Gordon Drive Constructability Review Meeting Notes

Project:	NHSX-012-1(038)--3H-97 Reconstruction of the Gordon Drive Viaduct in Sioux City
Subject:	Constructability Review No. 1
Date:	Monday, November 24, 2025
Location:	Iowa DOT District 3 Office Virtual (Microsoft Teams)

1. Meeting Purpose

The purpose of the meeting was to review constructability of the proposed Gordon Drive Viaduct and Bacon Creek Conduit (BCC) reconstruction project, with an emphasis on the Gordon Drive Bridge over the Bacon Creek Channel and Burlington Northern Santa Fe (BNSF) mainline and interchange tracks. The meeting primarily gathered feedback from industry partners on construction access and staging.

2. Project Overview

Location & Context

- The project is located on Gordon Drive, beginning at Virginia St on the west and ending at Fairmount St on the east. Gordon Dr is the primary east/west arterial in Sioux City and Iowa DOT intends to maintain traffic during construction.
- The project will replace the 3,970'-long Gordon Dr Viaduct, which is in poor condition, load posted, restricted to a single lane in each direction, and on an annual inspection schedule.
- The project will reconfigure the existing Lewis Blvd interchange as an at-grade intersection, which also necessitates reconstruction and realignment of Lewis Blvd.
- Access to the Yards area south of Gordon Dr will be improved by a new Cunningham Dr connection to Gordon Dr.
- The Bacon Creek Conduit (BCC) and Bacon Creek channel convey drainage from a basin in northeast Sioux City through the project area.

- The BCC and Bacon Creek channel liner are historic resources eligible for listing on the National Register of Historic Places (NHRP). As a result, construction plans will minimize impacts to the BCC and liner to the extent possible.

Project Scope

- **Length:** 1.4 miles, including the BCC
- **Total Construction Value:** $197.1 million, including the BCC
- **Letting Date:** July 2027
- **Construction Start:** Late summer 2027
- **Purpose:** Sustain safe vehicular and pedestrian/bicyclist mobility and address structural deficiencies of the Gordon Dr Viaduct and BCC.
- **2050 Traffic Volumes:**
  - Gordon Dr: 36,350
  - Lewis Blvd: 20,400
- **Development Status:** Signed Finding of No Significant Impact (FONSI), currently in Final Design

Key Improvements

- Reconstruction of Gordon Drive between Virgina St and Fairmount St.
- New south-shifted bridge over Floyd Blvd, the Floyd River, The Andersons spur, the UP mainline, the Transco spur, and Steuben St.
- New south-shifted bridge over the Bacon Creek channel, the BNSF interchange track (west), and the BNSF mainline.
- South-shifted Gordon Dr between the Floyd River and Bacon Creek channel built on a fill plug.
- New signalized Cunningham Dr connection to the Yards area.
- Reconstruction of the Lewis Blvd interchange as an elevated at-grade intersection.
- Reconstruction of Lewis Blvd from south of Leech Ave to 3rd St.
- Construction of new Bacon Creek Conduit from its Lewis Blvd outlet to its Rustin St inlet.
- Demolition of the existing Gordon Dr Viaduct.
- Abandonment of the Bacon Creek Conduit.

3. Staging Overview

Staging General Notes:

The staging plan will maintain one lane in each direction on the existing viaduct while constructing the new bridges off-alignment.

Heavy trucks on the existing viaduct will be restricted due to current 20-ton load posting, which is driven by the bridge condition.

The entire site will generally be open for bridge construction at the outset of the project, with laydown and contractor access areas to the south. There are some restrictions over the Bacon Creek channel and BNSF tracks.

Our charge is to minimize the impact to the Bacon Creek channel during bridge construction and bridge demolition activities. Additional NEPA reviews will be required if the project impacts more of the channel than currently estimated. NEPA approvals for impacts identified post-letting are not guaranteed.

Stage 1-1

- Stage 1-1 opens the entire Floyd River/UP bridge site for construction, begins the foundation and pier work for the Gordon Drive bridges over Bacon Creek/BNSF, and constructs the outlet and Fairmount St crossing portions of the BCC.
- Notable Stage 1-1 removals include the Gordon Dr eastbound to southbound Lewis Blvd ramp and partial removal of the Gordon Dr Viaduct near its east end.
- Single lane traffic in each direction will be maintained on the existing Gordon Dr viaduct during Stage 1-1, while Lewis Blvd traffic will also be reduced to two-lane-two-way operations on the existing northbound lanes.

Stage 1-2

- Stage 1-2 will begin construction on the Floyd River/UP bridge west approach and the Cunningham Dr connection/fill plug between the two bridges. Construction will continue on both the Floyd River/UP and Bacon Creek/BNSF bridges. Stage 1-2 also opens areas at the east and west end of the BCC for construction.
- Gordon Dr traffic will continue to operate with a single lane in each direction on the existing viaduct. Lewis Blvd will continue to be restricted to two-lane-two-way operation but be shifted to the existing southbound side to facilitate

construction of the east abutment and continued BCC construction. The north ramps will be closed and detoured.
- BCC construction staging will need to consider maintenance of flow through the worksite and anticipates shifting flow between barrels.

Stage 1-3

- Stage 1-3 will focus on the project's east and west pavement overlap sections connecting to existing eastbound Gordon Dr and the south leg of the proposed Lewis Blvd intersection. Stage 1-3 will also continue to build out the BCC on either side of the Fairmount St intersection.
- Gordon Dr traffic will continue single-lane operations in each direction on the existing viaduct and Lewis Blvd will continue two-lane-two-way operation on the existing southbound pavement. Local street closures will include Westcott St and Linn St.

Stage 2

- Gordon Dr traffic will be shifted off the existing viaduct to the new pavement and the new bridges over Floyd River/UP and Bacon Creek/BNSF.
- Stage 2 will focus on the project's east and west pavement overlap sections connecting to existing westbound Gordon Dr and the north and south legs of the proposed Lewis Blvd. Stage 2 will also finish the BCC inlet overlap section.
- Notable Stage 2 removals include demolition of the existing viaduct with contractor access to/from the south.

Stage 3

- Stage 3 will complete the Lewis Blvd northbound and southbound pavement overlap sections, in addition to shared-use path and Gordon Drive median construction.
- Gordon Dr traffic will continue single lane operations in each direction on the new bridges, while Lewis Blvd traffic will shift to new pavement.

Stage 4

- Stage 4 will construct Lewis Blvd medians.
- Gordon Drive will be fully opened to traffic, with two lanes in each direction, while northbound and southbound Lewis Blvd traffic will be shifted to their respective lanes with closures as necessary for median construction.

4. **Bacon Creek/BNSF Bridge Site Constraints**
    - **Bridge Condition**
        - The existing Gordon Dr viaduct is in poor structural condition, and it is subject to annual inspections each May. The existing viaduct has undergone two repair projects in the last few years, including rehabilitation of 55 piers. The structure is currently load posted and restricted to a single lane in each direction.
        - Given the condition of the existing viaduct, Iowa DOT does not believe materials delivery on the viaduct will be feasible. Construction access will necessarily be from below and to the south.
    - **Bacon Creek Channel** – The 140'-wide Bacon Creek Channel is a Section 4(f) historic resource and eligible for National Register of Historic Places (NRHP) listing. Impacts to the channel must be minimized, though it will already be breached by the City of Sioux City for another project.DOT indicated there are some areas of voids under the channel liner.
    - **BNSF Railroad** – The BNSF mainline track and a west interchange track are located under the existing viaduct and Span No. 4 of the proposed structure. The proposed design spans the entire railroad right-of-way and BNSF has indicated they will work with DOT for flagging operations.
    - **Utilities** – Roughly 1,400 utility impacts have been identified along the project, with a natural gas pipeline, an overhead transmission, and a sanitary sewer main all in the vicinity of the Bacon Creek/BNSF Bridge.
    - **Available ROW** – Large parcels are available south of the Gordon Dr for access and contractor laydown areas. Construction easements are provided north of the existing viaduct, though ROW is more constrained overall, including the presence of a billboard to be maintained in place.
5. **Industry Input**

    Bridge Type, Size, and Location (TS&L)

    - HDR presented the Floyd River/BNSF TS&L sheets.
    - The footings of Piers No. 1 and 2 (Elev. 1,071) are deeper than the flowline of the existing lined channel (Elev. 1,077 to 1,078) to protect for uncertain future scour conditions.
    - The existing Bacon Creek channel liner consists of a 6-inch thick bottom section reinforced 5-inches on center with No. 4 bars and 1:1 channel walls. The design needs to minimize and accurately quantify impacts to the channel liner due to its historic status.

- Current channel liner impact estimates for Piers No. 1 and 2 are based on assumed 2:1 footing excavation slopes where possible and shoring to minimize impacts to the existing viaduct footings.
- The elevations of Piers No. 3 and 4 are higher and do not require disturbance of the channel for footing construction, but partial removal of the existing viaduct is required. The typical offset between the existing and proposed structures is 13 feet.
- Soil borings to a 165-foot depth are complete and did not encounter bedrock. H-pile supported bridge foundations have been the working assumption, though foundation analysis is ongoing.
- The top 20' of soils are clay and silty clays, with sand underneath.

Issue 1: Bacon Creek Bridge Pier Shoring

DOT Questions to Contractors

- Is the 2:1 excavation assumption used to establish the Bacon Creek channel liner impact reasonable? Contractors responded they would likely look at coffer dams for Piers No. 1 and 2, at a minimum, and potentially every pier on the Bacon Creek Bridge.

Contractor Concerns

- Groundwater elevation could result in an artesian condition while the footing shoring is in place. HDR noted the draft SPS sheets show groundwater at elevation 1,070, just below the bottom of footing elevation.
- How does the proposed 1,071 footing elevation compare to the Missouri River channel and water surface elevations? *Note: HDR reviewed the stream gauge at the upstream Veteran's Bridge, which has a 1057.42 "gauge zero" elevation and had a 1,068.37 indicated water surface elevation on November 24, 2025.*
- The shoring for the Pier No. 1 footing (approximate bottom of footing at elevation 1,071) would need to be driven approximately 20'-25' from the existing viaduct foundation, which has a bottom of footing elevation at approximately 1094. Contractors noted that the shoring would likely need tie-backs or a coffer dam with internal struts to support the shoring. Would the shoring require a PE-stamped plan? DOT confirmed shoring plans will be contractor provided and need to be sealed by a licensed engineer.
- The 1,071 footing elevation is very deep with respect to existing ground. Contractors inquired whether the footing elevations could be raised. HDR

noted the depth of the footing has been conservatively set to accommodate potential future modifications to the channel by the City of Sioux City. HDR will engage DOT BSB to discuss possibility of raising the footing.

- The Iowa DOT developmental specifications do not cover inclusion of cofferdams. Provisions for cofferdams may need to be developed for the bid package.
- The contractors noted that the approximately 23'-tall exposed face of shoring may require sheet piling up to approximately 60'-long and require a large hammer that may result in vibration risk to the existing structure. DOT concurred and noted that a whaler system to restrain the wall could be used to shorten the shoring. DOT also noted that removing shoring could also be a risk to the existing structure and that DOT has abandoned shoring to minimize impact to the existing structure in some situations.
- The extent of restrictions included in the vibration monitoring and shoring specifications due to the deterioration of the existing structure could increase contractor bids significantly.

Industry Suggestions

- Pier construction in the winter would help mitigate the risk of the Pier No. 1 and 2 construction sites flooding. HDR noted the largest prolonged flooding concern is probably a Missouri River backwater event.
- Consider drilled shaft supported foundations for this area to minimize excavation depths and vibrations of the existing viaduct.
- Do not overly constrain the contractor's choices for bridge pier footing excavation means and methods by specifying the use of coffer dams if they are not required to manage water.

DOT Response

- Shoring designs will need to be very robust and could potentially tip out near the bottom of the existing timber piles. It is critical that the soil mass around the existing foundations stays in place. Cofferdams, which would be internally supported, may be a viable solution.
- Vibration and displacement monitoring of the existing structure will be included in the proposal package.
- DOT intends to analyze the structure to see the amount of vibration and displacement the existing structure can take.

Issue 2: Construction over BNSF ROW

DOT Questions to Contractors

- Do the contractors prefer that Iowa DOT procure agreements for construction access from the railroads or obtain the agreements themselves? The contractors noted their preference for Iowa DOT to obtain the agreements since the process can take up to a year. The contractors also noted they have not been successful in obtaining agreements.

Contractor Concerns

- Encroachment on railroad ROW is likely and may benefit from construction of drilled shaft foundations. HDR noted that the proposed 2:1 footing excavations do not encroach on the railroad ROW since the footings in the piers adjacent to the RR tracks are much shallower.
- The number of trains and the potential for them to be parked on the tracks under the bridge will limit the time contractors can work. HDR noted the track carries about ten through trains a day and an additional three local trains per day.

Industry Suggestions

- Contractors would prefer to have guidance on how stringent the railroads will be in the bid package since they will have to price in risk for dealing with the railroads. The contractors can give better bids when RR restrictions are provided by DOT sooner in the letting process.
- The most cost-effective way to facilitate the removal of the existing structure is to protect the ballast with a removable physical barrier. Containment above the tracks would be more expensive.
- DOT should seek agreements for any temporary railroad crossings for the contractors prior to letting.

DOT Response

- UP/BNSF will not allow construction or demolition debris to drop onto their tracks.

Issue 3: Bridge removals over the historic channel and railroad

DOT Questions to Contractors

- The design team anticipates that working pads and crane mats will be required within the channel to protect it. How much material would be required to sufficiently protect the channel from debris falling from 25' to 30' above it? The Contractors indicated that falling removal debris will likely be fairly small, given that pieces will need to fit between the deck reinforcing.

Contractor Concerns

- The contractor is assuming liability for damage to the channel liner. The plans and contract should provide some flexibility to the contractor.
- Existing bridge superstructure removal is more challenging than placement of the new girders since that process can probably employ shoring towers.
- The thickness of the channel section (6") and its poor condition is a concern for placement of cranes during the removal process.

Industry Suggestions

- The likely removal strategy will employ small excavators on the bridge deck. Temporary false floors could be installed between the girders to contain construction debris.
- Are there portions of the viaduct that do not have as tight a load restriction?
- Do not overly constrain contractor means and methods for removal of the existing structure since they may view the removal differently.
- Significant cost savings could be realized if the existing viaduct was closed during construction. DOT should consider moving the inspection closer to letting to provide better information to the contractor.

DOT Response

- The project plans will have details, provisions, and quantities that will establish basis of payment for repair of the channel liner. The established unit costs can be used to adjust payment if additional channel repair is necessary.
- DOT is considering a preconstruction survey to assist the contractors in assessing the risk of channel damage that must be repaired.
- DOT will consider structural analysis of the existing structure to determine if heavier loads could be considered in certain areas for demolition.

- DOT will confirm depth of pier removal below finished grade.

Issue 4: Construction Access and Laydown Areas

DOT Questions to Contractors

- The existing billboard north of the existing viaduct just west of the channel is currently not included in the acquisitions and would remain in place. Is the billboard in the way of bridge demolition?
- Does the absence of dedicated construction access across the channel complicate construction of the span over the channel (Span No. 2)?
- The state owns or has rights to several areas that could be used as laydown areas. Is designation of contractor laydown areas in the plans desirable?

Contractor Concerns

- Lack of access into the channel north of Gordon Dr is a concern for removal of the spans over Bacon Creek and approaching the BNSF tracks from the west.

Industry Suggestions

- While the billboard north of the viaduct west of the channel is not a huge obstacle, additional easement around the north side of the billboard would aid access for the viaduct demolition and improve contractor bids. However, removal of the billboard would also benefit the contractor.
- The absence of a dedicated channel crossing does not adversely affect either construction or demolition.
- Consider another channel access from the west bank of Bacon Creek north of existing Gordon Dr.
- Denote contractor laydown and storage areas in the plans.

DOT Response

- DOT will review the easements and access along the north side of the viaduct. Additional consideration will be given to the billboard west of the channel as to whether it should be removed or additional easement be provided around it.
- DOT will review provision for another access into the channel north of the existing viaduct.

Issue 5: Utilities

DOT Questions to Contractors

- In-line relocation of the overhead transmission line over proposed Span No. 4 is proposed. Is the presence of the transmission line an issue for placing the proposed girders?

Contractor Concerns

- The overhead power, currently shown at midspan, could limit contractor flexibility in placing girders.

Industry Suggestions

- Verify the relocated transmission line will meet minimum clearance requirements and that shutdown windows are negotiated with MidAmerican Energy.
- Consider relocating the MidAmerican Energy transmission line over Span No. 4 closer to the girder splice to give the contractor more flexibility setting girders.

DOT Response

- DOT will verify that relocation plans will at least meet minimum clearances above the roadway and seek higher clearance, if possible.
- DOT will investigate options for shifting the overhead transmission line closer to the girder splices. Transmission lines are currently near the proposed field splice location.

6. Conclusion and Next Steps

- Contractors would prefer this project be in a special letting given its size.
- Comments may be sent to Jessica Felix, Shane Tymkowicz, or Jason Klemme in District 3, or to Garret Reeder. Meeting materials and notes will be sent out via BidX or GOV delivery.
- The bulk of the project will be contracted in one letting, though DOT is considering a pre-work package to construct site preparation items so the main package contractor can hit the ground running.
- DOT is considering a pre-bid meeting and extended advertisement for the project.

- Additional constructability review meetings are anticipated, with potential individual meetings for major elements such as the BCC and the west bridge, which crosses USACE Floyd River flood control project.

In-Person Attendees:

Troy Bainbridge	Bainbridge Construction
Tracy Countryman	Bierschbach Equipment
Seth Dixon	Dixon Construction
Chris Eddy	PCI
Jessica Felix	Iowa DOT, District 3
Larry Frimann	PCI
Ray Imming	LG Everist
Jason Klemme	Iowa DOT, District 3
Jakob Lang	Iowa DOT, District 3
Justin Pottorff	Iowa DOT, District 3
Curt Swoyer	LG Everist
Jaime Thomas	PCI
Shane Tymkowicz	Iowa DOT, District 3
Darwin Bishop	HDR Engineering
John Carter	HDR Engineering
Jennifer Crumbliss	HDR Engineering
Paul Knievel	HDR Engineering
Dusten Olds	HDR Engineering

Online Attendees:

Jessica Birchmier	Iowa DOT – ROW Negotiations
Jared Bogue	Hi-Way Products
Ryan Cheeseman	United Contractors
Curtis Carter	Iowa DOT – CMB
Cesar Cintron	Iowa DOT – Contracts
Mitch Dillavou	AGC
Mark Dunn	Iowa DOT – Contracts
Jim Ellis	Iowa DOT – BSB
Mark Freier	Godbersen-Smith, AGC
Matthew Gordy	Iowa DOT – BSB
Brian Jacob	Cramer & Associates, AGC
Justin Lechtenberg	Reilly Construction, AGC
Mark Leusink	Cramer & Associates
Timothy McAndrew	Hawkins Construction
Desiree Mcclain	Iowa DOT – CMB
Kevin Merryman	Iowa DOT – CMB
Jordan Muller	Peterson Contractors, AGC
Linda Narigon	Iowa DOT – BSB
Tami Nicholson	Iowa DOT – MTB
Garret Reeder	Iowa DOT – PMB
Jesse Ritter	Hawkins Construction
Christine Schwienebart	Iowa DOT – LEB
Melissa Serio	Iowa DOT – CMB
Chad Small	IUOE Local 234
Sarah Tracy	Iowa DOT – District 3
Mike Van Iten	Minturn
Amanda Woods	Iowa DOT – MTB
Lili Yang	Iowa DOT – BSB
Heavybid 1(External)	Unknown
17*******07	Unknown
Unknown	Cedar Valley Corp