

MassDOT Cape Cod Canal Area Transportation Study

Cape Cod Canal Area Transportation Study

RE: Second Public Informational Meeting

Date and Time: April 16, 2015, 7pm-9pm

Location: Admirals' Hall at the Massachusetts Maritime Academy, Buzzards Bay

Meeting Notes:

MassDOT Project Manager, Ethan Britland, welcomed attendees and thanked them for attending the meeting. He then introduced himself, Diane Madden of MassDOT Environment, Michael Walsh who while not present is the study representative for the US Army Corps of Engineers, and the study team, including Ed Hollingshead, Heather Ostertog, Michael Paiewonsky, and Bill Reed, all of Fay, Spofford & Thorndike (FST), and Ken Buckland of the Cecil Group. Mr. Britland then presented the agenda for the evening.

Mr. Britland explained that the study process is linear and that the evening's meeting is not intended to discuss alternatives or possibilities, since the project has not reached that stage yet. Mr. Britland also explained that this project is not a design or construction project, it is a conceptual planning project.

Mr. Britland continued that the previous public meeting, in January, covered the project's goals and objectives and that this meeting will focus on the existing conditions in the project area. In addition to public meetings, such as this one, a Working Group has also been assembled.

Tonight's presentation will focus on the existing conditions that will be used as a foundation for the planning study. Steps three, four, and five are still to be undertaken and include: future conditions, alternatives development, issues evaluation, an alternatives analysis, and finally, recommendations.

The basic goals of this study are to create and improve multimodal mobility in the Cape Cod Canal Area and to establish an alternative or replacement crossing of the Cape Cod Canal to address the diminishing quality and reliability of year-round connectivity over the Cape Cod Canal. The diminishing reliability of connectivity is primarily due to the age of the Bourne and Sagamore Bridges. The study's objectives are designed to help meet the project's goals. This project's objectives are: to create reliable multimodal connectivity and mobility levels such that the quality of life on Cape Cod is not diminished by unreliable connectivity across the Cape Cod Canal; to create a reliable multimodal connection across the Cape Cod Canal to maintain/enhance public safety in the event of the need for an emergency evacuation of portions of Cape Cod and to accommodate first responders accessing Cape Cod; and to ensure that cross canal connectivity does not become a barrier to reliable intra-community connectivity for the Towns of Bourne and Sandwich.

Mr. Britland explained that the Existing Conditions that will be discussed tonight will serve as the foundation for the rest of the project. Before we begin to discuss alternatives, the project team needs to do its due diligence to ensure understanding of the existing, and then future, conditions that will serve as a basis for the rest of the project. To discuss alternatives or eventually decide on a project, the existing conditions study will provide the information necessary to know whether or not any future projects would impact natural or cultural resources.

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Mr. Britland provided the context for Existing Conditions research and explained that not only is it important to know what impacts might be caused by future work, it's important to identify the current issues and problems to know what issues need to be addressed. In addition to identifying resources, the Existing Conditions research will include answers to the following questions: where are the travel problems, where are the summer and non-summer travel demands, where are the congested locations, where are the crash locations, and what are the current multimodal options?

As most residents are often very interested in the traffic analysis, Mr. Britland explained that the study team evaluated 37 locations and found that only 18 are congested and of those 18 congested locations, only nine have year-round operational problems. Mr. Britland explained that it's important to not only understand the summer problems, but also the year-round traffic patterns.

Mr. Britland then turned the presentation over to Michael Paiewonsky of FST, to review the natural and cultural resources, protected environmental areas, existing infrastructure, and demographic information before Heather Ostertog explains the transportation research.

Natural and Cultural Resources

Mr. Paiewonsky explained that the project area consists of a larger Study Area as well as a smaller Focus Area. The study area extends from Cape Cod Bay west to Interstate 195 and from the intersection of Routes 6 and 130 in Sandwich, north to Herring Pond Road. Based on feedback from the last Public Informational Meeting, the study area was extended to Cape Cod Bay to the east and past Glen Charlie Road along Route 25.

Mr. Paiewonsky then reviewed the area's Natural and Cultural Resources. Natural resources include the waterways and wetlands, FEMA Flood Hazard Areas, fisheries, and rare and endangered species habitat. The major waterways in the area are the Cape Cod Canal, Cape Cod Bay, and Buttermilk Bay. The major wetland areas are associated with Cape Cod Bay and Buttermilk Bay. The FEMA Flood Hazard Areas are mostly similar to the waterways and wetlands, but there are some additional low-lying areas that are not immediately adjacent to the waterways but are included in the FEMA Floodplain. The area's fisheries are an important resource in the area; there are a number of recreational and economic activities that center around fishing and shell fishing. The anadromous fish found in this area spend most of their life cycle in the open ocean, but head inland to smaller streams and waterways to spawn. While shell fishing is an important activity in the region, there are areas that shell fishing is currently prohibited due to elevated fecal coliform pollution. The final natural resource discussed is habitat for rare and endangered species. The area has extensive rare and endangered habitat. According to information provided by the Natural Heritage Program, there are numerous species of rare or endangered turtles, reptiles, plants, moths, butterflies, birds, and other species that have been identified in and around the Study Area. Any future project needs to be aware of these resources and minimize impact.

Mr. Paiewonsky explained that it is not just environmental resources that need to be protected. The human environment must also be protected, especially historic resources. The area has a large number of historic buildings and districts. In addition to buildings and districts that are registered with the state or federal government, there are a number of buildings and areas that have been inventoried and are eligible for designation as historic resources, but have not yet been reviewed. Other aspects of the human environment that must be considered are the existing residential areas and the protected open

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spaces. The area's open spaces are owned by the Army Corps of Engineers as well as other municipal, private, nonprofit, local, state, and federal entities. One of the largest areas is the 1,000 acres of land around the canal that is owned and operated by the Army Corps of Engineers. The Army Corps reports that more than 4 million people visit this area each year. Joint Base Cape Cod, while not open to the public, is another large tract of protected open space. There are also significant Areas of Critical Environmental Concern that have exceptional environmental characteristics. There are also areas that are protected as drinking water protection areas. These include Zone II areas and wellhead protection areas. Another constraint that must be recognized are areas of hazardous material spills, landfills, and Superfund sites. Joint Base Cape Cod is a Superfund site that has been under study and remediation for many years. Environmental Justice (EJ) communities are communities with low-income and/or minority residents. EJ communities are protected by the federal government; the federal government cannot approve projects that will have a disproportionately negative impact on EJ communities.

Another factor that will influence future recommendations and alternatives is the area's existing infrastructure. The local infrastructure includes railroad lines and electrical and gas utility lines, including a National Grid Take-Off Area adjacent to the north end of the Sagamore Bridge.

Demographics

The area's demographics have also been studied as part of the Existing Conditions research. Understanding this information is important to understanding the current population statistics, but it is especially important to understand the demographic trends as they will influence future conditions and will inform the future traffic analysis. Massachusetts's population has been growing steadily since 1960. The populations of Barnstable and Plymouth Counties followed a similar pattern until about 2000. Between 2000 and 2014, Barnstable County's population decreased slightly. Between 2005 and 2013, the state population and Plymouth County population each grew by approximately 4.4%; Dukes County (Martha's Vineyard) had a population increase of almost 10%; and Nantucket's population grew by approximately 2%. However, Barnstable County's population decreased by slightly more than 5%.

The Study Team looked more closely at the population trends on Cape Cod between 2005 and 2013 to identify where the population change was most noticeable. The largest population changes were in communities east of Yarmouth. For example, Provincetown had a 15.5% population decrease. Bourne is the only municipality on Cape Cod that had a population increase. In Barnstable County, the trends are significantly different by age group. The 55+ year old population has increased by more than 16% while the under 55-year old population has decreased significantly. One of the reasons the Outer Cape could be experiencing population changes is job accessibility. The unemployment rate increases dramatically the further one travels from the Cape Cod Canal. For example, the unemployment rate in Provincetown is nearly 23%. The unemployment rates in communities near the Canal are more consistent with the 2014 statewide unemployment rate of 5.1%. Overall, Barnstable County's 2014 unemployment rate was 5.8%, Dukes County was 7.0%, and Nantucket County was 5.3%.

A large percentage of workers who live closer to the Cape Cod Canal travel off Cape Cod to work. More than 13,000 Cape Cod residents travel to the mainland each day. Conversely, 9,000 people are traveling to work locations on Cape Cod each day. The vast majority of workers are still commuting by vehicle. Approximately 85% of workers are commuting either alone in their personal vehicle or in a carpool.

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Transportation

Mr. Paiewonsky then turned the presentation over to Mr. Hollingshead, also of FST, to introduce the results of the transportation study thus far. The analysis conducted included traffic operations, a review of crash data, and research related to multi-modal transportation. Multi-modal transportation includes transit, bicycles, and pedestrians. The first step in traffic operations analysis is determining where to collect the data. The Cape Cod Canal area has two main north-south routes and two main east-west routes. These four roads create eight segments of roadway. Based on this traffic pattern, the Study Team worked with the Cape Cod Commission to identify 57 locations to collect traffic data with Automatic Traffic Recorders (ATR). Thirty-seven locations were selected to collect Turning Movement Count data (TMC). The ATR and TMC data was collected in summer season and non-summer season. The ATR data was collected for seven days and the TMC data was collected during the AM Peak Hour, PM Peak Hour, and Saturday Peak Hour.

Once the locations were selected, the Study Team needed to decide when to collect the data. Cape Cod has two traffic seasons: summer and non-summer, so the data was collected during each of those times. To determine the exact timing, the Team used the continuous count data that MassDOT collects for each bridge. The Sagamore Bridge is at 100% capacity during July and August. The Bourne Bridge is at 100% capacity during August. Based on this information, the Study Team decided to collect summer traffic data in August. October was selected as the non-summer month since it is the median month for non-summer traffic volume. After the traffic data was collected, the summer and non-summer data was compared to find out how much different the traffic volumes were during summer and non-summer. In three of the eight road segments studied, the traffic volumes were more than 50% higher in the summer than during the non-summer. The smallest change was on Route 3, where there was 28% more traffic in summer (August) than non-summer.

Mr. Hollingshead then turned the presentation over to Ms. Ostertog, also of FST, to discuss the rest of the traffic data. Ms. Ostertog began with a review of intersection Level of Service ratings. The Level of Service is a way to rank an intersection or location's traffic operations. A location's level of service is rated on an A to F scale, like a report card. It is never based on daily traffic volumes, but is instead based on peak hour traffic volumes. The peak hour is typically during the PM peak hour because people are coming home from work as well as running errands or making discretionary trips. Three types of analyses were completed during this study: intersections of local streets, which can be complicated by conflicting turning movements at unsignalized and signalized locations; operations within rotaries, where there are also conflicting turning movements as people navigate the rotary; and travel lanes on limited access roads where the level of service is impacted by traffic volumes. Once all the data was collected, the Study Team had nearly 300 locations and times to analyze.

In the interest of time, only a few of the worst-performing locations will be discussed in more detail tonight. In the Summer AM peak hour, there were 10 of 37 locations with a Level of Service E or F. In the non-summer AM peak hour there was one additional failing intersection, so a total of 11 of 37 were failing. Since this additional location is near the vocational high school, Ms. Ostertog believes that school traffic has caused the 11th location to fail. In the summer PM peak hour, 15 of the 37 locations were failing. In the non-summer PM peak, this number drops slightly to 13 of 37 locations. During the summer Saturday peak, 16 of the 37 locations were failing and during the non-summer weekend peak, 12 of 37 locations were failing. Nine intersections were identified as year-round problems.

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Ms. Ostertog then moved into a discussion of the crash data analysis. Between 2010 and 2012, there were 82 crash locations reported to MassDOT; 17 of these locations are classified as Highway Safety Improvement Program (HSIP) High Crash Locations. Some of the high crash locations are also locations that have been identified as having high congestion and failing level of service, but others were not identified as failing intersections, so there is something else that is causing the high crash numbers. The Cape Cod Commission recently released their Cape-Wide 50 top crash locations list; five of the top 10 are within the study area and five of the top 50 also had a year-round failing level of service. The Bourne Rotary, Belmont Circle, Sandwich Road at Adams Street, Route 6A at Cranberry Highway/Sandwich Road, and Route 130 at Cotuit Road all are high crash locations with congested traffic patterns and failing year-round levels of service.

Ms. Ostertog then discussed other aspects of the transportation study. This includes transit use, pedestrians, and bicyclists. The Cape Cod Regional Transit Authority (CCRTA) has seen significant growth in its ridership over the last 25 years from fewer than 400,000 annual passengers between 1989 and 1994 to more than 1.2 million riders in 2014. The CCRTA has local bus routes in both Bourne and Sandwich (the Bourne Run and the Sandwich Line) and the Sea Line runs through both Bourne and Sandwich. In addition to the CCRTA service, there are several additional transit providers in the Study Area. The CCRTA and MBTA work together to offer the Cape Cod Flyer train service on summer weekends from Boston, the Plymouth and Brockton Bus Lines run several buses a day across both bridges, and Peter Pan Bus Line offers service in the area. The Cape Flyer started in 2013 with 15,000 riders during the 6-month period between May and October. Ridership levels in 2014 were 12,600 riders during the five month period of May to September. The Plymouth & Brockton Bus Lines has more than 1,200 daily riders crossing a bridge on weekdays in June, July, August, and September and nearly 1,000 riders crossing a bridge each weekday in May and October. There are 15 Park & Ride Lots on Cape Cod and just north of the canal. Three of them are in the Study area. The most heavily used is the lot at the Sagamore Bridge; that lot is more than 90% full almost every day.

There are off-road bicycle facilities both north and south of the Canal in Bourne and Sandwich and the Shining Sea bikeway in Falmouth. There are also designated on-road bicycle routes in the Study Area along Route 3A, Route 130, and Route 6A across the Sagamore Bridge but there is not a complete connection from the mainland to the Cape. There are envisioned bicycle facilities to provide greater access to and from Cape Cod, both adding facilities to the Bourne Bridge and throughout that area as well as finishing the connection from Route 3 across the Sagamore Bridge and to Route 6A.

Schedule and Next Steps

Ms. Ostertog then turned the presentation back over to Mr. Britland of MassDOT to review the schedule and next steps as well as to moderate the questions. Mr. Britland explained that he will review the study schedule and objectives to help attendees understand the process and set expectations of what will be coming further along in the study. The intent is not just to present the data, but to get information back from attendees. The study began in 2014 with Task 1 and is currently in Task 2. Parts of Task 3, understanding future conditions in preparation of developing the alternatives, will occur simultaneously with Task 2. However, once Task 2 is complete, the study will move into alternatives development. Following that, towards the end of 2015, the Study Team will begin formulating the recommendations. The Study Team will continue to have Working Group meetings and Public Meetings throughout the process to keep sharing where they are in the process and to get feedback from the

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public. The immediate next steps are to project and analyze 2035 no-build traffic volumes, complete the economics analysis, and begin considering the improvement alternatives. As an aside, Mr. Britland explained that the 2035 no-build traffic scenario has no bearing on an actual build date, but is used to ensure that any conceptual alternatives will continue to function into the future.

Questions

Mr. Britland then thanked Massachusetts Maritime Academy for their hospitality, opened the floor for questions, and asked members of the FST team to join him at the front, as he would defer most technical questions to them. He reminded the audience that this time is to provide feedback and comments on the material that was presented and discuss the Existing Conditions data.

A Sandwich resident asked if it would be possible to use the existing convoy road on Joint Base Cape Cod and existing haul roads for intra-canal travel to minimize traffic on the main roadways as an interim measure. Mr. Britland said that that option would be taken into consideration, but the fact that Joint Base Cape Cod is a closed facility limits options.

A Bourne resident asked what time period was used for the peak hours. In his experience as a former police officer, he found that morning traffic begins very early. Ms. Ostertog explained that every intersection is different, but they collected data from 7am – 9am. Each intersection where data was collected peaked somewhere between 7am and 9am. The resident suggested that the study team look at traffic counts beginning as early as 5am to capture the people who are leaving the Cape each day for work. Ms. Ostertog responded that they would look back at the 24-hour count data to see if any locations peak outside the 7am – 9am time period.

A resident from Falmouth spoke next with several comments. The first was in regard to the population data; the decreasing population indicates lesser need so he recommended the Study Team address and include the seasonal population since seasonal residents have a large impact on Cape Cod's overall population. The second is that large freight trucks create problems on the bridges and roadways. Lastly, the resident requested data on the bridges' reliability. As an example, he would like to know how frequently there are lane closures and what the anticipated bridge maintenance needs are. Mr. Britland responded that the Study Team is working with the Cape Cod Commission on future projections and how best to incorporate seasonal populations; the information presented this evening was based on past trends. The trucking data has been collected, but was not presented this evening. Truck traffic is also included in the modeling and will be included in the final report. Finally, the information on the bridges themselves has been compiled, but was not included this evening. Mr. Britland noted that far more data is collected than can be presented in one slideshow presentation.

A retired Civil Engineer asked about the origin-destination flow through the area's roadways, with a specific focus on Route 3 to Route 28 or from Route 25 to Route 6. Ms. Ostertog showed additional slides and indicated that origin-destination data was collected using BlueTOAD technology at the same times as the turning data was collected so the Study Team has volume data and origin-destination data for all seven days in both the summer and non-summer.

A member of the CCRTA indicated that he was speaking only for himself and that he had a series of comments he would send to Mr. Britland. He asked for the study to include information on an evacuation plan for Cape Cod that includes how the bridges factor into disaster preparedness. He mentioned that a major contributor to traffic on Cape Cod is the fact that all the weekly rentals begin

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and end at the same time and that weekend residents who own homes all stay as late as possible on Sundays. He indicated that addressing this would require working with the community to change attitudes and behaviors. Additionally, he asked if a new bridge would need to be as tall as the existing bridges. He thanked the Study Team for their work and noted that with so many impoverished people living on Cape Cod, it is important to remember that anything done in the Canal Area impacts the entire Cape. Mr. Britland explained that MEMA has an evacuation plan that allows the State Police to control traffic flow off Cape Cod. Mr. Britland indicated that it is his understanding that any project would require a Coast Guard permit and review which would set the bridge height. Mr. Britland explained that, yes, there are no EJ populations within the study area, but any project would impact EJ populations further out on the Cape.

A resident said it is very useful to have the study and asked that all residents talk about their ideas as much as possible and to speak out to ensure that a project is completed. Her concern is that bureaucratic processes delay solutions to problems and that nobody knows what condition the bridges are in and wonders if it is safe to be using them. She indicated that it is common practice in the United States to allow infrastructure to deteriorate and citizens need to press their local representatives to work with the federal government to repair bridges as soon as possible. Mr. Britland thanked her for her comments and said that the Army Corps of Engineers is in the process of completing a rehabilitation study that will assess the condition of the bridges. He also mentioned that the local delegations are all talking and working with the state and federal agencies to coordinate and share information.

A Chatham resident asked about the public outreach for the project because he thought that some of the meetings were not well advertised. He said that Down Cape residents need to be involved as traffic is not only a problem around the Canal. His concern about how well meetings are publicized is that people from Down Cape will come to meetings later in the process and will have missed their opportunity to participate in discussing the alternatives. He thanked the Study Team for the reminder email about this meeting and asked why an email was not sent about the Working Group meeting. He would like more information included on the website, for example, a list of who is on the Working Group and Working Group meeting notices. He would also like to know how Working Group members were selected and asked if emails could be sent when information is changed or added to the website. Mr. Britland explained that there are different tiers of public involvement. There are Public Informational Meetings, like tonight's meeting, and the Working Group is a separate level. The Working Group is comprised of town officials, elected town officials, regional officials, such as CCRTA and Cape Cod Commission, or organizational representatives such as the Chamber of Commerce. Mr. Britland explained that the Study Group works to keep a separation between the public meetings and Working Group meetings to reduce confusion. Mr. Britland thanked the resident for his suggestion of adding a list of who is on the Working Group to the project's website. The Chatham resident then asked where he could find the criteria for working group membership and Mr. Britland replied that it is in the MassDOT Public Involvement Plan.

A resident of North Falmouth commented that the bridges are very important to the residents of Martha's Vineyard and Nantucket in addition to the Cape Cod Residents and that it's critical that the bridges be operational. His question is who will ultimately be responsible for whatever is decided. Would it be the Army Corps of Engineers and when would they expect construction to begin? Mr. Britland said that all of that is currently unknown. As the projects go along, those conversations and discussions will take place to determine the best approach.

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The police chief in a Cape Cod community asked if the license plate data that MassDOT collects of vehicles crossing the bridges was used to determine the origin and destination of vehicles. Ms. Ostertog replied that the BlueTOAD software had been used to collect origin-destination data throughout the study area.

A member of a local Board of Selectmen said that he learned a lot about the larger area and thanked the Study Team for the comprehensive data. He said everyone spends a lot of time studying the data for their individual community, often without considering how it fits into the regional context. He also requested that the Study Team hold a follow up meeting with the Town Manager of Bourne. Mr. Britland thanked the attendee for coming and for his comments.

With no additional questions, Mr. Britland thanked attendees and closed the meeting.

Staff Attendees

Ethan Britland, MassDOT

Bill Reed, FST

Ed Hollinghead, FST

Michael Paiewonsky, FST

Heather Ostertog, FST

Emily Innes, The Cecil Group

Alison Leflore, The Cecil Group