

FED. ROAD DIV. NO.	STATE	PROJECT NO.	COUNTY	CENTRAL SECTION	STATE ROUTE	SHEET NO.	TOTAL SHEETS
7	NEVADA						

DESIGN NOTES

SPECIFICATIONS:

DESIGN: A.A.S.H.O. DATED 1961 WITH REVISIONS THROUGH 1964.
FOR CULVERTS ON PILES OR ROCK FOUNDATIONS SPECIAL DESIGN MAY BE REQUIRED.

LOADING:

LIVE LOAD: HS 20-44 OR INTERSTATE ALTERNATE LOADING

DEAD LOAD: EARTH LOAD BASED ON 120 LBS. PER CU. FT. AND HORIZONTAL EQUIVALENT FLUID PRESSURE OF 36 LB PER SQ. FT.; CONCRETE 150 LBS PER CU. FT.

UNIT STRESSES: $F_s = 20,000$ R.S.I., $N = 10$

$F_c = 1,200$ P.S.I.

REINFORCEMENT EMBEDMENT IS $\frac{1}{2}$ " CLEAR, EXCEPT AS NOTED.

CONSTRUCTION NOTES

SPECIFICATIONS: STANDARD SPECIFICATIONS, DEPARTMENT OF HIGHWAYS, CURRENT EDITION, AND SPECIAL PROVISIONS ACCOMPANYING PLANS.

CONSTRUCTION LOADS: CONSTRUCTION LOADS HEAVIER THAN LEGAL LOADS NOT PERMITTED UNTIL CONCRETE HAS REACHED A STRENGTH OF 3,000 P.S.I. AND STRUCTURE STRUTTED AND CUSHIONED AS DIRECTED BY THE ENGINEER.

HEADWALLS: ALL R.C.B. CULVERTS SHALL HAVE TYPE I HEADWALLS UNLESS OTHERWISE NOTED ON PLANS.

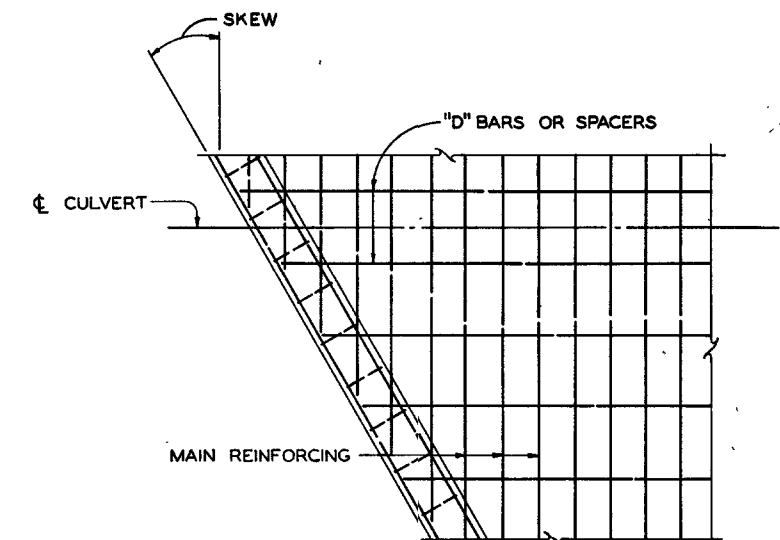
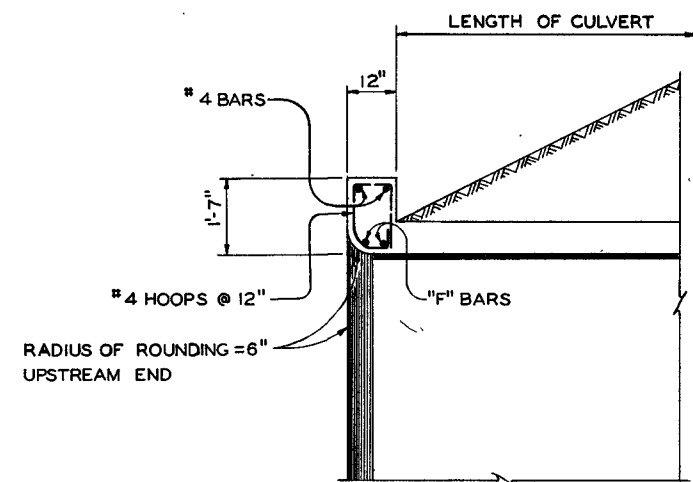
LOCATION NOTES

HYDRAULICS: IF SLOPE OF NATURAL CHANNEL EXCEEDS "NEUTRAL SLOPE" OF CULVERT ENTRANCE, CAPACITY FOR 10-YEAR FLOOD (Q_{10}) WILL USUALLY DETERMINE SIZE; OTHERWISE COMPUTE TOTAL HEAD $= \left(\frac{Q_{100}}{8A} \right)^2 \left(\frac{1.05 \cdot K_L}{100} \right)$, WHERE "K" IS HEAD FACTOR, "A" IS AREA, "L" IS LENGTH OF CULVERT, AND Q_{100} THE 100-YEAR FLOOD, AND COMPARE WITH ALLOWABLE HEAD. TABULATED ELEMENTS ARE FOR FULL NOMINAL SECTION.

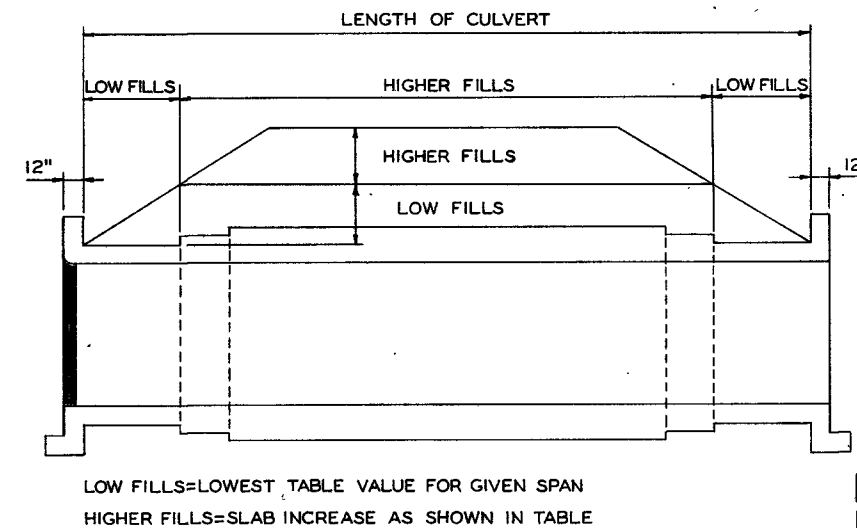
DESIGNATION: SHOW ON PLANS AS SPAN X HEIGHT X LENGTH.

QUANTITIES: QUANTITIES ARE FOR ESTIMATING ONLY. THEY DO NOT INCLUDE SPLICES IN LONGITUDINAL BARS OR CONCRETE AND REINFORCEMENT FOR SPECIAL COVERAGE.

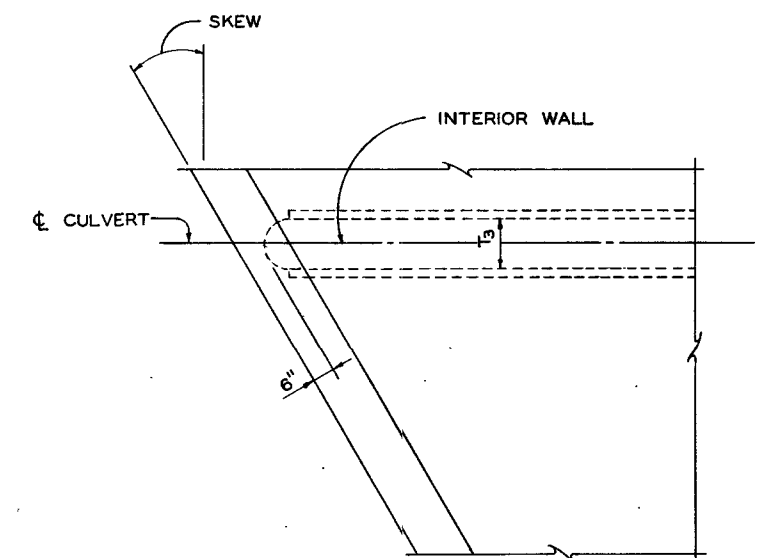
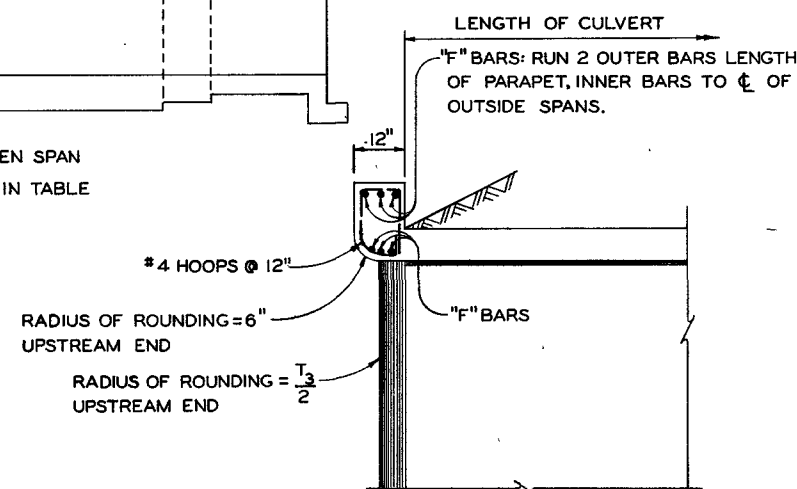
SPECIAL COVERAGE: WHERE SCOUR IS ANTICIPATED, THICKNESS OF BOTTOM SLAB SHALL BE INCREASED TO PROVIDE 2" MINIMUM COVERAGE BETWEEN STEEL AND EXPOSED SURFACE.



PARAPET DETAILS FOR SINGLE SPAN CULVERTS



LOW FILLS=LOWEST TABLE VALUE FOR GIVEN SPAN
HIGHER FILLS=SLAB INCREASE AS SHOWN IN TABLE



PARAPET DETAILS FOR MULTIPLE SPAN CULVERTS

SKEWED PARAPETS								
SKEW ANGLE	SPAN	3	4	5	6	8	10	12
0°-15°	BAR NO.	4	4	5	6	6	7	8
	NUMBER OF BARS	2	2	2	2	3	3	3
16°-30°	BAR NO.	4	4	5	6	7	8	8
	NUMBER OF BARS	2	3	3	3	3	3	3
31°-45°	BAR NO.	4	4	6	6	7	8	8
	NUMBER OF BARS	3	3	3	3	3	3	3
0°-45°	# 4 HOOPS	12" CTRS.						

107V3834

STATE OF NEVADA
DEPARTMENT OF HIGHWAYS

108

STANDARD BOX CULVERTS

(66)

APPROVED BY: *Edwin T. Boardman*

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