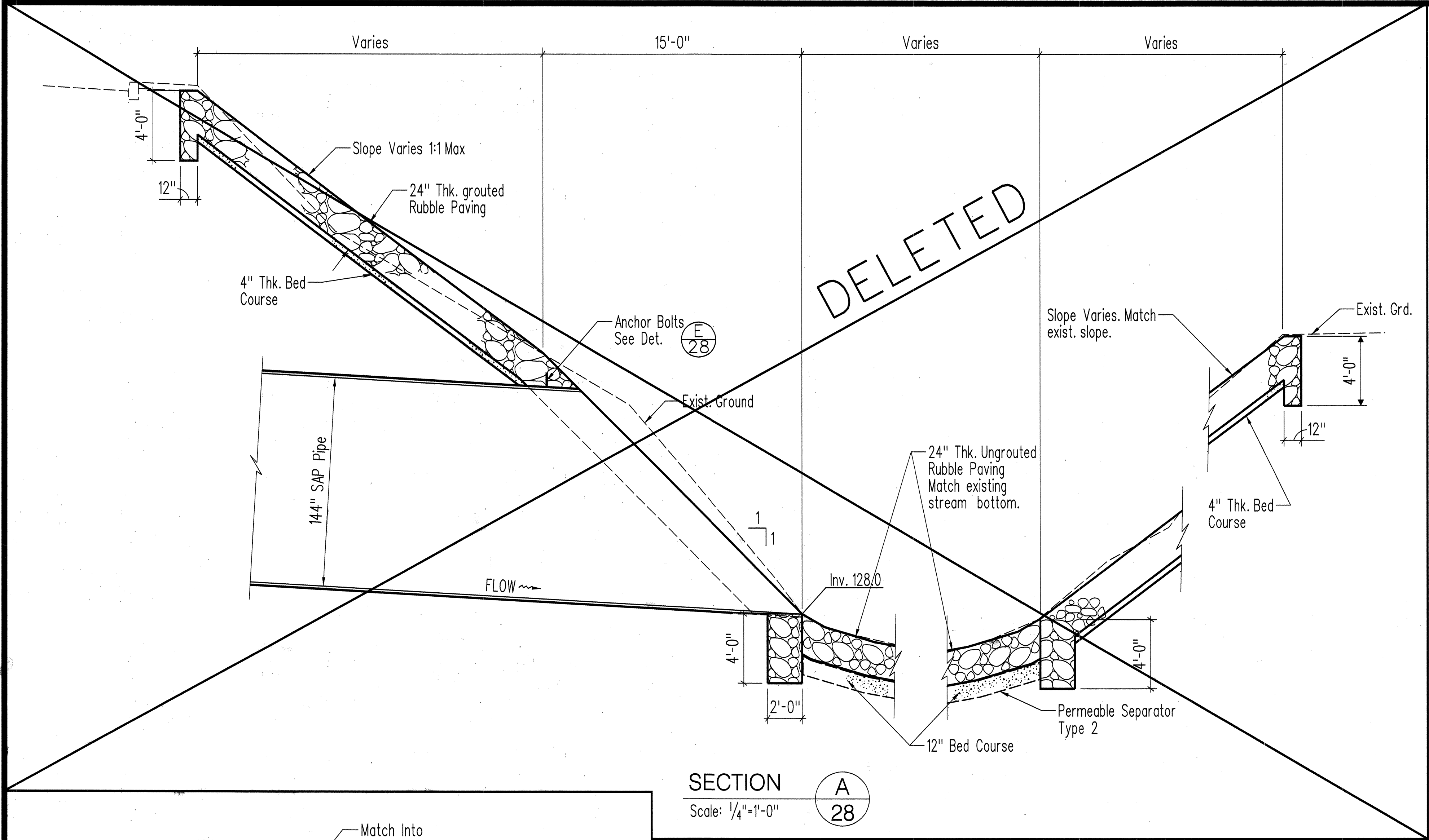


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	28 S-1	79

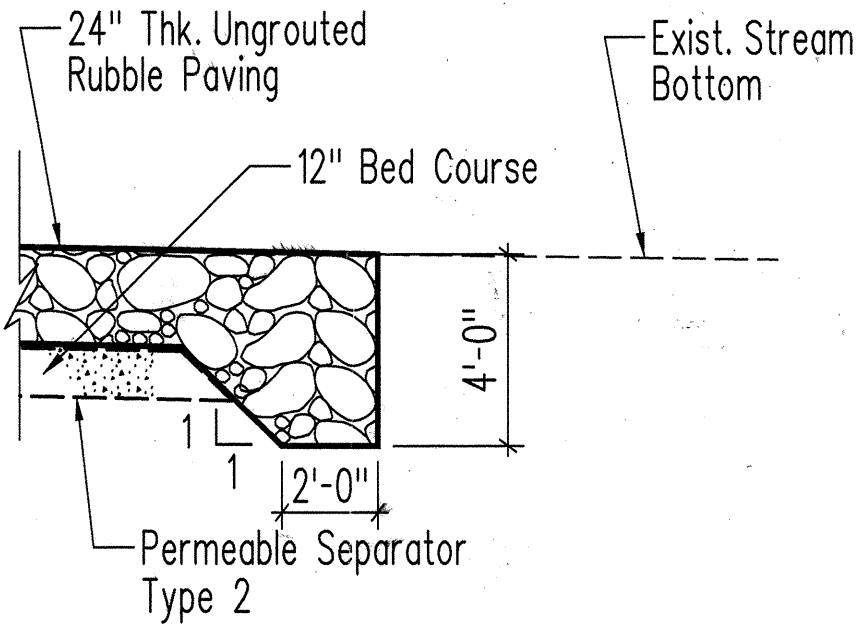
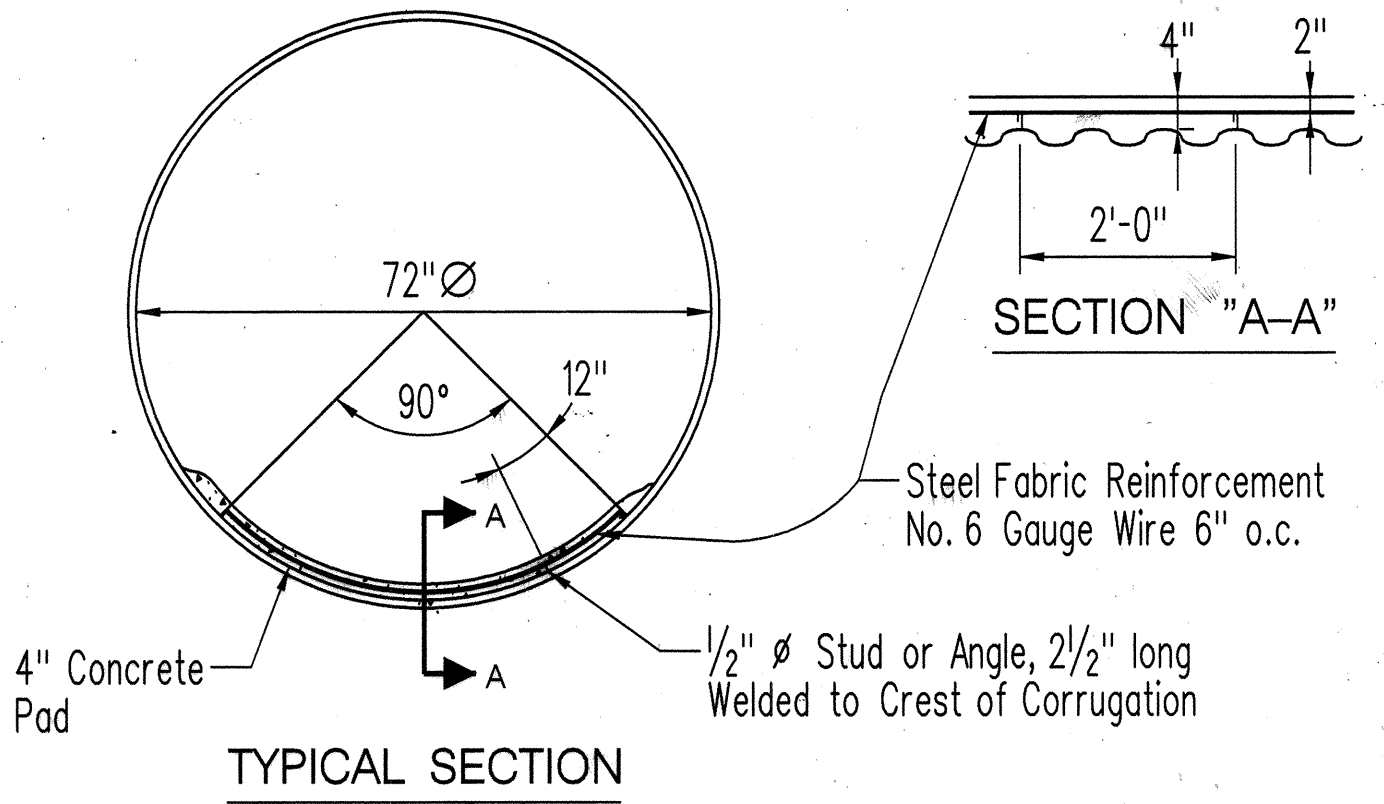


SECTION A
Scale: 1/4"=1'-0"

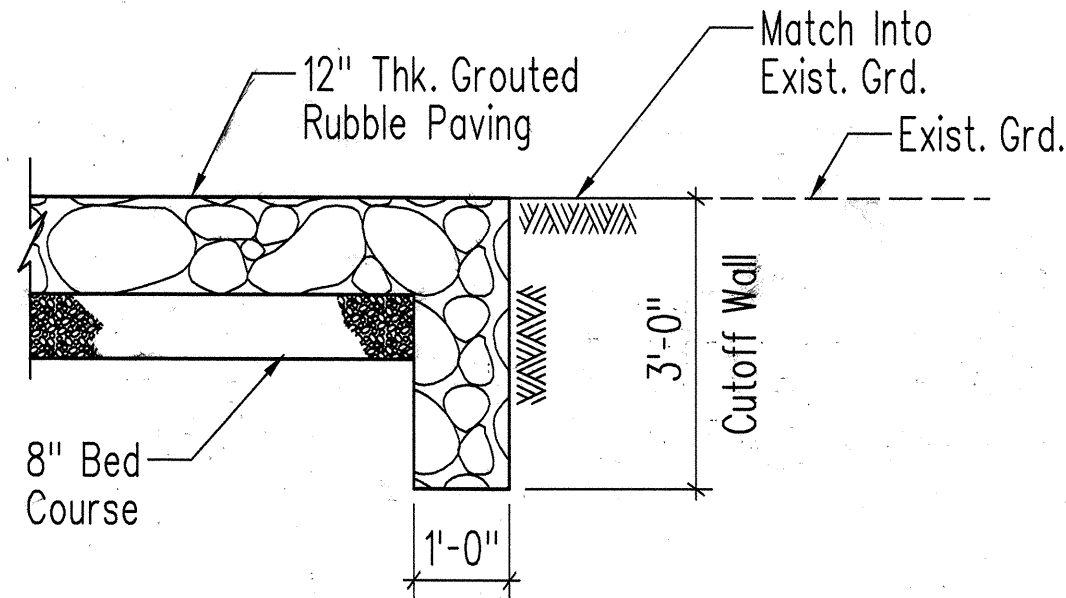
ANCHOR BOLT DETAIL E
Scale: 1"=3"

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, 9/16" thick, curve crowned to approximately 1" radius.

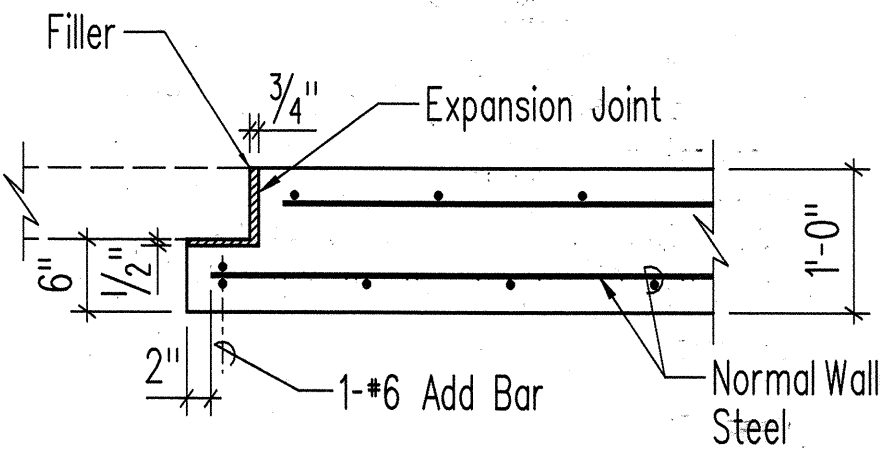
72" CSP CONC. LINING DETAIL G
Scale: 1"=3"



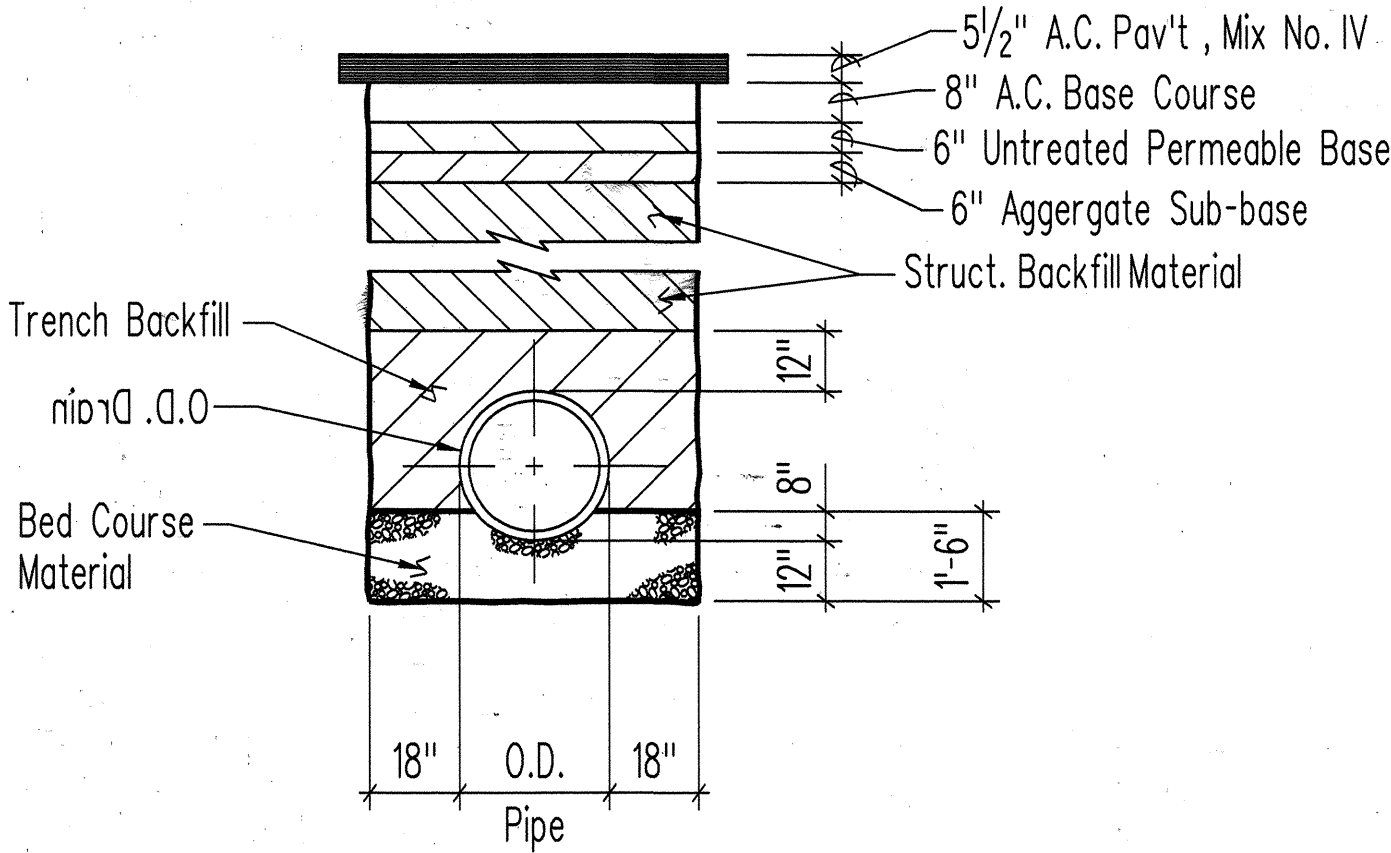
SECTION H
Scale: 1/4"=1'-0"



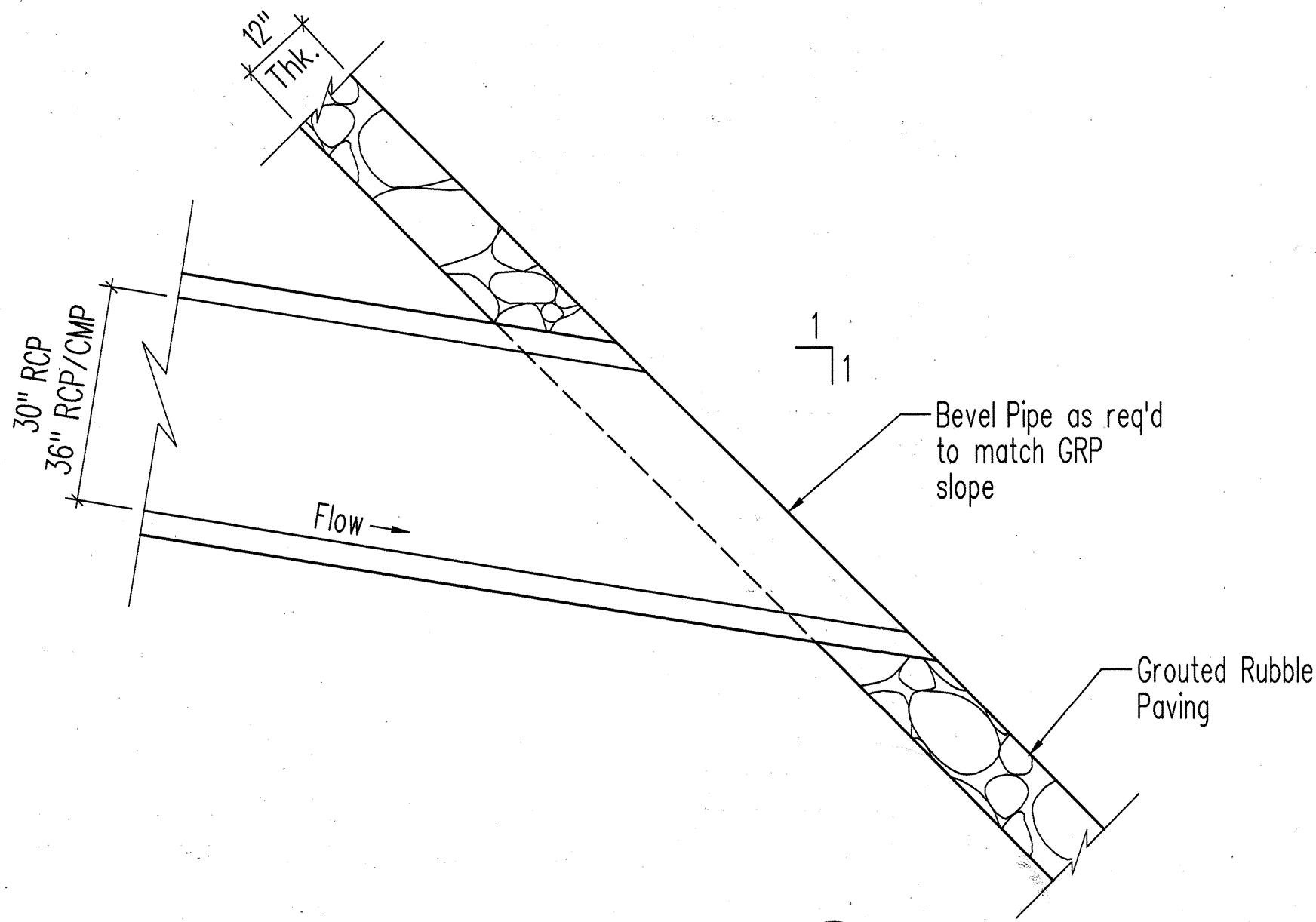
SECTION B
Scale: 1/2"=1'-0"



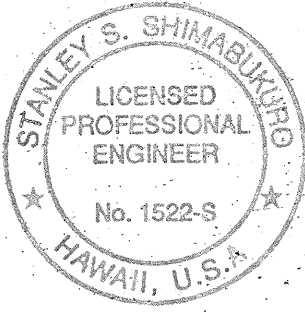
EXPANSION JOINT DETAIL C
Scale: 1/2"=1'-0"



TYPICAL DRAIN LINE TRENCH DETAIL D
NTS



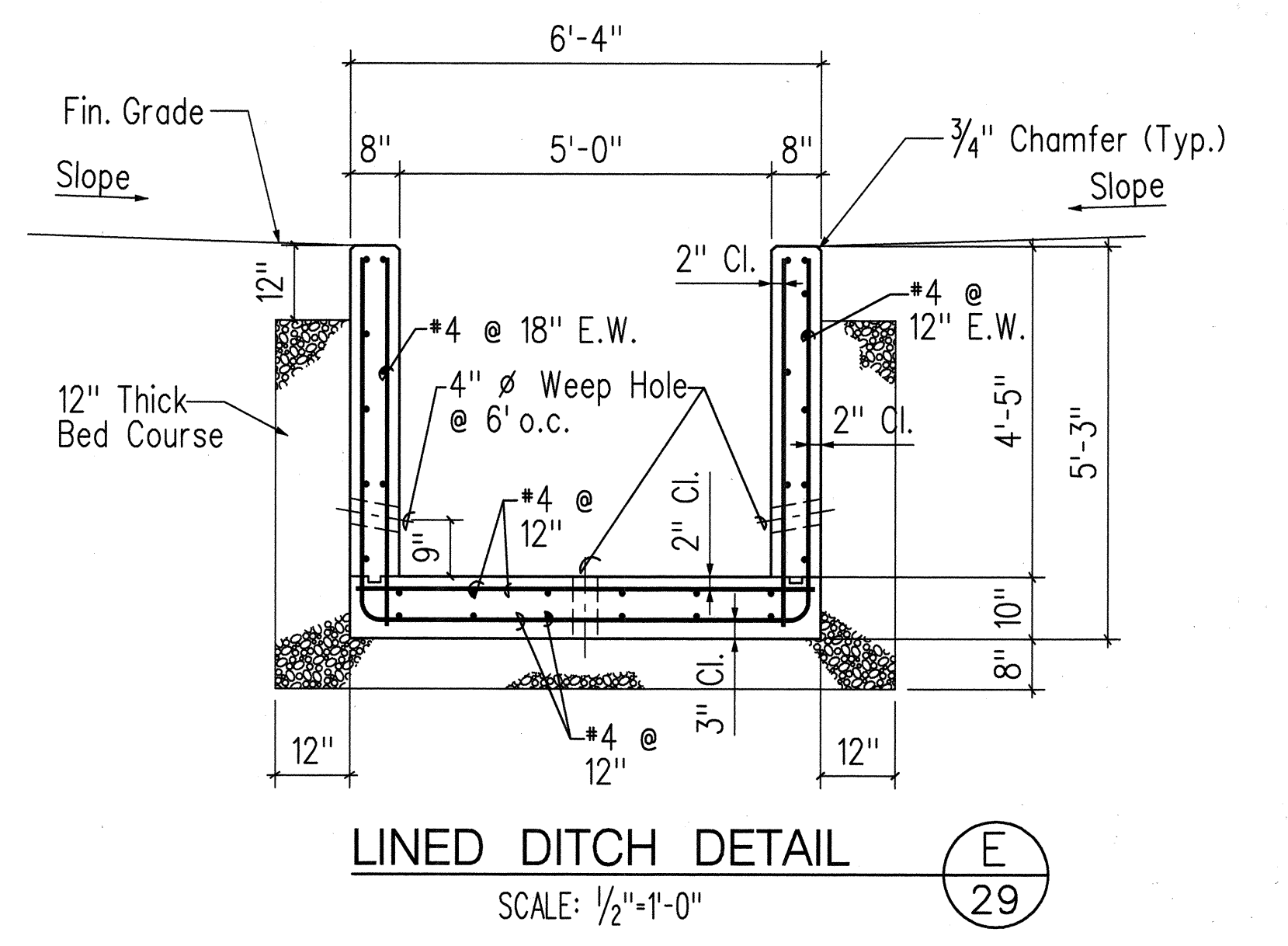
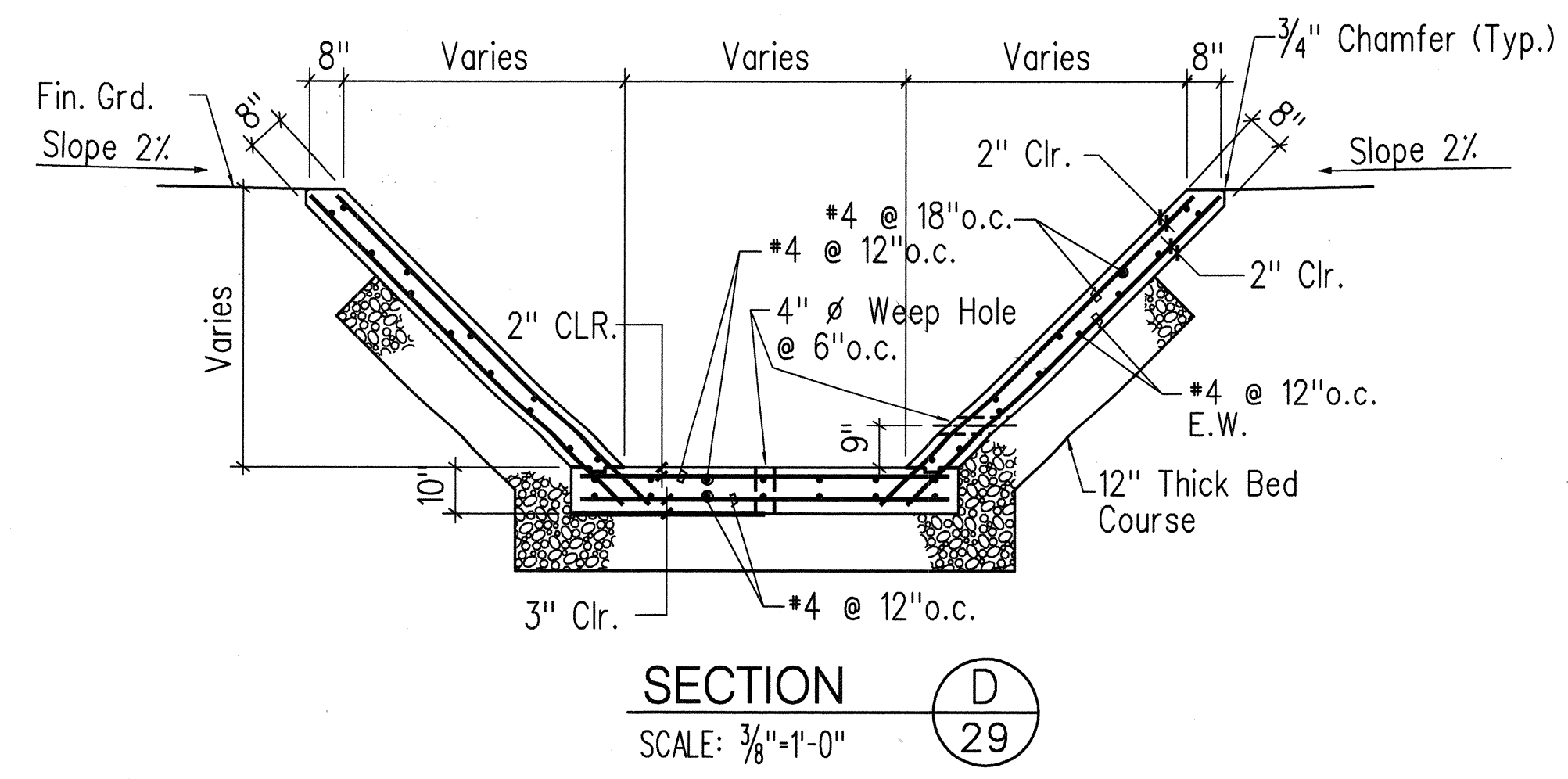
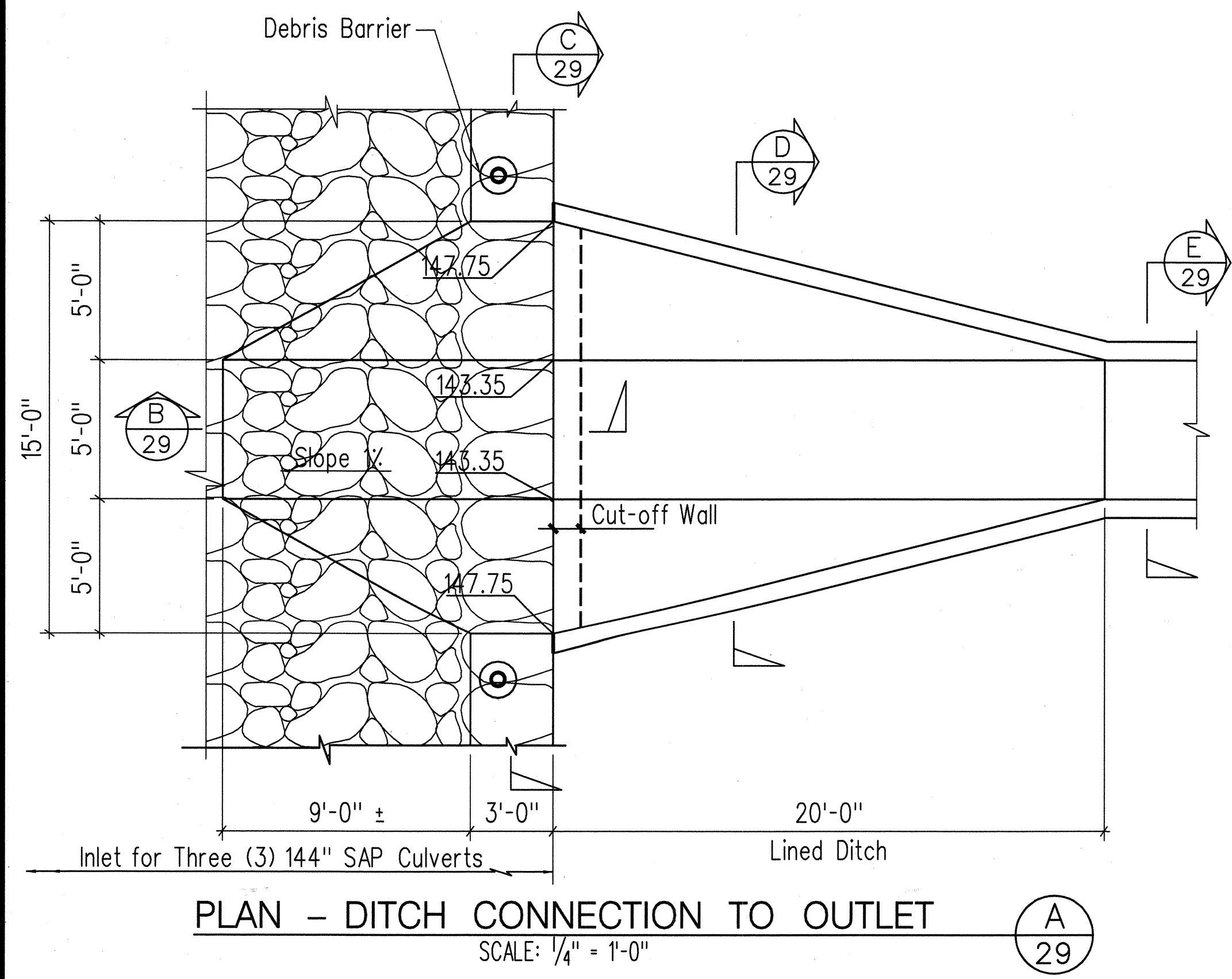
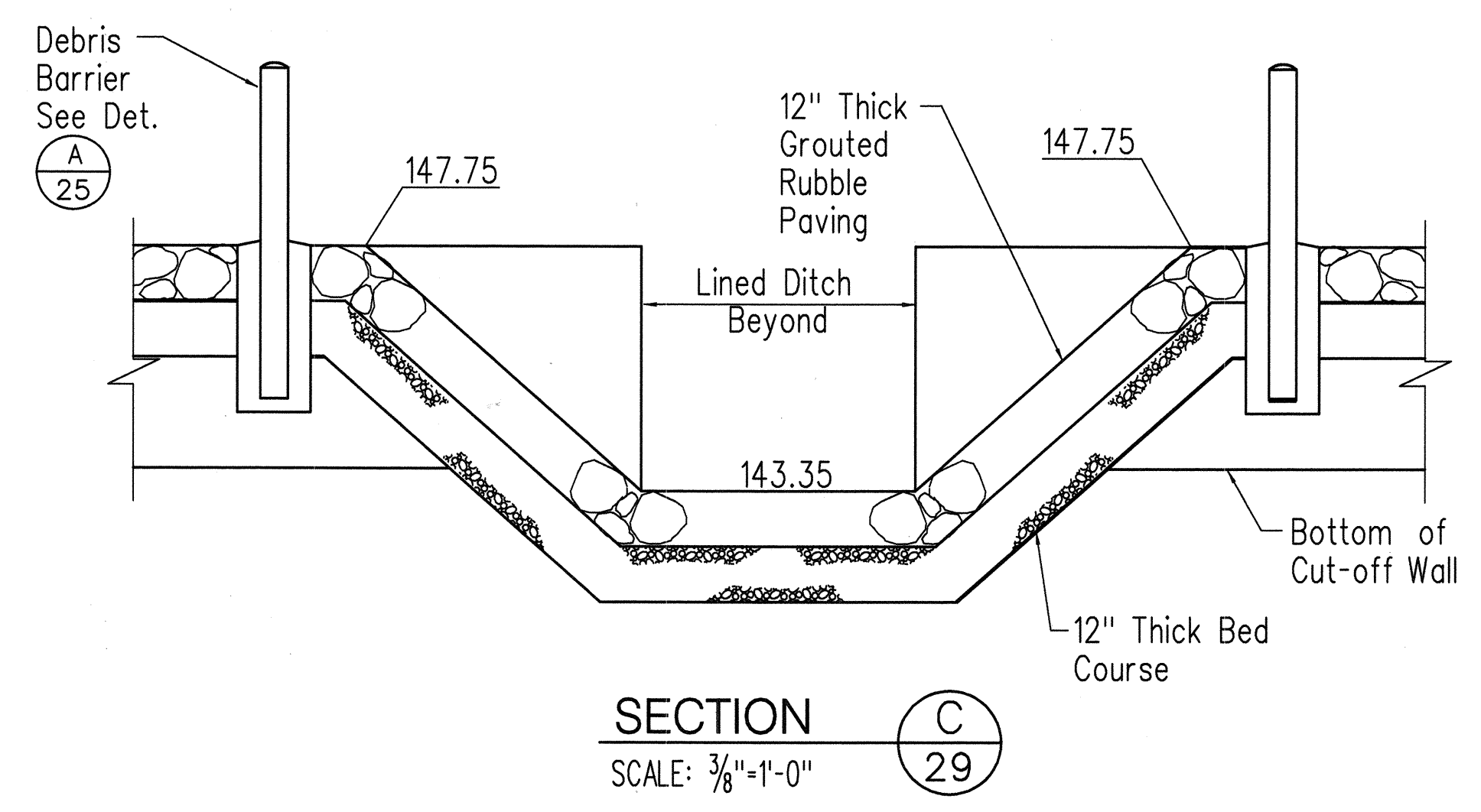
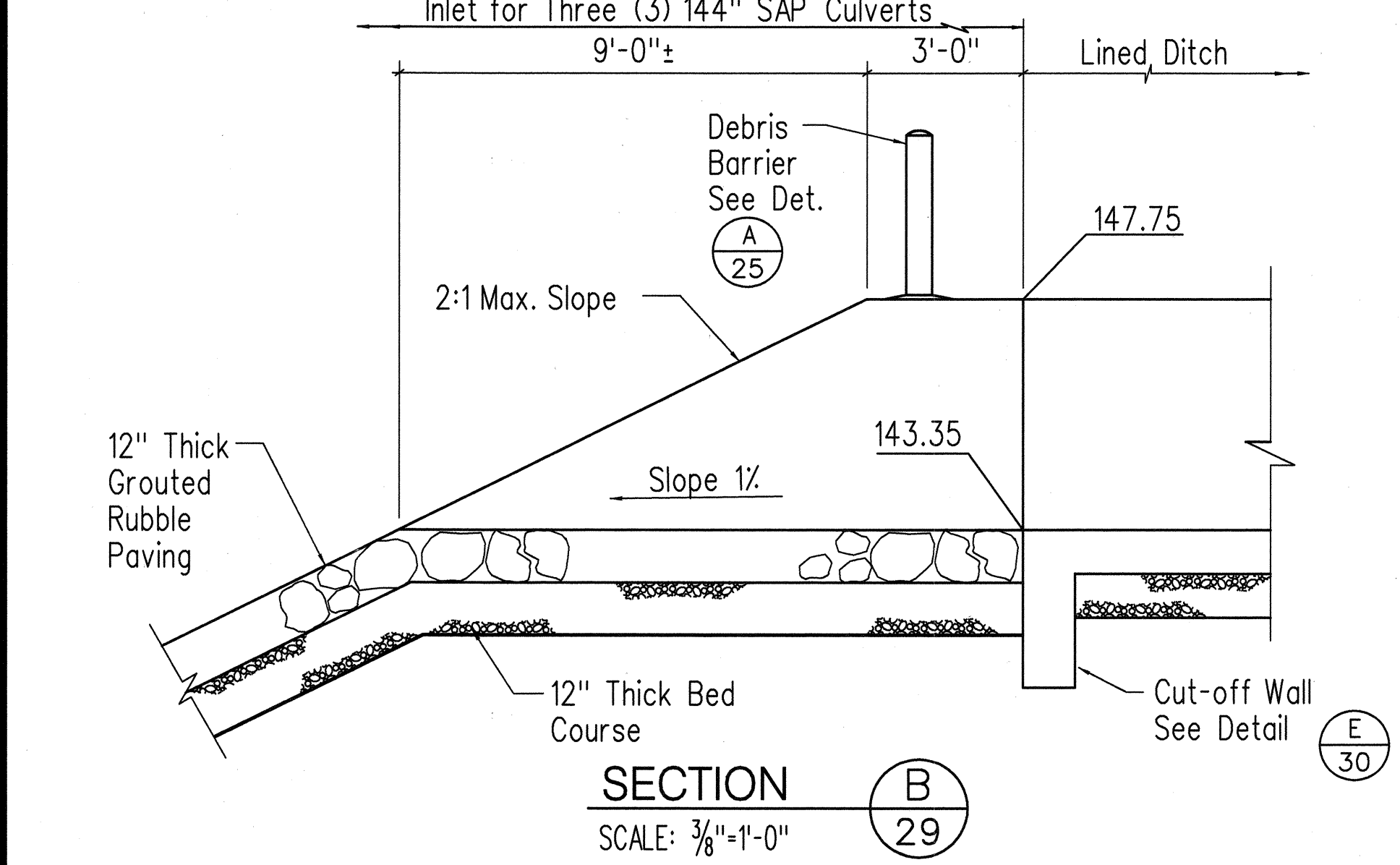
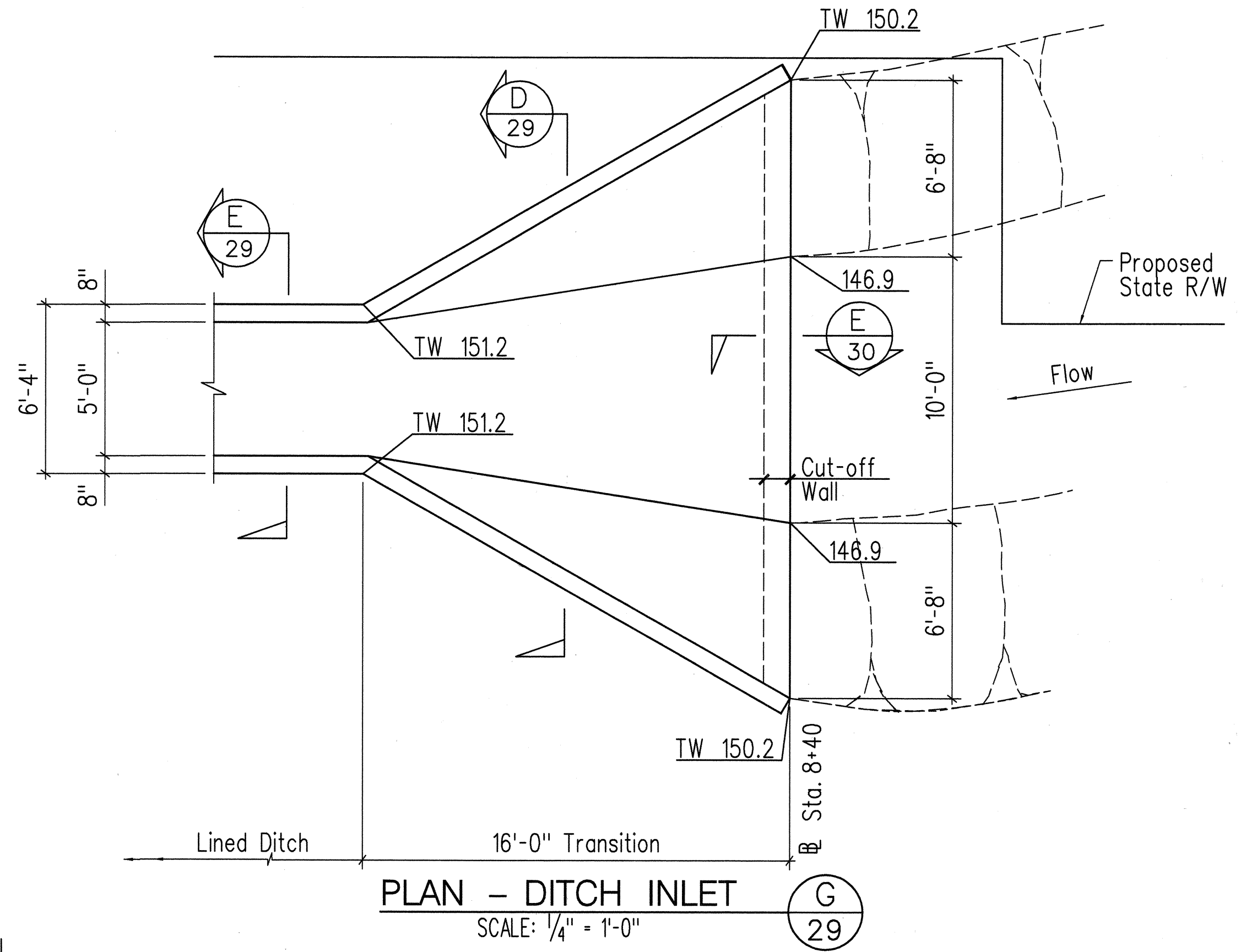
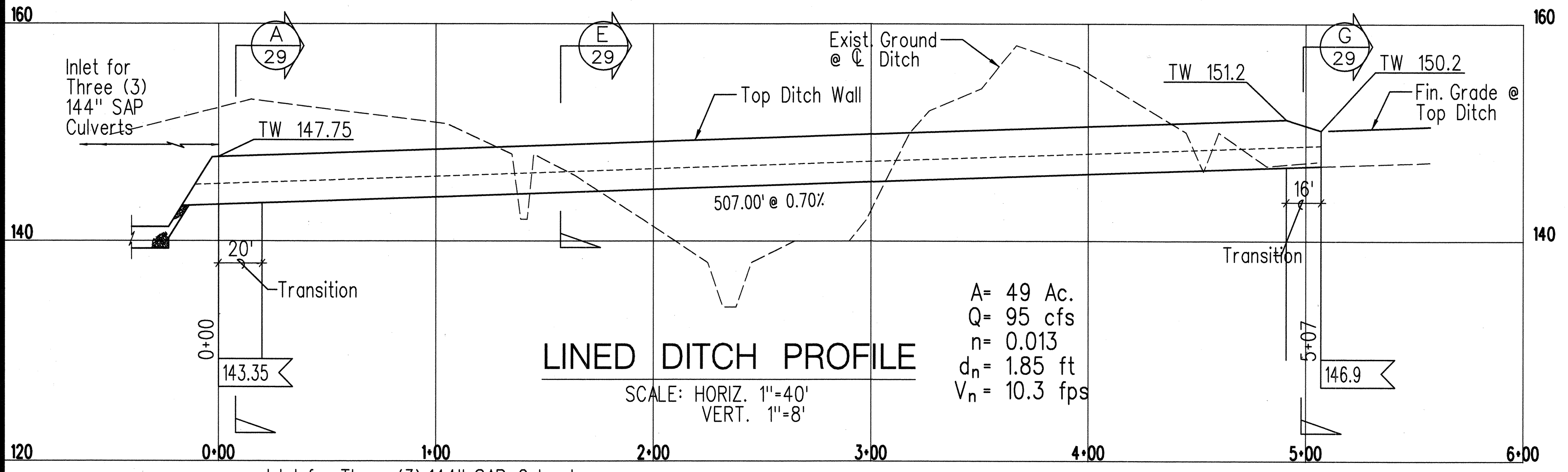
OUTLET THRU GRP DETAIL F
Scale: 1/2"=1'-0"



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Stanley S. Shimabukuro
SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96815

10/12/98	Deleted Section A/28. Revised Detail F/28.
Date	Revision
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	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	29	79

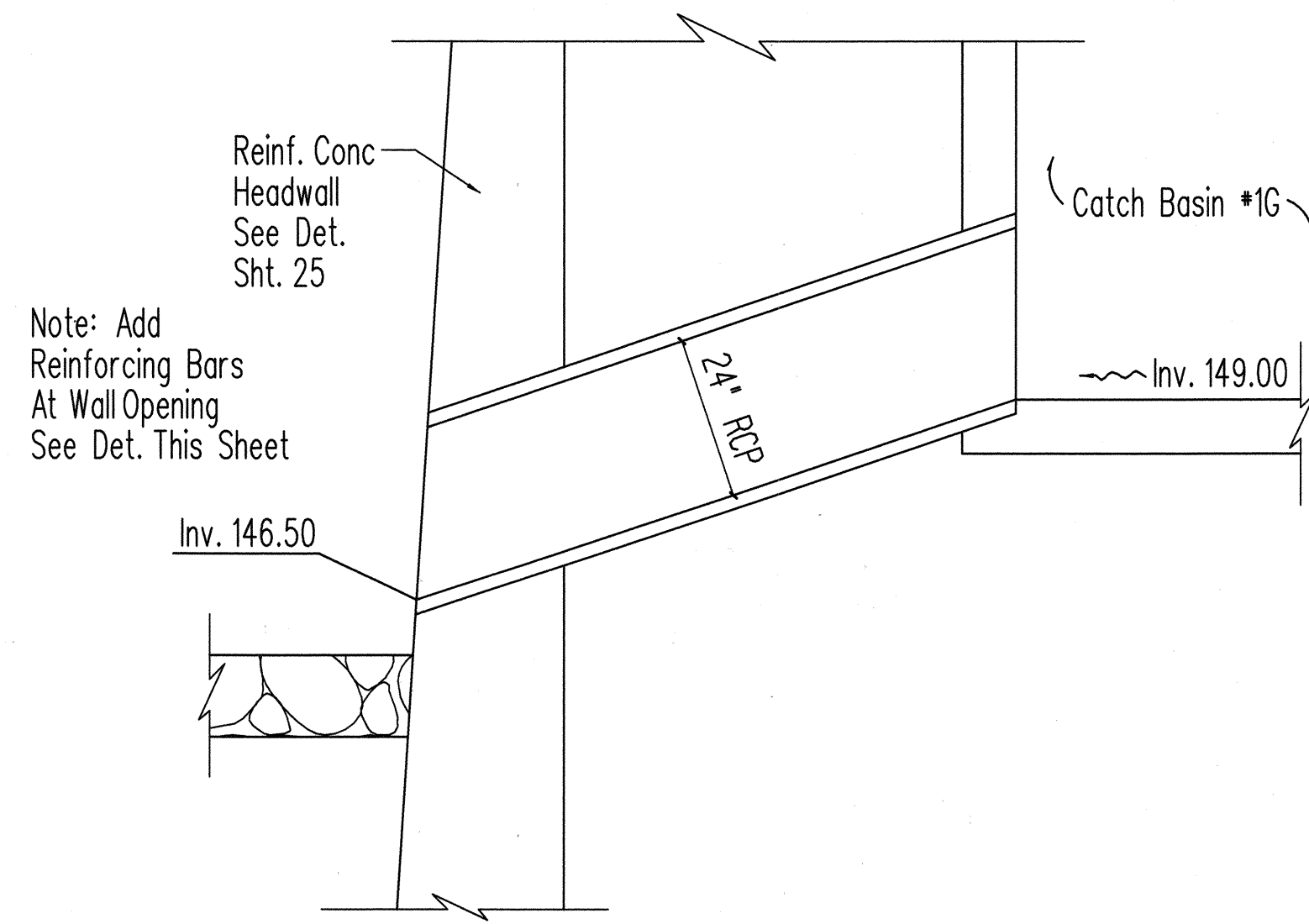


HAROLD I. YOSHIZAKI
 LICENSED PROFESSIONAL ENGINEER
 No. 2091-C
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 SHIMABUKURO, ENDO & YOSHIZAKI, INC.
 1126 12th Avenue
 Honolulu, Hawaii 96816

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 DRAINAGE DETAILS
 KAUMUALII HIGHWAY, KUHIO HIGHWAY &
 RICE STREET INTERSECTION IMPROVEMENTS
 PROJECT NO. 50E-01-98
 SCALE: AS NOTED DATE:
 SHEET NO. 1 OF 2 SHEETS

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

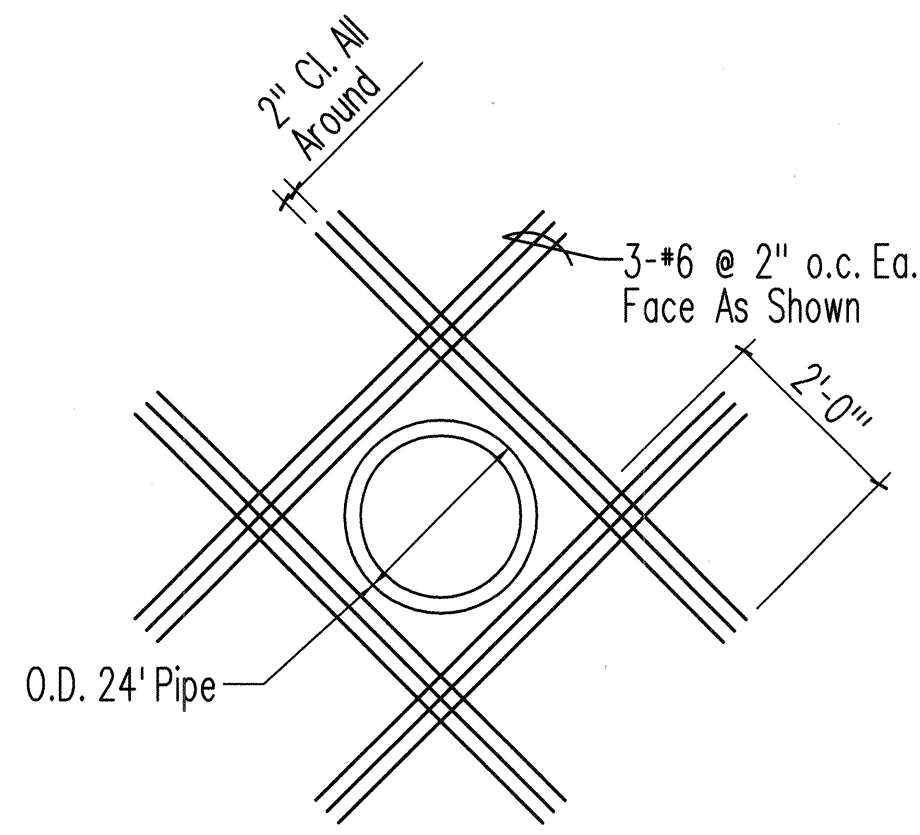
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50E-01-98	1998	30	79



OUTLET THRU HEADWALL

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

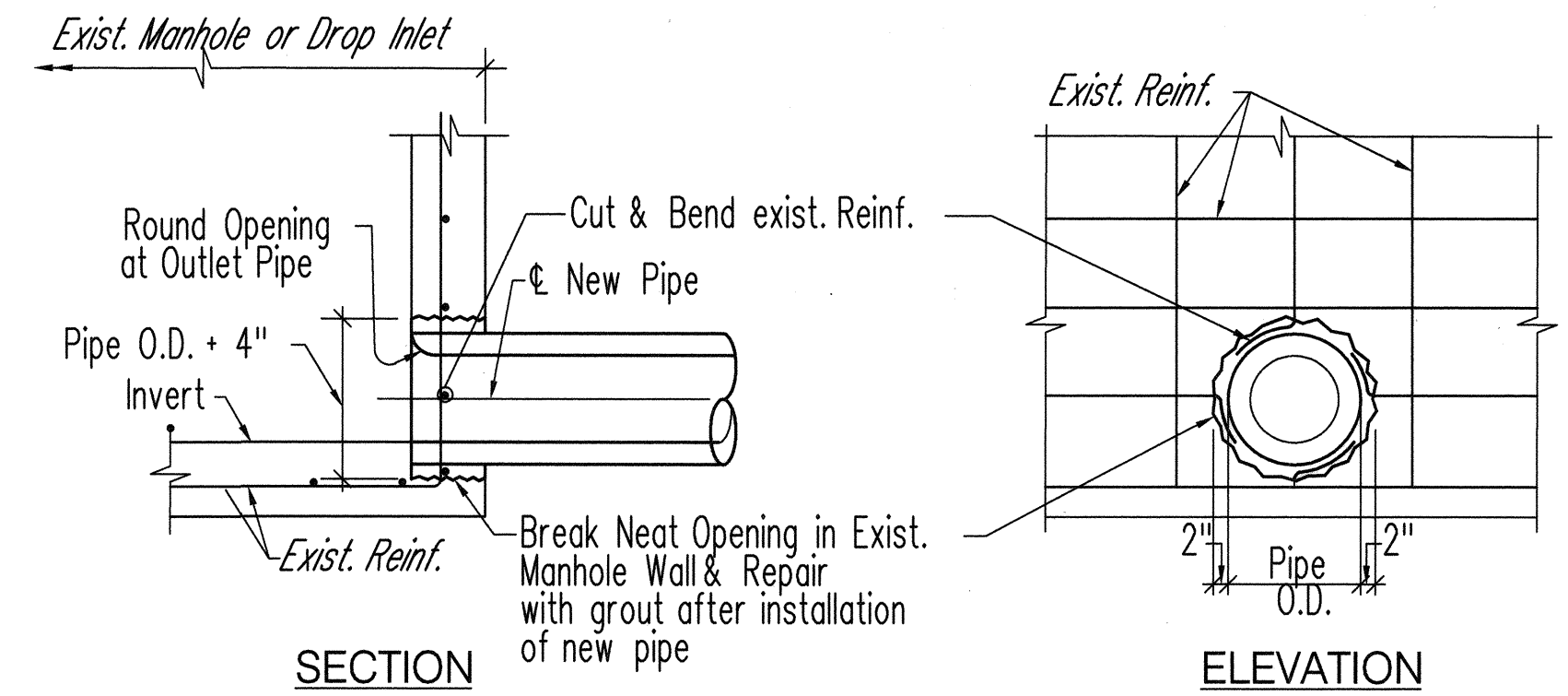
A
30



WALL OPENING REINFORCEMENT

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

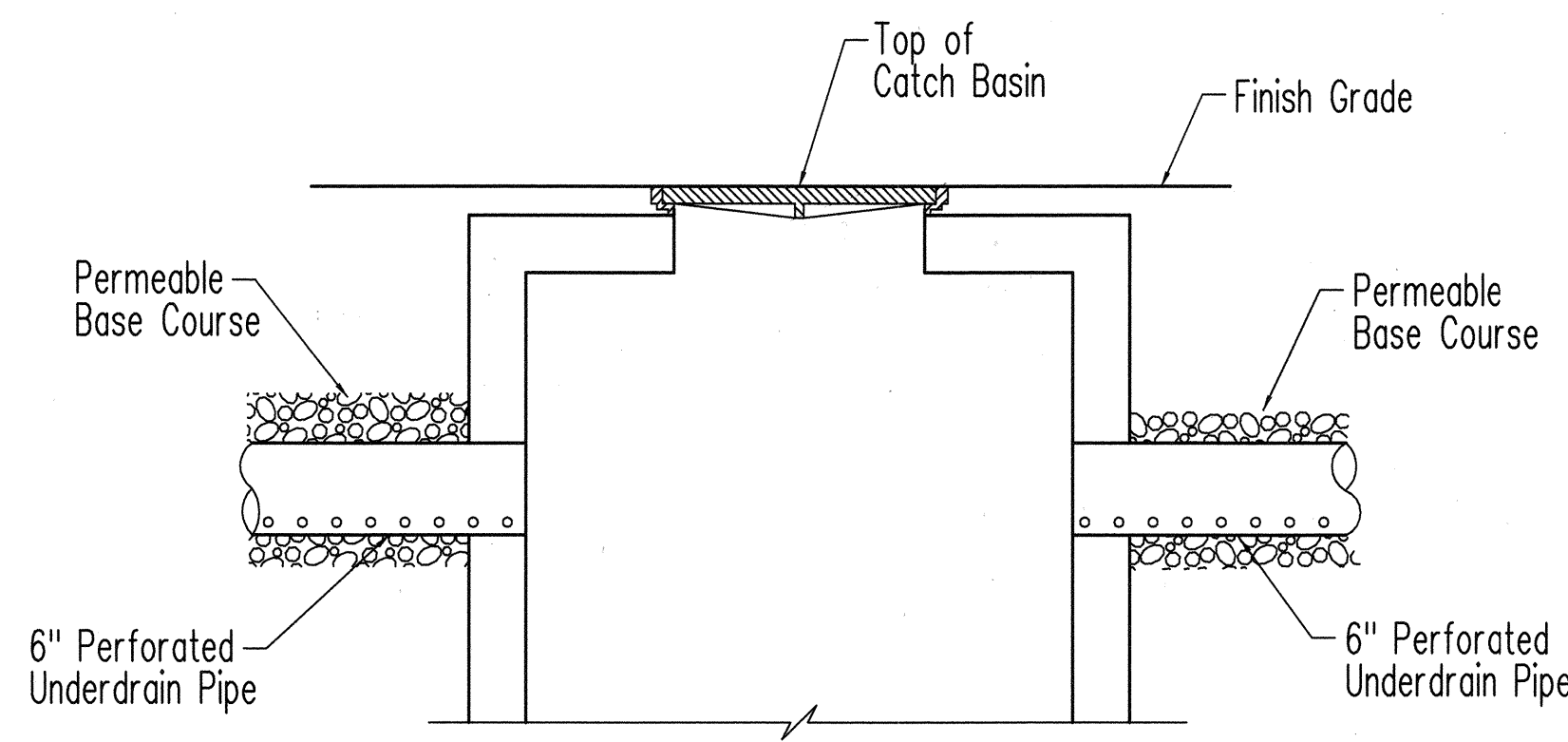
B
30



PIPE CONNECTION TO EXIST. SDMH OR DROP INLET

NTS

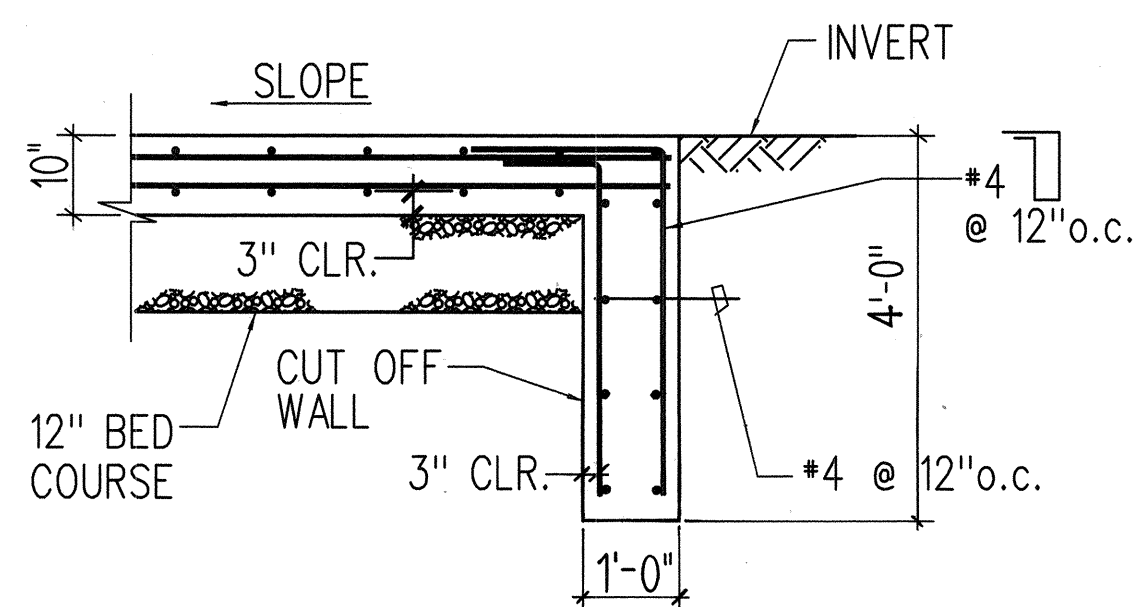
C
30



TYPICAL CONNECTION OF UNDERDRAIN TO DRAINAGE STRUCTURE

Scale: 3/4"=1'-0"

D
30

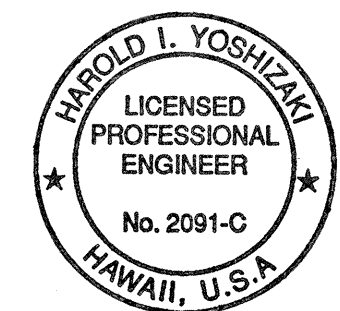


SECTION

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

E
30

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



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Harold I. Yoshizaki
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1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

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

SCALE: AS NOTED DATE: _____

SHEET NO. 1 OF 2 SHEETS