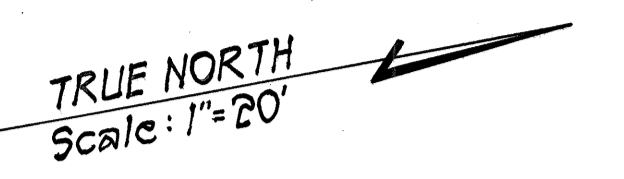


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-011-2(32)	1999	19	34

NOTES:

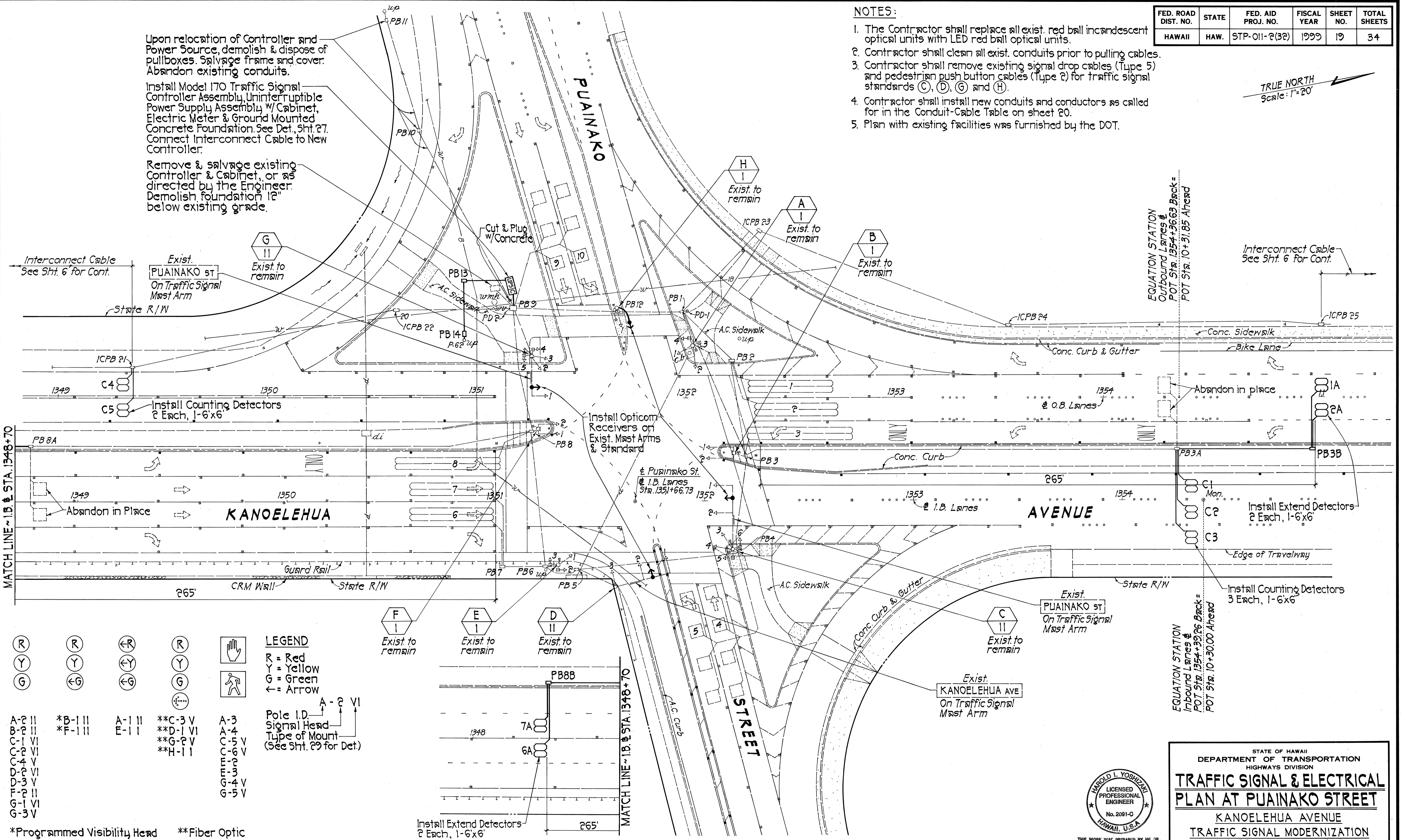
1. The Contractor shall replace all exist. red ball incandescent optical units with LED red ball optical units.
2. Contractor shall clean all exist. conduits prior to pulling cables.
3. Contractor shall remove existing signal drop cables (Type 5) and pedestrian push button cables (Type 2) for traffic signal standards (C), (D), (G) and (H).
4. Contractor shall install new conduits and conductors as called for in the Conduit-Cable Table on sheet 20.
5. Plan with existing facilities was furnished by the DOT.



Upon relocation of Controller and Power Source, demolish & dispose of pullboxes. Salvage frame and cover. Abandon existing conduits.

Install Model 170 Traffic Signal Controller Assembly, Uninterruptible Power Supply Assembly w/ Cabinet, Electric Meter & Ground Mounted Concrete Foundation. See Det., Sht. 27. Connect Interconnect Cable to New Controller.

Remove & salvage existing Controller & Cabinet, or as directed by the Engineer. Demolish foundation 12" below existing grade.



MATCH LINE ~ 18' & STA. 1348+70

MATCH LINE ~ 18' & STA. 1348+70

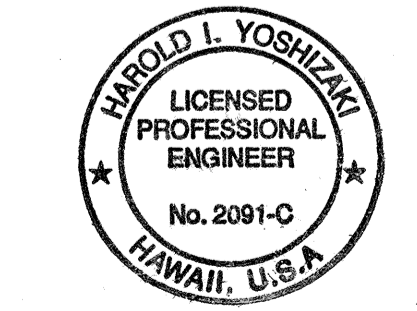
(R)	(R)	(←R)	(R)	(Hand icon)	LEGEND
(Y)	(Y)	(←Y)	(Y)	R = Red	
(G)	(G)	(←G)	(G)	(Ped icon)	Y = Yellow
					G = Green
					← = Arrow

A-2 II	*B-1 III	A-1 II	**C-3 V	A-3	Pole I.D. Signal Head Type of Mount (See Sht. 29 for Det.)
B-2 II	*F-1 II	E-1 I	**D-1 VI	A-4	
C-1 VI			**G-2 V	C-5 V	
C-2 VI			**H-1 I	C-6 V	
C-4 V				E-2 V	
D-2 VI				F-3 V	
D-3 V				G-4 V	
F-2 II				G-5 V	
G-1 VI					
G-3 V					

*Programmed Visibility Head **Fiber Optic

EXISTING SIGNAL ARRANGEMENT & MOUNTING

TRAFFIC SIGNAL & ELECTRICAL PLAN
Scale: 1" = 20'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Harold I. Yoshizaki
SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL & ELECTRICAL PLAN AT PUAINAKO STREET

KANOELEHUHA AVENUE
TRAFFIC SIGNAL MODERNIZATION
F. A. PROJ. NO. STP-011-2(32)

SCALE: AS SHOWN DATE: OCT. 1998

SHEET NO. 1 OF 2 SHEETS

INSTALL NEW CONDUCTORS IN EXISTING CONDUITS

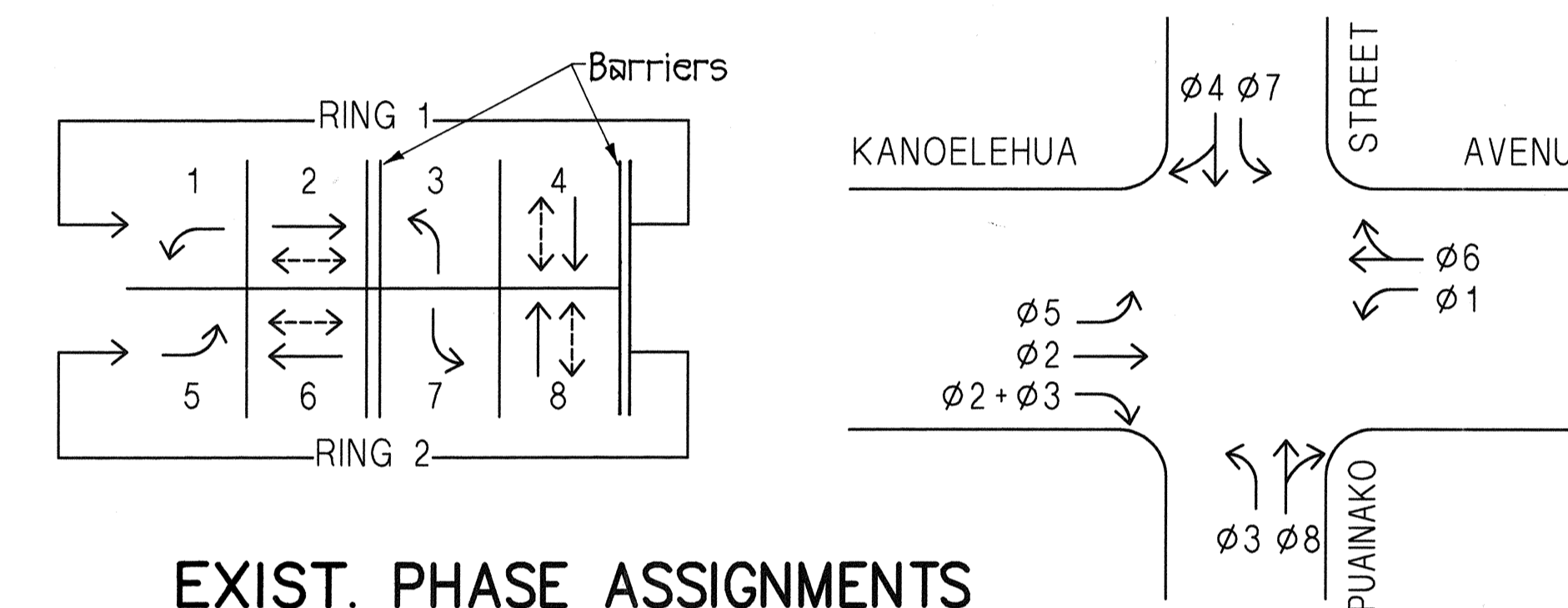
FROM	TO	SIGNAL CONTROL		DETECTORS		INTERCONNECT		OPTICOM		SPARE	REMARKS	
		CONDUIT	CONDUCTORS		CONDUIT	CONDUCTORS		CONDUIT	CONDUCTORS			
			SEE NOTE 1	SEE NOTE 2		2"	2C - #14		1 - 12pr #19			3C - #20 1 - #20 GRD
PB9	G	EX.	1	18		1			1		Install opticom & pedestrian detector conductors in existing signal control conduit.	
PB9	PB12				EX. 2"	4	EX. 2"	1	EX. 2"	1		
PB12	H	EX.	1	6		1			1		Install opticom & pedestrian detector conductors in existing signal control conduit.	
PB12	PB1				EX. 2"	4	EX. 2"	1				
PB1	PB2				EX. 2"	4				EX. 2"		
PB2	PB3				EX. 2"	4				EX. 2"		
PB3	PB3A				EX. 2"	1/4					Install conductors for counting detectors C1, C2 & C3 in same conduit with 1A/2A.	
PB3A	PB3B				•	1						
PB9	PB8					1			EX. 2"	2	Install vehicle detector conductors in Opticom conduit.	
PB8	PB8A				EX. 2"	1						
PB8A	PB8B				•	1						
PB8	PB6								EX. 2"	2		
PB6	PB5								EX. 2"	2		
PB5	D	EX.	1	12						1	Install opticom conductor in existing signal control conduit.	
PB5	PB4								EX. 2"	1		
PB4	C	EX.	1	21		1				1	Install opticom & pedestrian detector conductors in existing signal control conduit.	
ICPB 21	ICPB 22				EX. 2"	2	EX. 2"	1			Install conductors and stubout for counting detectors C4 & C5	
ICPB 22	PB9				EX. 2"	2	EX. 2"	1			Install conductors for counting detectors C4 & C5	
PB1	ICPB 23							1		EX. 2"		
ICPB 23	ICPB 24							1		EX. 2"		
ICPB 24	ICPB 25							1		EX. 2"		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-011-2(32)	1999	20	34

PULLBOX TABLE

PULLBOX I.D. NUMBER	TYPE	LOGO
3B, 8B, 13 & 14	B (NEW)	TRAFFIC SIGNAL
9	D (Existing)	NONE
1, 2, 3A, 4, 5, 6, 7, 8A, 10 & 11	B (Existing)	Traffic Signal
3, 8 & 12	C (existing) w/ Conc. Cover	Traffic Signal
ICPB 21, 22, 23 24 & 25	B (Existing)	Traffic Signal

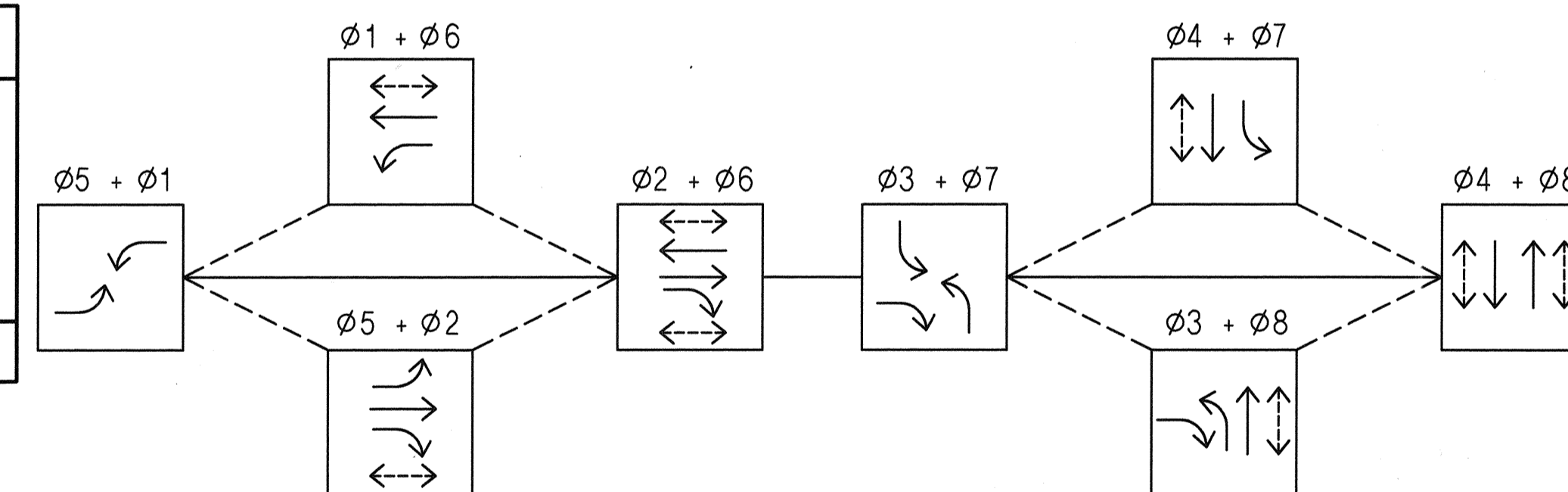
See Detail on Sheet 32 for Metric Pullbox, Type B.



EXIST. PHASE ASSIGNMENTS

INSTALL NEW CONDUITS AND REWIRE CONTROLLER USING EXISTING AND NEW CONDUCTORS

FROM	TO	MAIN CONTROL		DETECTORS		STREET LIGHTS		INTERCONNECT		OPTICOM		SPARE	REMARKS		
		CONDUIT	CONDUCTORS		CONDUIT	CONDUCTORS		CONDUIT	CONDUCTORS		CONDUIT			CONDUCTORS	
			2"	1-26C #14		2"	2C - #16		2"	2 - #10				2"	1 - 12pr #19
CONT.	PB9	•	1	6•	4	12/7		2•	1	•	4	4•	Rewire controller using existing & new conductors.		



EXIST. PHASING DIAGRAM

INSTALL NEW CONDUITS AND CONDUCTORS

FROM	TO	POWER		SPARE	REMARKS
		CONDUIT	CONDUCTORS		
P-62	PB14	•	By HELCO		Riser, weatherhead & conduit per HELCO requirements.
PB14	PB13	•	By HELCO		
PB13	MAN	•	By HELCO		
MAN	UPS		2 - #4 1 - #4 GRND.	•*	*For UPS power
UPS	CONT.		2 - #4 1 - #4 GRND.	•*	*For controller power

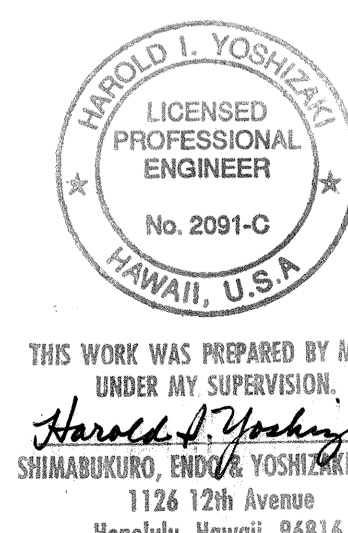
LEGEND:

- New Conduit
- 6• Number of New Conduits
- EX. 2" Existing 2" conduit
- 12/7 12 exist./7 New Conductors
- PB 7 Existing improvements are indicated by slant lettering. (Existing Pullbox 7)
- E New improvements are indicated by vertical and bold lettering. (New Traffic Signal Standard E)

NOTE:

1. Install 1-9 Cond. #14 or 1-26 Cond. #14 cable from pullbox to bottom of traffic signal standard, as required.
2. Install #14 conductors (color coded) as indicated on table from bottom of traffic signal standard to traffic and pedestrian signal heads.

SURVEY PLOTTED: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Harold I. Yoshizaki
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 Honolulu, Hawaii 96816

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
CONDUIT-CABLE TABLE
AT PUAINAKO STREET
 KANOELEHUA AVENUE
 TRAFFIC SIGNAL MODERNIZATION
 F.A. PROJ. NO. STP-011-2(32)
 SCALE: AS SHOWN DATE: OCT. 1998
SHEET No. 2 OF 2 SHEETS