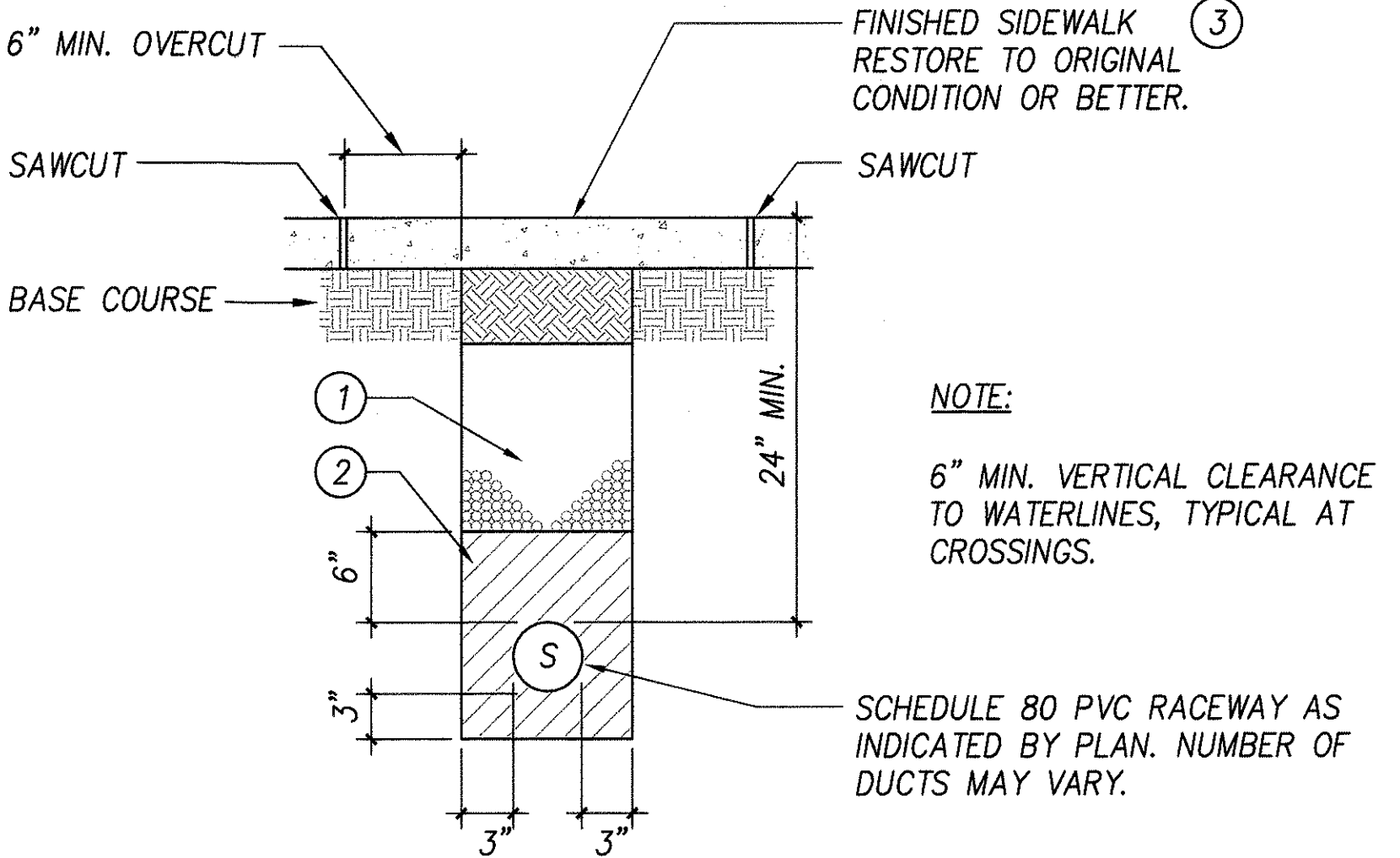
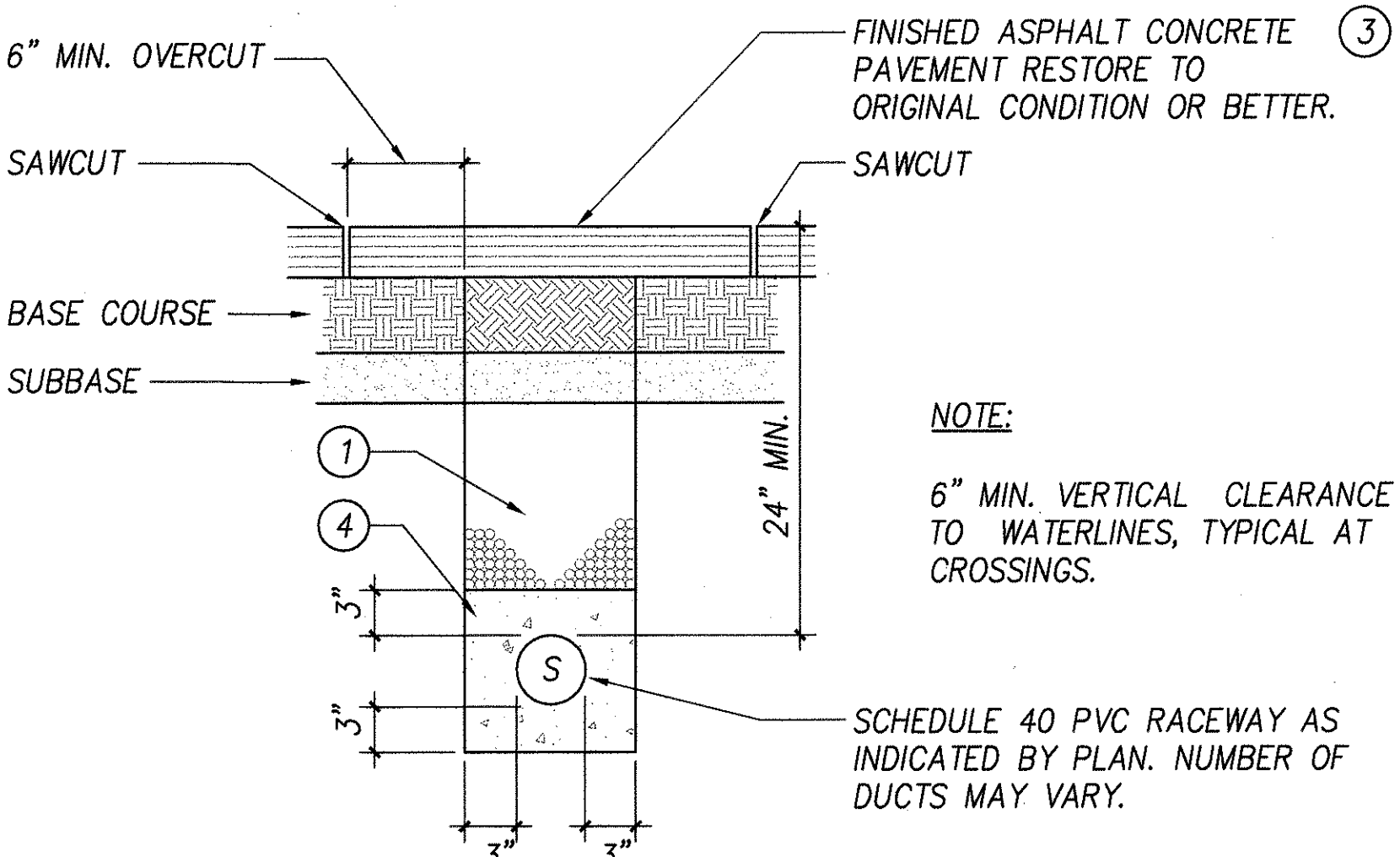


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	124	153



DIRECT BURIED DUCT TYPE [A]



ENCASED DUCT TYPE [B]

[A] TYPICAL DUCT SECTIONS  
[E-1] NOT TO SCALE

NOTES:

- TYPE "A" BACKFILL - BEACH SAND, EARTH, OR EARTH AND GRAVEL. IF EARTH AND GRAVEL, THE MAXIMUM ROCK SIZE SHALL BE 1" AND THE MIXTURE SHALL NOT CONTAIN MORE THAN 50% BY VOLUME OF ROCK PARTICLES.
- TYPE "B" BACKFILL - BEACH SAND, EARTH, OR EARTH AND GRAVEL. IF EARTH AND GRAVEL, THE MIXTURE MUST PASS A 1/2" MESH SCREEN AND CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICLES.
- CONCRETE STRUCTURE/PAVEMENT SHALL BE EQUIVALENT OR BETTER THAN EXISTING IN THICKNESS AND QUALITY.
- PROVIDE 3" CONCRETE JACKET SCHEDULE 40 UNDER ROADWAY CONDITIONS.

TRAFFIC SIGNAL NOTES:

- THE LOCATIONS OF THE TRAFFIC SIGNAL STANDARDS, PEDESTRIAN PUSH BUTTONS, PULLBOXES, CONDUITS SHALL BE STAKED OUT IN THE FIELD BY THE CONTRACTOR AND APPROVAL OF THE LOCATIONS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.
- ALL SPlicing SHALL BE DONE IN THE PULLBOXES.
- SHOULD ANY DEFECT BE ENCOUNTERED DURING THE WARRANTY PERIOD, THE MANUFACTURER WILL BE NOTIFIED AND HE SHALL PROMPTLY CORRECT SUCH DEFECT. SERVICE CALL (BY FACTORY QUALIFIED REPRESENTATIVE) DURING THE WARRANTY PERIOD FOR REPAIRS OR OTHER MAINTENANCE SHALL BE ANSWERED WITHIN 24 HOURS AND SHALL BE DONE AT NO EXPENSE TO THE STATE. ALL REPAIRS SHALL BE DONE AS SOON AS POSSIBLE.
- ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY", FEDERAL HIGHWAY ADMINISTRATION (1988) AND AMENDMENTS.
- ALL CONDUITS BETWEEN PULLBOXES AND TRAFFIC SIGNAL STANDARDS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS CONTRACT ITEMS.
- AFTER INSTALLING ALL THE TRAFFIC SIGNAL CABLES, THE CONTRACTOR SHALL DUCT SEAL ALL CONDUITS IN THE PULLBOXES AND TRAFFIC SIGNAL STANDARDS. THE DUCT SEAL MATERIAL SHALL BE APPROVED BY THE TRAFFIC SIGNAL INSPECTOR/ENGINEER AND SHALL BE CONSIDERED INCIDENTAL TO THE DIRECT BURIED AND/ OR CONCRETE ENCASED CONDUITS.
- CONNECTING INTO EXISTING TRAFFIC SIGNAL SYSTEM AND MARKING ALL NECESSARY ADJUSTMENTS SHALL NOT BE PAID FOR SEPARATELY, BUT CONSIDERED INCIDENTAL TO THE VARIOUS TRAFFIC SIGNAL CONTRACT ITEMS.
- THE CONTRACTOR SHALL NOTIFY THE TRAFFIC CONTROL BRANCH, DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU, (PHONE NO. 523-4589) THREE (3) WORKING DAYS PRIOR TO COMMENCING ANY WORK ON THE TRAFFIC SIGNAL SYSTEM.
- THE DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU, WILL ASSIST THE ENGINEER IN CONSTRUCTION INSPECTION FOR THE TRAFFIC SIGNAL SYSTEM.
- THE TRAFFIC SIGNAL SYSTEM SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. ANY RELOCATION REQUIRED SHALL BE APPROVED BY THE TRAFFIC CONTROL BRANCH, DEPARTMENT OF TRANSPORTATION SERVICES, AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING TRAFFIC SIGNAL FACILITIES, INCLUDING THE TRAFFIC SIGNAL INTERCONNECT SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING TRAFFIC SIGNAL FIBER OPTIC CABLE SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.

HIGHWAY LIGHTING NOTES:

- THE CONTRACTOR SHALL NOTIFY THE STATE HIGHWAYS, HIGHWAY LIGHTING AND TRAFFIC SUPERVISOR 72 HOURS IN ADVANCE BEFORE COMMENCING ANY WORK ON THE HIGHWAY LIGHTING SYSTEM. PHONE: 837-8056.
- THE CONTRACTOR SHALL HAVE ONE SET OF APPROVED PLANS AT THE JOB SITE AT ALL TIMES DURING THE CONSTRUCTION WORK AND RECORD ALL CHANGES WHICH OCCUR DURING CONSTRUCTION OF THE HIGHWAY LIGHTING SYSTEM.
- FINAL ACCEPTANCE AND INSPECTION WILL BE UNDERTAKEN ONLY AFTER ALL WORK HAS BEEN COMPLETED.
- THE CONTRACTOR SHALL MAINTAIN EXISTING CIRCUITING AND OPERATION OF THE LIGHTING SYSTEM DURING THE HOURS OF DARKNESS.
- THE CONTRACTOR SHALL LOCATE EXISTING BURIED UTILITY LINES IN THE VICINITY OF THE EXCAVATION WORK PRIOR TO COMMENCING EXCAVATION. AS A MINIMUM, AN ELECTRONIC MAGNETIC DEVICE FOR DETECTION OF BURIED LINES SHALL BE UTILIZED PRIOR TO EXCAVATION. TRENCHES SHALL BE EXCAVATED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES RESULTING FROM HIS NEGLIGENCE AND SHALL BEAR COST OF REPAIRS TO THE UTILITIES. METHOD OF REPAIR SHALL BE DETERMINED BY THE STATE.

ELECTRICAL SYMBOLS

SYMBOL		DESCRIPTION	REMARKS
EXIST	NEW		
		TRAFFIC LIGHT POLE	
		MAST ARM	
		TRAFFIC SIGNAL HEAD-RED, YELLOW, GREEN ARROW	
		TRAFFIC SIGNAL HEAD-RED, YELLOW, GREEN LEFT TURN ARROW	
		PUSH BUTTON	
		TRAFFIC LIGHT POLE, TYPE I	
		TRAFFIC SIGNAL HEAD-RED, YELLOW, GREEN, GREEN LEFT TURN ARROW	
		PEDESTRIAN SIGNAL	
		PULLBOX (TYPE AS INDICATED)	
		PEDESTRIAN PUSH BUTTON (ARROW DENOTES DIRECTION OF CROSSING)	
		PEDESTRIAN SIGNAL	
		UNDERGROUND TRAFFIC SIGNAL DUCTLINES AND CABLES	
		UNDERGROUND STREET LIGHT DUCTLINES	
		REMOVAL/DEMOLITION	
		DETAIL INDICATOR TOP HALF: DETAIL NUMBER BOTTOM HALF: SHEET ON WHICH SHOWN	
		NOTE INDICATOR, NOTE #1 INDICATED	
		INDICATES DUCT SECTION TYPE.	
		SLPB STREET LIGHT PULLBOX	
		TSPB TRAFFIC SIGNAL PULLBOX	

SURVEY PLANNED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	No.

LENNOX K. NISHIMURA  
LICENSED PROFESSIONAL ENGINEER  
No. 3880-E  
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Lennox K. Nishimura* DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 27 JUL 04

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ELECTRICAL NOTES AND  
SYMBOL LIST

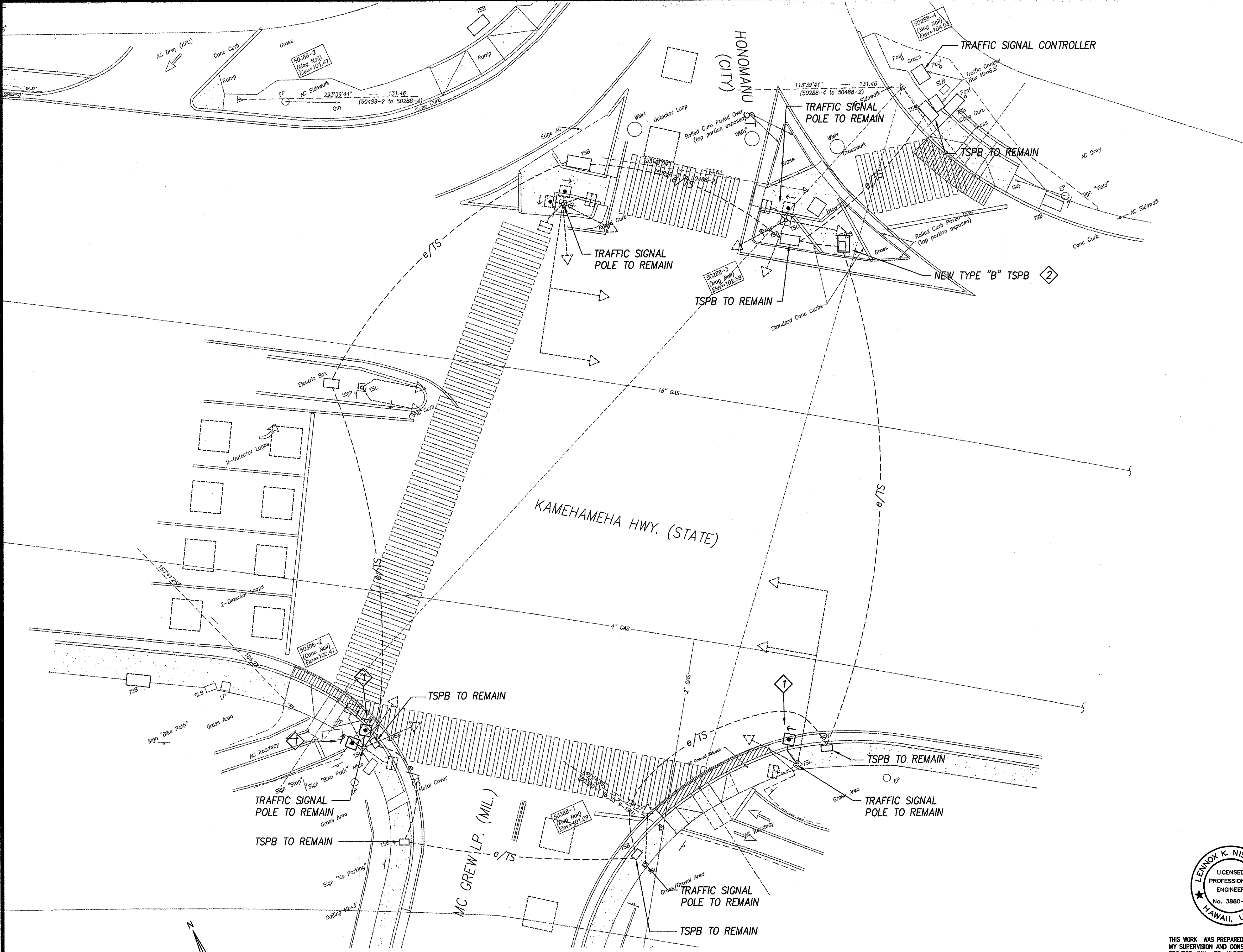
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

NONE Date: July 14, 2004

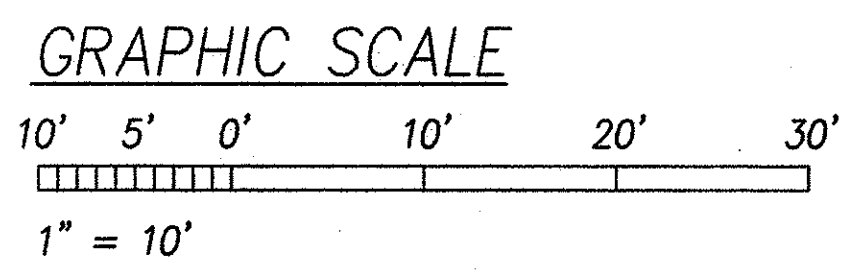
SHEET No. E-1 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	125	153

- NOTES:
- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27
  - 2 REMOVE EXISTING TSPB AND REPLACE IN PLACE WITH NEW TSPB FLUSH WITH FINISHED GRADE. MAINTAIN EXISTING TRAFFIC SIGNAL WIRING AND DUCTLINES UNLESS OTHERWISE NOTED.



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY., HONOMANU ST. & MC GREW LP.  
INTER. ID NO. 99-50288 & 99-50388  
SCALE: 1" = 10'-0"



LENNOX K. NISHIMURA  
LICENSED PROFESSIONAL ENGINEER  
No. 3880-E  
HAWAII, U.S.A.

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Signature: *Lennox K. Nishimura* DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/18/04

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KAMEHAMEHA HWY.,  
HONOMANU ST. & MC GREW LP.


Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

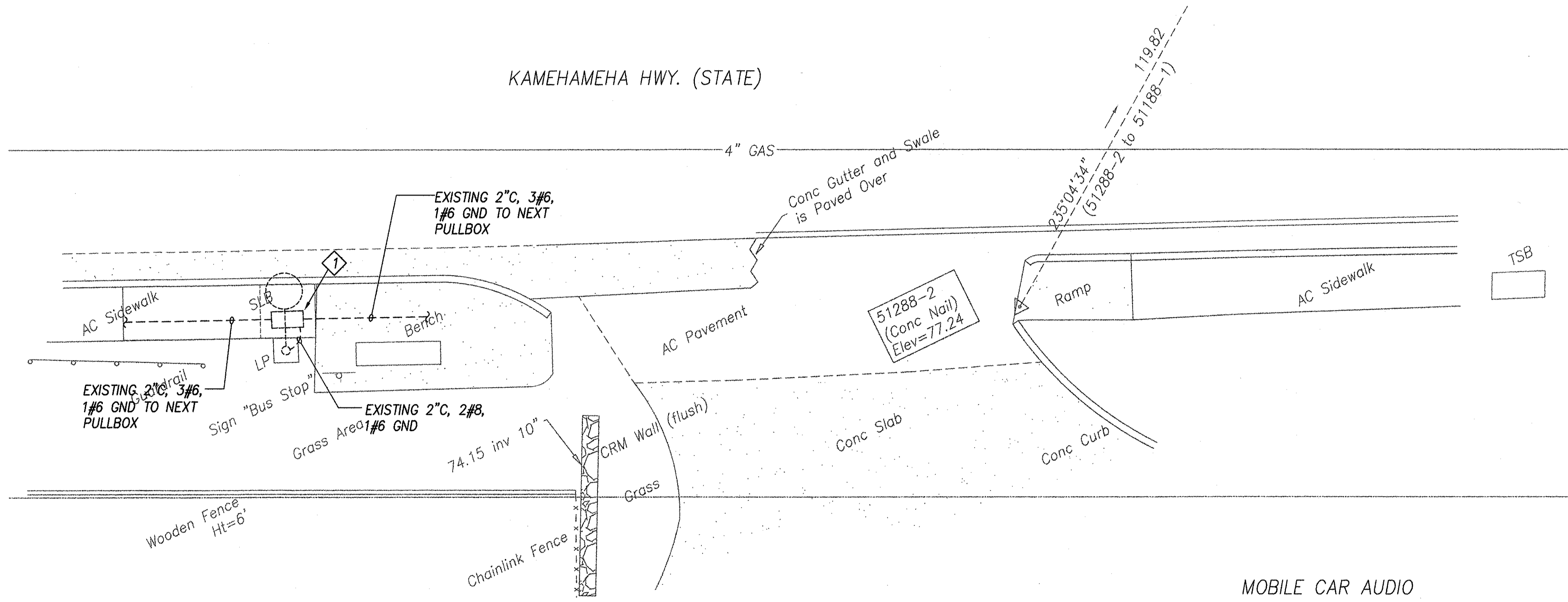
1" = 10'-0" Date: July 2004

SHEET No. E-2 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	126	153

NOTE:

ADJUST EXISTING SLPB TO BE FLUSH WITH FINISH GRADE. SEE 

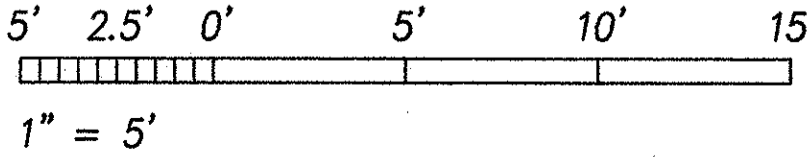


STREET LIGHT PLAN - KAMEHAMEHA HWY. & MOBILE AUDIO  
 INTERS. ID NO. 99-51288  
 SCALE: 1" = 5'-0"

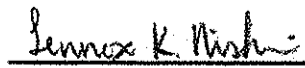
ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
No.	

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GRAPHIC SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE  DATE 7/07/04

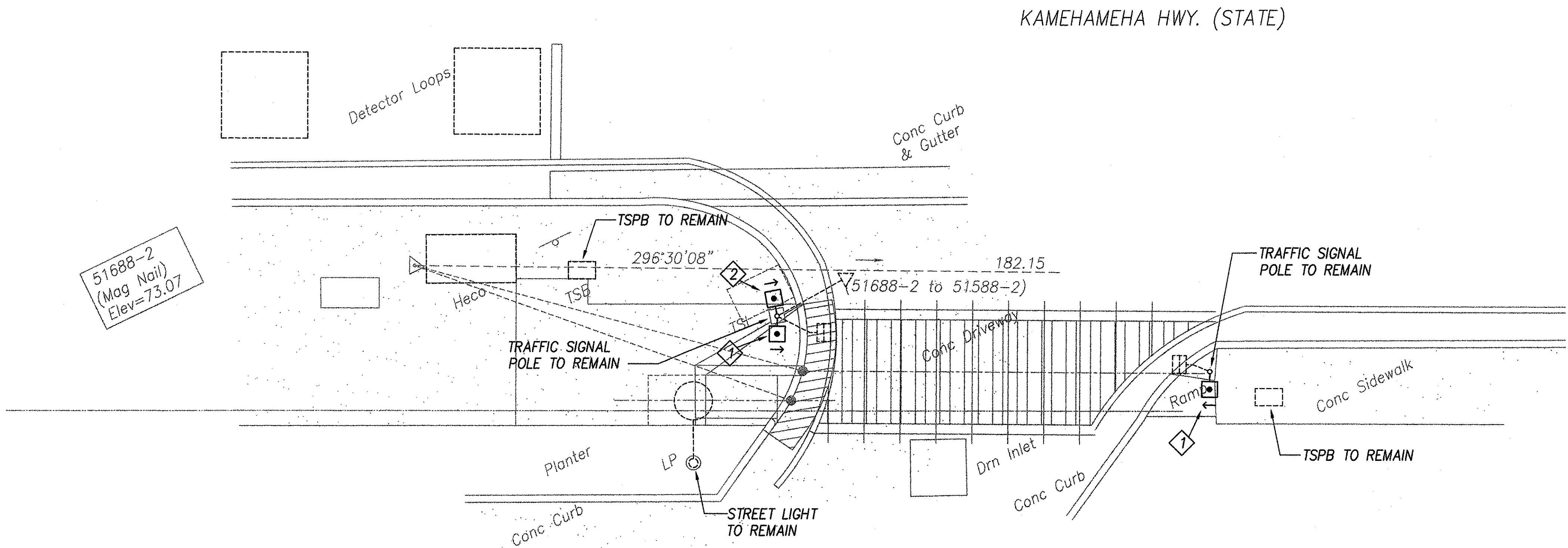
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED 
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>KAMEHAMEHA HWY. &amp; MOBILE AUDIO</b> Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 5 Fed. Aid Proj. No. CMAQ-0300(96) 1" = 5'-0" Date: July 2004	
SHEET No. E-3 OF 153 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	127	153

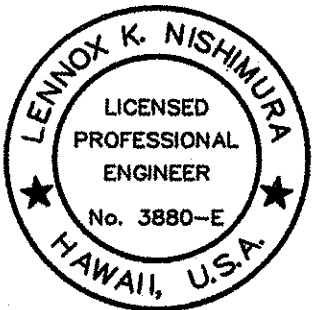
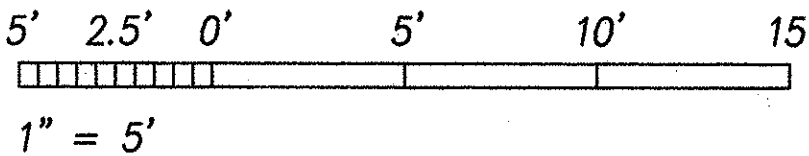
NOTES:

- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27
- 2 PROVIDE NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE 1 E-27



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & PEARL KAI ENTRANCE  
INTERS. ID NO. 99-51688  
SCALE: 1" = 5'-0"

GRAPHIC SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: Leinox K. Nishimura Date: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/7/04

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
PEARL KAI ENTRANCE

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

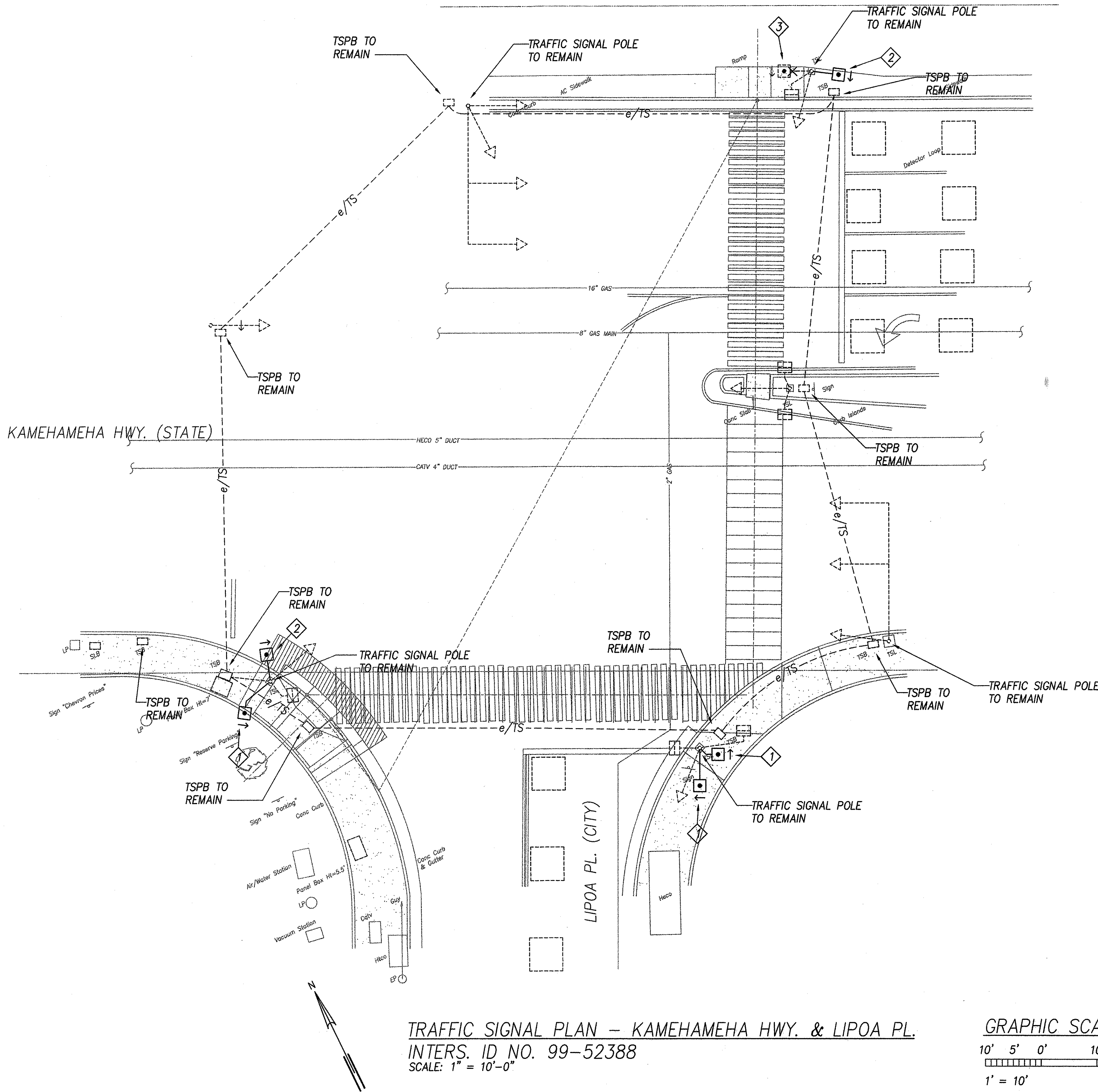
1" = 5'-0" Date: July 2004

SHEET No. E-4 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	128	153

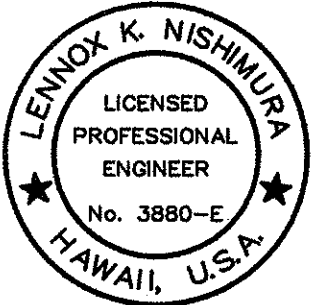
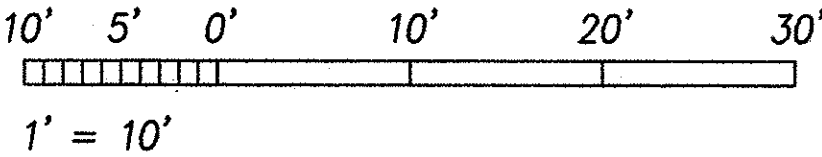
NOTES:

- REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1  
E-27
- PROVIDE NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING CIRCUIT. SEE 1  
E-27
- REMOVE EXISTING PUSH BUTTON AND ASSOCIATED WIRING. PLUG ANY HOLES IN POLE.



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & LIPOA PL.  
 INTERS. ID NO. 99-52388  
 SCALE: 1" = 10'-0"

GRAPHIC SCALE



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SIGNATURE: *Leinox K. Nishimura* DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED *7/10/04*

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
 LIPOA PL.

Pedestrian Facilities & ADA Compliance  
 at Various Locations on Oahu, Unit 5  
 Fed. Aid Proj. No. CMAQ-0300(96)

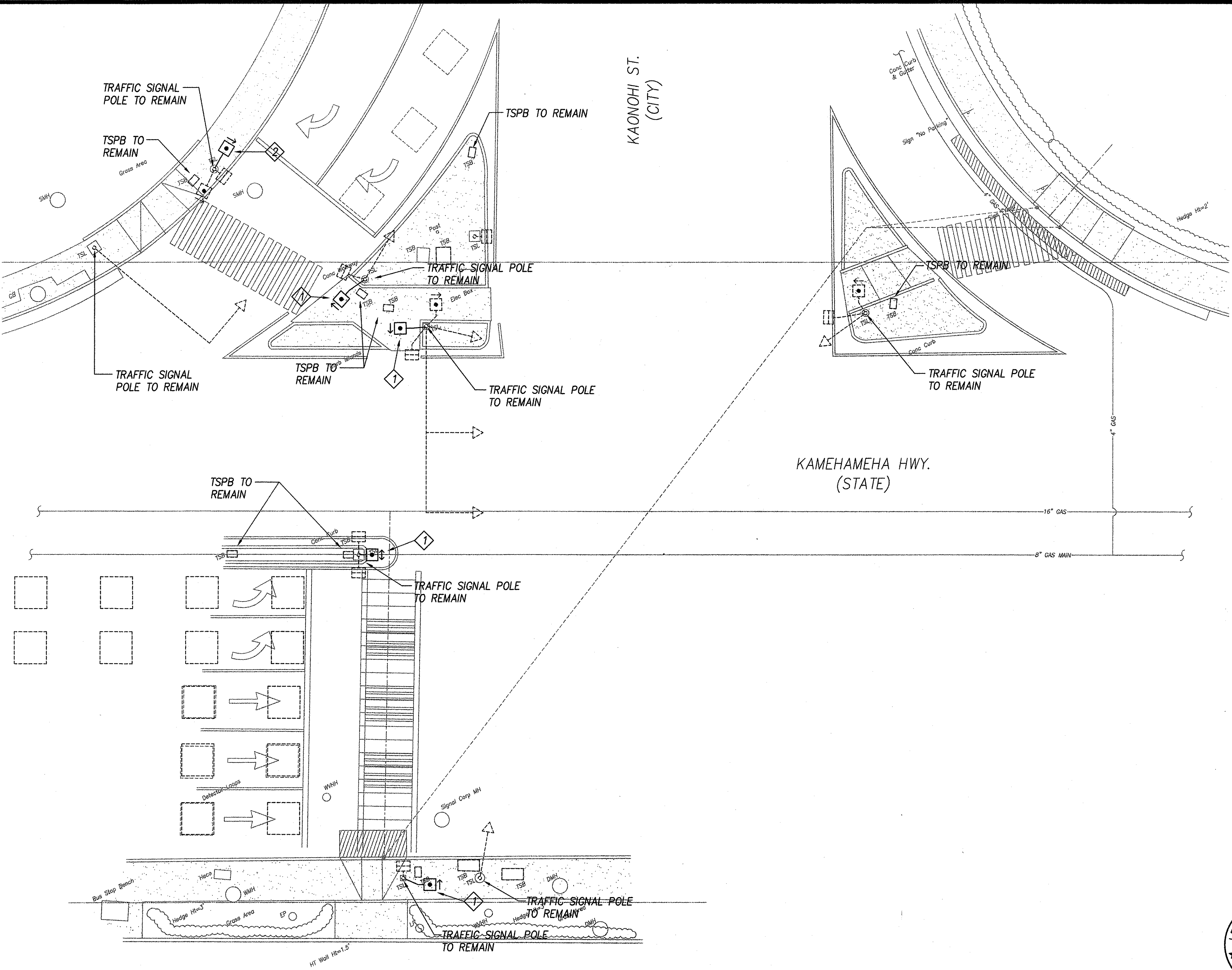
1" = 10'-0" Date: July 2004

SHEET No. E-5 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	129	153

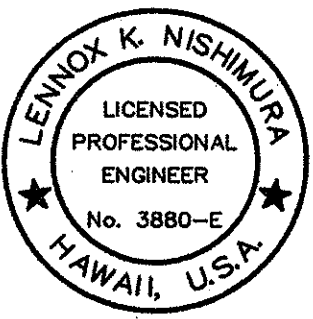
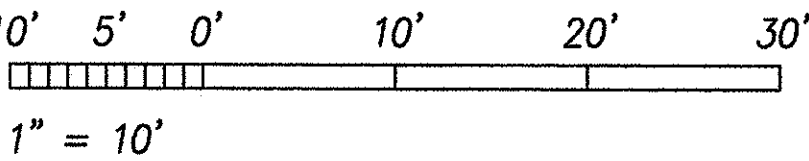
NOTE:

- REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1  
E-27
- PROVIDE NEW PEDESTRIAN PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE 1  
E-27



TRAFFIC SIGNAL PLAN – KAMEHAMEHA HWY. & KAONOHI ST.  
 INTERS. ID NO. 99-52588  
 SCALE: 1" = 10'-0"

GRAPHIC SCALE



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SIGNATURE: *Lennox K. Nishimura* DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

DTS, C&C HONOLULU DRAWING REVIEWED *7/14/04*

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 KAMEHAMEHA HWY. &  
 KAONOHI ST.

Pedestrian Facilities & ADA Compliance  
 at Various Locations on Oahu, Unit 5  
 Fed. Aid Proj. No. CMAQ-0300(96)

1" = 10'-0" Date: July 2004

SHEET No. E-6 OF 153 SHEETS

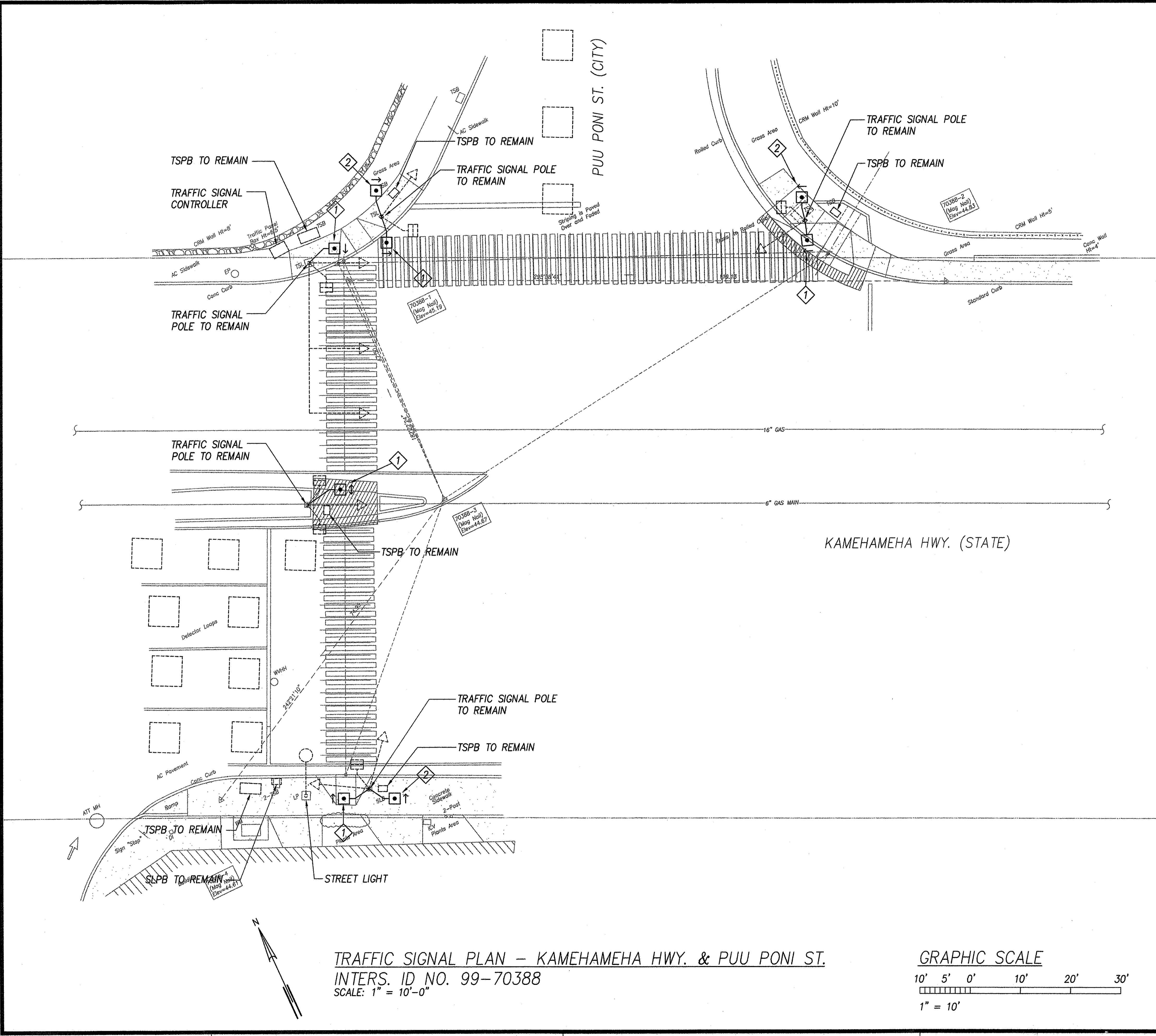




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(98)	2004	132	153

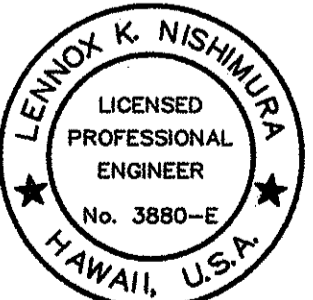
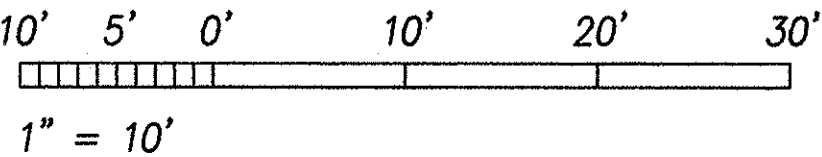
NOTES:

- 1
- REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSHBUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27
- 2
- PROVIDE NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE 1 E-27



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & PUU PONI ST.  
 INTERS. ID NO. 99-70388  
 SCALE: 1" = 10'-0"

GRAPHIC SCALE



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Signature: *Lennox K. Nishimura* DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU    DRAWING REVIEWED *7/10/04*

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
PUU PONI ST.

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

1" = 10'-0"      Date: July 2004

SHEET No. E-9 OF 153 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

7/7/04-21:49 X:\060\060111\060111 S08 KAM.PUU PONI.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	133	153

NOTES:

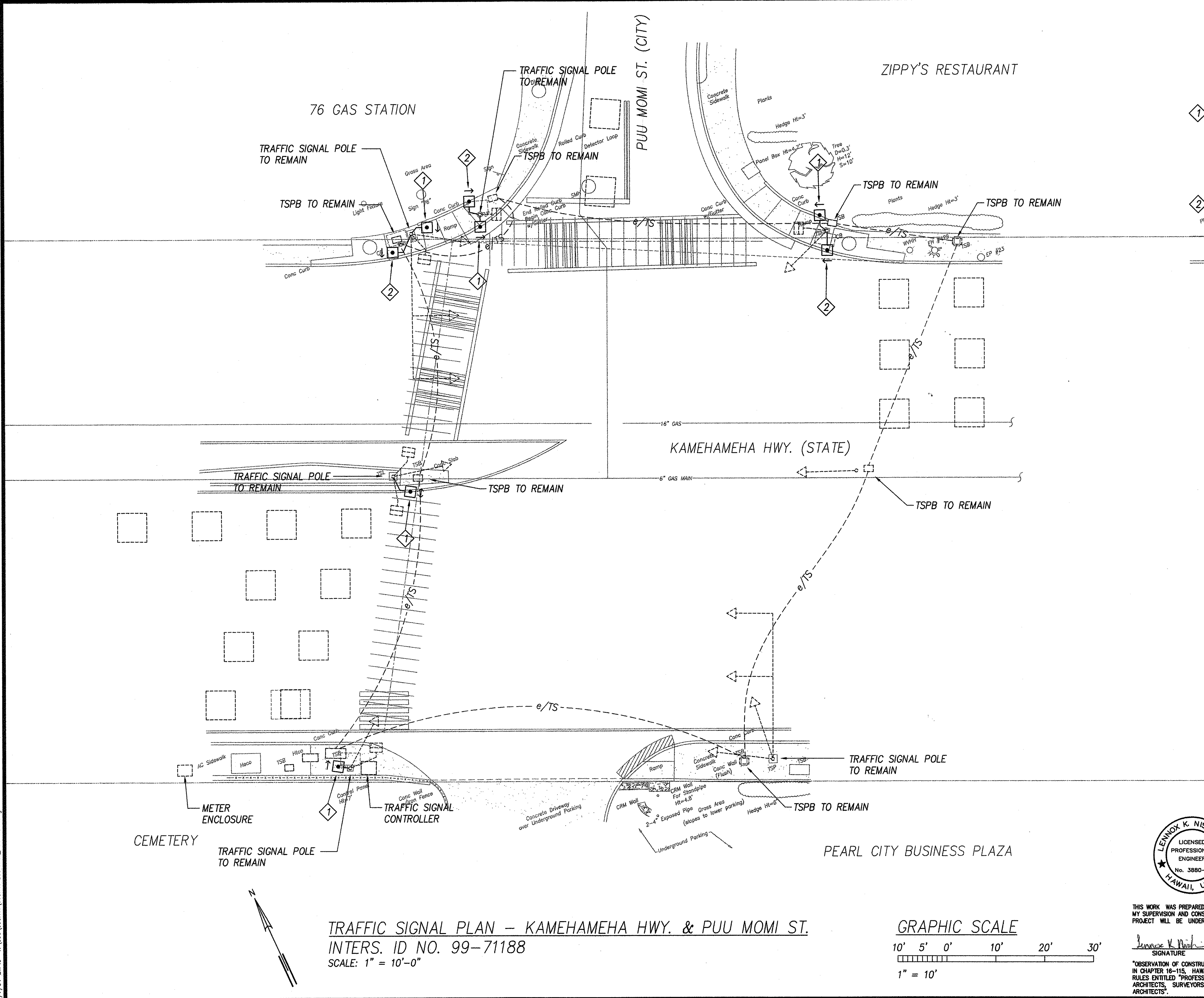
- 1

REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE

1
E-27
- 2

PROVIDE NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSHBUTTON CIRCUIT. SEE

1
E-27



DATE	7/7/04
SURVEY PLANNED BY	Y. 0801060111080111 S09 KAM_PUU MOMI.dwg
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
NO.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Lennox K. Nishiwara* DATE: 7/07/04  
 SIGNATURE DATE

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED	7/7/04
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STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**KAMEHAMEHA HWY. & PUU MOMI ST.**

*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 5*

Fed. Aid Proj. No. CMAQ-0300(96)

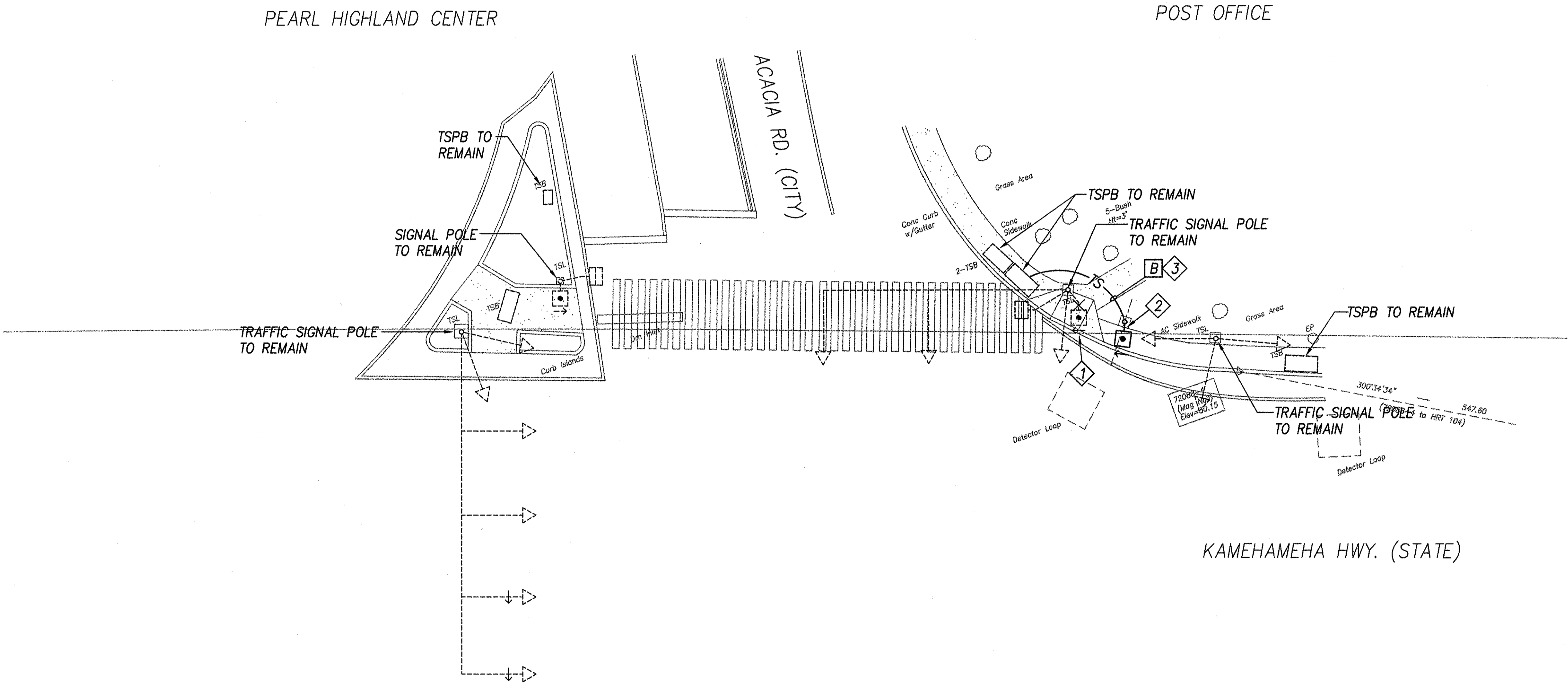
1" = 10'-0" Date: July 2004

**SHEET No. E-10 OF 153 SHEETS**

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	134	153

NOTES:

- REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND ASSOCIATED WIRING. PLUG ANY HOLES IN POLE.
- NEW PUSH BUTTON PEDESTAL WITH PUSH BUTTON, SEE 2, EXTEND EXISTING CIRCUIT AND CONNECT TO PUSH BUTTON. E-27
- SAWCUT AND TRENCH TO INSTALL NEW CONDUIT. RESTORE TO MATCH EXISTING.  
1-2"C WITH 1-2/C#14



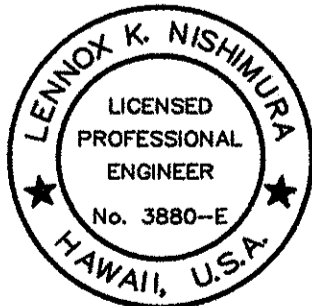
ORIGINAL PLAN	SURVEY PLANNED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

7/7/04-21:50 Y:\060\060111\060111 SIO KAM ACACIA.dwg



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & ACACIA RD.  
INTERS. ID NO. 99-72088  
SCALE: 1" = 10'-0"

GRAPHIC SCALE  
10' 5' 0' 10' 20' 30'  
1" = 10'



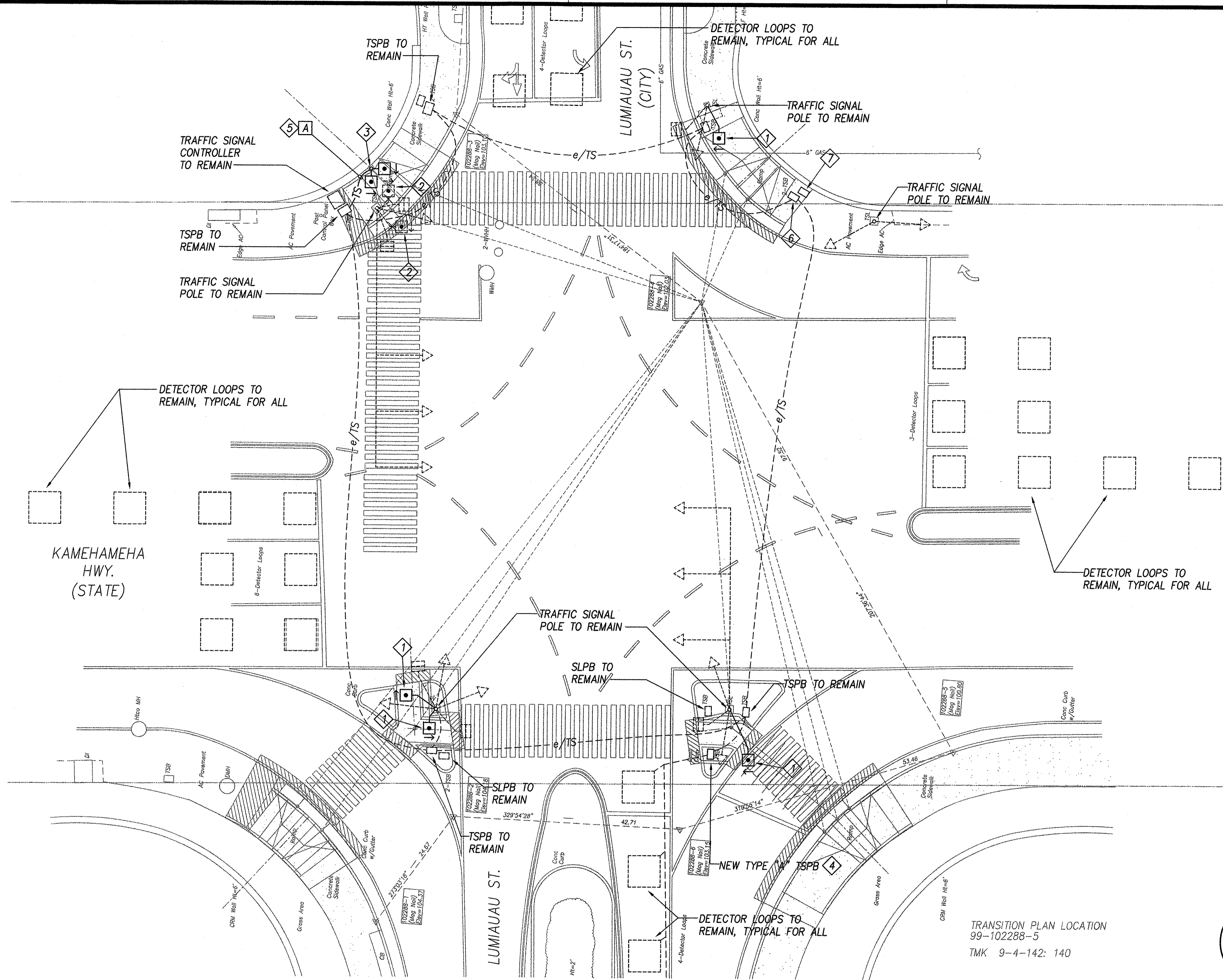
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.  
SIGNATURE Lennox K. Nishimura DATE 7/07/04  
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED	7/15/04
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>KAMEHAMEHA HWY. &amp;            ACACIA RD.</b> <i>Pedestrian Facilities &amp; ADA Compliance            at Various Locations on Oahu, Unit 5</i> Fed. Aid Proj. No. CMAQ-0300(96) 1" = 10'-0" Date: July 2004		
SHEET No. E-11 OF 153 SHEETS		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(98)	2004	135	153

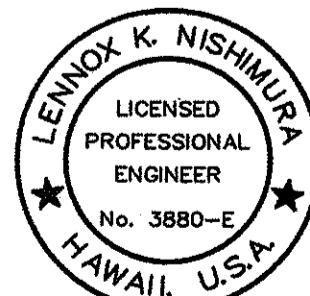
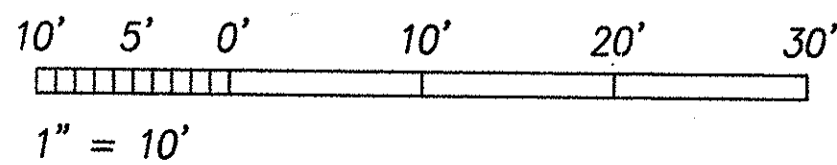
# NOTES:

- REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1  
E-27
- REMOVE PEDESTRIAN PUSH BUTTON AND ASSOCIATED WIRING. PLUG ANY HOLES IN EXISTING POLE.
- NEW PUSH BUTTON PEDESTAL WITH PUSH BUTTONS, SEE 2  
E-27, EXTEND EXISTING CIRCUITS AND CONNECT TO PUSH BUTTONS.
- REMOVE EXISTING TSPB AND REPLACE IN PLACE WITH NEW TSPB FLUSH WITH FINISHED GRADE. MAINTAIN EXISTING CIRCUITING AND DUCTLINES UNLESS OTHERWISE NOTED.
- TRENCH TO INSTALL NEW CONDUIT. 1-2" C WITH 2-2/C#14
- ADJUST EXISTING TSPB FLUSH WITH FINISHED GRADE. SEE 1  
E-30
- ADJUST EXISTING SLPB FLUSH WITH FINISHED GRADE. SEE 1  
E-30



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & LUMIAUUAU ST.  
 INTERS. ID NO. 99-102288  
 SCALE: 1" = 10'-0"

## GRAPHIC SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Lennox K. Nishimura* 7/07/04  
 DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/2/04

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
 LUMIAUUAU ST.

Pedestrian Facilities & ADA Compliance  
 at Various Locations on Oahu, Unit 5  
 Fed. Aid Proj. No. CMAQ-0300(96)

1" = 10'-0" Date: July 2004



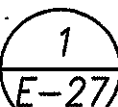
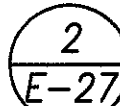

SHEET No. E-12 OF 153 SHEETS





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	ADD 138	153

NOTES:

- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 
- 2 NEW TYPE 1-7 STANDARD WITH TP-1W PEDESTRIAN SIGNAL AND PUSH BUTTON, EXTEND EXISTING CIRCUITS TO NEW POLE. SEE 
- 3 REMOVE EXISTING SIGNAL POLE AND DEMOLISH FOUNDATION TO 12" BELOW GRADE.
- 4 REMOVE EXISTING TSPB AND REPLACE IN PLACE WITH NEW TSPB FLUSH WITH FINISHED GRADE. MAINTAIN EXISTING CIRCUITING AND DUCTLINES UNLESS OTHERWISE NOTED.
- 5 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 1-2/C#14, 1-4/C#14
- 6 PROVIDE NEW PEDESTRIAN PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE 
- 7 REMOVE EXISTING PUSH BUTTON AND ASSOCIATED WIRING. PLUG ANY HOLES IN POLE.
- 8 NEW PUSH BUTTON PEDESTAL WITH PUSH BUTTONS. CONNECT PUSH BUTTONS TO EXISTING CIRCUITS. SEE 
- 9 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 2-2/C#14
- 10 ABANDON EXISTING VEHICLE DETECTOR LOOP IN PLACE. PROVIDE NEW VEHICLE DETECTOR LOOP.
- 11 PROVIDE NEW MICROWAVE DETECTOR ON EXISTING TRAFFIC SIGNAL POLE. PROVIDE NEW CONDUCTORS IN EXISTING CONDUITS FROM MICROWAVE DETECTOR TO TRAFFIC SIGNAL CONTROLLER. SEE 

9/22/04 ADD. NO.1 - ADDED VEHICLE DETECTION AND NOTE NOS. 10 AND 11

DATE REVISION

DTS, C&C HONOLULU DRAWING REVIEWED 7

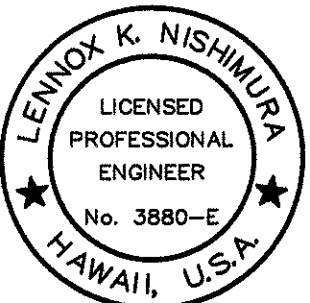
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
KIPAPA ST.

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

1" = 10'-0" Date: July 2004

SHEET No. E-15 OF 30 SHEETS



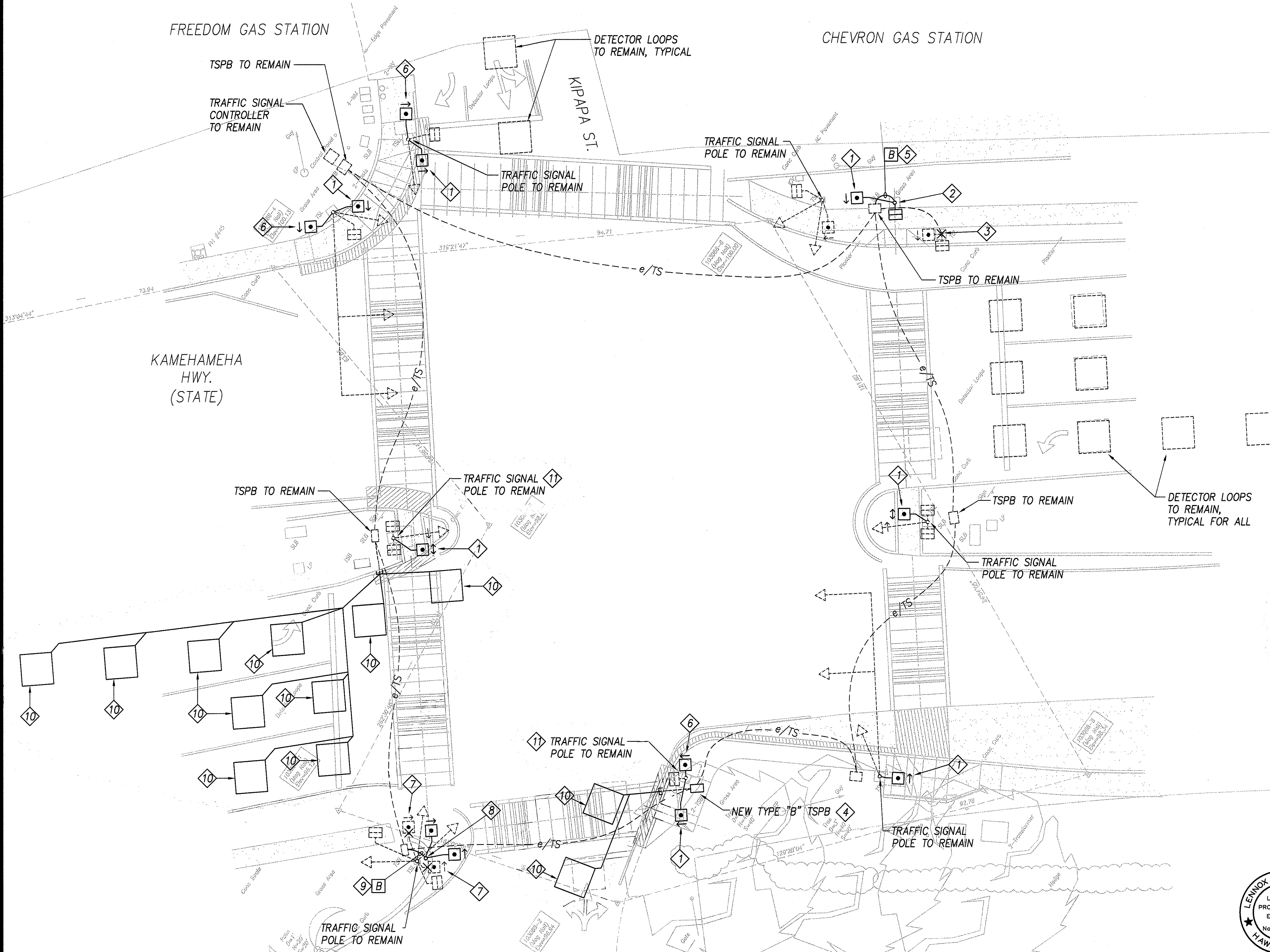
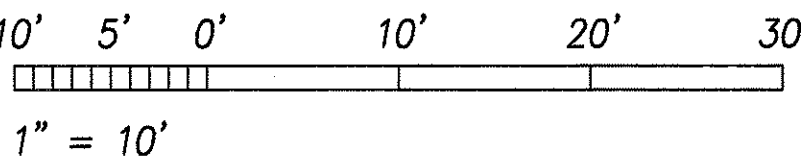
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE DATE 8/27/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & KIPAPA ST.  
INTERS. ID NO. 99-103088  
SCALE: 1" = 10'-0"

GRAPHIC SCALE



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

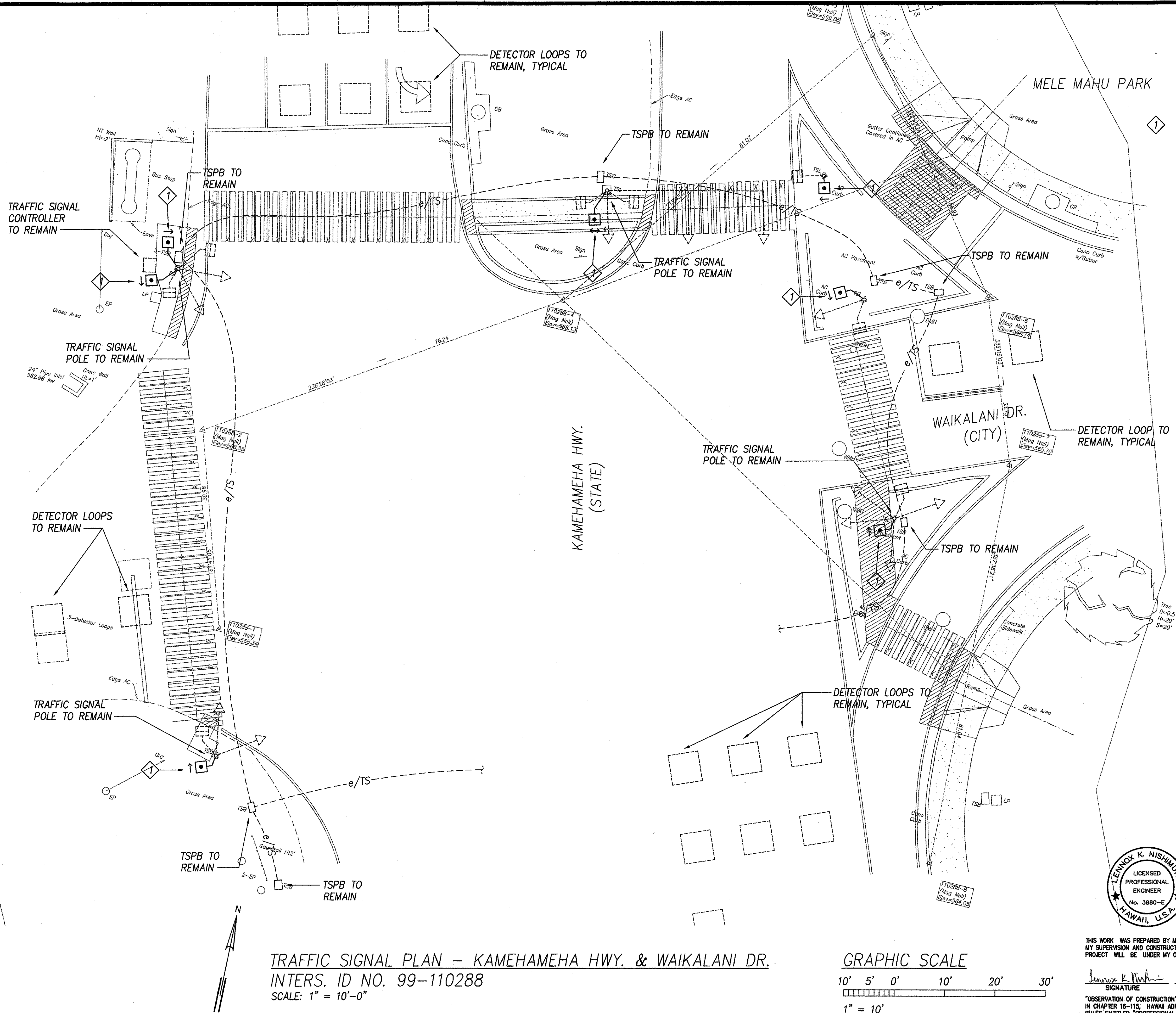
8/27/04-8:10 Y:\060\060111\060111 S14 KAM\_KIPAPA.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	139	153

NOTE:

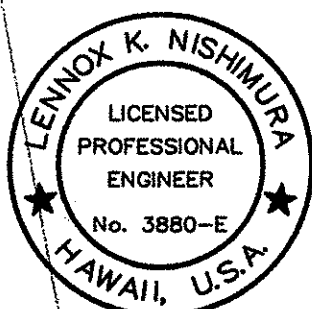
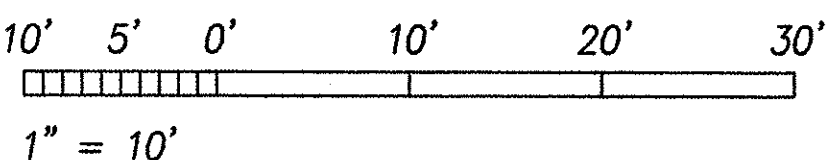
1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE

1  
E-27



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & WAIKALANI DR.  
INTERS. ID NO. 99-110288  
SCALE: 1" = 10'-0"

GRAPHIC SCALE



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Signature: [Signature] DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/1/04

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
WAIKALANI DR.

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

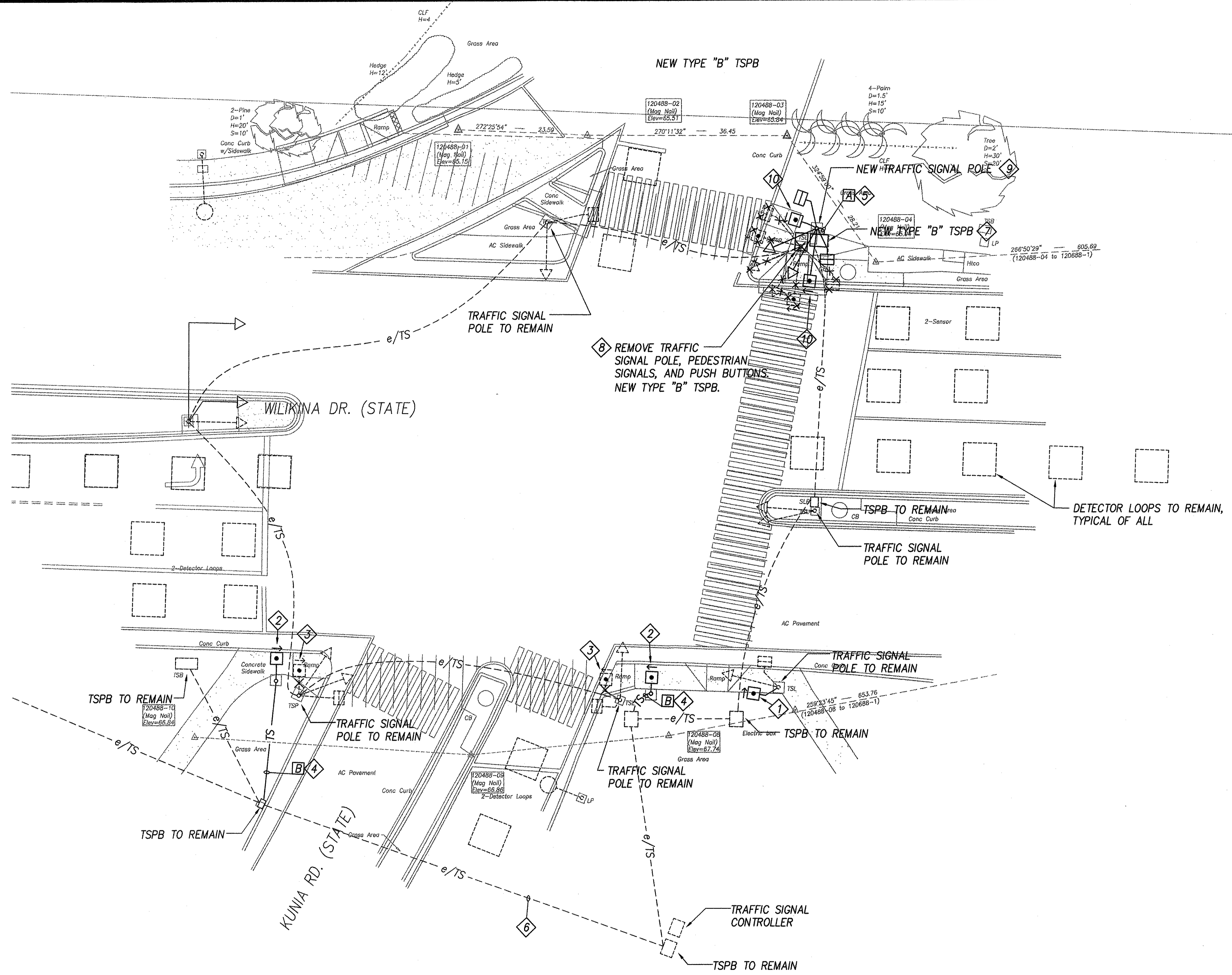
1" = 10'-0" Date: July 2004

SHEET No. E-16 OF 153 SHEETS

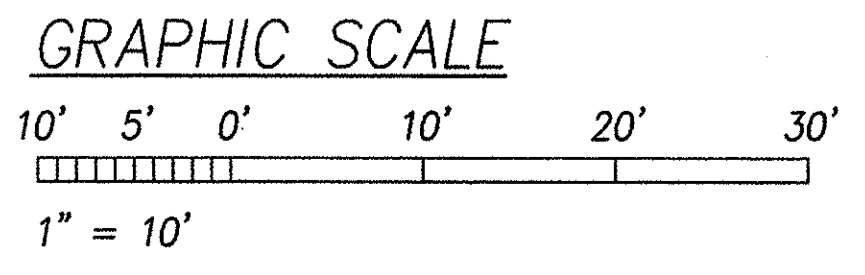
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	140	153

NOTES:

- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSHBUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27
- 2 PROVIDE NEW PUSH BUTTON PEDESTAL WITH PUSH BUTTONS, SEE 2 E-27, CONNECT PUSH BUTTONS TO EXISTING CIRCUITS
- 3 REMOVE EXISTING PUSH BUTTON AND ASSOCIATED WIRING PLUG ANY HOLE IN EXISTING POLE.
- 4 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 1-2/C#14
- 5 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 2-2/C#14, 4-4/C#14
- 6 ROUTE NEW 2/C#14 WITHIN EXISTING CONDUIT FOR PUSH BUTTON CIRCUIT.
- 7 REMOVE EXISTING TSPB AND REPLACE IN PLACE WITH NEW TSPB FLUSH WITH FINISHED GRADE. MAINTAIN EXISTING CIRCUITING AND DUCTLINES UNLESS OTHERWISE NOTED.
- 8 REMOVE EXISTING SIGNAL POLE AND DEMOLISH CONCRETE FOUNDATION ENOUGH TO INSTALL NEW TSPB OVER EXISTING CONDUIT AND CONDUCTORS. MAINTAIN EXISTING CIRCUITS AND DUCTLINES UNLESS OTHERWISE NOTED.
- 9 INSTALL NEW TYPE "A" CONCRETE BASE, NEW TYPE 1-10 SIGNAL POLE WITH TP-2W VEHICLE SIGNALS AND B-2W PEDESTRIAN SIGNAL. SEE 1 E-28 1 E-29
- 10 PROVIDE NEW PEDESTRIAN PUSH BUTTON ON NEW SIGNAL POLE.



TRAFFIC SIGNAL PLAN - WILIKINA DR. & KUNIA RD.  
INTERS. ID NO. 99-120488  
SCALE: 1" = 10'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.  
Signature: Lennox K. Nishimura  
DATE: 7/07/04  
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU		DRAWING REVIEWED		7/17/04
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION WILIKINA DR. & KUNIA RD. Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 5 Fed. Aid Proj. No. CMAQ-0300(96) 1" = 10'-0" Date: July 2004 SHEET No. E-17 OF 153 SHEETS				

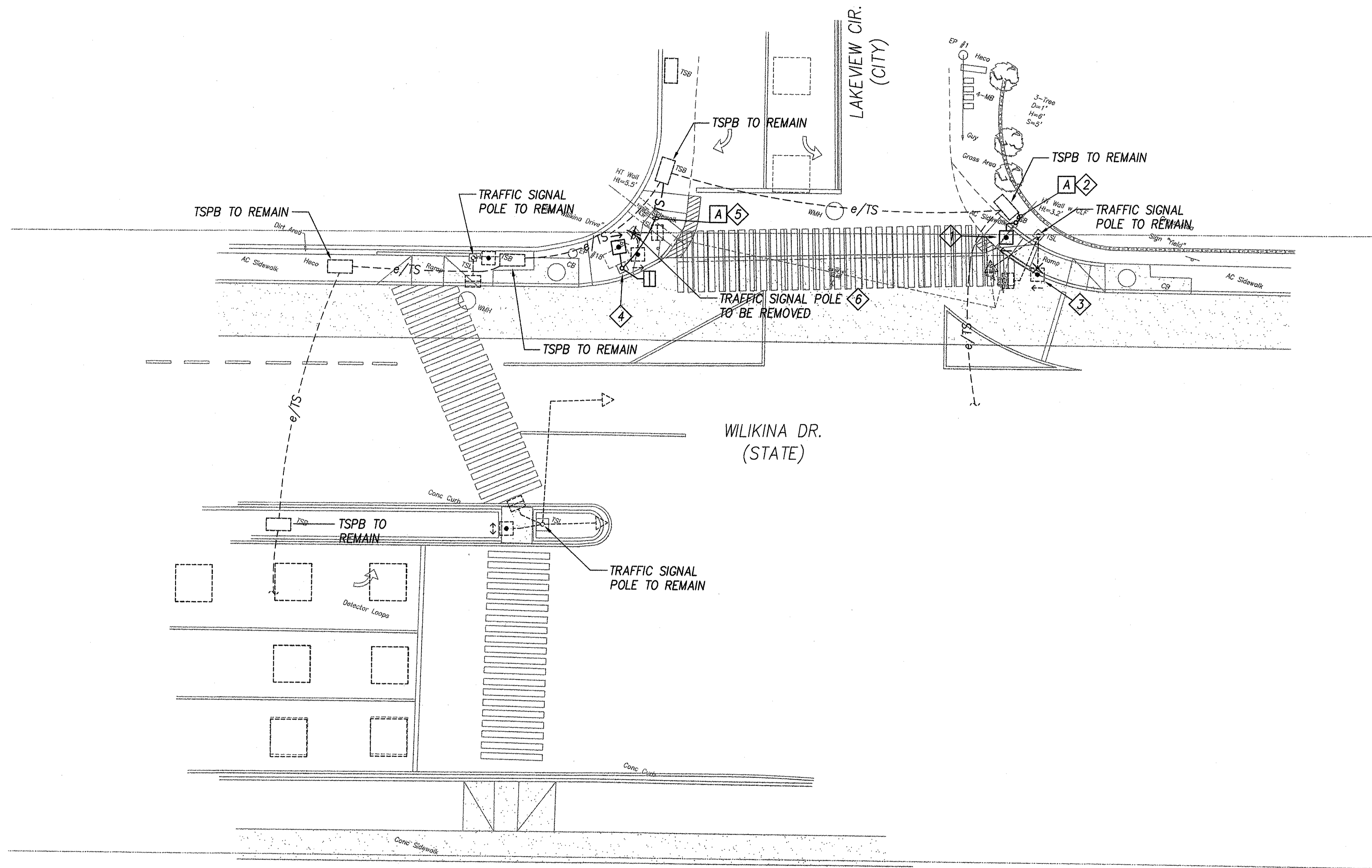
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	.....
No.	DESIGNED BY	.....
	QUANTITIES BY	.....
	CHECKED BY	.....

7/7/04-21:52 Y:\060\060111\060111 516 WILIKINA\_KUNIA.dwg

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	141	153

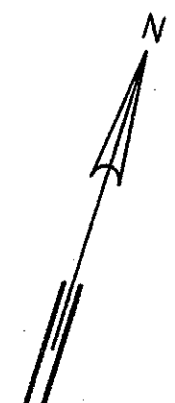
# NOTES:

- 1 NEW PUSH BUTTON PEDESTAL WITH PUSH BUTTON, SEE 2, CONNECT PUSH BUTTON TO EXISTING CIRCUIT. (E-27)
- 2 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 1-2/C#14
- 3 REMOVE EXISTING PUSH BUTTON AND ASSOCIATED WIRING. PLUG ANY HOLES IN EXISTING POLE.
- 4 PROVIDE NEW I-7 STANDARD WITH TP-1W PEDESTRIAN SIGNAL HEAD AND PUSH BUTTON. CONNECT TO EXISTING CIRCUITS IN TSPB. SEE 1 (E-28)
- 5 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 1-2/C#14, 1-4/C#14
- 6 REMOVE EXISTING SIGNAL POLE AND DEMOLISH FOUNDATION TO 12" BELOW GRADE.



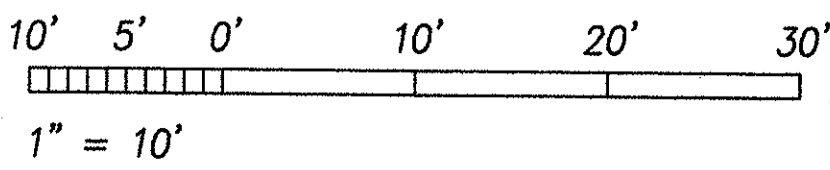
ORIGINAL PLAN	DATE
DESIGNED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

7/7/04-21:53 Y:\060\060111\060111 S17 WILIKINA LAKEVIEW.DWG



TRAFFIC SIGNAL PLAN - WILIKINA DR. & LAKEVIEW CIR.  
 INTERS. ID NO. 99-120788  
 SCALE: 1" = 10'-0"

## GRAPHIC SCALE



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SIGNATURE DATE 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

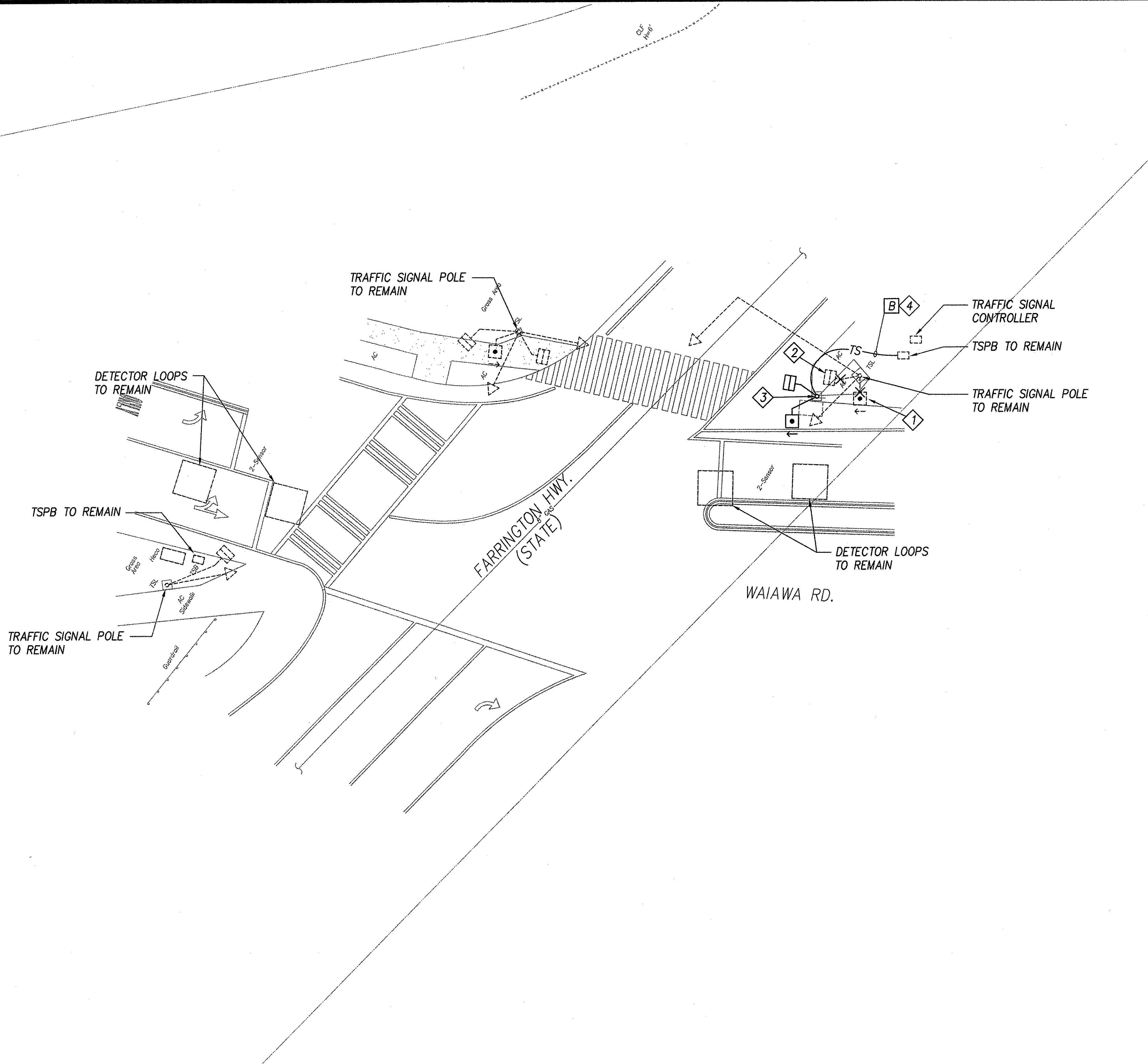
DTS, C&C HONOLULU DRAWING REVIEWED 7/10/04

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 WILIKINA DR. &  
 LAKEVIEW CIR.  
 Pedestrian Facilities & ADA Compliance  
 at Various Locations on Oahu, Unit 5  
 Fed. Aid Proj. No. CMAQ-0300(96)  
 1" = 10'-0" Date: July 1, 2004  
 SHEET No. E-18 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	142	153

NOTES:

- REMOVE EXISTING PUSH BUTTON ASSOCIATED WIRING. PLUG ANY HOLES IN EXISTING POLE.
- REMOVE EXISTING PEDESTRIAN SIGNAL ASSEMBLY AND ASSOCIATED WIRING. PLUG ANY HOLES IN EXISTING POLE.
- NEW I-7 STANDARD WITH TP-1W PEDESTRIAN SIGNAL HEAD AND PUSH BUTTON. CONNECT TO EXISTING CIRCUITS IN TSPB. SEE 1  
E-28
- TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 1-2/C#14, 1-4/C#14

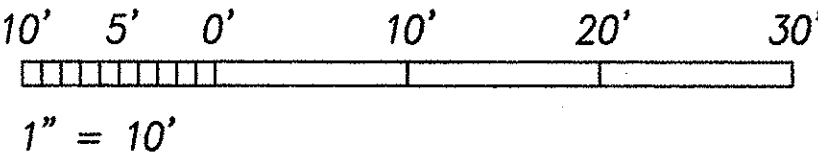


ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	DRAWN BY	
CHECKED BY	NOTED BY	
No.		

7/7/04-21:53 Y:\060\060111\060111 S18 WAIAWA\_FARRINGTON.dwg

TRAFFIC SIGNAL PLAN - WAIAWA RD. & FARRINGTON HWY.  
 INTERS. ID NO. 99-121888  
 SCALE: 1" = 10'-0"

GRAPHIC SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Lennox K. Nishimura* DATE: 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/7/04

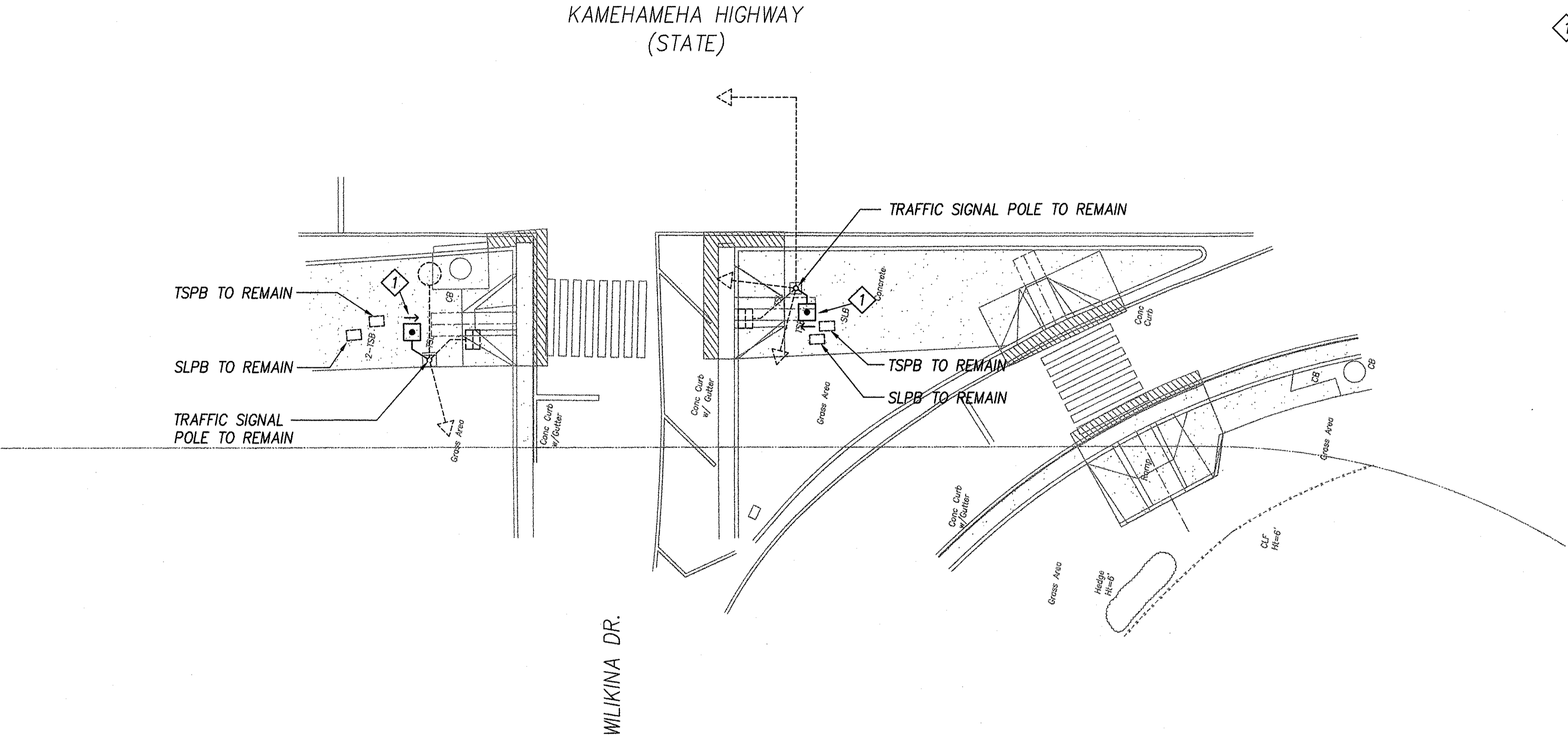
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
WAIAWA RD. &  
FARRINGTON HWY.  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)  
1" = 10'-0" Date: July 2004

SHEET No. E-19 OF 153 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	144	153

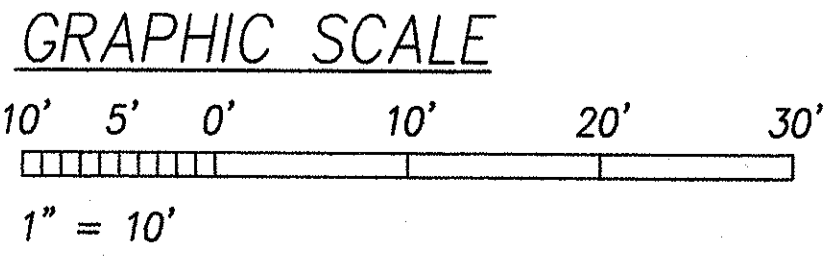
NOTE:  
1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27



TRAFFIC SIGNAL PLAN - WILIKINA DR. & KAMEHAMEHA HWY. - 2  
INTERS. ID NO. 99-121688  
SCALE: 1" = 10'-0"

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

7/7/04-21:54 Y:\060\060.111\060.111 S20 WILIKINA\_KAM02.dwg



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SIGNATURE: Lennox K. Nishimura DATE: 7/07/04  
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU    DRAWING REVIEWED 7/7/04

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
WILIKINA DR. &  
KAMEHAMEHA HWY. - 2  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)  
1" = 10'-0"    Date: July 2004  
SHEET No. E-21 OF 153 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	ADD. 146	153

NOTES:

- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE  $\frac{1}{E-27}$
- 2 NEW PUSH BUTTON PEDESTAL WITH PUSH BUTTONS, SEE,  $\frac{2}{E-27}$  EXTEND EXISTING CIRCUITS AND CONNECT TO PUSH BUTTONS.
- 3 REMOVE EXISTING TSPB AND REPLACE IN PLACE WITH NEW TSPB FLUSH WITH FINISHED GRADE. MAINTAIN EXISTING CIRCUITING AND DUCTLINES UNLESS OTHERWISE NOTED.
- 4 TRENCH TO INSTALL NEW CONDUIT. 1-2"C WITH 2-2/C#14
- 5 REMOVE EXISTING PUSH BUTTON AND ASSOCIATED WIRING PLUG ANY HOLES IN EXISTING POLE.
- 6 PROVIDE NEW 1-2/C#14 IN EXISTING CONDUIT AND CONNECT TO NEW PUSH BUTTON.
- 7 PROVIDE NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE  $\frac{1}{E-27}$
- 8 ABANDON EXISTING VEHICLE DETECTOR LOOP IN PLACE. PROVIDE NEW VEHICLE DETECTOR LOOP.
- 9 PROVIDE NEW MICROWAVE DETECTOR ON EXISTING TRAFFIC SIGNAL POLE. PROVIDE NEW CONDUCTORS IN EXISTING CONDUITS FROM MICROWAVE DETECTOR TO TRAFFIC SIGNAL CONTROLLER. SEE  $\frac{1}{E30B}$

TRAFFIC SIGNAL PLAN -  
KAMEHAMEHA HWY. & OLIVE AVE.  
INTERS. ID NO. 80-110688  
SCALE: 1" = 10'-0"

9/22/04 ADD. NO. 1 - ADDED VEHICLE DETECTION AND NOTE NOS. 8 AND 9

DATE REVISION

DTS, C&C HONOLULU DRAWING REVIEWED 7

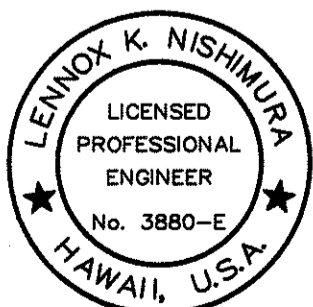
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KAMEHAMEHA HWY. &  
OLIVE AVE.

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

1" = 10'-0" Date: July 2004

SHEET No. E-23 OF 30 SHEETS

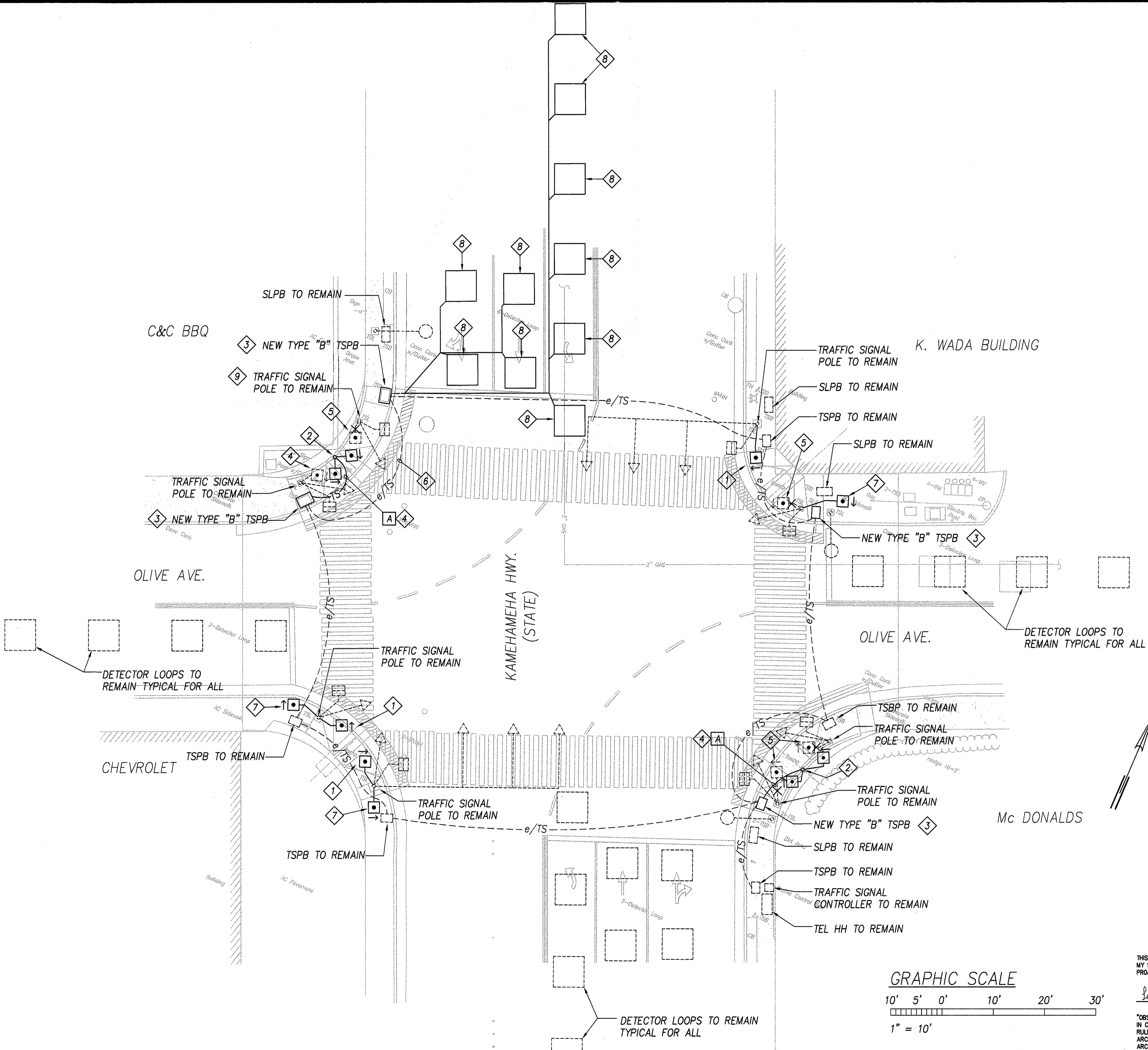
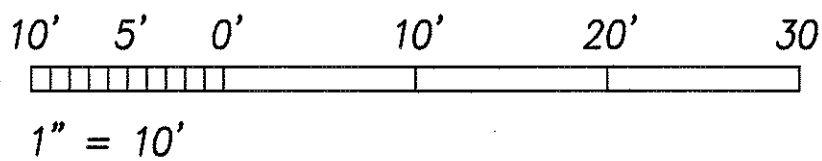


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SIGNATURE DATE 8/27/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

GRAPHIC SCALE



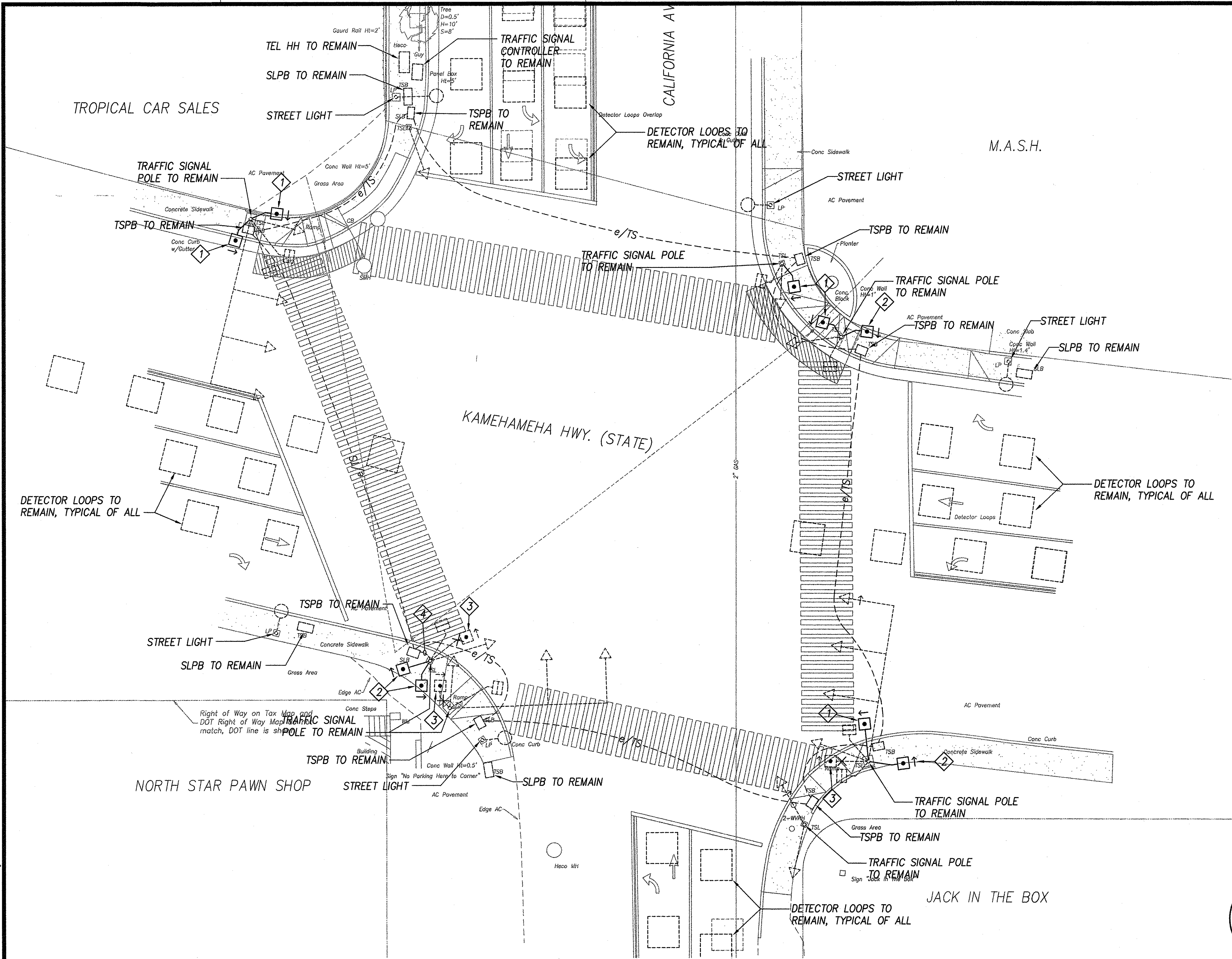
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SURVEY PLANNED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

8/27/04-8-11 Y:\060\060111\060111 S22 KAM OLIVE.dwg

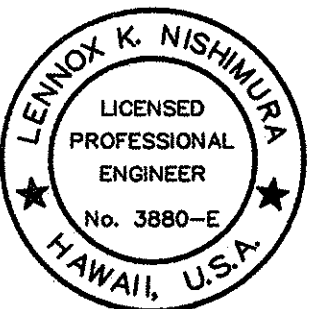
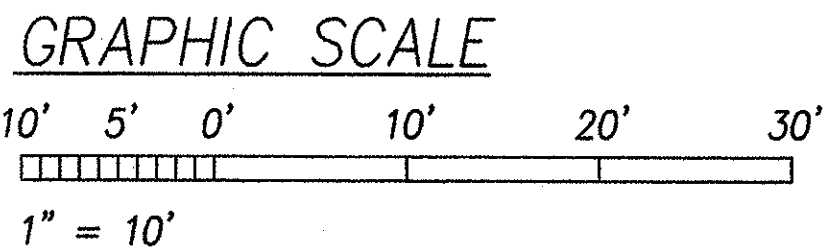
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	147	153

NOTES:

- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27
- 2 INSTALL NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE 1 E-27
- 3 REMOVE EXISTING PUSH BUTTON AND ASSOCIATED WIRING. PLUG ANY HOLES IN EXISTING POLE.
- 4 PROVIDE NEW 2/C#14 IN EXISTING CONDUIT AND CONNECT TO NEW PUSH BUTTON.



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY. & CALIFORNIA AVE.  
 INTERS. ID NO. 80-110788  
 SCALE: 1" = 10'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Lennox K. Nishimura 7/07/04  
 SIGNATURE DATE

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED	7/10/04
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STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**KAMEHAMEHA HWY. & CALIFORNIA AVE.**

*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 5*

Fed. Aid Proj. No. CMAQ-0300(96)

1" = 10'-0" Date: July 2004

**SHEET No. E-24 OF 153 SHEETS**

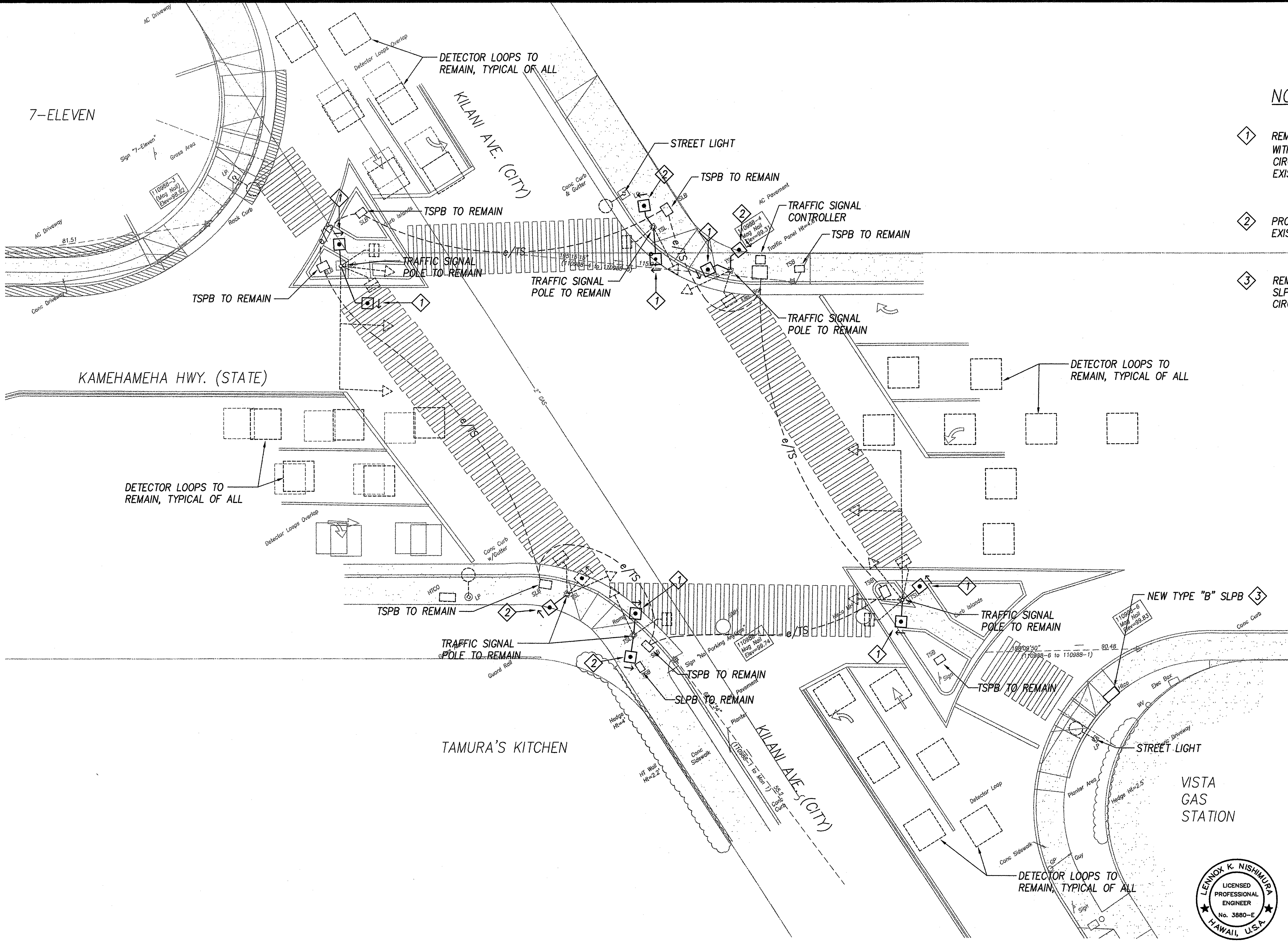
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
No.	

7/7/04-21:56 Y:\0601060111\060111 S23 KAM CALIFORNIA.dwg

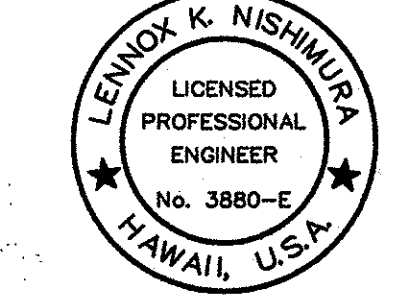
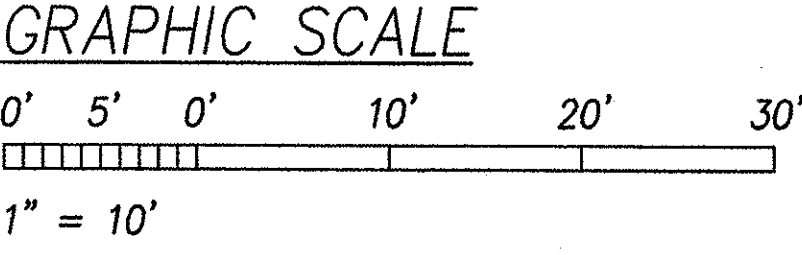
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	148	153

NOTES:

- 1 REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND REPLACE WITH NEW PUSH BUTTON. RECONNECT PUSH BUTTON CIRCUIT TO NEW PUSH BUTTON. PLUG ANY HOLES IN EXISTING POLE. SEE 1 E-27
- 2 PROVIDE NEW PUSH BUTTON ON EXISTING POLE. CONNECT TO EXISTING PUSH BUTTON CIRCUIT. SEE 1 E-27
- 3 REMOVE EXISTING SLPB AND REPLACE IN PLACE WITH NEW SLPB FLUSH WITH FINISHED GRADE. MAINTAIN EXISTING CIRCUIT AND DUC LINES UNLESS OTHERWISE NOTED.



TRAFFIC SIGNAL PLAN - KAMEHAMEHA HWY., KILANI AVE. & 7-ELEVEN  
INTERS. ID NO. 80-110988 & 80-111088  
SCALE: 1" = 10'-0"



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SIGNATURE: Lennox K. Nishimura DATE: 7/07/04  
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED	7/7/04
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
KAMEHAMEHA HWY., KILANI AVE. & 7-ELEVEN		
Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 5 Fed. Aid Proj. No. CMAQ-0300(96)		
1" = 10'-0" Date: July 2004		
SHEET No. E-25 OF 153 SHEETS		

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

7/7/04-21:56 1:1000(06011)060111 S24 KAM\_KILANI-7-11.dwg

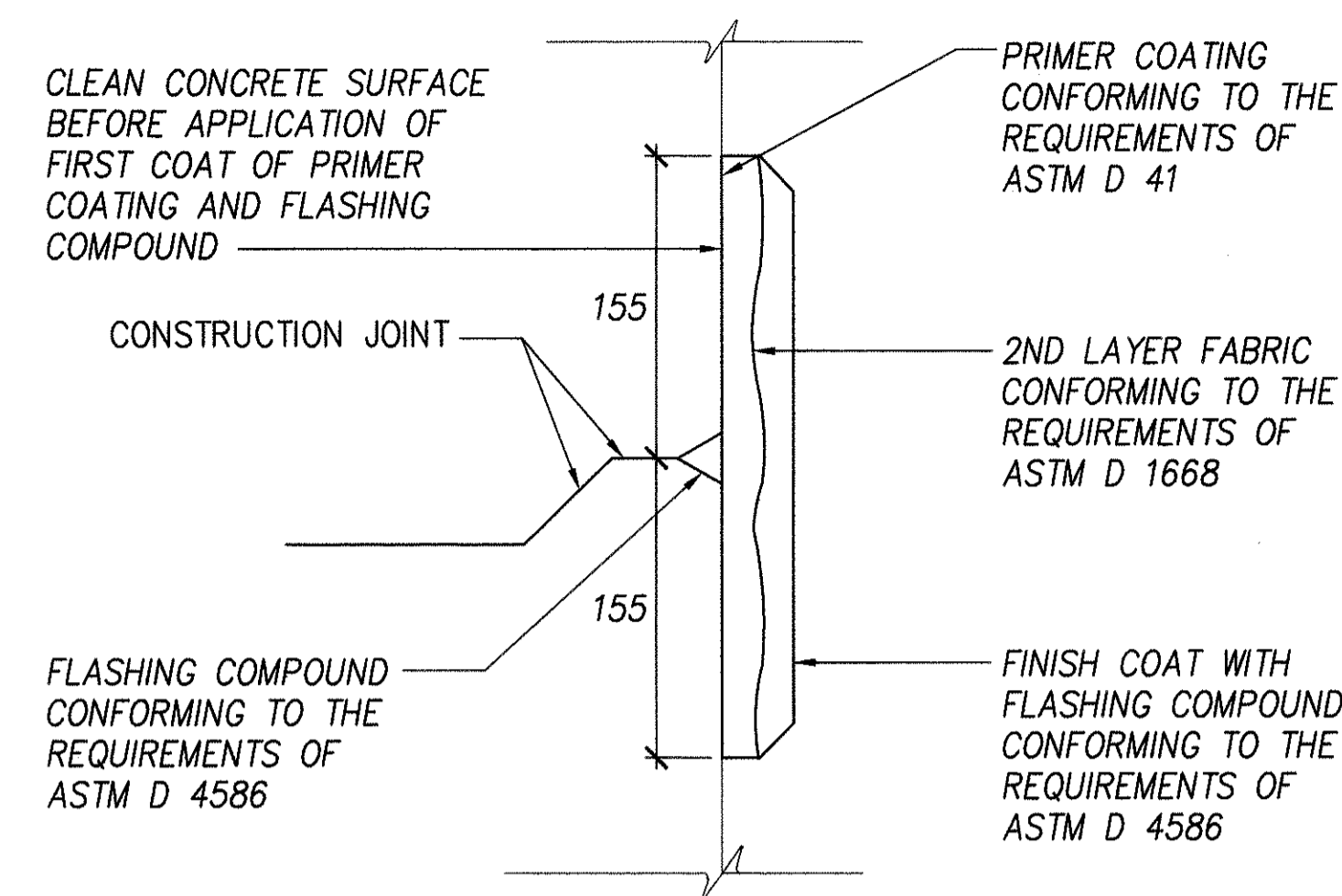
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	149	153

# GENERAL HANDHOLE NOTES:

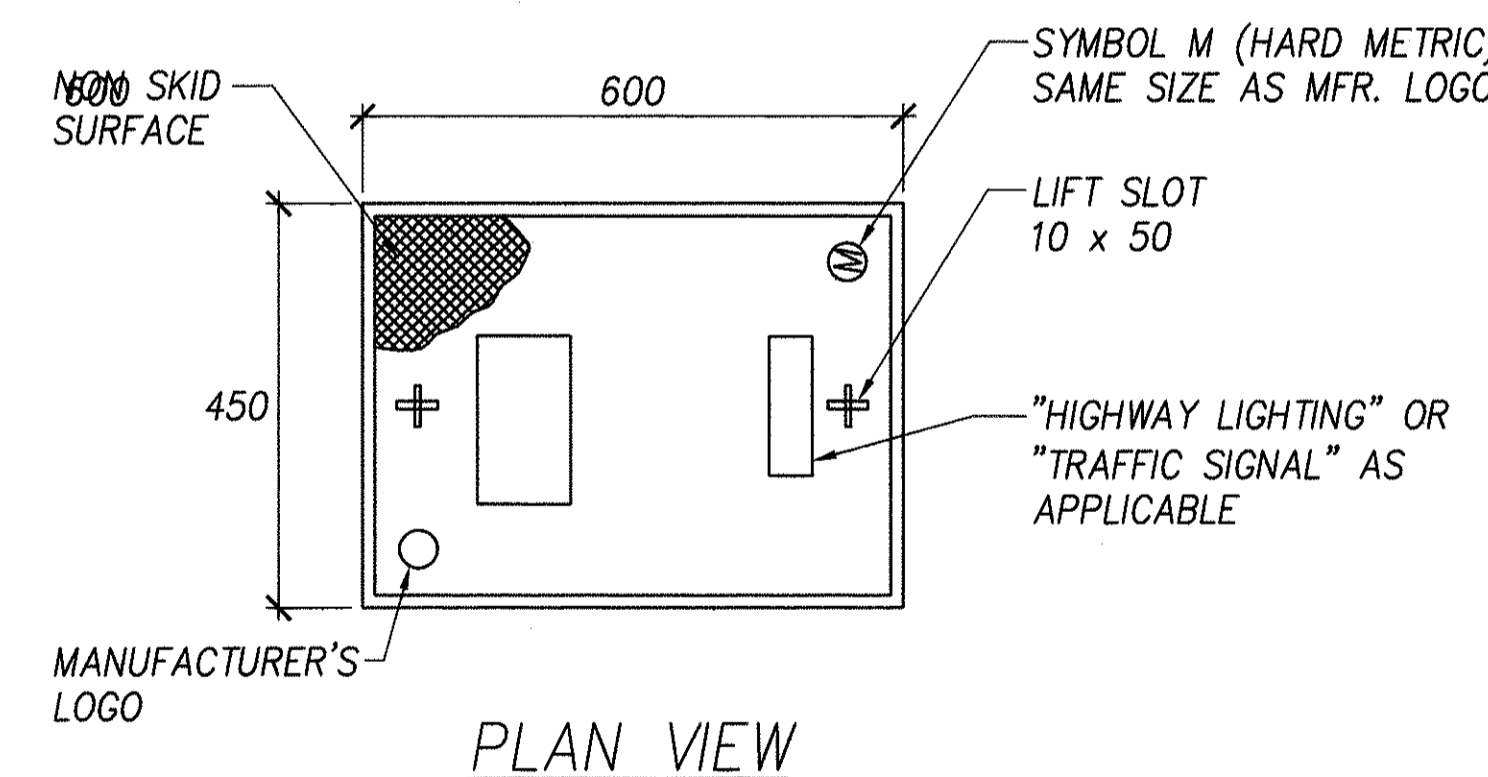
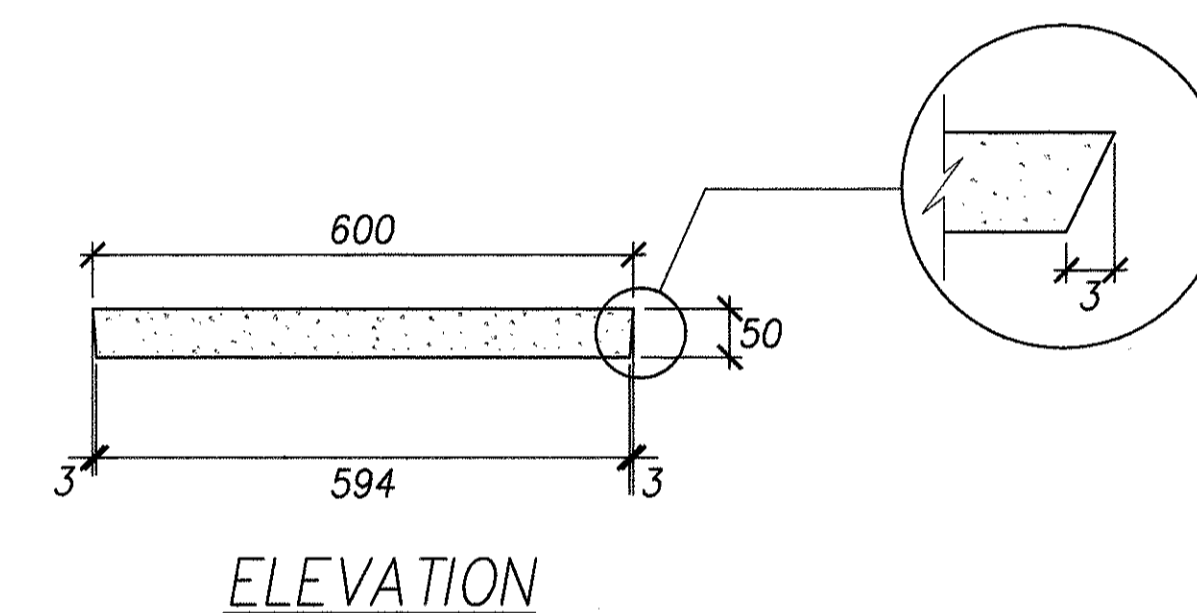
- PROVIDE A MINIMUM OF ONE 16Ø x 3.0M COPPERCLAD GROUND ROD IN EACH HANDHOLE. WHEN DIRECTED BY THE TRAFFIC SIGNAL INSPECTOR/ENGINEER, INSTALL ADDITIONAL GROUND RODS. COST OF GROUND RODS SHALL BE INCIDENTAL TO THE HANDHOLES.
- ALL PRE-CAST CONCRETE HANDHOLES SHALL BE MANUFACTURED IN TWO PIECES.
- THE HANDHOLE WITH COVER SHALL BE CAPABLE OF SUPPORTING AN MS 18 LOADING.
- THE MAXIMUM WEIGHT OF THE HANDHOLE COVER SHALL NOT EXCEED 27 KILOGRAMS.
- THE OPENINGS FOR THE CONDUITS ON ALL HANDHOLES SHALL BE PRE-CAST CONCRETE KNOCKOUTS.
- AFTER INSTALLING THE CONDUITS IN THE OPENINGS OF THE HANDHOLES, THE CONTRACTOR SHALL FILL THE EXCESS OPENING IN THE PRE-CAST KNOCKOUTS WITH CONCRETE MORTAR.
- PRIOR TO INSTALLING THE HANDHOLES, THE CONTRACTOR SHALL LEVEL THE BOTTOM OF THE TRENCH AND ACHIEVE A MINIMUM OF 95% RELATIVE COMPACTION OF THE BOTTOM OF THE TRENCH.
- ALL CONCRETE SHALL BE CLASS A (25MPA, MIN.)
- REBARS SHALL BE GRADE 300 AND ALL LAPPED SPLICES SHALL BE 360mm MINIMUM.
- THE #57 OR #67 SIZE AGGREGATE SHALL CONFORM TO LATEST VERSION OF AASHTO M43 (ASTM D 448).

# NOTES:

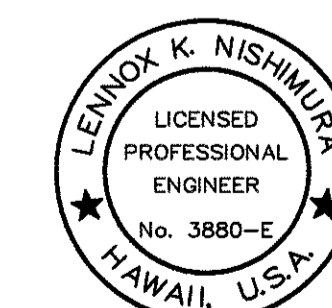
- ALL UNITS ON THIS SHEET ARE INDICATED IN METRIC UNLESS OTHERWISE NOTED.
- COVER SHALL BE LABELED TO IDENTIFY THE SYSTEM FOR WHICH THE BOX IS APART OF.



## 3 TYPICAL FLASHING COMPOUND WATERPROOFING DETAILS NOT TO SCALE



## 4 POLYMER CONCRETE COVER NOT TO SCALE

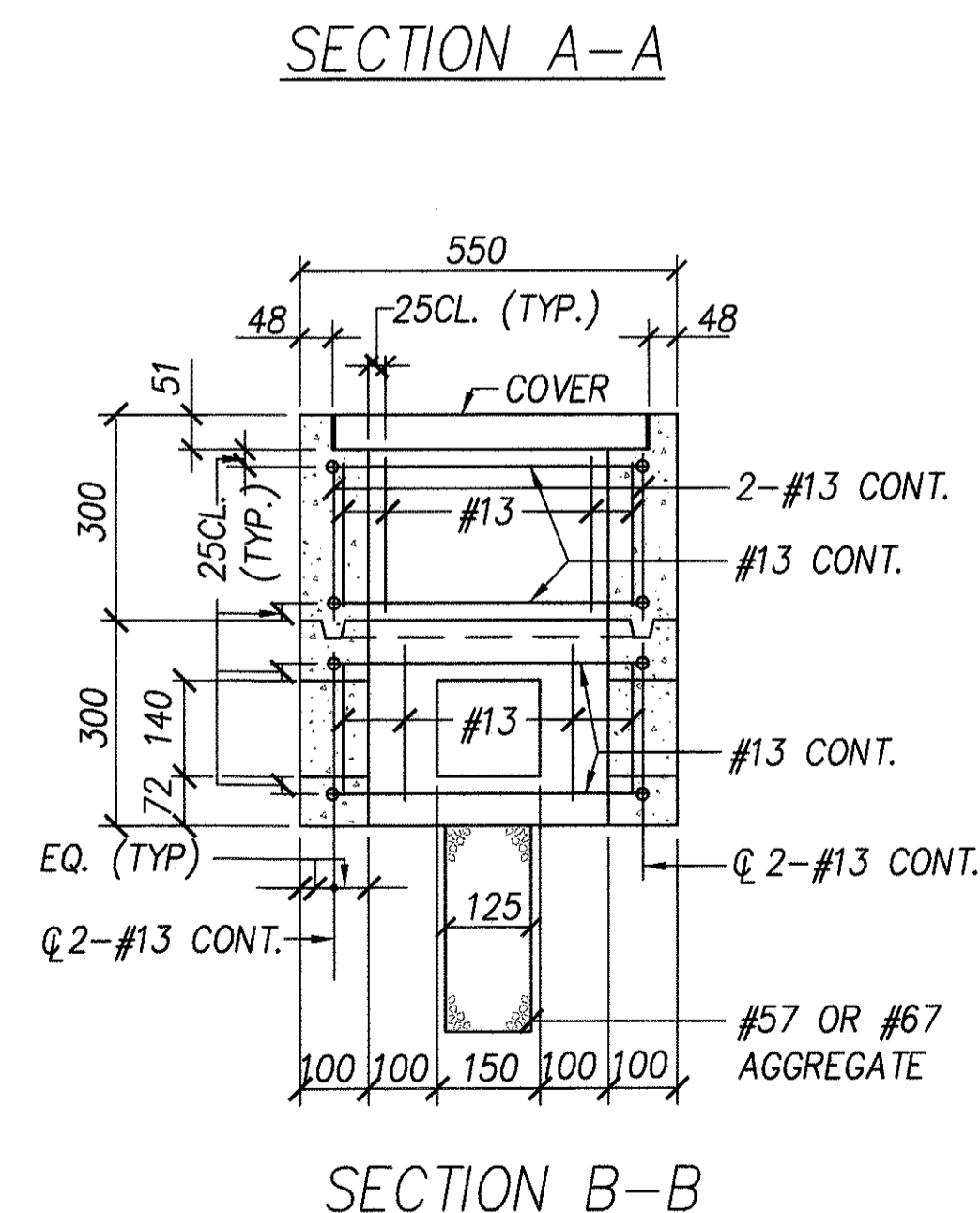
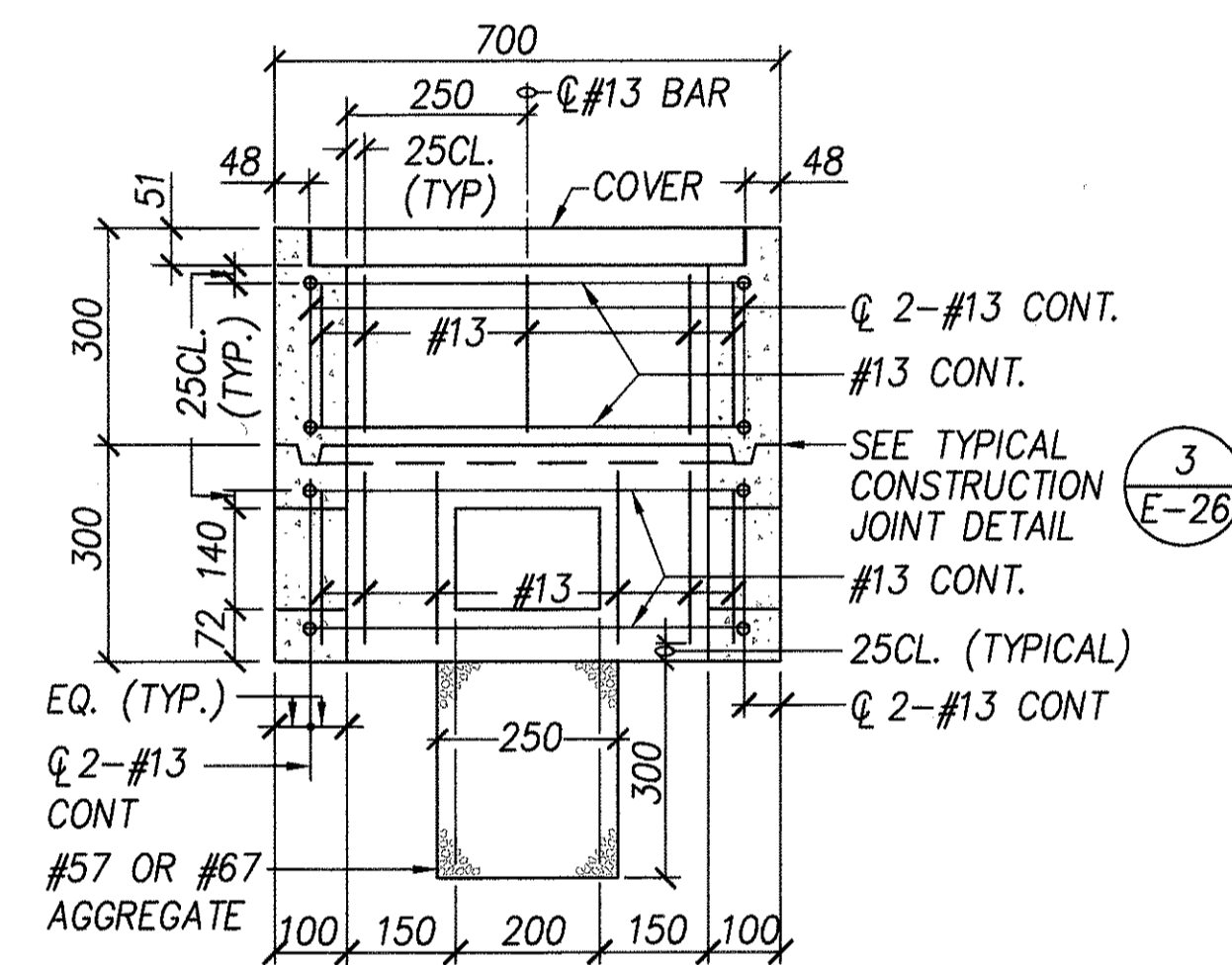
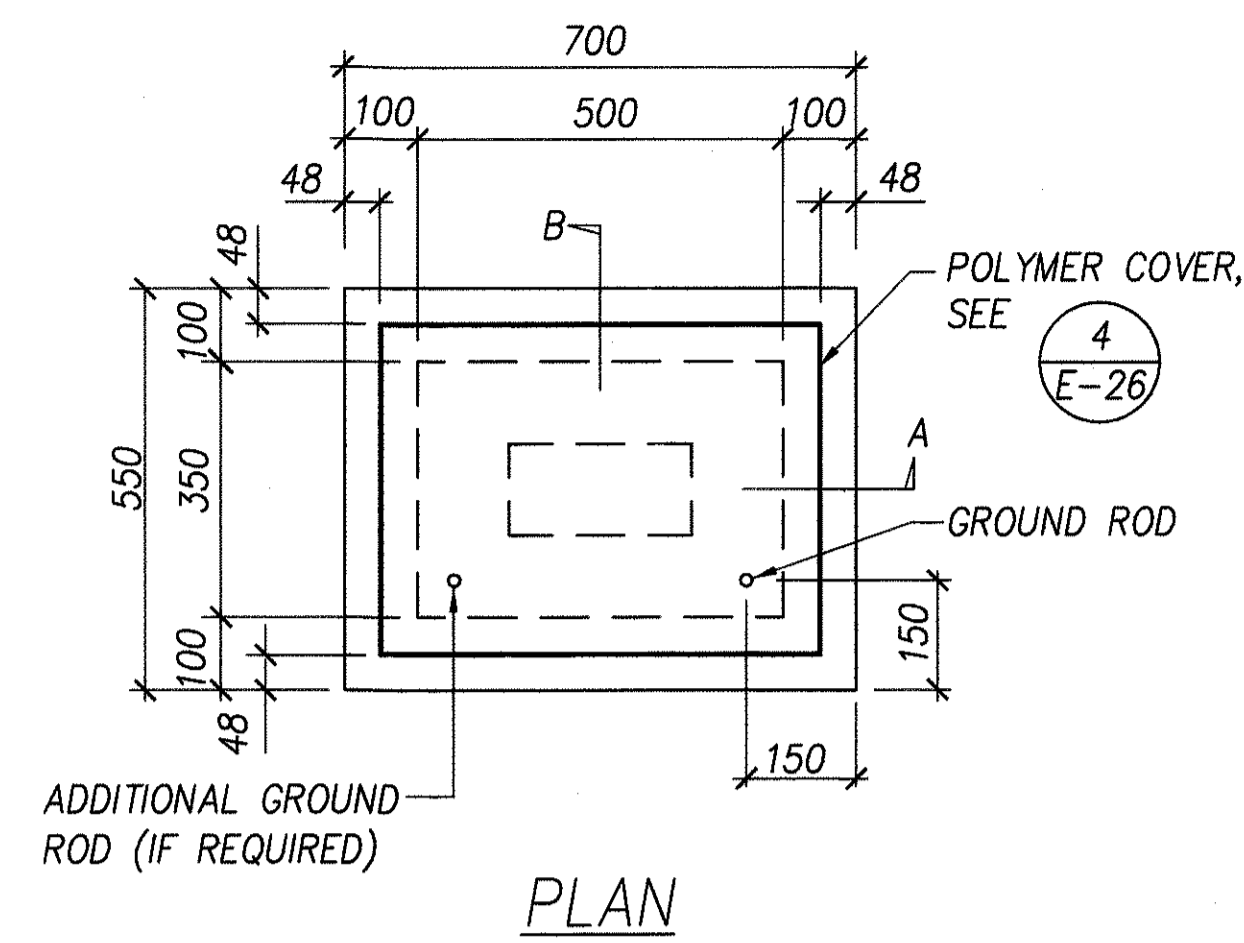


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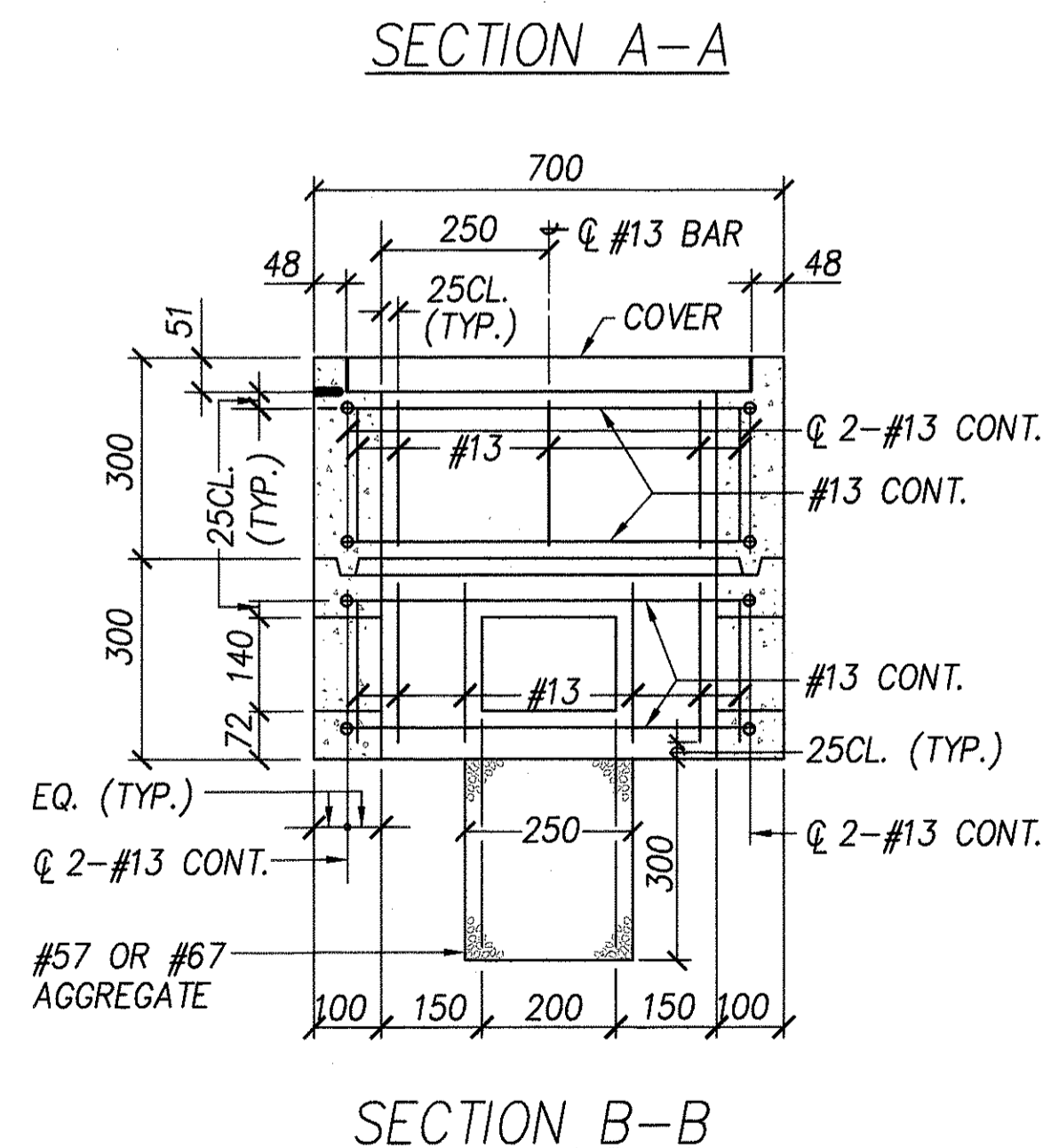
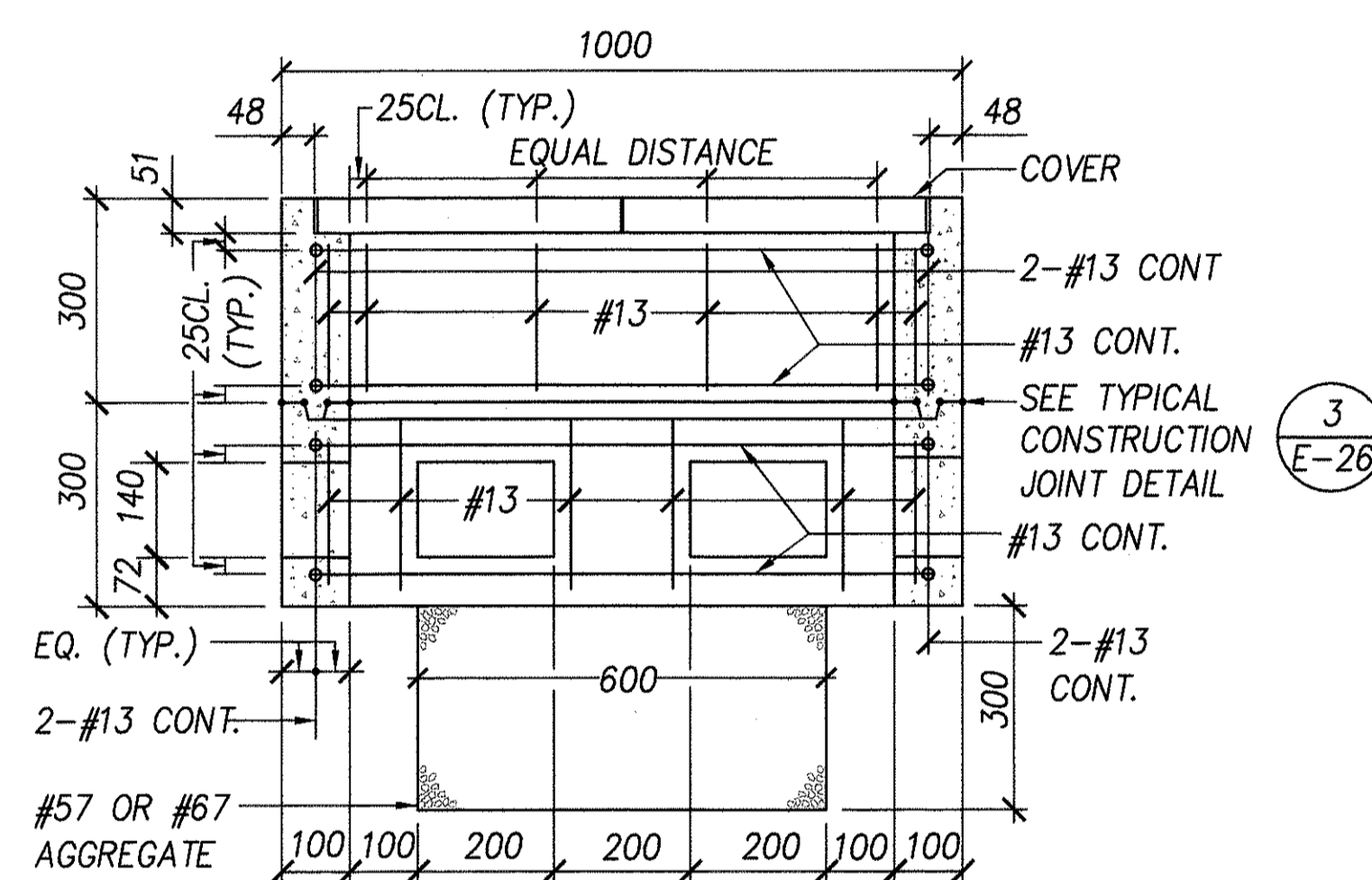
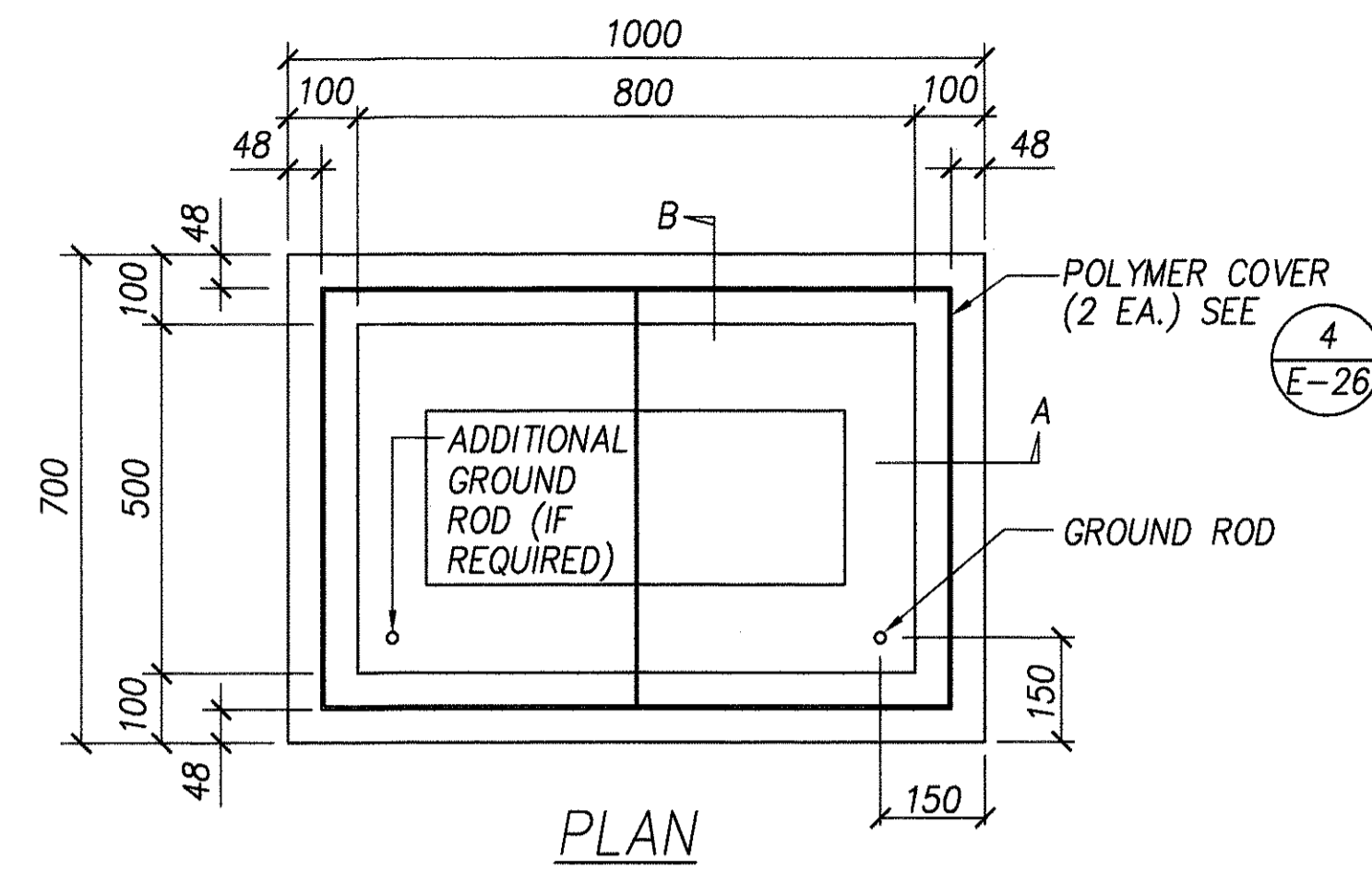
SIGNATURE DATE

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED	7/18/04
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
<u>PULLBOX DETAILS</u>		
<u><i>Pedestrian Facilities &amp; ADA Compliance</i></u> <u><i>at Various Locations on Oahu, Unit 5</i></u> <u><i>Fed. Aid Proj. No. CMAQ-0300(96)</i></u>		
NONE	Date: July 14, 2004	
SHEET No. E-26 OF 153 SHEETS		



## 1 TYPE "A" HANDHOLE NOT TO SCALE

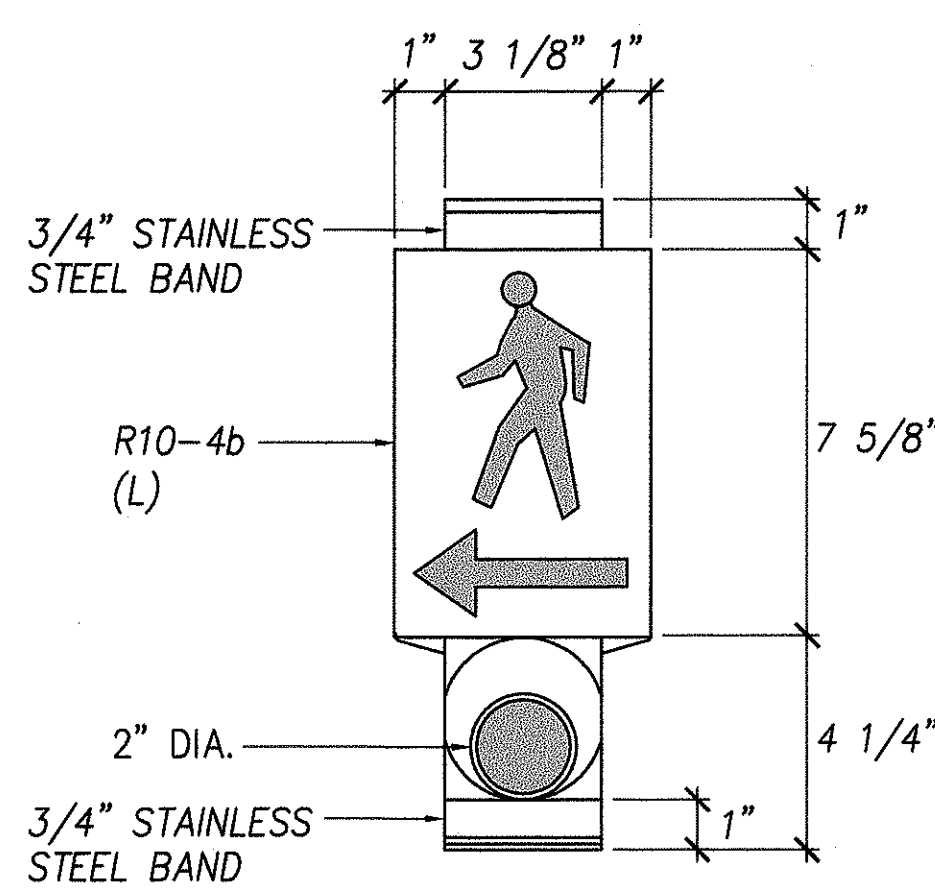


## 2 TYPE "B" HANDHOLE NOT TO SCALE

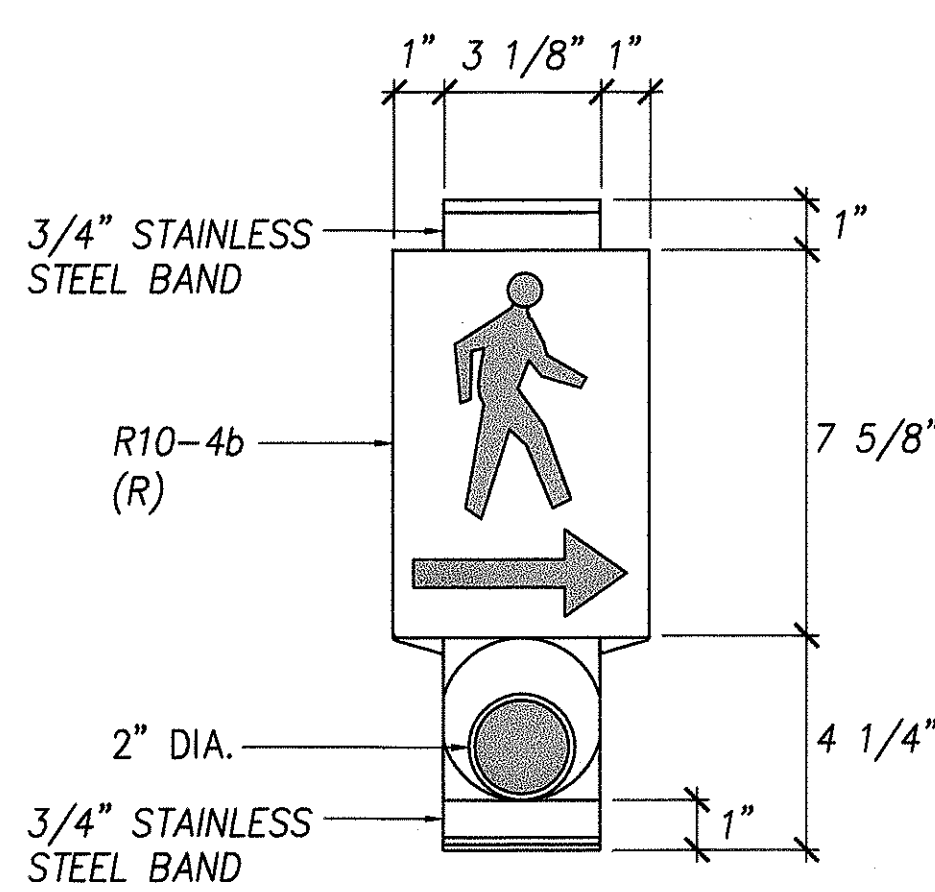
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	

1/7/04-21:56 Y:\060\060.111\060.111.D01.dwg

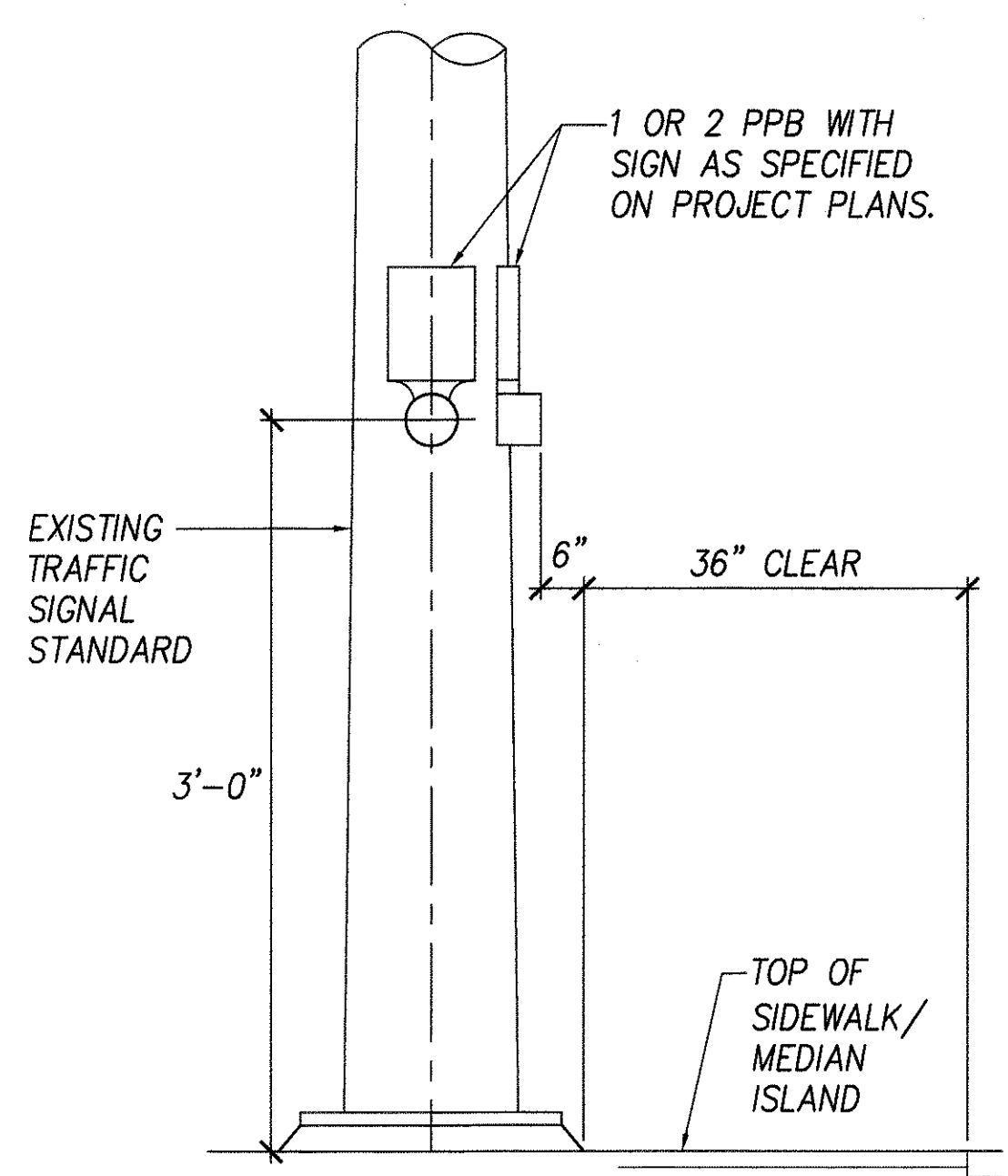
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	150	153



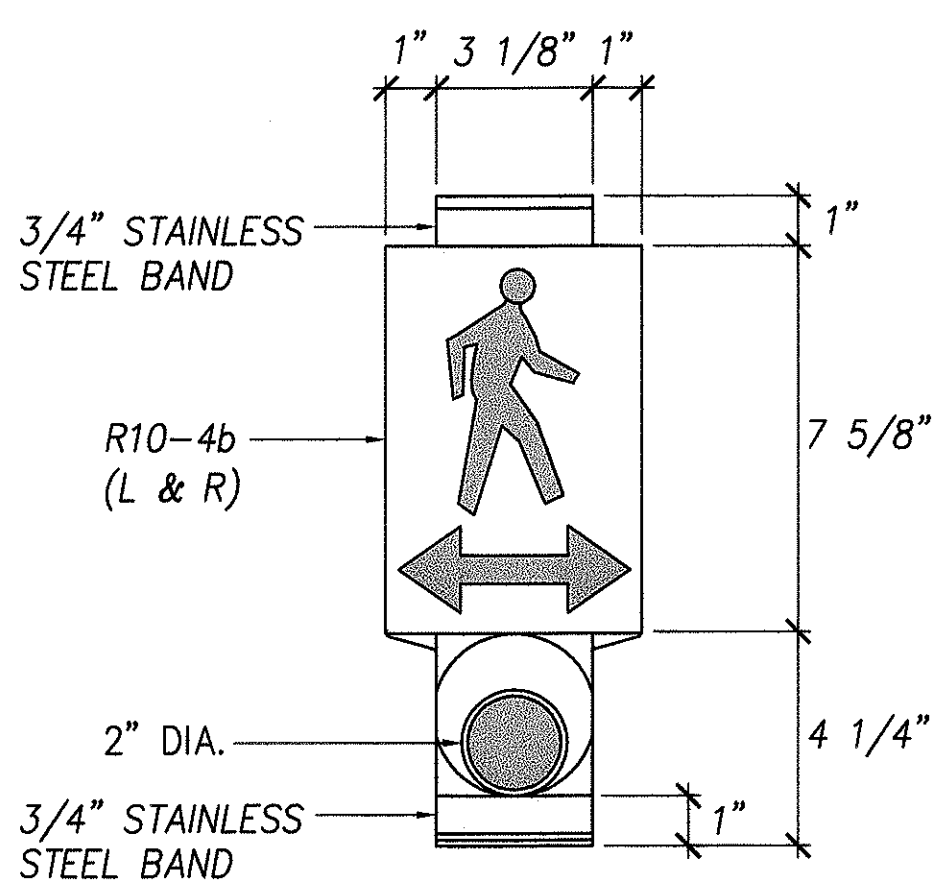
LEFT



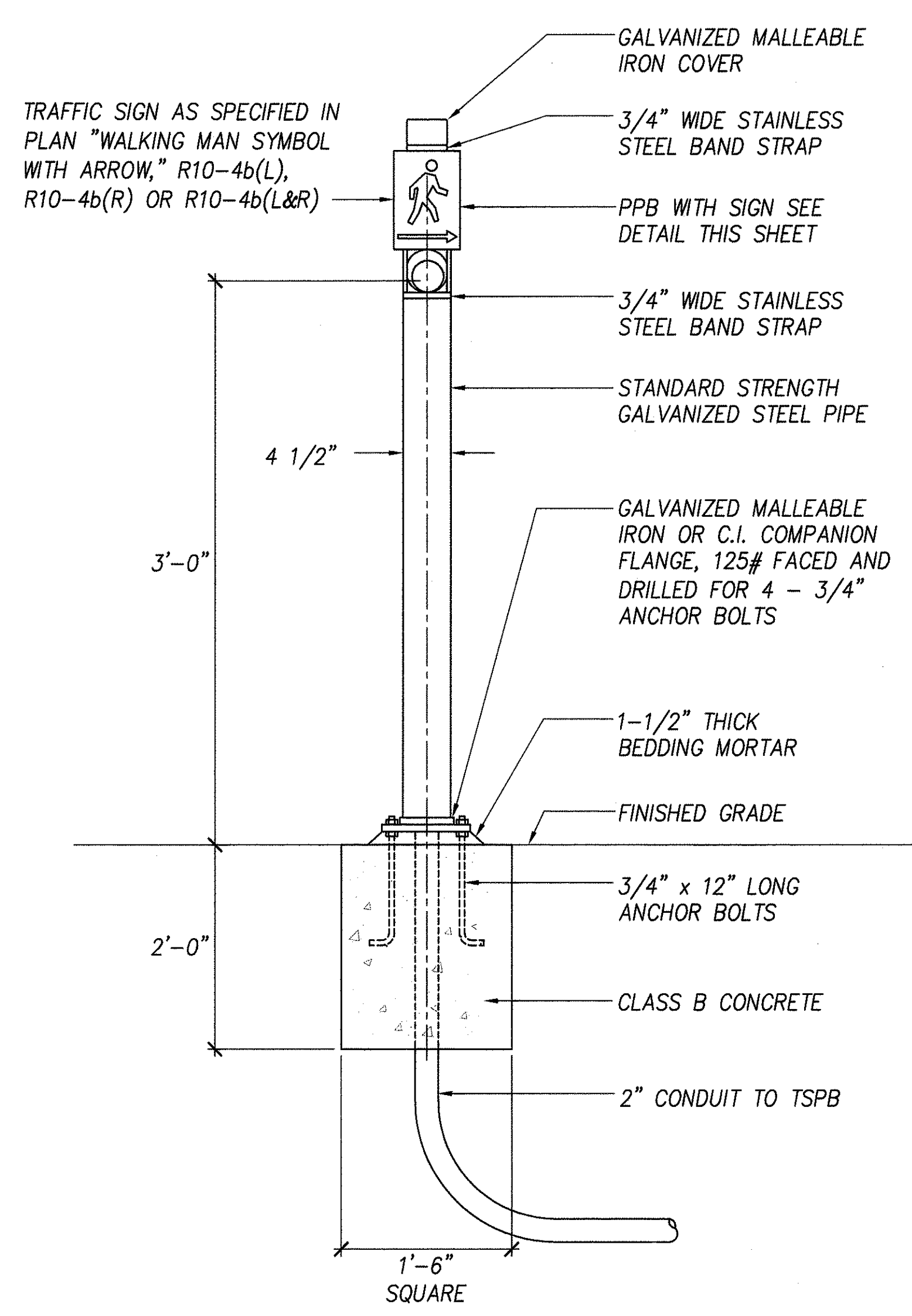
RIGHT



PPB ON EXISTING TSS

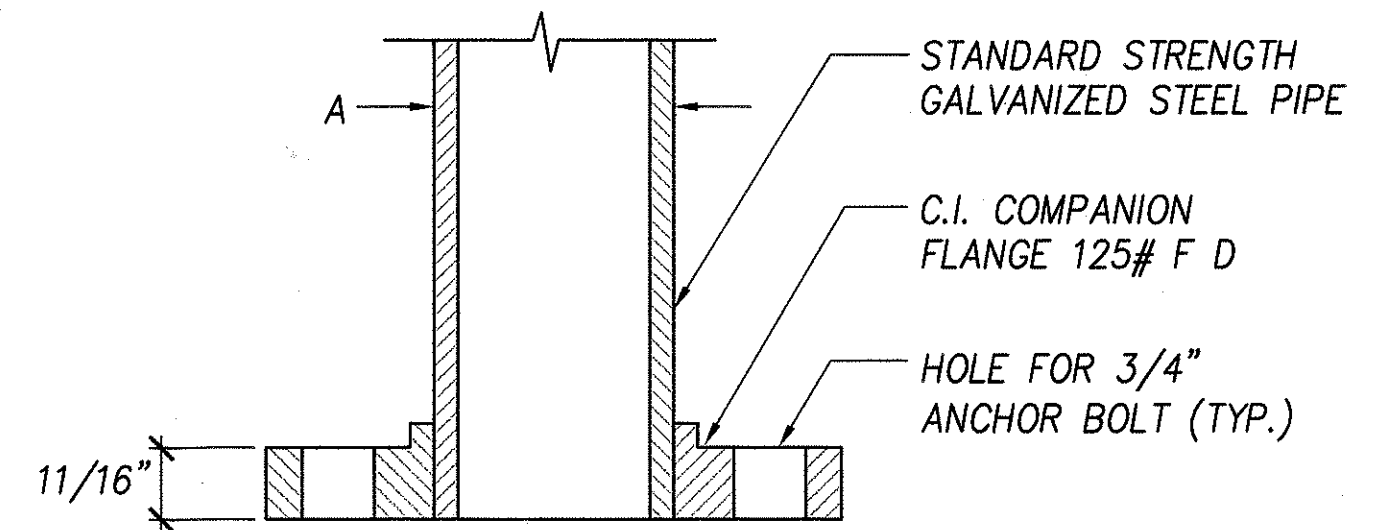


LEFT & RIGHT

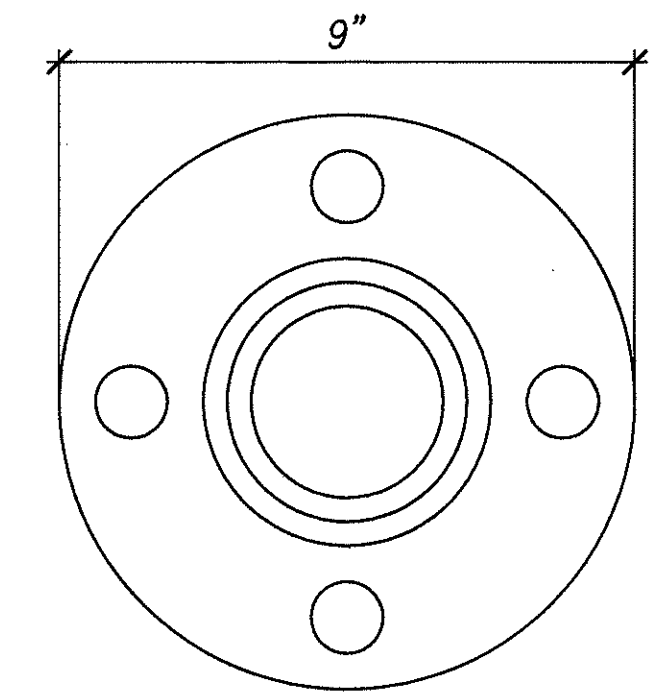


NOTES:

1. CONDUITS SHALL PROTRUDE 2" MAX. ABOVE FINISHED SURFACE OF FOUNDATION.
2. CONDUITS SHALL SLOPE AWAY FROM POST FOUNDATION.



SECTION



TOP VIEW

3 FLANGE DETAIL  
E-27 NOT TO SCALE

2 PPB POST AND FOOTING DETAIL  
E-27 NOT TO SCALE

NOTES:

THE COLOR SCHEME SHALL BE:  
WHITE - MAN, ARROW AND PUSH BUTTON  
BLACK - BACKGROUND

1 PEDESTRIAN PUSH BUTTON DETAILS  
E-27 NOT TO SCALE

DATE	7/7/04
SURVEY PLOTTED BY	...
DRAWN BY	...
DESIGNED BY	...
QUANTITIES BY	...
CHECKED BY	...
ORIGINAL PLAN	No. ...
NOTE BOOK	No. ...

7/7/04-21:44 Y:\060\060111\060111 002.dwg



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SIGNATURE: *Lennox K. Nishimura* DATE: 7/07/04  
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/7/04

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

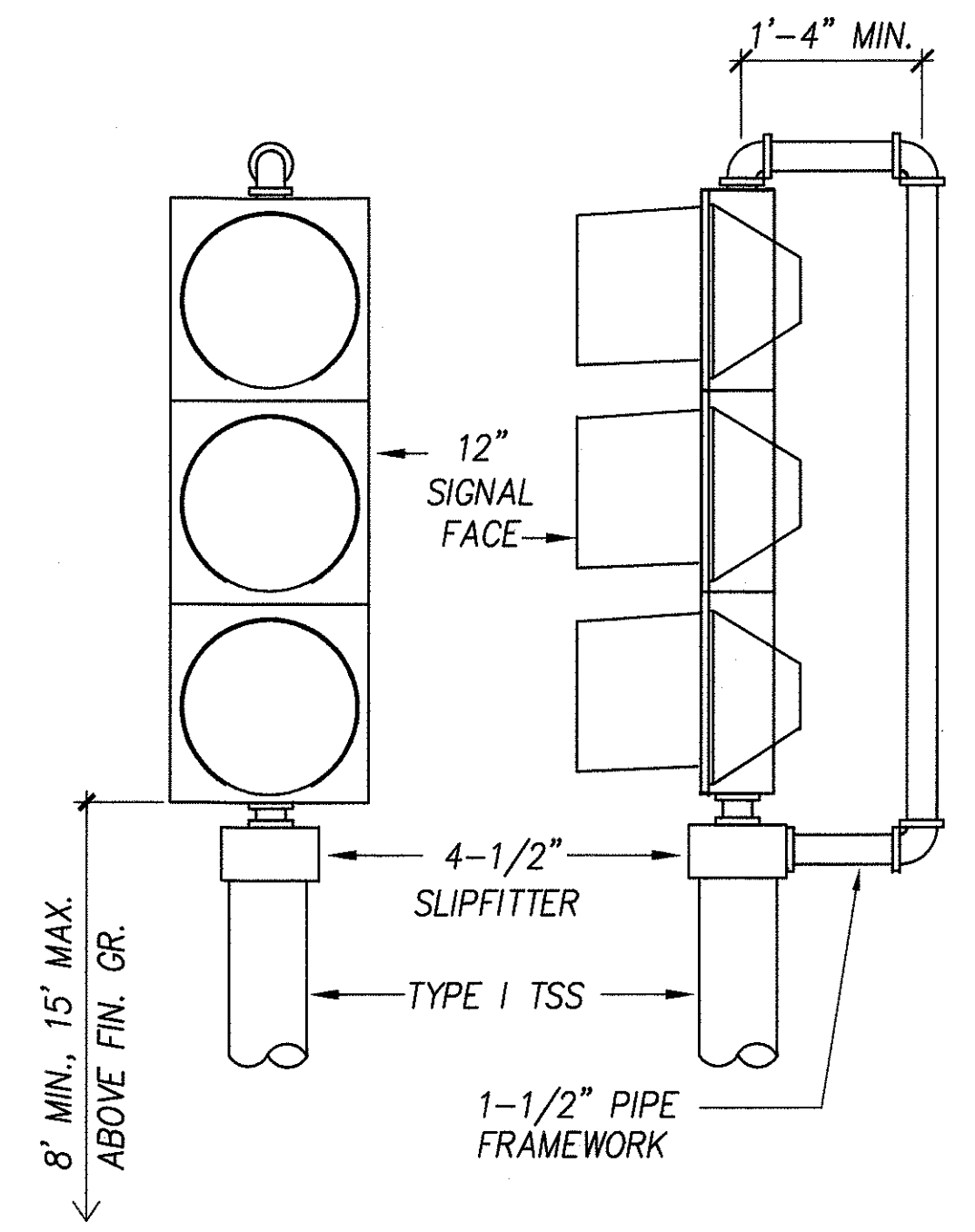
PUSH BUTTON DETAILS

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

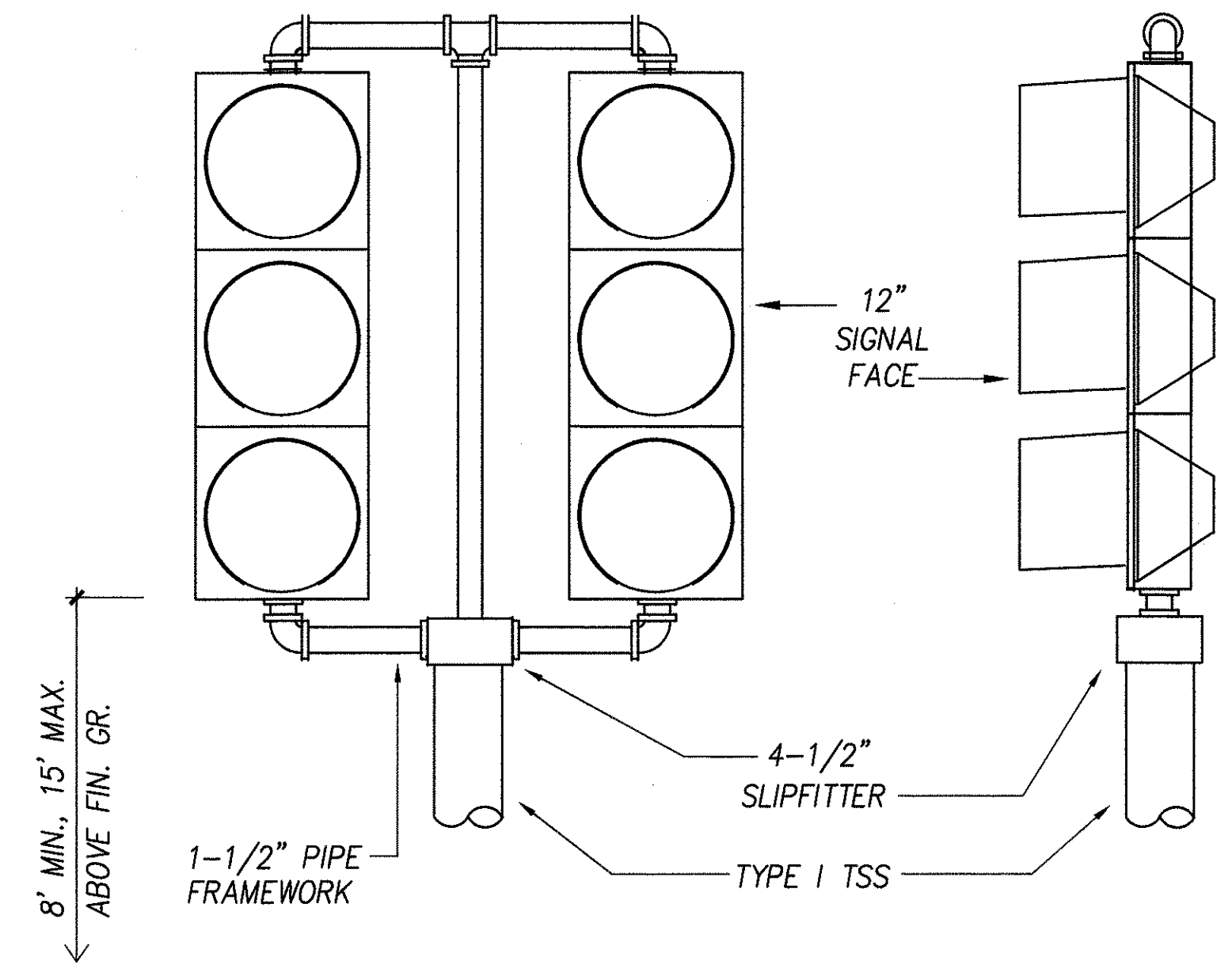
NONE Date: July 7, 2004

SHEET No. E-27 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	151	153

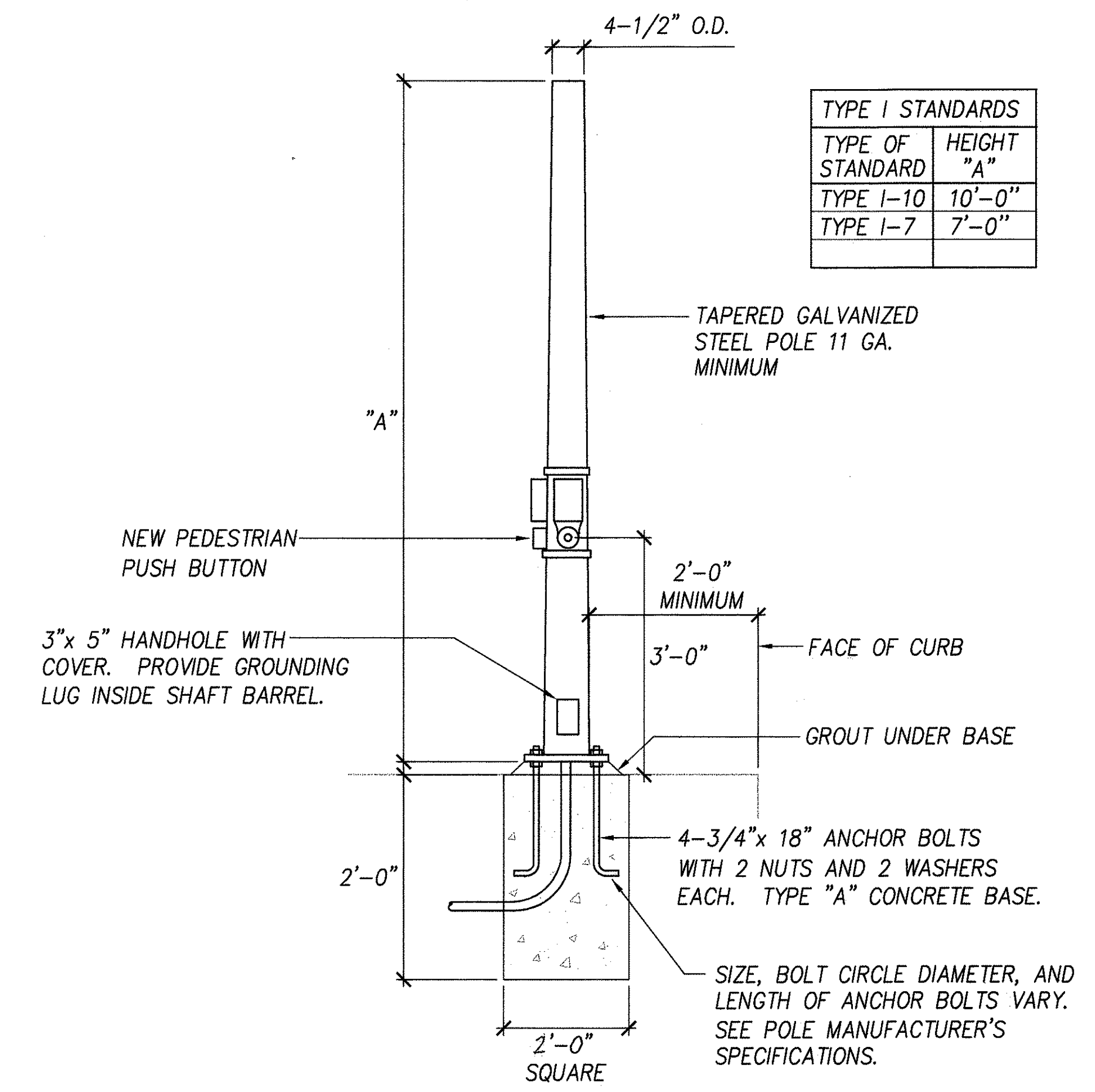


VEHICULAR SIGNAL  
TOP OF POLE -  
ONE WAY MOUNTING  
(TP-1W)



VEHICULAR SIGNAL  
TOP OF POLE -  
TWO WAY MOUNTING  
(TP-2W)

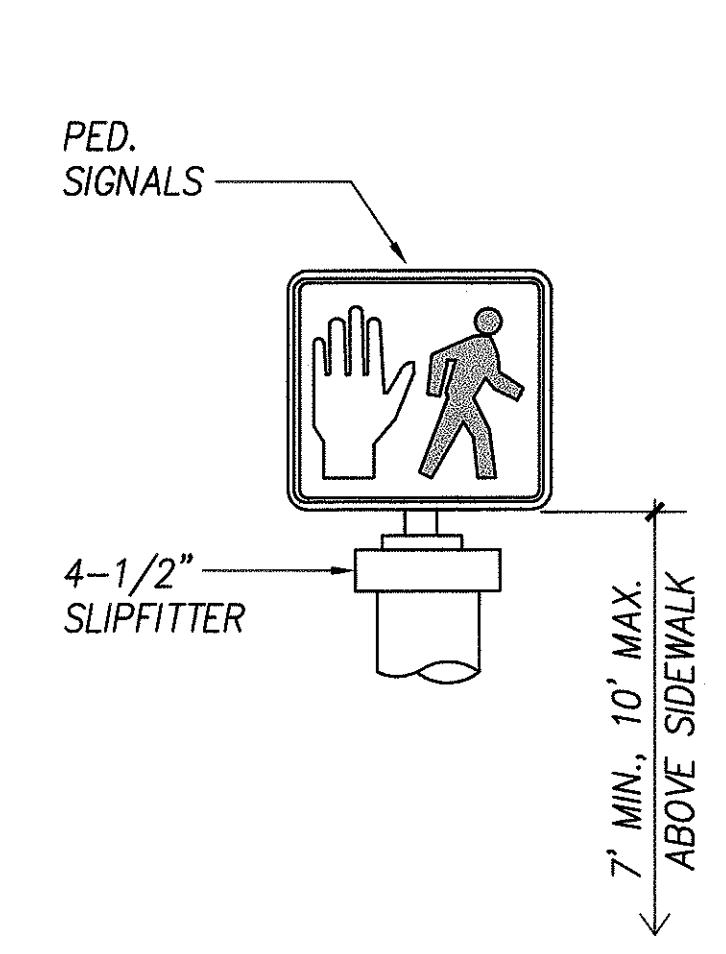
VEHICULAR SIGNAL MOUNTINGS



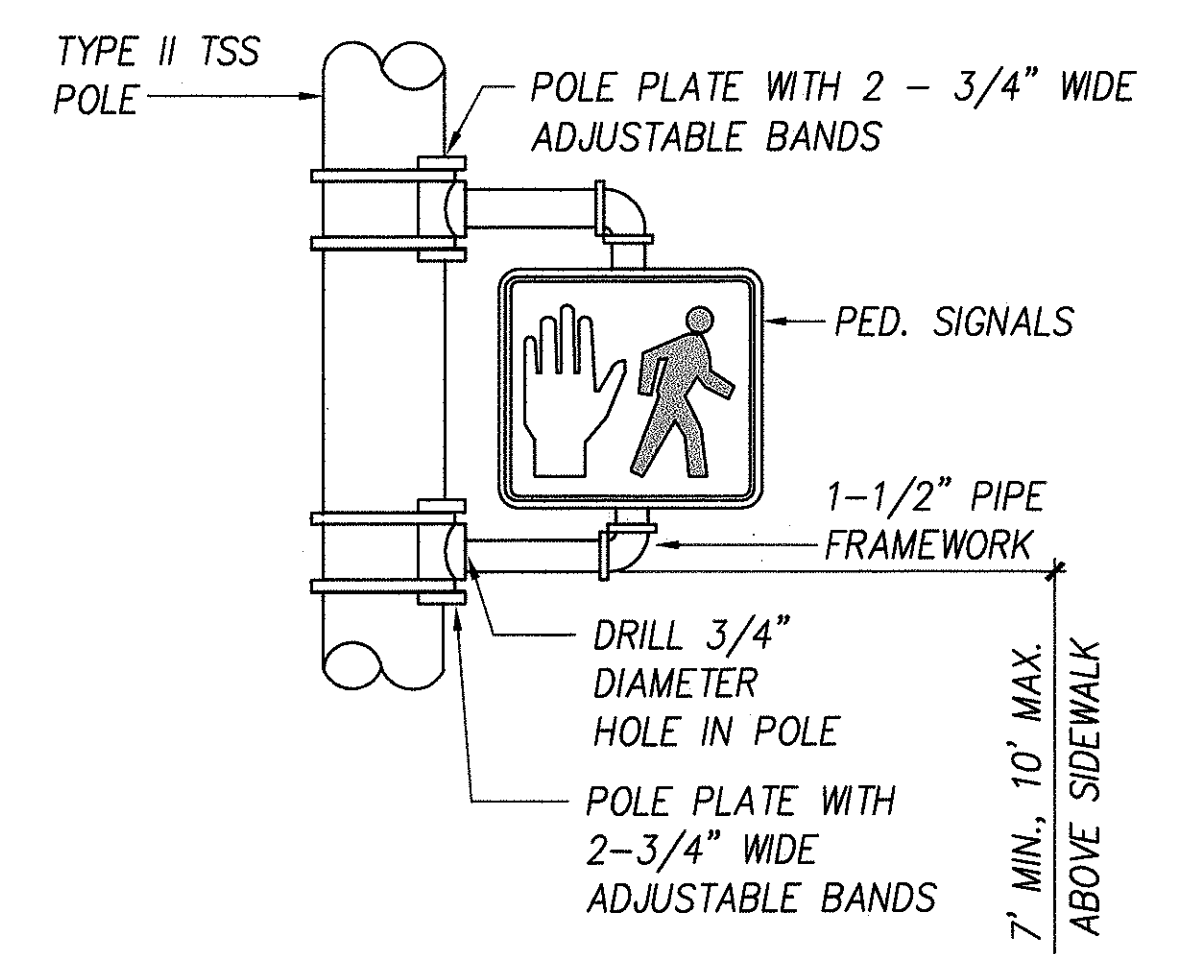
TYPE I STANDARDS	
TYPE OF STANDARD	HEIGHT "A"
TYPE I-10	10'-0"
TYPE I-7	7'-0"

- NOTES:
- STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS.
  - CONCRETE SHALL BE CLASS "B".
  - TYPE "1" CONCRETE BASE SHALL BE USED FOR TYPE I, TRAFFIC SIGNAL STANDARDS.
  - CONDUIT BEND IS INCIDENTAL TO CONCRETE BASE.
  - SUBMIT SHOP DRAWINGS FOR APPROVAL.

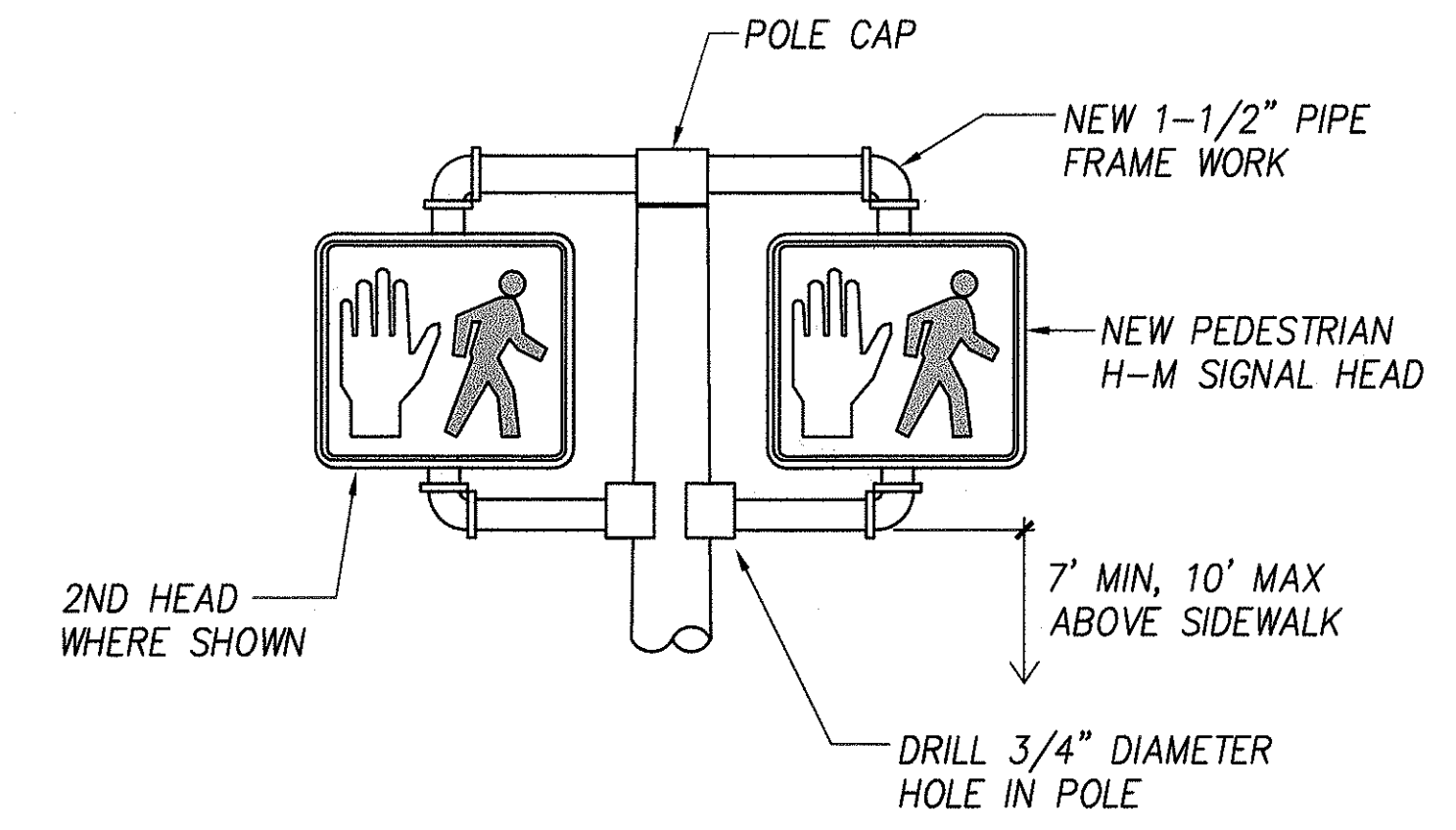
1 SIGNAL POLE WITH PUSH BUTTON  
E-28 NOT TO SCALE



TOP OF POLE-ONE WAY  
(TP-1W)



BRACKET MOUNT-ONE WAY  
(B-1W)



BRACKET MOUNT - TWO WAY  
(B-2W)

PEDESTRIAN SIGNAL MOUNTING

DATE	7/07/04
DESIGNED BY	LENNOX K. NISHIMURA
CHECKED BY	LENNOX K. NISHIMURA
IN CHARGE	LENNOX K. NISHIMURA
PROJECT NO.	7/07/04
SHEET NO.	151

LENNOX K. NISHIMURA  
LICENSED PROFESSIONAL ENGINEER  
No. 3880-E  
HAWAII, U.S.A.

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SIGNATURE: *Lennox K. Nishimura* DATE: 7/07/04

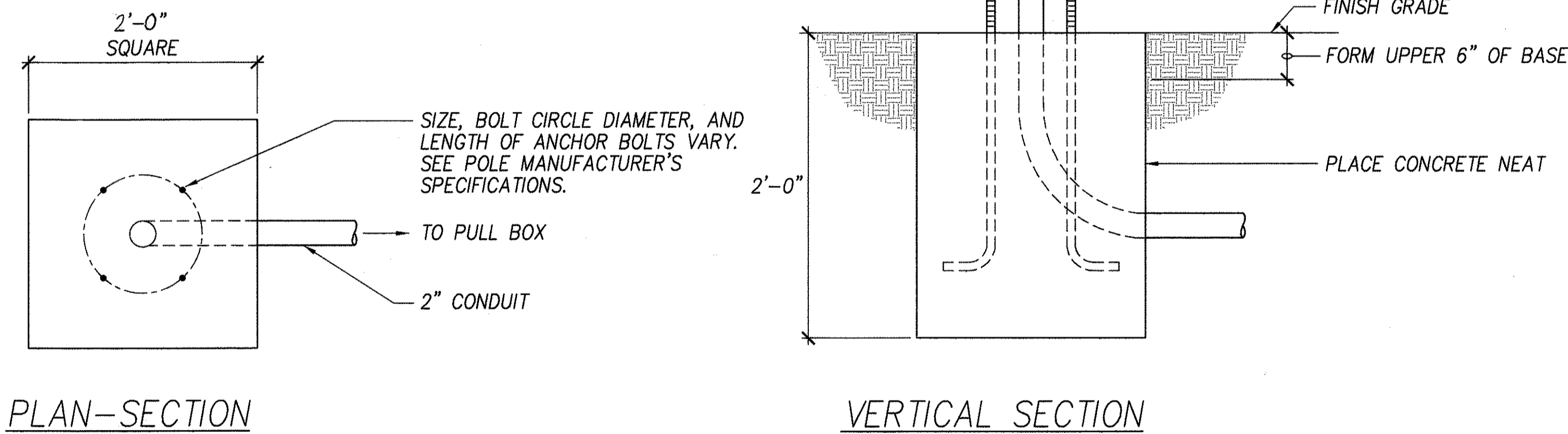
"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU DRAWING REVIEWED 7/7/04

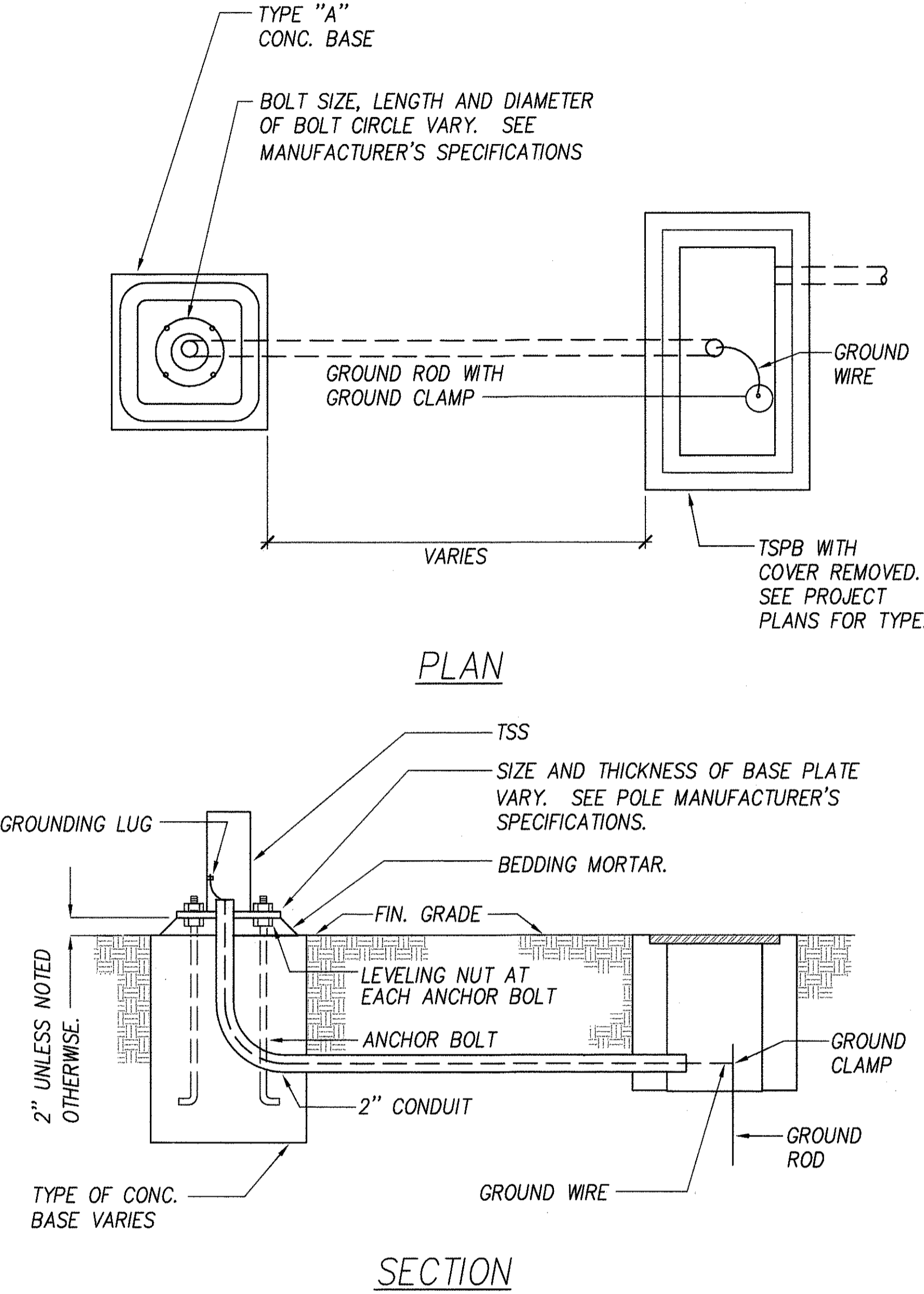
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
TRAFFIC SIGNAL  
MISCELLANEOUS DETAILS  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)  
NONE Date: July 2004  
SHEET No. E-28 OF 153 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	152	153

- NOTES:
1. CONCRETE SHALL BE CLASS "B".
  2. TYPE "A" CONCRETE BASE SHALL BE USED FOR TYPE I, TRAFFIC SIGNAL STANDARDS.
  3. CONDUIT BEND IS INCIDENTAL TO CONCRETE BASE.



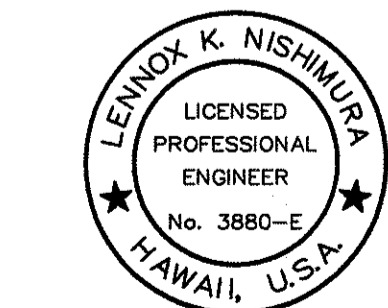
1 TYPE "1" CONCRETE BASE  
E-29 NOT TO SCALE



2 TYPICAL STANDARD AND PEDESTAL INSTALLATION  
E-29 NOT TO SCALE

ORIGINAL PLAN	SURVEY PLATTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

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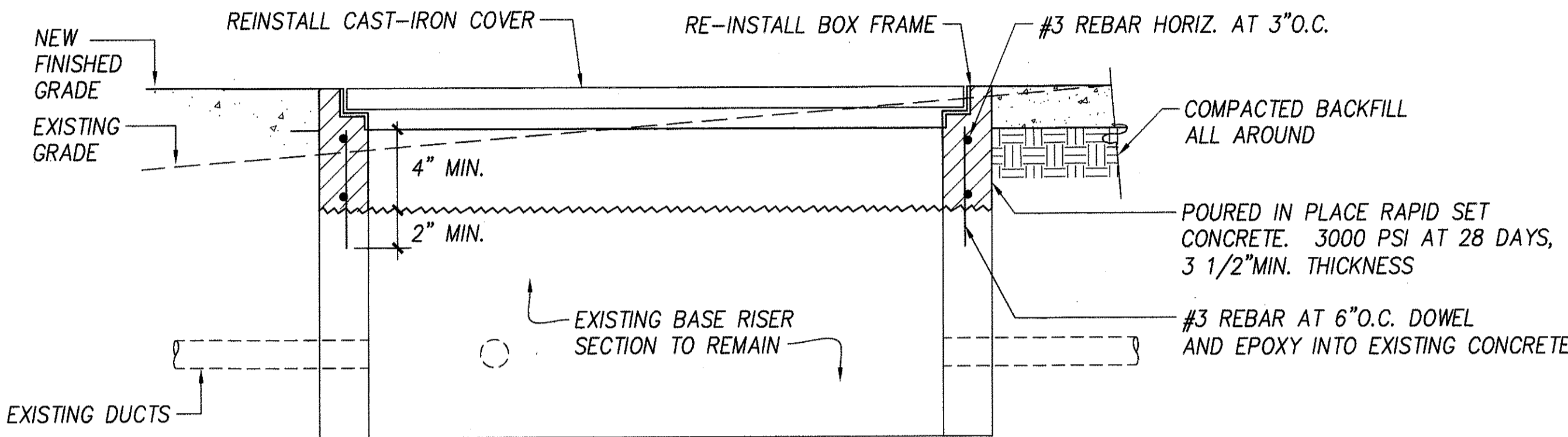
SIGNATURE *Lennox K. Nishimura* DATE 7/07/04

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

DTS, C&C HONOLULU	DRAWING REVIEWED	7/7/04
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRAFFIC SIGNAL MISCELLANEOUS DETAILS Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 5 Fed. Aid Proj. No. CMAQ-0300(96) NONE Date: July 2004
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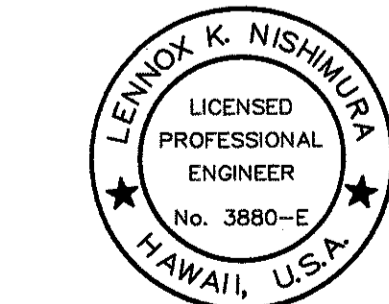
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(96)	2004	153	153



1 TRAFFIC SIGNAL/STREET LIGHT BOX ADJUSTMENT  
E-30 NOT TO SCALE

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

7/17/04-21:45 Y:\060\060111\060111 D07.dwg



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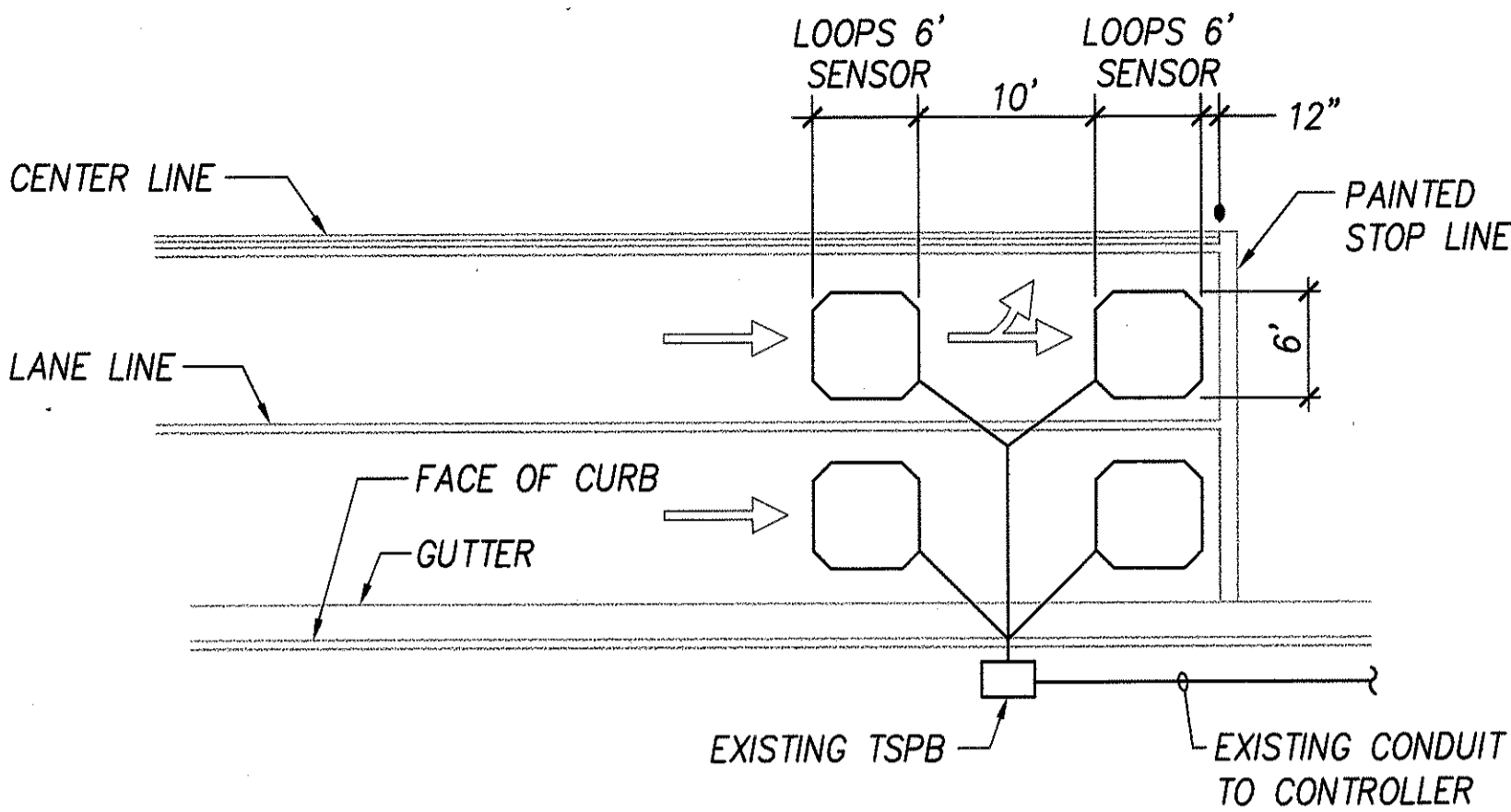
SIGNATURE DATE

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

DTS, C&C HONOLULU DRAWING REVIEWED 7/17/04

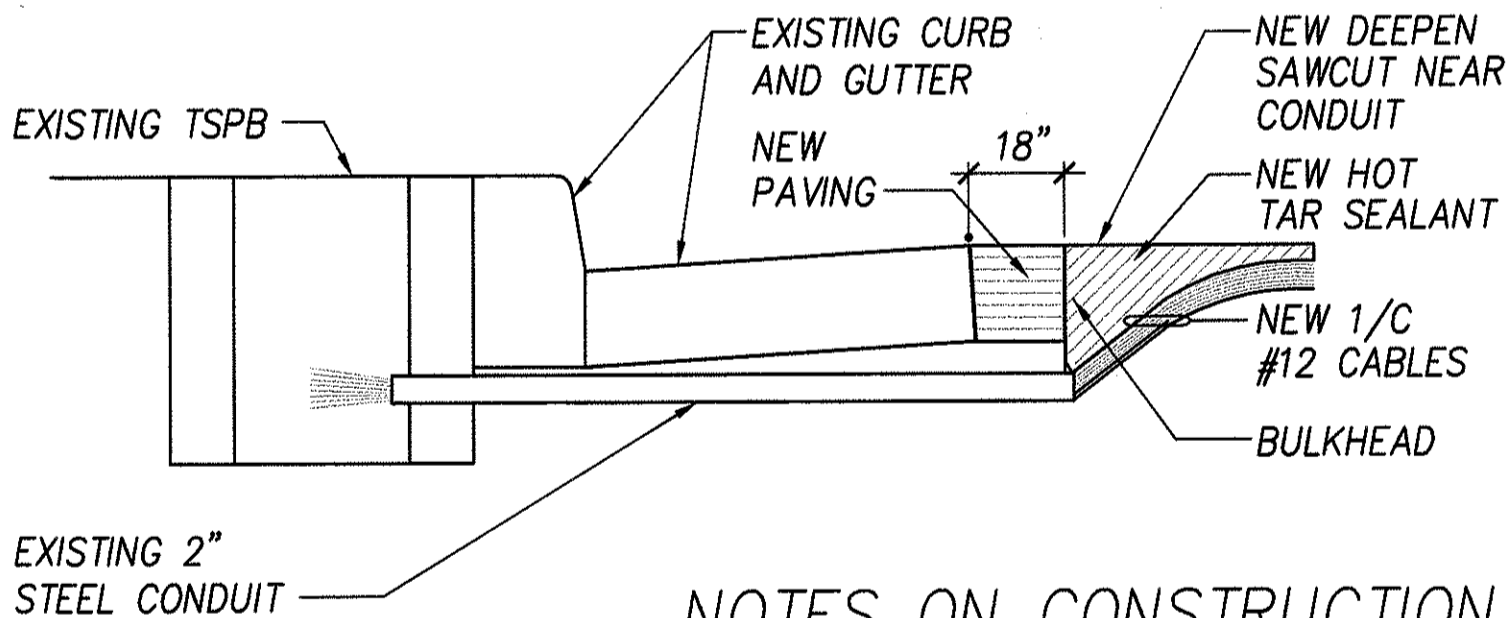
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
PULLBOX ADJUSTMENT  
DETAILS  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)  
NONE Date: July 2004

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(88)	2004	ADD. 153S-1	153



- NOTES:**
- CENTER SENSOR LOOPS IN LANES.
  - COLLECTOR CABLES SHALL BE TWISTED 2 TURNS PER FOOT.
  - NUMBER OF LOOPS AND LOCATIONS VARY. SEE PROJECT PLANS.
  - NUMBER AND LOCATIONS OF COLLECTOR SAWCUTS MAY BE VARIED IN THE FIELD TO SUIT.
  - COORDINATE FINAL LOCATION OF SENSORS WITH CIVIL STRIPING PLAN.

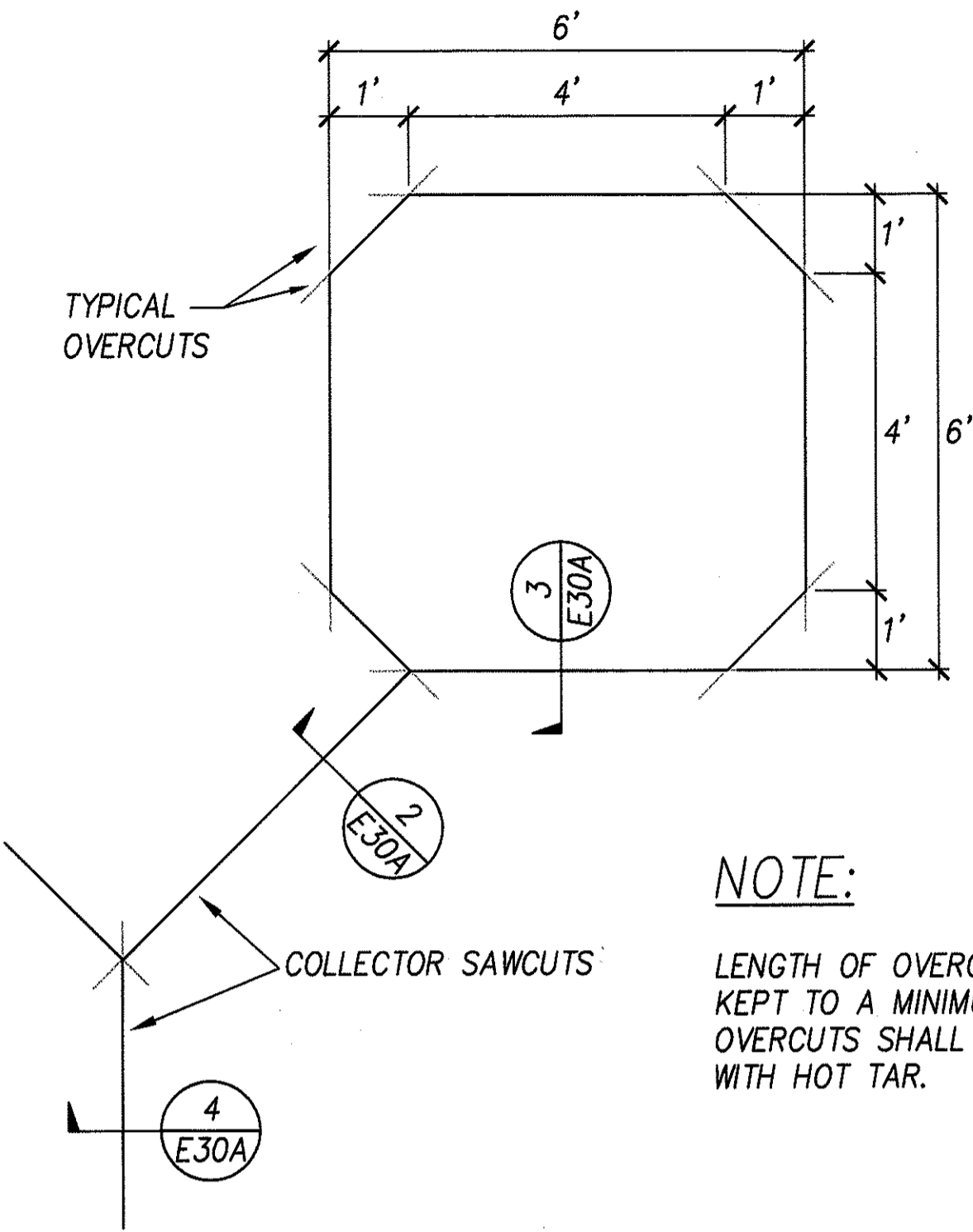
1 TYPICAL SENSOR LOOP LAYOUT  
E30A NOT TO SCALE



NOTES ON CONSTRUCTION  
AT END OF SAWCUT

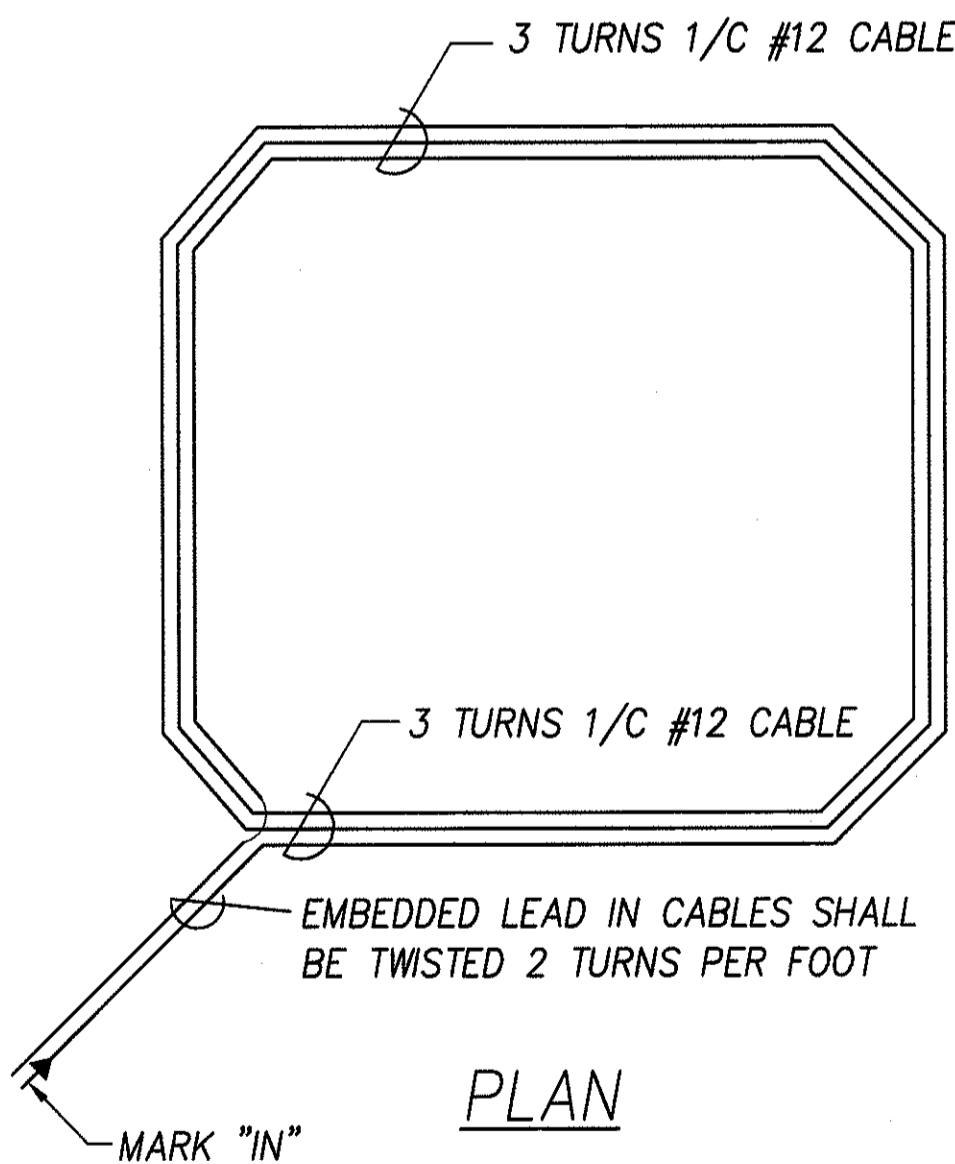
- SEAL ROADWAY END OF CONDUIT AFTER INSTALLATION OF CONDUCTORS
- INSTALL BULKHEAD ACROSS CONDUIT TRENCH.
- PLACE HOT TAR IN SAWCUT.
- BACKFILL OVER CONDUIT WITH NEW PAVING.
- RECONSTRUCT CURB AND GUTTER AS REQUIRED.

DETAIL OF SENSOR LOOP INSTALLATION  
AT EDGE OF ROADWAY

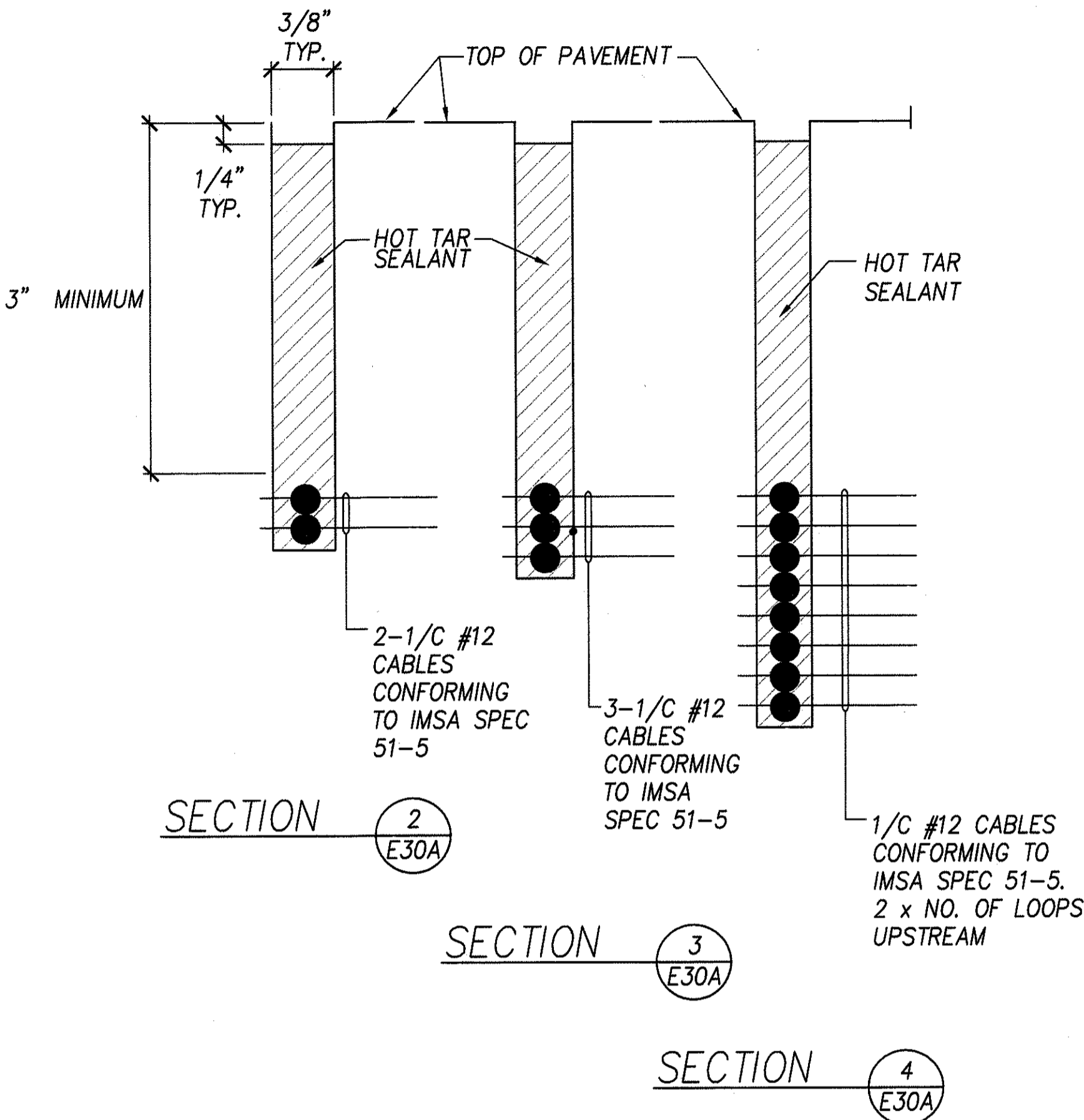


**NOTE:**  
LENGTH OF OVERCUTS SHALL BE KEPT TO A MINIMUM. ALL OVERCUTS SHALL BE BACKFILLED WITH HOT TAR.

TYPICAL SENSOR LOOP SAWCUT DETAIL



TYPICAL SENSOR LOOP WIRING DIAGRAM  
NOT TO SCALE



7/22/04 ADDENDUM NO.1 - ADDED SHEET

DATE REVISION

DTS, C&C HONOLULU DRAWING REVIEWED 7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DETECTOR LOOP DETAILS

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 5  
Fed. Aid Proj. No. CMAQ-0300(96)

Date: July 2004

SHEET No.E-30A OF 30 SHEETS

ADD. 153S-1

SURVEY PLATTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

8/27/04-8:11 X:\060\060.111\060.111.DWG



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Lennox K. Nishimura 8/27/04  
SIGNATURE DATE

"OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

