IOWADOT

**SPECIAL PROVISIONS
FOR
CONFORMITY WITH AND COORDINATION OF THE CONTRACT DOCUMENTS**

**Johnson County
IM-080-6(355)239--13-52**

**Effective Date
July 31, 2018**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

150402.01   DIGITAL CONTRACT FILES.

A. Digital Contract Files for Design 420 are listed in Appendix A. All links and references contained in the listed files are Digital Contract Files.

Commentary: The digital files can be viewed by selecting "52080355_420_iM.i.dgn" with Bentley View software. Refer to Attachment B, Bentley Quick Startup for download and use instructions as well as software capabilities. Bentley ProStructures and Bentley Navigator CONNECT are two for purchase programs which the contractor may elect to purchase. Refer to Appendix B for specific capabilities and estimated costs of ProStructures and Navigator CONNECT. Please note that Bentley Navigator CONNECT will not be available until after July 31, 2018. The "52080355_420_iM.imodel" file listed in Appendix A will be provided after Bentley Navigator CONNECT is available. The Bentley Navigator CONNECT program has similar capabilities to Bentley View with the addition of tablet viewing.

B. The Digital Contract Files are available for download at the following web site for the project listed above: http://www.iowadot.gov/contracts/lettings.html.

C. After July 31, 2018, 3D files for Design 120 & 320 will be provided "For Information Only" to the awarded bidder. These files are not considered Digital Contract Files.

150402.02   STANDARD SPECIFICATION REVISIONS.
Make the following changes to the Standard Specifications:

1101.03, DEFINITION OF TERMS.

Add to the definition of Contract (Also Contract Documents):

- Digital Contract Files specified in the contract documents,

1105.04, A.

Replace the Article:
In case of a discrepancy between contents of the contract documents, the following items listed by descending order shall prevail:

1. Addendum

2. Proposal Form

3. Special Provision

4. Plans.

5. Digital Contract Files

~~5~~ 6. Standard Bridge Plans, Standard Culvert Plans, and Standard Road Plans

~~6~~ 7. Developmental Specifications

~~7~~ 8. Supplemental Specifications

~~8~~ 9. General Supplemental Specifications

~~9~~ 10. Standard Specifications

~~10~~ 11. Materials I.M.

~~11~~ 12. Notice to Bidders

1105.04, E.

Replace the Article:
The Contractor shall not take advantage of any apparent error, omission, or discrepancy in the contract documents. The Engineer will be permitted to make such correction in interpretation as may be deemed necessary for the fulfillment of the intent of the contract documents subject to compensation as provided in Articles 1109.03, 1109.04 and 1109.14. Written notice of changes in the contract documents will be given to the Contractor by the Engineer. Field adjustment of digital contract files, if necessary, will be completed by the Engineer.

150402.03   DIGITAL CONTRACT FILE USES.

A. Table 1 lists the level of development (LOD) of bridge components within the Digital Contract Files. Level of development definitions.

LOD Levels

LOD 100 - The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element can be derived from other Model Elements.

LOD 200 - The Model Element is graphically represented within the Model as a generic system, object, or assembly with or without approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.

LOD 300 - The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.

LOD 350 - The Model Element is graphically represented within the Model as a specific system, object, or assembly in terms of quantity, size, shape, location, orientation, and interfaces with other structural systems. Non-graphic information may also be attached to the Model

LOD 400 - The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.

Table 1: Level of Development				
Component	LOD 100	LOD 200	LOD 300	LOD 350
Bridge deck concrete and rebar				X
Bridge Barrier rail concrete and rebar				X
Barrier rail conduit		X		
Barrier rail cover plates				X
Disc bearing assemblies		X		
Expansion joints		X		
Abutment concrete and rebar				X
Abutment piles				X
Abutment aesthetic treatments		X		
Abutment backfill		X		
Abutment slope protection		X		
Pier concrete and rebar				X
Pier piles				X
Pier aesthetic treatments		X		
Girders				X
Crossframes and stiffeners			X	
Girder shear connectors			X	
Inspection cable system and attachments		X		
Inspection access door and attachments		X		
Deck drains		X		

B. In addition to the above level of development of the Digital Contract Files, additional notes pertaining to the Digital Contract Files are listed below.
- All dimensions shown in the element information are measured in a horizontal plane and do not account for grade.
- Girders do not incorporate camber or deflections.

- Construction joints and keyways are not included.
- Barrier conduit is shown chorded. Actual layout shall follow barrier rail geometry. Junction box locations and conduit expansion fittings are included for visual information only.
- Concrete deck haunch above the girder top flange and below the deck is for information only. See plan details for haunch height and width.
- Girder end cuts are shown as plumb. End cuts shall be 90 degrees to the flanges.
- Field splices are positioned plumb relative to girder end cuts. Field splices shall be positioned relative to 90 degree end cuts.
- Crossframe stiffeners, crossframes and intermediate stiffeners are oriented plumb. They shall be oriented perpendicular to the flanges.
- Bearing and jacking stiffeners are oriented correctly as plumb.
- Bolts length and thread length are for visual information only.
- Bolt holes in girder web and flanges are not shown.
- Welds and weld treatments are not shown.
- Caulking not shown.
- Flange plate thickness and width transitions are not shown.
- Steel member copes not shown.
- Inspection cable is shown for visual information only.
- Limits of macadam stone, engineering fabric, geotextile fabric, excavation limits, floodable backfill and porous backfill are not included.
- Subdrain included for visual reference only.
- Construction joints are not included.
- Existing and phased ground surfaces are provided for visual reference only.
- Utility ribbons are provided for visual reference only.
- Boring locations are shown for visual reference only.
- Approach slabs are not included in the model.

150402.04   SOFTWARE.
The Digital Contract Files were developed and details verified with the software shown below.
- Bentley ProStructures: version 08.11.14.341
- Bentley OpenBridge Modeler: 08.11.11.72

150402.05   METHOD OF MEASUREMENT AND BASIS OF PAYMENT.
All costs for complying with this special provision shall be considered incidental to Mobilization. No separate payment will be made.

The digital files listed below are contained within the bid order package, associated with the project number   IM-080-6(355)239--13-52 available for download at:

http://www.iowadot.gov/contracts/lettings.html

STRUCTURAL DESIGN

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

(seal: LICENSED PROFESSIONAL ENGINEER — RICHARD T. HORTON — 17338 — IOWA)

Signature   4/30/18
                                             Date

Richard T. Horton
Printed or Typed Name

My license renewal date is December 31, 2019

Digital files shown in the table below are covered by this seal listed in pages:
1 of 1

52080355_420 BIM
52080355_420_iM.i.dgn
52080355_420_iM.imodel
52080355_420_PS.dgn
References
52080355_420_OBM_iM.i.dgn
52080355_420_PS_iM.i.dgn
52080355_420_OBM.dgn

Bentley View Quick Start Guide and Support Information

1. Download Project Materials from Iowa DOT designated website
    a. Place all documents within the same folder for hyperlinked documents to work properly
2. Download and install Bentley View V8i 08.11.09.829 from hyperlink provided below.
    a. After installation, if "Projectwise Log in" dialog appears, click Cancel.
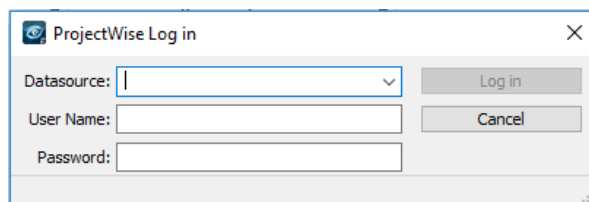
3. Training Material and Support Available online, links provided below:

Bentley View

*In addition to viewing 3D models, you can use Bentley View as a free CAD viewer with tools to search for objects, measure distances and areas accurately, and print drawings to scale with full fidelity, on every desktop, for **free**.*

Bentley Institute

Learn how to use Bentley View with these short videos that show the basic features of Bentley View. Click on this link, register with a Bentley Profile, and then watch the videos

Bentley Support

*If you are a user of a Bentley application, you can interact with other users, get questions answered, explore new workflows, access learning resources, or get software issues resolved. Take advantage of the CONNECTION Center, your one stop hub for application support and your access point to download software from Bentley. **1-800-BENTLEY**.*

Bentley Software Product Descriptions

A Bentley View software license is required for the project Advertising:

Bentley View

*In addition to viewing 3D models, you can use Bentley View as a free CAD viewer with tools to search for objects, measure distances and areas accurately, and print drawings to scale with full fidelity, on every desktop, for **free**.*

The following Bentley software products are required for the Construction phase of the project:

Bentley Navigator CONNECT Mobile

With Navigator, you can make better decisions, faster throughout the lifecycle of a project, while reducing project risk.

- *Gain insight into your projects and operations with clearer visibility into the information in 3D models from the field*
- *Speed project delivery with immediate access to the latest information through one experience on every device*
- *Improve project coordination and accelerate collaboration through faster reliable resolution of issues from field staff*
- *Use of Bentley Navigator CONNECT Mobile Requires a Bentley PassPort license. MSRP $128 annually / $32 quarterly*

Bentley ProStructures

With ProConcrete software you can model reinforced concrete with any combination of reinforcing, as 3D parametric objects. Quickly create your placing drawings, fabrication details, bar bending schedules, and concrete quantity and material reports directly from your 3D model, which automatically updates to reflect model changes. You can reduce documentation production time, errors, and design flaws with our advanced 3D application for modeling, detailing, and scheduling of reinforced in situ/precast and post-tensioned concrete structures. With simple and easy-to-use tools for advanced 3D modeling of reinforced concrete structures you can:

- *Efficiently model any reinforced concrete shape to 100% accuracy with the as-built condition*
- *Quickly extract 2D placing drawings that automatically update when the 3D model is changed*
- *Easily exchange information with other applications and disciplines*
- *Quickly create rebar tables for filtering and thorough understanding of the rebar layout in a 3D view*
- *Bentley gives you a choice for how to procure and consume our technology. To discuss the option most suitable for you, please contact a Bentley representative at 1+(800) 236-8539.*