

**PRESTRESSED CONCRETE BEAM
PCBT-93 BULB-T
CONTINUOUS SPAN**

NOTES TO DESIGNER:

Standard is to be used for simple span, prestressed concrete Bulb-T's with a 93" depth, made continuous for composite dead load and live load plus impact.

Include standard PCBT-CLOS2 (Closure Diaphragm Details) in the plans when using this standard.

Include standard PCBT-MISC1 and PCBT-MISC2 (Miscellaneous Beam Details) in the plans when using this standard.

End details (PLAN and SECTION ON CENTERLINE) show typical beam end at semi-integral abutment and closure diaphragm for 0° skew.

Details shown for typical beam end at closure diaphragm were developed based on the results from a study of positive moment connections for continuous precast concrete Bulb-T's conducted by VPI & State University.

SECTION ON CENTERLINE shows two stud shear connectors (total 4). Designer must check for required number, modify this sheet as needed and have it agree with the bearing standard sheet.

TYPICAL BOTTOM FLANGE EDGE DETAIL shows details when the distance between the edge of insert plate and end of beam is greater than 6" at a location other than a full integral abutment.

The designer shall ensure that bar BS0403 projects beyond the top flange of beam to the mid-depth of deck slab when determining the dimension "G".

The designer shall coordinate the location of diaphragm inserts and web through holes with that of draped strands to avoid conflicts. Adjust location of diaphragms as required.

See Part 2 Chapter 12 of this manual for practices and specific requirements of the Structure and Bridge Division for the design and detailing of prestressed concrete Bulb-T members including hold-down, anchorage zone design, lifting point and continuity requirements.

Cells for modifying the standard are located in pcb.cel library.

ADD THE FOLLOWING NOTES, DIMENSIONS, DETAILS, ETC. TO STANDARD:

PLAN:

When skew is not 0° and/or when actual end conditions differ from what is shown on the standard sheet, replace beam end detail(s) shown in PLAN with appropriate detail(s) from cell library.

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ADD THE FOLLOWING NOTES, DIMENSIONS, DETAILS, ETC. TO STANDARD (Continued):

SECTION ON CENTERLINE:

When actual end conditions differ from what is shown in the standard sheet, replace beam end detail(s) with appropriate detail(s) from cell library.

Add distance between BS04 or BS05 series and BS0403 bar. Provide spacing for BS0401 bar and for each BS0403 range. Where three BS0403 bar ranges are not used, adjust the details to add/delete additional ranges. For beam ends at full integral or semi-integral abutments, provide the distances for the BC0603 and BC0504 bars past the beam end and number of BC0603 bars.

END VIEW and SECTION A-A:

Complete details for strand pattern (spacings) for both details with low-relaxation strands.

DATA AND DIMENSION TABLE:

Complete table.

TYPICAL BOTTOM FLANGE EDGE DETAIL:

Replace detail when distance from edge of insert plate to end of beam is less than or equal to 6" or full integral abutment is used with appropriate detail from cell library (TBFED series).

NOTES:

Add appropriate plan sheet number(s) to Notes 4, 5, 8 and 10.

Where lifting points exceeding 2/3 height from the end of beam are assumed during design, add note, "Lifting points assumed for design are X'-X" from each beam end". Provide distance in note.