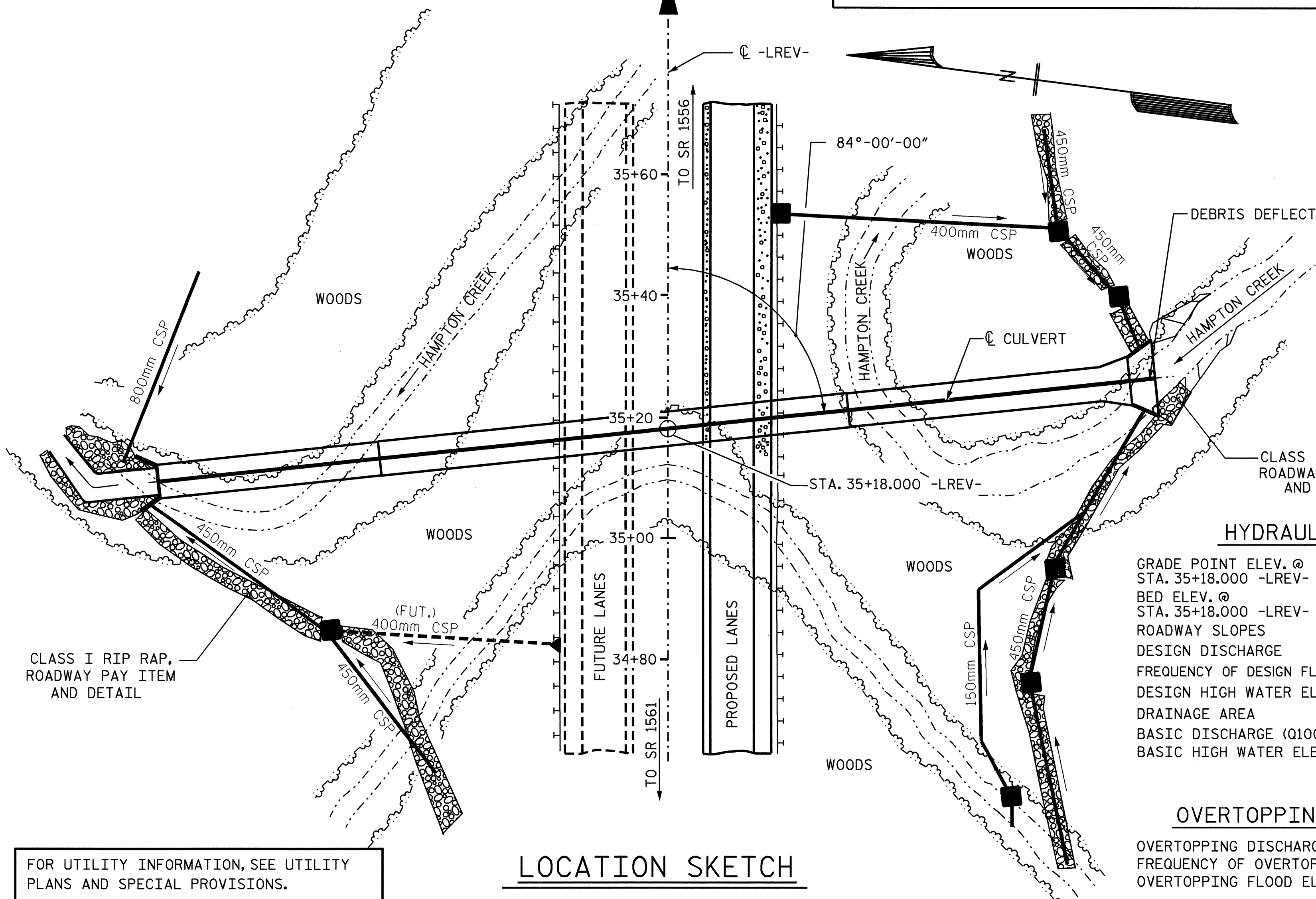


BENCH MARK #10 : CHISELED SQUARE IN WING WALL AT BRIDGE, 2.0m RIGHT FROM E.P. OF HARSHAW RD., 127.7m LEFT OF STA. 35+09.823 -L-, ELEV. 470.995



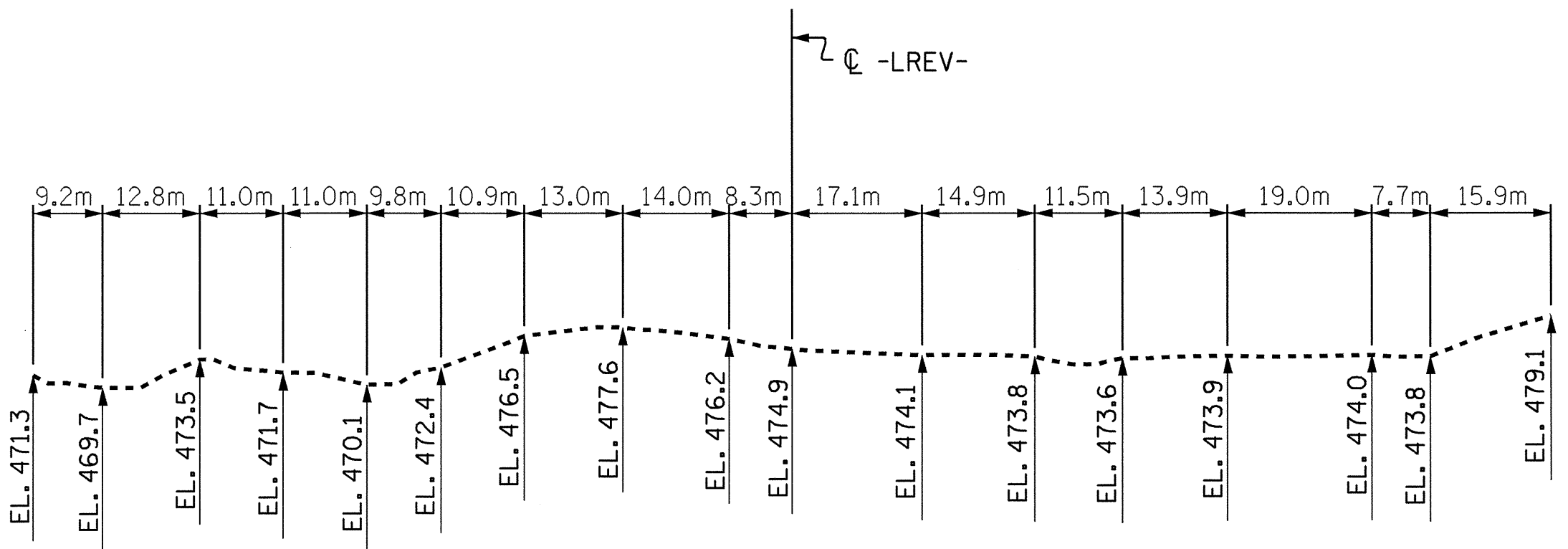
LOCATION SKETCH

HYDRAULIC DATA

GRADE POINT ELEV. @ STA. 35+18.000 -LREV-	=	505.470
BED ELEV. @ STA. 35+18.000 -LREV-	=	471.430
ROADWAY SLOPES	=	2:1
DESIGN DISCHARGE	=	25 m ³ /s
FREQUENCY OF DESIGN FLOOD	=	50 YEARS
DESIGN HIGH WATER ELEVATION	=	475.170
DRAINAGE AREA	=	5 SQ. KM.
BASIC DISCHARGE (Q100)	=	31 m ³ /s
BASIC HIGH WATER ELEVATION	=	475.510

OVERTOPPING FLOOD DATA

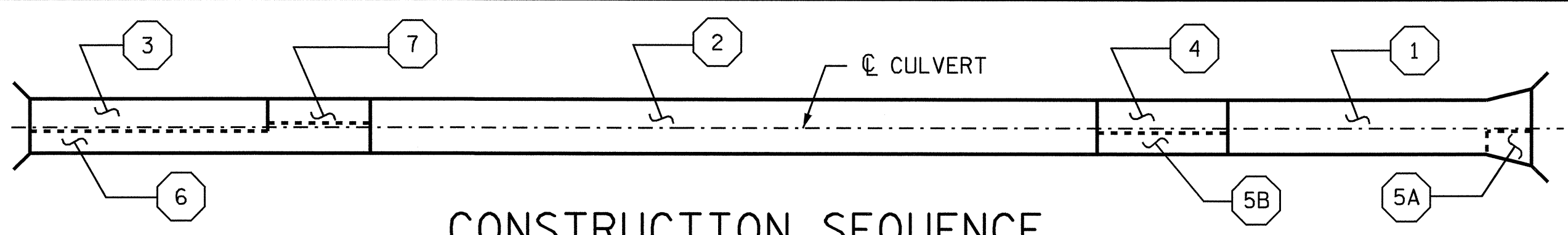
OVERTOPPING DISCHARGE	=	49+m ³ /s
FREQUENCY OF OVERTOPPING FLOOD	=	500 YRS.
OVERTOPPING FLOOD ELEVATION	=	501.000



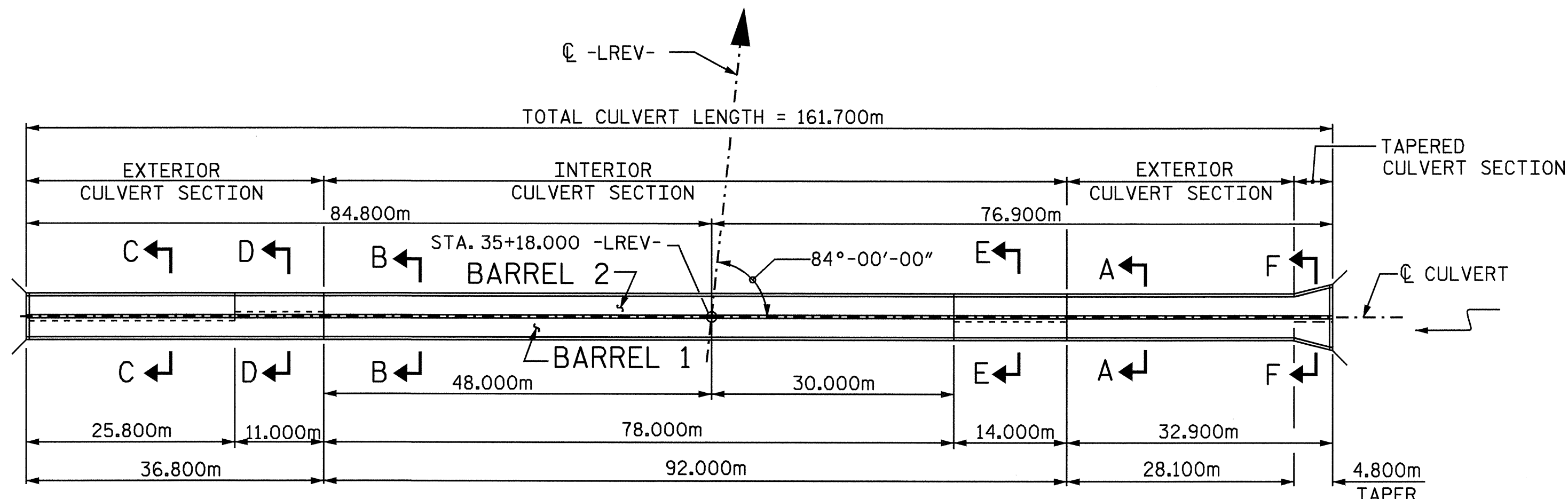
PROFILE ALONG CULVERT

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
BARREL EXTERIOR CULVERT SECTION	595.8 m ³
@ 9.18 m ³ /m	
BARREL INTERIOR CULVERT SECTION	1072.7 m ³
@ 11.66 m ³ /m	
TAPERED CULVERT SECTION	52.2 m ³
WING ETC.	19.0 m ³
DEBRIS DEFLECTORS	13.2 m ³
SILLS	13.7 m ³
TOTAL	1766.6 m³
REINFORCING STEEL	
BARREL & SILLS	126765 kg.
WINGS ETC.	891 kg.
DEBRIS DEFLECTORS	825 kg.
TOTAL	128481 kg.
FOUNDATION COND. MATERIAL	627 TONS
CULVERT EXCAVATION	LUMP SUM



CONSTRUCTION SEQUENCE



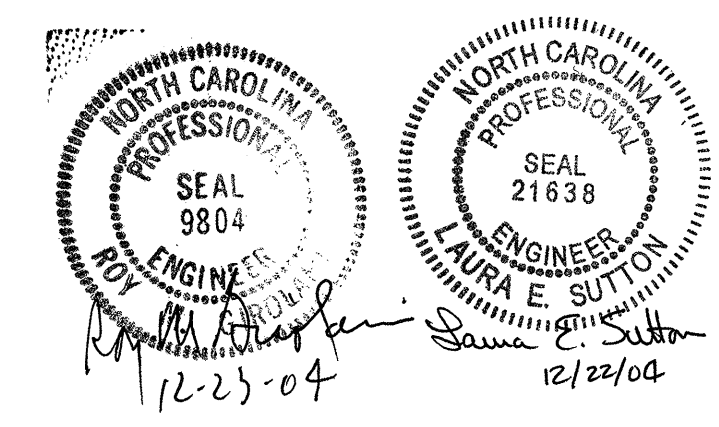
CULVERT LAYOUT

PROJECT NO. R-0977A
 CHEROKEE COUNTY
 STATION: 35+18.000-LREV-

SHEET 1 OF 14

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DOUBLE
 2.400m X 2.400m
 CONCRETE BOX CULVERT



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			14

DRAWN BY : V.X. NGUYEN DATE : 10/8/97
 CHECKED BY : B.N. BARODAWALA DATE : 9/04