

Estimate Review Guidance

Project and Program Delivery Manual
Chapter 5
Cost Estimating
Originally Issued: 11-07-24
Revised: 09-03-25

Estimate Review Guidance

Estimates should be reviewed for accuracy and completeness prior to approval in Masterworks. The steps outlined in this chapter provide a high-level overview of the estimate review process. These steps should be considered a starting point for the review of each project and are not intended to be an all-inclusive list.

Who Should Review Estimates?

The designer who enters the plan items and unit prices in Masterworks is responsible for ensuring an accurate estimate has been developed. In addition, the Project Manager, as assigned in Masterworks, should review the estimate for each of their projects.

Estimate Review Checklist

1. Confirm each phase is assigned to the correct letting date and Phase Program Year in Masterworks. *Include possible link to a PW document for screenshots, etc.*

The screenshot shows the Masterworks software interface with the 'PROJECT PHASES' tab selected. The left sidebar shows a list of recent projects, with '030-43-Missouri Valley Bypass - 1...' selected. The main panel displays the following details:

- Primary County:** Harrison
- Beg Mile Post:** 000.00
- Phase Location:** Missouri Valley Bypass
- Phase Program Year:** 2027 (highlighted with a red box)
- Phase Start Date:** 07/01/2026
- Phase End Date:** 06/29/2027
- Base Cost Estimate (\$):** 29,391,440.00
- Inflated Cost Estimate (\$):** 33,544,560.73
- Program Amount (\$):** 33,545,000.00
- Other Contribution (\$):** 0.00
- Field Manager:** Yes
- NEPA ID Number:**
- LETTING PLANS AND WORK DETAILS:**
 - Type:** Grading
 - Assigned To:** Wes Mayberry
 - Bridge Designer:**
 - RCE:**
 - Bid Letting Date:** 07/21/2026 (highlighted with a red box)
 - Plan Turn In Date:** 05/05/2026
 - Plan Turn in to Assistant Engineer:**
 - Work Group:** 3500-Grading
- ADDITIONAL WORK CODES:**
 - Let by Others:** No
 - Road Designer:** Wes Mayberry
 - RCE Company Name:**
 - RCE Organization:**
 - Bid Letting Fiscal Year:** 2027
 - Plan Turn In Fiscal Year:** 2026
 - Plan Turn in to Assistant Engineer Date:**
 - Work Code:** 3511-Grading

2. If the estimate reviewer does not have prior knowledge of the project, they should briefly examine the most recent plan set to gain a high-level understanding of the project scope.

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3. Review the plan items for each phase in Masterworks. A high-level review of plan items should include, but not be limited to:
 - Confirm major items (paving, earthwork, drainage, traffic control, mobilization etc.) are accounted for in the estimate.
 - Review for double counting of items/work.
 - For example, roadway items such as bridge approaches should not be included in both the structural phase and the grade/pave phase of a tied project.
 - Review quantities for major items to make sure they are in line with the overall project scope.
 - Examples could consist of verifying the correct number of bridges are included in the project quantities; SY of paving is consistent with project length and number of lanes; etc.
 - Follow up on plan item irregularities with the estimator and make appropriate adjustments in Masterworks if necessary.
 - *Does estimate make sense (\$/mile, gut feel, etc.). Link to design document for planning level costs. Publish to dotnet possibly for internal people. Reach out to Field Exam Engineer for planning costs.*
 4. Review unit prices for each phase in iPDWeb. When reviewing pricing, it is important to spend the most time on the items that have the greatest impact on cost in the estimate. Usually around 20% of the items compose 80% of the cost. A high-level review of major item unit prices should include, but not be limited to:
 - Compare earthwork and paving unit prices to recent bids for the same item with similar quantity.
 - Confirm the estimate trend filter and/or item trend filter is using up to date information. See Chapters 5.2.2.4 Estimate Trend Filters and 5.2.2.4.5 Item Trend Filters in iPDWeb for additional information.
 - For unit price lookup instructions refer see Chapter 5.2.2.4.5 Item Trend Filters In iPDWeb
 - Confirm contingency and/or unquantified percentages are appropriate for current stage of design. Refer to Design Manual 1B-6 for additional information.
 - Briefly review unit prices for remaining items that total over 10% of the total estimate.
 - Follow up on any irregularities that were identified with the estimator as necessary. Estimator should update estimate if necessary.
 5. Review containers for each phase under Plan Items in Masterworks.
 - A separate container should be included if specific items will be paid for by another entity such as a local jurisdiction.
 - For instructions on how to add a container see Chapter 5.2.1.2 Add Edit Delete Containers
 - A bridge phase should contain a "Roadway Items" container. If this container is missing, follow up with estimator to ensure roadway items such as bridge approach pavement are included in the overall estimate.
 - Confirm that duplicate/similar containers do not exist in the same phase.
 - For example, if there is a container named "Bridge Items" and another container named "Design No. 0227-CLINTON" in the same phase, this could indicate that items have been duplicated.
 - Follow up with the estimator if duplicate, or similar, containers are part of the estimate and make appropriate adjustments in Masterworks if necessary.
 - Delete any empty containers.
 - For instructions on how to delete a container see Chapter 5.2.1.2 Add Edit Delete Containers
 6. Compare the total estimated costs for all phases of the project to industry expected standards for the project type (E.g. diamond interchange, 4-lane expressway, etc.).
 - Reach out to the Field Exam Engineer for additional information related to planning level costs for various project types.
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7. Compare updated estimates to the Programmed amount for each phase.
- Follow up on significant changes with Assistant District Engineer. For the purposes of this comparison, a 10% or \$5M discrepancy between the updated estimate and the Programmed amount will be considered significant.
 - If the above threshold is met and the funding source for the project is 4R, NR, or MI, an explanation for the cost change should also be emailed to the Transportation Development Division Deputy Director. *Possibly go to Project Review?*
 - If the above threshold is met and the funding source for the project is BR, an explanation for the cost change should also be emailed to the Bridge Project Development Engineer.

Chronology of Changes to Manual Section:

5.3.1 Estimate Review Guidance

11/07/2024	NEW
12/20/2024	Added information about iPDWeb trend filters in section 4.
07/28/2025	Removed broken hyperlinks.
09/03/2025	Removed Header on pages. Checked Accessibility.