



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 23-17

October 16, 2023

TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/Dave Boruff
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SUBJECT: Placing and Terminating Temporary Traffic Barrier

EFFECTIVE: Lettings on or after December 1, 2023

The [Standards Committee](#) approved revisions to *Standard Specifications* Section 801.10 (Temporary Traffic Barriers) and *Standard Drawings* series 801-TCCB during the July 2023 meeting. Effective as noted, contracts that include a temporary traffic barrier pay item should include RSP 801-T-207 and RPD 801-T-207d.

This memo addresses the specification revisions associated with acceptable placement and termination of temporary traffic barrier (TTB). Figures illustrating the requirements are included for reference at the end of the memo.

Acceptable Placement and Termination

1. The approaching end of TTB placed within the construction clear zone must be terminated with a construction zone energy absorbing terminal (CZ). Construction clear zone is shown on RPD 801-T-207d. (Figure 1)
2. The CZ must be placed parallel to approaching traffic or the best alignment practical.
3. The TTB segment immediately downstream of a CZ unit must be parallel to the CZ unit.
4. Flare rates are determined by construction zone design speed. Flare rates are shown on RPD 801-T-207d. For interstates and freeways, the first run of barrier within the construction zone must use of 70 mph on for flare rate and construction clear zone distance.
5. Cross slope/side slope on which the TTB is placed must be as follows, otherwise, place parallel to approaching traffic.
 - a. 10:1 or flatter along interstates and freeways.
 - b. 4:1 or flatter on all other roadways.

6. TTB placed adjacent the front face of guardrail or concrete barrier (temporary or permanent) must meet the following. (Figure 2)
 - a. The approaching end of the temporary traffic barrier must be terminated with a CZ.
 - b. The temporary traffic barrier must overlap the permanent or temporary roadside barrier as follows:
 - 1) 15 ft if adjacent guardrail terminated with a crashworthy end treatment.
 - 2) 40 ft if adjacent guardrail terminated with a cable terminal anchor.
 - 3) 100 ft if adjacent concrete barrier or cut guardrail.
7. TTB placed behind guardrail must meet the following. (Figure 3)
 - a. No portion of the barrier may be within 10 ft of the guardrail front face.
 - b. The approach end of the temporary traffic barrier must overlap a minimum distance beyond the end of the guardrail (item 6b).
 - c. The slopes leading to and on which the barrier is placed must meet the cross slope/side slope criteria (item 5).
 - d. where all the above criteria cannot be met, the guardrail must be placed adjacent the face of the permanent or temporary roadside safety barrier, as described above.

Plan Details

Designers should ensure the placement and termination conditions are satisfied. The following should be shown on the plans. Contracts past the Final Tracings stage need not revise plans unless a modification to the temporary traffic barrier is required.

1. Minimum overlap of TTB with roadside barrier.
2. TTB flare rate.
3. Side slope on which the TTB will be placed.
4. CZ unit, where required, in appropriate orientation (items 2 and 3).
5. Where TTB is extended behind guardrail, offset from the front face of guardrail to front face of TTB.

Indiana Design Manual Revisions

Revisions to IDM Chapter 503 are forthcoming. This memo will be reissued upon publication.

For questions related to this design memo please contact the Work Zone Safety Section, Katherine Smutzer at ksmutzer@indot.in.gov.

FIGURE 1 - TTB Flared with End Outside Construction Clear Zone

Where the approaching end of the TTB exposed to traffic is flared AND the **offset \geq construction clear zone distance**, a CZ is not required where placement conditions are satisfied. If any placement condition is not met, install barrier parallel to traffic and terminate with a CZ on the approaching end (See Figure 2A).

CZ = Construction Zone Energy Absorbing Terminal

Placement Conditions: TTB flared outside construction clear zone

- Side Slope: (Freeway/Interstate) Side slope on approach and under barrier must be 10:1 or flatter. Other roadways 4:1 max.
- Flare Rate: Barrier flare rate must be equal to or flatter than the required flare rate based on Construction Zone Design Speed

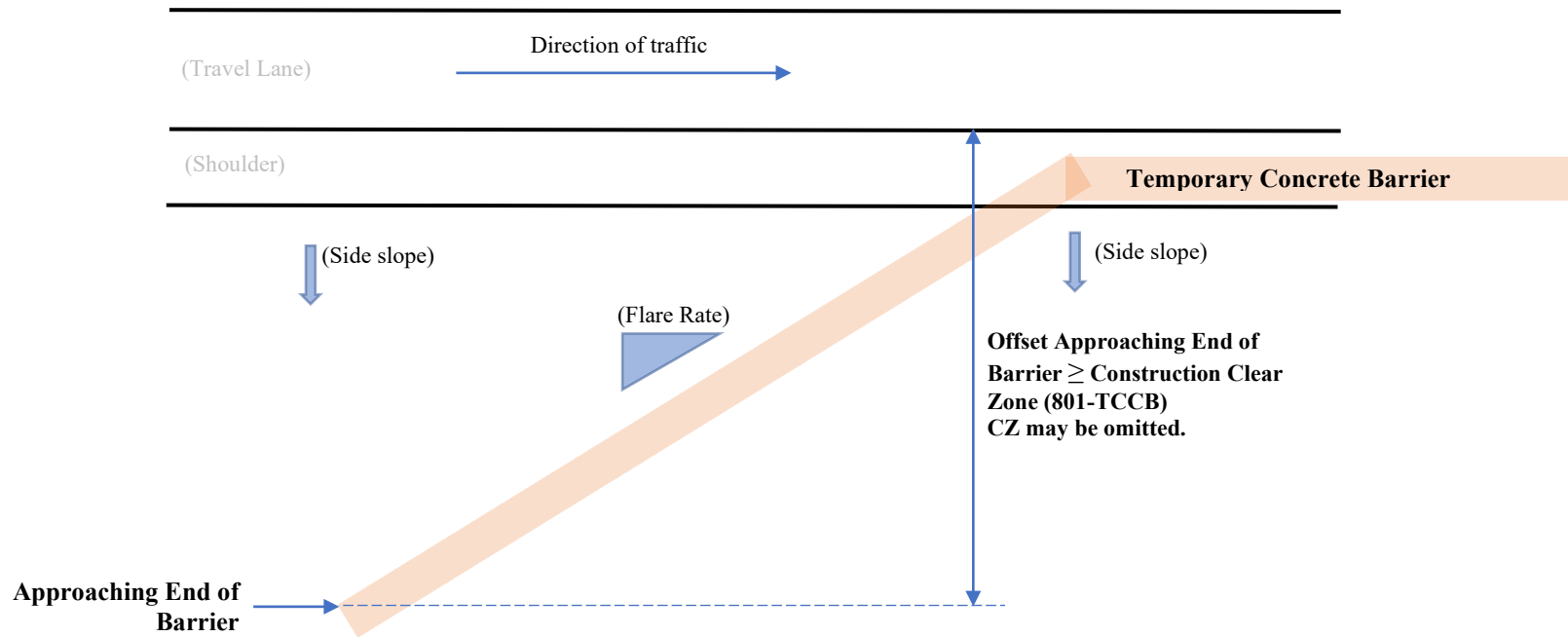


FIGURE 2A - TTB Adjacent to Face of Guardrail or Concrete Barrier, Parallel Placement

Where the approaching end of the TTB is exposed to traffic and the **offset < construction clear zone distance** a CZ is required on the approaching end. Additional placement condition applies when TTB is placed adjacent guardrail or concrete barrier.

CZ = Construction Zone Energy Absorbing Terminal

Placement Condition: TTB placed adjacent guardrail or concrete barrier

- **Overlap:** Approaching end of barrier must overlap guardrail or concrete barrier (temporary or permanent) by required distance shown.

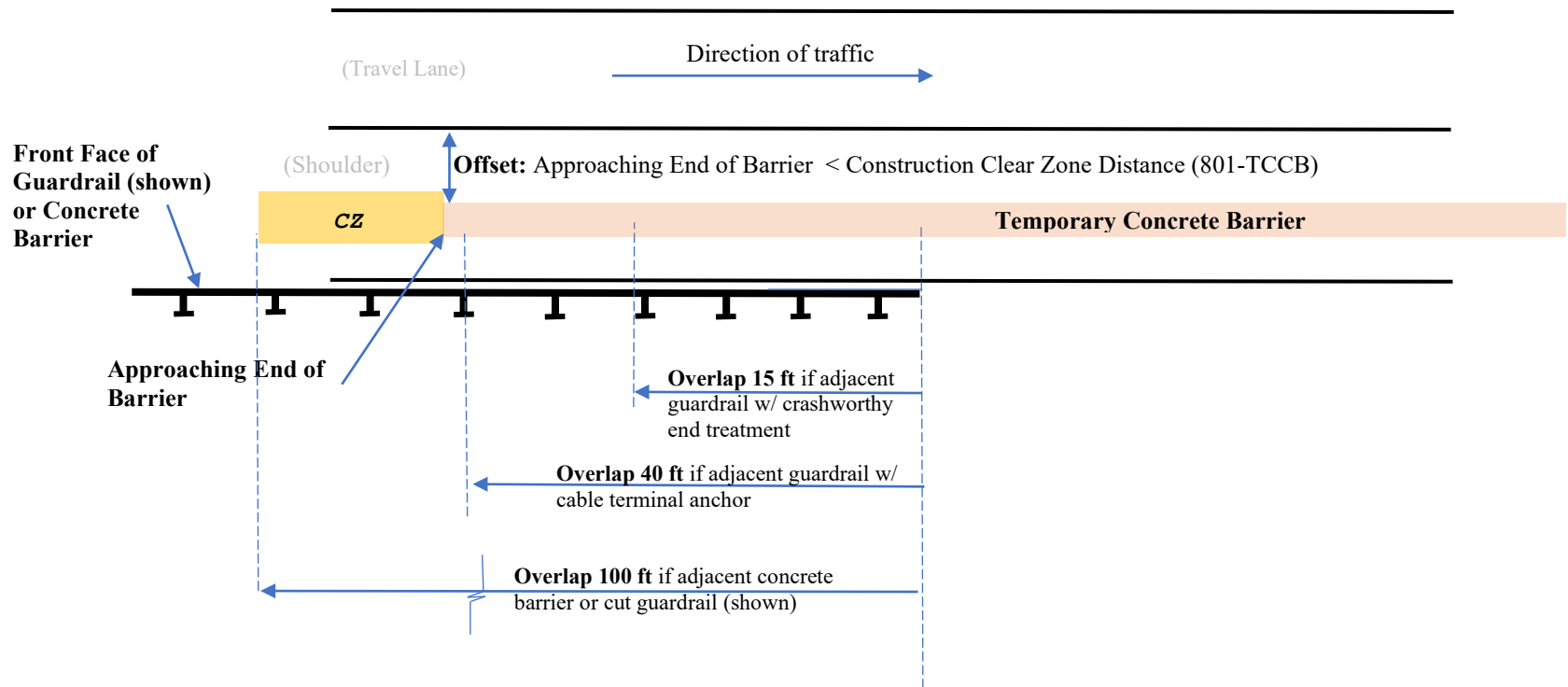


FIGURE 2B - TTB Adjacent Concrete Barrier (Temporary or Permanent)

Where TTB is placed behind temporary or permanent concrete barrier, the placement is considered “adjacent”, and the 100 ft overlap requirement applies. A CZ is not required where placement conditions are met. If any condition is not met, place barrier parallel to traffic and terminate with a CZ on the approaching end (See Figure 2A).

CZ = Construction Zone Energy Absorbing Terminal

Placement Conditions: TTB adjacent concrete barrier

- Side Slope: (Freeway/Interstate) Side slope on approach and under barrier must be 10:1 or flatter. Other roadways 4:1 max.
- Flare Rate: Barrier flare rate must be equal to or flatter than the required flare rate based on Construction Zone Design Speed
- Overlap: Approaching end of the barrier must overlap concrete barrier by 100 ft.

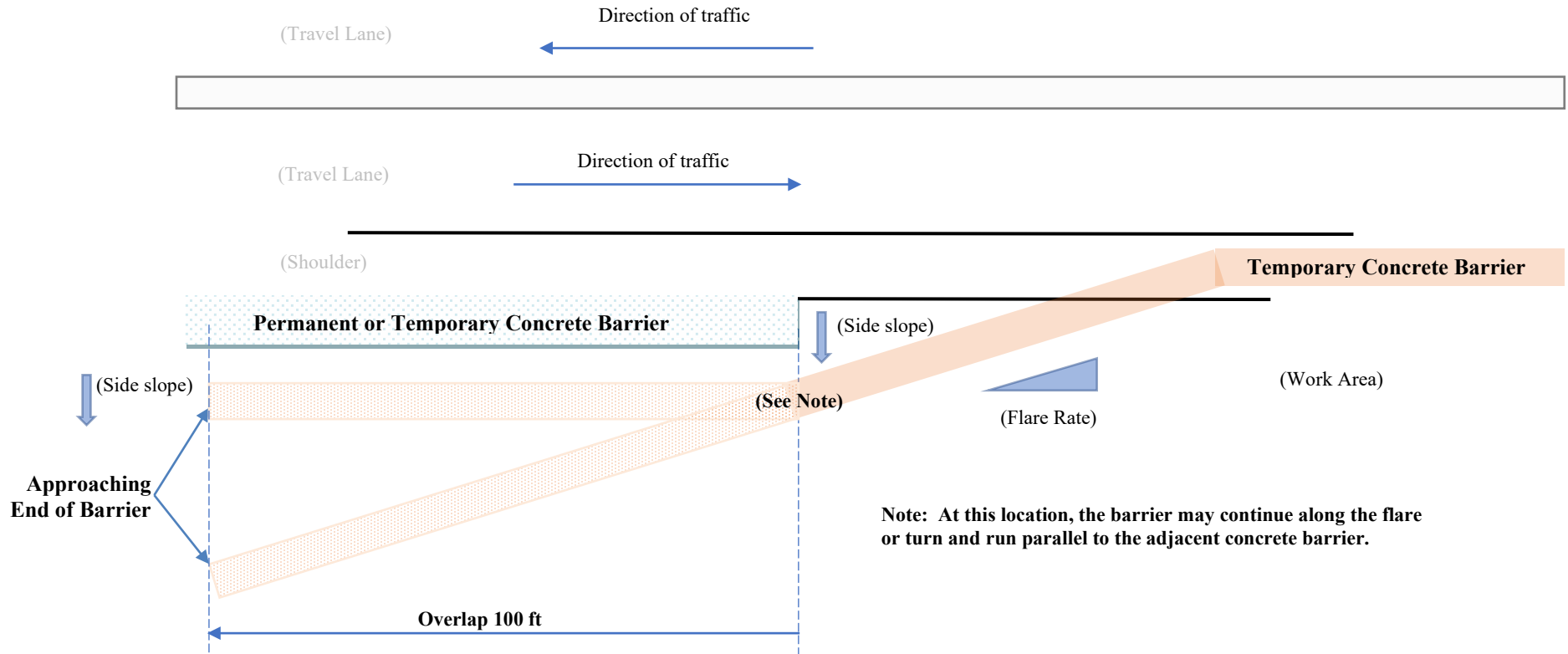


FIGURE 3 - TTB Behind Guardrail

TTB may be placed behind existing guardrail and CZ omitted where placement conditions are satisfied. If any condition is not met, place barrier parallel to traffic and terminate with a CZ on the approaching end (See Figure 2A).

CZ = Construction Zone Energy Absorbing Terminal

Placement Conditions: TTB behind guardrail

- Side Slope: (Freeway/Interstate) Side slope on approach and under barrier must be 10:1 or flatter. Other roadways 4:1 max.
- Flare Rate: Barrier flare rate must be equal to or flatter than the required flare rate based on Construction Zone Design Speed
- Overlap: Approaching end of barrier must overlap guardrail by required distance shown (based on type of end treatment).

