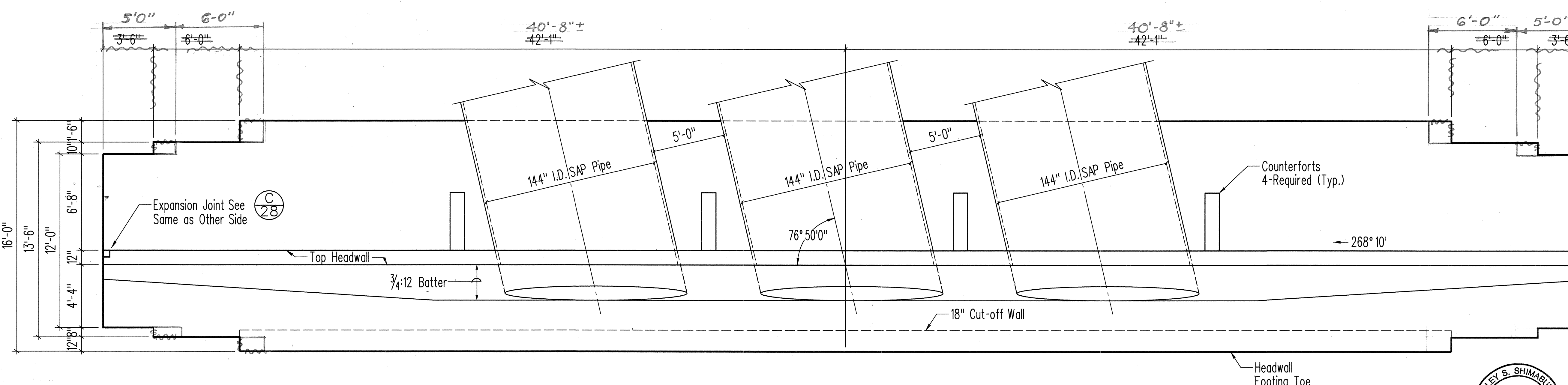
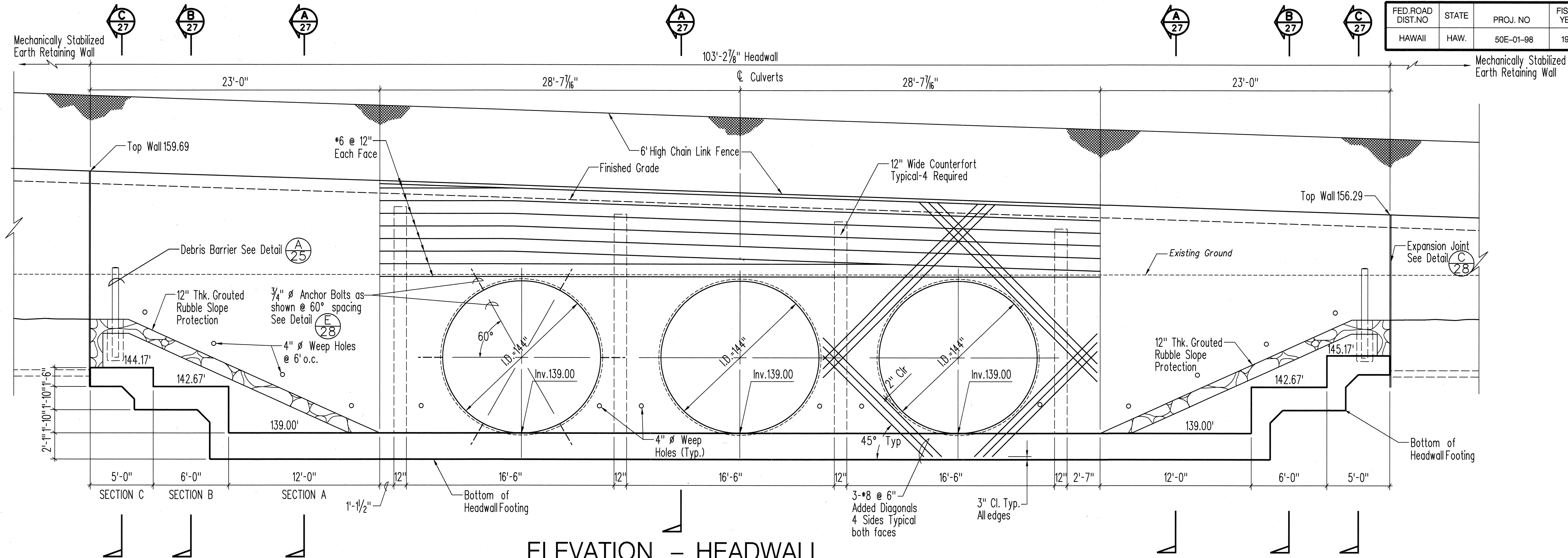
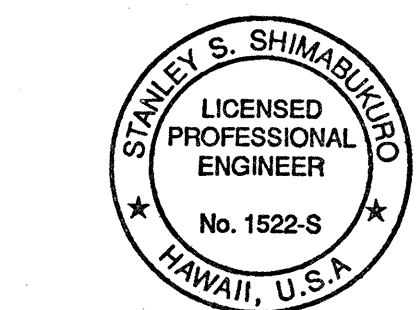


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	26	79



ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Stanley S. Shimabukuro
 SHIMABUKURO, ENDO & YOSHIZAKI, INC.
 1126 12th Avenue
 Honolulu, Hawaii 96816

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

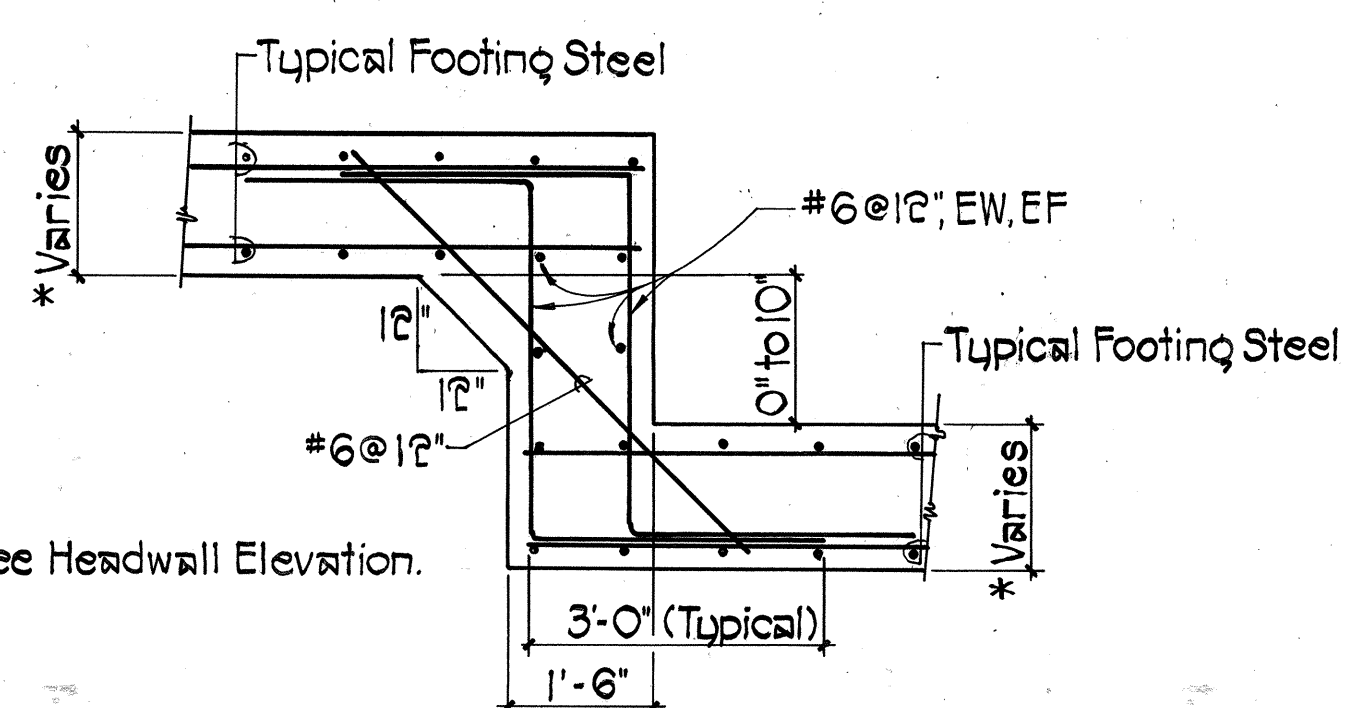
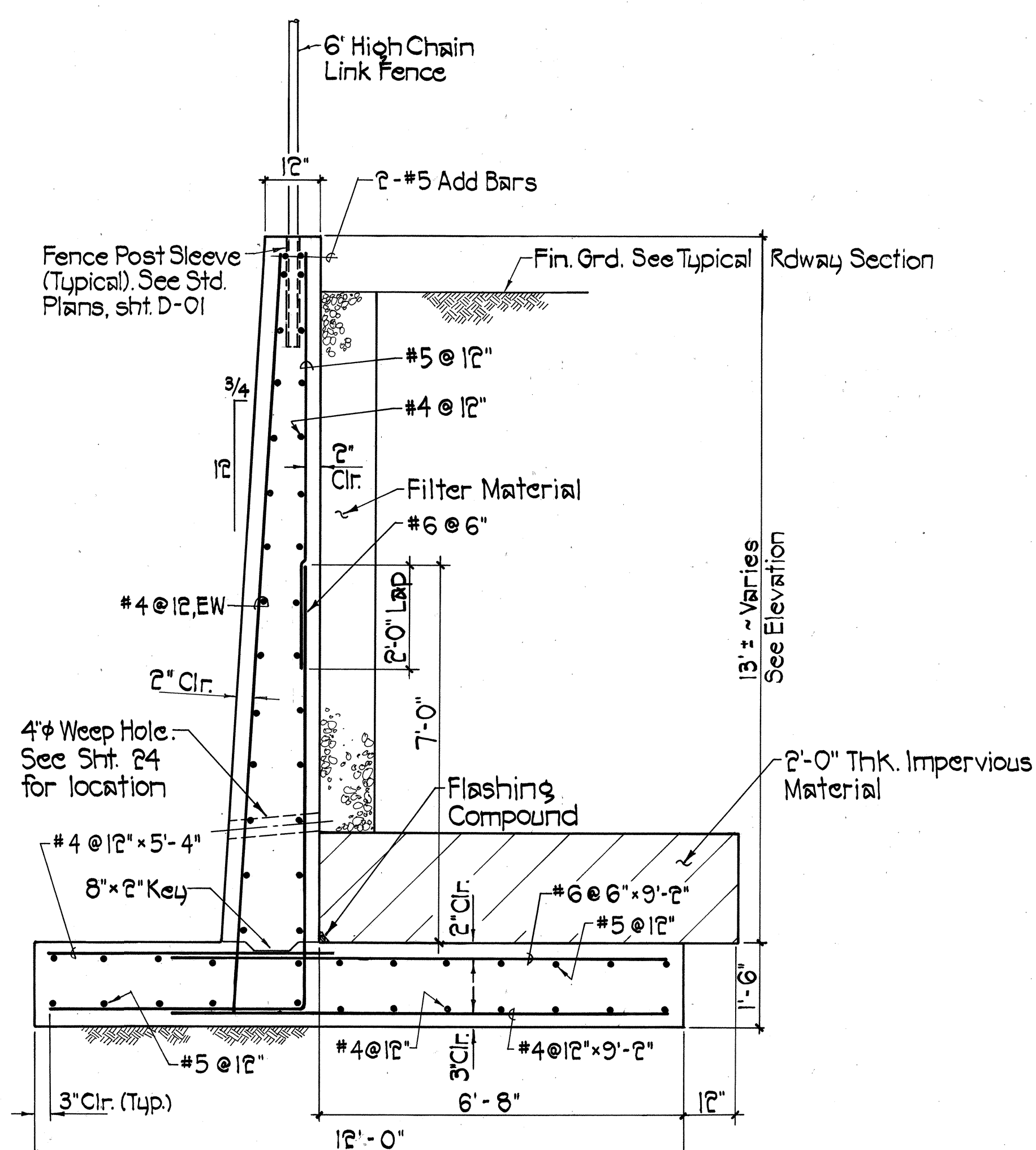
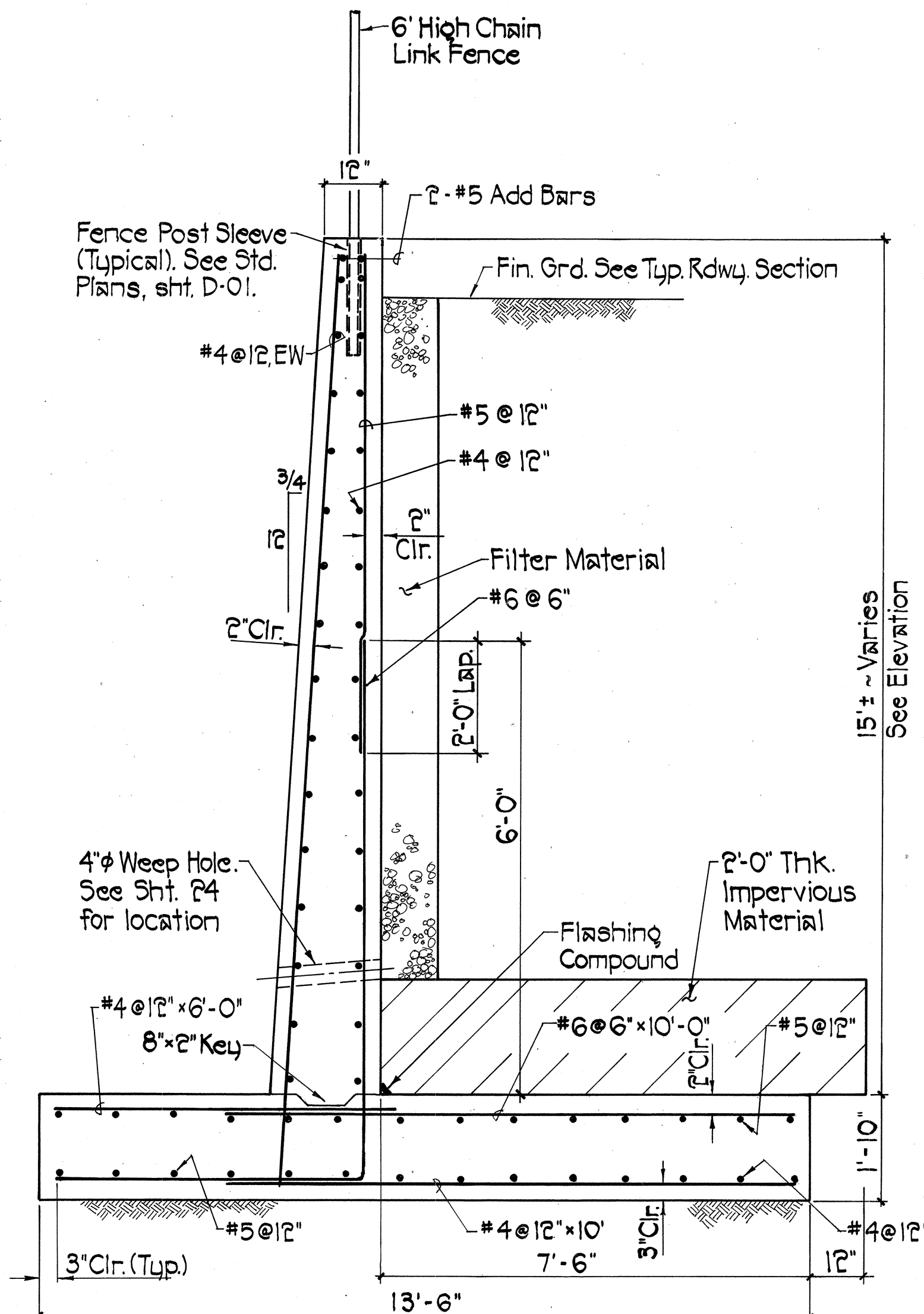
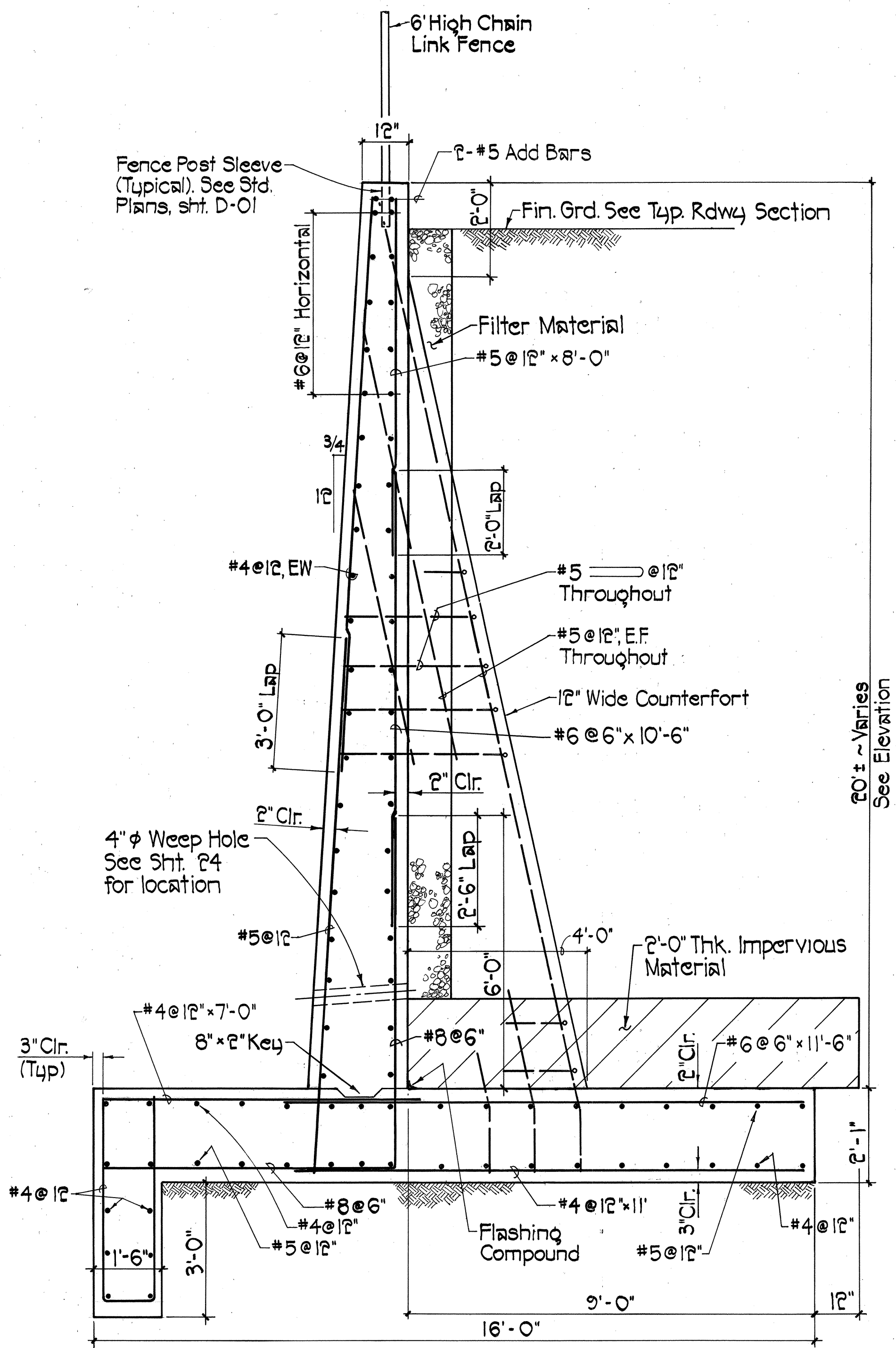
HEADWALL PLAN & ELEVATION

KAUMUALII HIGHWAY, KUHIO HIGHWAY &
 RICE STREET INTERSECTION IMPROVEMENTS
 PROJECT NO. 50E-01-98

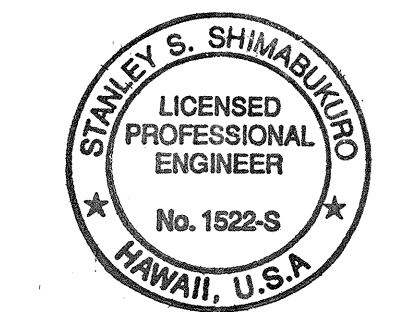
SCALE: AS NOTED DATE: _____

SHEET NO. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	27	79



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY		
NOTED BY		
CHECKED BY		
NO.		



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Stanley S. Shimabukuro
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 1126 12th Avenue
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

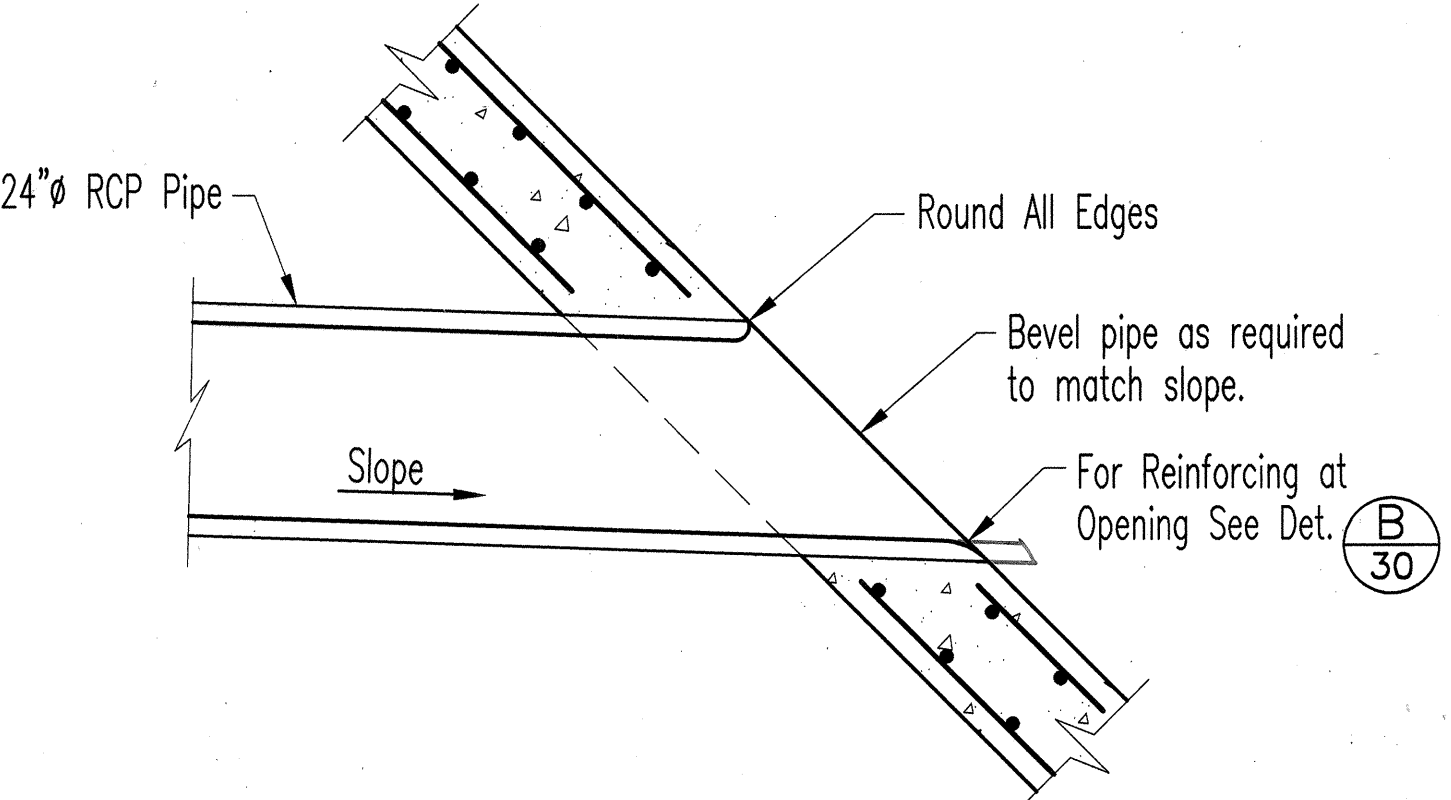
INLET HEADWALL DETAILS

KAUMUALII HIGHWAY, KUHIO HIGHWAY &
RICE STREET INTERSECTION IMPROVEMENTS
PROJECT NO. 50E-01-98

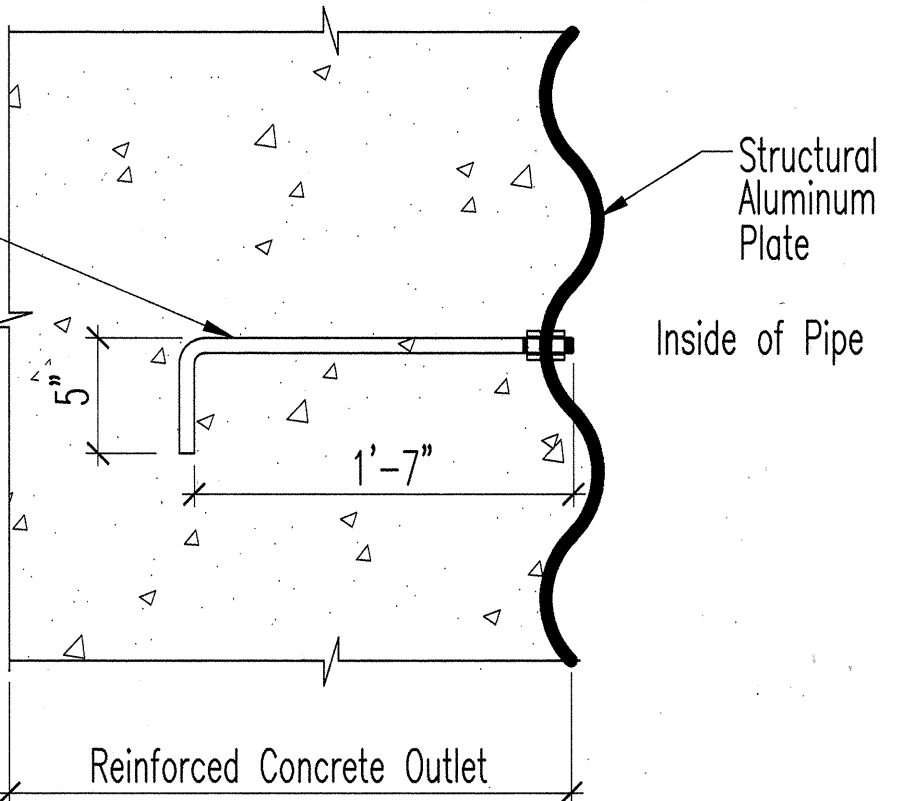
SCALE: AS NOTED DATE:

SHEET NO. 27 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	27S-1	79



OUTLET THRU CONC. COLLAR (C)
Scale: 1/2"=1'-0"

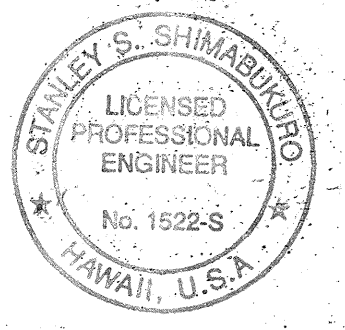


SECTION (B)
Not to Scale

Sta. 2+80~Rd. A
75'± o/s Rt.
Outlet #2 I
Inv. 133.00
See Det. (C)
27S-1

10/12/98 Added details for reinforced concrete collar for 3 barrel 144" SAP culverts and Outlet thru Collar.

Date Revision



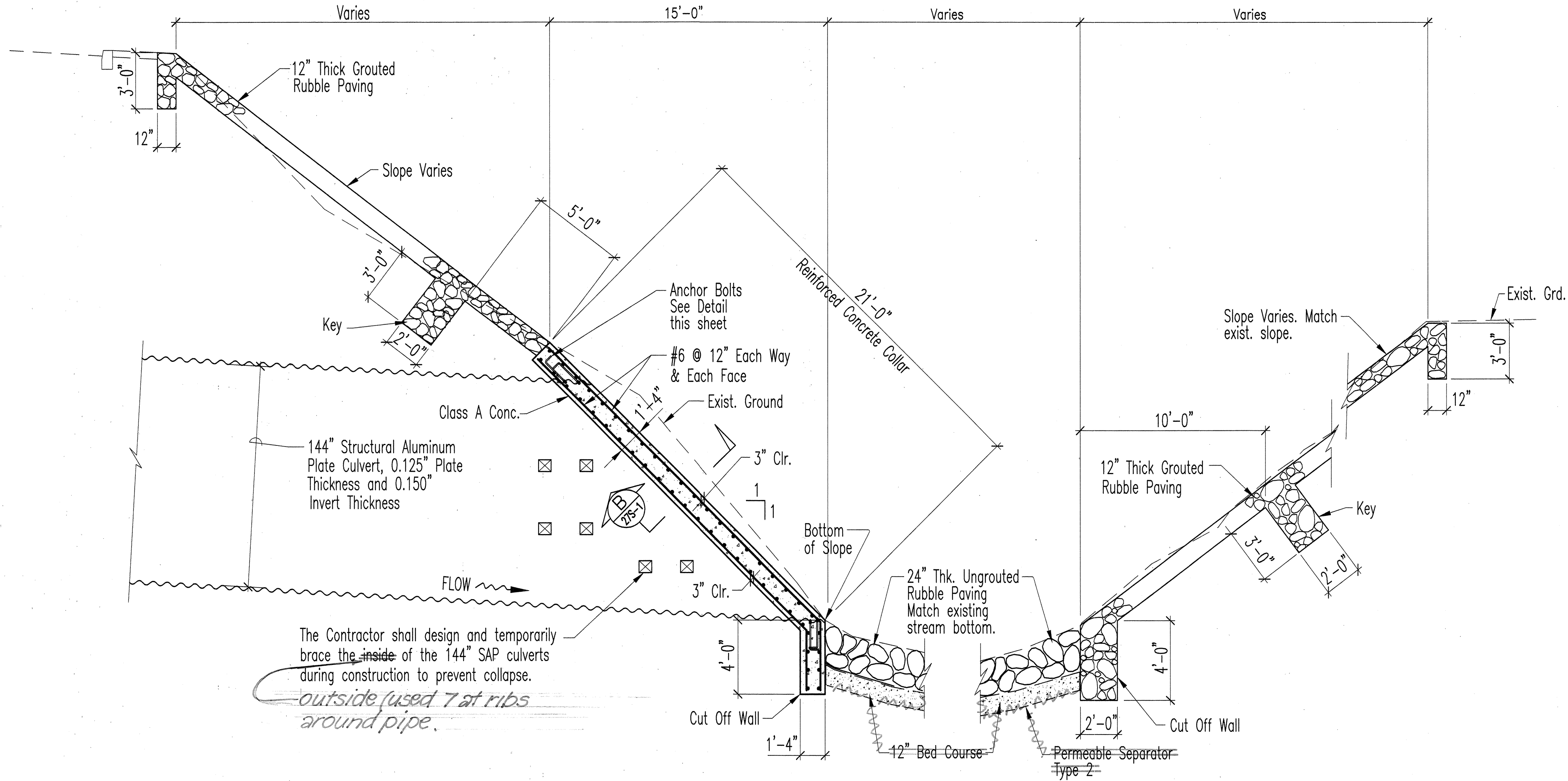
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Stanley S. Shimabukuro
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DEVELOPED ELEVATION
COLLAR
KAUMUALII HIGHWAY, KUHIO HIGHWAY &
RICE STREET INTERSECTION IMPROVEMENTS
PROJECT NO. 50E-01-98
SCALE: AS SHOWN DATE: OCT. 1998
SHEET No. 1 OF 1 SHEETS

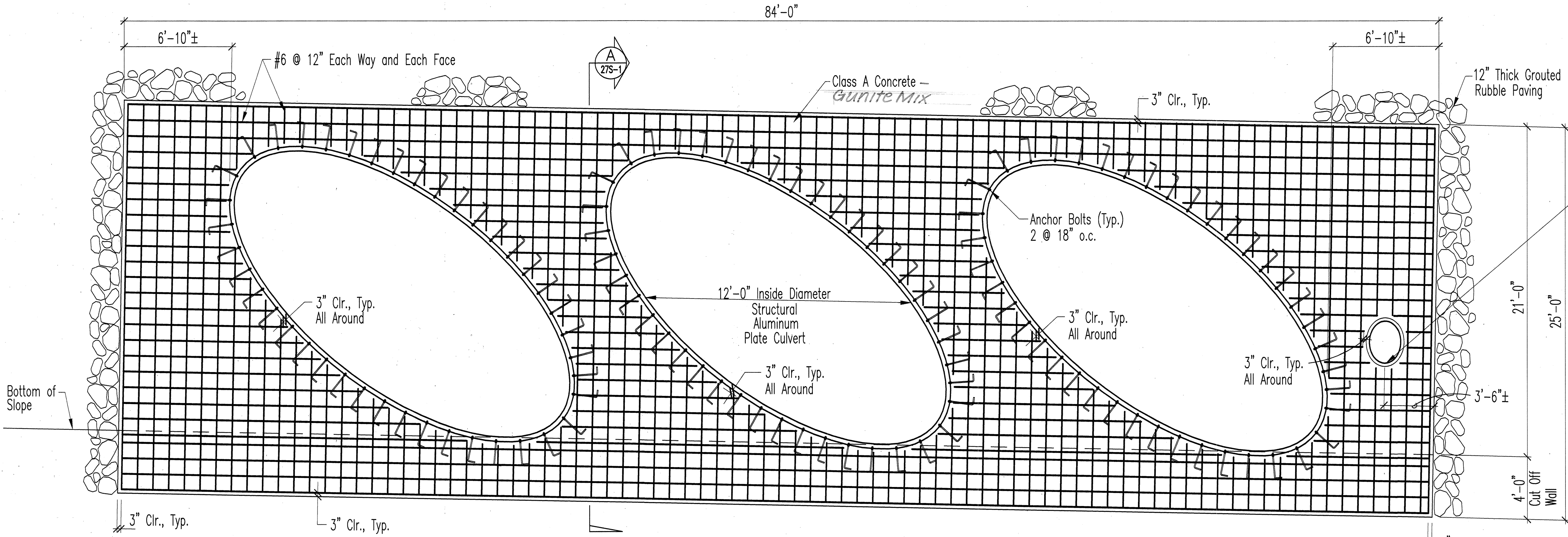
1
27S-1

"AS-BUILT"

CO 27 S-1



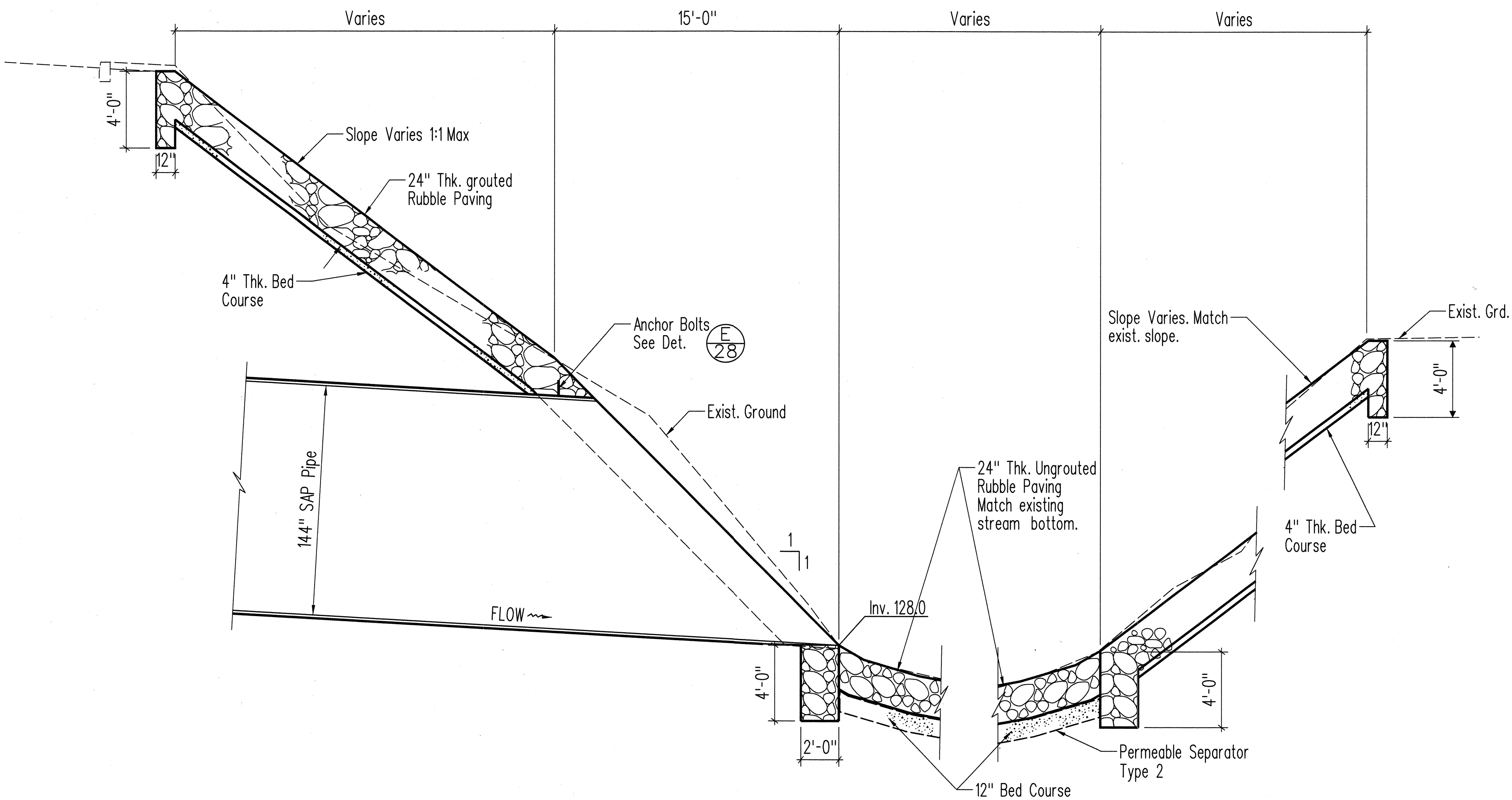
SECTION (A)
Scale: 1/4"=1'-0"



DEVELOPED ELEVATION - REINFORCED CONCRETE COLLAR (1)
Scale: 1/4" = 1'-0"

SURVEY PLOTTED	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

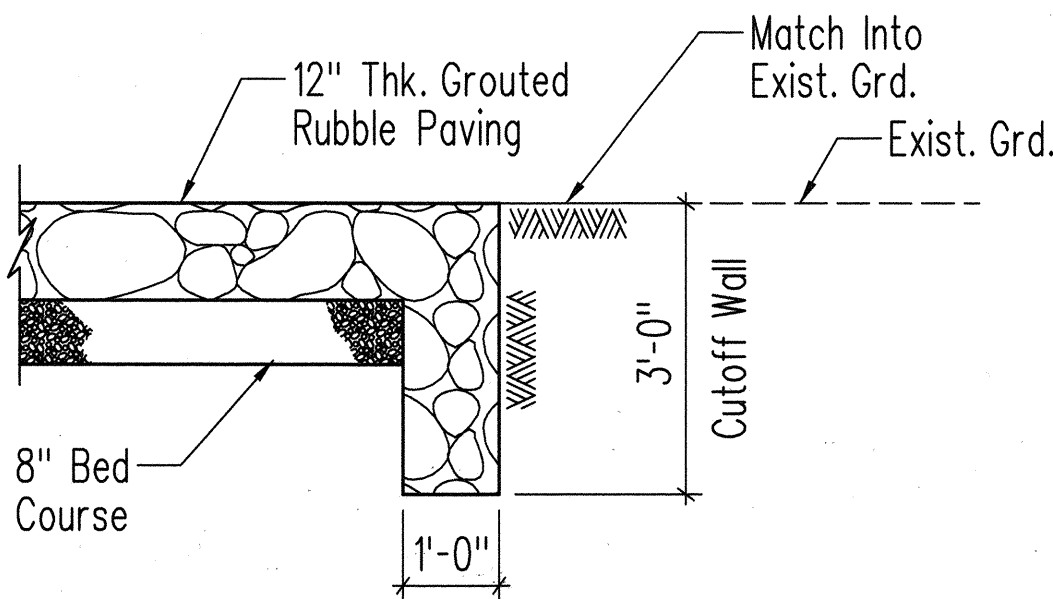
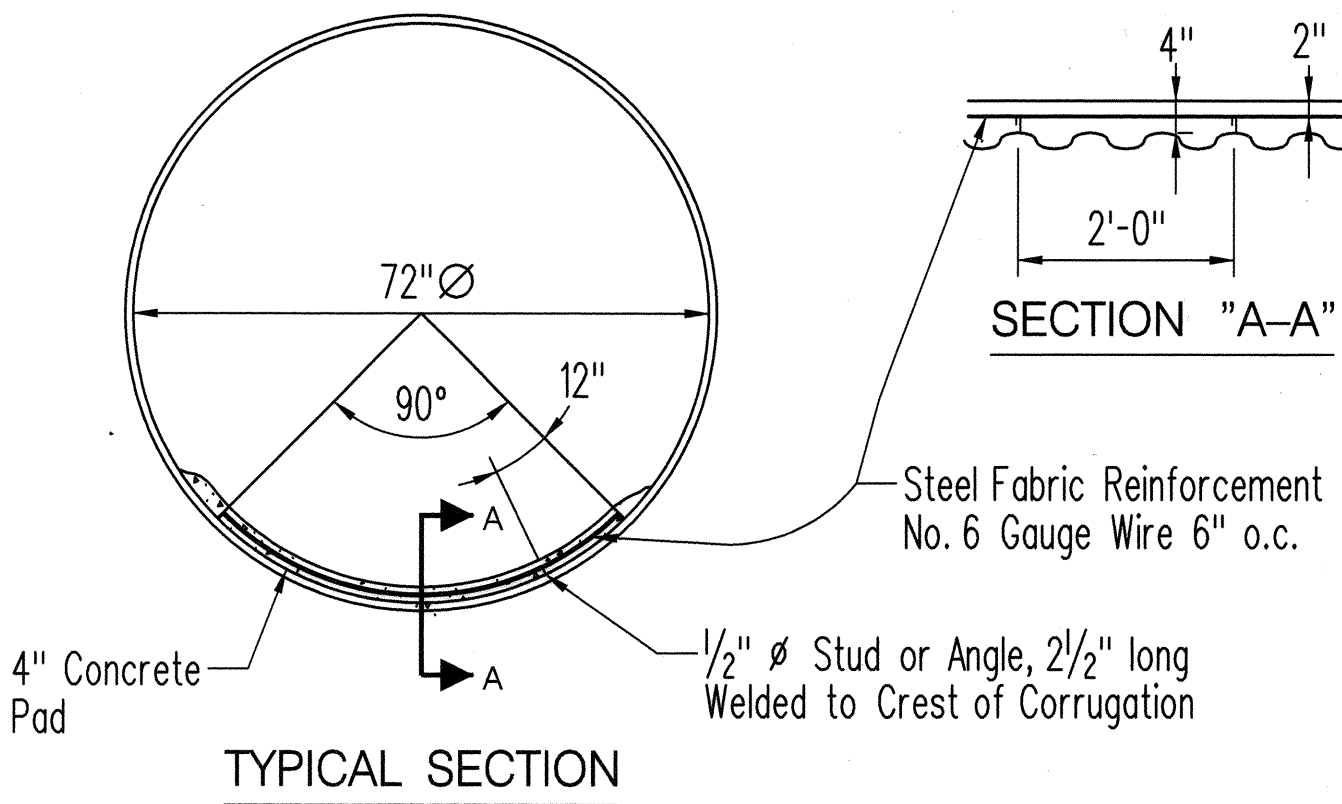
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	28	79



ANCHOR BOLT DETAIL E
28
Scale: 1"=3"

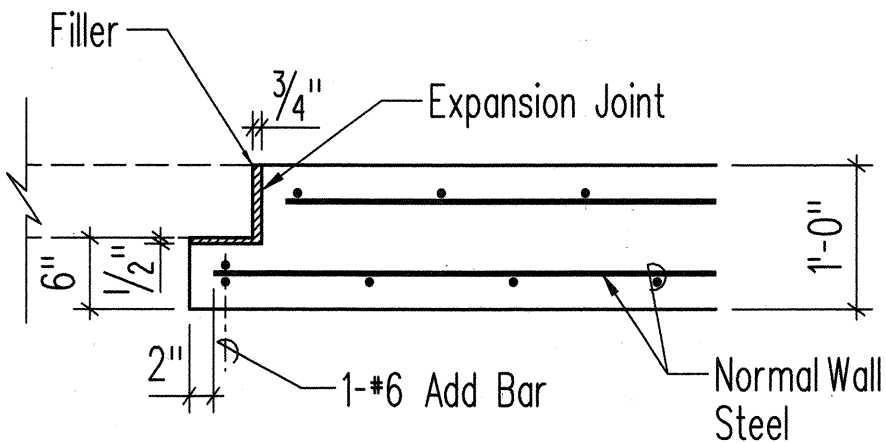
Note:
Anch. Bolt material shall meet the current ASTM a-307. Treads shall be American Standard Course Thread Series, Class 2, Free Fit. Bolts shall be galvanized to meet current ASTM specification, A-153. The galvanizing on threaded portion shall not prevent turning the nut by hand. Nuts shall be carbon steel hot dip galvanized to meet, ASTM specification A-153. Nut threads shall be American Standard Course Thread Series (1/64 maximum oversize), cleaned after galvanizing to provide a free running fit on the class 2 bolt. Nuts shall be 1/4" across flats, 1/6" thick, curve crowned to approximately 1" radius.

72" CSP CONC. LINING DETAIL G
28
Scale: 1"=3"

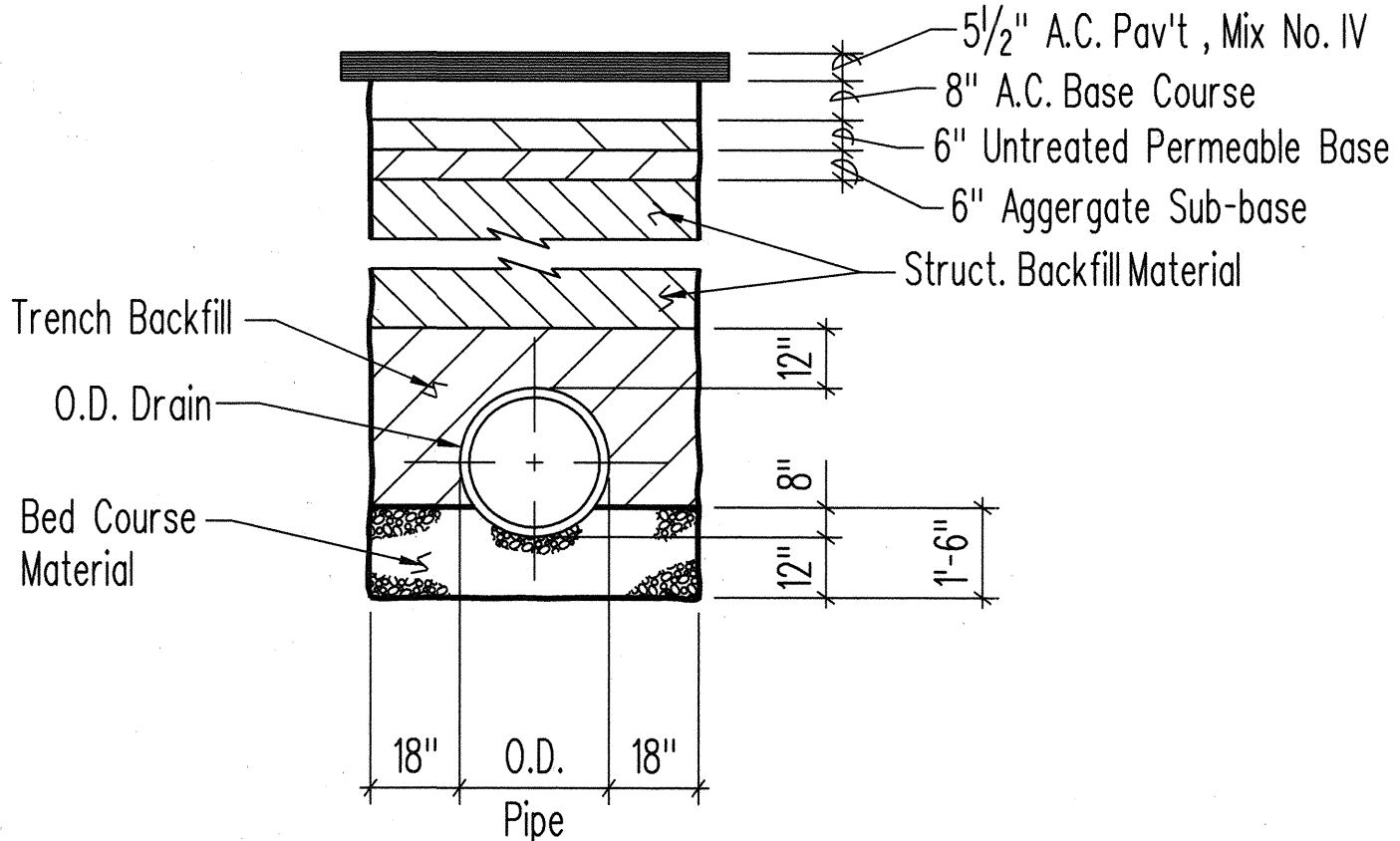


SECTION A
28
Scale: 1/4"=1'-0"

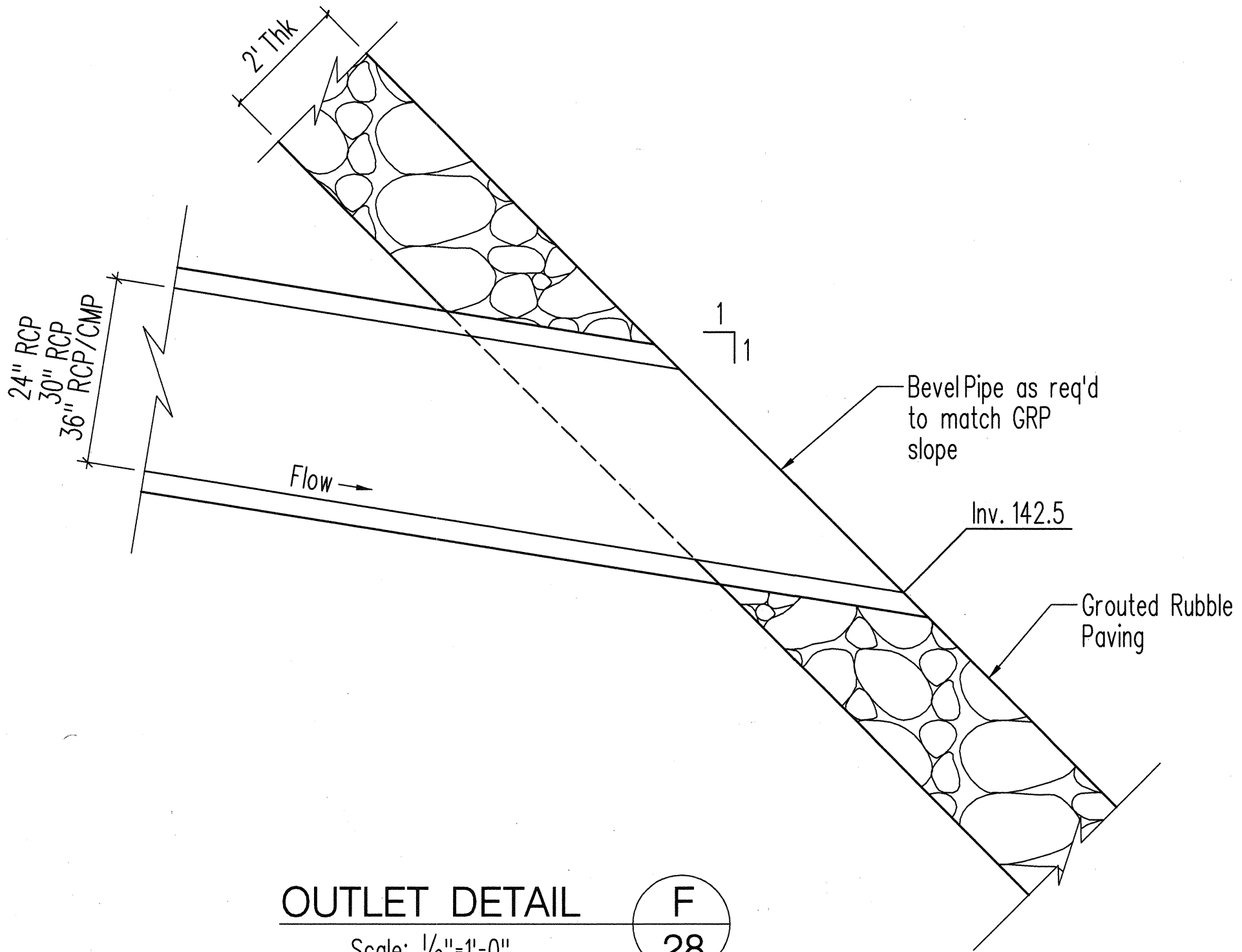
SECTION B
28
Scale: 1/2"=1'-0"



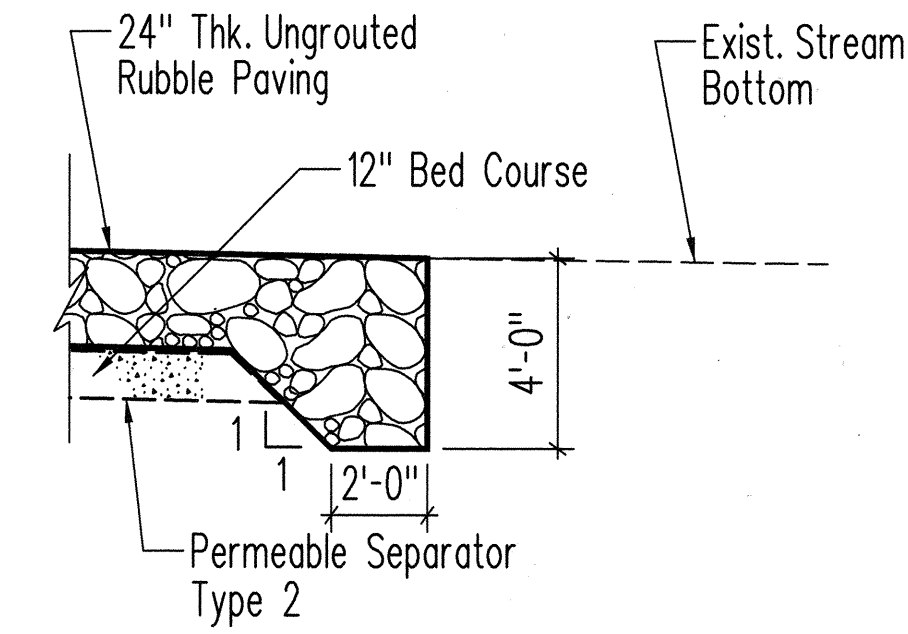
EXPANSION JOINT DETAIL C
28
Scale: 1/2"=1'-0"



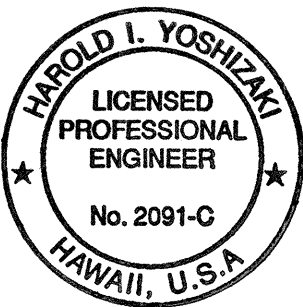
TYPICAL DRAIN LINE TRENCH DETAIL D
28
NTS



OUTLET DETAIL F
28
Scale: 1/2"=1'-0"



SECTION H
28
Scale: 1/4"=1'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION,
Harold L. Yoshizaki
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

KAUMUALII HIGHWAY, KUHIO HIGHWAY &
RICE STREET INTERSECTION IMPROVEMENTS
PROJECT NO. 50E-01-98

SCALE: AS NOTED DATE: _____

SHEET NO. 3 OF 3 SHEETS

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