. After award of the project, the Contractor may begin providing submittals for approval. Submit to the Engineer a complete list of preliminary data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way expressed or implied relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite

final review of Shop Drawings.

- C. Maintain an accurate updated Shop Drawing submittal log which shall include the following items:
1. Submittal Description and Number Assigned
  2. Specification Section
  3. Plans Sheet Number
  4. Date to Engineer
  5. Date Returned to Contractor (from Engineer)
  6. Status of Submittal (Approved, Approved as Noted, Rejected/Resubmit)
  7. Date of Resubmittal and Return (as Applicable)
  8. Date Material Release (for Fabrication)
  9. Projected Date of Fabrication
  10. Projected Date of Delivery to Site
  11. Status of O & M Manuals Submittal

#### 1.04 CONTRACTOR'S RESPONSIBILITY

- A. Furnish the Engineer with a schedule of Shop Drawings submittals, fixing the respective dates for the submission of Shop Drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
- B. Submit to the Engineer all plans and schedules sufficiently in advance of construction requirements to provide maximum time for checking and appropriate action from the time the Engineer receive them.
- C. It is the duty of the Contractor to check and approve all plans, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Plans and data shall bear Contractor's stamp showing that they have been checked and approved. Shop Drawings submitted to the Engineer without the Contractor's stamp and approval shall be returned to the Contractor for conformance with this requirement before Engineer's review. **Shop Drawings shall indicate any deviations in the submittal from requirements of the Project Documents and the Contractor shall state the reason why a deviation is required.**
- D. All submittals shall be accompanied by a submittal registry and transmittal letter containing the following information:
1. Date
  2. Project Title and Number
  3. Contractor's name and address
  4. The number of each Shop Drawing, Data, and Sample submitted
  5. Notification of Deviations from Project Documents
  6. Submittal Log Number conforming to and referring to Specification Section

## Numbers

- E. Submit seven copies of Shop Drawings and of descriptive or product data submittals necessary to complement Shop Drawing. The Engineer will retain five sets.
- F. After receiving approval by the Engineer, the Contractor shall be responsible for submitting the Shop Drawings to the Building Department. Shop Drawings of all premanufactured items and all other Shop Drawings are required to obtain approval prior to manufacturing or installing the submitted items. The Contractor shall also be responsible for contesting any interpretations by the Building Department that MDWASD considers non-acceptable. The Contractor shall include in the bid prices, all costs for permits, fees and expenses associated with the submittals, including resubmittals (if any) of Shop Drawings to the Building Department. The Building Department as used in this paragraph shall be taken to mean the Miami-Dade County Building Department and/or other governing building authority appropriate to this project.
- G. Do not begin any of the work covered by a drawing, data, or a sample returned as "Rejected/Resubmit" until a revision or correction thereof has been reviewed and returned to the Contractor, by the Engineer, with approval or approval "As Noted". Be responsible for and bear all costs of damages which may result from the ordering of any material or from proceeding with any part of work prior to receiving Engineer's approval or approval "As Noted" of the necessary Shop Drawings.
- H. Be fully responsible for observing the need for and for making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the materials/equipment the Contractor proposes to supply, both as they pertain to the Contractor's own work, work of others, or of other Divisions herein or Trades and clearly show such changes on the Shop Drawings.
- I. When substitutions in materials or equipment are allowed, the Contractor shall make all necessary changes in adjacent or connected structures and equipment at his expense. Where contemplated changes, substitutions or appurtenant work require engineering design, in the opinion of the Engineer, the Contractor shall have such design services performed at his expense. Said engineering design services shall be of an extent satisfactory to the Engineer whose word shall be final and shall be performed by a Registered Professional Engineer licensed to practice in the State of Florida.
- J. When substitutions in materials or equipment are allowed, the Contractor shall be solely responsible for all costs and time required by any differences in construction methods, fabrication or assembly required and no additional time will be allowed.
- K. When a construction change, initiated by the Contractor or resulting from a change made by the Contractor, requires re-permitting as discussed in the preceding paragraph, the Contractor shall be responsible for all labor, material and equipment required to redraw the Plan sheet or sheets affected by the change to the satisfac-

tion of the Engineer of Record and MDWASD. The costs for all work of this sort and all costs of re-permitting shall be borne by the Contractor and no extra compensation will be allowed.

- L. Determine and verify:
  - 1. Field measurements
  - 2. Field construction criteria
  - 3. Catalog numbers and similar data
  - 4. Conformance with specifications
  - 5. That installation and maintenance clearances are sufficient particularly when equipment or arrangement changes have been made

#### 1.05 ENGINEER'S REVIEW OF SHOP DRAWINGS

- A. Engineer's review of plans, data and samples, submitted by the Contractor will cover only general conformity to the Drawing and Specifications. The Engineer's review will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown. The review of plans and schedules will be general, and shall not be construed:
  - 1. As permitting any departure from the Contract requirements
  - 2. As relieving the Contractor of responsibility for any errors, including detail, dimensions, and materials
  - 3. As approving departures from details furnished by the Engineer, except as otherwise provided herein
- B. Variations
  - 1. If the plans or schedules, as submitted, describe variations per paragraph 1.03 C, and show a departure from the Contract requirements which Engineer finds to be in the interest of MDWASD and to be so minor as not to involve a change in Contract price or time for performance, the Engineer may return the reviewed plans without noting an exception.
  - 2. If the plans or schedules, as submitted, describe variations and show a departure from the Contract requirements which the Engineer finds to be minor enough to be corrected by redlining the submittal, the engineer will mark and return the submittal marked "Approved as Noted." The redlined corrections shall be as binding on the Contractor as would be a resubmission embodying the same corrections.
- C. When reviewed by the Engineer, each of the Shop Drawings shall be stamped and dated to indicate it had been reviewed. Shop Drawings stamped "Revise and Resubmit" and with required corrections shown will be returned to the Contractor for correction and resubmittal.
- D. Resubmittals will be handled in the same manner as first submittals. On resubmit-

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tals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions and corrections required by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.

- E. If the Contractor considers any correction indicated on the Shop Drawings to constitute a change to the Project Plans or Specifications, the Contractor shall give written notice thereof to the Engineer who will render a decision which shall be final. After the decision has been made, the Contractor shall without delay, provide the corrections to the plans.
- F. When the Shop Drawings have been approved by the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.
- G. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor for resubmittal. Unless otherwise specifically permitted by the Engineer, all submittals shall be made in groups containing all associated items for systems, processes or as indicated in specific specifications sections. All plans, schematics, manufacturer's product data, certifications and other Shop Drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interface checking.

#### 1.06 SHOP DRAWINGS

- A. When used in the Project Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for materials and equipment which become an integral part of the Project. These Shop Drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance/test data shall be considered only as supportive to required Shop Drawings as defined above.
- B. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data shall be clearly marked to identify pertinent materials, product or models. Information which is not applicable to the Work shall be deleted by striking or cross hatching.
- C. Shop Drawing shall have a submittal registry and display the following:
  - 1. Project Title and Number
  - 2. Name of Project Building or Structure
  - 3. Number and Title of the Shop Drawing
  - 4. Date of Shop Drawing or Revision
  - 5. Name of Contractor and Subcontractor Submitting Drawing
  - 6. Supplier/Manufacturer
  - 7. Separate Detailer when Pertinent

8. Specification Title and Number
  9. Specification Section
  10. Application Project Drawing Number
- D. If plans show variations from Contract requirements because of standard shop practice or for other reasons, describe such variations in the letter of transmittal. If no explanation of these variations is provided, the Contractor shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such plans have been reviewed and approved.
- E. For all mechanical and electrical equipment furnished, provide a list including the equipment name, address of and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- F. All manufacturers or equipment suppliers who propose to furnish equipment or products shall submit an installation list to the Engineer along with the required Shop Drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least five years, unless otherwise specified. Manufacturers and/or equipment which fails to meet the specified experience period will be considered if the manufacturer or supplier provides a bond or cash deposit which will guarantee replacement of the equipment or process in the event of failure or unsatisfactory service.
- G. Only the Engineer will utilize the color "red" in marking Shop Drawing submittals.

#### 1.07 REQUIRED INFORMATION

- A. Submit, as applicable, the following for all prefabricated or manufactured structural, mechanical, electrical, plumbing, process system, and equipment work:
1. Shop Drawings or equipment drawings, including dimensions, size and location of connections to other work, and weight of equipment
  2. Catalog information and cuts
  3. Installation or placing plans for equipment, drives, and bases
  4. Supporting calculations, signed and sealed by a Florida Registered Engineer when required, for equipment and associated supports, or hangers required or specified to be designed by equipment manufacturers
  5. Signed and sealed calculations and plans by in-house Florida Registered Professional Engineer for structural systems, indicating compliance to the structural design criteria specified in the Plans
  6. Complete manufacturer's specifications, including materials description and paint system
  7. Performance data and pump curves
  8. Suggested spare parts with current price information
  9. List of special tools required for testing, checking, parts replacement, and maintenance. (Special tools are those which have been specially designed

or adapted for use on parts of the equipment, and are not customarily and routinely carried by maintenance mechanics)

10. List of special tools furnished with the equipment
11. List of materials and supplies required for the equipment prior to, and during startup
12. List of materials or supplies furnished with the equipment
13. Special handling instructions
14. Requirements for storage and protection prior to installation
15. Requirements for routine maintenance required prior to equipment startup
16. List of all requested exceptions to the Project Documents

#### 1.08 SUBMITTAL REQUIRED FOR FOREIGN MANUFACTURED ITEMS

- A. In addition to the submittal requirements stated above, suppliers of foreign manufactured items shall submit the names and addresses of companies within the United States that maintain technical service representatives and a complete inventory of spare parts and accessories for each foreign-made item proposed for incorporation into the Work. Failure to prove these capabilities shall be cause for rejection of the foreign manufactured items.
- B. Foreign manufactured equipment and materials shall in all cases be clearly and permanently marked with the manufacturer's name and country of origin of the item. The name of the U.S. importing/supplying firm is not acceptable. Shop Drawing submittals of foreign-made items shall be accompanied by written information to include name and location (i.e. country, City, and street address) of the manufacturer. This requirement shall also apply to the foreign made elements of items assembled in this country from parts wholly or partially manufactured overseas.
  1. The words, "Permanently Marked" as used in this paragraph shall mean; die stamped, cast-in, welded, or otherwise marked such that the removal of the marking by any mechanical or chemical means will result in obvious permanent damage to the surface marked. These markings shall be on surfaces which are not hidden by assembly.
- C. Where specified elsewhere herein or at the sole discretion of the Engineer, whose word shall be final, supply verification of quality, suitability or other aspects, as directed by the Engineer, from a Professional Engineer licensed to practice in the State of Florida or the state where the supplying U.S. firm is located. The verification shall be signed, sealed, and dated. All costs for this verification shall be at the sole expense of the Contractor and no extra compensation will be allowed. Verification by foreign-based engineers, firms, manufacturers, etc. will not be acceptable. Verification by means of a very stringent foreign testing agency/standard (for example ISO 9000 series) may be acceptable. However, this shall again be at the sole discretion of the Engineer and the full burden of proof and satisfaction of MDWASD shall rest with the Contractor. No extra time will be permitted due to the requirement for verification and the Contractor has the sole responsibility to make



his submittals with all necessary information in a timely fashion.

#### 1.09 SAMPLES

- A. Furnish for the approval of the Engineer, samples required by the Project Documents or required by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
  - 1. Functional characteristics of the product, with integrally related parts and attachment devices
  - 2. Full range of color, texture and pattern
  - 3. A minimum of two samples of each Item shall be submitted
- C. Each sample shall have a label indicating:
  - 1. Name of Project
  - 2. Material or Equipment Represented
  - 3. Name of Producer and Brand (if any)
  - 4. Location in Project
- D. Prepare a transmittal letter in triplicate for each shipment of samples containing the information specified herein in Paragraph 1.06 A. Enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer. Approval of a sample shall be only for the characteristics or use specified and shall not be construed to change or modify any Contract requirements.
- E. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved shall be returned to the Contractor at his expense, if so requested at time of submission.

#### 1.10 SUBSTITUTIONS

- A. Changes in products, materials, equipment, and methods of construction required by the Contract Documents, which are proposed by the Contractor after award of the Contract, are considered to be requests for substitutions. Where the Plans and/or Specifications designate the products of a particular manufacturer, the product specified has been found suitable for the intended use. Articles or products of similar characteristics may be offered for the approval of the Engineer, whose decision shall be final. Copies of complete descriptive data shall be fur-

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nished regarding all materials furnished by the Contractor, consisting of Dimension drawings, catalog references, product data, cost, and other information necessary to clearly identify and evaluate each article. When substitutions are permitted, the Contractor shall make all necessary changes in adjacent, connected, or other structures and equipment at his expense.

- B. Where engineer-recommended changes, substitutions or appurtenant work require engineering design, the Contractor shall have such design services performed. Those engineering design services shall be of an extent satisfactory to the Engineer, whose decision shall be final. Engineering services for engineer-recommended changes, substitutions or appurtenant work, shall be performed by a Registered Professional Engineer licensed to practice in the State of Florida.
- C Unless specifically authorized by the Engineer in writing, no additional contract time will be allowed, and a decrease in time may be appropriate.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

**END OF SECTION**