

ALDOT-455 Procedure for Installation of Temperature Sensors on Mass Concrete Members

1. Scope

This procedure establishes requirements for proper installation of temperature sensors on members that have been designated as mass concrete.

2. Procedure

2.1. A minimum of two temperature sensors shall be placed at each of the following locations per cross section (for a total of six temperature sensors) on every mass concrete placement:

- At the center of the cross section
- At the midpoint of the shortest edge of the cross section
- At the midpoint of the longest edge of the cross section

2.2. All sensors shall be secured in a manner such that they do not move during concrete placement. The surface sensors may be tied to the rebar cage, provided that the sensors are within 6 in. {152 mm} of the surface.

2.3. Refer to Figures 1 through 5 for guidance on proper and inappropriate locations to position temperature sensors on cross sections.

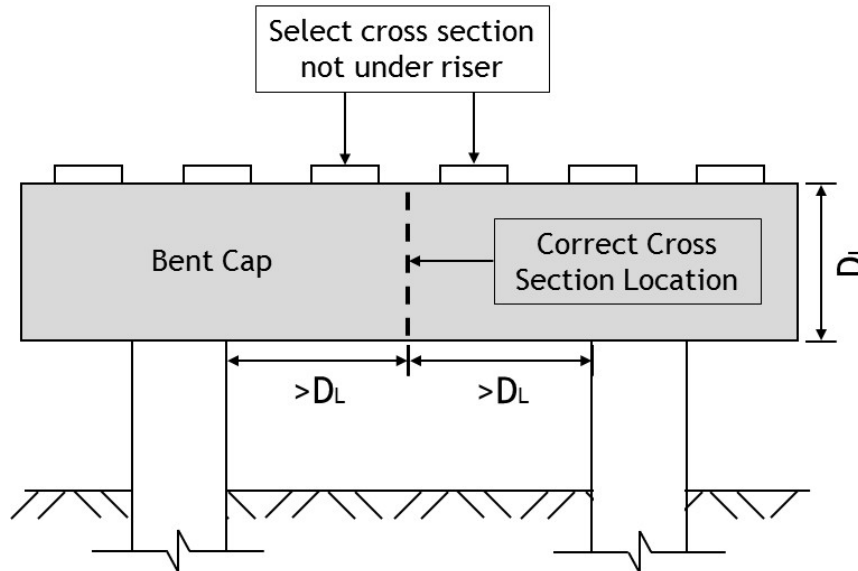


Figure 1: Proper temperature sensor cross-section location within a bent cap (D_L = least dimension) (example of a vertically oriented cross section)

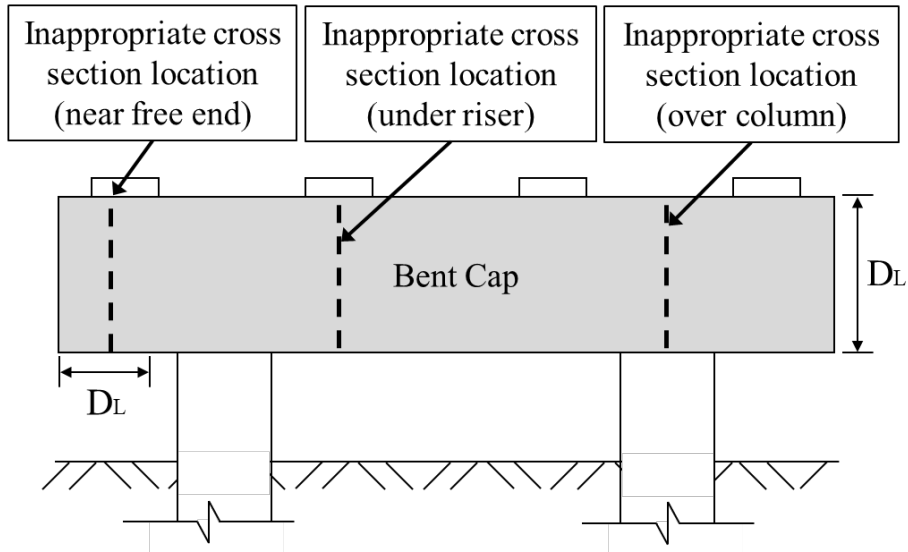


Figure 2: Inappropriate temperature sensor cross section locations within a bent cap (D_L = least dimension) (example of a vertically oriented cross section)

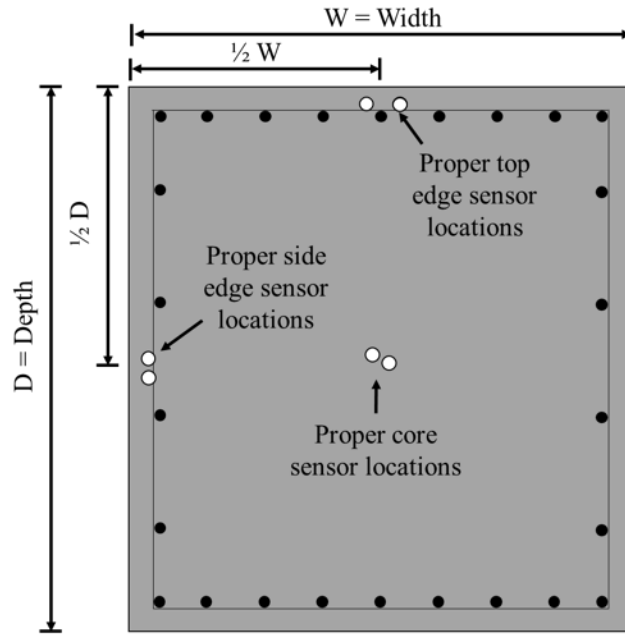


Figure 3: Proper temperature sensor placement on a rectangular bent cap cross section (example of a vertically oriented cross section)

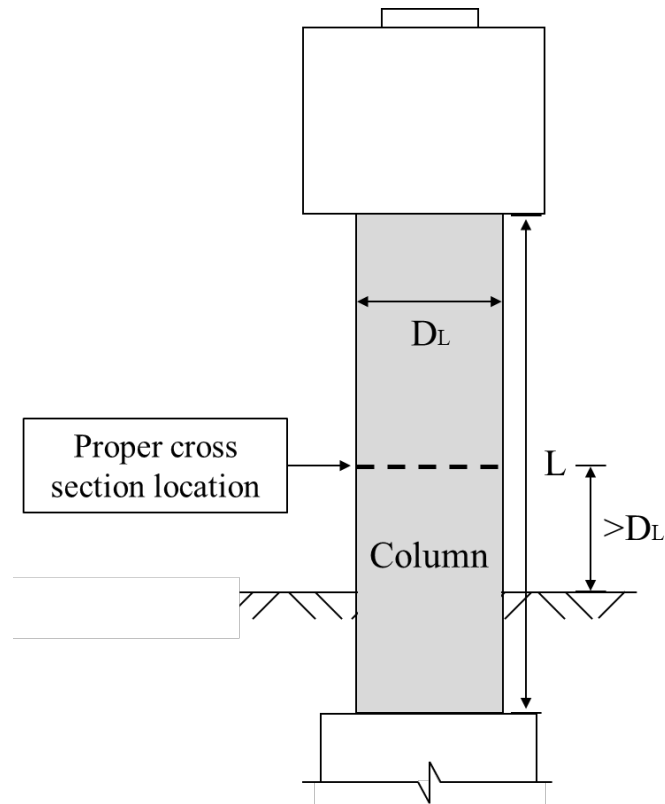


Figure 4: Proper temperature sensor cross section locations within a column (D_L = least dimension)
(example of a horizontally oriented cross section)

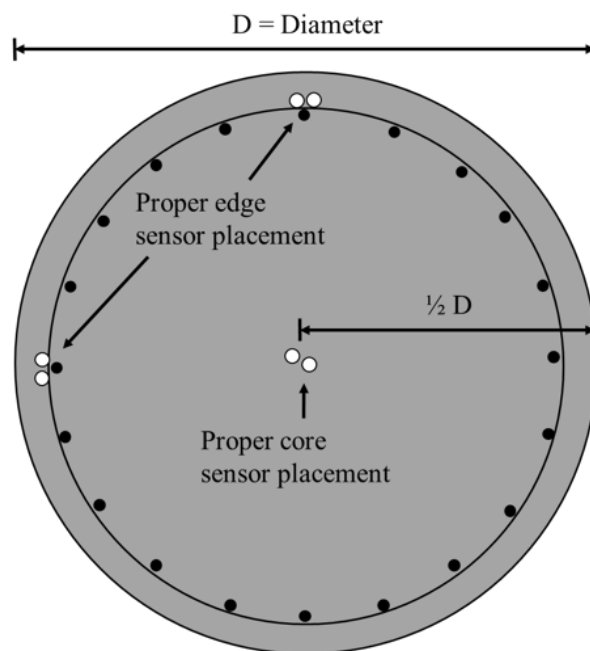


Figure 5: Correct temperature sensor placement on a circular column cross section
(example of a horizontally oriented cross section)