

 <p style="text-align: center;">CONSTRUCTION MEMO</p>	Date Issued: April 24, 2019
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Subject: Change Orders Process Update	

To: Distribution

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 Construction Engineer

This memo rescinds and replaces the previous Construction Memos on this subject including December 29, 2009 and September 02, 2015.

Introduction

A construction contract is a formal agreement between the Contractor and MDT. It is recognized that no set of plans will be perfect. Change orders are written throughout the life of the project to amend the contract documents to better fit field conditions. This may entail changes to the contract requirements, significant quantity changes, time adjustments or other. Change orders are a Code of Federal Regulations (CFR) requirement and are needed to protect MDT by having a written agreement to change the contract and to protect and preserve federal-aid funds.

Change Order Approval Types

Formal approval is to be completed before the change order work is allowed to proceed. However, when emergency or unusual conditions justify, advanced approval may be given to begin the work with formal approval obtained as soon as practicable.

Standard Approval: The majority of change orders are this type. This is when a necessary change to the contract is identified, prior to the contractor performing the work. The change must be discussed with proper personnel. A critical component of this change order type is that cost (+/-) and time (+/-) are negotiated and agreed to before any work begins.

Emergency Approval: Emergency Approval will be reserved for conditions when a delay in the work could pose immediate danger to traffic or the general public, or if not performing the work would cause a delay that would result in damage to the project or adjacent property. Unless either of these conditions is present, Emergency Approval will not be granted. The Chief Engineer, Construction Engineer, Construction Engineering

Services Reviewer (CESR), Construction Engineering Services Engineer (CESE), or the District Construction Engineer (DCE) may grant emergency approval. In this instance, work may be performed before formal approval of a change order. Time and materials must be monitored closely in the event that Force Account is used to arrive at a cost. This Emergency Approval must be followed-up with an email documenting authorization to the CESR and the Engineering Project Manager (EPM) and the instructions to initiate the change order approval process.

Verbal Authorization: This is a unique change order type. At times, situations exist where a quick decision must be made through a work directive to the contractor. A quick decision is necessary to avoid delays that would result in significant impacts to the progression of the project. Verbal authorization may be granted by the DCE or District Construction Operations Engineer (DCOE). Time and materials must be monitored closely in the event that Force Account is used to arrive at a cost. This verbal approval must be followed-up with an email from the DCE/DOE documenting authorization to the CESR and EPM and the instructions to initiate the change order approval process.

For both Emergency Approval and Verbal Authorization changes, the EPM must keep the DCE and the CESR apprised of the status and save all correspondence and the approval/authorization to the SiteManager share drive. The EPM must check the "Emergency Approval/Verbal Authorization" indicator on the change order. Because new items will not be available to record against until the change order is approved, document the work in a DWR or Diary remark.

Administrative Approval: This is solely an administrative change order that can be processed without formal approval. This change order type may be used when making a category or project item adjustments that have a net dollar amount of \$0 and no adjustment to contract time. Refer below to Override Approval Rules.

Change Order Checklists

EPM Checklist

The change order checklist is a document that EPMs must complete for each change order. The checklist will document personnel that were contacted to discuss the change order and when they were contacted. It is also a checklist for the EPM to ensure that all impacts are evaluated, such as the environmental and programming documents. The cost and time justification sections of the checklist are critical and must be completed.

Save the checklist along with justification and supporting documentation to the Change Order directory on the SiteManager share drive, using a separate subfolder for each change order. To avoid duplicating large files it is acceptable to place hyperlinks in the change order directory that will link to the file's original location in the project share drive (e.g. a copy of the schedule).

CESR Checklist

The CESR change order checklist will be completed on most change orders. Low risk change orders will not need a CESR checklist. The intent is to focus attention on high risk change orders and reduce the paper work for low risk, low dollar, or trivial changes to the contract. This risk-based approach is more efficient and focuses attention where it is needed. Engineering judgement is still required, and a checklist should be created for any changes the reviewer deems a moderate risk or higher.

It is not necessary to copy the EPM's documentation into the CES share folder. Use the CES share folder to store the CESR checklist plus any additional documentation not found in the EPM's folder.

Override Approval Rules

SiteManager has a feature to override the approval rules. There are two scenarios where this feature may be used:

- The contractor refuses to sign the change order, but the Department needs to pay the contractor for work that has been performed. This is known as a Unilateral Change Order.
- Existing contract items must be moved from one category or project to another to accurately reflect where the costs are being expended but are not affecting the contract total. This is when Administrative Change Orders are used.

The only people that can override the approval rules are the Contract Administration Section Supervisor (CASS), CAS Engineering Contract Specialist and the Construction Engineer.

Significant Change

Significant Changes are a trigger to produce a change order. According to Subsection 104.02.3, a significant change is defined as any of the following:

- The character of the change differs materially from that involved or included in the contract.
- Major items change more than 25% in quantity.
- Non-major items change more than 50% in quantity.

If any of these occur, the EPM must evaluate the situation to determine if a price and/or time adjustment is warranted, positive or negative. Factors to consider in this evaluation include the bid history of the item for the as-constructed quantities, the complexity of the work, and how many fixed costs are included in the item, such as mobilization and overhead costs.

Estimate Discrepancy (SiteManager)

Item overruns create discrepancies in SiteManager when the quantity placed exceeds the allowed percentage. This has been set in SiteManager to 25% for major items and 999% for all other items. When a discrepancy exists on the estimate, the EPM needs to either

resolve the discrepancy (typically with a change order), or override the discrepancy, adding a comment of when/how the discrepancy will be resolved.

If a non-major item overruns more than 50% but less than 999%, the EPM must evaluate it to determine whether or not a price adjustment is appropriate. If it is, a change order is required.

Estimate discrepancies are generated in SiteManager based on the Line Item Number. MDT's policy is based on the percentage that the Proposal Line Number overruns. If an item discrepancy exists in SiteManager, but the contract quantity has not reached the listed percentage, a change order is not required. Contact the CASS with the contract and item information. With agreement by the CASS, the EPM will override the discrepancy and the CASS will turn off the discrepancy during the finalization process.

Estimate Exceptions (Construction and Materials)

Item overruns create estimate exceptions in Construction and Materials when the quantity placed exceeds the allowed percentage or dollar amount. This has been set in Construction and Materials to 25% or \$75,000 for major items and \$50,000 for all other items. When an exception exists on the estimate, the EPM needs to either resolve the exception (typically with a change order), or override the exception, adding a comment of when/how the exception will be resolved.

If a non-major item overruns more than 50% (which is the specification), the EPM must evaluate it to determine whether or not a price adjustment is appropriate. If it is, a change order is required.

Change Order Phases

Change Order Discussion

Change order discussions are verbal and written discussions with other construction personnel and subject matter experts. They are required on all change orders (excluding Administrative Approval) to determine the need for a change, a preliminary scope and cost of the change, discuss federal eligibility, and to ensure consistency of changes statewide.

The EPM must contact the DCE, CESR, and other subject matter experts to finalize the scope of the change. FHWA must be contacted on Projects of Division Interest (PoDI), formerly known as Full Oversight projects. If the size or scope of the change is significant, the Construction Engineer and the CASS should also be contacted.

For Alternative Contracting projects (Design Build, Construction Manager/General Contractor, and Job Order Contracts), the Alternative Contracting Section Supervisor and the Alternative Contracting Engineer must be contacted for review and discussion.

If the project is designed by a consultant, Consultant Design must be contacted so they can determine if the change falls under Errors & Omissions. Environmental Services

should be contacted if there are changes that affect permits or the environmental document. Some environmental features can affect permits and result in noncompliance, with possible violations, when not addressed.

Change Order Review

When a change is identified, the EPM will create a change order in SiteManager. Information will be added to the change order as the scope is identified and bid items, cost and time are negotiated with the contractor.

When the change order information is complete, the EPM will use the Forward To function in SiteManager to send it out for review to the DCE, CESR, CAS Engineering Contract Specialist and if the change order meets the necessary thresholds, the DA and the FHWA Reviewer.

The draft change order is also automatically sent as an email attachment to the MDT Change Order distribution list that is specific to each District. This distribution list includes all relevant parties to change orders in that District. These people have an opportunity to review the change order and provide input in their area of expertise.

All personnel are encouraged to call and discuss the change with the EPM or others if they have questions.

Change Order Approval

The maximum time to approve the draft change order is four days. When the required approvers have approved the draft, the EPM can change the status to pending which initiates the Formal Approval Process. At a minimum, the DCE, CESR and CAS Engineering Contract Specialist must have reviewed and approved the draft change order. On large change orders or PoDI contracts, it is preferable, but not required, that the DA and FHWA have reviewed and approved the draft change order.

If a change order contains a change in project limits, the CES Reviewer will hold their approval until FHWA has approved the project limits extension modification and provided the approval date.

The EPM will send the pending change order for contractor signature. The signed copy is scanned and saved to the change order directory in the SiteManager share drive and the contractor approval date is entered in SiteManager to match the hard copy signature date.

Final MDT approval can now occur in SiteManager. When all required approvals are electronically recorded the change order status is automatically changed to 'Approved'. New work items can be recorded and paid for at that time.

Change Order Authority

The EPM and CESR approve all change orders. The DCE has authority to approve change orders with a value up to \$75,000 or that add up to 6 days of contract time. The DCE may delegate their approval authority to the District Construction Operations Engineer (DCOE).

Change orders over \$75,000 or 6 contract days must also be approved by the District Administrator (DA). *FHWA must approve all change orders on PoDI contracts.*

In SiteManager, these are known as the approval rules. As mentioned above, the only people that can override these rules are the CASS, CAS Engineering Contract Specialist and the Construction Engineer. On occasion an approval rule override is needed. When that occurs the EPM can contact one of the individuals listed above.

Change Order Content

Header

This contains summary information of the change order, including the reason code of the change order, the change order function(s) (e.g. overrun), and the change order amount.

The change order status is also changed in this window.

Items

All changes to work items are included here, whether existing quantities are increased or decreased, or new contract items are added. The EPM must include all items associated with the change (e.g. traffic control, erosion control, etc.) to present an accurate total impact of the change.

If an item is new to the contract, the EPM must evaluate the contractor's price to ensure it is fair, reasonable and equitable. The EPM can request additional information from the contractor (such as an itemized price breakdown) but should evaluate it independently. One of the most useful tools is the Bid History tool in Oracle. It allows the EPM to view historical data on projects in the same district or statewide and allows them to evaluate the price based on similar quantities. Recognize that, because the item is added by change order, it will usually cost a little more than if the item were included in the original contract. Thoroughly document in the checklist how the unit prices were arrived at. If an existing contract unit price was used, state this. Documentation must be stored in the change order folder.

Contract Change/Explanation

This is a thorough description of the contract change. In most situations it should be thought of as a Work Directive and should be written similar to a Special Provision. The EPM can use a standard explanation, if applicable. Multiple explanations can be entered in SiteManager, and all are displayed on the change order. The explanation can consist of

a standard explanation and a short custom explanation to describe additional information if needed. Assure there is a thorough explanation so that someone that is not familiar with this project can reasonably understand what the change is.

Time Adjustments

Contract time is adjusted here, whether the contract time is in days or is a specified completion date. Time can be increased or decreased. If time is adjusted, the Time Adjustment function must be checked on the header window. This window is used to adjust time on the contract or on a milestone.

Time is a negotiated item, similar to a new contract item. Usually, the approval of additional contract time will be based on an updated schedule from the contractor and how it affected the critical path. Other tools may be used to justify additional time, such as Diaries, production rates, etc. Thoroughly document how the time adjustment was determined in the time justification section of the checklist.

Change Order Reasons

Change orders must be completed for, but not limited to, the following reasons:

- A new item of work is added to the contract.
- The requirements of the contract change (e.g. a special provision is updated, a specification is deleted or changed, revised plan details, etc.)
- A price adjustment is applied to an item.
- Contract time is added or deleted.
- An item overruns the allowable threshold.
- The value of miscellaneous work used on an item of work exceeds \$20,000.
- The project limits are changed.
- A change in the controlled access.
- The Notice to Proceed is changed. This does not apply to flex time contracts.

Change orders are not required for incentives and disincentives, including those associated with contract time, and fuel adjustments. These are accomplished with a line item adjustment, not a reduction in quantity.

Please see the linked business process CO_NP_Change_Orders for the process in Construction and Materials:

http://mdtinfo.mdt.mt.gov/other/webdata/internal/const/reports/construction_review_reports/STATEWIDE/CO_NP_Change_Orders_V3-4-24-19.pdf

Change Order Accountability Process:

Due to the risk of non-federal aid participation on work that does not follow our change order process, a Change Order Accountability Process has been created. This process will minimize the risk of non-federal aid participation, it will explain and justify the work that was completed and will assist in the implementation of lessons learned to improve our construction processes. Following are the two cases when this process will be completed:

1. When extra work is performed before the change order is executed/approved and it is not one of the exceptions in accordance with the change order process.
2. When a project has scope or limits increased and the work is completed before the change order is executed/approved and did not follow the change order process which includes Helena Headquarters (HQ) in the discussion of scope or limit changes.

Before these change orders will be approved by HQ, the DCE will complete and submit a memo to the Construction Engineer explaining the situation and why the work was performed before a change order was executed/approved, to include the change order amount and quantities. The DCE will also include the lessons learned from this example and how these lessons learned will be implemented for future improvements. The Chief Engineer is to be copied on this memo.

The change order process is intended to be collaborative and the key is early and robust communication with both the contractor and MDT personnel. It is understood that the process is dynamic and to realize efficiencies, changes can be made as we move forward.

copies:

Chief Engineer	Construction Engineering Services Bureau
Construction Engineer	Engineering Bureau Chiefs
District Construction Engineers	Val Wilson, Legal
Engineering Project Managers	Chris Curran, Internal Audit
FHWA	Erik Martini, Internal Audit
Engineering Bureau Chiefs	