



### **I-91 Viaduct Study Working Group Meeting #4**

**December 3, 2015, UMass Springfield Center, Springfield MA**

### **Summary**

**Purpose:** The fourth meeting of the I-91 Viaduct Study Working Group provided a summary of work completed to date as well as a presentation of preliminary alternatives for the I-91 viaduct.

**Handouts:** Copies of the preliminary alternatives maps

**Present:** Representatives of Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP) and MassDOT District 2; the project study team led by Milone & MacBroom (MMI); and the following members of the Working Group:

**Rana Al-Jammal**, Pioneer Valley Planning Commission

**Jim Czach**, City of West Springfield

**Dave Gaby**, Open Housing of Western MA

**Margaret Gaby**

**Douglas Mattoon**, City of West Springfield

**Anna Nadler**, MassDOT District 2

**Paul Nicolai**, Nicolai Law Group, P.C.

**Hardy Patel**, MassDOT Highway Design

**Gary M. Roux**, Pioneer Valley Planning Commission

**Paula Simmons**, MassDOT Rail & Transit Division

**Ben Wood**, Massachusetts Department of Public Health (DPH)

**Thomas Yarsley**

MassDOT Project Manager Ethan Britland opened the meeting and welcomed the participants. He reviewed the agenda for the meeting and noted that the alternatives that will be reviewed are all conceptual, and are meant to show possible impacts of each alternative. Mr. Britland led a round of introductions, and speculated that the low turnout for the meeting may be due to the long delay between meetings. He asked attendees to encourage other Working Group members they may know who are not present to attend the next meeting. The Study is now in the alternatives development phase, and participation from the Working Group will help create the best alternatives. Mr. Britland introduced Mark Arigoni, Principal-in-Charge of MMI.

Mr. Arigoni reviewed what was discussed at the previous Working Group meetings. The Study Team previously presented the limits of the new regional study area (which is extended to the state line), the potential opportunities resulting from the study, and the various issues and constraints of I-91 and its surrounding area. Ben Wood and Margaret Round, DPH, also presented data on public health.

Mr. Arigoni summarized the work completed to date. He and Mr. Britland explained that there was a delay in the delivery of the Future No-Build Conditions for the future year 2040 - Transportation Demand Model (TransCAD). Now that the model is available, the Study Team is quickly moving forward. Mr. Arigoni thanked everyone involved in the making of the TransCAD model.

Mr. Arigoni clarified that the alternatives presented in the meeting are only preliminary concepts. They are line drawings that highlight the areas of concern for each alternative and are at a very broad scale. He defined some of the recurring themes of the alternatives, as follows: retain existing (elevated viaduct); at-grade roadway; “depression,” or below-grade, with three sides and an open top; and “tunnel,” indicating a covered, four-sided roadway. He noted that larger versions of each alternative map are at the back of the room, and the group can review them more closely after the meeting.

Mr. Arigoni presented the “Retain Existing” option for the I-91 viaduct. This would involve no change in elevation or location to the viaduct. There would only be changes to alleviate problems with traffic south of the viaduct by the South End Bridge. The benefits include no further construction impacts other than the current rehabilitation of the deck of the viaduct. Mr. Arigoni summarized the impacts of this option, including the continual maintenance of the deck, which will have to be replaced again at the end of its useful life.

**Question: Paul Nicolai asked why the current replacement of the deck is marked as a benefit, when it will have to be replaced again in 20 to 30 years.** Mr. Arigoni said the deck replacement can be viewed as a positive or negative.

**Comment: Dave Gaby agreed with Mr. Nicolai, and said the fact that the deck will require more funding for maintenance again, in the future, should be a disadvantage.** Mr. Arigoni thanked them for their comments and clarified that Mr. Nicolai and Mr. Gaby see this as an impact, rather than a benefit. He agreed to revise the benefits and impacts table. Hardy Patel noted that this is really a no build alternative with maintenance.

Mr. Arigoni presented the “At-Grade Section” alternative. This would keep I-91 in its current alignment with an at-grade elevation. Mr. Arigoni stated that the removal of the elevated viaduct would be a visual improvement, but it is hard to find any further benefits. Boland Way and State Street would still have to intersect with I-91, and the highway would still limit pedestrian access. He noted that there is a levee system established by the U.S. Army Corps of Engineers on both sides of the Connecticut River, which would be impacted by a change in elevation to the viaduct. He added that the I-291/I-91 Interchange would have to be reconstructed, and there would also be right-of-way takings and disruptions to surrounding neighborhoods and parks due to modifications and construction by the South End Bridge. Further impacts of the “At-Grade Section” alternative include the loss of the I-91 North and South Parking Garages and a complex utility relocation of the extensive fiber that is currently running through the viaduct. These impacts are seen with many of the alternatives. He also showed photographs of example at-grade highway systems, including pedestrian bridges that would have to be added to this alternative.

**Question: Would the “At-Grade Section” of I-91 be the same level as East and West Columbus Avenues? Would State Street have to be elevated over the viaduct?** Mr. Arigoni said yes to both questions.

**Comment: Gary Roux said that this doesn't begin to address the complexity of reconstructing the I-291/I-91 Interchange and the large existing network of roads beneath the viaduct.** Mr. Arigoni agreed, and said it would be a significant undertaking.

**Question: Mr. Nicolai asked what designated park land would be affected.** Mr. Arigoni said there is a network of riverfront parks that would be affected by almost all the alternatives.

Mr. Arigoni presented the "Depressed Section" alternative. In this alternative, I-91 would remain in the same alignment, but the elevation would be below-grade with a retaining wall on both sides. Mr. Arigoni reviewed the benefits on this alternative. Some of the benefits include: the cross streets can remain at-grade and cross over I-91, there would no longer be a major concrete structure inhibiting riverfront access, and vehicles and related noise would be fairly hidden. He also outlined the potential impacts, which are similar to the "At-Grade" alternative, including the reconstruction of the I-291/I-91 Interchange.

**Question: Mr. Roux asked how this would improve congestion on the South End Bridge.** Mr. Arigoni said the viaduct would expand into three lanes where the exit ramp currently begins.

**Question: What do the dashed yellow rectangles indicate on the alternatives maps?** Mr. Arigoni said they represent an area where construction or infrastructure modification would be required.

**Comment: Thomas Yarsley stated that pedestrian bridges have been implemented in Springfield before and there were many issues as a result of them, such as pedestrians throwing objects into lanes of traffic. Also, if the pedestrian bridge is enclosed in a fence, that would contradict the "beautification" of removing the viaduct because fences are an eyesore.** Mr. Britland agreed and thanked him for his comment.

Mr. Arigoni showed photographs of examples of depressed highway systems, including the highway in front of the Gateway Arch in St. Louis. He noted that with a depressed section, street crossings above can be confined and shortened in length. The cross streets could also be connected to each other, providing space for green development. Mr. Arigoni showed an example of Cincinnati, OH, where there are plans to add green space over the highway.

**Question: Mr. Yarsley asked how long a covered, depressed section of highway would need to be to be designated as a tunnel, which would affect trucking of hazardous materials.** Mr. Arigoni said that is an excellent question, and that is something the team will have to look into.

Mr. Arigoni presented the "Depressed Section with Railroad Right-of-Way (ROW)" alternative. This plan would transfer the current railroad on the east side of the Connecticut River to the west side along Route 5, and keep I-91 in the current alignment as a depressed section. There are potential benefits such as the opening up of green development space along the Springfield side of the Connecticut River. However, there are significant impacts as well, such as the building of a new bridge and the reconstruction of the I-291/I-91 Interchange, and impacts to surrounding neighborhoods and parks, including property acquisitions. It is imperative to list drainage as a potential impact for the depressed section and tunnel section alternatives, as these will require drainage to be pumped.

**Comment: Mr. Yarsley believes that the railroad tracks would have to be moved for proper access to the waterfront.**

**Question: Mr. Gaby asked if the highway could be built over the railroad tracks.** Mr. Arigoni explained that the highway could be depressed and local roadways could be elevated at different levels. The group discussed the section of Memorial Bridge at West Columbus Avenue. Mr. Gaby described Gardner's Esplanade, a historic plan for a riverfront roadway and park.

Mr. Arigoni presented the "Tunnel Section" alternative. In this plan, I-91 would remain in its current alignment, but the elevation would be below-grade and covered on all four sides. He explained the benefits of this plan, which include: the entire corridor can be narrowed, East and West Columbus Avenues can be placed on top of I-91, there would be opportunity for development space, and the visual element and noise of vehicles would be hidden. Mr. Arigoni noted that there are significant impacts with this alternative, such as the need to develop new stormwater and groundwater control, mitigation methods to control air quality, and possible hazardous conditions with trucks. He added that the "Tunnel Section" alternative would work better if the railroad is on the opposite side of the river, such as the previously discussed alternative. He showed examples of tunneled highway systems.

**Comment: Mr. Gaby said the benefits of this alternative should include the potential revenue from development above the tunnel.** Mr. Arigoni agreed.

**Comment: Mr. Yarsley stated that impacts to emergency and medical services should be added, and that there will be significant access issues. He also asked about the rules for trucking hazardous materials and other vehicles carrying combustible materials in tunnels, and if these vehicles would have to exit I-91.** Mr. Britland thanked him for his comment, and said the team will have to research the laws regarding this issue.

Van Kacoyannakis, MMI, said that impacts to Homeland Security should also be added.

Mr. Arigoni presented the "Elevated Section" alternative. This would keep I-91 in its current alignment, and would raise the elevation of the roadway even higher. Mr. Arigoni reviewed the benefits and impacts of this alternative. Some of the benefits include: more open space and light under the elevated section, the construction methods are modern and guarantee a long lifespan and reduced maintenance costs, and there would not be a need to alter the current layout of the City's streets. Mr. Arigoni stated that the space below the elevated structure could be used for development. Mr. Britland added that the Route 79/Braga Bridge Improvements Project in Fall River uses a similar approach. The abutments that hold the structure are able to be spaced far apart due to new design methods, allowing better access and open space below. Mr. Arigoni reviewed the impacts of this alternative, including the construction duration to build the structure.

**Question: Mr. Yarsley asked how far south on I-91 the elevated structure would start.** Mr. Arigoni said the structure would be located where the viaduct is currently, but this can be adjusted.

**Question: Mr. Patel asked if there would be on- and off-ramps to downtown, since they would have to be longer than they are now.** Mr. Arigoni said that ramps probably could not be installed at such a high elevation, and drivers would exit and enter I-91 before and after the elevated structure.

**Comment: Mr. Nicolai suggested combining this alternative with the reconstruction of the railroad on the west side of the river as was shown in the "Depressed Section with Railroad ROW" alternative.**

Mr. Arigoni thanked him for his comment and stated that all of the alternatives are flexible and parts of each alternative can be interchanged.

Mr. Arigoni presented the “Route 5 Realignment” alternative. This would keep I-91 in its current alignment with a “depressed section,” and shift Route 5 onto a new bridge south of the South End Bridge. The new bridge would carry vehicles from Longmeadow over I-91 and the Connecticut River into Agawam. Mr. Arigoni reviewed the benefits of this plan, such as providing an alternative to the current lane drop on I-91 in the southern corridor, and a reduction in congestion and weaving of traffic by the South End Bridge. Mr. Arigoni outlined the potential impacts of this alternative, including direct impacts to designated park land and neighborhoods. Mr. Arigoni showed a photograph of the Zakim Bridge in Boston, and said the new Route 5 bridge could also be a signature bridge.

**Comment: Mr. Czach and Mr. Mattoon expressed interest in the “Route 5 Realignment” alternative. They explained that they see a lot of traffic congestion on the South End Bridge and at the interchange of Route 5 and Route 57, which slows down traffic entering the City. Mr. Czach asked the Study Team if they know how many vehicles would be pulled off of I-91 with a new Route 5 bridge. Mr. Kacoyannakis estimated that about 25,000 vehicles would be reduced per day on I-91.**

**Comment: Mr. Roux suggested sharing this alternative with the Town of Longmeadow for comments. He agreed that this alternative would improve the existing exit and relieve some major issues.**

Mr. Britland stated that he was surprised Mr. Czach and Mr. Mattoon were not concerned by the impacts this alternative would have on parks and residences due to the new bridge. He added that the National Environmental Policy Act (NEPA) may not allow a new bridge to be built in the proposed location unless it is proven there are no other alternatives.

Mr. Arigoni presented the “I-91 on West Side” alternative. This would move I-91 to the west side of the Connecticut River in West Springfield along Route 5, and construct a new bridge south of the South End Bridge and a new bridge between the North End Bridge and the Memorial Bridge. A business access road would be constructed on the east side of the Connecticut River where I-91 is currently located. Benefits of this alternative include: opportunities for a green development space along the east side of the Connecticut River, and the relief of traffic congestion in the Longmeadow Curve of I-91. He outlined the impacts of this alternative, including the major construction of an I-91 tunnel under the Route 5 commercial area and the disruptions to the surrounding neighborhood.

**Comment: Mr. Yarsley stated that this alternative is similar to his own idea, except he would shift the current railroad alignment to connect the West Springfield side of the Memorial Bridge with the current I-91/I-291 Interchange. Mr. Arigoni thanked him for his comments and offered to do a line drawing showing this modification.**

**Comment: Mr. Nicolai stated that residents may not like this alternative because of the significant right-of-way takings and property acquisitions, and it may remind them of the demolition of the Barney Mansion. Mr. Nicolai clarified that the Barney Mansion was demolished when I-91 was first constructed.**

Mr. Arigoni presented the “North & Southbound Split” alternative. This would keep I-91 North in its current alignment and move I-91 South across the Connecticut River, on the west side in West Springfield. I-91 could be constructed as a depressed or tunnel system and a new bridge would be constructed south of the South End Bridge to reconnect I-91 South and North. Mr. Arigoni reviewed the benefits of this alternative, including more room available on the west side of the river than the “I-91 on

West Side” alternative. There would also be a narrower I-91 corridor on the east side of the river, and the opportunity to add more lanes at the Longmeadow Curve to relieve congestion.

**Question: How would traffic on I-91 South access Downtown Springfield?** Mr. Arigoni said that drivers would have to make a decision to enter Downtown Springfield north of the city.

Mr. Arigoni presented the “Railroad ROW” alternative. This would shift the CSX railroad to the west side of the Connecticut River, and build a depressed I-91 system where the CSX railroad is currently located. A new railroad bridge would be constructed south of the South End Bridge. A business access road would be located on the east side of I-91 through the City of Springfield. Benefits include: the opportunity for green development along the east side of the Connecticut River, and the construction could be implemented in phases. Mr. Arigoni showed an example of green space in a former railroad ROW.

**Comment: Mr. Nicolai estimated that this would be expensive to implement, and the “Elevated Section” alternative would be the most cost-effective option.** Mr. Gaby added that splitting up I-91 would result in a “ring road” effect.

Mr. Arigoni provided examples of some short- and medium-term recommendations that the team will be considering in addition to the long-term alternatives. He showed the revised schedule for the study, and noted the study is currently wrapping up Task 2. The first public meeting will be held on December 15. The presentation will review progress on the study’s first two tasks. He informed the Working Group that the next Working Group meeting will be held in January 2016, and the alternatives reviewed today that have the most merit will be discussed in detail at that meeting. Mr. Arigoni reviewed the next steps of the study and showed an example of a long-term alternative.

**Comment: Mr. Patel suggested keeping the rail line at the same elevation, and placing I-91 above the rail line.** Mr. Arigoni said the problem with that is figuring out how to depress the highway and rail line together, since the drop in grade would have to be a couple miles long. He added that this would open space, but would just result in moving the impediment closer to the river.

Mr. Britland asked the Working Group to send in comments regarding the alternatives as soon as possible before January 2016. He asked the group to disregard the cost of each long-term alternative for now, as all are going to be expensive, and the costs will be discussed later in the study.

Mr. Arigoni stated that the presentation will be posted on the study website. He asked the Working Group to encourage other members to attend the next Working Group meeting, and asked if anyone had any further comments. Mr. Yarsley said that the study team has been doing a great job and thanked them for their work.

Mr. Arigoni thanked participants for attending.