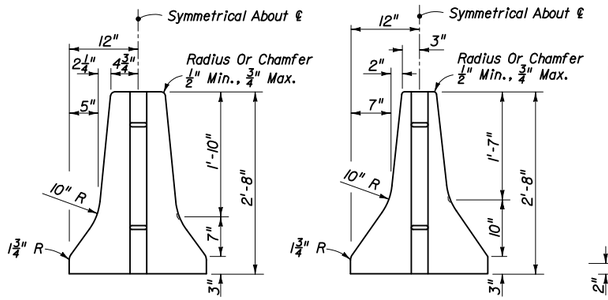
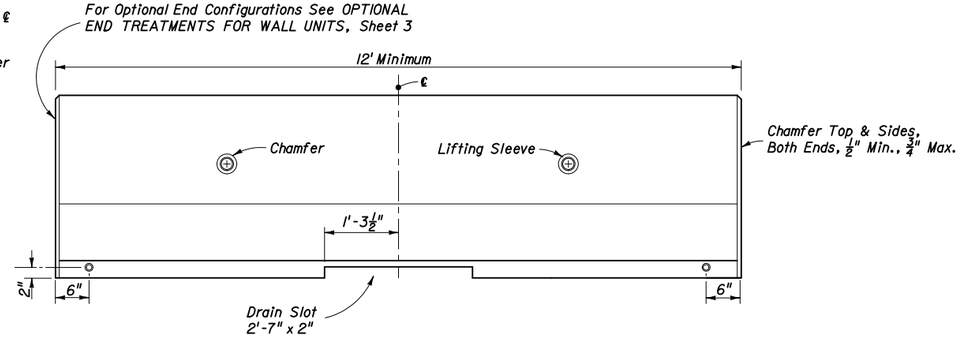


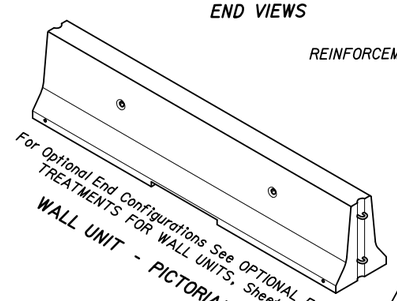
END VIEWS



SIDE VIEW

REINFORCEMENT AND OTHER UNIT FABRICATION DETAILS NOT SHOWN. SEE 'NOTICE' BELOW.

WALL UNIT



WALL UNIT - PICTORIAL VIEW

NOTICE

THE TEMPORARY CONCRETE BARRIER WALL UNIT SHOWN ON THIS INDEX THAT WAS PRODUCED PRIOR TO OCTOBER 1, 2002, AND THAT IS IN GOOD CONDITION, CAN BE USED ON STATE HIGHWAY PROJECTS THROUGH SEPTEMBER 30, 2012. TEMPORARY CONCRETE BARRIER UNITS PRODUCED ON AND AFTER OCTOBER 1, 2002 FOR USE ON STATE HIGHWAY PROJECTS MUST MEET NCHRP 350 CRITERIA, AND MUST BE INCLUDED ON THE QUALIFIED PRODUCTS LIST. IF AND WHEN A GENERIC TEMPORARY CONCRETE BARRIER WALL UNIT IS APPROVED FOR USE ON STATE HIGHWAY PROJECTS, THE UNIT DESIGN WILL BE POSTED ON THE ROADWAY DESIGN WEB SITE.

GENERAL NOTES

1. Temporary Concrete Barrier walls on roadways may be any of the following:

   a. The FDOT Type K Temporary Concrete Barrier Wall (Design Standard Index 414). F-Shape Units only.

   b. The FDOT 415 Temporary Concrete Barrier wall unit shown on Sheets 1 and 3 of this index, if manufactured prior to October 1, 2002, in good condition, and installed in accordance with this Index. Units may be either F-Shape or New Jersey Shape. The FDOT 415 unit shown in this Index is the design provided in Index No. 415 in prior editions of the Design Standards. See "NOTICE" below. Since units produced after October 1, 2002 cannot be used, complete fabrication details are omitted in this edition of the Design Standards.

   c. Temporary concrete barrier wall systems meeting NCHRP 350 Test Level 3 criteria and included on the Qualified Products List. Units may be either F-Shape or New Jersey Shape unless otherwise noted in the plans.

   For temporary concrete barrier walls on bridges see Design Standard Index No. 414.

2. The FDOT 415 units with the optional end connections shown in this index may be interconnected within a run of wall. However, intermixing units with different shapes (F-Shape, New Jersey Shape) and units with dissimilar end connections (415, Type K, or other) within a continuous run of wall is not permitted. See Sheets 6 through 8 for required treatment for continuation of runs of barrier with different shapes or dissimilar connectors.

3. Alignment, length of need, anchorage and end treatment shall be in accordance with this index.

4. Wall units shall not be used for permanent barrier wall construction regardless of unit length, unless specifically permitted by the plans.

5. If the plans specify Barrier Wall (Temporary) (Type K), substitution with other barrier types is not permitted.

6. If the plans specify temporary concrete barrier wall, substitution with water filled barriers is not permitted.

7. Type C Steady-Burn Lights are to be mounted on top of temporary concrete barrier walls that are used as barriers along traveled ways in work zones. The lights are to be spaced at 50' centers in transitions, 100' centers on curves and 200' centers on tangent roadways. For additional information refer to Index 600.

8. Wall units used for work zone traffic control and other temporary applications shall be paid for under the contract unit price for Barrier Wall (Temporary), LF. Type C Steady-Burn Lights shall be paid for under the contract unit price for Lights, Temporary, Barrier Wall Mount (Type C, Steady-Burn), ED.

FDOT 415 TEMPORARY CONCRETE BARRIER WALL UNIT AND GENERAL NOTES

When Shielding Above Ground Hazards:

Design Speed	Deflection Space
45 mph or Less	2'
50 mph and Greater	4'

When Shielding Dropoffs:

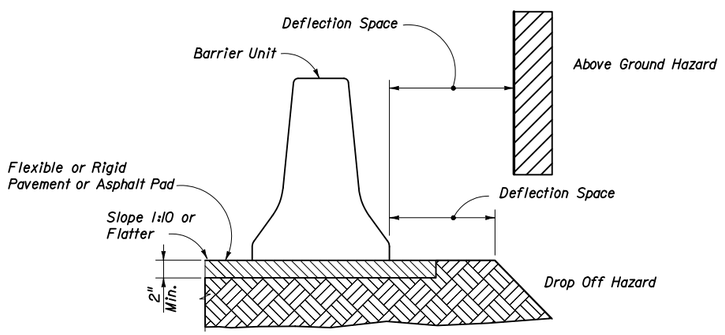
Design Speed	Deflection Space
45 mph or Less	2'
50 mph and Greater a. Dropoffs 4' or Less and No Traffic Below b. All dropoff conditions other than 'a'.	 2' 4'

When used as a Temporary Median Barrier separating opposing traffic lanes:

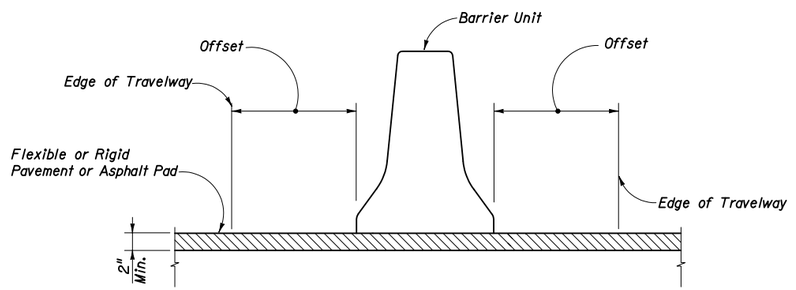
Design Speed	Offset To Travelway
45 mph or Less	0' min., 2' preferred
50 mph and Greater	2'

Note: These deflection space requirements also apply to approved options identified in General Note 1.

DEFLECTION SPACE REQUIREMENTS

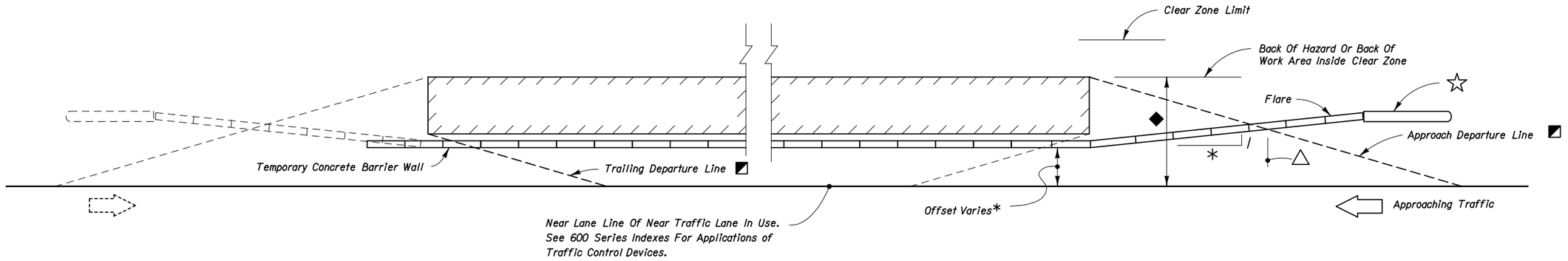


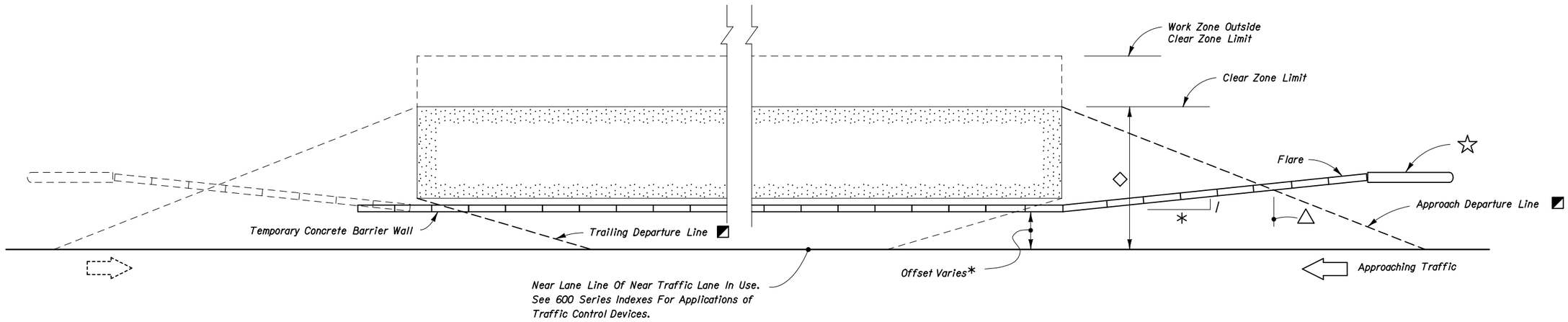
ROADSIDE INSTALLATION



MEDIAN INSTALLATION

Note: Where existing pavement is not present, construct the Asphalt Pad using Miscellaneous Asphalt Pavement. Cost of the Asphalt Pad to be included in the cost of the Barrier.





△ *The approach departure line location is determined by the line intersect with the back of the hazard or the area to be shielded, however the intersect offset distance is not to be beyond the clear zone limit. The trailing departure line is determined by the line intersect with the front of the downstream end of the hazard or the area to be shielded.*

The length of barrier wall need is the distance from the approach departure line intersect with the upstream toe of the temporary concrete barrier wall to the trailing departure line intersect with the downstream toe of the temporary concrete barrier wall.

Where temporary concrete barrier wall end units are not anchored, two and one-half ($2\frac{1}{2}$) wall units (min.) are required beyond the length of barrier need for wall end anchorage. Temporary concrete barrier wall end units shall be located at or outside the clear zone or shielded by other structure, earth embedment or a crash cushion.

Proprietary redirective crash cushions designed for use with temporary concrete barriers have the beginning length of need and departure line intersect point indicated on the respective QPL drawing for each proprietary crash cushion. Where redirective crash cushions are located on the departure line by their length of need reference point, the wall upstream end unit must be aligned with the crash cushion, and the wall's end unit secured with the anchor plates shown on Sheet 4 of this index. See Sheets 5 through 8 for configurations requiring end unit anchorage.

✳ *The wall offset from the near traffic lane, wall flare rate and wall flare length are to be in conformance with the alignment called for in the plans and the alignments called for by Department Design Standards specified in the plans; in absence of either plan requirement, the offset shall be as determined by the Engineer, and, unless other flare rates are approved by the Engineer the flare rates to be applied are 1:10 or flatter for speeds ≤ 45 mph and 1:15 or flatter for speeds ≥ 50 mph; see Index No. 642 for other flare rates on freeway facilities.*

The surface cross slope approaching the barrier wall and continuing across the required deflection space shall not exceed a rate of 1 vertical: 10 horizontal.

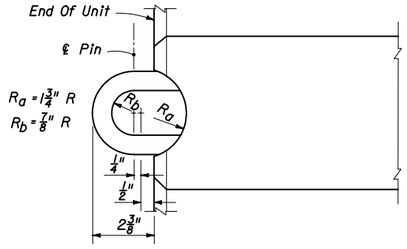
◩ *Departure Rates*
1:16 For Speeds ≤ 45 mph
1:13 For Speeds ≥ 50 mph

◆ *Area Shielded When Work Zone Hazards Or The Work Area Occupy Space Less Than Clear Zone Width*

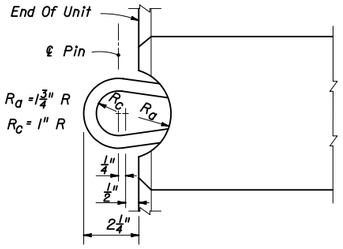
◇ *Area Shielded When Work Zone Hazards Or The Work Area Extend To Or Beyond Clear Zone Limit*

☆ *Crash Cushion In Absence Of Other Wall End Shielding. See △ Notations And Sheet 5 Through 8 For Varied Locations For Wall End Units And Crash Cushions.*

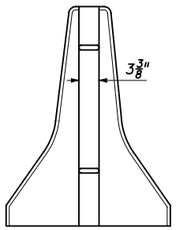
ALIGNMENT AND LENGTH OF NEED



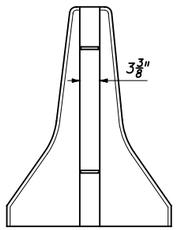
TOP VIEW



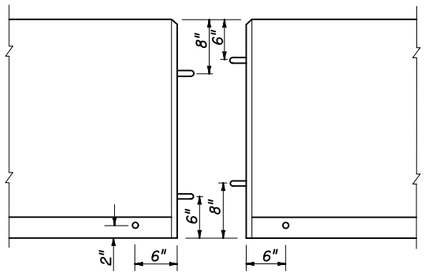
TOP VIEW



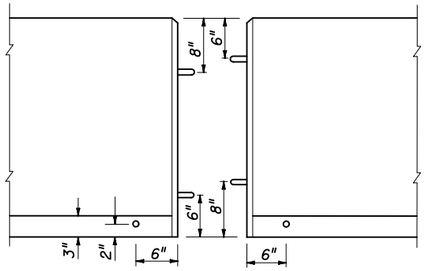
END VIEW



END VIEW

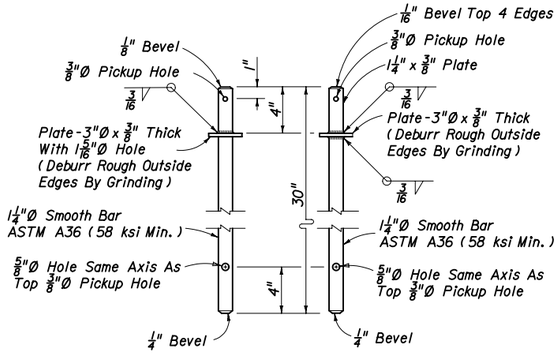


SIDE VIEW
ROUND BAR CONNECTOR



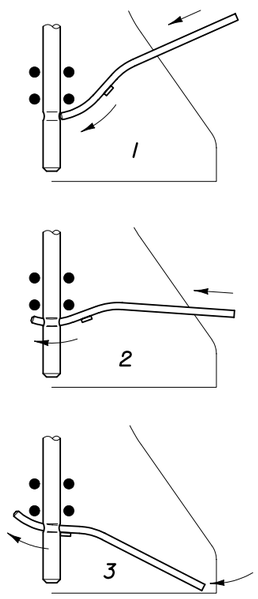
SIDE VIEW
WIRE ROPE CONNECTOR

OPTIONAL END TREATMENTS FOR WALL UNITS

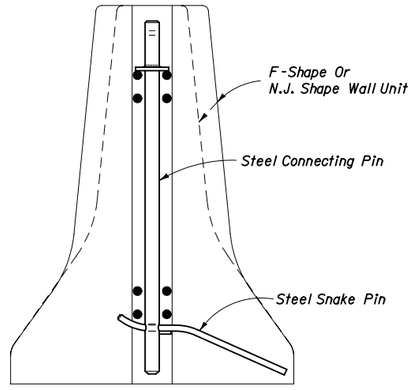


OPTIONAL PINS

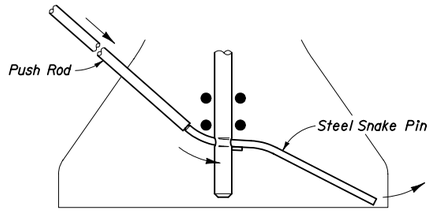
STEEL CONNECTING PIN



INSERTING FDOT SNAKE PIN

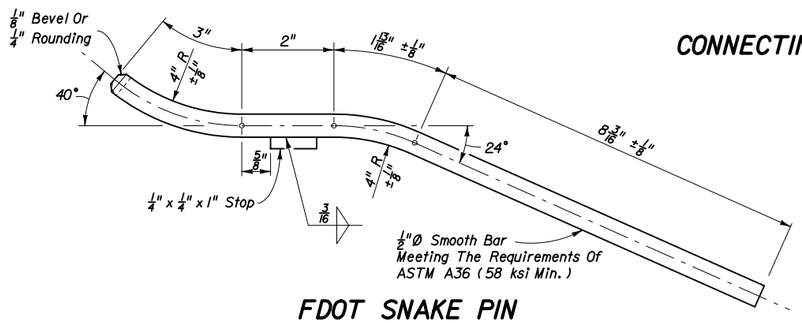


ASSEMBLED UNIT



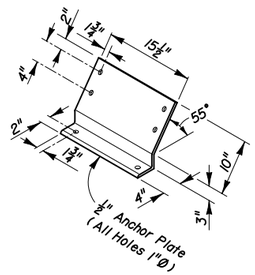
REMOVING FDOT SNAKE PIN

CONNECTING PIN ASSEMBLY

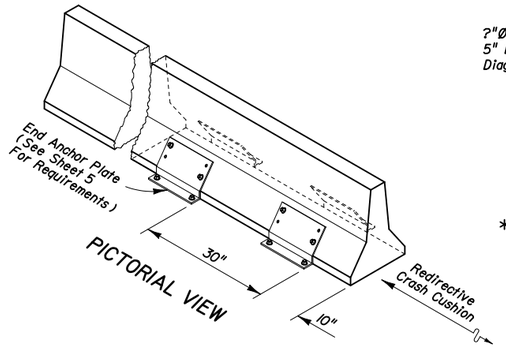


FDOT SNAKE PIN

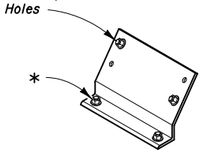
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	2008 FDOT Design Standards	Last Revision 04	Sheet No. 3 of 10
	TEMPORARY CONCRETE BARRIER	Index No. 415	



ANCHOR PLATE

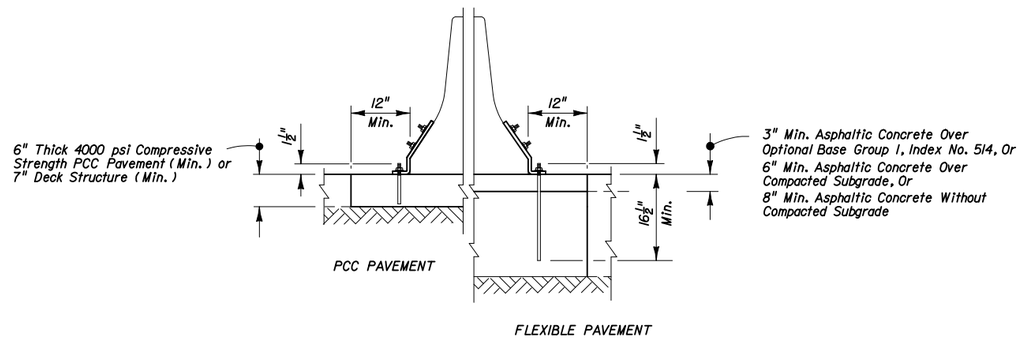


PICTORIAL VIEW



* ¾"Ø x 6½" Adhesive Bonded Anchor Bolts (EAS MP-3 Or Equal), 5" Embedment Where Installed On Concrete Pavement Or Decking, Two (2) Required Each Anchor Plate. ¾"Ø x 18" MP-3 Threaded Rod Longbolt System Or Other Approved ¾"Ø x 18" Threaded Rod With Chemical Anchorage Full Embedment Depth Where Installed On Asphaltic Concrete Pavement Prescribed Below, Two (2) Required Each Anchor Plate.

ANCHOR PLATE BOLTS



SURFACE ANCHORAGE REQUIREMENTS

NOTES FOR WALL END SHIELDING

1. Redirective crash cushions are the principal (standard) device to be used for shielding approach ends of temporary concrete barrier walls. Except where the plans designate a particular type of redirective crash cushion for a specific location, the contractor has the option to construct either the REACT 350, QuadGuard, TRACC or TAU-II crash cushions subject to the uses and limitations described on their respective drawings on the Qualified Products List. The barrier wall end unit must be anchored to a paved surface using anchor plates in accordance with "Anchor Plate Notes" and the details on this sheet.

2. Temporary redirective crash cushions shall be installed in accordance with the manufacturer's specifications and recommendations. Temporary crash cushions can be either new or functionally sound used devices. Performance of intended function is the only condition for acceptance, whether the crash cushion is new, used, refurbished, purchased, leased, rented, on loan, shared between projects, or made up of mixed new and used components.

3. Inertial crash cushions are not optional systems for locations designated for redirective crash cushions by the plans; can not be substituted for redirective crash cushions, and are not eligible for VECP consideration.

4. A yellow post mounted Type 1 Object Marker shall be centered 3' in front of the nose of all temporary crash cushions. Mounting hardware shall be in accordance with Index Nos. 11860 and 11865. The cost of the Object Marker shall be included in the cost of the crash cushion.

5. Optional temporary redirective crash cushions are to be paid for per location under the contract unit price for Vehicular Impact Attenuator (Temporary) (Redirective Option), LO.

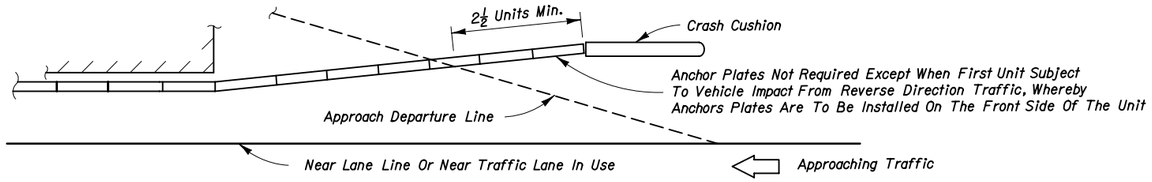
ANCHOR PLATE NOTES

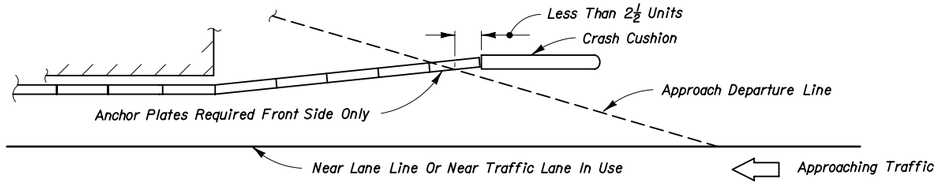
1. For temporary barrier wall end units requiring anchor plates, see sheets 5 through 8.

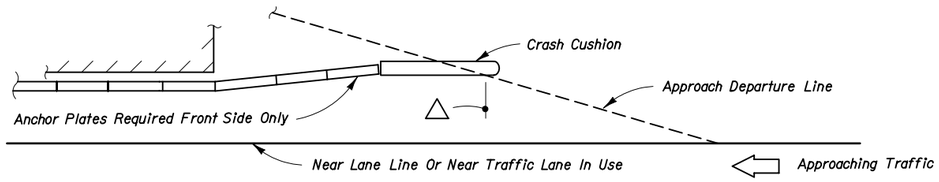
2. The temporary concrete barrier wall anchor plate depicted above is a proprietary design by Energy Absorption Systems, Inc. Other temporary anchorage methods can be substituted when wall rigidity is assured by any of the following:
   (a) proven by associated crash test of redirective crash cushions, or
   (b) meet anchorage prescribed in 'A Guide To Standardized Highway Barrier Hardware', or
   (c) crash cushion manufacturer's engineered design, or
   (d) approved shop drawings on a case by case basis.

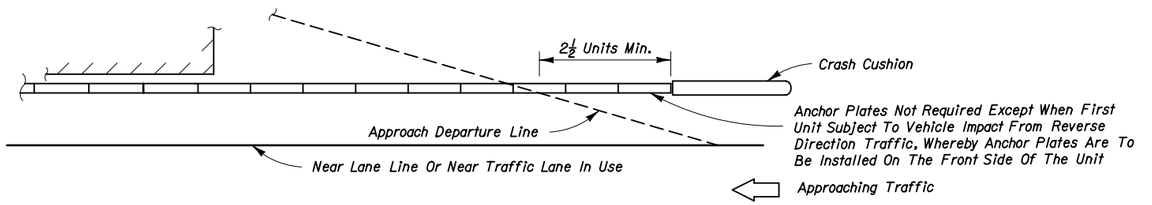
3. The cost for anchoring the wall segment will be included in the cost for the adjoining redirective crash cushion.

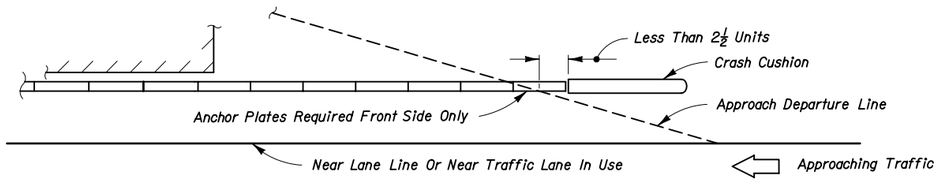
ANCHOR PLATE REQUIREMENTS FOR BARRIER WALL END UNITS ABUTTING CRASH CUSHIONS

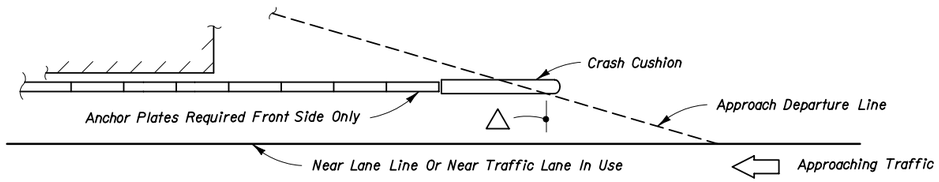




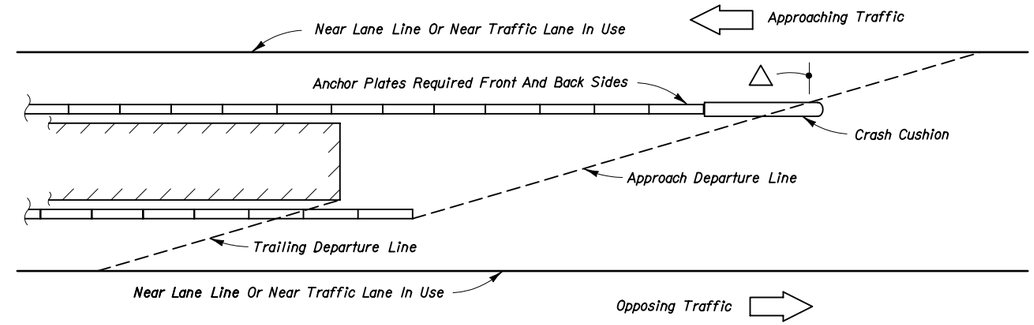




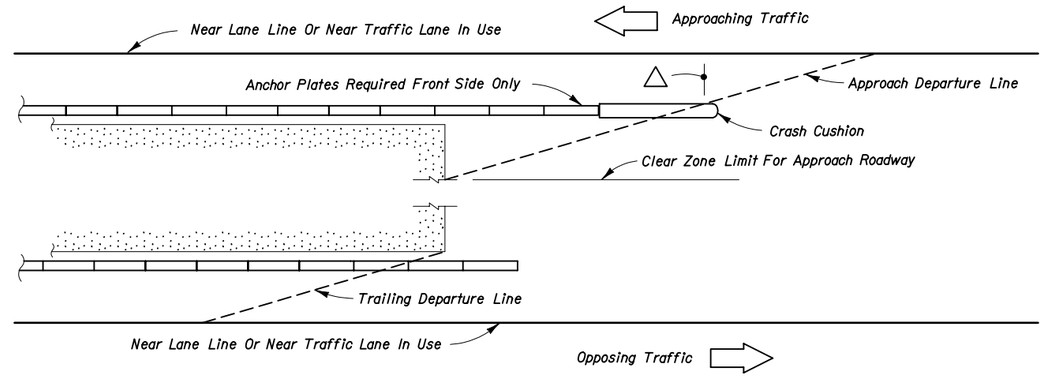




BARRIER WALL END UNIT ANCHORAGE



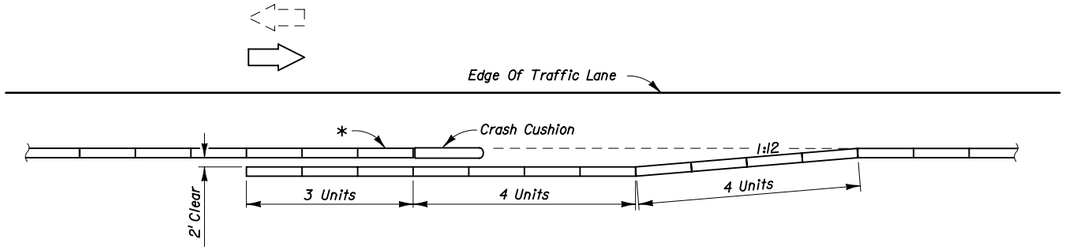
MEDIAN HAZARDS WITHIN CLEAR ZONES BOTH ROADWAYS



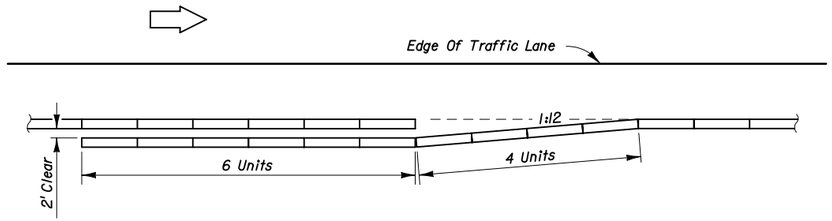
MEDIAN HAZARDS EXTENDS TO OR BEYOND CLEAR ZONES BOTH ROADWAYS

Note: Anchor Plates Required Only On End Units Abutting Crash Cushions. Schemes on this sheet based on 12' units.

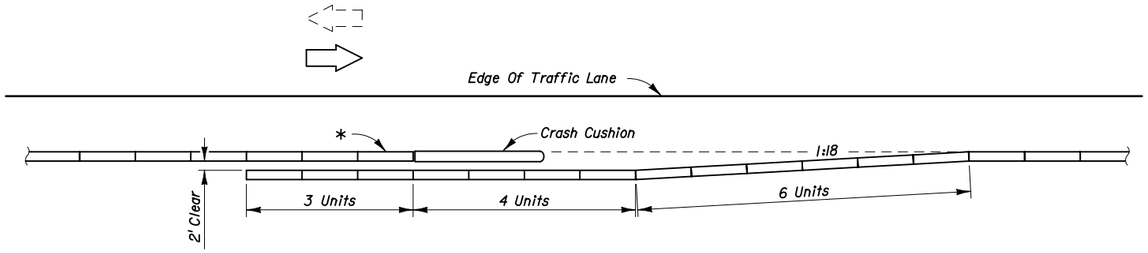
△ See Sheet 2



45 MPH OR LESS



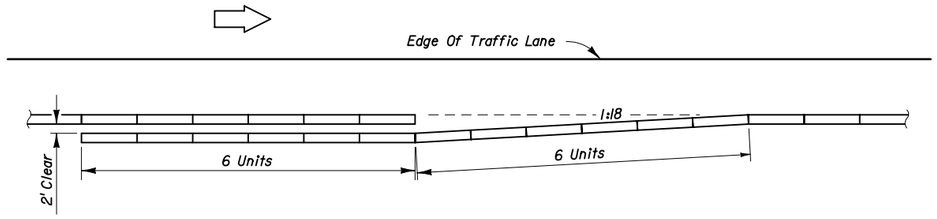
45 MPH OR LESS



50 MPH OR GREATER

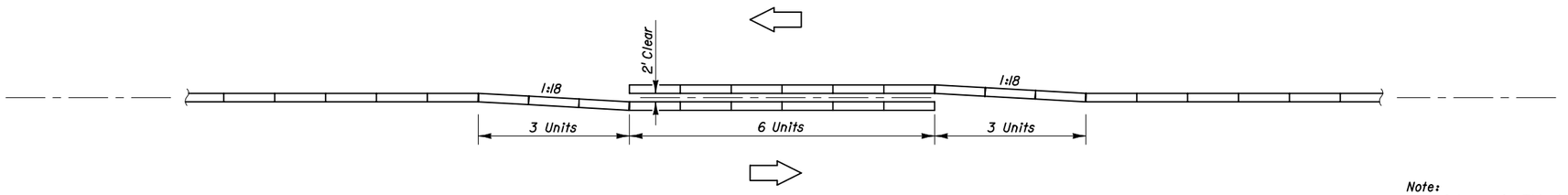
* Anchor Plates Required Front Side Only On Unit Abutting Crash Cushion (See Sheet 4).

SHOULDER BARRIER ON UNDIVIDED FACILITIES



50 MPH OR GREATER

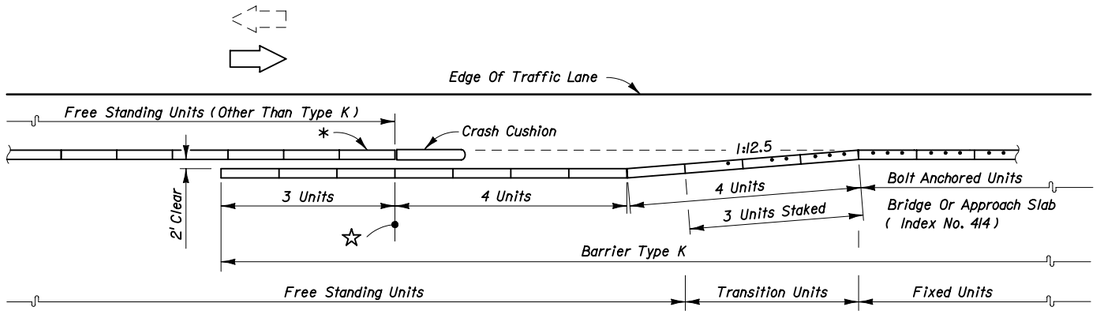
SHOULDER BARRIER ON DIVIDED FACILITIES



INTERIOR MEDIAN BARRIER

Note:
Schemes On This Sheet Based On 12' Units.
See Sheet Nos. 7 & 8 For Bridge Applications With Barrier Type K.

CONTINUATION OF RUNS OF BARRIER WITH DISSIMILAR CONNECTORS



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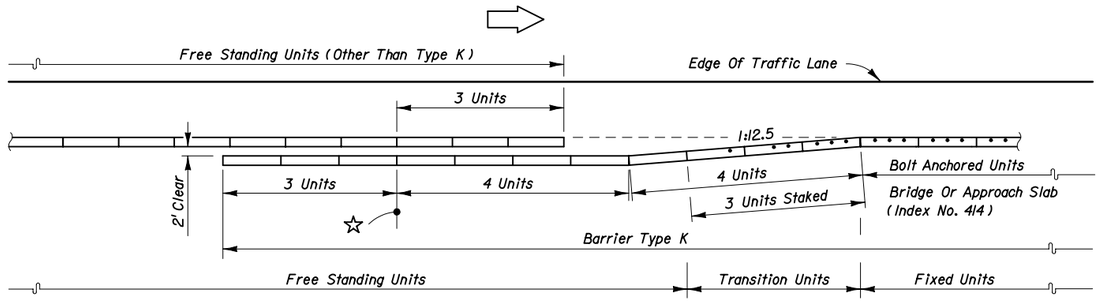
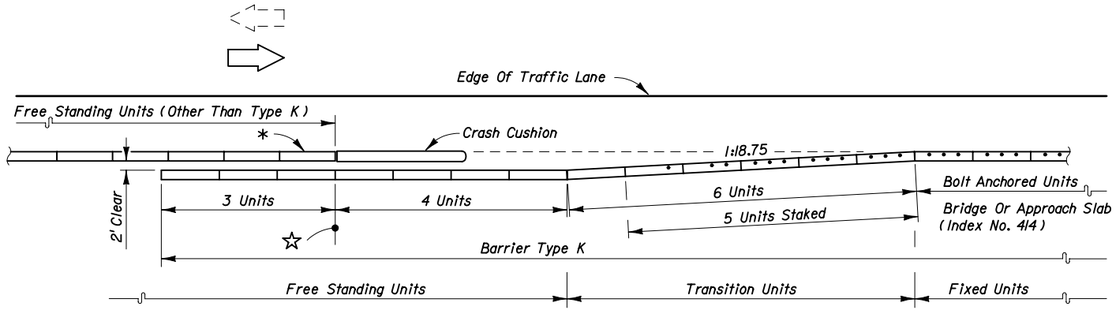
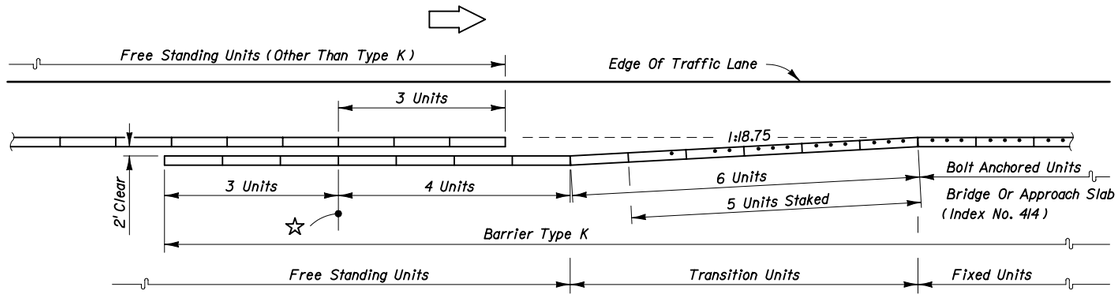


45 MPH OR LESS



50 MPH OR GREATER

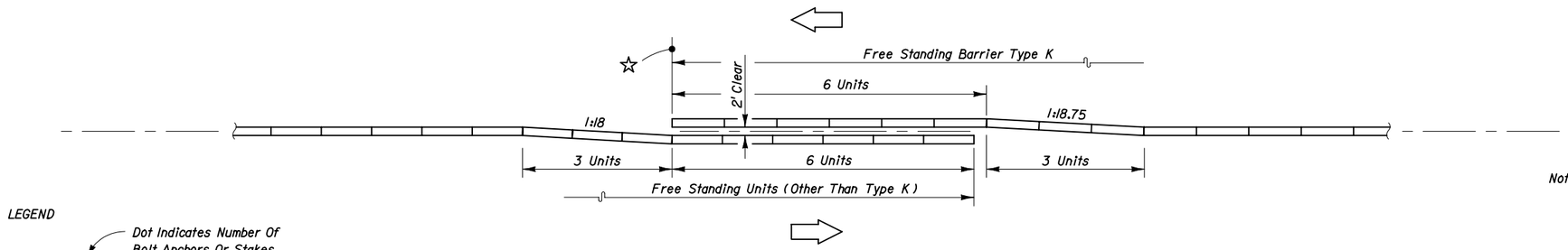


50 MPH OR GREATER

* Anchor Plates Required Front Side Only On Unit Abutting Crash Cushion (See Sheet 4).
☆ Overlap Reference Line

APPROACH SHOULDER BARRIER ON UNDIVIDED FACILITIES

APPROACH SHOULDER BARRIER ON DIVIDED FACILITIES



LEGEND
Dot Indicates Number Of Bolt Anchors Or Stakes

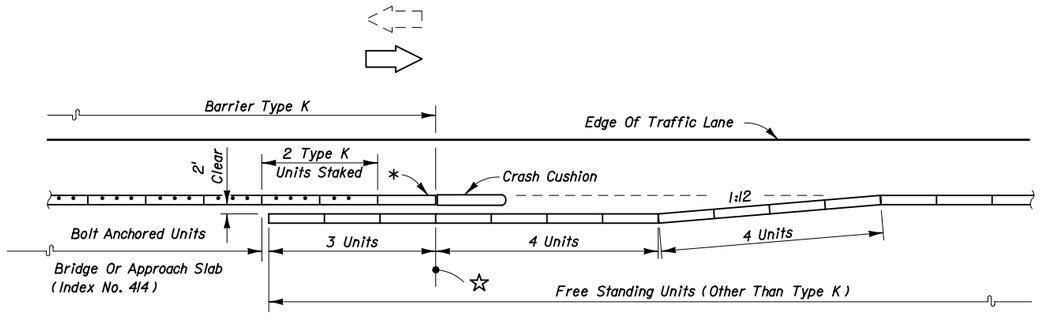
INTERIOR MEDIAN BARRIER

Note:
See Sheet No. 8 For Departure Shoulder Applications.

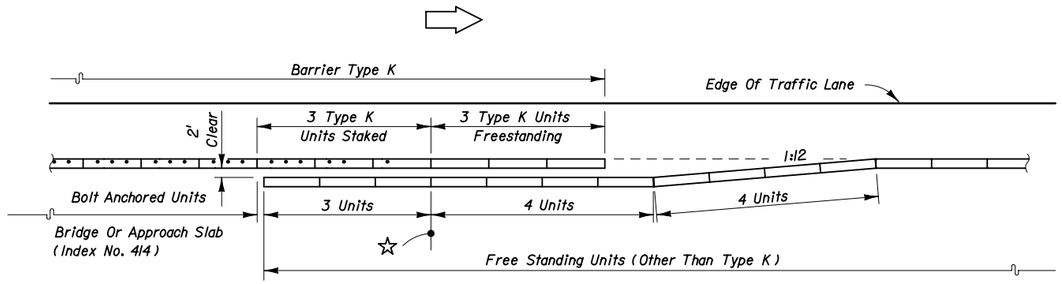
CONTINUATION OF BARRIER • FROM OTHER TYPE BARRIERS TO BARRIER TYPE K

BARRIER TYPE K ON BRIDGES AND APPROACH SLABS

	2008 FDOT Design Standards	Last Revision	Sheet No.
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER	07/01/05	7 of 10
		Index No.	415



45 MPH OR LESS



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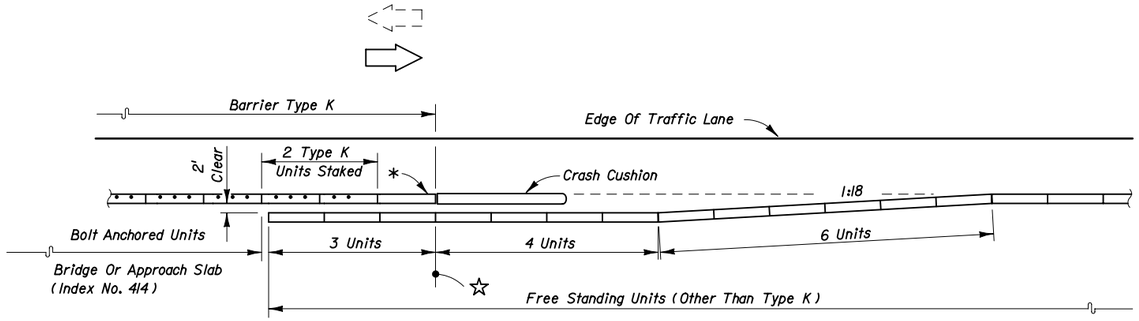
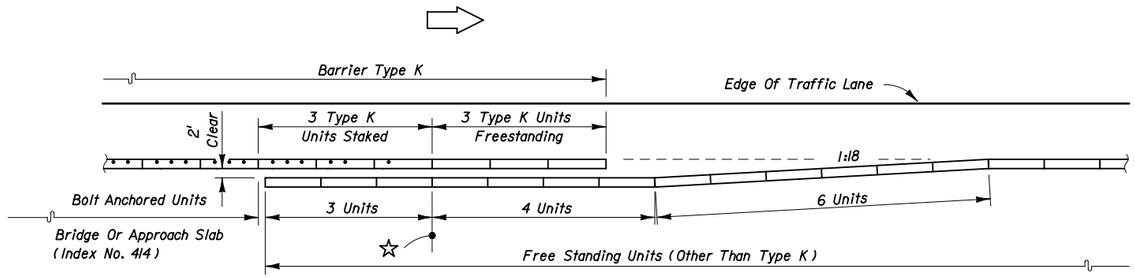


50 MPH OR GREATER

* Anchor Plates Required Front Side Only On Unit Abutting Crash Cushion (See Sheet 4).
☆ Overlap Reference Line

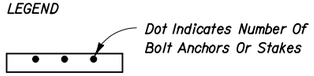
DEPARTURE (TRAILING) SHOULDER BARRIER ON UNDIVIDED FACILITIES



50 MPH OR GREATER

DEPARTURE (TRAILING) SHOULDER BARRIER ON DIVIDED FACILITIES

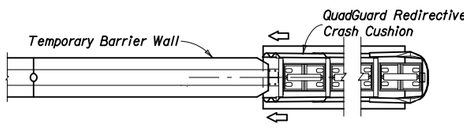
LEGEND



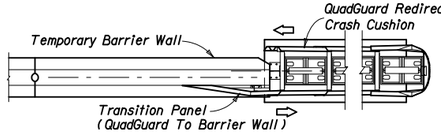
Note:
See Sheet No. 7 For Approach Shoulder Applications.
See Sheet No. 7 For Interior Median Applications.

CONTINUATION OF BARRIER • FROM BARRIER TYPE K TO OTHER TYPE BARRIERS

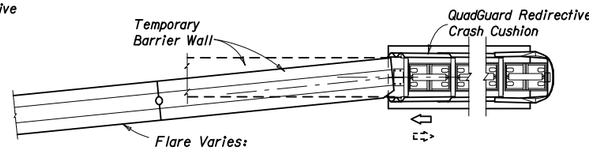
BARRIER TYPE K ON BRIDGES AND APPROACH SLABS



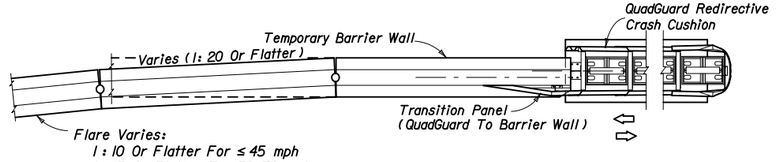
UNIDIRECTIONAL - SEPARATED TRAFFIC



BIDIRECTIONAL - SEPARATED TRAFFIC



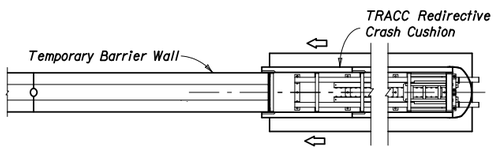
TWO-WAY TRAFFIC WITH CRASH CUSHION LOCATED OUTSIDE
OPPOSING LANE CLEAR ZONE OR ONE-WAY TRAFFIC



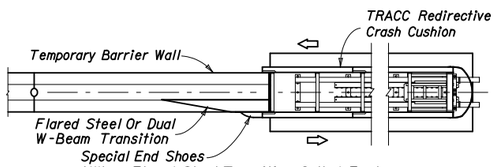
TWO-WAY TRAFFIC WITH CRASH CUSHION LOCATED
WITHIN OPPOSING LANE CLEAR ZONE

SHOULDER - RIGHT OR LEFT (RIGHT SIDE SHOWN)

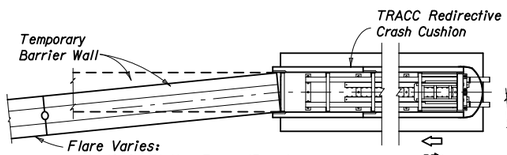
WALL END TREATMENT WHEN SHIELDED BY A QuadGuard CRASH CUSHION



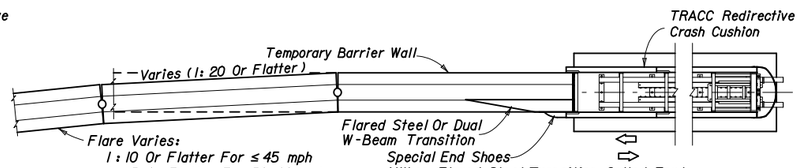
UNIDIRECTIONAL - SEPARATED TRAFFIC



BIDIRECTIONAL - SEPARATED TRAFFIC



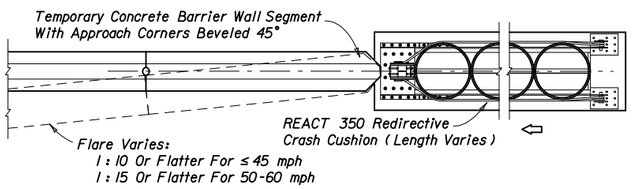
TWO-WAY TRAFFIC WITH CRASH CUSHION LOCATED OUTSIDE
OPPOSING LANE CLEAR ZONE OR ONE-WAY TRAFFIC



TWO-WAY TRAFFIC WITH CRASH CUSHION LOCATED
WITHIN OPPOSING LANE CLEAR ZONE

SHOULDER - RIGHT OR LEFT (RIGHT SIDE SHOWN)

WALL END TREATMENT WHEN SHIELDED BY A TRACC CRASH CUSHION



FOR ANY APPROACH CONDITION IT SHALL BE IN ACCORDANCE
WITH THE DRAWINGS POSTED ON THE QUALIFIED PRODUCTS LIST

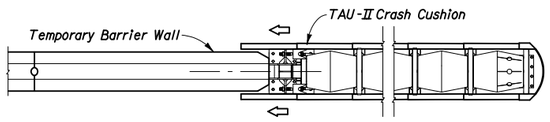
WALL END TREATMENT WHEN SHIELDED BY A REACT 350 CRASH CUSHION

NOTES

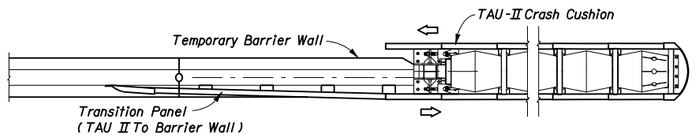
1. For alignment and length of need see Sheets 2 and 5 through 8.
2. Anchor plates required only on units abutting crash cushions.
3. For crash cushion details see drawings posted on the Qualified Products List at "544 Vehicle Impact Attenuators".

SHIELDING WALL ENDS WITH REDIRECTIVE CRASH CUSHIONS (REDIRECTIVE OPTION)

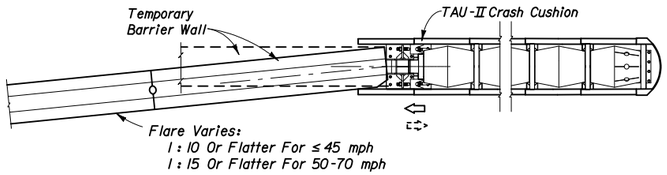
(CONTINUATION ON SHEET 10)



UNIDIRECTIONAL - SEPARATED TRAFFIC

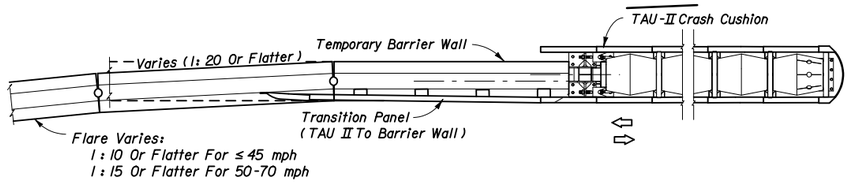


BIDIRECTIONAL - SEPARATED TRAFFIC



TWO-WAY TRAFFIC WITH CRASH CUSHION LOCATED OUTSIDE
OPPOSING LANE CLEAR ZONE OR ONE-WAY TRAFFIC

SHOULDER - RIGHT OR LEFT (RIGHT SIDE SHOWN)



TWO-WAY TRAFFIC WITH CRASH CUSHION LOCATED
WITHIN OPPOSING LANE CLEAR ZONE

SHOULDER - RIGHT OR LEFT (RIGHT SIDE SHOWN)

SHOULDER - RIGHT OR LEFT (RIGHT SIDE SHOWN)

WALL END TREATMENT WHEN SHIELDED BY TAU II CRASH CUSHION

NOTES

1. For alignment and length of need see Sheets 2 and 5 through 8.
2. Anchor plates required only on units abutting crash cushions.
3. For crash cushion details see drawings posted on the Qualified Products List.

SHIELDING WALL ENDS WITH REDIRECTIVE CRASH CUSHIONS (REDIRECTIVE OPTION)