

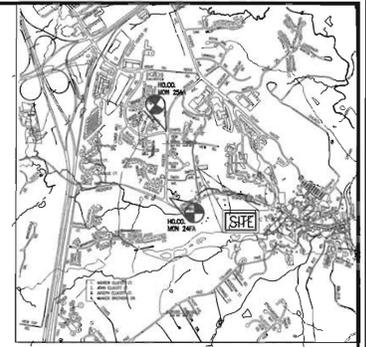
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 - MISS UTILITY 1-800-257-7777
 - BELL ATLANTIC TELEPHONE CO. 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 - AT&T CABLE LOCATION DIVISION: 393-3553
 - B.G.&E. CO. CONTRACTOR SERVICES: 850-4620
 - B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
 - STATE HIGHWAY ADMINISTRATION: 531-5533
- SITE ANALYSIS:
 - TOTAL AREA OF SITE: 0.58 AC
 - AREA OF PLAN SUBMISSION: 0.58 AC
 - TOTAL NUMBER OF BUILDABLE LOTS: 1
 - TOTAL NUMBER OF OPEN SPACE LOTS: 0
 - PRESENT ZONING: R-SC
 - LIMIT OF DISTURBANCE: 6,375 SF
 - STEEPSLOPES: TOTAL 5,996 SF
 - ON-SITE: 2,272 SF
 - PROPOSED USE OF SITE: SINGLE FAMILY DETACHED DWELLING
 - TOTAL UNITS ALLOWED: 1
 - TOTAL UNITS PROPOSED: 1
- PROJECT BACKGROUND:
 - LOCATION: TAX MAP: 25 PARCEL: 290
 - ZONING: R-SC
 - KLEIN AVENUE
 - DEED REFERENCE: LIBER 7736 FOLIO 389
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOILS TEST.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENT NO'S. 25AA AND 24FA.
- THE PROJECT BOUNDARY IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES INC. ON OCTOBER, 2003.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHY BY FREDERICK WARD ASSOCIATES OCTOBER, 2003.
- THERE ARE STEEP SLOPES LOCATED ON THIS PROPERTY. THERE ARE NO DISTURBANCES WITHIN THE STEEP SLOPES.
- NO BURIAL GROUNDS OR CEMETERIES ARE LOCATED ON THIS PROPERTY.
- IN ACCORDANCE WITH SECTION 12B OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12 FEET (14 FEET IF SERVING MORE THAN ONE RESIDENCE)
 - B) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
 - C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
 - D) STRUCTURES (CULVERTS/BRIDGES) - MUST SUPPORT 25 GROSS TON LOADING (H25 LOADING)
 - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - F) STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- NO 100 YEAR FLOODPLAINS EXISTS WITHIN THIS SITE.
- THIS SITE PLAN CONFORMS TO THE AMENDED 5TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06.
- THIS PROJECT IS LOCATED IN THE METROPOLITAN DISTRICT.
- THERE ARE NO HISTORIC STRUCTURES ON THE PROPERTY.
- THE SUBJECT PROPERTY IS ZONED RSC PER THE 2/02/2004 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS EXEMPT FROM STORMWATER MANAGEMENT C_p (C₁ < 2.0 cfs) R_e W_q, SINCE THE LIMIT OF DISTURBANCE BEING LESS THAN 5,000sq.ft. AND DUE TO THE CONVERSION OF GRAVEL TO GRASS.
- NO STREAMS OR WETLANDS EXIST ON SITE PER A FIELD INVESTIGATION AND CERTIFICATION PROVIDED BY ECO-SCIENCE PROFESSIONAL, INC. DATED OCTOBER, 2003.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$1,200.00 FOR THE REQUIRED 4 SHADE TREES
- THIS PLAN IS EXEMPT FROM FOREST CONSERVATION BECAUSE THE LOT IS LESS THAN 40,000 SQUARE FEET, PER SECTION 16.1202(b)(1)(i) OF THE HOWARD COUNTY CODE.

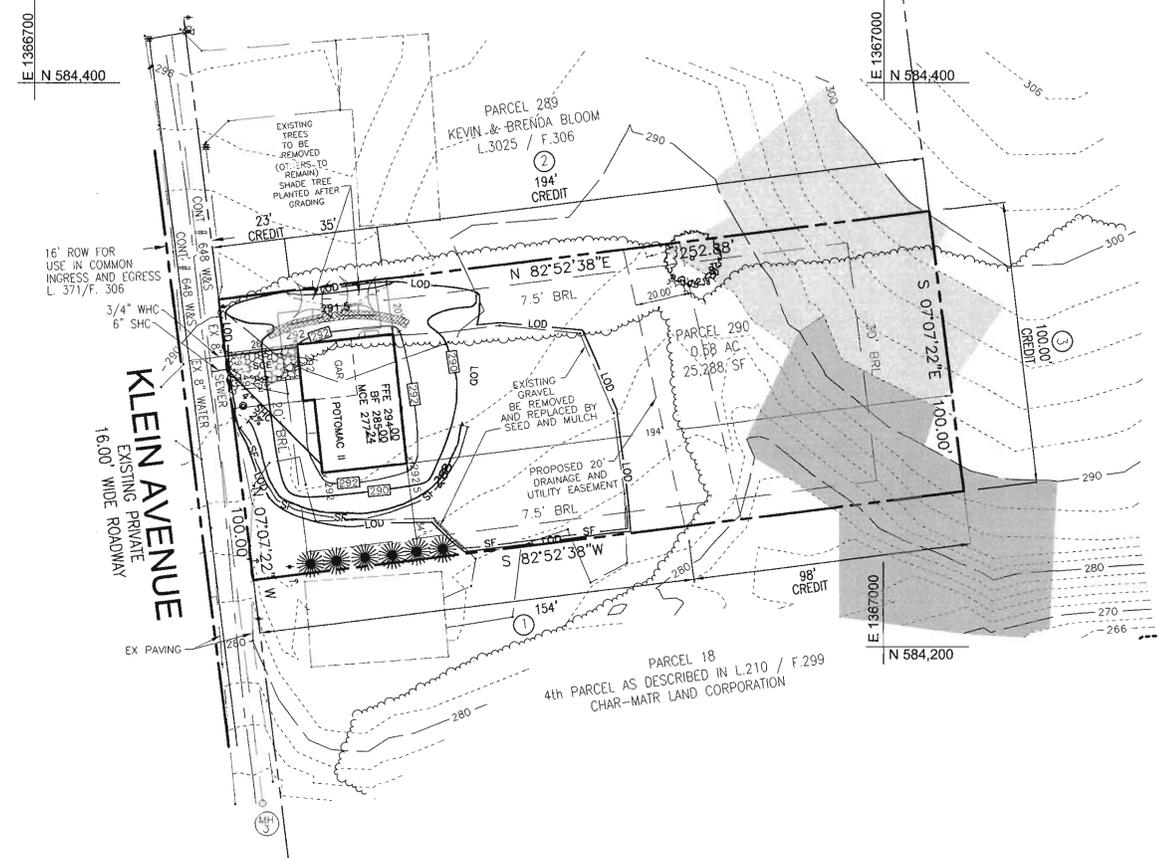
SITE DEVELOPMENT PLAN

KLEIN AVENUE, PARCEL 290

HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=2000'



BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
24FA	583,751.414	1,366,091.86	262.88	CONCRETE MONUMENT
25AA	585307.192	1,366,070.97	307.71	CONCRETE MONUMENT

PERMIT INFORMATION CHART					
PROJECT NAME		SECTION/AREA	PARCEL NUMBER		
KLEIN AVENUE		N/A	290		
PLAT REF.	BLOCK NO.	ZONE	TAX MAP	ELECT. DIST.	CENSUS TR.
N/A	7	R-SC	25	2ND	6028
WATER CODE:		F 04	SEWER CODE: 1401500		

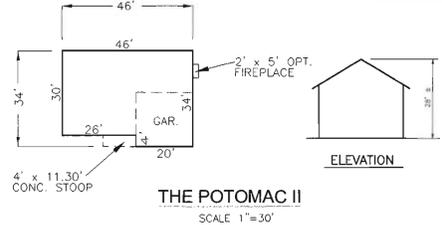
ADDRESS CHART	
PARCEL #	STREET ADDRESS
290	3617 KLEIN AVENUE

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
B-C3	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

NOTE: HOWARD SOIL SURVEY, MAP NUMBER 16

SEWER CONNECTION TABULATION				
PARCEL NO	TYPE	ELEVATION @ MAIN	ELEVATION @ RW	M.C.E.
290	S.H.C.	273.92	274.04	277.24

SHEET INDEX	
DESCRIPTION	SHEET NO.
SITE DEVELOPMENT AND LANDSCAPE PLAN	1 OF 2
DETAIL SHEET	2 OF 2

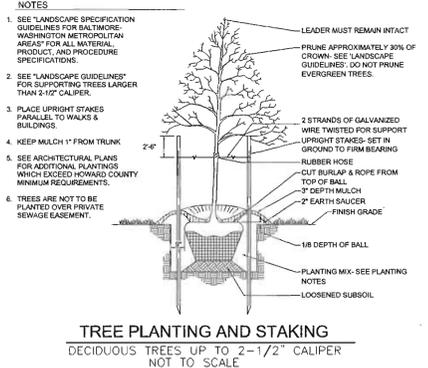


SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER	2 ADJACENT TO PERIMETER	3 ADJACENT TO PERIMETER
LANDSCAPE TYPE	A	A	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	252 LF	252 LF	100 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	98 LF	217 LF	100 LF
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NA	NA	NA
NUMBER OF PLANTS REQUIRED	154	35	NA
SHADE TREES	3	1	NA
EVERGREEN TREES	NA	NA	NA
SHRUBS	NA	NA	NA
NUMBER OF PLANTS PROVIDED	NA	1	NA
SHADE TREES	NA	NA	NA
EVERGREEN TREES	6**	NA	NA
OTHER TREES (2:1 SUBSTITUTION)	NA	NA	NA
SHRUBS (10:1 SUBSTITUTION)	NA	NA	NA

**SIX EVERGREENS SUBSTITUTED FOR 3 SHADE TREES

PLANT LIST					
TYPE	KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
SH. TREE	●	1	ACER RUBRUM 'OCTOBER GLORY'	2 1/2'-3' Cal.	B & B
EV. TREE	●	6	CUPRESSOCYPARIS LEYLANDI/ LEYLAND CYPRESS	4'-5' HT	COAT FULL



LEGEND	
— 585 —	EXISTING 2 FT CONTOUR
— 580 —	EXISTING 10 FT CONTOUR
— 582 —	PROPOSED 2 FT CONTOUR
— 580 —	PROPOSED 10 FT CONTOUR
— SF — SF —	SILT FENCE
LOD	LIMIT OF DISTURBANCE
●	EX. TREE
○	EX. TREE FOR LANDSCAPE CREDIT
■	STABILIZED CONSTRUCTION ENTRANCE
■	EROSION CONTROL MATTING
■	MODERATE SLOPES
■	STEEPSLOPES
○	PROPOSED TREE

OWNER
DEVELOPER/BUILDER
MICHAEL L PFAU
3675 PARK AVE., STE. 301
ELLICOTT CITY, MARYLAND 21043
(410) 480-0023

SITE DEVELOPMENT & LANDSCAPE PLAN

KLEIN AVENUE, PARCEL 290

SINGLE FAMILY DETACHED

TAX MAP #25 GRID: 7
PARCEL: 290 DEED REF.: L.7736/F.389
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS | www.frederickward.com

7125 RIVERWOOD DRIVE
COLUMBIA, MARYLAND 21046-2554
410-720-6900
410-720-6226 fax

REGIONAL OFFICES:
BEL AIR, MARYLAND AND WARRENTON, VIRGINIA

DESIGN BY: ELG
DRAWN BY: ELG
CHECKED BY: RHV
DATE: OCTOBER 23, 2003
SCALE: 1"=30'
W.O. NO.: 2034092.00

1 SHEET OF 2

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Dammann 5/11/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Candy Harms 5/15/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 5/15/04
DIRECTOR DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Myers 5/7/04
SDA-NATURAL RESOURCE CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

John K. Klutts 5/7/04
HOWARD SCD DATE

ENGINEERS CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

Robert H. Vogel 5/2/04
SIGNATURE OF ENGINEER DATE
ROBERT H. VOGEL, PE 16193

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 ALL 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.

Michael Pfaus 5/3/04
SIGNATURE OF DEVELOPER DATE

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
 - ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1, (B) 14 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 7, 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, SO2, TEMPORARY SEEDING, AND MULCHING (SEC. C). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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	25,288 SF
AREA DISTURBED	6,375 SF
AREA TO BE ROOFED OR PAVED	1,869 SF
AREA TO BE VEGETATIVELY STABILIZED	4,506 SF
TOTAL CUT	450 CY
TOTAL FILL	450 CY
OFFSITE WASTE/BORROW AREA LOCATION	N/A
 - 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.
 - 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.
 - 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.
- * TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED 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: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./100 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.)
- ACCEPTABLE-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND APPLY 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SO2. OPTION (3) SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

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 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (32 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SO2.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- INSTALL SEDIMENT CONTROL AS SHOWN ON PLAN IN ACCORDANCE WITH DETAILS (1 DAY)
- CLEAR AND ROUGH GRADE SITE (1 WEEK)
- CONSTRUCT HOUSE (4 MONTHS)
- FINE GRADE AND STABILIZE THE SITE WITH TOPSOIL AND SEEDING (SEE NOTES THIS PLAN) (3 DAYS)
- AFTER THE SITE IS PERMANENTLY STABILIZED AND AND PERMISSION IS GRANTED FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.

21.0 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 VEGETABLE 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

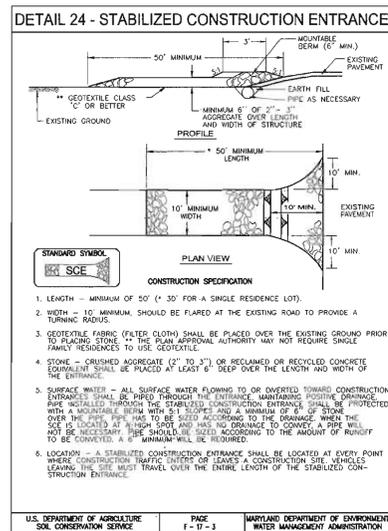
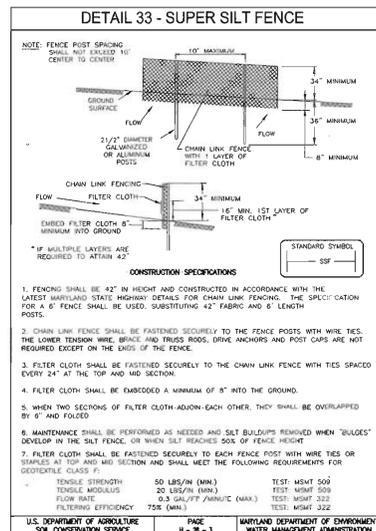
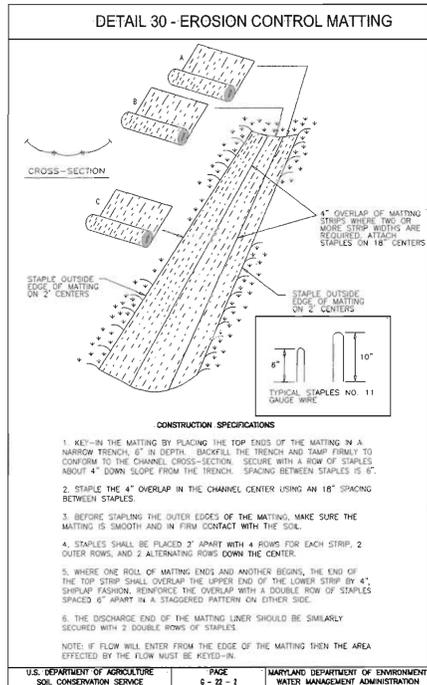
- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE 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 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 USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A 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 CHINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1" AND 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, 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 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:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

- 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:
 - 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.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - NO SO2 OR SEED SHALL BE PLACED ON SOIL 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.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

- TOPSOIL APPLICATION
 - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
 - 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 SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - 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 SEDGED PREPARATION.



APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamner 5/16/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael Pfau 5/14/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Mark A. Vogel 5/19/04
DIRECTOR DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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."

Robert H. Vogel 5/2/04
SIGNATURE OF ENGINEER DATE
ROBERT H. VOGEL, PE 16193

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 ALL 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."

Michael Pfau 5/3/04
SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE
MICHAEL PFAU

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Myler 5/17/04
USDA-Natural Resource Conservation Service Date

John L. Patten 5/17/04
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
HOWARD SCD Date

OWNER DEVELOPER/BUILDER
MICHAEL PFAU
3675 PARK AVE., STE. 301
ELLICOTT CITY, MARYLAND 21043
(410) 480-0023

DETAIL SHEET
KLEIN AVENUE
SINGLE FAMILY DETACHED

TAX MAP #25 GRID: 7 2nd ELECTION DISTRICT
PARCEL: 290 DEED REF.: L.7736/F.389 HOWARD COUNTY, MARYLAND

7125 RIVERWOOD DRIVE
COLUMBIA, MARYLAND 21046-2354
410-720-8900
410-720-8226 fax

FREDERICK WARD ASSOCIATES, INC.
REGIONAL OFFICES:
BEL AIR, MARYLAND AND WARRENTON, VIRGINIA
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS | www.fredrickward.com

DESIGN BY: ELG
DRAWN BY: ELG
CHECKED BY: RHW
DATE: OCTOBER 23, 2003
SCALE: 1"=30'
W.O. NO.: 2034092.00

2 SHEET OF 2