Moving Massachusetts Forward. massDOT Highway

INTEROFFICE MEMORANDUM

ATTN: Michael Papadopoulos, P.E., Project Manager

FROM: Ronald Dionne, P.E., District 3 Highway Director

DATE: June 6, 2012

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

TIP Amount: Currently Not Programmed

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

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

The District would like to meet with the Consultant to discuss the review comments. In advance of this meeting, please provide written responses to the District. After the meeting, a recommendation will be made as to whether the 25% design will need to be re-submitted or the project may advance to 75% design stage.

If you have any questions or require additional information, please call Thuong Phan, P.E., at (508) 929-3869, or Stephen Risotti, P.E., Senior Project Reviewer 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.

TP/SR/TE/JF

cc: Projects File, MO File, Projects Log

SR/sr

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

massDOT
Massachusetts Department of Transportation
Highway Division

DATE: JUNE 6, 2012

COMMENT NO.	SHEET OR ITEM NO.	COMMENTS [1] (COMPLETED BY REVIEWER)	INITIAL ACTION	RESPONSE [2] (COMP LETED BY DESIGNER)	QC REVIEW INITIAL	FINAL ACTION VERIFIED [3]
REVIEW SECTION:PROJECTS				**REVIEWER NAME:** THOUNG PHAN		
1.	25%	Revise the horizontal geometry or widen the path to allow the bicyclist to travel at the design speed through the curves with small radii or at the 90° angle turns without having to dismount (e.g. Station 35+00, 50+00, 67+00, 71+50, 72+50, 130+00, 134+60, 133+60, 138+00, 174+00, etc).				
2.	75%	Provide additional vehicle parking areas to support users at access points along the path (e.g. Station 20+45 & 154+00 – Sylvia Street). Also, consider provide bicycle parking areas and resting facilities along path.				
3.	25%	Confirm there is adequate sight distance throughout the length of the path. Where there is not sufficient sight distance, consideration should be given to widening the path through the curve along with installing a yellow center line with warning signs in accordance of the MUTCD. Refer to PDDG Section 11.4.7.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

(4.)	25%	Provide a minimum 2 foot wide shoulder along both sides of the path per PDDG, Section 11.4.1.2 (e.g. Station 30+00RT to 33+20RT, 72+50LT to 73+10LT, 73+50LT to 75+50LT).				
5.	75% for most items	Provide a minimum 3 foot clearance from the edge of the path to signs, trees, poles, walls, fences, guardrails, or other obstructions per requirements of the PDDG Section 11.4.1.2 (e.g. Station 30+00 to 33+20, Station 52+20 to 57+50, Station 66+47 to 66+99, Station 132+30 to 137+80, etc).				
6.	75%	In locations along the path where the proposed adjacent slopes are steeper than 1:3, a 5 foot separation from the edge of the path to the top of slope is desirable. Where a slope of 1:2 or greater exists within 5 feet of the path and the fill is greater than 10 feet, a physical barrier should be provided per requirements of the PDDG Section 11.4.1.2 (e.g. Station 0+25 to 30+00, Station 35+50 to 50+10, Station 64+00 to 66+50, Station 67+00 to 67+60, Station 76+50 to 86+80, etc.).		with 3' clearance, presumably		
(7.)	25%	In areas where the path is located adjacent to the roadway, provide a 7 foot separation (5 foot minimum) from the edge of roadway shoulder to the edge of path per the requirements of the PDDG Section 11.4.1.2 (e.g. Station 33+80 to 35+00, Station 50+25 to 51+25, Station 52+20 to 57+50, Station 67+80 to 71+50, Station 72+50 to 75+50, Station 87+40 to 89+50, etc.).				
8.	25%	The proposed path layout appears to have significant impacts to several abutting properties by situating the path within 5 feet of the dwellings at Station 64+40LT and 72+50LT. Consider realigning the path by balancing the offsets to the dwellings in these areas.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

exaggeration 1 times maybe 2 times

9.	25%	Consider all alternatives to the current path alignment from Station 67+00 to 75+50 which appears to switch from one side of the parking lot to the other 3 times. This number of crossings in a relatively short distance creates an undesirable condition for the path users.				
10	25%	The profile grades of the path used by pedestrians cannot exceed 5% unless treated as a ramp with a maximum slope of 8.33% per requirements of the PDDG Section 11.4.8. Revise the grades along the path that exceed these criteria (e.g. Station 62+20 to 63+60 and 72+50 to 75+40).				
11	25%	Review and revise the proposed profile of the path along the existing railroad bed to eliminate any excavation. This approach would minimize the possibility of additional costs associated with the disposal of contaminated soils that are inherent to railroad tracks.	f/ 96+00 / f/ 98+00			
12. bridge	75% type study	Prior to the next submission (with response to review comments), provide plans for the structural components of this project; such as, bridges, board walk, and retaining walls (e.g. retaining walls at Station 30+00 to 33+40LT).				
13.	25%	Confirm if the current horizontal alignment will allow emergency vehicles full access throughout the paths length. The current path design incorporates a narrow width, small radii, 90° turns, and bridges and boardwalks which appear to limit their access and movement. Also, consider turn around areas for the emergency vehicles at the beginning and ends of the boardwalk and bridges.				
14.	75%	Provide additional details at all path entrances that include pavement markings, fences, bollards, gates, etc. (e.g. Station 20+24, Station 154+25, etc.)				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

15.	75%	If there is sufficient right of way, every effort should be made to layout the intersection between the path and the roadway as close to a 90° angle as possible (e.g. Station 87+00 & 89+50)				
16.	75%	Provide fences or barriers at all cross culverts with appropriate clearances at the following locations; Station 10+80, 17+05, 101+80, 127+15, 144+05, & 154+25.				
17.	75%	Has an analysis been performed comparing the alternative of providing 1 high retaining wall between the path and the canal versus 2 low retaining walls on both sides of the path from Station 30+00 to 33+50. Consideration needs to be given to the highway guardrail between Winter Street and the path with respect to sufficient space to provide the lateral dynamic deflection and whether a moment slab is required.				
18.	75% for most items	Please be advised that future ADA regulations which may require a 48 inch clearance for all sidewalks and WCR instead of the current 36 inch clearance to a point obstruction, therefore, planning accordingly.				
19.	75%	From a site visit it appears there are drainage problems along the railroad tracks in which isolated depressed areas adjacent to the railroad tracks have caused ponding and in some cases have submerge the railroad tracks. Provide all necessary details for the path drainage including culverts, drainage swales, etc.				
20.	75%	Inspect all culverts to determine the condition and the need for either maintenance or replacement.				
(21)	25%	It appears the path is constructed in the same location as 2 detention ponds at Station 135+50 & 138+25. Confirm if these basins are part of a private drainage system and whether there will be a need to rebuild these facilities.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

22.	75%	Please submit Special Provisions and Office Calculation Book with the next submission.				
23.	25% 25% 25% 25%	Revise the plans to meet the requirements of PDDG Section 18.2.2.2 with the following: • The Locus Map on the Title Sheet should not have contours. • On the Construction Plans provide elevations of the contours along with providing a smoother shape to the contour lines. • Use proper line type and thicknesses in delineating property, layout, and easement lines. • Clearly indicate the Railroad right of way along with adjacent property lines including the current property owners.				
24.	75%	Sufficient survey information must be included in the plans so that the construction centerline can be physically established in the field. This is as directed in the 2006 MassDOT's Project Development and Design Guide on page 18-24 under "Center Line".				
25.	75% (or 100%)	The 100% plans must show the traverse points, list the coordinates for the traverse points, and show the ties to the traverse points. Coordinates must be listed for all the limits of work, centerline intersection points, PC's, PT's, PCC's, and angle points.				
26.	75%	A plan showing the traverse with bearings and distances and giving angles (or bearings) and distances to all the limits of work, centerline intersection points, PC's, PT's, PCC's, and angle points is also acceptable.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

27.	25%	Reference the vertical datum used for setting the Benchmarks elevations shown on the profiles. This is as directed on page 18-11 of the 2006 Project Development and Design Guide.				

REVIEW SECTION: UTILITIES/CONSTRUCTABILITY REVIEWER NAME: **RAG/TJE**

1.	25% for major 75% for minor	Existing layout information is not accurately depicted. The construction plans need to better define existing conditions including edge of road, tree locations, tree diameters, building locations, parking areas and existing property ownership on all construction drawings. More survey of the existing condition is needed to support the path route.				
2.	25%	Proposed path location will impact numerous properties and proposed permanent easements, temporary easements and right of way limits are hard to distinguish or not noted on the plans and should be better defined in the next design submission.				
3.	75%	There is no traffic management plan submitted. The proposed path location shows work directly adjacent to existing roadways.				
4.	75%	There are numerous impacts to wetlands and resources throughout the proposed path location. There are no proposed erosion and sedimentation controls detailed on the plans where wetland areas border the proposed limit of work.				
5.	75%	There are no wheel chair ramp or transition details to verify compliance with ADA/AAB requirements.				
6.	75%	Typical sections as shown on Sheet 3 are missing the section of the proposed boardwalk. This section is important in determining wetland impacts.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

7.	75%	There is not enough back up information provided to justify if the preliminary estimate is reasonable. More information is needed for the boardwalk, bridge structure, and retaining walls.				
(8.)	25%	It is noted that Station 131+70 to 135+40 has no retaining wall on left side. Please provide a typical section of these stations and adjust other sections accordingly.				
9.	75%	It is noted that there is proposed rip rap between Station 17+50 and 18+25 which should be shown on the construction plans.	2 0			
10.	75% Type study	The prefabricated bridge section should have the railing heights noted and be in compliance with section 11.4.10 in the 2006 MHD Project Development & Design Guide.				
11.	75%	Typical path section Station 30+00 to 33+20- Please provide a detail of proposed retaining wall, proposed bridge rail, proposed low retaining wall and proposed guard rail in the next design submission. Verify compliance with standards provided in Chapter 11 in the 2006 MHD Project Development & Design Guide.				
(12.)	25%	Typical path section Station 30+00 to 33+20- The minimum shy distance of 3 feet between the edge of the bike path and all obstructions will need to be maintained per Chapter 11 in the 2006 MHD Project Development & Design Guide.				
(13.)	25%	Typical path section Station 73+50 to 75+50- A minimum 2-foot wide graded shoulder should be maintained adjacent to both sides of the proposed path.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

14.	25%	Typical path section Station 73+50 to 75+50- Barriers is required between existing pavement and the proposed path in accordance with section 11.4.1 in 2006 MHD Project Development & Design Guide.				
15.	25%	Typical path section Station 72+50 to 73+10- A minimum 2-foot wide graded shoulder should be maintained adjacent to both sides of the proposed path.				
16.	25%	Typical path section Station 72+50 to 73+10- Barriers should be shown between existing pavement and the proposed path in accordance with section 11.4.1 in 2006 MHD Project Development & Design Guide.				
17.	25%	Typical path section Station 50+10 to 51+10- A minimum 2-foot wide graded shoulder should be maintained adjacent to both sides of the proposed path.				
18.	25%	Typical path section Station 50+10 to 51+10- Barrier should be shown between existing pavement and the proposed path in accordance with section 11.4.1 in 2006 MHD Project Development & Design Guide				
19.	25%	Typical path section STA 50+10 to 51+10- Please provide proposed slope ratio to existing in next design submission				
20	25%	Typical path section Station 50+10 to 51+10- The section should specifically show the proposed sidewalk as shown on Sheet 9 of the construction plan.				
21	25%	Typical path sections Station 67+80 to 69+00, 69+30 to 71+00 and 71+30 to 71+50- A minimum 2-foot wide graded shoulder should be maintained adjacent to both sides of the proposed path.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be deterrnined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

22.	25%	Typical path sections Station 67+80 to 69+00, 69+30 to 71+00, and 71+30 to 71+50- Barriers should be shown between existing pavement and the proposed path in accordance with section 11.4.1 in 2006 MHD Project Development & Design Guide.				
23.	25%	Typical path sections Station 67+80 to 69+00, 69+30 to 71+00, and 71+30 to 71+50- Please provide proposed slope ratio to existing in next design submission. Confirm compliance with minimum shy distance of 3 feet.				
24.	25%	Typical path section Station 57+85 to 63+70- A minimum 2-foot wide graded shoulder should be maintained adjacent to both sides of the proposed path.				
25.	25%	Typical path section Station 57+85 to 63+70- Barriers should be shown between existing pavement and the proposed path in accordance with section 11.4.1 in 2006 MHD Project Development & Design Guide.				
26.	25%	Typical path section Station 57+85 to 63+70- Please provide proposed slope ratio to existing in next design submission				
27.	25%	Typical path section Station 57+85 to 63+70- Please provides existing fence distance from edge of path in next design submission.				
28.	25%	Please provide a typical section of the proposed boardwalk in next design submission.				
29.	25%	Slope limits should be shown and noted on all construction drawings				
30.	75%	Existing trees are evident along proposed path location and due to minimal existing conditions shown on the construction plans the sight distance cannot be properly determined				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

31.	75%	Please evaluate the ADT, Stopping Sight Distance & Intersection Sight Distance and clarify if additional traffic control measures are required to protect the Rail Trail users at all proposed crosswalks and intersections.				
32.	75%	Please verify that the existing roadway pavement is in an appropriate condition to install the proposed cross walk pavement markings. If the existing pavement requires milling and resurfacing to install the proposed crosswalk pavement markings then please update the plans and estimate accordingly.				
33.	75%	The plans should clarify the limits of excavation and removal of railroad tracks, ties and ground cover. Will the project require any testing for hazardous materials present in excavated material?				
34.	25%	The existing base plan centerline shall be a dashed line per section of 18.2.1.2 in the 2006 MHD Project Development & Design Guide.				
35.	25%	Please show the proposed grade on the profile plan between Station 0+25.59 and Station 1+25 on next design submission.				
36.	75%	Please verify that the granite blocks are installed within the appropriate easements. ?				
37.	25%	Please better define the right of way in the next design submission.				
38.	25%	The existing culvert at Station 10+87± shall be shown on the base profile per Chapter 18 in the 2006 MHD Project Development & Design Guide.				
39.	25%	All proposed shoulder areas should be shown along the trail on all construction drawings.				
40.	75%	Please clarify if the proposed low point at Station 9+69.66 will require additional drainage accommodations to prevent ponding on the trail.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

41.	75%	Erosion and sedimentation controls should be shown on the plan between Station 13+76±LT and 18+60±LT as well as between Station 14+00±RT and 17+75±RT.				
(42.)	25%	The existing culvert at Station 17+05± should be shown on the base profile per Chapter 18 in the 2006 MHD Project Development & Design Guide.				
43.	75%	Please clarify if the proposed low point at Station 15+50.25 will require additional drainage accommodations to prevent ponding on the trail.				
44.	75%	Please provide details for the proposed HMA parking area and better define access from Winter Street.				
45.	75%	Please verify that the proposed stone dust entrance to the path meets ADA/AAB requirements.	—	pave !!		
46.	75%	Please provide proposed wheel chair ramp details on next design submission.				
47.	75%	The detectable warning panels required in the proposed wheelchair ramp transitions should be shown on the plan and details. Please refer to detail E 107.6.5 in the 2010 Mass DOT Construction Standards for additional information.				
48.	75%	Please label the diameter of the existing trees within proposed limit of grading between Station 25+00± and 27+00±.				
49.	75%	The plans should label the diameter of the existing trees along with labeling the disposition of each tree.				
(50.)	25%	Better define existing conditions of the intersection of RTE 117, Pine Street and Mill Street.				
51.	75%	The plans should label the diameter of the existing trees within the proposed limit of grading between Station 36+00± and 37+00±, along with labeling the disposition of each tree.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

52.	75%	This section of trail contains existing trees that are within the 3-foot shy distance of path that will need to be removed. Please update the plan accordingly.				
53.	75%	Please verify that the proposed landscaping can be installed within the appropriate "right of way" layout while maintaining the required 3-foot shy clearance from the edge of path.				
54.	75%	Please clarify if the proposed low point at Station 43+23.97 will require additional drainage accommodations to prevent ponding on the trail.				
(55)	25%	Please better define the edge of road of High Street.				
56.	75%	Proposed trees are within shy distance of the path. Please clarify existing tree measurements and if marked for removal. The minimum shy distance of 3 feet between the edge of the bike path and all obstructions will need to be maintained per Chapter 11 in the 2006 MHD Project Development & Design Guide.				
57.	75%	Please clarify if the proposed wood fence can be installed within the appropriate right of way limits.				
58.	75%	Please include the proposed cement concrete sidewalk thickness in between Station 50+00± and 51+00±.				
(59.)	25%	Proposed easement between Station 53+45± and 57+50± is proposed through an existing parking area. Also, please clarify if the path through this area will affect the existing parking spaces.				
60.	75%	The existing sign at Station 57+50± is within the 3-foot shy distance. This sign should be removed and reset accordingly.				
61.	75%	The plans should label the diameter of the existing trees within the proposed project limits between Station 58+50± and 59+10±, along with labeling the disposition of each tree.				

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

62.	75%	The existing street light is within the limits of grading at Station 59+83±RT. Please clarify if the street light will impact grading				
63.	75%	The existing catch basin is within limits of grading at Station 59+90±LT. Please clarify if the catch basin will impact grading.				
64.	25%	The proposed curb and bike path location appears to conflict with the existing edge of road along Railroad Street in between Station 57+50± and 58+50± on the plan. Please verify existing road location and provide better detail on the plan.				
65.	25%	The proposed path location is through an existing parking area from Station 58+00± and 63+00±. Please clarify if the path through this area will affect the existing parking spaces.		Clarify proposed arrangmt		
66.	75%	An existing electric manhole at Station 61+47±LT is shown within proposed path location should be labeled as adjust. Also, all existing underground utility lines to and from the electric manhole should be shown on the plans.		within grading area show as adjust 75% show lines		
67.	25%	It appears that the proposed path cannot be installed in front of the building at Station 64+40± as it will interfere with the existing walkway and parking spaces.		explain & show proposed arrangement		
68.	25%	The location of the Florida CT roadway is not shown in the correct location and should be shown on the southeasterly side of the existing building.		maybe confused confirm location		
69.	75%	Existing light pole at Station 64+65±LT is within the 3-foot shy distance and should be removed and reset.		show change at 75%		
70.	75%	Please clarify if the proposed low point at Station 66+02.75 will require additional drainage accommodations to prevent ponding on the trail.		show		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

71.	75%	Please provide detailed plans of proposed bridge in between Station 66+50± and 67+00± in next design submission. Both path entrances to bridge should have flared railings with an apron to direct path users per Chapter 11 in the 2006 Project Development & Design Guide.		show at 75%		
72.	75%	The base profile plan should show the bridge and bridge elevations.		show at 75%		
73.	75%	Existing wetlands flag locations are unmarked between Station 67+00± and 67+50±. Proposed erosion and sedimentation controls between these stations should be marked out and shown in the next design submission.		(Assabet River show at 75%		
(74.)	25%	Curve radii between Station 67+00± and 67+50± are insufficient per Chapter 11 in the 2006 MHD Project Development & Design Guide. Minimum radius for 15 mph design speed is 56 feet.		Can't do w/o losing parking spaces → or realign Bridge		
(75.)	25%	Better define existing conditions to include the affected parking area between Station 68+00± and 71+00±. 67+50 and 72+00		show		
(76)	25%	The proposed grade is greater than 5% between Station 72+45± and 75+40±. Grades for pathways used by pedestrians cannot exceed 5% unless treated as a ramp per Chapter 11 in the 2006 MHD Project Development & Design Guide.	can't change	or when following existing street grade? like sidewalks !		
(77)	25%	The proposed path location between Station 72+50± and 74+60± shows existing parking meters that are within the 3-foot shy distance of the path. These path meters will have to be removed and reset. Please change the plans accordingly.		can't do w/o losing all parking spaces (~~the~~)		
(78.)	25%	Curve radii between Station 74+00± and 75+00± are insufficient per Chapter 11 in the 2006 MHD Project Development & Design Guide. Minimum radius for 15 mph design speed is 56 feet.		We know – could change w/ retaining wall & even steeper grades.		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

79.	75%	Existing utility pole at Station 74+44±LT is shown within the proposed pathway location and will need to be relocated due to shy distance impacts. Also, all existing overhead wires should be shown on the plan.		show to be re located & show work 75%		
80.	75%	Signs at Station 86+60±RT, 87+40±RT, and 87+90±RT affect the shy distance of the proposed path location. The minimum shy distance of 3 feet between the edge of the bike path and all obstructions will need to be maintained per Chapter 11 in the 2006 MHD Project Development & Design Guide.		show relocation at 75%		
81.	75%	Existing utility pole within proposed limit of work at Station 87+64±RT is within the 3-foot shy distance. This utility pole will need to be removed and reset.		show relocation at 75%		
82.	75%	Existing catch basin within proposed limit of work at Station 88+42±RT should be shown as adjust.		show adjustment at 75%		
83.	75%	Existing catch basin on centerline of proposed path at Station 88+95± will need to be relocated or changed to a manhole if applicable.		show adjust. or relocate at 75%		
(84.)	25%	Existing 18 inch culvert crossing at Station 89+08± should be noted on the base profile plan per Chapter 18 in the 2006 MHD Project Development & Design Guide.		show on profile		
(85.)	25%	Proposed wheel chair ramp arrows are not pointed at the proposed wheel chair ramps at Station 89+50± and 90+00±.		fix		
(86.)	25%	Proposed path location at approximately Station 91+75± is within 5 feet of existing building. This area should be better defined in order to evaluate path location.		show more detail		
(87.)	25%	Limit of work appears to be encroaching on the abutter's property without note of an easement between Station 95+00±RT and 98+00±RT.		show proposed easement		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

88.	75%	Please clarify if the proposed low point at Station 98+70.66 will require additional drainage accommodations to prevent ponding on the trail.		slow at 75%		
89.	75%	Proposed erosion and sedimentation controls should be shown in between Station 101+00± and 102+50± around existing wetland areas.		" " "		
90.	25%	The existing culvert at Station 101+73± should be shown on the base profile per Chapter 18 in the 2006 MHD Project Development & Design Guide.		slow now		
91.	75%	Proposed erosion and sedimentation controls at Station 111+00± should be shown around existing wetland areas.		slow at 75%		
92.	75%	The size and disposition of the existing trees within proposed path and limit of grading between Station 114+70± and 115+80± should be provided on the plan.		slow at 75%		
93.	75%	Proposed erosion and sedimentation controls should be shown in between Station 118+80± and 132+00± around existing wetland areas.		" " "		
94.	75%	Please clarify if the proposed low point at Station 127+10.80± will require additional drainage accommodations to prevent ponding on the trail.		slow at 75%		
95.	75%	Existing culvert crossing at Station 127+02± shall be noted on the base profile plan per Chapter 18 in the 2006 MHD Project Development & Design Guide.		slow now		
96.	25%	Existing stone wall will affect shy distance of the proposed path. The minimum shy distance of 3 feet between the edge of the bike path and all obstructions will need to be maintained per Chapter 11 in the 2006 MHD Project Development & Design Guide.		stone wall in front of 20 Main St. problem with Hudson		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

96.a. existing Sewer line — show in profile

97.	75%	Existing 6 inch water line crossing proposed full depth paved path at Station 133+65. Please verify that the waterline will not interfere with the proposed work.		show in profile		
98.	75%	Existing 1-1/2 inch water line crossing proposed full depth paved path at Station 133+82. Please verify that the waterline will not interfere with the proposed work.		show in profile		
99.	75%	Proposed path location impacts existing wetlands from Station 135+30 to 141+00. Please clarify if wetland replication will be required due to proposed disturbance of existing wetland. Also, please add the appropriate items in the contract estimate if the wetland replication work is required.		clarify at 75%		
100.	75%	The impacts to the existing wetlands and trees to install the proposed boardwalk between Station 137+90± and 141+12± should be labeled on the plan. Please clarify if wetland replication will be required because of this work.		" " "		
101.	75%	Proposed erosion and sedimentation controls should be shown in between Station 141+00± and 145+00± around existing wetland areas.		show " "		
102.	75%	Existing culvert crossing at Station 144+05± shall be noted on the base profile plan per Chapter 18 in the 2006 MHD Project Development & Design Guide.		show now		
(103.)	25%	Please detail the type of material that is proposed for the 12 foot wide connection to Sylvia St. at Station 154+20± as the plans do not provide this information.		show pavement as in trail		
104.	75%	Please clarify if the proposed 12 foot wide connection to Sylvia St. will require any barrier to restrict vehicle access.		show Guard		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

105.	75%	The proposed 12 foot wide connection is shown covering an existing one foot box culvert at Station 154+20±. Please clarify if the proposed path connection can be installed at this location without impacting the exiting culvert.		clarify relocation		
106.	25%	Existing culvert crossing at Station 154+20± shall be noted on the base profile plan per Chapter 18 in the 2006 MHD Project Development & Design Guide.		show		
107.	75%	Proposed erosion and sedimentation controls should be shown around existing wetland areas.		show at 75%		
108.	75%	Please clarify if wetland replication will be required due to proposed disturbance of existing wetlands within Station 155+50± and 159+00±, and Station 161+85± and 163+90±.		Hold at 75%.		
109.	75%	Please provide detailed plans of proposed bridge in between Station 170+06.35 and 170+74.78 in next design submission. Both path entrances to bridge should have flared railings with an apron to direct path users per Chapter 11 in the 2006 Project Development & Design Guide.		ok at 75%		
110.	75%	The base profile plan should show the proposed bridge and bridge elevations.		show elevations		
111.	25%	Please clarify if the project contains enough easements to perform the proposed work for removal of the existing railroad ties and tracks, earth excavation, removal of the existing wood bridge and installation of the proposed prefabricated bridge.		clarify town land easement will be provided if needed.		
112.	75%	Proposed prefabricated bridge elevations should be shown on the base profile plan.		same as 110 above		
113.	25%	Please better define easement needs for the proposed path route and proposed HMA parking area.		show easement (if needed)		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

114.	25%	Curve radius between at Station 174+00± is insufficient per Chapter 11 in the 2006 MHD Project Development & Design Guide. Minimum radius for 15 mph design speed is 56 feet.		check radii in revised plan sheet. (56')		
115.	75%	Please clarify if the proposed low point at Station 174+05.65 will require additional drainage accommodations to prevent ponding on the trail.		probably yes - check on plan sheet		
116.	25%	Please better define the access from the proposed HMA parking area to the proposed HMA path and assure compliance with ADA/AAB standards.		covered in revised design		
117.	75%	Please better define existing conditions of roadways to allow for a better evaluation of the access to the proposed parking area.		do at 75%		
118.	75%	Please provide a detail of the proposed HMA parking area on the typical sections.		at 75%		
119.	75%	Please clarify if a barrier will be needed to eliminate vehicle access to the proposed path from the HMA parking and from the entrance to the path from Maple Street.		at 75%		
120.	25%	Galvanized steel pipe rail detail makes reference to construction standard detail 409.1.0 which is no longer included in the 2010 Mass DOT Construction Standard Details. Please update the detail accordingly.		update use wood		
121.	25%	Please clarify the need for the galvanized steel pipe rail as it is not labeled on any of the construction plans.		do specify where		
122.	25%	The critical section at Station 132+00± shows the proposed retaining wall outside of the ROW limits. Please add the easement limits to this section in the next design submission.		location ? (135+00?) no r.w. at 132+00 in ROP easement		
123.	25%	The proposed critical section at Station 137+50± shows work outside the ROW. Please add the easement limits for the proposed work.		easement shown		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.

124.	25% or 75%	Please clarify if items; 140, 220, 226, 440, 472, 482.5, 485, 580, 697, 698.3, 701, 704, 707.81, 767, 767.8, 874.1, 874.2 and 983.1 should be added to the contract estimate.		what does it mean?		
125.	25 or 75%	Please clarify if item 103 should be incidental to Item 101.1.		" "		
REVIEW SECTION: TRAFFIC				REVIEWER NAME: **CH/JF**		
1.	75%	Please provide signage and striping plans for the proposed project with the next submission.		75%		
2.	75%	Provide a signal plan for the proposed Motion Activated Flashing Beacon across Route 117 with the next submission.		75%		
3.	25%	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~~ Great Rd.		verify sight triangle.		
4.	25%	Please clearly show how the proposed path will match into the existing conditions between Stations 67+00 and 75+00.		show detail		
5.	25%	We recommend that the proposed crosswalk at Station 87+00 be made more perpendicular to the existing roadway.		can do !!		
6.	75%	Provide a Temporary Traffic Control Plan with the next submission.		75%		

(1) This section to be completed by MassDOT Reviewer.
(2) This section to be completed by Designer.
(3) To be determined by MassDOT.

Note: The intended use of this form is to provide a means to comment on submitted documents.