

PART 2: EROSION AND SILTATION CONTROL

The standards, regulations, and procedures set forth herein represent the erosion and siltation control practices of the City of Sarasota for the purpose of controlling:

1. The alteration of land and topography;
2. The removal and placement of certain vegetation; and
3. The erosion, sedimentation, and pollution within drainage systems.

The content of this regulation shall not be construed as a guarantee against all storm water damage, but will serve as a means to minimize the extent of potential storm water hazards to the public. These are minimum standards only and do not relieve the Developer or his Engineer-of-Record from their designated responsibility to meet the intent of this regulation and to protect the rights of surrounding property owners and the public interest, in accordance with good engineering practices.

Section A - Sea Walls.

1. All seawalls, bulkheads, groins, waterfront elevations and land slope shall be provided, as necessary, to protect waterfront property or waterways from erosion in accordance with Figure ER-1 as approved by the City Engineer.

Section B - Erosion and Siltation Control Permits.

1. All projects requiring any vegetation/root removal in the soil zone at or underlying the surface or removal of existing impervious surface (i.e. asphalt or buildings) such that bare soil remains, shall be required to have an Erosion and Siltation Control (ESC) Permit prior to beginning any such work. Any project five (5) acres or larger shall provide a copy of their Pollution Prevention Plan and "Notice of Intent" for construction activities, per the National Pollutant Discharge Elimination System (NPDES) permit.

Section C - Procedure for Permitting Land Disturbing Activity.

1. No person shall perform any land disturbing activity without first obtaining an Erosion and Siltation Control (ESC) Permit from the City Engineer. Such permit shall be in addition to any other permits or approvals required for the project by any other ordinances, rules, and regulations in effect.
2. Application for an ESC Permit must be made to the Building and Zoning Department in the same manner as Site Development Plans (See page 1-2), and must be accompanied by an Erosion and Siltation Control Plan. The applicant's ESC Plan shall include, in minimum, the following information for the entire tract of land to be disturbed, regardless of whether the tract will be developed in stages:
 - a. A narrative description of the overall project shall include:
 - (1) Anticipated starting and completion dates for each sequence and stage of land disturbing activities and the expected date the final stabilization will be completed;
 - (2) A description of the siltation control program and siltation control practices;
 - (3) An adequate description of general topographical and soil conditions of the tract;
 - (4) A description of the current zoning classification of adjacent property and a general description of existing and proposed structures, buildings and other fixed development located within a perimeter of two hundred feet (200 ft.) of the boundary line of applicant's property;
 - (5) A description of the maintenance program for siltation control facilities, including inspection programs, revegetation of exposed soils, method, and frequency of removal and disposal of solid waste material removed from control facilities, and disposition of temporary structural measures.
 - (6) Name, address, and telephone number of person and/or company that will have legal responsibility for accomplishing the plan, including maintenance thereafter.
 - b. Maps, drawings, and supportive computations bearing the signature and raised seal of a Professional Engineer, and containing:
 - (1) A site drawing indicating the location of the proposed project in relation to jurisdictional boundaries

of roadways, and location of water courses;

(2) A plan for temporary and permanent vegetative and structural erosion and siltation control measures.

- c. A boundary line survey of the site on which the work is to be performed bearing the signature and raised seal of a Professional Surveyor and Mapper.
3. If the project is to be developed in phases, then the City Engineer may issue a separate permit for a master plan or for each phase, at the City Engineer's sole discretion.
 4. The permit may be suspended, revoked, or modified by the City Engineer or his designee upon a finding that the holder is not in compliance with these regulations or has violated any of the provisions or conditions of the permit.
 5. In the case of a suspended or revoked permit, the permittee may be required to resubmit any applicable information deemed necessary for the application of a new permit, and may be subject to penalties as authorized by law.

Section D - Principles and Standards.

1. **Implementation:** Soil erosion and siltation control measures shall conform to the standards and specifications of this Manual. The application of measures shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent development. Measures shall be installed to prevent or control erosion and siltation pollution during all stages of any land disturbing activity.

In addition to the above mentioned considerations, the best management practices contained in the Florida Department of Environmental Protection's, Nonpoint Source Management for Construction Activities should be utilized along with the following additional guidelines, paragraphs 2 through 9.

2. **Stabilization of Denuded Areas:** No disturbed area may be denuded for more than thirty (30) calendar days unless otherwise authorized by the City Engineer. Denuded areas must be covered by mulches such as straw, hay, filter fabric, seed and mulch, sod, or some other permanent vegetation. Within sixty (60) calendar days after final grade is established on any portion of a project site, that portion of the site shall be provided with established permanent soil stabilization measures according to the original construction plan, whether by impervious surface or landscaping.
3. **Protection and Stabilization of Soil Stockpiles:** Soil stockpiles shall be protected at all times by on-site drainage controls which prevent erosion of the stockpiled material. Control of dust from such stockpiles may be required depending upon their location and the expected length of time the stockpiles will be present. In no case shall no unstabilized stockpile remain in place longer than thirty (30) calendar days.
4. **Protection of Existing Storm Sewer Systems:** During construction, all storm sewer inlets receiving drainage from the project shall be protected by sediment traps such as, but not necessarily limited to, secured hay bales, sod, or stone which shall be maintained and modified as required by construction progress, and which shall be approved by the City Engineer before installation. In no case shall sediment or debris be allowed to enter a public right-of-way in such a manner as to create a traffic hazard, a public nuisance, or a threat to existing drainage ways.
5. **Sediment Trapping Measures:** Sediment basins and traps, perimeter berms, filter fences, berms, sediment barriers, vegetative buffers and other measures intended to trap silt or prevent the transport of silt onto adjacent properties, or into storm sewer systems or existing water bodies, shall be installed, constructed, or, in the case of vegetative buffers, protected from disturbance, as a first step in the land alteration process. Such systems shall be fully operative and inspected by the City Engineer before any other disturbance of the site begins. Earthen structures, including but not limited to berms, earth filters, dams, or dikes, shall be stabilized and protected from drainage damage or erosion within one (1) week or installation.
6. **Sedimentation Basins:** Areas of three (3) acres or more shall be required to have temporary sedimentation basins as a positive remedy against downstream siltation, which shall be shown and detailed on construction plans. During development, permanent retention areas may be used in place of sedimentation basins provided they are maintained to the satisfaction of the City Engineer. The contractor shall prohibit the discharge of silt through the outfall structure during construction of any retention area and shall clean out the retention area before installing any permanent subdrain pipe. In addition, permanent retention areas shall be totally cleaned out and operating properly at the time of final inspection and at the end of any applicable warranty period. When temporary sedimentation basins are used, they shall be capable at all times of containing at least one cubic foot (1 c.f.) of sediment for each one hundred square feet (100 s.f.) of area tributary to the basin. Such capacity shall be maintained throughout construction by regular removal of sediment from the basin.

7. Working In or Crossing Waterways or Waterbodies: Land alteration and construction shall be minimized in all waterways and in a 25-foot-wide strip adjacent to the water, as measured from the top of the bank of the waterway. Construction equipment and motor vehicles shall be kept out of waterways and the 25-foot buffer area whenever possible. Barriers shall be used to prevent access by construction equipment and motor vehicles. Where in-channel work cannot be avoided, precautions shall be taken to stabilize the work area during land alteration, development, and construction to minimize erosion. If the channel or buffer area is disturbed during land alteration, it shall be stabilized within three (3) calendar days after the in-channel work is completed. Silt curtains or other filter/siltation reduction devices shall be installed on the downstream side of the in-channel activity to alleviate increased turbidity. Wherever stream crossings are required, properly-sized temporary culverts shall be provided and shall be removed when construction is completed. Upon completion of construction, the area of the crossing shall be restored to a condition equal to or better than that which existed prior to the construction activity.
8. Swales, Ditches and Channels: All disturbed or constructed swales, ditches, and channels leading from the site shall be sodded within three (3) days of excavation. All interior swales and detention areas shall be sodded prior to issuance of a Certificate of Occupancy.
9. Trench Excavation: The construction of all underground facilities shall be accomplished in an expeditious manner, with backfill and restoration lagging no more than four hundred feet (400 ft.) behind excavation and installation. Where appropriate, excavated material shall be cast onto the uphill side of any trench and shall not be cast into any channel, channel bank, or gutter.
10. Maintenance: All erosion control devices shall be checked regularly, and after each rainfall, and shall be cleaned or repaired as required.

Maintenance of all soil erosion and siltation control practices, whether temporary or permanent, shall be at all times the responsibility of the Owner. Failure to do so can cause rescinding of ESC Permit, and/or payment to the City for cleaning of downstream facilities and areas.
11. Standard Details: City of Sarasota Standard Figures ER-2 thru ER-8 are examples of accepted methods that may be used and/or required to control erosion and siltation.

Section E - Procedure for Inspection of Land Disturbing Activity.

1. **Prior Notification:** Construction projects that receive approval of an Erosion and Siltation Plan, shall notify the City Engineers Office five (5) working days before construction begins, regardless of the size or scope of the approved project. The Engineering Department individual responsible for the site review will then schedule a pre-construction meeting on-site to establish procedures to be followed. **FAILURE TO NOTIFY THE CITY ENGINEER'S OFFICE PRIOR TO CONSTRUCTION SHALL CONSTITUTE A VIOLATION OF THE APPROVED PLAN, AND SUBJECT THE APPLICANT TO REVOLCATION OF EROSION AND SEDIMENTATION PERMIT.**
2. **Pre-construction Meeting:**
 - a. A pre-construction meeting will be scheduled between the Engineering Department site reviewer and the Owner/Developer and or representative, and should include:
 - (1) Engineering Department Site Reviewer;
 - (2) Owner/Developer and/or Representative;
 - (3) Site Construction Supervisor/Responsible Construction Personnel
 - (4) Any Necessary Subcontractors/Builders
 - (5) A Certified Construction Reviewer (when required).
 - b. Items to be discussed during the pre-construction meeting shall include the following:
 - (1) The line of communications to be established for the transmittal of written and verbal information.
 - (2) Mandatory inspections will be discussed as to stage of construction, and frequency of inspection needed.
 - (3) Discussion of the sequence of construction and determination that any changes to the construction

sequence shall receive prior approval.

(4) Determine that limits of disturbance are clearly marked on site, and assure everyone is aware of limitations.

(5) Discussion of the approved plan and the procedure for potential field modification when needed.

2. Review Authority Responsibilities: All site inspections shall generate a written inspection report and/or notice of violation.

a. Initial Erosion and Sediment Control Construction Review: Unless waived by the Engineering Department site reviewer, the reviewer shall be notified after the perimeter controls have been installed, but before land clearing and grading begins, including clearing and grading for sediment and stormwater management traps or ponds. The site reviewer shall verify that correct installation of perimeter controls has been completed before authorization is given to proceed with the next item of the sequence of construction.

b. Required Sediment and Stormwater Construction Review: The Engineering Department site reviewer shall be notified prior to construction of stormwater management facilities as specified in this Manual, as well as previously determined stages of construction. Failure to notify the site reviewer prior to any specified stage of construction may necessitate that the structure or earthwork be constructed again in the presence of the site reviewer.

c. Routine Construction Review: The Engineering Department site reviewer will, in addition to the above designated inspections, ensure that every active construction site be inspected for compliance with the approved plan on a regular basis. The frequency of inspections will be determined by the size and scope of the project.

d. Authorization to Remove Sediment Controls: In certain instances it may be possible to remove sediment controls when a portion of a site has been completed and stabilized, but prior to a final site inspection. This action shall take place only after authorization of the Engineering Department site reviewer.

e. Final Construction Review: When all site grading and development, including stabilization has been completed, the Engineering Department site reviewer shall be notified for a final inspection. The entire site shall be reviewed for final conformance to the approved Stormwater Management Plan before final acceptance will be granted.

2. Project Review Procedures During Construction: All policies and procedures guiding review of active construction shall be consistent with this Manual.

a. Official Identification of Review Authority Personnel: The Engineering Department site reviewer will make his/her presence known to the appropriate individuals on the site before any inspection occurs. The site reviewer will have the appropriate identification and offer it as an introduction. If no appropriate individual can be found, the site reviewer will again attempt to contact the designated persons at the conclusion of the inspection.

b. Documentation of Site Review and Deficiencies: The Engineering Department site reviewer will complete a written report to be discussed with the contractor's representative or responsible person on site when that person is available. The written report shall be specific as to conformance with the approved plan, and/or a time frame to comply with items that need correction. The inspection report will be transmitted to the contractor's representative or responsible person and owner/developer or representative when appropriate. It shall be discussed that the plan deficiencies must be corrected in an appropriate time frame, or the site shall receive a violation notice. (NOTE: It is up to the discretion of the Engineering Department site reviewer to directly issue a Notice to Comply when the seriousness of the violation warrants.

2. Compliance Review Procedures:

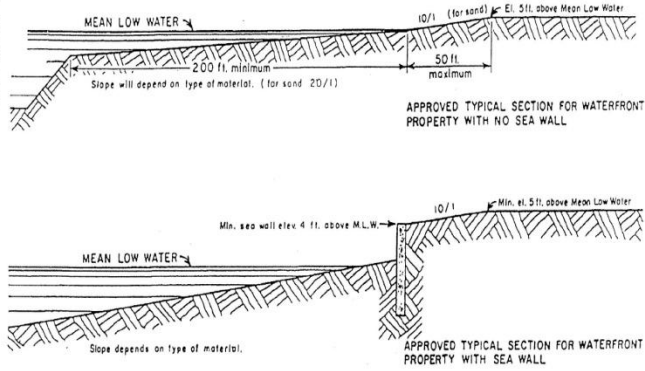
a. Previous Deficiencies Corrected: The site shall be re-inspected by the Engineering Department site reviewer, at the appropriate time, to determine if all necessary corrections have been completed. If all deficient items from the previous inspection have been corrected, it shall be noted on the site inspection form, along with any new items to be corrected.

b. Previous Deficiencies Not Corrected: If previous site conditions have not been corrected, appropriate enforcement action shall be initiated.

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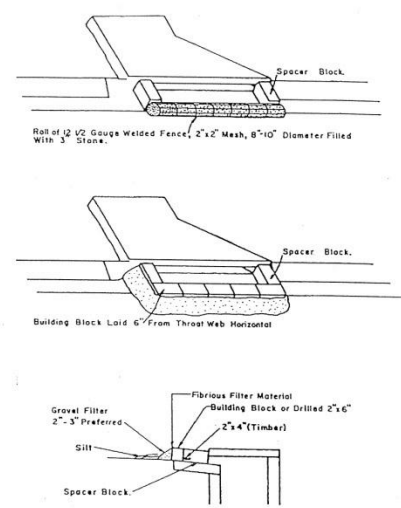
2-7

SEA WALL
N.T.S.
FIG. ER-1



CONSTRUCTION OF GROINS, BULKHEADS, SEAWALLS MUST BE IN ACCORDANCE WITH PLANS DRAWN UP BY A LICENSED PROFESSIONAL ENGINEER THOROUGHLY FAMILIAR WITH THIS TYPE OF CONSTRUCTION OR A TYPE WHICH HAS BEEN TIME TESTED AND PROVED SATISFACTORY IN THIS AREA.

THE ABSOLUTE MINIMUM ELEVATION OF TOP OF CATCH BASIN INLET SHALL BE 4 FEET ABOVE MEAN LOW WATER. MINIMUM LAND ELEVATIONS ARE CONTROLLED BY NECESSARY STORM OR SANITARY SEWERS AND STREET GRADES, ALL OF WHICH MUST BE APPROVED BY THE CITY ENGINEER.



Fibrous Filter Material in Front of Block Prevents Gravel From Washing into Structure.

2"x4" Behind Blocks And Across Throat Helps Keep Block in Place. Place in Outer Hole of Spacer Block.

TEMPORARY SEDIMENT TRAP
AT CURB INLET

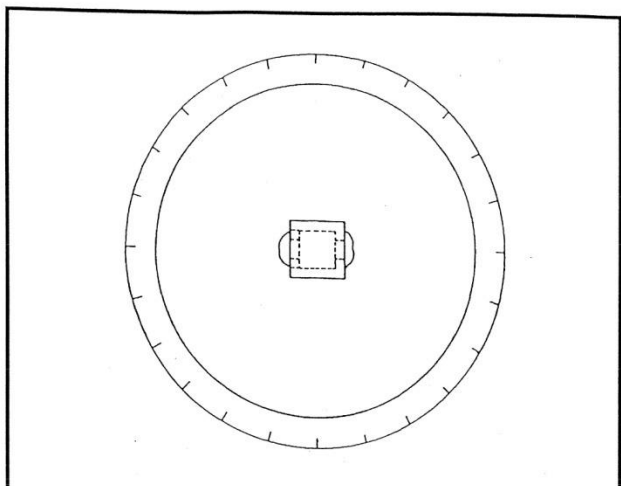
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2-12

FIG. ER-6



TEMPORARY SEDIMENT TRAP
AT STORM DRAIN INLET

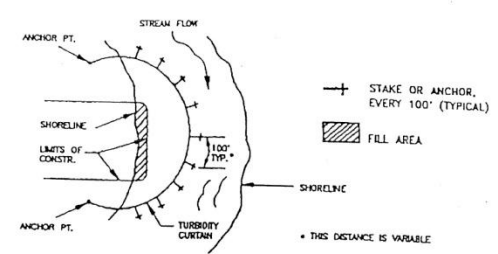
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CITY OF SARASOTA

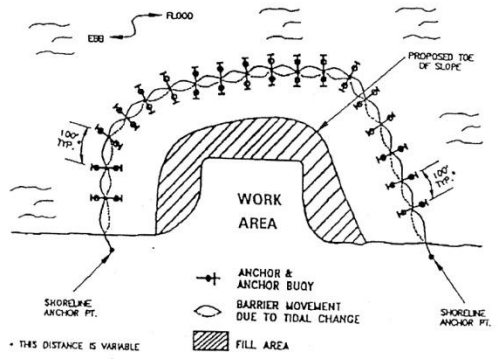
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2-13

FIG. ER-7



Typical Layouts
Streams, Ponds, and Lakes (Protected and Non-Tidal)



TURBIDITY BARRIERS

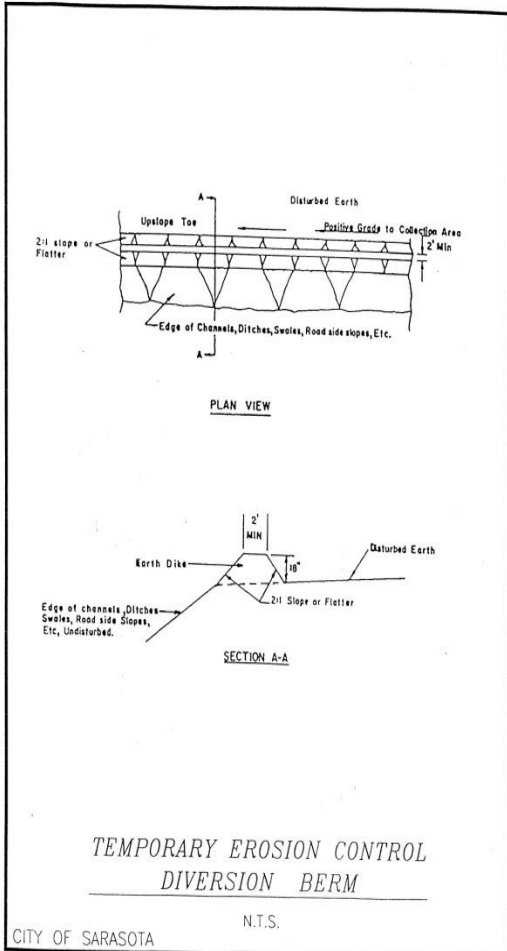
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2-14

FIG. ER-8

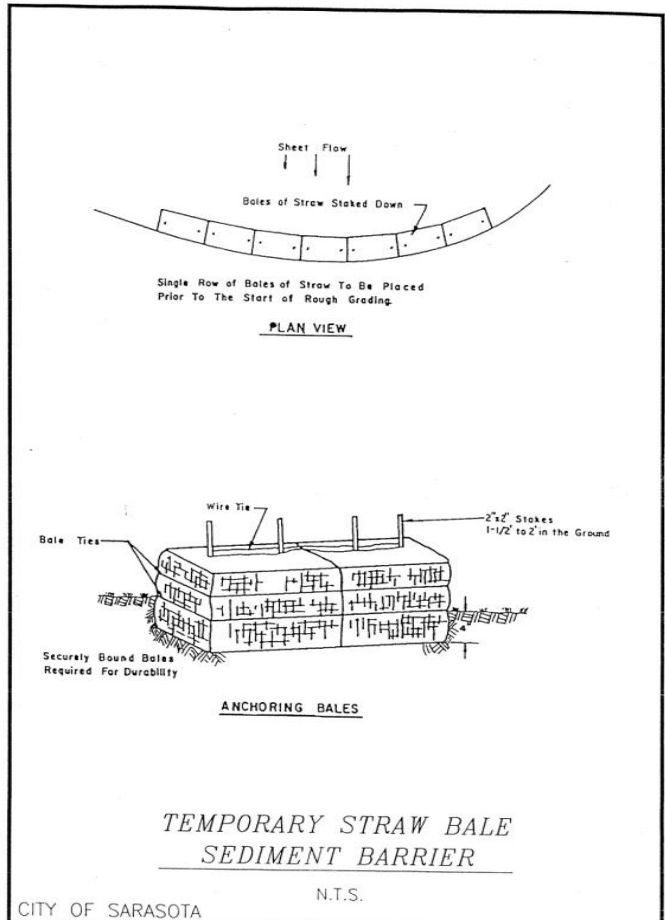


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2-9

FIG. ER-3

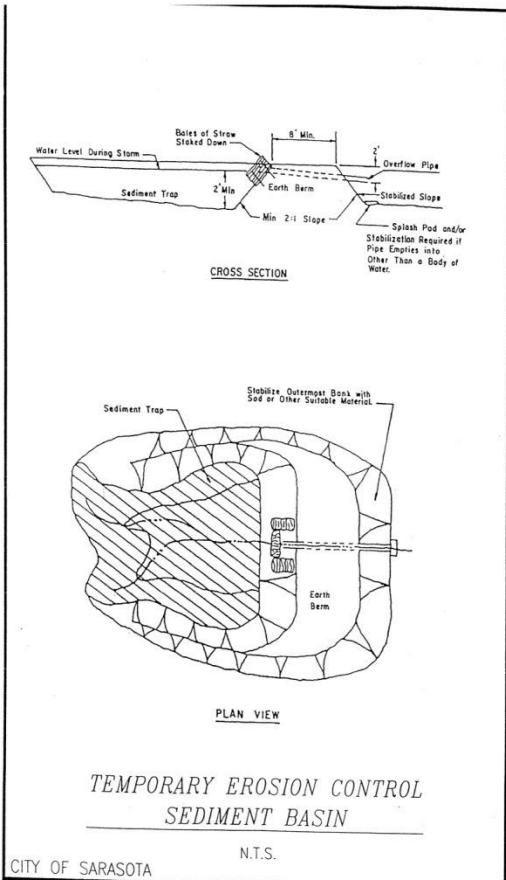


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2-11

FIG. ER-5

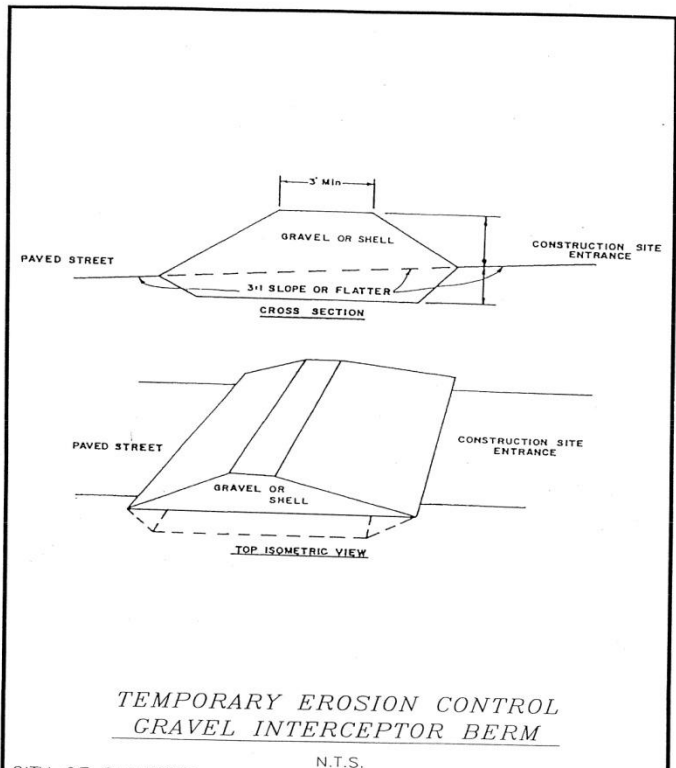


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2-10

FIG. ER-4



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MARCH 2002

2-8

FIG. ER-2

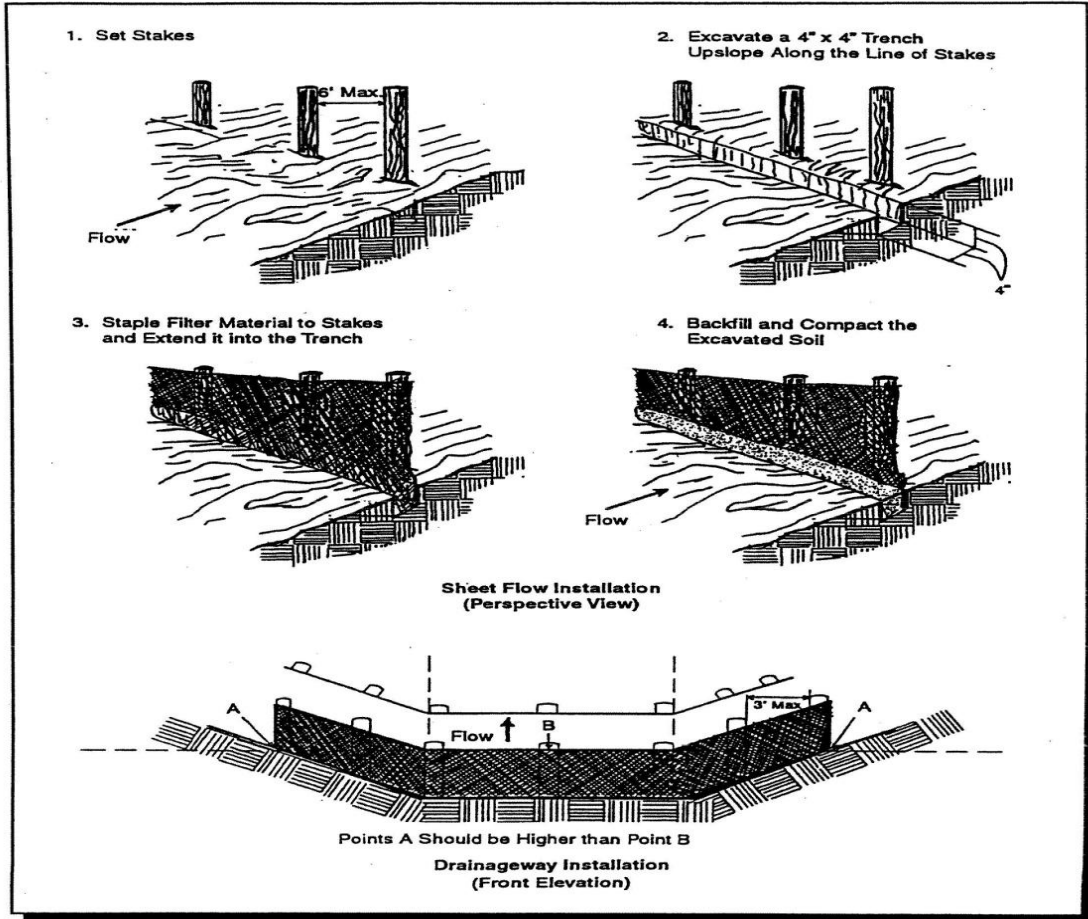


Plate 4.06b Construction of a Filter Barrier
Source: NRCS