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Project Construction and Contract Administration Contract Administration **Contract Time and Schedule Management**

www.fhwa.dot.gov/federal-aidessentials

Federal requirements must be met regarding managing schedules and completing projects on time



America's driving public understands that roadway construction is part of everyday life and a necessary component of improving our roadways. However, excessive construction periods due to inefficiencies and avoidable delays can frustrate drivers and prolong their exposure to the hazards of driving through work zones.



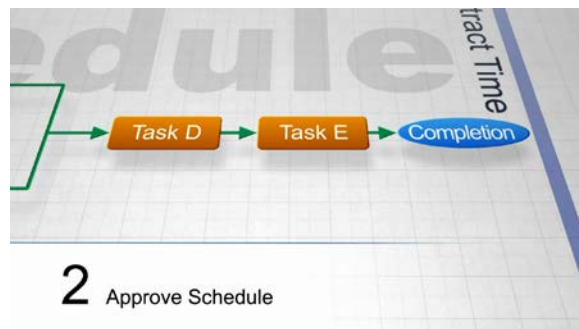
Project delays increase agency administration and the overall construction costs. On Federal-aid projects, it is essential for agencies to establish contract deadlines and control schedules.

Let's look at how agencies do this.

During the preparation of the plans, specifications, and estimate package, or PS&E, agencies should follow an approved process for setting the contract time, which is the maximum time allowed to complete all work in the contract. Typically this process is set by the State department of transportation, or State DOT.

After the construction contract is awarded, most agencies require the contractor to submit for approval an initial schedule for completing the project within the allotted contract time. A reviewer might ask:

- Does the schedule include all contracted work and time for agency action?
- Does it reflect the appropriate sequence of tasks and how each task affects others?
- Does the schedule meet all milestones and the completion date?



Once the project is underway, the focus shifts to maintaining an updated schedule for managing the work. Agencies determine if a schedule needs updating by looking at the controlling items of work—also referred to as critical path items. Some activities can be delayed without negatively affecting the schedule, but the contractor must complete controlling items as scheduled or the project will be delayed. At the earliest indication that the critical path schedule might be in trouble, agencies will request an updated schedule from the contractor showing the plan for delivering the project within contract time.

Agency personnel continue to manage the schedule by evaluating and authorizing time extension requests in coordination with the State DOT.

Some project delays are outside the control of the contractor—such as extraordinary weather events, additional work, labor strikes, or agency-ordered suspensions of work. If the delay affects a controlling item of work, a time extension is justifiable.



However, agencies are entitled to deny time extensions for unacceptable delays resulting from events within the contractor's control—such as lack of attention to the project, unscheduled maintenance, insufficient labor, or delayed shipment of materials or supplies.

Agencies need to promptly address requests for time extensions and enforce all time-related contract provisions, including the Federal requirement for establishing liquidated damages. Liquidated damages are charges assessed to recover an agency's additional costs when projects go beyond the approved contract time. If liquidated damages are not recovered according to the contract, an agency's Federal funds could be reduced.



Let's see how schedule management works in practice. Our example involves a road resurfacing project that will be conducted in phases to minimize impact to area businesses.

According to the contract, the work must be completed in 75 calendar days, or liquidated damages of \$1,500 will be charged for each day the project is late.

The agency awards a contract and approves a schedule that shows completion of the project in 75 days. The schedule includes 10 days for anticipated weather-related delays.

The controlling items of work include:

- Mobilization of equipment
- Traffic control set up
- Paving
- Striping.

All work progresses according to schedule until the sixth and final phase of work. At this point, five days are lost when the contractor's equipment breaks down, and an additional seven days are lost when asphalt tests fail, requiring rework. Since paving is a controlling item of work, the project is likely to be completed beyond the 75-day contract period. The agency has requested an updated schedule. The contractor is unable to make up the time, and requests a 10-day extension.

In a meeting with the contractor, it's confirmed that the delays were within the contractor's control. Therefore, the project manager does not approve the contract time extension.

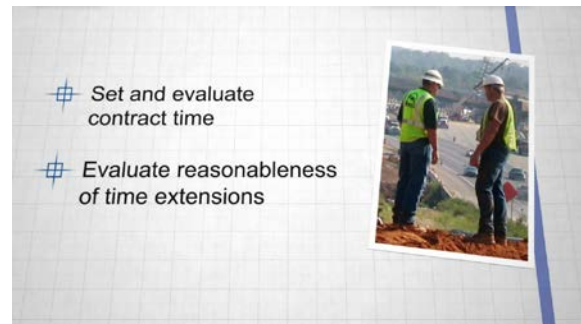
The project is completed 10 days late, and liquidated damages of \$15,000 are deducted from the final payment. No reimbursement is requested from the Federal Highway Administration (FHWA) for its portion of the liquidated damage.



As this example illustrates, agencies need procedures to set appropriate contract times and evaluate the reasonableness of contract time extensions. When determining reasonableness, agencies may also benefit from discussion with the contractor.

In addition to regulatory requirements, some agencies may elect to use additional contract provisions to encourage timely project completion such as:

- The withholding of progress payments when projects fall behind schedule
- Incentive and disincentive payments for schedule management.



Review the schedule-related contract provisions for your State DOT.

The provisions are generally found in the standard specifications, along with associated schedule management procedures. For clarification or additional assistance with schedule management techniques, contact your State DOT.

Web Resources

- FHWA Construction Program Guide covering contract time-related regulations, policies and guidance.
<http://www.fhwa.dot.gov/construction/cqit/time.cfm>
- Federal regulations dealing with various time-related construction requirements (Sect. 109, 120, 121, 124, 127)
http://www.ecfr.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title23/23cfr635_main_02.tpl
- FHWA guidance on handling contract time-related requirements (Sections III.A.6,8; III.B.5,7)
<http://www.fhwa.dot.gov/programadmin/contracts/coretoc.cfm>
- FHWA technical advisory providing guidance on construction contract time determination procedures
<http://www.fhwa.dot.gov/construction/contracts/t508015.cfm>

The content of this document is not a substitute for information obtained from State departments of transportation, appropriate FHWA Division Offices, and applicable laws. Scenarios have been simplified for emphasis and do not necessarily reflect the actual range of requirements applicable to the scenario or this topic. This document was created under contract number DTFH61-11-D-00025 by the Federal Highway Administration, U.S. Department of Transportation, and is offered to the public to heighten and focus awareness of Federal-aid requirements within the local public agencies community and reinforces the importance of these necessary policies, procedures, and practices.

This companion resource is the script content for the video production of the same name.