Moving Massachusetts Forward.
massDOT
Highway

Addendum To

Bridge Alternatives Evaluation

and Life Cycle Cost Comparison

for Bridge Street

over Mitchell River

May 17, 2011

11:00 am

AT

Chatham Town Hall
549 Main Street
Chatham, MA

FOR THE PROPOSED

Mitchell River Bridge Project
Section 106 Process – Consulting Parties Meeting

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PRESENTERS

Damaris Santiago, Environmental Engineer, Federal Highway Administration

Richard Marquis, Assistant Division Administrator, Federal Highway the Massachusetts Division

Joseph Pavao, Project Manager, MassDOT

Mark Shaman, URS Consulting Engineer

George Patton, URS

PRESENT

Damaris Santiago, FHWA

Joseph Pavao, MassDOT

Richard Marquis, FHWA, Massachusetts Division

Jeffrey Shrimpton, Historic Resources Specialist, MassDOT

Mary Ann Naber, FHWA, HQ

David Whitcomb, Chatham Board of Selectman

Timothy Roper, Chatham Board of Selectman

Florence Seldin, Chatham Board of Selectman

Len Sussman, Chatham Board of Selectman

Norm Pacon, Friends of the Mitchell River Wooden Drawbridge

Carol Legard, ACHP

Don Aikman, Chatham Historic Commission

Michael Pease, Pease Boat Works & Marine Railway

David Kells, Pease Boat Works & Marine Railway

George Myers, Chatham Citizen

Jim Igoe, Preservation Massachusetts

Sean Summers, Chatham Board of Selectman

Conference Call

John Smolen, Smolen Engineering

Kitty Henderson, Historic Bridge Foundation

Paul Brandenburg, Indiana Historic Spans Taskforce

James Cooper, Bridge historian

Betsy Merritt, National Trust of Historical Preservation

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P R O C E E D I N G S

DAMARIS SANTIAGO: Welcome everybody to the Consulting Parties Meeting of the Section 106 Process for the Mitchell River Bridge Project. We want to thank the Town of Chatham for hosting this meeting, once again. Before we start I want to make sure that everyone understands that this is not a public meeting. However, we want to recognize that there are members of the public present in the room. A stenographer is present at the meeting and will be producing a transcript that will be made available later on to the consulting parties and the general public.

Let's just go around the table and introduce ourselves. My name is Damaris Santiago; I am from the Federal Highway Administration. I am the Environmental Engineer.

RICHARD MARQUIS: Good morning everyone, I am Rick Marquis I am the Assistant Division Administrator with Federal Highway the Massachusetts Division.

JOSEPH PAVAO: Joseph Pavao, MassDOT Project Manager assigned to this project.

1 JEFFREY SHRIMPTON: Jeffrey Shrimpton, Historic
2 Resources Specialist at MassDOT.
3 MARY ANN NABER: Mary Ann Naber, I am the
4 Federal Preservation Officer out of the Washington
5 Headquarters Office at Federal Highway Administration.
6 DAVID WHITCOMB: David Whitcomb, member of the
7 Chatham Board of Selectman.
8 TIM ROPER: Tim Roper, also a member of the
9 Board of Selectman.
10 FLORENCE SELDIN: Florence Seldin, Chair of the
11 Chatham Board of Selectman.
12 LEN SUSSMAN: Len Sussman, Board of Selectman.
13 NORM PACON: Norm Pacon, The Friends of the
14 Mitchell River Wooden Drawbridge.
15 CAROL LEGARD: Carol Legard, I am with the
16 Advisory Council on Historic Preservation out of
17 Washington DC.
18 DON AIKMAN: Don Aikman, Chatham Historical
19 Commission.
20 MICHAEL PEASE: Michael Pease, Pease Boat Works
21 and Marine Railway.
22 DAVID KELLS: David Kells, also from Pease Boat
23 Works and Marine Railway.
24 GEORGE MYERS: George Myers, Chatham Citizen.

JIM IGOE: Jim Igoe, Preservation Massachusetts.

DAMARIS SANTIAGO: Thank you very much. Can we have the people connecting through the conference call introduce themselves too.

BETSEY MERRITT: Betsy Merritt, National Trust of Historical Preservation, Washington, DC.

JOHN SMOLEN: John Smolen, Smolen Engineering, North East Ohio.

KITTY HENDERSON: Kitty Henderson, Historic Bridge Foundation.

JAMES COOPER: James Cooper, Bridge Historian.

PAUL BRANDENBURG: Paul Brandenburg, Indiana Historic Spans Taskforce.

RICHARD MARQUIS: Is that everyone? Again, my name is Rick Marquis. I am the Assistant Division Administrator for Federal Highway, the Massachusetts Division. I am just going to quickly say because I know we have to cover a lot of things. We are here to simply continue the Section 106 Process. We had a meeting some months ago. Everyone should have an agenda for the meeting. Joe Pavao from MassDOT is going to give an over view of the Accelerated Bridge Program as well as the

1 project overview and meetings to date. He will give a
2 review of that.
3 I am not sure if it is Joe who will be giving
4 the presentation of the alternative analysis.
5 JOSEPH PAVAO: Our design consultant Mark
6 Shaman with URS is here to give us a power point.
7 RICHARD MARQUIS: Okay. Then we will have an
8 open discussion with the consultant parties. We will
9 talk about some of the next steps. I guess with that I
10 will turn it over to you, Joe.
11 JOSEPH PAVAO: Thank you, Rick. As Rick
12 mentioned my name is Joe Pavao. I am the Project Manager
13 assigned to this project. The Accelerated Bridge Program
14 was signed into law in 2008 by Governor Patrick. It is
15 an eight year program. The intent of the program is to
16 repair, rehabilitate or replace structurally deficient
17 bridges throughout the Commonwealth. Approximately $3
18 billion was made available for that purpose. The
19 Mitchell River Bridge Project is programmed under the
20 Accelerated Bridge Program for approximately $12 million.
21 Federal Highway is MassDOT's partner and funding this
22 project. They are going to be funding the construction
23 of the bridge, approximately 80%. MassDOT will be
24 picking up the remaining cost, approximately 20%.

1 The funding for the bridge under the
2 Accelerated Bridge Program we fund the initial
3 construction cost of the bridge. This is a town owned
4 bridge and maintenance, cost, and future replacements
5 whether it be the deck, or superstructure, or the entire
6 bridge is not funded under the Accelerated Bridge Program
7 at this time. So the funding is for the initial
8 construction cost. I wanted to make that clear up front.
9 As I stated back in October when I first came
10 on as Project Manager, MassDOT is fully committed to this
11 project as well as federal highway and we intend to keep
12 it within the Accelerated Bridge Program.
13 Just a quick project overview. Back in the
14 fall of 2009 MassDOT convened two public information
15 meetings where we came out and we listened to the public.
16 At that time the bridge was not ruled to be NR eligible.
17 We proceeded to take comments from the public. We
18 incorporated the comments to the extent that we could and
19 we moved forward to the 25% design.
20 We came back out to the public March 2010 where
21 we presented that design that we had, where we attempted
22 to mitigate and try to mitigate with the esthetic
23 features of the bridge. We tried to make it look as much
24 as possible to the existing bridge.

1 During the summer of 2010 there were some
2 challenges to the ruling that was made by our state
3 historic preservation officer and Federal Highway
4 appealed and looked for a clarification with the National
5 Keeper of Records. They came back and ruled that the
6 bridge was, in fact, NR eligible. MassDOT and Federal
7 Highway recognized that, and we realized that we needed
8 to go through the Section 106 Process given that ruling.
9 I came back; I was assigned as project manager
10 right around October of 2010. The first thing that I did
11 was I met with the Town Selectman, several members of the
12 Town Selectman just to reiterate our commitment to the
13 project that it would remain within ABP, and we fully
14 intended on moving forward with this project.
15 January 25 we held our first consulting party's
16 meeting. Many of you were here at that meeting either at
17 the table or via conference call. At that time MassDOT
18 stated their position. We were very reluctant to use any
19 type of wood materials on this particular environment.
20 We stated that at that meeting. There was a lot of
21 concerns from the consulting parties as well as the
22 public that we were basing our decisions on information
23 that nobody else has seen.

I expressed our reluctance to share information that is in draft form. Given the sensitivity of this project we agreed at that meeting that we would provide all of the information we had in the form of a repair rehabilitation report and a life cycle cost analysis for the different alternatives that we were considering.

So we went forward and created those reports. We provided, I believe one of them went out approximately a month ago and the other one approximately two weeks prior to this meeting. So we provided those reports. We are here today to give you a power point presentation on those reports. Before I turn it over to Mark Shaman for that Power Point presentation we are going to stay tuned, and we will be right back.

INTERMISSION

MARK SHAMAN: Hello, my name is Mark Shaman, and I am from URS Consulting Engineers to MassDOT. I have with me George Patton and Ivester, who may be answering questions later on, so I just wanted to introduce them. They are both structural engineers with URS. We do ask -- I am going to go through the

1 presentation, there is about forty-eight slides, if you
2 would wait until I finish the presentation, and then we
3 will entertain your questions between Joe and myself.
4 MassDOT has asked us to look at both the life
5 cycle cost options and some of the repair and
6 rehabilitation cost options. We had to come up with a
7 project objective in order to start the evaluation
8 process, if you will. The objective for the Mitchell
9 River Bridge Project is to remove a structurally
10 deficient bridge from the Deficient Bridge List by
11 providing a structure that meets the latest LRFD design
12 code that is a federal design code or AASHTO design code,
13 excuse me, and current safety standards. We will talk
14 about some of these as we go. I believe Joe in his
15 introduction talked about the Accelerated Bridge Program.
16 Really, the purpose of that program is to remove bridges
17 from the Structural Deficient List. So it fits right
18 into our project objective.
19 We have done two studies that Joe has
20 mentioned. We did a bridge repair and rehabilitation
21 feasibility study. That study evaluates the repair and
22 rehabilitation alternatives to avoid replacement of the
23 existing structure. After that study was completed, we
24 were asked to do life-cycle cost comparison for

1 evaluation of five alternatives. Supplemental to that
2 report we were actually asked to do two variations to the
3 all-wood construction. I do have a supplemental document
4 that I will hand out afterwards. I will talk about it in
5 the power point presentation, the two additional options.
6 Definitions, how do we define repair? How do
7 we define rehabilitation? Repair is basically work
8 needed to restore an element to its original condition.
9 It is not intended to correct defects or provide any
10 upgrades to satisfy current design standards.
11 With regard to rehabilitation, rehabilitation
12 is the kind of work needed to correct all the defects and
13 provide upgrades to satisfy the current standards.
14 These are the basic criteria that we used in defining the
15 scope of the repair and rehabilitation studies.
16 Beyond that we developed evaluation criteria
17 for the structure. Again, this goes back to the project
18 objective of meeting the design code, etcetera. The goal
19 of some of the criteria is to satisfy the AASHTO loading
20 requirements. Satisfy current safety standards. A lot
21 of that has to do with the guard rail system out there.
22 Make accessible for all users not only the running
23 traffic and marine users but also pedestrians of all
24 types meeting the ADA. One of the criteria's to maximize

1 channel clearance. Provide a service life of 75 years.
2 Be low maintenance and easy to operate. Avoid
3 counterweight submergence, which is one of the problems
4 of the existing bridge and also to try to be context-
5 sensitive.
6 On the screen, we have a picture of the
7 existing bridge opening. You can see that, and this is
8 from the bridge plans that were developed in 1980. What
9 we are looking at is a profile of the bridge at the
10 bascule span. The bascule span is the span that opens
11 and right off the bat a couple of things that we pointed
12 out here. This is 19′ 4″ clear opening. That is the
13 design opening if you will and that is for face to fender
14 to face to fender in the bascule span.
15 However, in looking at the picture you will
16 also note the design flaw that was actually built into
17 the project and that is there is a slight overhang of the
18 moveable span over the channel. Although there is no
19 scale here it is relatively a quarter of the way or a
20 quarter of the space of the channel. It is overhung by a
21 portion of the bridge. One of the issues that we have
22 here is that we are required to develop and provide a
23 bridge that has an unlimited vertical clearance. There
24 were two things in discussions with the Coast Guard, that

they are really interested in one is to maintain a channel width that is no less than 19’ 4” and also that channel width must have an unlimited vertical clearance. So boats of any type can get through at all times.

This here is a picture of the open bridge, and you can see that it is overhanging the channel. I understand that it doesn’t quite go up all the way. In the prior picture, you can see the top of the guardrail almost went to the top of the shift pole. Right now they are not quite fitting the clearance so it is a little less of the vertical clearance that was even designed into the project in the beginning.

We did note that in looking -- there will be a series of pictures in the presentation here. They show pictures that were taken during the bi-annual bridge inspection reports that are done by another consultant to MassDOT. This is one picture underneath the moveable span, the bascule span showing some of the collision damage to the underside of the deck. I don’t know if this is because people going through when it is low tide and the bridge is not lifted if they are knocking this, or if it is something that is being struck when the bridge is open.

1 Again, going back to some of the criteria that
2 we have our goal is to meet ADA. Make it accessible for
3 all users. The requirement for ADA is basically that you
4 have an unobstructed path that is four feet wide on any
5 sort of sidewalk system. You can see where we have the
6 open machinery in the sidewalks. Obviously, that width
7 is restricted. There are allowances for items that may
8 be in the sidewalk so that the passable distance for a
9 small obstruction doesn't need to be the full four feet.
10 I believe it is three feet thirty inches, something along
11 those lines. In this case, there is barely eighteen
12 inches from the structure to the curb. You can also see
13 here some of the issues related to having the open
14 machinery as it exists right now, basically subject to
15 all the problems of the weather.
16 Again, another picture of the accessibility.
17 This is off the bridge or off the timber portion of the
18 bridge but on the approach side. Again, we have some
19 accessibility. The sidewalk width is much less than the
20 required four feet. If you walked out there you will
21 recognize there is a lift actually on the sidewalk
22 itself. There is a concrete portion and a tuminous
23 portion and there is about a two inch vertical difference

1 between the two. So again, we need to provide a smooth
2 unobstructed path for ADA accessibility.
3 I will go through a series of slides that come
4 right out of the bridge inspection report that I
5 mentioned before. These bridge inspection reports are
6 done every two years. The latest one was done in January
7 of 2010, which is where the pictures of this presentation
8 come from. I also have available the bridge inspection
9 reports from 2008 and 2006. I will make some reference
10 to those.
11 One of the things to note is the bridge
12 inspection report does provide a grading classification
13 for the major elements of the bridge, and it goes into
14 detail on the following pages. What we are looking at
15 for those on the phone, we are looking at a cover sheet
16 that is basically a scoring sheet for the bridge
17 inspection. At the top of the sheet, I have highlighted
18 in the red cloud, if you will, the major areas of
19 inspection. Those are the deck, the substructure, and
20 superstructure. You will note in this report, again,
21 done in 2010 that the deck was rated at a 5, the
22 superstructure was rated at a 6, and the substructure was
23 rated at a 4. This is on a scale of 1 to 10.

A couple of remarks on the bridge inspection report substructure. Again, this is right out of the bridge inspection report. They noted for the pile caps, there is isolated timber caps at 1/8″ to ¼″ wide checks, which measure to 3′ long. The south end of the pile caps have been full height splits that extend to the first pile. For the piles themselves, it notes that there are isolated piles that exhibit heavy brooming which is basically, I will show you a picture later on. Basically the shaving of the bridge and its splintering off the sides. And advance section loss in the title zone. With up to 1′ ½″ deep full circumference areas of soft punky timber and it also notes that random piles have had sections removed in the upper portion and replaced up to three inches deep.

Then there is also problems with the diagonal bracing which again, I will show you some photos here in a minute. This is an underside of the deck picture. You can see some of the protrusion of the deck up above. I don’t know which stand this is in. This is a picture that we are looking at right now at the end of the bascule span and shows some of the problems with the wood out there. The fact that it misaligns with the bascule span means that it is more difficult to open and close.

1 It has been subject to weathering. You can see there is
2 some misalignment of the curb line, and it is really an
3 issue with the wood as a whole. It is obviously subject
4 to the weather. It doesn't weather, particularly well.
5 It doesn't behave in a known manner as a man-made
6 material. We understand how man-made materials will move
7 over time and wood is a different matter all together.
8 It is not on every piece of wood is not necessarily the
9 same as the others.
10 Again, this is another photo looking at the
11 misalignment of the toe. This is the misalignment of the
12 curb. Issues with the deck. The deck is actually in
13 pretty good shape, and it has obviously been repaired and
14 kept up to reasonable standard of repairs. There are
15 still some protruding knots and nails that stick out.
16 There are quite a few actually.
17 We do have some issues with the abutment. This
18 is the east abutment, and you can see there are cracks
19 along the east abutment, and you can see that there are
20 cracks along the east abutment. There is spalling,
21 deterioration of the concrete over time, which had to be
22 repaired. This is the brooming that I was talking about.
23 You can see just in the title zone itself, there is
24 section loss of the wood timbers. This brooming effect

1 that happens with the timbers splintering. The more this
2 splinters the more it is subject to exposure to marine
3 bores, etcetera. Once it starts to deteriorate it
4 deteriorates at a quicker rate. Of course, there is less
5 section to deteriorate once you get inside. So the
6 capacity could be lost pretty quickly.
7 Issues underneath the bridge. The vertical
8 split of the timber piles at the cap level and also at
9 the cap that has developed between the cap and the pile.
10 Issues with the diagonal bracing and know that this is a
11 picture from 2006, excuse me, 2010, but if we go back to
12 the 2006 pictures, it is basically the same picture.
13 Noting that this bridge was built in 1980 there has been
14 some discussion on what the service life is. Certainly,
15 by 2006, 25 years, this condition already existed.
16 So, our conclusions were that for the repair
17 and rehabilitation study, on the repair side, repairing
18 the bridge would not meet the basic project objectives.
19 It would not at all remove the bridge from the
20 structurally deficient bridge list. Again, we would only
21 be repairing what is there now, and it wouldn't meet the
22 environment, wouldn't satisfy the LRFD design code. It
23 would not correct the safety deficiencies or become

1 compliant with the Americans with Disabilities Act if we
2 went straight to a repair.
3 On the rehabilitation side, we determined that
4 rehabilitation was not a practical solution. Not that it
5 couldn't be done but in order to satisfy the project's
6 objective and really to repair the substructure, we have
7 to remove all the good elements to get to the bad
8 elements.
9 So in effect we would be rebuilding the bridge,
10 one way or another, with whatever materials we choose.
11 So the conclusion is that the rehabilitation is not an
12 option.
13 So again, the repair and rehabilitation study
14 MassDOT determined that advancing the repair
15 rehabilitation options is not prudent.
16 So then we were asked to look at five
17 replacement alternatives and two variations which I will
18 get to on the next slide. Alternative 1 is an all-wood
19 replacement/replication of the existing bridge but a 19'
20 or 19' 4" channel. That would come closest to
21 replicating the existing bridge.
22 Alternative 2 is very similar in that it would
23 have an all-wood bridge, but we would add a concrete and
24 steel bascule span to take care of some of the mechanical

1 issues and make sure that the bridge goes up and down.
2 Not only, the whole 25' width and the full length of
3 unlimited vertical clearance but also to make sure that
4 it is coming up and going down in the same place all the
5 time.
6 Alternative 3 has a wood superstructure, and
7 this is everything above the pier caps on a concrete and
8 steel substructure. So the steel pile - the piles would
9 be steel and the cap that connects all the piles will be
10 steel in Alternative 3. Everything above those caps
11 would be wood. Again, we would provide a 25' channel.
12 Alternative 4 is again the next step from
13 alternative 3, which has the steel piles, the concrete
14 caps, but it also has steel beams carrying the deck up
15 above. A wood deck up above.
16 Then Alternative 5 is the all concrete steel
17 replacement structure with the 25' channel with wood
18 features. I will note that all of these alternatives 2,
19 3, 4 and 5 as well as number 1 have wood features. The
20 sidewalk the curb rail, etcetera would be wood in all
21 cases. We are really just talking about the main
22 structure itself. I will show you some photos.
23 So, again like Joe mentioned this report
24 original went in about two or three weeks ago now. After

1 MassDOT and FHWA had a chance to review it, they asked us
2 to supplement the report with two additional options
3 which we did late last week. As I said I have a
4 supplement handout. The supplemental evaluation, the
5 goal was to consider apples to apples in comparison as I
6 noted in the original bridge Alternative 1. It was all
7 wood with a 19′ 4″ span. Where all the others have a 25′
8 channel span to meet the maritime community. So what we
9 did is we went back and said what if we to a 25′ span
10 with an all-wood bridge or what if we did a 25′ span
11 within a protective pier.
12 So here is what we are looking at right now is
13 a profile of Alternative 1 with a bascule span. This is
14 an all-wood structure. It has a 19′ clearance. Is
15 provides for a shift pole that is offset back away from
16 the back of the pivot point, if you will which again was
17 one of the design flaws in the original structure. This
18 again has a 19′ 4″ clear width opening between the
19 fenders and it does allow for a full vertical clearance.
20 Alternative 1A again was the alternative that
21 is very similar to the existing structure except that we
22 are adding a 25′ channel width and in order to do that
23 one of the biggest issues we have is the counterweight
24 itself. One of our goals in maintaining it or designing

1 a bridge that's built to last is to keep the counter
2 weight out of the water but in order to make a 25' all
3 wood bridge work you basically have to add a counter
4 weight that is long enough large enough or so large that
5 it would dip into the water every day and lead to some
6 corrosion and need to replace that after a certain amount
7 of time. So we are trying to keep that out of the water.
8 We do have a shift pole similar to the existing.
9 Alternative 1B is again a variation of 1A.
10 This is an all-wood bridge except for the fact to keep a
11 counterweight out of the water, we would add the bascule
12 span which some of you have seen in prior presentations.
13 The bascule span is a contained concrete pier with some
14 sort of facing to be determined. It allows for the
15 counterweight to pivot in the dry at all times behind the
16 bascule pier. Again, this has a 25' channel width with
17 unlimited vertical clearance.
18 Again, this goes back, we are looking at the
19 1980 design drawings again, and it just shows the issue
20 with the counterweight. As I said the counterweight does
21 dip into the water right now partly because of the design
22 flaws. You can see a picture with a corroded
23 counterweight. So that is the corroded counterweight.
24 One of the issues here and I have seen some other

1 pictures of the 2006 report. This counterweight is
2 actually bolted up into the structure above and while the
3 counterweight is corroded and ugly maintain the same
4 weight but what is happening is you are losing the
5 connections that really keep it connected to the bridge
6 itself. Those bolted connections are deteriorating and
7 there is some concern in the long run that the
8 counterweight can actually rust and slip off.
9 Looking at the all-wood superstructure and this
10 is basically the approach spans of the bridge, and the
11 approach spans would have an all-wood superstructure
12 again under Alternatives 1 and 2. The difference in one
13 and two are the bascule span which we will see a picture
14 of in a moment. Again, it is an all-wood deck. All wood
15 beams, girders and all wood sidewalk.
16 Superstructure which we are defining as the
17 portion above the pile caps is also identical for
18 alternative number 3. We are now looking at a section
19 through the approach spans. This is a design if you
20 will, cross section that we are looking at. It shows the
21 wood deck above the timber pile caps under Alternative 1
22 and 2. It also shows the arrangement of the piles that
23 would be necessary underneath that cap to support that

1 bridge and the lateral bracing that is required to tie it
2 all together.
3 Just in terms of future repairs of a jacketing
4 system if we did, if the wood option was selected, at
5 some point you would have to restore the structure of the
6 pile. As we noted the existing piles which are roughly
7 thirty years-old show significant deterioration. This
8 jacketing system is the method of choice if you will when
9 you need strength in a wood pile. Basically, what you
10 will do is you will build a cofferdam essentially so you
11 can construct in the dry. Within that cofferdam you will
12 go in and actually remove the damaged wood from the pile
13 itself by sandblasting or some other method. Get it down
14 to bear clean wood then you would come in and put a
15 treatment system on it. You may put a reinforcement cage
16 around the pile itself. You will use often fiberglass or
17 some sort of plastic casing system, and you lift it up as
18 a pantaloon, if you will, up around the leg of the pile.
19 Then you would pour the concrete in, and either remove or
20 leave the casing in place. So that is the operation that
21 is needed to restore a wood pile to regain the strength,
22 it may have lost after twenty, thirty, forty years.
23 Bascule structure, again this is for
24 Alternatives 2, 3, 4 and 5 where we are recommending the

1 use of a steel structure. Again, this is for the
2 operational purposes or the clearance purposes that we
3 would use steel. Again, the steel girder, steel
4 stringers going longitudinally. There is a deck with the
5 wood or some other materials it depends on which option
6 they use. Again, for all these options, we are
7 suggesting the use of timber siding. Similar to what we
8 have today. Again, we will be using timber guard rail as
9 well that satisfies the safety criteria from the roadway
10 itself.
11 We will go to a bascule pier without an
12 overhead shift pole. This is basically what it would
13 look like in profile if you were cutting it down the
14 middle. Effectively, you have the approach spans. Your
15 bascule span would be contained inside a concrete pier
16 that supported on steel piles. Then the pier itself
17 would be fairly unobtrusive. It would open vertically.
18 The span itself would open vertically to provide for the
19 boat clearance.
20 If we would go to the modern superstructure
21 again, this is for Alternatives 3, 4, and 5. This shows
22 the steel piles, and again, you will note that the
23 spacing of the steel piles in the cross section that we
24 are looking at is a little wider than the timber piles.

1 Obviously, because steel has better strength properties
2 than wood does. Also, and I think I have a profile in
3 here, and we will take a look at it, but the span length
4 would change for a wood pier - for a wood bridge or pier
5 spacing that is the spacing between the succeeding pile
6 beds would be at 16' where if we use a more modern
7 structure, the difference would be 30' center to center
8 on the spans. That is just taking advantage of the
9 materials themselves. So the look would be different for
10 sure, but it also opens up an area under the bridge for
11 fishing, fowl and other uses.
12 The Alternative 4 superstructure, this is the
13 superstructure that again is on the all modern
14 substructure. It will be using steel beams and steel
15 stringers to support a wood deck and again with the wood
16 guard rail and wood sidewalk.
17 Alternative number 5 superstructure this is the
18 all modern superstructure with the concrete deck. I will
19 show you some treatments on top but there are ways that
20 we can treat the deck to either make it look like wood or
21 make it stamped and colorized to give it a more rustic
22 appearance. Basically, it is a concrete deck with wood
23 sidewalks and wood guardrails. This is the bascule span

on the alternative five, again all modern materials except for the sidewalk and guardrails.

I wanted to add this picture. This is from one of our presentations back in the fall of 2009 or maybe 2010 showing what a bascule pier might look like with the wood trimmings, showing the wood sidewalk. I know we have had comments on the materials used on the bascule pier if it goes in this direction. There are various treatments that can be used to make it appear differently. I also wanted to note that we would have the large shift piers, they would be outboard of the sidewalks. So they would be in the water themselves and again that goes back to the ADA issues. We want to make sure that you have an unobstructed path at least four feet going down the sidewalks and in fact, these sidewalks are five feet wide. The shift pier that pulls to look like that, but they basically have to be fairly robust in order to lift the span number one and also to part of the structure here.

Again, this is a profile section for alternatives three, four, and five. It is a vivid distant view, but it shows the spacing of the piers as you go through on the profile.

1 So what are our technical factors that are
2 considered in looking at these five alternatives, five or
3 seven? Roadway function and safety, context sensitivity,
4 navigation function and safety, initial construction
5 cost, life cycle costs, maintenance and service life, and
6 impacts to environmental or protected resources.
7 We have gone through, we did the analysis those
8 of you who have the report will see the backup in there
9 for a lot of the cost estimating work that was done as
10 well. Just to look at the evaluation summary, and I
11 apologize because I cannot zoom in here but this is a
12 table that does add alternatives 1A and 1B into it for
13 some of the technical evaluation criteria. Looking at
14 each of the alternatives in comparison to the others.
15 You can see for roadway function and safety,
16 for example, they are all rated good meaning that we are
17 going to meet the roadway function and safety
18 requirements or goals or evaluation goals, if you will,
19 for all of these options. Context sensitive we rated
20 them from good to the all-wood option to satisfactory
21 for those that are mostly wood but have some elements of
22 modern materials and then fair for alternatives three and
23 four which have more wood in the superstructure and then

1 poorest is alternative five where there is all water
2 materials.
3 Navigation function and safety again, we rated
4 these for the navigation requirements. Number one is
5 rated poor because it only provides for the 19’4”
6 clearance. 1A is a little bit better for navigation
7 function and safety. 1B is satisfactory and then two,
8 three, four, and five are rated good. Initial costs, the
9 lowest initial costs are quite clearly for the all-wood
10 options and that would-be alternatives one, 1A and 1B.
11 The cost starts to rise for alternatives two, three, and
12 four as we start to incorporate some of the modern
13 materials. Then alternative five which is, excuse me,
14 two, three, and four are fair and alternative five is
15 rated satisfactory.
16 Life cycle costs Alternative 1 is rated fair.
17 Alternative 1A and 1B are rated fair. Alternative 2 is
18 poor, and that is more because the need to replace the
19 mechanical systems more regularly on Alternative 2.
20 Alternative 3, 4 are considered satisfactory and life
21 cycle costs for alternative five turn out to be the best.
22 That is the lowest overall cost of the project from day
23 one to day seventy-five, year seventy-five.

1 Maintenance service life, again, for the wood
2 options because they need to be replaced much more often
3 than the modern materials is rates to fair and
4 satisfactory and then good as you get to Alternative 5.
5 Again, these are all on relative basis to one another.
6 Then finally on environment and protected
7 resources Alternatives one and 1A are considered poor,
8 and this is primarily because of the need to rebuild the
9 superstructure every twenty or thirty years whatever the
10 term is and the attending problems with getting in the
11 water and disturbing the natural resources, whether it is
12 the wetlands, land under water, salt marsh or other
13 things that are in and growing underneath the pier. It
14 gets better as you go to Alternatives 1B and 2 and that
15 is because you have the sealed bascule pier and
16 foundations related to that. Satisfactory for 3, 4 and 5
17 no work is always the best. After that the least work
18 possible in the substructure is considered most
19 satisfactory.
20 Then the life-cycle cost summary results which
21 I eluded to earlier again the lowest initial cost is for
22 the all-wood replication structure. We estimated that
23 the initial cost would be about $8.3 million, and it
24 grades up to, I think it is Alternative 3 - Alternative

1 4, sorry. Is the highest initial cost and then
2 Alternative 5 is the cost just slightly less than
3 Alternative 4 at $10.7 million.
4 Life cycle costs however you see that there the
5 difference reverses itself. What we have done for those
6 that cannot see it we have overall life cycle costs and
7 75 year town maintenance cost which is really the initial
8 cost the present value of the cost that would be borne by
9 the town for the 75 year life of the project or the
10 bridge. What we have done is we have developed this in
11 the best-case scenario and the worst-case scenario, and
12 the criteria for our best and worst case is how long is
13 the substructure basically going to last? What is the
14 period between the new placements?
15 Again, to maintain it at its design criteria
16 strength levels. So the worst case we have gone for the
17 ones that have a lot of wood elements at ten years, and
18 for the best case for those alternatives is twenty years.
19 Then for Alternative 5 where we are using the all modern
20 material, we believe it is about forty years until there
21 will have to be a major maintenance operation to bring it
22 back up to its design standards or its original design
23 standards.

1 Again, the cost borne by the town in the long
2 term for the alternatives which incorporate the wood are
3 up close to $20 million from 19 million 9 hundred to 20
4 million 5 hundred. I think is the highest one. Whereas
5 for the modern materials with the longer lifespan would
6 be at 12.8 million or basically $13 million over the 75
7 years in present value terms. Those are all worst-case
8 numbers. Best case numbers if we extend the service life
9 for another ten years we chop about $5 million off the
10 town borne maintenance costs to $14.3 million for the
11 wood. It stays about the same at 11.7 for the all
12 modern.
13 Just to give you an idea of what the bridge
14 might look like in the future. This is the bridge as it
15 is right now. This is looking at it head-on, if you
16 will. You can see over time we will try as hard as
17 possible no matter which option is selected to maintain a
18 look that is similar to the existing while meeting all
19 the criteria that we have identified.
20 This is the wood deck for the sidewalk and the
21 railing. One thing that we will change is we are not
22 going to use the steel rail here. We are going to use a
23 timber railing system, guard rail system that works and
24 satisfies the safety requirements for guard rail for this

1 location. Otherwise the wood deck would look similar to
2 this deck here on the sidewalk for the railing on the
3 outside. We do need to maintain, we need to narrow up
4 the gap here to meet ADA requirements. I believe it is a
5 4" gap that we will have to maintain at a maximum so that
6 kids can't stick their heads through and get twisted up
7 in there.
8 I think with that I wanted to get onto the
9 schedule overview. This is the schedule that has been
10 developed based on picking up final design here in the
11 next couple of months. You can see the design itself can
12 be done in the early part of 2012; however, we have a
13 permitting feature that needs to be developed. Our
14 longest lead on our permits is going to be our Coast
15 Guard permit. Right now we are caring seventeen months
16 to get the Coast Guard permit. MassDOT is finding that
17 it takes that long to get a Coast Guard permit. The
18 Coast Guard permit cannot be applied until we have a
19 final design selected.
20 So from that final design point whatever it is
21 that we come to a resolution on what the ultimate bridge
22 will be designed to we are going to need probably two
23 months to develop the permit application itself. Then
24 seventeen months before the application is approved and

in hand, and we are allowed to construct. Once we go to advertising which right now we are showing in May of 2013, there will be a bid period of about two to three months, and then we are assuming that the construction of the bridge which ever alternative it is and it will vary is at least roughly in the range of two and a half years taking us to the early part, mid part 2016.

With this we are going to go to comments and questions, and we will be right back.

INTERMISSION

JOSEPH PAVAO: Thank you, Mark, for that Power Point presentation. Before we open it up to the floor, I wanted to make a couple of general comments on the report that was prepared. In the life-cycle cost report that all of you have seen there is a recommendation for Alternative 5 by URS. There is also a ranking that goes along with that. URS ranked Alternative 5, I believe it was 3, 4, 2 and 1 as their preference based on the project objective and the evaluation criteria that we had set.

MassDOT has consistently stated in the previous meetings that we have serious reservations over using

1 wood in this type of environment, specifically the
2 substructure. For this reason, we have been promoting
3 Alternative 5 in the past meetings. However, having said
4 that we also recognize based on the reports the fact that
5 the bridge is NR eligible, and we may need to mitigate in
6 adverse effect.
7 We also – although Alternative 5 may be the
8 best engineering solution, we also recognize that there
9 are other constraints, other issues, other evaluation
10 criteria that we need to meet. We think that Alternative
11 5 may not be the best solution for this location.
12 So what I wanted to do before we open it up is
13 just basically share our thoughts. We have discussed
14 this internally. We think that there may be another
15 alternative. We are leaning towards Alternative 3 as
16 maybe the alternative that seems to meet all of the
17 objectives, and the evaluation criteria that we put forth
18 at the beginning of the Power Point presentation. I do
19 want to stress that that is not our recommended
20 alternative at this point. We haven't made a decision on
21 it.
22 I just felt that it would be important to share
23 our thoughts on the report prior to hearing your comments
24 on these alternatives. So we are here today to listen to

what everyone has to say on the Power Point, on the alternatives that they have read. I think it is important for all of you to know what we are thinking based on the reports, but we are going to wait to hear from you. We are going to continue to consult internally as well with the consulting parties, and the Federal Highway before we make a decision on a preferred alternative.

So having said that we will open up the floor to comments from the consulting parties. Before we do being the town is going to own the bridge I would like to hear from some of the selectman first on their thoughts on the alternatives that we presented. Any takers.

DAVID WHITCOMB: I guess I will start, David Whitcomb. I think the community has always wanted to incorporate - I represent part of the community that want to incorporate as much of the wood as possible while retaining funding under the Accelerated Bridge Program. I think I am what you just said, sort of make sense that 5 might be your alternative but there might be a way that you can incorporate more wood into this and Alternative 3 might be something down the road. I hope that we can work in that direction.

1 FLORENCE SELDIN: Hello Florence Seldin, I am
2 glad -
3 BETSY MERRITT: I am having trouble hearing.
4 JOSEPH PAVAO: I think you have to pull the
5 microphone closer and speak. If everyone could state
6 their name for the record and your affiliation.
7 FLORENCE SELDIN: Florence Seldin, Board of
8 Selectman. I read the report. I saw your initial
9 recommendations, and I am glad to see that you are open
10 to alternatives, and you are willing to listen. I think
11 like David, we heard a lot from the community. They want
12 the bridge to work, to open all the way. The
13 navigational concerns are important to economic
14 development in our town. Yet at the same time the issue
15 of historic preservation on the bridge is important, so I
16 am glad to see that you are open to alternatives and
17 willing to listen. We will move on from there, and I am
18 sure at the end of the process you will tell us what the
19 next steps are and how we can communicate further.
20 JOSEPH PAVAO: Thank you.
21 LEN SUSSMAN: Len Sussman, Board of Selectman.
22 I would concur with that. As we get down to a final
23 consensus here I think we do have to keep a careful eye
24 on future costs for the Town of Chatham. We want to act

in a responsible way in terms of the legacy responsibility. Funding should be responsible for future generations.

BETSY MERRITT: I still can't hear.

SEAN SUMMERS: Sean Summers, I am also a member of the Board of Selectman. I went through your report as well. I appreciate the laborious work that the state has gone through in their review. I do think it had been quite detailed, quite thorough. I think we are at a point, frankly; at least, my view is we have reviewed this to death. I am comfortable, frankly, with 3, 4 or 5, although I would agree with my colleagues that I sort of like the wooden decking option, but I understand that is a little more expense.

What I have seen and heard from all sides, I actually believe that the design esthetically looks better than what we have now. Given what we have learned of the actual historic part of the bridge where it has been redone several times, I think that there has to be some sense of sanity involved here. Nine out of ten people that I speak with have the same feeling. Saying it would be great in a perfect world where we didn't have to think of funds and finances to have an all wooden bridge that worked nicely, and we could put a new bridge

on top of the historical piling which I guess is all that is left of the original bridge. I think what you guys presented looks great, and I think that 3 and 4 is an option that I think would be best.

TIM ROPER: I am Tim Roper also on the Board of Selectman. I go along with my fellow selectman. I think I have been leading in favor towards your solution 2 but I am leaning more towards 3 for the overall cost consideration. I simply want as much wood on the bridge as possible to replicate what was there before. I don't think a lot of people are as concerned of the substructure and obviously, something that lasts longer there is far more important.

I think it will also help for me, and I am sure for others, if you have them ready or something, but you have done some photo shop representations of the first phase, but I think it would help people to see what it would look like if you have some sort of renderings that would describe better for us visually the appearance for solution two and three and so forth.

FLORENCE SELDIN: May I comment again?

JOSEPH PAVAO: Sure.

FLORENCE SELDIN: On the cost, I guess I read much of what you had written, and I am not totally

1 convinced of the life cycle costs of wood where you seem
2 to make that the worst-case scenario. There are probably
3 woods today, and by the time you get around to it, there
4 are ways of dealing with the wood that may not be as
5 costly. I also will note that concrete and steel bridges
6 require quite a bit of repair.
7 Those of us that go over the Sagamore Bridge on
8 a regular basis do have to note that they always seem to
9 be more or less doing some sort of repair. So that
10 happens at the fish pier too that is concrete and steel.
11 It looks like it is in difficulty and needs repair. So I
12 think some of those life cycle costs are not absolutely
13 certain for me.
14 JOSEPH PAVAO: I will let Mark talk to some of
15 the assumptions on the life cycle costs. To be perfectly
16 honest I was pretty surprised when I saw the results. I
17 thought there would be a very wide range between a modern
18 structure and an all-wood structure. It turned out if
19 you look at the report that they were pretty well
20 grouped, so it kind of left all of the alternatives in
21 play. That is when we started looking at the other
22 things that we need to consider. Future maintenance,
23 environmental impacts, ADA accessibility, reliability,
24 other bascule span, channel clearances. So like I said a

few minutes ago the recommendation from URS, although it was Alternative 5 on the report we recognize that there are other factors context sensitivity. When I mention Alternative 3, and again that is just our initial thoughts on it, I know the presentation is not on the board so just real quickly. Alternative 3 is a fully modern substructure its concrete filled steel piles with the concrete cap. Everything above that cap with the exception of bascule span itself would be wood; including the structure, the superstructure structure and all the elements on the bascule span would also be wood. So the majority of the bridge would replicate to the extent possible what's there today.

FLORENCE SELDIN: May I form a question?

JOSEPH PAVAO: Sure.

FLORENCE SELDIN: This bridge is rated an urban collector. Chatham is considered a rural area. I don't know if we have addressed this. How do you characterize us then? This bridge is an urban collector.

JOSEPH PAVAO: That is the functional classification of the bridge. It is classified as an urban collector. I think there are 2,000 vehicles a day.

MARK SHAMAN: Let me address that quickly. You may be better off with urban designation. In a rural

1 area it is considered wide open spaces with high speed
2 roadways. The urban classification gets you lower speed
3 roadway, so it actually helps us on the profile to slow
4 the cars down. It narrows the roadway a little bit as
5 well. So if you consider it rural it becomes basically a
6 rural freeway.
7 FLORENCE SELDIN: Thank you and it is a 30 mile
8 -
9 MARK SHAMAN: We are designing for a 30 mile an
10 hour design speed.
11 NORM PACON: I have a statement to make Mr.
12 Pavao. It will be not as long as the Power Point
13 presentation. I represent the Friends of the Mitchell
14 River Wooden Draw Bridge. My name is Norm Pacon.
15 Other members of the friends are in the
16 audience. We have prepared a 91 page response which we
17 are going to hand out after my remark, which is intended
18 to comment on the two reports which we received. We hope
19 and expect that MassDOT and Federal Highway, and the rest
20 of the consulting parties will take the opportunity to
21 read what we have said very carefully.
22 When the Keeper confirmed last October what we
23 believed from the very beginning that the bridge was the
24 only single leaf drawbridge in the Commonwealth and in

1 the entire United States and worthy of being on the
2 national registry, we kind of breathed a sigh of relief
3 that the bridge could be saved. And I put saved in
4 quotes. When we read the Keepers words that the bridge,
5 and I am quoting, a rare surviving example of a once
6 common structure. That it is of exceptional
7 significance. That its presents in the landscapes forms
8 an exceptionally important part of the community's
9 historical identity.
10 These are all quotes from the Keepers decision.
11 We thought that the folks at MassDOT and Federal Highway
12 who had opposed our efforts from the very beginning would
13 reconsider what they were doing and agree to enter into a
14 genuine 106 consulting process. In order to try to
15 avoid, minimize, or mitigate harm to this historic asset
16 and come up with a replacement or a rehabilitation that
17 would do Massachusetts proud.
18 However, from the very beginning and I am not
19 misquoting anybody. It is clear that MassDOT and Federal
20 Highway have totally supported removing as much wood from
21 this bridge as possible and going to a concrete and steel
22 replacement. Representatives of MassDOT and by the way,
23 all of this is set forth in the response that we have
24 provided. Representatives from MassDOT made it very

1 clear from the beginning in their own words, no, we are
2 not going to consider a wooden bridge. That was Mr.
3 Omaha's statement to the Board of Selectman in August of
4 17. His word was no. Nobody over rules me. Nobody can
5 overrule me. And when he was asked specifically what if
6 somebody showed you, a wooden bridge that would last
7 forty to sixty years or more. What would you do. The
8 answer was. I won't build it.
9 So, we are now faced with the voluminous
10 reports that you have made but, which essentially come to
11 the same conclusion. Now you are entitled to give us
12 your conclusions but what I want to tell you now, and you
13 will find in the response that we will be submitting to
14 you is that we believe, and others believe, that the
15 conclusions you have reached are inaccurate. I want to
16 go directly to the issue of cost and service life.
17 A brief point for everybody and I think you
18 understand this. The shorter the service life and again
19 if you compute wood as only lasting ten to thirty years
20 than the bigger the cost. The longer the service life
21 and if you compute concrete and steel to last out there
22 for 75 years and get back your own thing that says 80 to
23 100 years by then the cost becomes much less. We were
24 faced when we looked at your reports with how do we deal

1 with this because there is very little substantiation.
2 There is antidotal evidence. There are comments like we
3 have experience but there is no hard evidence.
4 So we went to the Forest Products Laboratories
5 of the United States Department of Agriculture, a federal
6 agency with headquarters in Madison Wisconsin. They are
7 an authority in the field on wood, on wood treatment, on
8 comparison of costs, and we asked them without any
9 preconditions, without anything, please look at these
10 reports and come back and let us know.
11 We have received a five-page letter and an
12 attachment from Dr. Stan Lebo, who is one of the
13 authorities in the field. In summary, he basically says
14 the numbers that you have prepared are inaccurate. The
15 estimates are not factual. The comparisons that you have
16 made between wood and concrete and steel need further
17 substantiation and clarification. He makes it clear in
18 almost every respect that these comparisons are driving
19 this report. So what we heard last was the comparison of
20 the cost. Those are costs based on your estimates.
21 Certainly, Dr. Lebo says not so. That they need to be
22 further reviewed.
23 We asked almost at the outset when we received
24 your first report that had a good deal of information on

1 estimates of wood and practically nothing on concrete and
2 steel. We asked for supporting documentation in
3 accordance with section 106. We have never heard a
4 single word from either you or from Federal Highway. The
5 only comment we heard was from Ms. Santiago, who when I
6 asked specifically for a comment on the bascule span, and
7 I will get to that in a moment said only there will be
8 comments at this meeting. In our view that is not
9 compliance with the process. We asked 14 specific
10 questions. Some of them have a number of multiple items,
11 but we said to you, please if you have any of these
12 answers give us one at a time so we can look at them. We
13 received absolutely nothing.
14 I do not believe that that is compliance with
15 106. We as a consulting party want to find out what the
16 answers are. Had we received any of this information we
17 might not of had to go to the Forest Products Laboratory.
18 We also looked as URS did to the statement in
19 your first report which we read and other people read
20 including the engineer who is on the phone from Ohio,
21 John Smolen, who has built and designed over 200 wooden
22 bridges, and we read what we thought to say that it was
23 not possible to design a wooden drawbridge to cover a 25'
24 span. That is on page 3 and 4 of your report, and that

1 was our multiple reading. Yet only last night for the
2 first time, approximately ten hours before this meeting
3 we get the Power Point documents, and we now get a
4 description that apparently it is possible.
5 So in essentially 14 days we have received
6 something that says the first report was not accurate.
7 That was our reading of the first report. I would ask
8 anybody to show me in the first report where we are
9 incorrect. So now what we have are two more alternates
10 to look at and we are hearing that somehow comments have
11 to be back to you in 14 days. I don't think that is
12 acceptable.
13 We have also looked at other issues, including
14 the use of fiberglass rosin filament to wrap pilings done
15 by a company in Warsaw Virginia. It is called strong
16 seal. It is not mentioned at all in your report, and the
17 cost is quite reasonable. Your only comments in the
18 report are about wrapping the piles, and that was the
19 basis for not replacement but for repair or
20 rehabilitation. The comment was made that the cost would
21 be ten times the amount not so at all. I am going to
22 pass around photos that were given to us, and you will
23 see the pilings, how the piling have been wrapped. Dr.
24 Lebo in the Forest Products Laboratory letter that you

1 will see says specifically that he believes that this
2 technique cannot only possibly lengthen the service life
3 of the pilings which in your report, you make clear is
4 the most costly part of repairing or replacement of a
5 wooden bridge. He also says that it will help inhibit
6 the leaching of any preservatives from these pilings.
7 Another item that we have touched on in our
8 report is what Selectman Seldin just raised regarding the
9 traffic and the speed of vehicles over the bridge. Your
10 report says that the average daily traffic is 2100 cars a
11 day. That is false. The average traffic is
12 approximately 818 cars a day. In May of last year at
13 approximately this time I asked the Cape Cod Commission
14 to run a traffic study because of my concern that the
15 2100 number was inaccurate.
16 The reason for my concern and this is all
17 included in my report, is I asked your former project
18 manager for copies of the traffic study that was done to
19 support 2100 vehicles per day. What I got back was, I'm
20 sorry we never did a traffic study. All we did was an
21 in-house estimate. So does this bridge need to be
22 designed for 2100 cars a day when the average daily
23 traffic is approximately 800. Your own report
24 specifically says that if we widen this bridge at all, if

we remove the timber, if we smooth the concrete, if we smooth over the surface, there will be, and these are your words speeding, greater speeds and crashes. I didn't make this up.

So why are you asking the town to accept this kind of alternative. No one on Bridge Street and I don't think anyone in the town wants faster traffic over the bridge and on Bridge Street. But we will get faster traffic, and we will get potential hazards if we go to either a wider bridge or concrete or asphalt.

The report also shows and states that the Bikeways Committee and the town want what you have designed, which is a 26' wide bridge versus the 24' curb to curb that we now have. There is a misunderstanding somewhere because the Bikeways Committee and the town specifically wrote to MassDOT and said, please leave the width of the bridge alone. We don't want it widened at all. But somewhere it went from 24' to 26'.

Now I only have four more points to make, and then I am going to try and be brief because I know that other people wish to speak.

The process here is of extreme concern to us. The failure or refusal to provide supporting documentation goes to the heart of the 106 process

because it is very simple. When consulting parties such as ourselves or such as those who are on the phone want additional information or want you to substantiate what you say in the report, they ought to be able to receive it. If you ignore the requests, if you don't give it, if you turn your head, I don't think you are complying with the process.

There are two alternative solutions that we are going to ask you also to consider. They are detailed, and I won't go into them in depth right now. But under Section 106 there is a requirement that the federal agency look at a broad range of alternative solutions. Those are the words used. We think here it is highly inequitable for the town to be faced with this terrible choice of, in effect, turning away wood even though it is cheaper at the beginning because you are telling us under the Accelerated Bridge Program, they can't get any more money after the first shot. Whereas concrete and steel and again, I haven't looked at your latest numbers but the initial cost of concrete and steel your Alternative 5 was 25% higher $2.5 million dollars more than the cost of timber initially. And yet if the town chooses timber or wants it it's penalized. We don't think that's right.

1 We think in our judgment the Accelerated Bridge
2 Program has to give way and accommodate the principles
3 set forth in the federal policies which are annunciated
4 in Section 106 and in Section 4F. There is a strong
5 federal policy to protect historic assets. They are
6 described in the law and in the leading Supreme Court
7 case as being a paramount importance. So we think here
8 that alternative that that money be set aside in some
9 kind of a trust fund so that the town has the ability to
10 utilize that. After all it doesn't cost the state
11 anything. The state would be spending $10.5 million for
12 concrete and steel whereas for timber, it is only 8.1.
13 There is also a president under the 106 process
14 in Richmond Vermont. The town established with the state
15 a historic ridge preservation easement in which the town
16 continued its ownership, continued day to day maintenance
17 of the bridge but the state in its interest for historic
18 preservation agreed to be responsible over the long pole
19 for rehabilitation and restoration. I am going to give
20 you a copy of that also.
21 We hope and expect that our response will be
22 considered here and looked at carefully. I think it
23 would be tragic for MassDOT to offer the town an
24 alternative, which is Alternative 5, in which the

1 avoidance, minimization, or mitigation of harm to the
2 bridge. You refer to it as context-sensitive design. I
3 don't. That is rated poor. That is the worst
4 alternative possible and yet the Keeper has said, try to
5 preserve this bridge. The 106 process says do the best
6 you can. And you are telling us that Alternative 5 that
7 is what we think is good. We don't see it. So I am
8 going to pass out my statement, and I thank you very much
9 for hearing me.
10 JOSEPH PAVAO: Thank you, Mr. Pacon. To be
11 honest with you, I don't even know where to start. I
12 took as many notes as I could and whatever I don't get to
13 we will try to respond to in writing. I am not sure if
14 Damaris mentioned in the beginning of the meeting because
15 we had two alternatives that we introduced late in the
16 process we are going to allow two weeks for comment on
17 those alternatives. Our intent is going to be to respond
18 to all of the comments in writing.
19 Just a couple of points and I am not going to
20 catch everything, Mr. Pacon because you went through
21 quite a bit. Alternative 5 as I stated before you spoke
22 is not something that we are considering at this time.
23 Our initial thoughts on these reports were that
24 Alternative 5 maybe from an engineering solution may be

1 the best solution. We realize that it doesn't meet the
2 context sensitivity of this particular bridge.
3 So we have backed off of that position -
4 NORM PACON: So that, may I just add. That is
5 a change from your initial report.
6 JOSEPH PAVAO: Correct. Agreed and we are here
7 to discuss that today. I have been reviewing these
8 reports as everyone else around the table has also.
9 NORM PACON: Excuse me sir, I don't mean to
10 interrupt but what was handed out says Alternative 5 is
11 your recommended solution. This is the addendum.
12 JOSEPH PAVAO: That's correct. That is from
13 URS. That is in draft form. We are here to discuss
14 these alternatives today. That is draft form.
15 NORM PACON: So this is not what is being
16 recommended?
17 JOSEPH PAVAO: That is not a final report. It
18 is a draft report. The report that's finalized was the
19 repair, rehabilitation report. MassDOT concluded that
20 repairing or rehabilitating this bridge, although
21 feasible to rehabilitate, essentially it ends up being a
22 replacement of the entire structure in order to meet the
23 requirements of this project. That leads us into a life-
24 cycle cost report. I intentionally left that report

1 draft because we would be having further consultations
2 with the consulting parties. I stated today that our
3 opinion, this was URS's recommendation to MassDOT, our
4 opinion and our initial thoughts are that we think that
5 the best alternative based on all of the evaluation
6 criteria, and the goals of this project was Alternative
7 3. We have not made a decision on it. I want to listen
8 to all of the consulting parties comments today.
9 NORM PACON: With all respect sir it doesn't
10 say that.
11 JOSEPH PAVAO: I am not disagreeing with you,
12 but it is a draft report.
13 NORM PACON: But that is what we just got.
14 JOSEPH PAVAO: Your point is taken. So we are
15 here to discuss that and as I said we are considering
16 other alternatives that take into account the context
17 sensitivity of the bridge. Our thoughts on Alternative 3
18 and the reason we were looking at that is the more
19 prudent alternatives for this location. The substructure
20 which would be the most difficult portion of the bridge
21 to replace in the future and to maintain. It could be
22 designed for a 75 year design life whereas the
23 superstructure being out of the water we could have more

1 flexibility in allowing as much wood construction as
2 possible.
3 I did mention the bascule span, our desire to
4 have a steel bascule span and that goes back to issues
5 with reliability of opening and closing a wooden bascule
6 span. The desire to have a maximum channel clearance
7 based on comments that we have heard from others around
8 the table, preferably 25' if we can achieve that. We are
9 also looking at environmental impacts in the water.
10 Going in and doing replacements of the bridge, whether it
11 is one time, two times or three times over a 75 year
12 period. It is still more impacts environmentally to go
13 in and replace, I think it was an eleven span bridge if
14 it is all wood versus six spans if we go with a modern
15 substructure.
16 So I would like to hear from other consulting
17 parties on their thoughts of these alternatives. Just
18 one other thing, a couple of other comments. I just want
19 to state that the information that we provided, I think
20 it was stated at the last meeting that as part of 106, we
21 are not required to provide the information to the
22 consulting parties in draft form. I stated that very
23 clearly that MassDOT is very reluctant to provide draft

1 information that isn't finalized and isn't reviewed by
2 our engineers.
3 NORM PACON: We didn't ask for a draft form.
4 JOSEPH PAVAO: In addition –
5 NORM PACON: Sir, we didn't –
6 JOSEPH PAVAO: In addition –
7 UNIDENTIFIED SPEAKER: Excuse me; this isn't a
8 two-person conversation going on here, Mr. Pacon.
9 NORM PACON: I believe I am entitled to respond
10 sir.
11 UNIDENTIFIED SPEAKER: I don't believe you are.
12 NORM PACON: Thank you very much.
13 UNIDENTIFIED SPEAKER: You are not entitled to
14 interrupt.
15 JOSEPH PAVAO: In addition – I lost my train of
16 thought now, sorry. So, I stated at the last meeting
17 that we don't provide draft documents as a general policy
18 with MassDOT. Until our engineers have reviewed it, our
19 consultants have reviewed it, and we agree that the
20 information is accurate. However, we did agree at that
21 meeting that we would provide this information to the
22 consulting parties. We felt it was in the best interest
23 of the project to let everyone else see what we were

1 basing our thoughts on. That is why we are here today.
2 We are here to talk about the alternatives.
3 Again, this is a draft document. It stays
4 draft until we have a recommended alternative that we are
5 going to move forward with throughout the MEPA process.
6 I would like to hear from others.
7 DAVID KELLS: Thank you. Dave Kells from Pease
8 Boat Works. Just to come back to reality today the
9 bridge that we have is still a nightmare. We bought a
10 boat - a big schooner went through just the other day and
11 it took basically four and a half man-hours to go out and
12 prep that boat to go through the bridge, bring it through
13 the bridge with very little to despair, thankfully with
14 no damage. So basically one way that is $360 or $720
15 round trip. That is a hefty toll for a small business
16 that is trying to make a living today.
17 So, that is how that bridge is and by looking
18 at where we are 2011 and this bridge not completed until
19 2016 has me a little worried. That is a lot of money for
20 a company to absorb. The boats still get damaged through
21 there. So as we all talk about all of these alternatives
22 in terms of a business, the clock is ticking, and we are
23 running out of time quickly. We have about three months
24 before we make a decision to get this done, and I don't

1 see how we can debate much more about this doctor says
2 this, and I look at those pictures about the pines that
3 were wrapped and clearly, they are done in a factory.
4 They are not done on a bridge in a dry environment.
5 Thank you for your research, Mr. Pacon, but that is not
6 reality of fixing our bridge.
7 Another point though. Nothing has been brought
8 up about moving this channel five feet to the west. The
9 approach coming from the Mitchell River is the most
10 difficult part of the approach to the bridge. We need a
11 25' opening. We just brought a boat through with a 17'
12 beam that is a foot on either side and that is a multi-
13 million dollar boat. Made it through with no problem, so
14 25', I am glad there is no argument. It still needs to
15 be moved at least 5' to the west to make the approach
16 easier. Not necessarily foul free but a lot easier.
17 Another thing when I read through some of the
18 reports, it talks about the superstructure of our current
19 bridge and how the cable sizing is substandard, and the
20 shives are substandard. So I would actually like to know
21 between today and 2016 what is the percentage of chance
22 of failure in the cabling, shives, and the brakes on the
23 bridge. It actually made me toss and turn for a night or

1 two thinking I am going under that bridge when it is open
2 and if something fails that is not going to be pretty.
3 Is there a way between now and when this bridge
4 does get rebuilt to actually bring that lifting system up
5 to some sort of standard and also have a redundancy so if
6 something does fail, there is not a catastrophic failure?
7 I also noticed when I was going through those
8 reports that the timber bridge that Mass built, I forget
9 the year, but had all the reports and pictures it
10 basically showed all of the cracking, brooming, checking
11 and deteriorating. To me, it seems like a slam dunk
12 saying, hey, if you are willing to bend to Alternative 3
13 and put a modern substructure in with a wooden
14 superstructure that is great. I can see that obviously
15 those pilings are deteriorating quicker than anyone
16 thought, and they are green heart.
17 I just think that we need to move forward as
18 quickly as possible. During the recent elections, there
19 was talk about compromising and coming up with a
20 solution. I think that is something that we need to move
21 forward to and get away from arguing and saying everybody
22 else is wrong. These reports are failed. It is time to
23 move forward and make some compromises. I know that in
24 the Power Point, it was supposed to be where we go from

now page that is what I am interested in. Where do we go and let's get there fast?

JOSEPH PAVAO: We will get to that. I just want to hear from other people. Just a quick comment before we get to you, George. The 25' channel opening, I believe Mark that would be to the west that we would widen if we were to go with 25'.

MARK SHAMAN: Yes.

DAVID KELLS: I tell you about moving the whole opening five feet to the west. When we were back at 25% design stage, we were moving the whole opening to the west plus the extra five feet of opening. Again, if you look at the approach from the Mitchell River Bridge, you have to go way into the beach before you can even line up to go to the bridge. That is –

MARK SHAMAN: That is a detail we can work out.

DAVID KELLS: I just didn't want it to get lost in the –

MARK SHAMAN: I appreciate that.

JOSEPH PAVAO: Just one other thing. You mentioned a maintenance on that and a failure prior to 2016. Mark put up the schedule a little while ago and one of the things that I just want to clarify. We intend to submit a Coast Guard permit even if it goes in draft

form as soon as we have an alternative. Once we have an alternative we can determine what that box is vertical and horizontal clearance. We are going to get a draft permit over to Coast Guard while we develop sketch plans and move this project forward. Whatever the alternative may be.

The other thing that I wanted to mention is in order to speed up the process from a design point of view, this is something we are doing internally as part of the Accelerated Bridge Program. We intend to go from 25% design and go directly to 75% design. So whatever alternative we choose, we think we can progress what we have to date right into a 75% design.

One other thing I failed to mention earlier. Mr. Pacon, you had an engineer who spoke to us and gave some information. You had information on the different types of woods back in January. As a result of that I did state that we don’t invite other engineers to the table to do our design with us. However, we will listen to what you have to say.

I have spoken to them recently prior to this meeting, and I asked them where they are heading in terms of what they thought was the most appropriate alternative

for this location. My understanding is that they are also thinking that alternative three seems to meet the needs of not only the town but ADA accessibility, the NR eligibility of the bridge and maintaining a reasonable life-cycle cost, a reasonable initial cost. I think we can all look at this report regardless of the assumption that were made, that aside the initial costs are relatively close on a project this side. I think the life cycle costs are fairly well grouped.

So I think that we need to look at an alternative that is a reasonable compromise that achieves all the goals of this project. Not only, from the historic point of view MassDOT realizes is very important but also from ADA compliance, maintenance, having a reliable bascule span. I will mention that the Coast Guard is here today. They did attend the meeting today. That shows you how important this project is to everyone. So they are here to listen to everyone's thoughts. Hopefully, we can come to a consensus and move forward on an alternative that everybody can be equally happy with and equally un-happy with. Either way works.

DAVE KELLS: I'm sorry just to go back to it. I'm still the ones who goes, myself, my colleagues, my co-workers, more importantly the substandard cable shive

and brakes that are there now. Are they going to last until this bridge is built? Is there some way we can operate it? Can we do something? When I read that in that report, I say whoa.

JOSEPH PAVAO: We will take a closer look at the latest inspection report. I will let Mark talk to that. We can consult with the town on that. The intent is to get out with the project. I am hoping summer of 2013 if we can get through this process. So if we go into construction somewhere 2013, the bascule span can probably be put in the up position because traffic will be detoured at that time during construction. So we are really looking between now and summer of 2013 and not through 2016.

DAVID KELLS: I appreciate that and again we are in the beginning of our season where we want the bascule span to go up and down numerous times between now and November, December for this year, for next year with substandard cables, shives, and brakes. Is it going to hold up?

JOSEPH PAVAO: I can’t answer that question.

DAVID KELLS: And if not do we upgrade it? I will leave it at that. Thank you.

JOSEPH PAVAO: We can certainly talk to the town. This is under the town's maintenance, so I don't know if the town has any plans to do anything between now and then. I will let the town speak to that.

UNIDENTIFIED SPEAKER: I don't believe so. We certainly haven't discussed it.

UNIDENTIFIED SPEAKER: No we haven't.

JOSEPH PAVAO: Okay, so it is something that we need to talk about.

DAVID KELLS: Fair enough. Thank you.

GEORGE MYERS: I also have a serious concern about the timing. As I recall the last slide, we put had a timeline and there is only a three-month leeway between the completion of construction and the end of the Accelerated Bridge Program. I have seen a couple month slippage already in these 106 meetings, and my concern is there is going to be further slippage as we go along. We are talking about what another four, or five years to the end of the program. So any slippage in there is going to put us beyond the end of the Accelerated Bridge Program. That is a concern.

Another concern is that Mr. Pacon has indicated that the Friends are much in support of a wooden bridge, but I do not believe that Mr. Pacon and the Friends speak

1 for all of the people in this town. It has been my
2 experience that there have been many many people, most of
3 the people that I have spoken to are very interested in
4 moving this project forward. They are not in favor in
5 going forward with a wooden bridge.
6 One other point I would like to make has to do
7 with the documentation standards. As I read 36 CFR
8 Section 800.11, it is not up to consulting parties to
9 determine whether the standards of documentation are met.
10 It is up to the Advisory Council. Well, first of all, it
11 is up to Federal Highway to ensure that the documentation
12 standards are met. And if there is a dispute it is up to
13 the Advisory Council to resolve that dispute.
14 One other point as far as traffic counts I have
15 looked at MassDOT's traffic counts on your website, and I
16 don't see a traffic count on Bride Street but Stage
17 Harbor Road in Chatham in 2007, there was a traffic count
18 of 5700 vehicles. In 2003 there was a traffic count of
19 3700 vehicles.
20 JOSEPH PAVAO: Okay, thank you, Mr. Pacon. I'm
21 sorry, Mr. Myers.
22 GEORGE MYERS: Don't call me that.
23 JOSEPH PAVAO: The construction schedule, the
24 schedule is constantly being updated. We update it

monthly based on meetings and where we are headed with the project. That is a very preliminary construction schedule of three years, I believe we are carrying, Mark.

MARK SHAMAN: Two and a half.

JOSEPH PAVAO: But it is something that we believe can be squeezed down to two seasons, two and a half years.

MARK SHAMAN: It really depends on when we get the permits because there are going to be some restrictions on working in the water.

JOSEPH PAVAO: So we are assuming, I think, right now a worst-case scenario. As we preserve with the design, we will continue to refine the schedule. So it does change from month to month. I ask them for an update on the schedule, and we keep adjusting it based on events.

There was a comment earlier on the ABP funding. ABP funding is strictly for the initial construction cost. There is no funding available if we choose an alternative that is cheaper the funds go back to a pot to be used for other structurally deficient bridges throughout the Commonwealth. We do not put funds in trust accounts for future maintenance or future replacements. It is not what the Accelerated Bridge

1 Program was intended to do. The purpose of the program
2 is to replace, is to remove bridges, as many as possible
3 from the structurally deficient bridge listing. So any
4 money that is left over will be allocated towards another
5 project regardless of what the alternative that is chosen
6 is. If we are allocated 12 million, and we get to an
7 alternative that is $13 million because of mitigation
8 that we need to do under section 106, then that is
9 something that we need to look for money within the ABP
10 Program that maybe another project gets reduced, and we
11 take that money to make it available here.
12 So we look at the ABP Program as a whole with
13 the ultimate goal of removing as many structurally
14 deficient bridges as we can throughout the Commonwealth.
15 So I did want to state that. I don't know how Vermont is
16 doing it, and we do things the way we do them in
17 Massachusetts. So I am not really concerned with how the
18 State of Vermont is doing it. We have our guidelines
19 within ABP that we need to follow.
20 The HDR Report when I do receive that with
21 their recommendation, I did want to state that we will
22 make that available for Federal Highway to provide to the
23 consulting parties also. I think I answered most of your
24 questions, but I am not sure.

1 PAUL BRANDENBURG (on the phone): Two quick
2 questions for you. You mentioned some additional
3 handouts for today. I think on Alternative 1A and 1B. I
4 presume that they will be sent to the non-attending
5 remote consulting party?
6 JOSEPH PAVAO: That is correct.
7 PAUL BRANDENBURG: My second question has to do
8 with the Power Point evaluation summary and technically
9 the evaluation criteria for each of the Alternatives.
10 They are rated good, satisfactory, fair and poor. I did
11 not see in the documentation that the established
12 criteria for rating something good, satisfactory, fair
13 and poor, do you have that?
14 JOSEPH PAVAO: I will let Mark speak to how he
15 came about the evaluation criteria.
16 PAUL BRANDENBURG: Thank you.
17 MARK SHAMAN: Well, I have to put that in the
18 next version of the report. George has it back in his
19 office.
20 JOSEPH PAVAO: We can provide that has a
21 supplement along with Alternative 1A. We will provide
22 the 1A and 1B supplemental information, and we will send
23 that information following supplemental information.

1 PAUL BRANDENBURG: Did I hear you say that
2 there you were contracting with an independent firm for
3 them to review this? I believe you said that you would
4 provide that information as well, correct?
5 JOSEPH PAVAO: We will once it is complete. I
6 have not received it yet. When I do I will turn it over
7 to Federal Highway, and they will distribute to all the
8 consulting parties.
9 PAUL BRANDENBURG: Just to be clear. There is
10 a two-week comment period that we have. Would we
11 receive that – will we have two weeks after the receipt
12 of all this material that is comment?
13 JOSEPH PAVAO: That is fine. I don't have a
14 problem with that. We'll get it out as soon as possible,
15 and then we will give everyone two weeks to respond in
16 writing.
17 PAUL BRANDENBURG: Okay. Thank you very much.
18 JOSEPH PAVAO: Thank you.
19 JOHN SMOLEN (on the phone): This is John
20 Smolen. I wonder if I can speak now.
21 JOSEPH PAVAO: Sure, go right ahead.
22 JOHN SMOLEN: A few comments I want to make. I
23 noticed that the counter weight, the existing counter
24 weight that has steel and it is quite rusty and of course

it dumps under the salt water and that is why it is rusty. It was stated to be a goal counter weight for the new bridge would not be submerged in saltwater. Yet the steel pilings are submerged in saltwater. Of course, the high tide low tide and they will probably corrode and look just like that existing counter weight.

So I was wondering steel and saltwater somehow just doesn't seem the best choice. As I have mentioned, I have mentioned that if salt does anything to wood it preserves it but it sure does not preserve steel. I hope that Town in Chatham likes the color of rust because that is what they are going to see on those steel pilings between high tide and low tide. It is going to be difficult to paint that area because you will have your high tide, low tide thing. Anyway, like I said I hope you like the color of rust because that is what you are going to see as time goes on.

I wonder, I was in charge of maintenance and operation of a lift bridge for thirty-three years as part of my county engineer duty, but we rehabbed our bridge in 1985 and the consultants put a lot of computerized controls on the bridge. Twenty years later we couldn't get spear parts for these computer controls so we had to replace all of the drive systems. We had to paint the

bridge after 20 years and ended up having to spend 2.5 million dollars after 20 years on the steel and concrete bridge. We don't have - we're in fresh water, but we do have the deicing salt, so it is kind of a similar situation.

The other comment that I want to make is that on the steel grid floor that you are promoting, I wonder if it is concrete filled because that is what we had on our lift bridge. The concrete fill caused us all kinds if trouble, spalling and that kind of thing, and it ended up being rough.

As far as this term modern materials or modern substructure I mean concrete was in use by the Romans. The Great Roman Empire 2000 years ago. So I don't know how we can call it modern. As far as steel goes, I mean there was the iron age of the settlement of our world. Yet the treated timber piling with the fiberglass wrap, now that seems to me to be a modern material because fiberglass hasn't been around that long but yet concrete and steel have been around for 2000 years or more. So I kind of recent that term modern material when you refer to these steel pilings. I thank you for the opportunity to speak.

1 JOSEPH PAVAO: Thank you for your comments.
2 Just one thing, we are not promoting the steel grid deck
3 filled with concrete. So I just wanted to make that
4 clear. I will let URS speak to, I don't know if they
5 want to address any of comments that you made relative to
6 materials. I can say that the properties of concrete and
7 steel coatings have come a long way since Roman times.
8 So I think we can say that we are using the most up to
9 date modern materials. I don't think that is a misuse of
10 that word. That is just my opinion.
11 GEORGE PATTON: George Patton from URS. Just
12 wanted to point out that the submerging of the
13 counterweight into the saltwater is not just because of
14 corrosion reasons it has to do with the operation of the
15 bridge. When you submerge the counterweight into water
16 it becomes buoyant, and it significantly changes the
17 courses on the operating, and this is not a desirable
18 condition. There are other materials that can be used
19 for the counterweight such as all stainless steels which
20 we discuss in the reports that could mitigate and extend
21 the service life of that counterweight. We would not
22 recommend the submerging for purposes of the effect that
23 it has on the operation of the bridge.

1 UNIDENTIFIED SPEAKER: Can you talk about the
2 issue that was brought up in terms of the esthetic issues
3 regarding rust, corrosion, steel, etc. that was just
4 brought up by the previous speaker?
5 GEORGE PATTON: Steel, concrete filled steel
6 piles which is what we have considered for the purpose of
7 the modern structure the corrosion of the steel is
8 certainly a concern. There are ways to mitigate that
9 with coatings. The typical coatings for steel piles
10 include zinc coatings and coal-tar epoxy's that will
11 extend the life of those. We also include additional
12 thickness on the steel casing in the steel pilings
13 themselves. The steel piles do require maintenance, and
14 we have included the cost of that maintenance in our life
15 cycle report as we have for this painting of the steel
16 bascule span as well.
17 JOHN SMOLEN: You mentioned cold tar. Coal-tar
18 is creosote. Creosote is not to use on pilings, but yet
19 you want to put creosote because that is what coal-tar
20 is, creosote. Cold tar is creosote on these steel
21 pilings. As far as the buoyancy on that counterweight
22 when the bridge is almost up the buoyancy – when the
23 bridge is almost up that is when the counterweight
24 submerges, and the buoyancy should not have that much

effect on it. If it does when the bridge is almost up that is when you don't need this much effect on the counterweight. Thank you.

JOSEPH PAVAO: Thank you for your comments.

DAVID KELLS: I was looking at Alternatives 1A and 1B and trying to keep that counterweight actually out of the water, whether it is the buoyancy or the corrosion what at the height of the underside of the bridge at high water was like 7.4 feet or something like that, what if you just raise the bridge up another two feet above main high water which would certainly make a lot of fishermen with t-tops in the milk pond happy to have more clearance there in high water.

MARK SHAMAN: Just quickly. One of the issues because we looked at that when we were looking at other geometric requirements of the roadway itself, if we raise the bridge, we have to raise the profile going back and that is going to require some additional filling or some other things in the environmentally areas. One of the objectives is not to fill anything more than we need to and of course if we are not going to fill it means retaining walls, which would add a lot of cost for the job as well.

1 JOSEPH PAVAO: Mark, could you just talk also
2 about the cross-section of the bridge what we are
3 proposing because I think there was some confusion on -
4 MARK SHAMAN: Well it depends on the
5 alternatives.
6 JOSEPOH PAVAO: But as far as the widening the
7 bridge the curb to curb width.
8 MARK SHAMAN: going to 26' has been noted.
9 believe 25 or just before the 25% design we are actually
10 at 28'. One of the comments that had come back from some
11 of the prior designs was that they did want to provide a
12 whole shoulder for the bike. Now I know that as Mr.
13 Pacon has said there has been later letter where they
14 retracted at least, I believe it is fully retracted and
15 we did reduced the shoulders back down. There is a
16 desire to maintain a gutter line where the drainage will
17 occur and that is why we still left the extra foot on
18 each side of the roadway.
19 JOSEPH PAVAO: I think right now we are
20 providing 11' lanes with 2' shoulders on each side. So
21 we have backed off the 4' shoulders that was originally
22 proposed. When we talk about widening the bridge, it is
23 to meet ADA requirements.
24 MARK SHAMAN: That is for the sidewalk.

JOSEPH PAVAO: For the sidewalk, itself. Mr. Pacon.

NORM PACON: Yes, what – if I understand it correctly what you are proposing now is to reduce the width of the lanes themselves. They are presently 12′, two 12′ lanes is what we have curb to curb 24′. So in order to somehow increase the width of the bridge, which isn't requested by the town or by the Bikeways Committee, you end up reducing the width of the lanes from 12′ to 11′. I wanted to make that clear.

JOSEPH PAVAO: We are designing the roadway based on the functional classification of the roadway and Mark what are the minimum widths?

MARK SHAMAN: We are down at the minimum widths at 11′ and 2′. That would be the –

JOSEPH PAVAO: Those are the minimum widths that we need to meet current standards.

MARK SHAMAN: Similar to the design speed of 30 mph. Even if we went to the 800 it really wouldn't change.

JOSEPH PAVAO: It wouldn't make a difference.

GEORGE PATTON: Recognize that there is a minimum offset requirement from the edge of the lane to a crash tested barrier.

1 JOSEPH PAVAO: Which is 2′.
2 NORM PACON: I just wanted to be clear that
3 what is being recommended now reduces the width of the
4 existing lanes from 12′ to 11′. No one asked for that,
5 and it increases the width from 24′ to 26'.′, No one
6 asked for that either. They asked that it remain the
7 same. So, my question which you are going to find in my
8 response it why.
9 JOSEPH PAVAO: The reason why is that in order
10 to meet current standards based on the functional
11 classification of the roadway and have the minimum that
12 we need to make those standards is 11′ lanes with 2′
13 offsets, which gives us 26′ curb to curb. The fact that
14 you have 24′ does not meet current standards. We need to
15 meet current standards. You are going to end up with a
16 bridge that is 26′ from curb to curb.
17 NORM PACON: And this is current standards in
18 what sir, AASHTO?
19 JOSEPH PAVAO: These are highway design
20 standards, AASHTO standards that we must meet.
21 NORM PACON: And you can provide that to us.
22 JOSEPH PAVAO: It is readily available. We can
23 get you the link to AASHTO website, and you can look them
24 up.

1 DON AIKMAN: Don Aikman the Historical
2 Commission. Just to clarify one comment that was passed
3 around. Mr. Pacon passed around a picture of the
4 filament pilings. Those are brand new pilings, and they
5 would be suggested to be used instead of concrete and
6 steel pilings. It is not suggested that the existing
7 pilings be repaired, but with this process because that
8 would be impossible.
9 The question that I have is will you consider
10 the filament pilings instead of concrete and steel
11 pilings?
12 JOSEPH PAVAO: I would want to hear from the
13 engineers that we have on our payroll to tell us what the
14 expected life expectancy would be of those. I guess a
15 question I have for the consulting parties is that an
16 inverse effect aesthetically by having plastic wrapped
17 piles. The limited knowledge that I have is I am looking
18 at it, as if I have painted steel or something wrapped in
19 plastic, whether it is PVC or wood wrapped in plastic it
20 is still a new material. It is a modern material going
21 to this site. I am trying to figure out what the
22 difference is between the two.
23 DAVID KELLS: The problem that I have with
24 wrapping the pilings with fiberglass is that once the

water gets in there the wood is going to start to deteriorate, quicker.

MARK SHAMAN: That is a concern that we have as well in long-term maintenance. You can't expect it, so you don't know what the deterioration is. A lot of times with wood you will do a sounding of some sort. You knock on it to see if the wood is sound. If you were to do that in a wrapped pile, I don't know this particular wrapping but typically on a wrapped pile you risk damaging the coating itself.

DAVID KELLS: The fiberglass not the wood.

GOERGE PATTON: There are some other issues as well here. FRP wrapped timber piles is a relatively new technology. We don't necessarily have the track record with this technology and knowing how long it is going to last. It will be more expensive than just a timber pile because of the cost of the FRP. So these are all things that have to be looked into. It really comes down to risk versus reward. The cost of FRP and if it is really going to meet the long-term needs whereas steel piles in this environment here we actually do have a great deal of knowledge, and how long they will last, and what type of maintenance is required. So we have much more known that we can base on with less risk to the town.

1 JOSEPH PAVAO: Just come over to this side a
2 little and come on back.
3 UNIDENTIFIED SPEAKER: I want to speak to the -
4 we are having a historical argument, and I understand
5 that. Part of what gets me is we are not talking non of
6 the options, and everyone seems to agree. We are not
7 trying to save or replace a historic structure here.
8 Every option recognizes that we are going to have a
9 brand-new structure, whether it be wood or metal and
10 steel covered with wood. I think that plays a part in my
11 thinking for one.
12 Secondly, I agree with one of my earlier
13 colleague's comments. I do think that whether it is
14 printed or put on the website of the town etcetera that
15 the pictures, and it would be helpful to have one here of
16 the compromise. Which in my view not - a lot of the
17 critics will talk about putting a metallic structure, a
18 metal and steel bridge in place of this wooden structure.
19 I think that some folks, most folks are coming around to
20 realize that if you drive on this bridge or walk over
21 what is being proposed in either option, I like option 3
22 or 4 as well, is that you will not be able to tell that
23 this is a metal bridge. This is going to look, feel like
24 a wooden bridge with some stone facing that I really

1 think, if people take the time to look at it, it is a
2 very attractive structure.
3 JOSEPH PAVAO: I think regardless of what
4 alternative we proceed with we are still going to
5 continue to consult with all of you on the aesthetics.
6 What type of stone we use, if in fact we go with some
7 modern materials. Even the steel pilings that we are
8 talking about those could be painted brown, they could be
9 painted to look like the wooden timbers. There is a lot
10 that we can do with aesthetics to try to mitigate some of
11 the look of what is out there today.
12 FLORENCE SELDIN: A couple questions. We have
13 been talking about the timeline and where do we go from
14 here. The HDR report that you mentioned –
15 JOSEPH PAVAO: Correct.
16 FLORENCE SELDIN: -- when will that be
17 available? Will that enter into your thinking? What
18 will we do with this two-week comment period? What does
19 it do to that? What happens, we have a two-week comment
20 period what happens after that? What happens if there
21 are some of the consulting parties are opposed to what
22 alternative you might – MassDOT might finally come to?
23 What happens then because I know that people talked to

1 you about something called the 4F process. What happens
2 next?
3 JOSEPH PAVAO: Well, I think, I didn't know if
4 there were more comments regarding the alternatives
5 before we get to the next steps. We will get to the next
6 steps, and I will answer those questions.
7 FLORENCE SELDIN: Okay.
8 NORM PACON: I just wanted to say in respect to
9 the pilings, photos that I passed around the report from
10 Dr. Lebo of the Forest Products Laboratory Federal Agency
11 recommends that you look at those very carefully. The
12 aesthetics are easily seen in the photos as being
13 satisfactory in our environment. So I would hope, again,
14 that you would look at these without simply bypassing
15 them.
16 DAVID WHITCOMB: David Whitcomb, Board of
17 Selectman. I just want to reiterate what has been said
18 at the table. We don't have the luxury of a lot of time
19 for further review. I believe that we have met the
20 requirements for the Section 106. There are seven
21 alternatives. Alternatives before us three are entirely
22 made of wood. I would like to and maybe that is what is
23 coming to get to the memorandum of agreement. The major
24 parties are here. The Advisory Council, the State

1 Historic Preservation, MassDOT and FHA and when do they
2 get together to make this decision?
3 JOSEPH PAVAO: I think the next step is for us
4 is we are going to take back all these comments. We are
5 going to allow for a two-week comment period. We have
6 some information that we still need to provide to the
7 consulting parties. We are going to provide that. I
8 would like to get all the comments back. MassDOT will
9 sit down with our consultant and Federal Highway. We are
10 going to address the comments to the best of our ability.
11 At that point, we will consult internally and see what we
12 think is the best alternative that satisfies all the
13 requirements of the project. Tries to meet everybody's
14 needs from maintenance point of view, historical of the
15 aesthetics, navigation, and we are going to put forward a
16 recommendation. MassDOT will make a recommendation will
17 make a recommendation to Federal Highway on what we think
18 is the best alternative to proceed through the NEPA
19 process as our preferred alternative.
20 At that point we will make a decision on a
21 preferred alternative to move forward with. As far as
22 the 106 process the MOA the adverse effect finding, if
23 for example we go with Alternative 3, I am just using
24 that as an example, there would be an adverse effect that

1 would have to be drafted up for that, and a memorandum of
2 agreement would be drafted up. I don't know if, Mary
3 Ann, you would like to speak to 106, or we could have
4 Jeff speak to 106. As far as the process, if there is no
5 agreement if there is still no agreement on the selection
6 that we recommend as an agency maybe you could just walk
7 us through the steps with the adverse effect finding.
8 MARY ANN NABER: Sure. I think that Sean made
9 a very good point in recognizing that if we are not able
10 to rehabilitate in a way that is considered prudent, the
11 existing structure, then we basically have an adverse
12 effect. Any of the alternatives, any of the seven
13 alternatives that have been discussed today would have an
14 adverse effect on that structure, and we are dealing with
15 a new structure. Whether that new structure is wood or
16 partial wood or part, modern material, sorry for that
17 reference, does not lessen the fact that there is an
18 adverse effect to the historic structure.
19 The Keepers finding was that this thirty-year-
20 old structure was extraordinary because it was rare and
21 represented a surviving example of a once common type of
22 construction. When that is gone that is gone, so the
23 mitigation is well then what is appropriate in this
24 setting. So what is appropriate esthetically? What is

1 appropriate from an engineering solution and that
2 decision is frankly Federal Highway's with its partners
3 MassDOT and the other parties that will be signatories to
4 the memorandum of agreement.
5 So this is not necessarily a consensus process.
6 Consensus is a goal of the 106 process, but it is not
7 dictated by the 106 process.
8 The other question that you had was about
9 section 4F, and that is an entirely separate law which
10 applies only to U.S. Department of Transportation Agency
11 and says that we cannot approve an action that would use
12 a historic or other type of protective resources, unless
13 there is no prudent piece of an alternative.
14 I think that the life-cycle cost analysis and
15 all the analysis and all the information that has been
16 gathered together would demonstrate, and I think building
17 on one of the points that was made in order to even be
18 able to rehabilitate the structure that is there now we
19 basically have to take away anything that is left that is
20 good. So, rehabilitation is probably not likely a
21 prudent and feasible alternative. It might be feasible,
22 but it is not prudent. So that is a separate evaluation
23 that Federal Highway will go through or is in the process
24 of going through in supporting the decisions, since there

is no prudent and feasible alternative to rehabilitation then one of the seven alternatives for replacement that is on the table will be the way to go.

JOSEPH PAVAO: Thank you for that.

LEN SUSSMAN: Just some clarification on the life-cycle cost analysis analysis chart, Chatham responsibility going forward. How many years of the costs advertised?

JOSEPH PAVAO: I believe it was over 75 years and -

MARK SHAMAN: What we presented was the present value of those exact cost before 75 years.

LEN SUSSMAN: At the end of that 75 year period presumably all the alternatives would have been exhausted. Their life cycle would have come to an end, and an entirely new replacement bridge would be placed.

JOSEPH PAVAO: That is the presumption, yes, is that at 75 years we would be back at the table looking for a replacement structure.

LEN SUSSMAN: Just one further question. Those are not extraordinary costs those are the low-maintenance costs for all of these alternatives?

JOSEPH PAVAO: I believe one of the costs that URS carried was the maintenance cost that you have

1 budgeted now. They carried that into the alternatives.
2 In the intent of that portion of life-cycle cost, it is
3 really to compare the alternative to one another. So if
4 a particular element was not estimated accurately it
5 won't make a difference in the overall report, Mark,
6 correct me if I am wrong because you are using that same
7 number for all of those alternatives. So when you look
8 at them in comparison to each other, it is still an
9 accurate comparison.
10 LEN SUSSMAN: How did you choose the discount
11 rate?
12 JOSEPH PAVAO: I knew that was going to be
13 asked today. The discount rate, my understanding is the
14 difference from what we borrow money and what we lend the
15 money at. We had a lot of discussion about discount
16 rate. I finally did a little research on the website.
17 Federal Government's discount rate, I think, of a couple
18 weeks ago was .5%. I had a colleague who works in the
19 Accelerated Bridge Program with me but actually called
20 one of the state controllers and had a lengthy discussion
21 on what is appropriate for a discount rate, and they
22 recommended .5 and 1%. Now the whole reasoning behind
23 that I couldn't get into it, I would lose myself before I
24 lose you guys.

LEN SUSSMAN: That is a start.

JOSEPH PAVAO: So we felt that .8 was a reasonable number. The higher the number believe it or not the further apart the alternatives get. It is counterintuitive to what you would think using the discount rate, so we thought it was a good comparison.

FLORENCE SELDIN: Can I go back to the comment -

JOSEPH PAVAO: Sure.

FLORENCE SELDIN: The two-week comment period kicking today, when does it start?

JOSEPH PAVAO: From when Federal Highway provides the supplemental information that we need to provide to the people that are on conference call and I believe there was some other information, some backup data on the evaluation criteria that we are going to provide. So when we provide that we will give approximately two weeks.

FLORENCE SELDIN: I would just like to know when it is because I believe the Board of Selectman would like to discuss it and decide on what we would like to comment and say.

JOSEPH PAVAO: Sure we welcome comments from the town. We would like to hear what the town's position is after this meeting. That would be great.

UNIDENTIFIED SPEAKER: Do we have any renderings?

MARK SHAMAN: I do have some boards that were produced. They were not produced for this meeting, I will tell you, but they are replications. These are boards that we presented earlier. This right here would basically represent Alternative 3 just coincidentally that we had it. I tell you it is not Alternative 1 and 2 because it does not have the vertical poles that would be necessary to lift the bridge up. Otherwise it is a wood structure. You see the wood sidewalk here. There is a wood deck on the bridge itself. So this is what the bridge would look like in Alternative 3.

Alternatives 1 and 2 or 1B would have shive poles on the side here in order to do the lifting. There may be out boarding, as I said in the presentation they may be out boarded in the sidewalks.

MARY ANN NABER: Can I just ask a question about the structure that is midway on the bridge? Is that a little house structure intended to be the housing for the lift?

1 MARK SHAMAN: That is the mechanical lift.
2 GEORGE PATTON: That is just to house
3 electrical equipment because of the flood elevation and
4 because of where - that house is strictly for the
5 electrical equipment here based on the FEMA flood
6 elevation here in order to make sure that the bridge
7 remains operable in the event of a high-water event from
8 a major storm event. We need to locate the electrical
9 equipment above the deck.
10 In Alternatives 2 through 5, all the mechanical
11 equipment however would be located within the concrete
12 bascule pier below deck where it is protected. Of
13 course, we developed an electrical shed with similar
14 architectural style as to some of the casing buildings.
15 MARK SHAMAN: Then the profile, this would
16 represent what you would see from the water side for
17 Alternatives; I believe 3, 4, and 5 with the wood
18 sidewalk. So again this is Alternatives 3, 4, and 5.
19 The wood sidewalk, the wood cladding on the backside and
20 the concrete steel piles and the concrete pile cap with
21 the wider spacing you will notice that the distance
22 between the pier caps is 30' as opposed to it might be
23 16' if it was all wood.

1 Lastly looking onwards somewhat similar to what
2 it would look like in the future. You can see the wood
3 deck, the wood sidewalks with the wood guardrail. We do
4 have to modify these approaches a little bit they don't
5 meet the safety standards. This is similar to what you
6 would see if you were coming up to the bridge.
7 GEORGE MYERS: I have a question. Is there
8 really any difference externally from external appearance
9 between 3 and 4? It seems to me that you only see those
10 stringers when you go under the bridge.
11 MARK SHAMAN: That would be correct.
12 GEORGE MYERS: So the exterior appearance of 3
13 and 4 would be the same?
14 MARK SHAMAN: Right.
15 GEORGE MYERS: Okay.
16 MARK SHAMAN: And even for on the profile 5
17 would be very similar as well. The difference on 5 is
18 you see the modern concrete deck structure.
19 RICHARD MARQUIS: Carol, do you have any
20 comments on behalf of the Advisory Council?
21 CAROL LEGARD: Yes, thank you. Carol Legard
22 with the Advisory Council. I have been listening very
23 hard. This is a very unusual Section 106 consultation,
24 as you all know. I am struggling kind of with the

1 premise in these discussions is that rehabilitation is
2 not feasible and prudent or not prudent so in any of the
3 alternatives under consideration, there will be an
4 adverse effect. Then beyond that also, we are going to
5 have a new bridge here at Chatham so whatever is built
6 there even if it is an exact replica of the existing
7 bridge will not be eligible for the national register
8 anymore.
9 I don't know if that has ever really been
10 thought through or discussed with the Keeper of the
11 national register. I am not aware of any brand-new
12 bridges retaining national register eligibility, and I
13 don't know if any of the consulting parties on the phone
14 might be aware of any. That makes this a very different
15 discussion than if we are trying to preserve or keep
16 something on the national registry, eligible for the
17 national registry. Because the historic preservation
18 issue then really is what is in the best interest of the
19 community in terms of cost and safety but will also be
20 context-sensitive design. Something that not necessarily
21 looks like the bridge does today but what is going to fit
22 into the context.
23 I understand that many of the Friends of the
24 Bridge would love to see a wooden bridge remain in place.

1 I guess I am still not sure of the answer to that
2 question. If it were replaced entirely in wood would it
3 still be eligible for the national registry as a brand-
4 new bridge. Mary Ann would it be?
5 MARY ANN NABER: Absolutely not.
6 CAROL LEGARD: Absolutely not.
7 NORM PACON: Can I respond to that? The
8 critical point here is that the existing bridge is not
9 the original bridge. You have to keep that in mind. The
10 Keeper found this to be eligible for the national
11 register, not withstanding that the superstructure is
12 only 30 years old and the pilings approximately 80% of
13 them or 50 to 80% of them date from 1920 to 1925. The
14 Keeper found however was that this wooden bridge was one
15 of the continuous line of wooden bridges that has
16 extended at this site for 150 years approximately. So
17 consequently we are not dealing with the fact that this
18 is or is not going to be a new bridge because if the
19 issue was whether it was new or not the Keeper would not
20 have found it eligible. It couldn't have.
21 MARY ANN NABER: Actually, I have to disagree
22 since you raised the issue, Mr. Pacon. I have to
23 disagree. The Keepers letter which I have before me is
24 very clear in saying that this bridge, the 30 year old

1 bridge, including the superstructure, or consisting
2 primarily of the superstructure all though on a few
3 surviving piers from the 1925 -
4 NORM PACON: No, not a few.
5 MARY ANN NABER: Let me finish please. That
6 this bridge built in 1980 is eligible as a rare surviving
7 example of a structure embodying the distinctive
8 characteristics of a once common method of construction.
9 The Mitchell River Bridge constructed in 1980 atop the
10 pilings of an earlier bridge, but it is the Mitchell
11 River Bridge constructed in 1980 is one of the continuous
12 line. That is not why it is eligible. It is eligible
13 because that 1980 bridge is a rare example of a once
14 common type of construction, and it is the last
15 remaining, the believed to be the last remaining single
16 leaf wooden draw bridge in Massachusetts.
17 So she is dealing with that bridge from 1980.
18 The fact that it sits atop some surviving pilings from an
19 earlier structure that represents -- that remain from an
20 earlier bridge, there is in my reading of this is
21 inconsequential with the finding of eligibility. Since I
22 have the letter in front of me, I have to mention that I
23 believe in an earlier reference to the Keepers finding
24 that you put words in her mouth when you suggested that

1 the keeper found that the bridge's presence on the
2 landscape form an exceptionally important part of the
3 community's historic identity. That, in fact, was the
4 view that was recognized by the friends of the Mitchell
5 River Wooden Draw Bridge and the Chatham Historical
6 Commission not the Keepers finding.
7 NORN PACON: Well, I respectfully read it
8 differently Mrs. Naber, and I think that maybe we will
9 have to hear from the Keeper to find out exactly what to
10 do.
11 CAROL LEGARD: This is Carol Legard again. I
12 guess it would be worth checking with the Keeper. If the
13 1982 bridge was eligible because of its continuous - one
14 of a continuing line of wooden bridges in this location
15 of this design couldn’t a 2016 bridge be eligible, for
16 that matter. So I just wanted to share with you that
17 that is something that I am struggling with, and it could
18 make a difference in whether we would encourage a
19 completely wooden bridge.
20 I appreciate the fact that - I don’t know. I
21 am stumbling over my words because this is an awful lot
22 to take in. A lot of the alternatives, I do appreciate
23 that there have been a couple more completely wooden
24 alternatives put on the table to consideration. I think

1 that helps the analysis a great deal. So I look forward
2 to reviewing those materials. Also, I think it is an
3 excellent idea to have a second opinion. That you have
4 asked for a late analysis. I look forward to seeing that
5 too.
6 JOSEPH PAVAO: We will provide that as soon as
7 that is available. As soon as that is available we will
8 provide that to the consulting parties.
9 UNIDENTIFIED SPEAKER: I think what I hear, and
10 I think what is to the credit the Friends are certainly
11 the most vocal advocates of the wooden bridges here, but
12 I have to say here talking to my colleagues and hearing
13 what they have to say –
14 BETSY MERRITT (on the phone): I'm sorry I
15 can't hear.
16 UNIDENTIFIED SPEAKER: How is this? Is that
17 better?
18 BETSY MERRITT: Yes, thank you.
19 UNIDENTIFIED SPEAKER: We are a pretty diverse
20 board who generally doesn't agree on anything and the
21 five of us generally who are elected by the people to
22 speak for them are saying that we are looking for some
23 kind of compromise. That compromise what I am hearing
24 generally falls between that 3, 4 or 5 direction where we

have a town that I agree are esthetic nature and value of this community is very important. That is why I support wooden guard rails on Stage Harbor Road. I think those things are important.

I think that this bridge represents the values that this town has. That the wooden clad structure, if people take time to look at it will represent the values of this community. It also represents the fact that we are in a modern time where we do not have unlimited funds or unlimited pockets, and neither does the state. We need to be careful with our money and these funds and whatever the alternative, whatever you guys find out those funds are important, and we want to make sure that we do what we can as a community. At least, that is what I think that is the view that those funds are not jeopardized.

What I hear in the community, frankly, is that when are you guys going to end this discussion. Haven't you talked about it enough? Frankly, I think we have. I think we really want to move on; at least, I want to move on, speaking for myself. Whatever the assistance that the state needs and their review and the Federal Highway review, I certainly think that the town will be

1 help you in any which way you make the decision, but we
2 want it made.
3 JOSEPH PAVAO: Thank you for that comment.
4 Anyone else?
5 BETSY MERRITT: This is Betsy Merritt; can I
6 ask a couple of questions?
7 JOSEPH PAVAO: You sure can.
8 BETSY MERRITT: How do we resolve the
9 discrepancy in the average daily traffic figures? I
10 think I heard 800 and something, and I heard 8,000 and
11 something. I assume that there is a large seasonal
12 variation, but I am just wondering how that number gets
13 nailed down.
14 JOSEPH PAVAO: I can look that up when I get
15 back to the office as far as what the actual counts are,
16 the latest counts that were done at that location. It is
17 important to point out that regardless whether it is
18 2,000 or 800 it is not going to have an impact on the
19 design or our selection of an alternative for this
20 location.
21 BETSY MERRITT: You read my mind to my next
22 question. Thank you. I also wanted to get a better
23 understanding of in the assumptions in the life-cycle
24 cost, I thought an assumption, it seems to suggest

1 Federal Highway Administration would refuse to fund
2 anything in the future after the initial construction
3 cost occur. Is that still the case? Am I
4 misunderstanding that?
5 JOSEPH PAVAO: Somewhat. We are not funding
6 anything in the future in terms of maintenance or future
7 replacements under the Accelerated Bridge Program which
8 is set to expire in 2016. Hopefully, we won't be
9 replacing the bridge for a second time between now and
10 then.
11 As far as speaking to future replacements,
12 whether it is 25 years, 50 years, whether it is a deck
13 replacement, superstructure replacement, or an entire
14 structure, I can't speak to the availability of funds and
15 participation by MassDOT or Federal Highway 25, 50 years
16 out. So I don't know the answer to that. It is
17 certainly something the town would be seeking assistance
18 at that time. I am sure.
19 BETSY MERRITT: In 1980 when the bridge was
20 last reconstructed was that federally funded?
21 JOSEPH PAVAO: I think that was state funded.
22 Completely state funded.
23 BETSY MERRITT: Okay.

NORM PACON: The town paid approximately $20,000.

BETSY MERRITT: And the rest was funded by the state.

JOSEPH PAVAO: That is correct.

BETSY MERRITT: Okay. Another question has to do with the NEPA review process. There have been a few references to it, and it is not clear in what you are all doing an environmental assessment under NEPA or what is the NEPA process going to involve?

JOSEPH PAVAO: The next step as I mentioned earlier is we will consult with Federal Highway. We will consult internally. We need to develop an inverse effect finding regardless of which alternative is chosen out of the seven. We will develop a draft MOA. At some point in the very near future MassDOT will need to make a recommendation to Federal Highway on a preferred alternative that we will be progressing under NEPA.

At that time, we will request a class of action. We haven't made a decision on what the most appropriate class of action is for this project, whether it is a categorical exclusion or an environmental assessment. Those are discussions that we will be having

1 internally in the very near future. We will be making
2 that recommendation for approval by federal highway.
3 BETSY MERRITT: Okay. In the last slide which
4 I guess you all are going to turn to. I was concerned
5 that the last slide sort of suggests the decision is made
6 first, and then consultation happens afterwards. Or that
7 the project would be selected and then the Section 106
8 compliance as well as NEPA would occur after the fact. I
9 just think that it is important to keep in mind that NEPA
10 and Section 106 have to inform that choice not be driven
11 by it.
12 JOSEPH PAVAO: I am not sure if I understood
13 your question.
14 BETSY MERRITT: Well, on the last slide and
15 somewhat in the discussion that we were just having there
16 is a suggestion that the alternative is going to be
17 chosen first, and then the effect determination is going
18 to be made under Section 106. I guess I understood Mary
19 Ann and Carol to be saying that all of the alternatives
20 will have an adverse effect, and that is not really an
21 issue.
22 JOSEPH PAVAO: I don’t think that they need to
23 have an – I don’t think that one precedes the other. I
24 think that it is two processes that can happen

1 concurrently. The adverse effect finding will be based
2 on DOT's recommended alternative. We will start drafting
3 that based on the alternative that we select. Then we
4 will draft an MOA that will go out to the signatories of
5 the MOA for their review and approval. In the meantime,
6 we will be selecting a class of action. We will be
7 recommending something to Federal Highway for their
8 approval if they concur with us, then we will move
9 forward with the documentation necessary under NEPA for
10 that particular -
11 BETSY MERRITT: So when you say class of action
12 that means categorical exclusions versus environmental
13 assessment?
14 JOSEPH PAVAO: Yes, it would be one of those
15 two.
16 BETSY MERRITT: Okay, well I appreciate the
17 opportunity to participate by telephone, and I think the
18 materials presented are helpful and informative.
19 JOSEPH PAVAO: Thank you.
20 FLORENCE SELDIN: If someone appeals under this
21 what happens?
22 JOSEPH PAVAO: Mary Ann.
23 MARY ANN NABER: The statute and the
24 regulations that dictate the Section 106 process are what

we call procedural. The decision itself is up to the discretion of the federal agency. So if the appeal is made on the decision that really – it can be considered by or the party can request the views to the comments of the Advisory Council on whether or not we reached an appropriate decision. Whether or not the process was appropriately followed but there is really no appeal on the decision per say.

FLORENCE SELDIN: So you go ahead with the project, is that it? I have one other question. Under MEPA process, we have on – we have a regulatory agency – planning regulatory agency namely the Cape Cod Commission. Normally, when something goes under the MEPA process, and it is historic it goes to the Cape Commission. Has that been taken into consideration or –

JOSEPH PAVAO: Did you say MEPA or NEPA?

FLORENCE SELDIN: I said MEPA. This is NEPA, okay.

JOSEPH PAVAO: NEPA process we are exempt from the MEPA process.

FLORENCE SELDIN: Okay, thank you.

JOSEPH PAVAO: You're welcome. Yes sir.

DAVID KELLS: David Kells again. Two quick questions. Unfortunately, I see our police chief

probably had to go someplace else, but town officials are here. Do we plan to enforce the cars and light truck designation and restriction on the bridge? For one because I know that there are dump trucks and trucks and trailers still going over it.

Two when the construction starts on the bridge, and Bridge Street is closed would it be possible to just remove the bascule bridge because it still over hangs the waterway as opposed to just locking it up. Just make the waterway free and clear once and for all.

JOSEPH PAVAO: We can have the contract document specify that that would be the first thing to take place is removing the bascule bridge. We can do that.

FLORENCE SELDIN: And we will review what you just said about the light trucks.

DAVID KELLS: Thank you.

JOSEPH PAVAO: Anyone else?

PAUL BRANDENBURG (on the phone): Paul Brandenburg, one quick question.

JOSEPH PAVAO: Sure.

PAUL BRANDENBURG: I just want to be clear. I was just looking at the next slide, and I wanted to check. When would you expect the MOA to be actually

1 executed for this? The reason I ask is I notice that
2 towards the bottom it says continued coordination with
3 consulting parties regarding mitigation. Typically, what
4 I have seen is those who have been included in the MOA be
5 signed after the big consulting parties coordination and
6 Section 106 closes down?
7 MARY ANN NABER: I think if I may speak for -
8 JOSEPH PAVAO: Go right ahead.
9 MARY ANN NABER: This is Mary Ann. I think if
10 I may speak for MassHighway and Federal Highway's here
11 there would be a provision within the MOA for continued
12 coordination for things that Joe had referenced to
13 earlier in his discussion. When we get down to deciding
14 what color the piers should be, or you know, divine
15 choices and those kind of esthetic choices that we would
16 continue to work with the community to ensure that those
17 reflected your wishes and preferences.
18 JOSEPH PAVAO: I think that is correct and just
19 mentioning one other thing. We had talked about putting
20 up a curb rail that keeps traffic from basically jumping
21 the sidewalk and going off the bridge. We had talked at
22 previous meetings about even the possibility of reusing
23 portions of the existing railing. It would need to be

1 modified to meet ADA requirements, but that is just one
2 of the things that I think Mary Ann is referring to.
3 PAUL BRANDENBURG: Okay.
4 JOSEPH PAVAO: We would have further
5 discussions.
6 PAUL BRANDENBURG: Thank you very much for the
7 answer, Mary Ann.
8 JOSEPH PAVAO: Thank you. Anyone else from the
9 consulting parties? I am going to turn it over to
10 Damaris. I know there are some people from the public
11 here.
12 DAMARIS SANTIAGO: I know that everyone is
13 probably anxious to go home already, but we want to
14 provide an opportunity for the public to come up, if
15 anybody has a comment.
16 JOSEPH PAVAO: Step up to the podium.
17 DAMARIS SANTIAGO: Yes, you have to step up to
18 the podium and say your name, for the record.
19 GLORIA FREEMAN: Thank you, I am Gloria
20 Freeman, and I am concerned about the bridge. In the
21 states first report they admit that, and I quote. The
22 current significant wear of the timber surface promotes
23 lower traffic speeds, which reduces the likelihood of
24 crashes, end quote. Further, they admit that quote.

1 Traffic speeds are anticipated to increase, end quote.
2 The state recognized that higher speeds means the
3 likelihood of crashes and that this comes naturally from
4 a concrete road. I am not making this up. This is in
5 the states report. That with concrete or asphalt and
6 widening the roadway will be hazardous to the public.
7 There are no sidewalks other than over the
8 bridge forcing pedestrians to walk on the street. Six
9 months out of the year there are many pedestrians. There
10 are cars for five or six-month parking on both sides of
11 the street. There are also blind driveways, and a town
12 landing, and marina, and a yacht club all creating
13 activity. That is not what we want a faster bridge with
14 the increased possibility of crashes and pedestrian
15 accidents. This is a historic location with a scenic
16 view.
17 I would also like to tell you that I spoke with
18 Nell Pinkard (sounds like) Chatham citizen who wanted to
19 be here today but because of health issues could not
20 attend. Mrs. Pinkard is very concerned with the speed
21 that will result from the widening of the bridge and the
22 use of concrete or asphalt instead of the wood roadway.
23 There have been quite a few letters in local
24 newspapers in regard to the obvious increase in speed,

which is not considered a good thing because of safety issues. But also because concrete is counter to Chatham's character and certainly painting it brown is much more Disney like than Chatham.

I do want to congratulate you on coming to the realization that you can build an all-wood bridge with a 25' span after telling us just two weeks ago that it was not possible. Quite honestly maybe this meeting could have been canceled because who knows what you would have come up with next. Maybe after reading Dr. Lebo's letters you will determine the life cycle costs are not so different and a wood substructure might be possible if strong seal is used for wrapping timber pilings.

I would also like to comment that on page three on your April 28th report in the results of design criteria evaluation you have a column headed context sensitive which I guess is your short hand for the Section 106 criteria to avoid, minimize and mitigate adverse effects to the national register eligible resource. Why not head that column avoidance upon to our historical Mitchell River Bridge. After all that is what it is all about. That is the most important part of the process.

I am glad that you are no longer recommending Alternative 5 which you were trying to sell us on. You yourself rated it as poor. Alternative 5 the concrete and steel bridge is rated poor in this category by your own admission it is the worst one, and yet we were supposed to accept it. You changed your mind on that too apparently, and I hope that since you are presenting a more flexible position perhaps after studying the Friends document, there will be additional changes to be considered. Thank you for hearing me.

JOSEPH PAVAO: Thank you very much for your comments. Anyone else want to speak? I think that concludes the meeting. I want to thank everyone for coming down, especially those who have traveled. Thank you.

(Whereupon, the proceedings were concluded on May 17, 2011 at 2:16 p.m.)

C E R T I F I C A T E

I, Tammy A. Hillery, do hereby certify that the foregoing record is a true and accurate transcription of the proceedings in the above-captioned matter to the best of my skill and ability.

Tammy A. Hillery

** All names not provided were spelled phonetically to the best of my ability