

SECTION 01300

SUBMITTALS

PART 1: GENERAL

1.01 CONSTRUCTION SCHEDULE

- A. Prepare and submit detailed progress schedules, schedule of values and shop drawing and sample submittal schedules to the Engineer for approval in accordance with Paragraphs 2.6 and 2.9 of the General Conditions. The schedule shall be in bar graph form and shall include, as a minimum, the following separate activities:
1. Physical construction (identifying mobilization, demobilization, setup time, lags, etc.).
 2. Issuance by Contractor of purchase orders for material and equipment and submittal of shop drawings and samples to the Engineer.
 3. Review by Engineer for each submittal of samples and shop drawings. RPR MUST RECEIVE COPIES OF ALL SUBMITTALS. Unless otherwise approved by the Engineer, allow ten (10) working days for Engineer to review each submittal.
 4. Fabrication time for materials and equipment.
 5. Delivery of materials and equipment.
 6. Installation of materials and equipment.
 7. Testing, start-up and training for individual pieces of equipment or entire systems as appropriate.
 8. Weather affected activities.
 9. Outages or interruptions of Owner's facilities required to perform work.
 10. Demolition or removal work under this Contract.
- B. Activity durations shall represent the best estimate of elapsed time considering the scope of the Work involved in the activity and the resources planned for accomplishing the activity expressed in working days.
- C. Activity descriptions shall clearly define the scope of work associated with each activity.
- D. Detail the construction work schedule to an extent that progress can be readily monitored on a weekly basis. In general, the construction work shall be detailed such that no construction activity shall have duration greater than fifteen (15) work days. As a minimum, each activity shall be coded by:
1. Activity type (i.e., submittal, Engineer's review, material order material delivery, pilot hole drilling, well testing, development, etc.).
 2. Responsibility (i.e., Contractor, subcontractor A, subcontractor B, Owner, Engineer, etc.).
 3. Area (i.e., Pilot Wells, Production Wells, sitework, etc.).
- E. Develop the construction schedule as necessary to properly control and manage the project. The above schedule development requirements are a minimum.

- F. The preliminary progress schedule shall be submitted in a bar graph format and shall include, as a minimum, a graphic representation of all significant activities and events involved in the construction of the project. The graphic representation and statement must clearly depict and describe the sequence of activities planned by the Contractor, their interdependence and the times estimated to perform each activity.

1.02 FINALIZING SCHEDULES

- A. Prepare to present and discuss at the preconstruction meeting, the schedules submitted in accordance with this specification. Unless additional information is required to be submitted by the Contractor, the Engineer will, within 15 working days of the preconstruction conference, provide comments to the Contractor. Then resubmit the affected schedules addressing the Engineer's comments.
- B. Approval of the final schedules by the Engineer is advisory only and shall not relieve the Contractor of responsibility for accomplishing the work within the Contract Times. Omissions and errors in the approved schedule shall not excuse performance less than that required by the Contract. Approval by the Engineer in no way makes the Engineer an insurer of the success of those schedules or liable for time or cost overruns flowing from shortcomings in such schedules.

1.03 REQUIREMENTS FOR CONFORMING TO SCHEDULE

- A. Take such steps as will be necessary to improve progress, if, in the opinion of the Engineer, the Contractor falls behind the progress schedule. Engineer may require Contractor to increase the number of shifts and/or overtime operations, days of work, and/or the amount of construction planned, and to submit for approval such supplementary schedule or schedules as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost to the Owner. An updated cash flow schedule will be required in this occurrence and will be provided with the supplementary schedules referenced above.

1.04 UPDATING SCHEDULES

- A. Submit to the Engineer monthly updates of the schedules required per this specification section. **Monthly progress meetings are a good time to receive this information. We can also require two week look ahead schedule.**
- B. Progress and shop drawing schedule updates shall reflect the progress to date by providing actual start dates for activities started, actual finish dates for completed activities, and identifying out of sequence work, schedule logic changes and any circumstances or events impacting the current schedule. The updates shall also contain the Contractor's best estimate of the remaining duration for activities not complete as of the date of the update. All graphic presentations and other information required per the initial submittal of these schedules shall be provided with each update.
- C. The cash flow schedules shall be updated to reflect any changes.

1.05 ADJUSTMENT OF PROGRESS SCHEDULE AND CONTRACT TIMES

- A. If the Contractor desires to make changes in the method of operating which affect the approved progress schedule, notify the Engineer in writing stating what changes are proposed and the reason for the change. If the Engineer approves these changes, revise and submit for approval, without additional cost to the Owner, all of the affected portions of the schedule.
- B. Shop drawings and samples which are not approved on the first submittal or within the schedule time shall be immediately rescheduled, as well as any work which fails to pass specified tests or has been rejected.
- C. The Contract Times will be adjusted only for causes specified in the General Conditions. In the event the Contractor requests an adjustment of the Contract times, furnish such justification and supporting evidence as the Engineer may deem necessary for a determination as to whether the Contractor is entitled to an adjustment of Contract Times under the provisions of the General Conditions. The Engineer will, after receipt of such justification and supporting evidence, make findings of fact and will advise the Contractor in writing. If the Engineer finds that the Contractor is entitled to any adjustment of the Contract Times, the Engineer's determination as to the total number of days adjustment shall be based upon the currently approved progress schedule and on all data relevant to the adjustment. The Contractor acknowledges and agrees that actual delays in activities which, according to the progress schedule, do not affect the Contract completion date shown by the critical path in the schedule will not be the basis for an adjustment of Contract Times.
- D. From time to time it may be necessary for the progress schedule and/or Contract Times to be adjusted by the Owner to reflect the effects of job conditions, weather, technical difficulties, strikes, unavoidable delays on the part of the Owner, and other unforeseeable conditions which may indicate schedule and/or Contract Times adjustments. Under such conditions, the Engineer shall direct the Contractor to reschedule the work and/or Contract Time to reflect the changed conditions. Revise the construction schedule accordingly. No additional compensation shall be made to the Contractor for such changes except as provided in the General Conditions. Unless otherwise directed, take all possible actions to minimize any extension to the Contract Times and any additional cost to the Owner.

1.06 CASH FLOW SCHEDULE

- A. In addition to the Construction Schedule required above, submit to the Engineer, for approval, a Cash Flow Schedule. The Cash Flow Schedule shall show the amounts of money by months, which will be required to reimburse the Contractor for Work performed during each month of the Contract Time. The sum of all the monthly cash requirements shall equal the total price of the Contract. The monthly cash requirements shall be proportioned with the aid of the Construction Schedule.
- B. The approved Cash Flow Schedule will be used by the Owner to program funds for progress payments to the Contractor. Monthly payments will be made to the Contractor in accordance with the Contract Agreement, but at no time will the

aggregate amount of payments exceed the accumulated amount of payments for the same period of the Cash Flow Schedule.

1.07 SHOP DRAWINGS

- A. Promptly supply to the Engineer for approval, shop drawings with details and schedules for all items as noted in the Drawings and/or Specifications and/or required by the Engineer. Submittals are required for all equipment and materials to be installed on the job.
- B. Five (5) copies of all drawings, schedules and brochures shall be submitted for approval. Black line prints, blue line prints or reproducible transparencies are required. Blueprints (white lines on a blue background) are not acceptable. Each submittal shall have the job name on it.
- C. Submittals smaller than 8-1/2 by 11 inches shall be secured to paper 8-1/2 by 11 inches.

1.08 SAMPLES

When required by the Engineer or where noted in other Sections of these Specifications, samples of materials shall be submitted for approval.

1.09 PRE-CONSTRUCTION VIDEO/ELECTRONIC PHOTOS

- A. Prior to mobilization at the site, furnish to the Engineer on DVD a video recording of all planned construction areas, material storage areas, areas adjacent to these areas, including but not limited to, streets, driveways, sidewalks, curbs, ditches, fencing, railing, visible utilities, retaining structures and adjacent building structures. The purpose of the video is to document existing conditions and to provide a fair measure of required restoration. Care should be taken to record all existing conditions which exhibit deterioration, imperfections, structural failures or situations that would be considered substandard. RPR should attend site video making with the Contractor.
- B. The video shall be high quality, color and in an approved electronic format. Temporary lighting shall be provided as necessary to properly video areas where natural lighting is insufficient (indoors, shadows, etc.). The video shall include an audio soundtrack to provide the following information:
 - 1. Detailed description of location being viewed referenced to Contract Drawings (i.e., well location, building designation, pipeline route etc.)
 - 2. Direction (N, S, E, W, looking up, looking down, etc.) of camera view
 - 3. Date, time, temperature, environmental conditions during recording.

Where required by Engineer, electronic photographs of specific location shall be provided to supplement the electronic video.

- C. Any areas not readily visible by video/photo methods shall be described in detail. Unless otherwise approved by Engineer, video shall not be performed during

inclement weather or when the ground is covered partially or totally with snow, ice, leaves, etc.

- D. As many recordings or photos as are necessary to satisfy the requirements of this section shall be prepared. The original documents shall be submitted to the Engineer accompanied by a detailed log of the contents of each DVD. The log should include location descriptions with corresponding file name to facilitate the quick location of information contained on the DVDs. The DVDs will be maintained by the Engineer during construction and may be viewed at any time by Contractor upon request. Upon final acceptance, the DVDs will become the permanent property of the Owner.

1.10 PROGRESS PAYMENTS

- A. The detailed arrangement for submittal of progress payments shall be discussed at the preconstruction meeting. In general, progress payments shall be submitted monthly in a format acceptable to the Engineer. The progress payment request shall be based on the unit prices and should provide the percentage of completion, total dollar value completed, dollar value completed prior to the current payment, and the amount requested for this progress payment for each line item contained in the schedule of values. Progress payment requests for material and/or equipment suitably stored but not yet incorporated into the work shall be accompanied by a copy of the appropriate manufacturers invoice, shipping order, bill of lading, etc. and the progress payment amount shall be the direct cost to the Contractor, or subcontractor, for such material and/or equipment. Payment will not be made to the Contractor if, upon inspection by the Engineer, it is determined that the material and/or equipment does not conform to the requirements of the Contract Documents including proper storage, receipt of approved shop drawings, receipt of any special guarantees, Bonds, insurance coverage, any evidence of damage or imperfections, etc.

1.11 CONTRACTOR'S DAILY REPORTS

- A. The Contractor shall complete daily reports containing at least the following information:
 - 1. A description of daily work activities performed, including but not limited to:
 - a. size and quantity of main installed,
 - b. size and quantity of fittings, valves, and hydrants installed,
 - c. quantity of granular fill installed,
 - d. description and quantity of other equipment and materials installed,
 - 2. Description and quantity of underground obstructions encountered;
 - 3. A description of daily material or equipment deliveries;
 - 4. The temperature and weather conditions;
 - 5. The names and number of hours worked by each trade (General Contractor);
 - 6. The number of craftsmen and hours worked by each Subcontractor;
 - 7. The number of hours worked by each type of equipment;
 - 8. Downtime due to equipment failure;

9. Detailed description of issues that may cause the Contractor to incur delays, including quantity and types of issues.

- B. The daily reports shall be available upon request from Owner.
- C. Information provided on the daily report shall not constitute notice of delay or any other notice required by the Contract Documents. Notice shall be as required therein.

1.12 OPERATING AND MAINTENANCE INSTRUCTION MANUALS

- A. Prepare complete written maintenance and operating instructions covering the equipment provided under this Contract. Divide the operating instructions into basic sections according to type of equipment.
- B. Instructions shall describe all equipment and controls, their purpose, and their operation and use. Include maintenance checklists for use by the Owner's personnel and a complete listing of replacement parts with pertinent information relative to ordering such parts.
- C. Submit instructions in duplicate draft form for review by the Engineer at least eight weeks prior to initial operation and in final form within thirty days after return of one copy of the draft with the Engineer's notations.
- D. Prior to release of Final Payments, revise and resubmit copies of the instructions to accord with any changes in procedures or equipment made during start-up or initial operation. Resubmittals are also required for changes made during the guarantee period.

1.13 REQUIREMENTS FOR AMERICAN WATER ASSET VALUES

Provide a breakdown of the contract amount by Property Units in accordance with the list of Property Units that can be provided as requested. This process requires that the contractor assign the full cost of the project to lengths of pipe (by material and size), length of services (by material and size), hydrants, valves (by size), manholes and other fixtures (air relief valves, blowoffs, etc.) in the project. The submission must be approved by the Engineer to verify that the breakdown is realistic and reflects submitted contract unit prices.

1.14 PROJECT RECORD DOCUMENTS (BY CONTRACTOR)

- A. The Contractor shall complete and maintain on-site one set of the following Record Documents, which shall record all actual revisions to the Work concurrent with construction progress and shall be available upon request (during working hours or on the next business day) by the Owner, Engineer or Resident Project Representative.

1. Drawings;

2. Specifications;
 3. Addenda;
 4. Change orders and other modifications to the Contract;
 5. Approved Shop Drawings and other submittals;
 6. Field sketches.
- B. The Record Documents shall be updated daily (red-line markups). The Owner reserves the right to stop Work at Contractor's expense until red-line markups are up to date. Red-line markups shall contain but are not limited to the following information.
- C. Store Record Documents separate from documents used for construction.
- D. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
1. manufacturer's name and product model and number,
 2. product substitutions or alternates utilized,
 3. changes made by addenda and modifications.
- E. Record Drawings, Documents and Shop Drawings: Legibly mark each item to record actual construction including:
1. Original Drawings with Red-Line markings including measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements as stated in Section 01300 Submittals.
 2. Field changes of dimension and detail
 3. Pipe restrained joint lengths
 4. Actual fitting and valve locations with horizontal dimensions measured from permanent structures.
 5. Depths that exceed the minimum cover
 6. Details not on original Drawings.
 7. Pre and Post Construction videos
 8. Electronic photographs
 9. Others as required in other sections of the Specifications.
- F. Submit documents to Engineer with final Application for Payment.
- G. The Owner will issue a notice of Final Completion to the Contractor when the Work is in-service and up-to-date Record Documents have been provided by the Contractor.

PART 2: PRODUCTS

1.01 TESTING DATA CERTIFICATES

Product testing shall comply with all respective AWWA standards. The certificates of compliance shall be electronically scanned and submitted by E-mail to the Engineer or by submitting the hard copy originals to the Engineer.

PART 3: EXECUTION

Not Used.

END OF SECTION

