

Notes from Neighborhood Meeting, George St. Bridge Replacement Project

February 14, 2023, 6 PM at the Keene Recreation Center, 312 Washington St.

Presenters

- Brett Rusnock, City of Keene
- Samuel White, McFarland-Johnson (M-J)
- Matthew Moore, McFarland-Johnson (M-J)

Attendees

In addition to the presenters, a total of 18 people attended the meeting. Most of the attendees were neighbors to the project and their family members, including one City Councilor.

Initial Presentation

- Mr. Rusnock welcomed the attendees and thanked them for coming to the meeting. He introduced Sam White, the project manager and lead bridge engineer from M-J for the project, and Matthew Moore, the lead roadway and utility engineer from M-J for the project. He handed off the meeting to Mr. White to continue with a prepared presentation.
- Mr. White welcomed the attendees and began the presentation. He reviewed the project location and the current condition of the bridge over George St. The bridge was built in 1923 and is currently in poor condition. The bridge is included on the New Hampshire Department of Transportation (NHDOT) "Red List", which is a list that summarizes bridges receiving a condition rating of "poor" based on the National Bridge Inspection Standards on one of its critical elements. The "Red List" is used in priority ranking for bridge replacement candidates. Sam clarified that the bridge's status on the Red List does not mean it is unsafe, merely that it is prioritized for replacement. He noted that the bridge has provided the City with almost 100 years of service, and we have received good value so far.
- Projects on the NHDOT Red List are eligible for 80% NHDOT funding for the full cost of designing and constructing the replacement bridge. The City is responsible for the remaining 20%.
- All work that receives State funding must be associated with replacement of the bridge. In addition to the bridge itself, this can include:
 - Utility reconstruction
 - Paving
 - Sidewalk replacement near the bridge
 - Streambank stabilization
- Mr. White reviewed the major concerns to be addressed by the project. These include accommodation of the traffic volumes, which are estimated to be about 500 vehicles per day. Other concerns include above and below-ground utilities, impacts to abutting properties, and existing streambank erosion.
 - The streambank near the northwest corner of the bridge is steep and unstable. Mr. White showed a picture of a temporary repair that the City of Keene installed recently to address erosion at this location. The fix for this location is to reshape the slope to be flatter and armor it with riprap.

- The existing gabion baskets at the northeast corner of the bridge will need to be adjusted to connect to the new bridge abutment location. A customer asked for Mr. White to clarify what gabion basket means. Mr. White clarified that a gabion basket is a metal wire mesh basket filled with stones, which is visible in a picture included in the presentation.
- Mr. White described that the proposed bridge span will be 22-feet, compared to the existing span of 13-feet. The bridge opening is determined by completing an assessment of the stream and what the natural width should be based on flow and topography. The intent is for the stream to flow naturally as if the bridge did not exist.
- Mr. White described that the proposed bridge will accommodate wildlife to the greatest degree possible. He showed a photo of animal tracks present in the soil underneath the bridge. The proposed bridge will have a shelf along the stream to allow wildlife to cross underneath.
- Mr. White further explained the hydraulic constraints for the bridge design. The project is located within a mapped FEMA regulatory floodway for Beaver Brook. No work is allowed within the floodway that could result in an increase in base flood elevation.
 - M-J evaluated raising the profile of George St. and the bridge to better allow flow to pass during large storm events. Although the area under the bridge could technically become bigger, the fill necessary on either side of the bridge would restrict stream flow once the stream banks overtop and result in an impact (increase) of the base flood elevation for the mapped floodway. This would also lead to more extensive impacts to private properties abutting the project. In essence, the current height of the bridge over the stream will be maintained. The new bridge opening will be 8-feet wider than the existing.
- An attendee noted that in the 1980s there was a significant flood event along Beaver Brook. According to the customer, the propane tank for the Peoples Laundry facility was washed into the brook. After the flood receded, Peoples Laundry excavated areas along the western bank of the stream to repair damage.
- Mr. White handed the presentation off to Mr. Moore to describe the roadway and utility design aspects of the project. Mr. Moore described that safety, impacts to abutting properties, and drainage are some of the biggest concerns. He provided a graphic showing the current location of utilities along the street. There are stormwater lines along the northern curb line that outlet to Beaver Brook on either side. A water main is located in the center of the street and crosses underneath the stream. A sewer main is present along the southern curb line. There is also a sewer main along the eastern side of Beaver Brook. The overhead utilities are located on typical wooden utility poles along the southern side of the street.
 - A customer clarified that there are some isolated catch basins located along the southern side of the street. Mr. Moore thanked the customer and noted that all features of concern have been located by the project surveyors. The graphic in the presentation represents the major trunklines for all features, not necessarily everything that was surveyed.
- Mr. White reviewed the options for guardrail on and approaching the bridge replacement. The American Association of State Highway and Transportation Officials (AASHTO) design standards call for approximately 60' of guardrail at all four corners of the bridge. He showed a picture of

what this would look like, and noted that it is not really consistent with the neighborhood character of the project area.

- The two bridge rail options currently under consideration are:
 - Concrete bridge rail, similar to what was provided for the recently constructed Roxbury St. bridge over Beaver Brook
 - Steel bridge rail, similar to what has been provided on other crossings over Beaver Brook over the past 20 years. This includes Concord Rd. Giffin St., and Water St.
- Mr. White reviewed the temporary traffic control options for construction. He described that the bridge will be closed for approximately 4 months. The total project construction will likely be about 6 months. There are some items that can be completed before and after the bridge is closed and require short duration alterations to traffic flow (reduction to a single lane of alternating traffic with flaggers). He reviewed the proposed detour plan, which includes Washington St., Giffin St., and Sullivan St. Knight St. is a bit narrower than Sullivan St. and would not be the best detour.
- Construction is currently expected for summer of 2024.
- Mr. White reviewed the final slides of the presentation. This includes the expected water diversion method to be used during construction, which may include a large-diameter pipe and sandbags. Pumps may also be used to help with diversion. He also reviewed the likely bridge structure type that will be used. This includes a 3-sided rigid frame that will be set on poured foundations on either side of the stream.
- Mr. White concluded that he, Mr. Moore, and the City are here tonight to understand other concerns or issues with the planned project, and invited the attendees to speak up with questions and comments.

Question and Answer Session

Q: Will there be sidewalk on both sides of the street, or just one?

A: The plan is to provide sidewalk on only the north side of the bridge and the street, consistent with the current configuration. Mr. Rusnock asked the attendees if there were any major concerns with this approach. There were none identified.

Q: Will the project provide painted lines along the centerline of the street? Many drivers coming from Washington St. drive quickly along the curve and veer into the middle of the bridge.

A: The team has not yet identified if lines will be painted. This is determined more by traffic volume than anything else, and will be consistent with other areas of the City. Mr. Moore stated that one of the goals of the project is to improve sight distance along the curve coming from Washington St. Because sidewalk is not planned for the southern side of the street, the pavement can be shifted about 2-feet to the south. This will improve sight distance and safety.

Q: Will the street be paved as part of this project?

A: The limits of reconstruction necessary for the bridge will be paved. The entire street will not be paved. Mr. Moore showed a graphic with the estimated project limits, which

extend from the eastern limit of the driveway for Peoples Laundry to the western limit of the driveway for #63 George St.

Q: Is vibration expected to be a problem during construction? What will be done to manage this?

A: Mr. White described that construction of bridges of this type typically do not create vibrations that could damage structures. Depending on the bridge type selected and the expected construction methods, the design team may or may not include a vibration monitoring plan requirement during construction. If this is required, a contractor will review areas of concern prior to construction and establish a baseline for allowable vibrations. This will then be monitored during construction.

Q: Have you considered fence along the stream? How will you keep pedestrians out of the stream?

A: Mr. Rusnock noted that the proposed bridge rail will serve as a deterrent to pedestrians entering the stream. The City will ensure that within the right-of-way, there are no steep drop-offs that would allow someone to potentially fall into the stream. Outside of the City right-of-way, there will be nothing to prevent pedestrians from entering the stream.

Q: There is currently a concrete hump across the stream under the bridge that creates a small dam. What will happen to this after construction?

A: Mr. Rusnock stated he has not observed this concrete hump under the bridge, but believes it is likely related to the historic water main that used to cross under the bridge. At historic stream crossings, water mains were typically not installed far beneath the stream bed, if at all. They were often covered with concrete to protect them from damage from the stream. Mr. Rusnock clarified that the bridge construction will extend beneath the stream bed, and this concrete will be removed. The proposed water main will be installed under the stream bed to avoid hydraulic impacts.

Q: We live at the southeast corner of the bridge. Will it be possible to have some of the rocks that make up the existing retaining walls to be used for landscaping?

A: Mr. Rusnock stated that this can be reasonably accommodated. Once the limits of easements needed for bridge construction are established, the City will be in contact with abutters to discuss the impacts and resolution.

Q: How will knotweed be managed?

A: Mr. Rusnock stated that there is significant amounts of knotweed within the project area. The knotweed will be managed according to current State of NH best practices. Although care will be taken to manage knotweed appropriately, it is likely that it will return at some point.

Q: Will anything be done to better manage speed along George St. as part of this project?

A: The project will not directly address speeding concerns along George St. An added benefit of the slightly narrower proposed bridge could be that the narrower corridor persuades motorists to slow down.

Q: Are water outages required to complete the project?

A: The potential for water outages will be evaluated as the project progresses. If an outage is needed, Mr. Rusnock stated that the City's goal is to provide a minimum of 3 days' notice to those impacted (The State requirement is a minimum of 2 days' notice).

Q: Where will temporary overhead utility pole relocations be?

A: The temporary utility pole relocations will be coordinated with the utility companies. Once locations for the temporary poles are established, more information will be provided to those impacted.