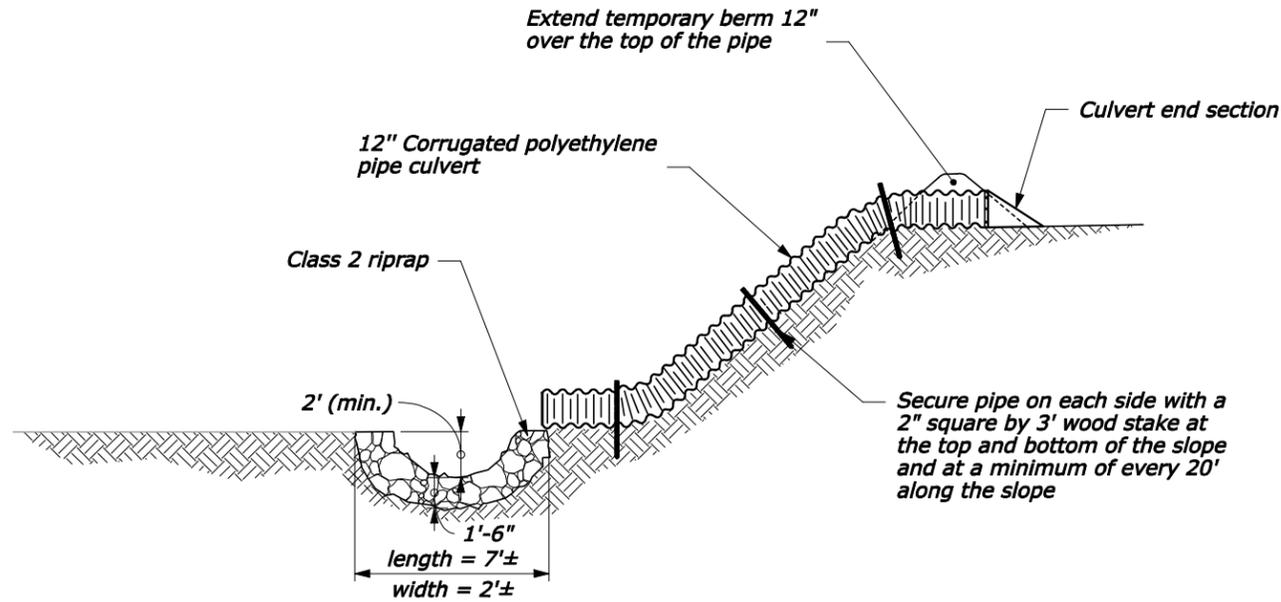
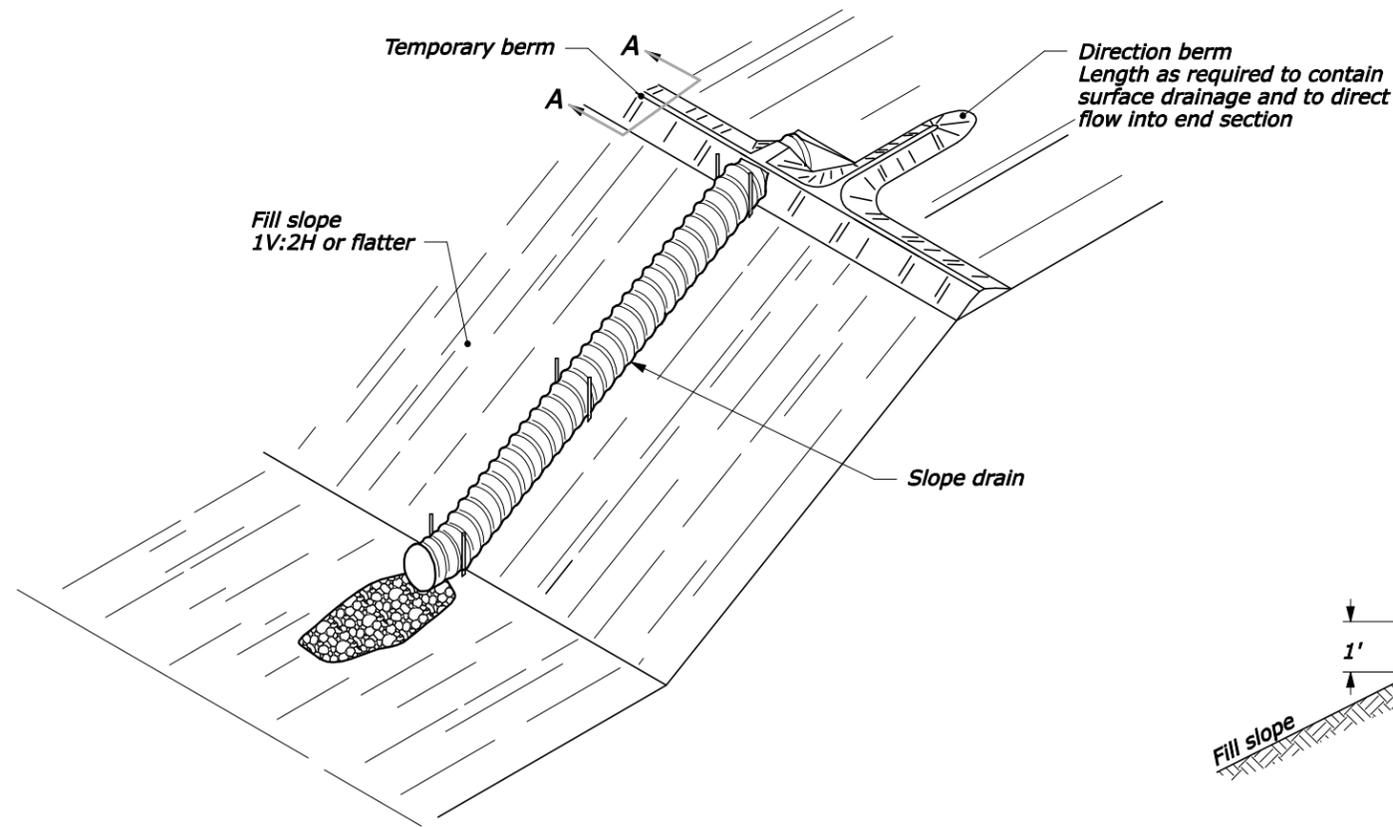


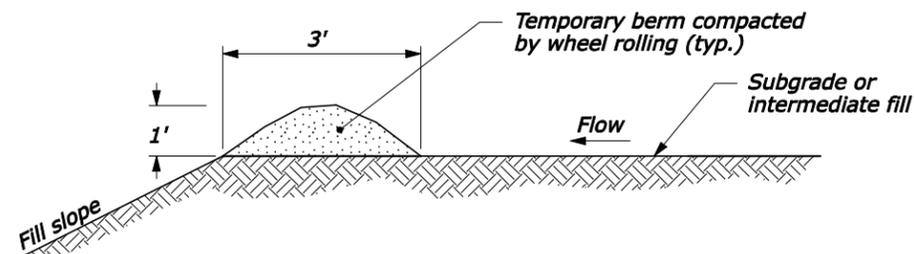
REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
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TEMPORARY SLOPE DRAIN



TEMPORARY SLOPE DRAIN ISOMETRIC VIEW



**SECTION A-A
TEMPORARY BERM**

NOTE:

1. Use temporary slope drains as the embankment is constructed. Use slope drains until the slopes are permanently stabilized.
2. Compact the ridge of existing soil to provide a berm that diverts storm runoff from recently constructed slopes. Repair all erosion of the berm immediately.
3. Compact the soil surface and berms around the entrance to the pipe end section to prevent water from undermining the pipe and eroding the slope. Repair all erosion around the inlet, outlet or slope immediately.
4. Secure the pipe to the ground every 20' to prevent pipe movement and subsequent failures during storm events.
5. Extend the slope drain as required to coincide with the height of the embankment.
6. Extend the drain a minimum of 3' beyond the toe of the slope and provide outlet protection.
7. Maintain slope drains until slopes have been permanently stabilized.
8. Alternate pipe materials installed according to the manufacturer's recommendations may be approved by the CO.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL	
SLOPE DRAIN	
DETAIL APPROVED FOR USE 01/2011	DETAIL
REVISED:	C157-57

NO SCALE

NOTES TO THE DESIGNER

Last Updated: January 2011

General Information

1. **Appropriate Applications.** A temporary slope drain is a flexible conduit for stormwater that extends the length of a disturbed slope to divert the flow and serve as a temporary outlet. Temporary slope drains are used on disturbed slopes until permanent drainage structures (i.e. riprap rundowns and outlets to paved waterways) are installed and until slopes are permanently stabilized.
2. **Limitations.**
 - Area drained by a temporary slope drain is 5 acres or less
 - If larger culvert is required to accommodate higher flows, need to revise Detail to fit project-specific conditions
3. **Layout Guidance.**
 - Show locations of slope drains in the erosion and sediment control drawings

Applicable SCRs

1. Section 157:
http://www.cflhd.gov/design/documents/construction/scr_03/S157-03E.doc

Typical Pay Item Used

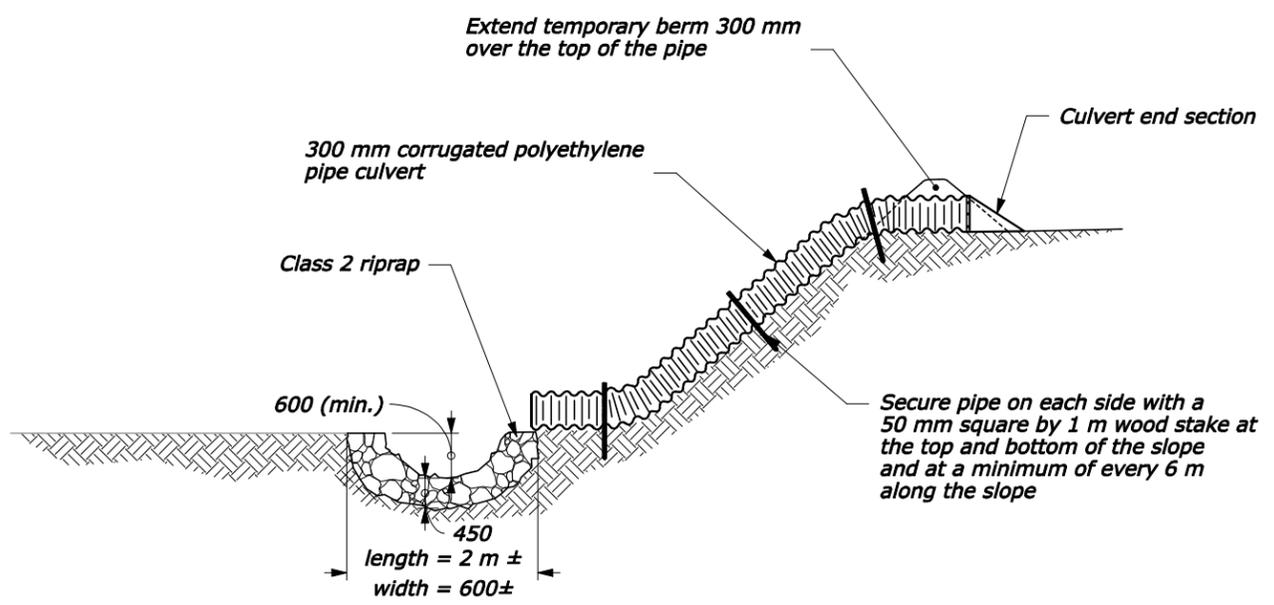
- 15705-0300 Soil erosion control, slope drains [LNFT]

Updates

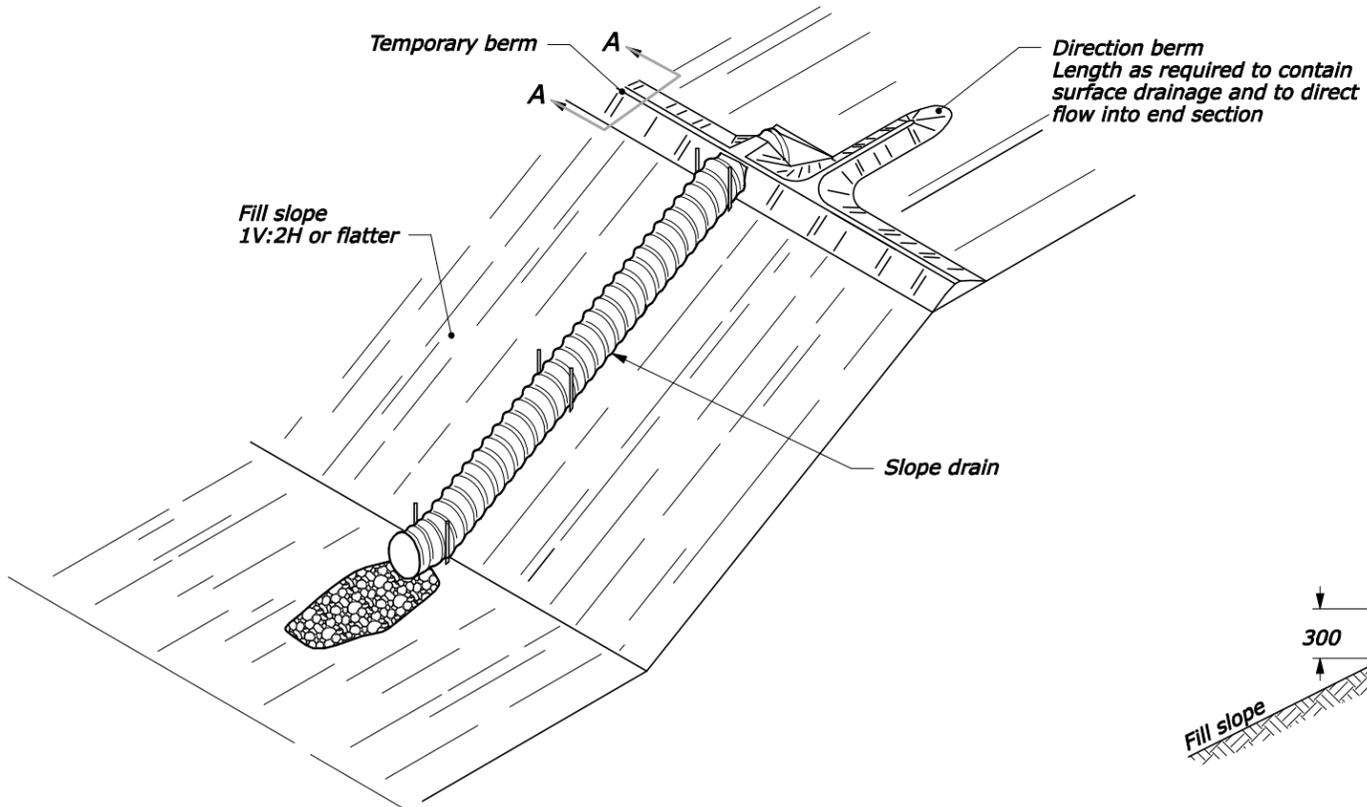
January 2011

- Revised Standard 157-7

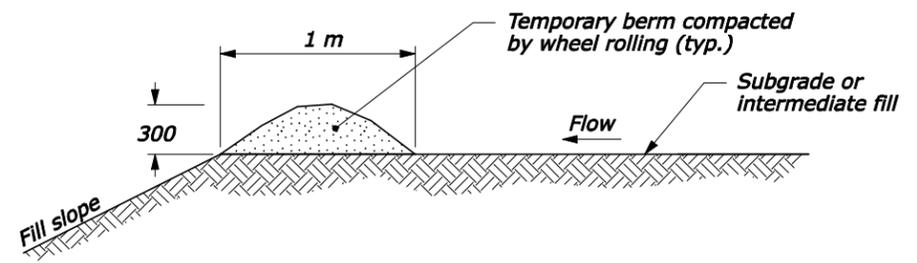
REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
.



TEMPORARY SLOPE DRAIN



TEMPORARY SLOPE DRAIN ISOMETRIC VIEW



SECTION A-A TEMPERARY BERM

NOTE:

1. Use temporary slope drains as the embankment is constructed. Use slope drains until the slopes are permanently stabilized.
2. Compact the ridge of existing soil to provide a berm that diverts storm runoff from recently constructed slopes. Repair all erosion of the berm immediately.
3. Compact the soil surface and berms around the entrance to the pipe end section to prevent water from undermining the pipe and eroding the slope. Repair all erosion around the inlet, outlet or slope immediately.
4. Secure the pipe to the ground every 6 m to prevent pipe movement and subsequent failures during storm events.
5. Extend the slope drain as required to coincide with the height of the embankment.
6. Extend the drain a minimum of 1 m beyond the toe of the slope and provide outlet protection.
7. Maintain slope drains until slopes have been permanently stabilized.
8. Alternate pipe materials installed according to the manufacturer's recommendations may be approved by the CO.
9. Dimensions without units are millimeters.

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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL	
SLOPE DRAIN	
DETAIL APPROVED FOR USE 01/2011	DETAIL
REVISED:	CM157-57

NO SCALE

NOTES TO THE DESIGNER

Last Updated: January 2011

General Information

1. ***Appropriate Applications.*** A temporary slope drain is a flexible conduit for stormwater that extends the length of a disturbed slope to divert the flow and serve as a temporary outlet. Temporary slope drains are used on disturbed slopes until permanent drainage structures (i.e. riprap rundowns and outlets to paved waterways) are installed and until slopes are permanently stabilized.
2. ***Limitations.***
 - Area drained by a temporary slope drain is 2 hectares or less
 - If larger culvert is required to accommodate higher flows, need to revise Detail to fit project-specific conditions
3. ***Layout Guidance.***
 - Show locations of slope drains in the erosion and sediment control drawings

Applicable SCRs

1. Section 157:
http://www.cflhd.gov/design/_documents/construction/scr_03/S157-03M.doc

Typical Pay Item Used

- 15705-0300 Soil erosion control, slope drains [m]

Updates

January 2011

- Revised Standard 157-7