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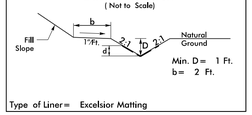
*DESIGN EXCEPTION:
SAG VERTICAL CURVE K
VERTICAL SSD
SUPERELEVATION

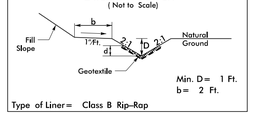
DETAIL A
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= Excelsior Matting

-L- STA. 13+00 TO 14+75 RT

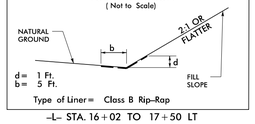
DETAIL B
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= Class B Rip-Rap

-L- STA. 14+75 TO 15+00 RT

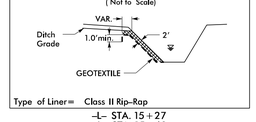
DETAIL C
TOE PROTECTION
(Not to Scale)



Type of Liner= Class B Rip-Rap

-L- STA. 16+02 TO 17+50 LT

DETAIL D
BANK STABILIZATION
(Not to Scale)



Type of Liner= Class II Rip-Rap

-L- STA. 15+27
-L- STA. 15+62

PROJECT REFERENCE	SHEET NO.
17BP.5.R.57 - GRANVILLE 25	4

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER
DocuSigned by: James Timothy Jordan
5/18/2016
HATCH MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 24364 ENGINEER
DocuSigned by: Patrick J. Lowe
5/18/2016
ICA ENGINEERING
LICENSE NO. F-0258

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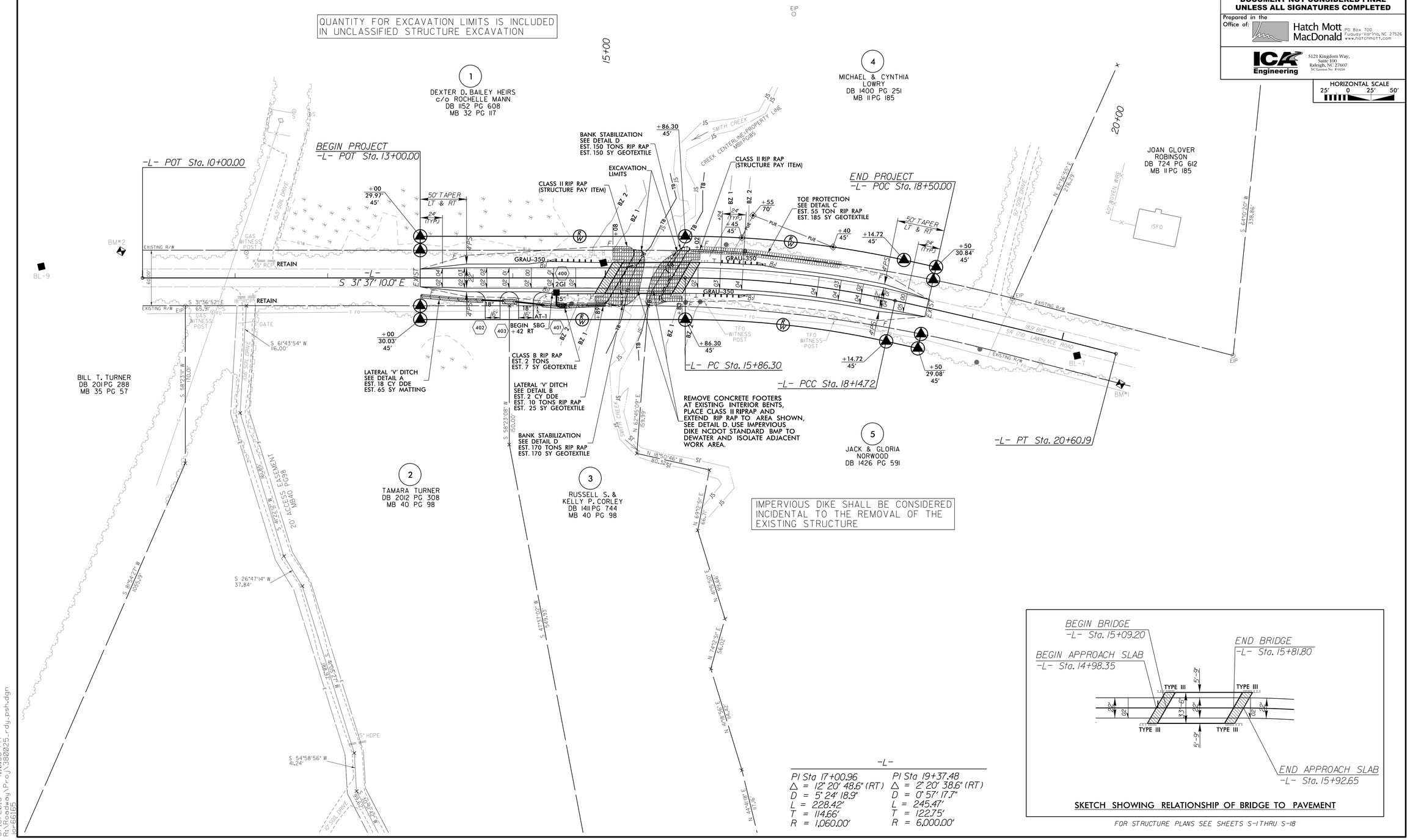
Prepared in the Office of:
Hatch Mott MacDonald, PO Box 700, Fuquay-Varina, NC 27526, www.hatchmott.com

ICA Engineering, 5121 Kingsdom Way, Suite 100, Raleigh, NC 27607, NC License No. F-0258

HORIZONTAL SCALE
25' 0 25' 50'

QUANTITY FOR EXCAVATION LIMITS IS INCLUDED IN UNCLASSIFIED STRUCTURE EXCAVATION



-L-

PI Sta 17+00.96	PI Sta 19+37.48
Δ = 12° 20' 48.6" (RT)	Δ = 2° 20' 38.6" (RT)
D = 5° 24' 18.9"	D = 0° 57' 17.7"
L = 228.42'	L = 245.47'
T = 114.66'	T = 122.75'
R = 1,060.00'	R = 6,000.00'

SKETCH SHOWING RELATIONSHIP OF BRIDGE TO PAVEMENT

FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-18

5/18/2016 4:10:58 PM
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jor6165