

City of Cambridge - PIO | 082323Mt Auburn Street at Aberdeen Meeting

ELISE HARMON-FREEMAN: OK. Again, welcome everybody to the Mt. Auburn Street At Aberdeen Avenue Intersection Safety Improvement Project Committee Meeting. Thanks, everybody, for joining us tonight. My name is Elise Harmon-Freeman. I'm the communications manager for the Traffic, Parking, and Transportation Department.

I'm here with several colleagues from the City of Cambridge. Andreas Wolfe is the Street Design Project Manager for this project. Brooke McKenna is the Transportation Commissioner for the City. Stephen Meuse is another Street Design Project Manager working in the Traffic, Parking, and Transportation Department. Chaimaa Medhat is a colleague in the Communications Office of the Traffic, Parking, and Transportation Department.

I've got Jerry Friedman, who's a Supervisor Engineer at the Department of Public Works. And I have Andy Reker, who is the Transit Program Manager for the Community Development Department. And finally, Conor Murphy, who is a consultant from McMahon Associates, has joined us tonight. So I think that's everybody who we have. Yes.

So again, welcome. And I think we are ready to get started. So tonight, we have this meeting. The purpose of the meeting, we are making changes to the street design on Mt. Auburn Street between Brattle Street and Belmont Street right near the Watertown/Belmont border. We're hoping that tonight, everybody who attends can learn about the proposed project design and give feedback and ask questions. And the way that's going to work, we'll present slides on the project background, goals, and key features, and then you can write a comment or question using the Zoom Q&A panel or make a verbal comment after the slideshow.

So we'll start tonight talking about planning background, a little bit of background on this project. Specifically, we'll talk about existing conditions on the street, some key features of the project design, and then we'll go block by block to show how that works in the design. And we'll end with next steps and then the Q&A. And with that, I'm going to turn it over to Brooke McKenna, our Transportation Commissioner, to talk a little bit about planning background.

BROOKE MCKENNA: Thank you, Elise. And thank you, everyone, for joining us tonight. We're excited to have you here with us and excited to be talking about the Mt. Auburn and Aberdeen Project. But to kick us off, I'm going to give a little bit of background. So we'll start with what guides our street design.

So we really design our streets for people of all ages and abilities. That includes people who do not have access to a car. Some people don't drive. Some people don't want to drive. Some people may not be able to afford to drive. And we want to make sure our streets meet the needs of all of those people.

We also want to meet the needs of people using all different types of mobility devices, whether it might be a mobility scooter, an adult tricycle, a bike with a child trailer, adaptive bicycles, and just many, many more and just constantly new types of mobility devices that are coming out. And we want to make our streets accessible to everyone. So when we think about our streets, we think about vehicle congestion and delay. And we really believe that moving people slowly is moving them safely. And we do not prioritize eliminating delay for people driving over the safety of other road users.

And we really focus on moving people and goods, not on the vehicles themselves. Biking and riding transit is a more efficient use of our limited street space, so we prioritize those. We want safe and accessible facilities, including bike lanes that can be used by a wide range of people from young to old with all types of differing abilities, as I mentioned on the last slide. But it's also really important that we allow safe access for trucks and local deliveries as well. And then we also like to acknowledge that public space on our streets can also be used for things other than transportation such as outdoor dining or public gathering or community placemaking.

So we talk a lot about sustainable transportation in Cambridge. Sustainable transportation options allow people to get around in ways that reduce greenhouse gas emissions and lower congestion-- things like biking, walking, public transit. And the City has a long history of prioritizing sustainable transportation going back to the Vehicle Trip Reduction Ordinance in the early '90s, the PTDM ordinance, Climate Protection Plan, School Wellness Policy, Envision Cambridge, and then coming up to more recently, our Complete Streets and Vision Zero policies, as well as the Cycling Safety Ordinance.

So I'll talk a little bit about how crash data informs our design as well as enforcement. So we design our streets, as I've mentioned, to keep our vulnerable users safe. People biking and walking are more likely to be injured than somebody driving when there is a crash. And you know, it's common sense that people in cars are more protected. So we really need to focus on people walking and biking.

As for user behavior on our streets, when we have safe facilities we see better behavior from all users. We see a real improvement in how the street is operating when it's very clearly delineated where various user groups can be. Speeding is the number one factor in the severity of a crash. We know that a vulnerable road user, like a pedestrian, who is hit at a slower speed has a much higher likelihood of survival than one who was hit by a vehicle at a higher speed. So lowering speeds is really a very high priority for us. We also know that narrowing our streets results in lowering speeds. So that combination is really important.

And then as for enforcement and education, where we see a crash pattern occur, we work with our partners across the City to conduct enforcement and to raise awareness around safety. We recommend enforcement based on the types of behaviors that cause crashes-- so things like speeding or distracted driving and things like that. And not all behaviors create the same type of risk. We look for the most common behaviors that cause injury, and those are the behaviors that we target.

And a design example that kind of demonstrates this is when we install separated bike lanes, parking in the bike lane is reduced, which makes-- which really improves safety for vulnerable road users. It creates a predictable place for people to ride without having to weave through traffic or ride on the sidewalk. So that's better for both the drivers and the pedestrians, as well as for the cyclists.

So getting into some specifics about the area that we're talking about tonight, Aberdeen Ave and Mt. Auburn Street. Between November of 2018 and November of 2022, there were eight total crashes at that intersection. None of them involved a person walking or biking. And the most common factors were people running red lights and unsafe lane changes.

At the other intersection in this area, the Aberdeen and Homer Ave intersection, between August of 2019 and August of 2023 there were eight total crashes there as well, one involving a serious injury to a person walking. And the factors that we saw in those crashes were speeding and red light running. So as you can see, the crash data that we look at provides a really good insight into the types of behaviors that we want to be targeting with our design changes.

So the Cambridge Bicycle Plan, as most people may have heard of before, kind of lays out the vision for the bicycle network across the whole city. It was put together with a lot of input from the community. And it does call this section of Mt. Auburn Street out for greater separation. So the goal here in the network, the bicycle network vision, is to have separated facilities along this corridor. And you can learn more about the bike plan at cambridgema.gov/2020bikeplanupdate.

So we often have folks asking us why is it so important to put in bike lanes. And there are a variety of reasons. When we do put in better facilities, more people are comfortable riding their bikes. And really, a lack of safe and accessible routes for people-- that are designed for people of all ages and abilities, the lack of that is really a huge impediment to why people decide not to bike. So as we've built more facilities, we've enabled a wider variety of people to bike. And you can see that reflected in the graph on the right showing both the increase in bike lane miles and the increase in cycling across the City.

So why specifically are separated bike lanes so important? So as I mentioned before, with separated bike lanes, people biking and driving are each allocated their own dedicated travel space. And there is a physical separation between the vehicle travel lane and the bike lane, which is both the buffer zone in-- which is separation in space, and then a vertical element like the flex posts as well. And for people with biking, this means increases in comfort and access for people of all ages and abilities, a decrease in crashes and injury risk.

Separated bike lanes eliminate the threat of dooring from parked vehicles, which is when someone in a vehicle opens a door into the path of a cyclist and can both hit that cyclist and push them in the way of moving vehicles, which is a really serious risk to cyclists. Separated bike lanes also reduce potential conflicts between vehicles and people biking by having their own designated areas. And then very importantly, the separated bike lanes visually and actually narrow the vehicle travel lanes, which results in-- typically results in lower speeds, which creates a safer environment for all users of the road.

All right. And just really quickly, I'll mention the Cycling Safety Ordinance. This one block of this project will include separated bike lanes that meet the standards of the Cycling Safety Ordinance. And the ordinance requires that the City installs or begins construction on about 25 miles of separated bike lanes by 2027, including all of Mass Ave, Garden Street, Broadway, Cambridge Street, and Hampshire Street, and then 11.6 miles of separated lanes from the rest of the network. And the portion on Mt. Auburn Street that we will have separated lanes here will fall into that 11.6 miles category. And with that, I will hand things over to Andreas.

**ANDREAS
WOLFE:**

All right Thank you, Brooke. Thank you, Elise and everyone else at the City. Hello, everyone. My name is Andreas Wolfe. I'm a project manager at the Traffic, Parking, and Transportation Department. And I'm going to be presenting on the bulk of the project background for the Mt. Auburn at Aberdeen project.

So first, we'll start with just some information to get everyone oriented to What we're talking about tonight. So the project area that we're specifically focusing on is the section of Mt. Auburn Street from Belmont Street at the crossing at the Watertown/Cambridge Greenway up until the intersection with Brattle Street.

So we have a few main goals for this project. And these will be reflected throughout the design that we present to you all tonight. Our first goal is to, as we stated in the introduction, is to improve the safety and mobility for people who are riding the bus, walking, biking, and driving. So for all users of the street, safety is core to what we do in our projects.

We also have another major goal of this project, which is to replace the signal infrastructure at Aberdeen Ave and Homer Ave. This project includes two major intersections, Aberdeen Ave and Mt. Auburn, but also Homer Ave and Mt. Auburn. But at Aberdeen Ave, we'll be installing all new signal equipment, which I'll get into the details of later in the presentation. And then of course, as with every project, we want to meet City goals and requirements, including the Cycling Safety Ordinance and the City's Vision Zero Action plan that Brooke talked about earlier.

So getting everyone up to speed to tonight, this is our second event that we've had to discuss this project. Specifically, last May we held a project open house at the Collins branch of the Cambridge Public Library. There, we presented an earlier draft of the design for the project, talked a bit about the background. We asked for feedback and got a lot of helpful ideas from members of the public.

One key takeaway from that meeting that is reflected in the design we'll talk about tonight was support for a change in the bike lane to have a two-way bike lane on one side of the street versus a single-way bike lanes on each side. We also heard a lot of really helpful feedback about conditions for pedestrians such as difficulty with crossing Mt. Auburn Street, especially for people at the bus stop across from the shopping center, and how long the wait is for the light. And so we're proposing some improvements to both the street and to the signal timing that we think will improve safety for people crossing.

And so with that, I'll dive further into the design. So first, some nearby projects that we have in this area. The City has been hard at work installing separated bike lanes on Brattle Street. This is a project that we installed earlier this summer and will actually tie into this project at Aberdeen Ave. We're mostly complete with the Brattle Street Project. We do have some of the concrete curbing that is left to install along the project.

Also nearby, there's the Huron Avenue project, which will be installing a two-way bike lane along the Fresh Pond Reservation on the north side of Aberdeen Ave as well. And all these projects, there's a lot going on in West Cambridge right now. But by talking about all these projects, you really start to see a full network come into play that aligns with the Cambridge bike plan vision that we talked about earlier.

All right. So next, I'll go into existing conditions. And so this is really just about talking about what people are experiencing today on the street. We'll talk about some of the details, but we also know that the people attending tonight live here and travel through here regularly. So we want to hear about your experiences as well.

So to start, the existing layout of the street-- we know that all users have different interactions with the street, whether they're on foot, on bike, riding a bus, or driving. So we'll talk about each of those. For people riding the bus today, there's an eastbound bus lane, but it ends after the Belmont Street intersection. So approaching Homer Ave and then approaching Aberdeen Ave, there's no dedicated bus lane in that section, so there's more delay than there is at the Belmont Street intersection. The bus lane then picks up again after Aberdeen Ave, getting down to West Fresh Pond Parkway. There's no bus lane in the westbound direction.

For people riding bikes on Mt. Auburn Street, there's no vertical separation or flex posts or curbs that separate people biking from people driving. There's sections of the street with sharrows or shared lane markings but really, really no substantial bike accommodation at all, which is not a comfortable facility. It's not an all ages and abilities facility.

And then we also have the two-way separated bike lane on Brattle Street that currently ends at the Aberdeen Ave intersection. And we don't have a-- right now at that intersection, it can be challenging entering the lanes on Brattle Street. And so as part of this project, we'll be looking at an improved connection between that project and this project.

For people walking, Mt. Auburn Street is a pretty wide street, fast travel speeds. It can feel quite exposed as there's no street parking, there's no bike lane. There's nothing really between someone walking on the sidewalk and a travel lane except a curb. And also, the crossing distances are quite large. And while the intersections are signalized, it can still be quite a challenge crossing the street, especially for people coming on the 71 and the 73 bus.

And then for people driving, there's two lanes in most of the corridor. However, there's some configurations of the lanes that can be quite challenging or confusing. So for example, right now a driver who is traveling east on Mt. Auburn Street, as they approach Aberdeen Ave, they're actually required to change lanes if they want to stay straight. And so that can be a complicated lane change, and that's something we're looking to address, too.

So regarding the bike facilities, as I said, we have the separated bike lane on Brattle Street. However, once you get to Mt. Auburn Street, it becomes a much more challenging environment for people biking. We do have a westbound standard bike lane, such as a bike lane without flex posts, from Aberdeen Ave-- or rather, from Homer to Belmont Street. However, there's a gap in that facility between Aberdeen Ave and Homer. And then east, traveling east, cyclists are sharing the lane with buses or with general traffic for its entire length.

As many of you know, there are bus lanes on the corridor that were installed as part of a previous project in 2018. The improvements made in 2018 led to substantial time savings and reliability improvements for bus riders. It showed, for example, on a typical morning a rider on a 71 or 73 bus would save about three to five minutes just in the section of the street each day. However, that project didn't complete bus lanes. There's currently a gap where the bus lane ends just after Belmont Street, and it doesn't pick up until after Brattle Street. There's also no westbound bus lane, either. And we'll talk more about changes we'll make to the bus lanes later on.

So with that, I'll go over some of the key changes to expect as part of the project. So we'll talk about each of these individually. But first, we just have pulled up the entire plan and then call-outs for each of the specific elements that we'll dive deeper into. So as I said, we're looking at improving bike facilities, including a section of separated bike lane between Aberdeen Ave and Homer Ave, signal improvements both at Aberdeen Ave and Homer Ave.

We're also installing dedicated turn lanes. So that includes a dedicated turn lane into Homer Ave, which will accommodate now turns into the shopping center-- will be handling turns into the shopping center from the Homer Ave entrance. So you'll no longer be able to turn left directly into the shopping center from Mt. Auburn Street. Rather, by installing a dedicated signal and turn lane, we can provide better access into the shopping center from Homer Ave.

There's a short extension of the bus lane to just after Homer Ave, which we'll get into. And then key to making all these changes happen is that westbound Mt. Auburn Street, we'll reduce the street from two general-purpose lanes down to one, with that extra space being-- accommodating the new bike facilities, accommodating the turn-only lanes, and accommodating the extension of the bus lane. And with combining this with signal improvements, we're able to see little to minimal impacts to Mt. Auburn Street traffic delay as part of that. So we'll talk more about that.

So some of the-- we really-- when we look at signal improvements for people walking, we have two key tools, both of which we'll be implementing in this project. The first of these is what's called protected phasing. And that's when people crossing, whether they're on foot in the crosswalk or crossing on the bike lane, they cross the street at a different time as turning traffic. So this requires a right turn-only lane. But when we're able to do that, we can signal the intersection such that those turns have a red light while people are crossing, and then later in the cycle they'll flip.

Where we're unable to accommodate that, or where the conditions are-- the intersection is maybe smaller or lower volume, we'll typically implement a leading pedestrian and bike interval. So in the photo, we've shared an example from Inman Square at Hampshire and Cambridge Street, where people biking and walking, they have a head start. That is an important safety improvement, as it allows someone crossing the street to establish themselves in the intersection before traffic goes. This improves visibility and improves yielding and makes it more likely that the driver who's turning will see the person and will turn after they've been able to cross the street.

So currently today, the bus lanes that were previously installed ends before the Homer Ave intersection across from the shopping center. As part of this project, we'll be looking to extend it about 400 feet to meet the bus stop. Wherever possible, we want to have dedicated lanes connect individual bus stops. So this will kind of complete that section up until the bus stop that's just after Homer Ave and will result in improvements to bus reliability that we'll talk about for the eastbound bus and the eastbound bus riders.

There are also a number of other benefits to the extension of the bus lane for all users that are happening at this intersection. So one of those is the dedicated turn lane into Homer Ave and allowing people to-- and making access to the shopping center via Homer Ave. This will signalize the left turn.

Wherever possible when we have high-volume streets, we want to have left turns-- high-volume left turns have their own signal. So today, drivers turning into Homer Ave or the shopping center are required to yield to oncoming traffic. Instead, in the future they'll have a red arrow, and then they'll have a green arrow when it's their time to go. And so by consolidating all those turns into Homer Ave, we're able to create a more predictable experience where people who are in the oncoming know where to expect someone turning.

We'll also be removing the kind of awkward lane change that happens today that I talked about earlier. So someone continuing straight on Mt. Auburn Street in a car will no longer have to move over. The through lane will stay the through lane so you won't have to change lanes.

The bus also is able to service the bus stop from a dedicated lane. And so today, the bus stops in the general-purpose lane. And in the future, it'll stop in a dedicated lane so when it's stopped, it's actually-- it's no longer blocking the traffic that's behind it. And this helps create a safer merge point. So today, the buses and general traffic must merge, and then the bus stops. In the future, the bus will stop, and then it will merge with general traffic, and the bus will merge after the stop, which is a more predictable experience than having to merge with a bus and then the bus stopping.

So we're also looking at turn lane improvements at Aberdeen Ave. So this is related to the signal separation that I mentioned earlier. So drivers who are turning right onto Aberdeen Ave from Mt. Auburn Street will have a dedicated arrow. So today, this is what's referred to as a permissive turn, where the driver must yield to bicyclists and pedestrians when turning, and that's kind of happening at the same time. In the future, we'll have those separated out.

So this has a number of benefits, the first of which is that the through traffic that's behind the turning traffic is no longer waiting behind them when they're turning. And so this makes the through lane more efficient. That's one of the reasons we're able to reduce the street to one lane from the two today. And this also improves conflicts between turning drivers and vulnerable road users.

So for example, the crossing at Aberdeen Ave is a pretty long crosswalk. And so we've observed that yielding behavior isn't great at this intersection. So this will make it no longer a yield. It will rather be complete signal control. And also with having a two-way separated bike lane, that adds to the importance of having that full separation with the increased number of users who will be moving to the right of turning traffic.

So we are installing improved bike facilities. As I said, we'll be installing separated bike lanes between Aberdeen Ave and Homer Ave. For the rest of the corridor between-- so going west from Homer after Belmont Street, people biking will have the same as today, which is a dedicated bike lane without separation. And traveling to the east, today there is a shared bus/bike lane that-- bus and bike lane that then merges into a general-purpose lane.

So that, instead, will be shared bus/bike lane the entire length until bikes transition at Homer Ave to the separated bike lane. As we said before, this is an improvement, especially between Aberdeen Ave and Homer Ave. However, we realize that we have more work to do to complete the network between Homer Ave and the greenway at Belmont Street.

And then lastly, a major key change is going to be the new signal infrastructure at Aberdeen Ave and Mt. Auburn Street. This is really the key component that lets all these things come together. Today, we don't have a lot of options for improvements to the street with the signals that are out there today.

Today, they're all what are called side-mounted signals. So the signals are on their supports on the side of the road. And for a street as busy as Mt. Auburn Street, we typically want to have overhead signals which are more visible and can accommodate additional signal heads.

This is historically because of the overhead trolley wires that were in the area at the intersection. The overhead wires were moved last year in anticipation of this project and then with the conversion of the MBTA bus fleet. And so by removing those wires, we'll be able to install overhead traffic signals, which will improve user clarity for everyone.

We'll also be updating all the pedestrian signals to the latest accessibility standards. And then we'll also be able-- by having the overhead signals, we'll have each head over its lane rather than having people have to look to the side of the road. We'll also have bike signals as part of this intersection as well. And then by looking at changes to the signal timing, we're able to better coordinate between the Homer Ave and Aberdeen Ave intersections, especially for the buses.

And then lastly, another key feature will be for westbound drivers who will go from the existing two lanes down to one lane going westbound. And so this lets us really install many of the, if not all of the key features of the project, including creating space now to have turn lanes, creating space for dedicated-- for the separated bike lanes. And also key, as we talked about in the intro, reduces the crossing distance. And so now people crossing the street, their crossing distance is really 75% of what it used to be. So they're only crossing three lanes, typically, versus the four today.

So next, we'll talk about it more block by block and talk about where are these key changes are happening. So from Belmont Street to Homer Ave-- so for each of these pages, you'll see basically the plan on the screen, and then we'll have what we call a cross-section kind of highlighting what that will look like at a specific point in the plan.

So first focusing on Belmont Street to Homer Ave, so heading east on the south side of the street, we have the dedicated bus lane, which now extends all the way to Homer Ave; the same bike facility we have today, which is the standard bike lane on the westbound side of the street; dedicated turn lane onto Homer Ave with left turns no longer allowed directly into the parking lot-- instead, they'll use Homer Ave to enter the parking lot; and of course, the single westbound travel lane.

So from Homer Ave to Aberdeen Ave, here's where we have the separated bike lanes. So again, this is a change we made based on feedback from our open house and also from key stakeholders, including the Mt. Auburn Cemetery, who we've been closely working with as part of this project. One of the benefits of having the two-way facility on the north side is better access to the shopping center, which is a major key destination point along the corridor. There's also a bike share station at that intersection.

We had also user counts from this area for bicyclists. And historically, those counts have shown a lot of people choosing to ride on the sidewalk rather than on Mt. Auburn Street, which is somewhat understandable given that there's no bike lane on the street. So by installing a bike lane, we can reduce sidewalk riding. And especially we saw a lot of people using the north side sidewalk coming from the shopping center, for example. And so this puts the bike lane where we see the most users, which we hope will further reduce-- encourage people to use the bike lane rather than ride on the sidewalk.

And then another key factor into this decision was the crossover to get into the bike lane. Rather than a previous design we had at Aberdeen Ave, we're actually moving it now to Homer Ave, which we'll talk a bit more in the next slide and kind of what factored into that. So other key changes in the section is really just the new merge point for the buses and general traffic after Homer Avenue. And then otherwise, we have the left turn lane into Aberdeen Ave, as there is today. Drivers will have to change lanes to stay straight. The through lane will just continue to Aberdeen Ave.

So focusing in a bit on what we call the bicycle jughandle, this is how people on bikes will move over from the shared bus/bike lane into the bike lane facility on the north side of the street. So we'll install a new ramp, which will allow bicyclists to mount onto the sidewalk. And then we'll also be expanding the existing ramp at the crosswalk to accommodate both-- be wider so it can accommodate both the crosswalk and also a bike lane.

As I said, this is a change from a previous design, which had this crossover, this jughandle at Aberdeen Ave. We made this for a number of reasons, the first of which, as I said, we worked closely with Mt. Auburn Cemetery, who the had some concern-- the previous location at Aberdeen Ave was closer to their entrance, and they had some concerns about the level of activity so close to their entrance.

The sidewalk is also wider here at Homer Ave than it is at Aberdeen Ave, which gives more space for people biking and walking to share the space. And in addition to that, we're going to have signage and pavement markings that indicate to people on bikes as they enter the jughandle to slow down and to yield to pedestrians and share the space.

So the last section of the project area from Aberdeen Ave to Brattle Street, here most of these changes were actually already implemented. We have the two-way bike facility that was installed as part of the Brattle Street Project. Also at that time, we added new markings and signage to Mt. Auburn Street, which no longer allow lefts out of the cemetery's west driveway. The cemetery has two driveways, a west and an east driveway.

The lefts are still allowed out of the east driveway, but what this did is it shifted those lefts to all be occurring from the same location. And also, it makes the lefts, the point where they're crossing the street, further away from the intersection where there's better visibility and more predictable traffic flow. And as I said, we've worked closely with Mt. Auburn Cemetery throughout this process.

And this was really an idea that was actually their idea and we were happy to oblige with it, but we do think makes an overall safer street for everyone. With that, I'll turn it over to Conor Murphy with McMahon, who will talk a bit about the timing of signals and traffic changes.

**CONOR
MURPHY:**

Thank you, Andreas. So we can move me to the next slide here. So first, let me describe the revised traffic signal phasing at the Aberdeen Ave intersection. So working on your screen from left to right, the-- Andreas, can we-- there we go. Thank you. You can stay here.

Working from the screen left to right, the cycle would start with the eastbound traffic getting a green light and allow for the left turn onto Aberdeen Avenue. This will-- the phasing here will depend on whether there is someone trying to cross Mt. Auburn Street on the east side of the intersection, which you can see on that first phase with the asterisk right there. If no one has hit the pedestrian push button, then instead of the walk sign coming on, the green ball for the eastbound vehicles will come on as well.

Either way, in either of those scenarios, right-turning traffic out of Aberdeen Avenue onto Mt. Auburn Street will have a right turn arrow to allow them to make that turn as well. Once that is serviced, then you will have all the Mt. Auburn Street traffic moving, including the bikes and the pedestrians that Andreas talked about earlier with the protected phasing, and then through movements on Mt. Auburn Street.

The bikes and the pedestrian movements will then turn off, which will then allow the westbound right-turning vehicles onto Aberdeen Avenue get the green, so that way they will be fully separated from the bikes and the pedestrians. And then lastly, the Aberdeen Ave movements will turn on for the left and the right movements. And this does include the bikes there as well being able to turn into the new two-way facility that Andreas has talked about.

So moving on to the next slide, with this phasing, some of the traffic conditions that are currently experienced through this intersection are going to change. So in general, what you're seeing with this slide is what we expect to happen, which is that the average queues or, basically, how far back the line of vehicles will reach from the stop line while you're waiting for a green light to turn on, will stay fairly consistent. Some of the lanes may have a little bit of a smaller queue, some may be a little higher by a couple vehicles or so. But in general, in the morning and the afternoon, that average queue will stay pretty consistent.

If you go to the next slide, Andreas, where you will see more of the change is the travel time through the intersections-- or through this intersection is where we are expecting to see this change. So first, drivers turning right from Mt. Auburn Street on to Aberdeen Avenue will now be turning from that dedicated right turn lane, as Andreas has talked about. And as such, they will be experiencing a little bit of additional waiting time at that signal-- as shown here, about one to two minutes. And again, that's to offset the safety benefit of separating the bikes and the pedestrians.

For drivers staying on Mt. Auburn Street, so traveling from Mt. Auburn to Mt. Auburn through the intersection, we are expecting to see an improved travel time, partly due to the separation of the turning traffic, as well as just some general signal timing changes that have been incorporated into this traffic signal design. Lastly, for drivers that are approaching Mt. Auburn Street from Aberdeen Avenue, so turning from Aberdeen onto Mt. Auburn Street, we were also expecting that these drivers will see a little bit of an increase in travel time during the evening peak hour, up to about a minute. But during the rest of the day, we're not expecting to see much of a travel time change for those vehicles.

If you move to the next slide, Andreas-- thank you-- similarly for the bus riders, we're looking at some changes for their travel times as well. So in the morning, the eastbound buses, we're actually expecting to see faster moving buses or shorter travel times by about 30 seconds in the morning and saving about 1 minute in the afternoon rush hour for those eastbound buses. And a lot of this is coming from the extension of that bus lane through the Homer Avenue intersection up to the eastbound bus stop.

And [CLEARS THROAT] excuse me. We aren't really expecting to see any changes in the travel time for the westbound bus riders. So it's really going to be more for that eastbound that the change will be seen for the bus experience. And then speaking of Homer Avenue, the last piece that I'm going to be talking about is just the change in phasing out here.

So overall, it's going to look somewhat similar to what's out there today. But if you start on the top left of this diagram, you're going to see that LPI, that Leading Pedestrian and bike Interval that Andreas described earlier. So for the westbound bikes and the pedestrians crossing Homer Avenue, they will get, I believe, about a four-second or so head start from the rest of the vehicles. And then you will see in the top right of that diagram, where all the eastbound and westbound vehicles will be traveling at the same time, and any of the right-turning vehicles into Homer Avenue will need to yield to the bikes and pedestrians that are crossing Homer Avenue. But again, with that LPI, the expectation is that a lot of them will have already made it through the intersection, therefore separating out those conflicts, which is ideal.

The phase 2, or the bottom left of this diagram, is where the eastbound left-turning vehicles-- so the Mt. Auburn left turns onto Homer Avenue-- they will get their green. And really, the change from existing here is the concurrent pedestrian phasing. So every time that that left turn lane comes on, pedestrians will get a Walk sign to cross Mt. Auburn Street. And this will also allow for any bikes to be able to cross from that eastbound bike lane to get into the two-way facility on the north side. And then the last phase on the bottom right, you will see, is the Homer Avenue approach which will allow anyone from Homer Avenue to turn onto Mt. Auburn. And again, that includes bikes turning into the two-way facility heading east or continuing on the one-way facility heading west. And I believe, Andreas, I'm passing this back to you.

**ANDREAS
WOLFE:**

Yes. Thank you, Conor. OK. So just to wrap us up, we'll just go over the brief project schedule. So thank you all for joining us tonight. So tonight was intended to be the virtual presentation, kind of the more in-depth explanation. We'll be posting everything from tonight on the project website so it'll be viewable. So if you know anyone who wasn't able to join us, that's a place you can help refer them to. And we'll post an email when that's all been posted and ready for viewing.

Next, then, on September 12 we're planning an additional open house for the project. This will be a little similar to the one we had in May. But instead, we'll actually have it at 699 Mt. Auburn Street, which is the Star Market. And we'll have it in the plaza out front kind of near the bike share station and where there's that turn-in for the metered parking.

And at that point, we'll discuss any updates we might have between now and then-- that would really be based on feedback we get both tonight and in the coming weeks-- and then any updates we have on the installation schedule. But for right now, our plan is for fall implementation. This is mostly a quick build project, so we don't expect too many changes to in-depth street construction.

However, there is going to be the installation of new signal foundations, which has to happen about a month before the rest of the project. So that's one of the first things you'll start to notice. And then in addition, some of the curb ramp-- the curbing changes, the ones that are happening at Homer Ave, those would also precede the rest of the project, which will be the pavement markings and the installation of flex posts.

So with that, I'll turn it back to Elise.

**ELISE HARMON-
FREEMAN:**

Thank you, Andreas. I'm going to lead us on the Q&A tonight. And as I'm going to explain some of our procedures, I'm just going to launch a quick poll. We'd love to hear how you heard about the meeting tonight, kind of where you're coming from. So as you listen to me lay down the ground rules, feel free to answer these questions.

So we're going to take comments in the order that hands are raised. I don't currently see anybody calling in, but if you are, you can dial 9 to raise your hand. Additional questions can be asked using the Q&A function. I see we've already got a couple coming in on the Q&A. About every 10 or 15 minutes, I'm going to stop us, and we're going to provide answers to those questions. So we'll kind of have a period of comment and questioning and then have a period of answers.

This meeting is scheduled to end at 8:00 PM. And if we've exhausted our time and there's no more questions, we might end a little early, but we'll see how it goes. So I see we're still getting some answers trickling in on that startup poll. And I think what I'm going to do, since we're getting some similar questions coming in in the Q&A is just start with answering some of those, and then I will call on people with their hands raised.

So I'm just going to quickly close the poll, and we can look at the results. So how did people hear about this meeting? A lot of people heard from the project email list or the daily email update from the City of Cambridge. A couple came from the flyer from social media, some word of mouth, and some other. So interested in what the "other" could be. So let's see. Did you attend the May 25 open house about this project? We got about a quarter did and 75% did not.

And then what describes you? We have a fair amount of people who travel through the area in a car, a fair amount of people who live close to this section of Mt. Auburn Street, a fair amount who travel on the bike or by foot, and then a few who travel on the bus, and one person who owns a business or works close to the project area. So thanks for sharing that.

With that, Andreas, I'm just going to ask you a couple of the questions we're seeing in the Q&A. And then I will start calling on people in maybe about five minutes. So let's see. Just a quick question about whether we're going to repaint the existing bus lanes to-- the bus lanes to the Watertown line because it's very faded today.

ANDREAS Sure. So at least for-- we are somewhat close to the end of the season we expect for installation, since we'll be
WOLFE: doing fall installation. I expect we'll paint the new bus lane. And then if we have time before the end of the season, we'll try to do the rest, although some of that may have to happen next year, just depending on the timing.

ELISE HARMON-Thank you. And then we have someone concerned with how the westbound buses are going to interact with the
FREEMAN: bike lane in front of the Star Market, asking if bus drivers are going to have the room to pull all the way over.

ANDREAS So that is the westbound bus stop, westbound with the bike lane?
WOLFE:

ELISE HARMON-Yes.
FREEMAN:

ANDREAS So that, we are adding some additional green paint in the bike lane at that location. Otherwise, this is going-- that
WOLFE: section will be staying fairly similar to how it is today with the pullout in the sidewalk where buses access the curb. We realize that as you get west of Homer Ave, our design isn't perfect. So we don't have separated facilities on that section. We are trying to do what we can to improve it with the additional green markings. But the expectation will be that bus drivers will wait for bicyclists to clear the crossing before entering the bus stop, as they would on any other section where we have bike lanes without separation at a bus stop.

ELISE HARMON-Great, thank you. And a couple of questions are coming in about the types of separation that we're using. So for

FREEMAN: the protected lanes, are we planning on using flex posts? And we have a request to use precast curbs instead.

ANDREAS Brooke, did you want to-- I can start if you want to add anything in. So we are planning to use flex posts. And we

WOLFE: are using the curbing on Brattle Street. I don't expect we'll have future installs after Brattle Street this year. I think there is actually some-- we have some demand from other cities in the area for the curbing, too. So after that, I think we'll reassess for next year if there's other locations. But this is not one of the locations that's planned.

ELISE HARMON-Thank you. And one more question for you, and then I'm going to move on to Brooke. And then I'm going to call

FREEMAN: on some of these people with their hands raised. Thank you for being patient.

Can you talk a little bit about the bike route from the Greenway to Homer Avenue? Will there be markings in the parking lot to help traffic navigate safely?

ANDREAS Sure. So I mean, we do not have-- the City does not have jurisdiction over the parking lot. There is, for those that

WOLFE: don't know what the commenter might be referring to, there is an entrance to the back of the parking lot from the Greenway, which can be kind of a-- if you're coming from that direction, a good way to access Mt. Auburn Street. We are working with the Star Market about safety improvements, like I said, the no left turn lane. But we wouldn't have any control over markings or anything like that within the parking lot itself.

There are other improvements that are under construction on Holworthy Street as part of a separate project that will be installing an improved crossing for bicyclists and for pedestrians coming from the Greenway who want to cross Mt. Auburn Street at that intersection at Belmont Street.

ELISE HARMON-Thank you. And Brooke, two questions for you. How do you intend to enforce the restriction against eastbound

FREEMAN: drivers turning left into that parking lot?

BROOKE Sure. You know, it's always challenging to get people to comply with turn restrictions. And we'll work with the

MCKENNA: Cambridge Police Department around education when the change is first made. But I would say that the changes that we're making at Homer Ave are going to make that entrance much more comfortable for drivers. And I believe that that will balance out the left-turning vehicles, I believe. So I think that with the turn lanes, available you're going to have more people opting for the Homer Ave entrance.

ELISE HARMON-Great. And then we just have a request for-- to see if we can dig new tree pits near the Homer Avenue

FREEMAN: intersection while sidewalk crews are on site.

BROOKE We will pass that suggestion along to the folks at DPW.

MCKENNA:

ELISE HARMON-Great, thank you. And with that, I'm going to move on to some of these people with their hands raised. Thanks

FREEMAN: very much for waiting while we answered some of those initial questions. I've got Scott up first, followed by Joe Poirier. And I'm going to apologize in advance for anybody whose name I mispronounce tonight. Scott, please go ahead.

AUDIENCE: Hi. Thank you for this project. It looks really good in general. I had a few comments about the Aberdeen Ave intersection. The first is, is there a plan to do any turn hardening? As it is right now, there's a really big radius curves on both sides. And with the double bike lane, you could really tighten up those curves. Since there is some curb work happening anyway, that would be great if you could physically change the curbing there.

But also, on the interface between the bike lanes and the general travel lanes, it'd be nice if there were some bumps of some sort, turn hardening work done, to help make sure that we don't have cars that are turning into the bike lanes, both from Mt. Auburn Street onto Aberdeen, and also Aberdeen onto Mt. Auburn, making it clearer that they have to go straight out so that you don't get that. I've had an issue on Brattle a few times of cars turning into it, the double wide bike lane. So I think some turn hardening there can make it more obvious, especially with the curb.

And then the other comment-- Aberdeen to Mt. Auburn, I don't know how much of this is in the project scope, but the current situation right now is the bike lane in between two turn lanes. And I don't think that is really a all ages and abilities situation. So I would love to see that changed moving the bike lane over to the side, though I think that's going to take some editing of the signals and the signal plan that was shown to make that work out. But I think that would be really great to make that interface a lot more all ages and abilities.

But overall, it's a great project. Very excited to see it happen. And the extension from Brattle Street so that you can get all the way down, I think it'll be awesome. Thank you.

ELISE HARMON-Thanks for your comment, Scott. Up next, I have Joe Poirier followed by Chris Cassa. So Joe, please go ahead.

FREEMAN:

AUDIENCE: Hey. Yeah, can you hear me OK?

ELISE HARMON-Yes.

FREEMAN:

AUDIENCE: Great, thanks. Joe Poirier, Sherman Street. Yeah, I just want to echo the last commenter, say thank you for this project. I think someone-- one of the presenters mentioned sidewalk riding here, and I'm one of those sidewalk riders because it's not super safe, and sometimes I bring my kid to Mt. Auburn Cemetery. So I think this is a huge improvement for all the people who do that trip.

I did want to mention two things. One, I think someone maybe typed this comment in, but any improvements that can be made to the connection from the Greenway through the shopping center parking lot would be awesome because I see a lot of people doing that-- making that movement on their bikes between-- with the Aberdeen/Mt. Auburn intersection and the Greenway through the parking lot. And then one other thing I wanted to mention-- I know it's not really in the scope of this project, but-- the bike parking at Mt. Auburn Cemetery is actually oftentimes totally full. Like, there's nowhere to lock your bike.

So if in passing you happen to be having conversations with cemetery staff, and there's any way to expand the parking there or make it a little bit more formal, I think that would help a lot of people and get a lot more people biking to the cemetery as opposed to driving, which would be awesome. But thank you so much for all your work on this project. I'm really excited.

ELISE HARMON-Thank you, Joe. Up next, we have Chris Cassa. And you're actually the last person with your hand raised at the moment, so I think after that we will move on to answering some of these questions. So Chris, please go ahead.

AUDIENCE: Hey, there. I am really excited to see this project happen. It's one of those last critical bits that you need to make sure that people can actually use the rest of the great network that you guys are building and really enable people from Watertown to be able to use our network and to get back and forth to work, because I think that type of regional connectivity is so important for making the reductions of car trips into the city that we're hoping actually happen because people can-- they feel comfortable enough to do it.

I had a few points to raise. The first is that I think the changes at Homer seem really great. I think getting in and out of the shopping center will be better that way. I do want to echo a few of the points that were raised. I think the point about turn hardening on Aberdeen is really helpful, especially with the speeds in that area. I would definitely echo the point about two-way bike lanes having a lot of unexpected-- we've seen it on Brattle, for example, where people are turning across the double-- the two-way bike lane and not expecting things, not expecting people from the opposite direction.

And so I think especially with the speeds out there, having physical barriers to slow people down and also just to prevent side swipes and stuff would be extremely helpful. So I just don't feel bollards, especially with speeds like that, are comfortable for people. And jersey barriers, if you can't do the concrete precast curbs or-- but, of course, a continuous curb or something like that would be really, really helpful. But I thought what you guys did with those curbs on Brattle was pretty nice, the precast curbs. And I think the reflectors have really helped there to address a lot of the concerns that people had raised about them.

And I think that's it. Yeah, I'm just so happy that you guys are doing this project. And thank you for all the technical analysis as well.

ELISE HARMON-Thank you, Chris. Let's see. With that, I'm going to ask some of these questions. And I see we have some more going into the Q&A, so thanks, everybody. So first of all, just to note, we can pass that message along to the cemetery about bike parking. So thanks for letting us know about that.

And then I'll ask a couple of questions for-- I think these are going to all end up being for Andreas. So let's see. First of all, is there any sort of plan to implement any turn hardening to reduce the radius of the curves at Aberdeen?

ANDREAS WOLFE: Sure. So we did look closely at the Aberdeen Ave intersection. In our assessment of different design options, we looked at one that would have kind of extended the median on Aberdeen out a little further into the intersection using a combination of different types of quick build materials. What we found was that you do have truck movements making that turn into Aberdeen, and we did find that when those were implemented in any way, any substantial way, it impacted the turning path for the larger vehicles.

So we did end up with the current design, which has full signal separation. So all the points where someone is waiting are fully out of the path of any turning vehicle and are also separated in-- in addition to space, are also separated in time from those movements for the lefts and the rights into Aberdeen Ave. So we'll look more, I think, at the corner where the commenter mentioned about the rights onto Mt. Auburn and just what we can do, make sure that we have that tightened up as much as possible while still making sure that the flex posts aren't knocked out over by tractor trailers and such, so.

ELISE HARMON-Thank you. And we have a related comment about the bike lane on Aberdeen between the two turn lanes being uncomfortable. Is there any sort of plan to address that?

ANDREAS WOLFE: Sure. So Aberdeen Ave is-- we had a graphic earlier in the presentation talked about the bike network plan. And Aberdeen Ave is also on the network. We've looked preliminarily at what separated bike lanes might look like on Aberdeen Ave and feel confident that there would be room to have them against the median without impacts to parking or anything. However, we're currently in coordination with different utility companies and everything, just trying to understand the future impacts to the street.

So as part of the signal design for this intersection, we've designed the signals in a way that it can accommodate separated bike lanes on Aberdeen Ave in the future. But at this time, we just don't have a solid enough understanding of the schedule for other road work that might be happening in the area to move ahead.

ELISE HARMON-Thank you. Another question about that intersection. So for eastbound drivers turning left from Mt. Auburn onto Aberdeen, so coming from Watertown/Belmont turning onto Aberdeen, is there going to be a red light left arrow to tell them not to turn when they're not supposed to turn?

ANDREAS WOLFE: There will be. Yes, correct. Eastbound lefts onto Mt. Auburn, so folks coming from Star Market turning into Aberdeen Ave, right now the existing signal equipment, we don't have enough heads-- enough lenses in the signal to have a dedicated red arrow for those turns. And so as part of this project, we'll be adding new equipment. There'll be a more intuitive signal configuration so they'll have a red arrow when they're not supposed to turn.

ELISE HARMON-Great, thank you. Let's see. And then now that the MBTA buses no longer need to U-turn on Aberdeen, can the flush median get some protection for the crosswalk-- perhaps flex posts, planters, stones?

ANDREAS WOLFE: Yeah. So we did look at, as I said, a design that would have kind of extended that median out and add more quick build elements to that intersection. And we found that the challenge became still that the left-turning truck movement from Mt. Auburn eastbound into Aberdeen Ave, which is part of the city street but signed as part of State Route 16-- and so we'd hope with no longer the U-turn, but there's still that concern as well.

And so what we've done in the design, we think that it's about as tight as it can be. And I think there will be-- with the lanes shifted over now and the bike lane in that location, there will be some more distance between the crosswalk and the travel lane, which will help as well.

ELISE HARMON-Great, thank you. And then can you just-- we heard some plus-ones for concrete curbing during that last comment period. Can you just reiterate what our thinking is there behind the flex post versus concrete curbing here?

ANDREAS WOLFE: Sure. So flex posts, we've been using in the City for a while. And they're an established feature that we know works well with, for example, accommodating emergency response vehicles. And they're a ready material we have from our suppliers. We do want to give the-- we are installing the curbs on Brattle Street, and we really feel like we need more time, especially winter season, to see how they hold up with the extra wear and tear that happens in the winter. So as I said, I think next year we'll kind of reassess where we might expand that treatment. And if so, we'll be looking more citywide for locations.

ELISE HARMON-Thank you. And then two questions for Brooke. So I'll give you a little break. Let's see. What can be done to
FREEMAN: reduce vehicle traffic running red lights, since that's something that we talked about as one of the reasons we're seeing crashes in the area? Yeah. Sorry, that's the end of the question.

BROOKE
MCKENNA: So I think that right now for running red lights, we collaborate with the Cambridge Police Department. That's a moving violation that they do enforcement on-- sorry, I'm off camera. So that's always an important part of the strategy kind of citywide around red light running. I know in another question, written question that we received, it mentions red light cameras. Unfortunately, that's still illegal on the state level, although there has been some movement in the right direction towards allowing camera enforcement. But we're not there yet. But I can tell you there's a lot of interest in the City in doing that.

Just this year, the council both-- passed a policy order to both support the change that's been proposed at the state level to allow red light cameras and also kind of asked us to look at a Home Rule Petition that might allow us to do it. So there's kind of a couple of paths that we're looking at. But ultimately, we know that camera enforcement is a great way to cut down on red light running. So we're hoping that we can get there relatively soon. But in the meantime, it's enforcement with the police department.

ELISE HARMON-Thank you. And I think that's all I'm seeing on the Q&A right now. And I don't see anybody with their hands
FREEMAN: raised. So I'm going to give you all a couple-- a minute or two to think about if you have any questions. Otherwise, I might end our meeting early. But feel free to raise your hand, ask more questions in the Q&A in the next couple of minutes.

While I let you think about that, I'll just let you know that we will post the meeting recording transcript and the presentation slides up on the project website within the next couple of weeks. We will email all those links out to you when we have them all. So if you're on the project email list, you'll get that information.

If you're not on the project email list, you can sign up on the project web page. And I would encourage you to do so. It's a great way to get information about project updates and installation and stuff like that. And I'm seeing some Q&As come in. So let's see.

BROOKE
MCKENNA: So I can just clarify one based on a Q&A that came in. In case I wasn't clear enough, the use of camera enforcement is illegal in the state right now. We absolutely can-- police officers can write red light tickets. So I may have misspoken, but what's illegal is camera enforcement, just to clarify that point.

ELISE HARMON-Thank you. And another question about the traffic signal design-- will there be flashing yellow arrows similar to
FREEMAN: Brattle Street for right turns where drivers are expected to yield across crosswalks and bike lanes?

ANDREAS
WOLFE: Conor, do you want to take that one? I don't remember yet if the-- I think that would be the right into Homer Ave. And I don't remember off the top of my head.

CONOR
MURPHY: Yeah, I was just-- I saw that come in. I was just trying to double check. I do not believe that we are showing the flashing yellow arrows. And we can certainly look into that implementation. There may be a few hurdles with some of the signal equipment out at Homer and whatnot. But we can certainly look into that.

ELISE HARMON-Great. Thank you. Let's see. Yeah. Please, if you have any more questions, feel free to put them in the Q&A, raise your hand. Any comments, happy to take them. Otherwise, if you think of any comments or questions over the next couple of weeks or days, hours, feel free to email Andreas. His contact information is up on the project website. And maybe he'll share that last slide again, just in case you really need it.

And thanks, Andreas. And let's see. With that, I think I am going to close out this meeting early. Thank you all for spending your, what is it, Wednesday night with us. We're really happy you were able to make it. And we understand it's sometimes difficult to take time out of your lives to come to these community meetings. And we're always appreciative. So have a great night and have a great end of the summer.