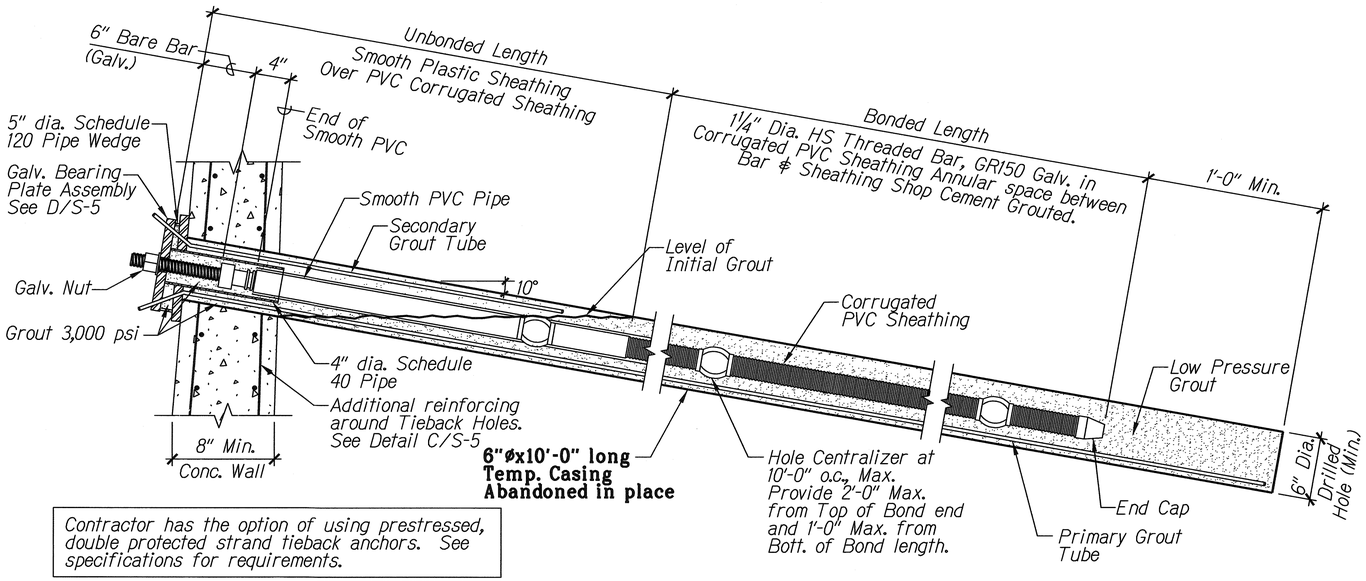
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	580A-01-02	2005	C.0.22	25



Contractor has the option of using prestressed, double protected strand tieback anchors. See specifications for requirements.

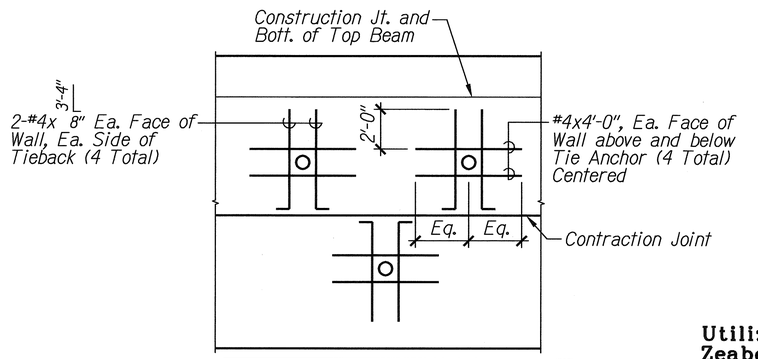
A TIEBACK ANCHOR DETAIL

S-4 | S-5 Not To Scale

TIEBACK ANCHOR NOTES

1. High strength threaded bar shall be 1-1/4" dia. per ASTM A722, Type II, Grade 150 (Bar Yield Point=150 kips and ultimate load= 187.5 kips) and galvanized per ASTM A153. Yield strength shall not be reduced by more than 5% after galvanizing. In addition, anchor assembly , including angle compensating nuts or bevel washers shall be galvanized per ASTM A153.
2. Design Criteria / Definitions
   A. Static Load = Earth Pressure + Live Load Surcharge
   B. Working Load = 1.0 Static Load Plus Vehicle Impact Load
   C. Design Load = Factor of Safety (1.33) Times Working Load
   D. Max. Test Load = 1.5 Time Design Load
   E. Lock-Off Load = Factor of Safety (1.33) Times Static Load Plus Prestress Losses.
   or
   Lock-Off Load = Impact Load Plus Static Load Plus Prestress Losses.
   Whichever is greater
3. Grout tubes shall be placed through the bearing steel plate. Size and locations shall ensure full grouting of hole. The Contractor shall submit grouting detaills for approval by the engineer.
4. For High Strength Threaded Bar:
   A. Do not weld bar.
   B. Do not use bar as ground connection for welding.
   C. Do not allow hot slag or sparks to touch bar.
   D. Do not damage bar surface.
   E. Do not use bars with kinks or sharp bends.
5. See Tieback Stressing Schedule on Sheet S-3A for tieback stressing information.

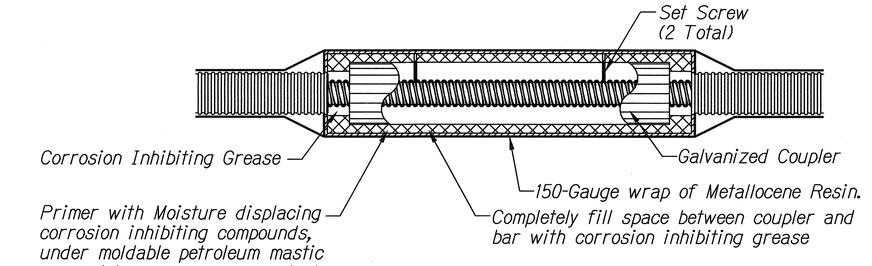
1



Note:
Added reinforcing shall have 2" min. cover from edge of Tieback holes and from Confraction Joints.

C ADDED WALL REINF. AT TIEBACKS

S-5 | S-5 Not To Scale

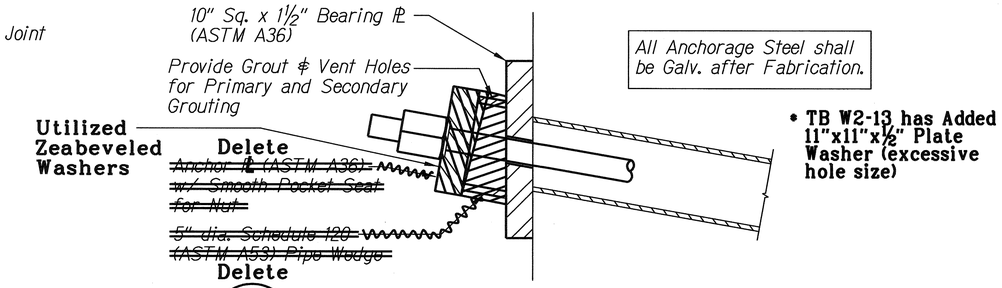


Coupler Installation Procedure

1. Apply Corrosion Inhibiting Grease to the bare ends of the bars and the inside of the Coupler.
2. Connect the two bar ends with the Coupler (Half the end of the Coupler).
3. Torque two ends together with 200 ft.-lbs. minimum then tighten set screws.
4. Coat Coupler with Corrosion Inhibiting Primer and cover with moldable mastic, rounding and reducing sharp edges.
5. Spirally wrap Coupler assembly with synthetic fabric carrier tape, pressing out air pockets and smoothing all lap seams, wrap with 1" min. over lap.
6. Cover Coupler assembly with wrap.
7. Coupler used shall be capable of developing the full ultimate tensile strength capacity of the threadbar.

DOUBLE CORROSION PROTECTED COUPLER FOR BOND LENGTH

B S-5 | S-5 Not To Scale



D BAR TIEBACK ANCHORAGE DETAIL

S-5 | S-5 Not To Scale

DATE		REVISION
3/21/07	1	DELETED TIEBACK TABLE, ADDED NOTE 5

LEGEND FOR AS-BUILT POSTINGS

~~^^^^^~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

EXPIRATION DATE OF THE LICENSE: APRIL 30, 2010

GRAIG H. SAKANASHI LICENSED PROFESSIONAL ENGINEER No. 5509-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TIEBACK ANCHOR DETAIL

KUAMOO ROAD RETAINING WALL IN THE VICINITY OF M.P. 1J PROJECT NO. 580A-01-02

Scale: As Noted Date: September 2005

SHEET No. S-5 OF 8 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 9/05
	DRAWN BY	3/07
	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
	NOTE BOOK	
No. C.0.22dgn		

"AS-BUILT"

C.0.22