

**DESIGN REVIEW COMMENT AND RESOLUTION FORM**

PROJECT NO.: 604531  
 DESCRIPTION: MAYNARD - ACTON ASSABET RIVER RAIL TRAIL  
 DESIGNER: AECOM TECHNICAL SERVICES, INC  
 SUBMITTAL: 25% REVIEW  
 REVIEW SECTION: DISTRICT #3



DATE: JUNE 6, 2012

COMMENT No.	SHEET OR ITEM No.	COMMENTS <sup>(1)</sup> (COMPLETED BY REVIEWER) JEFF CULLEN, AAB/ADA REVIEW COORDINATOR	INITIAL ACTION	RESPONSE <sup>(2)</sup> (COMPLETED BY DESIGNER) AECOM	QC REVIEW INITIAL	FINAL ACTION VERIFIED <sup>(3)</sup>
<b>REVIEW SECTION: PROJECTS</b>				<b>REVIEWER NAME: THOUNG PHAN</b>		
1.		At White Pond Road and the end of the project terminus plot the existing edge of road details such as granite curbing, sloped edging, grass, grass strip, sidewalk etcetera where the trail head ends.		This will be incorporate into the 75% submittal.		
2.		Provide a construction detail for the warning panel treatments for the full pavement width on the trail at the terminal and crossing points.		This will be incorporate into the 75% submittal.		
3.		Provide a 20 scale plan detail for the trail heads/terminal locations and crossing points.		Large scale plan of the northern terminal area in Acton will be presented at the comment resolution meeting and carried forward to the 25% design hearing.		
4.		The next level submission should include schedules for both driveways and wheel chair ramp (WCR) curb cuts which are cross-referenced with the plans. The schedules should include the referenced roadway baseline, station and offset to the center of the opening at the gutter line, gutter profile slope, opening width at the gutter, left transition length, right transition length, depth from the gutter to the back of the sidewalk, and depth of level landing or width of path of travel across driveways.		This will be incorporate into the 75% submittal.		

(1) This section to be completed by MassDOT Reviewer.

(2) This section to be completed by Designer.

(3) To be determined by MassDOT.

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5.		Please provide curb cut construction details with a sectional views for all the types of wheelchair ramps and driveways aprons with continuous sidewalk crossings. All proposed construction plans with wcrs and driveway aprons with continuous sidewalk crossing must use those outlines that comply with the types of curb cut construction details provided. The selected scaled symbols used for the construction plans must be reflective of the finished ramp or driveway apron. For example the wcr for the crossing at station 52 will require separate wcr construction detail.		This will be incorporate into the 75% submittal.		
6.		The wheelchair ramp schedule plan should include a notation, on the sketches, that detectable warning panels are required on all the proposed wheelchair ramps and are to be installed in accordance with Construction Standard Details, 2010 and E 107.6.5.		This will be incorporate into the 75% submittal.		
7.		At station 19+50 right, does the proposed stone dust path comply with the requirements of an accessible route in terms of grade, cross slope, surface treatment etcetera? Please provide a profile, grades or a grading plan and typicals or cross sections. Reference 521 <b>CMR 20.00; ACCESSIBLE ROUTE.</b>		A 75% plans will include a paved path (with detailed grading) to connect the proposed parking to the bike path.		
8.		Is there an accessible pedestrian route (PAR) directly leading form the accessible aisle to the trail at station 19+50 right? Provide enough information of the plans to conform this.		An accessible (paved) pedestrian route will be added into the 75% submittal.		
9.		Does the accessible aisle conform to Reference 521 <b>CMR 23.4.6; Access aisles</b> , at station 19+50 right. Provide enough information on the plans to conform this.		The will be evaluated with the modified parking and included into the 75% submittal.		

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10.		<p>The grade break at the bottom of the ramp at station 62+50 is skewed to the direction of travel and is non-compliant and is difficult for a wheelchair user to negotiate. This also applies to the wcrs at stations 67+80, 72+35, 76+50, both wcrs at the Acton Street crossing, 89+25 etcetera. Reference PROWAG Chapter R3: TECHNICAL PROVISIONS, Section R303.3.4; <b>GRADE BREAKS.</b></p>		<p>We request clarification as to whether the reviewer is asking for adjustments to the grade break locations, or adjustments to the path alignments. There may be opportunities for adjustment in some locations based on available ROW, and we request further discussion in the comment resolution meeting.</p>		
11.		<p>A level landing shall be provided at the top of every perpendicular curb cut/wcr 4 feet in depth by the width of the ramp. This applies to wcrs at stations 52+00, 58+00, 72+35 etcetera. Reference Massachusetts 521 CMR 21.00: <b>CURB CUTS</b>, subsection 21.6.1 Landing Width.</p>		<p>This will be incorporated into the 75% submittal.</p>		
12.		<p>The grade of the rail trail has to meet 4.5% ± 0.5% maximum or the section of trail not meeting this grade requirement for an accessible route has to be designed as a ramp. For the profile grade at stations 63 and 74. If the designer has determined that these regulations cannot be complied with, than it is recommended a variance is obtained from the Massachusetts AAB/ ADA Coordinator, Mr. David Phaneuf and after this has been accomplished, obtain another variance from the Massachusetts AAB before construction begins. Reference 521 <b>CMR 20.00; ACCESSIBLE ROUTE</b> and <b>PROWAG Chapter R3 TECHNICAL PROVISIONS, Section R302: Pedestrian Access Routes, subsection R302.5: GRADE.</b></p>		<p>62+20 – 63+60 This grade could be adjusted to 5% but it may have adverse affects on drainage, as it would require depressing the bikeway from 61+30 to 63+60. We request further detailed discussion of these requirements during comment resolution meeting, as this area is less than or equal to the roadway grade, and we will incorporate necessary changes into 75% submittal.</p> <p>72+50 – 75+40 We request further detailed discussion of these requirements during comment resolution meeting, as this area exceeds 5% but is less than or equal to the roadway grade, and we will incorporate necessary changes into 75% submittal.</p> <p><i>Reference for Meeting Discussion: 521CMR 22.3.1 paragraph 2 “Exception” PROWAG 301.4.2 “Street or Highway Grade” These two references indicate that a sidewalk along a street can exceed 5% without a need for ramps, as long as it matches the general grade of the adjacent street.</i></p>		

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13.		<p>Wheel chair ramps can provide geometric wayfinding assistance to the visually impaired to correctly orientate them to the proper direction when crossing a street. Radial wheelchair ramps inherently interfere with this property and can direct the visually impaired into the traffic stream instead of directing them to properly cross the street within the cross walk markings. As a result, we direct the designers not to place a radial wheel chair ramp in the "apex location" of a turning radius, but rather, to shift the wcr along the curvature of the radius as much as allowable, up to a maximum allowable by the MUTCD, to help negate the effect of improperly directing the visually impaired into the traffic stream. Also, a 4 foot deep by the length of the width of the ramp landing area is required at the bottom of all ramps to be within the cross walk strips and outside of the through-travel lanes. Apex positioned wcrs are only allowed when there are site constraints.</p>		<p>Will evaluate and incorporate into the 75% submission.</p>		
		<p>Please move all the radial wcrs to provide the best possible wayfinding assistance for the visually impaired. (See attached sketch showing a general layout.) For example the proposed apex wcr at station 76+00. Please provide a separate wcr for each crossing direction.</p>		<p>Will evaluate and incorporate into the 75% submission.</p>		
14.		<p>Please provide construction details such as decking, edge treatments, railings etcetera and typicals for the Boardwalk Structures.</p>		<p>This will be incorporated into the 75% submission.</p>		

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