

Askin, Tim

From: Colleen Reilly <ckreilly@outlook.com>
Sent: Wednesday, August 5, 2020 7:42 PM
To: Askin, Tim
Subject: Fwd: Coating Historic Bridges

Here is MN SHPO documentation.

Colleen Reilly, PMP
(414) 202-5730

Begin forwarded message:

From: "Wiener, Natascha (ADM)" <natascha.wiener@state.mn.us>
Date: August 5, 2020 at 2:41:26 PM CDT
To: C's Outlook <ckreilly@outlook.com>
Subject: RE: Coating Historic Bridges

Colleen,
Concrete coatings are a tough nut to crack. There are many who are very dedicated to their use.

Typically speaking – we don't approve the use of film forming concrete coatings unless there is a very strong proven need. Almost always, if we approve them, it is because a non-historic coating is already present. It is very difficult to get them off, so it is hard to avoid their continued use. The patched areas are small compared to the rest of the bridge covered in the coating already, so it is more of an approval to use on the patches. Removing the coating is often damaging to the concrete and is expensive. So best to avoid ever starting with a coating. I believe both the 10th and 3rd Ave bridges fall into that category.

For Minneopa, if memory serves, this was a very early concrete bridge. The concrete was not air entrained, and had some other longevity issues, and was suffering a great deal. And to be honest, if it came through the office now, I'd bet we'd have some better non-film forming coatings to look at instead.

I think patches and new portions of concrete should always be made to match the color of the historic. This can be done in the mix itself (though contractors are often resistant to this as it takes practice). In a precast situation, they should be able to control this quite well though. It is often a matter of using a different source of fly ash or other component that has a different hue – with structural concretes, they often do not like to use actual colorants in the concrete itself. But if this can't be achieved, a concrete stain can be used, and so far, they don't appear to be damaging to the historic concrete. It should only be used on the patches, and not on the historic uncoated concrete, more because you don't want to change the color of the historic concrete, but contractors sometimes push to do that as well, so it's easier to match to.

I hope that answers some of your questions. I'm happy to have a phone conversation or Skype, etc. if you have more questions. Just let me know.

Thanks,
Natascha



Natascha Wiener | Historical Architect

50 Sherburne Avenue, Suite 203
Saint Paul, MN 55155
(651) 201-3294
natascha.wiener@state.mn.us



Given the Governor's implementation of [Stay Safe MN](#), SHPO staff will continue to work remotely and be available via [phone and email](#), and the SHPO office will be closed to visitors and unable to accommodate in-person research and deliveries. Mail is being delivered to the office via USPS, FedEx and UPS, however, staff have limited weekly access to sort and process mail. Our office will continue to take file search requests via DataRequestSHPO@state.mn.us. Check [SHPO's webpage](#) for the latest updates and we thank you for your continued patience.

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From: C's Outlook <ckreilly@outlook.com>
Sent: Monday, August 3, 2020 11:11 AM
To: Wiener, Natascha (ADM) <natascha.wiener@state.mn.us>
Subject: Coating Historic Bridges

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Hello, Natascha,

I just spoke with Sarah Beimers, and she suggested I reach out to you about the use of coatings (specifically Bridge Cote) on historic concrete bridges. Sarah was very helpful, but thought you could provide both engineering and historic preservation perspectives regarding the use of coatings/sealants.

As a little background, we are working with O.N.E. (Wiss, Janey is their sub consultant) on a bridge rehabilitation here in Milwaukee. O.N.E. has proposed the use of Bridge Cote on our 1906 national register listed-concrete arch bridge (interestingly, WJE does NOT support the use of Bridge Cote). The bridge has never been painted or coated in the past (areas were patched with shotcrete and cracks caulked in the 1970's). Also, the bridge deck and wing walls will be replaced, using pre-cast concrete (which they are not proposing to color match to the old concrete). An engineering case is being made for the use of Bridge Cote, however, I am guessing the primary driver is to achieve a more uniform appearance following rehabilitation.

We would appreciate any thoughts you have on this given your experience. O.N.E. provided examples where MN SHPO approved the use of Bridge Cote (3rd Avenue Bridge, 10th Avenue Bridge, and the Minneopa State Park Pedestrian Bridge), so we were curious to understand better why Bridge Cote was considered appropriate for those bridges. For example, does Bridge cote provide such a superior product from an engineering perspective to justify altering the historic bridge's appearance from natural concrete? Were these bridges "exceptions to the rule"?

You can reach me via phone at the number below, if you think it would be easier to discuss via phone.

Thank you, in advance, for your time.

Colleen Reilly

Colleen Reilly, PMP
(414) 202-5730
ckreilly@outlook.com