

Monroe Street Bridge - Feasibility Matrix

Monroe Street Bridge - Feasibility Matrix	Option 1 Three Span Structure with Existing Abutments	Option 2 Three Span Structure with Tunnel
Technical Feasibility		
Bridge Structure	1. The proposed structure matches the existing bridge structure span arrangement.	1. Addition of a tunnel would require complete removal of the existing west side abutment and wingwalls and replacing them with a new integral or semi-integral abutment supported on piles with MSE walls in front. 2. Any extension on the overall length of the continuous bridge structure will require deeper beams/girders. This will result in minimum vertical clearance values that are less than the required 23ft over the CSX track. 3. Instead of the use of conventional consturction methods for the bridge, more expensive consturction methods (such as launching of beams) might have to be utilized.
Tunnel Design	N/A	1. A proposed tunnel in this area would need a conventional excavation approach with a locked-in arch section that is 10ft tall and approximately 15ft wide. 2. Given the state of current soil behind west abutment of existing bridge and the existing utility lines in this area, a proposed tunnel would have to have at least 8ft to 10ft of soil/roadway cover.
Economical Feasibility		
Right-of-Way Acquisition	No Right-of-Way acquisition is needed.	1. Acquisition of Right-of-Way, if possible, from WMATA/CSX 2. Acquisition of Right-of-Way, if possible, from private properties along east side of 8th Street Acquistion of Right-of-Way wil be very expensive if possible at all.
Consturction Cost	Estimated Consturction Cost: \$13M to \$16M	Additional construction work will be very costly due to the following: 1. Construction of a tunnel which will be very expensive 2. Demolition cost due to removal of existing west abutment and wingwalls 3. Additional construction cost of the Monroe Street Bridge due to the consturction of a new abutment and a potential extension to the length of the bridge 4. Construction cost of new retaining walls on south side of the bridge along the proposed bike trail 5. Additional cost of underpinning existing structures on south side of Monroe Street
Schedule Feasibility		
Potential Schedule Delay	1. Very limited construction work hours within the WMATA Right-of-Way	1. Obtaining Right-of-Way from private properties, if possible at all, will take a long time before the project can start and with the current condition of the existing bridge it could be critical. 2. Very limited construction work hours within the WMATA Right-of-Way 3. Additional coordination with CSX is needed which will further dalay the project. 4. Construction of the tunnel would add at least a year to the construction schedule.