



**MassDOT Cape Cod Bridges Program
Round 4 Public Information Meeting
Thursday, January 26, 2023, 6:00 PM
Held Virtually via Zoom**

Meeting Summary

The Massachusetts Department of Transportation (MassDOT) held a virtual public information meeting for the fourth round of the Cape Cod Bridges Program on Thursday, January 26, 2023. The Program team provided an update on the Program, bridge types, proposed bridge lane configurations, potential bridge locations, and next steps. There was an opportunity for public comment and questions following the formal presentation.

1. Formal presentation

- Program team including Bryan Cordeiro (MassDOT Project Manager), John Smith (HNTB), and Dave Anderson (HNTB) provides a formal presentation on bridge types, proposed bridge lane configurations, potential bridge locations, and next steps.

2. Q&A

- Barry Kromer: Was the public/taxpayers asked whether they wanted the bridges rebuilt rather than building a tunnel (regardless of cost) or fill in the canal and replace bridges with roadways?
 - Bryan Cordeiro (MassDOT): That's a great question, and that's definitely a question that's come up a few times. That was something that was investigated as part of the Army Corps' Major Rehabilitation Evaluation Report. That's something that we've built our analysis off of, you know, as we move forward in the program. I think there are some key considerations here for a tunnel and also, for filling in the canal. For a tunnel, the biggest thing is that it does not meet the Purpose and Need of the program. Most notably you would not be able to provide multimodal accommodations with the tunnel. The entrance portals or exit portals of the tunnels would be really far away from where the bridges touch down in the current condition. That's just by nature of how deep the canal is and being able to design a tunnel that has the correct geometries. So, you'd have portals that are really far away from the existing roadway network. It would be really difficult for us to make those same regional connections or local connections than what we have today, and a result in a much more transformative project than with just replacing bridges. And filling in the canal, I think the biggest thing there is that there is

federal legislation in place that discusses that the canal needs to be there for the passage of vessels. At this time, we don't plan to pursue revised federal legislation. That might not really be something within our ability. That is why those 2 options were not considered further.

- Stephen Buckley: I had a question about one of the slides that was shown. Would it be possible to go to slide 26? It sounded like you were saying that the bridge was not going to be designed to increase highway capacity. Which kind of sounds like in plain English that it won't be able to. It's not being designed to handle more traffic. But when I look at this picture of 3 lanes, and yes, one is "an auxiliary lane." It looks like to the average person, it looks like it can handle a lot more traffic, and if it's meant to address, within the Purpose and Need, to address traffic congestion, then I'm trying to reconcile what you said. You know. Oh, we're going to get rid of congestion. But it won't be with a bridge that increases, that will handle more traffic. It just sounds contradictory. So, if you could clear that up. I would say that that a lot of you know that one of the things that they look for in the federal application for money is the public involvement part. And if you're not making it clear to the average person, then you might not get the money.
 - Alex Siu (HNTB): When we talk about capacity, you know the intent of these bridges is not to increase capacity, but improve safety, and that's first and foremost right. But where we have the connection points when we talk about capacity. We talk about through capacity, and where how it connects, to say, you know, to 25 or 28 and 6 and 3, we're connecting to the existing cross sections that are on those roadways north and south of each of the bridges. So, when we say we're not increasing capacity, we're not changing the number of through lanes on any of those roadways. We're connecting the cross-section on these bridges to those roadways in terms of improving operations the entrance and exit lanes. That will be, you know, added to those bridges and will help improve where those connection points are on the northern and southern parts of the bridge, where they connect to those local roadways.
- Barry Kromer: Is the canal a financial generator, and if so, why isn't that income paying for any reconstruction? Is the canal fulfilling its original intent, if not, why not?
 - Scott Acone (Army Corps): The Cape Cod Canal is operated as a federal navigation project. There are no revenues or tolls associated with our federal navigation projects. The way the project is justified is, we do an economic analysis based on the value of the tonnage of the goods and services that are transported through there. That savings is then passed on to the consumers. Both the height of the bridges, the air draft of 135 feet as well as the depth of the canal, are driven by the fact that we do have vessels. We have, on average, 20 vessels a day that are greater than 65 feet, and usually one a day or every other day. That's barely close to that height and air draft that are transporting the canal, usually bringing petroleum products back and forth, sometimes cars, other goods. So, here is no money generated. It's really savings to consumers based on a more efficient means of goods transporting from point A to point B. Generally, from New York up into Boston and the region. The other thing I wanted to touch on I did see a note about the Zakim being lower, and it is lower. The channel that passes under the Zakim

bridge for the Charles River does not handle commercial vessels the size of the Cape Cod Canal does, and that's why there's a height difference there.

- John York: This is John York. There's a lot to cover. Just with respect to the picture that looked an awful lot like a 3 or 4 Lane bridge. People who live on Martha's Vineyard has seen this movie at least twice before. Every time they build a new terminal, they add an extra emergency use slip for the ferry boats and promised that it will never be in regular service, and within 5 years all of those slips that are being built are being used, and then the next time they build a new terminal they add one more slip. Back to the bridges and the design. So, Dave Anderson said there was something that was pretty much cast in concrete. I forget exactly what aspect it was about the bridges, but he said there was one part they were pretty settled on what he was showing you. So, 2 months ago we were given a presentation where they're looking at the different bridge types, and we made choices based on that and that went forward. But that presentation was locked in on one thing which was that the staging of building the 2 bridges, or the pair of bridges that's going to replace one of the existing bridges was going to be. Half of the bridge was going to build, be built close to the existing bridge, and then the existing bridge was going to be removed, and the other half of the new bridge was going to be built in that spot. That was pretty clear, and it was sort of stated the same way as something else that was stated tonight is done now. We could show up 2 months later with no notice to the public until we get to see it 2 nights ago. That option is not even present in the build staging the one that was already decided 2 months ago is no longer present in the options. So, as we hear from you, which things are decided and which things aren't, there's two things that leads to questions for you. The first question is: What is the process? So, a decision was made. What's your actual structure of this decision-making structure for designs of this program? We never hear who decided or what the process is. Could you talk a little bit about how that works, and I just want to observe that this is going to be an iterative process. I don't think the whole structure you're using right now should be, or will be, in place 6 months from now. For how you make those decisions, I hope not. I really want to hear what you're doing now, and what you feel about that. For example, the length you've chosen for the bridges to make them better for cyclists, and by implication for pedestrians to reduce the grade on the bridge means that those pedestrians and cyclists have to travel twice as far away from the canal to access the bridge as they do with the current bridges. That travel is the most dangerous part of that crossing, because it's where they're interacting with highway interchanges. It's the reason that most school children in our town are not allowed by their parents to cross the bridges. It cuts off their access to many of the things they would normally do after school and makes life miserable for their parents, because our schools do not have after school buses, so everyone who plays a sport has to have their parents come pick them up. It would be great if they could walk home. You're doubling the walking distance and doubling the most dangerous part by something that you're doing to help out the cyclists, and by implication pedestrians, but it doesn't help the pedestrians. So, there's a lot of issues that once you decide this and you start looking at roadway access, and without access, you're going to have to go back and change the things you're doing now, if you want to do a good job. So, could you talk about your decision-making process right now? Who makes the

decision? Is it a committee? Where are you sitting? What kind of room those, kind of details? How does it happen? Thank you.

- Bryan Cordeiro (MassDOT): The only thing that we made a recommendation on is the preferred bridge type, the other the other things that we were talking about are preliminary recommendations. Now all of these things that we're talking about, these different concepts that comprise an overall project alternative. Those will need to be vetted in the environmental documentation, namely. Federal Highway's National Environmental Policy Act process. So that's something we're gearing up towards. Really, the only way that we can get an understanding of what everyone thinks about these different options is by discussing them with everyone tonight. So that's what we're trying to do is, you know, get a sense of what everyone's temperature is on these different options. As we advance the project and try to get to an overall environmental filing. Because if there is, you know a lot of push-back on a particular option, then we need to know that, and we need to be ahead of that before we put it into any of our project framework documentation like our NEPA document or our state MEPA document. So that's why we're making these preliminary recommendations. John, I know that you had sent me a question through District 5 the other day, and I sent a response back to them. So, you should see a response on that very shortly. As for our decision-making process, it comprises a lot of different folks at DOT. But these aren't decisions, these are program recommendations. We will need to loop in a lot more folks when we get deeper into the NEPA process.
- Ed DeWitt: Would you comment on Senator Warren's public statements why the funding was denied?
 - Bryan Cordeiro (MassDOT): So, in terms of our federal delegation, you know, we are working in close coordination with them, as well as with our state delegation. Although we're working closely with them, we still need to find out more from USDOT why we did not receive funding under the Mega or the INFRA program. So, we're actively pursuing a deep debrief from them and we'll definitely let folks know what comes of that once we are done talking to them about it. So, there's still more that we need to know before we can say for sure exactly why funding was denied.
- MJ Mastrangelo: There's so much information in these presentations that takes a while to digest. So, the residents of Bourne really need more specifics about the impacts. There's a lot of pictures about this that and the other thing, we really need to have more specifics. And when I looked at the lane configurations, one of the things I thought about was considering the shared use path on the inside as opposed to the outside, because that would change the width. So, one of the things that was talked about was the with the bridges is changing. The overall span of the bridges is changing. I think you need to think about like different configurations, and not just be stuck with one thing. I'm interested in the analysis of the grade from the existing to the reduced grade, and what the property impacts are on that. What are specifics on the location plans? There was a comment that there was an impact on some Sagamore businesses on the canal, but they weren't really listed in impacts. And so, what businesses are those, and how are those going to be impacted. This is causing a lot of community angst, and we need to get a handle on

that and find a better way to communicate what's happening, and we want the bridges. They need to be replaced. But we need to address the needs of the community.

- Bryan Cordeiro (MassDOT): Thank you. That was great insight. And I agree, the town needs to see specifically what the impacts are. But we're just not there yet. The figures that we're showing here might look like nice engineering alignments, but they're still very conceptual. It's just to paint a picture. A lot of those things are still subject to change, even when you are showing a figure that says inboard, there's still a lot that can happen within there. We want to be able to speak to folks about what the impacts are, but we just don't know exactly what those specifics are just yet. So, we just do need to take a little more time to be able to fine tune that so that we can have the right discussion. But we are, you know we did hear a lot of impact comments on Tuesday like about doing more stakeholder engagement, and that is something at DOT that we have been discussing. You also had a question regarding grades, and I think for that I just want to give Dave Anderson the opportunity to speak on that.
- Dave Anderson (HNTB): We're very cognizant of having a design that's consistent with the Americans with Disability Act and the Architectural access board requirements. We believe this shared use path is a very important feature of the bridges. At the last meeting, we heard a lot about the overlooks and the importance of the overlooks. I think we believe that all persons, with all various abilities, should be able to enjoy those views. In order to accomplish that, it's important that the grades are flatter than they are today. So, that was something we took very, very seriously, and we'll continue to a to make sure that we're consistent with the laws. But more importantly, you know, providing a facility that can be enjoyed by everyone. That's the real goal. I also know the entrance/exit lane came up more than once, I think. As we get into some of our future meetings, and we start showing more about what potential connections to the local roadways could look like, and what the ramp configurations may be, I think this will become a lot clearer. I think it's very important to know that this entrance/exit lane only exists between the nearest on ramp and the nearest off ramp. It isn't extending anywhere beyond that. The 2 lanes on Route 3 would continue across the bridge as 2 lanes. Then there would be the auxiliary lane to the side that would allow for this weave to occur, and then, shortly after passing the first off ramp on the other side, that lane disappears. It's not there anymore. We're back to 2 lanes. We're matching the cross section on Route 6 as it continues on to the Cape. We're showing what's happening on the bridge. It just so happens that the bridge is located between an on ramp and off ramp that are very close together. You can imagine, even though we are providing flatter grades, it's 4% or 4.5% for an extended distance. It just takes vehicles longer to get up to the appropriate speed to merge into the through traffic. When you're going up a steeper grade you need to provide additional room for that to occur, and then for the weave to occur. Similarly, it takes a vehicle a longer distance to slow down to get off at the following off ramp. So, there's a reason why the entrance exit ramp is included. It's localized to between 2 ramps. It's not continuous. It's just that it does happen to occur where the bridge is located.

- David Rienks: Does the project have to be fully funded before it starts?
 - Bryan Cordeiro (MassDOT): We can continue to advance certain aspects of project development, but cannot start construction, and we can't go to certain final design activities as well. So, to answer your question. Construction cannot start.
- Karen Epstein: Will there be bike lanes, and will the speed limit be the same as on the current bridges?
 - Bryan Cordeiro (MassDOT): So yes, there will be a shared use path on both of the bridges that we described in the lane configurations portion of the presentation. We will discuss interchanges and approach roadways at a later date, which will conceptually also show those shared use path connections as you go onto the approach roadways.
 - Dave Anderson (HNTB): Yes, the design speed selected for the Sagamore, as 60 miles per hour, and for the Bourne was 55, and that was based on looking at the posted speeds on the facilities on either side as well as running speeds, what a target speed should be. There are a number of factors that were looked into. So, what that means is that the roadways are safe at that speed.
- John L. Swift: My major question is the dates you'll be starting in the beginning of the project which I did see online to be from 2027 until 2034, which is 2034 would be over 10 years from now which is pretty far in the future, considering the traffic congestion, the backups, the gridlock. It's pretty darn bad now on each highway, both going in Sagamore coming on in off Cape and if you can just imagine how bad it would possibly be 10 years from now, when the project is scheduled to be finished according to those dates that I read online. What would be the soonest and what would be the latest or the earliest. I should say that that the project could be started and finished realistically.
 - Bryan Cordeiro (MassDOT) So, I can't comment too much on the overall construction duration. A lot of that is going to be up to the design builder, and you know the construction phase period of the program. But getting started in 2027, that's about as aggressive as we can get based off of where we're at today here in 2023. But you know you brought you brought up a good point about construction period. Considerations are huge for this program, and that's why one of the things that we've been talking about with a lot of our goals and objectives is being able to maintain those existing connections through construction. And that's where the Twin Bridge concept is really important. It allows us to maintain those connections better than other options. So, when you have a construction duration, 7, 8 years, maybe longer, it starts to become really important that we maintain those connections.
- Makaela Niles (MassDOT): I next see a couple of questions in the Q&A Related to the shared use path, its location, and some of the potential connections there.
 - John Smith: One of the most important considerations on these bridges is keeping the structure depth shallow because we're already raising them a little bit for sea level rise, and if the shared use path was under the bridge, we did look at that, but then we would have to have the roadway portion of the bridge that much higher, which would lead impacts on the shore on both sides. So, we did look at that, and we dismissed it as not

feasible, because the bridge would have to be higher to maintain the have clearance navigation clearance.

- Stephen Buckley: Following up to my question earlier about a plain English answer about the idea that bridges that are almost 3 times as wide as what we have now. The response was from an engineer who gave an engineering answer. But it wasn't plain English, and I'm an engineer. Whatever happens here. If you're going to brush off questions with consultants speaking in engineering terms, then people are going to get frustrated because they won't feel like their answers are being answered in a meaningful way. So, I'm just saying, if you could try again. The bridges are going to be much wider. They're going to handle more traffic. And that is something to be considered, and the whole scheme of things. What does that mean for Cape Cod and the South Coast overall? If you're going to unleash and open up this bottleneck, we need to consider the ramifications and the impacts and the NEPA process for what this means for the whole area. And just like the first bridges changed the whole idea of Cape Cod, these bridges will change Cape Cod again. If you can make it easier for people to come to Cape Cod, day-trippers who would have been discouraged from coming to Cape Cod will come down, because, hey, there's no backup at the bridges. So, it's very important to look at this, I consider it to be looking at it with blinders on to make the Purpose and Need only about traffic congestion. No goals and objectives. All this word play. Oh, that's in the Purpose of Need, but it's not in the goals and objectives. It's like well, what's the difference It's confusing people, and we'll frustrate people, and it'll catch up with you in the end. So, if you know the idea, if you could just tell if the bridges are going to be wider, going to handle more traffic than how is that not going, how can you say, oh, it's not the auxiliary lane won't do anything wider. Lanes won't do anything. It's just disingenuous. That's all I'm trying to say. Try again. Thanks.
 - Bryan Cordeiro (MassDOT): So, I guess to put it in layman's terms. I think what we have here with both bridges is, we have two lanes approaching the bridge, you know, off Cape, and then, when you get on Cape. You also have two through travel lanes, and with our third, with this auxiliary lane that's just going to be on the bridge and a very short amount of the approach roadways. So, it's just going to go from interchange to interchange. If we were to actually add highway capacity, we would have to take the additional through traveling much further off Cape, and much further on Cape for it to accomplish that goal which we're not doing. Our approach work is as limited as we can possibly have it. We still will just have two through travel lanes directly when you get off the bridge or on it, whether it be on Cape or off Cape. You mentioned the purpose, need and goals and objectives. So, when we went through our roadway locations, part of the talk that Dave gave. I think you can see it's pretty clear that the distinguishing factor between the different alignments was constructability and property impacts. With the inboard there were fewer overall impacts compared to the different alignments. And they're also easier to construct. So, you know, even though limiting environmental and community impacts was not part of the Purpose and Need, we're still taking it really seriously, because it's within our preliminary recommendation.
- Claudia Sears: Is there any way to keep the same pathway for the bridges, and could one close for a year, and then replace it, and then do the same thing for the next year?

- Dave Anderson (HNTB): I would say that our objective has been to during construction, ensure that the same number of through lanes are available at all times, and there's a variety of different ways of doing that, and we're looking at all of them as far as the relationship between when the first new bridge is constructed, and traffic is shifted, and then, when the demolition of the existing bridge occurs, and the next bridge brought online. There's a variety of different ways of doing it, but our approach all along has been that the that we are striving not to have a bridge close for any extended period of time. Also, to really limit any instance where we're taking a lane. We want to ensure that during construction the conditions are as good as they are pre-construction or better.
- Makaela Niles: I next see a question in the Q&A That asks what if any sound pollution mitigation, measures may be included with the project to assist in current and future road surface noise.
 - Bryan Cordeiro (MassDOT): That is something that we will have to evaluate when we get into our National Environmental Policy Act process or our MEPA document. There are specific regulations that we'll have to look into for any potential noise mitigation that could be included in the project that doesn't mean that that will happen, but it's something that we will definitely be investigating.
- Jared Dardano: The Lane Configuration graphic depicted just one protected, non-motor-vehicle ("shared use") path. Is that accurate: One path on one side of the bridge for both directions of pedestrian/bike traffic? Or was the implication that such a path would exist on each side of the bridge?
 - Bryan Cordeiro (MassDOT): Right now, we are showing one path per crossing. So, one shared use path on the Bourne, and one share use path on the Sagamore.
- Steven Kahian: I live on Brigantine Passage Drive very close to the Sagamore bridge. Present access to Sagamore bridge is 300 ft. from Brigantine Passage drive. Will our road keep the same access from scenic highway?
 - Bryan Cordeiro (MassDOT): So, in terms of, you know, getting into the approach roadways and interchange network- that's something that we're not prepared to talk about yet. Unfortunately, you know right tonight. All the things that we're talking about are just the main highways that are the main line. But it's very likely that round 5 coming up in a couple of months that will be discussing approach roadways and the interchanges. So, I think we'll be able to answer your question at that time. I'm sorry that we can't provide a definitive response right now.
- D Walsh: What is the reason MassDOT is taking ownership of the new bridges and does that shift the burden on the State for maintenance?
 - Bryan Cordeiro (MassDOT): Army Corps is not a highway construction or highway operation firm. They're really not set up to work on transportation projects and handle transportation infrastructure. Future maintenance activities would be shifted to the state. However, we're going to be given 2 new bridges that hopefully won't have many maintenance needs for at least the foreseeable future.
- Jeff: How safe are inboard construction conditions for construction workers?

- Bryan Cordeiro (MassDOT): I'm not sure if there's necessarily a bearing on the safety conditions for construction workers on the inboard versus the outboard. I don't think alignment would necessarily have a bearing on that.
 - John Smith (HNTB): The position of the bridge, either inboard or outboard, it doesn't affect the relative safety of the construction workers.
- Kevin Sullivan: Are you proposing a tied arch bridge? Why with the issues in KY and TN?
 - John Smith (HNTB): Yeah, that's a very good question. And what he's referring to is an older style, 1950s steel arch bridge, in Kentucky, that experienced some cracking problems recently and had to be closed. I just want to assure you that's not the type of steel arch bridge that we're proposing here. We're proposing a network tied arch. You'll notice the cables if you look carefully at the renderings, are crisscrossed, which is different from the old style where the cables were vertical. It just greatly lessens the fatigue. The member that cracked was the steel at the bottom of the arch and it was welded that was much too rigid. When this tension came in from the vertical cables over time it developed a crack. We don't design or build them that way anymore. That was the state of the art in the fifties. But the kind of steel arches we build now are very robust, very resilient, and very redundant, and won't have to be closed, even if a single member anywhere on the bridge, or a single cable did get damaged or destroyed.
- Lorraine Halton: What is the design life of the 3 different options?
 - John Smith (HNTB): For a project of this magnitude, we use a little longer design life than usual. We use a 100-year design life, so there will be maintenance and minor rehabilitation required. But all 3 of the bridge types we are considering were designed for one-hundred-year design life.
- Jared Dardano: Will any of the proposed designs could have an impact on existing rail infrastructure nearby?
 - John Smith (HNTB): There is a rail line that goes over the old Cape Cod rail bridge and runs along the canal on the south shore. All our planning is around maintaining that that rail line. So, we'll build piers that are far enough back from either side of that rail line that it won't impact the rail line. There might be nighttime closures where we're erecting steel above the rail line or carrying things across, but we'll coordinate that with the railroad. But the rail line we're planning to leave in it the same position at the completion of our project.
- Michael Leger: I was just wondering, you mentioned that funding would be needed to make sure that you can complete final design and construction. Have you folks identified a drop-dead date where you would need to secure the funding so that you would not have an impact on those design dates in those construction dates.
 - Bryan Cordeiro (MassDOT): No, we have not identified sort of what you described as a drop-dead date.
 - Dave Anderson (HNTB): MassDOT is funding the design effort, and that is moving full speed ahead. You know we discussed earlier about the first two grant applications, but that has not done anything to slow the effort to advance the design, and those

questions around the construction funding, and the ability to move forward with the project. What is true is that MassDOT would not be in a position to let a contract out for construction without having secured the funds. MassDOT can, in fact, advance the design process without having the funds secured. Questions related to the timing and the condition of the existing bridge would be better addressed by the Army Corps of engineers.

- Monica Pepe: Would the inboard option for the Bourne bridge eliminate the bridge traffic going through the Rotary on the Cape side?
 - Bryan Cordeiro (MassDOT): Based on the figures we've shown tonight with the different alignments, it's clear that a lot of interchange and approach roadway work will be needed in order to reconnect the main lines to the existing local and regional roadways. There is definitely a probability that the Rotary will be impacted. Likely going to be the discussion of the round 5 installment of our meetings, which will take place in a couple of months.
- Makaela Niles: Thank you. I next see another question in the Q&A From Donna, who asks would it be a consideration making the on-ramp to the bridge a tolled bridge to generate revenue for the Cape's water and sewer issues
 - Bryan Cordeiro (MassDOT): We have not been investigating the use of tolls for any portion of the bridges or roadways at this time.
- John Hallgren: Yes, good evening. Back again with a question tonight. We're talking about the shared use path for bikes and pedestrians. I only use the bridge a couple of times a year to go on and off. But how somebody from the bypass, which is what, 80 feet below the Sagamore, is going to get up there to get across. Yeah, there are pedestrians on the bridge occasionally. I'm not sure even how they get there. So that's something you haven't really given a good explanation of how that's supposed to be accomplished to get people from you know, to the bridge to get across and down. But related to that, from the previous thing on you mentioned. They would have a scenic overlook type thing. I believe I put in the channel on Tuesday I saw some pictures, and so I haven't been there, but I saw some examples from what I still called the old, or the new Tappan Zee bridge, where they have a bike path along there with some glass walls to provide a good view of the you know the river. So, it might be, I don't know if you have any Massachusetts bridges that have that. But that might be a good example to use for some ideas, for presentations in the future.
 - Bryan Cordeiro (MassDOT) We will definitely be showing the shared use path connections going onto the bridges during very likely our next public meeting. Our next set of meetings round 5 that I talked about. So, we'll show different concepts for how the shared use paths will get there, as well as connecting to the existing bike path along the canal, and then we will show concepts along the approach roadway network to make other connections there. Safety fencing is something we're currently showing on our figures. That is something that we will definitely be proposing into our final design.

- Makaela Niles (MassDOT): I next see a couple of questions in the Q&A. One related to a clarifying question rather about bridge capacity whether there might be higher speeds expected on the bridges as part of the design.
 - Bryan Cordeiro (MassDOT): The auxiliary lane is the third lane that folks are referencing. It's just going to go from interchange to interchange. It's not going to carry traffic any further than that. In order for something to increase capacity, it would need to be able to help take a vehicle from one destination to another. So, we would need to have those lanes extend well beyond the existing interchanges, you know, up Route 3, and east on Route 6 on the Sagamore, for example and we're not doing that. That's not what we're proposing. That'd be a much different scope, much different project.
 - Dave Anderson (HNTB): I would say that you know they are designed for 55 and 60 miles per hour. Speeds obviously, today, vary depending on the level of usage, and the time of day. The appropriate posted speed will be there for enforcement purposes. Again, the lane configurations that were shown in the width of the lanes that were shown are based on current design criteria and are consistent with the lane widths for Route 3, Route 6, Route 24, and MacArthur Boulevard. They're all approximately 12 feet wide today. That's what's being proposed on the bridge. We talked about how the bridges, will be flatter, and there's very good reasons for that most important amongst them, as I described earlier, is relative to accessibility. As Bryan described in his presentation, there are advantages to the flatter grades as far as heavy vehicles and trucks, not disproportionately slowing down as they go up the grade, or going excessively fast, going down the grade.
- Kristyn Anderton: Has there been any thought of a separate bridge for bicycles and pedestrians only to allow a safe entrance/exit for bicycles/pedestrians and eliminate the need for the grading on the bridges that would impact additional property? The cost of saving on property impact vs. a pedestrian bike only bridge.
 - John Smith (HNTB): It would be very expensive and difficult to build a separate pedestrian and bicycle bridge for a canal crossing of this size, and with this height needed, the most efficient and cost-effective way to do it is to have it as an incremental width on a bridge we're already building.
- Michael Schiavi: In the event that this project doesn't get completely funded or there's environmental issues, and it just can't go forward. Is there a plan B? To simply renovate the current two bridges and bring them up to, you know, safety standards. By the way you guys are doing a great job. From my point of view, these are really informative sessions.
 - Bryan Cordeiro (MassDOT): Thank you. We appreciate that. In regard to the backup plan, I don't think DOT would be involved in any sort of major rehab effort that would be conducted by the Corps.
 - Scott Acone (US Army Corps): Right now, we're focused on pursuing the funding so that we can replace the bridges. When we did our analysis and the Major Rehabilitation Evaluation Report, the economics drove that the best decision economically was to replace the bridges. If that plan does fall apart, we will have to regroup, and we would

have to look at what we need to do to maintain the existing bridges for the duration that they're needed. One thing I will add, because it was a question in there, and I can kill 2 birds with one stone. We do have plans. So, the major rehabilitation was just that, it was a major rehabilitation. It involved closing bridges and replacement of members. But there are things we can do in the interim, the major work would have extended the life, for probably in the order of 50 years. What we're now looking at are the things we need to do to extend the service life for 5 to 10 years, and so you will see some increased maintenance. We will be doing maintenance on the bridges this spring starting in March.

- Alison Leschen: What's the planned width of the shared use paths?
 - Bryan Cordeiro (MassDOT): It would be able to accommodate 2-way travel for bikes and peds. We don't show width, but it will absolutely need to be wide enough to safely accommodate bi-directional travel.
- Steven Johnston: Has there been any discussion regarding the number or size of conduits running over the bridges for fiber optic?
 - Dave Anderson (HNTB): Yes, we have started that process we you know, most deeply with Enbridge and National grid regarding the gas. But we do know that there is fiber on the existing bridge and in the area, and as the work advances, we'll be talking with these utility companies and proceeding in a way that's consistent with MassDOT's utility accommodation policy.
- Robert Fizek: I have asked before but will ask again that the environmental impact analysis of all major projects should inform everyone of the climate costs -carbon expended- in total for all materials and construction activities.
 - Makaela Niles (MassDOT): Thank you, Robert for sharing that comment with us. We appreciate that.
- Scott Fitzmaurice: Do we think the commuter rail is likely to occur to Bourne /Wareham / or Pocasset even, sometime soon, which could really help increase options and limit congestion, well before construction begins.
 - Bryan Cordeiro (MassDOT): I really don't know what the plan is for the commuter rail down in this area. Unfortunately, I really can't offer any insight on that, but we agree that it would likely provide a nice transportation alternative for folks that want to come down to the Cape or folks that are commuting from the Cape to other areas.
- Leslie Pierce: The bridges appear the same, 2 lanes east and 2 lanes west, as we have, the wider, safer lanes will allow less congestion, because speeds will be more normal by not having to dodge vehicles crossing over the lanes that aren't able to navigate the narrow lanes and asks. Will you build union to ensure quality standards?
 - John Smith (HNTB): I haven't heard any discussions to date about whether there would be a project labor agreement that would require unions. Undoubtedly there will be discussions of that in time. So, to sum it up, we're still evaluating that.
- Robert Dwyer: Regarding the Entrance/Exit lanes, how will the design prevent or inhibit these being used for right-side passing of congested through-traffic, instead of exiting?

- Alex Siu (HNTB): In terms of the auxiliary lane, they're going to be short, and I think we've already kind of addressed this earlier, but they're short, and they only exist between the on ramp and the off ramp over the bridge. We already talked about having time to accelerate and to decelerate as you come onto the main line and then also exit. So, there really wouldn't be enough time or space to allow people to use that as a third lane for passing of congestion. Also, in terms of operations, having these auxiliary lanes is actually supposed to help safety with some of those weaving movements which inherently will, you know, improve some of the operations.
- Rosanna Mastera: At certain times of the year, we get very bad weather with winds upward of 50 mph in which the bridges need to be closed. Will the new bridges be able to withstand 50 mph winds and higher and not close the bridges to traffic?
 - John Smith (HNTB): We're very concerned about the wind. There is a lot of wind that whoops along the canal. We have performed a site-specific climatological evaluation and really looked at what the highest wind speeds can be expected for short duration, events and long duration events, and what direction they come from. As far as the question about whether the bridges can withstand that, we've already done some preliminary wind tunnel testing on certain deck types to determine what parameters work best. We will continue to do that wind analysis, and so our structures will definitely be able to handle not just the winds of today, but the expected wind conditions as the climate changes. Really, there might be wind speeds where it's not safe, especially for large trucks and traffic to be on the bridges at a certain point, even cars or pedestrians, and that'll be an operational discussion about whether there is a certain wind speed where traffic has to be restricted. The bridges themselves will be able to withstand any expected and predicted wind events.
- MJ Mastrangelo: How will the specifics of the Bourne and Sagamore be communicated to the Bourne Select Board and Town Administration?
 - Mark Kolonoski (HNTB): We heard a lot of questions very similar to this during the meeting on Tuesday night and MassDOT and the project team absolutely agrees that the coordination with the Town Administration and the Board of Selectman continue to be important moving forward. The project team has met with the Town Administrator on a number of occasions before these meetings, and actually before every public meeting, and we'll continue to do so into the future, and I can assure you that MassDOT, right now is discussing the best approach, best ways to engage the Administration and the Board of selectman. Going forward, will certainly coordinate the expectations of the town on how they would prefer to be engaged, so more engagement and more coordination, certainly, moving forward.
- MJ Mastrangelo: How will cost comparisons be between options be considered?
 - Bryan Cordeiro (MassDOT): They will be one of the evaluation criteria we use. Once we've gotten past things like a tunnel and filling in the canal, and other things like that cost becomes less of a factor, and we start to homing in on more important criteria. I think we consider it, but it's not as important as some other things.

- Makaela Niles (MassDOT): There was a question as well about the impacts to Sagamore businesses along the canal, and how those would be identified. And then the other question that I see here relates to the Bourne Rotary which has come up in previous discussions as well, and if it might make financial sense if the Rotary was eliminated.
 - Bryan Cordeiro (MassDOT): we're just not at a level of detail yet to be able to know what the specifics are.
- Makaela Niles (MassDOT) I next see a question from Stephen Buckley about using the existing bridges for bicycles and pedestrians. I know this is something that's also come up as a comment or a question at previous meetings as well.
 - Scott Acone (US Army Corps): Thanks. Yeah. So, we have looked at that. We have considered that. It can actually be as expensive or more expensive to maintain old bridges for pedestrian and bicycle traffic. The loads from pedestrians on bridges can be higher than the loads that cars produce.
- Susan Barrachini: Why can't we work in or near the same footprint of each bridge by building a temporary bridge near each original location, and then tearing down and rebuilding on the same footprint of the bridges and the land connections?
 - John Smith (HNTB): We're very concerned with minimizing impacts to properties. It's not really feasible to build a temporary bridge at this grade, span, length, and height. It's also important to note that the new bridge to meet current highway geometric standards, as we've discussed in this presentation is going to be wider. So, the footprint of the existing bridge is not really wide enough to accommodate our new structures. We also need room for cranes to build the bridges, so it's really impossible to keep the impacts for the new bridge right in the footprint of the existing bridges.
 - Bryan Cordeiro (MassDOT): We want to make sure that we're minimizing surrounding impacts as much as we can.
- Makaela Niles (MassDOT): I next see a question from Rachel, who starts by thanking everyone for their work and the time put into the Q&A. IJJA puts a lot of emphasis on high quality job creation, strong labor standards and opportunities for underrepresented groups and asks, will PLAs or apprenticeship programs be considered for the upcoming grant applications.
 - Bryan Cordeiro (MassDOT): we definitely are looking at all options to create a more competitive grant application for the next round of IJJA funding. We haven't specifically discussed apprenticeship programs. But if that's something that could make our grant application more competitive, then we will, definitely look into it.
- John Hallgren: I would suspect that if the aux lane is separated by a solid line at beginning and end of bridge where vehicles should be only getting ready to merge or exit, it would discourage anyone trying to use it as normal travel lane.
- Makaela Niles: I next see a question from John York about sharing some of the design group meetings.
 - Mark Kolonoski (HNTB): Yes, so we have been making all the information that we're sharing at these meetings public. It's available on the project website. We have

transcripts meeting minutes, recordings of the meetings. Everything that is presented here is available on the Project website very shortly after these meetings

- Kristof Ketch: Just some comments. No Q. MJ mentioned considering putting the shared use walkway between the twin bridge. I wouldn't like that as a pedestrian because I'd want a clear view of the landscape in at least one direction instead of being between two roadways with driving cars obstructing all views. I like the idea of scenic overlook rest/sitting areas for pedestrians. An idea to go with those areas is putting in mounted binoculars. I think it would also be a good idea to allow for private cart vendors to obtain permits to operate during the summertime at the pedestrian overlook areas. I'd like someone to have a cart with ice cream and drinks at the overlook! Another consideration with making the bridges more pedestrian friendly is planning for people travelling on/off Cape wanting easy access to parking near the base of the bridges to be able to easily go sightseeing on the bridges. Maybe planning for parcels for rest stop or gift shop near the base of each crossing should be considered during planning.
 - Makaela Niles (MassDOT): Thank you.
- Claudia Sears: Thank you everyone who facilitated and presented.

Program Team:

- Bryan Cordeiro – MassDOT Project Manager
- Makaela Niles – MassDOT
- Adetoyin Olaoye - MassDOT
- Fitz Denton – MassDOT
- Linda Schoffield – MassDOT
- Cassandra Ostrander - FHWA
- Craig Martin – USACE
- Scott Acone – USACE
- Kevin Walsh - Stantec
- Dave Anderson – HNTB
- John Smith – HNTB
- Joseph Cahill – HNTB
- Alex Siu – HNTB
- Mark Kolonoski – HNTB
- Erica Blonde – HNTB
- Paul Nelson – HNTB
- Mikayla Jerominek – HNTB
- Patrick Marvin - HNTB
- Emily Wood - HNTB

Translators:

- Melissa Toth – American Sign Language
- Lisa Gentile – American Sign Language
- Jill Pesti- CART

- Debora Borges - Portuguese
- Alexandra Fortich – Spanish
- Laura Lozano – Spanish
- Rafael Freire - Portuguese

Attendees:

1. Amy Sharpe
2. Stephen Buckley
3. Kim Berner
4. Bill ONeill
5. Mary Ann Mason
6. David DuBois
7. Ashley Hatcher
8. Jared Dardano
9. Kevin Hanley
10. Eric Hieser
11. Joe Viola
12. Bill Blunt
13. Susan Conway
14. Leonard Pinaud
15. Greg Bilezikian
16. Mary Riffe
17. Joyce Shea
18. Jill McLaughlin
19. Andrew Nelson
20. David Brooks
21. Carol Augat
22. Liz Hartsgrove
23. Colleen Medeiros
24. Linda Lemire
25. Richard Mclean
26. Mark Warren
27. Catherine Weston
28. Marlene McCollem
29. Susan Eliason
30. Julie Gammon
31. Stephen Tom
32. H L Place
33. Chuck Filliettaz
34. Susan Baracchini
35. Michael Cusack
36. John Donahue
37. James Sears
38. Emma Loughlin
39. Rosie King
40. Matthew Bruce
41. Kevin Sullivan
42. Tom Dignes
43. Ann Oconnell
44. Sue Weiss
45. Scott Fitzmaurice
46. Roald Lokken
47. Suresh Rao
48. Susan Areson
49. Rosanna Mastera
50. Thomas Flynn
51. Jed Cornock
52. Cheryl Mann
53. Barry Kromer
54. Christine Sweklo
55. Jack Fracasso
56. Kathy & Peter Wildman
57. Judith Shumway
58. Jack Afarian
59. Susan Bunbury
60. Michelle Christensen
61. Paul Courtney
62. Steve Tefft
63. Leonard Short
64. Fran Payton
65. Sue Lederhouse
66. Jeffrey Downs
67. Tom Cole
68. John York
69. Anthony Denault
70. Heather Murphy
71. Nancy Brooks
72. Aida Chaves

73. Joseph Mirabello
74. Ben Fields
75. Scott Lajoie
76. Caleb White
77. Bill Uzell
78. Gary Rochefort
79. Kim Rutty
80. Gianni Saltalamacchia
81. Kevin Brown
82. Paul Niedzwiecki
83. Kevin White
84. Frederick Moseley
85. Peter Noyes
86. Evelyn Bittner
87. Jackie Ferguson
88. Carl Harrison
89. Bruce Held
90. Ross Kessler
91. Trevor Meyer
92. Kurt Stiffel
93. James Danforth
94. David Howard
95. Patricia Basler
96. A Holmes
97. Scott Gustafson
98. Thomas Cole
99. William Reed
100. Thomas Andrade
101. Alex Duggan
102. Tom Foley
103. Michael Leger
104. William Gindra
105. Marie Rose
106. Jesse White
107. Heather Goldstone
108. Deborah Munster
109. Diane Guethlen
110. Bryan Hallas
111. Valerie Caron
112. MJ Mastrangelo
113. Carol Sim
114. Karen Epstein
115. Russ Young
116. Bob Klehm
117. Edward Haddad
118. Mallory Ross
119. Peter Sutton
120. Christopher Philips
121. Paul Dreyer
122. Frank Gasson
123. Henry Marcel
124. Joseph Allwarden
125. James McDowell
126. Thomas Classen
127. Laura Perra
128. Peter Cormier
129. Steven Tupper
130. Scott Swanekamp
131. Robin Morse
132. Linda
133. Mary Fischer
134. Liam Brister
135. Kathryn Shea
136. Steven Kahian
137. William Nicholson
138. Matthew Alfonso
139. Robert Ebersole
140. Kristof Ketch
141. David Rienks
142. Lynn Erdos
143. Liz Maloney
144. Nancy Selchan
145. Monica Pepe
146. Ilona Sobkowiak
147. John C Correira
148. Kristyn Anderton
149. Steven Kraemer
150. Blair Hasty
151. Harriet Draper
152. Anthony Corridori
153. Anne Scott-Putney
154. Sandra Taylor
155. Noelle Annonen
156. Michael Beintum
157. Richard Rothstein
158. Keri Lopes
159. Judy Switzer
160. Sarah Walker

161. Mike LaViolette
162. Edwin Howard
163. Nancy King
164. Lee Hicks
165. Ellie Harmon
166. Jeanne Azarovitz
167. Richard Falzone
168. Milt Williamson
169. Samuel Fazioli
170. Rockland Puzo
171. Jon Downing
172. Mark Simmons
173. Eileen Miskell
174. John Hallgren
175. Christopher Allgeier
176. Ralph Herbst
177. June Darmanian
178. Douglas Peterson
179. Donald Hayes
180. William Nelson
181. Bill DeStefano
182. Judy Sheldon
183. Michael Scavotto
184. Steven Johnston
185. Steve Blanchard
186. Stephen Beane
187. Paul MacMillan
188. Paul Jehle
189. Lorraine Halton
190. Petah Steiger
191. Brittany Lord
192. Michael Reghitto
193. Randi Lebar
194. Eliza McClennen
195. Cole Bateman
196. John Pourbaix
197. Lisa King
198. Wendy Boyer
199. Jane Fitzpatrick
200. Celeste Planzo
201. Sandra Rosado
202. Margaret Siderwicz
203. Craig Schelter
204. Alison Leschen
205. Wendy Scandurra
206. Ed DeWitt
207. Dr Paul J Canniff
208. Susan Harris
209. Timothy Letton
210. Karl Clayter
211. Priscilla Harcourt
212. Richard Carafoli
213. Guy Morse
214. Wendy Hauser
215. Colleen Cox
216. Walt Woo
217. Elisa Bucci
218. Susan Lincoln
219. John L Swift
220. Cory Lovett
221. Hugh Blair-Smith
222. Donna Wilson
223. Patricia McMenemy
224. Paula Thompson
225. Diane Ota
226. Kristine Keeney
227. Sharon Parkins
228. Chuck Hanson
229. RB Held
230. Maureen Reed
231. Fernando DiMaggio
232. Anthony Sadera
233. machi
234. Michael Schiavi
235. Emily L. Ferguson
236. Benjamin Molina
237. Carolyn Garabedian
238. Lucille Nardini
239. Rachael Clifford
240. Kristen Pennucci
241. Emily Wood
242. Deborah Levine
243. Genevieve
244. Jennifer Bombard
245. Raymond Castano
246. Brandon Rayno
247. Carol Ewing
248. Pam Harding

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| 249. Stephanie Harding | 280. Sherri Williams |
| 250. Bryan Bourbeau | 281. Judith Powers |
| 251. William Walker | 282. William Toner |
| 252. Peggy McCarthy | 283. Dan Connolly |
| 253. Ellie Held | 284. Lauren Catipon |
| 254. Stephen McCready | 285. Sandra McGuire |
| 255. D Walsh | 286. Eveleen |
| 256. Carla Emmons | 287. Carol Zurek |
| 257. Margaret Stewart | 288. Robert Dwyer |
| 258. Claudia Sears | 289. Joseph Rodricks |
| 259. Daniel Foley | 290. Susan Abrams |
| 260. Andrea D'amato | 291. Katherine Joyce |
| 261. Jacquelyn Goddard | 292. Ron Rizzuto |
| 262. Tim Nazzaro | 293. William Sinclair |
| 263. Jennette Barnes | 294. Katie Ries |
| 264. Alayna Lucero | 295. Janine Putnam |
| 265. Scott Moles | 296. Robert Fizek |
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| 267. Terry Little | 298. Sandy Richter |
| 268. Elizabeth Bradley | 299. Tabatha |
| 269. Mark Villa | 300. James Howard |
| 270. Lynne Mandigo | 301. Jeff Stevens |
| 271. Tom Nick | 302. Hasmukh Patel |
| 272. Robert Peltoma | 303. N T |
| 273. Lincoln Thurber | 304. Jeri Gaynor |
| 274. Peter Meier | 305. Chris Wyckoff |
| 275. Mike LaViolette | 306. Krista Hennessy |
| 276. Susan Curran | 307. Cheryl Lavallee |
| 277. Chris Timmel | 308. Donald Clay |
| 278. Gregory Stone | 309. Mike Clements |
| 279. Leslie Pierce | |