

GENERAL NOTES - TRAFFIC SIGNAL SYSTEM

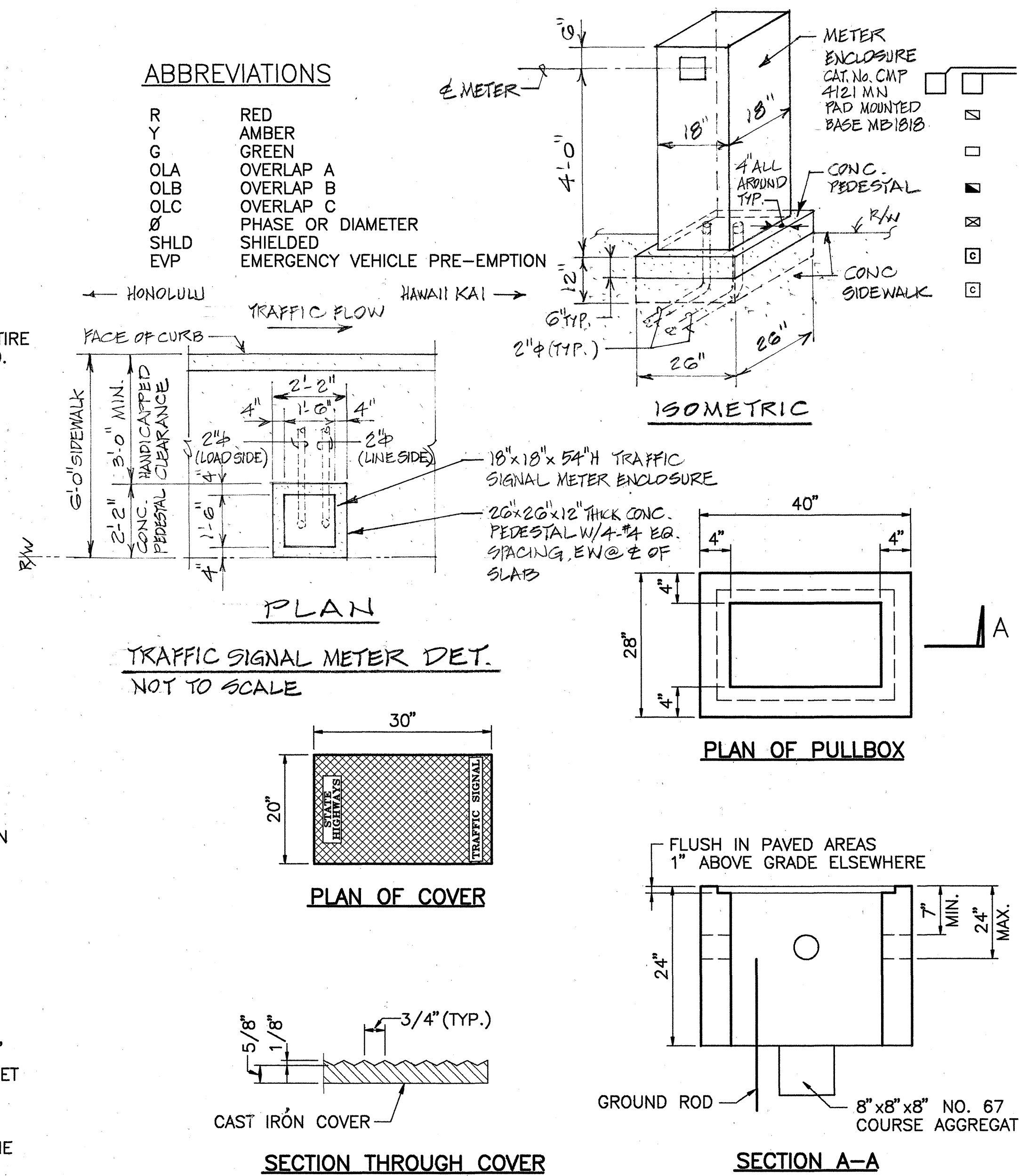
- SEE HIGHWAY LIGHTING PLANS FOR ELECTRICAL SERVICE CONNECTIONS TO CONTROLLERS, TEMPORARY CONTROLLER INTERCONNECT, AND COMMUNICATION/CONTROLLER INTERCONNECT.
- EXISTING SIGNAL SYSTEM SHALL REMAIN OPERATIONAL UNTIL NEW SYSTEM IS IN SERVICE AND SHALL BE ADJUSTED AS NECESSARY TO FACILITATE CONSTRUCTION OF NEW SYSTEMS AND OTHER FACILITIES SUCH AS UTILITIES, DRAINAGE, ETC. EXISTING LOOP DETECTORS SHALL BE RECONSTRUCTED AT NEW LOCATION AS REQUIRED. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO "TRAFFIC SIGNAL SYSTEM".
- ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION, AND AMENDMENTS.
- THE LOCATIONS OF THE TRAFFIC SIGNAL STANDARDS, TRAFFIC SIGNAL STANDARDS WITH MAST-ARM, PEDESTRIAN PUSH BUTTONS, TRAFFIC CONTROLLER, PULLBOXES, CONDUITS, BARRIERS & LOOP DETECTORS SHALL BE STAKED OUT IN THE FIELD BY CONTRACTOR & APPROVAL OF THE LOCATIONS OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION & INSTALLATION. LOCATIONS SHOWN ON THE PLANS SHALL BE ADJUSTED AS NECESSARY TO PREVENT CONFLICTS WITH EXISTING OR NEW FACILITIES.
- THE CONTRACTOR SHALL VERIFY LOCATION & CONDITION OF EXISTING TRAFFIC SIGNAL EQUIPMENT TO BE USED.
- IF AERIAL UTILITY LINES ARE IN CONFLICT WITH PROPOSED MASTARMS FOR SIGNAL HEADS, CONTRACTOR SHALL REQUEST IN WRITING ADJUSTMENTS TO AERIAL LINES BY UTILITY COMPANIES AT LEAST 2 MONTHS PRIOR TO THE INSTALLATION OF MASTARMS.
- ALL NEW CONDUITS UNDER ROADWAY (INCLUDING DRIVEWAYS) SHALL BE PVC SCHEDULE 80. CONTRACTOR SHALL HAVE THE OPTION OF USING PVC SCHEDULE 40 FOR NEW CONDUITS NOT UNDER ROADWAY, UNLESS OTHERWISE NOTED.
- IN ADDITION TO THE CONDUITS INDICATED IN THE "CONDUIT AND CABLE SCHEDULE", INSTALL ONE 3-INCH CONDUIT IN THE FOOTINGS OF ALL FINAL CONTROLLERS. CONDUIT SHALL BE STUBBED-OUT 12 INCHES FROM FOOTING AND SHALL BE CAPPED.
- A SOLID #8 BARE COPPER WIRE SHALL BE INSTALLED IN THE ENTIRE TRAFFIC SIGNAL CONDUIT SYSTEM FOR USE AS A SYSTEM GROUND.
- LOOP DETECTORS SHALL BE IN ACCORDANCE WITH STANDARD PLAN TE-40, EXCEPT FOR THE FOLLOWING:
 - LOOP SIZE SHALL BE 6'X6'
 - LOOP SPACING SHALL BE 12'-0"
 - PROVIDE 4 CABLE TURNS IN A LOOP
 - PROVIDE SEPARATE LEAD-IN CABLE FOR EACH INDIVIDUALLY NUMBERED LOOP (E.G. LOOP #52) AND FOR EACH GROUP OF LOOPS WITH SAME NUMBERS (E.G. LOOPS #51A AND #51B)
- LEAD-IN WIRES IN PULLBOX NEAR LOOPS SHALL BE TAGGED WITH LOOP NUMBER(S).
- EXISTING PAVEMENTS SHALL BE RESTORED IN ACCORDANCE WITH DETAIL "RESTORATION OF EXISTING PAVEMENT" SHOWN ON ROADWAY CONSTRUCTION PLANS.
- DEPARTMENT TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU WILL ASSIST THE ENGINEER IN CONSTRUCTION INSPECTION FOR THE TRAFFIC SIGNAL SYSTEM.
 - TEST CONTROLLER & AUXILIARY EQUIPMENT IN CABINET
 - MAKE ALL ELECTRICAL EQUIPMENT CONNECTIONS IN THE FIELD FOR SIGNAL SYSTEM AFTER THE SYSTEM HAS BEEN INSTALLED IN PLACE BY THE CONTRACTOR. (EXCEPT FOR EVP; SEE SPECIFICATIONS).
 - FINAL ADJUSTMENT OF TRAFFIC SIGNAL CONTROL EQUIPMENT.
- EXISTING CONTROLLERS AT KULIOUOU ROAD, KAWAHAE STREET, HAWAII KAI DRIVE AND KEAHOLE STREET SHALL BE RELOCATED AND REUSED AS INDICATED ON PLANS.
- EXISTING SIGNAL STANDARDS, SIGNAL HEADS, AERIAL CONDUCTORS, AND APPURTENANCES OF KULIOUOU ROAD, NEAR HOLY TRINITY CHURCH, KAWAHAE STREET, HAWAII KAI DRIVE AND KEAHOLE STREET SHALL BE SALVAGED, FULLY DISMANTLED AND STOCKPILED AS DIRECTED BY THE ENGINEER AT THE STATE'S BASE YARD, LEHUA AVE., PEARL CITY. EXISTING PULLBOXES, CONTROLLER FOOTINGS AND SIGNAL STANDARD FOOTINGS SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.

CONSTRUCTION SEQUENCE

- PHASE I:
- INSTALL ALL NEW CONTROLLERS AND CONNECT TO EXISTING SIGNAL SYSTEM.
 - RECONSTRUCT EXISTING LOOP DETECTORS AT NEW LOCATIONS TO MAINTAIN EXISTING TRAFFIC PATTERS
 - INSTALL TEMPORARY CONTROLLER INTERCONNECT CABLE AND CONNECT TO CITY'S COMPUTERIZED TRAFFIC CONTROL SYSTEM (SEE HIGHWAY LIGHTING PLANS).
- PHASE II:
- CONSTRUCT NEW SIGNAL SYSTEMS, EXCEPT:
 - FINAL LOOP DETECTORS
 - EMERGENCY VEHICLE PREEMPTION DETECTOR
 - CONSTRUCT CONTROLLER FINAL INTERCONNECT SYSTEM (SEE HIGHWAY LIGHTING PLANS).
 - RECONNECT EXISTING LOOP DETECTORS AT NEW LOCATIONS TO MAINTAIN EXISTING TRAFFIC PATTERN. CONNECT ALL LOOP DETECTORS TO NEW SIGNAL PATTERN.
 - REMOVE EXISTING SIGNAL SYSTEM FACILITIES UPON COMPLETION OF NEW SYSTEM.
 - INSTALL EVP.
- PHASE III:
- CONSTRUCT FINAL LOOP DETECTORS PRIOR TO PLACEMENT OF TOP LAYER OF ASPHALT CONCRETE PAVEMENT.
 - ADJUST PULLBOXES, ETC. TO FINISH GRADE.

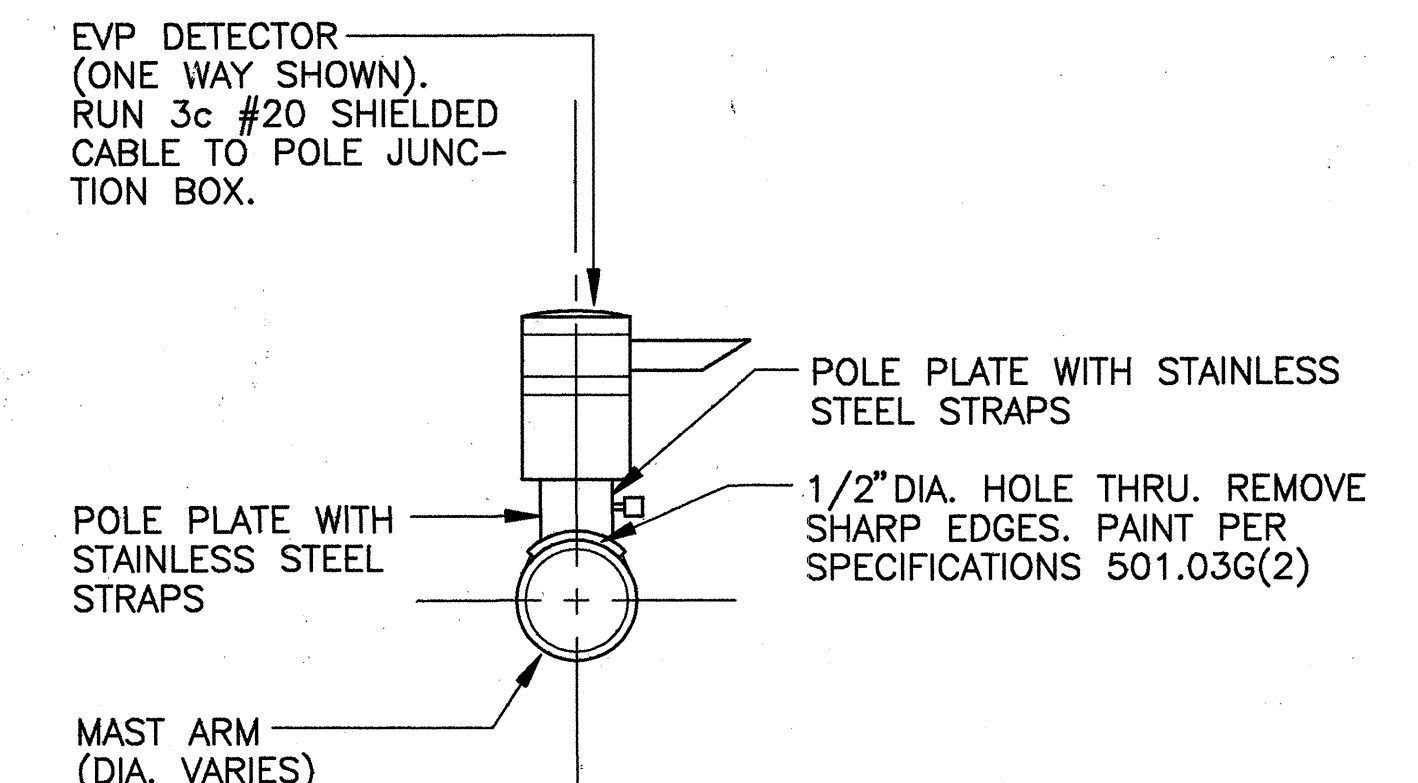
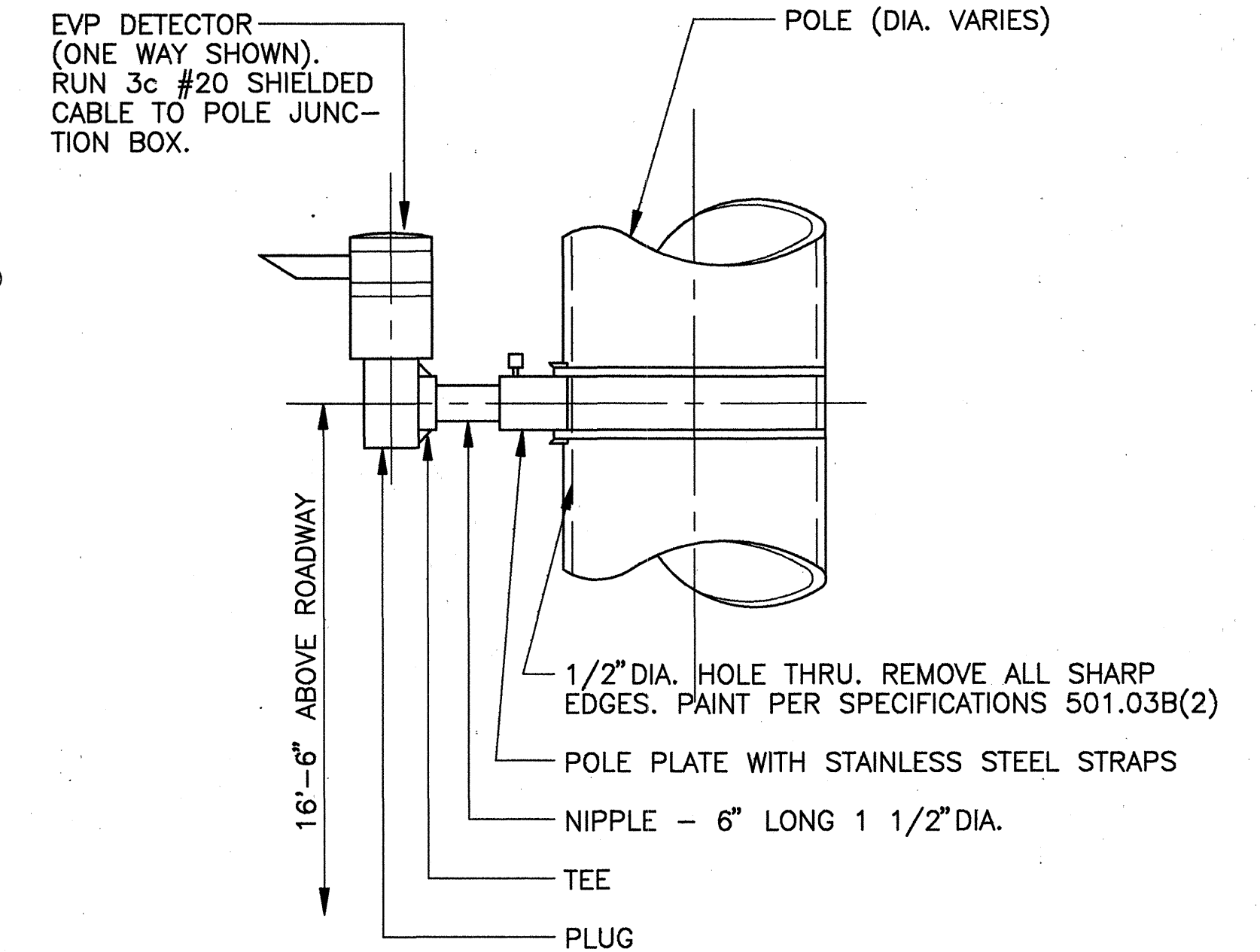
ABBREVIATIONS

R RED
Y AMBER
G GREEN
OLA OVERLAP A
OLB OVERLAP B
OLC OVERLAP C
Ø PHASE OR DIAMETER
SHLD SHIELDED
EVP EMERGENCY VEHICLE PRE-EMPTION



TRAFFIC SIGNAL LEGEND

- PROPOSED
- CONDUITS AND CABLES, CONDUIT RUN #2
 - EXISTING CONDUIT AND CABLES
 - TRAFFIC SIGNAL HEAD, SPACING OF SIGNAL HEADS SHALL BE 10'-0" UNLESS AS NOTED ON PLANS
 - PEDESTRIAN SIGNAL HEAD WITH PEDESTRIAN PUSH BUTTON ASSEMBLY AND SIGN R10-4a, R10-4a(L) OR 4a(R), AS APPROPRIATE (■ = INDICATES LOCATION OF PUSH BUTTON)
 - SIGNAL STANDARD WITH MASTARM (L=40'), POLE A, FOOTING TYPE II
 - SIGNAL STANDARD WITH MASTARM AND LIGHTING STANDARD EXTENSION, FOOTING TYPE III
 - SIGNAL STANDARD TYPE I
 - EMERGENCY VEHICLE PRE-EMPTION (EVP) RECEIVER; CIRCUIT A; (H)=HORIZONTAL MOUNT, (V)=VERTICAL MOUNT
 - LOOP DETECTORS
 - PULLBOX TYPE A (SEE STANDARD TE-41)
 - PULLBOX TYPE B (SEE STANDARD TE-41)
 - PULLBOX TYPE C (SEE STANDARD TE-41)
 - PULLBOX TYPE Z
 - NEW TRAFFIC CONTROLLER AND FOUNDATION
 - EXISTING TRAFFIC CONTROLLER TO BE RELOCATED W/NEW FOUNDATION



TRAFFIC SIGNAL GENERAL NOTES, LEGEND & EVP DETAILS

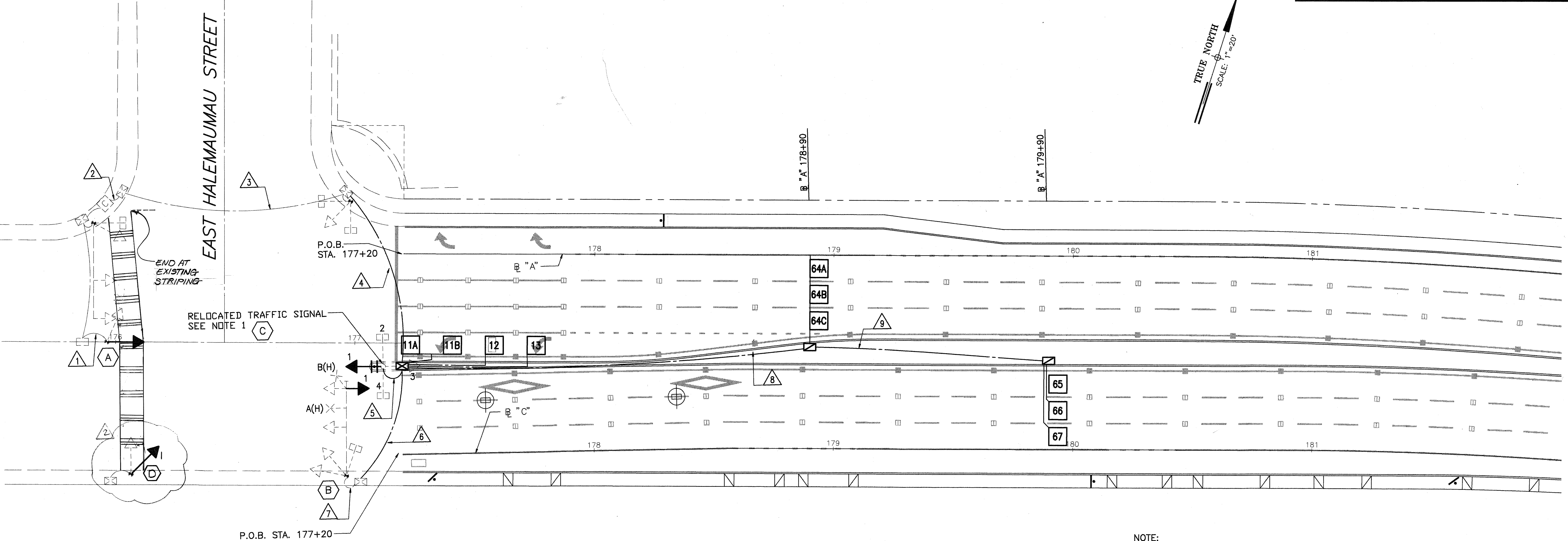
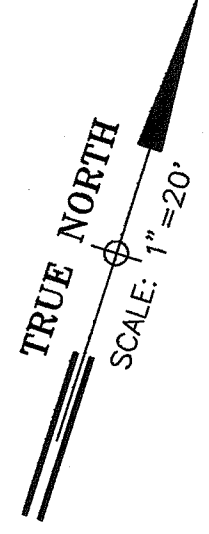
DATE	REVISION
6/30/93	C.O. #1
1/20/92	REVISED TRAFFIC SIGNAL HEAD SYMBOL W/ PUSH BUTTON LOCATION
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TRAFFIC SIGNAL GENERAL NOTES, LEGEND & EVP DETAILS	
KALANIANA'OLE HIGHWAY WIDENING EAST HALEMAU MAU ST. TO KEAHOLE ST. F.A. PROJECT NO. NH-STP-072-1(35)	
SCALE: NONE	DATE: 10/1/92
SHEET No. E-55 OF 62 SHEETS	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Dexter S. Yee
REGISTERED PROFESSIONAL ENGINEER
No. 5496-E
HAWAII, U.S.A.

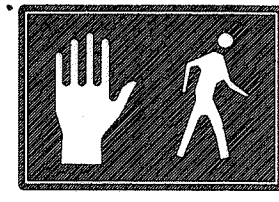
C.O. ADD. 277

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	278	340



NOTE:
1. INTERCONNECT CABLE SHALL BE 18 PAIR, 19 AWG, TWISTED PAIRS, CONFORMING TO IMSA SPEC. NO. 40-2 COMMUNICATION CABLE.

SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	PROGRAMMABLE VISIBILITY
B-1		X	PROGRAMMABLE VISIBILITY
C-1		X	PROGRAMMABLE VISIBILITY
C-2	X		
C-3	X		PROGRAMMABLE VISIBILITY
C-4	X		
D-1	X		PROGRAMMABLE VISIBILITY



C-2
C-4



*C-3

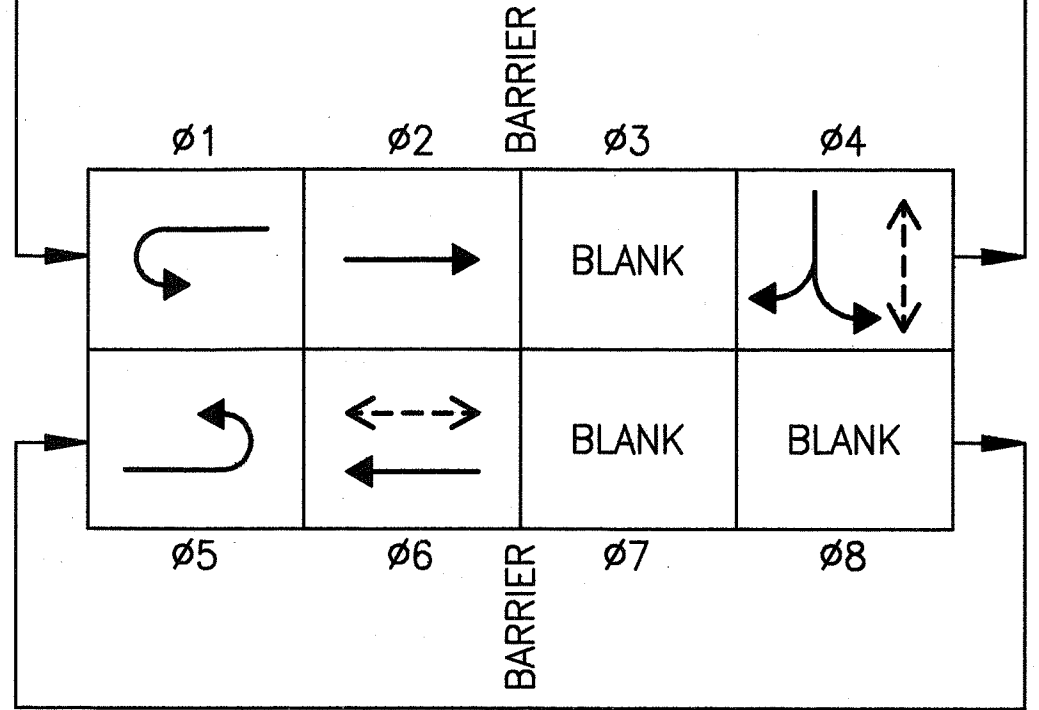
EXISTING SIGNAL INDICATIONS
* PROGRAMMABLE VISIBILITY

	C.O. #2
6/30/99	C.O. #1
1/20/93	REVISED TRAFFIC SIGNAL AND PEDESTRIAN PUSH BUTTON LOCATION
DATE	REVISION

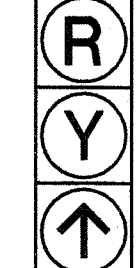
NOTES:
1. EXISTING TRAFFIC SIGNAL SHALL BE RELOCATED AS SHOWN ON PLANS.

TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT EAST HALEMAUMAU STREET	DELTA ITEM NO. (Δ)								
	1	2	3	4	5	6	7	8	9
QUANTITY OF 2"C, SEE NOTE NO. 2				4	2	4		1	1
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1				2	2				
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE		*12	*12	9	2	1	*1	4	3
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE					2				
QUANTITY OF #14 SIGNAL HEAD CABLE	*5			29	15	18	*23		

NOTES:
1. ADD 1 #6 AWG NEUTRAL WITH EACH 26/C #14.
2. ALL CONDUITS SHALL BE SCHEDULE 80.
* ADD TO EXISTING CABLE.



PHASE SEQUENCE

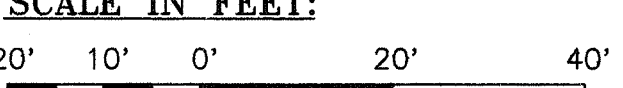


*B-1

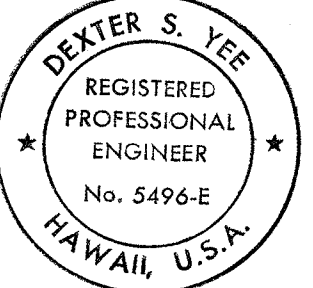


*A-1
*C-1

NEW SIGNAL INDICATIONS
* PROGRAMMABLE VISIBILITY



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN
AT EAST HALEMAUMAU STREET
KALANIANA'OLE HIGHWAY WIDENING
EAST HALEMAUMAU ST. TO KEAHOE ST.
F.A. PROJECT NO. NH-STP-072-1(35)

SCALE: 1"=20' DATE: 10/1/92

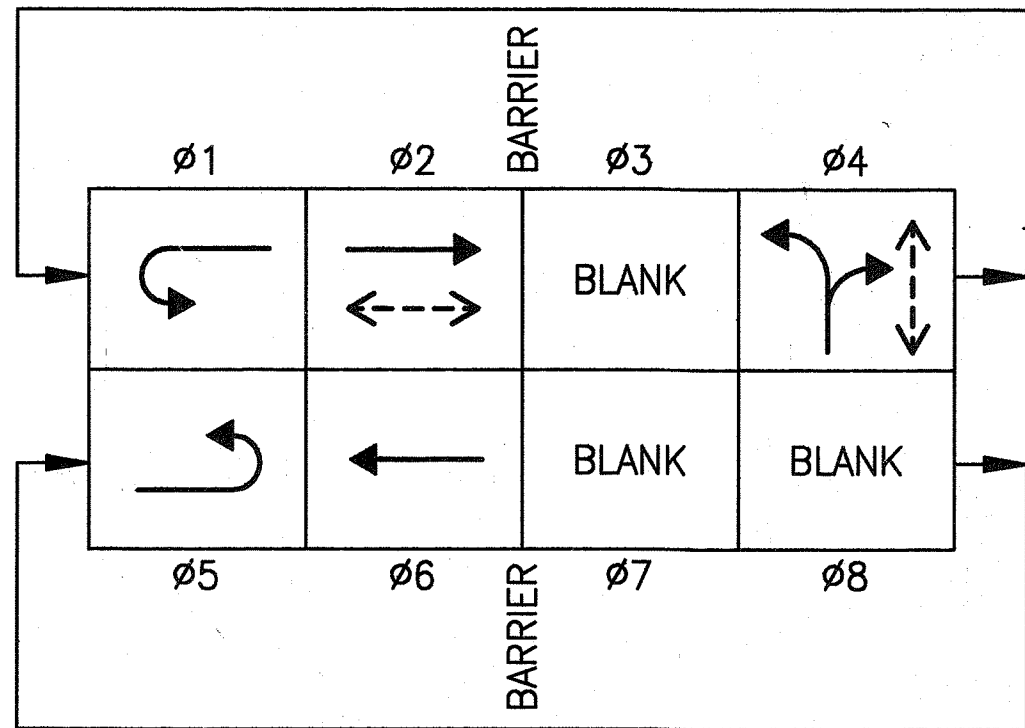
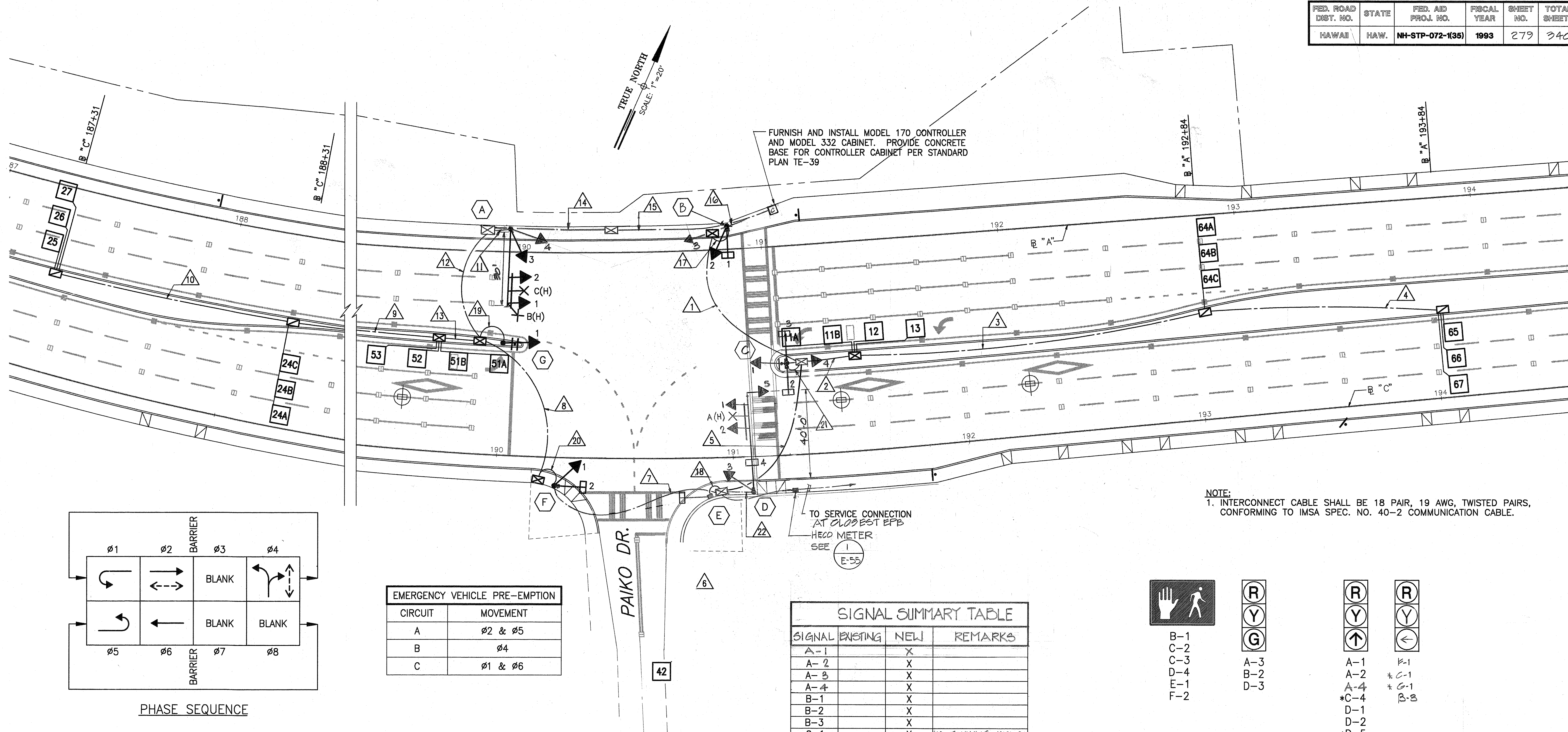
SHEET No. E-56 OF 62 SHEETS

"AS-BUILT"

C.O. ADD. 278

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	279	340



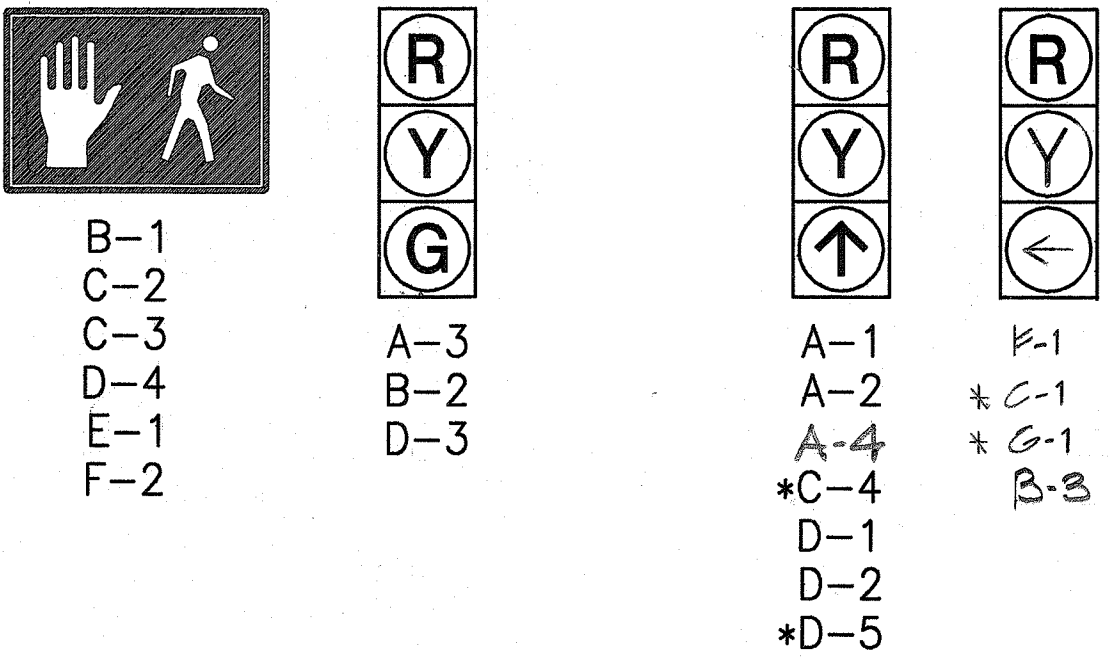
PHASE SEQUENCE

EMERGENCY VEHICLE PRE-EMPTION	
CIRCUIT	MOVEMENT
A	ø2 & ø5
B	ø4
C	ø1 & ø6

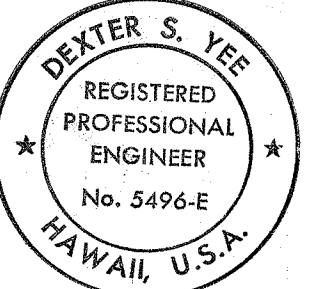
TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT PAIKO DRIVE	DELTA ITEM NO. (Δ)																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
QUANTITY OF 2"C, SEE NOTE NO. 2	5	1	1	1	5	1	2	3	1	1	2	3	1	3	3	5	2	2	1	1	2	3
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1	2				2		2	2				2		2	2	4						
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE	13	7	4	3	4	2		1	4	3		8	7	8	8	14	1	1				1
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE	1				1						2			2	2	1						1
QUANTITY OF #14 SIGNAL HEAD CABLE											10						9	3	5	6	12	15
QUANTITY OF 3/C #4 POWER CABLE	1				1											1						

NOTES:
1. ADD 1 #6 AWG NEUTRAL WITH EACH 26/C #14.
2. ALL CONDUITS SHALL BE SCHEDULE 80.

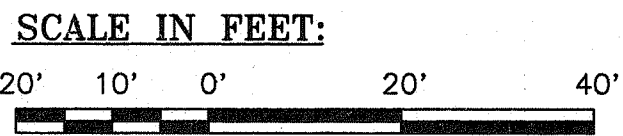
SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	
A-2		X	
A-3		X	
A-4		X	
B-1		X	
B-2		X	
B-3		X	
C-1		X	PROGRAMMABLE VISIBILITY
C-2		X	
C-3		X	
C-4		X	PROGRAMMABLE VISIBILITY
D-1		X	
D-2		X	
D-3		X	
D-4		X	
D-5		X	PROGRAMMABLE VISIBILITY
E-1		X	
F-1		X	
F-2		X	PROGRAMMABLE VISIBILITY
G-1		X	
A-4		X	



NEW SIGNAL INDICATIONS
*PROGRAMMABLE VISIBILITY



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C.O. #2	
6/30/93 C.O. #1	
1/20/93	REVISED TRAFFIC SIGNAL AND PEDESTRIAN PUSH BUTTON LOCATION
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC SIGNAL PLAN
AT PAIKO DRIVE**

KALANIANA'OLE HIGHWAY WIDENING
EAST HALEMAUMAU ST. TO KEAHOE ST.
F.A. PROJECT NO. NH-STP-072-1(35)

SCALE: 1"=20' DATE: 10/1/92

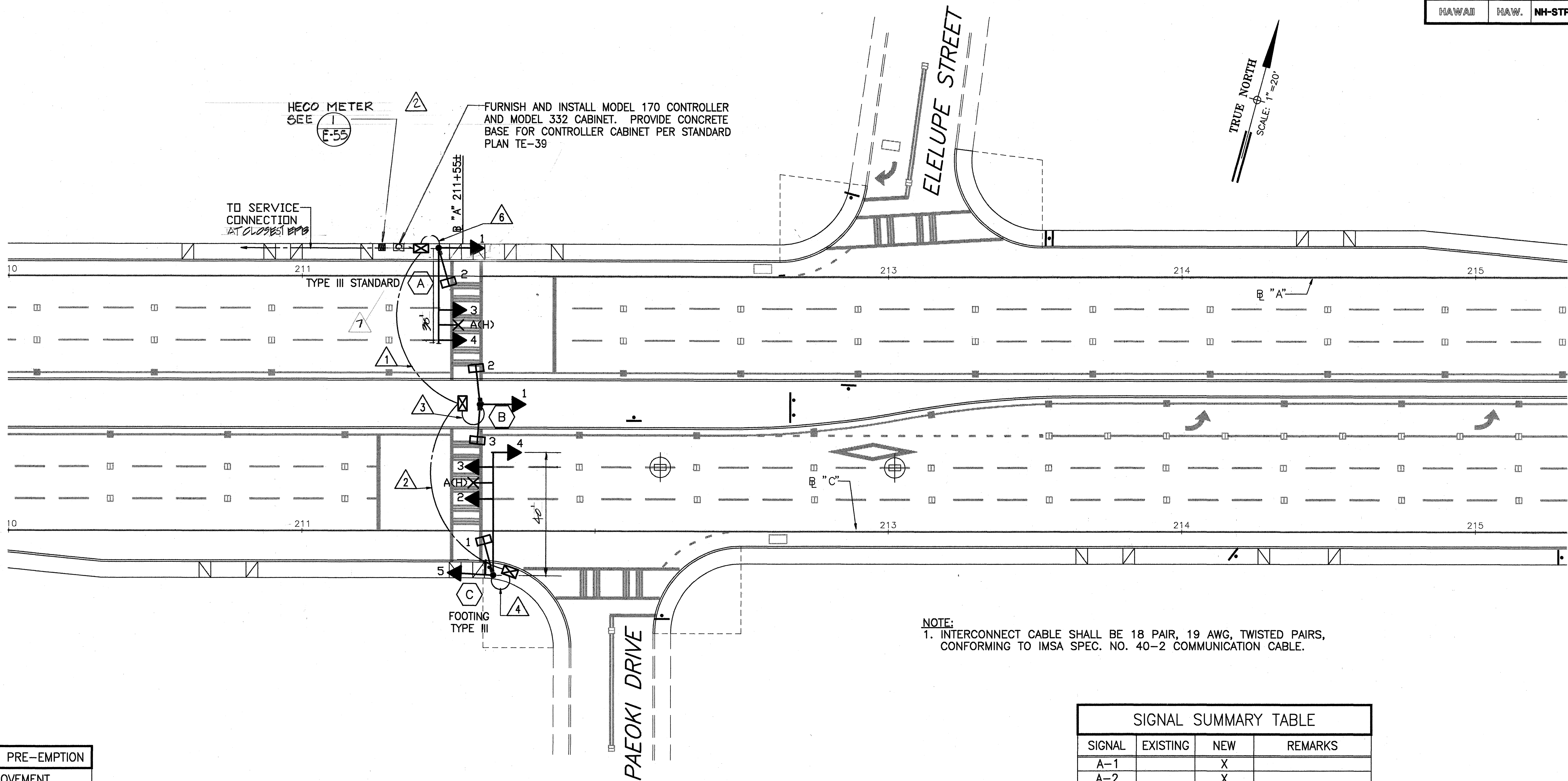
SHEET No. E-57 OF 62 SHEETS

"AS-BUILT"

C.O. ADD. 279

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	280	340



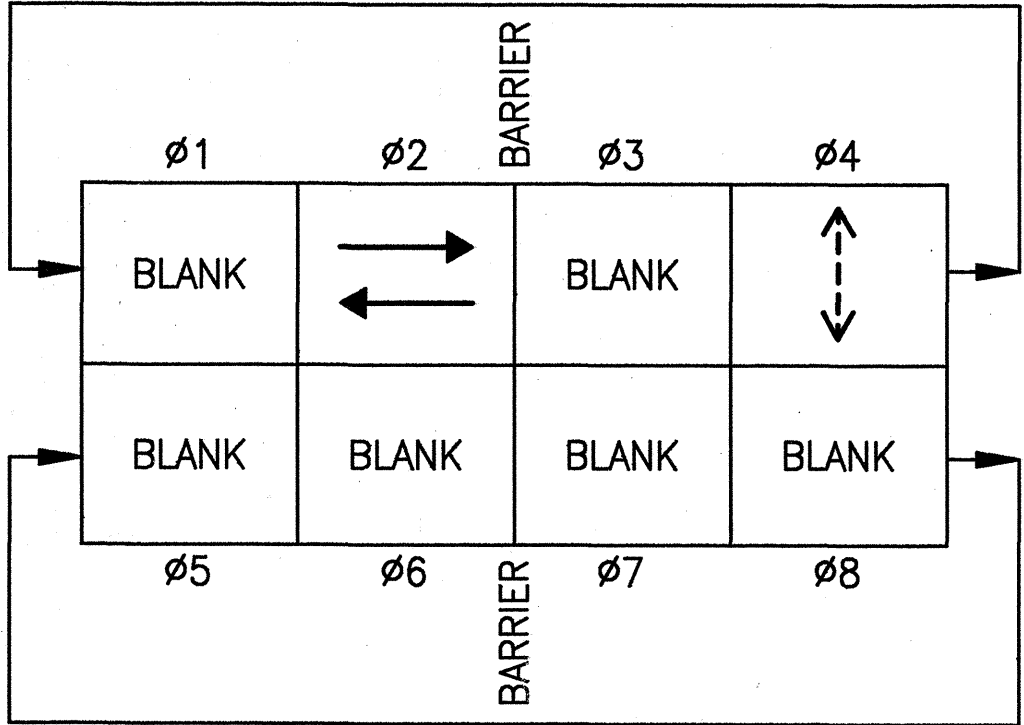
NOTE:
1. INTERCONNECT CABLE SHALL BE 18 PAIR, 19 AWG, TWISTED PAIRS, CONFORMING TO IMSA SPEC. NO. 40-2 COMMUNICATION CABLE.

EMERGENCY VEHICLE PRE-EMPTION	
CIRCUIT	MOVEMENT
A	Ø2

SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	
A-2		X	
A-3		X	
A-4		X	
B-1		X	PROGRAMMABLE VISIBILITY
B-2		X	
B-3		X	
C-1		X	
C-2		X	
C-3		X	
C-4		X	PROGRAMMABLE VISIBILITY
C-5		X	

TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT PAEOKI PLACE	DELTA ITEM NO. (Δ)						
	1	2	3	4	5	6	7
QUANTITY OF 2"C, SEE NOTE NO. 2	3	3	3	3	3	3	5
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1	1	1	1	1	1	1	1
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE	5	1	4	1	6	1	
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE			1	1	1	1	
QUANTITY OF #14 SIGNAL HEAD CABLE			10	19	15		
QUANTITY OF 3/C #4 POWER CABLE					1		

NOTES:
1. ADD 1 #6 AWG NEUTRAL WITH EACH 26/C #14.
2. ALL CONDUITS SHALL BE SCHEDULE 80.



PHASE SEQUENCE



A-2
B-2
B-3
C-1

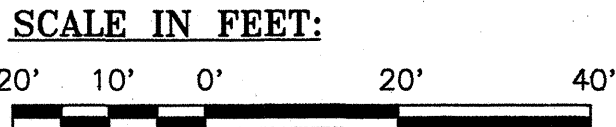


A-3
A-4
*B-1
C-2
C-3
*C-4

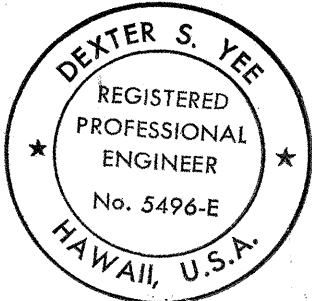


A-1
C-5

NEW SIGNAL INDICATIONS
* PROGRAMMABLE VISIBILITY



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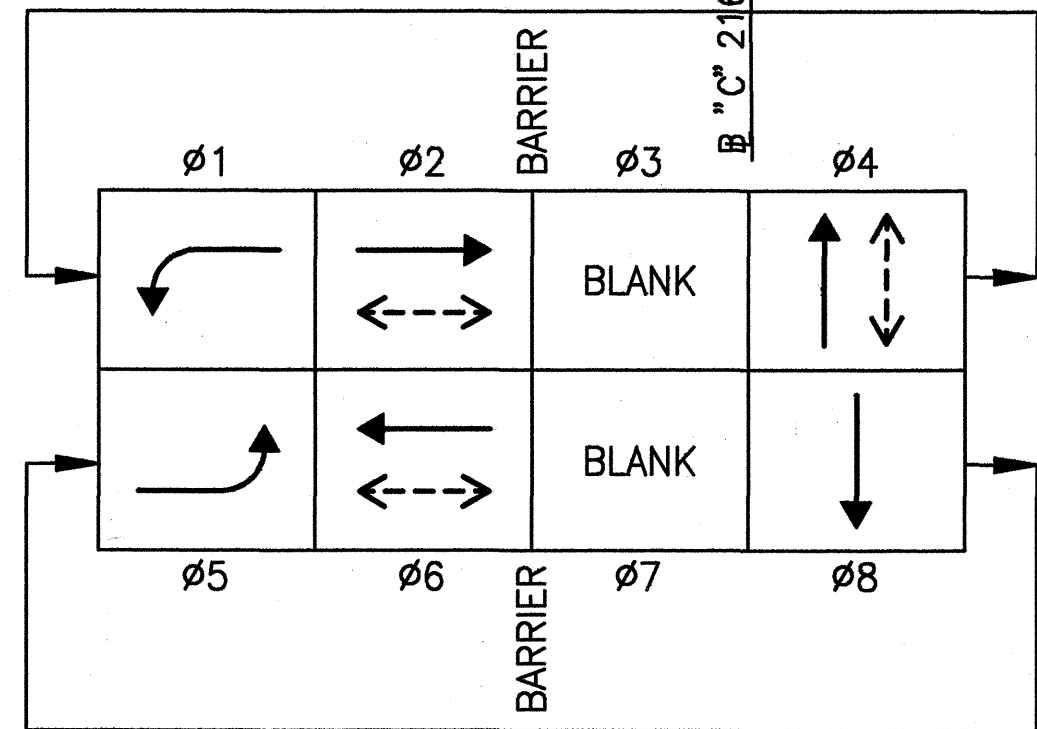
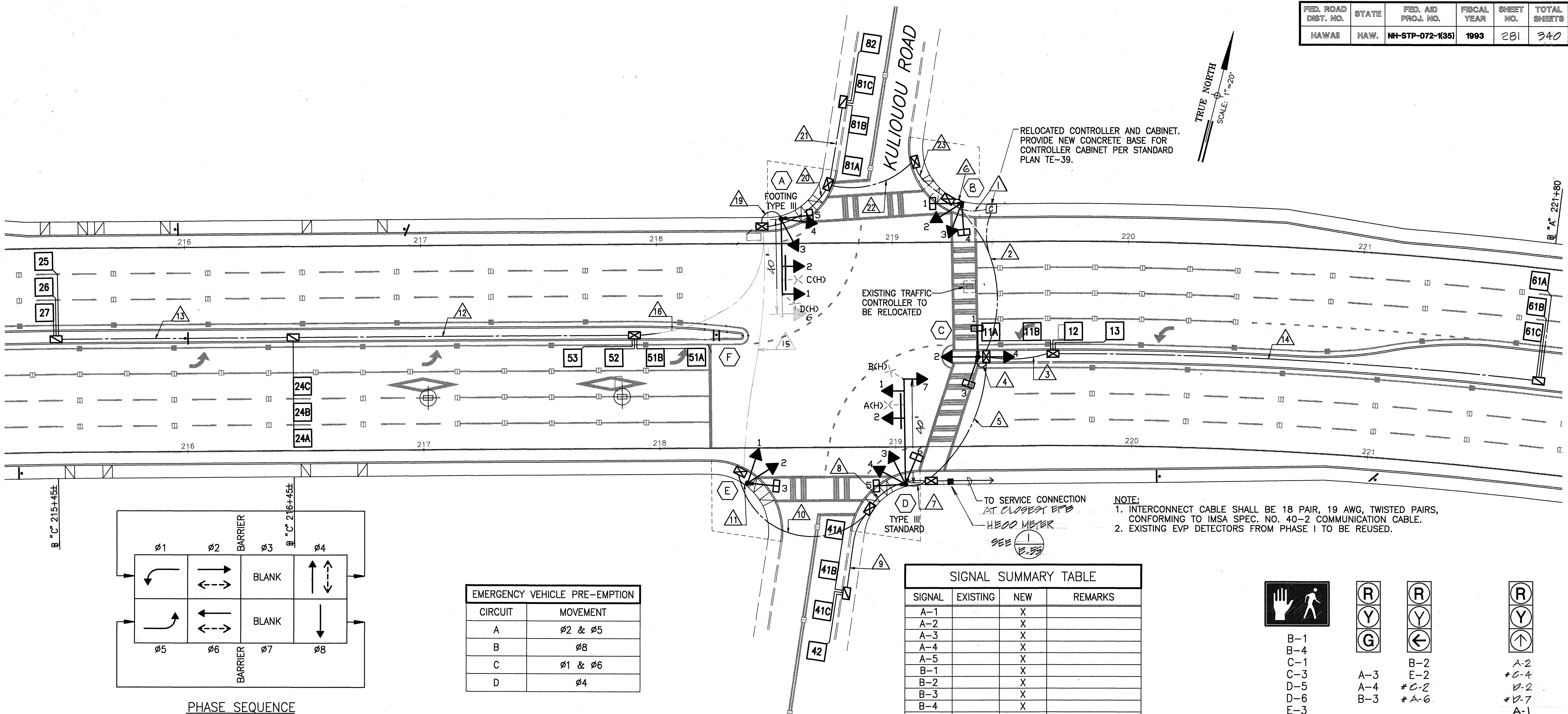
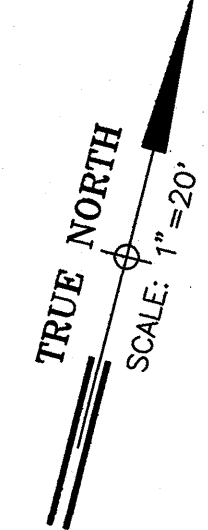


	C.O.#2
6/30/93	C.O.#1
1/20/93	REVISED TRAFFIC SIGNAL AND PEDESTRIAN PUSH BUTTON LOCATION
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC SIGNAL PLAN
AT PAEOKI PLACE**
KALANIANA'OLE HIGHWAY WIDENING
 EAST HALEMAUMAU ST. TO KEAHOE ST.
 F.A. PROJECT NO. NH-STP-072-1(35)
 SCALE: 1"=20'
 DATE: 10/1/92
 SHEET No. E-58 OF 62 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	281	340



PHASE SEQUENCE

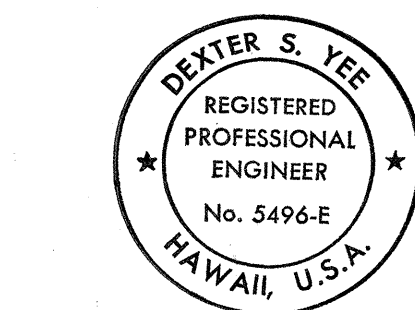
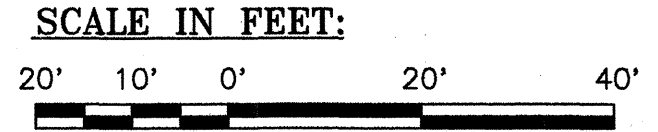
EMERGENCY VEHICLE PRE-EMPTION	
CIRCUIT	MOVEMENT
A	Ø2 & Ø5
B	Ø8
C	Ø1 & Ø6
D	Ø4

TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT KULIOUOU ROAD	DELTA ITEM NO. (Δ)																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
QUANTITY OF 2" C, SEE NOTE NO. 2	4	4	1	2	4	2	3	3	1	3	2	1	1	1	3	1	2	5	2	3	1	3	3
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1	4	2			2			2		2					2					2		2	2
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE	28	9	3	2	4	2	2	2	2		1	4	3	1	8	3		11	2	12	2	14	14
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE	4	2			2	2														2	2	2	2
QUANTITY OF #14 SIGNAL HEAD CABLE				15	14	30					11									24			
QUANTITY OF 3/C #4 POWER CABLE	1	1			1																		

NOTES:
1. ADD 1 #6 AWG NEUTRAL WITH EACH 26/C #14.
2. ALL CONDUITS SHALL BE SCHEDULE 80.

SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	
A-2		X	
A-3		X	
A-4		X	
A-5		X	
B-1		X	
B-2		X	
B-3		X	
B-4		X	
C-1		X	
C-2		X	PROGRAMMABLE VISIBILITY
C-3		X	
C-4		X	PROGRAMMABLE VISIBILITY
D-1		X	
D-2		X	
D-3		X	
D-4		X	
D-5		X	
D-6		X	
D-7		X	PROGRAMMABLE VISIBILITY
E-1		X	
E-2		X	
E-3		X	
A-6		X	PROGRAMMABLE VISIBILITY

6/30/93	C.O.#2
1/20/93	C.O.#1
DATE	REVISION



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B-1
B-4
C-1
C-3
D-5
D-6
E-3
A-5

(R)
(Y)
(G)

A-3
A-4
B-3
D-3
D-4
E-1

(R)
(Y)
(←)

B-2
E-2
*C-2
*A-6
A-2
D-2
*D-7
A-1
D-1

NEW SIGNAL INDICATIONS
* PROGRAMMABLE VISIBILITY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

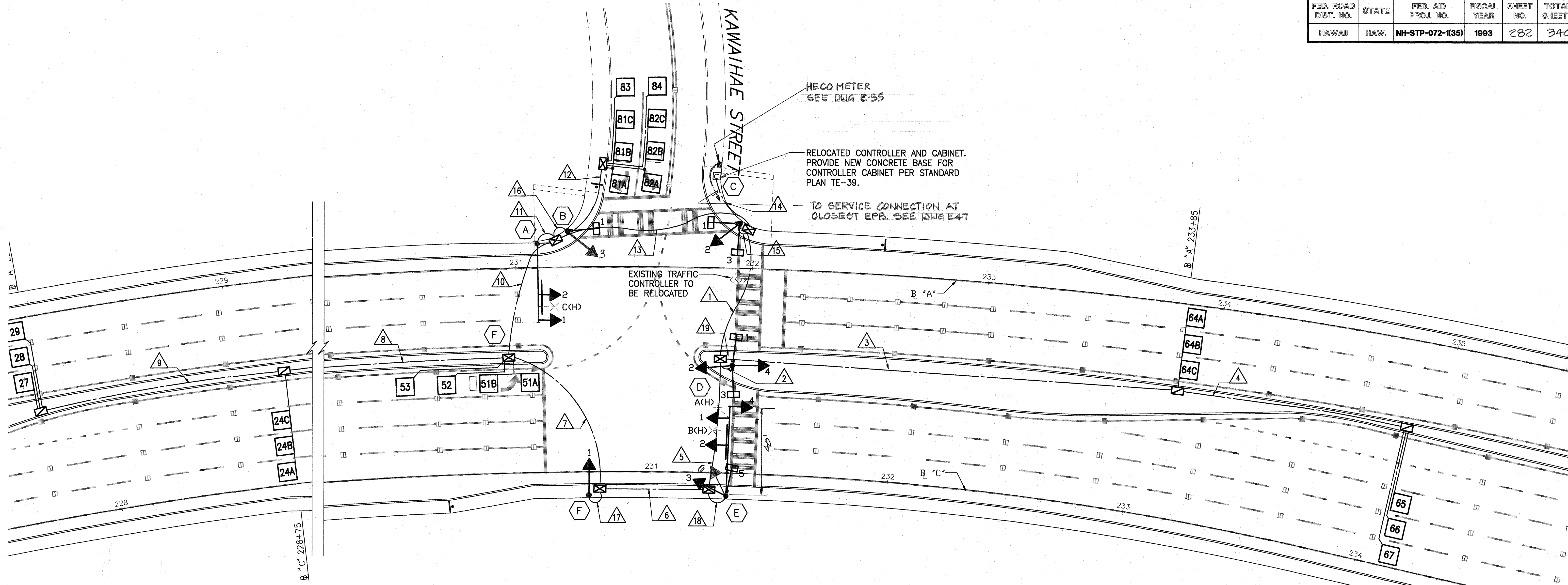
**TRAFFIC SIGNAL PLAN
AT KULIOUOU ROAD**

KALANIANA'OLE HIGHWAY WIDENING
EAST HALEMAUMAU ST. TO KEAHOLE ST.
F.A. PROJECT NO. NH-STP-072-1(35)

SCALE: 1"=20' DATE: 10/1/92

SHEET No. E-59 OF 62 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	282	340

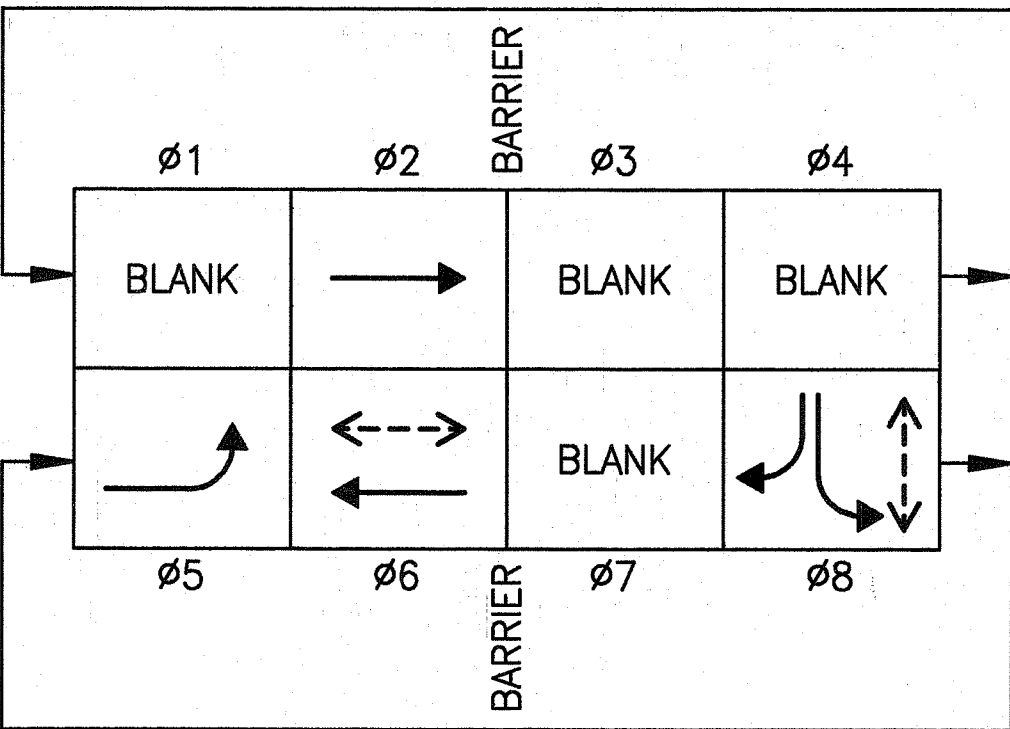


NOTE:
 1. INTERCONNECT CABLE SHALL BE 18 PAIR, 19 AWG, TWISTED PAIRS, CONFORMING TO IMSA SPEC. NO. 40-2 COMMUNICATION CABLE.
 2. EXISTING EVP DETECTORS FROM PHASE I TO BE REUSED.

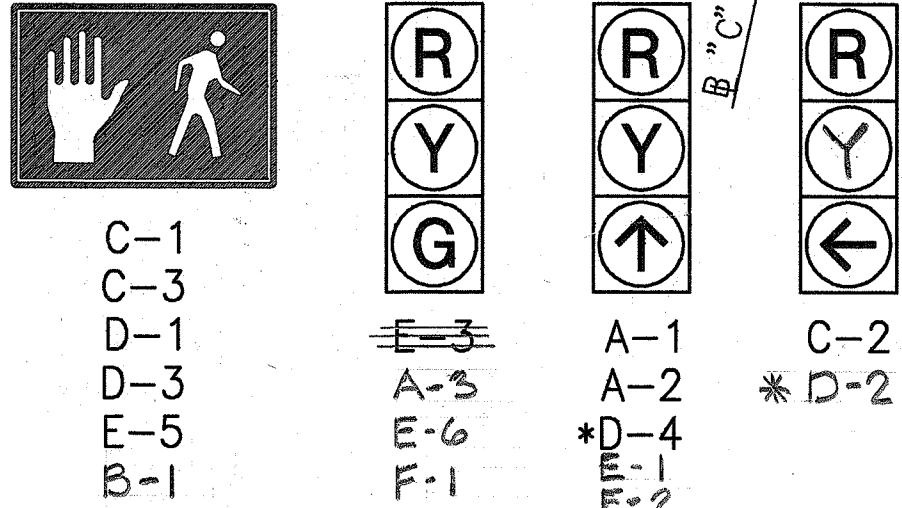
EMERGENCY VEHICLE PRE-EMPTION	
CIRCUIT	MOVEMENT
A	Ø2 & Ø5
B	Ø8
C	Ø6

TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT KAWAIHAE STREET	DELTA ITEM NO. (Δ)																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
QUANTITY OF 2" C, SEE NOTE NO. 2	3	2	1	1	3	3	3	1	1	3	2	1	4	8	2	2	2	1
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1	2				2	2	2			2			2	4				
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE	7	2	4	3	1			4	3	7		4	12	21	2	1		
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE	2				2						1		1	3				2
QUANTITY OF #14 SIGNAL HEAD CABLE		12									7				8	3	4	21
QUANTITY OF 3/C #4 POWER CABLE													1	1				

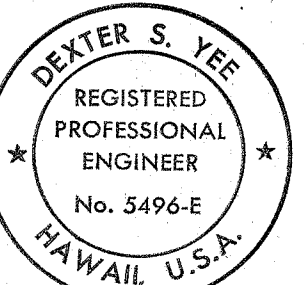
NOTES:
 1. ADD 1 #6 AWG NEUTRAL WITH EACH 26/C #14.
 2. ALL CONDUITS SHALL BE SCHEDULE 80.



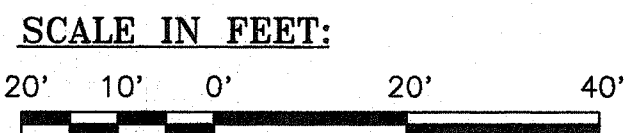
SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	
A-2		X	
A-3		X	
B-1		X	
C-1		X	
C-2		X	
C-3		X	
D-1		X	
D-2		X	PROGRAMMABLE VISIBILITY
D-3		X	
D-4		X	PROGRAMMABLE VISIBILITY
E-1		X	
E-2		X	
E-3		X	
E-4		X	PROGRAMMABLE VISIBILITY
E-5		X	
F-1		X	
A-3		X	



SIGNAL INDICATIONS
 * PROGRAMMABLE VISIBILITY



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.



	C.O. #2
6/30/93	C.O. #1
1/20/93	REVISED TRAFFIC SIGNAL AND PEDESTRIAN PUSH BUTTON LOCATION
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN
AT KAWAIHAE STREET
KALANIANA'OLE HIGHWAY WIDENING
EAST HALEMAUMAU ST. TO KEAHOLE ST.
F.A. PROJECT NO. NH-STP-072-1(35)

SCALE: 1"=20'

DATE: 10/1/92

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

"AS-BUILT"

C.O. ADD. 282

SHEET No. E-60 OF 62 SHEETS

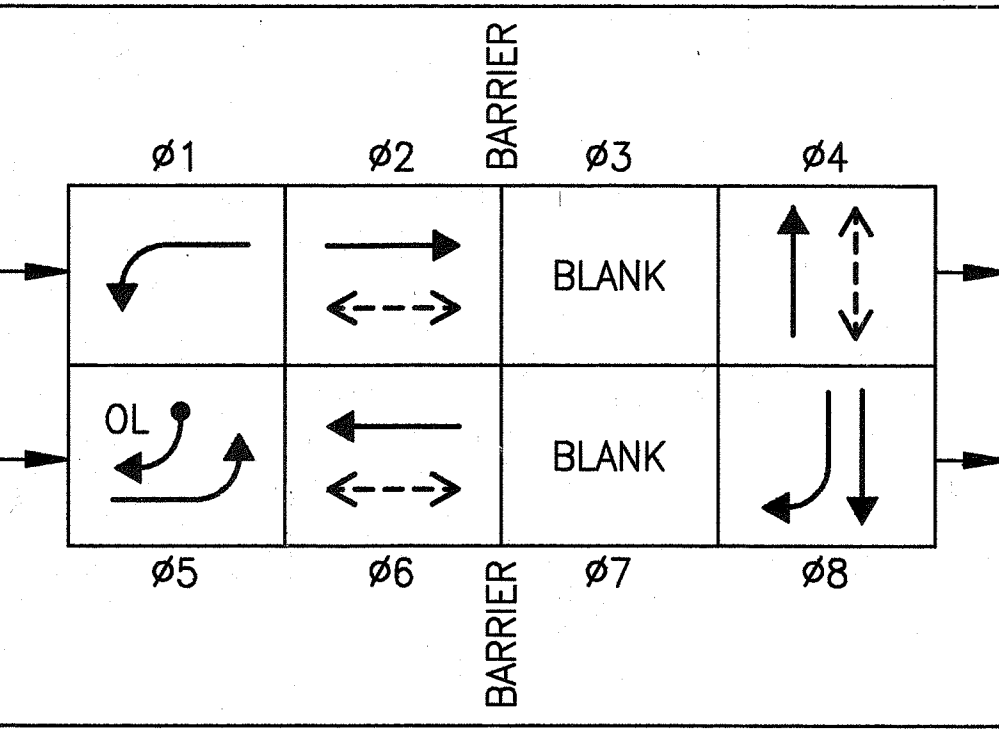
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	283	340

NOTE:
 1. INTERCONNECT CABLE SHALL BE 18 PAIR, 19 AWG, TWISTED PAIRS, CONFORMING TO IMSA SPEC. NO. 40-2 COMMUNICATION CABLE.
 2. EXISTING EVP DETECTORS FROM PHASE I TO BE REUSED.

RELOCATED CONTROLLER AND CABINET. PROVIDE NEW CONCRETE BASE FOR CONTROLLER CABINET PER STANDARD PLAN TE-39.

EXISTING TRAFFIC CONTROLLER TO BE RELOCATED

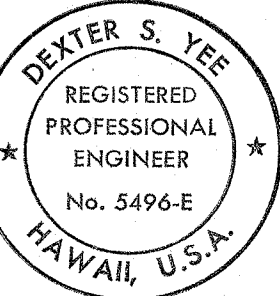
SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	
A-2		X	
A-3		X	
B-1		X	
B-2		X	
C-1		X	
C-2		X	
C-3		X	
D-1		X	
D-2		X	
E-1		X	
E-2		X	PROGRAMMABLE VISIBILITY
E-3		X	PROGRAMMABLE VISIBILITY
F-1		X	
F-2		X	
F-3		X	
F-4		X	
F-5		X	PROGRAMMABLE VISIBILITY
G-1		X	
G-2		X	
H-1		X	
H-2		X	
H-3		X	
I-1		X	PROGRAMMABLE VISIBILITY



• LOOPS 83A, 83B, 83C, 84, 85A, 85B, 85C & 86 WILL BE CONNECTED TO 05.

PHASE SEQUENCE

	C.O. #2
6/30/93	C.O. #1
1/20/93	REVISION TRAFFIC SIGNAL AND PEDESTRIAN PUSH BUTTON LOC.
DATE	REVISION



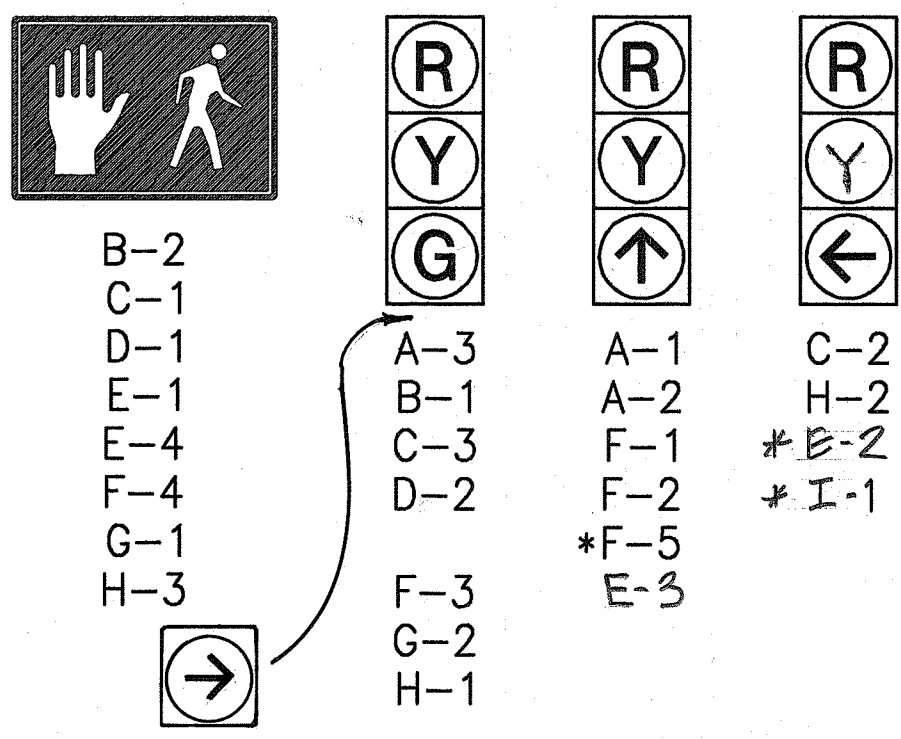
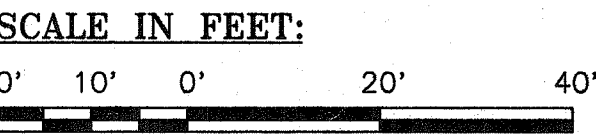
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
TRAFFIC SIGNAL PLAN
AT HAWAII KAI DRIVE
 KALANIANA'OLE HIGHWAY WIDENING
 EAST HALEMAUMAU ST. TO KEAHOE ST.
 F.A. PROJECT NO. NH-STP-072-1(35)

SCALE: 1"=20' DATE: 10/1/92
 SHEET No. E-61 OF 62 SHEETS

"AS-BUILT"

C.O. ADD. 283



NEW SIGNAL INDICATIONS
 * PROGRAMMABLE VISIBILITY

EMERGENCY VEHICLE PRE-EMPTION	
CIRCUIT	MOVEMENT
A	02 & 05
B	08
C	04
D	01 & 06

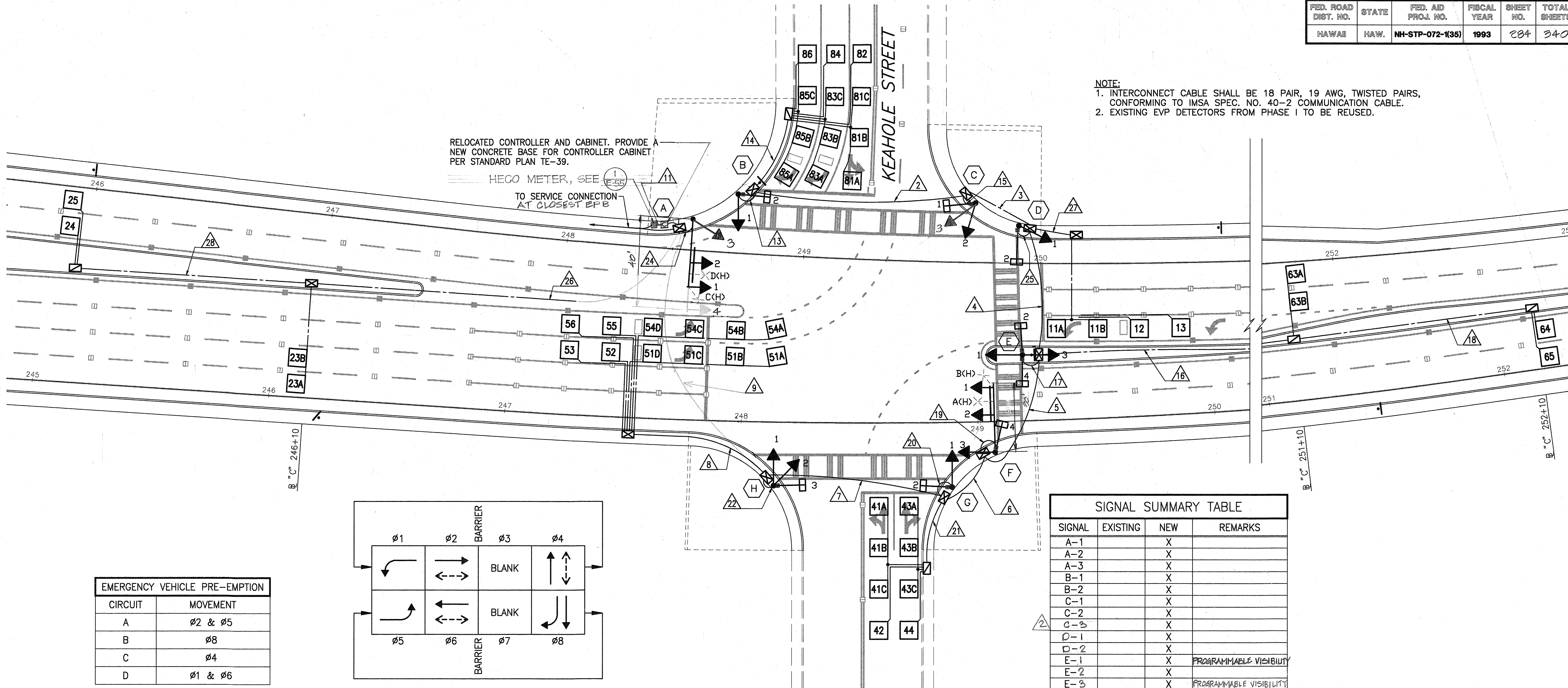
TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT HAWAII KAI DRIVE	DELTA ITEM NO. (Δ)																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
QUANTITY OF 2"C, SEE NOTE NO. 2	4	4	4	3	3	4	4	3	5	8	2	2	3	2	2	1	2	2	1	1	1	1	1	1	1	1	1
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1	2	2	2	2	2	2			2	2																	
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE	13	12	4	3		1	11	7	18	19	1	2	1	1	1			1	6	6	3	2	2	10	4	3	1
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE	2	2	2						2	2			2				2										
QUANTITY OF #14 SIGNAL HEAD CABLE											7	15	19	7	11	5	12	7									
QUANTITY OF 3/C #4 POWER CABLE									1	1																	

NOTES:
 1. ADD 1 #6 AWG NEUTRAL WITH EACH 26/C #14.
 2. ALL CONDUITS SHALL BE SCHEDULE 80.

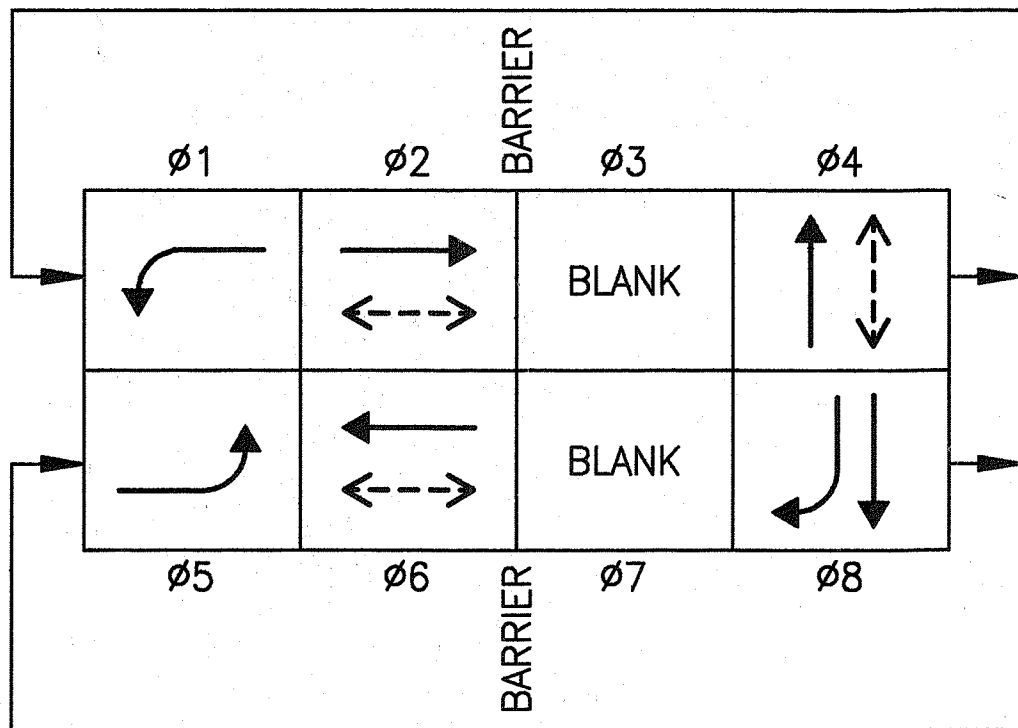
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
ORIGINAL PLAN	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	284	340

NOTE:
 1. INTERCONNECT CABLE SHALL BE 18 PAIR, 19 AWG, TWISTED PAIRS, CONFORMING TO IMSA SPEC. NO. 40-2 COMMUNICATION CABLE.
 2. EXISTING EVP DETECTORS FROM PHASE I TO BE REUSED.



EMERGENCY VEHICLE PRE-EMPTION	
CIRCUIT	MOVEMENT
A	Ø2 & Ø5
B	Ø8
C	Ø4
D	Ø1 & Ø6

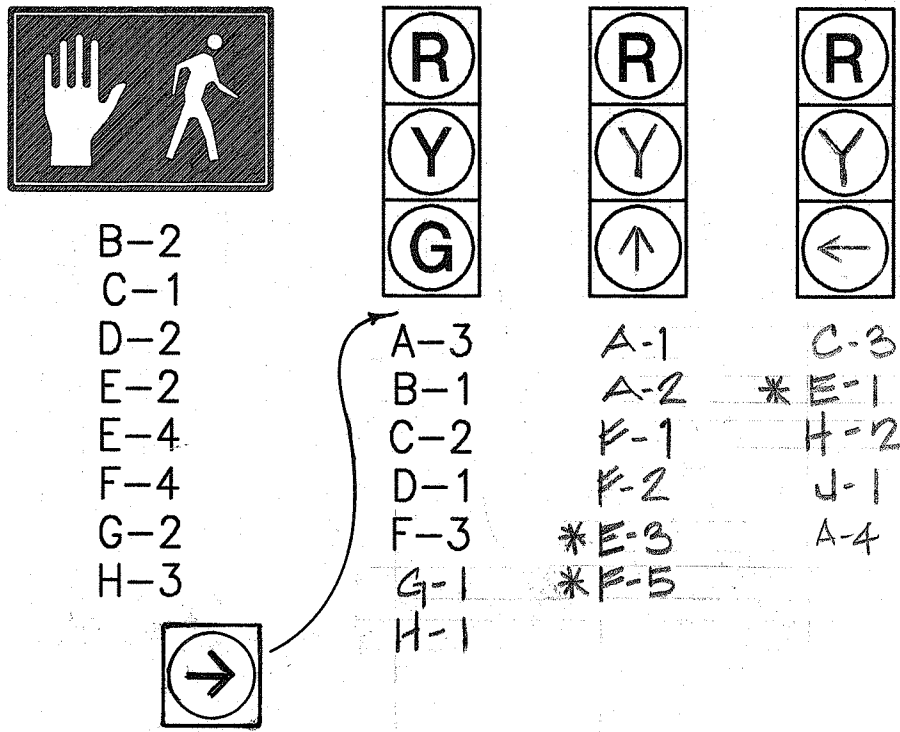


PHASE SEQUENCE

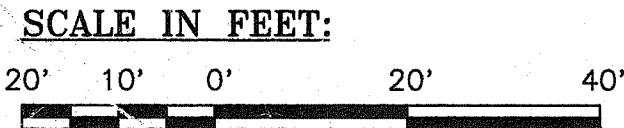
SIGNAL SUMMARY TABLE			
SIGNAL	EXISTING	NEW	REMARKS
A-1		X	
A-2		X	
A-3		X	
B-1		X	
B-2		X	
C-1		X	
C-2		X	
C-3		X	
D-1		X	
D-2		X	
E-1		X	PROGRAMMABLE VISIBILITY
E-2		X	
E-3		X	PROGRAMMABLE VISIBILITY
E-4		X	
F-1		X	
F-2		X	
F-3		X	
F-4		X	
F-5		X	
G-1		X	
G-2		X	
H-1		X	
H-2		X	PROGRAMMABLE VISIBILITY
H-3		X	
H-4		X	PROGRAMMABLE VISIBILITY

TRAFFIC SIGNAL SYSTEM CONDUIT AND CABLE SCHEDULE AT KEAHOLE STREET	DELTA ITEM NO. (Δ)																											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
QUANTITY OF 2" C, SEE NOTE NO. 2	5	5	5	5	3	3	3	1	3	2	8	1	2	1	2	1	2	1	3	2	1	2	1	6	2	1	1	1
QUANTITY OF 2-26/C #14 INTERCONNECT CABLE, SEE NOTE NO. 1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
QUANTITY OF 2/C #14 DETECTOR LEAD-IN AND PEDESTRIAN PB CABLE	15	8	7	6	1		5	6	13	13	13	2	1	6	1	3	2	2	1	1	4	1		3	1	3	3	
QUANTITY OF 3/C #20 SHIELDED EMERGENCY PRE-EMPTION CABLE	2	2	2	2	2						2								2					2				
QUANTITY OF #14 SIGNAL HEAD CABLE														6	6	12	12	6		9	5	10	6					
QUANTITY OF 3/C #4 POWER CABLE											1																	

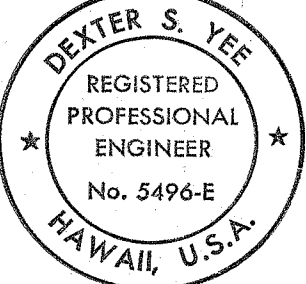
NOTES:
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 2. ALL CONDUITS SHALL BE SCHEDULE 80.



NEW SIGNAL INDICATIONS
 * PROGRAMMABLE VISIBILITY



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.



6/30/93	C.O. #2
1/20/93	C.O. #1
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN
AT KEAHOLE STREET

KALANIANA'OLE HIGHWAY WIDENING
EAST HALEMAUMAU ST. TO KEAHOLE ST.
F.A. PROJECT NO. NH-STP-072-1(35)

SCALE: 1"=20'

DATE: 10/1/92

SHEET No. E-62 OF 62 SHEETS

"AS-BUILT"

C.O. ADD. 284