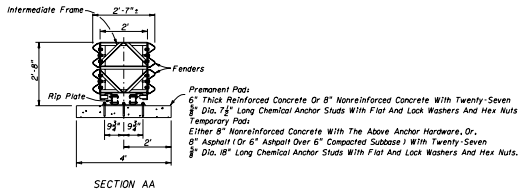
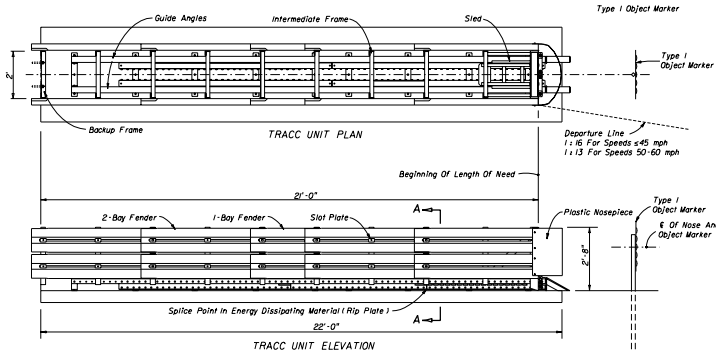


## GENERAL NOTES

- The energy absorbing system represented on this standard drawing is a proprietary design by Trinity Industries, Inc. and marketed under the trade name TRACC. Any infringement on the rights of the designer shall be the sole responsibility of the user.
- This standard drawing is produced by the Florida Department Of Transportation solely for use by the Department and its assignees. This standard drawing provides the general graphics and information necessary to field identify component parts of the TRACC and their incorporation into a whole system.
- At time of publishing this standard the TRACC system is limited to installations on built-out ends of concrete barrier walls. Under this application the standard drawing is sufficient for plan details, and precludes the requirement for shop drawing submittals unless the plans call for such submittals. See DESIGN NOTES for additional information.
- The TRACC shall be assembled and installed in accordance with the manufacturers detailed drawings, procedures and specifications, except that transition section posts will be set to connect to guardrail of standard W-beam center bail height (1'-9").
- The TRACC system is suitable for speeds of  $\leq 60$  mph.
- When the TRACC is installed at permanent locations it shall be anchored to either a reinforced 6" thick concrete pad or a nonreinforced 8" thick concrete pad with twenty-seven  $7\frac{1}{2}$ " long  $\frac{3}{8}$ " dia. chemical anchor studs, flat and lock washers, and, hex nuts. When the TRACC is installed at temporary locations it shall be anchored to a nonreinforced 6" thick concrete pad with the above mentioned anchor hardware, or a 6" thick asphalt pad (or a 6" thick asphalt over 6" of compacted subbase) using twenty-seven 18" long  $\frac{3}{8}$ " dia. grade 5 threaded chemical anchor studs, flat and lock washers, and, hex nuts.
- The TRACC shall be located parallel to the approach travel lane(s), on I-D or flatter cross slopes.
- In-place repairs on the TRACC crash cushion are limited to (a) end-on impacts which cause the sled to stroke 54" or less, and (b) side impacts where permanent distortion is limited to a unit's fender panels and where distortion of the intermediate frame(s) can be restored manually. Unit replacement is required when damage exceeds these conditions. Temporary construction units and units under Maintenance responsibility may be shop repaired units utilizing new or salvaged parts which will produce condition new units. All permanent units shall be factory new at completion of construction.
- A yellow Type I Object Marker shall be centered 3' in front of the nose of the TRACC. Mounting hardware shall be in conformance with Index Nos. I860 and I865. The cost of the Object Marker shall be included in the cost of the TRACC.
- The permanent TRACC will be paid for under the contract unit price for Impact Attenuator Vehicular (TRACC), EA; temporary units will be paid for under the contract unit price for Vehicular Impact Attenuator (Temporary) (TRACC), LD, or when the TRACC is used as an option in accordance with Index No. 415, it will be paid for under the contract unit price for Vehicular Impact Attenuator (Temporary) (Reductive Option), LD.

## DESIGN AND NOTES AND GUIDELINES

- The TRACC is designed to cushion automobile end-on hits and to redirect automobiles from side hits within the length of sleds while skidding the ends of permanent or temporary concrete barrier walls, or double faced guardrails. At time of publishing this standard the manufacturer's designs for bidirectional hardware was complete for applications indicated on Sheet 2, but final acceptance and department approval had not been attained. For current status of development and acceptance contact the central Office of Roadway Design.
- The TRACC system is not intended for use in gorges of freeway and expressway mainline ramp terminals; gorges of roadway forks; or other gore locations where there is a history of high frequency vehicle departure from the roadway or the potential exists for such departures. The TRACC system is not a restorable design, and repairs or replacement will be in accordance with GENERAL NOTES note No. 8.
- Currently the Department does not recognize other proprietary items as being equally suitable alternatives to the TRACC, and until such alternatives are available, the TRACC need not be bid against other proprietary items. However, where the TRACC and other approved temporary reductive crash cushions meet or exceed the minimum requirements for a specific location, the approved crash cushions will be considered optional systems and paid for as described in General Note 10 above.



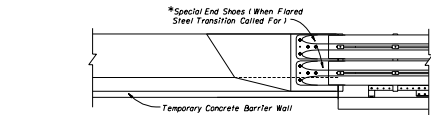
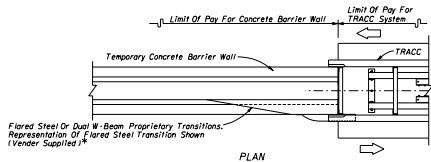
## GENERAL SYSTEM FEATURES AND GUIDELINES

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
ROAD DESIGN

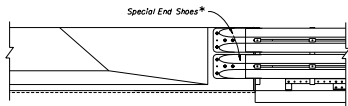
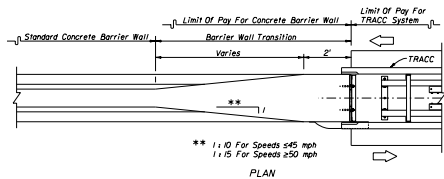
## TRACC

Revised	Date	Approved By
DESIGNED BY	08/17/97	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
DRAWN BY	08/17/97	00
CHECKED BY	08/17/97	00

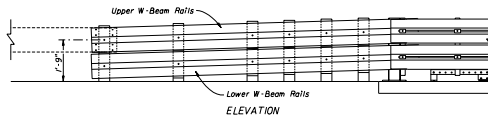
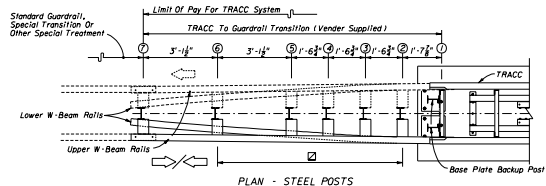
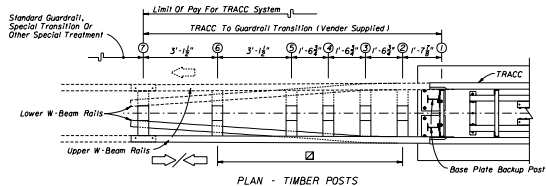
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ELEVATION  
\* To Be Included In Cost Of TRACC  
**MANUFACTURED STEEL TRANSITION**



ELEVATION  
\* To Be Included In Cost Of TRACC  
**INTEGRAL WALL TRANSITION**  
**TRACC TO CONCRETE BARRIER WALL**



Offset blocks that exceed standard block depth can be made up of blocks of special size or multiple standard blocks field trimmed to approximately equal size to achieve full transition width. Offset blocks for lower W-beam that are less in depth than standard blocks may be field trimmed standard blocks. All blocks are to be secured to plan position by 1/2d galvanized nails.

Transitions are required when connecting the TRACC to any guardrail system.

**TRACC TO GUARDRAIL**

**TRACC TRANSITIONS**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
ROAD DESIGN

**TRACC**

Drawn By	Checked By	Date	Scale	Revision	Approved By
MMT	JMB	11/97	1:1	00	<i>[Signature]</i>
MMT	JMB	11/97	1:1	00	
JMB	JMB	11/97	1:1	00	