

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT AND GRADING PLAN
3	SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-SC PER THE 2-2-04 COMPREHENSIVE ZONING PLAN AND THE COMP-LITE ZONING AMENDMENTS DATED JULY 28, 2006.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY BENCHMARK ENGINEERING, INC. DATED AUGUST, 2001 AND ROAD CONSTRUCTION PLANS F-07-069. ALL VERTICAL CONTROLS ARE BASED ON NGVD29.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 508A AND 508B WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC AND DRAINAGE AREA IS IN THE PATUXENT WATERSHED, CONTRACT NO. 24-4176-D. SEWER IS PUBLIC AND DRAINAGE AREA IS IN THE PATUXENT WATERSHED, CONTRACT NO. 24-4176-D.
- STORMWATER MANAGEMENT QUALITY CONTROL IS BEING PROVIDED BY A POCKET POND AND DRY SWALE AS PART OF F-07-069; THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. THE FACILITY IS A CLASS 'A' STRUCTURE.
- EXISTING UTILITIES SHOWN WERE LOCATED BY RECORD DRAWINGS AND FIELD LOCATIONS AND PER F-07-069. IF NECESSARY, CONTRACTOR SHALL ADJUST STRUCTURE TOPS TO MEET SDP GRADES.
- THERE ARE NO FLOODPLAINS OR STEEP SLOPES ON THIS SITE.
- THERE ARE NO WETLANDS ON THIS SITE PER ECO-SCIENCE PROFESSIONALS, INC. AS INDICATED IN A LETTER DATED MARCH 26, 2003.
- AN ADEQUATE PUBLIC FACILITIES ORDINANCE TRAFFIC ANALYSIS WAS PREPARED BY THE MARS GROUP, INC. DATE, MAY, 2003 AND REVISED AUGUST 2003 AND WAS APPROVED UNDER SP-03-17.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WAS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$13,650.00 FOR 36 SHADE TREES, 13 EVERGREEN TREES AND 30 EVERGREEN SHRUBS, PER F-07-069.
- THIS PROJECT COMPLIED WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PAYMENT OF A FEE-IN-LIEU OF \$26,790.00 FOR THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT OF 0.82 ACRES. THIS FEE WAS PAID WITH F-07-069.
- UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- BRL INDICATES ZONING BUILDING RESTRICTION LINE. OTHER RESTRICTIONS MAY APPLY.
- IN ACCORDANCE WITH SECTION 128 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 ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE.
- NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- MINIMUM BUILDABLE LOT SIZE SHALL BE 6,000 SQUARE FEET IN ACCORDANCE WITH SECTION 110 OF THE ZONING REGULATIONS.
- TRACT BOUNDARY ESTABLISHED BY A FIELD RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. AROUND AUGUST 2001.
- FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND ROAD RIGHT OF WAY LINE ONLY AND NOT ONTO THE FLAG OF PIPE STEM LOT DRIVEWAY.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' SERVING MORE THAN ONE RESIDENCE
 - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY - MAXIMUM 14% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- ALL WATER METERS SHALL BE SET INSIDE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- FOR DRIVEWAY ENTRANCE DETAIL SEE HOWARD COUNTY STANDARD DETAILS R-6.03 & R-6.05.
- SHC ELEVATIONS SHOWN ARE AT THE PROPERTY LINE OR EASEMENT LINE.
- THE PRIVATE USE-IN-COMMON MAINTENANCE AGREEMENT FOR LOTS 1-4 HAS BEEN RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 1973 AT FOLIO 582.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULAR "DRY BUILDING RESTRICTION LINES IS RECOMMENDED.
- DRIVEWAY SLOPES SHOWN ARE AVERAGE. THE SLOPE AT THE OUTSIDE EDGES COULD BE FLATTER OR STEEPER DEPENDING ON GRADE OF ROADWAY.
- THIS PLAN IS SUBJECT TO THE 5TH EDITION SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS AMENDED UNDER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED UNDER COUNCIL BILL #50-2001.
- WITHIN 1 YEAR OF SIGNATURE APPROVAL OF THIS SDP ORIGINAL, THE DEVELOPER SHALL APPLY TO THE DEPARTMENT OF INSPECTION, LICENSES AND PERMITS FOR BUILDING PERMIT TO INITIATE CONSTRUCTION ON THE SITE; AND, THE DEVELOPER SHALL APPLY FOR BUILDING PERMITS FOR ALL CONSTRUCTION AUTHORIZED BY THIS APPROVED SDP WITHIN 5 YEARS OF APPROVAL.
- WAIVER PETITION WP-03-81 WAS CONSIDERED AND DENIED ON FEBRUARY 26, 2003 TO WAIVE SECTION 16.121(c)(i) WHICH REQUIRES OPEN SPACE LOTS TO HAVE 40' OF FRONTAGE ON A PUBLIC ROAD.
- A WAIVER WAS APPROVED ON SEPTEMBER 18, 2003 FOR TO WAIVE SECTIONS 5.2.4.1 AND 5.2.7.A.2 OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME 1, SECTION 5.2.4.1 PERTAINS TO THE MINIMUM DISTANCE FROM A POND EMBANKMENT TO A PROPERTY LINE AND SECTION 5.2.7.A.2 PERTAINS TO THE 12' SAFETY BENCH.
- WAIVER FOR THE MINIMUM EASEMENT CLEARANCE REQUIREMENT WAS APPROVED BY DPW IN A LETTER DATED JULY 27, 2009, WHICH REQUIRES 5 FOOT CLEARANCE FOR LOTS 1 AND 2, WITH THE CORNER OF THE HOME ON LOT 2 LOCATED 4 FEET FROM THE EASEMENT LINE. A 7.5 FOOT CLEARANCE FOR LOT 3 AND A 2 FOOT CLEARANCE FOR LOT 4 WILL BE PROVIDED.
- NO IMPROVEMENTS SHALL BE CONSTRUCTED OR PLACED WITHIN THE PUBLIC WATER, SEWER AND UTILITY EASEMENTS THAT WILL IMPEDE OR HINDER ACCESS TO THE PUBLIC WATER AND SEWER MAINS. IMPROVEMENTS SUCH AS DECKS, FENCING, AND TREES SHALL NOT BE PLACED WITHIN THE EASEMENTS.
- THERE IS NO 100-YR FLOODPLAIN, WETLANDS, STREAMS, THEIR BUFFERS OR 25% OR GREATER STEEP SLOPES THAT ARE AT LEAST 20,000 S.F. OF CONTIGUOUS AREA ON THESE LOTS PER ECO-SCIENCE, INC. LETTER DATED MARCH 26, 2003.
- THERE ARE NO BURIAL GROUNDS, CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY, TO THE BEST OF OUR KNOWLEDGE.
- THE ARTICLES OF INCORPORATION FOR THE HOMEOWNERS ASSOCIATION WAS ACCEPTED BY THE STATE DEPARTMENT OF ASSESSMENT AND TAXATION ON 5/16/99, RECEIPT NO.005339726.
- RECREATIONAL OPEN SPACE HAS NOT BEEN PROVIDED AS THIS SUBDIVISION CONTAINS LESS THAN 10 LOTS.
- THE OPEN SPACE SHOWN WAS DEDICATED BY PLAT 19522 TO A PROPERTY OWNERS ASSOCIATION FOR THE RESIDENTS OF THIS SUBDIVISION AND RECORDING REFERENCES OF THE ARTICLES OF INCORPORATION AND RESTRICTIONS ARE SHOWN HEREON.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING AND PLANT MATERIALS. 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 REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN (AS PROVIDED FOR UNDER F-07-069); HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.

SITE DEVELOPMENT PLAN

KING'S ARMS, SECTION 3

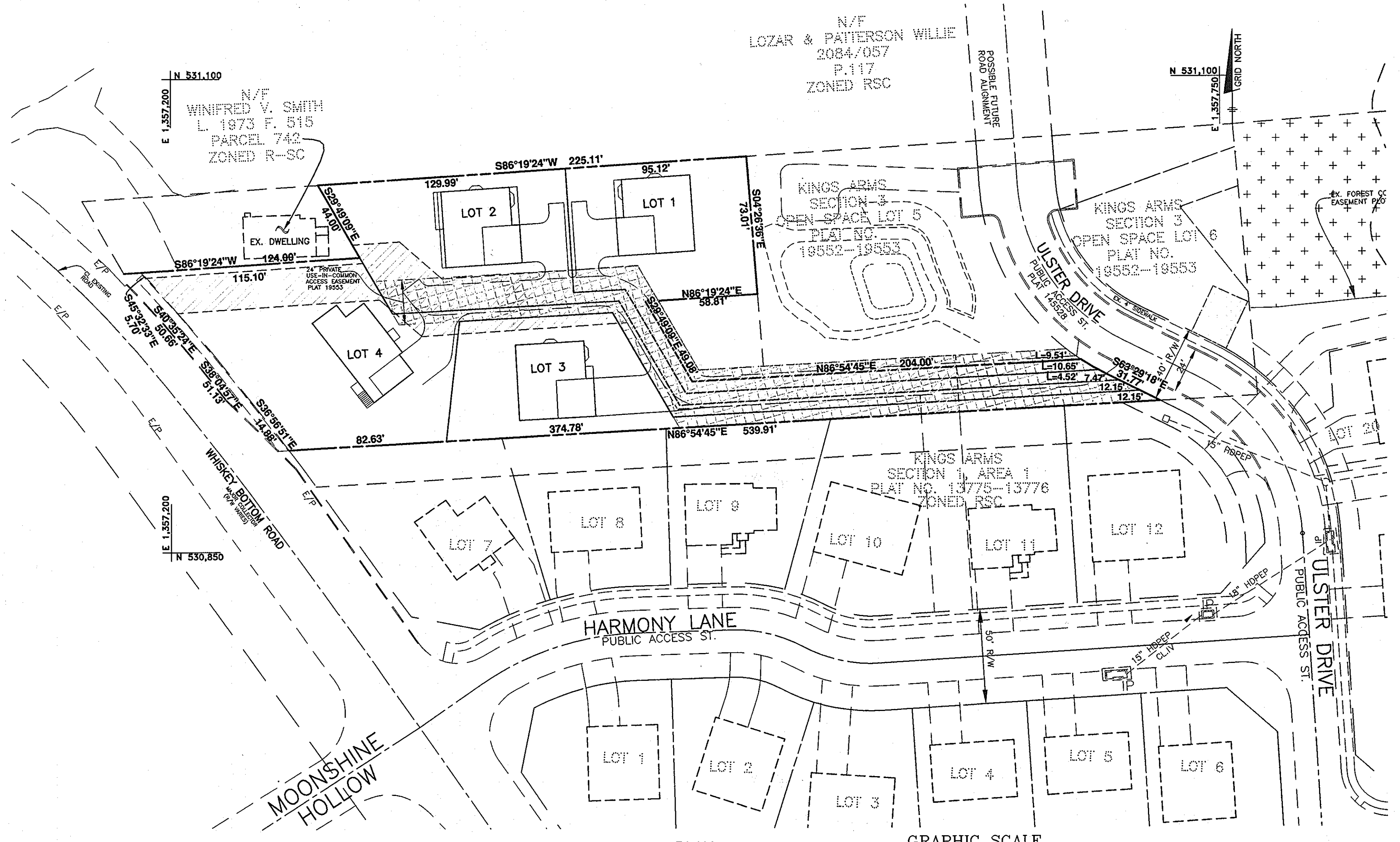
6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

BENCH MARKS--(NAD'83)

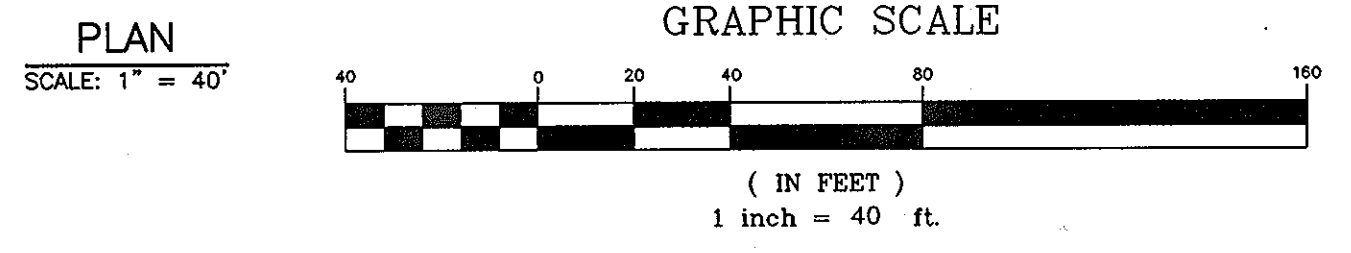
HO. CO. #508A	EL. 249.380
STANDARD DISC ON CONC. MONUMENT	
N 527561.667'	E 1359772.6'
HO. CO. #5085	EL. 178.142'
STANDARD DISC ON CONC. MONUMENT	
N 524999.355'	E 1357925.68'

VICINITY MAP
SCALE: 1"=2000'
ADC MAP 19, GRID K9
ADC COORDINATES:
E 845,000 N 470,250



LEGEND

EXISTING CONTOUR	--- 390	EX. UTILITY POLE	(Symbol)
PROPOSED CONTOUR	--- 412	EXISTING STREET TREE	(Symbol)
EXISTING WOODS LINE	(Symbol)	PER F-07-069	
EXISTING STRUCTURE	(Symbol)	EXISTING PERIMETER AND SCREENING TREES & SHRUBS	(Symbol)
PROPOSED STRUCTURE	(Symbol)	PER F-07-069	
EX. OVERHEAD WIRE	(Symbol)	10' PUBLIC TREE MAINTENANCE EASEMENT	(Symbol)
EX. GAS MAIN	(Symbol)	PUBLIC WATER AND/OR SEWER & UTILITY EASEMENT	(Symbol)
BUILDING RESTRICTION LINE	(Symbol)	PUBLIC DRAINAGE & UTILITY EASEMENT	(Symbol)
FIRST FLOOR ELEVATION	FFE=350.9	PRIVATE ACCESS EASEMENT	(Symbol)
GARAGE FLOOR ELEVATION (LP)	GFE=348.8	PRIVATE SWM DRAINAGE & UTILITY EASEMENT	(Symbol)
BASEMENT FLOOR ELEVATION	BFE=341.9		

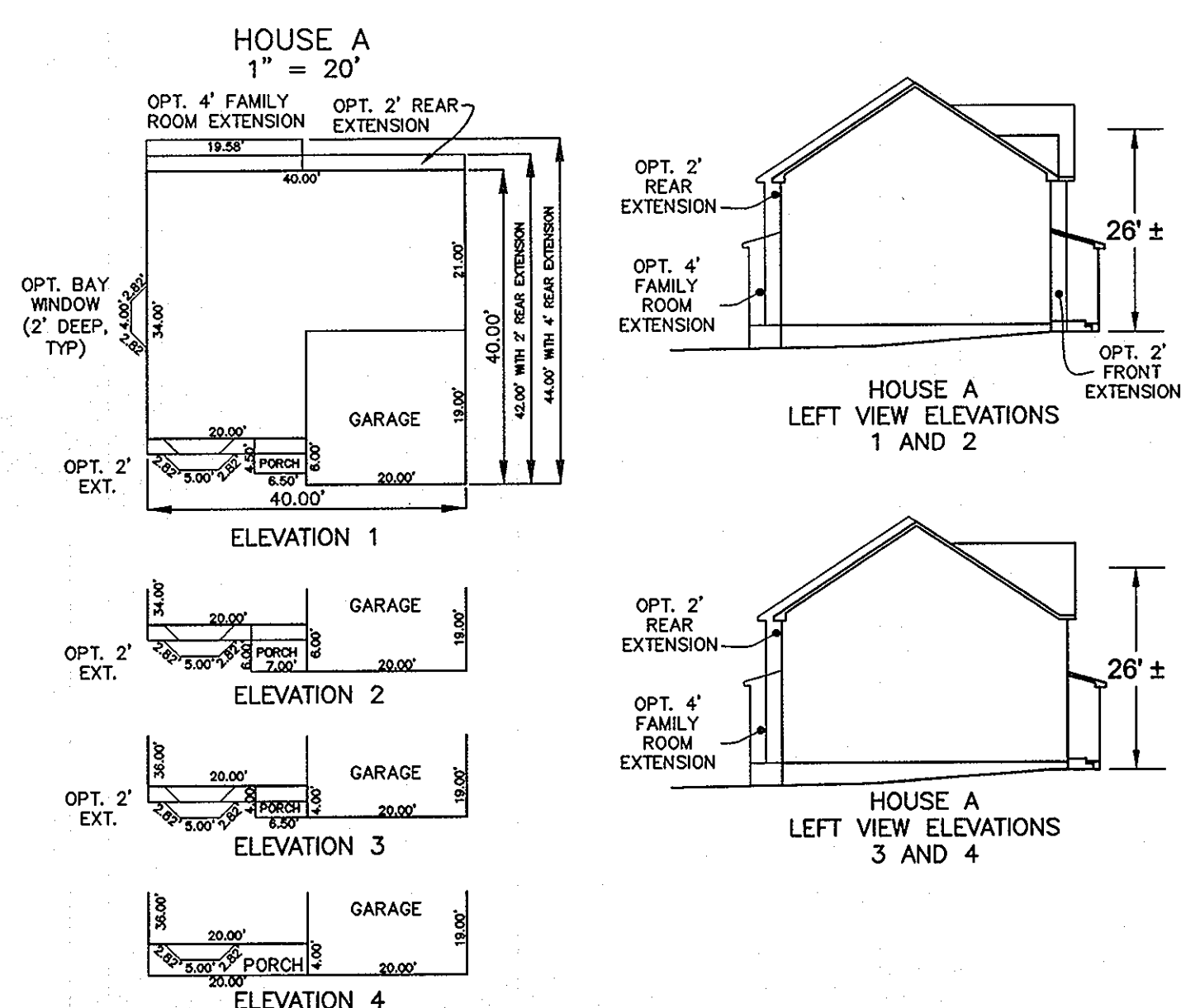


MINIMUM LOT SIZE CHART

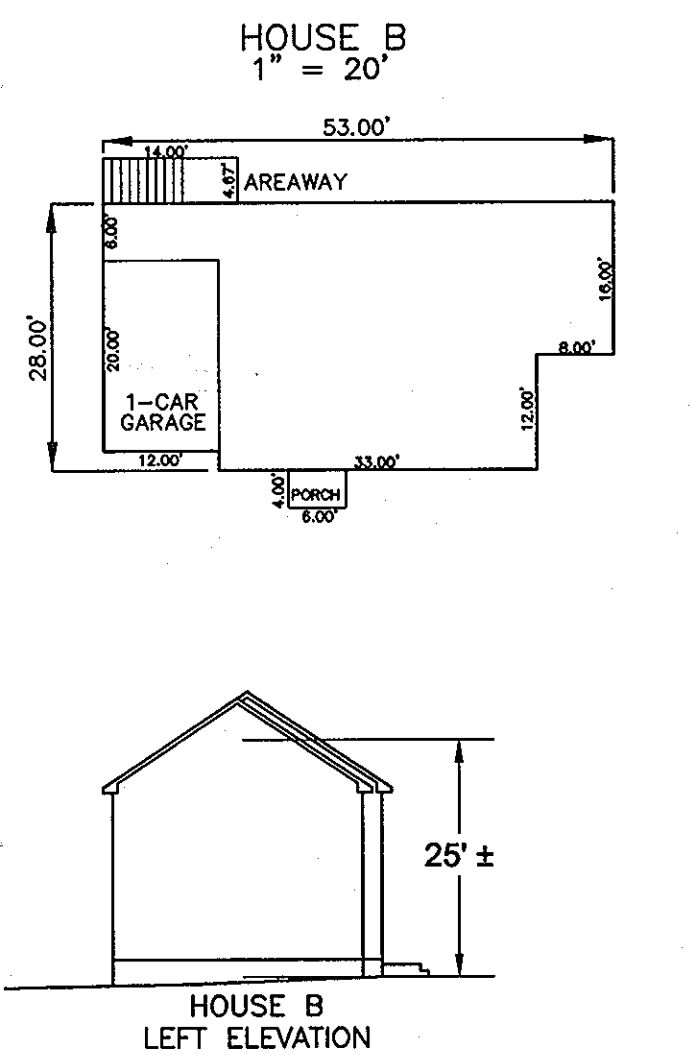
LOT	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	8,341 S.F.	1,599 S.F.	6,742 S.F.
2	9,884 S.F.	1,875 S.F.	7,989 S.F.
3	7,873 S.F.	1,501 S.F.	6,372 S.F.
4	13,411 S.F.	2,298 S.F.	11,113 S.F.

SITE ANALYSIS DATA CHART

A) TOTAL PROJECT AREA	0.91 AC.
B) AREA OF THIS PLAN SUBMISSION	0.91 AC.
C) APPROXIMATE LIMIT OF DISTURBANCE	0.65 AC.
D) PRESENT ZONING:	R-SC
E) PROPOSED USE OF SITE:	RESIDENTIAL SINGLE FAMILY DETACHED UNITS
F) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLATS(S)	4
G) TOTAL NUMBER OF UNITS PROPOSED	4
H) OPEN SPACE ON-SITE	0.81 AC.
I) APPLICABLE OPZ FILE REFERENCES:	SP-03-17, WP-03-81, F-03-106, F-03-107, F-07-069, CONTRACT # 24-4176-D
J) PROPOSED WATER AND SEWER SYSTEMS:	<input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE



- AVAILABLE OPTIONS AND ELEVATIONS BY LOT**
- LOT 1: HOUSE A - ELEVATIONS 1-4
BAY WINDOWS
2' FRONT EXTENSION
WALK OUT BASEMENT
 - LOT 2: HOUSE A - ELEVATIONS 1-4
BAY WINDOWS
2' FRONT EXTENSION
2' REAR EXTENSION
4' FAMILY ROOM EXTENSION
4' BASEMENT AREAWAY
 - LOT 3: HOUSE A - ELEVATIONS 1-2
BAY WINDOWS
4' BASEMENT AREAWAY
 - LOT 4: HOUSE B - ALL SHOWN OPTIONS



ADDRESS CHART

LOT	STREET ADDRESS
1	9444 ULSTER DRIVE
2	9448 ULSTER DRIVE
3	9456 ULSTER DRIVE
4	9452 ULSTER DRIVE

PERMIT INFORMATION CHART

SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL #
KING'S ARMS	SECTION 3	PARCEL 741 LOTS 1-4
PLAT No. 19552 19553	GRID No. 22	ZONE R-SC
TAX MAP 47	ELECTION DISTRICT 6th	CENSUS TRACT 6069.02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kristin DeWard 12/23/09
CHIEF, DIVISION OF LAND DEVELOPMENT

William J. Sullivan 12/16/09
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Thomas J. Sullivan 12/23/09
DIRECTOR, DEP

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644
E-MAIL: bel@bel-cviengineering.com

OWNER: SECURITY DEVELOPMENT, LLC
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
410-465-4244

PROJECT: KING'S ARMS SECTION 3, LOTS 1-4
SINGLE FAMILY DETACHED DWELLINGS

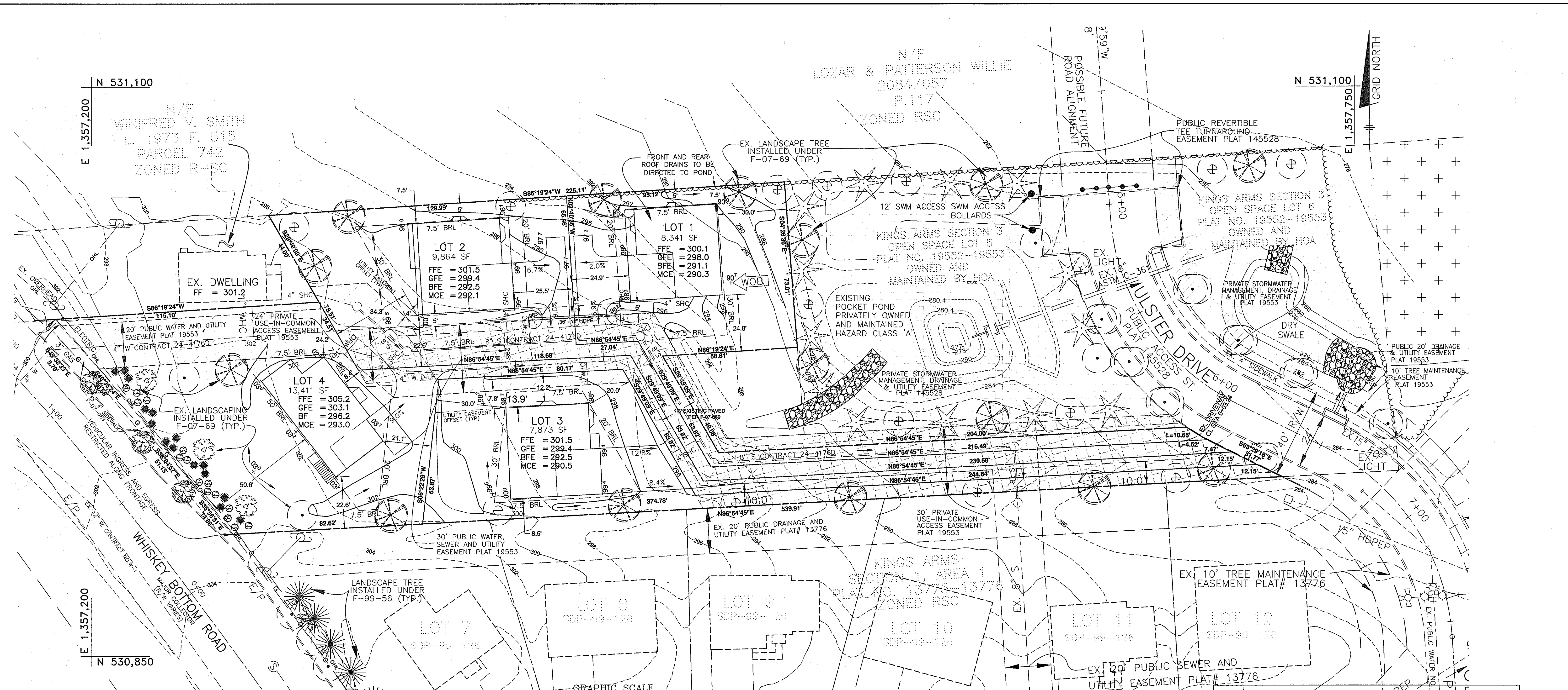
LOCATION: TAX MAP 47, GRID 22
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

BUILDER: BURKARD HOMES
5300 DORSEY HALL DR., SUITE 102
COLUMBIA, MARYLAND 21042
240-375-1052

TITLE: TITLE SHEET
SP-03-17, WP-03-81, F-03-106, F-03-107, F-07-069, CONTRACT # 24-4176-D

DATE: OCTOBER 2009 PROJECT NO. 2264

DES: AAM DRAFT: AAM CHECK: CAM SCALE: AS SHOWN DRAWING 1 OF 3



N 531,100

N 531,100

E 1,357,200

E 1,357,750

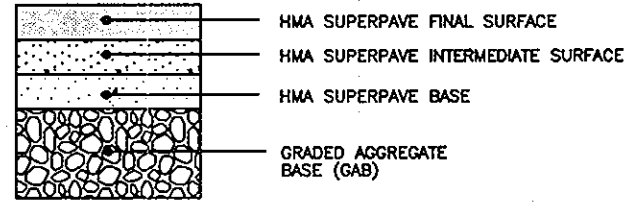
E 1,357,200

N 530,850



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5 TO <7		3 TO <5 TO <7				
			MIN	HMA WITH GAB	HMA WITH CONSTANT GAB	MIN	HMA WITH GAB	HMA WITH CONSTANT GAB	
P-1	PARKING BAYS, RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE AISLES, RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE	1.5	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		HMA SUPERPAVE BASE	2.0	2.0	2.0	3.5	3.0	2.5	
		GRADED AGGREGATE BASE (GAB)	8.5	7.0	5.0	4.0	4.0	4.0	

P-1 PAVING DETAIL



LOT	INV. @ MAIN	INV. @ ROW/ESMT	MCE
1	286.6	286.8	290.3
2	288.2	288.4	292.1
3	286.2	286.5	290.5
4	289.3	289.6	293.0

CONTRACTOR TO CHECK SEWER HOUSE CONNECTION ELEVATION AT PROPERTY/EASEMENT LINE PRIOR TO CONSTRUCTION OF HOUSE TO ENSURE PROPER SHC SLOPES CAN BE MAINTAINED.

LEGEND

- EXISTING CONTOUR 390
- PROPOSED CONTOUR 412
- EXISTING WOODS LINE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- EX. OVERHEAD WIRE
- EX. GAS MAIN
- BUILDING RESTRICTION LINE 30' BRL
- FIRST FLOOR ELEVATION FFE=350.9
- GARAGE FLOOR ELEVATION (LIP) GFE=348.8
- BASEMENT FLOOR ELEVATION BFE=341.9
- EX. UTILITY POLE
- EXISTING STREET TREE PER F-07-069
- EXISTING PERIMETER AND SCREENING TREES & SHRUBS PER F-07-069
- 10' PUBLIC TREE MAINTENANCE EASEMENT
- PUBLIC WATER AND/OR SEWER & UTILITY EASEMENT
- PUBLIC DRAINAGE & UTILITY EASEMENT
- PRIVATE ACCESS EASEMENT
- PRIVATE SWM DRAINAGE & UTILITY EASEMENT

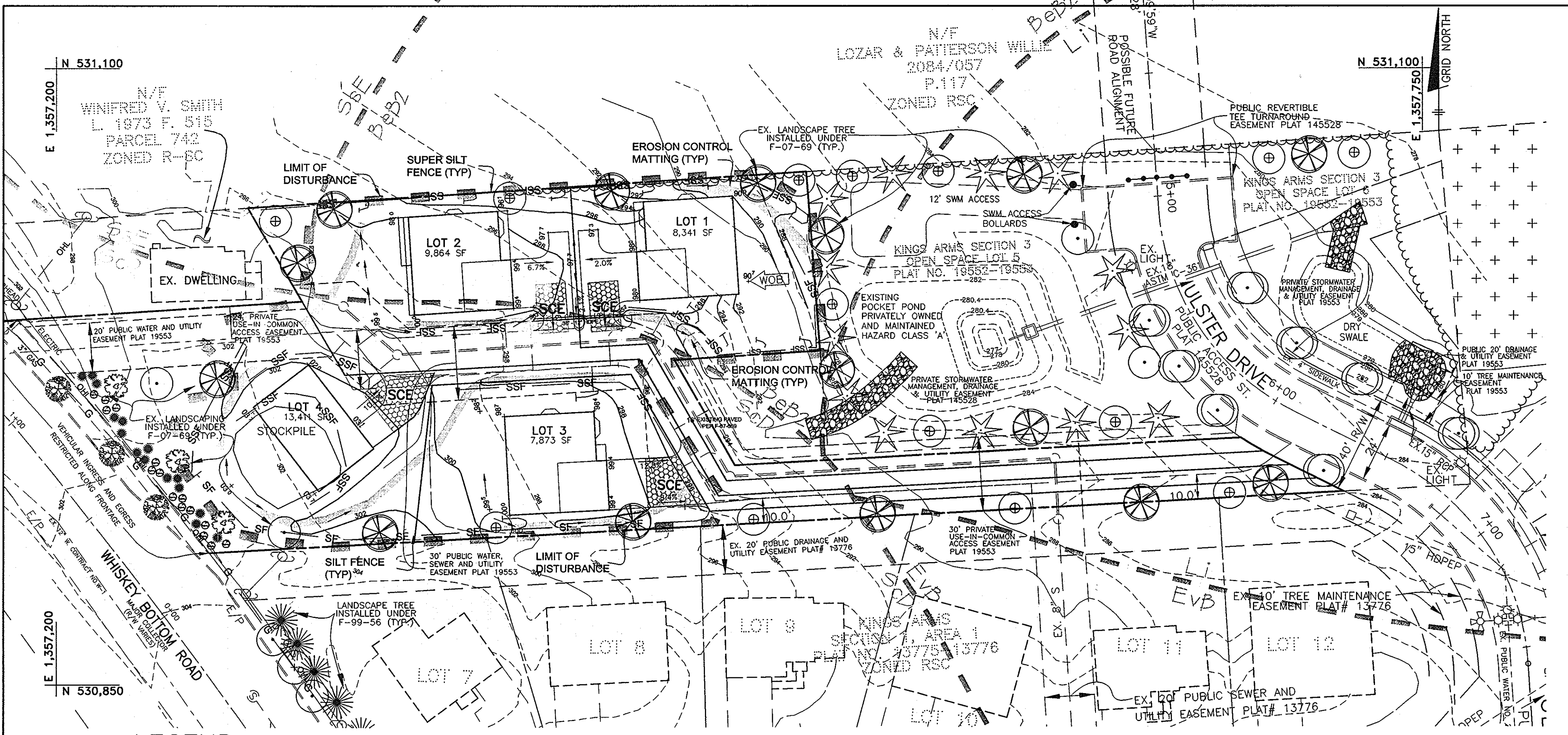
SEE GENERAL NOTE 34 FOR SETBACK EXCEPTIONS TO PUBLIC UTILITY EASEMENTS.

NO.	DATE	REVISION
<p>OWNER: SECURITY DEVELOPMENT, LLC P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 410-465-4244</p> <p>BUILDER: BURKARD HOMES 5300 DORSEY HALL DR., SUITE 102 COLUMBIA, MARYLAND 21042 240-375-1052</p> <p>PROJECT: KINGS ARMS SECTION 3, LOTS 1-4 SINGLE FAMILY DETACHED DWELLINGS</p> <p>LOCATION: TAX MAP 47, GRID 22 PARCEL 741 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p> <p>TITLE: SITE DEVELOPMENT AND GRADING PLAN</p> <p>DATE: JULY 2009 OCTOBER 2009</p> <p>PROJECT NO. 2264</p> <p>DES: AAM DRAFT: AAM CHECK: CAM SCALE: AS SHOWN DRAWING 2 OF 3</p>		

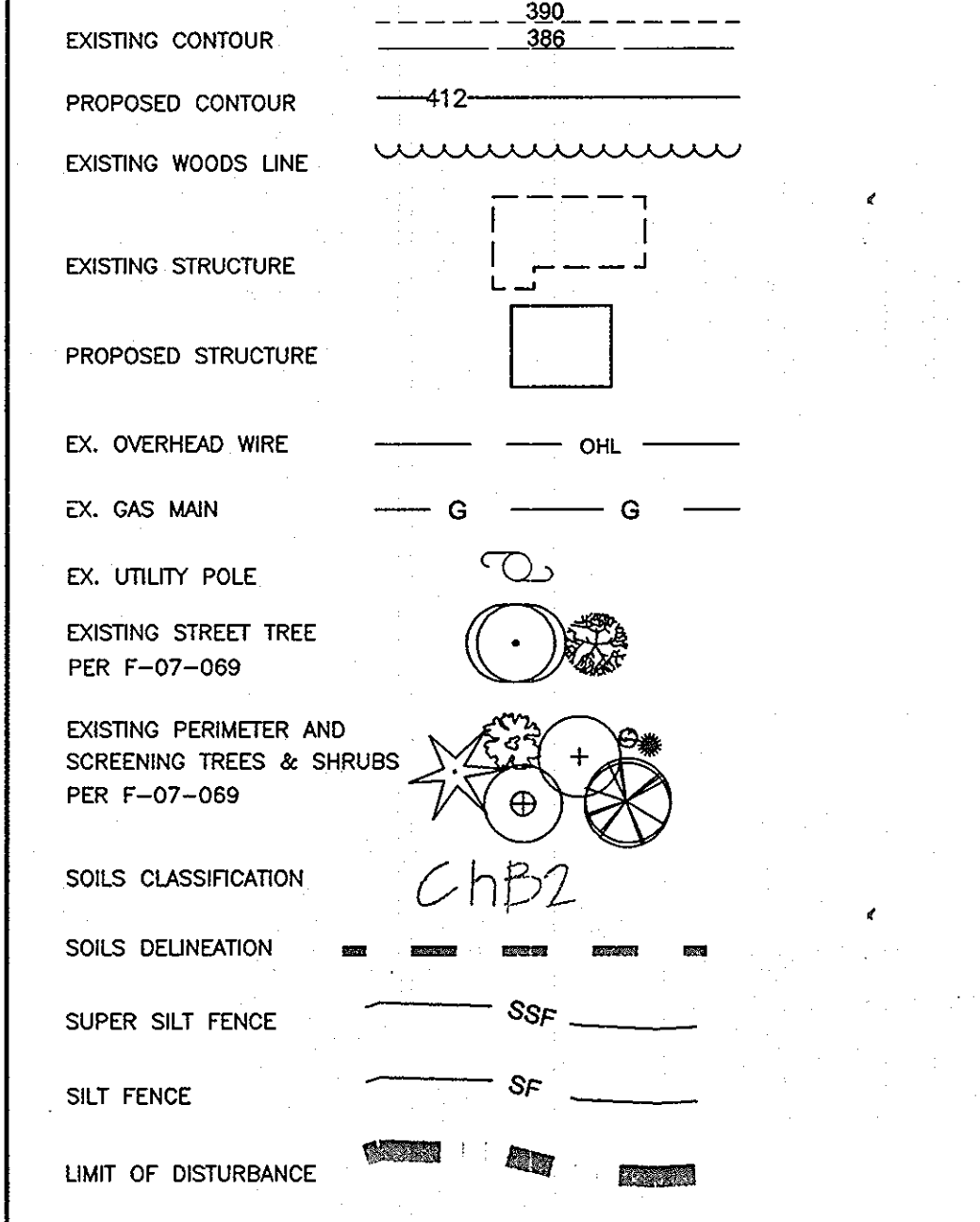
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Karl Shandorff 12/23/09
CHIEF, DIVISION OF LAND DEVELOPMENT

Thomas E. Butler 12/23/09
DIRECTOR, DEP.

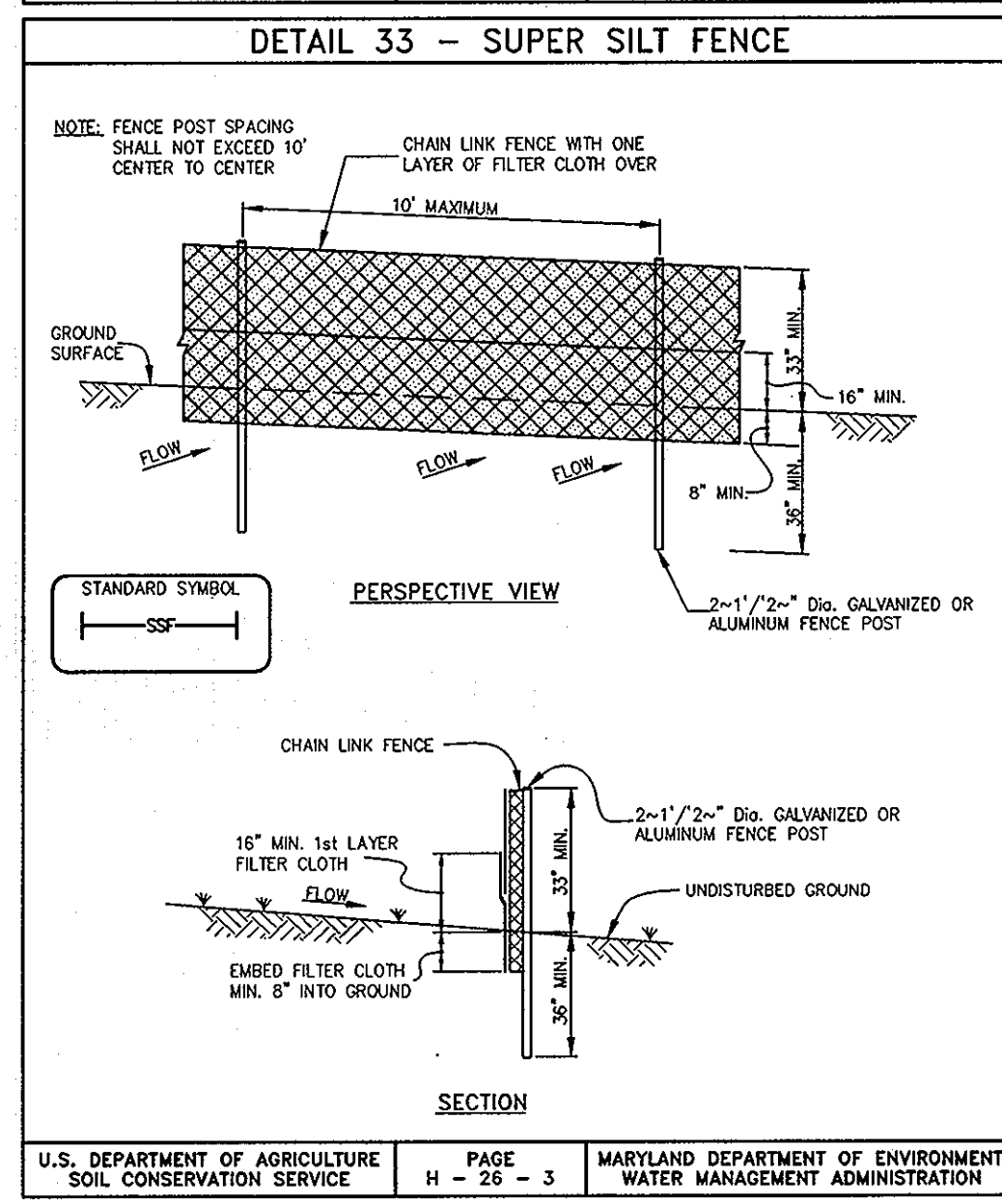
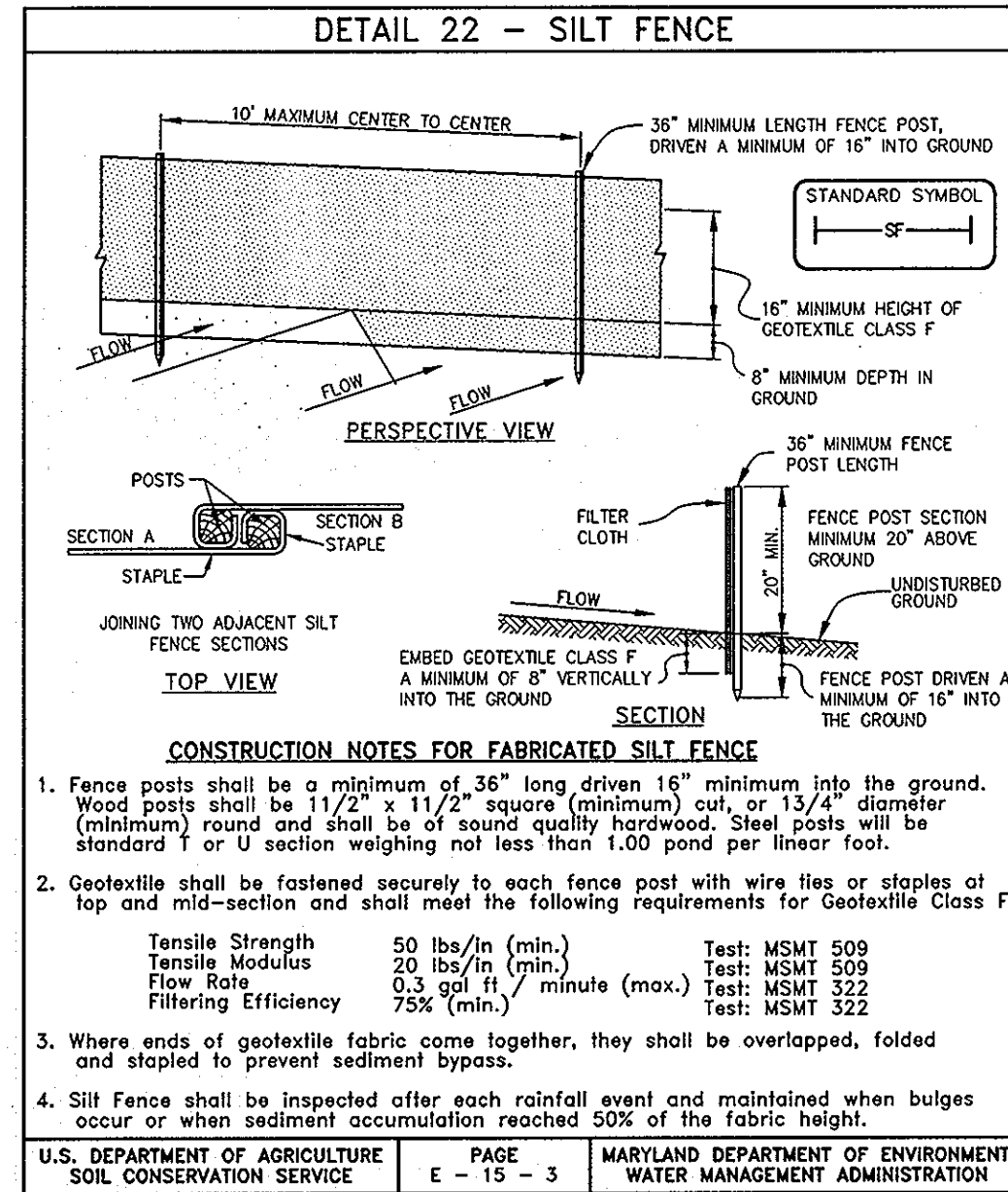


LEGEND



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Chief, Development Engineering Division
 Director, DEP

12/20/09
 12/10/09
 12/23/09



SOILS LEGEND

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
EVb	A	EVESBORO LOAMY SAND - 1 TO 5 PERCENT SLOPES
Li	D	LEONARDTOWN SILT LOAM
Sd	C	SANDY AND CLAYEY LAND - MODERATELY SLOPING
BeB2	C	BELTSVILLE SILT LOAM - 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
SsE	B	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES

* INDICATES HYDRIC SOILS
 SOILS MAP No. 33

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION

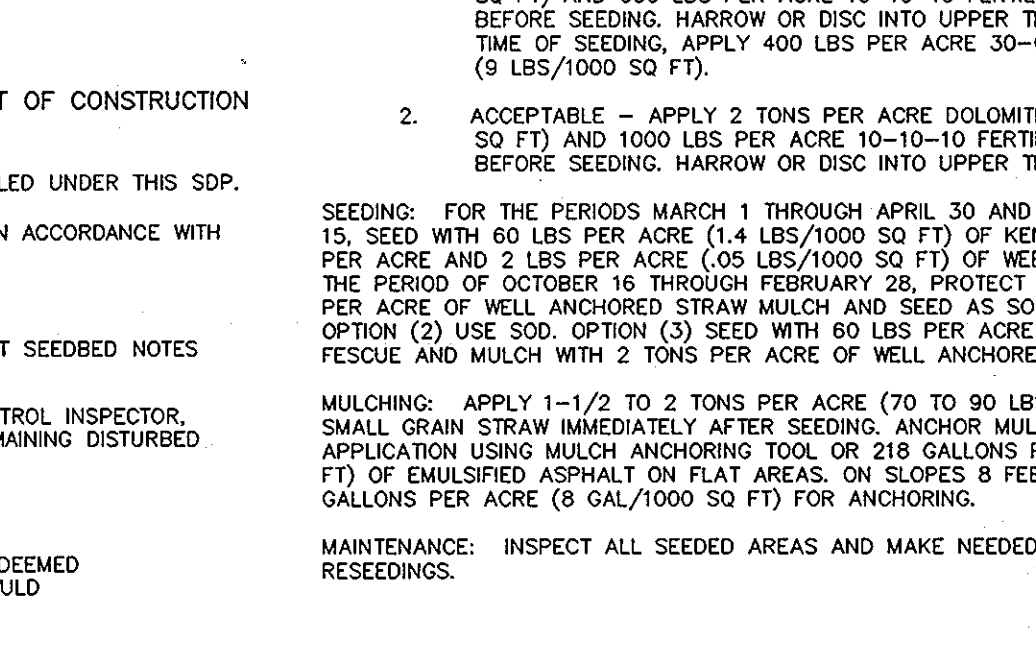
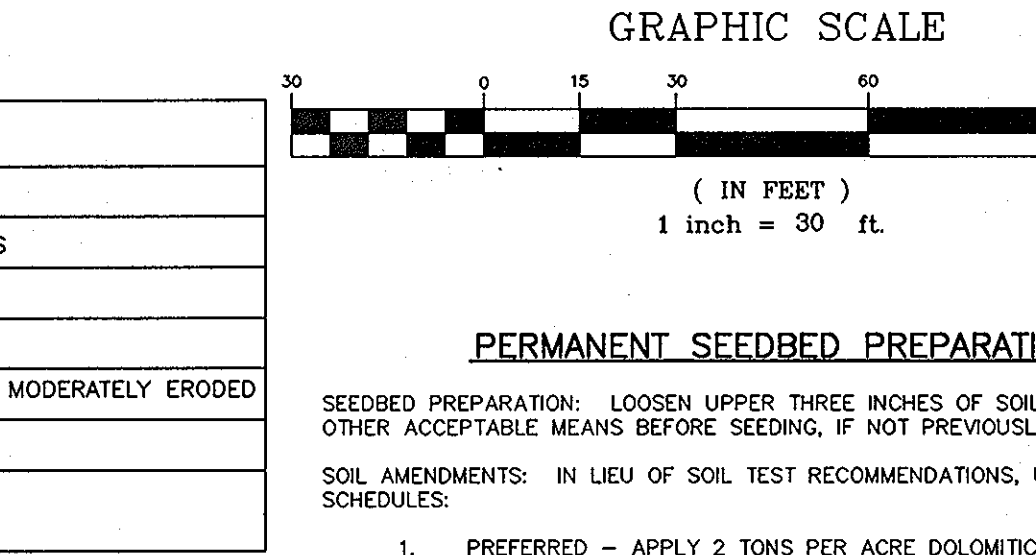
- 1.) OBTAIN GRADING PERMIT.
- 2-6) INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP.
- 7-10*) EXCAVATE FOR FOUNDATIONS, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
- 11-80) CONSTRUCT HOUSES, BACKFILL AND CONSTRUCT DRIVEWAYS.
- 81-85) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES AND FLUSH STORM DRAIN SYSTEM.
- 86-89) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.

* - INDICATES SINGLE HOUSE CONSTRUCTION.

NOTE:
 EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOIL SHOULD BE USED.

SUPER SILT FENCE DESIGN CRITERIA

Slope	Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 35%	5:1 - 3:1	100 feet	1,000 feet
35 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet



PERMANENT SEEDBED PREPARATIONS

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

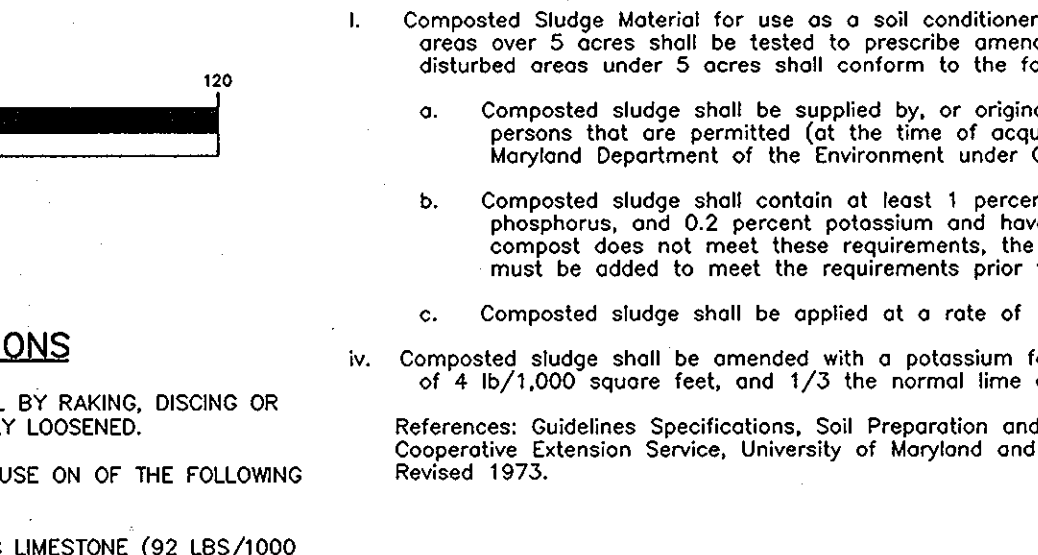
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWING SCHEDULES:

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

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION 1. 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOIL. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF 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 SEEDBED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.



TEMPORARY SEEDBED PREPARATIONS

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED 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 PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH 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 SOIL.

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 FT. 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.

PERMANENT SEEDBED PREPARATIONS

SEEDBED 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 ON OF THE FOLLOWING SCHEDULES:

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

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION 1. 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOIL. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF 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 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

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

TOPSOIL SPECIFICATIONS

- Topsoil salvaged from the existing site may be used provided that it meets that 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, silt 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 texture subsoils and shall contain less than 5% by volume of cinders, stones, silt, 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, quack grass, Johnson grass, 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 over 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - 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:
 - 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 or 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 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 phytotoxic materials.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - 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
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 5" 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 sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from the topsoiling 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 seedbed preparation.
- 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:
 - Composted Sludge Material for use as a soil conditioner for sites having distributed areas over 5 acres shall be tested to prescribe amendments and for sites having distributed areas under 5 acres shall conform to the following requirements:
 - 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.
 - 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.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - 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.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 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. (313-1850).
- 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 SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, 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 SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THE 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 SEEDINGS (SEC. 51) S00 (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.
- 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 (THIS SUBMISSION)	0.91	ACRES
AREA DISTURBED	0.65	ACRES
AREA TO BE ROOFED OR PAVED	0.27	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.38	ACRES
TOTAL CUT	714	CY
TOTAL FILL	747	CY
OFFSITE WASTE/BORROW AREA LOCATION	*	
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SPILL/BORROW SITE AND NOTIFY AND OBTAIN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
- 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 CONTROL 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 CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

ENGINEER'S CERTIFICATE

I HEREBY 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 COUNTY CONSERVATION DISTRICT.

12/18/09
 DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT 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 COUNTY CONSERVATION DISTRICT.

12/18/09
 DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

12/14/09
 DATE

BENCHMARK ENGINEERING, INC.

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 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844
 E-MAIL: bai@benchmark-engineering.com

OWNER: SECURITY DEVELOPMENT, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

BUILDER: BURKARD HOMES
 5300 DORSEY HALL DR., SUITE 102
 COLUMBIA, MARYLAND 21042
 240-375-1052

PROJECT: KINGS ARMS SECTION 3, LOTS 1-4
 SINGLE FAMILY DETACHED DWELLINGS

LOCATION: TAX MAP 47, GRID 22
 PARCEL 741
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS

DATE: JULY 2009
 OCTOBER 2009

PROJECT NO. 2284

DES: AAM DRAFT: AAM CHECK: CAM SCALE: AS SHOWN DRAWING: 3 OF 3