

# ORINATION FORM

## Proposed Revisions to the Specifications

(Please provide all information - incomplete forms will be returned)

Date:

Office:

Originator:

Specification Section:

Telephone:

Article/Subarticle:

email:

Will the proposed revision require changes to:

Publication	Yes	No	Office Staff Contacted
Standard Plans Index			
Traffic Engineering Manual			
FDOT Design Manual			
Construction Project Administration Manual			
Basis of Estimate/Pay Items			
Structures Design Guidelines			
Approved Product List			
Materials Manual			

Will this revision necessitate any of the following:

Design Bulletin

Construction Bulletin

Estimates Bulletin

Materials Bulletin

Are all references to external publications current?

Yes

No

If not, what references need to be updated? (Please include changes in the redline document.)

Why does the existing language need to be changed?

Summary of the changes:

Are these changes applicable to all Department jobs?

Yes

No

If not, what are the restrictions?

Contact the State Specifications Office for assistance in completing this form.

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**M E M O R A N D U M**

**DATE:** December 13, 2018

**TO:** Specification Review Distribution List

**FROM:** Dan Hurtado, P.E., State Specifications Engineer

**SUBJECT:** Proposed Specification: **SP0080302A Prosecution and Progress – Prosecution of Work (Submission of Working Schedule).**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Amy Tootle of the State Construction Office to modify the language.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at

<http://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx> .

Comments received after **January 10, 2019**, may not be considered. Your input is encouraged.

DH/dt

Attachment

**PROSECUTION AND PROGRESS - PROSECUTION OF WORK (~~SUBMISSION OF WORKING SCHEDULE~~)- GENERAL.**(REV ~~11-13-14~~10-3-18)-(FA ~~1-22-15~~)-(1-19)

SUBARTICLE 8-3.2 is deleted and the following substituted:

**8-3.2 General:** For this Contract, submit the following schedules and reports.**8-3.2.1 Contract Schedule:** Submit to the Engineer for acceptance a Critical Path Method (CPM) Contract Schedule for the project within 30 calendar days after execution of the Contract or at the preconstruction conference, whichever is earlier.

The Contract Schedule shall include detailed schedule diagrams and schedule data as described below ~~for that shows how~~ the Contractor intends to complete the work within the entire Contract Period Time, plus a Any Contract defined holidays, suspension days, or weather days that affect the Critical Path will be added as they occur. When the project includes a Maintenance of Traffic plan, the work breakdown structure (WBS) for the Contract Schedule shall be consistent with the Contract Maintenance of Traffic plan, showing activities for each discrete Contract activity to be accomplished within each Maintenance of Traffic phase. When the project does not include a Maintenance of Traffic plan, the work breakdown structure WBS shall be consistent with the phasing shown in the Contract Documents. Include activities for deliverables and reviews in the schedule. Sufficient liaison shall be conducted and information provided to indicate coordination with utility owners having facilities within the project limits. The schedule must ~~reflect~~incorporate the utility adjustment work schedules included in the Contract Documents, unless changed by mutual agreement of the utility company, the Contractor and the Department. Show the interdependence (logic) of the utility work schedule activities with other schedule activities in the Contract Schedule for acceptance by the, unless otherwise approved by the Engineer.

Failure to include any element of work or any activity relating to utility work will not relieve the Contractor from completing all work within the Contract Time at no additional time or cost to the Department, notwithstanding the acceptance of the schedule by the Department.

The Contract Schedule may indicate a completion date in advance of the expiration of Contract Time. However, the Department will not be liable in any way for the Contractor's failure to complete the project prior to expiration of Contract Time. Any additional costs, including extended overhead incurred between the Contractor's scheduled completion date and the expiration of Contract Time, shall be the responsibility of the Contractor. The Contractor shall not be entitled to claim or recover any such costs from the Department.

~~The Engineer will withhold monthly payments due for failure of the Contractor to submit an acceptable schedule or monthly updates within the time frame described herein~~Acceptance by the Engineer of the Contract Schedule or any updates shall not be construed as approval of any particular construction methods or sequence of construction or to relieve the Contractor of its responsibility to provide sufficient materials, equipment and labor to guarantee the completion of the contract in accordance with the Contract Documents.

**8-3.2.2 Schedule Submissions:** Develop the schedule in Precedence Diagram Method (PDM) format. ~~All schedule submittals, shall have a copy of the schedule files on a Windows compatible CD or DVD attached. The files shall be in a Primavera format. Make sure~~

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~~to use "Back up" menu selection and ensure that the option "Remove access list during backup" is checked.~~

Each schedule submission and monthly update shall include a minimum of the following ~~four~~seven items:

~~1. A Critical Path Method (CPM) Network Diagram in time-scale logic diagram, by week starting on Monday, grouped (banded) by phase and location and sorted by early start days. Prominently identify the critical path activities, defined as the longest continuous path of work activities. Submit the Network Diagram, printed in color on D-size, 22 inches by 34 inches or E-size, 34 inches by 44 inches paper. The network diagram shall contain, as a minimum, the following information for each schedule activity: identification, activity description, total duration, remaining duration, early start date, late finish date, and total float. Submit the files electronically in the current Department version of Oracle Primavera P6 format by exporting the full schedule to a .xer file format.~~

~~2. A report with the following schedule activity information for each construction activity: identification, description, original duration, Gantt chart grouped by work breakdown structure WBS, then phase, sorted by early start, early finish, then total float, percent complete, and budgeted cost. The bar chart diagram shall not be included in this report. The following columns:~~

<del>_____</del>	<u>a. Activity ID</u>
<del>_____</del>	<u>b. Activity Name</u>
<del>_____</del>	<u>c. Calendar</u>
<del>_____</del>	<u>d. Activity Type</u>
<del>_____</del>	<u>e. Original Duration</u>
<del>_____</del>	<u>f. Remaining Duration</u>
<del>_____</del>	<u>g. Duration % Complete</u>
<del>_____</del>	<u>h. Early Start</u>
<del>_____</del>	<u>i. Early Finish</u>
<del>_____</del>	<u>j. Late Start</u>
<del>_____</del>	<u>k. Late Finish</u>
<del>_____</del>	<u>l. Total Float</u>
<del>_____</del>	<u>m. Budgeted Total Cost</u>

~~The chart shall also include activity bars using the Oracle Primavera P6 default color coding for the bars. The chart will be submitted as a Portable Document Format (.pdf) file and formatted on 8.5x11 inches by 11x7 inches paper/landscape oriented sheets, with the activity table and bars.~~

~~3. A schedule narrative report describing current project schedule status and identifying potential delays. This report will include a description of the progress made since the previous schedule submission and objectives for the upcoming 30 calendar days. Gantt chart with the same columns and bars listed in 8-3.2.2(2), but filtered for the longest path, not grouped but sorted by early start, then early finish. The chart shall be submitted as a.pdf file and formatted on 8.5x11 inches by 11x7 inches paper/landscape oriented sheets, with the activity table and bars. This report shall at a minimum include the following information:~~

~~4. The Schedule log for the calculated schedule, submitted as a.pdf file and formatted on 8-1/2 inch by 11 inch portrait oriented sheets.~~

~~5. A schedule narrative report with the following information:~~

a. Current project schedule status and identify potential delays

b. A description of the progress made since the previous schedule submission

c. Objectives for the upcoming 30 calendar days

ad. This report shall indicate if the project is on schedule, ahead of schedule or behind schedule.

1. If the project is ahead of schedule or behind schedule, the report shall indicate the specific number of calendar days.

2. If the project is behind schedule, the report shall include a detailed recovery plan that will put the project schedule back on schedule track or identify the alleged delay event for which a preliminary request for an Time Extension, include a properly of Contract Time has been submitted, which if granted by the Department, will account for the amount of time the project is behind schedule, or provide a fully supported request for a Contract Time Extension, which if granted by the Department, will account for the amount of time the project is behind schedule.

be. The report will describe the current critical path of the project and indicate if this critical path has changed in the last 30 calendar days.

f. Discussion of current successes or problems that have affected either the critical path's length or have caused a shift in the critical path within the last 30 calendar days.

g. Identify specific activities, progress, or events that may reasonably be anticipated to impact the critical path within the next 30 calendar days, either to affect its length or to shift it to an alternate path.

eh. List all changes to schedule logic, calendars, calendar assignments, activity types, activity names, changes to constraints, added activities or duration changes (original and remaining) that have been made to the schedule since the previous submission.

For each change, describe the basis for the change and specifically identify the affected activities by identification number activity ID.

di. Identify any and all activities, either in progress or scheduled to occur within the following 30 days that require Department participation, review, approval, etc.

46. A copy of the schedule files on a Windows compatible CD or DVD in Primavera format. A detailed logic report that provides a list of activities in the schedule sorted by activity ID, no grouping and submitted as a .pdf file and formatted on 8-1/2 inch by 11 inch portrait oriented sheets. For each activity listed, the report shall include the activity's predecessors and successors, including the relationship type and lag.

7. A chart showing the budgeted total cost versus time shall be submitted as a pdf file and formatted on 8-1/2 inch by 11 inch landscape oriented sheets. The chart shall include the following two curves:

a. budgeted total cost versus time based on the early dates.

b. budgeted total cost versus time based on the late dates.

For each submission of the Contract Schedule and monthly update, the Engineer will have 3021 days to accept the Contract Schedule or monthly update or to schedule a

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meeting, if needed, within that time, with the Contractor to resolve any problems that prevent acceptance of the schedule. Attend the meeting scheduled by the Engineer, and submit a corrected schedule to the Engineer within seven days after the meeting. The process will be continued until a Contract Schedule or monthly update is accepted or accepted as noted by the Engineer.

Upon the Engineer's acceptance of the Contract Schedule, submit monthly updates of the Contract Schedule, including all months prior to the start of construction, reflecting progress through the monthly estimate cut-off date within 78 calendar days after the monthly estimate cut-off date.

The Engineer may withhold monthly payments due for failure of the Contractor to submit an acceptable schedule or monthly updates within the time frame described herein.

**8-3.2.3 Schedule Content:** All schedule submissions shall comply with the following content guidelines as appropriate to the specific submission:

~~Outline~~The S~~schedules~~ Diagrams and Data shall ~~show~~include the sequence, order, and interdependence of major construction milestones and activities. Include ~~ordering and~~ procurement of major project specific materials and equipment that require submittals and are not readily available, long-lead time items, and key milestones identified by the Contract. ~~Identify planned work schedule(s) and include all non-workdays. Provide a description of each major construction activity or key milestone.~~

~~Detailed Schedule Diagrams shall include activity number, description, early dates, float, and all relationships (i.e. logic ties), resources and costs.~~ Show the sequence, order, and interdependence of activities in which the work is to be accomplished. Include allowance for Department oversight review, acceptance and return of submittals, samples and shop drawings where Department acceptance is specifically required (in accordance with 5-1.4.6 of the standard specifications). In addition to construction activities, detailed network schedule activities shall include the submittals, procurement, and Department or Utility activities impacting progress:

1. Submittal activities shall include oversight submittal preparation, Department review, and acceptance of submittals. If the Department's action on any submittal is "Not Accepted" or "Revise and Resubmit", a new series of submittal preparation activities shall be inserted into the schedule. Predecessor for the new submittal preparation activity will be the original acceptance activity and the successor of the new acceptance activity will be the fabrication/delivery activity for the equipment or material.

2. Procurement activities shall include all project specific materials and equipment that require submittals and are not readily available, receipt of materials with estimated procurement costs of major items for which payment of stockpiled materials will be requested in advance of installation, fabrication of special material and equipment, and their installation and testing.

3. Show activities of the Department or Utilities that affect progress and contract-required dates for completion of all or parts of the work.

Detailed S~~s~~chedule D~~d~~ata: shall conform to the following:

1. All activities shall be assigned to a specific project calendar within the software. Specific project calendars will be defined within the software to include planned work days and planned non-work days. These project calendars will include both Contractor and Contract defined holidays and suspension days as non-workdays. The use of

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global calendars is not permitted. Project calendars shall not inherit holidays from global calendars. Work shifts identified for each project calendar shall be consistent with the Contractor's planned workdays. Actual start and finish date times shall be consistent with the work shift hours on the calendar assigned to the activities.

2. Each schedule activity shall be cost loaded. Activity cost loading shall be consistent with the bid breakdown. The sum total of the activity cost loading shall be equal to the current contract value, ~~and should not include bid items.~~

3. At a minimum, each schedule activity shall contain codes by:

a. Responsibility: including, but not be limited to, Department, Utility, Contractor/~~S~~subcontractor, ~~S~~supplier/~~V~~vendor, ~~C~~consultant, etc.

b. Phasing: identify the appropriate Maintenance of Traffic phase or subphase.

The required coding can be accomplished by ~~work breakdown structure~~WBS codes or project activity codes.

4. Key milestones as identified by ~~e~~Contract. At a minimum, the start and finish of each Maintenance of Traffic phase or subphase shall be represented by a milestone activity. Milestone activities shall be start or finish milestone type activities, as appropriate.

5. All non-procurement activities must be less than or equal to 20 workdays unless approved by the Engineer ~~to be greater by the Engineer.~~ Sufficient explanation for activities over 20 days shall be provided for the Engineers review and approval.

6. All activities must include adequate ~~d~~Detailed activity descriptions ~~of each activity~~to describe the work that is included. In each activity, through the activity name, user defined field, or cost account, give quantity and unit of measure so that the amount of work the activity involves is clearly communicated.

7. Only two open-ended activities (the first and the last) are allowed.

8. Constraints shall only be used for "~~P~~project ~~S~~start," and "~~P~~project ~~C~~completion." Constraints ~~can~~shall not override logic. The project start constraint shall be the Contract execution date. The project completion date shall be the Contract completion date plus any Contract defined holidays and suspension days included on the longest path. The use of any other imposed constraints is not allowed without specific approval by the Engineer. Any other desired constraints must be submitted to the Engineer with the rationale for the use of each desired additional constraint. If allowed by the Engineer, the rationale should be recorded in the activity's ~~log~~notebook field. Mandatory constraints (start and finish) violate network logic and shall not be used.

9. Out of sequence progress; ~~if applicable,~~ shall be ~~handled through~~ corrected on each monthly update by modifying the schedule logic so that the logic accurately depicts the actual sequence of the work. The Retained Logic setting shall be used when calculating the schedule. ~~Use of the Progress Override option is not appropriate for this project and will not be allowed.~~

10. ~~Progress shall be calculated based on percent complete.~~

11. All changes to activities shall be recorded with a note in the activity ~~log~~notebook field. The ~~log~~notebook entry shall include, as a minimum, the date and reason for the change, as well as reference to a document wherein the Engineer acknowledges and accepts the change.

~~12~~1. The use of resource leveling, either manual or automatic, is prohibited.

12. Activities shall not be deleted from the schedule. If an activity is not required, then upon approval from the Engineer, the Contractor shall provide actual start and finish dates equal to the date of the Engineer's approval, shall add the word "Removed" to the activity name and shall make a notebook entry explaining the reason for removing the activity from the planned work.

13. Activities with appropriate cost loading shall be added to the schedule upon approval of the Engineer when it is determined that a Contract work element was omitted from the previous accepted Contract schedule or update or if work is added to the Contract.

14. Activity names shall only be changed to reflect changes to the scope of the work element represented by the activity, not as a way to remove and replace activities. Changes to activity names shall be approved by the Engineer.

15. Unless otherwise approved by the Engineer, activity types shall be defined as milestones, level-of-effort, WBS summary or task dependent. resource dependent type shall not be used. All activities shall have percent complete type set to duration and duration type set to either fixed duration and unit/time or fixed duration and units.

**8-3.2.4 Weekly Meetings:** Attend weekly meetings scheduled by the Engineer to discuss Contract progress, near term scheduled activities, including utility relocations, problems and their proposed solutions. Submit a ~~Two~~Three-Week "Look Ahead" Planning Schedule at each weekly meeting, showing the ~~items of work~~Contract schedule activities completed in the previous week and planned for the next two weeks. Develop the Three-Week Planning Schedule in ~~Bar~~Gantt ~~C~~chart format, from the updated Contract schedule, identifying completed, current and planned activities ~~and related Contract Schedule work activities, including subcontractor work~~. Designate all activities that are controlling work items as determined by the currently accepted Contract Schedule. ~~A report shall be submitted at each weekly meeting identifying schedule activity progress including actual start or finish dates achieved for any activities.~~

**8-3.2.5 Float:** Float is defined as the amount of time the finish of an activity can be delayed. Two kinds of float are possible: Total float is how much an activity can be delayed without affecting the finish date of the project or an intermediate deadline (constraint); it is the difference between the late finish date and the early finish date. Free float is how much an activity can be delayed without affecting its earliest successor.

Float is not for the exclusive use or benefit of either the Department or the Contractor.

Use of float suppression techniques, such as preferential sequencing (arranging critical path through activities more susceptible to Department caused delay), special lead/lag logic restraints, zero total or free float constraints, extended activity times, positive relationship lags, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates. The use of finish-to-start lags greater than zero days, start-to-start lags that exceed the duration of the predecessors, or finish-to-finish lags that exceed the duration of the successor, shall not be used without the expressed approval of the Engineer. The use of Resource Leveling, (or similar software features), ~~used~~ for the purpose of artificially adjusting activity durations to consume float and influence the critical path is expressly prohibited.



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Negative float shall not be a basis for requesting time extensions. Any extension of time shall be addressed in accordance with 8-3.2. ~~7-6 Time Extensions~~. Scheduled completion date(s) that extend beyond the ~~e~~Contract completion date, (evidenced by negative float), may be used in computations for assessment of payment withholdings. The use of this computation is not to be construed as a means of acceleration.

**8-3.2.6 Critical Path:** The critical path shall be defined as the longest path and is represented by the longest logical path through the remaining activities, resulting in the earliest calculated completion date. There may be more than one longest path in the schedule. However, the use of float suppression techniques as described in 8-3.2.5 shall not be used to force the schedule to have more than one longest path.

**8-3.2.7 Time Extensions:** The Contractor is responsible for submitting a request for Contract Time extension in accordance with 8-7.3.2 ~~of the standard specifications~~. An extension of time ~~for performance~~ shall be considered only to the extent that an event delay to an activity or activities exceeds the total float along the project critical paths within the current approved schedule impacts the completion date of the schedule such that the impacted completion date is later than the Contract completion date as adjusted previously. The Pre-event Schedule is defined as the latest accepted update of the Contract schedule, stasured (actual start dates added, actual finish dates added, remaining durations adjusted) to the end of the day before the start of the event. The Post-event Schedule is defined as the accepted update of the Contract Schedule just after the end of the event and de-stasured (actual start dates removed, actual finish dates removed, remaining durations adjusted) to the end of the last day of the event.

As a minimum, time extension requests shall contain:

1. A descriptive summary of the ~~changes~~event
2. A ~~written~~ analysis ~~of project impact~~supported by a:
  - a. Pre-event Schedule
  - b. Post-event Schedule
3. A fragnet that shows the impacted activities before the changeSchedule submittal items 1, 2, 3 and 4 required in 8-3.2.2 shall be provided for the Pre-event and Post-event schedules
- ~~4. A fragnet that shows the impacted activities before the change~~

Time extensions shall not be considered for proposals that do not include full documentation ~~for the schedule change~~described above. Once a ~~change~~time extension has been approved by the Engineer, the ~~specific activities and the overall schedule must be updated~~Contract completion date shall be changed accordingly.

**8-3.2.7 Performance of Work:** By submitting a schedule, the Contractor is making a positive assertion that the project has been and will be constructed in the order indicated ~~in~~ the schedule. Prosecute the work in accordance with the latest accepted Working Contract Schedule or update. Any costs associated with meeting milestones and completing the project within the authorized Contract Time will be borne solely by the Contractor.

**8-3.2.8 As-Built Schedule:** As a condition for ~~F~~final Acceptancepayment of the project, submittal ~~of an~~the as-built schedule within 10 days of Final Acceptance. The as-built schedule which shall describes the actual order and start and stop times for all activities by the Contractor ~~is required~~.