Construction Administration in P6

February, 2014

Purpose

The purpose of this document is to define the vision and schedule for using P6 in the administration of construction projects. This includes administering contractor schedules, managing MnDOT resources in P6, developing contract time in P6, and P6 training.

Current Status of P6

Construction was one of the leaders in implementing CPM schedules. Over the past several years, resident offices and OCIC have used P3 and P6 to successfully in mitigate project delays and contractor claims.

In addition to construction, MnDOT has been recently using P6 on design activities. P6 is replacing the aging PPMS system with respect to scheduling. Currently, all highway and bridge pre-construction project delivery schedules are in P6.

Using P6 as Part of the WIG

In addition to simply replacing PPMS, P6 is a vital tool used to meet our Wildly Important Goal (WIG) of Enhancing Financial Effectiveness. MnDOT staff has been asked to identify how much it costs to deliver our program, how much we can deliver in-house, and how much does it cost to deliver our products and services.

To achieve the WIG, the Project Management battle has a requirement that all pre-construction P6 schedules be role loaded by July 1, 2014. The Office of Project Management and Technical Support (OPMTS) is working with pre-construction project managers and functional areas to identify required resources through role loading.

Role loading requires that each activity have a classification (e.g. survey crew, bridge inspector) associated with it so MnDOT can project needed resources into the future. The data from role loading these schedules will help MnDOT better predict our workload and manage our resources more effectively.

Construction Administration as part of the WIG

Following the successful implementation of role and resource loading on pre-construction schedules, the goal is to apply similar practices to construction administration. To date, schedules that can be used for construction contract administration (role and resource loading) have not been developed for MnDOT's use.

Moving forward, OPMTS will be working with a group of resident engineers and the Office of Construction and Innovative Contracting (OCIC) to develop a working understanding of what can be used most effectively and efficiently by the end users. This will likely require the development of contract administration templates in P6. Our goal is to have a process defined by the end of FY 14.

Vision for Construction Administration in P6

When a project is scoped, the P6 schedule will include an activity place holder for construction. As the resident office identifies resources for construction administration, the construction activity placeholder will be replaced with a contract administration template. This template will enable resident engineers to identify and place roles/resources in various areas of their projects. It is anticipated that the construction control schedules will be covered with basic areas used in the construction of a project, such as; Grading, Base, Paving (Bituminous/Concrete), Bridge, Miscellaneous. This data will be used to measure and analyze construction administration needs across the department.

Administering Contractor Schedules in P6

MnDOT will continue the current practice of having contractors build their schedules within MnDOT's P6 firewall. This process is outlined in the CPM Special Provision.

Resident and project engineers currently have multiple sources for contractor schedule review assistance. These include Rick Beckes in OCIC, MnDOT's Shared Service Center schedulers, and external consultants. If you want to use the SSC, please contact them in advance of the letting to arrange a consultant and ensure there are sufficient consultant funds to meet your schedule.

Contract Time Determination in P6

Determination of accurate contract time is essential for efficient delivery of each project. P6 will provide a powerful tool for construction staff to create accurate schedules. Our goal is to meet with OCIC and district construction staff to determine the desire to build schedules in P6 and the impact this will have on the number of P6 licenses.

CPM Specifications and Training

OCIC will continue to develop and manage the 1803 Critical Path Method (CPM) Schedule special provision templates. The Office of OPMTS will review proposed changes to insure the revisions are consistent with P6.

OCIC and OPMTS will work together to develop CPM training classes specific to construction administration. OCIC will lead the development of P6 related contract administration and OPMTS will lead the training regarding general P6 practices and role/resource loading.

Coordination between OPMTS, OCIC and Resident Engineers

As P6 continues to develop, the following working group has been formed to communicate and advance the development of P6 in construction. .

Brian Larson, D1
Kelly Brunkhorst, D8
Eric Embacher, Metro
Steven Barrett, Metro
Rick Beckes, OCIC
Tom Ravn, OCIC
Michael Beer, Metro (CMG)
Jay Hietpas, OPMTS
Jenny Morris, OPMTS
Kelly Hoffman, OPMTS

Next Steps

The working group will be focusing on the following items over the next 6 months:

- Refine Contract Administration Vision with working group (including how to role/resource load for contract administration)
- Determine how construction wants to use P6 for contract time determination
- Refine processes and identify funding for reviewing contractor schedules