

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIE-01-98	1998	10	13

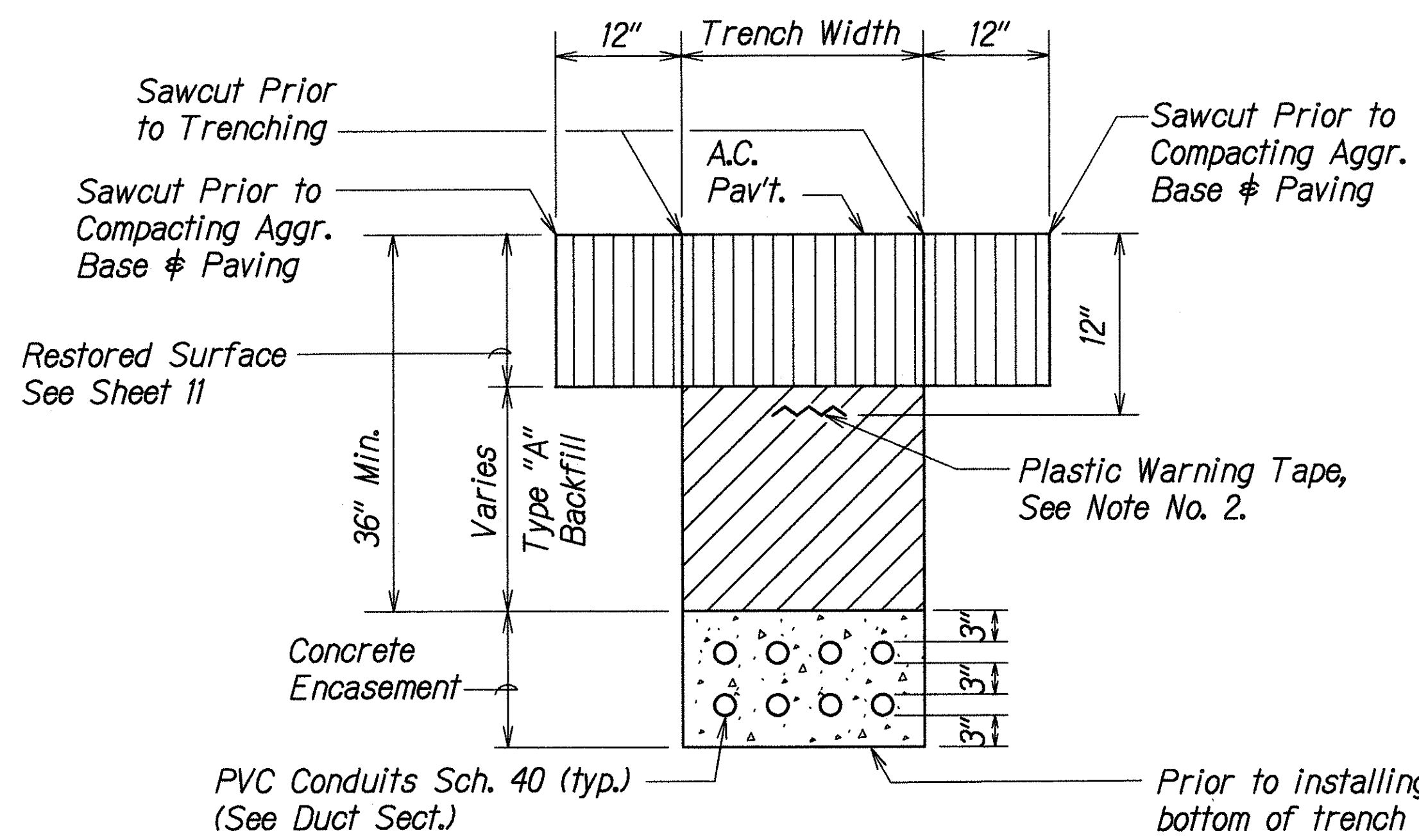
STATE RIGHT-OF-WAY BACKFILL NOTES

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.

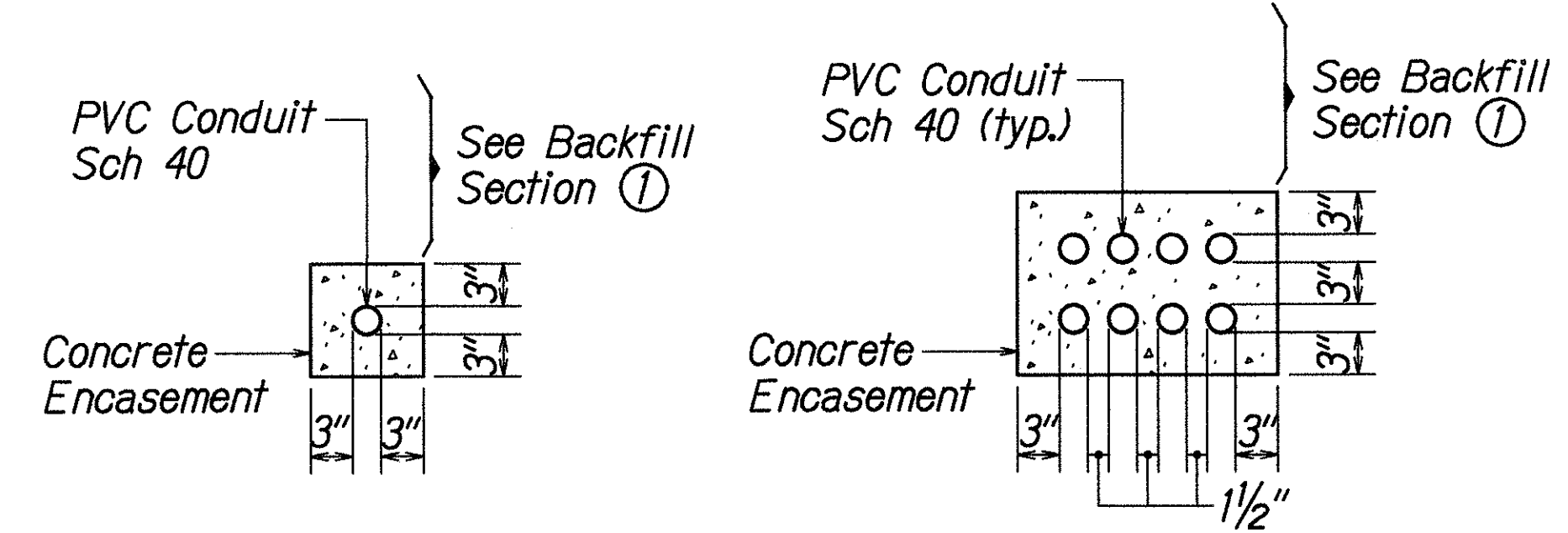
Concrete
3000 psi compressive strength @ 3 days.

NOTE: Base Course & Sub-Base Course per 1994 State Standard Specifications for Highway Construction.

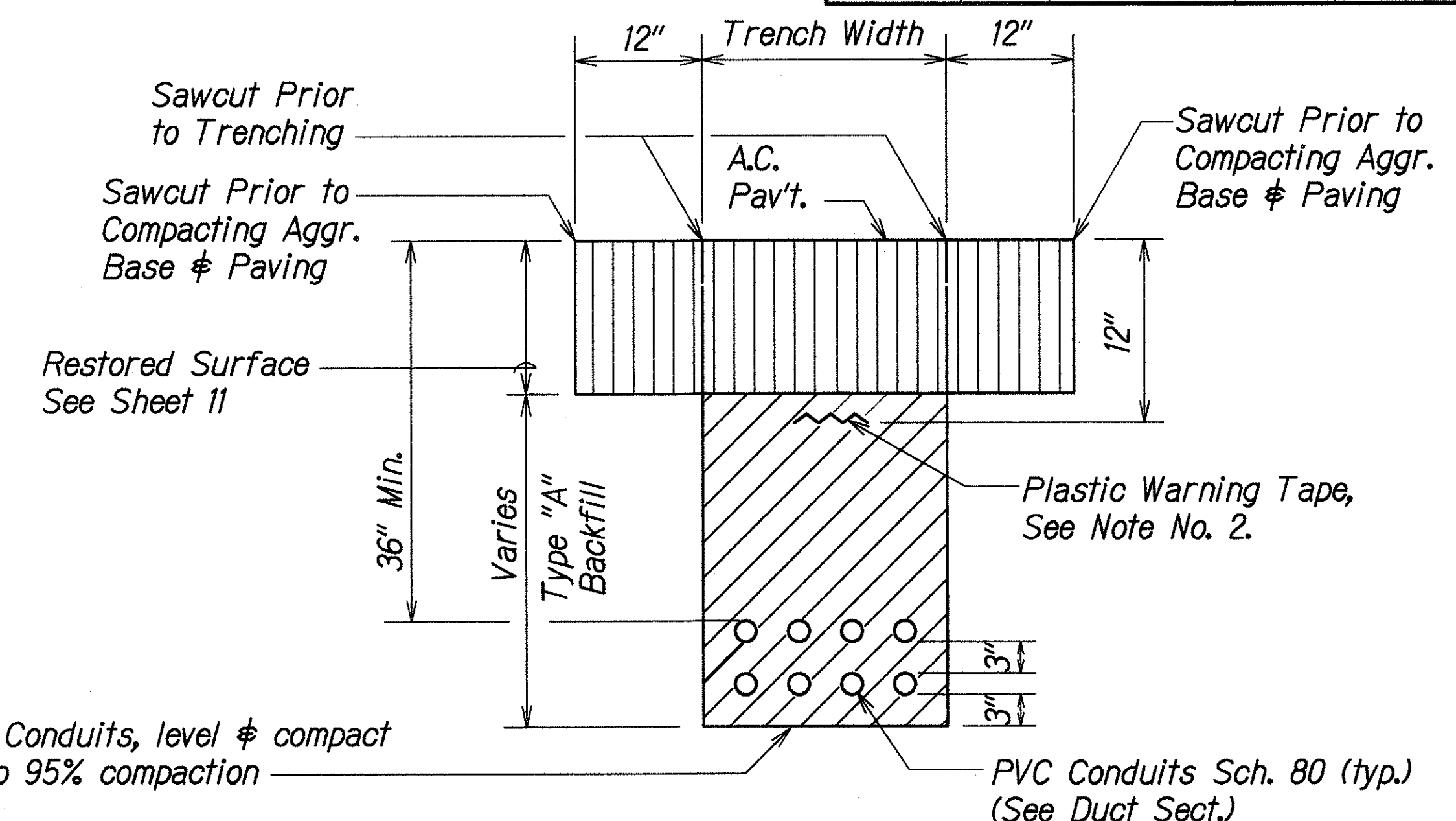
- GENERAL NOTES
- The Metal Detectable High Fluorescence Yellow Plastic Warning Tape shall be a minimum 5 mils thick and 4" wide with a continuous metallic backing and corrosion resistant 1 mil thick foil core. The tape shall read, "CAUTION - STATE TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW," utilizing 3 inch series "C" lettering. The message will be repeated with a 12-inch spacing between the end and beginning of repeated message.
 - The Contractor may begin backfilling the conduit trench when the concrete reaches 3000 psi compressive strength after 3 days.



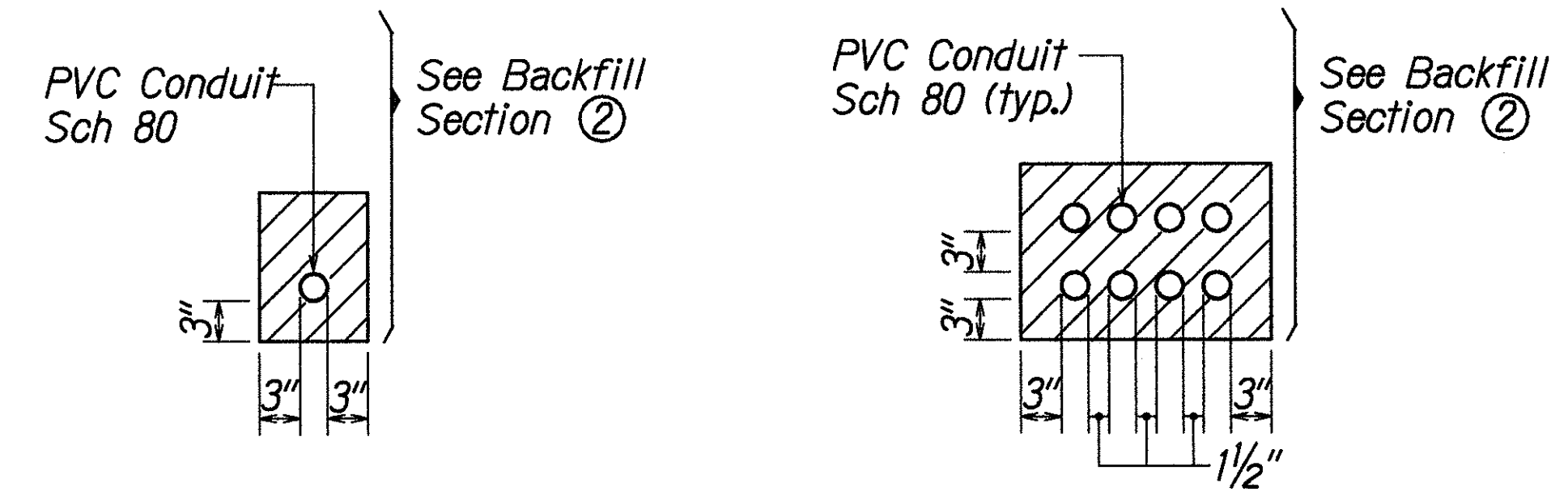
① TYPICAL BACKFILL SECTION WITH CONCRETE ENCASED DUCTS



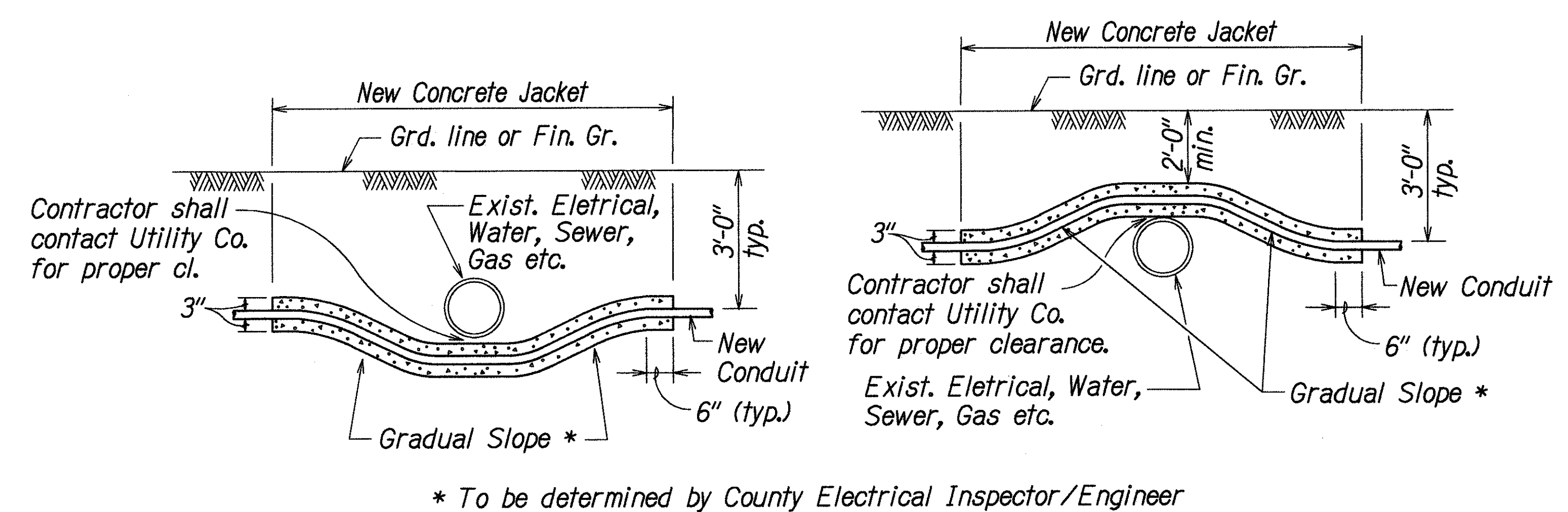
SINGLE CONDUIT MULTIPLE CONDUIT
DUCT SECTIONS - CONC. ENCASED



② TYPICAL BACKFILL SECTION DIRECT BURIED



SINGLE CONDUIT MULTIPLE CONDUIT
DUCT SECTIONS - DIRECT BURIED



* To be determined by County Electrical Inspector/Engineer
CONDUIT BY-PASS DETAIL AT VARIOUS UTILITIES
Not to Scale



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

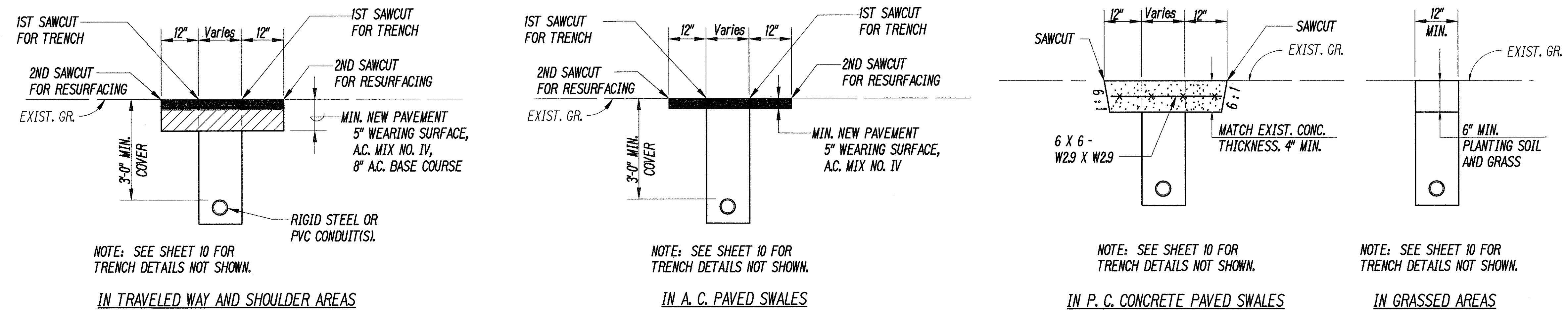
TRAFFIC SIGNAL DETAILS

INTERSTATE ROUTE H-1, WAI'AU I. C.
Traffic Signals at Moanalua Road
Project No. HIE-01-98

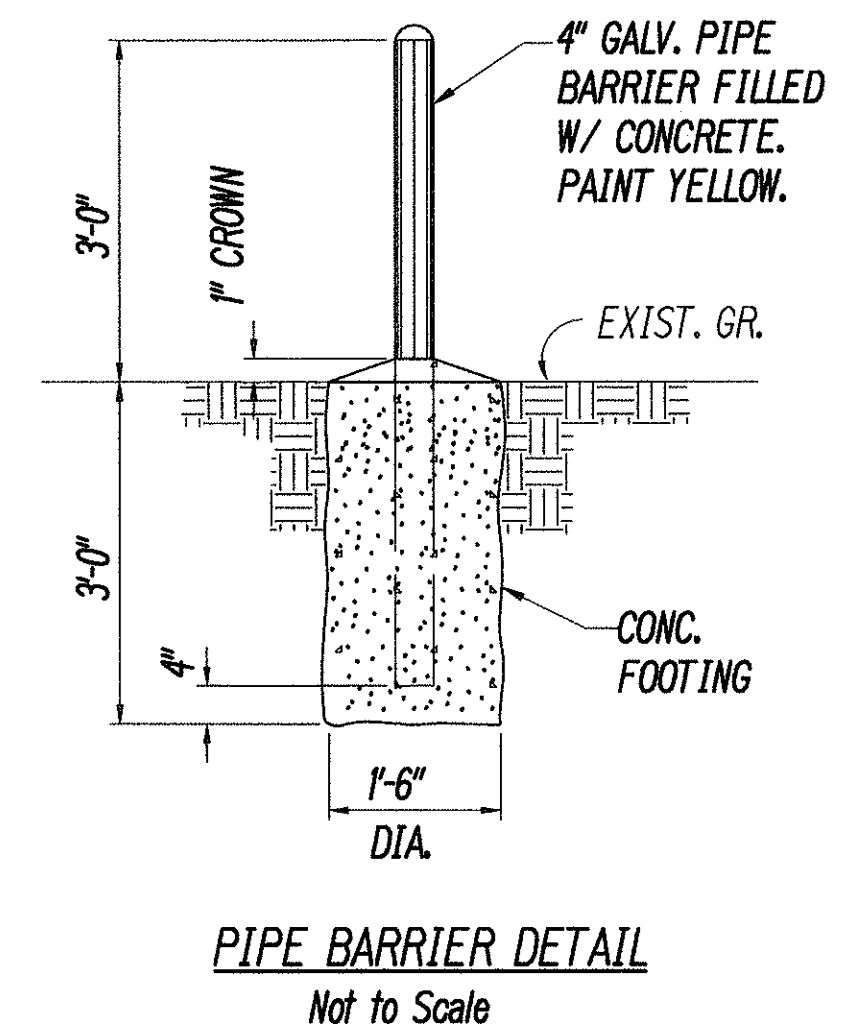
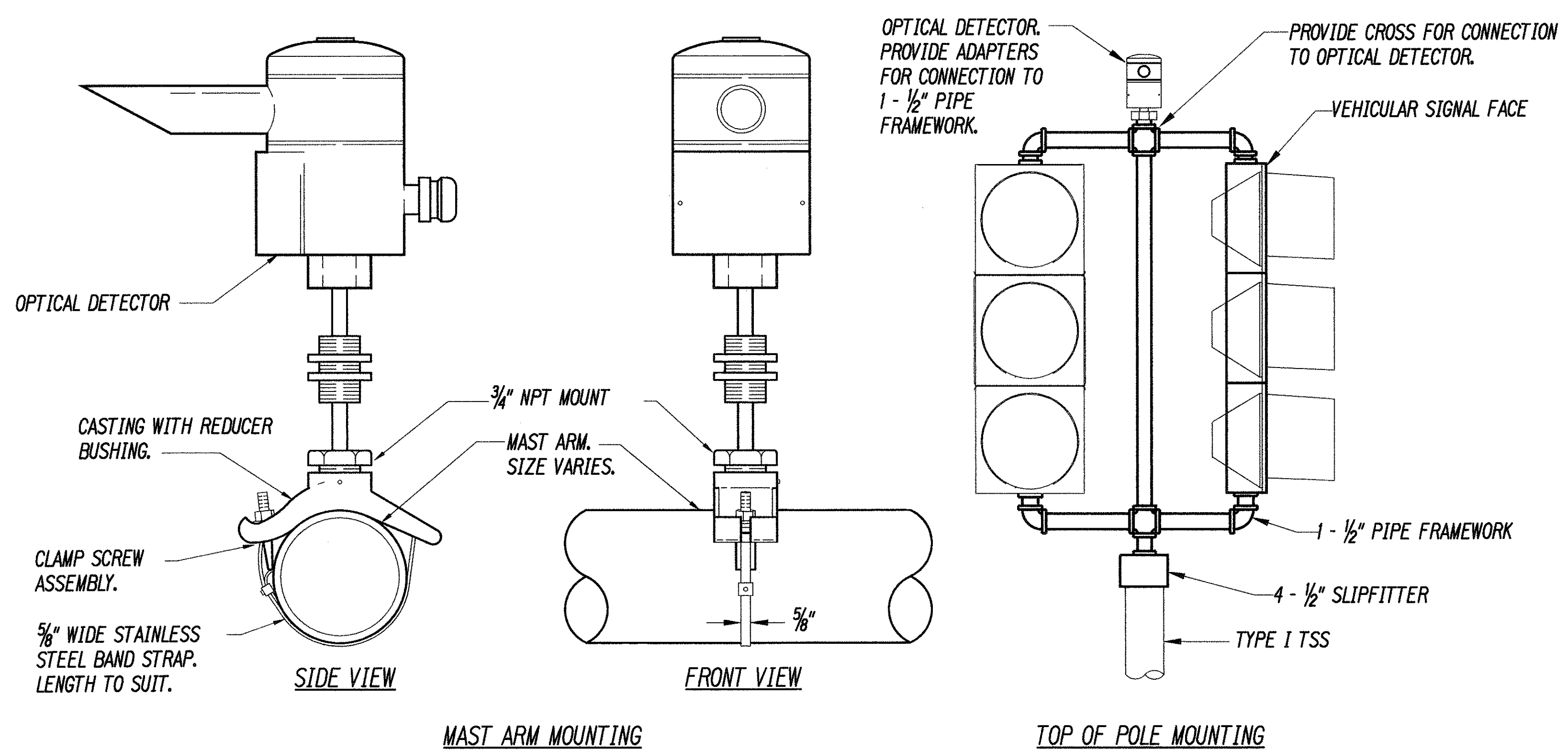
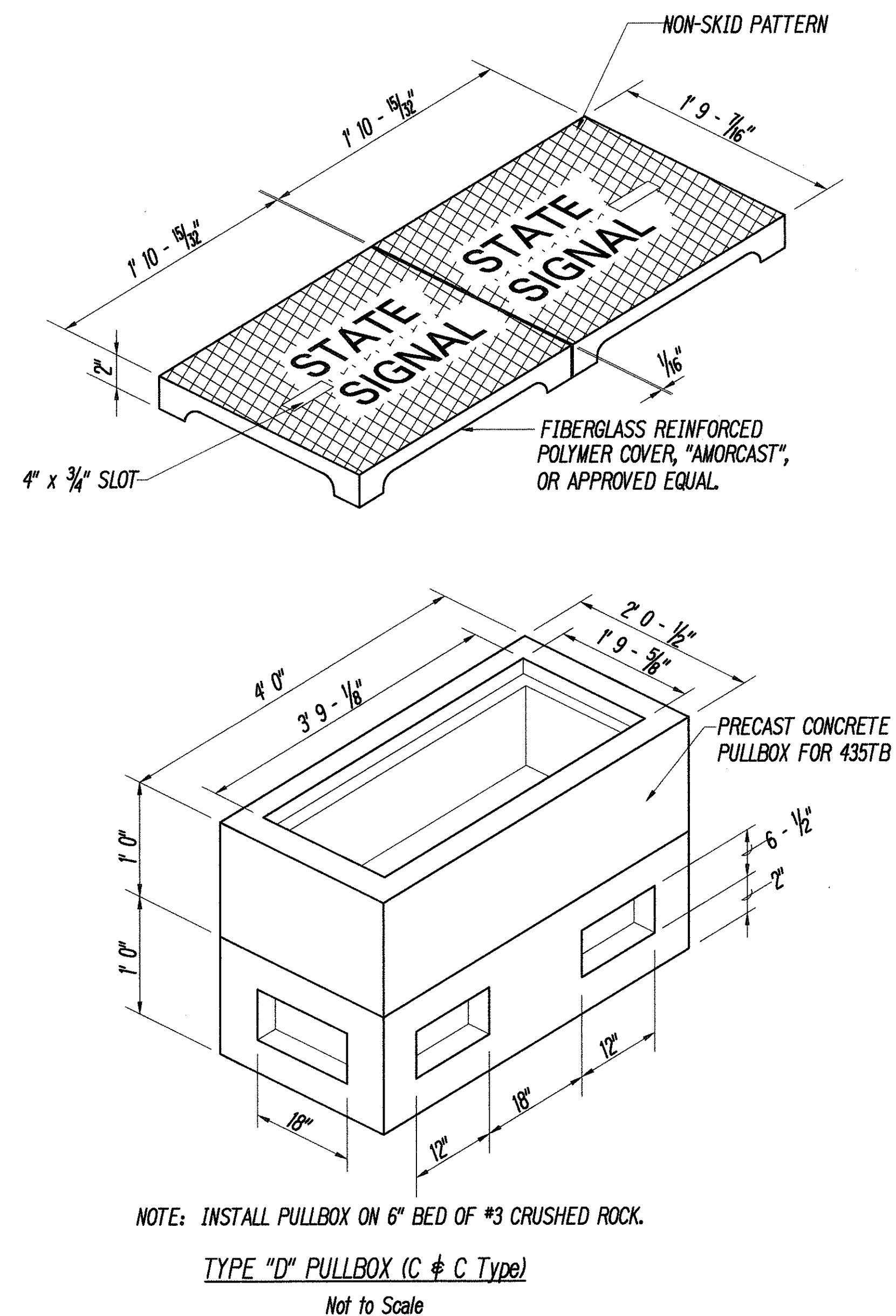
Not to Scale Date: Nov., 1997

SHEET No. 6 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1E-01-98	1998	11	13



TYPICAL TRENCH SECTIONS SHOWING DETAILS FOR RESTORING EXISTING SURFACES



- NOTES:
1. OPTICAL DETECTOR SHALL BE "OPTICOM M511 OPTICAL DETECTOR", OR APPROVED EQUAL, UNLESS NOTED OTHERWISE IN THE SPECIAL PROVISIONS.
 2. SUPPORT SADDLE ASSEMBLY FOR MAST ARM MOUNTING SHALL BE "ASTRO MINI-BRAC, AB-0132-29", OR APPROVED EQUAL, UNLESS NOTED OTHERWISE IN THE SPECIAL PROVISIONS.

THIS WORK WAS DONE BY ME OR UNDER MY SUPERVISION
 PAUL T. TANIUCHI
 LICENSED PROFESSIONAL ENGINEER
 NO. 894-C
 HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL DETAILS
INTERSTATE ROUTE H-1, WAI'AU I.C.
Traffic Signals at Moanalua Road
PROJECT NO. H1E-01-98
Scale: None Date: Nov., 1997

SHEET No. 7 OF 8 SHEETS

DESIGNED BY	DATE
CHECKED BY	
QUANTITIES BY	
NOTED BY	
ORIGINAL FILED	

