

BM #102 R.R. SPIKE IN BASE OF 24" PINE 96.36' LT OF -L- STA.115+74.72
ELEV. 124.66 FT. DETUM: NGVD 29

F.A. PROJECT NO. STP-0622(5)

ROADWAY DATA

GRADE POINT ELEV. @ STA 106+32.00 -L- = 126.88
BED ELEV. @ STA. 106+32.00 -L- = 108.11
ROADWAY SLOPES = 2:1

HYDROGRAPHIC DATA

DESIGN DISCHARGE = 2400 CFS
FREQUENCY OF DESIGN FLOOD = 50 YR.
DESIGN HIGH WATER ELEV. = 122.64
DRAINAGE AREA = 8.30 SQ MI.
BASIC DISCHARGE (Q100) = 2700 CFS
BASIC HIGH WATER ELEV. = 123.3'

OVERTOPPING FLOOD DATA

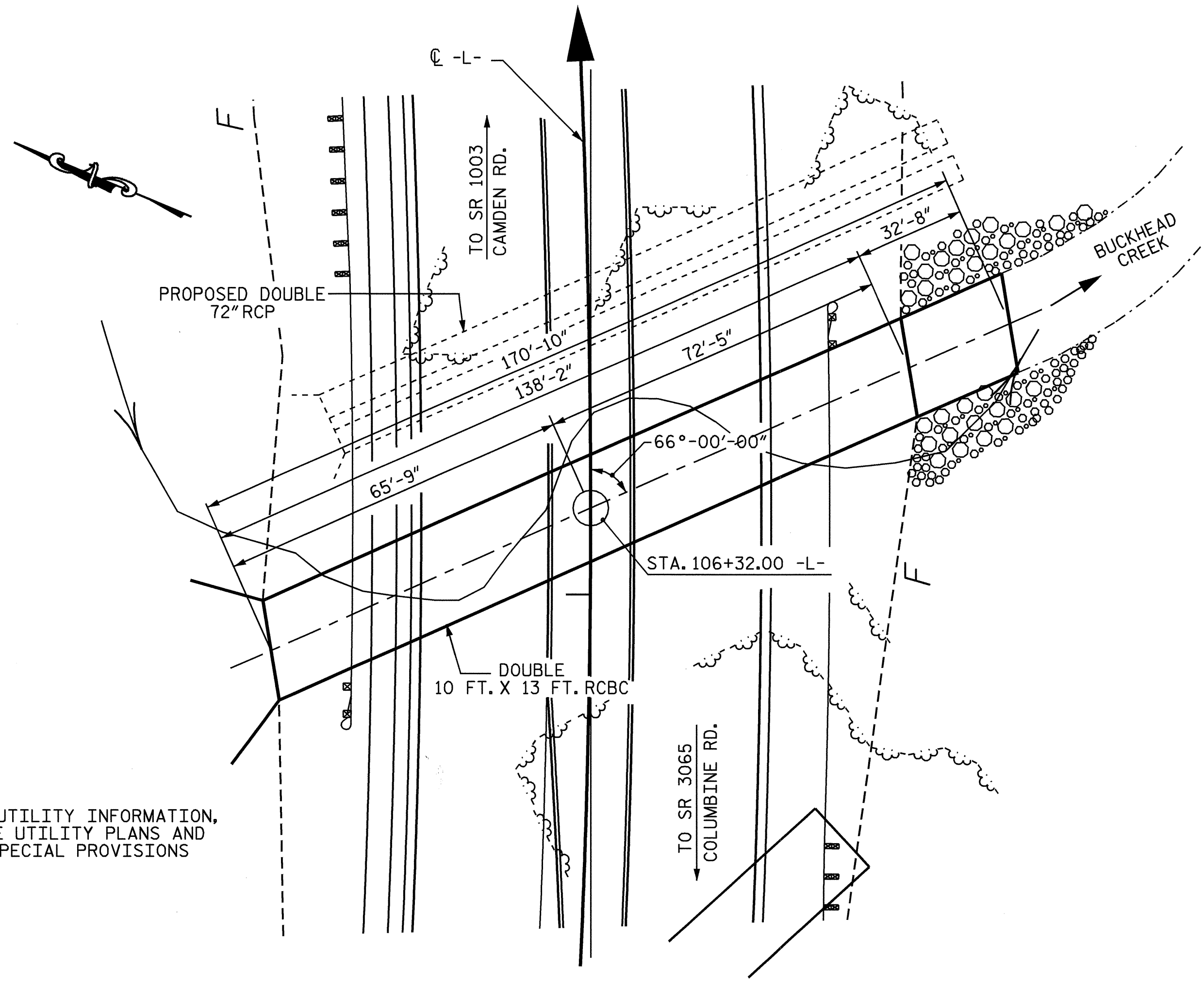
OVERTOPPING DISCHARGE = 3200 CFS
FREQUENCY OF OVERTOPPING FLOOD = 100 YR.+
OVERTOPPING FLOOD ELEV. = 124.28

NOTES

ASSUMED LIVE LOAD -----HS20-44 OR ALTERNATE LOADING.
DESIGN FILL-----7.400'
FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
CONCRETE IN CULVERTS 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.
STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

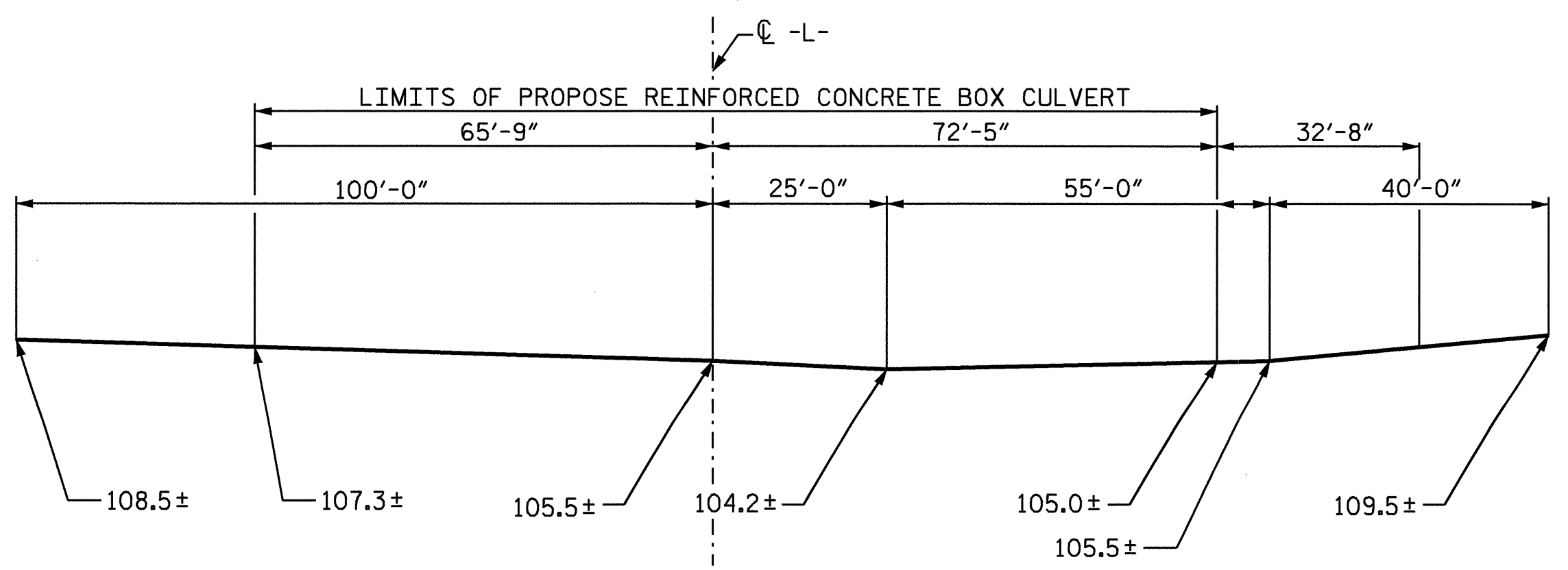
AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES 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 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.
A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

| TOTAL STRUCTURE QUANTITIES | | | |
|----------------------------|-------|------------|--|
| CLASS A CONCRETE | | | |
| BARREL @ 2.431 CY/FT | 335.9 | C.Y. | |
| INLET WING ETC. | 36.2 | C.Y. | |
| OUTLET WINGS | 39.6 | C.Y. | |
| TOTAL | 411.7 | C.Y. | |
| REINFORCING STEEL | | | |
| BARREL & OUTLET WING | 78934 | LBS. | |
| WINGS ETC. | 2826 | LBS. | |
| TOTAL | 81760 | LBS. | |
| CULVERT EXCAVATION | ----- | LUMP SUM | |
| FOUNDATION COND. MAT'L | ----- | 405.0 TONS | |
| PLAIN RIP RAP CLASS I | ----- | 74.0 TONS | |
| FILTER FABRIC | ----- | 91.0 S.Y. | |

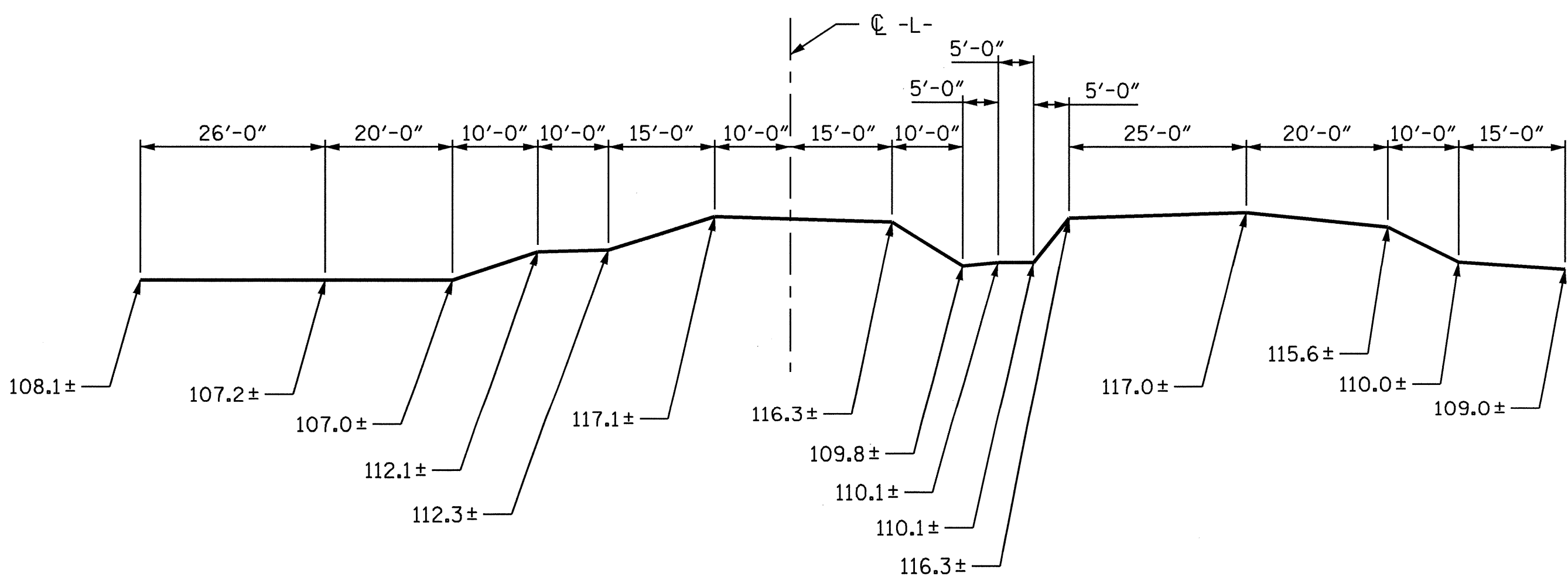


LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS



PROFILE ALONG EXISTING STREAM BED



PROFILE ALONG CULVERT

Jean Marie Bailey
8/21/07
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 02228
ARTHUR BAILEY

PROJECT NO. U-0620
CUMBERLAND COUNTY
STATION: 106+32.00 -L-
SHEET 1 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
BARREL STANDARD
DOUBLE 10 FT. X 13 FT.
CONCRETE BOX CULVERT
66°-00'-00" SKEW

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15825
D. KLAPPENBERG
8-14-07

ASSEMBLED BY : M. G. SHAIKH DATE : 03-15-01
CHECKED BY : D. A. GLADDEN DATE : 8-14-03
DRAWN BY : _____ DATE : _____
CHECKED BY : _____ DATE : _____

| REVISIONS | | | | | | SHEET NO. | |
|-----------|----|------|-----|----|------|-----------------|--|
| NO. | BY | DATE | NO. | BY | DATE | C-6 | |
| 1 | | | 3 | | | TOTAL SHEETS 23 | |
| 2 | | | 4 | | | | |