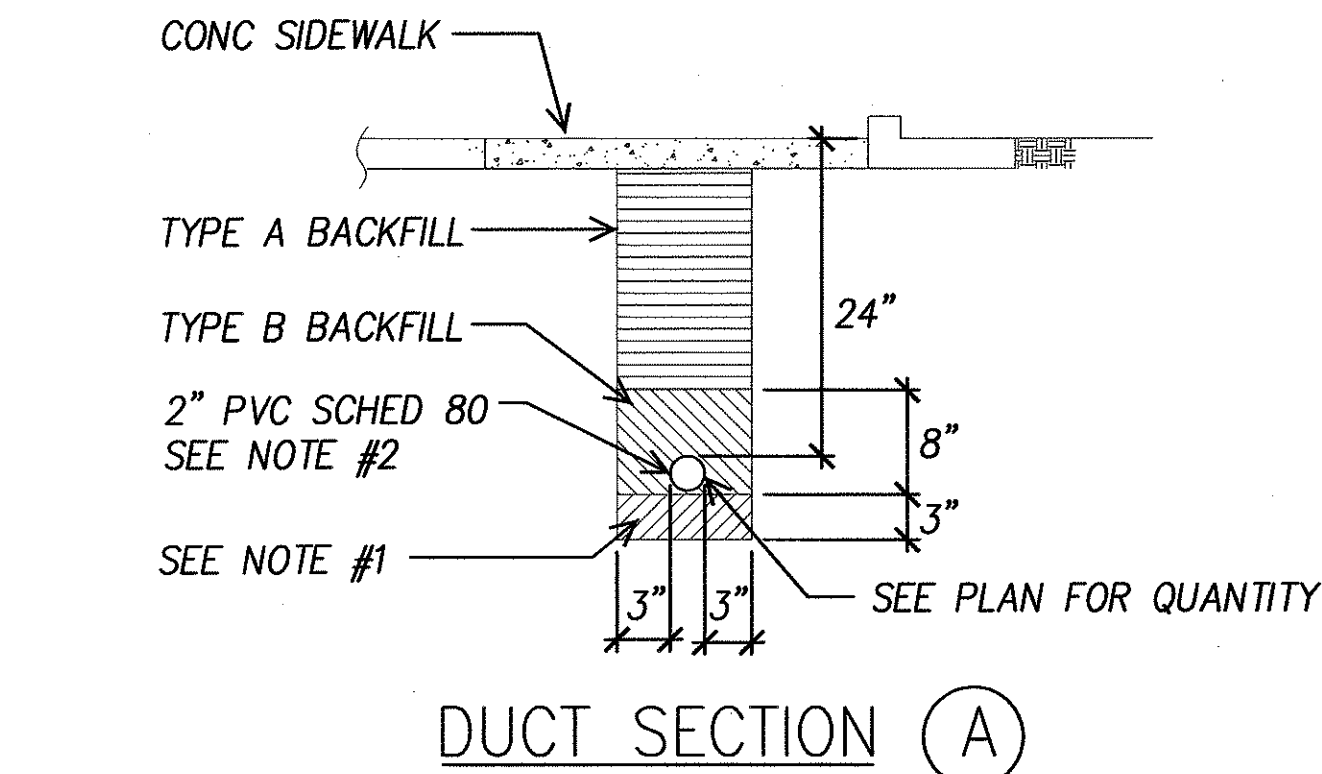
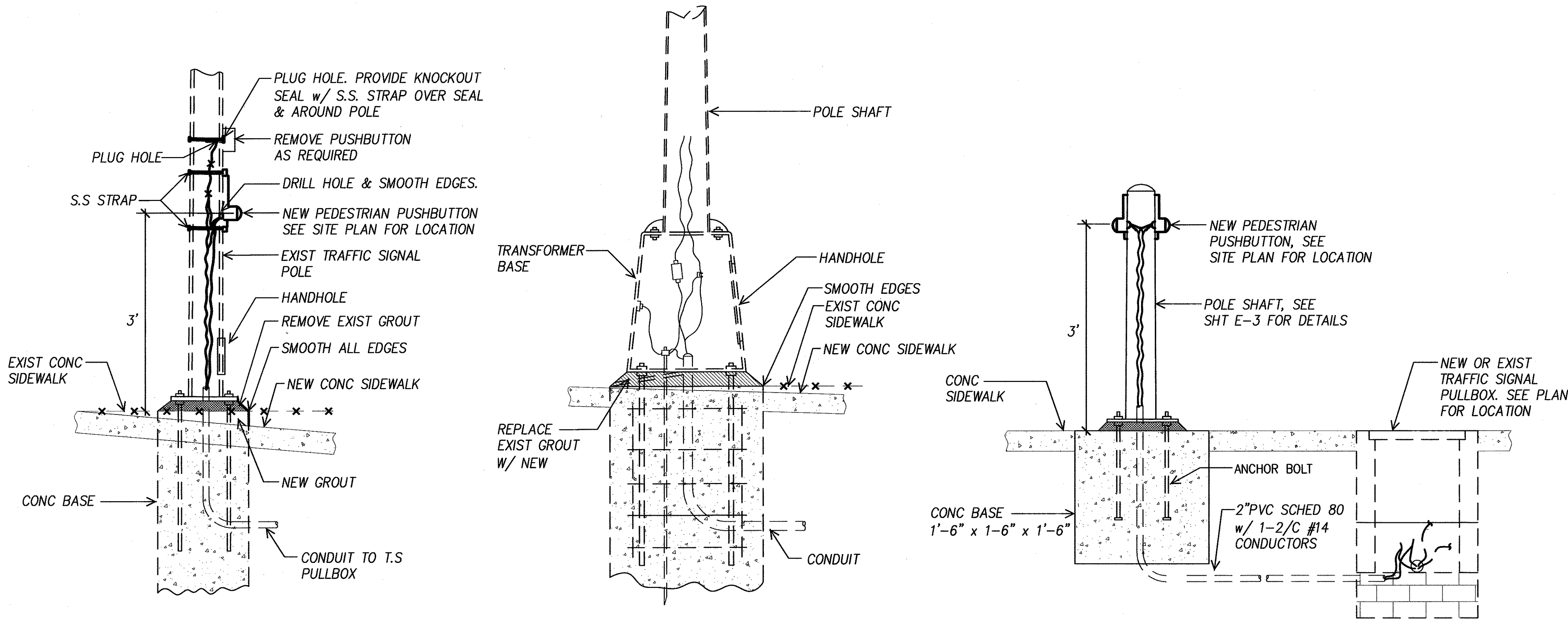


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	141	180

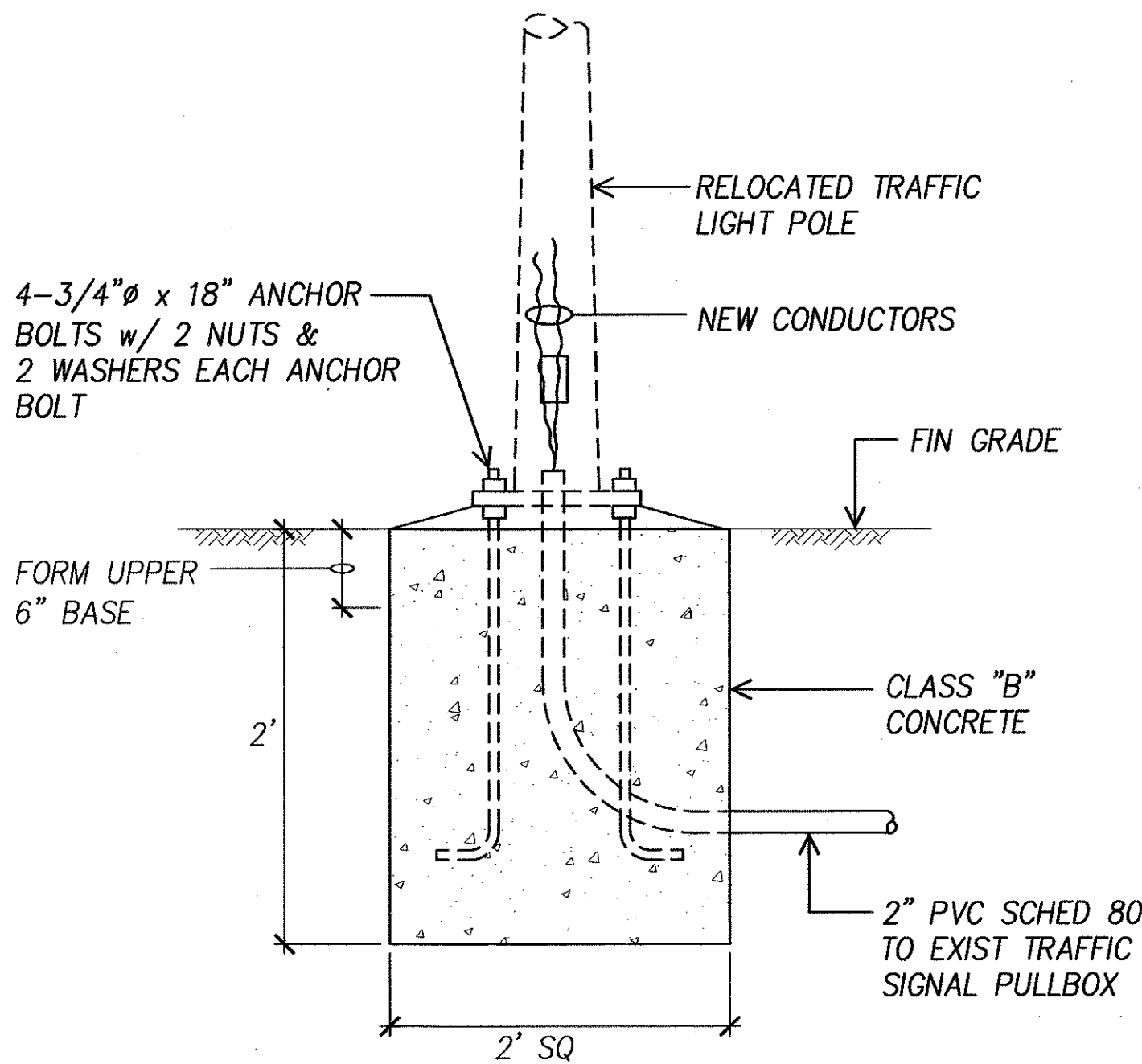


- TYPE "A": BEACH SAND, EARTH OR EARTH & GRAVEL. IF EARTH & GRAVEL USED, MAX. ROCK SIZE SHALL BE 1" & MIXTURE SHALL CONTAIN NOT MORE THAN 50% BY VOLUME OR ROCK PARTICLES. 95% COMPACTION.
- TYPE "B": SAME AS TYPE "A" EXCEPT THAT IF EARTH & GRAVEL USED, THE MIXTURE MUST PASS A 1/2" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICLES. 95% COMPACTION.
- NOTE: 1. IF THE NORMAL MATERIAL IN THE BOTTOM OR TRENCH IS NOT TYPE "B" AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL SHALL BE PROVIDED.
2. FOR ROADWAY CROSSING & LANDSCAPE AREAS STREET LIGHT CONDUITS SHALL BE PVC SCHEDULE 40 WITH 3" CONCRETE JACKET. 2800PSI @ 28 DAYS COMPRESS STRENGTH.

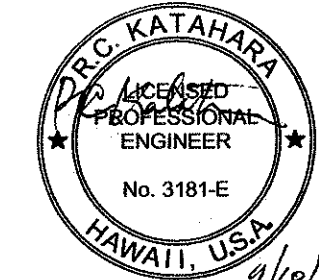
### DUCT SECTIONS

### SYMBOL LIST

- TLP ☒ EXIST TRAFFIC LT POLE
- TSB ☐ EXIST TRAFFIC SIGNAL PULLBOX
- SLP ☒ EXIST STREET LT POLE
- SLB ☐ EXIST STREET LT PULLBOX
- TS-- EXIST TRAFFIC SIGNAL CONDUIT
- TS— NEW TRAFFIC SIGNAL CONDUIT
- \*-TS-\* REMOVE EXIST CONDUCTORS ABANDON CONDUITS IN PLACE
- TSFO-- EXIST TRAFFIC SIGNAL CONDUIT WITH FIBER OPTIC CABLE



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



DTS, C&C HONOLULU DRAWING REVIEWED 7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SYMBOL LIST & DUCT SECTIONS**  
**MISCELLANEOUS DETAILS**

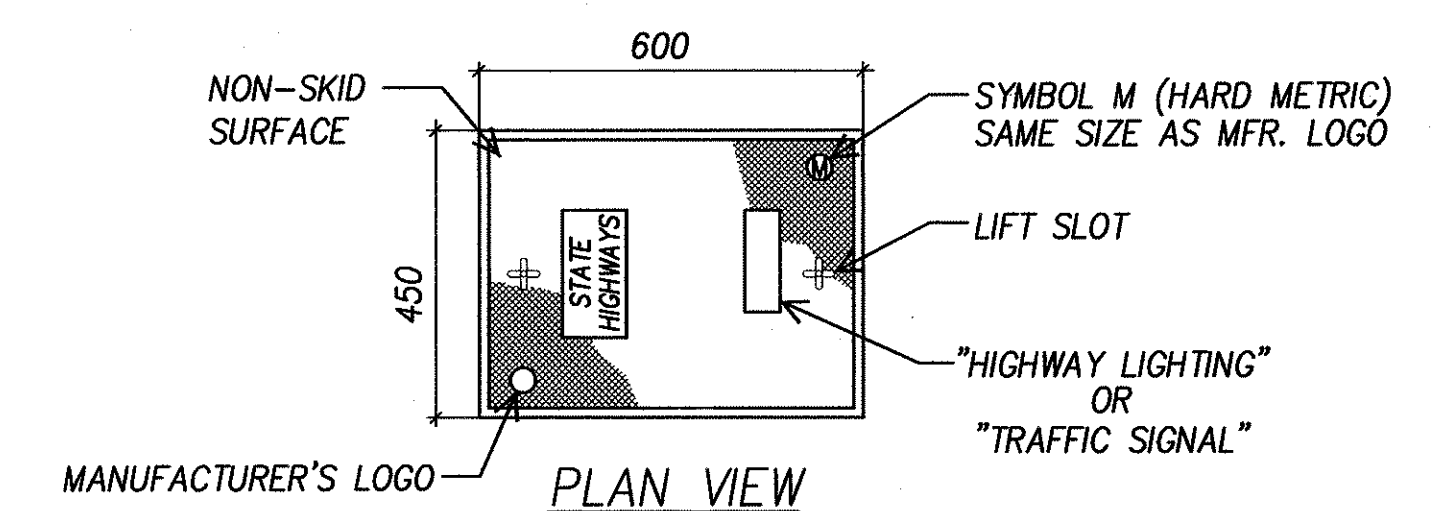
*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: Aug 2004

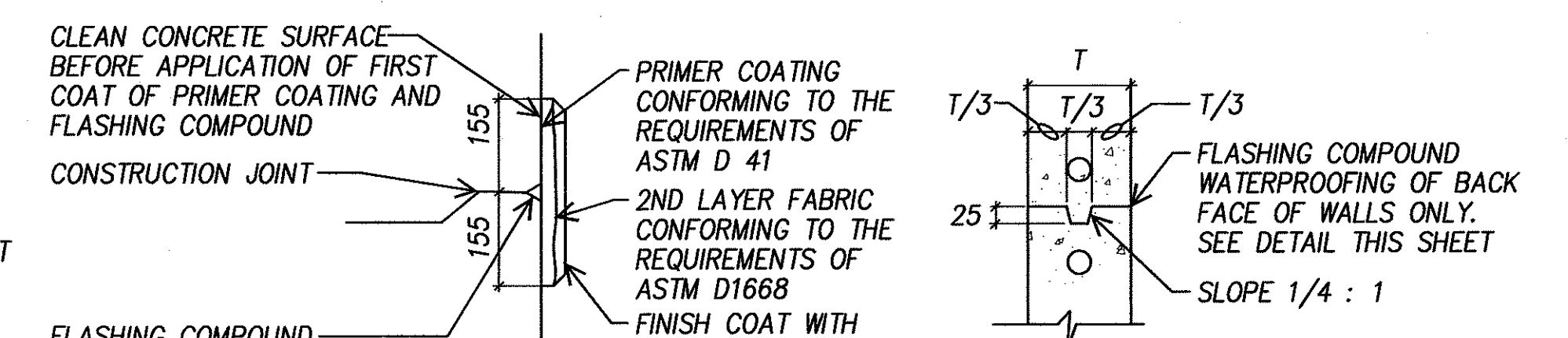
SHEET No. E-1 OF 40 SHEETS

GENERAL PULLBOX NOTES:

- 
- ELEVATION**



NOT TO SCALE



## WATERPROOFING DETAIL

NOT TO SCALE

JOINT DETAIL

NOT TO SCALE

DTS, C&C HONOLULU DRAWING REVIEWED 3

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

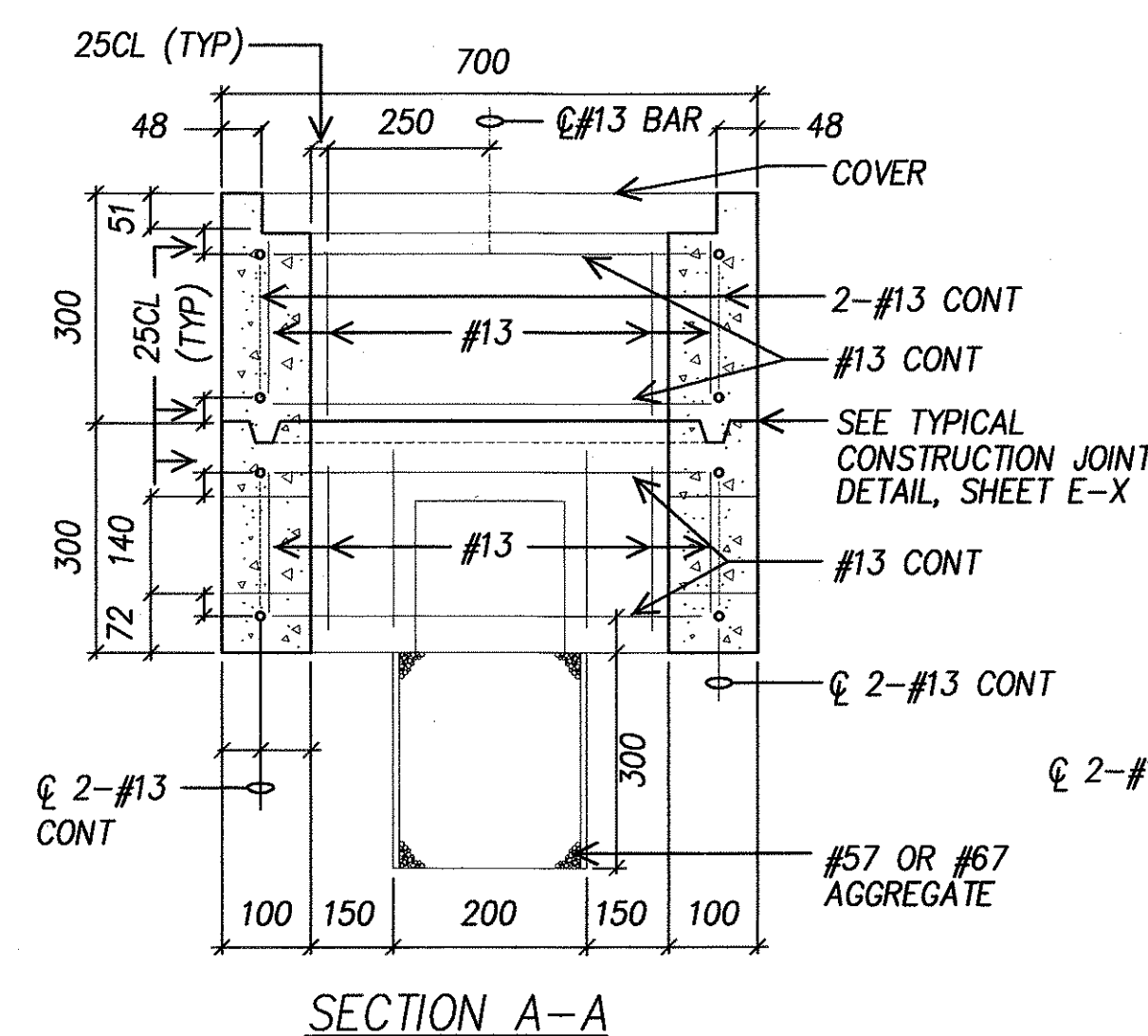
### PULLBOX DETAILS

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

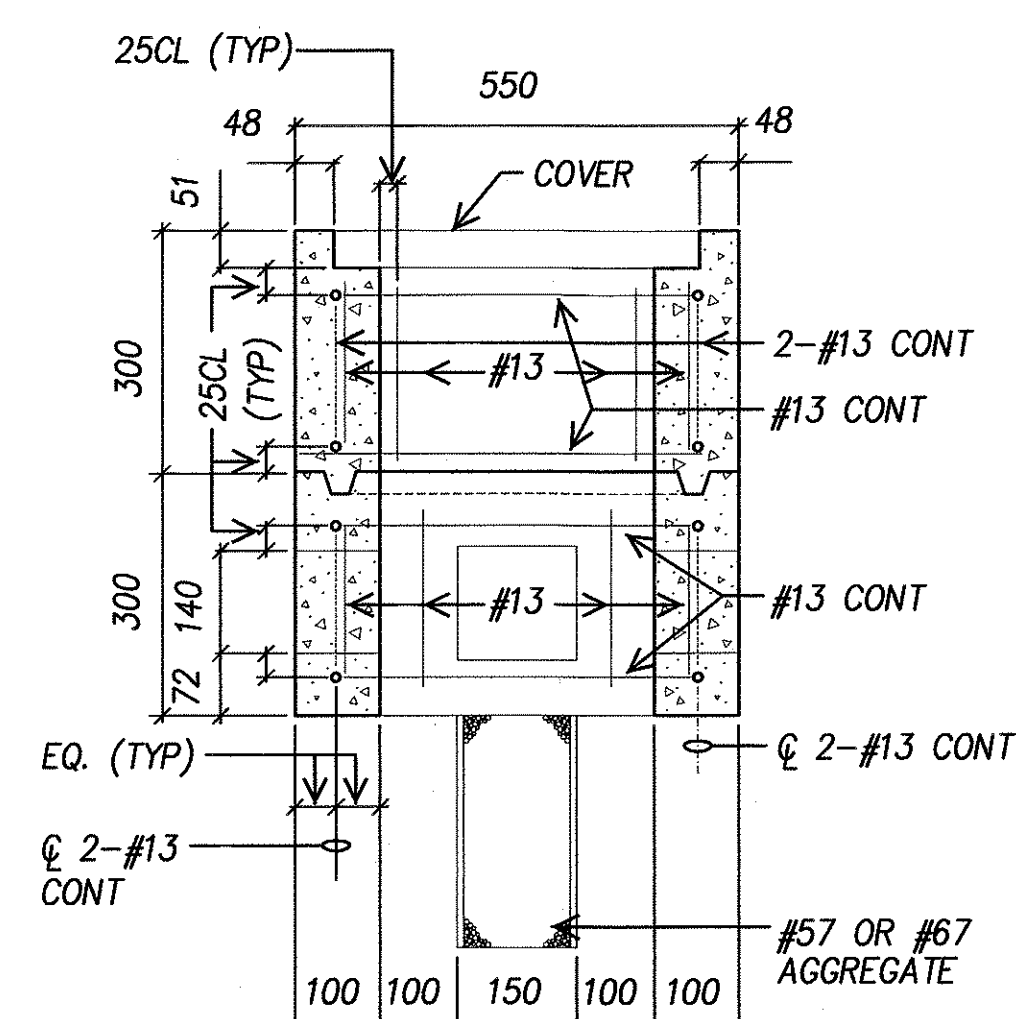
Scale: As Noted

Date: Aug 2004

SHEET No. E-2 OF 40 SHEETS

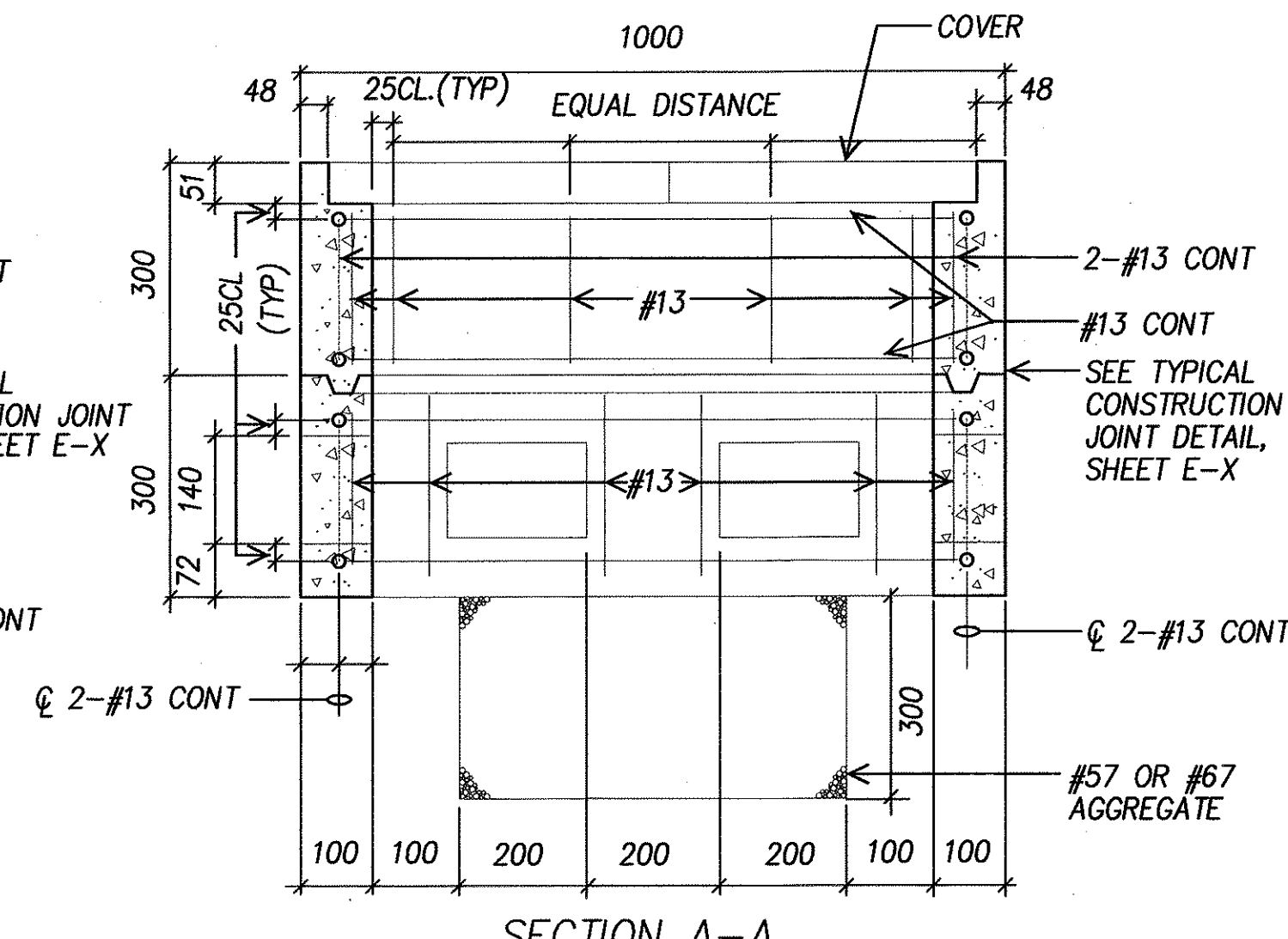


SECTION A-A

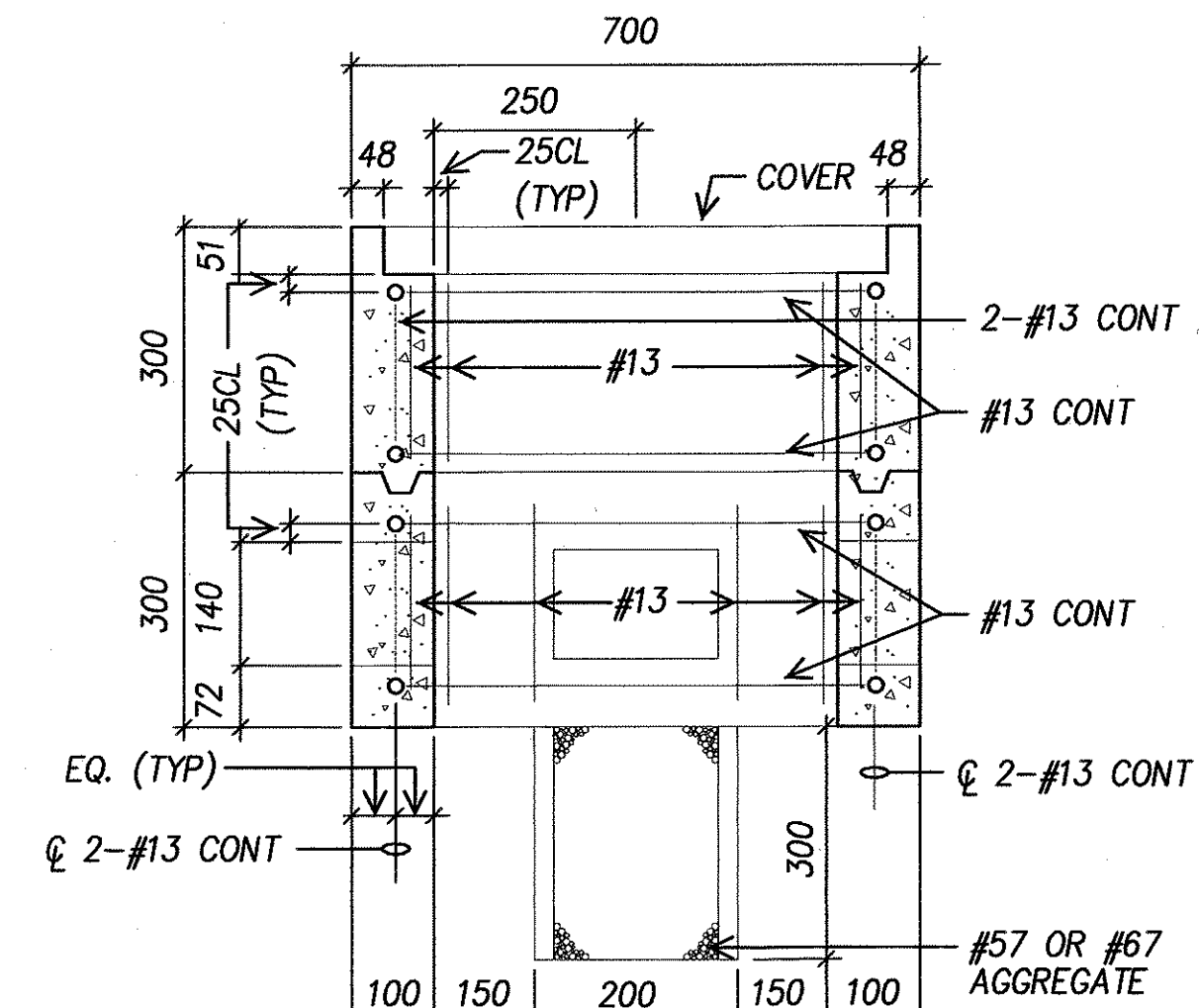


SECTION B-B

**A** TYPE "A" PULLBOX  
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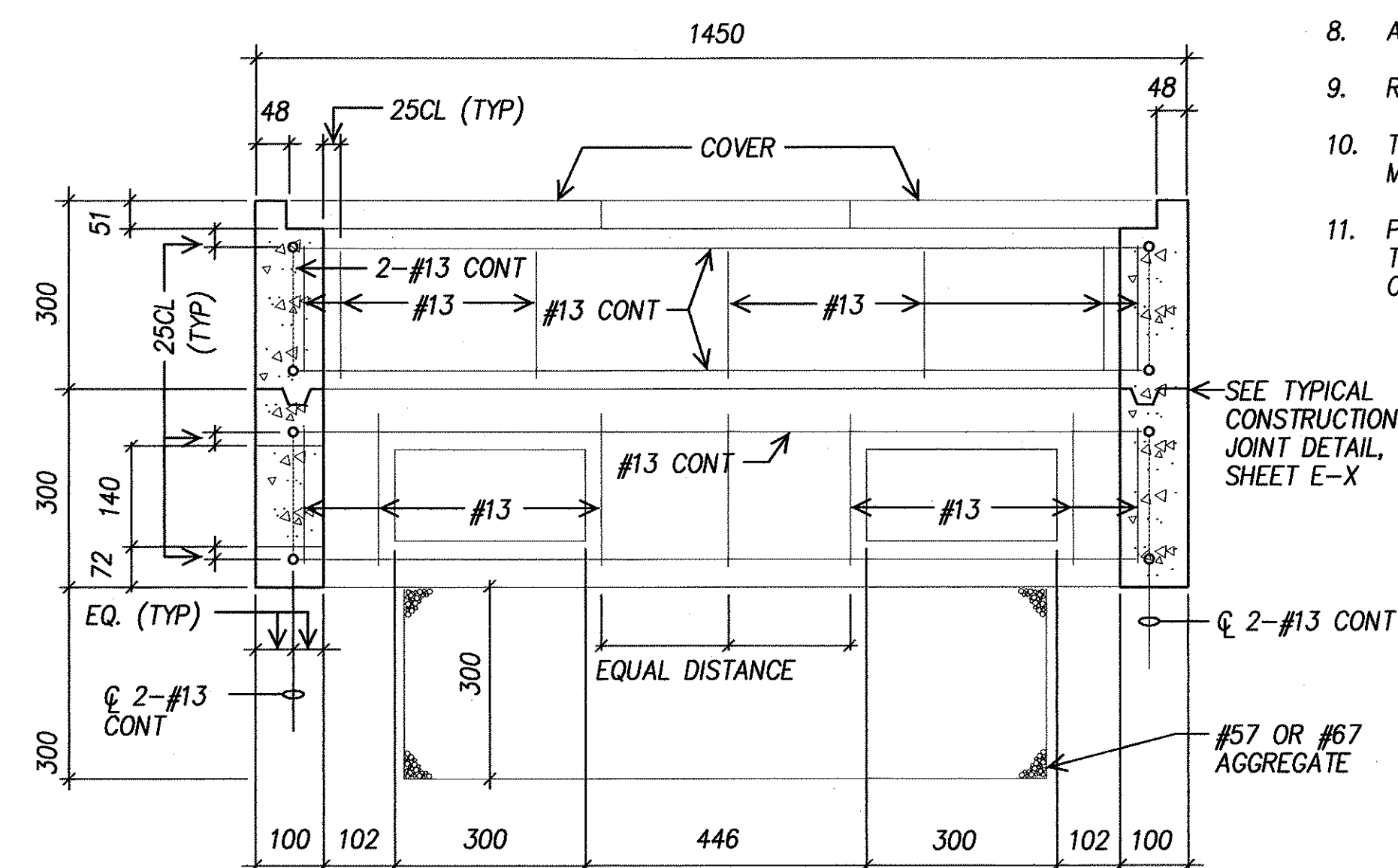


SECTION A-A

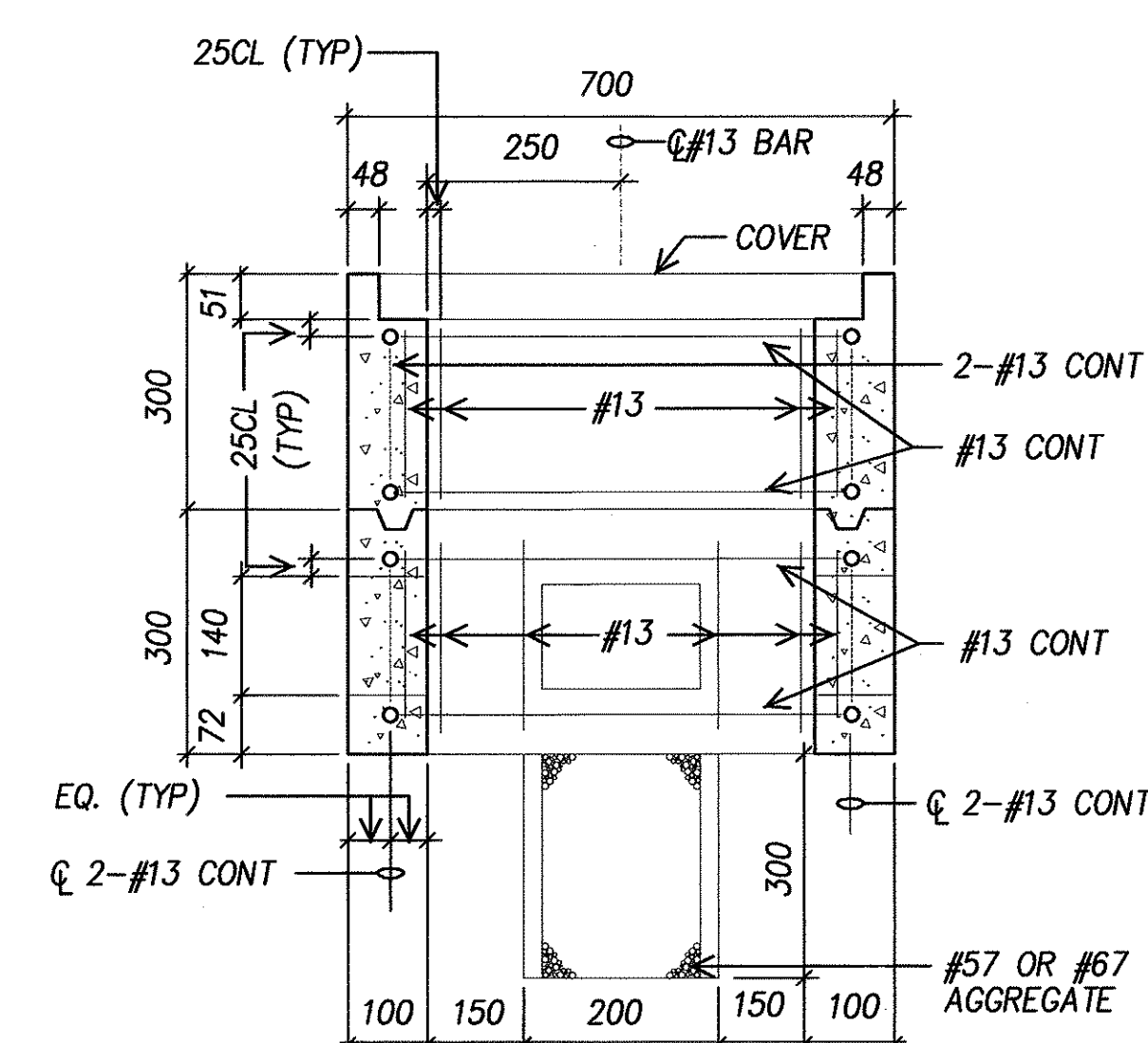


SECTION B-B

**B** TYPE "B" PULLBOX (OLD TYPE "C")  
E-2 NOT TO SCALE



SECTION A-A



SECTION B-B

C TYPE "C" PULLBOX (OLD TYPE "D")  
E-2 NOT TO SCALE

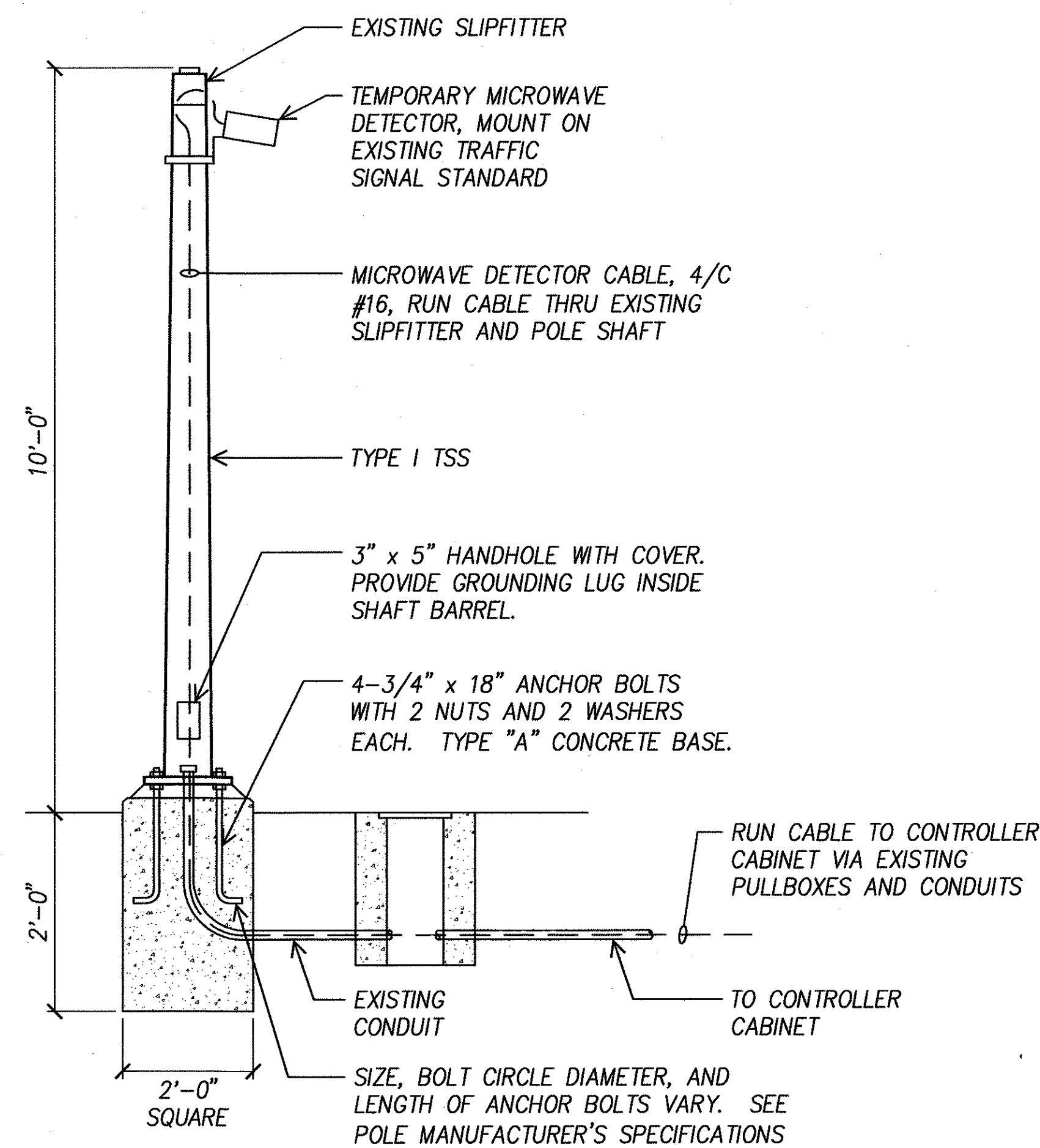
ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY _____
	TRACED BY _____
	DESIGNED BY _____
	QUANTITIES BY _____
No. _____	CHECKED BY _____

4/10/06  
MK ENGINEERS, LTD.  
LICENSE EXPIRATION DATE: 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

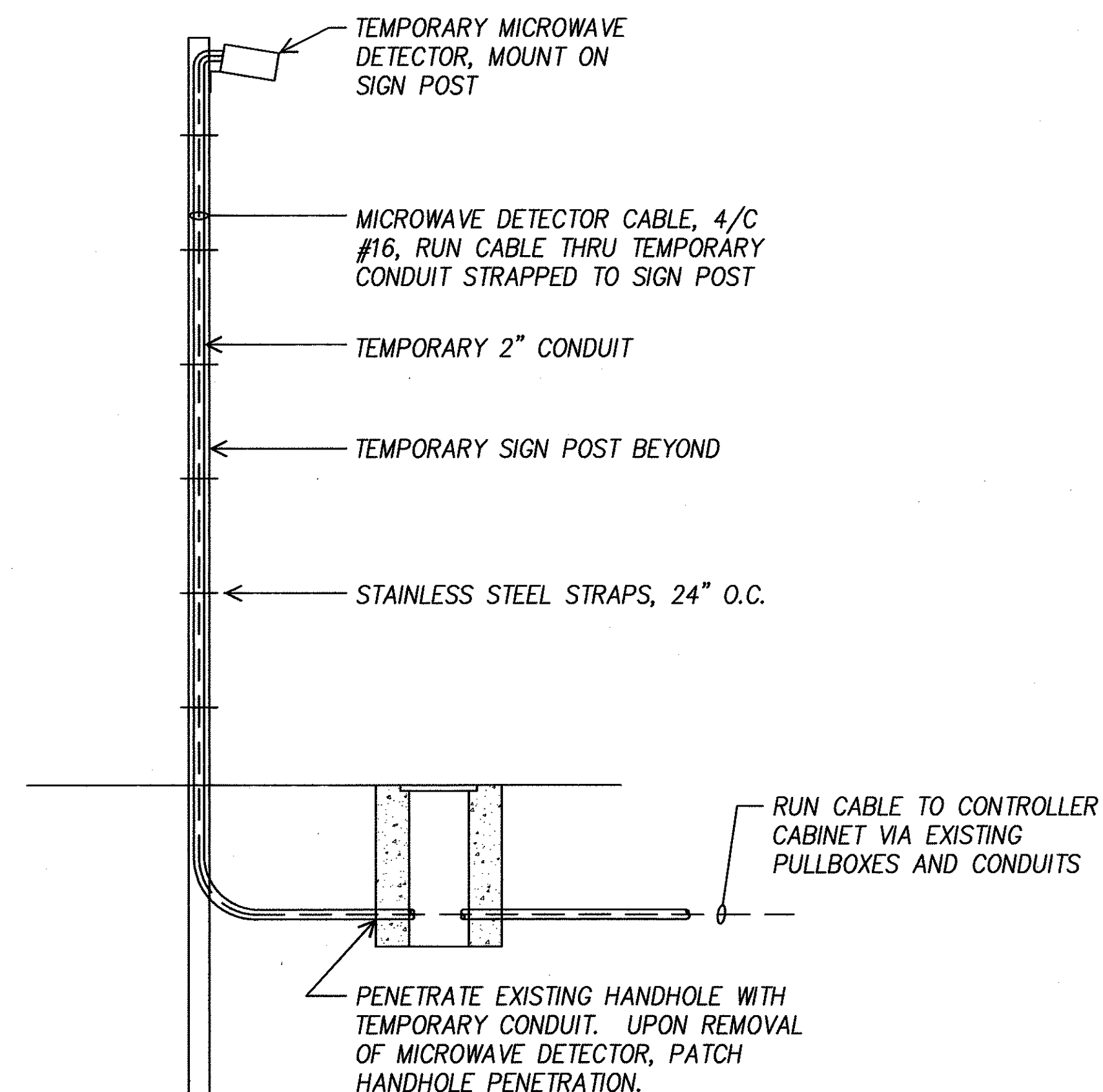




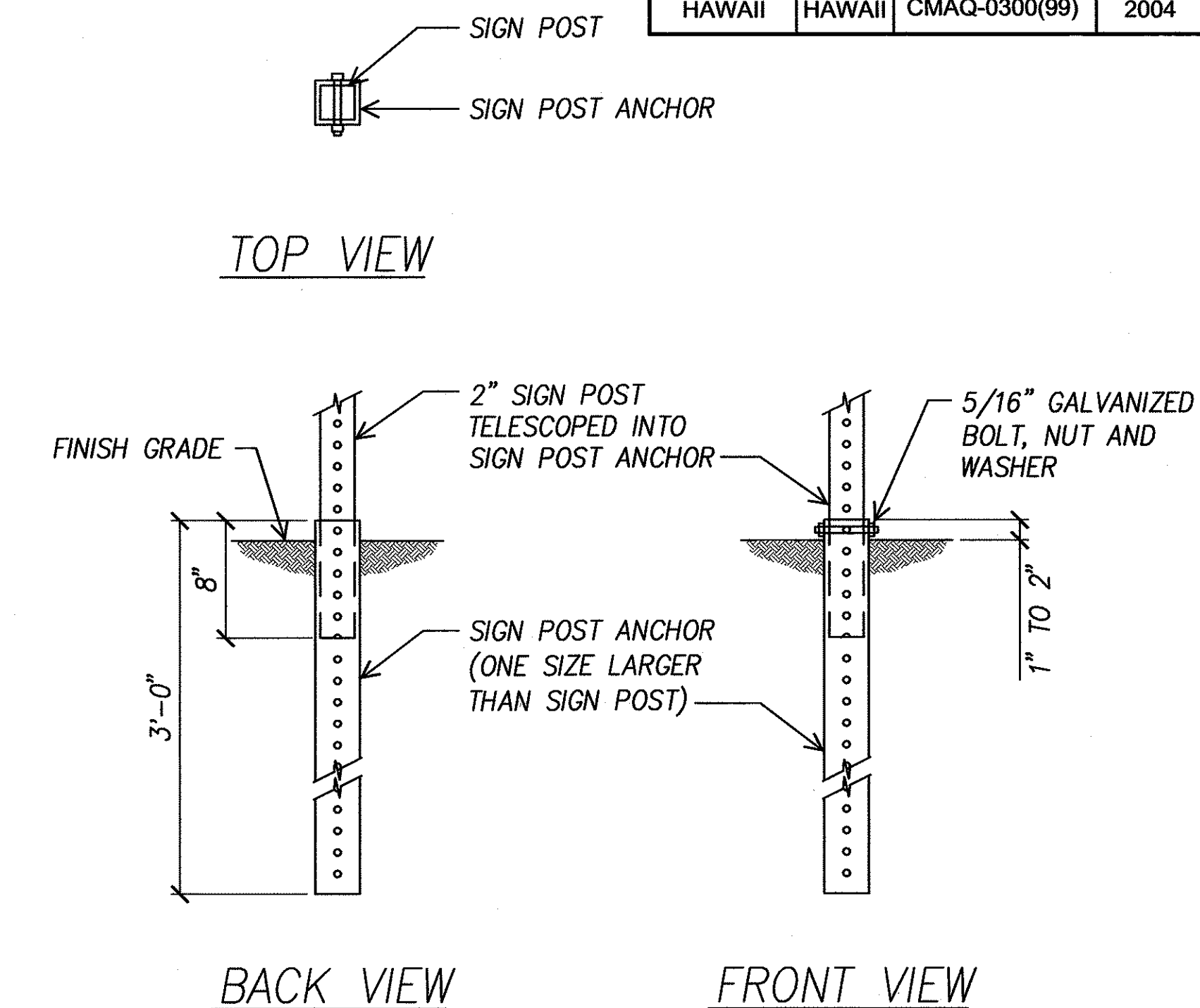
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	144	180



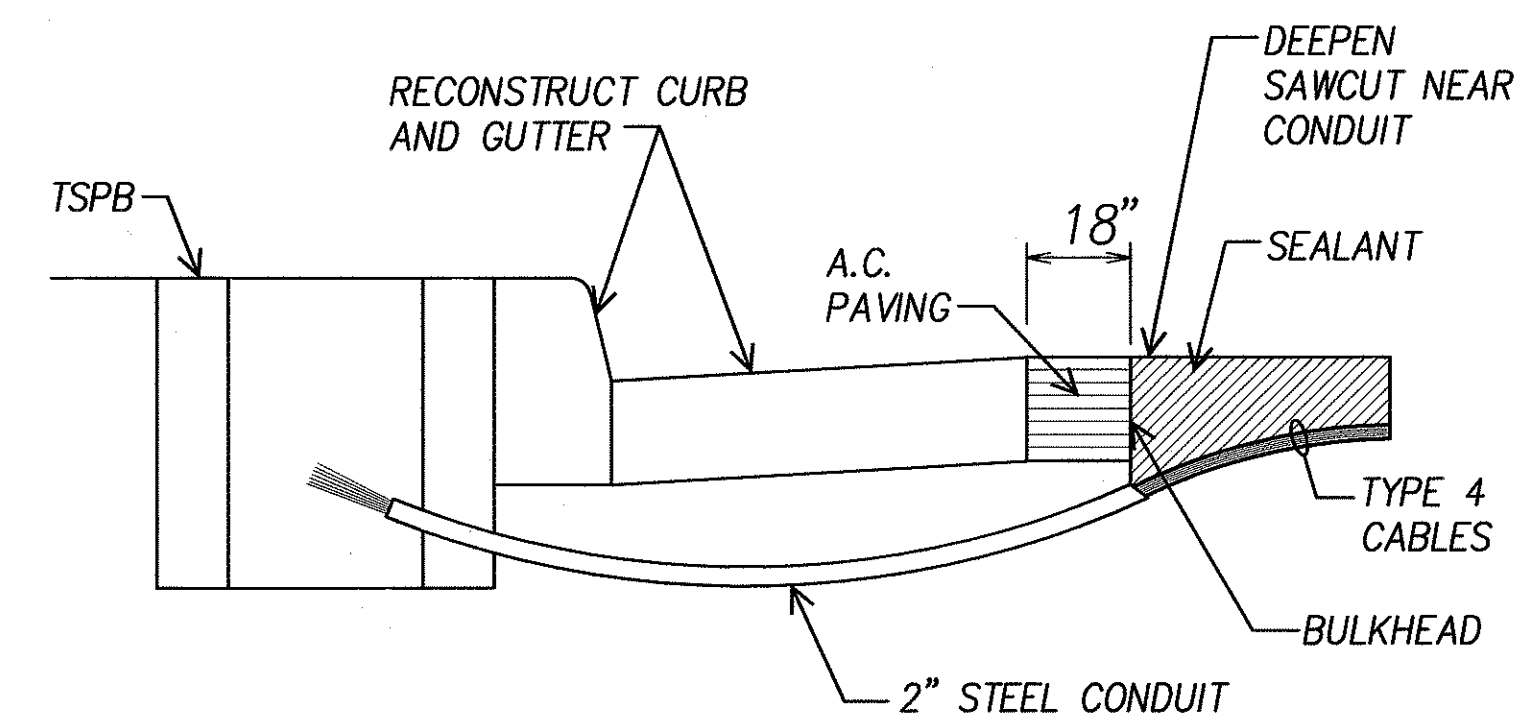
AT EXISTING TRAFFIC SIGNAL STANDARD



AT TEMP SIGN POST



B TEMPORARY SIGN POST DETAIL  
E-4 NOT TO SCALE



NOTES ON CONSTRUCTION AT END OF SAWCUT

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

C  
E-4

DETAIL OF SENSOR LOOP INSTALLATION  
AT EDGE OF ROADWAY

- NOTES:

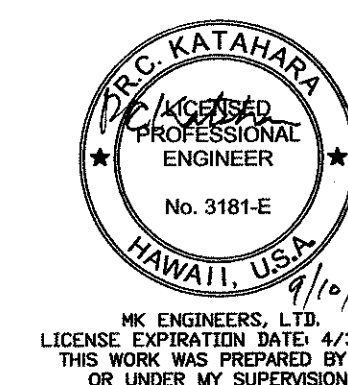
1. MICROWAVE DETECTOR SHALL BE OPERATIONAL BEFORE EXISTING LOOP DETECTORS ARE DEACTIVATED.
2. REMOVE MICROWAVE DETECTOR AND ALL ASSOCIATED CABLES AFTER NEW LOOP DETECTORS ARE INSTALLED AND OPERATIONAL.

- NOTES:

1. STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS.
2. CONCRETE SHALL BE CLASS "B".
3. TYPE "A" CONCRETE BASE SHALL BE USED FOR TYPE I-10, TRAFFIC SIGNAL STANDARDS.
4. CONDUIT BEND IS INCIDENTAL TO CONCRETE BASE.

A TEMPORARY MICROWAVE DETECTOR DETAIL  
E-4 NOT TO SCALE

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



DTS, C&C HONOLULU DRAWING REVIEWED 7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TEMPORARY MICROWAVE  
DETECTOR DETAIL**

*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

*Scale: As Noted* *Date: Aug 2004*

SHEET No. E-4 OF 40 SHEETS

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GENERAL CONSTRUCTION NOTES:

1. PLANS DO NOT INDICATE COMPLETE ELECTRICAL CONDITIONS. CONTRACTOR SHALL VISIT JOBSITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND EXTENT OF DEMOLITION AND NEW WORK PRIOR TO THE START OF WORK.
2. PRIOR TO THE START OF WORK, CONTRACTOR SHALL VISIT JOBSITE AND REPORT ANY DISCREPANCIES AND/OR DIFFERENCE IN DRAWINGS, IN RESPECT TO EXISTING CONDITION, TO ENGINEER AND/OR OWNER.
3. CONTRACTOR SHALL RESOLVE ALL DISCREPANCIES AND QUESTIONS PRIOR TO START OF WORK. NO EXTRA PAYMENT SHALL BE ALLOWED ON ACCOUNT OF WORK MADE NECESSARY BY CONTRACTOR'S FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES AND QUESTIONS.
4. RETURN ALL SALVABLE APPARATUS, AS DETERMINED BY THE CITY OR HIS REPRESENTATIVES, TO A SITE DESIGNATED BY THE CITY OR HIS REPRESENTATIVES, AT NO ADDITIONAL COST TO THE CITY. DISPOSE OF ALL UNWANTED MATERIALS.
5. THE CONTRACTOR IS TO COMPLY WITH THE DIRECTIONS OF THE STATE OF HAWAII OCCUPATIONAL SAFETY AND HEALTH LAW (DOSH).
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH HAWAIIAN ELECTRIC CO. (HECO) AND VERIZON HAWAII, INC., (HTCO).
7. CONTRACTOR SHALL NOTIFY HTCO'S INSPECTORS 72 HOURS PRIOR TO START OF HIS EXCAVATION WORK.
8. PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY WITH THE RESPECTIVE UTILITY COMPANIES AND GOVERNMENT AGENCIES, THE LOCATIONS OF ALL ELECTRIC, TELEPHONE, TRAFFIC SIGNAL, STREET LIGHT, FIRE ALARM, GAS, WATER, SEWER, DRAIN, AND OTHER LINES CROSSING THE EXCAVATION PATH OR IN EXCAVATION AREAS.
9. THE LOCATIONS OF ALL NEW TRAFFIC SIGNAL STANDARDS AND CONTROLLERS ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. CONFLICTS BETWEEN STANDARDS AND CROSSWALK LOCATIONS SHALL BE AVOIDED WHEREVER POSSIBLE. THE LOCATIONS OF TRAFFIC SIGNAL STANDARDS, CONTROLLERS, PULLBOXES, AND CONDUITS SHALL BE STAKED OUT BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ANY EXCAVATION.
10. ALL STRUCTURES, PAVEMENTS, UTILITIES, LANDSCAPING, AND OTHER TOPOGRAPHICAL FEATURES SHOWN ON THE INTERSECTION DRAWINGS ARE EXISTING AND ARE TO REMAIN UNLESS NOTED OR INDICATED OTHERWISE.
11. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES AND GOVERNMENT AGENCIES OF THEIR INTENT TO BEGIN CONSTRUCTION ON ANY INTERSECTION OR STREET AT LEAST TWO (2) WEEKS PRIOR TO THE START OF SUCH CONSTRUCTION.
12. THE CONTRACTOR MAY CLOSE ONLY ONE LANE OF TRAFFIC AT A TIME FOR ANY REASON. DURING THE PEAK TRAFFIC PERIODS FROM 6:00 TO 9:00 A.M. AND FROM 3:00 TO 6:00 P.M., MONDAY THRU FRIDAY, ALL LANES SHALL BE KEPT OPEN AND MAINTAINED AT ALL TIMES.
13. TYPE "A" BACKFILL - EARTH AND GRAVEL, ROCK SIZE TO BE 1" AND THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICLES. 95% COMPACTION.
14. TYPE "B" BACKFILL - EARTH AND GRAVEL, MIXTURE MUST PASS A 1/2" MESH SCREEN AND CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICLES. 95% COMPACTION.
15. IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B", AN ADDITIONAL 3" SHALL BE EXCAVATED AND TYPE "B" BACKFILL PROVIDED.
16. CONTRACTOR SHALL COMPLETELY RESTORE ALL SIDEWALKS, ROADWAYS, CURBS AND GUTTER DISTURBED BY THE CONSTRUCTION. ALL RESTORATION WORK SHALL CONFORM TO CITY DEPT. OF DESIGN AND CONSTRUCTION STANDARDS.
17. THE CONTRACTOR SHALL COORDINATE WITH THE CITY, ALL SPLICES AND CONNECTIONS IN PULLBOXES, HANDHOLES AND CABINET LOCATIONS PERTAINING TO TRAFFIC SIGNAL; SIGNAL HEADS, PED SIGNALS, PED PUSHBUTTONS, VEHICULAR DETECTORS, PREEMPTION DETECTORS AND INTERTIE CIRCUITS SHALL BE PERFORMED BY THE CITY.
18. THE CONTRACTOR SHALL DELIVER ALL EXCESS LAVA ROCK CURB TO THE HONOLULU CORPORATION YARD AT 99-1077 IWAENA STREET. IF ADDITIONAL LAVA ROCK CURB IS REQUIRED, CALL MR. MELVIN MIYATA AT 523-4287 FOR PICKUP.

TRAFFIC SIGNAL NOTES:

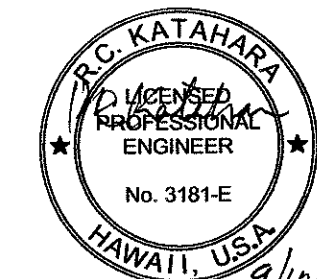
1. THE LOCATIONS OF THE TRAFFIC SIGNAL STANDARDS, PEDESTRIAN PUSH BUTTON, PULLBOXES, CONDUITS SHALL BE STAKED OUT IN THE FIELD BY THE CONTRACTOR AND APPROVAL OF THE LOCATIONS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.
2. ALL SPlicing SHALL BE DONE IN THE PULLBOXES.
3. 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.
4. 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
5. ALL CONDUITS BETWEEN PULLBOXES AND TRAFFIC SIGNAL STANDARDS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS CONTRACT ITEMS.
6. 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.
7. CONNECTING INTO EXISTING TRAFFIC SIGNAL SYSTEM AND MARKING ALL NECESSARY ADJUSTMENTS SHALL BE PAID FOR SEPARATELY, BUT CONSIDERED INCIDENTAL TO THE VARIOUS TRAFFIC SIGNAL CONTRACT ITEMS.
8. 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.
9. THE DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU, WILL ASSIST THE ENGINEER IN CONSTRUCTION INSPECTION OF THE TRAFFIC SIGNAL SYSTEM.
10. 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.
11. 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.
12. 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.
13. THE CONTRACTOR SHALL PROVIDE MICROWAVE DETECTOR SYSTEM FOR ALL EXISTING SIGNALIZED INTERSECTIONS WHERE EXISTING LOOP DETECTOR SYSTEM WILL BE OUT OF SERVICE FOR MORE THAN ONE (1) WEEK. ALL WORK SHALL BE COORDINATED WITH THE TRAFFIC SIGNALS & TECHNOLOGY, DEPARTMENT OF TRANSPORTATION SERVICES, AND PAID FOR BY THE CONTRACTOR.

HIGHWAY LIGHTING NOTES:

1. 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.
2. 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.
3. FINAL ACCEPTANCE AND INSPECTION WILL BE UNDERTAKEN ONLY AFTER ALL WORK HAS BEEN COMPLETED.
4. THE CONTRACTOR SHALL MAINTAIN EXISTING CIRCUITING AND OPERATION OF THE LIGHTING SYSTEM DURING THE HOURS OF DARKNESS.
5. THE CONTRACTOR SHALL LOCATE EXISTING BURIED UTILITY LINES IN THE VICINITY OF THE EXCAVATION WORK PRIOR TO COMMENCING EXCAVATION. AS A MINIMUM, AND 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 THE COST OF REPAIRS TO THE UTILITIES METHOD OF REPAIR SHALL BE DETERMINED BY THE STATE.

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	145	180

SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	
TRACED BY _____	
DESIGNED BY _____	
CHECKED BY _____	
NOTE BOOK _____	
No. _____	

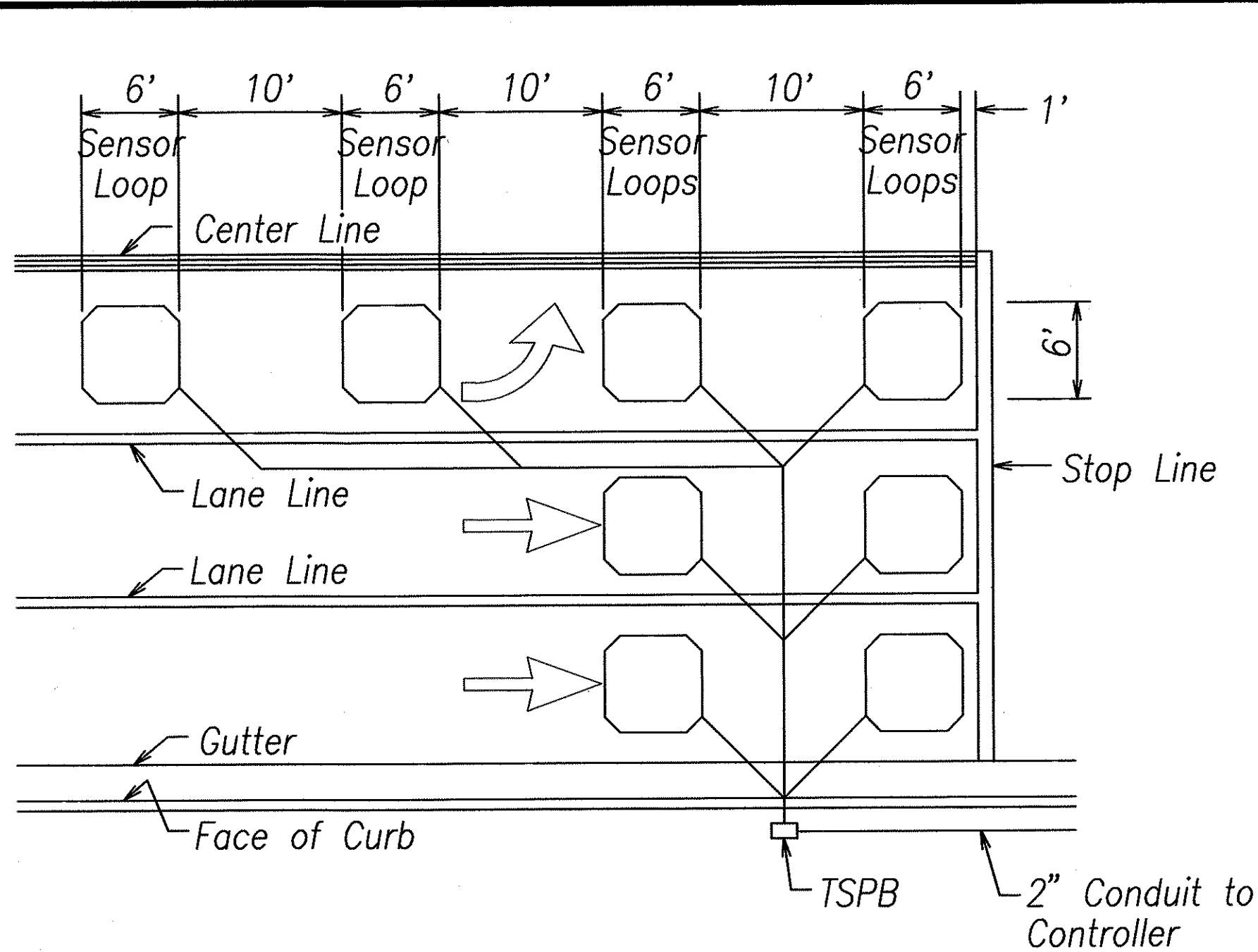


9/10/04  
MK ENGINEERS, LTD.  
LICENSE EXPIRATION DATE: 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED 7	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES	
Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8 Fed. Aid Proj. No. CMAQ-0300(99)	
Scale: As Noted	Date: Aug 2004
SHEET No. E-5 OF 40 SHEETS	

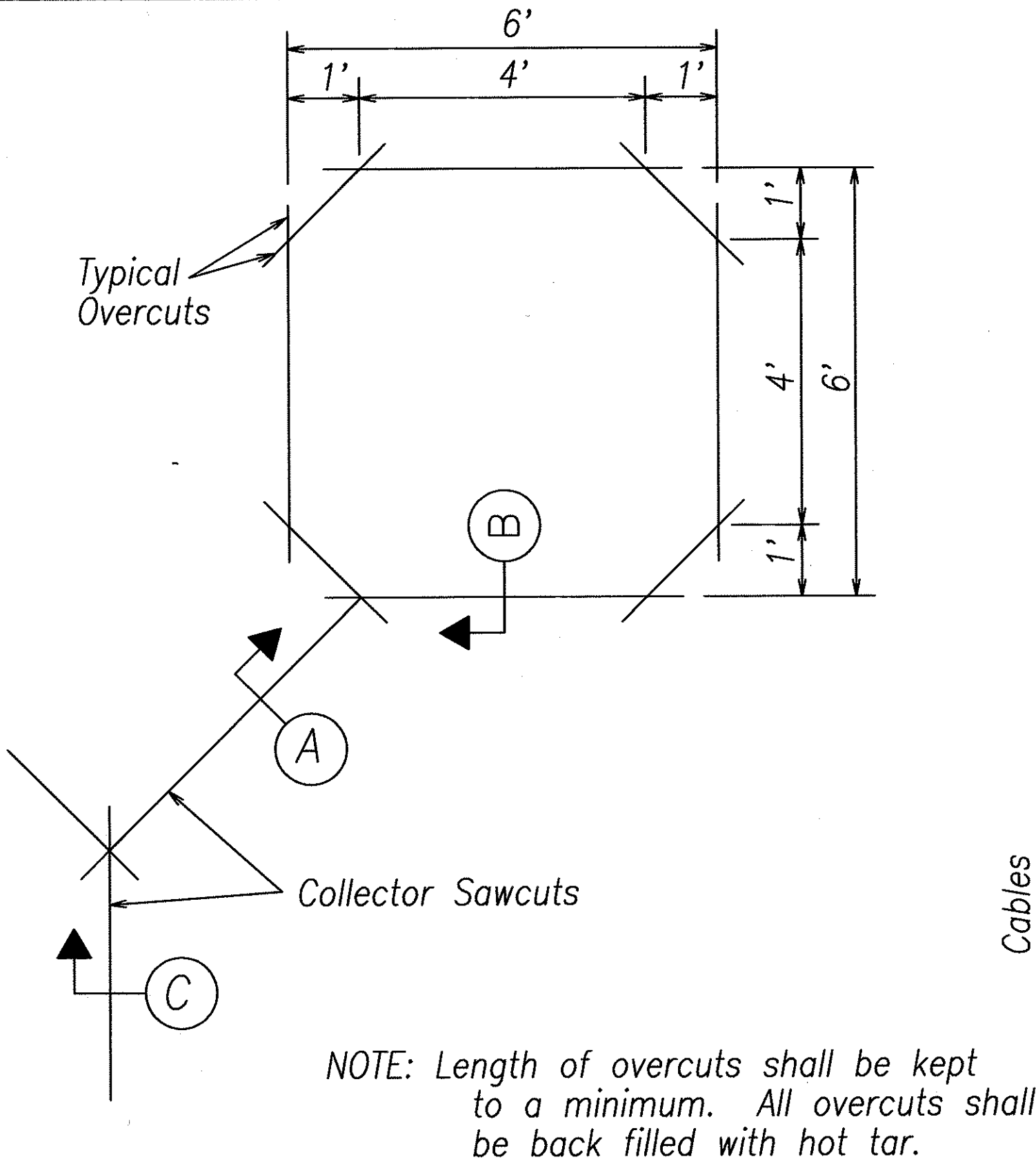


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	146	180



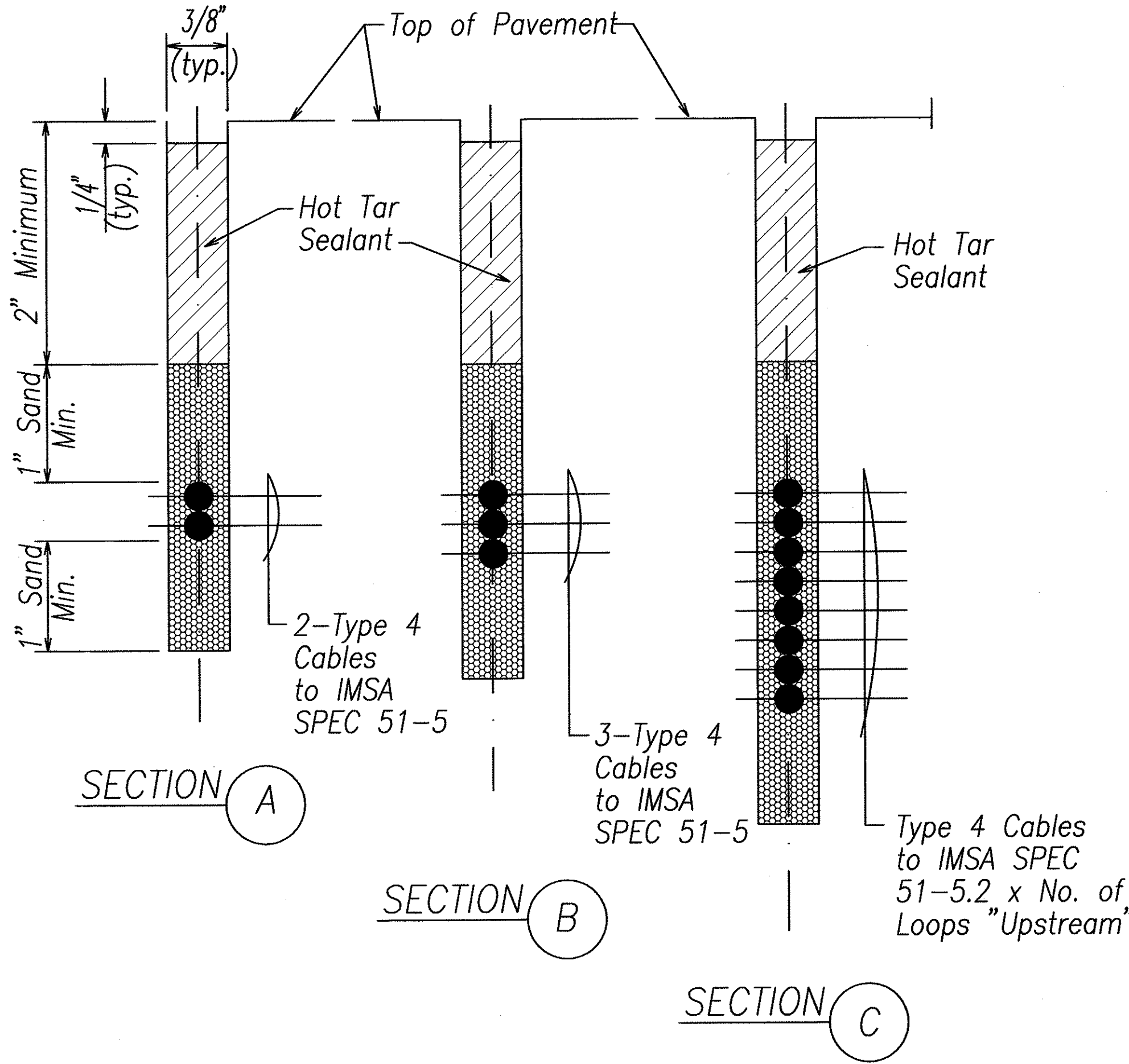
- NOTES:
- Center sensor loops in lanes.
  - Collector cables shall be twisted 2 turns per foot.
  - Number of loops and locations vary. See project plans.
  - Number and locations of collector sawcuts may be varied in the field to suit.

TYPICAL SENSOR LOOP LAYOUT

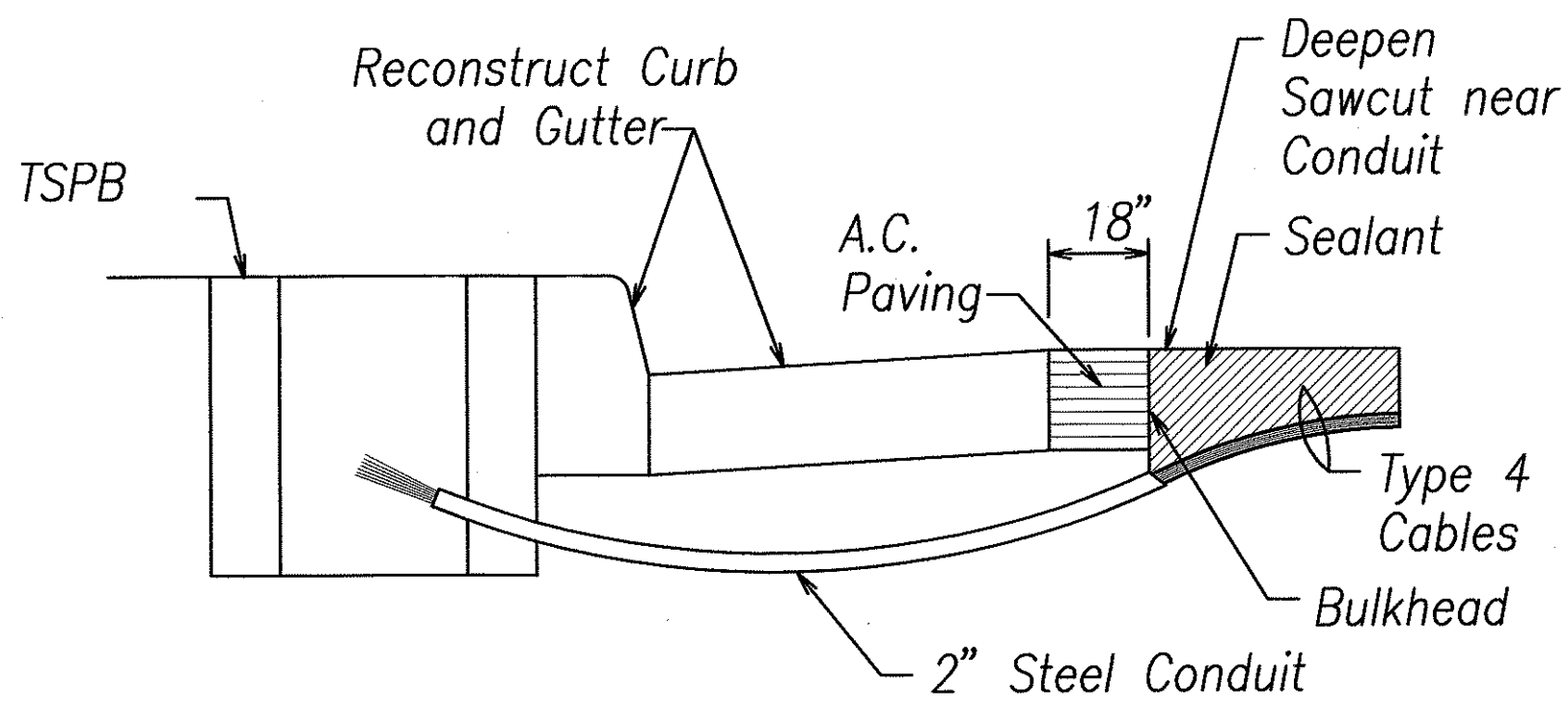


NOTE: Length of overcuts shall be kept to a minimum. All overcuts shall be back filled with hot tar.

TYPICAL SENSOR LOOP SAWCUT DETAIL

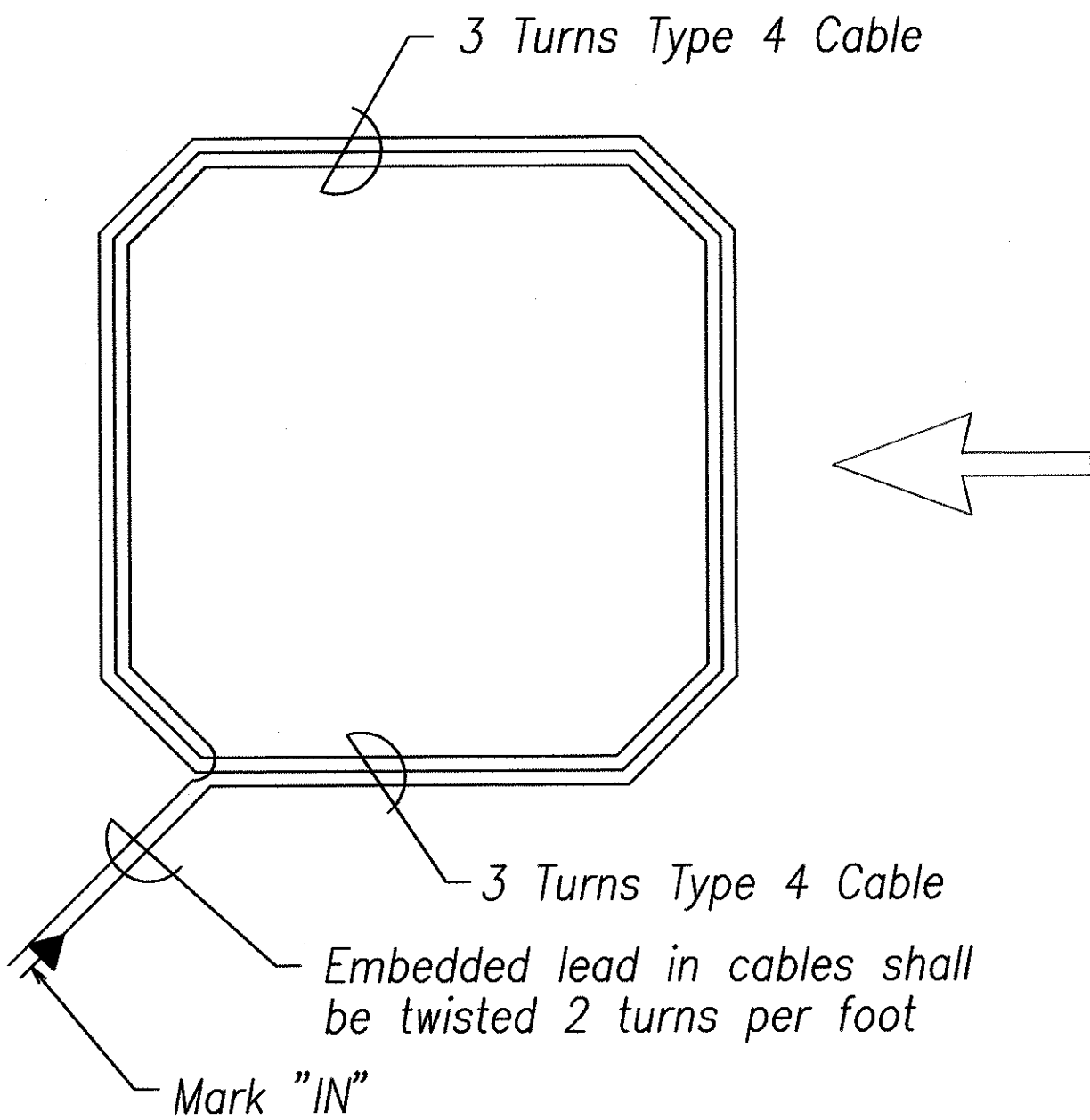


TYPICAL SECTION THROUGH SENSOR LOOP



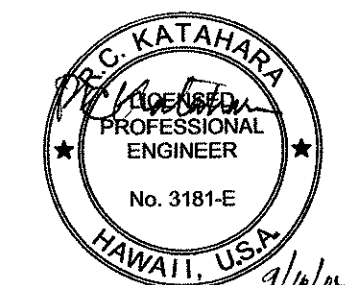
- NOTES ON CONSTRUCTION AT END OF SAWCUT
- Seal roadway end of conduit after installation of conductors.
  - Install bulkhead across conduit trench.
  - Place hot tar in sawcut.
  - Backfill over conduit with new A.C.
  - Reconstruct curb and gutter as required.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

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

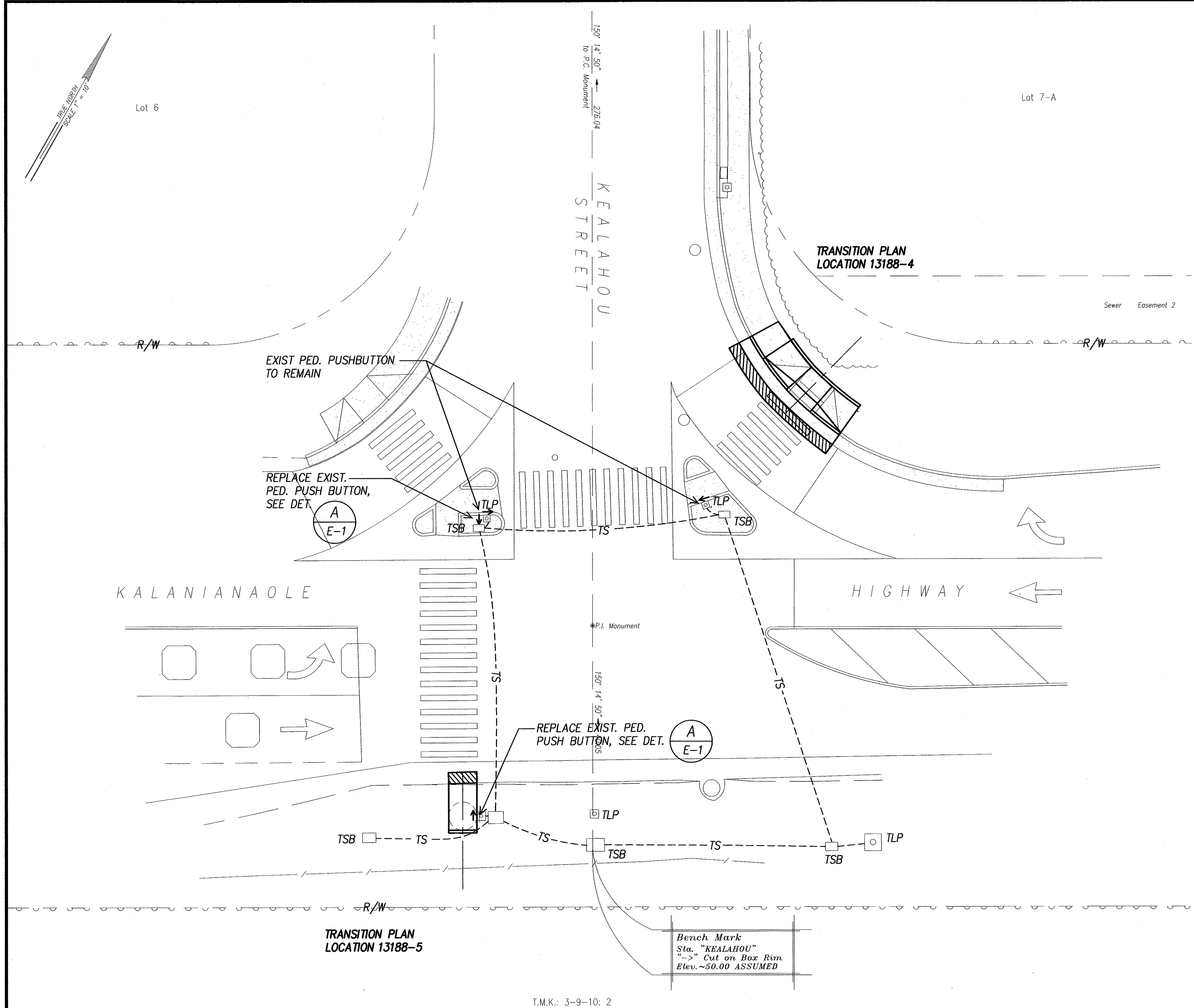


1/11/04  
MK ENGINEERS, LTD.  
LICENSE EXPIRATION DATE: 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED 1

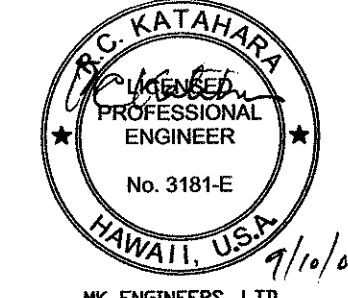
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**LOOP DETECTOR DETAILS**  
  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)  
  
Scale: As Noted      Date: Aug 2004  
  
SHEET No. E-6 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	147	180



SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	

**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & KEALAHOU STREET**  
INTERS. ID NO. 13188  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

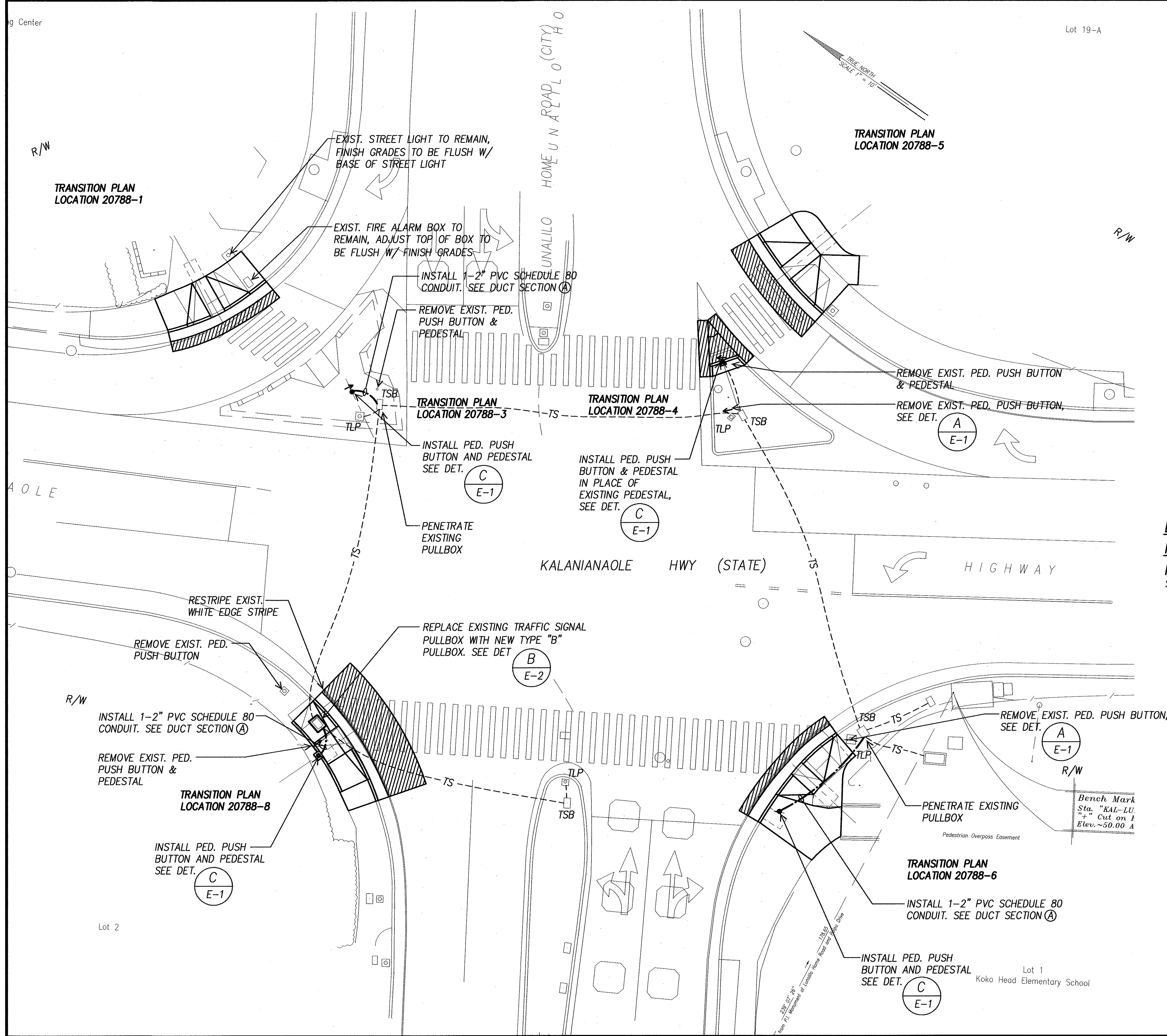
**ELECTRICAL SITE PLAN –  
KALANIANA'OLE HWY & KEALAHOU STREET**

*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

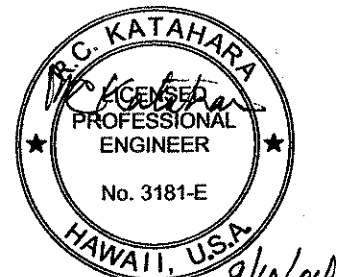
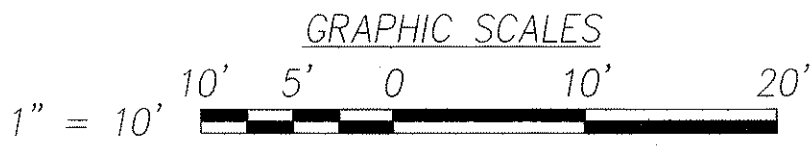
Scale: As Noted Date: Aug 2004

SHEET No. E-7 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	148	180



**ELECTRICAL SITE PLAN –  
KALANIANAʻOLE HWY & LUNALILO HOME ROAD  
INTERS. ID NO. 20788**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED 1

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN – KALANIANAʻOLE  
HWY & LUNALILO HOME ROAD**

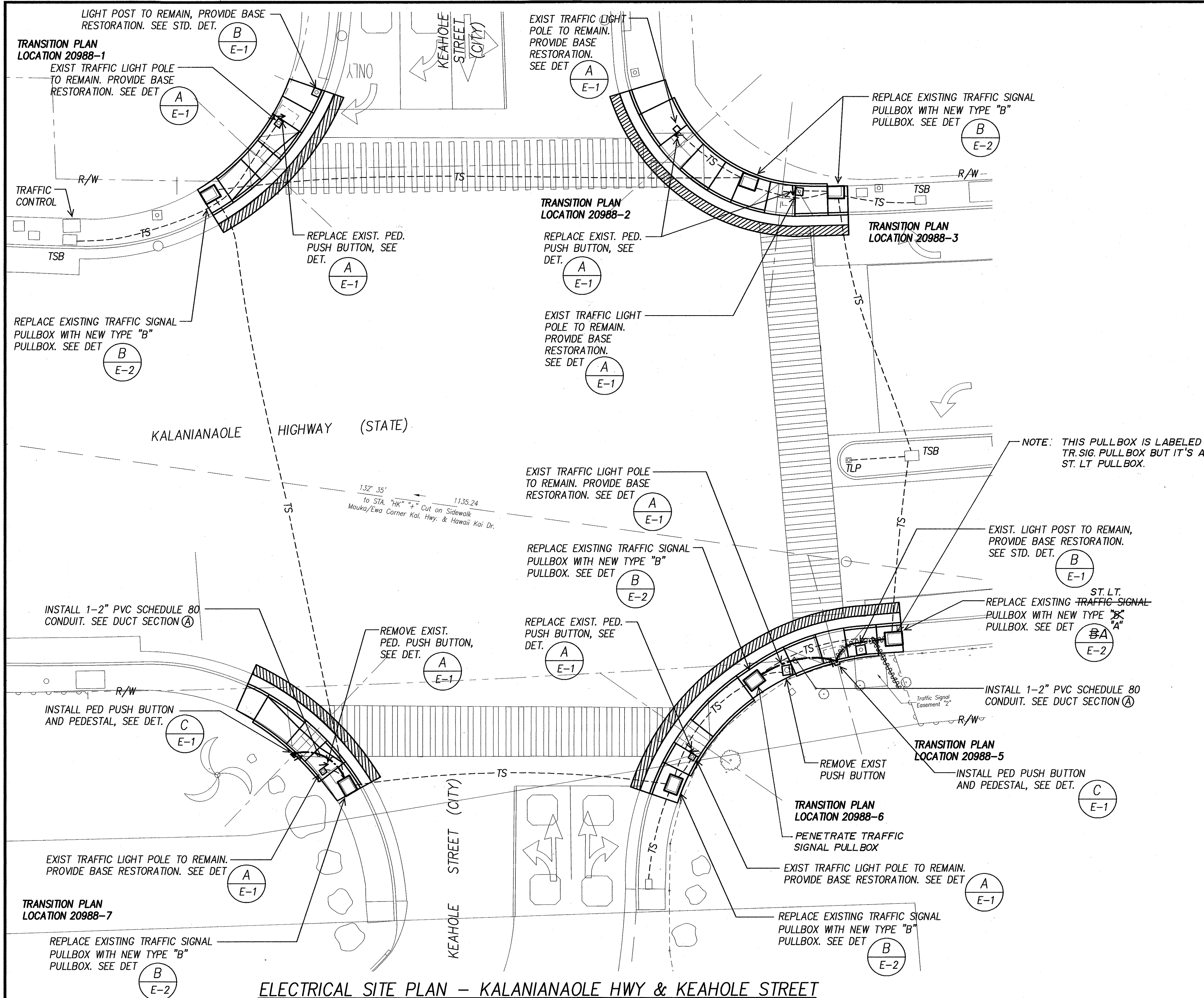
*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: Aug 2004

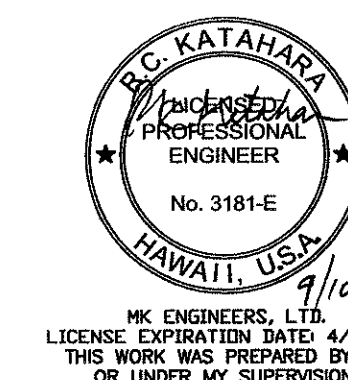
SHEET No. E-8 OF 40 SHEETS



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	149	180



**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & KEAHOLE STREET**  
**INTERS. ID NO. 20988**  
 SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

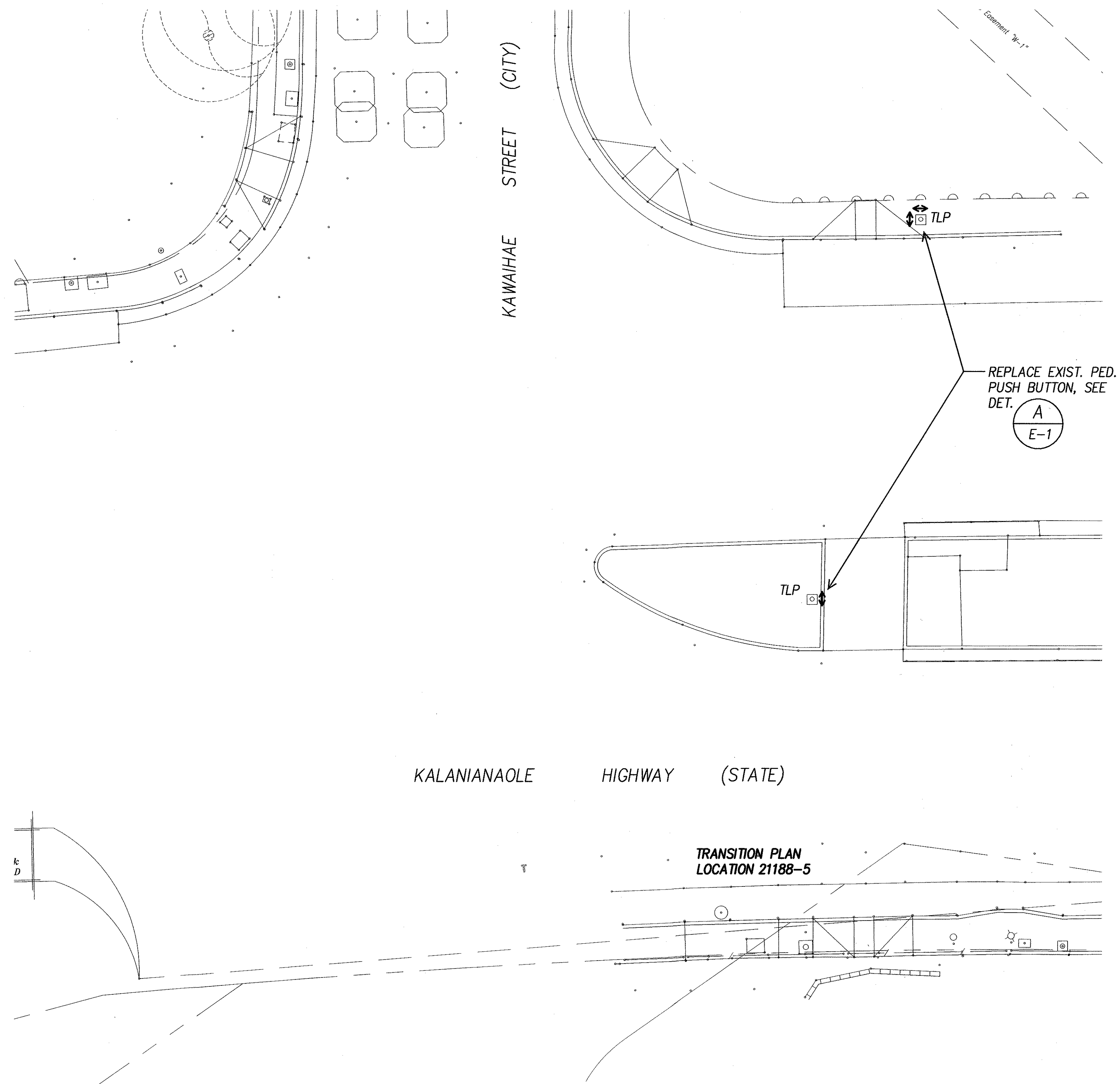
**ELECTRICAL SITE PLAN – KALANIANA'OLE & HWY KEAHOLE STREET**

*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
 Fed. Aid Proj. No. CMAQ-0300(99)

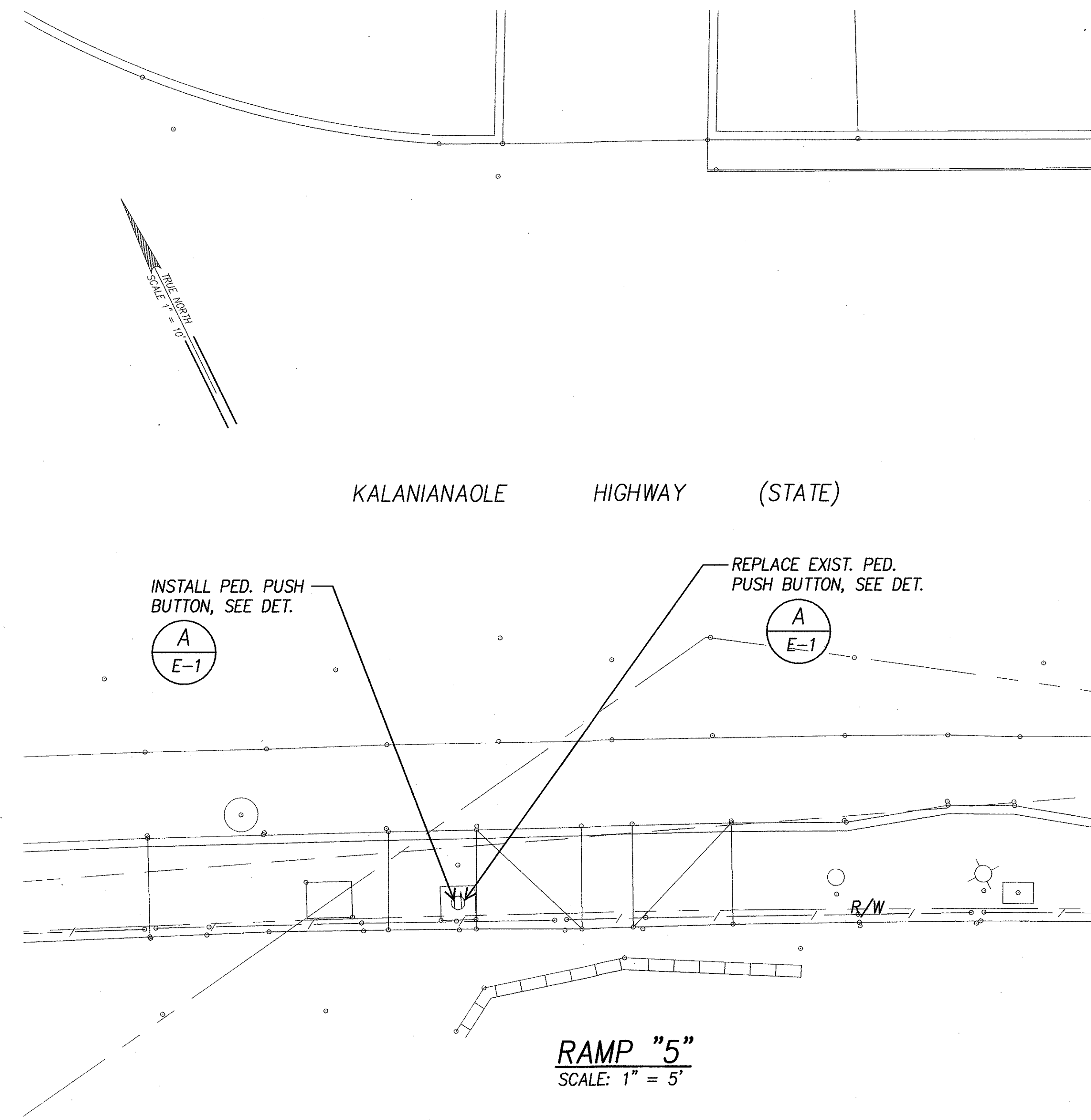
Scale: As Noted Date: Aug 2004

SHEET No. E-9 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	150	180

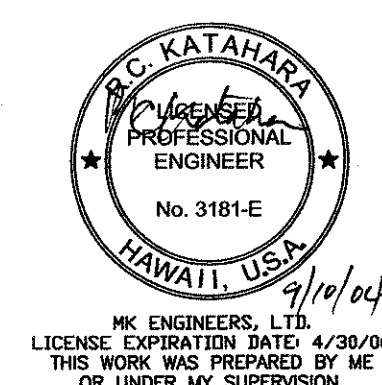
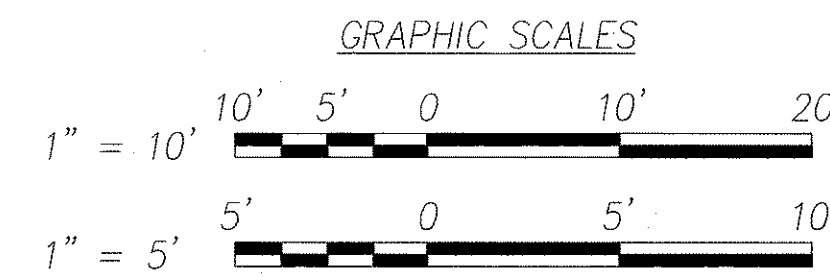


**SITE PLAN – KALANIANAʻOLE HWY & KAWAIHAE STREET**  
INTERS. ID NO. 21188  
SCALE: 1" = 10'



**ELECTRICAL PLAN – KALANIANAʻOLE HWY & KAWAIHAE STREET**  
INTERS. ID NO. 21188  
SCALE: 1" = 5'

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



DTS, C&C HONOLULU DRAWING REVIEWED 3

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

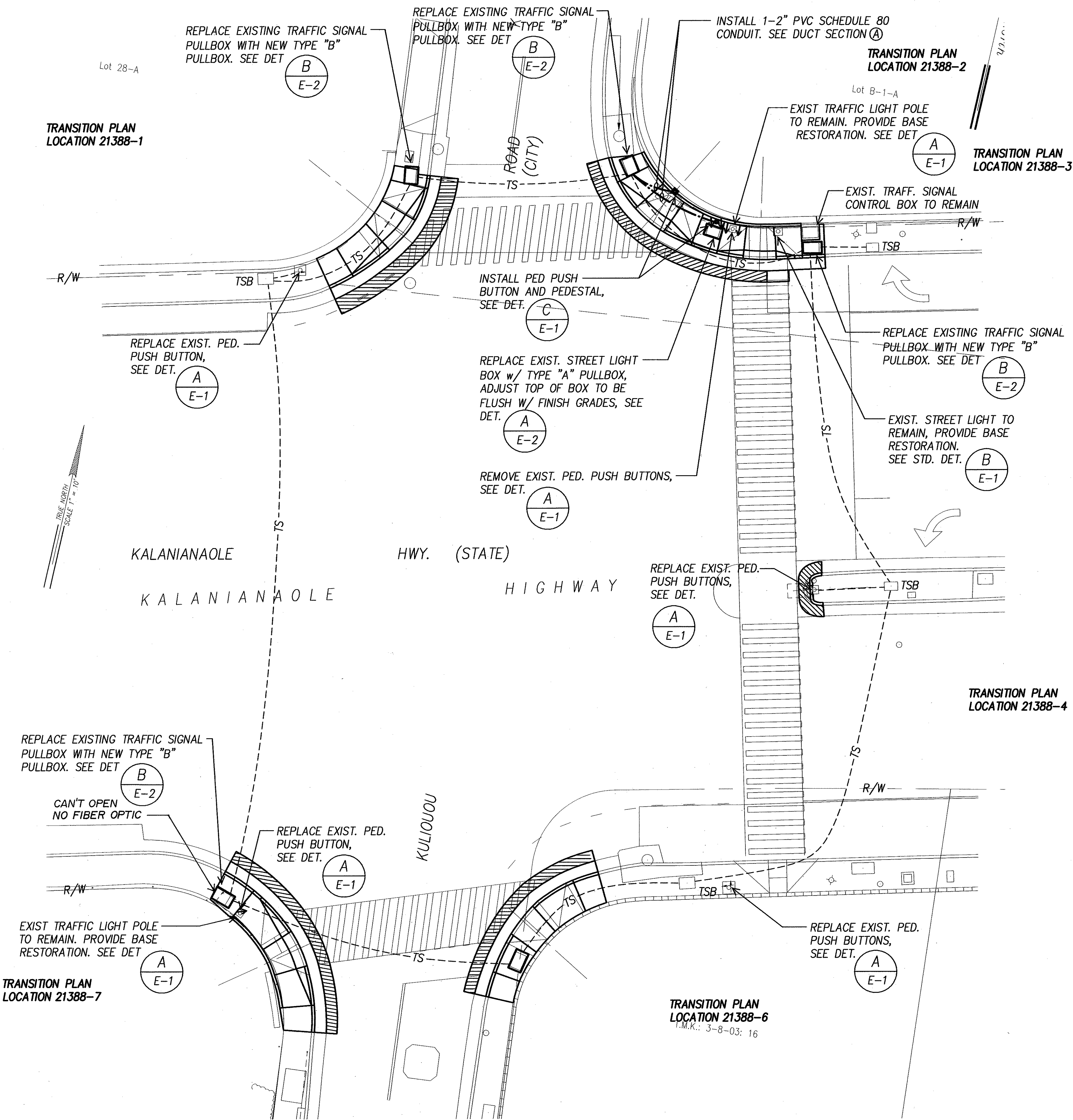
**ELECTRICAL PLAN**  
**KALANIANAʻOLE HWY & KAWAIHAE STREET**

*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

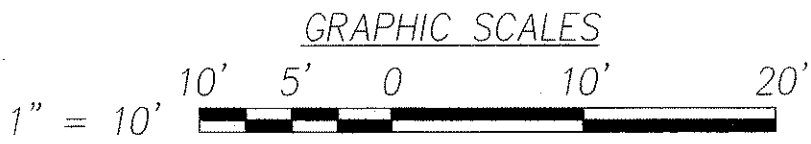
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SHEET No. E-10 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	151	180



**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & KULIOUOU ROAD**  
**INTERS. ID NO. 21388**  
 SCALE: 1" = 10'



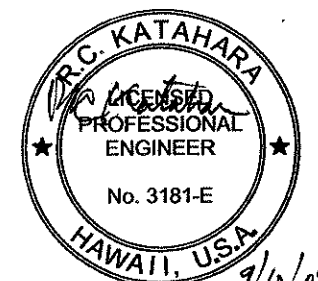
DTS, C&C HONOLULU DRAWING REVIEWED

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & KULIOUOU ROAD**  
*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted
Date: Aug 2004

SHEET No. E-11 OF 40 SHEETS



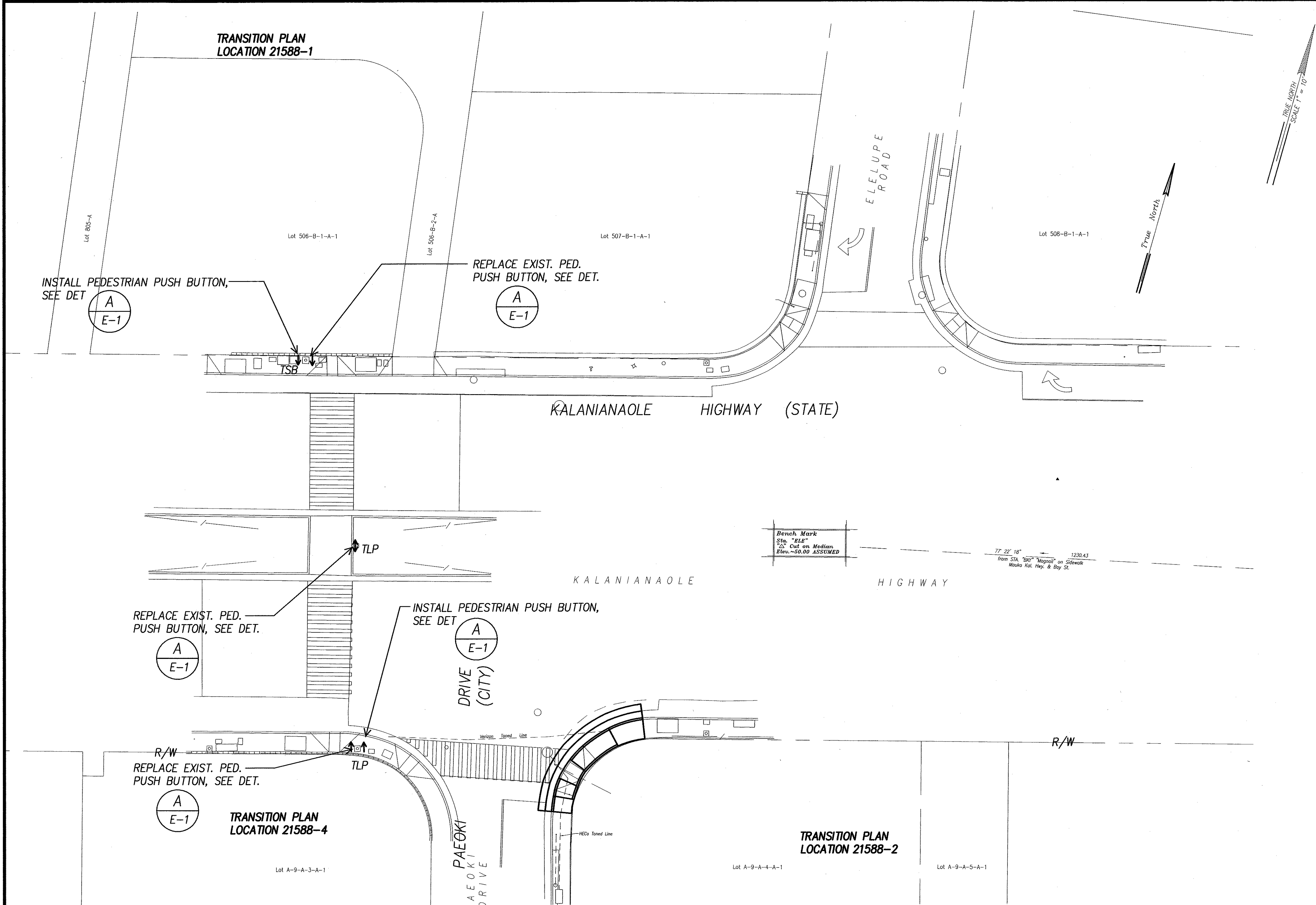
MK ENGINEERS, LTD.  
 LICENSE EXPIRATION DATE: 4/30/06  
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

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

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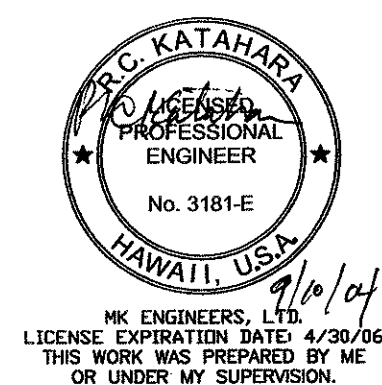
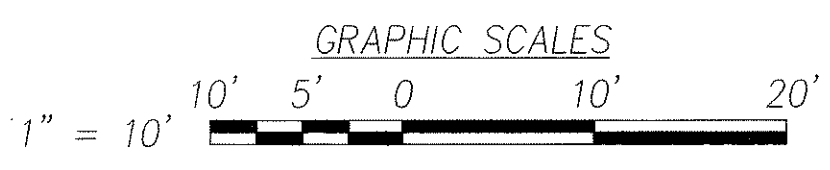


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	152	180



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

**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & PAEKIKI DRIVE**  
**INTERS. ID NO. 21588**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED

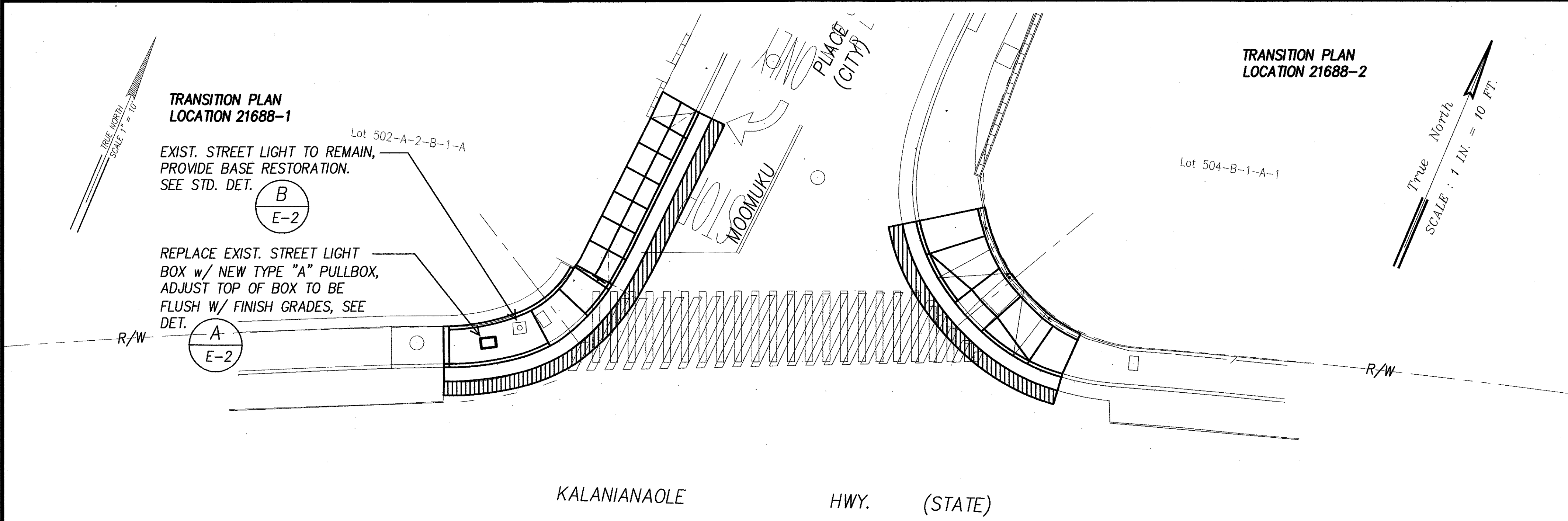
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN**  
**KALANIANA'OLE HWY & PAEKIKI DRIVE**  
*Pedestrian Facilities & ADA Compliance*  
*at Various Locations on Oahu, Unit 8*  
*Fed. Aid Proj. No. CMAQ-0300(99)*

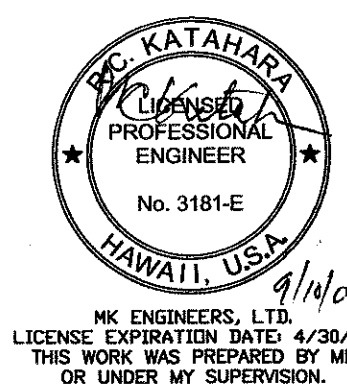
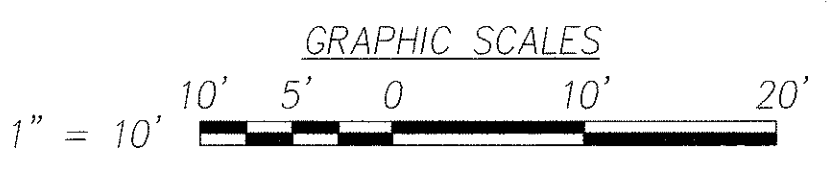
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SHEET No. E-12 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	153	180



**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & MOOMUKU PLACE**  
**INTERS. ID NO. 21688**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED

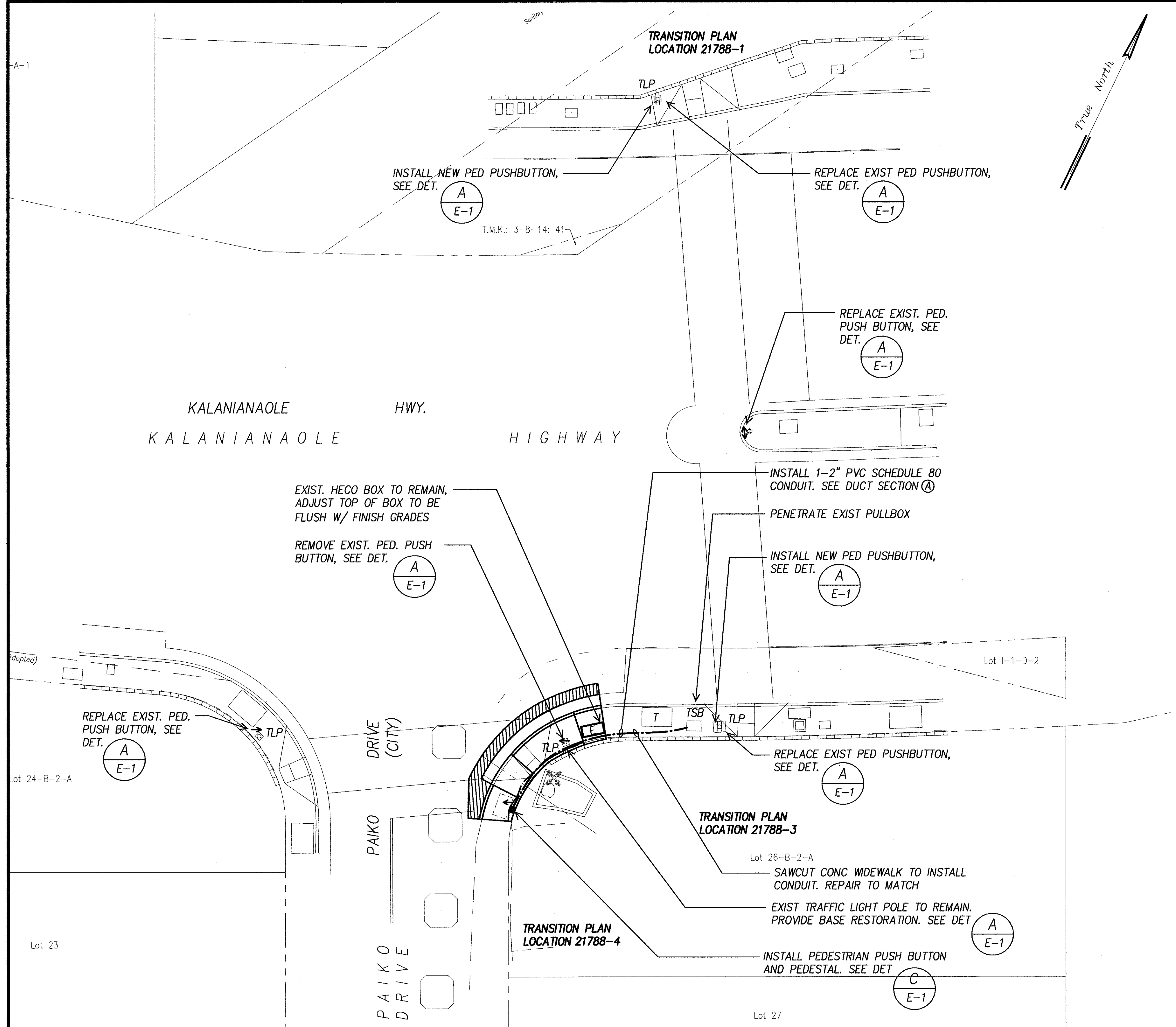
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SITE AND GRADING PLAN**  
**KALANIANA'OLE HWY & MOOMUKU PLACE**  
*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted      Date: Aug 2004

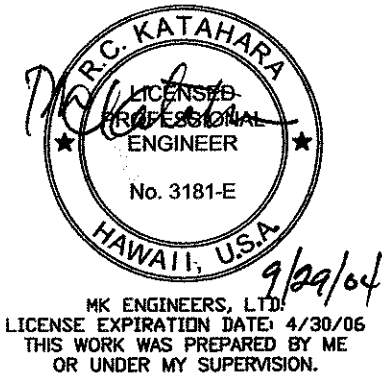
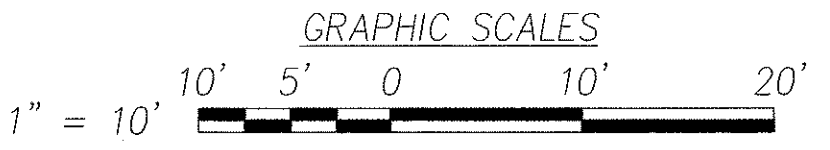
SHEET No. E-13 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	ADD. 154	180



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

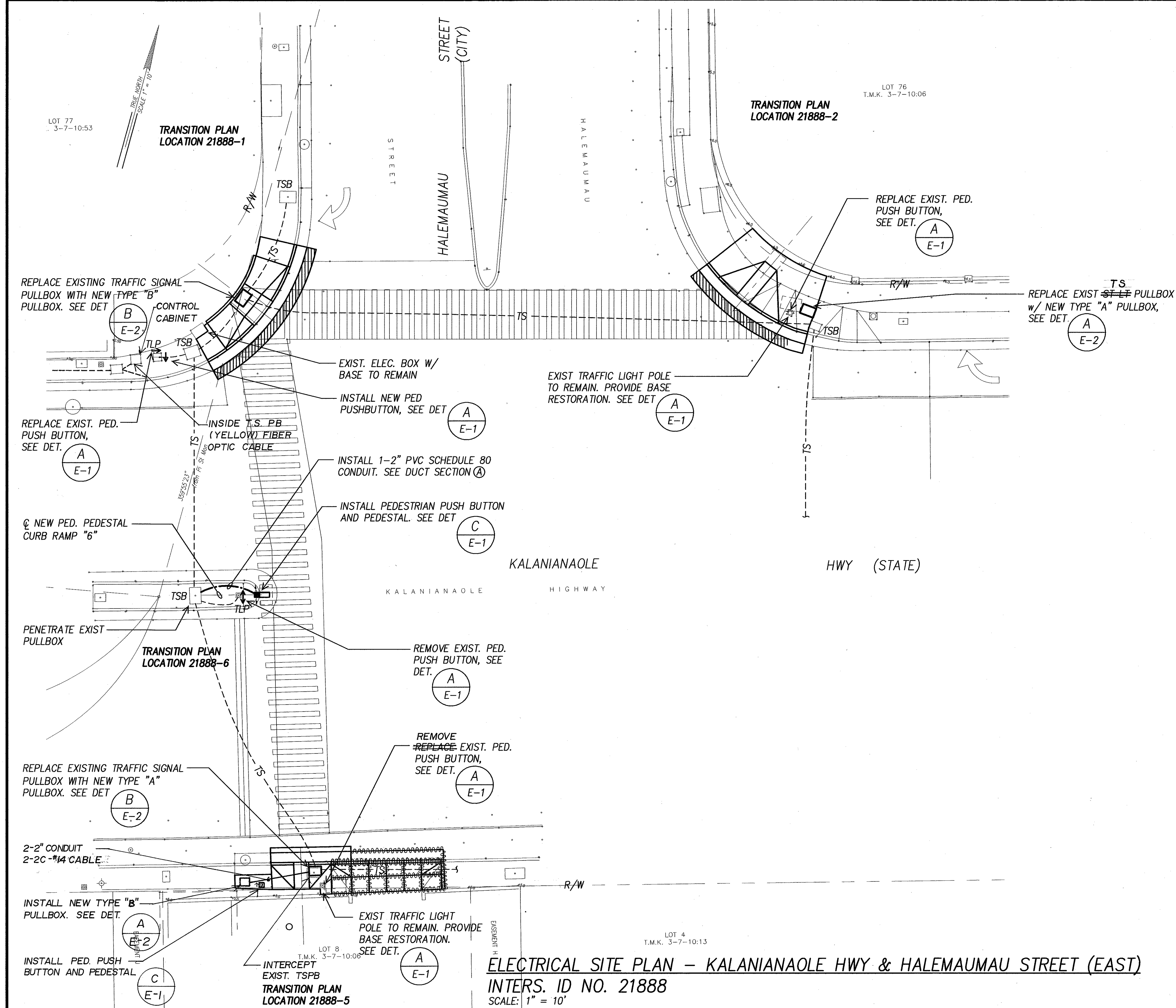
**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & PAIKO DRIVE**  
**INTERS. ID NO. 21788**  
SCALE: 1" = 10'



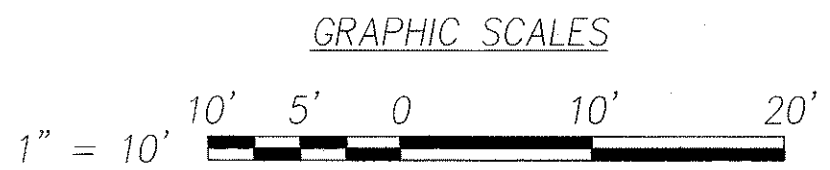
9/22/04	Relocated ppb
DATE	REVISION
DTS, C&C HONOLULU DRAWING REVIEWED	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>ELECTRICAL SITE PLAN</b> <b>KALANIANA'OLE HWY &amp; PAIKO DRIVE</b> <i>Pedestrian Facilities &amp; ADA Compliance</i> <i>at Various Locations on Oahu, Unit 8</i> <i>Fed. Aid Proj. No. CMAQ-0300(99)</i>	
Scale: As Noted	Date: Aug 2004
SHEET No. E-14 OF 40 SHEETS	



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	155	180



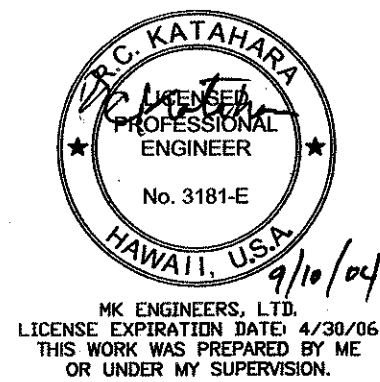
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



DTS, C&C HONOLULU DRAWING REVIEWED 3

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

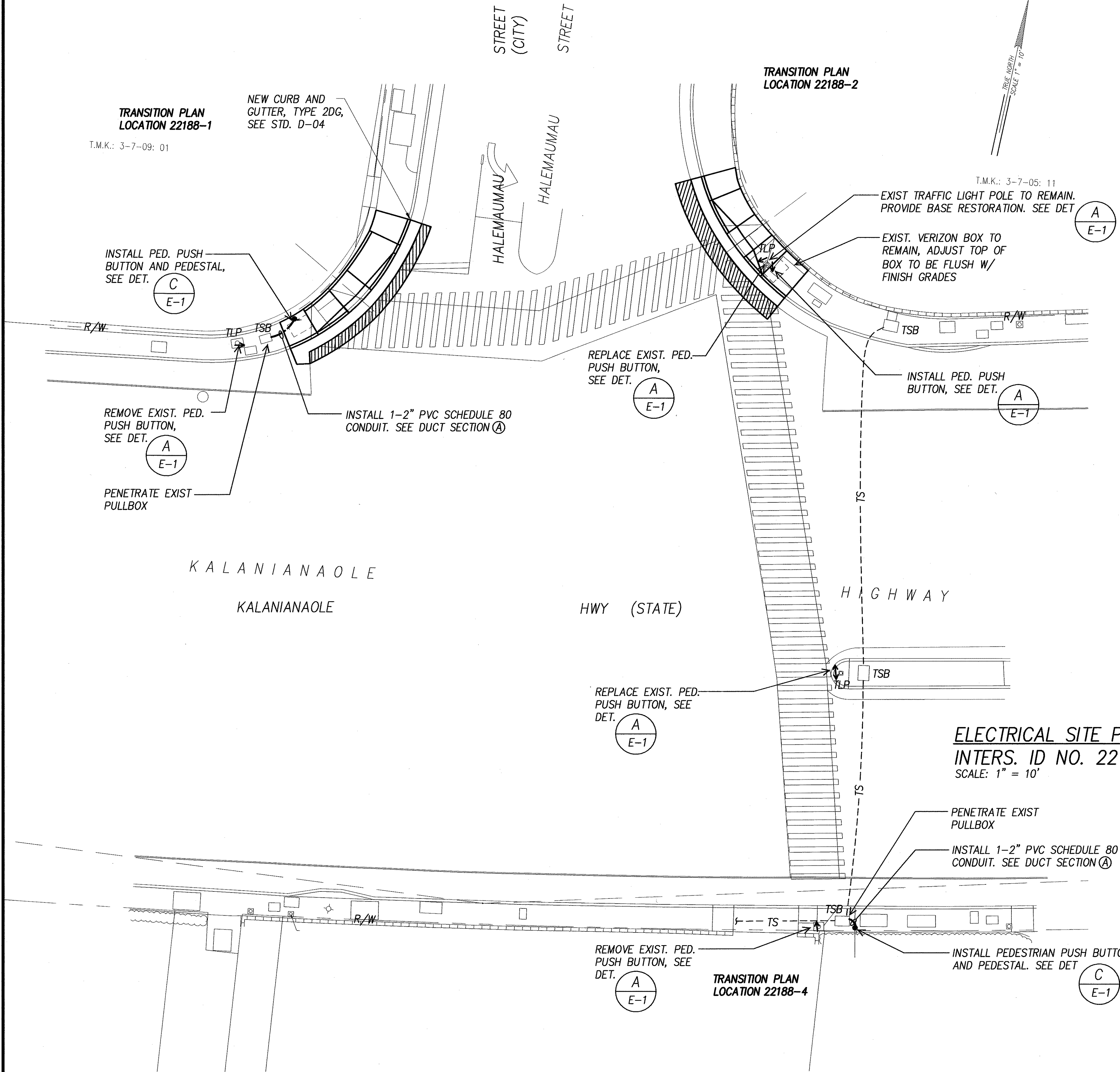
**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & HALEMAU STREET (EAST)**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)



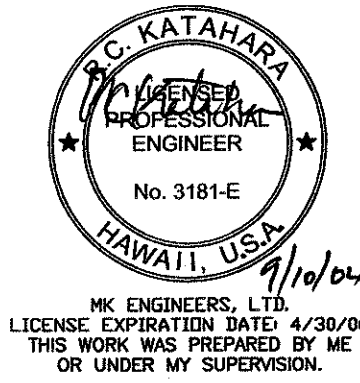
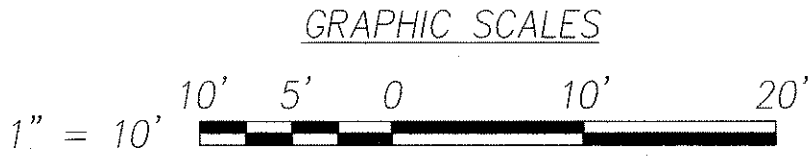
Scale: As Noted Date: Aug 2004

**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & HALEMAU STREET (EAST)**  
INTERS. ID NO. 21888  
SCALE: 1" = 10'

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	156	180



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



DTS, C&C HONOLULU DRAWING REVIEWED **3**

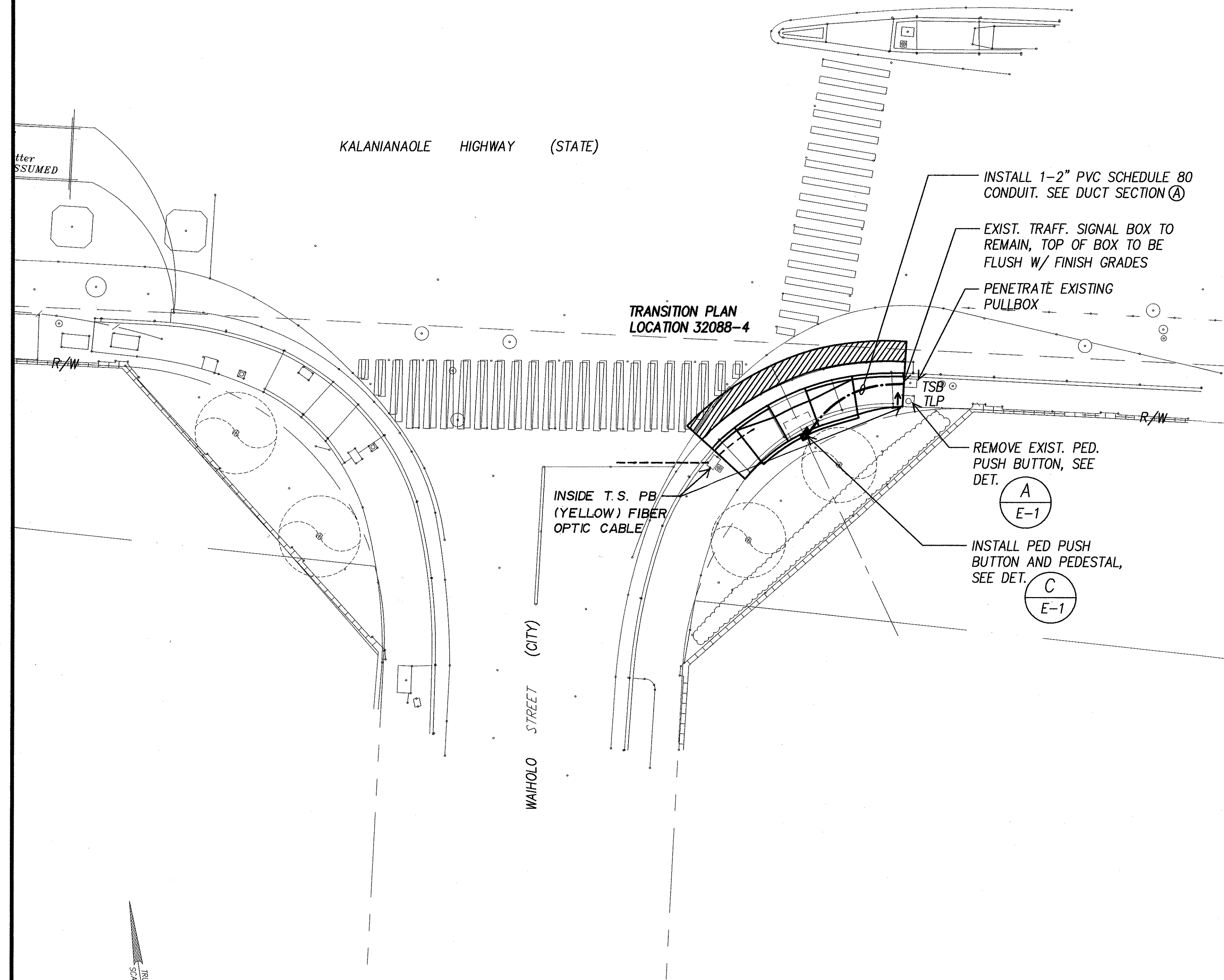
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & HALEMAU STREET (WEST)**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

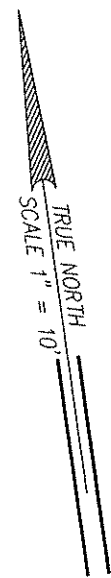
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SHEET No. E-16 OF 40 SHEETS

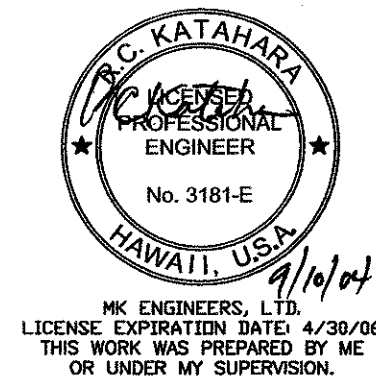
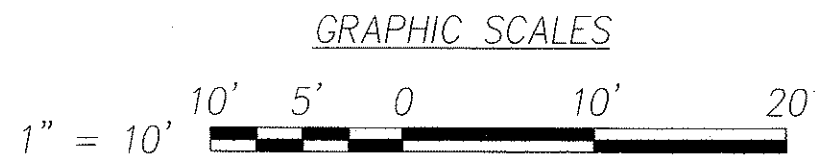
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	157	180



DATE	DATE
DESIGNED BY	DESIGNED BY
CHECKED BY	CHECKED BY
NOTED BY	NOTED BY
ORIGINAL PLAN	ORIGINAL PLAN



ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & LAUKAHI STREET  
INTERS. ID NO. 32088  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED 17

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

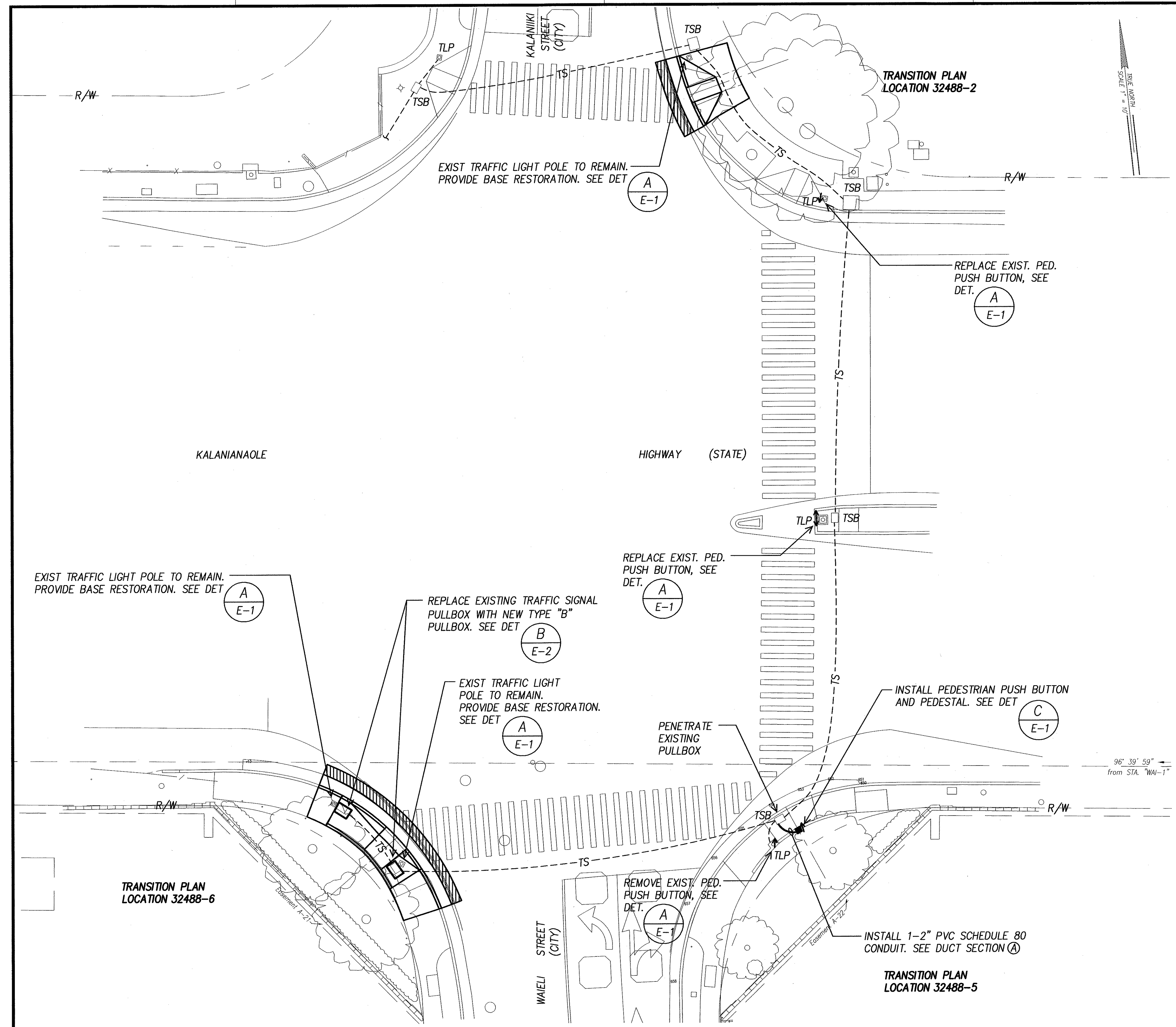
**ELECTRICAL SITE PLAN -  
KALANIANA'OLE HWY & LAUKAHI STREET**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: Aug 2004

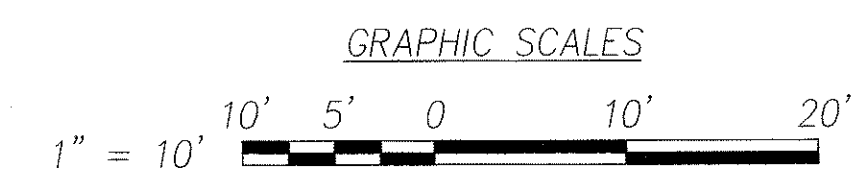
SHEET No. E-17 OF 40 SHEETS



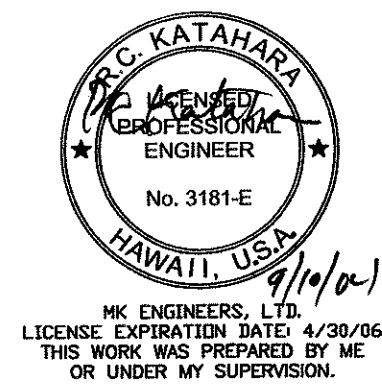
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	158	180



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	



**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & KALANIKI STREET**  
**INTERS. ID NO. 32488**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED 17

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

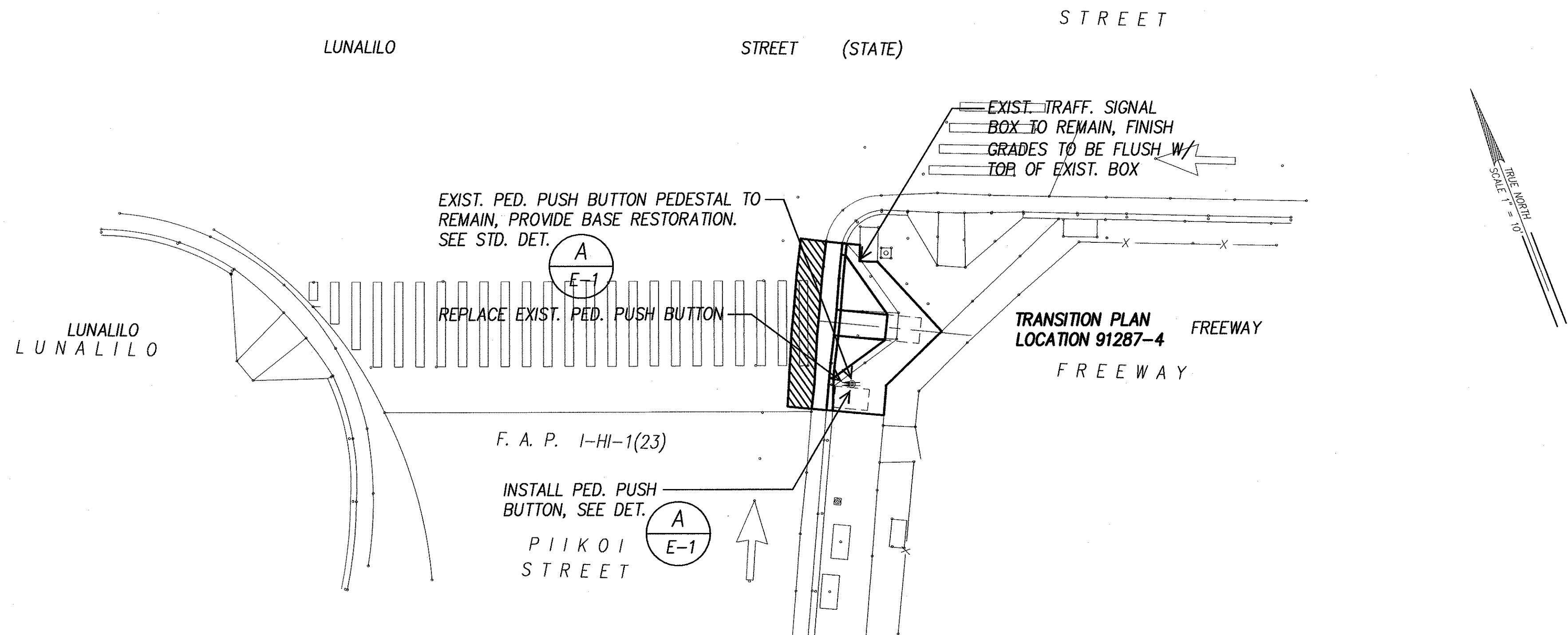
**ELECTRICAL SITE PLAN -**  
**KALANIANA'OLE HWY & KALANIKI STREET**

*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

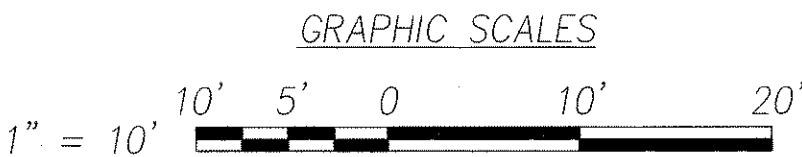
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SHEET No. E-18 OF 40 SHEETS

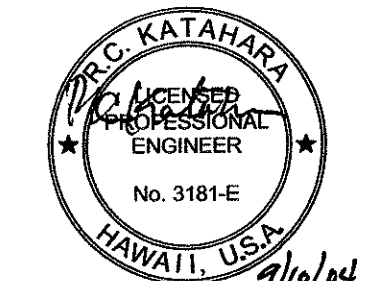
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	159	180



**ELECTRICAL SITE PLAN – LUNALILO STREET & PIIKOI STREET**  
**INTERS. ID NO. 91287**  
 SCALE: 1" = 10'



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



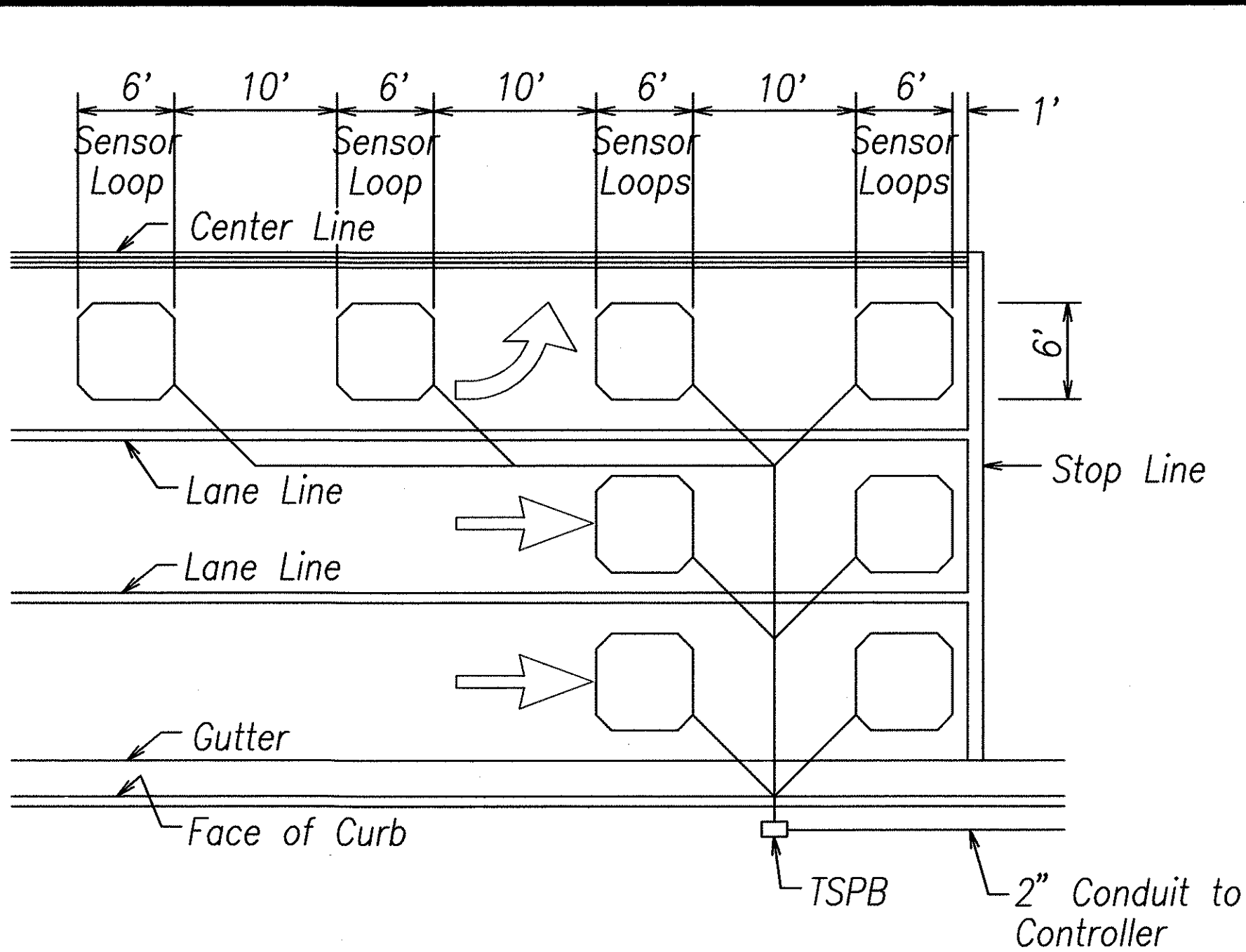
DTS, C&C HONOLULU DRAWING REVIEWED
7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ELECTRICAL SITE PLAN –  
LUNALILO STREET & PIIKOI STREET**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)  
Scale: As Noted Date: Aug 2004  
SHEET No. E-19 OF 40 SHEETS



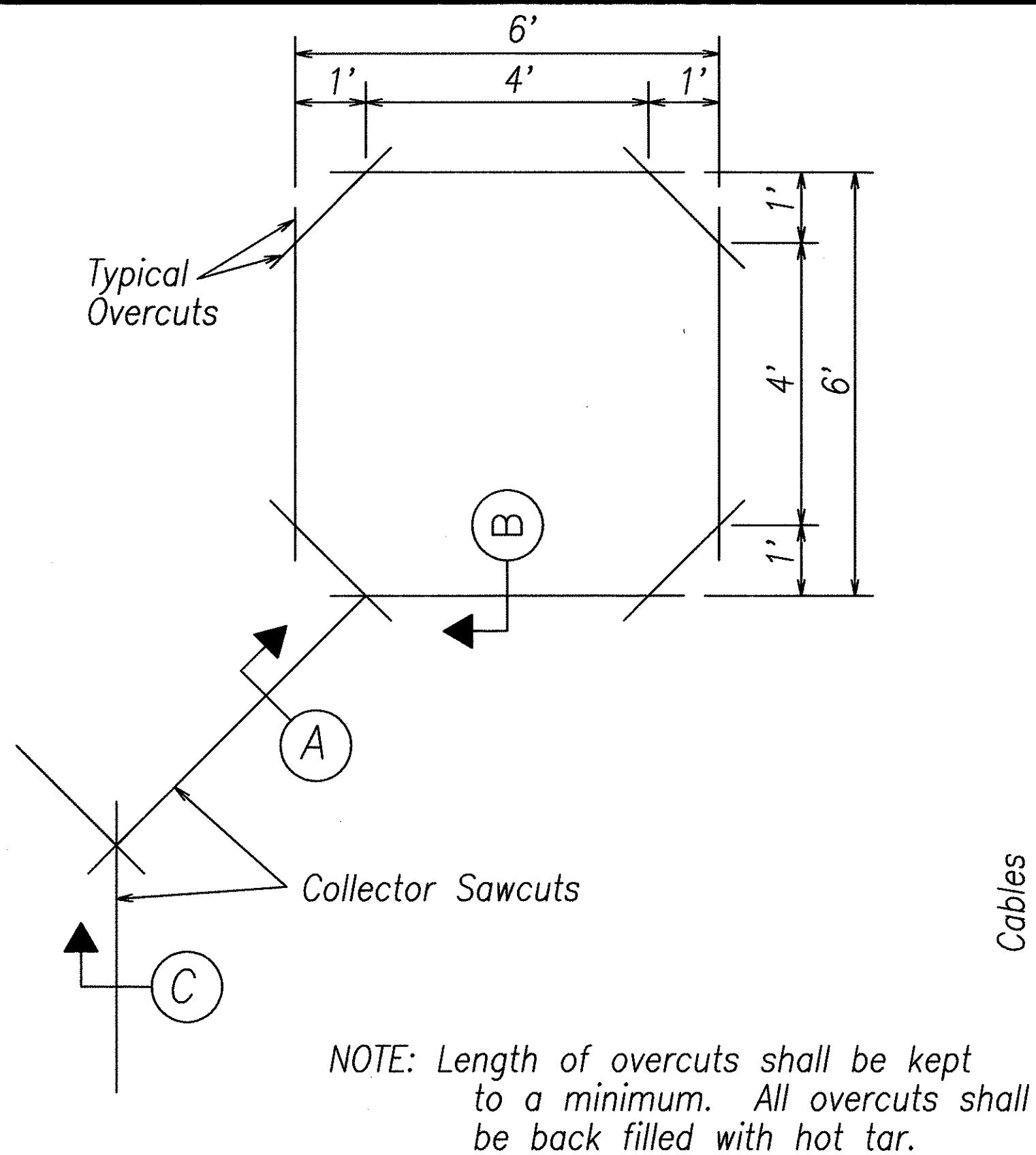


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(92)	2004	ADD. 160A	187

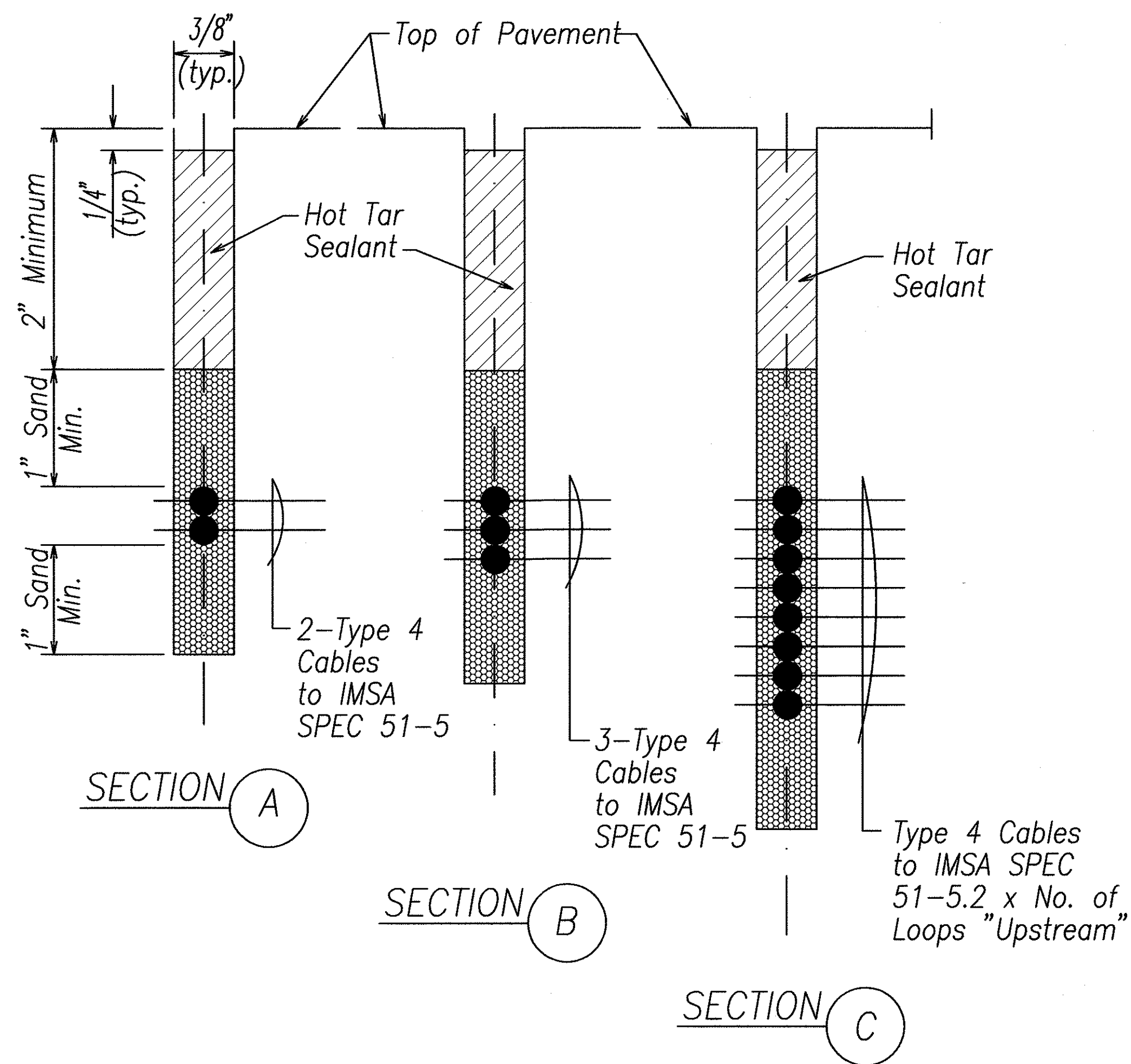


- NOTES:
- Center sensor loops in lanes.
  - Collector cables shall be twisted 2 turns per foot.
  - Number of loops and locations vary. See project plans.
  - Number and locations of collector sawcuts may be varied in the field to suit.

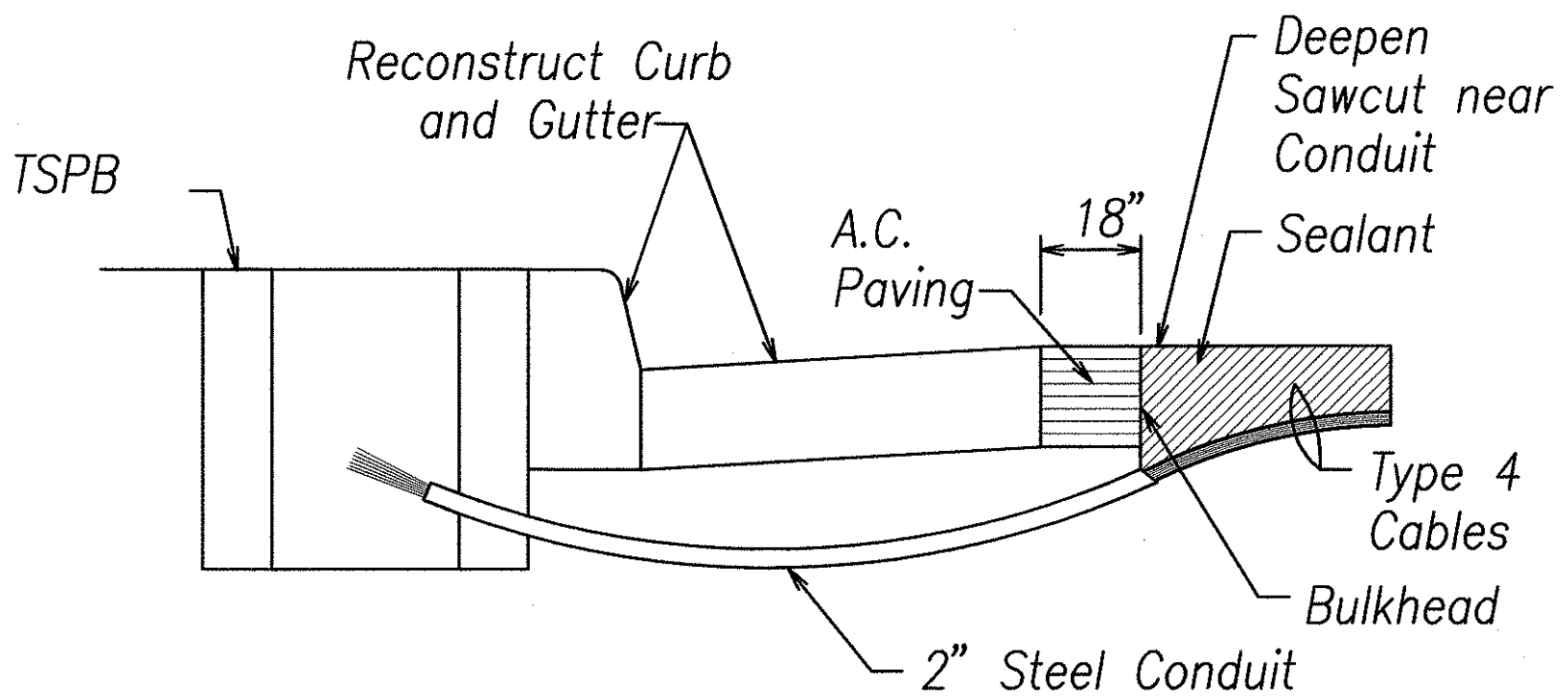
TYPICAL SENSOR LOOP LAYOUT



TYPICAL SENSOR LOOP SAWCUT DETAIL

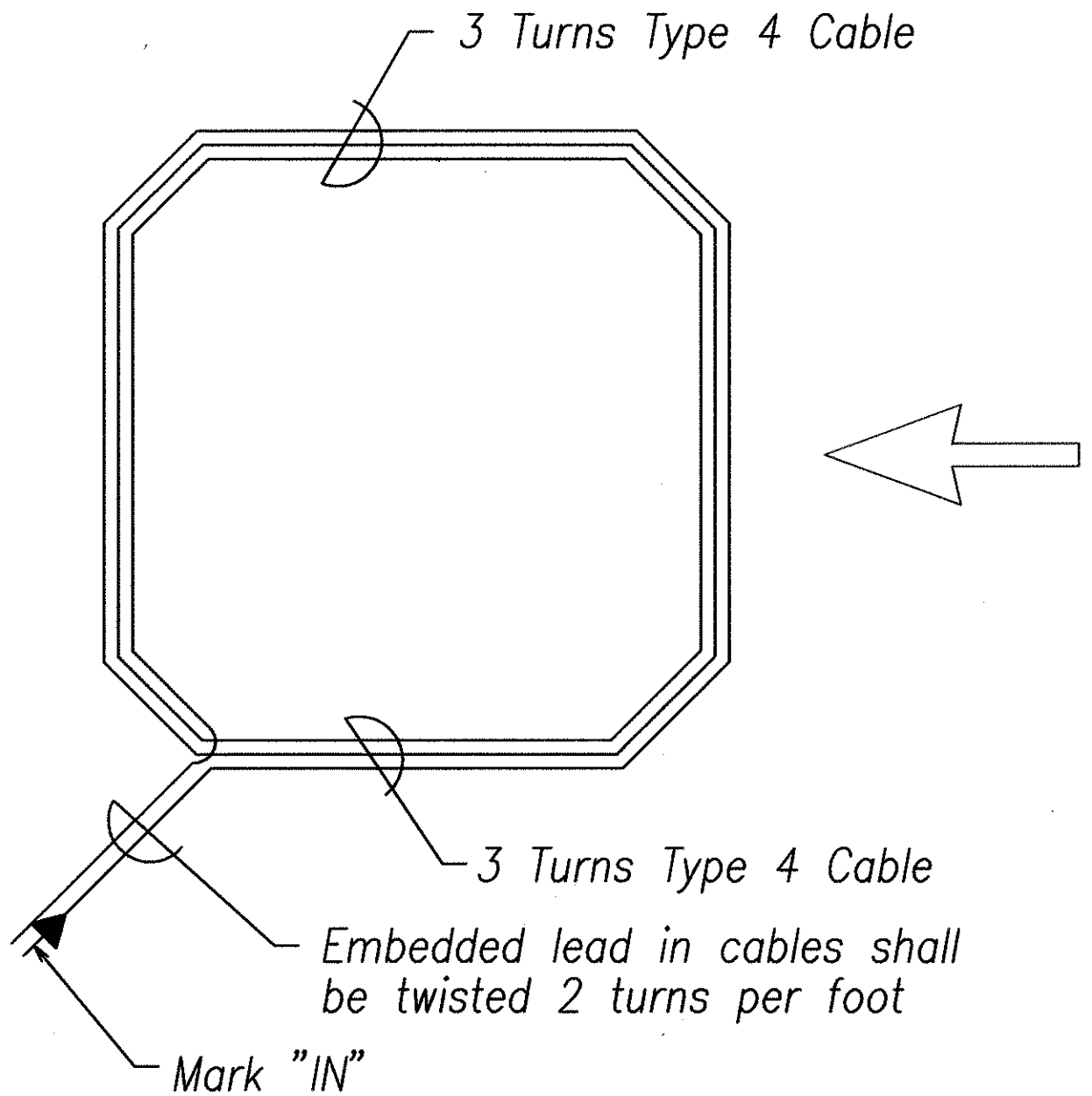


TYPICAL SECTION THROUGH SENSOR LOOP



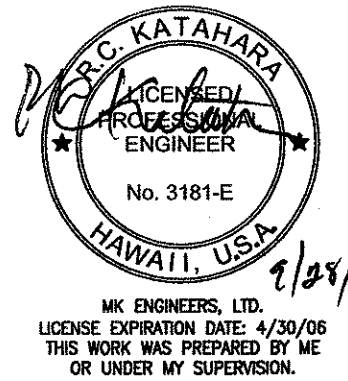
- NOTES ON CONSTRUCTION AT END OF SAWCUT
- Seal roadway end of conduit after installation of conductors.
  - Install bulkhead across conduit trench.
  - Place hot tar in sawcut.
  - Backfill over conduit with new A.C.
  - Reconstruct curb and gutter as required.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

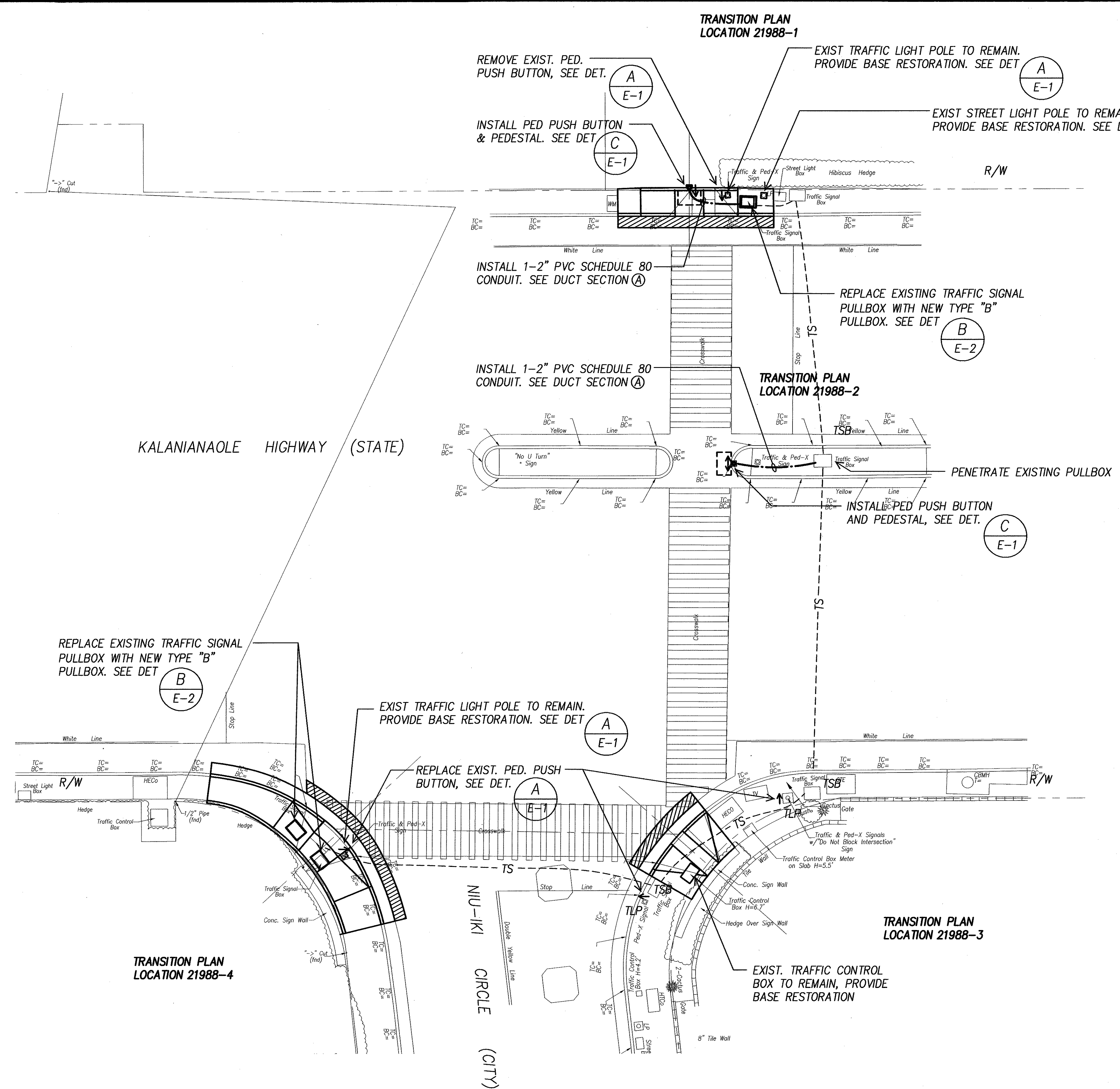
SURVEY PLOTTED BY	DATE
DRAWN BY	"
TRACED BY	"
DESIGNED BY	"
CHECKED BY	"
ORIGINAL PLAN	No.
NOTE BOOK	"



DTS, C&C HONOLULU DRAWING REVIEWED

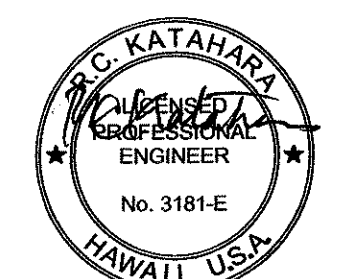
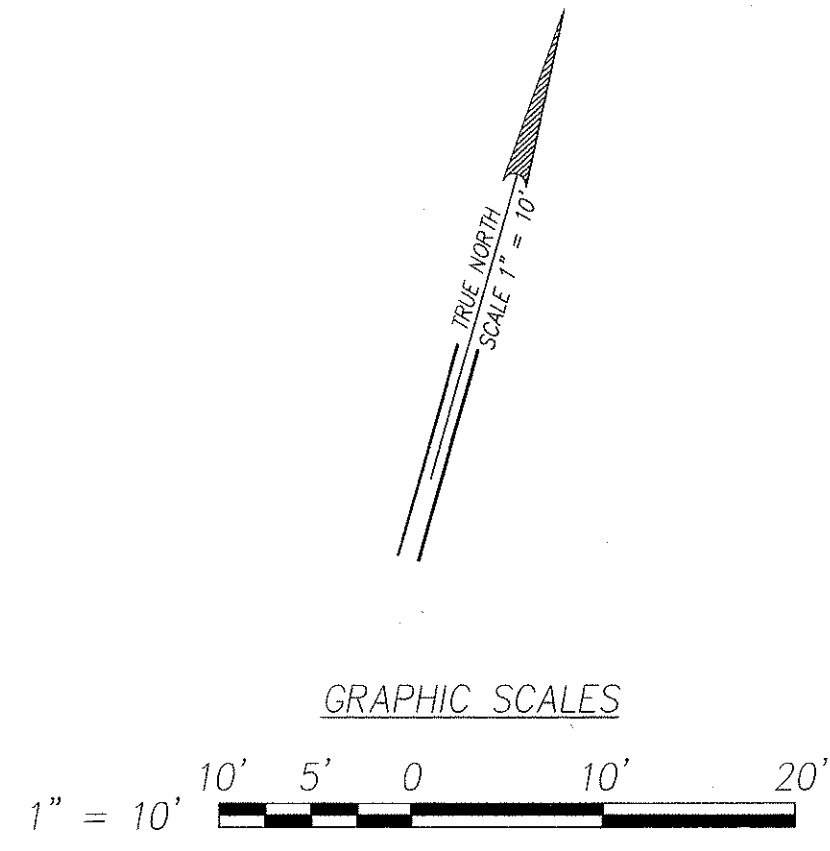
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**LOOP DETECTOR DETAILS**  
*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 1*  
*Fed. Aid Proj. No. CMAQ-0300(92)*  
Scale: As Noted      Date: Aug 2004

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	161	180



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

ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & NIU-IKI CIRCLE  
INTERS. ID NO. 21988  
SCALE: 1" = 10'



MK ENGINEERS, LTD.  
LICENSE EXPIRATION DATE: 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED ☒

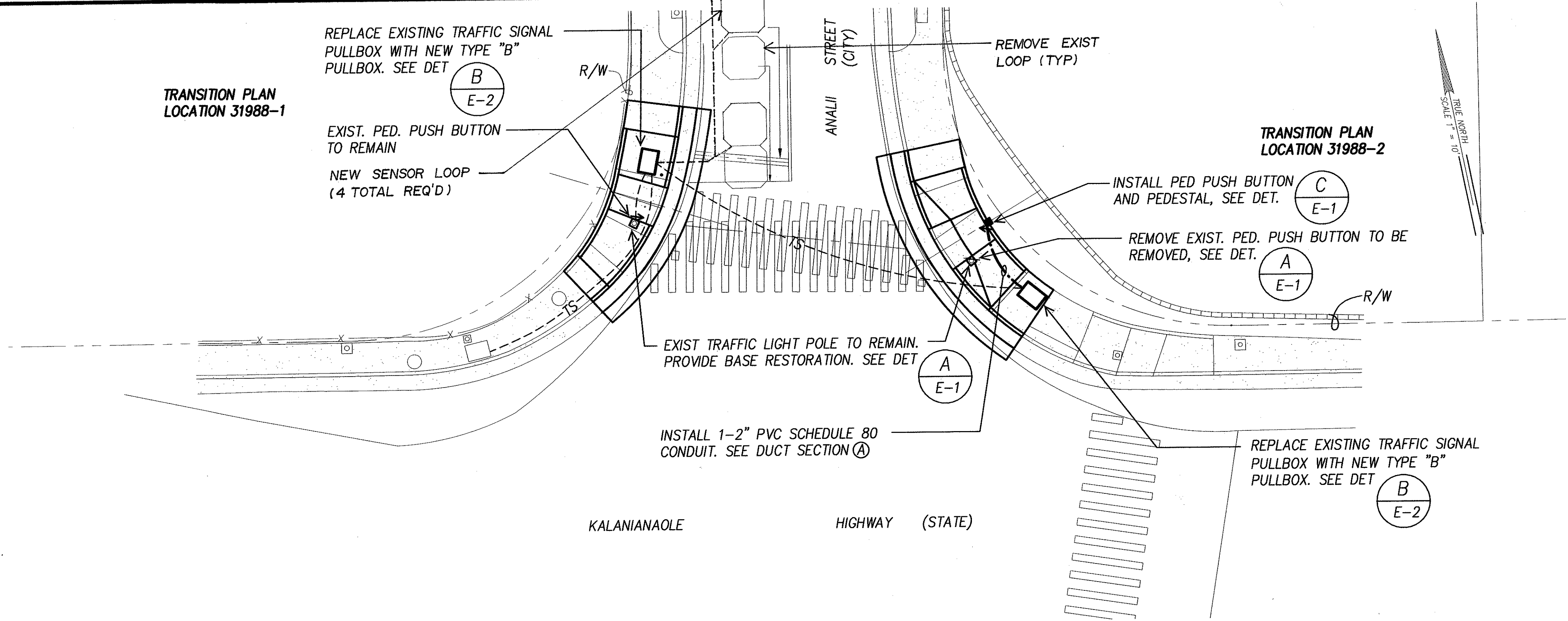
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & NIU-IKI CIRCLE**  
*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: Aug 2004

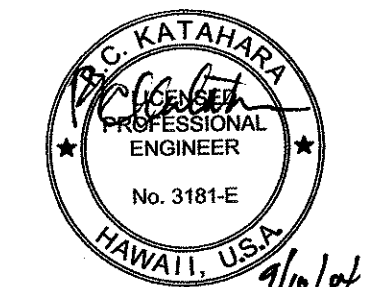
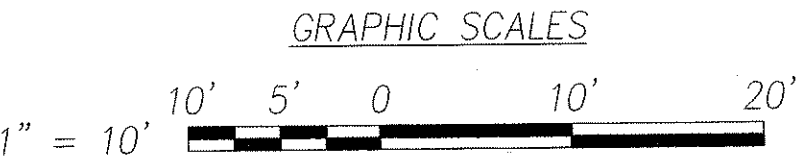
SHEET No. E-21 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	162	180



**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & ANALII STREET**  
**INTERS. ID NO. 31988**  
 SCALE: 1" = 10'

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



HK ENGINEERS, LTD.  
 LICENSE EXPIRATION DATE: 4/30/05  
 THIS WORK WAS PREPARED BY ME  
 OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED 7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

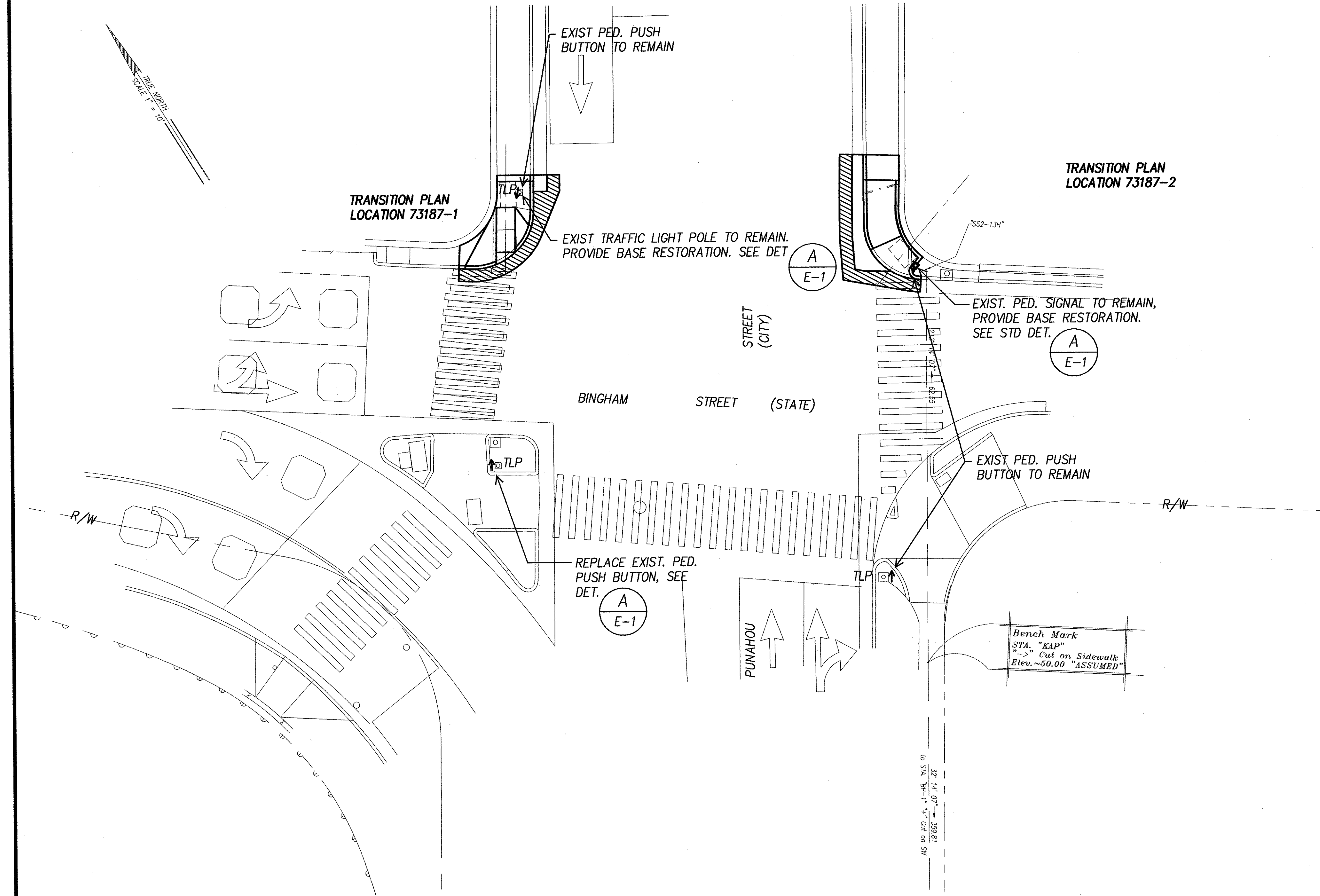
**ELECTRICAL SITE PLAN –  
KALANIANA'OLE HWY & ANALII STREET**  
*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted      Date: Aug 2004

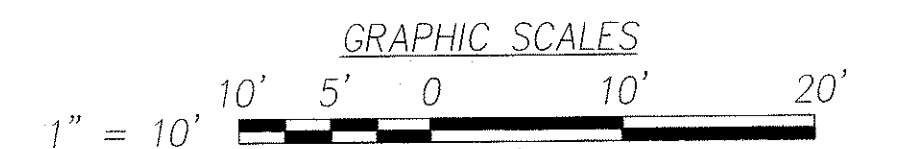
SHEET No. E-22 OF 40 SHEETS



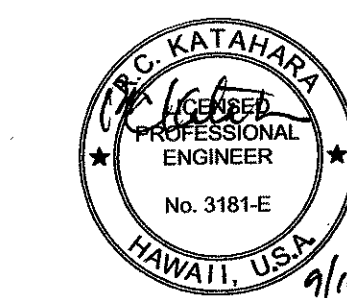
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	163	180



**ELECTRICAL SITE PLAN – BINGHAM STREET & PUNAHOU STREET**  
**INTERS. ID NO. 73187**  
 SCALE: 1" = 10'



ORIGINAL	SURVEY PLOTTED BY	DATE
PLAN	DRAWN BY	"
NOTE BOOK	TRACED BY	"
	QUANTITIES BY	"
	CHECKED BY	"
		"



9/10/04  
 LICENSE EXPIRATION DATE: 4/30/06  
 THIS WORK WAS PREPARED BY ME  
 OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED

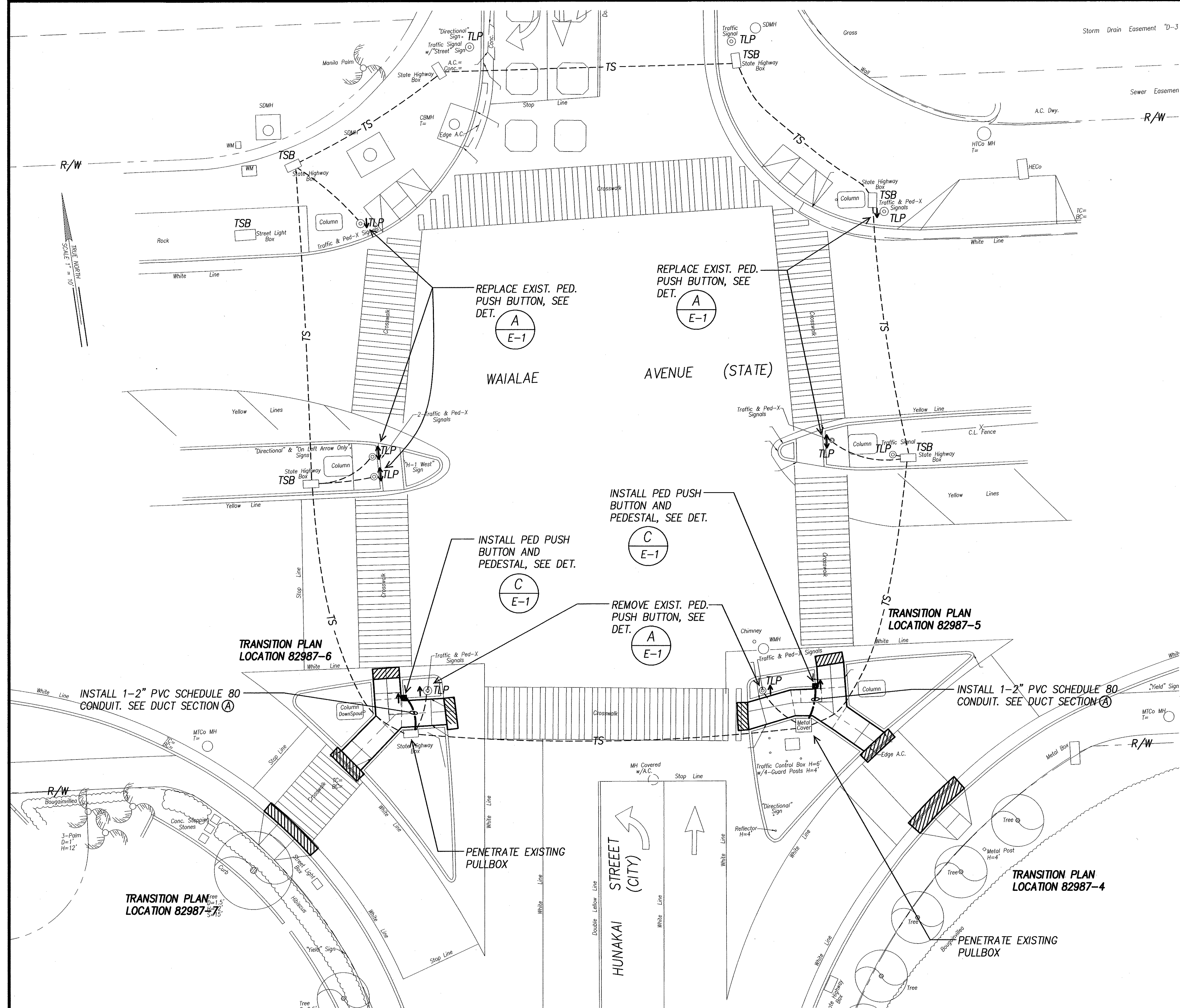
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN –**  
**BINGHAM STREET & PUNAHOU STREET**  
*Pedestrian Facilities & ADA Compliance*  
*at Various Locations on Oahu, Unit 8*  
 Fed. Aid Proj. No. CMAQ-0300(99)

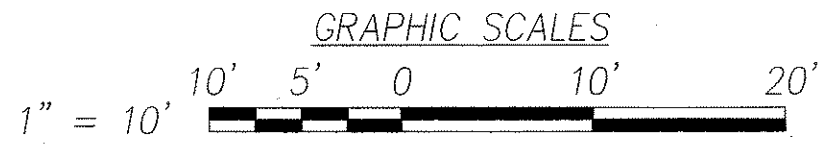
Scale: As Noted Date: Aug 2004

SHEET No. E-23 OF 40 SHEETS

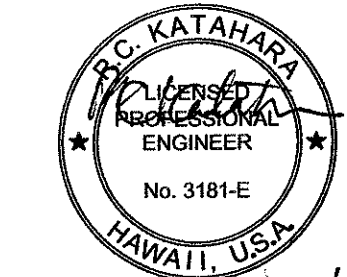
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	164	180



SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTED BY	
NO.	



**ELECTRICAL SITE PLAN - WAI'ALAE AVENUE & HUNAKAI STREET**  
**INTERS. ID NO. 82987**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED 7

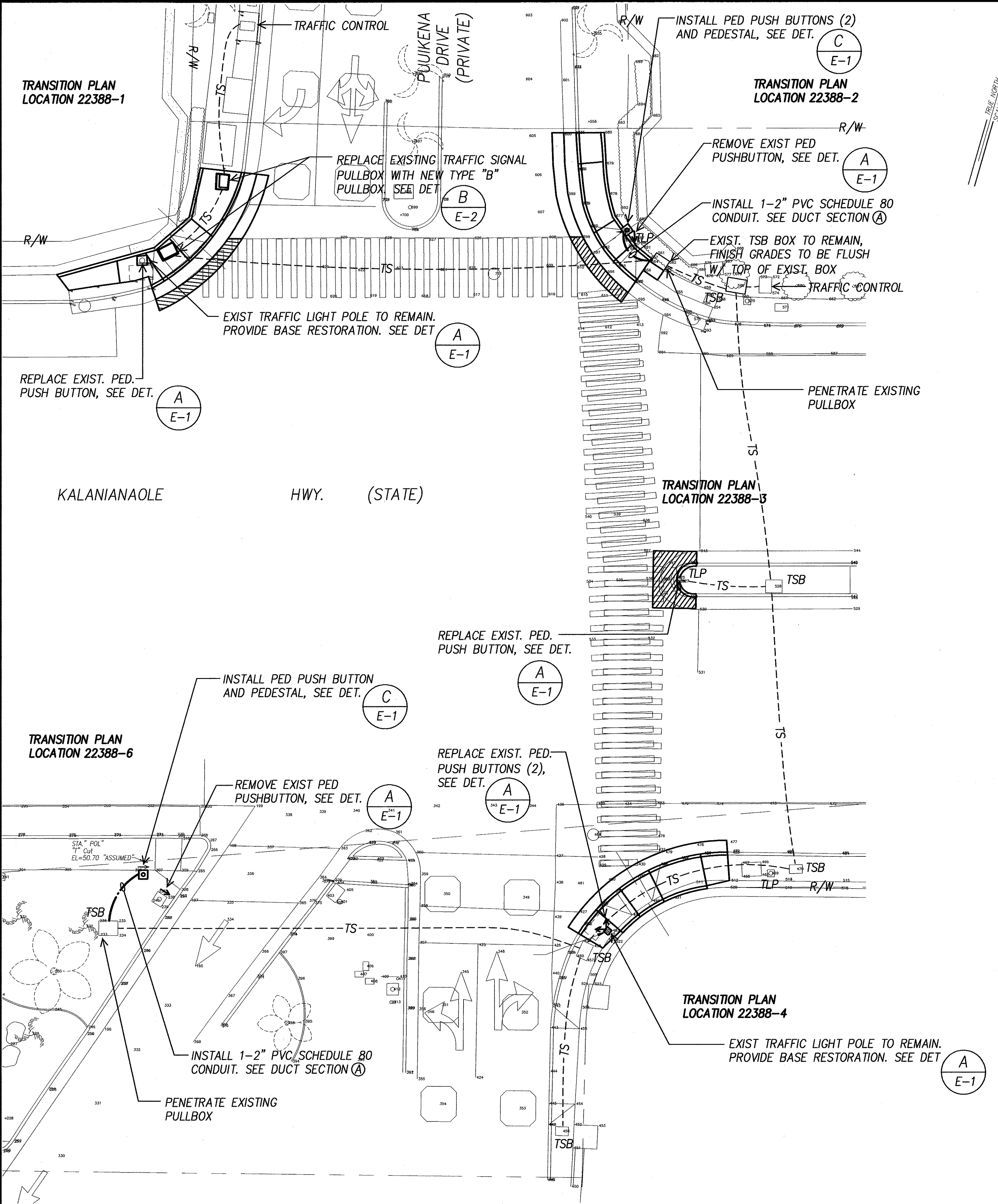
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN -  
WAI'ALAE AVENUE & HUNAKAI STREET**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

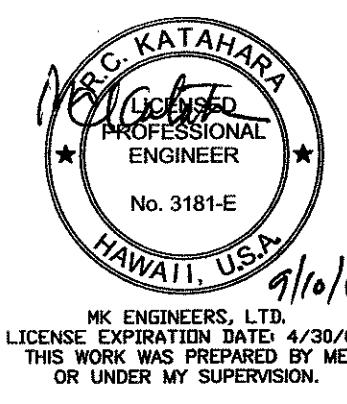
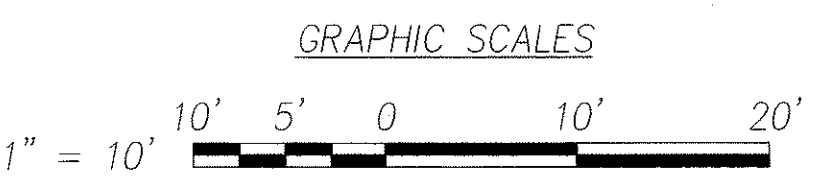
Scale: As Noted Date: Aug 2004

SHEET No. E-24 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	165	180



**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & PUUIKENA DRIVE**  
INTERS. ID NO. 22388  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED 7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & PUUIKENA DRIVE**

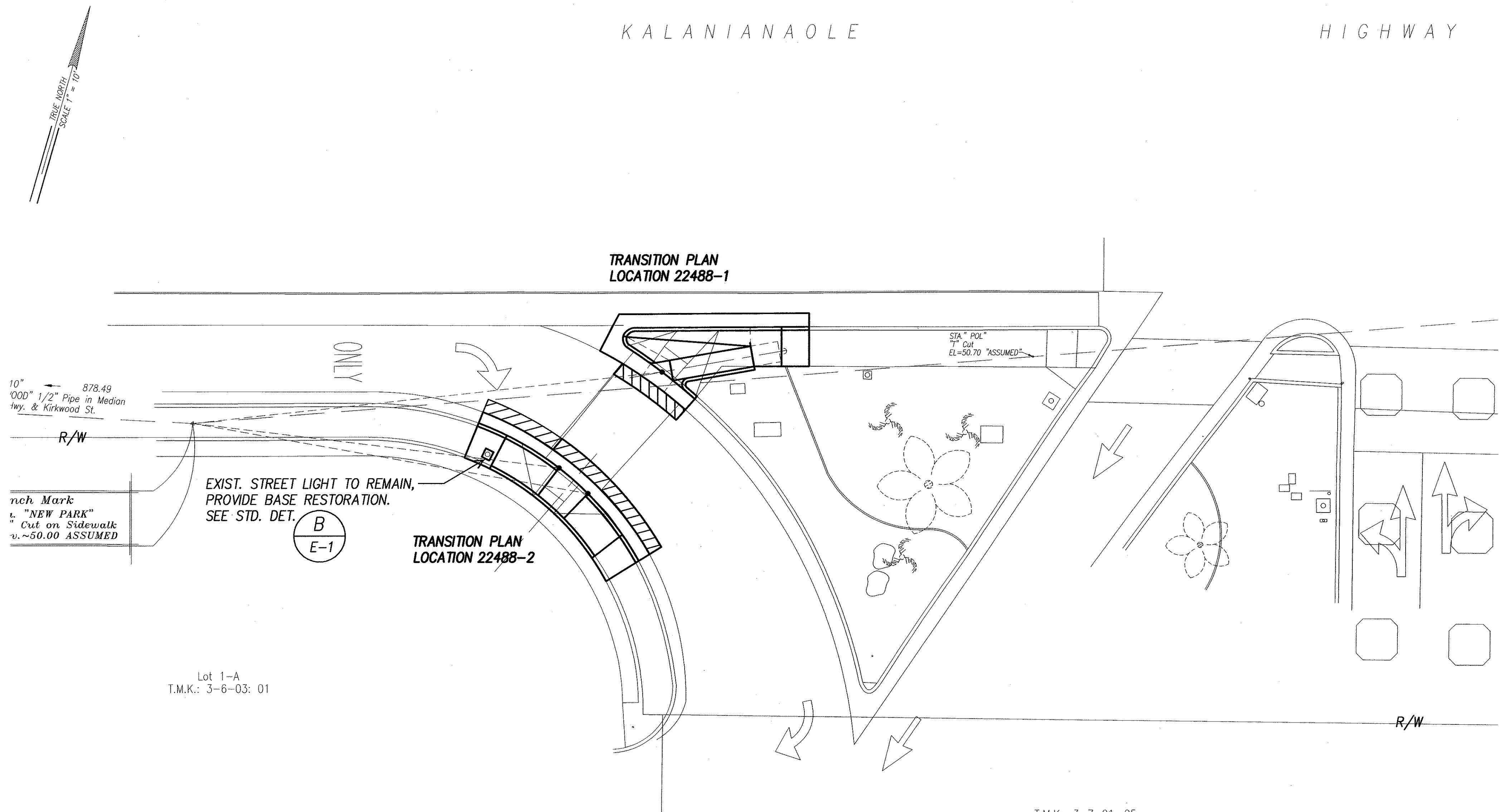
*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: Aug 2004

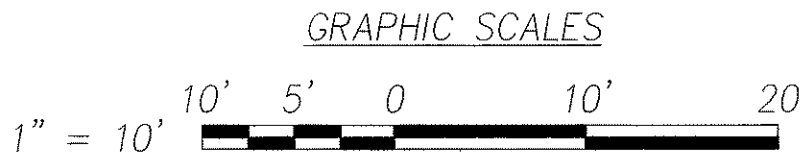
SHEET No. E-25 OF 40 SHEETS



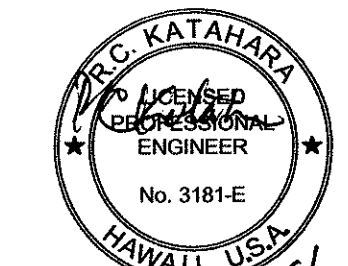
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	166	180



**ELECTRICAL SITE PLAN – KALANIANAOLE HWY & KAWAIKUI PARK**  
**INTERS. ID NO. 22488**  
SCALE: 1" = 10'



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	"
No.	TRACED BY	"
	CHECKED BY	"
	REVIEWED BY	"
	APPROVED BY	"



W.K. ENGINEERS, LTD.  
LICENSE EXPIRATION DATE: 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED

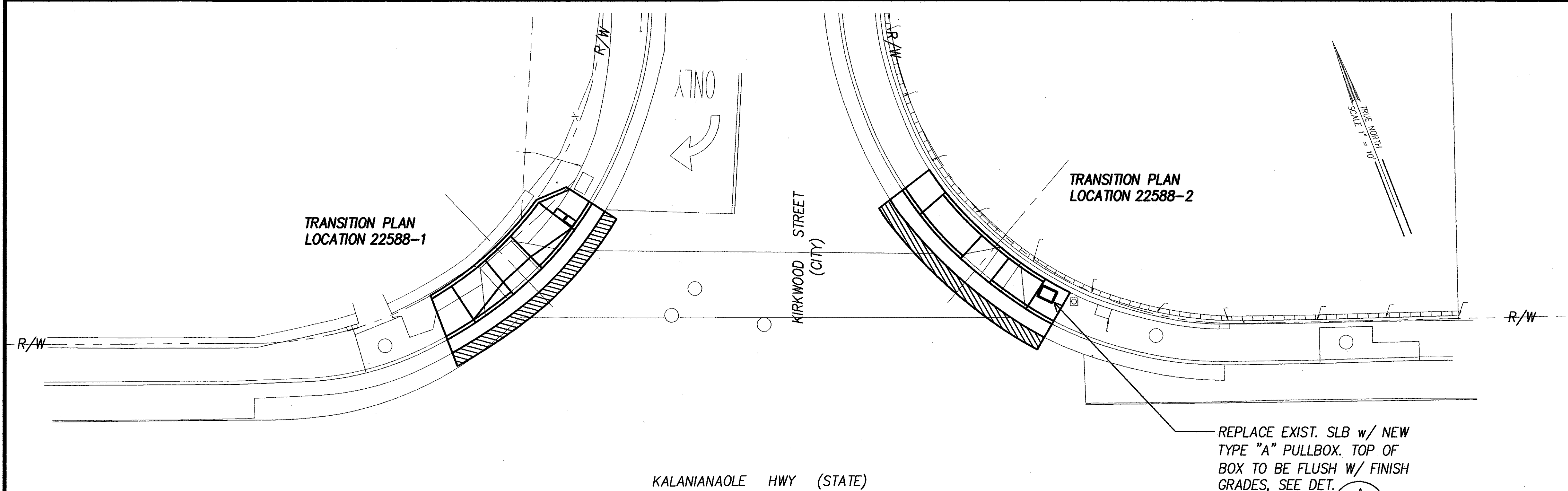
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN –**  
**KALANIANAOLE HWY & KAWAIKUI PARK**  
*Pedestrian Facilities & ADA Compliance*  
*at Various Locations on Oahu, Unit 8*  
*Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: Aug 2004

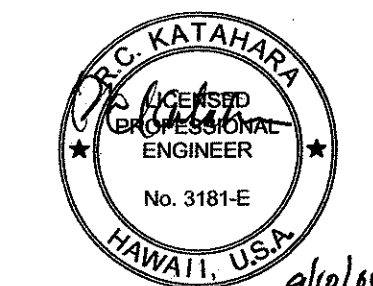
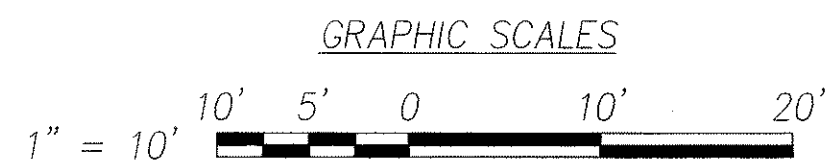
SHEET No. E-26 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	167	180



ELECTRICAL SITE PLAN – KALANIANA'OLE HWY & KIRKWOOD STREET  
INTERS. ID NO. 22588  
SCALE: 1" = 10'

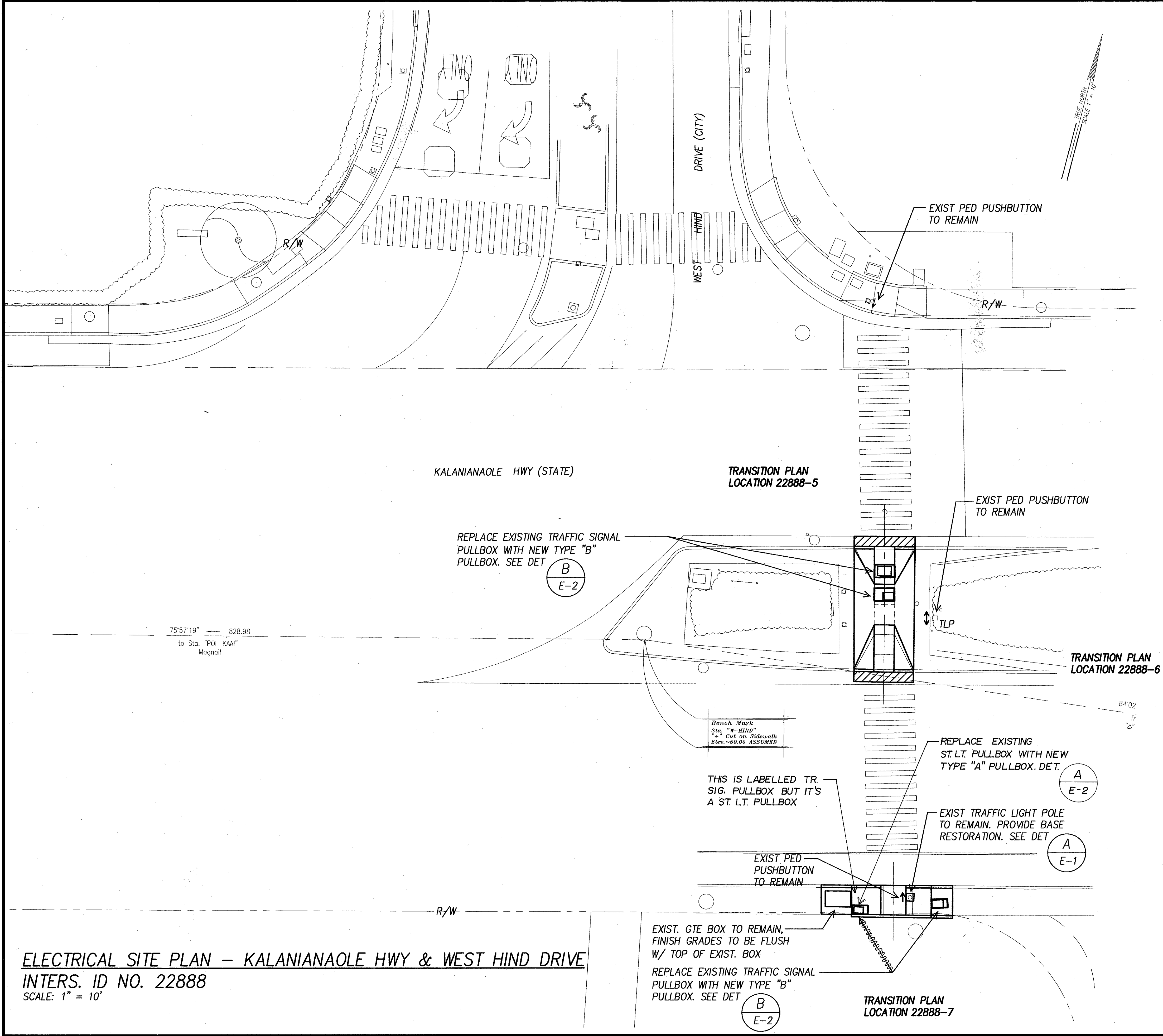
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



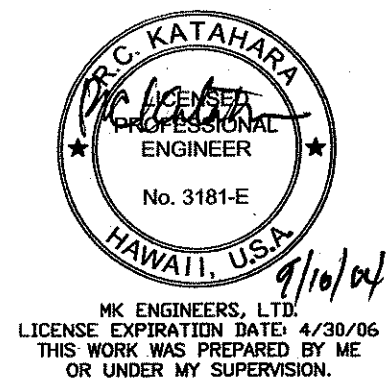
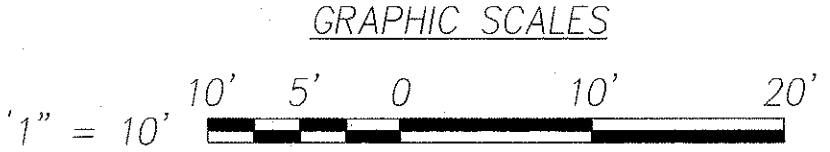
MK ENGINEERS, LTD.  
LICENSE EXPIRATION DATE: 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED 1	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>ELECTRICAL SITE PLAN – KALANIANA'OLE HWY &amp; KIRKWOOD STREET</u>	
<u>Pedestrian Facilities &amp; ADA Compliance at Various Locations on Oahu, Unit 8</u>	
<u>Fed. Aid Proj. No. CMAQ-0300(99)</u>	
Scale: As Noted	Date: Aug 2004
SHEET No. E-27 OF 40 SHEETS	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	168	180



**ELECTRICAL SITE PLAN – KALANIANAOLE HWY & WEST HIND DRIVE**  
**INTERS. ID NO. 22888**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED **3**

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN – KALANIANAOLE HWY & WEST HIND DRIVE**

*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
*Fed. Aid Proj. No. CMAQ-0300(99)*

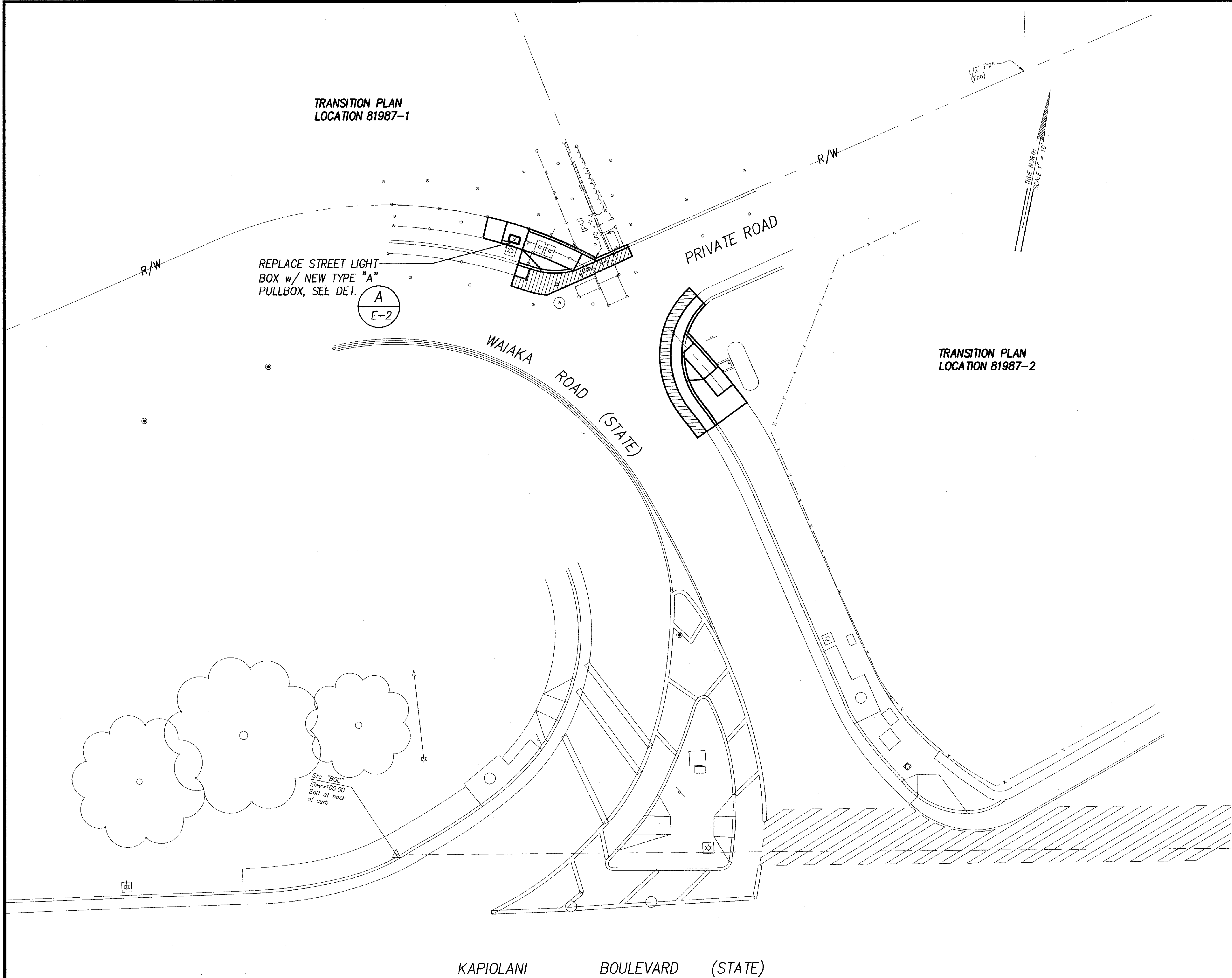
Scale: As Noted Date: Aug 2004

SHEET No. E-28 OF 40 SHEETS



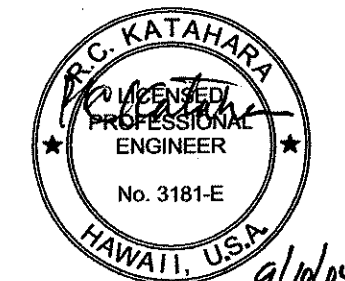
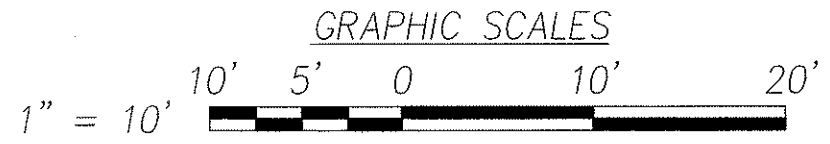


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	170	180



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

**ELECTRICAL SITE PLAN – WAIAKA ROAD & PRIVATE ROAD**  
**INTERS. ID NO. 81987**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED **17**

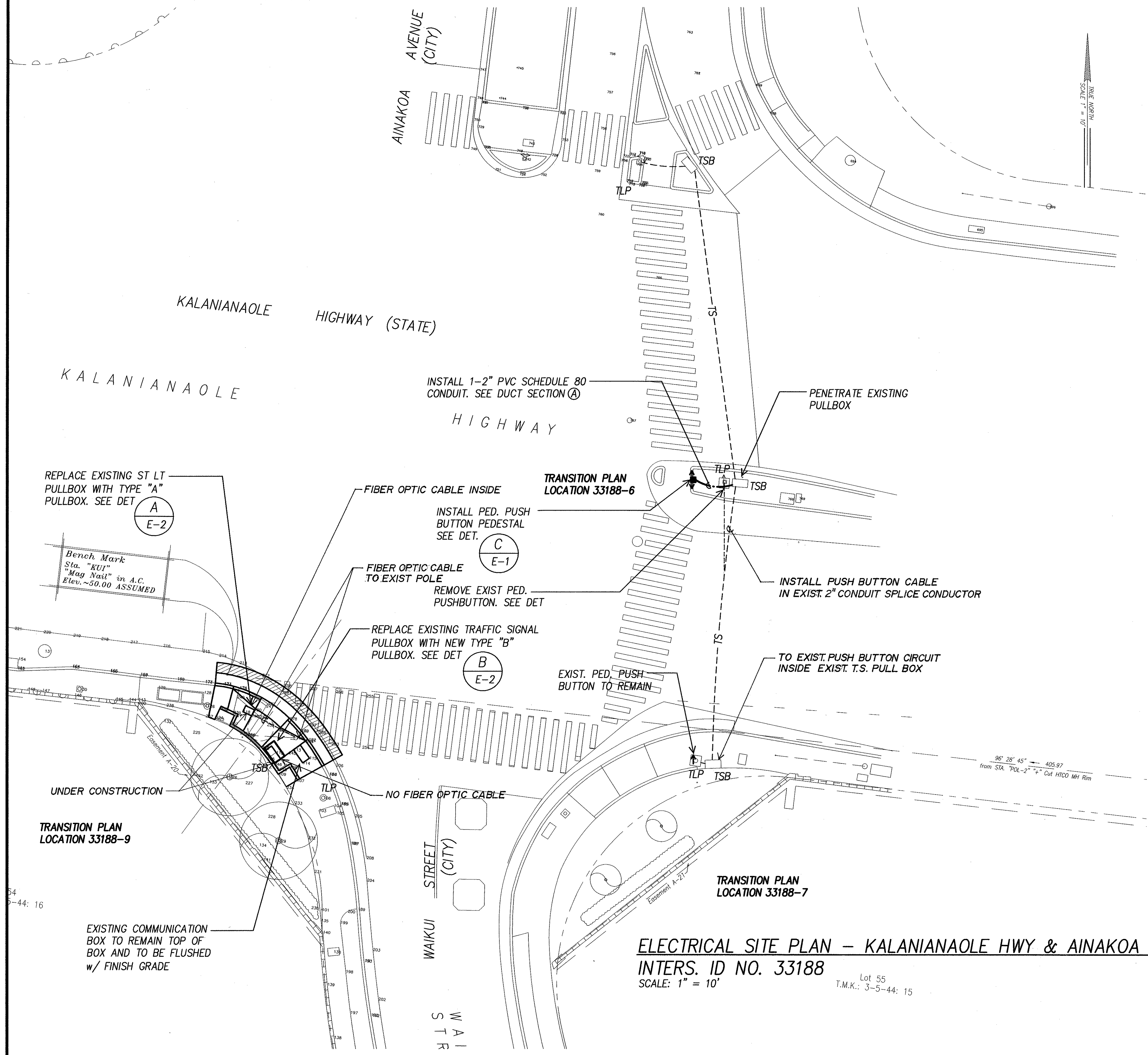
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN**  
**WAIAKA ROAD & PRIVATE ROAD**  
*Pedestrian Facilities & ADA Compliance*  
*at Various Locations on Oahu, Unit 8*  
*Fed. Aid Proj. No. CMAQ-0300(99)*

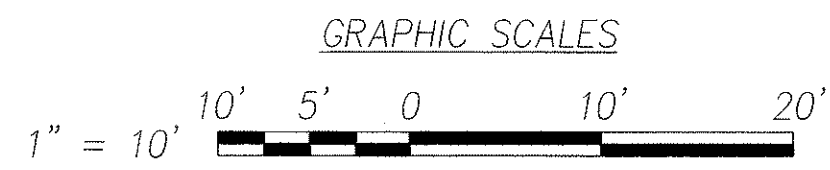
Scale: As Noted Date: Aug 2004

SHEET No. E-30 OF 40 SHEETS

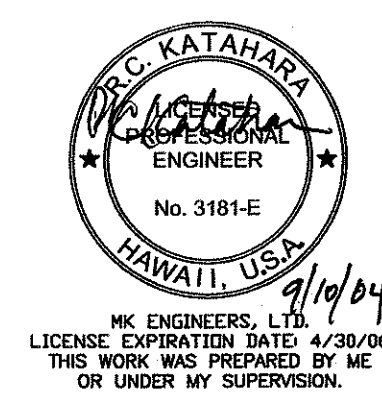
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	171	180



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



**ELECTRICAL SITE PLAN - KALANIANA'OLE HWY & AINAKOA AVENUE**  
INTERS. ID NO. 33188  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED 17

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN -  
KALANIANA'OLE HWY & AINAKOA AVENUE**

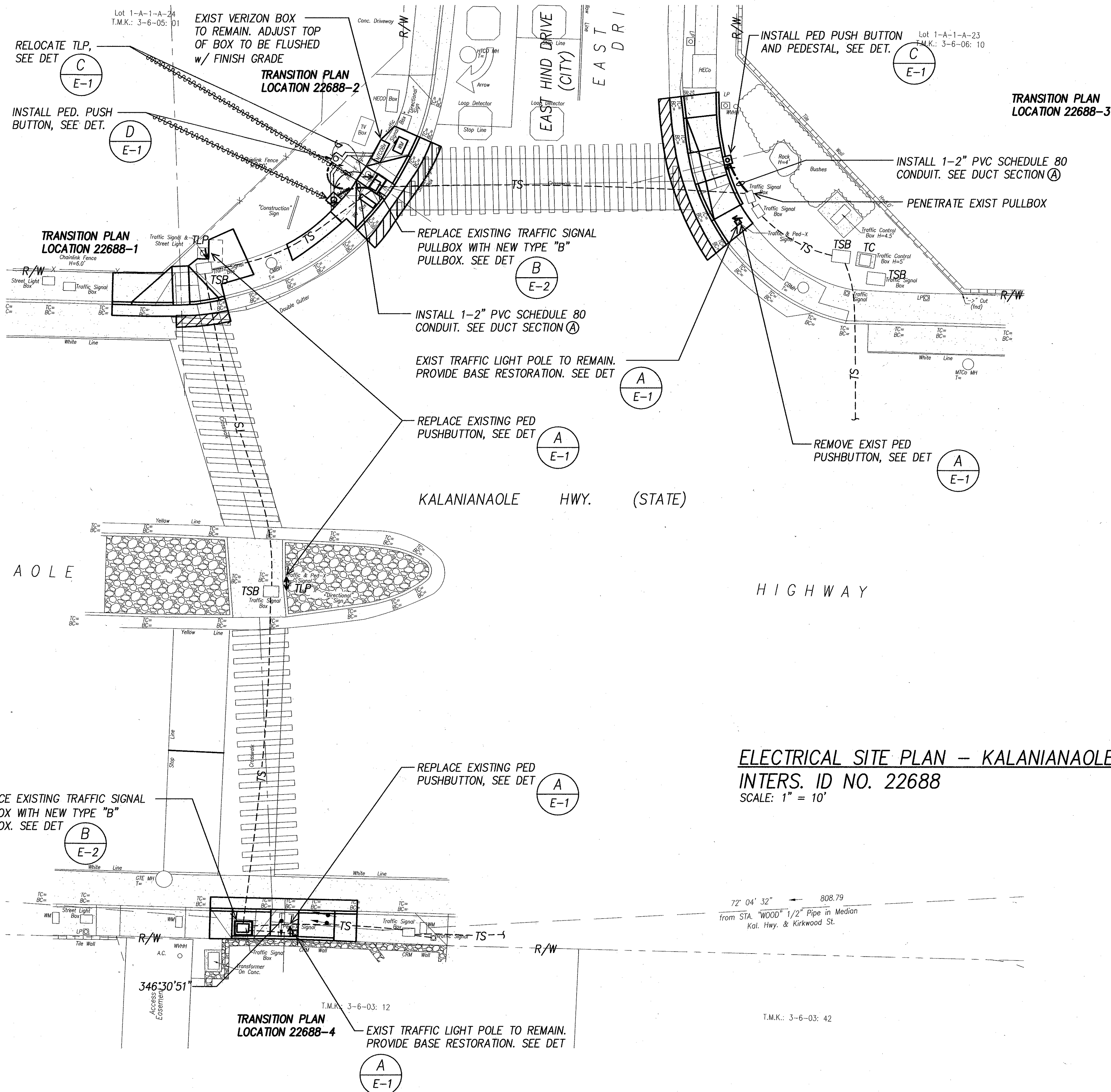
*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: Aug 2004

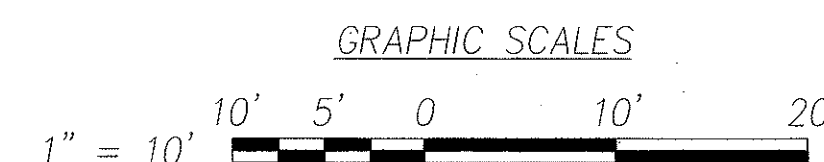
SHEET No. E-31 OF 40 SHEETS



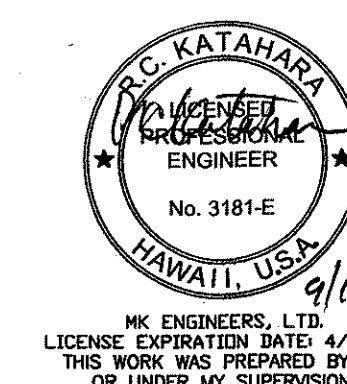
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	172	180



**ELECTRICAL SITE PLAN – KALANIANAOLE HWY & EAST HIND DRIVE**  
**INTERS. ID NO. 22688**  
 SCALE: 1" = 10'



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



DTS, C&C HONOLULU DRAWING REVIEWED 7

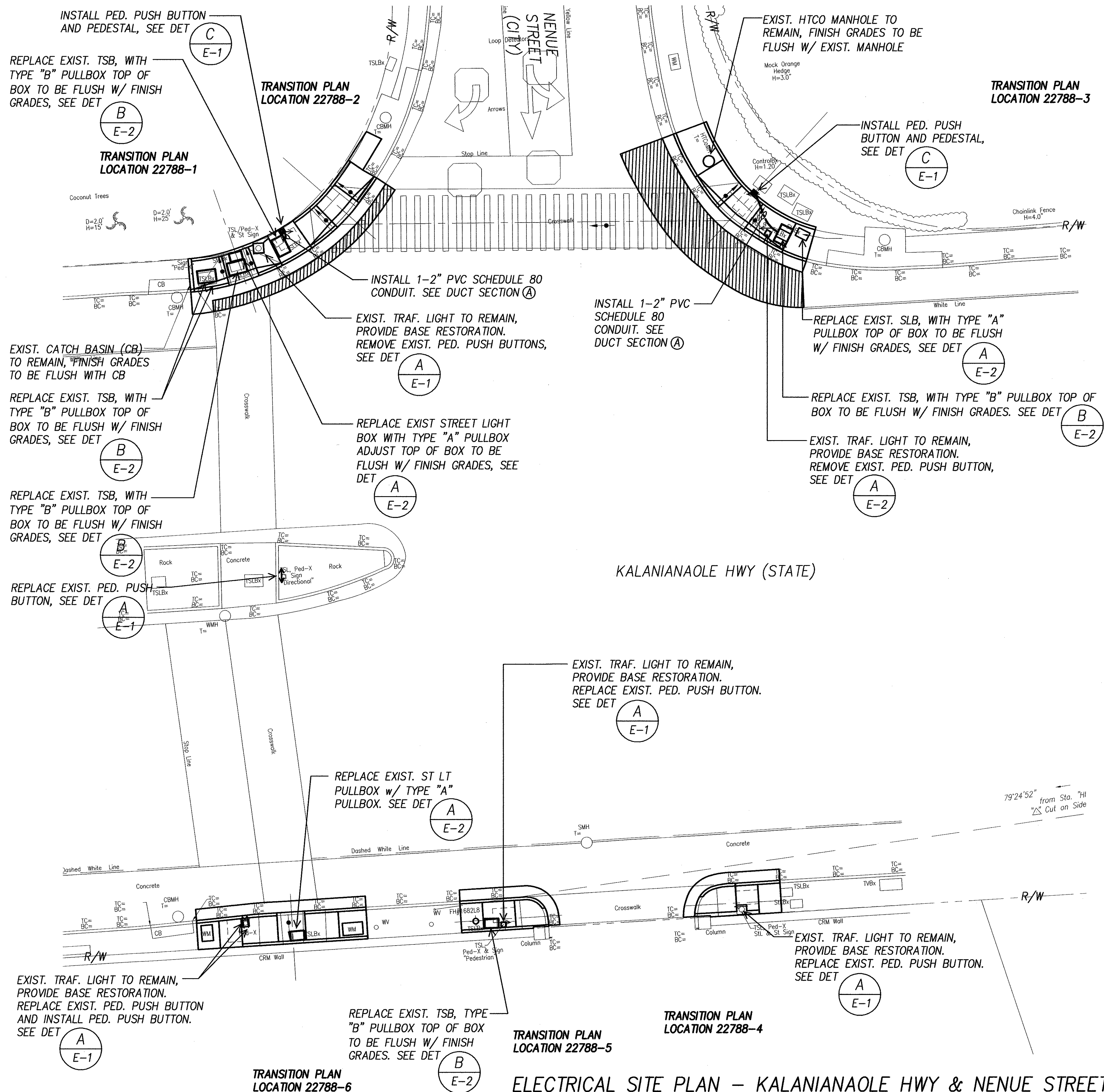
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN – KALANIANAOLE HWY & EAST HIND DRIVE**  
*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
 Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: Aug 2004

SHEET No. E-32 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	173	189



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

GRAPHIC SCALES

1" = 10'      10'      5'      0      10'      20'

DTS, C&C HONOLULU DRAWING REVIEWED 17

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

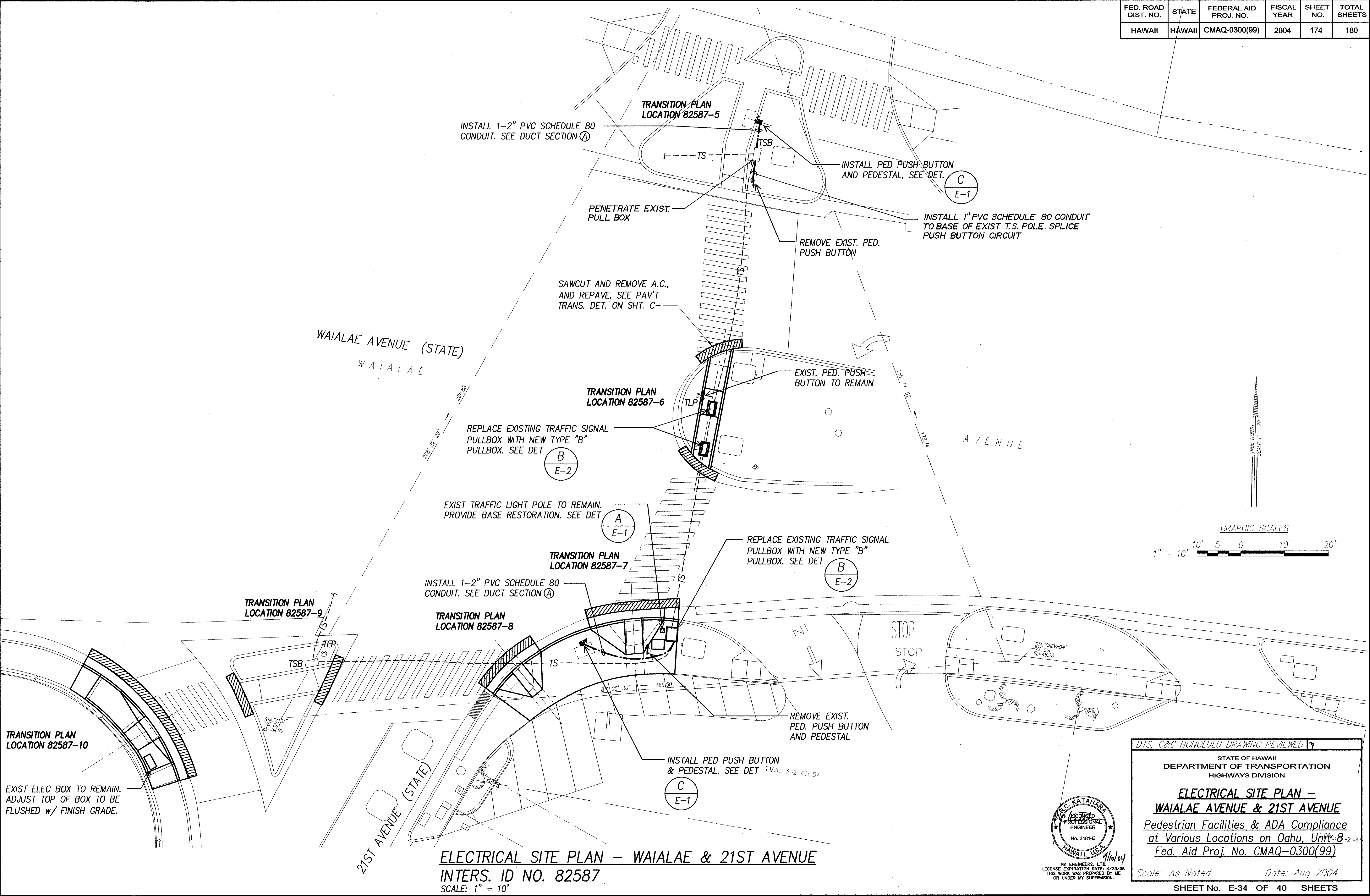
**ELECTRICAL SITE PLAN – KALANIANAʻOLAH  
HWY & NENUE STREET**

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

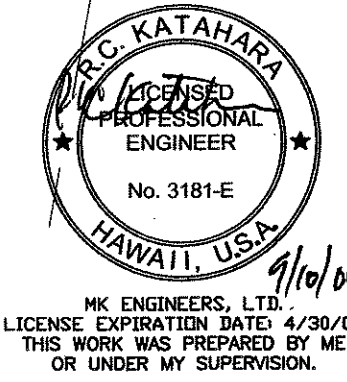
Scale: As Noted Date: Aug 2004

SHEET NO. 5 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	174	180



ORIGINAL PLAN	DATE
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	



DTS, C&C HONOLULU DRAWING REVIEWED 7

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

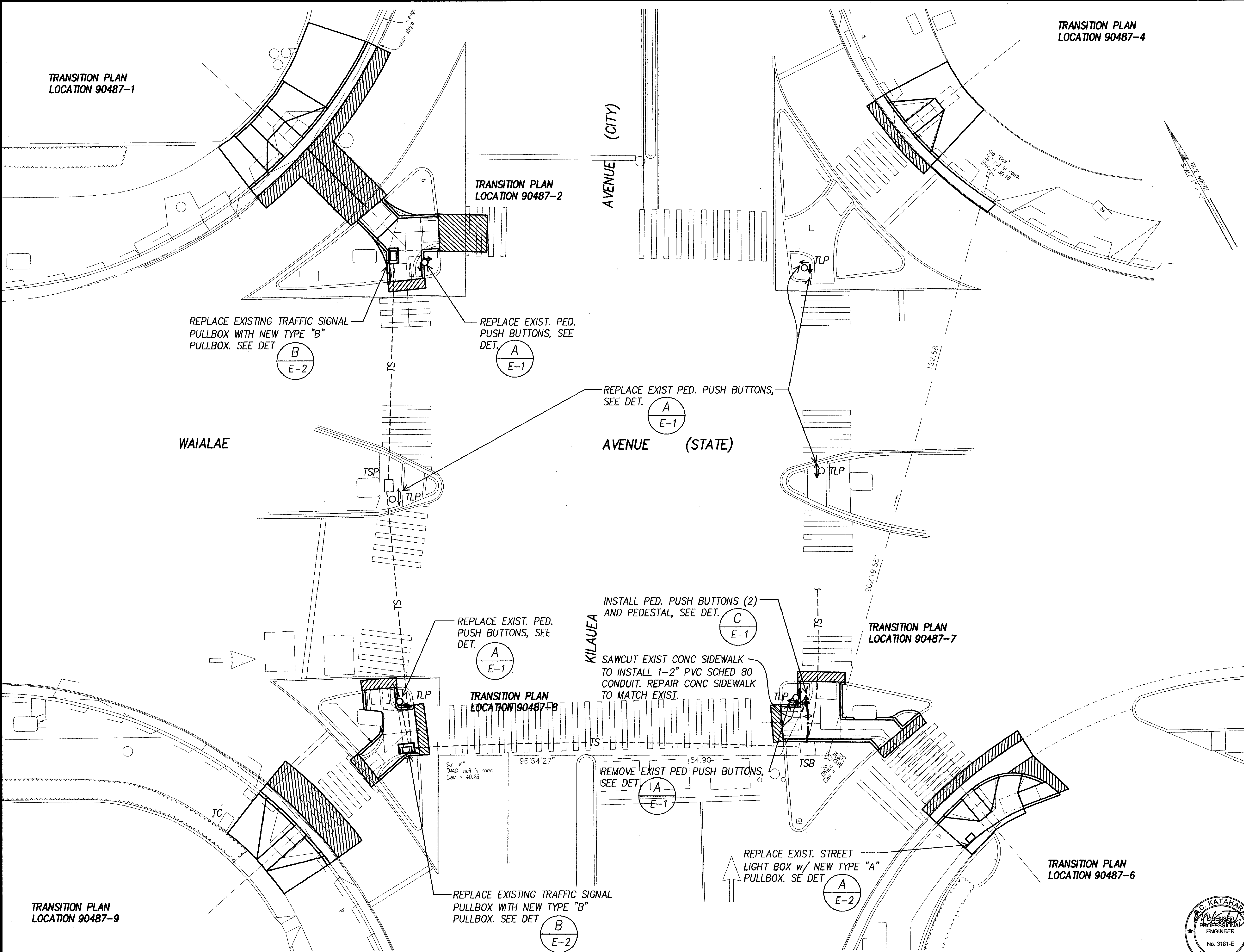
**ELECTRICAL SITE PLAN -  
WAIALAE AVENUE & 21ST AVENUE**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: Aug 2004

SHEET No. E-34 OF 40 SHEETS

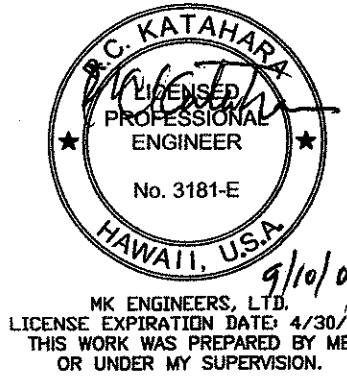
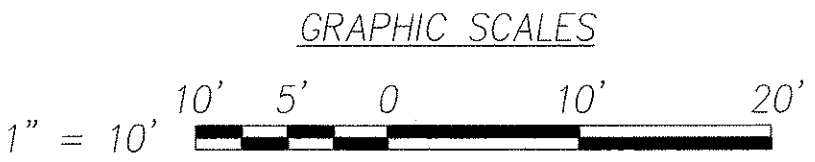


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	175	180



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

**ELECTRICAL SITE PLAN - WAIALAE AVENUE & KILAUEA AVENUE**  
**INTERS. ID NO. 90487**  
**SCALE: 1" = 10'**



DTS, C&C HONOLULU DRAWING REVIEWED 1

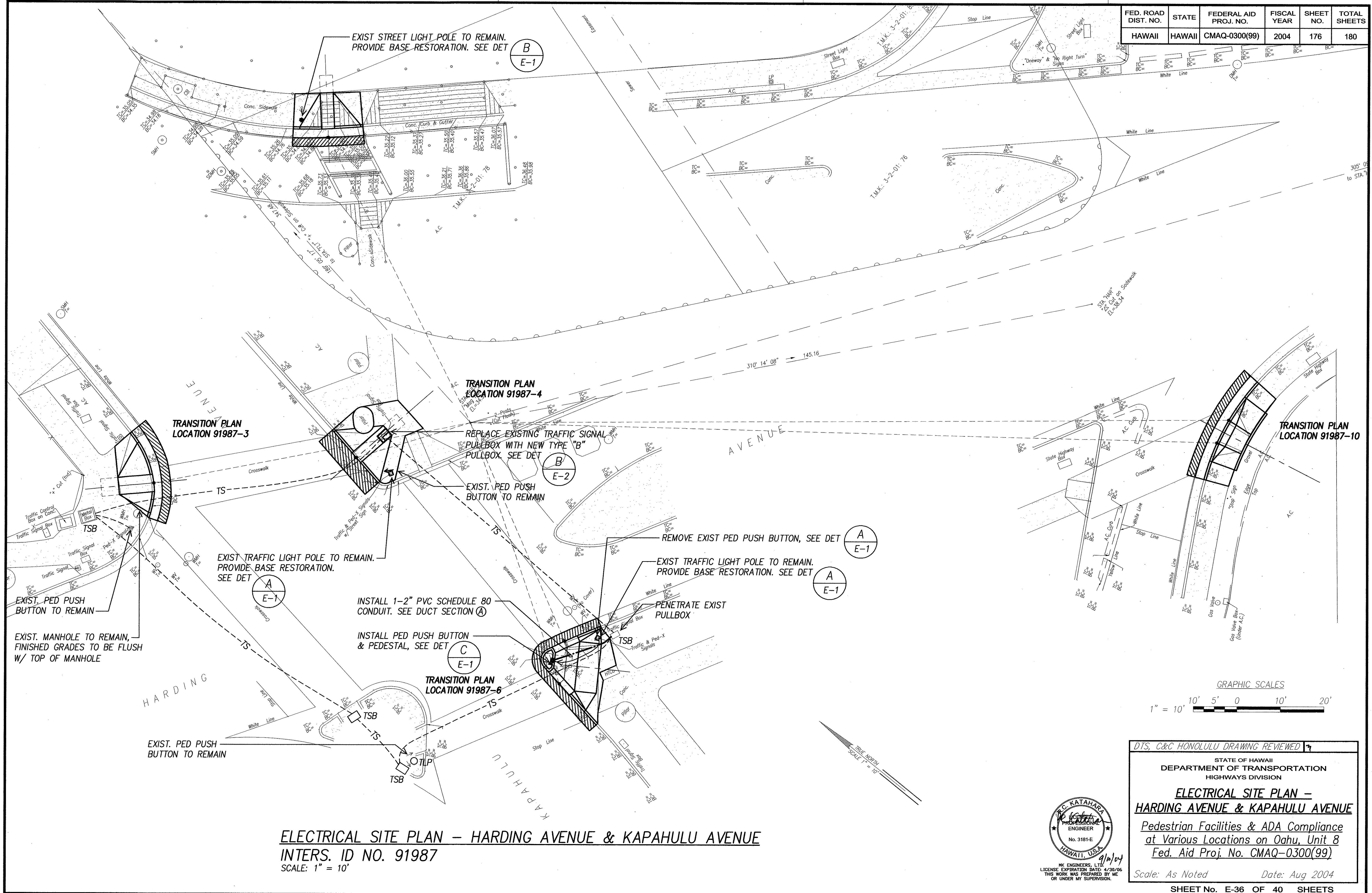
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN -**  
**WAIALAE AVENUE & KILAUEA AVENUE**  
**Pedestrian Facilities & ADA Compliance**  
**at Various Locations on Oahu, Unit 8**  
**Fed. Aid Proj. No. CMAQ-0300(99)**

Scale: As Noted Date: Aug 2004

SHEET No. E-35 OF 40 SHEETS

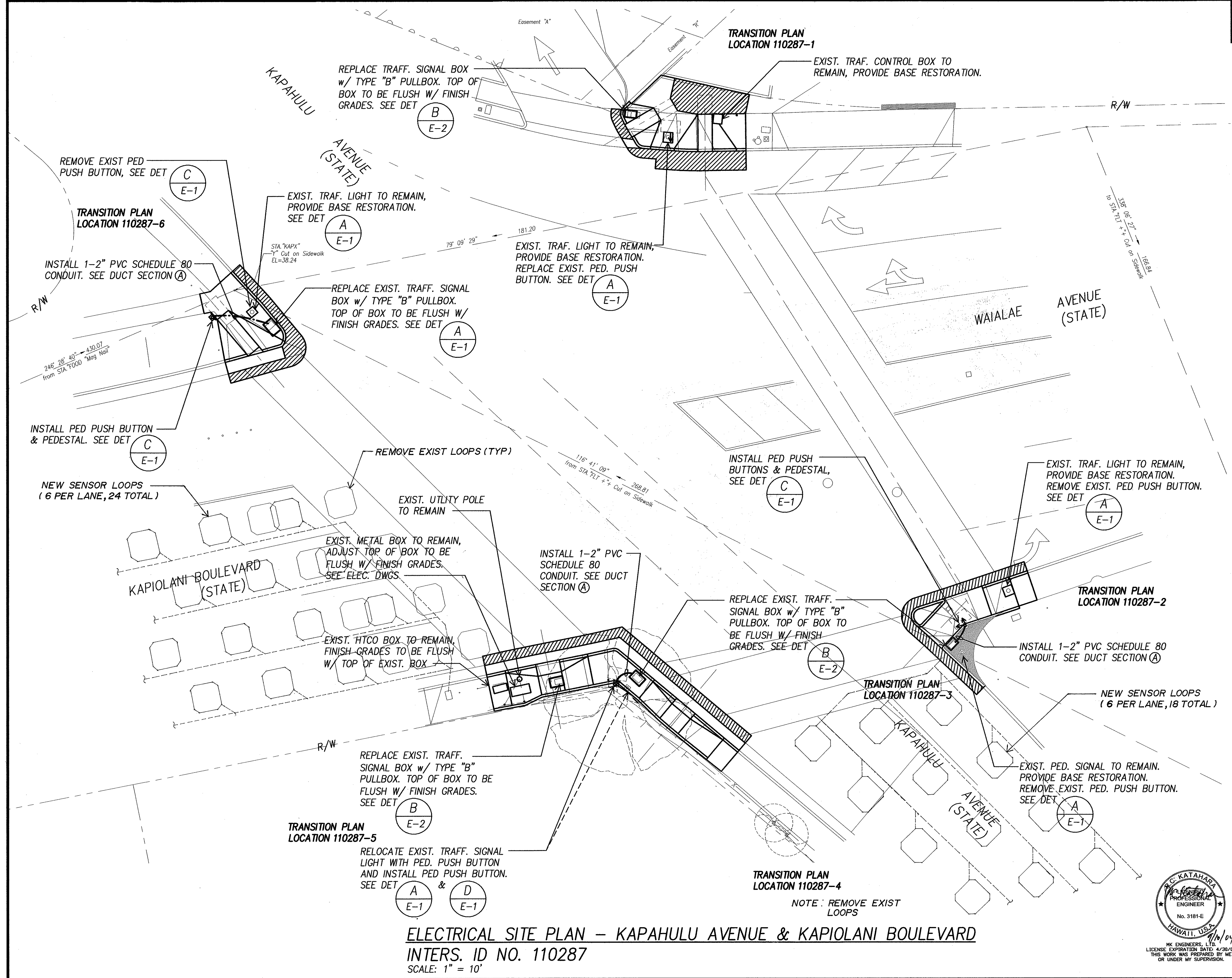
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	176	180



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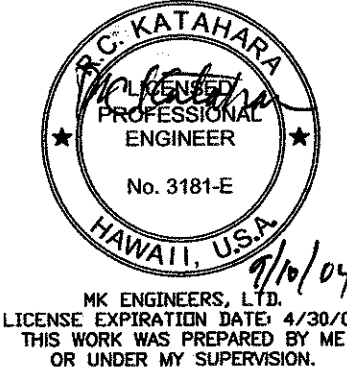


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	177	180



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

**ELECTRICAL SITE PLAN – KAPAHULU AVENUE & KAPIOLANI BOULEVARD**  
**INTERS. ID NO. 110287**  
SCALE: 1" = 10'



DTS, C&C HONOLULU DRAWING REVIEWED **7**

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

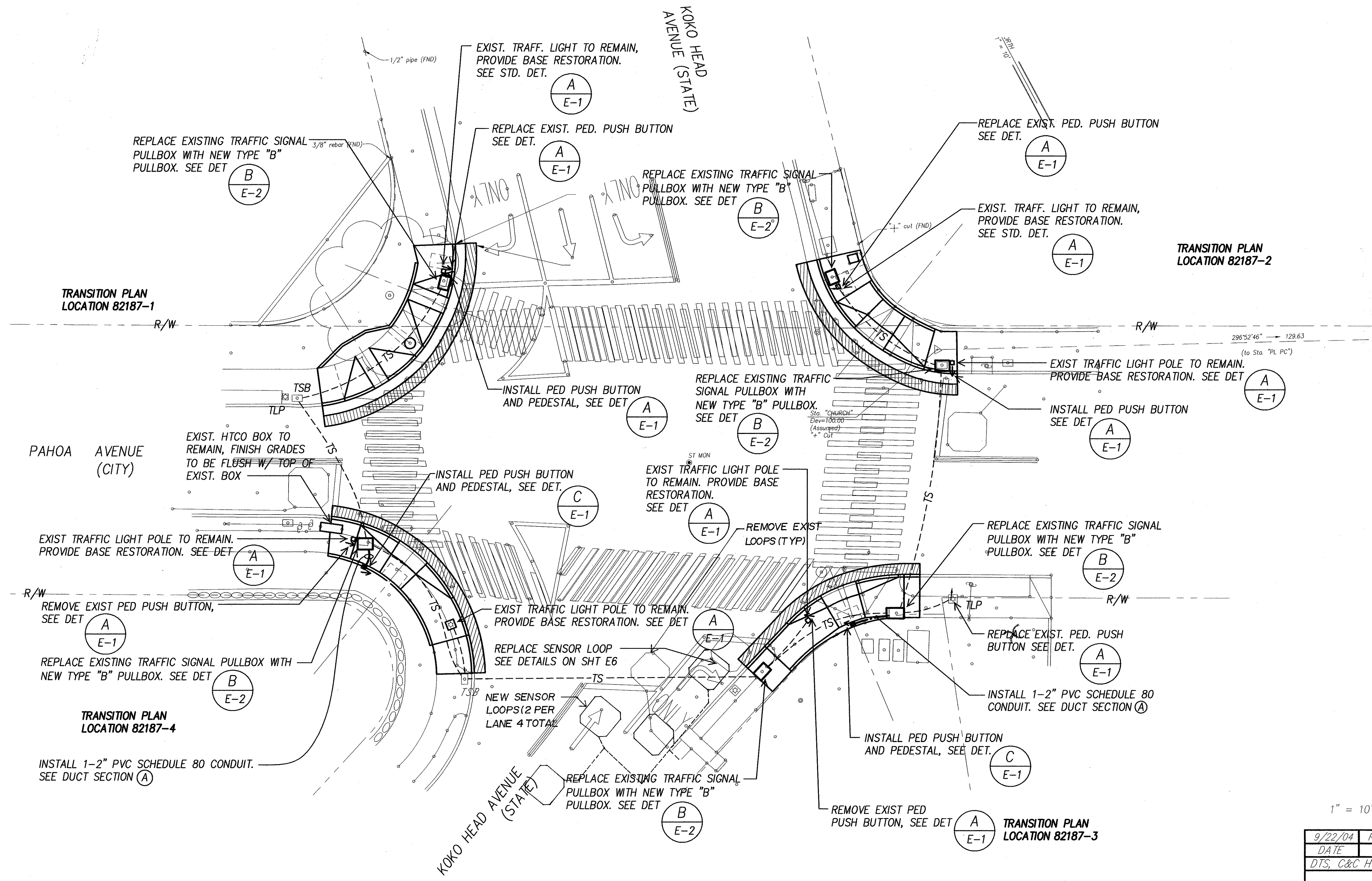
**ELECTRICAL SITE PLAN –**  
**KAPAHULU AVENUE & KAPIOLANI BLVD.**  
*Pedestrian Facilities & ADA Compliance*  
*at Various Locations on Oahu, Unit 8*  
*Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: Aug 2004

SHEET No. E-37 OF 40 SHEETS

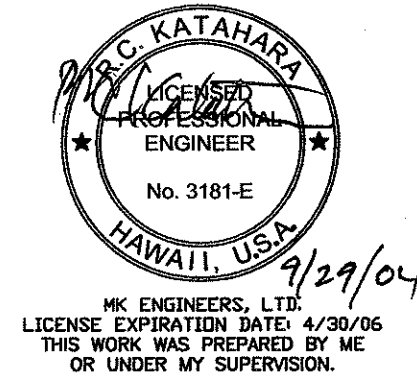
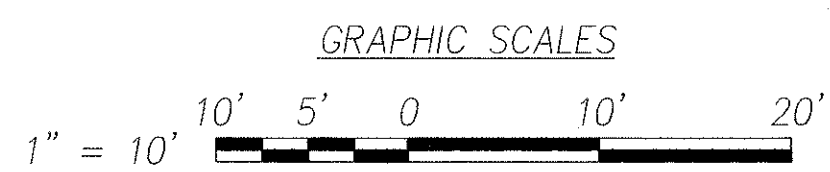


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	ADD. 178	180



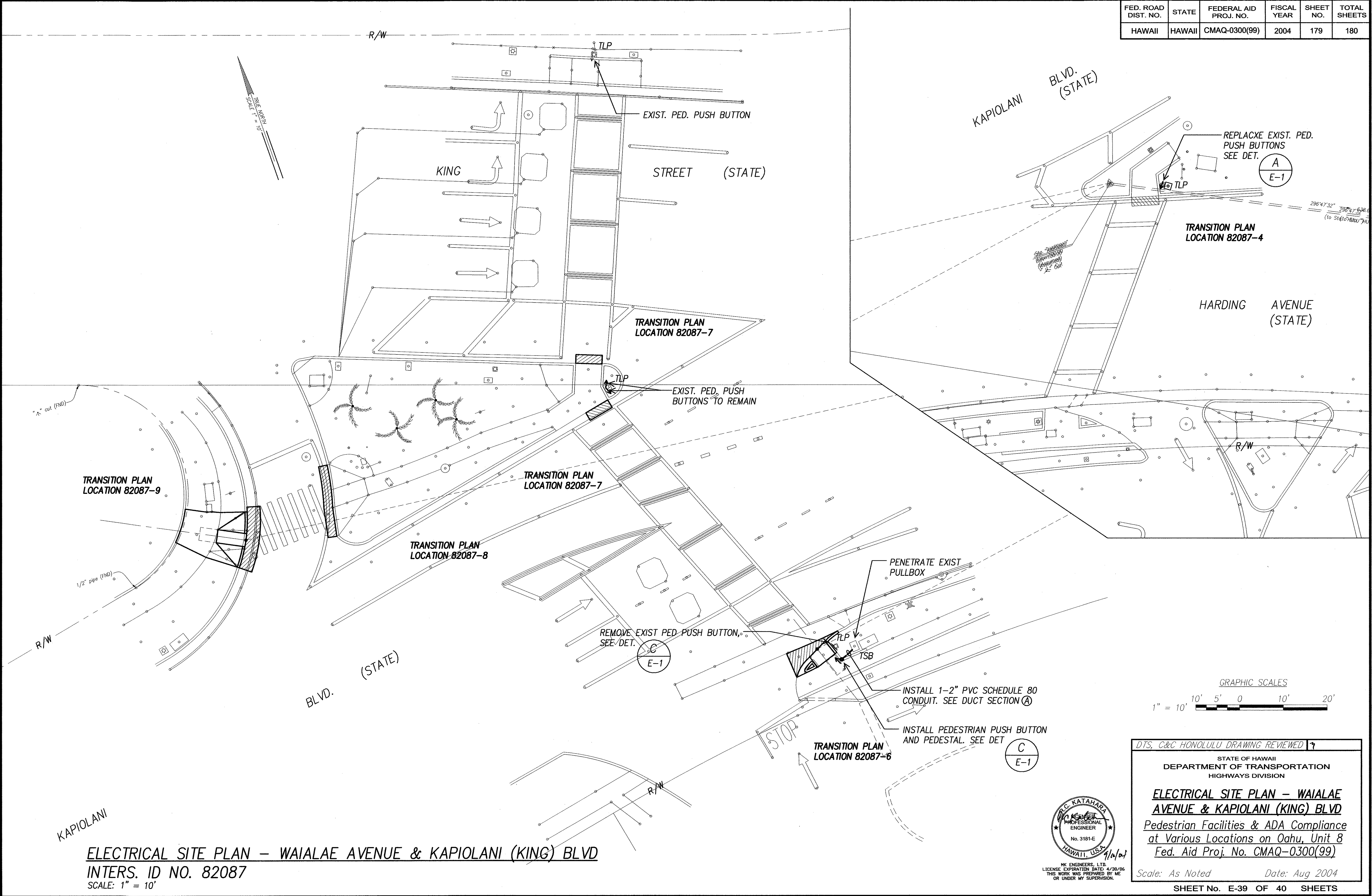
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

**ELECTRICAL SITE PLAN - KOKO HEAD AVENUE & PAHOA AVENUE**  
INTERS. ID NO. 82187  
SCALE: 1" = 10'



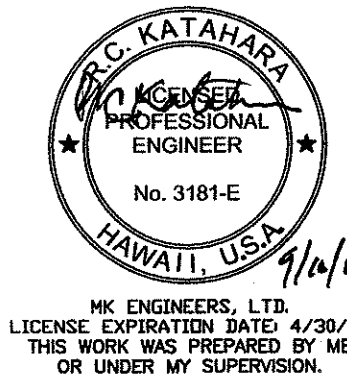
9/22/04	Relocated pbb
DATE	REVISION
DTS, C&C HONOLULU DRAWING REVIEWED	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>ELECTRICAL SITE PLAN - KOKO HEAD AVENUE &amp; PAHOA AVENUE</b>	
Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8 Fed. Aid Proj. No. CMAQ-0300(99)	
Scale: As Noted	Date: Aug 2004
SHEET No. E-38 OF 40 SHEETS	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	179	180



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

**ELECTRICAL SITE PLAN – WAIALAE AVENUE & KAPIOLANI (KING) BLVD**  
**INTERS. ID NO. 82087**  
**SCALE: 1" = 10'**



DTS, C&C HONOLULU DRAWING REVIEWED 7

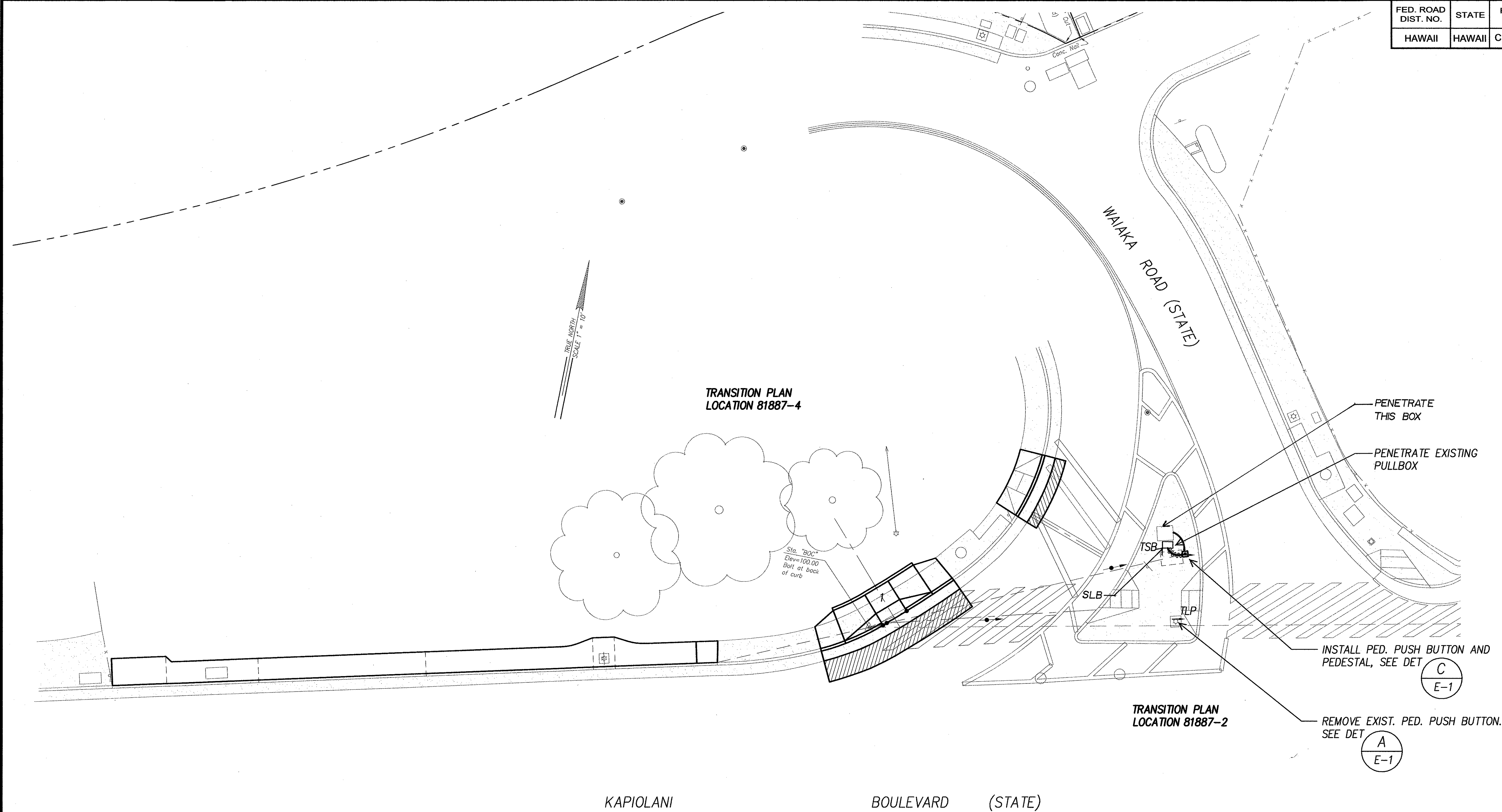
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN – WAIALAE AVENUE & KAPIOLANI (KING) BLVD**  
**Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8**  
**Fed. Aid Proj. No. CMAQ-0300(99)**

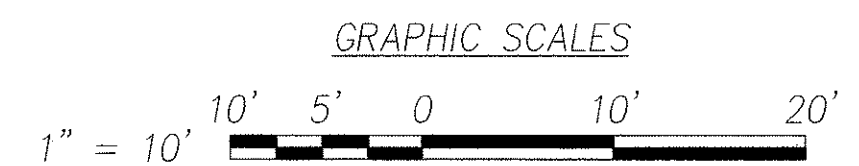
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SHEET No. E-39 OF 40 SHEETS

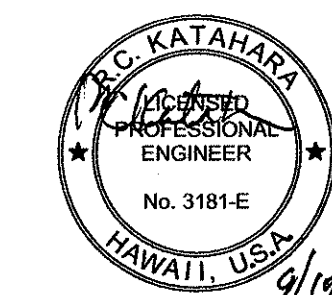
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	CMAQ-0300(99)	2004	180	180



**ELECTRICAL SITE PLAN – WAIAKA ROAD & KAPIOLANI BLVD.**  
**INTERS. ID NO. 81887**  
SCALE: 1" = 10'



SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	



9/19/04  
MK ENGINEERS, L.L.C.  
LICENSE EXPIRATION DATE 4/30/06  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

DTS, C&C HONOLULU DRAWING REVIEWED 17

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ELECTRICAL SITE PLAN**  
**WAIAKA ROAD & KAPIOLANI BLVD.**  
*Pedestrian Facilities & ADA Compliance*  
*at Various Locations on Oahu, Unit 8*  
*Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: Aug 2004

SHEET No. E-40 OF 40 SHEETS