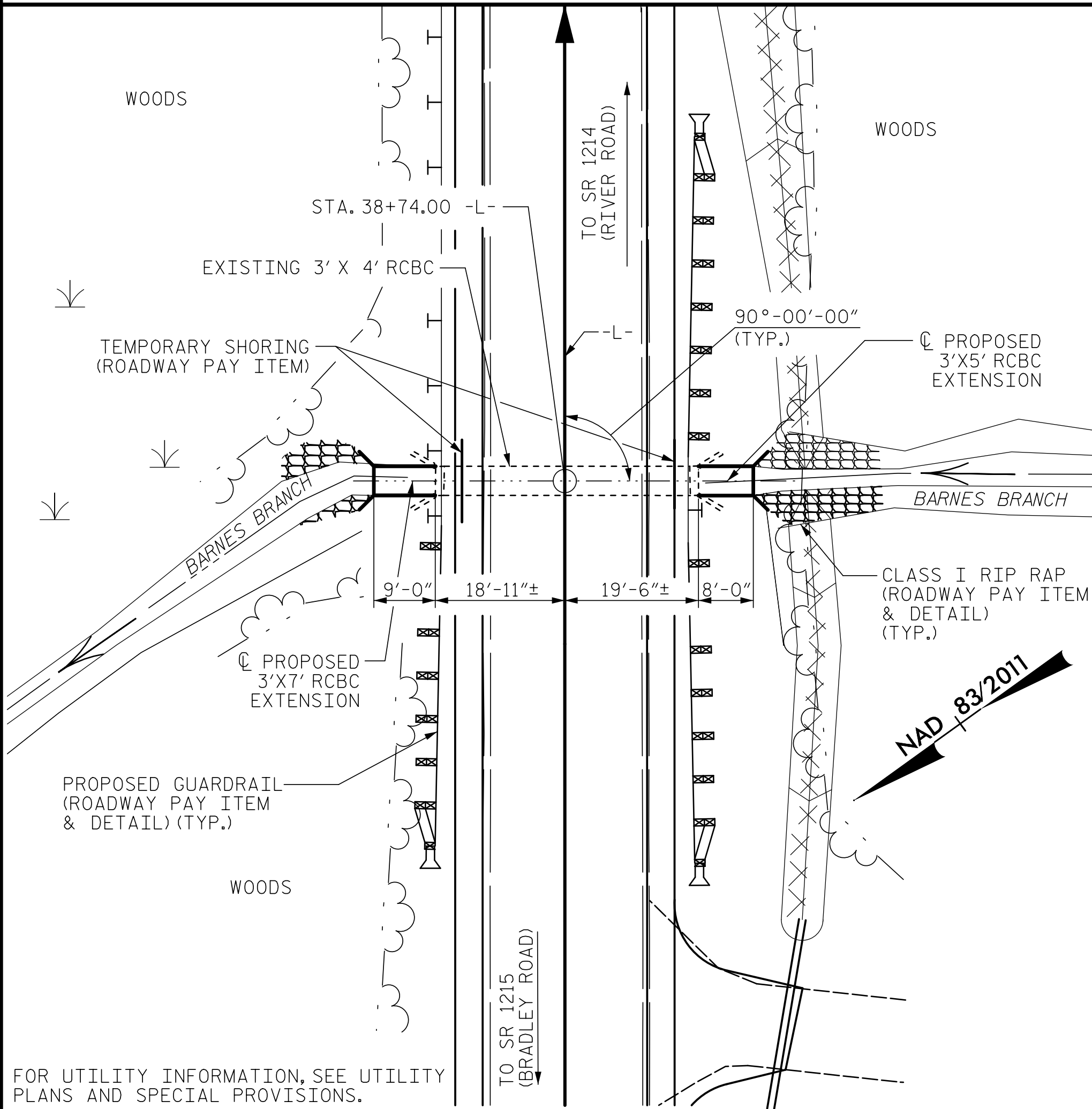


BENCH MARK: TBM "V": CHISLED X ON BOLT OF FIRE HYDRANT  
43.73' RT OF STA. 28+97.43 -L-; ELEV. = 329.70



LOCATION SKETCH

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
LEFT EXTENSION	14.6	C.Y.
RIGHT EXTENSION	10.1	C.Y.
TOTAL	24.7	C.Y.
REINFORCING STEEL		
LEFT EXTENSION	1,195	LBS.
RIGHT EXTENSION	813	LBS.
TOTAL	2,008	LBS.
FOUNDATION COND. MAT'L.		
LEFT EXTENSION	5	TONS
RIGHT EXTENSION	5	TONS
TOTAL	10	TONS
CULVERT EXCAVATION	LUMP SUM	

ROADWAY DATA

GRADE POINT ELEV. @ STA. 38+74.00-L- = 302.71  
BED ELEV. @ STA. 38+74.00-L- = 294.06  
ROADWAY SLOPES = 2:1

HYDROGRAPHIC DATA

DESIGN DISCHARGE = 130 CFS  
FREQUENCY OF DESIGN FLOOD = 50 YRS  
DESIGN HIGH WATER ELEVATION = 300.7  
DRAINAGE AREA = 0.13 SQ. MI.  
BASE DISCHARGE (Q100) = 150 CFS  
BASE HIGH WATER ELEVATION = 301.6

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 170 CFS  
FREQUENCY OF OVERTOPPING FLOOD = 200± YRS  
OVERTOPPING FLOOD ELEVATION = 302.6

NOTES:

ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.

DESIGN FILL----- 4.0' MAX.

FOR OTHER DESIGN DATA AND NOTES, SEE STANDARD NOTES SHEET.

3"Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

CONCRETE IN CULVERT TO BE POURED IN THE FOLLOWING ORDER:

1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.

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

DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

EXCAVATE 1 FOOT BELOW CULVERT AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414-4 OF THE STANDARD SPECIFICATIONS. FOUNDATION CONDITIONING MATERIAL SHOULD CONSIST OF SELECT MATERIAL CLASS V OR VI FOR RCBC.

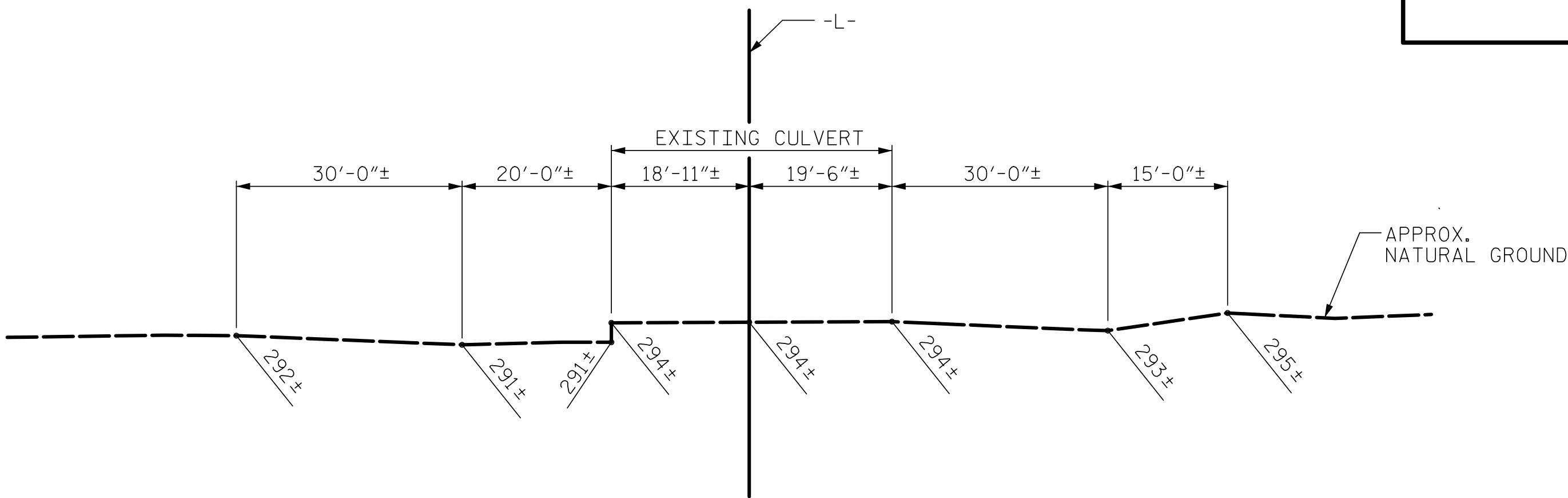
IF REQUIRED, UNDERCUT LOOSE SOILS THAT MAY BE ENCOUNTERED BENEATH THE BOTTOM OF THE FOUNDATION CONDITIONING MATERIAL. BACKFILL UNDERCUT AREAS WITH FOUNDATION CONDITIONING MATERIAL.

FOR TRAFFIC PHASING, SEE TRAFFIC CONTROL PLANS.

IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSIONS SHALL BE POURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

DOWELS SHALL BE USED TO CONNECT THE PROPOSED EXTENSIONS TO THE EXISTING CULVERT. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.

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.



PROFILE ALONG CULVERT

PROJECT NO. R-5739

NORTHAMPTON COUNTY

STATION: 38+74.00 -L-

SHEET 1 OF 10



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SINGLE  
3' X 7' RCBC LEFT EXT.  
&  
3' X 5' RCBC RIGHT EXT.  
90° SKEW

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED  
TGS ENGINEERS  
706 HILLSBOROUGH STREET  
SUITE 200  
RALEIGH, NC 27603  
PH (919) 773-8887  
CORP. LICENSE NO.: C-0275

REVISIONS

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

SHEET NO.

C1-1  
TOTAL  
SHEETS  
10

DRAWN BY : ZCS DATE : 4/22  
CHECKED BY : MGC DATE : 7/22  
DESIGN ENGINEER OF RECORD: ZCS DATE : 1/23

11/27/2023  
X:\NCDOT\NR-5739\Structures\Str. #1 (38 + 74.00 -L-)\Final Plans\DGNS\NR-5739\_SMU\_CU.650000.dgn  
User:ZSmith

STR. #1