

1801 SUBLETTING OF CONTRACT

The Contractor shall not sublet, sell, transfer, delegate, or assign the Contract or any portion of the Contract without written approval of the Engineer. If approved by the Engineer and if the Contractor performs Work amounting to at least 40 percent of the total original Contract Amount, the Contractor may sublet a portion of the Contract.

The Contractor may subcontract Contract Items designated in the Contract as "specialty items" and the Department will deduct the cost of any specialty items performed by subcontract from the total original Contract Amount before calculating the 40 percent of Work that the Contractor must perform.

On Contracts with Disadvantaged Business Enterprise (DBE) or Targeted Group Business (TGB) established goals, or both, the Contractor shall perform Work amounting to not less than 30 percent of the total original Contract Amount. The Department will deduct specialty items from the total original Contract Amount before calculating the amount of Work that the Contractor shall perform.

No Subcontractor shall further sublet its portion of the Work without the written approval of the Contractor and the Engineer. If approved by the Contractor and the Engineer, a first tier Subcontractor may sublet a portion of the Work no greater than 50 percent of the Work originally sublet. The Department will not allow second tier Subcontractors to sublet any portion of the Work.

The Contractor shall submit requests to sublet portions of the Contract to the Engineer on a "Request to Sublet" form provided by the Department, at least 10 business days before the Subcontractor intends to start Work. If requested by the Department, the Contractor shall provide one signed copy of each subcontract agreement to the Engineer.

The Department will consider Work subcontracted without the approval of the Engineer and subcontracted Work exceeding the percentages specified in this section as unauthorized work in accordance with 1512, "Unacceptable and Unauthorized Work."

The Contractor shall not construe the Engineer's approval as an endorsement of the subcontract, the Subcontractor, or the Subcontractor's ability to complete the Work in a satisfactory manner.

The subcontract or the Engineer's approval of the "Request to Sublet" form shall not relieve the Contractor of any responsibility to complete the Contract or relieve the Contractor of any obligations or liability under the Contract and the Contractor's Contract Bonds. The Engineer will conduct all transactions with the Contractor. The Engineer will recognize Subcontractors only in the capacity of employees or workers,

subject to the Contract requirements regarding character and competence. The subcontract does not create a contractual relationship between the Department and the Subcontractor; or convey to the Subcontractor any rights against the Department.

The Contractor shall ensure that the subcontracts at least contain the following:

- (1) Federal, State Special Provisions, Division A, or both,
- (2) Federal, State certified prevailing wage determinations, or both, and
- (3) State certified truck rental rates.

1802 QUALIFICATIONS OF WORKERS

The Contractor shall provide workers with sufficient skill and experience to perform the Work assigned to them. Upon request by the Engineer, the Contractor shall submit evidence of qualification for any person engaged in special Work requiring professional training or certification. If any person employed by the Contractor or by a Subcontractor fails to perform assigned Work in a proper and skillful manner, or becomes intemperate, disorderly, abusive, or harassing, the Contractor shall remove that person from the Project as directed in writing by the Engineer. The Contractor shall not employ that person again on any portion of the Project unless otherwise approved by the Engineer. If the Contractor fails to remove a person as directed by the Engineer, or fails to provide suitable and sufficient personnel for the proper prosecution of the Work, the Engineer may suspend the Work until the Contractor complies with the direction from the Engineer.

1803 PROGRESS SCHEDULES

1803.1 ALL SCHEDULES

A General Requirements

The Contractor shall prepare the Progress Schedule as specified in 1803.2, "Bar Chart Schedules," or 1803.3, "CPM Schedule." The Department may request, and the Contractor shall provide supporting data to verify the accuracy of or answer questions the Department has about a schedule.

A.1 Acceptance

The Department's acceptance of any schedule does not modify the Contract or constitute endorsement or validation by the Department of the Contractor's means, methods, logic, activity durations, or assumptions in creating the schedule. The Department's acceptance of a schedule is not an "approval." Review by the

Department of a portion of a schedule or an incomplete schedule submittal will not indicate acceptance of the entire schedule; the Department will return the accepted schedule to the Contractor as "Accepted-As-Noted" or "No Exceptions Taken."

The responsibility for the validity and accuracy of all accepted schedules is solely the Contractor's. The Department's acceptance of schedules will not relieve the Contractor of its obligation or responsibility to submit complete and accurate information. Failure to include any element of required Work in the Progress Schedule shall not relieve the Contractor from completing all Work necessary to meet the Milestones within the Contract Time. By accepting the schedule, the Department does not guaranty that the project can be performed or completed as scheduled. If the Contractor or the Department discovers errors after the Department has accepted a schedule, the Contractor shall correct the errors in the next schedule submission. The Department's acceptance of a schedule will not waive any Contract requirements.

A.2 Early Completion

The time between the scheduled completion date of the Work and the completion date associated with the Contract Time is Float. If the Contractor plans to or does complete the Work, or any portion of the Work, earlier than the Milestones, the Department will administer the float thus created the same as the Float in the schedule. However, if the Contractor does not want to share the float created by planning to or actually completing the Work earlier than the Milestones, then the Department will revise the Contract Time by executing a no cost Supplemental Agreement eliminating the float. For example, if the Contract Time expires on May 15 and the Contractor submits a schedule that is accepted by the Department that shows early completion of the Project on May 1, and the Contractor does not want to share the 14 days of float created by this planned early completion date, then the Department will eliminate the float by executing a Supplemental Agreement revising the Contract Time such that it expires on May 1.

A.3 Non-Compliance

The Contractor's refusal, failure, or neglect to pursue timely acceptance of any schedule shall constitute reasonable evidence that the Contractor is not prosecuting the Work with the diligence that will ensure its completion within the applicable Contract Time and shall constitute sufficient basis for the Engineer to exercise options available in this "Non-Compliance" section. The Engineer will determine which of the following option(s) will best facilitate compliance:

- (1) 100 Percent Withholding: The Engineer may withhold an amount up to 100 percent of the estimated value of work performed.

- (2) Monetary Deduction: The Engineer may assess a non-recoverable Monetary Deduction of up to \$1,000/day for every day past an applicable deadline within 1803, "Progress Schedule."

1803.2 BAR CHART SCHEDULES

A General Requirements

The Contractor shall plan and manage the Project, and report progress using the Bar Chart Method for the Contractor's Progress Schedules. The Contractor shall not start any permanent work before Baseline Schedule Acceptance.

B Required Schedules

B.1 Preliminary Schedule

The Department will consider all schedules submitted before Baseline Acceptance to be Preliminary Schedules until the Preliminary Schedule is accepted as the Baseline in accordance with 1803.3.B.2, "Baseline Schedule"; the Contractor shall continue to improve upon the Preliminary Schedules and show the status of Work actually completed, by incorporating actual start and finish dates and by reasonably estimating the remaining duration for each incomplete activity.

B.2 Baseline Schedule

The Baseline shall indicate:

- (1) Actual Dates of Work performed if the Contractor chooses to perform any Work before the Department's Acceptance of the Baseline Schedule.
- (2) All Work being completed within the Contract Time by the applicable Milestones and in compliance with all staging restrictions.
- (3) Each Activity shall:
 - (3.1) Possess a unique activity description and include a VOL (Verb, Object, and Location) for each description.
 - (3.2) Be expressed in working days with duration of not more 20 working days unless the Engineer authorizes otherwise.
- (4) The Critical Path.
- (5) The following minimum level of detail:
 - (5.1) Mobilization
 - (5.2) Work to be performed by the Contractor, Subcontractors, and suppliers.
 - (5.3) Work to be performed by the Department, other contractors, and third parties such as government agencies and authorities, permitting authorities, or other entities.
 - (5.4) The Project Milestones, project highlights (i.e. traffic switches), and staging restrictions and phasing.

- (5.5) Submittal, review, and acceptance activities when applicable, including time periods for the Department's acceptance as specified in the Contract.
- (5.6) Fabrication, delivery, installation, testing, and similar activities for materials, plants, and equipment.
- (5.7) Settlement or surcharge periods.
- (5.8) Utility notification and relocation.
- (5.9) Installation, erection and removal, and similar activities related to temporary systems or structures such as temporary electrical systems or shoring.
- (5.10) Durations for receipt of permits.
- (5.11) Substantial Completion
- (5.12) Final Completion

B.3 Update Schedule

The Department will not allow changes to an Update Schedule that disrupts the continuity or comparative relationship between the last accepted schedule and the Update Schedule, such as, renaming of activities or changing activity descriptions.

The Contractor shall minimize the number of changes. The Contractor shall describe the reason for changes to the schedule in the Narrative Report submitted with the Update Schedule.

The Contractor shall update the last accepted Schedule by incorporating actual start and finish dates and by reasonably estimating the remaining duration for each incomplete activity.

B.4 Not Used

B.5 Revised Schedule

The Contractor shall not perform Work substantially different than depicted on the approved Progress schedule in accordance with 1803.4, "Prosecution Control," and shall seek an Accepted Revised Schedule to become the new Progress Schedule.

The Contractor shall submit a Revised Schedule upon one of the following:

- (1) The Contractor desires to substantially deviate from the current Progress Schedule sequence or durations of planned Work, such as, a change to the Critical Path.
- (2) Department's Request.
 - (2.1) Where the Department requires the Contractor to demonstrate how to recover any scheduled Milestone date(s) that differ from the dates established by the Contract or the Contract Time.

- (2.2) The Department concludes that there is a substantial difference between the actual sequence or actual duration of the Work, and the Work as depicted in the Progress Schedule.
- (3) The issuance of a Contract Revision document that changes the planned sequence of Work or the method and manner of its performance.

The requirement to prepare a Revised Schedule is not a directive by the Department to accelerate the Work but rather a directive for the Contractor to seek the Department's Acceptance of a proposal to revise the Progress Schedule. The requirements of the Revised Schedule are otherwise the same as the Baseline Schedule.

B.6 Impact Schedule

The Contractor shall prepare an Impact Schedule:

- (1) To quantify the effects of any contemporaneous or prospective impacts to the Progress Schedule;
- (2) To establish the need for a time extension to a Milestone; or
- (3) At the Department's request, such as, for the negotiation of a potential Contract Revision that changes the planned sequence of Work or the method and manner of its performance.

The standard for preparation of the Impact Schedule is specified in 1806, "Determination and Extension of Contract Time," concerning the analysis of delays using a prospective time impact analysis. The requirement to prepare an Impact Schedule is not a directive by the Department to accelerate the Work but rather a directive for the Contractor to provide a proposal to demonstrate the effects of impacts to the accepted Progress Schedule. The requirements of the Revised Schedule are otherwise the same as the Baseline Schedule.

C Schedule Submission Requirements

The Contractor shall include the following with the Bar Chart schedule in its schedule submission:

C.1 Narrative Reports

- (1) Baseline, Revised, and Impact Schedules must include:
 - (1.1) Explanation of the overall plan to complete the Project, including where the Work will begin and how Work and crews will flow through the Project.
 - (1.2) The working days per week, number of shifts per day, number of hours per shift, the holidays to be observed, and how the schedule accommodates adverse weather days for each month or activity.

- (1.3) A statement describing the status of required permits.
- (1.4) The quantity and estimated production rates for Critical Activities.
- (1.5) Activities requiring coordination with the Department, third parties (i.e. utilities), or both
- (2) Update Schedule must include:
 - (2.1) A description of the reasons for any changes made to the Progress Schedule.
 - (2.2) A statement describing the status of permits.
 - (2.3) Status of Activities requiring coordination with the Department, third parties (i.e. utilities), or both

C.2 Gantt Charts

A Gantt chart is a graphical representation, in either paper or pdf format, of the following information:

- (1) Activity ID
- (2) Activity Description,
- (3) Start date
- (4) Duration (Working Days)
- (5) Finish date
- (6) Timeline
- (7) Title block
 - (7.1) Data date
 - (7.2) Run date

C.3 Electronic Files (Blank)

C.4 Submission Timeline

The Contractor shall submit applicable schedules in accordance with the following table.

Table 1803-1

Schedule Type	Section	Data Date	Submission Due Date	Department Review Length	Resubmission Due Date
Baseline	1803.2.B.2	Letting Date, or as directed by the Department.	10 Business days prior to any permanent Work	7 Business Days after submitted	3 Business Days
Update	1803.2.B.3	15 th of Every Month	4 Business Days after Data Date	7 Business Days after submitted	3 Business Days
Revised	1803.2.B.5	As needed or directed by the Department.	4 Business Days after Data Date	7 Business Days after submitted	7 Calendar Days
Impact	1803.2.B.6	No earlier than last accepted schedule's data date	7 Business Days after Data Date	7 Business Days after submitted	As directed by Department

D Weather and Duration Contingency

The Contractor shall allow for normal weather delays when developing the Progress Schedule. The Department will extend the Contract Time, except as limited by 1806.4, "Extension of Contract Time Due to Weather on calendar Day and Completion Date Contracts," for delays in excess of the anticipated work days lost to inclement weather as specified in Table 1803-2; the days in Table 1803-2 are cumulative and prorated when Contract Time starts or ends mid month. For example, if Contract Time starts May 15 and there are days lost to weather in May or June, then the Contract must lose 7 days to weather (2 days from May and 5 days from June) in addition to the anticipated days in July before a time extension would be considered due to weather days lost in July.

Time Period	Anticipated Work Days Lost
January	20
February	15
March	9
April 1-15	3
April 16-30	2
May	4
June	5
July	4
August	3
September	3
October	3
November 1-14	2
November 15-30	5
December	17

1803.3 CRITICAL PATH METHOD (CPM) SCHEDULES

A General Requirements

If the Contractor intends to use Critical Path Method (CPM) schedules, or when the Department specifies the Work under this Contract shall be scheduled using CPM, the Work shall be planned, accomplished, and reported using CPM for the Contractor’s Progress Schedules.

A.1 Software

The Department uses “Primavera Project Manager (P6)”. If the Contractor uses software other than (P6), the Contractor is responsible for any conversion discrepancies.

A.2 Schedule Calculations, Codes, and Settings

The Contractor shall not prepare a schedule with User Defined fields. The Contractor shall use project-level calendars, not Global or Resources Calendars. The Contractor shall use project-level codes, not Global- or EPS-level codes. The Contractor shall not assign resources to activities.

A.3 File-Naming Convention

The Contractor shall use a file-naming convention as modeled in Table 1803-3. If the schedule is not accepted, the Contractor shall resubmit under the file name as

modeled for the 2nd version, etc. The #####-### indicates a placeholder for the State Project Number.

Table 1803-3 Progress Schedule Filename convention			
Schedules	1st Version	2nd Version	3rd Version
1 st Baseline Schedule (All Schedules until it is Accepted as Baseline)	#####-###-BS-1	#####-###-BS -2	#####-###-BS -3
1 st Update to Progress Schedule	#####-###-1BSU-1	#####-###-1BSU-2	#####-###-1BSU-3
2 nd Update to Progress Schedule, etc	#####-###-2BSU-1	#####-###-2BSU-2	#####-###-2BSU-3
1 st Revised Schedule	#####-###-1RE-1	#####-###-1RE-2	#####-###-1RE-3
1 st Update to Revised Schedule	#####-###-1REU-1	#####-###-1REU-2	#####-###-1REU-3
2 nd Revised Schedule, etc	#####-###-2RE-1	#####-###-2RE-2	#####-###-2RE-3
1 st Impact Schedule	#####-###-1IS-1	#####-###-1IS-2	#####-###-1RE-3
2 nd Impact Schedule, etc	#####-###-2IS-1	#####-###-2IS-2	#####-###-2IS-3

A.4 Float Suppression / Sequestered Float

The Contractor shall not suppress or sequester float. Examples of prohibited float suppression or sequestration include, but are not limited to:

- (1) Logic relationships that provide no tangible or sequential value between unrelated activities.
- (2) Logic relationships that demand completion of an activity that could otherwise continue beyond a Successor's start or finish dates.
- (3) Excessively long durations.

The Contractor shall obtain the Engineer's approval before using lags or leads. The Contractor shall remove any lags or leads and replace with an activity identifying the lag or lead upon the request of the Engineer, regardless of whether the Department allowed the lag or lead in a previous Progress Schedule.

The Contractor shall not be entitled to compensation or a time extension for delays that could have been avoided by revising activity durations or logic used to sequester float.

A.5 Use of Float

The Contractor acknowledges that all float (including Total Float, Free Float, and Sequestered Float) is a shared commodity available to the Project and is not for the exclusive benefit of any party; float is an expiring resource available to accommodate changes in the Work, however originated, or to mitigate the effect of events that may delay performance or completion of all or part of the Work.

It is understood that identified contingencies, as described in 1803.3.D, "Weather and Duration Contingency," become available Float as time elapses and the contingency is not used.

B Required Schedules

B.1 Preliminary Schedule

Acceptance of the first Preliminary Schedule is a condition of Contract Approval and NTP1. A delay in submitting the Preliminary Schedule is a non-excusable delay under 1806.3.A, "Non-Excusable Delays," and the Contractor is not entitled to an extension of the Contract Time.

All schedules submitted before the Department accepts the Baseline Schedule will be considered Preliminary Schedules until the Preliminary Schedule is accepted as the Baseline Schedule in accordance with 1803.3.B.2, "Baseline Schedule"; the Contractor shall continue to improve upon the Preliminary Schedules and show the status of Work actually completed by incorporating actual start and finish dates and by reasonably estimating the remaining duration for each incomplete activity.

At a minimum, the Contractor shall include the following level of detail in the Preliminary Schedules:

- (1) First Preliminary Schedule: show all Milestone dates are understood and provide a detailed schedule for a 30-day look-ahead period.
- (2) Subsequent Preliminary Schedules: show all Milestone dates are understood and provide a detailed schedule for a 45-day look-ahead period.
- (3) Changes to the First Preliminary Schedule in subsequent submissions shall be closely coordinated with the Engineer and are subject to the Engineer's review and acceptance.

B.2 Baseline Schedule

Baseline Schedule acceptance is a condition of NTP2. The Baseline Schedule shall include the entire scope of work and how the Contractor plans to complete all work contracted. The Engineer may review the resource allocations using historical data, Means Productivity Standards, or equivalents to determine if the Schedule is practicable

The Baseline shall indicate:

- (1) Actual Dates of Work performed if the Contractor chooses to perform any Work prior to the Baseline being Accepted.
- (2) All Contract Time dates, Milestones, and staging restrictions are understood and scheduled to complete within the Contract Time.
- (3) Each Activity shall:

- (3.1) Possess a unique activity description and include a VOL (Verb, Object and Location) for each description.
- (3.2) Be expressed in working days with duration of not more 20, or less than 5 working days, unless otherwise authorized by the Engineer.
- (3.3) Have at least one predecessor activity except for the first activity in the schedule.
- (3.4) Have at least one successor activity except for the last activity in the schedule.
- (4) No more than twenty (20) percent Critical Activities, nor more than thirty (30) percent Near-Critical Activities, unless otherwise authorized by the Engineer.
- (5) The minimum following level of detail:
 - (5.1) Mobilization
 - (5.2) Work to be performed by the Contractor, Subcontractors, and suppliers.
 - (5.3) Work to be performed by the Department, other contractors, and third parties such as government agencies and authorities, permitting authorities, or other entities.
 - (5.4) The project Milestones (start or finish dates specified in the Contract), project highlights (i.e. traffic switches and phases) availability dates specified in the Contract.
 - (5.5) Submittal, review, and acceptance activities when applicable, including time periods for the Department's acceptance as specified in the Contract.
 - (5.6) Fabrication, delivery, installation, testing, and similar activities for materials, plants, and equipment.
 - (5.7) Settlement or surcharge periods.
 - (5.8) Utility notification and relocation.
 - (5.9) Installation, erection and removal, and similar activities related to temporary systems or structures such as temporary electrical systems or shoring.
 - (5.10) Installation, erection and removal, and similar activities related to temporary systems or structures such as temporary electrical systems or shoring.
 - (5.11) Durations for receipt of permits.
 - (5.12) Substantial Completion
 - (5.13) Final Completion

B.3 Update Schedule

The Contractor shall update the last accepted schedule to create the Update Schedule. The Contractor shall update the Progress Schedule by incorporating actual start and finish dates and by reasonably estimating the remaining duration for each

incomplete activity. The Contractor shall minimize the number of changes. The Contractor shall describe the reason for changes to the schedule in the Narrative Report submitted with the Update Schedule. If the changes are significant, then the Contractor shall submit the schedule as a "Revised Schedule."

A significant schedule revision is defined as a revision that results in one of the following:

- (1) Alters the Critical Path(s) or Near Critical Path(s).
- (2) Extends the scheduled Milestone date(s) compared to the dates shown on the Progress Schedule.
- (3) Disrupts the integrity or comparative relationship between the Progress Schedule and the Update Schedule. An example of such a revision would be the renaming of activities or changing activity descriptions.

The requirements for the Update Schedule are otherwise the same as the Baseline Schedule.

B.4 Look-Ahead Schedule

The Contractor shall give the Engineer at least 72 hours advance notice before beginning any construction, and at least 24 hours advanced notice before beginning each major construction operation. The Contractor shall inform the Department of the number of hours the Contractor intends to be working each day; and provide 24 hours advance notice of any changes to workday hours, equipment, forces, or sequence of operations.

The Contractor shall submit a detailed Two-Week Look-Ahead Schedule to the Engineer each week until all Work is completed. The Contractor shall prepare the schedule in the bar chart format by hand or by using a computer. This schedule shall span a forward-looking, rolling period of at least 14 calendar days. This schedule is intended to represent the Contractor's best effort to fully communicate the Work planned for the rolling 14-day period and shall not contain extraneous information. The Work activities included in the Two-Week Look-Ahead Schedule shall specifically reference the applicable Activity IDs in the Progress Schedule.

The Two-Week Look-Ahead Schedule shall include, at a minimum, the following level of detail:

- (1) Bridges:
 - (1.1) Test piling
 - (1.2) Test holes
 - (1.3) Embankment for each abutment location
 - (1.4) Fabrication and delivery of piling
 - (1.5) Structural Steel fabrication and delivery, per structure

- (1.6) Pile installation, per bent, per structure
- (1.7) Drilled shaft installation, per pier, per structure
- (1.8) Pile caps, per bent, per structure
- (1.9) Footings, per pier, per structure
- (1.10) Columns, per pier, per structure
- (1.11) Caps, per pier, per structure
- (1.12) End bents, per structure
- (1.13) Beam or girder erection, per structure
- (1.14) Diaphragms
- (1.15) Deck placement, per structure
- (1.16) Parapets, per structure
- (1.17) Erection and removal of falsework and shoring
- (2) Roadway:
 - (2.1) Traffic switches
 - (2.2) Submission of job mix formula for asphalt pavement
 - (2.3) Delivery schedule for items such as drainage pipe, guardrail, sign structures and signs, permanent lighting facilities, and permanent traffic signals
 - (2.4) Internal access and haul roads (location and duration in-place)
 - (2.5) Clearing and grubbing by stationing and roadway
 - (2.6) Excavation
 - (2.7) Embankment placed for each roadway
 - (2.8) Drainage – by run with structures for each roadway
 - (2.9) Retaining walls per location
 - (2.10) Subgrade for each roadway
 - (2.11) Base for roadway
 - (2.12) Curb, barrier wall and sidewalks for each roadway
 - (2.13) Pavement (asphalt and/or concrete) for each roadway
 - (2.14) Bridge approach slabs per location
 - (2.15) Guardrail for each roadway
 - (2.16) Slope pavement or riprap
 - (2.17) Roadway lighting for each roadway
 - (2.18) Signing for each sign structure location and for each roadway
 - (2.19) Striping for each roadway
 - (2.20) Traffic signals per location
 - (2.21) Topsoil, sodding, seeding and mulching for each roadway
 - (2.22) Landscaping
 - (2.23) Finishing roadway and final cleanup

B.5 Revised Schedule

The Contractor shall not perform Work substantially different than depicted on the approved Progress Schedule in accordance with 1803.4, "Prosecution Control" and shall seek an Accepted Revised Schedule to become the new Progress Schedule.

The Contractor shall submit a Revised Schedule upon one of the following:

- (1) The Contractor desires to substantially deviate from the current Progress Schedule sequence or durations of planned Work. An example would include but not limited to an altered Critical Path.
- (2) Department's Request.
 - (2.1) Where the Department requires the Contractor to demonstrate how to recover any scheduled Milestone date(s) that differ from any dates established by the Contract or the Contract Time.
 - (2.2) The Department concludes that there is a substantial difference between the actual sequence or actual duration of the Work, and the Work as depicted in the Progress Schedule.
- (3) The issuance of a Contract Revision document that changes the planned sequence of Work or the method and manner of its performance.

The requirement to prepare a Revised Schedule is not a directive by the Department to accelerate the Work but rather a directive for the Contractor to seek the Department's Acceptance of a proposal to revise the accepted Progress Schedule. The requirements of the Revised Schedule are otherwise the same as the Baseline Schedule.

Unless otherwise directed in writing by the Engineer, whenever an Update Schedule indicates negative Total Float greater than 5 percent of the remaining calendar days before a Milestone, but in no case greater than negative 40 working days, the Contractor shall submit, within 7 calendar days, a Revised Schedule. The Contractor shall prepare a Revised Schedule eliminating all negative float associated with Milestone dates. The Contractor shall submit a written Narrative Report describing the Contractor's position regarding the cause for the negative float and the proposed actions by the Contractor to recover. The requirement to prepare a Revised Schedule is not a directive by the Department to accelerate the Work but rather a directive to provide a proposal. If, in the opinion of the Contractor, the delays causing the negative float are Excusable, then any cure involving acceleration, at a cost to the Department, shall be directed in writing from the Department before any execution of acceleration.

The requirements of the Revised Schedule are otherwise the same as the Baseline Schedule.

B.6 Impact Schedule

The Contractor shall prepare an Impact Schedule:

- (1) To quantify the effects of any contemporaneous or prospective impacts to the Progress Schedule
- (2) To establish the need for a time extension to a Milestone
- (3) At the Department's request. An example of a reason, is the negotiation of a potential Contract Revision document that changes the planned sequence of Work or the method and manner of its performance

The standard for preparation of the Impact Schedule is specified in 1806, "Determination and Extension of Contract Time," concerning the analysis of delays using a prospective time impact analysis. The requirement to prepare an Impact Schedule is not a directive by the Department to accelerate the Work but rather a directive for the Contractor to provide a proposal to demonstrate the effects of impacts to the accepted Progress Schedule. The requirements of the Revised Schedule are otherwise the same as the Baseline Schedule.

C Schedule Submission Requirements

The Contractor shall include the following with the CPM schedule in its schedule submission:

C.1 Narrative Reports

The Contractor shall include a narrative for each schedule submittal to include and discuss:

- (1) Baseline, Revised, or Impact Schedules will include:
 - (1.1) Explanation of the overall plan to complete the Project, including where the Work will begin and how Work and crews will flow through the Project.
 - (1.2) The working days per week, number of shifts per day, number of hours per shift, the holidays to be observed, and how the schedule accommodates adverse weather days for each month or activity.
 - (1.3) A statement describing the status of required permits.
 - (1.4) The quantity and estimated production rates for Critical Activities
 - (1.5) Activities requiring coordination with the Department and/or 3rd parties (i.e utilities)
 - (1.6) A statement identifying Constraints and an explanation of the reason for and purpose of each constraint
 - (1.7) A statement describing the reason for the use of each lag or lead.
- (2) Update Schedules will include:
 - (2.1) A description of the reasons for any changes made to the schedule

- (2.2) A statement describing the status of permits.
- (2.3) Status of Activities requiring coordination with The Department and/or 3rd parties (i.e Utilities)
- (2.4) A description of the status of the scheduled Milestone dates. Elaborate on any differences from the previous submission.
- (2.5) A statement explaining why the scheduled Milestone dates are forecast to occur before or after the Contract Milestone date.
- (2.6) A description of unusual labor, shift, equipment, or material conditions or restrictions encountered or anticipated since the previous Update Schedule.
- (2.7) A statement identifying any new Constraints and an explanation of the reason for and purpose of each constraint.
- (2.8) A statement describing the reason for the use any new lag or lead.

C.2 Gantt Chart

C.2.a Gantt Chart Names

The Contractor shall include the following Gantt charts with each schedule submission. Each schedule shall be sorted by Early Start. The Engineer may require the contractor to submit a .pdf version as well as hard copy.

- (1) "All Activities Chart". All activities with the Longest Path indicated in red.
- (2) "Milestone Chart(s)". Each Milestone's Critical Path.
- (3) "Near-Critical Chart". All Near-Critical Activities.
- (4) Any chart requested by the Department.

C.2.b Gantt Chart Information

Each Gantt Chart shall contain the following information:

- (1) Activity ID
- (2) Activity Description,
- (3) Early Start
- (4) Late Start
- (5) Duration (Working Days)
- (6) Late Finish
- (7) Total Float
- (8) Progress Bar
 - (8.1) Current Schedule Progress Bar
 - (8.2) Baseline Progress Bar (The Engineer may require this to be any past accepted schedule)

- (9) Title block
 - (9.1) Data date
 - (9.2) Run date
 - (9.3) Gantt Chart name

C.3 Electronic File

Compressed format (.xer files).

C.4 Submission Timeline

It is the Contractor's responsibility to meet with the Engineer as often as necessary to satisfy the Department's comments with timeframe stated in Table 1803-4.

Table 1803-4 CPM Submission Timelines					
Schedule Type	Section	Data Date	Submission Due Date	Department Review Length	Resubmission Due Date
First Preliminary	1803.3.B.1	Letting Date, or as directed by the Department.	Condition of Contract Approval	7 Calendar Days after Submitted	Condition of Contract Approval
Subsequent Preliminary	1803.3.B.1	No later than the 15 th of the month following the last accepted Preliminary Schedule.	4 Business Days after Data Date	7 Calendar Days after Submitted	7 Calendar Days
Baseline*	1803.3.B.2	*See Note	*See Note	*See Note	*See Note
Update	1803.3.B.3	15 th of Every Month	4 Business Days after Data Date	7 Business Days after submitted	3 Business Days
Revised	1803.3.B.4	As needed or directed by the Department.	4 Business Days after Data Date	7 Business Days after submitted	7 Calendar Days
Impact	1803.3.B.5	No earlier than last accepted schedule's data date	7 Business Days after Data Date	7 Business Days after submitted	As directed by Department
*The Preliminary Schedule becomes the Baseline after Baseline criteria is met.					

If the Department does not accept the Update Schedule, the Contractor shall correct the comments and resubmit to the Department within timeframe indicated in Table 1803.2.

D. Weather and Duration Contingency

It is the responsibility of the Contractor to estimate a sufficient amount of contingency to account for normal weather. The duration of each activity shall only include the necessary working days to actually complete the work defined by the activity; weather or any other contingency shall not be built into the durations but shall be accounted for within the project calendars.

Each activity shall be assigned an appropriate calendar. The Project calendars shall indicate planned working and nonworking days. Each calendar, with the exception of the calendar used for tracking calendar days, shall include contingent nonworking days. The Contractor shall indicate contingent nonworking days on Monday through Friday only. The Engineer reserves the right to accept or reject the estimated amount of contingency in accordance with "Acceptance of Schedule" section contained herein.

The Schedule shall use a minimum of the following calendars:

- (1) Calendar to indicate calendar days (cure time, etc),
- (2) Calendar for work that can progress year round, and
- (3) Calendar for each major item of Work affected by weather or seasonal limitations. The Contractor shall include a minimum of 15 percent weather contingency for each major item of Work.

Contingency will be the numbers of indicated nonworking days compared to a description of the duration (in hours) of the normal working day, as indicated in the narrative, of the work week, e.g., M-F (10 hrs) and Sat (6 hrs) for every calendar.

1803.4 PROSECUTION CONTROL

The Contractor shall commence and prosecute the work with forces and equipment adequate to complete the Controlling Activity(s) of the Progress Schedule within the planned duration. The Contractor shall prosecute the work continuously and diligently from as many different points and in such parts and sequences as will ensure progress in accordance with the Progress Schedule.

The Contractor shall prosecute the Work substantially in the same sequence as the Progress Schedule. The Department will provide written notice to the Contractor when the Department deems Work is being performed substantially out of sequence; any Work the Contractor continues to perform out of sequence will be considered unauthorized work in accordance with 1512, "Unacceptable and Unauthorized Work".

The Contractor shall mitigate the effects of any delay to the extent practicable, and demonstrate recovery through submission of a Revised Schedule, in accordance

with 1803.2.B.5, "Revised Schedule," or 1803.3.B.5, "Revised Schedule," as appropriate.

While the work is in progress, the Contractor shall notify the Engineer in writing at least 2 business days in advance of any proposed change in equipment, forces, or sequence of operations that may require a change in the Department's engineering or inspection forces.

1803.5 LIMITATION OF OPERATIONS

The Contractor shall conduct the Work in a manner and sequence that will ensure the least interference with traffic, with due regard given to the location of detours and to the provisions for handling traffic. The Contractor shall not open up Work to the prejudice or detriment of Work already started. The Engineer may require the Contractor to finish a section on which Work is in progress before starting Work on any additional sections if the opening of that section to traffic is essential for public convenience.

The Contractor shall not perform Work during the hours of darkness without the prior approval of the Engineer. When the Engineer authorizes night work the Contractor shall furnish sufficient artificial lighting to permit proper and safe inspection, as well as to ensure quality workmanship equal to that achievable during daylight hours.

The Contractor shall not perform Work on Sundays or legal holidays unless specifically allowed for in the Contract. The Contractor shall suspend construction operations for a period of 24 hours from approximately 6:00 a.m. on each Sunday or legal holiday until 6:00 a.m. on the following day. The Engineer may allow slight changes in these hours, but the Contractor shall comply with the intent of this policy. The Contractor does not have to obtain the Engineer's permission to perform minor operations on Sundays and legal holidays that may be necessary to protect the work or to maintain and protect traffic.

1803.6 TEMPORARY SUSPENSIONS

A Suspension of Work Ordered by the Engineer

The Engineer will issue all suspension-of-work orders in writing specifying the effective start date and end date of the suspension, the operations to be suspended, and the reasons for the suspension. The Contractor may not resume work until so authorized in writing by the Engineer and shall resume work immediately upon the Engineer's discretion. The Engineer will order the resumption of Work upon determining that the conditions that caused the suspension no longer exist.

If the Engineer issues a temporary suspension-of-work order because of any action or inaction by the Department, or because of incomplete Work under other contracts, and if the Contractor has not been advised in the Contract that such a suspension may be necessary, the Contractor shall refer to 1402.4, "Suspensions of Work Ordered by the Engineer," regarding compensation and extension of Contract Time.

If the Engineer issues a temporary suspension-of-work order due to the Contractor's fault or negligence, such suspension is a non-excusable delay as specified in 1806.2.C, "Non-Excusable Delays," and is non-compensable.

B Suspension of Work Requested by the Contractor

The Contractor shall send a written request for the temporary suspension of work to the Engineer. The Contractor's request shall include the proposed effective start and end dates, the operations to be suspended, and the reasons for requesting the suspension. The Contractor shall not suspend all or any part of the Work without the Engineer's written authorization. Suspension of the Work for any cause whatsoever shall not relieve the Contractor of the responsibility for maintenance of traffic, except as otherwise provided in 1404, "Maintenance of Traffic," or by written agreement between the Contractor and the Department.

The Engineer will not authorize the Contractor to temporarily suspend operations until the following conditions are met:

- (1) The roads that are being used by traffic and any temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, and farms are in such condition that only routine maintenance will be required to adequately accommodate through and local traffic during the anticipated period of suspension.
- (2) The Contractor has performed such work as is necessary to protect all completed or partially completed work during the anticipated suspension period.
- (3) The Contractor has placed all traffic control devices as specified in 1710, "Traffic Control Devices."

Should the Contractor fail to perform any of this Work before suspension, the Department reserves the right to have the Work performed by others and to deduct the associated costs from any moneys due or becoming due the Contractor.

1804 FAILURE TO MAINTAIN SATISFACTORY PROGRESS

Should the Contractor fail to maintain satisfactory progress, the Engineer will require that the Contractor provide additional resources (labor, materials, equipment, etc.) as necessary to bring the Work up to the level of progress reflected in the current approved progress schedule. The Department will consider any failure by the Contractor to adhere to the approved progress schedule as a failure to provide sufficient resources to ensure completion of the Work within the Contract Time. If the Contractor fails to do either of the following, the Department may issue a notice of default to the Contractor, in accordance with 1808, "Default of Contractor":

- (1) Adhere to the current approved progress schedule, or
- (2) Take action as ordered to remedy unsatisfactory progress.

1805 METHODS AND EQUIPMENT

The Contractor shall use methods and Equipment capable of performing the Work specified in the Contract. The Contractor shall ensure the Equipment does not damage the Roadway, adjacent property, or other Highways.

The Contractor shall request permission from the Engineer, in writing, to use methods or Equipment other than those specified in the Contract. The Contractor shall describe the proposed methods and Equipment and the reasons for the change. The Contractor shall perform the Work in accordance with the original basis of payment and Contract Time.

The Contractor shall discontinue performing the Work using alternate methods or Equipment, if the Work does not meet the Contract requirements. The Contractor shall remove and replace or repair unacceptable work at no additional cost to the Department.

1806 DETERMINATION AND EXTENSION OF CONTRACT TIME

1806.1 GENERAL

The Proposal Package will specify the Contract Time. The Contractor shall prosecute the Work continuously and effectively, with the least possible delay, to the end that all Work is completed within the Contract Time.

If the Department issues a Notice to Proceed, the Contract Start Date established in the Notice to Proceed takes precedence over the Contract Start Date specified in the Proposal Package.

The Department will not consider a plea by the Contractor that the Contract Time was not sufficient as a valid reason for an extension of the Contract Time.

If the Department grants an extension of the Contract Time, the extended time for completion will be in full force and effect as though it was originally specified.

The Department will only extend the Contract Time if an excusable delay, as specified in 1806.2.A, "Excusable, Non-Compensable Delays," or 1806.2.B, "Excusable, Compensable Delays," delays Work on the Critical Path as described in items 1, 2, 3, and 4, below.

Mitigation of delay, whether caused by the Department, Contractor, a third-party, or an event, is a shared contract and legal requirement. Mitigation efforts include, but are not limited to, re-sequencing work activities, acceleration, and continuation of work through an otherwise planned shutdown period. The Contractor and Engineer will explore and discuss potential mitigation efforts promptly and agree upon costs or cost-sharing responsibilities prior to the implementation of mitigation efforts.

The Department will not evaluate a request for extension of the Contract Time unless the Contractor notifies the Engineer as specified in 1403, "Notice for Contract Revisions," and provides the required analysis as follows.

The Contractor shall evaluate delays and calculate the appropriate time extension due based on the following:

- (1) The Contractor shall base all evaluations of delay and all calculations of the appropriate time extensions due on the schedules submitted to and accepted by the Department. The Contractor shall not use schedules that did not exist on the project or create schedules after the delay has occurred to demonstrate entitlement to a time extension.
- (2) The Contractor shall base evaluations and calculations related to the determination of extensions of time on the Critical Path as established by the schedules submitted to and accepted by the Department. The Contractor is not entitled to a time extension for delays that do not delay the Critical Path.
- (3) The evaluations and calculations required to establish entitlement to a time extension will vary depending on the nature and timing of the delay and whether the Contract Time is measured in working days, calendar days, or based on a fixed completion date. It will also vary depending on whether the Contract requires a bar chart or CPM schedule.
- (4) The schedules relevant to the evaluation and calculation of time extensions are the most current schedules submitted to and accepted by the Department. For example, if the Department determines that Extra Work is required and the Supplemental Agreement adding this work will be dated June 2, then the determination of the time extension due the Contractor will be based on the

last schedule submitted and accepted by the Department prior to June 2 of the same year.

- (5) The Contractor's evaluations and calculations to document an appropriate time extension shall be performed as follows:

(5.1) The Contractor shall use the method known in the construction industry as the Time Impact Analysis (TIA) to identify and measure critical delays that have not yet occurred. The Contractor shall not use this method to evaluate delays that have already occurred. In general terms, the Contractor shall perform a TIA as follows:

(5.1.1) Develop a "mini" schedule for the changed work. This schedule is known as a fragnet.

(5.1.2) Identify the current Progress Schedule as described in paragraph (4), above. Record the scheduled completion date of this schedule.

(5.1.3) Insert the fragnet into the current Progress Schedule by properly linking the fragnet with the existing activities in the current Progress Schedule.

(5.1.3) Recalculate the current Progress Schedule with the fragnet inserted and record its scheduled completion date.

(5.1.4) The difference in the calculated scheduled completion dates (or other Milestone dates) between the current Progress Schedule and the Progress Schedule calculated with a properly inserted and properly composed fragnet is the delay attributable to the changed work. The time extension due, if any, will be based on this delay.

- (5.2) The Contractor shall use a Contemporaneous Analysis when evaluating delays that have already occurred. In general terms, the Contractor shall perform a Contemporaneous Analysis as follows:

(5.2.1) Identify the Progress Schedule that is immediately before the start of the delay being evaluated.

(5.2.2) Identify each Progress Schedule in effect during the delay and the Progress Schedule with a data date that immediately follows the conclusion of the delay.

(5.2.3) Identify the critical path each day from immediately before the start of the delay to the Progress Schedule immediately following the delay.

- (5.2.4) Determine whether the delay falls on the critical path.
- (5.2.5) If the delay does not fall on the critical path, then no project delay occurred and no time extension is due.
- (5.2.6) If the delay falls on the critical path, then determine the number of days the critical path is delayed. The time extension due, if any, will be based on this delay.

The Engineer will review the Contractor's evaluations and calculations and determine the time extension due, if any. The Engineer will measure extensions to the Contract Time in working days for Working Day Contracts and in calendar days for Completion Date and Calendar Day Contracts.

The Department will not grant an extension of the Contract Time for delays incurred between November 15 and April 15, inclusive, unless the Contractor's Progress Schedule in place at the time the delay occurred indicated that the Contractor intended to perform Critical Path Work from November 15 through April 15.

The Department may order the Contractor to continue Work between November 15 and April 15, inclusive, and compensate the Contractor for costs incurred due to cold weather Work.

The Department will relieve the Contractor from associated liquidated damages, as specified in 1807, "Failure to Complete the Work on Time," if the Department extends the Contract Time under this section (1806).

1806.2 TYPES OF DELAYS

A Excusable, Non-Compensable Delays

Excusable, non-compensable delays are delays that are not the Contractor's or the Department's fault or responsibility, and that could not have been foreseen by the Contractor. The Department will not compensate the Contractor for excusable, non-compensable delays.

The following are excusable, non-compensable delays:

- (1) Delays due to fires, floods, tornadoes, lightning strikes, earthquakes, epidemics, or other cataclysmic phenomena of nature.
- (2) Delays due to weather if the Contractor is entitled to a time extension for weather as specified in 1806.3, "Determination of Charges on Working Day Contracts," and 1806.4, "Extension of Contract Time Due to Weather on Calendar Day and Completion Date Contracts."
- (3) Extraordinary delays in material deliveries the Contractor or its suppliers cannot foresee or avoid resulting from freight embargoes, government acts, or nationwide material shortages.

- (4) Delays due to civil disturbances.
- (5) Delays due to acts of the public enemy.
- (6) Delays due to labor strikes that are beyond the Contractor's, subcontractor's, or supplier's power to settle and are not caused by improper acts or omissions of the Contractor, subcontractor, or supplier.
- (7) Increases in Contract Item quantities that exceed the Proposal Form quantities, but do not cause an increase in the length of the Critical Path.
- (8) Delays due to acts of the government or a political subdivision other than the Department.
- (9) All other delays not the Contractor's or Department's fault or responsibility and which could not have been foreseen by the Contractor.

B Excusable, Compensable Delays

Excusable, compensable delays are delays that are not the Contractor's fault or responsibility, and are the Department's fault or responsibility, or are determined by judicial proceeding to be the Department's sole responsibility.

The following are excusable, compensable delays:

- (1) Delays due to revised Work as specified in 1402.2, "Differing Site Conditions," 1402.3, "Significant Changes to the Character of the Work," and 1402.5, "Extra Work."
- (2) Delays due to utility or railroad interference on the Project Site that are not anticipated as a concurrent move or activity by the Contract.
- (3) Delays due to an Engineer-ordered suspension as specified in 1402.4, "Suspensions of Work Ordered by the Engineer."
- (4) Delays due to the neglect of the Department or its failure to act in a timely manner.

C Non-Excusable Delays

Non-excusable delays are delays that are the Contractor's fault or responsibility. All non-excusable delays are non-compensable.

Non-excusable delays include, but are not limited to:

- (1) Delays due to the Contractor's, subcontractor's, or supplier's insolvency or mismanagement.
- (2) Delays due to slow delivery of materials from the supplier or fabricator when the material was available in warehouse stock, or when delivery was delayed for reasons of priority, late ordering, financial considerations, or other causes.
- (3) Delays due to the Contractor's failure to provide sufficient forces and equipment to maintain satisfactory progress in completing the Controlling Activities.

- (3.1) An example of unsatisfactory progress would be Measured Mile analysis comparing the productivity of work impacted by a change to the productivity of similar work performed under unimpacted (unchanged) conditions to quantify the inefficiency.
- (4) Delays caused by plant and equipment failure or delays due to the Contractor's failure to provide and maintain the equipment in good mechanical condition or to provide for immediate emergency repairs.
- (5) Delays caused by conditions on the project, including traffic conditions that could be foreseen or anticipated before the date of bid opening. Weather delays are addressed in 1806.3, "Determination of Charges on Working Day Contracts," and 1806.4, "Extension of Contract Time Due to Weather on Calendar Day and Completion Date Contracts."

D Concurrent Delays

Concurrent delays are separate delays to Critical Activities occurring at the same time. When a non-excusable delay is concurrent with an excusable delay, the Contractor is not entitled to an extension of Contract Time for the period the non-excusable delay is concurrent with the excusable delay. When a non-compensable delay is concurrent with a compensable delay, the Contractor is entitled to an extension of Contract Time, but not entitled to compensation for the period the non-compensable delay is concurrent with the compensable delay.

1806.3 DETERMINATION OF CHARGES ON WORKING DAY CONTRACTS

The Department will determine working day charges as follows:

- (1) One whole day for each day of work that the Contractor makes progress or could have made progress during a working day on one or more Critical Activities for at least 4 continuous hours.
- (2) One whole day when the Engineer orders a work suspension for reasons of Contractor's fault or negligence.
- (3) One whole day for Non-Excusable Delays as specified in 1806.2.C, "Non-Excusable Delays."

The Department will not charge a working day:

- (1) When the Contractor could not effectively prosecute Critical Activities for at least 4 continuous hours during a working day due to:
 - (1.1) Excusable, Non-Compensable Delays as specified in 1806.2.A, "Excusable, Non-Compensable Delays."
 - (1.2) Excusable, Compensable Delays as specified in 1806.2.B, "Excusable, Compensable Delays."

- (1.3) Concurrent Delays as specified in 1806.2.D, "Concurrent Delays."
- (2) On Saturdays, Sundays, and legal holidays.
- (3) During the inclusive period from November 15 through April 15, except as specified in 1806.1, "Determination and Extension of Contract Time, General."
- (4) During Suspensions of Work Ordered by the Engineer as specified in 1402.4, "Suspensions of Work Ordered by the Engineer," except for work suspensions ordered by the Engineer for reasons of Contractor's fault or negligence.

The number of working days to be added or subtracted will be determined as specified in 1806.1, "Determination and Extension of Contract Time, General":

- (1) For Differing Site Conditions as specified in 1402.2, "Differing Site Conditions."
- (2) For Significant Changes in the Character of the Work as specified in 1402.3, "Significant Changes in the Character of the Work."
- (3) For Extra Work as specified in 1402.5, "Extra Work."

The Engineer will furnish the Contractor a weekly statement showing the working days charged to the project, except during periods when the Engineer determines that working day charges will not be made. The statement will include an accounting of all delays affecting the Critical Path. The Engineer will classify each of these delays as excusable non-compensable, or excusable compensable, or non-excusable, in accordance with 1806.2, "Types of Delays," or weather-related in accordance with 1806.3, "Determination of Charges on Working Day Contracts," and 1806.4, "Extension of Contract Time Due to Weather on Calendar Day and Completion Date Contracts."

The Engineer will commence assessing working day charges on the Contract Starting Date and cease when the Contractor has completed all Work, including maintenance and final cleanup operations. However, assessments will be made for work conducted before the Contract Starting Date when the operations in progress result in traffic restriction. The Department, under the same condition, will assess working days during the inclusive period from November 15 to April 15. In both cases, the work causing the traffic restriction will be considered Critical Path Work and working days will be assessed.

Objections by the Contractor as to an improper or excessive assessment of working day charges shall be in the form of a written protest to the Engineer, within 10 calendar days of receipt of statement, setting forth the specific dates and justifications for reduced charges. If the Engineer finds the Contractor's protest to be valid or if the Department detects an error, the Engineer will issue corrected weekly

statements. Once accepted by the Contractor, whether explicitly or as a result of the Contractor's failure to file a timely protest, the weekly statement is final and the Contractor waives entitlement to an extension of Contract Time or compensation for any delays not explicitly identified by the weekly statement.

1806.4 EXTENSION OF CONTRACT TIME DUE TO WEATHER ON CALENDAR DAY AND COMPLETION DATE CONTRACTS

The Department will not consider weekends, holidays, or any days between November 15 and April 15, inclusive, as eligible for extensions of Contract Time due to weather unless the Engineer directs the Contractor to work those days, or the Contractor's accepted progress schedule in place at the time the delay occurred indicated that the Contractor intended to perform Critical Path Work on those days.

1807 FAILURE TO COMPLETE THE WORK ON TIME

The Department is entitled to damages for failure of the Contractor to complete the Work within the Contract Time. In view of the difficulty in making a precise determination of actual damages incurred, the Department will assess a daily charge not as a penalty but as liquidated damages to compensate the Department for the additional costs incurred.

In suits involving assessment or recovery of liquidated damages, the reasonableness of daily charges will be presumed and the amount assessed will be in addition to every other remedy enforceable at law, in equity, by statute, or under the Contract.

1807.1 ASSESSMENT OF LIQUIDATED DAMAGES

The Department will deduct from money due the Contractor a daily charge for each calendar day that the Work remains incomplete after the Contract Times expires. The Engineer will assess the daily charge based on the original Contract Amount and Table 1807-1.

Table 1807-1		
Schedule of Liquidated Damages		
Original Contract Amount		Liquidated damage charge per calendar day, \$
From more than, \$	To and including, \$	
0	25,000	300
25,000	100,000	400
100,000	500,000	900
500,000	1,000,000	1,200
1,000,000	2,000,000	1,500
2,000,000	5,000,000	2,500
5,000,000	10,000,000	3,000
10,000,000	—	3,500

1807.2 WAIVER OF LIQUIDATED DAMAGES

The Department may waive all or any portion of the liquidated damage assessment after the date the Work is substantially completed if the Engineer determines that the Work is in a condition that no longer requires ongoing inspection by the Department.

The Department will not assess liquidated damages during the following:

- (1) Periods of authorized suspension of all critical path tasks as defined in 1803, "Prosecution of Work," and
- (2) From November 15 to April 15, inclusive.

The Department does not waive any of its rights under the Contract by allowing the Contractor to continue and finish the Work or any part of the Work after the Contract Time expires. The Department does not waive its rights to recover liquidated damages from the Contractor or its Surety by either:

- (1) Taking over the Work, or
- (2) Terminating the Contract.

1808 DEFAULT OF CONTRACTOR

The Commissioner, after giving due notice to the Contractor and its Sureties, will have full power and authority to take the prosecution of the Work out of the hands of the Contractor without violating the terms of the Contract if the Contractor commits any of the following events of default:

- (1) Fails to start the Work by the Contract starting date and any intermediate starting date, as required in 1806, "Determination and Extension of Contact Time,"
- (2) Fails to perform the Work with sufficient workers and equipment or with sufficient Materials to ensure prompt completion of the Work as required in 1804, "Failure to Maintain Satisfactory Progress,"
- (3) Fails to perform the Work satisfactorily as required by 1512, "Unacceptable and Unauthorized Work,"
- (4) Suspends the prosecution of Work without permission of the Engineer as required in 1803.6, "Temporary Suspensions,"
- (5) Neglects or refuses to remove Materials or reconstruct Work rejected as defective or unacceptable as required in 1512, "Unacceptable and Unauthorized Work,"
- (6) Fails to resume suspended Work within a reasonable time after notice to do so, as required by 1803.6, "Temporary Suspensions,"
- (7) Becomes insolvent, is declared bankrupt, or is the subject of a voluntary or involuntary bankruptcy petition,
- (8) Makes an assignment for the benefit of creditors,
- (9) Fails to comply with the Labor Provisions required by the Contract, or
- (10) Fails to carry on the Work in an acceptable manner for any other cause whatsoever.
- (11) Repeatedly fails to make payment in accordance with the Contract to subcontractors or suppliers for labor or materials.

The Engineer will give the Contractor and Sureties written notice of any default, and will identify the facts of the events of default together with a demand that the Contractor correct such events of default to the satisfaction of the Engineer. If within a period of 10 business days after such notice the Contractor and Sureties fail to correct the identified events of default, the Commissioner will exercise any lawful authority and take any lawful action with respect to such default and with respect to securing performance of the Work.

The Contractor and Department acknowledge the following:

- (1) A notice of default is duly served when it is delivered in person or by registered mail to the Contractor and Sureties or to their authorized representatives, including persons in charge of their offices; and
- (2) The service of the notice is complete and sufficient when a properly addressed and stamped envelope containing the notice is registered and deposited in any post office or U.S. letter box in the State.

The Commissioner's authority to take the prosecution of the Work out of the hands of the Contractor shall include the right to appropriate or use any or all

Materials and equipment on the ground as may be suitable and acceptable, and to enter into an agreement with others for completion of the Work according to the terms and provisions of the Contract, or to use such other methods as may be required to complete the Work in an acceptable manner.

The Department will deduct all costs and charges incurred by the Department, together with the cost of completing the Work under Contract, from any moneys due the Contractor or that would have become due the Contractor under the Contract if the Contractor had completed the Work. If the cost and charges incurred by the Department exceed the amount that would have been payable under the Contract, the Contractor and the Sureties shall be liable for the excess.

If a default of the Contractor is later determined to be without cause, the default of the Contractor will revert to a termination of the Contract in the best public interest as allowed in 1809, "Termination of Contract."

1809 TERMINATION OF CONTRACT

The Department may issue a written termination of the Contract or any portion thereof for any of the following reasons beyond the Contractor's control:

- (1) If the Department determines that the Contractor is prevented from proceeding with or completing the Work within a reasonable period of time because of, but not limited to, the following:
 - (1.1) Labor or material shortage;
 - (1.2) Limitations imposed by law, rule, regulation, or order of the local, State, or Federal government; or
 - (1.3) Actions of the public enemy, including those related to priorities and third-party actions.
- (2) If the Department determines it is in the best public, State, Department, or national interest, because of, but not limited to, the following:
 - (2.1) Lack of funding or a funding reallocation that prevents the completion of the Work as planned,
 - (2.2) Discovery of significant hazardous material problems,
 - (2.3) Right Of Way acquisition problems, or
 - (2.4) Utility conflicts that would cause substantial delays or expense to the Contract.

If the Department issues a termination of the Contract or portion thereof, the Department relieves the Contractor of its obligation to perform such portions of the Contract. The Department does not relieve the Contractor of its responsibilities for the Work completed before the termination, or the Contractor's Surety of its

responsibilities for any just claims arising out of the performance of the Work before the termination.

The Department may direct the Contractor to complete certain elements of the Work before termination of the Contract. The Department will compensate the Contractor for completed and partially completed quantities of eliminated Contract Items in accordance with 1905, "Elimination of Work."