To:	Mike O'Dowd MassDOT Project Manager	Date:	February 2, 2018
From:	Jeff Dietrich Howard Stein Hudson	HSH Project No.:	2013061.14
Subject:	MassDOT I-90 Allston Interchange Improvements Project Public Meeting Introducing the Draft Environmental Impact Report (DEIR) – Cambridge Meeting Notes of January 3, 2017		

Overview

On January 3, 2017, members of the Allston I-90 Interchange Improvement Project team and MassDOT staff associated with the job held the third and final in a series of public meetings to introduce the public to the Draft Environmental Impact Report (DEIR), and outline the process for submitting comments on the document. This series of meetings has been noticed in local newspapers in Allston, Brighton, Brookline, Cambridge, and Boston. Physical copies, bundled with digital appendices, have been made available for reference in libraries in Brookline, Boston, and Cambridge.

On December 20, 2017, MassDOT announced an additional extension of the comment period from January 19, 2017, to February 9, 2018. This represents a total of 72 days since the document was made publically available at the Task Force meeting on 11/30/2017, and a total of 66 days between the official kick-off of the comment period on 12/06/2017 and its closure.

Before the presentation by the project team, members of the Task Force representing Cambridge and a representative of the Cambridgeport Neighborhood Association delivered some welcoming and framing remarks to the audience, summarizing their preliminary findings regarding the document and what they presume will be the areas of focus for their comments. The City of Cambridge focused on three main points: 1.) the phasing of the project, specifically regarding West Station, which the City describes as "Commuter Rail station that doesn't serve a holistic transit purpose"1 and

[1] West Station was designed, modeled, and cost-estimated as a station equipped to handle current and potential future rail service on the Commuter Rail and Grand Junction Lines, bus and shuttle passenger pick-up/drop-off and layover space, and bike and pedestrian connections to and through the station. While the original concept for the

potential implications for the design and development of the new space within the Allston neighborhood; 2.) the noise analysis performed in the document and a perceived lack of mitigations for current and future noise, work for which the City has hired an independent consultant; and 3.) alternatives that maintain the River Street right-turn ramp from Soldiers Field Road.[2]

Henrietta Davis, a resident of Cambridge representing neighborhood concerns on the Task Force, distributed a worksheet containing an overview of items of concern and outstanding questions, from her perspective based on prior meetings, public comments, and participation on the Task Force. Aside from some points which the City of Cambridge had already touched on, these focused mainly on the desire for a finer level of detail on particular points of design and construction; the worksheet is attached as Appendix 2 to these minutes.

Following a presentation that provided an overview of the structure and high-level content of the document, the floor was opened to discussion, to elected officials, members of the public, and members of the Task Force. This structure, used throughout the meeting process, is designed in order to offer members of the public the first opportunity to speak, as the Task Force has had ample dedicated opportunities to ask questions and provide input.

While these minutes document the comments given at the meeting, the project team has stressed that formal comments at this stage, per Massachusetts Environmental Policy Act Office (MEPA) requirements, must be submitted to that agency, in writing via mail or email, before the closure of the comment period in order to be evaluated for the purposes of generating a scope of work for the Final Environmental Impact Report (FEIR).

Public comment and question focused primarily on the noise impacts of the project in Cambridgeport and impacts of the removal of the River Street right-turn in the Preferred Alternative. Regarding noise impacts, the City of Cambridge reported that it has hired an independent consultant to validate the methodology of the noise analysis as performed for the DEIR. Commenters including Representative Livingstone have noted that perceptible noise has not changed significantly since the removal of the toll plazas, and that the lack of federally-approved noise mitigations proposed for the project is unacceptable given the lived experience of residents. The project team recognized the daily

---

station was a Commuter Rail platform similar to Yawkey or Boston Landing, input from the Task Force and public throughout the ENF phase of work resulted in this more involved, multimodal design.

[2] It is noted elsewhere in these minutes, and outlined in the DEIR, that the designs maintaining that turn-lane ramp severely limit the improvements that can be made for the Paul Dudley White Path through this section, known as 'the narrows'. The project's Preferred Alternative provides for a vehicular access path using the new urban interchange that is expected to significantly improve the trip time for this movement, while simultaneously allowing for significant improvement to accommodations for bikes and pedestrians as well as to the amount of open space included in the project—all in line with the project Purpose & Need as well as community and Task Force goals.

experience of noise, and noted that while all three alternatives represent similar noise levels at this distance from the project site, none trigger the federal requirements to consider mitigations, except for on the very edge of the Magazine Beach shoreline. Regardless of this lack of federal classifications, major project elements, including the shift of Soldiers Field Road inland and away from Cambridge, do function as abatements of noise by their nature and function, and are included in the project's Preferred Alternative. The impacts of these and all other proposed changes were included in the noise analysis.

Regarding the removal of the right-turn ramp from Soldiers Field Road, there are outstanding concerns regarding the implications for vehicles accessing Cambridgeport and Cambridge. The design in the Preferred Alternative maintains access via a Soldiers Field Road off-ramp into the new urban interchange's East Drive Connector, to Cambridge and River Street—a total of three intersections to transverse. As noted by Eric Maki at this meeting, the traffic models for the design show a near-halving of trip-time versus existing conditions for this movement, due to the relocation and diffusion of other conflicting traffic throughout the interchange. Some comments suggest skepticism regarding the accuracy of this model, citing expectations of future congestion in the street grid. The DEIR includes analysis of alternatives to maintain the ramp for right-turning traffic, which are not included in the Preferred Alternative but which MassDOT was directed via comment to study. Bill Deignan, the Cambridge City Government's representative on the I-90 Allston task force characterized some of these alternatives as promising solutions worthy of further study, recommending that members of the public look at them while writing their comments.

As noted in the meeting, the removal of the ramp allows for gain of significant parkland open space and significant improvements for bike and pedestrian facilities over a distance of approximately 1,500'—namely, a longer, wider stretch of separated bike and pedestrian facilities on a multi-use path, which merges into a shared-use path only at the intersection with River Street. Keeping the ramp would require a reduction in open space, a lessened length of separated facilities[3] due to reduced available width, and a lane width and ramp structure of 17' in order to accommodate emergency access. This section of the Paul Dudley White Path serves hundreds of users daily, and the inclusion of ramp removal in the Preferred Alternative is understood to serve agreed-upon project goals to improve conditions for those users throughout the project area.

Additional comments echoed previous meetings regarding the transit elements of the project: the importance—for transportation planning and as a value statement regarding regional transportation—of north/south bus connections routed through a full-build West Station in Phase 1

[3] It is worth noting that nearly universally throughout the project and public process, Task Force members, residents, and advocates encourage separated facilities wherever possible and describe them as preferable to shared-use paths.

of the project. It is worth note that part of the reason for the expected phasing is the evolution of West Station from a Commuter Rail platform and overpass like Yawkey Station or Boston Landing Station, as envisioned in the 2014 ENF, to a much more robust, multimodal connection including bus and rail elements—more comparable to Forest Hills or Ruggles stations than Boston Landing or Yawkey. This evolution occurred in cooperation with Task Force and public desires for a transit hub that includes both Commuter Rail platforms and bus connections, along with the associated platforms and layover space; bicycle and pedestrian accommodations to, through, and around the station as well as bike parking including Hubway; and flexibility to not preclude potential services like taxis and transportation network companies (TNCs).

The perception that anticipated project phasing, with West Station in Phase 3 and completed before 2040, represents the "removal of the station from the project", continues. West Station remains a core feature of the Preferred Alternative, and has not been removed from the project: the expectation that the station will be phased as outlined is based on current direction from MassDOT leadership, available financing and funding, the existing and substantial need to provide layover capacity to support existing commuter rail service, and anticipated short-term ridership projections at West Station before any of the expected development occurs at Beacon Park Yard. The concept of somehow phasing West Station has been discussed throughout the project's DEIR period between summer 2015 and fall 2017, including an extended discussion on the issue led by a presentation by the Task Force's Harvard University representatives in fall 2016.

Comments on the DEIR must be submitted MEPA by the closure of the comment period on February 9, 2018; comments can be submitted electronically or mailed. Details are available in these minutes and on the presentation given at this meeting, as well as posted to the MassDOT project website at:

http://www.massdot.state.ma.us/highway/HighlightedProjects/AllstonI90InterchangeImprovementProject/Documents.aspx

(also accessible by Googling "I-90 Allston Interchange Improvement Project").

Agenda

Detailed Meeting Minutes[4]

Welcoming Remarks

C: Nate Cabral-Curtis, Howard Stein Hudson: Good evening and thanks everyone for coming in the teeth of the bombogenesis snow storm. Before we get started with the presentation for the evening, we're going to have welcoming remarks from the Cambridgeport Neighborhood Association and Cambridge's representatives from the Task Force, starting with Cathy Zusy.

Remarks from Cambridge Representatives

C: Cathy Zusy, Cambridgeport Neighborhood Association: Welcome everyone and thank you for coming. Following the meeting tonight, which will give us an opportunity to hear from MassDOT, we will hold a community meeting next Wednesday, January 10, right here, from 6:30pm to 8:30pm. At that meeting, we will discuss what we heard tonight and come up with a Cambridge position about the project, if we're going to have one. We look forward to seeing you back here next week. We also have our annual meeting and election on Tuesday, January 16, at the LBJ Apartments. There are three board positions open, so please consider running, since you are all here has engaged citizens. We need some strong members to respond to local issues. Thank you. Let me introduce our two Task Force members: Bill Deignan and Henrietta Davis.

C: Bill Deignan, City of Cambridge: Thanks Cathy. Thank you to everyone for coming, and to MassDOT for coming to give this presentation. I also want to thank: Representatives Mike Connolly and Jay Livingstone; Kate Chang from the office of Congressman Capuano, and several Cambridge City Councilors: Mayor Marc McGovern, Vice Mayor Jan Devereux, Quinton Zondervan, and Dennis Carlone.

As Cathy said, Henrietta and I have been representing Cambridge on the Task Force for the I-90 Allston Interchange project. As you probably know, this is an important regional project with lasting short- and long-term impacts to Cambridge. It is important for us and you all to engage and submit comments during environmental review. This project is moving ahead because the I-90 viaduct is in need of immediate repair—that's what's driving this project. Comments are due February 9, and we hope that people come to an understanding of the project and submit specific comments to the state regarding how the design should move ahead.

[4] Herein "C" stands for comment, "Q" for question and "A" for answer. For a list of attendees, please see Appendix 1.

This process has taken over three years and 30 Task Force meetings so far. We will continue to be involved to influence the project, attempting to maximize the benefits and minimize the negative effects of this project for Cambridge. In general, we are still processing this very large document, but have some reactions.

First, we are disappointed that there is not an overall sustainable vision for the new neighborhood that will be created by this project; in particular, that the rehabilitated I-90 isn't part of a multimodal system to build a sustainable transportation network for both current and future needs. The only transit element that was included, West Station, has been delayed until the end stage of project in 2030 to 2040, and is a Commuter Rail station that doesn't serve a holistic transit purpose. We want to delve into that more to make improvements so that West Station can serve the regional employment centers, which would mean additional transit like buses, and possibly utilizing the Grand Junction Line.[5] We also feel that there needs to be more space dedicated to thinking about walking and biking, especially connections to Cambridge. This might include protected bikeways over the River and Western Street Bridges, which need to get rehabilitated at some point in the future anyways.

This project will lay the groundwork for how trips are made to and from the Allston area. We want to influence things so that fewer single-occupancy vehicle trips are made to and from the site, and use as many other modes as possible. The DEIR also talks about the noise impacts to Cambridge—we don't see a lot at this point about how the current and future noise will be mitigated. We will investigate this more and make specific recommendations, along with a consultant we've hired, on how to better address these issues.

One of the recommended options for Base Case 2 has something to look out for: access to Cambridge from River Street is taken out as part of that base case. The document does include a very good alternative for including that access, which people may want to look at. We'll include that in our comments.

This is a very large and complex document, and we hope that people take the time, including this presentation and reviewing it online, to understand it and to make specific comments. We're hoping that those become a to-do list for the state to do additional work and additional thinking about how to make sure that the option chosen here can create a vision for this area revolving around sustainable transportation.

[5] As has been stated by the project team on multiple occasions, the I-90 Allston Interchange Improvement Project holds harmless the Grand Junction Line and views any work across the river or in Cambridge as out of scope. The institution of passenger rail service on the Grand Junction Line would require an independent project development process including environmental permitting, design, stakeholder and abutter coordination, and public outreach.

C: Henrietta Davis, Task Force Member: Thank you, Bill, for framing the issue so well. I'll pick up with the things that this group has already responded to and were hoping to get responses to. Some of those responses we've gotten already; some are still outstanding. We handed out this crib sheet[6], which shows the issues we raised in a letter to Secretary Pollack: I will run through it, and tell you a bit about each.

First, we asked for an integrated transportation system, and this plan falls short. That same feeling is running high in Allston-Brighton, which is depending on this project as a crucial neighborhood link. I am concerned primarily regarding the off-ramp on Storrow Drive. We need to continue to advocate to make sure that that happens, and it seems to be possible. If we care about it, we will have to write about it to make it happen. Secondly, I don't believe we have analysis of what this will mean for our access on and off the Turnpike. These patterns will change, because the streets aren't built yet, and we can't know what it will mean until all the streets are actually there. River and Western Streets are also potentially impact. At 5pm today, it's already impossible to get on and off there. In the 'throat' section, which is the area directly across the river from us that is currently up on a viaduct, we wanted to know what the visual impact would be to Cambridge: we didn't hear anything on this, and maybe it won't be significant but it would have been nice to know. The noise consultant, as Bill said, will look into the noise issues he mentioned. We are concerned about future access including the Grand Junction Line, and we don't have any information regarding that. We don't really have information about construction impacts, but we do need to have a plan for those. For parkland, there had been an overall hope and dream to have more parkland at the end of this project. There is a minimal amount of additional parkland, but also some additional land around the bikeways and the walkways—I think up to 2 acres that might result from those. For overall construction impacts, we don't know much but it would be good to know how this will impact Cambridge.

This project will obviously be very expensive: somewhere from half-a-billion to over a billion dollars depending on which option you choose. This means a lot to taxpayers and toll-payers across the state—so much that I have found myself thinking, maybe it should be delayed until we can do it right. Either way, we should be sure that we get the answers that we need in this process, so that MassDOT and the Secretary will be able to make the best decision. I urge you to write comments in by the deadline, and come to meeting next week, to help prepare to respond.

C: Mike O'Dowd, MassDOT Project Manager: Good evening everyone. It's a good thing that we scheduled this meeting for tonight, not tomorrow; thanks for coming out. This is an important

[6] A copy of this sheet, as distributed, is attached as Appendix 2 to these minutes.

project, as was just expressed. There are neighborhood concerns as well as issues around the regional transportation system. We are here tonight to provide information about the DEIR. We have subject matter experts here to share as much as they can in the time we have tonight: Chris Calnan, the consultant project manager for Tetra Tech; Mark Fobert from Tetra Tech, the lead for the DEIR document itself; Mark Shamon from VHB for transit; Eric Maki from Tetra Tech from for traffic; and Nate Cabral-Curtis from Howard Stein Hudson for public engagement. We know that there are some things that are near-and-dear to Cambridge, including noise, traffic, and the Charles River. We're here to make sure that we do everything we can to make your reading of the document easier so that you can draft your comments. I'll turn it over to Chris Calnan now; please hold your comments and questions until the end of the presentation.

DEIR Organization

C: Chris Calnan, Tetra Tech: Thanks Mike. Good evening everyone. As Mike said, we have lots to cover. We will give an overview of the project and of what's included in DEIR; we will go through the goals; explain how the document is organized and give a high-level overview of the content; and finally, Nate will give the instructions on how to offer comment.

This is a very big document: more than 600 11"x17" pages. There are also 115 pages of figures. The document was designed to be graphic-intense, in order to help with ease of reading comprehension. The structure of the document conforms to the scope of the ENF Certificate: it describes the Urban Interchange Preferred Alternative 3K. As Jim mentioned, this Preferred Alternative is specific to interchange itself; outside of that area, there are three throat variations where we haven't yet selected a variation. There are 10 chapters in the document:

Chapter 1 is a brief summary and description of the project, for those who cannot or don't want to read the entire document. This describes the project in overview, outlines its evolution, and talks about the impacts analyzed and the mitigations proposed.

Chapter 2 describes the Purpose, Need, and Goals for the project, including West Station, the bike and pedestrian connections, and the interchange itself.

Chapter 3 provides the alternatives analysis that we've studied, including the options in the throat, different potential configurations for the Franklin Street footbridge and others, and maintaining the River Street Bridge right-turn from Soldiers Field Road.

Chapter 4, “Affected Environment”, means the existing conditions in the area of the project. There are more than 20 subject areas in this chapter, and plenty of detail, all describing how things are operating out here today.

Chapter 5, “Assessment of Impacts” is organized in the same way as Chapter 4, but assesses the impacts to all those subject areas described in Chapter 4. This includes analysis of Noise, Historic concerns, Bike & Pedestrian Facilities, Stormwater, etc. This is one of the largest chapters and includes plenty of detail.

Chapter 6, “Compliance and Consistency with Environmental Laws, Regulations, and Programs,” summarizes compliance with the various regulatory concerns, in a tabular format.

Chapter 7, “Mitigation”, presents potential mitigations with regard to those impacts. Wherever impacts cannot be avoided, that is where mitigations are proposed. Again, many subject areas, and they match the same organization as Chapters 4 and 5.

Chapter 8 is a determination of the appropriate public benefit associated with affected tidelands.

Chapter 9 is response to comments and public involvement: this is where all comments received on the ENF are formally responded to, and it also includes a summary of the public process undertaken to this point. Chapter 10 is the circulation list for the DEIR.

Then, finally, there are 13 appendices. These are provided electronically and are not a part of the book because they are many thousands of pages. These provide additional detail on their subject matters, to supplement the report.

DEIR Content

Next, I’ll highlight some of the major elements of the filing. This first slide shows the interchange as of a public meeting held in 2014. There’s not a lot of detail on these lines: only three ramp connections, and an area reserved for rail infrastructure. From there, we moved to the Urban Interchange Preferred Alternative 3J, which was what we filed with MEPA in the ENF. This is similar in many ways; we advanced the level of detail, but it was still basically a sketch concept. It included connections for West Station, and some additional streets; it did not include the comments received subsequent to this point, to flip the ramps over and next to the highway, add additional connections to the Charles, and increase open space.

Those changes and others were driven by the public involvement process including lots of meetings and robust input from the Task Force, and the Placemaking Study from the City of Boston Planning and Development Agency (BPDA). We also performed detailed investigations about how to implement those changes and recommendations. All of that has shaped the design to where we are today: Urban Interchange Preferred Alternative 3K, with the three throat variations. This graphic is similar to those on boards in the back of the room, and shows the level of detail we're currently at in the process. A key point to keep in mind here: the graphics that we are showing here are all straight from the book, so you can see them all as you're reading.

This preferred alternative includes many core elements outside of the throat that are shared between all three throat variations: it realigns the Turnpike south; provides a context-sensitive urban street grid, connecting the street grid and new development to the highway and to Cambridge Street; makes extensive improvements and adds new connections for bikes and pedestrians, including the Franklin Street bridge, a connection on Malvern Street, and connections to the Paul Dudley White Path; expands operations at BPY including the new West Station for both rail and bus operations; relocates Soldiers Field Road including the introduction of an underpass that expands available open space and allows you to cross Soldiers Field Road directly to the river with the road in an underpass; and it adds noise walls along the Turnpike. All of these are part of the full-build interchange, not specific to any throat variation.

CONCEPT 3K-HV VARIATION (HIGHWAY VIADUCT)

The highway-viaduct variation provides a widened elevated highway with the rail at-grade, very similar to what's there today. The widening accommodates safety elements. It does not add lanes to the Turnpike. It shifts Soldiers Field Road south towards the viaduct which allows us to gain more open space near the river; and allows us to incorporate a widened Paul Dudley White Path and a widened landscape buffer between the path and Soldiers Field Road. Overall, there aren't many changes in this variation from what we've been showing, just some tweaks to make things work better. Here, you can see a cutaway rendering showing the highway viaduct with the rail system underneath, with Soldiers Field Road and the bike path to the left. These renderings have all been updated for this document. This looks east towards downtown, with the river to the left. Next, here is a conceptual rendering of a view looking east towards downtown, just west of the tightest portion of the throat. This gives you some perspective on the experience of the path, and you can see the viaduct off to the right. I should note that there are lots of other renderings in the DEIR; we've just pulled these out for tonight to give you a sense of what to expect.

CONCEPT 3K-AMP VARIATION (AMATEUR PLANNER)

Next, 3K-AMP, which originated from Ari Ofsevit, throat variation provides an elevated rail with the highway at-grade, flipping the viaduct from what's out there today; it raises Soldiers Field Road in the eastbound direction 4' higher than the westbound direction, in order to help minimize the wheel noise of the road for users of the Paul Dudley White Path. This alternative also incorporates a widened PDW path of 12', and a landscaped buffer between the path and Soldiers Field Road. Unique to this variation is an elevated shared use path connection from West Station to the Paul Dudley White path, along the rail viaduct and above the highway.

Q: No Name Given: Can you show where that would be in the image you're showing?

A: Chris Calnan: Of course, the elevated path is this white line.

This variation also includes replacement of the Grand Junction Line Bridge over Soldiers Field Road; which also allows for some additional Paul Dudley White path connections near the Grand Junction Line Bridge and the BU Bridge to give direct connections without the boardwalk. Here's the cutaway view showing an overview of the elements followed by a conceptual rendering, just west of the tightest part of the throat. This wall-like structure is the elevated Soldiers Field Road.

CONCEPT 3K-ABC VARIATION (A BETTER CITY)

Next and finally, the 3K-ABC variation, which originated from A Better City (ABC). This eliminates the viaduct structures and places the roadway and rail elements at-grade; in other words, everything is on one plane, with no vertical stacking. Similarly to 3K-AMP, this raises Soldiers Field Road eastbound to help with noise. It maintains the Paul Dudley White Path in its currently width at the narrowest point; also includes replacement of the Grand Junction Line Bridge; and provides additional path connections at the Grand Junction Line and BU Bridges. Here is the cutaway view at the narrowest location; you can see everything roughly at the same plane. And then the conceptual rendering, showing the view from the Path.

Q: James Williamson: Would there even be any riverfront left?

A: Chris Calnan: Please let me finish the presentation, and then we'll get to questions and answers.

Project Phasing

MassDOT currently expects this to be a phased project. Phase 1 is the largest, focusing on addressing the aging viaduct, the street grid, and bike and pedestrian connections. It includes: reconstruction and realignment of the Turnpike; the realignment of Soldiers Field Road and construction of the underpass; building the street grid with the bike and pedestrian accommodations including separated bike lanes, on-street lanes, shared-use paths, etc.; rebuilding Cambridge Street as a Complete Street, which we've been talking about since day one of this project; building a two-way shared use path adjacent to Cambridge Street South as an at-grade connection to the Paul Dudley White Path and the river, an idea which was added from the BPDA Placemaking Study; building a new bike & pedestrian connection at Malvern Street from the interchange to the south; reconstructing the Franklin Street pedestrian/bike bridge; making improvements to the existing Beacon Park Yard to store up to 8 train sets; and constructing noise walls along the Turnpike.

Phase 2 is targeted for completion after 2025, and is focused on Beacon Park Yard: construction of additional layover tracks and switches to store up to 16 train sets, as well as crew quarters, storage sheds, utilities, and other infrastructure to support light maintenance.

Phase 3 is targeted prior to 2040, to evolve based on demand and need. This is all focused on West Station. This includes construction of the station, rail platforms, bus concourse, and bike and pedestrian connections. It will reconfigure the rail yard to store 8 train sets—down from the 16 sets in the interim condition—and construct a new bicycle and pedestrian connection from West Station to Babcock Street. It will also build out the remaining balance of the at-grade streets to the north of Cambridge Street as well as the Stadium Way Connector, currently shown on the project plans as being constructed by the landowner. These are the so-called 'orange streets'.[7]

Construction Costs & Funding

There is no doubt that there will be a big price tag associated with this job. The team came up with conceptual cost estimates, presenting an "all-in" as if everything is built at once. This is not phased, and it is intended for comparison purposes. It includes base construction, contingency, and escalation, all as standard for these projects. The takeaway for this chart is that the no-build is the least expensive alternative, but still $426 million once you factor in contingency and escalation. This includes repairs to the viaduct and improvements to some operations.

[7] So-called because they are typically shown in orange on the project team's overview graphics of the project.

Of the build variations, 3K-ABC is the cheapest at $983 million; then 3K-HV at $1.05 billion; then 3K-AMP at $1.25 billion. There is no doubt that there will be lots of challenges for funding in this project, and lots of attention is being paid to the issue. MassDOT recently established a funding & financing committee to develop a finance plan for this project; that group is looking at public-private partnerships (P3s), public financing, 3rd party contributions, basically anything that could be used do to fund this massive project. Part of the challenge here is that toll revenues produced by the Turnpike and the commuters who use it cannot go towards other elements, such as West Station or the pedestrian and bicycle connections: they have to be used exclusively for toll facilities and feeders. I'll hand it to Nate to talk through the next steps and how to comment.

Commenting on the DEIR

C: Nate Cabral-Curtis, *Howard Stein Hudson*: Thanks Chris. Folks, we are rapidly getting towards the end of the presentation. I want to note for everyone, we have been giving the same show as part of our tour. You can download the presentation as it was given in Allston from the project website. The only exception is that Eric Maki and Jason Ross will talk about two specific Cambridge issues after I finish talking.

Q: No Name Given: Will those be available online?

A: Nate Cabral-Curtis: Yes, we should be able to post them as well.

C: Nate Cabral-Curtis: Alright, I'll go through how to comment on this document. The posting in the Environmental Monitor on December 6 kicked off the comment period, which has since been extended twice. The comment period now ends on February 9, 2018.[8]

Print versions of the DEIR are available at the State Library of Massachusetts, the Copley Main Library, the Honan-Allston Branch Library, Brighton and Faneuil Branch Libraries, the Cambridge Main Library, the Cambridgeport Branch Library in Central Square, and The Public Library of Brookline.

The MassDOT website a link to download the document, and if you need any help accessing that link, here is my contact information. This document is a tome: I recommend downloading on a wired connection, and maybe getting a cup of coffee once you press start. Depending on your connection, it can take a while to download, usually around three minutes. It's been a painless process for most people so far, and I'm here to help if there are any issues.

[8] This represents a total of 72 days since the document was made publically available at the Task Force meeting on 11/30/2017, and a total of 66 days between the official kick-off of the comment period on 12/06/2017.

This slide shows to whom you should direct your comments: I'll keep this slide up at the end of the presentation for cell-phone photos, and the information will also be posted in the Environmental Monitor. When you make your comments to MEPA, please CC Jim Cerbone at MassDOT, to make sure everyone gets everything in a timely fashion.

Finally, I'll quickly go through the next steps after the DEIR. The Executive Office of Energy and Environmental Affairs (EEA) will provide MassDOT with a scope, similar to the ENF process. This will serve as the basis for the Final Environmental Impact Report (FEIR). MassDOT will use the comments from coordinating agencies and the public in order to continue to refine and improve the 3K concept and select a variation for the throat. Throughout, there will be continued outreach with the abutting communities, municipalities, stakeholders, and the universities.

The schedule of the project requires that we have the MEPA process done in early 2019. In large part, this scheduled is driven by the declining health of the main MassDOT asset in this area, the highway viaduct. It was deteriorating when we first visited in 2014, and bridges don't deteriorate in a straight line—the longer that it's out there, the worse it will get. So, here is the schedule chart: we are here, in the first quarter of 2018. Based on our current projections, you can see that construction of Phase 1 is expected to start in 2020 and continue until 2025. Note that this is our current 'best-guess' pending the FEIR scope.

Now, I'm going to turn things over to Erik and Jason to give their 'mini presentations'.

C: Jason Ross, VHB: Thanks Nate. I led the noise and vibration analysis in the DEIR, and I welcome you to review both the DEIR document and the noise appendix. This presentation focuses on the results of that analysis for Cambridge and Cambridgeport. I should note that we are also looking at the Paul Dudley White Path. There are a few key points I want to communicate tonight.

First, this was a very detailed analysis with a very complex model, including highway, roadway, and train noise sources. What we discovered is that the three variations give only a very minor difference in noise. This takes into account the various features of the alternatives: whether or not the roads are at-grade or elevated; the changes in roadway alignments; et cetera. One of the important things for Paul Dudley White users is that Soldiers Field Road can be shifted. That shift, about 10', can be very important from a noise perspective. But in Cambridge, where the closest noise receptors are 500' away on Magazine Beach, those shifts are not as critical. We've heard a lot of questions and comments about the impacts of road gradients: those are included in the FHWA model that we used. It is important to understand that those changes have a very, very minor effect on the noise—most vehicle noise is the contact between tires and pavement, not

engine noise. The non-engine factor that is noisy is air compression brakes on trucks. The elimination of the toll plazas on I-90 is expected to be one of most important factors in eliminating usage of air brakes on the Turnpike because the trucks will no longer need to slow and stop at the plazas.

Second, all of these project variations reduce the future noise conditions, and all have benefits in full build relative to what exists now, as well as what would exist in the future without the changes that the alternatives make.

Along the Paul Dudley White Path—which I understand isn't Cambridge, but it is still an important component of looking north for the noise analysis—in the throat, these changes mean a noise level about 3 decibels quieter. The noise is relatively high in this area, 70 – 78 decibels, which exceeds the noise abatement criteria and means that we will need to look at potential mitigations. Along the Paul Dudley White Path where Soldiers Field Road is proposed to be in an underpass, a substantial reduction would occur: up to 13 decibels. To put these into context: 3 decibels is considered to be the minimum perceptible shift, but 10 decibels is a halving of loudness.

The noise there will still be relatively high, but down in the range of 64-69 decibels. On Magazine Beach: we expect a shift of 1-2 decibels quieter—but this is barely perceptible to people. Along the closest portions of the shoreline, some noise levels may exceed noise abatement criteria, but starting just back from the shoreline, they will be below the abatement criteria. In Cambridgeport, we're showing 2-4 decibels quieter in various parts of Cambridgeport, depending on the variation. But overall, the noise levels are substantially lower than they are elsewhere within the project. We're talking about areas that are 1500' away—a quarter-mile. We understand that the vehicles can still be heard, but the noise from Memorial Drive is also a very important factor. Here, we're showing 52-58 decibels, which is below the abatement criteria. In the Riverside neighborhood, there is only a small difference among the variations.

To summarize: we have very similar findings for all variations. The noise is shown to exceed the abatement criteria—which is the point at which the feasibility of potential mitigations must be evaluated—along portions of Magazine Beach and the Paul Dudley White Path.

This figure shows all the locations we evaluated, and the technical report includes results for all. Where the noise is shaded yellow, orange, or red, those areas exceed the abatement criteria. Where it shows green, it is below the criteria. Where it shows dark green, it is substantially below the criteria. All of Cambridgeport shows 10 decibels or more below the thresholds. We also looked at upper floor receptors; we heard concerns regarding elevation on these analyses. We

have results for those showing three decibels higher than the ground level, but still substantially below the thresholds. Even though the project shows overall noise reductions, we still need to look at potential abatements in response to areas that do exceed the thresholds, so we evaluated noise walls on the north side of Soldiers Field Road and I-90.

The MassDOT criteria for evaluation of noise abatement look at projects across the state and takes into consideration roadway safety, acoustical effectiveness, and cost. Here, due to the roadway alignments, barriers along Soldiers Field Road are not feasible from either safety or a maintenance perspective, due to the available setback for snow removal and safety concerns for emergency egress from the Paul Dudley White Path. We looked at many variations, and all of these show a cost-effectiveness index substantially higher than the MassDOT criteria. Hence, they are not recommended for any variations. Eric?

C: Eric Maki, Tetra Tech: I think it will be beneficial to start off with an overall slide of the project network, to give an introduction to all of the streets. We've got the Turnpike here; West Station in red; a realigned Soldiers Field Road in green, and added open space; the new Soldiers Field Road interchange and the underpass section, including the purple where Soldiers Field Road will dip under; the yellow showing ramp roadways; and here is Cambridge Street South, including a two-way shared use path on the north side of the street. Because of the new underpass arrangement, pedestrians and bikes can directly cross Soldiers Field Road, at-grade, to get to the new open space and the River.

Moving onto the interchange: today, there only a couple of roadways and ramps, instead of the spread-out street grid shown here. There will be multiple streets to get on I-90 Westbound, and multiple exit streets. These four major roads will separate traffic on the on- and off-ramps.

Under the Preferred Alternative, where that River Street turn-lane would be eliminated, we are instead allowing traffic that would turn left to get to the Turnpike to do that further down, which will eliminate or reduce a lot of the travel on this segment of Cambridge Street to help create a different feel for the district. Traffic getting on the Turnpike will use this first left. We've removed a lot of traffic up here at River Street, and by removing the ramp needed for that turn-lane, we can substantially benefit open space and non-motorized users.

Q: No Name Given: Can you explain the blue colors?

A: Eric Maki: Those mean sections of the roadway that elevated or located on retained fill. Because both the Turnpike and West Station are elevated, we have to elevate to meet them. Red means bridge structures; blue means retained fill; and yellow means at-grade. The orange streets will

be built by the landowner, Harvard University. Those new north/south streets all connect to Western Avenue, and Stadium Way would connect through Western Avenue to North Harvard Street, to provide traffic from Harvard Square with more direct access.

So, River Street. This black arrow indicates the ramp that would be removed, and replaced by enhanced open space and a wider Paul Dudley White Path. The red dashed arrows shown are the trip movements that I just walked you through: you can see that this is a very concise movement, and everything stays very close to the Turnpike. Traffic bound for Cambridge can continue on Cambridge Street South. Traffic bound for Western Avenue, instead of going through, would use East Drive. Traffic turning right onto River Street would go through three new intersections, which I know sounds like a lot, but we can accomplish it because the reconfiguration of all these roadways pulls apart and spreads the traffic, making the operations at River Street much simpler. The goal of all of this is to enhance the pedestrian and bicycle accommodations. This section is known as 'the Narrows', and it is only 8.5' wide right now. We want to enhance that.

Our Preferred Alternative eliminates this ramp. Please note that this figure is rotated 90 degrees, but here's the ramp. We are able to gain significant open space; the multi-use path with separated bike and pedestrian facilities, merging into shared-use paths at the intersections. Here's a rendering of that area: you can see that the roadway ramp is removed, and we can create a larger parkland area with separated facilities leading up to the River Street Bridge.

The second alternative would keep a single lane of right-turn-only traffic onto River Street. There are more details on all of this in the document, but the main differences in order to maintain one-lane ramp are: less open space, needing to merging the separated multi-use path into a shared bike and pedestrian path sooner, and impacts to the shared use path crossings. The other important factor is that you can't have just a standard lane width, because it needs to be wide enough to accommodate emergency access. This means a 17' lane.

Here are the options side-by-side: if you completely eliminated the roadway, you could provide a 12' sidewalk, 7' landscape buffer, and a 12' bicycle path. As you get closer to River Street, it would provide a 16' shared use path with 18' of open space. In the second alternative, we only have room for a 12' shared use path. This is still about 3.5' wider than today, but considering the presence of vertical barriers on either side, it's not really a generous amount of space.

Now, I want to talk through the traffic numbers. Here are numbers for the morning peak and the evening peak in existing conditions. In the morning peak hour, there are 336 vehicles using the off-ramp today, with about 87 turning right. What we see is that the ramp is mainly used for left-turns to Cambridge Street to get to the I-90 ramps. Only about 26% of the traffic today makes

that right-turn, meaning just over one vehicle per minute. In the PM peak, we see 724 vehicles per hour, with 150 turning right—about 21%. Again, the majority of people are making the left-hand turn to get to Cambridge Street or the interchange.

In the future, all of that left and northbound through-traffic will use the interchange the way that we've built it, to get directly onto the Turnpike without having to use Cambridge Street. This is a big benefit to the intersection of Soldiers Field Road and River Street.

Another complication of keeping that right-turn lane is the conflict points between pedestrian and bikes, and the right-turning traffic. Even if it's not a huge number, it is still a conflict point. We're working with the City of Cambridge and looking through info we have received from Bill Deignan to compare those numbers to our counts. MassDOT and DCR have the completed Charles River Basin Pedestrian and Bike Study, from 2015. We replicated the numbers they found for the south bank of the middle basin area. In the weekday period, upwards of 300-400 pedestrians are making that crossing. That report gives a complete breakdown with multiple years of data, and I recommend people check it out. What that says is that the majority of the users are in the lower basin, with numbers a bit lower in the middle basin. They collected these counts using a two-hour peak, and saw similar numbers on the weekdays and on the weekend. The other important piece is that 50-60% of people are on bikes at that area of the path.

Overall, what we're trying to do is enhance the pedestrian and bike accommodations in the project. The street grid is comprised of Complete Streets, with various hierarchies of pedestrian and bike activities expected on each: the major one being a two-way shared use path leading to the river, without a traffic signal. This allows for wider paths and for more open space through 'the narrows'. We see that the number of people currently making the right hand turn is not large, and we know that today, it takes a very long time to make that right turn during rush hour—often 3-4 cycle lengths, meaning 300-400 seconds of delay.

With the reconfiguration, the interchange will be simplified, the signals re-timed and programmed to work together, and the left-turn traffic removed. Today, there are merging movements, with traffic crossing to and from the hotel, creating a very complicated situation. The reconfiguration gives us a chance to make everything work better. Traffic will get off Storrow/Soldiers Field Road, make a right turn going through this future intersection when it is built by Harvard, and turn right onto Cambridge Street.

This will be simpler and mean less delay than the existing conditions: we are estimating that it will take half as much time, even though the distance is longer, because 80% of the existing traffic is just taking that left turn, and we'll be pulling all of that out of this section. We know

that during the off-peak hours it doesn't take as long as during the rush, but there is such a big benefit to the non-motorized users that we determined it was preferred.

Q: **No Name Given:** Would that intersection be signalized?

A: **Eric Maki:** It would be, but that would allow it to run more efficiently, and we'd still have the pedestrian and bike crossing. When you pull out the left-turn, everything else works better, and we can reallocate signal time to pedestrian and to bikes.

Discussion

C: **Nate Cabral-Curtis:** Many of you already know how this process works. I'll read down the list, rolling the dice with the pronunciation of last names and asking your indulgence. Two things first: we know that there is a major snowstorm coming, so please do try to keep your comments topical and short, to make sure that everyone who wants to can go gas up and buy shovels tonight. Secondly, are there any elected officials present tonight who would like to speak?

Q: **No Name Given:** Have you thought at all about traffic and noise impacts from construction?

A: **Nate Cabral-Curtis:** I'm going to address this first and then turn it over to the elected officials. Right now, we're at a stage of just figuring out what we need to build. Only once that's settled would we get into detail on construction staging and how to make the construction process as painless as possible for people on both sides of the river. Based on my experience with other projects, there is a standard package of things that are likely to be used, and that will include working with the communities to designate truck routes and detours, as well as make use of other connections. For example, on the Fore River Bridge, we made use both of the waterway and the railroad. But all of that will be figured out later, once we know what we're building.

Q: **Representative Jay Livingstone, 8th Suffolk:** From the start of the project, I have heard consistent complaints about noise. I have not heard a lessening of the complaints since the tolls have come down. Those complaints are inconsistent with the consultants' noise analysis, and that inconsistency is why the City of Cambridge has hired their own consultant. Your consultant said that mitigation would be needed—what is the proposal for mitigation as part of this project?

A: **Jason Ross:** There is a noise limit, which triggers the need to consider mitigation. It does not mean that there is a requirement to implement mitigation, because of that matrix of safety-, cost-, and acoustical-effectiveness that I mentioned. Those criteria are from FHWA, and their intent is to create an even playing field for projects throughout the state and the country, to

assess whether mitigations are feasible, reasonable, and warranted. At Magazine Beach, all the three variations exceed those levels at the shoreline and within 100' or so, but as you get farther back, the levels no longer exceed the thresholds.

No mitigation is proposed along this section of the project, because those federal assessments show that it is not warranted. FHWA takes into account the land uses, and weights residential uses more heavily than parks. Honestly, it is difficult for parks to meet the cost-effectiveness thresholds for noise mitigation, from the federal perspective.

C: **Representative Livingstone:** My comment to MassDOT, then, is that there should be mitigations provided specifically for Cambridgeport.

C: **Jason Ross:** We certainly respect that comment. You might see some small differences among the variations in the DEIR—there is some consideration of small feature changes that may help improve the noise levels for some more or less than others. For instance, setting back Soldiers Field Road is not a noise wall, so it is not abatement from the federal perspective, but it will help and it will continue to be part of this process.

C: **Dennis Carlone, Cambridge City Council:** I am a Cambridge City Councilor and an urban designer & architect. The one thing that wasn't mentioned tonight is the elimination of West Station. This is unconscionable from an urban design point of view. Kendall Square needs that future access on the railroad Right-of-Way (ROW). If Harvard and Boston University are supposed to pay for part of the station, what does that mean? How does the City of Cambridge participate in making sure that happens? Putting it twenty years off is a joke. When you say "in 20 years' time", I know that that actually means 20 years more—same as what the MBTA told me with Lechmere Station.

This is the big issue for the region. Harvard and Boston University should participate, but it's ludicrous to throw it out of the project. To expect the station to come out 40 years later is a lack of planning and a lack of reality. The reality is, we are in an urban area, and we are solving one transportation problem while completely forgetting about the future. It is irresponsible, all the way up to the Governor. The MBTA doesn't have money; the T is still paying for MassDOT's work on the Big Dig. This is why the T needs to be paying for this station. I'm thrilled to hear Bill and Henrietta bring this up as our representatives. This will not end, it is just the beginning, and it is just disgusting that it is not a part of the project.

C: **Nate Cabral-Curtis:** Echoing what we've heard and said in Allston, these decisions are being made well beyond this room and this project. I urge you to include this in your comment letters.

C: Walter McDonald: I've lived across from the Turnpike for 30 years. I can't tell that there's a been difference between the eighteen-wheelers decompressing as they slow down—you lose track of them because the noise is so frequent that you can't hear it, but they're still there. There is no alternative that actually depresses the highway below-grade, as a way to take care of traffic noise. My main comment is about routing traffic off of Soldiers Field Road, and not having the right-hand turn lane. As I understood it, you counted 774 vehicles exiting from that ramp, and that 75% go to Allston and 25% go to Cambridge. But without that turn lane, those 744 vehicles will all be turning left and going through that one intersection. It will take a lot longer to get through that mess when the traffic queues up, so there is a hole in the analysis there.

C: Matt Carty: You were careful to point out early on that highway funds can't be used on pedestrian and bicycle facilities. I would point out that lots of the money from the General Fund goes towards vehicle roads. If we raised tolls on the Pike, this could pay more for itself, and the General Fund can pay for other pieces of the project. I hope that the cost estimates consider the total costs of ownership: paying for an elevated highway over 60 years means much more maintenance than either the at-grade or the rail viaduct. And lastly, air-brake noise for trucks happens because trucks have to go up and down a hill. I hope that was in the calculations.

Q: David Lund: My wife had to leave, but I think you largely answered our questions. I'll echo Walter. On the third floor, we open our windows in the summer, and we hear trucks just constantly. This is not from Memorial Drive, not Storrow Drive: it's the Turnpike. Our other comment was about whether or not you dealt with acceleration and deceleration, which you've discussed. My question is: which of the three alternatives presented is the quietest?

A: Jason Ross: That depends on where exactly you are. On the Paul Dudley White Path, 3K-HV is the quietest: the elevation of the highway provides acoustic shielding. On Magazine Beach, we're talking about an imperceptible 1-2 decibel difference, but 3K-HV is the quietest, and 3K-ABC is the loudest. That switches as you move through Cambridgeport, which has slightly quieter levels for 3K-AMP. But again, we're talking about one decibel: three is the minimum for perception.

C: Matti Klock: I've lived in Cambridge on Oxford Street for 10 years. I visit friends in Brookline, so I use the interchange a lot—mostly by bus, but also on bike and even on foot, which is really scary. In my time in Boston, I've seen many long-term improvements: the Silver Line, CharlieCards, accessible T stations, and all of Kendall Square. Here, we have a chance to build another Kendall Square. Instead we're making a good highway project that is not focused on other things. As a worker in Kendall Square, I know that we depend on transit to hire people. You should focus on transit, build West Station first, and allow for north/south bus connections.

C: Nate Cabral-Curtis: Bus connections were evaluated, per our ENF scope. I welcome you to say all of that in your comment letter. To speak to the bicycle concerns especially: Phase 1 includes all of the project's bike improvements, including the Franklin Street Bridge. Once that is done, you could come across the river, stay on a Cambridge Street that is a Complete Street, and use the cycle connection over the train tracks to get to Malvern Street and from there out to Packard's Corner. A combination of multimodal elements remain front-loaded for the project.

Q: Jameson Brown: I am a landscape architecture and urban planning student. My question is about the width of the streets that are provided. They all look to be four travel lanes, plus parking, and other features. Why are they being planned to be so wide, when we know that wide streets are more dangerous, create a worse environment for biking and walking, and encourage speeding?

A: Nate Cabral-Curtis: As noted, we are creating a lot of pedestrian and bicycle infrastructure. Cambridge Street is equipped with a median to break up the crossing for pedestrians. Today, there is lots of grade separation and an uncomfortable environment. If you get over the river today, you're going up a hill with cars accelerating at your back. In the future, that bridge goes away and you can cross at-grade. For the internal streets, we do have a lot of traffic to process coming out of the interchange, as well as to accommodate the potential development. The decision was made that rather than use grade-separation, we are going to create a street grid, with plenty of signalized intersections. We need to make sure that we can process and stack that traffic such that it doesn't leak back onto the mainline of the interchange. Eric, is that all fair?

A: Eric Maki: You got most of it. The biggest challenge with this project is that people seem to believe we're only building a new urban neighborhood. In reality, we're also maintaining an interchange that processes 60,000 vehicles every day, from a Turnpike that carries 150,000. So the question is: how do we transition from that condition down to urban streets? I like to use a plumbing analogy: if you're running pipe, you can't go from a 6" pipe to a 2" pipe; you have to step down, from 6" to 4" to 2". Similarly, we can just transition from a highway straight to neighborhood streets—nothing would work. We are charged to make the interchange work.

Right off the bat three years ago, we started by evaluating traditional ramp intersections, which we realized wouldn't work, so we looked at various ways to push them apart. Then we heard, "we don't want a suburban style interchange, we want an urban grid of streets that will stitch in the fabric of what's been missing in between these two neighborhoods." We're doing that, but we still have to maintain that traffic—and we're doing it by transitioning it onto a grid with multiple roadways. As Nate mentioned, we are also building the grid out as all Complete Streets—part of

the reason that they look so wide graphically is because we've included all the transportation pieces and amenities, including parking, landscape buffers, separated bike lanes, buffers, and sidewalks.

This grid is built the way you would build it if you could build a brand-new street. Unlike other streets in Boston where we're squeezing things in, we have the luxury of including everything. I encourage you all to zoom in on the .pdf—all of a sudden this looks like a very different street.

Lastly, this plan is the barebones for the operations of the interchange. It doesn't include all of the interstitial streets that will be built by the landowner, so many of the 'walking' streets that will be present aren't shown on this grid at all, even though Harvard expects to build them.

Q: No Name Given: When you say "interchange", what does that mean?

A: Eric Maki: It means the ramps leading to Cambridge Street. Today, those are the elevated roadways and ramps connecting from the Turnpike. It means the connections using Exits 18, 19, and 20, which connect you to Allston, Brighton, and Cambridge. Cambridge Street South is intended to pull some of that traffic—as with all the other roads.

Q: Cathy Zusy: How many lanes are there for cars?

A: Eric Maki: We show two lanes in each direction. This decision is founded on considering the seven million square feet of anticipated future development: as that builds out, you will have more and more pick-ups and drop-offs, driveways and other curb cuts which introduce turns—all of it means that the curbside lane is going to have friction that has to be dealt with.

Q: No Name Given: Does that include parking?

A: Eric Maki: Many of these streets don't have it set yet; some do. We don't have the landowner's plan. Like I said, this is the barebones and focused on the transportation, but it makes sure that we are providing the pedestrian and bike facilities as well as the interchange.

Q: No Name Given: How are you accounting for increases in the future?

A: Eric Maki: The "build out year", 2040, includes the impacts of that seven million square feet of development. The projection modeling for the future was done by the Central Transportation Planning Staff (CTPS), using the Boston MPO's Regional Travel Demand Model. That also includes everything else that is happening in the region, including development in Kendall, Harvard, Somerville, Charlestown, etc.

C: Renata von Tscharner, Charles River Conservancy: Thank you to MassDOT for listening to the Task Force and to those advocating for the three options. There has been great progress and the work is much appreciated. I want us to think about the Seaport and whether there are lessons to apply here to this project. I hope everyone writing letters will consider that.

The issue of not having West Station right at the beginning of the project is the biggest mistake that we are making, and missing out on a chance for a livable city[9]. Secondly, the BPDA did a Placemaking Study, and I want to include the point that the single most place-making element here is the Charles River. The river needs to be accessible from Brookline, from Boston University, and from Cambridge, and not all of the options allow the river to be accessed. Thirdly, you describe this project as multimodal, but it is much-too-much car-oriented. Bicycles are increasing along the river, and none of the three options along the throat allow for safe or attractive transportation by foot or by bike along the river. The Charles River Conservancy will include comments on these points.

Q: John MacDougall: I want to raise two broad issues having to do with transit. I do appreciate past speakers on the matter of West Station and I agree with their points. Specifically: if there a possibility of actually building a minimal West Station, with high-level platforms to accommodate people with disabilities as well as a basic elevator, it will save money and make the project more attractive to funders. Second, I want to talk about the broader assumptions behind the 2040 decision. There is a broader set of issues to look at transit holistically, and I don't know if is within the scope of this project. I have heard talk of brand-new bus routes with BU's cooperation. If true, that would lead into a whole issue about the ridership assumptions that were made, which seem to me to be inadequate. They indicate ridership that is way less than would actually happen, as we've seen with Boston Landing station. Is it within your scope to guarantee service on the Grand Junction Line which could connect West Station to North Station? And finally, could you address, as has been suggested by my friends at TransitMatters, the idea that instead of having layover, you could simply run revenue-producing trains through the Worcester line in the middle of the day, so they wouldn't have to layover in South Station or West Station? Some of those trains could even then go over North Station on the Grand Junction Line. How are those improvements addressed?

A: Nate Cabral-Curtis: Our plan with this project is to hold the Grand Junction Line as it exists, bringing a double-track out of West Station and coming into a tailing-point switch with a single track coming out of that and heading across the river. I can't speak to the MBTA's service

[9] Applause in the room.

planning, but I know the project already has a big enough price tag on it, without trying to add in a brand new service along the Grand Junction Line as well.

A: Mark Shamon: We could spend all night and more talking about this, but I'll take a stab at a few major points. First, on the Grand Junction Line: we've heard a lot about this, and we know that there is lots of interest in making that connection to the west and the south. Early on in the project, we determined that the Grand Junction Line was beyond the scope of MassDOT's interchange. Our approach is that we understand that, at some future day, a transit connection is likely over that bridge—whether it's Diesel Multiple Units (DMUs) or Electric Multiple Units (EMUs) or something else—but it is not a part of this contract. In the full-build scenario, we've provided a platform dedicated to that future Grand Junction Line service, and two tracks to eventually merge in with the Grand Junction Line into Cambridge. Those two tracks will run up to the bridges to get over the Charles River; whether that means that they'll meet the existing one-track bridge over Soldiers Field Road, or a new bridge, or the re-built bridge in 3K-AMP and 3K-ABC, which would have two tracks as part of the re-build. It also needs to be noted that the bridge over the Charles River itself would need a lot of upgrades, and that there would be lots of work in Cambridge to make a two-track Grand Junction Line service work.

The transit and bus modeling is all in Chapter 5, and in Appendix L, which is a technical memo that gets further into the modeling and the assumptions. I can run through those quickly: we modeled three potential Cambridge-to-West-Station routes, including the Longwood Medical Area (LMA). All were considered as new, shuttle-type routes, using MBTA-type buses, but not as extensions of existing MBTA service routes. We assumed a five-minute distance between buses, which is called headway, for the route between Harvard Square and West Station; five-minute headways for the route between Kendall Square and West Station; and ten-minute headways for the route from West Station to the LMA. I can show some of those numbers here. Understand that we don't make assumptions about these numbers: we gave CTPS the headway assumptions, and the model gave these results. What you see is, at West Station, the Commuter Rail ridership with those modeling assumptions is 250 riders daily. We know that that's controversial, and that Boston Landing is indicating higher, but we didn't fudge any numbers; this is the model we have.

C: No Name Given: But that model is absent any Grand Junction Line service.

C: Robert LaTrémouille: They also completely ignore Yawkey.

A: Mark Shamon: In the 2040 full-build, if you add the transit connection to Commonwealth Avenue, the model shows a reduction of some of the rail numbers but an increase in the bus

numbers: the Harvard Square shuttle shows 800 daily boardings; the Kendall Square shuttle shows 900; and the LMA shuttle shows 3,200 boardings.

C: Caroline Ducas, VHB: I would also clarify that the model uses different assumptions for peak and off-peak headways; the details are all in the DEIR.

C: Mark Shamon: Good point. The takeaway is that, with the model assuming a Malvern Street connection, you see a reduction in rail use at West Station, but increases in bus service. I'll be happy to stay later and discuss these in detail.

C: Laura Donahue: I have three quick points. I am a 30-year resident of Riverside, and a business owner in Harvard Square. There isn't much of a Riverside Neighborhood Association, like there is here, but I want to say that there has been very poor communication of information to Riverside; I just happen to be plugged in. Please work with the City Council to find a way to get information to us. And if not, would the Cambridgeport folks mind if we join your party?

C: Nate Cabral-Curtis: We can arrange briefings for any groups you know of or are a part of.

C: Laura Donahue: Thank you. Can I see a blow-up of the riverfront area? Does that diagram distinguish between public and private/institutionally-owned land, in terms of the maximum developable parkland space? My question is, is everything to the left of Storrow Drive assumed to be private, or is there any public space left? Somehow delineating that would be helpful.

Q: My second point is that I am one of that 25% who uses the River Street turn daily. I am very skeptical of anyone telling me that anything is that good for me. I've sat through many, many meetings with the Anderson Bridge, where the solution given was to tunnel underneath the bridge. Was an underpass like that considered at all here?

A: Nate Cabral-Curtis: I'm actually on that Anderson Bridge project, too, so I can speak to that. For one thing, I know that there are very different underground conditions on that bridge, and that there is space available at the Anderson that isn't available here. I would encourage you to put your concerns regarding the right-turn lane onto River Street into your comment letter.

C: Steve Miller: I want to repeat and support Dennis and others regarding West Station. The overall point for me is that if you don't build it, all of the development will occur with the assumption that people need cars. Even if the station is rudimentary now, the development could then bring people in who will want to use it. That changes the demographics and the culture of

the area and the needs for the secondary roads. It's not about how many will be boarding now; it's about how to create something that people can use.

My second point is about the Esplanade. In Chicago, where projects are subject to similar federal requirements, somehow the city has managed to build a large part of a path on cantilevered supports—which were actually designed and built by a Boston firm. Why can't we be that creative, without worrying about incurring a federal veto?

I understand that the Grand Junction Line is outside of the scope of this project; I would submit that it is really important to include analyses as you go forward with the project that assumes that it will be built, because it would change the dynamics of what is built here.[10]

One other thing that is outside the project scope but I hope you will include in your studies, which Fred Salvucci has been talking about for a while: it would change the vehicular dynamics if we built a new exit ramp for inbound traffic on the Turnpike, which would go outbound on St. Mary Street or Beacon Street. Right now, that section is six lanes of moving traffic with an intermittent side lane. If that side lane were used as an exit, you'd be able to pull cars off earlier, especially for people going to the LMA. I'd ask that you look at that option now or in the future.

C: Robin Pope: Why was my submission not taken into account? All of this is in denial of climate change. People should be only licensed to drive a private car one day per week. Then we could reduce the Turnpike to two lanes in each direction, keep the open space, build noise walls, and more. Of course, the Turnpike people would have to pay for not only the noise, which is damaging, but also, pollution, car accidents, and everything else. We should get all of the cars off of Memorial and Storrow Drives because they are a desecration of the Charles River. Everyone already has access from the existing side streets, and with a driver's license limiting people to driving their car one day per week, we would get the changes that are needed. Harvard, MIT, and BU should already have paid for lots of mass transit, and should have put in for this project. They have a whole lot of consultants on their campuses, and they are hiding behind being 'non-profit' to not contribute. I echo Robert LaTrémouille: Harvard shouldn't have the permission to build any of this. This project needs to change radically before it goes ahead.

C: Robert LaTrémouille: I want to echo some of the most recent comments; the lady who commented on the bad communication to Cambridge was exactly correct. The Development

[10] In the project development process, state transportation planning is primarily represented in the Long Range Transportation Plan (LRTP). Projects represented on the LRTP are included in CTPS models and planning processes. Passenger rail service on the Grand Junction Line—whether by DMU, EMU or other mode—is not represented on the LRTP within the time period covered by the project and the DEIR.

Department says that they need to talk to the people living near the river, but the transportation aspects concern the rest of Cambridge as well. I've heard lots about Grand Junction Line trains; those trains were originally killed by those people who lived away from the Charles River, because the Grand Junction Line would be a nightmare for streets all over the place.

Regarding River Street: I want thank you for implementing my idea, in spite of the fact that I had to fight to find out when the Boston meetings were: I suggested killing the left-turn on that ramp. The numbers for the right turns are artificially deflated because people cannot get onto that ramp because of all the people making the left. The right-turn numbers would be much larger otherwise. Mid-Cambridge, North Cambridge, and Riverside would all be affected. The only people in Cambridgeport who use that turn are within a block. My suggestion is that you talk to the City Council, and put this issue onto City television.

The removal of West Station is correct—in fact, I'd remove it from the project completely, because it's silly. The numbers are showing support for people using in from the LMA which is a half-mile from Yawkey. Who would be stupid enough to run buses from West Station to the LMA? You just go to Yawkey, and walk right down the street. It would be silly! The neighbors in Allston have been yelling at you about killing West Station only because you're saying that it provides a transportation benefit, but the Commuter Rail is nonsense and it doesn't help Allston.

Instead, you should provide a Green Line spur from the Boston University and Commonwealth Avenue Bridges to Harvard Medical and Harvard Square. This would have a great number of advantages for people living there, as well as improvements for the Red Line because those folks could also use the new Green Line spur. I hope that you will consider these suggestions. Also, open space on cantilevers is already in the project plan: 3K-ABC puts open space over the Charles River and thereby destroys the banks of the river.

C: Steve Kaiser: I live on Hamilton Street. I've reviewed this staggering report as much as I have been able to this point. Other readers have my sympathies. The first page of the document says that this is a multimodal project, which is a good idea. The problem is that the transit system that they are proposing fails. The more I read, the more dismal the transit system appears to be.

Appendix A includes an analysis of running the Commuter Rail from West Station to North Station, which simply says "we can't do it, there is no capacity for trains at North Station." So why are we talking about it at all, if connection is undoable? The analysis should have studied the Grand Junction Line, and the fact that didn't means there is a big hole in the program. The MBTA wanted the ability to store 20 trains in Allston, and the plans provide only for eight. So, what transit program do you have for the next 20 years? A bus shuttle from Harvard Square to

Allston. That's it. There is no coherent transit plan. Where are the transit planners on this project? The MBTA doesn't even have a Transit office; we know that we can't blame the highway guys. But this is worse than Scheme Z, for anyone who remembers that.[11] We need a better plan, and I know that I'll be spending the next 2-3 weeks trying to come up with one.

Including breakdown lanes on the Turnpike viaduct widens the road, speeds up traffic, creates more noise, and takes from parkland. It is very doubtful that breakdown lanes would make any improvements to safety.

I want to find out how much land Harvard has – is it 135, 141, 150 acres? The DEIR suggests at one point that development could be 20 million square feet. We have to plan for that and Harvard has to do that. That is three times the size of Kendall Square. Without a transit plan, this place will be bombarded by traffic. We are in a bad hole here, and it's not these guys in the room who have created it: this is the best highway job that they could build.

I will continue to assess and will submit my comments by February 9. I'm sorry to be so pessimistic, but I want to conclude on a positive note: we in Cambridgeport have been through a lot in the past 50 years. The last Highway Department project that we've had was the Inner Belt, and back then, they would have just bombed us—1,500 housing units would have been lost, and there would have been zero neighborhood discussion. Now, this highway project contains none of that. This is a tremendous achievement, and there are tremendous opportunities here.

Q: **Susanne Rasmussen:** I have some very specific noise questions. First, how did you model the noise impacts of an elevated train viaduct? A vehicle viaduct has a constant stream of cars which means uninterrupted noise, but the trains would only be two or three per day across the river, which means intermittent noise. Does the noise scenario assume some level of future transit on that line? Second, I believe that you said that on the upper story receptors, some places exceeded the noise thresholds, but that there is no mitigation proposed there. Third, can you pull up page 3 of the presentation; you went quickly through the last bullet. Can you speak more to that?

A: **Jason Ross:** Going point-by-point: first, yes, train noise is different than highway noise. This was a multimodal noise model, using both FHWA roadway and FTA train noise models. We look at both one-hour and 24-hour metrics, and take into account exposure over those periods.

[11] "Scheme Z" refers to one variant studied as part of the Central Artery/Tunnel Project, to connect the Tobin Bridge to a crossing of the Charles River via a stacked highway ramp configuration, chosen by then-Secretary of Transportation Fred Salvucci. The City of Cambridge sued to revoke the project's environmental certificate, citing visual impacts to the Charles River. The connection was ultimately re-designed as the Leonard P. Zakim Bunker Hill Memorial Bridge.

Roadway noise changes throughout the day but is relatively constant. The 24-hour metric is an energy average of noise exposure. The hourly-equivalent sound level is known as Leq(h) and the day-night sound level is known as Ldn. The 24-hour metric also integrates a 10 decibel difference at night, recognizing that at night, people are more sensitive to noise levels.[12]

Q: Susanne Rasmussen: How many trains were you assuming?

A: Jason Ross: The model focuses on the design year conditions where we expect it to be the loudest that it will be within the project window, and it included predictions of trains that are slightly greater than existing conditions; I think the number was 1-2 more daily.

A: Jason Ross: Secondly, to the point of noise along Memorial Drive. 808 Memorial Drive is a series of 10-15 story condominium buildings, including outdoor balconies. Those do have noise levels exceeding those criteria. That cannot be feasibly addressed by noise walls along the Turnpike or Memorial Drive: you'd have to block the line-of-sight to the upper floor receptors, and there are curb cuts for existing uses including the gas stations. There is no exceeding elsewhere in Cambridgeport at upper-floor receptors. The noise is a few decibels higher, but still 10 decibels below thresholds. Noise impacts stay mostly within a few hundred feet of highways.

We evaluated numerous options and designs for noise barriers. Those evaluations look at the cost, and whether there are benefits of 5 decibels or more of impact, in order to get the cost effectiveness index. The results for these noise barriers show that they would be 10 or 100 times over the criteria for being considered effective. They would have to be extremely long, extending along the entire length of the project from River Street to the Boston University Bridge, and the details I already discussed mean that they are not feasible.

Q: James Williamson: That building that was just mentioned prompts me to wonder something. 808 and 812 Memorial Drive include affordable housing. Is there an Environmental Justice (EJ) dimension to the noise impact question that was just asked? If not, more generally, what are the EJ dimensions to this document? You can be brief, if possible.

A: Jason Ross: I contributed to that section, but no means did I write all of it. Many areas throughout the project area are EJ areas. As you look at any on specific noise area, EJ is not a

[12] Further reading for those interested in FHWA's noise analyses formulas: see FHWA Analysis and Abatement Guidance, Appendix A: Highway Traffic Noise Analysis Process, for a summary of the FHWA approach to highway and rail noise.
https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/analysis_and_abatement_guidance/polguide03.cfm

direct factor in those cost effectiveness matrices. EJ analysis looks at disproportionate impacts for EJ areas versus non-EJ areas, but most of the area is, so there's not a major difference.

A: Mark Shamon: Section 5.23 of the DEIR includes that information.

Q: James Williamson: Thank you. First, regarding the issue of highway funds: I think we should also think about the fact that this is a legislative issue. We have legislators here tonight: the legislature could change that restriction by freeing up toll revenue. I would commend to my legislators that possibility, to examine the issue of using highway money for public transit, so that we can do a better job on this project while we still can.

Second, on West Station: I'm not sure how many others saw this, but there was a front page article about this issue in the Boston Globe, about how suddenly and as a big surprise to everyone, West Station disappeared from the project. I want to echo the earlier comments, and say how big of a mistake this is. When the Silver Line was completed, the numbers that were used as projections of future development, which was probably the same FHWA analysis, determined the expenditures on the Silver Line. But that didn't allow for any projection for future development in the Seaport, so there was not enough money present to build a Silver Line running underground all the way to the airport. That's why you come above ground, making that weird loop. Now, years later, and at a much greater cost, we are building the tunnel, but that original formula didn't allow for it. I'm from Delaware originally, and the Delaware Memorial Bridge is one of the largest in the world. When it was built, they didn't account for future vehicular traffic, but they couldn't build another ramp beneath. They ended up having to go side-by-side with another. The lesson is that including the future in your considerations is important and will ultimately be cost-effective.

Regarding Kendall Square. The Grand Junction Line is important to Cambridge especially because of Kendall Square. Sometimes you have to wait for three Red Line trains during crush hour. Secretary Pollack, before she was Secretary, coordinated a study that said that the Red Line was at or over capacity at Kendall Square. The whole idea of West Station and of the Grand Junction Line connection is to relieve some of the pressure at Kendall Square so that the development that the Planning Board keeps green-lighting has the transportation infrastructure to support it. West Station is a crucial part of relieving that pressure, to allow the development, to allow jobs, to allow tax revenue, to allow economic growth. Whether or not there is a specific plan right now for Grand Junction Line service, West Station is still important.

In the Boston Globe article, Secretary Pollack says that Boston Landing exists and therefore West Station isn't needed. But Boston Landing doesn't link to the Grand Junction Line. I also

believe that it is unfair to refer to Ari as the 'Amateur Planner.' He is a graduate student in transportation at MIT, and he helped solve a problem that the T had related to the meet-up of the last train and the last bus. He is doing a better job than some of the so-called professionals. His ideas and work have been admirable even if I don't agree with all of it.

Q: Moving onto specific questions. First, regarding River Street: you've talked about traffic coming from the east. What about traffic coming from the other direction, was that part of the analysis? Second, could you be more specific about the extra costs for building the viaduct versus the other alternatives? Third, regarding the left-turn just past the throat coming along the new section. What's happening there with all the traffic that would otherwise be headed to TP or Cambridge? Would all the traffic that would otherwise be headed to the Turnpike or to Cambridge be taking the left turn through that first block? Is some of that is in a left-lane, and some in the right-lane? Finally, I agree with Steve Kaiser regarding the tyranny of the highway lobby, and the insistence on having breakdown lanes where they are not needed.

A: Nate Cabral-Curtis: Today, making this movement coming off of Soldiers Field Road, people can go straight, but most will go left to access Cambridge or the ramps, with the remainder turning right into Cambridge. In the future, the through-movement for Soldiers Field Road drops into the depressed 'boat' section. For those headed to the Turnpike, there will be a dedicated left-turn lane. For those headed to Cambridge, there will be a dedicated right-turn lane and then you turn right twice, to get to the River Street Bridge.

A: Eric Maki: This set-up takes into consideration the amount of storage that is present for the multi-lane sections. We are both replicating the existing movements and adding more movements: we are not trying to create another bottleneck point.

Q: James Williamson: How does that works for cars coming from the north?

A: Eric Maki: Vehicles can still come from the north. It's possible that we will be able to reduce the lanes—it's currently very wide. From Western Avenue, you'd be able to use the other north/south streets to get to the interchange, like Cattle and East Drives.

Q: James Williamson: Right now, if you are turning left coming from north, that turn is in conflict with the ramp traffic. Is that going to be addressed?

A: Eric Maki: Yes, if we eliminate that ramp completely, like in the Preferred Alternative.

C: James Williamson: That sounds like a real plus.

C: Eric Maki: As a traffic guy, I think it's a huge plus. We're pulling traffic onto the Turnpike earlier, which gets it off of Cambridge Street, which is a big help to placemaking.

Q: James Williamson: Thanks. Can you explain, as best you can, why West Station got dropped?

A: Eric Maki: As a project team member, I want to make the point that West Station is fully integrated into the project in all of our studies. The ramps to access it, the pedestrian and bike connections, the structures that will be required: it's all in there. As Nate mentioned, there are higher powers that are looking at the questions of funding, staging, and phasing, but West Station is in the project. We're just anticipating that we need to react to those realities.

A: Nate Cabral-Curtis: We've seen many people use the term "dropped" in their concerns about the station. It is expected to be later, but it's not dropped. It's in the DEIR and it is in the project.

C: Carol O'Hare: I have some Cambridgeport-related questions. I am concerned that so much of this very important project has been devoted to traffic issues on the other side of the river. I too have been trying to get Riverside notified of these meetings, but the City of Cambridge hasn't helped one bit. This is very upsetting because Riverside will be equally impacted by this project.

You said that there will be no noise walls. That is absurd. Even if the revised roadways would not exacerbate the noise conditions, MassDOT is improving the roadways, and doing all kinds of things on the other side of the river to parkland and for the new Allston neighborhood, and to improve transportation (except for West Station). But somehow the economics don't work out to install noise barriers for us, even though all the other improvements will be made. And even that assumes that what the noise consultants have said is right in the first place. Whatever the jargon suggests, when this highway is restored, we need to be allowed to have what Newton and all the other suburbs have gotten even without reconstructing the roadways. At least 5-7 years of construction noise, which won't be barrier-ed, entitles us to noise barriers on the new roadway.

Regarding the non-right-turn, I understand that there are 400-500 pedestrians and cyclists per day who will benefit with a wider pathway, but it would only be 4' wider.

C: Eric Maki: The existing path is 8.5', and will widen to 16' for a total distance of about 1,500'.

Q: Carol O'Hare: Well for that 1,500', we in Cambridge will have to take three new lights, which could cause all kinds of pollution and delay. Many people will use Memorial Drive instead. Has anyone done any analysis of Memorial Drive at all? What happens to it because that right turn

has been eliminated in order to improve life for 1,500' for 400 people? We haven't even heard Memorial Drive mentioned once in this project.

A: Nate Cabral-Curtis: We have to work within our project area, which doesn't include Memorial Drive, but those intersections within the project area have been analyzed, and discussed both within the team and with Cambridge city staff. The full regional traffic model used by CTPS does include Memorial Drive and all the other streets in the area in its analyses.

C: Brad Bellows: I am a 35-year Riverside resident. Thanks to the team for your patience in staying this long. It pains me to say that I share Steve Kaiser's view that this project falls far short of living up to incredible opportunity to develop a new district that will be home for millions of people over the next century. I think we've gotten too sucked into the details, though I commend all of you who've worked so hard to analyze things to the *n*th degree, and I commend your interest in improving the streetscape for bikes and pedestrians. But if you take a step back out of the details, what you see is a 1950s-era transportation project, by the amount of real estate being devoted to transportation uses. Instead of a waterfront area with a great park system, we're parking trains and leaving open highways. There has been no analysis of the opportunity costs of devoting this much valuable property to these uses in perpetuity. There has been only a cursory analysis of a tunnel, or of stacking all these uses.

Boston is great because of the vision and wisdom of prior generations, which integrated transportation decisions with public space and long-term value. They made some tough choices that we benefit from today. They also fell short in the park system in the throat area, the missing piece between River Street and the BU Bridge. They couldn't solve that problem, but now we'll come back and put back a viaduct, but not fix that mistake? This is the great treasure of Boston, radiating value in all directions. We need a much more careful economic analysis of the opportunity costs and ways to capture value. I appreciate what's being done on Soldiers Field Road, including depressing Storrow and restoring what was a minimal and isolated connection. But if we could depress even more of the road, there could be more seamless connections of parkland. Spending $1 billion to put back a 1960s vision is ridiculous. Governor Baker allowed this project to go forward, and to be run by a cash-strapped agency. The scope was never big enough to be commensurate to the task. This project needs to be rethought and reframed to be more economically intelligent than this "pennywise, pound-foolish" approach.

C: Nate Cabral-Curtis: Thank you. If you haven't yet, please do read the minutes and presentations from the BPDA Placemaking Study as well, which speak to those points.

Q: Ari Ofsevit, LivableStreets: I have three or four questions, and I'll try to go through quickly.

First, for the various options, were total lifecycle costs analyzed in the document?

A: Nate Cabral-Curtis: No, lifecycle costs were not analyzed.

Q: James Williamson: Can you explain what you mean by lifecycle?

A: Ari Ofsevit: Basically, "what does the option cost over the whole time the infrastructure exists?"

Q: Ari Ofsevit: Second, I understand that the no-build has something like a 30-35 year lifespan. Can you confirm that, and how long would the lifespan be for the other options? I ask because I think an at-grade would be more-or-less indefinite, wouldn't it, once you put it out there?

A: Mike O'Dowd: It would be roughly 75 to 100 years for the build-scenario viaduct options. In terms of structure replacement, 'indefinite' is more-or-less accurate for at-grade. All would require routine maintenance and surface/deck replacement.

Q: Ari Ofsevit: Did you model routes for shuttles, and what were they?

A: Mark Shamon: The CTPS does include some basic routing. We're still working with them to get the exact routes they used, but generally speaking: Massachusetts Avenue for the LMA shuttle, Stadium Way from West Station up to North Harvard Street to get to Harvard Square, and Western Avenue for the Kendal Square shuttle.

Q: Ari Ofsevit: In the staging diagram for 3K-ABC, it shows lots of temporary ramps. It seems like those are the same in the Beacon Park Yard area that also show up in the HV plan. Was there any consideration given to different ways to reduce the number of those temporary ramps, and the cost-effectiveness of doing so?

A: Jim Keller, Tetra Tech: We looked at a bunch of different options. Within the interchange area, the staging is similar for all the alternatives. For 3K-ABC, you need a temporary viaduct because you're removing the viaduct in order to go at-grade. There wouldn't be many opportunities to remove the temporary ramps, other than what is shown. As the design continues to progress, some ability to refine those may become apparent.

Q: Ari Ofsevit: I know I'm focusing a lot on 3K-ABC instead of 3K-AMP; I have other questions about the AMP but for the sake of time will limit them here. Looking between 3K-ABC and 3K-HV, the viaduct in 3K-HV is built, generally, "north then south then middle", but the 3K-ABC is built "north to south". How was that difference developed?

A: Jim Keller: We could go very far into detail: there was lots of thought put into it. The workshops would be a great venue to dive deeper into this with you.

Q: Ari Ofsevit: Okay. Lastly, the document quoted 900 riders on the West Station to Kendall Square shuttle, but you're only showing an increase of 200 passengers on the Commuter Rail at West Station. Where are those extra 700 coming from if not from West Station?

A: Caroline Ducas: Not everyone getting on that shuttle from West Station will be coming from the Commuter Rail. Also, the proposed shuttle from West Station to Kendall Square will include additional stops. That 900 is total route ridership, including stops at Central Square and in Barry's Corner.

C: Ari Ofsevit: But that 200 people number does includes all of the Commuter Rail riders from West Station. So if we've seen 500 people daily at Boston Landing, with 10x as much space here as there, we can assume that that will be higher.

Q: Robert LaTrémouille: What are these workshops that you mentioned?

A: Nate Cabral-Curtis: Our Task Force members each represent various constituencies, and one of the responsibilities they are expected to take on is to help those people write their own comment letters. So, for example, if I'm Henrietta's neighbor, I should be able to ask her for some help writing my letter. To aid them in that, we have held a Task Force meeting and a technical workshop at the Fiorentino Commuter Center, and we have one more workshop next week. Those are intended to give Task Force members an opportunity to come in and say "my constituents are asking me this and this about the project, how do I answer it for them?"

Q: Robert LaTrémouille: Day and time for that that workshop?

A: Nate Cabral-Curtis: It is on January 11th, from 3-5pm at the Fiorentino Center. While it will be open to the public, priority will be given to the Task Force first so they can ask questions. Similarly, we hold these public meetings first for members of the public to ask questions.

C: Cathy Zusy: Thank you all for coming, and again, please come back next Wednesday!

Next Steps

The final Task Force technical workshop session was held on January 11, 2018. Public meetings for the DEIR comment period have concluded, as of this writing. Comments are due by the end of

business on February 9, 2018. Thereafter, the Executive Office of Energy and Environmental Affairs will review comments from coordinating agencies and the public, in order to formulate and deliver a scope to MassDOT for the Final Environmental Impact Report.

Appendix 1: Meeting Attendees

First Name	Last Name	Affiliation
Brad	Bellows	
Sally	Benbasset	
Jameson	Brown	
Norman	Brown	Bayside Engineering
Sam	Burgess	
Nate	Cabral-Curtis	Howard Stein Hudson
Chris	Calnan	TetraTech
Ken	Carson	
Matt	Carty	Community Member
Kate	Chang	Representative Capuano
Colleen	Clark	
Mike	Connolly	MA House of Representatives
Julie	Craven	
Allison	Crump	
Daniel	Curtis	
Donny	Dailey	MassDOT Government Affairs
Jan	Davareux	Cambridge City Council
Bill	Deignan	
Jeff	Dietrich	Howard Stein Hudson
Laura	Donohue	
Sif	Ericsson	
Tamara	Etingen	
Pam	Ferrante	
Mark	Fobert	TetraTech
Debby	Galef	

First Name	Last Name	Affiliation
Katherine	Gamble	
Richard	Garver	
David-Marc	Goldstein	Brookline Town Meeting Precinct 8, AC
Rhoda	Goodwin	
Carolyn	Goodwin	
Marcell	Graeff	
Ryan	Grams	
Karl	Haglund	Department of Conservation and Recreation
Michael	Higgins	
Heather	Hoffman	
John	Hostage	
Stephen	Kaiser	
Maurice	Keane	
Brendan	Keegan	
Jim	Keller	TetraTech
Matti	Klock	
David	Kroop	Resident
John	Kyper	Sierra Club
Annette	LaMund	
Wendy	Landman	WalkBoston
Robert	LaTremouille	Friends of the White Geese
Rochelle	LaTremouille	
Liz	Leary	Boston University
Alex	Levering	
Jay	Livingstone	MA House of Representatives
David	Lund	
Peter	Lupetsky	
Peggy	Lynch	
John	MacDougall	
Marty	Mauzy	

First Name	Last Name	Affiliation
Walter	McDonald	
Andrew	McFarland	LivableStreets Alliance
Mark	McGovern	City of Cambridge
Steve	Miller	LivableStreets Alliance
Tom	Nally	A Better City
Judith	Nathans	
Lucien	Neisbrod	
Sara	Nelson	
Robin	Pope	
Jan	Puibello	
Robyn	Reed	CRC
Yolanda	Rodriguez	
Lester	Sackett	
Nita	Sembrowich	Riverside Neighborhood Group
Jay	Shetterly	Cambridgeport Neighborhood Association
Frank	Shirley	
Mike	Small	
David	Solomon	
Bill	Sterritt	CDM Smith
Renata	von Tscharner	Charles River Conservancy
Andrea	Williams	
James	Williamson	
Jack	Wofford	
Fred	Yalouris	
Jason	Zogg	Cambridge Redevelopment Authority
Quinton	Zondonovan	Cambridge City Council
Cathy	Zusy	CNA

Appendix 2

"Worksheet for the Draft EIR I-90", prepared and distributed by Henrietta Davis.

WORKSHEET FOR THE DRAFT EIR I-90

	DOT RESPONSE RECEIVED	BENEFITS	PROBLEMS	COMMENTS
Support for an integrated, balanced transportation system	yes	yes, but delayed by 20 years	yes, but delayed by 20 years	Cambridge needs to advocate for transit
Access retained to Cambridge from Soldiers Field Road	yes	yes	Not fully explored in the DEIR	Cambridge needs to advocate for this access
Access on and off the Mass Turnpike	no	no	Further study needed	Cambridge needs to press for continued access
Issues with Western Ave and River Street	no	no	Further study needed	Cambridge needs to press MassDot for the study
The Throat design:				
visual	no	?	?	?
noise	yes	no	yes	The city is contracting with a noise consultant
access	?	?		Need more information relative to the Grand Junction railroad
construction impacts	?	?	yes	Need more information about phasing
parkland	yes	?		
Parklands and pathways	yes	yes (minimal)		Expansion of pathways and bikeways is heading in the right direction
Construction impacts: noise and traffic	yes	no	Further study needed	Protect Cambridge roadways from being overwhelmed

Appendix 3

Received written comments of Steve Kaiser.

PRELIMINARY ASSESSMENT OF THE I-90 DRAFT EIR

1* The cover of the report says it is a multimodal plan. This is an excellent objective, but the report is primarily focused on roads. The transit plan is incomplete. Planning for pedestrians and bikes is minimal. The Draft EIR includes a bike and pedestrian count that was made two years ago, in the middle of December. Counts were very low. Please use the September 2011 MassDOT pedestrian counts, which also include bike trips on the riverfront paths.

2* The highway plans need to be fine-tuned to remove unnecessary lanes and reduce the width of roads to become closer to a community scale. New design alternatives are needed for the rail yard area -- to provide for roads, West Station, commuter rail train storage and maintenance in a balanced package. I will propose alternatives in two to three weeks.

3* Appendix A of the DEIR contains a stunning technical analysis (May 31, 2017; pages 101-111.) The conclusion is that any additional commuter rail service to North Station is not feasible during peak hours, because of capacity limits set by platforms at North Station. Plans for Grand Junction service are clearly inadequate. Commuter rail service in the Grand Junction corridor should be dropped. Instead, alternatives to be considered should be Green-Line type train service or buses.

4* In 2014 the MassDOT plan for South Station, the MBTA wanted ten storage tracks for twenty layover trains at the Beacon Yards. The preferred plan in the DEIR shows storage for only eight trains. Therefore, storage for commuter rail is short by twelve trains.

4* At the moment, with no West Station until 2040, and no workable plans for Grand Junction, we are completely without any transit plan except for a Harvard shuttle bus from Harvard Square. The possibilities of creating a new neighborhood in Boston remain intriguing. Good transit planning should be part of that new neighborhood, but the DEIR does not do its job to bring that goal closer.

6* The project will not take any homes nor will it slice through established neighborhoods (as the proposed proposed Inner Belt highway of 50 years ago would have done). There do not appear to be significant wetlands and tidelands impacts.

7* All alternatives for the "Throat" area show the present scale of highway structures with be maintained or increased. The 3K HV series of viaduct variations shows numerous ways of adding breakdown lanes. Additional breakdown lanes would result in a taking of DCR parkland within the Charles River Reservation and National Historic District. Section 4(f) and Article 97 issues must be addressed for any such parkland takings. The most extreme widening in the HV series would increase the number of lanes on the viaduct from the existing eight lanes -- to twelve lanes, resulting in a 50-foot parkland taking for the length of the throat area.

8* The alleged reason for adding breakdown lanes is to seek full or partial conformity with national design standards for Interstate roads, supposedly in the interests of safety. I believe that any net safety benefits are doubtful. The extra lanes could increase speeds and accidents elsewhere along the Turnpike.

9* The DEIR includes no alternatives that would reduce viaduct size. The ABC plan comes closest by providing for eight lanes at-grade. Additional alternatives are needed for the Turnpike Throat area, in order to preserve parkland and also to provide visual shielding against the elevated structures proposed as part of several Throat area plans.

10* One reduced expressway option not studied is rebuilding at six-lanes to meet the capacity demands, at a lower speed. Could the space of the two removed lanes by used for transit service within the 1-90 corridor -- extending to the Seaport District to the east and Newton to the west?

11* The total land area for full Harvard build-out should be identified. I have seen figures of 135, 139, 141 and 150 acres to represent Harvard ownership in Allston.

12* Data from CTPS trip estimates suggests that the total build-out of Harvard's Allston properties could be a growth of 20 million square feet in new development. This figure is three times the amount of new development growth now anticipated for Kendall Square, which is also served directly by the Red Line. The FEIR should show the total amount of new trip generation and its distribution

to roads and streets within the North Allston study area, as well as the need for better transit.

13* The MEPA scope did not specify a study area and intersections to be studied. Additional streets to be considered in the FEIR should be Putnam Avenue in Cambridge, and both ends of the Boston University Bridge. Counts and capacities on the Turnpike as a functioning unit should be included between Copley Square and West Newton.

Technical

14* The use of Highway Capacity Manual methods and its related Synchro model both lack validation. Special concerns about calculations of capacity are : permissive left turns, progression factors, short lanes, lost time and the effect of queuing and signal cycles on capacity. Capacity calculations in Appendix C were done with Synchro Model version 8 for existing conditions. Switching the model to Synchro version 9 for the future years 2025 and 2040 is highly questionable practice. Some of the differences in future vs. present traffic conditions may be due to modeling changes and in particular to the way pedestrian time is treated in the 2010 HCM compared to the year 2000 version. If HCM 2010 does not allow for pedestrian exclusive phases, Synchro 9 should not be used for any calculations. The use of a six-second WALK phase at Harvard Avenue in the future also violates the timing minimums set by the Manual on Uniform Traffic Control Devices.

Prepared by Stephen Kaiser
Hamilton Street
Cambridge

Appendix 4

Received written comments of Robin Pope.

Submission on I-90 Allston Interchange Project and South Station Expansion

*within an Environmentally Responsible Plan for inside route 128**

to help conform to

THE MASSACHUSETTS HEALTHY TRANSPORTATION COMPACT

by
Dr Robin Pope

575 Memorial Drive, Cambridge MA 02139

May 26, 2017

To: MassDot

Nathaniel Curtis,
Howard/Stein-Hudson, Public Involvement Specialist
Tel: (617)482-7080 x236
Email: ncabral-curtis@hshassoc.com

Stephanie Pollack
Secretary & Chief Executive Officer, Department of Transportation
stephanie.pollack@state.ma.us

Patricia Leavenworth,
PE, MassDOT, Chief Engineer
10 Park Plaza, Boston, MA, 02116
Attn: Bridge Project Management – Project File No. 606475

Mr. Steve Woelfel
South Station Expansion Project Manager
Deputy Director,
MassDOT Office of Transportation Planning
Email: steve.woelfel@state.ma.us

Dear Nathaniel, Patricia, Stephanie, and Steve, and through you four, MassDot

I have appreciated, Nate, your concern and openness in holding public meetings, and attending those held by others, and feel your concern and your courtesy, including to myself. This state, this country, and the planet are at a cross road. You are in a pivotal position to get us the right path. The below is to assist this by placing before you the wider matters in your stewardship of how people travel and live.

It points you also to some funding issues for non-profits such as private universities. These house for profit professors earning consulting fees, and benefit from their employees being able to travel without paying taxes to help fund MassDot. Institutions of higher education have obligations to aid you in your Massachusetts Healthy Transportation Compact, not play the devil, adding to bad health and non-sustainability in how they have grown as mini cities within this Commonwealth.

I ask that you pass my submission on to the governor and the legislature, as well as acting on it yourselves.

Background: The National Institute of Medicine attributes the US's lousy longevity record compared to other rich countries first and foremost to its over-use of automobiles. Through excess use of vehicles, especially 1-person cars, Massachusetts residents: die sooner, suffer unnecessary mental and physical illness through traffic accidents, traffic pollution unable to enjoy nature and being face-to-face with others or exercising their limbs since spending so much of each date sitting in front of their car wheels. Insufficiently physically and socially challenged, Massachusetts residents are less happy, produce less efficiently produce; create an anti-social, polarized society; and contribute to climate damage.

To help fulfil the Massachusetts Healthy Transportation Compact, MassDot's plans for the I-90 Allston Interchange Project need to assist in having, in all societal strata, far fewer travelers going by car to work and events. This amounts to a revolution for we are in a war for our health and our planet. The changes proposed below are dramatic. Yet unlike the typical changes brought about by wars, these changes are with *immediate* benefits locally, and beyond Massachusetts. The revolution can happen inside a year, from MassDot taking initiatives that rapidly get miles travelled on average halved, and far more of that travel done by walking, running, cycling or using public transport.

People cannot make the changes to this by themselves, much as many want it ardently. It needs coo-ordination, with you MassDot, a natural lead coordinator

Methods I advise including the following. Not all are directly in your MassDot jurisdiction, hence my request that you pass my submission on to the governor and the legislature as the three bodies combined can make the package more effective. If you turn out to be limited to those only in your direct jurisdiction, that alone can help much in your fulfilling the Massachusetts Healthy Transportation Compact.

a) Impose heavy penalties on institutions –including non-profits like universities, who fail to decentralize having enough space in their current buildings for a proportion of employees to live on site – including an adequate proportion of their employees (or sub-sub-sub-contractors) who are at the bottom end economically to assist in reversing some of the extreme inequality that has arisen since 1970 in Massachusetts. Require the conversion of much current parking space to bike storage, showers for those running or cycling to the office, lockers in which runners and bikers keep clothes for getting in and out of their office attire, as well as the conversion of some of those parking garages into residential accommodation, with their top floors green space.

   Achieving this requires businesses, governments and non-profits to turn roughly half of each office block into residential, and exporting outside the seaward side of the 128 route, that half their downtown office space converted into being residential. This will be relatively simple since many who presently commute downtown from the hinterland have unused rooms in their suburban houses which they would gladly convert to office use, with some who live nearby joining them, and will be pleased to only go their downtown office one or two days a week. There will be other delighted to live downtown instead of the lengthy daily commutes in from the suburbs, and quite a few of these will be ready to have the residential conversion extent of erstwhile office modest – no more than showers

getting installed somewhere, and plugging in an electric cooker for their food. Many may discover it a healthier lifestyle to revert to medieval world heritage Porto in Portugal where the toilet, bathing and washing blocks are external – in this reconfiguration in floors of that office block's parking space where with the reduced number of cars, less than a quarter are needed now for cars.

b) More than double capacity on public transport, in a few months by more frequent services, in half a year by adding new routes for buses and in the longer term new routes for trams including h), j), m) and n) below. Even before capacity on public transport has been doubled, use a number-plate allocation and other rules to reduce vehicular traffic to about a quarter, and concomitantly by more than doubling car occupancy rates. The incentive to double occupants per car is a limit on when cars can penetrate the 128 route. This limit not only incites use of public transport but carpooling. Allow cars only inside the 128 route 1-day a week, eg car plates A-E Monday, F-G Tuesday etc; with other rules limiting other sorts of private vehicles (vans, trucks and so forth). Comparable limits on access days should be imposed by number plate on cars from other states. In so doing, Boston is catching up on what wise cities have done for decades in limiting car access to congested areas. On carpooling, with the internet, less than a month would be needed for each council to set up sites for its residents to find others living close enough for work or special events inside route 128, and in addition private firms would sprout offering to put those seeking to travel in touch with others going at a similar time to a similar spot. The combination of more public transport capacity and restrictions on when each car number plate can cross route 128 getting car traffic down to about a quarter of what it is now would cut the atrocious time waste from congestion suffered by those travelling on the seaward side of route 128. It would economize on time and car congestion despite the big reduction in road space from implementing d) and e) below.

c) Get car occupancy rates up beyond double what they are now. Get car occupancy up to treble or quadruple the current mode of one person per car passengers by imposing penalties that rise steeply with the value of the car for infringements so that police make a profit for the state in a simple way, car values being simple to ascertain. Put a big surcharge on use of taxis, Ubers etc that goes to subsidize public transport. Put a penalty on cars carrying less than four people inside 128, of if containing a handicapped person where one car seat goes for a wheel chair, less than three persons. Require all buses, shuttles for the handicapped, hotels, universities to be willing to pick up passengers when they have spare seats at specified points to avoid the current environmental waste of these being often half empty. all these measures help create the revolution in attitude from vehicular driving seen as natural, to vehicular driving seen as only to be done in special circumstances.

d) It is a disgrace of wider Boston that the sacred river stretch is desecrated with vehicles pouring pollution on those using the stingily narrow stretch on each side. Boston and Cambridge have far more wealth to create here something comparable to New York City's Central Park than had that city at the time it invested in its park. End vehicular traffic entirely alongside the Charles Basin/River ie on what in the basin is Storrow and Memorial Drive and their extensions in each direction.

All properties are accessible by *other* roads so these *riverside* roads are not necessary for riverside residents** –filled with commuter cars transiting. Note that this should be combined with measure b) to ensure that despite these riverside roads being closed to vehicles, there are so many fewer vehicles on the road each day, that travelers would get to and from venues faster. The following use should be made of the width of two lanes in each direction on these river roads after they are closed to cars and trucks. On the lane farthest from the river, should be built one tram line (with occasional crossover

lines to allow trams in opposite directions to pass each other). The next lane should become two bicycle lanes. The two lanes closest to the river should be converted to nature, with more urban wild areas created. The river itself cleaned for swimming, above all as global climate change accelerates so that being in the water is not merely exercise, but heat escape in summer.

On the river banks, the white geese re-given the access on both east and west of their nesting area. The wanton deprivation of the white geese, and of locals and tourists who previously found such pleasure in them and their pure gold chicks in the spring is being described and depicted with photographs, in a letter of Robert La Trémouille to Stephanie Pollack.

These recommended changes should not be made under the Department of Conservation and Recreation since it has failed in both its recreation and conservation duties. In the last two years, it authorized wanton destruction of 150 mature trees, east of the Boston University boathouse, permitted contractors to generate atrocious erosion and put in paths so shoddily surveyed that they are more under water then the prior ones, and done plantings unsuitable for wildlife and people wishing to enjoy views of downtown and be among wildlife.

e) The MassTurnpike I-90 should be cut from 4 to 2 lanes in each direction on the sea side of 128 route. With measure b) this will have faster flow than the current 4 lanes. The halved width should be with a full above ground tunnel encasement in the area where it is above the rail west from the BU bridge. It should go rapidly back onto ground level after the planned new west station.

g) Vehicular traffic should cease on the BU bridge and Brookline: the former tram of the 1920s should be reinstated up to Massachusetts avenue.

h) As in the suggestion made some years ago by Robert La Trémouille, a green/red connector, should go from the river side of west station through Harvard property to the red line. This writer notes it can be built entirely at Harvard's expense. Harvard is a mini-city within greater Boston, and ought to become far more environmentally responsible than its past practice of worsening pollution and climate change by having so many vehicular commuters, and contributing to inequality by reducing rather than expanding the percentage of affordable housing under its ownership. Overly centralized medical complexes exacerbate travel and damage the climate. The commonwealth of Massachusetts and MassDot should coordinate to ensure that Harvard's new medical complex is smaller so that over 90% of its patients and employees come on foot, bike or by public transport. The new complex should also be smaller given evidence of the US being over medicalized: medical errors are its third leading cause of death.

i) West station should be where Harry Agganis Way takes a left bend toward Parking Lot C-1 that should be pre-empted from Boston University for the station. With respect to this pre-emption, note that universities need to become more environmentally responsible by curbing car usage, and thus curbing the amount of space that they currently squander of parking. The construction and maintenance of West Station should be paid for by its two major beneficiaries, Boston University and Harvard University.

j) A green line extension should run to West Station from Commonwealth Avenue along Harry Agganis Way. It is very bad planning to have West Station without access to the green line. Placement of that station as in i) does this and gives ready public transport to the Boston University playing fields obviating the need for parking lots by it. This short green line extension should be paid for by Boston

University. It may be feasible to have a driverless tram going back and forth every few minutes on this short stretch.

k) A small station (for which there is room) at the junction of the commuter rail and Commonwealth Avenue at the Boston University bridge to connect with the tram spur extension of g) above, as also to give an alternative connection to the green line for rail commuters without needing to go along Harry Agganis Way

l) The reduction of I-90 to 2 lanes each way under e) would furnish a width of 4 lanes of extra green space on the Boston side of the Charles that should be used entirely for nature. Care should be taken to present the nature in place which differs from that in other river segments, and to introduce more urban wild. The river bank on both sides is boringly sanitized and with inadequate wildlife. In managing this, for the reasons given in d), use of the Department of Conservation and Recreation should be avoided, as

m) Grand junction could take a single commuter car from west station across the river, by hooking an extra engine on each of its ends and offload and upload these at a small platform by either Fort Washington or Pacific Street, for which there is ample room in both spots, and that will primarily serve MIT rental property and MIT students and employees located nearby that are in a tram public transport vacuum, and one that would not be filled fully by n). The one-car train can reverse before Massachusetts Avenue, by its having an engine on both ends. It therefore would not generate the problems of more trains, and trains in peak hour crossing Massachusetts Avenue. The number of such one-car trains should be limited to at most two mornings and two evening to keep adequate quiet for the white geese, and for Cambridgeans and Bostonians who much appreciate having that wee nook between the Boston University Boathouse and the Boston University bridge to experience being in an urban wild.

n) A green/red connector from Yawkey station to Kendall Square paid for by MIT since its people will be the main beneficiaries

o) Arrange a retraction by (i) MIT (its 2014 report on this path), (ii) the Cambridge City Council (its 2006 project on this path), and (iii) former Mayor Davis, of plans for an alleged bike path along Grand Junction. The plan is spurious, the sort of double dealing disgraceful on the part of all three parties. The plan requires stunt rider skills plus of the bikers on the river side of Memorial Drive and on the inland side, wastefully duplicates a much superior bike path along Vasser Street. La Trémouille has been earnest and energetic in his public duty to alert on where projects damage wildlife and human communities, and furnishes evidence words plus photographs in a letter to you Stephanie Pollack that the bike path plan is a pretense, a plot to bring cars off the turnpike after getting approval is granted for the other. The cars along Grand Junction combined with the needed fence, would devastate the white geese, remove valuable forms of nature growing by the rail track and much of the urban wild between the Boston University boathouse and bridge. Relatedly, MassDot should ensure that MIT in its upcoming Kendall Square redevelopment, halves the area's car traffic.

p) Recall that the failure to introduce environmentally wise gasoline taxes in the 1970s was a failure to curb excess car usage. Recall that the failure arose largely from inability to devise a plan acceptable to congress on how to compensate the poor for higher gasoline taxes. Hence, while it is important to get the shift out of car travel, it is even more important than back in the 1970s, to do so without imposing

extra costs on the poor since inequality is not so much worse than earlier. The Commonwealth of Massachusetts will have considerable savings from the halved turnpike width in the area, in maintenance, in police required, and in health costs. Its fines and taxi surcharges under c) will also yield revenue to assist in furnishing free public transport in this area. Seaward of route I28, MassDot would thus have enough extra revenue likely to make public transport free, something sensible when properly costed for externalities, it would be free, and cars almost none existent. In addition, to entice businesses and universities in how they redevelop areas, to generate inclusive neighborhoods and not shove the poor into remote ghettoes, require employers to furnish all employees earning below the median wage free public transport from their homes to the employment place.

q) With the measures of p) in place the poor are protected from facing higher costs in shifting from cars to public transport and living close to where they work, the Commonwealth can use price hike to switch people out of car driving. The Commonwealth should charge enough more for car licenses and car parking to cover its massive increase in public transport, explaining to people how by over-driving, they are damaging their own mental and physical health, social and natural environment as well as generating more global warming. The Commonwealth should also increase property taxes to this end, using some of the extra raised on nature and environmental education. It should explain to people that a high proportion of the overall property price rise, that in the unimproved value of land, comes from community decisions, so is not something earned by the property holder, but something that rightfully belongs to the government. The Commonwealth should also explain how the community needs more money from higher taxes to protect property owners by investing in public transport and educating people about nature and climate change to avoid more acts damaging the environment and the climate such as those of the Department of Conservation and Recreation. MassDot can go a long way in this revolution just using on public transport its gigantic savings from fewer cars on roads. It can go even further if the Commonwealth agrees to raise property taxes to use in converting turnpike lanes, roads, and car parks into public transport, bicycle paths and nature.

I wish you well in the splendid opportunity you have through implementing proposals such as a) to q above. You can take steps toward the Massachusetts Healthy Transportation Compact that can make the Commonwealth a beacon of health and happiness imitated worldwide.

I have many more suggestions, and details on each of the above, and on how to impart the healthy vision. Feel free to phone or email me.

May greetings, and please confirm receipt of this submission.

Dr Robin Pope
Email robin.el.pope@gmail.com
Mobile: +1-929-365-3345

---

* its seaward side with a south boundary added

** Even the row boat houses have roads at right angles to the river very close for carrying in by hand boats.