

Notes to the Designer

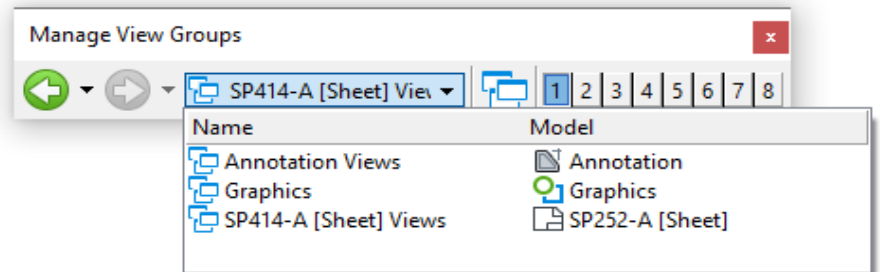
Updated June 2024

Check Dam

NOTE: DO NOT USE THIS DRAWING IF PAYING BY THE LPSM. This drawing should only be included in the plan set if items are being paid for separately.

General Information

- Printing should be done from the **[Sheet]** View model



- Appropriate Applications

Check dams reduce scour in a channel or ditch and provide runoff treatment by reducing flow velocity and encouraging sediment deposition. Appropriate applications include:

- Fiber rolls are appropriate for lower flow conditions, gravel bags and riprap/filter rock check dams in higher flow conditions
- Steep channels where storm water runoff velocities exceed 3 ft/s
- During the establishment of grass linings in ditches
- Use in conjunction with RECP lining in ditches steeper than 5% or 6% (See CFL Detail C157-54)

- Limitations

Not used in live streams

Drainage areas 10 acres or less

- Limitations

Install the first check dam about 15 ft from the outfall and at regular intervals based on slope gradient and soil type (steeper slopes and more erosive soils (e.g. loose sand or silt) will require shorter spacing between check dams).

When installing a series of check dams in a channel, install outlet stabilization measures below the final dam, such as riprap or geotextile, to minimize erosion potential.

Applicable SCRs

- None

Typical Pay Item Used

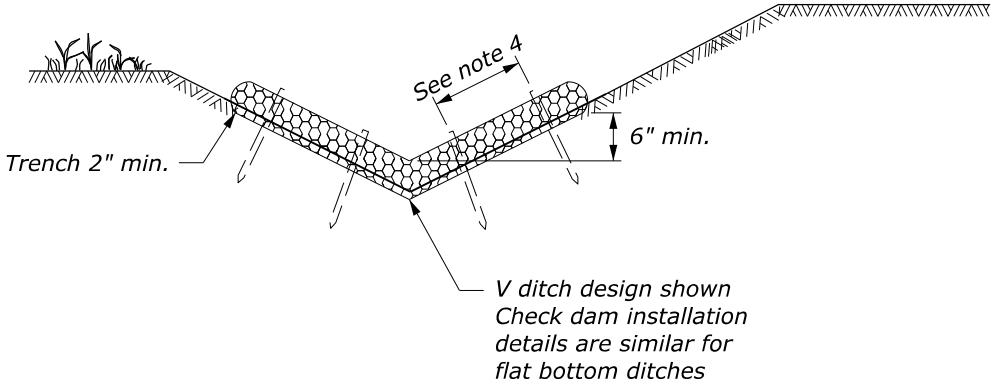
- Typically we will leave it up to the Contractor to select the specific type of check dam to use on the project. Include both plan sheets and a generic pay item in the PS&E. If you would like to specify a type of check dam to use, show the type in parenthesis in the pay item description. For example Soil erosion control, check dam (riprap)
- 15706-0200 Soil erosion control, check dam [EA]

Updates

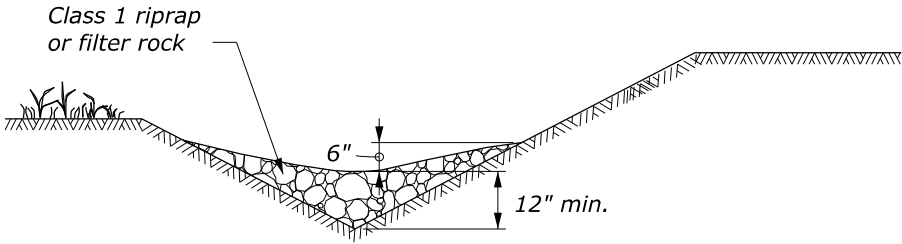
- **September 2020**
 - Updated for OpenRoads Designer
- **June 2024**
 - Updated for FP24

K:\CADD_Coordinator\ORD Drawings\Details\C157-53.dgn [Det C157-53] 6 June 2024 1:35 PM

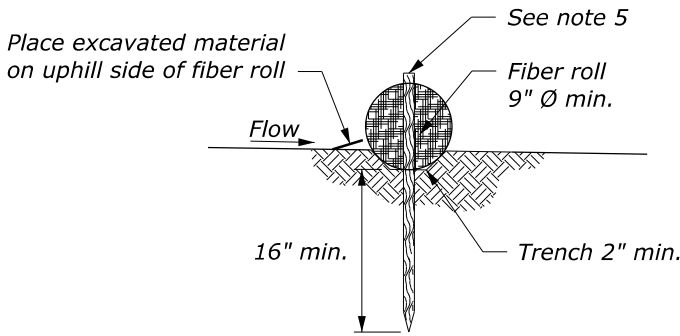
PROJECT	SHEET
PROJECT NUMBER	NUMBER
PROJECT NAME	



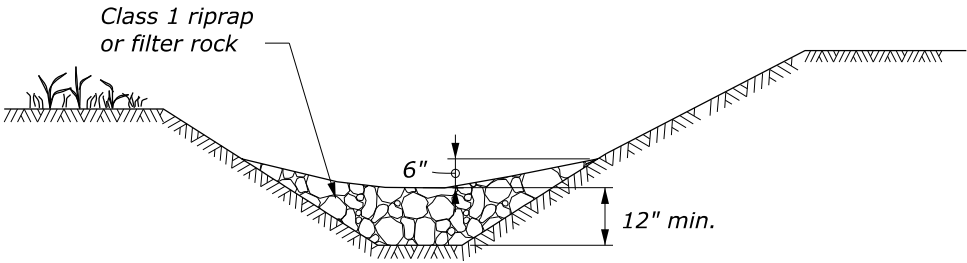
CROSS SECTION



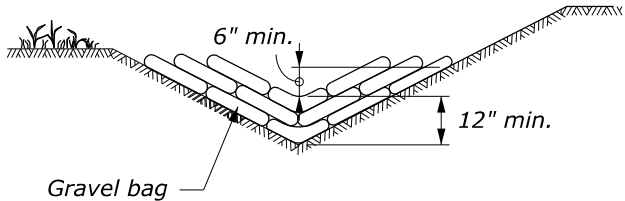
V DITCH
CROSS SECTION



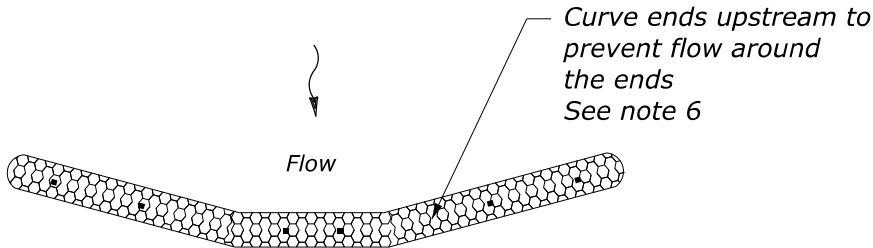
FIBER ROLL
STAKING DETAIL



FLAT BOTTOM
CROSS SECTION



CROSS SECTION



PLAN

FIBER ROLL CHECK DAM SPACING* (See note 7)	
DITCH GRADE	MAX. CHECK DAM SPACING (ft)
2%	150
3%	100
4%	80
5%	60

*Spacing calculated based on 9" Ø min. fiber roll. Do not use fiber roll check dams on ditch grades steeper than 5%.

FIBER ROLL CHECK DAM

RIPRAP AND FILTER ROCK CHECK DAM SPACING (See note 7)	
DITCH GRADE	MAX. CHECK DAM SPACING (ft)
2%	150
3%	100
4%	80
5%	60
6%	50

RIPRAP OR FILTER ROCK CHECK DAM

GRAVEL BAG CHECK DAM SPACING* (See note 7)	
DITCH GRADE	MAX. CHECK DAM SPACING (ft)
2%	150
3%	100
4%	80
5%	60
6%	50

*Do not use gravel bag check dam on ditch grades steeper than 6%

GRAVEL BAG CHECK DAM

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	CFLHD DETAIL C157-53
CHECK DAM	SPECIFICATION FP-24
	APPROVED FOR USE
	DRAFT: 06/2024

NOTE:

1. Check dams of fiber rolls, riprap, filter rock, or gravel bags may be used to meet the functional requirements of the check dam device.
2. Repair all rills and gullies and properly compact before installation.
3. Install check dams in ditches perpendicular to the flow line.
4. Stake fiber rolls in place with 1 1/8" x 1 1/8" wood stakes. Drive stakes at each end of the fiber roll and at 2-foot maximum spacing.
5. Drive stakes into undisturbed soil of trench bottom 16" minimum. Expose stakes a minimum of 2 inches above top of fiber roll.
6. Provide sufficient length to prevent water from flowing around the ends of the fiber roll.
7. Adjust check dam spacing based on site specific conditions.

NO SCALE