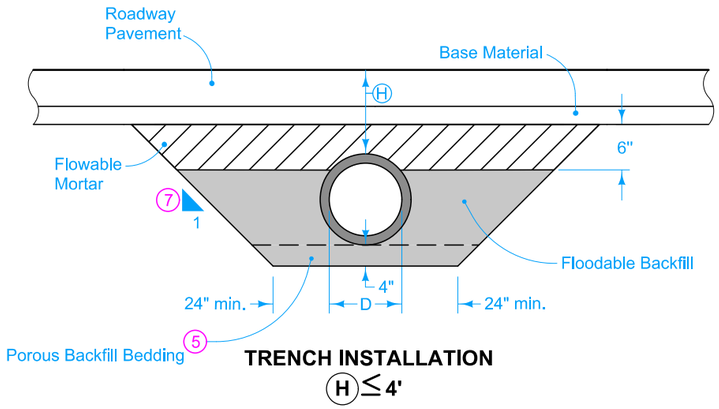
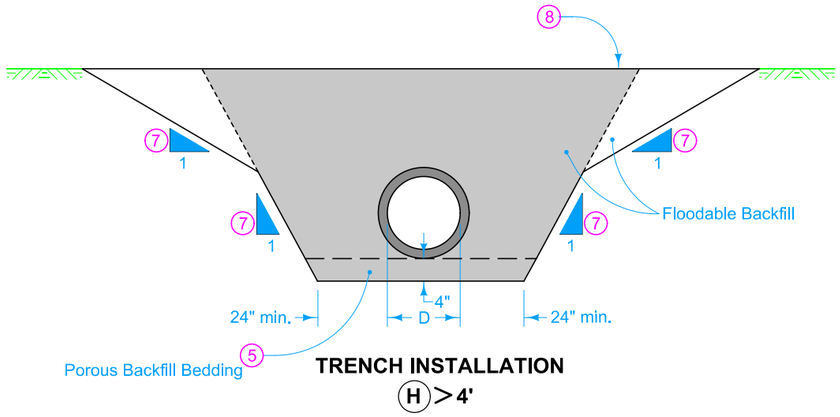
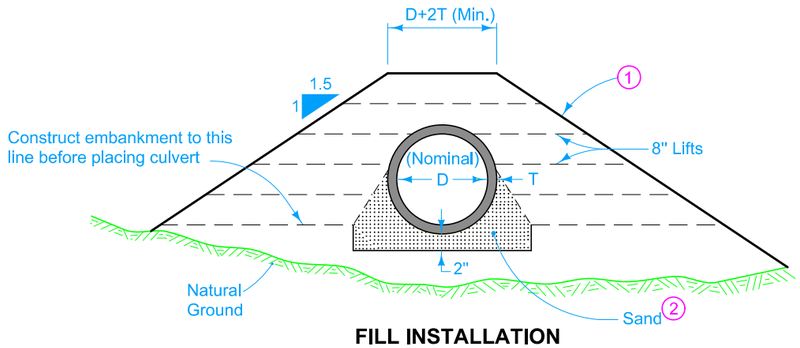
# DESIGNER INFORMATION




**TRENCH INSTALLATION**
**(H) ≤ 4'**



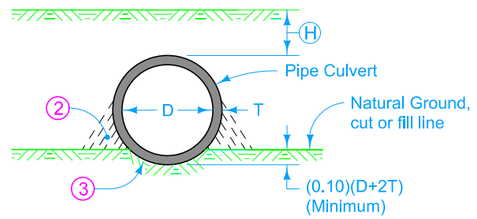

**TRENCH INSTALLATION**
**(H) > 4'**



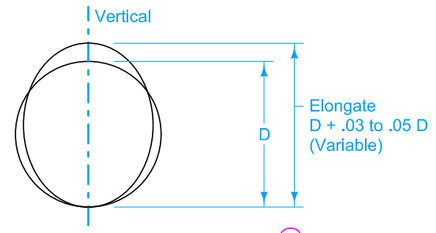

**FILL INSTALLATION**
**(FOR RIGID PIPES ONLY)**

**CLASS 'B' BEDDING & BACKFILL** (4)

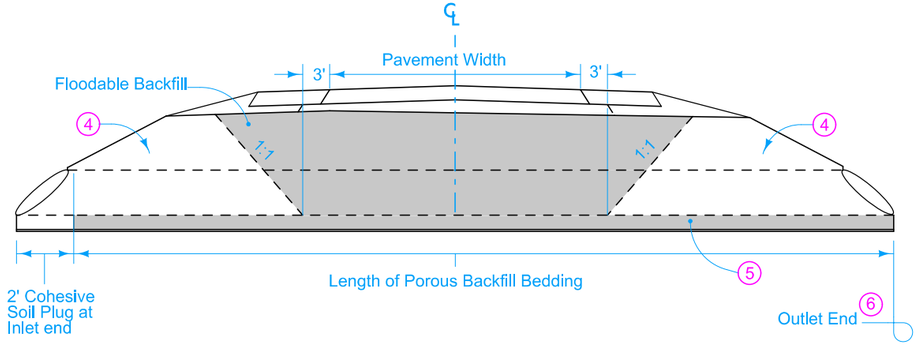
Denotes pay limits for flooded backfill




**CLASS 'C' BEDDING & BACKFILL**




**ELONGATED PIPE** (9)




**TYPICAL SECTION - SOIL PLUG**

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

IOWA DOT

REVISION
2 | 04-18-17

# STANDARD ROAD PLAN

DR-101

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

## PIPE CULVERT (BEDDING AND BACKFILL)