



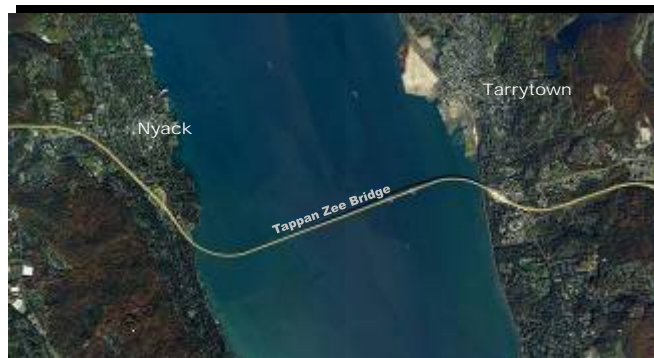
TAPPAN ZEE BRIDGE/I-287
ENVIRONMENTAL REVIEW

**New York State Department of Transportation
Metropolitan Transportation Authority Metro-North Railroad
New York State Thruway Authority**

Meeting Minutes

***Stakeholders' Advisory Working Group
Bridge SAWG 13***

Tappan Zee Bridge/I-287 Corridor Project



August 13, 2009

Attendance at Bridge Stakeholders' Advisory Working Group Meeting August 13, 2009 Nyack Hospital, Nyack, New York			
<u>Stakeholders' Advisory Working Group Members</u>	<u>Additional Attendees</u>	<u>Project Team Members</u>	
Phil Bosco	Jerry Ilowite, South Nyack Planning Board	Michael Anderson	NYSDOT
Harriet Cornell	Alain Leinbach, South Nyack Trustee	Kristine Edwards	NYSDOT
Bob Dillon	Tanya Sherman	Yvette Hinds	NYSDOT
Marion Franklin		Robert Laravie	NYSDOT
Francis Goudie		Peter Casper	NYSTA
Gilbert Hawkins		Angel Medina	NYSTA
Robert Hintersteiner		Elisa Van der Linde	MNR MTA
Milton Hoffman		Ed Pomfred	Arup
Barton Lee		Mark Roche	Arup
Marilan Lund		Rita Campon	Parsons
John Messina		George Paschalis	HSB
Paul Richards			
George Sherman			
Mary Jane Shimsky			
Neil Trenk			

INTRODUCTION

Kristine Edwards, the NYSDOT bridge manager for the study, opened the meeting. Those in attendance introduced themselves and the meeting commenced.

This session continued our interactive Stakeholders' Advisory Working Group format, with attendees sitting around a table and drawings and other materials rolled out in front of them for their review. SAWG members and other attendees participated, asked questions, and offered opinions throughout the meeting.

One of the purposes of this meeting was to get further input from the working group as the project team continues its evaluation and screening of options for a new bridge configuration. This meeting specifically addressed commuter rail transit (CRT), bus rapid transit (BRT), and highway alignment issues and how they may impact the Tarrytown side of the proposed new bridge.

Both single level and dual level bridge configurations were shown at the meeting, which focused in part on how highway lanes, BRT/high occupancy vehicle (HOV) lanes, and a commuter rail system could be arranged on the bridge structure while considering project goals, design criteria, right-of-way (ROW) concerns, safety and security, operations, BRT connectivity, CRT connectivity, constructability, possible main span bridge type, and transit accommodations that could be made to the highway and bridge while the transit environmental analysis is under way.

Mark Roche (Arup, engineering consultant) began the meeting with a general introduction and recap of the SAWG meeting on July 28, 2009. Also addressed were the action items from the last SAWG meeting. Minutes of the Joint Environmental and Bridge SAWG held on July 28 were distributed.

Since there were numerous new participants at this Bridge SAWG meeting, some previously addressed items were revisited briefly to bring everyone up to speed. Large-format drawings and aerial photographs depicted the various bridge configuration options under consideration.

Over the course of the next two-plus hours, Mr. Roche shared with the group the project team's progress since the last SAWG session in the evaluation and screening of bridge configuration options. Using working drawings, elevations, and aerials, Mr. Roche explained the various issues with regards to the CRT, BRT, and highway and their relationship to the proposed bridge at both the Rockland and the Tarrytown landing. He described how the new bridge would meet the land and the elevation issues that need to be considered to accommodate the CRT system. The following issues were among those discussed:

- Possible locations for CRT and BRT on the bridge. A new organization of alignments was shown in which single, dual, and hybrid options were grouped and would be compared in regards to BRT and CRT alignments. The single level options differed on the location of the rail, whereas the dual level options differed on BRT locations. The hybrid option will be compared with the best single and dual level options.
- The options for the placement of commuter rail on the bridge were discussed. Proposals include the CRT on north, center, and south decks.
- The connection between the CRT and the Hudson Line was discussed, particularly the difference between connecting via a trestle—a spur directly from the main span—to the Hudson Line and continuing the CRT into a tunnel at the Tarrytown landing, then looping around Kraft and connecting to the Hudson Line.
- The hybrid configuration was addressed in relation to how the BRT would connect into Tarrytown and Rockland.
- The dual level configuration was discussed in terms of the effect on the visual environment at the Rockland approach. It was again noted that the dual level would result in a highway that was higher than the existing roadway, matching the existing roadway at the Broadway bridge.



DISCUSSION

Questions and comments included the following.

- Question 1: Would the dual level option be at both landings?
Answer: Yes. Although the options shown are representative of the configurations at the main span and may differ at the landing, the dual level options shown are uniform across the river.
- Question 2: How much are the environmental aspects considered in the screening of the bridge options?
Answer: The initial evaluation is based heavily on engineering criteria. Possible configurations that cannot be constructed, for example, have been eliminated. Those options that remain after this "engineering screening" will be evaluated using environmental criteria.
- Question 3: What is the distance between the dual level structures?
Answer: The current proposed spacing is 30 feet, which is meant to account for any proposed towers at the main span.
- Question 4: Do the decks come close to combining at the main span towers?
Answer: At this point in the design development, the configurations shown are pretty uniform across the span.
- Question 5: Would it be possible to shift the transportation in case of an emergency?
Answer: There are ongoing discussions among the project team--New York State Department of Transportation, New York State Thruway Authority, Metro-North Railroad--regarding this and other operating issues.
- Question 6: Would the triple deck (single level) configuration combine into one structure at the main span?
Answer: This cannot be determined at the current point in the design development.
- Question 7: What is the maximum width on the land between the dual level and single level configurations?
Answer: The maximum width of the single level bridge is 270 feet, which takes into account the possibility of 15-foot bicycle/pedestrian paths on both sides of the bridge. The right-of-way boundary is currently 250 feet.
- Question 8: Regarding the height of the main span, has there been consideration in regards to the cost of the higher dual level configuration?
Answer: A cost estimate will be prepared for each of the options.
- Question 9: What is the height of each proposed option in comparison to the existing bridge?
Answer: Any towers at the main span of the proposed bridge may reach a height of approximately 350 feet. The existing bridge is about a hundred or so feet lower.
- Question 10: Will the dual level bridge have a higher clearance due to federal government regulations?
Answer: All options for the replacement bridge will have a vertical clearance of 155'. The existing bridge has a vertical clearance of 139'. The 155' was established through conversations with the Coast Guard and through a public notice issued by the Coast Guard.
- Question 11: What is the difference in the total square footage of the piers in the river between the dual and single level options?
Answer: The size of the piers is based on how long the spans of the structure are. For the dual level bridge, the minimum span separation distance is approximately 430 feet. For the single level bridge, the minimum span is approximately 230 feet, but the actual spans used could be longer. The comparison of the square footage for both the single level piers and the dual level piers will be done as the design development proceeds



through the Draft Environmental Impact Statement (DEIS). It will be the basis for the evaluation of a number of environmental impacts that will be considered in the DEIS.

- Question 12: One of the lower decks in the D2-3 dual level configuration is not currently utilized. Could that deck be used in the future?
Answer: Absolutely not. The only manner in which the lower part of the deck might be used is for light utility transport. The structure would be designed to carry only the weight of the top deck.
- Question 13: Regarding the type of main span, are the designers leaning toward a cable-stayed bridge?
Answer: The design of the main span support structure is not being considered at this point, as it would constrain the ultimate design of the entire bridge.
- Question 14: Where will the I-287 roadway be on the land in relation to the existing highway?
Answer: The highway will cover the same area that it currently covers.
- Question 15: Will the CRT go through a tunnel down to Irvington or will it be accommodated on a trestle—a spur from the main span—in the river?
Answer: The drawing shows CRT going into a tunnel at Tarrytown and connecting to Metro-North's Hudson Line in Irvington. An evaluation of a trestle connection that would descend to the Hudson Line is under way.
- Question 16: For both the dual and single level configurations, where does the CRT hit ground at the Tarrytown landing?
Answer: Both configurations hit the ground at the same elevation.
- Question 17: Would it be possible to dig a trench for the CRT entering the Tappan Zee station?
Answer: Yes, the trench could allow the CRT to go underneath Broadway. This would provide an advantage in that it would keep the construction constrained to the area of the State Police and Thruway Maintenance Facility.
- Question 18: How much of a noise impact will occur on the north sides of the landings with a CRT north configuration?
Answer: This is an issue, but the degree of noise has not been quantified at the present time.
- Question 19: Is there a guarantee that the rail will be built?
Answer: NYS DOT has already committed fully to constructing the bridge, the highway, and both transit options.
- Question 20: How will the bridge be built while the old bridge is still in use?
Answer: Half of the bridge structure would be built initially. Then both traffic lanes would be shifted over to the new bridge. Once traffic has shifted over, the old bridge would be dismantled, and the remaining sections of the bridge would be constructed.
- Question 21: How will the operation of a BRT system conflict with the construction of the bridge?
Answer: BRT will not be in operation during construction of the bridge.
- Question 22: Will the CRT tunnel in Westchester contain only two tracks and have a 40-foot diameter?
Answer: The tunnel will have two tracks and have a 40- to 42-foot diameter.
- Question 23: Would it have been easier for a CRT tunnel under the river to connect at the western approach?
Answer: This was considered previously, and the tunnel would not have worked at the approaches.
- Question 24: For the trestle connection to the Hudson Line, would the rail descend at a 1.5 percent grade?
Answer: That is a possibility.
- Question 25: How far back onto the bridge can the rail separate from the highway decks?
Answer: The rail must be parallel to the highway across the main span.
- Question 26: Could it be possible for the CRT to diverge from the north side configuration and onto the Hudson Line?



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- Answer: This would be possible, but it is important to consider that the splitting tracks must be flat.
- Question 27: Is the Port Authority jurisdiction line currently a constraint in regards to a potential CRT causeway?
Answer: No. It is not.
- Question 28: What kind of noise level will exist for the trestle connection to the Hudson Line?
Answer: The noise analysis is not yet complete.
- Question 30: How do the designers get to a point where they can eliminate an option?
Answer: Currently, the options are eliminated based on engineering practice, such as security issues, constructability, safety, etc. Once those "impractical" options have been eliminated, an environmental analysis of the impacts associated with that option will be conducted.
- Question 31: What is the design speed for the highway, the BRT, and the CRT?
Answer: The highway and BRT have a design speed of 65 miles per hour. CRT has a design speed of 80 miles per hour.
- Question 32: For the tunnel connection to the Hudson Line, would the CRT tracks come up or go down to the Hudson Line tracks?
Answer: The rail would come from below and meet up with the Hudson Line.
- Question 33: Would 6 tracks be needed at the convergence of the CRT and the Hudson Line?
Answer: The current plan is to use 5 tracks, which would not affect the current rail boundary.
- Question 34: Will there be problems regarding keeping the river out of the tunnel?
Answer: Steps will be taken to prevent the river from entering the tunnel. For 100-year floods, the river rises about 10 feet. The Hudson Line floods rather regularly. Due to global warming, some projections show that the river is also expected to rise 4 to 8 feet in 150 years.
- Question 35: Would it be possible to raise the elevation of the Hudson Line tracks?
Answer: Metro-North is currently examining this.
- Question 36: Would creating a trench in the river be a viable option?
Answer: It is not our intent to alter the river as such. Our goal is to avoid, minimize, or mitigate any environmental impacts associated with the required work.
- Question 37: Is there a noise difference on the rail in regards to a straight track versus a curved track?
Answer: There can be, if the curve is tight.
- Question 38: Are there different scenarios between how the bridge comes in on the east and west sides?
Answer: The east and west approaches can be different, to an extent.
- Question 39: Has there been thought put into possibly rerouting or eliminating the River Road underpass?
Answer: The team hasn't looked at an option that eliminates River Road. It has been discussed at a few municipal meetings held recently. There are people on both sides of that issue. The required vertical clearance over River Road determines the elevation of the CRT in Rockland; for the dual level, the required vertical clearance for the CRT determines the new elevation of the highway. Rerouting or eliminating River Road would reduce the resultant elevation of the highway and its associated impacts. No decisions have been made regarding River Road.
- Question 40: On the Rockland side, where would the nearest CRT station from the river be located?
Answer: The closest CRT station would be at the Palisades Mall.
- Question 41: What is the difference between the D3-2 and S3-2 configurations?
Answer: The S3-2 consists of 3 single level structures from Tarrytown, It then transitions to a dual level structure on the Rockland side. D3-2 is a dual level structure across the entire river.
- Question 42: Could the recreational bicycle/pedestrian path be raised above the highway for better views?
Answer: Raising the bicycle/pedestrian path would create maintenance, access, and security issues, as well as limiting the sight distance of drivers on the highway. The path also could not be placed along the center of the highway.
- Question 43: What is the width of the bicycle/pedestrian path?
Answer: In the current drawings, the bicycle/pedestrian path is 15 feet wide; the minimum width according to our design criteria would be 10 feet wide. But the final width and configuration have yet to be determined.