



August 23, 2018

Tim Jordan, PE
Mott MacDonald
7621 Purfoy Road, Suite 115
Fuquay-Varina, NC 27526

Project: 17BP.7.R.114 (SF-400052)
County: Guilford
Description: Bridge No. 52 over Deep River Tributary on SR 1332 (Scientific St)
Subject: Culvert Foundation Recommendations

Dear Mr. Jordan:

As authorized, Falcon Engineering Inc. (Falcon) has completed the Culvert Foundation Recommendations for the above referenced project based on current NCDOT LRFD bridge design policy and procedures.

Foundation recommendations and notes on plans are presented in the attachments. These recommendations are based on subsurface data obtained by Falcon as presented in the Subsurface Investigation Report submitted under separate cover. Culvert geometry and scour data used in our analysis were obtained from the approved Culvert Survey and Hydraulic Design Report (CSR).

Falcon appreciates the opportunity to have provided Mott MacDonald with geotechnical engineering services. If you have any questions concerning the contents of this report or need additional information, please do not hesitate to contact our office.

Respectfully submitted:

FALCON ENGINEERING, INC.

A handwritten signature in blue ink that reads "Stephen Crockett".

Stephen Crockett, EI
Geotechnical Professional

A handwritten signature in blue ink that reads "Jeremy R. Hamm".

Jeremy R. Hamm, PE
Geotechnical Engineering Manager

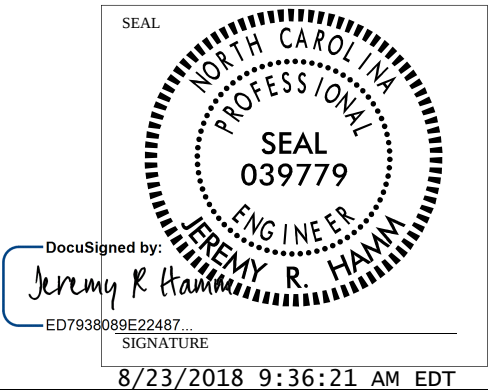
Attachments: Foundation Recommendations and Notes on Plans

FOUNDATION RECOMMENDATIONS

WBS # 17BP.7.R.114
T.I.P. NO. SF-400052
COUNTY Guilford
STATION 14+37.00 -L-

DESCRIPTION Bridge No. 52 on SR 1334 (Scientific St)
over Deep River Tributary

	INITIALS	DATE
DESIGN	SCC	07/12/18
CHECK	JRH	08/08/18
APPROVAL		



CULVERT SIZE	STATION	FOUNDATION TYPE	EXCAVATION DEPTH	MISCELLANEOUS DETAILS
Dual, 12' x 10' Reinforced Concrete Box Culverts	-L- 14+37	Full Concrete Invert on 12" Class VI Foundation Conditioning Material	1.0 foot below bottom of culvert	Approximate Culvert Length = 85 ft Culvert Skew = 124 degrees Culvert Invert Elevation = 761.8 ft Slope = 1.143%

FOUNDATION RECOMMENDATION SPECIAL NOTES ON PLANS

- 1. EXCAVATE FOUNDATION A MINIMUM OF 1.0 FEET BELOW CULVERT BEARING ELEVATION. PLACE 1.0 FEET OF CLASS VI FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATION.
- 2. OVEREXCAVATE LOOSE/SOFT MATERIAL IF PRESENT TO SUITABLE BEARING MATERIALS AND REPLACE WITH ADDITIONAL CLASS VI FOUNDATION CONDITIONING MATERIAL.