



Mn/DOT Cost Estimation Process Improvement and Organizational Integration Project

Total Project Cost Estimate

Many challenges make it difficult to successfully estimate and manage project costs. Escalating costs and diminishing Mn/DOT credibility among key stakeholders have led Mn/DOT management to seek improvements in cost estimation and cost management procedures.

Why a total project cost estimate?

Consistent and accurate cost estimation and cost management policies offer fiscal transparency while improving the process for everyone. The total project cost estimate, which represents all project-related costs, will allow Mn/DOT to communicate project costs more accurately and consistently both internally and externally.

The total project cost estimate supports the project's vision to "manage and control costs through a department-wide priority on cost estimating and cost management," and to create "reliable and accurate estimates, statewide uniformity and consistency, improved communication and credibility with external stakeholders, and clear accountability." The vision also calls for "well-documented and complete cost estimates."

What is the total project cost estimate?

The total project cost estimate includes a comprehensive list of project costs, including non-construction costs, such as right of way. As implementation begins, project-related costs will be expressed and communicated as a total project cost estimate, regardless of project development phase.

The total project cost estimate consists of the base estimate, or the estimate for all known project costs at the time of the estimate, plus contingency, or the amount that reflects the estimated costs of the remaining risks to the project.

What's different about the total project cost estimate?

- The total project cost takes into account more than just construction costs – including costs for moving utilities, completing engineering, and purchasing right-of-way, among other items.
- It also includes estimates for risk and contingency – assessing risks and assigning a contingency amount in the estimate to account for those risks.
- A project estimate file will be established and maintained for the life of the project, from planning to letting. The basis of the estimate and the inputs to cost estimating will be documented every time a cost estimate is updated.

Who is involved?

Many Mn/DOT district and central office functions are critical to developing accurate cost estimates. Mn/DOT districts and the central office share responsibility for cost estimation. Functional areas also play important roles in process.

The central office primarily will provide cost estimating direction, support and resources, including training opportunities, to the districts.

Districts will have a dedicated estimating function with the primary responsibility of preparing and refining cost estimates for all phases of project development. District estimators with local knowledge will be responsible for all initial cost estimates, including quantities, before coordinating the estimate with the central office. Project cost estimators will follow the cost estimating guidelines and processes outlined in the *Technical Reference Manual*.

What are the elements of a total project cost estimate?

To help project managers and estimators as they scope and estimate projects, a list of 19 base estimate elements has been established.

Base Estimate Elements

1. Pre-Letting Engineering: Internal—Mn/DOT
2. Pre-Letting Engineering: External—Consultants
3. Construction Engineering: Internal—Mn/DOT
4. Construction Engineering: External—Consultants
5. Project Construction Cost
 - Per Scoping Report (e.g., roads, bridges, approaches, and other structures)
 - Contractor Work (e.g., staking, creation of machine control, landscaping and retaining walls)
6. Detours and Haul Roads
7. Pre-Letting Traffic Management: Enforcement and Incident Mgt
8. Construction Traffic Management: Extraordinary Enforcement and Incident Mgt
9. Pre-Letting Communications/Public Information
10. Construction Communications/Public Information
11. Right of Way
12. Utilities
13. Railroads
14. Municipal/Local Issues
15. Turn-Backs: Before
16. Turn-Backs: After
17. Landscaping
18. Environmental Clean-Up/ Mitigation
19. Incentives (moves to Construction Contingency after Letting)

Contingency

Pre-Letting Contingency:

- Total for Base Estimate Elements

Post-Letting (Construction) Contingency:

- Supplemental Agreements
 - Change Orders
 - Cost Overruns
 - Incentives

Total Project Cost Estimate = Base Estimate + Contingency

Where can I find more information?

More information can be found on the web at www.dot.state.mn.us/cost-estimating.

The *Technical Reference Manual*, a guide for developing and managing project cost estimates, will provide procedures to aid Mn/DOT staff in preparing project cost estimates and managing costs throughout the Mn/DOT planning and project development process. The *Technical Reference Manual* will be available in the fall.