

SECTION 01 32 16
PROJECT SCHEDULES

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. The Contractor shall develop a Critical Path Method (CPM) plan and schedule demonstrating fulfillment of the contract requirements (Project Schedule), and shall keep the Project Schedule up-to-date in accordance with the requirements of this section and shall utilize the plan for scheduling, coordinating and monitoring work under this contract (including all activities of subcontractors, equipment vendors and suppliers). Conventional Critical Path Method (CPM) technique shall be utilized to satisfy both time and cost applications.

1.2 CONTRACTOR'S REPRESENTATIVE:

- A. The Contractor shall designate an authorized representative responsible for the Project Schedule including preparation, review and progress reporting with and to the Contracting Officer's Representative (COTR).
- B. The Contractor's representative shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the requirements of this specification section.
- C. The Contractor's representative may develop the project schedule within their organization or engage the services of an outside consultant.

1.3 PROJECT SCHEDULE SUBMITTAL REQUIREMENTS

- A. The Contractor shall submit the original Project Schedule at or before the Preconstruction Conference.
- B. Within 14 calendar days after receipt of the original Project Schedule, the Contracting Officer or his representative, will do one or both of the following:
1. Notify the Contractor concerning his actions, opinions, and objections.
 2. Schedule a meeting with the Contractor at or near the job site for joint review, correction or adjustment of the proposed plan if required. Within 14 calendar days after the joint review, the Contractor shall revise and submit the revised Project Schedule.
- C. Each submittal of the Project Schedule (including the original and monthly updates) shall be dated and shall include one hard copy and one electronic version of each deliverable.
1. Hard copies of the schedule shall be printed on appropriately-sized paper (up to 30 x 42 inches).
 2. Electronic versions of the schedule shall be compatible with Microsoft Project 2007.

3. Electronic versions of all other documents shall be either compatible with Microsoft Office 2010 or in pdf format.

1.4 PROJECT SCHEDULE REQUIREMENTS

- A. The Project Schedule shall reflect the Contractor's approach to scheduling the complete project and shall describe the activities to be accomplished and their interdependencies.
- B. The Project Schedule shall include at a minimum, the following activities:
 1. All phasing described in Section 01 00 00, GENERAL REQUIREMENTS- OPERATIONS AND STORAGE AREAS- Paragraph "Phasing"
 2. Procurement- Submittals, review and approvals, fabrication and delivery of all key and long lead time procurement items.
 3. Design- All design submissions listed in the RFP solicitation, including the specified meeting and review activities.
 4. Detailed design and construction activities for the first 90 calendar days after Notice to Proceed.
 5. Summary activities which are necessary (and are not included above) to properly show:
 - a. The approach to scheduling the remaining work. The work for each major trade must be represented by at least one summary activity, so that the work cumulatively shows the entire project schedule.
 - b. Summary activities shall have the trade code of SUM, or be otherwise clearly identified.
- C. Each activity/event on the schedule shall contain the following as a minimum:
 1. Activity/event ID
 2. Activity/event description
 3. Duration
 4. Budget amount
 5. Early start date
 6. Early finish date
 7. Late start date
 8. Late finish date
 9. Total float
- D. Show on the project schedule the sequence of work activities/events required for complete performance of all items of work. The Contractor shall:
 1. Show activities/events as:
 - a. Contractor's time required for submittal of shop drawings, templates, fabrication, delivery and similar pre-construction work.

- b. Contracting Officer's and Architect-Engineer's review and approval of shop drawings, equipment schedules, samples, template, or similar items.
 - c. Interruption of VA Facilities utilities, delivery of Government furnished equipment, and rough-in drawings, project phasing and any other specification requirements.
 - d. Test, balance and adjust various systems and pieces of equipment, maintenance and operation manuals, instructions and preventive maintenance tasks.
 - e. VA inspection and acceptance activity/event with a minimum duration of five work days at the end of each phase and immediately preceding any VA move activity/event required by the contract phasing for that phase.
- 2. Show not only the activities/events for actual construction work for each trade category of the project, but also trade relationships to indicate the movement of trades from one area, floor, or building, to another area, floor, or building, for the trades who are performing major work under this contract.
 - 3. Break up the work into activities/events of a duration no longer than 20 work days each or one reporting period, except as to non-construction activities/events (i.e., procurement of materials, delivery of equipment, concrete and asphalt curing) and any other activities/events for which the COTR may approve the showing of a longer duration. The duration for VA approval of any required submittal, shop drawing, or other submittals will not be less than 10 work days.
 - 4. Describe work activities/events clearly, so the work is readily identifiable for assessment of completion.
 - 5. The schedule shall be generally numbered in such a way to reflect either discipline, phase or location of the work.
- E. The Project Schedule in its original form shall contain no contract changes or delays which may have been incurred during the schedule development period and shall reflect the Contractors as bid schedule. These changes/delays shall be entered at the first update after the Project Schedule has been approved.
 - F. Failure to include any element of work required for the performance of this contract on the Project Schedule shall not excuse the Contractor from completing all work required within any applicable completion date of each phase, regardless of the COTR's approval of the Project Schedule.

1.5 WORK ACTIVITY/EVENT COST DATA

- A. All work activities (including design), other than procurement activities, shall be cost loaded as specified and will be the basis for progress payments.
- B. The cumulative amount of all cost loaded work activities/events (including alternates) shall equal the total contract price. Prorate overhead, profit and general conditions on all work activities/events for the entire project length. Negative work activity/event cost data will not be acceptable, except on VA issued contract changes.
- C. The Contractor shall cost load work activities/events for guarantee period services, test, balance and adjust various systems in accordance with the provisions in Article, FAR 52.232 - 5 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS) and VAAR 852.236 - 83 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS).
- D. In accordance with FAR 52.236 - 1 (PERFORMANCE OF WORK BY THE CONTRACTOR) and VAAR 852.236 - 72 (PERFORMANCE OF WORK BY THE CONTRACTOR), the Contractor shall identify which activities/events of the project will be self-performed by the contractor's own forces.
- E. The Contractor shall cost load work activities/events for all BID ITEMS. The sum of each BID ITEM work shall equal the value of the bid item in the Contractors' bid.

1.6 PAYMENT TO THE CONTRACTOR:

- A. The Contractor shall be entitled to a monthly progress payment upon approval of estimates as determined from the currently approved updated project schedule.
- B. The Contractor's payment requests shall be submitted monthly and shall include the following:
 - 1. The AIA application and certificate for payment documents G702 & G703, reflecting updated schedule activities and cost data in accordance with the provisions of the following Article, PAYMENT AND PROGRESS REPORTING, as the basis upon which progress payments will be made pursuant to Article, FAR 52.232 - 5 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS) and VAAR 852.236 - 83 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS).
 - 2. The updated schedule, in Precedence Diagramming Method (PDM) format, as detailed in the Article PAYMENT AND PROGRESS REPORTING below.
 - 3. A listing of all agreed upon Project Schedule changes and associated data, as detailed in the Article CHANGES TO THE SCHEDULE.
- C. Approval of the Contractor's monthly Application for Payment shall be contingent, among other factors, on the submittal of a satisfactory

monthly update of the project schedule, as detailed in the following Article, PAYMENT AND PROGRESS REPORTING.

1.7 PAYMENT AND PROGRESS REPORTING

- A. Monthly schedule update meetings will be held on dates mutually agreed to by the COTR and the Contractor. The Contractor's representative responsible for the schedule shall attend all monthly schedule update meetings. The Contractor shall accurately update the Project Schedule and all other data required and provide this information to the COTR three work days in advance of the schedule update meeting. Job progress will be reviewed to verify:
1. Actual start and/or finish dates for updated/completed activities/events.
 2. Remaining duration for each activity/event started, or scheduled to start, but not completed.
 3. Logic, time and cost data for change orders and supplemental agreements that are to be incorporated into the Project Schedule.
 4. Changes in activity/event sequence and/or duration which have been made, pursuant to the provisions of following Article, ADJUSTMENT OF CONTRACT COMPLETION.
 5. Completion percentage for all completed and partially completed activities/events.
 6. Logic and duration revisions required by this section of the specifications.
 7. Activity/event duration and percent complete shall be updated independently.
- B. Within 5 business days of completion of the joint review, the Contractor shall provide the COTR with an updated computer-produced calendar-dated schedule.
- C. Within 5 business days of receiving the updated schedule, the COTR will provide the Contractor with either approval of the schedule or required corrections. Required corrections shall be made by the Contractor within 3 business days.

1.8 WEEKLY PROGRESS MEETINGS

- A. Meet weekly with the Government (or as otherwise mutually agreed to) between the meetings described in paragraph PAYMENT AND PROGRESS REPORTING for the purpose of jointly reviewing the actual progress of the project as compared to the as planned progress and to review planned activities for the upcoming two weeks. The then current and approved schedule update shall be used for the purposes of this meeting and for the production and review of reports. The Contractor's Project Manager

and the COTR shall attend. The weekly progress meeting will address the status of RFI's, RFP's, and submittals.

- B. Provide a bar chart produced by the scheduling software, organized by Total Float and Sorted by Early Start Date, and a two week "look-ahead" schedule by filtering all schedule activities to show only current ongoing activities and activities scheduled to start during the upcoming two weeks, organized by activity/event and sorted by Early Start Date.
- C. The Government and the Contractor shall jointly review the reports. If it appears that activities on the longest path(s) which are currently driving the calculated completion date (driving activities), are not progressing satisfactorily and therefore could jeopardize timely project completion, corrective action must be taken immediately as described in paragraph RESPONSIBILITY FOR COMPLETION.
- D. The COTR and the Contractor should conclude the meeting with a clear understanding of those work and administrative actions necessary to maintain project schedule status during the reporting period.

1.9 RESPONSIBILITY FOR COMPLETION

- A. If it becomes apparent from the current updated Project Schedule that phasing or contract completion dates will not be met, the Contractor shall execute some or all of the following remedial actions:
 - 1. Increase construction manpower in such quantities and crafts as necessary to eliminate the backlog of work.
 - 2. Increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment, or any combination of the foregoing to eliminate the backlog of work.
 - 3. Reschedule the work in conformance with the specification requirements.
- B. Prior to proceeding with any of the above actions, the Contractor shall notify and obtain approval from the Contracting Officer for the proposed schedule changes. If such actions are approved, the representative schedule revisions shall be incorporated by the Contractor into the Project Schedule before the next update, at no additional cost to the Government.

1.10 CHANGES TO THE SCHEDULE

- A. With each monthly submission of the updated project schedule, the Contractor shall submit a list of any activity/event changes for any of the following reasons:
 - 1. Delay in completion of any activity/event or group of activities/events, which may be involved with contract changes, strikes, unusual weather, and other delays will not relieve the Contractor from the requirements specified unless the conditions are

- shown on the CPM as the direct cause for delaying the project beyond the acceptable limits.
2. Delays in submittals, or deliveries, or work stoppage are encountered which make rescheduling of the work necessary.
 3. The schedule does not represent the actual prosecution and progress of the project.
 4. When there is, or has been, a substantial revision to the activity/event costs regardless of the cause for these revisions.
- B. Project Schedule revisions which affect the previously approved schedules for Government furnished equipment, vacating of areas by the VA Facility, contract phase(s) and sub phase(s), utilities furnished by the Government to the Contractor, or any other previously contracted item, shall be furnished in writing to the Contracting Officer for approval.
- C. The cost of revisions to the project schedule resulting from contract changes will be included in the proposal for changes in work as specified in FAR 52.243 - 4 (Changes) and VAAR 852.236 - 88 (Changes - Supplemental), and will be based on the complexity of the revision or contract change, man hours expended in analyzing the change, and the total cost of the change.
- D. The cost of revisions to the Project Schedule not resulting from contract changes is the responsibility of the Contractor.

1.11 ADJUSTMENT OF CONTRACT COMPLETION

- A. The contract completion time will be adjusted only for causes specified in this contract. Request for an extension of the contract completion date by the Contractor shall be supported with a justification, CPM data and supporting evidence as the COTR may deem necessary for determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof based on revised activity/event logic, durations (in work days) and costs is obligatory to any approvals. The schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved in this request. The Contracting Officer's determination as to the total number of days of contract extension will be based upon the current computer-produced calendar-dated schedule for the time period in question and all other relevant information.
- B. Actual delays in activities/events which, according to the computer-produced calendar-dated schedule, do not affect the extended and predicted contract completion dates shown by the critical path in the network, will not be the basis for a change to the contract completion date.

- C. The Contractor shall submit each request for a change in the contract completion date to the Contracting Officer in accordance with the provisions specified under FAR 52.243 - 4 (Changes) and VAAR 852.236 - 88 (Changes - Supplemental). The Contractor shall include, as a part of each change order proposal, a sketch showing all CPM logic revisions, duration (in work days) changes, and cost changes, for work in question and its relationship to other activities on the approved network diagram.

1.12 EARLY PROJECT COMPLETION

- A. In the event the project schedule calculates an early completion date of the last activity prior to the contract completion date, the Contractor shall identify those activities that it intends to accelerate and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. The last activity shall have a late finish constraint equal to the contract completion date and the schedule will calculate positive float. The Government will not approve an early completion schedule with zero float on the longest path. The Government is under no obligation to accelerate activities for which it is responsible in order to support a proposed early contract completion.

1.13 OWNERSHIP OF FLOAT

- A. Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

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