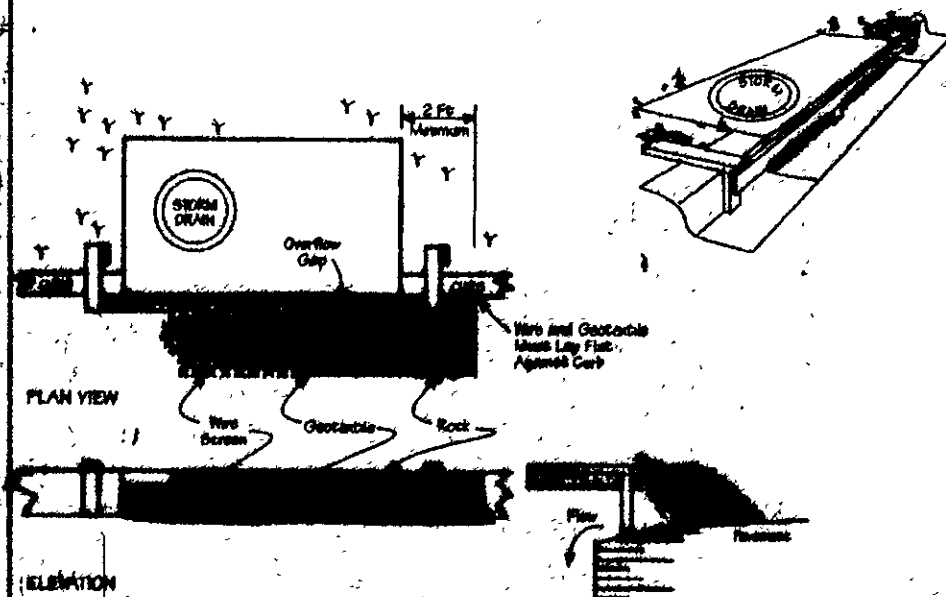
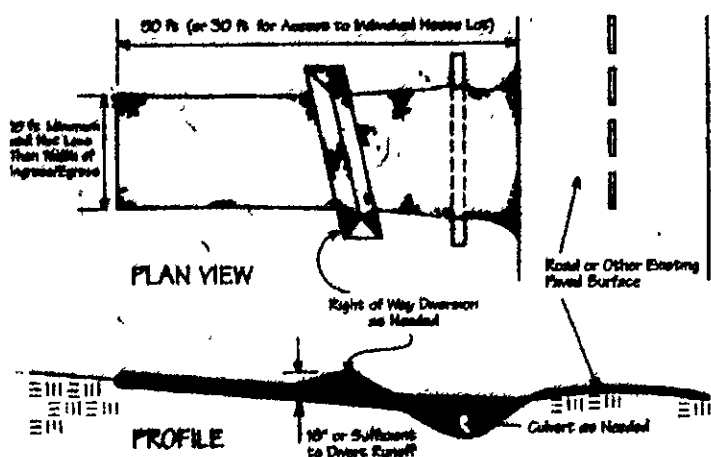


Curb Inlet Protection



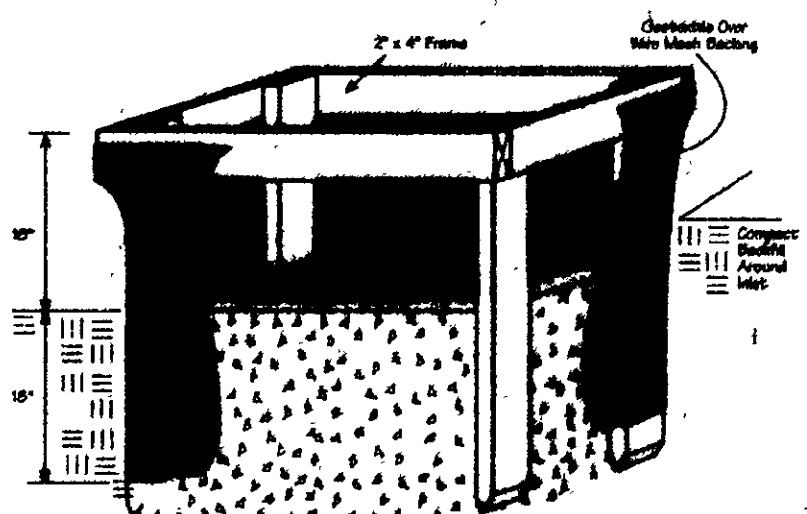
1. Inlet protection shall be constructed either inside upstream head-dissipation bays or behind the storm drain business operational.
2. The channel form (b) to be constructed of 2-by-4-in corrugated-steel barrier. The side spacers shall be a minimum of 1 ft apart and both ends of the throat opening. The structure shall be nailed to 2-by-4-in timber driven on the opposite side of the curb.
3. The wave mouth shall be of sufficient strength to support debris and stone. It shall be a continuous piece with a minimum width of 30 in and 4 ft longer than the throat length of the pipe, 2 ft on each side.
4. Geotextile depth shall be on equivalent opening size (100%) of 20-60 mesh and be resistant to tearing. It shall be at least the same size as the wave mouth.
5. The wave mouth and geotextile cloth shall be formed to the concrete gutter and against the face of the curb on both ends of the curb and securely fastened to the 2-by-4-in frame.
6. Two-inch stone shall be placed over the wave mouth and geotextile on each a corner to prevent wind from blowing the sheet under or around the geotextile cloth.

Construction Entrance



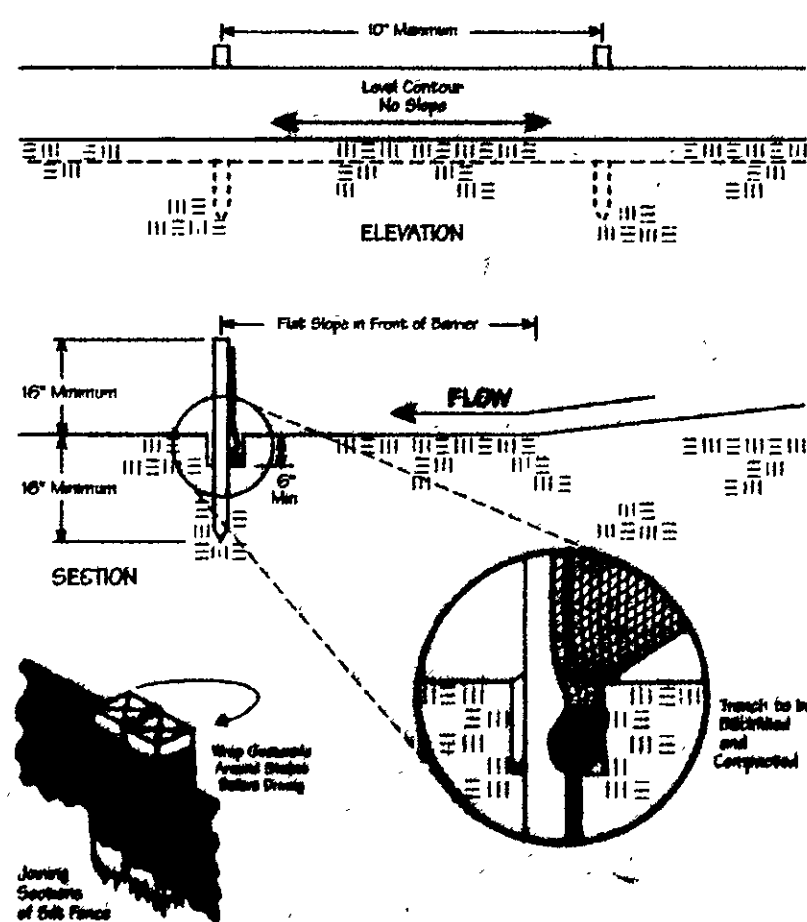
- 1 Stone Bed--Two-in stone shall be used, or recycled concrete equivalent
- 2 Length--The construction entrance shall be as long as required to stabilize high traffic areas but not less than 80 ft (except on tight roadways but where a 30-ft minimum length applies)
- 3 Thickness--The stone layer shall be at least 6 in. thick
- 4 Width--The entrance shall be at least 10 ft wide, but not less than the full width at points where grades or grades occur
- 5 Grading--A geotextile mat shall be placed over the stone prior to placing stone. It shall have a Break Tensile Strength of at least 200 lb and a Mullen Burst Strength of at least 100 lb
- 6 Culvert--A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being drained out onto surface
- 7 Water Bar--A water bar shall be constructed in part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces
- 8 Maintenance--Top dressing of additional stone shall be applied as additional damage from trucks, equipment, or needed curb patching results, or any surface runoff is not caused by surface damage, shall be removed immediately. Removal shall be accomplished by sweeping or blasting
- 9 Signage--Construction entrance shall not be relied upon to reduce road time exposure and shall have the construction site and its entrance from readily seen

Inlet Protection in Swales, Ditch Lines or Yard Inlets



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational
2. The earth around the inlet shall be constructed completely to a depth of at least 18 in
3. The wooden frame shall be constructed of 2-by-4-in construction-grade lumber. The 2-by-4-in posts shall be driven 1 ft into the ground at four corners of the inlet and the top portion of 2-by-4-in boards connected using an overlap joint within the top of the frame shall be at least 6 in below adjacent roads if parallel water would pose a safety hazard to traffic
4. Wire mesh shall be of sufficient strength to support fabric with water fully suspended against it. It shall be fastened tightly around the frame and fastened securely to the frame
5. Geotextile shall have an equivalent opening size of 30-40 days and be resistant to sunlight. It shall be stretched tightly against the frame and fastened securely. It shall extend from the top of the frame to 18 in below the inlet within elevation. The geotextile shall overlap across one side of the inlet to the side of the ditch are not fastened to the same post
6. Rockfill shall be placed around the inlet in compacted 8-in layers until the earth is even with inlet elevation on grade and top elevation on sides
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a existing pond. The top of earth structure shall be at least 8 in higher than the top of the frame

Specifications for Silt Fence



Specifications for Permanent Seeding

DATA PRESENTATION

- 1 A subsealer, plow or other implement shall be used to reduce and disrupt and allow maximum aeration. (Non-aerating implements will help control both runoff loss and water quality.) Subsealing should be done when the soil is moist enough to allow till and to crack or fracture. Subsealing shall not be done on steep-slopes where soil and vegetation should be allowed to start to regenerate vegetation.
 - 2 The area shall be graded as needed to permit the use of conventional equipment for standard preparation and seeding.
 - 3 Seed shall be applied where needed to establish vegetation.
 - 4 Where feasible, sealer when a cuttopping type sealer is used, the seedbed should be tilled following seeding operations with a cuttopping, roller, or light drag. On shaping land, seeding operations should be on the contour where feasible.
- SEEDING**
- 1 Mulch material shall be applied immediately after finishing. Seeding must be done during optimum seeding times and with favorable soil conditions and on very flat areas may not have time to cover seedbed. Barren seeding shall be restricted.

SECRETED FROM 1980

- 1 Larvae - Agricultural ground treatments shall be applied to soil and as recommended by a soil test in the of a soil test, larvae shall be applied at 100 lbs of 1,000 to 17,000 sq ft or 2 inches
- 2 Pupae - Pupae shall be applied as recommended by a soil test in the of a soil test, pupae shall be applied at a rate of 12 to 17,000 sq ft or 100 lbs /ac of 10-10-10 or 12-12-12 mixture
- 3 The tree and forage shall be worked into the soil and spread evenly over the forage, or when conditions limit treatment to a depth of 3 in. Or allowing the soil shall be worked on the surface
- 4 Other - Other acceptable methods include: match mixings applied

STORAGE, DATING AND RUN CONDITIONS

Seeding should be done March 1 to May 31 or Aug 1 to September 30. These seeding dates are ideal but, with the use of additional plow and irrigation, seedings may be made any time throughout the growing season. Tillage/seeded preparation should be done when the soil is dry enough to crumble and not form ridges when compressed by hard foot wear treading, and the following season on dormant seedbeds.

CONTACT INFORMATION:

- 1 Seedlings shall not be planted from October 1 through November 20. During this period the seeds are likely to germinate but probably will not be able to survive the winter.
- 2 The following methods may be used for "Dormant Seeding":
 - From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
 - From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.

Introduction

- 1 Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or on adverse site conditions as needed for adequate moisture for seed germination and plant growth.
- 2 Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.

COLUMBIAN BEANS			
Seed No.	Sowing Date		Notes
	5/10	5/11/1938	
Shaded Area			
Emerging Seed Plants	20-25	15-1	
Emerging Seedlings	10-20	15-15	
Emerging Seedlings	10-20	15-15	
Full Plants	40	1	
Plant Height	40	1	
Open Field & Cut Field			
Full Plants	40	1	
Green Vetch	10	15	
Full Plants	20	15	Do not seed later than August
Full Plants	20	15	
Full Plants	20	15	Do not seed later than August
Field Studies and Studies			
Full Plants	40	1	
Plant Height	40	25	
Emerging Seedlings	5		
Light			
Emerging Seedlings	40	15	
Emerging Seedlings	40	15	
Emerging Seedlings	40	15	
Emerging Seedlings	40	15	For shaded area

EROSION CONTROL DETAILS

Foresight Engineering Group
Engineers & Surveyors
 440 286-1010
 440 286-1034 fax
 320 Center Street, Unit F.
 Chardon, Ohio 44024

SCALE : NONE

Page: 2/2

Small Lot Building Sites

- 1 Processing vegetation shall be retained on site pursuant to the building lot for as long as convenient operations allow. Stacking shall be done so only above working areas are bare.
- 2 Temporary seed (typical spp. date, etc.) or mulch shall be applied to areas, such as excavations, that are bare and not being being worked. This shall apply to areas that will not be reseeded for 14 days or more.
- 3 Debris and excavated from backfills shall be removed away from ditches, canals, or other waterways and shall be loaded and/or mulched.
- 4 Sed. flows shall control street flow runoff from the building lot. It shall not be constructed on streets or areas of concentrated flow. Other sediment controls such as silt protection and sediment traps shall also be used as needed to control sediment runoff.
- 5 Construction vehicle access shall be limited to one route, to the greatest extent practical. The access shall be gravel or crushed rock applied to the roadway side.
- 6 Mud tracked onto the street or elsewhere settled around curb and sidewalk shall be removed daily or as needed to prevent it from accumulating. It shall be removed by shoveling and sweeping and shall NOT be washed off paved surfaces or into storm drains.

Specifications for Temporary Seeding

Monthly Reading Service Schedule			
Reading Dates	Species	Lb 1,000 ft. ²	Per Acre
March 1 to August 15	Gale	3	4 bushels
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
August 15 to November 1	Rye	3	2 bushels
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Wheat	3	2 bushels
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
November 1 to Spring Reading			

Use seed only, unless proven or directed by label.

Note: Other approved seed species may be substituted.

- 1 Structural seeder- and endower-control pattern seeds or granules and seed/soil contact shall be matched and combined with temporary seeding prior to grading the rest of the construction site
 - 2 Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 60 days or more. These soil areas should be treated as soon as possible after grading or shall be seeded within 7 days. Several applications of temporary seeding are necessary on typical construction projects
 - 3 The seedbed should be prepared and tamed to ensure the success of establishing vegetation. However, temporary seeding shall not be justified if final seeded preparation is not possible
 - 4 Soil Amendments--Applications of temporary vegetation shall ensure adequate amounts of vegetation which may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer
 - 5 Seeding Method--Seed shall be applied uniformly with a cyclone seeder, shot, endower seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done uniformly and without interruption
- Minimum Temporary Seeding**
- 1 Applications of temporary seeding shall include match areas that are applied during or immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need match to achieve adequate establishment
 - 2 Materials
 - Straw--If straw is used, it shall be unweeded small-grain straw applied at the rate of 1 ton/acre of 60 to 110,000 sq ft. Two to three inches. The match area shall be spread uniformly by hand or mechanically as the last surface is covered. For uniform distribution of hand-spread match, divide total area approximately 1,500-sq-ft sections and spread two 45-lb bales of straw in each section
 - Hydroseeder--If used estimate that it would be used at 2,000 lb/acre or 60 lb/1,000 sq ft
 - Other--Other acceptable matches include match matting applied according to manufacturer's recommendations or seed cloth, applied at 1 ton/acre
 - 3 Straw match shall be anchored immediately to prevent loss by wind or water. Anchoring Methods
 - Mechanical--A disk, compactor, or similar type seed shall be set straight to punch or anchor the match material into the soil. Straw mechanically anchored shall not be freely chopped but, generally, be left longer than 6 in
 - Mesh Netting--Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold match in place in areas of construction runoff and on steep slopes
 - Asphalt Binding--Asphalt shall be applied as recommended by the manufacturer or at the rate of 100 gal/acre
 - Synthetic Binders--Synthetic binders such as Acrylic BIA (Agi-Tect, DCA-70, Petro-Tect, Terra Tect) or equal may be used at rates recommended by the manufacturer
 - Wood-Chaffless Fiber--Wood-chaffless fiber binder shall be applied at a net dry weight of 750 lb/acre. The wood-chaffless fiber shall be mixed with water and the mixture shall contain a minimum of 50 lb/100 gal