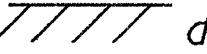
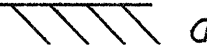
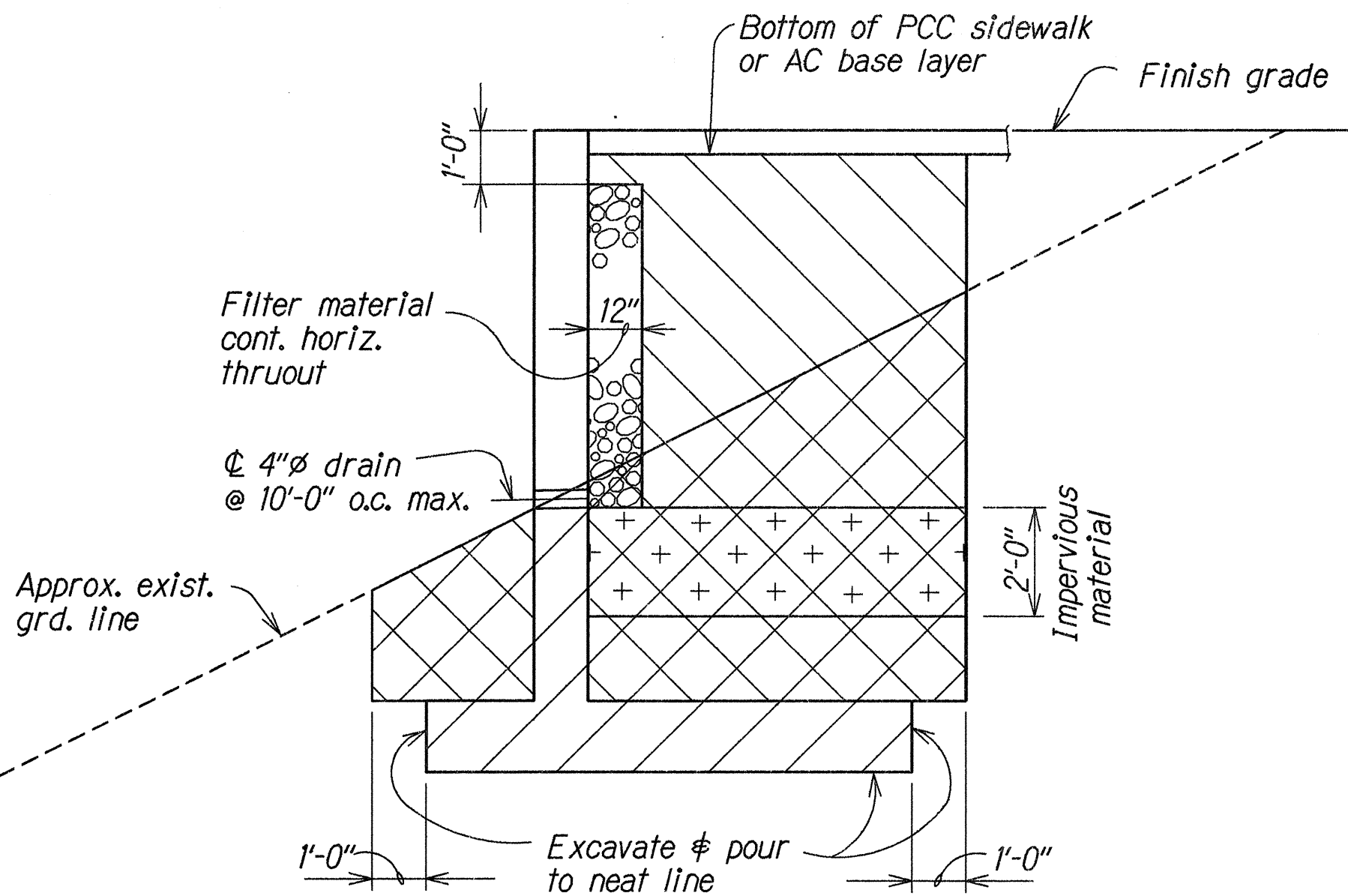


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-91	1991	15	26

Note:

- Hatched area shown thus  denote limits of structure excavation payline.
- Hatched area shown thus  denote limits of structure backfill.
- Impervious material as selected by the Engineer shall be incidental to structure excavation.

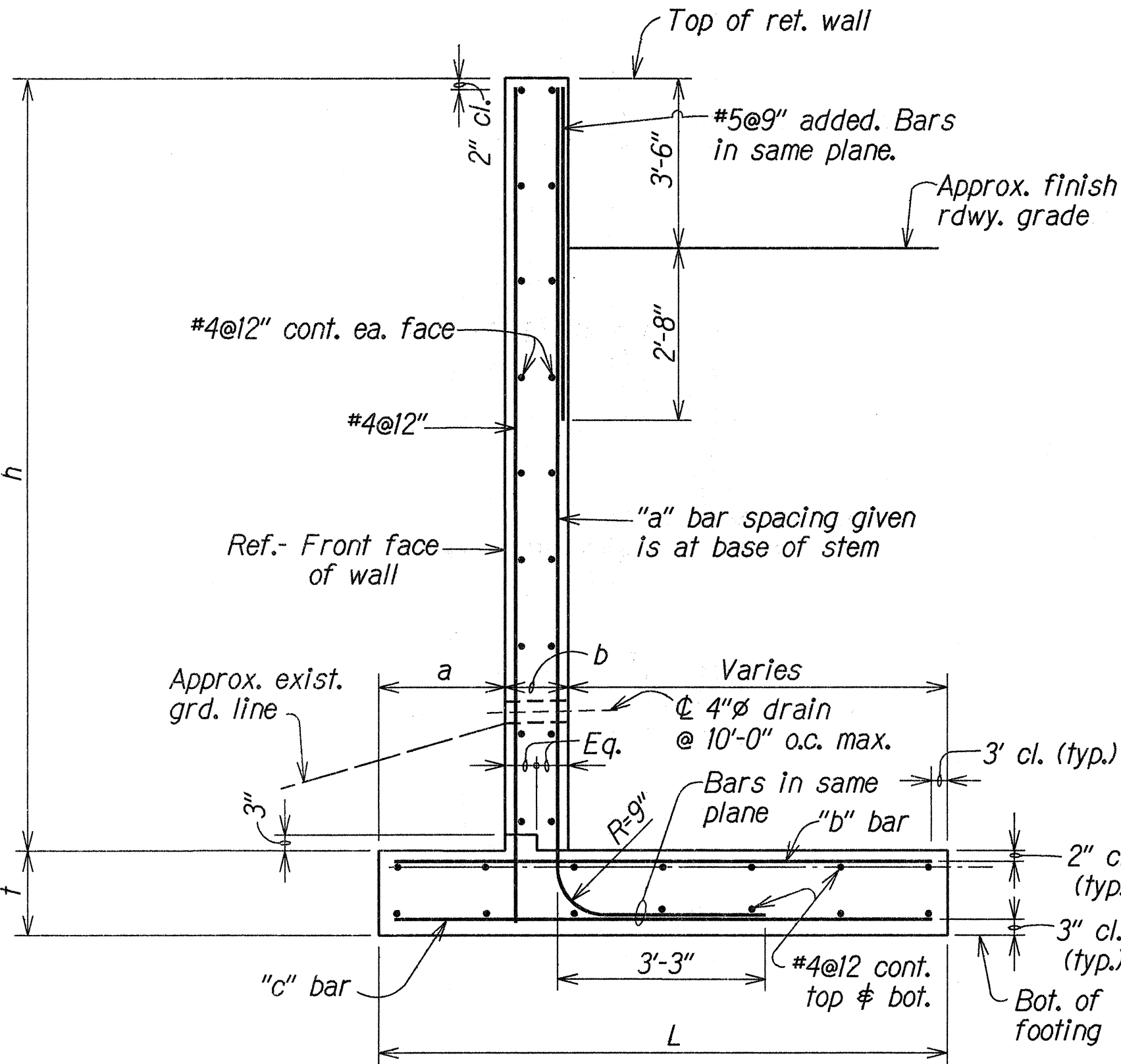


AT FILL SIDE

TYP. EXCAVATION & BACKFILL PAY LIMITS

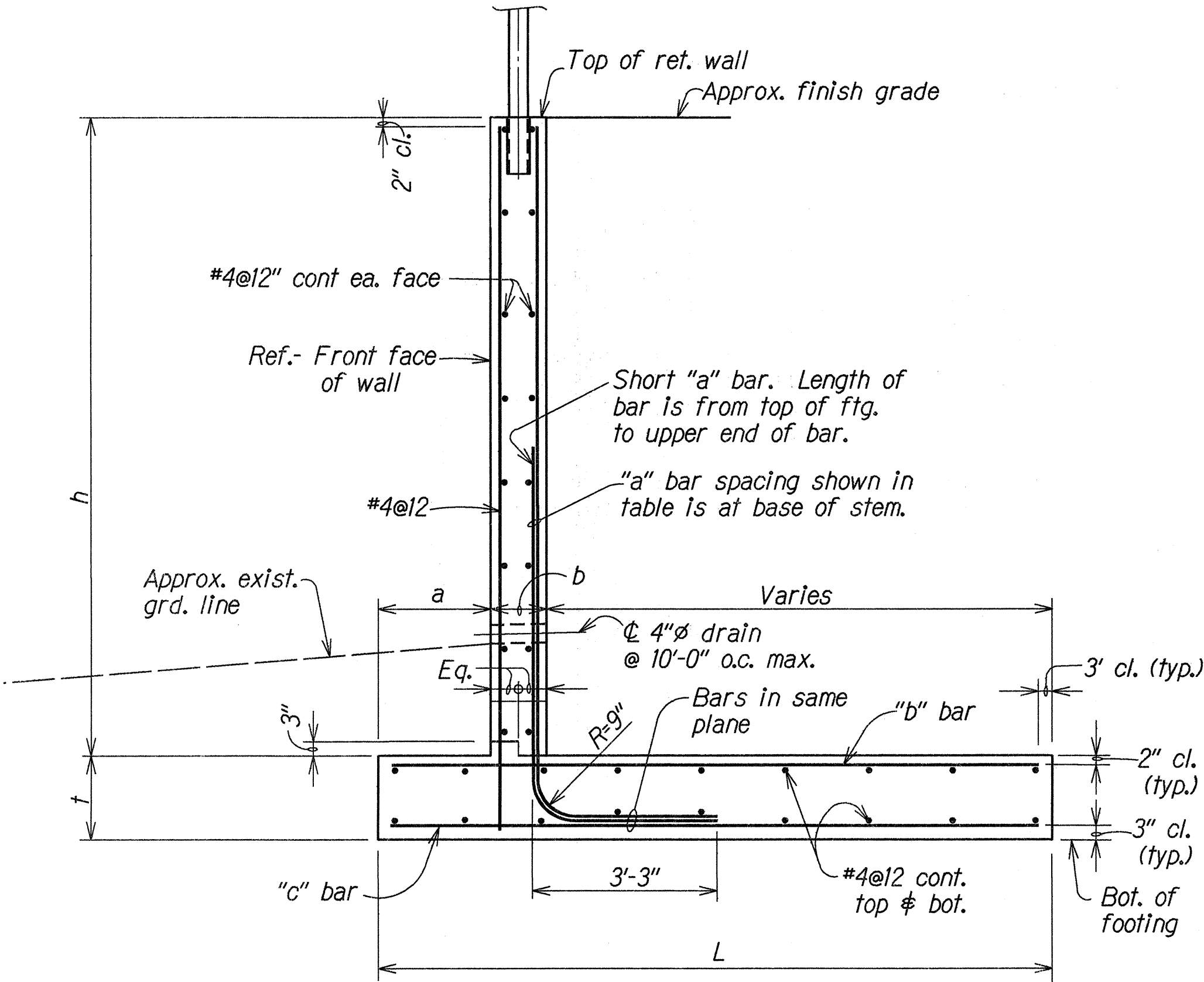
Not To Scale

SCHEDULE OF DIMENSIONS AND REINFORCING STEEL WITH TRAFFIC IMPACT WALLS						
MAXIMUM h	10'	11'				
a	2'-0"	2'-0"				
b	12"	12"				
t	14"	14"				
L	7'-0"	9'-0"				
"a" bars	#7@11"	#7@8"				
"b" bars	#5@11"	#8@8"				
"c" bars	#4@12"	#4@12"				



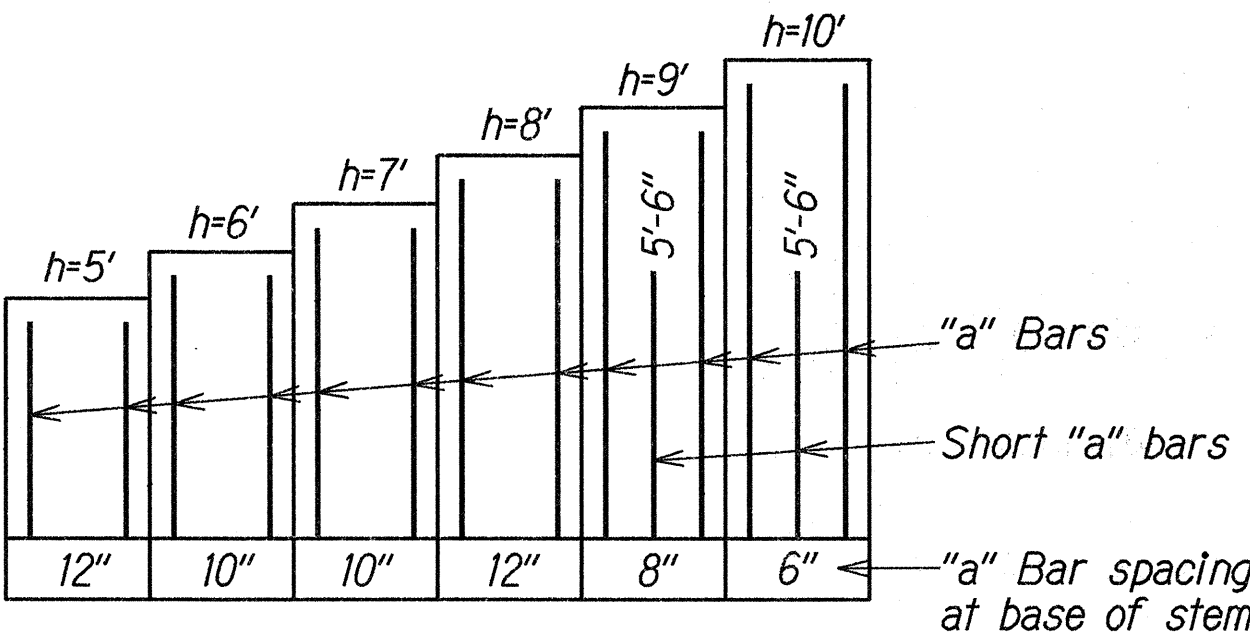
TRAFFIC IMPACT RETAINING WALL SECTION (Type "T-1" Wall)

Not To Scale



NON-TRAFFIC RETAINING WALL SECTION (Type "T-2" Wall)

Not To Scale



VERTICAL REINFORCING STEEL ARRANGEMENT AT NON-TRAFFIC WALLS

N.T.S.

SCHEDULE OF DIMENSIONS AND REINFORCING STEEL NON-TRAFFIC WALLS						
MAXIMUM h	5'	6'	7'	8'	9'	10'
a	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"
b	12"	12"	12"	12"	12"	12"
t	14"	14"	14"	14"	15"	16"
L	4'-3"	5'-0"	6'-3"	7'-6"	9'-0"	11'-0"
"a" bars	#4@12"	#4@10"	#5@10"	#6@12"	#6@8"	#7@6"
"b" bars	#4@12"	#4@10"	#5@10"	#7@12"	#7@8"	#8@6"
"c" bars	#4@12"	#4@12"	#4@12"	#4@12"	#4@12"	#5@12"
Short "a" bars length	---	---	---	---	5'-6"	5'-6"

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

RETAINING WALLS NO. 1, NO. 2 AND NO. 3

TYPICAL RETAINING WALL SECTION

TYPICAL EXCAVATION AND BACKFILL PAY LIMITS

KEAAU-PAHOA ROAD IMPROVEMENTS

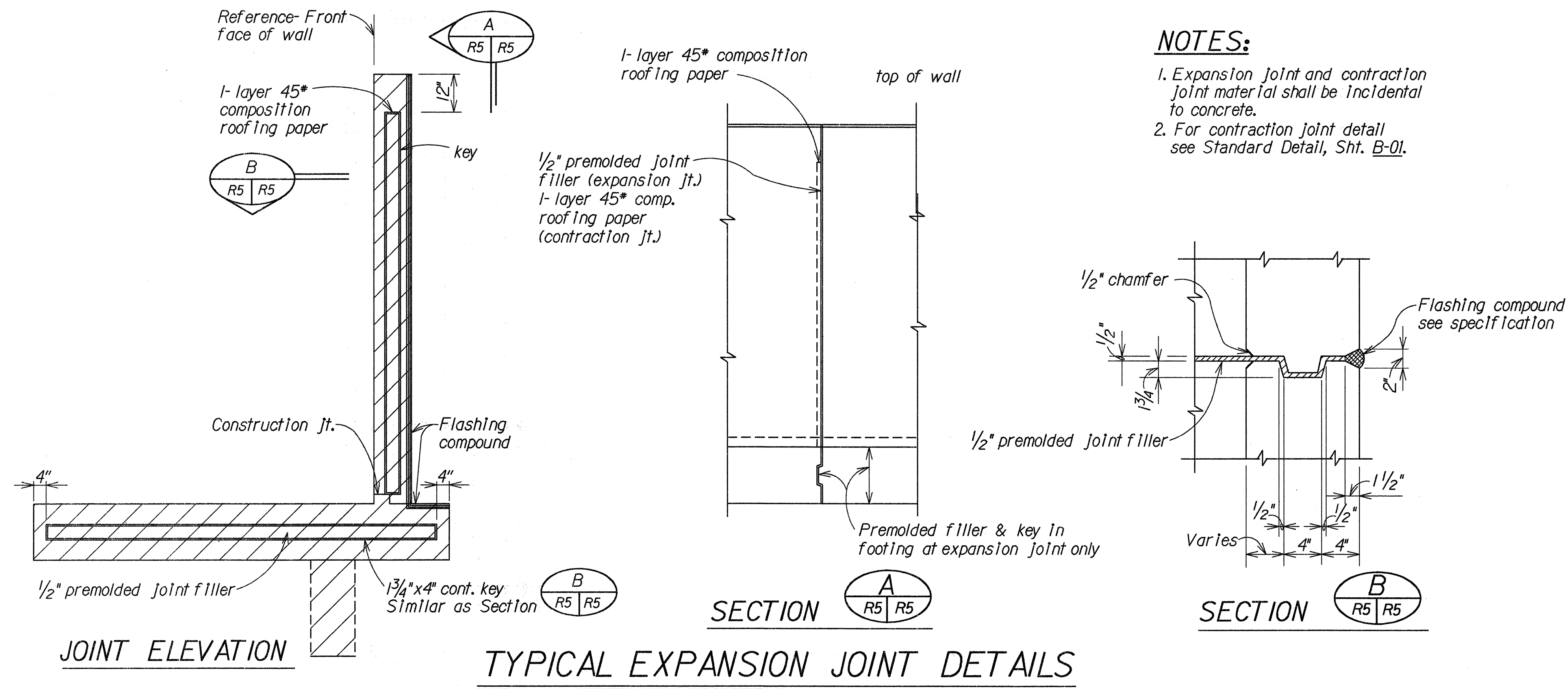
VICINITY OF KEAAU SCHOOL

Project No. 130B-01-91

Scale: As Noted

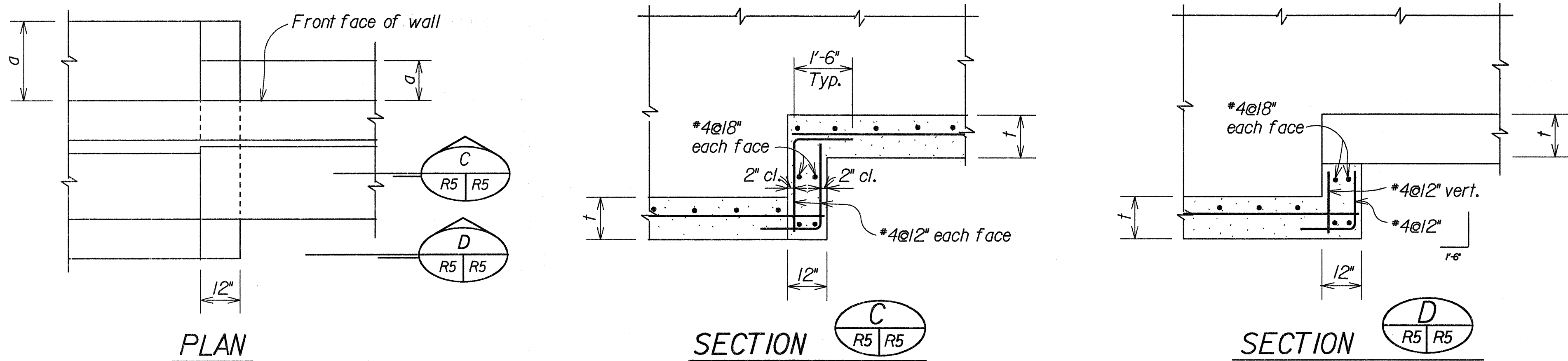
Date: May, 1991

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-91	1991	16	26

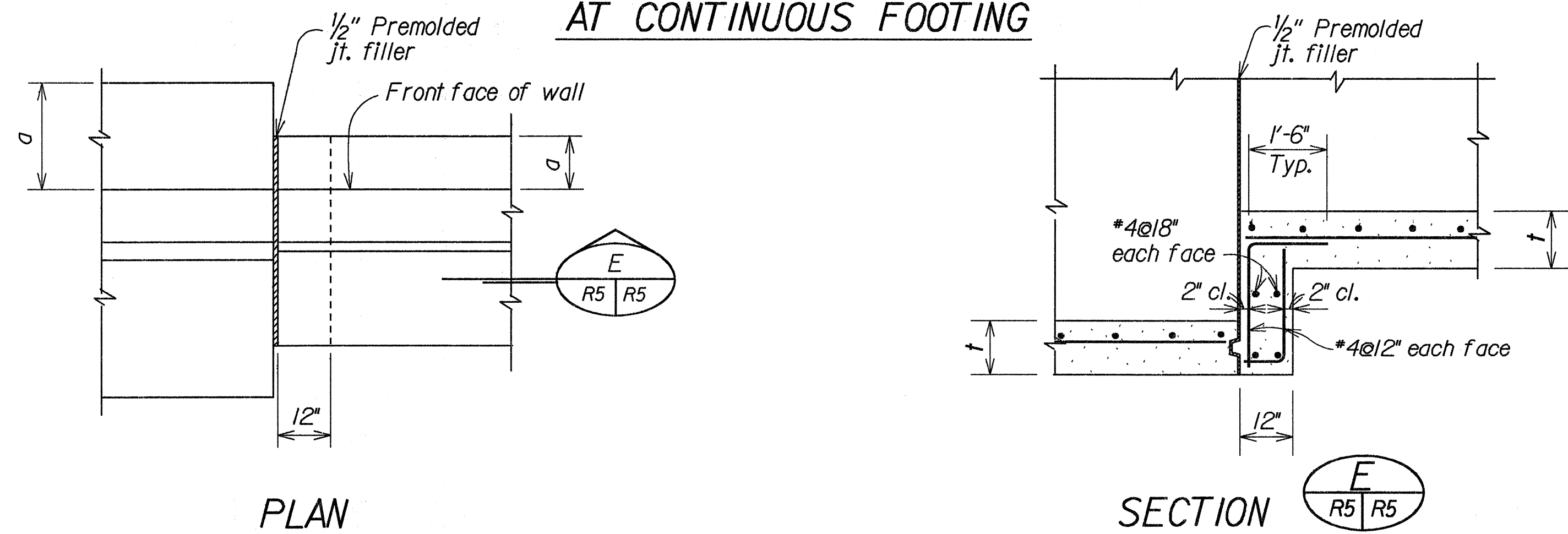


TYPICAL EXPANSION JOINT DETAILS

Not to Scale



AT CONTINUOUS FOOTING



AT EXPANSION JOINT

TYPICAL FOOTING STEP-UP DETAILS

Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALLS NO. 1, NO. 2 AND NO. 3

TYPICAL EXPANSION JOINT DETAILS
TYPICAL FOOTING STEP-UP DETAILS

KEAAU-PAHOA ROAD IMPROVEMENTS
VICINITY OF KEAAU SCHOOL
Project No. 130B-01-91

Scale: As Noted Date: May 1991

SHEET No. R5 OF 6 SHEETS