

**TG 01320 v 13.04**  
**Summary of Changes**

1. Expand WebCM to all islands.

**Construction Progress Documentation**  
**TECHNICAL GUIDE**

**TG 01320**

**1. COORDINATION ISSUES:**

- 1.1 The information contained in and required by this section has serious contract implications. Ensure there are no errors in the final specification section.

**2. DESIGN ISSUES:** (Not Used)

**3. DRAWING NOTES:** (Not Used)

**4. STANDARD DRAWINGS:** (Not Used)

**5. SPECIFICATION NOTES:** (Not Used)

- 5.1 Schedule of Prices: Depending on the complexity of the Project, adjust the requirements and breakdown levels of the Contractor's costs and schedule.

**6. GUIDE SPECIFICATION:**

- 6.1 SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION is attached. Add this section for all projects.

***SPECIFIER'S NOTE: Blue colored italicized text is used for notes to the specifier and should be completely deleted from the final text. Where [Red colored text in brackets] is shown in this specification section, insert wording, numbers, etc. as appropriate and delete brackets. Where <Red colored text in brackets> is shown, a choice is indicated. Make the appropriate choice and delete the brackets. Maintain footer notation with the current version used (e.g. TG 01320 v04.0813.04). Verify that section titles cross-referenced in this Section correspond to this Project's specifications.***

***Do not include the Project Name (etc.) line in the footer. Use the following format for the specification footer.***

TG 01320 v04.0813.04  
DAGS Job No. 00-00-0000

Construction Progress Documentation  
01320 - 1

End Footer Sample

## SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION

### PART 1 - GENERAL

**SPECIFIER'S NOTE:** Paragraph 1.01 A. Delete schedule types not required or add new schedule types to suit Project. Revise paragraph 1.01 B. to suit project.

#### 1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Contractor's Construction Schedule.
  2. Submittals Schedule.
  3. Schedule of Prices.
  4. Payment Application.
- B. Related Sections include the following:
1. SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION for preparing a combined Contractor's Construction Schedule.
  2. SECTION 1322 – WEB BASED CONSTRUCTION MANAGEMENT for use of the StateWebCM for electronic submittals.
  23. SECTION 01330 - SUBMITTAL PROCEDURES for submitting schedules and reports.

**SPECIFIER'S NOTE:** Retain definitions in paragraph 1.02 E. and subparagraphs 1.02 E. 1. thru 3. below for most projects. See Project Coordinator if proposing to designate ownership of float by another method.

#### 1.02 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
1. Critical activities are activities on the critical path and control the total length of the project. They must start and finish on the planned early start and finish times.
  2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of project.
- C. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.

- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either the Department or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
  - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Schedule of Prices: A statement furnished by Contractor allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Payment Applications.

### **1.03 SUBMITTALS**

- A. Required Submittals: Submit 8 sets of the list of the required submittals, by Specification Section, within 15 days after award of the contract or upon earlier written instructions from the Contracting Officer. *[A general listing is provided under SECTION 01330 - SUBMITTAL PROCEDURES.]*
  - 1. The listing shall indicate and include the following:
    - a. The number of copies required for submittal.
    - b. Planned submittal date.
    - c. Approval date required by the Contractor.
    - d. A space where the "date of submittal" can be inserted.
    - e. A space where the "date of approval" can be inserted.
    - f. A space where an "action code" can be inserted.
- B. Construction Schedule: Submit 7 sets of the Construction Schedule for review within 15 days after the award of the contract or upon earlier written instructions from the Contracting Officer.
- C. Schedule of Prices: Submit 3 sets of the Schedule of Prices integrated with the Construction Schedule for review within 15 days after the award of the contract or upon earlier written instructions from the Contracting Officer.
  - 1. Use the Department's forms for Payment applications.
- D. Payment Application: Submit the payment application at earliest possible date and no sooner than the last day of the month after all payroll affidavits, updated submittal registers, and schedules have been submitted.

### **1.04 COORDINATION**

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate Contractors.

- B. Construction Schedule: Coordinate Contractor's Construction Schedule with the Schedule of Prices, Submittals Schedule, loaded monthly event activity, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from parties involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- C. Schedule of Prices: Coordinate preparation of the schedule with preparation of Contractor's Construction Schedule.
  - 1. Correlate line items in the Schedule of Prices with other required administrative forms and schedules, including the following:
    - a. The Department's Payment Application form and the Construction Progress Report continuation sheet for the event cost estimate per time period.
    - b. Submittals Schedule.

## **PART 2 - PRODUCTS**

### **2.01 SUBMITTALS SCHEDULE**

- A. Comply with the GENERAL CONDITIONS "SHOP DRAWINGS AND OTHER SUBMITTALS" Article. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules of materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.
- B. Preparation: Furnish a schedule of submittals per Contracting Officer.
  - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Prices, and Contractor's Construction Schedule.

***SPECIFIER'S NOTE: 21 for Oahu and 25 for all other islands unless instructed otherwise by Project Coordinator.***

- 2. The schedule shall accommodate a minimum of 21 [25] calendar days for the State's review, as applicable for the Island the project is located.
- 3. Prepare and submit an updated list to the Contracting Officer at monthly intervals or as directed by the Contracting Officer. The listing shall reflect all approvals received since the last update.

***SPECIFIER'S NOTE: Use GANTT Chart Method Schedule for small projects (less than \$500,000). Otherwise, use PERT Critical Path Method Schedule.***

### **2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE - GANTT CHART METHOD**

- A. The construction schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. The progress chart shall indicate the order in which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment).

- B. Upon completion of the Contracting Officer's review, the Contractor shall amend the schedule as necessary to reflect the comments. If necessary, the Contractor shall participate in a meeting with the Contracting Officer to discuss the proposed schedule and changes required. Submit the revised schedule for review within 7 calendar days after receipt of the comments.
- C. Use the reviewed schedule for planning, organizing and directing the work, for reporting progress, and for requesting payment for the work completed. Unless providing an update, do not make changes to the reviewed schedule without the Contracting Officer's approval.
- D. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve progress, including those that may be required by the Contracting Officer, without additional cost to the State. The Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, or amount of construction plant, and to submit for approval any supplemental schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.
- E. Update the construction schedule at monthly intervals or when directed by the Contracting Officer to revise the schedule. Reflect any changes occurring since the last update with each invoice for progress payment. Submit copies of the purchase orders and confirmation of the delivery dates as directed. The Contracting Officer's review of the updated schedule is to check that the updated schedule does not alter the construction performance period unless the period was revised through a change order or contract modification.
- F. At Contractor's option a PERT chart may be used.

**OR**

**2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE - PERT CHART CRITICAL PATH METHOD (CPM)**

- A. The construction schedule shall address the entire project, to the extent required by the Contract Documents, and shall show an expedient and practical execution of work. If requested by the Contracting Officer, the Contractor shall participate in a preliminary meeting to discuss the proposed schedule and requirements prior to submitting the schedule.
- B. The Construction Schedule shall indicate the following:
  1. Elements of the Project in detail time scaled by month or by week, and a project summary.
  2. The order and interdependence of activities and the sequence in which the work is to be accomplished.
  3. How the start of a given activity is dependent upon the completion of preceding activities and how its completion restricts the start of following activities.

4. The submittal and approval of shop drawings, samples, procurement of critical materials and equipment, receipt of materials with estimated costs of major items for which payment will be requested in advance of installation, fabrication of special materials and equipment, and their installation and testing.
  5. Activities of the State that have an effect on the progress schedule, such as the required delivery dates for State furnished materials and equipment and other similar items.
  6. Provide a separate report with the following:
    - a. The description of the activity.
    - b. The duration of time in calendar days.
    - c. For each activity indicate the early start date.
    - d. For each activity indicate the early finish date.
    - e. For each activity indicate the late start date.
    - f. For each activity indicate the late finish date.
    - g. Total float time.
    - h. Cost of event.
    - i. Contract-required dates for completion of all or parts of the Work.
    - j. Events are to be used on "Monthly Progress Report" for monthly payment request.
- C. Upon completion of the Contracting Officer's review, the Contractor shall amend the schedule to reflect the comments. If necessary, the Contractor shall participate in a meeting with the Contracting Officer to discuss the proposed schedule and changes required. Submit the revised schedule for review within 7 calendar days after receipt of the comments.
- D. Use the reviewed schedule for planning, organizing and directing the work, for reporting progress, and for requesting payment for the work completed. Unless providing an update, do not make changes to the reviewed schedule without the Contracting Officer's approval.
- E. Should changes to the schedule be desired, submit a request in writing to the Contracting Officer and indicate the reasons for the proposed change. If the changes are major, the Contracting Officer may require the Contractor to revise and resubmit the schedule at no additional cost to the State. Contractor shall mitigate the impact of all changes by readjusting the sequence of activities, duration of time, or resources utilizing available float.
1. A change is major if, in the opinion of the Contracting Officer, the change affects the substantial completion date or other contractual and milestone dates.
  2. Minor changes are those that only affect activities with adequate float time.
- F. Once the schedule is reviewed by the Contracting Officer, the Contractor shall submit 6 sets of the revised schedule within 14 calendar days.
- G. Throughout the duration of the project, the Contracting Officer may require more detailed breakdowns of activities, logic, and schedule submittals from the Contractor.

- H. Updated Schedules: Submit at monthly intervals or as directed by the Contracting Officer. The schedule shall reflect all changes occurring since the last update including the following:
1. Activities started and completed during the previous period.
  2. The estimated duration to complete each activity that was started but not completed.
  3. Percentage of cost payable for each activity.
  4. Modifications and pending proposed changes.
  5. Narrative report describing current and anticipated problem areas or delaying factors with their impact together with an explanation of corrective actions taken or proposed.
- I. Failure on the part of the Contractor to submit updated schedules may be grounds for the Contracting Officer to withhold progress payments for items noted on the schedule.
- J. Contractor shall prosecute the work according to the CPM Schedule. The Contracting Officer shall rely on the reviewed Contractor's CPM Schedule and regular updates for planning and coordination. The Contracting Officer's review of the Contractor's CPM Construction Schedule does not relieve the Contractor of its obligation to complete the work within the allotted contract time. Nor does the review grant, reject or in any other way act on the Contractor's request for adjustments to complete remaining contract work, or for claims of additional compensation. These requests shall be processed in accordance with other relevant provisions of the contract.
- K. If the Contracting Officer issues a field order or change order or other directive that affects the sequence or duration of work activities noted on the construction progress schedule, the Contractor shall promptly update the schedule. To accomplish this update, add, delete or revise the work activities noted or change the logic in the schedule to show the Contractor's plan to incorporate the change into the flow of work. All change orders and time extension requests that affect the construction schedule shall be evaluated based on their impact on the approved Construction Schedule.
- L. If the current work is behind schedule or projected to be behind schedule, such as negative float on a critical activity or inability to meet the Contract Completion Date, the Contracting Officer may require the Contractor, at the Contractor's cost, to take remedial measures to get the project back on schedule. This may require increasing the work force, working overtime and weekends, air freighting materials, or other similar actions.
- M. If at any time the Contracting Officer determines that any critical activity has fallen behind the CPM schedule by 15 calendar days or more, the Contractor shall submit a remedial plan to recapture the lost scheduled time. Include a revised schedule. Furnish the remedial plan no later than 7 calendar days from Contracting Officer's notification.

N. If an accelerated schedule is proposed, refer to GENERAL CONDITIONS Section 7.22 "CONSTRUCTION SCHEDULE".

### **2.03 SCHEDULE OF PRICES**

- A. Furnish a schedule of prices per Contracting Officer.
- B. Provide a breakdown of the Contract Sum in enough detail to facilitate developing and the continued evaluation of Payment Applications. Provide several line items for principal subcontract amounts, or for materials or equipment purchased or fabricated and stored, but not yet installed, where appropriate. Round amounts to nearest whole dollar; total shall equal the Contract Price.
- C. Each item in the Schedule of Prices and Payment Application shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

### **2.04 PAYMENT APPLICATION**

- A. Use the Schedule of Prices as the Monthly Construction Progress Report. Each Payment Application shall be consistent with previous applications and payments. The Contracting Officer shall determine the appropriateness of each payment application item.
- B. Payment Application Times: The date for each progress payment is the last day of each month. The period covered by each Payment Application starts on the first day of the month or following the end of the preceding period and ends on the last day of the month.
- C. Updating: Update the schedule of prices listed in the Payment application when Change Orders or Contract Modifications result in a change in the Contract Price.
- D. Provide a separate line item for each part of the Work where Payment Application may include materials or equipment purchased or fabricated and stored, but not yet installed.
- E. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
- F. Provide separate line items for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- G. Payment Application Forms: Use and submit copies of the Payment Application and Construction Progress forms provided by Department. Forms are available at the Department's Public Works Division office or District office. Furnish 7 copies.
- H. Application Preparation: Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of the Contractor.
  - 1. Entries shall match data on the Schedule of Prices and Contractor's Construction Schedule. Use updated schedules if revisions were made. Include amounts of Change Orders and Contract Modifications issued before last day of construction period covered by application.

- I. No payment will be made until the following are submitted each month:
  - 1. Monthly Estimate, 7 copies.
  - 2. Monthly Progress Report, 7 copies.
  - 3. Statement of Contract Time, 7 copies.
  - 4. Updated Submittal Register, 1 copy.
  - 5. Updated Progress Schedule, 1 copy.
  - 6. All Daily Reports, 1 copy.
  - 7. All Payroll Affidavits for work done, 1 copy.
  
- J. Retainage: The Department will withhold retainage in compliance with the GENERAL CONDITIONS.
  
- K. Transmittal: Submit the signed original and 6 copies of each Payment Application for processing.

**2.05 CONTRACTOR DAILY PROGRESS REPORTS**

- A. The General Contractor and all Subcontractors shall keep a daily report of report events.
  
- B. The form of the Contractor Daily Progress Report shall be as directed by the Contracting Officer.
  
- C. Submit copies of the previous week's reports on Monday morning at 10:00 a.m.
  
- D. Submit copies of the reports with the monthly payment request for the whole period since the last payment request submittal.
  
- E. Deliver the reports in hard copy, by e-mail, or web based construction management as directed by the Contracting Officer.

**PART 3 - EXECUTION (Not Used)**

END OF SECTION