

Guide and / or I.M. Revision Notice

To: Cities, Counties, and Consultants

Date: December 31, 2015

From: Office of Local Systems

Revision Notice Number: 2015-02

The Federal-aid Project Development Guide (Guide) and / or Instructional Memorandums to Local Public Agencies (I.M.s) have been revised as indicated below. This revision notice identifies all new or revised documents and includes a summary of the significant changes. Where appropriate, it also references the existing Project Development Information Packet (Packet) or County Engineers I.M. documents that have been replaced or superseded.

The Iowa DOT does not provide paper copies of the Guide or I.M.s. Since these documents are updated frequently, we recommend using the on-line version of the [Guide and I.M.s](#) for reference. However, if you prefer using paper copies, all new or revised documents have been included in this file for convenient printing. If you maintain a paper copy of these documents, please remove the old documents and replace them with the new documents. **Note:** This file is designed for double-sided printing; therefore, all documents with an odd number of pages will be followed by a blank page.

For more information and additional download options, refer to the [Guide and I.M.s](#) web page. If you have any questions concerning these revisions, please contact Donna Buchwald Donna.Buchwald@dot.iowa.gov or 515-239-1051.

***** PLEASE NOTIFY ALL AFFECTED PERSONNEL OF THIS CHANGE *****

Document Title or I.M Number	Summary of Significant Revision(s)
I.M. Table of Contents December 31, 2015	The I.M. Table of Contents has been revised to reflect new or revised I.M.s, as indicated below.
I.M. 2.030 Transfer of Farm-to-Market Funds to the Local Secondary Road Fund December 31, 2015	This I.M. has been updated. The reference to Iowa Code section 312.2(8) was changed to 312.2(5).
I.M. 2.120 Bridge Inspection December 31, 2015	This I.M. has been updated. Substantive changes from the previous version include the following: <ul style="list-style-type: none"> • In the Definition section, the Extended Inspection Cycle was changed from 30 days to one month. • In the Load Rating section, Posting subsection, requirements for Special Haul Vehicle load rating procedures were added. • In the Load Rating section, Advanced Posting subsection, clarification on advanced posting was added when there is more than one bridge on a section of roadway that requires posting. • In the Records section, Load Rating Calculations subsection, information pertaining to the installation and use of the new CulvertCalc software was added. Requirements for load rating for special haul vehicles deadlines were also added to this subsection. • In the Master List section, Underwater Inspections subsection, a reference was added to the Bridge Inspector's Reference Manual (BIRM) for the requirements for diver qualifications for underwater inspections. • In the Master List section, Scour Critical Bridges subsection, guidance was revised and added to include information that was previously found in Attachment C, Scour Plan of Action, to this I.M.

Document Title or I.M Number	Summary of Significant Revision(s)
	<ul style="list-style-type: none"> • Revised Attachment B to correct a reference to another Attachment. • Obsoleted Attachment C, Scour Plan of Action (POA), and all references to it in the I.M. were removed. The information that was included in Attachment C is now included in the I.M. • Revised Attachment J, Quality Assurance Field Review Worksheet, clarification was added pertaining to the required inspection forms under Item 2. • Attachment N, Highly Erodible Soils, was reintroduced due to several requests. • Attachment O, Berm Stability Criteria, was reintroduced due to several requests.
<p>I.M. 2.220 Establishing and Signing Area Service Roads December 31, 2015</p>	<p>This I.M. has been updated. Substantive changes from the previous version include the following:</p> <ul style="list-style-type: none"> • The title of the I.M. was changed to better reflect its use. • The title of Attachment A, Area Service “B” Sample Ordinance, was revised to match the title of the attachment. • The title of Attachment B, Area Service “B” Sample Resolution, was revised to better match the intended use of the attachment which is to reduce the maintenance from Level of Maintenance “A” to “B”. • The title of Attachment C, Area Service “C” Sample Ordinance, was revised to match the title of the attachment. • The title of Attachment D, Area Service “C” Sample Resolution, was revised to better match the intended use of the attachment which is to reduce the maintenance from Level of Maintenance “B” to “C”. • Attachment E, Resolution for Increased Level of Maintenance to Area Service Road, was added for use when a road is going to be increased from a Level of Maintenance “C” to “B” or “B” to “A”. • Guidance was added to the I.M. when a road is going to be increased from a Level of Maintenance “C” to “B” or “B” to “A”.
<p>I.M. 3.805 Construction Inspection December 31, 2015</p>	<p>This is a new I.M. that includes guidelines and procedures for a Local Public Agency (LPA) as the Contracting Authority, the Person in Responsible Charge, the Project Engineer, and staff, to perform the construction inspection for a Federal-aid project using the Iowa Department of Transportation (DOT) Standard Specifications. This I.M. also includes the following attachments:</p> <ul style="list-style-type: none"> • Attachment A - Preconstruction Inspection Process Flowchart • Attachment B - Construction Inspection Process Flowchart • Attachment C - Subcontract Review and Authorization Process - Post Award Flowchart • Attachment D - Local Public Agency Construction Contract Administration Guidance (this attachment is a rewrite of Chapter 2 of the Iowa DOT Construction Manual and should be used by the Local Public Agencies administration of Federal-aid projects. All other chapters of the Iowa DOT Construction Manual should be used in their entirety.) • Attachment E - Iowa DOT Field Inspection Review Report (this attachment is used by the Iowa DOT, Office of Local Systems Field Review Technicians. It may be beneficial to the Local Public Agency staff that are overseeing the

Document Title or I.M Number	Summary of Significant Revision(s)
	<p>construction project.)</p> <ul style="list-style-type: none"> • Attachment F - Reserved for Sample Scope of Service for Consultant Construction Inspection
<p>I.M. 3.910 Attachments A-E December 31, 2015</p>	<p>The Attachments to this I.M. has been updated. Substantive changes from the previous versions include the following:</p> <ul style="list-style-type: none"> • The days in Attachment A were update to reflect changes made in Attachments B-D. • Attachments B, C, and D reflect the new Punch List process which includes changes in the days. • References in Attachment E to Chapter 2 of the Iowa DOT Construction Manual were replaced with references to I.M. 3.805, Attachment D, Local Public Agency Construction Contract Administration Guidance. A new Change Order for Local Public Agency Projects (Form 831240) was developed. Changes were made in Attachment E to reflect changes made in the new Form 831240.



Instructional Memorandums to Local Public Agencies

Table of Contents

Some I.M.s are written either to counties or cities; others are written to both counties and cities. The intended audience is indicated in the "To:" field of the I.M. as well as the Table of Contents below. Many of the I.M.s are referenced by the Federal-aid Project Development Guide (Guide). These I.M.s are marked with an asterisk (*). For more information about the relationship between the Guide and I.M.s, refer to the [Guide and I.M.s web page](#).

Note: The I.M.s are currently in the process of being transitioned into a new format and numbering system. New or updated I.M.s will use the new format. Existing I.M.s will remain in the old format until they are revised or updated. Some of the I.M.s are not yet complete, as shown in light grey text. Some incomplete I.M.s will be based on an existing Project Development Information Packet document, some will be based on an existing County Engineers I.M. that will be renumbered, and some will include entirely new content. Where applicable, a reference and link to the existing Packet document or County Engineers I.M. is provided.

No.	Subject	Revision Date	Written To
Chapter 1 – General Information			
Section 1.0 -- General			
1.020	Pavement Friction Evaluation Program	August 10, 2011	Both
1.030	Ordering Forms and Supplies From the Iowa Department of Transportation	November 2001	Both
1.050	Manuals, Guides and Instructional Information Available to Counties	December 2002	Both
1.070*	Title VI and Nondiscrimination Requirements	July 20, 2012	Both
1.080*	ADA Requirements	October 1, 2013	Both
	Attachment A – Sample Curb Ramp Transition Plan (Word)	August 24, 2012	Both
Section 1.1 -- References			
1.120	References to the Iowa Code	August 2003	Counties
Chapter 2 – Administration			
Section 2.0 -- Finance			
2.005	Farm-to-Market Program	December 19, 2014	Counties
2.010	Transfer of Local Secondary Road Use Tax Funds to the Farm-to-Market Fund	November 2001	Counties
	Attachment A - Local to FM Fund Transfer Resolution (Word)	November 2001	Counties
2.020*	Federal and State Bridge Programs	December 19, 2014	Both
	Attachment A – City Bridge Priority Point Rating Worksheet (Word)	July 18, 2011	Cities
	Attachment B – County Bridge Priority Point Rating Worksheet (Word)	July 18, 2011	Counties
	Attachment C – Touchdown Points and Limits of Participation	July 18, 2011	Both
	Attachment D – County HBP Fiscal Constraint Requirements	July 18, 2011	Counties
2.030	Transfer of Farm-to-Market Funds to the Local Secondary Road Fund	December 31, 2015	Counties
2.040	Temporary Allocation of Farm-to-Market Funds	November 2001	Counties
2.050	Procedure to Amend a County Secondary Road Construction Program and Budget	November 26, 2013	Counties
	Attachment A – Example of Resolution to Add, Modify, or Advance a Project (Word)	November 26, 2013	Counties
2.071	Secondary Road Budget Accounting Code Series	July 2005	Counties

No.	Subject	Revision Date	Written To
Section 2.1 -- Maintenance			
2.110	Maintenance of County Roads at Intersections, Interchanges, and Grade Separations with the Primary Highway System	May 12, 2014	Counties
	Attachment A – Iowa DOT PPM 630.01, Rural Intersection and Destination Lighting	March 16, 2004	Counties
	Attachment B – Iowa DOT PPM 630.03, Interchange and Freeway Lighting	March 16, 2004	Counties
2.120*	Bridge Inspections	December 31, 2015	Both
	Attachment A - Bridge Scour Stability Worksheet - Level A Evaluation (Word)	May 11, 2011	Both
	Attachment B - Intermediate Scour Assessment - Level B Evaluations	December 31, 2015	Both
	Attachment C - Intentionally left blank	December 31, 2015	Both
	Attachment D - Scope of Services for NBI Bridge Inspection Services (Word)	July 18, 2013	Both
	Attachment E - Iowa Legal Trucks Diagrams	July 18, 2013	Both
	Attachment F - Routine Permit Trucks Diagrams	July 18, 2013	Both
	Attachment G - USGS Hydrologic Region Map with Region Descriptions	July 18, 2013	Both
	Attachment H - Unknown Foundations Guidance, Flowchart, Risk Assessment, Worksheet, and Plan of Action (POA) - Level A Evaluation (Word)	July 18, 2013	Both
	Attachment I - Unknown Foundations Flowchart - Level B Evaluation	July 18, 2013	Both
	Attachment J - Quality Assurance Field Review Worksheet (Word)	December 31, 2015	Both
	Attachment K - Fracture Critical Member Locations and Conditions for Trusses form (Word)	July 18, 2013	Both
	Attachment L - Fracture Critical Member Locations and Conditions for Thru/Two Girders form (Word)	July 18, 2013	Both
	Attachment M - Sample Fracture Critical Member Locations and Conditions for Trusses form	July 18, 2013	Both
	Attachment N - Berm Stability Criteria	December 31, 2015	Both
	Attachment O - Highly Erodible Soils	December 31, 2015	Both
Section 2.2 -- Traffic Service and Control			
2.210	Engineering and Traffic Investigations – Speed Limit Study	March 2002	Counties
	Attachment A - Speed Restriction Ordinance (Word)	March 2002	Counties
	Attachment B - Amendment to Speed Restriction Ordinance (Word)	March 2002	Counties
	Attachment C - Resolution for Establishing Speed Limits (Word)	March 2002	Counties
2.220	Establishing and Signing Area Service Roads	December 31, 2015	Counties
	Attachment A - Area Service “B” Road Maintenance Ordinance (Sample) (Word)	May 12, 2014	Counties
	Attachment B - Resolution for Reduced Level of Maintenance to Area Service “B” Road (Sample) (Word)	December 31, 2015	Counties
	Attachment C - Area Service “C” Road Maintenance Ordinance (Sample) (Word)	May 12, 2014	Counties
	Attachment D - Resolution for Reduced Level of Maintenance to Area Service “C” Road (Sample) (Word)	December 31, 2015	Counties
	Attachment E - Resolution for Increased Level of Maintenance to Area Service Road (Sample) (Word)	December 31, 2015	Counties

2.230	Signing for Low Cost Stream Crossings	June 2002	Counties
	Attachment A - Resolution for Low-Water Stream Crossing (Word)	June 2002	Counties
2.240	Iowa DOT Traffic Counts	(future)	Both

Section 2.3 -- Agreements

2.310	Construction Agreements Between City and County on Secondary Road Extensions	April 2002	Both
	Attachment A - Resolution for Construction Agreement between City and County on Secondary Road Extensions (Word)	April 2002	Both

Chapter 3 – Project Development

Section 3.0 -- General

3.002*	Federal-aid Project Scheduling	February 16, 2007	Both
3.005*	Project Development Submittal Dates and Information	May 7, 2015	Both
3.030	Project Development Outline -- Local Funding (L)	February 2002	Both
3.050*	In-Kind Contributions	August 10, 2011	Both
3.060	Project Numbers (see I.M. 3.14 , dated December 2002)	(future)	Both

Section 3.1 -- Environmental Reviews and Permits

3.105*	Concept Statement Instructions (see Packet, Index No. 6, Concept Statement Instructions)	(future)	Both
	Attachment A – Example Concept Statement	(future)	Both
3.110*	Environmental Data Sheet Instructions (see Packet, Index No. 6, Environmental Datasheet Instructions)	(future)	Both
	Attachment A – Example Environmental Data Sheet	(future)	Both
3.111	Threatened and Endangered Species	December 19, 2014	Both
	Attachment A - Section 7 Process Flowchart	July 1, 2014	Both
3.112*	FHWA Environmental Concurrence Process (see Packet, Index No. 6, NEPA Project Classification Process)	(future)	Both
	Attachment A - Environmental Concurrence Process Overview (see Packet, Flowcharts, Chart No. 6 – Environmental Process Overview)	(future)	Both
	Attachment B - Environmental Assessment / FONSI Process (see Packet, Flowcharts, Chart No. 6A – Environmental Assessment / FONSI Process)	(future)	Both
	Attachment C - Environmental Impact Statement / ROD Process (see Packet, Flowcharts, Chart No. 6B – Environmental Impact Statement / ROD Process)	(future)	Both
	Attachment D - Section 106 Process (see Packet, Flowcharts, Chart No. 6C – Section 106 Process)	(future)	Both
	Attachment E - Section 4(f) Process (see Packet, Flowcharts, Chart No. 6D – Section 4(f) Process)	(future)	Both
3.114*	Cultural Resource Regulations (see Packet, Index No. 6, Cultural Resource Regulations)	(future)	Both
3.120*	Farmland Protection Policy Act Guidelines (see Packet, Index No. 6, Farmland Protection Policy Act Guidelines)	(future)	Both
	Attachment A - Farmland Protection Policy Act Process Flowchart (see Packet, Flowcharts, Chart No. 6E – Farmland Protection Policy Act Process)	(future)	Both

3.130*	404 Permit Process	March 26, 2008	Both
	Appendix A – 404 Permit Checklist	March 26, 2008	Both
3.140*	Storm Water Permits	July 18, 2011	Both
3.150*	Highway Improvements in the Vicinity of Airports or Heliports	December 3, 2007	Both
3.160*	Asbestos Inspection, Removal, and Notification Requirements	April 12, 2007	Both
	Attachment A – Notification of Demolition form (Word)	April 12, 2007	Both
 Section 3.2 -- Design Guidelines and Exceptions			
3.210*	Rural Design Guidelines	December 19, 2014	Counties
3.213*	Traffic Barriers (Guardrail and Bridge Rail)	July 18, 2013	Both
	Attachment A - Bridge Barrier Rail Rating Systems (Word)	July 18, 2013	Both
3.214*	3R Guidelines	October 1, 2013	Both
3.215*	Clear Zone Guidelines	March 26, 2008	Both
3.216*	Economic Analysis (Benefit-to-Cost Ratio)	October 1, 2013	Both
3.218*	Design Exception Process	October 1, 2013	Both
	Attachment A – Design Exception Process Flowchart	October 1, 2013	Both
 Section 3.3 -- Consultant and In-House Design			
3.305*	Federal-aid Participation in Consultant Costs	May 7, 2015	Both
	Attachment A – Federal-Aid Consultant Checklist	December 19, 2014	Both
	Attachment B – Requirements for Federal-Aid Consultant Contracts	December 19, 2014	Both
	Attachment C – Payment Methods	December 19, 2014	Both
	Attachment D – Sample Consultant Contract (Word)	May 7, 2015	Both
	Attachment E – Errors and Omissions	December 19, 2014	Both
3.310*	Federal-aid Participation in In-House Services	December 19, 2014	Both
	Attachment A - Scope of Work and Budget Worksheet	February 18, 2013	Both
 Section 3.4 -- Preliminary Design			
3.405*	Preliminary Plans	December 19, 2014	Both
	Attachment A – Preliminary Plan Guidelines	February 18, 2013	Both
	Attachment B – Preliminary Plan Checklist (Word)	December 19, 2014	Both
	Attachment C – Preliminary Plan Process Flowchart	February 18, 2013	Both
3.410*	Preliminary Bridge or Culvert Plans	May 7, 2015	Both
	Attachment A – Hydraulic Review Criteria	May 7, 2015	Both
	Attachment B – Iowa DNR Floodplain Regulations	June 18, 2010	Both
	Attachment C – Instructions for Completing the Request for Approval: Local Road Systems Form (Form 1-E)	May 7, 2015	Both
	Attachment D – Instructions for Completing the Risk Assessment Form	May 7, 2015	Both
 Section 3.5 -- Final Design			
3.505*	Check and Final Plans	August 28, 2014	Both
	Attachment A – Check and Final Plan Guidelines	August 28, 2014	Both
	Attachment B – Check and Final Plan Checklist (Word)	December 19, 2014	Both
	Attachment C – Check and Final Plan Process Flowchart	February 18, 2013	Both
3.510*	Check and Final Bridge or Culvert Plans	May 7, 2015	Both
	Attachment A – Bridge or Culvert Plan Supplementary Checklist (Word)	May 7, 2015	Both

[3.520*](#) Electronic Bid Item Information February 18, 2013 Both

Section 3.6 -- Right-of-Way, Utilities, and Railroads

[3.605*](#) Right-of-Way Acquisition June 18, 2007 Both

[Attachment A](#) – Compensation Estimate Procedures June 18, 2007 Both

[Attachment B](#) – FHWA Authorization of Right-of-Way Costs Flowchart June 18, 2007 Both

[Attachment C](#) – Early Right-of-Way Acquisition Process Flowchart June 18, 2007 Both

[3.640*](#) Utility Accommodation and Coordination February 11, 2014 Both

[Attachment A](#) – Utility Coordination Flowchart December 11, 2008 Both

[Attachment B](#) – Utility Coordination Checklist ([Word](#)) February 11, 2014 Both

[3.650*](#) Federal-aid Participation in Utility Relocations February 11, 2014 Both

[Attachment A](#) – Utility Relocation Federal-Aid Eligibility Flowchart February 11, 2014 Both

[Attachment B](#) – FHWA Authorization of Utility Relocation Costs Flowchart February 11, 2014 Both

[3.670*](#) Work on Railroad Right-of-Way May 7, 2015 Both

[Attachment A](#) – Work in Railroad Right-of-Way Flowchart May 7, 2015 Both

[3.680*](#) Federal-aid Projects Involving Railroads May 7, 2015 Both

[Attachment A](#) – FHWA Authorization of Railroad Costs Flowchart May 7, 2015 Both

Section 3.7 -- Lettings and Contracts

3.705 Local Letting Process – State or Local Funded (see [I.M. 3.41](#), dated September 2005; [I.M. 3.42](#), dated March 2002; and [I.M. 3.43](#), dated September 2002) (future) Both

[3.710*](#) DBE Guidelines June 18, 2007 Both

3.715 TSB Guidelines (future) Both

[3.720*](#) Local Letting Process – Federal-aid April 12, 2007 Both

[Attachment A](#) – Pre-Award Checklist and Certification April 12, 2007 Both

[Attachment B](#) – Post-Award Checklist and Certification April 12, 2007 Both

[Attachment C](#) – Supplemental Agreement April 12, 2007 Both

[3.730*](#) Iowa DOT Letting Process August 28, 2014 Both

[Attachment A](#) - Iowa DOT Pre-Letting Process Flowchart October 1, 2013 Both

[Attachment B](#) – Iowa DOT Post-Letting Process Flowchart October 1, 2013 Both

[3.750*](#) Project Development Certification Instructions December 3, 2007 Both

[Attachment A](#) – Project Development Certification Process Flowchart December 3, 2007 Both

[Attachment B](#) - Sample Project Development Certification Form December 3, 2007 Both

[3.760*](#) Public Interest Findings May 12, 2014 Both

[3.770](#) Paving Point Requirements August 24, 2012 Counties

[Attachment A](#) – Paving Point Determination August 24, 2012 Counties

[Attachment B](#) – Sample Notice of Public Hearing ([Word](#)) August 24, 2012 Counties

[Attachment C](#) – Sample Resolution ([Word](#)) August 24, 2012 Counties

Section 3.8 -- Construction

[3.805*](#) Construction Inspection December 31, 2015 Both

[Attachment A](#) - Preconstruction Inspection Process Flowchart December 31, 2015 Both

[Attachment B](#) - Construction Inspection Process Flowchart December 31, 2015 Both

[Attachment C](#) - Subcontract Review and Authorization Process - Post Award Flowchart December 31, 2015 Both

[Attachment D](#) - Local Public Agency Construction Contract Administration Guidance December 31, 2015 Both

Attachment E - Iowa DOT Field Inspection Review Report	December 31, 2015	Both
Attachment F - Scope of Services for Consultant Construction Inspection (Sample)	Future	both
3.810* Federal-aid Construction by Local Agency Forces	December 19, 2014	Both
Section 3.9 -- Project Close-out and Audits		
3.910* Final Review, Audit, and Close-out Procedures for Federal-aid Projects	December 31, 2015	Both
Attachment A – Project Close-out Process Overview Flowchart	December 31, 2015	Both
Attachment B – Final Review and Audit Process Flowchart – Highway or Bridge Construction	December 31, 2015	Both
Attachment C – Final Review and Audit Process Flowchart – Non-highway Construction, DOT Specifications	December 31, 2015	Both
Attachment D – Final Review and Audit Process Flowchart – Non-highway Construction, Non-DOT Specifications	December 31, 2015	Both
Attachment E – Pre-audit Checklist (Word)	December 31, 2015	Both
Attachment F – Final Forms Packet Checklist (Word)	May 7, 2015	Both
3.920 Final Review, Audit, and Close-out Procedures for State-aid Projects	(future)	Both
3.930* Interest Payment Procedures	December 3, 2007	Both
Attachment A – Sample Interest Payment Information Form	December 3, 2007	Both
3.940 Resolution to allow County Engineer to Certify Completion of Work on Construction Contracts	August 28, 2014	Counties
Attachment A – Sample Resolution (Word)	December 3, 2007	Counties

Chapter 4 – Systems Classification And Identification

Section 4.0 -- General

4.010 Procedures to Modify the Secondary Road Route Numbering System	September 2002	Counties
4.030 County Road Vacations	September 2002	Counties
Attachment A - Resolution for Road Vacation Public Hearing (Word)	September 2002	Counties
Attachment B - Notice of Public Hearing (Word)	September 2002	Counties
Attachment C - Resolution to Vacate a County Road (Word)	September 2002	Counties

Section 4.1 -- (Reserved)

Section 4.2 -- Farm-to-Market System

4.210 Modification of the Farm-to Market (FM) System	August 10, 2011	Counties
4.220 Farm-to-Market Review Board Advisory Opinions on Proposed Jurisdictional Transfers	April 2002	Counties

INSTRUCTIONAL MEMORANDUMS

To Local Public Agencies



To: Counties	Date: December 31, 2015
From: Office of Local Systems	I.M. No. 2.030
Subject: Transfer of Farm-to-Market Funds to the Local Secondary Road Fund	

Contents: This Instructional Memorandum (I.M.) outlines the restrictions and procedures for a county to transfer Farm-to-Market (FM) funds to its Local Secondary Road Fund, as per Iowa Code Section 309.10.

Restrictions

1. A proposed transfer amount cannot exceed the unobligated balance, or 50% of the county's estimated FM annual allocation, whichever is less.
2. The county cannot have a temporary allocation (be "borrowed ahead") of FM funds under Iowa Code Section 310.27.
3. The county's Secondary Road Program cannot propose total expenditures from its local fund for construction on the FM System in excess of the competitive bid threshold for Horizontal Infrastructure, as shown on the [Bid and Quote Thresholds for Iowa Cities and Counties web page](#).
4. The county must have met the minimum transfer under the local effort provisions of the Iowa Code Section [312.2\(5\)](#) for the period covered by the last Annual Report.
5. The transfer funds must be used for contract work involving the construction and reconstruction of local secondary roads estimated over the competitive bid threshold for Horizontal Infrastructure. Transfer funds shall not be used for day labor, engineering, right-of-way, and other non-construction costs on local secondary roads. Only the 20% local match on listed BROS projects is eligible for the FM transfer.
6. The proposed transfer request may only be made annually in the originally approved Secondary Road Budget.
7. The balance of the statewide FM Account must be sufficient to match Federal funds.

Procedures

If the restrictions have been satisfied, the procedure to request an FM transfer is described below:

1. List the proposed transfer amount on line 6, sheet 2 of your proposed Secondary Road Budget. Note that omissions and/or errors of this amount cannot be corrected by an amended budget and there are no carryovers for this item. If a transfer project did not get started or completed in the same fiscal year, you will need to re-list the budgeted amount again the following year and have the same restrictions.
2. List the proposed transfer projects in the construction program and designate them according to the instructions for completing the construction program.
3. Prior to July 1 each year, the Iowa Department of Transportation's (Iowa DOT) Office of Local Systems will notify you of approval, revision, or disapproval of the proposed transfer amount. Department approval of the Budget shall be considered notification.
4. Transfer payments for eligible individual project costs can be requested through the Iowa DOT's District Local Systems Engineer by either of the following ways:
 - a) After the project letting, the contract amount can be requested for a transfer payment; or
 - b) Upon project completion, all eligible costs can be sent to the appropriate District Office for a transfer payment.
5. The total for all transfer requests cannot exceed the original budgeted amount.
6. After the Iowa DOT's District Local Systems Engineer reviews and approves the request, the voucher will be sent to the Iowa DOT's Office of Finance for the transfer payment.

INSTRUCTIONAL MEMORANDUMS

To Local Public Agencies



To: Counties and Cities	Date: December 31, 2015
From: Office of Local Systems	I.M. No. 2.120
Subject: Bridge Inspections	

Contents: This Instructional Memorandum (I.M.) includes guidelines and procedures for a Local Public Agency (LPA) to assist them in complying with the National Bridge Inspection Standards (NBIS). This I.M. also includes the following attachments:

- [Attachment A](#) - Bridge Scour Stability Worksheet – Level A Evaluation ([Word](#))
- [Attachment B](#) - Intermediate Scour Assessment Flowchart – Level B Evaluation
- [Attachment C](#) - Intentionally left blank
- [Attachment D](#) - Scope of Services for NBI Bridge Inspection Services ([Word](#))
- [Attachment E](#) - Iowa Legal Trucks Diagrams
- [Attachment F](#) - Routine Permit Trucks Diagrams
- [Attachment G](#) - USGS Hydrologic Region Map with Region Descriptions
- [Attachment H](#) - Unknown Foundations Guidance, Flowchart, Risk Assessment, Worksheet, and Plan of Action (POA) - Level A Evaluation ([Word](#))
- [Attachment I](#) - Unknown Foundations Flowchart - Level B Evaluation
- [Attachment J](#) - Quality Assurance Field Review Worksheet ([Word](#))
- [Attachment K](#) - Fracture Critical Member Locations and Conditions for Trusses Form ([Word](#))
- [Attachment L](#) - Fracture Critical Member Locations and Conditions for Thru/Two Girders Form ([Word](#))
- [Attachment M](#) - Sample Fracture Critical Member Locations and Conditions for Trusses Form
- [Attachment N](#) - Berm Stability Criteria
- [Attachment O](#) - Highly Erodible Soils

Table of Contents

INTRODUCTION	2
DEFINITIONS (23 CFR 650.305).....	2
USE OF CONSULTANT SERVICES	4
OFFICIAL BRIDGE FILES	4
BRIDGE INSPECTION ORGANIZATION (23 CFR 650.307, d)	4
QUALIFICATIONS OF PERSONNEL (23 CFR 650.309, b)	5
INSPECTION FREQUENCY (23CFR 650.311)	6
Routine Inspections (23CFR 650.311, a).....	6
Underwater Inspections (23CFR 650.311, b).....	7
Fracture Critical Members (FCMs) (23CFR 650.311, c)	8
Criteria for Inspection Frequencies Less Than 24 Months	8
Special Inspection Criteria	8
INSPECTION PROCEDURES	8
Load Rating (23 CFR 650.313, c).....	8
Procedures for Rating Standard Bridges	8
Load Factor Rating (LFR) Requirements	9
Bridge Load Rating Report.....	10
Culverts.....	11
Posting	11
Advanced Posting	12
Overload or Superload Permitting	12
Records (23 CFR 650.313, d).....	13
Bridge Plans	13
Repair Plans	13
Photographs	13
Scour Evaluation Data	14
Channel Cross Section	14

Local Agency Field Data Collection Form	14
Structure Inventory and Appraisal Forms (SI&A)	14
Load Rating Calculations.....	14
Load Rating Evaluation Form.....	15
Critical Findings.....	15
Critical Features	15
Special Inspection Equipment	16
Master Lists (23 CFR 650.313, e)	16
Fracture Critical (FC) Bridges	16
Underwater Inspections	16
Scour Critical Bridges.....	16
Unknown Foundations	19
Load Posting	20
Quality Control (QC) and Quality Assurance (QA) (23 CFR 650.313, g).....	20
Quality Control (QC) Program	20
Quality Assurance (QA) Program.....	20
Bridge Record Reviews	20
Team Leader Reviews.....	20
Load Rating Engineer Reviews	21
Critical Findings (23 CFR 650.313, h)	21
Purpose.....	21
Criteria	21
Procedure for County/City Bridges.....	22
INVENTORY (23 CFR 650.315).....	22
New Bridge Data.....	22
Modifications to a Bridge or Change in Load Restriction.....	22

INTRODUCTION

According to Iowa Code [Chapter 314.18](#), the counties, cities, and other public agencies are responsible for the safety inspection and evaluation of all highway bridges under their jurisdiction which are located on public roads, in accordance with the NBIS. These responsibilities include inspection policies and procedures, inspections, reports, load ratings, quality control (QC), quality assurance (QA), maintaining a bridge inventory, and other requirements of the NBIS.

The NBIS may be found in [23 CFR 650](#). The following are additions or clarifications to the indicated subsections of [23 CFR 650](#).

DEFINITIONS ([23 CFR 650.305](#))

Armored Countermeasure (Armoring) - Material such as Class E Revetment, according to Section 4130 of the Standard Specifications, placed under and around a bridge structure for the purpose of protecting the embankment or berm from scour and/or erosion. Armoring is not a permanent countermeasure since the material is subject to displacement during a major flood event which is considered to be the lesser of the 500 year or roadway overtopping event.

Bridge Inspector Refresher Training Course – (FHWA-NHI-130053) – The major goals of this course are to refresh the skills of practicing bridge inspectors in fundamental visual inspection techniques, review the background knowledge necessary to understand how bridges function, communication issues of national significance relative to the nations’ bridge infrastructures, re-establish proper condition and appraisal rating practices, and review the professional obligations of bridge inspectors.

Fracture Critical Inspection Techniques for Steel Bridges Training Course – (FHWA-NHI-130078) – The course curriculum for this training reflects current practices, while addressing new and emerging technologies available to

bridge inspectors. In addition, the course features exemplary training, hands-on workshops for popular types of nondestructive evaluation (NDE) equipment, and a case study of an inspection plan for a fracture critical bridge.

Fracture Critical Member (FCM) - A steel member in tension, or with a tension element, whose failure would probably cause a portion of or the entire bridge to collapse. Floor beams are considered to be fracture critical members when the floor beam spacing is greater than 14 feet.

Extended Inspection Cycle - A period of time to allow for unforeseen circumstances such as severe weather, concern for bridge inspector safety, concern for inspection quality, the need to optimize scheduling with other bridges, or other unique situations may be cause to adjust the scheduled inspection date. The adjusted date should not extend more than one month beyond the scheduled inspection date.

Independent Party - An entity not influenced by or affiliated with the LPA or the LPA's Program Manager. An LPA or consulting firm with more than one Program Manager can utilize an alternate Program Manager from the same consulting firm or LPA to conduct the QA review.

Low Water - Water depth of less than 6 feet.

Monthly Notifications – automated notifications sent by e-mail to the LPA's by the Iowa DOT's Office of Bridges and Structures regarding inspections past due or bridges not in compliance with posting requirements on a monthly basis.

Permanent Countermeasure - Designed to account for all three major types of scour (i.e. long term degradation, general or contraction scour, and local pier or abutment scour). Properly designed and installed systems satisfy the requirements of a "Permanent" classification. Examples of permanent systems include:

- Fabric Formed Articulated Block Mattress (ABM)
- Stone Revetment
- Proprietary Articulated Concrete Block (ACB)
- Gabion Mattress

Stone revetment is subject to displacement during a major flood event which is considered to be the lesser of the 500 year or roadway overtopping event. Therefore, unless the revetment is designed in accordance with Hydraulic Engineering Circular (HEC) [HEC 23](#) and contained, it cannot be considered to provide adequate protection to attain a "Permanent" classification. The following are some examples of permanent stone revetment:

- Burial below the contraction scour elevation.
- Installation of cut-off walls.
- Placing the revetment as launchable stone.

Safety Inspection of In-service Bridges Course – (FHWA-NHI-130055) – This course is based on the "Bridge Inspector's Reference Manual" and provides training on the safety inspection of in-service highway bridges. Satisfactory completion of this course will fulfill the training requirements of the National Bridge Inspection Standards (NBIS) for a comprehensive training course. This course does not address fracture critical, underwater, or complex structures.

Scour Plan of Action (POA) - A POA is a written procedure developed by the bridge owner or delegated Program Manager that outlines the monitoring plan for a specific bridge. The plan provides guidelines and practical information pertaining to each bridge for the purpose of monitoring foundation scour during flood events.

Standard bridge – a bridge constructed using the "Bridge Standards" developed by the Iowa DOT. See the [Procedures for Rating Standard Bridges](#) section below in this IM.

[Structural Inventory and Inspection Management System \(SIIMS\)^{\(R\)}](#) - Bridge inspection data collection software.

Scour Evaluation - Scour evaluation is the process of determining the susceptibility of each bridge for scour. The depth, or level, of this process varies for each bridge. Some bridges may be determined scour safe after the first level of evaluation, Level A. Other bridges cannot be determined scour safe after Level A so they shall go to Level B using assessment procedures. Still others may need to go to the highest level of evaluation, Level C.

Level A - Bridge Scour Stability Worksheets (see [Attachment A](#) to this IM). Bridges that meet the required Stability Total of less than 35 points, do not need any further evaluation, and may be considered scour safe. Bridges with a Stability Total of 35 points or greater need further evaluation using the Level B Intermediate Scour Assessment Procedures Flowchart (see [Attachment B](#) to this IM).

Level B - Intermediate Scour Assessment Procedures Flowchart (see [Attachment B](#) to this IM). From this assessment, bridges are determined to be either stable, limited risk needing monitoring, scour susceptible needing monitoring, or scour susceptible needing a Level C Evaluation.

Level C - This is the most in-depth level of the evaluation process needed for those bridges that do not satisfy guidelines in the Level B Evaluation. A full computational analysis is completed using the Federal Highway Administration's [HEC 18](#) procedures and a determination is made concerning the stability of the bridge. Bridge owners may decide to develop a Plan of Action (POA) for these structures in lieu of the Level C Evaluation.

Thalweg - The lowest point in the stream channel along the cross section.

Unknown Foundation Plan of Action (POA) – A risk based POA developed by the bridge owner or Program Manager after completing the unknown foundation risk assessment worksheet to determine the level of risk to the traveling public.

USE OF CONSULTANT SERVICES

Use of consultant services for bridge inspection in accordance with this IM is acceptable. For consistency in inspections, it is strongly recommended that [Attachment D](#) to this I.M., Scope of Services for NBIS Bridge Inspection Services, be included in the Request for Proposal, if applicable, and the agreement. Use of [Attachment D](#) to this I.M., Scope of Service for NBIS Bridge Inspection Services, will ensure the NBIS requirements and activities are met.

OFFICIAL BRIDGE FILES

It is FHWA's expectations that the bridge owner will maintain a complete Bridge File for each individual bridge with all the required components documenting the bridge's inspection history. The various forms and documents required to be completed by the Iowa DOT in SIIMS qualify as "State Forms", which are required to be completed as part of the Official Bridge File.

The Iowa DOT as the Official Bridge Inspection Organization has the authority to establish requirements for the completion of State forms and other supporting documentation in a manner consistent with managing a bridge management system and quality assurance program. Therefore, the SIIMS records serve in this capacity as part of the Official Bridge File.

There are however, other documents that are not required to be included in SIIMS that should be maintained by the bridge owner as stated in the AASHTO Manual for Bridge Evaluation (MBE) Section 2.2, Components of Bridge Records. These also constitute part of the bridge file and the owner is free to keep such records in either hard copy or electronic format of their choosing. In conclusion, the Bridge File is a combination of SIIMS bridge records required to be maintained by the Iowa DOT and other documents maintained separately by the bridge owner as per the MBE.

BRIDGE INSPECTION ORGANIZATION ([23 CFR 650.307](#), d)

According to Iowa Code 314.18, the counties, cities, and other public agencies are responsible for the safety inspection and evaluation of all highway bridges under their jurisdiction, which are located on public roads, in accordance with the NBIS. These responsibilities include inspection policies and procedures, inspection reports, load ratings, QC, QA, maintaining a bridge inventory, and other requirements of the NBIS.

The NBIS regulations apply to all publicly owned highway bridges longer than 20 feet located on public roads. Railroad and pedestrian structures that do not carry vehicular traffic are not covered by the NBIS regulations. Similarly, the NBIS does not apply to inspection of sign support structures, high mast lighting, retaining walls,

noise barrier structures, and overhead traffic signs. Tunnels, since they are not bridges, are not covered by the NBIS. Bridges within the public right-of-way but not on the roadway, such as entrances to fields and driveways to private properties, are not covered by the NBIS regulations.

A bridge on a public highway where the bridge is privately owned is not subject to the NBIS and therefore, the FHWA has no legal authority to require private bridge owners to inspect or maintain their bridges. However, the FHWA strongly encourages private bridge owners to follow the NBIS as a standard for inspecting their structures or reroute the public road when a privately owned bridge carries a public road,

The Bridge Owner shall have a Program Manager who is assigned the above responsibilities. The Bridge Owner may retain a consultant to perform the duties of Program Manager.

QUALIFICATIONS OF PERSONNEL ([23 CFR 650.309](#), b)

Bridge inspection experience is defined in the NBIS as active participation in bridge inspections in accordance with the NBIS, in either field inspections, or a supervisory or management role. A combination of bridge design, bridge maintenance, bridge construction, and bridge inspection experience, with the predominant amount in bridge inspection, is acceptable.

The Iowa DOT has developed the following criteria to determine if an individual with experience performing bridge inspections has the qualifications of a Team Leader in accordance with 23 CFR 650.309(b).

1. Licensed Professional Engineers are required to successfully complete the Safety Inspection of In-Service Bridges Course (FHWA-NHI-130055).
2. Technicians are required to have a minimum of 5 years of bridge inspection experience as defined in the NBIS to include the completion of a minimum of 500 field inspections under the supervision of a qualified Team Leader along with the successful completion of the Safety Inspection of In-Service Bridges Course (FHWA-NHI-130055).
3. Technicians that are National Institute for Certification in Engineering Technologies ([NICET](#)) certified as Level III or IV Bridge Safety Inspectors are required to successfully complete the Safety Inspection of In-Service Bridges Course (FHWA-NHI-130055).
4. Engineer Interns that have successfully completed the Fundamentals of Engineering Exam are required to have a minimum of 2 years of bridge inspection experience and have completed a minimum of 200 field inspections under the supervision of a qualified Team Leader along with the successful completion of the Safety Inspection of In-Service Bridges Course (FHWA-NHI-130055).
5. Individuals with an associate's degree in engineering or engineering technology are required to have a minimum of 4 years of bridge inspection experience and have completed a minimum of 400 field inspections under the supervision of a qualified Team Leader along with the successful completion of the Safety Inspection of In-Service Bridges Course (FHWA-NHI-130055).

Bridge inspectors not qualified as Team Leaders may assist the Team Leader but may not inspect bridges independently. Education and experience requirements for bridge inspectors who are not Team Leaders should be determined by the Program Manager or Bridge Owner.

Program Managers and Team Leaders who perform field inspections on FCM's shall complete the Fracture Critical (FC) Inspection Techniques for Steel Bridges Training Course, by December 31, 2012. Any individual that meets the qualifications of Program Manager or Team Leader after December 31, 2012, that will be performing field inspections on FCM's shall complete the Fracture Critical (FC) Inspection Techniques for Steel Bridges Training Course.

The NBIS requires periodic bridge inspection refresher training for Program Managers and Team Leaders as part of QC and QA. The Iowa DOT has defined periodic as being every 5 years. Therefore, all bridge inspection personnel are required to complete the Bridge Inspection Refresher Training Course every 5 years following the completion of the Safety inspection of In-Service Bridges Training Course.

Program Managers and Team Leaders whose qualifications have expired have 12 months from the expiration date to successfully complete the Bridge Inspection Refresher Training Course before they are disqualified. The Program Managers and Team Leaders can perform inspection duties during the 12 month "Grace Period"; however, if they have not completed the Bridge Inspection Refresher Training Course within the 12 months they will be disqualified as a Program Manager or Team Leader until they complete this required course.

The two week Safety Inspection of In-Service Bridges Course has been updated. As a result of the significant improvements made to this course, there are new requirements of the participants. All participants taking the two week course must have successfully completed **one** of the following prerequisite courses with a score of 70% or better:

- Prerequisite Assessment for Safety Inspection of In-Service Bridges Course (FHWA-NHI-130101A): a 1 hour web-based course at no cost. This is a test out course for those individuals with significant experience and/or a comprehensive background in bridge inspection or engineering.
- Introduction to Safety Inspection of In-Service Bridges Course (FHWA-NHI-130101): a 14 hour web-based course at no cost. This course is for individuals with limited experience with in-service bridge inspection.
- Engineering Concepts for Bridge Inspectors Course (FHWA-NHI-130054): a 5-day instructor led course for which there is an associated cost per person. This is an in-person course for those individuals with limited experience with in-service bridge inspection.

Upon successful completion of one of the prerequisite requirements, participants may enroll in the two week Safety Inspection of In-Service Bridges Course, for up to 2 years. After 2 years, participants will need to retake one of the prerequisites prior to enrolling. Participants must bring a certificate of completion from one of the prerequisite options to the first day of the Safety Inspection of In-Service Bridges Course.

Professional Engineers that have successfully completed the Safety Inspection of In-Service Bridges have met the qualifications to be bridge inspection Program Managers as per the NBIS. The Iowa DOT provides access to bridge records authorized by the bridge owners in [SIIMS](#) bridge inspection software to these individuals once they have submitted the Bridge Inspector form provided on the [SIIMS](#) website to the Iowa DOT for review and approval.

Approved Program Managers are provided access to all forms and records for each bridge in [SIIMS](#) authorized by the bridge owner. Individuals approving the Load Rating form are required to be Professional Engineers licensed in the state of Iowa. Therefore, each person that is required to approve the load rating information must submit the Bridge Load Rating form provided in [SIIMS](#). The Bridge Load Rating form must be reviewed and approved by the DOT, or by an approved Program Manager who has submitted the Bridge Inspector form including Professional License information. Editing of the Bridge Load Rating form by other users with authorized access to the bridge forms is permitted but approval can only be completed by a qualified Load Rater.

INSPECTION FREQUENCY ([23CFR 650.311](#))

Routine Inspections ([23CFR 650.311, a](#))

The required inspection frequency for routine inspections may be extended by the extended inspection cycle to account for unforeseen circumstances as described in the definition of extended inspection cycle. Subsequent inspections should adhere to the previously established interval; that is the use of the extended inspection cycle should be an exception. The inspection date recorded for Item 90, Inspection Date, shall be the actual date the new inspection is initiated. The details of why the bridge inspection was late shall be documented in [SIIMS](#).

A late inspection is defined as not being completed within or before the month of the previous inspection. If 10 or more bridges will be late for inspection in a given month for a local public agency, an e-mail submitted to the DOT explaining the delayed inspections is acceptable, in lieu of entering comments for each bridge individually.

Bridges that have Item 58, Deck; Item 59, Superstructure; or Item 60, Substructure, with a condition rating of 3 or less, should have an inspection frequency less than 24 months, which may be an in-depth inspection on a more frequent basis or a special inspection in between routine inspections. Other factors that may impact frequency of inspections are Item 29, ADT; Item 70, Posting; Item 64, Operating Rating; and all items under Structure Type and Materials on the SI&A form.

Extended Inspection Frequency

The criteria for qualifying bridge structures for 48 month inspection frequency are listed in the [Bridge Inspection Manual](#) Section 1.4.4.

An in-depth inspection must be completed in order to go to an extended inspection frequency. Also all other rules set forth by the FHWA must be satisfied at the time of the inspection. These rules are detailed in the Bridge Inspection Manual.

When an inspection report is created, SIIMs will indicate on the Inspection Info form whether the bridge is eligible for 48 month inspection cycle based on the current edit asset values. If the bridge is not eligible, SIIMs will indicate the bridge is not eligible with the statement "Bridge Does Not Qualify for a 48 Month Inspection Cycle" and why after the "Due to the following:" as shown in the screen shot below.

The screenshot shows the 'NBI90 Information' section of a form. On the left, there are two radio buttons: 'Routine' (unchecked) and 'In-Depth' (checked). To the right is a date field for 'NBI 90 Date' with the value '11/25/2014'. On the right side of the form, there is a red-bordered box containing the following text: 'NBI 91 Freq: 24', 'Bridge Does Not Qualify for a 48 Month Inspection cycle', 'Due to the following: Rule 2 NBI 58,59,60,61,62 does not have a rating>5', and '** Other rules may not be met as well **'.

As the bridge is inspected, criteria could change that make a bridge ineligible or eligible for an extended inspection. If this happens the Inspection Info will only be updated after going to the Error Check form or when trying to finalize an inspection report as shown below.

Error check form

The screenshot shows the 'Error Check' form for report 3815.6L020 (District 1) dated 11/25/2014, indicating 3 errors found. The first error is 'Error 91: NBI 91 can not be 25 because the bridge is not eligible for 48 month inspection. Please correct to '24' months or less.' Below this error are two links: 'Form:SIA Edit Values' and 'Form:Inspection Info Edit Values'. The second error is 'Rule 2 NBI 58,59,60,61,62 does not have a rating>5'. Below this error are also two links: 'Form:SIA Edit Values' and 'Form:Inspection Info Edit Values'.

A management report called Extended Inspection Frequency Report can be run and used to determine if a bridge is eligible or not eligible for an extended inspection frequency. If the bridge passes all the rules except rule 17 (An In-depth inspection was not done at the current inspection and the last value of NBI 91 was not 48) the bridge may be eligible for an extended inspection frequency of up to 48 months at the next inspection if an in-depth inspection is performed.

Underwater Inspections ([23CFR 650.311](#), b)

Underwater inspection requirements covered in this article pertain to the inspection of the structural elements such as abutments or piers to determine the structural integrity. If at any time during the 60 month underwater inspection interval, the water level is less than 6 feet, inspections may be performed with a method appropriate for the element without the use of divers.

Structures that experience low water levels less than 6 feet have the structural elements inspected by means of wading and probing during the regular inspection cycles. The DOT is allowing the bridge owner the option of inspecting the underwater substructure elements on a 48 month inspection cycle when the low water level is more than 2 feet and less than 6 feet. If the 48 month inspection cycle is utilized, then Item 92B, Underwater Inspection (frequency), needs to reflect the 48 month cycle and Item 93B, Underwater Inspection (date), needs to have the date of the underwater inspection entered.

Bridges that have Item 60, Substructure, with a condition rating of 3 or less due to deficiencies below the waterline should have an underwater inspection frequency less than 60 months. Other factors that may impact frequency of inspections are Item 29, ADT; Item 70, Posting; Item 64, Operating Rating; all items under Structure Type and Materials; environment; age; and scour characteristics.

Fracture Critical Members (FCMs) ([23CFR 650.311](#), c)

Criteria for Inspection Frequencies Less Than 24 Months

1. The alignment of FCMs or sub-elements has measurably changed from the as-built condition.
2. Deterioration in tension areas of a FCM has caused Item 59, Superstructure, to have a condition rating of 3 or less.
3. Item 59, Superstructure, with a condition rating of 4, should be considered for an inspection frequency less than 24 months.

Special Inspection Criteria

1. Deterioration is progressing at a rate that warrants inspection more frequently than 24 months or when there is a condition rating of 2 or less.
2. Channel degradation or channel movement is progressing at a rate that warrants inspection more frequently than 24 months or when there is a condition rating of 2 or less.
3. More frequent inspections should be considered when temporary supports are in place.
4. Fatigue cracks have been found in a redundant steel structure. Special Inspections can be stopped when repair has been performed to mitigate the cracks.
5. Fatigue cracks have been found in a FCM. Special Inspections should continue even after cracks have been mitigated. Only after the potential for any future fatigue cracks has been eliminated can Special Inspections be stopped on a Fracture Critical bridge.
6. Collision damage has severely affected the load capacity of the bridge and repairs cannot be done within a reasonable time period. Once repairs have been made, the Special Inspections can be stopped.
7. Section loss has severely affected the load capacity of the bridge. Once repairs or rehabilitation work have been completed, the Special Inspections can be stopped.

Upon completing the final Special Inspection, the check box must be marked in the Inspection Information section, to indicate that no additional Special Inspections are required. If the check box is not marked, the inspection frequency will continue and the Special Inspection will be due again according to the frequency specified.

INSPECTION PROCEDURES

Load Rating ([23 CFR 650.313](#), c)

Bridges are to be load rated in accordance with the [FHWA Policy Memorandum on Bridge Load Ratings for the National Bridge Inventory, dated November 5, 1993](#) and [FHWA Policy Memorandum on Bridge Load Ratings for the National Bridge Inventory, dated October 30, 2006](#). Item 64, Operating Rating; and Item 66, Inventory Rating; will need to be updated accordingly upon completion of the new load rating capacity calculations. Computations shall be performed based on items found during the most recent field inspection. See the Load Rating Evaluation Form in [SIIMS](#).

At the discretion of the Program Manager, Team Leader, or Load Rater, the bridge may be re-rated to reflect changes in condition, method of analysis used, or changes in acceptable load rating methodologies. The re-rating may be justified without changes in the condition codes of Item 58, Deck; Item 59, Superstructure; or Item 60, Substructure. A new Bridge Load Rating Report form will need to be generated in [SIIMS](#) and the form certified by a Professional Engineer, licensed in the State of Iowa, when the controlling member changes or the controlling capacity is reduced.

Procedures for Rating Standard Bridges

The following procedure should be utilized for determining the load ratings of standard bridges that have been rated by the Iowa Highway Research Board Project, HR-239. There are currently 4 phases of the report available for different standard bridge designs ([Load Rating for Standard Bridges \(1982\)](#), [Load Rating for Secondary Bridges \(1991\)](#), [Load Rating for Standard Bridges, Phase III \(1998\)](#), and [Load Rating for Standard Bridges, Phase IV \(2008\)](#)).

1. Identify the standard bridge used. Refer to project plans, if available, in the Bridge File to determine the version of the standard utilized. Some standards have multiple versions due to minor revisions.
2. Item 27, Year Built, is a good indicator of which standard version was used, if you are unable to locate the original plans. Some verification may be necessary in the field to determine exactly which version was utilized.
3. Review the applied dead load to determine if it matches the standard rating assumptions.
4. The operating and inventory ratings in the summary for each standard bridge are coded as an HS rating. This is NOT what should be coded on Items 64, Operating Rating, and Item 66, Inventory Rating, on the SI&A form. These numbers shall be converted to a tonnage based on a 36 ton truck.

The HS number shall be multiplied by the ratio of 36 tons/20 tons = 1.8 and this number recorded on the SI&A in Items 64, Operating Rating, and Item 66, Inventory Rating. For example, if the operating and inventory ratings are listed as HS 32.0 and HS 23.3 respectively; then Item 64, Operating Rating, should be coded 57.6 (32.0 tons x 1.8 = 57.6 tons) and Item 66, Inventory Rating, should be coded 41.9 (23.3 tons x 1.8 = 41.9 tons).

5. Some of the HR-239 reports include detailed computations for review of the critical and non-critical elements. These computations can be adjusted when changes to the dead load conditions are encountered or section loss in structural elements are noted.
6. Some of the standard bridges have restrictions to the number of vehicles that may be on the bridge at one time even if the roadway will accommodate more than one vehicle. If bridges are rated using one lane loading these bridges shall be posted accordingly and Item 41, Posting Status, on the SI&A coded based on the restriction.
7. When standard ratings are used from any of the HR-239 reports, the Bridge Load Rating Report does not require a signature by a Professional Engineer, licensed in the State of Iowa. In the Comment section of the Bridge Load Rating Report identify which of the Iowa DOT Office of Bridges and Structures Bridge Standard was used.

The Federal Government instituted a policy to use only metric units for all measurement. Therefore, FHWA requires all National Bridge Inventory data to be in metric units. The Iowa DOT has chosen to use English units instead of metric. [SIIMS](#) was developed using English units for all measurements; including, but not exclusive to, vertical and horizontal clearances, deck widths, bridge length, and Inventory and Operating ratings. These English values will be converted to metric units by [SIIMS](#) for the annual National Bridge Inventory submittal.

The Inventory, Operating, and Posting ratings are typically governed by superstructure elements; and in some cases, deck elements. Further analysis may be necessary to determine the capacity if significant changes in condition or applied dead load are noted based on the current conditions. Substructures should be reviewed for deterioration and rated, if necessary. Section loss should be reviewed and losses considered in adjustments to the original ratings.

Load Factor Rating (LFR) Requirements

Bridges are to be load rated in accordance with the [FHWA Policy Memorandum on Bridge Load Ratings for the National Bridge Inventory, dated November 5, 1993](#), for all bridges constructed, replaced, or rehabilitated since January 1, 1994. Bridges in this category shall be rated by load factor methods.

These ratings are required for the HS ratings Items 64, Operating Rating, and Item 66, Inventory Rating, on the SI&A. The bridge owner may elect to use Load Factor Rating (LFR), Allowable Stress Rating (ASR), or Load Resistance Factor Rating (LRFR) to establish load limits for purposes of load posting.

Bridges built or rehabilitated since January 1, 1994, falling into the following categories shall be rated by load factor methods:

1. Bridges constructed or replaced with the following materials:
 - a. Steel produced in 1936 (33 ksi or better) or after.
 - b. Prestressed concrete.
 - c. Reinforced concrete.
2. Bridges that undergo major rehabilitation or repairs.
3. Bridges designed with the Load Resistance Factor Design (LRFD) method prior to October 1, 2010, shall be rated with LRFR or LFR method. Bridges designed after October 1, 2010, shall be rated LRFR.

The following material types do not require LFR analysis and may be analyzed using ASR:

1. Masonry including stone, concrete block, or clay brick.
2. Bridges constructed with timber and designed prior to October 1, 2010.
3. Rolled steel produced prior to 1936 (30 ksi or less).

Bridge Load Rating Report

A Bridge Load Rating Report has been developed in [SIIMS](#) for each bridge to help identify the critical elements for the capacity rating of the structure and for certification of the ratings by a Professional Engineer, licensed in the State of Iowa.

1. All rating calculations shall be certified by a Professional Engineer, licensed in the State of Iowa, and summarized on the Bridge Load Rating Report in [SIIMS](#).
2. The Bridge Load Rating Report shall be reviewed by the Program Manager or Team Leader to ensure that it indicates the critical element, the operating and inventory ratings and the method of analysis used to determine the rating capacity of the bridge.
3. Rating calculations for standard bridges shall be reviewed using the Load Rating Evaluation Form in [SIIMS](#) by a Professional Engineer, licensed in the State of Iowa, to verify the ratings are still applicable under the current condition ratings and applied loads of the bridge, and be summarized on the Bridge Load Rating Report. For standard bridges the Controlling Element and Location fields are not required to be completed.
4. The ratings for a standard bridge found in one of the HR-239 reports can be entered in the Load Rating Report when the bridge is still in a condition that warrants this rating. When this rating is entered, a licensed engineer must place their name, date, and license number at the bottom of the Load Rating Report form. The engineer must place the following comment in the comment box at the bottom of the Load Rating Report form when using ratings from HR-239: "The engineer's name on this report is not certifying these ratings, but is only verifying they are the correct ratings from the HR-239 report published by the Iowa D.O.T. for this standard bridge.
5. If a Bridge Load Rating Report has been previously completed, existing ratings shall be reviewed with the critical elements being determined from available file information and accepted by a Professional Engineer, licensed in the State of Iowa. Recertification is not required for existing computations included in the file that are deemed reasonable based on the present condition of the structure.
6. Re-ratings needed due to reasons listed in the Load Rating Evaluation Form in [SIIMS](#) will need to be certified if the element re-rated becomes the critical element and controls the capacity of the structure.

7. Completing the Load Rating Table on the Bridge Load Rating Report is required for all bridges being rated for the first time or re-rated, even if posting is not required. Tonnage data are required in the table.
8. Bridges that are rated for both one lane and two lane traffic shall have the Load Rating Table completed for both one lane and two lane values to support the bridge posting or restriction.

Culverts

When a culvert has a fill depth greater than the length shown for Item 49, Structure Length, the live load is considered insignificant and the load capacity can be coded as 99.9 tons for Item 64, Operating Rating, and Item 66, Inventory Rating.

Posting

All bridges shall be rated for the following vehicles:

1. Type 4
2. 3S3
3. 3-3
4. Special Haul Vehicles (SHV's)

All bridges with continuous spans or simple span lengths of 100 feet or greater should also be rated for:

1. 3S3B
2. 4S3

Diagrams of the Iowa Legal Trucks are in [Attachment E](#) to this IM.

Load Rating for Special Haul Vehicles (SHV) are to be completed according to the schedule shown under the "Records/Load Rating Calculations" section in this I.M.

Load ratings for SHV's may be initially evaluated for simple span bridges, with existing Load Ratings, by using the method provided in the Load Rating Manual in [SIIMS](#). If the initial load ratings for SHV's show that no posting is needed, the initial evaluation should be uploaded in SIIMS under the Load Rating section. This evaluation shall be dated and show the name of the individual who performed the evaluation.

The Load Rating form may not need to be updated at this time. Load Rating forms shall be updated according to the schedule shown in this I.M. Future updates to the Load Rating form shall include all load limits for SHV's.

If the initial analysis of a simple span bridge shows that posting is needed, a load rating analysis shall be performed by a Professional Engineer licensed in the State of Iowa and the Load Rating form updated accordingly in [SIIMS](#).

For bridges that are not simple span, a load rating analysis shall be done according to the Manual for Bridge Evaluation (MBE). The load capacity for each SHV shall be documented in SIIMS on the Load Rating form and certified by a Professional Engineer licensed in the State of Iowa.

Whenever the Load Rating form is updated in [SIIMS](#) for SHV loadings, the ratings must be certified by a Professional Engineer licensed in the State of Iowa. Some standard bridges will be load rated for SHV's by the Iowa DOT and will not require certification of the load ratings (see paragraph 4 in the Bridge Load Rating Report section in this I.M. for more guidance).

SHV's are to be rated as per the Load Rating Manual Section 1.4.4 in [SIIMS](#). Adding the load ratings for the SHV to the Bridge Load Rating Report is not considered a re-rating of the bridge. All bridges that require re-rating shall be rated for the SHV.

It is recommended that bridge owners utilize the Type 4 straight truck posting value on the triple truck weight limit sign R12-5 to post for the SHV load restriction. The single truck weight limit sign can be utilized when the SHV load restriction is 10 tons or less.

Posting signs should limit all vehicles as efficiently as possible. Posting for a single gross weight limit, maximum axle weight limit, or both are the most enforceable means of restricting vehicles. Any method described in the Manual for Uniform Traffic Control Devices (MUTCD) is appropriate. Using the signs in the MUTCD with pictorial images of vehicles is allowed as long as it is clearly understood that the number of axles shown on any one vehicle could be literally interpreted if/when a violation is taken to court.

Bridges that have adequate capacity of legal vehicles up to 40 tons, but do not have adequate capacity for legal vehicles over 40 tons should be posted for a maximum gross limit of 40 tons regardless of the allowable limit calculated. This eliminates confusion about any permit vehicles that are within the 40 to 48 ton range.

Bridges do not need to be posted for loads that are annual permit loads. Bridges that commonly carry vehicles that fall under the annual permit types should be documented in [SIIMS](#) so when a permit request is made these bridges can be included on the permit as embargoed for that vehicle.

Item 70, Posting, should be calculated using the most restrictive legal truck. The most restrictive truck will be the one with the lowest Rating Factor (RF). $1.0 - RF = \% \text{ below legal load}$. Use this % to determine which coding, between 0 and 5, should be entered into Item 70, Posting. When Item 70, Posting, is equal to 4 or less, posting the bridge for the appropriate restriction is required. Item 41, Posting Status, shall be coded for the required restriction. The rating method for Item 70, Posting, does not have to be the same method used for Item 64, Operating Ratings, and Item 66, Inventory Rating. If a bridge is re-rated for Item 64, Operating Rating, and Item 66, Inventory Rating using the LFR or LRFR methods, the posting limits do not have to be re-calculated by these methods.

Bridge structures that have Item 41 coded (P) for Posted prior to an inspection, should remain coded (P) following the inspection, even if the posting limit changes. When a bridge requires posting for the first time, Item 41 can be coded (B) until the bridge posting is installed. Once posting signs are installed, Item 41 shall be changed to (P). Item 41 can be coded (B) for a maximum of six months.

Advanced Posting

Bridges shall have advance load postings at the last available location to avoid crossing an embargoed structure by using an alternative route or turning around. The signs shall be readily visible and installed in accordance with the MUTCD 2009 Edition, Section 2B.59, Weight Limit Signs

When bridges are clearly visible and signs legible from the advance intersection, both advanced warning signs and signing at the bridge site are not required. The signing located at the bridge site will be sufficient to warn oncoming traffic.

When there are multiple bridges on a roadway that require load posting, only the most restrictive posting is required to have advanced posting installed as per the MUTCD.

Advance warning signs that restrict the bridge to one lane or limits the number of vehicles on the structure at one time shall also be located far enough in advance of the structure to allow the traffic to slow down prior to crossing the bridge along with oncoming traffic.

Overload or Superload Permitting

The bridge owner shall review requests for overload crossings of their bridges to minimize damage, ensure public safety, and protect the integrity of the local infrastructure.

1. The bridge load carrying capacity shall be reviewed and computations completed as required to determine if the specific overload will cause overstress to the structure.

2. Permit requests and approvals shall be kept on record for documentation. Special requirements such as reduction of speed, centering on the roadway, elimination of braking, and other restrictions should be noted on the permit.
3. The bridge owner has the right to be compensated for costs associated with the review for the overload permit by the individual/company requesting the permit as per [Iowa Code 321E.14](#), Fees for Permits. [761 Iowa Administrative Code \(IAC\) 511.5\(8\)](#), Fair and Reasonable Costs, states that the permit-issuing authority may charge any permit applicant a fair and reasonable cost for measures necessary to avoid damage to public property including structures and bridges.
4. Any request can be denied if it is determined the overload will be detrimental to the public facility.
5. Bridges may be evaluated for Routine Permit Trucks (see [Attachment F](#) to this IM). If the bridge does not have the capacity to carry one or more of these trucks, when center-lined at 5 mph, the inadequacy can be recorded on the Load Rating Bridge Report form in [SIIMS](#).

Records ([23 CFR 650.313](#), d)

Bridge owners are required to maintain a complete, accurate, and current record of each bridge under their jurisdiction, either electronically or hard copy, as per the American Association of State Highway and Transportation Officials Manual for Bridge Evaluation (AASHTO Manual). The components of a complete bridge record are listed in the AASHTO Manual. Many of the items listed will be included in [SIIMS](#) for each bridge. Bridge owners are encouraged to include electronic copies of these items in [SIIMS](#) as soon as possible.

Uploading Bridge Records

Bridge records that are NOT associated with a specific bridge inspection, such as scour analysis, unknown foundation analysis, channel cross sections, etc., should be uploaded into SIIMS utilizing the FILES Tab. Uploading these general documents in conjunction with an inspection will conceal the documentation in that specific record, making it difficult to locate the documents for future reference.

The following list of items shall not to be considered in lieu of the requirements in the AASHTO Manual. All of the items in the AASHTO Manual will not be available for every bridge structure; therefore, the items listed below should be included in each Bridge File as a minimum. However, any and all items addressed in the AASHTO Manual should be included in the bridge file when available.

Bridge Plans

Plans for bridges are not required to be in the file folder; however, they are required to be readily available to the bridge owner, Program Manager, or Team Leader at all times. Plans for bridges let after January 1, 2011, shall be included in [SIIMS](#). Bridge owners are encouraged to scan relevant plan sheets for bridges let prior to January 1, 2011, and include them in [SIIMS](#).

Repair Plans

Plans for bridge repair are not required to be in the file folder; however, they are required to be readily available to the bridge owner, Program Manager, or Team Leader at all times. Plans for bridges let after January 1, 2011, shall be included in [SIIMS](#). Bridge owners are encouraged to scan relevant plan sheets for bridges let prior to January 1, 2011, and include them in [SIIMS](#).

Photographs

A road view and a side view of the bridge structure are the minimum requirement. Structures with Item 58, Deck; Item 59, Superstructure; Item 60, Substructure; Item 61, Channel / Channel Protection; and Item 62, Culvert, coding of 4 or less are required to have photographs of the deficiency. Structures that have had no changes from the previous inspection do not require updated photographs. All relevant photographs taken after January 1, 2012, will be required in [SIIMS](#).

Scour Evaluation Data

All scour evaluation documentation is required to be in [SIIMS](#), including the Bridge Scour Stability Worksheet, Level A Evaluation (see [Attachment A](#) to this IM); Intermediate Scour Assessment Procedures Flowchart, Level B Evaluation (see [Attachment B](#) to this IM); and/or Level C [HEC 18](#) calculations. Bridge owners or Program Managers are required to indicate the level of scour analysis completed using the check boxes on the Channel/Channel Protection tab in [SIIMS](#). POAs are required to be in [SIIMS](#) and indicated on the Channel & Channel Protection form. Scour analysis worksheets and POAs are required to be in [SIIMS](#).

Channel Cross Section

A channel cross section on the upstream side of the bridge is required to be a part of the bridge record. A standard Channel Cross Section form has been incorporated into [SIIMS](#). Each bridge structure is required to have a data point at the top of bank, toe of bank, thalweg, and each substructure unit. The Channel Cross Sections are to be updated every 4 years for natural waterways and 10 years for drainage ditches controlled by a drainage district in [SIIMS](#) unless conditions at the bridge warrant more frequent monitoring. The Channel Cross Section will be required in [SIIMS](#).

Local Agency Field Data Collection Form

The MBE specifies that the Bridge File should reflect the information in the current bridge inspection report and that each Bridge File should include a chronological record of all inspections performed. Therefore, the field notes are required to be included in the Bridge File. The Field Data Collection form in [SIIMS](#) was developed for the purpose of documenting field notes and shall be completed in [SIIMS](#).

The two types of bridge inspections, In-Depth and Routine, are determined based on the condition and type of structure being inspected. In-Depth Inspections are recommended for structures that contain elements in less than satisfactory condition or structures that require arm's length inspection of elements. In-Depth Inspections are required to have all the appropriate sub elements addressed with comments to support the condition rating of the primary element. It is recommended that all appropriate sub elements are addressed during Routine Inspections to adequately track the deterioration rate of each primary element.

An In-Depth Inspection is recommended for structures meeting the following criteria:

1. All fracture critical bridges.
2. Fatigue vulnerable bridges.
3. Structurally Deficient bridges.
4. Bridges with two or more condition ratings equal to 5 (Item 58, Deck; Item 59, Superstructure; Item 60, or Substructure).
5. Culverts with a condition rating equal to 5.

Item 58, Deck; Item 59, Superstructure; Item 60, Substructure; or Item 62, Culvert; ratings of 5 and below affect the Sufficiency Rating, which indicates that deterioration is beginning to become more apparent; therefore, the bridge is closer to becoming Structurally Deficient.

Structure Inventory and Appraisal Forms (SI&A)

The SI&A forms will be completed and stored in [SIIMS](#).

Load Rating Calculations

The Bridge File is required to include a complete record of the calculations of the bridges load carrying capacity. A standard Bridge Load Rating Report has been incorporated into [SIIMS](#) and is required to be completed for each bridge structure. The load rating calculations or Bridge Load Rating Report is required to be signed by a Professional Engineer, licensed in the State of Iowa, for all non-standard bridge load ratings. Electronic signatures for the forms in [SIIMS](#) are not required, but a signed copy of the load rating calculations is required to be in the Bridge File. Bridge owners are encouraged to have an electronic scanned copy of the signed Bridge Load Rating form included in [SIIMS](#).

Bridge structures that rate 2.7 Metric Tons or less for Item 64 Operating Rating shall be closed or; if the bridge can carry Legal Iowa truck loads of 3 tons, Item 64 should be re-evaluated to determine if a value above 2.7 Metric Tons should be entered in order to keep the bridge open.

FHWA requires all bridge structures be rated for its safe load carrying capacity as per 23 CFR 650.313(c). The DOT has developed the [CulvertCalc](#) software for rating reinforced box culverts. [Installation Instructions](#), [CulvertCalc Technical Manual](#), and [CulvertCalc User Manual](#) are available. The FHWA is requiring a three phase process in completing the load ratings for culverts as follows:

1. Culverts that have Item 62, Culverts, with a condition rating of 4 or less, were required to be rated by January 1, 2013.
2. Culverts that have Item 62, Culverts, with a condition rating of 5 will be load rated by June 1, 2016.
3. Culverts that have Item 62, Culverts, with a condition rating >5 will be load rated by December 15, 2017.

Load ratings for Special Haul Vehicles (SHV) have been divided into three groups with the following deadlines for completing the ratings:

- a. Group 1 load ratings are to be completed on or before 12/31/2016
 - i. Single span beam type bridges and multi-span PPCB's with Operating Rating < 45 tons and not posted.
- b. Group 2 load ratings are to be completed on or before 12/31/2020
 - i. Multi-span bridges with Operating Rating < 45 tons and not posted.
 - ii. Single span special bridges (arch, truss, etc.) with Operating Rating < 45 tons and not posted.
- c. Group 3 load ratings are to be completed on or before 12/31/2022
 - i. Posted bridges.
 - ii. Bridges with Operating Rating > 45 tons.

Load Rating Evaluation Form

The Load Rating Evaluation Form, in SIIMS, is required to be completed for each in-depth or routine inspection. The Program Manager or Team Leader completing this form in SIIMS is not confirming that the load rating calculations are correct, only that the condition of the bridge has or has not changed. If any of the items on the form indicate that the condition of the bridge has changed since the most recent load rating calculations, then re-rating the structure for load carrying capacity is required.

When the Load Rating Evaluation Form requires the load ratings to be re-evaluated and the ratings do not change upon re-evaluation, the load rater must change the answer to the question "Does this bridge need to be re-rated" on the Load Rating Evaluation Form to "No" and insert their name and the date at the top of the Load Rating Evaluation Form. This will document that the load ratings have been reviewed and are still appropriate for the current conditions.

Critical Findings

A standard Critical Finding report form has been incorporated into [SIIMS](#). The completed report is to be filed in [SIIMS](#).

Critical Features

FC and scour critical elements are addressed in [SIIMS](#).

Special Inspection Equipment

The list of specialized equipment and any additional requirements to complete the bridge inspection is included in [SIIMS](#).

Master Lists ([23 CFR 650.313, e](#))

A master list shall be kept which identifies an agency's FC bridges, the bridges requiring underwater inspection, scour critical bridges, unknown foundations, and bridges that are load posted. Additionally, it is recommended that a map be prepared showing each of these bridges for easy reference.

The master list can be generated by selecting the Manager side of [SIIMS](#) and running the report for FC bridges, underwater inspections, scour critical bridges, unknown foundations, and bridges that are load posted.

Fracture Critical (FC) Bridges

The following information shall be kept as part of the inspection records for each FC bridge as required by the NBIS.

1. A sketch of the bridge showing the location of all FCMs.
2. The inspection frequency and procedures that are necessary to inspect each FCM within arm's reach. The procedure may include equipment required (i.e. climbing equipment, ladder, snooper truck) or access methods (i.e. ground access, walk on lower chord) used to inspect the member.

The Fracture Critical Member Locations and Conditions for Trusses or for Thru/Two Girders forms (see [Attachment K](#) or [L](#) to this IM) shall be utilized to provide information described in items 1 and 2 above to comply with the NBIS. Bridge owners may elect to produce their own form in lieu of completing the Fracture Critical Member Locations and Conditions form; however, this will require review and approval by FHWA. The Iowa DOT has developed a Sample Fracture Critical Member Location and Conditions form as shown in [Attachment M](#).

Utilize the drop down menu on the Supplementary Inspection Information page stating whether or not the bridge is fracture critical. Check the box by "Fracture Critical Member Sketch" after it has been uploaded into SIIMS.

Underwater Inspections

The Program Manager is responsible for adhering to the requirements for diver qualifications as per the [Bridge Inspector's Reference Manual](#) (BIRM).

The following information shall be kept as part of the inspection records for each bridge requiring underwater inspection.

1. The location of all elements requiring an underwater inspection.
2. The inspection frequency and procedures necessary to inspect each element. The procedure may include equipment required or access methods used to inspect the member.

Scour Critical Bridges

The following information shall be kept as part of the inspection records for each bridge determined to be scour critical or with unknown foundations. Item 113, Scour Critical, shall be coded as 2 or 3.

1. Scour Analysis Procedures

The analysis used to determine the Item 113, Scour Critical, coding shall be included in the inspection file for each bridge as applicable. This may include a Level A, B, or C scour evaluation (see [Attachment A](#) and [Attachment B](#) to this IM).

If a bridge has been designed for scour, a computed scour depth notation shall be shown on the plans or included in the inspection file. Item 113, Scour Critical, can be coded 5 if there are plans uploaded in [SIIMS](#) that contain the scour data on the situation plan, in lieu of scour calculations.

2. Scour Inspection Frequency

All bridges should be monitored for changes that may affect the scour rating at the routine inspection interval.

Review Level A Bridge Scour Stability Worksheets (see [Attachment A](#) to this IM) and upstream channel cross section to determine scour rating.

3. Plan Of Action (POA)

A POA needs to include a specific plan for monitoring, inspecting, or closure for structures that have been determined to be scour susceptible during and after a flood event. There are two methods in which structures can be analyzed for scour susceptibility.

Structures with known foundation type and depth are analyzed to determine if the structure is susceptible to scour during a flood event. Structures with unknown foundations are analyzed to determine the level of risk that the structure poses to the traveling public during a flood event. Guidance and commentary for unknown foundation analysis is provided in [Attachment H](#) and [Attachment I](#) to this I.M.

Structures with unknown foundations can be determined to have a Low, Moderate, or High risk to the traveling public during a flood event. POA's are developed and implemented for Low, Moderate, and High risk unknown foundations.

Bridges with unknown foundations that are determined to be Low risk can have a basic POA that simply requires the structure to be inspected for scour as part of the regularly scheduled bridge inspection. Bridges with known foundation type and depth that are determined to be scour critical will have a POA similar to a Moderate risk POA for a structure with an unknown foundation. Bridges with unknown foundations that are determined to be High risk involve the installation of countermeasures, which require inspection following a flood event.

Moderate or High risk POA should include the following information:

General Information

The name of the individual that completed the POA form should be included along with the date that the form was completed. Bridge identification information should be included such as local identification numbers and FHWA numbers. The condition code should be provided for Item 113, Scour Critical, to identify the scour status of the bridge. A detailed description of the bridge location should be part of the POA document to be utilized by the individual responsible for monitoring the bridge during a flood event.

Functional Groups

Management and local maintenance personnel are the two functional groups that will be involved in the monitoring process during a flood event.

The management personnel can be comprised of the City Engineer, County Engineer, or a designated representative. This individual will be involved in implementing bridge closure plans and the process of reopening of closed bridges. This individual is the ultimate authority for closing and re-opening bridge structures and should be identified in the POA by job title. Stating the individual's job title eliminates voiding the POA due to personnel changes.

The local maintenance personnel can be comprised of the grader operator, road superintendent, or maintenance superintendent where the bridge structure falls under their area of responsibility. This individual will be involved in the process of monitoring the development of flooding conditions, implementing bridge closure plans, general monitoring of

bridge condition during floods, and advising management of bridge closures. Again, this individual should be identified in the POA by job title to eliminate voiding the POA due to personnel changes.

Initiation of Monitoring

Local maintenance personnel shall initiate monitoring when the trigger mechanism or mechanisms developed by management have occurred. These trigger mechanisms should be site specific for each bridge structure. Some examples of trigger mechanisms are flood watches or warnings issued by the National Weather Service that include the drainage area for the bridge being monitored, or the local maintenance personnel witness heavy rainfall in the vicinity of the drainage area.

Records shall be kept of each bridge that was monitored as a result of a rain event. The report should include observed water levels, the amount of rain fall and the timeline of the rainfall.

Structures that are monitored during a flood event are required to be inspected to by the local maintenance personnel and the findings provided to management for the purpose of determining if any follow up action is required such as armoring.

Closure Procedures

The trigger mechanisms utilized to determine closure of the bridge structure need to be specified in the POA. A critical water surface elevation should be determined for closure of the bridge. This could be a conservative elevation that can be calculated from the plans based on 25 or 50 year flood elevation. This elevation can be painted on a pier or abutment and/or marked on a witness post so the local maintenance personnel can determine if they need to continue monitoring or initiate closure procedures.

Other criteria such as visually observed distress to the approach roadway or significant erosion to the stream banks may also be listed as secondary criteria for closure.

Post Flood Monitoring and Reopening Procedures

Regardless of whether the bridge is closed as a result of flooding, a scour inspection that includes a channel cross section should be performed after the flood waters have receded. Bridges determined to be High risk are required to have the countermeasures inspected following the flood event to determine if repairs are required.

Further inspections such as in-depth, damage, and/or underwater inspections may be required depending on its structure type, site characteristics, and conditions observed from the scour inspection.

Details of the criteria required to re-open the structure should be clearly stated. Following the flood event, these structures are required to be inspected by a Professional Engineer, licensed in the State of Iowa, or a Team Leader prior to opening the bridge, to determine if the structure has changed from its pre-flood condition and if any additional follow-up action is required.

The scour POA should be re-evaluated and updated after the conclusion of every flood or high-water event in which the POA is implemented. The POA should also be updated based on learning new information about foundation type, changed stream profile or condition of the channel, or other changes to the initial criteria used to develop the POA.

Scour Countermeasures

If the post flood inspections warrant the installation of scour countermeasures, the repairs should be prioritized for all bridges evaluated as scour critical or high risk. The scour inspection in the bridge records should include the plans to install the countermeasures with the estimated repair date. This may be the date the countermeasure installation is programed

in the STIP or if it is to be installed by local maintenance staff, the report should include the estimated repair date.

Scour critical bridges that have countermeasures installed for the purpose of armoring the structure to remain open during a single flood event are required to meet the criteria in [Section 4130](#) of the Standard Specifications. Reference to the Armored Countermeasure in the Definitions section in this I.M.

Item 113, Scour Critical, can be coded 7 if the structure has a POA developed and implemented with an approved countermeasure installed. Broken concrete does not constitute an armored countermeasure and does not meet the criteria in the Standard Specifications.

Item 113, Scour Critical, can be coded 8 if permanent countermeasures are installed. Reference Permanent Countermeasure in the Definitions section in this I.M.

When Item 113, Scour Critical, is coded 2 or less, Item 60, Substructure, shall be coded 2 or less as per HEC-18, Section 10.3.2 Bridge Inspection, FHWA Recording and Coding Guide.

New and reconstructed bridges shall be designed to resist scour in accordance with HEC 18, as required by AASHTO Bridge Design Specifications and [FHWA Technical Advisory, Evaluating Bridges for Scour, dated October 28, 1991](#).

Unknown Foundations

The following information shall be kept as part of the inspection records for each bridge with unknown foundations.

1. A POA for monitoring bridges with unknown foundations should be developed and implemented to reduce the risk to users from a bridge failure during and immediately after a flood event (see [HEC 23](#)). Also, the use of risk assessment, standard design practices, and engineering judgment can be used to reduce the risk of scour induced failures.
2. Use [Attachment H](#) and [Attachment I](#) to this IM to evaluate the bridge according to the following procedures:
 - a. Use the Unknown Foundations Flowchart - Level A Evaluation (see [Attachment H](#) to this IM) to determine if the foundation type and depth can be determined. If not, then go to step b below.
 - b. Complete the Unknown Foundation Risk Assessment Worksheet - Level A Evaluation (see [Attachment H](#) to this IM) utilizing the USGS Hydrologic Region (see [Attachment G](#) to this IM) information provided and the SI&A form. Determine the risk category based on the point totals and go to step c below.
 - c. Structures determined to have "Moderate" or "High" risk unknown foundations based on the Risk Assessment Worksheet - Level A Evaluation ([Attachment H](#) to this I.M.) may utilize the Unknown Foundations Assessment Flowchart - Level B Evaluation ([Attachment I](#) to this I.M.) to determine if the category of risk can be reduced.
 - d. Refer to [Attachment H](#) to this IM for guidance on developing the appropriate POA.
 - e. Check the appropriate boxes on the Channel/Channel Protection form in SIIMS that indicated the level of evaluation that was completed and the risk level of the POA that was developed and implemented.

The risk-based POAs developed for the unknown foundations are required to be in [SIIMS](#).

Bridge owners are cautioned that simply developing a POA for each bridge with an unknown foundation without first making every effort to determine the foundation (by discovery or inference) may not be advisable. The personnel required to implement POA's for a large number of bridges during a widespread rainfall event may overwhelm staff.

Load Posting

Maintain a list of posted bridges with weight limits for each bridge. Additionally it is recommended that a map be prepared showing the locations of these bridges.

Quality Control (QC) and Quality Assurance (QA) ([23 CFR 650.313](#), g)

Quality Control (QC) Program

It is the Program Manager's responsibility to ensure the following:

1. The "Monthly Notifications" are reviewed to identify any bridges that have not been inspected within the specified frequency or are not in compliance with load posting requirements.
2. [SIIMS](#) is used to document each inspection, including but not limited to the following:
 - a. Local Agency Field Data Collection Forms in [SIIMS](#) are completed.
 - b. The Supplemental Inspection Information tab is completed in [SIIMS](#) for each bridge.
3. Master lists are maintained as required in the Inspection Procedures-Master List section of this IM.
4. Team Leaders maintain the education/experience/training requirements contained in the Qualifications of Personnel section of this IM.
5. The individual charged with the overall responsibility for load rating bridges is a Professional Engineer, licensed in the State of Iowa.

Quality Assurance (QA) Program

Bridge Record Reviews

A review of the bridge records for LPA's to determine if they contain the minimum items listed in Inspection Procedures – Records section of this IM, will be conducted by the Office of Bridges and Structures utilizing [SIIMS](#) on an annual basis for randomly selected LPAs. Additional reviews of the bridge records will be conducted during on site reviews in conjunction with the DOT's annual oversight of the LPAs.

Team Leader Reviews

It is the Program Manager's responsibility to ensure the following:

1. Team Leader Reviews are conducted every 4 years, beginning January 1, 2012.
 - a. Independent party review by a Professional Engineer qualified as a Team Leader.
 - b. Field review of inspection data for 10 bridges inspected during the past 12 months. The bridges selected shall include, but not limited to, predominant bridge types inspected and bridges with lower sufficiency ratings. The bridges selected shall include some bridges with Item 58, Deck; Item 59, Superstructure; Item 60, Substructure; Item 62, Culvert; or Item 70, Posting; rated 4 or less (if available for the bridges inspected by the Team Leader).
 - c. Reviewer accompanies the Team Leader during the inspection of 2 of the 10 selected bridges.
 - d. Quality Assurance Field Review Worksheet ([Attachment J](#) of this IM) completed for each bridge inspected.
 - e. Verification of the validity of information provided by an individual to obtain approval to utilize [SIIMS](#) as a Team Leader.
 - f. Documentation that the Team Leader has completed the Bridge Inspector Refresher Training Course and, if needed, Fracture Critical Inspection Techniques for Steel Bridges Training Course.

The findings of the Team Leader Reviews shall be attached to an e-mail to eric.souhrada@dot.iowa.gov. The report shall be stamped and signed by the reviewer. If

there are negative findings regarding the Team Leader, the report shall include corrective recommendations, or actions taken, to resolve those findings.

2. Disqualification and re-instatement of Team Leaders

The Program Manager shall disqualify a Team Leader if they have provided invalid information to obtain approval to utilize [SIIMS](#) as a Team Leader or have not completed the required training required by the Qualification of Personnel section of this IM. The disqualification shall be as follows:

- a. Invalid information willfully provided to obtain approval to utilize [SIIMS](#) as a Team Leader: Permanent disqualification as a Team Leader.
- b. Non Compliance with the Qualification of Personnel section of this IM: Disqualification as a Team Leader until they meet the requirements of Qualification of Personnel section of this IM.

Load Rating Engineer Reviews

Load Rating Engineer reviews will be conducted by the Office of Bridges and Structures utilizing SIIMS in conjunction with on-site field reviews as part of the Iowa DOT's annual oversight of the LPA's program.

Critical Findings ([23 CFR 650.313](#), h)

Purpose

The purpose of the Critical Finding Bridge Report in [SIIMS](#) is to ensure that serious bridge damages or defects are reported, the necessary notifications are made to the bridge owner by the Program Manager or Team Leader, and that proper and timely action is taken to ensure the safety of the traveling public. This process alerts the bridge owner so damage or deterioration can be repaired in a proper and timely manner and that the damage and repairs are documented.

FHWA will query the Critical Finding Reports in SIIMS every quarter; therefore, it is imperative that the LPA's complete the Critical Finding Report in [SIIMS](#) as per this I.M.

Criteria

Conditions that require the filing of a critical finding report shall include, but are not limited to one of the following:

1. a partial or complete bridge collapse,
2. structural or other defects posing a definite and immediate public safety hazard,
3. a condition rating of 2 or less for any of the following bridge items:
 - a. Item 58, Deck,
 - b. Item 59, Superstructure,
 - c. Item 60, Substructure,
 - d. Item 61, Channel/Channel Protection,
 - e. Item 62, Culverts, or
 - f. Item 113, Scour Critical.

In cases where it is determined that the bridge could be used safely at a lower posted load limit, the bridge may remain open if it is immediately posted at the reduced limit.

Procedure for County/City Bridges

1. The individual discovering the critical finding shall:
 - a. Immediately report the finding to the responsible local official, who may notify law enforcement or maintenance personnel to close the bridge.
 - b. Complete Part I of the critical finding report within 48 hours of the finding.
2. The responsible local official shall
 - a. Take action to ensure the safety of the traveling public.
 - b. Complete Part II of the critical finding report within 5 days of the finding.
3. Before a closed bridge may be reopened to traffic, a Professional Engineer, licensed in State of Iowa, shall approve any structural repairs, the bridge shall be load rated, and the bridge shall be inspected by a Team Leader.

INVENTORY ([23 CFR 650.315](#))

Iowa DOT maintains an inventory of all bridges subject to NBIS. This inventory is available for viewing and updating by local agencies in [SIIMS](#). All local agencies shall enter their inventory data updates into the database using this access system. User names and passwords are available by request from the [State of Iowa Enterprise A & A System](#). Access to [SIIMS](#) will be approved and granted by the Iowa DOT Office of Bridges and Structures, Bridge Maintenance and Inspection (BM&I) Unit.

New Bridge Data

Within 30 days of receiving the new FHWA number for a new bridge or bridge replacement, all of the required NBI data must be populated in SIIMS. If the bridge has not been built or is not open to traffic, Item 41, Posting Status, must be coded as G.

Modifications to a Bridge or Change in Load Restriction

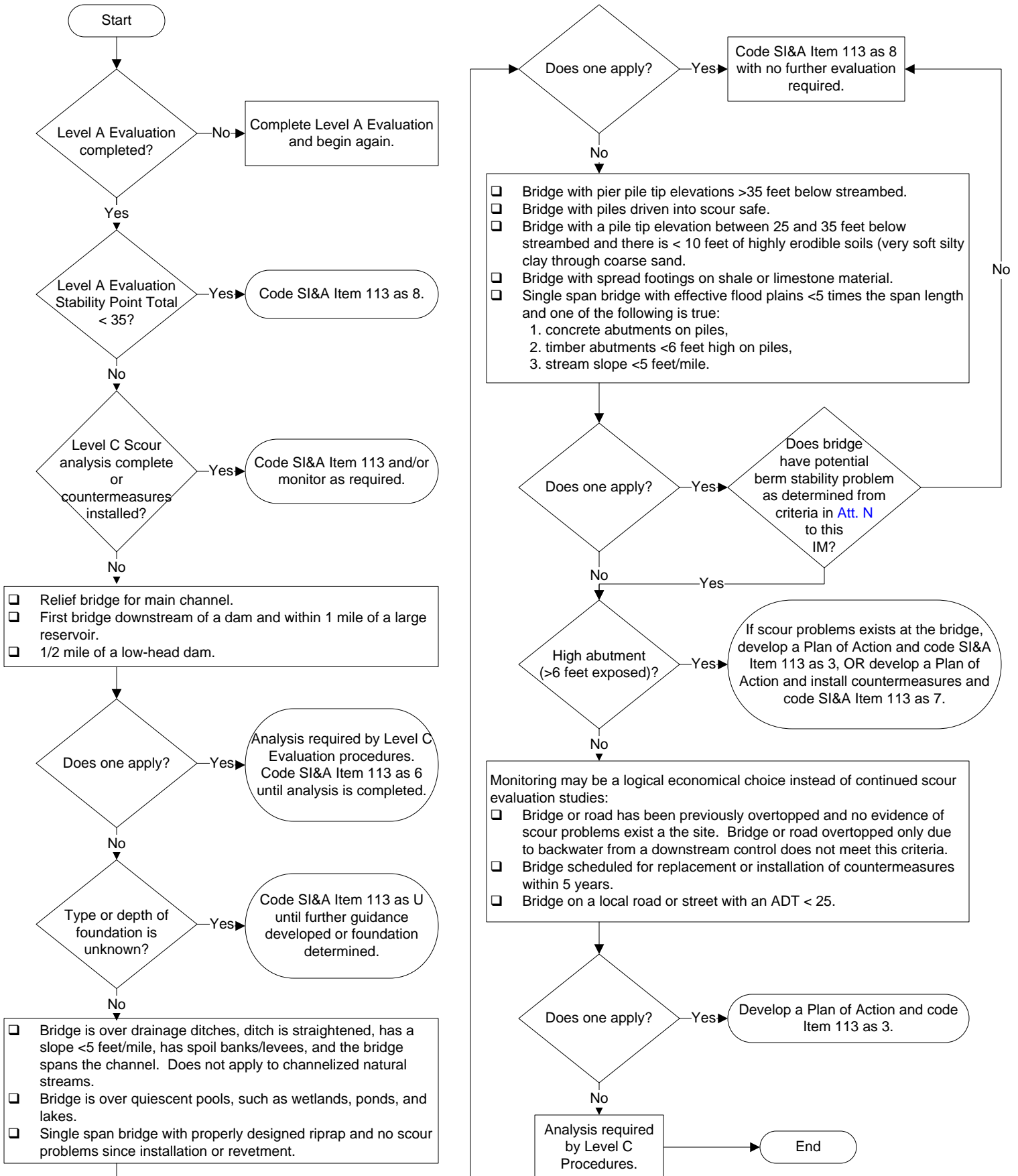
Modification to a bridge that alters the geometry or changes to a bridge load restriction must be updated in the NBI within 180 days of the change.

For all types of bridge inspections, the inspection dates and condition codes shall be entered into [SIIMS](#) within the required month of the field inspection.

Final approval of inspection reports, including load ratings if necessary, shall be completed in [SIIMS](#) within 90 days of the field inspection.

INTERMEDIATE SCOUR ASSESSMENT FLOWCHART

Level B Evaluation



Abbreviations / Acronyms:

SI&A = Structural Inventory and Appraisal

QUALITY ASSURANCE FIELD REVIEW WORKSHEET

Reviewer: _____ Review Date: _____

Agency: _____

Program Manager: _____ *Team Leader: _____

**Team Members: _____

Bridge ID: _____ County / City: _____

FHWA No.: _____ Stream: _____

Main Span Materials & Design (Item 43): _____

Location: _____

* (Required to be present at 2 reviews) ** (Not required to be present)

	<u>No</u>	<u>Yes</u>
1. Is this a Fracture Critical Bridge? If "Yes", are the Fracture Critical Elements identified in the inspection documentation?	_____	_____
2. Are all necessary inspection forms completed fully and accurately in SIIMS?		
a. Field Data Collection form, including the deck, superstructure, substructure, channel and culvert forms.	_____	_____
b. Critical Finding form	_____	_____
c. Fracture Critical Member Locations and Conditions form	_____	_____
d. Are the condition ratings, comparable between the inspector and reviewer (+/- 1 condition rating)? "Y" for Yes, "N" for No.	_____	_____
Item 58, Deck: Previous rating: _____ Inspector: _____ Reviewer: _____		
Item 59, Superstructure: Previous rating: _____ Inspector: _____ Reviewer: _____		
Item 60, Substructure: Previous rating: _____ Inspector: _____ Reviewer: _____		
Item 61, Channel and Channel Protection:		
Previous rating: _____ Inspector: _____ Reviewer: _____		
Item 62, Culvert: Previous rating: _____ Inspector: _____ Reviewer: _____		
e. Does the bridge posting condition at the bridge match the condition coding in Item 41, Posting Status?	_____	_____
f. Were appropriate sketches, notes, and photos from previous inspections used for preparing the inspection documentation?	_____	_____
g. Was an underwater inspection required during this inspection? If "Yes", was the underwater inspection properly documented?	_____	_____

Review comments: _____

BERM STABILITY CRITERIA

Berm stability should be reviewed for any bridges that exceed the following values:

- 1) Any berm slope steeper than 1.5:1, or
- 2) When the road grade to normal stream bed is > 20' and the effective berm slope (measured from road grade to the edge of stream) is steeper than 2:1, or
- 3) When the road grade to normal stream bed is < 30' and the effective berm slope is steeper than 2.5:1.

Abutment berm slopes or high abutments protected by properly designed riprap are considered stable.

HIGHLY ERODIBLE SOILS
(Excerpt from “Driven Pile Foundation Soils Information Chart”)

Soil Description	Blow count per foot (N Value)	
	Mean	Range
Very Soft Silty Clay	1	0-1
Soft Silty Clay	3	2-4
Stiff Silty Clay	6	4-8
Firm Silty Clay	11	7-15
Stiff Silt	6	3-7
Stiff Sandy Silt	6	4-8
Stiff Sandy Clay	6	4-8
Silty Sand	8	3-13
Clayey Sand	13	6-20
Fine Sand	15	8-22
Course Sand	20	12-28

INSTRUCTIONAL MEMORANDUMS

To Local Public Agencies



To: Counties	Date: December 31, 2015
From: Office of Local Systems	I.M. No. 2.220
Subject: Establishing and Signing Area Service Roads	

Contents: This Instructional Memorandum (I.M.) includes guidelines and procedures for a Local Public Agency (LPA) to establish different levels of maintenance for Area Service Roads and to instruct counties of the options available and requirements for the establishment of these roads. This I.M. also includes the following attachments:

- [Attachment A](#) - Area Service “B” Road Maintenance Ordinance (Sample) ([Word](#))
- [Attachment B](#) - Resolution for Reduced Level of Maintenance to Area Service “B” Road (Sample) ([Word](#))
- [Attachment C](#) - Area Service “C” Road Maintenance Ordinance (Sample) ([Word](#))
- [Attachment D](#) - Resolution for Reduced Level of Maintenance to Area Service “C” Road (Sample) ([Word](#))
- [Attachment E](#) - Resolution for Increased Level of Maintenance to Area Service Road (Sample) ([Word](#))

Introduction

Iowa Code Section [309.57](#) allows a County Board of Supervisors, after consultation with the County Engineer, to classify their area service roads into three classifications termed Area Service A, Area Service B, and Area Service C. Area Service A roads are to be maintained in conformance with applicable statutes. Area Service B roads may have a lesser level of maintenance, as specified by the County Board of Supervisors, after consultation with the County Engineer. Area Service C roads have restricted access and a minimal level of maintenance, as specified by the County Board of Supervisors, after consultation with the County Engineer.

House File (HF) 768 enacted during the 1981 legislative session allowed counties to designate a lower level of maintenance for certain Area Service Roads which would be known as Level B roads. The legislation did not designate a procedure to establish Level B roads.

The Iowa State Association of Counties (ISAC) asked their legal counsel to review the legislation and recommend a procedure. ISAC subsequently issued a memo, dated [November 18, 1981](#), and on file in the Office of Local Systems, to Boards of Supervisors recommending that an ordinance be used to establish a Level B system. The basis for the recommendation was that an ordinance is actually a county law and a resolution is simply a setting of county policy, usually an administrative type act. A quote from the ISAC memo: “A county supervisor acting in a legislative capacity is immune from personal liability. A supervisor would not be immune from personal liability as a result of an administrative act unless it could be established that you acted in good faith.” Ordinances also require hearings and publication, resolutions do not. ISAC also developed a model ordinance that they distributed later. See [Attachment A](#) ([Word](#)) and [Attachment C](#) ([Word](#)) to this I.M.

The Level C classification was added in 1991 by HF 419. This third classification was developed to provide a means to limit access to roads that primarily serve adjacent farming operations and there has been resistance to vacating them. This legislation included language stating that stated Level C roads may only be established by ordinance or resolution. The original legislation required a petition from adjacent landowners before the Board of Supervisors could act on a reclassification. This requirement was removed as part of the SF 451 legislation that was passed in 2003.

The decision whether to classify roads as Level B or Level C by ordinance or resolution, rests with the Board of Supervisors. According to ISAC, the ordinance process provides more opportunity for public notification and reduces personal liability for board members. Several counties have established a Level B or Level C system by ordinance and then use resolutions to add or remove roads from the system.

AREA SERVICE B ROADS

Roads may only be classified as Area Service B by ordinance or resolution, see [Attachment A](#) ([Word](#)) and [Attachment B](#) ([Word](#)), respectively, to this I.M. Roads designated as Area Service B are required to have

appropriate warning signs, erected and maintained by the county, at all access points from other public roads. The warning sign size, type, and message are illustrated on page two of this I.M.

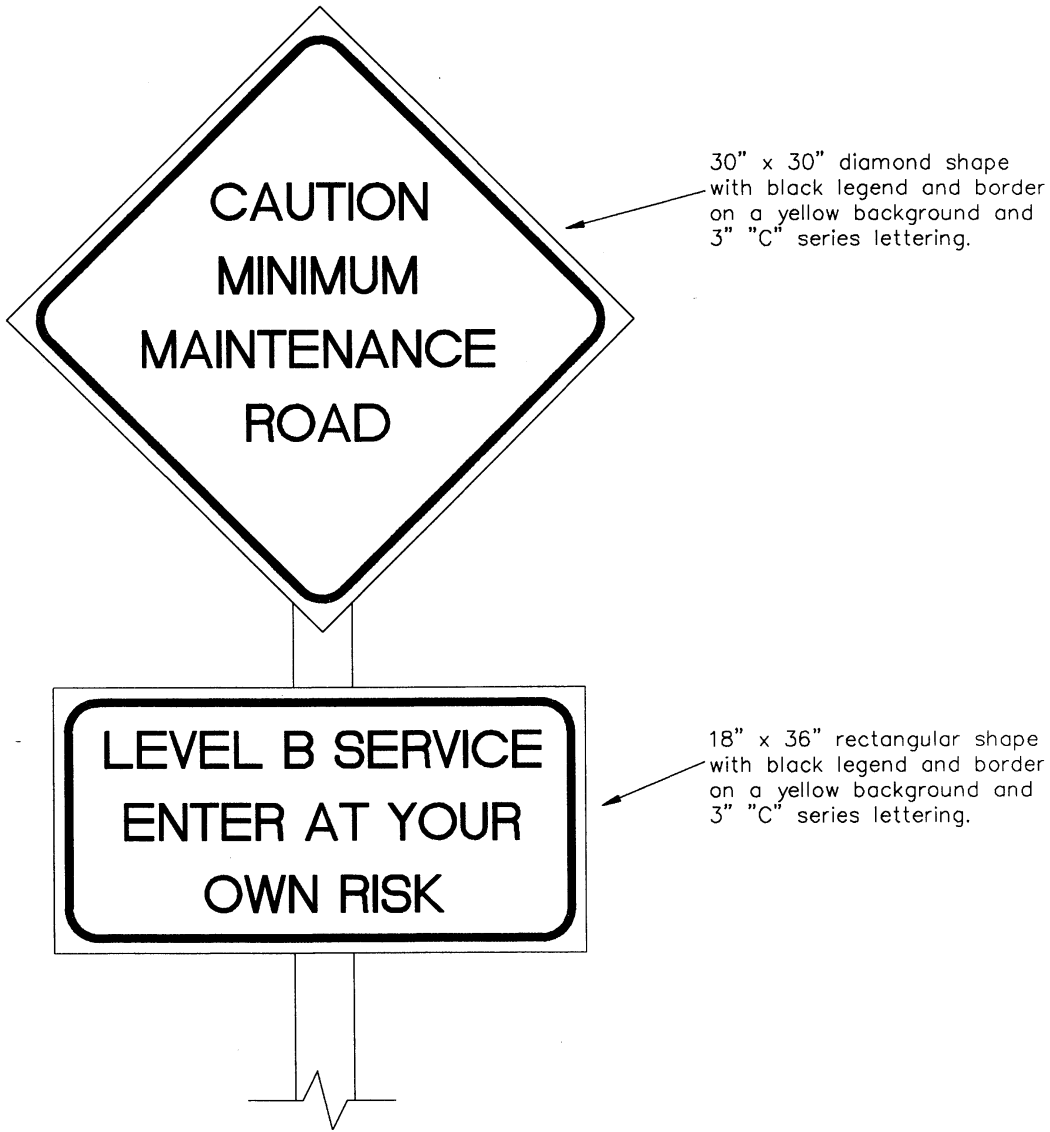
AREA SERVICE C ROADS

Roads may only be classified as Area Service C by ordinance or resolution, see [Attachment C \(Word\)](#) and [Attachment D \(Word\)](#), respectively, to this I.M. The ordinance or resolution shall specify the level of maintenance and the persons who will have access rights to the road. Roads designated as Area Service C are required to have appropriate regulatory signs, erected and maintained by the county, at all access points from other public roads. In addition, Area Service C classification roads shall adequately warn the public that access is limited. Access to the road shall be restricted by means of a gate or other barrier. The regulatory sign size, type, and message are illustrated on page three of this I.M.

Installation of the signs shall be in accordance with the current Iowa Signing Manual as per 761 Iowa Administrative Code (IAC) [Section 130](#).

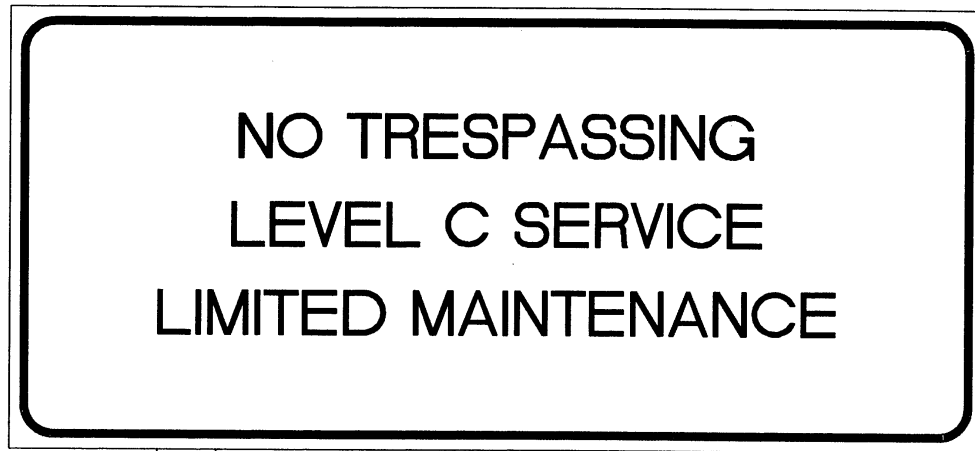
INCREASING AREA SERVICE OF A ROAD

There may be situations where requests are made to counties for an increase in the level of maintenance to roads classified as Area Service B or Area Service C. Counties should have policies or include language in their ordinances that address a procedure for these requests and a method to accomplish the road improvement (if necessary). See [Attachment E \(Word\)](#) to this



SIGNS REQUIRED AT ALL ACCESS POINTS OF LEVEL B ROADS

I.M.



30" x 66" rectangular shape
with black legend and border
on a white background and
4" "C" series lettering.

SIGNS REQUIRED AT ALL ACCESS POINTS OF LEVEL C ROADS

**RESOLUTION FOR REDUCED LEVEL OF MAINTENANCE TO AREA SERVICE "B"
ROAD**

(County Name) County Resolution No. _____

WHEREAS, (county name) County desires to classify certain roads on the area service system in the County to provide for a minimal level of maintenance; and

WHEREAS, (county name) County, after consultation with the County Engineer, has the authority to specify certain roads within the County as Area Service "B" roads pursuant to Iowa Code Section 309.57; and

WHEREAS, the (county name) County Board of Supervisors, after consulting with the (county name) County Engineer, desire to designate various roads in (county name) County on the Area Service "B" System to provide for a reduced level of maintenance in order to best utilize maintenance funds, and

WHEREAS, pursuant to Notice of Public Hearing duly published according to the Iowa Code, Public Hearing as held on the _____ day of (month), 20____ at _____ a.m. in the Board of Supervisors room at the (county name) County Courthouse, (city name of county seat), Iowa, to hear support and/or objections from the public on roads so designated.

THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF (COUNTY NAME) COUNTY that this County does hereby establish the road described as an Area Service "B" road, with restricted access and a minimal level of maintenance.

(enter a description of roads to be designated as Area Service B Roads here)

Resolution adopted this _____ day of (month), 20_____.

(county name) County Board of Supervisors

Board of Supervisors Chairperson

ATTEST:

(county name) County Auditor

RESOLUTION FOR REDUCED LEVEL OF MAINTENANCE TO AREA SERVICE "C" ROAD

(County Name) County Resolution No. _____

WHEREAS, (county name) County desires to classify certain roads on the area service system in the County to provide for a minimal level of maintenance and access by means of a gate or barrier; and

WHEREAS, the County, after consultation with the County Engineer, has the authority to specify certain roads within the County as Area Service "C" roads pursuant to Iowa Code Section 309.57; and

WHEREAS, the only persons who will have access rights to the roads shall be:

- (1) the owner, lessee, or person in lawful possession of any adjoining land,
- (2) The agent or employee of the owner, lessee or person in lawful possession of any adjoining land,
- (3) any peace officer,
- (4) any magistrate,
- (5) any public employee whose duty it is to supervise the use or perform maintenance of the road,
- (6) any agent or employee of any utility located upon the road.

WHEREAS, the minimal level of maintenance will be as follows:

1. Blading. Blading or dragging will not be performed on a regular basis.
2. Snow and Ice Removal. Snow and ice will not be removed, nor will the road surface be sanded or salted on a regular basis.
3. Signing. Except for load limit posting for bridges, signing shall not be continued or provided. ALL AREA SERVICE LEVEL C ROADS SHALL BE IDENTIFIED WITH A SIGN AT ALL POINTS OF ACCESS TO WARN THE PUBLIC OF THE LOWER LEVEL OF MAINTENANCE.
4. Weeds, Brush and Trees. Mowing or spraying weeds, cutting brush and tree removal will not be performed on a regular basis. Adequate sight distances will not be maintained.
5. Structures. Bridges and culverts may not be maintained to carry legal loads. Upon failure or loss, the replacement structure will be appropriate for the traffic thereon.
6. Road Surfacing. There will be no surfacing materials applied to Area Service System C Roads on a regular basis.

7. Shoulders. Shoulders will not be maintained on a regular basis.
8. Crown. A crown will not be maintained on a regular basis.
9. Repairs. There will be no road repair on a regular basis.
10. Uniform Width. Uniform width for the traveled portion of the road will not be maintained.
11. Inspections. Regular inspections will not be conducted.

THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF (COUNTY NAME) COUNTY that this County does hereby establish the road described as an Area Service "C" road, with restricted access and a minimal level of maintenance.

(enter a description of roads to be designated as Area Service C Roads here)

Resolution adopted this _____ day of (month), 20_____.

(county name) County Board of Supervisors

Board of Supervisors Chairperson

ATTEST:

(county name) County Auditor

RESOLUTION FOR INCREASED LEVEL OF MAINTENANCE TO AREA SERVICE ROAD

(County Name) County Resolution No. _____

WHEREAS, (county name) County desires to classify certain roads on the area service system in the County to provide for an increased level of maintenance; and

WHEREAS, (county name) County, after consultation with the County Engineer, has the authority to reclassify certain roads within the County as Area Service _ roads pursuant to Iowa Code Section 309.57; and

WHEREAS, the (county name) County Board of Supervisors, after consulting with the (county name) County Engineer, desire to designate various roads in (county name) County from Area Service _ Roads to Area Service _ Roads to provide for an increased level of maintenance in order to best utilize maintenance funds, and

WHEREAS, pursuant to Notice of Public Hearing duly published according to the Iowa Code, Public Hearing as held on the _____ day of (month), 20____ at _____ a.m. in the Board of Supervisors room at the (county name) County Courthouse, (city name of county seat), Iowa, to hear support and/or objections from the public on roads so designated.

THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF (COUNTY NAME) COUNTY that this County does hereby establish the road described as an Area Service _ road, with increased access and an increased level of maintenance.

(enter a description of roads to be designated as Area Service A or B Roads here)

Resolution adopted this _____ day of (month), 20_____.

(county name) County Board of Supervisors

Board of Supervisors Chairperson

ATTEST:

(county name) County Auditor

INSTRUCTIONAL MEMORANDUMS

To Local Public Agencies



To: Counties and Cities	Date: December 31, 2015
From: Office of Local Systems	I.M. No. 3.805
Subject: Construction Inspection	

Contents: This Instructional Memorandum (I.M.) includes guidelines and procedures for a Local Public Agency (LPA) as the Contracting Authority, the Person in Responsible Charge, the Project Engineer, and staff, to perform the construction inspection for a Federal-aid project using the Iowa Department of Transportation (DOT) Standard Specifications. This I.M. also includes the following attachments:

- [Attachment A](#) - Preconstruction Inspection Process Flowchart
- [Attachment B](#) - Construction Inspection Process Flowchart
- [Attachment C](#) - Subcontract Review and Authorization Process - Post Award Flowchart
- [Attachment D](#) - Local Public Agency Construction Contract Administration Guidance
- [Attachment E](#) - Iowa DOT Field Inspection Review Report
- Attachment F - Reserved for Sample Scope of Service for Consultant Construction Inspection

Introduction

Throughout this I.M., frequent references will be made to various parts of the Iowa DOT [Construction Manual](#), which is available on-line as part of the Iowa DOT Electronic Reference Library ([ERL](#)). However, any references to Chapter 2 of the Iowa DOT Construction Manual should be directed towards [Attachment D](#) to this I.M. Please note the Construction Manual is written primarily for use by Iowa DOT staff and therefore the terminology it uses reflects the Iowa DOT's organizational structure. For example, references in the Construction Manual to the Resident Construction Engineer (RCE) should be interpreted as referring to the Contracting Authority and/or Project Engineer. Likewise, references to the District Construction Engineer (DCE) correspond to the District Local Systems Engineer (DLSE); or in the case of projects administered by the Office of Systems Planning, the appropriate Grant Program Manager or their designee. The Contracting Authority and Project Engineer should also recognize that some of the procedures described in the Construction Manual are internal to the Iowa DOT and therefore may not be applicable for LPA administered projects.

In most cases, this I.M. will simply provide summary guidance and reference the appropriate parts of the Construction Manual for more detailed information. However, in some instances, this I.M. provides additional information or guidance that is applicable only to LPA projects. Therefore, the Iowa DOT strongly recommends that the Contracting Authority, Person in Responsible Charge, Project Engineer, and staff become thoroughly familiar with the contents of both this I.M. and the Construction Manual. If you have any questions concerning the applicability of procedures in the Construction Manual, contact the Administering Office for assistance.

Definitions

Administering Office: The Iowa DOT's representative who is responsible for oversight of the project. The representative may be a District Local Systems Engineer or from the Office of Systems Planning.

Contract Administrator: The Contract Administrator is the LPA's assigned representative who will be responsible for all aspects of administration and inspection of the construction contract. The Contract Administrator is the person that will be carrying out the day-to-day duties on the project to ensure that the work is in compliance with the contract documents. The Contract Administrator may be the Project Engineer, the PIRC, or any other LPA employee or designee who would be the first point of contact for businesses, residents, contractor, etc.; when issues arise that would need the attention of the PIRC or the Project Engineer. If the inspector encounters issues that need to be dealt with, they may first go to the Contract Administrator for guidance if it involves dispute resolution affecting businesses or residents, or may result in modifications to the contract. If the Contract Administrator is not a full time employee of the LPA, the LPA must designate a PIRC to make final decisions and/or sign any documents pertaining to contract costs, time adjustments, or contractual agreements.

Contracting Authority: See [Article 1101.02](#) of the Standard Specifications.

Contractor: When an upper case “C” is used, the term refers to the individual, firm, corporation, or joint venture contracting with the Contracting Authority for performance of prescribed work, as defined in [Article 1101.03](#) of the Standard Specifications. When a lower case “c” is used, the term refers to contractors in general which includes any contractor that may bid on a contract and subcontractors.

Inspector: See Article [1101.02](#) of the Standard Specifications. Authority and Duties of the Project Inspector can be found in Article [1105.07](#) of the Standard Specifications.

Person in Responsible Charge (PIRC): If the LPA uses a consultant to perform construction inspection services, [23 CFR 635.105](#) requires the LPA to have a full time employee who is in responsible charge of the project. For counties and larger cities, this person is typically the county or city engineer; however, they need not be a licensed engineer or architect to be the Person in Responsible Charge. For smaller cities that do not have full time employees, the mayor or city clerk may perform this function, with assistance from the Iowa DOT Administering Office. A consultant may not serve as the Person in Responsible Charge for a Federal-aid project.

Duties and functions of the Person in Responsible Charge include the following:

- Administering inherently governmental project activities, including those dealing with cost, time, adherence to contract requirements, construction quality, and scope of Federal-aid projects.
- Maintaining familiarity with day to day project operations, including project safety issues.
- Making or participating in decisions about changed conditions or scope changes that require Change Orders (Form [831240](#)) or supplemental contracts.
- Visiting and reviewing the project on a frequency that is commensurate with the magnitude and complexity of the project.
- Reviewing financial processes, transactions and documentation to ensure that safeguards are in place to minimize fraud, waste, and abuse.
- Directing project staff, agency or consultant, to carry out project administration and contract oversight, including proper documentation.
- Is aware of the qualifications, assignments, and on-the-job performance of the LPA and consultant staff at all stages of the project.

These duties may be shared by several people. A single person may also serve as the Person in Responsible Charge for multiple projects.

Project Engineer: For publicly owned projects, the Engineer is a Professional Engineer licensed in the State of Iowa and authorized representative of the Contracting Authority. For privately contracted projects, with improvements that will become publicly owned, the Engineer is the authorized representative of the public entity ultimately accepting ownership of the improvements. For all other projects, the Engineer is the owner's authorized representative. Further authority of the Engineer can be found in [Article 1105.01](#) of the Standard Specifications.

Additional Responsibilities for key project personnel can be found in [Attachment D](#) of this I.M., Local Public Agency Construction Contract Administration Guidance

Resources

The Local Public Agency Construction Contract Administration Guidance (see [Attachment D](#) to this I.M.) gives specific guidelines for administration of projects. [Basic Contract Administration Manual](#) and [Materials Inspection Manual](#) are the books used for the Basic Construction Administration and Materials Inspection class and include examples of project documentation from an actual LPA project. Please consult this I.M. for more in-depth guidance than what is found in the [Basic](#) or [Advanced Contract Administration](#) manuals.

[Advanced Contract Administration Manual](#) is the book used for Advanced Construction Administration and includes FHWA-1273; information about the utility process; [I.M. 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects; and [I.M. 3.930](#), Interest Payment.

The [Electronic Reference Library](#) (ERL) is the electronic version of many of the standard contract documents and includes several non-contract documents also. Contract documents which can be found on the ERL include the [Standard Specifications for Highway and Bridge Construction](#), [Supplemental Specifications](#), [Materials I.M.s](#), [Standard Road Plans](#), [Standard Culvert Plans](#), [Standard Bridge Plans](#), [Sign Truss Standards](#), [Construction Manual](#) (non-contract documents), [Flagger's Handbook](#), and [SUDAS Standard Specifications](#) (non-contract documents).

SUDAS Standard Specifications: "Refers to specifications developed by the Iowa Statewide Urban Design and Specifications program." Many specifications are jointly developed and maintained by the [Statewide Urban Design and Specifications](#) (SUDAS) staff and Iowa DOT Specifications Section, with approval by their respective Board of Directors and Specification Committee. The jointly developed and maintained specifications are identified in the Standard Specifications with the following first paragraph of the section:

"This section was developed in conjunction with Section *nnnn* of the [SUDAS Standard Specifications](#), with modifications to suit the needs of the Department."

Examples of these modifications are testing frequencies, pipe material allowed within the right-of-way, and backfill materials.

Other sections of the [SUDAS Standard Specifications](#) may be used on the project but not by reference. A Special Provision must have been developed using the desired text and included in the proposal and contract.

Preconstruction Inspection Duties

1. Color coding of plans:

If the plans are not printed (or available) in color, it is recommended that the inspector review the plans and use multiple colored highlighters to emphasize key issues that will need to be addressed during construction. For example on the typical cross-sections, highlight pavement slope in one color, widths in a second color, depth in a third color, etc. On the d-sheets, highlight locations of various types of installations, i.e. field entrances, side roads, culvert locations, right-of-way limits, borrow areas, etc. For suggested colors, see Design Manual, Chapter [21E-4](#).

2. Office Task:

- Develop a filing system for each project that will address pre-letting, post-letting, and project close-out requirements.
- Obtain a copy of I.M. 3.910, [Attachment E](#), Pre-audit Checklist, to ensure that the proper documents for each project are included in the project file. The Pre-audit Checklist and the documents required by the checklist can be filed in either an electronic or hardcopy format.
- These checklists may not be all inclusive. If there are more specific files needed for a project, other file folders may be developed.

3. Review [Chapter 3](#) of the Construction Manual for general inspection instruction. Review appropriate chapters in the rest of the Construction Manual for the type of work being inspected.

4. Field tasks (when appropriate):

- Tying section corners.
- Marking stations/linear reference points.
- Identify survey points needed for construction (ie point of curve, PT).
- Mark super-elevated curves for transitions.
- Mark fill areas for leveling courses.
- Identify deviations in roadway crown that may affect overlay thickness.
- Stake structures.

- Mark or identify the locations indicated on plan tabulations to make sure they are correct with field conditions (i.e. subdrain outlets, location of paint markings, mailbox relocations, removal limits, patching locations).
- Preconstruction photos or videos.
- Ensure any environmental or cultural sensitive areas are correctly identified on the plans.
- Communicate with residence, businesses, and services that may be impacted to see if they will have any special access needs during construction.
- Develop preliminary cross-sections for earthwork items.
- If smoothness is not required, verify that a 10 foot straight edge will be available for the inspector to use during construction. (See [Article 2316](#) of the Standard Specifications, the list of Special Provisions in the Proposal, and the Estimate Reference Information or General Notes in the plans to determine if smoothness will or will not be required.)

5. Setting up the field records:

A uniform system of project documentation should be established for construction projects. Uniformity will simplify training of new employees and reduce confusion upon reassignment of inspectors to other projects. It will also facilitate efficient inspection, construction progress documentation, audits, and project reviews. The Person in Responsible Charge will assign staff to inspect the construction project(s). The responsibility for all required documentation must be specifically and clearly communicated to the project inspector(s).

The Contract Administering staff must maintain project records properly, preserve all source documentation, backup electronic files, and make all documentation readily available when needed. A log of all employees providing documentation for a project should be maintained, including their signature and initials. The principles of record keeping discussed in this I.M. apply to all types of documentation, regardless of the media used to save the information. The two options for contract administration are:

FieldBook2 and FieldManager

FieldBook2 is an automated record keeping system that is used by some field staff to document construction progress. It is a PC “front-end” to the FieldManager component that interfaces with the Iowa DOT’s mainframe contractor payment system.

There may be multiple users of FieldBook2 making individual entries for the same contract. The information from each of these users is combined by FieldManager which is then used to document progress of the field work and process payments to the Contractor.

FieldManager gathers information on item progress only; supporting documentation must be maintained separately. Since the supporting documents are not available in FieldManager, they will need to be made available to the inspector either electronically or in hard copy format to track the support information for the individual items that require them. For information on what supporting documents are needed, see the guidance in the Item Progress and Supporting Forms section below.

The [FieldBook Users Guide](#) and [FieldManager Users Guide](#) and are available for instructions on using the programs. For training opportunities contact the District Local Systems Engineer. There are also documents named [FieldBook Cookbook](#) and [FieldManager Cookbook](#) which give step by step instructions on how to use the respective programs based on the task you are working on.

NOTE: In the near future the Office of Local Systems will be implementing a contract administration automation process. If you are not currently using FieldBook2/FieldManager, it is recommended that you wait to automate until the Office of Local Systems has completed the new process.

Setting up a Field Book

In the past project records have been kept manually on paper forms or on pre-developed Excel spread sheets, what are referred to as “field books”. For each item available for use on a contract, forms have been developed using Excel to record item progress and any item specific information pertinent to the installation/construction of that item. These forms can be utilized in either an electronic or paper format. The forms are available on the [Office of Construction and Materials](#)

[Inspection tools and forms](#) webpage; under “Inspection worksheets”, click on “English” for a menu of the forms. To see the list of items and forms associated with each item, click on “[Index](#)”. Do not print this list because the column for the support forms may not be wide enough in a printed version to show all the required form for some items. Also, this index of forms is updated every letting that an item code is added or deleted, so a printed copy may be obsolete as early as the next letting.

When setting up a book for a project that was let previously there may be items that no longer appear on the current list. At the bottom of the spreadsheet there are two tabs, one is “Current” and the other is “Obsolete”. If the item you are looking for does not appear on the “Current” list, click on the tab “Obsolete” to find it. The items on these lists are numerical based by the item code and should appear in the same order as they are on the contract. An easy way to get a list of the forms you will need is to make a table of all the items on your contract and then go through the list of items on the index and write down the forms you will need for each item. The table may include columns for “Line No.”, “Item Code/Item Description”, “Unit”, “Form”, and “Support Forms”. Once this list of forms is complete, go to the [webpage](#) with the list of forms and download a copy of each form you will need.

From the list that is developed, print each of the forms needed for each item. These should be inserted into a 3-ring binder for use in the field to document the project. In lieu of hardcopy forms, the electronic versions of the forms, in Excel format, can be used to document daily activities and item progress. The advantage of using electronic documentation is that many of the forms have internal quantity calculations built into them and will require the use of a mobile electronic device in the field.

A. Loose Leaf Forms (hard copy and electronic formats)

- 1) There are six standard forms that are used on every project:
 - a. Project Index forms - “[Project Index](#)” and “[Project Index-A](#)” (page 2 of the form if more than one page is needed for all of the information):
 - i. If setting up books in a hard copy format, this page will not be needed if each of the items in a binder is tabbed for easy access. This eliminates the need to renumber the pages on the index when additional pages are added to the book.
 - ii. If using electronic format (Excel) for field documentation, make a new tab (sheet) for each item. On the first tab (sheet) make an index to list the item number and the tab label under which the information for each of the items can be found.
 - b. [Project Information](#) form: This sheet included information on the contract period and key personnel that will be working on the project and their contact information. If utilizing hard copy forms include a printed name, signature, and initials. If utilizing electronic forms include name and initials. If using an electronic signature on any documents, also include that. Anyone who is going to be making entries into books, picking up tickets, or signing documents in the field needs to be included on this sheet.
 - c. [Inspector's Checklist](#) form: The Inspector's Checklist as with many of the support forms serves as a reminder to the inspector of duties they need to perform during the inspection of the project.
 - d. Daily Diary forms - “[Daily 1](#)” and “[Daily 2](#)” – two formats are available depending on how much information will be written each day.
 - i. The Daily Diary is used to document information needed to complete the Weekly Report of Working Days ([Form 830238 \(Word\)](#)).
 - ii. Daily Diaries must be legible and complete. These inspector's diaries are legal documents and may be used to resolve claims and disputes. Entries should be strictly factual and remain objective in nature. Do not include opinions. This documentation may be used in a court of law. Each inspector must also keep a diary that includes a description of activities accomplished during each day.
 - iii. Preparing a Daily Diary:

- a. Who - Contractor, subcontractors, utilities on site.
- b. What - Items of work, weather, problems encountered.
- c. Where - Exact location by station and offset of work performed, problem, or event.
- d. When - Time of major event.
- e. How - Specialized equipment or methods used.
- f. Sketches and computations - Dimensions are critical and neatness counts.
- g. Visitors - Name, purpose of visit, and discussions held.
- h. Modifications - Authorization for modifications to the contract documents and any substitutions allowed.
- i. Author's signature

2) Item Progress and Supporting Forms:

- a. Item progress forms begin with "E0xx" where xx is the form number. For every item there is a form E0xx and a form E0xxA. As with Index and Index-A, if there is too much information for one sheet, the A sheets are used to continue the documentation for that item and do not include the footers shown on the first page. Every item progress form includes a space/field for documenting the Article where the Method of Measurement and Basis of Payment for each item can be found. Enter the appropriate Article number in the space provided on each form.
- b. Supporting documentation forms are used begin with "E1xx" where xx is the form number. These forms are used to document field test results, samples, measurements, temperatures, observations, etc. for individual items. Not all items require a support form and some items require multiple support forms. If the same support form is required for more than one item, a separate form shall be included for each of those items. For example, if there is more than one concrete item on the contract, [Form E115](#) (which is used to document results of entrained air and slump test) would be included for each concrete item.
- c. When using a notebook or pad of paper in the field for documentation of progress or events:
 - i. Hardcopy forms: Do not discard this original document after entering the information on the loose leaf forms in the 3-ring binder. Three-hole punch the paper and insert in your project binder, so if there is a mistake in transferring information the original source documentation is not lost.
 - ii. Electronic forms: Do not discard this original document after entering the information in the electronic loose leaf forms. Scan the original document and attach it to the electronic record so if there is a mistake in transferring information the original source documentation is not lost.

B. Other documents to include in your field book:

In addition to the loose leaf forms listed above, obtain copies of the documents listed in [Attachment E](#) to this I.M., under Inspectors Records and Office Files. The "Type of documents being used to record project progress" and "Are entries for all items" under the Inspectors Records section refer to the items discussed in Section A above. All other documents listed in [Attachment E](#) to this I.M. are in addition to the item progress sheets.

The bullet items listed in I.M. 3.910, [Attachment E](#), Pre-audit Checklist, Contract Documents, are items that shall be in the project file at the time of final review. Some of these documents will be used in the field by the project inspector and be included in the project file. Please review I.M. 3.910, [Attachment E](#), prior to the start of the project to identify any additional forms that may be needed in the field books for completion on the project site.

Preconstruction Meeting

After a contract has been awarded, a Preconstruction meeting should be scheduled. Directions on the content of this meeting are available in Section 2.11, Preconstruction Meeting, in [Attachment D](#), to this I.M.

Construction Inspection Duties

- Inspect Contractor's Poster Board to verify compliance and record inspection results on Project Engineer's EEO Project Site Inspection/Wage Rate Report form ([Form 650170](#)).
- If [Section 2602](#) of the Standard Specifications is included in the contract documents (there is an item code that begins with 2602) then an Erosion Control Implementation Plan (ECIP) is required. Using information provided in the ECIP, identify all planned and emergency mobilizations so appropriate payment can be applied.
- If a Pollution Prevention Plan is included in the plans, insure erosion control methods are established before work that could result in erosion begins. Conduct joint inspections and record on Storm Water Site Inspection form ([Form 830214](#)) as specified in the Pollution Prevention Plan.
- If Davis-Bacon Wages apply, ("FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT" as stated on the first page of the Contract) perform wage rate reviews as specified in Section 2.24, Davis-Bacon Wage Requirements, Project Engineer's Involvement, A. Field Procedure, in [Attachment D](#) to this I.M. The correct version of the Wage Rate is found on the first page of the Contract and is listed as an addendum (i.e. IA14-1.1). This is the version that should be found on the Contractor's Poster Board and should be used to check the payrolls for compliance.
- For all DBEs working on the contract, complete a Commercially Useful Function Checklist ([Form 507014](#)).
- As materials are delivered to the site:
 - Obtain the appropriate documentation for those materials, as required by the contract documents.
 - Review documents for accuracy and compliance with the requirements of the contract documents.
 - Organize Materials Certifications as submitted.
- Observe work being performed by the Contractor and subcontractors. Document quantities of items installed and record daily activities in the Daily Diary.
- Perform tests and obtain materials samples as directed by [Materials I.M. 204](#).
 - For samples to be submitted to other labs for testing, complete an Identification of Sample for Test form ([Form 820193](#)) and attach to the sample before submitting.
 - Obtain test results from testing labs and include in field records.
- If there are any deviations from the contract requirements that will require either correction or price adjustment, these deviations shall be recorded on Non-Compliance Notice form ([Form 830245](#)) (Notice) (see [Attachment D](#), Section 2.53, Price Adjustment Guide for Reasonably Close Conforming, Reasonably Acceptable, and Deficient Work, to this I.M.).
 - The Contractor's representative should sign the Notice.
 - If the Contractor's representative will not sign the Notice, record name, date, and time of presentation of the Notice.
 - Provide the Contractor a copy of the Notice. If the Contractor is not on site, and the Notice is given to a subcontractor, also send the Contractor a copy of the form.
 - Negotiate between the PIRC, Project Engineer, and Contractor on method of corrective action or price adjustment.
 - If field correction is agreed upon, record date, time, and method of correction in field records.
 - If Price Adjustment is agreed upon, complete a Change Order ([Form 831240](#)) to address the change.
 - If no correction is agreed upon, record basis for that decision in field records.
- Record item progress quantities on the appropriate loose leaf pages or in FieldBook.

- Complete a Weekly Report of Working Days form ([Form 830238](#)) ([Word](#)) and submit to Project Engineer for signature and distribution.

LPA Construction Reviews

- Local Systems Field Reviews - On an annual basis, the Office of Local Systems will select a sample of projects to review. These reviews will occur during the construction of the project and will utilize the Iowa DOT Field Inspection Review Report (see [Attachment E](#) to this I.M). This checklist includes all of the documents that should be present in the Project Engineer's files, project inspector's records, and observations from the project site. The purpose of these reviews is to verify a project was developed and is being constructed in accordance with the procedures outlined in the Federal-aid Project Development Guide ([Guide](#)) and Instructional Memorandums to Local Public Agencies ([I.M.s](#)), thereby ensuring that Federal requirements are being met.

Any deficiencies that are identified at the time of the field review will be discussed with the LPA to assist them in correcting these issues. This review and correction of any deficiencies will aid in the expedition of the project closeout and final review process. This should also aid in the administration and inspection of future projects to ensure that the documentation will be complete and the project will be in compliance with the contract documents.

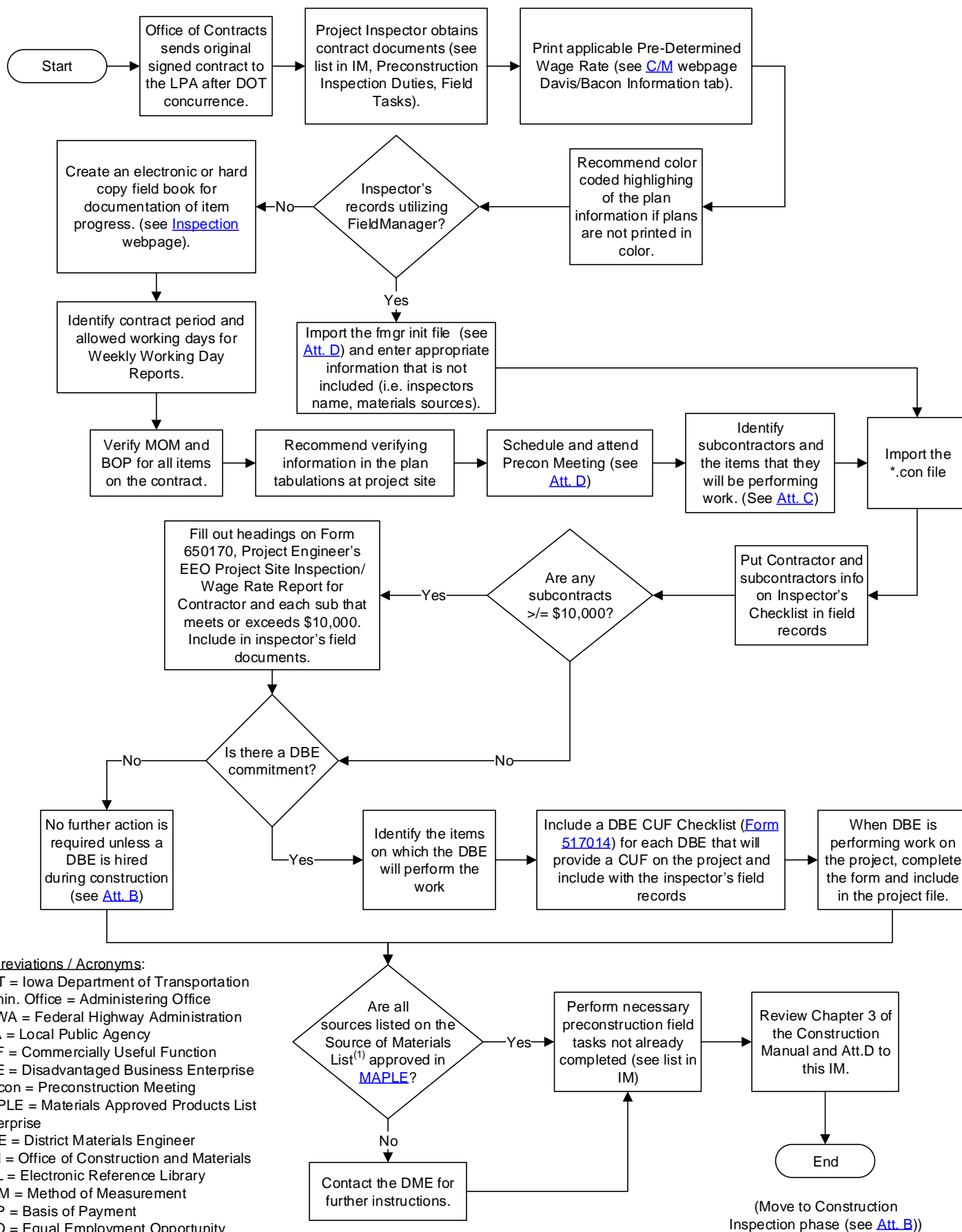
- Systems Planning Field Reviews - contact the Office of Systems Planning.
- FHWA Field Reviews - On an annual basis, FHWA will select a sample of projects to review. These reviews will occur during the construction of the project. These are formal reviews and a report is written to document the findings. FHWA does have the authority to rescind funding of a project.
- Work Zone Safety Reviews – On an annual basis, representatives from FHWA and DOT, review a sample of projects currently under construction for compliance of traffic control and flagging procedures.

File Format, Location, and Retention

Project files may be in either paper or electronic format. It is helpful, but not necessary, to have all of the documents in the same location (i.e., the same file folder, binder, drawer, cabinet, or electronic storage equivalent). If documents are stored in different locations, those locations should be clearly identified and easily located. In all cases, documents should be readily accessible for inspection by authorized Iowa DOT, other State agencies, Federal Highway Administration (FHWA), or other Federal personnel. For practical purposes, this means hard copies are either present in the file or can be printed upon request.

If the construction inspection is conducted by a consultant, these documents may be stored at the consultant's office during construction. However, after the project has been closed out, these records should be turned over to the LPA for the duration of the record retention period (see [I.M. 3.910](#), Field Review, Audit, and Close-out Procedures for Federal-aid Projects).

Preconstruction Inspection Process Flowchart



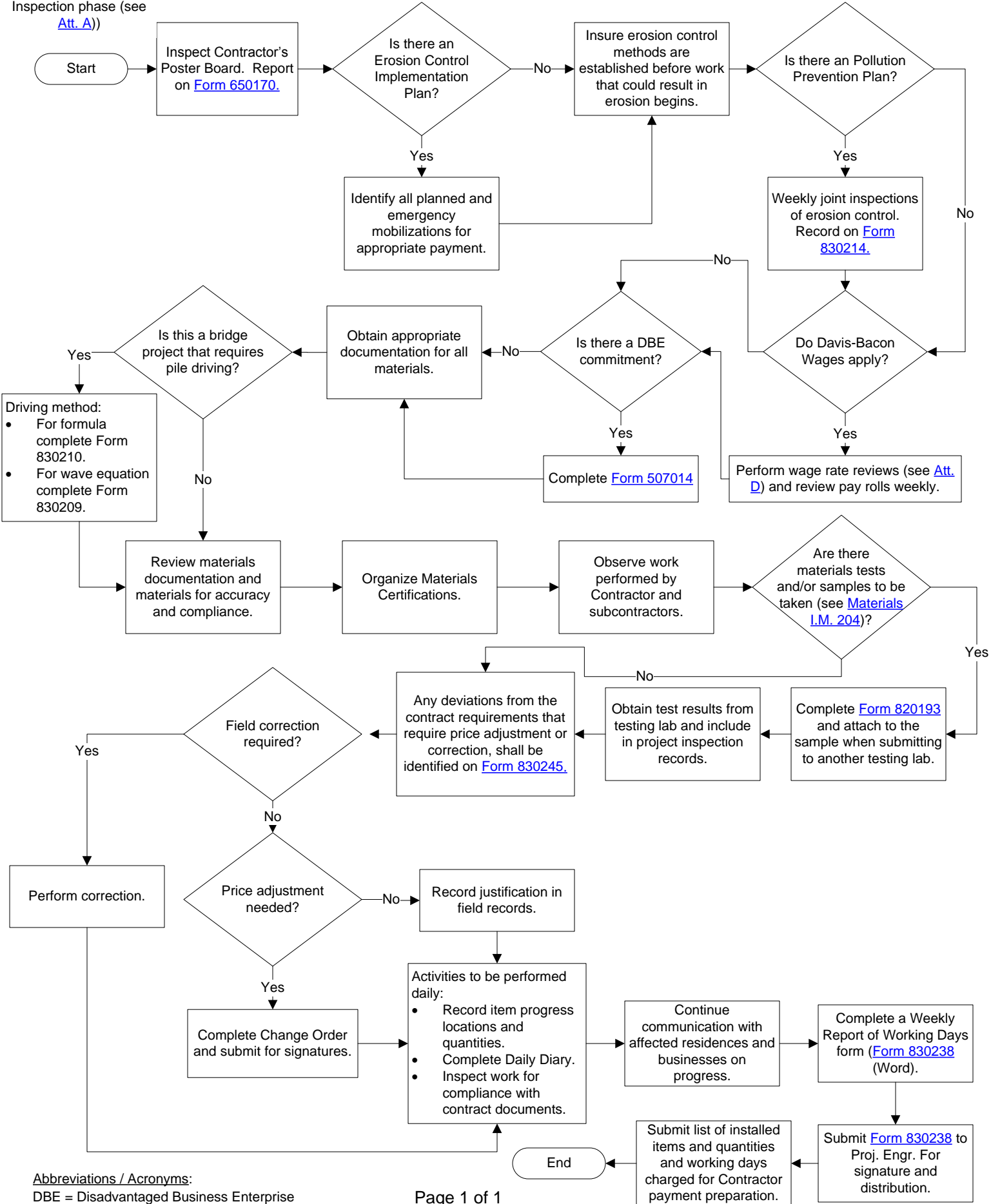
Abbreviations / Acronyms:

- DOT = Iowa Department of Transportation
- Admin. Office = Administering Office
- FHWA = Federal Highway Administration
- LPA = Local Public Agency
- CUF = Commercially Useful Function
- DBE = Disadvantaged Business Enterprise
- Precon = Preconstruction Meeting
- MAPLE = Materials Approved Products List Enterprise
- DME = District Materials Engineer
- C/M = Office of Construction and Materials
- ERL = Electronic Reference Library
- MOM = Method of Measurement
- BOP = Basis of Payment
- EEO = Equal Employment Opportunity

Notes:
(1) To be supplied by the Contractor at or before the Preconstruction meeting.

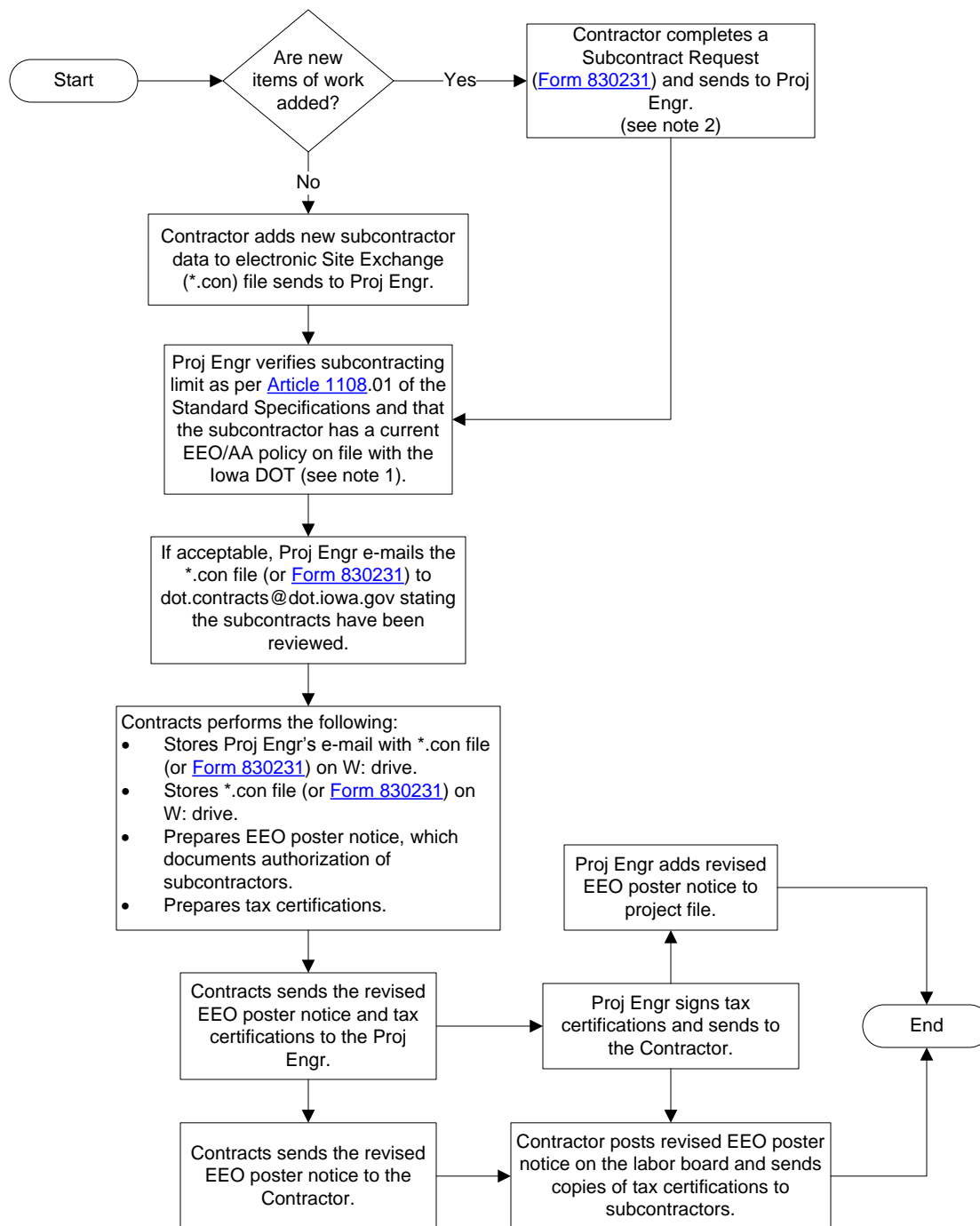
Construction Inspection Process Flowchart

(End Pre-Construction Inspection phase (see [Att. A](#)))



Abbreviations / Acronyms:
DBE = Disadvantaged Business Enterprise

Subcontract Review and Authorization Process – Post Award



Abbreviations:

Admin. Office = Iowa DOT Administrating Office
 Contracts = Office of Contracts, Iowa DOT
 EEO / AA = Equal Employment Opportunity / Affirmative Action
 ERMS = Electronic Records Management System
 FHWA = Federal Highway Administration
 LPA = Local Public Agency
 Proj. Engr. = LPA's Project Engineer

Notes:

(1) Click on the link provided to view the status of all contractors and subcontractors with a current EEO / AA policy on file with the Iowa DOT.
 (2) [Form 830231](#) is required when new items of work are added because the Site Exchange software does not allow new items of work to be added to the *.con file.

Local Public Agency Construction Contract Administration Guidance

This Attachment is only to be used for Local Public Agency administered projects. For projects administered by the Iowa DOT, refer to Chapter 2 of the [Iowa DOT Construction Manual](#). The Appendices for this Attachment can be found in Chapter 2 of the [Iowa DOT Construction Manual](#).

Chapters 1 and 3 through 12 are available in the [Iowa DOT Construction Manual](#).

TABLE OF CONTENTS

2.00	PROJECT ORGANIZATION	1
2.01	AUTHORITY OF ENGINEER	1
2.02	RESPONSIBILITY OF PROJECT ENGINEER	1
2.03	DELEGATION OF RESPONSIBILITY	2
2.10	PRECONSTRUCTION.....	2
2.11	PRECONSTRUCTION MEETING	2
	Discussion Items.....	2
	Scheduling the Meeting	2
	List of Discussion Topics.....	3
	Utilities and Law Enforcement Attendance	8
2.12	HAUL ROADS.....	8
2.13	STREAM CROSSINGS.....	8
	Permanent Structures - "Iowa Department of Natural Resources Notification of Completion of Construction" (DNR Form 37)	8
	Temporary Stream Crossings	9
2.14	WATER REGISTRATION AND PERMIT	9
2.15	WORKING AND SHOP DRAWING – SUBMITTAL & REVIEW	9
2.20	CONTRACT ADMINISTRATION	10
2.21	OCCUPATIONAL SAFETY AND HEALTH	10
2.22	EQUAL EMPLOYMENT OPPORTUNITY (EEO)	11
	Contractor's Responsibility	11
	Project Engineer's Responsibility	13
2.23	TRAINING PROGRAMS.....	14
2.24	DAVIS-BACON WAGE REQUIREMENTS.....	15
	Certified Transcript of Labor Payroll	15
	Project Engineer's Involvement	25
	Supplemental Wage Rates	29
2.25	SUBCONTRACTS.....	29
	Subcontract Requests	29
	Contractor's Requirements.....	29

Project Engineer’s Responsibility	30
Leased Employees	31
Subcontractor - Disadvantaged Business Enterprise (DBE)	32
Subcontractor - Traffic Control	37
Prompt Payment to Subcontractors	38
Certification of Subcontractor Payment	38
2.26 USE OF PROPERTY OUTSIDE OF PROJECT RIGHT-OF-WAY	38
2.27 "CONTRACT QUANTITY AGREEMENT" (FORM 830230)	38
2.28 RETAINED FUNDS	39
Release of Retained Funds	39
Contractor	39
Project Engineer	40
2.29 Intentionally left blank	40
2.30 CONSTRUCTION PERIOD.....	40
2.31 ADMINISTRATION OF THE CONTRACT PERIOD	40
Contract Types	41
Working Day	43
Calendar Day	44
Controlling Item of Work	45
Special Considerations	48
2.32 NOTICE TO PROCEED (FORM 830237 (Word))	52
2.33 WEEKLY REPORT OF WORKING DAYS (FORM 830238 (Word))	53
Preparation of Form 830238 (Word)	53
Preparation of Incentive/Disincentive Form.....	55
Multiple Sites on a Contract.....	56
2.34 LIQUIDATED DAMAGES AND EXTENSION OF CONTRACT TIME	57
2.35 EQUIPMENT RENTAL RATES	57
Rental Rate Blue Book.....	58
Invoiced Rental Costs.....	59
Equipment Time Charges	60
Chargeable Project Costs	60
Statement of Force Account Form (Form 181213)	62
2.36 CHANGE ORDERS (FORM 831240).....	62
Policy for Change Orders.....	62
Preparation of Change Order (Form 831240).....	65
Value Engineering	73
2.37 PROJECT ACCEPTANCE AND AUTHORIZATION FOR FINAL PAYMENT	74
2.38 CONTRACTOR EVALUATION REPORT	74
2.40 PROJECT REVIEW AND AUDITS.....	75
2.41 RESERVED FOR FUTURE USE.....	75
2.42 PROJECT ENGINEER'S PRE-AUDIT	75
2.43 DISTRICT OFFICE AUDIT	75
2.44 RESERVED FOR FUTURE USE.....	75
2.45 FORMS FOR FINAL PAYMENT PACKET.....	75
2.50 CONTRACTOR PAYMENTS AND PRICE ADJUSTMENTS.....	75

2.51	PAYMENT FOR MATERIAL ALLOWANCE	75
	Pre-conditions for Material Allowances.....	76
	Stockpile Documentation Work Sheet.....	77
	Voucher Entries.....	77
	Miscellaneous	78
2.52	PAYMENT FOR UNEXPECTED CLASS 12 ROCK EXCAVATION	78
2.53	PRICE ADJUSTMENT GUIDE FOR REASONABLY CLOSE CONFORMING, REASONABLY ACCEPTABLE, AND DEFICIENT WORK.....	79
	Guide Schedules for Price Adjustments.....	79
2.54	PRICE ADJUSTMENT CHANGE ORDERS.....	92
2.55	FINAL PAYMENT TO CONTRACTOR	92
	Recommended Guidelines	92
	Interest Payment Information for County and City Projects (.....	93
2.56	FUEL ADJUSTMENT	93
	Fuel Adjustment Calculation	93
	Instructions for Fuel Adjustment Calculation Spreadsheet (105Oct10)	93
2.60	CONSTRUCTION FORMS	94
2.70	Intentionally left blank	96
2.71	BRIDGE INVENTORY REPORT	96
2.72	PREPARATION OF As-built PLANS.....	96
	Types of Work	97
	Wetlands	98
	Right of Way.....	98
	Land Section Corner Ties.....	98
	Tied Projects.....	98
	As-Built Plans Checklists.....	99
2.73	Intentionally left blank	99
2.74	Intentionally left blank	99

2.00 PROJECT ORGANIZATION

2.01 AUTHORITY OF ENGINEER

Responsibility for administering construction contracts on Local Public Agency (LPA) projects rests with the Iowa DOT Administering Office which is the District Local Systems Engineer or the Office of Systems Planning. Responsibility for the actual construction work and the day-to-day administration is delegated to the public employee in responsible charge (PIRC), as defined in [I.M. 3.805](#), of the project on behalf of the LPA, and ultimately rests with the Project Engineer. All reference in this document to “Office of ...” refer to the appropriate Iowa DOT Office.

For county or city projects, Project Engineer decisions are subject to review and concurrence by the appropriate staff person from the Iowa DOT Administering Office. For projects overseen by a District Office, this person is the District Local Systems Engineer or the District Construction Engineer. For projects overseen by the Office of Systems Planning, this person is the appropriate Grant Project Manager.

The Project Engineer has authority to administer construction contracts according to the contract documents and assign and supervise inspection personnel on construction projects. Project Engineer decisions pertaining to contract costs, time adjustments, or contractual agreements are subject to review and perhaps revision by the PIRC.

2.02 RESPONSIBILITY OF PROJECT ENGINEER

The Project Engineer, who is assigned responsibility for supervision of roadway construction projects, is the key person in the field organization.

In assuming the responsibility for proper fulfillment of assigned construction work, the Project Engineer is also responsible for:

- Maintaining good relations with all of the contractors, affected property owners, and the general public.
- Assigning personnel to inspection and survey operations on the project, along with providing the supervision and instructions necessary to assure proper performance of assigned duties.
- Keeping the Administering Office informed as to construction progress, status, etc.
- Maintaining complete project records and proper documentation.
- Assuring proper use of equipment and materials used in the performance of assigned duties.
- Keeping the PIRC informed as to the construction progress, status, and any issues that may need to be addressed.

While Project Engineers have responsibility for general supervision of the work, their main concerns are for compliance with specifications and project completion. It is not their responsibility to direct the everyday activities of the Contractor or their subcontractors.

2.03 DELEGATION OF RESPONSIBILITY

The PIRC cannot and should not expect to retain all the duties and responsibilities. To have an efficient organization each employee, including the Project Engineer, should be delegated authority in line with their responsibilities and duties. The PIRC must check to see that delegated duties are properly performed.

All employees should accept delegated responsibility and make decisions within the authority delegated to them.

2.10 PRECONSTRUCTION

2.11 PRECONSTRUCTION MEETING

After award of the contract and prior to starting work on the project, a meeting between the Contractor, Administering Office, PIRC, Project Engineer, and subcontractors. It is important to also invite any other affected or interested parties including utilities, railroad, emergency response, and businesses that may be affected by the construction. The meeting is generally conducted to discuss project requirements and administrative details. The items for discussion at the meeting and scheduling of the meeting will depend on the type and complexity of the project and the Contractor and their subcontractors' familiarity of Iowa DOT's procedures.

Discussion Items

The Project Engineer must consider the type of work, the experience of all of the contractor, and complexity of the project to determine the appropriate items for discussion.

Many contractors are experienced in working with Iowa DOT specifications and contract requirements. In these instances, the need for discussing administrative requirements and procedures in a meeting format may not be necessary, and may be accomplished by the use of a preconstruction questionnaire.

A comprehensive list of topics that may be discussed at preconstruction meetings or included in a preconstruction questionnaire is included at the end of this section. The guideline includes topics that may not be necessary or applicable to all contracts.

Scheduling the Meeting

Preconstruction meetings may be scheduled any time after the award of the contract and Iowa DOT Office of Contracts concurrence with the award. Often times, the meetings are scheduled well in advance of the time that the work will start in order to allow for coordination of utilities, work of other governmental agencies, or other construction contracts. While these meetings are productive in discussing the schedule of the project, key project personnel that will be directly involved with the project may not be available. In this situation the opportunity to discuss critical quality issues between the project personnel that will have primary responsibility for the work may not occur.

Preconstruction meetings for projects that do not require detailed coordination efforts with other entities may be held on the project site just before the work begins. These meetings shall include the contractor and inspection personnel that will be involved in the project.

For complex projects that do require advanced coordination of the intended schedule, an earlier meeting should be held that would involve other appropriate people. These earlier meetings should focus on the planning efforts needed to achieve the intended schedule.

Assign the duties of taking minutes for the Preconstruction meeting to someone from the agency or consultant.

Prepare an [attendance list](#) to circulate at the meeting. This list should include columns for the attendees' name, organization name, telephone, cell, and email information. It is also recommended that columns for signatures and job titles be included.

List of Discussion Topics

A. Administrative Details

1. Change Orders

Before commencing any work not covered by the contract, the Contractor and the PIRC must agree on the price or prices to be paid for the work. Extra work performed before this agreement cannot be considered for payment. The basis of payment for the cost of extra work follows four general categories:

- Contract unit prices
- Agreed unit prices
- Lump sum
- Force account

On force account work, the Contractor is required to record labor, equipment, and material furnished on a Statement of Force Account form ([Form 181213](#)). The form, which is prepared in duplicate, shall be signed by the inspector and Contractor's representative at the end of each day's work. Both the Contractor and inspector will retain a copy.

[Article 1109.10](#), Disputed Claims for Extra Compensations, of the Standard Specifications, details requirements for submitting Contractor claims. When the Contractor deems that extra compensation is due for work or materials not covered by their contract, they are required to notify the Engineer in writing before work begins on which the claim is based. The prior notice allows the Engineer an opportunity to evaluate the issue and, if necessary consult with the PIRC, to address possible changes in the design when appropriate. The Engineer is to respond in writing to the Contractor's claim.

2. Contract Documents

Contractors will see that copies of plans, specifications, and special provisions are available at all times to their representatives on the project.

Plan revisions will be mailed to the Contractor as soon as they are issued. Contractors will be responsible for keeping their field representatives informed and supplied with such revisions. If the Contractor believes such revisions require extra work, they will immediately advise the Project Engineer.

3. Wage Rates (if applicable)

All wages paid must conform to wage and hour provisions prescribed for the contract. Crafts must be listed exactly as shown in the wage decision. Crafts not listed but needed shall be requested by the Contractor through the Project Engineer. Required payrolls must be submitted weekly and within seven days after the last day covered by the payroll.

The Contractor shall collect, sign, and submit all payrolls of approved subcontractors, as a group, to the Project Engineer.

If the Contractor's pay rolls are more than 2 weeks behind schedule, or more than 3 weeks behind schedule for subcontractors, the Project Engineer should advise the PIRC withhold progress payments on the items where pay rolls are overdue or require corrective action.

4. Postings

Contractor shall be responsible for erecting and maintaining required postings as outlined in Sections 2.21 and 2.22 of this Attachment. Discuss methods and location of postings, especially for projects that are at multiple locations or are of short duration.

5. Materials

If the Contractor or their subcontractors want payment for stockpiled materials that have been fabricated for the project, they should provide a list of the types, quantity, and estimated cost of material expected to be stockpiled. For payment, refer to Section 2.51 of this Attachment.

The [Source of Materials List](#), furnished to the Contractor by the Project Engineer, is to be returned to the Project Engineer, no later than the Preconstruction Meeting. The Project Engineer is to forward a copy of the list to the Iowa DOT District Materials Engineer.

It is suggested that the Contractor submits a list of the certified technicians that will be working on the project. This will allow the Project Engineer an opportunity to verify that the certifications are current.

6. Subcontracting

On all contracts, the Contractor should have submitted subcontract requests electronically using the SiteXchange program as described in Section 2.25 of this Attachment." The Contractor is responsible for EEO and minimum wage compliance by all subcontractors in addition to fulfilling terms of the contract.

Details of subcontracts that have "Part Items" should be discussed at the preconstruction meeting. "Part Items" are those items that have a portion of the plan quantity subcontracted or a part of the work required for a contract item is subcontracted. It is especially important that "Part Items" subcontracted to DBE subcontractors be discussed so project personnel are informed of the work to be performed by DBE subcontractors (i.e. Commercially Useful Function).

For subcontract requests and requirements, refer to Section 2.25 of this Attachment.

7. Project Supervision

The Contractor shall submit in writing, to the Project Engineer, the name of an authorized representative on the project. Representative will be empowered to coordinate with all operations of subcontractors and negotiate with the engineer any questions concerning extra work, including extra work performed by a subcontractor. If the Contractor wishes, this representative may be a subcontractor's employee that is present when work on the project is being performed.

8. Weekly Report of Working Days

During the contract period, the Project Engineer will prepare and furnish the Contractor with a Weekly Report of Working Days form ([Form 830238 \(Word\)](#)) showing working days charged that week. Objections to days charged must be submitted in writing to the Project Engineer within 10 calendar days after the receipt of the report. Objections based on delays due to unavailability of materials should be accompanied by copies of orders placed, acceptance of orders, and promised dates of delivery. Engineer will respond to the objection, indicating acceptance of the claim or reasons for rejection.

9. Right of Way

All parties are reminded that roadway right-of-way adjoins private property. Any infringement or trespassing upon such private property could cause damage that would become a liability to the person or organization involved. Maintaining good relations with the public is also important.

10. Safety

Contractor must comply with provisions of the Federal and State Occupational Safety and Health Acts. Contractors are referred to [Article](#)

[1107.07](#) of the Standard Specifications regarding safety responsibilities on construction projects and the Iowa DOT [Construction Manual 12.03](#) regarding railroad company policies and agreements, if applicable.

11. Water Pollution

The Contractor's erosion control implementation plan and schedule for control of water pollution shall be submitted to the Project Engineer prior to the preconstruction meeting. Storm water discharge requirements, if applicable, should be discussed. For projects regulated by NPDES storm water permit, identify the individual(s) that have completed the Iowa DOT Erosion & Sediment Control Basics (ESC Basics) web-based training and will be onsite daily and the Contractor's Erosion Control Technician (ECT).

Refer to [Section 2602](#) of the Standard Specifications and Iowa DOT [Construction Manual 10.30](#).

12. Payment to Contractor

For Secondary projects, the Contractor may request intermediate progress payments to be made on either a monthly or bi-weekly interval. Measurement of quantities may be based on contract quantities by a written Plan Quantity Agreement ([Article 1109.01](#) of the Standard Specifications).

B. Project Details

On many projects it may be necessary for the Project Engineer to prepare and present an enlarged plan or map for showing location, special areas of concern, right of way restrictions, and staging.

Specific project information to be discussed includes:

- Anticipated work starting dates:
Staging schedule ([Article 1108.02](#), J, or [Section 1110](#) of the Standard Specifications).
- Requirement for all employees to be wearing approved high-visibility apparel as per 23 CFR 655.603 and 6D.03.04 of the MUTCD.
- Signing and barricade responsibilities
 - State/county responsibilities ([Article 1107.09A](#), 1 of the Standard Specifications).
 - Contractor responsibilities ([Article 1107.09](#), A, 2 of the Standard Specifications).
 - Contractor's traffic control contact information, submitted if traffic to be maintained through construction areas ([Article 1107.09](#), A, 2, j of the Standard Specifications).
- Construction staking requirements

- Discussion of items to be subcontracted and names of subcontractors. Commercially useful function of DBE subcontractors, suppliers, and manufacturers should also be discussed. (Section 2.25 of this Attachment)
- Equipment to be used – Contractor should identify equipment with greater than legal axle loads that is to be moved across bridges or pavements that will remain in place. Equipment with greater than legal axle loads ([Article 2001.01](#) of the Standard Specifications and Iowa DOT [Construction Manual 3.40](#)) must be either loaded on an appropriate trailer or specifically exempted. Requests for exemptions will be analyzed on a case-by-case basis by the Contracting Authority.
- Special notes on plans, proposals, and special provisions.
- Discuss advanced notification of pedestrian path closures as per [Article 2528.01](#), A, 10, of the Standard Specifications.
- Environmentally sensitive areas, including wetlands, mitigation areas, historical sites; and remind the Contractor that they must obtain necessary clearances for Contractor Supplied Borrow if they have not already done so.
- Pre-concreting conferences
- Value engineering incentive proposals submitted by the Contractor ([Article 1105.14](#) of the Standard Specifications and Section 2.36 of this Attachment)

C. Documents to be submitted by the Contractor:

- Superintendent's name and contact information
- Foreman's name and contact information
- 24-hour Contact name and phone number
- Plant Inspector's name and contact information (if applicable)
- Traffic Control Technician's name and contact information (applicable only if the project includes an item for Traffic Control). Must be an employee of the Contractor and not the subcontractor.
- Erosion Control Technician's name and contact information (applicable only if the project includes a Storm Water Permit)
- Source of Materials List (see [Inspection Tools](#) website)
- Contractor's Co-permit for the Storm Water Permit (furnished by the Office of Contracts and signed by the Contractor)
- Storm Water [Co-permittee Certification Statement \(Form 830215\)](#) for each subcontractors that will be performing work that could result in erosion or prevent erosion
- Borrow documents (applicable only if project includes Contractor Furnished Borrow)
- Example of Contractor's Daily Traffic Control Diary
- Staging schedule
- Traffic Control Plan (if applicable)

- Value Engineering proposal (if applicable)
- Erosion Control Implementation Plan

Utilities and Law Enforcement Attendance

At preconstruction meetings, attendance of utilities and law enforcement personnel could be highly beneficial to all concerned. The Project Engineer should expend extra effort to assure attendance and open communication with utilities and appropriate law enforcement.

Relocation of utilities is of extreme interest to all concerned in the progress of the project. Meeting with individual utility companies prior to the preconstruction meeting to discuss their schedule for relocation is recommended. The appropriate time for this meeting to be most effective will depend on project specific circumstances (i.e. start date, letting date, extent of relocations required etc.) For safe control of traffic, the ability to discuss traffic control with all contractors and law enforcement could be highly beneficial. Local law enforcement officers (Local Police, Sheriff, or Campus Police) and Highway Patrol should be invited to attend preconstruction meetings when appropriate. Highway Patrol can be contacted through the Highway Patrol district office having jurisdiction over the area where the project is located. Communication and coordination with enforcement personnel regarding work zone staging changes is helpful in improving project safety.

It is beneficial to discuss utilities relocation, project staging and/or traffic control early in the meeting before more detailed and time consuming construction matters are discussed.

2.12 HAUL ROADS

This section is usually not applicable for LPA projects. Negotiate between jurisdictions as needed.

2.13 STREAM CROSSINGS

Permanent Structures - "Iowa Department of Natural Resources Notification of Completion of Construction" (DNR Form 37)

When a permanent structure is to be constructed on a stream with a drainage area of 100 square miles in rural areas and over 2 square miles in urban areas, the DNR requires a permit to build the structure. The requirements are noted in the Iowa Administrative Code, Environmental Protection [567], Chapter 71, [567-71.1](#). The permit is obtained by the Office of Bridges & Structures and issued to the Iowa Department of Transportation. The permit will also cover a temporary stream crossing needed during bridge construction.

The DNR sends a Notification of Completion of Construction card ([DNR Form 37](#)) with approval permit to the Office of Bridges and Structures. A copy of the permit is forwarded to the Project Engineer and DCE and the notification card is retained by the Office of Bridges & Structures. When the structure is completed, the Office of Bridges & Structures will complete the copy of the Notification of Completion of Construction card ([DNR Form 37](#)) and submit the original form to the Iowa DNR.

Temporary Stream Crossings

A temporary stream crossing should also be reviewed by the Project Engineer to determine if an existing Section 404 permit issued by the U.S. Army Corp of Engineers covers the work or if a new permit must be obtained. Refer to the Iowa DOT [Construction Manual 10.40](#).

The requirements for Temporary Stream Crossings are specified in [Section 2547](#), Temporary Stream Access, in the Standard Specifications. Temporary stream crossings and causeways shall be constructed in accordance with [Standard Road Plan EW-401](#). Note that [EW-401](#) identifies the types of materials that are permitted to be used to construct temporary stream crossings and causeways and those materials **DO NOT** include soils.

2.14 WATER REGISTRATION AND PERMIT

Any use of water which is a minor nonrecurring use, including roadway construction and maintenance, shall not require a permit. In lieu of a permit, this use may be registered with the Environmental Protection Agency, Department of Natural Resources. Registrations usually extend for up to one year and may be extended by re-registration and re-permitting.

For any construction project requiring water amounting to 25,000 gallons or more per day, a "Registration of Minor, Nonrecurring Use of Water" (DNR Form 20) must be completed. An exception is made if the source is a city water supply; the Mississippi, Missouri, or Big Sioux Rivers; or the Des Moines River bordering Missouri.

The Contractor shall complete and submit the "Registration of Minor, Nonrecurring Use of Water" form (DNR Form 20) and a project location map directly to the Iowa DNR at the address listed on top of the form. A copy of the form is available in the Iowa DOT Construction Manual [Appendix 2-3](#). The Contractor shall provide a copy of the completed form to the Project Engineer.

Daily records or documentation of water usage do not need to be kept.

Duplicate copies of "Registration of Minor, Nonrecurring Use of Water" (DNR Form 20) can be made from blank sample in the Iowa DOT Construction Manual [Appendix 2-3](#).

2.15 WORKING AND SHOP DRAWING – SUBMITTAL & REVIEW

[Article 1105.03](#) identifies the contractual requirements for submittal and review of working and shop drawings including identification of the primary review office. Submit all working and shop drawing to the Project Engineer for review.

Working and shop drawing signature requirements are clarified in the following:

1. In the case of the Contractor and their fabricator, working or shop drawing submittals do not need to be signed by a licensed Engineer if they are prepared from the information provided in the plans without any changes, and the contract

documents (ie: plans, specifications, etc.) do not state preparation must be by a licensed Engineer.

If the working/shop drawing preparer proposes design changes in their submittal, that would require them to have the submittal prepared and signed by a Professional Engineer licensed in the State of Iowa.

2. In the case of the reviewer who will approve the working/shop drawings; the same as above would apply. Also note that the review and approval does not relieve the submitter/Contractor from responsibility as to the overall correctness of the submittal as stated in [Article 1105.03](#).

2.20 CONTRACT ADMINISTRATION

This section provides instructions and guidance to the Contractor and Contracting Authorities for administration of construction contracts. Instructions include information on required reports or forms, equal employment opportunity, wage reports, training program, minority recruitment, and subcontracting. Copies of all Iowa Department of Transportation forms referred to in this section are included in the [Iowa DOT Construction Manual Appendix 2](#) and can be copied as needed. Electronic versions (Word, Excel or Adobe Reader format) of the forms are also available on the DOT's website: <https://forms.iowadot.gov/BrowseForms.aspx>
Forms and Reports - Prepared by the Contractor:

Form No.	Title	Reference Section
102116	Certification of DBE Accomplishment	2.25*
518002	Certification of Subcontractor Payment	2.25*
830176 (Excel)	Certified Transcript of Labor Payroll	2.24*
830231	Subcontract Request	2.25*
830215	(Storm Water) Co-Permittee Certification Statement	10.33
831240	Change Order for Local Public Agency Projects	2.36*
Forms & Reports - Initiated by Contractor, Prepared by Project Engineer		
830230	Contract Quantity Agreement	2.27*

* Indicates Section in the Attachment

2.21 OCCUPATIONAL SAFETY AND HEALTH

Occupational Safety and Health Act (OSHA) regulations (federal and state) apply to all construction projects. (Federal OSHA regulations are codified in 29 CFR, Sections 1910 and 1926.) Contractors are responsible for compliance with OSHA regulations and shall maintain a safe work site. Therefore, the Contractor, the subcontractors, and all of their employees must be familiar with the health and safety requirements of the act.

[Article 1102](#).19, E, 5 of the Standard Specifications require that a poster entitled Job Safety and Health Form 70-8025 be displayed in a prominent place at all times.

Contractors can obtain OSHA forms and posters from:

Regional Director-OSHA	or	Labor Services Division
Federal Office Building		Department of Employment Services
210 Walnut		1000 E. Grand
Des Moines, Iowa 50309		Des Moines, Iowa 50319
515-284-4794		515-281-3606

[23 CFR 634](#) addresses issues of worker visibility. The purpose of the regulations in this part is to decrease the likelihood of worker fatalities or injuries caused by motor vehicles and construction vehicles and equipment while working within the right-of-way on Federal-aid highways. The rule states that all workers within the right-of-way of a Federal-aid highway who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel.

2.22 EQUAL EMPLOYMENT OPPORTUNITY (EEO)

Contractor's Responsibility

The Contractor, their subcontractors, and all of their staff who are responsible for the hiring, supervising, promoting, and discharging of employees shall be knowledgeable of their EEO/AA Policy. Their EEO/AA efforts will be reviewed on a company-wide basis rather than on project specific efforts.

1. Contractor's EEO Policy

The Contractor and their subcontractors shall have an EEO/AA policy approved by the Office of Employee Services, Civil Rights Team, prior to awarding a contract or approving subcontracts which are \$10,000 or greater. The policy is to be reviewed and resubmitted each year.

The policy is to include:

- General operating statement
- Designation of EEO officer
- Definition of EEO & AA
- Company's recruitment policy
- Certification that the company does not possess segregated facilities
- Plan for employee training and promotion – If the Contractor or any of their subcontractors do not have a training program, their EEO/AA Policy shall state that there is no plan.

The Contractor and their subcontractors shall conduct periodic meetings with supervisory and personnel staff at least every 6 months to review and discuss the company's policy. All new supervisory and personnel staff shall be instructed of the policy within 30 days of being hired.

2. Postings

All required site postings shall be in a location that is easily accessible to all employees and applicants. The location should have been identified at the Preconstruction Meeting (see Section 2.11 of this Attachment). Postings may be fastened to a bulletin board, tool shed, or job office/trailer and protected from weather by glass or clear plastic. Postings that become soiled, faded, or otherwise illegible should be replaced. More than one posting may be necessary if there are multiple locations where workers report for work. Such cases typically occur on complex or long projects involving several different crews and/or subcontractors. The project bulletin board shall be in place before work starts and remain on the project until the project is completed and accepted by the Project Engineer ([Form 830435](#) is signed).

The following are required to be posted on the project bulletin board:

- Subcontractor Authorization and EEO Poster Notice provided by the Iowa DOT Office of Contracts that lists the name, address and phone number of the Contractor's and all subcontractors' EEO/AA officer. This form is considered the Department's written authorization of subcontractors for the contract.
- "Equal Employment Opportunity is the Law" * (Publication OFCCP 1420 or EEOC P/E-1)*
- Form FHWA 1022 – Notice of False Statement
- If predetermined wage requirements apply:
 - Current Pre-Determined Wage Rate Decision
 - Form WH-1321 Employee Rights Under the Davis-Bacon Act *
- Form 70-8025 – Job Safety and Health
- WH-1420 – Your Rights Under the Family Medical Leave Act of 1993
- WH-1462 – Employee Polygraph Protection Act

* The Spanish version of these posters is recommended where Spanish speaking employees or applicants are likely to occur.

Posters may be obtained from the Project Engineer or the Iowa DOT Office of Employee Services, Civil Rights Team. A pdf version can also be found at the Office of Local Systems Mailing webpage, search for "poster".

3. Reports and Records

The Contractor and their subcontractors are required to maintain records to document compliance with EEO/AA requirements for a period of 3 years following completion of the contract.

These records include:

- Number of minority/non-minority/females employed in each classification
- Progress and efforts made in hiring minorities and females

The Contractor and their subcontractors shall submit the following documents to the Office of Employee Services, Civil Rights Team:

- Their company's EEO/AA Policy annually
- Annual report each July listing the number of minorities/females/non-minorities in each classification in July (FHWA-1391)
- When requested, documentation of periodic meetings, inspections, and investigations

The Contractor and their subcontractors who have not complied with the specification may be required to submit a plan for corrective action to the Iowa DOT Office of Employee Services, Civil Rights Team. Failure to correct the deficiencies may result in suspension of that contractor's bidding privileges for a period up to one year.

Project Engineer's Responsibility

While responsibility for complying with EEO requirements is solely the Contractor and their subcontractors, the Project Engineer's responsibility on contracts include:

1. Subcontract Request

Refer to [I.M. 3.730, Attachment B](#), Iowa DOT Letting Process, for instruction on how to manage subcontractor requests before the contract is executed. For additional requests or modifications to existing requests, the Contractor and their subcontractors are to submit the forms to the Project Engineer. The Project Engineer should confirm that the subcontractor has an approved EEO/AA policy and that the amount subcontracted does not exceed 70% prior to approving the subcontract. The Project Engineer forwards the .CON file (before award) or [Form 830231](#), Subcontract Request, to the Office of Contracts for processing. A list of contractors with approved policies is available from the Office of Employee Services, Civil Rights Team.

2. Review of Project Bulletin Boards

Inspection staff is to review the Contractor's bulletin board for required notices/posters. Progress payments may be suspended if the appropriate notices/posters are not displayed on the project site. Work may be suspended for continued non-compliance. At least one inspection shall be made on contracts of short duration (six months or less). If the contract exceeds 6 months, at the start of every 6 month period, a site inspection shall be performed to ensure that the documents are still correct and legible. If the project's bulletin board is damaged an inspection shall be performed after repairs have been made to ensure that it meets the requirements. Reviews shall be documented on [Form 650170](#), Project Engineer's EEO Project Site Inspection/Wage Rate Report.

3. "EEO Project Site Inspection/Wage Rate Report"

After reviewing the project's bulletin board, the inspector's findings should be documented on the "Project Engineer's EEO Project Site Inspection

Wage/Rate Report." This report includes a checklist of the required postings. This report also serves to document the wage-rate interviews of the Contractor and subcontractors' employees. A copy of this report is provided in the Iowa DOT Construction Manual [Appendix 2-10](#). The completed report is to remain in the Project Engineer's file.

4. In-depth EEO Inspections

On selected contracts, staff from the Iowa DOT Office of Employee Services, Civil Rights Team may request that a more detailed EEO interview be conducted. The in-depth interview/report will coincide with EEO reviews of the home office conducted by staff from the Office of Employee Services, Civil Rights Team. The Office of Employee Services, Civil Rights Team staff will provide their request and instructions to the Project Engineer at the time of the in-depth review.

2.23 TRAINING PROGRAMS

Requirements for training of all contractors' employees are included in the EEO/AA specification, [Article 1102.19](#). The Contractor and all of their subcontractors are required to have a written training and promotion plan when their three-year average of all work contracted (including subcontracted work) with the Department equals or exceeds \$5,000,000. The required minimum number of trainees is dependent on the amount of work under contract.

Responsibility of the Contractor and all of their subcontractors

When required, the written training and promotion program shall include details such as:

- Designated crafts of trainees
- Maximum ratio of one trainee to 3 journey-workers (by craft)
- Methods for training and number of hours required for training
- Payment to trainees
Rate of pay for trainees shall be described as a percentage of journey worker's rate of pay. Trainees' rate of pay shall be at least the appropriate rate that is specified in their approved training program. The Project Engineer should verify with the Office of Employee Services, Civil Rights Team that the Contractor and all of their subcontractors have an approved training program if trainees are being paid less than full Davis-Bacon wage rates.

Individuals enrolled in a training program shall be paid benefits as outlined in Section 2.24 of this Attachment.

After a trainee has completed his/her training program, the trainee's base wage rate shall be increased to the Davis-Bacon's wage determination for that job classification.

- Records
The Contractor and all of their subcontractors shall furnish a copy of the program to each trainee as well as a certification of satisfactory completion.

All contractors shall submit an annual training report to the Office of Employee Services, Civil Rights Team documenting their training efforts for the year.

2.24 DAVIS-BACON WAGE REQUIREMENTS

Certified Transcript of Labor Payroll

A. Regulations

Regulations covering interstate, primary, secondary, and city projects financed in whole or in part with federal funds may require submission of a "Certified Transcript of Labor Payroll" ([Form 830176 \(Excel\)](#)) in accordance with "Required Contracts Provisions" (Form [FHWA-1273](#)). These requirements will be included on the proposal and shall be carefully studied and observed. A copy of [Form 830176 \(Excel\)](#) is provided in the Iowa DOT Construction Manual [Appendix 2-14.1](#).

Davis-Bacon regulations apply to laborers and mechanics employed by the Contractor and subcontractors on, adjacent or virtually adjacent to the "Site of the Work". "Site of the Work" includes the physical location of the work called for in the contract documents. Also included are tool yards, batch plants, borrow pits, etc. provided they are dedicated exclusively to performance of the contract and "provided they are adjacent or virtually adjacent to the site of the work".

The U.S. Department of Labor has interpreted "adjacent to the Site of Work" to indicate a common boundary, while "virtually adjacent" indicates a small separation between the project and temporary plant site.

Temporary plants, Contractor Furnish Borrows, or the Contractor's staging yard established for a project would be considered "Site of Work only when the site is:

- adjacent (common boundary between the project and plant site) or
- virtually adjacent (for example: plant site is separated from the project site by a narrow strip of land such as a local road between a project and a plant site)

Chapter 15 of the Department of Labor Field Operations Handbook describes Davis-Bacon and the Contract Work Hours and Safety Standard Act requirements. A link to the DOL Handbook is available under the Contract Administration/Davis Bacon Information tab of the Office of Construction and Materials webpage <http://www.iowadot.gov/construction/index.htm>.

Project engineers shall refer questions concerning Davis-Bacon coverage to the Administering Office. If necessary, the Administering Office will consult with the Office of Construction and Materials so uniform interpretations can be provided.

Occasionally, Project Engineers receive requests from private sources for copies of certified payroll records. If the project is being administered by a consultant, the request for release of payroll records should be sent to the PIRC. The PIRC is the person responsible for all payroll records. Iowa's "Open Records Law" provides for the release of all information except social security

numbers. Requests for payroll records must be submitted in writing. Copies of these written requests are to be provided by registered mail to the Contractor that initially submitted or will submit certified payrolls. If a request for subcontractor information is received, a copy of the request will also be sent to the Contractor. Requests are to be acknowledged in writing, confirming that information is available and indicating that social security numbers will be withheld. Payroll records must not be released until 14 calendar days after a copy of the request is received by the Contractor. This allows the Contractor an opportunity to obtain a court injunction to stop the release if they believed the information could affect the competitive bidding process. These procedures are to be followed for requests received from outside sources, such as labor unions.

Adherence to these procedures during investigations by the Department of Labor or FHWA is not required. Another exception has been made for representatives of the Iowa Labor Management Work Preservation Fund, who may obtain project payrolls for a given week without a written request provided it does not cause undue inconvenience for the Project Engineer's office (Iowa Administrative Code-[761 IAC 4.9\(31\)](#))

When contract provisions state that a certified transcript of weekly payroll is required, the Contractor shall submit to the Project Engineer one copy of [Form 830176 \(Excel\)](#) or an alternate form which contains the information as required in [FHWA-1273](#), Section IV 3.

Project engineers must also ensure "Statement of Compliance" information is furnished with the payrolls and that the Contractor has signed all payrolls received from subcontractors.

If an individual works on more than one project during a period, payroll information shall include adequate data to verify correct computation and payment of fringe benefits.

B. Postings

A copy of wage rates must be posted in a location easily accessible and visible to all employees and applicants. It should be attached or adjacent to the posted Wage Rate Information Federal-Aid Highway Project form (Form HW-1321). Supplemental wage rates requested and approved shall also be posted.

C. Davis-Bacon Wage Requirements for Independent Truckers

Federal-aid construction contracts may include Required Contract Provisions ([FHWA-1273](#)) which governs Davis-Bacon wage rates and fringe benefits for the project. Therefore, all employees of the Contractor or subcontractor hauling on a Davis-Bacon covered project must be paid in accordance with [FHWA-1273](#) requirements.

When an independent trucking firm is engaged to haul materials to a Davis-Bacon covered site, Davis-Bacon coverage of drivers depends on the status of the material supply source. Department of Labor has consistently held

that the following are construction activities covered by Davis-Bacon provisions [Code of Federal Regulations, [29 CFR, Section 5.2\(j\)\(1\) & \(2\)](#)]:

- Employees working in situations where materials are produced from an operation, plant, or pit that is opened or installed "virtually adjacent" to a construction site for the exclusive purpose, or nearly so, of fulfilling contract material requirements, and
- Truck drivers who haul and deliver materials from those locations to the job site. The only exception is for bona fide owner-operators physically driving their own trucks. This exception does not extend to other drivers of independent trucks.

Truckers hauling from a commercial source are not covered by Davis-Bacon requirements except for the time spent on the project. This ruling applies to all trucking, whether it is by an employee of the Contractor, subcontractor, or an independent material supplier or transporter. A trucker employed by the Contractor/subcontractor may be covered when hauling from portable plant to project and not covered if hauling from commercial quarry to portable plant site. Commercial sources are not considered part of the "site of work." This includes permanent plants and quarries that are not established for a specific project.

Portable plant sites set up in a commercial quarry for a specific project are considered part of the site of work when the quarry is adjacent to or virtually adjacent to the project site.

For deliveries by a supplier or an independent trucking firm from a certain material supply facility to be considered outside Davis-Bacon coverage, the facility must be off the project site and 10% or more of sales must actually be made from the facility to the general public. (See Section 5.2(1)(3) of Regulations, Part 5.) Sales to the public must be more than token sales.

D. Preparation of Certified Transcript of Labor Payroll

Use the Certified Transcript of Labor Payrolls form ([Form 830176 \(Excel\)](#)) when preparing and submitting payrolls.

1. Heading

The heading of a payroll transcript must include the information as shown in the Iowa DOT Construction Manual [Appendix 2-14.3](#). Subcontractors shall include name of the Contractor. Wage decision number must be listed, so there will be no confusion on minimum wage rates for the project.

2. Contracts with Multiple Projects

Typically, payroll transcripts are required from the Contractor and each subcontractor for a project. However for multi-project contracts, the Contractor may prepare one "combined" payroll transcript if the projects have identical wage schedules and are worked more or less as one project with individuals used interchangeably between projects.

Therefore, the Contractor and subcontractors may combine multiple projects for payroll transcripts provided:

- the Contractor and each subcontractor prepares individual transcripts, and
- all projects included are listed on that "combined" payroll transcript.

3. Required Contract Provisions

The Required Contract Provisions (Form [FHWA-1273](#)) attached to contract documents show that at least the following items shall be observed:

- a. Payrolls shall only contain employee's full name and an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). Contractors and subcontractors are required to maintain complete social security numbers and addresses of employees and to provide such information to government agencies upon request.
- b. Employee's craft and classification must be listed exactly as shown in the wage decision. For example, it is not acceptable to simply use "Operator-Group 2" without listing the classification.
- c. If an employee works in more than one work classification during the pay period, the employee's hours may be assigned to one classification, provided the classifications are in the same Group (i.e. same wage rate and fringe benefit).
- d. Deductions must be itemized.
- e. No individual shall be employed as laborer or mechanic except on a hourly-wage basis.
- f. All Contractors shall comply with all applicable federal, state, and local laws governing safety, health, and sanitation.
- g. Overtime pay shall be computed on 40 hours/week. This means an employee must accumulate the initial 40 hours before overtime becomes reimbursable. This is computed at the base Davis-Bacon rate with fringe benefits being paid at the straight time rate.

Employee work hours accumulated on a contract where the Davis-Bacon Act applies shall be reimbursed at least Davis-Bacon labor rates. The Contractor and their subcontractors shall carefully track and document time for employees who charge time to different contracts in a single pay period, especially if these

different contracts are not all subject to Davis-Bacon labor rates. For example:

CASE 1:

Employee "A" has charged labor time to two projects in week "X". Project 1 is subject to Davis-Bacon, project 2 is not. Employee "A's" time sheet shows:

Monday - Thursday, 4 days at 8 hours/day, project 1
Friday, Saturday, 2 days at 8 hours/day, project 2

Employee "A" has accumulated 48 hours (6 days x 8 hours/day) in week "X."

Employee "A" is reimbursed:

- 4 days x 8 hours/day = 32 hours x project 1's Davis-Bacon wage rate
- 1 day x 8 hours/day = 8 hours x project 2's standard wage rate
- 1 day x 8 hours/day = 8 hours OT x project 2's overtime rate

CASE 2:

Employee "B" has charged labor time to the same two projects noted in Case 1. This employee's time sheet shows:

Monday - Thursday, 4 days at 10 hours/day, project 2
Friday, 1 day at 8 hours/day, project 1

Employee "B" has accumulated 48 hours (4 days x 10 hours/day) plus (1 day x 8 hours).

Employee "B" is reimbursed:

- 4 days x 10 hours/day = 40 hours x project 2's standard wage rate
- 1 day x 8 hours = 8 hours OT x project 1's Davis-Bacon overtime rate

4. Work Assignments

The Contractor and their subcontractors shall acquaint their supervisors with crafts and minimum wage provisions so employees are assigned work that conforms to their classification. The correct classification and rate may be reported to Contractor's home office. Exceptions to the general rule include:

To establish a uniform procedure among contractors for future wage determinations, contractor shall show on payroll COMBINATION crafts for

employees performing more than one type of work. However, all work classifications for that individual shall be listed. For example:

CASE 1:

Lower classification employee doing higher classification work.

- Shall segregate hours and pay at higher wage rate if individual is not being reimbursed the highest rate for class of work performed.

CASE 2:

Higher classification employee doing lower classification work.

- Not necessary to segregate hours performing separate tasks, provided individual continues to be reimbursed at the highest rate.
- Shall segregate hours and classifications if individual will have their wage rate reduced when doing lower classification work.

In Iowa, there is not an "Ironworker" classification for all zones. For these situations, employees erecting structural steel are to be classified as "Carpenters and Piledrivermen".

5. Working Supervisors

Supervisors who spend more than 20% of their time performing other "labor type" duties as a regular part of their activities at the job site must be so designated by having the "other" work classifications listed on the payroll transcript. For example: A supervisor who also does carpentry work, or operates a dozer, or drives a truck would have to have these duties listed on the payroll transcript.

This requirement confirms their hourly rate is for the highest work classification. Any premium pay received for supervision will be over and above the rate of pay for work performed.

6. Apprentices

Apprentices shall be paid fringe benefits in accordance with provisions of the apprenticeship program. If a particular apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for applicable classification. If the Wage and Hour Division administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination.

7. Trainees

Trainees shall be paid fringe benefits in accordance with provisions of the trainee program. The Project Engineer should verify with the Office of Contracts that the contractor has an approved training program if trainees are being paid less than full Davis-Bacon wage rates. If a particular trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination for the work actually performed. The Wage and Hour Division administrator will determine if there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices.

8. Owner-Operators of Hauling Equipment

Bona fide owner-operators of trucks and similar construction hauling equipment, who are independent contractors, are not subject to enforcement of contract labor standard provisions. Owner-operators of other non-hauling type equipment are considered as employees, not as subcontractors.

A ruling by the Department of Labor states in effect that:

- Because owner-operators usually work under payment arrangements based on a unit price [for example, so much per cubic meter (yard) hauled] rather than on an actual truck or equipment rental rate plus the driver's (or operator's) rate, and
- Because of difficulties that have arisen with respect to securing adequate data on rental arrangements in order to determine whether contract minimum rates are being paid, therefore,
- As a matter of administrative policy, the provisions of Davis-Bacon and related acts will not be applied to bona fide owner-operators of trucks or other similar construction equipment used exclusively for hauling and who are independent contractors.

This policy, which is not intended to encompass other equipment such as bulldozers, scrapers, backhoes, cranes, drilling rigs, and welding machines, will be in effect until such time as it may appear practical to devise workable and easily enforceable procedures for obtaining compliance with respect to such owner-operators.

The Certified Transcript of Labor Payrolls form ([Form 830176 \(Excel\)](#)) including names of such bona fide owner-operators need not show hours worked nor rates allegedly paid, but only operator's name and the notation "owner-operator." In this way, such individuals can be recognized as bona fide independent contractors NOT subject to contract labor standard provisions and can be distinguished from equipment operators who ARE subject to such provisions.

A ruling by the Chief Counsel for the Federal Highway Administration requires that data for each driver employee of truck owner-operators,

regardless of number of trucks owned, must be shown the same as for any other laborer or mechanic. This means all such employees shall be listed on the payroll with a complete breakdown of hours worked, hourly rate paid, and all other required information according to "Required Contract Provisions" (Form [FHWA-1273](#)). In those instances where truck "owner operators" drive their own truck, payroll notation shall list them as "owner operator" with no further information relative to hours worked or wages paid. However, during multi-shift operations when an owner may hire a driver for a subsequent shift, a complete breakdown of information relative to daily hours worked, hourly rate paid, etc., must be shown on the payroll for "employee of owner-operator." This same procedure shall be followed if owners have several trucks for which they hire drivers. The only exception to showing a complete breakdown of information is when "owner operators" physically drive their own trucks.

9. Flaggers

The Department of Labor has determined that duties of flaggers are clearly manual and physical in nature and as such they are laborers or mechanics within the meaning of the Davis-Bacon Act. Flaggers who perform a dual function, such as flagger and journeyman, have to be paid journeyman's rate.

10. Exempt Classifications

The Department of Labor has determined that classifications whose duties are generally not manual or physical in nature are not subject to Davis-Bacon regulations. The following classifications are considered exempt from Davis-Bacon regulations, provided that the employees are not engaged in other covered work:

- a. Ticket-taker
- b. Certified plant inspector, Quality Control technician
- c. Survey crew, except for survey crew members who perform primarily physical and/or manual duties.

11. Corrections

When errors or omissions are discovered, the Contractor or their subcontractors will be required to make necessary corrections and submit a supplemental payroll transcript. If a subcontractor has to make correction, it must be submitted to the Contractor for review before being submitted to the Contracting Authority. Original transcript will not be returned. A Supplemental transcript shall be so labeled (e.g. No. 15 Supplemental). Examples of supplemental transcripts are shown in the Iowa DOT Construction Manual [Appendix 2-14.4](#). Only employees affected by the errors or omissions are listed on the supplemental.

The Contractor or their subcontractors may be required to submit a notarized statement from the employee or a copy of both sides of a canceled check verifying that an adjustment has been made. Sufficient

explanation shall be given to make any adjustment easily understood by all who may review a supplemental transcript.

12. Starting, Suspending, Completing Payroll Transcripts

Payroll transcripts shall be submitted as soon as the contractor starts any project activity at the site of work. Transcripts shall be in sequential order starting with the number "1." When work on a contract is suspended, the last payroll transcript should be labeled "suspend" (e.g. No. 14 Suspend). This procedure shall be followed when work is resumed or completed (e.g. No. 15 Resume and No. 24 Final). Contractors, if they choose, may continue payroll transcripts during the suspension period with a notation on the transcript "No work during this period."

If any of the contractors fail to submit required records or make them available, the Iowa DOT, FHWA, or DOL may, after written notice to the Contractor, take such actions as may be necessary to suspend further payments. Payment should be withheld to the Contractor for those items that are contracted to the contractor who is in violation. Payment to subcontractors who submit correct payrolls should not be withheld because of mistakes of another subcontractor. Failure to submit required records upon request or make such records available may be grounds for debarment action.

13. Records

Payrolls and basic records shall be maintained by the Contractor and each during the course of the work, and shall be available for inspection at any time by authorized representatives of the contracting agency, DOL, or FHWA.

Regulations and contract provisions require all contractors to preserve employment records at least **3** years after completion and final settlement of the contract.

E. Completion of "Statement of Compliance"

A "Statement of Compliance" is printed on the backside of the Certified Transcript of Labor Payroll form ([Form 830176 \(Excel\)](#)) and relates to wage kickbacks, payrolls, apprentices, fringe benefits, and falsification penalties. A copy is provided in the Iowa DOT Construction Manual [Appendix 2-14.2](#). Those Contractors who have permission to use their own payroll form must attach a copy of the "Statement of Compliance" to their payroll transcript. The statement of compliance is certified by the dated signature of the Contractor or an authorized agent. The Contractor must also sign all Statements of Compliance submitted by their subcontractors. A scanned copy of the original "Statement of Compliance" and payroll transcripts may be submitted to the Project Engineer as email attachments, or by uploading to Doc Express, provided the Contractor retains the Statement(s) of Compliance with original signature(s) for the required retention period.

F. Fringe Benefits

Davis-Bacon prevailing wages are made up of two interchangeable components - basic hourly wages and fringe benefits. Under Davis-Bacon, fringe benefits must be paid for all hours worked. The fringe benefits may be paid:

- In cash
- To an approved plan, fund or program
- Any combination thereof

Example:

The wage decision requires:

Basic hourly rate	\$10.00
Fringe benefits	<u>\$ 1.00</u>
Total prevailing rate	\$11.00

The contractor can comply by paying:

1. \$11.00 in cash wages
2. \$10.00 plus \$1.00 in pension contributions or other "bona fide" fringe benefits
3. \$ 9.00 plus \$2.00 in pension contributions or any combination of "bona fide" fringe benefits. In this example, overtime must be paid at the basic hourly rate of \$10.00.

1. Payment of Fringe Benefits to an Approved Plan

All contractors who pay fringe benefits to approved plans, funds, or programs in amounts not less than determined in applicable wage decision shall show on the face of their payroll the basic cash hourly rate and overtime paid to employees. Such contractors shall check 4(a) to indicate they are paying to approved plans, funds, or programs not less than the amount predetermined as fringe benefits for each craft. Any exception shall be noted in 4(c). Details of the fringe benefit plan, fund, or program shall be submitted with the first payroll to the Project Engineer. The submittal shall include description of the benefits, dollar amount contributed per hour, and if applicable, name of the Trustee or third person to whom the benefits were paid.

Included as "bona fide" fringe benefits, are benefits such as supplemental unemployment plan, life insurance, health insurance, pension, vacation, holidays and sick leave. Credit may be taken as Davis-Bacon fringe benefits for training, provided the training program is approved by the U.S. Bureau of Apprenticeship and Training and the amount is reasonable (i.e. less than \$0.50/hr). No credit may be taken for any benefit required by federal, state or local law (i.e. worker's compensation, unemployment compensation or social security contributions). Also, travel expenses, meals, lodging, per diem expenses, uniforms, administrative expenses, union administrative dues, union working dues or industry promotional funds (i.e. Heavy Highway Advancement Fund, Labor-Management Work Preservation Fund) are not considered bona fide fringe benefits within the meaning of Davis-Bacon regulations.

2. Cash Payment of Fringe Benefits

All contractors who do not pay any fringe benefits to an approved plan, fund, or program must make cash payment to an employee. Payment shall not be less than the predetermined fringe benefit amount plus minimum wage rate. When fringe benefits are paid in cash, the contractor shall check 4(b). Any exceptions shall be noted in 4(c). If part of the fringe benefits are paid to an approved plan, fund, or program and part in cash to an employee, then both 4(a) and 4(b) shall be checked.

3. Fringe Benefits and Overtime

Contracts covered by the Davis-Bacon Act are also subject to the Contract Work Hours and Safety Standards Act (CSHSSA) which requires overtime on covered projects at 1 ½ the hourly rate for hours worked in excess of 40 hours per week.

The overtime rate is computed at the sum of 1 ½ times the basic rate plus the designated hourly rate for fringe benefits. It is not required that the hourly cash rate for fringe benefits be multiplied by a factor of 1 ½.

For example:

Davis-Bacon rate	\$10.00
Fringe benefit	\$ 2.00

The overtime rate of pay may be calculated by 3 methods:

1. \$10.00 (base) + \$2 (fringe) + ½ \$10.00 (D-B rate) = \$17.00
2. \$12.00 (cash) + ½ \$10.00 (D-B rate) = \$17.00
3. \$ 8.00 (base) + \$4 (fringe) + ½ \$10.00 (D-B rate) = \$17.00

Project Engineer's Involvement

A. Field Procedure

Early and complete labor compliance inspections are essential to the development of a sound compliance pattern on all contracts. Inspections are required to be performed on the Contractor and each subcontractor performing more than \$10,000 of work (on any contract), unless they participate in the Associated General Contractors of Iowa Prevailing Wage Notification Program (see below). At least one inspection shall be made on the following:

- Contracts of short duration (six months or less).
- If the Contractor or a subcontractor works longer than 6 months on the project, at the start of every 6 month period, an interview shall be performed to ensure that the Davis-Bacon requirements are still being met.

Results of inspections shall be documented on the Project Engineer's EEO Project Site Inspection/Wage Rate Report form ([Form 650170](#)).

For contracts which extend over a longer period of time (greater than 6 months), inspections shall be made on approximate six months intervals. The Project Engineer is responsible to see that required labor compliance inspections are conducted and recorded. Whoever is assigned the compliance inspection needs to be thoroughly familiar with the regulations and instructions.

The Associated General Contractors of Iowa have implemented a Prevailing Wage Notification Program. All contractors participating in this voluntary program have established a proactive method for informing their employees of the Davis-Bacon wages and benefits to be paid on projects.

It is felt that these proactive measures by the contractor will allow the Project Engineer to eliminate the routine wage rate interviews and focus on complaints received from the employees. This procedure will not eliminate the need for posting the wage rate decision on bulletin boards or submittal of certified payrolls.

The list of contractors participating in the Prevailing Wage Notification Program is maintained on the AGCI's website (<http://www.agcia.org/pwnp.asp>). Any contractor wishing to participate should contact the AGC of Iowa.

The Project Engineer's office staff review certified payrolls that have been submitted. In order to ensure that certified payrolls have been received for all subcontractors whose employees worked during a given week, the office staff must be advised of the subcontractors that worked. The Project Engineer's office should develop a process to provide this information between the inspection staff and office staff.

Methods to accomplish this for FieldManager projects include:

- FieldManager query "ContractorsOnSite" lists which contractors worked during a week. FieldBook users must designate in the Inspectors Daily Report (IDR) which contractors were "On Site" during the week.
- Inspectors submit to the office a "Weekly Payroll Check" indicating which subcontractors worked during the week. The FieldManager inquiry, "Subcontractors Assigned to the Contract" can be used for the list of subcontractors.

If payrolls of the Contractor are not received within 2 weeks of the period covered, the residency staff should advise the Contractor, in writing, which payrolls have not been submitted and that progress payments for the work will be withheld. If payrolls of subcontractors are not received within 3 weeks of the period covered, the Project Engineer should advise the Contractor, in writing, which payrolls have not been submitted and that progress payments for the subcontracted items will be withheld. In either case, communication with the Contractor sooner than these time limits may be appropriate to inquire on the status of payrolls.

B. Wage-Rate Interview

When conducting a wage-rate interview, the following questions shall serve as a guide:

1. Is the employee receiving at least the specified wage rate for type and class of work performed?
2. Is proper allowance being made for fringe benefits and have the plans been explained to the employees?
3. Is work performed within the proper classification?
4. Are additional classifications necessary?
5. Does the employee have complaints as to hours, wages, and fringe benefits?

The findings of the wage rate interview are to be documented on the EEO Project Site Inspection/Wage Rate Interview form ([Form 650170](#)). Names of employees interviewed and date of the certified payroll transcript used are to be recorded on the interview form. If no discrepancies are identified during the interview, this should be so noted. In some instances, employees may not be knowledgeable of the pre-determined hourly wage rates and fringe benefits to which they are entitled. Furthermore, they may not be aware of the hourly wage rates and fringe benefits they have been paid or what work classification they have been assigned. In these cases, the interviewer should document on [Form 650170](#) that the findings of the interview were inconclusive because the employee was unable to respond to the questions. Interview forms are to be retained in the project files. A copy of the EEO Project Site Inspection/Wage Rate Interview form ([Form 650170](#)) is included in the Iowa DOT Construction Manual [Appendix 2-10](#).

C. Violations and Complaints

Any violations discovered, or complaints received, shall be investigated promptly. The PIRC should be actively involved in the investigation. If the Contractor is found to be in violation of the contract's labor standard provisions, a complete report shall be written giving details of violation(s) and results of the investigation.

The report shall also include an amount of money, if any, found to be due to employees and the number of employees who shall receive these payments. A copy of this report shall be sent to the Administering Office. The Administering Office will review and forward to the Office of Construction and Materials.

D. Office Procedure

1. Payroll transcripts shall be checked to verify that:
 - Information in the heading is correct and complete.
 - Titles designating crafts correspond correctly with those in wage schedule for that particular contract. No others may be used unless a supplemental wage determination has been secured by the Contractor or subcontractor. If a listed craft is not included in

the wage decision, the Contractor or subcontractor shall be advised that a supplemental wage rate must be requested.

- Rate per hour is not less than that shown for each craft in the wage schedule for that contract, and overtime rates (if any) are at least one and one half times the regular base rate, plus any fringe benefits. Exception: The Contractor and subcontractors have the option to reduce basic cash wage by the excess payment of fringe benefits. Fringe benefits may be in cash, by contribution into a bona fide fringe benefit program, or a combination of both.
 - Fringe benefits (if any) have been provided and appropriate paragraph is checked on the Statement of Compliance.
 - The Statement of Compliance is complete and properly signed. Multiple-sheet transcripts will be considered certified if the necessary information and dated signature are shown on the last sheet of that packet.
 - Signature of the Contractor appears on all payrolls submitted from subcontractors.
 - Transcript is submitted within one week after the end of a payroll period. ESTIMATES SHALL BE WITHHELD until such time as these requirements are fulfilled.
 - An occasional spot check to determine accuracy of computations.
 - Checking payroll transcripts can be time consuming. The primary objective is to ensure the proper wage rate is being paid. It is important to review the first 3-4 payrolls received from the Contractor and subcontractors carefully to be sure information is complete and accurate. Once it is apparent that wage rates used are appropriate, it is not necessary to check each line of each payroll. However, occasional spot checks should continue to be made, paying particular attention to new crafts listed. If problems are noted, subsequent payrolls must be checked until problems are resolved. Payrolls submitted to Doc Express that have been checked shall be indicated by adding "Checked by xxx" in the comment field in Doc Express.
2. Corrections
- When errors or omissions are discovered on transcripts, the Contractor will be advised. Necessary corrections must be made on a supplemental payroll transcript (See example in the Iowa DOT Construction Manual [Appendix 2-14.5](#)). The original payroll transcript will NOT be returned to the Contractor or their subcontractors; however, copies indicating necessary corrections may be supplied.

3. Disposition

Retention of payroll transcripts by the Contracting Authority shall comply with the requirements in [I.M. 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects.

Supplemental Wage Rates

If, after a letting, the Contractor determines that the wage decision for the contract does not include wage rates for one or more work classifications to be used, the Contractor must request additional classification(s) and wage rate(s). A letter to the Office of Construction and Materials, with a copy to the Project Engineer, shall include wage decision number, contract ID number, work classifications requested, and intended rate of pay including fringe benefits.

Approval from the U.S. Department of Labor usually takes at least 30 days, so an early request by the Contractor is necessary. Final payment to the Contractor shall not be held up pending a response from the Department of Labor, if the Contractor has made timely submittals for additional wage classifications and there are no DOL investigations on file.

2.25 SUBCONTRACTS

Subcontract Requests

Effective with the October 15, 2013, letting, Subcontract Requests must be prepared using the “.CON” file generated by the SiteXchange software and submitted electronically.

Contractor’s Requirements

At the time of contract signature, the Contractor submitted their list of subcontractors to the Office of Contracts (dot.contracts@dot.iowa.gov) and provided a copy to the Contracting Authority. All Subcontract Requests must be prepared using the “.CON” file and submitted electronically.

- Instructions for completing Subcontractor Requests are available on the Iowa DOT Office of Contracts’ website “Letting Process” www.iowadot.gov/contracts/contracts_letting.htm under the bullet entitled “Subcontracting”.
- The SiteXchange software is available to all users on the “BIDX Utility Files” webpage www.iowadot.gov/contracts/bidx_utilityfiles.htm .

After time of contract signature, submit all requests directly to the Project Engineer as an email attachment using the Subcontract Request form ([Form 830231](#)).

For Federal-aid contracts, the Contractor certifies (by signing the contract) that each subcontract is in writing and that subcontract contains all pertinent provisions and requirements of the contract. These requirements include, but are not limited to; the

[FHWA-1273](#) is attached to all subcontractor agreements and certification regarding debarment, suspension, ineligibility, and voluntary exclusion.

When completing a subcontract request, describe items to be subcontracted with line numbers, item descriptions, quantities, unit prices, and amounts of specialty items. Unit prices shown must be the contract unit prices except when “labor only” or “place only” items are subcontracted. In such cases, indicate with a notation in the “Description” portion that the “item unit price” is appropriate.

When a subcontracted item is used to satisfy a DBE goal, the amount paid to a DBE must be shown in Column “A.” Note the additional guidelines on the administration of DBE subcontracts that follow.

Except for trucking by DBE firms, a Subcontract Request ([Form 830231](#)) is not required for trucking of materials. Trucking by DBE firm shall be documented on a Subcontract Request and Approval form, but the dollar value will not be used to determine the amount subcontracted. The Contractor or subcontractor shall advise the Project Engineer in writing, on a daily basis, the names of independent companies that will be hauling materials on the “site of work”. This will allow the Project Engineer to monitor trucking companies for compliance with Davis-Bacon requirements.

“Subcontract Requests” are not required for work performed by a “wholly owned” subsidiary of the Contractor. A list of wholly owned subsidiaries is maintained by the Office of Contracts and can be obtained from the Administering Office. NOTE: the Administering Office can obtain the list at w:\Highway\Contracts\FieldInformation.

The Office of Contracts will provide a Subcontractor Authorization and EEO Poster Notice to the Contractor for placement on the project’s bulletin board. This poster is considered the Department’s written authorization of subcontractors for the contract.

Project Engineer’s Responsibility

For LPAs using FieldManager for administration of their projects, refer to Chapter 2.5 of the [FieldManager Users’ Guide](#) for instructions on importing the SiteXchange file into FieldManager. The SiteXchange file will import all subcontractor information, including associating items with the appropriate subcontractor.

While the Contractor submits subcontract requests to the Office of Contracts with the signed contract, additional request or modifications to existing requests are submitted to the Project Engineer.

Existing items by an existing subcontractor

The Project Engineer is to check revised .CON files for accuracy (% subcontracted, current EEO/AA policy, items assigned to appropriate subcontractor) and forward the revised .CON file to the Office of Contracts as an email attachment. The email is sent to dot.contracts@dot.iowa.gov with a subject line of “Revised Con File”.

New items to be completed by an existing or new subcontractor and existing items by a new subcontractor

- Once the Contractor submits the Subcontract Request to the Project Engineer as an attachment to an email, the Project Engineer is to review the Subcontract Request form to ensure that the percent subcontracted does not exceed the maximum threshold and that the subcontractor has a current EEO/AA policy. If all information is correct the Subcontract Request form should be attached to an email to the Office of Contracts at dot.contracts@dot.iowa.gov. The email, with attachment, should also be forwarded to the project inspector. The Subcontract Request can then be filed in the project file.
- The Office of Contracts will provide a Subcontractor Authorization and may issue a new EEO Poster Notice to the Contractor for placement on the project's poster board. This poster is considered the Department's written authorization of subcontractors for the contract. If a corrected EEO Poster Notice is sent to the Project Engineer, it should replace the outdated form on the Contractor's Poster Board. If the Office of Contracts does not send a corrected EEO Poster Notice, the Project Engineer should verify with the Office of Contracts that the new Subcontract Requests were received and the new subcontractors may be added to the document on the poster board by hand.

The additional/modified requests are submitted to the Project Engineer in order to minimize delays in providing the information to field staff.

The Project Engineer is responsible to make sure a subcontractor does not perform more work than described on the approved subcontract.

Occasionally, subcontractors may have to rent additional equipment and hire extra employees to complete their work. However, when the entire crew and equipment of the Contractor or another subcontractor is used to complete work, the Contractor is violating the intent of [Article 1108.01](#) of the Standard Specifications and is considered brokering a project. If the Project Engineer's staff observes work performed by anyone other than the approved subcontractors, the Administering Office should be notified. Assistance will be provided to investigate the circumstances.

At the preconstruction meeting, it will be beneficial to discuss methods of keeping subcontractors informed of the work status. Although the Contractor is responsible to make progress payments to a subcontractor, numerous incidents in the past have indicated a lack of timely progress payments from the Contractor to the subcontractor. Subcontractors may request the Project Engineer to furnish them a copy of a progress voucher for informational purposes.

Leased Employees

The Contractor and approved subcontractors may utilize "leased" employees as part of their "own" work crew. In either case, the Contractor shall submit a Subcontract Request before leased employees can be on the job site. "Leased" employees shall be obtained from a firm that does not perform highway construction (i.e. a temporary employment agency).

When "leased" employees are used, they are considered part of the contactors "own organization" when the following requirements are followed:

- The Contractor maintains control over the supervision of the day-to day activities of the leased employees.
- The Contractor remains responsible for the quality of the work of the leased employees.
- The Contractor retains all power to accept or exclude individual employees from work on the project.
- The Contractor remains ultimately responsible for the payment of predetermined minimum wages and submission of payrolls on contracts that required predetermined wages.

The employee leasing company will appear on the list of subcontractors and under the EEO/AA list. The leasing company is responsible for all customary employer responsibilities including EEO/AA in hiring, training and promotions, and the submittal of required employee information to the Department, state, and federal agencies. If prevailing wages are required, the employee leasing company shall submit certified payrolls. The certified payroll will need to designate the Contractor that is using the leased employee(s).

A leased employee may be utilized by the Contractor or different subcontractors during a project; however, the individual employee may be used by only the Contractor or one of the subcontractors at a time.

DBE Contractors and DBE subcontractors may not use leased employees because Federal DBE regulations prohibit the use of leased employees and will not meet the commercial useful function towards DBE commitments.

Subcontractor - Disadvantaged Business Enterprise (DBE)

A. Contract Award

On Federal-aid projects with predetermined goals, all bidders will be required to submit a Statement of DBE Commitment form ([Form 102115](#)) with their bid. A blank copy is provided in the Iowa DOT Construction Manual [Appendix 2-17](#). This form identifies DBE subcontractors, suppliers, transporters, and/or manufacturers that will be used to satisfy the DBE goal. [Form 102115](#) shall also include work or items to be subcontracted, cost of this work, percent applicable to DBE goal, and dollar amount committed to each DBE.

Upon execution of a contract, the Contractor becomes committed to those DBEs listed on [Form 102115](#). This commitment is therefore a contractual arrangement between the State and the Contractor with the same enforcement as any other provision specified in the contract documents. The Contractor is required to enter into a contractual arrangement with each DBE listed by formally executing a written subcontract agreement specifying the work to be performed and appropriate compensation for that work. This two-tier process, which contractually obligates the Contractor to both the State and each participating DBE, formalizes implementation of all DBE contract provisions.

The Office of Contracts will review the low bidder's Statement of DBE Commitments form ([Form 102115](#)) to assure that certified DBEs are being used. After review, the DBE commitment information will be mailed to the Project Engineer by the Office of Employee Services, Civil Rights Section.

B. Subcontract Requests

For added or modified subcontracts, the Project Engineer must compare the Subcontract Request form ([Form 830231](#)) submitted by the Contractor to the Contactor's DBE Commitment. The Contractor must subcontract the work to the certified DBE subcontractor. Any request to subcontract work for less than the total amount shown on the "DBE Commitment" document shall not be approved without written approval from the Office of Employee Services, Civil Rights Team.

1. Temporary Employees and Leased Equipment

A DBE may lease equipment consistent with standard industry practice provided a rental agreement, specifying terms of lease arrangement, is approved prior to a DBE starting work. If equipment is of a specialized nature, the lease may include an equipment operator. If this practice is generally acceptable within the industry, then the operator can remain on lessor's payroll. For equipment that is not specialized, a DBE is expected to provide the operator and be responsible for all payroll and labor compliance requirements.

Operation of equipment shall be subject to full control of the DBE. Such an arrangement shall be short term and involve a specialized piece of equipment used at the job site.

The Office of Employee Services, Civil Rights Team maintains an electronic roster of certified DBE trucks in their folder on the Local Area Network. Contact the Administering Office for a current copy of the DBE Truck Roster.

2. Commercially Useful Function

A commercially useful function exists when:

- DBE is totally responsible for execution of a distinct element of work by actually performing, managing, and supervising the work involved in accordance with the contract documents, normal industry practice, and
- that DBE firm receives due compensation as agreed upon for the work performed.

To meet commercially useful function requirements of the regulations and contract, the following statements are applicable:

- DBE firm must manage the work contracted. Management shall include scheduling work operations, ordering equipment and materials (if materials are part of the contract), preparing and

submitting payrolls and all other required reports and forms, as well as hiring and firing employees, including supervisory employees.

- DBE shall perform work with employees normally employed by and under the DBE's control. In all instances, the DBE shall be responsible for payroll and labor compliance requirements concerning all workers under their control. DBEs may use other means to perform work on a limited basis when the contract requires specialized knowledge, skills, or equipment. A DBE may be allowed to augment their work force with personnel which normally work for another firm, if requested and approved by the Office of Contracts prior to commencing work.
- DBE must supervise daily operations of their portion of contracted work. The only two acceptable ways for a DBE to supervise daily operations are:
 - 1) The DBE owner may act as the superintendent and directly supervise work, or
 - 2) A skilled and knowledgeable superintendent employed and paid wages by the DBE must directly supervise that work.

If the latter is used, the DBE owner must be actively involved in making operational and managerial decisions of the firm. Basically, this means that all administrative functions shall be performed by personnel responsible to, or employed by, the DBE at facilities or locations under the DBE's control.

- DBEs shall supervise and perform contracted work with workers on their payroll and under their direct supervision. The DBE and their superintendent must, on a full-time basis, supervise and control contracted work. Supervision of contract work by personnel normally employed by the Contractor or another subcontractor, or by personnel not under the DBE's control constitutes failure to perform a commercially useful function.

The DBE Specifications includes minimum requirements for DBE manufacturers, dealers, transportation services, and subcontractors. DBE subcontractors that indicate work which will be performed by employees of another firm or with leased equipment should be questioned.

The Administering Office shall be notified in all cases where there is a question of commercially useful function before that subcontract is approved.

The Office of Employee Services, Civil Rights Team will assist in determining requirements of a commercially useful function for DBE suppliers and manufacturers.

3. Partial Subcontract of an Item

It is not unusual for DBE subcontractors to be involved in only part of a contract item. This is to be documented on [Form 830231](#) by clearly stating in the "Description" column exactly what portion of an item is to be accomplished by the DBE and the corresponding dollar amount. Details of subcontracts that have "Part Items" should be discussed at the preconstruction meeting so project personnel are informed of the work (i.e. Commercially Useful Function) to be performed by DBE subcontractors.

For conditions where a subcontract does not exist but a DBE firm is manufacturing, supplying, or trucking materials to the job site, terms of the agreements shall be described in [Form 830231](#). This information is documented on [Form 830231](#) so the Project Engineer can be assured that the Contractor is meeting commitments previously stated on the Statement of DBE Commitments form ([Form 102115](#)). The work documented on the form shall be assigned to a contract item. A typical example may be for trucking only of hot mix asphalt and should be included as: "HMA Surface-Trucking Only-Lump Sum"; Quantity =1; Unit Price= \$30,000. This dollar value will not be used to determine the percent subcontracted as specified in [Article 1108.01](#) of the Standard Specifications.

Inspection staff must monitor work performed and periodically inform the Project Engineer as to which individuals and equipment actually worked, so payrolls can be spot-checked.

C. Construction Period

The Project Engineer and inspectors must routinely review work subcontracted to DBE subcontractors to assure work is being performed as intended and that DBEs are performing a commercially useful function. Where work is performed by the Contractor or any other subcontractor or with equipment not owned by the DBE, the inspector shall issue a non-compliance notice citing violation of the Specification for Disadvantaged Business Enterprises, of [Article 1102.17](#) of the Standard Specifications. This non-compliance shall be immediately reported to the Project Engineer, who will in turn notify the Administering Office.

The Contractor will be given credit toward the DBE contract goal only when a DBE performs a commercially useful function. The requirements for a commercially useful function are outlined in the previous section "Subcontract Requests."

A DBE may lease equipment consistent with standard industry practice provided a rental agreement, specifying terms of lease arrangement, is approved prior to a DBE starting work. If equipment is of a specialized nature, the lease may include an equipment operator. No credit will be given for the cost of equipment leased or rented from the Contractor.

DBEs shall negotiate cost, arrange for delivery, and pay for materials and supplies required for their portion of the contract work. Invoices for materials shall be invoiced to the DBE firm and not to the Contractor.

No credit shall be allowed toward the DBE goal for cost of materials placed by a DBE subcontractor when payment is made by deducting this payment from the Contractor's payment to the DBE.

Project engineers must document performance of the DBEs activity on all projects as part of the normal project contract compliance monitoring. On-site project monitoring by field personnel shall include employee assignments, equipment used, and supervision of the work as indicated on the subcontract form. The commercially useful functions shall be documented on the DBE Commercially Useful Function Checklist ([Form 517014](#)) once per DBE per contract. Even though this form is completed only once per DBE per contract, if any irregularities are observed any time that DBE is working on a project, it should be noted on [Form 517014](#). All irregularities must be documented on [Form 517014](#), and immediately reported to the Contractor and the Administering Office.

Project engineers shall not allow the Contractor or other subcontractors to perform work that has been committed to a DBE subcontractor without written approval from the Office of Employee Services, Civil Rights Team.

In situations where a DBE subcontractor cannot (or is not) performing, the Contractor must follow all steps described in the specifications. Upon receipt of a signed statement from the DBE and documentation where the Contractor will satisfy the goal with other items or DBEs, the Project Engineer may recommend to the Office of Employee Services, Civil Rights Team, that the commitment be waived and the required goal adjusted. The Office of Employee Services, Civil Rights Team, must provide written approval of all substitutions before any changes in subcontracted work are performed.

D. Post Construction

The Contractor shall submit a completed Certification of DBE Accomplishment form ([Form 102116](#)) with the final project documents for all Federal-Aid contracts and shall list the dollar amounts paid to all DBE firms on the contract. A blank form is provided in the Iowa DOT Construction Manual [Appendix 2-19](#). This form certifies the dollar amount paid to each DBE. If the contract had a DBE commitment, Project Engineers must compare the dollar amounts on [Form 102116](#) to dollar amounts committed to DBE's as shown in the "DBE Commitment" document that was previously mailed to the Contract Administrator.

If the contract contained a DBE commitment, the Project Engineer will verify that the Contractor has attained the DBE commitment specified to each DBE firm listed on [Form 102116](#). A price adjustment will be assessed for the amount of commitment not paid to each DBE firm used unless the DBE commitment to that DBE firm was reduced as allowed by [Article 1102.17, G, 3](#), of the Standard Specifications. The Project Engineer must include a written explanation describing situations, background, and findings which resulted in reductions of

adjustments. This explanation shall be attached to [Form 102116](#). The Administering Office shall review these adjustments prior to signing [Form 830436](#), Final Payment; or [Form 640003](#), Certificate of Completion and Final Acceptance of Agreement Work.

When the Contractor is a certified DBE contractor, [Form 102116](#) is required to be submitted upon completion of a Federal Aid contract. The DBE contractor shall include the amount of work completed by their firm and DBE subcontractors. The Project Engineer will sign the form acknowledging receipt of the form and does not need to complete the amounts in the lower portion of the form.

Unique problems have been noted with the goals and variables of the DBE program. Documentation of any activity related to the program is important and must not be overlooked. Record all telephone or personal contacts noting time, place, and details.

Subcontractor - Traffic Control

Traffic control items of a contract may require designation of a subcontractor to perform the work depending on how much of the total item is performed. Some guidelines are:

- A. A Subcontract Request ([Form 830231](#)) will NOT be required if:
 1. Traffic control is a lump sum bid item and the traffic control supplier:
 - Furnishes the traffic control devices
 - Delivers materials to the "first use" location
 - Sets devices up at the "first use" location
 - Keeps equipment operational by being on call from the Contractor or through periodic visits to the site
 - Picks up devices when a project is completed
 2. Traffic control signals are bid as furnish and install and the traffic control supplier:
 - Furnishes the traffic control devices
 - Delivers materials to the "first use" location
 - Picks up devices when a project is completed
 3. Traffic control bid as incidental to other work will not require a Subcontractor Request.
- B. A Subcontract Request ([Form 830231](#)) shall be required if the traffic control supplier performs the entire item of traffic control (lump sum, furnish and install) and provides regular surveillance, cleaning, routine maintenance and repair of devices, or changes the system between stages.

Prompt Payment to Subcontractors

Contractors are required to pay subcontractors for satisfactorily completed work within 7 calendar days after receiving payment (or should have received payment) from the Contracting Authority.

Certification of Subcontractor Payment

The Contractor shall provide to the Engineer a Certification of Subcontractor Payment form ([Form 518002](#)) with the signed final voucher. The form shall include the names of all approved subcontractors. The Contractor shall provide an explanation for instances that exceed 30 days.

The Certification of Subcontractor Payment form ([Form 518002](#)) form is not required to be submitted if there were no subcontractors on the contract.

An example of the form is included in the Iowa DOT Construction Manual [Appendix 2-23](#).

2.26 USE OF PROPERTY OUTSIDE OF PROJECT RIGHT-OF-WAY

Any proposed use of property outside of the project right-of-way by the Contractor or any subcontractor shall be submitted to the Project Engineer. Prior to any use of private property, the Contractor shall provide the Project Engineer a copy of the written agreement with the property owner that allows them access to the property and releases the Contracting Authority of all liability.

2.27 "CONTRACT QUANTITY AGREEMENT" ([FORM 830230](#))

The Contractor may request final payment for an item based on contract quantities. When a contract quantity request is received from the Contractor, the Project Engineer shall verify that items included on the request are not items to be paid as contract quantity by [Article 1109.01](#) of the Standard Specifications.

If there are contractual conflicts, i.e. the Contractor does not agree with the quantities in the contract documents, these issues should be discussed at the Preconstruction Meeting. The method of measurement for those items that may have conflict should be identified at this time. For example, if the Contractor does not agree with the quantity of Class 10 excavation on the contract, the Contractor can request the actual measurements by providing written notice to the Contracting Authority. The preliminary cross-sections and the balance points shown in the contract documents will be used as the basis for payment of quantities. For further explanation of this example, see [Article 2102.04, A, 1, c](#), of the Standard Specifications.

If there are no contractual conflicts, the Project Engineer will prepare a Contract Quantity Agreement form ([Form 830230](#)) and send it to the Contractor for signature. A blank copy of this form is provided in the Iowa DOT Construction Manual [Appendix 2-21](#). After the Contractor returns the signed form, the Project Engineer shall sign and file it in the project file.

2.28 RETAINED FUNDS

Retained funds held by the Contracting Authority are for the purpose of satisfying 573 Claims. The term, "573 Claim", originates from Chapter 573 of the Code of Iowa that addresses claims on government contracts. Persons or companies may file a "573 Claim" with the Office of Finance on Farm-to-Market funded projects, all others submit with the Contracting Authority, for unpaid labor and/or materials.

Retained funds are not intended to offset credit payments for deficient work, including price adjustments and liquidated damages.

When payment is needed to be withheld for price adjustments for deficiencies, item progress should be withheld on the appropriate contract item(s) for the amount to be withheld. Pay quantities for the Contractor items should be withheld to cover liquidated damages. These items will be increased to the final quantities after a Change Order for price adjustments and/or liquidated damages is processed.

Release of Retained Funds

[Chapter 573](#) of the Iowa Code was amended, in part, by [Section 26](#) during the 2006 legislative session. The changes included new requirements for the release of retained funds. For contracts let after January 1, 2007, Contractors are required to certify that they have given notice to all subcontractors and suppliers of their intent to request early release of retained funds. The notice must be provided 10 calendar days before the release of retainage is requested. [Section 26](#) allows the Contractor to request release of retainage when the contract is substantially complete or after the contract is certified complete by the Engineer.

In consideration of these new Contractor responsibilities, the Contractor should initiate any request for release of retainage. The Project Engineer should not initiate release of retainage.

Procedure and assigned responsibilities:

Contractor

- Submit a signed Request for Early Release of Retained Funds form (see Appendix 2-22_LS at the end of this Attachment).
- The request shall include a sworn statement, signed by the Contractor, that the notice was given to all subcontractors and material suppliers at least 10 calendar days prior to the date of the request. The "Request for Early Release of Retained Funds" form shall be used (see Appendix 2-22 LS at the end of this Attachment).
- Shall provide a statement to every subcontractor and material supplier that the Contractor intends to request release of retainage. In accordance with Iowa Code [section 26.13](#) the notice shall be similar to the following:

"You are hereby notified that [name of Contractor] will be requesting an early release of funds on a public improvement project or a highway, bridge, or

culvert project designated as [name of project] for which you have or may have provided labor or materials. The request will be made pursuant to Iowa Code section 26.13. The request may be filed with the [name of governmental entity or department] after ten calendar days from the date of this notice. The purpose of the request is to have [name of governmental entity or department] release and pay funds for all work that has been performed and charged to [name of governmental entity or department] as of the date of this notice. This notice is provided in accordance with Iowa Code section 26.13.”

Project Engineer

Acting on the Contractor's request the Project Engineer will:

1. Confirm criteria have been satisfied, including receipt of the signed statement from the Contractor.
2. Contact Office of Finance for Farm-to-Market funded projects and the Contracting Authority for all other projects and inquire if any claims are on file. If 573 Claims have been filed, retain twice the amount of claims. If there are no claims, the entire amount of retainage is to be released.
3. Submit completed Early Release of Retained Funds form (see Appendix 2-22_LS at the end of this Attachment) to the District Local Systems Engineer for Farm-to-Market funded projects and the Contracting Authority for all other projects. If using FieldManager, do not submit the FieldManager Retainage Release voucher (RR) at this time. The District Local Systems Engineer will contact the Project Engineer for Farm-to-Market funded projects and advise when the appropriate amount of retainage can be released. For all other projects, the Contracting Authority will release the appropriate amount of retainage.
4. Provide the Contractor a written explanation, within 30 days of their request, for denying any amounts requested.

Other items to note for FieldManager projects are:

- No entries for item progress or working day charges or approval of Change Orders are allowed on the Retention Release voucher
- For multiple project contracts, each project must have a checkmark in the "create voucher" box in the voucher tab of the estimate screen.

2.29 Intentionally left blank

2.30 CONSTRUCTION PERIOD

2.31 ADMINISTRATION OF THE CONTRACT PERIOD

Administration of any contract period and determination of the controlling item of work requires a fair and equitable assessment of work performed (either working or calendar days).

- [Article 1108.02](#) of the Standard Specifications identifies how a contract period is identified in the contract documents and provides guidance for contract administration.
- [Article 1108.03](#) of the Standard Specifications supplements by outlining working days on non-Incentive/Disincentive (I/D) projects during holidays.
- [Section 1111](#) of the Standard Specifications provides direction for Incentive/Disincentive projects.
- Iowa DOT Construction Manual [Appendix 2-27](#) shows "Charging of Contract Time."

Contract Types

Three types of working day contracts are:

- Approximate Start Date
- Late Start Date
- Specified Start Date

In addition, a contract may include an intermediate contract period (completion date) for completing certain phases of work. In all cases, the contract documents will identify a maximum project duration, i.e., working days. Project durations, identifying the time allowed to complete work, are used to calculate dollar amounts of liquidated damages and incentive/disincentive assessments.

A. Approximate Start Date

It is expected that the site will be available by the approximate start date. If it appears a project site may not be available by the expected start date, the Project Engineer will notify the Contractor of a delay and, if possible, length of the expected delay. Contractors are expected to remain informed about site conditions and be prepared to start work with minimal delay when a site becomes available.

An approximate start date is designated for the purpose of allowing the Contractor some leeway in planning their work. The Contractor and Project Engineer should work with the Contracting Authority to develop an agreed starting date.

A Contractor may request to start work any time after execution of the contract and before the approximate start date. This request is subject to approval by the Project Engineer and the Contracting Authority. If approved, working days will be charged when work is actually started. If approval is given, the Contractor will be required to sign a waiver giving up any right to claim extra compensation for damages due to delays related to their early commencement. If the Contractor requests to start early, they shall not interfere with operations of other Contractor who have first right to the site.

The guidelines for charging working days are explained in [Article 1108.02](#) and [Article 1108.06](#) of the Standard Specifications and in the following case:

Frequently a paving contract is let following a grading or structure contract which has not been completed when expected.

The policy on charging of working days in this situation is as follows: Whenever paving operations are in progress, working days are charged when paving is identified as the controlling operation, even though there may be a section of the project that cannot be paved because of some uncompleted work. If paving operations must be suspended or cannot start because of this uncompleted work, charging of working days should also be suspended. The Contractor and Project Engineer shall agree on a date for resuming paving operations.

The site is considered not available if the Contractor's operation would be restricted or curtailed to the extent that production is reduced because of insufficient or excluded areas. Examples of contracts often delayed are:

- Bridges delayed due to uncompleted berms
- Paving work delayed because of grading construction

Working days will be charged whenever the Contractor is working on the controlling operation, whether before or after the approximate start date. A "Notice to Proceed" shall be issued if the Project Engineer determines there are sufficient reasons and available areas to expect the Contractor to be working. In this case, the Project Engineer will contact the Contracting Authority to notify the Contractor that the site is available and work should start. If the Contractor does not start on or before the 15th day following a "Notice to Proceed," charging of working days will begin on the 15th day.

Factors to be considered are amount of work available to the Contractor, safety, other contracts, other work, opening the road to traffic, etc.

Examples of this type of contract are fencing or signing. In either case, the Contractor will only be able to work as areas are completed and become available. The Contractor may be expected to work in somewhat confined or limited areas due to other Contractors or subcontractors on the site.

B. Late Start Date

When a contract includes a late start date, the Contractor may start work any time after execution of the contract if permitted by specifications and weather. If an early start is allowed, working days will be charged commencing when work is actually started. Otherwise, working days will be charged starting on the late start date.

Occasionally the Contractor will start a project, complete several items of work, and then request that working days be suspended. The charging of working days may be suspended only when the Contractor begins work on the project before the late start date and with the approval of the Project Engineer. Project

suspensions should normally not be allowed after the late start date, unless the project has been opened to traffic. See "Project Suspensions" that follows.

Example of an intermediate project suspension:

Usually the road will not be closed and construction work will be accomplished while maintaining traffic. Before work is suspended, the road must be left in a condition that is at least as safe as it was before the start of any preliminary work. (Refer to "Project Suspensions" in the following section.) After suspending work, a new late start date is calculated using the number of working days remaining at the time of suspension. A statement indicating work is suspended and the new late start date should be reported on the appropriate "Weekly Report of Working Days." The charging of working days would be resumed starting on the new date or when the Contractor resumes work, if earlier.

C. Specified Start Date

When a contract includes a specified start date, the Contractor can expect the site to be available by the start date specified. The guidelines for charging working days are covered in the applicable specifications. Starting work after the specified start date, except as noted in the specifications, is unacceptable. Therefore, the Contractor is expected to have a sufficient work force available to start work not later than the specified date.

Working Day

A working day, as defined in [Article 1101.03](#) of the Standard Specifications, assumes that work is able to be performed on the controlling item (or operation) of work and is defined as any calendar day except:

- Saturdays on non-accelerated projects, when inspection is not required.
- If not worked, Saturdays, Sundays and days defined in [Article 1108.03](#) of the Standard Specifications for state observed holidays on non-accelerated projects. (Refer to the note following this section.)
- If not worked, Sundays and state observed holidays when an accelerated work schedule (mandatory 6-day work week) is specified. If weather and specifications allow, a working day will be charged for all:
 1. Saturdays
 2. Days preceding and following a state recognized holiday, excluding Sunday (Refer to the note following this section.)
- Days where conditions identified in the contract documents require the Contractor to suspend construction operations.
- Days with inclement weather, site conditions, or other conditions beyond the Contractor's control, that prevent prosecution of the controlling item of work at least 25% of the daily hours routinely worked.

[Article 1108.02](#) of the Standard Specifications further refines this by charging 1/2 a working day for construction activities that occur for less than 75%, but more than 50% of the daily hours routinely worked.

NOTE: With the exception of Sundays, it is not intended to automatically restrict work on roadways where traffic volumes are not a concern. In fact, the Contractor should be allowed to work on activities that can be accomplished with minimal impact on traffic. The specification is intended to allow a Project Engineer work with the Contracting Authority to approve (or deny) the Contractor's request to work on normally excluded working days. Permission should be evaluated as to how the proposed work impacts traffic - based on site experience, Contractor's operation, and project schedule. Any decision to allow work during normally excluded times, shall be pre-approved by the Contracting Authority on non-primary road projects. For projects that impact a primary road the Administering Office must also pre-approve the request.

Working days (reference the Iowa DOT Construction Manual [Appendix 2-27](#)) will be charged when work actually begins on the contract, unless:

- A. The Contractor does not start work on the Specified Start, or Late Start, date required by the contract documents. In this case, working days will be charged commencing with the date specified.
- B. For Approximate Start date contracts, the Contractor does not start work on the date agreed to at the preconstruction meeting. In this case, the Project Engineer shall notify the Contracting Authority to issue (or has already issued) a "Notice to Proceed." Working days will start on the 15th day following a "Notice to Proceed," or when the Contractor starts, whichever is earlier. (Refer to [Article 1108.02](#) of the Standard Specifications)
- C. The Contractor begins to work, or is working, during winter shutdown (November 15 to April 1) and:
 - working days remain for the contract, or
 - the contract does not require winter work.

Calendar Day

Calendar days are typically used on Incentive/Disincentive projects. As the name implies, calendar days are every day shown on the calendar beginning at 12:01 AM and ending at 12:00 midnight.

There is clarification for charging calendar days noted in [Section 1111](#) of the Standard Specifications. It states in part: Additional closure days for weather delays will not be allowed for the first 5 consecutive closure days by adverse weather (i.e. rain, snow, extreme heat, etc.). The specification identifies non-weather related extraordinary circumstances which will be considered provided they cause a delay.

NOTE: Additional closure days have to be authorized by writing a "Substantial" Change Order to the project.

Controlling Item of Work

The controlling item (or operation), as defined in [Article 1101.03](#) of the Standard Specifications, of work is: Work that is (or could be) in progress at any given period of time, and would have the greatest influence on the duration of the contract.

Stated another way: at a given point in time, any task which has the greatest impact on completing the project on time will be considered the controlling item of work.

There can be only one controlling item (or operation) of work at any given time. Also, by definition: A controlling item (or operation) of work should change as the project progresses from start to finish, and the item (or operation) need not be completed to change. For example:

- Placement of reinforcing steel may be a controlling operation at some point in time. However, placing all reinforcing steel in a bridge need not be completed before another operation such as placing structural concrete would become controlling.
- Fabrication and delivery of tower lighting poles may be a controlling item of work. However, delivery of "all" towers and masts need not occur before construction of tower bases or erection of some towers would become the controlling operation.
- Placing granular subbase is a task which obviously needs to occur prior to placing pavement. However, once placing the subbase has advanced far enough to stay ahead of placing pavement, the paving operation would become controlling.

For contracts with a Critical Path Method (CPM) schedule, the controlling item (or operation) is identified by its appearance on the critical path. For contracts without a CPM, determining the controlling item (or operation) is not as straightforward and is decided by the Project Engineer. In these cases, the Project Engineer should include input from the Contractor and then decide:

- What task is, or should be, in progress (at that time) to keep the project on schedule?
- What task (at that time) has the greatest influence on completing the project on time?

Construction operations must be able to occur on the controlling item (or operation) before a working day will be assessed. A working day will not be charged unless work can be performed on the controlling item (or operation) of work, even if the Contractor is working elsewhere on the project. Factors considered outside the Contractor's control are:

- A. Adverse weather which results in site inaccessibility or non-workability of materials. Further, the Contractor will not be required to perform any task under unsafe conditions resulting from (or during) adverse weather. Suspension of working days is allowed only if the Contractor is working, or ready to work, on the

controlling item (or operation). In the event of adverse weather, working days will not be charged during inclement weather, even if the Contractor has not mobilized to the project.

B. Insufficient survey stakes, late acceptance or testing of materials, or lack of inspection support could result in suspension of working days **PROVIDED** the item in question is a controlling item (or operation) of work **AND**:

- These delays were caused as a result of inaction by the Contracting Authority. For example: Insufficient survey will not be a reason for suspending working days, unless the Contracting Authority has not provided adequate preliminary survey staking or there is a plan error.
- The Contractor provided adequate advance notice indicating a specific need. Timely notice and communication between all project team members are of the utmost importance.

Note: There has to be a clear impact to completing the project on time before a suspension, or additional contract days will be considered.

C. Strikes which are not directed against the Contractor. For example: A labor strike against a material fabricator, after the project has started. Or a trucking strike which at a minimum affects all transportation in a particular region where materials or supplies must come from.

D. Legal stoppages are reason to suspend charging of contract time if they are a result of legal action:

1. against the Contracting Authority, or
2. against the Contractor and are not based on a specification interpretation or violation of the contract documents.

E. A controlling item (or operation) could be impacted for reasons such as:

- Delays resulting from redesign or a plan revision
- Redirecting traffic onto a project by State personnel due to some unforeseen emergency
- Awaiting contract pile lengths based on test pile results
- Awaiting a preceding Contractor to complete their work
- Delays associated with environmental problems

F. Late Delivery of Material. Procurement of material for a project is solely the Contractor's responsibility. Contract time credits for late delivery will be considered only when the Contractor documents:

- Orders were placed with a reliable supplier, in sufficient time for materials to be delivered on schedule.
- The supplier has made a reasonable attempt to secure equal materials elsewhere within the industry.

- A supplier has the capability and ability to provide materials at the rate promised.

Contract time credits (working or calendar days) may be allowed for the difference between promised and actual delivery dates. However, the promised delivery date must have been realistic, acceptable, and fully documented to the satisfaction of the Project Engineer. Time credits could be allowed for late delivery if the problem developed after a project was let because of:

- An area or nationwide shortage of the material.
 - A natural disaster.
 - An industry wide strike.
 - Transportation strike which delays the delivery of material.
 - Delays due to a change in material commitments when caused by a federal emergency or order.
 - Delays due to specially fabricated material which are damaged during shipment to the project.
- G. Redoing work that had been completed, but was damaged or destroyed for reasons beyond the Contractor's control. For example: A grading Contractor is working on a project and rain occurs. The Contractor starts back to work and has to disk previously placed material to dry it out. Working days should not be charged until the site is back to "reasonably" the same condition it was prior to the rain. (Note: Drying borrow material, after a rain, would also be included in this scenario.)

RATIONALE: If the Contractor is willing to place special "early" effort into a project, or if the Contractor has to redo work which was damaged, the intent is not to penalize that effort by charging contract time until the site is back to its "original" condition.

Obviously, an alternate would be for the Contractor to wait until site conditions are perfect and then resume work. This is not beneficial to either the Contracting Authority or the Contractor.

- H. Change Orders and plan revisions could affect the controlling operation. Impacts on time should be considered for extra work and plan revisions and addressed when the impact is known. A Change Order for additional time may be executed when the impacts are quantified. For projects with a CPM schedule, simply providing an updated schedule, without substantiating information detailing changes, will be inadequate for a comprehensive review.

For large overruns, the magnitude and impact may not be readily known until the final quantities have been determined. In such situations, relative information should be included as notes on the Working Day Report.

- I. Natural Disasters are typically a result of storms which produce catastrophic results and supersede "adverse weather" described in "A" above. In Iowa, the Governor's office issues disaster proclamations.

A suspension order may be issued on any project in a declared disaster area. After consulting with the PIRC, recommendations for a disaster suspension will be initiated by the Project Engineer, sent to the Administering Office for final approval. Disaster suspensions will be considered for projects regardless of the Contractor's working status, i.e., actively working or not yet mobilized to the site. Time credits could also be considered for damages to plant facilities, equipment, supplies, partially completed work, and completed work which must be redone.

- J. The Weekly Working Day Report form ([Form 830238 \(Word\)](#)) becomes a very important document in providing a historic record of events. This form should include notes about delays and other pertinent information that can be used later to assist in resolving disputes that may arise.

Special Considerations

- A. Adjusting Liquidated Damages

Assignment of working days is based on the estimated value of the contract costs as found in Table for Proposal Guaranty and Liquidated Damages per Day in the [Iowa DOT Letting Guidelines](#). Any adjustments to Working Days, when calculating Liquidated Damages, should be based on costs accrued due to administration costs, user costs from either delays of the project or out of distance travel to get around the project should also be considered (see Section 10. Liquidated Damages in the [Iowa DOT Letting Guidelines](#).)

[Article 1108.09](#) of the Standard Specifications states in part that the Contracting Authority may waive liquidated damages which accrue after the work is in a condition for safe and convenient use by the traveling public. This specification also identifies conditions which must be met before considering any credit.

Further, the Contractor would be expected to retain or obtain sufficient equipment and work force necessary to complete the remaining work within a reasonable time. Normally 30 calendar days would be considered adequate time to allow for completing minor work under this provision. One method for administering working days on projects that are substantially completed with only clean-up / Punch List items remaining to be completed (typically in the following spring) is to advise the Contractor that charging of working days will resume in 31 days. This allows the Contractor to complete the project with no working days for clean-up work if it is completed with the 30-day period.

- B. Winter Work

Determination of contract days (working or calendar days) charged during winter shut down (November 15 through April 1) will be according to [Article 1108.02](#) of the Standard Specifications and [Section 1111](#) of the Standard Specifications,

and the contract proposal. Unless otherwise noted, contract proposals allow the Contractor to work between November 15 and April 1 with no time charged. Regardless of whether working days are charged, Working Day Reports are to be issued whenever the Contractor is working on the project. The reports provide documentation of project status and the Contractor's progress.

However, a contract period ends when the Contractor has used all the specified number of working days. Therefore, if the Contractor has used all allowed working days and has not completed the project and continues (or is required) to work after November 15, working days will be charged.

This could also apply on intermediate completion dates. If all specified working days for an intermediate completion are used, but contract time remains for completing the project and the Contractor continues (or is required) to work after November 15, working days would be charged until the intermediate completion work is completed. But, charging working days would then be suspended until April 1.

The two situations above assume work can be completed sometime after November 15. This is not always the case. Anytime working days are charged during winter free time because of uncompleted work, the Contractor will be required to work as long as conditions are favorable for work to occur. At the point where weather and/or site conditions prohibit acceptable constructive work to continue, a suspension will be issued and work will be commenced at the first opportunity in the spring.

The Project Engineer may require the Contractor to place temporary materials prior to a suspension in the following situations:

- A project (or a required intermediate portion) is not completed within the allowed contract time, **and**
- work continues (or is required) after November 15, **and**
- due to weather conditions, work cannot be completed.

Typically, temporary materials will be required for safety or soil erosion considerations. All temporary materials shall be furnished, placed, and removed if required prior to start-up at the Contractor's expense.

If the Contractor wishes to start work prior to April 1 and the contract proposal allows winter free time, the Contractor is required to request authorization to commence work prior to April 1. If the Project Engineer and the Contracting Authority approve the request, a condition shall be imposed that the Contractor is not entitled to compensation for delays when not able to work during the winter free period. This condition shall also be used when the Contractor submits a CPM schedule indicating work performed prior to the contract period.

C. Project Suspensions

The Project Engineer and Contracting Authority may approve a suspension when either of the following two conditions is met:

- when the Contractor starts work prior to the late start date
- when a project is substantially completed

However, if it is apparent the intended suspension would make it impossible for the Contractor to complete the project within the intended construction season, the Contractor will be advised that suspension of work will not be approved and charging of working days will continue.

If it is necessary, or required, that the road be closed to traffic because of the preliminary work, a suspension will not be allowed and working days will be charged unless there are extenuating circumstances or situations.

Charging of working days may be suspended on substantially completed contracts when only clean-up of the project site and/or completion of minor work remains. The specification that provides for this allowance depends on whether liquidated damages have accrued at the time of suspension.

For contracts that have not accrued liquidated damages at the time of suspension, [Article 1108.06](#) of the Standard Specifications, "Temporary Suspension of Work" is to be followed and working days will not be charged when the following conditions are met:

- Only minor work or clean-up of the project remains to be completed
- The Contractor submits to the Project Engineer a written request for suspension of work and a schedule for satisfactory completion of the work.

If approved, the Project Engineer will notify the Contractor that working days will be suspended. This may be accomplished by the Project Engineer noting on the weekly working day report that charging of working days is suspended. If the request is not approved, the Project Engineer must advise the Contractor in writing of the reasons the suspension is denied. The Contractor should be provided with a response to their request in a timely manner.

It is important to note that this procedure is not intended to allow a suspension for an indefinite period of time without a planned and approved schedule for completing the work. The Project Engineer may resume working day charges when the approved suspension expires if the Contractor fails to complete the work in accordance with the schedule submitted with the request for suspension.

On contracts that have exceeded the allowable number of working days allowed and are accruing liquidated damages, [Article 1108.09](#) of the Standard Specifications, "Failure to Complete Work Within Contract Period" is to be followed. In this case, working days should not be charged when the following conditions are met:

- Traffic must have complete use of the roadway, shoulder to shoulder, with no delays or one-way traffic and no obstructions except for signs warning of construction work ahead.

- The remaining work to be completed is confined to the areas outside the shoulder edge.
- Only minor work is left for completion such as clean-up or erosion control work if it is a small item, not part of an erosion control contract, and the erosion control work is completed during the first available seeding period.
- The remaining work is completed without excessive delay on the part of the Contractor.

D. Projects Behind Schedule

Typically, bar charts and Critical Path Method (CPM) schedules have been used as a means of relating construction progress versus time for various types of construction projects. The Project Engineer will monitor progress by using these schedules and the "Weekly Report of Working Days."

No mandatory acceleration action is required of the Contractor unless a project is 10%, or more, behind schedule. If the Contractor is more than 10% behind and an accelerated work schedule is expected, there should be no additional costs passed on to the Contracting Authority for any costs borne by the Contractor due to the requirement of the accelerated work schedule.

- **10% Behind Schedule**
When the Contractor is 10% or more behind schedule, the Contracting Authority may issue a notice as provided in [Article 1108.02, I](#), of the Standard Specifications. Further action may be taken if it appears that the rate of progress is such that the contract will not be completed within the allowed time. Ten percent behind schedule may warrant written or verbal assurances from the Contractor of what they will do to bring the project back on schedule.
- **20% Behind Schedule**
When the Contractor is 20% (or more) behind schedule, and it appears that completing the project on time is in jeopardy, the Contracting Authority (working with the Administering Office) will recommend actions described in [Articles 1102.03](#), [1103.01, B](#), and may take further action described in [Article 1108.02, I](#), of the Standard Specifications.

A letter to the Contractor will be required when a project is more than 20% behind schedule. This letter should reiterate the Contractor's obligation to expedite the work and remind them of the various provisions of [Article 1103.01, B](#), and [Article 1108.02, I](#), of the Standard Specifications. The letter should also request a reply from the Contractor on steps which will be implemented to improve work progress within the next two weeks, and to ultimately have the project completed on time.

The Administering Office should be notified at the end of 14 additional working days if:

- the Contractor has failed to respond to the letter, and/or
- the Contractor has not taken positive, measurable actions to improve project deficiencies.

2.32 NOTICE TO PROCEED ([FORM 830237 \(Word\)](#))

Historically, the Notice to Proceed form ([Form 830237 \(Word\)](#)) has not been widely used due in part to good coordination efforts and communication skills of project team members and use of the executed contract as the notice that the Contractor may begin work. The form was developed for Approximate Start Date contracts (where there is no specified starting date on the contract) to formalize Contractor notification relative to a project start date. However, the form may be used for any special situation needing a formal time notice not imposed by the contract documents.

Generally, formal notification is not necessary if:

- A start date has been agreed to at the preconstruction meeting and the agreed date is recorded in the minutes. These minutes must then be distributed to all participants including the Contractor. A week will be allowed for comments and revisions. After that time, the minutes become documentation of agreements made during the meeting.
- The Contractor has started work prior to the critical time for issuing a Notice to Proceed.
- An early work waiver has been approved.

If the Contractor does not appear to be ready to start on the agreed date, or project conditions warrant an earlier start date, the Project Engineer may issue a Notice to Proceed form ([Form 830237 \(Word\)](#)). Examples of these cases are:

- The Contractor agreed at the preconstruction meeting to mobilize and begin work on the second week in July. It is now the first week in July, the Project Engineer has been unable to reaffirm the start date or the Project Engineer has reason to believe the Contractor has no intention of starting as agreed.
- Assume: There is a contract for an HMA overlay. This contract includes some patching with an approximate start date of June 1. At the preconstruction meeting, the Contractor noted they would mobilize and begin patching work on July 15. Sometime after the preconstruction meeting, but before the Contractor starts to work, the Project Engineer or Contracting Authority becomes aware that the roadway in question is experiencing rapid deterioration and patching must begin earlier, say mid-June. In this case, the Notice to Proceed form could be used to require the Contractor to begin work.

NOTE: Cannot "mandate" the Contractor to begin work prior to the approximate start date. If the Contractor is agreeable and the site is ready, work can begin

before that date but forcing the Contractor to start early could result in the potential for an acceleration claim.

In either case the Contractor should be contacted to discuss relevant issues and attempts made to redefine a new start date. However in the absence of an agreement, or if the Contractor is not amenable to starting work as needed, the Contracting Authority should issue a Notice to Proceed form ([Form 830237 \(Word\)](#)).

NOTE:

1. In the absence of an agreement, the Notice to Proceed form must be issued before working days can be charged.
2. A starting date in the Notice to Proceed must not be less than 15 calendar days after date of issuance.
3. Working days will be charged beginning on the 15th calendar day after the Date Issued on the Notice to Proceed, or when the Contractor begins work, whichever comes first.

2.33 WEEKLY REPORT OF WORKING DAYS ([FORM 830238 \(Word\)](#))

The Weekly Report of Working Days (working day report) form ([Form 830238 \(Word\)](#)) is an Iowa DOT form used to document time charged versus actual work completed. Two forms currently used for reporting of time charges are:

- The Weekly Report of Working Days form ([Form 830238 \(Word\)](#)) is the standard form used for all construction and/or maintenance contracts.
- Incentive/Disincentive contracts require charging of calendar days during critical closure periods and should use the Weekly Report of Working Days for Incentive/Disincentive Clause form ([Form 830241 \(Word\)](#)).

Except for tracking Critical Closure Days, the forms look about the same and their preparation is similar.

Preparation of [Form 830238 \(Word\)](#)

The form is divided into two basic sections, one for reporting working days used and the other for reporting work progress. Instructions for preparation are as follows:

1. Late/Approx. Starting Date

If an approximate start date is designated, enter that date. If a specified start or late start date is designated, that date is entered and the abbreviation "Approx." is crossed out. (In FieldManager, the date that the Contractor starts work should be entered in the "Construction Start Date" field.)

2. Length of Project

Enter the length of the project in miles, if applicable. Note: Bridge, culvert, and other site specific projects need not be included in this section.

3. Type of Work

Enter the type of work such as PCC paving, AC resurfacing, shoulder stabilization, structures, etc. For structures, (bridge or culverts) enter the individual design number(s).

4. Days of Week

For reporting contract time, a day starts at 12:01 AM and ends at 12:00 midnight.

5. Controlling Operation

During the contract period, list the controlling item (or operation). If work is not progressing on the controlling item (or operation), note controlling item in appropriate column and actual work item in the "Remarks" column.

When work is stopped or suspended and working days are not charged, the reason for not charging time should be noted under "explanation of delays."

When the Contractor is not working and working days are being charged, give the reason why there is no work in progress, if known. For example, under "Explanation of Delays" and/or "Remarks" note something like: Waiting for subcontractor to mobilize.

6. Working Days Charged

If conditions allow work on the controlling item (or operation) of work, tabulate time charged for that day. (Refer to the Iowa DOT Construction Manual [Appendix 2-27](#) for charging of contract time.) Listed values will be either 1/2 or 1 for days where conditions allow work on the controlling item and 0 (zero) if days are not charged.

Refer to Section 2.34 of this Attachment for adjustment of time charged in FieldBook/Field Manager contracts.

7. Work Progress

Three blanks are provided for major items or phases of construction. Items entered in this section are intended to provide a "quick reference" of progress for various major items. Since working day reports are continuous, it is easy to look back in a file to glean relevant data. Thus, it is preferable to allow a project inspector the flexibility to include various major phases rather than rigidly adhering to 3 items for an entire project. In so doing, anyone looking retrospectively can obtain a quick mental reference as to major work in progress at any given time. For example:

- On report #6 an inspector included Pier 2, North Abutment, and South Slope Protection.
- On report #7 the list changed to Piling, Pier 3 Footing, and Reinforcing Steel.
- On report #8 the list reverted back to report #6's items.

Report Number	Type of Work	% Complete
6	Pier 2	40
	North Abutment	60
	S. Slope Protection	20
7	Piling (Furnish & Drive)	90
	Pier 3 Footing	10
	Reinforcing Steel	30
8	Pier 2	70
	North Abutment	95
	S. Slope Protection	100

Such reporting may seem nonsensical; however, individuals using this report often need "quick" historical data that is unavailable elsewhere.

8. Percent Complete

Blanks are on the form for entering percent of the total contract completed, and percent of time used. All the percentages need only be approximate calculations, rounded to the nearest 1%. When the rate of progress on a project is behind schedule to the extent that there is danger work will not be completed on time, note such situations on the "Weekly Report of Working Days."

Preparation of Incentive/Disincentive Form

As noted above, the Weekly Report of Working Days for Incentive/Disincentive Clause form ([Form 830241](#)) for projects specifying incentives and/or disincentives (I/D). This form tracks both working and calendar days on the same form.

Preparation of [Form 830241](#) for incentive/disincentive is generally the same as for Weekly Report of Working Days form ([Form 830238](#) ([Word](#))) except:

1. Under "Controlling Operation" there are two columns, one for CPM and the other for "Actual". When charging contract time (working or calendar days), complete the CPM controlling column. An entry in both columns would be appropriate to document when the Contractor is working, but not working on the CPM controlling item (or operation) identified by a CPM.

NOTE: CPM schedules show a critical path. Any item (or operation) on this path is, by definition, a controlling item (or operation).

2. Columns headed "Working Days Charged" or "Critical Closure Days Charged" days are self-explanatory. NOTE: Working days are assessed when site conditions permit work on the controlling item (or operation) during noncritical

closure time(s), and calendar days are charged every day during critical closure time(s).

Multiple Sites on a Contract

A contract may consist of multiple "sites" in addition to the overall contract, which is known as Site 00. Multiple sites are used when smaller specific portions of the contract are required to be completed in a time frame that is different than the overall contract. The site numbers, site description, start date, and time allowed are described in the "Proposal Details."

Multiple site contracts include:

- Contracts with intermediate completion periods. Example: a grading contract with intermediate completion periods for completion of bridge berms.
- Multi-project contracts. Example: a contract consisting of more than one project.

For multiple site contracts, working days for each site, including the overall contract (Site 00), will be administered independently based on the controlling operation for the site. A work day will be charged to a site when work is done on the controlling item of that site.

An example of a proposal that includes multiple sites:

- The overall grading contract (Site 00 with 120 working days allowed)
- A hot mix asphalt paving project (Site 01 with 90 working days allowed)
- An intermediate completion period for constructing a bridge berm (Site 02 with 50 working days allowed)
- A RCB culvert project (Site 03 with 30 working days allowed)

A typical scenario may be that, due to wet weather, conditions allow work on controlling operations of Sites 01 and 03, but not on Site 00 or 02. In this example, time would be charged to sites 01 and 03, but not to the overall contract (Site 00) or Site 02.

Occasionally a proposal will include an intermediate construction period, have a liquidated damage clause, and a statement which paraphrasing states: Liquidated damages will not be charged for work prior to (XXX date) regardless of working days used. In this case, the "XXX date" will be the date (typically approximate start date) for a following contract. Use of this clause is intended to allow the Contractor flexibility and latitude in their schedule, while fixing a point in time that a future Contractor can reasonably assume a site will be available. If the first Contractor does not meet that date, liquidated damages will be assessed because a future Contractor/contract is impacted.

When intermediate construction period requirements have been met, the "Remarks" section on the Weekly Report of Working Days form ([Form 830238 \(Word\)](#)) should be noted with "final" and:

1. Date intermediate work was complete or when contract requirements were met.
2. Total contract time charged to an intermediate construction phase of the work.
3. Total contract time charged in excess of the number of days specified, if an intermediate construction date is not completed on time.

2.34 LIQUIDATED DAMAGES AND EXTENSION OF CONTRACT TIME

If the number of allowable working days is exceeded and it is later determined that previously charged days should not have been charged, the length of the contract period is to be extended. The number of allowable days is increased by processing a time extension modification to the contract.

Retained funds held by the Contracting Authority are not intended to offset credit payments for deficient work and/or liquidated damages.

When liquidated damages, as defined in Weekly Report of Working Days form ([Form 830238 \(Word\)](#)), are anticipated, item progress of the Contractor's items shall be withheld to cover liquidated damages. These items will be increased to the final quantities after a Change Order for liquidated damages is processed.

If initial negotiations between the Contracting Authority and the Contractor fail to resolve differences, the Project Engineer shall request negotiation assistance from the Administering Office.

Should combined efforts described above fail to resolve dispute(s), the issue will be considered to have reached an impasse. At this point, a meeting with all affected parties shall be scheduled by the Administering Office.

If liquidated damages remain after considering possible working day credits or time extensions, a Change Order is to be written. The amount of liquidated damages shall be written as a non-substantial credit Change Order using the item number 6200-1108010. The Administering Office will not process a Final Voucher until all liquidated damage claims are settled.

For projects where construction engineering is Federal-aid funded, the Change Order for Liquidated Damages should be marked under the "Participating" "Federal-aid" column. For projects where projects are State funded, the Change Orders for Liquidated Damages should be marked under the "Participating" "State-aid" column. For all other situations, Liquidated Damages are non-participating so no marks should be made in either column under "Participating". However, it is required to note in the Justification for Costs that "the LDs on this project do not exceed the construction engineering costs."

2.35 EQUIPMENT RENTAL RATES

On construction projects, unanticipated costs for equipment can arise as a result of work that was unforeseen at the time a contract was awarded. Such unforeseen work is often necessary in order to complete a project. Data on actual costs for equipment used for

such additional, unanticipated work is usually not available, primarily because it is difficult to separate equipment costs from items bid in the contract documents. Preferably the Project Engineer and Contractor successfully negotiate a price that is agreed to by the Contracting Authority and concurred by the Administering Office for unanticipated work and execute a Change Order to the contract. In formulating the costs for such Change Orders, [Article 1109.03, B](#), of the Standard Specifications allows the Contractor to use Rental Rate Blue Book (Blue Book) rate guides or actual lease invoices to calculate equipment costs.

Rental Rate Blue Book

The Rental Rate Blue Book is a recognized standard rate guide which can be used to determine rental rate cost in force account work and to substantiate equipment costs for agreed price work. Typically, this method of determining rental costs is used when the Contractor owns, or has a long term lease for any equipment in question, but does not have an established rental cost per unit of time. Rental Rate books are published semi-annually as a 3 volume set. The set covers a broad range of types and ages of construction equipment. The volumes are arranged to include information based on the age of equipment:

- Volume 1 - past 5 years
- Volume 2 - 6 to 10 years
- Volume 3 - 11 to 20 years

One of the greatest challenges in using Rental Rate books is finding a particular piece of equipment. It is important that Contractors provide complete, definitive, information relative to a particular piece of equipment, i.e., manufacturer, model number, type, size, horsepower, bucket or box capacity, equipment weights, and age. Such information is equally important as equipment ages beyond 10 years because the listing breakdown becomes less detailed. Further, it is often necessary for the Project Engineer to use all available information in finding reasonable alternates for non-listed equipment.

Data published in Rental Rate books provide a detailed guide to costs associated with equipment ownership, rental, and usage. (NOTE: Operator wages are not included.) To use Rental Rate costs, several adjustment factors must be applied before a user gets to the "bottom line." A detailed explanation of individual adjustments is provided in Volume 1's "Introduction" section. For Iowa DOT applications, equipment monthly rental rates shall be adjusted by:

A. Regional Adjustment Factor

In the first few pages of each section will be a United States map divided into "Adjustment" regions. To the side of this map, adjustment factors are shown by regions. These adjustments reflect variations that affect equipment ownership costs. The most significant item in this factor is an adjustment for climate and its effect on equipment's average annual use. (A shorter working season means rates will be higher to recover fixed annual costs.)

U.S. maps have Iowa divided into two regions by a line running roughly from Dubuque to Council Bluffs. For uniformity of application, projects on and north of

Highway 30 will be included in the northern region and work south of Highway 30 in the southern region. Regional adjustment factors apply to rental rates only and are not to be used to adjust hourly operating costs.

To make Regional Adjustments, multiply the monthly rental rate times the appropriate adjustment factor.

B. Rate Adjustment Factor

Equipment rental rate listings contain allowances for depreciation and replacement costs. FHWA has ruled that Rental Rate costs are not eligible for reimbursement unless the rate has been adjusted to eliminate depreciation and replacement costs. Therefore, Iowa DOT policy will be to apply Rate Adjustment Factors to both federal aid and non-federal aid projects.

Rate Adjustment Tables included in the front of each section lists equipment in that section, date of equipment manufacture, and an adjustment factor. Instructions for using Rate Adjustment Tables are included in the "Introduction" section. Rate adjustments apply to rental rates only and are not to be used to adjust hourly operating costs.

To make Rate Adjustments, multiply the previously adjusted monthly rental rate times the appropriate adjustment factor.

C. Rate Element Adjustment (Indirect Cost)

Care needs to be exercised when applying rental rates to avoid cost duplication. [Article 1109.03, B](#), of the Standard Specifications states: "Profit percentage shall not be added to the rental rate." This is because rental rates published in the Rental Rate Book include indirect costs, i.e. some overhead and profit costs, insurance, taxes, licenses, office support, etc. Since specifications do not allow adding profit, the potential for duplication is eliminated and there is no need to use a factor for removing indirect costs. (This means: Pay what the previously noted adjustments amount to in rental rate, but no more.)

Rental Rate Books include a Rate Element Adjustment Factor for removing indirect costs. (Refer to the Rental Rate Book "Introduction" section should a deduction be needed.)

Invoiced Rental Costs

There are times where the Contractor will obtain needed special or extra equipment at a rental facility. The Contracting Authority reimburses rental costs for providing equipment and highly specialized attachments, equipment operating costs, and costs for an operator, and if necessary equipment support crew. Care needs to be exercised in checking how a rental arrangement is written. Sometimes operators are furnished in a rental agreement. In that case, the operator and/or support crew have to be removed from equipment rates and included on the force account form as hourly labor.

Equipment Time Charges

Charging equipment project time will be as follows:

A. Equipment on the Project

This can be equipment on the project that is owned, leased, or rented by the Contractor. Rental time is charged when the equipment is physically working at the extra work site. Standby time will not be allowed for equipment which was on the project (prior to extra work) for work required by the contract. Further, rental time will not be charged when equipment is not working, no longer needed for the extra work, or not on the extra work site.

B. Equipment not on the Project

This can be equipment that is owned, leased, or rented by the Contractor and is mobilized to the extra work site specifically for extra work. Rental time is charged when the equipment is working or is on standby available for work. Rental or standby time will not be charged when the equipment is no longer needed for extra work or not on the extra work site.

C. Standby Time

Standby time is that time a piece of equipment is at the extra work site, fully functional, and available for work. The use of a standby rate is appropriate when equipment has been ordered to be available for force account work but is idle for reasons which are not the fault of the Contractor.

Standby time will not be charged for:

- nonworking hours
- nonworking days (calendar or working days)

D. Set-up Time

Often equipment transported to a work site will have to be assembled (set up) prior to being fully functional and available for work. Set-up time will be charged (on a working day basis) after off-loading the equipment from a transporting vehicle and continue until it is assembled and available for work.

Chargeable Project Costs

As previously noted, rental rates apply to equipment rented or leased for specific extra work items. Equipment often requires highly specialized (not common) attachments to functionally perform the work needed. Rental rates for these attachments will be calculated in the same manner as if they were a separate piece of equipment. For example: A dozer blade would not be considered a specialized attachment for a dozer. However, a special rock ripper for a dozer or a drill table for a crane (used to install drilled shafts) would be considered specialized attachments.

A. Rental Rate Blue Book

The formula to calculate hourly equipment rate is:

$$\text{EQUATION 1: } W = \frac{(RR \times RF) \times RA}{HA} + HO$$

Project cost is the hourly equipment rental rate (W), calculated above, and multiplied by the number of hours charged for that piece during the project. This value is combined with any other extra work equipment costs and entered in the "Equipment" column on a Statement of Force Account. NOTE: Operator wages will be included with other "labor" costs on the Force Account sheet.

B. Standby Costs

Standby rates are calculated as 50% of rental rates, excluding operating costs. Using the Rental Rate Blue Book, standby rates are calculated as follows:

$$\text{EQUATION 2: } Y = \frac{(RR \times RF) \times RA}{HA} \times 0.50$$

Where:

- W = Hourly Equipment Rate (reported as \$ per hour)
- Y = Hourly Equipment Stand-by Rate (reported as \$ per hour)
- RR = Rental Rate (Use listed monthly rates)
- RF = Regional Factor (found in the front of each section)
- RA = Rate Adjustment Factor (found in the front of each section)
- HO = Hourly Operational Cost (as listed for each piece)
- HA = Hourly Adjustment (HA = 176, converts monthly to hourly)

C. Set-up Costs

Project set-up costs will be calculated and charged as standby time. (Refer to "B" above, and section "D" of Equipment Time Charges.)

D. Mobilization Costs

1. Mobilization and demobilization charges will not be allowed for equipment which was at the project for ongoing operations prior to the extra work.
2. Contractor owned (or long term leased) equipment which is brought to the extra work site from another project, or the Contractor's yard, will have mobilization costs reimbursed based on hauling time to the project. Rental rates as calculated in Equation Number 1, times the hauling time will be applied for mobilization costs.

NOTE: Only equipment needed for the extra work and not already on the project will be considered for mobilization reimbursement. Demobilization time (or costs) will not be included for payment.

3. Equipment leased specifically for extra work and transported by the Contractor will have mobilization time reimbursed as outlined in D. 2. above. Demobilization time (or costs) will not be included for payment.
4. Equipment leased specifically for extra work which is transported by the lessor, or a third party, will be reimbursed on an invoiced basis. Demobilization costs will be reimbursed if the equipment is returned to a lessor's yard.

Statement of Force Account Form ([Form 181213](#))

The Statement of Force Account form ([Form 181213](#)) completed and signed by the Contractor and project inspector at the end of each day document hours charged to equipment for that day. After the ordered extra work has been completed, total hours charged for equipment can be combined and tabulated on a summary force account sheet.

2.36 CHANGE ORDERS ([FORM 831240](#))

A Change Order is a written order to the Contractor for:

- Changing the authorized quantity of a contract item. This includes increases or decreases to contract quantities.
- Adding a new item or material to an existing contract. Often this is a result of plan revisions or a change in scope from what was originally envisioned at time of letting.
- A source document for the Office of Finance to enter changes and additions into the Contractor Pay System or for the Contracting Authority to authorize extra work or changes in item quantities. Ultimate results of this endeavor are changes to items, or additional items, appearing on a Progress Voucher or Pay Estimate.
- Officially documenting changes to the contract documents. Change Orders are written orders to the Contractor (or consultant) which are initiated and prepared by the Project Engineer. Once signed by all parties, these orders become legally binding contract documents ordering a specific change to the original contract.

Policy for Change Orders

A. Contractor Markup

Subcontracted Items. Items added to a contract, and performed by a subcontractor, entitle the Contractor an allowance to cover administration expenses. This markup is not to apply to incentive payments or other specified items covered by specifications. The percentage allowed per [Article 1109.03, B](#), of the Standard Specifications is to be applied to each individual item of extra work which is performed by a subcontractor. The amount of mark-up shall be included in the unit price and not as a separate item such as "Contractor's Markup".

Contract Unit Price. Change Orders covering overrun/underrun of items at contract unit price are NOT eligible for any additive. This includes work which was done by a subcontractor. The contract unit price should have already considered any necessary additives for administrative expenses.

A Contractor may request a price adjustment to recover lost administration expense for underruns amounting to more than 25% of the bid amount for a major item of work. A Contractor is allowed to recover that portion of lost administration expense represented by the difference between the actual quantity and 75% of the original contract quantity.

Price adjustment may be made to reduce the cost of major items of work which overrun by more than 25%, since the Contractor should have already included overhead expenses in their bid. Overrun price adjustments apply to only that portion/quantity which is more than 125%.

Agreed Unit Price. Change Orders, based on an agreed unit price, or lump sum, shall have overhead considered as a part of the negotiation. The agreed unit price may include the cost of overhead for handling subcontracted items. It may be included in lump sum items if justified. However, if negotiations specifically excluded markup, the item may be shown as a separate entry on a cost workup sheet.

Force Account. Specified force account percentages for labor, material and equipment are intended to cover all costs that the Contractor may incur due to the work, regardless of who does that work (Contractor or subcontractor). Force account work to a subcontractor will be authorized for additional administration percentage to the Contractor.

B. Situations that require processing a Change Order:

- Any change in the original scope or intent of the project, i.e. changing the project limits which results in overruns, underruns, or new contract items amounting to \$10,000 or more. (Contact the Administering Office before proceeding ANYTIME this situation arises. Before any changes to project limits can be made new NEPA clearances must be obtained.)
- Any overrun/underrun of items that are defined at to be paid at contract quantity according to the specifications.
- Overrun/underrun amounting to \$50,000 or more on any contract item.
- All price adjustments.
- Liquidated damages.
- Value engineering proposals.
- Incentive/Disincentive payments (if incentive/disincentive items are not included in the contract).
- Added items.
- Change in specification.
- Plan revision.
- Extension of contract time.

- C. Price adjustments which reduce payment for an item are occasionally charged because material or quality of work is below minimum specified standard. These adjustments are applied when the Project Engineer has determined a problem that lacks a level of severity warranting removal and replacement. However, the problem does affect life cycle costs or could cause premature maintenance costs. For example: Rain damage, out of tolerance slump and/or air content, deficient smoothness, and insufficient pavement thickness.

On the other hand, price adjustments could provide an "incentive or reward" for exceptional work. In these cases, a project value is added due to increased diligence on the Contractor's part. Examples are exceptional smoothness and extra pavement thickness.

- D. Mutual benefit agreements require a Change Order to document changes.
- E. Reducing the final quantity of an item to zero requires a Change Order if the original contract quantity is \$50,000 or more.
- F. Settlement of liquidated damages (See Section 2.34 of this Attachment). Contract proposals will list a daily rate (dollar value) for liquidated damages. Change Orders written for liquidated damage assessments are written as non-substantial. Refer to Incentive/Disincentive provisions below.
- G. Incentive/Disincentive (I/D) provisions are included to provide the Contractor with an "incentive" to complete a project early or a "disincentive" if the project is completed late. I/D provisions will list daily rates to be applied to "critical closure" times. Change Orders written for incentive/disincentive payments for early/late completion are considered substantial.
- H. Value Engineering proposals are encouraged for all aspects of contract work. (Refer to Value Engineering later in this section.) Change Orders for implementing value engineering proposals are Substantial and shall document the terms and changes being implemented.
- I. Intentionally left blank.
- J. Items NOT Requiring a Change Order:
 - 1. Deletion of a measured items with original contract amount less than \$50,000.
 - 2. Overruns and underruns of measured items less than \$50,000.
- K. Often, plan revisions result in Change Orders having to be negotiated due to new and/or changes to contract items. Processing Change Orders resulting from plan revisions is sometimes delayed due to disagreement on prices, lack of success in obtaining qualified subcontractor(s), or various other reasons.

It is imperative that the PIRC, in collaboration with the Project Engineer, actively pursue Change Order negotiations to an early conclusion, especially if proposed work involves public safety (guardrail, safety enhancement, etc.) or work related to a prolonged detour. Obviously, agreement on unit prices is desirable;

however, there are times that work will have to proceed on a Force Account basis. In all cases, documented agreements on the Method of Measurement and Basis of Payment for items must be obtained before the Change Order is written. NOTE: No work can begin until the Contractor has either agreed to a Change Order or agreed to a basis of computing force account costs.

Preparation of Change Order ([Form 831240](#))

Each contract, on single project contracts, or each project on multi-project contracts requires preparation of separate Change Orders for changes or additions.

All Change Orders shall be agreed to by the Contractor, and have all necessary approvals prior to commencing additional work. This does not necessarily mean a fully executed Change Order document, but rather a written agreement of the work to be performed, how it is to be paid, and justification of cost. The only exception to this rule is Force Account Work. If costs for work cannot be agreed upon, the extra work must be performed on a force account basis. In such case, the Statement of Force Account ([Form 181213](#)) is used. [Article 1109.03, B](#), of the Standard Specifications provides guidance and responsibilities for preparation of Force Account forms.

Currently, there are two systems for processing Change Orders:

- The FieldBook2/FieldManager programs initiate Change Orders and export the data to CPS for processing of the payment. Refer to the FieldBook and FieldManager User Guides for instructions for generating Change Orders.
 - The reason for proposed changes shall be included for existing and new items.
 - The justification for costs shall be included for new items (Refer to the following instructions in Section C for [Form 831240](#)).
- Change Order form ([Form 831240](#)) may be used for projects paid locally by the LPA or projects on the Farm-to-Market system utilizing paper Contract Construction Progress Voucher (sometimes referred to as 309's) for processing progress payments through the Contractor Pay System (CPS).

The procedure for completing Change Order form ([Form 831240](#)) in the Contract Construction Progress Voucher system or locally paid projects follows:

- All information must be furnished (i.e. substantial/non-substantial).
- It is important that the information is in the standard format because the data is manually entered into the Contractor Pay System.

One copy of the final Change Order form should be printed and distributed for signatures.

Top of form

No.: Enter the Change Orders number. This should be a consecutive numbering system for each contract, but multiple projects on a contract must have their own Change Order. Example: a two project contract and changes need to be made to both contracts at the same time. There must be two Change Orders written. Changes to one of the projects will be made in Change Order 01 and the changes to the second project will be made in Change Order 02.

Non-Substantial and Substantial boxes: Check the box that is appropriate for this Change Orders. The Administering Office shall be consulted if there are any questions concerning the determination. The following guidelines shall be used for determination;

Non-substantial

- a. Price adjustments made to the contract in accordance with prescribed guidelines in the Iowa DOT Construction Manual and/or contract documents, such as (not all inclusive):
 - Changes in piling length
 - Jetting pile
 - Heating and protection of concrete
 - Price adjustments (plus or minus) for smoothness, pavement thickness, fuel adjustment
 - Price adjustments for liquidated damages
 - Price adjustments for rain damaged pavement
- b. Lump sum agreements, force account, and agreed price settlements less than \$50,000.
- c. Change in contract quantity at contract unit price when variations from the estimated plan quantities are not due to a plan or design change and do not equal or exceed \$100,000.
- d. Total deletion of a measured item that has a bid amount greater than \$50,000.

Substantial

NOTE: when a Change Order is classified as substantial, the Contracting Authority must obtain written pre-approval from the Administering Office.

- a. Changes or extra work requiring new contract items to be added amounting to \$50,000 or more per item. This includes lump sum agreements, force account, and agreed price settlements.
- b. Change Orders that include an overrun or underrun of an original contract item amounting to \$100,000 or more.
- c. Changes to the Method of Measurement or Basis of Payment of a contract item or changes to price adjustment schedules for defective work detailed in the Iowa DOT Construction Manual.
- d. Re-negotiation of a contract item's unit price.

- e. Value Engineering proposals in accordance with [Article 1105.15](#) of the Standard Specifications.
- f. Modifications to the terms of a contract, such as changes in contract periods. An extension to contract time is considered non-substantial. Refer to Section 2.34 of this Attachment.
- g. Adjustment in time of critical closure periods.
- h. Changes in limits of contract or scope of work.
- i. Prior to the work in the extended area, for federal-aid projects, the following items must be accomplished, regardless of the funding source for the extra work:
 - NEPA – Location and Environment staff have reviewed environmental documents and documented the extended area is clear.
 - Document the work to be performed is either cost effective or in response to an emergency.
 - FMIS – Request Administering Office to request a change in scope of work and project limits in FMIS (Financial Management Information System). Also, included are the dates for "revised NEPA clearance" and "cost effectiveness determination".

Administering Office Concurrence Date: This is the date that FHWA concurs with the Change Order so work may commence. This concurrence can be through verbal communication or email, and entered by the Engineer. This allows work to be performed without waiting until FHWA receives the form for their official signature at the end of the form.

Accounting ID No. (5-digit number): This is the 5-digit accounting number for this project. This number is obtained from the right hand side of the second section of the first page of the contract.

Kind of Work: This is a brief explanation of the work that will be performed or deleted from the project due to this Change Order.

Contractor: Name of the Contractor's company on this contract.

Project Number: The project number in this contract that will be affected by this Change Order.

Local Public Agency: The Local Public Agency that is the Contracting Authority for this contract.

Date Prepared: The date this Change Order was prepared.

Section A - Description of modification to be made

Section A is used to provide a description of the work to be completed or the modifications to be made. All descriptions should be brief and to the point; and

each should be preceded by the Line Number (xxxx) in Section F and/or the Change Number (8xxx) in Section G. For example:

- | | |
|-------------|---|
| xxxx Change | Increase item for "Class 10 Excavation, Roadway & Borrow". |
| 8xxx Change | Add an item for "Silt Basins". Work shall be in accordance with the Pollution Prevention Plan provided for in the contract documents. |
| 8xxx Change | Add an item for "Sealing Wells". Work shall be in accordance with Article 2538.03, D, 8 , of the Standard Specifications. |

Section B - Reason for modification

Section B provides space for a brief narrative of reasons (or background) for ordering the modifications outlined in Section A.

The explanation should be in sufficient detail and clarity to provide reasons why the modification is necessary; and each should be by the Line Number in Section F and/or the Change Number in Section G. A statement such as "Extra Work ordered by the Engineer" or "As per plan revision" is not a sufficient explanation.

Section C - Settlement for cost(s) of modification as follows with items addressed in Sections F and G

Section C provides space for an explanation of the basis for the cost(s) of the modification; and each should be preceded by the Line Number in Section F and/or the Change Number in Section G. The basis should be noted as one of the following: contract unit price, agreed unit price, agreed lump sum, force account, no-cost change, or mutual benefit.

Section D - Justification for cost(s)

Section D provides space for the justification for the cost(s). The Project Engineer shall conduct an independent cost analysis for items added or changed by the Contractor Modification prior to agreeing to those costs. An extension of contract unit price(s) and price(s) established in the contract documents do not need further justification. However, agreed unit price(s), agreed total price, lump sum, and force account basis do require justification; and each should be preceded by the Line Number in Section F and/or the Change Number in Section G.

Examples of justification could be:

- Original copies of material quotes.
- Comparable to item xxxx (a similar item) in the contract or a previous Change Order.
- Independent cost check of area suppliers.
- Rental Rate Blue Book values and attached to the Change Order.
- Invoiced price(s) and estimated labor cost (Davis-Bacon wage determinations) is comparable to item xxxx (a similar item).

- Certified payroll expenses, invoiced rental rate charges, and actual material invoiced.
- Davis-Bacon wage determinations.
- Summary of cost(s) and attached to the Change Order.
- Similar contracted items on previous project.

If all or part of the cost is based on an actual invoice from the contractor, attach a copy of the invoice to the Change Order.

If the Statement of Force Account ([Form 181213](#)) is used, attach copies of each day's form as justification for this Change Order.

Section E - Contract time adjustment

Section E is to address any modifications that may need to be made to the Contract Period. Every Change Order must address working days whether or not an adjustment needs to be made to the Contract Period. Make sure to address working days by checking the appropriate box; "No Working Days added" if the change will have no impact to the time required to complete the controlling item of work, "Working Days added" and how many if the change will require additional days to complete the controlling item of work, or "Unknown at this time" if the impact to the progress of the controlling item is unknown at the time the Change Order is written. If the impact is unknown, it must be addressed in a future Change Order. Add an explanation to justify the Contract Time Adjustment that was selected.

Section F - Items included in contract

Section F provides lines for entering modifications to original contract items. Change Orders written as "Mutual Benefit" or "No-cost Change" do not have entries in this section.

Section F is completed as follows:

- The first two columns indicate the "Participating" funding sources, if there is Federal-aid and/or State-aid. Communication with the Administering Office for their initial approval on Federal-aid and/or State-aid participation before entering an "x" in the column(s) that will indicate how the modification could potentially be funded. The Administering Office will review the Federal and State potential participation determination and make changes if necessary. If an "x" is not entered in either of the first two columns, the change will be locally funded.

Remember to always ask for and obtain initial approval from the Administering Office before proceeding.

Most changes to items on Federal-aid projects are eligible for Federal-aid participation. Examples of items which may not be participating are:

1. Costs relating to field mistakes. These could be errors by the Contractor or inspection forces.

2. Unincorporated material
 3. Added work that is considered "maintenance" in nature
 4. Hauling of salvaged materials
- The third column, Line Number, lists each modification to a contract item. The "Line Number" identifies the specific contract item affected by a particular change. The line number is the four-digit number identifying the specific contract item and can be found in the contract under "Line No". If making a change that has been added by a previous Change Order, use the 8xxx "Change Number" found on the Change Order in which it was added.
 - In the fourth column, Item Description, enter the name of the item being modified. This can be found either on the contract under "Item Description"; or for items that were added by previous Change Orders, it can be found on that Change Order.
 - In the fifth column, Unit Price, enter the contract unit price of the affected item. Unit Prices are entered to 2 decimals.

NOTE: Lump Sum items can be entered with a unit price of 1.00.

- In the sixth column, Quantity, enter the adjustment's quantity. (How much quantity is being changed?) All quantities should be entered to 3 decimal places. For example: Structural Concrete is being increased 53 CY. The "Quantity" would be entered as 53.000. If the change to the item will result in a decrease to the quantity, add a negative sign before the quantity to indicate this decrease (-x.xxx).

NOTE: Lump Sum items have the agreed cost (in dollars) entered in the quantity column. For example: Assume some item of work will be deleted. That item was bid as lump sum with a unit price of \$500. Then 500.000 would be entered for the "Quantity."

- The seventh column, Amount, is typically a calculated amount (total dollars) represented by a single entry. The Amount is automatically calculated when using the electronic version of the Change Order form. For example: Structural Concrete is being increased by 53 CY at a unit price of \$250 per CY. The dollar amount of this change would be $53 \times 250 = \$13,250.00$. "Amounts" are entered to 2 decimal places. If the change to the item is for a negative price adjustment or other decrease in contract costs, add a negative sign before the number in this column also to indicate a decrease in cost, unless using the electronic form in which a negative sign will automatically be entered with the calculated amount.

NOTE: Care must be exercised to identify decreased and deleted contract items, and disincentives. Obviously, the amount is negative for these types of adjustments. To indicate "negative" values, a negative sign (-) must be enter before the numbers in either the "Unit Price" or "Quantity" column. Failure to correctly enter negative values could result in increased payments to the Contractor, when in reality reduced payments were required.

Section G - Items not included in contract

Section G, provides lines for adding new items NOT originally included in the contract. The Iowa DOT policy requires additional, or new, items to be sequentially numbered starting with 8001 for each project if the contract includes multiple projects. Items added by 8xxx will appear on the progress voucher or can be entered on the pay estimate as an 8xxx item after the Change Order has been processed. Once an 8xxx item has been added, changes to that item shall be considered as original contract items. Future changes to these items shall be processed as changes to items included in the contract under Section F and will continue to carry the 8xxx line number.

Currently there are two 8xxx items which have special significance. 8998 is used solely for indicating liquidated damages and 8999 is used for stockpile of materials.

NOTE: Change Orders written as "Mutual Benefit" or "No-cost Change" do not have entries in this section.

Section G is completed as follows:

- The first two columns indicate the "Participating" funding sources, Federal-aid and/or State-aid. Enter an "x" in the column(s) that will indicate how the modification could potentially be funded. See Section F above.
- The third column, Change Number, lists each new item being added to the contract. Change numbers begin with 8001 and continue sequentially for each project, even on multiple project contracts.
- In the fourth column, Item Description, identifies an addition by properly describing the item according to the item's "Method of Measurement" and "Basis of Payment." Since descriptions are now referenced to specification sections, it is mandatory to check and use pre-existing bid item descriptions. For items which have no description, i.e. those which are typically incidental to a bid item, enter a short descriptive phrase. Pre-existing bid item descriptions are provided in the "[Index to English Items Forms](#)". The Index to English Items Forms is updated for every letting or as new items are added. The list in the "Summary of Awarded Contract Prices" book may also be used. This book is available at <https://www.bidx.com/ia/lettings>. On the "Lettings" tab, select the most recent letting and click on "Awarded Contract Unit Prices - ENGLISH" under "Downloads" on the right side of the screen. This shows the award summary for a one year period ending with the letting selected.
- The last 3 columns (Unit Price, Quantity, and Amount) are used in the same manner as explained in Section F above. For price or quantity deductions enter the number as a negative (-x.xx or -x.xxx). An example of a deduction would be when reducing payment amount on the contract include a negative sign before the amount entered in the "Quantity"

column. For a disincentive item, enter -1.000 in the “Quantity” column. The form will automatically calculate a negative dollar amount in the “Amount” column.

Section H - Signatures

Agreed: This is for the Contractor’s signature that they agree with the Change Orders as written. The Contractor should be the first to sign the Change Order.

Recommended: This is for the Project Engineer’s signature and should be the second to sign the Change Order. For publicly owned projects, the Engineer is a Professional Engineer licensed in the State of Iowa and authorized representative of the Contracting Authority, and may or may not be an employee of the Contracting Authority. For privately contracted projects, with improvements that will become publicly owned, the Engineer is the authorized representative of the public entity ultimately accepting ownership of the improvements. For all other projects, the Engineer is the owner’s authorized representative.

Approved:

- **Person in Responsible Charge (PIRC):** This may or may not be the same person as the Project Engineer. If it is the same person, they may sign on the “Project Engineer” signature line and this line, but their signature on this line is the only one required. If the LPA uses a consultant to perform construction inspection services, [23 CFR 635.105](#) requires the LPA to have a full time employee who is in responsible charge of the project. For counties and larger cities, this person is typically the county or city engineer; however, they need not be a licensed engineer or architect to be the Person in Responsible Charge. For smaller cities that do not have full time employees, the mayor or city clerk may perform this function, with assistance from the Iowa DOT Administering Office. A consultant may not serve as the Person in Responsible Charge for a Federal-aid project. For future explanation of duties and functions of the PIRC, see [I.M. 3.805](#).
- **Contracting Authority and Other lines:** These lines are all optional. If the Contracting Authority and the PIRC is the same person, they only need to sign the PIRC line above. The Contract Authority is the governmental body, board, commission, or officer having authority to award a contract. Some City Boards and County Commissions like to have their Chairs or Treasurers also sign financial documents. This gives them a place for other signatures as they desire or require themselves.
- **Iowa DOT Administering Office:** The Iowa DOT’s representative who is responsible for oversight of the project. The representative may be a District Local Systems Engineer or from the Office of Systems Planning, or a designee within their Office.

NOTE: Change Orders for Farm-to-Market projects do not need to be signed by the Administering Office.

- **FHWA Concurrence:** This is only required for Substantial Change Orders which FHWA has oversight and that determination is the responsibility of the Administering Office.

Distribution

When all required signatures are obtained, the Iowa DOT Administering Office (except on Farm-to-Market projects) will distribute the form as listed in the "DISTRIBUTION" list. If FHWA concurrence is required, FHWA will return the document to the Iowa DOT Administering Office after it has been signed. The person who distributes the executed Change Order will date and initial the document that is retained in their Office.

On Farm-to-Market projects, after being signed by the Project Engineer, or the Person in Responsible Charge if the Project Engineer is a consultant; and the Contracting Authority when that option is applicable, the form should be distributed as indicated on the form with the exception of a copy being sent to the Administering Office.

Multiple Pages of the Form

The Accounting I.D. No. and Change Order No. must be included in the upper right hand corner of each subsequent page.

Value Engineering

In accordance with [Article 1105.14](#) of the Standard Specifications the Contractor may submit a value engineering proposal to the Project Engineer with copies to the Administering Office. The purpose of value engineering is to encourage alternative, cost effective measures which produce equal or better quality end products.

Value Engineering proposals will not be accepted for:

- Changes in basic design of a bridge or pavement type. For example: Value engineering a project from PCC to HMA will not be acceptable. Changing a designed bridge to a box culvert is not acceptable.
- Changes which the Contracting Authority may already be considering.
- Basing a value engineering proposal on, or similar to, existing standard specifications, special provisions, or design plans and standards adopted by the Contracting Authority. For example: A plan was let using 15 feet PCC joint spacing. A value engineering proposal would not be accepted changing this to 20 feet because "RH" standards have included this spacing as an acceptable standard.

The written proposal shall have sufficient detail to be evaluated for compliance with the requirements and limitations of [Article 1105.14](#) of the Standard Specifications. The detail provided must also allow for reviewing how a proposal impacts the entire project. It shall include:

- A description of existing requirements and proposed changes.
- All affected contract items, including new Change Order items and supporting justification for that extra work.

- Unit prices requested for the work.
- Effects on crew, equipment, and production needs for the project.
- Impact on the construction period.
- Schedule for obtaining all required materials.

It is very important to pursue these requests quickly to maximize potential savings. Once a proposal is received, the Project Engineer should discuss merits of VE proposal with the Administering Office. If appropriate, the Administering Office will coordinate the review with other offices, including selected section leaders (Design and/or Bridges & Structures) and FHWA if appropriate. Following this review the Administering Office will notify the Project Engineer of approval or disapproval, and any special considerations or requirements.

The Project Engineer will notify the PIRC to prepare and send a written notification to the Contractor outlining the review and conclusions of that review.

If a proposal is acceptable, this notification will form the basis for issuing a Change Order to implement conditions of the value engineering proposal. Therefore, a notification should include:

- A restatement of any changes.
- All costs involved, and how costs will be addressed.
- Any specification requirements as a result of changes or modifications to the existing contract.
- Details pertaining to special requirements for materials inspection and testing, if applicable.
- Any other special considerations or conditions.

If a proposal is not approved, the notification needs to include reasons for rejection.

The Iowa DOT has established a goal of 10 days to complete the entire review and notification process.

2.37 PROJECT ACCEPTANCE AND AUTHORIZATION FOR FINAL PAYMENT

See [IM 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects.

2.38 CONTRACTOR EVALUATION REPORT

For FieldManager contracts, a Contractor's Performance Evaluation (CPE) must be completed and approved for the Contractor and all subcontractors before the final voucher can be created.

If using FieldManager, refer to the FieldManager User's Guide Section 6-5 for instructions on completing Contractor Performance Evaluations. For all other projects, use the instructions on the [Evaluation Report Instructions](#) web page.

The intent of an evaluation is to report strength and/or weakness of the Contractor Contractor's project related activities including paperwork, material documentation, attitude, and cooperation. Special attention should be given to the Contractor rating

below 50 points. Remarks are required for any individual item(s) that is rated less than 50%. Remarks are also required when the Contractor is given a 100% rating.

The Office of Contracts maintains a database of Contractor evaluation ratings, reacts to low evaluations, and seeks to improve Contractor project administration. Evaluations are also used as a factor to establish bidder qualifications. Therefore, it is very important that Contractors are evaluated realistically, factually, and without bias.

It is anticipated that lower than average ratings would have been discussed at a meeting between the Project Engineer and Contractor representatives prior to form submittal. A Contractor should have an opportunity to discuss and understand why a low rating was given. Further, the Contractor should be given (if requested) a critique of corrective actions which would prevent reoccurrence of low rating(s).

See [IM 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects for additional instructions.

2.40 PROJECT REVIEW AND AUDITS

2.41 RESERVED FOR FUTURE USE

2.42 PROJECT ENGINEER'S PRE-AUDIT

See [IM 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects.

2.43 DISTRICT OFFICE AUDIT

See [IM 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects.

2.44 RESERVED FOR FUTURE USE

2.45 FORMS FOR FINAL PAYMENT PACKET

See [I.M. 3.910, Attachment F](#), Final Form Packet Checklist, ([Word](#))

2.50 CONTRACTOR PAYMENTS AND PRICE ADJUSTMENTS

2.51 PAYMENT FOR MATERIAL ALLOWANCE

[Article 1109](#) .05 of the Standard Specifications allows for payment of material stored at the project site or, under certain conditions, at other locations. NOTE: The phrase "material allowance" is also referred to as "stockpiled material."

Payment for stockpiled material may be allowed for materials that will be incorporated in the project. Payment will not be considered for contracts with an award amount less than \$10,000. When reimbursement is allowed, payment will be based on:

- 100% of invoice cost for material properly documented and properly stored at the project; or,

- 90% of invoice cost for material properly documented and stored elsewhere. Storage locations must facilitate routine inspection by Project Engineer.

When material is stockpiled off-site and inspection of the material is not possible by the Project Engineer or Iowa DOT Materials personnel, if Iowa DOT Materials inspection has been requested and approved, the material may be paid for at 90% provided the following information has been submitted by the Contractor:

- Invoice cost of the material,
- Description and quantity of the material,
- Inspection reports, test reports, mill certifications, and approved shop drawings,
- Location of the material, and
- Material clearly marked for the County, Project Number, and Contractor as reserved for that project, including photo(s) of stockpiled materials and photo(s) of product identification tags.

Material allowances could be extended to "raw" structural steel provided:

- "Raw" as used in this context means steel products that have been processed by a steel mill into plates, sheets, or shapes of standard mill dimensions. "Fabrication" is then taking these mill run products, and fabricating them into usable structural shapes as specified in the contract documents.
- Mill Certifications and Heat Numbers have been submitted and approved by the Office of Construction and Materials.
- All shop drawings have been submitted and approved, including development of a fabrication shop "cutting diagram."
- Iowa DOT shop fabrication inspector has verified and inspected all "raw" steel as being delivered, properly marked for the project, and properly stored at the fabrication shop.

Pre-conditions for Material Allowances

- Payment for material allowances is based on actual invoiced cost. This means the Contractor has ownership and/or control of any stockpiled material. Checking or verification of payment to the Contractor may be required in instances where a Project Engineer deems it necessary. In lieu of checking, certification that the Contractor owns or controls the material may suffice.
- Off-site material should be secured and clearly identifiable to the project.
- Material considered for material allowances shall be specifically fabricated or processed for that project. By definition, fabricated items will require shop drawings or shall be fabricated from standard Iowa DOT detail sheets.

NOTE: Aggregate is obviously not "fabricated," but is "processed" and can be considered unique as long as the material meets other applicable requirements of this pre-condition section and has been certified by the producer.

- The Project Engineer shall confirm the following items before payment is made:
 1. Inspection or certification reports, test reports, and invoices are included in the project file or in the Office of Construction and Materials.
 2. Processed or fabricated material is satisfactorily stored, correctly identified, reserved for the project, and available for inspection to verify existence and quantity.
 3. Provisions should be made for inspection to verify that quality has not deteriorated and that material has not been utilized for other projects. This inspection can be arranged through the Project Engineer.

The preconstruction meeting is a good place to identify items for, or begin the discussion of, potential stockpiled material. Potential items can be identified, but no action needs to be taken until the material is available at the project or at other agreed locations.

Stockpile Documentation Work Sheet

Payment for material allowances must be documented and monitored. It will be necessary to maintain a project level work sheet covering:

- value and quantity of material being stockpiled
- location of stockpile (not on the project)
- dates of the Project Engineer's inspections
- basis for material approval

The work sheet must show a running total for materials delivered and those used in construction of the project, including the total quantity and value of the remaining stockpiled materials. As materials are placed into "the stockpile," payment may be made by properly including the new amount to Item 8999 on the progress voucher or pay estimate. Federal-aid reimbursement is not allowed until the materials are incorporated in the project.

Voucher Entries

An 8999 item number will be preprinted on the Contract Construction Progress Voucher for Stockpiled Material. (If an 8999 item number is not provided, one can be added by writing a Change Order to the contract for Stockpiled Material.) For locally paid projects, a Change Order may be processed for payment of stock pile materials, but it is not required.

For those agencies using FieldBook/FieldManager for project administration:

- Instructions for processing material allowances in the FieldBook / FieldManager systems are detailed in their respective FieldBook or FieldManager Users Guide.
- Field entries (dollars) in this item number authorize Contractor payment for stockpiled materials. Payment will be based on the actual cost as shown by an invoice.
- Value of the 8999 item will be decreased as stockpiled material is incorporated in the project and included as an appropriate contract pay item. The value of 8999 may fluctuate up or down during the project because of:
 - Increased value as more material is stockpiled, or
 - A decreased value as material is used on the project, i.e., stockpile is being depleted.
- The final entry made concerning stockpiled material must:
 - Zero (0) Item 8999 on the final voucher **AND**
 - Zero (0) all stockpile quantities documented on the project work sheet.

Miscellaneous

The term "material allowance" is used to designate material which will later be incorporated in the project and ultimately paid at contract unit prices. The term "unincorporated material" is used for material ordered for use on the project, but not used. Payment for material ordered, but not used and taken over by the Contracting Authority must be paid by Change Order. (Refer to Section 2.36 of this Attachment for procedure used to process a Change Order.)

2.52 PAYMENT FOR UNEXPECTED CLASS 12 ROCK EXCAVATION

When Class 12 excavation is unexpectedly encountered and there is no contract item for Class 12, the quantity of Class 12 will be paid for as extra work through a Change Order. (Refer to Section 2.36 of this Attachment for procedure used to process a Change Order.)

Approval for Work:

CASE I (Contract has an item for Class 10.)
[Specification 2102.05, A, 1](#) establishes a price of ten times the Class 10 contract unit price for unexpected Class 12 excavation.

CASE II (Contract does not have an item for Class 10.)
In this case a new price will have to be negotiated.

NOTE: When the contract contains items for special categories of Class 12, such as Class 12 (channel) or Class 12 (boulders), these items are not considered as representing normal Class 12 roadway and borrow excavation work.

2.53 PRICE ADJUSTMENT GUIDE FOR REASONABLY CLOSE CONFORMING, REASONABLY ACCEPTABLE, AND DEFICIENT WORK

Every effort should be made to prevent substandard work and/or non-complying material from being incorporated into the project. However, when work and/or materials are deemed to be non-complying, Sections [1101](#) and [1105](#) of the Standard Specifications give authority to the Project Engineer for determining if construction work or materials are acceptable and/or within reasonably close conformity to the plans and specifications. Therefore, the Project Engineer must decide whether deficient work is to be removed and replaced or left in place with a price adjustment. Unusual situations or circumstances may warrant consultation with the Administering Office.

NOTE: A price adjustment is no substitute for specification compliance and "unacceptable work" shall always be removed and replaced with acceptable work. Further, Contractors need to be given an option of removing deficient work and replacing with acceptable work in lieu of a price adjustment.

Price adjustments of \$100 or less need not be formalized in a Change Order.

Guide Schedules for Price Adjustments

A. Gradation

Unless otherwise specified, variations in the gradation of aggregates shall be price adjusted as prescribed by Price Adjustment for Aggregate Gradation Test Deviation (see Iowa DOT Construction Manual [Appendix 2-34\(A\)](#)). These adjustments apply to variations in gradations for:

- Portland Cement Concrete

B. PCC Slump, Air Content, Rain Damage, and Edge Damage

1. Concrete Slump Price Adjustments are prescribed in the Iowa DOT Construction Manual [Appendix 2-34\(B\)](#). Concrete Air Content, Water Cement Ratio, Vibrator Frequency, Certified Plant Inspection, and Late Curing Application Price Adjustments are prescribed in the Iowa DOT Construction Manual [Appendix 2-34\(C\)](#).

2. Rain Damaged Portland Cement Concrete

When rain damage occurs, removal and replacement may be required by the Project Engineer in accordance with [Article 2301.03, K, 4](#), of the Standard Specifications. However, damage must be determined to be severe enough to warrant such action. Contact the Administering Office for assistance, if needed.

If work is allowed to remain, [Article 1109.03, C](#), of the Standard Specifications requires the Project Engineer to determine "... a modification of the contract unit price." The following CASES shall be used for determining rain damage price adjustments.

NOTE: Price adjustments are applied to an entire area encompassing the damage. (This means full width placed when damage occurred, beginning at the first transverse joint before any damage and ending at the first transverse joint after damage.)

ADJUSTMENT SCHEDULE

CASE I - (Payment is 95% of contract unit price.)

Texture is absent from practically all of surface area. Surface appearance may have a "sandy" appearance or may be "pock" marked from the rain droplets. An occasional edge repair may be required due to excess edge slump or from edge rounding. Small areas along edge may have coarser particles of fine aggregate exposed. Surfaces finished in the rain or after a rain are also included in Case I. This includes any manipulation of the pavement surface including mopping of the surface to attempt to remove rainwater or retexturing while rainwater is present.

CASE II - (Payment is 90% of contract unit price.)

Texture is totally absent from the surface and cement mortar has been eroded to an extent that coarser particles of the fine aggregate fraction are generally exposed. Some slight troughs or depressions are apparent; exposing coarse aggregate particles, but this damage is confined to a limited area or randomly spread intermittently throughout damaged area. Some edge repairs may be required to restore eroded edges. Surface mortar that was removed by rain water, but later replaced or supplemented with plastic concrete is included in Case II since a cold joint or sand lens with minimal Portland cement paste contact may have been inadvertently incorporated into the slab.

CASE III - (Payment is 85% of contract unit price.)

Surface mortar has been practically all removed to an extent that coarse particles of the coarse aggregate fraction are visible. Considerable erosion of edges has occurred, but not to an extent that pavement width is affected. Intermittent edge repair may be required as well as some surface patching of slight troughs or depressions that may have formed in pavement surface due to flowing water.

Severe rain damage may require "localized area" repair by bridge deck overlay procedures. Full depth removal and replacement may be required if edge damage is severe. Severe cases of rain damage should be referred to the Administering Office for review prior to determination of repair or replacement.

In addition to above described price adjustments and repairs, slab surfaces with missing, omitted, or damaged texturing shall have macrotexture re-established by grooving prior to acceptance by Project Engineer. As an alternative to price adjustment and grooving, for CASE I and CASE II corrections, the Contractor may elect to diamond grind the entire affected area to remove questionable surface mortar and re-establish texture. When this option is chosen, payment for CASE I rain

damage will be 100% of the contract unit price, and the payment for CASE II rain damage will be 95% of the contract unit price.

3. PCC Pavement Edge Damage

Price adjustments and recommended repairs for PCC pavement edge damage are included in the Iowa DOT Construction Manual [Appendix 2-34\(N\)](#). Typically PCC pavement edge damage does not affect the structure of the pavement, but it is unsightly and a result of substandard workmanship. Therefore, in moderate cases, a price adjustment is warranted over repair. In severe cases, price adjustment and repair may be appropriate.

C. Steel Products

Certificates for steel products should be reviewed for compliance with the federal Buy America requirements before it is incorporated in the project or paid as stockpiled material. The intent of the Federal requirements is not to utilize foreign steel in a Federal-aid project. If the Contracting Authority permits the minimum usage as allowed by the Standard Specifications, the Contracting Authority must track and report the usage of foreign steel to ensure the minimum usage is not exceeded.

If it is discovered after-the-fact that foreign steel has been incorporated into to the project exceeded the minimum usage, the Contracting Authority must contact the Administrating Office for guidance. All after-the-fact discovers of foreign steel must be reported to FHWA who will determine the resolution on a case-by-case basis, and will vary depending on the circumstances. If the Contracting Authority has chosen to allow the minimum usage, and exceeds the minimum usage, their risk of losing federal reimbursement is increased.

D. "L" Joint Tie Steel Deficiencies

Tolerance problems with "L" joint tie steel shall be corrected according to procedures established in the Iowa DOT [Construction Manual 9.26](#). (Note: ""BT" and "KT" deficiencies usually require field correction.)

An adjustment in the contract unit price shall be made for out of tolerance "L" joint tie steel areas. This price adjustment should be a reduction of 5% to the contract unit price per square yard for affected areas. It should be calculated based upon the length of the area with deficient tie steel multiplied by the width of the placement. The price adjustment is not intended to apply to individual out of tolerance tie steel.

E. Bridge Floor Overlay price adjustments are prescribed in the Iowa DOT Construction Manual [Appendix 2-34\(D\)](#).

F. Macro texture adjustments will be determined by the Project Engineer on a case-by-case basis depending on severity and amount of surface area involved.

For texture depth measurement criteria, refer to the Iowa DOT [Construction Manual 9.43](#). Texture depths less than 1.5 mm (1/16 inch) shall be corrected by sawing in grooving or diamond grinding. Texture depth exceeding 4.5 mm (3/16

inch) may require price adjustment as directed by the Project Engineer. Price adjustments for over depth grooving are found in the Iowa DOT Construction Manual [Appendix 2-34\(E\)](#).

G. Traffic Control

1. Price adjustments may be applied for failure to comply with traffic control requirements in the contract documents. Contract price adjustments will be determined by the Project Engineer, based on magnitude and frequency of violations. A suggested sliding scale is \$500 for the first violation, \$1,000 for the second violation, \$2000 for the third and subsequent violations. See flowchart in the Iowa DOT Construction Manual [Appendix 2-15](#) for further guidance. After the third violation has occurred, work may be suspended. If the traffic control violation is serious, a higher price adjustment may be used based on the Contracting Authority's discretion as recommended by the Project Engineer and/or Administering Office.

Price adjustment violations will be counted from first violation through last violation for an entire contract. It is the Contractor's responsibility to ensure a safe work zone for all construction activities regardless of work in progress or who is doing that work. Therefore, violations will accumulate against the "contract" and not be separated or individualized by subcontractor.

Examples of situations where a price adjustment would be appropriate include:

- Failure to maintain traffic control devices (costs incurred by the Contracting Authority may be recovered against this item).
- Working without proper traffic control setup.
- Unauthorized crossing of multilane divided roadway median.
- Use of unauthorized, substandard, or non-standard traffic control items such as incorrect sign sheeting or unapproved floodlights.
- Violations of, or failure to comply with, traffic control requirements in the contract documents.

It is not intended that minor deficiencies be price adjusted if corrected in a timely manner.

In addition to price adjustments, Project Engineers may suspend work for irresponsible and/or repeated failure to conduct construction activities using proper traffic control procedures.

It is acceptable for Contractors to work beyond the specified work hours when all of the following conditions are met:

- Contractor is working behind temporary barrier rail.

- Inspection is not required.
- No vehicles are entering the work area.
- Traffic control is in accordance with the Night Work Lighting requirements ([Section 2550](#) of the Standard Specifications).
- The work continues only for a short time frame to complete a specific work task.

Copies of traffic control non-compliance notices should be provided to both the Contractor and Subcontractor if the Subcontractor was issued the non-compliance notice.

2. Failure to maintain traffic control devices and signs on a daily basis continues to be a concern of the Project Engineer and/or Contracting Authority. Price adjustments are appropriate for failure to adequately maintain these devices and signs. To determine an appropriate daily price adjustment for lack of maintenance, the total bid price for the traffic control item should be divided by the number of working days allowed on the contract. This calculated amount should then be divided in two to determine an appropriate daily maintenance value. This daily maintenance value would be the appropriate price adjustment for failure to maintain traffic control devices and signs.

The daily maintenance price adjustment calculated below is in addition to other traffic control price adjustments.

An example calculation to determine this daily maintenance value follows:

$$\begin{aligned}\text{Traffic control bid item amount (TC)} &= \$25,000 \\ \text{Number of contract working days (WD)} &= 100 \\ \text{Daily maintenance price adjustment (PA)} \\ \text{PA} &= (\text{TC}/\text{WD})/2 \\ \text{PA} &= (\$25,000/100)/2 = (250)/2 = \$125 \\ \text{PA} &= \$125\end{aligned}$$

3. Occasionally Contractors fail to provide the required traffic control technician or have the daily traffic control diary completed during the construction of the project.
 - An appropriate price adjustment for failure to provide a traffic control technician is 20% of the traffic control bid item price or \$500, whichever is greater.
 - An appropriate price adjustment for failure to provide a traffic control diary that is supervised by a trained Traffic Control Technician for review during construction activities is an additional 10% of the traffic control bid item or \$500, whichever is greater. This price adjustment

can be issued multiple times throughout the duration of the project and may even be issued on a daily basis for gross failure to have an up-to-date completed Traffic Control Diary each day.

- An appropriate price adjustment for failure to submit to the Project Engineer upon project completion a traffic control diary that is supervised by a trained Traffic Control Technician is an additional 20% of the traffic control bid item price or \$500, whichever is greater.
 - These price adjustments are independent of each other and are also in addition to other traffic control price adjustments.
4. When a flagger is incorrectly flagging according to the Flagger's Handbook, as referenced in [Article 2528.03, K](#), of the Standard Specifications, the project should have the Flagger bid item price adjusted. This price adjustment should be one half of the daily unit bid price for the Flagger item.

Examples of situations where a flagger price adjustment would be appropriate include:

- Incorrect flagging procedures
- Nighttime flagging without a correctly lighted flagger station or without appropriate nighttime flagging equipment or apparel
- Incorrect, inappropriate, or incomplete flagger attire
- Use of incorrect STOP/SLOW paddle
- Failure to carry their flagger training card

When an untrained flagger is used in violation of the specifications, the flagger shall not be measured and paid. The flagger shall continue to flag for the remainder of the day and a trained flagger shall be substituted the next day. Unattended flagger stations are not allowed by specifications. Any unattended flagger station is considered a severe violation of the specifications and should be price adjusted per Item 1 price adjustments.

When an untrained flagger is used in violation of the specifications, the flagger shall not be measured and paid. The flagger shall continue to flag for the remainder of the day and a trained flagger shall be substituted the next day. Unattended flagger stations are a severe violation of the specifications and should be price adjusted per Item 1 price adjustments.

These price adjustments are also in addition to other traffic control price adjustments.

G. Asphalt

1. Liquid Asphalt

a. Viscosity or Penetration

When non-complying tests occur, determine the quantity affected. Average all non-complying quality control tests and use that

average in conjunction with the Iowa DOT Construction Manual [Appendix 2-34\(F\)](#) to determine if, or how much, price adjustment is warranted.

b. Residue

The determination of compliance for emulsions used as tack coats shall be based on residue percentage. Undiluted emulsion contains a minimum of 57% asphalt residue. Emulsion diluted with one part emulsion to one part water shall contain a minimum of 28.5% residue.

When non-complying tests occur, determine the quantity affected. Average all non-complying quality control tests and use that average in conjunction with the Iowa DOT Construction Manual [Appendix 2-34\(G\)](#) to determine if, or how much, price adjustment is warranted.

2. Asphalt Binder - Viscosity

When a non-complying viscosity test occurs, establish the quantity of material affected. This quantity may be the total asphalt binder used that day, unless intermediate quality measurements have been made during the day. The quantity affected shall be in relation to the proportion of non-complying samples to the total number of asphalt binder samples obtained that day.

Example:

Total samples taken during the day	=	5
Number of failing samples for the day	=	2
Total asphalt binder used that day	=	200 tons
Quantity affected = $(2 \div 5) \times 200$	=	80 tons

Non-complying test results for the day shall be averaged to determine the amount of deviation from specification requirements. This average will be used to apply the appropriate percent of payment for the quantity affected. Use the Price Adjustment schedule in the Iowa DOT Construction Manual [Appendix 2-34\(H\)](#) and [Appendix 2-34\(I\)](#) to obtain the applicable payment adjustment.

The materials, both liquid asphalt and asphalt binder, are used on the basis of certification. The follow-up acceptance testing is performed to verify the compliance so work will not be delayed pending the test results. However, if the material has not been incorporated and acceptance tests indicate non-compliance, the material will be rejected.

Unless indicated otherwise in the contract documents, the Contractor must use performance graded (PG) asphalt binders. If a PG asphalt binder is used but the properties do not comply with specifications, consult with the Administering Office and the District Materials Engineer for appropriate resolution. A price adjustment may or may not be appropriate depending upon the circumstances involved in each situation.

3. Asphalt Binder Content

The determination for compliance with the specifications of the asphalt binder content control shall be made for periods not exceeding one day in length. Determinations shall be made for shorter time intervals when non-compliance for the shorter intervals has occurred.

The specifications for asphalt construction require the Contractor to maintain the asphalt binder content within plus or minus 0.3 percentage points of the percent intended. The percent intended is given on the job-mix formula sheet. No payment will be made for asphalt binder used in a mixture in excess of tolerance specified. Please note that the Price Adjustment for Deviation in Asphalt Binder Content (see Iowa DOT Construction Manual [Appendix 2-34 \(Table J\)](#)), is only for use in situations when no hot box samples are taken for a given day of asphalt paving.

Excessive asphalt binder content can result in low lab voids which can, in turn, result in a high potential for pavement failure due to flushing and rutting. When the deviation from intended asphalt binder content is greater than 0.3% and the lab voids for the lot are extremely low, the District Materials Engineer should be consulted regarding the rutting potential of the pavement. In cases where severe rutting or flushing develops or is likely to develop, removal and replacement of the non-complying asphalt pavement should be considered.

When the asphalt mixture quantity involved is 200 tons or less, tank-stick measurements lack precision and cannot be used as a basis for determining asphalt binder content. In this case, the average of tank-stick measurement results from the day before and the day after may be used to provide further verification.

The procedures listed in the Iowa DOT [Materials I.M. 508](#) and [I.M. 509](#) should be followed closely in making tank-stick measurement calculations.

The Contractors are cautioned to observe the following procedures in order to help insure accuracy of the determinations:

- a. Keep the storage tank level and in good condition
- b. Make sure that the asphalt binder in the surge tank is exactly the same level each time that measurements are made
- c. Try not to drain the asphalt binder level in the tanks into the heater coil area when measurements are made
- d. See that rail cars and transport trucks are completely unloaded or any unused asphalt binder returned is weighed or measured

To eliminate misunderstandings and uncertainties, it is strongly urged that an authorized representative of the Contractor observe all sampling and tank-stick measurements and check all calculations. A Contractor's representative should also be requested to initial or sign the field book or record sheet containing the measurements and results as they are made.

4. Segregation in Hot Mix Asphalt Pavement
When mixture segregation occurs in the pavement such that the composition and quality of the mixture required by specification are not uniformly attained, the sections judged deficient may be required to be removed and replaced as defective work. An adjustment in contract price may be made for deficient work for the cases described in the following schedule.

- a. Pavement Surface

The adjustments in contract price are to be applied to the entire paver lane width and lift thickness between extreme areas of segregation. Price adjustment shall apply only to the payment for the asphalt mixture. Price adjustments are defined in the Iowa DOT Construction Manual [Appendix 2-34\(K\)](#).

ADJUSTMENT SCHEDULE

Case I (Payment is 80% of contract unit price.)

When uniform surface texture and mixture composition is evident (by visual observation) except for occasional and random areas of segregation, the mix shall be subject to price adjustment if the area determined segregated equals or exceeds 1 square yard per station per paver width (length determined by longitudinal distance both directions from segregated area).

Case II (Payment is 50% of contract unit price.)

When a non-uniform surface texture and mixture composition is evident (by visual observation) and there is a regular interval of numerous areas of segregation connected or nearly connected with longitudinal traces of segregation, the mix shall be subject to price adjustment if the total area segregated equals or exceeds 3 square yards per station per paver lane width (length determined by longitudinal distance both directions from the extreme ends of areas of segregation).

Case III Longitudinal Streaks (Payment is 80% of contract unit price.)

When a non-uniform surface texture and mixture composition is evident (by visual observation) and in the form of longitudinal streaks of 3 inches or more in width, the mix shall be subject to price adjustment if the segregation occurs at a rate that exceeds 1 square yard per station. The rate is determined by multiplying approximate width by length of the streaks to determine area and dividing by the length of the streaks (in stations). Longitudinal streaks most commonly occur with the windrow-pickup process, particularly when resurfacing superelevated curves. Streaks are typically seen in the wheel path areas and occasionally in the center of the lane. Streak widths typically vary from 3 to 12 inches and may be continuous or intermittent. This type of segregation results in longitudinal cracking.

More severe surface and mixture segregation may require corrective procedures as:

- full width thin layer 1 inch thick resurfacing or
- removal of asphalt mixture course with no extra payment and replacement with construction that fully complies

Note: Determination of segregation in asphalt pavement is by visual examination in accordance with current specifications. The engineer may consider further verification through coring and extraction tests. Segregation case examples, with corresponding price adjustment calculations, are illustrated in the Iowa DOT Construction Manual [Appendix 2-34\(K\)](#).

b. Fillets & Runouts

This price adjustment procedure does not apply to fillets, bridge runouts, or other hand-worked areas outside of the normal paver lane width.

c. Base & Intermediate Courses

The price adjustment percentages shall be reduced as indicated in the Iowa DOT Construction Manual [Appendix 2-34\(K\)](#) for all base or intermediate courses, except when such mixture is specified and used as the surface course.

d. Procedure for Determination of Price Adjusted Quantities

The segregation case examples shown in the Iowa DOT Construction Manual [Appendix 2-34\(K\)](#) illustrate a concept that may be used to define the severity of segregation and appropriate price adjustment factor. It is not required, however, to physically measure each area of segregation to determine a quantity of HMA mixture that is subject to price adjustment. The intent is to define the quantity subject to price adjustment by identifying the number of truckloads in which segregated areas are evident. This obviously takes some judgment to decide how large or severe an area must be before it is price adjusted. The 1 square yard area shown in examples is a "rule-of-thumb." Most importantly, segregated areas that exhibit an obvious concentration of coarse aggregate resulting in a non-uniform open texture should be price adjusted.

Whenever segregation is observed, the Contractor shall be advised immediately and the inspector must document the deficiency with a Non-compliance Notice. The notice should reference the applicable specification and indicate the Project Engineer will review the work to determine the acceptability of the work. It is recommended that a Non-compliance Notice be issued when segregation is initially observed with final evaluation and price adjustment determined later but prior to project acceptance.

Timeliness is important for two reasons. First, the Contractor must take corrective action immediately. Failure to do so should result in suspension of work. Secondly, early identification of unacceptable work allows for resolution of any disputes before there is an "implied" acceptance. The Iowa DOT [Construction Manual 1.12](#) discusses the enhancement of working relationships by timely notification of unacceptable work.

For streak type segregation, it will be necessary to identify and tabulate the location and length of the segregated streak areas subject to price adjustment and base the price adjustment on the mix quantity within the beginning and ending station limits of the streaks.

Normally this procedure should be repeated for each day from header to header on the day following placement. Each day's run can be tabulated showing a summary of affected tons of HMA mixture subject to price adjustment.

5. Asphalt Binder Film Thickness

Film thickness, as calculated in the Iowa DOT [Materials I.M. 501](#), provides a general indication of an asphalt pavement's potential long-term durability. When asphalt binder content changes are considered to adjust air voids, caution must be used to assure that adequate film thickness required in the Iowa DOT [Materials I.M. 510 Appendix A](#), Table 1 is maintained. When the resulting film thickness is outside the specified range, procedures given in the Iowa DOT Construction Manual [Appendix 2-34 \(Table M\)](#) should be used to determine the appropriate price adjustment or alternate course of action.

6. Laboratory Voids and Field Voids

Production control and compaction requirements are covered in the current specifications for Asphalt Mixtures. Price adjustment is made through use of Pay Factors for laboratory voids and field voids determined for the lot. The Pay Factors are applied to the unit price for asphalt mixture only.

7. Defective Field Voids in Asphalt Pavement

When Percent Within Limits (PWL) falls below 50 for field voids, the lot may be declared defective. Use the following guidelines to determine if the material shall remain in place or be removed. These guidelines are to be used with engineering judgment. The resulting pay factor at the completion of review should be between 0 and 0.75.

First, determine if there is a testing issue by reviewing Gmm for consistency and correlation. If it is determined the Gmm is not reliable due to testing concerns, re-calculate the field voids using the Engineer's test results and compare. It may be necessary to proceed through the guidelines below with both initial results, and re-calculated results. If Gmm is valid, use the following guidelines:

- a. Randomly core the defective area. The cores shall be for information only and not be included in the acceptance decision.
- b. Re-calculate the voids for each core using the nearest Gmm value instead of the average Gmm value.
- c. Evaluate the initial set of cores as well as the additional cores as follows:

- If Field Voids are High (risk of long-term durability and strength issues)

If all of the following are true or for a non-surface lift, consider leaving in place with a price adjustment:

- No core exceeds 10% voids
- Film thickness ≥ 10
- Average field voids $< 9\%$

If all of the above are not true, consider removal.

- If Field Voids are Low (risk of rutting)
 - If low traffic and high speed, then consider leaving in place.
 - If high traffic, consider removal.
- If the average thickness is less than the intended, consider removal.

H. Adjustments for All Contract Administration Issues

Price adjustments for non-complying work are occasionally appropriate when the issue relates to other incidental items in the contract documents. Price adjustments shall not be considered unless there is willful or repeated reoccurrences indicating lack of due consideration on the Contractor's part. In such cases, the following will apply:

- Provide a clear and concise notification to all parties involved with the incident. (This could be a verbal notification or a written non-compliance without price adjustment.)
- Subsequent violations would result in additional non-compliances and could be reason for price adjustments starting at \$100, then \$250, \$500 etc. (progressively doubling the amount of each following violation).

NOTE: It is NOT intended that minor deficiencies be price adjusted if corrected in a timely manner. Situations and circumstances will dictate how this portion should be applied.

I. Steel H-Pile Weight Deficiency

The Iowa DOT [Materials I.M. 467](#) specifies a mass tolerance of 2.5% on steel H-pile weight deficiency. Steel H-piles that are deficient by more than 2.5% of theoretical weight should not be accepted for incorporation into the work except when:

- The need for the steel H-pile is immediate and considered critical by the Project Engineer.
- Replacement of steel H-pile is not reasonably possible due to short supply and availability.

In the above cases, the Project Engineer may decide to approve the use of deficient steel H-pile and apply a price adjustment in contract unit price for the material as prescribed by Steel H-Pile Weight Deficiency Price Adjustment" in the Iowa DOT Construction Manual [Appendix 2-34\(L\)](#).

J. Erosion Control

Occasionally Contractors fail to provide the required erosion control technician (ECT) or an Erosion & Sediment Control (ESC) Basics trained individual during the construction of the project.

An appropriate price adjustment for failure to provide an ECT or ESC Basics trained individual during construction activities anytime during a month is \$250. This adjustment would be issued on a monthly basis. Price adjustments for failure to provide an ECT will not exceed \$1,000 per year.

These price adjustments are independent of each other and are also in addition to other erosion control price adjustments.

K. Railroad Safety Violations

Projects that affect railroads will include Contractor safety and flagging requirements. The provisions may specify amounts for price adjustments for safety violations. If the provisions do not include amounts for price adjustments, the Project Engineer and/or Contracting Authority should consult with the Office of Local Systems to determine the appropriate amount.

Copies of non-compliance notices for railroad safety violations should be forwarded to the Administering Office.

L. Use of Non-Domestic Steel Products

Certificates for steel products are to be reviewed for compliance with the contract documents before the material is incorporated in the project or paid as stockpiled material. The intent of Specification 1107.06, B and I.M. 107 is not to utilize foreign steel. If the Engineer permits the minimum usage as allowed by the Standard Specifications, the Engineer must track and report the usage of foreign steel to ensure the minimum usage is not exceeded.

If it is discovered "after-the-fact" that foreign steel has been incorporated into the project exceeding the minimum usage, the Engineer must contact the Office of Construction and Materials. All after-the-fact discoveries of foreign steel incorporated into a federal-aid contract must be reported to FHWA who will determine the resolution on a case-by-case basis.

2.54 PRICE ADJUSTMENT CHANGE ORDERS

Price adjustment deductions are processed by Change Orders using an 8xxx Change Number. (Refer to Section 2.36 of this Attachment for information about processing Change Orders.)

2.55 FINAL PAYMENT TO CONTRACTOR

Iowa Code allows a maximum of 5% to be retained until a contract is completed. Iowa DOT specifications require that 3% will be retained on the first \$1,000,000 paid on a contract.

This retainage is specifically withheld to cover:

- Unpaid creditors who file claims against a contract. The Contracting Authority is obligated by Iowa Code Section 573, to withhold at least double the amount of any claims on file from the retained funds. The amount of retained funds is the maximum amount available for 573 claims.
- Iowa Code also requires payment of interest on retained contract funds.
- Refer to [I.M. 3.930](#), Interest Payment Procedures, for the applicable interest payment requirements.
- 573 Claim
A "573 Claim" is a term used to signify an Iowa Code Section (573) that establishes procedures by which unpaid subcontractors, material suppliers, etc. may file a claim for payment against the contract. These claims are formally filed with the Office of Finance.

"If a claim is filed," Iowa Code mandates that the Contracting Authority shall withhold, from the retained funds, an amount of 2 times any claim. The amount of retained funds is the maximum amount available for 573 claims. Following resolution of a "573 claim" or 60 days after the final (if no lawsuit has been filed), the Contracting Authority issues payments as required.

Recommended Guidelines

At the preconstruction meeting, Contractors should be advised that all required forms, documents, and certifications must be properly prepared and forwarded to the Project Engineer before a final progress voucher can be processed. Forms required for Contractor submittal are explained in Section 2.20 of this Attachment and the Contractor is expected to read and be knowledgeable of these requirements.

It is important that required forms, documents, and certifications are dated when received from the Contractor. Every effort should be made to have all documentation and Change Order issues resolved on, or soon after, accepting the project.

For more information, see [IM 3.910](#), Final Review, Audit, and Close-out Procedures for Federal-aid Projects.

Interest Payment Information for County and City Projects ([Form 830236](#))

See [IM 3.930](#), Interest Payment Procedures.

2.56 FUEL ADJUSTMENT

The specification for Fuel Adjustment, [Section 2120](#) of the Standard Specifications, applies to a contract only when specified in the Proposal with the appropriate note.

The Current Price Index (CPI) is available at the Office of Contracts' website: www.iowadot.gov/contracts/lettings/FuelAdjustment.pdf. The Base Price Index (BPI) for fuel adjustment calculations will be the CPI listed for the month prior to the letting date of the contract.

Fuel Adjustment Calculation

Standardized Fuel Adjustment work sheet (Form 105) is available in electronic format under the "Inspection Tools" tab on the Office of Construction and Materials' "Contract Administration" webpage:

http://www.iowadot.gov/Construction_Materials/contract_admin/fuel_adj.html

Form 105 is usable as either a preprinted form for manual usage or as EXCEL applications. Only raw data inputs are required for those who choose to utilize the EXCEL spreadsheets. Once raw data is entered, the computer calculates adjusted fuel payment from formulas and the user can print a completed monthly adjustment report. Refer to the Iowa DOT Construction Manual [Appendix 2-35](#) for a completed adjustment work sheet.

Payment for fuel adjustments is to be calculated at the end of each month for all qualifying work accomplished that month.

The Contractor shall provide to the Project Engineer, on a monthly basis, a spreadsheet with quantities and the calculated amount of fuel adjustment.

Instructions for [Fuel Adjustment Worksheet](#)

Following instruction also available at

http://www.iowadot.gov/Construction_Materials/contract_admin/fuel_adj.html

1. Download the [Fuel Adjustment Worksheet](#) and save file to user's computer.
2. Complete contract information in header of spreadsheet.
3. Obtain Base Price Index (BPI), from the [Office of Contracts](#) by selecting Price Index for month previous to month of the letting. (For example: Letting Date is October 18, select CPI for September).
4. Enter the BPI in the designated space.

5. Enter the contract quantity of the items in the designated rows in the "Estimated Project Quantities". Other items included in the contract, but not listed, shall be added.
6. Obtain the Current Price Index (CPI) for a month from the [Office of Contracts](#).
7. Enter the CPI in the column "CPI" for the designated month.
8. Enter the quantities that have been hauled in the appropriate item columns and month row. For example, Selected Backfill and Class 10 Excavation were hauled in June. In the June row, the Selected Backfill quantity is entered in Cell E35 and Class 10 Excavation quantity in Cell F35. The total quantity for the month will be automatically computed and shown in the column labeled "Total CY".
9. When adding an item not already shown in the spreadsheet, use one of the columns designated for the applicable Fuel Usage Factor (FUF). The spreadsheet uses yellow shading for items which use a FUF of 0.20 and green shading for Embankment-in-Place items which use a FUF of 0.27.
10. The fuel adjustment amount for the month will be automatically computed and shown in the column "FA" (Fuel Adjustment).
11. Submit a copy of the completed form to the Project Engineer. Payment or credit will be made by processing a Change Order. The form shall be completed and submitted on a monthly basis. The monthly quantities shall be added to the previous month's spreadsheet.
12. The Contractor and Contracting Authority shall agree upon the frequency of payment or credit.

Fuel Adjustment Payment

Payment shall be by a Change Order form ([Form 831240](#)) using the item number 6200-5000171. With the Contractor's approval, one Change Order may be executed at the end of the project or at intervals agreeable to both the Project Engineer and the Contractor. Regardless of payment intervals, calculations on Form 105 shall be made at the end of each month with a copy forwarded to the Project Engineer for their files.

2.60 CONSTRUCTION FORMS

Most forms can be found on the [Iowa DOT's Forms](#) webpage, but if difficulty is encountered in locating forms, contact the Administering Office.

<u>FORM NUMBER</u>	<u>TITLE</u>	<u>MANUAL LOCATION</u>
General Construction		
830301	Audit of Final Pay Estimate	2.43*
640003 (Word)	Certificate of Completion and Final Acceptance for Agreement Work	12.04
518002	Certification of Subcontractor Payments	2.25*
830176 (Excel)	Certified Transcript of Labor Payroll/Statement of Compliance (WH-348)	2.24*
831240	Change Order	2.36*
830230	Contract Quantity Agreement	2.27*
102008	Contractor Concept for Value Engineering Incentive Proposal	2.36*
830215	Co-Permittee Certification Statement	10.33
830436	Final Payment	2.37*
820193	Identification of Sample for Test	3.21
830236	Interest Payment Information for County and City Projects	2.55*
830245	Noncompliance Notice	3.21
830216	Notice of Discontinuation of a Stormwater Discharge	10.31
810036	Notice of Suspension or Resumption of Work	3.06
830237 (Word)	Notice to Proceed	2.32*
830435	Statement of Completion and Final Acceptance of Work	2.37*
181213	Statement of Force Account	2.35*
830214	Storm Water Site Inspection	10.33
830231	Subcontract Request	2.25*
830238 (Word)	Weekly Report of Working Days	2.33*
830241 (Word)	Weekly Report of Working Days (I/D)	2.33*
EEO and Employee Training		
102116	Certification of DBE Accomplishment	2.25*
650170	Project Engineer's EEO Project Site Inspection / Wage Rate Report	2.22*
102115	Statement of DBE Commitments	2.25*
Grading		
650014 (Word)	Preliminary Estimate for Clearing Right-of-Way	6.11

830214	Storm Water Site Inspection	10.33
830215	Co-Permittee Certification Statement	10.33
830216	Notice of Discontinuation of a Storm Water Discharge	10.31

Structures

830209	Log of Piling Driven with Wave Equation	11.25
830210	Log of Piling Driven by Formula	Appendix 11.22
800240E	PCC Plant Page (English)	11.51

Hot Mix Asphalt and Flexible Bases and Subbases

800241	Daily HMA Plant Report (English/Metric)	8.02
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Portland Cement Concrete Paving

830212	Ready Mix Concrete Ticket	9.03
830213	Project Information/Paver Inspection	9.69
800240E	PCC Plant Page (English)	9.02

* Indicates Section in the Attachment

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2.71 BRIDGE INVENTORY REPORT

See [I.M. 2.120](#), Bridge Inspection

2.72 PREPARATION OF As-built PLANS

It is recommended practice to generate as-built plans on all projects for historical records but it is not required; however, for projects that go over, under, or intersect with an Interstate or Primary highway, three copies of as-built plans must be submitted to the Administering Office

When revising information on the plan with As-built information, the voided information should be lined out.

The As-built plan shall include the actual quantities included in the project, as well as items added to the project by Change Order that change physical features of the project.

It is not necessary to change wording in the As-built plan from future tense to past tense.

The title page of all as-built plans should include the certification block ([Form 520003](#)) with the name of the Contractor, year of project completion, Project Engineer's signature and certification.

Samples are included in the Iowa DOT Construction Manual [Appendix 2-37](#).

Types of Work

Changes in the following types of work may include the listed items in the As-built plan:

A. Grading, Paving, Subdrains, Fencing, and Erosion Control

The As-built plan may include the following:

1. Control points - marked and referenced.
2. Land section corners - marked and referenced.
3. Vertical and horizontal alignment.
4. Corrections and adjustments in stationing.
5. Elevation of final bench marks and deletion of abandoned bench marks.
6. Planned drainage including pipe location, sizes, and flowlines; subdrains; backslope and letdown drains; etc.
7. Field Tile Crossings including size and location.
8. Subgrade treatment areas.
9. Locations, type, and width of accesses, driveways, and street connections.
10. Include location of overhead and underground utilities, if known.
11. Utility permit number and filing location.
12. Planned location, sizes, and flow lines of storm and sanitary sewers and intakes.
13. Location and type of fence.
14. Erosion control ditch treatment and let-down treatment.
15. Guardrail and other safety appurtenances.

B. HMA Resurfacing

Wedge and strengthening courses and other items such as guardrail, culvert extensions, etc.

C. Structures

Items to include for structures and bridges converted to culverts:

1. Flow line and footing elevation
2. Elevation of bench mark
3. Log of piling
4. Excavation limits (Class 21, 22,23, and 24)
5. Weep hole locations

D. Lighting, Signing, and Traffic Signals

Lighting, Signing, and Traffic Signal projects may include:

1. Location of underground conduit
2. Location of pole and handhole
3. Mounting heights and lengths of mast arms

4. Log of piling for tower lighting projects
5. Location of sign footing, post size and length
6. Vertical clearance of sign truss
7. Detector Loop type, size, and location

E. Bridge Deck Repairs and Pavement Patching

As-built plans are not required for bridge deck repair and pavement patching projects, unless safety items such as; guardrail or barrier rail have been changed. The repair projects for replacing bridge beams do not require an As-built plan.

Wetlands

Corps of Engineers' Section 404 Permits require that "Wetland Mitigation As-Constructed Drawings" be submitted to the Corps within 30 days of the completion of the mitigation sites. These drawings are separate from the usual Contracting Authority As-built plans. "Wetland Mitigation As-Constructed Drawings" are more detailed site maps that are used to confirm compliance with mitigation agreements and to monitor future performance of the wetland. The information varies with the permit, but typically includes before/after cross-sections, location and elevation of water control structures, monitoring sites, final boundary of constructed wetlands, list of plant species, photos, depth of transplanted topsoil, geometry and treatment of buffer areas, ditch plugs, drain tiles, and boundary markers.

Right of Way

All right-of-way lines may be darkened and the station and offset included for all right-of-way breakpoints. Location of right-of-way corners may be identified. If the plan and profile sheets become too crowded when the right-of-way information is included, this information may be included on a separate plan sheet.

Information regarding access may be included on the As-built plan, including the limits of access rights purchased and location of constructed and deleted entrances.

The parcel information may include the owner's name and parcel number. Temporary easements do not need to be shown on the As-built plan.

Land Section Corner Ties

During As-built plan preparation, the final land section corner ties information shall be reviewed with the District Land Surveyor. A plan sheet of the corrected land section corner ties shall be included in the As-built plan.

Tied Projects

Tied projects may include references on the As-built plan title sheet that list other projects included in the contract. Project quantity item numbers should correspond to the item numbers shown in the contract, by plan. As-built plans for each project should be completed separately.

As-Built Plans Checklists

See the Iowa DOT Construction Manual [Appendix 2-37.5](#) for checklists to use in developing As-built plans.

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Request For Early Release of Retained Funds

(This section to be completed by the Contractor)

Contract I.D. _____ County _____

Contractor _____ Letting Date _____

In accordance with Code of Iowa Chapters 26 and 573; I hereby request early release of retained funds on this contract. I certify that on _____, 20__ written notice was provided to all subcontractors and suppliers associated with this contract, that early release of retained funds will be requested.

Contractor

Date

Contractor shall submit signed form to Project Engineer

(This section to be completed by Contracting Authority)

Twice the Amount of Claims on File _____

Total of retention to continue _____

Contract Acceptance Date (435) _____

(Retained funds will be paid not sooner than 30 days after the Contract Acceptance Date)

OR

% Contract Complete (must be $\geq 95\%$) _____

(Retained funds will be paid not sooner than 30 days after DLSE Approval date)

Recommended by: _____

Project Engineer

Date

Approved by: _____

Iowa DOT Administering Office

Date

Disposition: Project Engineer – Submit completed form to Iowa DOT Administering Office
Iowa DOT Administering Office – Forward approved form to Office of Finance

Iowa DOT Field Inspection Review Report

REVIEW INFORMATION

Date of Review:

Reviewed by:

Accompanied by:

PROJECT INFORMATION

Contracting Authority:

Project No.:

Location:

Work Type:

Length of Project:

Original Contract Amount:

Contract Time:

Contractor:

PROJECT STAFFING

- **Contracting Authority's Individual in Responsible Charge:**

- **Name of Project Engineer:**

- **Inspection Staff:**

- | | Yes | No | N/A |
|--------------------------------|--------------------------|--------------------------|--------------------------|
| ○ Local Inspection Staff | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ Consultant Inspection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Name	Position/Responsibility	Certification #	Iowa DOT Certification

- **Comments on Project Staffing:**

FIELD INSPECTION

- | | Yes | No | N/A |
|---|--------------------------|--------------------------|--------------------------|
| • Adequate Erosion Control | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- o Work in Progress:
- o Construction Activities Observed:
- o Upcoming Work:

• **Comments on Field Inspection:**

INSPECTORS RECORDS*

	Yes	No	N/A
• Type of documents being used to record project progress:			
o Loose leaf			
▪ Hard copy	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Electronic	<input type="checkbox"/>	<input type="checkbox"/>	
o Bound field book	<input type="checkbox"/>	<input type="checkbox"/>	
o FieldBook / FieldManager	<input type="checkbox"/>	<input type="checkbox"/>	
o Are there item progress and support forms for items added by Change Order?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Method of Measurement / Basis of Payment included for each item	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o For items paid by weight are there adding machine tapes, computer print outs, or other documentation to support the pay quantities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o For items paid by measured length, area, or volume are actual measured quantities shown?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o For items paid by count do all items show the actual count?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o For items paid as lump sum are the dates work started, dates of intermittent progress (if applicable), and date work completed included in the documentation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o For items paid by plan/contract quantity is the date and location of the work an estimated quantity included in the documentation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Comments:			
• Are entries for all items:			
o Dated	<input type="checkbox"/>	<input type="checkbox"/>	
o Locations indicated.	<input type="checkbox"/>	<input type="checkbox"/>	
o Quantities incorporated	<input type="checkbox"/>	<input type="checkbox"/>	
o Initialed	<input type="checkbox"/>	<input type="checkbox"/>	
o Comments:			
• Contract Quantity Agreements	<input type="checkbox"/>	<input type="checkbox"/>	
o Items:			
• Materials tickets			
o Signed properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>For ticket requirements see Materials I.M. 209 for aggregate; Materials I.M. 508, App. B, and Construction Manual 3.50 for HMA; and Materials I.M. 527 and Construction Manual 9.03 for PCC.</i>			
o Turned in weekly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Comments:			
• Storm Water Site Inspection form (Form 830214)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>See Construction Manual 10.33, Administering Projects with Storm Water Discharge Permit.</i>			
o Frequency:			
o Proper signatures	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			
• Issues corrected within 3 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Comments:			
• Erosion Control Implementation Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>See Construction Manual Appendix 7-1. If updates or changes are needed after work has started, use the ECIP Update Checklist, Appendix 7-2, of the Construction Manual.</i>			

- Comments:
- **Traffic Control Monitor Diary**
 - Comments:
- **Flaggers' names and training properly documented**
 - Comments:
- **Non-Compliance Notice form** ([Form 830245](#))
See Construction Manual 3.21, Field Testing on Construction Projects, "Non-Compliance Notice" (Form 830245), for guidance.
- **Identification of Sample for Test form** ([Form 820193](#))
See Construction Manual 3.21, Field Testing on Construction Projects, "Project Verification Sampling and Testing" and [Materials I.M. 204](#) for guidance.
- **Log of Piling Driven**
Construction Manual 11.25, Construction Manual Appendix 11-22). The appropriate forms for the driving method used should be completed as the piles are driven and forwarded to the Administering Office.
 - If by formula, ([Form 830210](#))
 - If by wave equation, ([Form 830209](#))
- **ADA (Materials I.M. 363):** Does the project contain any construction or reconstruction of sidewalk or recreational trails?
 - Has the work been documented as required by [Materials I.M. 363](#)?
- **Comments on Inspectors Records:**

OFFICE FILES*

- | | Yes | No | N/A |
|--|--------------------------|--------------------------|--------------------------|
| • Estimating Proposal | <input type="checkbox"/> | <input type="checkbox"/> | |
| • Project Plans | <input type="checkbox"/> | <input type="checkbox"/> | |
| <i>Plans and proposals can be obtained from the Office of Contracts, Current Letting Information website. Click on the letting that your project was in and then select the documents that you need. If you have any questions on using the on-line system, please call the Office of Contracts at 515-239-1414.</i> | | | |
| • Addendums | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| List: | | | |
| • Plan Revisions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ Comments: | | | |
| <i>Changes made to the plans after the letting can be obtained from the Project Engineer or Design Engineer.</i> | | | |
| • Contract | <input type="checkbox"/> | <input type="checkbox"/> | |
| ○ Original signed | <input type="checkbox"/> | <input type="checkbox"/> | |
| ○ Signed copy | <input type="checkbox"/> | <input type="checkbox"/> | |
| ○ Unsigned copy | <input type="checkbox"/> | <input type="checkbox"/> | |
| ○ Copy of FHWA-1273 attached to the contract | <input type="checkbox"/> | <input type="checkbox"/> | |
| ○ General Supplemental Specifications * | <input type="checkbox"/> | <input type="checkbox"/> | |

List:

Any work that has been subcontracted to a DBE should show up in the "A" column of the Subcontract Request form (Form 830231), see Attachment D, Section 2.25. On the contract there should be a dollar amount indicated after "DBE Commitment". All the work the subcontractor may not be eligible to qualify as DBE work, only the dollar amount in the "A" column is subject to the regulations for DBE Commercially Useful Function. Also, note that in the "Partial Item" column there may be a "Y" indicating that the DBE is not responsible for that entire item. If this is the case, make sure these items are discussed at the Pre-construction meeting so you know which portions of that item you will need to pay closer attention to make sure that the DBE is performing the Commercially Useful Function on those activities.

- Was the DBE Contractor(s) performing the work they were approved for?
- DBE Commercially Useful Function Checklist (Form 507014) for each DBE
- Comments:

- **Weekly Report of Working Days (Form 830238) (Word)**
 See Attachment D, 2.33, Weekly Report of Working Days (Form 830238), for guidance.
 - Date of first Working Day Report (week ending):
 - Date of latest Working Day Report and Report Number (week ending):
 - Percent of Contract Completed:
 - Percent of Time Used:
 - Comments:

- **Notice of Suspension or Resumption of Work (Form 810036, C.M. 3.06)**
 - Has the Contractor been directed to stop work by the Project Engineer at any time during the project? If so, does the project file include a completed copy of this form? . .
 - Has the Contractor been issued a Notice of Resumption of Work

- **Change Orders (Form 831240)**
 - Total number of Change Orders:
 - A review of Change Order No. was made:
 - Is there adequate cost justification?
 - Comments:
 - Was the time impact addressed in the Change Order?
 - Comments:
 - Concurrence by District/Systems Planning
 - Comments:

- **Required Payroll Submittals**
 - Date received documented
 - Submitted within 14 days (or 21 days for subcontractors)
 - Checked for compliance.
 - Predetermined Wage Rate
 - Number:
 - Did the Prime Contractor sign off on the subcontractor payrolls
 - Comments:

- **EEO/Wage Rate Reviews (Form 650170)**

The first section of the form "1. Which posters are properly displayed?" is for the poster board inspection. Since the Contractor is responsible for erecting the poster board before work starts, and maintaining until the project has been accepted, this portion of the form only needs to be completed for the Contractor. For more information, see Attachment D, 2.22, A, 2, Postings.

The next section of the form "2. Are employee facilities provided on a non-segregated basis?" is to document that all employees have access to restroom facilities and all employees have the same opportunities to use the same facilities.

- o Is the Prime Contractor, or any of the subcontractor(s), part of the AGC Prevailing Wage Rate Notification Program (PWNP)?

Sections 3 through 5 are to document verification that employees are receiving Davis-Bacon wages and fringe benefits. For more information, see [Attachment D](#), 2.24, Project Engineer's Involvement, A, Field Procedures, and B, Wage Rate Interview.

Contractor / Subcontractor	Date of review	Findings

o Comments:

- **Storm Water Discharge Permit**
Associated with Industrial Active for Construction Activities for the Prime Contractor: This document is sent to the Contractor from the Office of Contracts after the project has been let and accepted with all of the other contract documents. See [Basic Construction Administration Manual](#), Record Keeping chapter, Pollution Prevention Plan/Storm Water Site Inspections section. (See [Construction Manual 10.33](#))

- o Notice of Intent published:

Name of paper	Date published

- Certification Statement for Storm Water Discharge associated with Industrial Active for Construction Activities for the Prime Contractor

This document is sent to the Contractor from the Office of Contracts after the project has been let and accepted with all of the other contract documents. See [Basic Construction Administration Manual](#), Record Keeping chapter, Pollution Prevention Plan/Storm Water Site Inspections section. (See [Construction Manual 10.33](#)). Filed with the Storm Water Discharge Permit.

- o Co- Permittee Certifications Statement ([Form 830215](#)) for subcontractors
Copies of the completed co-permits for the subcontractors for the Storm Water Discharge Permit. The Contractor should obtain this document from every subcontractor that is performing work that may result in erosion or that is doing work to prevent erosion. (See [Construction Manual 10.33](#)). Filed with the Storm Water Discharge Permit.

- List of subcontractor co-permittees:
- Comments:
- **Materials Documentation (as applicable)**
 - Source of Materials list
This document is completed by the Contractor and submitted at the Pre-Construction meeting. It lists all of the materials that will be used on the project and their source. These sources must be listed as approved sources, consult with Materials Approved Product List Enterprise ([MAPLE](#)).
 - Materials Certifications and tickets:
Comments:
 - Steel items in compliance with Buy America requirements
Comments:
 - All field tests in compliance with requirements.
Comments:
 - **Progress Payments**
 - Date of first Voucher:
 - Processing frequency:
 - Date of latest Voucher and Voucher Number:
 - Proper signature / authorization included
 - Comments:
 - **Comments on Office Files:**

* The locations for the items in these bulleted lists for "Inspectors Records" and "Office Files" are interchangeable depending upon how the project is being administered.

REVIEW SUMMARY - OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS:

Comments:

ec:

HMA Inspection Review

ALL HMA PROJECTS

Yes No N/A

- **How many tons of:**
 - Base Course: tons
 - Intermediate Course: tons
 - Surface Course: tons
 - Total tonnage: tons

If total tonnage is 1,000 tons or less, go to Section A. If total tonnage is more than 1,000 tons, go to Section B.

- **Inspector(s) Certification Status:**
 - Name:
 - Certification Level:
 - Expiration:

- **Was plant visited:**
 - Observations:

- **Verify Material Certification:**
 - Process of Material Certification:

- **Has the contractor's lab been certified?**
 - Date of the plant inspector's last proficiency test:

- **Comments on All HMA Projects:**

Section A - Small Quantity Projects

(SS-01059, Quality Control Program for Small HMA Paving Quantities)

- **Sampling and Testing:**
 - Was an aggregate cold-feed sample taken?
 - Was a HMA loose mix sample taken?

- **Comments on Section A:**

Section B – HMA Quality Control Program

(Article 2303.04 of the Standard Specifications)

• **Sampling and Testing:**

- Loose Mix:
 - Was the sampling of loose mist observed during the inspection?
 - Was the method used in accordance with Materials I.M. 322?
 - How is the verification sample selected?
 - Comments:
- Cores:
 - Who determines the core location?
 - How is the core location selected?
 - Who is present when cores are taken?
 - Who transports the core samples?
- Secure samples:
 - Have samples been secured as defined in Materials I.M. 322?
 - Who completes Form 193?
 - Have there been any instances of samples arriving unsecured or evidence of being tampered with?
 - What happens to the unsecured samples or those samples that showed evidence of being tampered with?

• **Comments on Section B:**

HMA REVIEW SUMMARY - OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS:

Comments:

PCC Inspection Review

	Yes	No	N/A
Does the project include the QMC specifications (Materials I.M. 530)? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If yes, complete Section A and Section B. If no, complete Section B only.			

Section A - QMC project
(Materials I.M. 530)

- **Has the Contractor's lab been certified?**

- **Contracting Authority Certification Status:**
 - Name:
 - Certification Level:
 - Expiration:

- **Contractor Certification Status:**
 - Name:
 - Certification Level:
 - Expiration:

- **Sampling and testing (Materials I.M. 204)**
 - Quality Control Tests
 - Who is performing Quality Control tests?
 - Verification test
 - Who is performing Verification tests?

- **Comments on Section A:**

Section B - All PCC Projects

- **Air Content** (Article 2301.02, B, 4 of the Standard Specifications)
 - For QMC projects, was an air test run every day to verify that both air meters (Agency and Contractor) were within tolerance in Materials I.M. 216?
 - Have there been any verification test results that were outside the tolerance for air content?
 - What corrective action(s) were taken?
 - How many loads of PCC were subject to a price adjustment?
 - Comments:

- **Cores** (Materials I.M. 346)
 - Who will determine the core locations?
 - How will the core locations be selected?
 - Who will be present when the cores are taken?
 - Who will transport the core samples?
 - Comments:

- **Comments on Section B:**

PCC REVIEW SUMMARY - OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS:

Comments:

PCC Structures Inspection Review

- | | Yes | No | N/A |
|---|--------------------------|--------------------------|--------------------------|
| • PCC Delivery Tickets | | | |
| ○ Is there a delivery ticket for each load of PCC? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Is maximum water content included on the ticket? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ If water was added on the grade: | | | |
| • Are revolutions included for each occurrence? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Is the total water less than the maximum allowable water content? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ If not, what corrective action(s) were taken? | | | |
| ▪ Is time of discharge included on the ticket? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • If so, were all within the allotted time? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ If not, what corrective action(s) were taken? | | | |
| • Is each ticket signed by | | | |
| ○ the plant inspector? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ the project inspector? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ How many loads of PCC were subject to a price adjustment? | | | |
| • Air Content | | | |
| ○ Have there been any field test results that were outside the tolerance for air content? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ What corrective action(s) were taken? | | | |
| ▪ How many loads of PCC were subject to a price adjustment? | | | |
| • Slump | | | |
| ○ Have there been any field test results that were outside of the tolerance for slump? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ What corrective action(s) were taken? | | | |
| ▪ How many loads of PCC were subject to a price adjustment? | | | |
| • Flexural Strength | | | |
| ○ Have there been any field test results that were less than the minimum requirement for Flexural Strength? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ If yes, what corrective action(s) were taken? | | | |
| • PCC Plant Reports | | | |
| ○ Are structural PCC Plant Reports being submitted for each lot? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ Are all results of gradation tests within allowable limits? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ Is the water added on the grade included on the reports? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ○ Comments: | | | |

▪ PCC Plant Inspection Personnel:

Name	Position/Responsibility	Certification #	Iowa DOT Certification

STRUCTURES REVIEW SUMMARY - OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS:

Comments:

INSTRUCTIONAL MEMORANDUMS

To Local Public Agencies



To: Counties and Cities	Date: December 31, 2015
From: Office of Local Systems	I.M. No. 3.910
Subject: Final Review, Audit, and Close-out Procedures for Federal-aid Projects	

Contents: This Instructional Memorandum (I.M.) provides guidelines and procedures for closing-out Local Public Agency (LPA) Federal-aid projects, including field inspections, pre-audits, final audits or reviews, final Federal reimbursement, and records retention. This I.M. includes the following attachments:

[Attachment A](#) – Project Close-out Process Overview Flowchart. This attachment illustrates the entire project close-out process. It also directs the reader to the appropriate flow chart for the final review, audit, and payment of construction work, depending on the type of project.

[Attachment B](#) – Final Review and Audit Process Flowchart – Highway or Bridge Construction. This attachment illustrates the final review, audit, and payment process for traditional highway and bridge construction contracts that are let by the Iowa DOT and use the Iowa DOT Standard Specifications. This Attachment pertains to projects classified in Category 1 in [Materials I.M. 103](#). ICAAP project are classified as Category 1.

[Attachment C](#) – Final Review and Audit Process Flowchart – Non-highway Construction, DOT Specifications. This attachment illustrates the final review, audit, and payment process for non-highway type construction contracts that use the Iowa DOT Standard Specifications. These may be let at the Iowa DOT or locally*. They may include trails or landscaping / scenic improvement projects, such as those funded by the Transportation Enhancement, Federal Recreational Trails, Scenic Byways, and Safe Routes To School programs. This Attachment pertains to projects classified in Category 2 in [Materials I.M. 103](#).

[Attachment D](#) – Final Review and Audit Process Flowchart – Non-highway Construction, Non-DOT Specifications. This attachment illustrates the final review, audit, and payment process for non-highway construction contracts that do not use the Iowa DOT Specifications. These may be let at the Iowa DOT or locally*. In addition to the kinds of projects listed for Attachment C above, these may include building restoration or renovation projects. This Attachment pertains to projects classified in Category 2 in [Materials I.M. 103](#).

*For more information on the types of contracts that may be let locally, refer to [I.M. 3.720](#), Local Lettings – Federal-aid.

[Attachment E](#) – Pre-audit Checklist ([Word](#)). This attachment includes a checklist and instructions to guide the LPA's Project Engineer through the pre-audit process and prepare for a final audit. This checklist will also be used by the Iowa DOT staff when performing the final construction contract audit.

[Attachment F](#) – Final Forms Packet Checklist ([Word](#)). This attachment includes a checklist and instructions that describe the necessary forms and documents that should accompany the Project Engineer's request for approval of final payment to the Contractor.

Introduction

The primary objective of this I.M. is to document the process for closing-out Federal aid projects and set expectations, for both LPA and Iowa DOT staff, concerning the amount of time required to complete this process. Timely completion of the close-out process is very important because of Federal and State laws or regulations that pertain to prompt payment to contractors and subcontractors. The flowcharts included as Attachments [A](#), [B](#), [C](#), and [D](#) of this I.M. provide an estimate of the *minimum* amount of time required to complete each step. However, depending on the circumstances of each project, more time may be required.

Another important objective of this I.M. is to outline the documentation necessary to ensure that the project was constructed in accordance with the approved plans and specifications. In order to effectively carry-out its responsibilities to oversee the use of Federal funds, the Iowa DOT reviews some of this documentation. If such documentation is lacking, the Iowa DOT has the responsibility and the authority to deny Federal participation in some or all of the project costs.

Besides reviewing the construction documentation, the Iowa DOT is also responsible to ensure that the LPA is adequately staffed and equipped to undertake a Federal-aid project. If the Iowa DOT's reviews of an LPA's projects during the close-out process consistently indicate that the LPA is not adequately staffed or equipped, the Iowa DOT has the responsibility and the authority to withhold letting of future Federal-aid projects until the LPA makes the necessary corrections.

The best way to make the project close-out process run smoothly and quickly is to ensure that proper documentation and records are kept during construction. Some of the documentation reviewed during the close-out process is discussed in [I.M. 3.805](#), Construction Inspection. Therefore, the information contained in I.M. 3.805 should be thoroughly reviewed before beginning either construction or the project close-out process.

Besides I.M. 3.805, the Iowa DOT's [Construction Manual](#) should also be consulted as a resource for construction inspection and close-out procedures. The current version of the Construction Manual is available on-line as part of the Iowa DOT's [Electronic Reference Library](#). In many places throughout this I.M., references to the Construction Manual are provided for additional explanation or information.

Note: LPA and consultant staff should be aware that the Construction Manual is written primarily for use by Iowa DOT staff. Therefore, the terminology it uses reflects the Iowa DOT's organizational structure. For example, references in the Construction Manual to the Resident Construction Engineer (RCE) should be interpreted as referring to the LPA's Project Engineer. Likewise, references to the District Construction Engineer (DCE) correspond to the District Local Systems Engineer (DLSE), or in the case of projects administered by the Office of Systems Planning, the appropriate Grant Program Manager or their designee. In addition, the LPA should also recognize that some of the procedures described in the Construction Manual are internal to the Iowa DOT and therefore may not be applicable for LPA administered projects. If you have any questions concerning the applicability of procedures in the Construction Manual, contact the Administering Office for assistance.

While not detailed extensively in this I.M., timely completion and review of other non-construction contracts that have Federal-aid participation, such as consultant, railroad, or utility relocation contracts, are also very important to the project close-out process. When such Federal-aid participating work is complete, the LPA should forward a request for final reimbursement for that work to the Iowa DOT as soon as possible. This enables the final review or audit process for such contracts to begin prior to completion of the construction contract, when possible. Sometimes the final reviews or audits of consultant, railroad, or utility work can take a significant amount of time, and therefore have potential to delay close-out of the project as a whole. For more information regarding these procedures, refer to [I.M. 3.305](#), Federal-aid Participation in Consultant Costs; [I.M. 3.650](#), Federal-aid Participation in Utility Costs; and [I.M. 3.680](#), Federal-aid Projects Involving Railroads.

The attachments referenced above provide an outline of the entire process for closing-out a Federal-aid project. The remainder of this I.M. provides additional explanation for each major part of this process. These parts include the following:

Completion of Field Work

The project field work is considered complete when all the Contractor's items of physical work have been completed. In other words, unless some of the work is found to be defective, the Contractor will not need to come back to the project site.

Completion of field work requires some, but not all of the paperwork that will eventually be required from the Contractor. Before accepting the field work as complete, the Project Engineer should obtain the following from the Contractor, as applicable: survey books, the Contractor's Daily Traffic Control Diary, Abandoned Water Well Plugging Record ([DNR Form 542-1226](#)), corrected profilometer reports, and plant reports. In addition, any non-compliances related to field work should be resolved before accepting the field work as complete.

Inspection of Field Work

The Project Engineer shall notify the Administering Office when it appears the Contractor is approximately 1 week from substantial completion of the field work. The Project Engineer shall schedule a final inspection with the Contractor, the Administering Office, and themselves. The goal is to complete the final inspection within 2 weeks of substantial completion of the project, weather permitting. While every effort will be made to meet this goal, it is possible that staff availability will not allow this goal to be met for every project. In such cases, the final inspection will be scheduled as soon as possible. During the final inspection, a Final Inspection Punch List will be developed

listing all items of work that have not been completed in reasonable close conformity to the contract documents. The Project Engineer shall deliver to the Contractor the Final Inspection Punch List and specify the corrective action that must be taken. Weekly Report of Working Days ([Form 830238 \(Word\)](#)) will continue until the Punch List items are complete; however, days will not be charged during this time. The Contractor has 30 days to complete the items on the Punch List. Consideration may be given if there are items that need to be fabricated or for weather delays. Otherwise if work is not completed within the 30 days, work days charges will resume until all Punch List items have been completed. A copy of the Final Inspection Punch List shall also be sent to the Administering Office. Once the Project Engineer determines all of the work is satisfactorily completed, including any corrective actions, the Project Engineer shall send a copy of the final Weekly Report of Working Days ([Form 830238 \(Word\)](#)) and documentation of completion of the Final Inspection Punch List to the Administering Office.

The Project Engineer should not accept the field work as complete by signing the Statement of Completion and Final Acceptance of Work ([Form 830435 \(Word\)](#)) or Certificate of Completion and Final Acceptance of Agreement Work ([Form 640003 \(Word\)](#)), as applicable, until both the Project Engineer and the Administering Office agree the field work is complete and in reasonably close conformance with the contract documents.

Statement of Completion and Final Acceptance of Work

After the field inspections have been completed, and any required corrective actions completed, the Project Engineer shall notify the Administering Office in writing. This notice shall specify the corrective actions that have been taken, if any, and include the appropriate form to document the completion and acceptance of the work. The Administering Office staff, at its discretion, may spot check these corrections. The form used to document the completion and acceptance of the work depends on the type of specifications used:

For projects using the Iowa DOT Standard Specifications, the Project Engineer shall sign and date the Statement of Completion and Final Acceptance of Work ([Form 830435 \(Word\)](#)) and send the original to the Administering Office. Upon receipt, the Administering Office will sign and date [Form 830435](#), return a copy to the Project Engineer, forward the original to the Office of Finance, Project Accounting and Payables Section, and retain a copy for the Administering Office's file. The Project Engineer shall then send a copy to the Contractor.

For projects that use other specifications, the Project Engineer shall sign and date the *top portion only* of the Certificate of Completion and Final Acceptance of Agreement Work ([Form 640003 \(Word\)](#)), send a copy to the Administering Office and the Contractor, and keep the original in the LPA's file. The only purpose of this submittal is to document the date of completion of the work. It is not intended to be the LPA's approval for final payment. Approval for final payment occurs later, at which time the original [Form 640003](#) shall be sent to the Administering Office as part of the Final Forms Packet submittal. For more information, refer to [Attachment D](#) and [Attachment F](#).

The date of the Project Engineer's signature on [Form 830435](#) or [640003](#) is important, because this date marks the beginning of a 50 day count that is used to determine whether interest may be due to the Contractor. For more information, refer to [I.M. 3.930](#), Interest Payment Procedures.

A County Board of Supervisors may authorize its County Engineer to sign either the [Form 830435](#) or [640003](#) on its behalf, provided, that it has passed and executed a resolution authorizing the County Engineer to do so. For more information, refer to [I.M. 3.940](#), County Engineer Resolution.

Pre-audit Process

Prior to requesting a final audit from the Administering Office, the Project Engineer shall conduct a pre-audit. Within 90 days of completion of construction and/or other activities authorized by the project agreement, the Recipient shall provide the completed pre-audit checklist to the Department and request a final audit; however, if there is an anticipated delay the pre-audit could be started when the project is substantially completed. The pre-audit consists of a thorough review of the construction contract documentation, as specified in the Pre-audit Checklist ([Attachment E](#) to this I.M.). The purpose of the pre-audit is to prepare for a possible audit by Administering Office staff. Therefore, when conducting the pre-audit, the Project Engineer should ensure that all of the documentation associated with the construction contract is complete, correct, and well organized. If the Administering Office finds that the documentation is not complete, correct, or well organized, it may defer its final audit until the Project Engineer addresses these issues.

As part of the pre-audit process, the Project Engineer shall also prepare the proposed final quantities, including all applicable price adjustments, such as incentives / disincentives, liquidated damages, or adjustments due to non-

compliance with the contract documents. Additional guidance for each of these items is provided in [I.M. 3.805](#), Construction Inspection, and the Construction Manual sections referenced by the Pre-audit Checklist ([Attachment E](#) to this I.M.).

When the pre-audit is complete, the Project Engineer shall notify the Administering Office that the project is ready for an audit. This notification shall include a completed Pre-audit Checklist ([Attachment E](#) to this I.M.), and if applicable, all materials review forms and associated documentation, as specified by [Materials I.M. 101](#). The applicability of the materials audit process is discussed in the Final Audits section below.

Semi-final Voucher or Semi-final Pay Estimate

After the pre-audit is complete, the Project Engineer shall send the proposed final quantities, including any price adjustments, to the Contractor for review and acceptance. For contracts that are paid by the Iowa DOT through its Contractor Pay System (CPS), this submittal consists of the semi-final voucher, which is documented using the Construction Contract Progress Voucher (Form 181013), or if the Field Manager software is used, a similar computer generated form. For contracts where the LPA makes payment to the Contractor directly, this submittal consists of a semi-final pay estimate, which may be documented using either the Final Estimate of Road or Bridge Work on Non-State Roads / Streets ([Form 181235 \(Word\)](#)) or an equivalent form.

The submittal of the semi-final voucher or semi-final pay estimate to the Contractor should be made at the same time a final audit is requested from the Administering Office. Therefore, the Project Engineer should make it clear to the Contractor that the proposed final quantities are subject to change by an Iowa DOT audit.

Also as part of the semi-final voucher or semi-final pay estimate submittal, the Project Engineer shall provide the Contractor with a complete list of any missing documentation that will be required in order to receive final payment, as determined by the Project Engineer's Pre-audit.

If any quantities or price adjustments are in dispute, the Project Engineer and the Contractor shall negotiate a mutually acceptable resolution. If the parties are unable to reach an agreement, the Project Engineer or the Contractor may contact the Administering Office for assistance. If requested, the Administering Office will attempt to mediate an acceptable solution to both parties.

After the Project Engineer and the Contractor have reached agreement on the semi-final voucher or semi-final pay estimate, the Project Engineer shall approve the semi-final voucher or semi-final pay estimate and the Contractor should be paid in full, less any retainage withheld.

If informal discussions between the Project Engineer, the Contractor, and if requested, the Administering Office, are unable to reach an agreement on any quantities or price adjustments, the Project Engineer shall approve the semi-final voucher or semi-final pay estimate, less any retainage and pay adjustments for items that are being disputed. The Project Engineer shall document the reason for the items that are being disputed and what actions were taken to resolve the dispute.

Final Audits

The Administering Office, at its discretion, may audit any construction contract. Some Administering Offices have elected to audit all contracts; others have elected to select contracts using a systems approach.

Using the systems approach, from among those contracts that have been completed at the time projects are selected for audit, the Administering Office will select at least one contract for each LPA. If the LPA only has one contract, that contract will be selected. If the LPA has more than one contract, the contract will be selected at random. If the audit of the selected contract does not reveal any significant problems, the Administering Office may waive the final audits for the LPA's other contracts let during that Federal fiscal year.

If a project is not selected for an audit, the Administering Office will simply review the Pre-audit Checklist for completeness, notify the Project Engineer that a final audit will not be conducted, and send a completed copy of the Pre-audit Checklist to the Project Engineer.

If a contract is selected for a final audit, the Administering Office will forward the materials review forms and associated documentation to the District Materials staff. The materials and construction audits will proceed as follows:

Materials Audit Process (highway and bridge projects only)

A materials audit will be performed for highway or bridge projects only. Materials audits will not be performed for non-highway projects, such as those funded by the Transportation Alternatives Program, Transportation Enhancement, Federal Recreational Trails, Scenic Byways, and Safe Routes to School programs.

After receipt of the materials review forms and associated documentation, the District Materials staff will perform a materials audit in accordance with procedures outlined in Materials I.M. [101](#) and [103](#). After their audit is complete, District Materials staff will notify the Project Engineer of any deficiencies in the materials testing, certification, or other required documentation and specify the corrective action that must be taken. If needed, the District Materials staff will provide a copy of this request to the Administering Office.

After the requested corrective actions have been taken and / or obtaining the requested documentation, the Project Engineer shall forward this information to the District Materials staff.

Construction Audit Process

After substantial completion of the project the Project Engineer shall submit to the Administering Office the Pre-audit Checklist (see [Attachment E](#) to this I.M.). The Administering Office will review the Pre-audit Checklist before the final audit. For selected items, the Administering Office will examine samples of the supporting documentation contained in the Project Engineer's files in order to verify that the item was completed as indicated on the Pre-audit Checklist. Those items for which supporting documentation was reviewed will be noted as such on the Pre-audit Checklist by the Administering Office staff. Any deficiencies identified by their review will be recorded on the Audit of Final Pay Estimate ([Form 830301 \(Word\)](#)). The Administering Office staff will provide a partially completed Form 830301 to the Project Engineer. If needed, the Administering Office staff will provide a copy of Form 830301 to the District Materials staff. The Administering Office staff will also sign and date the Pre-Audit Checklist, provide a copy to the Project Engineer, and retain the original for the Administering Office's file.

After the requested corrections have been completed, the Project Engineer shall indicate the date corrective actions were taken, and sign and date Form 830301. A copy of the completed form shall be returned to the Administering Office, along with any requested documentation, as part of the Final Forms Packet submittal (see [Attachment F](#) to this I.M.). The original Form 830301 shall be retained in the LPA's file.

Preparation of the Final Voucher or Final Pay Estimate

After the materials and construction audits are complete, or upon notice by the Administering Office that a final audit will not be conducted, the Project Engineer may begin preparing the final voucher or final pay estimate. The final voucher or final pay estimate shall incorporate the corrections to final quantities or price adjustments, if required by the final materials or construction audits.

Note: For counties using the Field Manager software on contracts paid through the CPS, any changes to quantities required by the final audits will require re-issuing a semi-final voucher before preparing a final voucher. This is because the final voucher is only used to release retainage; it cannot process changes in quantities.

The Project Engineer shall send the final voucher or final pay estimate to the Contractor and request the Contractor's approval of the final quantities, including any price adjustments that may apply. If acceptable, the Contractor signs the final voucher or final pay estimate and returns it to the Project Engineer. The Contractor shall also submit to the Project Engineer all required paperwork for final payment, if not already provided. This submittal marks the beginning of a 30 day count, referred to as the Day Zero count, which is used to determine when interest may begin to accrue. For more information, refer to [I.M. 3.930](#), Interest Payment Procedures. If all required paperwork is not provided, the Project Engineer shall promptly inform the Contractor which items are still needed and that final payment will not be processed until those items are received.

Submittal of Final Forms Packet

After the Contractor has signed the final voucher or final pay estimate and provided all the required paperwork, the Project Engineer shall submit the Final Forms Packet to the Administering Office. The Final Forms Packet includes the final voucher or final pay estimate and all other required documentation for final payment. Use [Attachment F](#) to this I.M., Final Forms Packet Checklist, as a complete list of required forms and documentation.

Upon receipt of the Final Forms Packet, it will be reviewed by the Administering Office within 30 days to ensure all the applicable forms and documentation has been included. If any forms or documentation are missing, the Administering Office will promptly notify the Project Engineer and specify the items that are not complete. Once acceptable, the Administering Office routes the appropriate forms and documentation as needed. For contracts let under the Iowa DOT Specifications, the Iowa DOT documents approval for final payment by signing the Final Payment ([Form 830436 \(Word\)](#)). For contracts let under other specifications, the Iowa DOT documents approval for final payment by signing the bottom part of [Form 640003 \(Word\)](#).

Final Payment to the Contractor

After the Administering Office has approved the Final Forms Packet and signed the [Form 830436 \(Word\)](#) or [Form 640003 \(Word\)](#), final payment to the Contractor will be processed as follows:

For contracts that are paid by the LPA, the Administering Office notifies the Project Engineer that final payment may be processed and provides a copy of the signed Form 830436 or 640003 as appropriate. Upon receipt, the LPA makes final payment to the Contractor in accordance with the approved final pay estimate, including release of all retainage that is due.

For contracts paid using the CPS, the Administering Office forwards Form 830436 and the Final Forms Packet to the Office of Finance. Upon receipt, the Office of Finance processes the final payment to the Contractor, including a release of all retainage that is due.

Final Federal Reimbursement

For contracts paid by the LPA, the LPA may request final Federal reimbursement of project costs after all payments have been made, including the construction contract and any other project costs for which Federal reimbursement will be requested. This request shall be made using the reimbursement claim form provided by the Administering Office, if applicable, and shall include copies of all warrants and pay estimates for which reimbursement has not yet been requested. The Administering Office will review the LPA's final Federal reimbursement request, and if acceptable, will forward to the Office of Finance for processing, along with the Final Forms Packet.

For contracts paid by the CPS, the Office of Finance will process the Federal reimbursement of participating contract costs. Federal funds reimbursement will be deposited in the fund from which payments were originally made (e.g., the county's Farm-to-Market account for a Federal-aid project on the Farm-to-Market System). If there are any other Federal reimbursable project costs that were not paid through the CPS, the LPA shall request final reimbursement for these costs as described in the paragraph above.

Upon receipt of the final reimbursement request from the Administering Office, the Office of Finance will issue a warrant to the LPA for the final amount of Federal reimbursement that is due. If the final audits or reviews reveal that the LPA has been overpaid, the LPA shall reimburse the Iowa DOT accordingly.

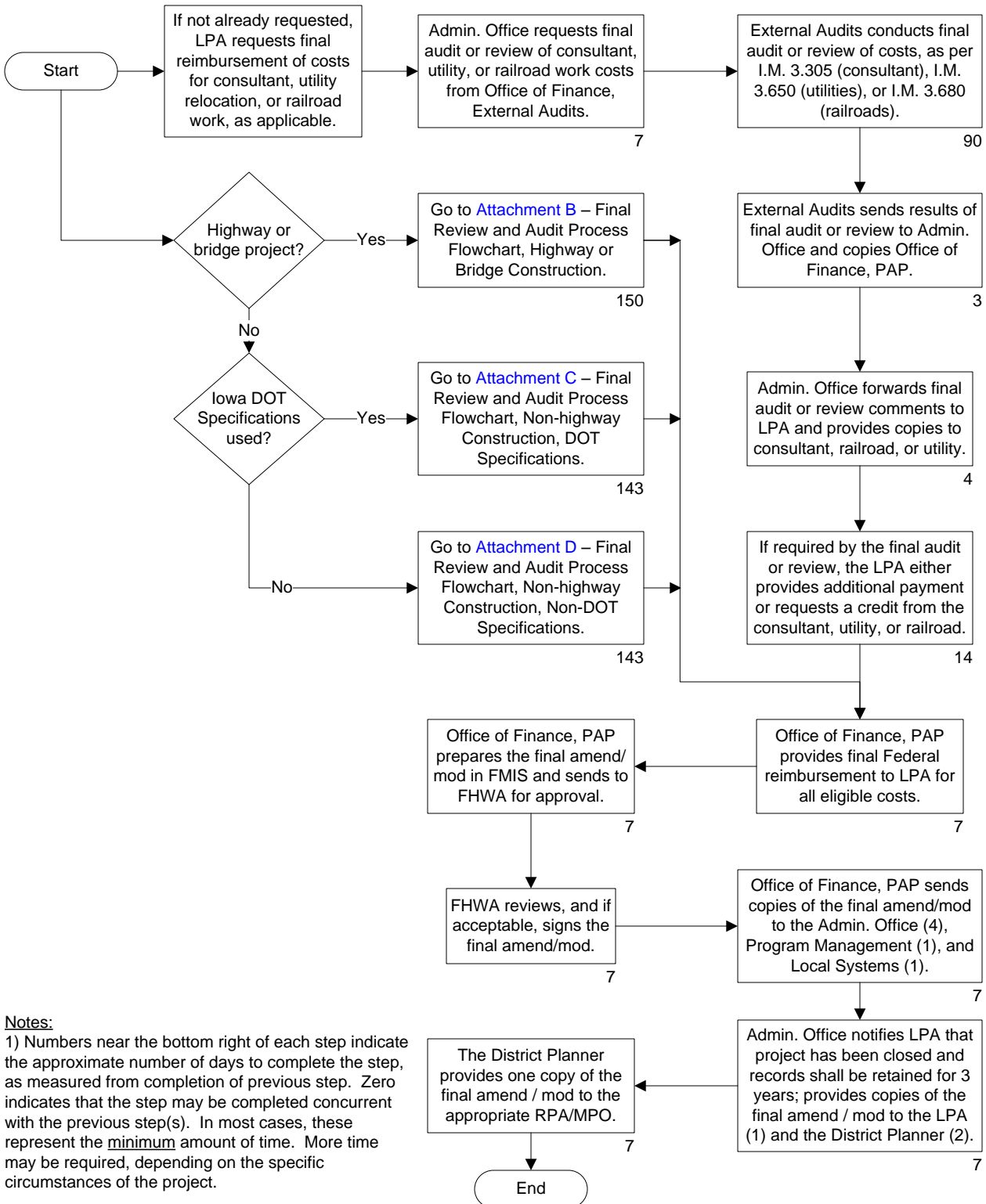
Project Close-out and Records Retention

After processing the final Federal-aid reimbursement to the LPA, the Office of Finance will prepare a final amend / modification (amend / mod) to the project authorization in the Federal Highway Administration's Fiscal Management Information System (FMIS). The final amend / mod is sent to FHWA electronically for its review and approval.

Once approved by FHWA, the Office of Finance distributes 6 copies of the final FMIS amend / mod document to the Administering Office (4), Program Management (1), and the Office of Local Systems (1). In turn, the Administering Office distributes copies to the LPA (1) and the District Planner (2). Finally, the District Planner forwards one copy to the appropriate Metropolitan Planning Organization (MPO) or Regional Planning Affiliation (RPA).

Upon receipt of the final amend / mod, the LPA shall retain its project records for not less than 3 years from the date of FHWA's signature on the final FMIS amend / mod document. These records shall be available for inspection by authorized Iowa DOT or FHWA personnel at any time during the retention period.

Project Close-out Process Overview Flowchart For LPA Federal-aid Projects



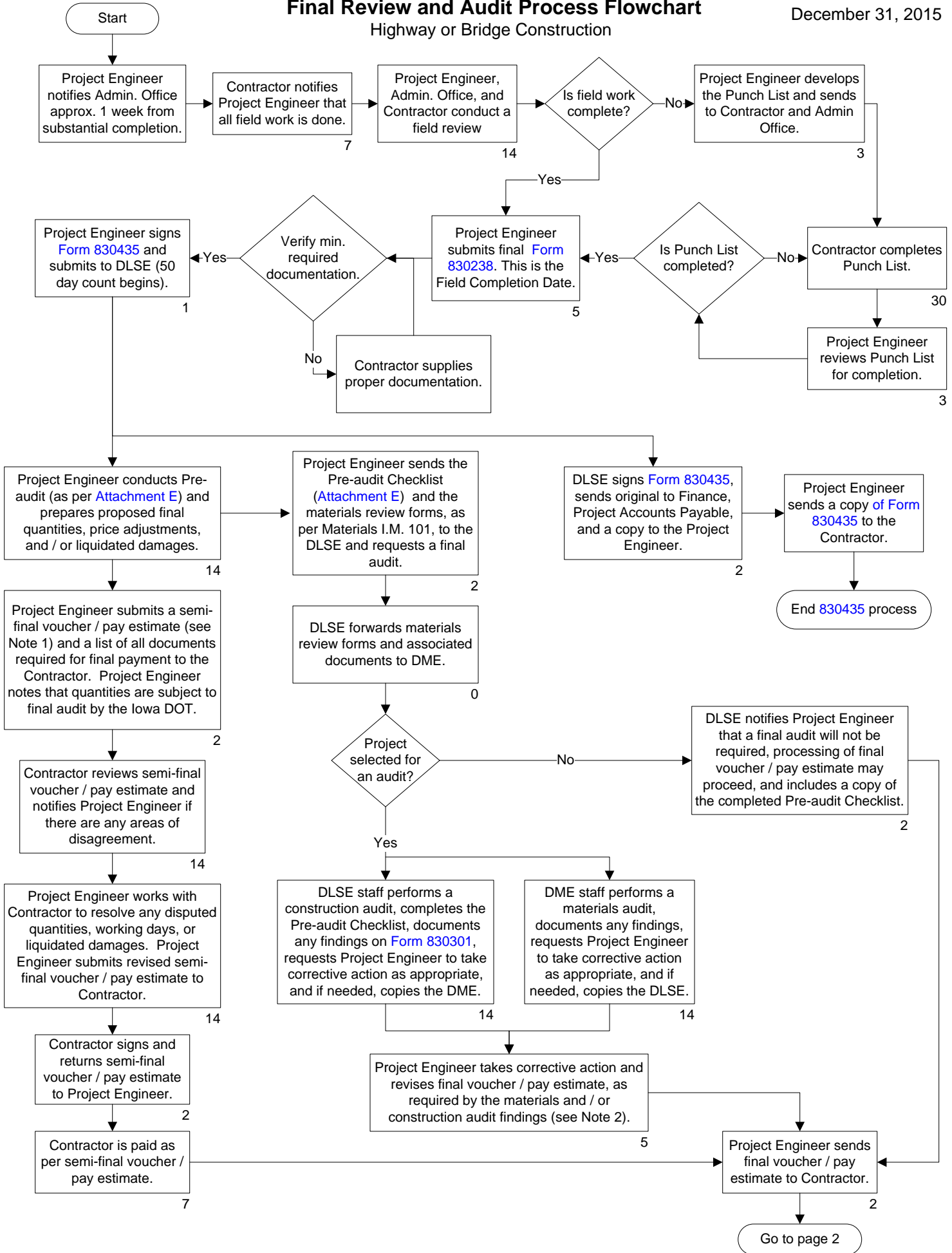
(Total = 192)

Notes:
 1) Numbers near the bottom right of each step indicate the approximate number of days to complete the step, as measured from completion of previous step. Zero indicates that the step may be completed concurrent with the previous step(s). In most cases, these represent the minimum amount of time. More time may be required, depending on the specific circumstances of the project.

Abbreviations:
 Admin. Office = Iowa DOT Administering Office
 Amend / mod = amendment / modification to the project record in FMIS
 FHWA = Federal Highway Administration
 FMIS = FHWA's Fiscal Management Information System
 LPA = Local Public Agency
 MPO = Metropolitan Planning Organization
 PAP = Project Accounting and Payables
 RPA = Regional Planning Affiliation

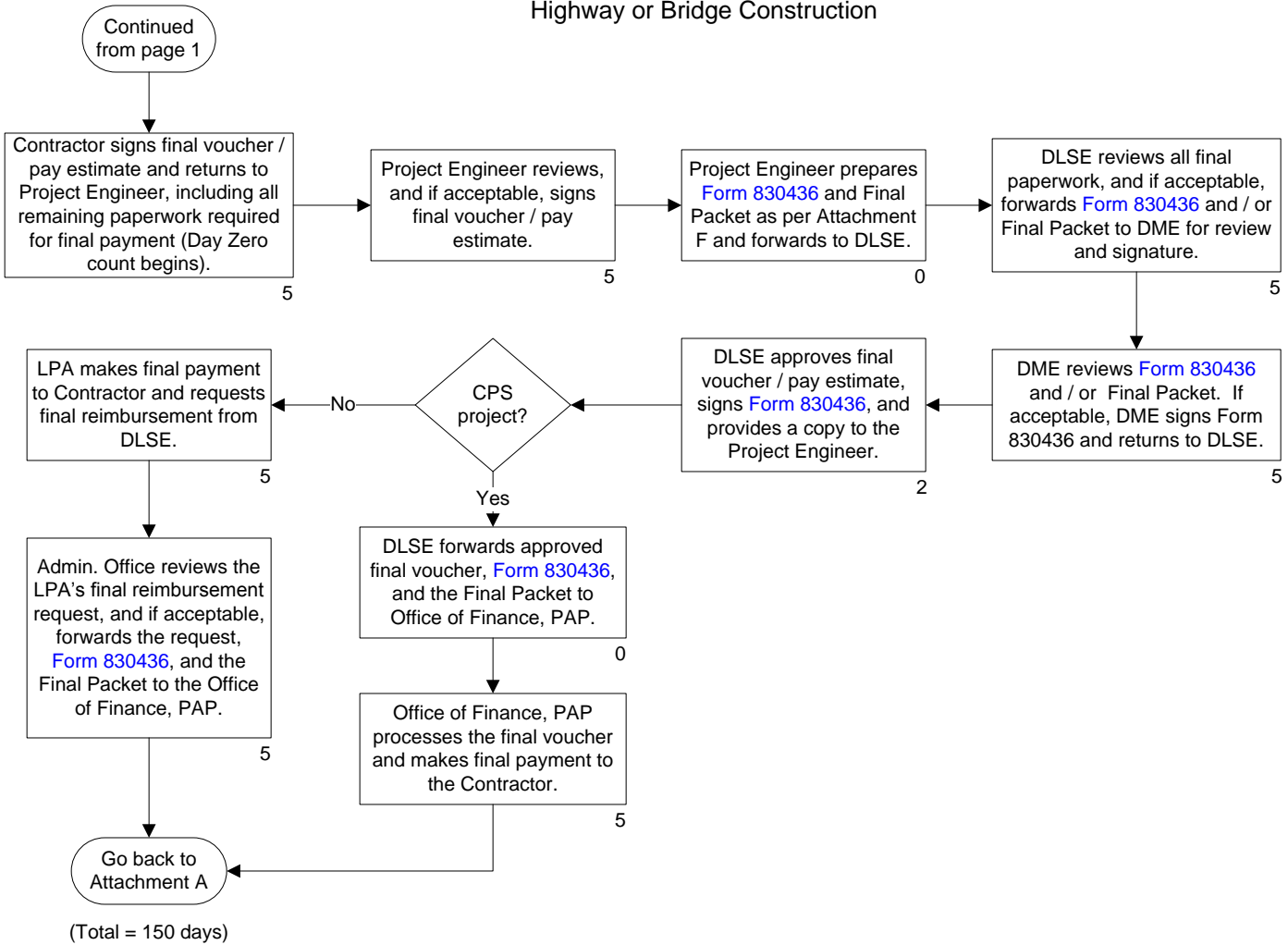
Final Review and Audit Process Flowchart

Highway or Bridge Construction



Final Review and Audit Process Flowchart

Highway or Bridge Construction



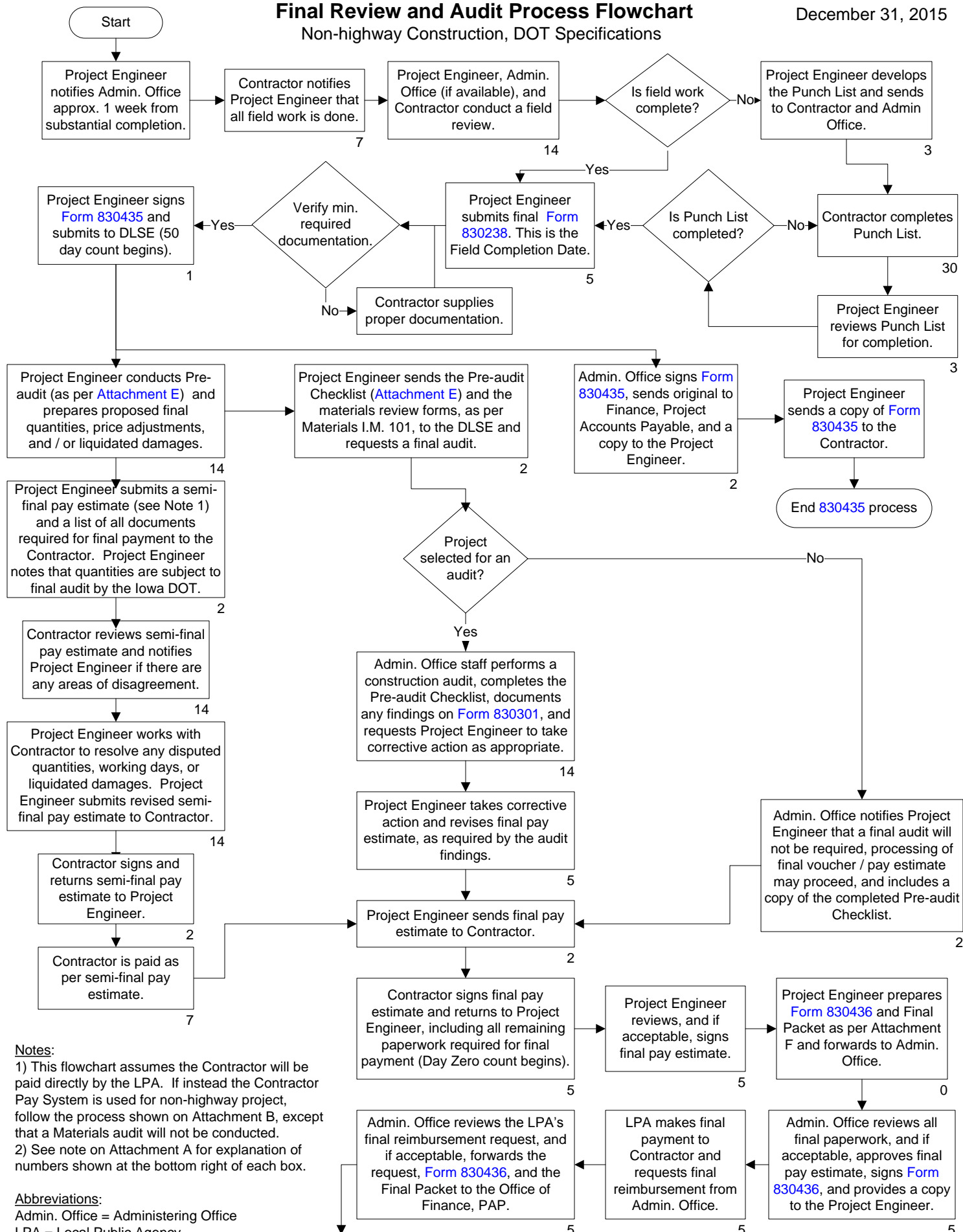
Notes:

- 1) Vouchers refer to projects using the Contractor Pay System (CPS); pay estimates refer to projects where the Contractor is paid directly by the LPA (reimbursement projects).
- 2) For contracts using the Field Manager software, a revised semi-final voucher must be prepared.
- 3) See note on Attachment A for explanation of numbers shown at the bottom right of each box.

Abbreviations:

- DLSE = District Local Systems Engineer (or delegate)
- DME = District Materials Engineer (or delegate)
- LPA = Local Public Agency
- PAP = Project Accounting and Payables

Final Review and Audit Process Flowchart Non-highway Construction, DOT Specifications



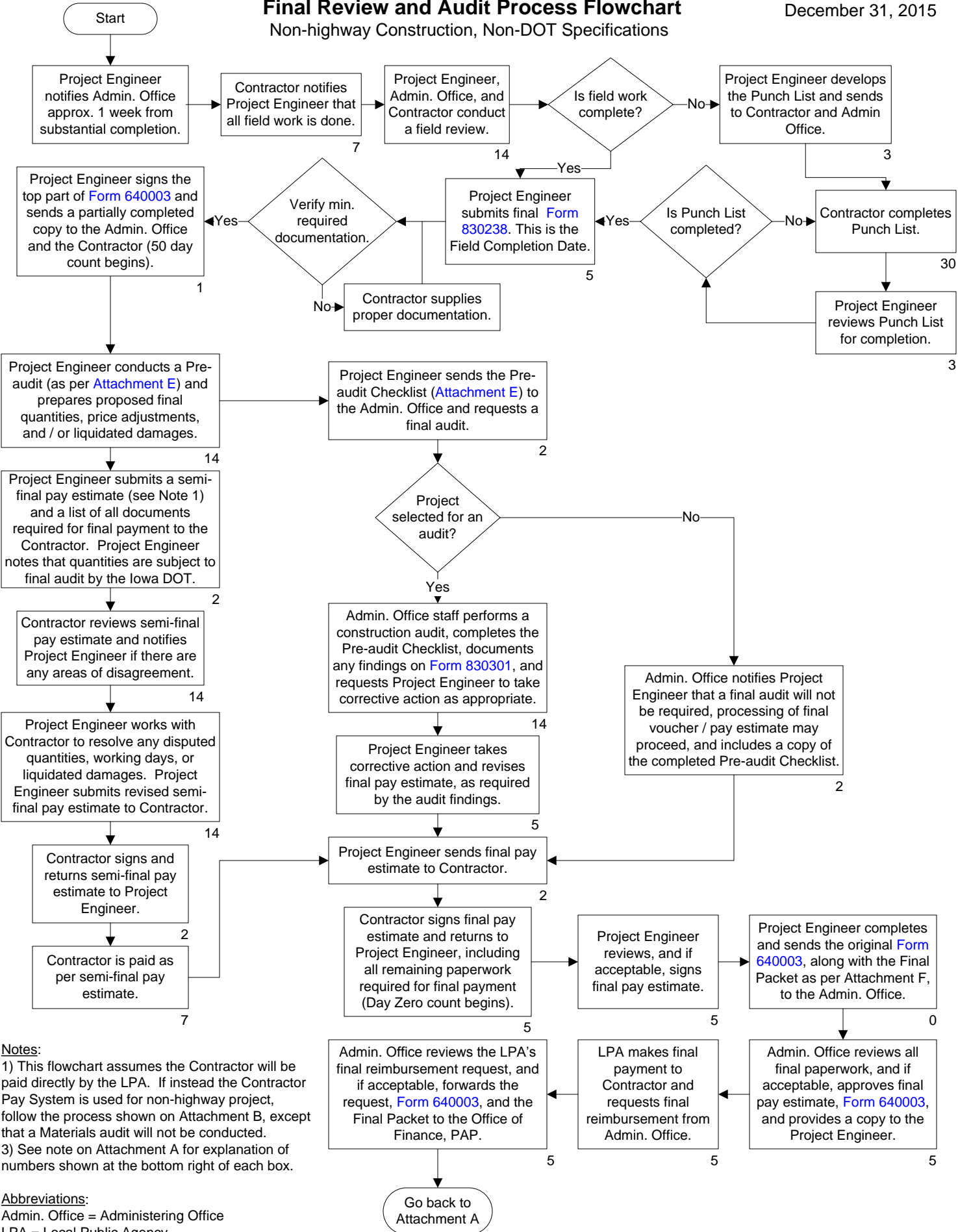
Notes:
 1) This flowchart assumes the Contractor will be paid directly by the LPA. If instead the Contractor Pay System is used for non-highway project, follow the process shown on Attachment B, except that a Materials audit will not be conducted.
 2) See note on Attachment A for explanation of numbers shown at the bottom right of each box.

Abbreviations:
 Admin. Office = Administering Office
 LPA = Local Public Agency
 PAP = Project Accounting and Payables

Go back to Attachment A
(Total = 143)

Final Review and Audit Process Flowchart

Non-highway Construction, Non-DOT Specifications



Notes:
 1) This flowchart assumes the Contractor will be paid directly by the LPA. If instead the Contractor Pay System is used for non-highway project, follow the process shown on Attachment B, except that a Materials audit will not be conducted.
 3) See note on Attachment A for explanation of numbers shown at the bottom right of each box.

Abbreviations:
 Admin. Office = Administering Office
 LPA = Local Public Agency
 PAP = Project Accounting and Payables

(Total = 143)

Pre-audit Checklist

Project Number: _____ Project Name / Location: _____
Contract Number: _____ Contracting Authority: _____
Accounting Number: _____ Contractor: _____

Instructions: All of the applicable documents, steps, or reviews represented by this checklist should be complete and correct before requesting a final audit from the Iowa DOT Administering Office. Review and complete this checklist as indicated below, and as indicated by the instructions for each item:

- If the question(s) associated with an item can be answered “yes”, and the project file contains documentation to support this answer, check the box.
- If the item does not apply, write “N/A” over the box.
- If any items need additional explanation, place a note adjacent to that item, add remarks in the “comments” section below, or attach additional documents as necessary.

For many of the checklist items below, references have been provided to the appropriate Iowa DOT form number, Iowa DOT Standard Specifications Section or Article number, Construction Manual (C.M.) section, Materials Instructional Memorandum (Materials I.M.s), or Instructional Memorandum to Local Public Agencies (I.M.). Such references are included in parenthesis immediately after the checklist item title. Consult these references for additional instructions and information.

The Iowa DOT Standard Specifications, Construction Manual, and the Materials I.M.s are all available on-line as part of the Iowa DOT’s [Electronic Reference Library](#). Most of the Iowa DOT forms referenced below are also available on the [Iowa DOT Forms](#) web page. Finally, some of the forms or documents included in this checklist are also discussed as part of [I.M. 3.805](#), Construction Inspection.

This checklist is not an all inclusive list. It should be used as a starting point for the project audit. Additional documents and documentation may be required as part of the project records.

Contract Documents

- Local Agency Funding Agreement:** Does the file include a copy of the fully-executed Iowa DOT/Local agency funding agreement including all addendums to the agreement?
- Estimating Proposal:** Does the project file include a copy of the Estimating Proposal and all attachments to the proposal?
- Addendums:** If any addendums were issued during the bid advertisement period, does the project file include copies of each addendum?
- Contract:** Does the project file include a copy of the fully-executed construction contract with FHWA Form 1273 attached?
- Plans:** Does the project file include a copy of the plans?
- Plan Revisions:** If the plans were revised after the contract award, are copies of such plan revisions, including transmittals to the Contractor, included in the project file?
- Specifications:** Is a copy (electronic or paper) of the contract specifications (Iowa DOT Standard Specifications plus the applicable General Supplemental Specifications, or other specifications as applicable) located in the project file or can they be produced when requested?
- Specification Modifications:** If the contract was let using the Iowa DOT Standard Specifications, does the project file include copies of all applicable Special Provisions, Developmental Specifications, and Supplemental Specifications? If the contract was let using other specifications, does the project file include copies of all similar special provisions or modifications to those specifications?

Contract Administration and Inspection Documents

- Final Highway Funding Sources. Final Detail Estimate Cost Summary, and Final Highway Detail Construction Estimate (if applicable):** If the contract was let by the Iowa DOT, does the project file include a copy of these documents? These documents are distributed by the Iowa DOT Office of Finance after a contract is awarded by the LPA. Together, these documents document the Contractor, awarded contract amount, the funding sources that will be used to pay for the contract costs, and if applicable, a breakdown of costs and funding by bid item categories.
- Pre-construction Meeting Minutes:** If a pre-construction meeting was held, does the project file include a copy of these notes, including a list of attendees?
- Inspector's Daily Diary:** Does the project file contain a copy of the project inspector's daily diary of construction operations, including the date and name or initials for each diary entry?
- Property Used by Contractor** (I.M. 3.805, [Att. D](#), section 2.26): If the Contractor requires the use of property, other than the existing right-of-way or easements provided by the Contracting Authority:
 - Does the project file contain copies of the Contractor's agreements for purchase, lease, or temporary easements with the property owner(s)?
- Traffic Control Documentation** ([C.M. 5.40](#), [Article 2528.01](#)): If the contract includes an item for traffic control, does the project file include:
 - A copy of the Contractor's Traffic Control Daily Diary?
 - Records to verify that the Contractor has a technician on staff that has attended and passed the exam in an American Traffic Safety Services Association (ATSSA) or International Municipal Signal Association (IMSA) Work Zone Traffic Control training class?
- Noncompliance Notice** ([Form 830245](#), [C.M. 3.21](#)): If any of the contract items, test results for incorporated materials, or work activities were not in compliance with the contract documents, was the Contractor issued a noncompliance notice for each, and does the project file include complete copies of this form?
- DBE Commitment Report** (I.M. 3.805, [Att. D](#), section 2.23): If the contract was let by the Iowa DOT and if the Contractor made a DBE commitment. Does the project file include a completed copy of this report? This report is provided to the LPA by the Office of Employee Services, Civil Rights Section, after the contract has been let. It shows a summary of the Contractor's DBE commitment(s), including the proposed DBE Contractor and/or subcontractor(s), and the committed amounts of each.
- Statement of DBE Commitments for Locally-Procured Federal-aid Contracts** ([Form 517012](#), [I.M. 3.720](#)): If the contract was let by the LPA, does the project file include a completed copy of this form?
- Certification of DBE Accomplishment** ([Form 102116](#); [Article 1102.17](#), G; I.M. 3.805, [Att. D](#), section 2.25): This form shall be submitted on all Federal-aid contracts and shall list the dollar amounts paid to all DBE firms on the contract (even if there is no commitment). Does the project file include a completed copy of this form?
- Subcontract Request and Authorization** (I.M. 3.805, [Att. D](#), section 2.25, [Article 1108.01](#)): If the Contractor used subcontractors, does the project file contain evidence that the subcontractors were authorized by the Iowa DOT Office of Contracts?
- DBE Commercially Useful Function** ([Form 517014](#); I.M. 3.805, [Att. D](#), section 2.25): Does the file include a copy of the DBE Commercially Useful Function form or documentation the DBE did a commercially useful function on the project?
- Storm Water Permit** ([I.M. 3.140](#)): If the contract work required a National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 from the Iowa DNR, does the project file include completed copies of the following:
 - Iowa DNR's Notice to Proceed form and a copy of the required newspaper notice?

- Copy of the Storm Water Permit?
- Storm Water Site Inspection Reports ([Form 830214](#)) every 7 days starting with initial ground disturbance and continuing until 70% permanent vegetative growth is established?
 - Are the site inspections signed by a representative of the Contracting Authority and the Contractor's Erosion and Sediment Control Basics trained individual?
- If the seeding or other permanent ground cover has been established, the Iowa DNR's Notice of Discontinuation (NOD) form? (If the site has not yet been stabilized, this form may be submitted later.)
- Iowa DNR Notification of Completion of Construction** ([DNR Form 37](#), [I.M. 3.410](#)): If the project required an Iowa Department of Natural Resources (Iowa DNR) Flood Plain Permit, was this form completed and sent to the Iowa DNR and does the project file include a copy of this form?
- Contractor's Erosion Control Implementation Plan** (ECIP) ([Article 2602.03](#)):
 - Does the Contractor's ECIP include stages for erosion control work to address the Contractor's time table and sequence of major activities or stages on the contract?
 - For projects with a NPDES permit:
 - Does the file contain the name of the Erosion and Sediment Control Basics (ESC Basics) and Erosion Control Technician (ECT) trained individuals on the Contractor's staff?
 - Was the ECIP submitted by the Contractor's ESC Basics trained individual?
 - If Erosion Control Mobilizations apply to the contract, did the ECIP include the anticipated number of erosion control mobilizations for the project?
 - Did the contracting authority approve the ECIP?
 - Does the project file include a copy of the Contractor's certification statement for storm water discharge associated with industrial activity for construction activities?
 - Does the project file include signed affidavits from affected subcontractors identifying them as co-permittees?
- Weekly Report of Working Days** ([Form 830238](#) ([Word](#)) or [Form 830241](#) ([Word](#)); I.M. 3.805, [Att. D](#), section 2.33): Does the project file include these reports for each week that the Contractor or subcontractors performed or should have performed work?
- Notice of Suspension or Resumption of Work** ([Form 810036](#), [C.M. 3.06](#)): If the Contractor was directed to stop work by the Project Engineer at any time during the project, does the project file include a completed copy of this form?
- Davis-Bacon Compliance** (I.M. 3.805, [Att. D](#), section 2.24): If Davis-Bacon wage requirements apply to the contract, does the project file contain the following:

Note: Federal-aid routes include all Federal Functional Classifications, except Local Roads and Rural Minor Collectors. This item also generally applies to contracts for construction of bicycle or pedestrian trails, if at least 50% of the trail is located within the right-of-way of a Federal-aid route. Projects including Safe Routes to School (SRTS) or Transportation Alternatives Program (TAP) funds require compliance with Davis-Bacon regardless of project location. For contracts let by the Iowa DOT, applicability of the Davis-Bacon requirements is indicated on the bid proposal and contract.

 - Completed Wage Rate Reports ([Form 650170](#)) for the Contractor and all subcontractors with contracts greater than \$10,000 to document the wage rate interviews? The wage rate interviews should be completed at least once, and if the contract extends more than 6 months, approximately once every 6 months for the duration of the contract. Note: Wage rate interviews do not need to be completed for Contractor or subcontractors if they participate in the Association of General Contractors (AGC) Prevailing Wage Notification Program.

- Copies of the Certified Transcript of Labor Payroll ([Form 830176 \(Excel\)](#)) that are:
 - Signed and dated by the Contractor, for each week that the Contractor or subcontractors performed work?
 - Dated by the Project Engineer upon receipt?
 - Checked and initialed by the Project Engineer for compliance? (This is only required for the first few submitted; if no compliance problems are noted, subsequent submittals will only require spot checking.)
- A copy of the applicable Predetermined Wage Rate?
- Equal Employment Opportunity (EEO) Site Inspections** ([Form 650170](#), I.M. 3.805, [Att. D](#), section 2.22): Does the project file contain completed copies of this form to document the EEO site inspections? These inspections shall be completed at least once, and if the contract extends more than 6 months, approximately once every 6 months for the duration of the contract. Note: If Davis-Bacon wage rates do not apply for the contract, only the top portion and sections 1 and 2 must be completed for each site inspection.
- Log of Piling Driven** (if by formula, [Form 830210 \(Excel\)](#), if by wave equation, [Form 830209 \(Excel\)](#); [C.M. 11.25](#), [C.M. Appendix 11-22](#)): If the contract included an item of work for driving piles, such as on a bridge project, does the project file include a completed copy of this form? This form should be completed as piles are driven and forwarded to the Administering Office.
- Change Order for Local Public Agency Projects** ([Form 831240](#)); I.M. 3.805, [Att. D](#), section 2.36): If the contract had any Change Orders, has the following been completed for each Change Order:
 - Marked as either "Substantial" or "Non-substantial"?
 - Completed quantities recorded in the appropriate field book?
 - Does the Change Order include a Justification of Cost? Refer to the "Checklist for Change Orders" included in I.M. 3.805, [Att. D](#), section 2.36 for additional guidance related to supporting documentation. Note: Supporting documentation is not required for changes in cost based on existing contract prices.
 - Is the Change Order's effect on contract time noted on the document?
 - If any work was performed on a force account basis, does the project file contain a Statement of Force Account with supporting documentation attached? ([Form 181213](#); I.M. 3.805, [Att. D](#), section 2.35; [Article 1109.03](#), B)
- Materials Review**: For all materials incorporated into projects let using the Iowa DOT Standard Specifications:
 - Have all materials been reviewed for compliance with the materials testing, sampling, and acceptance requirements of the Iowa DOT Standard Specifications and Materials I.M.s [101](#), [204](#), and [205](#)?
 - Have the applicable materials review sheets been completed or reviewed by the Project Engineer? ([Materials I.M. 101](#))
 - Has a summary statement of non-compliant tests or measurements of material incorporated into the project been completed by the Project Engineer? ([C.M. Appendix 2-33](#))
 - If the contract included HMA and / or PCC from a plant, does the project file include copies of the HMA and / or PCC Plant Reports?
- ADA (Materials I.M. 363)**: If project contains any construction or reconstruction of sidewalk or recreational trails, has the work been documented as required by Materials I.M.363?
- As-built Plans** (I.M. 3.805, [Att. D](#), section 2.72): If the contract involves work on an Interstate or Primary Highway, has the Project Engineer prepared 3 sets of as-built plans and forwarded a copy to the appropriate Administering Office?

- Statement of Completion and Final Acceptance of Work** (Form 830435; [I.M. 3.910](#)): If the contract was let using Iowa DOT Specifications, is a copy of this form included in the project file, signed and dated by the Project Engineer?
- Certificate of Completion and Final Acceptance of Agreement Work** ([Form 640003 \(Word\)](#), [I.M. 3.720](#)): If the contract was let using non-DOT specifications, is a copy of this form included in the project file, signed and dated by the Project Engineer?

Review of Quantities and Payments

- Field Book(s)**: Are the quantities for all items documented in a field book, loose leaf binder, or if recorded electronically, available as a computer print-out or report? Does the item quantity documentation include:
 - Added Change Order items (8000 “Change Number” series)?
 - Dates and initials of the person who entered the quantity?
 - Initials of the person who checked the quantity?
 - Locations specified where each quantity was placed?
- Method of Measurement and Basis of Payment**: Do all items have a method of measurement and basis of payment specified? This information is usually contained in the specifications (including any applicable Special Provisions, Developmental Specifications, Supplemental Specifications, etc.) but may also be located on the plans. Note: If the bid item number indicates the Standard Specification Section where this information can be found, the bid item number is a sufficient reference for this information.
- Items Paid by Length**: Do all items paid on the basis of length show the actual measured quantity, including the date and initials of the person that performed the measurement?
- Items Paid by Count**: Do all items paid on the basis of count (per each) show the actual count, including the date and initials of the person that performed the count?
- Items Paid by Weight** ([Article 2001.07](#)): Do all items paid on the basis of weight include:
 - Scale tickets that are certified by the producer?
 - Scale tickets that are signed by the originator and the receiver?
 - Ticket totals that are supported by adding machine tapes, computer print-outs, or other documentation?
 - Dates and locations where the material was placed?
 - Documentation of scale checks (verification and/or check weights)?
 - Documentation that tare weights were newly determined (if applicable)?
- Ready Mix Tickets**: If ready mix concrete is used, are copies of all ready mix tickets meeting the requirements of [C.M. 9.03](#) available in the project file?
- Items Paid as Lump Sum**: Do all items paid as a lump sum include the date the work was started, dates of intermittent progress (if applicable), the date the work was completed, and initials of the person who verified the work was completed?
- Items Paid by Volume**: Do all items paid by volume include supporting calculations, such as original and final cross sections, or other methods that indicate how the volume was calculated?
- Items Paid by Area**: Do all items paid by area include supporting calculations, such as sketches with dimensions, or other methods that indicate how the area was calculated?
- Items Paid by Plan / Contract Quantity** (I.M. 3.805, [Att. D](#), section 2.27, [Article 1109.01](#)): For each item paid for on the basis of plan / contract quantities:

- Does each quantity entry include the date and location of the work performed and an estimated quantity of work performed at that location?
- If the item is not plan / contract quantity by specification, does the item have a completed and approved Contract Quantity Agreement ([Form 830230](#))?
- Price Adjustments:** Have all appropriate price adjustments been documented by a completed Change Order ([Form 831240](#)), including those related to:
 - Non-compliance with the contract documents? (I.M. 3.805, [Att. D](#), section 2.53)
 - Incentive / disincentive specifications, including, but not limited to:
 - Pavement smoothness, if required by the contract documents? ([C.M. 3.60](#))
 - PCC Pavement thickness? ([C.M. 9.65](#), [Materials I.M. 346](#))
 - HMA Lab Voids, Field Voids? ([Section 2303](#))
 - Early completion? ([Section 1111](#))
 - Liquidated damages? (I.M. 3.805, [Att. D](#), section 2.34)
- Progress Vouchers / Pay Estimates:** Does the project file contain copies of all progress vouchers or pay estimates prepared by the Project Engineer and approved by the LPA?
- Reimbursements:** If the Contractor was paid directly by the LPA, does the project file contain the following:
 - Copies of all checks or warrants issued to the Contractor or copy of a check register showing all payments that have been made to-date?
 - Copy(s) of the one of the following:
 - Claim for Reimbursement of Project Costs ([Form 517050](#) or equivalent)?
 - Claim for Reimbursement of Federal Grant Program Project Costs ([Form 240007](#))?
 - Claim for Reimbursement of Safe Routes to School Project Costs ([Form 240009](#))?
 - Claim for Reimbursement of State Grant Program (RISE, RT) Project Costs ([Form 240011](#))?
- Proposed Semi-final Voucher / Pay Estimate:** Does the project file contain a copy of the semi-final voucher or pay estimate, including the final quantities and price adjustments proposed by the Project Engineer?

Project Engineer's Comments

Project Engineer's Certification: I have reviewed and verified each of the applicable items shown above. The supporting documentation associated with each applicable item is in the project file. The project file is organized and ready for Iowa DOT and / or FHWA inspection.

Printed Name: _____ Date: _____

Signature: _____

Iowa DOT Review: As the authorized representative of the Iowa DOT:

- I have reviewed this checklist and performed a final audit of this contract. For the Davis-Bacon Compliance and EEO Site Inspection items, and for all other items indicated by my initials above, I have reviewed a sample of the supporting documentation and found it to be in substantial conformance with the contract documents and / or project requirements, except as noted on the Audit of Final Pay Estimate (Form 830301).
- I have reviewed this checklist only. This contract was not selected for a final audit.

Printed Name: _____ Date: _____

Signature: _____ Initials: _____

