



# TRANSITION PLAN FOR THE PUBLIC RIGHTS OF WAY

Americans with Disabilities Act/Section 504

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Office of Diversity and Civil Rights

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# I. OVERVIEW

The Americans with Disabilities Act (ADA) is a civil rights law mandating equal opportunity for individuals with disabilities. The ADA prohibits discrimination in access to jobs, public accommodations, government services, public transportation, and telecommunications. The Massachusetts Department of Transportation (MassDOT) is undertaking a comprehensive re-evaluation of its policies, programs, services and facilities to determine the extent to which individuals with disabilities may be restricted in their access to MassDOT's services and activities.

In October 1994, the former Executive Office of Transportation and Construction (the former EOTC, and now MassDOT), completed a self-evaluation form generated by the Commonwealth of Massachusetts to achieve compliance with Title II of the ADA. At that time, the role of the EOTC was administrative in nature and less involved with the substantive work of the former Massachusetts Highway Department (MassHighway). For this reason, EOTC's self-evaluation focused on functions within the core administrative duties of this Secretariat. This report also contained separate self-evaluations among each of the Highway, Aeronautics, and Registry of Motor Vehicles departments that were part of EOTC, reflecting access considerations within each entity's management of its operational obligations. The Rail and Transit Division was not represented within this report, however, at that time, the organization was primarily on grant authorization and administration, and limited in the degree of its public engagement. Additional reports were compiled for Massachusetts Port Authority and the Massachusetts Turnpike Authority. The MBTA was not included in this process because it was an authority outside of the Commonwealth of Massachusetts Executive Branch. After 2006, the MBTA has had in place an Office of Systemwide Accessibility that responds to accessibility issues within the authority.

The 1994 agency-wide survey included an outline of the organizations' programs and activities, an affirmation of agency understanding of the obligation to provide access under the ADA, and identification of the services provided to the public. At

that time, responsibility for ADA coordination was generally held by the senior Affirmative Action/Equal Employment Officer for a given agency, with overall coordination through EOTC's Civil Rights Officer. EOTC provided public notice of the intent to comply with the ADA and the availability a contact person through the agency, including a statement of policy that designated the Civil Rights Officer as the person designated to implement EOTC's nondiscrimination programs in employment and programs sponsored by the agency. Each of the transportation agencies identified ADA Coordinators with respect to the implementation of policy.

This self-evaluation effort by the EOTC and the Transportation agencies was intended to be responsive to both ADA and Commonwealth requirements for compliance. The overall responsibility for compliance was delegated to a highly placed person in the EOTC administration. ADA coordination responsibility was established in each Transportation agency and public notice was given. From 1994 to the creation of MassDOT in 2009, each agency fulfilled its requirement to provide access on a recurring basis, as requests for assistance were made.

In 2010, MassDOT revisited its self-evaluation and determined that the coordination of response on ADA matters was oriented more towards internal employment or employee related issues of access. On the Highway side, this coordination did not extend to establishing leadership to conduct and respond to more complete inventories of the Highway Division's assets, policies and procedures. The need for ADA related training and coordination beyond the Highway Division was also identified with regard to other MassDOT divisions, particularly including the Registry of Motor Vehicles.

Despite the gaps in establishing a more systematic approach, before and after the ADA was established, the former Executive Office of Transportation made meaningful efforts to assist people with disabilities in external matters, including support for access at public meetings, programs and activities across the agency, including responding to complaints. A strong indication of this focus is evident in the former MassHighway Project Development & Design Guide (2006), which emphasizes accessibility in the development of highway construction projects.

Through this self-evaluation, it also became clear that the policies and procedures underlying the obligation to comply with the ADA was in need of revision to better articulate and reflect the current state of the law and practice. The creation of MassDOT and this agency's emphasis on making cutting edge efforts to become the best transportation system in America has created an optimum backdrop for restating the MassDOT ADA/Section 504 Transition Plan.

MassDOT's Transition Plan for the Public Rights of Way ("Transition Plan" or ADA/Section 504 Transition Plan") will guide changes to planning and implementation of necessary programs, activities and facilities over the next several years. This Plan will expand on previous work and reflect the reality of MassDOT becoming a single transportation organization. Given the complexity and need for a deliberate effort to follow through on the agency's self-evaluation, this document sets forth all of the elements contemplated, and or completed to establish a final and executable multi-year transition plan. This work will recommit MassDOT to the cultivation and maintenance of policies, programs, and facilities that ensure equal access to all who work, reside in, or visit the Commonwealth of Massachusetts. This ADA/Section 504 Transition Plan will apply to all facilities based on their being open to and/or used by members of the public.

## **II. FEDERAL AND STATE ACCESSIBILITY REQUIREMENTS**

### **A. AMERICANS WITH DISABILITIES ACT**

The Americans with Disabilities Act (ADA) was enacted on July 26, 1990, and provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, and access to public accommodations, transportation, and telecommunications. The ADA is companion civil rights legislation to the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973. With respect to public entities, the ADA mandates that qualified disabled individuals shall not be excluded from participation in, denied the benefit of, or be subjected to discrimination under any program or activity. The Act also provides disabled employees with certain protections and requires employers to make reasonable accommodation for disabled applicants and employees. The ADA is divided into five parts, covering the following areas:

#### **i. TITLE I: EMPLOYMENT**

Employers, including governmental agencies such as the Massachusetts Department of Transportation (MassDOT), must ensure their practices do not discriminate against persons with disabilities in the application, hiring, advancement, training, compensation, discharge of an employee, or in other terms and conditions of employment.

#### **ii. TITLE II: PUBLIC SERVICES**

This title prohibits state and local governments from discriminating against persons with disabilities or from excluding participation in denying benefits or programs, services, or activities to persons with disabilities. It is under Title II that a “Self-Evaluation” is prepared. The Self-Evaluation is intended to outline programs, services, and the transportation-related facilities of MassDOT, and to evaluate what policies, procedures, or structural changes must be revised or



implemented to affect the non-discrimination policies contained in Title II. Several examples of MassDOT facilities which must provide public accommodation in accordance with ADA, regardless of funding source include but are not limited to the Registry of Motor Vehicles sites on the Massachusetts Turnpike, rest areas, public information centers, Park and Ride facilities, maintenance facilities (if applicable) and administrative buildings. The Self-Evaluation is also the precursor to the “Transition Plan (the Plan).”

### **iii. TITLE III: PUBLIC ACCOMMODATIONS**

Title III requires places of public accommodation to be accessible to and usable by persons with disabilities. The term “public accommodation” as used in the definition is often misinterpreted as only applying to public agencies, but the intent of the term is to refer to any privately funded and operated facility open to and/or used by the public.

### **iv. TITLE IV: TELECOMMUNICATIONS**

This title covers regulations regarding private telephone companies, and requires common carriers offering telephone services to the public to increase the availability of interstate and intrastate telecommunication relay services to individuals with hearing and speech impairments.

### **v. TITLE V: MISCELLANEOUS PROVISIONS**

Title V contains several miscellaneous regulations, including construction standards and practices, provisions for attorney fees, and technical assistance provisions. The Department of Justice’s [DOJ] established implementing regulations for Title II of the ADA which specify in relevant part that a public entity must evaluate its services, programs, policies, and practices to determine whether they are in compliance with the nondiscrimination requirements of ADA. See, 28 C.F.R. Sc. 35.105. The DOJ regulations were issued in July, 1991, and have been revised from time to time to reinforce the essential requirements of the law. These DOJ regulations mandate that each public entity is required to examine activities and services and identify problems that may limit accessibility for

persons with disabilities. The entity must then proceed to make the necessary changes resulting from the Self-Evaluation. The DOJ regulations implementing Title II of the ADA further require that a Transition Plan be prepared to describe any structural or physical changes required to make programs accessible. The MassDOT Transition Plan will be a companion to the MassDOT Self-Evaluation Plan; however it will be prepared in a separate document.

## **B. SECTION 504 OF THE REHABILITATION ACT OF 1973**

Section 504 of the Rehabilitation Act of 1973 (Section 504), 29 U.S.C. § 701 et seq., states, in relevant part, that:

“...no otherwise qualified individuals with a disability in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

This requirement applies to each recipient of Federal financial assistance from the United States Department of Transportation (USDOT) and to each program or activity that receives or benefits from such assistance. Each Federal agency has its own set of Section 504 regulations that apply to its own programs.

When a state agency is a primary recipient of federal financial assistance and extends such assistance to third parties, called subrecipients, the agency has both Section 504 compliance and oversight obligations. As a primary recipient of federal financial assistance, MassDOT must ensure that local public agencies and other subrecipients that receive federal financial aid through MassDOT follow Section 504 regulations. Requirements common to these regulations include reasonable accommodation for employees with disabilities; program accessibility, effective communications with people who have hearing or vision disabilities; and accessible new construction and alterations.

## **C. ADA AND SECTION 504 IMPLICATIONS FOR MASSDOT**

MassDOT must observe all requirements of ADA Title I in its employment practices; ADA Title II in its policies, programs, and services; parts of ADA Titles IV and V that apply to MassDOT and its programs, services, or facilities; and applicable requirements specified in the ADA Accessibility Guidelines (ADAAG), the proposed federal Public Right of Way Accessibility Guidelines (PROWAG) and other related federal policy statements that apply to facilities and other physical holdings.

To meet ADA obligations on internal (employee facing under ADA Title I) and external (public facing under ADA Title II) bases, MassDOT's Secretary of Transportation has designated the overall responsibility for ADA coordination and oversight to the Assistant Secretary for Civil Rights, Julian Tynes. Assistant Secretary Tynes has assigned the Manager of Federal Programs, John Lozada, the responsibility for management of ADA Title I and Title II coordination, and day to day responsibility to the ADA Title I Coordinator, Allan Motenko.

In terms of Highway engineering, overall ADA compliance responsibility rests with the Assistant Chief Engineer for Design, David Anderson. Assistant Chief Anderson has assigned day to day responsibility for oversight to the State Highway Design Engineer, Andrew Paul, and his staff. The State Highway Engineer's office also collaborates with the Manager of Federal Programs in the development of strategies and policies to ensure compliance with the ADA Transition Plan requirement. The State Highway Engineer's office provides final review on projects across the Commonwealth for ADA compliance, and consults with the individual highway district offices. Each of MassDOT's six district highway offices has assigned ADA coordination duties to a member of the district staff, and these individuals provide preliminary input and support on a project basis within the districts.

Title II of the ADA has the broadest impact on MassDOT, including administrative requirements that apply to all government entities employing more than fifty people. These administrative requirements include:

- Completion of a self-evaluation;
- Development of an ADA complaint procedure;
- Posting a notice of Nondiscrimination based on Disability
- Designation of a person responsible for overseeing Title II compliance; and
- Development of a transition plan if the self-evaluation identifies any structural modifications necessary for compliance. The transition plan must be retained for three years.

In accordance with Title VI, and Section 504 and their related implementing regulations MassDOT must submit signed assurances to the FHWA that it will not discriminate in the administration of its programs and activities. MassDOT must also secure, where applicable, similar assurances from its subrecipients. The assurances remind MassDOT and its subrecipients of their nondiscrimination obligations and provide a basis for the federal government to enforce compliance with the nondiscrimination laws. The subrecipient assurances generally appear in MassDOT's project-related documents.

## **D. COMMONWEALTH OF MASSACHUSETTS ACCESSIBILITY REQUIREMENTS**

The Massachusetts Architectural Access Board (MAAB) is a regulatory agency with the legislative mandate to develop and enforce regulations designed to make public buildings accessible to, functional for and safe for use by persons with disabilities. To carry out the board's mandate, the "Rules and Regulations", which appear in the code of Massachusetts Regulations as 521 CMR 1.00, have been developed and amended. These regulations are incorporated in the Massachusetts building code as a "specialized code", making them enforceable by all local and state building inspectors, as well as by the Board itself.

In assessing specific services, policies and practices and addressing the removal of physical barriers or the revision of policies and procedures, MassDOT must ensure compliance with applicable ADA and Section 504 regulations, including 49 C.F. R. Part 27 (Section 504), 28 C.F.R. Part 35 (ADA) and with the provisions of 521 CMR, the Accessibility regulations of the state of Massachusetts. Under state law, MassDOT must apply the more stringent of these standards to achieve accessibility.

By meeting the requirements of the ADA, Section 504 and the MAAB, MassDOT's Transition Plan will also satisfy many Commonwealth of Massachusetts agency level requirements for ensuring nondiscrimination and access for people with disabilities. Among the relevant Massachusetts laws and orders that MassDOT must comply with to ensure access for people with disabilities are: Article CXIV of the Massachusetts Constitution; M.G.L Chapters 93 § 103, 151B, 272 §§ 98 and 98A; and Massachusetts Executive Order 526. To the extent that state law may require that MassDOT take actions beyond what is required under the ADA or Section 504, MassDOT will take steps to meet such additional requirements as may be determined to exist now or in the future.

### **III. ADA/SECTION 504 WORKING GROUP; STRUCTURE AND PURPOSE**

#### **A. FORMATION OF SCOPE OF WORK, WORKING GROUP AND INTERDEPARTMENTAL COORDINATION**

In January 2011, MassDOT established an ADA Transition Plan Working Group (Working Group), to update and implement its plan for compliance with Title II of the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504), as well as related state statutory and regulatory provisions. This working group was created pursuant to an ADA/Section 504 Transition Plan Scope of Work that was drafted by the Working Group, and approved by the Federal Highway Administration (FHWA) to establish MassDOT's ADA/Section 504 Transition Plan. **Attachment 1**, ADA/Section 504 Transition Plan Scope of Work.

The structure of the Scope of Work was developed across several phases, with the first phase focused on the review of policies and practices with respect to its programs, services, and activities to determine the existence of any physical or communication barriers that limit full participation of persons with disabilities. MassDOT completed Phase 1 self-assessment activities in 2015, and has since been involved developing and implementing Phase 2 self-assessment and remediation activities.

#### **B. MASSDOT ADA/SECTION 504 WORKING GROUP CHARTER**

The MassDOT ADA Transition Plan Working Group will use technical, policy and legal expertise, as well as employee and stakeholder opinions, knowledge and

experience to assess, identify and improve access across MassDOT's services, policies and practices. The Working Group is envisioned as a proactive and engaged committee that will:

- Provide leadership and structure to MassDOT's efforts to ensure accessibility, consistent with our mission to become one transportation organization focused on customer service and safety.
- Identify and discuss critical issues that impact accessibility, where colleagues are welcome to help develop and recommend solutions for adoption and implementation within the MassDOT ADA/Section 504 Transition Plan.
- Ensure a process that respectfully takes into account the concerns and participation of the public in developing and implementing the ADA/Section 504 Transition Plan.
- Increase MassDOT's ability to provide access through enhancement to the agency's ADA/Section 504 Transition Plan that better reflects the legal and moral imperatives for accessibility across MassDOT's services, policies and practices.

## **C. OFFICIAL DESIGNATION OF TRANSITION PLAN COORDINATED LEADERSHIP**

MassDOT's ADA Transition Plan effort is co-chaired by David Anderson, Deputy Chief Engineer for Design and John Lozada, Manager of Federal Programs in MassDOT's Office of Diversity and Civil Rights. Mr. Anderson is responsible for directing Highway Division staff, dedicating resources in support of Transition Plan activities and endorsing policy determinations. Mr. Lozada coordinates logistics on the ADA Transition Plan Working Group, provides policy and research support, and documents activities, reports and Transition Plan documentation. Mr. Anderson was designated by the Highway Division Administrator and Chief Engineer, and Mr. Lozada was designated by the Secretary of Transportation and the Assistant Secretary for Civil Rights.

## D. DESCRIPTION OF WORKING GROUP

The Working Group's efforts are coordinated through a Core Group that includes a member of MassDOT's Office of General Counsel, a representative of the MBTA's Systemwide Accessibility department, MassDOT's Title VI Specialist, FHWA representatives (including Tina Lee, Civil Rights Specialist, who replaced David Chandler in December 2016, Joshua Grzegorzewski, Field Operation Team Leader in engineering), and the Massachusetts Office on Disability's (MOD) Director David D'Arcangelo. Mr. D'Arcangelo serves as the Working Group's technical advisor and sits on the Commonwealth's Architectural Access Board, bringing a state level policy perspective and understanding of federal requirements for ADA and Section 504 compliance. This Core Group develops Working Group meeting agendas, reviews proposed documents, discusses strategy, undertakes special initiatives, and directs implementation of Working Group decisions.

The Working Group met monthly throughout phase one activities, which began in January 2011, and has convened more strategically since the fall of 2015, as attention has turned to completing this Plan. The group includes all members of the Core Group, as well as representatives from key Highway units, Planning, Information Technology, the Registry of Motor Vehicles and MassDOT Shared Services unit. Meeting agendas and minutes were developed for each monthly discussion to structure the meetings and deliberations of the Working Group. Working Group meetings focused on subcommittee updates on progress implementing the Scope of Work and considering key issues and policy modifications to eliminate impediments to accessibility. This Working Group also served as a clearinghouse for information on ADA related matters that enhance our efforts across MassDOT departments, and will support community outreach efforts to seek support for the Transition Plan. **Attachment 2**, ADA Transition Plan Working Group Members.

We are currently restructuring the Working Group to focus on implementation activities, which will increase representation among central leadership, including design and construction, and district leadership, including among resident



engineers and ADA Coordinators. Once formed in early 2017, this group will resume a regular meeting schedule.

## **E. KEY WORKING GROUP ACCOMPLISHMENTS**

There were seven phase one subcommittees at the outset of meetings within the ADA/Section 504 Working Group, each having specific objectives to begin the effort to restate the ADA/Section 504 Transition Plan. The critical self-evaluation and remediation elements achieved from January 2011 to the present include the following, including:

- Identification of ADA Coordinator
- Draft and Dissemination of ADA/Section 504 Nondiscrimination Policy Statement and Grievance Procedures
- Revised standard drawings (Wheel chair ramp and Traffic related, including Work Zones)
- Established baseline data on intersections and sidewalks owned by MassDOT, for inventory, data analysis and prioritization purposes
- Revised Design and Construction Notes
- Incorporated Variance Process, as needed, for the Architectural Access Board into project development processes
- Established the Accessible Pedestrian Signal policy
- Completed statewide curb ramp assessment
- Completed pilot prioritization of failing and missing curb ramps across a Highway District, including design for remediation and alignment of ramps with existing or proposed projects, or by creating new projects
- Strategic use of Retrofit contracts for interim remediation of deficient ramps and intersections identified through consumer complaints or by district staff/managers
- Drafted Work Zone Access policy

- Established and implemented Accessible Public Meeting Policy and incorporated into Title VI Program documents
- Developed, revised and are actively implementing MassDOT's Public Participation Strategy for the ADA/Section 504 Transition Plan
- Developed and implemented new contract language that requires all electronic deliverables from consultants to be accessible
- Developed and adopted internal guidance for employees to help ensure that all website content meets Web Content Accessibility Guidelines 2.0 Level AA standards

## **F. POLICY RELATED ACHIEVEMENTS**

Other work has also been achieved that is not specifically required to restate MassDOT's ADA/Section 504 Transition Plan, but has significant meaning for the work going forward. For example, in January 2011, MassDOT's Working Group became aware that the Department of Justice was moving forward with establishing the Public Right of Way Accessibility Guidelines (PROWAG). As part of the process for establishing the state transportation standards applicable to the inventory of existing and needed curb ramps, MassDOT reviewed these proposed standards and made a comparison with existing standards under the ADAAG and relevant state Architectural Access provisions. Through this review process, MassDOT also provided comment to the Department of Justice in response to its Notice of Proposed Rulemaking on PROWAG, as well as recommendations to the state Architectural Access Board, which is currently revising its design standard regulation.

Similarly, MassDOT has consulted with other states based on our experience, we have developed training for municipalities and we have explored strategies for expanding the use of tools and resources we have created. We have also provided recommendations for the revision of the regulations for the Massachusetts Architectural Access Board, which were designed to ensure greater congruity between state standards, the ADA and PROWAG. We anticipate that MassDOT's recommendations and actions will encourage the approval of a more consistent set of accessibility standards in the right of way for

Massachusetts, where in the past conflicts or confusion resulted from different applicable standards being utilized between state and federal standards.

Based on the achievement of key Phase 1 self-evaluation activities and the resulting creation of critical policy statements and applicable standards, in 2013, MassDOT moved into Phase 2 inventory activities, starting with the curb ramp inventory that is expressly required by federal regulation. To achieve this inventory, MassDOT contracted with a consultant group to design a software format for collecting key data points on the curb ramps that exist or should exist across the properties owned by the Commonwealth of Massachusetts, discussed in detail below. This assessment ultimately yielded nearly 26,000 assessed existing or missing curb ramps and/or locations. This stage of the transition effort was coordinated by members of the Design and Standards committee who joined with other staff from Planning, Asset Management and Civil Rights to oversee the development of the tools and strategy needed to conduct a statewide curb ramp inventory.

## **G. OTHER ASSESSMENT ACHIEVEMENTS**

Other standing committees have worked through self-evaluation phases to develop and implement transition strategies that will support the overall Transition Plan. For example, within the Facilities - Programs, Services and Activities subcommittee, an effort was undertaken to identify and assess all of the buildings MassDOT owns or leases that invite the public to participate in programs or activities. This work involved the identification of the public facing facilities among roughly 940 buildings, some of which were merged into the transportation Shared for the first time with the creation of MassDOT, as described in detail below.

Ultimately, we have determined that a majority of MassDOT's facilities are not public facing, but serve operational needs, including maintenance, construction and research, and that the bulk of public facing activities occur in the six Highway district offices and MassDOT Headquarters. These facilities have all been subject to design processes and are now either constructed or in line for construction,

with proposed dates for moving forward. This committee has also worked to establish an inventory strategy that will focus on identifying and remediating accessibility issues from a program and activity standpoint, in collaboration with the Commonwealth's Division of Capital Asset Management and Maintenance (DCAMM).

As a further example, in the process of conducting assessment analyses, our team identified a series of recurring accessibility problems relating to information technology, including the failure to ensure accessibility in procurements, a recurring rejection of information from being added to the MassDOT website due to inaccessibility, and a lack of training on correctly using communications software such as the Microsoft Office suite to create accessible documents.

To address these challenges, MassDOT established an Electronic Communications subcommittee that is now deploying a series of strategies and policies that have been designed to address all three areas of concern. Critical components include policy work to establish contract requirements to ensure that contractors provide accessible documents and software, training for staff on document creation and web accessibility, and consultation on IT accessibility considerations within agency projects. This work is now being considered as a model for other Commonwealth and state agencies on accessibility in procurement, website development and maintenance and creating accessible documents. These efforts and those of related subcommittees are described in more detail within the section on Fixed Asset inventories.

MassDOT will consider establishing additional sub-committees to support the data collection, plan implementation and policy review efforts that extend beyond our current activities. As additional committees are needed, they will be formed and staffed appropriately.

## **H. MASSDOT DESIGN GUIDE, TECHNICAL INFEASIBILITY POLICY AND RELATIONSHIP TO ARCHITECTURAL ACCESS BOARD**

In 2006, the former MassHighway (now part of the MassDOT Highway Division) created a Project Development and Design Guide (Design Guide), which has three stated purposes:

- Ensure equal consideration of multimodal users of the right of way, including pedestrians, bicyclists and drivers, with a commitment to full compliance with state and federal accessibility standards for people with disabilities.
- Incorporate principles of Context Sensitive Design that would involve all constituents throughout project planning design and construction, to develop transportation facilities that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility for all users.
- Establish a clear and transparent project development and design process that can be administered consistently throughout the state. The ideal is a process that results in project consensus among constituents which can be expeditiously accomplished within reasonable project cost.

Source: MassDOT Design Guide, page 1-2, 3 (2006) (emphasis added).

The development of the design guide received input from the community of people with disabilities and the Massachusetts Office on Disability (MOD), and there are references throughout the document of the goal to seek compliance with both applicable ADA standards as well as Commonwealth of Massachusetts regulations for accessibility established by the Architectural Access Board (AAB). See, 521 C.M.R. (2006).

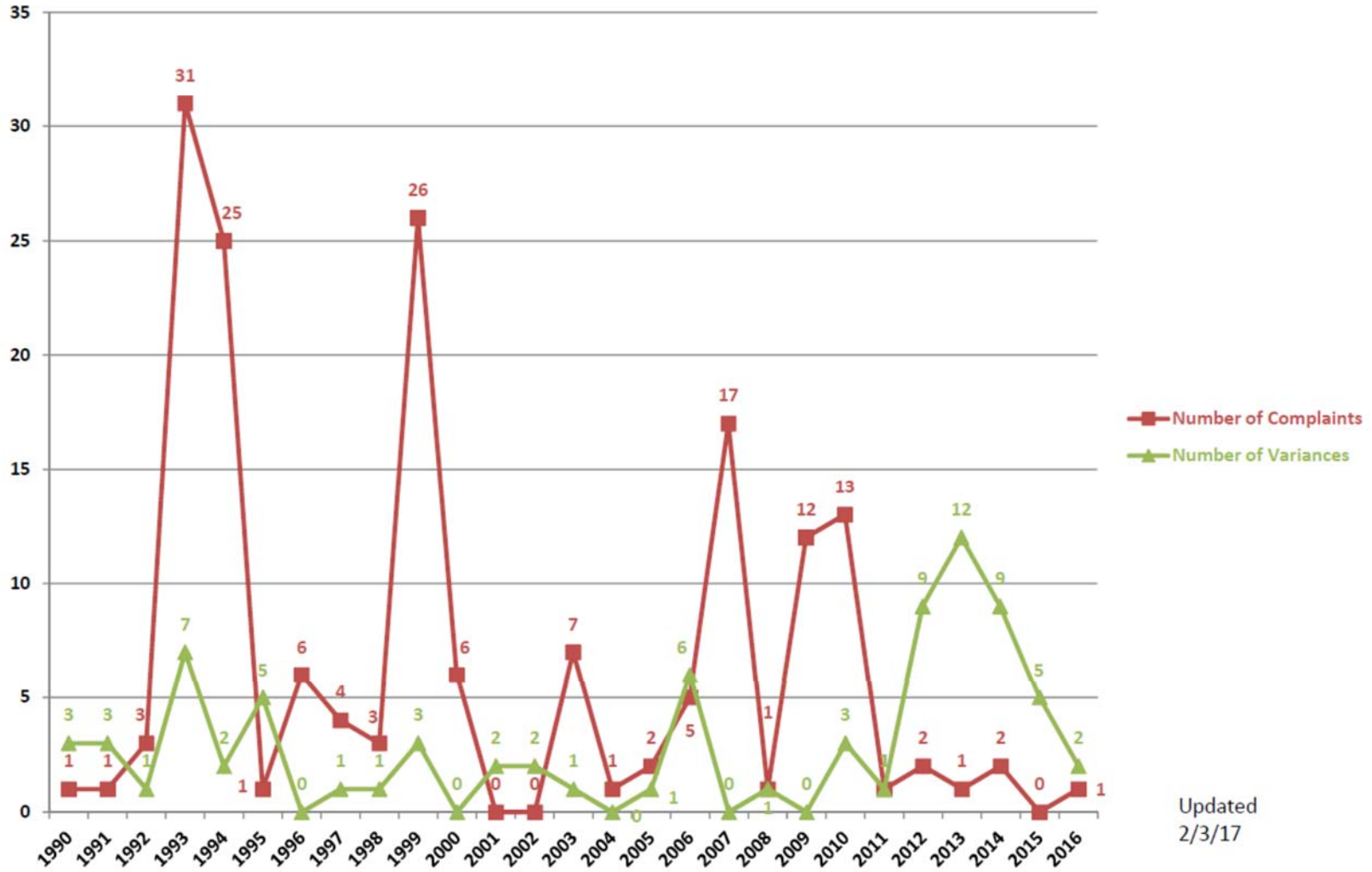
In 2011, MassDOT met with the Executive Director of the AAB to discuss the AAB's process, MassDOT's Transition Plan restatement and considerations pertaining to prior complaints received by the AAB. The result of this discussion

was that MassDOT has opted to take a more proactive approach to look at the variance process and give the AAB more advance and timely notice, whenever possible, of projects where AAB waiver approval is needed. Through discussions with AAB and actions of the Governor's office, state agency requests for variances have also been given a top priority over pending filings, which avoids concerns about delay due the need to file a request based on technical infeasibility. MassDOT has convened several meetings for agency Design staff to meet with the Director of the Architectural Access Board to respond to questions and encourage the use of the variance process in appropriate cases.

Based on data from the Architectural Barriers Board, there is clear evidence from mid-2011 to 2016 of a decline in complaints on accessibility involving MassDOT coupled with an increase in the number of variances that the agency has been granted. During this period, there were 38 variances sought and only 7 complaints on accessibility concerning MassDOT related projects filed with the AAB. See Figure 1, below. By contrast, from the period of 2006 to mid-2011, just after the ADA Working Group was formed, AAB data indicates that there were 42 complaints filed, with only five variances sought during this period. As this work progresses, we will define this data further to inquire into variances filed by municipalities on project matters being built through MassDOT's state and federal resources. MassDOT is also incorporating the purpose and importance of the variance process within municipal trainings we are conducting through our Local Technical Assistance Provider, Baystate Roads, to encourage such recourse in appropriate circumstances.

Figure 1:

### AAB Complaints and Variances involving MassDOT 1990-2016



Updated  
2/3/17

MassDOT and AAB leadership understand that unforeseen issues which arise during construction may sometimes make it difficult or impossible to provide more timely notice. MassDOT is committed to work up front on projects to make timely determinations on accessibility barriers so that such occasions are minimized.



## **IV. SELF EVALUATION – FIXED ASSETS, INCLUDING CURB RAMPS, SIDEWALKS, AND OTHER PROGRAMS, SERVICES AND ACTIVITIES**

### **A. CURB RAMPS AND SIDEWALKS – STANDARDS, METHODOLOGY AND PRIORITIZATION**

#### **i. OVERVIEW**

MassDOT has initiated and completed efforts to conduct a survey and inventory of all existing and/or missing agency-owned, operated, or maintained curb ramps or locations within the state public right-of-way (PROW) where pedestrian paths cross public roads. With the field study data collected, MassDOT has initiated the process of prioritizing curb ramps by the level of critical need for remediation and has now established funding and a Curb Ramp remediation schedule, consistent with to 28 CFR 35.105(d)(2) & 49 CFR 27.11(c)(2)(i-v); 28 CFR 35.151(e)(1)(2) & 49 CFR 27.75 (a)(2); ADAAG 4.29 & FHWA policy guidance (May 2002).

#### **ii. CURB RAMP ASSESSMENT**

In March 2012 the Highway Division issued MassDOT Engineering Directive E-12-005, providing revised, updated guidance on the design and construction of walks and wheelchair ramps. MassDOT has adopted a policy of applying the most conservative of accessibility standards as a baseline for accessible design requirements and in its determination of compliance, which was used to establish the agency's Engineering Directive. We further took notice of the proposed federal Right of Way Accessibility Guidelines as a best practice and have

incorporated reasoning from that draft policy into the standards that we have set for curb ramp compliance for access.

Between 2011 and 2013, MassDOT conducted preliminary discussions and deployed strategies to assess the feasibility of conducting a paper and pen survey versus an automated approach. We assessed the time factor in compiling data and converting it in-house for further use to be cost prohibitive and less accurate than desirable and determined that we would pursue an electronic data collection methodology. We then engaged a consulting firm which collaborated with our working group to design a technology based curb ramp collection system. In August 2013, a suite of software strategies had been established for purposes of assigning, recording and displaying curb ramp data. Starting in September 2013, we deployed contracted survey crews into the field to conduct the assessments of curb ramps within the MassDOT owned right of way across the Commonwealth.

### **a. BARRIERS IDENTIFIED – CURB RAMPS**

In July 2015, the curb cut assessment data collection activity was completed, yielding data on 25,675 existing and/or missing curb cuts. Of the total ramps surveyed, there are 6,289 that have been identified as failing ramps, either because of technical deficiencies on existing features or because the feature were missing from locations that required ramps. This data included failed or missing ramps that were considered under federal and state level requirements, including the Commonwealth's best practice of considering paths of travel as potential uses that could warrant treatment as a curb cut, absent technical infeasibility considerations.

To ensure accuracy in the data collected, MassDOT added certain features and took steps to review our data for quality control, including the following:

- Refinements of the Desktop Tool for Quality Assessment and Quality Control functionality
- Review of Collected Data - To facilitate the review of the curb cuts that have been assessed, MassDOT commissioned modifications to the Report Card application to allow for the viewing of curb ramps in groupings of

photo images. This approach allows for the identification of images to help identify ramps collected under snow conditions or where an image is blurred or depicts an obvious error as to a location that was collected.

- Incorporating Social Factor Components into the Analysis of Data Collected – During summer 2014, MassDOT’s ADA Transition Plan Working Group, and the Office of Transportation Planning, identified a series of GIS layers that reflect public uses, including schools, hospitals, transportation resources and the like. These “social factors” were rated in terms of priority as related to the uses most prominent in the state highway layout, and were incorporated into the MassDOT’s curb ramp Report Card to provide a measure against which the severity of curb ramp deficiency can be weighed. Unfortunately, this system did not provide the desired accuracy of social use assessments due to age and duplication deficiencies in the GIS data currently in place. We therefore resorted to an alternate means to match the technical deficiency score with social use considerations, as discussed below.
- Score Card Modifications – The scoring of curb cuts under the MassDOT model includes up to 23 data points that are measured and could be weighted to determine severity of deficiency. We determined this scale of analysis to be overly complex in terms of reaching a baseline understanding of ramp deficiency, especially where there are up to 10 types of ramps in the inventory we are creating. We also found that the large majority of ramps were either in the failing or in the passing categories, and that few were in the middle range of technical deficiency. We determined that many of the additional measurements are likely to be more helpful for highway design purposes, in terms of viewing locations more globally, and evaluating the measurements taken in light of topography and feasibility of compliant reconstruction.

Through collaboration with the Massachusetts Office on Disability, we isolated eight (8) key measurements that have critical importance in determining the deficiency of an individual curb ramp, and have enhanced the scoring system in the software suite to put more weight on these measurements. Through analysis of these specific metrics, we found that the key scores were the determinants of

whether a ramp remained in the passing or failing categories, which bore out the value to simplifying the scoring format.

MassDOT's overall review of the data collected indicated a strong level of reliability as to key measurements agreed upon with the MOD as critical determinants of accessibility. Nonetheless, we found several matters that warranted deeper attention, particularly involving the erroneous measurement of certain residential and commercial driveways. This error resulted from confusion at the field survey level in understanding related to the occasional commercial driveway used by malls or other locations that realize heavy pedestrian use. This concern was addressed through retraining on the limited circumstances where a driveway might have a critical public use that warranted assessment.

We also noted the difficulty of capturing and replicating consistent measurements on ramps built using bituminous concrete (asphalt). Through consultation with FHWA and MOD representatives, the team agreed that we would rely on the field measurement taken as the best measurement for compliance assessment purposes, as the structure of most asphalt ramps was found to render consistent replication of measurements nearly impossible.

## **b. PRELIMINARY SOCIAL FACTOR ASSESSMENT AND CURB RAMP PRIORITIZATION EFFORT**

In 2015, MassDOT determined it to be time and cost prohibitive to adequately structure the social factors we attempted to build as part of the Curb Ramp Assessment System software to properly project and blend social factor data with technical ramp deficiency data to prioritize the curb ramps. We therefore determined it necessary to adopt and implement an independent means for conducting the curb cut prioritization process.

In order to properly scale this effort for statewide purposes, we piloted the methodology in one district (Highway District 3), linking the prioritization and

design to the actual dollars usable for the remediation of deficient curb ramps. This effort was structured to be scalable across all of the Highway Districts, based on existing Retrofit dollars, but with an eye toward expansion once the Commonwealth's Capital Investment Plan was established in 2016.

### **c. HIGHWAY DISTRICT 3 PILOT PRIORITIZATION EFFORT – METHODOLOGY DEVELOPMENT**

In 2015, MassDOT engaged an engineering consulting firm to provide ADA curb ramp prioritization and design services, starting with Highway District 3 (sometimes referred to as "D3"), which is located in Central Massachusetts, under a two phased strategy. Phase I of the pilot project prioritized the District's deficient curb ramp list and generated a curb ramp schedule. Phase II of the project is currently underway and is focused on designing and advancing projects to construct ramps prescribed for remediation in the schedule from Phase I.

The prioritization of non-compliant and missing ramps provided a strategic starting point for District 3 within the ADA Transition Plan that incorporates the values and priorities of the District, MassDOT, FHWA, MOD, and the community.

To conduct this work, the consultant, Howard Stein Hudson (HSH), took the following steps:

- Exported data from the MassDOT curb ramp list from the Curb Ramp Inventory System,
- Performed a quality control check and cleaned inaccurate curb ramp data,
- Identified and gathered supporting data to be used for analysis including:
  - District 3 priority projects,
  - Environmental Justice / Title VI populations,
  - Public facilities, healthcare locations, transit stops and
  - Percent persons with disabilities,

- Performed prioritization analysis using the ActiveTrans Priority Tool, and
- Established a priority ranked curb ramp schedule.

To develop the analysis, our consultant worked with D3 Design staff to establish factors and weights that would govern the prioritization analysis. District 3 encompasses 77 towns and cities in the central part of Massachusetts. There are four regional planning agencies representing the cities and towns throughout District 3. Within District 3, the curb ramp list contained 830 curb ramps classified as non-compliant or missing. The consultant generated maps at the District level showing the top 200 ramp locations and impacts of the factors used in the analysis. The consultant also generated maps for each city and town in the District showing curb ramp rankings. The prioritization analysis maximized the value of limited infrastructure funds for remediation, by identifying and ranking facilities that would benefit the most from reconstruction.

## **USE AND SOCIAL FACTOR CONSIDERATIONS**

Many factors were considered in the District 3 prioritization process, including the amount of pedestrian traffic in the area, elderly and disabled populations, environmental justice populations, and proximity to destinations such as transit stops, schools, and post offices. In short, the ramps that will be utilized most frequently are typically going to be a priority. However, other factors must also be considered, such as equitable distribution throughout the entire district, and logical order for construction.

The overarching goal of the project was to provide a data driven and transparent schedule of non-compliant curb ramps to be reconstructed such that the project addresses ADA compliance while encompassing the values and priorities of the District and their constituency. In addition, this project has been configured to meet both the Federal Title VI requirement and the 4 Priorities for Prioritization requirement.

## **QUALITY CONTROL CHECK**

The contractor first performed a quality control check of the initial MassDOT non-compliant and missing curb ramp list to ensure that the ramp categorizations were correct. Ramps located on residential or commercial driveways were removed, leading to a removal of 157 of the initial 830 ramps.

Many factors were considered in the prioritization process, including the amount of pedestrian traffic in the area, elderly and disabled populations, environmental justice populations, and proximity to destinations such as transit stops, schools, and post offices. In short, the ramps that will be utilized most frequently are typically going to be a priority. However, other factors must also be considered, such as equitable distribution throughout the entire district, and logical order for construction.

A starting point for defining the applicable variables was based on the methodologies used in the National Cooperative Highway Research Program (NCHRP) Report 803: *Pedestrian and Bicycle Transportation along Existing Roads-ActiveTrans Priority Tool Guidebook* were followed. This tool allowed for a transparent process and the ability to weight analysis factors (1-10) based on the priorities of the District, FHWA and the Massachusetts Office of Disability (MOD). Each ramp is assessed manually or via Geographic Information System (GIS) analysis based on a number of factors and the given weighting, described below. The tool uses the data input to generate an overall ranking for each ramp location which is used to create the retrofit schedule. The following provides an overview of the factors assessed in the prioritization process.

## **PILOT ANALYSIS FACTORS AND WEIGHTS**

### *Persons with Disabilities (Weight 10)*

The persons with disabilities factor prioritizes ramps that serve greater concentrations of persons with disabilities. Data came from the American Community Survey and therefore is self-reported.

### *Safety (Weight 10)*

The safety factor considers the frequency of crashes near each ramp location from 2011 to 2013 involving a pedestrian, including those in wheelchairs. A pedestrian crash rate is also included to capture a measure of pedestrian traffic.

### *Equity/Title VI (Weight 9)*

This factor prioritizes ramps that are located within areas that exceed Environmental Justice/Title VI (EJ/Title VI) demographic thresholds. In this context, the number of overlapping EJ/Title VI variables warrants increasing the prioritization of the ramp location. The variables considered are: language isolation; elderly populations (over 75); households with no automobile ownership; minority populations; and low-income populations.

### *Demand/Federal Priorities (Weight 8)*

The demand factor prioritizes ramps presumed to have higher volumes of users. This factor prioritizes curb ramp locations with higher population density and proximity to services, including health care services, public services, schools, and transit (bus and commuter rail) stops.

### *Opportunities/Upcoming Projects (Weight 7)*

This factor looks to coordinate resurfacing and maintenance projects with ramp retrofits.

### *Stakeholder Input (Weight 6)*

Stakeholder input prioritizes ramps that have been identified through community comments and requests or that will be addressed through an adopted plan or approved list. Ramps located within the boundaries of pre-programmed projects are assigned a lower priority.



### *Ease of Construction (Weight 6)*

Ease of construction is included to maximize the contractor's ability to mobilize and construct multiple ramps at a time by prioritizing non-compliant curb ramps concentrated along a corridor.

### *Existing Conditions (Weight 5)*

This factor determines whether a curb ramp currently exists at the location where there is currently a sidewalk. Locations where no curb ramp is present are prioritized above existing ramps in need of retrofit. Curb ramp locations with existing sidewalks are of higher priority than curb ramps at locations with no other pedestrian facilities.

### *Constraints/Right of Way (Weight 4)*

The factor prioritizes locations with sufficient public right of way for ramp construction. This factor is weighted lowest out of the analysis factors because MassDOT did not want to discount an otherwise high priority location because permanent or temporary easements would be required.

These measures were tested and then finalized for use to perform prioritization analysis as the ActiveTrans Priority Tool, which allowed MassDOT establish a priority ranked curb ramp schedule. The overarching goal of the project was to provide a data driven and transparent schedule of non-compliant curb ramps to be reconstructed such that the project addresses ADA compliance while encompassing the values and priorities of the District and their constituency. In addition, this project was configured to meet both the Federal Title VI requirement and the four priorities for prioritization requirement.

## d. DISTRICT 3 REMEDIATION PRIORITIZATION PILOT

### PHASE 1: PRIORITIZATION OF RAMPS

Phase 1 prioritization activities took place during the fall and winter of 2015 to early 2016. This phase included performing data analyses to generate a prioritized list of failed curb ramps, and a prioritized curb ramp remediation schedule. The pilot list of the 200 most deficient curb ramps in District 3 are included in **Attachment 3**. Phase 2 activities involve the implementation process to correct the most highly ranked curb ramps, based on the prioritization strategy.

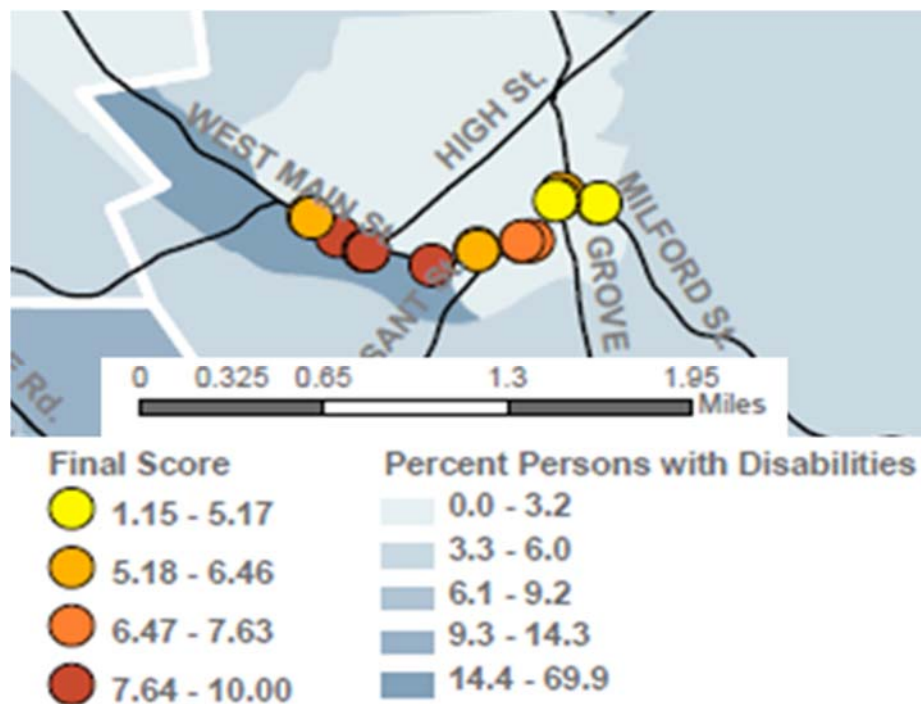
In the first phase of this process, the top 200 ranked ramps were identified to be investigated, surveyed, designed, and reconstructed as part of the second phase of this project, based on complexity of each intersection and/or the complication of the ramps. The working assumption is that funding will cover up to 170 ramps within this contract. Having the survey completed for an extra 30 ramps will provide a contingency should any of the top ramps prove to be unfeasible for a retrofit, and any unaddressed ramps in this group, as well as all remaining ramps, will be addressed upon the allocation of further funding for the work.

Conversely, it is understood that upon survey, MassDOT will exercise good engineering judgment where additional parallel locations or other proximately located ramps that are not on the schedule should be retrofitted (for example, within the same intersection) to achieve greater access, efficiencies and minimize need for second tier mobilization. The prioritization analysis and retrofit approach has been designed to maximize the value of limited infrastructure funds by identifying facilities where reconstruction would most meaningful access to the communities served.

The following two images provide locations that reflect considerations that helped to prioritize the most deficient ramps in District 3. In this example, several ramps were identified within the MassDOT highway jurisdiction in the Town of Upton, MA. Among the other scored values, as described above, there was weight attributed to the fact that the ramps are located in the center of town,

which is atypical for MassDOT owned curb ramps, where most are on the outskirts of towns or adjacent to highways (on-ramps and off-ramps). The location also reflected a significant level of pedestrian use, as well as a significant percentage of Persons with Disabilities living in proximity to the ramps, with reference to the 30.61 percent of people with disabilities in the relevant tracts, as self-reported to the American Community Survey. These combined factors resulted led to a higher scoring factor that resulted in these ramps becoming highly prioritized, consistent with the vision for this strategy.

Figure 2: Persons with Disabilities – Upton, MA

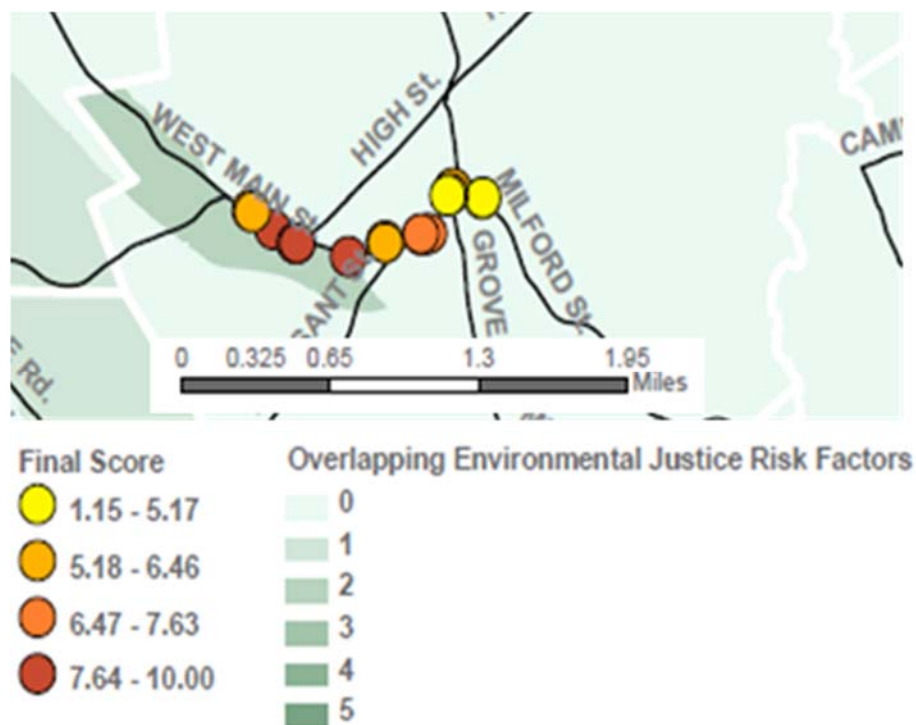


Additionally, this same location also achieved a priority ranking because the ramps are in an area defined as EJ/Title VI because of the percentage of the population who reflect some of the targeted elements of language isolation; elderly populations (over 75); households with no automobile ownership; minority populations; and low-income populations.

In the image below, the same tract that included a significant number of people with disabilities also reflects a high number of people who are identified as minority. Moreover, as it is detailed in the Prioritization list for District 3, there

are indications that the minority population is comprised of people over the age 75, and households with no autos.

Figure 3: Environmental Justice Populations – Upton, MA



We reviewed the balancing of the factors established to conduct this prioritization process, and are convinced that we are achieving priorities consistent with agreed upon elements that demonstrate the greatest need for curb ramp remediation.

## **PHASE 2: PILOT PRIORITIZATION AND PROJECT DESIGN** **APPROACH IN HIGHWAY DISTRICT 3**

This phase began in spring 2016 and will result in the creation of ADA Retrofit contract documents for MassDOT's D3 to advertise for construction during FY17. MassDOT's development of an overall plan for the reconstruction and/or remediation of deficient or missing curb ramps has evolved from the preliminary effort to prioritize the ramps in Highway District 3, under the standards referenced above.

Under MassDOT Project 607038 for D3 ADA Retrofits – at Various Locations, there is a total contract value of \$1.28 million to construct ADA deficient curb ramps. This effort has utilized consultant support to identify, design, and advertise for construction curb ramps on the priority ranked curb ramp remediation schedule until the estimated construction cost equals the total contract value. Using previous construction data, the estimated number of ramps is less than 200. This project is scheduled to begin construction in spring 2018. The remainder of the ramps on the curb ramp remediation schedule will be grouped together for projects to be advertised in future years.

As part of the prioritization process, it was necessary to determine how many ramps could be constructed under this project. Based on D3 experience with a similar curb ramp reconstruction project, our consultants assumed a unit cost of \$7,500 to construct each ramp. Dividing the total contract value by the unit cost equates to approximately 170 curb ramps. It was also found that ramps located in higher density population centers cost up to \$13,000 per ramp to reconstruct; this is important to note as it allows for the lower limit of the number of ramps to be reconstructed within a single contract.

Based on the possibility that it will not be feasible to immediately construct some of the most costly and complex ramps that have been prioritized, due to the spending constraints on presently allocated resources. However, our consultants have gone further to identify an additional 30 ramps to establish a total list of 200 of the most critically deficient ramps for remediation, to be investigated and surveyed as part of phase two of this project. These additional 30 ramps will provide a contingency should any of the top ramps prove to be cost prohibitive for a retrofit approach in our first fiscal allocation. Therefore, the results of this pilot effort includes a list and estimate for the top 200 prioritized ramps in D3, as well as a master list of all ramps in D3, ranked for design and construction under future contracts.

## **PROJECT DESIGN TIMING AND SEQUENCE CONSIDERATIONS**

Utilizing the prioritized ramp list, each location will be reviewed individually. The first review will be done using an internet based image search of the ramp locations to determine if there are any obvious obstructions surrounding the ramps such as, but not limited to curb ramps, traffic signal posts and foundations, catch basins and curb inlets, utility covers, trees and tree wells, fences and curbing and all other manmade features. This phase will take approximately two weeks.

From this initial review, MassDOT's consultant will then go into the field to establish project limits and focus the efforts of the survey crew. This work will also allow the consultant to review each location to get an initial idea of what improvements, upgrades, or installments need to take place per location. This phase will take approximately two to three weeks.

Once the consultant has marked locations, the topographic survey team, following MassDOT Survey Standards, will begin their survey work. These two efforts will be performed simultaneously. Once the survey crew has completed approximately one-third of the work, the results will be submitted to one of several consultant firms to perform the design. The consultants will review each location's layout and draw plans according to MassDOT highway standards. Each ramp will either be designed individually, as a part of an intersection or linear connection; once the ramp or clusters are designed it will allow the team to assign dollar value to each location, providing a clear understanding of what locations can be completed within a fiscal year.

The aforementioned package submittal process will allow the consultant to prepare its first submittal package and send it to MassDOT for review, at the same time the survey team should be sending the second set of surveyed ramps to the consultant so they can begin work on that set of ramp's designs. This staggered review process will continue until all available contract funds are allocated, and will begin again once the next round of funding is established.

Once the District has completed a list of the ramps that will be fixed in the upcoming years, the prioritization will help to forecast the next set of projects to be completed. It will help to show what locations will have Right of Way or Environmental permitting constraints which will be more costly and tend to require a significant amount of time, which will in turn dictate the overall schedule for future work to be projected for a given year. It is important to note that although this forecast is helpful to provide direction, each round of improvements will need to be examined through the previously mentioned steps to ensure what can be reconstructed in a given fiscal year.

### **e. EXPANDING CURB RAMP PRIORITIZATION STATEWIDE**

Our strategy is structured such that all of the MassDOT-owned ramps on the prioritized list, whether missing or failing, will be reconstructed and brought into compliance with current ADA/AAB standards over a fifteen year period, from 2017 to 2032. As there are limited funds available with which to construct these ramps, our prioritization method provides a transparent data set as to the total universe of ramps identified for reconstruction, coupled with justification for the ranking of each ramp. Based on the pilot effort with respect to District 3's top 200 curb ramps through our consultancy initiative, MassDOT further requested that the same consultant undertake the work associated with prioritizing the list of deficient and missing curb ramps in Districts 1, 2, 4, 5, and 6. The consultant has completed this prioritization for all MassDOT Highway Districts and has provided a package submittal template to the other Districts so that throughout the Commonwealth the review process will be consistent. Additional consultants have been engaged to conduct the design process, apart from District 1, which is doing its own design work. The results of this effort will provide MassDOT with a prioritized curb ramp list for each district that will link to available funds and generate a curb ramp remediation schedule, mirroring the effort undertaken in District 3. We have attached the curb ramp prioritization list statewide, by town, and by district at **Attachment 4**.

The expanded prioritization effort for each district will again include a quality check of the initial curb ramp data, given the lessons learned from reviewing the

assessed ramps in District 3. As the quality check is being performed on the data for a particular district, additional information will be collected from each district in order to coordinate the prioritization process. Such data will include a list of ramps constructed under previous contracts, TIP projects, priority locations, any locations where complaints have been received, locations of maintenance projects, and locations of permit projects.

This data, along with GIS data pertaining to safety, demand, pedestrians with disabilities, and environmental justice, was imported into the prioritization tool and used to create a prioritized curb ramp list for use by each district. Districts 1, 3, 4, 5, and 6 will be advertised by then end of MassDOT's fiscal calendar in September 2017. The current budget for the first five (5)-year cycle of remediation provides varying levels of financial resource based on relative need and prior progress to date, as discussed in detail below.

The schedule for each of these Districts allows for time to incorporate the prioritized list into their next ADA retrofit contract, and reflects considerations on prior dollars allocated per district during our preliminary retrofit activities. In order to meet contract advertisement dates without the risk of losing allocated funding for the first year of this effort, the FY 17 work will not include projects that are subject to Right of Way, Utility or Environmental constraints. These more complex curb ramps will be incorporated into FY 19 funded projects and thereafter. This limitation will ensure that MassDOT will be able to fully utilize available 2017 funds.

Thus far, District 2 is the first to implement the Prioritization List and advertise projects which include all possible constraints. The estimated total federal participating construction cost is \$939,715.60 and anticipated advertised date is February 2, 2019.

The design phase for each contract to be advertised is expected to take approximately nine months, with some of this time overlapping to support field survey work. Once all of the planning work is complete and the plans for the work are approved, the project will be ready to be advertised, which will take



approximately four months to bid, hire, and negotiate with the selected contractor. Once a Notice to Proceed has been issued the work under each contract is expected to take approximately two years, including delays for weather.

## **f. RELATIONSHIP OF RAMP PRIORITIZATION TO SIDEWALKS**

### **SIDEWALK SELF-EVALUATION EFFORTS**

As part of the Working Group self-evaluation process, in 2011, the Sidewalk subcommittee initially created a report entitled “MassDOT Sidewalk Analysis,” identifying the total miles of sidewalks and total miles by route number in each MassDOT Highway District. MassDOT - owned and maintained intersections and signalized intersections, with pedestrian phases, sidewalks, and crosswalks were also reported. **Attachment 5**, Sidewalk Analysis. As of 2011, our understanding was that of the roughly 1,100 miles of sidewalk that MassDOT owns, there had possibly been ADA compliant upgrades to 20% of the sidewalks.

Due to the original focus on the specific regulatory requirement assessing curb ramps, consideration to sidewalks to-date have been preliminary, and were not formally studied in this phase of our self-assessment activities.

As a general practice, MassDOT utilizes Geographic Information Systems (GIS) to track inventory and condition of transportation infrastructure. A key component of this strategy is the Massachusetts Road Inventory File. The file is a spatial representation of the theoretical centerline of the public (and the majority of the private) roadway system in Massachusetts, and includes information on classification, ownership, physical conditions, traffic volumes and pavement conditions. Sidewalk inventory is also maintained within the file.

The sidewalk inventory was refreshed in 2012, when MassDOT engaged design contractors to study our Video Log for the MassDOT right of way, and update several attributes along state including the sidewalk attributes. We are now

preparing to conduct another round of updates using Lidar or the new video log system and expect to get started during winter 2017. This assessment will include additional attribute data will be incorporated to identify obstructions, gaps, grates or openings, and significant changes in longitudinal slope.

To collect the additional attributes MassDOT is pursuing a strategy to utilize Lidar (light/radar) data recently collected for traffic sign inventory. Lidar data consists of a dense array of points, which in this case was collected in a mobile operation, and covers the entire state-owned road inventory. The point data was collected along with high definition photography, which when used in conjunction allow for desktop extraction of features, and the recording of precise measurements. A proof-of-concept for this approach is currently being devised, and it is expected that production work could begin in spring 2017, with initial estimates indicating three to six months of work.

Once the data has been collected, MassDOT envisions developing a condition index to incorporate all the attributes into a segment rating. A similar methodology is used to grade roadway pavement, the Pavement Serviceability Index (PSI), and provides the means to perform network level assessment. Once inaccessible or missing sidewalks have been identified, we envision using a similar methodology for prioritization as is in use for the curb ramp inventory. Moreover, once the sidewalk prioritization is complete, MassDOT will cross-reference this data to the existing curb ramp data to create an integrated priority strategy that links curb ramps and sidewalks for remediation.

Concurrently, the Commonwealth of Massachusetts is revising the State Building Code regulatory provisions enforced by the Architectural Access Board (AAB) to ensure greater consistency with Americans with Disability Act related standards. Part of this measure includes a new regulation requiring that efforts involving the remediation of curb ramps also address sidewalk deficiencies. This revision to the AAB regulations is currently in review with the Commonwealth's Office of Administration and Finance, and is pending public comment. As a state agency, MassDOT is bound to comply with this requirement, which will therefore cause to

consider the sidewalk attendant to curb ramps that we have prioritized for remediation, presuming this regulation modification is adopted.

MassDOT recognizes the essential interrelationship between remediating ramps and ensuring that sidewalks are also accessible, and has taken several steps to address consideration of sidewalks as related to the curb ramps in our right of way. These steps build upon prior efforts that MassDOT had undertaken to identify the extent of jurisdictional sidewalks in our right of way, and to incorporate sidewalk remediation into the ongoing roadway reconstruction cycle.

## **SIDEWALK ASSESSMENT AND REMEDIATION STRATEGY** **UNDER DEVELOPMENT**

MassDOT is working on a three-pronged approach to address sidewalk reconstruction for ADA compliance. First, MassDOT has been including sidewalk reconstruction with other projects (such as roadway resurfacing). It has been determined that it takes 20-30 years for an entire highway resurfacing cycle to take place, thus if agency resources allowed for the modification/rehabilitation of sidewalks in this way, the work would be done in 20-30 years. Once the evaluation of sidewalks needing reconstruction is complete, further steps will be taken to determine how this strategy can be coordinated, in whole or in part, with our need to integrate curb and sidewalk prioritization.

Second, given that some portion of sidewalks are actively used, while other portions are likely to have little or no use by the public, MassDOT will utilize the same logic from our Active Trans prioritization tool to identify areas of sidewalk where there is significant public use. These locations will be called out through a process that reflects the fundamental interdependence between sidewalks and curb ramps, the latter of which have started undergoing a sophisticated prioritization process through the ActiveTrans tool. We have a rough estimate that approximately 85% of MassDOT sidewalks have some level of public use. The Working Group will develop a prioritization matrix which will be shared for public comment through our Public Participation Plan, with the support of MOD, as a means to establish a format for structuring sidewalk rehabilitation under this

approach. We will also rely on research data from other MassDOT departments, including Journey to Work data and other related research.

Third, where there is particular concern raised by community members concerning the prioritization of a sidewalk under the first two approaches, MassDOT will develop a process which would allow low-priority projects to be “bumped” up the list via the operation of a request, supported by relevant evidence of need. It is envisioned that this is a process that could incorporate the support of metropolitan planning organizations and disability commissions across the Commonwealth for information on the worst sidewalks and need for reconstruction.

## **B. ASSESSMENT OF PROGRAMS, SERVICES AND ACTIVITIES**

MassDOT has conducted and is continuing to complete an assessment of public facing agency-owned, operated or maintained facilities, other than curb ramps, to determine if barriers exist that deny full access to any program, service, or activity housed within a facility, and to remediate these barriers as needed.

### **i. SELF-EVALUATION – PUBLIC FACING BUILDINGS AND OTHER FIXES STRUCTURES**

MassDOT has identified nearly 900 physical structures that are owned or managed by our agency. The large majority of these structures cannot be accessed by the public based on their purposes, which include sheds and storage facilities, such as for equipment and road salt.

In terms of the possibility that MassDOT employees or contractors with disabilities who work in these facilities may require accommodation to a disability, MassDOT addresses such matters under our ADA Title I obligation to provide reasonable accommodation to qualified individuals with a disability,

consistent with the requirements of state and federal law, as well as Commonwealth guidelines to Governor's Executive Order 526.

MassDOT has focused efforts and resources on surveying MassDOT facilities that offer programs, services and/or activities to the public to ensure they are accessible.

## **a. BREAKDOWN BY BUILDING TYPE**

The nearly 900 buildings owned and maintained by MassDOT –Highway Division have been listed according to Public Facing and Non-Public Facing uses generally as follows:

### **PUBLIC FACING**

- Administration Buildings
- EZ Pass Center(s)
- Full Service Plazas (Leased Sites)
- Rest Area Facilities (Restroom, Visitor Center Facilities)

### **NON PUBLIC FACING (EMPLOYEES ONLY)**

- Salt Storage Barns
- Maintenance Depots
- Maintenance Equipment Repair Garages
- Equipment and Material Storage
- Vent Buildings and Pump Stations
- Wash Bay Buildings
- Toll Support Buildings (35 to be removed with Automatic Electronic Tolling Systems (AETS))

## **b. BUILDING INVENTORY SUMMARY**

Through coordination between members of the ADA Transition Plan Working Group across ODCR, Highway Operations, General Services and the Office of the General Counsel, MassDOT tabulated the buildings that were public facing, with references to use, oversight and remediation considerations.

### **REST AREAS**

MassDOT operates 120 rest areas, some of which feature restrooms and vending machines, while some locations include visitor centers. Eighteen of these rest areas are also Service Plazas, many of which offer gas stations, food service vendors, and stores in addition to restrooms and vending machines. Much of this retail space is leased from MassDOT to private realtors who own the responsibility for ensuring access.

### **PARK AND RIDES**

MassDOT also operates 81 park and rides. Eight of the 81 are currently closed. The majority are operated by MassDOT but several are operated by other entities such as MassPort, which would be responsible for accessibility compliance.

### **DISTRICT OFFICES**

There are six district Highway offices across the Commonwealth, and one additional office that is identified as Headquarters. These offices serve primarily as employee space; however, programs/services such as public meetings, staff and vendor training, permit applications, visits by municipal, state and federal representatives occur at these locations.

In terms of remediation, MassDOT's strategy has been to first address the public facing uses with our six District Administration Buildings, which have the greatest volume of use directly relating to the programs, services and activities offered by our agency. Priorities have also been set on the basis of existing complaints by the public with respect to public facing programs and/or on known and reported employee-related accessibility issues. These reports indicate a level of actual or experienced needs at each location. Each MassDOT District has an active facility repair contract that can be utilized to respond to minor issues as they are reported at various locations. MassDOT also maintains a number of open-ended "House Doctor" contracts for Architectural Design Services through the Designer's Selection Board which may be used to address issues requiring design assistance as needed.

## **c. STATUS OF ADMINISTRATIVE BUILDING ASSESSMENT**

### **MASSDOT HEADQUARTERS**

The Sidewalk Replacement Project was approved with a March 1<sup>st</sup> start date. Scope addresses replacement of all perimeter sidewalks. Brick sidewalk will be replaced with concrete to improve accessibility and access from parking. The Building Entry Door Project was approved with a July 1<sup>st</sup> start date. This scope includes all three vestibule areas. Included in the scope is replacement of all automatic door openers and new ADA compliant glass doors. A Project has been approved and assigned to a DCAMM House Doctor for construction of an accessible gender-neutral toilet room with an estimated start date of April 1<sup>st</sup>. MassDOT has created an accessible space for Board meetings, including inductive coils and a state of the art assistive audio system, and will install additional coils along with upgraded audio visual equipment in the adjacent conference rooms during 2017.

### **DISTRICT 1 – LENOX**

Study has been completed on accessibility needs for all levels and rooms. Short term goal is to address employee issues and public areas on first floor (particularly

rest rooms). No elevator is proposed at this time. Next Phase of Project (design) is awaiting funding. Planning is toward a 2017 advertising date.

## **DISTRICT 2 – NORTHAMPTON**

Renovation completed in 2015 to address expansion needs. All public areas were addressed, including an elevator installation and front door related ramping.

## **DISTRICT 3 – WORCESTER**

Design of a new building is at 75%, with a new location planned for the building on Plantation Pkwy in Worcester. Anticipated construction date is between 2017-2019. Comprehensive ADA improvements will include an elevator.

## **DISTRICT 4 – ARLINGTON**

A new administration building design with comprehensive accessibility improvements is complete, but awaiting funding toward construction. An accessible employee elevator is proposed for non-public areas of the building.

## **DISTRICT 5 – TAUNTON**

A new administration building design with comprehensive accessibility improvements is complete but awaiting funding toward construction. Minor site interim site improvements have been performed. An employee elevator has been proposed for non-public area access.

## **DISTRICT 6 – BOSTON**

Renovation was completed in 2015. Comprehensive ADA improvements were included.



## **RESEARCH AND MATERIALS LABORATORY – HOPKINTON**

MassDOT has constructed an accessible facility designed for a staff of 70 that is used as office and laboratory space, featuring a one-story lab with a two-story section with offices. The lab tests materials used in the construction of roadways and bridges: pavement, concrete, paints, guardrails, steel rebars, and the like. Along with the lab and offices, there is an accessible conference room to support MassDOT training.

## **STATE POLICE BARRACKS – WESTON**

MassDOT has constructed a new police barracks on the Massachusetts Turnpike, with comprehensive accessibility features.

## **ADMINISTRATIVE OFFICE – WESTON**

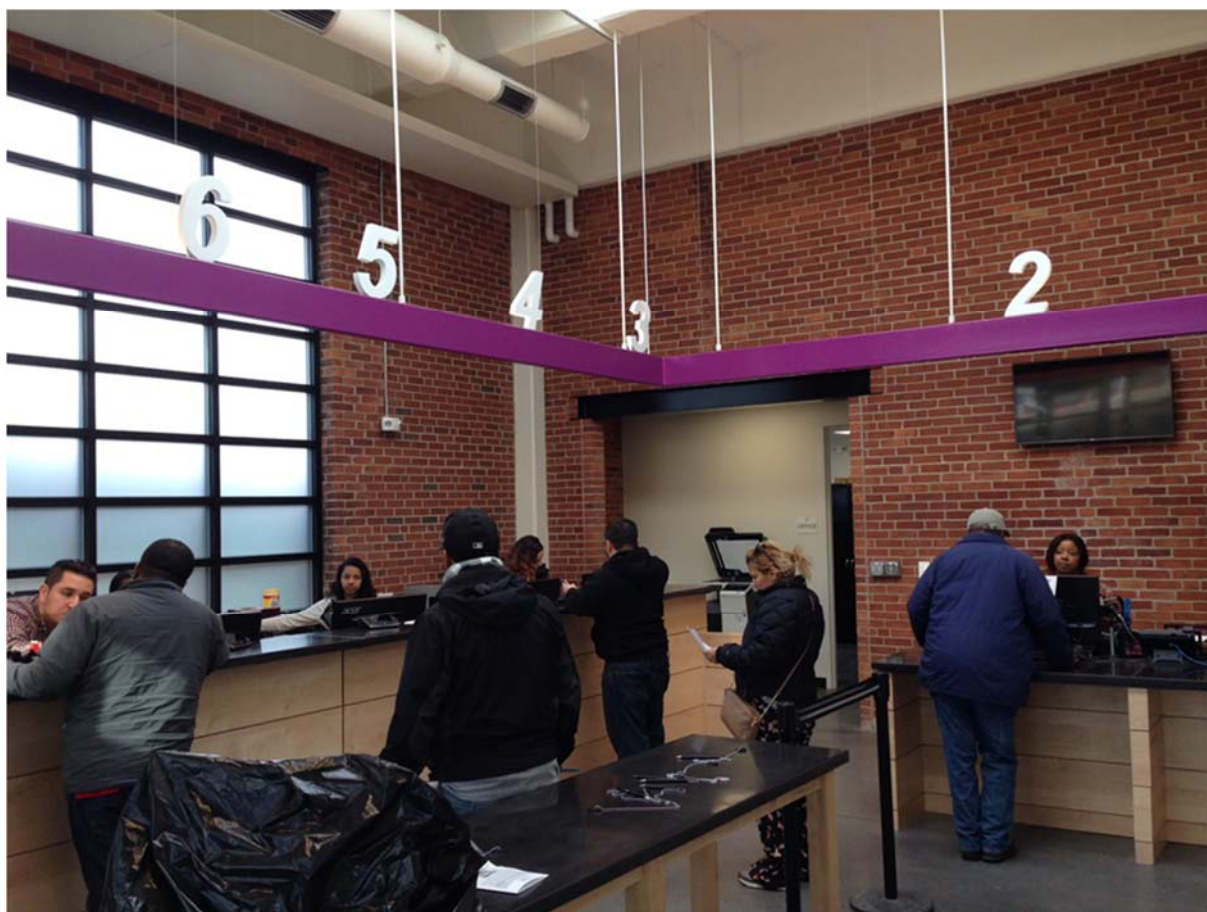
This location is used as office space with no public use. Accessibility matters are addressed under ADA Title I to address employee reasonable accommodation requests on a case by case basis.

### **d. EZ PASS CENTERS**

#### **EAST BOSTON – HAVRE STREET (ONLY EZ PASS LOCATION OWNED BY MASSDOT)**

Project to address accessibility issues was completed in October 2016. Second floor service desk area moved to ground level (storefront style entry). See Figure 4, below, for an image of the newly constructed facility.

Figure 4: Interior photograph of newly reconstructed Havre St. EZ Pass Service Center



## **OTHER EZ PASS CENTER LOCATIONS**

Are or will be leased sites provided by the service vendor with obligations to meet accessibility requirements in the lease contract language.

### **e. REST AREAS / VISITOR CENTERS**

The Commonwealth's Division of Capital Asset Management and Maintenance (DCAMM) is assisting the Highway Division by conducting Accessibility Audits of 14 Roadside Rest Areas/Visitor Centers which operate either on an annual or seasonal basis. These audits will become the basis for future projects to improve the interiors and exteriors of these facilities. MassDOT will prioritize locations

based upon usage and severity of access issues. MassDOT has active open ended facility repair contracts that can be utilized to respond to minor issues as locations require.

## **f. SERVICE PLAZAS / LEASED SITES**

The Commonwealth's Division of Capital Asset Management and Maintenance (DCAMM) is assisting the Highway Division by conducting Accessibility Audits of 18 Service Plazas which operate under leases held by 3rd party vendors. These audits will become the basis of reviews of lessee's compliance with current lease terms with respect to providing and maintaining accessibility. Each lease location will be reviewed for specific language regarding ownership of building and site accessibility issues.

## **g. BUS STOPS**

MassDOT is taking a two-pronged approach that is similar to the methodology and efforts used to remediate curb ramps. Currently, on order from a previous Administrator, MassDOT is remediating bus stops in our right of way in the context of roadway projects, similar to has been done with regard to curb ramps and sidewalks on such projects. With respect to creating a more systemic assessment of the bus stops in our right of way, MassDOT has funded the creation of a software solution for a major bus stop assessment, called the Plan for Accessible Transit Infrastructure, by the Massachusetts Bay Transportation Authority, which is currently in use to assess the MBTA's roughly 8,000 bus stops across its service area. This assessment work commenced in early 2016 and the completed survey of bus stops is expected in the first quarter of 2017. To date, 7,588 individual stops have been surveyed. Upon completion of field work, MBTA staff will announce a proposed strategy for prioritizing remediation projects as well as a funding projection in early 2018. The prioritization methodology includes input from MBTA's service planning staff. Upon completion of the bus stop assessment, the MBTA will survey subway and commuter rail stations for accessibility, as well.

It is our intention to adapt that tool for use by MassDOT following the MBTA's successful deployment of this resource, which will give us a more solid means of recording the data, making modifications and incorporating the results of assessment and remediation into our asset management infrastructure. We have attached a recent board presentation from Systemwide Accessibility on the progress of this project for reference, under **Attachment 6**.

## **h. MIXED USE TRAILS**

In Massachusetts, the vast majority of park lands and trails are within the jurisdiction of the Commonwealth's Department of Recreation and Conservation (DCR), which provides a range of oversight including the provision of services designed to provide access to persons with disabilities. MassDOT works with DCR as well as with public and private entities to design and construct mixed use trails with respect to state, municipal and/or privately owned land.

To help ensure accessibility in all such facilities, the MassDOT Project Development and Design Guide (Guidebook), includes provisions governing the creation of trails, including accessibility considerations. A relevant portion of the Guidebook, Chapter 11, Shared Use Paths and Greenways, is included as **Attachment 7**. These guidelines apply in all MassDOT funded or supported trail design and construction initiatives.

MassDOT owns over 50 trails within its jurisdiction and these facilities have been designed for accessibility, according to MassDOT Project Management and Office of Transportation Planning leadership.

## **ii. ASSESSMENT METHODOLOGY**

In 2013, MassDOT conducted discussions on its plan to capture and categorize its inventory of facilities with the Commonwealth's former Universal Access Committee (UAC) and the Division of Capital Asset Management and Maintenance (DCAMM). These groups had developed a means of updating

agency transition plans by assessing the accessibility of facilities owned or operated by the Commonwealth. The method adopted focused on evaluating a person's access to the programs, services and activities offered at that facility, as opposed to every aspect of the facility's built environment. For example, an assessment that revealed public meetings were being held on the second floor of a building without an elevator would likely focus on ways to relocate the meeting space to ground level, as opposed to installing an elevator. This approach was designed to expand the scope of the total number of significant barriers to be addressed by strategically using resources on a larger number of facilities.

MassDOT adopted this method of assessing facilities for the purposes of this transition plan, and consulted positively with FHWA on the reasonableness of this approach.

### **iii. REMEDIATION**

The inventory will identify both the extent of need for remediation and the number of facilities that require attention on a priority basis, using the factor of public use as a major criterion. Any identified need will be funded from a combination of sources identified to address needed remediation between the Commonwealth, Facilities and Highway resources.

## **V. OTHER ADA REQUIREMENTS**

### **A. PUBLIC ENGAGEMENT / INSPECTION OF PLAN**

*Regulatory Reference: 28 CFR 35.150(d)(1) & 49 CFR 27.11 (c )(2)*

The results of the Curb Ramp assessment were completed during the summer of 2015, with the prioritization and layout of potential projects currently under development within a portion of the total ramps assessed in District 3. During 2015, as the strategy for prioritization was being developed, MassDOT reviewed its Public Participation strategy for the Transition Plan to ensure a systematic public process to inform the public of the results of our assessment and to seek comment.

Generally, the approach will be similar to that taken with the introduction of the interim Transition Plan in 2013, including direct meetings with key disability community leaders across the Commonwealth, along with electronic mailings of the results of the assessment and prioritization scheme and an outline of the budget strategy. However, based on the emphasis toward district specific prioritization and remediation scheduling, we will conduct meetings in each Highway district to introduce and accept feedback on the Transition Plan. An electronic portal will be created in the MassDOT public facing website for the Transition Plan to allow for e-mail responses to the Working Group, with links to TTY, mail and phone options included.

Between 2015 and 2016, MassDOT gave substantive presentations to the following statewide organizations on the ADA and our Transition Plan efforts:

- Massachusetts Statewide Independent Living Center Conference
- MassDOT “Moving Together” conference
- Presentation to the Access Advisory Committee to the MBTA
- Baystate Roads Training Workshop “Strategic Municipal ADA Planning”

- Massachusetts Office on Disability – Massachusetts Disability Summit – Presentation on Title V of ADA and introduction to ADA Transition Plan
- MassDOT – Statewide Innovation Conference – demonstration of Curb Ramp tool and data

Throughout the process of the ADA Transition Plan’s development, MassDOT’s ADA Working Group has continually invited and reached out to groups and individuals to present and discuss the Transition Plan effort. For example, in the process of developing our Plan, members of our Working Group reached out, shared information and/or collaborated with the following internal and external groups and individuals in connection with the ADA Transition Plan:

- Massachusetts Rehabilitation Commission – Annual Consumer Conference (demonstration of Curb Ramp Assessment software, with supporting documentation of relevant data)
- Carroll Center for the Blind (community initiative to introduce ADA Transition Plan and secure community input on design strategies)
- Judge Patrick King, Independent Monitor, MBTA (introduction of curb ramp tool and ADA Transition Plan for technology adoption by MBTA)
- Paul Spooner, Executive Director, MetroWest ILC;
- Steve Higgins, Executive Director, Independence Associates Center for Independent Living
- Michael Muehe, Executive Director, Cambridge Commission for Persons with Disabilities;
- Carl Richardson, ADA Coordinator, Commonwealth of Massachusetts, State House
- Kristen McCosh, Commissioner, City of Boston, Commission for Persons with Disabilities
- Thomas P, Hopkins, Executive Director, Massachusetts Architectural Access Board (AAB);

- Sarah Bourne, Assistive Technology Director and Mass.Gov Chief Technology Strategist, Comm. of Massachusetts Information Technology (MassIT)
- Jabes Rojas, Deputy Chief, Office of the Governor, Office of Access and Opportunity
- Massachusetts Office on Disability
- Massachusetts Statewide Independent Living Council
- Massachusetts Metropolitan Planning Organizations - Transportation Managers Group

MassDOT Working Group representatives also attended the following events and seminars, and/or offered presentation related to accessibility matters that impact our work:

- 2013-16 Annual Statewide Independent Living Conferences
- Cities for All: A Universal Design Colloquium (MIT sponsored)
- 2014 and 2015 City of Boston Access Summit
- Disability Policy Consortium Annual Dinner
- Massachusetts Office on Disability Webinars on Web Access and Reasonable Accommodation
- Baystate Roads Conference – Designing Pedestrian Facilities for Access
- Access Advisory Committee to the MBTA (presentations on self-assessment effort) - 2015
- Massachusetts Registry of Motor Vehicles (presentation on ADA self-assessment) - 2015
- American Council of Engineering Companies of Massachusetts (presentations on MassDOT's ADA self-assessment and electronic communications – 2014 and 2015)
- Massachusetts Regional Planning Agencies (presentation on accessible electronic communications and MPO accessibility obligations) – 2014; presentation on Title I ADA Obligations (2015)



During late 2016 and early 2017, when all locations across the Commonwealth will have been prioritized and the process for design is well underway, we will plan and initiate a second outreach round to further provide an opportunity for public comment, using the same approaches, with a more diverse set of meeting locations to provide a greater statewide presence. This approach will continue to rely on the public presentations that we have made at statewide conferences.

## **B. COMMENTS RECEIVED**

MassDOT has established and implemented a multifaceted public engagement process from the beginning of our efforts in 2011 to the present to ensure public participation and comment that has encompassed our work from assessment through prioritization and remediation efforts. We structured this work across three principal phases: 1) Introduction of the effort to establish a plan; 2) Dissemination of the Interim Plan and 3) Plan Updates and Assessment Results.

The work we have done has been centered on ensuring a primary focus on regular engagement with groups and individuals representing people with disabilities. To this end, we have utilized the Commonwealth's strong infrastructure of state level disability commissions, Independent Living Centers, municipal Disability Commissions and nonprofit organizations serving people with disabilities. Central to all of this work has been the Massachusetts Office on Disability, which has supported our outreach work through information and counsel regarding meetings, conferences, key community leaders and organizations with which MassDOT should share information and provide public comment opportunities. Relative to input received, MassDOT is retaining records of comments received and responses thereto, consistent with FHWA requirements. From 2011 to 2013, the principal focus was on introducing the ADA Transition Plan Working Group and Subcommittees and seeking to meet with leadership for each independent living center and the active municipal disability commissions in the Commonwealth. The meetings we conducted were structured through agendas that included an opportunity for the organizations to introduce themselves, a presentation on the MassDOT strategic approach to the Plan, including the

identification of assigned staff and resources that were allocated to conducting the assessment and developing a Plan. These meetings were captured via notes, and were then followed up on either directly by the Manager of Federal Programs, the Deputy Chief Engineer for Design, the MassDOT Title VI Specialist or through discussions within the ADA Transition Plan Working Group meetings.

The key questions that were repeatedly asked, apart from individual location or generalized barrier concerns which we provide a sample of below, included the following:

Question: Would there be an opportunity for public comment?

Response: There will be multiple opportunities for comment, online, at meetings and through direct communication with staff.

Question: Would there be employment opportunities for people with disabilities to support the work?

Response: We were trying to pursue such opportunities, particularly around the assessment of the curb ramp work, but had concerns about safety and insurance considerations that made it difficult to establish such a commitment.

Question: Could a community based advisory group be established to support the Transition Plan work?

Response: We were trying to establish such a group, but the combination of work efforts to develop the internal Working Group and deploy the resources to conduct the assessments made this coordination problematic. There were also logistics on bringing people from across the state together without funding to support travel, meals and the like. We would instead opt for reaching out across the state in several ways over time and try to make sure that we reached many different groups with

interest in the Transition Plan work, and then reconsider an advisory group structure once we had a plan in place.

A sample of the project or barrier specific question responded to from these meetings included the following:

- Concern: The trash cans at the Turnpike rest areas were being placed in locations that blocked the accessible path of travel (from AdLib, Inc.- Independent Living Center)
- Response: Deputy Chief Engineer engaged the Turnpike Service staff to reposition and/or replace, as needed, all trash cans across the Turnpike and provide instruction to staff on maintaining these services in an accessible manner
- Concern: A portion of curb ramps on a corridor under construction appeared to be constructed out of compliance with ADA/AAB requirements (AdLib, Inc., site location - Lenox, MA)
- Response: The Federal Highway Administration (FHWA) and MassDOT staff revisited the location and made determinations as to whether modifications were needed to address any deficiencies at the site

Other comments during this phase concerned a number of municipal based issues that were not within MassDOT's jurisdiction, questions about the MBTA and accessibility and a smattering of questions about other modes of transportation. Each of these questions was addressed via clarification, referral to the proper authority and/or substantive response, as possible, on the underlying matter. This period involved a great deal of clarification about the role and structure of MassDOT Highway on ADA compliance matters as compared to other modes of transportation, which helped to eliminate a great deal of confusion.

From 2013 to 2015, upon the creation of the interim ADA Transition Plan and the decision to reallocate funding in an effort toward early curb ramp remediation, MassDOT undertook a multifaceted approach to share the Plan document with the public and meet with key community groups and individuals to seek approval and/or comment on the preliminary remediation effort. This round included e-mailing over 3,600 addresses with links to the Plan document and attachments via GovDelivery, as well as creating a web page dedicated to the Transition Plan document, a page which provided instructions contact information to facilitate comment. This step followed up on an outreach strategy across the Commonwealth to ask community groups if there were specific locations they might identify that were of particular concern. We conducted a second round of meetings to share the Plan document with Independent Living Centers and Disability Commissions, while also beginning to accept opportunities to present at conferences and other community meetings, as outlined in the summary of groups contacted. During this stage, MassDOT was also in the process of finalizing its work on the creation of a data collection tool for the curb ramp assessment effort, so some of the discussion focused on this strategy as well.

The most focused questions and comments received can be characterized as follows:

General Concern: Regarding MassDOT's request for assistance in identifying curb ramps for remediation, there was confusion and concern in the community that MassDOT was asking local groups of people with disabilities to conduct assessments, as opposed to only identifying locations that were particularly problematic from a pedestrian perspective in the community or regions approached

Response: MassDOT clarified that we were committed to conducting a systematic assessment of the entire state jurisdictional layout to identify deficiencies, including through a major IT investment and field deployment of surveyors for the assessment, and that we were only looking for suggestions from the community on places that they felt posed significant barriers to access. We further explained that based on the confusion, we turned to the District Highway office

leaders and requested that they make this early identification, though we would still welcome community recommendations.

Question: Could the tool for the data collection effort be used by municipalities?

Response: We are working through the use of the tool and the potential for it to be adapted for use by municipalities, but MassDOT has not yet worked through the entire process, from collection through recording remediated ramps. With these steps in place, it would be possible to address the potential for extending the use through this tool or a similar resource to municipalities. (Note: We have determined that the IT solution for MassDOT might require too much administrative support for municipal use, thus we are looking to a smaller scale option based on our lessons learned).

Question: Could the curb ramp assessment tool and results of the assessment, as well as the remediation of ramps, be downloaded or otherwise used to support wayfinding for people with disabilities?

Response: The IT infrastructure for the tool did not allow for transfer to an application-based solution, however, the data that has been collected in a database that can be downloaded and incorporated into GIS mapping platforms that would facilitate use for other purposes. The major difficulty with this use, however, is that the state highway layout is not often centered in cities and towns, but on the outskirts and adjacent to highways, so that the wayfinding function would only be of significant benefit if it were connected to real-time ADA curb ramp assessment and/or remediation data at the municipal level.

Concern: The format of the PDFs on MassDOT's website concerning the Interim ADA Transition Plan are not accessible to certain people with vision related disabilities.

Response: MassDOT remediated the inaccessible PDF document, but went further to establish an Electronic Communications subcommittee to the ADA Transition Plan Working Group that has been looking systemically at accessibility across technology based communications.

This series of meetings and presentations again drew in a number of questions regarding problems at specific locations, as well as matters concerning other modes, including the Registry of Motor Vehicles (RMV). We noted during these meetings that the RMV was poised to conduct a full assessment of its branches, and that in collaboration with the Office of Diversity and Civil Rights we would be establishing a Transition Plan for the RMV.

In fall of 2015, the results of the curb ramp assessment were received, and formed the basis for a series of community meetings during 2016 that presented the results of the survey work and the strategy for moving into remediation, including highlights on remediation work conducted to date. The comments received in these contexts consistently included indications of support for our efforts, and anticipation of the work moving to prioritization and remediation. Now that we have established the full picture on the curb ramp prioritization, remediation schedule and financing, the next series of presentations will provide a comprehensive strategy to achieve accessible curb ramps over the next 15 year.

The work of engaging with the community across the Commonwealth in a consistent and multifaceted basis over several years has resulted in public understanding about MassDOT's efforts and vision for accessibility in ways that has produced good relationships, trust and fluid conversations. We believe that the next round of conversations on the remediation effort will provide a great opportunity to ensure that our priorities are consistent with community concerns and that our contribution to increased access is clear.

## C. SELF-EVALUATION OF POLICIES AND METHODOLOGIES

*Regulatory Reference: 28 CFR 35.150(d) & 49 CFR 27.11; 28 CFR 35.150(d)(3)*

In 2011, the creation of the ADA Transition Plan Working Group led to MassDOT initiating a range of self-evaluation efforts. The approach utilized took the following form:

- Identifying applicable MassDOT standards to utilize in the assessment process, and where necessary, revising such standards to reflect current legal requirements.
- Strategizing through subcommittees and the Working Group to establish the parameters of the substantive areas to be assessed.
- Developing an approach, based on the information collected to conduct the self-assessment, including the identification of such data as will be determinative of compliance or deficiencies.
- Consultation with FHWA representatives and the Massachusetts Office on Disability to confirm that the strategic approach developed was sound and consistent with applicable regulatory provisions
- Implementing the strategy and collecting the requisite data
- Analyzing the data that was collected and prioritizing the deficiencies identified, consistent with such factors as critical nature of the program or activity, population density, severity of the deficiency and other factors to be determined)

Most of the self-evaluation effort conducted took this strategic approach, and where applicable, MassDOT also completed checklists recommended by the United States Department of Justice to affirm ADA compliance or identify areas of noncompliance.

## **i. SELF-EVALUATION OF RELEVANT POLICIES**

### **a. FULFILLING ADMINISTRATIVE PROGRAM REQUIREMENTS OF THE ADA**

The Policy subcommittee determined that there was a need to revise the baseline administrative policy statement, notice and grievance procedures for ADA. The Policy subcommittee took on this responsibility and addressed the following critical elements:

#### **ADA COORDINATOR IDENTIFIED IN NON-DISCRIMINATION POLICY STATEMENT**

*Regulatory Reference: 28 CFR 35.107(a) & 49 CFR 27.13 (a) and (b)*

The ultimate responsibility for implementation of MassDOT's ADA/Section 504 Transition Plan rests with MassDOT Secretary/CEO Stephanie Pollack. This responsibility has been delegated by Secretary Pollack to the Assistant Secretary Julian Tynes, the designated ADA Coordinator for MassDOT and the MBTA. Mr. Tynes has delegated Title II ADA oversight responsibilities to John Lozada as Manager of Federal Programs, to lead the effort on behalf of Civil Rights to establish and ensure implementation of the Transition Plan. Mr. Lozada also has oversight of Title I ADA for providing reasonable accommodations to employees and members of the public based on this delegation. **Attachment 8**, Nondiscrimination Policy Statement.

#### **NOTICE OF ADA REQUIREMENTS AND PUBLIC DISSEMINATION**

*Regulatory Reference: 28 CFR 35.160(a), 28 CFR 35.163(a) & 49 CFR 27.7(c); 28 CFR 35.106 & 49 CFR 27.15; 28 CFR 35.160(a), 28 CFR 35.163(a) & 49 CFR 27.7(c).*

MassDOT has established a detailed notice of ADA requirements, and an abbreviated version of this notice. **Attachment 9**, Notice of Nondiscrimination. Each form of the notice identifies the designated ADA Coordinator, consistent with the approach that MOD recommends for providing notice to the public, and provides information on how to request assistance. The information on



requesting assistance is to be included on all meeting notices that are created by agency personnel. A strategy for dissemination of this information has been created consistent with MassDOT's Public Participation strategy, referenced in more detail, below.

## **REVIEW OF POLICIES ON THE EXTENT TO WHICH AUXILIARY AIDS ARE PROVIDED BY MASSDOT**

*Regulatory Reference: 28 CFR 35.160(a), 28 CFR 35.163(a) & 49 CFR 27.7(c)*

The general ADA policies were reviewed and resulted in the revision to the notice of ADA requirements in order to make clear that the ADA Coordinator was the point of contact for reasonable accommodation requests. Special consideration was given to meeting notices and to the accessibility of documents that are intended to be shared with the public, along with general notices on accessibility. Model language has been developed and shared with key units, including public facing Highway Division departments, the Office of Transportation Planning and Information Technology, designed to coordinate reasonable accommodation at the project level.

## **PROCEDURE FOR HANDLING INDIVIDUAL REQUESTS FOR SUCH DEVICES**

*Regulatory Reference: 28 CFR 35.160(b)(1) & 49 CFR 27.7(c )*

MassDOT's current procedure and related training focuses on requests being made through the individual organizers of meetings or activities, in collaboration with the Office of Diversity and Civil Rights and its ADA Coordinator. Financial support for a requested accommodation is to be provided by the department hosting the meeting or activity under their administrative budget, by the Shared Services office, as assisted by the General Services department, or through the Division in question. Training has been implemented, as part of an orientation to Title VI and the ADA within the MassDOT Public Participation Plan, across departments including, Design, Environmental, Right of Way, Highway Call Center, Community Relations, Legislative Affairs, Planning and Information Technology. The focus was on reaching both departmental leadership and those individuals

and supervisors who host public meetings and/or work with members of the public. Our goal is to achieve a more decentralized structure, with the Office of Diversity and Civil Rights serving as a technical advisor and providing a specialist function to resolve complicated issues and/or to address grievances.

We have similarly provided training to Metropolitan Planning Organization (MPO) executive leadership and transportation managers on public facing ADA obligations, and encouraged their adoption of MassDOT's Public Participation Plan. This effort led to the individual MPOs developing smaller transition plans to address barriers.

We believe this overall approach will instill a deeper and broader understanding of the reasonable accommodation requirement, as well as staff ability to manage basic accommodation requests without need of assistance. This effort will also free up resources within the ODCR to provide a broader range of services and to focus on challenging policy and practice issues that demand greater attention.

## **ESTABLISHMENT OF GRIEVANCE PROCEDURE AND COMPLAINT HANDLING**

*Regulatory Reference: 28 CFR 35.107(b) & 49 CFR 27.13(b); 49 CFR 27.121(b)*

MassDOT has developed a grievance procedure for handling complaint matters that is consistent with FHWA and MOD requirements. MassDOT also has investigative staff in its civil rights unit capable of handling ADA related complaint matters. **Attachment 10**, Grievance Procedures.

## **AGENCY AND SUB-RECIPIENT ASSURANCES TO FHWA**

*Regulatory Reference: 49 CFR 27.9*

MassDOT evaluated the assurances required of subrecipients and revised the relevant documents, both in terms of our oversight of ADA compliance as a

related nondiscrimination obligation under Title VI and within the context of this Transition Plan.

Under MassDOT's Title VI Program, we have restructured our approach to secure nondiscrimination Assurance commitments from key subrecipients, starting cities and across the Commonwealth. This process requires the signature of nondiscrimination Assurances, which include specific ADA compliance references, every 10 years by the chief executive for the locality. We issued these Assurance requests in 2015, and have thus far received signed assurances from 274 of the 351 cities and towns in the Commonwealth.

To ensure that the ADA compliance obligation is made plain to a city or town that works with MassDOT on a Highway project, MassDOT has adopted the practice of including notice of ADA related obligations on the approval letter from the local District Highway Office. Further we have also revised the language in the Municipal Project Agreement to clarify and identify the specific obligations that municipalities will have to meet in terms of access in the design, construction and maintenance of projects built collaboratively with MassDOT. These agreements are required prior to the start of any construction work on a municipally-owned facility. MassDOT has also developed training that addresses our standards and expectations on access, based on our Title VI/ Nondiscrimination Program for FHWA. We will be implementing on site assessments of municipalities for purposes of monitoring compliance with these agreements beginning in 2017.

## **b. AWARENESS AND INFORMATION DISSEMINATION**

*Regulatory Reference: 28 CFR 35.160(a), 28 CFR 35.163(a) & 49 CFR 27.7(c)*

### **STAFF DISSEMINATION AND AWARENESS**

MassDOT had disseminated a link to the ADA/Section 504 Nondiscrimination Policy Statement and Notice and to a copy of the MassDOT ADA Transition Plan. MassDOT has provided copies of these documents to relevant staff in departments with public engagement responsibilities. MassDOT staff has also

been advised of the Civil Rights website portal for external ADA and Transition Plan inquiries and information. To build internal awareness, MassDOT has incorporated relevant information in various formats for ongoing staff development, and for new employee orientation.

## **PUBLIC DISSEMINATION AND AWARENESS**

MassDOT's Civil Rights and ADA links are prominently featured on the public facing website. MassDOT has developed a public participation strategy to ensure that the public has knowledge of the Transition Plan and an opportunity to comment, as well as understanding MassDOT's ADA/Section 504 and related state obligations on a going forward basis. MassDOT has also collaborated with the Massachusetts Office on Disability and conducted independent research, to develop a dissemination list to reach out to the broad network of organizations and individuals that would be interested in MassDOT's ADA/Section 504 Transition Plan efforts.

## **TRAINING**

Training on the knowledge needs for staff and managers to effectively implement the ADA Transition Plan is broad based, multifaceted and coordinated with MassDOT's Title VI Program implementation effort. We have developed protocols based on our Policy Statement, which provides staff with clear guidance to how to engage with the public in different accessibility contexts. A prime example of this approach is based on the Accessible Public Meeting policy that MassDOT has established. In connection with disseminating this policy, MassDOT developed training that has been provided to each unit that conducts meetings with the public, to provide orientation to the policy and instruction that will ensure its proper implementation. To ensure the effectiveness of training, MassDOT collaborates with internal staff resources and Commonwealth agencies focused on disability advocacy and awareness, including:

- Massachusetts Office on Disability (MOD)
- Massachusetts Rehabilitation Commission (MRC)

- Massachusetts Commission for the Blind (MCB)
- Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH)

Training on the ADA/Section 504 Transition Plan and policy related requirements for staff is part of a range of strategies that includes senior leadership and managers across impacted departments. We have also developed ADA specific training on accommodating members of the public in the context of meetings or the office setting.

This training complements the significant Commonwealth mandated training for all staff and managers on matters concerning employees and disability related issues, including protocols for addressing people with disabilities. These efforts established a good predicate for initiating further training to address public facing issues, including timely notice, the provision of reasonable accommodation, complaints and ensuring facilities access on a proactive basis.

### **c. REVIEW AND REVISION OF DESIGN AND CONSTRUCTION POLICIES AND RELATED DOCUMENTS FOR ADA COMPLIANCE**

*Regulatory Reference: 28 CFR 35.105 & 49 CFR 27.11(c)(2)(i-v); 28 CFR 35.151(c); 28 CFR 35.150(a)(3) & 28 CFR 35.164; 28 CFR 35.150(a)(3) & 28 CFR 35.164 - ADAAG 4.1.1 (5) & 4.1.6 (J); also 28 CFR 36.401(c) and 402.*

MassDOT self-assessment efforts took a methodical approach to identify applicable standards and work through subcommittees to identify, develop and recommend strategies to address the need for policy modification.

Design and Construction Standards and Guidance – As noted above, MassDOT has established a policy to address ADA/Section 504 conformity for projects designed by or at the expense of MassDOT, constructed by or through MassDOT, and owned or accepted for ownership by MassDOT.

## **CONSTRUCTION STANDARDS AND DESIGN POLICY REVIEW AND RESTATEMENT**

In March 2012, MassDOT adopted engineering guidance materials to address ADA/Section 504 and Massachusetts Architectural Access Board (MAAB) conformity for curb ramps and walks on MassDOT projects. **Attachment 11**, Construction Standard Details and Engineering Directive E-12-005, dated March 27, 2012.

This effort was the work of MassDOT's ADA Transition Plan Working Group's Construction and Design Standards subcommittee, which was formed with the purpose of reviewing all available Highway Division guidance related to the design and construction of sidewalks and intersections. The review focused on ensuring that the Highway Division's guidance conformed to applicable state and federal laws, regulations and policy. The process resulted in the preparation of new and/or revised standard plates for the Construction Standard Details and a set of Notes on Walks and Wheelchair Ramps ("Notes"), contained within Engineering Directive E-12-005, which provide the following guidance with respect to the determination of technical infeasibility in the design and/or construction process with respect to compliance and seeking variance approval from the Commonwealth's Architectural Access Board:

All MassDOT projects shall be designed and constructed to meet all state and federal regulations associated with pedestrian access. There are conditions which will be encountered; however, where full compliance is structurally impracticable, or technologically infeasible, or where the cost of compliance is excessive without any substantial benefit to persons with disabilities, or prohibitive in some other manner. In these cases variances from the rules and regulations of the Massachusetts AAB are required. Notes, at page 1.

These documents were approved by both MassDOT's Office of the General Counsel and FHWA. The documents were issued via an Engineering Directive in March 2012 and are available on the Highway Division's public website.

## **WORK ZONE SAFETY**

There are currently a number of new Work Zone policies that MassDOT is gearing up to release officially in 2017, which the Highway Division is planning to incorporate into a comprehensive Engineering Directive that will include the currently draft Temporary Pedestrian Access Route (TPAR) policy. The TPAR, which is currently in use as a best practice, includes requirements for all projects that impact sidewalks. For several years now, the State Traffic Engineer's office has provided comment on all design reviews based on the principles under TPAR, to state the need for compliance on MassDOT projects. **Attachment 12** Work Zone Safety Policy for Accessibility.

In 2013, the State Traffic Engineer made modifications to Highway Division's Work Zone flipcharts, in collaboration with FHWA, to support the range of safety and access issues that present in connection with construction projects. These requirements are incorporated TPAR concepts even before the policy was drafted has been applied in the review process for all projects that impact sidewalks.

The formal TPAR policy will add in the specific details on how the duration of the work dictates the level of accommodation necessary and introduces the concept of an attended work zone where someone on site would assist a pedestrian through the work zone or across the street if a more formal detour/TPAR is not practical. The Engineering Directive component will ensure that MassDOT has full leverage over the design / contracting community.

## **ACCESSIBLE PEDESTRIAN SIGNALS POLICY**

The Construction and Design Standards subcommittee undertook a review of MassDOT's policies and procedures for the use and application of accessible pedestrian signals to ensure compliance with 28 CFR 35.149. The result of this effort was the development in June 2012, of an Accessible Pedestrian Signal Installation Policy, which was formally established as Highway Division policy and implemented pursuant to an Engineering Directive dated June 7, 2012.

**Attachment 13a and Attachment 13b, Accessible Pedestrian Signal Policy and Installation Policy.**

Section 4A.02 of the Manual on Uniform Traffic Control Devices (“MUTCD”) defines an Accessible Pedestrian Signal (“APS”) as a device that communicates information about pedestrian timing in a non-visual format such as audible tones, verbal messages, and/or vibrating surfaces. The draft PROWAG definition is similar, however, Under PROWAG, APS devices must include both audible and vibrotactile functions. APS devices let pedestrians who are blind or visually impaired know when the WALK interval begins and terminates. Pedestrians who know when the crossing interval begins will be able to start a crossing before turning cars enter the intersection and can complete a crossing with less delay. Audible signals can also provide directional guidance, which is particularly useful at non-perpendicular intersections and at wide multi-lane crossings.

The policy essentially requires the inclusion of APS devices as part of all new pedestrian signals installed on MassDOT projects. The policy also describes the process for considering the installation of APS devices as retrofits to existing signals not scheduled to be replaced under a MassDOT project.

***IMPLEMENTATION OF ACCESSIBLE PEDESTRIAN SIGNAL POLICY***

In 2016, through consultation with the Assistant State Traffic Engineer, we have determined that MassDOT has recently completed an asset inventory for all of the traffic signals under its control. In all, there are approximately 1,400 signals owned by the department. At this time there are approximately 930 intersections that have at least one pair of pedestrian pushbuttons; of those, approximately 85 have APS-style pushbuttons installed. It is MassDOT standard practice to not mix pushbutton types, so those 85 intersections have been completely upgraded to all-APS pushbuttons.

MassDOT established an Accessible Pedestrian Signal Installation Policy in 2012. This policy requires the installation of only APS-style pushbuttons at all new traffic signals and an upgrade to APS during any major alteration or reconstruction of an



existing traffic signal. Federal and State Aid projects that are located outside the State Highway system but advertised by MassDOT are also required to follow this policy. Routine and emergency maintenance operations are, however, exempt.

Based upon a 20-25 year life-cycle for a typical traffic signal, it would be expected that MassDOT would complete a conversion of all department-owned signals to APS pushbuttons in the years from 2032-37. However, traffic signals owned by the department are frequently in use beyond their planned life-cycle; a replacement of 4-5% of all signals (approximately 55-70 intersection) every year is not feasible. In addition, it is not pragmatic to wait for the end of a complete signal system life-cycle to install APS pushbuttons if there is an identified need today. Therefore, MassDOT has developed a request form that is available to the public for APS retrofits on the State Highway system and a prioritization tool that may be used by District Engineers to evaluate the request and budget for retrofit projects. These tools were developed based upon NCHRP 03-62, Guidelines for Accessible Pedestrian Signals. The APS request form is available through both the Traffic Engineering and the ADA related pages on the MassDOT website.

In terms of maintenance, the Assistant State Traffic Engineer indicated his perception that the APS systems that are in place are operable. He noted two ways that MassDOT we can identify problems in the field:

- Reactive. Response to a customer identified problem.
- Proactive. We have a routine maintenance program to check for problems (loose connections, device failures, etc.) to identify and correct.

The Assistant State Traffic Engineer confirmed that operations and maintenance are functions of the district offices, which could lead to different practices to ensure the functioning of APS. He also noted that currently it is likely that we are responding more to customer calls, rather than through maintenance checks, although with the implementation of our Asset Management System, MassDOT will be more proactive.

In terms of practice, when an APS device (or any other pushbutton system) is determined to be malfunctioning, either by a customer complaint or through routine maintenance, it is considered a public safety matter and is assigned immediately for correction either by a District Electrician or through the district-wide signal betterment contract. Such maintenance, because of its priority nature, is typically processed in a matter of days.

Through outreach to the district traffic engineers statewide, MassDOT has confirmed that in no instance do repairs to APS take a year or more to address, but that in most instances repairs are completed in a matter of days, weeks, or at the outside, a few months. In the case of the quickest response, the districts have reserve equipment in house, and are able to address the repair in a month or less. In the one district where repairs took up to two months, this was a function of an outside Signal Betterment and Maintenance Contract used to address repairs, which required the purchase of equipment prior to installation.

## **PROJECT DEVELOPMENT AND DESIGN GUIDE**

*Regulatory Reference: 28 CFR 35.151 (c); 28 CFR 35.105 & 49 CFR 27.11 (c)(2)(i-v)*

The Highway Division's Project Development and Design Guide (Guidebook) was created in 2006 following a lengthy and consultative process that began in 2003 and involved a number of stakeholders, including the Massachusetts Office on Disability. The Guide is voluminous and covers a very wide range of resulting work and is intended to meet the following objectives:

“The purpose of this Guidebook is to provide designers and decision-makers with a framework for incorporating content sensitive design and multi-modal elements into transportation improvement projects. The emphasis is to ensure that investments in transportation infrastructure encourage projects that are sensitive to the local context while meeting the important needs of the people they serve.” Guidebook, p.1-2 (2006)

The Guidebook has been recognized through numerous awards for its exhaustive treatment of public outreach, community engagement and consensus building as a means to achieve effective project development. Given the time, expense and comprehensiveness of the Guidebook, there is no immediate plan to revise and reissue the complete document. As policy changes are made that impact the document, they will be referenced through Engineering Directives that will be disseminated consistent with existing protocols for new policy issuance, which will ensure that any revised content is considered by appropriate professionals and is accessible to stakeholders. As part of ODCR's public participation training for internal staff, managers, consultants and the general public, trainees are advised that the Title VI and ADA related Public Participation Plan should be considered part of the Guidebook.

## **STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES;** **BRIDGE MANUAL**

Currently, MassDOT has not made any proposed changes to the standard specifications on ADA compliance, based on the approach and protocols in place that set the obligation for the creation of ADA and AAB compliant designs on the professionals charged with the component parts of the highway and bridge design process. Most of MassDOT's construction work is horizontal construction and deals with ADA/AAB issues as related to walkways, sidewalks and ramps. MassDOT holds its contractors responsible for constructing projects in accordance with the contract plans and specifications, and project designers responsible for assuring that the plans and specifications are compliant with the latest ADA requirements.

The standard specifications will be updated as needed for relevant language for contractor compliance with ADA/AAB. This would normally be done to highlight any changes that may occur to ADA/AAB regulations as they pertain to our construction projects.

### **d. OTHER HIGHWAY DIVISION POLICIES**

MassDOT is committed to ensuring that its policies and procedures comply with the accessibility requirements set forth in the Massachusetts Architectural Access Board (AAB) regulations (521 C.M.R. 3.00 et seq.), the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, and other applicable federal and state statutes and regulations related to accessibility.

MassDOT acknowledges that the standards for existing facilities differ from those for new construction or various levels of rehabilitation under each code and is committed to taking all necessary steps to comply with the particular requirements for each project. In 2013, the former MassDOT Policy Committee conducted a self-evaluation of MassDOT's policies and practices with respect to its programs, services, and activities to determine the existence of any physical or communication barriers that limit full participation of persons with disabilities.

As part of the self-evaluation the Committee has started cataloguing and reviewing the nearly 300 policies, standard operating procedures and engineering directives issued by MassDOT or one of its predecessor agencies. The Committee has also worked to articulate an omnibus or catch all notice applicable to all relevant MassDOT policies to prohibit the policies from being used or interpreted in ways that would allow for discrimination against people with disabilities, or toward individuals in other protected categories.

## **e. COMMUNICATIONS**

MassDOT has reviewed the communication access afforded under agency programs, services, and activities that provide a public benefit, including the extent to which auxiliary aids are provided, and the procedure for handling individual requests for such devices, as required by 28 CFR 35.160(a), 28 CFR 35.163(a) & 49 CFR 27.7 (c).

## **COMMUNICATIONS RELATED POLICIES – POLICY STATEMENT AND ACCESSIBLE PUBLIC MEETING POLICY**

MassDOT is committed to meet the requirement to provide equal access to communications for people with disabilities, and is responding to this obligation through existing or new policy statements, procedures, equipment and technology.

MassDOT's intent to comply with the ADA stated within MassDOT's ADA/Section 504 Policy Statement and by the MassDOT and MBTA Accessible Public Meeting Policy. The ADA/Section 504 Policy Statement provides the public with contact information to seek auxiliary aids or other accommodation in connection with a program or activity offered by MassDOT, or to file complaints. The Accessible Public Meeting policy provides a set of definitions, procedures and contact information relevant to creating accessible meetings across the Commonwealth's transportation public engagement activities. Included within this document are instructions for providing public notice, ensuring accessible spaces, securing CART and Sign Language interpretation, access to telephones the creation of accessible print materials. This policy is addressed in more detail, below in the subsection on Public Hearing and Public Information Meeting Procedures.

To ensure that the policies are understood and properly implemented, ODCR has developed training for relevant meeting planners and conveners. These two statements definitively set forth the public's right to notice, accommodation and to seek redress in connection with participating or benefitting from MassDOT's programs, activities or services.

## **IMPLEMENTATION ACTIVITIES**

### ***MASSDOT ADA SUBCOMMITTEE FOR IT, WEB AND ELECTRONIC COMMUNICATION***

The MassDOT ADA Sub-Committee for IT, Web and Electronic Communication was formed in the spring of 2013 to champion accessibility awareness and activities related to MassDOT's digital assets. This Subcommittee consists of members from the Highway Division, Registry of Motor Vehicles, Office of Transportation Planning, Office of Diversity and Civil Rights, General Counsel's Office, and IT department as well as the MBTA, Mass Office on Disability and

MassIT's Assistive Technology Group. The committee meets on a monthly basis to discuss issues and make recommendations for MassDOT standards and policies.

### Committee Objectives

- Awareness – Raise awareness of this issue across the organization, focusing on the impacts to the public and employees.
- Skills – Expand the skill set of employees with regard to the creation of accessible documents and other electronic assets, as well as the purchasing requirements for IT solutions.
- Accountability – Improve the ability to hold external vendors and employees responsible for creating accessible electronic deliverables.

## **SELF-ASSESSMENT – COMMUNICATIONS**

### ***TELEPHONE COMMUNICATION***

There is a dedicated central TTY line that connects all MassDOT Divisions and departments therein. This line is referenced on the MassDOT website. There is also a dedicated TTY line within the MassDOT Office of Diversity and Civil Rights, which is referenced on the notice of nondiscrimination based on disability.

In this self-evaluation process, MassDOT staff has learned about the advances in telecommunications for people with disabilities, and using that information to evaluate and plan for prospective deployment of equipment to support people who are deaf or hard of hearing. We understand that TTYs are currently used less by people who are deaf, based on the increased use of video and voice relay systems. MassDOT further understands that TTY systems are still used by a number of individuals, thus our agency will maintain its commitment to providing this service into the future. MassDOT also provides notice to staff on the more contemporary communications tools used by people with hearing related disabilities, including any protocol or etiquette elements that staff should be aware of and follow.

There will continue to be a distinct MBTA TTY number for the foreseeable future, given size of the organization, the population served and the significant funding from the Federal Transit Administration.

In 2014, MassDOT undertook a major telephone upgrade project which provided ADA compliant telephones to assist staff with hearing related disabilities.

### ***WEB-BASED COMMUNICATIONS***

The Massachusetts transportation agencies have a history of commitment in providing an accessible online environment. Prior to 2009, both the former Executive Office of Transportation and the Mass Highway agency websites went through a third party accessibility audits for compliance purposes.

The MassDOT website designed after that audit was reviewed by the Commonwealth's Assistive Technology Lab to ensure that the website met accessibility standards before it went live in November 2009. The Commonwealth's accessibility standards have been determined to exceed those of the federal government. Since going live, the MassDOT website has been maintained and updated using the Commonwealth's standards as a guide for all content and design decisions. For ongoing web development and new content, MassDOT's Web team uses a selection of Web tools to check for accessibility issues and remediate them in the development environment prior to going live as to any given project or posting of material.

As part of this self-assessment process, MassDOT has also completed the Website Accessibility survey included in the ADA Best Practices Tool Kit for State and Local Governments.

### **APPLICABLE POLICIES**

The MassDOT Accessibility Policy closely follows the Web Accessibility Standards developed by MassIT with the participation of state web page developers, including developers with disabilities. They are intended for use by all state

agencies to address accessibility issues in web page design:

<http://www.mass.gov/anf/research-and-tech/policies-legal-and-technical-guidance/tech-guidance/accessibility-guidance/>

The purpose of the Web Accessibility Standards is to ensure access to state web pages for all users, whether they be internal (employees) or external (public). The scope of these standards encompasses more than compliance with the Americans with Disabilities Act (ADA) and other statutes that call for accessible technology for people with disabilities. The standards also address access issues for people using different technologies, including older technologies (slower Internet connections, for example) and newer technologies (mobile devices, for example), as well as issues of computer literacy.

The Commonwealth and MassDOT standards are based on Section 504

(<http://www.dol.gov/oasam/regs/statutes/sec504.htm>) and 508

(<http://www.dol.gov/oasam/regs/statutes/sec508.htm>) of the Rehabilitation Act of 1973, as amended, which include a variety of provisions focused on rights, advocacy and protections for individuals with disabilities. The standards also consider Mass General Law chapter 151B

(<http://www.malegislature.gov/Laws/GeneralLaws/PartI/TitleXXI/Chapter151b>)

which addresses unlawful discrimination and the W3C Web Content Accessibility Guidelines (<http://www.w3.org/WAI/intro/wcag.php>) which are the guidelines widely regarded as the international standard for Web accessibility.

MassDOT's accessibility policy is posted on our public websites. The Web team also provides detailed guidelines for employees on the MassDOT intranet along with references to best practices and information provided by third parties, including Adobe.

Every member of the Web team understands the accessibility requirements and how they relate to their responsibilities; the Web team's objective is to serve as the in-house resource on this topic. All requests that come into the Web team are evaluated against these requirements and content that does not meet the standards is fixed before posting it to the MassDOT website. The Web team also works closely with MassDOT content managers and external contractors to inform



them of the requirements and provide training and resources so that they can ensure their content is accessible.

The Web Manager attempts to keep the Web team informed and trained on best practices utilizing a variety of state, federal and private sector resources and organizations.

## **CONTRACTING FOR IT SOLUTIONS**

Contract provisions were developed to address and overcome the challenge of receiving inaccessible electronic deliverables from third-party contractors. This language has been added to vendor contracts to ensure the accessibility of electronic deliverables.

## **ELECTRONIC COMMUNICATION SUBCOMMITTEE ACHIEVEMENTS**

From the period of its creation to the present, the Electronic Communication subcommittee has realized a range of important milestones and achievements, including;

- Formalizing an employee guide for creating accessible documents and working with MassDOT's HR team to broaden the employee training in this area,
- Creating contract language which ensures that every MassDOT consultant or contractor is required to provide accessible electronic deliverables,
- Planning and hosting an all employee Lunch & Learn to raise awareness of accessibility and the current efforts of MassDOT and the MBTA.
- Advising on the renovation of the MassDOT and MBTA Board Room to ensure a compliant physical structure and the adoption of state of the art communications software to assist individuals with disabilities

## **COMPLETED ACTIONS**

## ***TRAINING***

- MassDOT U – Worked with MassDOT’s HR Training department to develop courses on creating accessible documents.
- Online Resources – Provided links to online training via the MassDOT internal website.
- IT Staff – The committee is working to raise awareness of IT accessibility issues within the IT Development and Project Manager groups. Through these departments, MassDOT is conducting third party testing of applications, as with the curb cut tablet project, consistent with Commonwealth-wide IT policy. In 2016, the Commonwealth also established a new statewide blanket contract for the creation and/or remediation of inaccessible documents and other media. There is anecdotal information on departments beginning to use this resource successfully on individual documents within MassDOT and at the Commonwealth level.
- Accessible Document Guide – MBTA and MassDOT – Created an online guide to creating accessible documents.

## ***AWARENESS RAISING***

- Lunch & Learn Employee Session – Hosted a lunchtime meeting that was broadcast statewide to raise awareness and provide resources to employees.
- Stakeholder Engagement – Technical assistance meetings have been held with several partners to discuss the concept of accessibility and electronic deliverables. Key among these conversations have been with the Massachusetts chapter of the American Council of Engineering Companies and the statewide leadership and individual Metropolitan Planning Organizations, with whom Working Group members have met several times. These discussions were designed to both introduce the overall vision of MassDOT’s work in ADA Transition Planning, but also to focus in on the essential work of this group on MassDOT projects and its relationship to accessibility.

- Senior Staff and Department Briefings - The sub-committee has presented to MassDOT and MBTA Senior Staff in order to raise awareness of this issue and to introduce new contract language that had been developed for use by both agencies. Members have also met with various MassDOT departments to address specific department focused accessibility issues.

### ***PLANNING FOR 2017***

- Continuation of Lunch & Learn sessions on a quarterly basis
- Expansion of sub-committee membership
- Development of additional training when circumstance is identified
- Increase awareness of requirements within the IT department for all solutions
- Provide expertise to the organization for website and application development

## **PUBLIC HEARING AND PUBLIC INFORMATION MEETING PROCEDURES**

### ***SELF EVALUATION***

In planning projects, conducting transportation studies, or providing information to the public on construction projects, MassDOT and the MBTA share a responsibility to conduct meetings that welcome the general public, including individuals with disabilities. The practice had been for meeting planners to reach out for accessibility related assistance through ODCR staff and managers, or for more seasoned meeting planners to rely on prior corporate knowledge on the need for accessibility.

In 2010, the MBTA recognized that an ad hoc approach was not fully effective, and began to develop a policy to help meeting planners and others understand their responsibilities and the available resources to ensure access by members of the public. In light of Transportation Reform, the conversation became shared between the MBTA and MassDOT, and ultimately responsibility for developing an accessible meeting policy was brought into the Working Group.

In Massachusetts, there are limited numbers of people who serve as CART or sign language interpreters, thus there is a critical need for sufficient lead time to ensure their availability, and for staff to understand how these services function and are paid for.

We have learned that providing timely notice to the public and to CART or sign language service providers is essential to ensuring that the service can be provided.

We have also learned that there is a need for structuring a system of coordination on the fiscal and administrative aspects of making requests for interpreter services, which is an issue that exists in both the context of disability related interpretation and in Title VI, with respect to language assistance services. When the work is connected to a specific project, it is clear where to assign charges for the service, but in other contexts that are not project specific, it is not as clear, and MassDOT staff appears confused as to who to reach out to for support.

## ***REMEDICATION***

The MBTA and MassDOT have jointly developed an enterprise wide Accessible Public Meeting Policy which is an expansive outline of the concepts, requirements and resources that combine to form an accessible public meeting. To ensure synergy between this component of the ADA and Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color and national origin, among other nondiscriminatory categories, the policy also references means for meeting planners to understand their obligation to address language translation issues in meeting planning. **Attachment 14**, Accessible Public Meeting Policy.

Prior to approval, MassDOT vetted the draft document among diverse staff, as well as Commonwealth agencies charged with protecting the interests of people with disabilities in Massachusetts, including the Massachusetts Office on Disability, the Commission for the Deaf and Hard of Hearing, the Commission for the Blind and the Massachusetts Rehabilitation Commission. This process brought forth significant modifications and increased cultural awareness in

dealing with particular concerns relevant to people with disabilities, insights which significantly strengthened the policy statement. Among these considerations are the difference in background and accommodation needs between culturally deaf individuals and those who have lost their hearing over time, as well as the wide range of assistive listening device supports that are available and needed to ensure that people who are hard of hearing can be effectively accommodated.

Our plan to address the problem of CART translation will be initially addressed through training to ensure more timely notice of upcoming meetings to the public, which will result in more timely requests for CART or sign language translation. We will also incorporate specific training for accessible meeting planning and implementation, as referenced above in Section IV(A)(2)(c) of this Transition Plan.

In terms of the fiscal question on securing interpreter services, MassDOT Working Group members will follow up on this issue by reaching out to Budget for assistance in designating or clarifying the people who are to carry out this responsibility to make sure these requests are not impeded by confusion finances.

## ***IMPLEMENTATION***

The Accessible Public Meeting Policy was approved by the former Secretary of Transportation and the MBTA's former General Manager in 2014. The policy is applicable to all of the MassDOT divisions, has been incorporated into the Title VI programs for all divisions and is presented within civil rights related training for managers, staff and shared with the public on line and at community meetings or forums on civil rights. Staff has recently presented this policy to MassDOT Secretary Pollack who has requested that the policy be revised to better identify achievable steps to ensure compliance. This review will take place during 2017.

We anticipate there will be some recurring scheduling issues, given that the Massachusetts Commission for the Deaf and Hard of Hearing requires at least

seven (7) days' notice for an interpreter and MassDOT has encountered difficulties securing services even with two weeks advance notice. This is an area where collaboration may be needed to identify additional sources of qualified interpreters and CART reporters. We will gauge the ability to meet our need as the Accessible Public Meeting Policy is disseminated, staff is provided training and we determine what difference the policy makes in ensuring that accessible meetings are held.

We will continue coordinating the training efforts on the Accessible Meeting Policy as part of the training conducted under Title VI with staff and managers who conduct public meetings, to ensure that the coverage of the issues is comprehensive. Because the policy document is extensive, a summary "Quick Reference Guide" has been created that highlights key considerations which meeting planners must know in order to comply with the policy.

## **D. FIXED ASSETS – MAINTENANCE / SNOW AND ICE**

*Regulatory Reference: 28 CFR 35.130(b) (1)(v); 28 CFR 35.133 & 49 CFR 27.7(v)*

### **i. OVERVIEW OF LEGAL OBLIGATIONS AND STANDARDS**

Under the ADA and state law, sidewalks are considered a public program. All government agencies operating streets or highways with sidewalks are required to ensure that sidewalk systems are accessible. In the self-evaluation work our ADA Working Group has done to date, preliminary data from MassDOT's Office of Transportation Planning shows that we own approximately 1,100 miles of sidewalk. We are currently working to determine which of our publicly used sidewalks are noncompliant. Our obligation to provide sidewalk access also means that we have to maintain the sidewalks in an "operable working condition," which includes reasonable snow and ice removal. Below is the federal regulation that sets forth the ADA maintenance requirement (and is supported by

the Commonwealth's Office on Disability as well as by the AAB's regulations for maintenance of accessible features that have been in place since 1996):

Maintenance of accessible features:

(a) A public entity shall maintain in operable working condition those features of facilities and equipment that are required to be readily accessible to and usable by persons with disabilities by the (ADA) or this part.

(b) This section does not prohibit isolated or temporary interruptions in service or access due to maintenance or repairs. 28 C.F.R. Sc. 35.133

Apart from maintaining MassDOT-owned property, we are also required to ensure that the cities and towns that we build projects for are aware and commit to meet this obligation in locations built with any state or federal monies.

The question of sidewalks across the Commonwealth is the subject of a complex set of statutes, local ordinances and informal practices that have evolved over many years.

Massachusetts General Laws, Chapter 81, Section 19 authorizes and directs the former Massachusetts Highway Department (MassHighway, now the MassDOT Highway Division) to keep such State highways or parts thereof as it may select, sufficiently clear of ice and snow to be reasonably safe for public travel. The Department engages in this activity to promote highway safety and mobility during inclement winter weather, with principal focus on the roadways across the Commonwealth.

In Massachusetts, where cities and towns own the majority of sidewalk miles in the Commonwealth, the law allows cities and towns to appropriate money to finance the removal of snow and ice, and to establish ordinances to impose the obligation on sidewalk abutters to remove snow and ice, as deemed expedient.

MGL Chapter 40, Section 6C (appropriation); MGL Chapter 85, Section 5 (Adoption of bylaws and ordinances to require abutters to remove snow and ice). Further, local towns are determined to have police jurisdiction over all state highways within the local limits, and are required to provide notice to MassDOT of any defect or want of repair in the highways, or may make necessary temporary repairs, without notice to MassDOT. M.G.L. Chapter 81, Section 19.

## **E. MUNICIPAL OBLIGATIONS ON FEDERALLY AIDED PROJECTS**

*Regulatory Reference: 28 CFR 35.130(b) (1)(v); 28 CFR 35.133 & 49 CFR 27.7(v)*

### **i. OVERVIEW OF LEGAL OBLIGATIONS AND STANDARDS**

The United States Code, at 23 U.S.C. § 116, states in part that:

“(a) It shall be the duty of the State transportation department to maintain, or cause to be maintained, any project constructed under the provisions of this chapter or constructed under the provisions of prior Acts.”

This statutory requirement is interpreted in coordination with the ADA Title II regulatory obligation for public entities to maintain in operable working condition those features of facilities and equipment that are required to be readily accessible to and usable by persons with disabilities, as specified in 28 C.F.R. Sc. 35.133,(a), above. To ensure compliance, MassDOT must either maintain the project, or secure timely and ongoing commitments from localities in which a project is built with federal financial assistance to maintain that property.



## **ii. SELF-EVALUATION**

MassDOT identified inconsistency in the prior practice of securing maintenance agreements on federally aided projects, and worked with FHWA to develop a strategy to address this need for accountability. To limit the risk of inconsistency, MassDOT has sought municipal commitments applicable to all projects built with federal financial assistance.

## **iii. REMEDIATION**

MassDOT has revisited the methods and means for securing municipal commitments to carry out maintenance obligations on federally aided projects. MassDOT developed an approach, in consultation with FHWA that is into the cycle for execution of Local Aid agreements with all municipalities to seek this assurance. The commitment will include an assurance to maintain property built with federal financial assistance and to refrain from using the property in a discriminatory manner. MassDOT will also address how these agreements will be administered, and establish means for seeking municipal compliance with this obligation.

## **VI. TRANSITION PLAN BUSINESS METHODOLOGY, BUDGET, REMEDIATION SCHEDULE AND MONITORING**

### **A. ACCESSIBILITY REPAIRS AND EMERGENCY RESPONSE**

The routine repair of structures in response to consumer calls and inquiries has been a practice across MassDOT for many years. Unfortunately, the procedures and agency practices in response to public inquiries have not been widely disseminated.

Since the creation of MassDOT, accessibility or emergency repairs are addressed through calls to the central Highway Administration office and/or to individual Highway District offices. Calls are evaluated to determine:

- the nature of the matter,
- whether the issue is within MassDOT jurisdiction,
- how the matter is to be addressed under the policies and practices for repairing the type of matter indicated,
- the appropriate office for referral of the matter.

There are several ways to contact MassDOT's Highway Division to address repair concerns, as outlined below. For recording and tracking purposes, the best means is sending an electronic inquiry through the MassDOT webpage, but the other means are equally effective for communicating concerns.

## **i. METHODS FOR RAISING ACCESSIBILITY OR EMERGENCY CONCERNS**

### **a. WEBSITE INQUIRIES**

<http://www.massdot.state.ma.us/ContactUs.aspx>

The link above is connected to the MassDOT Web-based site for the public to raise concerns regarding accessibility issues, and is readily addressed through “Contact Us” links located at the top and bottom borders of the webpage screen. By clicking the “contact us” icon, a second page opens up, allowing members of the public to report concerns via a drop down menu of options and a series of boxes for entering relevant information. One item on the drop down menu includes an option for reporting on “Roads and Bridges,” where a member of the public can identify themselves, the issue they wish to raise, and submit the inquiry a concern about.

When a concern is submitted through this system, the matter is directed to a central staff person at MassDOT who identifies the issue, and refers the matter for review and correction, if needed. The identified party would then be responsible for addressing the matter, and/or for consulting with Highway headquarters leadership if the issue is of a major scale and/or involves a significant cost consideration. This approach ensures the ability to track the response or need for further action as to a complaint or inquiry.

### **b. PHONE, FAX OR MAIL CONTACT TO THE HIGHWAY DIVISION**

- Highway Call Center – information or issues related to highway operations  
857-368-3500 , Mon-Fri, 7:00am to 7:00pm (excluding holidays)
- Massachusetts Department of Transportation - for all departments

857-DOT-INFO (857-368-4636)

Toll Free - 877-MA-DOT-GOV (877-623-6846)

Fax: 857-368-0601

(TTY) 857-368-0655

10 Park Plaza, Suite 4160

Boston, MA 02116

The Highway Operations Center is open 24 hours a day thus it is possible to contact this arm of the Highway Division after regular working hours.

## **B. ONGOING MANAGEMENT STRUCTURE**

The management structure and business model for implementing the Transition Plan will continue to evolve organically as MassDOT moves forward to remediate identified deficiencies, including with respect to available resources to conduct the work. As a starting point, the primary leadership roles in the several subject matter areas outlined in this Plan will continue to rest within the Working Group structure we have established. The Working Group co-chairs will continue to preside over the Core and Working Groups to build consensus, identify resources and assign responsibilities to carry out the tasks related to self-evaluation and implementation aspects of this Plan.

The structure of work flow, individual assignments and recording will be designed to ensure that, starting with the curb ramp remediation schedule we have initiated, and including other areas to be assessed under the Plan, we will strive for efficient implementation on a timely basis. Concurrently, related components in Highway are evolving on parallel tracks, such as asset management tools and our effort to develop on-line project development tools. These efforts will empower MassDOT not simply to remediate deficiencies, but to institutionalize accessibility in thinking across the entire Highway agenda of our agency. To support this work, our Working Group will continue sharing data collected from our self-evaluations for the purposes of programming of remediation and record

keeping, but also as a resource that will help build proactive habits of mind in our agency. For example, developing the online project initiation tool to include deficient ramps in proposed Highway construction ideas not only responds to those Highway projects, but simultaneously reinforces an approach wherein accessibility considerations are well incorporated into initial stages of project planning in the future.

Our working group structure includes individuals across multiple disciplines, as well as representation from FHWA and the Massachusetts Office on Disability. These discussions create the means to ensure shared accountability, and allow for the coordination of efforts among units that have diverse relationships to a particular area of accessibility. For example, with respect to roles related to intersections, the presence of Working Group members from design, traffic, construction and the Commonwealth's ensure that we can resolve conflicts on such potentially complicated matters as the placement of accessible pedestrian signals in relationship to a ramp that is part of an intersection that may need to be reconstructed due to the lack of a parallelism among curb ramps.

The additional presence and participation of subject matter experts from FHWA, MOD and MassDOT Highway Division leadership will also continue to ensure regulatory compliance as we address particular concerns or policy considerations on such matters as determination of technical infeasibility in particularly difficult contexts. This group has also been informed and made comments on both the draft PROWAG regulation and the Commonwealth's revision to the Architectural Access regulation.

MassDOT will also continue to rely on our subcommittee structure and individual units to propose work models, identify policy questions and provide leadership as we implement the tasks associated with self-evaluation and Plan implementation. To illustrate this role, the Working Group subcommittee on Information Technology has taken on internal and external tasks for shaping policy that is benefitting MassDOT, but is in fact being looked to as a model among all Commonwealth agencies. We are certain that the Working Group will continue to

take on roles that are designed to ensure that the implementation process is equally well-staffed and developed.

Future areas we envision addressing to establish more fluid business model and building capacity include the following:

- Decentralizing oversight to utilize district ADA Coordinators and others to oversee Plan self-evaluation and implementation components at a District level
- Deepening the process for early identification and making timely determinations on technical infeasibility where barriers may meet the defined terms for seeking a waiver or variance
- Ensuring periodic updates to the Plan
- Data, project, schedule and reporting management in coordination with asset management tools to consistently weigh the completion of projects and overall remediation
- Implementing methods of evaluating and responding to unanticipated concerns, or addressing unique projects or facilities that require assessment
- Coordination of approval processes between units to ensure understanding and agreement on approaches for remediation
- Responding to community concerns or complaints on non-priority deficiencies
- Ensuring routine and systematic approaches that ensure timeliness and consistency in remediating deficiencies

It is envisioned that these work protocols will ultimately be defined into documents and policies, where needed, that will ultimately become the ADA Management Plan for MassDOT. This document will ensure that throughout the duration of our deficiency compliance efforts under this Plan, but also prospectively, we will have a means for building thinking on accessibility as part of

MassDOT's overall business protocols for construction and repair of our infrastructure.

## **C. METHOD TO ADDRESS DEFICIENCIES IDENTIFIED**

### **i. DEFICIENCIES IDENTIFIED**

We propose that the removal of the barriers identified through the self-evaluation process be prioritized into two established ADA categories, Priority #1 and Priority #2, and a schedule along with a budget for making modifications will be established for each category. Priority #1 items will identify those barriers whose removal is essential to providing access to specific elements under the jurisdiction of MassDOT (i.e. curb ramps, parking stalls, etc.), to access programs not otherwise accessible by modification of programs and practices. Those programs and services, located in buildings and facilities, and identified as requiring architectural modifications to provide access to qualified persons with disabilities, will be included in the Priority #1 listing along with a timeline for completion.

Within the listing of the two priority levels, this plan will incorporate a series of the subcategories, as needed, to ensure the greatest definition on the most critical needs, and to facilitate the coordination of work on multiple priority areas concurrently, as feasible. For example, within the Priority #1 focus on barriers, this scope will apply a format that will rank based on variables that include location, degree of utilization and degree of noncompliance. The strategy for these priorities will be developed in connection with what the data leads us to understand in terms of the remediation needed.

Priority #2 items will identify all other architectural barriers whose removal will be completed as planned alterations are made to a specific building or facility with a forecast date. It is anticipated that Priority #2 items will be addressed as part of the Transportation Improvement Program (TIP) and/or with state bond resources

(non-federal resources). Additionally, an estimated schedule and budget will also be provided for Priority #2 items. Under Priority #2 items, the same sub-categorization approach referenced under Priority 1 items would be incorporated as well, as warranted by the nature of the barriers identified.

## **ii. SCHEDULE TO CORRECT DEFICIENCIES**

Each of the subcommittees associated with the self-evaluation process will define objective measures to achieve the remediation outlined in this plan. This information will be compiled and set forth in an overall ADA/Section 504 Transition Plan work Schedule to be developed. This schedule will be predicated for tracking activities initially and will be monitored and used to seek reports on a monthly basis as part of the continuing activities of the Working Group. The successes of the group will be noted in revisions to this Transition Plan document through quarterly updates.

## **D. SCHEDULE AND BUDGET FOR ACCESS MODIFICATIONS AND ALTERATIONS**

### **i. APPROACH AND METHOD(S) FOR MAKING CURB CUTS ACCESSIBLE**

Our planned approach is to use the identification and prioritization of deficient curb cuts to determine which ones can be remediated through one of four strategies:

- Incorporation into existing roadway reconstruction projects
- Incorporation into currently planned or pending projects,
- Utilization of the remaining Curb Ramp Retrofit contract resources through 2018 in each Highway district, and
- Creation of new projects to address curb ramp remediation through resources programmed to the MassDOT Capital Investment Plan (CIP).



These strategies will be implemented through a process of discussions across MassDOT, including the Secretary's office, Highway leadership, District ADA Coordinators, the Office of Transportation Planning and members of the Working Group. We believe that the contemplated approach will enable MassDOT to articulate a sound remediation schedule that reasonably projects and meets budgetary needs.

## **a. BUDGET AND SCHEDULING – CURB RAMPS REMEDICATION**

### **RECONSTRUCTION OF SUBSTANDARD CURB RAMPS**

In understanding our obligation to the development of an ADA Transition Plan, MassDOT has started moving forward with one component: the reconstruction of substandard curb ramps and sidewalks.

This process took several years to develop. It began in 2012, when key measurements were identified that indicated the inaccessibility of a curb ramp, as well as related measurements determined important to achieve compliance. A field survey tool was designed and utilized to measure and record curb ramp elements. Using the results of the internal field survey, MassDOT drafted a consultant Scope of Work for a wheelchair ramp inventory tool and the development of a technology-based format for data collection. The selected consultant helped the District offices to assess and map 25,675 missing or existing curb cuts within the Commonwealth's jurisdiction. Each location was studied and evaluated with up to 20 data points recorded to determine accessibility and use.

The next step was to develop a methodology to identify and repair the curb ramps found to be in the most critical need of reconstruction. As this could not be done by score alone, MassDOT contracted a second consultant to develop a prioritization tool that focused on the failed and missing ramps based on various weighted parameters. With the field work and the information received from our District offices, this consultant was able to provide MassDOT with an early

prioritized curb ramp list for each district to use. Each prioritized list is the result of a data driven and transparent process, which reflects the values and priorities of all stakeholders.

## **FUNDING ALLOCATION**

### ***CURRENTLY EXECUTED ADA RETROFIT CONTRACTS***

Throughout the Commonwealth, it was found that almost 6,300 curb ramps were failing or missing out of the 25,675 total state owned curb ramps initially surveyed (approximately 20%). MassDOT had to determine how many new curb ramps had been reconstructed since the total ramps assessed were recorded.

As of 2015, there were six (6) previously executed contracts, one for each District; more than 1,450 ramps of the 25,675 total were reconstructed. This assumption was based on the previously mentioned approximation that 20% of ramps statewide are failing or missing. Therefore, we presumed that of the 1,450 ramps most recently reconstructed (the methodology for ramp selection was determined by each District based on their experience or need), approximately 245 (20% of the reconstructed) were failing or missing reducing the overall number from 6,289 to 6044 curb ramps pending reconstruction as part of these contracts. From the initial six (6) executed District contracts, we have calculated an average curb ramp cost of approximately \$6,000 to rebuild each ramp (note that this cost in some instances includes minor sidewalk reconstruction). MassDOT intends to continually monitor and, if necessary, adjust our average cost per curb ramp based on ongoing construction efforts.

During 2016, two (2) additional CIP funded contracts were executed granting additional funding to District 1 and 2. District 1 advertised \$292,332.98 to reconstruct a maximum of 41 ramps and 8 ancillary ramps. District 2 advertised \$782,815.63 to reconstruct a maximum of 109 ramps and 22 ancillary ramps. Thus, by the end of these eight (8) existing contracts, we anticipate close to 5,900 substandard ramps remaining for reconstruction.

## ***FUTURE FUNDING ALLOCATED IN CIP AND ANTICIPATED ADDITIONAL NFA***

Moving forward with curb ramp reconstruction, additional funding has been allocated in the proposed CIP for FY17 through FY21. We are also anticipating additional Non-Federal Aid (NFA) 100% State funding. District funding for the first five year cycle of improvements have been allocated as follows:

- District 1 is projected to receive \$1,240,284.40.40 and \$765,000.00 for FY19 and 20, respectively, for a total of \$2,005,284.40 to rebuild a maximum of 279 curb ramps and 55 ancillary ramps.
- District 2 is projected to receive \$939,715.60 and \$791,797.00 for FY19 and 21, respectively, for a total of \$1,731,512.60 to rebuild a maximum of 240 curb ramps and 48 ancillary ramps.
- District 3 is projected to receive \$1,280,004.00 and \$600,000.00 for FY17 and 21, respectively, for a total of \$1,880,004.00 to rebuild a maximum of 261 curb ramps and 52 ancillary ramps.
- District 4 is projected to receive \$1,340,996.00, \$750,000.00, \$1,430,000.00, \$1,450,000.00 and \$1,440,000.00 for FY17 through 21, respectively, for a total of \$6,410,996.00 to rebuild a maximum of 890 curb ramps and 178 ancillary ramps.
- District 5 is projected to receive \$575,000.00, \$785,000.00 and \$1,440,000.00 for FY17, 20 and 21, for a total of \$2,800,000.00 to rebuild a maximum of 389 curb ramps and 78 ancillary ramps.
- District 6 is projected to receive \$1,640,000.04 and \$600,000.00 for FY19 and 21, respectively, for a total of \$2,240,000.04 to rebuild a maximum of 311 curb ramps and 62 ancillary ramps. **Attachment 15**, Curb Ramp Reconstruction Timeline.

By the end of FY20, District 1 will be the first District to complete reconstruction of their failed or missing ramps. This was priority based on the lower number of substandard ramps requiring reconstruction and the amount of NFA 100% State

funding which gave the District a quick start. By completing each District as quickly as possible, without over committing, and maintaining consistent obligation of maximum ramp construction per year, we expect additional costs due to mobilization can be minimized. District 6 completes their remaining ramp reconstruction at the end of FY2026. District 3 completes their remaining ramp reconstruction a year later at the end of FY2027. District 2, 5 and 4 complete their reconstruction by the end of FY29, 230 and 31, respectively.

By the end of FY21, MassDOT would have spent close to \$27M to build almost 3,700 failed or missing curb ramps and an additional 20% ancillary curb ramps and/or sidewalk segments. Also, by the end of FY21, we anticipate District 1 to have completed all reconstruction of their estimated failed and missing curb ramps (including their additional 20%). At that point, we estimate that there should only be about 3500 (exclusive of the additional 20%) curb ramps left to be reconstructed.

### ***FUNDING SOURCE PENDING***

To complete the 15-year plan, we are requesting an additional: \$3.5M, per year, for FY22 through FY25; \$2.5M, per year, for FY26 through FY28; \$2.0M during FY29; \$1.0M during FY30; and a final \$875,000.00 during FY31.

With the proposed plan, District 1 would have already completed their obligation to reconstruct deficient curb ramps with already available CIP and NFA funding. Going forward, pending funding sources will provide for the following: by the end of FY26, District 3 will complete their final 111 curb ramps and 22 ancillary ramps, to finish their reconstruction of estimated failed and missing curb ramps, and statewide there will only have about 1230 curb ramps failing or missing remaining to be reconstructed; by the end of FY29, District 2 will complete their final 83 curb ramps and 17 ancillary ramps, to finish their reconstruction of estimated failed and missing curb ramps, and statewide there will only have about 260 curb ramps failing or missing remaining to be reconstructed; District 5 will complete their obligation for curb ramp reconstruction at the end of FY30 by finishing 55 curb ramps and 11 ancillary ramps, and the District 6 (the only remaining contract) will only have about 120 curb ramps left to reconstruct; and finally, by the end of the

15-year plan, in FY31, District 6 will complete their remaining 122 curb ramps and 24 ancillary ramps, thus completing the proposed reconstruction of substandard curb ramps.

## **b. DATA ON CURB RAMPS REMEDIATED TO DATE**

Part of the initial strategy within MassDOT was to attempt to remediate ramps as the assessment process was underway, to begin creating greater access, as we learned the challenges related to this unique initiative.

MassDOT coordinated the initial effort to remediate deficient curb ramps at a district level, where we began the process of undertaking remediation by identifying curb ramps in critical areas, even as we progressed on the curb ramp inventory. This effort was conducted in consultation with critical stakeholders, including MOD, FHWA, disability commissions and independent living centers across the Commonwealth. With specific reference to the disability commissions and independent living centers, MassDOT also made some effort to seek out specific concerns that could be addressed through this resource. We did not derive many suggestions from this effort, partly due to confusion about the nature of this unique request. Nonetheless, each of these groups and individuals consulted supported the concept of our beginning to take some actions toward remediation as we moved forward on the assessment effort.

In spring 2012, MassDOT reprogrammed approximately \$15,000,000 for the fiscal years 2013-2016, which was divided across the six highway districts for the purpose of the “ADA Retrofit Program.” MassDOT preliminarily depended on District leadership to identify critical areas in need of remediation in this interim, which included either or both curb ramp related remediation and/or facility accessibility, to establish contracts to start addressing these areas.

## **c. RETROFIT CONTRACT ACTIVITY**

Through coordination with the Highway Division and District office staff, and with the financial resources of the Retrofit Contracts for remediation of curb cuts and related barriers to access, MassDOT has been able to address matters including the following:

- The lack of ramping and accessible parking at the Worcester Millbury Blackstone River Trail.
- An inaccessible path at the Intersection of Route 16 and Prairie Street in Milford.
- Concerns regarding inaccessible ramps in Milford on Route 16.
- An inaccessible path of travel (3' minimum width at obstruction) on Route 129 in Lynn.
- Concerns regarding ramp and sidewalk obstructions for a reconstructed segment of Route 3A in Billerica.
- A concern about the inaccessibility of the Rest Area in Chelmsford and Route 495.

Figure 5: 2013-16 ADA Retrofit Allocations and Contract Advertising Dates

District	Project File #	Estimate	Advertising
1	607035	\$ 292,332.98	3/26/2016*
1	608225	\$ 670,284.40	3/2/2019
2	607036	\$ 735,736.75	5/28/2016*
2	608226	\$ 939,715.60	2/2/2019
3	607038	\$ 1,280,004.00	7/8/2017
4	607039	\$ 1,340,996.00	7/15/2017
5	607041	\$ 575,000.00	6/3/2017
6	607042	\$ 1,600,000.04	6/17/2017

\*Advertised

Figure 6: Total by Fiscal Year:

- FY16: \$ 1,028,069.73 (D1&2)
- FY17: \$ 4,796,000.04 (D3, D4, D5, D6)
- FY19: \$ 1,610,000.00 (D1&2)

In total, as of March 2016, MassDOT had remediated over 400 curb ramps under the retrofit contracts and will be looking to establish a similar contractual structure of support as MassDOT begins to prioritize and establish project curb ramp remediation.

In terms of remaining retrofit contract funding, there is approximately \$1M programmed in FY16 for Districts 1 and 2, \$4.8M in FY17 for Districts 3, 4, 5 and 6, and \$1.6M in FY2019 for Districts 1 and 2. Ongoing discussions are taking place with the Highway division to consider elements based on lessons learned from the first round of contracting, including:

- Whether contractors should be responsible for the design, or whether the Highway Division should include proposed designs in the contract bid documents
- Whether the proposed funding and schedule aligns with District needs
- Whether the proposed funding for future years will help us meet reasonable expectation from FHWA with regards to our ADA Transition Plan
- Standardizing the manner in which ramps are prioritized across the Commonwealth

These matters and related considerations will continue to evolve as the self-assessment is complete and our work moves into broader remediation planning and implementation activities.

#### **d. CURB RAMP REMEDIATION PRIORITY 2**

These curb ramps will be addressed through the implementation of the Highway Division's annual construction program. All roadway reconstruction, roadway resurfacing and bridge rehabilitation or replacement projects will incorporate the construction of new ADA compliant curb ramps within the project limits. The construction of these curb ramps is not considered to be a separate activity.

Including accessible curb ramps is a critical component of a successful project. As result, this work is not budgeted separately; it is simply considered part of the overall cost of the project. Over the last four years the Highway Division's annual advertising program has averaged approximately \$1 Billion. This work is funded through the following programs; federal aid program (STIP), Accelerated Bridge Program, State Bond Funded program, Western Turnpike and Metropolitan Highway System.

MassDOT's will prospectively consider whether Priority #2 items will need to be addressed as part of the Transportation Improvement Program (TIP) and/or with state bond resources (non-federal resources). An estimated schedule and budget will also be provided for Priority #2 items, should this need become evident.

#### **e. BUDGETING FOR FACILITIES REMEDIATION**

Improvements to MassDOT facilities (e.g. buildings) will also be implemented as part of the Highway Division's annual advertising program. A certain component of the annual allotment for State Bond funded, Western Turnpike and Metropolitan Highway System projects will be allocated for this purpose. There are also resources between the Highway Operations and MassDOT Administrative Services that are contemplated to support the self-evaluation and implementation efforts. There is also potential for reaching out to the Commonwealth for support through existing resources within the Division of Capital Asset Management and Maintenance (DCAMM) and the Executive Office



for Administration and Finance (A&F) designed to support state-wide accessibility initiatives, where there are insufficient resources across MassDOT for particular projects.

## **f. DOCUMENTING, RECORDING AND REPORTING ON COMPLETED REMEDIATION EFFORTS**

Where possible, the remediation program has been incorporated within existing highway processes. MassDOT is focused on the use of performance management as a means to inform investment decisions, and asset management practices are the subtext for this philosophy. MassDOT has long practiced an asset management-based approach to investments in bridges and pavements, and other priority assets are now being included. The MassDOT asset management program provides a cohesive framework in which to position the remediation program.

From a technology standpoint, transportation asset management requires that the practitioner maintain data on asset inventory and condition. Geographic information systems (GIS) offer a powerful platform in which to record asset information, and the technology is a core component of MassDOT information systems. Taking advantage of the MassDOT enterprise GIS infrastructure, MassDOT Office of Transportation and Planning (OTP) will host the wheel chair ramp data on the Agency web-based GIS portal, *geoDOT*.

The portal site is easily accessed by headquarters and district personnel, and map layers can be made available to outside partners and the general public. The site supports user roles, enabling properly credentialed employees to update the inventory to reflect the status of each existing ramp. The same functionality is available in a mobile tool. Most importantly, the interoperability of the system provides a sustainable platform within an environment of rapidly changing technology.

To ensure business processes are in place to support data quality, the existing Asset Management Steering Committee will be utilized. The Steering Committee was formed of representatives across MassDOT, with the charge of proposing and implanting tools and processes to support of asset management. In addition to headquarters personnel, each District office has a seat on the Committee. District participation is critical so that frontline staff have a voice in policy development, and to also ensure consistency with enacted policy.

The Steering Committee is focused on the identification and reporting of information throughout the asset life-cycle. Headquarters is primarily involved in the planning and design phases of this cycle, whereas construction and operations/maintenance are the responsibility of the District Offices. This arrangement underscores the importance of District personnel to the asset management program. District Steering Committee members will ensure reporting within each respective District, through communication with the District ADA Coordinator, Maintenance and Construction staff.

## **g. OUTLINE OF PROTOCOLS FOR REVIEW OF REMEDIATED CURB RAMPS**

For purposes of curb cut ramp reassessment, reconstructed locations will be inspected to ensure the following standards are met:

- The maximum longitudinal slope, slope in the direction of travel, for a curb cut ramp may not exceed 8.3%. The single exception is that the length of a side transition ramp does not need to exceed 15 feet. At a length of 15 feet slope in the direction of travel no longer is the criteria for acceptance, minimum length is.
- The cross slope to the direction of travel should not exceed 2.0%.
- A level landing is required for all curb cut ramps. It facilitates the wheelchair user changing direction and moving from either from sidewalk to ramp or from ramp to sidewalk to continue using the system.
- The slope of the level landing does not exceed 2.0% in any direction (longitudinal, transverse or diagonal.)

- A level landing shall not measure less than 48 inches in any expected direction of travel, or 60 inches when a vertical element obstructs the toe of the curb cut, and the level landing shall be as wide as the curb cut opening.
- The level landing shall be scored to allow easy identification by the user and accurate measurements to ensure compliance.
- Minimum ramp width varies by type of ramp. For simplicity Massachusetts uses 60 inches for any ramp, perpendicular to the curb line and which requires a change in direction at a level landing to proceed.
  - Regulatory Minimum values are:
    - For Straight Ramps – 36 inches
    - For Combination Ramps – 48 inches
    - For ramps with the level landings flush with the gutter level – 60 inches

## **h. COMPLAINTS ON CURB RAMPS**

For access complaints received by the District or by the Boston Office, or issued by the Massachusetts Architectural Access Board, the District ADA/AAB Coordinator will investigate the complaint providing a report with recommendations to the Boston ADA/AAB review unit, the District Director, the Office of Diversity and Civil Rights, and if necessary, MassDOT legal counsel.

If the complaint involves a curb ramp or missing curb ramp the District ADA/AAB Coordinator will update the inventory. This creates a record of what existed prior to any improvement. The District ADA/AAB Coordinator will also evaluate the complaint to determine if the deficiencies at a specific location may be remedied through the Curb Ramp Retrofit contract.

## **i. PERIODIC REVIEW AND EVALUATION UPDATE**

*Regulatory Reference: 49 CFR 27.11 (c) (2) (v).*

Periodic review and evaluation will flow from ongoing Working Group meetings, where subcommittee activities and progress are reported on a monthly basis, and through Core Group meetings, which will address thorny policy and planning issues. The Manager of Federal Programs will continue to record, follow up and report on progress made that is linked to Work Plan objectives that will be the source for follow up reporting and evaluation of progress. Annual updates and/or revisions to the Transition Plan document will be provided, as needed, to reflect progress and completion of pending assessments.

## **j. MONITORING AND EVALUATION**

*Regulatory Reference: 49 CFR 27.11 (c) (2)(iv)*

MassDOT will report on performance of the remediation program on an annual basis, with the number of deficient curb cuts remaining used as the key performance indicator. At the close of each state fiscal year (June 30th), a snapshot of the database will be preserved to mark the progress of the preceding year. The data will be included in the MassDOT Office of Performance Management and Innovation (OPM&I) annual report, which is available on the MassDOT website.

## **VII. DOCUMENTATION OF PLAN**

A copy of the original plan and any updates will be made available for public inspection for three years following the completion of the self-evaluation.

## VIII. ATTACHMENTS

**Attachment 1**, ADA/Section 504 Transition Plan Scope of Work

**Attachment 2**, ADA Transition Plan Working Group Members

**Attachment 3**, District 3 Pilot Prioritization List

**Attachment 4**, Curb ramp prioritization lists statewide, by town, and by district

**Attachment 5**, Sidewalk Analysis

**Attachment 6**, PATI Update

**Attachment 7**, Shared Use Paths and Greenways

**Attachment 8**, Policy Statement

**Attachment 9**, Public Notice

**Attachment 10**, Grievance Procedures

**Attachment 11**, Engineering Directive

**Attachment 12**, Work Zone Safety Policy

**Attachment 13a-b**, Accessible Pedestrian Signal Policy and Installation Policy

**Attachment 14**, Accessible Meeting Policy

**Attachment 15**, Curb Ramp Reconstruction Timeline