

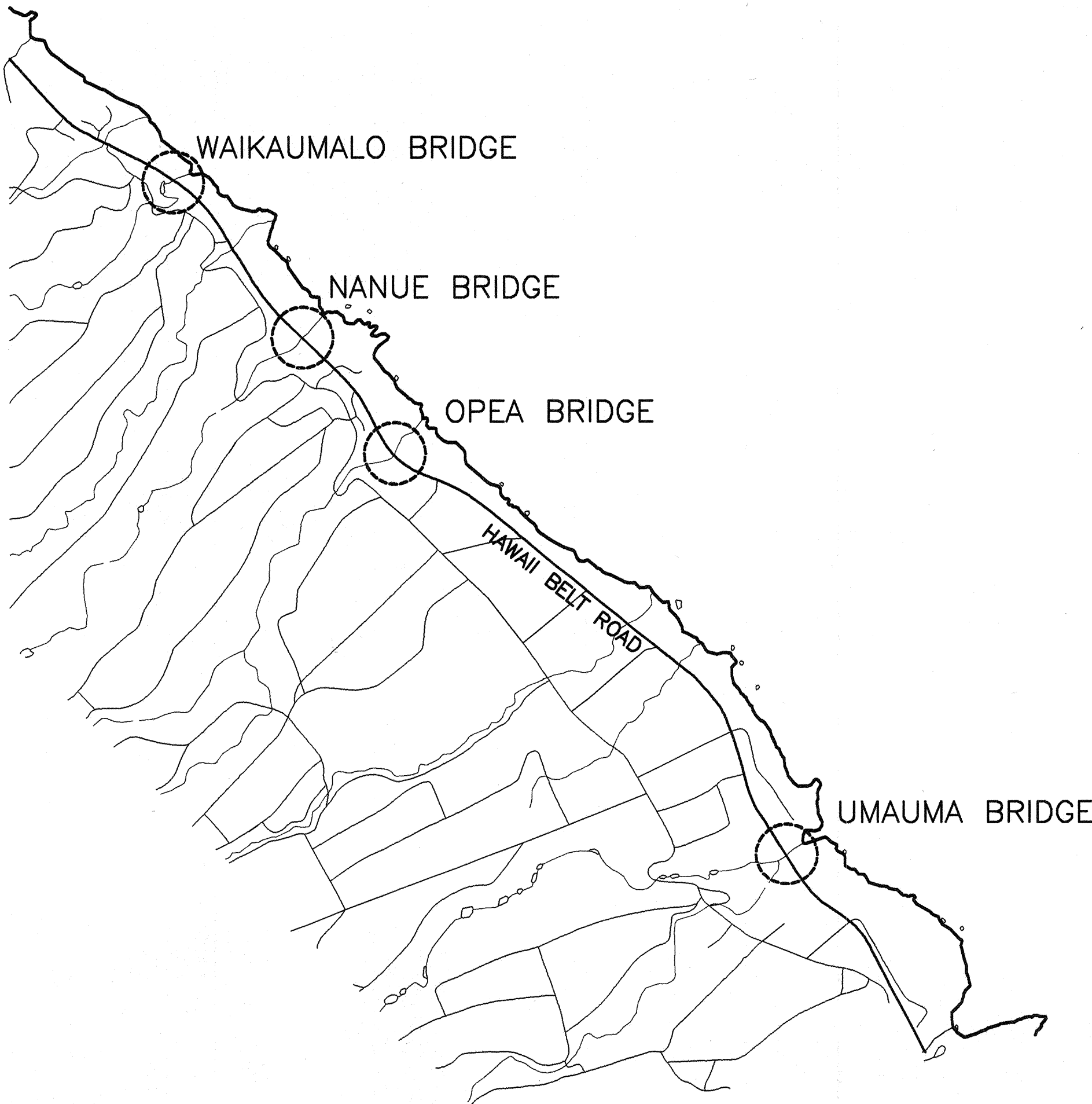
INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET: INDEX TO DRAWINGS, VICINITY MAP, AND LOCATION MAP
2-3	STANDARD PLANS SUMMARY, GENERAL NOTES
4	GENERAL STRUCTURAL NOTES AND ESTIMATED QUANTITIES
5-6	ABBREVIATIONS AND DETAILS
7-11	NANUE AND UMAUMA BRIDGES SUPERSTRUCTURE RETROFIT PLANS, ELEVATIONS AND RESTRAINER DETAILS
12-19	NANUE AND UMAUMA BRIDGES SUBSTRUCTURE RETROFIT PLANS, ELEVATIONS AND DETAILS
20-22	OPEA BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE RETROFIT PLANS, ELEVATIONS AND RESTRAINER DETAILS
23-26	WAIKAUMALO BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE RETROFIT PLANS, ELEVATIONS AND RESTRAINER DETAILS

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
HONOLULU, HAWAII

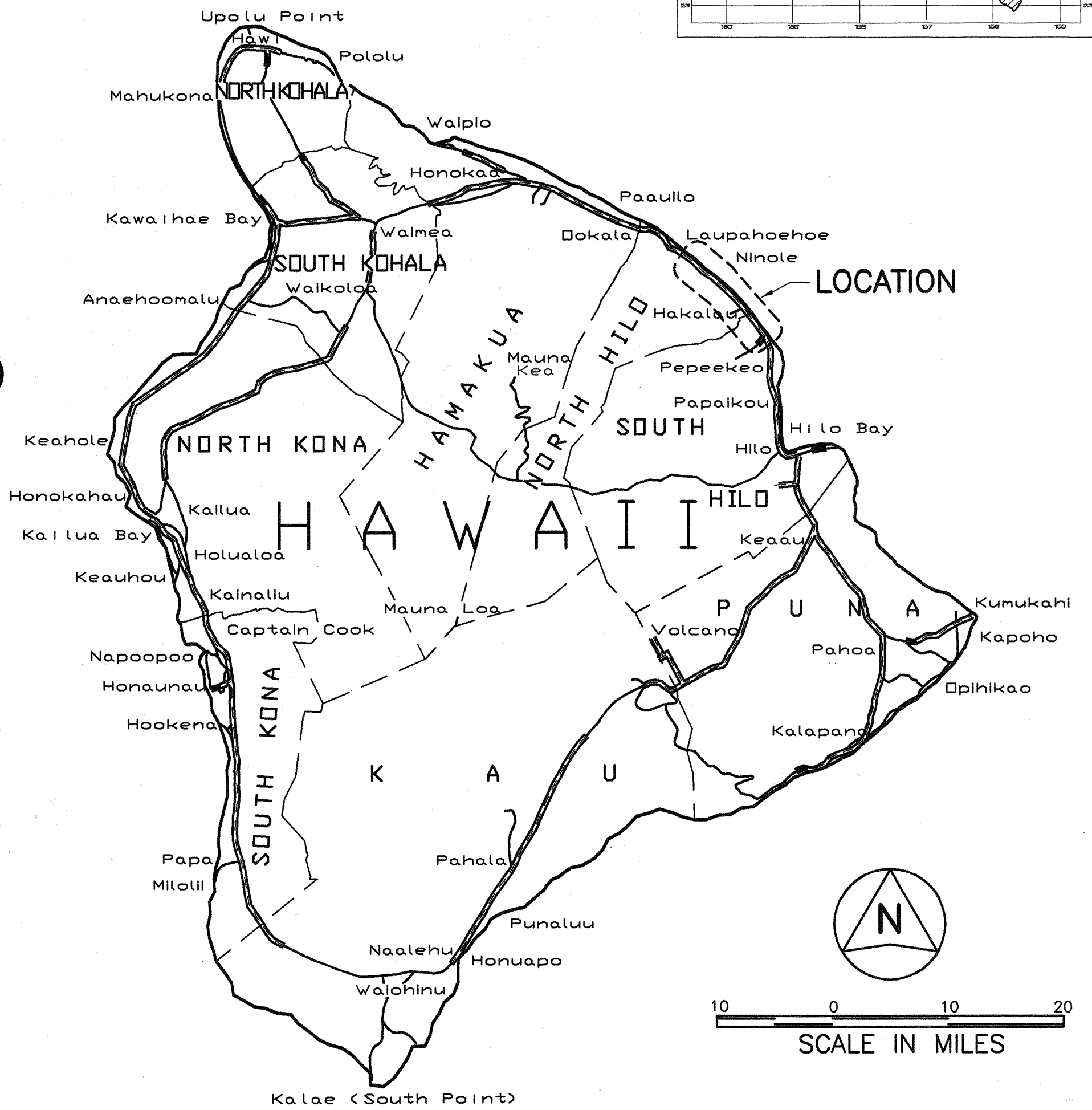
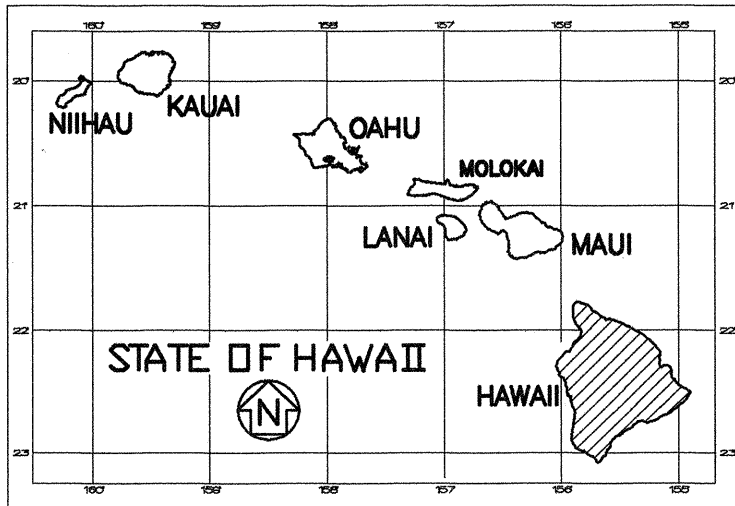
PLANS FOR  
SEISMIC RETROFIT OF VARIOUS BRIDGES  
EAST OF NINOLE

(NANUE, OPEA, WAIKAUMALO, AND UMAUMA BRIDGES)  
FEDERAL AID PROJECT NO. BR-019-2 (46)  
DISTRICT OF NORTH HILO  
ISLAND OF HAWAII



VICINITY MAP  
Not to Scale

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(46)	2000	1	26



LOCATION MAP  
Not to Scale

WAIKAUMALO BRIDGE	MILE POST 18.57
NANUE BRIDGE	MILE POST 17.98
OPEA BRIDGE	MILE POST 17.61
UMAUMA BRIDGE	MILE POST 16.02

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	8/19/99
DIRECTOR OF TRANSPORTATION	DATE

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

T-1.DWG 07/24/99 09:35 FINAL L:\DWG\6041-01\NEWSTRUCT

WILSON OKAMOTO & ASSOC. DESIGNED BY  
EMILIO BARROGA P. S. & E. BY  
692-7546 PHONE  
8/17/99 DATE