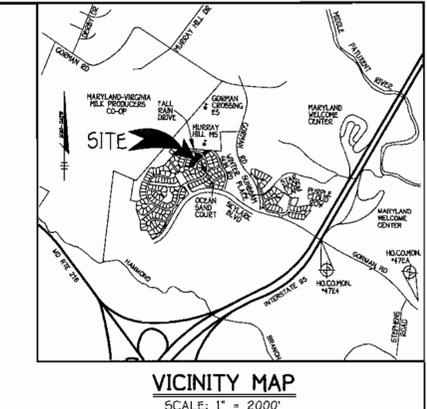
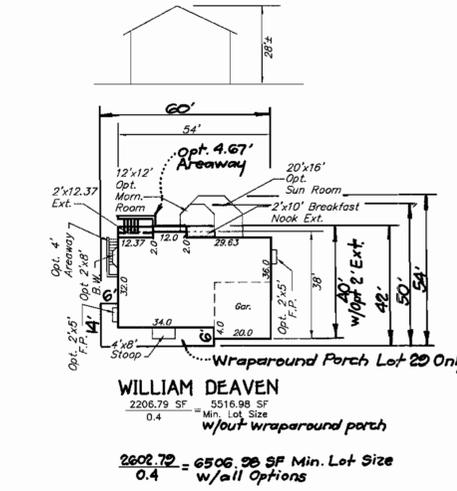
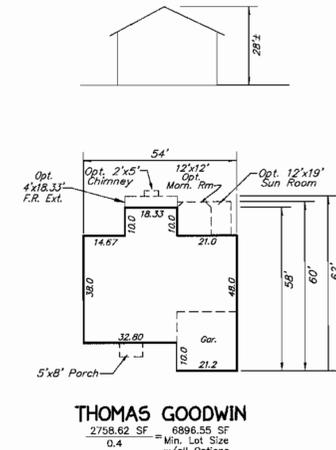
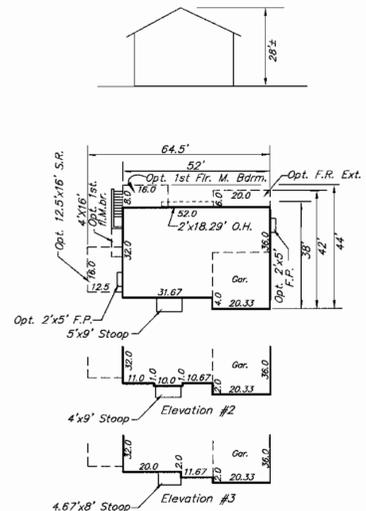
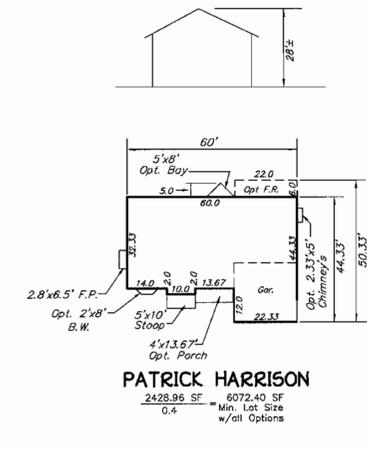
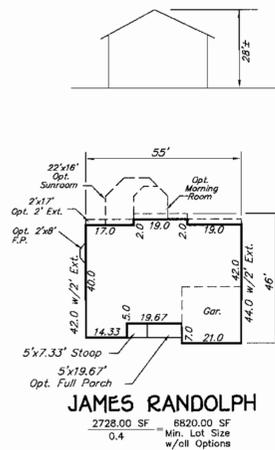


BENCH MARKS
 T.P. 47EA ELEV. 315.38
 N. 535,063.639
 E. 1,357,284.010
 LOC. NEAR THE INTERSECTION OF GORMAN RD. & STEVENS ROAD.
 T.P. 47EA ELEV. 339.00
 N. 535,046.148
 E. 1,355,431.223
 LOC. NEAR I-95 BRIDGE ALONG GORMAN ROAD



GENERAL NOTES

- SUBJECT PROPERTY ZONED PEC-MXD-3 AS GRANTED BY THE ZONING BOARD ON 9/3/98 AS CASE NO. ZB 979M.
- TOTAL AREA OF SITE: 1.373 ACRES
- TOTAL NUMBER OF LOTS SUBMITTED: 6
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1080 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES: ZB-979M, PB-339, 5-99-12, F-01-15, WP-05-22, F-01-137, WAS CONT. #24-3968-D
- THIS PLAN IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JUNE, 1999 BY DAFT McCUNE WALKER, INC.
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS. HOWARD COUNTY MONUMENT 47EA N 535046.153 E 1355431.224 HOWARD COUNTY MONUMENT 47EA N 535063.639 E 1357284.010
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAY OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION. FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-01-137.
- AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 24-3968-D
- CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- STORMWATER MANAGEMENT WILL BE PROVIDED AS APPROVED ON THE ROAD CONSTRUCTION DRAWINGS FILED UNDER F-01-137.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$9500.00. LANDSCAPE SURETY FOR LOTS 29, 49, 50, 51 & 53 IS \$1500 PER LOT. LANDSCAPE SURETY FOR LOT 52 IS \$16500 PER LOT.
- PERIMETER LANDSCAPING AND STREET TREES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL AND DEVELOPMENT CRITERIA APPROVED BY THE PLANNING BOARD 7-1-99 PER CASE NO. PB-339 AS SHOWN ON THE APPROVED ROAD CONSTRUCTION DRAWINGS FILED UNDER F-01-137.
- LANDSCAPING FOR LOTS 1 THROUGH 176 SHOWN HEREIN IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN, ON FILE WITH THIS PLAN IN ACCORDANCE WITH SECTION 16124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 161200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION AREA. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THIS PLAN CONFORMS WITH THE REQUIREMENTS OF SECTION 161200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY RETAINING 16.77 ACRES+ AND REFORESTING 5.03 ACRES+ AS PART OF THE OVERALL DEVELOPMENT OF EMERSON, SECTION 2. THE EXCESS 4.5 ACRES+ OF REFORESTATION MAY BE USED TOWARD MEETING THE OBLIGATIONS OF FUTURE PHASES OF EMERSON, SECTION 2, F-01-137.
- STORMWATER MANAGEMENT (SWM) IS BEING TREATED ON THIS SITE BY SWM PONDS AND SWM CREDITS IN ACCORDANCE WITH THE 2000 MARYLAND DEPARTMENT OF THE REGULATIONS. THERE ARE TWO WET PONDS DESIGNED FOR THIS PORTION OF THE PROJECT, EACH OF WHICH ADDRESSES WATER QUANTITY AND QUALITY REQUIREMENTS. THE WET VOLUMES REPRESENTING QUALITY. THESE PONDS ARE TO BE PUBLICLY MAINTAINED BY HOWARD COUNTY, MARYLAND. WATER QUANTITY, QUALITY AND RECHARGE VOLUMES ARE ADDRESSED BY SWM CREDITS THAT TREAT RUNOFF NON-STRUCTURALLY. THESE CREDITS INCLUDE NATURAL AREA PRESERVATION AREAS, DISCONNECTION OF ROOFING RUNOFF, SHEET FLOW TO BUFFER AREAS AND GRASS SWALES. SWM POND IV IS A RETROFIT OF AN EXISTING POND (BELONGING TO EASTERN MIDDLE SCHOOL) AND WILL ADDRESS SWM QUANTITY AND QUALITY. THE LATTER IN THE FORM OF EXTENDED DETENTION.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO HO. CODES MANUAL VOL. IV DETAILS R.6.03 & R.6.05.
- OPEN SPACE REQUIREMENTS FOR THESE LOTS HAVE BEEN PROVIDED UNDER F-01-140.
- MINIMUM BUILDING RESTRICTION SETBACKS FROM PROPERTY LINES AND PUBLIC ROAD RIGHTS-OF-WAY ARE TO BE IN ACCORDANCE WITH THE DEVELOPMENT CRITERIA APPROVED WITH THE COMPREHENSIVE SKETCH PLAN 5-99-12 AND THE DECISION AND ORDER FOR PB-339 APPROVED ON JULY 1, 1999.
- THE MINIMUM SETBACKS FOR STRUCTURES SHALL BE AS FOLLOWS:
 FRONT SETBACK 15' FROM THE RIGHT-OF-WAY TO THE HOUSE OR GARAGE.
 SIDE SETBACK 5' TO THE PROPERTY LINE WITH A MINIMUM OF 15' BETWEEN STRUCTURES
 REAR SETBACK 10' FROM THE PROPERTY LINE TO AN OPEN DECK
 20' FROM THE PROPERTY LINE TO THE HOUSE



ADDRESS CHART

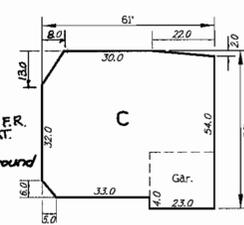
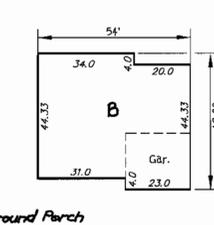
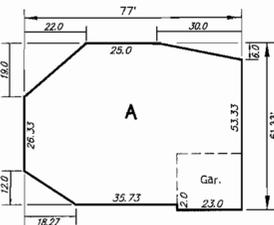
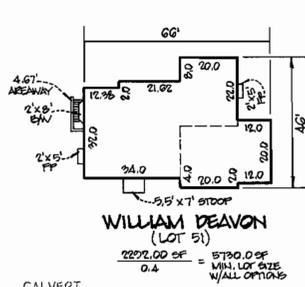
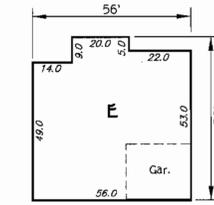
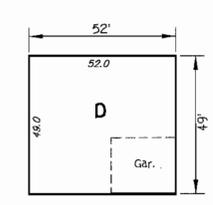
LOT NUMBER	STREET ADDRESS
29	1004B FALL RAIN DRIVE
49	9912 OCEAN SAND COURT
50	9908 OCEAN SAND COURT
51	9904 OCEAN SAND COURT
52	10047 FALL RAIN DRIVE
53	10051 FALL RAIN DRIVE

INDEX CHART

SHEET	DESCRIPTION
SHEET 1	TITLE SHEET, HOUSE TYPES, TEMPLATES
SHEET 2	SITE DEVELOPMENT PLAN, LANDSCAPE NOTES & DETAILS
SHEET 3	SEDIMENT AND EROSION CONTROL PLAN
SHEET 4	DETAIL SHEET

LEGEND

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
+362.5	SPOT ELEVATION
—SF—SF—	SILT FENCE
—SSF—SSF—	SUPER SILT FENCE
---	PROPOSED WALKOUT
---	EROSION CONTROL MATTING
LOD	LIMIT OF DISTURBANCE
○	EXISTING STREET TREE TAKEN FROM F-01-137



CALVERT NO/OPT.
 GEORGE OLIVER
 SARAH DUNMORE
 NO/SUNROOM, MSTR. BDRM.

CALVERT
 DORCHESTER
 GEORGE OLIVER
 HUNTINGTON
 JAMES RANDOLPH
 PATRICK HARRISON
 SARAH DUNMORE
 THOMAS GOODWIN
 NO/4' F.R. EXT.
 NO/MORN. ROOM
 NO/SUN ROOM
 WILLIAM DEAVEN No Wraparound Porch

CALVERT NO/OPT.
 SARAH DUNMORE NO/SUN RM OR F.R. EXT.
 WILLIAM DEAVEN
 NO/OPT. SUNROOM or wraparound porch

CALVERT NO/1ST FLOOR MSTR. BDRM.
 DORCHESTER
 GEORGE OLIVER
 JAMES RANDOLPH
 NO/OPT. SUN ROOM
 PATRICK HARRISON
 SARAH DUNMORE
 NO/SUN ROOM
 WILLIAM DEAVEN No Wraparound Porch

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."

Signature of Engineer: CHARLES J. PROVOSE, 7-18-02 Date
 Signature of Builder/Developer: ROBERT CORBETT, 7-18-02 Date

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."

Signature of Developer: ROBERT CORBETT, 7-18-02 Date

Reviewed for HOWARD SCD and meets Technical Requirements.

Signature: Jan M... 7/30/02 Date
 Signature: John R. Kalman... 7/30/02 Date

OWNER

THE HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044
 410-992-6000

BUILDER/DEVELOPER

WILLIAMSBURG GROUP, LLC
 5495 HARRERS FARM ROAD
 COLUMBIA, MARYLAND 21044
 410-997-8800

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: Chris... 8/2/02 Date
 Signature: ... 8/10/02 Date
 Signature: ... 8/7/02 Date

PROJECT	SECTION	LOTS NO.
EMERSON	2/B	29 & 49-53

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
15205	8 & 9	PEC-MXD-3	47	6	6068.02

WATER CODE	SEWER CODE
E-15	7640000

TITLE SHEET

**SINGLE FAMILY DETACHED
 EMERSON
 SECTION 2 PHASE 1B
 LOTS 29 & 49-53**

TAX MAP NO: 47 PARCEL: 3 & 837 GRID B
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: MAY, 2002

SHEET 1 OF 4

SDP 02-137



20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

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

Vegetative stabilization is used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the surface is able to absorb rainfall, thereby reducing sediment loads and runoff 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 plan and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding to establish vegetative cover for short duration (up to one year), and Permanent Seeding for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stabilization, cleared areas being left between construction phases, earth dikes, etc. and for Permanent Seeding are dunes, 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, seeded preparation, seeding, mulching and vegetative establishment to prevent three quarters movement and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation**
 - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- Soil Amendment (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 analysis.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizers shall 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 of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime) but may be substituted which contains at least 50% total calcium oxide plus magnesium oxide. The material 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 fertilizer into the top 3-5" of soil by diking or other suitable means.
- Seeded Preparation**
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable hand or construction equipment, such as disc harrows, 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. The surface shall be greater than 3D should be tracked bearing the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plan.
 - Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
- Temporary Seeding**
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil shall be between 6.0 and 7.0.
 - Soil shall contain less than 500 parts per million phosphorus.
 - The soil shall contain less than 400 parts per million nitrogen.
 - Soil shall contain less than 100 parts per million potassium.
 - Soil shall contain less than 100 parts per million calcium.
 - Soil shall contain less than 100 parts per million magnesium.
 - Soil shall contain less than 100 parts per million sulfur.
 - Soil shall contain less than 100 parts per million zinc.
 - Soil shall contain less than 100 parts per million copper.
 - Soil shall contain less than 100 parts per million manganese.
 - Soil shall contain less than 100 parts per million iron.
 - Soil shall contain less than 100 parts per million boron.
 - Soil shall contain less than 100 parts per million sodium.
 - Soil shall contain less than 100 parts per million chlorine.
 - Soil shall contain less than 100 parts per million fluoride.
 - Soil shall contain less than 100 parts per million bromine.
 - Soil shall contain less than 100 parts per million iodine.
 - Soil shall contain less than 100 parts per million selenium.
 - Soil shall contain less than 100 parts per million tellurium.
 - Soil shall contain less than 100 parts per million vanadium.
 - Soil shall contain less than 100 parts per million molybdenum.
 - Soil shall contain less than 100 parts per million cobalt.
 - Soil shall contain less than 100 parts per million nickel.
 - Soil shall contain less than 100 parts per million silicon.
 - Soil shall contain less than 100 parts per million phosphorus.
 - Soil shall contain less than 100 parts per million potassium.
 - Soil shall contain less than 100 parts per million calcium.
 - Soil shall contain less than 100 parts per million magnesium.
 - Soil shall contain less than 100 parts per million sulfur.
 - Soil shall contain less than 100 parts per million zinc.
 - Soil shall contain less than 100 parts per million copper.
 - Soil shall contain less than 100 parts per million manganese.
 - Soil shall contain less than 100 parts per million iron.
 - Soil shall contain less than 100 parts per million boron.
 - Soil shall contain less than 100 parts per million sodium.
 - Soil shall contain less than 100 parts per million chlorine.
 - Soil shall contain less than 100 parts per million fluoride.
 - Soil shall contain less than 100 parts per million bromine.
 - Soil shall contain less than 100 parts per million iodine.
 - Soil shall contain less than 100 parts per million selenium.
 - Soil shall contain less than 100 parts per million tellurium.
 - Soil shall contain less than 100 parts per million vanadium.
 - Soil shall contain less than 100 parts per million molybdenum.
 - Soil shall contain less than 100 parts per million cobalt.
 - Soil shall contain less than 100 parts per million nickel.
 - Soil shall contain less than 100 parts per million silicon.
 - Soil shall be between 6.0 and 7.0.
 - Soil shall contain less than 500 parts per million phosphorus.
 - Soil shall contain less than 400 parts per million nitrogen.
 - Soil shall contain less than 100 parts per million potassium.
 - Soil shall contain less than 100 parts per million calcium.
 - Soil shall contain less than 100 parts per million magnesium.
 - Soil shall contain less than 100 parts per million sulfur.
 - Soil shall contain less than 100 parts per million zinc.
 - Soil shall contain less than 100 parts per million copper.
 - Soil shall contain less than 100 parts per million manganese.
 - Soil shall contain less than 100 parts per million iron.
 - Soil shall contain less than 100 parts per million boron.
 - Soil shall contain less than 100 parts per million sodium.
 - Soil shall contain less than 100 parts per million chlorine.
 - Soil shall contain less than 100 parts per million fluoride.
 - Soil shall contain less than 100 parts per million bromine.
 - Soil shall contain less than 100 parts per million iodine.
 - Soil shall contain less than 100 parts per million selenium.
 - Soil shall contain less than 100 parts per million tellurium.
 - Soil shall contain less than 100 parts per million vanadium.
 - Soil shall contain less than 100 parts per million molybdenum.
 - Soil shall contain less than 100 parts per million cobalt.
 - Soil shall contain less than 100 parts per million nickel.
 - Soil shall contain less than 100 parts per million silicon.

PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDING PREPARATION:**
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:**
APPLY 1.0 TONS PER ACRE DOLOMITE LIMESTONE (82 LBS/1000 SUFF) AND 400 LBS PER ACRE 0-20-20 FERTILIZER (100 LBS/1000 SUFF) BEFORE SEEDING. IN THE SPRING, OPTION (2) - USE 500 OZ PER ACRE OF 100-0-0 FERTILIZER (200 LBS/1000 SUFF) INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS PER ACRE 0-20-20 UREA/BURN FERTILIZER (100 LBS/1000 SUFF) AND 400 LBS PER ACRE 0-20-20 FERTILIZER (100 LBS/1000 SUFF) INTO UPPER THREE INCHES OF SOIL.
- SEEDING:**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS PER ACRE (2.3 LBS/1000 SUFF) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE (1.5 LBS/1000 SUFF) OF KENTUCKY 31 TALL FESCUE AND 40 LBS/ACRE (1.0 LBS/1000 SUFF) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY OPTION (2) - 100 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) - USE 500 OZ PER ACRE OF 100-0-0 FERTILIZER (200 LBS/1000 SUFF) INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS PER ACRE 0-20-20 UREA/BURN FERTILIZER (100 LBS/1000 SUFF) AND 400 LBS PER ACRE 0-20-20 FERTILIZER (100 LBS/1000 SUFF) INTO UPPER THREE INCHES OF SOIL.
- MULCHING:**
APPLY 1.0 TO 2.0 TONS PER ACRE (80 TO 160 LBS/1000 SUFF) OF UNBOTTLED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE OF CALGALON 200 (200 GALLONS/2000 SUFF) OR ANIMAL FEED ASH ON SLOPES 4 FEET OR HIGHER USE 200 GALLONS PER ACRE (40 GALLONS/2000 SUFF) FOR ANCHORING.
- MAINTENANCE:**
INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.
- * FOR PUBLIC ROADS SUBSTITUTE CHEMICAL CEMENTATION AT 15 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 10 LBS/ACRE AS THE SEEDING EQUIPMENT. OPTIMUM SEEDING DATE FOR THIS SEEDING IS MARCH 1 TO APRIL 30.

TEMPORARY SEEDING NOTES

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION:**
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS:**
APPLY 600 LBS PER ACRE 0-10-10 FERTILIZER (60 LBS/1000 SUFF).
- SEEDING:**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH NOVEMBER 15, SEED WITH 17 BARS/1000 PER ACRE OF ANNUAL RYE (3.2 LBS/ACRE) OR WEEPING LOVEGRASS (0.7 LBS/1000 SUFF) FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE 500.
- MULCHING:**
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.
- APPLY 1.0 TO 2.0 TONS PER ACRE (80 TO 160 LBS/1000 SUFF) OF UNBOTTLED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE OF CALGALON 200 (200 GALLONS/2000 SUFF) OR ANIMAL FEED ASH ON SLOPES 4 FEET OR HIGHER USE 200 GALLONS PER ACRE (40 GALLONS/2000 SUFF) FOR ANCHORING.
- MULCHING:**
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT 7 DAYS
- INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN 7 DAYS
- CLEAR AND GRUB TO LIMITS OF DISTURBANCE 4 DAYS
- INSTALL TEMPORARY SEEDING 2 DAYS
- CONSTRUCT BUILDINGS 60 DAYS
- FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE 14 DAYS
- REMOVE SEDIMENT CONTROL DEVICES UPON AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR. 7 DAYS

SEDIMENT CONTROL NOTES

- A MINIMUM OF 10 BUSINESS DAYS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PREVENTION CONTROL DEPARTMENT PRIOR TO THE START OF ANY CONSTRUCTION (311-3555).
- 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.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, STRUCTURAL OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PEREMPTER SEDIMENT CONTROL STRUCTURES.
 - 14 CALENDAR DAYS FOR ALL PEREMPTER SEDIMENT CONTROL STRUCTURES, DICES, PEREMPTER SLOPES AND ALL SLOPES STEEPER THAN 3:1, 10 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 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.
- 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. 50), SOIL 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.
- 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 CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	1,373 ACRES
AREA DISTURBED	0,980 ACRES
AREA TO BE SCOOPED OR PAVED	0,336 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0,644 ACRES
TOTAL CUT	1,909 CU. YD.
TOTAL FILL	66 CU. YD.
- ANY OFFSITE WASTE/BORROW AREA LOCATION - EMISSIONS SECT. 2, PH. 1B 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.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PEREMPTER SEDIMENT CONTROL STRUCTURES, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS LITERAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition

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.

Conditions Where Practice Applies

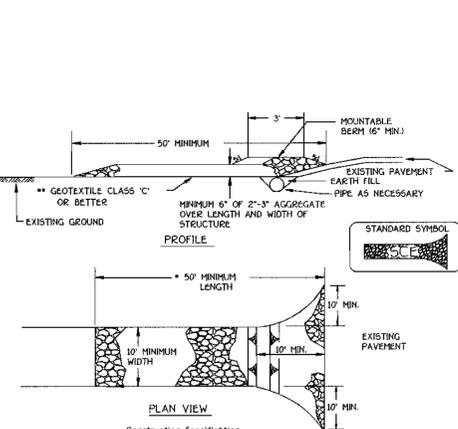
- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- 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

- Topsoil salvaged from the existing site may be 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 USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silty 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, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 - 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 and designed areas worked into the soil in conjunction with tillage operations as described in the following procedures.

For sites having disturbed areas over 5 acres:

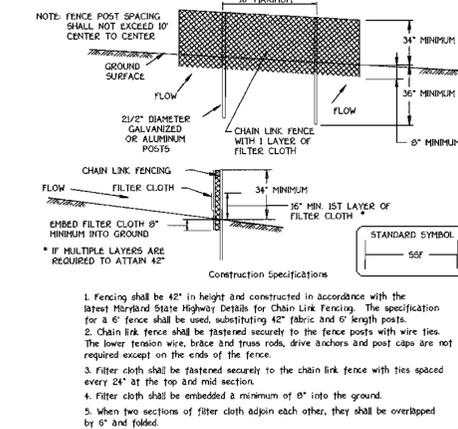
- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.



- Length - minimum of 50' (40' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. *The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3" or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance. Surface water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a moundside 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 has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every lot, where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entrance length of the stabilized construction entrance.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

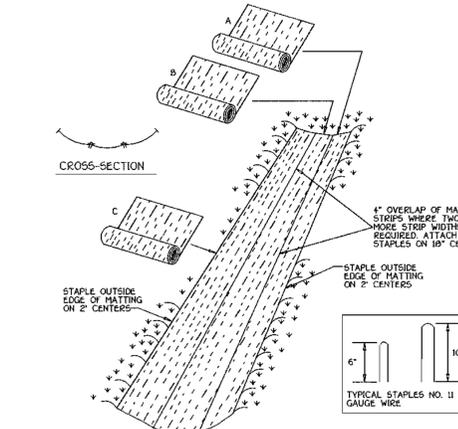


- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and fastened.
- Maintenance shall be performed as needed and silt buildup removed when "bulges" develop on the silt fence, or when silt reaches 50% of fence height.
- Filter cloth 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:

Design Criteria		
Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

SUPER SILT FENCE

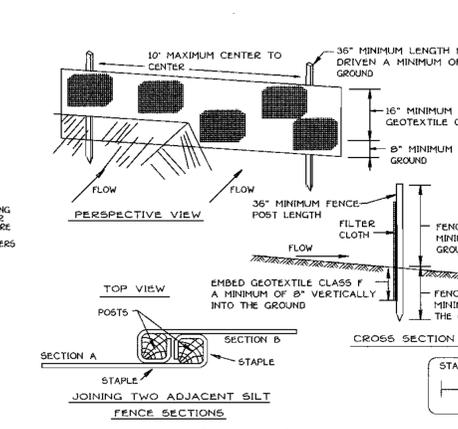
NOT TO SCALE



- Key-in the matting by placing the top ends of the matting in a narrow trench 6" deep. Backfill the trench and trim 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".
- Staple the 4" overlap in the channel center using an 18" spacing between staples.
- Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
- Staples shall be placed 2" apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
- Where one roll of matting ends and another begins, the end of the discharge end of the matting line should be similarly secured with 2 double rows of staples.
- The discharge end of the matting line should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area affected by the flow must be protected.

EROSION CONTROL MATTING

NOT TO SCALE



- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut) or 1 3/4" diameter (minimum round) and shall be of sound quality hardwood. Steel posts will be standard 1" or 1 1/2" section weighing not less than 1.00 pound per linear foot.
- 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:

Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- 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

NOT TO SCALE

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.

Signature of Engineer: CHARLES J. CROVO, SR. Date: 7/15/02

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 Environmental Engineering Training Program for the Control of Sedimentation and Erosion before beginning the project. I/We will schedule periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer: ROBERT CORBETT Date: 7-15-02

OWNER

THE HOWARD RESEARCH & DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLLETTA, MARYLAND 21044 410-992-6000

BUILDER/DEVELOPER

WILLIAMSBURG GROUP, LLC 5405 HARRIS FARM ROAD COLUMBIA, MARYLAND 21044 410-997-0000

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development Date: 8/6/02

Chief, Development Engineering Division Date: 8/1/02

Director, Department of Planning and Zoning Date: 8/15/02

PROJECT

EMERSON SECTION 2/1B LOTS 29 & 49-53

FLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
15205	8 & 9	PEC-MXD-3	47	6	6068.02
WATER CODE	SEWER CODE				
E-15	7640000				

SEDIMENT/EROSION CONTROL NOTES & DETAILS

SINGLE FAMILY DETACHED

EMERSON

SECTION 2 PHASE 1B

LOTS 29 & 49-53

TAX MAP NO: 47 PARCEL: 3 & 837 GRID B

SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MAY, 2002

SHEET 4 OF 4

SDP 02-137