

Public Comment on MassDOT's I-90 Allston Multimodal Project National Environmental Policy Act Review Scoping Report

Mary Connaughton and Andrew Mikula

Scoping Report Background

The I-90 Allston Multimodal Project aims to address a failing viaduct and reroute the Massachusetts Turnpike over a former rail yard to facilitate safer, more efficient travel and to make way for a new urban neighborhood. The federal permitting process for the Project began on October 18, 2019 after the Federal Highway Administration (FHWA) released a Notice of Intent to assess the Project's environmental impacts.¹ FHWA will prepare an Environmental Impact Statement (EIS), the most extensive level of environmental review, to assess the project.

On November 6, 2019, the Massachusetts Department of Transportation (MassDOT), the project's sponsor, released its National Environmental Policy Act (NEPA) Review Scoping Report for the project, which identifies the project's purpose and need, design alternatives, environmental impacts and other relevant information.² Public comments on the Scoping Report are due to MassDOT and/or the FHWA, the lead federal agency for the project, by December 12, 2019. FHWA is expected to release the EIS and Record of Decision in October 2021.

The FHWA will consider the Scoping Report, along with summarized public comments, as the agency prepares the EIS in accordance with the NEPA during the next phase of the project. The Council on Environmental Quality regulations requires the EIS to "rigorously explore and objectively evaluate all reasonable alternatives" and to "devote substantial treatment to each alternative considered so that reviewers may evaluate the comparative merits."³

As identified in the Scoping Report, the EIS will analyze project alternatives while considering:

- Visual impacts, including a shadow study
- Economic impacts
- Impacts on historic and archeological resources
- Impacts on pedestrians and bicyclists

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- Roadway impacts and public safety
- Rail impacts
- Air quality and greenhouse emissions
- Noise and vibration impacts
- Wetlands, water, and wildlife impacts
- Floodplain impacts
- Social impacts, including social groups harmed by the project
- Construction impacts and costs
- Section 4(f) evaluation (described below)

The Scoping report states that the “Project need was initially driven by the structural deficiency of the I-90 viaduct.”⁴ However, the project grew to include other multimodal transportation deficiencies in the area, including the lack of neighborhood connection to the Charles River Reservation.

The Scoping Report describes the screening process for preliminary design alternatives and determines whether a design meets the purpose and need of the project. If an alternative meets the project need and purpose, MassDOT may recommend the alternative for further evaluation in the next phase of review.

This report represents Pioneer Institute’s public comment on the Scoping Report, primarily focusing on the “throat” area of the project. Our response also provides additional mitigation strategies for those adversely impacted during the construction period.

Summary

As put forth in the Scoping Report, MassDOT selected the Soldiers Field Road (SFR) Hybrid Option for further review, while dismissing the at-grade option from further evaluation, concluding that the latter does not meet the project’s purpose and need and would have permanent impact on natural resources.⁵ Along with other design elements, the SFR Hybrid option includes the construction of a new viaduct to elevate Soldiers Field Road and partially depress I-90 in a narrow section of the project referred to as the “throat” area. MassDOT also selected the “no build” option for further review as a matter of NEPA process. We recommend that MassDOT revise the Scoping Report and that a modified at-grade option for the throat area be submitted to FHWA for further review.

As explained below, the modification we propose is for the Paul Dudley White bicycle and pedestrian path (PDW Path)

to be structured as a bridge over the river in the throat area away from the riverbank to provide for parkland with neighborhood access, similar to what was previously proposed by A Better City. The at-grade option as presented in the Scoping Report includes a cantilever bridge over the riverbank. With such modification, the at-grade option, hereafter referred to as the modified at-grade option, should be reconsidered as meeting the purpose and need of the project and be eligible for more detailed analysis.

The public interest, including in an accessible and enjoyable Charles River Reservation, may be best served by the modified at-grade option, which we therefore urge to be analyzed fully. The current construction plan relocates SFR and the PDW Path over the river for most of the Project’s eight to ten-year projected duration and would require a substantial permitting process. One could argue that such a duration could reasonably be considered permanent and that maintaining the PDW Path over the river is a matter of common sense.

An in-depth analysis of the modified at-grade option and the SFR Hybrid Option would be necessary under Section 4(f) of the USDOT Act of 1966 (further described below) to ensure that the design plan ultimately chosen would cause the least harm to properties defined by the act.

The Scoping Report acknowledges that the SFR Hybrid Option “will necessarily require more time than other Throat options to move major utilities, construct the temporary trestle, and then sequentially construct the proposed railroad, interstate, and parkway infrastructure.”⁶ This statement is a clear validation that analysis of another throat option is warranted.

The screening process in the Scoping Report does not consider construction costs, life-cycle costs, asset lifespans, or project construction durations, all of which will impact the overall environment in some fashion and will have significant daily impact on commuters from the west and other Turnpike users. Arguably, these users will be the most harmed during project construction and may wind up paying a large portion of its costs.

Additionally, the history of the Charles River includes numerous man-made alterations that have achieved favorable results. Much of its “natural beauty” was the result of human intervention, as discussed later in this paper.

Even if MassDOT opts not to consider the modified at-grade option as meeting the project’s purpose and need,

FHWA may consider the alternative in preparing the EIS if it deems the alternative reasonable. According to the American Association of State Highway and Transportation Officials, “reasonable alternatives include those that are practical

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or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.”⁷

Project Background

Hardly 10 years after the completion of the Big Dig, MassDOT is in the design phase of a new megaproject, the I-90 Allston Multimodal Project. The project’s intent is to address a failing viaduct and reroute the Turnpike over Beacon Park Yard, a former rail yard, to facilitate safer, more efficient travel and to provide multimodal access to a new urban neighborhood.⁸ The project area covers nearly 150 acres, bounded by the Framingham/Worcester Commuter Rail Line (Worcester Line), Cambridge Street, and the Charles River (see Figure 1).⁹

The project’s initial purpose was to remove I-90’s structurally deficient viaduct along the stretch known as the “throat” just east of Boston University’s Nickerson Field and to straighten I-90 west of the throat area through Beacon Park Yard, a Harvard-owned former rail yard.¹⁰ Like the Big Dig, the project has grown to include much more than its initial objectives. Beacon Park Yard is one of Boston’s last great tracts of open land and will ultimately host development of up to 3.8 million square feet of new housing, retail, and office space. West Station, a new commuter rail station, will provide improved transit service for Worcester Line users as well as Allston-Brighton residents.¹¹

The project also includes providing pedestrian and bicycle access to the Charles River Reservation from the Allston-Brighton, Brookline, and Boston University neighborhoods, adding connectivity and improvements to the PDW Path along the Charles River, and creating new parkland.¹² However, the strip of land supporting the existing viaduct, known as the “throat,” approximately 210 feet in width, is too narrow to support eight lanes of I-90, two commuter rail tracks, four lanes on SFR, two bicycle lanes and a dedicated pedestrian lane for the PDW path, and parkland while also accommodating work zones during construction.¹³

Since 2014, MassDOT has explored design alternatives and held monthly meetings with a wide variety of stakeholders, from local residents to pedestrian and bicycle advocates to environmentalists to business owners. In January 2019, MassDOT announced its preferred plan, known as the SFR Hybrid Option, which would elevate SFR, partially depress I-90, and regrade the commuter rail to accommodate modern switching equipment for expanded use.¹⁴ This equipment would allow

trains to park at a proposed mid-day layover facility at West Station and, eventually, provide transit access for commuters to cross the Charles River and reach Kendall Square.

The January 2019 memo stated that the preferred plan would “require a long and complicated construction period that will disrupt travelers, whether they are in cars or trucks, on commuter rail, or walking or cycling on the Paul Dudley White Path.”¹⁵ However, MassDOT cited permitting issues and “unacceptable impacts on the water, parkland, and historic resources of the Charles River Basin” as reasons to reject the option to keep both SFR and I-90 at-grade.¹⁶ Still, the traffic and mobility impacts of MassDOT’s proposal are unacceptable at a time when transportation infrastructure is heavily strained in the Boston region, which was recently found to have the worst congestion in the country.¹⁷ The Scoping Report states that MassDOT’s preferred SFR Hybrid Option would hinder service on the Worcester Line during the eight-to-ten-year project, as “one of the two tracks would

require closure for up to half the duration of construction.”¹⁸ Such rail disruption to commuters from the economic engine of MetroWest and beyond would cause significant harm, especially since the Turnpike will be reduced from eight to six lanes with work zone slowdowns during construction.

Failing to maintain adequate transit service for the I-90 corridor will exacerbate the long-standing inequity faced by these residents, who pay tolls while I-93 corridor commuters and most others do not.

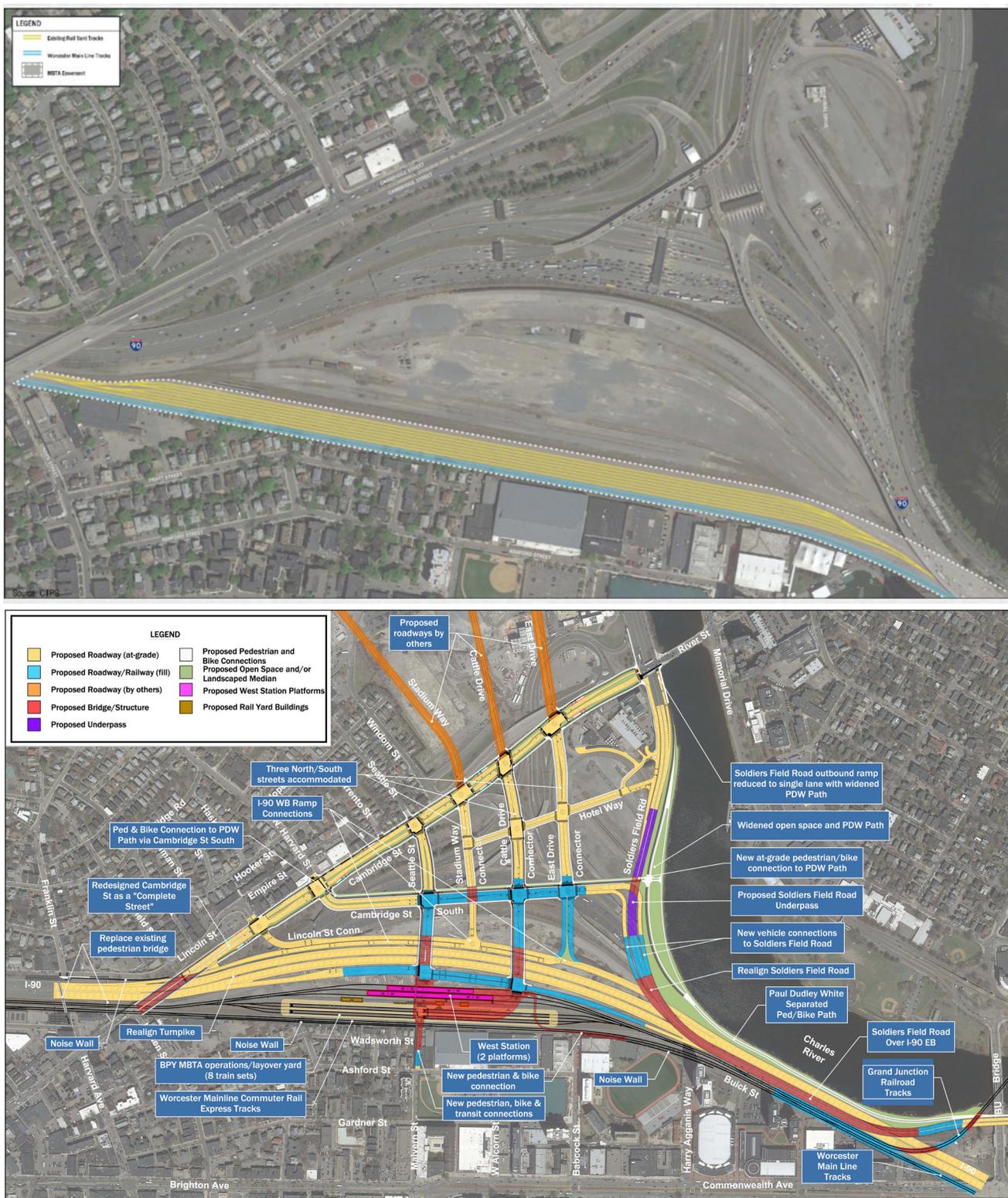
Additionally, the SFR Hybrid Option includes challenging geometry with shifts in the grade and curvature of the roadway relatively close to off-ramps along the Turnpike and SFR in the throat area. This regrading warrants further analysis of the potential safety risks and traffic flow slow-downs in comparison to an at-grade option.

Reconsidering a Modified At-Grade Option for the Throat Area

The Scoping Report notes that the project need was “initially driven by the structural deficiency of the I-90 viaduct,” but has grown to include many other transportation deficiencies.¹⁹ Taken together, the other project elements are major determinants of the overall design in the throat area. These elements include deficiencies in the width of the PDW Path, neighborhood access to the Charles River Reservation, multimodal access to Harvard-owned land, and the capacity of interchange ramps. Project needs also aim to address increased transit demand, substandard highway layouts, and high crash rates on I-90, SFR, and Cambridge Street.

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Figure 1: The Allston Multimodal Project area before (top) and after (bottom) the proposed upgrades under the SFR Hybrid Option²⁰



Major considerations for analyzing project alternatives — construction costs, life-cycle costs, asset lifespan, and project duration times — were not presented in the Scoping Report. Alternatives were screened by MassDOT based on what was defined as the project purpose and need, developed after input from numerous Project Task Force meetings and other public events. However, evaluating the alternatives without this vital information makes for an inadequate analysis. The modified at-grade option with a moderate intrusion into the river using a bridge to accommodate the PDW Path may result in lower construction costs, a longer infrastructure lifespan, lower life-cycle costs, and shorter construction time while minimizing harm to the environment, including the disruption faced by commuters as well as Allston-Brighton, Brookline, Cambridge, and Newton residents. All the same, MassDOT suggested the at-grade option be dismissed without further analysis.

The purpose and need of the project include providing more direct north-south pedestrian and bicycle neighborhood access to the Charles River Reservation, which is operated by the state Department of Conservation and Recreation. The Scoping Report notes that there was much public support for this connection as a northward extension of Harry Agganis Way.²¹ The schematics in the report do not include this connection for either the at-grade option (as presented) nor for the SFR Hybrid Option. Presumably, engineers designing such a connection would have more flexibility under the at-grade option than the SFR Hybrid Option because of its elevated structure.

In considering whether to dismiss an alternative, the Scoping Report notes that the alternatives to be considered must fully meet the purpose and need as defined in the report. MassDOT concluded that the at-grade option, featuring a 17-foot wide cantilever structure over the Charles River for the PDW Path, fails to meet the project's need because the structure would preclude non-motorized connections to the Charles River Reservation from Allston-Brighton and Boston University. Placing the PDW Path on a permanent bridge over the river should accommodate such connections. Mitigation for this intrusion could consist of:

- Soil treatment, re-grading, and beautification on the river by SFR and Harvard Business School, near the site most impacted by the new bike and pedestrian path's construction
- Sustainability improvements to stormwater and sewage overflow management infrastructure
- Investments in green infrastructure to deter the contamination of nearby beaches
- Use of dirt from the project site to cap nearby landfills and other waste disposal areas

- Mandates for open space creation and sustainable drainage systems at Harvard's development sites
- Riverbank improvements elsewhere along the Charles River

MassDOT should undertake a detailed analysis to compare the SFR Hybrid option to the modified at-grade option. Such factors as construction logistics and feasibility, environmental impacts, traffic operations, rail operations, construction costs and scheduling, and long-term infrastructure costs should all require consideration. Additionally, the reasonable feasibility of creating neighborhood connections to the Charles River Reservation should be fully analyzed under both the SFR Hybrid and the modified at-grade options.

The inclusion of these considerations may expose additional shortcomings of the SFR Hybrid option. For example, the new SFR viaduct may have a similar lifespan as the current one and the public may face a similar issue when today's youth approach retirement.

MassDOT is right to include plans for a pedestrian and bike path with access to the Charles River and new parkland. This should be an essential element of whatever plan is finally approved, but the design of the paths should be made with construction logistics in mind so as not to cause undue harm to western commuters and others. While "excessive permanent impacts to natural resources" are legitimate concerns, this screening criteria should consider the long history of man-made alterations to the Charles River, described later in this paper.²²

Impact on Commuters and the Economy

The Scoping Report indicates that foreseeable economic impacts on the regional and/or local economy must be considered.²³ These include impact on development, taxes, accessibility and retail sales. There are several developments in the works along the Worcester Line that may be negatively impacted during construction. In Framingham alone, there are five new residential developments underway within reasonable proximity to the train station.²⁴ Delays resulting from single-track operation and work zone slowdowns in the project area could affect the success of these and other projects in the corridor. Businesses and organizations like the soon-to-be Worcester Red Sox will rely on train service to and from Boston. A shorter construction duration is critical for the region's economy. The extent of state tax revenues derived from MetroWest and Central Massachusetts workers employed in Boston must also be considered because their ability to get to and from work will be heavily constrained. The Scoping Report also notes that any disproportionate impact that each design alternative may have on social groups, including those reliant on transit, should be

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considered.²⁵

MassDOT should select a construction plan that has the shortest reasonable project duration with the least adverse impact on commuters. Workers commuting to Boston from the west and those traveling west from Boston are in for a decade or more of misery with lane and track reductions and work zone slow-downs. As commuters shift from I-90 to the city's secondary streets to avoid congestion, Allston-Brighton, Brookline, Cambridge, and Newton will also be hotspots for even more traffic and tailpipe emissions. While any construction of this magnitude would significantly disrupt commuters, the plan as proposed would create devastating, widespread, long-term consequences for Boston-area commuters,

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particularly those coming from the west. There are currently about 146,000 weekday trips daily on the Turnpike in the throat area and 18,600 daily Worcester Line trips.²⁶

The impending I-90 congestion should incentivize automobile commuters to switch to public transit. Still, the extent of increased train service during construction is uncertain. It lacks any real solution for accommodating peak-hour travel demand in the Boston area and would negate recent commuter rail service quality improvements.²⁷ The Worcester Line, which has recently increased its ridership faster than any other

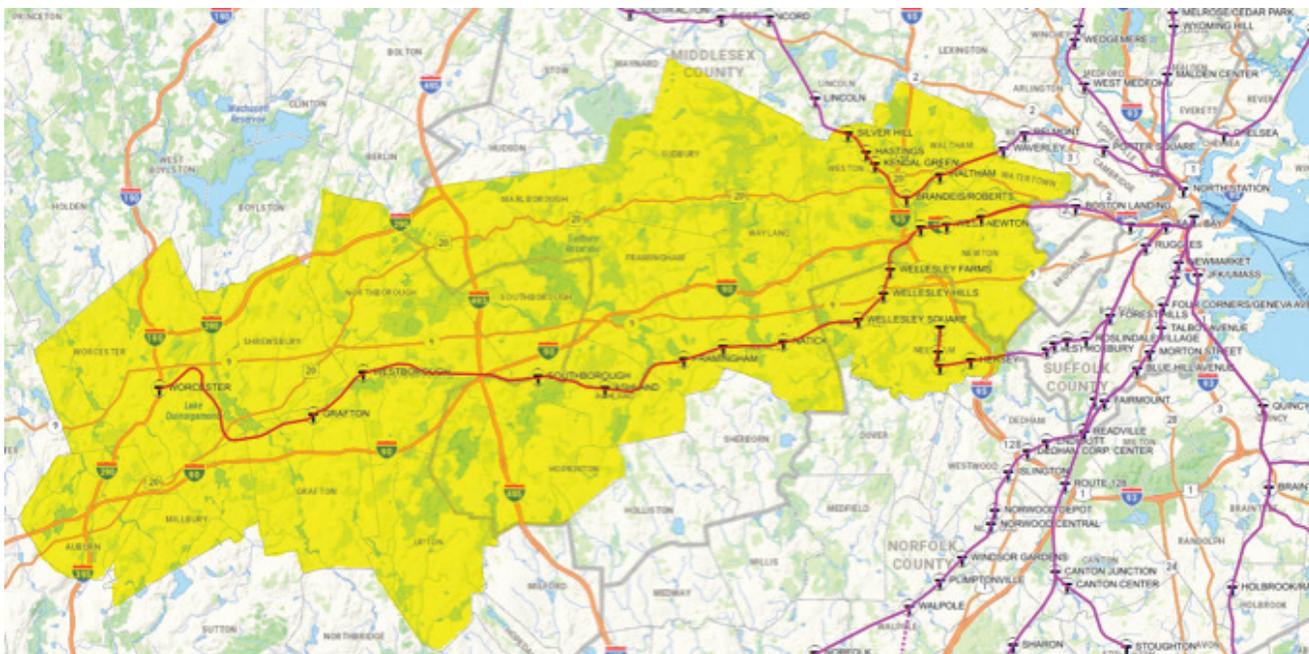
line in the commuter rail system, is the only other reasonable option for commuters.²⁸ However, the line is slated to operate on a single track in the project area for up to half of the construction period.²⁹ MassDOT should limit the potential for commuter disruptions by committing to two-track service for the project's duration, curtailing plans for a layover facility that would add train traffic on the line, and providing service at more frequent intervals throughout the day.

The Boston-Worcester corridor, broadly characterized by a series of sub-regional hubs of industry and commuter towns, has had a major role in the state's economy and transportation networks for centuries, especially since the expansion of Boston's suburbs in the mid-1900s. Anchored by the formerly industrial cities of Worcester and Framingham, the region also contains some of the state's fastest-growing suburbs in Hopkinton and Sudbury.³⁰ For east-west transportation, the area primarily relies on I-90, with Routes 9 and 20 prioritizing access to sub-regional businesses over mobility in places like the Natick Mall.

The region thus depends largely on I-90 to move its large base of Boston commuters to and from work every day, in addition to the MBTA's commuter rail network. Below is a map of municipalities with significant transportation infrastructure (including I-90, Route 9, Route 20, MBTA Commuter Rail, and Route 135) connecting Boston and Worcester. Pioneer will use this "study area" as a basis for designing targeted mitigations for the project (see Figure 2).

Among the state's top 25 employers, 24 percent are based in

Figure 2: Map of the I-90 corridor study area*



* The base map for this image originates from MassGIS's OLIVER webtool

this region.³¹ The project timeline is long enough that it may deter builders from pursuing business and residential development in the study area for the project's duration, potentially harming property values by restricting access to downtown Boston. Additionally, these employers routinely use I-90 to travel to and from Logan International Airport. Choosing a design that minimizes such risks is therefore essential to protect the region's and state's economy.

The end benefit for I-90 corridor commuters should be substantial after a decade or more of disruption and should include a timeline from MassDOT for transit access to Cambridge from West Station. The newly constructed Turnpike should remain at eight lanes in the project area, especially with the increased activity resulting from Harvard University's development, which is projected to include 12,300 new jobs and 3,000 new housing units by 2040.³² Commuters should also be made aware of other significant projects that loom, particularly plans for the I-90/I-95 interchange area.

The Turnpike's impending traffic woes will likely divert rush hour commuters onto secondary roads. However, according to the Metropolitan Area Planning Council (MAPC), daily vehicle trips on Route 9 are already operating at or near build-out levels east of Framingham.³³ Route 9 also regularly carries over twice its free-flow traffic capacity at rush hour between Newton Upper Falls and Brookline Village.³⁴ Other alternatives (like Route 20) do not have the capacity to accommodate a large influx of rush hour vehicles. The long-term solution involves transit investments for the region that improve the utility of the commuter rail and regional bus networks.

However, the state should pay for such investments in a way that acknowledges the long-standing burden placed on western commuters. In the 1950s, the Massachusetts Turnpike Authority sold some \$239 million in bonds to finance its debts, to be repaid with toll revenue.³⁵ The Authority's unfulfilled promise to eliminate tolls after repaying the bonds is the subject of ongoing controversy and, when considering tolls and gas taxes, I-90 travel from Framingham to Boston still costs commuters about 10 times more per mile than travel on I-93.³⁶ While a project finance plan is not yet public, MassDOT is considering toll revenues as a funding source for a portion of the project.³⁷ Ironically, those most adversely impacted by the project may also be paying for a large portion of it. The finance plan should be developed in a transparent manner with toll payer representation on a finance plan task force that should include other public participants. The Commonwealth should aggressively pursue federal funding to ease the inequity.

To make matters worse for western commuters, another major construction project looms. The Turnpike viaduct over I-95, built eight years before the Allston viaduct, is also

structurally deficient and could be a safety risk. It would seem prudent that the bridge be addressed now to ensure the two projects are not under construction concurrently.

The Ever-Changing Charles River and Section 4(f) of USDOT Act of 1966

At odds with an at-grade design is the potential that such a plan would permanently impact the Charles River, either with a bridge or fill. According to the Scoping Report, Section 4(f) of the Transportation Act of 1966 was enacted to ensure that the U.S. Secretary of Transportation develops "transportation plans and programs that include measures to maintain or enhance the *natural beauty* of lands crossed by transportation activities or facilities."³⁸ Section 4(f) of the US Department of Transportation Act of 1966 prohibits the FHWA from "using land from publicly owned parks, recreation areas (including recreational trails), wildlife and water fowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use."³⁹ A Section 4(f) review would be undertaken for both the SFR Hybrid Option and modified at-grade options because both affect a historic park and the Charles River Reservation.

MassDOT has been hesitant to use the river as a resource on a permanent basis to create more space in the throat area. Even so, recent plans under the SFR Hybrid Option include installing a bridge over the river to reroute SFR and the PDW Path during construction that likely would exist for 10 years.⁴⁰ While the plan is to remove this bridge after project completion, the river's history reveals that man-made alterations have achieved favorable results. Permanently keeping the PDW Path as a bridge in the river would allow space for other project elements to be constructed at-grade with improved parkland along the river in the throat area.

Over the past 200 years, dam construction, fill-ins, and other human activity have heavily influenced the Charles River's contour, width, and flow patterns. Examples of this human activity include:

- Topographical alterations (notably the filling of Back Bay) to facilitate residential development⁴¹
- Cambridge side fill-ins in 1897, involving drainage, planting, regrading, and sand-pouring work
- Construction of the Charles River Dam in 1908, ending tides on the Charles beyond the West End. The Dam was reconstructed further east in 1978 to calm the river waters after a hurricane⁴²
- Storrow Drive's construction in the 1950s, which required additional filling of the Charles

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There are also several examples of local river manipulation for the purpose of creating public spaces:

- Construction of The Fens in 1878, which required regrading, planting, and engineering work
- Filling and drainage of the Charles in the late 1800s, which made Cambridge's beaches much more popular in the early 1900s
- Construction of Storrow Lagoon in 1935, which created an artificially calm surface for boaters and ice skaters by altering the slopes on either side

During the Big Dig, efforts to facilitate mobility improvements on I-93 also impacted the river. Residents and professionals alike censured plans to construct elevated ramp infrastructure near Charlestown, which seemingly negated

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the aesthetic effect of burying the Central Artery (the project's original purpose).⁴³ The river appeared to be protected under section 4(f) of the USDOT Act of 1966, rendering it difficult to solicit funding for building roads that would harm it. Environmental groups eventually agreed not to further litigate the matter as long as the associated adverse impacts were fully mitigated. Such mitigation

efforts created Northpoint Park in Cambridge and Paul Revere Park in Charlestown. Big Dig mitigation also resulted in improved environmental conditions at Spectacle Island and Rumney Marsh.⁴⁴ Eventually, federal officials ruled that 4(f) didn't apply to the land underneath the new bridge.⁴⁵

The Charles has a long history of manipulation, fill, and diversion to suit the needs of human settlement and transportation. Rebuilding the PDW Path over the Charles River with a permanent bridge could be the next step in this history, contributing to the use of the river as a public space. This alternative design could also result in reduced shadows over DCR parkland that may result from an elevated SFR viaduct. Additionally, a bridge over the Charles River may be more appealing to bicyclists and pedestrians because they would be further removed from noise and vibrations generated by the Turnpike and SFR. The bridge can be designed in such a manner that it becomes a marveled-at icon in the Boston landscape for decades to come.

Accordingly, the modified at-grade option should be considered as it may minimize construction time, decrease long-term infrastructure costs, allow SFR to remain at-grade, decrease construction time, and achieve long-term favorable aesthetic results.

Transportation impact mitigation during construction

In addition to ameliorating environmental concerns, Project mitigation efforts may help build a more sustainable future in energy usage and vehicle emissions on the MBTA commuter rail, encourage additional capacity across transportation modes, and better engage commuters in a public process, as follows:

- Maintain two-track Worcester Line service throughout the construction period
- Begin a pilot project to electrify key areas of the Worcester Line to improve commutes and increase ridership
- Expand service on the Worcester Line with more frequent service and higher capacity than presently exists⁴⁶
- Curtail plans for the West Station layover facility to avoid additional traffic on the Worcester Line in the Boston area
- Build platforms for completely level boarding at more commuter rail stations, beginning with Back Bay Station, to reduce dwell time
- Expedite certain proposed design upgrades for Newton's commuter rail stops to improve access and facilitate faster peak-hour boarding⁴⁷
- Provide transparency on the timing of other major construction projects in the I-90 corridor, including the I-90/I-95 interchange
- Facilitate partnerships among the MBTA, communities, and private firms to increase parking capacity during project construction near the Green Line, Commuter Rail, and bus stations in the I-90 corridor
- Provide transparency on the plan to provide Kendall Square transit access from West Station to benefit commuters from the west
- Where practical, permanently expand station parking lots or consider higher-capacity garages
- Provide MBTA bus service for the I-90 corridor from Park and Ride lots to Boston during construction
- Conduct a feasibility study for improving the Newton Corner exit interchange, addressing design deficiencies of exit ramps and preventing traffic spillover onto I-90
- Encourage pedestrian and bicycle infrastructure improvements near existing Worcester Line and Green Line stations
- Increase MBTA coordination with the MetroWest Regional Transit Authority and the Worcester Regional Transit Authority, including expanded service during construction

- Install electronic speed limit signs that adjust to traffic conditions, maximizing road efficiency⁴⁸
- Create numerous opportunities for western commuters to provide feedback to MassDOT on these mitigation efforts, including public meetings, special web forums, and outreach efforts
- Ensure that residents from MetroWest and Central Massachusetts are represented on the MassDOT board throughout the construction period
- Establish the finance plan for the project in an open and transparent manner and form a finance plan task force with toll payer and other public representation
- Seek extensive federal funding for the project
- Continue to work with private organizations to help fund the project

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Additionally, in a letter to MassDOT dated July 30, 2019, Massachusetts State Senate President Karen Spilka raised a series of thoughtful questions regarding the project's impact on the public, its cost, and mitigation plans. Addressing those questions as soon as possible would be in the public interest.⁴⁹

Conclusion

The modified at-grade option, which includes a permanent PDW Path as a bridge in the throat area of the project over the Charles River away from the riverbank, may minimize disruption to commuters, give park users a far more pleasant environment, and allow for both new riverfront open space and an all at-grade transportation corridor. Visually, such a bridge would be an improvement over an elevated roadway structure and could avoid the potential shadows such a structure may create.

The economies of MetroWest and parts of Central Massachusetts may be significantly impacted during construction of the project. Tens of thousands of workers from these regions are dependent on transportation systems in the throat area. Limited access to Boston could adversely affect current and future development in the impacted areas. It is therefore critical that the SFR Hybrid Option and the modified at-grade option be thoroughly analyzed side-by-side considering not only purpose and need, but the many other considerations included in this paper.

The financing for the project has yet to be disclosed.

The finance plan should be prepared in a transparent manner with significant public input to ensure that recent history is not repeated. The Big Dig finance plan largely burdened toll payers to fund a large portion of the project and further advanced the inequity for western commuters. Given the enormity of the effort, the toll paying public should be represented on MassDOT's board for the project's duration.

The "natural beauty" of the Charles is not so natural. It's a product of many carefully engineered and designed initiatives to allow the public to enjoy their experience of the river. Building a pedestrian and bike path over the Charles would continue this legacy, should the modified at-grade option be chosen.

The purpose and need criteria for this project should reflect the interests of commuters and neighborhoods that are significantly impacted. We ask MassDOT and the FHWA to reconsider a modified at-grade option and provide an analysis of construction costs and timing, traffic and rail operations, long-term infrastructure costs, and other environmental factors for each project alternative during the environmental review process.

Endnotes

- 1 Commonwealth of Massachusetts, “Allston Multimodal Project 2019 documents and meeting notes,” *Massachusetts Department of Transportation — Highway Division*, 2019, <https://www.mass.gov/lists/allston-multimodal-Project-2019-documents-and-meeting-materials>
- 2 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, i–ii.
- 3 Center for Environmental Excellence, “Defining the Purpose And Need And Determining The Range Of Alternatives For Transportation Projects,” *American Association of State Highway and Transportation Officials*, https://environment.transportation.org/flipbooks/practitioners_handbook/07_Def_Purp_Need_Determ_Range_Alt_Transp_Proj_Aug_16/#2, 2.
- 4 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 15.
- 5 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 42.
- 6 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 33.
- 7 Center for Environmental Excellence, “Defining the Purpose and Need And Determining The Range Of Alternatives For Transportation Projects,” *American Association of State Highway and Transportation Officials*, https://environment.transportation.org/flipbooks/practitioners_handbook/07_Def_Purp_Need_Determ_Range_Alt_Transp_Proj_Aug_16/#2, 2.
- 8 Commonwealth of Massachusetts, “About the Allston Multimodal Project,” *Massachusetts Department of Transportation — Highway Division*, 2019, <https://www.mass.gov/info-details/about-the-allston-multimodal-Project>
- 9 Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs, “Certificate Of The Secretary Of Energy And Environmental Affairs On The Draft Environmental Impact Report — I-90 Allston Interchange Project,” *City of Cambridge Community Development Department*, February 16, 2018, <https://www.cambridgema.gov/~media/Files/CDD/Transportation/Projects/allstoni90interchange/i90deirmapcertificate.pdf>, 6.
- 10 Catherine Carlock, “Harvard completes Allston Landing acquisition with \$97M land buy,” *Boston Business Journal*, December 16, 2015, https://www.bizjournals.com/boston/real_estate/2015/12/harvard-completes-allston-landing-acquisition-with.html
- 11 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 11.
- 12 Commonwealth of Massachusetts, “Allston Multimodal Project,” *Massachusetts Department of Transportation — Highway Division*, 2019, <https://www.mass.gov/allston-multimodal-Project>
- 13 Christian Milneil, “A Rough Guide To Boston’s Allston/I-90 Megaproject,” *Streetsblog Mass*, October 15, 2019, <https://mass.streetsblog.org/2019/10/15/a-rough-guide-to-bostons-allston-i-90-megaproject/>
- 14 Stephanie Pollack, “Decision of the Secretary of the Massachusetts Department of Transportation: Preferred Alternative for the ‘Throat’ Section — Allston Multimodal Project,” *Massachusetts Department of Transportation*, January 10, 2019, <https://www.mass.gov/doc/decision-of-the-secretary-preferred-alternative-for-the-throat-section-011019/download>, 11–12; 14.
- 15 Klark Jessen, “MassDOT Announces Design Choice for Allston Multimodal Project,” *Massachusetts Department of Transportation*, January 10, 2019, <https://blog.mass.gov/transportation/massdot-highway/massdot-announces-design-choice-for-allston-multimodal-Project/>
- 16 *Ibid.*
- 17 Katelyn Newan, “Cities With the World’s Worst Traffic Congestion,” *U.S. News & World Report*, February 12, 2019, <https://www.usnews.com/news/cities/articles/2019-02-12/these-cities-have-the-worlds-worst-traffic-congestion>
- 18 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 33.
- 19 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 15.
- 20 Commonwealth of Massachusetts, “Allston Multimodal Project 2019 documents and meeting notes,” *Massachusetts Department of Transportation — Highway Division*, 2019, <https://www.mass.gov/lists/allston-multimodal-Project-2019-documents-and-meeting-materials>
- Commonwealth of Massachusetts, “About the Allston Multimodal Project,” *Massachusetts Department of Transportation — Highway Division*, 2019, <https://www.mass.gov/info-details/about-the-allston-multimodal-Project>
- 21 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 12.
- 22 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 38.
- 23 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 45.

- 24 Framingham Planning Board, “Project Archive,” *City of Framingham*, <https://www.framinghamma.gov/2294/Project-Archive>
- 25 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 62.
- 26 Commonwealth of Massachusetts, “Transportation Data Management System,” *Massachusetts Department of Transportation — Highway Division*, 1997–2019, <https://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=>
Anissa Gardizy, “While most MBTA traffic goes to Boston, some passengers take train west to Worcester,” *The Telegram & Gazette*, August 6, 2019, <https://www.telegram.com/news/20190806/while-most-mbta-traffic-goes-into-boston-some-passengers-take-train-west-to-worcester>
- 27 Jonathan Belcher, “Changes to Transit Service in the MBTA district, 1964–2019,” *The Boston Transit eMuseum*, August 15, 2019, <http://www.transithistory.org/roster/MBTARouteHistory.pdf>, 355; 360.
- 28 Cyrus Moulton, “Local legislators outline requests for improving Worcester/Framingham commuter rail service,” *The Telegram & Gazette*, April 6, 2019, <https://www.telegram.com/news/20190406/local-legislators-outline-requests-for-improving-worcesterframingham-commuter-rail-service>
- 29 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 33.
- 30 UMass Donahue Institute, “Massachusetts Population Estimates Program: Population Estimates by City and Town,” *University of Massachusetts*, 2019, <http://www.donahue.umass.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program/population-estimates-by-massachusetts-geography/by-city-and-town>
- 31 Sean McFadden & Hilary Burns, “Largest Employers in Massachusetts,” *Boston Business Journal*, July 25, 2019, <https://www.bizjournals.com/boston/subscriber-only/2019/07/25/largest-employers-in-massachusetts.html>
- 32 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 45.
- 33 Metropolitan Area Planning Council, “Route 9 Corridor Analysis,” *MAPC*, Spring 2011, http://www.mapc.org/wp-content/uploads/2017/09/Route-9_final_0.pdf, 11–12.
- 34 Massachusetts Department of Transportation, “Congestion in the Commonwealth: Report to the Governor 2019,” Scribd, 2019, https://www.scribd.com/document/421198656/Congestion-in-the-Commonwealth#from_embed?campaign=SkimbitLtd&ad_group=126006X1587340Xa645b32ae88375e3779c344c6d686ff6&keyword=660149026&source=hp_affiliate&medium=affiliate
- 35 Yanni K. Tsipis, *Images of America: Building the Mass Pike* (Portsmouth, NH: Arcadia Publishing, 2002), 27–28.
- 36 Mary Connaughton, “Perpetuating the Pike Inequity,” *The MetroWest Daily News*, December 12, 2015, <https://www.metrowestdailynews.com/article/20151212/opinion/151218372?template=ampart>
- 37 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 1.
- 38 Commonwealth of Massachusetts, “I-90 Allston Multimodal Project Boston, MA National Environmental Policy Act Review Scoping Report,” *Massachusetts Department of Transportation — Highway Division*, November 6, 2019, <https://www.mass.gov/doc/national-environmental-policy-act-scoping-report-110619/download>, 63.
- 39 Federal Transit Administration, “Section 4(f) of the Department of Transportation Act,” *United States Department of Transportation*, last updated March 16, 2016, <https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/section-4f-department-transportation-act>
- 40 Christian Milneil, “A Rough Guide to Boston’s Allston/I-90 MegaProject,” *Streetsblog Mass*, October 15, 2019, <https://mass.streetsblog.org/2019/10/15/a-rough-guide-to-bostons-allston-i-90-megaProject/>
- 41 Karl Haglund, *Inventing the Charles River* (Cambridge, MA: The MIT Press, 2003), 20; 110; 461.
- 42 Karl Haglund, *Inventing the Charles River* (Cambridge, MA: The MIT Press, 2003), 176; 282; 288.
- 43 Karl Haglund, *Inventing the Charles River* (Cambridge, MA: The MIT Press, 2003), 331.
- 44 Daniel C. Wood, “Learning From The Big Dig,” *United States Federal Highway Administration*, Summer 2001, <https://www.fhwa.dot.gov/publications/publicroads/01julaug/bigdig.cfm>
- 45 Karl Haglund, *Inventing the Charles River* (Cambridge, MA: The MIT Press, 2003), 332–333; 335–336.
- 46 Mary Connaughton & James Aloisi, “The Mass. Pike is in for some massive disruption. Are we ready?” *The Boston Globe*, May 30, 2019, <https://www.bostonglobe.com/opinion/2019/05/30/the-mass-pike-for-some-massive-disruption-are-ready/ZCvDo2pSERUVUREJEizIUN/story.html>
- 47 Massachusetts Bay Transportation Authority, “Newton Commuter Rail Accessibility Improvements,” accessed October 11, 2019, <https://www.mbta.com/Projects/newton-commuter-rail-accessibility-improvements>
- 48 Rachel Barker et al., “The making of global cities: Stories from the Global Cities Exchange,” *The Brookings Institution*, September 28, 2016, <https://www.brookings.edu/research/the-making-of-global-cities-stories-from-the-global-cities-exchange/>
- 49 Karen Spilka, “How Will the I-90 Allston Multimodal Project Impact MetroWest?” *Senator Karen E. Spilka*, August 15, 2019, <https://karenspilka.com/updates/2019/8/15/how-will-the-i-90-allston-multimodal-project-impact-metrowest>

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