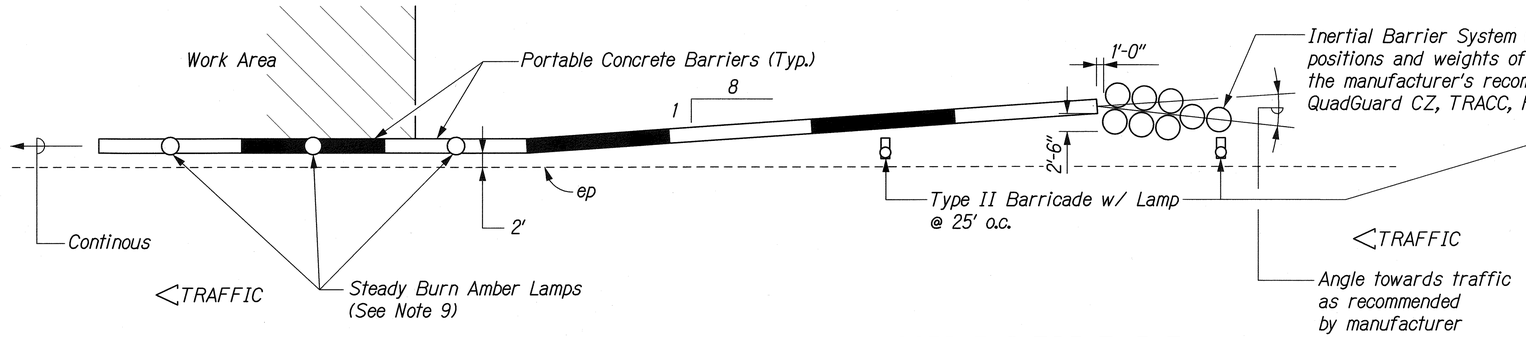
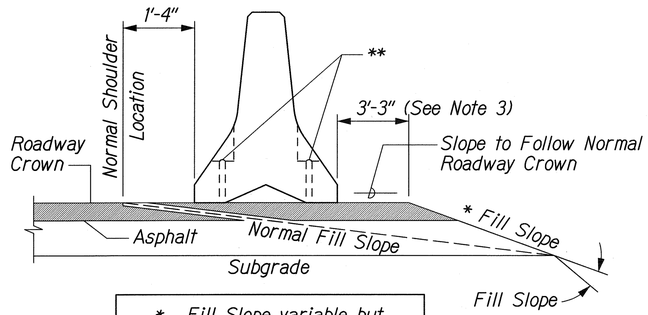
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	59	160



TYPICAL DETAIL - PORTABLE CONCRETE BARRIER END TREATMENT

Scale: 1" = 10'-0"

METAL REINFORCEMENT TABLE				
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	Horizontal in Barrier Tied Inside V-1 Bars	#5	(6)	19'-3"
H-2	Centered Above Scuppers Long. & Transversely	#5	(6)	6'-6"
H-3	Tied Above H-1 Bars to Support H-2, Tied to V-1	#4	(2)	1'-6"
S-1	Horizontal in Top of Wing Wall & in Floor Back Wall	#4	(2)	2'-5", Lifting Hole, R=3 3/8", 90°
S-2	Horizontal Around Slots Between V-1's @ Scuppers	#4	(2)	5'-1" Bar w/(4) 1 1/2"R Bends & Min. 1'-0" Overlap; R=1 1/2"; Slots; 7"; 1'-6"; 1" Min. Clear to Bar
V-1	Vertical in Barrier (3) Each End & (2) at Each Scupper	#5	(16)	Total Length 4'-9"; R=2 3/16"; 12°; 9 1/2"; 4 3/8"; 2'-1 3/8"



* Fill Slope variable but not steeper than 2:1
** Stabilization Pins (See Note Nos. 3 & 4)

STANDARD INSTALLATION

(See Note No. 1)

NOTES:

1. For end treatment, layout, crash cushions and where needed see Project Plans or Special Provisions.
2. Barriers must be pinned together and cannot exceed the maximum taper of 8:1.
3. Barrier installations that require less than 3'-3" of outward lateral movement should have stabilization pins.
4. ASTM A-36 steel shall be used for the connection pin, connection loops and stabilization pins. A one piece pin, with a 3" rounded top may be used in place of the detailed connection pin if the one piece pin meets ASTM A-36 requirements.
5. A 4" white PVC sleeve may be used to form the lifting hole and if used the sleeve is to be left in place.
6. Concrete shall be Class A and reinforcing shall be Grade 60.
7. Identification and date of design will be as follows:
   PROPERTY
   OF HDOT
   OCT 2001
   Text letters and numbers shall be as shown on Std. Plan Sht. B-01. "PROPERTY OF HDOT" may be changed depending upon ownership. All portable Concrete Barriers made for HDOT will be subject to rejection, if "PROPERTY OF HDOT" is not imprinted. The Contractor shall bear the cost of the rejected Portable Concrete Barriers.
8. Minimum tangent length for Portable Concrete Barrier System shall be 100' (5 units). This minimum does not include the required system length of the Inertial Barrier System.
9. Install steady burn amber lamps on portable concrete barriers at 20.0' o.c. Installing, maintaining and removing each steady burn amber lamp including changing of batteries and bulbs shall be considered incidental to applicable portable concrete barrier items.

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

J:/FORT WEAVER ROAD/TCP/BARRIER01.dgn

RANDALL M. URASAKI LICENSED PROFESSIONAL ENGINEER No. 7269-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

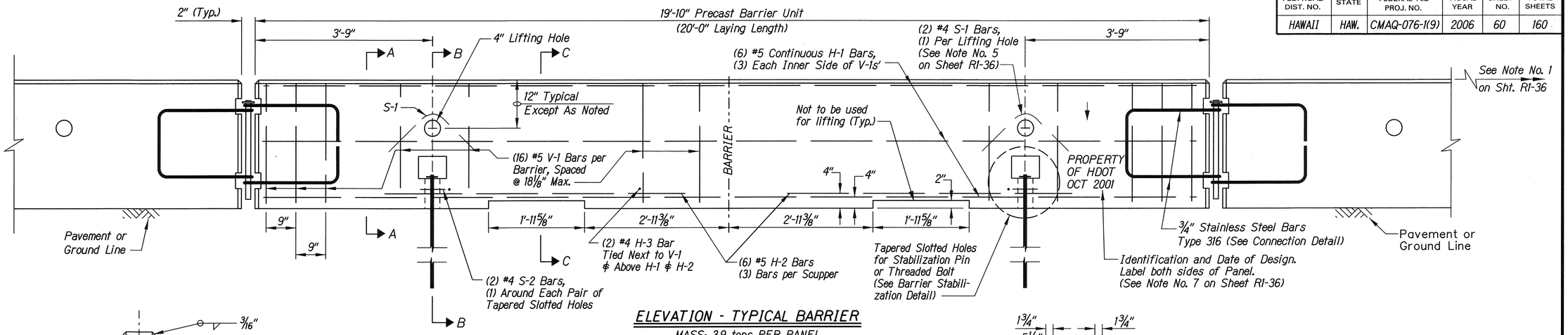
PORTABLE CONCRETE BARRIER

FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: As Shown Date: Sept. 20, 2007

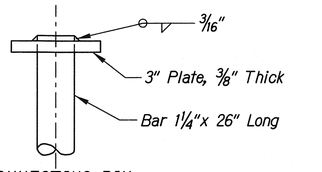
SHEET No R1-36 OF 39 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-076-1(9)	2006	60	160

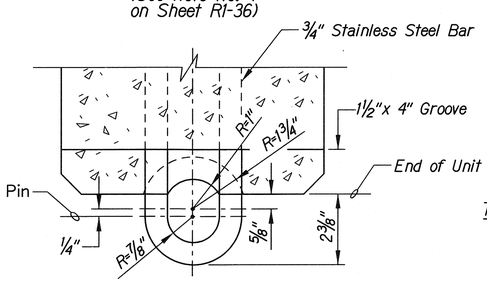


ELEVATION - TYPICAL BARRIER

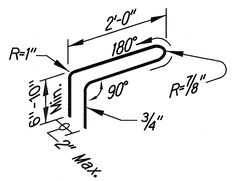
MASS: 3.9 tons PER PANEL



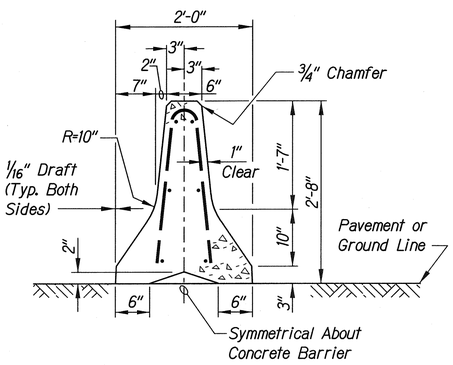
CONNECTING PIN
(See Note No. 4
on Sheet RI-36)



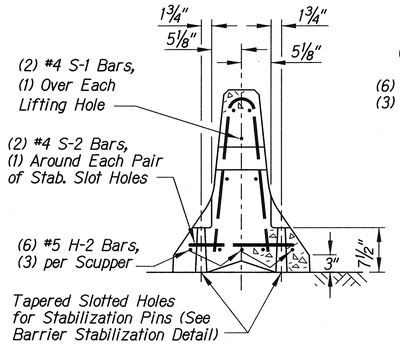
SECTION E-E



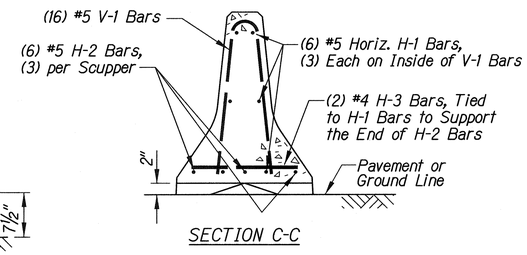
TYPE 316 STAINLESS STEEL BAR



SECTION A-A



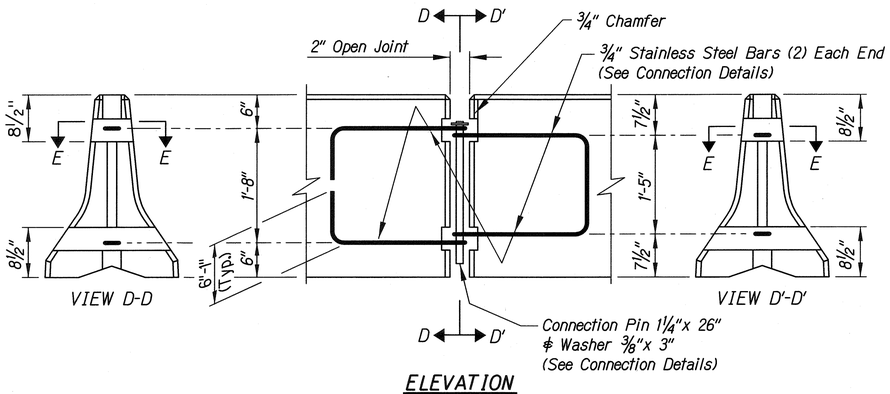
SECTION B-B



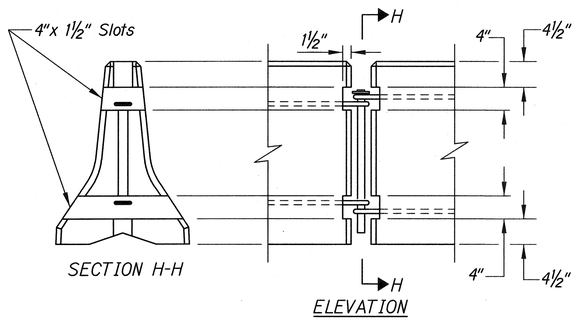
SECTION C-C

CONNECTION DETAILS

(See Note No. 5 on Sheet RI-36)



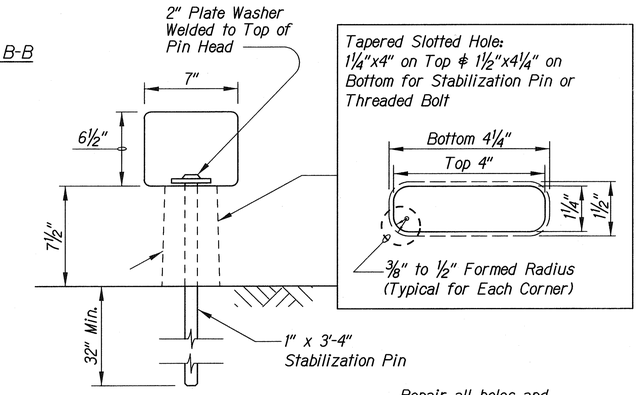
ELEVATION



SECTION H-H

ELEVATION

BARRIER REMOVAL SLOT DETAILS



Repair all holes and damage to pavement

BARRIER STABILIZATION DETAIL

(See Note Nos. 3 & 4 on Sheet RI-36)

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

J:/FORT WEAVER ROAD/TCP/BARRIER02.dgn

HUI PANG CHEN
LICENSED PROFESSIONAL ENGINEER
No. 3865-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PORTABLE CONCRETE BARRIER

FORT WEAVER ROAD WIDENING
VICINITY OF AAWA DRIVE TO GEIGER ROAD

Scale: As Shown Date: Sept. 20, 2007

SHEET NO RI-37 OF 39 SHEETS