

**From:** [Keim, Matthew](#)  
**To:** [Fischer, Steven M CIV](#); [Hurst, Austin](#)  
**Cc:** [Sugarman, Shelly CIV](#); [Moore, James M CIV](#); [Keim, Matthew](#)  
**Subject:** [Non-DoD Source] RE: BNSF 3.9 Vertical Clearance requirements  
**Date:** Tuesday, October 9, 2018 2:55:39 PM  
**Attachments:** [201810031606.pdf](#)

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Steve,

Received, Thank you. Here is a copy of the notes that we took during our call last Thursday afternoon to review your attached comments on the DRAFT bridge plans. Please let me know if you disagree with any of these notes or see any errors/mistakes on them.

Attendees: Steve Fischer (USCG), Matt Keim (BNSF), Austin Hurst (BNSF) & Jason Smith (Jacobs)

Notes:

Call started at 3pm central time and ended by 4pm central time on Thursday Oct 4 2018.

- Sheet 1 of 11–
  - Stamp and Date when Final
  - Remove Agency Reference Number
  - Signed and Stamped as part of the final EA
  - Steve will check if we can go out without signed and stamped drawings for the navigation public meeting. He will tell BNSF if it needs to be signed.
  - Steve believes that the information that Matt K. sent to Steve from the IDL public hearing is sufficient to go to the navigation hearing.
  
- Sheet 2 of 11–
  - Comments apply to both permanent and temporary drawings.
  - Mark ownership outside the BNSF R/W. Research and add ownership info (IDL?).
  - Summer pool for OHWM and OLWL is hard to see.
  - Remove all contour lines unless there is a significant impairment to navigation. (i.e. if there is an obstruction 1' below surface)
  - Compare the elevation drawings to the plan view. Keep contour lines on cross section
  - Get rid of some of the landward contour lines (reduced to 5' o/c) and label:
    - Temporary fill to be removed.
    - Permanent fill label
  - Use exact numbers for depth, not approximate. Use best guess.
  - Keep it simple as it needs to be focused on navigation. Drawings are good, just need fine tuning.
  - Use the checklist for the plans.
  - Show the widths similar to the way Steve has drawn them in and then show the widths as Steve's notes including spans and bridge width at the top and horizontal clearances on the existing bridge
  - When spans are the same, use one or two widths to show the various
  - Replace asterisks with bullseye type details (as seen on sheet 6 of 11) to show depths and various locations upstream and downstream. Use the best guess to show best and worst depth locations. Copy the way we did it on the last drawing. Focus the depths from low and high water?

- Low pool 2051.5 water depths try to focus on worst case and don't worry if it is greater than 10-12 feet.
- Sheets 3 – 7 of 11
  - Follow previous notes on Sheet 1-2
  - Add random water depths where it varies
  - Show pier widths for horizontal clearances especially if they vary.
  - Show depths for main navigation channel
- Sheet 8 of 11
  - Original concrete piers are cutoff below the surface and if they are below the mud line then they can be removed. Confirm cutoff elevation before removal from bridge plans.
  - Show the approach fill on the right side of drawing.
  - Consider any reduction in the detail for the superstructure.
  - Differentiate between the existing and proposed piers
  - Show elevation and clearance for different water events at Low and High Water. Clearance would be from the water surface to the low steel on the bridge.
  - Remove 100 year flood unless it is on the checklist.
  - Vertical Clearances
    - Note if the elevations for the existing vs. proposed bridge. Ideally we are showing low steel, so focus on the clearance(s).
    - Address the issue of the navigation span and showing the clearance to the OHWL and OLWL with the blue areas and where it varies.
- Sheet 9 of 11
  - See Sheet 8 comments
  - Lighted navigation channel is shown in red. Add red box, use the BPAG guidance
  - Show vertical clearance for other spans where it varies.
  - Proposed vertical clearance discussion related to comments Steve reportedly received from Shawnodese Vessel. 14' vs. 15' vs. 16' foot clearance discussion for lighted navigation channel(s) and off navigation channels.
    - Discussed Hwy 95 bridge is currently 15 ft vertical clearance.
  - Discussed pre-application meeting discussions related to proposed clearances on 3.1 and 3.9. Both sides remember those discussions differently.
  - Discussed worst case lake conditions possibly affecting navigation for both the Ida Mae or the Shawnodese vessels using channel(s) under 3.9.
  - USCG reportedly has comments from local mariners and suggests we evaluate and redesign the 3.1 and 3.9 bridges for navigation. BNSF would like to vet it before completing any design changes to the bridge plans.
  - Vertical clearances appears to be an issue at 3.9 and horizontal clearances appear to be an issue at 3.1
  - Discussed vertical clearance on 3.9. How many new bridge spans may have to meet 16 ft vertical clearance to match existing vertical clearance if design change is required? One span, two span, all spans?
  - Steve will talk to the Shawnodese to determine if we need more than one span.

If design change is required for 16 ft vertical clearance on 3.9 then temporary work bridge for 3.9 needs to meet 16' as well.

- Sheet 10 of 11
  - Show the approach fill on the left side of drawing.

Thanks again,

Matt Keim  
BNSF Railway  
Manager Engineering  
Montana Division  
Minneapolis, MN  
(763)-782-3489

-----Original Message-----

From: Fischer, Steven M CIV [mailto:Steven.M.Fischer3@uscg.mil]  
Sent: Tuesday, October 9, 2018 1:19 PM  
To: Keim, Matthew <Matthew.Keim@BNSF.com>; Hurst, Austin <Austin.Hurst@BNSF.com>  
Cc: Sugarman, Shelly CIV <Shelly.H.Sugarman@uscg.mil>; Moore, James M CIV <James.M.Moore2@uscg.mil>  
Subject: RE: BNSF 3.9 Vertical Clearance requirements

External Message

Matt can you confirm receipt...thanks  
Steve

-----Original Message-----

From: Fischer, Steven M CIV  
Sent: Friday, October 5, 2018 1:07 PM  
To: 'Keim, Matthew' <Matthew.Keim@BNSF.com>; 'Austin Hurst, BNSF-Structures' <austin.hurst@bnsf.com>  
Cc: Sugarman, Shelly CIV <shelly.h.sugarman@uscg.mil>; Moore, James M CIV <James.M.Moore2@uscg.mil>  
Subject: BNSF 3.9 Vertical Clearance requirements

Matt and Austin,

Thanks for the discussion yesterday...it was very productive.

Here are some excerpts from and few emails I have received from the owner of MV Shawnodese.

MV Shawnodese "... Steve, We use the two spans on either side of the swivel bridge, the ones that measure 89.6' horizontal x 16' vertical. I know of several houseboats on the lake which would need that clearance,..."

MV Shawnodese "Hi Steve, Our vertical clearance requirement is 16 feet, not 15. Yes, our vessel is the Shawnodese. "

Me "...Curtis, what is your vertical clearance requirements for the new proposed BNSF bridge? Would you be able to fit under 15ft OHW? If not what is the minimum you can safely navigate under? Is your vessel the Shawnodese? Do you have contact info for "Ida Mae"?

I original reached out to Shawnodese about the 3.1 bridge as they are navigation subject matter experts on the lake. They said that current 3.1 proposed pier alignment was problematic for reasonable and safe navigation....in the conversation about 3.1 they had also brought up questions about up 3.9 clearances.

I hope this info helps

Thanks

Steve Fischer  
13th Coast Guard District  
Waterways Management (dpw)  
Bridge Administrator/Chief  
Thirteenth Coast Guard District  
(206)220-7282

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