



FDM 3-10-10 Scheduling and Programming

May 15, 2019

10.1 Engineering Authorization, Scheduling, and Programming

The concept definition phase culminates in the authorization to incur engineering costs for the project. This involves the scheduling of necessary manpower and funding resources for the project, and is dependent upon present or anticipated inclusion of the project in an appropriate construction program.

During authorization activities, a separate project I.D. is established for each phase of the work having different financing arrangements. Authorization is typically given on such project activities as pre-construction engineering, right-of-way, construction, performance of engineering or right-of-way services by the region for a local unit, responsibility of local unit for costs not eligible for federal participation, etc.

Important to note is that the development of funding for engineering, right-of-way, construction, etc., occurs in various stages throughout the process and is subject to continual review and update as those aspects of the project are refined.

10.2 Letting Guidelines

10.2.1 Objectives

1. Deliver entire annual program to letting.
2. Maximize utilization of available funds.
3. Distribute work load.
4. Allow industry to efficiently schedule forces and equipment.
5. Maximize competition.
6. Reduce risk for bidder.

10.2.2 Assumptions

- Annual volume \$600 million
- 11 lettings annually
- Firm quotes from suppliers allow letting work as early as August for next spring start.

10.2.3 Constraints

There are several constraints that could limit the overall funding available for let contracts within any given fiscal year. Some of those constraints include:

- Federal appropriation bills, such as ISTEA, are valid for only a specific time period. Federal funds cannot be obligated beyond the end of the legislation. Therefore, there may be times when the funds available for let contracts will be significantly less than in the past because they reflect only projects that are totally state funded.
- In addition to federal legislative constraints there are also state budget constraints. The state budget allocates expenditures of federal and state funds. It is possible to have federal funds within a program category but not have state budget authority to spend them. Thus, there is a potential for reduced let contract size compared to let goals.

10.2.4 Letting Size

Based on the foregoing assumptions and considering the following factors, target letting sizes and division of work are proposed in [Attachment 10.1](#).

The percentages shown in the "Total" column are the percent of the target program for the fiscal year. The values shown in parentheses represent the target size in millions of dollars based on an assumed \$600 million program. These guidelines are intended to show target letting sizes under normal conditions and are not intended to limit the letting size or number of projects because of an occasional exceptionally large contract.

Under the columns for specific work areas, the terms High, Moderate and Low are indicators of level of emphasis, i.e. High indicates most desirable time to let this type of work. The numbers shown refer to the following factors.

10.2.5 Factors

1. Maximum size letting of 60 proposals and \$100 million, but not two such size lettings in a row unless exceptional circumstances mandate such.
2. If possible, some of each type of major category of work should be included in each letting.
3. Projects need to be critically assessed as to whether work has to be completed in a single season or if a suspension may be allowed, if proper provisions for traffic handling, erosion control, and winter maintenance are made. This will allow greater flexibility in scheduling letting dates.
4. All types of contractors and suppliers need to schedule forces and equipment, thus they all need work in early lettings.
5. After a contract is executed, the industry feels secure in ordering materials, thus earlier lettings allow early ordering of materials.
6. To assure that local road and bridge projects can be financed in a given fiscal year, they should be scheduled for letting basically in the November through April time frame each year. Local road projects using federal aid will not use the Advance Construction concept. The reason is that WisDOT does not have the ability to fund local projects with state funds in the event that federal funds do not become available.
7. Smaller asphalt surfacing projects should be let early to allow contractors to schedule work around major asphalt paving projects.
8. Electrical and signalization type projects receive better competition if let prior to May.
9. Contracts containing electronic components for signals should be scheduled with about a six-month lead time for delivery of the signal components. Contracts containing light poles or standards and significant quantities of electrical wire should be scheduled to allow a four-month lead time for materials delivery.
10. Projects containing large fills or poor soils should, if possible, be designed for stage construction and scheduled for suspension after completion of the fills. This will allow settlement over the winter prior to construction of the pavement.
11. Utility accommodation
 - Clearing and grubbing contracts can be let separately to allow utility work in the fall or winter.
 - Grading contracts can be scheduled to allow clearing and grubbing in late fall or winter to accommodate early utility work.
12. Best if grading contractors can look at ditches etc. on rehabilitation contracts in fall without snow cover. Also, it's easier to get boring rigs into fields for relocated sections without snow cover.
13. Earth subgrades need to be covered with base course and appropriate erosion control measures must be in place prior to winter suspension to reduce erosion potential.
14. Small steel bridges should be scheduled to allow about five months for steel fabrication.
15. Large steel bridges. Consider separate contract let sufficiently early to allow time for steel fabrication.
16. Reconstruction projects. Ideally the grading contract should be let prior to the structure and paving contracts.
- 17 "Package Contracts" are probably the best choice for:
 - Very small projects
 - Urban reconstruction
 - Whenever traffic control requires complex staging and coordination.

Otherwise the best competitive bidding situation is obtained by breaking the proposed contract into similar categories of construction as the construction industry, i.e.

 - Grade and base course
 - Structures
 - Pavement
 - Lighting and signing, when appropriate.
18. Large or complex asphaltic paving contracts requiring grading, culverts or structure rehabilitation should be scheduled for the earlier lettings. (prior to March)

19. Routine resurfacing or pavement replacement contracts requiring minor (less than six weeks) preparation prior to paving may be scheduled for later lettings. (March and later)
20. Large, complex concrete paving contracts requiring grading, structure rehabilitation, etc. should be scheduled for the earlier lettings. (prior to March)
21. Separate concrete paving contracts following a grading contract and routine concrete pavement repair contracts may be scheduled for later lettings. (March and later)
22. Structures that span warm water fisheries should be emphasized in the July through January lettings.
23. Structures that span cold water fisheries should be emphasized in the February through June lettings.
24. Bridges with nesting swallows cannot be removed, or the nests otherwise disturbed, during the nesting season. This is generally mid-May through early August. Contracts which will require disturbing existing swallow nests should not be scheduled for lettings in April through June unless this restriction has been taken into account in the project work schedule or arrangements made to prevent nesting.
25. Bridge Painting contracts should be scheduled for letting in January through March.
26. Pavement Marking projects should be scheduled for March or earlier lettings if possible. This allows early summer work and lessens conflict with construction project pavement marking needs.
27. Spring and fall climatic windows need to be considered when scheduling planting projects. Major planting projects should be scheduled for letting in August or earlier for the following spring planting season. Suppliers of plant materials inventory their fields in late summer and book most of their orders in August and September.
28. In all cases, cold weather work restrictions and the need to establish erosion control measures prior to suspension of work, need to be considered in determining letting dates.

For further discussion of this activity, refer to the Program Management Manual.

LIST OF ATTACHMENTS

[Attachment 10.1](#) Letting Guidelines