

#### MODIFIED SCHEDULE C LANDSCAPE CHART INTERNAL TOTAL TREES SHADE REMAINING TYPE B REQUIRED LANDSCAPING REQUIRED TREE | SHADE TREE | LOT NO. **CLASSIFICATION** REQUIRED CREDIT \* OBLIGATION (#OF SHADE TREES) | SHADE EVERGREEN SHADE EVERGREEN N/A N/A 5 TREES PER LOT NON-WOODED 25 TOTAL TREES

\* THIS NUMBER REFLECTS THE MATHEMATICAL CONVERSION OF EVERGREEN TREES TO SHADE TREES (2:1) FOR

THE PURPOSE OF MEETING THE INTERNAL PER LOT SHADE TREE OBLIGATION.

SURETY AMOUNT FOR THIS PLAN IS IN THE AMOUNT OF \$7,500.00

1. SURETY FOR LOTS 44-48 \$1,500.00 PER LOT. FIGURED ON A PER LOT BASIS. CREDIT GIVEN FOR LANDSCAPE BUFFER WERE APPLICABLE... STREET TREES ARE NOT INCLUDED IN MODIFIED SCHEDULE C LANDSCAPE CALCULATIONS. 2. TYPE 'B' BUFFER OR PERIMETER LANDSCAPE BUFFER WILL BE CREDITED TOWARDS THE

LANDSCAPE, REQUIREMENTS. 3. LANDSCAPE CAN NOT BE PLANTED IN ANY PUBLIC EASEMENTS.

4. FINAL PLANTING TYPE AND LOCATION IS SUBJECT TO APPROVAL BY THE ARCHITECTUAL REVIEW COMMITTEE.

5. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTING HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH HOWARD COUNTY LANDSCPAE MANUAL.

6. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS FENCES AND WALLS, ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE

REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED. 7. SIZES OF PLANT MATERIALS MUST CONFORM TO THE REQUIREMENTS OF THE LANDSCAPE

MANUAL, CHAPTER IV AND APPENDIX C.

### KEY PROPERTY DEVELOPMENT CRITERIA, APPROVED 7/1/99 SECTION VII RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

THE QUANTITY AND GENERAL LOCATION OF TREES REQUIRED FOR INTERNAL LANDSCAPING ARE DETERMINED BY CRITERIA APPLIED BY THE ARCHITECTURAL COMMITTEE. THE COMMITTEE WILL CLASSIFY, DURING ARCHITECTURAL REVIEW, ALL LOTS AND PARCELS AS 1) NON-WOODED; 2/SEMI-WOODED; 3) WOODED SUCH CLASSIFICATION SHALL TAKE INTO ACCOUNT THE EXISTING TREE COVER AND THE POTENTIAL FOR SAVING TREES IN CONNECTION WITH GRADING AND SITING. THIS CRITERIA ALSO CONSIDER THE SIZE OF THE LOT, AMOUNT OF EXISTING VEGETATION AND THE TYPE AND SITING OF RESIDENTIAL UNITS, IF, DURING OR AFTER CONSTRUCTION. THE COMMITEE DETERMINES THAT A BUILDER HAS VIOLATED ANY PROVISION OF TREE PRESERVATION, THE BUILDER WILL BE REQUIRED TO ADD NEW

PLANT MATERIAL. SHADE TREE REQUIREMENTS ARE SPECIFIED BY THE FOLLOWING TABLE. DENSITIES REFER TO THE DENSITY OF THE INDIVIDUAL PARCEL.

### SHADE TREE REQUIREMENTS

TYPE OF UNIT AND LOT SIZE MEDIUM RESIDENTIAL LOT (7,000-13,000 SQUARE FEET)

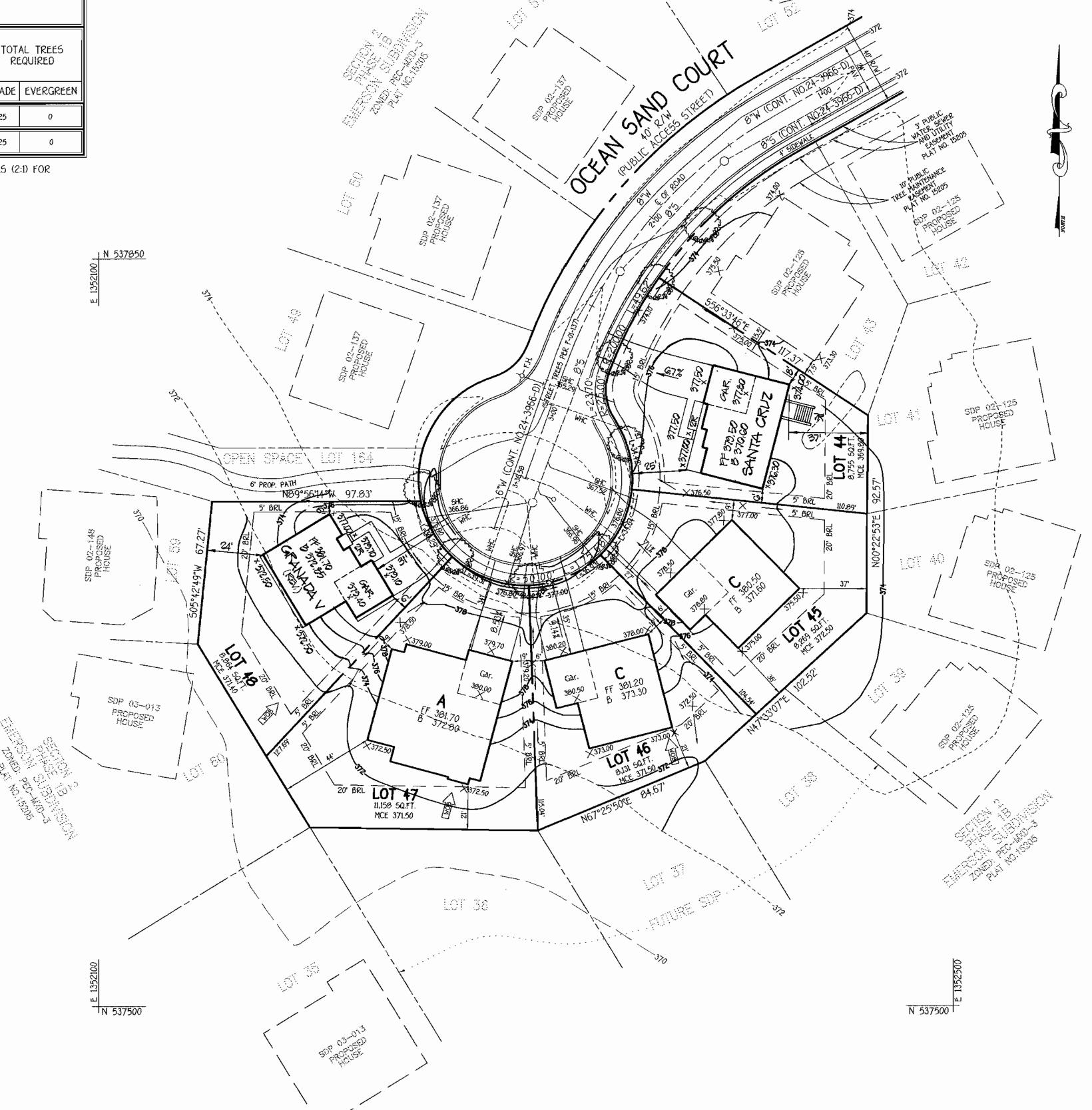
MINMUM NUMBER OF SHADE TREES REQUIRED 3.0/LOT

SUBSTITUTION OF TWO FLOWERING TREES OR TWO EVERGREEN TREES FOR EACH SHADE TREE MAY BE PERMITTEDFOR UP TO 50% OF THE REQUIRED NUMBER OF SHADE TREES SHOWN IN THE TABLE SUBJECT TO THE

2-4 D.U./ACRE APPROVAL OF THE ARCHITECTURAL COMMITTEE. CREDIT MAY ALSO BE GIVEN FOR ANY AREAS REQUIRED TO BE PROVIDED ALONG ROADWAYS, SUBJECT TO THE APPROVAL OF THE ARCHITECTURAL COMMITTEE.

## BUILDER/DEVELOPER'S/ CERTIFICATE

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO



## PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines" for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to quarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on

drawings and specifications Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except

where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope).

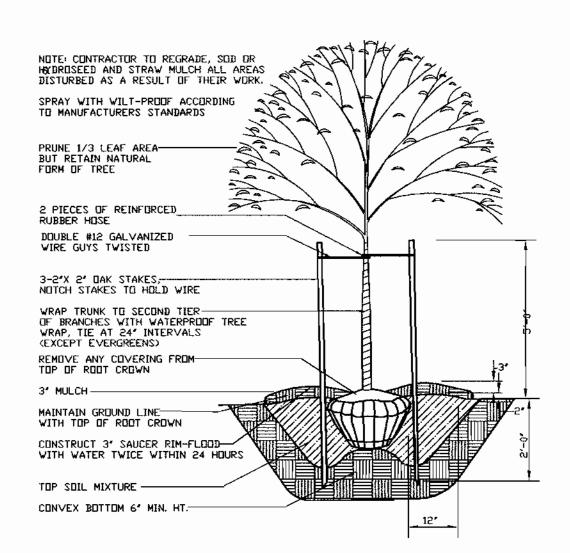
the plant list, the quantities on the plan take precedence

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

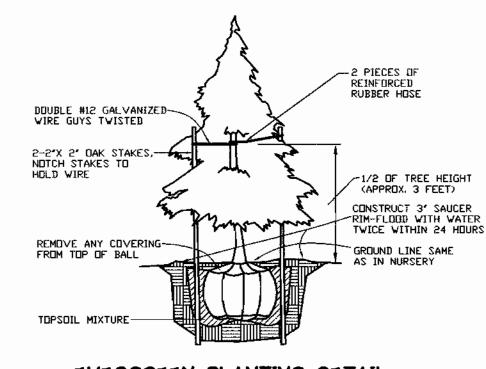
All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

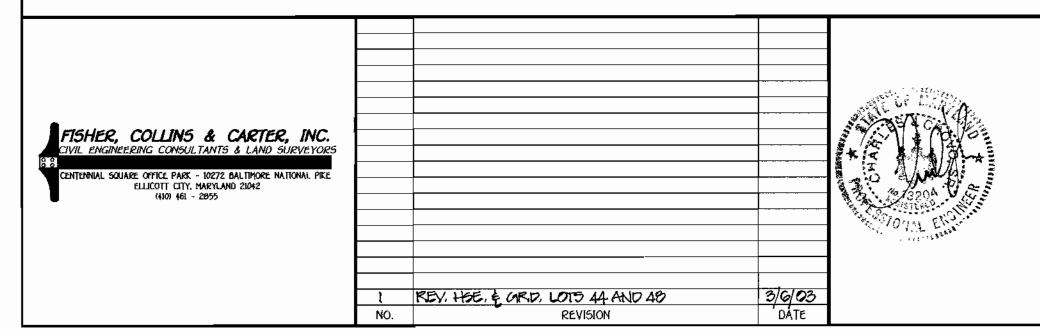


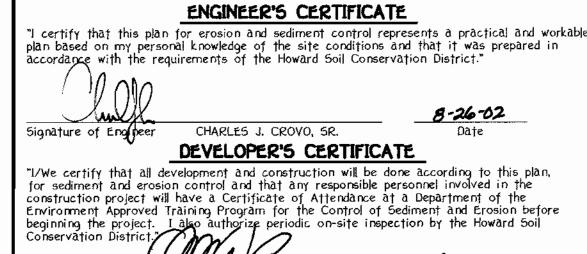
TREE PLANTING DETAIL

NOT TO SCALE

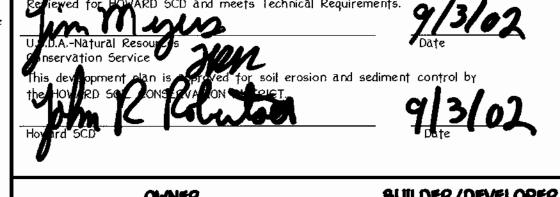


EVERGREEN PLANTING DETAIL NOT TO SCALE





Signature of Developer



OWNER	BUILDER/DEVELOP
THE HOWARD RESEARCH & DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 410-992-6000	ALLAN HOMES 10260 OLD COLUMBIA PIK RIVERS CORPORATE PAR COLUMBIA, MARYLAND 210
	410-361-1414

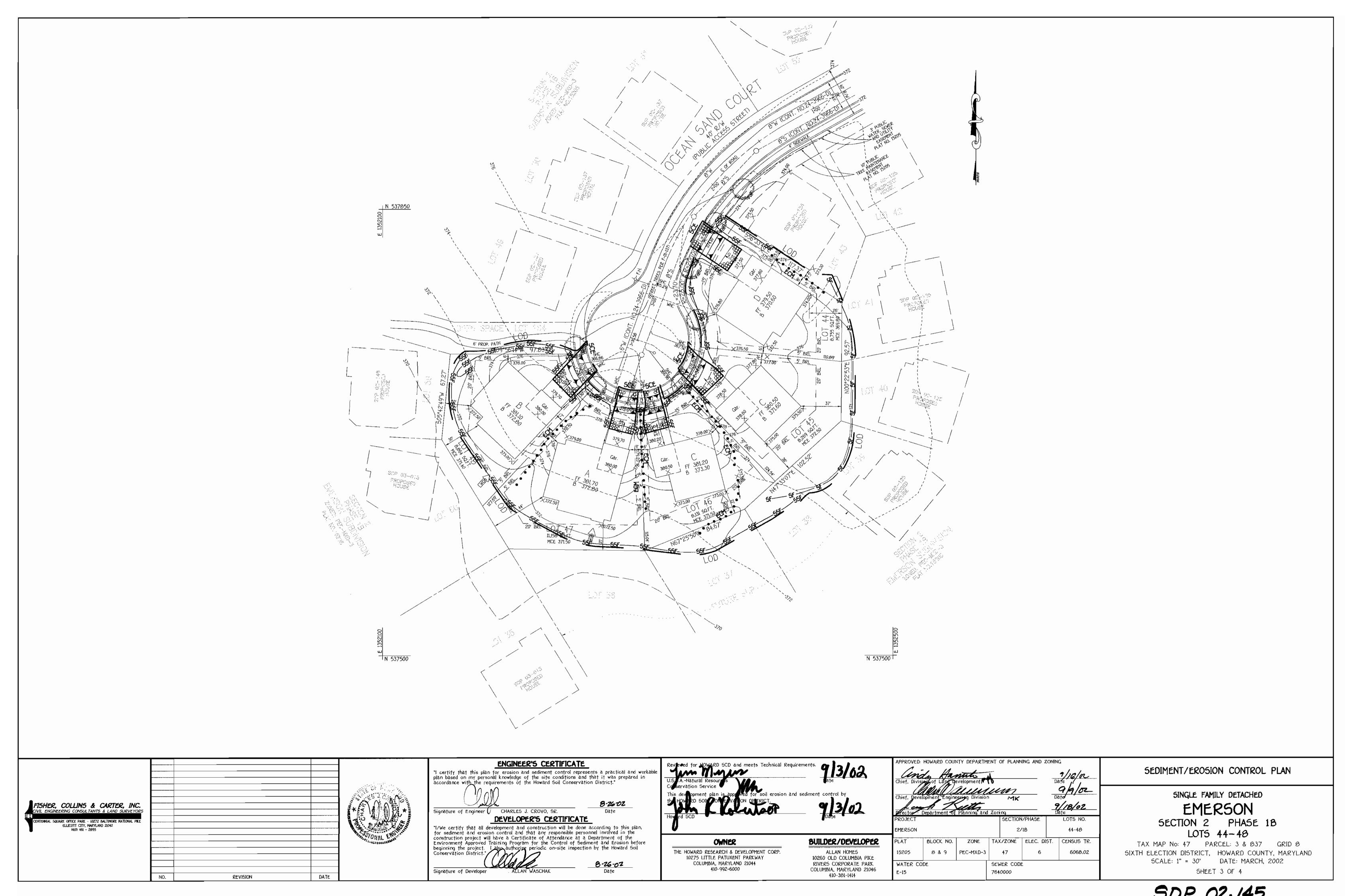
	APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING								
Chief, Division of Land Development MI Date  Chief, Development Engineering Division MK Date  9/18/02								$\vdash$	
	PROJECT	pepal Intentivol	2017		N/PHASE LOTS NO.			1	
	EMERSON				2/18			44-48	
	PLAT	BLOCK NO.	ZONE	TA)	(/ZONE	ELEC. DI	5T.	CENSUS TR.	1
	15205	889	PEC-MXD-3		47	6		6068.02	
				SEWER CODE				1	
				764	7640000				

SITE DEVELOPMENT PLAN, LANDSCAPE NOTES & DETAILS

SINGLE FAMILY DETACHED **EMERSON** SECTION 2 PHASE 1B

LOTS 44-48 TAX MAP No: 47 PARCEL: 3 & 837 GRID 8 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND 5CALE: 1" = 30' DATE: MARCH, 2002

SHEET 2 OF 4



# 20.0 STANDARDS AND SPECIFICATIONS VEGETATIVE STABILIZATION

DEFINITION Using vegetation as cover for barren soil to protect it from forces that cause erosion

PURPOSE Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources. CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration Odup to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Install crosion and sediment control structures (either temporary of permanent) such as diversions. grade stabilization structures, berms, waterways, or sediment control basins. ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

  iii. Schedule required soil tests to determine soil amendment composition and application rates for sites
- having disturbed area over 5 acres.

  B. Soil Amendments (Fertilizer and Lime Specifications) Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering
- purposes may also be used for chemical analyses. ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee
- iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a \*100 mesh sieve and 90-100% will pass through a \*20 mesh sieve.
  Incorporate lime and tertilizer into the top 3-5" of soil by disking or other suitable means.
- Seedbed Preparation
  i. Temporary Seeding
  a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of a seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of
  - suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges
- running parallel to the contour of the slope.

  Apply fertilizer and lime as prescribed on the plans. c. In corporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means.

  ii. Permanent Seeding
- nament beeging
  Minimum soil conditions required for permanent vegetative establishment:
  1. Soil pH shall be between 6.0 and 7.0. Soluble salts shall be less than 500 parts per million (ppm). The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a
- moderate amount of moisture. An exception is if lovegrass of serecia lespedezas is to be planted, then a sandy soil (30% silt plus clay) would be acceptable. Soit shall contain 1.5% minimum organic matter by weight.
- Soil must contain sufficient pore space to permit adequate root penetration If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
- b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from
- sliding down a slope.

  Apply soil amendments as per soil test or as included on the plans.

  Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches. seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and triable. Seedbed loosening may not be necessary on newly disturbed areas.
- Seed Specifications All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
- Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

  ii. Inoculant The inoculant for treating legume seed in the seed mixtures shall be a pure culture of mitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective
- Methods of Seeding
  i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacter seeder. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium); 200 lbs/ac.

  Lime - use only ground agricultural timestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one
- time. Do not use burnt or hydrated lime when hydroseeding. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and
- without interruption.

  Seeding: This includes use of conventional drop or broadcast spreaders.

  Seed spread dry shall be incorporated into the subsoit at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

  a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- Mulch Specifications (In order of preference) Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- ii. Wood Cellulose Fiber Mulch (WCFM)

  a. WCFM shall consist of specially prepared wood cellulose processed into a uniform
- WCFM shall be died green or contain a green die in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry. WCFM, including die, shall contain no germination or growth inhibiting factors. WCFM materials shall be manufactured and processed in such a manner that the
- wood cellulose fiber mulch will remain in uniform suspension in water under acitatio and will blend with seed, fertilizer and other additives to form a homogeneous sturry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.
- \*\*III DE PATROI-TONG.

  f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 9.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

  Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

### SEQUENCE OF CONSTRUCTION

	<u> </u>	_
1.	OBTAIN GRADING PERMIT	7 DAYS
2.	INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN	7 DAYS
3.	CLEAR AND GRUB TO LIMITS OF DISTURBANCE	# DAYS
4.	INSTALL TEMPORARY SEEDING	2 DAYS
5.	CONSTRUCT BUILDINGS	60 DAYS
6.	FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE	14 DAYS
7.	REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED	
	AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.	7 DAYS

- G. Mulching Seeded Areas Mulch shall be applied to all seeded areas immediately after seeding.
   i. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
- accordance with these specifications.

  ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform toose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
- iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

  Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by
- preference), depending upon size of area and erosion hazard:
- A mulch archoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. It used on sloping land, this practice should be used on the contour if possible.

  Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons
- of water.

  iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
- iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long. Incremental Stabilization - Cut Slopes
- All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15' ii. Construction sequence (Refer to Figure 3 below):
- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
   b. Perform Phase 1 excavation, dress, and stabilize.
- Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as
- necessary. Perform final phase excavation, dress and stabilize. Overseed previously seeded Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.
- Incremental Stabilization of Embarkments Fill Slopes Embankments shall be constructed in lifts as prescribed on the plans.
- ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches

  15°, or when the grading operation ceases as prescribed in the plans.

  iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embarkment to intercept surface runoff and convey it down the slope in a non-crosive manner. a sediment trapping device. Construction sequence: Refer to Figure 4 (below).

PERMANENT SEEDING NOTES

ILL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

OR OTHER ACCEPTABLE MEANS BEFORE SEEDING

<u>SEEDBED PREPARATION:</u>
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING

SOIL AMENDMENTS:

APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 L85/

1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC. INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING

APPLY 400 LBS. PER ACRE 38-0-0 UREAFORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./ 1,000 SQ.FT.) OF 10-20-20 FERTILIZER.

1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE (1.4 LBS./LOOD SQ.FT.) KENTUCKY 31 TALL FESCUE AND

LOVEGRASS, DURING THE PERIOD OF OCTOBER IS THROUGH FEBRUARY 20. PROJECT SITE BY: OPTION (1) - TWO TONS PER

ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON A POSSIBLE IN THE SPRING OPTION (2) - USE 500; OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH

OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING

\* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNYETCH AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED

APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST

8. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WEI

APPLY 1 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.)

15 THROUGH NOVEMBER 15, SEED WITH 17 BUSHEL PER ACRE OF

ANNUAL RYE (3.2 LBS./ACRE OF WEEPING LOVEGRASS (07 LBS.

anchored straw mulch and seed as soon as possible in the

OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.

ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GALLO00 5Q.FT.)

DE EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES & FEET OR

REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR

SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT

HIGHER, USE 340 GALLONS PER ACRE (B GAL/1,000 SQFT.) FOR

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR

OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY

WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

THE SEEDING REQUIRMENT. OPTIMUM SEEDING DATE FOR THIS

TH TWO TONS/ACRE WELL ANCHORED STRAW, ALL SLOPES SHOULD

SEEDING:
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST

MULCHING:
APPLY 1 TO 2 TONS PER ACRE (ID TO 90 LBS./1,000 SQFT)

GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS,

REPLACEMENTS AND RESEEDINGS.

ASPHALT ON FLAT ACRES. ON SLOPES & FEET OR HIGHER US

BE HYDROSEEDED.

SEEDBED PREPARATION:

1,000 SQ.FT.)

SPIRING, OR USE 500.

508. AMENDMENTS:

iv. Construction sequence: Refer to Figure 4 (below).
a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope sill fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
b. Place Phase 1 embankment, dress and stabilize.
c. Place Phase 2 embankment, dress and stabilize.
d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.
Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of and placement of topsoil (if required) grading and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

\*\* GEOTEXTILE CLASS 'C'

OR BETTER

L-EXISTING GROUND

## SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1255).

  2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN
- CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

  3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

  5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT
- 7) SITE ANALYSIS: 1.0371 ACRES AREA DISTURBED AREA TO BE ROOFED OR PAVED 1.1950 ACRES 0.341 ACRES AREA TO BE VEGETATIVELY STABILIZED 0.854 ACRES 8,462 CU.YDS OFFSITE WASTE/BORROW AREA LOCATION EMERSON SECT. 2, PH. 18
- 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

  ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED
- NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES. APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 19) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10

TRANSTRATION V

**SURFACE** 

CHAIN LINK FENCING

EMBED FILTER CLOTH 8"

MINIMUM INTO GROUND

\* IF MULTIPLE LAYERS ARE

REQUIRED TO ATTAIN 42"

by 6" and folded.

Geotextile Class F

FILTER CLOTH

FLOW ----

7/8/1/8

21/2" DIAMETER

GALVANIZED

OR ALUMINUM

required except on the ends of the fence.

every 24" at the top and mid section.

Tensile Strength

Filtering Efficiency

0 - 10%

10 - 20%

20 - 33%

33 - 50%

50% +

Tensile Modulus

GROUND

## STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation

### Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation

- 1. This practice is limited to areas having 2:1 or flatter slopes where:
- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth b. The soil material is so shallow that the rooting zone is not deep enough to support plants or

Conditions Where Practice Applies

- furnish continuing supplies of moisture and plant nutrients. c. The original soil to be vegetated contains material toxic to plant growth
- d. The soil is so acidic that treatment with limestone is not feasible.
- 11. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

#### Construction and Material Specifications

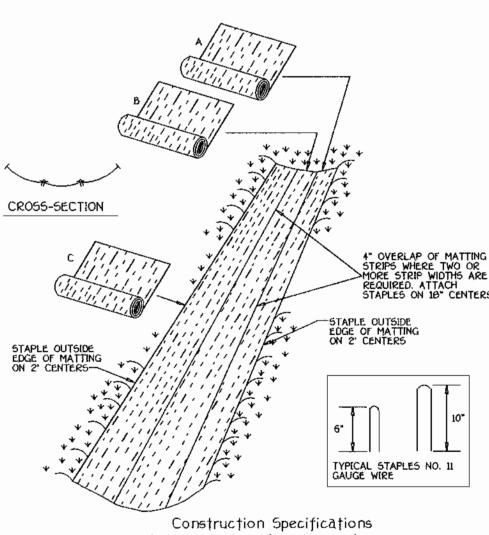
- 1. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USOA—5CS in cooperation with Maryland Agricultural Experimental Station.
- II. Topsoil Specifications Soil to be used as topsoil must meet the following:
- i. Topsoil shall be a loam, sandy loam, clay loam, sitt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coars fragments, gravel, sticks, roots, trash, or other materials larger than 11/2" in diameter.
- ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.
- iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures. For sites having, disturbed areas under 5 acres:
- i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative abilization - Section I - Vegetative Stabilization Methods and Materials.

- II. For sites having disturbed areas over 5 acres:
- On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
- a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0. sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
- b. Organic content of topsoil shall be not less than 1.5 percent by weight.
- c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
- d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization — Section I — Vegetative Stabilization Methods and Materials.

- i. When top soiling, màintàin needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- ii. Grades on the areas to be top soiled, which have been previously established, shall be maintained, albeit 4"-8" higher in elevation.
- iii. Topsoil shall be uniformly distributed in a 4" 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from top soiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- VI. Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
- i. Composted Studge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
- a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
- b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
- c. Composted sludge shall be applied at a rate of I ton/1,000 square feet. iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000
- square feet, and 1/3 the normal lime application rate. References: Guideline Specifications, Soil Preparation and Sodding,. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.



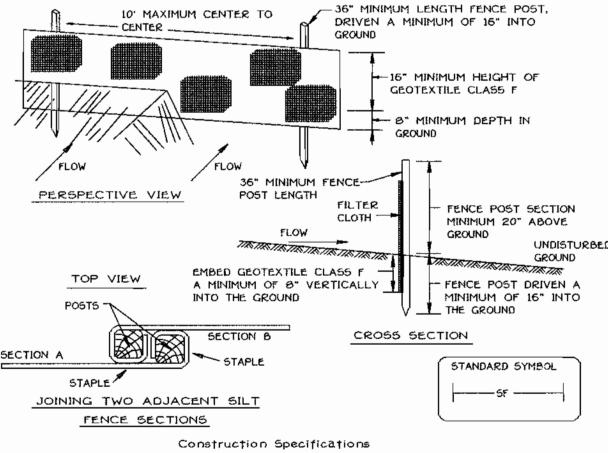
1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6". 2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil 4. Staples shall be placed 2' apart with 4 rows for each strip, 2

outer rows, and 2 alternating rows down the center. 5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4". shinlan fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples. Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

**EROSION CONTROL MATTING** 



1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

Test: MSMT 322

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F: 50 (bs/in (min.) Tensile Strength Test: MSMT 509 Test: MSMT 509

Tensile Modulus 20 lbs/in (min.) 0.3 gal ft 1/ minute (max.) Test: MSMT 322 Flow Rate Filtering Efficiency 75% (min.)

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass. 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE

FISHER, COLLINS & CARTER, INC. VIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 25042 (410) 461 - 2855

REVISION

ENGINEER'S CERTIFICATE "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

CHARLES J. CROVO, 5R. BUILDER/DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

10' MAXIMUM

WITH I LAYER OF

34" MINIMUN

- 16" MIN. 15T LAYER OF

FILTER CLOTH

FILTER CLOTH

Construction Specifications

latest Maryland State Highway Details for Chain Link Fencing. The specification

The lower tension wire, brace and truss rods, drive anchors and post caps are not

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced

5. When two sections of filter cloth adjoin each other, they shall be overlapped

7. Filter cloth shall be fastened securely to each fence post with wire ties o

staples at top and mid section and shall meet the following requirements for

75% (min.)

5teepness

0 - 10:1

10:1 - 5:1

5:1 - 3:1

3:1 - 2:1

2:1 +

6. Maintenance shall be performed as needed and silt buildups removed when "bulges"

50 **b**s/in (min.)

20 lbs/in (min.)

Design Criteria

Slope Length

(maximum

200 feet

100 feet

100 feet

50 feet

UPER SILT FENCI

NOT TO SCALE

1. Fencing shall be 42" in height and constructed in accordance with the

for a 6' fence shall be used, substituting 42" fabric and 6' length posts. 2. Chain link fence shall be fastened securely to the fence posts with wire ties.

4. Filter cloth shall be embedded a minimum of 8° into the ground.

develop in the silt fence, or when silt reaches 50% of fence height

36" MINIMUN

STANDARD SYMBOL

Test: MSMT 509

Test: MSMT 509

Test: MSMT 322

Silt Fence Length

(maximum)

Unlimited

1.500 feet

1.000 feet

500 feet

0.3 gai/ft /minuté (max.) Test: M5MT 322

owner 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044

BUILDER/DEVELOPER ALLAN HOMES 10260 OLD COLUMBIA PIKE RIVERS CORPORATE PARK

PPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 9/16/n
Date 99/02 Date 9/18/02 EMERSON 2/1B 44-48 BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR. 6068.02 15205 8 & 9 | PEC-MXD-3 WATER CODE SEWER CODE

SEDIMENT/EROSION CONTROL NOTES & DETAILS

SINGLE FAMILY DETACHED **EMERSON** SECTION 2 PHASE 1B

LOTS 44-48 TAX MAP No: 47 PARCEL: 3 & 837 GRID 8 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2002

SHEET 4 OF 4

Signature of Developer ALLAN WASCHAR DATE

THE HOWARD RESEARCH & DEVELOPMENT CORP. 410-992-6000

COLUMBIA, MARYLAND 21046 410-301-1414

SDP 02-145

8-26-02

B-26-02

7640000

Signature of Engiloger

MOUNTABLE

EARTH FILL

MINIMUM 6" OF 2"-3" AGGREGATE

OVER LENGTH AND WIDTH OF

STRUCTURE

PROFILE

PLAN VIEW

Length - minimum of 50" (\*30" for single residence lot).

residences to use geotextile.

Construction Specification

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior

5. Surface Water - all surface water flowing to or diverted toward construction

4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete

to placing stone. \*\*The plan approval authority may not require single family

---- \* 50' MINIMUM

LENGTH

Width - 10' minimum, should be flared at the existing road to provide a turning radius.

equivalent shall be placed at least 6" deep over the length and width of the entrance.

mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has

to be sized according to the drainage. When the SCE is located at a high spot and

according to the amount of runoff to be conveyed. A 6" minimum will be required.

where construction traffic enters or leaves a construction site. Vehicles leaving

the site must travel over the entire length of the stabilized construction entrance

STABILIZED CONSTRUCTION ENTRANCE

entrances shall be piped through the entrance, maintaining positive drainage. Pipe

installed through the stabilized construction entrance shall be protected with a

has no drainage to convey a pipe will not be necessary. Pipe should be sized

Location - A stabilized construction entrance shall be located at every point

BERM (6" MIN.)

- PIPE AS NECESSARY

EXISTING PAVEMENT

STANDARD SYMBOL