

SECTION 01 34 00 SHOP DRAWING PROCEDURES

PART 1 -- GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. This Section specifies the methods and requirements for submittals including Shop Drawings and Product Data. Additional requirements are contained in Article 5 of the General Conditions. Specific requirements for Shop Drawings are denoted in the applicable Sections.
- B. Submittal for each Section shall be provided with a separate transmittal form. Submittals shall be completed and organized by the Section noted in the table at the end of this Section. Each submittal shall be clearly identified by reference to applicable Section Number. Submittals shall clearly reference the Contract Number and bear the identification of the Seller. Submittals shall be clear and legible and of sufficient size for presentation of data. Each submittal shall be signed by the Seller.
- C. Failure to provide the Shop Drawings as required by this Section within the allocated time shall constitute a failure of the Seller to provide Special Engineering Services in accordance with the requirements of the Contract. The Seller shall be assessed Liquidated Damages in accordance with Article 5 of the Agreement until acceptable Shop Drawings have been provided.
- D. Reference Specifications
 - 1. Section 11 30 00, Hollow Fiber Membrane Equipment

1.02 SHOP DRAWINGS, PRODUCT DATA, SAMPLES

- A. Shop Drawings
 - 1. Shop drawings as specified in individual Sections include, custom-prepared data such as fabrication and erection/installation (working) drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications, as applicable to the work.
 - 2. All shop drawings submitted by subcontractors or component equipment suppliers shall be sent directly to the Seller for checking. The Seller shall be responsible for coordination and checking their submittals before submitting to the Engineer for review and approval.
 - 3. The Shop drawing submittal shall identify a single manufacturer or provider of component equipment. Shop Drawings that identify multiple suppliers for the same item will be rejected.
 - 4. The Seller shall check all subcontractors or component equipment suppliers shop drawings regarding measurements, size of members, materials of construction and fabrication details to make sure that they conform to the Drawings and Specifications.

5. All details on shop drawings shall show clearly the relation of the various parts to the main members and lines of the structure and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted.
6. For all tagged devices supplied, the Seller shall develop an "Equipment Cross Reference Schedule" per Section 01 08 00, Identification and Tagging, that matches the Tag to the appropriate equipment manual. The Cross Reference Schedule shall be provided for each section submitted.
 - a. The equipment schedule shall include the pertinent information associated with the equipment including tag number, description, functional name location, component equipment model, part number, size, materials, accessories and range. The Equipment Cross- Reference Schedule shall be provided in the form of a Microsoft Excel (.XLS) spreadsheet.
 - b. Provide a separate listing for all Membrane Unit Equipment, including cross-reference schedules with the Membrane Unit (Section 11 30 00, Hollow Fiber Membrane Equipment) submittal. Equipment that is not considered part of the Membrane Unit shall be submitted with the appropriate division submittal.
7. Drawings: Provide in PDF format with bookmarks.
8. Standard product data shall be clearly identified with reproducible arrows or other marking indicating the parts to be supplied with the equipment. Any parts or equipment not provided shall be marked out. In the event that an individual product data sheet has multiple items selected, refer to the Equipment Cross Reverence Schedule, to obtain the relevant model and part number.

B. Product Data

1. Product data as specified in individual Sections include, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare- parts listing and printed product warranties, as applicable to the work.

C. Samples

1. Samples specified in individual Sections include, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols and units of work to be used by the Engineer or Buyer for independent inspection and testing, as applicable to the work.

1.03 SELLER'S RESPONSIBILITIES

- A. Review shop drawings, product data and samples, including those by component equipment suppliers and subcontractors, prior to submission to determine and verify the following:
 - 1. Measurements
 - 2. Construction criteria
 - 3. Catalog numbers and similar data
 - 4. Conformance with related Sections
- B. Each shop drawing, sample and product data submitted by the Seller shall have affixed to it the following Certification Statement including the Seller's Company name and signed by the Seller designated Project Manager. Shop drawings and product data sheets shall be organized using bookmarks in PDF format and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package.
- C. A separate transmittal form shall be used for each section where submittal is required. Transmittal of Shop Drawings on various items using a single transmittal form shall be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole.
- D. The Seller shall utilize a 9-character submittal identification numbering system in the following manner:
 - 1. The first six digits shall be the applicable Section Number.
 - 2. The next two digits shall be the numbers 01 to 99 to sequentially number each initial separate item or drawing submitted under each specific Section Number.
 - 3. The last character shall be a letter, A to Z, indicating the submission, or resubmission of the same Drawing, i.e., "A=1st submission, B=2nd submission, C=3rd submission, etc. A typical submittal number would be as follows:

11 30 00-01-B

- 11 30 00 = Section for hollow fiber membrane equipment
- 01 = The eighth submittal under this section
- B = The second submission (first resubmission) of that particular shop drawing.

4. Once information for a section has been prepared to completion, it may be submitted to the Engineer for review. However, if the Engineer determines that the review and approval of the section is contingent upon receipt of additional submittal information, the review of that section shall not be performed until all information has been received.
- E. Notify the Buyer and Engineer in writing, at the time of submittal, of any deviations in the submittals from the requirements of the Contract Documents.
 - F. The review and approval of shop drawings, samples or product data by the Buyer and Engineer shall not relieve the Seller from the responsibility for the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Seller and the Buyer and Engineer will have no responsibility therefor. The Buyer and the Engineer may review the conformance of all Goods and Special Services with respect to the Contract Documents at any time prior to Final Acceptance.
 - G. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.

1.04 SUBMITTAL REQUIREMENTS

- A. Make submittals promptly in accordance with the Contract Times specified in Article 5 of the General Conditions.
- B. Schedule and Coordination Meetings
 1. The Seller shall submit Shop Drawings Table A and Table B of this Section.
 2. Within 10 days after the issuance of the First Shop Drawing the Seller shall meet with the Engineer and Buyer at the Buyers location to review and receive comment regarding the Shop Drawing Submittal.
 3. Within 10 days after the issuance of the Second Shop Drawing Submittal, the Seller shall meet with the Engineer and Buyer at the Buyers location to review and receive comment regarding the Shop Drawing Submittal.
- C. Each submittal, appropriately coded, will be returned within 15 working days following receipt of submittal by the Engineer.
- D. Number of submittals required:
 1. Shop Drawings: 1 electronic copy in PDF format.

2. Samples: Submit the number stated in the respective Sections.
 3. Drawings: 1 electronic copy in PDF format.
- E. A letter of transmittal shall accompany each submittal.
- F. At the beginning of each letter of transmittal, provide a reference heading indicating the following:

Buyer's Name	<u>City of Sandy</u>
Project Name	<u>Sandy Program Management</u>
Contract No.	<u>Alder Creek WTP</u>
Transmittal No.	_____
Section No.	_____

- G. All Shop Drawings submitted shall bear the stamp of approval and signature of the Seller as evidence that they have been reviewed by the Seller. Submittals without this stamp of approval will not be reviewed by the Buyer and will be returned to the Seller. The Seller's stamp shall contain the following information:
1. The date of submission and the dates of any previous submissions.
 2. The Project title and number.
 3. Seller identification.
 4. Name of the following:
 - a. Seller
 - b. Supplier, Distributor or Manufacturers Representative
 - c. Manufacturer (i.e. Component Equipment Manufacturer)
 5. Identification of the product, with the section number, page, and paragraph(s), drawing number.
 6. Identification of deviations from Contract Documents.
 7. Identification of revisions on resubmittals.
 8. A blank 3-inch x 4- inch space for Engineers review stamp.
 9. Where calculations are required to be submitted by the Seller, the calculations shall have been checked by a qualified individual other than the preparer. The submitted calculations shall clearly show the names of the preparer and of the checker.
- H. All Shop Drawings submitted for approval shall have a title block with complete identifying information satisfactory to the Buyer

1.05 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES

- A. Refer to Article 5.06 of the General Conditions.
- B. One marked up electronic PDF format copy will be returned to the Seller under one of the following notations.
 - 1. "NO EXCEPTIONS TAKEN" is assigned when there are no notations or comments on the submittal. When returned under this code the Seller may release the equipment and/or material for manufacture, unless specifically noted in the Agreement or the General Conditions.
 - 2. "MAKE CORRECTIONS NOTED". This code is assigned when a confirmation of the notations and comments IS NOT required by the Seller. The Seller may release the equipment or material for manufacture unless specifically noted in the Agreement or the General Conditions; however, all notations and comments must be incorporated into the final product without exception.
 - 3. "MAKE CORRECTIONS NOTED/CONFIRM". This combination of codes is assigned when a confirmation of the notations and comments IS required by the Seller. The Seller may, at his own risk, release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product. This confirmation shall specifically address each omission and nonconforming item that was noted. Confirmation is to be received by the Buyer and Engineer within 15 working days of the date of the Engineer's transmittal requiring the confirmation.
 - 4. "AMEND - RESUBMIT". This combination of codes is assigned when notations and comments are extensive enough to require a resubmittal of the package. This resubmittal is to address all comments, omissions and non-conforming items that were noted. Resubmittal is to be received by the Buyer and Engineer within 15 working days of the date of the Engineer's transmittal requiring the resubmittal.
 - 5. "REJECTED - RESUBMIT" is assigned when the submittal does not meet the intent of the Contract Documents. The Seller must resubmit the entire package revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the Contract Documents.
 - 6. "COMMENTS ATTACHED" is assigned where there are comments attached to the returned submittal which provide additional data to aid the Seller.
 - 7. Items 1 through 5 designate the status of the reviewed submittal with Item 6 showing there has been an attachment of additional data.
- C. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Seller shall identify all revisions made to the submittals, either in writing on the letter of transmittal or on the shop drawings by use of revision triangles or other similar methods. The resubmittal shall clearly respond to each comment made by the Buyer and Engineer on the previous submission. Additionally, the Seller shall direct specific attention to any revisions made other than the corrections requested by the Buyer and Engineer on previous submissions.

- D. Partial submittals may not be reviewed. The Buyer and Engineer will be the sole judge as to the completeness of a submittal. Submittals not complete will be returned to the Seller and will be considered "Rejected" until resubmitted. The Buyer and Engineer may at his option provide a list or mark the submittal directing the Seller to the areas that are incomplete.
- E. If the Seller considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Seller shall give written notice thereof to the Buyer and Engineer at least 7 working days prior to release for manufacture.
- F. When the shop drawings have been completed to the satisfaction of the Buyer and Engineer, the Seller shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Buyer and Engineer.
- G. All Shop Drawings and Samples shall be submitted prior to the dates established in Article 5 of the Agreement. For any Shop Drawing that is submitted after the dates established in Article 5 of the Agreement, if the Shop Drawing is deemed
- H. "AMEND - RESUBMIT" or "REJECTED" the Buyer shall notify the Seller within five working days after receipt of the Shop Drawings that the shop drawings furnished were not acceptable. Upon notification, the Seller has ten working days to produce and deliver to the Buyer an acceptable Shop Drawing(s).
- I. In the event that the Seller requests an "or equal" for a previously approved item, all of the Engineer's costs in the reviewing and approval of the "or equal" will be back-charged to the Seller, unless the need for such "or-equal" is beyond the Seller's control.

1.06 DISTRIBUTION

- A. In accordance with the requirements of Section 01 73 00, Installation, Operation and Maintenance Manuals, distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Buyer and Engineer. Number of copies shall be as directed by the Buyer and Engineer.

1.07 PROFESSIONAL ENGINEER (P.E.) CERTIFICATION FORM

- A. If specifically required in other related Sections, submit a P.E. Certification for each item required, in the form attached to this Section, completely filled in and stamped.

1.08 GENERAL PROCEDURES FOR SUBMITTALS

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work of other related Sections, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Seller's failure to transmit submittals in a timely manner.

B. Submit Shop Drawings to the Engineer(s) at the addresses indicated below:

Stantec Consulting Services, Inc.
c/o Adam Odell, P.E.
Tel:(503) 220-5409
Adam.Odell@stantec.com

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

PART 4 -- SUPPLEMENTAL INFORMATION

FIRST SHOP DRAWING SUBMITTALS -- TABLE A

SECTION	TITLE	PARAGRAPH	DATE SUBMITTED	DATE APPROVED
01 74 00	Membrane System and Module Warranty	1.03A		
09 90 00	Painting System P&IDs	1.03A		
11 30 00	General Arrangement Drawings	1.03A		
11 30 00	Electrical One-line drawings	1.03A		
11 30 00	Valve, instrument, and equipment lists [Addendum #5]	1.03A		
11 21 10	Horizontal End Suction Pumps	1.03A		
11 24 90	Fiberglass Reinforced Plastic Tank	1.03.A.1		
11 30 00	Hollow Fiber Membrane Equipment	1.03A.2.a		
11 34 00	Automatic Self-Cleaning Strainers	1.03A		
11 37 00	Compressed Air System	1.03A		
11 37 10	Blower Positive Displacement	1.03A		
11 39 10	Diaphragm Pumps	1.03A		
11 39 50	Vertical Inline Centrifugal Booster Pumps	1.03A		
11 40 05	Strainers	1.03A		
13 32 70	Process Instrumentation General Requirements and Switches	1.03A		
13 32 80	Process Instrumentation Meters and Transmitters	1.03A		
13 32 90	Process Instrumentation Analyzers	1.03A		
15 10 00	Ball Valves	1.03A		
15 10 10	Butterfly Valves	1.03A		
15 10 40	Check Valves	1.03A		
15 10 50	Specialty Valves	1.03A		
15 10 60	Valve Actuators	1.03A		
16 48 20	Variable Frequency Drive Units	1.03A		

SECOND SHOP DRAWING SUBMITTALS -- TABLE B

SECTION	TITLE	PARAGRAPH	DATE SUBMITTED	DATE APPROVED
01-08-00	Identification and Tagging	1.03A		
01-75-00	Spare Parts	1.03A		
05-05-19	Post-Installed Concrete Anchors	1.03A		
11-24-90	Fiberglass Reinforced Plastic Tanks	1.03A.2		
11-30-00	Hollow Fiber Membrane Equipment	1.03A.2.b		
13-32-00	Instrumentation and Control System- Functional Description	1.03A		
13-32-10	Instrumentation and Control System- General Requirements	1.03A		
13-32-50	Programmable Logic Control Equipment	1.03A		
13-32-60	SCADA System	1.03A		
13-33-00	Control Panels, Enclosures, and Panel- Instruments	1.03A		
15-06-20	Stainless Steel Pipe and Tubing	1.03A		
15-07-00	PVC and CPVC Piping Systems	1.03A		
15-07-10	HDPE Piping Systems	1.03A		
16-15-00	Manufactured Wiring Systems	1.03A		
11-30-00	Catalog cut sheets for all tagged equipment [Addendum #5]	1.03A		
11-30-00	Spare Parts List	1.03A		
11-30-00	Tank Drawings	1.03A		
11-30-00	SFD	1.03A		
11-30-00	Control Panel Drawings	1.03A		

P.E. CERTIFICATION FORM

The undersigned hereby certifies that he/she is a professional engineer registered in the [State] [Commonwealth] of _____ and that he/she has been employed by

_____ to design

(Name of Seller)

(Insert P.E. Responsibilities)

in accordance with Section _____ for the

_____.

(Name of Project)

The undersigned further certifies that he/she has performed the design of the _____, that said design is in conformance with all

(Name of Project)

applicable local, state, and federal codes, rules, and regulations, and that his/her signature and P.E. stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the

(Insert Name of Buyer)

or Buyer's representative within seven days following written request therefor by the Buyer.

P.E. Name

Seller's Name

Signature

Signature

Address

Title

Address

END OF SECTION