MDOT
Michigan Department of Transportation

OFFICE MEMORANDUM

DATE: February 24, 2012

TO: Region Engineers
Region Associate Delivery Engineers
Region Construction Engineers
TSC Managers
TSC Construction Engineers

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SUBJECT: Bureau of Highway Instructional Memorandum 2012-03
Processing Contract Modifications
(Supersedes BOH IM 2004-14)

This instructional memorandum sets forth changes to the Michigan Department of Transportation (MDOT) contract modification process for construction contracts. The procedures in this BOH IM are effective immediately and apply to all MDOT highway construction projects involving federal and/or state funding including all local or municipal projects with MDOT oversight. This procedure supersedes the procedures set forth in Section 103 of the MDOT Construction Manual and BOH IM 2004-14.

References to Standard Specifications in this document refer to either: the *MDOT 2003 Standard Specifications for Construction* or the *MDOT 2012 Standard Specifications for Construction*, and the selection will be whichever specification is referenced in the project's contract documents. References and citations in this BOH IM will refer to the new *MDOT 2012 Standard Specifications for Construction* but in any case where discrepancies between the specifications exist, the engineer shall refer to the applicable procedures in the respective governing specifications.

This BOH IM contains multiple hyperlinks in both the Table of Contents and throughout the document for easy reference to other sections or attachments. To use the underlined hyperlinks just hold the "control" key and click on them with your mouse.

Table of Contents:
(Hyperlinks to sections)

I. Construction Contract Modification Process Overview 3
II. Contract Modification Development 4
1) Revisions to the Contract 4
2) Revisions to Contract Time 4
III. Generating Contract Modifications 5
1) General Contract Modification Information 5
2) Contract Modification Item Type 6
- Original Pay Items 6
- Modified Original Pay Items 6
- Extra Work 7
- Adjustments 7

3) Detailed Contract Modification Information 7
4) Balancing Quantities 8
IV. Approval Thresholds 8
Figure 1 – Approval Thresholds 8
V. Authorization Path 9
Preparer 9
Consultants (MDOT or LAP Contracts) 9
Contractors 9
Local Agency Projects 9
Federal Highway Administration 9
Tier I - TSC Approval 10
Tier II - Region Approval 10
Tier III - Bureau of Field Services Approval 11
VI. Digital Electronic Signatures 11
VII. Records Retention 12
Appendix A – Authorization Flow Chart 13
Appendix B – Sample Contract Modification 14
Appendix C – Authorized Signature Form 17

I. Construction Contract Modification Process Overview

Subsection 103.02 of the 2012 Standard Specifications for Construction states:

103.02. Revisions to the Contract.

A. General. *The Department reserves the right to revise the contract at any time. Revisions to the contract neither invalidate the contract nor release the surety, and the Contractor agrees to perform the work as revised. The Contractor must not proceed with the revised work until directed to do so by the Engineer, but must continue with all work unaffected by the revision.*

Contract modifications are the formal process by which revisions to the contract are formally authorized, approved and incorporated into the construction contract. Contract modifications are to be processed for any revisions to the contract that alters the nature, scope, cost or time of the project.

The MDOT contract modification process will no longer differentiate between different item types, quantities and/or monetary revisions in work. Changes, extras, adjustments, time extensions, modified originals, overruns, and all other changes are all to be evaluated in the same manner. To better align former terms, new terms, and changes in the MDOT 2012 Standard Specifications for Construction, all these various different types of changes to a construction contract modification will be referred to in this document only as "revisions to the contract". Contract revisions will include all possible work revisions that may be included on a contract modification. Contract revisions may be positive or negative in dollar value, or even have no dollar value associated. The criteria for determining approval requirements of contract modifications will consist of the total cumulative net dollar value change of all contract revisions and previously generated contract modifications with respect to the awarded contract amount.

(For example, an awarded contract for $10,000 with a contract modification containing the following contract revision items:
Adding more blue house paint +$1,000
Deducting yellow house paint -$900
Adding new green paint for shed +$400
Modifying the application rate for a second coat of red paint (units x rate difference) = +$300

Net Contract Modification Total = +$800

$800 total net cumulative contract modifications / $10,000 original contract = 8 percent
So the contract modification would be evaluated as being 8 percent over awarded contract amount requiring Tier II approval as outlined in Section IV.

All contract modifications will be generated and processed within the timeframes established within this document, and shall then be subject to the approval thresholds, oversight, and authorization procedures also outlined by this document.

II. Contract Modification Development

Once a need has been determined to revise the terms of a construction contract, the engineer will initiate the construction contract modification process per the MDOT 2012 Standard Specifications for Construction, Division 1, and as outlined below.

1) Revisions to the Contract

The revision of any contract work shall be identified and processed per the procedures outlined in the MDOT 2012 Standard Specifications for Construction. **The contractor and engineer must come to an agreement on the price, extent, increased units, estimated budget and/or method of payment, of any contract revision prior to commencement of the work.** This agreement may consist of a lump sum, a set quantity of increased pay item units, negotiated unit price, agreement to enter a force account method of payment, and/or an estimated budget amount. The precedence of contract term revisions is outlined in the MDOT 2012 Standard Specifications for Construction (Subsection 109.05). If the engineer does not receive an estimate or lump sum price quote for any work within five calendar days of their request, the contract modification shall be generated with an estimated budget and the work is performed by force account procedures. **In no case shall it take longer than seven business days after commencement of any contract revision work to generate the contract modification covering the revised work and send the contract modification to the contractor for signature.**

All force account work (Subsection 109.05) or any force account like procedures shall require the pre-approval of the region construction engineer prior to commencing the work. A description showing when and how this prior approval was obtained must be noted directly on the contract modification document in the detailed work description area. Any contract revision that will be paid for using the force account method shall have an estimated budget created on a contract modification. Payments to contractors are based only on accepted work that meets specifications in the pay estimate process, so estimated budgets for force account work are expected to be revised and balanced as the work progresses.

2) Revisions to Contract Time

Any revisions to the terms of the contract must be made in a contract modification. This includes revisions to the contract time conditions. Any revisions in work that may impact the contract time requirements must be included on the same contract modification. If it is not possible to determine the exact extent of the contract time revisions at the time the contract modification is generated, then any potential impacts to contract time should be noted directly on the contract modification. Contract modifications should indicate one of the following: that there are no contract time impacts, the exact impacts to contract time, or note that revisions included on the contract modification could impact the contract time and a future contract revision may be required to address this.

Sample: It is not currently known at this time if this non-critical path contract revision work will impact the project completion schedule, however, should the work included in this contract revision alter the project schedule, the contractor will be required to submit a revised progress schedule for approval (Subsection 108.05.A.3.b).

III. Generating Contract Modifications

1) General Contract Modification Information

The following general information is required on each contract modification:

- "Short Description" – Include a brief description of the contract revisions covered by this contract modification.
- "Description of Changes" – Address all items below as they apply to the contract modification:

  A. State the original awarded contract amount.
  B. State the current net total contract amount. This total shall include the net sum total of all previously generated contract modifications, including the current contract modification being developed.
  C. State the resulting net total difference between the current net total contract amount and original awarded contract amounts ("B" minus "A" above).
  D. State the resulting total net percentage change in contract amount. This shall be calculated as the total resulting changes to the contract ("C" above) divided by the original awarded contract amount ("A" above) expressed as a percentage.
  E. State if the project is a Federal Highway Administration (FHWA) oversight project or MDOT oversight. Also indicate if the project has consultant oversight, local agency involvement or other description as may be applicable. For all FHWA oversight projects also state the name of the FHWA area engineer and date of their pre-approval for the work covered on this contract modification. See additional requirements for attaching pre-authorized FHWA Form 1365 to the contract modification as detailed in BOH-IM 2011-05 or as superseded.
  F. For all contract modifications bound for a Tier III approval process (as detailed in Section IV) this section must include a short executive summary of project changes. This summary can and should typically discuss work beyond that contained in the subject contract modification, to more fully describe how the sum of all the contract modifications brought the contract to its current status. *(i.e., a last minor contract revision may not be the sole reason the entire contract has now reached Tier III status, often work in previous contract revisions contributed to the total project cost increases in a more significant way.)* The summary should not be overly detailed and just give a general description of how and why the contract has reached the Tier III threshold. This summary description of contract revisions and explanations may be used by external reviewers in their evaluation and approval of contract modifications reaching the Tier III level.

For example, contract modifications will contain summary bullet points in the "Description of Changes" area like:

A- $100 awarded contract.
B- $110 current net total contract (including changes in this CM).
C- $10 net total change.
D- Total project now 10 percent over awarded contract amount.
E- MDOT oversight project.
F- Tier III approval required. Contract has reached the Tier III approval threshold due to several previously approved minor changes (provide brief overview of specific larger changes) that were required to safely construct the project due to changing conditions caused by weather. No additional contract time will be needed to complete the project as scheduled.

A full sample contract modification has been included within this document as Appendix B

2) Contract Modification Item Type

There are four basic item types used in the FieldManager software. They are described in more detail as:

- Original Pay Items:

  - This item code is used for contract revisions that were already included in the awarded contract as a pay item, but which may need to be increased or decreased based on actual field conditions.
  - A detailed explanation (including answering all of items "A" through "E" in Part 3 of Section III) is required for all revisions that increase or decrease the work item in excess of $25,000. *(Note this is a general guideline for minimum requirements. Additional information may be required on smaller dollar value changes depending upon specific project requirements.)*

- Modified Original Pay Items:

  - Modified originals are used for contract work that was included in the awarded contract as a pay item, but which may need to be duplicated within the contract for another funding category or job number within the same contract for the same item of work.
  - Provide a detailed explanation (including answering all of items "A" through "E" in Part 3 of Section III) for any modified original contract pay item.
  - Must include the following statement as part of the reason:
    - "The item code, item description, and unit price for this modified original have been verified against the original contract item and are correct." See Construction Advisory 2011-01 or as superseded for clarification.

- Extra Work:

  - This item type is used for any contract revisions that will require the addition of a new pay item of work in FieldManager and were not included in the awarded contract.
  - Provide detailed explanation (including answering all of items "A" through "H" in Part 3 of Section III) for the addition of any extra work item revising the contract.
  - Include any required documentation to support the extra revised contract work.

- Adjustments:

  - This category is for contract revisions that require adjustments to work items. Adjustments are defined as "a monetary revision to a contract unit price or to the entire contract." Examples: incentive, disincentive, liquidated damages, HMA quality adjustment, concrete quality adjustment, traffic control quality and compliance adjustment, soil erosion and sedimentation control adjustment, prompt pay violation adjustment, delinquent payroll adjustment, significant changes (i.e., 103.02.B for major items of work ± 25 percent), etc.
  - Document the details of the contract revision adjustments and all associated impacts to the project. Provide detailed explanation (including answering all of items "A" through "H" in Part 3 of Section III) for any contract adjustment item.
  - The unit used for adjustments will be "DLR" (dollars) and the quantity can be ±.

3) Detailed Contract Modification Information

The following detailed information is required for all contract modifications according to which item type (Part 2 above) is used.

- Document the details of the contract revision work including responses to all applicable items listed below:

  A. What was done?
  B. Why was it done?
  C. Are there any offsetting items?
  D. Is the work expected to impact contract time or open to traffic date(s)?
  E. Is this a design error or due to changed conditions?
  F. Who else has reviewed the proposed contract revisions? (FHWA area engineer, region construction engineer, etc).
  G. How was the price established? Document how the cost was determined and justified either by negotiated prices or force account use. For example:
     - Unit price compared to a similar project or similar items on the existing contract.
     - Quoted price appears to be reasonable when compared with weighted average item prices – reference year.
     - Force account was the only logical method due to variables/unknowns.
  H. Include and attach any/all supporting documentation for the contract revision.

4) Balancing Quantities

Work items should be balanced as soon as they are completed and not delayed until project finaling. Balancing quantities must be submitted as soon as the work items are completed, measured, and checked.

IV. Approval Thresholds

The required approval path of contract modifications will be based on the sum of the original awarded contract, the net sum of all previously generated contract modifications, and the current proposed contract revisions compared to the original contract award amount. As shown in Figure 1, if the net total contract amount is less than or equal to 5 percent then the contract modification approval occurs at the Tier I – Transportation Service Center (TSC) level; if the net contract amount exceeds 5 percent of the original value but is less than or equal to 10 percent then the contract modification requires both Tier I - TSC and Tier II - Region approvals; and if the contract modification exceeds 10 percent of the original contract value then the contract modification requires Tier I - TSC, Tier II - Region and Tier III - Bureau of Field Services approvals. Contracts at the Tier III - Bureau of Field Services level may also require approval of other entities and may take longer to approve. *Please note that approval of the State Administrative Board will not be required if the contract modification is approved in accordance with all the instructions included in this BOH IM.*

Figure 1 – Approval Thresholds

Contract Modification Approval Level	Net Cumulative Increase to Contract *(Sum of Current and all Previously Generated Contract Modifications over Original Contract Amount)*
Tier I - TSC Approval	Equal to or less than 5 percent (= or <5%)
Tier II - Region Approval	Greater than 5 percent (>5%) AND less than or equal to 10 percent (< or = to 10%)
Tier III - Bureau of Field Services Approval (Also includes external reviews by other agencies)	Greater than 10 percent (>10%)

If a level of approval is reached and then subsequent contract modifications decrease the contract value to below the threshold, then the later contract modifications under the threshold can be approved with only the lower relevant approvals, however, once any higher approval level has been reached, the engineer must continue to forward information only copies of all subsequent contract modifications to that level for tracking and monitoring until the project is closed.

V. Authorization Path

Preparer
The "prepared by signature" block of the contract modification will contain the name of the technician/project engineer/consultant or other staff that prepared the contract modification document. This signature block is considered optional and the use of this signature block will depend upon TSC or consultant office policies. The preparer of the contract modification is responsible for completing all content, including all required information, determining all signatures required, routing the document to required approvers, and for determining the approval threshold requirements. Due to varying approval times, non-sequential numbered contract modifications and other issues, the threshold net contract budget amount determination will be determined by the preparer at the time of contract modification generation. The preparer shall account for both the current contract modification and all previously "generated" contract modifications (regardless of final approval or not), but shall not include any draft contract modifications that have not yet been generated for signatures.

Consultants (MDOT or LAP Contracts)
When consultants are managing construction projects, they must complete the signature block for "consultant project manager" by having the consultant's licensed project engineer assigned to the project sign in this signature block. **Consultants shall then send the contract modification to the contractor for signature.**

Contractors
Once the engineer, local agency or consultant generates the contract modification, it will be sent to the contractor for signature. The contractor shall sign and return the document to the sender within ten calendar days of transmittal. The above approval timeline is the general guideline for most contract modifications, however, for complex or large balancing modifications that may require additional time to review, the contractor may take up to a maximum of 21 calendar days to return the document. After this maximum timeframe, or if the contractor refuses to sign and return the contract modification, the engineer may then process the contract modification with "contractor failed to sign and return" noted in the contractor signature area.

Local Agency Projects
The contract modification authorization procedures for local agency projects are the same as those described with the addition of a required signature by the local agency. FHWA has directed that a representative of the local agency participating on federally funded projects must have a full time representative of the local agency sign all contract modifications. This representative is not required to be an engineer, just a full time employee of the local agency, and directly accountable to the local agency. The local agency representative shall also review and authorize the contract modification within five business days of transmittal.

Federal Highway Administration
On FHWA oversight projects, ALL contract modifications require the approval of the FHWA. Please refer to BOH IM 2011-05 or as superseded for contract modifications on federal oversight projects. These contract modifications will need to be sent to the appropriate division area engineer for review and signature. Please note that for "Major Items of Work"

(as defined in BOH IM 2011-05) a copy of the previously approved FHWA Form 1365 that pre-authorized the contract revisions included on the contract modification must accompany the contract modification through the approval process. This step only applies to FHWA oversight projects; MDOT administered projects will not have any signature in the FHWA signature block area.

Tier I - TSC Approval

Once all external non-MDOT signatures have been completed, the contract modification will go through Tier I - TSC level approval. For all electronic signature contract modifications, the document shall be placed in the correct job number and folder within the MDOT ProjectWise system for further MDOT approvals. Non-electronic signature documents will be physically routed and mailed with all government approval timelines tripled (see Section VI). TSC approval shall consist of at least two licensed engineer signatures and these two signatures are mandatory for every contract modification without exception. The "Recommended by" signature must contain the printed name of the construction/project engineer in responsible charge of the project. The "Authorized by TSC manager" signature block must contain the name of the TSC manager. When the contract modification is returned to the TSC office from the contractor, local agency or consultant the construction/project engineer (or designated alternate/backup) shall review and approve the contract modification within four business days of receipt. The TSC manager (or their designated alternate/backup) shall also review and authorize the contract modification within four business days of the construction/project engineer signature.

For all MDOT construction contract modification documents, signature authority is allowed to be designated to a pre-established backup or alternate signer as required. Designated backups or delegated signature authority must be to a pre-established person that is an equivalent level or higher. Any backups, alternates, designated signers, and/or other signers of documents will be established ahead of time on the required MDOT Authorized Signature Form 1979 (Appendix C). However, even if a backup or designated alternate review and sign the document, the name on the signature block will still contain the printed name of the required approver. In this case, the construction/project engineer and TSC manager will be named as the owners of these two signature blocks and they will ultimately be responsible for the accuracy and content of the contract modification regardless of who signed. It is never acceptable to have the same person sign multiple signature blocks on the same contract modification. If a designated backup signs for a responsible party, then they must indicate so by signing and printing their name along with adding the words "for [name of person]" in the signature area. If using electronic signatures, the backup or alternate signer must enter this same text in the signature reason area as they enter their digital electronic signature.

Tier II - Region Approval

Contract modifications meeting Tier II - Region approval threshold level must first obtain all lower level Tier I – TSC approval signatures as outlined above. After receiving these approvals, the contract modification will then be submitted to the region construction engineer for their review and approval. The region construction engineer must respond within four business days of receipt of the contract modification from the TSC. Backup or alternate signers for the region construction engineer will also be pre-established on the MDOT Authorized Signature Form 1979 (Appendix C).

Tier III - Bureau of Field Services Approval
Contract modifications reaching the Tier III - Bureau of Field Services approval threshold, must first obtain all Tier I - TSC and Tier II - Region level signatures, and then be routed to the construction contracts engineer at the Bureau of Field Services for review and processing. Contract modifications, with supporting documentation, reaching this level may also be sent to the Office of Commission Audits (OCA) and the Attorney General's Office (AG) for review and concurrence prior to authorization. Contract modifications may be indentified by OCA to be further explained. (*Contract modifications at this level that do not conform to all the requirements established in this BOH IM may have to also be submitted to the SAB for approval.)* Estimated approval time from initial receipt of the contract modification at the Bureau of Field Services through approval will likely be in the 30-45 day time frame with all required reviews. Contract modifications reaching this threshold should be submitted promptly to begin the approval process due to the lengthy timeframes involved. Upon authorization by the Bureau of Field Services, the contract modification will be sent back to the designated contact for the construction/project engineer as indicated on the MDOT Authorized Signature Form 1979 (Appendix C).

Engineers at any level of the construction contract modification approval process always have the option to contact higher level approval engineers for advice or consultation on unusual contract modifications regardless of threshold levels. The same holds true for the advice or consent of other services available to engineers through the Bureau of Field Services Construction Contracts Unit in Lansing, FHWA area engineers, the Attorney Generals office and/or the Office of Commission Audits. These resources can provide a great deal of expertise to engineers which can help avoid potential contract issues. Inquiries to these areas should be routed through the region construction engineer and/or the Construction Contracts Unit to facilitate potential correlation of similar issues and/or possible statewide guidance to other engineers.

VI. Digital Electronic Signatures

The recently approved BOH IM on the use of Digitally Encrypted Electronic signatures has authorized the use of electronic signatures on all contract modifications. *(Please Note: The use of digital electronic signatures on contract modifications will become mandatory on all MDOT Field Manager administered projects in the near future.)* All electronic signatures on contract modifications must be completed according to the regulations set forth in BOH IM for Digitally Encrypted Electronic Signatures.

The MDOT – Signature Authorization Form 1979 (Appendix C) will now be mandatory on all projects regardless of the use of electronic signatures or not. This sheet must be completed prior to the preconstruction meeting and is to contain the pre-established names of all points of contact, authorized signers, backup signers, and other potential signers at all levels of the project. Only those persons specifically identified on the form are legally permitted to sign critical project contract documents including contract modifications and pay estimates. This form is mandatory and must be fully completed prior to the commencement of construction. Any changes to personnel or names will require re-distribution of a revised list to all parties on the list.

Regardless of signature method, a paper copy of the completed contract modification must be kept in the engineer's project files in addition to the electronic record files. Also, because electronic signatures and hand written signatures are mutually exclusive of each other, contract modifications and pay estimates must be signed entirely by one method or the other. It is not possible to mix the two methods as printouts of electronic signatures are meaningless (electronic signature data is lost) and scans of handwritten signatures are currently unacceptable as legal signatures by the attorney generals office, thus documents requiring more than one signature must be entirely completed in one method or the other. Until electronic signatures are mandatory in FieldManger, the optional use of handwritten signatures on contract modifications will still be permitted; however, the allowable timeframes for all state, federal, and local government approvals will be triple the timeframes indicated in this document.

VII. Records Retention

Electronic records of all construction contract modifications will be stored in the MDOT ProjectWise system to ensure proper records retention criteria for document backup, archiving, and disposal schedules can be met. Consultant or local agency generated contract modifications will also be stored in the ProjectWise system by the TSC point of contact after MDOT signatures have been obtained but an electronic copy will also be emailed back to the consultant/local agency for their records and electronic storage. The use of electronic signatures changes the standard MDOT records process, as the electronic file with the digital signatures embedded into it is legally considered the original document and it must be properly retained. Questions on records retention or digital electronic signatures should be referred to the MDOT Construction Contracts Unit.

Gregory C. Johnson, P.E.

Digitally signed by Gregory C. Johnson, P.E.
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Chief Operations Officer

Bureau Director of Field Services

FHWA Approval: 01-04-12

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