

AACE
INTERNATIONAL
RECOMMENDED
PRACTICE

78R-13

**ORIGINAL BASELINE SCHEDULE
REVIEW - AS APPLIED IN
ENGINEERING, PROCUREMENT,
AND CONSTRUCTION**

SAMPLE

AACE
INTERNATIONAL



AAACE® International Recommended Practice No. 78R-13

**ORIGINAL BASELINE SCHEDULE REVIEW – AS APPLIED IN
ENGINEERING, PROCUREMENT, AND CONSTRUCTION**
TCM Framework: 7.2 – Schedule Planning and Development

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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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ORIGINAL BASELINE SCHEDULE REVIEW – AS APPLIED IN ENGINEERING, PROCUREMENT, AND CONSTRUCTION

TCM Framework: 7.2 – Schedule Planning and Development



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PURPOSE

This recommended practice (RP) for baseline schedule review addresses two aspects of the schedule development process. First, it is intended to provide guidelines for the engineering, procurement, and construction scheduler to create a professional, useable baseline critical path method (CPM) project schedule by making him/her aware of the criteria by which the schedule is to be reviewed. Second, and the focus of this RP, it provides guidelines for the reviewing scheduler to evaluate that baseline schedule for acceptance by the owner or client. This recommended practice is associated with Section 7.2, *Schedule Planning and Development*, of the *Total Cost Management (TCM) Framework*.^[10]

OVERVIEW

The accepted initial schedule is often referred to as the baseline schedule. The baseline schedule establishes the activity dates (and possibly budgeted costs) that forms the basis of the original project execution plan. It will be used to compare the original planned dates, durations, logic, sequence, and costs against the actual as-built progress. This usage of the term, baseline schedule, in this RP is different from the same term used by several software companies to indicate any saved copy of a CPM schedule or its updates.

This recommended practice is to assist both the creator of the baseline schedule (scheduler) and the person (reviewer) who receives the submitted schedule and reviews it for acceptability on behalf of the owner or client. It may also assist owners in the development of their scheduling specifications. The use of the term owner also includes the work performed by their agents such as contractors, subcontractors, or a project manager acting as the owner's representative.

Most contracts require the contractor to submit a baseline schedule. The baseline schedule is a model of the contractor's project execution plan and is the standard by which project performance is measured.^[11] The schedule should be a reflection of the contractor's intent to achieve project completion while integrating all contractual scope and requirements. For the purposes of this RP it is assumed that the schedule is originally created and updated by the contractor, however, the guidelines may apply to other contractual relationships. The baseline schedule serves as a common basis for assessment of project progress and performance.

Reaching agreement on a baseline schedule is often difficult, frequently requiring team effort, negotiation, and perseverance. During the initial stages of developing the baseline schedule, meetings between the contractor and the owner to discuss expectations and requirements can go a long way towards assuring timely completion, review and acceptance of a useful and effective baseline schedule. A lack of timely agreement on the acceptance of a baseline schedule can result in confusion, disagreements, loss of productivity, extra work, and un-resolved issues that may afterward lead to claims or disputes. It is in the best interests of all parties to achieve an accepted baseline schedule in a timely manner.

APPLICABILITY

This recommended practice is intended to address the evaluation of critical path method (CPM) original baseline schedules. This RP does not apply to a revised baseline plan or to a schedule update review where project

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progress/status is of primary concern.

The focus of a baseline review is on the overall quality and completeness of the original project schedule and overall plan; it is not an assessment of current progress or subsequent project schedule changes. A baseline schedule review focuses on the following issues that are not normally considered in a schedule update review:

- Inclusion of the entire project scope.
- Sequence and work flow.
- Constructability.
- Timing and phasing.
- Adherence to legal and contractual requirements.
- Unambiguous and clear descriptions of the work.
- Resource usage and balance.
- Level of detail.
- Design and coding of activities and project organization [i.e. organizational breakdown structure (OBS) and work breakdown structure (WBS)].
- Highlighting key or critical areas of risk.

RECOMMENDED PRACTICE

This RP is organized into two phases; the preparation of the baseline schedule submittal by the contractor and the review of this submittal by the owner. The following topics are outlined as follows:

- OVERARCHING PRINCIPLES
 - Completeness (inclusion of the entire project scope)
 - Delineation of Responsibility
 - Enforceability
- BASELINE SCHEDULE SUBMITTAL
- BASELINE SCHEDULE REVIEW PROCESS
 - REVIEW INTRODUCTION
 - Reviewer's Role and Responsibilities
 - Review Process Overview
 - Baseline Schedule Review Items
 - Factors for Disapproval
 - PRE-ANALYSIS CHECKS
 - Early Project Completion
 - PROJECT ANALYSIS
 - ACTIVITY ANALYSIS
 - ACTIVITY DESCRIPTION CHECKS
 - ACTIVITY CODE ANALYSIS
 - WBS CODE ANALYSIS
 - RELATIONSHIP ANALYSIS
 - LAG AND LEAD CHECKS
 - CONSTRAINT ANALYSIS
 - COST ANALYSIS
 - NOTEBOOK OR LOG REVIEW
 - OTHER BASELINE SCHEDULE CHECKS
- ADDITIONAL TOPICS
 - Resource Levelled Schedules

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OVERARCHING PRINCIPLES

The review of a baseline schedule focuses on completeness, delineation of responsibility, and enforceability. Contractually, if the owner requires the contractor to submit a baseline schedule, then the owner of the project should review and comment on that submittal in a timely manner. Review comments from the owner should be made in writing and returned to the contractor.

COMPLETENESS

All contractual deliverables and significant pieces of work to be performed by the contractor and its subcontractors should be included in the schedule. Any significant expenditure of resources under direct or indirect control of the contractor should be described. Significant pieces of work performed by the owner, their agents, and other significant stakeholders that have the potential to affect the contractor's performance should be included in the schedule.

DELINEATION OF RESPONSIBILITY

Each activity in the schedule shall have a primary agent or a single entity in control of the work and responsible for its completion. Work by different contractors or under other parties' control should not be combined together into a single activity.

ENFORCEABILITY

If the schedule specification allows or prohibits a particular CPM practice, then that practice is allowed or prohibited (as the case may be) regardless of other considerations. The contractor may request that any specific schedule practice be waived and if such waiver is granted by the owner, may disregard that particular practice. Other than for issues of commonly observed good scheduling practice, the reviewer should not add any further prohibitions to the project than those that already exist in the contract, specifications, and plans.

BASELINE SCHEDULE SUBMITTAL

At a minimum, the baseline schedule submittal consists of a schedule narrative and a copy of the schedule's native electronic backup file in a form consistent for archiving and transfer to other project participants. Additional schedule submittal components may include printed or electronic copies of CPM reports and graphics, submittal/procurement schedules, early/late progress and budget curves (S-curves), related resource graphics, and other deliverables required by the contract.

If extensive submittal documents are required, then the owner may wish to consider specifying a minimum review period in the contract to provide sufficient time for this process. It is in both parties best interest to minimize review periods in order to obtain baseline schedule acceptance as soon as possible.

Open discussions between the contractor and the owner early in the baseline schedule creation process may aid in establishing the true needs of the owner regarding submittal requirements. These baseline schedule coordination meetings are highly effective in streamlining the entire baseline schedule process. Typically the baseline schedule submittal consists of the following components:

- **A written narrative describing the general workplan for the project.** The schedule narrative adds and