MEMORANDUM

To:	Ken Kirwin Project Manager	Date:	December 8, 2016
From:	Hannah Brockhaus Howard Stein Hudson	HSH Project No.:	2015136.00
Subject:	Department of Conservation and Recreation Mount Auburn Street Corridor Study Stakeholder Group Meeting 6 Meeting Notes of November 1, 2016		

Overview

On November 1st, members of the Department of Conservation and Recreation (DCR) Mount Auburn Street Corridor Study project team and DCR staff associated with the job held its sixth Stakeholder Group meeting. The meeting took place at Russell Youth Community Center, located at 680 Huron Avenue in Cambridge. The stakeholder group is composed of local residents, representatives of major institutional and business stakeholders in the area, cycling, pedestrian, and green space advocates, as well as members, both elected and appointed, of local, state, and federal government for the project area.

The purpose of the stakeholder group is, through the use of its members' considerable local knowledge, to assist and advise the DCR in developing short- and long-term recommendations for the improvement of the Mount Auburn Street corridor and its abutting roadways. Through this project, the agency seeks to create a corridor which is friendlier to transit users, cyclists, and pedestrians, and to strengthen connections between abutting neighborhoods and the key green space of the Charles River, while ensuring calm, efficient vehicle operations.

At the meeting documented herein, several elements of the long term concept still under review were discussed. The meeting was kicked off with a presentation of Road Safety Audit results. A road safety audit was done at three major intersections within the corridor. Each has been noted as a highway safety improvement program crash cluster.

Pete Stidman next presented results of a road diet analysis for Fresh Pond Parkway between Huron and Brattle, which invoked a lively discussion from attendees. The City of Cambridge requested a more balanced approach to the analysis in the final report, since many improvements would be made possible with the width of one lane. However, the city noted that they do not have to grapple with the same regional traffic concerns that the DCR must balance. There was an unwillingness to believe the traffic queues presented by some members of the audience. As a possible solution to the debate, some audience members suggested a trial of the road diet, and project team members noted that a more permanent road diet could be accomplished at low cost in the future. There was some overall pushback on whether the design on Fresh Pond Parkway could encourage bicycling at all, rather than taking the Watertown Greenway. Finally, audience members questioned what could be done for neighborhood cut-through traffic that exists today, specifically calling out apps like Waze which encourage the practice. Project team members responded that they had observed an unwillingness to change circulation in the neighborhood, which would be the most effective means of deterring the traffic. However, as an alternative, it was said that speed humps and time of day restrictions for neighborhood roads could mitigate this. There was no opposition to this idea.

VISSIM early results were presented, including animations of existing and proposed conditions. Project team members noted that more detail would be presented at the upcoming public meeting, including analysis of the design from Gerry's Landing to the river. The City of Cambridge suggested a person throughput analysis as an effective tool for moving forward with the design. The City also voiced concerns over the lack of westbound bicycle facilities, and requested analysis on a further road diet as a means of achieving the lane. Finally, the project team answered lingering questions about impacts to Brattle queues as a result of the T-intersection and signal. There were continued discussions over raised intersections versus stamped asphalt as intersection treatments for traffic calming, and concerns voiced over dismissing the mid-block crossing for safety reasons. Conversely though, there was recognition from some attendees that the important benefit for the community was traffic calming rather than the crosswalk. Pete also presented the Star Market driveway treatments that came out of suggestions from the design charrette. Finally, Tamar Zimmerman of Crosby Schlessinger Smallridge presented the landscape schemes derived from the design charrette of the previous meeting. Following the end of the presentation, roll plans of each option and the landscape plans were laid out for comments, which were made with sticky notes and drawing directly on the roll plans.

Agenda

I. Welcome
II. Road Safety Audit Results
III. Road Diet Analysis
IV. VISSIM Traffic Analysis: Early Results and Design Changes
V. Community Driven Design Changes
VI. Landscaping Ideas
VII. Interactive Sticky Note Exercise

Detailed Meeting Minutes[1]

C: Pete Stidman (PS): Good evening everyone. I want to start by thanking a lot of the team members like Hannah; Mike Tremblay over here who did the RSA you will hear about tonight; Bob with traffic; Tamar with landscaping; Burak with transit. We've been doing a lot of work to prepare for this meeting. I get to be the one to get up and talk, and you don't see all the other work that goes on. Thanks for all of your input, which made the plan possible. And thanks to DCR for hiring us.

First this is just reviewing the DCR mission and more importantly our schedule. We're pretty much on schedule - working on the analysis for proposed short and long term improvements. We're starting work on the draft final report to get ready as we pull that together. Later tonight we will lay out plans for you to make comments on where we are today. There will be a similar format at the public meeting with a bit more of a fine tuned design. After those two meetings we will go away for a while and then come back in January to present final findings. I want to emphasize that there is still a lot of opportunity to comment left. After the public meeting there will be a comment period and you can keep talking to us and keep refining the plan, because we want to make sure everyone likes the plan.

This is what we'll talk about tonight. We will hear from the Road Safety Audit. We did three road safety audits on the most crash prone intersections in the project area; we'll talk about the idea of a road diet on Fresh Pond Parkway (between Huron and Mount Auburn). We have Burak here to talk about the VISSIM analysis, which is a fancy traffic analysis that is animated so you can see how it operates. Then we will talk about design changes that have happened because of

[1] Herein "C" stands for comment, "Q" for question and "A" for answer. For a list of attendees, please see Appendix 1. For photos of the roll plans with people's comments, please see Appendix 2.

the VISSIM analysis and because of community feedback and a couple meetings we've had with BB&N and other entities.

Finally, we will look at some landscaping plans from Tamar. We will briefly show you them on the screen, and then we will break out and are going to have landscaping plans and the roll plans from two different options for the streets, including all the different choices we talked about in previous meetings, so you can comment on them and then we'll take them back and fix things up.

First I'm going to invite Mike Tremblay up here. He's also from Howard Stein Hudson but far off from us looking at the crashes in the corridor and what they tell us about improving safety.

Discussion of the Road Safety Audit (RSA)

C: Mike Tremblay (MT): Thanks Pete. As Pete mentioned I'm pretty removed from the design process for this project. We did the Road Safety Audit (RSA) at three intersections. They were chosen based on the fact that they are high crash locations, a term used by MassDOT and Federal Highway Administration use to determine what the areas of concerns are – it's based on number and severity crashes. Injury and fatal crashes are scored ranked higher than property crashes. As you can see, the first intersection we looked at, Mount Auburn at Aberdeen and Brattle had 56 crashes over the course of five years. These are crashes reported to the Cambridge and State Police Departments. Fresh Pond Parkway at Huron Avenue had 35 crashes over the five years, and Fresh Pond Parkway at Mount Auburn had 70 crashes. The reason I mentioned the reporting was that if there was a small fender bender, it might not be reported to the police, but that doesn't mean there are more crashes. This also doesn't show potential near misses, which wouldn't be reported as crashes. These numbers might not tell whole story, but they are what we have and they are certainly suggestive.

Here's an overview of each intersection showing the types of crashes that we saw at each intersection. We saw a lot of rear end crashes and angle crashes that is cars turning into a vehicle that's moving through the intersection. At Mount Auburn Street at Aberdeen, we saw a lot of rear end crashes. A lot of those were at the point between the merge of the Brattle Street slip lane onto Mount Auburn. That intersection is really close to the Aberdeen intersection, it's actually in the functional area of the intersection. You're trying to merge into a bunch of queued cars, and when the light turns green there are two roads trying to use that roadway. That might result in some people trying to squeeze in. At Fresh Pond Parkway at Huron we saw a lot of rear end and angle crashes – the angle crashes were often between vehicles turning left from Fresh Pond Parkway southbound, and trying to go through Fresh Pond Parkway Northbound. That movement is restricted during peak hours, but not restricted off peak. I believe there are a few

crashes that happen during peak hours because people are ignoring the restriction. There were also a lot of rear end crashes that might have to do with the fact that there are no overhead signals there. You might not be able to see the signal, and by the time you do, the car in front of you has already stopped. Finally at the big intersection, Fresh Pond Parkway at Mount Auburn, we saw a lot of rear end crashes and angle crashes for the same reason as before: it's hard to see the signal so by the time you see the signal you have to slam on the brakes. The intersection is also a very large area, so it's tough to get through the intersection a lot of time.

Here are the severities of all the crashes. You can see that most crashes were definitely property damage only, but there were a fair few injury crashes at each location.

I kind of talked about this stuff already, but I'll go through this quickly. Again, Fresh Pond Parkway at Huron, it's tough to see the signals especially if you're coming northbound or southbound on Fresh Pond Parkway. The left turns are restricted part of the time but not all the time. That can confuse drivers and it also shows that it's a safety and congestion issue that's being addressed during the peak hour but not necessarily during off peak hours. That's a peculiarity we've noticed. The takeaways we saw were to install overhead signals where possible so that when you're coming up the hill on Fresh Pond Parkway in either direction you can see the light before you hit the stop line. We want to check the clearance intervals there because we saw red light running crashes there and there might be some yellow or red time to alter. Finally we would consider restricting left turns there 24/7. Obviously there are network wide implications, you'd have to identify alternative routes and have some wayfinding beyond what's already out there.

Mount Auburn at Fresh Pond Parkway, again, is a large pavement area and confusing. Vehicles might not know what the left turn movement is versus straight. There are a lot of high speed turns because the roadway is at such an angle that people can turn right very quickly and that can lead to confusion and severe crashes. Some of the turns are restricted due to the geometry or due to the signal not allowing them. For example there were 10 crashes coming southbound on Fresh Pond Parkway due to all the vehicles that were turning left onto Mount Auburn Street, which is not a legal turn. A lot of times those were severe crashes because they were high speed. Finding a way to show motorists that it's not a legal move and giving them an alternate route to the destination is important. Finally, there is some unclear lane use out there, especially again on Fresh Pond Parkway southbound that's the same movement we were just talking about. It is wide enough for at least three lanes, but it's only supposed to be two lanes. Vehicles can form three lanes and all the sudden you're not sure which lane is supposed to be going where. Again, it's tough to see the signals in part because the intersection is so wide and so long that maybe

you pass the first signal and the next one is all the way across the intersection, 100 feet away. It might be tough to see those signals and at same time the intersection is so long that it might take some time to get through the intersection. If it's backed up you might be stuck in the intersection. Finally pedestrians at the intersection have to cross Gerry's Landing Road in three stages, and most pedestrians aren't going to wait that long to cross the street, so you will have jaywalking or running across the street. You see a lot of noncompliance when you have multiple crossings. There were two pedestrian crashes there which don't sound like a lot but they tend to be very severe and people tend to just avoid the intersection. It's really not serving the community. That's another thing to think about

So takeaways include: reducing the overall pavement area, improve lane markings so that people can figure out what lane to be in, install overhead signals (which can be tough because there are other overhead wires in the area), removing the third lane with paint in the short term and curb in the long term, and reduce the overall pedestrian delay there, which will help pedestrians, make them more compliant and improve pedestrian crossings.

The other intersection we looked at was Aberdeen and Brattle together. The most obvious geometrical issue here is the Brattle Street slip lane right here. As I said earlier the intersection is at a weird angle and is close to the other intersection. There are some rear end crashes and side swipes there, because it's tough to merge. The signal indications at Aberdeen Avenue are far away (partly due to it being such a wide intersection). There are no overhead lights there as well. There's also a lagging left turn phase that makes it tough to turn left there after you've been waiting there for a while. Takeaways at this intersection include: installing overhead signals (around the existing MBTA wires there), adjusting signals at Aberdeen so vehicles can get through the intersection (again adjusting red and yellow times), removing the Brattle and Mount Auburn merge and T-ing up the intersection. I think that's a key geometrical change that needs to happen to avoid that tough merge – the intersections are so close together with the merge. With that, installing a signal at Brattle, I believe it is warranted there. That will help coordination along the corridor and also help pedestrians cross – the intersection is tough for pedestrians and bicycles now and a signal there could help cross them across the four lane road. Finally, the RSA recommends creating a way to get bikes through that intersection, preferably with a signal as well. That's the end of the Road Safety Audit analysis. I don't have the website in memory, but if you google MassDOT RSA Fresh Pond, it's the first thing that comes up. You can also email me and I'll send over to you.

Q: Ps: Before Mike leaves are there any questions for him?

C: Arthur Strang (AS): We've seen different data. Some are three year, five year periods. MassDOT publishes 11 years of data. I have two things. One is: what's the standard deviation that you see around that? Or do you just have a point estimate and you don't know the same or different range around it. The second question is, there are not many who walk at Fresh Pond Parkway at Mount Auburn Street, so one might want to adjust the percentage of crashes relating different routes by the quantity of people involved. That adjustment would give us a better sense of the risks of different modes. The last question is a general one. A lot of this, I understand that it's the question you're asked, is about the flow of traffic and a little bit about getting across the street, but a lot of us are interested in neighborhood connections. Many people are concerned that their kids can't walk to school or ride a bike to school because they're concerned about crossing the parkway. It's not so much about the flow of traffic, it's about how fast it goes that's the issue and how attentive drivers are. You say people can't see the stoplights but they're easier to see at the speed limit than 40 or 50 miles per hour and a lot of us consider the 25 mile per hour the relevant speed for our neighborhood, like all of Cambridge is putting into effect. Those are my comments.

A: MT: I think regarding speed, going along the area, not just Fresh Pond Parkway and Mount Auburn, the fact that they're so wide open means that people see it and go. We've seen the highway atmosphere on Greenough and Gerry's Landing and we can talk about some ways to address that.

C: AS: I would say that there is a highway atmosphere all the way. People go through a green light going 50 easy.

A: MT: Speeds contribute to crashes and the severity of crashes, and not only the actual safety but the perceived safety are things to focus on.

Q: Aaron Dushku (AD): I don't know what the final intersection design looks like, but people insist on turning left onto Mount Auburn, are there signs there? You might want them to say "to get to Mount Auburn Hospital, take Huron", and "to get to Harvard Square, take Memorial Drive."

A: MT: I believe at the intersection at Huron there are signs for the hospital, it's turn left or right. I don't know how others feel, but for me they're not the best signs; I'd want one that looks a bit different and shows the right way. I think the turns are a point to reinforce; signage will help but finding a way to make it next to impossible to make that turn. You're coming up Gerry's Landing and you think you have a straight shot and all the sudden someone's turning left in front of you.

C: PS: One thing we are doing is extending the median right there which might provide more opportunity for signage and geometry changes to keep people going straight.

C: MT: And making it more obvious to people that you can't turn left there.

Discussion of the Fresh Pond Parkway Road Diet (Between Huron and Brattle Streets)

Q: PS: Any other questions for Mike? Okay, thanks Mike. We took a look at a bit of analysis for Fresh Pond Parkway between Huron and Mount Auburn. This was expressed as a desire really early on in the process and it's been a part of our conversation at pretty much every meeting, so we wanted to look at it. We used SYNCHRO to calculate what the traffic would be with one lane in either direction, Bob did this analysis. Like we did in other meetings, we're showing you the traffic queues that would result. They kind of look like they fit but this is actually a really long queue that extends into the Huron Avenue intersection so you get gridlock there, but also a lot of really impatient people throughout the corridor. In both directions the queue pretty much fills the entire street. That was am peak, this is pm peak. The purple line is what we have now, and the blue is the queue with the road diet. Additionally, with this kind of queue, people will look for different ways to get around it. As we experienced from our Uber ride over here, it happens all the time. There are a lot of cut-throughs that people use and that we've heard about from members of the group and the neighborhood. Lexington has already been pointed out as a problem that's connected to Fresh Pond at Mount Auburn. Taking this discussion back to the Shared Goals that we came up with together, there are a few that relate to this. We talked about maintaining mobility for motor vehicles and this would be causing a time delay for folks who live here, to say nothing of those who pass through. We also talked about improving the safety, attractiveness, noise, and comfort for pedestrians and residents. This would increase the number of idling cars in the neighborhood, and cut through traffic which we talked about. For these reasons, we think a road diet is inadvisable on Fresh Pond between Huron and Brattle. Further down we are proposing enacting one from Mount Auburn down to the Eliot Bridge. That's the end of this section. Any questions on that?

C: AS: Since I live on Fresh Pond Parkway and I get up at 6:30 or 7:00 every day and see what's out there, I can tell where in 30 years the line has gotten longer and already crosses Huron inbound in the morning as part of rush hour already. Already, there are noise and comfort problems for pedestrians and that has been there for 20 years and my neighbors don't walk on Fresh Pond anymore. Already we know that there is commuter growth in and around Cambridge and Boston – some predict 10% in a decade for the Boston metro region. Watertown and Boston are seeing a lot of development. If we are concerned about those three elements: maintaining mobility isn't

possible because there are more cars up there. It's impossible because there will be more people looking to drive in to work. My question was originally long ago, why look at flows today, why not look at the flow from 15 years ago and accomplish that flow rather than 10 years in the future. Then my last comment is that Cambridge and a lot of other communities are looking to reduce traffic, reduce emissions from CO_2 into the atmosphere. We found that telling people that "we ought to" doesn't work - we have to push. We just spent $300 million on the Fitchburg line. Why don't we push them onto the trains just a little bit. That's my response to that analysis. I don't think maintaining mobility isn't useful. There's a sequence of 60 cars through the light for about two hours at a standstill from beyond Huron through the Brattle light, and the same in the afternoon. Improving safety and attractiveness is impossible, and addressing cut-throughs - we already have cut-throughs. We've already asked for no left turn signs on Fresh Pond Parkway. You probably drove a cut-through today. I understand that, and we have to think larger and systemically, not quite so narrowly about the current situation because that is something that cannot last.

A: PS: I just want to say that a lot of what you're saying speaks to a much bigger issue. Doing a road diet on Fresh Pond on that length could be as simple as pavement markings in the future, but there are a lot of other issues that we need to talk about in the broader sense.

C; AS: One more comment. On Huron Avenue we have dug that street up eight times in the last five years to put in pipes and separate the sewer and in a way that was an experiment. You could do a little experiment on Fresh Pond Parkway. Put the stripe out today and see what happens, rather than wait.

C: Joe Barr (JB): One major comment is that city asked for this in the scope. I appreciate your analysis, but I'm a little taken aback by your cursory review of it is. You've talked about all the bad things but you haven't talked about the potential to provide safe bicycle facilities which is otherwise impossible; you haven't talked about the extremely narrow twisty lanes and if a road diet worked and I'm not saying that it does) there would be a potential there to create a little more space for all users including car drivers would benefit from wider lanes given the geometry of the road. Arthur made some points, some I agree, and some I have concerns about. The way you presented this was that it's a terrible idea and that's a little unfair conceptually for what you're trying to say here. I'm not saying your solution is wrong, but in your final report you should give more thought into the positives here. There are some concerns about regional traffic which I don't have to care about but my colleagues at DCR do. I will say that I was in the Commissioner's office a few weeks ago talking about how we use the roadway network versus the importance of parkland. I'm not sure that he would necessarily be all in, but again I think this

needs a bit more consideration rather than dismissal out of hand. This may not be a solution today but it could be five to seven years from now. We're concerned about bicycle safety and wanted to see this analyzed rather than dismissed for traffic.

A: PS: I'm not sure that's a fair criticism. When I was preparing this, I felt like we all knew the benefits. I've said in other meetings that I would love to do a road diet on this street. Obviously it meets a lot of other goals in this lineup.

C: Xander Dyer (XD): To the point about trying it and if it doesn't work don't do it, it could be as simple as putting down some stripes. They did this down on Storrow Drive by the Massachusetts Avenue Bridge. They tried to throttle it down off Storrow onto Soldiers Field Road approach to Fenway. They tried one lane and it failed miserably - it didn't last more than three weeks. You could throw up some cones or something like that. You could do a test – if it does fail what time period you would need in order to make the decision and say that the positives don't outweigh negatives.

A: PS: It's a good question, and we could consider that with the team, but I will say that you'd need more than just a day, because people behavior changes over time when you do something like that. We'll take that under advisement and can explore that area.

C: Anne Roosevelt (AR): I live in Larchwood, near Chip. He lives on the Parkway and I live inside the neighborhood). If you have a number of cars (say 100,000) go by there every day and you put a road diet in, you will still have that many cars, but you will have them over a longer period of time so there will be more pollution. It's terrible now; I agree with Chip, and we are getting lots of people going into the neighborhood which isn't right and I hope the city will start enforcing, because there are already some signs out there. I'm concerned about that. The other thing I heard is bicycles on Fresh Pond Parkway. I'm the president of the Cambridge Water Board and we have done so much work at Fresh Pond to make sure that bicycles don't go on Fresh Pond Parkway. We are working to get a bicycle path which will go from underneath essentially Aberdeen, under the bridge, and right along Fresh Pond and along Fresh Pond Parkway. I don't think there's any way, in our opinion, to make it safe for bicycles on Fresh Pond Parkway whether there's a road diet or not.

A: PS: One interesting point to note is that Fresh Pond is pretty narrow now. Each lane is 11 feet.

C: AS: 42 feet wide.

C: PS: Yes. If you cut one lane off (4:3 road diet) you have five feet on either side leftover- that's a bicycle lane striped, not protected, which would be more appropriate for the volumes on the street. I'm not dismissing it I just wanted to note that.

C: AS: You already have a barrier and curb on one side which has width to it, that's not currently roadway, and you already have a certain amount of space taken up by guardrails along the side which is again not part of roadway. Then you could adjust to put separation between bicycles and the roadway.

A: PS: I don't want to get too into the weeds on this. You could do a raised bicycle lane but you would still need some buffer. The typical way is to move the guardrail

C: AS: If you move guardrail and curb…

C: AR: You still need sixteen feet for bike lane.

A: PS: Five feet for a bicycle lane, two feet for buffer if it's a cycle track. There are ways to do raised bicycle lanes that are more narrow.

Q: AD: Right now there are four lanes, two in each direction. Could you do three lanes inbound and one outbound in the morning, and 3 lanes outbound and one inbound in the afternoon, a mechanical switch? I see it on expressway sometimes.

A: PS: We can look into that.

A: Nathaniel Cabral-Curtis: I assist MassDOT with a number of construction projects right now and we've had a lot of requests in construction zones for the kind of reversible lane you're talking about. On the expressway you have a moveable concrete barrier which is shifted by a machine. The machine has a house it lives in near the Braintree split. It's a fairly large device. Out here, you're obviously not going to take someone's home to build a house for a machine, so you'd be looking at something with cones. What we've found is typically police departments are the ones that have to set the cones up, and they have concerns about their officers being out there shifting cones especially at peak hours and at this time of year when the solar glare is pretty intense. The other thing to note is that with cones you require a shy distance to either side of the cones. If you were to make it a permanent condition you wouldn't have the neat timeframe: just this time period and these couple of hours the way you normally do. It tends to have safety side effects that officers are pretty concerned about, and you wind up needing more space than you think you

do. A lot of times it gets considered and then tossed. Not to dismiss it out of hand, but that's the history I've had with it.

C: John Attanucci (JA): The inbound storage capacity beyond Brattle is very unused because of light cycles. There is a possibility of three lanes because outbound in the pm the queue from further down on Fresh Pond Parkway goes all the way back to Huron Avenue already. You could have a permanent two lanes inbound and one lane outbound without too much delay overall. The delay after Huron Avenue is worse than the delay before Huron Avenue. If you really wanted to think about some savings I think you should think about it as a permanent one lane outbound and two lanes inbound.

Q: NC: Bob, do you want to say anything to that, since you ran the analysis?

A: Bob Stathopoulos (BS): I think we need to look even further out to what the effects of that would be. We just show the diversions within your neighborhood, but there would be diversions further back.

C: JA: The point is, overall delay is the person going beyond, because they just pile up at the next roadway.

A: PS: I get that.

Q: Nina Coslov (NC): We're throwing out this idea because it would add to cut-through traffic, but I just want to ask, is there anything else we're doing to address the current cut-throughs?

C: AR: The Larchwood neighborhood has a history of having children running around it at all hours. It's shaded and everyone feels comfortable and so people let their little kids run around outside. There was never any traffic, but now all the sudden there's traffic. I saw a little kid who lives next door to me, run outside for a ball, got the ball and came back in and three minutes later a car going about 50 miles per hour went down the street. This is serious if you have people cutting through that neighborhood. Some kid's going to get hit.

A: PS: One of the most common things you can do for that is to change directions of some of the streets, but I heard mixed feedback from the neighborhood about that idea.

C: AR: We know the times of day when most of this happens, so you could have no left turn between 4 and 7pm coming in, toward Huron and the other way in morning. The other way is posted but no one pays attention. They won't pay any attention of it unless you have enforcement.

A: PS: If a design needs a lot of enforcement it's not a good design.

C: AR: I disagree with you. I've lived here all my life, and when Frank Newhaven was the Mayor and City Councilor, he decided that all the streets along Mount Auburn Street toward Brattle were getting too many cars flipping through, so he got the traffic department to put no left turns between the hours of 4 and 6pm and no one does it, because they really enforced it for a year and now it's in peoples conscience. They only have to enforce it every once in a while.

A: BS: On the time restrictions for right or left turns you really need enforcement otherwise people will continue to do it. Traffic calming for a neighborhood the most common things you would see is an alignment change, or you enforce it with a police officer for a year or so. That's a question of if the city can handle such a thing for four hours, maybe a bit longer based on traffic. You might want to consider geometric changes to make it more firm.

C: AR: I agree with you totally, that it's hard to do, but the new thing here is technology. Waze is sending people through our neighborhood to avoid the lights. The minute you get off of Waze, people won't do it – so if you enforce it, Waze will stop.

A: PS: Yes, and I believe that Waze knows when there's a temporary restriction as well. I'm not sure how to go forward with those ideas. Certainly we can look at no left turns off Fresh Pond Parkway. In terms of changing traffic flow in the neighborhood, am I reading you all correctly that that's a non-starter? When we came into this job we had anticipated putting that out there as a proposal, but it doesn't seem popular.

Q: NC: What about speed bumps?

A: PS: Speed humps might be possible.

A: BS: That's part of the horizontal and vertical geometric changes I was talking about in the range of possibilities, You would also have to consider noise and speed because you're driving down a residential road which could be noisy.

A: PS: It would mitigate, but not solve. People wouldn't go as fast through the neighborhood, but they still might come through.

C: NC: If it doesn't save as much time, that would fit into their algorithm.

C: AR: Or you could do speed bumps in addition to enforcement.

A: PS: We could do a left restriction which I think Waze would recognize, and speed humps, and that would mitigate it. We'll make a note of that.

A: NCC: It's noted ma'am. We do understand Waze is tough. As a public involvement person, when you google "problems with Waze" you get a list as long as my arm. It's a tough one. The solutions that Bob and Pete are talking about: we've had state police with us. Of course once you're off the parkway and into the neighborhoods its Cambridge police, but we changed the design to introduce a space that's safe for a state trooper to sit which they don't currently have. We've heard the enforcement issue loud and clear. One of the goals here is to come up with some short term recommendations, so we can certainly reflect that in that in the report and your city of Cambridge is well represented here and I'm sure they're hearing you as well.

C: AS: Regarding enforcement, a no left turn into the neighborhood would need enforcement. A state police on the parkway is not that useful.

A: NCC: A state trooper visible can have a wonderful effect, just to note.

C: PS: Okay. Is everyone okay with us moving on? Now I'm going to have Burak come up to talk about the traffic analysis. These are early results. The stuff you will see is a little rough around the edges because we haven't fully integrated the plan into the animation although that will be done by the time we get to the public meeting.

Presentation of Preliminary Vissim Analysis

C: Burak Cesme (BC): Thanks Pete. We're going to focus on VISSIM results for the bus operations. Before I start showing you the video for the existing and alternative I would like to emphasize one thing which is the person throughout analysis on the Mount Auburn corridor. We looked at two segments: the first one is between Belmont and Homer Avenue going eastbound in the morning peak hour. We looked at the percent of buses in terms of vehicles (not people) traveling the corridor they account for 2% of the total number of vehicles. But if you look at bus person throughout – in other words, the number of people those buses carry during the peak hour in the eastbound peak direction, it's about 43%. If you go further east, after Brattle and through to Coolidge, now the percent of buses in terms of vehicles is 3% and they account for 56% of the total number of people traveling the corridor. These numbers show that there is a need for bus lanes along the corridor because they carry more people. Before we get into the detail, I would like to show you two simulation videos. First will be existing and then we'll look at the build scenario. As Pete mentioned earlier we overlaid the animation on top of an existing background

aerial so you might see some cars that look like they're going over another but that's just the image.

We are looking at Fresh Pond Parkway, north to south, this is Mount Auburn and you can see the conditions. I'm going to run the model and point out a couple things. You can see the queue because of this bottleneck which people generally experience in the morning. The white buses indicate MBTA buses 71, 72, and 73. You can see here the 72 bus laying over after the U-turn. Again, you can clearly see how congested the traffic is and how buses get affected. We'll follow the bus as much as possible. This is what I mentioned before with the existing aerial versus the simulated cars. You can see pedestrians crossing. As we keep watching I will continue to point out problems from the existing most of which you already know. Again this is a 72 bus laying over. You can see here the queue spilling from Fresh Pond Parkway and Brattle and here we're going to focus on the pedestrian operations at Fresh Pond Parkway after we dwell here for a bit. This bus is either the 71 or the 73, and it will dwell here because there's a stop. This lane is not used by cars 100% of time. That's important to note. Here we'll look at the pedestrian crossings. This is the first stage. Now the pedestrians will wait for the second stage because this phase is for left turns. We will also look at pedestrian delay results later. This is the second stage. Finally the third stage when the northbound left is green.

Now I will move to the build conditions. Here in order to better highlight the improvement we are proposing, we got rid of background image but there will be one for the public meeting. The ones shown in red indicate curbside bus-only lanes and again I will point out a couple things as we go. Here you can see the queue jump for the 73 bus, continuing to pass the queue. It's true that the queue is a bit longer now, because we repurposed the lane. Now the bus is moving toward Aberdeen. Here we are showing a full bus lane as well. Right now the left most lane is through only and the right turning vehicles. It turns into a right turn lane most of the time because of the heavy right turn we are proposing making this a right turn only and a westbound through lane to provide more space for buses. We have to keep this left turn lane because it is heavy onto Aberdeen, so you might ask what will happen with the bus and the bus stop. That's why you will see the buses almost using this as a queue jump lane. The bus jumps the queue. The light is red, so now the cars are stopping and the bus can go in front of the cars. Also Brattle is now a T-up intersection as we modeled with a signal. There is significant travel times savings by providing this lane but also should understand that because we weren't able to provide a bus lane here it means that it takes a long time for buses to get into the bus lane. This one was lucky, but in watching the simulation you can see that sometimes the buses wait behind the queue. There's a bus stop here. We pulled it a little forward so that it's stopping in the bus lane. Now you can see the bus will come to the Coolidge intersection, use the queue jump lane. This bus will

use the pedestrian crossing north of Coolidge and the first bus will jump the queue and the second will use the stop. Here in simulation we modeled a two-stage crossing instead of single or three-stage crossings. We will discuss that in a bit.

C: PS: You may notice that the stuff down by the river hasn't been done yet; that will be shown at the public meeting as well.

C: BC: Now that we've watched simulation together we observed the benefits, and then we wanted to show what're talking about in terms of travel time savings. Here we are looking at what we have defined as Bus Travel Time Option B, which is a queue jump lane on Belmont Street, bus lanes between Belmont and Homer and Brattle and Coolidge. There is no bus lane between Homer and Aberdeen. Also note that all the results we present are based on a two stage crossing at Fresh Pond Parkway, which we will again discuss in a couple slides.

First let's look at the average am peak hour travel times savings for buses. You can see that on average in the eastbound direction, bus travel times are reduced by about two minutes in this segment. In the westbound direction they are almost same; this is what we expect, because we didn't make any changes there. We also wanted to look at 90th percentile travel time, which the MBTA typically uses as their schedule recovery time to make sure buses start their next trip on time. You can also consider this an indication of reliability. Not surprisingly, the reliability benefits are even more pronounced – you can see that there is about 3.5 minute reduction in travel time.

What about effects on cars? This slide shows auto travel time for the same scenario, the two corridors for the peak direction. First is Mount Auburn, both directions, and the second is Fresh Pond Parkway north and southbound. Mount Auburn travel time decreases slightly, which is surprising in this case, but this is partially due to signal timing improvements at Fresh Pond Parkway to make sure green time is not wasted. We also shifted a little bit of green time from Fresh Pond Parkway, though not a lot because as you know the Parkway is fairly congested as well. You can see that travel time slightly improved. This is also important because if we didn't make those changes and the eastbound queue extends all the way to the intersection you would lose all the travel time benefits for buses. For Fresh Pond Parkway travel time in the southbound direction, now there is an increase from 250 to 253 seconds. The increase in travel time in the southbound (peak) direction can be contributed to two factors. One: as Pete briefly mentioned, we are assuming two lanes between Brattle and Mount Auburn, which has an additional turn lane currently. And second, we also shifted a couple of seconds of green time from Fresh Pond Parkway to Mount Auburn.

Now we're looking at bus travel time under Option A. These results are also based on the two stage crossing at Fresh Pond Parkway. This is exactly the same as what we watched on the simulation, we have the additional bus lane after Homer Street. If you look at average travel time results we were able to further reduce bus travel time and now the benefits are over 2.5 minutes in the peak direction, and the 90th percentile benefits are even more significant. If we consider westbound travel time, there is a slight increase because in providing the additional bus lane length we had to take one eastbound through lane, and thus there was a bit of an increase in bus travel times.

Finally, as I mentioned earlier, we wanted to test the single stage versus two-stage crossing. Today its three stages if you completely comply. Let me take a step back this is pedestrian delay crossing Fresh Pond Parkway if you don't jaywalk. If you cross eastbound, you experience two minutes of delay. This is not travel time, you're waiting for the signal to come up. In the westbound direction it's almost three minutes because of the phasing. If we provide a single stage crossing, you can see the significant reduction in pedestrian delay. You don't have to wait multiple times while crossing. However this takes out a lot of the capacity from the intersection, it increases Mount Auburn travel time significantly, it increases Fresh Pond Parkway travel time significantly, and starts to affect bus travel times because the buses get stuck in between segments where there's no bus lane. Instead we tried a two stage crossing at the intersection in a way that there's coordination in one direction, so that you can use the left turn and the cross street to coordinate the pedestrian crossing. So, you can start the first stage with east/west traffic and once the left turn starts you can finish the second stage. This works in one direction but doesn't work in the other. The delay is almost the same as the single stage coordination (because we use the coordination), but in the other direction, it's better than today but not as good as the single stage crossing. With that are there any questions?

Q: PS: Any questions for Burak? After this we will go through some of the design changes he was talking about.

Q: Igor Belakovsky (IB): What happens with pm traffic westbound peak?

A: BC: That's something we are testing now. Watching the simulation we don't think the effects are going to be as bad. Getting rid of the slip Brattle lane and making it T-ed up in general helps the operation. That offsets some of the disadvantages of providing the single westbound through lane. AS I also mentioned the right most lane is not much used by through traffic anyway because of the heavy right turn movement. But that is something we are testing again.

Q: AR: The new area in front of Mount Auburn Cemetery sidewalk and the grassy area beyond it are bigger than in normal places. Have you thought about getting back a foot or two by taking that grassy area?

A: PS: We are toying with that intersection. There are limitations to how much you can do with the S-curve on the street, by engineering standards, and if we were to use that space to push the lanes to the plaza… your question was whether we could use the space to gain a foot or two or gain a lane?

Q: AR: I was thinking that from the Star Market on the Mount Auburn Cemetery side, the sidewalk and the area beyond the sidewalk are larger than normal. Could you gain some feet there to add a lane?

A: PS: We are looking at that very closely because these guys pointed out to us that we could get additional transit benefit time by finding it, but there are limitations to how much you can S-curve the traffic and street. The vehicles traveling into the other direction would have to go into where the plaza is today, and then go straight. There's a limitation there, and we are already probably pushing a design exception as we have the design today. We are going to take a close look but I can't make any promises.

Q: JB: Have you done person delay comparison? Obviously the 2.5 minutes sounds really great, but looking at that versus the mild change in delay for vehicles would be more powerful.

A: BC: We have started that.

A: PS: A small point here is to show the percent of person throughput is.

C: JB: Yes, and expanding that to show changes. S curve, I understand why there are concerns about that. Our general rule on a Cambridge street is that if someone manages to go off road at 25 miles per hour in an s curve they're not driving at 25 miles per hour. We would be less concerned about that. Obviously if it turns into a massive thought project then we'll go through that process.

C: JA: I would also say that the missing section of bus lane would become very variable. We raised this in the transit committee's comment letter. If you take part of the plaza on the north side you could have a left turn lane, a through lane for traffic and a bus lane and not start it after the T intersection. We hope you take a look at that.

A: PS: We are looking at that, and there are still some constraints top point out – at Aberdeen and Brattle. It would be more like T-ing up Brattle closer to the middle. We haven't really sat down to draw it yet but we will try.

C: NC: It's on the same intersection. Just like you did to rule out the road diet on Fresh Pond Parkway, I think it's important to do an analysis of what the T is going to cause down Brattle. I think its important thing to get rid of the merge but I would guess that you would have traffic all the way back through Fresh Pond Parkway.

A: BC: We have that in the simulation analysis for PM peak. It wasn't 100% ready yet so we didn't want to present it. If you look at this intersection, it's a two phase intersection, so we can provide a lot of green time for the right turn because there's no left turn and that helps with queueing. The queue may extend a little, for maybe ten to fifteen minutes, but just looking at preliminary results I haven't seen an issue.

Q: AR: What about going onto Brattle with the left turn lane

A: BC: It's the same answer, because the eastbound left turn and westbound right turn can go at the same time which means we can give them long green times.

Q: AR: I can see how the left turn goes now, but would that be an open left turn lane and you just wait until traffic stops?

A: BC: It's a signalized intersection

C: AR: Oh.

A: PS: Like Burak is saying, it's a simpler signal than the ones on either side of it, because there are not as many movements that go through it, so there's more time to share. You might have to stop there, but you would've had to stop at the next signal anyway.

C: AS: I'm curious about the intersection of Mount Auburn and Fresh Pond Parkway. Currently if you get on the bus they use the far right lane after Coolidge; because the cars go to the right anyway, in the eastbound direction. Starting at the stop at Coolidge Hill Avenue, once they have a green light they take the right lane until they have to bear left and squeeze cars over. They have a queue jump already and the proposal doesn't allow that anymore. I'm curious what that difference might be for performance.

A: BC: If I understood the question correctly, a bus in the eastbound direction we already allow to go ahead of all the cars. We will make sure there is good coordination.

Q: AS: How do they get ahead of cars?

A: PS: There's a queue jump at the signal. Any other questions?

Q: IB: What happens to bicycles going eastbound direction in the morning?

A: PS: We heard loud and clear the desire to get over to Brattle. But are you talking about folks that continue down Mount Auburn?

A: IB: Yes.

A: PS: One thing that has been done in other cities, including Boston, is a shared bus and bike lane. It's not perfect; the MBTA question it, the City of Cambridge questions it, but they do provide, I think, an option that feels safer. You're dealing with a professional driver class. On Washington Street, in Boston, you don't have the "dooring" issue that is a problem. That's a conversation we're having going forward.

Q: Bill Deignan (BD): What about bicycle facilities going west?

A: PS: The street is very constrained and we were not able to provide more than a sharrow going west.

Q: AR: Can I speak up? Are you aware of the DCR Rails to Trails program that is already underway?

A: PS: Yes, the Cambridge Watertown Greenway.

C: AR: The Cambridge Watertown Greenway is going to, as you go along, right at Star Market there will be an immediate entrance to the Minuteman Trail

A: PS: Yes, but I think what we're talking about is folks coming from this neighborhood to and from Harvard Square.

C: AR: If they go to the Star Market, get on the Minuteman Trail, go onto the Fresh Pond Reservation, take a right on Concord Avenue, that would get them to Harvard Square.

A: PS: Sure, but most people would opt for quicker route. Folks who know me know I tried very hard to get some bike accommodations here; this is tough stuff.

C: Tegin Bennett (TB): It's really great to show. I had concerns previously about how one lane in the eastbound would balance with the queues and it looks like the signal time has some ability to improve that. But there is still a need to think about the westbound lane capacity to think about getting some better bicycle facilities without using the transit lanes.

A: PS: This is something we've worked on I think to work in our two options, to look at two lanes westbound and two lanes eastbound for the section beyond this. Burak, I don't know if you have any initial comments? She's talking about two lanes in the westbound direction and one lane eastbound.

C: TB: No, actually one general travel lane in each direction.

A: PS: Oh, a road diet on both sides? That's something we can look at.

C: TB: I think if you continue to look in the westbound direction, still with transit but the addition of a bicycle lane would do a lot. This is just a personal anecdote, but if I'm biking with my child, I'll go on the sidewalks. It's uncomfortable to be sharing a lane with vehicles and I don't know if this design would change that. If you're going eastbound then you can get to Brattle, but if you're traveling westbound you get a little stuck as to where to go.

A: PS: Good comment, thank you.

Q: AS: Could you show the Mount Auburn intersection? There are still going to be two lanes westbound from the hospital at the intersection, yes?

A: PS: Two lanes for through traffic, and two lanes for left turning vehicles. This is not a bus only lane, it's a regular through lane.

C: Stacey Beuttell (SB): Do you have any cross section drawings in your presentation, where you can see segments of the road and all the different users and right of way? I think that would be really helpful in trying to present the roadway and how you're dividing it by use. Plan drawings are great, and this is an improvement over previous versions, but a cross section drawing of existing and proposed would be helpful.

A: PS: Okay, that is something we can put together pretty easily for the public information meeting.

Discussion of Design Changes

C: PS: Next is to review the different changes that came out. One stage crossing here at Mount Auburn and Fresh Pond Parkway becomes a two stage crossing and we will provide a pedestrian refuge there. Burak was talking about this; it is definitely needed to make it all work. Between Aberdeen and Homer, we're keeping a through traffic lane, a left turn lane for the eastbound direction, a westbound traffic lane, plus the transit lane. We're testing both options. Over here there's a challenge fitting in a transit lane but we're working on it.

There are two options now and we will lay out roll plans of both in a bit so you will have a chance to look through the details. There were some calls to maintain the merge here, so the second option maintains that merge. We've heard already today from the RSA and Mike Tremblay that there are a lot of side swipe and rear ends here that may be related to the merge, so that's important to keep in mind when considering the two. Mount Auburn at Belmont had a comment between this meeting and the last, which people were concerned about the left turn here, and the fact that it's not provided for in our design.

C: AS: It's illegal.

C: PS: Right, it's not allowed, but someone asked us to facilitate it. We find that there are very few left turns: just one in the am peak and none in the pm peak. There are also a lot of options just west of here, so we decided to maintain the design with no change. Also we did a lot of talking to BB&N and the Cambridge Boat House by the river. This is our original design, we had Brookline-esque reverse angel parking with a buffer so that parents could pull in. When we talked to BB&N, they more interested in buses operating there, because there is a lot of parent parking further down. Also, we talked to the Boat House, because with the regatta and everything else, sometimes they get some pretty big boats in here. We wanted to make sure they were accommodated – currently they pull into the shoulder and haul in the boats. That's accommodated all of that, changing the design for Option A to reflect the need for bus parking and cutting back the street a bit there. Because a lot of the staging happens in 3 and 4 there will be opportunities to use some of this right turn lane. Also, the boat loading area is maintained for the boat house.

Another thing came out of talks with Walk Boston and internally. We question the safety of putting in a mid-block cross on Fresh Pond Parkway. It encourages folks to use it, but we're worried about sight lines and visibility because of the curve, particularly with inclement conditions. If you recall, a couple meetings ago, I asked where the demand is, and where do people want to cross to, and there wasn't a lot of information we received back on that. I

understand the traffic calming need, that's clear, but I'm not convinced there is a huge demand for a pedestrian crossing here because of the side street connections.

C: AS: If there was a comfortable way to cross the street, more people would walk to Fresh Pond Market from Huron Avenue. It's much safer and faster than going all the way down to the intersection. Also it would be used for kids on bicycles going to the playground.

A: PS: We also heard from someone last time about the need for that left turn from someone who lives on Fresh Pond, I believe their house was in the picture, as a means to get in and out of her house. Based on that feedback, we went back to maintaining the existing circulation, but we are going to be talking about traffic calming. We've had discussions about whether to do a raised intersection here, or stamped concrete. Right now this is an ongoing discussion. Stamped concrete marks the space but is not actually a measured traffic calming ingredient. I think its useful; others question it. One Option has stamped concrete, one is a raised intersection. There are quite a variety in options of raised intersections in terms of grade and the materials you use. This would likely be an all asphalt raised intersection with a three inch rise over ten feet because of maintenance. If you do a six inch raise there are statistics that start to show calming. Typically these are installed in residential areas.

Q: AR: I have a question about that, as I'm on the Cambridge Water Board. Will that affect the water quality of Fresh Pond?

C: PS: Can I just finish this section? I'll have to get back to you on that. There have been studies that show the effectiveness of these facilities but they've rarely been used on high volume or high speed streets in the U.S. Typically, they're used as in Cambridge on side residential streets in dense urban areas. There's stuff out from the National Cooperative Highway Research Program that says that doesn't mean they're ineffective in other situations. It would be a first in the area. We can't find any other examples of a street at this volume, four lane street, so that's still a question. That's the report if you want to check it out. The status of this question for us is to continue to study and talk about it, but they are both included.

C: JB: It's unusual at a signalized intersection.

C: PS: Yes, it is unusual. One piece we were thinking about internally was that you're not going to slow down people going 30 or 40, but I think you would have an effect on those ninety fifth to ninety eighth percentile speeders that are going 60.

Q: Bill Deignan (BD): Back where you have the crosswalk that you're not recommending. Did you look at a raised table to connect the two streets? I know it's a curve. That would create a raised intersection between the two streets?

A: PS: The sight line problem would still be there. That's roughly how we were thinking about it, as a table. The difference is minimal, at least physically, between a raised crossing and a table.

C: XD: I thought the original intent was that was to slow people down, and not so much as a crosswalk.

C: PS: Right. We'll talk about some other options for traffic calming. The sight lines are really an issue, and the fact that there's not much else to slow people down. We can keep talking about it. I don't want to rule anything out, but we feel like it might be dangerous.

A couple things are shown to be effective. These are based on FHWA studies. Speed activated speed limit reminder signs could go in some locations around here. They compare the speed limit to your speed. They have an effect from one to fourteen percent. Gateway treatments have strong effects when you have to actually go around them. But there is also a psychological effect of knowing you're in a residential neighborhood. This location might be opportunity for this. A big one is speed limit enforcement cameras. We want to mention this because there is currently no law in Massachusetts that allows these cameras but it is a discussion that comes up. This is one location that would be effective. If you can't do anything else this is what we do. That's a statewide issue, but maybe you should be concerned with that. This is the map. There are a lot of states that don't have regulation. There are red light and speed cameras, that our neighbor New York allows. There are variety of actual policies – sometimes they're about school zones, or neighborhood zones.

We also had you draw up plaza designs and there were varying results with the Star Market driveway – some people want to get rid entirely. We looked at design elements that would help left hand turns or to limit intake entirely. Those are two options in front of you to comment on.

C: AS: It used to be that you couldn't turn in. That was 10 or 20 years ago.

A: PS: With our model we think it would help if no one took lefts there. This option is a more Star Market friendly option. Really quickly we want to talk about the landscaping plans.

Q: AS: Is there a school speed zone around BB&N for 20 miles per hour?

A: JB: No.

A: PS: That's a good question, and is something to be investigated.

C: AS: It's a school.

A JB: You can't for high schools. Under new legislation a safety zone is twenty miles per hour

Q: AS: What about our discussion about twenty five miles per hour on the parkway?

A: PS: In the site discussions we were talking about posting it as twenty five.

A: RL: We will be working with you guys on that.

Q: AD: Transit signal prioritization- is that a part of the conversation?

A: PS: Yes, that's what we talked about with the bus delay. Burak described a queue jump at a couple points, for example, at Coolidge Avenue towards Fresh Pond. The bus gets a head start so it can position itself to get across the street. A couple of locations have that. The signals that we have out there now are equipped to do that, I think.

A: BC: Some, not all of them are.

A: PS: We're starting to look at the signals too. Equipment is later in the design. Okay, the landscaping plans come directly out of your exercise. I'll have Tamar come up and describe how that translation happened.

Discussion of Landscaping

C: Tamar Zimmerman (TZ): Thank you. Starting with Fresh Pond Parkway edges, we had talked earlier about greening up the edges and restoring the tree canopy. I've spoken with Stella Lensing who's in charge of planting for the DCR, and she said that the DCR is committed to replanting the street trees that are missing. There are a lot of gaps currently. What you're seeing on the screen is green for existing trees and proposed trees are red. That means there's a gap, where a tree has been removed or died, typically in the last five years. DCR is committed to replanting trees; the first round of plantings will happen in the spring of 2018. Right now, there are 37 trees remaining on the parkway, three of which are dead. Working with typical spacing, we can replace an additional 41 trees. That's the proposal, and we will be passing this onto DCR as a guide for replanting.

Q: Jan Devereux: Is that regardless of whether this study gets executed?

C: TZ: I think that will happen regardless. One thing that was raised was the widening of the parkway, digging up the curbing, and that would definitely have a negative impact on trees there now. If we value the canopy and the remaining trees that would certainly affect them.

Q: AS: Is that really being discussed? Widening?

A: TZ: There was some discussion about bicycle lanes. When I say widening I mean removing the curb.

C: JB: That was on Mount Auburn Street.

A: TZ: Okay, I misunderstood that.

C: AS: There was on Fresh Pond Parkway, move the curb not disturb trees the trees.

A: TZ: Okay, I thought you were talking about guardrails and curbing.

A: TZ: At the Star Market Plaza there are two alternatives. The chief difference between them is that one includes bicycle lane on the plaza itself (this all comes out of the charrettes from last time), and the other does not. The other difference is one includes some parking and vehicular access to the plaza and the other does not. This is the one that does not include the bicycle lane but it does include the parking in the plaza area. The entrance and exit are here. This is overlaid on the existing plan. Right now this entire area is vehicular. The bicycle lane remains in the street as shown and this is compatible with what was shown at the last meeting. This area becomes a plaza with seating, picnic area, trees, planters along edge of the plaza to create separation from the roadway, a series of café tables, a Hubway station here and connection to the greenway.

C: PS: Tamar, I just got a time check and we have about ten minutes left of the meeting so I wonder if we can speed through this?

C: TZ: Sure. This is a bus plaza with seating and some screening from the parking lot. This is the alternative scheme shows it shows a westbound bicycle lane through plaza protected by bollards so there's some separation; an area of plaza with trees and kiosks; a larger Hubway with fourteen bicycles, and this comes all the way through and connects to the bicycle lane here. There is the same exit only Homer side Star Market driveway.

Now we go to Brattle, this is a more plaza-like, harder surface option showing an area for Hubway. Seven bicycles could fit in here, as well as some plantings. In both instances we bring

the pedestrian sidewalk directly through and link it across to the sidewalk so you're not crossing where you do now. Finally, the second option is more green option, with no Hubway facilities, same bicycle circulation we have on the other, and a seating area more trees planting. That's basically everything. Any quick questions?

C: NCC: I'm going to fire up the lights. I don't want to cut Tamar short, but we tried to have this charrette three to four times and I want to give you the opportunity to draw. If there are any questions, Tamar, Pete, me, Hannah will all be here so come up.

C: PS: Folks please look at the plans in detail, and use sticky notes for comments or just write on them.

Next Steps

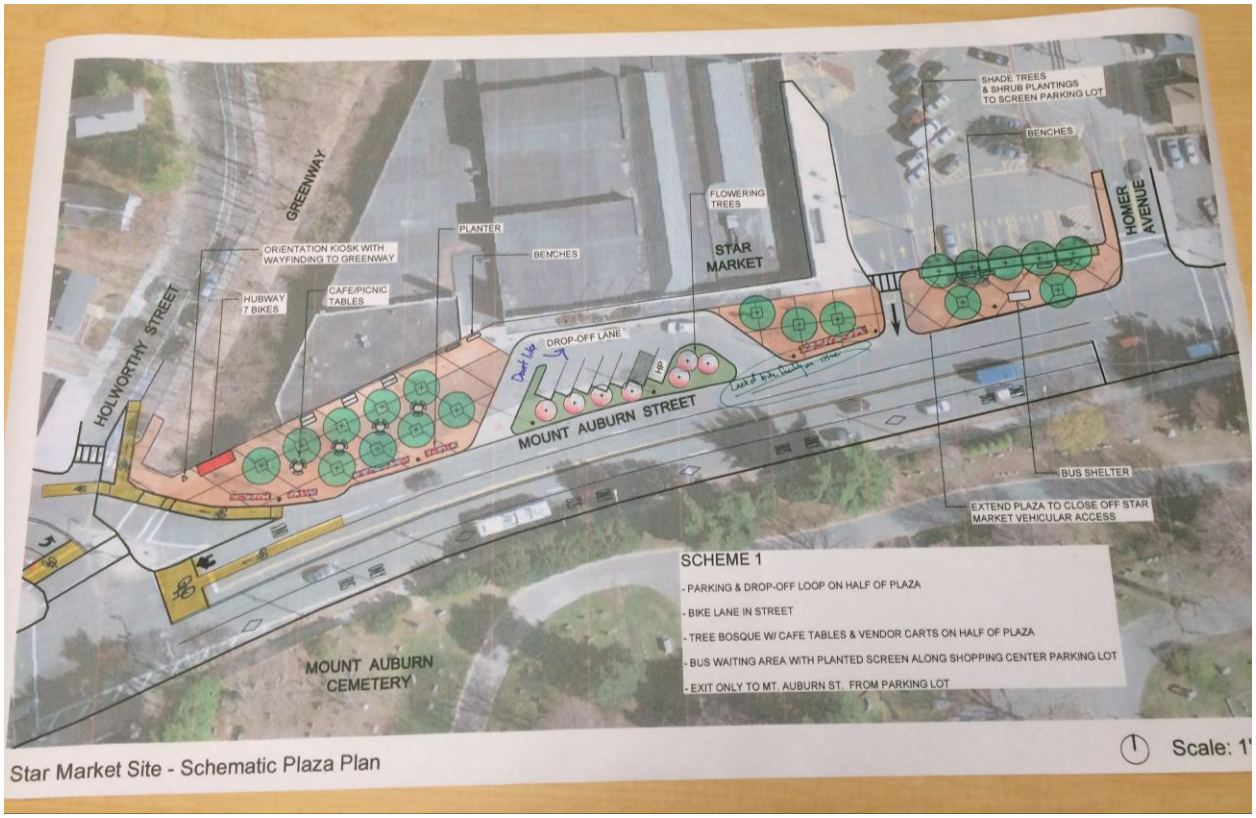
The next public meeting will be held at 6:00 PM on Monday, November 14, 2016 at the Shady Hill School Assembly Hall, located at 56 Coolidge Ave, Cambridge. The meeting is fully accessible, and can be accessed via the 71 and 73 buses.

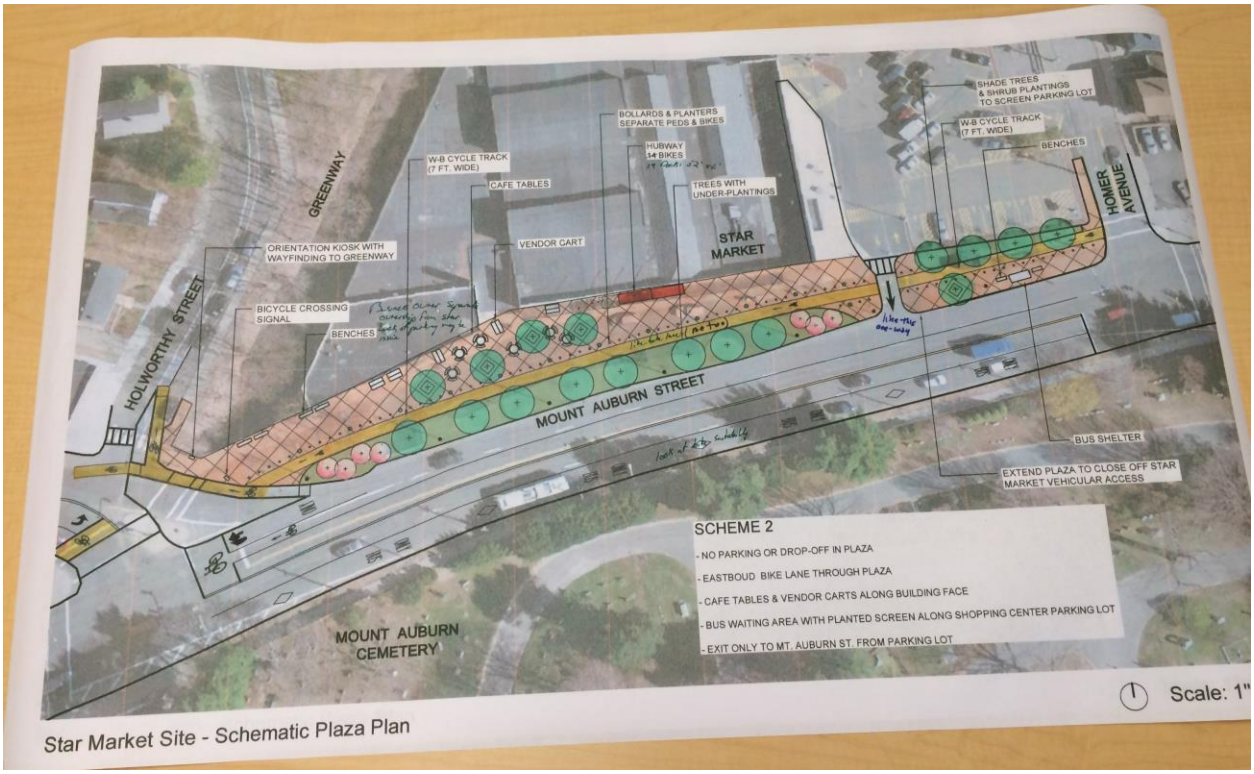
Appendix 1: Meeting Attendees

First Name	Last Name	Affiliation
John	Attanucci	MIT
Joe	Barr	Stakeholder Group
Igor	Belakovskiy	Community Member
Tegin	Bennett	City of Cambridge
Stacey	Beuttell	Stakeholder Group
Hannah	Brockhaus	Howard Stein Hudson
Nathaniel	Cabral-Curtis	Howard Stein Hudson
Nina	Coslov	Stakeholder Group
Bill	Deignan	Stakeholder Group
Jan	Devereux	Stakeholder Group
Aaron	Dushku	Stakeholder Group
Xander	Dyer	Stakeholder Group
Jill	Forney	Stakeholder Group
Brett	Fuhrman	BB&N
Janice	Gould	Stakeholder Group
Phil	Groth	Stakeholder Group
Jonathan	Hecht	Stakeholder Group
Amitai	Lipton	MassDOT District 6
Melissa	McGaughey	Stakeholder Group
Mark	Peterson	Stakeholder Group
Katherine	Rafferty	Stakeholder Group
Gabriela	Romanow	Stakeholder Group
Anne	Roosevelt	Stakeholder Group
Gideon	Schreiber	Stakeholder Group
Martha	Stearns	Stakeholder Group
Arthur	Strang	Stakeholder Group

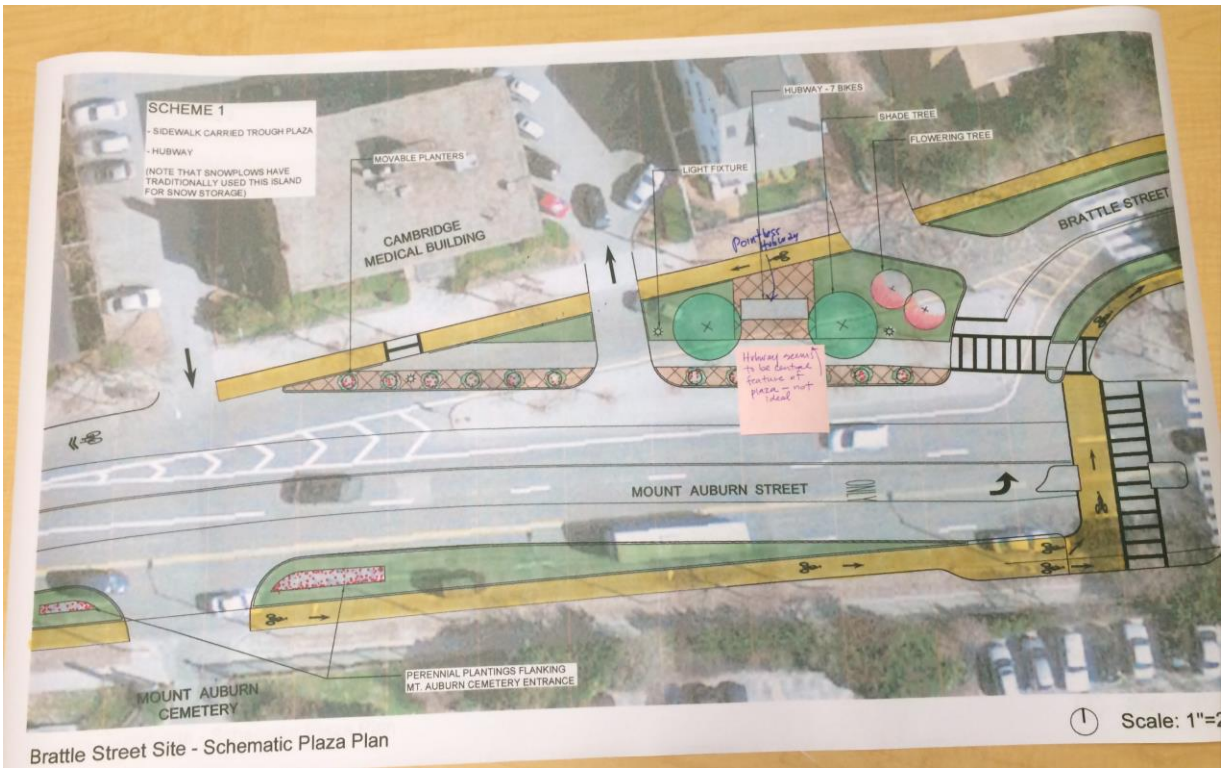
Appendix 2: Roll Plans with Comments

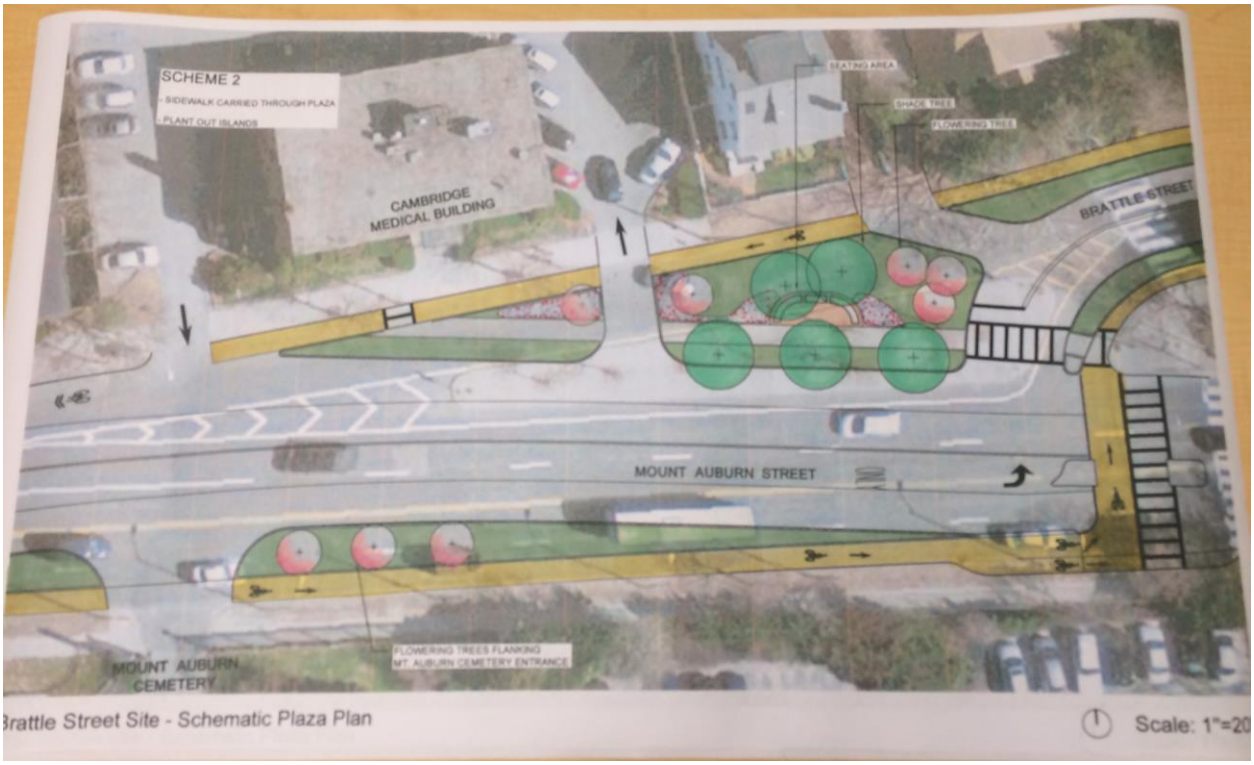
STAR MARKET PLAZA SCHEMES




GREENWAY
W-B CYCLE TRACK (7 FT. WIDE)
CAFE TABLES
BOLLARDS & PLANTERS SEPARATE PEDS & BIKES
HUBWAY 14 BIKES
TREES WITH UNDER-PLANTINGS
STAR MARKET
SHADE TREES & SHRUB PLANTINGS TO SCREEN PARKING LOT
W-B CYCLE TRACK (7 FT. WIDE)
BENCHES
HOMER AVENUE
ORIENTATION KIOSK WITH WAYFINDING TO GREENWAY
VENDOR CART
HOLWORTHY STREET
BICYCLE CROSSING SIGNAL
BENCHES
MOUNT AUBURN STREET
BUS SHELTER
EXTEND PLAZA TO CLOSE OFF STAR MARKET VEHICULAR ACCESS
SCHEME 2
- NO PARKING OR DROP-OFF IN PLAZA
- EASTBOUD BIKE LANE THROUGH PLAZA
- CAFE TABLES & VENDOR CARTS ALONG BUILDING FACE
- BUS WAITING AREA WITH PLANTED SCREEN ALONG SHOPPING CENTER PARKING LOT
- EXIT ONLY TO MT. AUBURN ST. FROM PARKING LOT
MOUNT AUBURN CEMETERY
Scale: 1"
Star Market Site - Schematic Plaza Plan

BRATTLE PLAZA SCHEMES

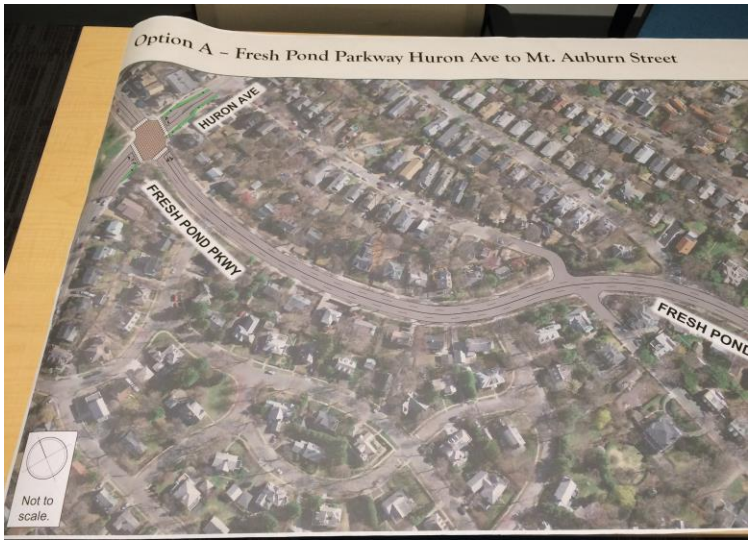


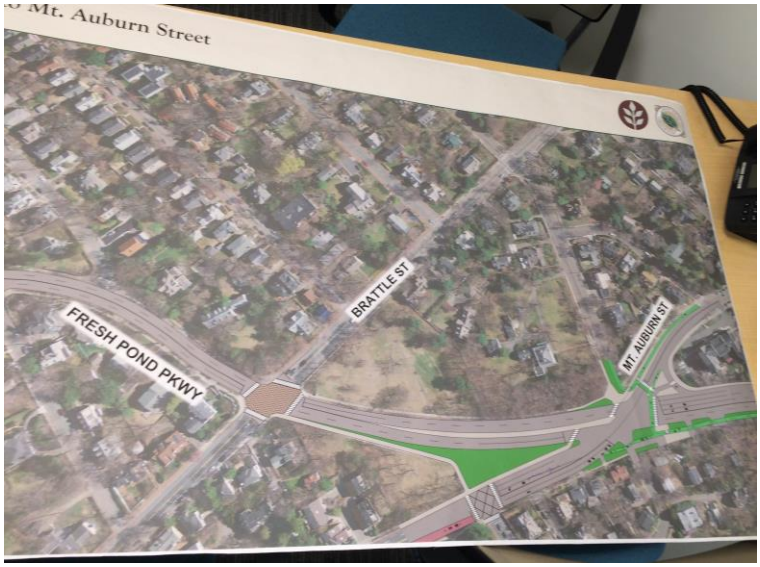


Brattle Street Site - Schematic Plaza Plan

Scale: 1"=20

OPTION A: FRESH POND PARKWAY





OPTION A: GERRY'S LANDING, MEMORIAL DRIVE, AND GREENOUGH BLVD

There were very few comments on this map. One comment expressed preference for the bus parking in front of BB&N (rather than parking).

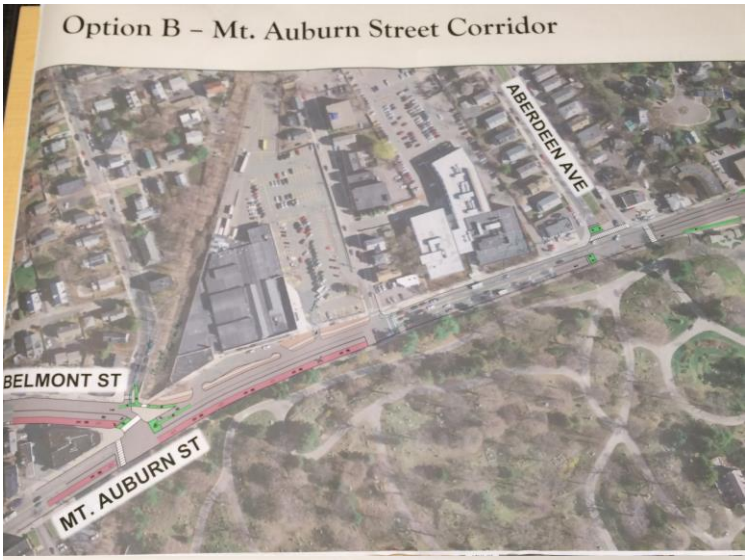
OPTION A: MOUNT AUBURN CORRIDOR

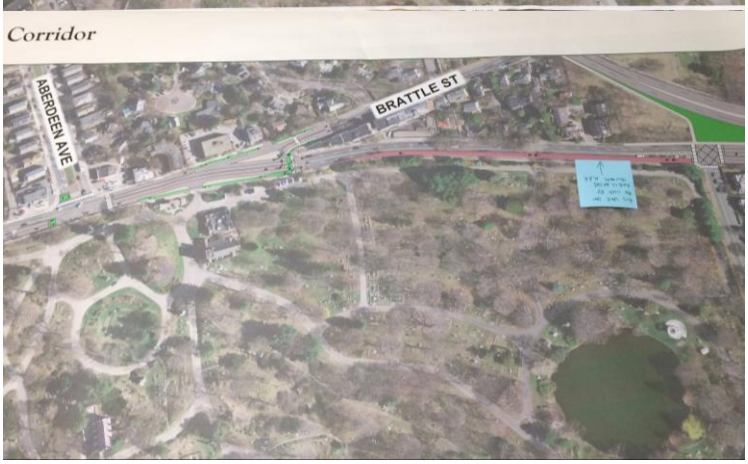
There were very few comments on this map. One comment expressed preference for the T-ed up intersection at Brattle.

OPTION B: FRESH POND PARKWAY

OPTION B: GERRY'S LANDING, MEMORIAL DRIVE, AND GREENOUGH BLVD

OPTION B: MOUNT AUBURN CORRIDOR





Appendix 3: Received Comments

From: Doug Brown
Sent: Wednesday, November 16, 2016 5:31 PM
To: Pete Stidman
Cc: 'Doug Brown'
Subject: RE: Mt. Auburn St. Corridor - September Meeting Presentation

Thanks, Pete. I think overall I prefer Option A for the Mt Auburn-to-Brattle St intersection and for the Boathouse area. However, for the Star Market driveway, I strongly prefer Option B. The two-way nature of the current driveway is incredibly confusing to both drivers and pedestrians. Frequent pedestrian conflicts occur at this location, which is immediately adjacent to both the Star Market entrance and the westbound Mt Auburn Street bus stop.

In addition, keeping the two-way driveway encourages left turns by car travelling eastbound on Mt Auburn, which then causes backups in the left hand lane. I believe it would be much better to have entering cars proceed to the signalized intersection at Homer Avenue. (I might even go further and suggest that ALL Star Market traffic use Homer Avenue and that the driveway directly on Mt Auburn be eliminated entirely).

Worse, keeping the current two-way driveway configuration creates the potential for cars to turn into the path of bikes using the future cycle track as shown in the Star Market Plaza Scheme 2. Since Scheme 2 is my preference for the plaza area, I would like to see the Star Market driveway become an exit only.

If you don't mind, could you please submit my comments to the team?

Thanks,

Doug

From: Pete Stidman
Sent: Wednesday, November 16, 2016 3:18 PM
To: Doug Brown
Subject: RE: Mt. Auburn St. Corridor - September Meeting Presentation

Hey Doug,

It's all leaning toward Option A, though we do not have anything definitive on the star market plaza yet.

-Pete

From: Doug Brown
Sent: Wednesday, November 16, 2016 10:22 AM
To: Pete Stidman
Subject: RE: Mt. Auburn St. Corridor - September Meeting Presentation

Pete,

I was unable to attend the last two meetings. Regardless, I reviewed the presentation and was wondering whether either the Stakeholder Group or the Public gave a clear indication of which design alternatives they preferred for the following sections:

1) Mt Auburn-to-Brattle intersection
2) Boathouse circulation
3) Star Market driveway
4) Star Market plaza

I have my own preferences, but I'm curious what others thought. Thanks!!!!

-Doug

From: Shuman, Matthew [mailto:mshuman@watertown-ma.gov]
Sent: Tuesday, November 01, 2016 2:11 PM
To: Nathaniel Cabral-Curtis; Pete Stidman
Cc: Mee, Gerald; Sheehan, Dennis; Magoon, Steven; Schreiber, Gideon; Rich Benevento; Michael Pompili
Subject: Mt. Auburn/Fresh Pond Study

I would like to summarize the DPW's comments from yesterday's meeting:

- We are concerned about traffic impacts of removing an eastbound lane at the Mount Auburn Street/Belmont Street intersection and how it will impact traffic on Watertown's share of Mount Auburn Street, from Arlington Street/Coolidge Square to the Cambridge line.
- We are concerned about potential by-pass traffic through Watertown neighborhoods and streets due to the impacts of the proposed plan.
- The DPW's Mount Auburn Street project is working towards submitting 25-percent design plans to MassDOT in early 2017. Notwithstanding our concerns noted above, our construction plans end just short of the Mount Auburn Street/Belmont Street intersection and we should be able to accommodate revised lane configurations. Our schedule for MassDOT submission may differ from the corridor study's schedule for issuing final recommendations.
- The DPW believes that the Mt. Auburn Street/ Coolidge Square intersection should also be reviewed for improvements in bus efficiency, however we are concerned about traffic impacts and the need to maintain two lanes of traffic in the eastbound direction at this location.

We should have another meeting once you are further along with your traffic modeling. Thanks.

Matthew I. Shuman, P.E.
Town Engineer
Town of Watertown
124 Orchard Street
Watertown, MA 02472

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From: Pete Stidman
Sent: Thursday, November 03, 2016 5:56 PM
To: Elizabeth Bierer
Cc: Nathaniel Cabral-Curtis; McLean, MaryCatherine (DCR); 'Fiesinger, Anne (DCR)'; Hannah Brockhaus
Subject: RE: CPA Request for Lowell Park

Hey Elizabeth,

Thank you for your letter. When we compile the final report we'll do our best to get it in there as part of the community engagement section as one of the desires we noted in the neighborhood. If in the future traffic goes down, which is possible with all the shared mobility innovations happening these days, there might be an opportunity for this someday and I'm fully okay with including restoring this connection as something we wanted to do, but were unable to. Of course, the DCR has the last say but I imagine this is in line with their approach as well as it is a park issue.

Thanks again and see you at the public meeting,

-Pete

From: Elizabeth Bierer
Sent: Tuesday, November 01, 2016 5:05 PM
To: Pete Stidman
Subject: Re: CPA Request for Lowell Park

Hi Pete,

I understand that there are many constraints to be considered in connection with the concept of this mid-block crossing. Yes, a ramp would be necessary. However, I did make the crossing myself, and when I got to the middle of the Parkway, I could see from gate to gate in Lowell Park, and the diagonal path through the park does feel like a natural "desire line" that would serve to knit the two pieces of the park together. Without this path, people don't have much reason to walk through the park, and don't have a way of seeing the two sections as one landscape.

So, in view of the recent change in the state law regarding speed limits in thickly settled zones, I'm wondering if you could consider some language in the final report that would keep the door open in the future (hopefully a future of less and slower traffic!) to a pedestrian crossing in its historic place, as was originally intended and designed. Is there any way to add a sentence or two which might make it more possible at some later date.

I can't be at the meeting tonight, but please let me know what you think.

Thank you!
Elizabeth Bierer

On Sep 15, 2016, at 11:09 AM, Pete Stidman wrote:

Very good news Elizabeth, thanks for letting me know. Likely this will start after we finish, but it's always good to know what the desires are from the friends.

The problem with a mid-block park crossing is first the grade change in the middle of the street, and second how it would interfere with traffic. If it is pedestrian-actuated, it would not be coordinated with other signals, and this would complicate the traffic especially at the peak hour. But the grade change is actually the more serious roadblock, you're not allowed under US law to build access anywhere that is not also accessible to people with disabilities.

-Pete

From: Elizabeth Bierer
Sent: Wednesday, September 14, 2016 11:13 AM
To: Pete Stidman
Subject: CPA Request for Lowell Park

Hi Pete,

Just wanted you to know that the Cambridge CPA committee approved the request for $60,000 for a Master Plan for Lowell Park. The City Council will also vote on it, but usually approves the committee decision. I understand that DCR will also contribute $60,000. This is wonderful news for the park. Perhaps you could speak to DCR's Wendy Pearl if you have detailed questions?

I was wondering if a pedestrian crossing in the middle of the park is totally out of the question. Have you given it any real thought?

Also, are you aware that Herb Nolan of the Solomon Fund is hoping to get funding for a pedestrian connection from Greenough through the Cambridge Cemetery and on to Fresh Pond? He envisions a ramp up the slope from the current BB&N parking lot.
I will attempt to find a drawing of this to send you if you don't already know about it.

Thank you for all your work!
Elizabeth