

GEOTECHNICAL ENGINEER

ENGINEER



DocuSigned by:  
Shihai Zhang 2/12/2015

2450674181835 SIGNATURE DATE

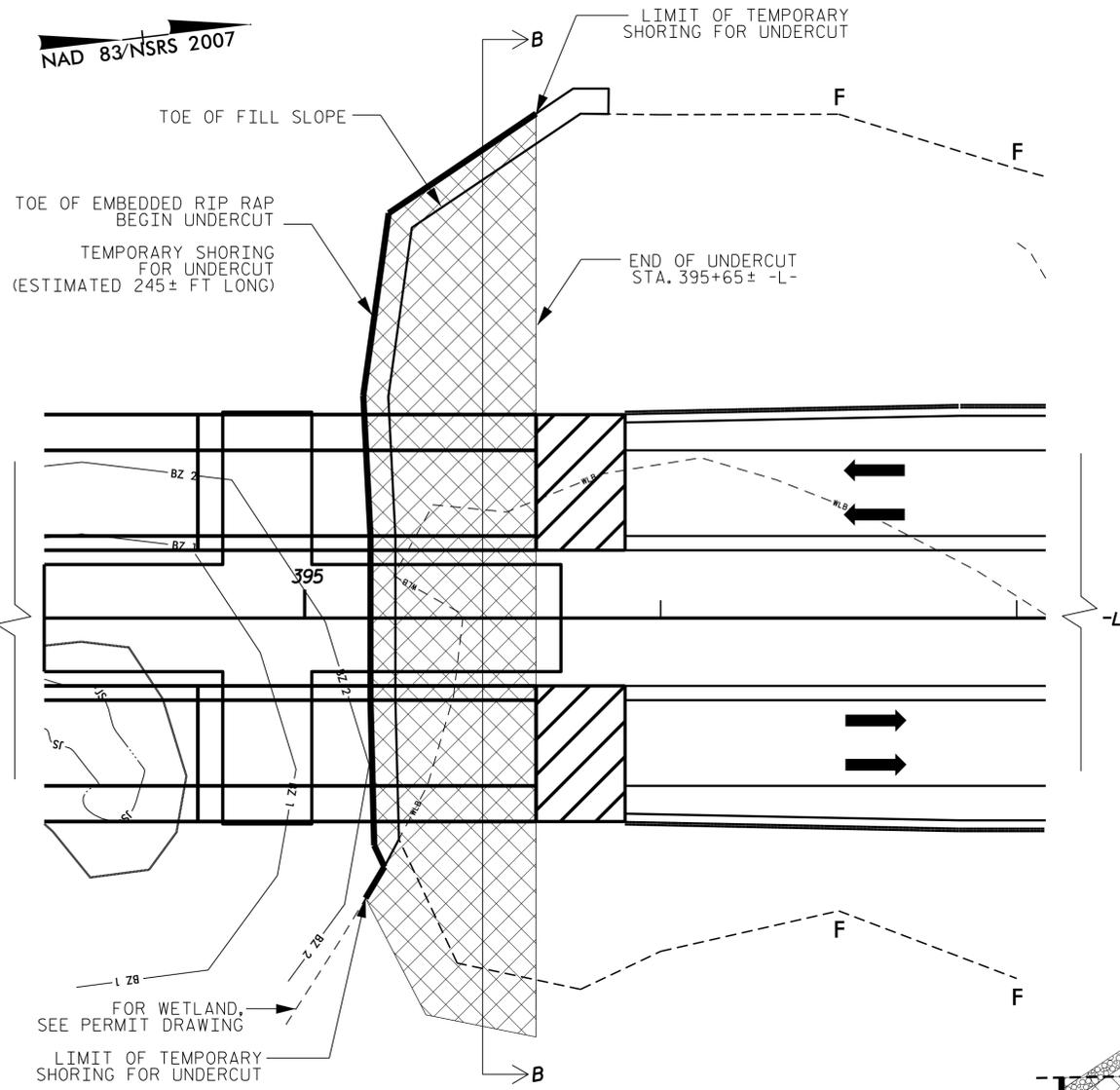
SIGNATURE DATE

**ESTIMATED QUANTITIES**

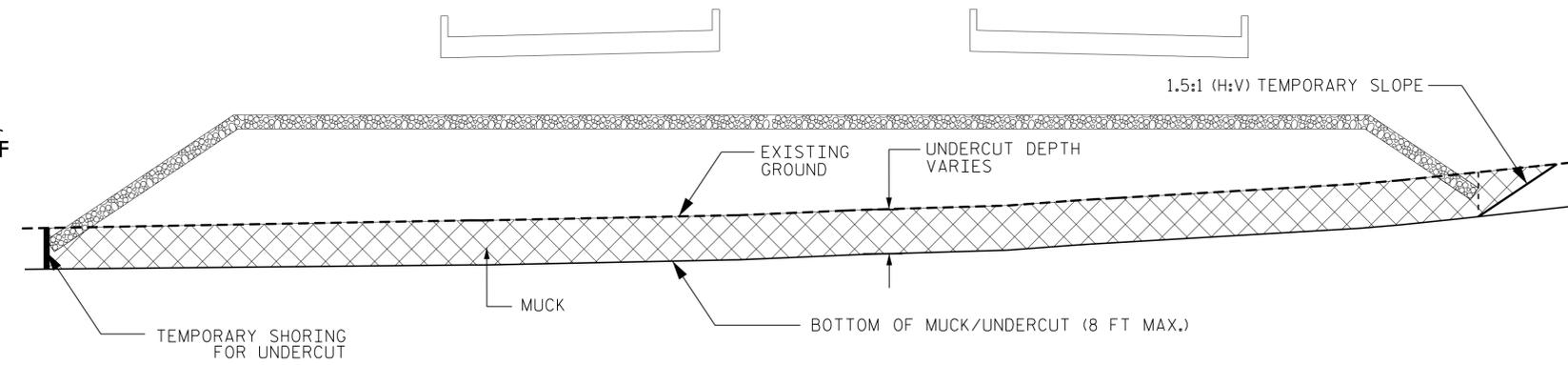
UNDERCUT EXCAVATION	1,500 CUBIC YARD
SELECT GRANULAR MATERIAL	1,500 CUBIC YARD
TEMPORARY SHORING FOR UNDERCUT	LUMP SUM
AT STATION 395+18± -L-	

**NOTES**

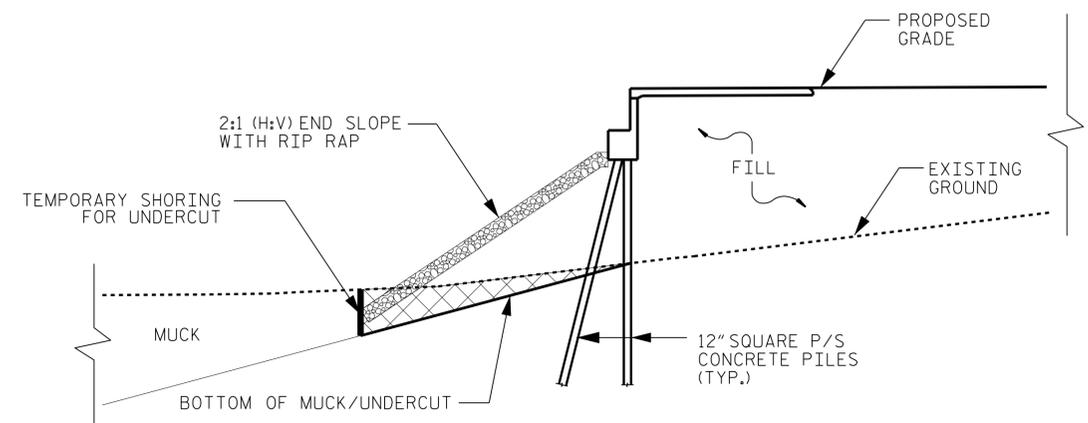
1. FOR UNDERCUT, SEE SECTION 225 OF THE STANDARD SPECIFICATIONS.
2. UNDERCUT ORGANIC MATERIAL/MUCK AS SHOWN IN THIS PLAN AND AS DIRECTED BY THE ENGINEER. DEPTH OF UNDERCUT VARIES FROM LOCATION TO LOCATION.
3. TEMPORARY SHORING FOR UNDERCUT WILL BE REQUIRED WITHIN WETLAND AS SHOWN IN THIS PLAN. FOR TEMPORARY SHORING FOR UNDERCUT, SEE TEMPORARY SHORING FOR UNDERCUT AT STATION 395+18± -L- SPECIAL PROVISION.
4. DESIGN TEMPORARY SHORING FOR UNDERCUT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:  
 UNIT WEIGHT = 80 LB/CF (MUCK)  
 FRICTION ANGLE = 11 DEGREES (MUCK)  
 COHESION = 150 LB/SF (MUCK)  
 UNIT WEIGHT = 120 LB/CF (COASTAL PLAIN SOIL)  
 FRICTION ANGLE = 30 DEGREES (COASTAL PLAIN SOIL)  
 COHESION = 0 LB/SF (COASTAL PLAIN SOIL)  
 GROUNDWATER ELEVATION = 0 FT
5. FOR SELECT GRANULAR MATERIAL, SEE SECTION 265 OF THE STANDARD SPECIFICATIONS.



**PLAN VIEW FOR LIMITS OF UNDERCUT AT END BENT NO. 2**  
N.T.S.



**CROSS SECTION B-B**  
N.T.S.



**TYPICAL SECTION OF UNDERCUT THROUGH END BENT NO. 2, N.T.S.**

PREPARED BY: S. ZHANG DATE: 02/2015  
 REVIEWED BY: J. BATTS DATE: 02/2015

**GEOTECHNICAL ENGINEERING UNIT**

EASTERN REGIONAL OFFICE  
 WESTERN REGIONAL OFFICE  
 CONTRACT OFFICE

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**UNDERCUT FOR END BENT NO. 2 OF DUAL BRIDGES ON US 17 OVER TRENT RIVER**

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		