MINUTES OF IOWA D.O.T. SPECIFICATION COMMITTEE MEETING

January 10, 2013

Members Present: Jim Berger Office of Materials

Darwin Bishop

Mark Brandl

Donna Buchwald

Eric Johnsen, Secretary

District 3 - Construction

District 6 - Davenport RCE

Office of Local Systems

Specifications Section

Gary Novey Office of Bridges & Structures

Dan Redmond District 4 - Materials
Tom Reis, Chair Specifications Section
Brian Smith Office of Design

Willy Sorensen Office of Traffic & Safety
Tom Jacobson Office of Construction

Members Not Present: Sandra Larson Systems Operations Bureau

Greg Mulder Office of Contracts

Advisory Members Present: Lisa McDaniel FHWA

Others Present: Dean Herbst District 3 - Sioux City RCE

Wayne Sunday Office of Construction

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the revised agenda dated January 4, 2013:

1. Article 2316.05, H, 2, Schedule B Smoothness Requirements.

The Office of Materials requested to correct an error in a table note.

2. Article 2412.03, C, Placing Concrete.

The Office of Construction requested to establish a lower temperature limit of 40°F or an upper wind speed of 25 mph that requires the permission of the engineer for placing concrete.

3. Section 2538, Salvage, Removal, and Disposal of Obstructions.

The Office of Location and Environment requested to reference updated lowa DNR requirements.

4. DS-12XXX, Doc Express (Electronic Document Storage).

The District 3 Office requested approval of Developmental Specifications for Doc Express (Electronic Document Storage).

5. DS-12XXX, Portable Dynamic Message Sign.

The Office of Traffic and Safety requested approval of Developmental Specifications for Portable Dynamic Message Sign.

6. Article 1109.12, Arbitration.

The Office of Contracts requested to remove arbitration from the Standard Specifications.

	SPECIFICA	TION REV	/ISION SUBMIT	TAL FO	RM		
Submitted by: Jir	n Berger		Office: Mat	terials			Item 1
Submittal Date: 1	2/26/2012		Proposed E	Effective	Date:	October	2013
Article No.: 23	16.05, H, 2		Other:				
Title: Schedule I	3 Smoothness Requi	rements					
Specification Con	nmittee Action: App	proved as r	ecommended.				
Deferred: N	lot Approved:	Approve	ed Date: 1/10/20	013	Effecti	ve Date:	10/15/2013
Specification Committee Approved Text: See Specification Section Recommended Text.							
Comments: None).						
Specification Sec	tion Recommended	Text:					
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Comments:	(0.10) 01 201101, 111	-	or may elect to t	ор.аоо р		01 1110 0	9,,,,,,,,,,
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Comments:

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Jacobson / Wayne A. Sunday	Office: Construction	Item 2
Submittal Date: 2012.11.29	Proposed Effective Date:	October 2013
Article No.: 2412.03, C	Other:	
Title: Placing Concrete		

Specification Committee Action: Approved with changes.

Deferred: Not Approved: Approved Date: 1/10/2013 | Effective Date: 10/15/2013

Specification Committee Approved Text:

2403.03, F, 1.

Replace the Article:

Do not place concrete, without notifying permission from the Engineer, when the air temperature is 40°F (4°C) or less.

2412.03, C, Placing Concrete.

Replace Article 2:

When cold weather protection is necessary, do not place concrete without the Engineer's written permission.

Add as the second sentence of Article 4:

Do not place concrete when the forecast wind velocity (maximum steady wind or gusts) will be 25 mph (40 km/h) or greater without permission from the Engineer.

Comments: The District 3 Office indicated the main issue was in Article 2403.03, F, 1, where it specifies the Contractor must notify the Engineer before placing concrete. This Article was changed to "permission from the Engineer" to be consistent with Article 2412.03, C, 2.

The Office of Bridges and Structures wanted something tying back to Article 2403.03, F, Placing and Protection in Cold Weather, instead of just the above 40°F (4°C) requirement as proposed. The reference to "cold weather protection" was retained to bring in Article 2403.03, F. The reference to written permission of the Engineer was changed to just permission.

Specification Section Recommended Text:

2412.03, C. Placing Concrete.

Replace Article 2:

2. When cold weather protection is necessary the air temperature is 40°F or less, do not place concrete without the Engineer's written permission of the Engineer.

Add as the second sentence of Article 4:

Do not place concrete when the forecast wind velocity, maximum steady wind or gusts, will be 25 mph or greater without permission from the Engineer.

Comments:

Member's Requested Change: (Do not use '<u>Track Changes'</u>, or '<u>Mark-Up'</u>.Use Strikeout and Highlight. C. Placing Concrete.

- 1. Place concrete deck sections according to the sequence shown in the contract documents or as modified by the Engineer.
- 2. When cold weather protection is necessary, do not place concrete without the Engineer's written permission. When the air temperature is 40 °F or less, do not place concrete without permission of the Engineer.
- **3.** Do not place concrete if the temperature of the plastic concrete, at the time of placing exceeds 90°F (32°C). The Contractor may (at their own expense) cool the plastic concrete below 90°F (32°C) by a method the Engineer

approves

4. Do not place concrete if the theoretical rate of evaporation for that day exceeds 0.2 lbs. per square foot per hour (1 kg/m² per hour). Do not place concrete when the forecast wind velocity, maximum steady wind or gusts, will be 25 mph or greater without permission from the Engineer. Use the Theoretical Rate of Evaporation Chart located within the appendix to calculate the theoretical rate of evaporation. For this chart, use:

The National Weather Service's maximum air temperature, relative humidity, and maximum steady wind velocity without gusts for the date and the location of the concrete deck placement, and

The temperature of plastic concrete at time of placement.

Reason for Revision: To establish a temperature limit of 40°F or less that requires the contractor to request permission to place a bridge deck and is subject to the approval of the Engineer following review of the forecasted weather conditions.

The Theoretical Rate of Evaporation Chart referred to by Article 2412.03, C, 4 is in the Specification Appendix. The chart shows wind speeds up to 25 mph for use in determining the Theoretical Rate of Evaporation, but does not go above 25 mph. There may be weather conditions in which the wind velocity, either maximum steady wind or gusts, is forecast to exceed 25 mph. Wind velocities above 25 mph are not represented in the chart for determination of Theoretical Rate of Evaporation and thereby would potentially result in unfavorable deck concrete placement conditions. Requiring a contractor to request permission from the Engineer when the forecast wind velocity, maximum steady wind or gusts, exceeds 25 mph and will require approval of the Engineer for the deck concrete placement to occur.

County or City Input Needed (X one)			Yes	No	No	
Comments:						
Industry Input Needed (X one)			Yes	No	No	
Industry Notified:	Yes	No	Industry Concurrence:	Yes	No	
Comments:	•	•	•		•	

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Rost	Office: Location and Environment	Item 3
Submittal Date:	Proposed Effective Date:	
Section No.: 2538	Other:	
Title: Salvage, Removal, and Disposal of Obstructions		

Specification Committee Action: Deferred until a future meeting.

Deferred: X Not Approved: Approved Date: Effective Date:

Specification Committee Approved Text:

Comments:

Specification Section Recommended Text:

2538.03, D, 4, Dust Control.

Replace the Article:

Minimize the spread of fugitive dust during demolition of masonry by thoroughly wetting the material. Comply with the provisions of the Iowa DNR fugitive dust rules contained in 567 Iowa Administrative Code (IAC), Chapter 23.

2538.03, D, 6, d.

Replace the Article:

Remove and dispose of appliances and other items that may contain refrigerants according to 40 CFR, Part 82, mercury, or PCB-containing capacitors in accordance with the Iowa DNR discarded appliance demanufacturing rules contained in 567 IAC, Chapter 118. Appliances and other items that may contain refrigerants include, but are not limited to, refrigerators, freezers, dehumidifiers, and portable or central air conditioners. Venting refrigerants into the atmosphere when removing or disposing of these appliances is prohibited. Ensure a technician certified through a U.S. EPA approved course evacuates refrigerants from these appliances. Ensure equipment used to evacuate refrigerants is certified by the ARI or UL.

2538.03, D, 7, a, 1.

Replace the third sentence:

Ensure sewage is disposed of according to 567 lowa Administrative Code IAC, Chapter 68.

2538.03, D, 8, Wells.

Replace the Article:

- **a.** Seal the well with methods and materials according to 567 IAC 567, Chapter 39, Requirements for Properly Plugging Abandoned Wells. Ensure wells are sealed by a certified well subcontractor certified in accordance with 567 IAC, Chapter 82.
- **b.** Remove all obstructions before beginning to fill and seal the abandoned well. Use one or more of the following materials to fill the well:
 - Sand,
 - Pea gravel,
 - Class A, B, or C granular surfacing material,
 - Agriculture lime.
- **c.** Ensure all fill materials are free of foreign matter and any toxic residue. Introduce the material at the bottom of the well, or at the starting location. Fill and place progressively upward to the bottom of the seal material location.
- d. Use one or more of the following materials to seal the well:

- Neat cement (14 lbs. (1.7 kg) cement per gallon (liter) of water),
- Graded bentonite, bentonite pellets, or bentonite grout,
- Sand cement grout (1 sack of cement/equal volume masonry sand/not more than 6 gallons (23 L) water),
- PCC.
- e. Place sealing materials using a grout pipe, tremie pipe, cement bucket, or dump bailer, in such a way as to avoid segregation or dilution of the sealing materials. Bentonite pellets or graded bentonite may be added as sealing materials by pouring in place and agitating to avoid bridging.
- f. For a deep well, place neat cement from 10 feet (3 m) below the bottom of the casing to 10 feet (3 m) above the bottom of the casing or to the static water level, whichever is higher.
- g. For wells complete in multiple aquifers, re-use this same procedure throughout subsequent aquifers.
- **h.** Cut off the upper portion of the well casing at least 4 feet (1.2 m) below ground or construction level. Plug the upper 6 feet (2 m) of the remaining casing with neat cement.

2538.05, A, 2.

Replace the Article:

Payment is full compensation for:

- Removal and disposal of buildings, building materials, contents of buildings, appliances, trash, rubbish, basement walls, foundations, sidewalks, steps and driveways,
- Water and sewer disconnection,
- Obtaining permits,
- Dust control,
- Removal and handling of refrigerants, mercury and PCB-containing materials,
- Furnishing and compacting backfill material,
- Finish grading of disturbed areas,
- Furnishing and placing seed and fertilizer,
- Placing and removing safety fencing, and
- Removal of septic tanks and cisterns.

Comments:

Member's Requested Change: (Do not use '<u>Track Changes'</u>, or '<u>Mark-Up'</u>. Use <u>Strikeout</u> and <u>Highlight</u>.)

Section 2538. Salvage, Removal, and Disposal of Obstructions

2538.01 DESCRIPTION.

Salvage, remove, and dispose of buildings and other obstructions from the project site as designated in the contract documents.

2538.02 NOTIFICATION AND RIGHTS OF POSSESSION OR OCCUPANCY.

A. Notification.

- 1. Notify the Engineer, in writing, of the intended starting and completion dates for demolition no less than 25 calendar days prior to the start of demolition.
- 2. If unable to begin work on the intended start date, notify the Engineer, by telephone with a written follow-up, of the new intended start date. To meet the requirements of 40 CFR 61.145(b), provide notification of the inability to commence work on the intended start date as soon as possible before, but no later than 1 working day prior to, the original intended start date. Failure to commence work on the specified start date, and failure to notify of a change in start date 1 working day prior to the original start date, will result in the need for a new 25 calendar day notification to the Engineer.
- **3.** The Contracting Authority will provide notification of the work to the lowa DNR.

B. Rights of Possession or Occupancy.

- 1. The Contracting Authority retains the exclusive right to grant occupancy and collect rent on any property included in this contract.
- 2. Do not view the interior of occupied houses.

2538.03 SALVAGE, REMOVAL, AND DISPOSAL.

A. General.

- 1. Unless designated otherwise in the contract documents, the Contractor may elect to:
 - Demolish the buildings on site and remove the building materials, or
 - Move the building structure intact from the site.
- 2. Demolition by burning and the burning of demolition debris and material is prohibited.
- 3. Perform Clearing and Grubbing according to Section 2101.

B. Regulated Materials.

- 1. The Contracting Authority will have inspected the building for the presence of asbestos, mercury, and PCB-containing materials. These materials will be removed by others.
- **2.** Mercury-containing materials include:
 - Fluorescent, high pressure sodium, mercury vapor, metal halide light bulbs, and
 - Thermostats containing a liquid filled capsule.
- PCB-containing materials include capacitors, ballasts, and transformers where the component is contained within a metal jacket and does not have a specific, legible, label stating no PCB's are present.
- **4.** Should the Contractor encounter unforeseen regulated materials, immediately suspend all activities that may disturb the suspect regulated material and notify the Engineer.

C. Underground Tanks.

- If the presence of underground tanks is known, they will be indicated in the contract documents.
 Unless specified otherwise in the contract documents, perform all work involved in removing and disposing of underground tanks, the associated plumbing, and the contents, as well as placing backfill in the excavation, according to Section 2537.
- 2. Should the Contractor encounter an underground tank not indicated in the contract documents, avoid disturbing the tank, its associated plumbing, and its contents. Promptly notify the Engineer.

D. Removal Requirements.

1. Rodent Extermination.

When required by local government ordinances, exterminate rodents before commencing demolition.

2. Utilities.

Water and Sewer Disconnections.

- Tap off all water service lines at the main according to the requirements of the local jurisdiction.
- Seal storm and sanitary sewers leading to the buildings to be removed. Unless otherwise required by the City or County, use a burlap plug capped with concrete. If desirable to use drains during the removal work, take preventive measures to prevent dirt, plaster, and other material from entering and clogging sewers.
- 3) Water and sewer disconnections may be performed prior to the intended start date referenced in Article 2538.02, A, with no working days charged.

b. Other Disconnections.

 Disconnection of other utilities will typically be arranged by the Contracting Authority prior to salvage and removal work. Verify the disconnection of all utilities and notify Iowa One-Call at 800.292.8989 prior to the commencement of work.

2) If a utility has not been disconnected at the time the work is to commence, make arrangements for the disconnections. This work will be paid for according to Article 1109.03, B.

3. Permits.

Some local jurisdictions require a permit for the performance of demolition work or the moving of intact structures, or both, according to Article 1107.03.

4. Dust Control.

Minimize the spread of fugitive dust during demolition of masonry by thoroughly wetting the material. Comply with the provisions of the Iowa DNR fugitive dust rules contained in 567 Iowa Administrative Code (IAC), Chapter 23.

5. Safety Fence.

Furnish and place a safety fence meeting the requirements of Article 4188.03 around the site of work. Leave the safety fence in place until the demolished materials are removed from the site and backfill is placed in all holes or excavated areas. The fencing material remains the property of the Contractor.

6. Removal of Buildings and Materials.

- a. Unless directed otherwise in the contract documents, remove all structures, trash, rubbish, basement walls, floors, foundations, sidewalks, steps and driveways from the specified parcel. All materials remain the property of the Contractor, unless designated otherwise in the contract documents.
- b. Remove and dispose of all materials according to Federal, State, and local regulations. Cover all demolition materials being removed from the site, or transport in a manner that prevents visible emissions. Transport all demolition materials that are not being recycled or salvaged directly to a landfill approved by the Iowa DNR (or the equivalent environmental department in a surrounding State) to accept construction and demolition wastes.
- **c.** Complete the removal of intact structures from the right-of-way within the contract period.
- d. Remove and dispose of appliances and other items that may contain refrigerants, mercury or PCB-containing capacitors in accordance with the Iowa DNR discarded appliance demanufacturing rules contained in 567 IAC, Chapter 118. according to 40 CFR, Part 82. Appliances and other items that may contain refrigerants include, but are not limited to, refrigerators, freezers, dehumidifiers, and portable or central air conditioners. Venting refrigerants into the atmosphere when removing or disposing of these appliances is prohibited. Ensure a technician certified through a U.S. EPA approved course evacuates refrigerants from these appliances. Ensure equipment used to evacuate refrigerants is certified by the ARI or UL;
- Remove building cornerstones and other historical markers without damaging. Deliver to the Engineer.
- f. Obtain the Engineer's approval prior to commencing backfill placement.

7. Septic Tanks and Cisterns.

Remove septic tanks and cisterns, when included in the contract documents, as described below:

a. Septic Tanks.

- 1) Remove liquids and sludge from all septic tanks prior to their removal. Ensure pumping, transporting, and disposing of septic tank sewage is performed by a Commercial Septic Tank Cleaner licensed for such work by the State of Iowa. Ensure sewage is disposed of according to 567 lowa Administrative Code IAC, Chapter 68.
- Remove septic tanks and place backfill in the excavation according to Article 2538.03, D, 9.
 Removed septic tanks become property of the Contractor. Transport off the project.
- 3) Plug all lateral lines (inflow and outflow) at the side of the excavation or tank.

b. Cisterns.

Remove all cisterns and place backfill in the excavation according to Article 2538.03, D, 9. Cisterns will be considered demolition debris. Remove from the site.

8. Wells.

- **a.** Seal the well with methods and materials according to 567 IAC 567, Chapter 39, Requirements for Properly Plugging Abandoned Wells. Ensure wells are sealed by a certified well subcontractor certified in accordance with 567 IAC, Chapter 82.
- b. Remove all obstructions before beginning to fill and seal the abandoned well. Use one or more of the following materials to fill the well:

- Sand.
- Pea gravel,
- · Class A, B, or C granular surfacing material,
- Agriculture lime.
- c. Ensure all fill materials are free of foreign matter and any toxic residue. Introduce the material at the bottom of the well, or at the starting location. Fill and place progressively upward to the bottom of the soal material location.
- d. Use one or more of the following materials to seal the well:
 - Neat cement (14 lbs. (1.7 kg) cement per gallon (liter) of water),
 - Graded bentonite, bentonite pellets, or bentonite grout,
 - Sand cement grout (1 sack of cement/equal volume masonry sand/not more than 6 gallons (23 L) water);
 - PCC.
- e. Place sealing materials using a grout pipe, tremie pipe, cement bucket, or dump bailer, in such a way as to avoid segregation or dilution of the sealing materials. Bentonite pellets or graded bentonite may be added as sealing materials by pouring in place and agitating to avoid bridging.
- f. For a deep well, place neat cement from 10 feet (3 m) below the bottom of the casing to 10 feet (3 m) above the bottom of the casing or to the static water level, whichever is higher.
- g. For wells complete in multiple aquifers, re-use this same procedure throughout subsequent aquifers.
- **h.** Cut off the upper portion of the well casing at least 4 feet (1.2 m) below ground or construction level. Plug the upper 6 feet (2 m) of the remaining casing with neat cement.

9. Placing Backfill Material.

- a. For placing backfill material, furnish earth fill material meeting the requirements of Article 2102.03, F. Place backfill material and compact according to the requirements of Section 2107 for Type A compaction. Complete within 10 working days after completion of the removal of structures.
- **b.** Grade and shape the site to drain and ensure the condition of the completed site complies with Article 1104.08.

10. Erosion Control.

Seed and fertilize, as specified in the contract documents, all areas disturbed by the Contractor's operations. The Engineer may require additional erosion control measures. Additional erosion control measures will be paid for according to Article 1109.03, B.

2538.04 METHOD OF MEASUREMENT.

Measurement will be as follows:

- A. Salvage, Removal, and Disposal of Obstructions identified in the contract documents: lump sum item; no measurement.
- B. Sealing Wells: by count for each well filled and sealed.

2538.05 BASIS OF PAYMENT.

Payment will be as follows:

- **A.** Salvage, Removal, and Disposal of Obstructions on Parcel No. _; and Salvage, Removal, and Disposal of Obstructions:
 - 1. Lump sum.
 - 2. Payment is full compensation for:
 - Removal and disposal of buildings, building materials, contents of buildings, appliances, trash, rubbish, basement walls, foundations, sidewalks, steps and driveways.
 - Water and sewer disconnection,
 - Obtaining permits,
 - Dust control.
 - Removal and handling of refrigerants, mercury and PCB-containing materials,
 - Furnishing and compacting backfill material,
 - Finish grading of disturbed areas,

- Furnishing and placing seed and fertilizer,
- Placing and removing safety fencing, and
- Removal of septic tanks and cisterns.
- 3. Other items of work will be paid for in accordance with Article 1109.03, B.
- B. Sealing Wells:
 - 1. Contract unit price per unit.
 - **2.** Payment is full compensation for materials, equipment, excavation, filling, and sealing according to the contract documents.

Reason for Revision: To reference updated Iowa DNR requirements						
County or City Input	t Needed ()	(one)	Yes	No		
Comments:			·			
Industry Input Needed (X one)			Yes	No		
Industry Notified:	Yes	No	Industry Concurrence:	Yes	No	
Comments:			•			

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Darwin Bishop / Dean Herbst	Office: District 3	Item 4
Submittal Date:	Proposed Effective Date: March 19,	2013
Article No.: Title:	Other: Developmental Specifications Express® (Electronic Document Storage	

Specification Committee Action: Approved as recommended.

Deferred: Not Approved: Approved Date: 1/10/2013 Effective Date: 3/19/2013

Specification Committee Approved Text: See attached Developmental Specifications for Doc Express (Electronic Document Storage).

Comments: Tom Jacobson will be the controller of this DS until a technical memorandum can be written to explain the use of the DS. At that time, there will be no controller.

The Office of Local Systems asked about the use of this DS by cities and counties. The District 3 Office explained that there is a cost to Infotech for each project that uses Doc Express. The cities and counties would be responsible for this cost for their projects. This information will be included in the technical memorandum. The technical memorandum will also include information on recommended file sizes and the recommendation for a cellular aircard for field access to the Doc Express website.

The Specifications Section asked about similar programs that the Iowa DOT is using, such as Newforma Project Cloud (formerly Attolist). Newforma Project Cloud is being used for submission of shop drawings and providing comments to the Contractor. This is a different function than Doc Express, which is just a document storage site. Once shop drawings are approved, shop drawings would be placed in Doc Express.

The Office of Design asked if other software should be included, besides just Doc Express. The District 3 Office indicated that Doc Express is an Infotech program that works in conjunction with Bid Express to load project information such as bid items and required bid item documentation, such as shop drawings and materials certifications. Field Book and Field Manager are also Infotech programs that tie in with Doc Express.

Once a project is complete, the information in Doc Express is archived in ERMS for future reference. The Office of Bridges and Structures asked about filing approved shop drawings. The RCE Office has been responsible for this and will continue for the time being.

The Office of Design asked about the list of file formats in Article DS-12XXX.01, D. This is just an example of the file formats, as Doc Express will accept any format. In the future, as this specification is moved from a DS to the Standard Specifications, we may want to eliminate specific mentions of file formats so the specification does not need to be revised when new file formats become common.

The District 6 Office asked if Doc Express conflicts with the Department's use of ProjectWise. ProjectWise is capable of being accessed by Contractors, but has not been used yet in this manner. Also, ProjectWise would not have access to the bid item information from Bid Express.

Specification Section Recommended Text: See attached Draft Developmental Specifications for Doc Express (Electronic Document Storage).

Comments:

Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.)

DS-XXXXX (New)



DEVELOPMENTAL SPECIFICATIONS FOR DOC EXPRESS (Electronic Document Storage)

Effective Date DATE

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

XXXXX.01 GENERAL.

This specification contains requirements for the collection and management of documents through the use of Doc Express[®] at https://docs.infotechexpress.com/. Doc Express is a web based program which accepts electronic documents and has security in each submittal which prevents modifications to the submitted electronic document. Doc Express is a more efficient method of collecting and managing information through the use of technology instead of paper hard copies.

The Contracting Authority will perform setup of Doc Express based on the detail within this Developmental Specification and in accordance with project requirements. Doc Express is the complete and officially recognized file storing material approval documentation, certified payrolls, and other contract documents required by the Contracting Authority. Full implementation of Doc Express is required.

Contractor responsibilities within this Developmental Specification are designated as the prime contractor who may choose to delegate responsibilities to subcontractors and suppliers of the project.

A. Doc Express Structure.

This specification provides the framework for which Doc Express will be utilized to store project documents. Three basic file cabinet drawers will be used to store documents:

- Materials Certifications drawer which include the following types of folders:
 - a. Defined by Contract Item Types of information included within each Contract Item include:
 - i. Type A, Type C, Type D Certifications
 - ii. Material Source
 - iii. Approved Warehouse Stock
 - iv. Approved Shop Drawing & Approved Catalog Cut
 - v. Fabrication Reports
 - vi. Visual Approval by Project Engineer
 - vii. Plant Reports
 - viii. Profilometer Reports
 - ix. Smoothness Reports

- b. Material Test Results
- c. Rejected Items
- 2. Contract Documents drawer which include the following types of folders:
 - a. Weekly Work Day Reports
 - b. Daily Traffic Control Diaries
 - c. Storm Water Inspection Reports
- 3. Certified Payrolls drawer

Documents will be stored in the appropriate folder within each drawer of the file cabinet (Contract). The Contracting Authority will either Receive the document which will acknowledge the document addresses an aspect of the project or Reject the document if the document is in error.

B. Doc Express User Guide.

A Doc Express User's Guide is available at https://docs.infotechexpress.com/html/help.html to provide detail on how to navigate the program but a few key functionalities include:

- 1. The Doc Express program provides an opportunity to add comments each time a document is submitted, copied, received, or rejected.
- 2. A certification statement requiring an acknowledgement the information submitted is accurate. Enabling this certification statement and submitting the document places an electronic signature within Doc Express.
- 3. When a user performs a submittal, copies a submittal (Contracting Authority only has this option), adds a comment, receives a submittal, or rejects a submittal; those actions are tracked, logged, and are able to be viewed in an activity audit trail of the submitted document.

C. Doc Express Security.

Each user within an organization will be assigned an account within Doc Express. Access to Doc Express will be through the use of the user's email address and a unique password. This unique user ID is utilized by the tracking feature described in XXXXX.01 B, 3. User permissions will be defined within Doc Express for each specific contract.

- 1. **Principal -** The Prime Contractor will be assigned Principal permission which will authorize any person associated with the Prime Contractor to submit documents and view all documents submitted into Doc Express including those submitted by the Contracting Authority and user's with an Associate level permission.
- 2. Associate Subcontractors and suppliers will be assigned Associate permission which will authorize any user associated with the respective subcontractor or supplier to submit documents but can view only those documents submitted by that respective entity. An Associate user is not able to view documents submitted by a Principal, Contracting Authority, or other Associate users.
- Reviewer A Reviewer permission will allow the user to only view all documents and will typically be assigned to those that will oversee the specific contract but are not responsible for daily tasks.
- **4. Contracting Authority** A formal permission level is not assigned. Contracting Authority staff has the ability to submit documents, receive submitted documents, or reject a submitted document which does not address a specific requirement of the contract.

Documents submitted into Doc Express are secure. The security of the program will not allow modifications to a submitted document by any user. The user, or another user within the

organization, who submitted the document may delete the submittal from Doc Express as long as the document has not been Received, Rejected, or had a comment attached.

The Payroll drawer has a more restrictive security setting. Only the user who submits a payroll document or a Contracting Authority user specifically assigned to access payroll information for the specific contract can view the payroll document. Other Principal users will not be able to view the submitted payroll document nor will other Contracting Authority users have access to the Payroll drawer.

D. Doc Express Document Types.

Doc Express will accept all types of electronic documents including but not limited to Microsoft Excel files, Microsoft Word documents, Adobe Portable Document File (PDF), Tagged Image File (TIFF), and Joint Photographic Experts Group (JPEG). Doc Express has a 2 GB size limitation on a document, but uploading and opening of the document will take longer as the file size increases. Preference should be given to smaller file sizes anytime they can be used.

E. Doc Express Email Preferences.

Doc Express will provide email notifications but is not designed to operate as a communication tool.

Each individual user has the option of an email notification when a document has been rejected or when documents are submitted. When the rejected email notification option is enabled, an email will be sent to the user every time a submitted document is rejected. When the document submittal option is enabled, the user will be provided a summary of the number of documents submitted the previous day. These notifications will only occur for instances when document(s) can be accessed as per the defined permission level of the user.

F. Doc Express Archive.

Contracting Authority users only have the option to electronically archive all documents submitted and processed during the project and at project completion.

XXXXX.02 EQUIPMENT.

Doc Express requires access to the internet. The preferred web browser is Internet Explorer 8 or newer. Other web browsers such as Mozilla Firefox and Google Chrome may be used but the functionality of Doc Express may be compromised. The use of air cards and laptop computers may be desired to allow field users access to documents.

XXXXX.03 CONSTRUCTION.

A. Contracting Authority Responsibilities.

- 1. The Engineer will create the drawers and document folders within a file cabinet (Contract) in Doc Express. The name of the file cabinet will include the project number, reference to the administering office, brief description of the work, and the Prime Contractor.
- 2. Define document drawers within the contract file cabinet in Doc Express based on the requirements of the project. At a minimum, the Materials Certification and Contract Documents drawers will be included. The Payroll drawer will be included when Certified Payrolls are specified in the contract documents.
- **3.** Assign Principal, Associate, and Reviewer Permissions for the contract file cabinet within Doc Express.
- **4.** Assign folders under the document drawer within the contract file cabinet in Doc Express to categorize information to be submitted. The drawer/folder organization will include:
 - a. Material Certifications
 - By Contract Item

- ii. Items added by Contract Modification
- iii. Material Test Reports
- b. Contract Documents
 - i. Weekly Work Day Reports
 - ii. Daily Traffic Control Diaries
 - iii. Storm Water Inspection Reports
- c. Certified Payrolls
 - i. Prime Contractor
 - ii. Each Subcontractor
- 5. Review and Receive submitted electronic documents in Material Certifications drawer.
 - a. Verify electronic material certification document for specific material corresponds to the material delivered to project site.
 - b. **After field verification** Receive the submitted electronic document in Doc Express prior to material being incorporated into the project or processing payment for work completed.
 - c. A list of electronic certification which the Contracting Authority is responsible for submitting to Doc Express as defined in Materials IM 204 includes:
 - Test reports Includes job control tests, verification tests, and independent assurance tests
 - ii. Approved Warehouse Stock
 - iii. Material Approved by Visual Inspection
- 6. Submit and Receive Erosion Control Seeds Type A certification tags from the material bag.
- 7. Submit and Receive on a weekly basis the Weekly Report of Working Days to the Weekly Work Day Reports folder in the Contract Documents drawer of Doc Express.
- **8.** Review the electronic submittal and take action on the Contractor submitted Daily Traffic Control Diaries.
- **9.** Submit and Receive on a weekly basis the Storm Water Inspection Reports to the Storm Water Inspection Reports folder in the Contract Documents drawer of Doc Express.
- **10.** Review and take action on the Contractor submitted Certified Payrolls. The comments section will be utilized to note which payrolls have a detailed check performed.

B. Contractor Responsibilities.

- 1. The Contractor is responsible for ensuring materials used in the project meet all quality requirements of the contract. This responsibility includes providing the Project Engineer with a certification document stating that the material meets the requirements of the plans and specifications.
- 2. Submit electronic material certifications per contract item to Doc Express as defined in the Materials Acceptance Report and Materials IM 204.
 - Each electronic submittal may contain multiple pages and/or types of certification documentation but shall provide certification covering one contract item only.
 Electronic submittals which include certification for multiple contract items will not be accepted.
 - i. Example: A project with the following six (6) contract items: 24" Concrete Roadway Pipe, 30" Concrete Roadway Pipe, 36" Concrete Roadway Pipe, 24" Concrete Apron, 30" Concrete Apron, and 36" Concrete Apron shall not have all six (6) contract items grouped into one certification document. Six (6) individual documents, one per contract item, is required so each document is Submitted to the respective contract item and contains specific

certification required for that specific contract item only.

- b. Material certifications which are components of multiple contract items may be submitted and copied to multiple contract item folders.
 - Example: Liquid Curing Compound may be applicable for multiple contract items.
- 3. Include a cover sheet showing contract item specific information for all electronic material certifications submitted to Doc Express. The cover sheet shall include but is not limited to the following information:
 - a. Project number
 - b. Contract item number
 - c. Date the material is delivered to project site.
 - d. Description of the material certified
 - e. Itemized delivery quantity which this specific submitted certification covers.
 - f. Log of all material shipments with total certified project quantity delivered. When multiple shipments will be used, then the initial cover sheet is to be updated with subsequent shipments to show each delivery, quantity included, and total certified on one cover sheet.
- **4.** Notify Contracting Authority if an item which requires submittal is not available within Doc Express. This notification will prompt the Contracting Authority to add the requested item.
- A list of electronic certification which the Contractor is responsible as defined in Materials IM 204 includes:
 - a. Type A Certification lab report with test results and a certification statement (e.g. Steel Mill Certifications)
 - b. Type C Certification a document prepared by manufacturer or producer with certification statement with applicable specification number or Material IM number identified.
 - c. Type D Certification a document prepared by an approved manufacturer with certification statement.
 - d. Approved Source also referred to as Approved Brand, Approved Producer, Approved Supplier, and Approved Fabricator
 - e. Fabrication Reports
- **6.** The Contractor shall electronically Submit Daily Traffic Control Diaries to the Traffic Control Diaries folder in the Contract Documents drawer of Doc Express. The diaries shall be grouped together per week and submitted within one week after the end of the week which work is performed.
- 7. The Contractor shall electronically Submit certified payrolls for each contractor/subcontractor working during the week to the Certified Payrolls drawer of Doc Express. This submittal is due within two weeks after the end of the week which work was performed on the project.

C. Shared Contracting Authority and Contractor/Supplier Responsibilities.

Doc Express will store final versions of documentation required for the contract. Some of the documents require involvement and coordination between the Contracting Authority and the Contractor to reach a final version. This shared responsibility will be coordinated to prevent incomplete or redundant data from being electronically stored.

- 1. Non-Proportioned Aggregates
 - a. Aggregates are defined in IM 204 Appendix A, B, C, and D. The Method of Acceptance is by Approved Source and will include tickets with each delivery to the project site.
 - b. The Contracting Authority will collect delivery tickets as the material is delivered to the project site.
 - c. The Contractor shall provide to the Contracting Authority a daily or weekly summary of

- loads delivered to the project for each material certified.
- d. The Contracting Authority will verify delivery tickets are accurately reflected on the summary. The Contracting Authority will Submit and Receive the summary in Doc Express once accurate information is collected. A copy of one of the tickets per source showing IDOT gradation number, project number, quantity, source name, and T-203 A number will also be Submitted and Received in Doc Express.
- e. The Contractor shall submit to Doc Express Form 821278 for non-proportion aggregate processed from recycled products that are accepted by bulk volume.

2. Proportioned Aggregates

- a. Aggregates are defined in IM 204 Appendix E and F. The Method of Acceptance is by Approved Source and will include tickets with each delivery to the HMA or PCC Plant.
- b. The Certified Plant Inspector shall collect delivery tickets and summarize the quantity of each aggregate in the plant book for review by the Contracting Authority Plant Monitor.
- c. The Certified Plant Inspector shall provide proportioned aggregate information with plant information described in Article XXXXX.03, C, 3 and Article XXXXX.03, C, 4 of this Developmental Specification.

3. HMA Plant

- a. The Certified Plant Inspector shall perform plant inspection responsibilities as defined in IM 511 including obtaining electronic certifications specified in IM 204 Appendix F and submit the HMA Plant Book by email to the Contracting Authority.
- b. The Plant Book and Plant Reports shall be per contract item with required component material certifications itemized for each contract item.
- c. The Contracting Authority will review the electronic plant book received by email and add information as required. The Contracting Authority will Submit and Receive the plant report and plant book in Doc Express once accurate information is reflected in the plant book/report.
- d. The electronic document certifications for individual HMA mix components shall be submitted by the Certified Plant Inspector to the appropriate item in Doc Express when the contract item is completed. These components consist of:
 - i. Proportioned Aggregates Detailed in Article XXXXX.03, C, 2 of this Developmental Specification.
 - ii. Asphalt Binder
 - iii. Hydrated Lime
 - iv. Emulsions & Cutbacks
 - v. Recycled Asphalt Material

4. PCC Plant

- a. The Certified Plant Inspector shall perform plant inspection responsibilities as defined in IM 527 including obtaining electronic certifications specified in IM 204 Appendix E and submit the PCC Plant Book by email to the Contracting Authority.
- b. The Plant Book and Plant Reports shall be per contract item with required component material certifications itemized for each contract item.
- c. The Contracting Authority will review the electronic plant book received by email and add information as required. The Contracting Authority will Submit and Receive the plant report and plant book in Doc Express once accurate information is reflected in the plant book/report.
- d. The electronic document certifications for individual PCC mix components shall be submitted by the Certified Plant Inspector to the appropriate item in Doc Express when the contract item is completed. These components consist of:
 - Proportioned Aggregates Detailed in Article XXXXX.03, C, 2 of this Developmental Specification.
 - ii. Portland Cement
 - iii. Fly Ash

- iv. GGBFS (Ground Granulated Blast Furnace Slag)
- v. Chemical Admixtures (Examples: Air Entrainment, Water Reducer, Retarder)
- 5. Shop Drawings and Catalog Cuts
 - a. Contractor shall submit electronic documents of shop drawings and catalog cuts as per Article 1105.03 of the Standard Specifications.
 - b. The information shall be submitted per contract item.
 - c. Contracting Authority will review and if required return to the Contractor with comments until the submitted information is approved. The Contracting Authority will Submit and Receive electronic approved shop drawings and catalog cuts per contract item to Doc Express.

XXXXX.04 METHOD OF MEASUREMENT. None.

XXXXX.05 BASIS OF PAYMENT.

Any costs associated with the use of Doc Express are incidental to Mobilization. Contract item progress payments will be withheld until documentation is provided as defined within this Developmental Specification.

Reason for Revision: Twenty seven (27) projects over the past couple construction seasons have utilized a web based system to store material certification documents instead of paper hard copies. Technology is in use to assist in preparation of material reports for material certifications and HMA and PCC plant reports. The current process takes the electronic information initially prepared, then typically requires more than one printed hard copy over the life of the project, and ends with the hard copy being scanned into an electronic format for permanent record keeping in ERMS. Contractors have also expressed frustration when material certification hard copies are required to be resent because the information was either never received or became lost. This system is viewed to be a more efficient workflow because:

- Information could remain in an electronic format and reduce resources needed to create paper hard copies.
- 2. The Contracting Authority and the Contractor are able to review the collective information and together ensure missing information is provided.
- 3. Provide Reviewers, FHWA and auditors, access to project information without having to visit the project site or obtain the project file.

The demonstration projects initially focused on material certifications but grew to include other contract documents which are included in this proposed developmental specification.

The experience gained over the 27 construction projects was used to prepare this developmental specification. A key learning point involves the structure which the system is set up. Currently, with the hard copy workflow, there are no format requirements which a Contractor is required to follow to submit the information as long as the required information was provided. The lack of a requirement allows information to be submitted as a large group of information which the Contracting Authority has to disassemble and ascertain what is included. The 27 projects which have utilized Doc Express followed this approach and found the evaluation of the submitted documents to be complex and time consuming. This proposed developmental specification details an organization framework and submittal structure which is intended to require information specific to the item instead of pages of information which may not be applicable to the item. It is understood that Industry will be required to change their process of providing information.

County or City Input Needed (X one) Yes	No X
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Comments: At this time the proposed Developmental Specification would not be applied to County or City administered projects.

Industry Input Needed (X one)			Yes X	No	
Industry Notified:	Yes X	No	Industry Concurrence:	Yes X	No

Comments: The AGC and individual contractors have requested more widespread use of Doc Express which has driven the need to develop a DS. Overall, the electronic workflow process is well received by the industry as it has been easy to use, saved time, and saved money. The negative experiences shared by industry have focused on inconsistent use of Doc Express from one office/project to another. Providing a framework through a DS which the industry knows what is expected and provides consistency between offices is highly desired.

Input has been requested on the Draft DS from the eleven (11) contractors which were the prime contractor on one of the 27 projects which utilized Doc Express. A few comments were received and incorporated into the current Draft DS. The one comment which is known but needs to be tested is the submittal of material certifications by item. It is recognized that this requirement will have an impact on suppliers, but the intent is to proceed with the DS as the impact is viewed to be manageable.

DS-12XXX (New)



DEVELOPMENTAL SPECIFICATIONS FOR DOC EXPRESS (ELECTRONIC DOCUMENT STORAGE)

Effective Date March 19, 2013

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

12XXX.01 GENERAL.

This specification contains requirements for the collection and management of documents through the use of Doc Express at https://docs.infotechexpress.com. Doc Express is a web based program which accepts electronic documents and has security in each submittal which prevents modifications to the submitted electronic document.

The Contracting Authority will perform setup of Doc Express based on the detail within this specification and in accordance with project requirements. Doc Express is the complete and officially recognized file storing material approval documentation, certified payrolls, and other contract documents required by the Contracting Authority. Full implementation of Doc Express is required.

Contractor responsibilities within this specification are designated as the prime contractor who may choose to delegate responsibilities to subcontractors and suppliers of the project.

A. Doc Express Structure.

This specification provides the framework for which Doc Express will be utilized to store project documents. Three basic file cabinet drawers will be used to store documents:

- 1. Materials Certifications drawer which include the following types of folders:
 - Defined by Contract Item Types of information included within each Contract Item include:
 - 1) Type A, Type C, Type D Certifications.
 - 2) Material Source.
 - 3) Approved Warehouse Stock.
 - 4) Approved Shop Drawing & Approved Catalog Cut.
 - 5) Fabrication Reports.
 - 6) Visual Approval by Project Engineer.
 - 7) Plant Reports.
 - 8) Profilometer Reports.
 - 9) Smoothness Reports.
 - b. Material Test Results
 - c. Rejected Items
- 2. Contract Documents drawer which include the following types of folders:
 - a. Weekly Work Day Reports.
 - b. Daily Traffic Control Diaries.
 - c. Storm Water Inspection Reports.

3. Certified Payrolls drawer.

Documents will be stored in the appropriate folder within each drawer of the file cabinet (Contract). The Contracting Authority will either receive the document which will acknowledge the document addresses an aspect of the project or reject the document if the document is in error.

B. Doc Express User Guide.

A Doc Express User's Guide is available at https://docs.infotechexpress.com/html/help.html to provide detail on how to navigate the program but a few key functionalities include:

- 1. The Doc Express program provides an opportunity to add comments each time a document is submitted, copied, received, or rejected.
- 2. A certification statement requiring an acknowledgement the information submitted is accurate. Enabling this certification statement and submitting the document places an electronic signature within Doc Express.
- 3. When a user performs a submittal, copies a submittal (Contracting Authority only has this option), adds a comment, receives a submittal, or rejects a submittal; those actions are tracked, logged, and are able to be viewed in an activity audit trail of the submitted document.

C. Doc Express Security.

Each user within an organization will be assigned an account within Doc Express. Access to Doc Express will be through the use of the user's email address and a unique password. This unique user ID is utilized by the tracking feature described in Article DS-12XXX.01, B, 3. User permissions will be defined within Doc Express for each specific contract.

- 1. **Principal -** The Contractor will be assigned Principal permission which will authorize any person associated with the Contractor to submit documents and view all documents submitted into Doc Express including those submitted by the Contracting Authority and users with an Associate level permission.
- 2. Associate Subcontractors and suppliers will be assigned Associate permission which will authorize any user associated with the respective subcontractor or supplier to submit documents but can view only those documents submitted by that respective entity. An Associate user is not able to view documents submitted by a Principal, Contracting Authority, or other Associate users.
- 3. Reviewer A Reviewer permission will allow the user to only view all documents and will typically be assigned to those that will oversee the specific contract but are not responsible for daily tasks.
- **4. Contracting Authority** A formal permission level is not assigned. Contracting Authority staff has the ability to submit documents, receive submitted documents, or reject a submitted document which does not address a specific requirement of the contract.

Documents submitted into Doc Express are secure. Security of the program will not allow modifications to a submitted document by any user. The user, or another user within the organization, who submitted the document may delete the submittal from Doc Express as long as the document has not been received, rejected, or had a comment attached.

The Payroll drawer has a more restrictive security setting. Only the user who submits a payroll document or a Contracting Authority user specifically assigned to access payroll information for the specific contract can view the payroll document. Other Principal users will not be able to view the submitted payroll document nor will other Contracting Authority users have access to the Payroll drawer.

D. Doc Express Document Types.

Doc Express will accept all types of electronic documents including but not limited to Microsoft Excel files, Microsoft Word documents, Adobe Portable Document File (PDF), Tagged Image File (TIFF), and Joint Photographic Experts Group (JPEG). Doc Express has a 2 GB size limitation on a document, but uploading and opening of the document will take longer as the file size increases. Preference should be given to smaller file sizes anytime they can be used.

E. Doc Express Email Preferences.

Doc Express will provide email notifications but is not designed to operate as a communication tool. Each individual user has the option of an email notification when a document has been rejected or when documents are submitted. When the rejected email notification option is enabled, an email will be sent to the user every time a submitted document is rejected. When the document submittal option is enabled, the user will be provided a summary of the number of documents submitted the previous day. These notifications will only occur for instances when document(s) can be accessed as per the defined permission level of the user.

F. Doc Express Archive.

Contracting Authority users only have the option to electronically archive all documents submitted and processed during the project and at project completion.

12XXX.02 EQUIPMENT.

Doc Express requires access to the internet. The preferred web browser is Internet Explorer 8 or newer. Other web browsers such as Mozilla Firefox and Google Chrome may be used but the functionality of Doc Express may be compromised. The use of air cards and laptop computers may be desired to allow field users access to documents.

12XXX.03 CONSTRUCTION.

A. Contracting Authority Responsibilities.

- 1. Engineer will create the drawers and document folders within a file cabinet (Contract) in Doc Express. The name of the file cabinet will include: project number, reference to administering office, brief description of work, and the Contractor.
- 2. Define document drawers within the contract file cabinet in Doc Express based on the requirements of the project. At a minimum, the Materials Certification and Contract Documents drawers will be included. The Payroll drawer will be included when Certified Payrolls are specified in the contract documents.
- **3.** Assign Principal, Associate, and Reviewer Permissions for the contract file cabinet within Doc Express.
- **4.** Assign folders under the document drawer within the contract file cabinet in Doc Express to categorize information to be submitted. The drawer/folder organization will include:
 - a. Material Certifications.
 - 1) By Contract Item.
 - 2) Items added by Contract Modification.
 - 3) Material Test Reports.
 - b. Contract Documents.
 - 1) Weekly Work Day Reports.
 - 2) Daily Traffic Control Diaries.
 - 3) Storm Water Inspection Reports.
 - c. Certified Payrolls.
 - 1) Contractor.
 - 2) Each subcontractor.

- 5. Review and receive submitted electronic documents in Material Certifications drawer.
 - **a.** Verify electronic material certification document for specific material corresponds to the material delivered to project site.
 - **b.** After field verification, receive the submitted electronic document in Doc Express prior to material being incorporated into the project or processing payment for work completed.
 - **c.** A list of electronic certification which the Contracting Authority is responsible for submitting to Doc Express as defined in Materials I.M. 204 includes:
 - Test reports Includes job control tests, verification tests, and independent assurance tests.
 - 2) Approved Warehouse Stock.
 - 3) Material Approved by Visual Inspection.
- 6. Submit and receive Erosion Control Seeds Type A certification tags from the material bag.
- 7. Submit and receive on a weekly basis the Weekly Report of Working Days to the Weekly Work Day Reports folder in the Contract Documents drawer of Doc Express.
- **8.** Review the electronic submittal and take action on the Contractor submitted Daily Traffic Control Diaries.
- **9.** Submit and receive on a weekly basis the Storm Water Inspection Reports to the Storm Water Inspection Reports folder in the Contract Documents drawer of Doc Express.
- **10.** Review and take action on Contractor submitted Certified Payrolls. Comments section will be utilized to note which payrolls have a detailed check performed.

B. Contractor Responsibilities.

- 1. Contractor shall ensure materials used in the project meet quality requirements of the contract. This responsibility includes providing the Engineer a certification document stating the material meets the requirements of the Contract Documents.
- 2. Submit electronic material certifications per contract item to Doc Express as defined in the Materials Acceptance Report and Materials I.M. 204.
 - a. Each electronic submittal may contain multiple pages and/or types of certification documentation but shall provide certification covering one contract item only. Electronic submittals which include certification for multiple contract items will not be accepted. For example, a project with the following six contract items: 24 inch Concrete Roadway Pipe, 30 inch Concrete Roadway Pipe, 36 inch Concrete Roadway Pipe, 24 inch Concrete Apron, 30 inch Concrete Apron, and 36 inch Concrete Apron, shall not have all six contract items grouped into one certification document. Six individual documents, one per contract item, is required so each document is submitted to the respective contract item and contains specific certification required for that specific contract item only.
 - **b.** Material certifications which are components of multiple contract items may be submitted and copied to multiple contract item folders, i.e. Liquid Curing Compound may be applicable for multiple contract items.
- 3. Include a cover sheet showing contract item specific information for all electronic material certifications submitted to Doc Express. Cover sheet shall include, but is not limited to the following information:
 - a. Project number.
 - **b.** Contract item number.
 - **c.** Date the material is delivered to project site.
 - **d.** Description of the material certified.
 - e. Itemized delivery quantity which this specific submitted certification covers.
 - **f.** Log of all material shipments with total certified project quantity delivered. When multiple shipments will be used, then the initial cover sheet is to be updated with subsequent

shipments to show each delivery, quantity included, and total certified on one cover sheet.

- **4.** Notify Contracting Authority if an item which requires submittal is not available within Doc Express. This notification will prompt the Contracting Authority to add the requested item.
- A list of electronic certification which the Contractor is responsible as defined in Materials I.M. 204 includes:
 - **a.** Type A Certification lab report with test results and a certification statement (e.g. Steel Mill Certifications).
 - **b.** Type C Certification a document prepared by manufacturer or producer with certification statement with applicable specification number or Material IM number identified.
 - **c.** Type D Certification a document prepared by an approved manufacturer with certification statement.
 - **d.** Approved Source also referred to as Approved Brand, Approved Producer, Approved Supplier, and Approved Fabricator.
 - e. Fabrication Reports.
- 6. Contractor shall electronically submit Daily Traffic Control Diaries to the Traffic Control Diaries folder in the Contract Documents drawer of Doc Express. Diaries shall be grouped together per week and submitted within one week after the end of the week which work is performed.
- 7. Contractor shall electronically submit certified payrolls for each contractor/subcontractor working during the week to the Certified Payrolls drawer of Doc Express. This submittal is due within 2 weeks after the end of the week which work was performed on the project.

C. Shared Contracting Authority and Contractor/Supplier Responsibilities.

Doc Express will store final versions of documentation required for the contract. Some of the documents require involvement and coordination between the Contracting Authority and the Contractor to reach a final version. This shared responsibility will be coordinated to prevent incomplete or redundant data from being electronically stored.

1. Non-Proportioned Aggregates.

- **a.** Aggregates are defined in Materials I.M. 204 Appendix A, B, C, and D. The Method of Acceptance is by Approved Source and will include tickets with each delivery to the project site.
- **b.** Contracting Authority will collect delivery tickets as the material is delivered to the project site.
- **c.** Contractor shall provide to the Contracting Authority a daily or weekly summary of loads delivered to the project for each material certified.
- d. Contracting Authority will verify delivery tickets are accurately reflected on the summary. Contracting Authority will submit and receive the summary in Doc Express once accurate information is collected. A copy of one of the tickets per source showing Iowa DOT gradation number, project number, quantity, source name, and Materials I.M. T-203 A number will also be submitted and received in Doc Express.
- e. Contractor shall submit to Doc Express Form 821278 for non-proportion aggregate processed from recycled products that are accepted by bulk volume.

2. Proportioned Aggregates.

- **a.** Aggregates are defined in Materials I.M. 204 Appendix E and F. The Method of Acceptance is by Approved Source and will include tickets with each delivery to the HMA or PCC Plant.
- **b.** Certified Plant Inspector shall collect delivery tickets and summarize the quantity of each aggregate in the plant book for review by the Contracting Authority Plant Monitor.

c. Certified Plant Inspector shall provide proportioned aggregate information with plant information described in Article DS-12XXX.03, C, 3 and Article DS-12XXX.03, C, 4.

3. HMA Plant.

- a. Certified Plant Inspector shall perform plant inspection responsibilities as defined in Materials I.M. 511 including obtaining electronic certifications specified in Materials I.M. 204 Appendix F and submit the HMA Plant Book by email to the Contracting Authority.
- **b.** Plant Book and Plant Reports shall be per contract item with required component material certifications itemized for each contract item.
- c. Contracting Authority will review the electronic plant book received by email and add information as required. The Contracting Authority will submit and receive the plant report and plant book in Doc Express once accurate information is reflected in the plant book/report.
- **d.** Electronic document certifications for individual HMA mix components shall be submitted by the Certified Plant Inspector to the appropriate item in Doc Express when the contract item is completed. These components consist of:
 - 1) Proportioned Aggregates Detailed in Article DS-12XXX.03, C, 2.
 - 2) Asphalt Binder.
 - 3) Hydrated Lime.
 - 4) Emulsions & Cutbacks.
 - 5) Recycled Asphalt Material.

4. PCC Plant.

- a. Certified Plant Inspector shall perform plant inspection responsibilities as defined in Materials I.M. 527 including obtaining electronic certifications specified in Materials I.M. 204 Appendix E and submit the PCC Plant Book by email to the Contracting Authority.
- **b.** Plant Book and Plant Reports shall be per contract item with required component material certifications itemized for each contract item.
- c. Contracting Authority will review the electronic plant book received by email and add information as required. Contracting Authority will submit and receive the plant report and plant book in Doc Express once accurate information is reflected in the plant book/report.
- **d.** Electronic document certifications for individual PCC mix components shall be submitted by the Certified Plant Inspector to the appropriate item in Doc Express when the contract item is completed. These components consist of:
 - 1) Proportioned Aggregates Detailed in Article DS-12XXX.03, C, 2.
 - 2) Portland Cement.
 - 3) Fly Ash.
 - 4) GGBFS (Ground Granulated Blast Furnace Slag).
 - 5) Chemical Admixtures (Examples: Air Entrainment, Water Reducer, Retarder).

5. Shop Drawings and Catalog Cuts.

- **a.** Contractor shall submit electronic documents of shop drawings and catalog cuts as per Article 1105.03 of the Standard Specifications.
- **b.** The information shall be submitted per contract item.
- **c.** Contracting Authority will review and if required return to the Contractor with comments until the submitted information is approved. Contracting Authority will submit and receive electronic approved shop drawings and catalog cuts per contract item to Doc Express.

12XXX.04 METHOD OF MEASUREMENT. None.

12XXX.05 BASIS OF PAYMENT.

Costs associated with the use of Doc Express are incidental to Mobilization. Contract item progress payments will be withheld until documentation is provided as defined within this specification.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Willy Sorenson	Office: Traffic and Safety	Item 5
Submittal Date: 2012.11.30	Proposed Effective Date: March 2013	
Article No.: Title:	Other: Developmental Specifications for Portable Dynamic Message Sign	

Specification Committee Action: Deferred until a future meeting.

Deferred: X Not Approved: Approved Date: Effective Date:

Specification Committee Approved Text:

Comments: This specification is initially intended for a project in Black Hawk County in the February 19th letting. It will be processed as a Special Provision to be issued by addendum. The specification will be brought back to the committee for approval after the Office of Traffic and Safety has a chance to review the results on this project.

The Office of Traffic and Safety explained that this specification is intended to be used on projects in critical areas where Iowa DOT access to the portable dynamic message signs (PDMS) is important for quick response times. The existing PDMS's in Iowa may not be compatible with this specification, but they are available for rental if a contractor does not want to purchase them.

The Office of Traffic and Safety is meeting with ATSSA on January 15th and will get comments on this specification. The SP will be revised based on these comments.

The Office of Design asked how to define "display a message adequately". The Office of Traffic and Safety indicated that they didn't want the sign rejected or replaced if one pixel is out, but the message can be read. The Office of Design also asked what if the message is displayed correctly, but the DOT loses connection with the sign. The Office of Traffic and Safety will more clearly define this situation in the SP.

Specification Section Recommended Text: See attached Draft Developmental Specifications for Portable Dynamic Message Sign.

Comments:

Member's Requested Change: (Do not use '<u>Track Changes'</u>, or '<u>Mark-Up'</u>. Use Strikeout and <u>Highlight</u>.) Portable Dynamic Message Signs

Furnish, place, operate, and maintain PDMS at the locations specified on the project plans. The Contractor maintains possession of the PDMS upon completion of the project.

1. Sign Design.

- a. A Portable Dynamic Message Sign (PDMS) is defined as all components working together to accomplish the requirements of the specification. These components include, but are not limited to, the LED pixel boards, on-board computer, cellular modem, trailer, mounting equipment, solar panels, batteries, charge controller,
- b. Trailer mounted signs. Message panel mounted at a height of at least 7 feet (2.2 m), measured from the bottom of the sign to the ground directly below. Sign presents a level appearance. Sign is capable of displaying three lines of up to eight characters at one time. Character height is 18 inches (450 mm) and configured using a 7 pixel tall by 5 pixel wide font.
- **c.** Message panel visible from 1/2 mile (800 m) under both day and night conditions. Letters legible from 750 ft (225 m). Message sign shall include automatic dimming for nighttime operation and a power supply capable of providing continuous 7 days (24 hours per day) service.
- d. Message panel controlled by an onboard computer capable of:
- Storing a minimum of 99 programmed messages for instant recall.
- Being programmed to accept messages created by the operator via an alpha-numeric keyboard.
- Being programmed by remotely by Department's National Transportation Communication for Intelligent Transportation Systems Protocols (NTCIP) DMS software.
- e. Physical access to the onboard computer protected by a padlock (using a key). Electronic access to the

onboard computer protected by a username and password.

2. Cellular Communications.

- a. PDMS will be equipped with a cellular modem for remote communications. The cellular service provider must have data coverage within the project limits. The IP address, communications port, software and any username/password for web interface will be supplied to the Engineer for integration into a statewide ITS control software.
- b. The cellular modem must be capable of obtaining its location by global positioning system (GPS) of satellites. Current location from GPS coordinates will be stored in the cellular modem's memory for retrieval by ITS control software. Modem must have firewall security protections that limit who and what can communicate to it
- **c.** Typical monthly data usage by the Department is 5 Mb when PDMS is in good working condition. Additional data usage is possible if PDMS requires remote troubleshooting or maintenance.

3. NTCIP Compliance.

- a. PDMS onboard computer and operating firmware will be compliant with the latest version of approved National Transportation Communication for Intelligent Transportation Systems Protocols (NTCIP) 1203 for the following commands:
 - Read configuration data from the sign
 - Send configuration data to the sign
 - Poll the sign (retrieve sign status) both manual and automated with software
 - Activate a message
 - Blank or remove a message
 - Upload fonts
 - Reset the controller/onboard computer.

4. Maintenance of Signs.

- a. Provide preventive maintenance efforts necessary to achieve uninterrupted service.
- **b.** The Department or their representative will perform remote diagnostic tests of the sign's operational status each morning and notify the contractor when a problem is detected.
- **c.** Provide unscheduled maintenance or total replacement of sign when sign is unable to display a message adequately within 24 hours of notification.
- **d.** If service is not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service. The associated cost for this restoration shall be borne by the contractor.

5. Operation of Signs by Contractor.

- a. The Engineer may request the Contractor to operate PDMS for advance traffic notification and warning. Authority to operate PDMS will be under the direction of the Engineer. The Contractor may only operate the PDMS to display messages authorized by the Engineer.
- b. Promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

6. Operation of Signs by the Engineer.

- a. The Department will use their own NTCIP compliant software to activate messages, check the sign's status and perform diagnostic tests.
- **b.** At anytime during the project, the Engineer may remotely activate a message on the PDMS. Any message placed on the PDMS will not be removed or replaced by the contractor unless requested by the Engineer.

7. Testing and Configuration.

- **a.** A least one week before the PDMS is deployed to a project for use, a testing and configuration meeting with the Engineer shall be held. Coordination of this meeting will be with the Department's ITS Engineer.
- b. Physical and electronic access to PDMS shall be granted to the Engineer, or their representative.
- **c.** The Engineer, or their representative, in conjunction with the contractor, will perform necessary configuration adjustments in the PDMS and cellular modem to allow remote control by the Engineer's NTCIP software.

2528.04 METHOD OF MEASUREMENT.

B. Portable Dynamic Message Signs.

The Engineer will count the number of days each PDMS is required to be in place along a road and capable of displaying messages to the traveling public by remotely using the Department's NTCIP software.

2528.05 BASIS OF PAYMENT.

- B. Portable Dynamic Message Signs.
 - 1. Payment will be the contract unit price per calendar day for each PDMS that is required to be in place along a road and capable of displaying messages to the traveling public by remotely using the Department's NTCIP software.
 - 2. Payment is full compensation for furnishing, placing, operation, and maintenance of PDMS. Payment includes the cost of preventative and unscheduled maintenance, cellular communication, hardware, and power supply.

Reason for Revision:							
County or City Input	t Needed ()	(one)	Yes	No			
Comments:			·				
Industry Input Need	ed (X one)		Yes	No			
Industry Notified:	Yes	No	Industry Concurrence:	Yes	No		
Comments:	1		•		<u> </u>		

Draft DS- 12XXX (New)



DEVELOPMENTAL SPECIFICATIONS FOR PORTABLE DYNAMIC MESSAGE SIGN

Effective Date March 19, 2013

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

12XXX.01 DESCRIPTION.

Furnish, place, operate, and maintain a Portable Dynamic Message Sign (PDMS) at locations specified on the plans. The Contractor maintains possession of the PDMS upon completion of the project.

12XXX.02 MATERIALS.

A. Sign Design.

- A PDMS is defined as all components working together to accomplish the requirements of the specification. These components include, but are not limited to, the LED pixel boards, onboard computer, cellular modem, trailer, mounting equipment, solar panels, batteries, charge controller, etc.
- 2. The message panel shall be trailer mounted. Message panel mounted at a height of at least 7 feet (2.2 m), measured from the bottom of the sign to the ground directly below. Sign presents a level appearance. Sign is capable of displaying 3 lines of up to 8 characters at one time. Character height is 18 inches (450 mm) and configured using a 7 pixel tall by 5 pixel wide font.
- 3. Message panel visible from 1/2 mile (800 m) under both day and night conditions. Letters legible from 750 feet (225 m). Message sign shall include automatic dimming for nighttime operation and a power supply capable of providing continuous service for 7 continuous days without recharging.
- **4.** Message panel controlled by an onboard computer capable of:
 - Storing a minimum of 99 programmed messages for instant recall,
 - Being programmed to accept messages created by the operator via an alpha-numeric keyboard, and
 - Being programmed remotely by the Department's National Transportation
 Communication for Intelligent Transportation Systems Protocols (NTCIP) DMS software.
- **5.** Physical access to the onboard computer protected by a padlock (using a key). Electronic access to the onboard computer protected by a username and password.

B. Cellular Communications.

- 1. PDMS will be equipped with a cellular modem for remote communications. The cellular service provider shall have data coverage within the project limits. The IP address, communications port, software, and any username/password for web interface shall be supplied to the Engineer for integration into a statewide ITS control software.
- 2. The cellular modem shall be capable of obtaining its location by global positioning system (GPS) of satellites. Current location from GPS coordinates shall be stored in the cellular modem's memory for retrieval by ITS control software. Modem shall have firewall security protections that limit who and what can communicate to it.
- Typical monthly data usage by the Contracting Authority is 5 Mb when PDMS is in good working condition. Additional data usage is possible if PDMS requires remote troubleshooting or maintenance.

C. NTCIP Compliance.

PDMS onboard computer and operating firmware will be compliant with the latest version of approved NTCIP 1203 for the following commands:

- Read configuration data from the sign,
- Send configuration data to the sign,
- Poll the sign (retrieve sign status) both manual and automated with software,
- Activate a message,
- Blank or remove a message,
- Upload fonts, and
- Reset the controller/onboard computer.

12XXX.03 CONSTRUCTION.

A. Testing and Configuration.

- 1. A least one week before the PDMS is deployed to a project for use, a testing and configuration meeting with the Engineer shall be held. Coordination of this meeting will be with the Department's ITS Engineer.
- 2. Physical and electronic access to PDMS shall be granted to the Engineer.
- 3. The Engineer in conjunction with the Contractor will perform necessary configuration adjustments in the PDMS and cellular modem to allow remote control by the Department's NTCIP software.

B. Operation of Signs by Contractor.

- 1. The Engineer may request the Contractor to operate PDMS for advance traffic notification and warning. Authority to operate PDMS will be under the direction of the Engineer. The Contractor may only operate the PDMS to display messages authorized by the Engineer.
- 2. Promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

C. Operation of Signs by the Engineer.

1. The Contracting Authority will use their own NTCIP compliant software to activate messages, check the sign's status and perform diagnostic tests.

2. At anytime during the project, the Engineer may remotely activate a message on the PDMS. Any message placed on the PDMS will not be removed or replaced by the Contractor unless requested by the Engineer.

D. Maintenance of Signs.

- 1. Provide preventive maintenance efforts necessary to achieve uninterrupted service.
- **2.** The Engineer will perform remote diagnostic tests of the sign's operational status each morning and notify the Contractor when a problem is detected.
- **3.** Provide unscheduled maintenance or total replacement of sign when sign is unable to display a message adequately within 24 hours of notification.
- **4.** If service is not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service. The cost for this restoration shall be borne by the Contractor.

12XXX.04 METHOD OF MEASUREMENT.

The Engineer will count the number of days each PDMS is required to be in place along a road and capable of displaying messages to the traveling public by remotely using the Department's NTCIP software.

12XXX.05 BASIS OF PAYMENT.

- A. Payment will be for the contract unit price per calendar day, measured as provided above.
- **B.** Payment is full compensation for furnishing, placing, operation, and maintenance of PDMS. Payment includes the cost of preventative and unscheduled maintenance, cellular communication, hardware, and power supply.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Greg Mulder Office:			Office: Contracts		Item 6
Submittal Date: 12/12/12			Proposed Effective Date: October 2013		
Article No.: Title: Arbitration	1109.12 on		Other:		
Specification C	ommittee Action: Defe	rred until a f	uture meeting.		
Deferred: X	Not Approved:	Approved	Date:	Effective Date:	
Specification C	ommittee Approved Te	xt:			
Comments:					

Specification Section Recommended Text:

1109.12, Arbitration.

Delete the Article:

1109.12 ARBITRATION.

- A. If a Contractor's claim as outlined in Article 1109.11 has been disallowed in whole or in part, then the Contractor may, within 30 calendar days from the date the ruling of the Engineer is mailed, make a written request to the Engineer that the claim or claims be submitted to a board of arbitration. The Engineer will decide whether the matter is one which is subject to arbitration and will, within 30 calendar days of the receipt of the request for arbitration, grant or deny the same. The Engineer's decisions will be final.
- B. The board of arbitration will consist of three persons; one to be chosen by the Engineer, one by the Contractor, and the third by the two arbitrators thus chosen.
- C. The arbitrators selected will be persons experienced and familiar with construction or engineering practices in the general type of work involved in the contract, but will not have been a regular employee or an individual retained by either party at the time involved in the controversy, or at the time of arbitration.
- D. The board of arbitration will make its own rules of procedure and will have authority to examine records kept by the Engineer and the Contractor. If the desired records are not produced within 14 calendar days after they are requested, the board of arbitration will proceed without them as best it may. In determining the findings or award, or both, the majority vote of the board will govern. Copies of the findings or award, or both, signed by the arbitrators will be filed with the Engineer and the Contractor. A unanimous report or minority report may be filed. The board of arbitration will fix the cost of the proceedings, including a reasonable compensation to the arbitrators, and will determine how the total cost shall be borne.
- E. The board of arbitration will have jurisdiction to pass upon questions involving compensation to the Contractor for work actually performed or materials furnished and upon claims for extra compensation which have not been allowed by the Engineer. Jurisdiction of the board will not extend to a determination of quality of work or materials furnished or to an interpretation of the intent of the plans and specifications except as to matters of compensation. Jurisdiction of the board will not extend to setting aside or modifying the terms or requirements of the contract.
- F. The findings or award, or both, of the arbitration board, if acceptable to both parties to the contract, may become a basis for final payment.
- G. If the findings of the arbitration board are unacceptable to either party to the contract, said findings may become the basis for further negotiations between the parties. If a solution agreeable to both parties has not been reached through the filing of a claim, through arbitration, or if arbitration has been denied, either party may resort to whatever other methods for resolving the claim are available.

Comments:

Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.)

- A. If a Contractor's claim as outlined in Article 1109.11 has been disallowed in whole or in part, then the Contractor may, within 30 calendar days from the date the ruling of the Engineer is mailed, make a written request to the Engineer that the claim or claims be submitted to a board of arbitration. The Engineer will decide whether the matter is one which is subject to arbitration and will, within 30 calendar days of the receipt of the request for arbitration, grant or deny the same. The Engineer's decisions will be final.
- B. The board of arbitration will consist of three persons; one to be chosen by the Engineer, one by the Contractor, and the third by the two arbitrators thus chosen.
- C. The arbitrators selected will be persons experienced and familiar with construction or engineering practices in the general type of work involved in the contract, but will not have been a regular employee or an individual retained by either party at the time involved in the controversy, or at the time of arbitration.
- D. The board of arbitration will make its own rules of procedure and will have authority to examine records kept by the Engineer and the Contractor. If the desired records are not produced within 14 calendar days after they are requested, the board of arbitration will proceed without them as best it may. In determining the findings or award, or both, the majority vote of the board will govern. Copies of the findings or award, or both, signed by the arbitrators will be filed with the Engineer and the Contractor. A unanimous report or minority report may be filed. The board of arbitration will fix the cost of the proceedings, including a reasonable compensation to the arbitrators, and will determine how the total cost shall be borne.
- E. The board of arbitration will have jurisdiction to pass upon questions involving compensation to the Contractor for work actually performed or materials furnished and upon claims for extra compensation which have not been allowed by the Engineer. Jurisdiction of the board will not extend to a determination of quality of work or materials furnished or to an interpretation of the intent of the plans and specifications except as to matters of compensation. Jurisdiction of the board will not extend to setting aside or modifying the terms or requirements of the contract.
- F. The findings or award, or both, of the arbitration board, if acceptable to both parties to the contract, may become a basis for final payment.
- **G.** If the findings of the arbitration board are unacceptable to either party to the contract, said findings may become the basis for further negotiations between the parties. If a solution agreeable to both parties has not been reached through the filing of a claim, through arbitration, or if arbitration has been denied, either party may resort to whatever other methods for resolving the claim are available.

Reason for Revision: The lowa DOT has a long tradition of being fair and resolving claims without requiring legal action. The lowa DOT has been denying requests for arbitration consistently for the past 25 years because the arbitration process does have an appeal, which makes the arbitration non-binding. Our dispute resolution system provides for an appeal to the District Engineer and Highway Division Director.

County or City Input	Needed (X o	ne)	Yes	No x		
Comments: Deleting arbitration from the specification doesn't preclude two parties from using this as a conflict resolution tool.						
Industry Input Needed (X one)			Yes	No		
Industry Notified:	Yes	No	Industry Concurrence:	Yes	No	

Comments: Deleting arbitration from the specification doesn't preclude two parties from using this as a conflict resolution tool.