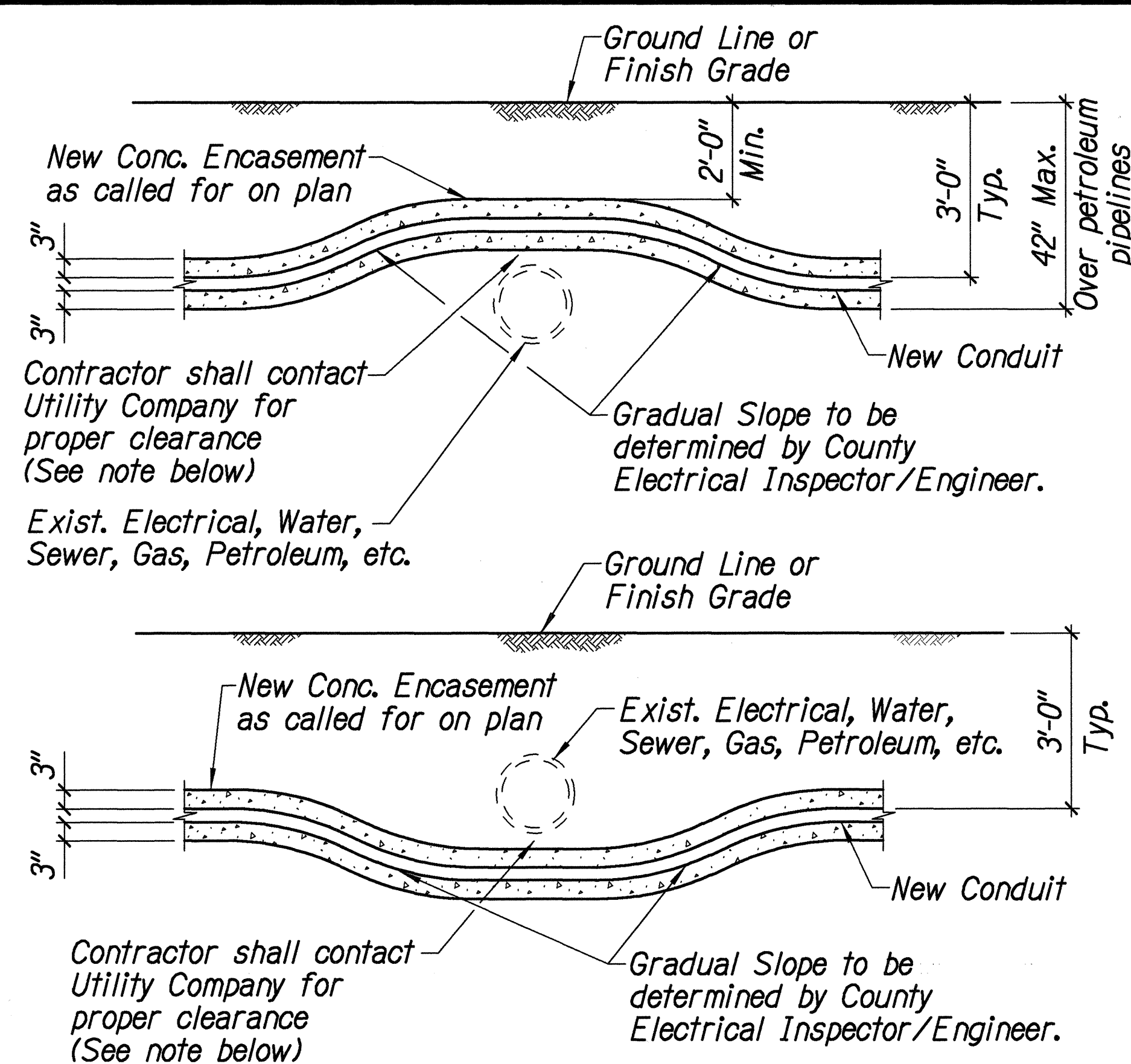


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(6)	2001	33	33

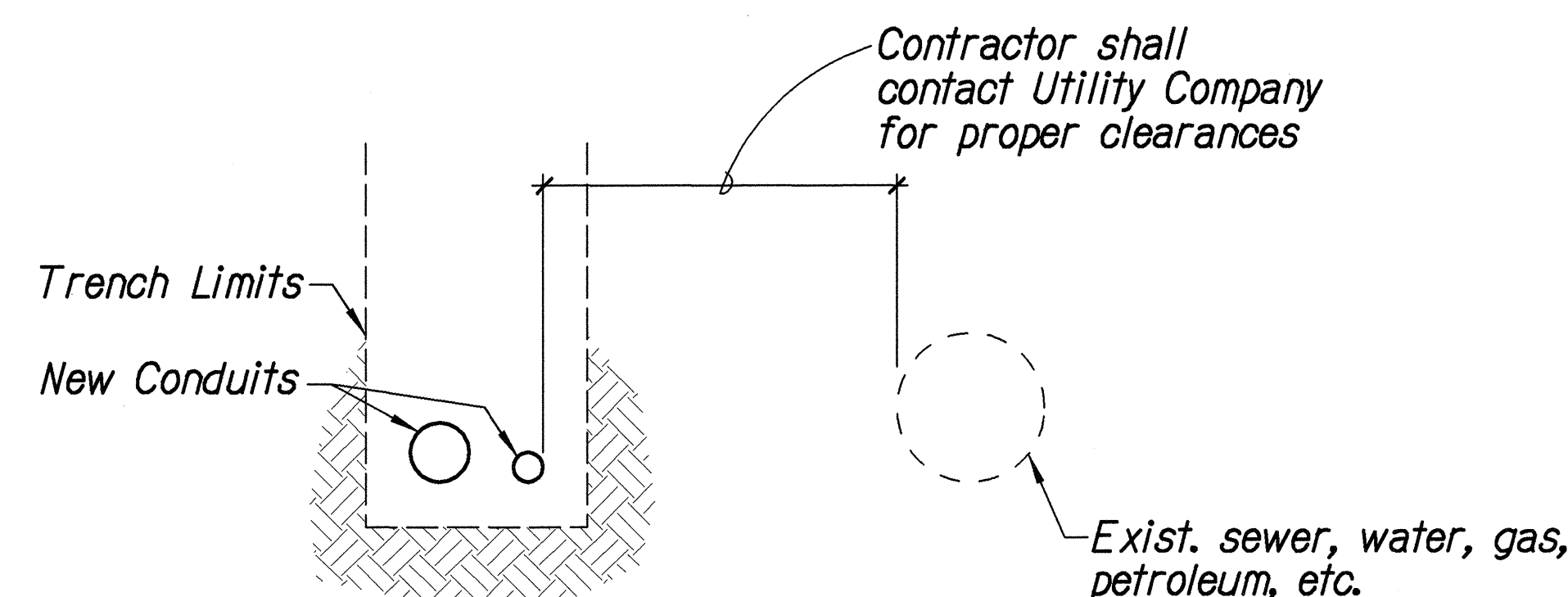


Note:

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" R.C. jacket on sewer line.

CONDUIT BY-PASS DETAIL AT VARIOUS UTILITIES

Not to Scale

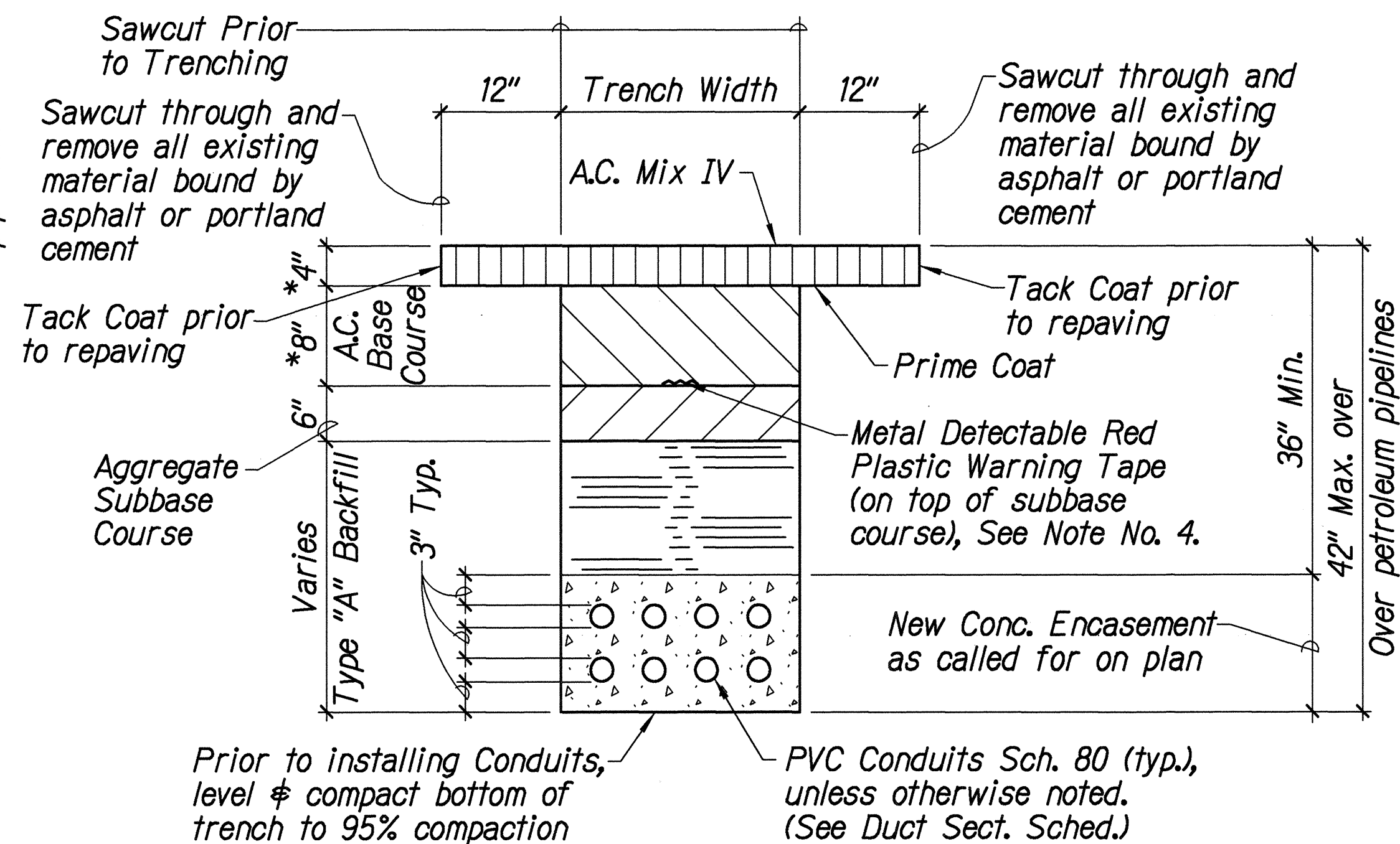


Note:

The Contractor shall provide 3' minimum clearance between sewer main and the ductline/pullbox.

TYPICAL SECTION ADJACENT TO VARIOUS UTILITIES

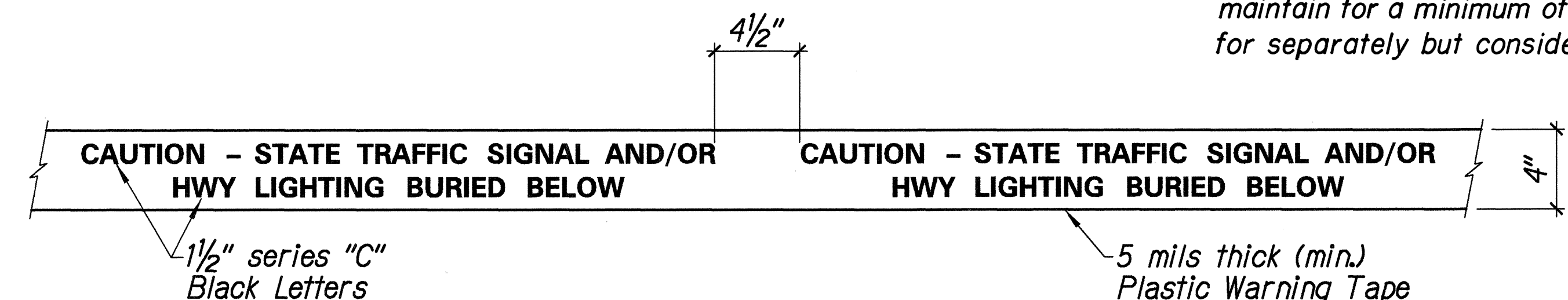
Scale: 1"=1'-0"



* Minimum thickness or match existing, whichever is greater

TYP. PAVEMENT RESTORATION AND BACKFILL SECTION

Not to Scale



For additional information see note no. 4.

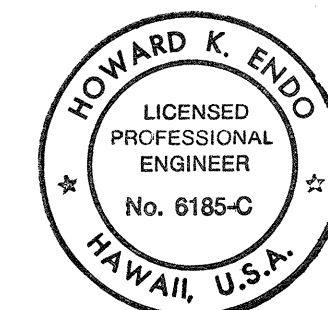
METALLIC DETECTABLE RED PLASTIC WARNING TAPE

Not to Scale

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 & 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 excavated backfill material with Type "A" backfill material and 6" topsoil.
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 - STATE TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW," utilizing 1½" inches series "C" black lettering. The message will be repeated with a 4½" 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 3000 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 but considered incidental to the direct buried and/or concrete encased conduits.
8. At sidewalks, replace the entire modular section of sidewalk (from construction joint to construction joint). Trench width patches in sidewalk shall not be accepted. Replace curbs and gutters in similar manner.
9. For grassed areas, re-sod or hydromulch disturbed areas and maintain for a minimum of 30 days. This work shall not be paid for separately but considered incidental to conduits.

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 SHIMABUKURO, ENDO & YOSHIZAKI, INC.
 1126 12TH AVENUE
 HONOLULU, HAWAII 96816

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TRAFFIC SIGNAL DETAILS	
Fort Weaver Road Traffic Signal Modernization Federal-Aid Project No. CMAQ-076-1(6)	
Scale: As Noted	Date: Sept., 2000
SHEET No. 3 OF 3 SHEETS	