

AACE
INTERNATIONAL
RECOMMENDED
PRACTICE

54R-07

**RECOVERY SCHEDULING -
AS APPLIED IN ENGINEERING,
PROCUREMENT, AND
CONSTRUCTION**

SAMPLE

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AAACE® International Recommended Practice No. 54R-07

RECOVERY SCHEDULING – AS APPLIED IN ENGINEERING, PROCUREMENT, AND CONSTRUCTION

TCM Framework: 10.2 – Forecasting
10.3 – Change Management

Rev. November 19, 2010

Note: As AAACE International Recommended Practices evolve over time, please refer to www.aacei.org for the latest revisions.

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Disclaimer: The opinions expressed by the authors and contributors to this recommended practice are their own and do not necessarily reflect those of their employers, unless otherwise stated.

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PURPOSE

This recommended practice (RP) for recovery scheduling is intended to provide a guideline, not to establish a standard. As a recommended practice of AACE International, this document provides guidelines for the project scheduler to create a professional recovery schedule or assess the reasonableness of a recovery schedule necessary due to a change of project status and progress that forecasts late completion. This recommended practice is associated with the *Total Cost Management (TCM) Framework* sections 10.2 – Forecasting, and 10.3 – Change Management^[5].

OVERVIEW

This recommended practice provides guidelines to assist construction entities submitting the recovery schedule (the contractor) and the entity reviewing the recovery schedule submittal (the owner or client) to develop, analyze, and respond to the recovery schedule in a fair and reasonable manner. The use of the term “owner” also includes the work performed by their agents such as architect and/or construction manager. In this RP, the use of the term “contractor” does not indicate whether it is a prime contractor or subcontractor, as both are contractors and the issues may be applicable to either or both. Overall, these participants are responsible for the complete, accurate, and timely submittal, review and approval of the project recovery schedule in order to benefit the project as a whole.

Progress on a project does not always proceed as planned. Occasionally, the project schedule may indicate that the project is ‘behind schedule’ and based upon the current work plan, a late project completion is anticipated. This late completion may adversely affect the plans of the owner of the project. Given a situation where there are no existing contractual or other legal issues to the contrary, the contractor is normally entitled to complete late, provided that compensating damages, if any, are paid at the appropriate time to the owner. On the other hand, the owner is normally entitled to direct the contractor to recover lost time. The question of who is responsible for paying for any increased costs due to directed recovery efforts is beyond the scope of this RP.

Many contracts limit the amount of time that the project schedule may indicate as the current prediction of project completion beyond requiring substantial completion. Should the current schedule indicate that the project is behind an amount greater than the allowable time, the owner and/or its agents may direct the contractor to recover lost time and return the prediction of project completion to the needed date. In addition, the owner may decide to simply direct the contractor to recover lost time even if such a clause does not exist in the contract or that the specified limit has not been reached.

If the owner decides to demand a recovery schedule, care should be taken to ensure that the owner has not ignored, delayed, or rejected legitimate time extensions for lost time on a project, while demanding that the contractor recover lost time. When that lost time is due to excusable delays (resulting in the contractor earning the right to time extensions), whether compensable or not, the owner is at risk when requiring a recovery schedule. The issuance of legitimate time extensions on a project, provided in a timely manner and incorporated into the project schedule, will minimize the risk to an owner for potential constructive acceleration claims. See AACE International Recommended Practice No. 29R-03 *Forensic Schedule Analysis*^[6] for further information concerning these types of claims.

Once directed to recover lost time, the contractor is normally required to create and submit a schedule plan that describes how this recovery of time will be accomplished. We call this schedule a recovery schedule. Recovery

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schedules are an important aspect of timely project completion and this is a major reason that requirements for recovery schedules are included in most construction contracts for large projects. They are important as a planning tool as well as a vital medium of communication from the contractor to the owner about changes to be made to the schedule to bring the forecast for project completion back to an on-time, or at least acceptable, basis.

There is no industry established protocol for the best way to recover a schedule, and the different parties involved normally have different motivations driving their very different recommended solutions. This RP provides a structured approach that attempts to reduce construction time at the least cost and while minimizing claims opportunities. This approach contributes to teamwork, providing least cost solutions with reduced conflict, and suggestions to be used whether updating or reviewing a schedule.

APPLICABILITY

This recommended practice is oriented to critical path method (CPM) schedule analysis and is applicable only to recovery schedules that take place during execution of the work, and are used to attempt to regain lost time and to cause the project to complete earlier than the current schedule update forecasts. This RP does not address acceleration schedules which are designed to provide earlier completion than contractually required or used to gain time on a project which is not running behind contractual completion.

Current status in schedules on projects that require recovery may indicate negative float or may show late completion. Neither condition matters in the recovery effort, and in both cases the goal is to eliminate the negative float or bring the predicted completion date back to the earlier, contractual date, or at least reduce that delay to a reasonable minimum.

OVERARCHING PRINCIPLES

The ability of a professional scheduler to produce a reasonable and achievable recovery schedule that will plan for and allow a project to regain lost time is dependent on a number of things; a project management team that is involved with the schedule development, a schedule-driven culture on the project, a reasonable and fair assessment of the project status, knowledge of the capabilities and commitment of the task workers and tradesmen, and a willingness to participate in the schedule management through monitoring and control of the project schedule, in this case the recovery schedule.

While often recovery plan efforts are developed outside the project schedule, the recovery plan should be shown in the schedule, with clear and well-thought out steps for recovery. Just as each schedule update should ensure that the schedule provides a good model of the means and methods employed to progress the work, it is essential that the recovery schedule is based on a good knowledge of the project progress and provides a reasonable and attainable approach to regain lost time. The question of who is responsible for paying for any increased costs due to directed recovery efforts is beyond the scope of this RP.

Fairness

The fact that a contractor submitted a recovery schedule does not imply or require that the contractor execute the planned changes at no cost to the owner. The fact that the owner accepted a recovery schedule does not indicate owner responsibility for time, cost, quality, or material issues arising from the execution of the plan change. The circumstances and responsibility for the project being late (as well as the contract language) should be considered and documented before responsibility may be assigned. A separate document detailing the assumptions and

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responsibilities incurred should accompany a recovery schedule before any such understandings can be assumed (see section on Narrative).

Responsibility

The recovery schedule should be a reflection of the contractor's intent to take steps to improve progress so as to achieve earlier project completion than currently predicted. Generally this earlier progress than predicted is the contractually agreed upon completion date. If there are requested time extensions that are under review by the owner that would eliminate the need for a recovery schedule, and the owner still requires the preparation of a recovery schedule, the contractor should notify the owner that the recovery schedule might become an acceleration schedule, either directed or constructive, with the associated risks to the owner. Since a recovery schedule is the formulation of the contractor's plan to recover time, the recovery schedule is created by the contractor. As with the approved progress schedule, the recovery schedule is created and managed by and is the responsibility of the contractor. The owner indicates his willingness to accept the recovery schedule as an acceptable plan by accepting the submitted revised schedule, but the acceptance does not imply owner participation or direction in the contractor's means and methods, only that the owner agrees that the plan seems reasonable and the schedule appears to represent the contractor's plan. Owner acceptance of the recovery schedule does indicate that the owner agrees to work within constraints on owner-responsible activities shown in the recovery schedule. There are alternative methods of developing a recovery schedule, but the process should honor this basic procedure. Acceptance first requires reaching agreement on the project status.

On some projects, the construction manager may develop the recovery schedule and when this is the case, it is vital that the contractors affected by the schedule participate and collaborate with the recovery schedule development. This is also true in the case of multiple prime contracts, where all contractors that are affected by the schedule should participate and whose needs and abilities should be taken into account during the recovery schedule development.

Involvement

Arriving at a plan to regain lost time while minimizing or mitigating the cost or avoiding unnecessarily increasing the consumption of resources is difficult and is best achieved with involvement by the entire project management team. Failure to arrive at a reasonable, lowest cost, recovery schedule raises the risk of potential loss of time and/or money on the project. A lack of timely agreement on the steps used in the recovery schedule could result in contractor acceleration, cost overruns, late project delivery, and disputes that frequently last well past project completion. It is important to keep in mind that when a recovery schedule is required, project status and situations already exist that have raised the risk of completion for the project, so development and approval of a recovery schedule should be carefully thought out. If the recovery schedule is a product of a team approach, the risks of wasted time and arguments after implementation of the recovery effort are reduced.

Assessment of the recovery from the impacts of trends, deviations, changes, etc. on project schedules usually involves the project team. If the participants agree that the recovery schedule submittal meets the specified standards and represents the current status and the revised forecast using logic for the project is reasonable and achieves the goals of recovery, it is understood that both the contractor and owner are in agreement on approval of the recovery schedule submittal and that both will cooperate in the actions necessary to meet the project recovery schedule.