

DRAINAGE SUMMARY

PROJECT : HONOAPIILANI HIGHWAY
ALAELOA TO PINEAPPLE HILL
PROJECT NO.: F-030-I(8)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-030-18	1981	29	32

ITEM NO.		206	206	206	207	503	503	602	603	603	603	603	603	603	603	603	603	604	609	640	640	640	640	640														
		.1000	.7100	.8200	.0100	.0000	.2010	.1000	.0010	.1010	.6344	.6610	.6620	.6630	.6640	.6010	.2370	.2616	.1010	.1020	.4610	.4620	.4630															
UNIT USED		C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	L.B.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.														
TYPE OF STRUCTURE	STATION (FROM – TO)	STRUCTURAL EXCAVATION OTHER THAN AT BRIDGES	STRUCTURE BACKFILL FOR STRUCTURAL PLATE CULVERTS	FILTER MATERIAL FOR STRUCTURES	DITCH AND CHANNEL EXCAVATION	CLASS 'A' CONCRETE OTHER THAN IN BRIDGES	CLASS 'B' CONCRETE OTHER THAN IN BRIDGES	REINFORCING STEEL OTHER THAN IN BRIDGES	BED COURSE MATERIAL FOR CULVERT	24-INCH RCP, CLASS III	60-INCH CMP, Sht. "t" 0.138 or 54-INCH RCP, Class V	78-INCH CMP (3"x1"), Sht. "t" 0.138 or 78-INCH STRUCTURAL PLATE PIPE No. 10 Gage	108-INCH CMP (3"x1"), Sht. "t" 0.138 or 108-INCH STRUCTURAL PLATE PIPE No. 10 Gage	120-INCH CMP (3"x1"), Sht. "t" 0.138 or 120-INCH STRUCTURAL PLATE PIPE No. 10 Gage	108-INCH CMP (3"x1"), Sht. "t" 0.168 or 108-INCH STRUCTURAL PLATE PIPE No. 8 Gage	24-INCH PRECAST FLARED END SECTION	TYPE 61616-45 DEGREE STEEL FRAME AND GRATE	GUTTER, TYPE 2 (61616)	1' X 1' (SS 1/1) LINED TRAPEZOIDAL DRAINAGE DITCH	1' X 1.5' (SS 1/1) LINED TRAPEZOIDAL DRAINAGE DITCH	3' X 1' (SS 1/1) LINED TRAPEZOIDAL DRAINAGE DITCH	3' X 3' TO 3' X 1' LINED TRAPEZOIDAL DRAINAGE DITCH TRANSITION	3' X 1' TO 1' X 1' LINED TRAPEZOIDAL DRAINAGE DITCH TRANSITION															
LINED DITCH TRANSITION	STA. 184+30 0/S 95' RT. STA. 184+45 0/S 90' RT.				8																	15																
3.0' X 1.0' LINED TRAPEZOIDAL DITCH	STA. 184+45 0/S 90' RT. STA. 186+00 0/S 69.3' RT.				84																158																	
LINED DITCH TRANSITION	STA. 186+00 0/S 69.3' RT. STA. 186+20 0/S 65' RT.				5																	20																
1.0' X 1.0' LINED TRAPEZOIDAL DITCH	STA. 186+20 0/S 65' RT. STA. 190+00 0/S 65' RT.				72														410																			
TYPE 61616 45° CDI 24" CULVERT	STA. 190+50 0/S 25' LT. STA. 190+50 0/S LT.	6				2.8		187									1																					
OUTLET STRUCTURE	STA. 193+36 ± 0/S LT.	10		8		20.1		2250																														
CULVERT	STA. 193+75	102							15		160																											
INLET STRUCTURE	STA. 194+08 ± 0/S RT.	3				11.8		1300																														
TYPE 61616 45° CDI CULVERT	STA. 200+00 0/S 25' LT. STA. 200+00 0/S 42' LT.	6				2.8		187									14																					
OUTLET STRUCTURE	STA. 201+49.04 0/S 74.76' LT.	41				17.4		3082				308																										
2-78" SP CULVERTS	STA. 201+78	8403	336						213																													
INLET STRUCTURE	STA. 202+02.36 0/S 67.20' RT. STA. 202+28.5 0/S 69' LT. STA. 203+12.27 0/S 76.84' LT.	137				35.6		1506								1																						
24" CULVERT	STA. 203+12.27 0/S 76.84' LT.	75							2	84							1																					
TYPE 61616 45° CDI 24" CULVERT	STA. 203+12.27 0/S 76.84' LT. STA. 203+17.18 0/S 71.69' LT. STA. 203+81.21 0/S 76.69' LT.	5				22		148																														
TYPE 61616 45° CDI 24" CULVERT	STA. 203+81.21 0/S 76.41' LT. STA. 203+81.21 0/S 76.41' LT. STA. 204+00.36 0/S 47.23' RT.																1																					
TYPE 61616 45° CDI 1.0' X 1.5' LINED TRAPEZOIDAL DRAINAGE DITCH	STA. 204+00.36 0/S 47.23' RT. STA. 204+20 0/S 98.0' RT. STA. 207+50 0/S 60.0' RT.	7				30		175									1																					
24" CULVERT	STA. 207+00 0/S 61' LT. STA. 207+00 0/S 25' LT.	16							1	36							1	1																				
TYPE 61616 45° CDI 24" CULVERT	STA. 207+00 0/S 25' LT. STA. 207+00 0/S 25' LT. STA. 207+00 0/S 37' RT.	9				35		193									1																					
TYPE 61616 45° CDI	STA. 207+00 0/S 37' RT.	9				36		198																														

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PROJECT NO : F-030-I(8)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-030-I(8)	1981	30	22

ITEM NO.		206	206	206	207	503	503	602	603	603	603	603	603	603	603	603	604	609	640	640	640	640	640															
		.1000	.7100	.8200	.0100	.0000	.2010	.1000	.0010	.1010	.6344	.6610	.6620	.6630	.6640	.9010	.2370	.2616	.1010	.1020	.4610	.4620	.4630															
UNIT USED		C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	L.B.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.															
TYPE OF STRUCTURE	STATION (FROM – TO)	STRUCTURAL EXCAVATION OTHER THAN AT BRIDGES	STRUCTURE BACKFILL FOR STRUCTURAL PLATE CULVERTS	FILTER MATERIAL FOR STRUCTURES	DITCH AND CHANNEL EXCAVATION	CLASS "A" CONCRETE OTHER THAN IN BRIDGES	CLASS "B" CONCRETE OTHER THAN IN BRIDGES	REINFORCING STEEL OTHER THAN IN BRIDGES	BED COURSE MATERIAL FOR CULVERT	24-INCH RCP, CLASS III	60-INCH CMP, Sht. "t" 0.138 or 54-INCH RCP, Class V	78-INCH CMP (3"x1"), Sht. "t" 0.138 or 78-INCH STRUCTURAL PLATE PIPE No. 10 Gage	108-INCH CMP (3"x1"), Sht. "t" 0.138 or 108-INCH STRUCTURAL PLATE PIPE No. 10 Gage	120-INCH CMP (3"x1"), Sht. "t" 0.138 or 120-INCH STRUCTURAL PLATE PIPE No. 10 Gage	108-INCH CMP (3"x1"), Sht. "t" 0.168 or 108-INCH STRUCTURAL PLATE PIPE No. 8 Gage	24-INCH PRECAST FLARED END SECTION	TYPE 61616-45 DEGREE STEEL FRAME AND GRATE	GUTTER, TYPE 2 (6/6)	1' X 1' (SS 1/1) LINED TRAPEZOIDAL DRAINAGE DITCH	1' X 1.5' (SS 1/1) LINED TRAPEZOIDAL DRAINAGE DITCH	3' X 1' (SS 1/1) LINED TRAPEZOIDAL DRAINAGE DITCH	3' X 3' TO 3' X 1' LINED TRAPEZOIDAL DRAINAGE DITCH TRANSITION	3' X 1' TO 1' X 1' LINED TRAPEZOIDAL DRAINAGE DITCH TRANSITION															
24" CULVERT	Ⓟ STA. 207+00 O/S 37' RT. Ⓟ STA. 207+19 O/S 71' RT.	33							1	38																												
TYPE "A" CDI	Ⓟ STA. 207+19 O/S 71' RT.																																					
ENERGY DISSIPATOR	Ⓟ STA. 209+14.84 O/S 147.50' LT.	20		12		113.1		2768						220.8																								
120" SP CULVERT	Ⓟ STA. 209+37	571	438						125				220.8																									
INLET STRUCTURE	Ⓟ STA. 209+56.97 O/S 102.74' RT.	131				37.3		3410																														
24" CULVERT	Ⓟ STA. 210+50 O/S 72' LT. Ⓟ STA. 211+20.80 O/S 75.56' LT.	52							1	68						1																						
TYPE 61616 45° CDI	Ⓟ STA. 211+20.80 O/S 75.56' LT.	14				5.2		251									1																					
24" CULVERT	Ⓟ STA. 211+20.80 O/S 75.56' LT. Ⓟ STA. 211+79.20 O/S 76.56' LT.	62							1	56																												
TYPE 61616 45° CDI	Ⓟ STA. 211+79.20 O/S 76.56' LT.	15				5.4		257									1																					
24" CULVERT	Ⓟ STA. 211+79.20 O/S 76.56' LT. Ⓟ STA. 211+79.20 O/S 76.56' RT.								4	150																												
TYPE 61616 45° CDI	Ⓟ STA. 211+79.20 O/S 75.56' RT.	10				4.0		210									1																					
24" CULVERT	Ⓟ STA. 211+79.20 O/S 75.56' RT. Ⓟ STA. 212+70 O/S 130' RT.	123								102																												
TYPE "A" CDI	Ⓟ STA. 212+70 O/S 130' RT.	7					2.1																															
1.0' X 1.5' LINED TRAPEZOIDAL DRAINAGE DITCH	Ⓟ STA. 212+70 O/S 130' RT. Ⓟ STA. 219+50 O/S 88' RT.				131																	687																
TYPE 61616 45° CDI	Ⓟ STA 220+10 O/S 37' RT.	6				2.1		187									1																					
24" CULVERT	Ⓟ STA. 220+10 O/S RT.	6								22						1																						
OUTLET STRUCTURE	Ⓟ STA. 221+02.53 O/S 169.43' LT.	42				220		3380																														
108" SP CULVERT	Ⓟ STA. 221+19	553	612						282			228.5		128																								
INLET STRUCTURE	Ⓟ STA. 222+11.62 O/S 152.61' RT.	52				31.5		3560																														
TYPE 61616 45° CDI	Ⓟ STA. 226+22.13 O/S 37' RT.	8				12.1		1390										1																				
24" CULVERT	Ⓟ STA. 226+22.13 O/S 37' RT. Ⓟ STA. 226+41.32 O/S 69.01' LT.	112								104																												
24" CULVERT	Ⓟ STA. 226+30.51 O/S 71.54' LT. Ⓟ STA. 226+41.32 O/S 69.01' LT.	6								10							1																					
TYPE "B" 45° CDI	Ⓟ STA. 226+41.32 O/S 69.01' LT.	16				4.8		1710										1																				

S U M M A R Y

PROJECT: HONOAPIILANI HIGHWAY
ALAELOA TO PINEAPPLE HILL

PROJECT NO.: F-030-1(8)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-030-13	1981	31	92

[illegible]