

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE			
BARREL @	1.59	CY/FT	238.5 C.Y.
WINGS, ETC.			45.8 C.Y.
SILLS			2.0 C.Y.
TOTAL			286.3 C.Y.
REINFORCING STEEL			
BARREL			30311 LBS.
WINGS, ETC.			3276 LBS.
TOTAL			33587 LBS.
CULVERT EXCAVATION			LUMP SUM
FOUNDATION COND. MATERIAL			159 TONS

HYDROGRAPHIC DATA

DESIGN DISCHARGE _____ = 500 CFS
 FREQUENCY OF DESIGN FLOOD _____ = 50 YRS
 DESIGN HIGH WATER ELEVATION _____ = 746.2'
 DRAINAGE AREA _____ = 0.7 SQ. MI.
 BASIC DISCHARGE (Q100) _____ = 600 CFS
 BASIC HIGH WATER ELEVATION _____ = 747.1'

OVERTOPPING FLOOD DATA

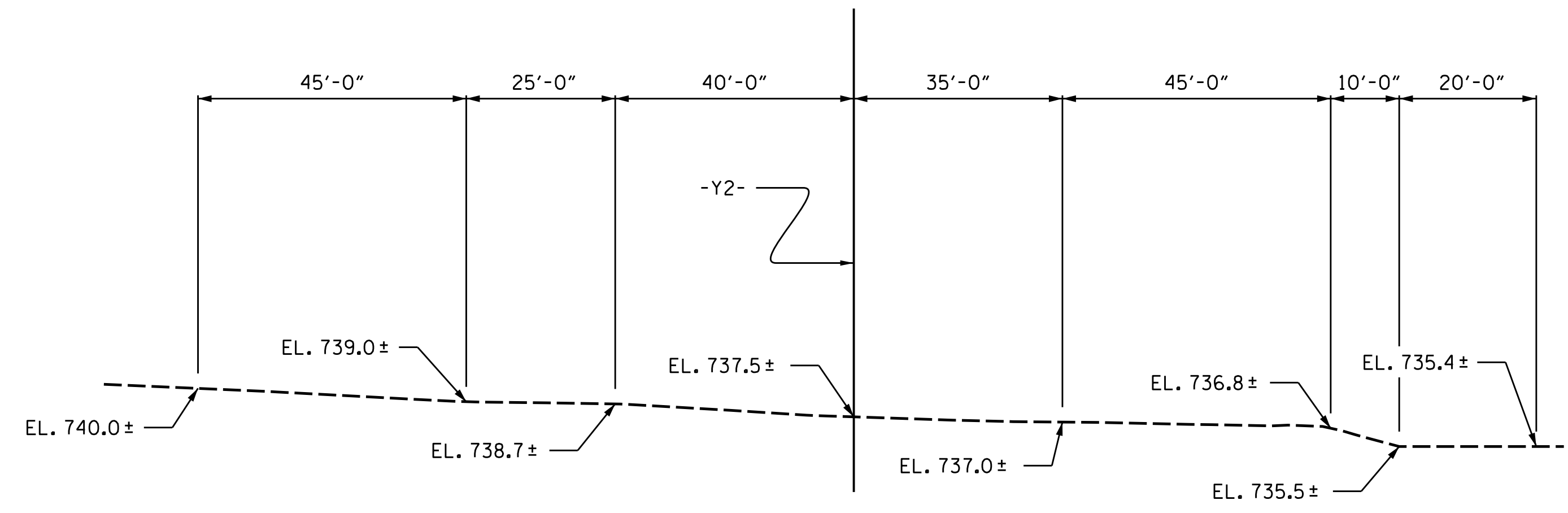
OVERTOPPING DISCHARGE _____ = N/A
 FREQUENCY OF OVERTOPPING FLOOD _____ = >500 YRS
 OVERTOPPING FLOOD ELEVATION _____ = 761.4'

GRADE DATA

GRADE POINT ELEV. @ STA. 19+90.69 -Y2- = 766.22
 BED ELEV. @ STA. 19+90.69 -Y2- = 736.90
 ROADWAY SLOPES _____ = 2 : 1

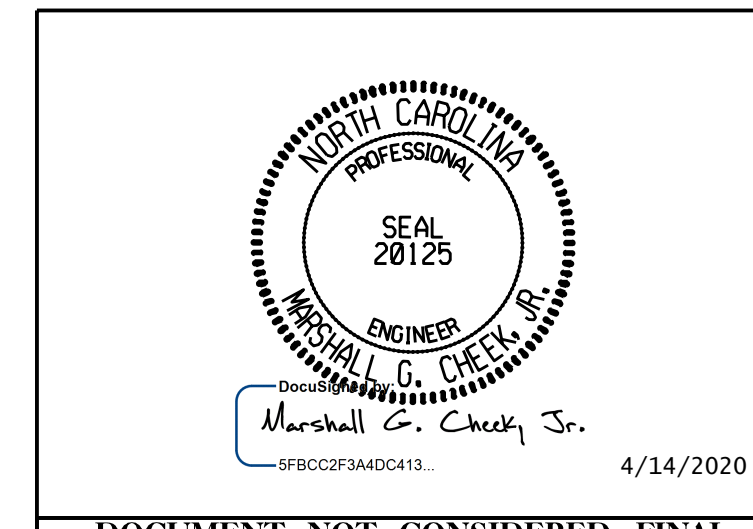
NOTES

- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.
- DESIGN FILL RANGE ----- 16.50' TO 19.10'
- 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.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- 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.
- 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 IEU 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.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.



PROFILE ALONG CULVERT

PROJECT NO. B-5825
YADKIN/FORSYTH COUNTY
 STATION: 19+90.69 -Y2-
 SHEET 1 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SINGLE 9 FT. X 10 FT.
 CONCRETE BOX CULVERT**

DRAWN BY : STM DATE : 09/19
 CHECKED BY : MGC DATE : 11/19
 DESIGN ENGINEER OF RECORD: STM DATE : 02/20

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						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			C2-1
2			4			TOTAL SHEETS 13