



**County AB Overpass/Interchange
Meeting with Dane County Drainage Board
WisDOT ID 3080-01-05
May 27, 2021**



Attendees:

Derek Potter, Jenny Grimes, Phil Ferris (WisDOT); Bart Chapman, Zach Zopp (DATCP); John Mitby, Leonard Massie (Dane County); Lisa Dreifuerst, Kevin Kuhlrow, Bill Kasch (Dane Partners)

MEETING NOTES

1. Project Overview

- *A new diamond interchange is proposed approximately 1,000 feet east of the existing US 12/18 at-grade intersection with County AB. Direct access to US 12/18 will be removed along the north side at the US 12/18 Service Road and Dane County Landfill; access will be restricted to right-in only at Millpond Road.*
- *Final plans are due February 2022, construction begins in fall 2022.*

2. Discussion

- *Primary concern is the potential impact to the Door Creek drainage district as a result of the water coming off the project site with regards to the quantity of water as well as the duration of flow after a storm event.*
- *There has also been a problem in the past with culverts being installed at the proper heights, resulting in drainage problems.*
- *The proposed project will construct two new wet ponds with possible infiltration (Ponds C and D) at the interchange to help manage the quantity and quality of water going to the Door Creek drainage district. There are no new pipes being installed, other than those that will manage the drainage of ditches in the immediate project area.*
- *Flow rates will be maintained so as not to exceed the existing peak discharges for the 2-year through 100-year storm events. Not expecting any impacts to Door Creek as a result of the project.*
- *The pipe at the eastern project limits will remain in place as is. Water flows through the pipe to the north into Door Creek. The creek then flows to the east then south under US 12/18.*
 - **Action Item (Design Team):** *verify invert elevations of the culvert pipe at the eastern project limits and revise drainage exhibit as necessary.*
- *For agricultural purposes, the duration of a managed release flow after a storm is as important as the quantity of flow during a storm. Need to take into consideration what the antecedent water conditions are on the agricultural lands and the potential that the managed release will slow down the overall drainage of the district.*
- *For a farmer with a crop in the field, excess water in the root zone needs to be removed within 24 hours otherwise there is the potential to start having problems with the root structure and flooding. Need to have the ability to have the major flood event pass by and quickly drain the land. If we have detention ponds that are holding the water levels up so the on-farm tile systems are underwater then drainage of fields does not occur.*
- *DATCP and Dane County Drainage Board have minimal soils, hydraulic, and historic information on the drainage district; the previous chairman dealt with the drainage district independently and there are no records available.*
- *Under the previous Dane County Executive (Kathleen Faulk), land was bought at the outlet end of the Door Creek district with the intent that no further drainage would occur; it is uncertain what impact this has had on the district.*
- *DATCP will assist in reviewing the information needed from WisDOT to ensure the Drainage Board understands the potential impacts on the district as a result of the project.*

- **Action Item (Design Team):** provide information showing where the water is coming from, what the release rates and duration of release are, how the storm water will be managed, and what lands in the district within the project limits will be potentially impacted.
- Current analysis shows that 25 hours into a 24-hour 5-year storm event, there is less than 1 CFS going into Door Creek from the project area.
- Per drainage code, drainage boards are to provide DATCP information pertaining to 10-year and 25-year 24-hour storms, looking at surface water elevations, peak discharges, and duration of discharge. Need to understand how long will the storm water be released out of the ponds and hold water elevations above base flow, thereby impacting the ability to drain the root zone.
- Knowing the elevation of tile drainage systems of the farms going to the channel would indicate whether the system would be underwater for a lengthy period of time or just during the peak flow following a storm event.
- The Board has not had any contact with the members of the district and doesn't know anything about individual circumstances of the landowners of the area, including information on drain tile systems.
- There appears to be 4 to 6 landowners in the area that could be affected by the project; approximately 60 to 80 acres potentially impacted by project. The Board could meet with landowners on an individual basis.
- The design team does not have cross section information for Door Creek. The culvert is not modeled in the floodplain model. The Door Creek box culvert is the control section that dictates the downstream flow.
- WisDOT projects will typically just require analysis of the peak flow during storm events and not the duration of flow following a storm event.
 - **Action Item (Design Team):** look at a time 24 hours after the 10-year and 25-year storm events and see what the corresponding change in headwater is behind the culvert to determine the potential impact. Send information to Bart Chapman (DATCP) and Leonard Massie (Drainage Board); copy John Mitby.
- The Board can call a meeting to discuss potential impacts and recommendation (prior to November). Need a minimum of 3 weeks advance notice to post meeting and set agenda.
 - **Subsequent Action Item (Leonard, Bart):** review information sent and make a recommendation to the Drainage Board to approve. DATCP to review and provide technical assistance as needed.
- If the condition of the existing ditches and culverts is causing water to back up and flood tile systems, the landowners need to bring that information to the Drainage Board to correct or obtain a permit to do the work themselves; otherwise, the Board doesn't have the funding to analyze existing conditions and make repairs.
- **Action Item (DATCP, Drainage Board, Design Team):** meet onsite to review project.

3. Action Items/Next Steps

- **Action Item (Design Team):** verify invert elevations of the culvert pipe at the eastern project limits and revise drainage exhibit as necessary.
- **Action Item (Design Team):** provide information showing where the water is coming from, what the release rates and duration of release are, how the storm water will be managed, and what lands in the district within the project limits will be potentially impacted.
- **Action Item (Design Team):** look at a time 24 hours after the 10-year and 25-year storm events and see what the corresponding change in headwater is behind the culvert to determine the potential impact. Send information to Bart Chapman (DATCP) and Leonard Massie (Drainage Board); copy John Mitby.
 - **Subsequent Action Item (Leonard, Bart):** review information sent and make a recommendation to the Drainage Board to approve. DATCP to review and provide technical assistance as needed.
- **Action Item (DATCP, Drainage Board, Design Team):** meet onsite to review project/landscape.