



Mass Ave Partial Reconstruction Project
Working Group Meeting 4
Thursday, April 25, 2024
3:00-5:00 PM
Zoom

ATTENDEES

Working Group Members	City Staff	Public
Steven Beaucher	Jerry Friedman – DPW	Alexandra Hawley
Makayla Comas-Race	Stephen Meuse - TPT	Gleb Bahmutov
Darren Buck	Andrew Reker – CDD	Jessica Daniels
Eitan Normand	Linda Spencer - DPW	Louise Ciampi
Diane Gray	Emily Paulsen - DPW	Mary Jane Kornacki
Timothy Keefe	Melissa Miguel - DPW	Judy Bright
Ruth Ryals	Jeff Parenti - TPT	Andrew Lai
Laurie Pessah	Pardis Saffari - CDD	Janet Malenfant
Debby Galef		Sara Flynn
Christopher Cassa	Consultants	Richard Freierman
Denise Jillson	Christi Apicella – Bowman	Paul Toner
Gary Dmytryk	Natalie Press – Bowman	Alex Epstein
	Maggie Cameron - KLF	FD
	Greg Avenia – KLF	Glenn Heinmiller
	Rosie Jaswal - Toole	Paul DeRuzzo
		Joan Pickett
Not in attendance:	Other Attendees	Paige F
Sukia Akiba	Alex Hollowell - MBTA	Helen Walker
Daniel Stubbs		

Key:
DPW = Public Works
TP&T = Traffic Parking & Transportation
CDD = Community Development Department



MEETING SUMMARY

The following is a summary of the fourth meeting of the City of Cambridge Mass Ave Partial Reconstruction Project Working Group.

For more information, see cambridgema.gov/massavepartialconstruction.

Welcome and Overview

Jerry Friedman, Cambridge Department of Public Works, initiated the meeting and welcomed City staff members, the consultant team, Working Group members, and the general public. Jerry explained that the focus of the meeting will be on Rindge Ave to Linnaean St, essentially north and south of Porter Square, though other areas will also be discussed.

Jerry handed it over to Christi Apicella of the Project Team, who reminded Working Group members and attendees of the remote participation instructions and explained that screen share will be turned off during discussion periods to encourage more conversation.

Christi reviewed the agenda, explaining that concept design means that there is something sketched out to show what the street will look like. A concept design will be presented from Rindge Ave to Porter Square. There will be more detail on traffic operations from Rindge Ave to Walden St. The City will show the design direction for the segment from Porter Square to Linnaean St, which is more of an issues and opportunities evaluation. This will focus on what the City is thinking about and what questions remain for the Working Group so that input can be incorporated as the team moves towards concept design. There will also be an update on the Linnaean St to Waterhouse St segment, followed by next steps and more discussion.

Jerry continued the presentation by providing an overview of the partial construction project limits, which include Mass Ave from Waterhouse Street to Alewife Brook Parkway. Two segments within this section, Alewife Brook Parkway to Dudley St; and Beech to Roseland Street, had quick build bike lanes installed in 2021 and 2022. An important part of the City's recommendation to the Council was that these segments also be included in the Partial Construction project to ensure continuity along the corridor. Re-examining and including these segments will allow for a cohesive design throughout the entire length of the project, and just as importantly, allow for additional input from businesses and abutters in those areas. The section of the corridor being discussed today is the most complex, which is why it is being shown at different levels of development.

The project status is currently in three different stages:

- 50% design from Linnaean St to Waterhouse St
- Concept design in progress from Rindge Ave to Linnaean St
- Existing conditions from Alewife Brook Parkway to Rindge Ave

Jerry reviewed stakeholder engagement conducted to date and summarized comments received. The City received 36 comments regarding physical separation between the bike lane and travel lane, with a desire for concrete curbs opposed to flex posts, to which the City is giving consideration. City staff met with several businesses and abutters. Many comments were concerns about customer parking and loading, especially senior parking; the City is very cognizant of those needs. They also heard about kids



getting dropped off by parents to dentist/orthodontist appointments, making needs like short-term parking and not having to cross the street more important. Feedback was also provided on which crosswalks are used by seniors, requiring more signal time to cross. Jerry reiterated that staff will continue to visit businesses and are happy to talk to them.

Jerry concluded the section by providing a reminder that this project is about balancing different needs, which includes transit. One of the goals of the project, in addition to improving safety, is to improve MBTA bus travel times and reliability along Mass Ave. There are three basic ways that each section of the corridor may be designed – full time bus lanes, part time bus lanes on one side, or a bus lane on one side only. These options can change block to block.

Rindge Ave to Linnaean Street Concept Design- Cross Section

Andy Reker, City of Cambridge Transit Program Manager, initiated discussion of this section by providing statistics from the MBTA on bus ridership, as one of the City's motivations for the street design is to accommodate the large number of people today that ride buses and take the MBTA Red Line or commuter rail from this location. On an average day in 2023 there are almost 5,000 riders on Route 77, about 1,300 riders on Route 83 about 1,000 riders on Route 96. Despite issues from Covid-19 and difficulty with bus driver hiring, there is a lot of bus ridership on this corridor.

This section of the corridor also includes the important connections at Porter Square to the MBTA Red Line and commuter rail station. The statistics are older, but there were about 8,000 weekday riders on the Red Line in 2020 and about 1,500 on the commuter rail in 2018. Commuter rail ridership is the closest to being back to pre-pandemic levels, while the Red Line is furthest. Changes to the roadway in this location will affect thousands of bus riders and how people access transit in Cambridge and metro Boston.

Andy provided an overview of bus delay data, showing that delay is a concern for the entire length of Mass Ave in this segment. Bus lanes should be part of any street changes because of how delayed and unreliable bus travel is for riders and operators under current conditions. The consultant teams' analysis shows that delay issues persist in 2023 in the AM and PM peak hours. For this section of Mass Ave, the design includes a part time (AM peak hour) bus lane on the southbound side and full time bus lane on the northbound side. Parking and loading areas could provide curb access during the rest of the day on the southbound side, including the PM peak.

Andy then turned it over to Stephen Meuse, Supervising Engineer at City of Cambridge Traffic, Parking, and Transportation (TPT), to review existing conditions and considerations. Mass Ave is about 71-ft. wide from curb to curb at this location. Within that width, there are two travel lanes, a bike lane, and a parking lane in both directions separated by a median, which takes up about 6-ft.

There are two main types of pedestrian signal controls used in Cambridge, each with pros and cons: exclusive and concurrent. Their use is largely context-specific.

Exclusive pedestrian phasing is where all vehicles are stopped and all crosswalks are set to WALK at the same time. This can be a great option when people are going to destinations that are diagonal across the street or where there is tricky intersection alignment that makes the crosswalks abnormally long or misaligned. These types of intersections are commonly push-button activated, and that typically leads to additional delays for most users, including people



walking. Even when automatic, there are typically much longer wait times to cross the street so that the vehicle phases can process all or most of the cars before changing to the walk phase.

The City prefers **concurrent phasing** where possible in Cambridge. This is where all vehicles, pedestrians, and cyclists move in the same direction together. In most instances, pedestrians are given a head start, called an LPI, a leading pedestrian interval, and that lets those waiting get out in front of drivers so they can be visible before turning maneuvers begin. When there are higher volumes of turning vehicles, protected-concurrent phasing is used, the conflicting turns across crosswalks are held. Concurrent phasing reduces wait times for crossing the street, allows crosswalks to come up automatically, and increases the overall efficiency of the intersection.

Where there are high turning volumes, the City also looks at adding dedicated turn lanes. These give drivers a place to wait before a turn without pressure from those behind them. This can increase both pedestrian safety and vehicle efficiency by removing the need to judge for a gap in traffic. This is helpful to use with concurrent crosswalks. There are two lanes in each direction on these sections of Mass Ave, but few turn lanes. This means that at intersections with high turn volumes, the straight travelers often get stuck behind turning vehicles. Based on the volumes, one of the lanes can be changed into a turn lane or the approach to intersection can be widened to add a turn lane. This is all space-permitting, with the removal of the median allowing for this flexibility. Additionally, most Cambridge intersections do not allow right turns on red lights, which benefits people walking no matter the type of pedestrian signal control.

Stephen continued by explaining that once turn lanes are considered at busy intersections, space quickly runs out for accommodating everything that may be wanted, and tradeoffs must be considered. The bike lane cannot be removed, so do you remove the through lane? Parking or loading? The bus lane? The crossing island? Traffic flows and signal operations are being analyzed to help choose the right path.

Stephen then showed the cross-section that has largely been settled upon. Removing the median provides room to accommodate buses, drive lanes, turn lanes, and space for parking on the southbound side when the bus lane is not in use. An overview map of the bus lane configuration was shown, illustrating how the southbound bus lane is morning only, as southbound delays are not as bad as northbound, particularly in the evening. This allows off peak parking and loading in certain areas, corresponding to the delay map. This provides more flexibility at busy intersections, and transit priority can still be implemented using advanced signal functions to know when buses are coming even when the bus lane is not in effect. There are other opportunities for 24/7 parking areas where there are not turn lanes.

Key features of the cross section include:

- Separated bike lanes, both directions
- Bus lanes, full time northbound, part time southbound
- Turn lanes at important intersections
- Floating bus stops
- Improved existing and new crosswalks
- Parking/loading areas as close to where they are needed as possible



Questions/Comments:

Denise Jillson: Will there be one lane for through traffic south from Rindge Ave to Linnaean St?

Stephen: Yes, at some intersections. This will be offset by having turn lanes at busy intersections to take additional flow and friction out.

Jerry: Broadly yes, but it will make more sense when you see the block-by-block design.

Ruth Ryals: Explain the difference between bus transit delay north and south in the evening and morning.

Andy: There is more delay in afternoon heading northbound primarily because of the confluence of traffic flows coming from places like Harvard Square, Somerville Ave from Beacon St/Hampshire St, Kendall Square, and other parts of Somerville. All these flows are meeting at the Somerville Ave and Mass Ave intersection, and buses are part of that congestion. At the same time, delay differs by bus route. Route 77 is different than Route 83 because of how the signals progress intersection to intersection. Dedicating space to buses reduces delay and unreliability, not just for MBTA but also school buses and emergency vehicles. There is also signal timing at intersections and technology that could reduce delay on buses.

Makayla Comas-Race: Is there a difference in loading zones between personal vehicles vs. commercial trucks? It would be helpful to have a distinguisher.

Stephen: We have summarized curbside access to encompass all needs – including regular parking, loading by trucks, vans, and rideshare pick-up/drop-off. As we fine tune the design, we can think about specific regulations that make sense. Loading zones in Cambridge are typically 30 minutes for commercial plates and 15 minutes for other plates.

Darren Buck: The inbound bus lane being part-time with a lot of time dedicated to loading infers that for all of the mid-blocks without turn lanes, any full time curb access will be on the outbound side. Is that correct?

Stephen: It will make more sense when we show the block by block slides – there are a couple locations on the southbound side where there will be some full time parking, such as accessible parking near the senior center. It is a function of where we can have the bus lane peak hour only. There are some locations where the bus lane needs to be in operation all times, such as closer to Porter Square.

Rindge Ave to Porter Square: Concept Design

Stephen reviewed the concept design for Rindge Ave to Porter Square, focusing on crosswalk locations, bus stops, and curb uses like parking and loading.

Crosswalks: Existing crosswalks will be enhanced by maintaining or relocating pedestrian islands at unsignalized locations, as those are the half-way across waiting spots. Signal timing adjustments will be made at signalized crosswalks. For example, the existing crosswalk at Creighton St will be upgraded to a HAWK signal, which will tie in and replace the fire station's emergency signal. New crosswalk locations



are proposed based on existing crosswalk spacing and suggestions from the Working Group and community. There are two new proposed crosswalk locations. Some requested locations, such as an additional crosswalk at Rindge Ave were not feasible.

Bus Stops: A number of stop relocations are proposed based on the MBTA spacing guidelines. This involves making most bus stops on the far side (or through) the intersection, which can reduce delays at signals, to improve operations. This also ensures that crosswalks are behind the bus so that sightlines are better for those who need to cross the street.

Curb Use Elements: There are many varying needs for curb space, and so the City is looking at how to allocate spaces efficiently and effectively. Removing the median helps make space for parking and loading, which the City has heard is important along Mass Ave. Businesses need deliveries, some patrons need to drive, and even those who don't own cars might take ride shared rides. The part-time bus lane in the southbound direction provides opportunity to allow some areas of off-peak curb access. The northbound side can fit full time parking in some areas as well. Changes to side streets have not yet been discussed in this section, but the City is open to any suggestions.

Questions/Comments:

Denise Jillson: Is it correct that you are removing the southbound bus stop at the corner of Rindge Ave and Mass Ave?.

Stephen: Yes – relocating it to the other side of the intersection, shown in the Rindge Ave intersection in detail.

Ruth Ryals: Keep an eye on how much parking we are losing. That is the biggest question from people.

Stephen: We are continuing to evaluate parking and loading needs as the concept design is advanced. We have not completed concept design for north of Rindge Avenue at this point.

Debby Galef: Pleased to see a crosswalk added on the south side of Walden St. Will any crosswalks be removed or will all current crosswalks remain?

Stephen: We are adding a crossing at Russel St. All remaining crosswalks will stay with minor adjustments to length and positioning.

Ruth Ryals: Are there any changes to Upland Rd?

Stephen: Right now, that section is not yet determined; it is still in the design direction phase.

Rindge Ave to Walden St: Traffic Operations

Stephen continued by explaining that there are several intersections with complex multimodal challenges in this segment. There are significant vehicle volumes on Mass Ave and high turn volumes that conflict with bike and pedestrian traffic. A driver cannot turn if there is a wall of people crossing or someone riding a bike alongside them. If you give each mode their own dedicated phase at intersections, vehicle traffic could be backed up in all directions and everyone would have to wait longer for their turn



to go. The City is looking at how to give each mode and directional movement a signal time so that they complement rather than delay each other.

Concurrent pedestrian phasing with separate signalized vehicle turns is proposed to move everyone on Mass Ave quickly and safely. At locations without enough room for turn lanes or where volumes are lower, people walking, and biking, can be given a head start. In this section, Rindge Ave, Walden St, Beech St, and Somerville Ave are considered complex intersections that need a greater level of study.

Stephen walked through the City's approach to intersection operations at Rindge Ave and Walden St, as they are confident about what can be done at these locations. There are still a couple options at Beech St and Porter Square, which are being refined and will be discussed at a later date.

Rindge Ave: There are a lot of through vehicles on Mass Ave, but also a lot of rights and lefts onto Mass Ave and lefts from Mass Ave onto Rindge Ave. The proposed solution includes concurrent pedestrian crossings, turn lanes, re-aligned crosswalks to be straighter and shorter, and relocating the southbound bus stop to the farside of the intersection. This enables it to be a combination 77 and 83 bus stop, so that riders do not need to think about which route is coming next.

This design works even with fewer through vehicular lanes because the turn lanes reduce friction – people do not need to make last minute adjustments about gaps in traffic and change lanes, or look across two lanes of traffic, a bike lane, and a crosswalk. There is less to think about to make a left turn with a dedicated signal, as decision points are removed.

Stephen then reviewed each of the signal phases, describing when general vehicular traffic, buses, people walking, and people biking would move through the intersections:

- Phase 1: Almost everyone gets to go straight on Mass Ave, except for people biking southbound or walking across Rindge Ave. They are held for some seconds to process right turns onto Rindge Ave and clear the way for the bus to go through the intersection to the new stop location.
- Phase 2: Once all the right turners are gone, everyone gets to go straight on Mass Ave whether they are driving, biking, or walking and no drivers can turn across the paths of people walking and biking.
- Phase 3: The left turns from Mass Ave to Rindge Ave go at the same time as the rights from Rindge Ave to Mass Ave. The crosswalk across Mass Ave also automatically goes during this phase. Previously, this crosswalk would only come on by using the push-button. When it was activated, that was a big loss in terms of vehicular efficiency as it could not be on at the same time as the heavy volume lefts onto Rindge Ave. The turn lane makes this possible now and it is a benefit for people walking and driving.
- Phase 4: This phase will come up if the signal detects someone needing to turn left out of Rindge Ave. If it is skipped, some of the time could be reallocated back to other phases that might need it.

Walden St: Concurrent pedestrian phasing, signal separation for turns to protect people walking and biking, and designated turn lanes are also used here. The northbound bus stop is retained in the same spot in front of the Henderson Carriage building, but is turned into a floating stop. The



southbound stop is shifted to the other end of the senior center and is also floating. The design will ensure accessible parking spaces in front of the senior center.

Stephen then reviewed each of the signal phases:

- Phase 1: Similar to Rindge Ave where almost everyone gets to go straight on Mass Ave, except for people biking southbound or walking across Walden St. They are held for some seconds to process right turns onto Walden St and hold the bus in the bus lane in the morning, but the bus still gets to move up to the front of the line in its own lane. The southbound approach's bus lane shows the off-peak parking and plays a role in how the signal sequencing can be orchestrated.
- Phase 2: Once all the right turners are gone, everyone gets to go straight on Mass Ave whether they are driving, biking, or walking and no drivers can turn across the paths of people walking and biking. Buses also get to go through southbound if they are in the active bus lane.
- Phase 3: The left turns from Mass Ave to Walden St go at the same time as the rights from Walden St to Mass Ave. The crosswalk across Mass Ave also comes on during this phase, which is in effect today since there are already these specific turn lanes that allow for it.
- Phase 4: This is a new phase added because of a new second crosswalk across Mass Ave. Today this is a Walden St "turns in both directions phase", but those Walden St turns can be split between the last phase and this phase to make this walking improvement.

Questions/Comments:

Denise Jillson: Is it correct that you removed parking at Mass Ave at Rindge Ave, and on Mass Ave at Chester Street (I live at Chester St and Mass Ave), in front of Dr. Do, at Dr. Bane, beside Keefe? All parking is removed across the street and at the dental office. What about the parking in front of Pemberton Farms? There was a meeting last night at St. John's with 40-45 people from neighborhood talking about this meeting today.

Going back to what Ruth asked, how many spaces are being removed, and more importantly, where are they being removed? There are a number of elderly and handicapped that visit Dr. Do or visit the funeral home and have no place to park. I'm glad there are spaces in front of the senior center, but the wholesale idea of removing critical parking is radical and not going to work. That it is a disaster cannot be overstated, but this is just an opinion.

I take Route 77 to Harvard Square – it works pretty well going inbound in morning. Coming outbound in afternoon there is back up because of the intersection with Somerville Ave. It is backed up halfway to Harvard Square.

Do we need to continue the evaluation here based on businesses? Needs are really geared towards the senior population and families (attending church, funerals, wakes).

Stephen: Yes, parking on Mass Ave is reduced, but the parking in front of Pemberton's is not yet determined. In most sections, in between complex intersections, we have the typical cross section with parking on one side of street. Parking is only removed in sections with complex intersections. We are making up some of the parking with part time parking on the south side. It is likely that to the north we will see something similar



to the Porter Square to Waterhouse St section where there is not as much vehicular demand. We understand there are businesses with parking needs.

Andy: What we know from bus travel times is that there is less intensity for delays and unreliability in the southbound direction. In the northbound direction, especially the PM peak, that is not the case. The rendering shows there could be space for additional parking in some areas, but we haven't gotten into the details after Chester St, as we are checking the intersection operations at Rindge Ave first.

Steven Beaucher: It would be helpful to see the existing business uses and their existing conditions in comparison to the proposed conditions, such as a side-by-side parking space comparison. Denise pointed out the businesses – can you show business type on diagrams to help us understand the context? It is easy to forget who is using curb space if the diagram stops at the curb.

I notice two little parking spaces proposed on the bottom right of Rindge Ave – could you squeeze in another? Go ahead and see if you can, because there is a lot of apprehension about parking loss. The more parking we can preserve is vital (left of Walden St intersection).

Christi: This is good input for the materials to have ready to show the land use context for future meetings with the Joint Transportation Committee (JTC) and the public.

Jerry: There will be a general public open house in June like the one for other segment where we will have more fine-tuned materials and be available to discuss.

Laurie Pessah: Clarify the before and after for parking and also the land uses. This area is time of day sensitive – explore options that provide as much flexibility as possible. It is frustrating to see red asphalt unused, such as a Saturday morning, because the northbound bus is not the most critical need at that time. Look at examples of how to manage different uses in the same space.

Stephen: We are considering a different approach for how part-time bus lanes are marked. For example, in the concept drawing, you can see the red bus lane, but the parking spaces that are available after the morning peak period are not red.

Would any current intersections that prohibit u-turns allow them in the future? Where are opportunities to improve turn around direction on Mass Ave in/out of businesses?

Christi: The next section will show more about where off-peak parking is used. We will continue to refine intersection operations and identify where there are opportunities for u-turns.

Chris Casa: Do you see that keeping the alignment of the roadway straight makes it safer and reduce conflicts? It seems like heading north there are fewer things to think about. How does this effect whether people are going too quickly? There are still quite a lot of lanes, and people are not always compliant with bus lanes. Are you thinking about that side of it? People go really quickly, but bus lanes may change this, parking in off peak may change this, but it is dangerous to cross on foot. The off-peak parking is wonderful, but it was the biggest issue on North Mass Ave.



Stephen: We are designing for skinny roads and fat nodes. If we make the intersections really efficient, we do not need as many lanes in between because fewer cars need storage leading up to intersection. Walden St and Rindge Ave are difficult to manage because of all of the turns and people. We are keeping the fewest lanes as possible that still enable people to get through so we can have smaller road sections further down in between intersections. Off-peak parking would not look anything like that in North Mass Ave. It would be much clearer with a new signage package.

Diane Gray: I appreciate the safety measure at Walden St and Rindge Ave, especially the shorter crossing distances. There are often high-speed vehicles turning right from Rindge Ave onto Mass Ave. Is there any way to help curb and slow down cars from Rindge Ave to Mass Ave (to improve conditions for people crossing)? Suggest showing existing and proposed crossing at the public meeting to illustrate the shorter crossing distance.

Stephen: Absolutely, we are bumping the curb out to T-off the intersection, which reduces the crossing distance. This also gives the left turn lane more space to actuate properly so it is likely people will take it slower than today.

Stephen continued block by block to show what happens in between the intersections.

Rindge to Walden: Starting at the Rindge Ave end, there is the southbound bus lane that allows for some parking and loading after the morning rush hour and on weekends. Russell St has an uncontrolled intersection with Mass Ave and a fair amount of folks use it to get to Davis Square and beyond. The City has heard many concerns from the community at this location, from drivers, walkers, and bikers. As a response, a new left turn lane onto Russell Street is added, as well as a new crosswalk with a crossing island and flashing crosswalk signs. There is space to give drivers turning left a place to wait without backing up Mass Ave, which should lead to fewer aggressive maneuvers by drivers and a better and safer experience for all users.

Walden to Davenport: The hope is to combine an upgraded traffic signal at Blake Street next to the flashing emergency traffic signal for the fire station with the crosswalk and a HAWK signal to help people cross the street in addition to clearing the way for fire apparatus. The City is studying how to implement signalized dedicated turn lanes and concurrent crosswalks at Beech St similar to those presented for Rindge Ave and Walden St.

The bus stops near Davenport St and Porter Rd are relocated to farside of the intersections to improve visibility and are made floating. Tree impacts will need to be checked, as well as space for new trees. If trees are affected, plans may need to change, or a tree may need to be moved – this is still in flux. Some parking was already taken away in the section from Beech St to Porter Square, but the area is still being formalized and there may be potential for adding spaces here. A lot is to be determined at this point in the concept development phase.

Porter Square: There have been recent improvements to the intersection of Somerville Ave and Mass Ave at Porter Square. In 2019 there was new signal coordination equipment, the raised bike lane on the Somerville Ave approach, and crosswalk adjustments. In 2022 the quick build bike lanes were added. Now there is the opportunity to fix what could not be done with quick build. The concurrent/protected



crossings will be kept, but the City will look to better use the turn lanes and bring a bus lane through in both directions.

This is a very complex intersection consisting of three separate yet equally important intersections that are still a work in progress: Mass Ave at Somerville Ave and at Upland Rd, and around the corner Somerville Ave and White St. The Upland Rd intersection shows some markings, but this area is very much still under development. While feedback is always encouraged and welcomed, it is anticipated that the layout will change quite a bit by the next check-in.

Questions/Comments:

Several questions/comments were received in the meeting chat regarding flexible use of the bus lane (i.e. for school buses, funeral parking) and flexibility to use off-street parking for shared parking/public use (parking lots at St. John's and Pemberton's).

Christi: The southbound bus lane will only be in effect in the AM peak and so it will be parking at other times.

Ruth Ryals: It looks like you are making it easier to turn left going southbound from Mass Ave onto Russel St. Be aware that cars turning right into Russel St (in northbound direction) are a danger to pedestrians. The left turns may be bumping into right turns. The same thing happens at Somerville Ave going north where many pedestrians get confused trying to figure out if cars are turning and give up/ignore the hand signal.

Stephen: Russel St is an intersection we are looking at in more detail and in relation to Cogswell St. People tend to be aggressive, so we are trying to provide opportunities for them to take turns as safely as possible.

Steven Beaucher: Does the space at the bus stop at Walden to Davenport indicated parking? Can we use any Porter Square shopping area parking?

Stephen: Yes, full-time parking. We cannot use the Porter Square shopping center parking.

Steven Beaucher: Has there been progress on the design of allocating space on side streets for metered parking removed from Mass Ave? I strongly support exploration on that.

Stephen: We are open to reviewing side streets for parking, but so far haven't made a proposal. We want to make sure what we do on side street does not have impacts there - like does it make a one-way unmanageable or helpful? Would it be part-time?

Debbie Galef: How many seconds are the cycles at Walden St and Rindge Ave?

Stephen: I believe it's 120 seconds. We needed to pick biggest intersection with the most complexity that sets the rest of corridor. Other less complex intersections may be half the cycle.

Debbie Galef: Will there be a southbound bike lane across the bridge?

Stephen: Right now, the bike lane is shared with the bus stop because that is what's on the bridge today. The bridge deck is owned by the state so we are not sure how much



we can do. We think we can remove the median but the design is still under development.

Debbie Galef: St John's has a very large parking lot and many times it does not have cars. Could there be arrangement with City? Empty parking lots are not helpful.

Stephen: Good point. St. John's is out of the section we are talking about today, but we can look into it for that section.

Darren Buck: The southern crosswalk conflicting with left turns off Beech St is concerning if that is the plan. Taking the crosswalk out simplifies a lot of things about this intersection.

Stephen: There would be lefts and rights out of Beech St with the crosswalk, then rights onto Beech St and lefts with the other crosswalk. The challenge is there are a lot of right turns onto Beech St and not much storage space because of the crosswalk and crossing island, but we are working through it. We didn't look at removing the crosswalk, but if it solves the problem and doesn't degrade experience, it could be explored as alternative.

Ruth Ryals: Side street parking is already done in the Porter Square area, for example on Mt. Vernon St and Upland Rd. People who live there aren't happy. Remember, houses do not have driveways or garages so the only place for residents to put their car is on street. The assumption that it is fine to have public parking during the day and resident in the evening doesn't work – many people work from home so they are not gone during the day.

Christi: We will continue to look at parking regulations for side streets.

Alex Hollowell, MBTA Transit Priority Team: I oversee the construction of bus lanes for the MBTA and am excited to see this project moving forward. Regarding the stop spacing presumed in the plans – some look close together, with one spacing less than 600 ft. The MBTA is really pushing to roll out minimum stop spacing of at least 750 ft. A high frequency route like the 77 would have stop spacing closer to 1,000 ft. Longer stop spacing opens opportunities for different curbside activities with so many competing things.

Also keep in mind that enforcement is a huge challenge with time limited bus lanes. It sets the expectation that people can park sometimes, but not others, or on some areas of corridor but not other areas, so we are not huge fans of time limited bus lanes. What is really valuable is to have a design with something visual to indicate which part is 24/7 and which part is not. Work with the police on enforcement activities.

Porter Square to Linnaean St: Design Direction

Stephen continued the presentation by addressing how there is a gap in the project's progress: concept design for Rindge Ave to Porter Square was shown tonight, but Porter Square to Linnaean St is a work in progress. The City needs to think about how many vehicle lanes are needed in the context of bicycling, walking, and buses, where should bus lanes start and stop, are there missing crosswalks and would there be unsignalized crossings, and what impacts do these decisions have on parking, loading, valet zones? Options are still being reviewed to see what could work.



The bridge over the MBTA tracks is also a challenge. The City believes the median can be removed, but is still exploring what is possible for the sidewalks and bus stops on the bridge. There will be more coordination with MassDOT to fine tune what can be changed on the bridge deck.

Linnaean St to Waterhouse St: 50% Design Update

Jerry initiated the 50% design update from Linnaean St to Waterhouse St by reviewing comments received at the open house and from the online survey, which generally indicated support for how the design accommodates all modes. Other feedback included consideration of the materials used for the bike lane separation (concrete curb vs. flex posts) and considerations for curb use needs. City staff also met with Harvard Law School about their curb use needs and concerns. There was back and forth, but ultimately it was decided to shift the bus stops at Waterhouse St to mid-block at Harvard Law School just north of Waterhouse St.

Stephen reviewed the proposed curb use allocation, bicycle facilities, and crosswalks. Bus stops at the Wendall St/Shepard St intersection are shifted to farside of the intersection and made floating. The City is moving forward with the shifting of Waterhouse St bus stops to mid-block. The parking and loading regulations in front of Harvard Law School are a bit in flux and will likely include more of a mix of pick up/drop off and loading instead of meters based on the types of demand there (not pictured on slide).

Bicycle facilities will be sidewalk level at bus stops, but otherwise street level separated by some type of vertical element.

There have been no changes to crosswalks since the concept shown in December. There are three new crosswalks – at Sacramento St, Mellen St, and mid-block between Everett St and Waterhouse St. All would have rectangular rapid flashing beacons (RRFB), flashing crosswalk signs, and crossing islands. This proposal normalizes the distances between crossing locations and allows better access for those who need to get to and from destinations on either side of the street.

Jerry added that there will be an additional process around the triangular park at Waterhouse St making it possible to reclaim unused pavement area for something like green space or electric vehicle parking. The City will come back to the group with a plan.

Next Steps

Jerry explained that a flyer was distributed to all first-floor businesses along the project corridor providing information on the project, including the removal of some parking to allow for separated bike lanes. The flyer was handed directly to staff on site at each business location. The flyer allowed businesses to respond with concerns and set up appointments to discuss with the City. A total 170 flyers were distributed and seven businesses replied so far to set up discussions.

In person stakeholder meetings were requested by two stakeholders - the Burns Apartments and North Cambridge Senior Center. These meetings will be scheduled for the fall.

Other emailed comments from the public have included requests for traffic calming on Rice St and improved bike left-turns at Rindge Ave. Comments have also been received voicing concerns about the removal of on-street parking potentially resulting in business closure along Mass Ave. Christi added that the business and stakeholder outreach efforts continue to be ongoing.



Christi continued next steps by explaining that the City is now reviewing the 50% design south of Linnaean.

Jerry added that this is the first of three meetings for this segment of Mass Ave. The City will show what was shown today with refinements at the next City Joint Transportation Committee (transit, pedestrian and bike groups) meeting on May 15th to get the committee's input. There will then be an open house in late June with a similar format to the December open house at Lesley University, followed by a narrated presentation posted on the website.

Working Group Discussion

Denise Jillson: For Rindge Ave to Porter Square – how much parking is being removed, where is it being removed from, and when will it happen?

Jerry: We will make an effort to tabulate that and show where it is full time vs. part-time, certainly by open house in June. We are still trying to refine the overall strategy for the corridor and coordinate with Eversource, and piece together how to construct this.

Gary Dmytryk: When will construction begin and how long will it last?

Jerry: We do not know yet and are balancing out other things happening on the corridor. More info to come on both. We will have lots of outreach on that.

Timothy Keefe: It is scary to see the big red line (referring to the bus lane) as a business owner who relies on the Ave for parking. We have heard what has been done to accommodate pedestrians and bus riders, but not business owners. There will be no parking whatsoever on one side of street from Porter Square to almost Pemberton Farms. Many small businesses are concerned as well. There is more work to be done. The large parking lots are private.

Stephen: From Rindge Ave to Porter Square we are keeping approximately 40% of the parking that is there. This is the context of why we are doing partial construction – if we just did quick build, it would be 0%. There is a larger impact in this section where we have so much parking. In other sections we can keep 80-90% of the parking. We hear this is concerning and are trying to find additional spots whether on Mass Ave itself or side streets.

Chris Casa: I appreciate the work that went into the design of Rindge Ave and Walden St. Someone was hit and killed at Walden St and Mass Ave – it is very critical that the City takes this work seriously and tries to identify additional mitigation measures. Identify spaces that may be available in parking lots at least in a transitional period. As the system evolves, we are looking to the future – a Route 77 bus service that is frequent. For many businesses, this is the transition to the future. It's hard to think about when looking back at what's been there before.

Public comment

Alexandra Hawley: On a daily basis I see bike riders racing through red lights and have never seen anything being done about this. Everyone is making everything safer for bikes and talking about safety, but has anyone studied compliance at intersections? I have never seen anyone do anything about someone going through a red light. People spend more time looking at the bike lane when trying to cross the street than anything else.



Stephen: We hear concerns about compliance from all modes and have dedicated enforcement looking for traffic violations. Someone running a red light is not specific to this design. We are working with the police department so that education is part of any solution. The police department does enforce regulations for people biking. I would re-emphasize that these changes help with visibility for people walking and provide a comfortable space for people who are biking, which may lead them to make less aggressive maneuvers.

Jerry: We will pass this comment on to the police department, but it will probably not significantly impact the actual design of this project.

Janet Malenfant: I live on Blake St and am reporting back to neighbors. Thank you for the work you are doing. Currently, there is a lot of traffic coming out of Davis Square down Orchard St and out Blake St as a Waze route. We already have a lot of traffic backing up on the street. Not allowing left turns is a concern. Parking was just put in in front of the St. James project – will that be removed?

Stephen: That is outside of this project, but Blake St and Waze is frustrating, and it is hard to discourage people from doing it. We will look at turn restrictions to try to help. Blake St as right out only has to do with the crossing signal because if lefts are allowed, it would become a whole intersection, and we are trying to keep it not overly controlled.

Parking is removed in front of St James, but we will see if the design team can come up with solution to retain it. We will see what we can do with minor curb work to keep it in that section.

Mary Jane Kornacki: I appreciate the balancing of needs. My comment at the Lesley University meeting was about people being flipped out at the fact that Mass Ave would be one lane in each direction. All of us who use Mass Ave know traffic is really hard at times of day with two lanes. Do you know what the actual volume of cars that are using both lanes is at different periods of day, such as 5 PM, 6 PM, 7 PM northbound? Do you know the volume that you now expect to squeeze into one lane, even with turn lanes? Where is the data that allows us to predict what that will do to traffic?

Stephen: We are using count data to time the signals to accommodate vehicle volumes. We know how many vehicles are going straight, turning, thru, and put that into modeling software, which tells us how many seconds of green each approach should get. We then figure out how long turn lanes need to be. The analysis focuses on peak commuting times because if you design for those you know it is going to work on a Saturday or Sunday, or at 11 PM, as we are designing for the worst time of day using real count data. In the future, all signals will be coordinated so that the greens line up, turns are on/off, so instead of everyone moving quickly then being stuck, maybe it takes same amount of time to travel on Mass Ave moving slowly and steadily.

Public comments from the Q&A chat:

- At the Mass Ave at Walden St intersection bikes are often noncompliant in stopping north bound. How will the new design protect pedestrians?
 - *Christi:* Our goal in designing roadways and intersections is to make things clear and understandable – that makes it safer for all users.



- *Stephen*: Floating bus stops provide a structured crossing for pedestrians to cross the bike lane at the bus stop. This differs from today where the bus can cut off bikers or block bike lane, resulting in bikers that are unsure what to do. Floating bus stops will put people in right spot.

At signalized intersections we are using concurrent phasing and pulling out the turning movements to improve safety. We are making lower volume intersections more comfortable so people don't always need to decide whether they should go or not. With the separated bike lane there should be fewer people riding bikes on the sidewalks, as people do that because they don't feel safe on the provided facility/there is no facility.

- Will there be changes in turning southbound (left) off streets like Blake St?
 - *Jerry*: We are still working through how the bus lane, right turn lane, and what will happen with lefts from Blake Street onto Mass Ave will work.
 - *Stephen*: Blake Street would be right only at the end due to the crossing light. There are many decisions to make. The median prevented a lot of turns, but now we can revisit this.

Christi concluded the meeting by thanking Working Group members and the public for participating. Additional questions or comments can be emailed to MassAve4@cambridgema.gov. This presentation will be posted on the project website (cambridgema.gov/massavepartialconstruction). The next meeting will be the JTC meeting in mid-May and then everyone will be made aware of when public meeting will be held. Roll plans will be developed to help people understand what is being proposed.