

Geotechnical Section Letter of Transmittal



10 PARK PLAZA, BOSTON, MA 02116

Date: December 29, 2017 Project File No: 608164
RE: SUDBURY – BIKE PATH CONSTRUCTION (BRUCE FREEMAN RAIL TRAIL)

To: Fred Nohelty, P.E., Consultant Review Engineer

MassDOT-Highway Division Room 6430	<input checked="" type="checkbox"/> Bridge Project	<input type="checkbox"/> FA Oversight
	<input checked="" type="checkbox"/> Federal Aid	<input type="checkbox"/> Non-Federal Aid
	<input type="checkbox"/> NHS Roadway	<input type="checkbox"/> Non-NHS Roadway
	<input checked="" type="checkbox"/> Rail Trail/Bike Path	<input type="checkbox"/>

Quantity Description

1	MassDOT Geotech RCR Form for PSR - Rail Trail over Hop Brook (S-31-007)
1	MassDOT Geotech RCR Form for BTSW - Rail Trail over Pantry Brook (S-31-013)
1	MassDOT Geotech RCR Form for 25% Plan Submittal

These are transmitted as checked: For Approval For Review and Comment Tracking

Progress Tracking: Due Date: 1/26/18 Date Sent: 9/26/17 Date Received: 9/26/17 Date Returned: 12/29/17

Remarks: The MassDOT Geotechnical Section reviewed and commented on the September 2017 preliminary structure report (PSR) and bridge type selection worksheet (BTSW) for the Bruce Freeman Rail Trail project (rehabilitation of railroad bridge S-31-007 and replacement of railroad bridge S-31-013, respectively). A limited review of the 25% plan submittal was also performed. Please have all review comments addressed on the attached RCR forms. Electronic copies will be placed under the geotechnical correspondence folder on PInfo and emailed to the PM.

If you have any questions, please contact Erin Griffin, P.E. at 857-368-9183.

12/29/2017

Signature: Title: Geotechnical Engineer

Print Name: Peter J. Connors, P.E. Phone Number: (857) 368-9191

Copy to: John S. Gendall, P.E., PM, and Kim Chaban Griffith (transmittal only for tracking)

NOTE: Please address all return correspondence to Peter J. Connors, P.E., Geotechnical Engineer

DESIGN REVIEW COMMENT AND RESOLUTION FORM



PROJECT NO.: 608164

DESCRIPTION: SUDBURY-BIKE PATH CONSTRUCTION (BRUCE FREEMAN RAIL TRAIL)

DESIGNER: Vanasse Hangen Brustlin, Inc.

SUBMITTAL: Preliminary Structure Report for Abandoned Railroad Bridge over Hop Brook (S-31-007)

DATE: December 29, 2017

REVIEW SECTION: Geotechnical

REVIEWER NAME: Erin Griffin

NO.	SHEET OR ITEM	COMMENT	INITIAL ACTION	RESPONSE	QC REVIEW INITIAL	FINAL ACTION VERIFIED
COMPLETED BY REVIEWER			COMPLETED BY DESIGNER			BY REVIEWER
N/A	Summary	<i>It is proposed to rehabilitate the existing railroad bridge, a riveted steel deck plate girder superstructure supported on granite block abutments (foundation type not indicated). The existing bridge will be picked up and moved 1 foot to the west to line up with the path of the rail trail. The railroad ties and tracks will be removed and replaced with a new deck, and the bridge will be repainted. The backwalls will be capped, and the granite blocks will be cleaned and repointed.</i>	N/A			
1	Page 3	Section C: Is it known if the abutments are supported on shallow or deep foundations?				
2	Page 5	Section H: The proposed live load on the bridge will be significantly less than the railroad loading. Will the proposed dead load on the bridge abutments be greater than or less than the current dead load?				
3	Page 5	Section H: Presumably the information obtained from the borings will be used to check the stability of the abutments, including bearing, sliding, limiting eccentricity, settlement, and global stability (as needed). Please confirm.				
4	Appendix D	Does the cost estimate include disposal of the railroad ties and track?				



DESIGN REVIEW COMMENT AND RESOLUTION FORM

PROJECT NO.: 608164
 DESCRIPTION: SUDBURY-BIKE PATH CONSTRUCTION (BRUCE FREEMAN RAIL TRAIL)
 DESIGNER: Vanasse Hangen Brustlin, Inc.
 SUBMITTAL: Bridge Type Selection Worksheet for Abandoned Railroad Bridge over
 Pantry Brook (S-31-013)
 REVIEW SECTION: Geotechnical

DATE: December 29, 2017

REVIEWER NAME: Erin Griffin

NO.	SHEET OR ITEM	COMMENT	INITIAL ACTION	RESPONSE	QC REVIEW INITIAL	FINAL ACTION VERIFIED
COMPLETED BY REVIEWER			COMPLETED BY DESIGNER			BY REVIEWER
N/A	Summary	<i>It is proposed to replace the existing railroad bridge (steel deck beam structure on stone masonry abutments) with either a buried arch system or a beam-and-slab superstructure type. It is anticipated that the proposed superstructure will be supported by abutments having shallow foundations.</i>	N/A			
1	General	Given the proposed span lengths, it is suggested that the use of a GRS-IBS structure be evaluated, provided that the scour depth is not significant.				
2	General	As part of the forthcoming geotechnical investigation, suggest performing borings to evaluate the subsurface soil and rock conditions and probes to estimate the geometry of each abutment.				

COLUMN "NO." PREFIX FOR COMMENT NO'S - PLANS =P, SPEC. PROVS=S, EST.=E, CALC BOOK=C, BRIDGE CALCS=D, OTHER = O
 "ACTION" A=WILL INCORPORATE, B=WILL EVALUATE, C=DELETE COMMENT

DESIGN REVIEW COMMENT AND RESOLUTION FORM



PROJECT NO.: 608164

DESCRIPTION: SUDBURY-BIKE PATH CONSTRUCTION (BRUCE FREEMAN RAIL TRAIL)

DESIGNER: Vanasse Hangen Brustlin, Inc.

SUBMITTAL: 25% Plan Submittal for the Bruce Freeman Rail Trail (BFRT)

REVIEW SECTION: Geotechnical

DATE: December 29, 2017

REVIEWER NAME: Erin Griffin

NO.	SHEET OR ITEM	COMMENT	INITIAL ACTION	RESPONSE	QC REVIEW INITIAL	FINAL ACTION VERIFIED
COMPLETED BY REVIEWER			COMPLETED BY DESIGNER			BY REVIEWER
N/A	Summary	<i>It is proposed to replace the existing railroad bridge (steel deck beam structure on stone masonry abutments) with either a buried arch system or a beam-and-slab superstructure type. It is anticipated that the proposed superstructure will be supported by abutments having shallow foundations.</i>	N/A			
1	General	Please explain the lack of subsurface information for the proposed approximately 750-foot-long boardwalk and various retaining walls. The typical section for the boardwalk appears to show piles and the construction plans indicate the presence of ledge outcrop. Refer to Section 1.2.4.2 of the 2013 MassDOT LRFD Bridge Manual regarding boring requirements.				
2	Sheet 1	The Construction Standard Details were updated in October 2017. Please revise for the next submittal.				

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