
[4317](#) Fill for Culverts Used for Bridge Replacement

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Since floodable backfill costs less than flowable mortar, designers should look at using this detail, as opposed to Design Detail [4318](#), if possible. Designers will need to keep in mind that contractors need a minimum of 5 feet of vertical clearance to place floodable backfill. This means a minimum of 5 feet is required from the top of floodable backfill to bottom of beam or slab (depending on type of bridge).

Circle note 3 states 5 feet is the maximum distance from top of floodable backfill to bottom of beam or slab (based on the contractor's need for a minimum 5 foot clearance). This is to minimize the amount of flowable mortar required, thus reducing cost. However, designers may encounter situations where maintaining 5 feet between top of floodable backfill and bottom of slab or beam results in a thin lift of floodable backfill (less than 2 or 3 feet). In cases such as these, using Design Detail [4318](#) may actually be more economical since the work required to place a thin lift of floodable backfill may outweigh the cost of using flowable mortar instead. As a guideline, when maintaining 5 feet between top of floodable backfill and bottom of slab or beam results in a lift of floodable backfill that is 4 feet or less, designers should investigate whether using Design Detail [4318](#) would be more economical.