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Massachusetts Department of Transportation
Highway Division

INTEROFFICE MEMORANDUM

TO: Marie Rose, P.E., Director of Project Management

ATTN: Lawrence Cash, P.E., Project Manager

FROM: Jonathan L. Gulliver, District 3 Highway Director

DATE: June 19, 2013

SUBJECT: Maynard - Acton
Assabet River Rail Trail
File No. 604531
Revised 25% Review
Designed by: AECOM
Contact: John Schoenfeld (978) 905-2385

TIP Amount: Currently Not Programmed

25% Estimate: $ 3,835,000
(w/25% Contingency)

The District has reviewed the Revised 25% Submission, dated April 2013; for the above-mentioned project. Comments are attached in the following documents or as marked in red on the plans.

Providing the above comments are addressed, the District recommends that this project be advanced to the 75% design phase.

If you have any questions or require additional information, please call Thuong Phan, P.E., at (508) 929-3869, or Stephen Risotti, P.E., Highway Review Lead Engineer at (508) 929-3703; Tom Emerick, District Utility/Constructability Engineer, at (508) 929-3919. For traffic related comments, contact Joe Frawley, P.E., District Traffic Engineer at (508)-929-3916.

cc: Projects File, EC, Pinfo.
AAF/sr

DESIGN REVIEW COMMENT AND RESOLUTION FORM

PROJECT NO: 604531
DESCRIPTION: Maynard/Acton - Assabet River Rail Trail
DESIGNER: AECOM, Inc.
SUBMITTAL: Revise 25% Submission
REVIEW SECTION: District 3

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DATE: 6/19/2013

COMMENT NO.	SHEET OR ITEM NO.	COMMENTS [1] (COMPLETED BY REVIEWER)	INITIAL ACTION	RESPONSE [2] (COMPLETED BY DESIGNER)	QC REVIEW INITIAL	FINAL [3] ACTION VERIFIED
PROJECTS SECTION						**Reviewer:** THOUNG PHAN
1.	Gen.	The following 25% review comments were not adequately addressed and/or need to be revisited by the Designer: • Comment #1: *"Revise the horizontal geometry or widen the path to allow the bicyclist to travel with the design speed…"* At horizontal curves, the designer should strive for a minimum 56 ft radius to meet 15 mph design speed wherever the right of way is available. For example, curves at Station 35+25, 172+75, 175+75 and 177+50. • Comment #4: *"Provide a minimum 2 foot wide shoulder along both sides of the path…"* Confirm if this requirement is met at Station 49+75LT to 50+68LT, Station 67+40Lt to 71+15Lt, etc. • Comment #5: *" Provide 3 foot clearance from the edge of the path to signs, trees, walls, fences,…"* , The designer needs to review to confirm adequate clearances have been provide along the path (e.g. Station 59+45RT to 62+25RT, Station 67+50 to 74+90, etc). • Comment #7: *"Provide a 7 foot separation (5 foot minimum) from the edge of roadway shoulder to the edge of path…"* This requirement also includes separations to parking lots. Please check sections from Station 57+60 to 59+45, Station 62+25 to 62+70,				

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		Station 72+05 to 74+90, and Station 179+94 to 180+44. If there were resolutions to these and other comments at the comment resolution meeting, please provide a written summary for the record and future references.				
2.	Gen.	As stated in the PDDG Book Section 11.4.1.1 *"...In certain instances, a reduced width of 8 feet may be acceptable where there are severe environmental, historical, and/or structural constraints"*, and Engineering Directive E-09-005, "a minimum path width of 10 feet may be used with sufficient justification. A path of 8 feet may be allowed under unusual circumstances, but must be supported with a Design Exception Report". Please provide documentation or DER for substandard path widths that need to be resolved with the District and the CSE (Complete Street Engineer).				
3.	Gen. 12 6 7, 24	Revise Typical Sections for consistency with the Construction Plans at the following locations: • On Mill Street, from Station 34+30 to 35+30 the typical section depicts railroad tracks to be removed while there are no railroad tracks shown on the plans. • As Shown on the construction plans, show the stone wall on the right side of the path on typical section from Station 132+00 to 134+00. • Provide a typical section for the path from 71+15 to 72+05. • The Typical Section from Station 134+85 to 140+55 depicts a 16 foot wide boardwalk while the construction plans show both a 12 foot and 16 foot wide boardwalk.				
4.	Gen.	In the next submission, show locations of all erosion control devices.				

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5.	Gen.	Review the proposed path profile to minimize the fill areas. Currently, the path is being raised in excess of 2 feet in the following locations. • Station 25+00 to 30+00 • Station 45+00 to 47+00 • Station 172+00 to 178+00				
6.	9	Provide a minimum 12 foot wide path from parking areas to the bike trail whenever there is sufficient right of way available (e.g. from parking lots at Station 20+40 and 117+30). Also, the Designer should consider the need for signs, island, bike racks, etc in these locations.				
7.	Gen.	At the intersections of the bike path with the roadway, revise the WCRs along the bike path with the following: • The widths of primary ramps and level landings of WCR should be as wide as the bike path width, such as WCR # 27, #28, and # 29, etc. • Provide transition ramps to abut cement concrete sidewalk if necessary. For example, WCR #11 at Station 57+05, WCR #12 at Station 57+50, WCR #13 at Station 63+55, etc. • Show a 1.5 % slope along the WCR level landing.				
8.	15	There is a callout for the proposed 10 foot wide cement concrete path to abut the existing 5 foot wide cement concrete sidewalk. There is also a callout for the existing sidewalk to be saw cut longitudinally along the path. Is a saw cut necessary?				
9.	15	From Station 54+45 to 57+10, there appears to be significant area of an existing parking lot being converted to a loam and seed island and a portion of the bike path outside the existing right of way. Revise the construction plans to show the necessary land takings or permanent easements for these				

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		areas. A reduced cross section may need to be considered in this area.				
10.	11, 14, 16	Where the proposed bike path is adjacent to an existing parking lot, street, or sidewalk, the elevations of the bike path surface should follow a 6 inch high offset to the adjacent profile. This will minimize amount of grading required at the following locations: • From Station 29+75 to 33+30 the bike path profile should be parallel with Winter Street profile. • From Station 33+80 to 34+50, the path should be parallel with Great Road profile. • From Station 45+50 to 49+75, the path should parallel to High Street profile. • From Station 51+45 to 57+10, the path should match the Main Street sidewalk profile.				
11.	16	The bike path should be widened to offset a tight horizontal curve along steep slopes, such as, the S curve from Station 62+30 to 62+75. See AASHTO, Guide For The Development Of Bicycle Facilities, Chapter 2, Horizontal Alignment for additional information.				
12.	Gen. (19, 25)	Review the construction plans to verify the sloping limits are correct. It appears the limit of grading show some large changes in areas without any significant elevation change in both the path and surrounding area (e.g. Station 78+45LT, 147+50LT to 148+50 LT, etc).				
13.	Gen.	Revise the plans to meet the MassDOT drafting standards and the followings: • Darken the existing condition on the construction plans to improve legibility. • Plans show contours but no reference elevations. • Provide uniform text sizes, symbols, etc. regardless of				

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		plan scales. • Show the necessary repairs required on all cross culverts and headwalls along with sizes and materials.				
UTILITY/CONSTRUCTABILITY SECTION				**Reviewer:** TJE		
1.		Provide cross sections for the proposed rail trail as indicated in Section 7 of the 25% Checklist. The cross sections should adhere to Section 18.2.1.4 of the 2006 Project Development and Design Guide.				
2.	Title	Please update the reference manual and guide block with the correct versions of all reference material.				
3.	3	Note #8 indicates that "All proposed granite curb shall be Type VB." The constructions plans and estimate indicate all proposed granite curbing as Type VA4. Please change to Type VB and update accordingly.				
4.	3	Please remove Note #11 from the plans. The utility poles and OHW's will be relocated by the respective utility companies. The project falls under Engineering Directive E-11-008 "MassDOT Utility Reimbursement Policy". MassDOT shall reimburse utility owners for necessary relocations of their facilities within MassDOT projects.				
5.	5	Typical Path – Station 30+00 to 33+10 – Full Depth Pavement; • The label "Prop 4-inch Loam and Seed" is not relative to the section. Please remove from the section. • Label the material used for the 3-ft strip on the right side of the path. • Has a concrete retaining wall been discussed rather than the proposed modular block retaining wall? Would a concrete retaining wall be a cheaper				

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		alternative?				
6.	5	Please update pavement notes regarding pavement courses to SUPERPAVE Surface Course - 9.5 (SSC - 9.5) and SUPERPAVE Intermediate Course - 12.5 (SIC - 12.5). Additionally update the estimate with the appropriate items.				
7.	5	The Proposed Full Depth Pavement – Widening is typically widening less than 4-ft and not 3-ft. Please update accordingly.				
8.	5	The base course for Proposed Full Depth Pavement – Widening should be 8-inches of High Early Strength Concrete. Please update the plans accordingly.				
9.	5-39	Update the Title Block with the project City/Town and project name.				
10.	7	Typical Path Section Station 73+10 to 73+95 and Typical Path Section Station 73+95 to 74+90 shows a proposed modular block retaining wall on the left side. Please evaluate grading the proposed fill in this area to meet the existing ground and eliminate the retaining thru these stations.				
11.	7	The typical section for the boardwalk indicates 10-inch concrete piles. The area that the boardwalk is proposed is not very accessible. What will be the proposed method for installing the concrete piles? The method of installation should create the least impact to the existing wetland area. If the boardwalk is installed in sections and the installed sections are used to support heavy equipment please verify that the boardwalk is designed to support these loads.				
12.	7	Please provide bridge plans and boring logs for the boardwalk. The District recommends that the structure be				

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		treated as a bridge. These plans and borings are critical to determining impacts of the boardwalk to the surrounding area.				
13.	9	Please verify the condition and functionality of the existing culvert and headwall at Station 17+00±.				
14.	9	All permanent and temporary easements should be shown the construction plans. This will assist in identifying that all proposed work is within the ROW. For example, the construction easement for the proposed parking area for the entrance to the bike path at Station 20+45±RT should be shown.				
15.	10-12, 14	The existing utility pole diameter scales to approximately 3-ft. Typically utility poles are 1.5-ft in diameter. Please update the plans with the correct diameter.				
16.	11	Please label the disposition of all water gates within the project limits throughout the plans. For example the water gate valve at Station 34+39±RT.				
17.	15	Please label the disposition of the existing TMH at Station 51+71±LT.				
18.	16	The disposition of utility pole #57/24 at Station 57+55± is not labeled. The existing pole location is shown in the middle of the proposed trail. This pole should be labeled and a proposed location shown at a minimum 3-ft from the edge of path. This location may affect additional poles with the pole set and should be evaluated at the utility field meeting.				
19.	16	Shared use paths are minimum 10-ft as detailed in the 2006 Project Development and Design Guide Section 11.4.1.1. It appears that the trail width can be increased to 10-ft between				

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		Stations 58+25± to 59+50±. Please evaluate increasing the width through this section.				
20.	17	Utility Pole #81/7 is shown within the 3-ft shy distance. If the pole is not to be relocated then barrier should be shown to protect pedestrians from the utility poles. Additionally, the guy anchor is shown as "adjust by others". The proposed location for the guy anchor should be shown on the plans. Adjustments to the guy anchor may affect the utility pole location. The location for this guy wire will be determined at the utility field meeting.				
21.	17	Bridge plans are required for the proposed bridge structure at Station 66+25±. The existing bridge has a water line crossing. The plans are required to determine how the relocation of the water line will be staged and incorporated into the new bridge structure.				
22.	18-19	Please provide proposed locations for the R&R parking meters between STA 67+50± to STA 74+00±. The proposed locations should be shown to verify that their location is not within the rail trail and the location adheres to the 3-ft shy distance while maintaining the minimum rail trail width.				
23.	18	Utility Pole #57-15/3 at Station 68+50±RT is labeled as "R&R" but there is no proposed location shown on the plans. The plans should indicate the proposed location of the pole and the associated guy anchor to verify that no additional impacts are created with the new pole and guy anchor location. This location will be discussed at the utility field meeting.				
24.	19	Please label the disposition of utility pole #1/x at Station 74+00±LT. Additionally the pole is within the 3-ft shy				

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		distance. If the pole is not to be relocated then barrier should be shown to protect pedestrians from the utility pole.				
25.	19	Please label the disposition of UP #92/10 at Station 75+55±RT.				
26.	20	Please label the disposition of utility pole #48-1 at Station 87+40±RT. The pole is within the 3-ft shy distance. If the pole is not to be relocated then barrier should be shown to protect pedestrians from the utility pole.				
27.	20	Utility pole #48-2 is labeled as "RET" but is within the 3-ft shy distance. If the pole is not to be relocated then barrier should be shown to protect pedestrians from the utility pole.				
28.	24	Please verify that the scale bar on the plans is correct. For example the scale bar on Sheet 24 is incorrect. Please update accordingly.				
29.	24	The existing hydrant at Station 133+35±RT is labeled as "R&R". Please provide a proposed location for the hydrant and show the proposed service line for the new hydrant location.				
30.	24	There is an existing light post at Station 133+65±RT that is within the 3-ft shy distance. Please provide a proposed location for the light post or shown protection for pedestrians if the pole is not to be relocated.				
31.	27	Bridge plans are required for the proposed bridge structure at Station 169+80±. The plans are required in order to help identify potential issues with construction of the bridge.				
32.	28	The existing width of Maple Street is approximately 25-30 ft. The proposed path between Station 179+80 and the end of				

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		the project creates a bump out in Maple Street that constricts the width to 16-ft with a proposed 12-ft lane through this section. The plans should indicate if Maple Street is one way through this section as well as the direction of the traffic flow.				
33.	28	There is an existing driveway at Station 180+25±RT that is being eliminated due to the rail trail construction. Please evaluate if this driveway access needs to be maintained as this appears to be the only access to the property.				
34.	28	The proposed sidewalk markings are shown in the proposed wheelchair ramp. Please update the plans accordingly.				
35.	30	There appears to be a motion sensor flashing beacon within the sidewalk path. Please verify that this location does not impact the minimum ADA/AAB travel width.				
36.		Please add the following items to the estimate; 140, 220, 226, 431,440, 450.90, 452, 453, 453.22, 455.31, 472, 482.5, 485, 580, 697, 698.3, 701, 704, 707.81, 767, 767.8, 874.1 and 874.2.				
TRAFFIC SECTION				**Reviewer:** CHRISTOPHER L. HOGAN		
1.	42	Add the G20-2 "End Road Work Double Fines End" sign to the Temporary Traffic Control Plan.				
2.	30	Look at relocating the proposed sign and signal post to meet ADA requirements on the proposed sidewalk.				
3.	11	Please ensure that the proposed retaining wall, where the trail parallels Winter Street will not obstruct the sight triangle for vehicles turning out of Winter Street onto Main Street. The additional detail must be provided as part of the 25%				

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		submission.				
4.	34	It is not clear where the proposed path will match into the existing conditions between stations 67+00 and 75+00; please clearly show the proposed work in the next submission.				
5.	41	Please include all Temporary Traffic Control Plan Details for the proposed work with the next submission. The TTCP included in this submission is incomplete, for example a shoulder closure detail will be needed.				
6.	40	The proposed W11-1 signs should be 30' X 30' on the Traffic Sign Summary Sheet.				
7.	G	Install W11-1 and W16-7p at any uncontrolled trail crossings.				

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