

SECTION 00555

PROSECUTION AND PROGRESS

PART 1 GENERAL

1.1 RELATED SECTIONS

- A. Section 00570: Definitions
- B. Section 01282: Payment
- C. Section 01355: Environmental Protection

1.2 PRECONSTRUCTION CONFERENCE

- A. Contact Engineer to schedule Pre-Construction Conference following Notice of Award.

1.3 NOTICE TO PROCEED

- A. Proceed with the work after receipt of written notice from the Department.
- B. Notify the Engineer at least five calendar days before beginning work.

1.4 SUBLETTING CONTRACT

- A. Obtain written approval of the Department before subletting, selling, transferring, assigning or disposing any portion of the Contract or Contracts.
- B. Sublet no more than 70 percent of the total contract work bid amount.
- C. Subcontracts whether committed to in writing or by an informal, unwritten arrangement or transfer of the Contract, or any part of it or its obligations, do not relieve liability under the Contract and bonds. As part of its contract with the Department, the Contractor accepts liability for any claims for damages or liability resulting from an act or omission of any person who carried out work on its behalf, whether that working relationship is codified into a subcontract or carried out by an informal, unwritten agreement. The Contractor agrees to

indemnify the Department for any damages or liability, including attorney's fees and court costs, that may be incurred by such a person.

- D. Do not allow subcontract work to begin until approved by Engineer.
- E. In computing the percentage of subcontracted work, Department considers an item as subcontracted in its entirety unless otherwise designated in the subcontract.
 - 1. Department uses the accumulated percentages of all approved subcontracts to assure that the maximum subcontracted limitation is not exceeded.
 - 2. To determine the amount of work subcontracted, the Department uses the total dollar amount of the items subcontracted in the Contract Bid Proposal, divided by the original contract amount.
 - 3. If the prime Contractor is to perform a portion of an item, the Department determines the amount of work subcontracted by using the dollar amount of the item agreed to between the prime Contractor and the subcontractor, excluding bonds, insurance, profit, and office transaction, etc. performed by the Contractor.
- F. Provide for a reduction in retained monies commensurate with the percentage held as retainage as provided for in Section 01282.
- G. Include a statement agreeing on a method of distribution of any adjustments due to price increases or decreases using applicable price adjustment specifications for fuel, cement, common carrier rates, etc.

1.5 ANTICIPATED MONTHLY PAYMENT SCHEDULE

- A. Prepare the Anticipated Monthly Payment Schedule based on the proposed sequence of activities shown in the baseline construction schedule.
 - 1. Use form provided by the Engineer
 - 2. Submit the proposed Monthly Payment Schedule before the date established for the first partial payment.
 - 3. Include both monthly and semi-monthly payments when anticipated due to the volume of work on the project.
 - 4. Include all months during the life of the contract when payments are anticipated.
 - 5. Include dates of contract start, suspension, completion and milestones that impact payments.
- B. Submit Revised Payment Schedule within 30 days of notification by the Engineer. Payment Schedule Revisions are required when:
 - 1. Actual Payments vary 10 percent or more (plus or minus) from the submitted Payment Schedule and the variance is sustained for 60 days.
 - 2. Contract start, suspension, completion and milestones dates change.

3. Change Orders are approved increasing or reducing the contract amount sufficient to vary actual payments 10 percent or more (plus or minus) from the accepted Payment Schedule.

1.6 BASELINE CONSTRUCTION SCHEDULE

- A. Develop a baseline construction schedule using Primavera SureTrak Project Manager or Primavera Project Planner. Assure the schedule accurately reflects the proposed approach to accomplish the work outlined in the Contract documents and conforms to all requirements of this article.
- B. Use the baseline construction schedule to coordinate all activities on the project - particularly the interaction with other entities, including, but not limited to, utilities, local governments, special service districts, and the Department.
- C. Schedule Submission
 1. Within 14 calendar days of the Notice of Award, submit a baseline construction schedule in a Critical Path Method (CPM) format for the Engineer's review and acceptance. Submit one hard copy and one electronic copy in a format acceptable to the Engineer.
 2. The Engineer reviews the schedule and returns it, accepted or with comments, within seven calendar days from the date of receipt.
 3. If the schedule is returned with comments, address all comments and revise the schedule as necessary to the satisfaction of the Engineer. Complete the final baseline schedule and obtain the acceptance of the Engineer within 30 calendar days from the Notice of Award.
 4. No progress payments are made before the Engineer accepts the baseline construction schedule.
 5. Develop a 60-calendar day schedule for complex contracts exceeding 120 working days, when not practical to prepare, review, and approve the baseline construction schedule in the time frame specified above. Use the same format as required for the baseline schedule and include all activities worked on during the first 60 calendar days of the Contract. The Engineer reviews and accepts the schedule prior to the approval of the first pay estimate.
 6. Acceptance of the baseline construction schedule by the Engineer does not imply approval of any particular construction methods or relieve the Contractor from its responsibility to provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the contract documents.

7. Acceptance of the baseline construction schedule by the Engineer does not attest to the validity of assumptions, activities, relationships, sequences, resource allocations, or any other aspect of the baseline construction schedule. Within the contractual constraints, the Contractor is solely responsible for the planning and execution of the work.
8. Failure by the Contractor to include any element of work required by the Contract in the accepted baseline construction schedule does not relieve the Contractor from its responsibility to perform such work.
9. In no way does the baseline construction schedule modify the contract documents.

D. Schedule Requirements

As a minimum, address the following in the baseline construction schedule:

1. Define a complete logical plan that can realistically be accomplished, for executing the work defined in the Contract.
2. Include sufficient activities to assure adequate planning of the project.
3. Comply with the phasing, work constraints, and milestones defined in the Contract as well as all other contractual terms and conditions.
4. Clearly show the critical path (using the longest path definition) and other critical elements of work. If the schedule is resource loaded and leveled, define the critical path of the schedule based on resource limitations. If an early completion schedule is accepted, the Engineer defines the additional Department cost required to support the accelerated schedule (such as increased staff for inspection and testing, overtime, etc.). The Contractor is responsible for paying these added costs unless waived by the Engineer on the basis of other benefits accrued to the Department.
5. Clearly define significant interaction points between the Contractor, UDOT, and other entities (such as utilities, local governments, special service districts, etc.).
6. Designate the "Data Date" as the day prior to the Notice to Proceed.
7. Include a unique identification number for each schedule activity.
8. Clearly and uniquely define each activity description. Using descriptions referring to a percent complete of a multi-element task (i.e., "Construction 50 percent of Deck") are not acceptable.
9. Define the duration of each activity - limiting the maximum duration of any activity to 15 days unless otherwise accepted by the Engineer.
10. Clearly identify the relationships tying activities together.
11. Do not have any open ended activities (with the exception of one start and one finish activities).
12. Do not have any constrained activities unless the Engineer accepts such constraints.
13. Do not sequester project total float through manipulating the calendars, extending activities durations, or any other such methodology.

14. Use resource loading if resource limitations could affect the prosecution of the work. No time extensions tied to a shortage of resources will be considered unless the baseline and subsequent schedule updates are resource loaded.
15. Include milestones to define significant contractual events such as Notice to Proceed, Substantial Completion, and coordination points with outside entities such as utilities, special service districts, etc.
16. Include a well-defined activity coding structure that allows project activities to be sorted by total project, responsible party, location of work, type of work, work phase, or as mutually agreed to by the Contractor and the Engineer.
17. Have clearly defined calendars.
18. Include a Narrative that describes:
 - a. The construction philosophy supporting the approach to the Work outlined in the baseline schedule. Address the reasons for the sequencing of work and describe any limited resources, potential conflicts, and other salient items that may affect the schedule and how they may be resolved.
 - b. The justification(s) for activities with durations exceeding 15 working days.
 - c. The justification(s) for constraints used.
 - d. The justification(s) for unusual calendars used.
 - e. The approach used to apply relationships between activities (for example, all ties are based on physical relationships between work activities - rebar must be placed before concrete is poured; or relationships are used to show limited resources - bridge two follows bridge one because the contractor only has one bridge crew; etc.).
 - f. The project critical path and challenges that may arise associated with the critical path.
 - g. How the Contractor intends to coordinate with other entities.

E. Project Float

Total Project Float is defined as the length of time activities can be delayed before they affect the finish date of the project or a contractual milestone.

1. Float is a shared commodity and not for the exclusive use or financial benefit of either party.
2. Either party has the full use of the project float until it is depleted.

F. Prosecution of the Work

Employ a sufficient work force, supply adequate materials and equipment, and prosecute the work with such diligence as to maintain the rate of progress indicated in the accepted baseline construction schedule.

1. Any additional or unanticipated costs required to maintain the schedule is solely the Contractor's obligation and is at no expense to the Department.

1.7 CONSTRUCTION SCHEDULE UPDATES

- A. Update the construction schedule monthly using the closing date for the monthly progress payment and submit to the Engineer.
 - 1. The Engineer does not approve progress payment until the schedule update has been received.
 - 2. Show actual progress for each activity; actual start and finish dates for completed activities; actual start dates, percent complete, and remaining duration for activities in progress; projected sequences of activities for future work; revised relationships and durations for unfinished activities, if warranted; and a well defined critical path.

- B. Submit one hard copy and one electronic copy of the schedule update to the Engineer for review and approval.

- C. Along with the updated schedule, submit a narrative describing:
 - 1. Actual work performed during the estimate period.
 - 2. Any problems or delays that have been experienced to date, the party responsible for the problems or delays, and the Contractor's intentions to resolve the problems or bring the delayed activities back on schedule.
 - 3. Differences between the actual work performed and the work planned for the period, including explanations for the deviations.
 - 4. The current critical path of the project, highlighting any changes to this path since the last update and the impacts of such changes.
 - 5. All added or deleted activities and the reason(s) for and the impact(s) of such changes.
 - 6. All changes in activity durations and the reason(s) for and the impact(s) of such changes.
 - 7. All changes in relationships between activities and the reason(s) for and the impact(s) of such changes.
 - 8. The addition or deletion of constraints and the reason(s) for and the impact(s) of such changes.
 - 9. All changes to the project calendars and the reason(s) for and the impact(s) of such changes.
 - 10. The work to be accomplished during the next period. Provide reasoning for any deviations from the schedule.
 - 11. All potential problems that may be encountered during the next period and the proposed solutions to such problems. Particularly, identify all potential problems the Department may be party to. Explain what action the Department needs to take and the date by which time the action needs to be taken to avoid the problem.

- D. The Engineer conducts a monthly review of the updated construction schedule.
1. This review occurs within one week of the receipt of the Contractor's updated information and serves as the forum to discuss activity slippages, remedies, schedule revisions, coordination requirements, change orders, potential Contractor delay claims, and other relevant issues.
 2. The Contractor's project manager, scheduler, and appropriate field personnel participate in these reviews.
 3. Compile an action item list that describes who is responsible for existing or pending issues and the date by which the issue needs to be resolved to avoid contract delays.
 4. Submit a revised schedule update if necessary.

1.8 CONSTRUCTION SCHEDULE DELAYS

- A. A construction schedule delay is defined as an event, action, or other factor that impacts the critical path of the construction schedule and extending the time needed to complete the construction project. There are four types of delays:
1. **Excusable Delay** - An excusable delay is one caused by an unforeseeable event beyond the Contractor's control. Such delays, where the Contractor may be granted added time but no additional money, include, but are not limited to, acts of God, acts of public enemies, fires, floods, area wide strikes, utility conflicts, and unusually severe weather.
 2. **Compensable Delay** - A compensable delay is one solely caused by the Department or its representatives. Such delays include, but are not limited to, Department ordered suspension of the work, design errors, and differing site conditions. Compensable delays may entitle the Contractor to additional time and monetary compensation.
 3. **Inexcusable Delay** - An inexcusable delay is one that the Contractor could have foreseen and prevented but failed to do so. In such cases, the Contractor is responsible for all cost and time impacts resulting from the delay for all parties affected. Examples of events that cause inexcusable delays include weather or failure by the Contractor to assign sufficient resources to the project.
 4. **Non-Critical Delays** - Non-critical delays are delays, regardless of cause, that do not impact the critical path of the project. No added time or monetary compensation is given the Contractor for such delays. If the delay is sufficiently long to eventually place the impacted activity(s) on the critical path of the construction schedule, the time period the delay affects the critical path will be handled as defined above.
- B. Upon determining critical activities have been delayed, provide written notification to the Engineer within seven calendar days of the delay-causing event. Provide detailed information including:
1. The events that caused the delay.
 2. Party(s) responsible for the events.

3. Activities in the construction schedule affected by the events.
 4. The magnitude of the delay using the current update of the construction schedule.
- C. The Engineer reviews the request and within 14 calendar days provides a written response to the Contractor. If the Engineer agrees with the request, a time extension and added compensation, if applicable, will be granted under the terms of the Contract.
 - D. If the Engineer disagrees with the request, a clear explanation will be included in the letter. This letter serves as formal rejection of the request by the Department.
 - E. Once a delay-causing event is identified, take all reasonable steps needed to minimize the impact of the delay. Failure to do so results in the rejection of all or part of the delay claim.

1.9 LIMITATION OF OPERATIONS

- A. Conduct the work to minimize interference with traffic.
- B. Sundays or holidays: Do not perform any work without written approval except repair or servicing of equipment, protection of work, maintenance or curing of concrete, or maintenance of traffic.
- C. Night work:
 1. Provide five calendar day's notice before starting night work.
 2. Provide adequate lighting for performing satisfactory inspection and construction operations.
 3. Control noise and vibration in accordance with Section 01355.

1.10 CHARACTER OF WORKERS

- A. Provide sufficient resources to complete all work in accordance with the Contract and employ workers with the skills and experience necessary to perform the work.
- B. Remove any person employed who performs the work in an improper or unskilled manner, or who is intemperate or disorderly. Rehire these employees only with the Engineer's written permission.
- C. Failure to remove any employee(s) or to furnish suitable and sufficient personnel to perform the work may result in a written notice to suspend the work.

1.11 METHODS AND EQUIPMENT

- A. Use equipment of the size and mechanical condition to perform and produce the specified work.
- B. Do not damage the roadway, adjacent property, or other highways.
- C. Use methods or equipment other than those specified only with the Engineer's written permission.
 - 1. Describe in writing the proposed methods and equipment to be used and the reasons for the change.
 - 2. Once approval is received, produce work meeting project requirements.
 - 3. Discontinue use of alternate methods or equipment if the Engineer determines that the work does not meet contract requirements.
 - 4. Remove and replace or repair deficient work to return it to specified quality at no cost to the Department.
 - 5. Department does not change the basis of payment for a change in methods or equipment.

1.12 CONTRACT TIME

- A. Contract time begins 10 Calendar days after the date of the Notice to Proceed, unless otherwise specified.
- B. The Contract Documents define the time allowed to complete the Contract. Contract time is measured in either Working Days or Calendar Days as defined in Section 00570.
 - 1. Department excludes Calendar days elapsing between the effective dates of any orders of the Engineer to suspend and resume work that are not the fault of the Contractor.
 - 2. Completion Date: The date when the Contract work is specified to be Substantially Complete.
- C. The Engineer furnishes a Monthly Status of Contract Time showing the number of days expended to date and the number of days remaining for Substantial Completion.
 - 1. This statement is considered correct unless a written protest documenting the differences is submitted to the Engineer within 10 calendar days of the schedule update review meeting.
 - 2. Immediately resolve any differences with the Engineer.

- D. **Substantial Completion** - the day, determined by the Engineer, when all of the following have occurred:
1. The public (including vehicles and pedestrians) has full and unrestricted use and benefit of the facilities both from the operational and safety standpoint, and
 2. All safety features are installed and fully functional, including, but not limited to, illumination, signing, striping, barrier, guard rail, impact attenuators, delineators, and all other safety appurtenances, and
 3. Only minor incidental work, replacement of temporary substitute facilities or correction or repair remains for the Physical Completion of the Contract, and
 4. The Contractor and Engineer mutually agree that all work remaining will be performed without lane closures, trail/sidewalk closures, or further delays, disruption, or impediment to the public.
- E. **Physical Completion** - the day, determined by the Engineer, when all construction work required by, or incidental to, the Contract (including all punch list work, final cleanup, and demobilization) is physically completed and the only outstanding obligation under the Contract is the submittal or processing of documentation.
- F. **Contract Completion** - the day, determined by the Engineer, when all work specified in the Contract is completed and all obligations of the Contractor under the Contract are fulfilled.
1. Furnish all documentation required by the Contract and required by law before this date.

1.13 EXTENDING CONTRACT TIME

- A. Request additional contract time as part of project change orders covering quantity overruns, extra work requested by the Department, suspensions of work, and other excusable delays.
1. Time added to Calendar Day and Completion Date contracts is in calendar days.
 2. Time added to Working Day contracts is in working days.
- B. Provide a narrative clearly explaining the cause and duration of the delay.
1. Support the narrative with a project schedule delay analysis showing the overall project critical path and substantial completion date is negatively affected by the number of days requested.
 - a. Base the schedule analyses on the most current project schedule update.
 - b. Explain any changes made to the schedule in the analysis.

- c. Include an explanation of the addition or deletion of activities, modified activity durations, changes in activity relationships and constraints, and any other change that contribute to the schedule delay.
- C. Partial Suspension: Suspension of work on some items as ordered by the Engineer is considered a partial suspension.
- 1. Applicable only to working day or calendar day contracts.
 - 2. Engineer determines the time charged for each day on partial suspensions not the fault of the Contractor as the greater of:
 - a. 0.15 day
 - b. The quotient (rounded to hundredths) obtained by dividing the sum of the bid amount for the specific items of work not suspended by the total value of original contract amount.

1.14 FAILURE TO COMPLETE ON TIME

- A. Achieve Substantial Completion within the required Contract Time. Department deducts from any money due the sum specified in the following Schedule of Liquidated Damages (Table 1) for each calendar day or working day that any work remains necessary to achieve Substantial Completion after the Substantial Completion date.
- B. Achieve Physical Completion no later than 30 calendar days after achieving Substantial Completion. Department deducts from any money due \$210.00 per day for each calendar day after the 30 days following Substantial Completion any work remains necessary to achieve Physical Completion.
- C. Achieve Contract Completion no later than 30 calendar days after achieving Physical Completion. Department deducts from any money due \$100.00 per day for each calendar day after the 30 days following Physical Completion any obligation of the Contractor under the Contract remains unfulfilled.

Table 1 - Schedule of Liquidated Damages

Original Contract Amount		Daily Charge	
From more than	To and including	Calendar Day Completion Date	Work Day
\$0	\$100,000	\$210	\$830
100,000	500,000	450	950
500,000	1,000,000	680	1380
1,000,000	5,000,000	1270	2170
5,000,000	10,000,000	1860	2950
10,000,000	30,000,000	2770	4930
30,000,000		4100	8240

- D. Continuation and completion of the work after the contract time expires does not waive the Department's rights under the Contract.

1.15 TERMINATION FOR DEFAULT

- A. Termination can occur if the Contractor:
 - 1. Fails to begin the work under the Contract within the time specified.
 - 2. Fails to perform the work with sufficient resources to assure the prompt completion of the work.
 - 3. Fails to perform the work in accordance with the Contract requirements or neglects or refuses to remove and replace rejected materials or unacceptable work.
 - 4. Discontinues the prosecution of the work.
 - 5. Fails to resume work within the time specified upon notification from the Department.
 - 6. Becomes insolvent, or is declared bankrupt, or commits any act of insolvency or bankruptcy.
 - 7. Allows any final judgment to remain unsatisfied for a period of 10 calendar days.
 - 8. Makes an assignment for the benefit of creditors without the Department's approval.
 - 9. Fails to comply with Contract requirements including minimum wage payments or EEO requirements.
 - 10. Is a party to fraud.
- B. The Engineer may declare the Contract in default by written notice to the Contractor and the Surety advising them of the actions required for remedy.
- C. Comply with the written notice within 10 calendar days of receipt or the Department has full power and authority to terminate the Contract.
- D. The Department may appropriate or use any or all materials and equipment at the project site and enter into another contract for completion of the work according to the terms and provisions thereof, or use such methods as determined by the Department to complete the Contract.
- E. All costs and charges incurred by the Department, including the cost of completing the work under the Contract, are deducted from monies owed or that may be owed the Contractor. Should the expense exceed the sum that would have been payable under the Contract, the Contractor and Surety are liable and must pay the Department the amount of the excess.

- F. If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Department.

1.16 TERMINATION OF CONTRACT FOR CONVENIENCE OF THE DEPARTMENT

- A. The Department may by written order terminate the Contract or any portion thereof after determining that for reasons beyond the Contractor's or the Department's control, the Contractor is prevented from proceeding with or completing the work and that termination would be in the public interest.
- B. Reasons for termination may include, but are not limited to:
 - 1. Executive Orders of the President relating to prosecution of war or national defense.
 - 2. National emergency that creates a serious shortage of materials.
 - 3. Orders from duly constituted authorities relating to energy conservation.
 - 4. Restraining Orders or Injunctions obtained by third-party citizen action resulting from national or local environmental protection laws or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor.
- C. When the Department orders termination of a Contract effective on a certain date, the Department pays for all completed items of work as of that date at the Contract bid price.
 - 1. Department pays for partially completed work either at agreed prices or by force account methods.
 - 2. Department pays for items that are eliminated in their entirety in accordance with Section 01282.
- D. Materials obtained by the Contractor that have not been incorporated into the project may be:
 - 1. Purchased from the Contractor at the option of the Department at actual cost delivered to a prescribed location.
 - 2. Disposed of as mutually agreed.
- E. Contractor may submit a claim for additional costs not covered in the Contract after receipt of Notice of Termination from the Department.
 - 1. Submit within 60 calendar days of the effective termination date.
 - 2. Include cost items such as:
 - a. Reasonable idle equipment time
 - b. Mobilization efforts
 - c. Bidding and project investigative costs
 - d. Overhead expenses attributable to the project terminated

- e. Reasonable profit on work completed
 - f. Subcontractor costs not otherwise paid for
 - g. Actual idle labor cost if work is stopped in advance of termination date.
 - h. Guaranteed payments for private land usage as part of original Contract
 - i. Any other direct cost the Contractor has incurred
3. The negotiated settlement figure reached with the Contractor does not include loss of anticipated profits.
- F. Make cost records available to the Department for determining the validity and amount of each item claimed, and for providing a basis for negotiating an equitable settlement.
- G. Termination of a Contract or portion thereof does not relieve the Contractor of contractual responsibilities for the work completed, nor does it relieve the Surety of its obligation for and concerning any just claim arising out of the work performed.

PART 2 PRODUCTS Not used

PART 3 EXECUTION Not used

END OF SECTION