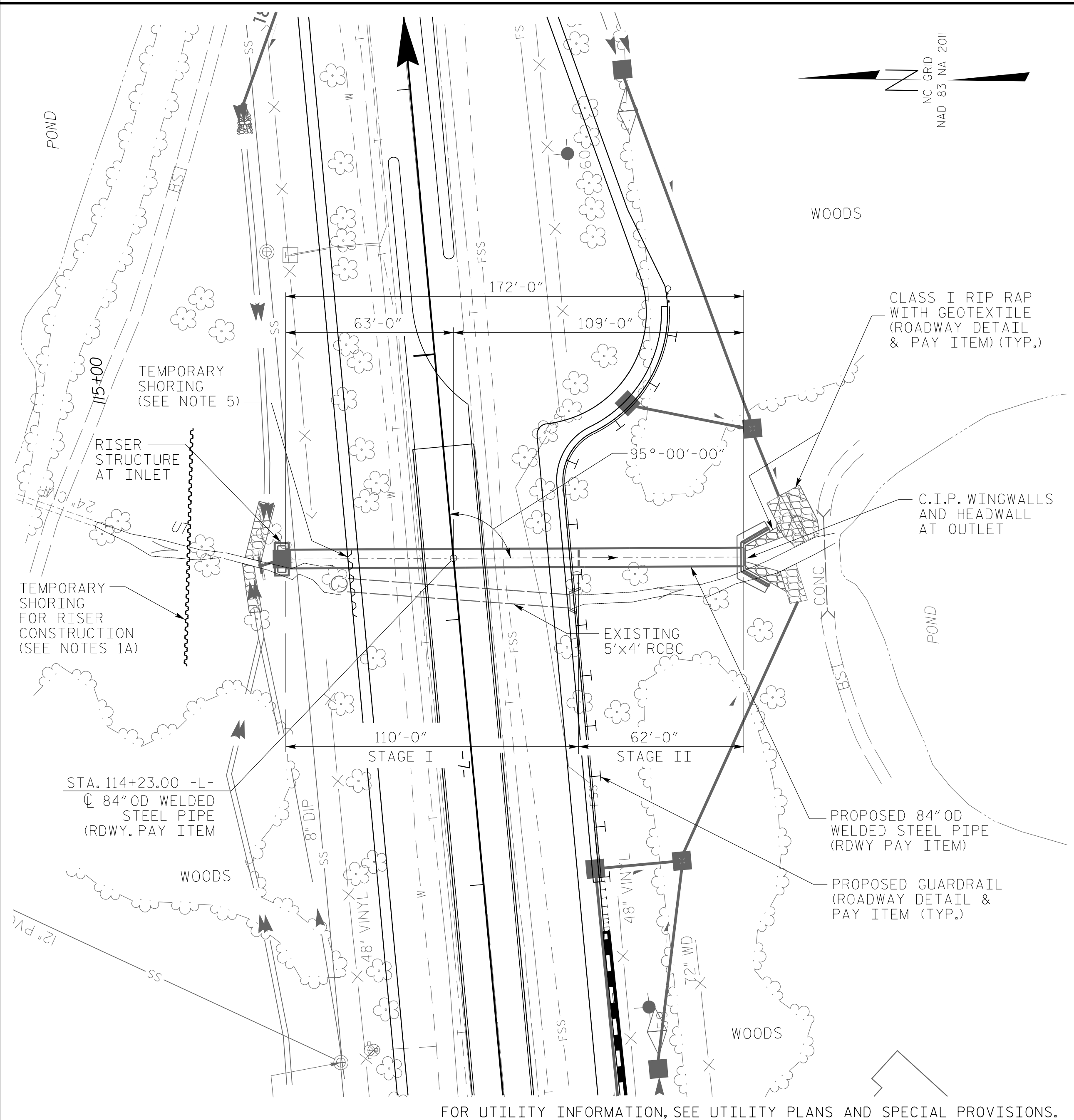
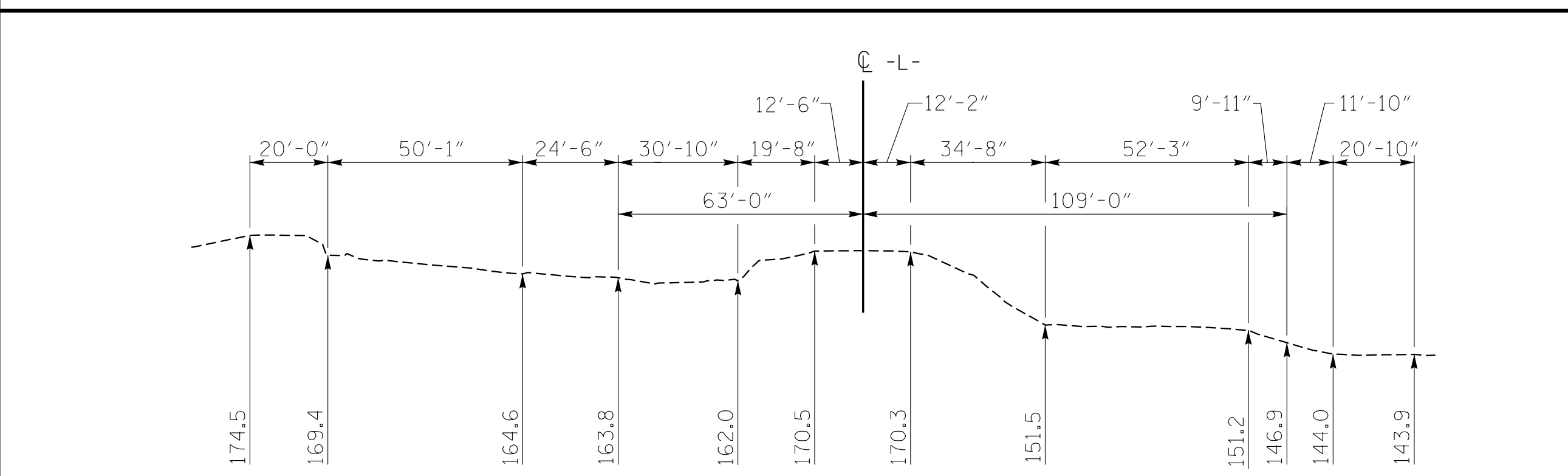


BM #6: RAILROAD SPIKE SET IN 20" OAK TREE
 93.87' LT OF -BL- STA. 115+97.58 N 691,504.54 E 2,180,721.78 EL. 171.66'



LOCATION SKETCH



PROFILE ALONG C CULVERT

V & M PROJECT NO.: 31740-03

NOTES

ASSUMED LIVE LOAD -----HL-93 OR ALTERNATE LOADING.
 DESIGN FILL-----MAX. = 21.0'

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET "SN".

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF PIPE BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

GRADE DATA
 GRADE POINT ELEV. @ -L- STA. 114+23.00 = 172.66'
 BED ELEV. @ -L- STA. 114+23.00 = 145.10'
 ROADWAY SLOPES 6:1 (LEFT), 3:1 (RIGHT)

FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC MANAGEMENT PLAN.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE EXISTING STRUCTURE CONSISTING OF 1 @ 5' X 4' RCBC LENGTH 83.8' ALONG C/L W/ DROP STRUCTURE AT UPSTREAM END, 8" DIA. VERTICAL PIPE, AND LOCATED AT THE PROPOSED STRUCTURE, SHALL BE REMOVED.

THE EXISTING STRUCTURE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING STRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE. THE EXISTING STRUCTURE IS PRESENTLY POSTED FOR LOAD LIMIT.

EXCAVATE 1'-0" MIN. BENEATH PIPE INVERT AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414 OF THE STANDARD SPECIFICATIONS.

SHORING LOCATION NO. 1A

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE UTILITY INSTALLATION FROM STATION -L- 113+92±, 103.5 FT. LEFT, TO STATION -L- 114+80±, 93.0 FT. LEFT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 113+92±, 103.5 FT. LEFT, TO STATION -L- 114+80±, 93.0 FT. LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 110 LB/CF
- FRICTION ANGLE (Φ) = 28 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 157.0 FT. ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 113+92±, 103.5 FT. LEFT, TO STATION -L- 114+80±, 93.0 FT. LEFT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -L- 113+92±, 103.5 FT. LEFT, TO STATION -L- 114+80±, 93.0 FT. LEFT MAY NOT PENETRATE BELOW ELEVATION 149 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 113+92±, 103.5 FT. LEFT, TO STATION -L- 114+80±, 93.0 FT. LEFT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 113+92±, 103.5 FT. LEFT, TO STATION -L- 114+80±, 93.0 FT. LEFT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

SHORING NOTE 5

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

TOTAL STRUCTURE QUANTITIES	
REMOVAL OF EXISTING STRUCTURE	LUMP SUM
ASBESTOS ASSESSMENT	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	180 * TONS
CLASS A CONCRETE	
2GI RISER	29.1 C.Y.
OUTLET	12.8 C.Y.
TOTAL	41.9 C.Y.
REINFORCING STEEL	
2GI RISER	4,065 LBS.
OUTLET	1,067 LBS.
TOTAL	5,132 LBS.
TEMPORARY SHORING FOR RISER CONSTRUCTION	10,600 SQ. FT.

* NOTE: DO NOT PLACE FOUNDATION CONDITIONING MATERIAL UNTIL APPROVAL BY ENGINEER.

HYDRAULIC DATA	
DESIGN DISCHARGE	= 37 CFS
FREQUENCY OF DESIGN DISCHARGE	= 50 YRS
DESIGN HIGH WATER ELEVATION	= 166.6 FT
DRAINAGE AREA	= 0.33 SQ MI
BASE DISCHARGE (Q100)	= 39 CFS
BASE HIGH WATER ELEVATION	= 166.67 FT

OVERTOPPING DATA	
OVERTOPPING DISCHARGE	= 129 (+) CFS
FREQUENCY OF OVERTOPPING	= 500 (+) YRS
OVERTOPPING ELEVATION	= 170.9 FT



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DSG. ENG. OF RECORD:	CB
DWN. BY:	MAF DATE: 3/18
CHKD. BY:	HLW DATE: 3/18

PROJECT NO. R-3825B

JOHNSTON COUNTY

STATION: 114+23.00 -L-

SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
84" OD WELDED STEEL PIPE W/ RISER STRUCTURE
 ON UT TO NEUSE RIVER UNDER NC 42 BETWEEN SR 1704 AND SR 2677

REVISIONS						SHEET NO. C2-1
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 7
2			4			

7/17/2018 8:15:56 AM EDT