



SOUTH CAROLINA
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
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DM0289
RAILROAD

Changed - Now
DM-0292

February 28, 1989

MEMORANDUM TO DESIGN GROUP LEADERS

Subject: Criteria for Railroad Overpasses

The following criteria is to be observed when establishing bridge and span lengths and developing preliminary plans for railroad overpasses.

1. General

- A. The distance to the nearest mile post from the intersection of the centerline track and centerline of the bridge shall be shown on the plan and profile sheet.
- B. Horizontal and vertical clearances shall be clearly marked on the plan and profile sheet.
- C. A minimum of one boring shall be taken at each bent adjacent to the track. The design group leader should specify this when making a request for borings.
- D. Surveys of railroad grade separations should now included five profiles parallel to the centerline of the bridge. These profiles are to be made at the centerline of survey, the approximate toe line for the side slopes and midway between centerline of survey and the toe line for the side slopes. The Road Section will plot these profiles and provide them to Bridge Design for inclusion in the preliminary plans to be submitted to the railroad company. These profiles should not be included in the final structure plans.

2. Clearances

- A. Horizontal clearance shall, whenever possible, be set at a minimum of 25 feet from the face of the column or pier to the centerline of track, measured perpendicular to the track. Existing horizontal clearances should be maintained for widening projects.
- B. Vertical clearances shall be set at a minimum of 23 feet from the top of rail to the bottom of the superstructure. Existing vertical clearances should be maintained for widening projects.
- C. Temporary construction clearances shall be noted on the plans as 10.0 feet horizontal and 22.0 feet vertical. Increased temporary clearances may be requested by the railroad company after review of the preliminary plans.

3. Crashwalls

Crashwalls will be required on all new and existing bents when the face of the pier or column is closer than 25.0 feet to the centerline of track, measured perpendicular to the tracks, except as noted below.

Crashwalls shall meet the following requirements:

- A. Crashwalls for single column piers shall be minimum 2'-6" thick and shall extend a minimum of 6'-0" above the top of high rail. The wall shall extend a minimum of 6'-0" beyond the column on each side in the direction parallel to the track.
- B. For multiple column piers, the columns shall be connected with a wall of the same thickness as the columns or 2'-6" whichever is greater. The wall shall extend a minimum of 2'-6" beyond the end of outside columns in a direction parallel to the track.
- C. Reinforcing steel to adequately anchor the crashwalls to the column and footing shall be provided.
- D. For piers of heavy construction, crashwalls may be omitted. Solid piers with a minimum thickness of 2'-6" and length of 20'-0", single column piers of minimum 4'-0" x 12'-6" dimensions or any other solid pier sections with equivalent cross sections and minimum 2'-6" thickness are considered as heavy construction.

4. Drainage

Deck drains shall not be used on railroad overpass structures.



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