Section 155:

WFL Specification 01/06/23

In all projects, include one of the following Section 155 requirements.

Select the appropriate bookmark (Select *Insert* tab; then select *Bookmark* icon; select bookmark) and copy that content to the project SCR:

Bookmark [Case1\_155](#Case1_155): Section 155 for projects that require a CPM Schedule; OR

Bookmark [Case2\_155](#Case2_155): Section 155 for projects that require a Bar Chart Method Schedule

Consult with the COE to determine the appropriate scheduling method.

## Section 155. — SCHEDULES FOR CONSTRUCTION CONTRACTS

01/06/23(1)– FP-14

 CASE 1:

WFL Specification 01/06/23 15510010

Include the following as directed below in all projects that require a CPM Schedule

For:

 IDIQ/MATOC projects insert:

 task order number

 All other projects insert:

 contract number

Consult with the PM and COE to determine whether approval of the Baseline Schedule Submittal is 1) required before the contractor mobilizes onto the project or 2) critical scheduling considerations require including a Preliminary Work Plan to allow the contractor to mobilize upon issuance of the NTP.

Delete this Section and substitute the following:

Description

### 155.01

This work consists of scheduling, monitoring, and reporting of all construction activities. Follow the requirements of FAR Clause 52.236-15, Schedules for Construction Contracts.

### 155.02 Definitions.

**(a) Baseline Schedule.** The initial schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the contract work.

**(b) Critical Activity.** An activity whose duration, if increased, will increase the time required to complete the project unless a schedule adjustment is made. These activities are activities on a schedule’s critical path.

**(c) Critical Path.**  The longest sequence of activities in the schedule that determines the projects duration.

**(d) Critical Path Method (CPM) Schedule.** A computer-generated time-scaled logic diagram showing: the sequence in which the contractor plans to perform the work; the interdependence of all activities and milestones; the work completed through the data date; and the remaining work necessary to complete the project.

**(e) Data Date.** The status reporting date upon which schedule updates (e.g. addition or deletion of activities, revised logic, updates to percent complete and remaining durations) are made. Scheduling software uses the data date to base its network calculations and is typically shown on the schedule as a vertical line separating the completed (as-built) work and scheduled (as‑planned) work.

**(f) Gantt Chart.** A printout of the CPM schedule with columns on the left hand side of the page identifying activity ID, activity name/description, original duration, remaining duration, percent complete, start date, finish date, total float, and predecessors/successors along with horizontal bars on the right hand side of the page displaying both completed work activities and the planned work activities at any given point of time.

**(g) Schedule Narrative.** A written narrative describing how the contractor plans to organize and execute the work described in the contract and the rationale and assumptions that went into developing the schedule including labor, equipment, and materials to be used, anticipated production rates, and work calendars.

**(h) Schedule Submittal.** A submittal that includes the schedule, schedule narrative, and submittal log. A schedule submittal is required for the baseline schedule and each schedule update.

**(i) Schedule Update.** An update to the previous approved schedule submittal. A schedule update is provided on a monthly basis (or sooner if necessary) showing the completed work and the remaining work necessary to complete the project.

**(j) Submittal Log.** A log that tracks status of contract submittals.

Construction Requirements

### 155.03 General.

WFL Specification 01/06/23 15510020

Insert the following in all projects requiring baseline schedule approval prior to mobilization.

Do not begin work associated with Section 151 Mobilization and limit construction activities according to Subsection 108.01 until the baseline schedule submittal is accepted by the CO.

WFL Specification 01/06/23 15510030

Insert the following in all projects.

Schedule approval does not relieve the Contractor of the responsibility to schedule the work in a practicable manner that meets the contract requirements. Failure to include elements of work in the schedule submittal required for performance of the contract, even if approved in a previous submittal, does not excuse the Contractor from being responsible for completion of all specified work by the contract’s fixed completion date.

The CO may reject any schedule submittal with a projected completion date past the contract’s fixed completion date. Approval of a schedule submittal with a projected completion date past the contract’s fixed completion date does not excuse the Contractor from being responsible for completing the work by the contract’s fixed completion date.

When a schedule is “Accepted as Noted”, address such comments when preparing resubmittals or future schedule submittals, when appropriate.

Failure to receive approval of a prior schedule submittal does not relieve the Contractor of the responsibility to meet the requirement to provide each specified schedule update submittal.

WFL Specification 01/06/23 15510040

Include the following in all projects.

For projects where mobilization may proceed immediately after the Notice To Proceed INSERT: Notice to Proceed.

OR for projects requiring baseline schedule submittal approval prior to mobilization INSERT: Contract Award.

### 155.04 Schedule Manager and Scheduling Software.

**(a) Qualifications.** Provide a schedule manager with a minimum of 5 years of construction scheduling experience. To be qualified, experience must demonstrate the person has supported active construction projects by preparing, evaluating, and actively managing construction schedules during 3 of the last 5 years including:

**(1)** Projects of similar size and scheduling complexity; and

**(2)** At least two highway or bridge type construction projects.

**(b) Scheduling Personnel** **and Software.** Provide a schedule manager responsible for preparing and managing the schedule submittals and the schedule submittal meetings. Within 7 days of [**INSERT** Notice to Proceed. **OR** Contract Award], unless otherwise approved by the CO, submit the following:

**(1)** The name and qualifications of the schedule manager for approval. Provide ONLY information that is applicable to the qualifications specified in Subsection 155.04(a). Documents that include unrelated or non-relevant information will not be accepted.

**(2)** The name of the scheduling software to be used along with version number (if any).

Do not designate the project superintendent, QC manager, foreman, or traffic control supervisor as the schedule manager.

WFL Specification 01/06/23 15510050

Include the following in all projects where mobilization will be allowed immediately after Notice To Proceed

### 155.05 Preliminary Work Plan.

A preliminary work plan is a written narrative of contract activities that will be in progress within the first 45 days after the Notice to Proceed has been issued. Limit construction activities according to Subsection 108.01 until the preliminary work plan is accepted by the CO.

Include in the preliminary work plan all elements listed in Subsection 155.06(b) with the exception of paragraphs (2) and (3).

The preliminary work plan is due a minimum of 7 days prior to the preconstruction conference.

Within 7 days after the preconstruction conference (or resubmittal date if rejected), the preliminary work plan will be accepted or rejected. If rejected, submit a revised plan within 3 days.

WFL Specification 01/06/23 15510060

Insert the following in all projects requiring the baseline schedule submittal approval prior to mobilization.

### 155.05 Preliminary Work Plan.

No preliminary work plan is required.

WFL Specification 01/06/23 15510070

Include the following in all projects.

For projects where mobilization may proceed immediately after the Notice To Proceed INSERT: 14 days of Notice to Proceed.

OR for projects requiring baseline schedule submittal approval prior to mobilization INSERT: 25 days of Contract Award.

### 155.06 Schedule Submittal.

The Schedule Submittal includes the Schedule, Schedule Narrative, Submittal Log, and Certification.

**(a)** Due date. The baseline schedule submittal is due within **[INSERT** 14 days of Notice to Proceed. **OR** 25 days of Contract Award.]

Monthly schedule submittals are due within 7 days following the closing date for progress estimates established in accordance with Subsection 109.08.

Resubmittal of rejected schedule submittals are due within 3 days of the rejected date unless otherwise approved by the CO.

When no schedule meeting is held, the schedule (re)submittals will be approved or rejected within 14 days of receipt. When a schedule meeting is held, the schedule submittal with updates resulting from the meeting will be approved or rejected within 7 days of receipt.

**(b)** Prepare schedule submittals according to Subsection 103.06. Include the following:

**(1)** Title page with contract information; Contractor name; current fixed completion date; date of submittal; name of submittal; progress estimate number; submittal number, and [**INSERT** contract number **OR** task order number].

**(2)** Native schedule file. An electronic copy of the schedule’s native file that is fully compatible with Bentley Synchro Pro Scheduler (free 2D Version). The native file must be provided in .xml format and/or be capable of being imported into Synchro using Synchro’s import feature without the need of installing other scheduling software on the computer. Some versions of Microsoft Project (.xml), Primavera P6 (.xml), PMA NetPoint, Safran Project, Microsoft Excel, and ProjectWise Project may be compatible with Synchro. Verify compatibility with Synchro prior to use.

**(3)** Gantt chart schedule printouts with critical path identified in .pdf format, fit to 11 by 17‑inch paper, with no more than 40 activities per page unless otherwise stated below, Provide each of the following unique printed charts:

*(a)* Chart of the current schedule’s activities, grouped by area and sorted by start date.

*(b)* Chart of all incomplete activities in the current schedule as of the data date, sorted by area and then by early start date.

*(c)* Chart comparing the current schedule with the last approved schedule. Include two horizontal bars for each activity (one bar for the current schedule and one bar for the previously approved schedule). Include Gantt chart columns with early start and finish dates and actual start and finish dates for the current schedule. Group activities by area, sorted by start date, with no more than 20 activities per page. Some scheduling software may refer to this as a baseline comparison or setting a baseline, but the scheduling software terminology is referring to the earlier of the two comparison schedules and is not to be confused with the contract definition of the baseline schedule.

**(4)** Schedule Narrative.

**(5)** Submittal log current as of the data date.

**(6)** Certifications.

*(a)* Schedule Certification. Each of the contractor personnel having a primary role in developing the construction schedule, scheduling work activities, and/or managing the project shall certify the schedule as follows:

*“By signature below, I certify this schedule submittal accurately reflects the contractor’s plans for constructing the project.”*

Unless otherwise approved by the CO, a certification by each of the following are required: the schedule manager, project manager, and project superintendent.

*(b)* Subcontractor Certification. The project manager responsible for scheduling subcontractor work shall certify the following when any subcontractor is performing work on scheduled critical path activities:

*“By signature below, I certify each subcontractor responsible for work associated with critical path activities has reviewed the schedule submittal and agreed the schedule accurately reflects the Subcontractor’s schedule for completing the work.”*

**(c)** Time Impact Analyses. For the purpose of performing time impact analyses in Subsection 108.03, use the schedule submittal with a data date matching the closing date for the progress estimate just prior to the CO being notified of the change.

### 155.07 Schedule.

Schedule work in a practicable manner that meets the contract requirements.

**(a) Develop CPM schedule.** Include the following:

**(1)** Include all activities that are required to complete the contract. Begin with the award date and conclude with the project completion date milestone. In the baseline schedule, constrain the project completion date to finish on or before the Fixed Completion Date identified in FAR Clause 52.211-10 Commencement, Prosecution, and Completion of Work;

**(2)** Activity IDs;

**(3)** Activity names and descriptions. Relate activities or groups of activities to the [**INSERT** contract **OR** task order] pay item number or specification section when no pay item is applicable. Include activities for submittals, submittal reviews, fabrication periods, and deliveries;

**(4)** Show the activity name or description with the activity bar on the diagram;

**(5)** Activities grouped by area (e.g., distinct roadway sections, bridges, and separate repair sites) and by type of work (e.g., distinct and unique features such as walls, submittals, and utilities);

**(6)** Original and remaining durations of construction activities with construction activities broken into subtasks so that no activity duration exceeds 20 working days unless otherwise approved by the CO. Break longer activities into two or more activities and distinguish locations by station or other unique identifier included in the contract plans or specifications;

**(7)** Original and remaining durations of non-construction activities. Non-construction activities include: mobilization, shop drawings and sample source testing submittals by [**INSERT** contract **OR** task order] pay item number or specification section when no pay item is applicable, the fabrication and delivery of key materials, and government review times of submittals and shop drawings, unless otherwise approved by the CO. Non-construction activities may have durations exceeding 20 working days;

**(8)** Activity percent complete;

**(9)** Early, late and actual start and finish dates;

**(10)** Activity relationships. Each activity must have at least one predecessor and one successor activity, except for the award and planned completion date;

**(11)** Data date. For the baseline schedule, set the data date to the award date. For schedule updates, set the data date to the estimate closing date established in accordance with Subsection 109.08;

**(12)** Lags and leads. Whenever possible, show lags or leads as individual activities. Obtain approval, in writing, by the CO prior to using lag or lead settings within the program. The CO may reject any lag or lead settings within the program, regardless of whether they were allowed on a previous schedule;

**(13)** Subcontractor names or codes (if applicable);

**(14)** Calendars. Use the scheduling software’s calendar function to model hourly work schedules, work days, weekends, holidays, environmental restrictions (e.g. fish windows), other contract schedule restrictions, and winter shutdowns; and

**(15)** Incorporate changes to activities that are the result of executed contract modifications.

**(b) Requests to exclude activities from the schedule.** Activities for continuous, non-critical items such as flagging, temporary traffic control, and quality control may be excluded from the schedule.

Activities that are considered an integral part of other scheduled activities may be excluded from the schedule by certifying the completion of the activities will not have an effect on the critical path, but only with prior written approval of the CO. If approved, include a list of these activities in the schedule narrative along with the following certification:

*“By excluding the activities listed above from the schedule, the Contractor certifies that work associated with these pay items or activities will have no effect on the critical path activities and the Contractor will not submit, or request consideration of their affects when performing time impact analyses associated with this contract.”*

**(c) Do not suppress or sequester float.** The contractor’s planned durations, sequencing, etc. may not be altered to give the appearance that activities do not have float. Float shown within the schedule is not for sole use or benefit of either party, but is a jointly owned resource available to both parties as needed to meet the completion date established in the contract. Either party has the full use of float until it is depleted. Suppressing float to create multiple critical paths is prohibited.

**(d) Schedule acceleration or recoveries.**  The contractor has the right to accelerate activities within the schedule to recover its own delays when adequately supported in the schedule narrative (e.g. increased number of shifts, overtime operations, days of work, increased equipment and labor). Any acceleration is subject to limits included in the contract.

### 155.08 Schedule Narrative.

Prepare a written narrative describing how the contractor plans to organize and execute the work described in the contract and the rationale and assumptions that went into developing the schedule. Refer to specific activities by activity ID and activity name/description. Ensure there are no conflicts between the schedule and schedule narrative.

**(a)** For the schedule narrative provided with the baseline schedule submittal:

**(1)** Describe the planned critical path(s) and the general sequence of work;

**(2)** For all activities excluding mobilization and submittals, describe:

*(a)* Scope of work;

*(b)* Locations (e.g. station numbers);

*(c)* Resource loading planned to perform the work. Include manpower allocation by types of labor and crew size, types and number of equipment and special equipment, materials, materials source locations; and

*(d)* Basis for calculating the duration for each activity stated as quantity production rates (such as quantity of excavation per day), in the same units as the pay item quantity unless otherwise approved in writing by the CO.

For individual activities divided into multiple segments, the resource loading and production rates can be stated once in the narrative if they are similar, provided all of the locations are noted and the planned duration at all locations is reasonably supported by the planned resource loading and production rate;

**(3)** Describe the general work schedule including workdays per week, number of shifts per day, and number of hours per shift;

**(4)** Describe the assumptions used to establish calendars within the scheduling software. Include anticipated non-workdays, holidays, environmental restrictions, other constraints within the contract, and winter shutdowns. Include assumptions and allowances made for inclement weather. Describe all calendars used in the schedule and list the calendar used for each activity in the schedule;

**(5)** Identify the subcontractor or supplier performing an activity and identify their activity codes used on the schedule diagram once known. If a supplier or subcontractor has not yet been secured, indicate activities that will be completed by a supplier or subcontractor and state assumptions used to develop the schedule activities;

**(6)** Describe site mobilization as well as expected and critical delivery dates for equipment or material that may affect completion of the project;

**(7)** Describe organizational limitations (such as resource constraints or subcontractor commitments) that may limit scheduling flexibility; and

**(8)** Provide a list and description of constraints used within the scheduling software.

**(b)** For schedule narratives provided with the schedule submittal updates, limit content to progress updates and changes that have occurred since the last approved schedule narrative. Include the following:

**(1)** Describe the progress of work. If progress is less than planned, explain why and explain what, if any, modifications will be made to meet the Fixed Completion Date.

**(2)** Document all changes and updates related to production rates; durations; calendar or work shift adjustments; labor, material, and equipment availability; suppliers and subcontractors; and schedule logic. Document all changes made within the schedule software and the reason for each change. Calculated outputs from the scheduling software (e.g. revised float values or planned activity start and finish dates) do not need to be documented in the schedule narrative.

**(3)** Document all new activities inserted into the schedule and discuss the source(s) of, or reasons for, each new activities. Provide all information required in Subsection 155.08 related to each new activity.

**(4)** If critical activities on the schedule update are different from those shown on the previously approved schedule, discuss source(s) of, or reasons for, the change(s).

**(5)** Document any critical path delays, discuss the source(s) of and reasons for the critical path delays.

**(6)** Document any planned schedule recoveries or acceleration, discuss the plan for achieving the schedule recovery (e.g. increased number of shifts, overtime operations, equipment and labor, etc.) and why they are necessary.

### 155.09 Submittal Log.

Prepare a submittal log that lists all contract documents and submittals requiring approval in a format approved by the CO.

Include at a minimum columns for submittal number; section or item number; submittal description; date submitted; due by date; approval date; and comments.

Update the log as submittals are submitted and approved. Provide a copy of the log with each progress estimate and as requested by the CO.

### 155.10 Scheduling Meetings.

The CO may reject the schedule submittal prior to holding any scheduling meeting.

Hold a baseline schedule meeting a minimum of 14 days after the (re)submittal date unless an earlier date is approved by the CO. Plan for the baseline schedule meeting to last 8 hours.

Monthly scheduling meetings may be requested by either party. When requested, hold scheduling meetings within 14 days of the (re)submittal date unless a later date is agreed upon. Plan for the schedule submittal meetings to last for at least 2 hours.

Scheduling meeting format:

**(a)** The schedule manager, project manager, and superintendent are required to attend, unless otherwise approved by the CO.

**(b****)** Provide meetings capable of being attended virtually with audio, face-to-face video, and screen sharing that will allow Contractor and Government attendees to view and participate in discussions whether in person or attending virtually. Verify virtual capabilities with the CO at least 3 days in advance of the baseline schedule meeting.

**(c)** With the scheduling software, interactively review the schedule for conformance with the contract requirements. Also review and discuss software settings and calendars. Make immediate corrections if errors or omissions are discovered. For corrections that will take further consideration or more time than allowed in the meeting, the CO may approve adding a comment within the schedule and delaying the correction until after the meeting.

Regardless of whether the schedule is in final format, provide a Synchro compatible native file with all revisions made during the meeting to the CO at the conclusion of the meeting.

**(d)** Interactively review the schedule narrative and submittals list. Document any necessary corrections or revisions.

**(e)** If revisions are required, within 3 days of the meeting, unless a later date is approved by the CO, resubmit the schedule submittal with revisions based on meeting discussions.

**(f)** Within 3 days of the meeting, unless a later date is approved by the CO, submit a draft of the meeting minutes with a log of all changes made to the schedule during the meeting. Resubmit a final version of the meeting minutes certified by the schedule manager, project manager, and superintendent within 3 days of being returned unless a later date is approved by the CO.

### 155.11 Lookahead Schedules.

At the end of each week, provide a look-ahead schedule listing all planned work activities for the next 2 to 3 weeks and the days the activities will be performed. Provide lookahead schedules in the form of a spreadsheet, table or printout from the scheduling software in a format as approved by the CO. The CO may request weekly meetings to review actual progress and planned activities shown in the look-ahead schedule.

### 155.12 Contractor’s Daily Record of Construction Operations.

For each day of work, submit a completed Form WFLHD 465 Contractor's Daily Record of Construction Operations (CDR) or an approved alternate form within one day of the work being performed. Report operations of work separately, with manpower and equipment assigned to each operation separately. Document inspection results, including deficiencies observed and corrective actions taken. Complete a CDR for each contractor and subcontractor working each shift. CDR’s will be approved or rejected by the CO. Correct rejected CDRs and resubmit the revised CDR within 24 hours.

Certify each CDR with the following statement signed by the person responsible for the construction operation:

*"I certify that the information contained in this record is accurate, and that all work documented herein complies with the requirements of the contract. Any exceptions to this certification are documented as a part of this record.”*

Electronic versions of the form are available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>

### 155.13 Acceptance.

Schedule submittals and preliminary work plans will be evaluated under Subsection 106.02.

Meeting minutes will be evaluated under Subsection 106.02.

CDR’s will be evaluated under Subsection 106.02 and 106.03.

Measurement

### 155.14

Measure the Section 155 items listed in the bid schedule according to Subsection 109.02.

Payment

### 155.15

The accepted quantities measured according to Subsection 109.02, will be paid at the contract price per unit of measurement for the Section 155 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for Section 155 lump sum pay item will be paid as follows:

**(a)** 25 percent of the item amount, not to exceed 0.5 percent of the original contract amount, will be paid after the baseline schedule submittal is approved; and

**(b)** Payment of the remaining portion of the lump sum will be prorated based on the estimated number of monthly schedule submittals (i.e. months from Mobilization to fixed completion date). Prorated amount will be paid upon acceptance of each monthly schedule submittal and look ahead schedules for that month.

No progress payment will be made until the Schedule Manager and baseline schedule submittal are approved.

A mandatory 10 percent withholding of the entire progress payment will be applied if the latest schedule submittal has not been received by the due date or the previous schedule submittal has not been approved. Progress payment withholdings will not be released until the submittal(s) and approval of the submittal(s) are current.

Payments made for work under this specification do not affect any rights the government may have because of failure to meet the project schedules for construction requirements.

## Section 155. — SCHEDULES FOR CONSTRUCTION CONTRACTS

01/06/23(2)– FP-14

 CASE 2:

WFL Specification 01/06/23 15520010

Include the following as directed below in all projects that require a Bar Chart Method Schedule

For:

 IDIQ/MATOC projects insert:

 task order number

 All other projects insert:

 contract number

Consult with the PM and COE to determine whether approval of the Baseline Schedule Submittal is required 1) before the contractor mobilizes onto the project or 2) critical construction schedule considerations require including a Preliminary Work Plan to allow the contractor to mobilize upon issuance of the NTP.

Delete this Section and substitute the following:

Description

### 155.01

This work consists of scheduling, monitoring, and reporting of all construction activities. Follow the requirements of FAR Clause 52.236-15, Schedules for Construction Contracts.

### 155.02 Definitions.

**(a) Bar Chart Method (BCM) Schedule.** A time scaled graphic representation of a project displaying the overall sequencing of work. Each activity includes an activity number, description, start and finish date, and duration. In addition, bar chart schedules list predecessor activities that must be finished before each activity can be started.

**(b) Baseline Schedule.** The initial schedule showing the order in which the Contractor proposes to perform the work, and the dates by which the Contractor contemplates starting and completing the contract work.

**(c) Critical Activity.** An activity whose duration, if increased, will increase the time required to complete the project unless a schedule adjustment is made. These activities are activities on a schedule’s critical path.

**(d) Critical Path.** The longest sequence of activities in a schedule that determines the projects duration.

**(e) Critical Path Method (CPM) Schedule.** A computer-generated time-scaled logic diagram showing: the sequence in which the contractor plans to perform the work; the interdependence of all activities and milestones; the work completed through the data date; and the remaining work necessary to complete the project.

**(f) Data Date.**  The status reporting date upon which schedule updates (i.e. addition or deletion of activities, revised logic, updates to percent complete, remaining durations, etc.) are made. Scheduling software uses the data date to base its network calculations and is typically shown on the schedule as a vertical line separating the completed (as-built) work and scheduled (as-planned) work.

**(g) Schedule Narrative.** A written narrative describing how the contractor plans to organize and execute the work described in the contract and the rationale and assumptions that went into developing the schedule including labor, equipment, and materials to be used, anticipated production rates, and work calendars.

**(h) Schedule Submittal.** A submittal that includes the most current schedule, schedule narrative, and submittal log. A schedule submittal is required for the baseline schedule and each schedule update.

**(i) Schedule Update.** An update to the previous approved schedule submittal. A schedule update is provided on a monthly basis (or sooner if necessary) showing the completed work and the remaining work necessary to complete the project.

**(j) Submittal Log.** A log that tracks status of contract submittals.

Construction Requirements

### 155.03 General.

WFL Specification 01/06/23 15520020

Insert the following in all projects requiring baseline schedule approval prior to mobilization.

Do not begin work associated with Section 151 Mobilization and limit construction activities according to Subsection 108.01 until the baseline schedule submittal is accepted by the CO.

**WFL Specification 01/06/23 15520030**

**Insert the following in all projects.**

Schedule approval does not relieve the Contractor of the responsibility to schedule the work in a practicable manner that meets the contract requirements. Failure to include elements of work in the schedule submittal required for performance of the contract, even if previously approved by the CO, does not excuse the Contractor from being responsible for completion of all the specified work by the contract’s fixed completion date.

The CO may reject any schedule submittal with a projected completion date past the contract’s fixed completion date. Approval of a schedule submittal with a projected completion date past the contract’s fixed completion date does not excuse the Contractor from being responsible for completing the work by the contract’s fixed completion date.

When a schedule is “Accepted as Noted”, address such comments when preparing resubmittals or future schedule submittals, when appropriate.

Failure to receive approval of a prior schedule submittal does not relieve the Contractor of the responsibility to provide each specified schedule update submittal.

**WFL Specification 01/06/23 15520040**

**Include the following in all projects.**

**For projects where mobilization may proceed immediately after the Notice To Proceed INSERT:** 7 days of Notice to Proceed.

**OR for projects requiring baseline schedule submittal approval prior to mobilization INSERT:** 7 days of Contract Award.

### 155.04 Schedule Manager.

**(a)** **Qualifications**. Provide a schedule manager with a minimum of 5 years of construction scheduling experience. To be qualified, experience must demonstrate the person has supported active construction projects by preparing, evaluating, and actively managing construction schedules during 3 of the last 5 years including:

**(1)** Projects of similar size and scheduling complexity; and

**(2)** At least two highway or bridge type construction projects.

**(b)** Scheduling Personnel. Provide a schedule manager responsible for preparing and managing the schedule submittals and the schedule submittal meetings. Within 7 days of [**INSERT** Notice to Proceed. **OR** Contract Award], unless otherwise approved by the CO. Submit the name and qualifications of the schedule manager for approval. Provide ONLY information that is relevant to the qualifications specified in Subsection 155.04(a). Documents that include unrelated or non-relevant information will be not be accepted.

WFL Specification 01/06/23 15520050

Include the following in all projects when a separate scheduling manager is not required. Consult with the PM and COE.

Do not designate the project superintendent, QC manager, foreman, or traffic control supervisor as the schedule manager.

WFL Specification 01/06/23 15520060

Include the following in all projects where mobilization is allowed immediately after Notice To Proceed.

### 155.05 Preliminary Work Plan.

A preliminary work plan is a written narrative of contract activities that will be in progress within the first 45 days after the Notice to Proceed has been issued. Limit construction activities according to Subsection 108.01 until the preliminary work plan is accepted by the CO.

Include in the preliminary work plan all elements listed in Subsection 155.06(b) with the exception of paragraph (2).

The preliminary work plan is due a minimum of 7 days prior to the preconstruction conference.

Within 7 days after the preconstruction conference or resubmittal date if rejected, the preliminary work plan will be accepted or rejected. If rejected, submit a revised plan within 3 days.

WFL Specification 01/06/23 15520070

Insert the following in all projects requiring the baseline schedule submittal approval prior to mobilization.

### 155.05 Preliminary Work Plan.

No preliminary work plan is required.

**WFL Specification 01/06/23 15520080**

**Include the following in all projects.**

**For projects where mobilization may proceed immediately after the Notice To Proceed INSERT:** 14 days of Notice to Proceed.

**OR for projects requiring baseline schedule submittal approval prior to mobilization INSERT:** 21 days of Contract Award.

### 155.06 Schedule Submittal.

The Schedule Submittal includes the Schedule, Schedule Narrative, Submittal Log, and Certification.

**(a)** Due date. The baseline schedule submittal is due within [**INSERT** 14 days of Notice to Proceed. **OR** 21 days of project award.]

Monthly schedule submittals are due within 7 days following the progress estimate closing date established in accordance with Subsection 109.08.

Resubmittal of rejected schedules are due within 3 days of the rejected date unless otherwise approved by the CO.

When no schedule meeting is held, the schedule (re)submittals will be approved or rejected within 14 days of receipt. When a schedule meeting is held, the schedule submittal with updates resulting from the meeting will be approved or rejected within 7 days of receipt.

**(b)** Prepare schedule submittals according to Subsection 103.06. Include the following.

**(1)** Title page with contract information; Contractor name; current fixed completion date; date of submittal; name of submittal; progress estimate number; submittal number, and [**INSERT** contract number **OR** task order number].

**(2)** BCM schedule;

**(3)** Schedule Narrative;

**(4)** Submittals log; and

**(5)** Certifications:

*(a)* Schedule Certification. Each of the contractor personnel having a primary role in developing the construction schedule, scheduling work activities, and/or managing the project shall certify the schedule as follows:

*“By signature below, I certify this schedule submittal accurately reflects the contractor’s plans for constructing the project.”*

Unless otherwise approved by the CO, certifications by each of the following are required: the schedule manager, project manager, and project superintendent.

*(b)* Subcontractor Certification. The project manager responsible for scheduling subcontractor work shall certify the following when any subcontractor is performing work on scheduled critical path activities:

*“By signature below, I certify each subcontractor responsible for work associated with critical path activities has reviewed the schedule submittal and agreed the schedule accurately reflects the Subcontractor’s schedule for completing the work.”*

**(c)** Time Impact Analyses. For the purpose of performing time impact analyses in Subsection 108.03, use the schedule submittal with data date matching the closing date of the progress estimate just prior to the CO being notified of the change.

### 155.07 Schedule.

**(a) Develop a BCM or CPM schedule.** Include at a minimum the following:

**(1)** Schedule all work to finish on or before the Fixed Completion Date identified in FAR Clause 52.211-10 Commencement, Prosecution, and Completion of Work.

**(2)** Identify activity ID and activity name/description. Associate activity or groups of activities to the contract pay items. If no pay item exists, relate to the specification section. Include activities for submittals, submittal reviews, fabrication, and deliveries.

**(3)** Arrange all activities in the order the work will be performed.

**(4)** Identify all critical activities that are controlling factors in completing the work by the contract completion date.

**(5)** List predecessor activities that must be finished before each activity can be started.

**(6)** For each activity, identify planned activity start date, completion date, and duration.

**(7)** Provide a time scaled progress bar chart showing graphically, the time needed to perform each activity and its relationship in time to other activities. For activities that are currently in progress or have completed, identify percent complete, remaining duration, actual start date, and actual finish date.

**(8)** Provide enough space between each activity to permit the addition of two bars for schedule updates. Use one space to plot revised as-planned schedule for each activity (if any). Use the second space to show the actual as-constructed schedule for each activity.

**(9)** Show the Data Date.

**(10)** Incorporate activity changes that are the result of executed contract modifications.

**(b) Requests to exclude activities from the schedule.** Activities for continuous, non-critical items such as flagging, temporary traffic control, and quality control may be excluded from the schedule.

Activities that are considered an integral part of other scheduled activities may be excluded from the schedule if certified that completion of the activities will not have an effect on the critical path, but only with prior written approval of the CO. If approved, include a list of the activities in the schedule narrative along with the following certification:

*“By excluding the activities listed above from the schedule, the Contractor certifies that work associated with these pay items or activities will have no effect on the critical path activities and the Contractor will not submit or request consideration of their affects when performing time impact analyses associated with this contract.”*

**(c) Schedule acceleration or recoveries.** The contractor has the right to accelerate activities within the schedule to recover contractor responsible delays. When necessary, adequately support schedule recoveries in the schedule narrative. Any acceleration is subject to all limitations included in the contract.

### 155.08 Schedule Narrative.

Prepare a written narrative describing how the contractor plans to organize and execute the work described in the contract and the rationale and assumptions that went into developing the schedule. Refer to specific activities by activity ID and activity name/description. Ensure there are no conflicts between the schedule and schedule narrative.

**(a)** For the schedule narrative provided with the baseline schedule submittal:

**(1)** Describe the planned critical path(s) and the general sequence of work;

**(2)** For all activities excluding mobilization and submittals, describe:

*(a)* Scope of work;

*(b)* Locations (e.g. station numbers);

*(c)* Resource loading planned to perform the work. Include manpower allocation by types of labor and crew size, types and number of equipment and special equipment, materials, materials source locations; and

*(d)* Basis for calculating the duration for each activity stated as quantity production rates (such as quantity of excavation per day), in the same units as the pay item quantity unless otherwise approved in writing by the CO.

For individual activities divided into multiple segments, the resource loading and production rates can be stated once in the narrative if they are similar, provided all of the locations are noted and the planned duration at all locations is reasonably supported by the planned resource loading and production rate;

**(3)** Describe the general work schedule including workdays per week, number of shifts per day, and number of hours per shift;

**(4)** Identify the subcontractor or supplier performing an activity and identify their activity codes used on the schedule diagram once known. If a supplier or subcontractor has not yet been secured, indicate activities that will be completed by a supplier or subcontractor and state assumptions used to develop the schedule activities;

**(5)** Describe site mobilization as well as expected and critical delivery dates for equipment or material that may affect completion of the project;

**(6)** Describe organizational limitations (such as resource constraints or subcontractor commitments) that may limit scheduling flexibility; and

**(7)** Provide a list and description of constraints used within the scheduling software.

**(b)** For schedule narratives provided with the schedule submittal updates, limit content to progress updates and changes that have occurred since the last approved schedule narrative. Include the following:

**(1)** Describe the progress of work. If progress is less than planned, explain why and explain what, if any, modifications will be made to meet the Fixed Completion Date.

**(2)** Document all changes and updates related to production rates; durations; calendar or work shift adjustments; labor, material, and equipment availability; suppliers and subcontractors; and schedule logic. Document all changes made within the schedule software and the reason for each change. Calculated outputs from the scheduling software (e.g. revised float values or planned activity start and finish dates) do not need to be documented in the schedule narrative.

**(3)** Document all new activities inserted into the schedule and discuss the source(s) of, or reasons for, each new activities. Provide all information required in Subsection 155.08 related to each new activity.

**(4)** If critical activities on the schedule update are different from those shown on the previously approved schedule, discuss source(s) of, or reasons for, the change(s).

**(5)** Document any critical path delays, discuss the source(s) of and reasons for the critical path delays.

**(6)** Document any planned schedule recoveries or acceleration, discuss the plan for achieving the schedule recovery (e.g. increased number of shifts, overtime operations, equipment and labor, etc.) and why they are necessary.

### 155.09 Submittal Log.

Prepare a submittal log that lists all contract documents and submittals requiring approval in a format acceptable to the CO.

Include at a minimum columns for submittal number, section or item number, submittal description, date submitted, due by date, approval date, and comments.

Update the log as submittals are submitted and approved. Provide a copy of the log with each progress estimate and as requested by the CO.

### 155.10 Scheduling Meetings.

The CO may reject the schedule submittal prior to holding any scheduling meeting.

Hold a baseline schedule meeting a minimum of 14 days after the (re)submittal date unless an earlier date is approved by the CO. Plan for the baseline schedule meeting to last 4 hours.

Monthly scheduling meetings may be requested by either party. When requested, hold scheduling meetings within 14 days of the (re)submittal date unless a later date is agreed upon. Plan for the schedule submittal meetings to last for at least 1 hours.

Scheduling meetings format:

**(a)** The schedule manager, project manager, and project superintendent are required to attend, unless otherwise approved by the CO.

**(b)** Provide virtual meetings capable of being attended virtually with audio, face-to-face video, and screen sharing that will allow Contractor and Government attendees to view and participate in discussions whether in person or attending virtually. Verify virtual capabilities with the CO at least 3 days in advance of the baseline schedule meeting.

**(c)** Interactively review the schedule, schedule narrative, and submittals list for conformance with contract requirements.

**(d)** Make corrections if errors or omissions are discovered and resubmit the schedule submittal based on meeting discussions. Submit the updated schedule submittal by the end of the meeting unless a later date is approved by the CO.

**(e)** Provide meeting minutes and a log of all changes and revisions made as a result of the meeting within 3 days of the meeting, or as approved by the CO. Correct any errors and omissions if identified and furnish a copy with certifications signed by the schedule manager, project manager, superintendent.

### 155.11 Lookahead Schedules.

At the start of each week, provide a look-ahead schedule listing all planned work activities for the next 2 to 3 weeks and the days the activities will be performed. Provide lookahead schedules in the form of a spreadsheet, table, or printout from a scheduling software as approved by the CO. The CO may request weekly meetings to review actual progress and planned activities shown in the look-ahead schedule.

### 155.12 Contractor’s Daily Record of Construction Operations.

For each day of work, submit a completed Form WFLHD 465 Contractor's Daily Record of Construction Operations (CDR) or an approved alternate form within one day of the work being performed. Report operations of work separately, with manpower and equipment assigned to each operation separately. Document inspection results, including deficiencies observed and corrective actions taken. Complete a CDR for each contractor and subcontractor working each shift. CDR’s will be approved or rejected by the CO. Correct rejected CDRs and resubmit the revised CDR within 24 hours.

Certify each CDR with the following statement signed by the person responsible for the construction operation:

*"I certify that the information contained in this record is accurate, and that all work documented herein complies with the requirements of the contract. Any exceptions to this certification are documented as a part of this record.”*

Electronic versions of the form are available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>

### 155.13 Acceptance.

Schedule submittals and preliminary work plans will be evaluated under Subsection 106.02 and 106.03.

Meeting minutes will be evaluated under Subsection 106.02.

CDR’s will be evaluated under Subsection 106.02 and 106.03.

Measurement

### 155.14

Measure the Section 155 items listed in the bid schedule according to Subsection 109.02.

Payment

### 155.15

The accepted quantities will be paid at the contract price per unit of measurement for the Section 155 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for Section 155 lump sum pay item will be paid as follows:

**(a)** 25 percent of the item amount, not to exceed 0.5 percent of the original contract amount, will be paid after the baseline schedule submittal is approved; and

**(b)** Payment of the remaining portion of the lump sum will be prorated based on the estimated number of monthly schedule submittals (i.e. months from Notice to Proceed to fixed completion date).

No progress payment will be made until the Schedule Manager and baseline schedule submittal are approved.

A mandatory 10 percent withholding of the entire progress payment will be applied if the latest schedule submittal has not been received by the due date or the previous schedule submittal has not been approved. Progress payment withholdings will not be released until the submittal and approval of the submittals are current.

Payments made for work under this specification do not affect any rights the government may have because of failure to meet the project schedules for construction requirements.