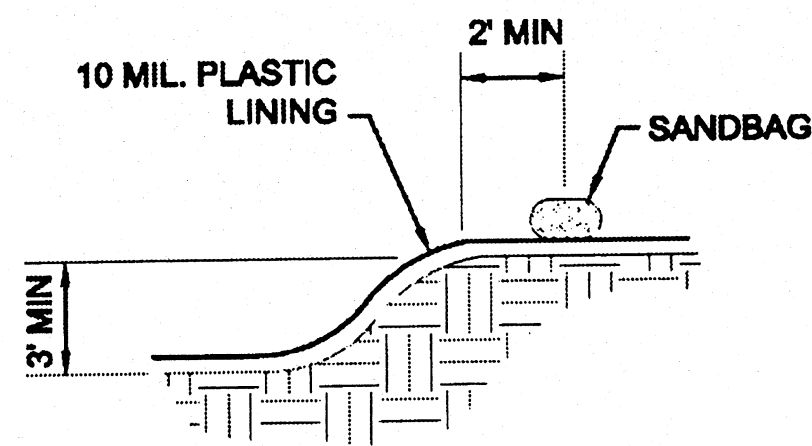


CONCRETE WASHOUT PLAN VIEW
N.T.S.



CONCRETE WASHOUT SECTION A-A
N.T.S.

NOTE: SANDBAGS MAY BE REPLACED BY A SOIL BERM TO ANCHOR THE PLASTIC LINING.

WASHOUT BASIN SECTION

SCALE: NTS

December 2003

Check Dams

Applications

- Perimeter Control
- Slope Protection
- Sediment Trapping
- Channel Protection
- Temporary Stabilization
- Permanent Stabilization
- Waste Management
- Housekeeping Practices

Targeted Constituents

- Sediment
- Nutrients Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Construction Wastes

Implementation Requirements

- Capital Costs
- Maintenance
- Training
- Suitability for Slopes > 5%

Legend

- Significant Impact
- Medium Impact
- Low Impact
- Unknown or Questionable Impact

Fe=0.40

S-7

North Central Texas Council of Governments

DESCRIPTION
Check dams are small barriers consisting of rock, sand bag or earth berms placed across a drainage swale or ditch. They reduce the velocity of small concentrated flows, provide a limited barrier for sediment and help disperse concentrated flows, reducing potential erosion.

PRIMARY USE
Check dams are used for long drainage swales or ditches to reduce erodible velocities. They are typically used in conjunction with other channel protection techniques such as vegetation lining and turf reinforcement mats. Check dams provide limited treatment to sediment-laden flows. They are more useful in reducing flow to acceptable levels for other techniques.

APPLICATIONS
Check dams are typically used early in construction in swales for long linear projects such as roadways. They can also be used in short swales with a steep slope to reduce unacceptable velocities. Check dams shall not be used in live stream channels.

DESIGN CRITERIA

- Check dams should be placed at a distance and height to allow small pools to form between each one. Typically, dam height should be between 18" and 36". Dams should be spaced such that the top of the downstream dam should be at the same elevation as the toe of the upstream dam.
- Major flows (greater than 2 year design storm) must pass the check dam without causing excessive upstream flooding.
- Check dams should be used in conjunction with other sediment reduction techniques prior to releasing flow offsite.
- Use geotextile filter fabric under check dams exceeding 18 inches in height. The fabric shall meet the material specified for the Stone Outlet Sediment Trap, S-5.

Rock Check Dams

- Stone shall be well graded with size range from 1-1/2 to 3-1/2 inches in diameter depending on expected flows.
- Rock check dams should be triangular in cross section with side slopes of 1:1 or flatter on the upstream side and 2:1 or flatter on the downstream side.

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Check Dams

Sand Bag Dams

- Sand bag check dams should have a maximum flow through rate of 0.1 cfs per square foot of surface with a minimum top width of 16 inches and bottom width of 48 inches. Bags should be filled with coarse sand, pea gravel, or filter stone that is clean and free of deleterious material.
- Bag length shall be 24-inches to 30-inches, width shall be 16-inches to 18-inches and thickness shall be 6-inches to 8-inches and having an approximate weight of 40-pounds.
- Bag material shall be polypropylene, polyethylene, polyamide or cotton burlap woven fabric, minimum unit weight 4-ounces-per-square-yard, Mullen burst strength exceeding 300-psi as determined by ASTM D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method, and ultraviolet stability exceeding 70-percent.
- PVC pipes may be installed through the sand bag dam near the top to allow for controlled flow through the dam. Pipe should be schedule 40 or heavier polyvinyl chloride (PVC) having a nominal internal diameter of 4 inches.

LIMITATIONS
Minor ponding will occur upstream of the check dams. For heavy flows or high velocity flows, extensive maintenance or replacement of the dams will be required.

Care must be used when taking out rock check dams in order to remove as much rock as possible. Loose rock can create an extreme hazard during mowing operations once the area has been stabilized.

MAINTENANCE REQUIREMENTS
Check dams should be inspected regularly (at least as often as required by the TPDES Construction General Permit, Appendix A). Silt must be removed when it reaches approximately 1/3 the height of the dam or 12", whichever is less.

SPECIFICATION
Specifications for construction of this item may be found in the Standard Specifications for Public Works Construction - North Central Texas Council of Governments, Section 201.9 Rock Dam and Item 201.11 Sand Bag Dam.

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Check Dams

View Looking Upstream

Section A - A

Spacing Between Check Dams

NOTE:
Key stone into channel banks and extend it beyond the abutments a minimum of 18" (0.5m) to prevent flow around dam.

Source: Stormwater Management Manual for Western Washington.

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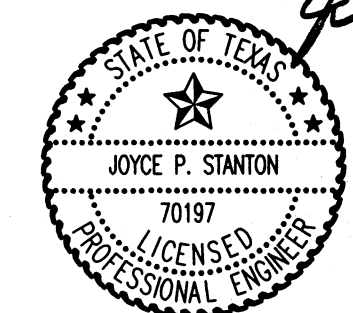
4-61

THESE DETAILS ARE NOT FOR USE ON STATE RIGHT OF WAY

THESE STANDARD ISWM DETAILS ARE AUTHORIZED FOR USE ON THIS PROJECT BY:

RECORD DOCUMENT

This Record Document (As Built) has been prepared based on information provided by others. The Engineer has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.



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ESTABLISHED 1953 FIRM NUMBER F-615

ISWM EROSION CONTROL DETAILS

LOT 22R
SKYVIEW COUNTRY ESTATES No. 3
ROCKWALL COUNTY, TEXAS

DESIGNED: JPS DATE: NOVEMBER, 2011
DRAWN: CM, JCS NOT TO SCALE PROJECT No.: E-1030 SHEET: 12
CHECKED: JPS