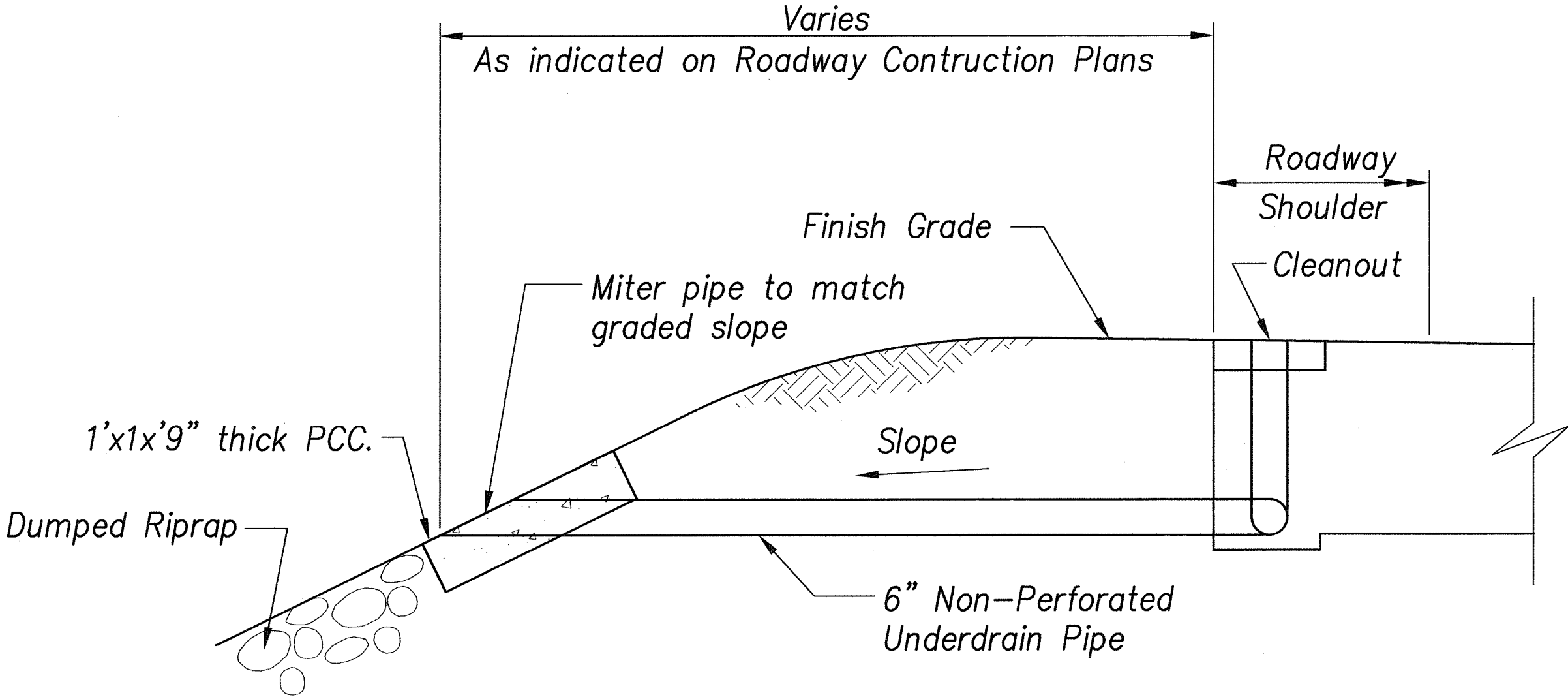
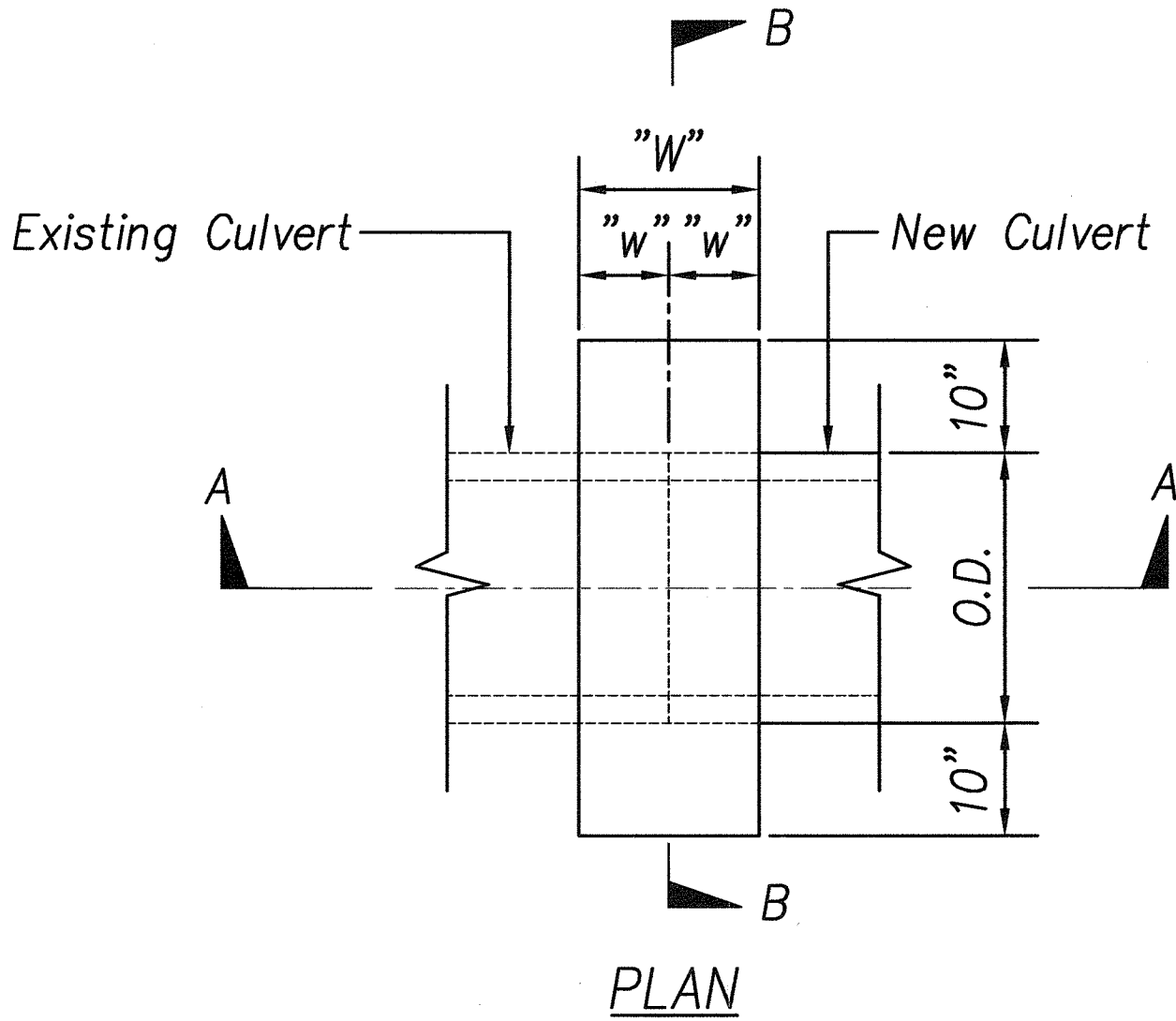


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(60)	2007	22	90

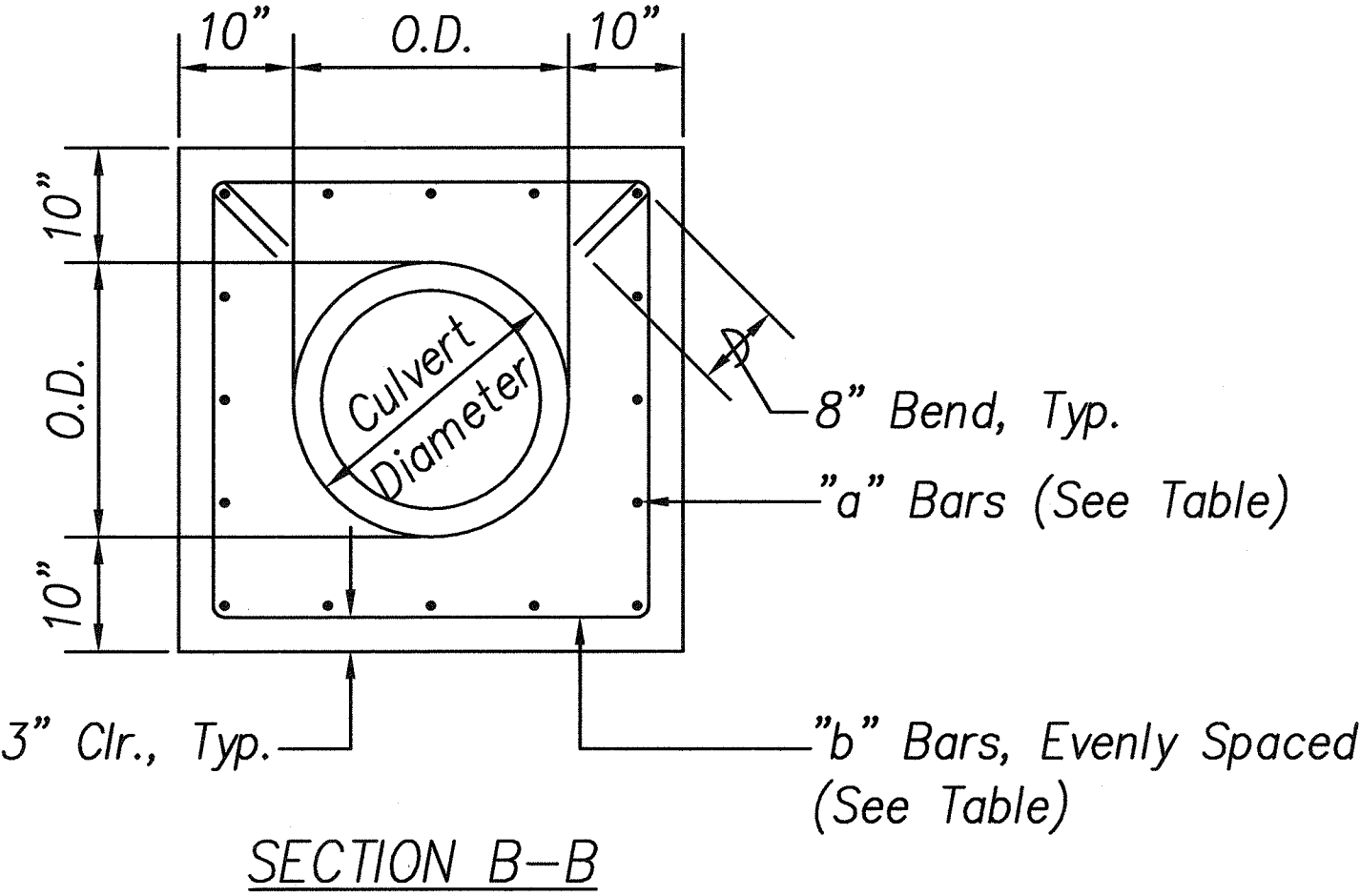
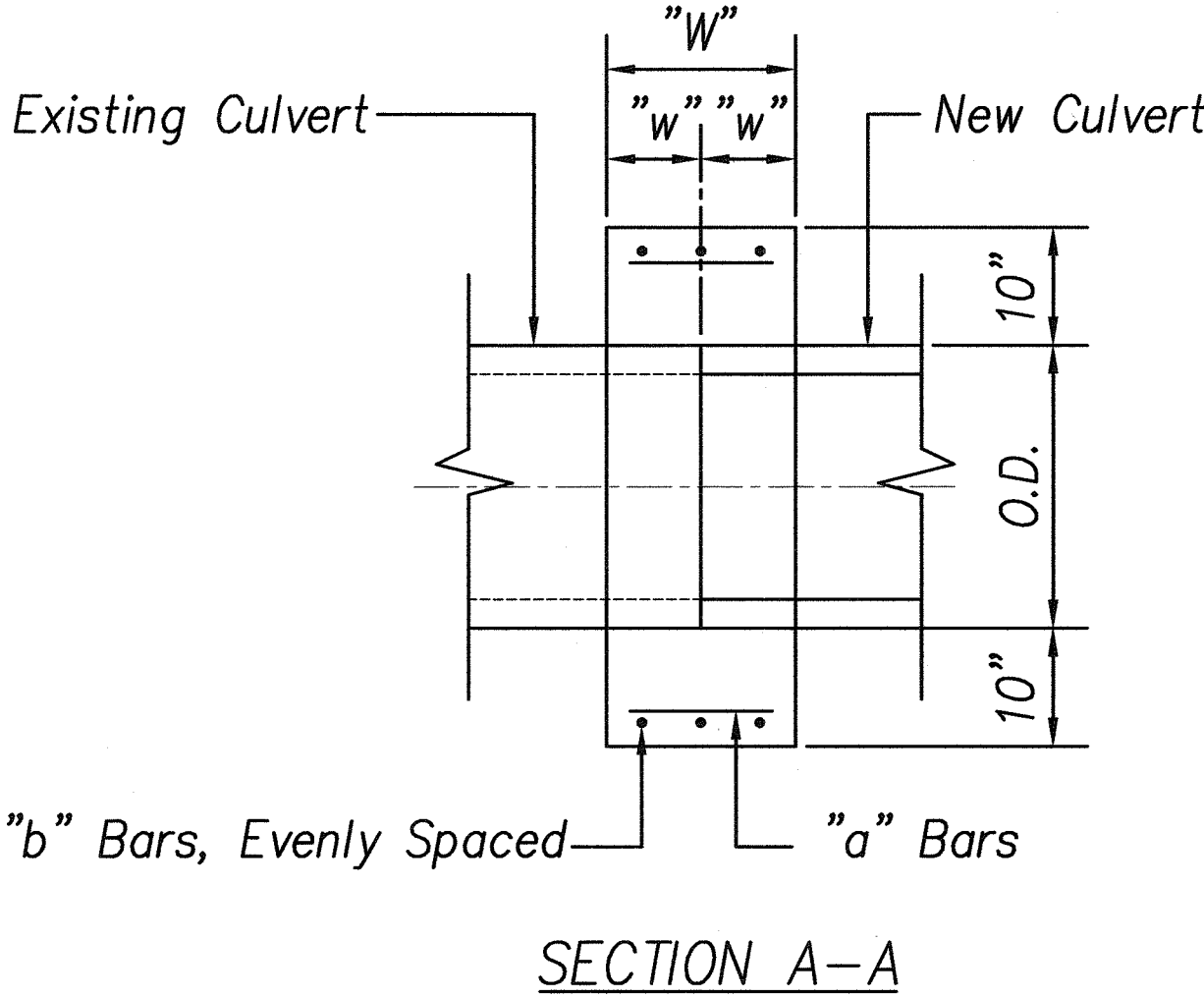


TYPE A UNDERDRAIN OUTLET
Not to Scale



General Note:
Reinforcing Steel for Concrete Collar Shall Conform To The Requirements Of ASTM 615-Grade 60.

Culvert Diameter	"a" Bars	"b" Bars	"W"	"w"
18" To 30"	#4 @ 9"	3 - #4	24"	12"
36" To 48"	#5 @ 9"	4 - #4	30"	15"



REINFORCED CONCRETE COLLAR
Scale: 3/4" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	CHECKED BY	

SIGNATURE

APRIL 30, 2008

EXPIRATION DATE OF LICENSE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

DRAINAGE AND MISCELLANEOUS DETAILS

KAHEKILI HIGHWAY INTERSECTION IMPROVEMENTS

VICINITY OF HUI IWA STREET

FEDERAL-AID PROJECT NO. NH-083-1(60)

SCALE: AS NOTED

DATE: April 2007

SHEET No. C-20 OF 90 SHEETS