Hinsdale, NH – Brattleboro, VT Connecticut River Bridge Project

Project Advisory Committee Meeting #3

Hinsdale Police Department
10 Main Street
Hinsdale, NH 03451

MINUTES

April 24, 2017

Project Advisory Committee: Peter Elwell (Chair), *Town Manager, Town of Brattleboro, VT*; Michael Abbott, *Representative, New Hampshire State Legislature;* Mollie Burke, *Representative, Vermont State Legislature*; Jill Collins, *Town Administrator, Town of Hinsdale;* Steve Diorio, *Board of Selectmen, Town of Hinsdale, NH*; John Gomarlo, *Member/Resident, Southwest Region Planning Commission (SWRPC) Transportation Advisory Committee/Town of Winchester, NH*; Bob Harcke, *President, Hinsdale Commercial and Industrial Development Commission*; Kathryn Lynch, *Community Development Coordinator, Town of Hinsdale;* Fred Moriarty, *Board of Trustees Treasurer, Brattleboro Museum and Art Center*; Edwin Smith, *Member/Resident, SWRPC Transportation Advisory Committee/Town of Hinsdale, NH;* Lew Sorenson, *Member/Resident, Windham Regional Commission (WRC) Transportation Committee/Town of Dummerston, VT.*

Project Advisory Committee Lead Team: Chris Baker, *Vermont Agency of Transportation (VTrans)*; Liz Kelly, *SWRPC;* Don Lyford, *NHDOT*; J. B. Mack, *SWRPC*; Erica Roper, *WRC*; Bill Saffian, *NHDOT*; and David Scott, *NHDOT.*

I. Welcome and Introductions

Chair Elwell called the meeting to order at 2:05 p.m. and all attendees introduced themselves.

II. Approval of Minutes of March 13, 2017 Meeting

Motion: To approve the minutes of March 13, 2017.

Motion made by Lew Sorenson. Seconded by John Gomarlo. J.B. Mack noted that there was an error in the minutes. Dan Landry was incorrectly identified as representing NHDOT on page 1. Jill Collins noted that "Fred" should be changed to "Frank" Podlensky on page 2.

Motion: To approve the minutes of March 13, 2017 with the additional corrections.

Motion made by Lew Sorenson. Seconded by John Gomarlo. Motion approved unanimously.

III. Bridge Pier Design

Bill Saffian referenced two handouts NHDOT created for the meeting (attached to the minutes). The handouts showed cross sections and diagrams of various bridge pier designs. He projected a CAD drawing of the proposed Hinsdale-Brattleboro Bridge to show three dimensional views of different pier designs. He

provided some contextual information about the bridge design itself. The CAD model showed the proposed alignment of the bridge, major routes near the bridge, and adjacent properties in Brattleboro and Hinsdale. He noted that the bridge has dedicated right and left turning lanes coming off the bridge where Vermont Route 119 connects with Vermont Route 142. He pointed out the location of the bridge piers: one located on the tank farm property, three piers located in the main channel of Connecticut River, pier was located on the island, and two piers located in the side channel of the Connecticut River. The abutment ends at the easterly side of the marina drive. He noted that the clearance on the New Hampshire side over the marina driveway will be a minimum of 16' 11". The minimum clearance of the bridge on the Vermont side will be 23', which is Vermont's standard clearance over railways. There are straight portions of the bridge and one curved portion. The beginning of the curved portion starts 833' from the Vermont abutment and curves an additional 948' towards New Hampshire. There are eight spans associated with the bridge. The first span extends 153' from the Vermont abutment to the first pier. The last span is 153' from the last pier to the New Hampshire abutment. There are a total of 7 piers.

Lew Sorenson asked if adding bus stop turnouts at either end of the bridge would be feasible. Bill Saffian said that there might be enough space on the New Hampshire side of the bridge but that he would need to discuss this further with the NHDOT Highway Designer. Don Lyford asked Lew Sorenson to clarify what the bus stop would be for. Lew Sorenson responded that ideally, intercity transit riders will increase in Brattleboro and Hinsdale and it would be good to be able to accommodate that shift in transportation mode preference by adding a bus stop if needed. Bill Saffian noted that with the left and right turning lanes on the Vermont side of the bridge, it would be difficult to accommodate a transit spot without having to widen the entire bridge or widen VT 142 which would push the retaining wall further into the college parking lot. Edwin Smith asked why the bus would need to stop at the bridge. He observed that the former Walmart plaza in Hinsdale has a parking lot the bus would use on the Hinsdale side. Mike Abbott and Don Lyford agreed that a better spot to have a bus stop might be at the end of the existing bridges, since they will be limited to pedestrian and bicyclist use.

Bill Saffian summarized the decisions that were made at the March 13, 2017 meeting and showed how they have been incorporated into the bridge design. There is a 6' wide sidewalk on the north side of the bridge that connects to Vermont Route 142 towards Marlboro College. There is no rail between the travel lane and the sidewalk on the bridge. The travel way is 12' wide with an 8' shoulder. Peter Elwell commented that the shoulder could double as a bike lane. Mollie Burke asked if there would be a crosswalk on the Vermont side of the bridge. Bill Saffian noted that typically a crosswalk is not incorporated into a design if there is no sidewalk on one side of the project, and there is no sidewalk on the south side of the bridge. Peter Elwell stated that, if it were possible to add a sidewalk to the south side of the bridge, the Morning Side housing development could benefit from that pedestrian connection to downtown. He noted that the Hinsdale-Brattleboro bridge project area ends near the Morning Side development, which provides an opportunity to extend the sidewalk down to the development itself. Mollie Burke noted that it would be cheaper to construct the sidewalk now than to build a sidewalk later. Bill Saffian said that currently there are no plans for a crosswalk on the west side of the bridge or a sidewalk on Vermont Route 142 south of the bridge. He also noted that if the committee recommended constructing a sidewalk, NHDOT would add a crosswalk, but the incorporation of the sidewalk would need to be reviewed by VTrans.

Bill Saffian noted that the shoulders on the western side of the bridge decrease to 5' to make room for an 11' wide westbound turn lane and a 12' wide eastbound travel lane. Peter Elwell asked if there would be signals at the Vermont end of the bridge and Bill Saffian confirmed that a signal is planned. Edwin Smith asked if the decision to create two turn lanes was because there are more vehicles turning right towards downtown. Bill Saffian said that NHDOT chose to include a right turn lane because it allows motorists to go right on red, making the traffic flow more efficient. Representative Abbott said that he expected there to be a large amount of left turns at the intersection so that motorists could avoid downtown Brattleboro's

"malfunction junction" on their way to Interstate 91. He stated that he believed many motorists will use Cotton Mill Road, South Main Street and Fairground Road to reach Exit 1 on Interstate 91.

Lew Sorenson asked what the grey shading was on the south side of the bridge. Bill Saffian said that it was a fence, which is a requirement for any bridge segments passing above a railroad. There is one on both sides of the bridge extending for 80'. Don Lyford pointed out the fence on the cross section handout.

Chris Baker asked if NHDOT has analyzed traffic patterns for the proposed bridge yet to see if any queues are anticipated. Bill Saffian responded that they had and thought incorporating a left and right turn lane was an adequate solution. Edwin Smith asked if the left turn lane is long enough. Peter Elwell stated that the current traffic data will not accurately show the committee how the new bridge will be used. He asked if the left turn lane could be made longer by locating the wider portion of the bridge deck back towards the river. Bill Saffian said that this would be possible. J.B. Mack asked if NHDOT had access to traffic modeling software to predict traffic movements. Don Lyford commented that they had created some projections. Peter Elwell mentioned that modeling might help better understand left turns and help avoid overbuilding that end of the bridge. If it avoids the issue of left turning vehicles blocking right turning vehicles, it might be worth knowing. Don Lyford noted that NHDOT could look at this more closely.

Bill Saffian explained the preliminary drainage plan for the bridge. Right now, water collects in shoulders and travels towards each end of the bridge. During 10 year storm events, the water can be expected to collect a few feet into the travel way. Current bridge design standards allow water collection in the travel lane. As the bridge widens at the Vermont side to accommodate the three lanes of traffic, water will infringe approximately halfway into the outer travel lanes. Peter Elwell asked how long the water ponds for. Bill Saffian didn't have an exact time, but noted that NHDOT will be directing the water off the bridge once it gets to the abutment. Lew Sorenson asked where the water would drain on the north side of the bridge. Bill Saffian replied that NHDOT has not decided this. Mollie Burke mentioned that Vermont has water quality standards. Lew Sorenson asked where the peak of the bridge is. Bill Saffian responded that it is almost at the island. Equal amounts of runoff will be going toward the New Hampshire side and the Vermont side. Mike Abbott asked if drainage and water quality standards are different for both sides. Bill Saffian noted that state water quality standards may be different, however, current design guidance for the project design speed on Route 119 would allow water to collect halfway into travel lanes. He also said that currently, the plan is to carry the water to the abutments and to deal with water filtration there. Bill Saffian also noted that scuppers could be introduced to remove water from the bridge before it gets to the abutments but that required penetrations through the deck would create weak points in the bridge where water could infiltrate under the deck membrane and accelerate the deterioration of the deck. It would also have to be determined if the water could be discharged directly into the river and/or ground below the bridge or if the water would have to collected in a closed drainage system and treated before discharge.

Bill Saffian noted that there will be a T4 rail mounted on the sidewalk with discrete posts. On the south side of the bridge, where there isn't a sidewalk, there will be a T3 rail. Peter Elwell asked if the T3 versus the T4 rail is going to look awkward, since they're slightly different heights. David Scott responded that it is not noticeable. Fred Moriarty asked if the project is taking any land from the college parking lot for the sidewalk. Bill Saffian noted that they would be taking some spaces along Vermont Route 142. Fred Moriarty asked if the property owners were aware they may be losing parking spaces. Chris Baker said that VTrans is aware and has discussed it with the current property owners.

Kathryn Lynch asked if they were going to discuss the Hinsdale side. She mentioned that Norm's Marina was recently purchased. The new owners spoke with Kathryn and asked her if any part of their land would be taken and affected in any way. Bill Saffian mentioned that he could tell her what NHDOT is planning to do but doesn't know how it will impact their land in terms of property lines at this stage. The marina access will be under the abutment on the NH side of the bridge. It will need a fairly long wing wall. The

side slope from NH 119 was made as steep as possible to minimize projection onto the property. Where that is in relation to property lines, Bill noted that he was not sure. Don Lyford told Kathryn Lynch to have the new owners call him directly to speak about this further.

Lew Sorenson asked about the thickness of the piers. Bill Saffian noted for the Vermont and New Hampshire abutments, the piers are shallower than 6' (approximately 42 inches). In the middle of the bridge, the piers are 6' thick.

Bill Saffian referred to the handout that displayed various pier layout and surficial treatments that the committee could recommend for the bridge piers. NHDOT provided five pier layouts for the committee to review. The design options included hammer head (rounded), hammer head (semi-rounded), two-column with solid infill wall, "V", and solid wall. There were also six surface treatment options including no surface treatment, a vertical line form liner, a rough surface form liner, a granite block with relief form liner, a granite block smooth rustication, a sloped inset, dry laid stone, and rough vertical lines. Bill Saffian mentioned that the hammer head rounded option is not a typical style NHDOT uses because it requires special formwork, but since it was requested at the last meeting, they brought the option with them. He also noted that in the two leg option, the infill wall is set back a foot from the face.

Discussion ensued among the committee about the various pier layout options. Mike Abbott asked the committee to consider who will really see the piers, besides fishermen. Bill Saffian responded that motorists traveling down the road on the Hinsdale side will still have a good view of the bridge piers. Erica Roper asked if NHDOT could design a semi-rounded or rounded approach at the top of the pier. Bill Saffian replied that they could do this, but that it wasn't an industry standard. Lew Sorenson noted that the most aesthetically appealing pier to him was the one labeled as "granite block relief on any other pier type" on the last page of the handout. He asked NHDOT if they could design a pier layout that resembled the shape in the photo. Bill Saffian replied that it might be possible, but that the downside is that the pier gets thin at the bottom, which impacts the amount of weight the pier is able to hold. If the committee wanted to pursue a shape like this, NHDOT would have to look further into the feasibility of that design.

Bob Harcke asked if the committee could receive some information on the economics of each of the pier layout types so that the committee could consider cost as part of their review process. Mike Abbott agreed. Bill Saffian replied that all of the options NHDOT presented are fairly standard forms and cost around the same amount besides the hammer head (rounded) which would be more expensive. David Scott noted that NHDOT can prepare cost comparisons, but assured the committee that none of these layouts are "budget breakers." Mike Abbott asked why the hammer head (rounded) was more expensive. Bill Saffian responded that with a solid wall, the form work is standard. It's linear and quick to create. The hammer head (rounded) option is more expensive because of the form that's required, despite it having less concrete mass. David Scott noted that the solid wall pier layout is NHDOT's typical "go-to" pier design.

Bill Saffian referenced the vertical line form liner option (type b) for pier surface treatment. The line work is set back by three inches as is the vertical striping of the pier which adds complexity in the construction, adding some cost. J.B. Mack asked if a passerby would be able to see the texture easily. Bill Saffian replied that yes, if there is a river walk, pedestrians will be able to enjoy the aesthetic appeal. Erica Roper asked if it would be possible to have this form liner paired with the curved granite block with relief pier that Lew Sorenson mentioned earlier. Bill Saffian said that NHDOT could look into that combination.

Bill Saffian referenced the rough surface form liner treatment (type c) for pier surface treatment. The rough surface form creates a dimpling effect. The dimple surface is inset about 3" except for the column pier layout where the inset would be indented a full foot. He noted that the hammer head semi-rounded pier layout would be less expensive than the hammer head rounded pier layout. He mentioned that the two column option with rough surface form liner makes it "pop". Bill Saffian noted that the piers are 43 feet

tall from the surface of the water to the top of the substructure and get marginally shorter as the bridge extends towards the Vermont side.

Bill Saffian referenced the granite block with relief form liner (type d) for pier surface treatment. Mollie Burke asked if the granite block would be rough textured. Bill Saffian said that yes, it would. Mike Abbot asked how the piers handle ice. Bill Saffian responded that the ice comes down and is divided at the nose of the pier. Bill Saffian provided an overview of the sloped inset surface treatment and the "other options" category which included dry laid stone and rough vertical line treatments. Mollie Burke asked if the dry laid is more expensive than some of the other treatments to which Bill Saffian replied that no, its price is comparable to many of the other treatments.

Mike Abbott announced that he needed to have more information on the economics of each of these options before he can make a logical decision. He noted that he is not in favor of the hammer head (rounded) option. Peter Elwell asked NHDOT if they could generate this information quickly. Bill Saffian responded that they would bring estimates to the next Project Advisory Committee meeting. Steve Diorio mentioned that he is interested in having some sort of texture for the bridge, despite there being a cost. Mollie Burke agreed. Bill Saffian noted that NHDOT could move forward with the design knowing the pier shape first. The committee can vote on the line and texture options at a later date if needed. Mollie Burke commented that there should be some relationship between the new bridge and the other bridges. Mike Abbott responded that there are no piers on the old bridges, only abutments. J.B. Mack commented that he thought that the existing bridge abutments were made of concrete. Bill Saffian referenced the photos and confirmed that they are reinforced concrete abutments on the current bridge and the old bridge.

Fred Moriarty commented that he wanted to know more about the pros and cons between each pier layout design and surface treatments. The styles and sizes are very different and understanding more detail about the functionality of each of the layouts would be helpful. Bill Saffian noted that even for the "daintier" looking piers, NHDOT would design the bridge to handle traffic and reinforce the weight. Peter Elwell asked how the committee would be able to get accurate cost information from NHDOT on the various pier options. Bill Saffian noted that they would research costs, but the figures would be cost estimates. Chris Baker said he thought it wise if the committee move forward to make a decision on pier design at this meeting. He noted that he didn't think the committee would find a large difference in cost between many of the options in the grand scheme of the expensive project and its budget as a whole. Mike Abbott responded that if there isn't a five percent difference between costs of pier layouts, then he's good with whatever decision the committee wants to make.

Peter Elwell asked if anyone on the committee had comments on the pier layout shape. Lew Sorenson commented that he would like to wait to see what the NHDOT comes up with for the pier design that is a hybrid between #3 (two column) and #4 ("V"). Erica Roper showed the committee a drawing she created that showed what the hybrid might look like. Peter Elwell recommended that the committee choose a first, second, and third choice in case any of the options end up being more expensive.

Kathryn Lynch noted that #3 (two-column pier layout) was her first choice. Steve Diorio wanted to consider the #3 and #4 hybrid Erika designed (being referred to as #6). Peter Elwell asked if the committee wanted to consider any others besides #3 and #6. Bob Harcke asked whether #6 would be much more expensive than the other choices they've decided. David Scott noted that he did not think #6 would be a "deal breaker" when it came to cost. Lew Sorenson asked if the committee could eliminate #1 and #5. Peter Elwell noted that NHDOT did speak favorably to the ability of the solid wall to deal with ice. Is this a concern for the other designs? Bill Saffian responded that #3 would have issues if it were built as drawn. NHDOT would have to alter the design slightly to handle ice better. Mike Abbott asked if #5 (the solid wall) could be the third option. Peter Elwell asked the committee if they could eliminate #1 and #2 from the running. There were no objections. Based on the discussion, the top three choices determined by the committee for pier

layout are #3, #5, and #6. Peter Elwell asked NHDOT if they could bring renderings of each of these to the next meeting with relief features and texture as well as cost estimates.

The committee began discussing preferred surface treatments. Mollie Burke liked the dry laid stone surface treatment. Lew Sorenson agreed and commented that his second preference would be the rough surface form liner. Erica Roper asked if NHDOT could use a dry laid stone inlet on any of the pier layout options the committee has discussed, to which Bill Saffian responded yes. Erica Roper asked if the granite block surface treatment can be used on any of the pier layout options as well. David Scott noted that he has seen it used on wall piers and that it gives the impression of blockinesses. You wouldn't naturally see that treatment used on some of the other types. Bob Harcke asked the committee to think about what the purpose of the texture would be. Fred Moriarty asked if NHDOT has pictures of abutment textures. Bill Saffian noted that the abutments could have the same treatment as the piers. Peter Elwell asked if the committee picked a dry laid stone treatment for the inset portion of piers, could NHDOT do the same on the abutments so that it didn't have a border. Bill Saffian responded that the abutments have to follow the slope of the bridge, so the border makes it easier to construct. David Scott agreed and noted that it might look odd in the corners. Mollie Burke asked if the dry laid stone could be on the whole surface of the pier. Bill Saffian replied that it would be on the inside of the pier. Mollie Burke commented that it would be great to create a new bridge that references something older. David Scott responded that if the committee chose a solid wall pier with a granite block rustication surface treatment, then that authentic look would be achieved.

Peter Elwell summarized the discussion. He asked NHDOT to provide images and cost estimates of the solid wall with granite block smooth rustication surface treatment and the two column and "V" hybrid variation that Erica Roper drew with two different treatments: dry laid stone form liner and rough texture form liner. Bill Saffian asked if the dry laid stone for the two column pier would be just the inset, to which everyone agreed. Steve Diorio and Peter Elwell noted the productivity of the committee throughout this meeting. Mike Abbott expressed gratitude and appreciation to NHDOT for their hard work.

IV. Next Steps

J.B. Mack asked when the committee should start thinking about the public meeting and hearing. Don Lyford replied that both can be planned regardless of what is finalized in these meetings. J.B. Mack asked how important it would be to get started with the public right of way process. Don Lyford replied that it is not that critical to do that yet. Chris Baker mentioned that the process has already started in Vermont. Don Lyford noted that the hearing would most likely be held 6-7 months from now. Chris Baker noted that the Vermont Attorney General's office said that a public hearing meeting in Hinsdale is sufficient for both States.

Peter Elwell asked that the next meeting be focused around making the choice for pier design and planning for the public hearing. It was decided that the next meeting should take place in 1-2 months. J.B. Mack brought up that the Project Advisory Committee has yet to make final recommendations on the topic of lighting and asked whether that should be discussed at the next meeting as well. Bill Saffian replied that NHDOT is looking into lighting that was requested along the rail and only found one example on a pedestrian bridge in Manchester, NH. He spoke to the town engineer who noted that they have had issues with vandalism to the lights. Mike Abbott and Peter Elwell asked if NHDOT could bring lighting information to the next meeting including a standard selection of light posts. Lew Sorenson commented that the committee may want to revisit overlooks at the next meeting as well. At the last meeting, the committee voted to limit the number of overlooks on the bridge. Bill Saffian said that NHDOT could incorporate the overlooks into the model. He will create a few different scenarios that show what the bridge looks like with 1 or more overlooks. Bill Saffian noted that the overlooks should include a historical plaque or something that would engage people so that they become a destination. Mike Abbott asked if they could also receive cost estimates on overlooks. David Scott noted that the cost for overlooks would not make a

significant difference in the overall budget, particularly since the committee has decided to build smaller overlooks that don't require additional structural support.

V. Next Meeting

The next meeting will be sometime in early-to-mid June and will be scheduled by an online meeting poll.

VI. Public Comment

There were no public comments.

VI. Adjourn

The meeting adjourned at 4:04 p.m.

Respectfully submitted,

Liz Kelly
Planning Technician