

SCALE: 1 1/2"=1'-0"

ST. NAME SIGN

NEW OR EXIST. SIGN.-SEE DET. 5

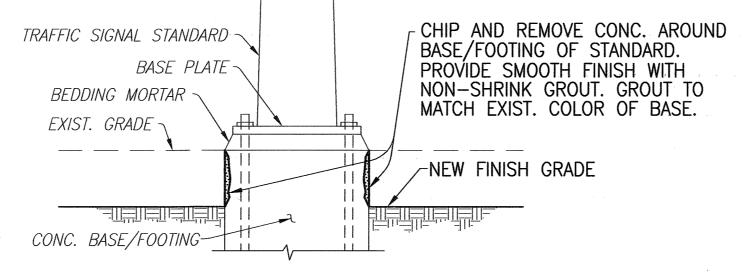
22

5/16" ø x 5' LONG BOLT

CONC. FOOTING —/ 2000 PSI

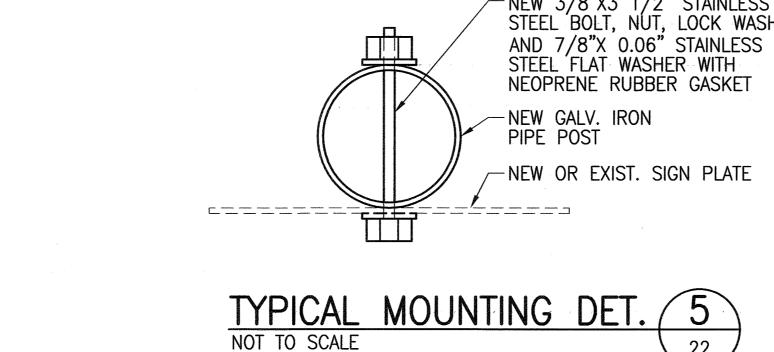
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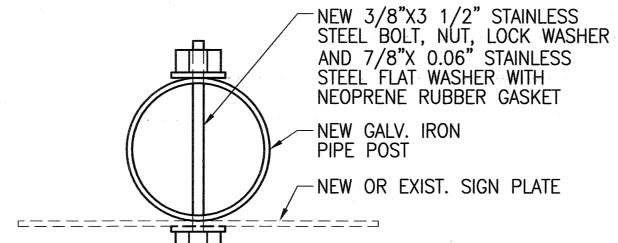
TYP. SIGN POST 4

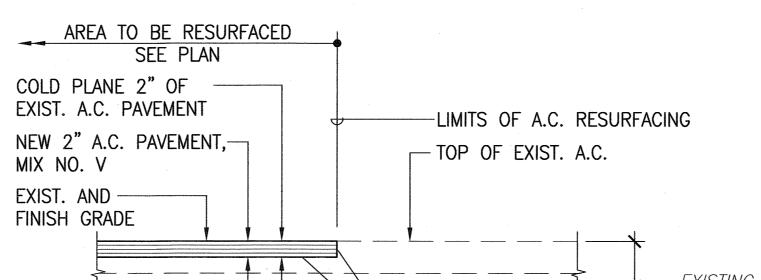


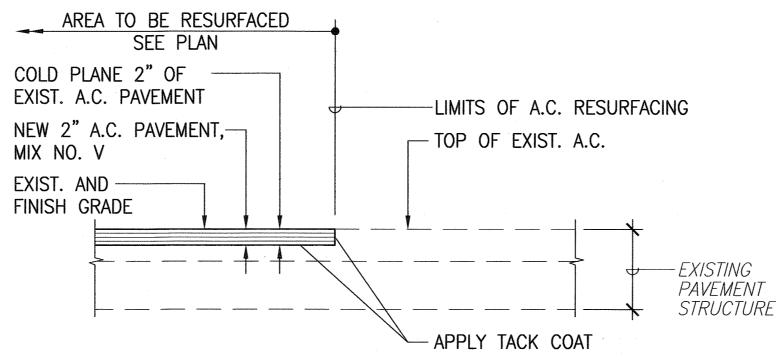


TYP. TRAFFIC SIGNAL & STREET LIGHT (2) STANDARD BASE RESTORATION DET. 22 NOT TO SCALE



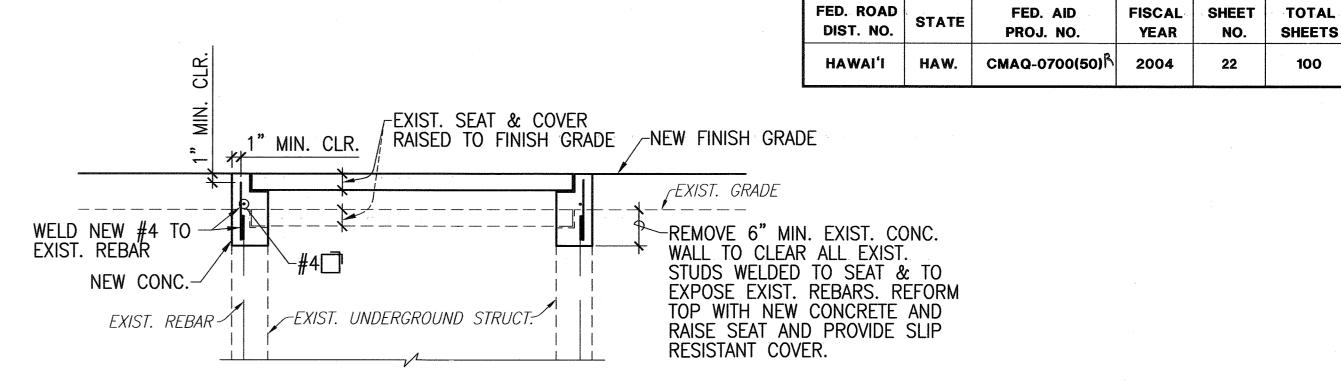




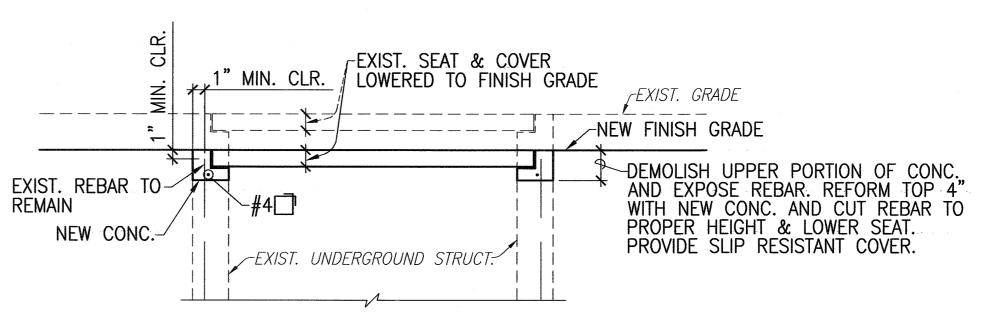




A.C. PAV'T RESURFACING DETAIL

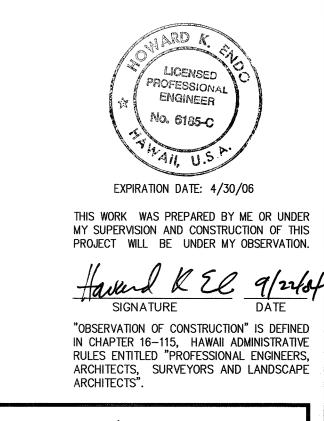


## RAISED BOX & SEAT ADJUSTMENT



LOWERED BOX & SEAT ADJUSTMENT





YEAR

2004

NO.

22

SHEETS

100

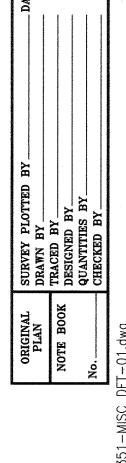
STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

MISCELLANEOUS DETAILS -

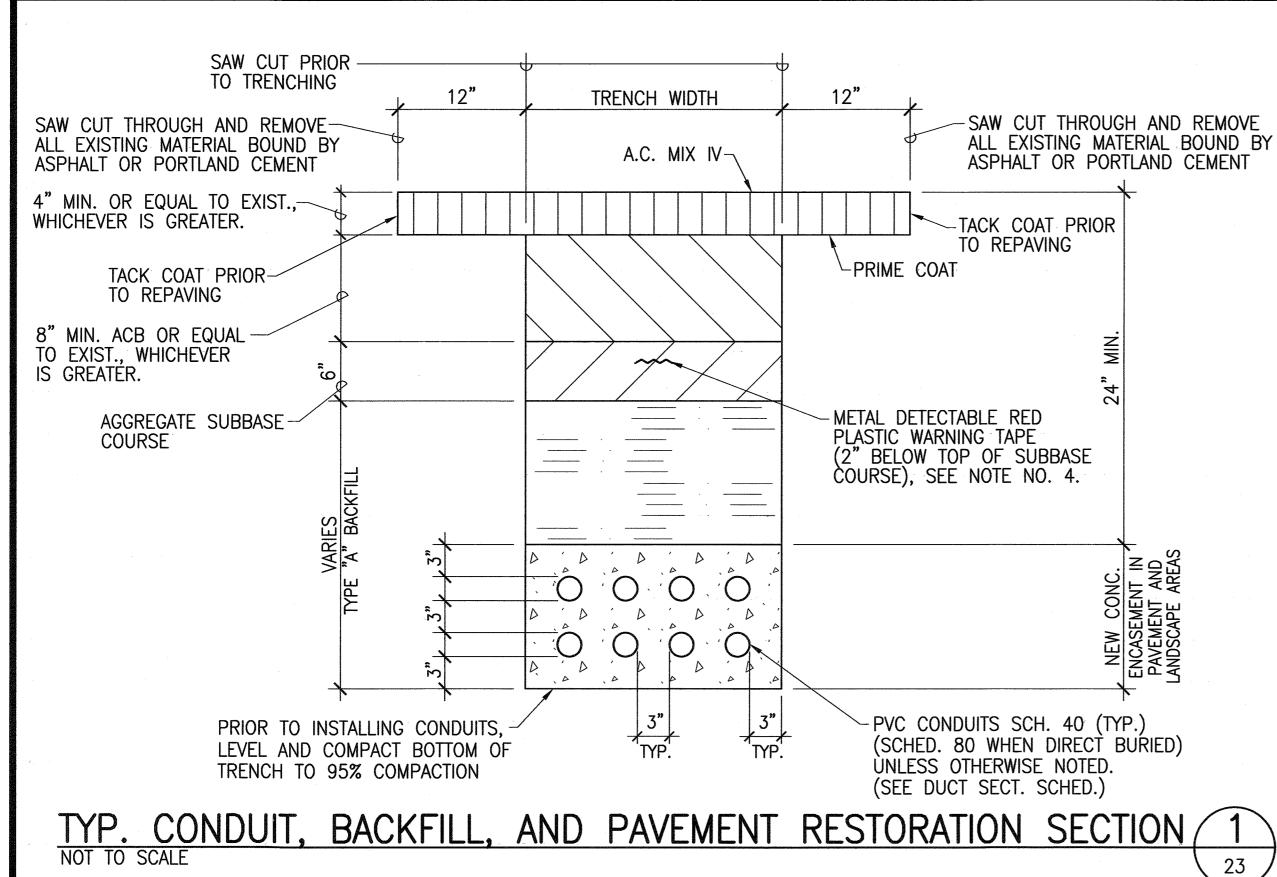
Pedestrian Facilities & ADA Compliance <u>at Various Locations on Kauaʻi</u> Fed. Aid Proj. No. CMAQ-0700(50) R

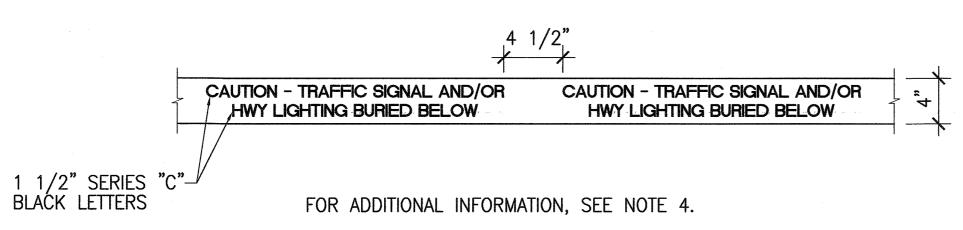
Date: **AUG. 13, 2004** Scale: AS NOTED

SHEET No. 1 OF 4 SHEETS

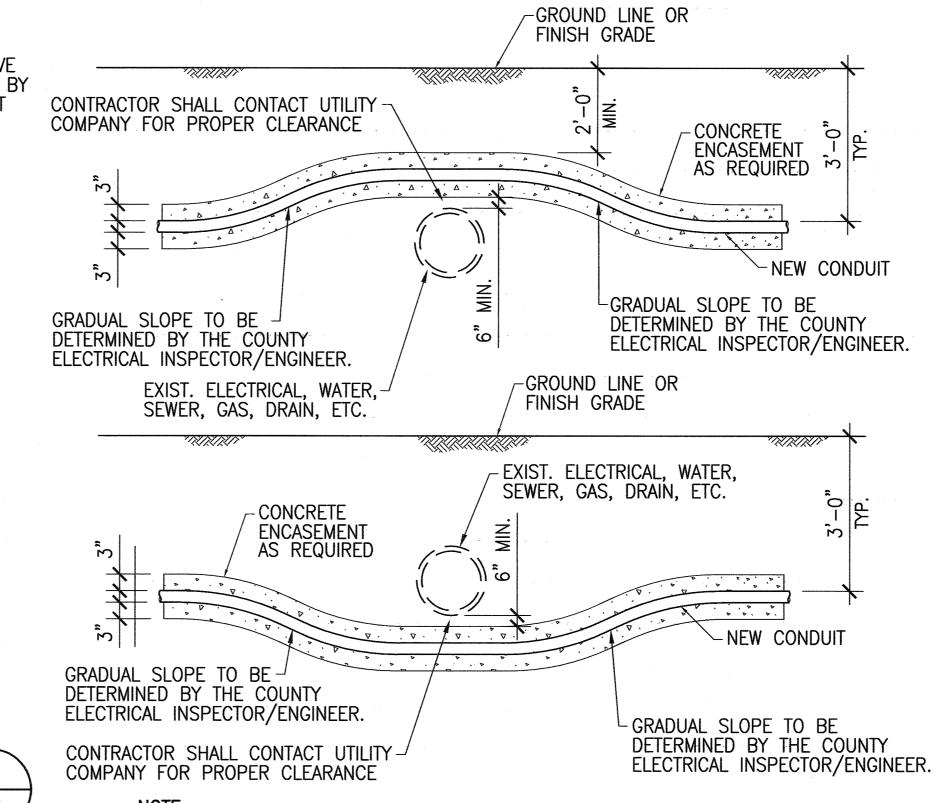


22





METALLIC DETECTABLE
RED PLASTIC WARNING TAPE 3
NOT TO SCALE



NOTE:

THE CONTRACTOR SHALL PROVIDE 6" MINIMUM VERTICAL CLEARANCE BETWEEN WATER MAINS AND THE TRAFFIC SIGNAL CONDUITS OR CONCRETE ENCASEMENT (12" VERTICAL CLEARANCES FOR STRUCTURES LARGER THAN 16") AND 2' VERTICAL CLEARANCE BETWEEN SEWER MAINS AND THE TRAFFIC SIGNAL CONDUIT (OR CONCRETE ENCASEMENT). IF CONDUIT IS PLACED BELOW SEWER LINE, PROVIDE 6 L.F. 6" REINFORCED CONCRETE JACKET ON THE SEWER LINE PER CITY AND COUNTY OF HONOLULU STANDARD DETAIL S-5.

CONDUIT BY-PASS DETAIL AT VARIOUS UTILITIES (

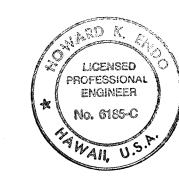
NOT TO SCALE

FED. ROAD DIST. NO. STATE FED. AID PROJ. NO. FISCAL SHEET NO. SHEETS

HAWAI'I HAW. CMAQ-0700(50) 2004 23 100

## NOTES:

- 1. TRENCH BACKFILL MATERIAL "A" BEACH SAND, EARTH OR EARTH AND GRAVEL. IF EARTH AND GRAVEL USED, THE MAXIMUM SHALL CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICLES. MAXIMUM 8" LOOSE FILL PER LIFT. OBTAIN 95% COMPACTION FOR EACH LIFT.
- 2. BASE COURSE AND SUB-BASE COURSE MATERIAL SHALL BE PER 1994 STATE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- 3. IF TRENCH IS LOCATED ON UNPAVED AREA, THE CONTRACTOR SHALL REPLACE 8" A.C. BASE COURSE AND 4" A.C. PAVEMENT WITH TYPE "A" BACKFILL MATERIAL.
- 4. THE METAL DETECTABLE RED PLASTIC WARNING TAPE SHALL BE A MINIMUM 5 MILS THICK AND 4" WIDE WITH A CONTINUOUS METALLIC BACKING AND CORROSION RESISTANT 1± MIL THICK FOIL CORE. THE MESSAGE ON THE TAPE SHALL READ, "CAUTION TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW", UTILIZING 1 1/2 INCHES SERIES "C" BLACK LETTERING. THE MESSAGE WILL BE REPEATED WITH A 4 1/2 INCH SPACING BETWEEN TOP LINE OF MESSAGE AND START OF NEXT REPEAT. TAPE SHALL BE CONSIDERED INCIDENTAL TO DUCTLINE COST.
- 5. THE CONTRACTOR MAY BEGIN BACKFILLING THE CONDUIT TRENCH WHEN THE CONCRETE REACHES 3,000 PSI COMPRESSIVE STRENGTH AFTER 3 DAYS.
- 6. MAXIMUM FOUR (4) CONDUITS PER ROW FOR MULTIPLE CONDUIT DUCT SECTION.
- 7. AFTER INSTALLING ALL THE TRAFFIC SIGNAL CABLES, THE CONTRACTOR SHALL DUCT SEAL ALL CONDUITS IN THE PULLBOXES, TRAFFIC SIGNAL STANDARDS AND TRAFFIC SIGNAL CONTROLLER CABINET CONCRETE BASE. THE DUCT SEAL MATERIAL SHALL BE APPROVED BY THE TRAFFIC SIGNAL INSPECTOR/ENGINEER AND SHALL NOT BE PAID FOR SEPARATELY BUTCONSIDERED INCIDENTAL TO THE DIRECT BURIED AND/OR CONCRETE ENCASED CONDUITS.
- 8. AT SIDEWALKS, REPLACE THE ENTIRE MODULAR SECTION OF SIDEWALK (FROM SCORE LINE TO SCORE LINE). TRENCH WIDTH PATCHES IN SIDEWALK SHALL NOT BE ACCEPTED. REPLACE CURBS AND GUTTERS IN SIMILAR MANNER.



EXPIRATION DATE: 4/30/06

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Howard KEl 9/22/6 SIGNATURE DATE

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

DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

MISCELLANEOUS DETAILS - 2

Pedestrian Facilities & ADA Compliance
at Various Locations on Kaua'i
Fed. Aid Proj. No. CMAQ-0700(50) R

Scale: AS NOTED

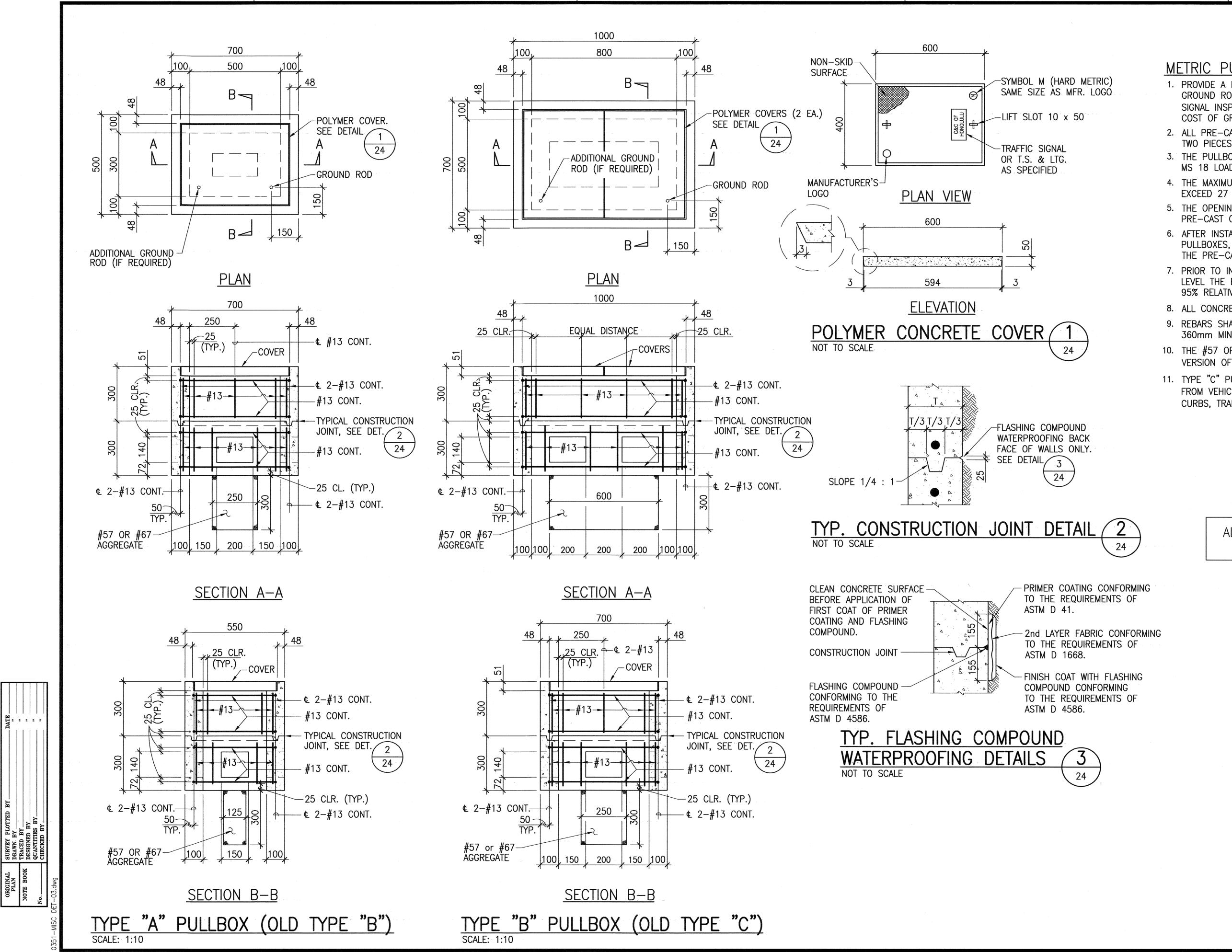
Date: **AUG. 13, 2004** 

SHEET No. 2 OF 4 SHEETS

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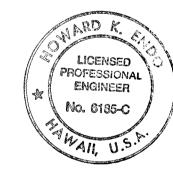
FED. ROAD DIST. NO. STATE FED. AID PROJ. NO. FISCAL SHEET NO. SHEETS

HAWAI'I HAW. CMAQ-0700(50) 2004 24 100

## METRIC PULLBOX NOTES:

- 1. PROVIDE A MINIMUM OF ONE 16m DIA. x 2.5m COPPERWELD GROUND ROD IN EACH PULLBOX. WHEN DIRECTED BY THE TRAFFIC SIGNAL INSPECTOR/ENGINEER, INSTALL ADDITIONAL GROUND RODS. COST OF GROUND RODS SHALL BE INCIDENTAL TO THE PULLBOXES.
- 2. ALL PRE-CAST CONCRETE PULLBOXES SHALL BE MANUFACTURED IN TWO PIECES.
- 3. THE PULLBOX WITH COVER SHALL BE CAPABLE OF SUPPORTING ON MS 18 LOADING.
- 4. THE MAXIMUM WEIGHT OF THE PULLBOX COVER SHALL NOT EXCEED 27 KILOGRAMS.
- 5. THE OPENINGS FOR THE CONDUITS ON ALL PULLBOXES SHALL BE PRE-CAST CONCRETE KNOCKOUTS.
- 6. AFTER INSTALLING THE CONDUITS IN THE OPENINGS OF THE PULLBOXES, THE CONTRACTOR SHALL FILL THE EXCESS OPENING IN THE PRE-CAST KNOCKOUTS WITH CONCRETE MORTAR.
- 7. PRIOR TO INSTALLING THE PULLBOXES, THE CONTRACTOR SHALL LEVEL THE BOTTOM OF THE TRENCH AND ACHIEVE A MINIMUM OF 95% RELATIVE COMPACTION OF THE BOTTOM OF THE TRENCH.
- 8. ALL CONCRETE SHALL BE CLASS A (25MPa, MIN.).
- 9. REBARS SHALL BE GRADE 300 AND ALL LAPPED SPLICES SHALL BE 360mm MINIMUM.
- 10. THE #57 OR #67 SIZE AGGREGATE SHALL CONFORM TO THE LATEST VERSION OF AASHTO M43 (ASTM D 448).
- 11. TYPE "C" PULLBOX SHALL BE INSTALLED IN A LOCATION PROTECTED FROM VEHICULAR TRAFFIC (I.E. RAISED SIDEWALK, BEHIND A.C. CURBS, TRAFFIC SIGNAL STANDARDS OR PIPE GUARDS).

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.



EXPIRATION DATE: 4/30/06

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PROJECT WILL BE UNDER MY OBSERV.

Havenal & El 9/22

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DEPARTMENT OF TRANSPORTATION

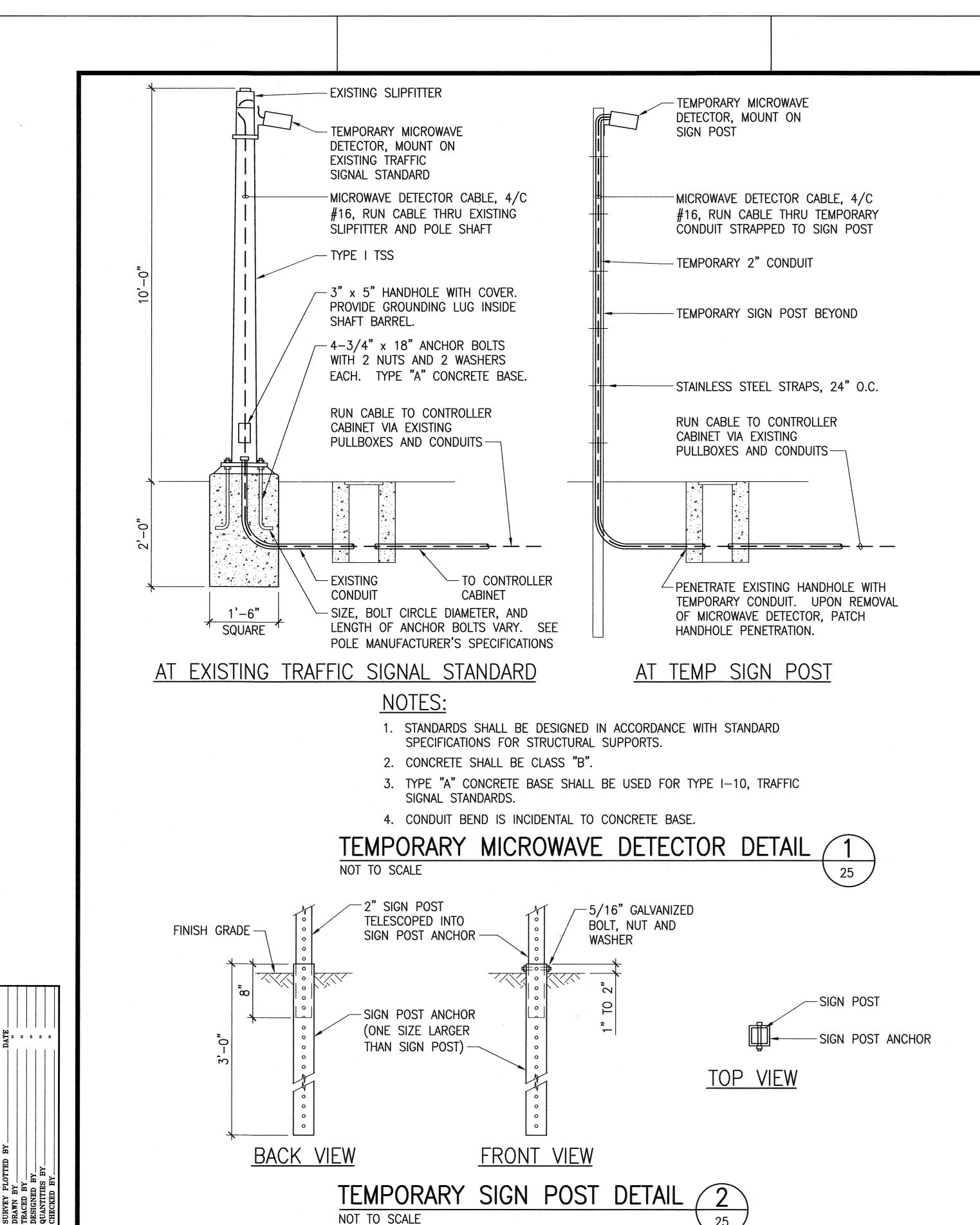
MISCELLANEOUS DETAILS - 3

Pedestrian Facilities & ADA Compliance at Various Locations on Kaua'i
Fed. Aid Proj. No. CMAQ-0700(50) R

Scale: AS NOTED

SHEET No. 3 OF 4 SHEETS

Date: AUG. 13, 2004



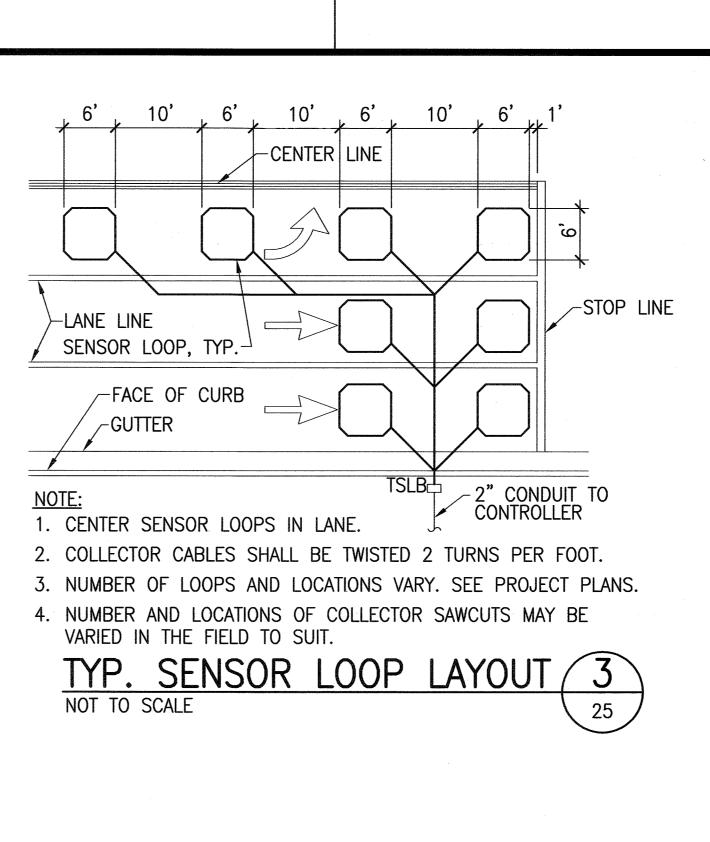
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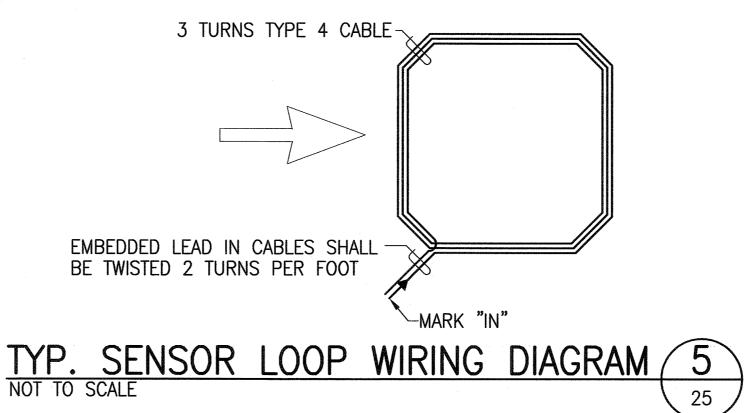
MICROWAVE DETECTOR SHALL BE OPERATIONAL BEFORE EXISTING

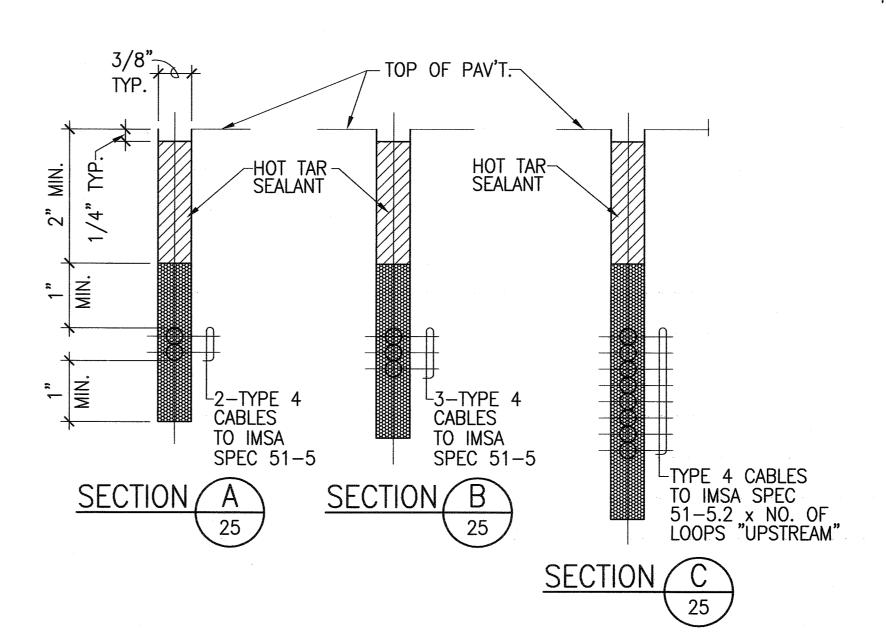
2. REMOVE MICROWAVE DETECTOR AND ALL ASSOCIATED CABLES AFTER

NEW LOOP DETECTORS ARE INSTALLED AND OPERATIONAL.

LOOP DETECTORS ARE DEACTIVATED.



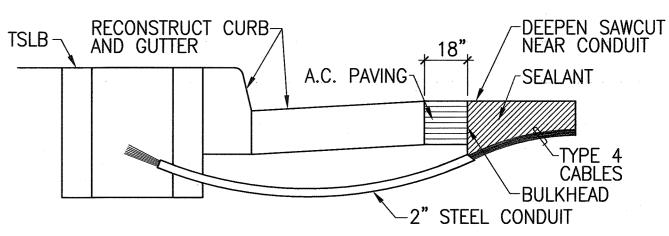




TYP. SECTION THROUGH SENSOR LOOP 7
NOT TO SCALE

FED. ROAD DIST. NO. STATE FED. AID PROJ. NO. FISCAL SHEET NO. SHEETS

HAWAI'I HAW. CMAQ-0700(50) 2004 25 100



## NOTES ON CONSTRUCTION AT END OF SAWCUT:

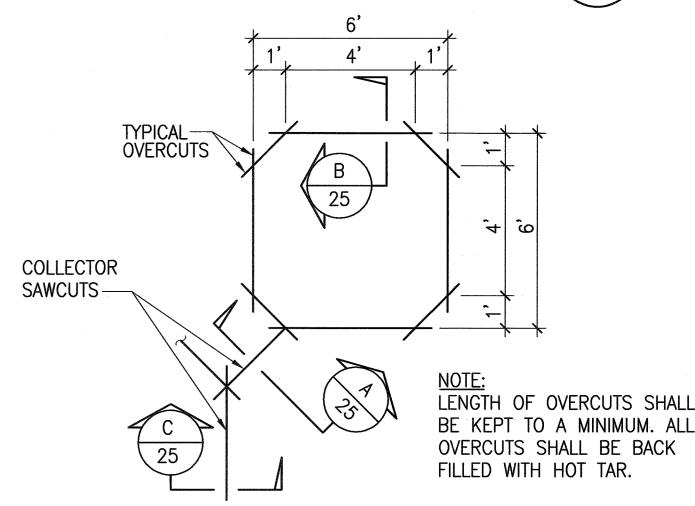
- 1. SEAL ROADWAY END OF CONDUIT AFTER INSTALLATION OF CONDUCTORS.
- 2. INSTALL BULKHEAD ACROSS CONDUIT TRENCH.
- 3. PLACE HOT TAR IN SAWCUT.
- 4. BACKFILL OVER CONDUIT WITH NEW A.C.

5. RECONSTRUCT CURB AND GUTTER AS REQUIRED.

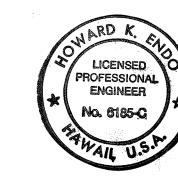
SENSOR LOOP INSTALLATION
AT EDGE OF ROADWAY

NOT TO SCALE

4
25



TYP. SENSOR LOOP SAWCUT DET.



EXPIRATION DATE: 4/30/06

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MY SUPERVISION AND CONSTRUCTION OF THIS
BROJECT WILL BE LINDER MY OBSERVATION

Howard KEL 9/22/64
SIGNATURE DATE
"OBSERVATION OF CONSTRUCTION" IS DEFINED

IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS".

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS — 4

<u>Pedestrian Facilities & ADA Compliance</u> <u>at Various Locations on Kauaʻi</u> <u>Fed. Aid Proj. No. CMAQ—0700(50)</u> R

Scale: AS NOTED Date: AUG. 13, 2004

SHEET No. 4 OF 4 SHEETS

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