



Refer to **DR-104** for minimum and maximum allowable cover (H) for the particular kind of pipe culvert.

- ① The backfill adjacent to and above the pipe culvert may be placed in conjunction with normal embankment construction. Thoroughly tamp the embankment within the limits shown.
- ② Take extra care to ensure complete and satisfactory tamping of backfill material in the area immediately adjacent to the lower portion of pipe.
- ③ Carefully shape excavation below groundline either using a template conforming to actual dimension and shape of the pipe or using other means. If using other means, check with a template conforming to the actual dimension and shape of the pipe.
- ④ For culverts backfilled by flooding, place a cohesive soil plug at the inlet, outlet, and, when necessary, sides, prior to flooding.
- ⑤ 4-inch Porous Backfill bedding, 2-inch Floodable Backfill bedding may be used under unsealed rigid pipe.
- ⑥ Extend Porous Backfill through the outlet end soil plug when used for bedding.
- ⑦ Quantity calculations are based upon a 1:1 slope and minimum trench dimension. Actual slope of trench may vary based upon Contractor's operations.
- ⑧ Ground Line at time of pipe installation. When existing ground exceeds 5 feet depth over pipe, backfill and compaction by flooding is not required more than 5 feet above the pipe.
- ⑨ Where a corrugated metal pipe culvert requiring elongation is to be installed (to counteract deformation caused by backfill), complete elongation using a means approved by the Engineer. Elongation may be developed either as part of shop fabrication or field installation. Install with elongated axis vertical.

Possible Contract Items:  
 Flowable Mortar  
 Flooded Backfill  
 Excavation, Class 20

Possible Tabulations:  
 104-3  
 104-4

<b>IOWA DOT</b>	REVISION
	2   04-18-17
	<b>DR-101</b>
<b>STANDARD ROAD PLAN</b>	SHEET 1 of 1

REVISIONS: Changed "Porous Backfill" to "Porous Backfill Bedding" for clarity. Modified trench installation detail for H>4' to clarify pay limits.

APPROVED BY DESIGN METHODS ENGINEER  
*Brian Smith*

**PIPE CULVERT  
 (BEDDING AND BACKFILL)**

Denotes pay limits for flooded backfill