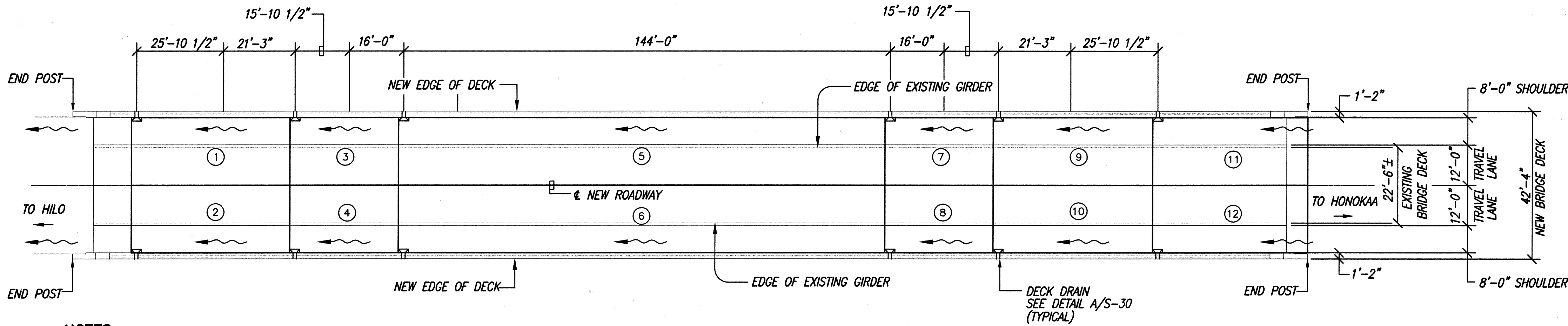


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(38)	2002	9	73



NOTES:

1. AREA IS IN ACRES
2. Q IS IN CUBIC FEET PER SECOND (CFS)
3. "HALF-CLOGGED" CAPACITY OF EACH PIPE = 0.2414 CFS

DRAINAGE PLAN

SCALE: 1"=20'

TRIB	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
AREA	0.0218	0.0218	0.0148	0.0148	0.0667	0.0667	0.0148	0.0148	0.0128	0.0128	0.0213	0.0213
Q ₁₀	0.0395	0.0395	0.0268	0.0268	0.1209	0.1209	0.0268	0.0268	0.0232	0.0232	0.0386	0.0386

RUNOFF CRITERIA

RECURRENCE INTERVAL
ONE-HOUR RAINFALL INTENSITY
RUNOFF COEFFICIENT
TIME CONCENTRATION
RAINFALL INTENSITY
TRIBUTARY AREA
FLOW RATE
AVERAGE FLOW RATE

T_m = 10 YEARS
I = 4.5 INCHES
C = 0.82
T_c = 10 MINUTES
I = 2.2 INCHES/HOUR
A = 0.32 ACRES
Q = 0.58 CFS
q = 1.80 CFS

TRIB	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
AREA	0.0218	0.0218	0.0148	0.0148	0.0667	0.0667	0.0148	0.0148	0.0128	0.0128	0.0213	0.0213
Q ₅₀	0.0538	0.0538	0.0366	0.0366	0.1647	0.1647	0.0366	0.0366	0.0316	0.0316	0.0526	0.0526

RUNOFF CRITERIA

RECURRENCE INTERVAL
ONE-HOUR RAINFALL INTENSITY
RUNOFF COEFFICIENT
TIME CONCENTRATION
RAINFALL INTENSITY
TRIBUTARY AREA
FLOW RATE
AVERAGE FLOW RATE

T_m = 50 YEARS
I = 5.5 INCHES
C = 0.82
T_c = 10 MINUTES
I = 2.9 INCHES/HOUR
A = 0.32 ACRES
Q = 0.79 CFS
q = 2.47 CFS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
[Signature]
ENGINEERS SURVEYORS HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE MAP

HAWAII BELT ROAD
KUPAPAU'UA BRIDGE WIDENING
HAMAKUA DISTRICT
Federal-Aid Project No. BR-019-2(38)

Scale: As Noted Date: Oct 2001
SHEET No. C-7 OF 41 SHEETS