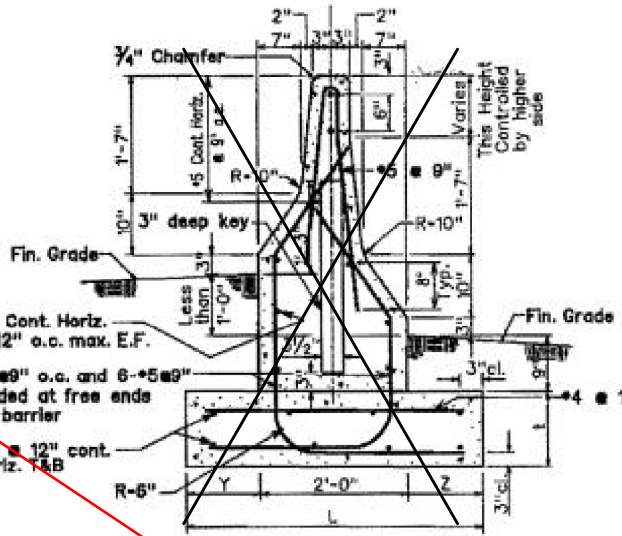
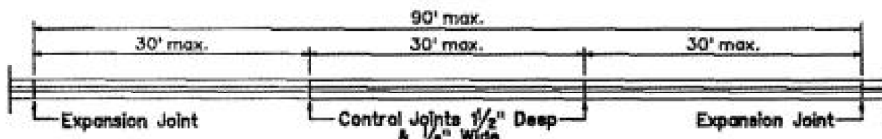


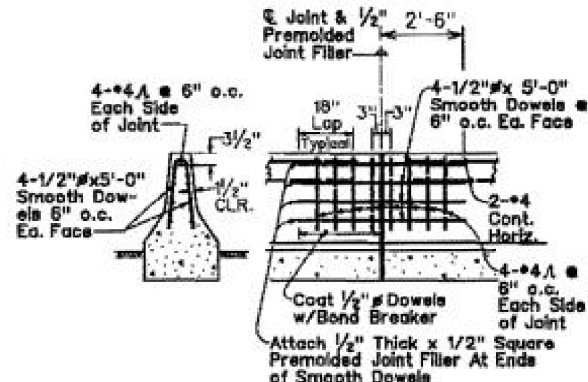
TYPE 4A



TYPE 4B



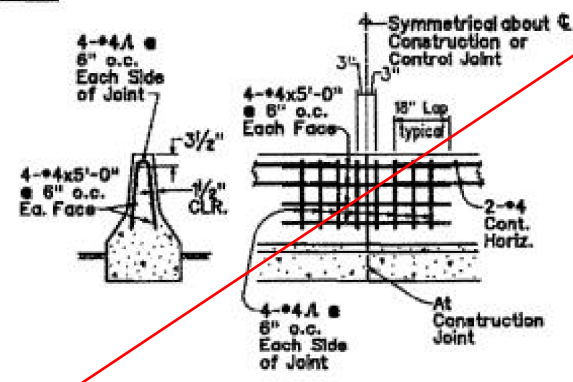
PLAN



SECTION

ELEVATION

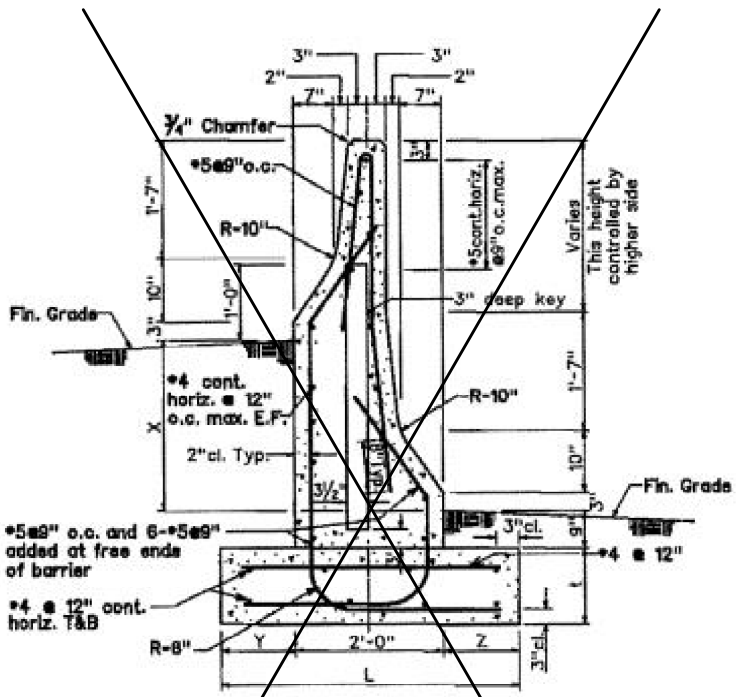
EXPANSION JOINT DETAIL



SECTION

ELEVATION

CONSTRUCTION & CONTROL JOINT DETAIL



TYPE 4C & TYPE 4D

TYPE	DIFFERENCE IN FIN. GRADE	FOOTING
4B	Less than 1'-0" max.	1'-9" 1'-8" 5'-3" 1'-6"
4C	1'-0" min., 2'-4" max.	2'-0" 1'-9" 5'-9" 1'-6"
4D	Greater than 2'-4", 4'-4" max.	2'-6" 2'-6" 7'-0" 1'-9"

NOTE: Except where noted all dimensions shall be the same for Type 4C and Type 4D.

See Specials 618-B and 618-C for Concrete Barrier (with Footing)

LOADS

A. AASHTO Railing test level: TL-4

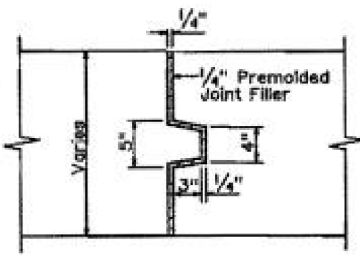
GENERAL NOTES

1. Precast Rigid Barrier Guardrail may be installed as an option to cast-in-place Type 4A Rigid Barrier Guardrail. Contractor shall submit shop drawings to Engineer for approval.
2. Barriers shall be installed in lengths greater or equal to 90 feet. This length is the total length from beginning to end of barrier system.
3. Expansion Joints shall be constructed at ninety-foot (90 ft.) maximum intervals and at existing expansion joints of structures. (Use 1/4" premolded joint filler, incidental to Type 4 Rigid Barrier Guardrail). Control Joints shall be placed between expansion joints at 30' maximum. Shear keys shall be required at all joints.
4. The exterior surface and vertical alignment of the Type 4 Rigid Barrier Guardrail shall be constructed to give a uniform and presentable appearance. Variation of more than 1/4" in 20' max. and 1/2" in 40' or more will be considered objectionable. The Engineer will determine the acceptability of the work. During the course of the work, samples may be tested and measurements made to establish whether or not the specified values or dimensions are being met. If the specified values or dimensions are not being met, the Engineer will determine the degree of the non-conformance, the effect on the serviceability of the project, whether the work be accepted and remain in place and, if so, the amount to be paid for such work, or whether the work shall be removed and replaced or otherwise corrected at the Contractor's expense.
5. Welded wire fabric of equivalent strength may be substituted for the barrier reinforcement in conformance with the applicable ASTM specifications and with the approval of the Engineer.

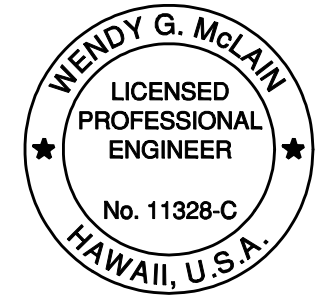
DETAIL AT FREE END OF BARRIER

GENERAL NOTES (Cont.)

6. Free ends of barrier shall be protected by an NCHRP approved end treatment. Submit details to the Engineer for approval.



SECTION THRU KEY AT JOINTS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
Signature: Wendy G. McLain  
EXPIRATION DATE OF THE LICENSE: 4/30/2016

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY SPECIAL

CONCRETE BARRIER (TYPE 4A)

SPECIAL  
618-A

Amendment A001

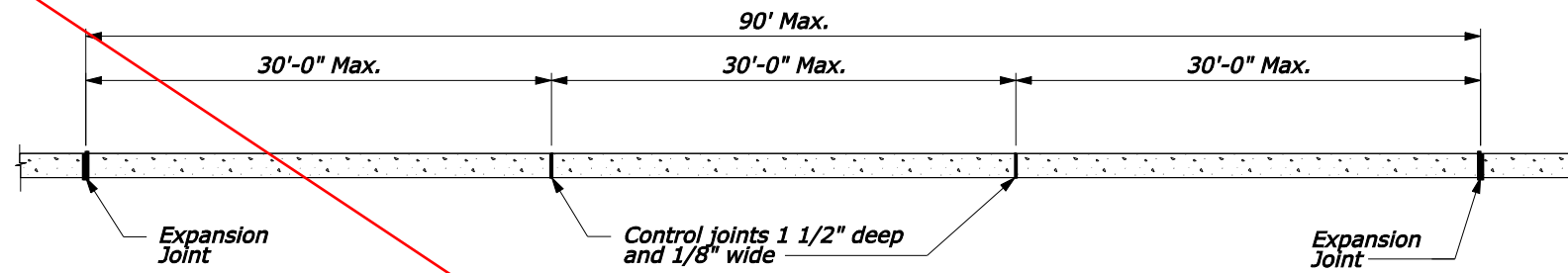
3/6/15 Contract negotiation revisions and NPDES compliance

NO SCALE

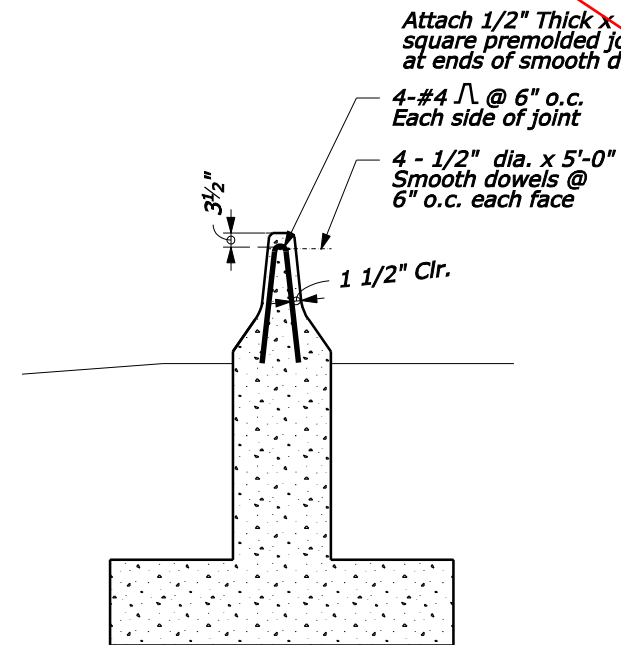




STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	T9	T9

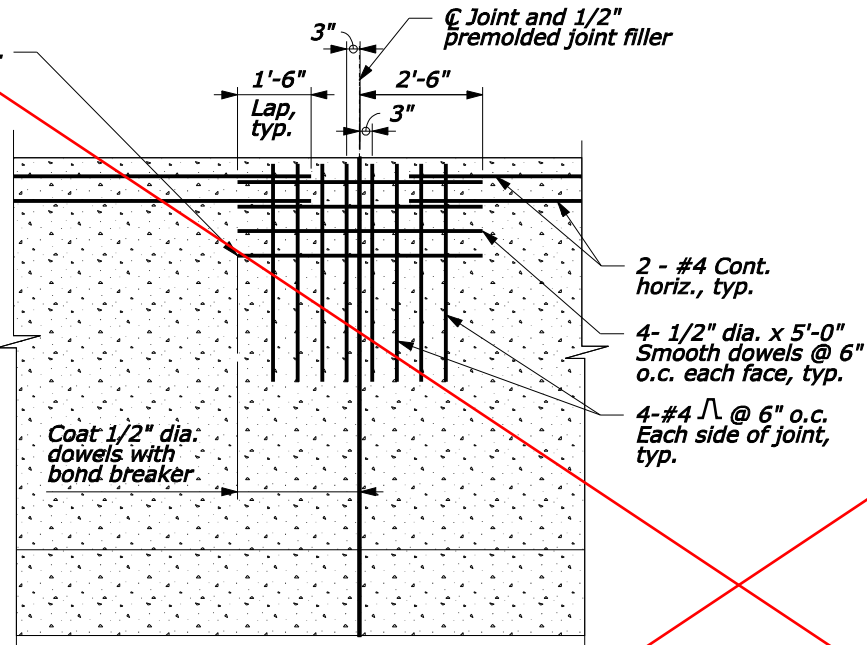


PLAN

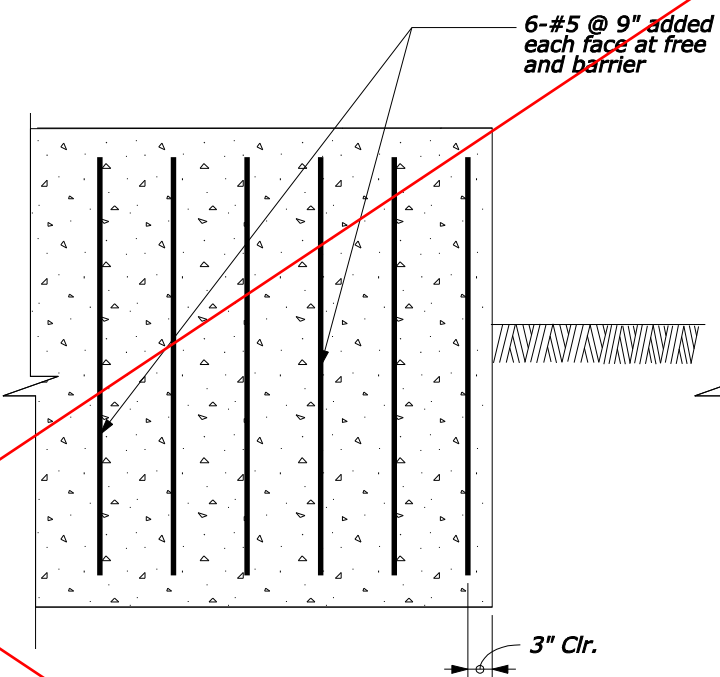


SECTION

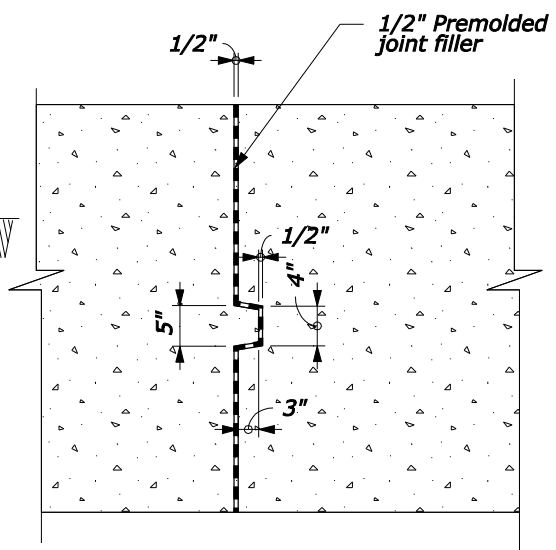
EXPANSION JOINT DETAIL



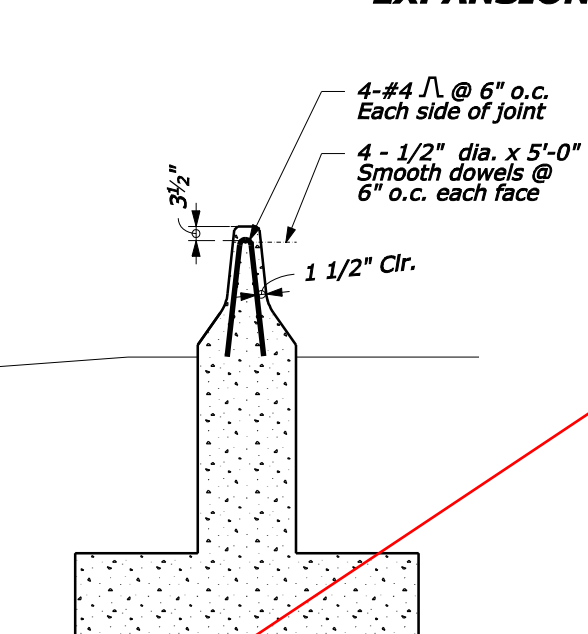
ELEVATION



DETAIL AT FREE END OF BARRIER

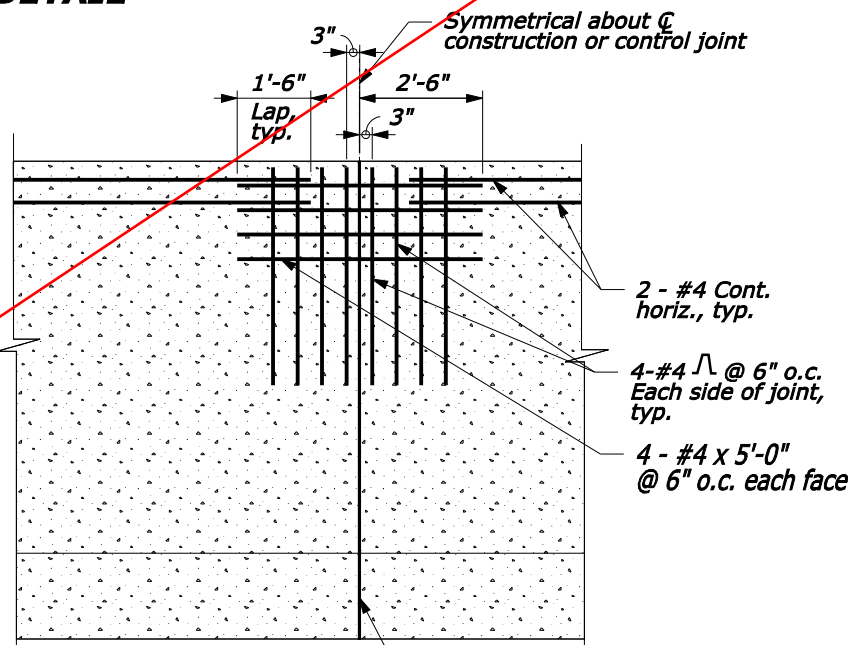


PLAN SECTION THRU KEY AT JOINTS



SECTION

CONSTRUCTION AND CONTROL JOINT DETAIL



ELEVATION

At construction joint

Amendment A001

3/6/15 Contract negotiation revisions and NPDES compliance

No Scale



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE

4/30/2016  
EXPIRATION DATE OF THE LICENSE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL <b>CONCRETE BARRIER (WITH FOOTING)</b> SHEET 2 of 2	
SPECIAL 617-C	

12/10/2014 9:49:52 AM M:\2014\2014\_027.001 ATKINS Saddle Road West Side Truck Escape Ramps\G Dwg\Structural\Contract Documents\Sheets\HI SR 20000\_S2.dgn