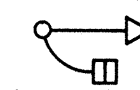
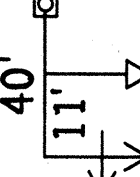
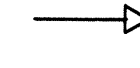
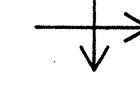
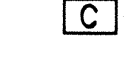
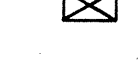


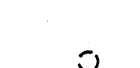
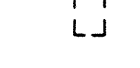


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	110	148

LEGEND

- TS NEW TRAFFIC SIGNAL STANDARD
-  STANDARD TRAFFIC AND PEDESTRIAN SIGNAL HEADS MOUNTED ON TYPE I SIGNAL STANDARD, HEIGHT = 10'
-  TRAFFIC SIGNAL HEADS MOUNTED ON TYPE II SIGNAL STANDARD, ARM SPREAD SHOWN IS 40' AND DISTANCE BETWEEN SIGNAL HEADS IS 11'
-  12" RYG TRAFFIC SIGNAL HEAD
-  12" RYG<G-/<Y- 4 SECTION DUAL INDICATION TRAFFIC SIGNAL HEAD
-  CONTROLLER CABINET
-  TYPE "A" PULLBOX
-  TYPE "B" PULLBOX
-  LOOP DETECTOR, SERIES-PARALLEL CONNECTED
-  LOOP DETECTOR, SERIES CONNECTED
- EP ELECTRIC POLE
- WV WATER VALVE
-  WM WATER METER
- SMH SEWER MANHOLE
- EXISTING MARKINGS
- ₁₂ EXISTING UTILITY LINES AND SIZES AS INDICATED
- W = WATER G = GAS
- S = SEWER E = ELECTRIC
- T = TELEPHONE D = DRAIN
- ABD = ABANDONED

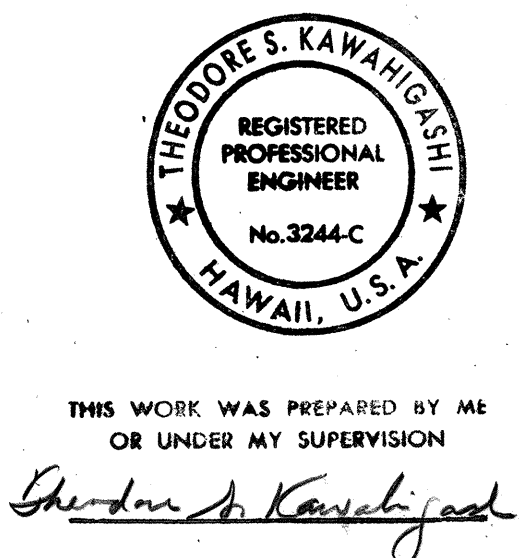
CONSTRUCTION NOTES

1. LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES SUCH AS PIPE LINES, CONDUITS, CABLES, ETC., SHOWN ON PLANS ARE APPROXIMATE ONLY. IT IS NOT THE INTENT OF THESE PLANS TO SHOW THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES WITH THE RESPECTIVE OWNERS. EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN COST.
2. THE LOCATIONS OF THE TRAFFIC SIGNAL STANDARDS, TRAFFIC SIGNAL STANDARDS WITH MAST-ARM, PEDESTRIAN PUSH BUTTONS, TRAFFIC CONTROLLER, PULLBOXES, CONDUITS AND LOOP DETECTORS SHALL BE STAKED OUT IN THE FIELD BY THE CONTRACTOR AND APPROVAL OF THE LOCATIONS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.
3. ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", FEDERAL HIGHWAY ADMINISTRATION (1984) AND AMENDMENTS.
4. LOCATIONS OF TRAFFIC MARKINGS AND MARKERS (LANE LINES, STOP LINES, CROSSWALK, ETC.) SHOWN ON THE PLANS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO THE INSTALLATION OF THE TRAFFIC SIGNAL SYSTEM.
5. MAINTENANCE OF TRAFFIC THROUGH THE CONSTRUCTION AREA SHALL BE IN ACCORDANCE WITH PART VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", FEDERAL HIGHWAY ADMINISTRATION (1984) AND AS SPECIFIED IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE BARRICADES, BLINKERS, CONSTRUCTION SIGNS, ETC., FOR THE SAFETY OF THE MOTORING PUBLIC.
6. DEPARTMENT OF TRANSPORTATION SERVICES, CITY AND COUNTY OF HONOLULU, WILL ASSIST THE ENGINEER IN CONSTRUCTION INSPECTION FOR THE TRAFFIC SIGNAL SYSTEM.
7. EXISTING STOP SIGN SHALL BE REMOVED AND RETURNED TO THE ENGINEER. COSTS SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK.

TRAFFIC SIGNAL NOTES

1. ALL TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE COMPLETELY WIRED IN THE CABINET AND SHALL CONTROL THE TRAFFIC SIGNALS AS CALLED FOR IN THE PLANS.
2. SIGNAL INDICATIONS DURING CLEARANCE INTERVAL:
 - A. IF A SIGNAL IS G OR <G AND WILL REMAIN G OR <G DURING THE NEXT PHASE, IT SHALL BE G OR <G DURING THE CLEARANCE INTERVAL.
 - B. IF A SIGNAL IS G OR <G AND WILL BECOME R OR EXTINGUISHED DURING THE NEXT PHASE, IT SHALL BE Y OR <Y DURING THE CLEARANCE INTERVAL.
 - C. IF A SIGNAL IS R AND WILL REMAIN R OR BECOMES G DURING THE NEXT PHASE, IT SHALL REAMIN R DURING THE CLEARANCE INTERVAL.
3. A SOLID #8 BARE COPPER WIRE SHALL BE PULLED WITH THE TRAFFIC CONTROL CABLE FOR EQUIPMENT GROUND. COST SHALL BE INCIDENTAL TO THE INSTALLATION OF THE CONTROL CABLE.
4. CONTRACTOR SHALL INSTALL METER SOCKET AND BREAKER ON POWER POLE AS SHOWN ON PLANS IN ACCORDANCE WITH HECO REQUIREMENTS. METER SHALL BE MOUNTED BETWEEN 5' AND 7' ABOVE GROUND. METER SOCKETS SHALL BE 4-PRONG, COMPLETE WITH A MANUAL CIRCUIT CLOSING DEVICE.
5. CONDUITS, OVERHEAD CABLE AND CABINET LOCATIONS AS SHOWN ON THE PLANS ARE SCHEMATIC. THEY MAY BE MODIFIED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.
6. THE CONTRACTOR SHALL SPLICE ALL SIGNAL CONDUCTORS IN PULLBOX. NO SPLICES SHALL BE PERMITTED IN DETECTOR LEAD-IN CABLE.
7. NO SPLICES SHALL BE PERMITTED IN THE COMMUNICATIONS CABLE EXCEPT AT THE CONTROLLER CABINETS AS INDICATED ON THE PLANS.

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



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

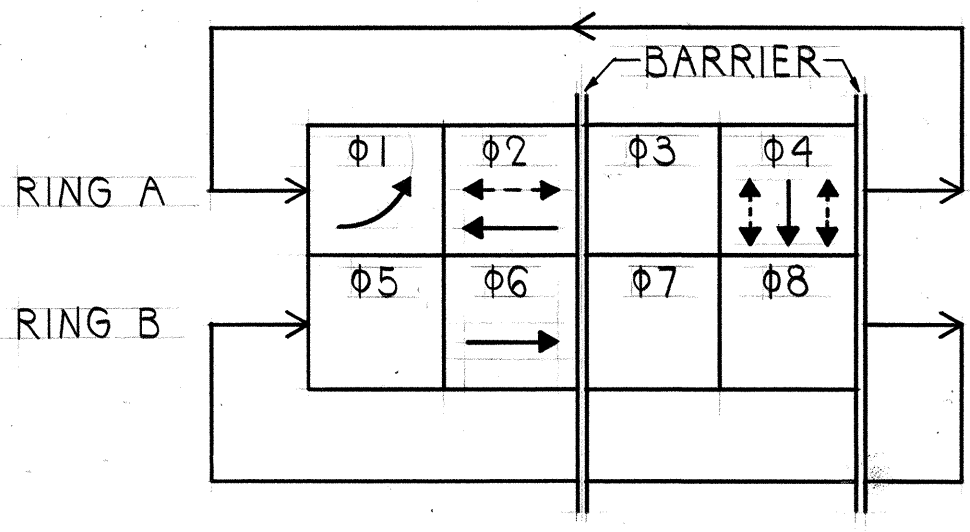
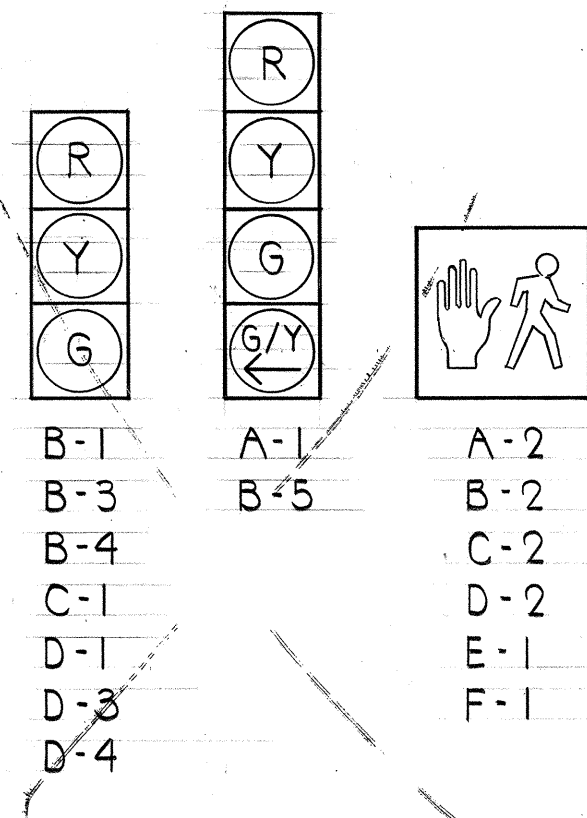
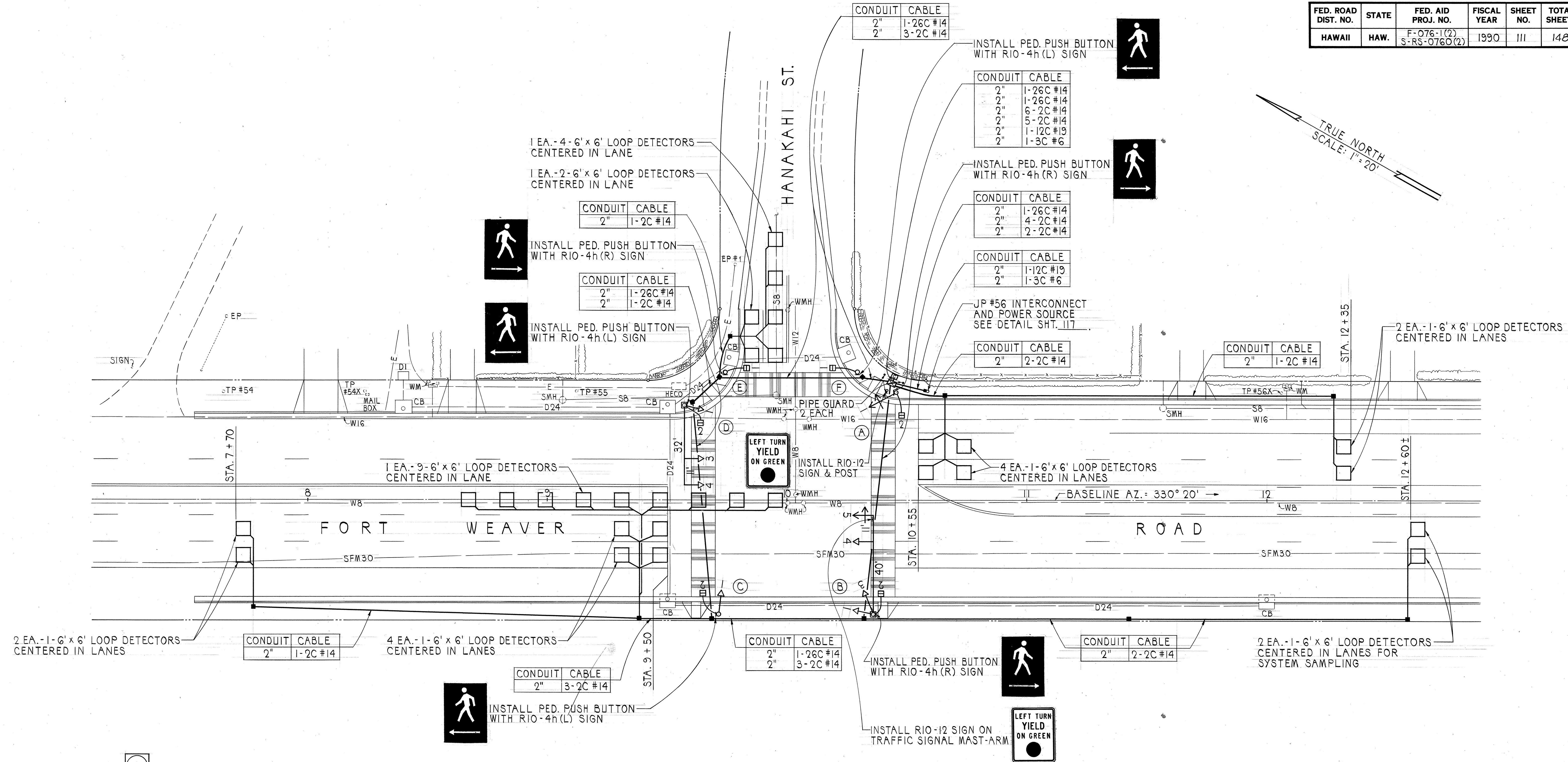
LEGEND AND NOTES

**FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.**

Scale: None Date: June 1989

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	III	148



SIGNAL INDICATIONS

PHASE DIAGRAM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

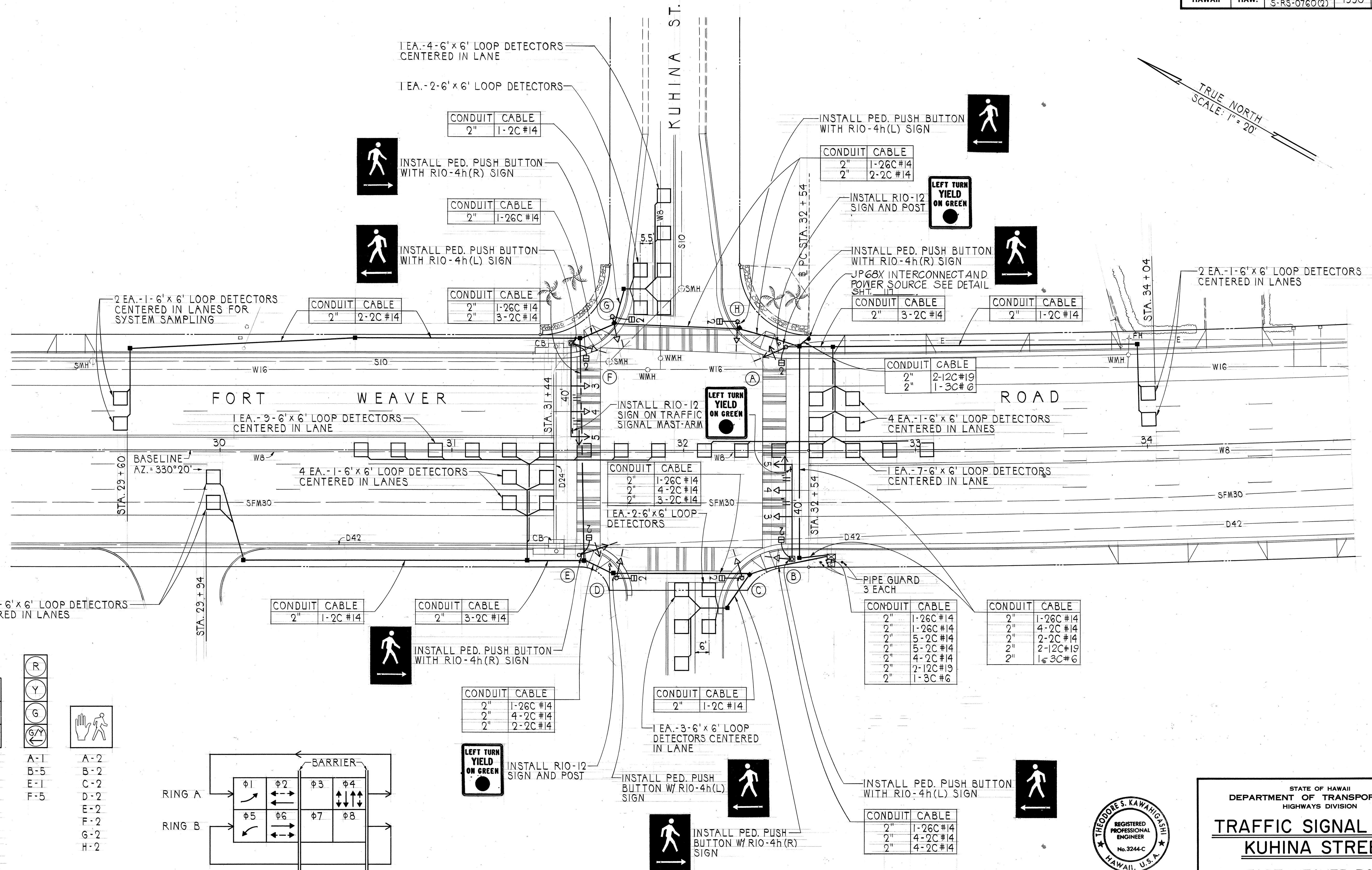
TRAFFIC SIGNAL PLAN
HANAKAHI STREET

FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.

Scale: 1" = 20' Date: June 1989

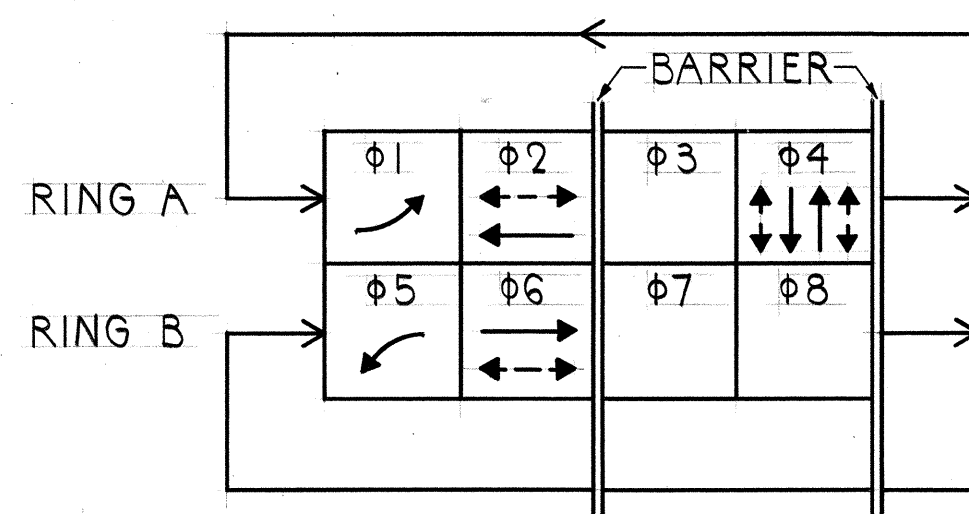
SHEET NO. 1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	112	148



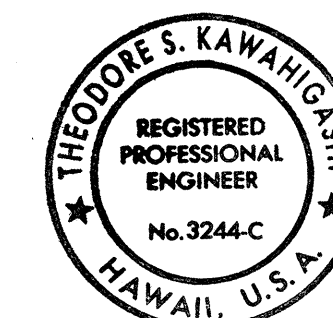
SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

(R)	(R)	A-2
(Y)	(Y)	B-2
(G)	(G)	C-2
(G)	(G)	D-2
		E-2
		F-2
		G-2
		H-2
B-1	A-1	
B-3	B-5	
B-4	E-1	
C-1	F-5	
D-1		
F-1		
F-3		
F-4		
G-1		
H-1		



SIGNAL INDICATIONS

PHASE DIAGRAM



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

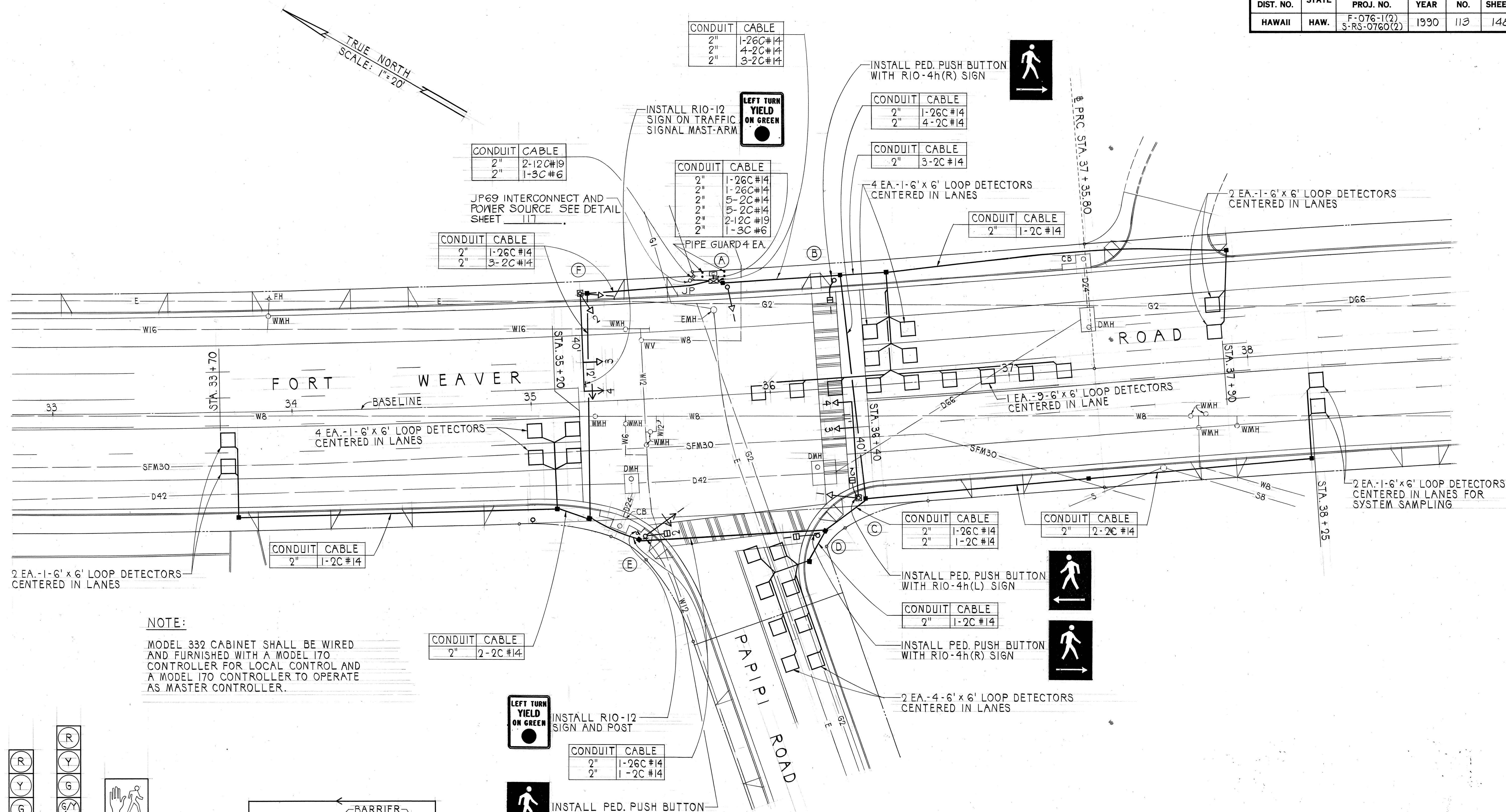
TRAFFIC SIGNAL PLAN
KUHINA STREET

FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.

Scale: 1" = 20' Date: June 1989

SHEET No. 2 OF 5 SHEETS

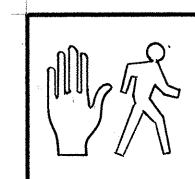
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	113	148



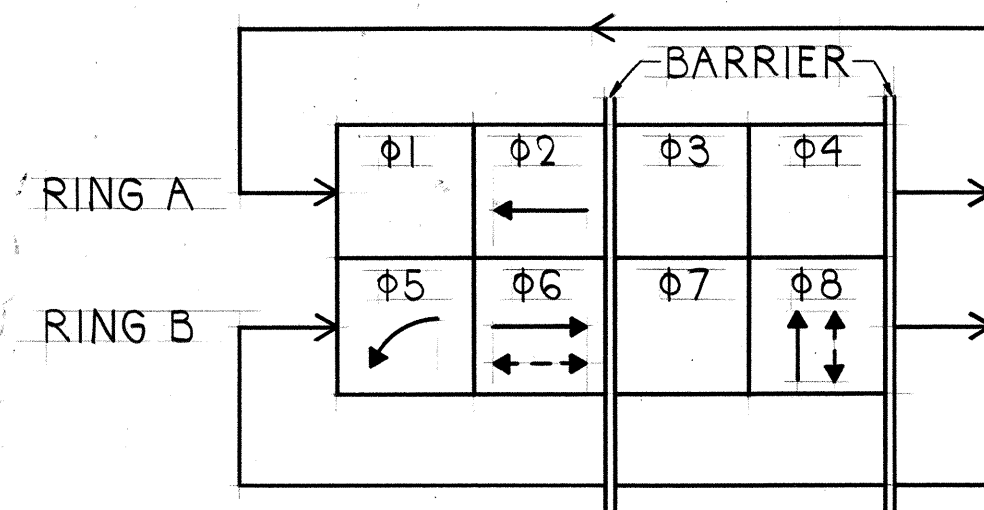
NOTE:

MODEL 332 CABINET SHALL BE WIRED AND FURNISHED WITH A MODEL 170 CONTROLLER FOR LOCAL CONTROL AND A MODEL 170 CONTROLLER TO OPERATE AS MASTER CONTROLLER.

R	R
Y	Y
G	G
G	G
A-1	E-1
C-1	F-4
C-3	
C-4	
F-1	
F-2	
F-3	

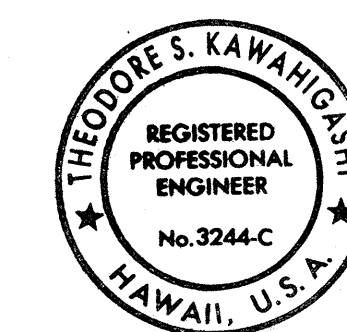


B-1
C-2
D-1
E-2



SIGNAL INDICATIONS

PHASE DIAGRAM



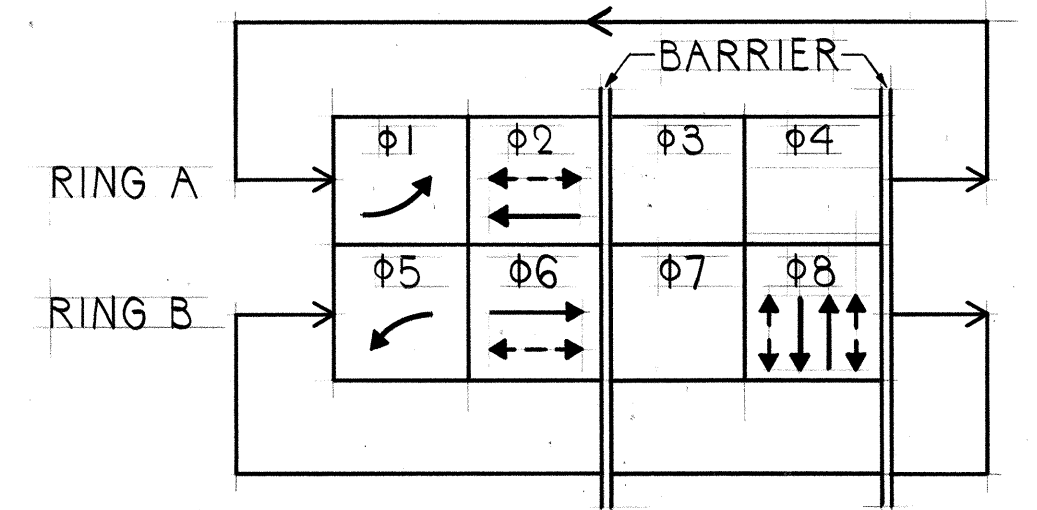
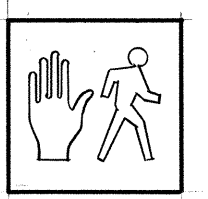
THIS WORK WAS PREPARED BY ME
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Shendee A. Kawaiyoshi

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNAL PLAN
PAPIPI ROAD
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Scale: 1" = 20' Date: June 1989
SHEET No. 3 OF 5 SHEETS

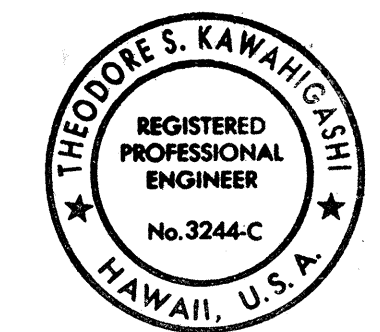
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	115	148

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
NO.	_____

<div><div>R</div><div>Y</div><div>Y</div><div>G</div></div>	<div><div>R</div><div>Y</div><div>G</div><div>Y</div></div>	<div><div>A-1</div><div>B-2</div><div>C-2</div><div>D-2</div><div>E-2</div><div>F-2</div><div>G-2</div><div>H-2</div></div>
<div><div>B-1</div><div>B-3</div><div>B-4</div><div>C-1</div><div>D-1</div><div>F-1</div><div>F-3</div><div>F-4</div><div>G-1</div><div>H-1</div></div>	<div><div>A-1</div><div>B-5</div><div>E-1</div><div>F-5</div></div>	



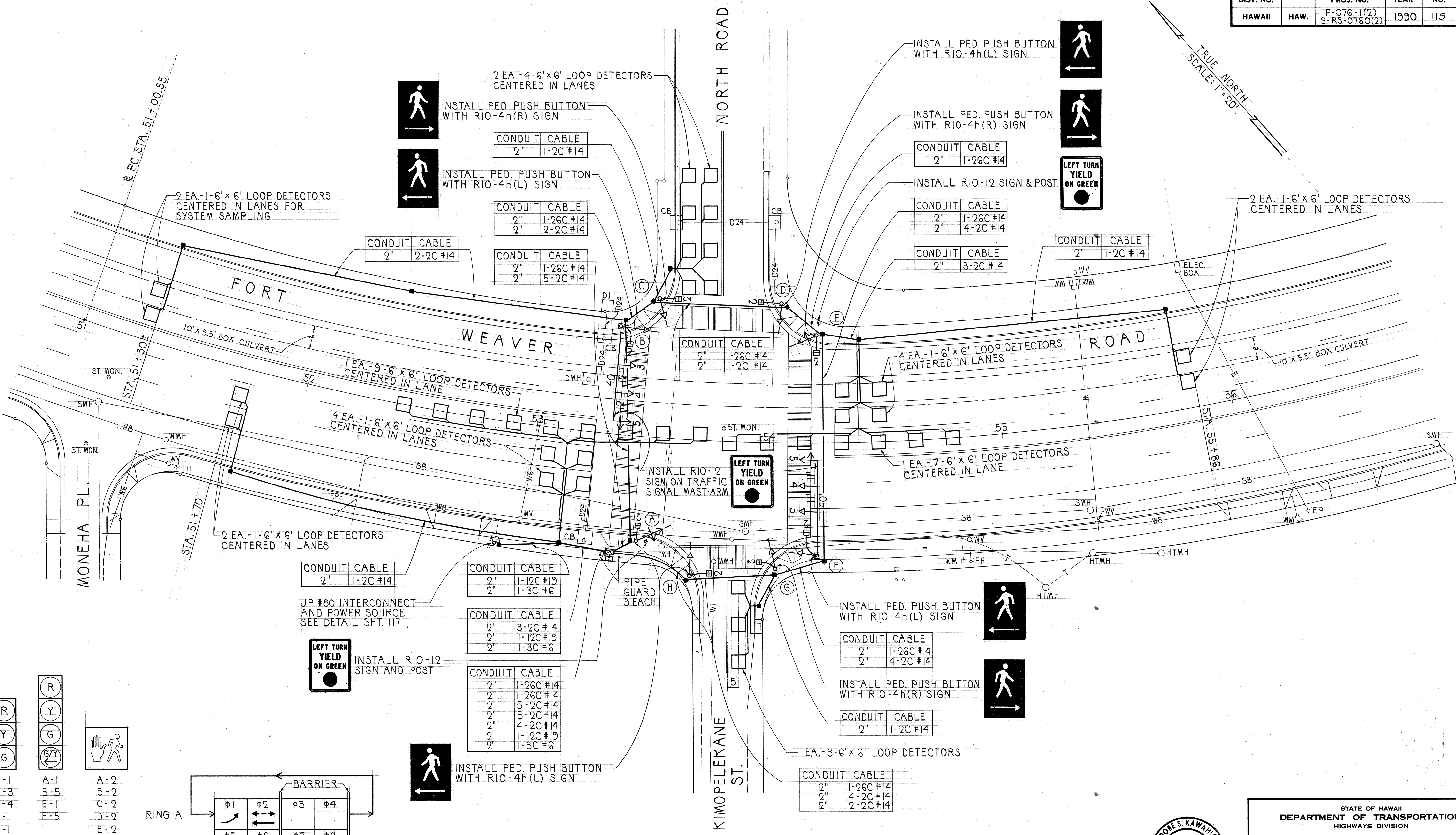
SIGNAL INDICATIONS PHASE DIAGRAM



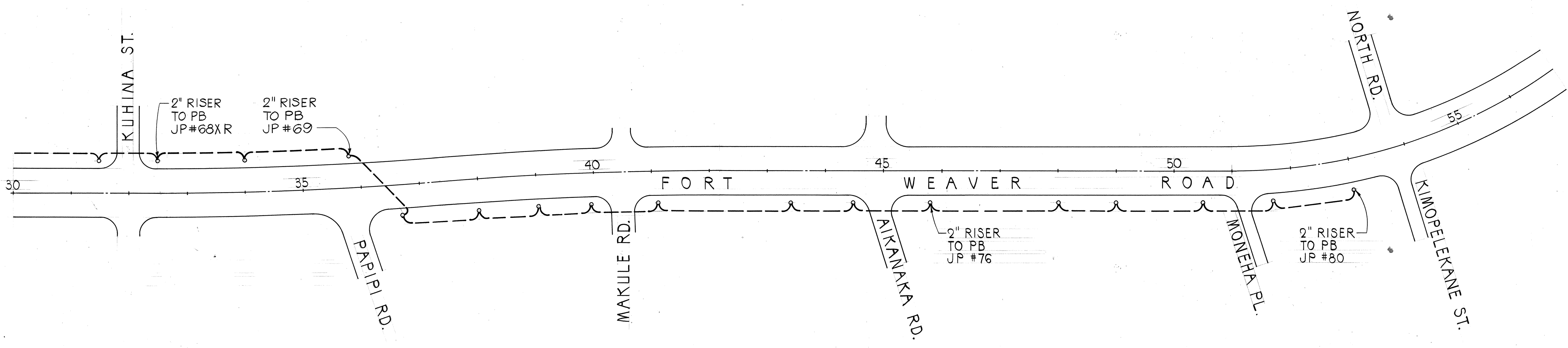
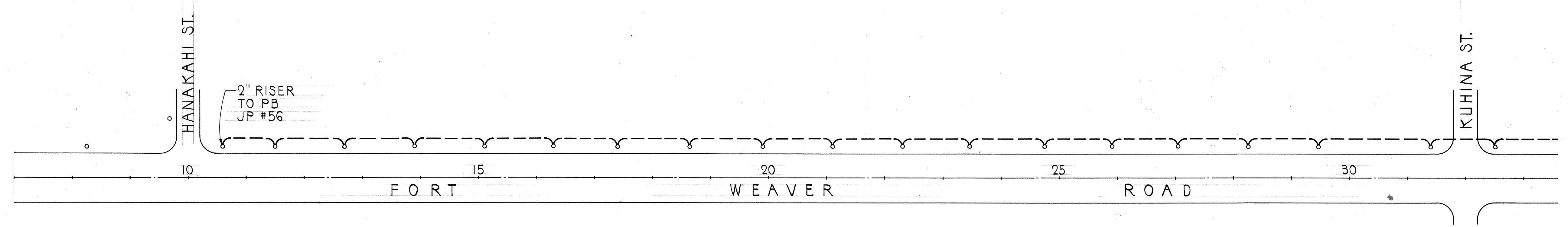
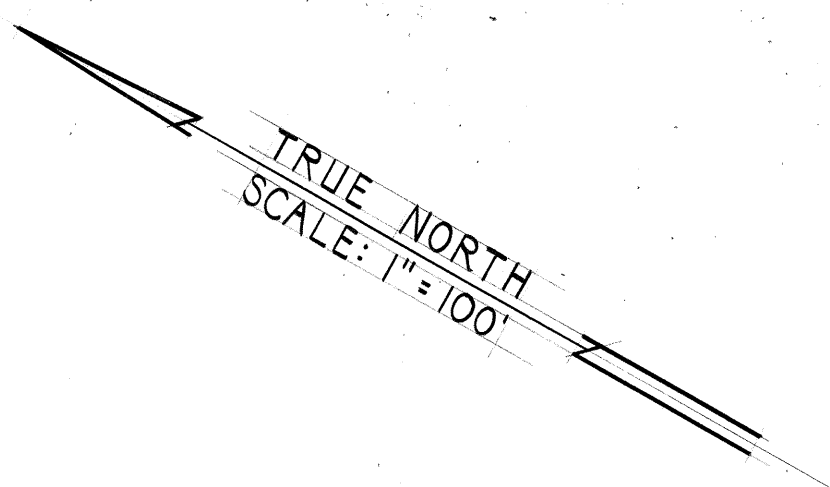
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HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN
NORTH ROAD
FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Scale: 1" = 20' Date: June 1989
SHEET No. 5 OF 5 SHEETS

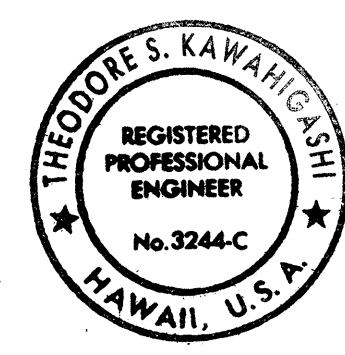


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	116	148



- NOTE:
- 1. INTERCONNECT CABLE - 12C #19
 - 2. COST FOR INTERCONNECT CABLE SHALL INCLUDE MESSENGER CABLE AND LASHING WIRE.

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



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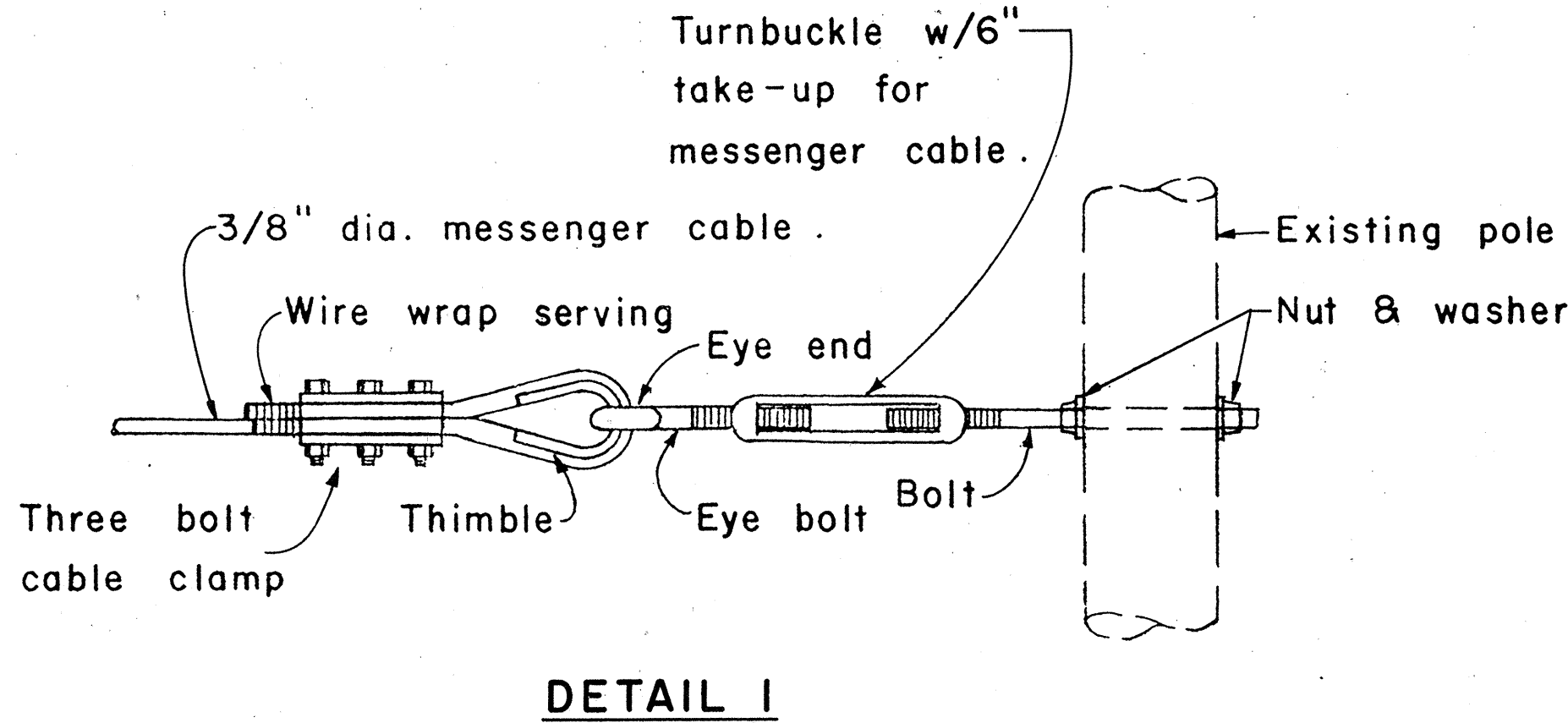
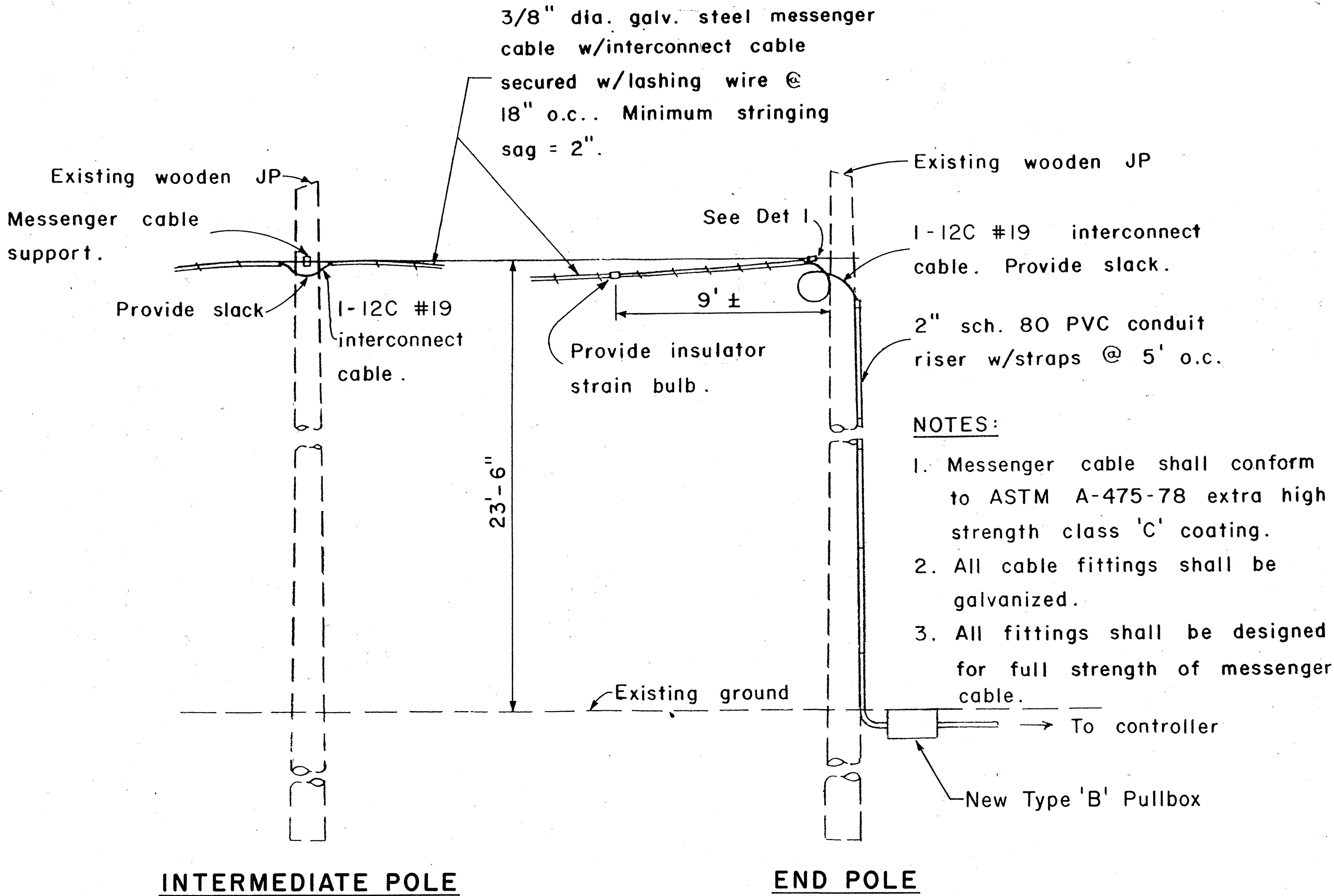
OVERHEAD INTERCONNECT
CABLE PLAN

FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.

Scale: 1" = 100' Date: June 1989

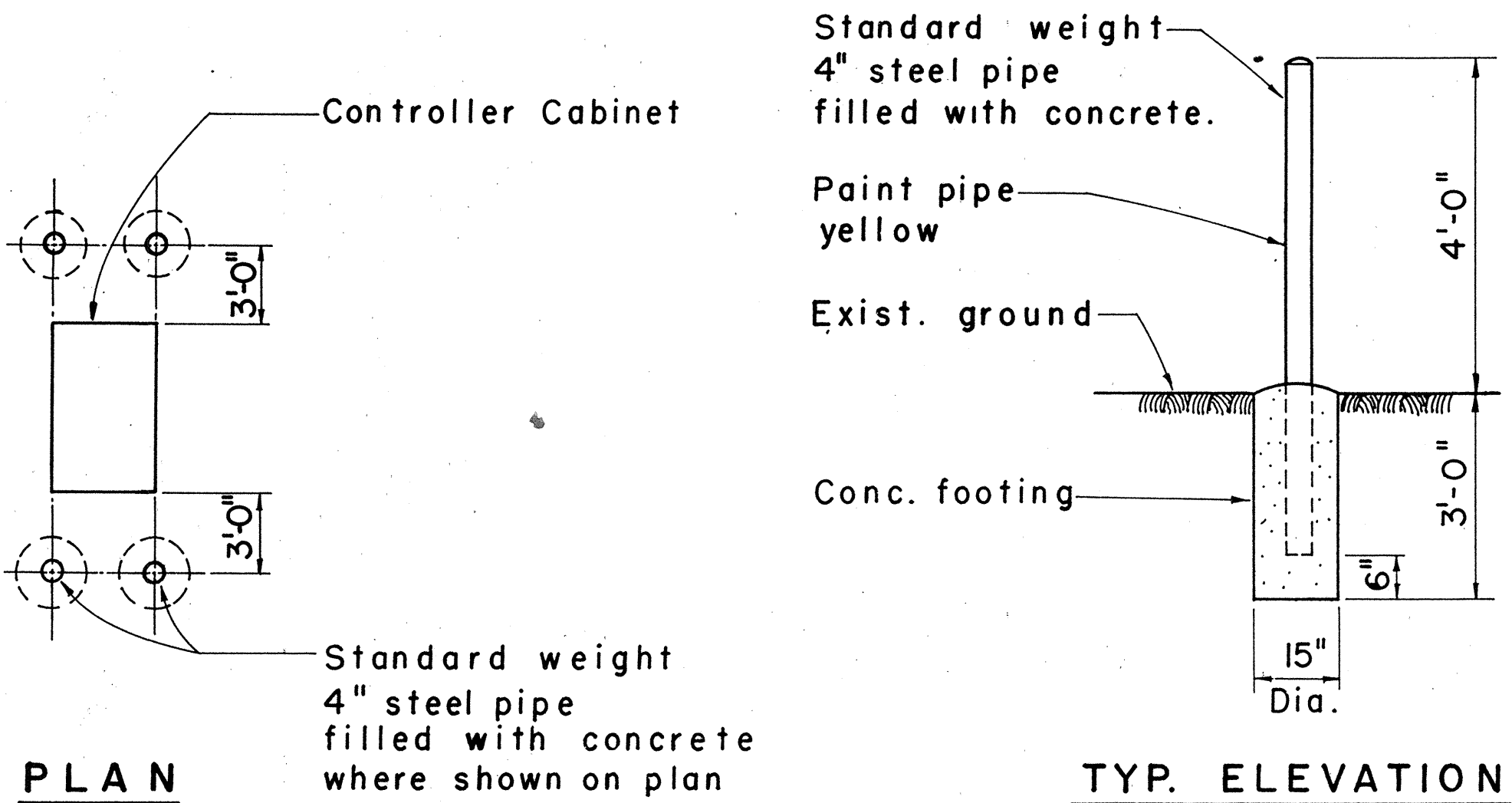
SHEET No. 116 OF 148 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	117	148

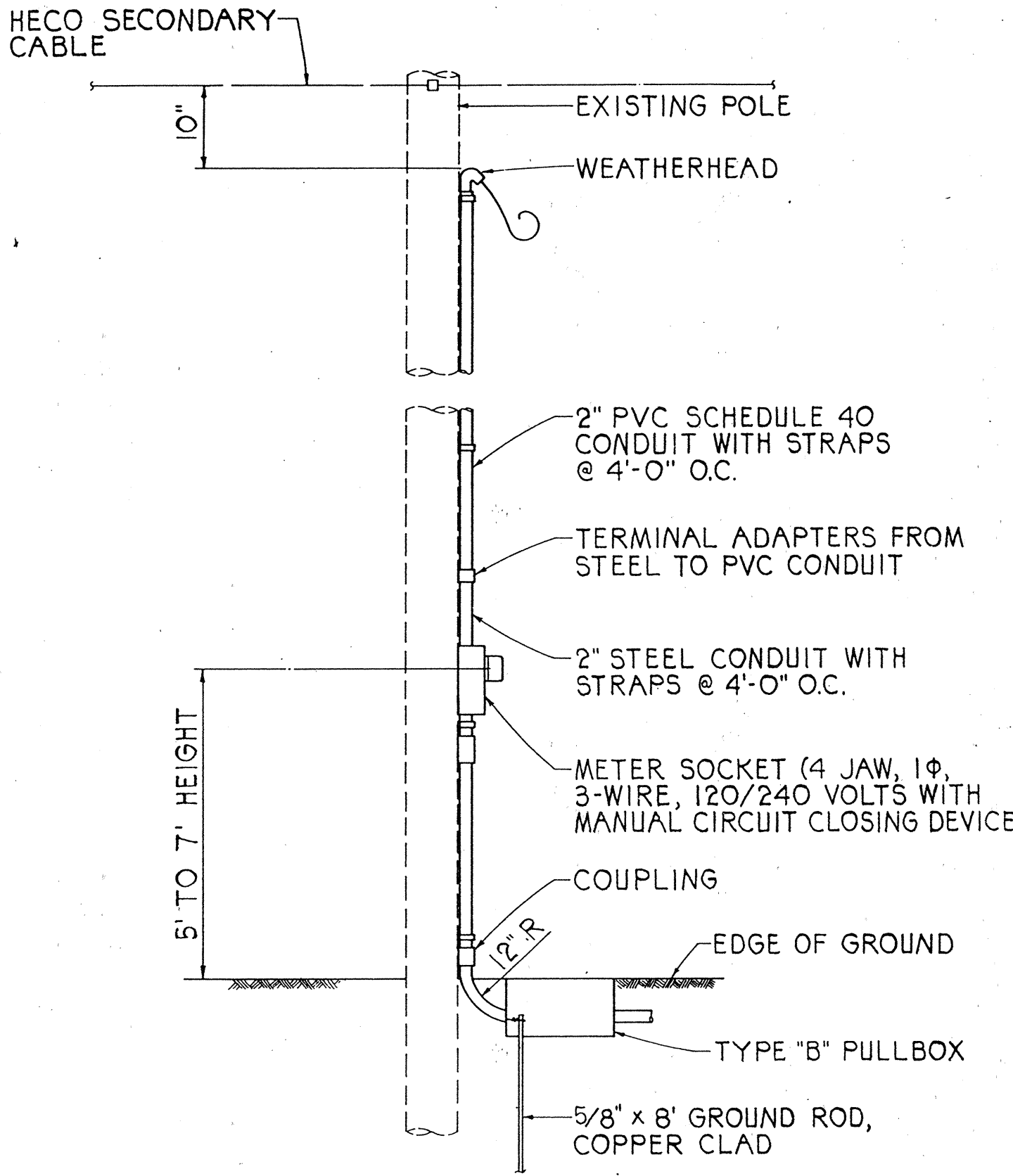


TYPICAL OVERHEAD INSTALLATION
NOT TO SCALE

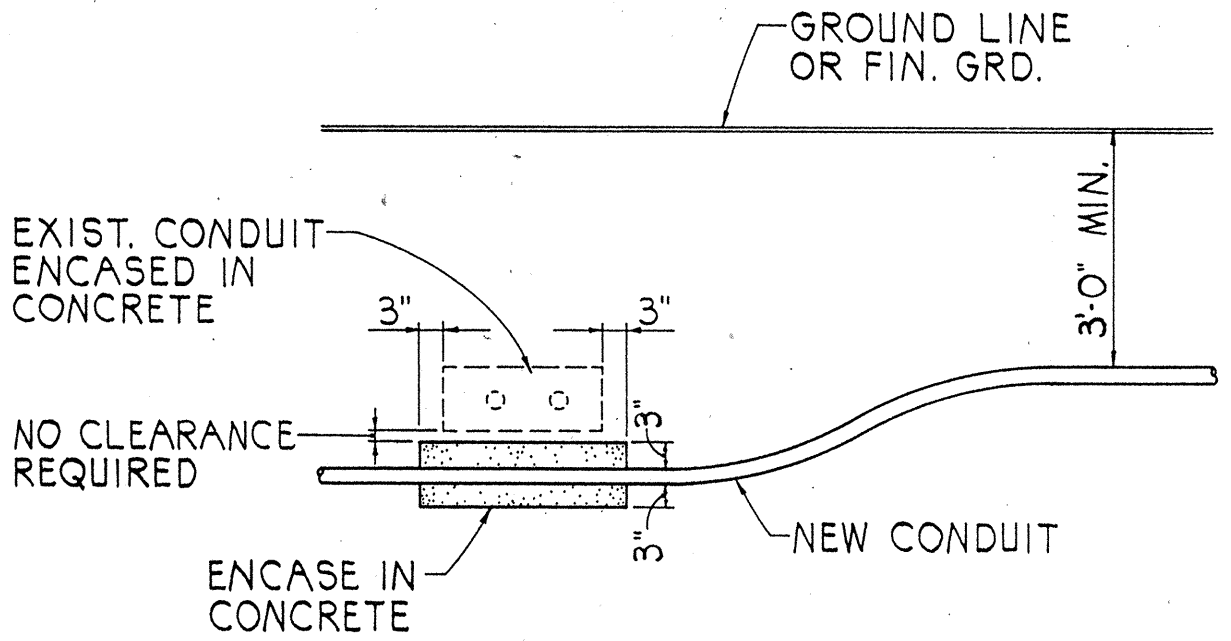
NOTE:
Cost of concrete filled galvanized posts shall be incidental to other items of work.



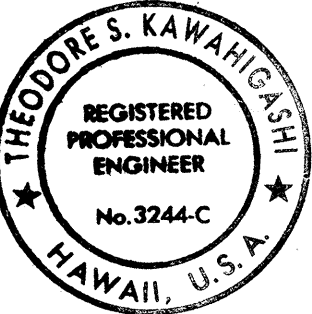
PIPE GUARD DETAIL
NOT TO SCALE



SERVICE POLE DETAIL
NOT TO SCALE



CONDUIT BY-PASS DETAIL
NOT TO SCALE



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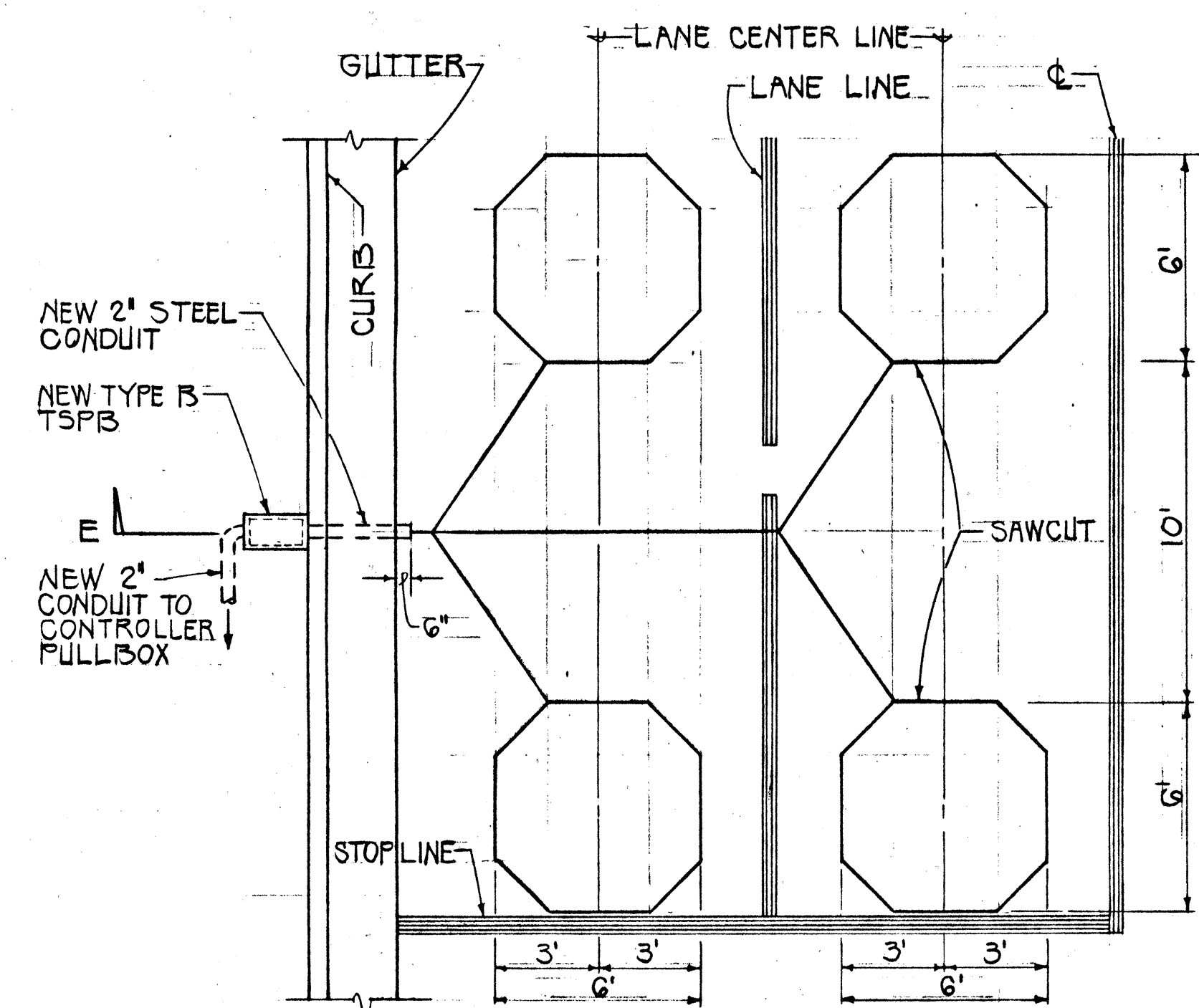
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Scale: Not to Scale Date: June 1989
SHEET NO. 117 OF 148 SHEETS

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

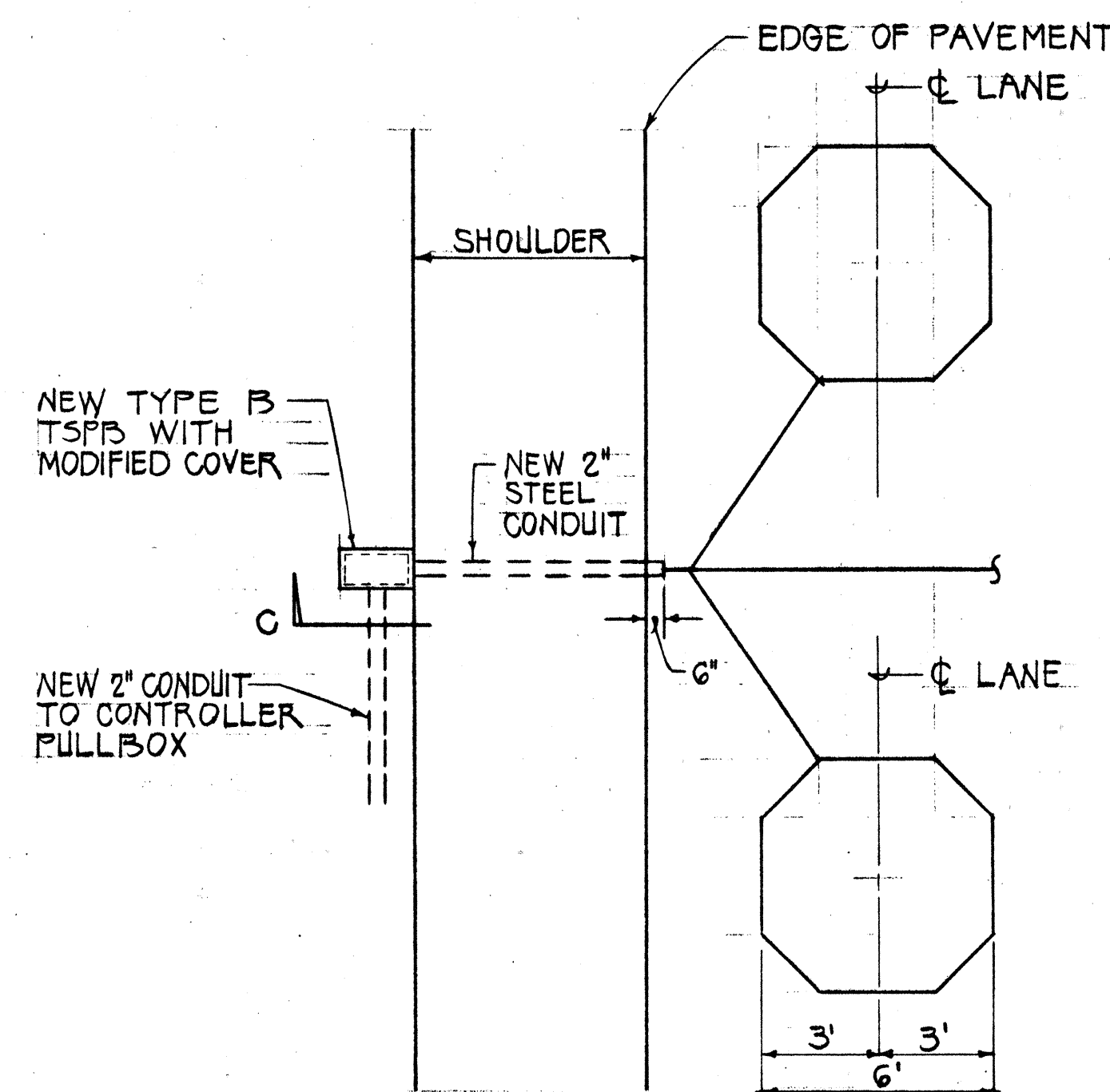
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(2) S-RS-0760(2)	1990	118	148



NOTE: ADD ONE PAIR OF LOOPS FOR EACH ADDITIONAL LANE

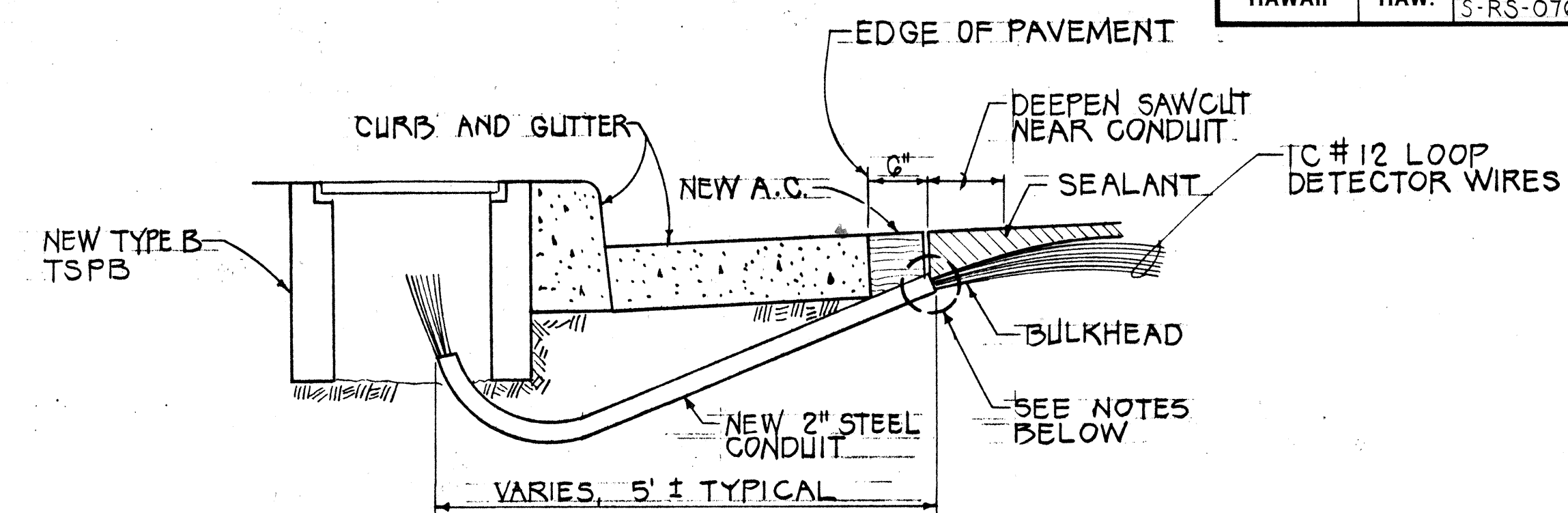
TYPICAL LAYOUT AT STOPLINES

SCALE: 1/4" = 1'-0"



TYPICAL LAYOUT AT SHOULDER AREAS

SCALE: 1/4" = 1'-0"

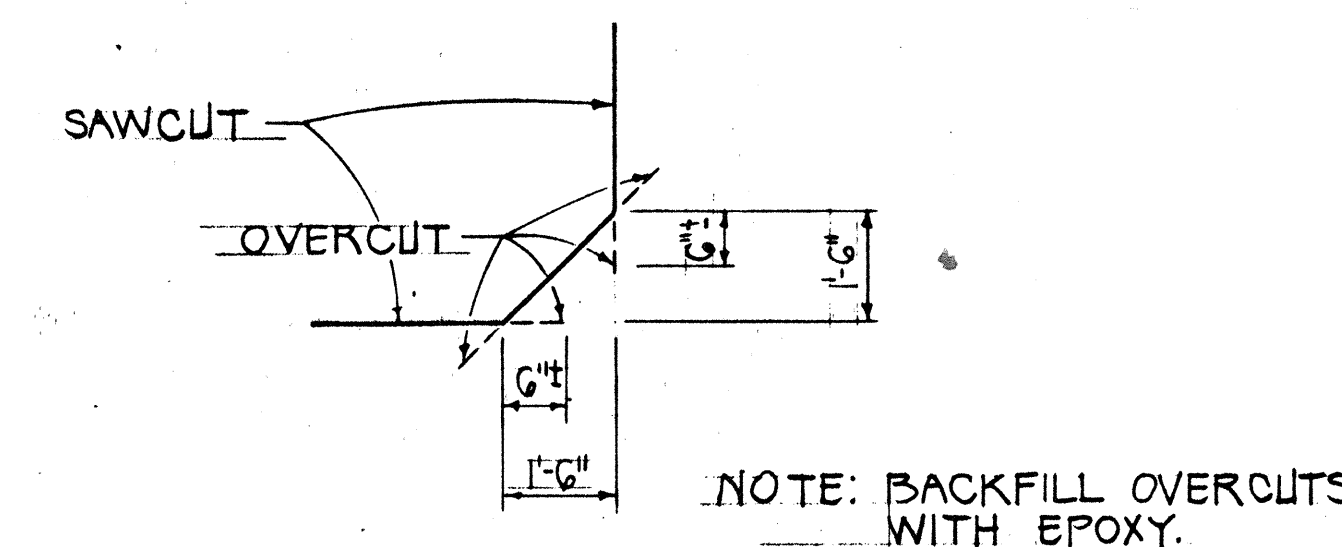


NOTES:

1. SEAL ROADWAY END OF CONDUIT AFTER INSTALLATION OF CONDUCTORS.
2. INSTALL BULKHEAD ACROSS CONDUIT TRENCH.
3. PLACE APPROVED SEALANT IN SAWCUT
4. BACKFILL OVER CONDUIT WITH NEW A.C.
5. RECONSTRUCT CURB AND GUTTER AS REQUIRED.

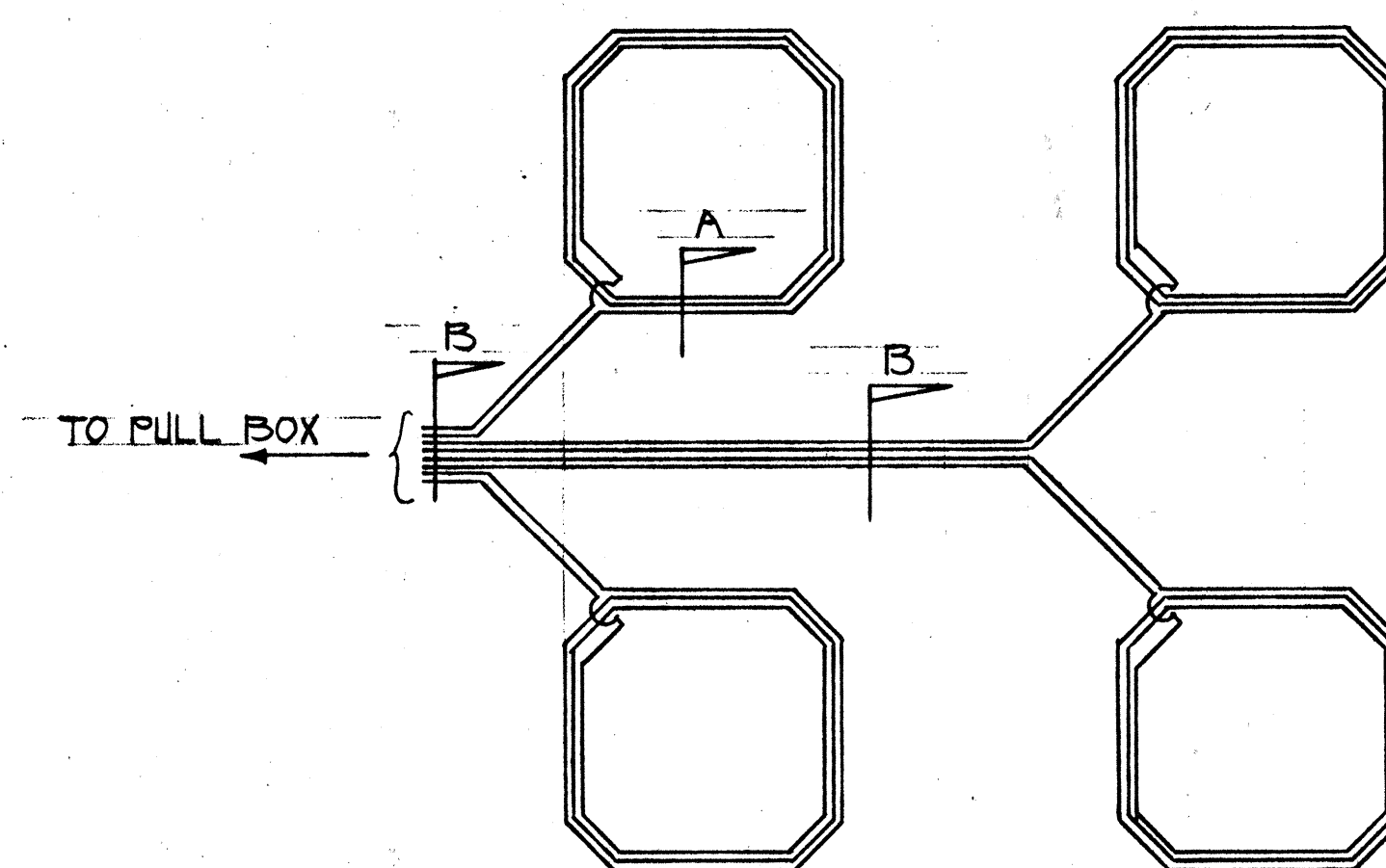
SECTION E

NOT TO SCALE



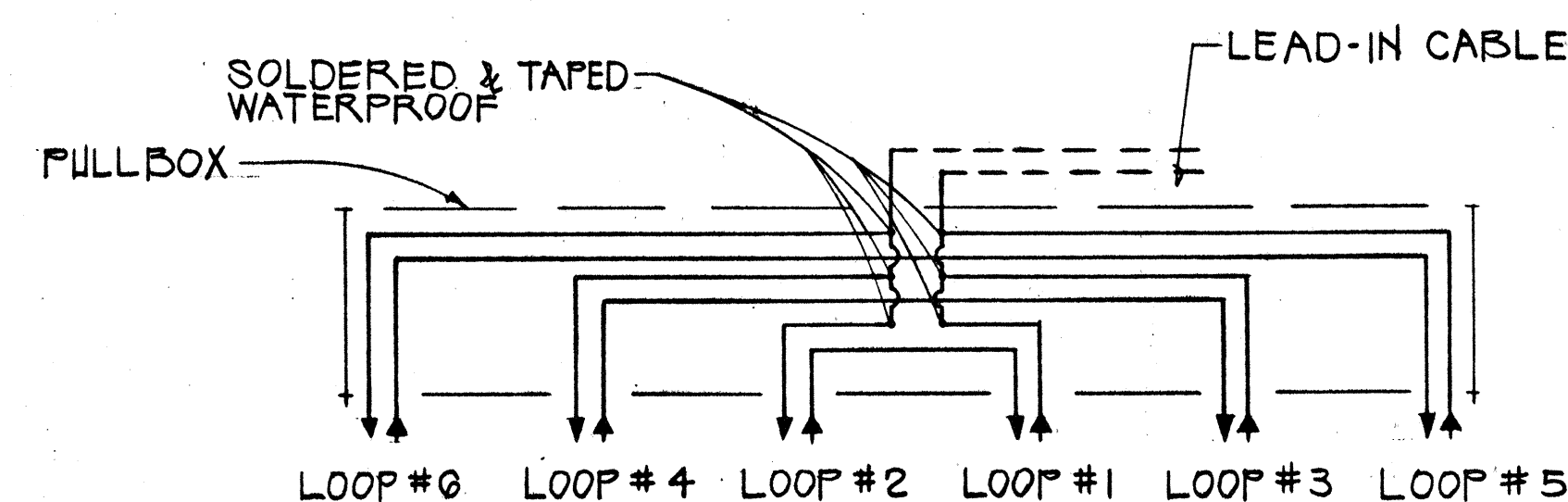
DETAIL OF SAWCUT AT CORNERS

NOT TO SCALE



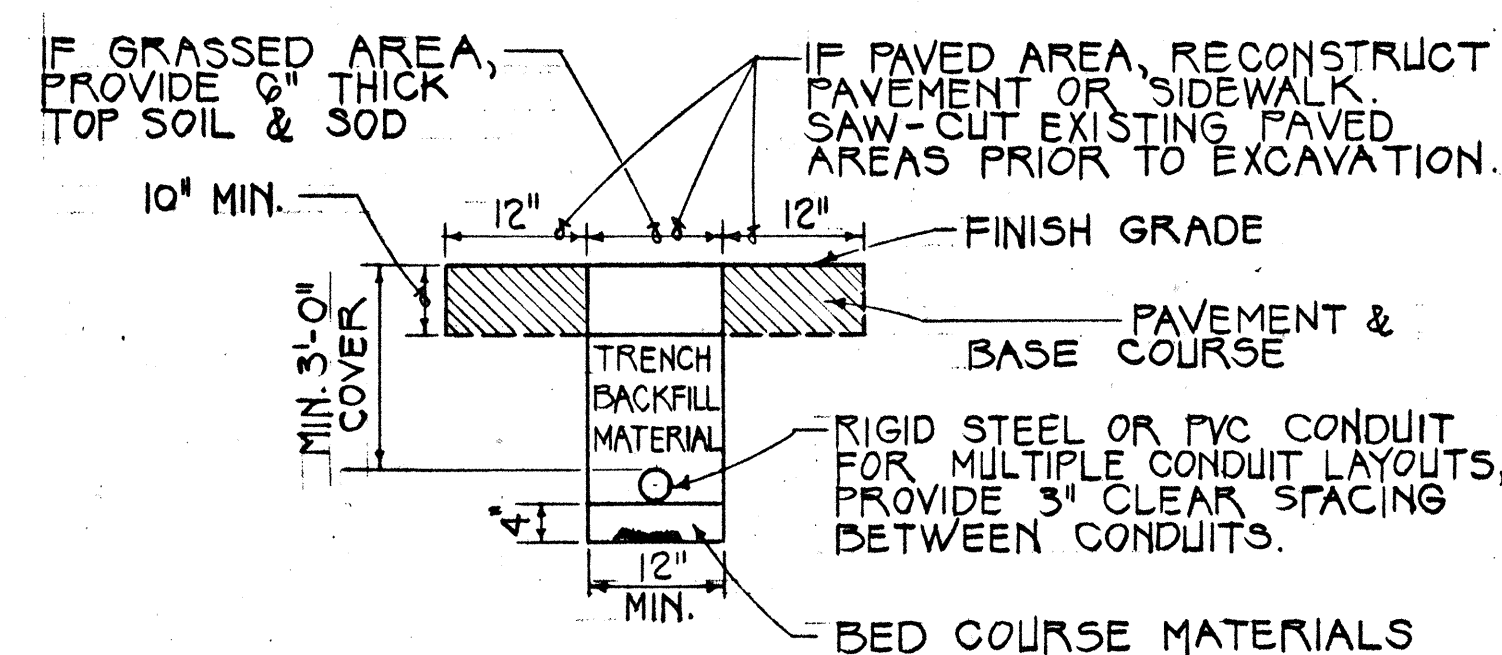
WIRING DIAGRAM

NOT TO SCALE



DETAIL "A"

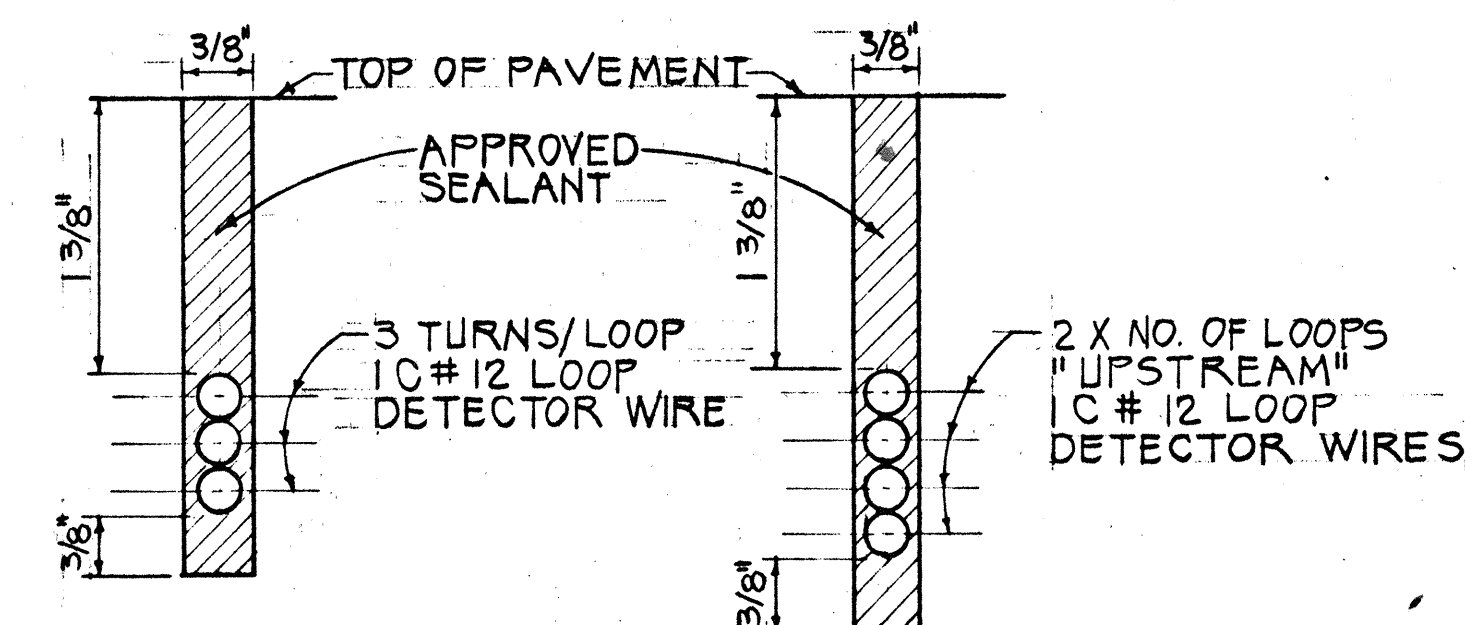
TYPICAL SERIES-PARALLEL LOOP CONNECTION



SECTION C

NOT TO SCALE

NOTE: ALL CONDUITS UNDER ROADWAYS SHALL BE STEEL OR PVC SCHEDULE 80.

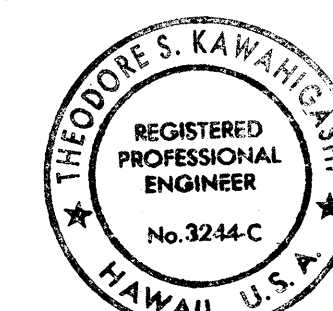


SECTION A

NOT TO SCALE

SECTION B

NOT TO SCALE



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS

FORT WEAVER ROAD
HANAKAHI ST. TO EWA BEACH RD.
Scale: As Noted Date: June 1989
SHEET No. 1 OF 1 SHEETS

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NO.	