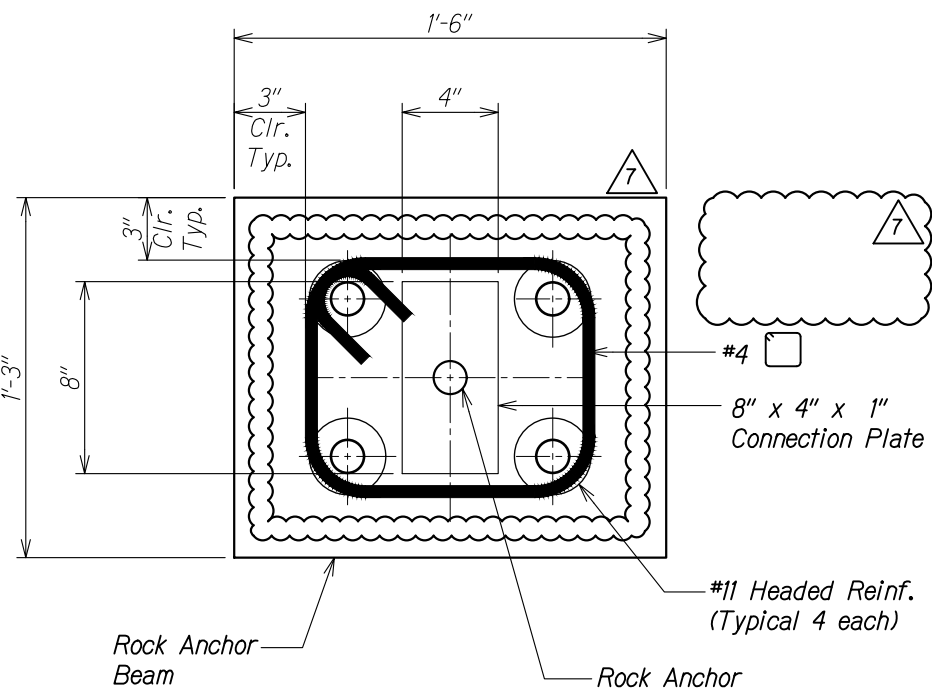
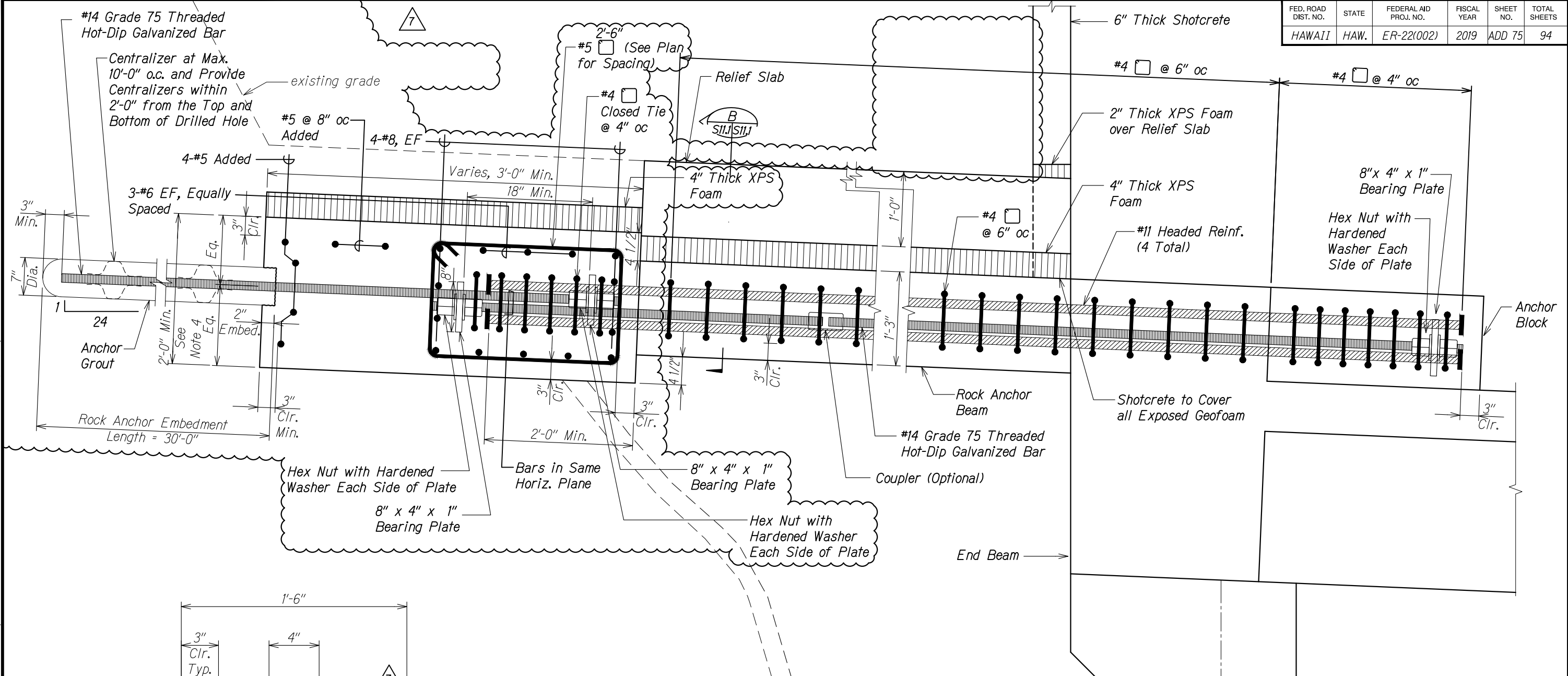




FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 75	94



SECTION B
Scale: 3" = 1'-0"
S11.1

- Notes:**
1. All nuts, washers, plates and couplers shall be hot-dip galvanized in accordance with ASTM A 513. All threaded bars shall be hot-dip galvanized in accordance with ASTM A 767.
 2. Proof test all production anchors to 1.0x DTL.
 3. Design Test Load (DTL) = 100 kips
 4. Contractor to verify rock anchor cap beam height is adequate based on as-built location and angle of rock anchors.

TYPICAL ROCK ANCHOR AND BEAM SECTION
Scale: 1 1/2" = 1'-0"
A
S11.1 S11.1

9/27/19		Added Rock Anchor Cap Beam
5/24/19		Revised Section
DATE	REVISION	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

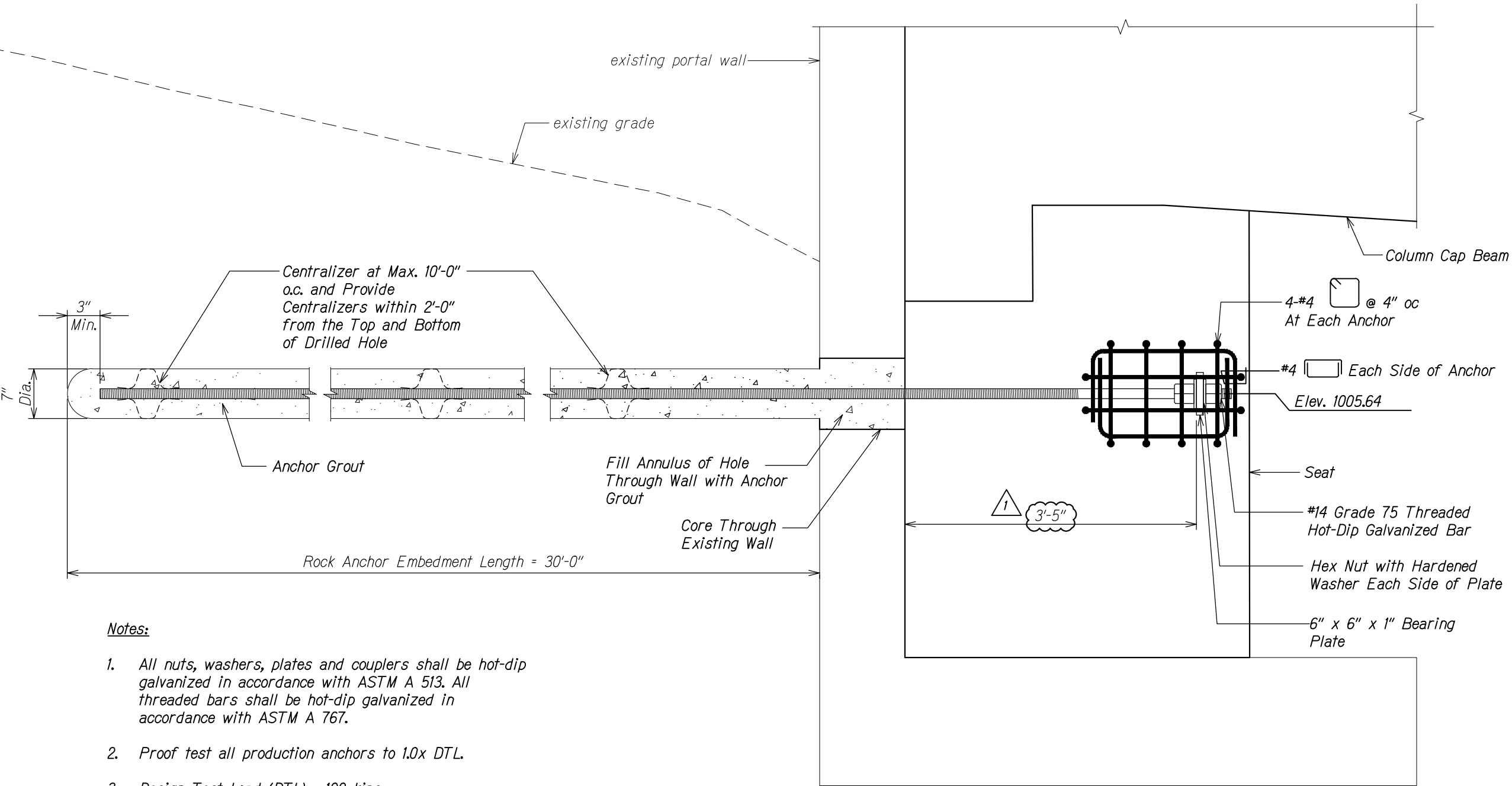
ROCK ANCHOR SECTIONS

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. *S11.1* OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 76	94



Notes:

1. All nuts, washers, plates and couplers shall be hot-dip galvanized in accordance with ASTM A 513. All threaded bars shall be hot-dip galvanized in accordance with ASTM A 767.
2. Proof test all production anchors to 1.0x DTL.
3. Design Test Load (DTL) = 100 kips

ROCK ANCHOR AT COLUMN CAP BEAM SEAT
Scale: 1 1/2" = 1'-0"

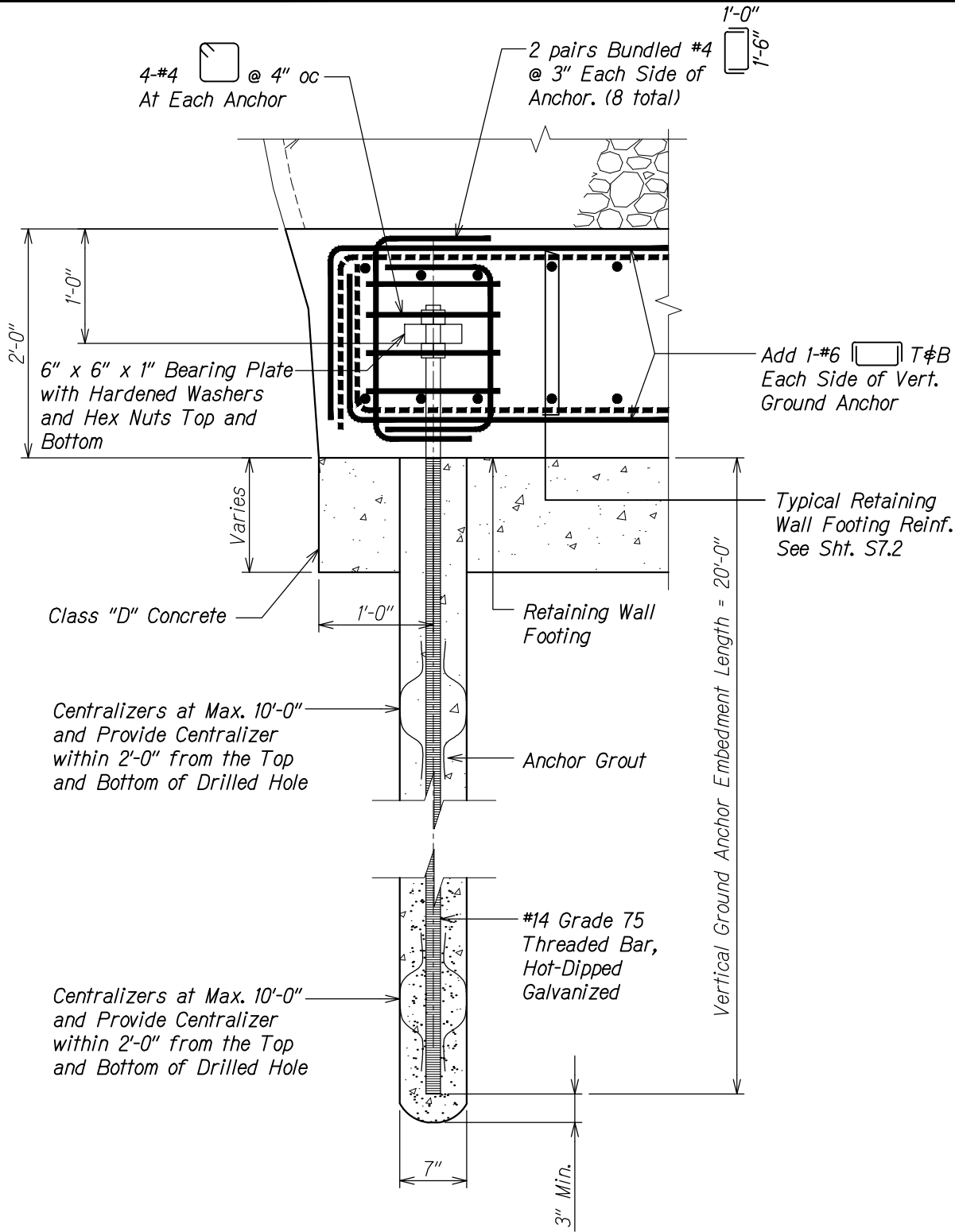
A
S11.2 S11.2

5/24/19	1 Revised Dimension
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ROCK ANCHOR SECTION	
PALI HIGHWAY LANDSLIDE MITIGATION PROJECT FAP Proj. No. ER-22(002)	
Scale: As Noted	Date: May 6, 2019
SHEET No. S11.2 OF 3 SHEETS	

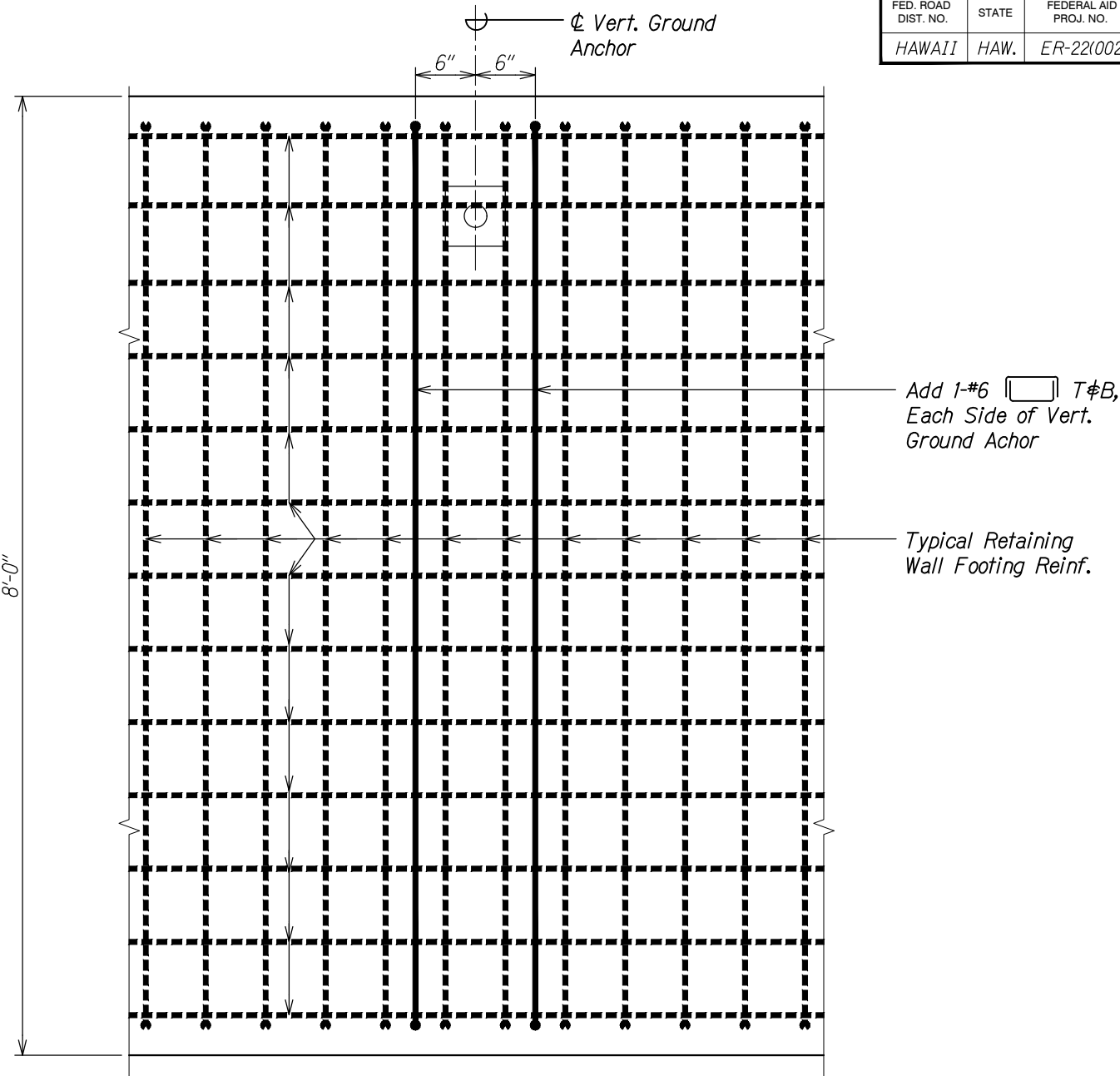
ORIGINAL PLAN	DATE
NO. 1	
DESIGNED BY	
CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\19-014.1 PALI ROOF SHED-WSP TMA 01 CAD\05-24-19 PH 2\PLM-S1101 ADD1 GRD ANCHOR DET.DWG PLOT TIME: 06-03-19, 11:06 AM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	77	94



VERTICAL GROUND ANCHOR SECTION
Scale: 1 1/2" = 1'-0"



PARTIAL PLAN AT
VERTICAL GROUND ANCHOR
Scale: 1 1/2" = 1'-0"

Notes:

1. All nuts, washers, plates and couplers shall be hot-dip galvanized in accordance with ASTM A 513. All threaded bars shall be hot-dip galvanized in accordance with ASTM A 767.
2. Proof test all production anchors to 1.0x DTL.
3. Design Test Load (DTL) = 100 kips

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

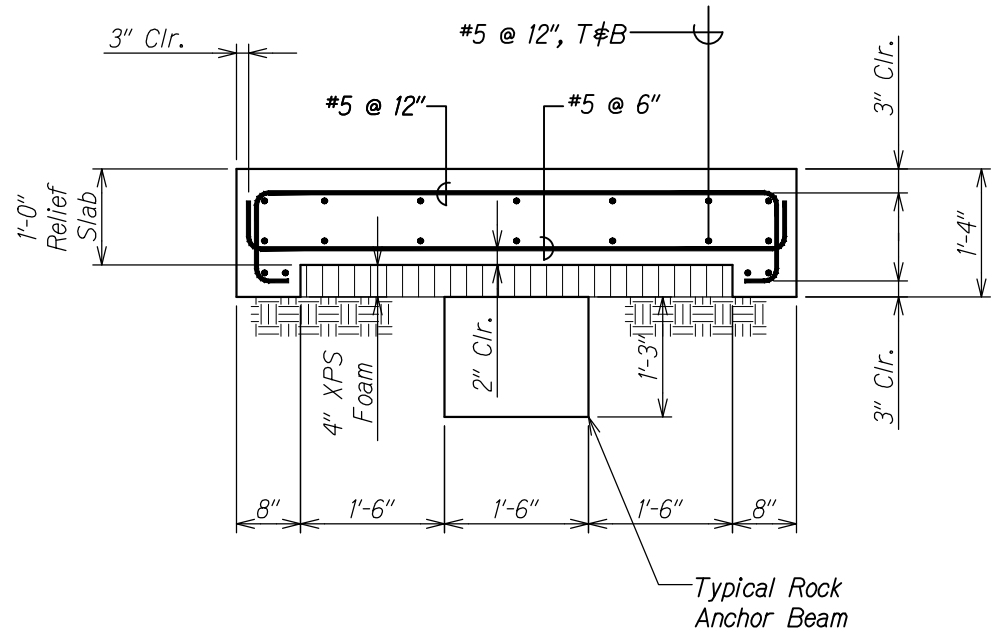
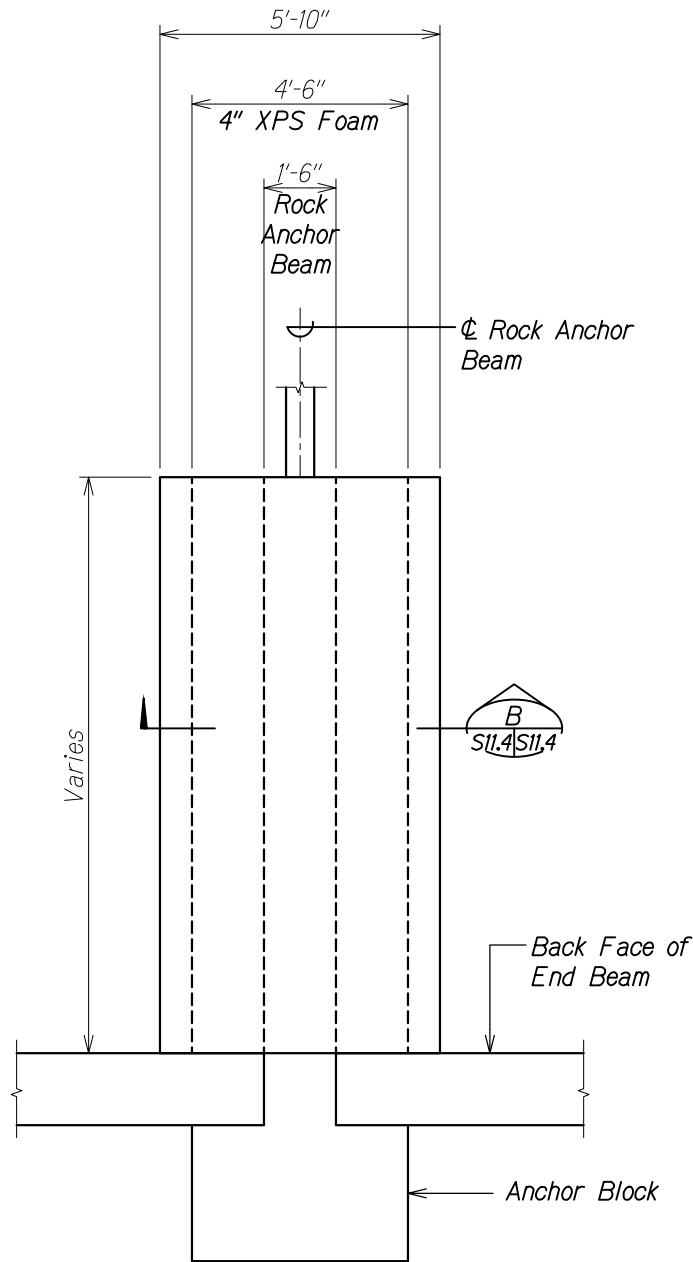
VERTICAL GROUND ANCHOR

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)
Scale: As Noted Date: May 6, 2019
SHEET No. S11.3 OF 3 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\19-014.1 PALI ROOF SHED-WSP TMA\01 CAD\05-06-19 TOPO\PLM-S1103 PRODCN ANCHOR.DWG PLOT TIME: 05-07-19, 12:00 AM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 77S-1	94



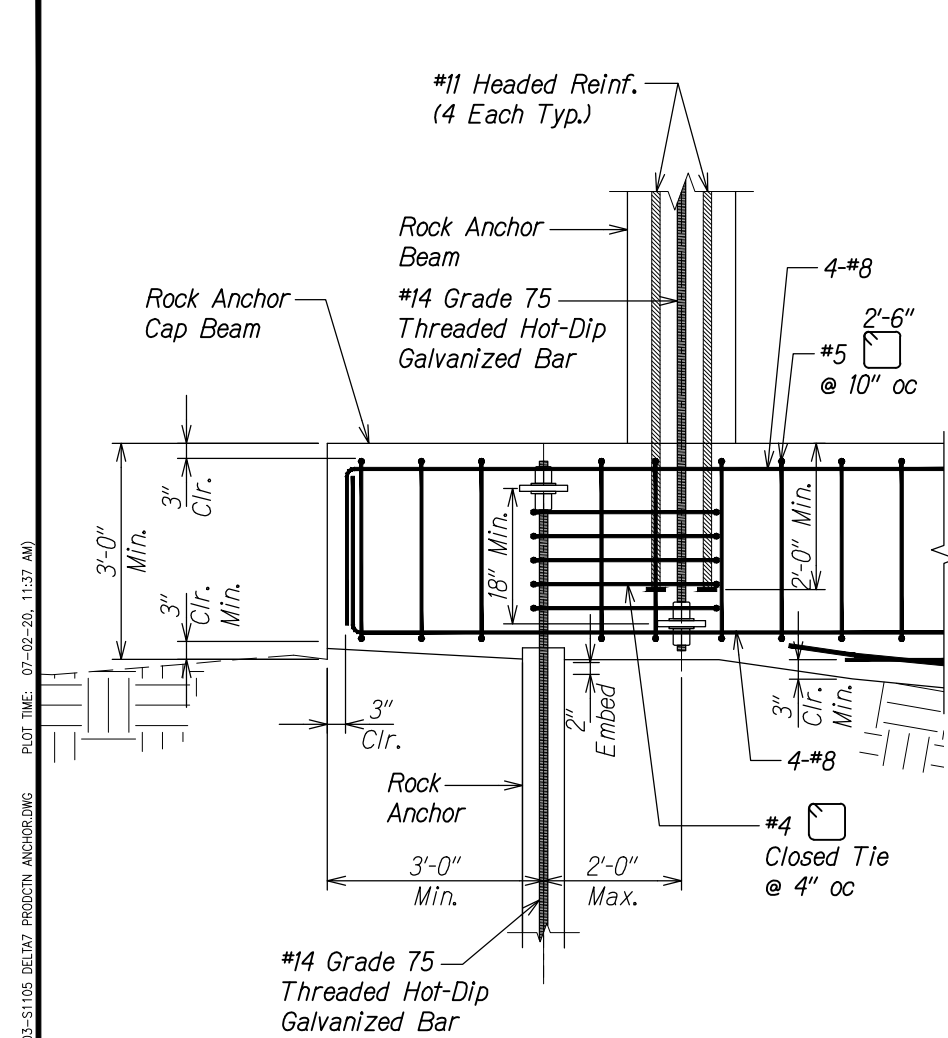
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\19-014.1 PALI ROOF SHED-WSP TMA\01 CAD\05-24-19 PH 2\PLM-S1103 PROTECTV ANCHOR.DWG PLOT TIME: 06-03-19, 11:07 AM

5/24/19	<div>1</div> New sheet
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
RELIEF SLAB PLAN AND SECTION	
PALI HIGHWAY LANDSLIDE MITIGATION PROJECT FAP Proj. No. ER-22(002)	
Scale: As Noted	Date: May 6, 2019
SHEET No. S11.4 OF 3 SHEETS	

ADD 77S-1

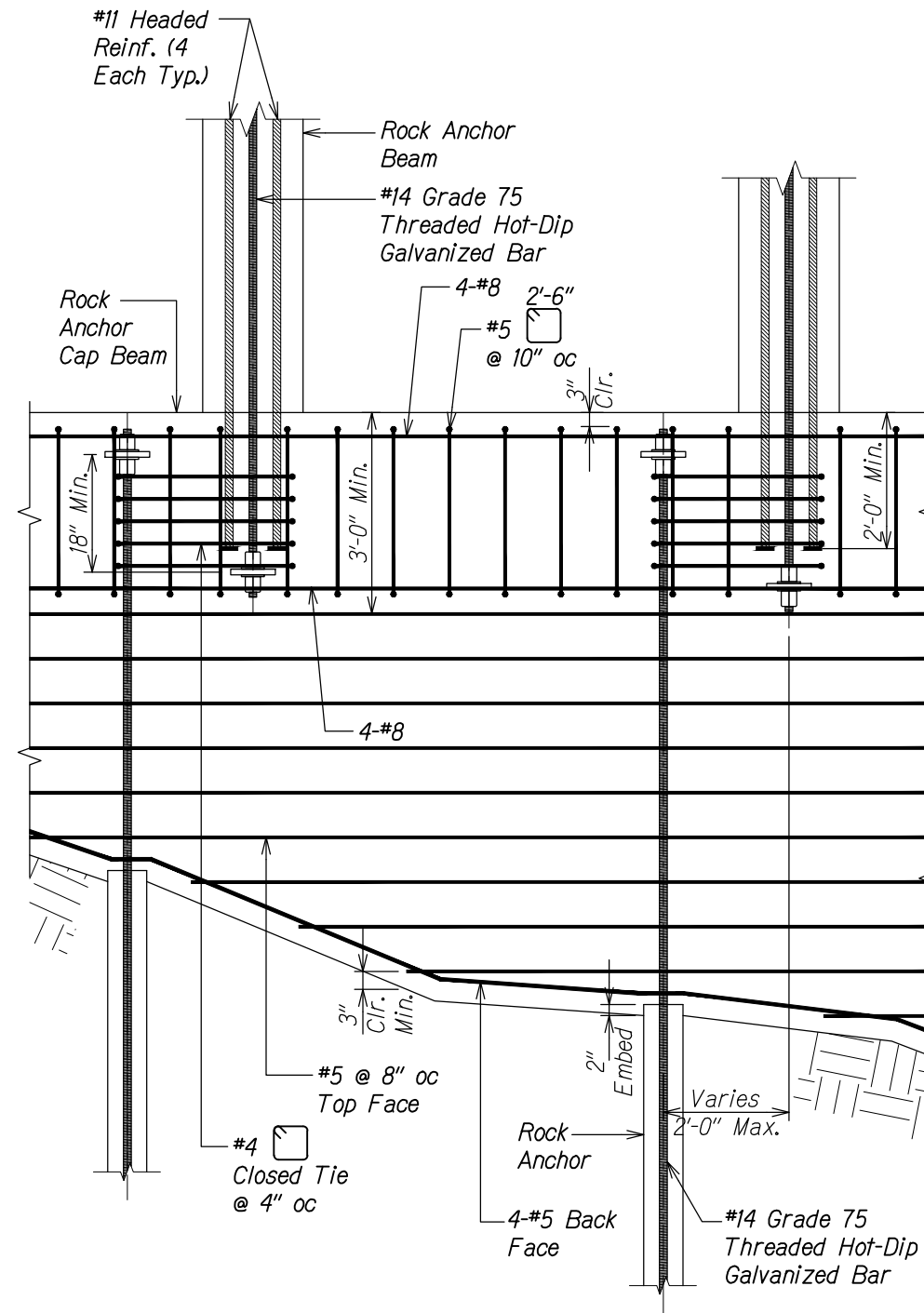
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 775-2	94



DETAIL


Scale: $\frac{3}{4}'' = 1'-0''$

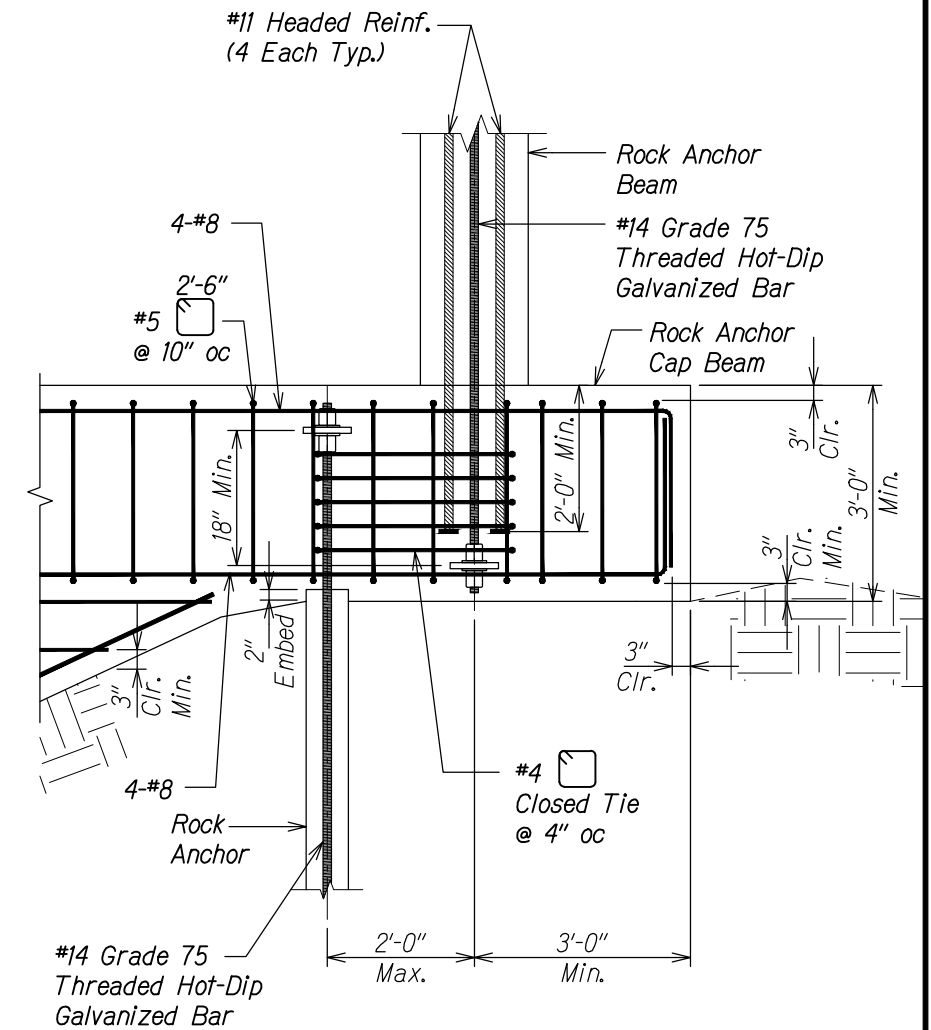
A
S1.5 | S11.5



DETAIL


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





DETAIL


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



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

PLOT TIME: 07-02-20 11:37 AM)

DRAWING NAME: 7:\00 ONGOING\19-014\A PA\ ROOF SHED POST DESIGN-WSP TM\01 CAR\04-06-20R BE123 RVSQ RFBAR\PI M-S1103-S1105 DELTA7 PRODCDN ANCHOR DWG

9/23/19	 New sheet
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROCK ANCHOR

CAP BEAM DETAILS

PALI HIGHWAY

LANDSLIDE MITIGATION PROJECT

FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. *III.5* OF 3 SHEETS

ADD 77S-2