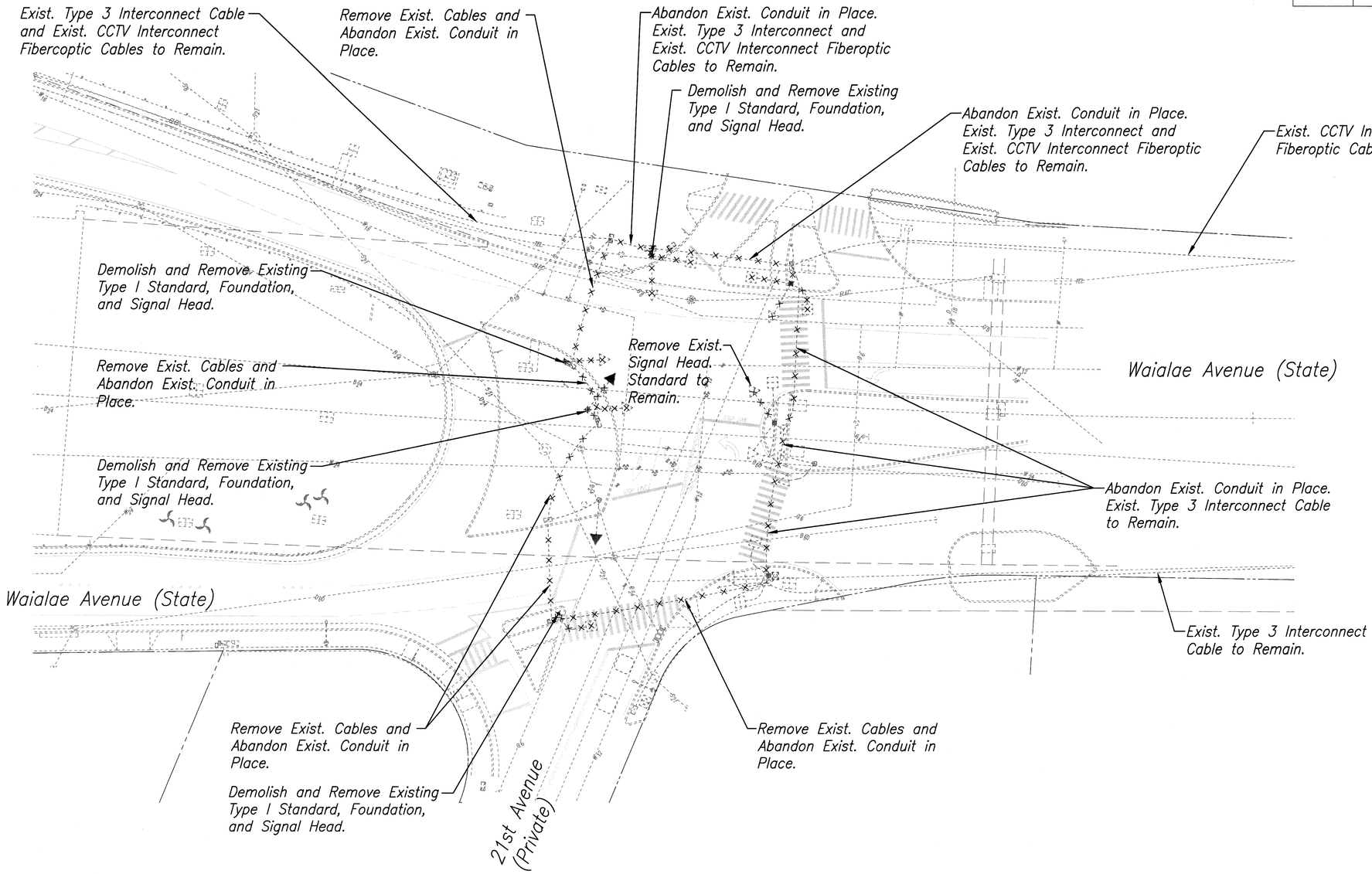
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	11	203

True North
Scale: 1" = 20'



Traffic Signal Demolition Plan

Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 12 for New Signal System.

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

Plot Date: Jul 29 2008 Plot Time: 11:52 am
File: S:\dgn\1207 Oahu Various TSM\straw\sgn-waialae 01 demo.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Demolition Plan

Waialae Avenue at 21st Avenue

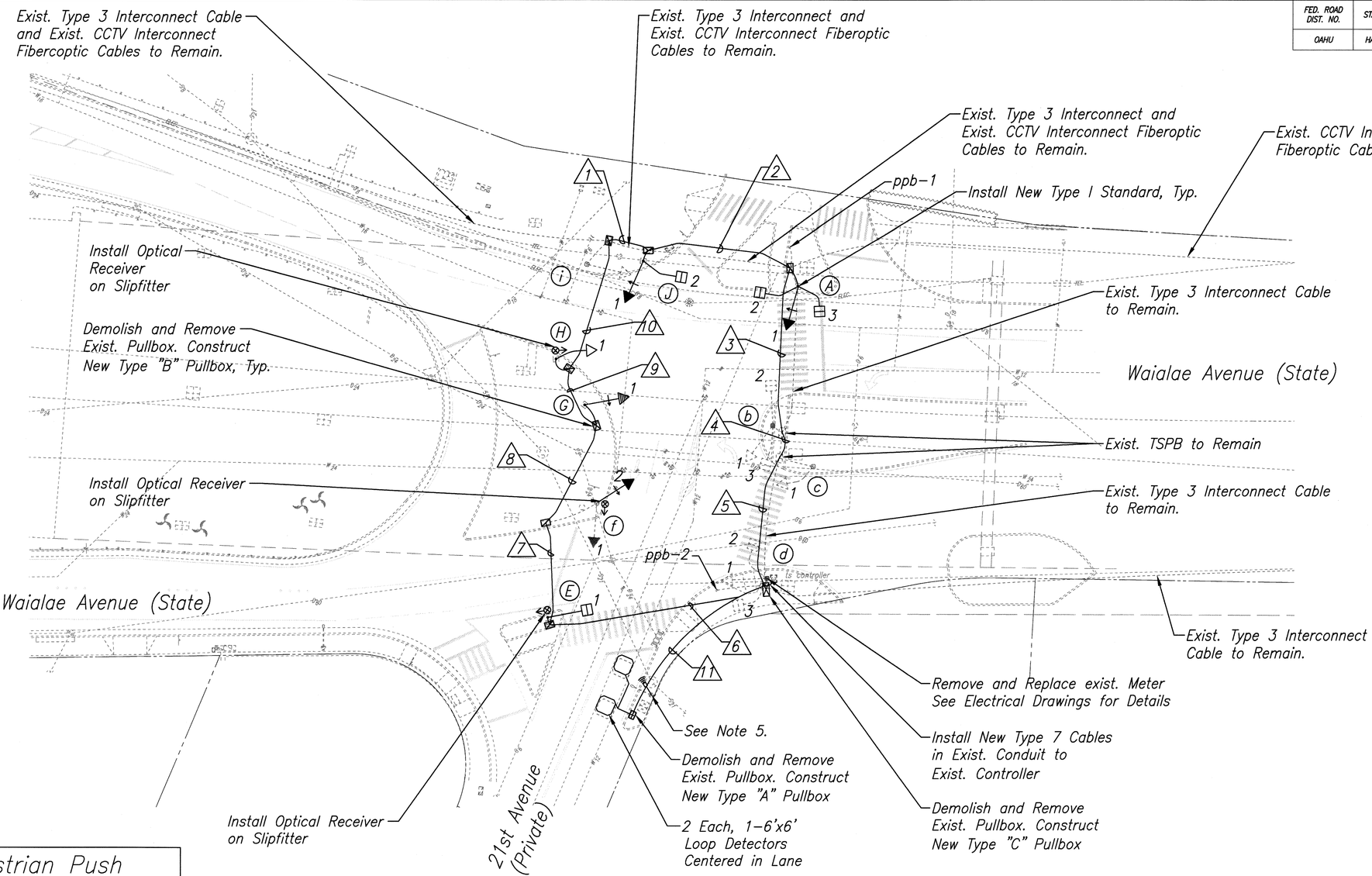
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	12	203

True North
Scale: 1" = 20'



Traffic Signal Plan

Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1 b	*(⟶) R10-4B (R)
ⓑ d	*(⟷) R10-4B (L&R)
ppb-2 d	*(⟶) R10-4B (R)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 13 for List of Materials.
3. New Striping Shown for Clarity. See Striping Plan, Sheet 104.
4. Furnish and Install Opticom Preemption Module in Exist. Controller.
5. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

Plot Date: Jul 30 2008 Plot Time: 11:16 am
File: S:\Bpl\1037 Oahu Various TSM \drive \gs-waialae 01 new.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Waialae Avenue at 21st Avenue
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	13	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2"	1 - Type 1, Ground Wire 2 - Spare
2	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare
3	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 3 - Type 2 1 - Spare
4	New 3-2"	1 - Type 1, Ground Wire 4 - Type 2 1 - Spare
5	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 4 - Type 2 1 - Spare
6	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 3 - Type 7 1 - Spare
7	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 7 1 - Spare
8	New 3-2"	1 - Type 1, Ground Wire 1 - Type 7 1 - Spare
9	New 3-2"	1 - Type 1, Ground Wire 1 - Type 7 1 - Spare
10	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare
11	Exist. 1-2"	1 - Type 2

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	b-1	*	*	*	f-1	*	*	*	A-1	N	N	N	A-2 N
	c-1	*	*	*					f-2	N	N	N	A-3 N
	d-1	*	*	*					G-1	NP	NP	NP	b-3*
	H-1	N	N	N					J-1	N	N	N	b-4*
	i-1	*	*	*									d-2*
													d-3*
													E-1 N
													J-2 N

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H - M H - M
b	Existing (to Remain)	I	1 2 3 4	⊠ Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G ⊛ R Y ← H - M H - M
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
d	Existing (to Remain)	I	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G H - M H - M
E	New	I-10	1	Slipfitter, One-Way Slipfitter, One-Way	H - M Opticom
f	Existing (to Remain)	I	1 2	⊠ Slipfitter, Two-Way ⊠ Slipfitter, Two-Way Slipfitter, One-Way	R Y ↑ R Y ← * Opticom
G	New	I-10	1	Slipfitter, One-Way	R Y G
H	New	I-10	1	Slipfitter, One-Way Slipfitter, One-Way	R Y G Opticom
i	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
J	New	I-10	1 2	Slipfitter, One-Way Pole Bracket, Two-Way	R Y ← H - M

* = Install on Existing Standard

⊛ = Remove Exist. Signal Head, See Traffic Signal Demolition Plan, Sheet 11.

⊠ = Remove Exist. Mounting and Provide New Designated Mounting as Required

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 30 2008 Plot Time: 11:16 am
File: S:\Dgn\2007 Oahu Various TSM \drive \sig-revision 1\a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

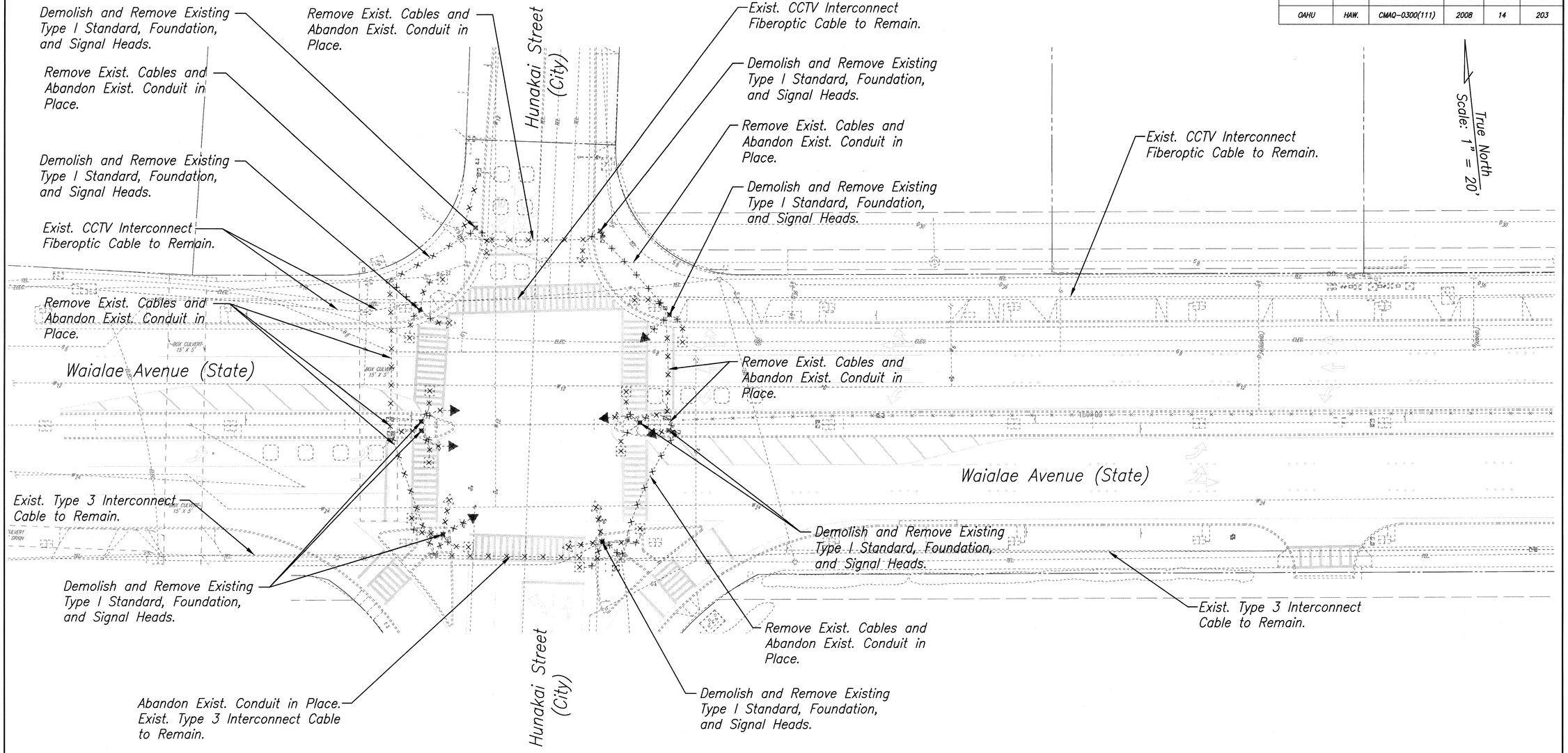
Waialae Avenue at 21st Avenue

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	14	203



Traffic Signal Demolition Plan

Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 15 for Signal Plan

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
DIMENSIONED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 12:00 pm
File: S:\Bryl\0207 Oahu Various TSM \dgn\~wsolate 02 demo.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Demolition Plan

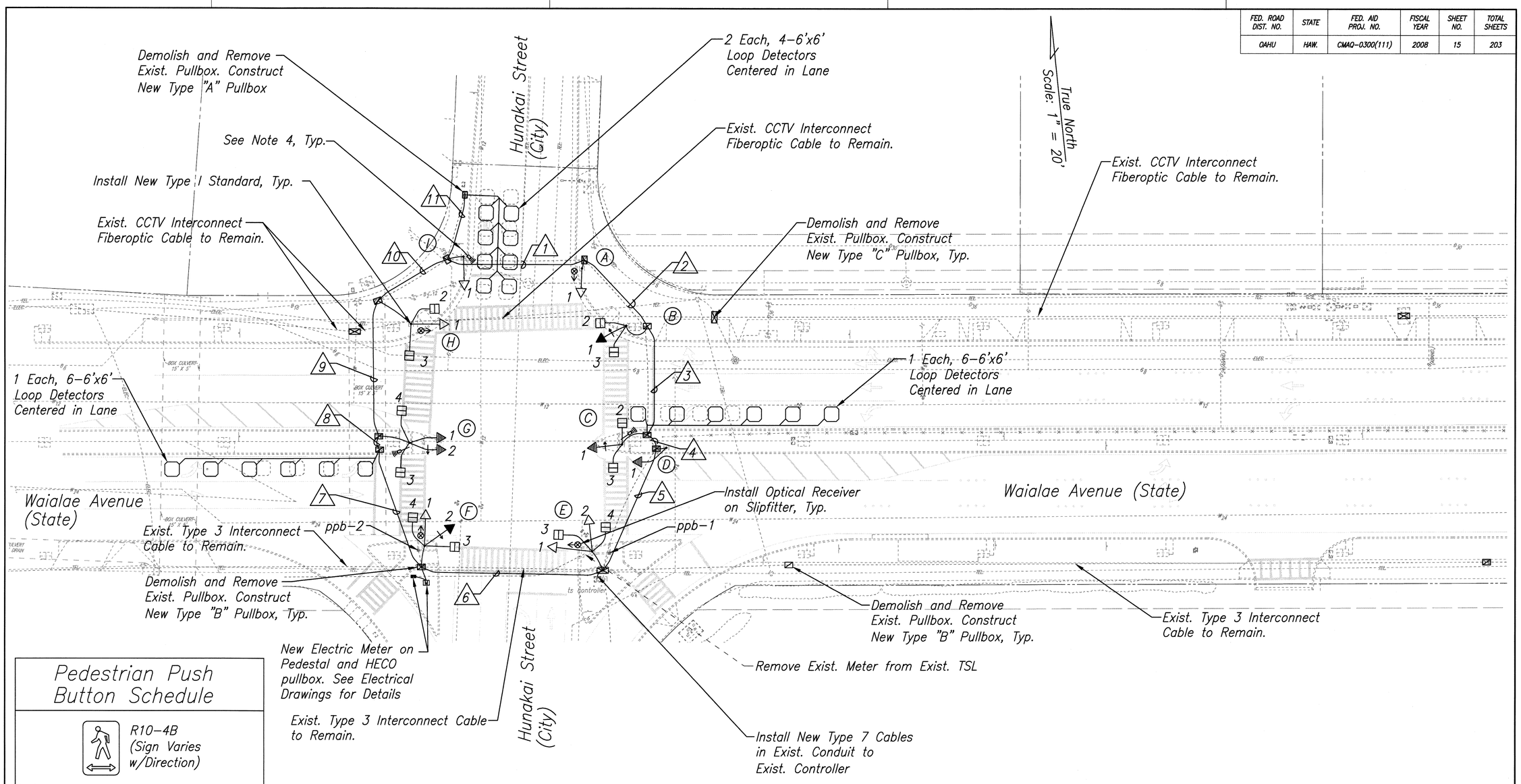
Waialae Avenue at Hunakai Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	15	203



Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(B)	þ	(⟶) R10-4B (R)
(C)	þ	(⟷) R10-4B (L&R)
ppb-1	q	*(⟶) R10-4B (R)
ppb-2	þ	*(⟵) R10-4B (L)
(G)	q	(⟷) R10-4B (L&R)
(H)	q	(⟵) R10-4B (L)

* = Exist. PPB to Remain

Traffic Signal Plan

Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 16 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY BJL | QUANTITIES BY | CHECKED BY
Plot Date: Jul 29 2008 Plot Time: 11:17 am
File: S:\dgn\0207 Oahu Various TSM\Lorew\sgn-wavialae_02.nwk.dwg

BRYAN P. LOW LICENSED PROFESSIONAL ENGINEER No. 8569-C HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Waialae Avenue at Hunakai Street
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	16	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Spare
2	New 3-2"	1 – Type 1, Ground Wire 1 – Type 7 1 – Spare
3	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 7 1 – Spare
4	New 4-2"	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
5	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
6	New 5-2" (Conc. Enc.)	1 – Type 1, Ground Wire 5 – Type 2 1 – Type 6 2 – Type 7 1 – Spare
7	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 1 – Type 7 1 – Spare
8	New 4-2"	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
9	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
10	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Spare
11	New 1-2"	1 – Type 1, Ground Wire 1 – Type 2

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1	Slipfitter, One-Way Slipfitter, One-Way	R Y G Opticom
B	New	I-10	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H – M H – M
C	New	I-10	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H – M H – M
D	New	I-10	1	Slipfitter, One-Way	R Y ↑
E	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter,Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y G H – M H – M Opticom
F	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H – M H – M Opticom
G	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ↑ R Y ← H – M H – M
H	New	I-10	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G H – M H – M Opticom
I	New	I-10	1	Slipfitter, One-Way	R Y ←

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	A-1	N	N	N	D-1	NP	NP	NP	B-1	N	N	N	B-2 N
	E-1	N	N	N	G-1	NP	NP	NP	C-1	NP	NP	NP	B-3 N
	E-2	N	N	N					F-2	N	N	N	C-2 N
	F-1	N	N	N					G-2	NP	NP	NP	C-3 N
	H-1	N	N	N									E-3 N
	I-1	N	N	N									E-4 N
													F-3 N
													F-4 N
													G-3 N
													G-4 N
													H-2 N
													H-3 N

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY LNGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 30 2008 Plot Time: 11:18 am
File: S:\Sys\DOT Oahu Various TSM \plan-waialae t02a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

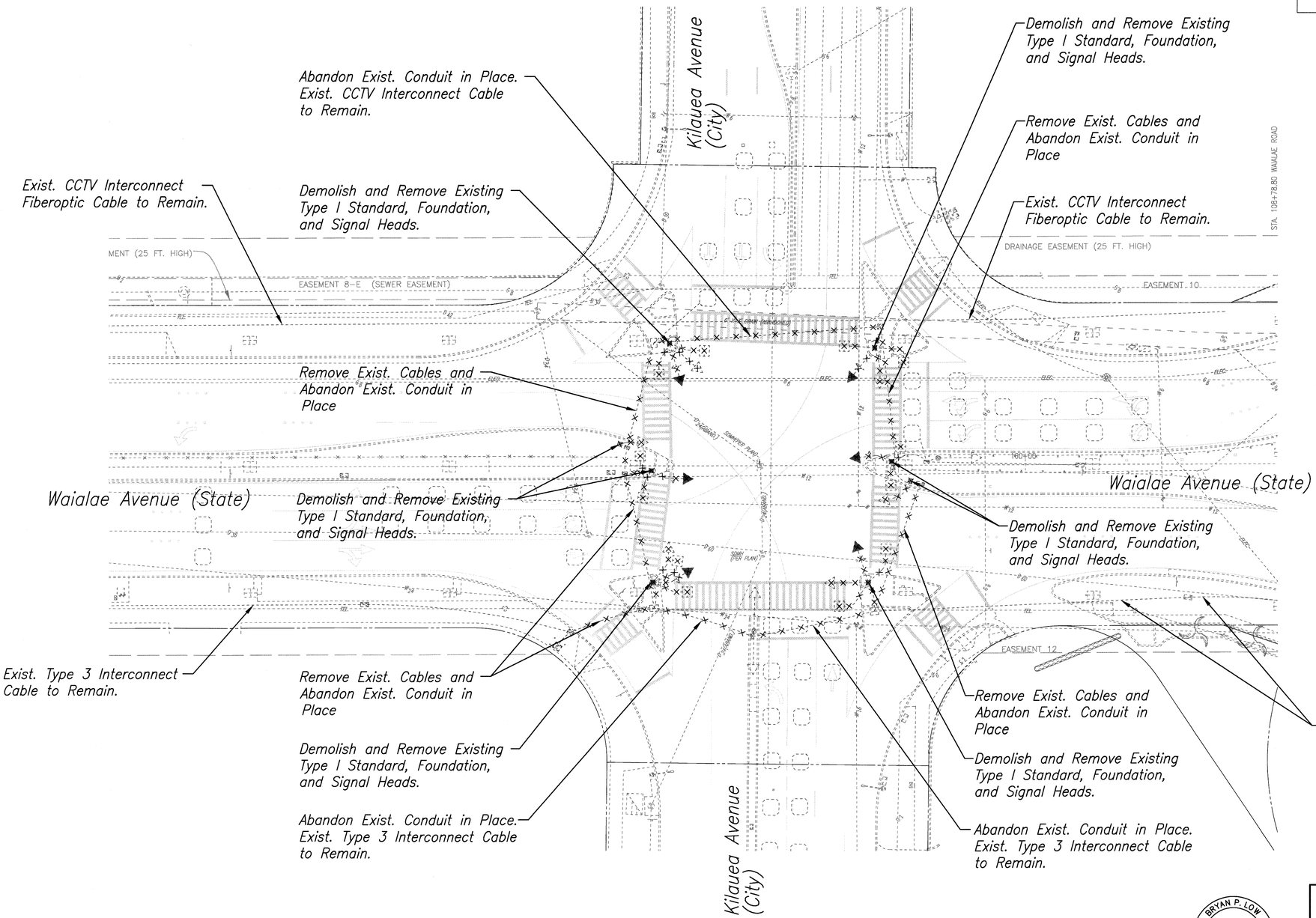
Waialae Avenue at Hunakai Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	17	203



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 18 for Signal Plan

Traffic Signal Demolition Plan

Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 2:08 pm
File: S:\Dgn\1007 Oahu Various TSM\prew\sp-wavalae 03 demo.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Demolition Plan

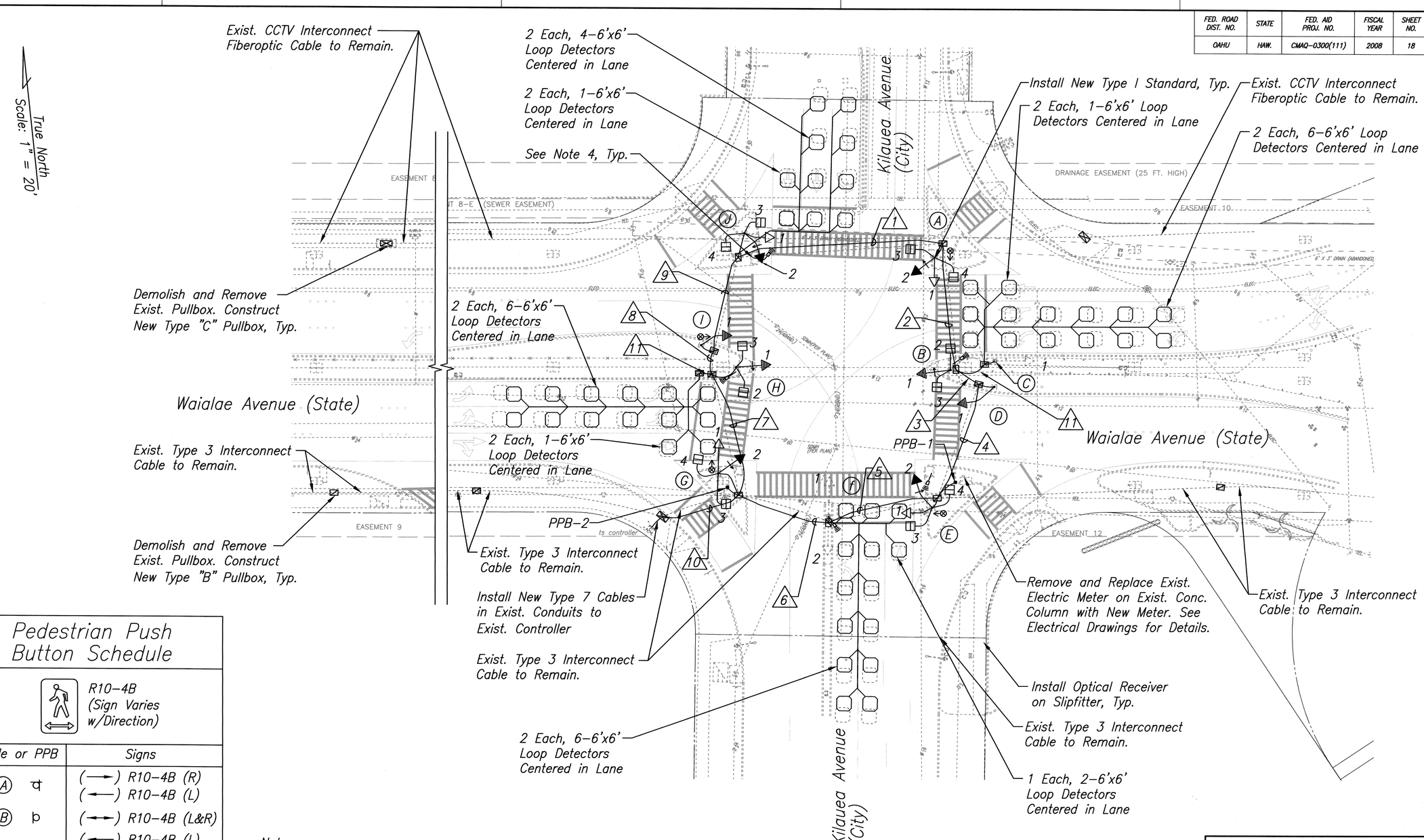
Waialae Avenue at Kilauea Avenue

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	18	203



Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(A)	(→) R10-4B (R) (←) R10-4B (L)
(B)	(↔) R10-4B (L&R)
PPB-1	(←) R10-4B (L) (←) R10-4B (L)
PPB-2	(→) R10-4B (R) (→) R10-4B (R)
(H)	(↔) R10-4B (L&R)
(J)	(→) R10-4B (R) (←) R10-4B (L)

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

Plot Date: Jul 30 2008 Plot Time: 5:40 pm
File: S:\Sgb\10077 Oahu Various TSM\Draw\Sgn-waialae 03 new.dwg

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 19 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Waialae Avenue at Kilauea Avenue

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	19	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
3	New 4-2"	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
4	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
5	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 2 – Type 7 1 – Spare
6	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 2 – Type 7 1 – Spare
7	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 1 – Type 7 1 – Spare
8	New 4-2"	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
9	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 1 – Spare
10	New 5-2" (Conc. Enc.)	2 – Type 1, Ground Wire 8 – Type 2 1 – Type 6 4 – Type 7 1 – Spare
11	New 1-2"	3 – Type 2

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H – M H – M Opticom
B	New	I-10	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H – M H – M
C	New	I-10	1	Slipfitter, One-Way	R Y G
D	New	I-10	1	Slipfitter, One-Way	R Y G
E	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H – M H – M Opticom
f	Exist. (to Remain)	I	1 2	Slipfitter, One-Way Slipfitter, One-Way	R Y G R Y G
G	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H – M H – M Opticom
H	New	I-10	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H – M H – M
I	New	I-10	1	Slipfitter, One-Way Slipfitter, One-Way	R Y G Opticom
J	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G R Y ← H – M H – M

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	←	
Pole Letter and Signal Head Number	A-1	N	N	N	A-2	N	N	N	A-3 N
	C-1	N	N	N	B-1	NP	NP	NP	A-4 N
	D-1	NP	NP	NP	E-2	N	N	N	B-2 N
	E-1	N	N	N	G-2	N	N	N	B-3 N
	f-1	*	*	*	H-1	NP	NP	NP	E-3 N
	f-2	*	*	*	J-2	N	N	N	E-4 N
	G-1	N	N	N					G-3 N
	I-1	NP	NP	NP					G-4 N
	J-1	N	N	N					H-2 N
									H-3 N
									J-3 N
									J-4 N

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY ENGR.	
NOTE BOOK	TRACED BY	
	DESIGNED BY B.L.	
No.	QUANTITIES BY	
	CHECKED BY	

Plot Date: Jul 30 2008 Plot Time: 11:21 am
File: S:\Dpt\DOT Oahu Various TSM\Draw\Sgn-wavlnx 03a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Waialae Avenue at Kilauea Avenue

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 3 OF 3 SHEETS

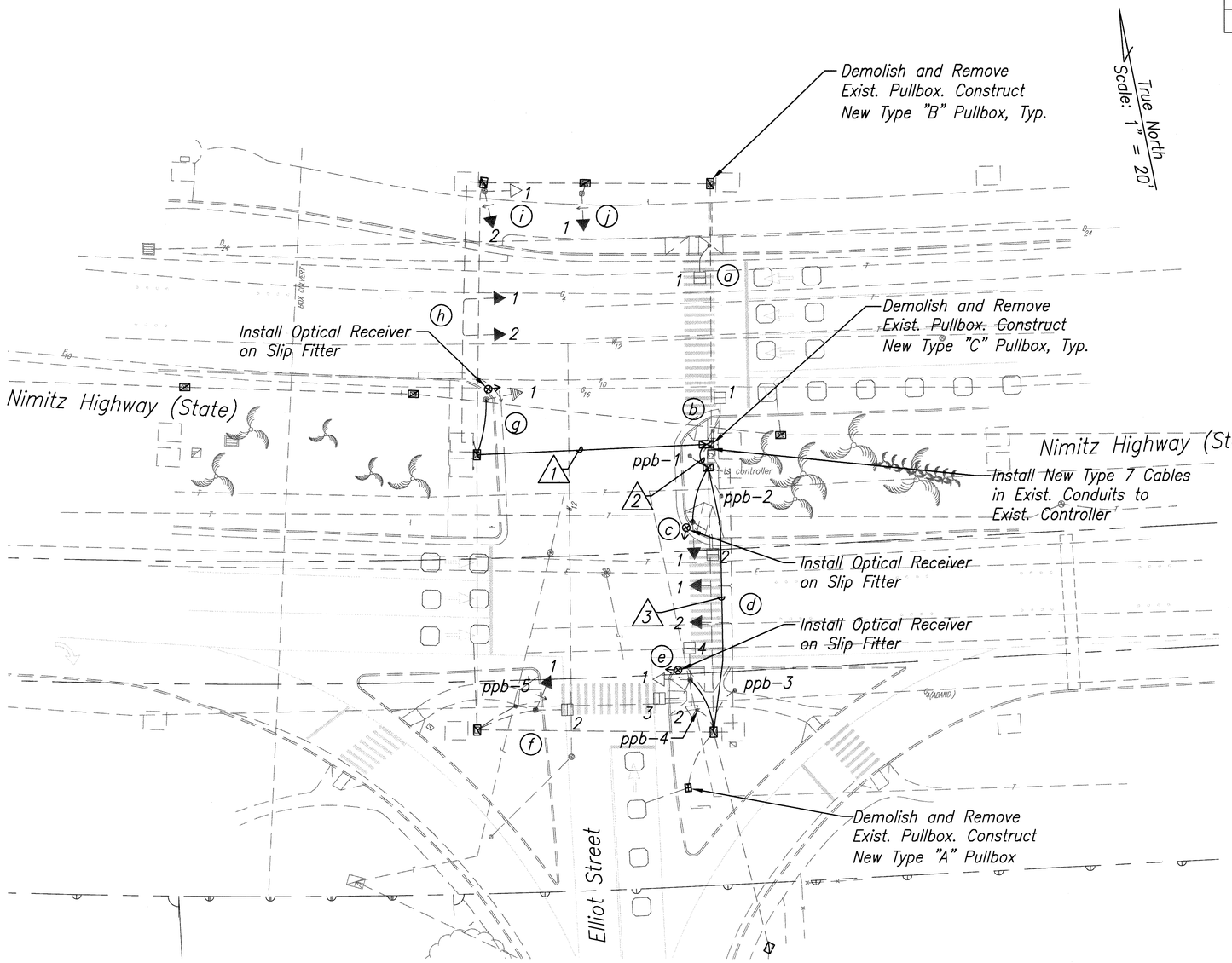
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	20	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ⓐ	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
ppb-1	*(⟶) R10-4B (R)
ppb-2	*(⟶) R10-4B (R)
ppb-3	*(⟵) R10-4B (L)
ppb-4	*(⟶) R10-4B (R)
ppb-5	*(⟵) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 21 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan
Scale: 1"=20'

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE

NOTE BOOK | No.

Plot Date: Jul 29 2008 Plot Time: 3:36 pm
File: S:\Opt\007 Oahu Various TSM\draw\sig-nimitz 02.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Nimitz Hwy. at Elliot Street
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	21	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 7 2 - Spare
2	New 3-2"	2 - Type 7 2 - Spare
3	New 3-2" (Conc. Enc.)	1 - Type 7 2 - Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	e-1	*	*	*	c-1	*	*	*	f-1	*	*	*	a-1* b-1*
	e-2	*	*	*	d-1	*	*	*	g-1	Ⓟ	Ⓟ	Ⓟ	c-2* e-3*
	i-1	*	*	*	d-2	*	*	*	i-2	*	*	*	e-4* f-2*
					h-1	*	*	*	j-1	*	*	*	
					h-2	*	*	*					

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slip Fitter, One-Way	H - M
b	Existing (to Remain)	I	1	Slip Fitter, One-Way	H - M
c	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y ↑ H - M * Opticom
d	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
e	Existing (to Remain)	I	1 2 3 4	Slip Fitter, Two-Way Slip Fitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slip Fitter, One-Way	R Y G R Y G H - M H - M * Opticom
f	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y ← H - M
g	Existing (to Remain)	I	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y ← * Opticom
h	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
i	Existing (to Remain)	I	1 2	Slip Fitter, Two-Way Slip Fitter, Two-Way	R Y G R Y ←
j	Existing (to Remain)	I	1	Slip Fitter, Two-Way	R Y ←

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 3:37 pm
File: S:\Bpl\007 Oahu Various TSM \drive \gp--nimitz 02b.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Elliot Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

21

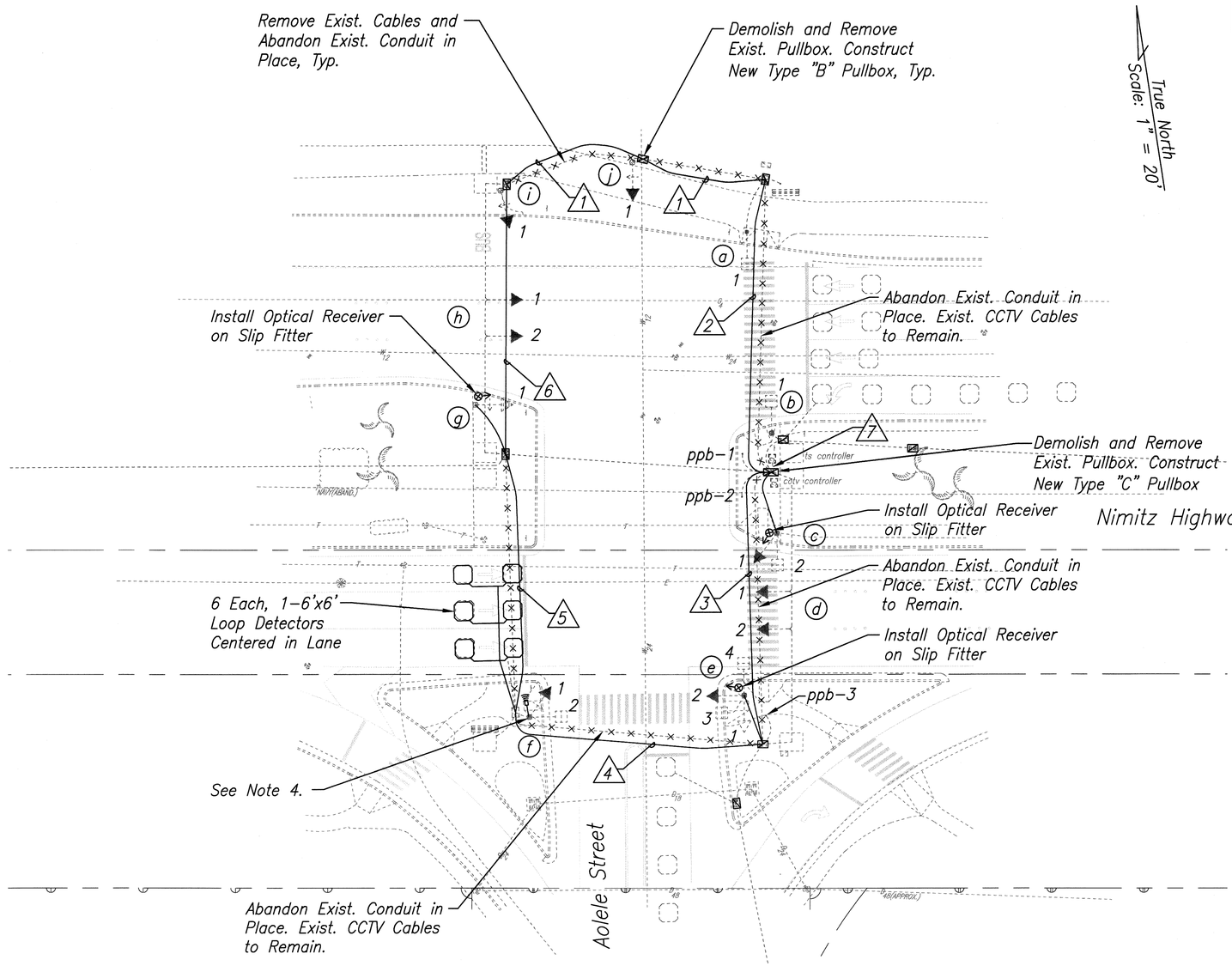
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	22	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a)	*(→) R10-4B (R) *(←) R10-4B (L)
ppb-1	*(→) R10-4B (R)
ppb-2	*(←) R10-4B (L)
ppb-3	*(→) R10-4B (R) *(→) R10-4B (R)
(f)	*(→) R10-4B (R) *(←) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 23 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY KNOR
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:37 pm
File: S:\Bpl\LOT Oahu Various TSM \dgn\nimitz 03.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Aolele Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

22

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	23	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2"	1 - Type 1, Ground Wire 1 - Type 7 1 - Spare
2	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Type 7 1 - Spare
3	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 4 - Type 2 1 - Type 7 1 - Spare
4	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 2 1 - Spare
5	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare
6	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 7 1 - Spare
7	Exist. 4-2"	⊕1 - Type 1, Ground Wire ⊕1 - Type 1, Ground Wire ⊕3 - Type 2 ⊕2 - Type 7 †1 - Service

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	e-1	*	*	*	c-1	*	*	*	f-1	*	*	*	a-1*	b-1*
					d-1	*	*	*	g-1	Ⓟ	Ⓟ	Ⓟ	c-2*	e-3*
					d-2	*	*	*	i-1	*	*	*	e-4*	f-2*
					e-2	*	*	*	j-1	*	*	*		
					h-1	*	*	*						
					h-2	*	*	*						

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slip Fitter, One-Way	H - M
b	Existing (to Remain)	I	1	Slip Fitter, One-Way	H - M
c	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y ↑ H - M * Opticom
d	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
e	Existing (to Remain)	I	1 2 3 4	Slip Fitter, Two-Way Slip Fitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slip Fitter, One-Way	R Y G R Y ↑ H - M H - M * Opticom
f	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y ← H - M
g	Existing (to Remain)	I	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y ← * Opticom
h	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
i	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y ←
j	Existing (to Remain)	I	1	Slip Fitter, Two-Way	R Y ←

* Install on Existing Standard

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY ENGR.	
NOTE BOOK	TRACED BY	
	DESIGNED BY B.L.	
No.	QUANTITIES BY	
	CHECKED BY	

Plot Date: Jul 29 2008 Plot Time: 3:38 pm
File: S:\Sys\LOOT Oahu Various TSM\dgn\sjp-nimitz 03c.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1226 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Aolele Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

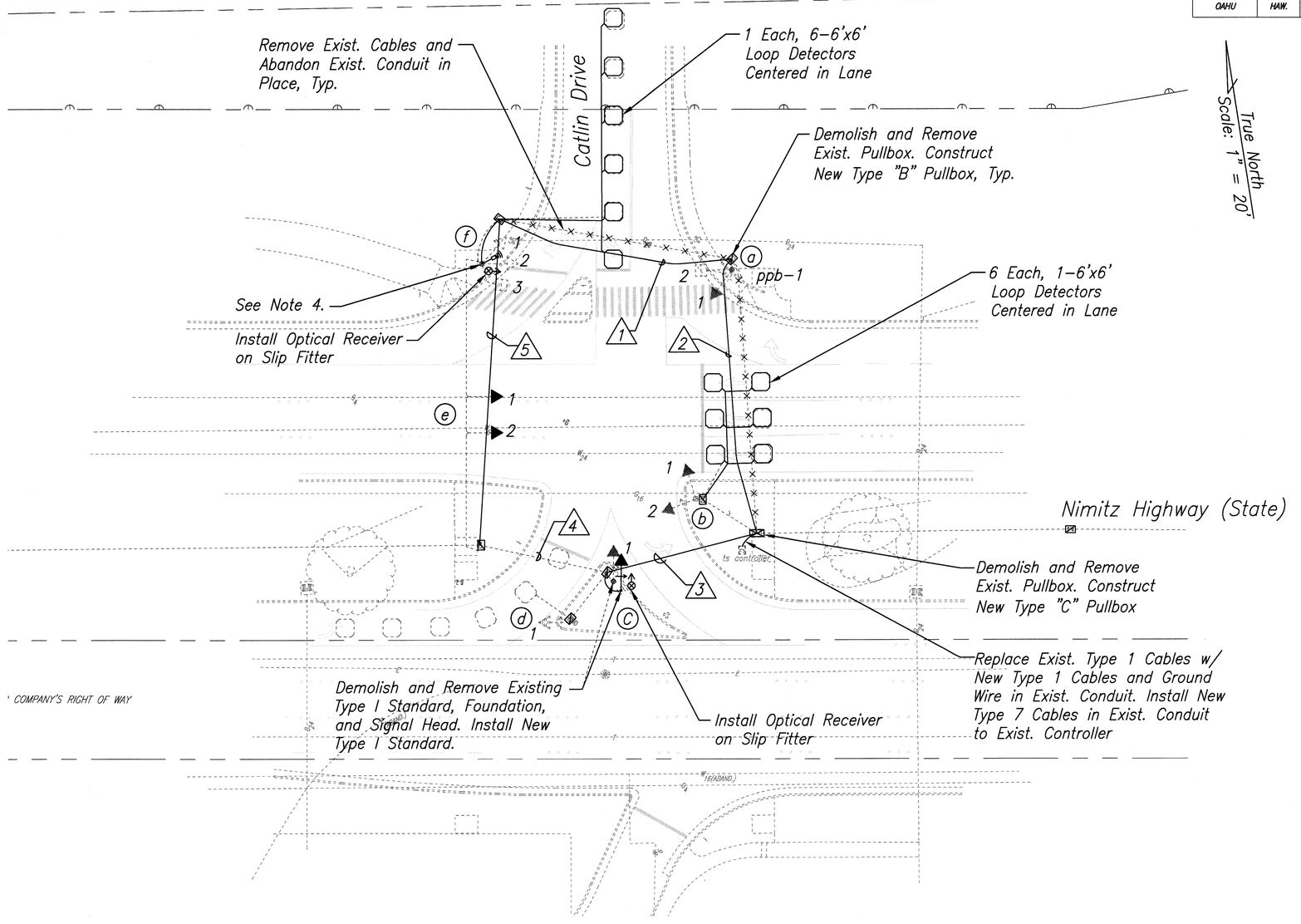
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	24	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1	*(←) R10-4B (L)
(f)	*(→) R10-4B (R)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 25 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan
Scale: 1"=20'

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L.L. | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

Plot Date: Jul 29 2008 Plot Time: 3:39 pm
File: S:\By\DOT Oahu Various TSM \drew \sp-nimitz 04.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1326 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Catlin Drive

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	25	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
3	Exist. 2-2"	ᴿ 1 – Type 1, Ground Wire † 1 – Type 2 ⊕ 1 – Type 7
4	Exist. 1-2"	ᴿ 1 – Type 1, Ground Wire
5	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Spare

† = Existing Cables to Remain

ᴿ = Remove Exist. 19 Conductor Cable And Replace w/ New Type 1 Cable as Designated

⊕ = Add Designated Cable within Existing Conduit

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	f-1	*	*	*	b-1	*	*	*	a-1	*	*	*	a-2* f-3*
	f-2	*	*	*	e-1	*	*	*	b-2	*	*	*	
					e-2	*	*	*	C-1	ᴺ	ᴺ	ᴺ	
									d-1	Ⓟ	Ⓟ	Ⓟ	

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

ᴺ = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y ← H – M
b	Existing (to Remain)	I	1 2	Slip Fitter, Two-Way Slip Fitter, Two-Way	R Y ↑ R Y ←
C	New	I-10	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y ← * Opticom
d	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y ←
e	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
f	Existing (to Remain)	I	1 2 3	Slip Fitter, Two-Way Slip Fitter, Two-Way Pole Bracket, One-Way	R Y G R Y G H – M

* Install on Existing Standard

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	" "
	DESIGNED BY B.L.	" "
No.	QUANTITIES BY	
	CHECKED BY	

Plot Date: Jul 29 2008 Plot Time: 3:40 pm
File: S:\Sig\LOT Oahu Various TSM \draw \sig-nimitz Cat\c.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Catlin Drive

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

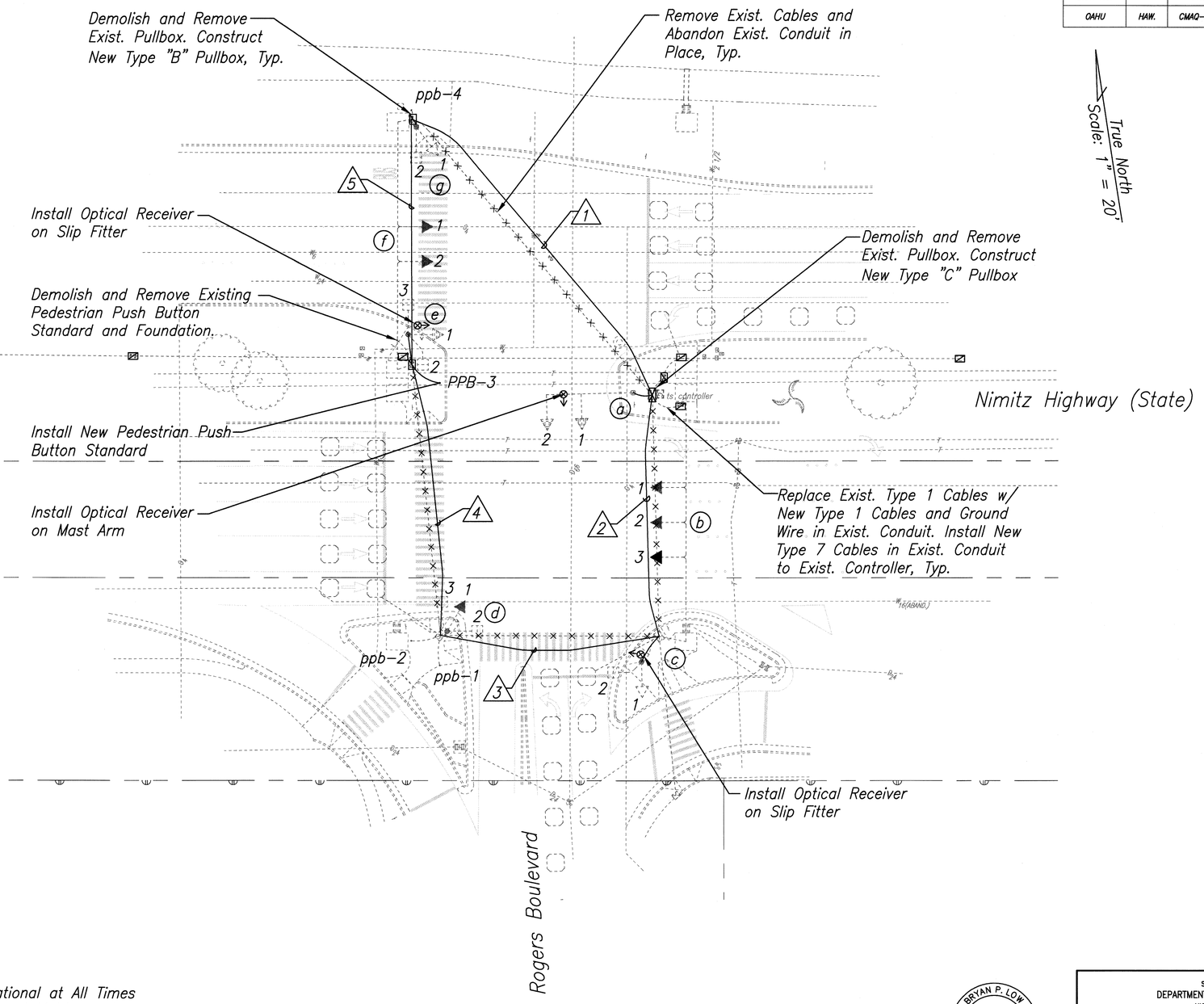
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	26	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(c)	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
ppb-1	*(⟵) R10-4B (L)
ppb-2	*(⟶) R10-4B (R)
PPB-3	(⟷) R10-4B (R & L)
ppb-4	*(⟵) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 27 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan
Scale: 1"=20'

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Rogers Boulevard

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

26

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE

Plot Date: Jul 29 2008 Plot Time: 3:41 pm
File: S:\Sig\1007 Oahu Various TSM \arrow \sig-nimitz 05.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	27	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 7 1 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 6 – Type 2 1 – Type 7 1 – Spare
3	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 1 – Spare
4	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Spare
5	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 7 1 – Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	a-1	Ⓟ	Ⓟ	Ⓟ	a-2	Ⓟ	Ⓟ	Ⓟ	a-1	*	*	*	c-2*	d-2*
	c-1	*	*	*	b-1	*	*	*	d-1	*	*	*	d-3*	e-2*
	g-1	*	*	*	b-2	*	*	*	e-1	Ⓟ	Ⓟ	Ⓟ	e-3*	g-2*
					b-3	*	*	*						
					f-1	*	*	*						
					f-2	*	*	*						

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	II	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y G R Y ↑ * Opticom
b	Existing (to Remain)	Soffit	1 2 3	Soffit Mount Soffit Mount Soffit Mount	R Y ↑ R Y ↑ R Y ↑
c	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y G H – M * Opticom
d	Existing (to Remain)	I	1 2 3	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H – M H – M
e	Existing (to Remain)	I	1 2 3	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slip Fitter, One-Way	R Y ← H – M H – M * Opticom
f	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
g	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 3:42 pm
File: S:\Eph\2007 Oahu Various TSM\dgn\sp-nimitz 05a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1126-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Rogers Boulevard

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	28	203

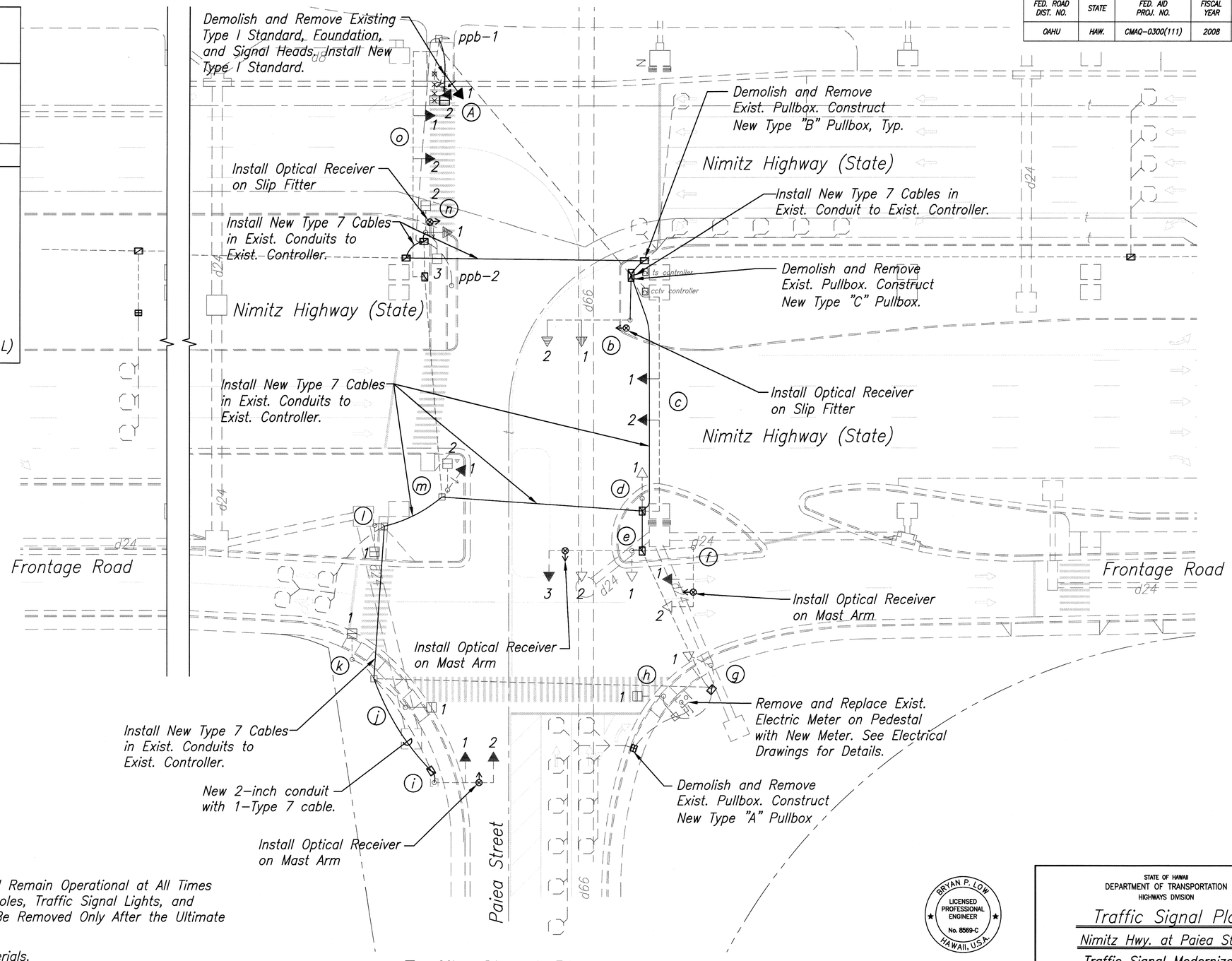
Pedestrian Push Button Schedule



R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1 ɖ	*(⟵) R10-4B (L)
(i) ơ	*(⟶) R10-4B (R)
(k) ơ	*(⟵) R10-4B (L)
(l) ɖ	*(⟶) R10-4B (R)
(m) ɖ	*(⟵) R10-4B (L)
(n) þ	*(⟵) R10-4B (L)
ppb-2 þ	*(⟷) R10-4B (R & L)

* = Exist. PPB to Remain



Traffic Signal Plan
Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 29 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:43 pm
File: S:\Byk\TDT Oahu Various TSM \plans\sig-nimitz 08.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Paiea Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	29	203

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	A-1	N	N	N	b-2	Ⓟ	Ⓟ	Ⓟ	m-1	*	*	*	A-2 N	h-1*
	b-1	Ⓟ	Ⓟ	Ⓟ	c-1	*	*	*	n-1	Ⓟ	Ⓟ	Ⓟ	j-1*	k-1*
	d-1	*	*	*	c-2	*	*	*					l-1*	m-2*
	e-1	*	*	*	e-3	*	*	*					n-2*	n-3*
	e-2	*	*	*	f-1	*	*	*						
	f-2	*	*	*	i-1	*	*	*						
	g-1	*	*	*	i-2	*	*	*						
					o-1	*	*	*						
					o-2	*	*	*						

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
b	Existing (to Remain)	II	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y G R Y ↑ * Opticom
c	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
d	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y G
e	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y G R Y G R Y ↑ * Opticom
f	Existing (to Remain)	II	1 2	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y ↑ R Y G * Opticom
g	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y G
h	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
i	Existing (to Remain)	II	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y ↑ R Y ↑ * Opticom
j	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
k	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
l	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
m	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y ← H – M
n	Existing (to Remain)	I	1 2 3	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slip Fitter, One-Way	R Y ← H – M H – M * Opticom
o	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 3:44 pm
File: S:\By\1207 Oahu Various TSM \draw\ tsp-nimitz 06s.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Paiea Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

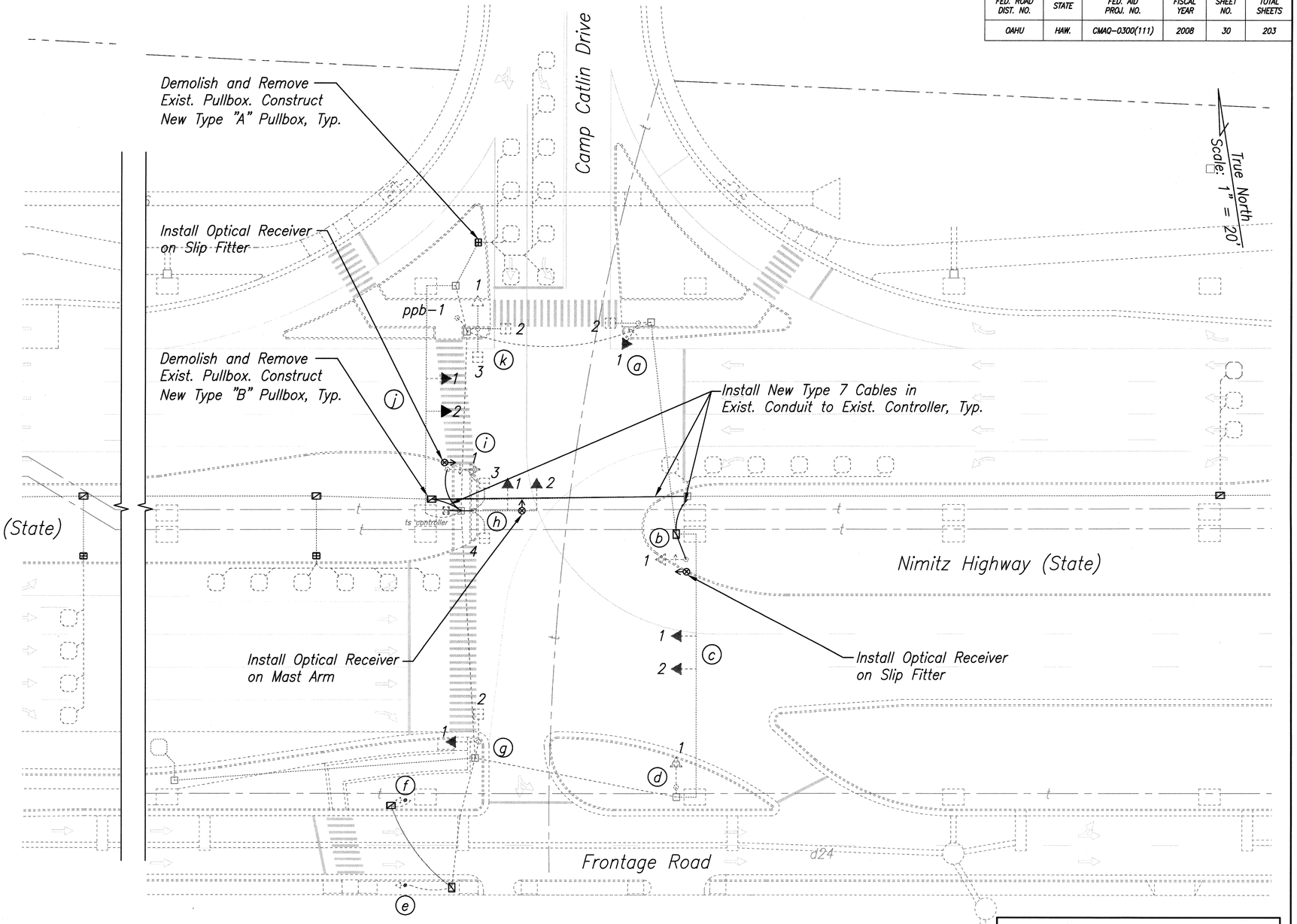
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	30	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	σ	*(⟶) R10-4B (R)
(g)	þ	*(⟵) R10-4B (L)
(h)	þ	*(⟷) R10-4B (R & L)
(c)	þ	*(⟶) R10-4B (R) *(⟵) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 31 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan
Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:45 pm
File: S:\Sjb\1DOT Oahu Various TSM \draw\gp-nimitz 07.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Camp Catlin Road
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	31	203

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Flashing Red Beacon Signal Head	Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	a–1	*	*	*	c–1	*	*	*	b–1	Ⓟ	Ⓟ	Ⓟ	e–1* f–1*	a–2* g–2*
	d–1	Ⓟ	Ⓟ	Ⓟ	c–2	*	*	*	i–1	Ⓟ	Ⓟ	Ⓟ		h–3* h–4*
	k–1	*	*	*	g–1	*	*	*						k–2* k–3*
					h–1	*	*	*						
					h–2	*	*	*						
					j–1	*	*	*						
					j–2	*	*	*						

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slip Fitter, One–Way	R Y G
			2	Pole Bracket, One–Way	H – M
b	Existing (to Remain)	I	1	Slip Fitter, One–Way	R Y ←
				Slip Fitter, One–Way	* Opticom
c	Existing (to Remain)	Soffit	1	Soffit Mount	R Y ↑
			2	Soffit Mount	R Y ↑
d	Existing (to Remain)	I	1	Slip Fitter, One–Way	R Y G
e	Existing (to Remain)	I	1	Slip Fitter, One–Way	R
f	Existing (to Remain)	I	1	Slip Fitter, One–Way	R
g	Existing (to Remain)	I	1	Slip Fitter, One–Way	R Y ↑
			2	Pole Bracket, One–Way	H – M
h	Existing (to Remain)	II	1	Mast Arm, One–Way	R Y ↑
			2	Mast Arm, One–Way	R Y ↑
			3	Pole Bracket, Two–Way	H – M
			4	Pole Bracket, Two–Way	H – M
				Mast Arm, One–Way	* Opticom
i	Existing (to Remain)	I	1	Slip Fitter, One–Way	R Y ←
				Slip Fitter, One–Way	* Opticom
j	Existing (to Remain)	Soffit	1	Soffit Mount	R Y ↑
			2	Soffit Mount	R Y ↑
k	Existing (to Remain)	I	1	Slip Fitter, One–Way	R Y G
			2	Pole Bracket, Two–Way	H – M
			3	Pole Bracket, Two–Way	H – M

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 3:46 pm
File: S:\Dgn\1007 Oahu Various TSM\dgnw\sgp-nimitz d7o.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Camp Catlin Road

Traffic Signal Modernization
Various Locations – Oahu
Federal–Aid Project No. CMAQ–0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

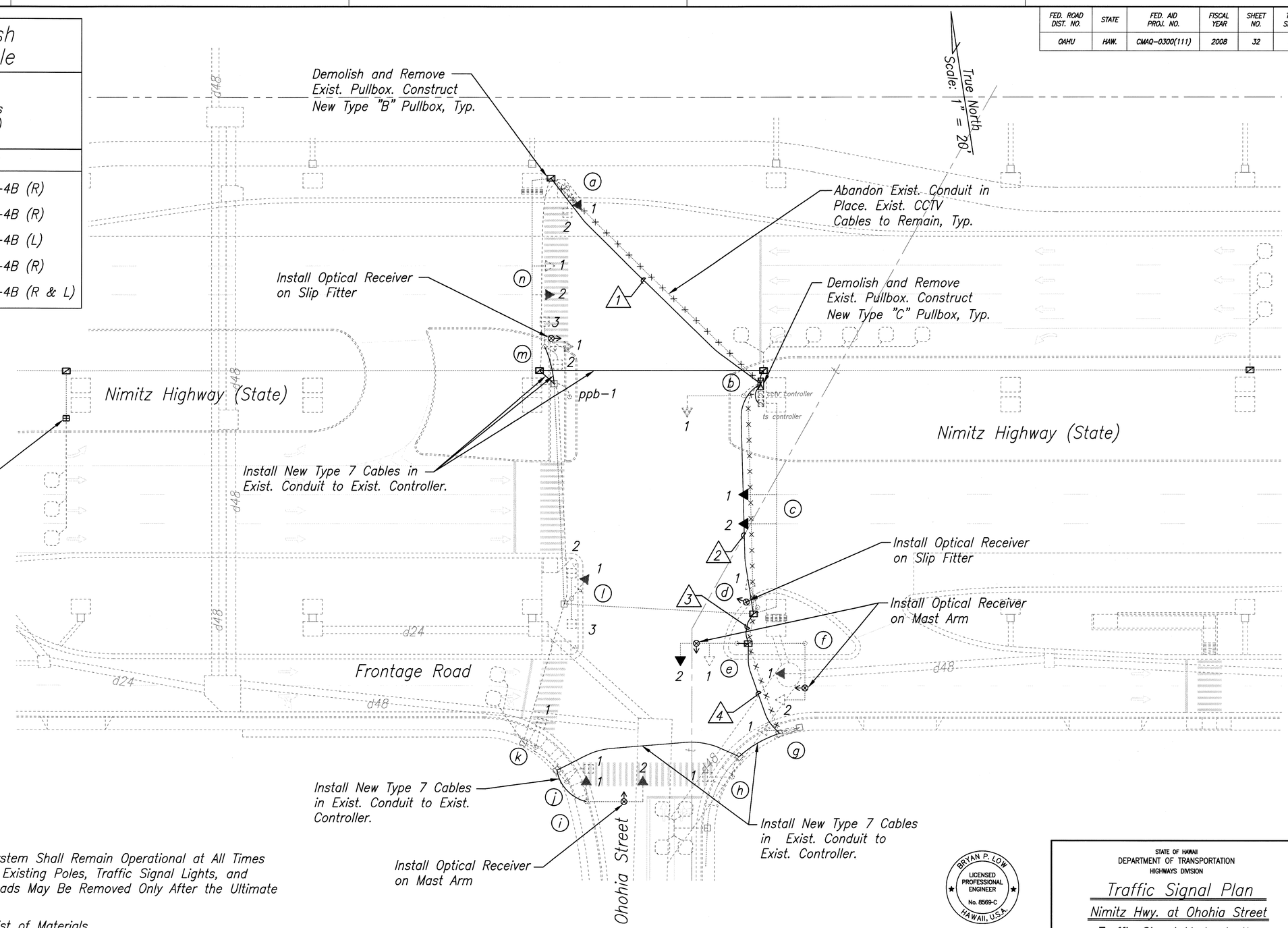
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	32	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	p	*(⟶) R10-4B (R)
(h)	σ	*(⟶) R10-4B (R)
(j)	σ	*(⟵) R10-4B (L)
(k)	q	*(⟶) R10-4B (R)
(l)	p	*(⟷) R10-4B (R & L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 33 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 29 2008 Plot Time: 3:46 pm
File: S:\Sy\2007 Oahu Various TSM \drwg \gr-mnitz 08.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Ohohia Street
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	33	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 2 – Spare
2	New 5-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 2 – Type 2 4 – Type 7 1 – Spare
3	New 5-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 2 – Type 2 3 – Type 7 1 – Spare
4	New 5-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	b-1	Ⓟ	Ⓟ	Ⓟ	a-1	*	*	*	l-1	*	*	*	a-2*	h-1*
	d-1	*	*	*	c-1	*	*	*	m-1	Ⓟ	Ⓟ	Ⓟ	j-1*	k-1*
	e-2	*	*	*	c-2	*	*	*					l-2*	l-3*
	f-2	*	*	*	e-1	*	*	*					m-2*	m-3*
	g-1	*	*	*	f-1	*	*	*						
	n-1	*	*	*	i-1	*	*	*						
					i-2	*	*	*						
					n-2	*	*	*						

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
c	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
d	Existing (to Remain)	I	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y G * Opticom
e	Existing (to Remain)	II	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y G R Y ↑ * Opticom
f	Existing (to Remain)	II	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y ↑ R Y G * Opticom
g	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y G
h	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
i	Existing (to Remain)	II	1 2	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y ↑ R Y ↑ * Opticom
j	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
k	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
l	Existing (to Remain)	I	1 2 3	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H – M H – M
m	Existing (to Remain)	I	1 2 3 4	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slip Fitter, One-Way	R Y ← H – M H – M * Opticom
n	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y G R Y ↑

* Install on Existing Standard

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY ENGR.	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY B.L.	
	QUANTITIES BY	
	CHECKED BY	

Plot Date: Jul 29 2008 Plot Time: 3:47 pm
File: S:\Dgn\1007 Oahu Various TSM\strew\sp-nimitz 08a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Ohohia Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

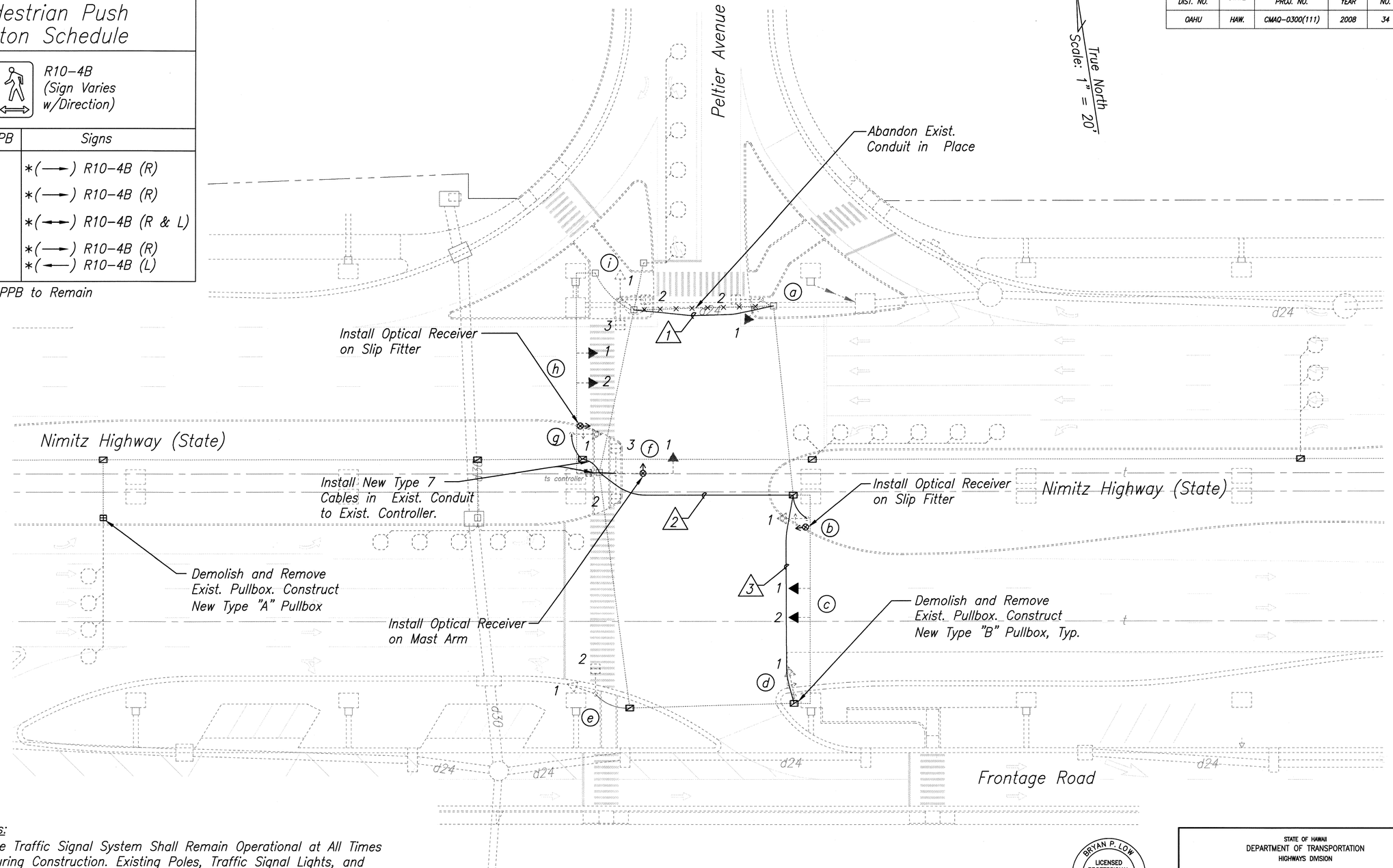
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	34	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	ơ	*(⟶) R10-4B (R)
(e)	ơ	*(⟶) R10-4B (R)
(f)	þ	*(⟷) R10-4B (R & L)
(i)	ϕ	*(⟶) R10-4B (R) *(⟵) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 35 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan
Scale: 1"=20'

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

Plot Date: Jul 29 2008 Plot Time: 3:43 pm
File: S:\Dpt\Dot Oahu Various TSM \draw \tp-nimitz 09.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Peltier Avenue

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	35	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Spare
2	New 3-2" (Conc. Enc.)	1 - Type 7 2 - Spare
3	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	e-1	*	*	*	f-1	*	*	*	a-1	*	*	*	a-2*	e-2*
	i-1	*	*	*	c-1	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ	f-2*	f-3*
					c-2	*	*	*	d-1	Ⓟ	Ⓟ	Ⓟ	i-2*	i-3*
					h-1	*	*	*	g-1	Ⓟ	Ⓟ	Ⓟ		
					h-2	*	*	*						

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y ← H - M
b	Existing (to Remain)	I	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y ← * Opticom
c	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
d	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y ←
e	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H - M
f	Existing (to Remain)	II	1 2 3	Mast Arm, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, One-Way	R Y ↑ H - M H - M * Opticom
g	Existing (to Remain)	I	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y ← * Opticom
h	Existing (to Remain)	Soffit	1 2	Soffit Mount Soffit Mount	R Y ↑ R Y ↑
i	Existing (to Remain)	I	1 2 3	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G H - M H - M

* Install on Existing Standard

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY ENGR.	
NOTE BOOK	TRACED BY	* * * * *
	DESIGNED BY B.L.	
No.	QUANTITIES BY	
	CHECKED BY	

Plot Date: Jul 29 2008 Plot Time: 3:49 pm
File: S:\Plan\DOT Oahu Various TSM \drwg \tp-nimitz 09a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1426 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Peltier Avenue

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

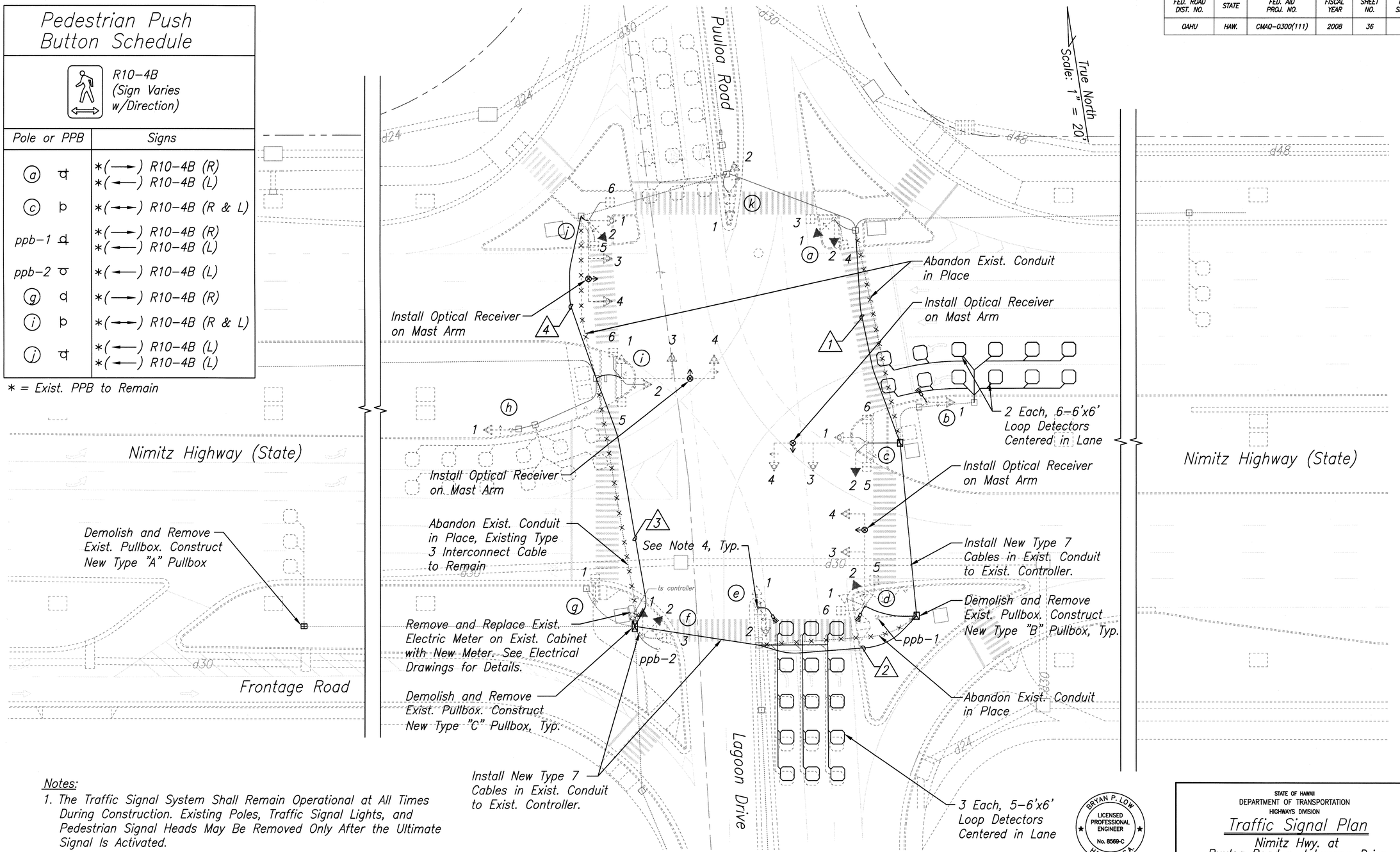
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	36	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a)	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
(c)	*(⟷) R10-4B (R & L)
ppb-1	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
ppb-2	*(⟵) R10-4B (L)
(g)	*(⟶) R10-4B (R)
(i)	*(⟷) R10-4B (R & L)
(j)	*(⟵) R10-4B (L) *(⟵) R10-4B (L)

* = Exist. PPB to Remain



Traffic Signal Plan
Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 37 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY | DRAWN BY | ENGR. | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:50 pm
File: S:\Dgn\DOT Oahu Various TSM \draw \gp-mimitz 10.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Puuloa Road and Lagoon Drive
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	37	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slip Fitter, Two-Way	R Y ←
			2	Slip Fitter, Two-Way	R Y ↑
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M
b	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y ←
c	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y ←
			2	Pole Bracket, Two-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ←
			5	Pole Bracket, Two-Way	H – M
			6	Pole Bracket, Two-Way	H – M
				Mast Arm, One-Way	* Opticom
d	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ↑
			5	Pole Bracket, Two-Way	H – M
			6	Pole Bracket, Two-Way	H – M
				Mast Arm, One-Way	* Opticom
e	Existing (to Remain)	I	1	Slip Fitter, Two-Way	R Y G ←
			2	Slip Fitter, Two-Way	R Y ←
f	Existing (to Remain)	I	1	Slip Fitter, Two-Way	R Y ↑
			2	Slip Fitter, Two-Way	R Y ←
			3	Pole Bracket, One-Way	H – M
g	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
h	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y ←
i	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y G
			4	Mast Arm, One-Way	R Y ←
			5	Pole Bracket, Two-Way	H – M
			6	Pole Bracket, Two-Way	H – M
				Mast Arm, One-Way	* Opticom
j	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y ↑
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ↑
			5	Pole Bracket, Two-Way	H – M
			6	Pole Bracket, Two-Way	H – M
				Mast Arm, One-Way	* Opticom
k	Existing (to Remain)	I	1	Slip Fitter, Two-Way	R Y G ←
			2	Slip Fitter, Two-Way	R Y ←

* Install on Existing Standard

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 2 – Type 2 1 – Spare
2	New 5–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 5 – Type 2 2 – Type 7 1 – Spare
3	New 5–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 7 – Type 2 2 – Type 7 1 – Spare
4	New 5–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 5 – Type 2 1– Type 7 1 – Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				12" RYG← Traffic Signal Head					Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		R	Y	G	←		
Pole Letter and Signal Head Number	d–1	*	*	*	a–2	*	*	*	a–1	*	*	*	e–1	*	*	*	*	a–3*	a–4*
	i–1	*	*	*	c–2	*	*	*	b–1	Ⓟ	Ⓟ	Ⓟ	k–1	*	*	*	*	c–5*	c–6*
	i–3	Ⓟ	Ⓟ	Ⓟ	c–3	Ⓟ	Ⓟ	Ⓟ	c–1	Ⓟ	Ⓟ	Ⓟ						d–5*	d–6*
					d–3	Ⓟ	Ⓟ	Ⓟ	c–4	Ⓟ	Ⓟ	Ⓟ						f–3*	g–1*
					d–4	Ⓟ	Ⓟ	Ⓟ	d–2	*	*	*						i–5*	i–6*
					f–1	*	*	*	e–2	Ⓟ	Ⓟ	Ⓟ						j–5*	j–6*
					j–1	Ⓟ	Ⓟ	Ⓟ	f–2	*	*	*							
					j–3	Ⓟ	Ⓟ	Ⓟ	h–1	Ⓟ	Ⓟ	Ⓟ							
					j–4	Ⓟ	Ⓟ	Ⓟ	i–2	Ⓟ	Ⓟ	Ⓟ							
									i–4	Ⓟ	Ⓟ	Ⓟ							
									j–2	*	*	*							
									k–2	Ⓟ	Ⓟ	Ⓟ							

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Puuloa Road and Lagoon Drive

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

37

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:51 pm
File: S:\Byl\DOT Oahu Various TSM \plans \Sig-nimitz 170a.dwg

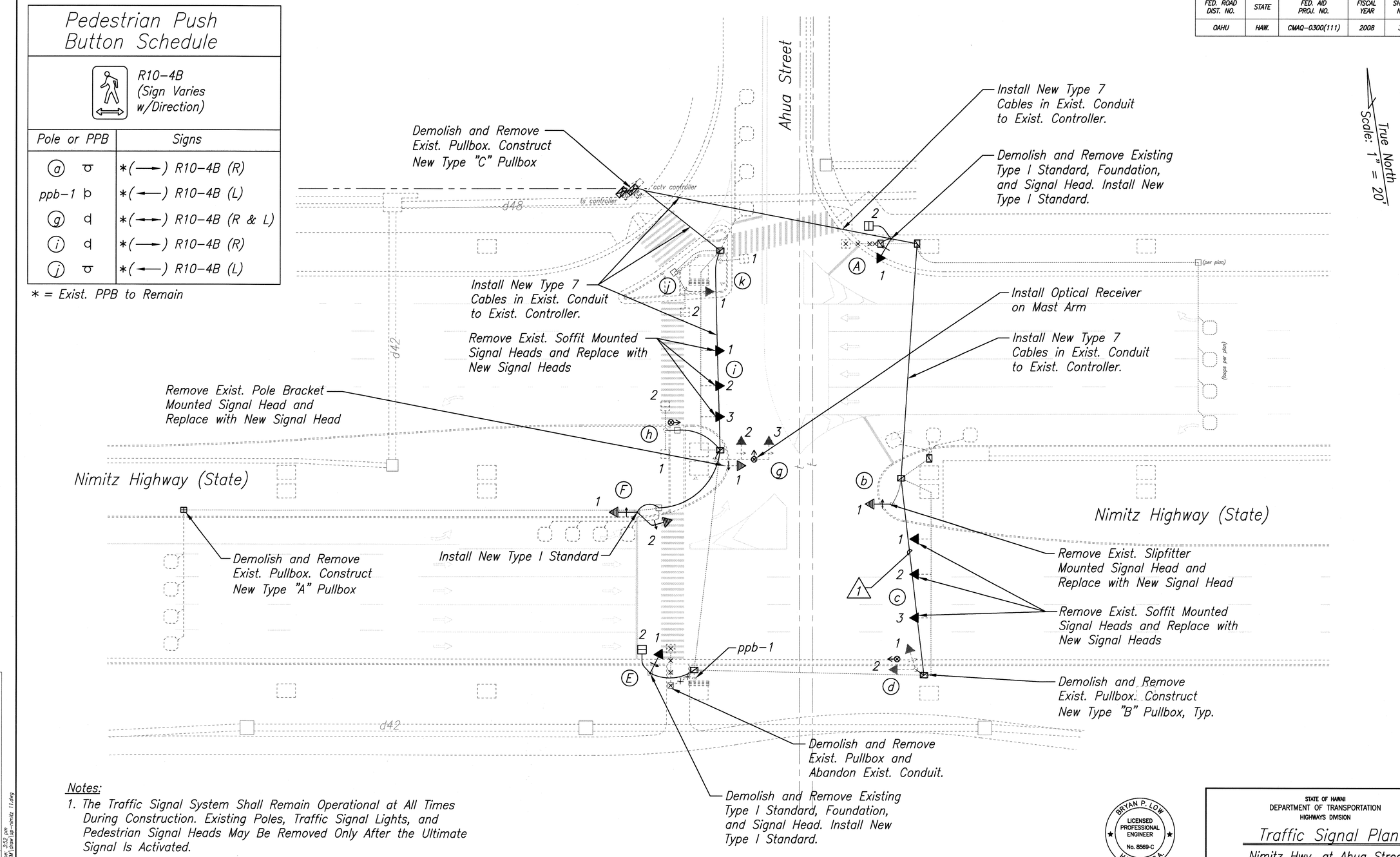
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	38	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	ơ	*(⟶) R10-4B (R)
ppb-1	þ	*(⟵) R10-4B (L)
(g)	ɑ	*(⟷) R10-4B (R & L)
(i)	ɑ	*(⟶) R10-4B (R)
(j)	ơ	*(⟵) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 39 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan
Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:52 pm
File: S:\Stp\UDOT Oahu Various TSM \draw \gs-nimitz 11.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Hwy. at Ahua Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	39	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1 2	Slip Fitter, One-Way Pole Bracket, One-way	R Y ← H – M
b	Existing (to Remain)	I	1	Slip Fitter, One-Way	R R Y ←
c	Existing (to Remain)	Soffit	1 2 3	Soffit Mount Soffit Mount Soffit Mount	R R Y ↑ R R Y ↑ R R Y ↑
d	Existing (to Remain)	I	1 2	Slip Fitter, Two-Way Slip Fitter, Two-Way Slip Fitter, One-Way	R Y ← R Y ↑ * Opticom
E	New	I-10	1 2	Slip Fitter, One-Way Pole Bracket, One-way	R Y ← H – M
F	New	I-10	1 2	Slip Fitter, Two-Way Slip Fitter, Two-Way	R Y ← R Y ←
g	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way	R R Y ← R Y ← R Y ← * Opticom
h	Existing (to Remain)	I	1 2	Slip Fitter, Two-Way Slip Fitter, Two-Way Slip Fitter, One-Way	H – M H – M * Opticom
i	Existing (to Remain)	Soffit	1 2 3	Soffit Mount Soffit Mount Soffit Mount	R R Y ↑ R R Y ↑ R R Y ↑
j	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y ↑ H – M
k	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M

* Install on Existing Standard

R Remove Exist. Signal Head and Replace w/ New Signal Head

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 7 1 – Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number					c-1	N	N	N	A-1	N	N	N	A-2 N E-2 N
					c-2	N	N	N	b-1	NP	NP	NP	h-1* h-2*
					c-3	N	N	N	d-1	*	*	*	j-2* k-1*
					d-2	*	*	*	E-1	N	N	N	
					i-1	N	N	N	F-1	NP	NP	NP	
					i-2	N	N	N	F-2	NP	NP	NP	
					i-3	N	N	N	g-1	NP	NP	NP	
					j-1	*	*	*	g-2	*	*	*	
									g-3	*	*	*	

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE

NOTE BOOK | No.

Plot Date: Jul 29 2008 Plot Time: 3:53 pm
File: S:\Sh\DOT Oahu Various TSM \draw \ga-nimitz 11a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

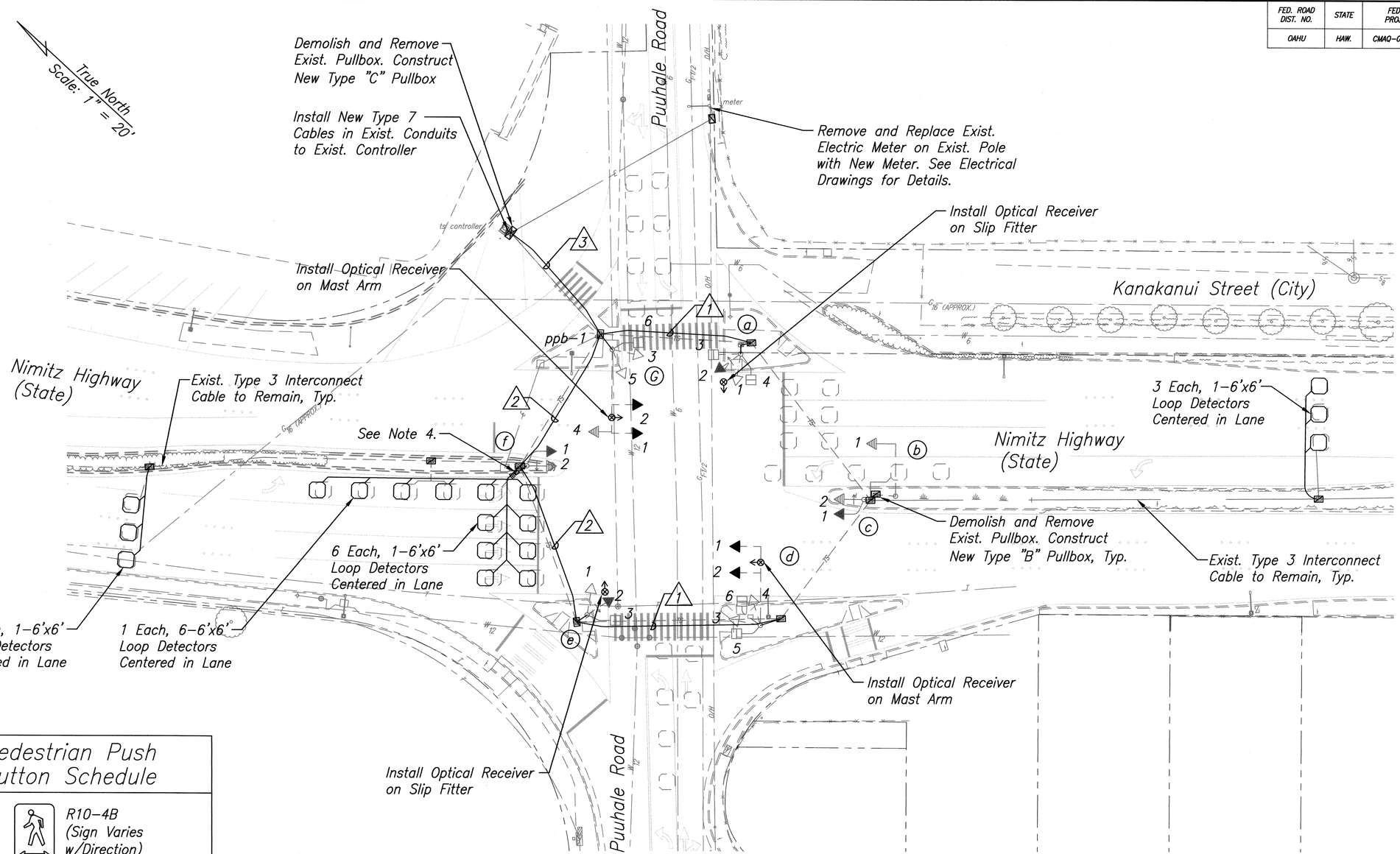
Nimitz Hwy. at Ahua Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	40	203



Traffic Signal Plan

Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	d	*(→) R10-4B (R)
		*(←) R10-4B (L)
(d)	b	*(←) R10-4B (L)
		*(←) R10-4B (L)
(e)	a	*(→) R10-4B (R)
ppb-1	c	*(←) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 41 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

Plot Date: Jul 30 2008 Plot Time: 5:41 pm
File: S:\Dgn\DOT Oahu Various TSM\area tsp-nimitz 12.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Puuhale Road

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	41	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 7 2 - Spare
2	New 3-2" (Conc. Enc.)	2 - Type 7 1 - Spare
3	New 3-2" (Conc. Enc.)	4 - Type 7 1 - Spare

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H - M
			4	Pole Bracket, Two-Way	H - M
				Slipfitter, One-Way	* Opticom
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
c	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y ↑
			2	Slipfitter, Two-Way	R Y ←
d	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
			3	Pole Bracket, Two-Way	R Y G
			4	Pole Bracket, Two-Way	R Y G
			5	Pole Bracket, Two-Way	H - M
			6	Pole Bracket, Two-Way	H - M
				Mast Arm, One-Way	* Opticom
e	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, One-Way	H - M
				Slipfitter, One-Way	* Opticom
f	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y ↑
			2	Slipfitter, Two-Way	R Y ←
g	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
			3	Pole Bracket, Two-Way	R Y G
			4	Mast Arm, One-Way	R Y ↑
			5	Pole Bracket, Two-Way	R Y G
			6	Pole Bracket, One-Way	H - M
				Mast Arm, One-Way	* Opticom

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ	a-2	*	*	*	a-3*
	d-3	*	*	*	c-1	*	*	*	c-2	Ⓟ	Ⓟ	Ⓟ	a-4*
	d-4	*	*	*	d-1	*	*	*	e-2	*	*	*	d-5*
	e-1	*	*	*	d-2	*	*	*	f-2	Ⓟ	Ⓟ	Ⓟ	d-6*
	g-3	T	*	T	f-1	*	*	*					e-3*
	g-5	*	*	*	g-1	*	*	*					g-6*
					g-2	T	*	*					
					g-4	Ⓟ	Ⓟ	Ⓟ					

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

T = Retrofit Existing Signal Lens with New L.E.D. Signal Lens and Install New Signal Lens Tunnel Hood

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY _____ DATE
DRAWN BY ENGR. * * * *
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 3:55 pm
File: S:\Bw\DOT Oahu Various TSM\draw\tp-nimitz 12b.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1326 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

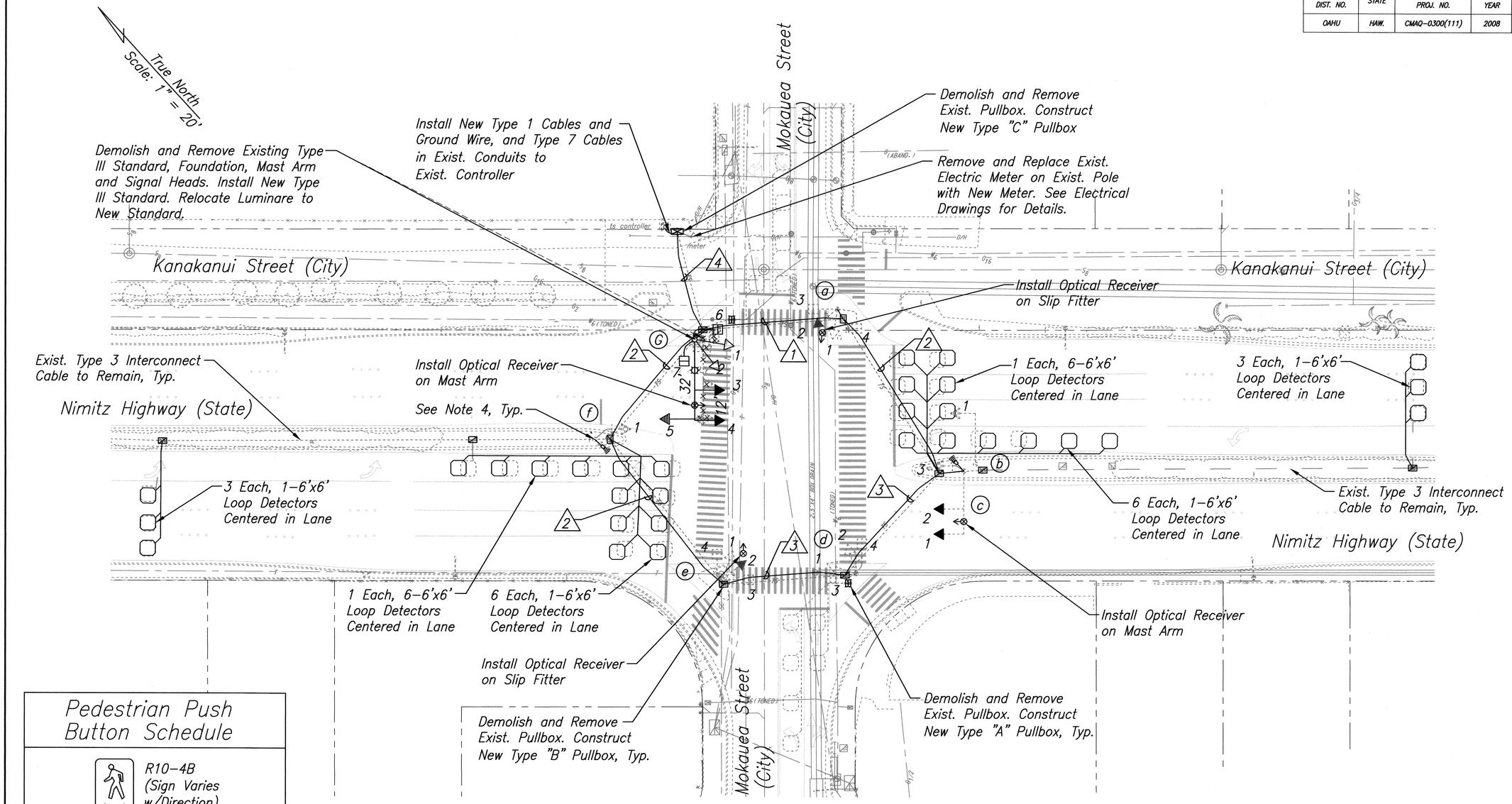
Nimitz Highway at Puuhale Road

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	42	203



Traffic Signal Plan
Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
ⓐ	⊄	*(←—) R10-4B (L) *(←—) R10-4B (L)
ⓓ	⊅	*(←—) R10-4B (L)
ⓔ	⊅	*(←—) R10-4B (L)
Ⓖ	⊄	(←—) R10-4B (L) (←—) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 43 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY | DRAWN BY ENGR. | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY

Plot Date: Jul 30 2008 Plot Time: 5:41 pm
File: S:\Sig\DST Oahu Various TSM \dgn\ Sig-nimitz 13.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Nimitz Highway at Mokauea Street
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	43	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 7 1 - Spare
2	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 7 1 - Spare
3	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 7
4	New 3-2" (Conc. Enc.)	2 - Type 1, Ground Wire 4 - Type 7 1 - Spare

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H - M
			4	Pole Bracket, Two-Way	H - M
				Slipfitter, One-Way	* Opticom
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
c	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
			3	Pole Bracket, One-Way	R Y ←
				Mast Arm, One-Way	* Opticom
d	Existing (to Remain)	III	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y G
			3	Pole Bracket, Two-Way	H - M
			4	Pole Bracket, Two-Way	H - M
e	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H - M
			4	Pole Bracket, Two-Way	H - M
				Slipfitter, One-Way	* Opticom
f	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
G	New	III-32	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y G
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ↑
			5	Mast Arm, One-Way	R Y ↑
			6	Pole Bracket, Two-Way	H - M
			7	Pole Bracket, Two-Way	H - M
				Mast Arm, One-Way	Opticom

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	†	*	b-1	Ⓟ	Ⓟ	Ⓟ	a-2	*	†	†	a-3*
	d-1	*	*	*	c-1	*	*	*	c-3	Ⓟ	Ⓟ	Ⓟ	a-4*
	d-2	*	*	*	c-2	*	*	*	e-2	*	*	†	d-3*
	e-1	*	*	*	G-1	N	N	N	f-1	Ⓟ	Ⓟ	Ⓟ	d-4*
	G-3	N	N	N	G-2	N	N	N					e-3*
	G-5	N	N	N	G-4	NP	NP	NP					e-4*
													G-6 N
													G-7 N

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY
DATE

Plot Date: Jul 29 2008 Plot Time: 3:57 pm
File: S:\Dgn\DOT Oahu Various TSM\dgn\gp-nimitz 13s.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

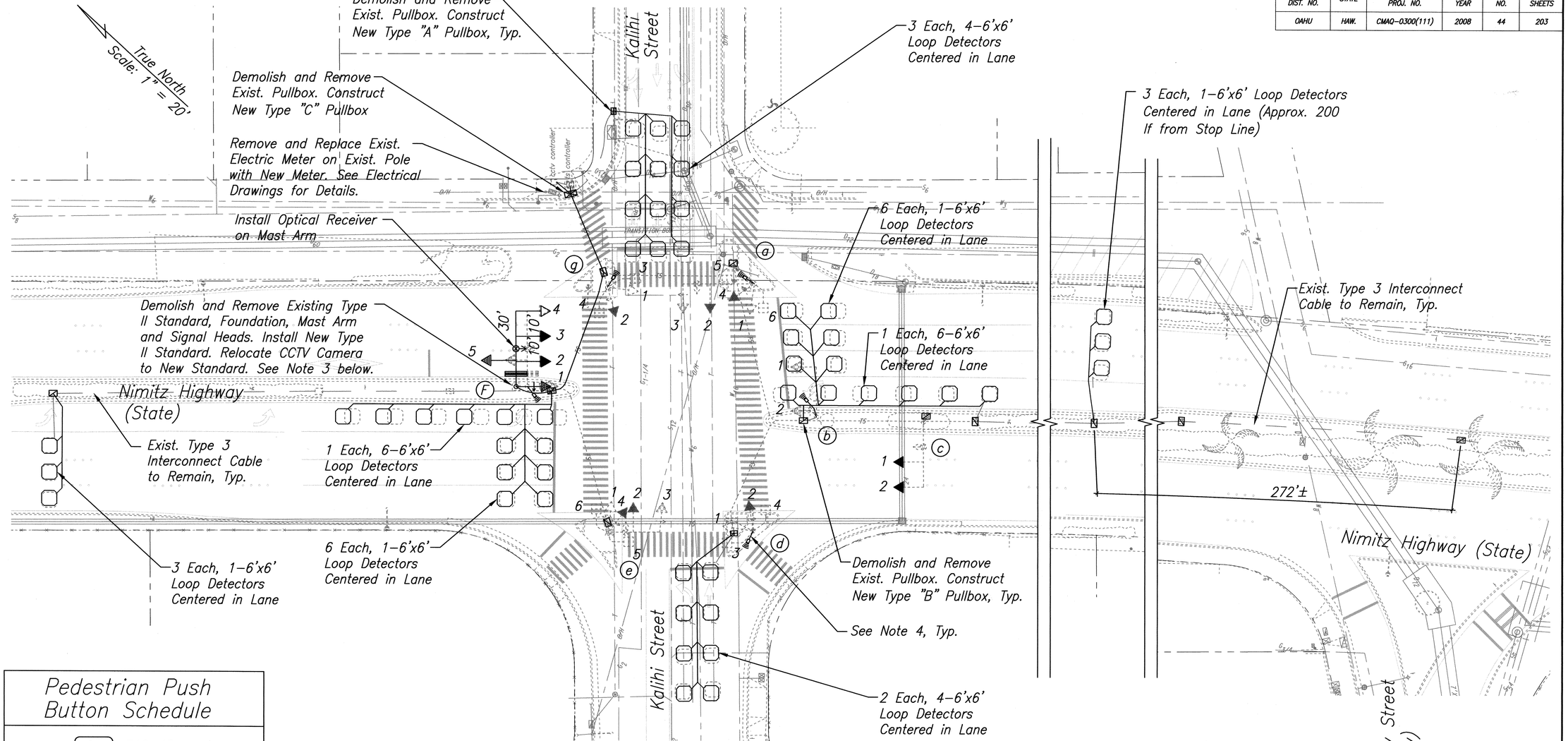
Nimitz Highway at Mokauea Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	44	203



Traffic Signal Plan

Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ⓐ ⊄	* (←—) R10-4B (L) * (←—) R10-4B (L)
ⓓ ⊄	* (—→) R10-4B (R) * (←—) R10-4B (L)
ⓔ ⊄	* (—→) R10-4B (R) * (←—) R10-4B (L)
ⓖ ⊅	* (—→) R10-4B (R) * (←—) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 45 for List of Materials.
3. Remove and Replace CCTV Camera Cables and Type 7 Cables in Exist. Conduits bewteen CCTV Controller and Relocated CCTV Camera and TS Controller and New Opticom Receiver. Cables Shall be Continuous without Splices between CCTV Camera and CCTV Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

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

Plot Date: Jul 30, 2008 Plot Time: 5:42 pm
File: S:\Sig\300 Oahu Various\Dgn\Drawings\Dgn\sht-nimitz 14.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Kalihi Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	45	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y G
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ←
			4	Pole Bracket, One-Way	R Y ←
			5	Pole Bracket, Two-Way	H – M
			6	Pole Bracket, Two-Way	H – M
				Mast Arm, One-Way	Opticom
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Pole Bracket, One-Way	R Y ←
c	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
				Mast Arm, One-Way	Opticom
d	Existing (to Remain)	III	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M
e	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y G
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ←
			4	Pole Bracket, One-Way	R Y ←
			5	Pole Bracket, Two-Way	H – M
			6	Pole Bracket, Two-Way	H – M
				Mast Arm, One-Way	Opticom
F	New	II-30	1	Pole Bracket, One-Way	R Y ←
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y G
			5	Mast Arm, One-Way	R Y ↑
				Mast Arm, One-Way	Opticom
				Mast Arm, One-Way	Ⓡ CCTV
g	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M

Ⓡ Relocate from Exist. Standard to New Standard.

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*	a-2	*	*	*	a-3	Ⓟ	Ⓟ	Ⓟ	a-5*
	d-1	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ	a-4	*	*	*	a-6*
	e-1	*	*	*	c-1	*	*	*	b-2	Ⓟ	Ⓟ	Ⓟ	d-3*
	F-4	N	N	N	c-2	*	*	*	d-2	*	*	*	d-4*
	g-1	*	*	*	e-2	*	*	*	e-3	Ⓟ	Ⓟ	Ⓟ	e-5*
					F-2	N	N	N	e-4	Ⓟ	Ⓟ	Ⓟ	e-6*
					F-3	N	N	N	F-1	NP	NP	NP	g-3*
					F-5	NP	NP	NP	g-2	*	*	*	g-4*

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

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

Plot Date: Jul 29 2008 Plot Time: 3:58 pm
File: S:\Bpl\DOT Oahu Various TSM\draw\tp-nimitz 14a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

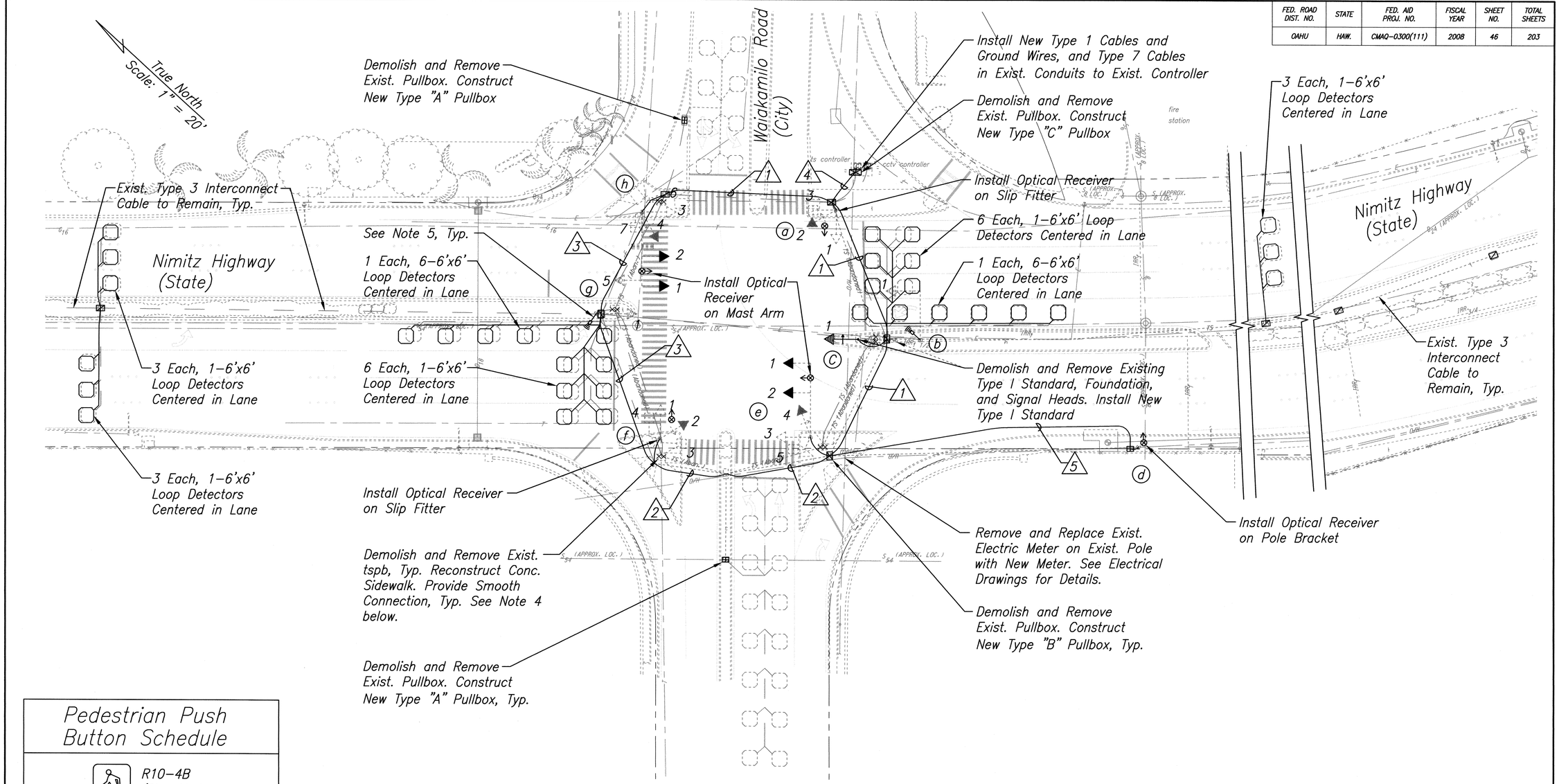
Nimitz Highway at Kalihi Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	46	203



Traffic Signal Plan

Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	a	*(⟶) R10-4B (R)
(e)	e	*(⟵) R10-4B (L)
(f)	f	*(⟶) R10-4B (R) (⟵) R10-4B (L)
(g)	g	*(⟵) R10-4B (L) *(⟵) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 47 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Contractor Shall Verify the Exist. Cables w/in the Pullboxes to be Removed are not Active Prior to Demolishing and Removing the Pullbox.
5. Install Temp. Microwave Detector on Exist. Pole.

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

Plot Date: Jul 30 2008 Plot Time: 5:43 pm
File: S:\Sig\1207 Oahu Various TSM\Varw sig-mm1x2 15.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Waiakamilo Road

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	47	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
(1)	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 7 1 – Spare
(2)	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Spare
(3)	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 7 1 – Spare
(4)	New 3-2" (Conc. Enc.)	2 – Type 1, Ground Wire 5 – Type 7 1 – Spare
(5)	New 1-2" (Conc. Enc.)	1 – Type 7

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y ← H – M * Opticom
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
C	New	I-10	1	Slipfitter, One-Way	R Y ←
d	Existing (to Remain)	I		Slipfitter, One-Way	* Opticom
e	Existing (to Remain)	II	1 2 3 4 5	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, Two-Way Mast Arm, One-Way	R Y ↑ R Y ↑ R Y G R Y ← H – M * Opticom
f	Existing (to Remain)	I	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H – M H – M * Opticom
g	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
h	Existing (to Remain)	III	1 2 3 4 5 6 7	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, One-Way	R Y ↑ R Y ↑ R Y G R Y ← R Y ↑ H – M H – M * Opticom

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ	a-2	*	*	*	a-3*
	e-3	*	*	*	e-1	*	*	*	C-1	NP	NP	NP	e-5*
	f-1	*	*	*	e-2	*	*	*	e-4	*	*	*	f-3*
	h-3	*	*	*	h-1	*	*	*	f-2	*	*	*	f-4*
					h-2	*	*	*	g-1	Ⓟ	Ⓟ	Ⓟ	h-6*
					h-5	Ⓟ	Ⓟ	Ⓟ	h-4	*	*	*	h-7*

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

NP = New Programmed Visibility Signal Lens

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE
	DRAWN BY _____
NOTE BOOK	TRACED BY _____
	DESIGNED BY B.L.
No. _____	QUANTITIES BY _____
	CHECKED BY _____

Plot Date: Jul 29 2008 Plot Time: 4:00 pm
File: S:\Sig\100T Oahu Various TSM \proj\g-nimitz 15a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

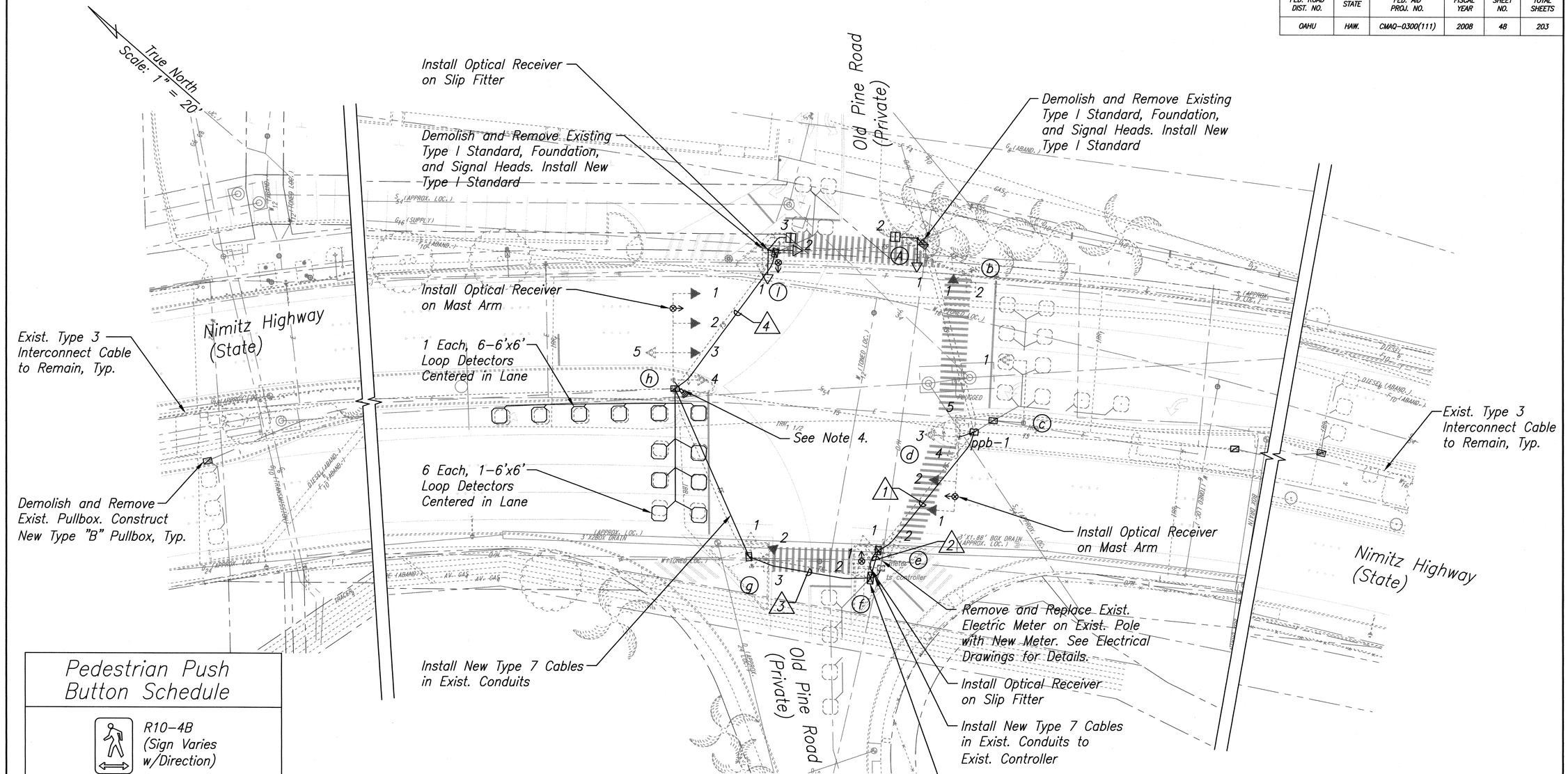
Nimitz Highway at Waiakamilo Road

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	48	203



Traffic Signal Plan
Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(b)	ᵭ	*(⟶) R10-4B (R) *(⟶) R10-4B (R)
ppb-1	þ	*(⟷) R10-4B (L&R)
(e)	ɑ	(⟶) R10-4B (R)
(f)	ơ	*(⟶) R10-4B (R)
(g)	ơ	(⟵) R10-4B (L)
(l)	ơ	(⟵) R10-4B (L)

* = Exist. PPB to Remain

Notes:
1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 49 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY: ENGR. | TRACED BY | DESIGNED BY: B.L. | QUANTITIES BY | CHECKED BY | DATE

Plot Date: Jul 30 2008 Plot Time: 5:43 pm
File: S:\Sp\DOT Oahu Various TSM Group\Sig-nimitz 16.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SHIMABUKURO, ONO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Nimitz Highway at Old Pine Road
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	49	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 7 2 - Spare
2	New 3-2"	2 - Type 7 1 - Spare
3	New 3-2" (Conc. Enc.)	2 - Type 7 1 - Spare
4	New 3-2" (Conc. Enc.)	1 - Type 7 2 - Spare

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
b	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y ← H - M
c	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
d	Existing (to Remain)	II	1 2 3 4 5	Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Pole Bracket, Two-Way Mast Arm, One-Way	R Y ↑ R Y ↑ R Y ← H - M H - M * Opticom
e	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
f	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H - M * Opticom
g	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y ← H - M
h	Existing (to Remain)	II	1 2 3 4 5	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way	R Y ↑ R Y ↑ R Y ↑ R Y ← R Y ↑ * Opticom
I	New	I-10	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y G H - M Opticom

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	A-1	N	N	N	c-1	Ⓟ	Ⓟ	Ⓟ	b-1	*	*	*	A-2 N
	e-1	*	*	*	d-1	*	*	*	d-3	Ⓟ	Ⓟ	Ⓟ	b-2*
	f-1	*	*	*	d-2	*	*	*	g-2	*	*	*	d-4*
	g-1	*	*	*	h-1	*	*	†	h-4	Ⓟ	Ⓟ	Ⓟ	d-5*
	I-1	N	N	N	h-2	*	*	†					e-2*
	I-2	N	N	N	h-3	*	*	†					f-2*
					h-5	Ⓟ	Ⓟ	Ⓟ					g-3*
													I-3 N

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

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

Plot Date: Jul 29 2008 Plot Time: 4:01 pm
File: S:\Dpl\DOT Oahu Various TSM\draw\Sp-nimitz 16a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Old Pine Road

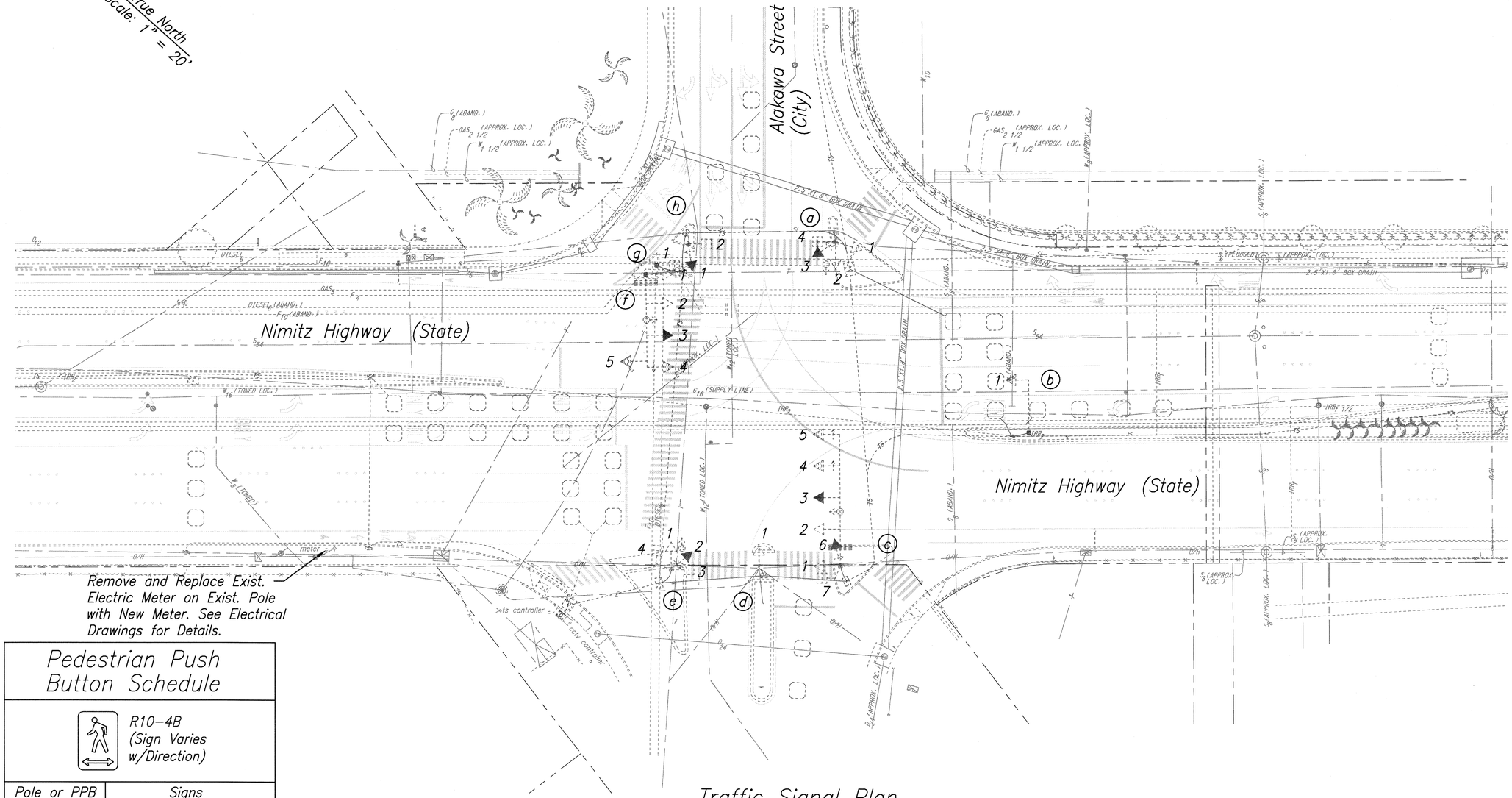
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	50	203

True North
Scale: 1" = 20'



Pedestrian Push Button Schedule

R10-4B
(Sign Varies w/Direction)

Pole or PPB		Signs
(a)	P	*(←) R10-4B (L)
(c)	P	*(→) R10-4B (R)
(e)	P	R(←) R10-4B (L) R(→) R10-4B (R)
(g)	P	*(←) R10-4B (L)
(h)	P	*(→) R10-4B (R)

* = Exist. PPB to Remain
R = Remove Exist. PPB. Replace w/ New PPB.

Traffic Signal Plan
Scale: 1"=20'

Notes:
1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 51 for List of Materials.

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

Plot Date: Jul 29 2008 Plot Time: 4:32 pm
File: S:\Dpl\DOT Oahu Various TSM\prew \dp-mmlz 17.dwg

BRYAN P. LOW
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LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENBO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Nimitz Highway at Alakawa Street
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	51	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y G
			3	Slipfitter, One-Way	R Y ←
			4	Pole Bracket, One-Way	H – M
				Slipfitter, One-Way	Opticom
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
c	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y G
			2	Mast Arm, One-Way	R Y G
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ←
			5	Mast Arm, One-Way	R Y ←
			6	Pole Bracket, One-Way	R Y ←
			7	Pole Bracket, One-Way	H – M
				Mast Arm, One-Way	Opticom
d	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
e	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M
				Slipfitter, One-Way	Opticom
f	Existing (to Remain)	II	1	Slipfitter, One-Way	R Y G
			2	Mast Arm, One-Way	R Y G
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ←
			5	Mast Arm, One-Way	R Y ↑
				Mast Arm, One-Way	Opticom
g	Existing (to Remain)	I	1	Pole Bracket, One-Way	H – M
h	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
			2	Pole Bracket, One-Way	H – M

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
Pole Letter and Signal Head Number		R	Y	G		R	Y	↑		R	Y	←	
	a–1	*	*	*	b–1	Ⓟ	Ⓟ	Ⓟ	a–3	*	*	†	a–4*
	a–2	*	*	*	c–3	*	*	†	c–4	Ⓟ	Ⓟ	Ⓟ	c–7*
	c–1	*	*	†	f–3	*	*	*	c–5	Ⓟ	Ⓟ	Ⓟ	e–3*
	c–2	*	*	*	f–5	Ⓟ	Ⓟ	Ⓟ	c–6	*	*	†	e–4*
	d–1	*	*	*					e–2	*	*	*	g–1*
	e–1	*	*	*					f–4	Ⓟ	Ⓟ	Ⓟ	h–2*
	f–1	*	*	*					h–1	*	*	†	
	f–2	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

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

Plot Date: JU 29 2008 Plot Time: 4:03 pm
File: S:\Bjl\1007 Oahu Various TSM \plan \pp-nimitz 17a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, LENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Alakawa Street

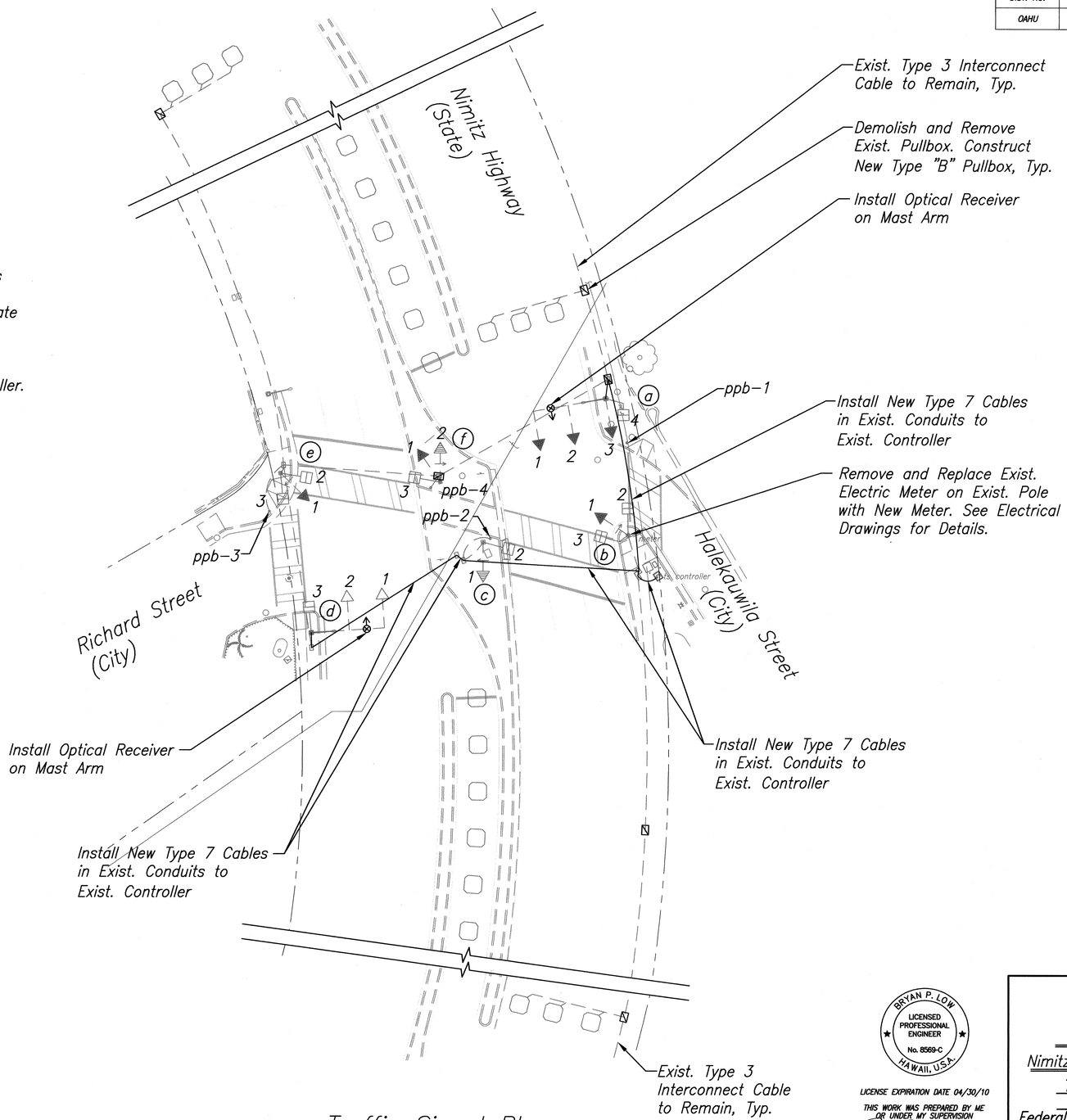
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	52	203

True North
Scale: 1" = 20'



Traffic Signal Plan
Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 53 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1	*(←—) R10-4B (L)
ⓑ	*(—→) R10-4B (R) *(←—) R10-4B (L)
ppb-2	*(←→) R10-4B (L&R)
ⓓ	R(←—) R10-4B (L)
ⓔ	*(—→) R10-4B (R) *(←—) R10-4B (L)
ppb-3	*(←—) R10-4B (L)
ppb-4	*(←→) R10-4B (L&R)

* = Exist. PPB to Remain
R = Remove Exist. PPB. Replace w/ New PPB.

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

Plot Date: Aug 25 2008 Plot Time: 11:38 am
File: S:\Sig\1207 Oahu Various TSM\dgn\sp-nimitz 18.dwg

BRYAN P. LOW
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No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Halekauwila Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

52

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	53	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	III	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
			3	Pole Bracket, One-Way	R Y ↑
			4	Pole Bracket, One-Way	H – M
				Mast Arm, One-Way	* Opticom
b	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
			2	Pole Bracket, Two-Way	H – M
			3	Pole Bracket, Two-Way	H – M
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
			2	Pole Bracket, One-Way	H – M
d	Existing (to Remain)	III	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y G
			3	Pole Bracket, One-Way	H – M
				Mast Arm, One-Way	* Opticom
e	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
			2	Pole Bracket, Two-Way	H – M
			3	Pole Bracket, Two-Way	H – M
f	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y ↑
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H – M

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
Pole Letter and Signal Head Number		R	Y	G		R	Y	↑		R	Y	←	
	d-2	*	*	*	a-1	*	*	*	b-1	*	*	*	a-4*
					a-2	*	*	*	c-1	Ⓟ	Ⓟ	Ⓟ	b-2*
					a-3	*	*	*	e-1	*	*	*	b-3*
					d-1	*	*	*	f-2	Ⓟ	Ⓟ	Ⓟ	c-2*
					f-1	*	†	†					d-3*
													e-2*
													e-3*
													f-3*

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

ORIGINAL PLAN | NOTE BOOK No.

SURVEY PLOTTED BY DATE
DRAWN BY ENGR.
TRACED BY * * * *
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Aug. 25, 2008 Plot Time: 11:58 am
File: S:\Plan\LOT Oahu Various TSM \drawings\plan-nimitz 19a.dwg

BRYAN P. LOW
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No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Nimitz Highway at Halekauwila Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

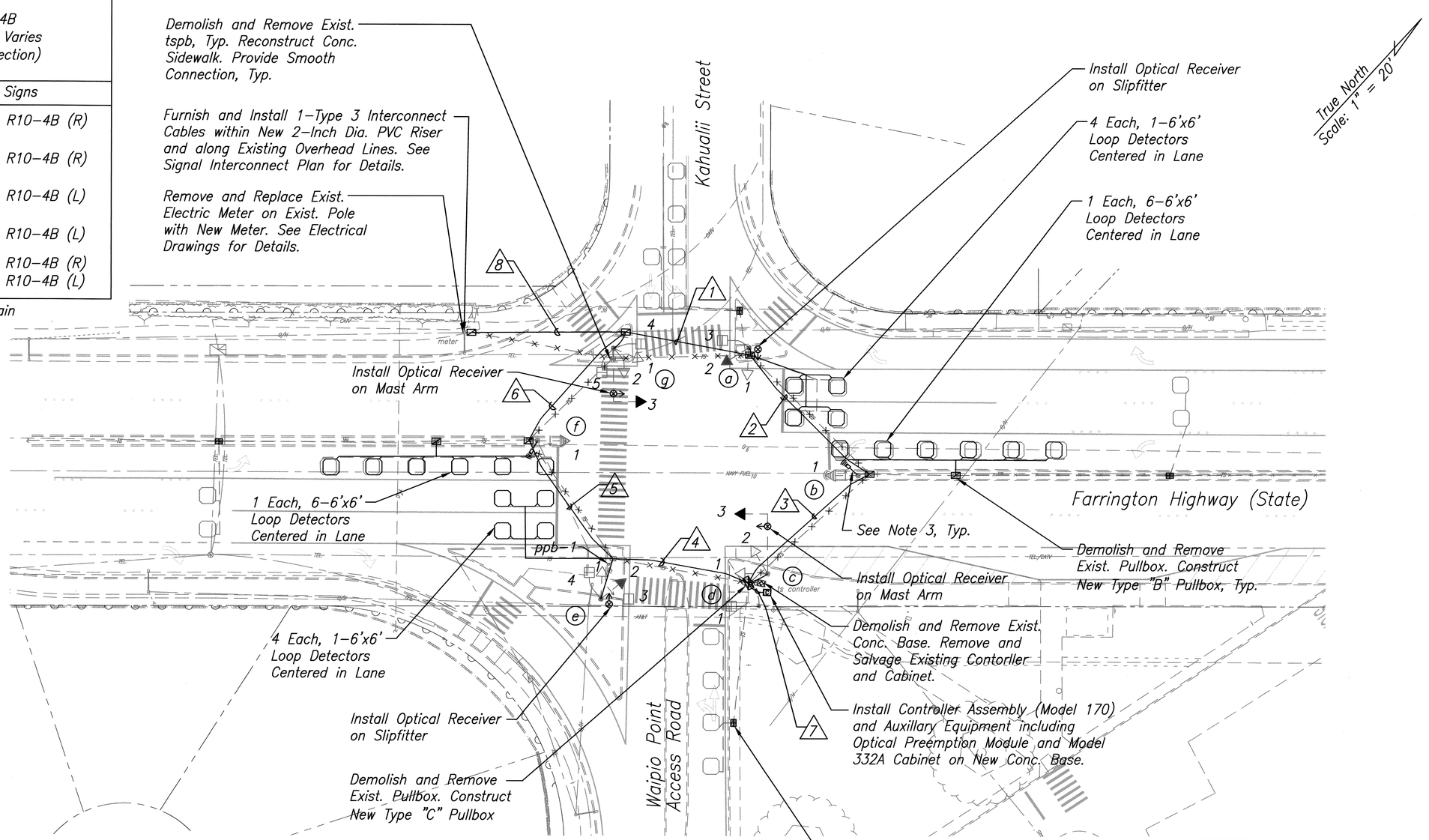
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	54	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a) ơ	*(⟶) R10-4B (R)
(d) ơ	*(⟶) R10-4B (R)
(e) ơ	*(⟵) R10-4B (L)
ppb-1 þ	*(⟵) R10-4B (L)
(g) ơ	*(⟶) R10-4B (R) *(⟵) R10-4B (L)

* = Exist. PPB to Remain



Traffic Signal Plan
Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 55 for List of Materials.
3. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY B.L.
DESIGNED BY
QUANTITIES BY
CHECKED BY

Plot Date: Jul 30 2008 Plot Time: 5:46 pm
File: S:\Sig\Oahu Various Traffic Signals\Waipio Point Access Rd\tsp-wp01.dwg

BRYAN P. LOW
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No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Waipio Point Access Rd.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	55	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 1 – Type 7 1 – Spare
3	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 6 – Type 2 1 – Type 7 1 – Spare
4	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 6 – Type 2 1 – Type 3 1 – Type 6 2 – Type 7 1 – Spare
5	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 1 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
6	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
7	New 8-2"	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 7 – Type 2 6 – Type 2 1 – Type 3 1 – Type 6 4 – Type 7 1 – Spare
8	New 3-2" (Conc. Enc.)	1 – Type 3 1 – Type 6 1 – Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	a-1	*	*	*	c-3	*	*	*	a-2	*	*	*	a-3†	d-1†
	c-1	*	*	*	g-3	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ	e-3†	e-4†
	c-2	*	*	*					e-2	*	*	*	g-4†	g-5†
	e-1	*	*	*					f-1	Ⓟ	Ⓟ	Ⓟ		
	g-1	*	*	*										
	g-2	*	*	*										

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y ← H – M * Opticom
b	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
c	Existing (to Remain)	II	1 2 3	Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y G R Y G R Y ↑ * Opticom
d	Existing (to Remain)	I	1	Slipfitter, One-Way	H – M
e	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y ← H – M * Opticom
f	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
g	Existing (to Remain)	II	1 2 3 4 5	Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, (Horiz.)	R Y G R Y G R Y ↑ H – M H – M * Opticom

* Install on Existing Standard

ORIGINAL PLAN | SURVEY PLOTTED BY | DATE
NOTE BOOK | DRAWN BY | ENGR.
No. | TRACED BY
DESIGNED BY B.U.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 4:08 pm
File: S:\Dgn\DOT Oahu Various TSM\dran\tsp-mod1a.dwg

BRYAN P. LOW
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No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Waipio Point Access Rd.

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

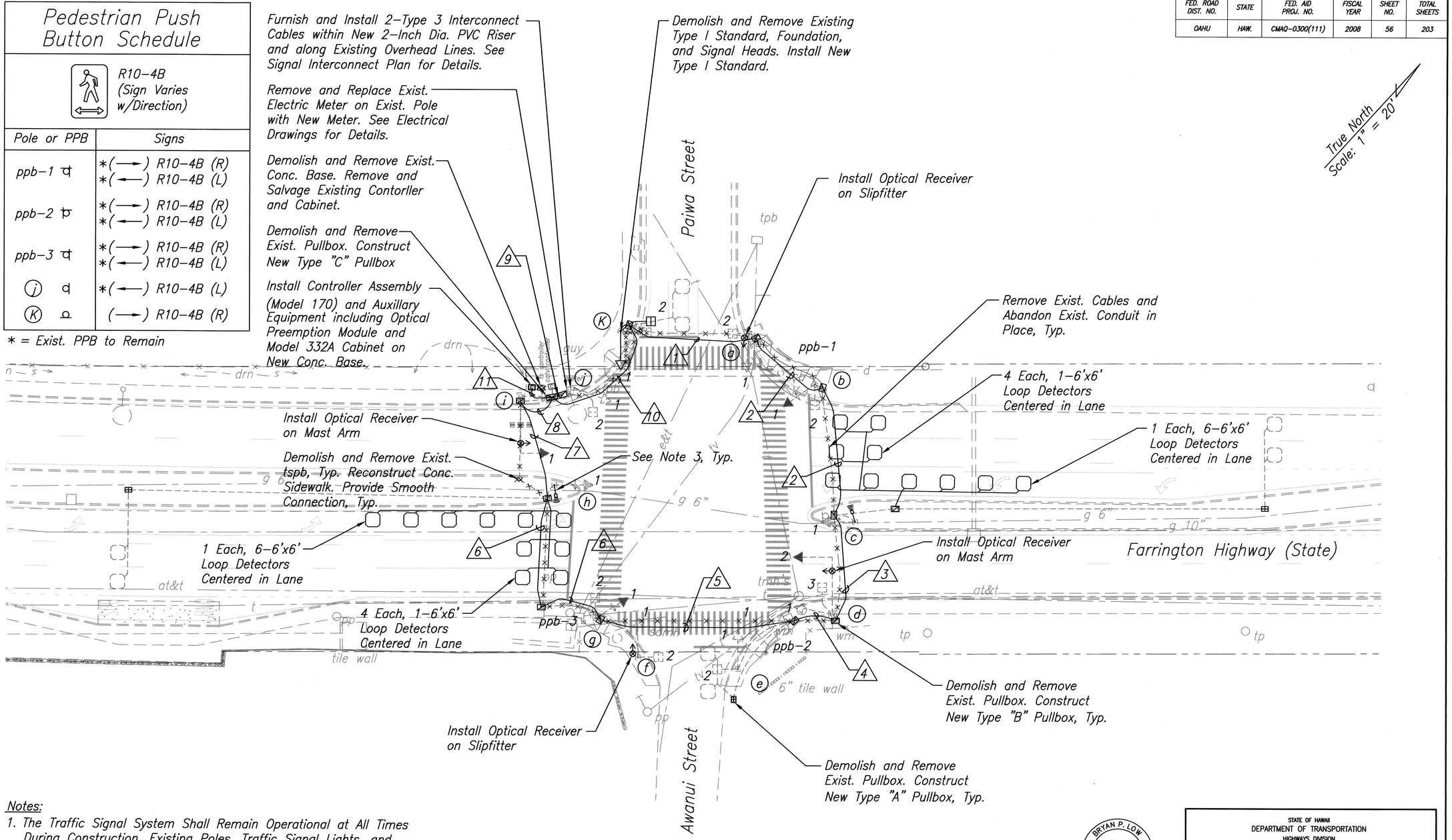
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	56	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1	*(→) R10-4B (R) *(←) R10-4B (L)
ppb-2	*(→) R10-4B (R) *(←) R10-4B (L)
ppb-3	*(→) R10-4B (R) *(←) R10-4B (L)
(j)	*(←) R10-4B (L)
(K)	(→) R10-4B (R)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 57 for List of Materials.
3. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 30, 2008 Plot Time: 5:46 pm
File: S:\Sig\1207 Oahu Various TSM\Drwg\Sig-wo02.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Paiwa St.
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	57	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 5 - Type 2 2 - Type 7 1 - Spare
2	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 4 - Type 2 1 - Type 7 1 - Spare
3	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 2 1 - Type 7 1 - Spare
4	New 4-2"	1 - Type 1, Ground Wire 3 - Spare
5	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 2 2 - Spare
6	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 2 1 - Type 7 1 - Spare
7	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 2 1 - Type 7 1 - Spare
8	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 5 - Type 2 2 - Type 7 1 - Spare
9	New 1-2"	2 - Type 3
10	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 6 - Type 2 2 - Type 7 1 - Spare
11	New 8-2"	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 7 - Type 2 4 - Type 2 2 - Type 3 1 - Type 6 4 - Type 7 1 - Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	a-1	*	*	*	d-2	*	*	*	b-1	*	*	*	a-2†	b-2†
	d-1	*	*	*	i-1	*	*	*	c-1	Ⓟ	Ⓟ	Ⓟ	d-3†	e-2†
	e-1	*	*	*					g-1	*	*	*	f-2†	g-2†
	f-1	*	*	*					h-1	Ⓟ	Ⓟ	Ⓟ	j-2†	K-2ɴ
	j-1	*	*	*										
	K-1	ɴ	ɴ	ɴ										

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

ɴ = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H - M * Opticom
b	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y ← H - M
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
d	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y G R Y ↑ H - M * Opticom
e	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
f	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H - M * Opticom
g	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y ← H - M
h	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
i	Existing (to Remain)	II	1	Mast Arm, One-Way Mast Arm, (Horiz.) Mast Arm, (Horiz.)	R Y G CCTV * Opticom
j	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
K	New	I-10	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M

* Install on Existing Standard

ORIGINAL PLAN | NOTE BOOK | No.

SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY ENGR. | QUANTITIES BY BJL | CHECKED BY | DATE

Plot Date: Jul 29 2008 Plot Time: 4:08 pm
File: S:\Dpt\DOT Oahu Various TSM\draw\tsm-mod2a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, YENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Paiwa St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

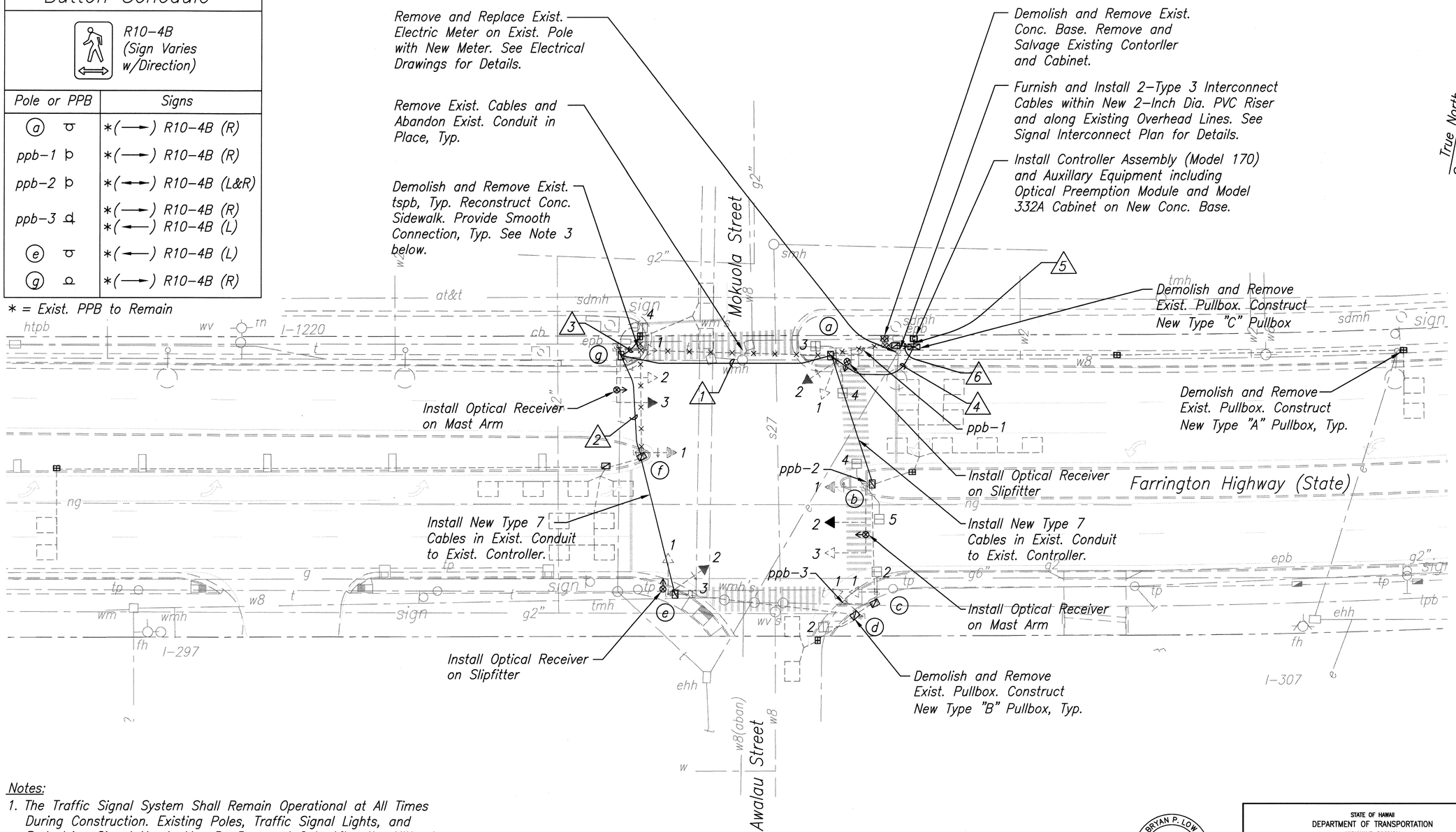
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	58	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a)	*(⟶) R10-4B (R)
ppb-1	*(⟶) R10-4B (R)
ppb-2	*(⟷) R10-4B (L&R)
ppb-3	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
(e)	*(⟵) R10-4B (L)
(g)	*(⟶) R10-4B (R)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 59 for List of Materials.
3. Contractor Shall Verify the Exist. Cables w/in the Pullboxes to be Removed are not Active Prior to Demolishing and Removing the Pullbox.

Traffic Signal Plan

Scale: 1"=20'

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Mokuola St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

58

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DATE
DRAWN BY ENGR.
TRACED BY B.L.
DESIGNED BY
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 4:09 pm
File: S:\Dgn\UDOT Oahu Various TSM \dgn\03.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	59	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 5 – Type 2 2 – Type 7 1 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 1 – Type 7 1 – Spare
3	New 1-2"	1 – Type 2
4	New 6-2" (Conc. Enc.) New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 7 – Type 2 4 – Type 2 4 – Type 7 1 – Spare
5	New 8-2"	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 7 – Type 2 4 – Type 2 2 – Type 3 1 – Type 6 4 – Type 7 1 – Spare
6	New 2-2"	2 – Type 3 1 – Type 6

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	a-1	*	*	*	b-2	*	*	*	a-2	*	*	*	a-3†	a-4†
	b-3	*	*	*	g-3	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ	b-4†	b-5†
	c-1	*	*	*					e-2	*	*	†	c-2†	d-2†
	d-1	*	*	*					f-1	Ⓟ	Ⓟ	Ⓟ	e-3†	g-4†
	e-1	*	*	*										
	g-1	*	*	*										
	g-2	*	*	*										

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M
				Slipfitter, One-Way	* Opticom
b	Existing (to Remain)	II	1	Pole Bracket, One-Way	R Y ←
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y G
			4	Pole Bracket, Two-Way	H – M
			5	Pole Bracket, Two-Way	H – M
				Mast Arm, (Horiz.)	* Opticom
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
			2	Pole Bracket, One-Way	H – M
d	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
			2	Pole Bracket, One-Way	H – M
e	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, One-Way	H – M
				Slipfitter, One-Way	* Opticom
f	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
g	Existing (to Remain)	II	1	Pole Bracket, One-Way	R Y G
			2	Mast Arm, One-Way	R Y G
			3	Mast Arm, One-Way	R Y ↑
			4	Pole Bracket, One-Way	H – M
				Mast Arm, (Horiz.)	* Opticom

* Install on Existing Standard

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY
DATE

Plot Date: Jul 29 2008 Plot Time: 4:10 pm
File: S:\Dgn\DOT Oahu Various TSM \draw\tp-ex03s.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Mokuola St.

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

59

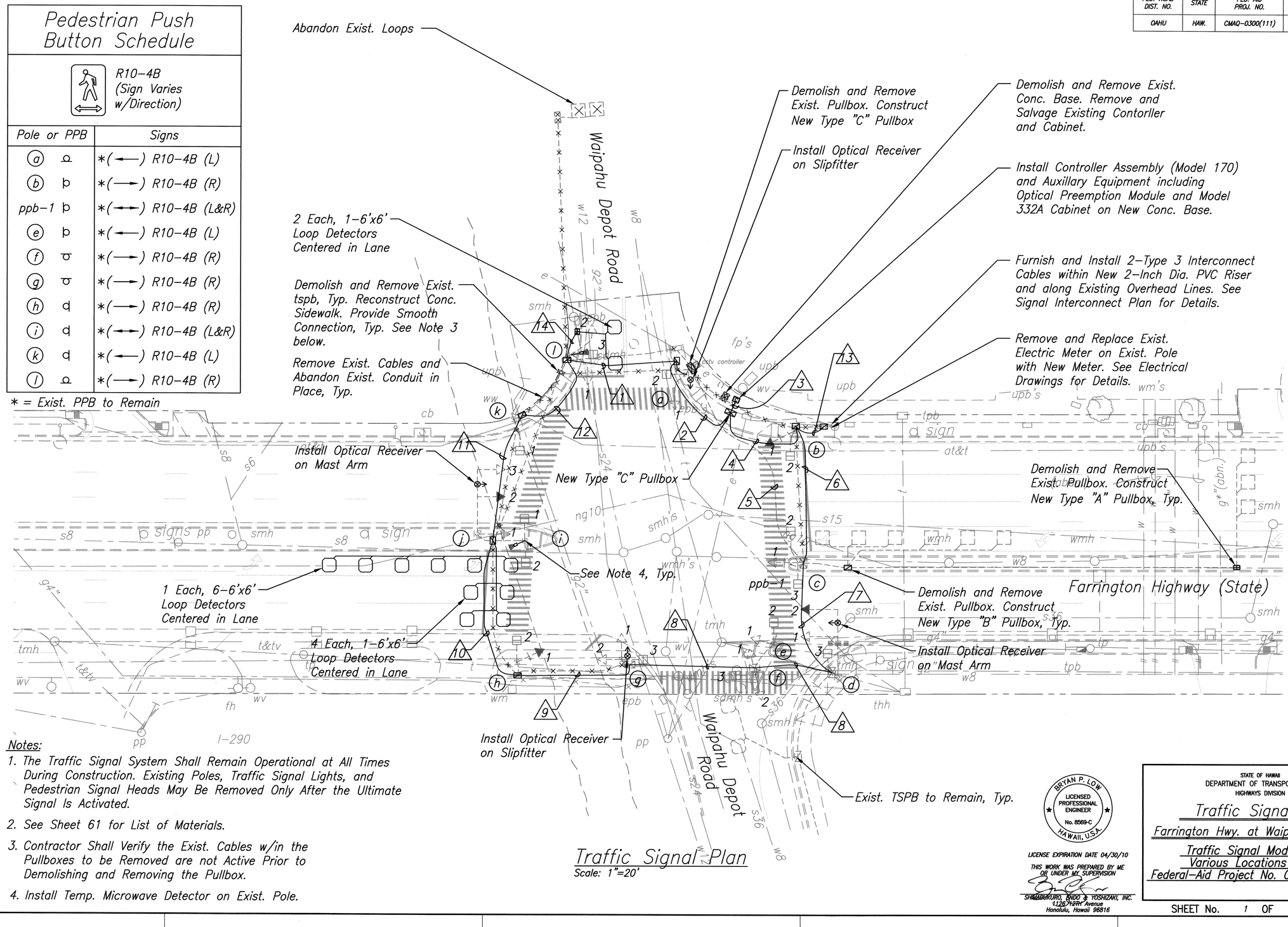
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	60	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	⍺	*(⟵) R10-4B (L)
(b)	þ	*(⟶) R10-4B (R)
ppb-1	þ	*(⟷) R10-4B (L&R)
(e)	þ	*(⟵) R10-4B (L)
(f)	⍵	*(⟶) R10-4B (R)
(g)	⍵	*(⟶) R10-4B (R)
(h)	⍺	*(⟶) R10-4B (R)
(i)	⍺	*(⟷) R10-4B (L&R)
(k)	⍺	*(⟵) R10-4B (L)
(l)	⍺	*(⟶) R10-4B (R)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 61 for List of Materials.
3. Contractor Shall Verify the Exist. Cables w/in the Pullboxes to be Removed are not Active Prior to Demolishing and Removing the Pullbox.
4. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 30, 2008 Plot Time: 5:47 pm
File: S:\Esv\UDOT Oahu Various TSM\ drwg\ wo2X.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Waipahu Depot Rd.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	61	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 5-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 5 - Type 2 1 - Type 7 1 - Spare
2	New 5-2"	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 5 - Type 2 2 - Type 7 1 - Spare
3	New 8-2"	2 - Type 1, Ground Wire 2 - Type 1, Ground Wire 5 - Type 2 5 - Type 2 2 - Type 3 1 - Type 6 4 - Type 7 1 - Spare
4	New 7-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 5 - Type 2 2 - Type 3 1 - Type 6 2 - Type 7 1 - Spare
5	Exist. 3-2"	† 1 Coax. & 1 Control † 1 - TS Power 1 - Spare
6	New 5-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 5 - Type 2 2 - Type 7 1 - Spare
7	Exist. 6-2"	† 1 - Type 1, Ground Wire † 1 - Type 1, Ground Wire † 5 - Type 2 † 1 Coax. & 1 Control † 1 - TS Power ⊕ 2 - Type 7
8	Exist. 4-2"	† 1 - Type 1, Ground Wire † 1 - Type 1, Ground Wire † 3 - Type 2 ⊕ 1 - Type 7
9	New 4-2"	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 2 - Spare
10	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 1 - Type 2 1 - Spare
11	New 5-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 3 - Type 2 1 - Type 7 1 - Spare

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
12	New 5-2"	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 3 - Type 2 1 - Type 7 1 - Spare
13	New 2-2"	2 - Type 3 1 - Type 6
14	New 1-2"	1 - Type 2

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	a-1	*	*	*	d-2	*	*	*	b-1	*	*	*	a-2 †	b-2 †
	d-1	*	*	*	j-2	*	*	*	c-1	Ⓟ	Ⓟ	Ⓟ	c-2 †	c-3 †
	e-1	†	†	†					h-1	*	*	*	d-3 †	e-2 †
	f-1	†	†	†					j-1	Ⓟ	Ⓟ	Ⓟ	f-3 †	g-3 †
	f-2	†	†	†									h-2 †	i-1 †
	g-1	*	*	*									i-2 †	k-1 †
	g-2	*	*	*									l-3 †	
	j-3	*	*	*										
	l-1	*	*	*										
	l-2	*	*	*										

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H - M * Opticom
b	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y ← H - M
c	Existing (to Remain)	I	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y ← H - M H - M
d	Existing (to Remain)	II	1 2 3	Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.) Mast Arm, (Horiz.)	R Y G R Y ↑ H - M * Opticom CCTV
e	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
f	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y G H - M
g	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y G H - M * Opticom
h	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y ← H - M
i	Existing (to Remain)	I	1 2	Slipfitter, Two-Way Slipfitter, Two-Way	H - M H - M
j	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ← R Y ↑ R Y G * Opticom
k	Existing (to Remain)	I	1	Slipfitter, One-Way	H - M
l	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y G H - M

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 4:12 pm
File: S:\Dpt\DOT Oahu Various TSM\Farrington Hwy - work0.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, KUDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

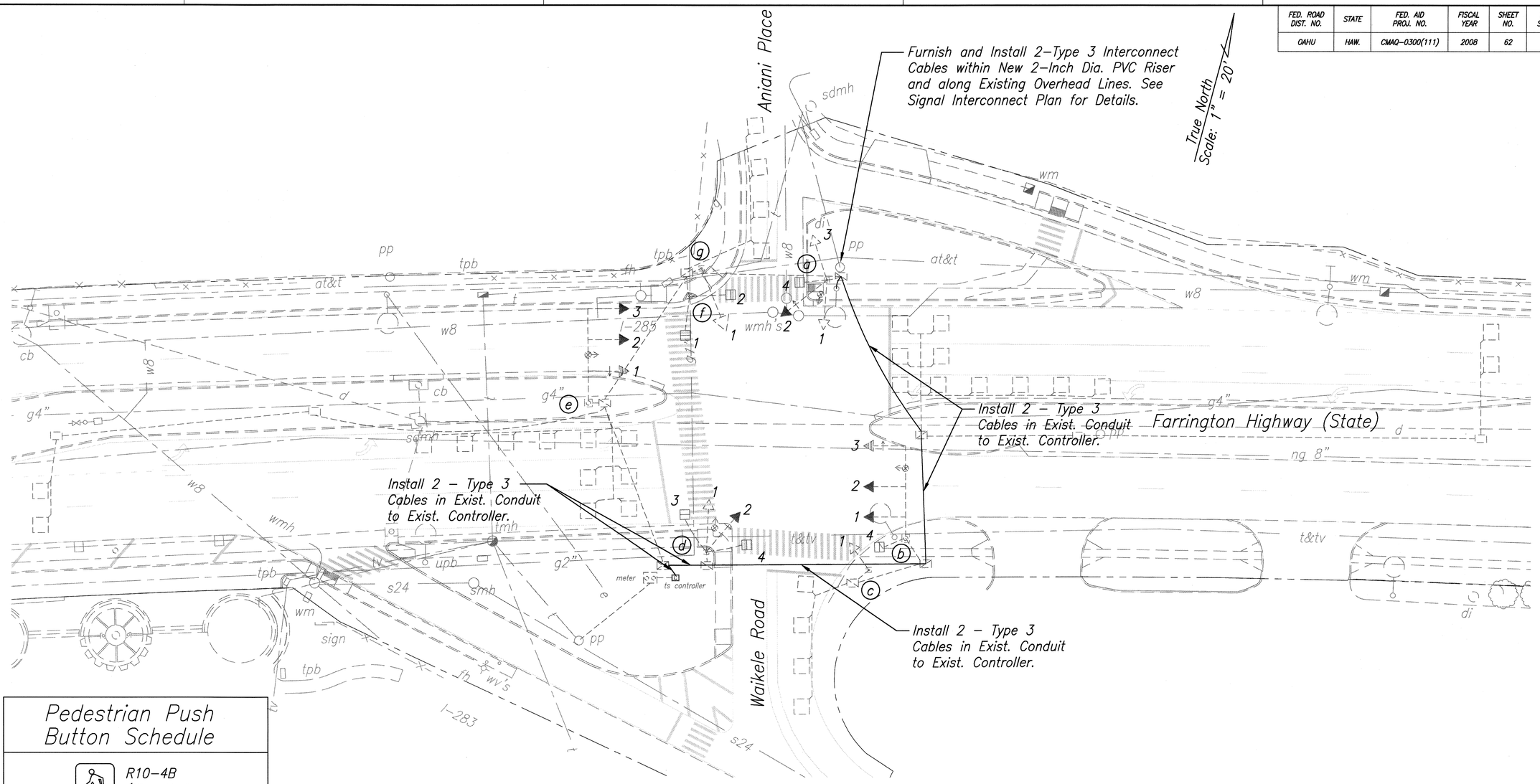
Farrington Hwy. at Waipahu Depot Rd.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	62	203



Pedestrian Push Button Schedule

R10–4B (Sign Varies w/Direction)

Pole or PPB		Signs
ⓐ	⍝	*(⟵) R10–4B (L)
ⓑ	⍝	*(⟵) R10–4B (L)
ⓓ	⍑	*(⟶) R10–4B (R) *(⟵) R10–4B (L)
ⓕ	⍑	*(⟶) R10–4B (R) *(⟵) R10–4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 63 for List of Materials.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 29, 2008 Plot Time: 4:13 pm
File: S:\Sig\1007 Oahu Various TSM \drawing\sig-wa005.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Waikele Rd.

Traffic Signal Modernization
Various Locations – Oahu
Federal–Aid Project No. CMAQ–0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

62

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	63	203

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*	b-1	*	*	†	a-2	*	*	†	a-4 †
	a-3	*	*	*	b-2	*	*	†	b-3	Ⓟ	Ⓟ	Ⓟ	b-4 †
	c-1	*	*	*	e-2	*	*	†	d-2	*	*	†	d-3 †
	d-1	*	*	*	e-3	*	*	†	e-1	Ⓟ	Ⓟ	Ⓟ	d-4 †
	g-1	*	*	*									f-1 †
													f-2 †

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, Three-Way	R Y G
			2	Slipfitter, Three-Way	R Y ←
			3	Slipfitter, Three-Way	R Y G
			4	Pole Bracket, One-Way	H – M
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ←
			4	Pole Bracket, One-Way	H – M
				Mast Arm, (Horiz.)	Opticom
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
d	Existing (to Remain)	I	1	Slipfitter, Two-Way	R Y G
			2	Slipfitter, Two-Way	R Y ←
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M
				Slipfitter, One-Way	Opticom
e	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ←
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ↑
				Mast Arm, (Horiz.)	Opticom
f	Existing (to Remain)	I	1	Slipfitter, Two-Way	H – M
			2	Slipfitter, Two-Way	H – M
g	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G

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

Plot Date: Jul 29 2008 Plot Time: 4:13 pm
File: S:\Byl\DOT Oahu Various TSM\dgn\ws005s.dwg

BRYAN P. LOW
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LICENSE EXPIRATION DATE 04/30/10

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SHIMABOKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

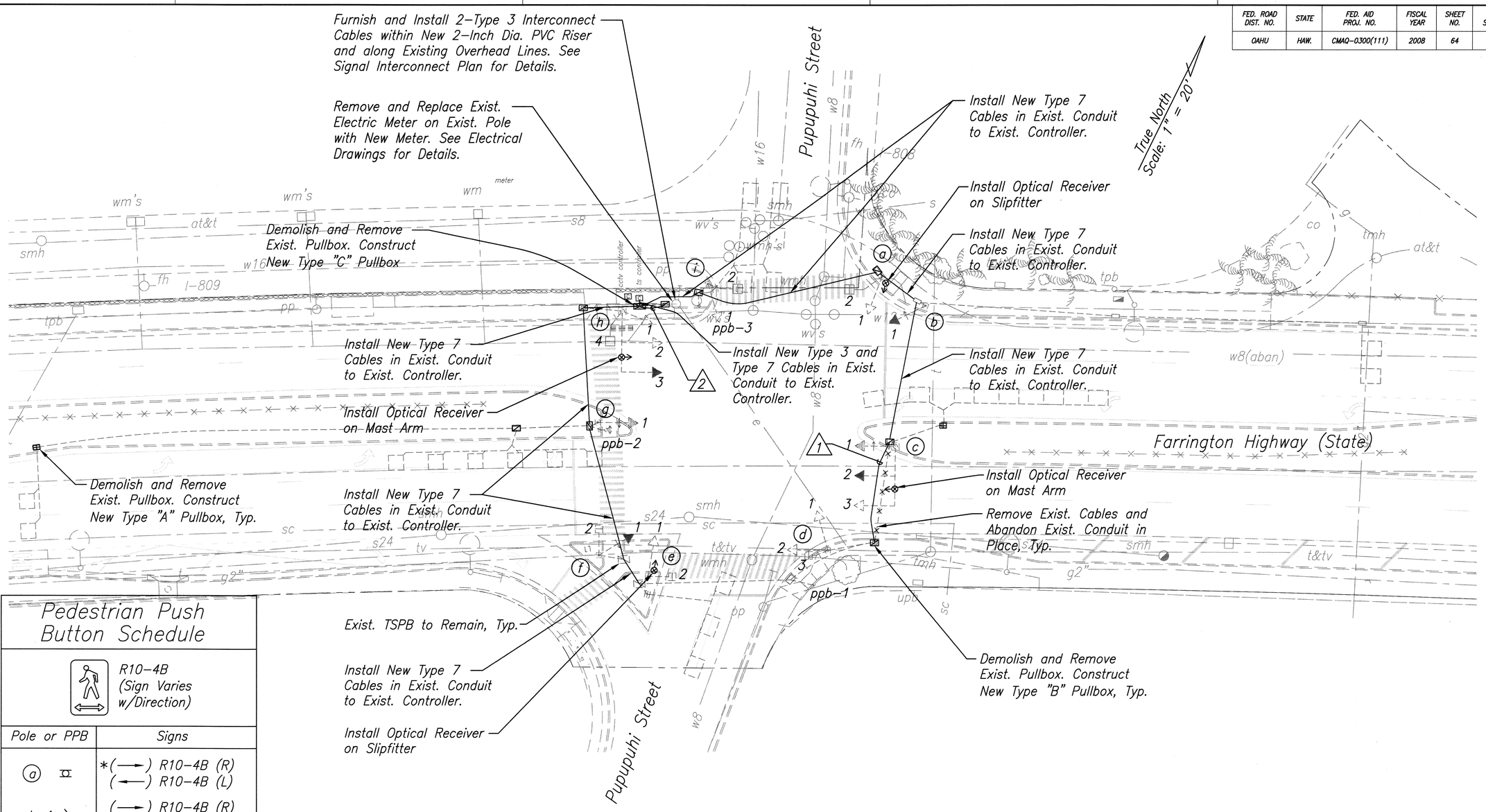
Farrington Hwy. at Waikele Rd.

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	64	203



Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ⓐ	*(⟶) R10-4B (R) (⟵) R10-4B (L)
ppb-1	(⟶) R10-4B (R) *(⟵) R10-4B (L)
ⓔ	*(⟵) R10-4B (L)
ⓕ	*(⟶) R10-4B (R)
ppb-2	*(⟷) R10-4B (L&R)
ⓗ	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
ppb-3	*(⟶) R10-4B (R)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 65 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.

Traffic Signal Plan
Scale: 1"=20'

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

Plot Date: Jul 29 2008 Plot Time: 4:14 pm
File: S:\Sig\1007 Oahu Various TSM\dgn\sig-wa08.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at Pupupuhi St.
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	65	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare
2	New 1-2"	2 - Type 3

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
Pole Letter and Signal Head Number		R	Y	G		R	Y	↑		R	Y	←	
	a-1	*	*	*	c-2	*	*	*	b-1	*	*	*	a-2 †
	c-3	*	*	*	h-3	*	*	*	c-1	Ⓟ	Ⓟ	Ⓟ	d-3 †
	d-1	*	*	*					f-1	*	†	†	e-2 †
	d-2	*	*	*					g-1	Ⓟ	Ⓟ	Ⓟ	f-2 †
	e-1	*	*	*									h-4 †
	h-1	*	*	*									i-2 †
	h-2	*	*	*									
	i-1	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H - M * Opticom
b	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
c	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ← R Y G R Y ↑ * Opticom
d	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y ← H - M
e	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H - M * Opticom
f	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
g	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
h	Existing (to Remain)	II	1 2 3 4 5	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.) Mast Arm, (Horiz.)	R Y G R Y G R Y ↑ * Opticom CCTV
i	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M

* Install on Existing Standard

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY ENGR.	
NOTE BOOK	TRACED BY B.L.	
	DESIGNED BY	
	QUANTITIES BY	
No.	CHECKED BY	

Plot Date: Jul 29 2008 Plot Time: 4:15 pm
File: S:\Dpl\DOT Oahu Various TSM Utrs\Sg-ess06s.dwg

BRYAN P. LOW
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No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

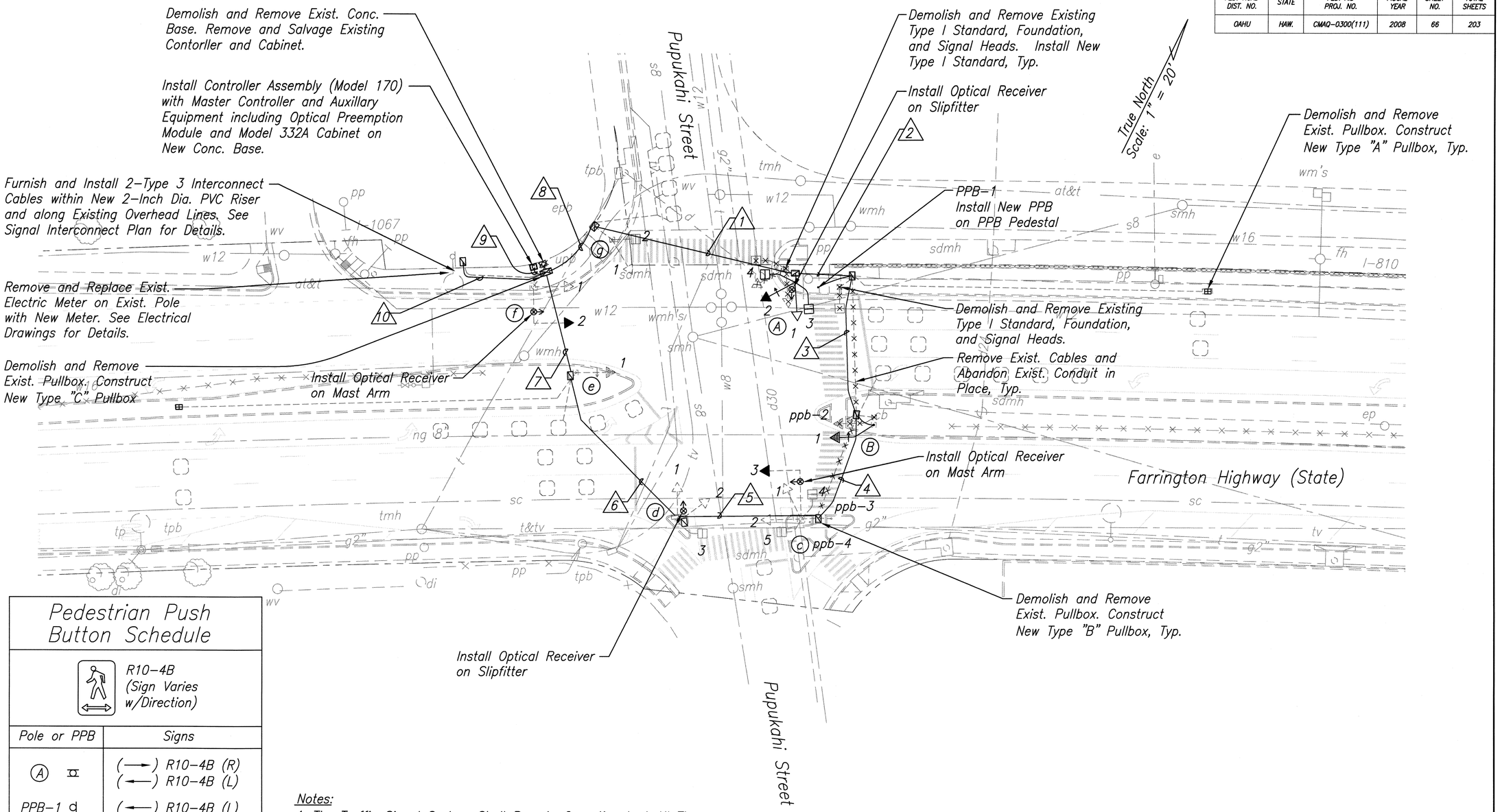
Farrington Hwy. at Pupupuhi St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	66	203



Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(A) ¤	(→) R10-4B (R) (←) R10-4B (L)
PPB-1 ¢	(←) R10-4B (L)
ppb-2 þ	*(↔) R10-4B (L&R)
ppb-3 ¢	*(→) R10-4B (R)
ppb-4 ¢	*(←) R10-4B (L)
(d) ¢	*(→) R10-4B (R)
(g) ¤	(→) R10-4B (R) *(←) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 67 for List of Materials.

Traffic Signal Plan
Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY KNOR | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE

Plot Date: Jul 29 2008 Plot Time: 4:15 pm
File: S:\Sig\1007 Oahu Various TSM\arrow\sig=wa07.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Pupukahi St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	67	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	Exist. 2-2"	*1 - Type 1, Ground Wire †3 - Type 2⊕1 - Type 2⊕1 - Type 7
2	Exist. 2-2"	*1 - Type 1, Ground Wire †3 - Type 2⊕1 - Type 2
3	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 3 - Type 2 1 - Spare
4	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Spare
5	Exist. 2-2"	*1 - Type 1, Ground Wire †1 - Type 2⊕1 - Type 2⊕1 - Type 7
6	Exist. 2-2"	*1 - Type 1, Ground Wire †1 - Type 2⊕1 - Type 2⊕2 - Type 7
7	Exist. 2-2"	*1 - Type 1, Ground Wire †4 - Type 2⊕1 - Type 2⊕2 - Type 7
8	Exist. 2-2"	*1 - Type 1, Ground Wire †4 - Type 2⊕2 - Type 2⊕1 - Type 7
9	New 8-2"	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 7 - Type 2 4 - Type 2 2 - Type 3 1 - Type 6 4 - Type 7 1 - Spare
10	New 2-2"	2 - Type 3 1 - Type 6

* = Remove Exist. Cables and Replace with New Cables as Designated.

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	I-10	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H - M H - M Opticom
B	New	I-10	1	Slipfitter, One-Way	R Y ←
c	Existing (to Remain)	II	1 2 3 4 5	Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, (Horiz.)	R Y G R Y G R Y ↑ H - M H - M * Opticom
d	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y G H - M * Opticom
e	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
f	Existing (to Remain)	II	1 2	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y G R Y ↑ * Opticom
g	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	A-1	N	N	N	c-3	*	*	*	A-2	N	N	N	A-3 N
	c-1	*	*	*	f-2	*	*	*	B-1	NP	NP	NP	A-4 N
	c-2	*	*	*					d-2	*	*	*	c-4 †
	d-1	*	*	*					e-1	Ⓟ	Ⓟ	Ⓟ	c-5 †
	f-1	*	*	*									d-3 †
	g-1	*	†	*									g-2 †

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

NP = New Programmed Visibility Signal Lens

ORIGINAL PLAN | NOTE BOOK | No. | SURVEY PLOTTED BY | DRAWN BY ENGR. | TRACED BY B.L. | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

Plot Date: Jul 29 2008 Plot Time: 4:16 pm
File: S:\Sig\1007 Oahu Various TSM Unsn\Sgn-mod7a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

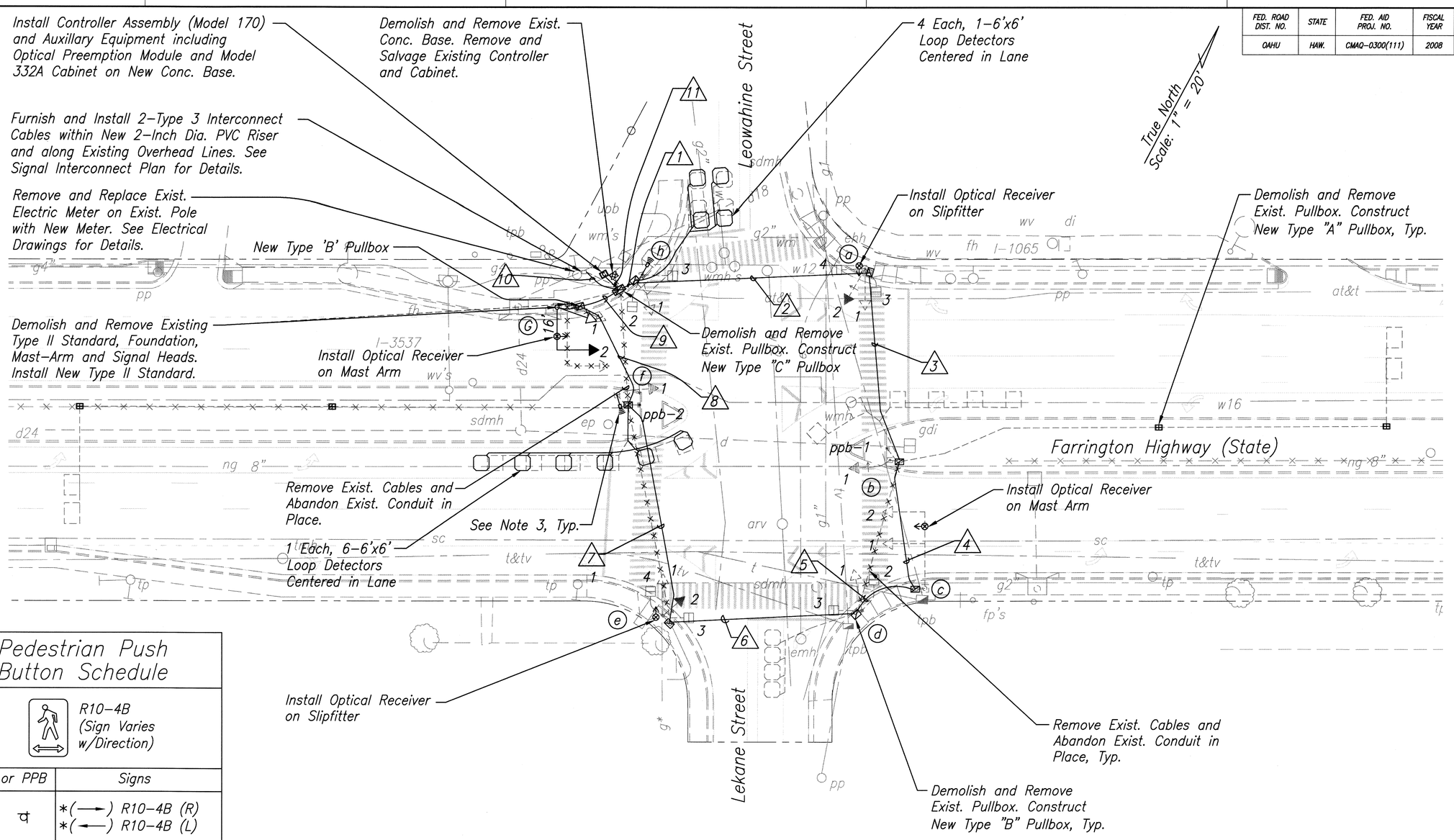
Farrington Hwy. at Pupukahi St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	68	203



Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a)	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
ppb-1	*(⟷) R10-4B (L&R)
(c)	*(⟵) R10-4B (L)
(d)	*(⟵) R10-4B (L)
(e)	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
ppb-2	*(⟷) R10-4B (L&R)
(h)	*(⟶) R10-4B (R) *(⟵) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 69 for List of Materials.
3. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan
Scale: 1"=20'

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

Plot Date: Jul 29 2008 Plot Time: 4:15 pm
File: S:\Sig\DOT Oahu Various TSM plans\sig-mod08.dwg

BRYAN P. LOW LICENSED PROFESSIONAL ENGINEER No. 8569-C HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Leokane St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	69	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	Exist. 2-2"	*1 - Type 1, Ground Wire †3 - Type 2 ⊕2 - Type 2 ⊕2 - Type 7
2	Exist. 2-2"	*1 - Type 1, Ground Wire †2 - Type 2 ⊕2 - Type 2 ⊕2 - Type 7
3	Exist. 2-2"	*1 - Type 1, Ground Wire †2 - Type 2 ⊕1 - Type 2 ⊕1 - Type 7
4	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Type 7 1 - Spare
5	Exist. 1-2"	*1 - Type 1, Ground Wire
6	Exist. 2-2"	*1 - Type 1, Ground Wire †1 - Type 2
7	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 3 - Type 2 1 - Type 7 1 - Spare
8	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 5 - Type 2 1 - Type 7 1 - Spare
9	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 5 - Type 2 2 - Type 7 1 - Spare
10	New 1-2"	2 - Type 3
11	New 8-2"	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 5 - Type 2 5 - Type 2 2 - Type 3 1 - Type 6 4 - Type 7 1 - Spare

* = Remove Exist. Cables and Replace with New Cables as Designated.

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H - M H - M *Opticom
b	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
c	Existing (to Remain)	II	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y G R Y ↑ *Opticom
d	Existing (to Remain)	I	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G H - M H - M
e	Existing (to Remain)	I	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y G R Y ← H - M H - M *Opticom
f	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
G	New	II-16	1 2	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y G R Y ↑ Opticom
h	Existing (to Remain)	I	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G H - M H - M

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*	c-2	*	*	*	a-2	*	*	*	a-3†
	c-1	*	*	*	G-2	N	N	N	b-1	Ⓟ	Ⓟ	Ⓟ	a-4†
	d-1	*	*	*					e-2	*	*	*	d-2†
	e-1	*	*	*					f-1	Ⓟ	Ⓟ	Ⓟ	d-3†
	G-1	N	N	N									e-3†
	h-1	*	*	*									e-4†
													h-2†
													h-3†

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY
DATE

Plot Date: Jul 29 2008 Plot Time: 4:17 pm
File: S:\Dgn\1007 Oahu Various TSM\grow\sg-wo08a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Leokane St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

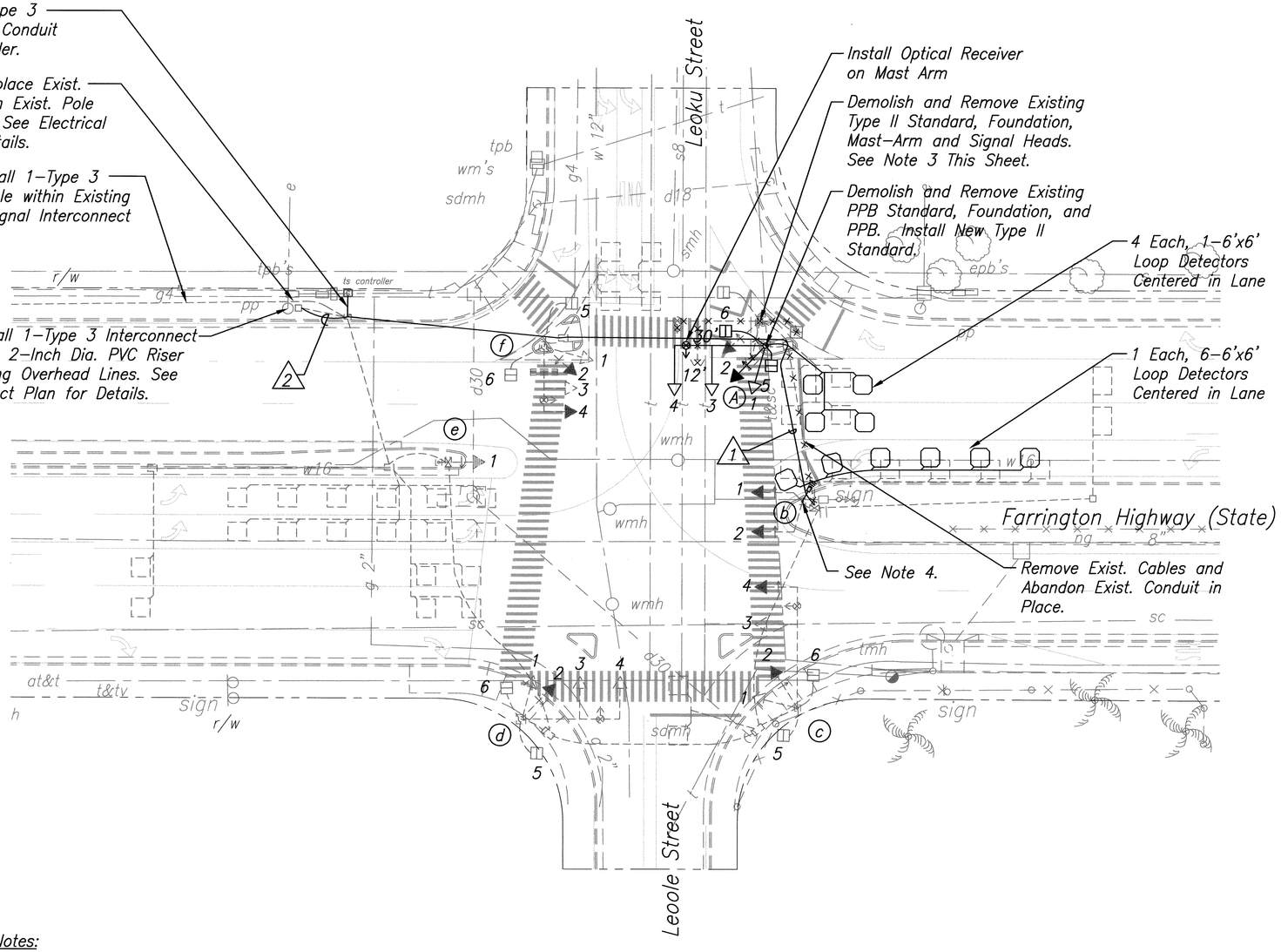
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	70	203

Install 2 New Type 3 Cables in Exist. Conduit to Exist. Controller.

Remove and Replace Exist. Electric Meter on Exist. Pole with New Meter. See Electrical Drawings for Details.

Furnish and Install 1-Type 3 Interconnect Cable within Existing Conduits. See Signal Interconnect Plan for Details.

Furnish and Install 1-Type 3 Interconnect Cable within New 2-Inch Dia. PVC Riser and along Existing Overhead Lines. See Signal Interconnect Plan for Details.



Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(A) ϕ	(→) R10-4B (R) (→) R10-4B (R)
(c) ϕ	*(→) R10-4B (R) *(←) R10-4B (L)
(d) ϕ	*(→) R10-4B (R) *(←) R10-4B (L)
(e) ϕ	*(→) R10-4B (R) *(←) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 71 for List of Materials.
3. Remove Exist. Type 7 Cable from Exist. Conduits and Replace with New Type 7 Cable between Controller and New Type II Standard.
4. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 31, 2008 Plot Time: 5:47 pm
File: S:\Sig\2007 Oahu Various TSM\ dgn\ wa009.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, BUDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Leoku St./Leoole St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	71	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 1, Ground Wire 3 - Type 2 1 - Spare
2	New 1-2"	2 - Type 3

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
Pole Letter and Signal Head Number		R	Y	G		R	Y	↑		R	Y	←	
	A-1	N	N	N	c-4	*	*	†	A-2	N	N	N	A-5 N
	A-3	N	N	N	f-4	*	†	†	b-1	†	†	†	A-6 N
	A-4	N	N	N					b-2	†	†	†	c-5 †
	c-1	†	*	*					c-2	†	*	*	c-6 †
	c-3	†	*	*					d-2	†	*	*	d-5 †
	d-1	†	*	*					e-1	Ⓟ	Ⓟ	Ⓟ	d-6 †
	d-3	†	*	*					f-2	†	*	*	f-5 †
	d-4	†	*	*									f-6 †
	f-1	†	†	†									
	f-3	†	†	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
A	New	II-30	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y G
			4	Mast Arm, One-Way	R Y G
			5	Pole Bracket, Two-Way	H - M
			6	Pole Bracket, Two-Way	H - M
				Mast Arm, (Horiz.)	Opticom
b	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
			2	Slipfitter, One-Way	R Y ←
c	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y G
			4	Mast Arm, One-Way	R Y ↑
			5	Pole Bracket, Two-Way	H - M
			6	Pole Bracket, Two-Way	H - M
				Mast Arm, (Horiz.)	Opticom
d	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y G
			4	Mast Arm, One-Way	R Y G
			5	Pole Bracket, Two-Way	H - M
			6	Pole Bracket, Two-Way	H - M
				Mast Arm, (Horiz.)	Opticom
e	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
f	Existing (to Remain)	II	1	Pole Bracket, Two-Way	R Y G
			2	Pole Bracket, Two-Way	R Y ←
			3	Mast Arm, One-Way	R Y G
			4	Mast Arm, One-Way	R Y ↑
			5	Pole Bracket, Two-Way	H - M
			6	Pole Bracket, Two-Way	H - M
				Mast Arm, (Horiz.)	Opticom
				Mast Arm, (Horiz.)	CCTV

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

Plot Date: Jul 29 2008 Plot Time: 4:18 pm
File: S:\Dpl\007 Oahu Various TSM\prow\sjp-wa09s.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENBO & YOSHIZAKI, INC.
1426 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

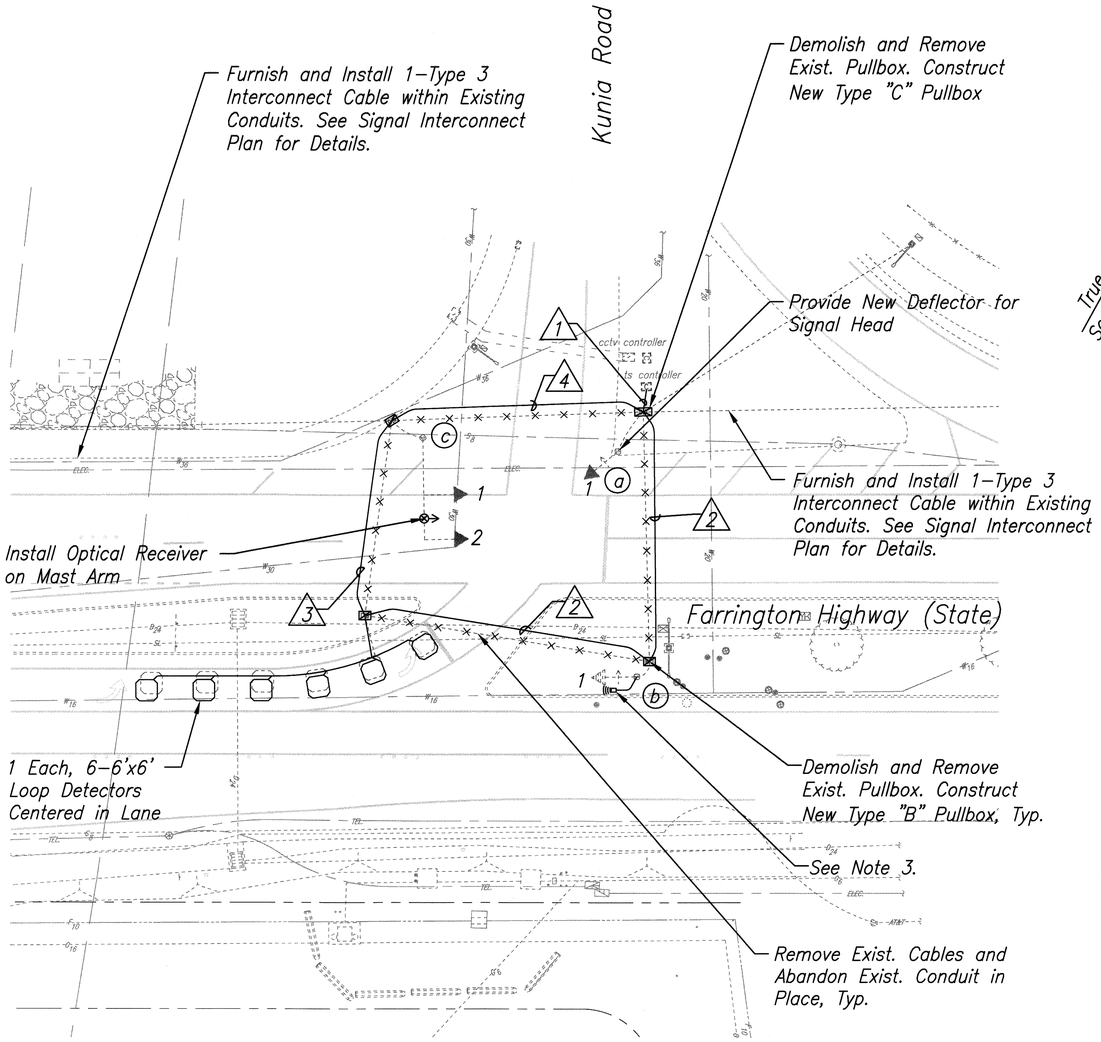
Farrington Hwy. at Leoku St./Leoole St.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	72	203



Description of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y←
b	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y←
c	Existing (to Remain)	II	1 2	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ *Opticom

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RY ↑ Traffic Signal Head				12" RY ← Traffic Signal Head			
		R	Y	↑		R	Y	←
Pole Letter and Signal Head Number	c-1	*	*	*	a-1	*	*	*
	c-2	*	*	*	b-1	Ⓟ	Ⓟ	Ⓟ

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	Exist. 5-2"	*1 - Type 1, Ground Wire *1 - Type 1, Ground Wire *1 - Type 2, *1 - Type 7 *2 - Type 3 †1 - Service
2	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare
3	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Spare
4	New 5-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Type 3 1 - Type 7 1 - Spare

* = Remove Exist. Cables and Replace with New Cables as Designated.

† = Existing Cables to Remain

Note:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. Furnish and Install Opticom Preemption Module in Exist. Controller.
3. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 29 2008 Plot Time: 4:19 pm
File: S:\Dgn\1007 Oahu Various TSM\grow\sgr-wa10.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

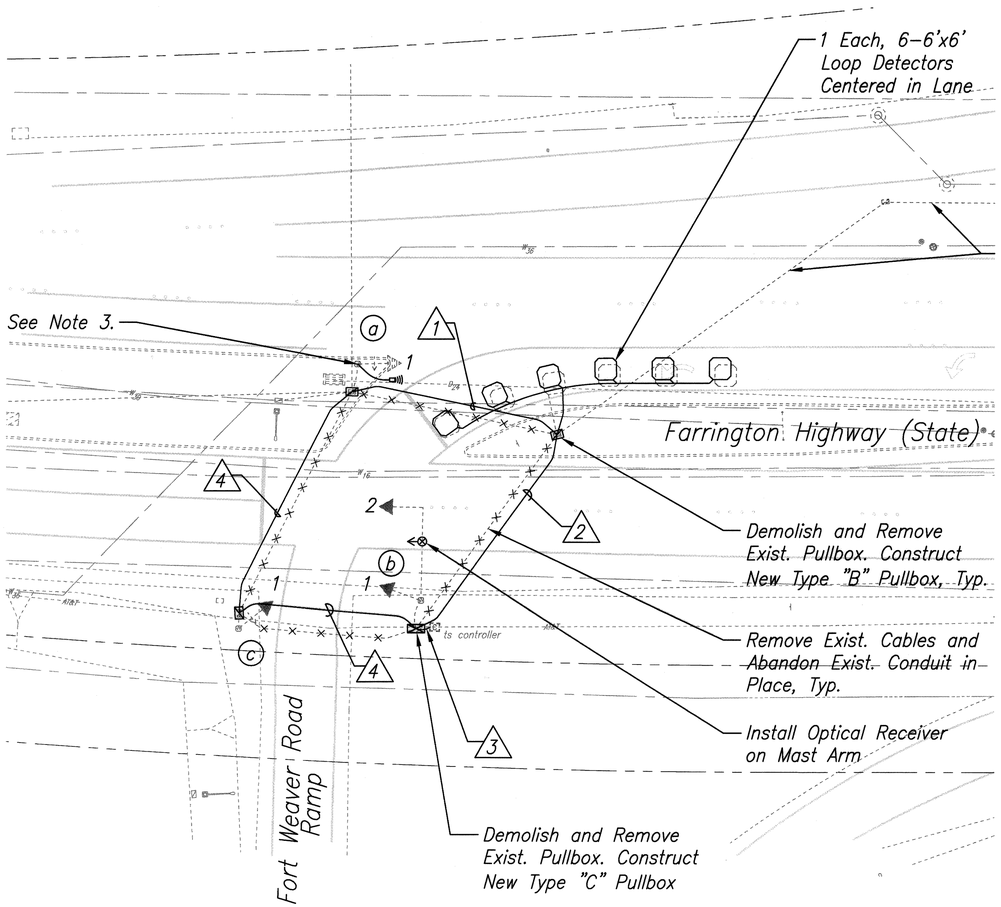
Farrington Hwy. at Kunia Rd.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	73	203



Description of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
b	Existing (to Remain)	II	1 2	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ *Opticom
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RY ↑ Traffic Signal Head				12" RY ← Traffic Signal Head			
Pole Letter and Signal Head Number		R	Y	↑		R	Y	←
	b-1	*	*	*	a-1	Ⓟ	Ⓟ	Ⓟ
	b-2	†	*	*	c-1	*	*	†

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

† = Existing L.E.D. Signal Lens to Remain

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Spare
2	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 2 1 - Type 3 1 - Spare
3	Exist 5-2"	*1 - Type 1, Ground Wire *1 - Type 1, Ground Wire *1 - Type 2, *1 Type 7 *1 - Type 3 *1 - Type 6
4	New 3-2" (Conc. Enc.)	1 - Type 1, Ground Wire 1 - Type 6 1 - Spare

* = Remove Exist. Cables and Replace with New Cables as Designated.

Note:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. Furnish and Install Opticom Preemption Module in Exist. Controller.
3. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan

Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY B.L.
DESIGNED BY
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 4:20 pm
File: S:\Bar\LOOT Oahu Various TSM \plans\tp-mod11.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at Fort Weaver Rd.
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 1 SHEETS

73

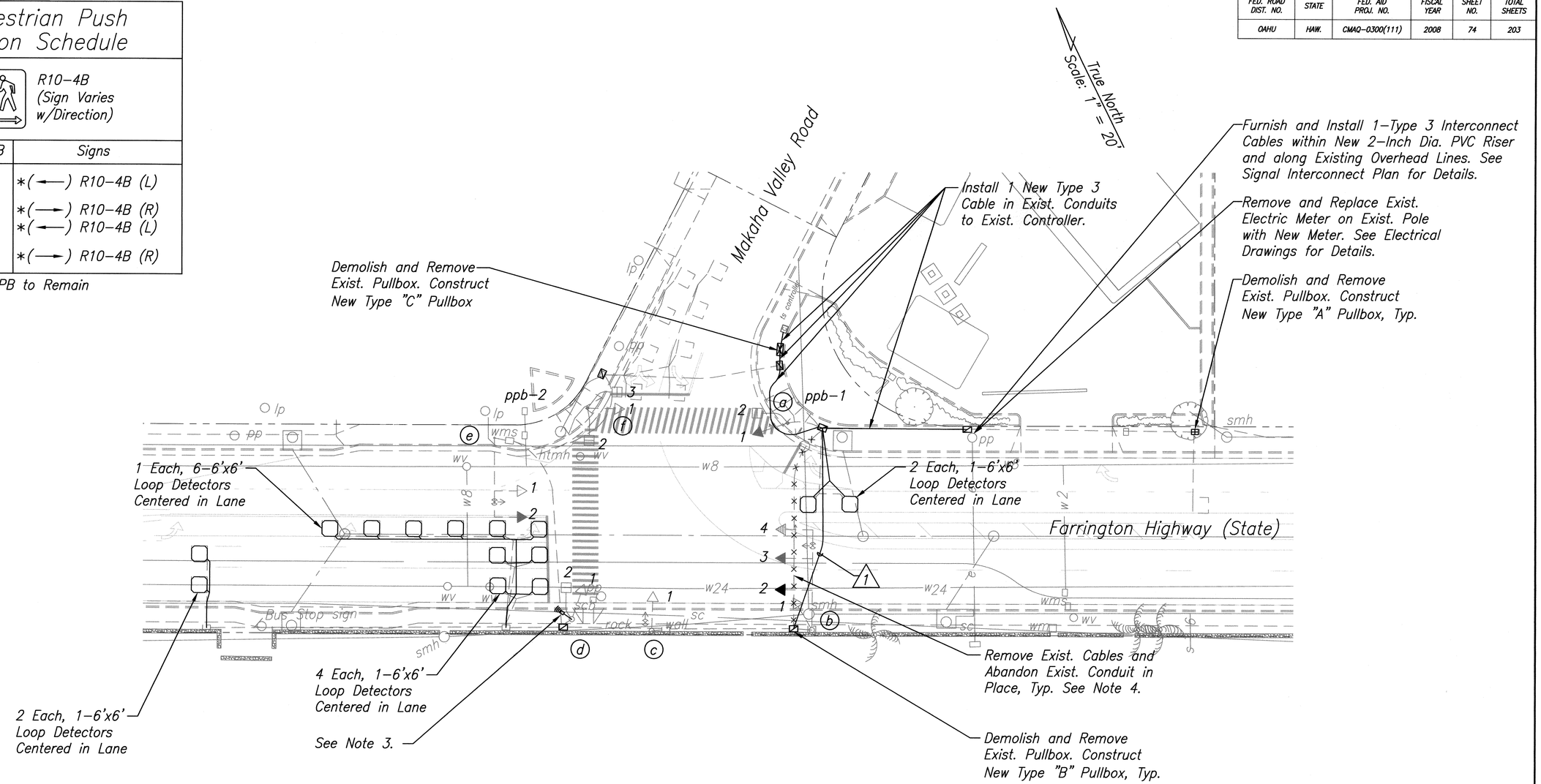
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	74	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1	*(←) R10-4B (L)
ppb-2	*(→) R10-4B (R) *(←) R10-4B (L)
(d)	*(→) R10-4B (R)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 75 for List of Materials.
3. Install Temp. Microwave Detector on Exist. Pole.
4. Reroute Existing Type 7 Cables for Existing Opticom Receivers through New Conduit. Work Shall be Considered Incidental to Various Items of Work and No Separate Payment for Rerouting the Cables will be Made.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 30 2008 Plot Time: 5:48 pm
File: S:\dot\Dot_Oahu_Highways_Traffic\Farrington Hwy\Farrington01.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1426 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Makaha Valley Rd.

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
(1)	New 4–2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 R 2 – Type 7 1 – Spare

R = Reroute Exist. Cable to New Conduit.
See Note 4 on Previous Sheet.

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	b–1	*	*	*	b–2	*	*	*	a–1	*	*	*	a–2* d–2*
	c–1	*	*	*	b–3	*	*	*	b–4	Ⓟ	Ⓟ	Ⓟ	f–2* f–3*
	d–1	*	*	*	e–2	*	*	*					
	e–1	*	*	*									
	f–1	*	*	†									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ–0300(111)	2008	75	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slipfitter, One–Way Pole Bracket, One–Way	R Y ← H – M
b	Existing (to Remain)	II	1 2 3 4	Pole Bracket, One–Way Mast Arm, One–Way Mast Arm, One–Way Mast Arm, One–Way Mast Arm, (Horiz.)	R Y G R Y ↑ R Y ↑ R Y ← Opticom
c	Existing (to Remain)	I	1	Slipfitter, One–Way Slipfitter, One–Way	R Y G Opticom
d	Existing (to Remain)	I	1 2	Slipfitter, One–Way Pole Bracket, One–Way	R Y G H – M
e	Existing (to Remain)	II	1 2	Mast Arm, One–Way Mast Arm, One–Way Mast Arm, (Horiz.)	R Y G R Y ↑ Opticom
f	Existing (to Remain)	I	1 2 3	Slipfitter, One–Way Pole Bracket, Two–Way Pole Bracket, Two–Way	R Y G H – M H – M

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY
DATE

Plot Date: Jul 29 2008 Plot Time: 5:00 pm
File: S:\Dgn\LOST Oahu Various TSM\draw\sig-watanad1a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

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Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Makaha Valley Rd.

Traffic Signal Modernization
Various Locations – Oahu
Federal–Aid Project No. CMAQ–0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

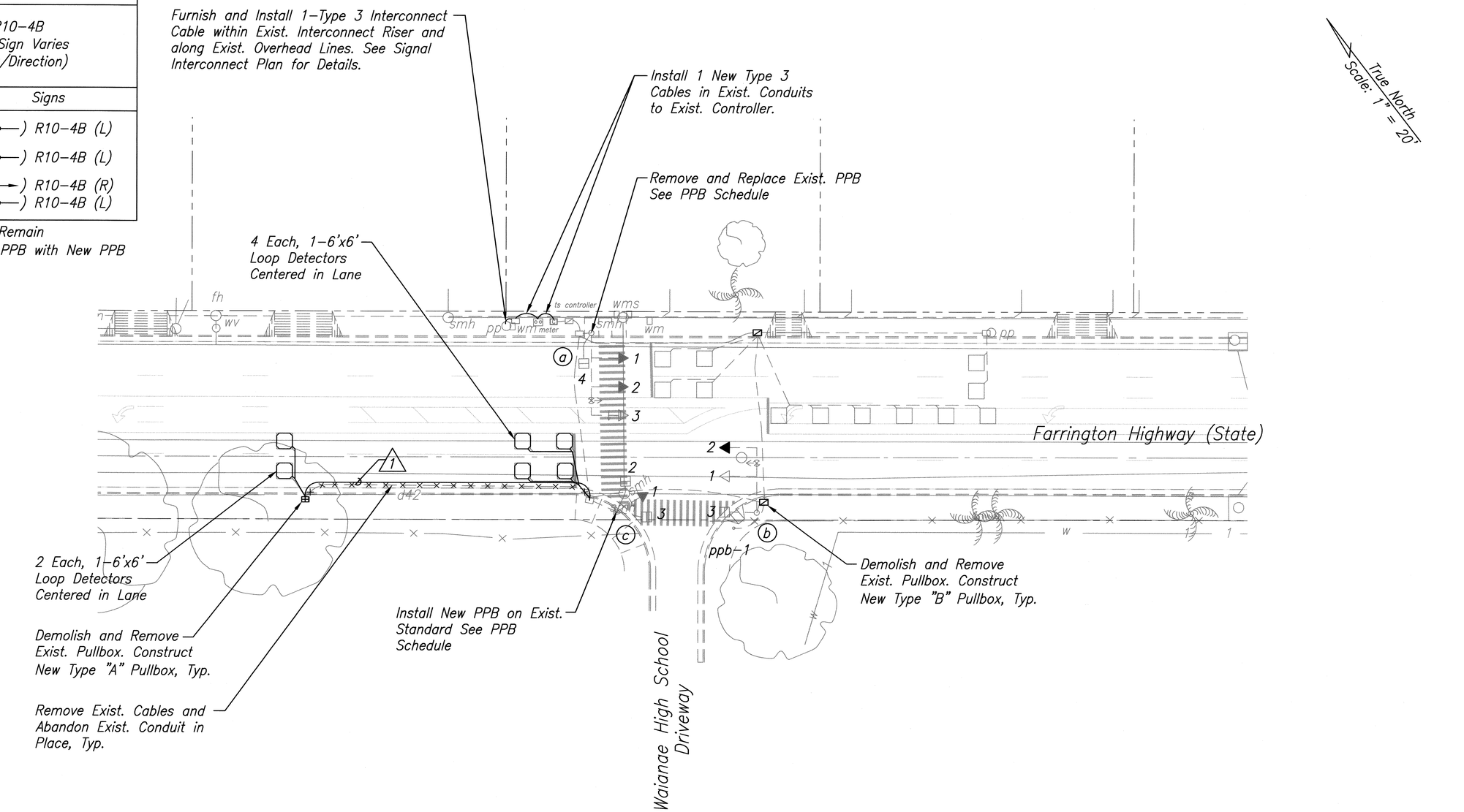
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	76	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a) ◁	®(⟵) R10-4B (L)
ppb-1 ⌂	*(⟵) R10-4B (L)
(c) ▷	(⟶) R10-4B (R) *(⟵) R10-4B (L)

* = Exist. PPB to Remain
® = Replace Exist. PPB with New PPB



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 77 for List of Materials.

Traffic Signal Plan
Scale: 1"=20'

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

Plot Date: Jul. 30, 2008 Plot Time: 5:48 pm
S:\Sig\JOB 2008 Hawaii Traffic Signal Plans\Waianae\02.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at Waianae High School
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	77	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
(1)	New. 1-2" (Conc. Enc.)	1 - Type 2

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	b-1	*	*	*	a-1	*	*	†	a-3	Ⓟ	Ⓟ	Ⓟ	a-4* b-3*
					a-2	*	*	†	c-1	*	*	*	c-2* c-3*
					b-2	*	*	*					

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y ↑
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ←
			4	Pole Bracket, One-Way	H - M
				Mast Arm, (Horiz.)	Opticom
b	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y G
			2	Mast Arm, One-Way	R Y ↑
			3	Pole Bracket, One-Way	H - M
				Mast Arm, (Horiz.)	Opticom
c	Existing (to Remain)	I	1	Pole Bracket, One-Way	R Y ←
			2	Pole Bracket, Two-Way	H - M
			3	Pole Bracket, Two-Way	H - M

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

Plot Date: Jul 29 2008 Plot Time: 5:01 pm
File: S:\Dgn\LOOT Oahu Various TSM \draw \sig-waianae02a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Waianae High School

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

77

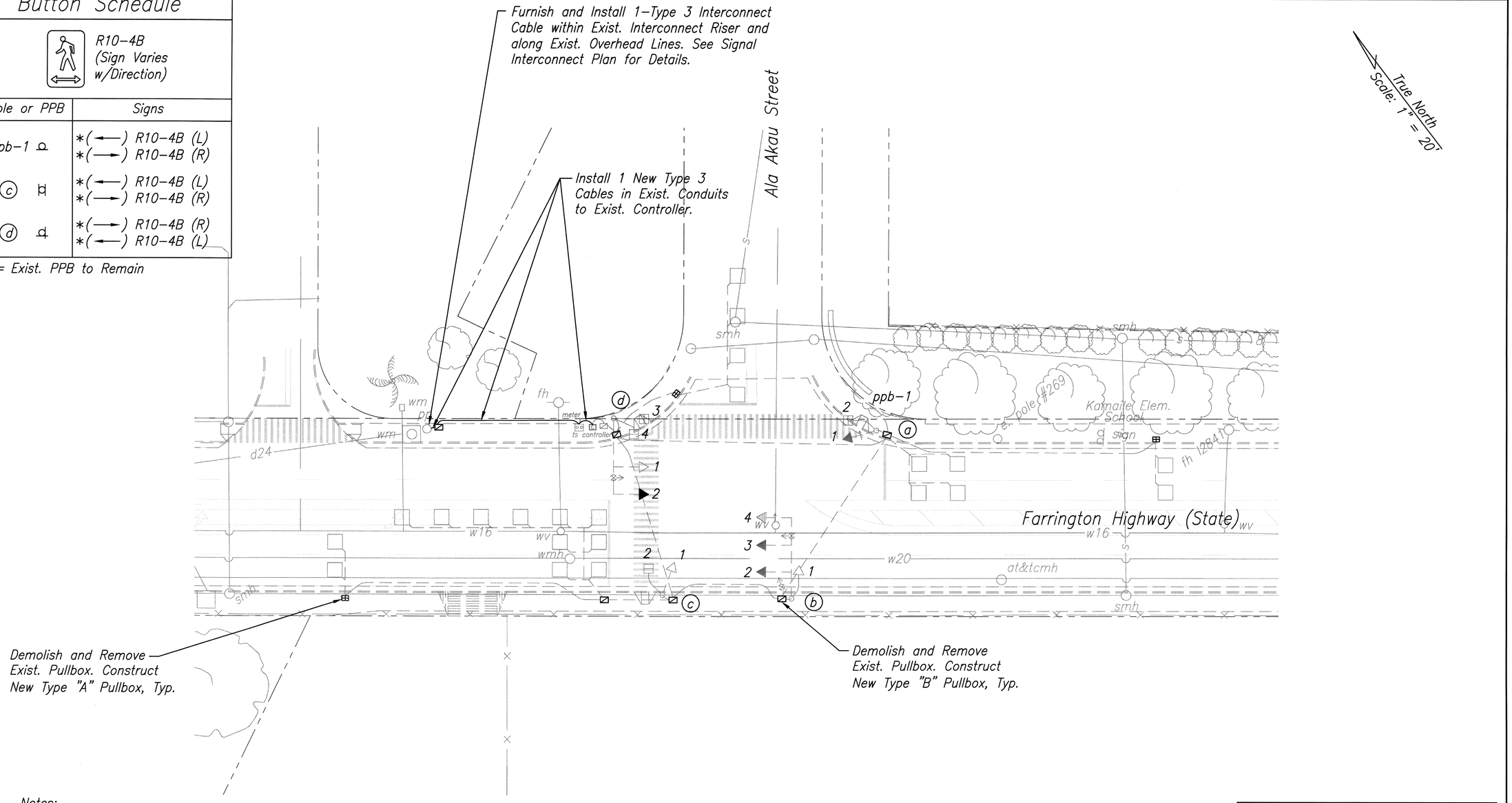
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	78	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1	*(←) R10-4B (L) *(→) R10-4B (R)
ⓒ	*(←) R10-4B (L) *(→) R10-4B (R)
ⓓ	*(→) R10-4B (R) *(←) R10-4B (L)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 79 for List of Materials.

Traffic Signal Plan

Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE

Plot Date: Jul 29 2008 Plot Time: 5:02 pm
File: S:\Plp\1207 Oahu Various TSM\prew\plp-wsignal03.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Ala Akau Street

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

78

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	79	203

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	b-1	†	*	*	b-2	†	*	*	a-1	†	*	*	a-2* c-2*
	c-1	†	*	*	b-3	†	*	*	b-4	Ⓟ	Ⓟ	Ⓟ	d-3* d-4*
	d-1	†	*	*	d-2	†	*	*					

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Pole Bracket, One-Way	R Y ←
			2	Pole Bracket, One-Way	H – M
b	Existing (to Remain)	II	1	Pole Bracket, One-Way	R Y G
			2	Mast Arm, One-Way	R Y ↑
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ←
				Mast Arm, (Horiz.)	Opticom
c	Existing (to Remain)	I	1	Pole Bracket, One-Way	R Y ←
			2	Pole Bracket, One-Way	H – M
d	Existing (to Remain)	II	1	Mast Arm, One-Way	R Y G
			2	Mast Arm, One-Way	R Y ↑
			3	Pole Bracket, Two-Way	H – M
			4	Pole Bracket, Two-Way	H – M
				Mast Arm, (Horiz.)	Opticom

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE
	DRAWN BY ENGR.
NOTE BOOK	TRACED BY * * * *
	DESIGNED BY B.L.
No.	QUANTITIES BY
	CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 5:03 pm
File: S:\Sig\1007 Oahu Various TSM plans\sig-waiomao03a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Ala Akau Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	80	203

Pedestrian Push Button Schedule

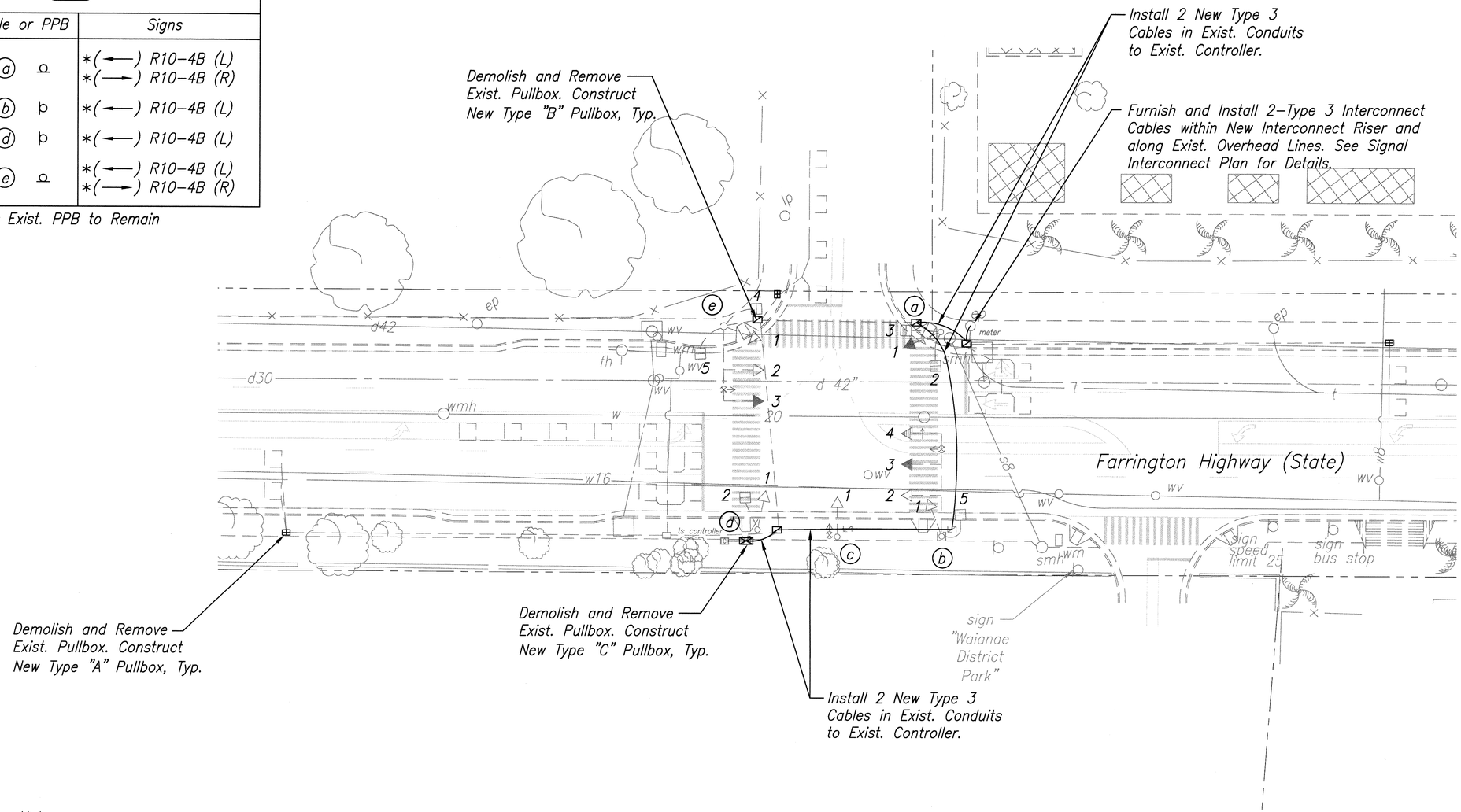
R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	⌀	*(⟵) R10-4B (L) *(⟶) R10-4B (R)
(b)	⌀	*(⟵) R10-4B (L)
(d)	⌀	*(⟵) R10-4B (L)
(e)	⌀	*(⟵) R10-4B (L) *(⟶) R10-4B (R)

* = Exist. PPB to Remain

Waianae Intermediate School

True North
Scale: 1" = 20'



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 81 for List of Materials.

Traffic Signal Plan
Scale: 1"=20'

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at Waianae Intermediate School
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

80

ORIGINAL PLAN | NOTE BOOK No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE

Plot Date: Jul 29 2008 Plot Time: 5:03 pm
File: S:\Dgn\Dot Oahu Various TSM dtrns \Sgn-waianae04.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	81	203

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		
Pole Letter and Signal Head Number	b-1	*	*	*	b-3	*	*	*	a-1	*	*	*	a-2*	a-3*
	b-2	*	*	*	e-3	*	*	*	b-4	Ⓟ	Ⓟ	Ⓟ	d-2*	e-4*
	c-1	*	*	*									e-5*	
	d-1	*	*	*										
	e-1	*	*	*										
	e-2	*	*	*										

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y ←
			2	Pole Bracket, Two-Way	H – M
			3	Pole Bracket, Two-Way	H – M
b	Existing (to Remain)	II	1	Pole Bracket, One-Way	R Y G
			2	Mast Arm, One-Way	R Y G
			3	Mast Arm, One-Way	R Y ↑
			4	Mast Arm, One-Way	R Y ←
			5	Pole Bracket, One-Way	H – M
				Mast Arm, (Horiz.)	Opticom
c	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y G
				Slip Fitter, One-Way	Opticom
d	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y G
			2	Pole Bracket, One-Way	H – M
e	Existing (to Remain)	II	1	Pole Bracket, One-Way	R Y G
			2	Mast Arm, One-Way	R Y G
			3	Mast Arm, One-Way	R Y ↑
			4	Pole Bracket, Two-Way	H – M
			5	Pole Bracket, Two-Way	H – M
				Mast Arm, (Horiz.)	Opticom

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

Plot Date: Jul 29 2008 Plot Time: 5:04 pm
File: S:\Dpl\LOCI Oahu Various TSM \draw \sp-weainae04a.dwg

BRYAN P. LOW
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No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at
Waianae Intermediate School
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

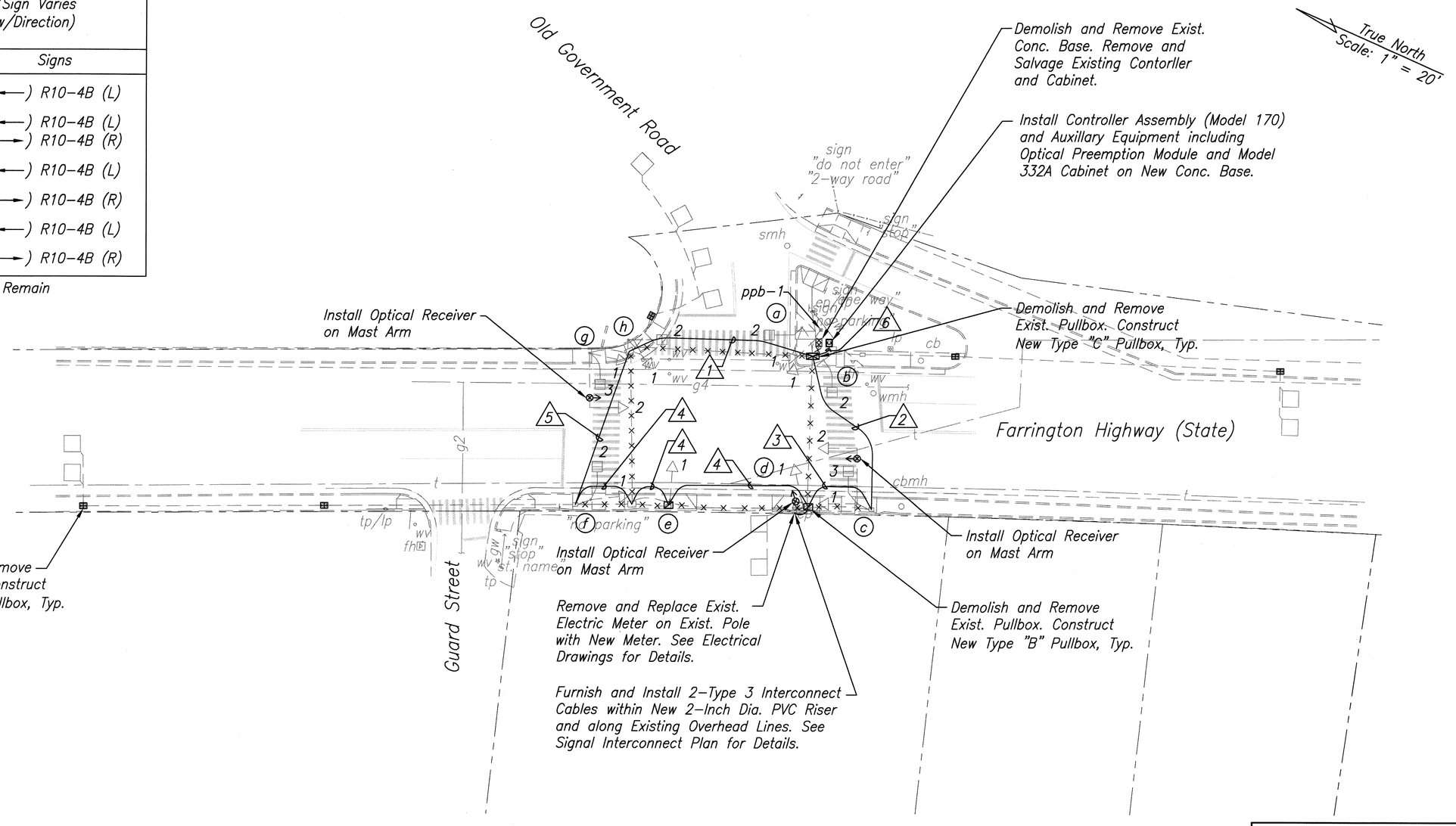
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	82	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1	*(←) R10-4B (L)
(b)	*(←) R10-4B (L) *(→) R10-4B (R)
(c)	*(←) R10-4B (L)
(f)	*(→) R10-4B (R)
(g)	*(←) R10-4B (L)
(h)	*(→) R10-4B (R)

* = Exist. PPB to Remain



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 83 for List of Materials.

Traffic Signal Plan

Scale: 1"=20'

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY

Plot Date: Jul 29 2008 Plot Time: 5:05 pm
File: S:\Dpw\DOT Oahu Various TSM drwg \tsp-mainsheet05.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1128-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Old Government Road
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	83	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 1 – Type 7 1 – Spare
2	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 2 – Type 3 1 – Type 6 2 – Type 7 1 – Spare
3	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
4	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Spare
5	New 3-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Spare
6	New 7-2"	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 6 – Type 2 2 – Type 3 1 – Type 6 3 – Type 7 1 – Spare

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*									a-2* b-2* c-3* f-2* g-3* h-2*
	b-1	*	*	*									
	c-1	*	*	*									
	c-2	*	*	*									
	d-1	*	*	*									
	e-1	*	*	*									
	f-1	*	*	*									
	g-1	*	*	*									
	g-2	*	*	*									
	h-1	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
b	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
c	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y G R Y G H – M *Opticom
d	Existing (to Remain)	I	1	Slip Fitter, One-Way Slip Fitter, One-Way	R Y G *Opticom
e	Existing (to Remain)	I	1	Slip Fitter, One-Way	R Y G
f	Existing (to Remain)	I	1	Slip Fitter, One-Way	H – M
g	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y G R Y G H – M *Opticom
h	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 5:05 pm
File: S:\Sig\1007 Oahu Various TSM \Drew \Sp-motionSSs.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at Old Government Road
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

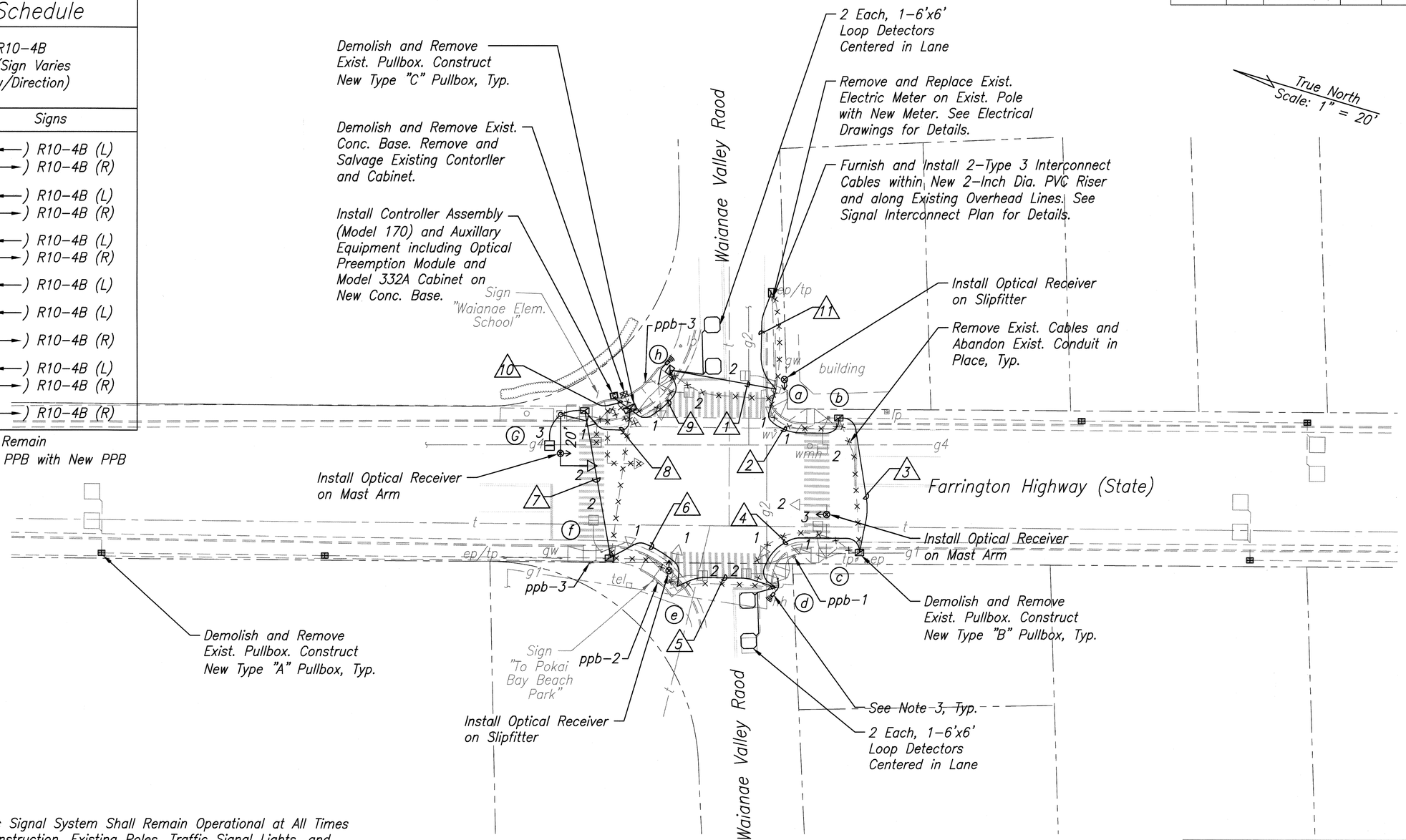
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	84	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a)	*(←) R10-4B (L) (→) R10-4B (R)
(b)	(←) R10-4B (L) ®(→) R10-4B (R)
(c)	*(←) R10-4B (L) *(→) R10-4B (R)
ppb-1	*(←) R10-4B (L)
ppb-2	*(←) R10-4B (L)
ppb-3	*(→) R10-4B (R)
(G)	(←) R10-4B (L) (→) R10-4B (R)
(h)	*(→) R10-4B (R)

* = Exist. PPB to Remain
® = Replace Exist. PPB with New PPB



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 85 for List of Materials.
3. Install Temp. Microwave Detector on Exist. Pole.

Traffic Signal Plan
Scale: 1"=20'

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

Plot Date: Jul 29 2008 Plot Time: 5:06 pm
File: S:\Dgn\1007 Oahu Various TSM\prow\sp-waianae05.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1164 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Farrington Hwy. at Waianae Valley Road
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	85	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 2 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
3	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 7 1 – Spare
4	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 7 2 – Spare
5	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
6	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 2 – Type 7 1 – Spare
7	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 2 – Type 7 1 – Spare
8	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 3 – Type 7 1 – Spare
9	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 2 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
10	New 8-2"	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 4 – Type 2 4 – Type 2 2 – Type 3 1 – Type 6 4 – Type 7 1 – Spare
11	New 2-2" (Conc. Enc.)	2 – Type 3 1 – Type 6

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
Pole Letter and Signal Head Number		R	Y	G		R	Y	↑		R	Y	←	
	a-1	*	*	*									a-2* b-2*
	b-1	*	*	*									c-3* d-2*
	c-1	*	*	*									e-2* f-2*
	c-2	*	*	*									G-3* h-2*
	d-1	*	*	*									
	e-1	*	*	*									
	f-1	*	*	*									
	G-1	N	N	N									
	G-2	N	N	N									
	h-1	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y G H – M *Opticom
b	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
c	Existing (to Remain)	II	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y G R Y G H – M *Opticom
d	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
e	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y G H – M *Opticom
f	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
G	New Type II	II-20	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y G R Y G H – M Opticom
h	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 5:07 pm
File: S:\Dgn\001 Oahu Various TSM (draw).tgn—waianae08s.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Waianae Valley Road

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

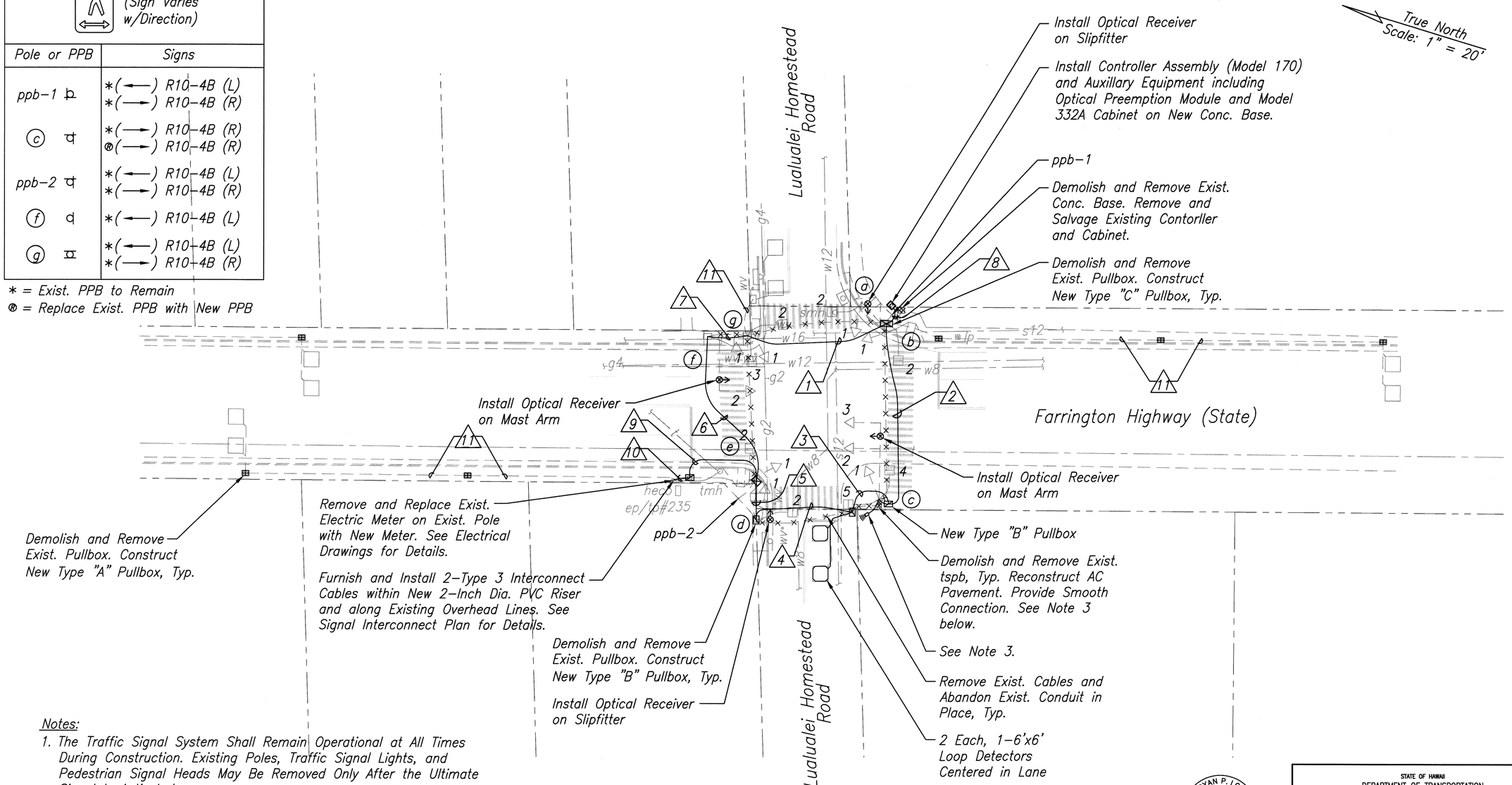
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	86	203

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
ppb-1 b	*(←) R10-4B (L) *(→) R10-4B (R)
ⓒ d	*(→) R10-4B (R) ®(→) R10-4B (R)
ppb-2 d	*(←) R10-4B (L) *(→) R10-4B (R)
ⓕ d	*(←) R10-4B (L)
ⓖ a	*(←) R10-4B (L) *(→) R10-4B (R)

* = Exist. PPB to Remain
® = Replace Exist. PPB with New PPB



Traffic Signal Plan

Scale: 1"=20'

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 87 for List of Materials.
3. Contractor Shall Verify the Exist. Cables w/in the Pullboxes to be Removed are not Active Prior to Demolishing and Removing the Pullbox.

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY
DRAWN BY LNGR
TRACED BY
DESIGNED BY B.L.
QUANTITIES BY
CHECKED BY
DATE

Plot Date: Jul 29 2008 Plot Time: 5:07 pm
File: S:\Dpw\DOT Oahu Various TSM \dgn\various07.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Farrington Hwy. at Lualualei Homestead Road
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	87	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 4 – Type 2 2 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
2	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 2 – Type 7 1 – Spare
3	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 7 1 – Spare
4	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 7 1 – Spare
5	New 4-2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Spare
6	New 5-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 2 – Type 3 1 – Type 6 1 – Spare
7	New 6-2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 2 – Type 3 1 – Type 6 1 – Type 7 1 – Spare
8	New 8-2"	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 4 – Type 2 4 – Type 2 2 – Type 3 1 – Type 6 4 – Type 7 1 – Spare
9	New 3-2" (Conc. Enc.)	1 – Type 2 2 – Type 3 1 – Type 6
10	New 2-2"	2 – Type 3 1 – Type 6
11	Exist. 1-2" (per plan)	†1 – Type 2

† = Existing Cables to Remain

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
Pole Letter and Signal Head Number		R	Y	G		R	Y	↑		R	Y	←	
	a-1	*	*	*									a-2* b-2*
	b-1	*	*	*									c-4* c-5*
	c-1	*	*	*									d-2* e-2*
	c-2	*	*	*									g-2* g-3*
	c-3	*	*	*									
	d-1	*	*	*									
	e-1	*	*	*									
	f-1	*	*	*									
	f-2	*	*	*									
	g-1	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y G H – M *Opticom
b	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
c	Existing (to Remain)	II	1 2 3 4 5	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Mast Arm, (Horiz.)	R Y G R Y G R Y G H – M H – M *Opticom
d	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way Slip Fitter, One-Way	R Y G H – M *Opticom
e	Existing (to Remain)	I	1 2	Slip Fitter, One-Way Pole Bracket, One-Way	R Y G H – M
f	Existing (to Remain)	II	1 2	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y G R Y G *Opticom
g	Existing (to Remain)	I	1 2 3	Slip Fitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G H – M H – M

* Install on Existing Standard

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

Plot Date: Jul 29 2008 Plot Time: 5:08 pm
File: S:\Dgn\1007 Oahu Various TSM\Grow\Sgn-waianae07a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

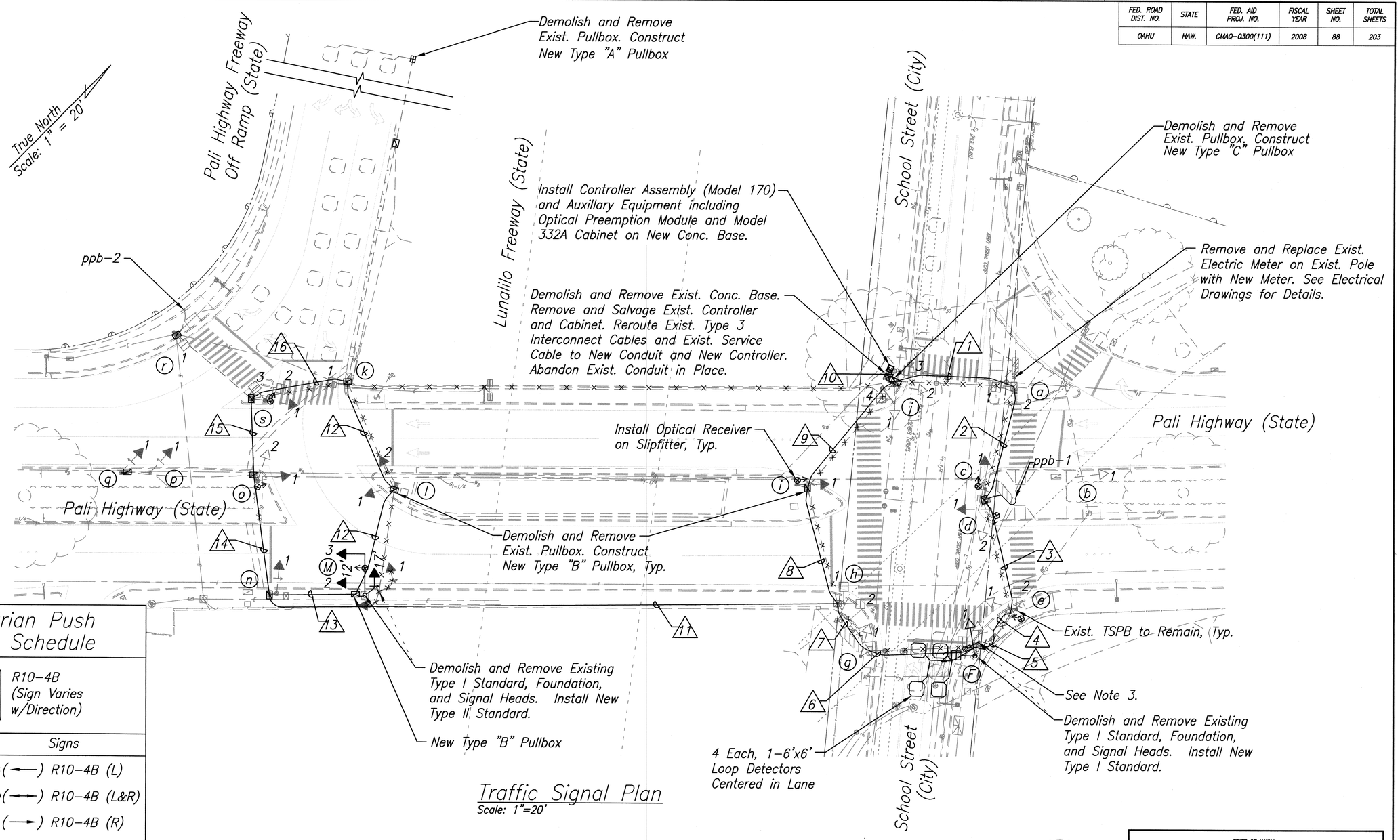
Farrington Hwy. at Lualualei Homestead Road
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

87

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	88	203



Traffic Signal Plan

Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB	Signs
(a) ɑ	*(⟵) R10-4B (L)
ppb-1 ɑ	®(⟵⟶) R10-4B (L&R)
(e) ɑ	*(⟶) R10-4B (R)
(h) ɑ	®(⟶) R10-4B (R)
(j) ɒ	*(⟶) R10-4B (R)
ppb-2 ɋ	*(⟶) R10-4B (R)
(s) ɔ	*(⟵⟶) R10-4B (L&R)

* = Exist. PPB to Remain
® = Replace Exist. PPB with New PPB

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 89 for List of Materials.
3. Install Temp. Microwave Detector on Exist. Pole.

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
DRAWN BY ENGR.
TRACED BY
DESIGNED BY BLL
QUANTITIES BY
CHECKED BY

Plot Date: Aug 20 2008 Plot Time: 8:35 am
File: S:\Sgn\2007 Oahu Various TSM Upgrades\pali-ramp\pali01.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Pali Hwy. at School St. & Off-Ramp
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	89	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Pole Bracket, Two-Way Pole Bracket, Two-Way	H – M H – M
b	Existing (to Remain)	I	1	Mounted on Overpass	R Y ↑
c	Existing (to Remain)	I	1	Slipfitter, One-Way Slipfitter, One-Way	R Y G ∗ Opticom
d	Existing (to Remain)	I	1 2	Slipfitter, Two-Way Slipfitter, Two-Way Slipfitter, One-Way	R Y ↑ R Y G ∗ Opticom
e	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H – M ∗ Opticom
F	New	I–10	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H – M
g	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y G
h	Existing (to Remain)	I	1 2	Pole Bracket, Two-Way Pole Bracket, Two-Way	H – M H – M
i	Existing (to Remain)	I	1	Slipfitter, One-Way Slipfitter, One-Way	R Y ↑ ∗ Opticom
j	Existing (to Remain)	I	1 2 3 4	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, Two-Way Pole Bracket, Two-Way	R Y G R Y G H – M H – M
k	Existing (to Remain)	I	1	Pole Bracket, One-Way	H – M
l	Existing (to Remain)	I	1 2	Slipfitter, Two-Way Slipfitter, Two-Way	R Y ↑ R Y ←
M	New	II–17	1 2 3	Pole Bracket One-Way Mast-Arm, One-Way Mast-Arm, One-Way Mast-Arm, One-Way	R Y ← R Y ↑ R Y ↑ Opticom
n	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
o	Existing (to Remain)	I	1 2	Slipfitter, Two-Way Slipfitter, Two-Way Slipfitter, One-Way	R Y ↑ R Y G ∗ Opticom
p	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y →
q	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y →
r	Existing (to Remain)	I	1	Pole Bracket, One-Way	H – M
s	Existing (to Remain)	I	1 2 3	Slipfitter, One-Way Pole Bracket, Two-Way Pole Bracket, Two-Way Slipfitter, One-Way	R Y ↑ H – M H – M ∗ Opticom

∗ = Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				12" RY→ Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)	
		R	Y	G		R	Y	↑		R	Y	←		R	Y	→		
Pole Letter and Signal Head Number	b–1	∗	∗	∗	d–1	∗	†	†	l–2	∗	∗	∗	p–1	∗	∗	∗	a–1∗	j–3∗
	c–1	∗	∗	∗	i–1	∗	∗	∗	M–1	N	N	N	q–1	∗	∗	∗	a–2∗	j–4∗
	d–2	∗	†	∗	l–1	∗	∗	∗	n–1	∗	∗	∗					e–2∗	k–1∗
	e–1	∗	∗	∗	M–2	N	N	N									F–2 N	r–1∗
	F–1	N	N	N	M–3	N	N	N									h–1∗	s–2∗
	g–1	∗	∗	∗	o–2	∗	∗	∗									h–2∗	s–3∗
	j–1	∗	∗	∗	s–1	∗	∗	∗										
	j–2	∗	∗	∗														
	o–1	∗	∗	∗														

∗ = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 5–2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Type 6 3 – Type 7 1 – Spare
2	New 4–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 3 – Type 7 1 – Spare
3	New 3–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 2 1 – Type 7 1 – Spare
4	New 3–2"	1 – Type 1, Ground Wire 2 – Spare
5	New 3–2"	1 – Type 1, Ground Wire 2 – Spare
6	New 3–2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Type 2 1 – Spare
7	New 3–2"	1 – Type 1, Ground Wire 2 – Type 2 1 – Spare
8	New 5–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 6 – Type 2 3 – Type 7 1 – Spare
9	New 5–2" (Conc. Enc.)	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 6 – Type 2 4 – Type 7 1 – Spare
10	New 7–2"	1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 1 – Type 1, Ground Wire 9 – Type 2 1 – Type 6 7 – Type 7 1 – Spare
11	Exist. 3–2" (Along Soffit)	∗1 – Type 1, Ground Wire ∗3 – Type 2 ∗3 – Type 7
12	New 3–2" (Conc. Enc.)	1 – Type 1, Ground Wire 2 – Spare
13	New 3–2"	1 – Type 1, Ground Wire 1 – Type 7 1 – Spare
14	Exist. 2–2"	∗1 – Type 1, Ground Wire †3 – Type 2,⊕2 – Type 7
15	Exist. 2–2"	∗1 – Type 1, Ground Wire †3 – Type 2,⊕1 – Type 7
16	New 3–2" (Conc. Enc.)	1 – Type 1, Ground Wire 3 – Type 2 1 – Spare

∗ = Remove Exist. Cables and Replace with New Cables as Designated.

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

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

Plot Date: Aug 20 2008 Plot Time: 8:35 am
File: S:\Bid\2008 Oahu Various TSM\draw\sig-plan01a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Pali Hwy. at School St. & Off-Ramp

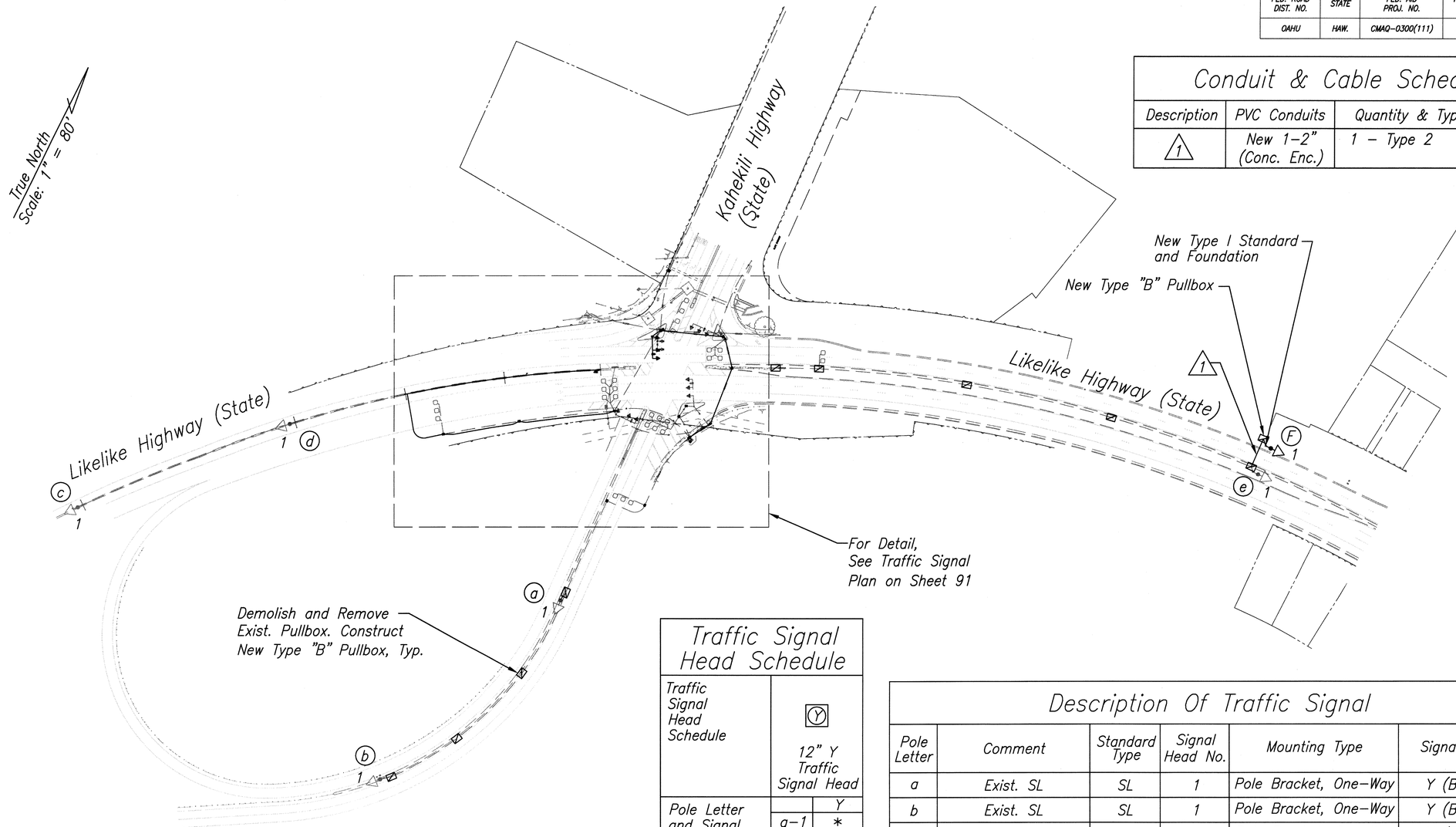
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	90	203

True North
Scale: 1" = 80'



Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 1-2" (Conc. Enc.)	1 - Type 2

Traffic Signal Head Schedule

Traffic Signal Head Schedule	Ⓨ 12" Y Traffic Signal Head	
Pole Letter and Signal Head Number		Y
	a-1	*
	b-1	*
	c-1	*
	d-1	*
	e-1	*
	F-1	N

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens
N = New L.E.D. Signal Lens

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces
a	Exist. SL	SL	1	Pole Bracket, One-Way	Y (Beacon)
b	Exist. SL	SL	1	Pole Bracket, One-Way	Y (Beacon)
c	Exist. SL	SL	1	Pole Bracket, One-Way	Y (Beacon)
d	Exist. SL	SL	1	Pole Bracket, One-Way	Y (Beacon)
e	Exist. SL	SL	1	Pole Bracket, One-Way	Y (Beacon)
F	New	I-10	1	Slipfitter, One-Way	Y (Beacon)

Note:
The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.

Traffic Signal Plan
Scale: 1"=80'

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

Plot Date: Jul 30 2008 Plot Time: 9:01 am
File: S:\Dpl\DOT Oahu Various TSM\drw\sp-likelike01.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABOKURO, ENDO & YOSHIZAKI, INC.
1726 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

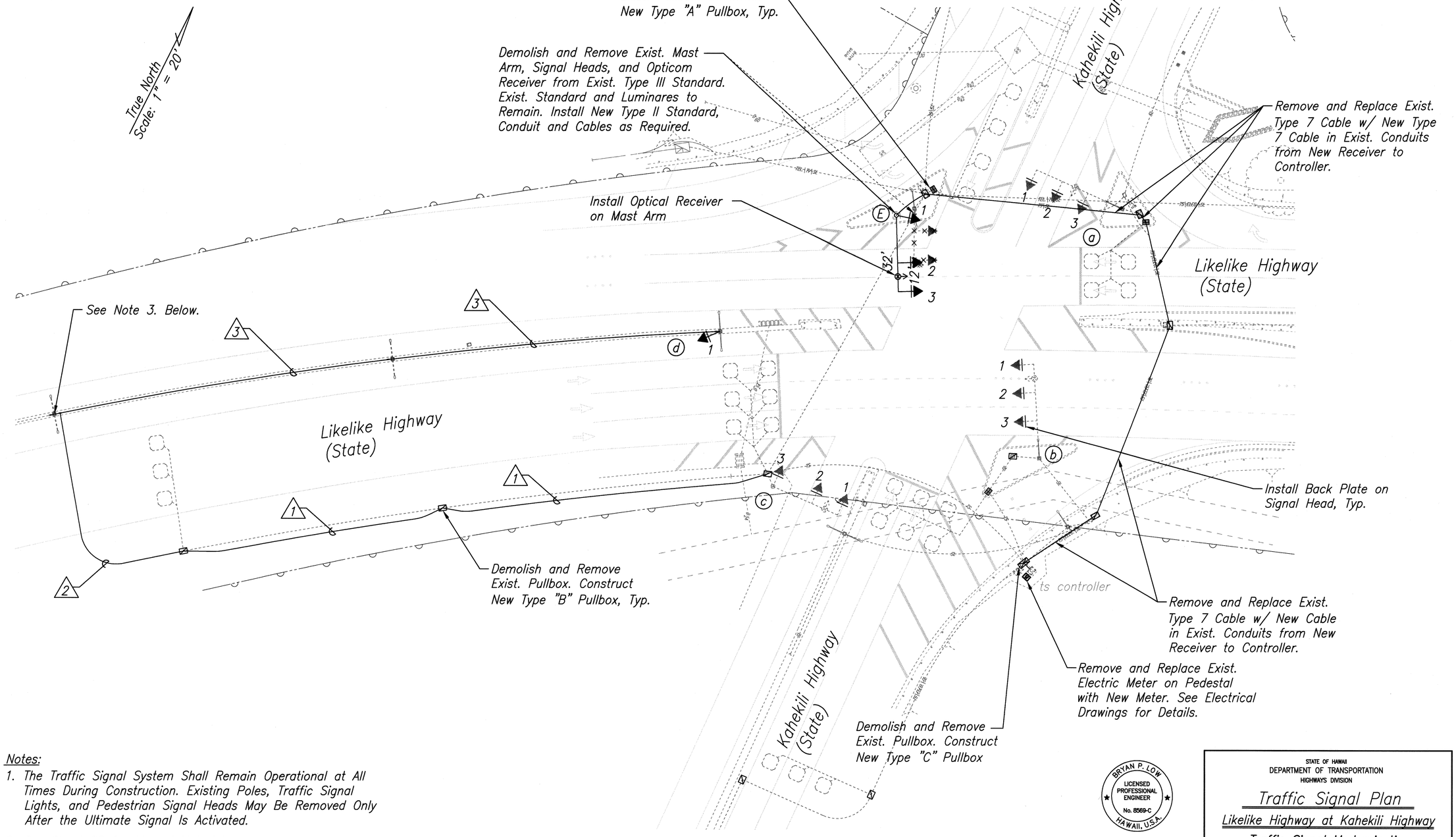
Likelike Highway at Kahekili Highway

Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	91	203



Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 92 for List of Materials.
3. Route Type 1 Cable through Existing SL to Existing SL box in Existing Type 4G Concrete Barrier.

Traffic Signal Plan

Scale: 1"=20'

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

Plot Date: Jul 30 2008 Plot Time: 9:04 am
File: S:\Dgn\DOT Oahu Various TSM \dfrow1\gp-dsskte02.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO ENDO & YOSHIZAKI, INC.
1126-12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Likelike Highway at Kahekili Highway

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	92	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	III	1 2 3	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y ↑ Opticom
b	Existing (to Remain)	III	1 2 3	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y ↑ Opticom
c	Existing (to Remain)	III	1 2 3	Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y ↑ Opticom
* d	Existing SL	SL	1	Pole Bracket, One-Way	* R Y ↑
E	New	II-26	1 2 3	Pole Bracket, One-Way Mast Arm, One-Way Mast Arm, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y ↑ Opticom

Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RY↑ Traffic Signal Head				12" Y Traffic Signal Head	
		R	Y	↑		Y
Pole Letter and Signal Head Number	a-1	*	*	*		
	a-2	*	*	*		
	a-3	*	*	*		
	b-1	*	*	*		
	b-2	*	*	*		
	b-3	*	*	*		
	c-1	*	*	*		
	c-2	*	*	*		
	c-3	*	*	*		
	d-1	N	N	N		
	E-1	N	N	N		
	E-2	N	N	N		
	E-3	N	N	N		

Note: Provide Back Plate for All Signal Heads

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens

N = New L.E.D. Signal Lens

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
1	New 2-2"	1 - Type 1, Ground Wire 1 - Spare
2	Exist. 1-2" (Conc. Enc.)	†1 - Type 2 ⊕1 - Type 1, Ground Wire
3	Exist. 1-2" SL Conduit in Barrier	†1 - SL Cable ⊕1 - Type 1, Ground Wire

† = Existing Cables to Remain

⊕ = Add Designated Cable within Existing Conduit

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	ENGR.
NOTE BOOK	TRACED BY	
	DESIGNED BY	B.L.
No.	QUANTITIES BY	
	CHECKED BY	

Plot Date: Jul 30 2008 Plot Time: 9:05 am
File: S:\Dpl\DOT Oahu Various TSM\Draw\Sig-like&Kah2a.dwg

BRYAN P. LOW
LICENSED PROFESSIONAL ENGINEER
No. 8569-C
HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Likelike Highway at Kahekili Highway

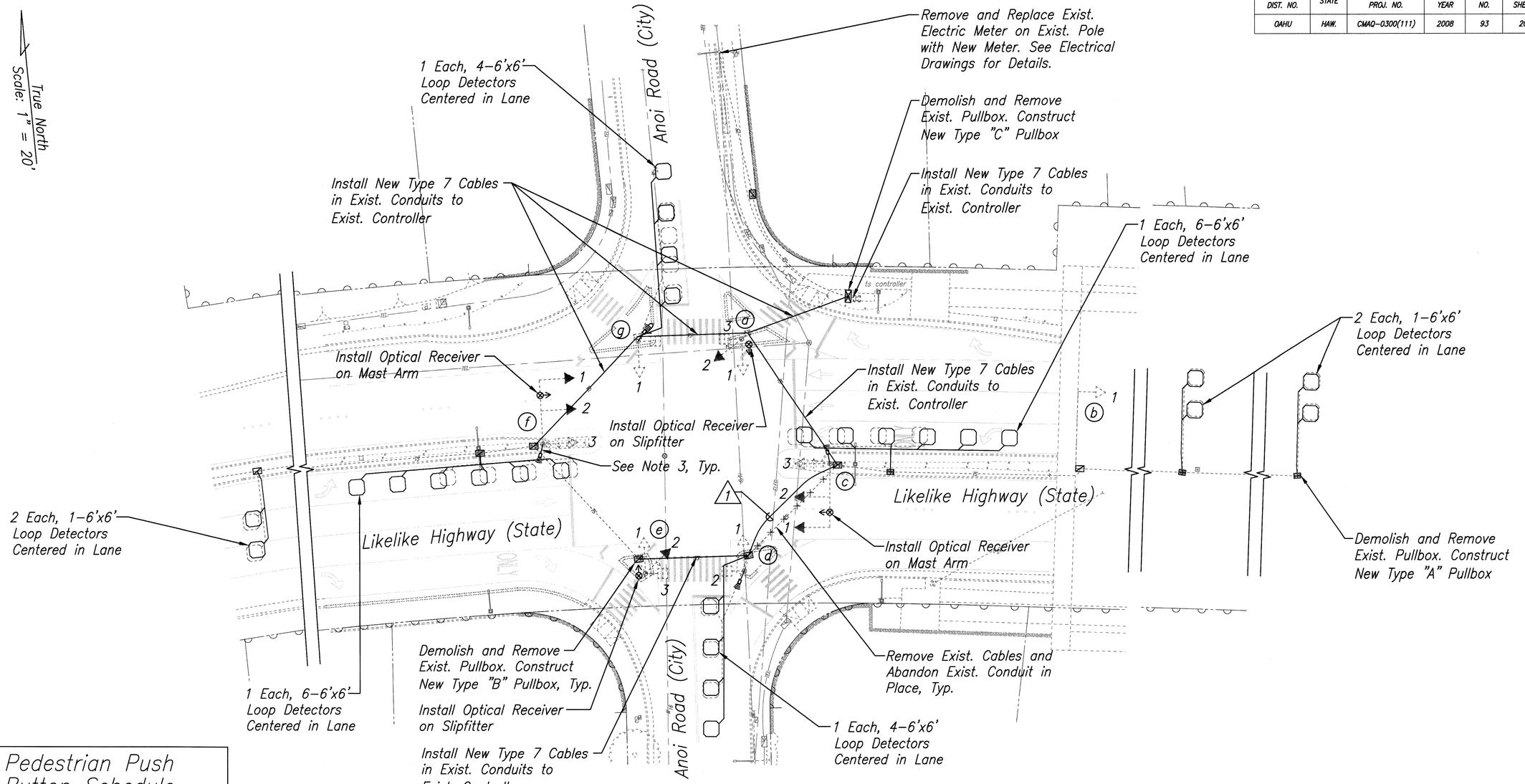
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	93	203

True North
Scale: 1" = 20'



Traffic Signal Plan

Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	○	*(→) R10-4B (R)
(d)	⌂	(→) R10-4B (L)
(e)	⌂	(←) R10-4B (R)
(g)	○	*(←) R10-4B (L)

* = Exist. PPB to Remain

Notes:

1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated.
2. See Sheet 94 for List of Materials.
3. Furnish and Install Opticom Preemption Module in Exist. Controller.
4. Install Temp. Microwave Detector on Exist. Pole.

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

Plot Date: Jul. 30 2008 Plot Time: 9:08 am
File: S:\Dgn\1007 Oahu Various TSM Upgr\Sgn-Realted3.dwg

BRYAN P. LOW
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HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10
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SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Likelike Highway at Anoi Road
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	94	203

Conduit & Cable Schedule

Description	PVC Conduits	Quantity & Type of Cable
(1)	New 4-2" (Conc. Enc.)	1 - Type 1, Ground Wire 2 - Type 2 1 - Type 7 1 - Spare

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y ← H - M * Opticom
b	Existing (to Remain)	Soffit	1	Soffit Mount	R Y G
c	Existing (to Remain)	II	1 2 3	Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y ← * Opticom
d	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M
e	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G R Y ← H - M * Opticom
f	Existing (to Remain)	II	1 2 3	Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y ← * Opticom
g	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way	R Y G H - M

* Install on Existing Standard

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a-1	*	*	*	c-1	*	*	*	a-2	*	*	*	a-3*
	b-1	*	*	*	c-2	*	*	†	c-3	Ⓟ	Ⓟ	Ⓟ	d-2*
	d-1	*	*	*	f-1	*	*	*	e-2	*	*	*	e-3*
	e-1	*	*	*	f-2	*	*	*	f-3	Ⓟ	Ⓟ	Ⓟ	g-2*
	g-1	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

† = Existing L.E.D. Signal Lens or Countdown Pedestrian Signal Head to Remain

Ⓟ = Existing Programmed Visibility Lens to Remain

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

Plot Date: Jul 30, 2008 Plot Time: 9:09 am
File: S:\Dpl\DOT Oahu Various TSM\dgnw\sgn-likelike03a.dwg

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HAWAII, U.S.A.

LICENSE EXPIRATION DATE 04/30/10

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SHIMABUKURO, INADA & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Likelike Highway at Anoi Road

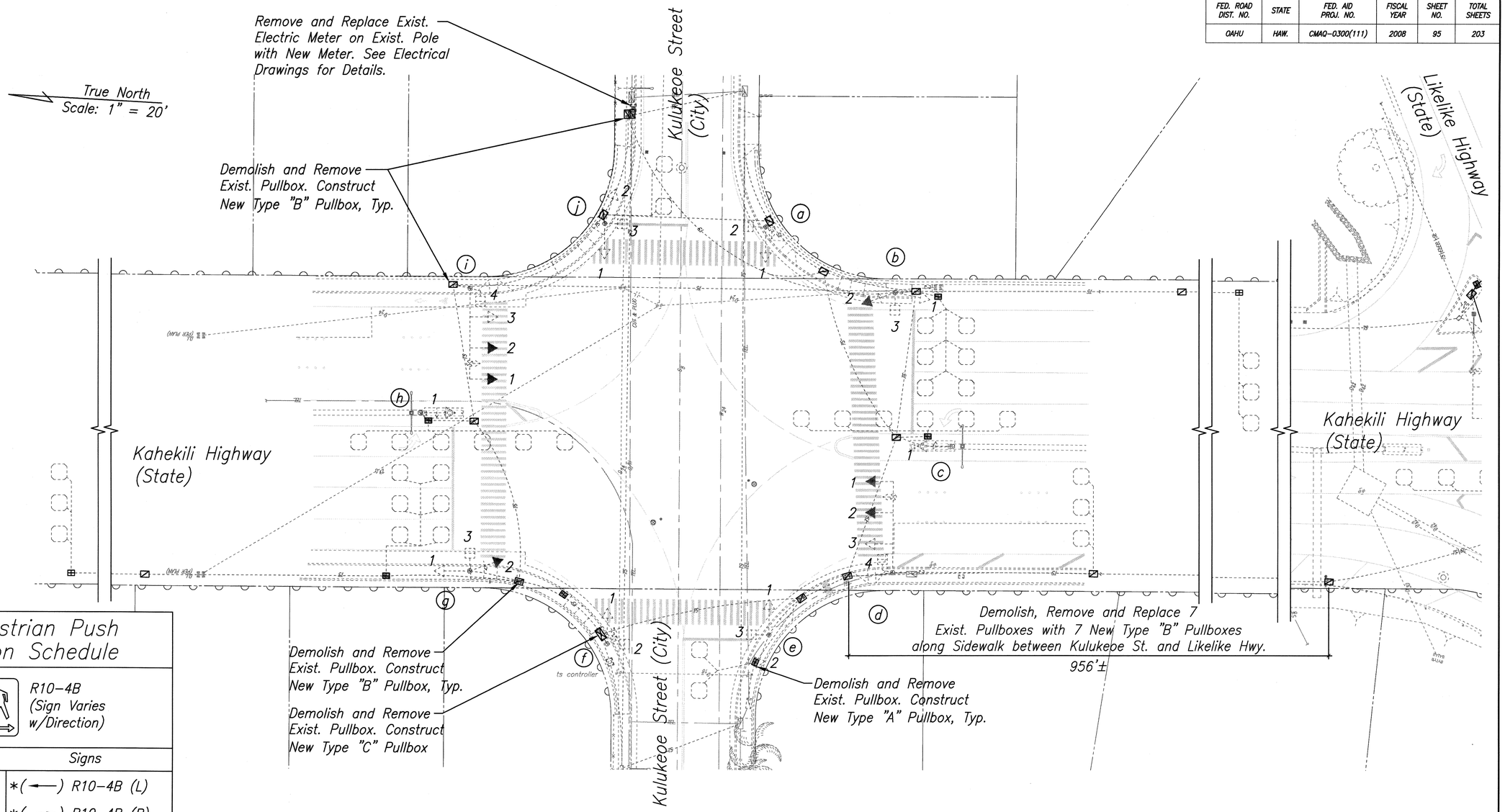
Traffic Signal Modernization
Various Locations - Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS

94

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	95	203



Traffic Signal Plan
Scale: 1"=20'

Pedestrian Push Button Schedule

R10-4B (Sign Varies w/Direction)

Pole or PPB		Signs
(a)	♌	*(⟵) R10-4B (L)
(b)	♍	*(⟶) R10-4B (R)
(d)	♊	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
(e)	♎	*(⟶) R10-4B (R)
(f)	♎	*(⟵) R10-4B (L)
(g)	♊	*(⟶) R10-4B (R) *(⟵) R10-4B (L)
(i)	♑	*(⟵) R10-4B (L)
(j)	♌	*(⟶) R10-4B (R)

* = Exist. PPB to Remain

Notes:
1. The Traffic Signal System Shall Remain Operational at All Times During Construction. Existing Poles, Traffic Signal Lights, and Pedestrian Signal Heads May Be Removed Only After the Ultimate Signal Is Activated. All Equipment and Materials Removed with the Exception of Existing Temporary Microwave Detectors Shall Become the Property of the Contractor Unless Otherwise Specified.
2. See Sheet 96 for List of Materials.

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY B.L. | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

Plot Date: Jul 30 2008 Plot Time: 9:10 am
File: S:\Dgn\DOT Oahu Various TSM \draw \sgn-tltestle04.dwg

BRYAN P. LOW
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LICENSE EXPIRATION DATE 04/30/10
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SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12TH Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan
Kahekili Highway at Kulukeoe Street
Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)
Date: July, 2008

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	CMAQ-0300(111)	2008	96	203

Description Of Traffic Signal

Pole Letter	Comment	Standard Type	Signal Head No.	Mounting Type	Signal Faces, CCTV and Optical Receivers
a	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H – M Opticom
b	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y ← H – M
c	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
d	Existing (to Remain)	III	1 2 3 4	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y G H – M Opticom
e	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y G H – M
f	Existing (to Remain)	I	1 2	Slipfitter, One-Way Pole Bracket, One-Way Slipfitter, One-Way	R Y G H – M Opticom
g	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y ← H – M
h	Existing (to Remain)	I	1	Slipfitter, One-Way	R Y ←
i	Existing (to Remain)	III	1 2 3 4	Mast Arm, One-Way Mast Arm, One-Way Mast Arm, One-Way Pole Bracket, One-Way Mast Arm, (Horiz.)	R Y ↑ R Y ↑ R Y G H – M Opticom
j	Existing (to Remain)	I	1 2 3	Slipfitter, Two-Way Slipfitter, Two-Way Pole Bracket, One-Way	R Y G R Y G H – M

Traffic Signal Head Schedule

Traffic Signal Head Schedule	12" RYG Traffic Signal Head				12" RY↑ Traffic Signal Head				12" RY← Traffic Signal Head				Countdown Pedestrian Signal Head (L.E.D.)
		R	Y	G		R	Y	↑		R	Y	←	
Pole Letter and Signal Head Number	a–1	*	*	*	d–1	*	*	*	b–2	*	*	*	a–2*
	b–1	*	*	*	d–2	*	*	*	c–1	Ⓟ	Ⓟ	Ⓟ	b–3*
	d–3	*	*	*	i–1	*	*	*	g–2	*	*	*	d–4*
	e–1	*	*	*	i–2	*	*	*	h–1	Ⓟ	Ⓟ	Ⓟ	e–3*
	e–2	*	*	*									f–2*
	f–1	*	*	*									g–3*
	g–1	*	*	*									i–4*
	i–3	*	*	*									j–3*
	j–1	*	*	*									
	j–2	*	*	*									

* = Retrofit Existing Signal Lens with New L.E.D. Signal Lens or Countdown Lens

Ⓟ = Existing Programmed Visibility Lens to Remain

N = New L.E.D. Signal Lens or Countdown Pedestrian Signal Head

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

Plot Date: Jul. 30 2008 Plot Time: 9:11 am
File: S:\Dgn\DOT Oahu Various TSM\dgnw\sig-Westkok4b.dwg

BRYAN P. LOW
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LICENSE EXPIRATION DATE 04/30/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

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Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Traffic Signal Plan

Kahekili Highway at Kulukeoe Street

Traffic Signal Modernization
Various Locations – Oahu
Federal-Aid Project No. CMAQ-0300(111)

Date: July, 2008

SHEET No. 2 OF 2 SHEETS