

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	GRADING, SEDIMENT AND EROSION CONTROL AND LANDSCAPE PLAN
3	HOUSE MODELS, GENERIC BOXES AND SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

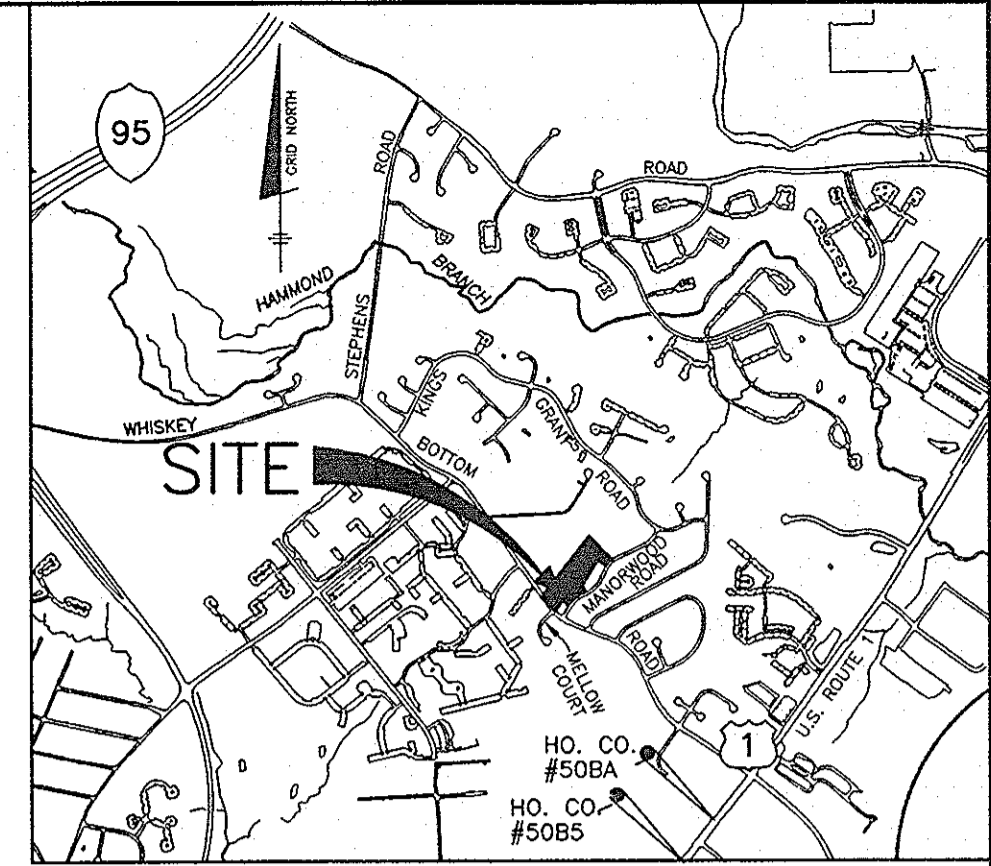
SITE DEVELOPMENT PLAN

KINGS ARMS

SECTION 4

LOTS 1-9

BENCH MARKS--(NAD'83)	
HO. CO. #508A	EL. N/A
STANDARD DISC ON CONC. MONUMENT	
N 527561.6702	E 1359772.5936
HO. CO. #5085	EL. 178.242
STANDARD DISC ON CONC. MONUMENT	
N 524999.3640	E 1357925.6751



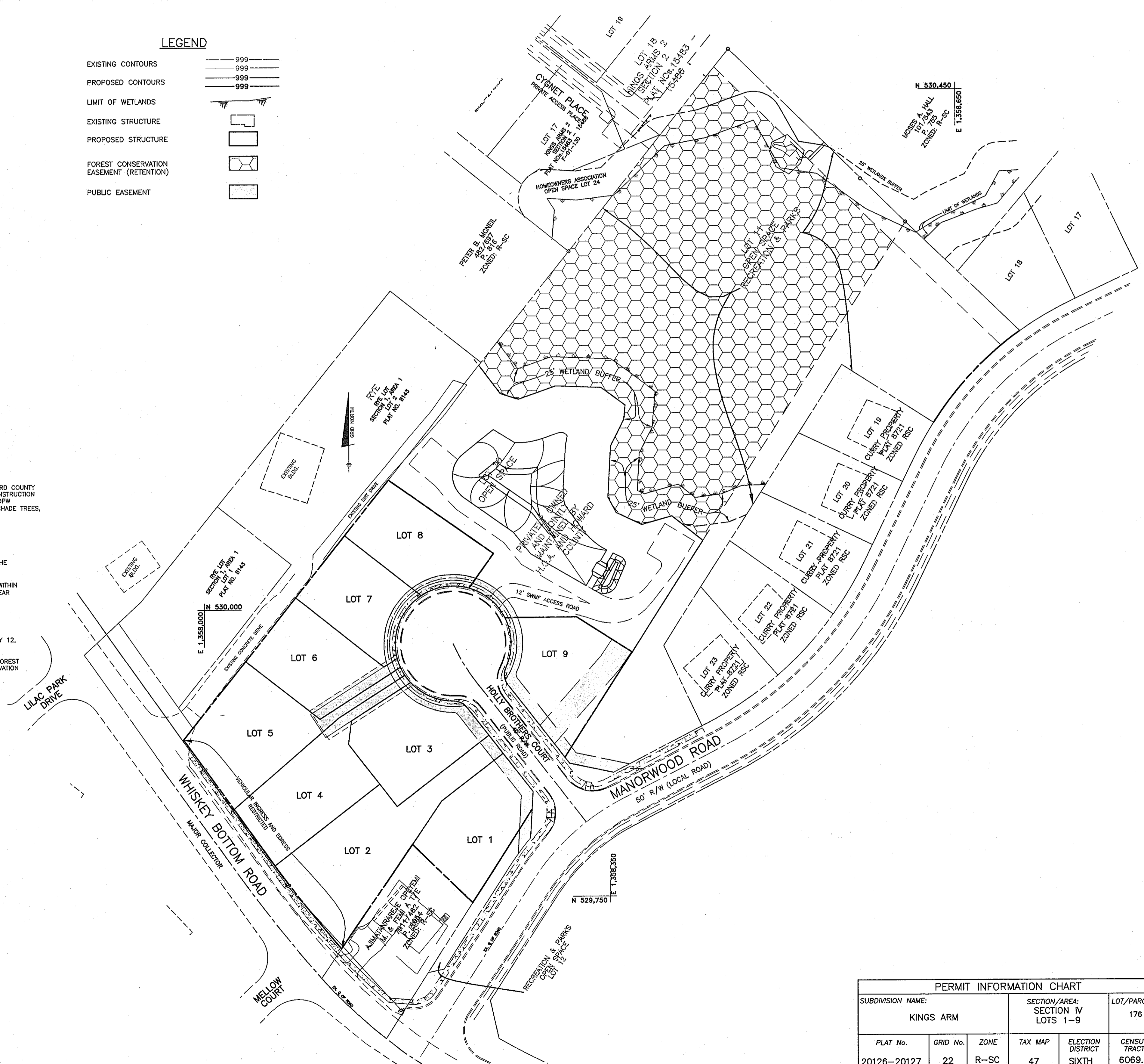
ADC MAP 19 GRID K-10
VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-SC PER THE 2-2-04 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING AMENDMENT EFFECTIVE 7-28-06.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT FIVE(5) 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.
- EXISTING TOPOGRAPHY SHOWN HEREON WAS TAKEN FROM THE GRADING PLAN UNDER F-07-068 CONTOUR INTERVAL IS 2 FEET.
- THE COORDINATES BASED ON NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 508A AND 5085.
- EXISTING UTILITIES SHOWN HAVE BEEN TAKEN FROM CONTRACT DRAWINGS #24-4434-D AND ROAD CONSTRUCTION PLANS F-07-068. IF NECESSARY, CONTRACTOR SHALL ADJUST ANY OR ALL STRUCTURE TOP ELEVATIONS TO MATCH SDP GRADES.
- STORM WATER MANAGEMENT PROVIDED BY POCKET POND AND GRASSSED SWALE. THE FACILITY IS HAZARD CLASSIFICATION 'A' UNDER APPROVED FINAL PLAN F-07-068.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDER'S AND/OR DEVELOPER'S EXPENSE.
- SHC ELEVATION SHOWN ARE LOCATED AT THE PROPERTY LINE.
- 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 AND NOT ONTO THE FLAG OR PIPE STEM LOT DRIVEWAY.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING. C) GEOMETRY - MAX. .5% GRAD., MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
 - STRUCTURES(CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD)
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET. C) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- THERE ARE NO STREAMS, STREAM BUFFERS OR 100-YEAR FLOODPLAIN LOCATED ON THESE LOTS.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS: BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 10 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.
- WOB INDICATES WALKOUT BASEMENT.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.
- "BRL" INDICATES BUILDING RESTRICTION LINE.
- FOR DRIVEWAY ENTRANCE DETAIL SEE HOWARD COUNTY STANDARD DETAILS R-6.03.
- HOUSES/GARAGES WILL BE SITED ON LOTS SO THAT A SECOND CAR, IF PARKED IN THE DRIVEWAY, WILL NOT OVERHANG INTO THE SHARED DRIVEWAY (18' MINIMUM CLEARANCE).
- DRIVEWAY SLOPES SHOWN ARE AVERAGE. THE SLOPE AT THE OUTSIDE EDGES COULD BE FLATTER OR STEEPER DEPENDING ON GRADE OF ROADWAY.
- THIS PLAN CONFORMS WITH THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER SHALL APPLY FOR BUILDING PERMITS FOR ALL LOTS AS SHOWN ON THIS SITE DEVELOPMENT PLAN WITHIN FIVE YEARS OF SIGNATURE APPROVAL OF THIS PLAN.
- STREET TREES HAVE BEEN PROVIDED IN ACCORDANCE WITH THE APPROVED ROAD CONSTRUCTION DRAWINGS (F-07-068). SURETY HAS BEEN POSTED WITH THE DEVELOPER'S AGREEMENT.
- PERIMETER AND STORM WATER MANAGEMENT LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WAS PROVIDED AS SHOWN ON THE LANDSCAPE PLAN SHEETS OF THE ROAD CONSTRUCTION DRAWINGS FOR THIS PROJECT. SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DFW DEVELOPER'S AGREEMENT UNDER THE FINAL PLAN (F-07-068) IN THE AMOUNT OF \$10,000 (\$7,500 FOR 25 SHADE TREES, \$2,500 FOR 17 EVERGREENS).
- THIS SITE DEVELOPMENT PLAN HAS BEEN PREPARED TO BE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF \$800.00 (\$800.00 FOR 2 SHADE TREES AND \$300.00 FOR 2 EVERGREEN TREES) SHALL BE POSTED WITH THE BUILDER'S GRADING PERMIT FOR LOT 9.
- THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT FOR THIS PROJECT OF 1.39 AC WAS ADDRESSED BY THE ON-SITE RETENTION OF 1.63 AC UNDER THE FINAL PLAN (F-07-068).
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- ALL WATER STRUCTURES SHALL BE LOCATED INSIDE.
- A DRIVEWAY MAINTENANCE AGREEMENT FOR THE USE-IN-COMMON DRIVEWAY SHARED BY LOTS 4, 5 & 8 WAS RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 11341/FOLIO 340, DATED MAY 12, 2008.
- THE FOREST CONSERVATION EASEMENT WITHIN THE OPEN SPACE AREA FOR THIS DEVELOPMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.100 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

LEGEND

EXISTING CONTOURS	--- 999 ---
PROPOSED CONTOURS	--- 999 ---
LIMIT OF WETLANDS	--- 999 ---
EXISTING STRUCTURE	[Symbol]
PROPOSED STRUCTURE	[Symbol]
FOREST CONSERVATION EASEMENT (RETENTION)	[Symbol]
PUBLIC EASEMENT	[Symbol]



SITE ANALYSIS DATA CHART

GENERAL SITE DATA	
1.) PRESENT ZONING:	R-SC
2.) APPLICABLE DPZ FILE REFERENCES:	F-07-68, F-89-75, WP-89-42, SP-05-10
3.) PROPOSED USE OF SITE:	RESIDENTIAL (SFD)
4.) PROPOSED WATER AND SEWER SYSTEMS:	PUBLIC
AREA TABULATION	
1.) GROSS TRACT AREA	1.59 AC.±
2.) AREA WITHIN 100-YEAR FLOODPLAIN	0.00 AC.±
3.) TOTAL AREA OF 25% OR GREATER STEEP SLOPES AREA NOT IN FLOODPLAIN (FOR NTA CALC.)	0.00 AC.±
4.) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION	9
5.) AREA OF ROAD RIGHT-OF-WAY	0.00 AC.±
6.) AREA OF RECREATIONAL OPEN SPACE REQUIRED	N/A

ADDRESS CHART

LOT	STREET ADDRESS
1	9303 HOLLY BROTHERS COURT
2	9307 HOLLY BROTHERS COURT
3	9311 HOLLY BROTHERS COURT
4	9315 HOLLY BROTHERS COURT
5	9319 HOLLY BROTHERS COURT
6	9323 HOLLY BROTHERS COURT
7	9327 HOLLY BROTHERS COURT
8	9328 HOLLY BROTHERS COURT
9	9310 HOLLY BROTHERS COURT

SHC TABLE

LOT NO.	MIN. CELLAR	SHC INV.
1	272.52	268.70
2	275.71	269.84
3	274.20	269.85
4	279.23	275.29
5	279.34	275.32
6	277.79	273.69
7	276.60	272.50
8	275.89	272.04
9	273.56	269.62

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

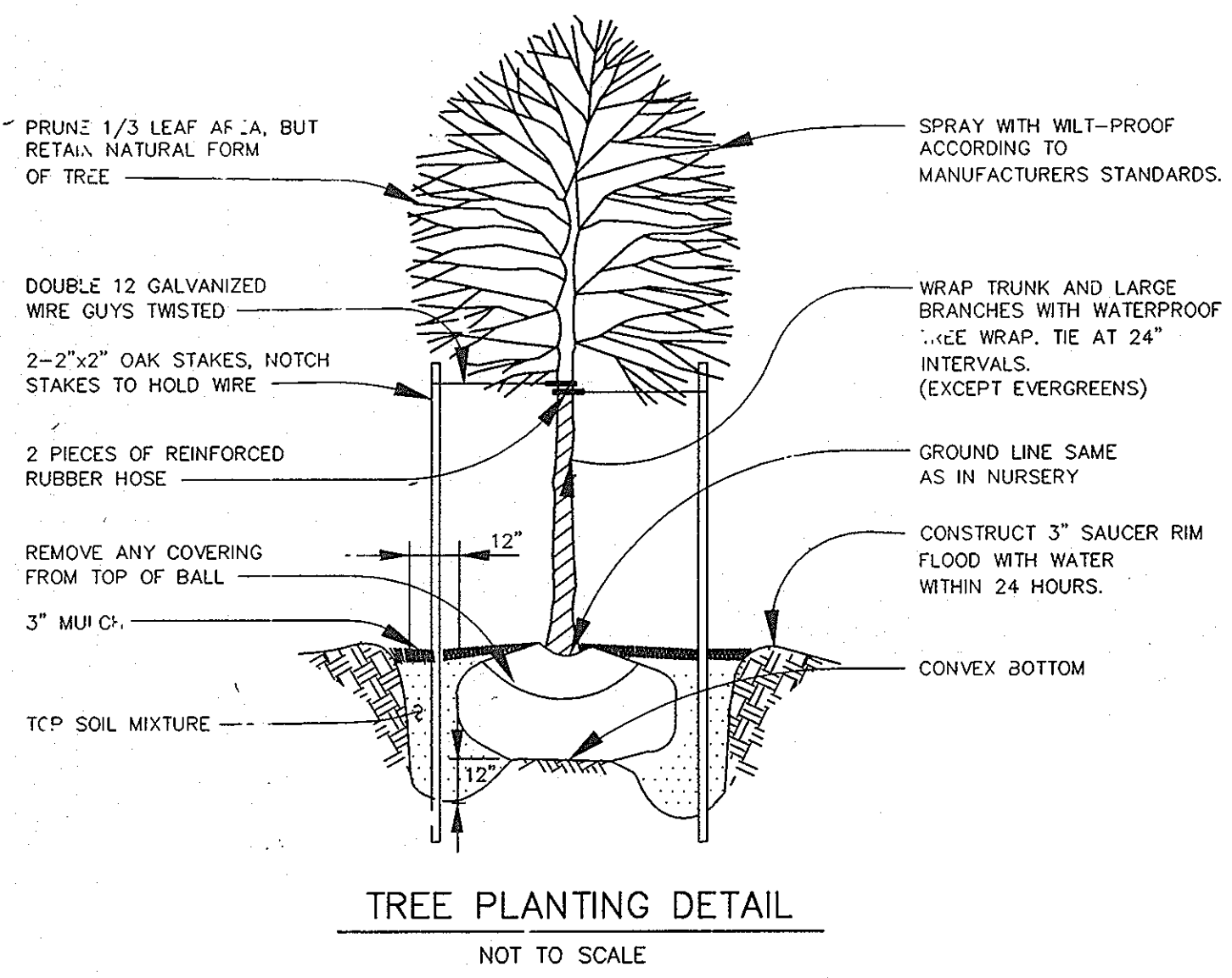
MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MIN. LOT SIZE
2	10,743 S.F.	2,191 S.F.	8,552 S.F.
4	7,934 S.F.	714 S.F.	7,220 S.F.
5	8,689 S.F.	659 S.F.	8,030 S.F.
6	6,653 S.F.	91 S.F.	6,562 S.F.

APPROVED - DEPARTMENT OF PUBLIC WORKS	
CHIEF, BUREAU OF HIGHWAYS	DATE
APPROVED - DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
DIRECTOR	DATE

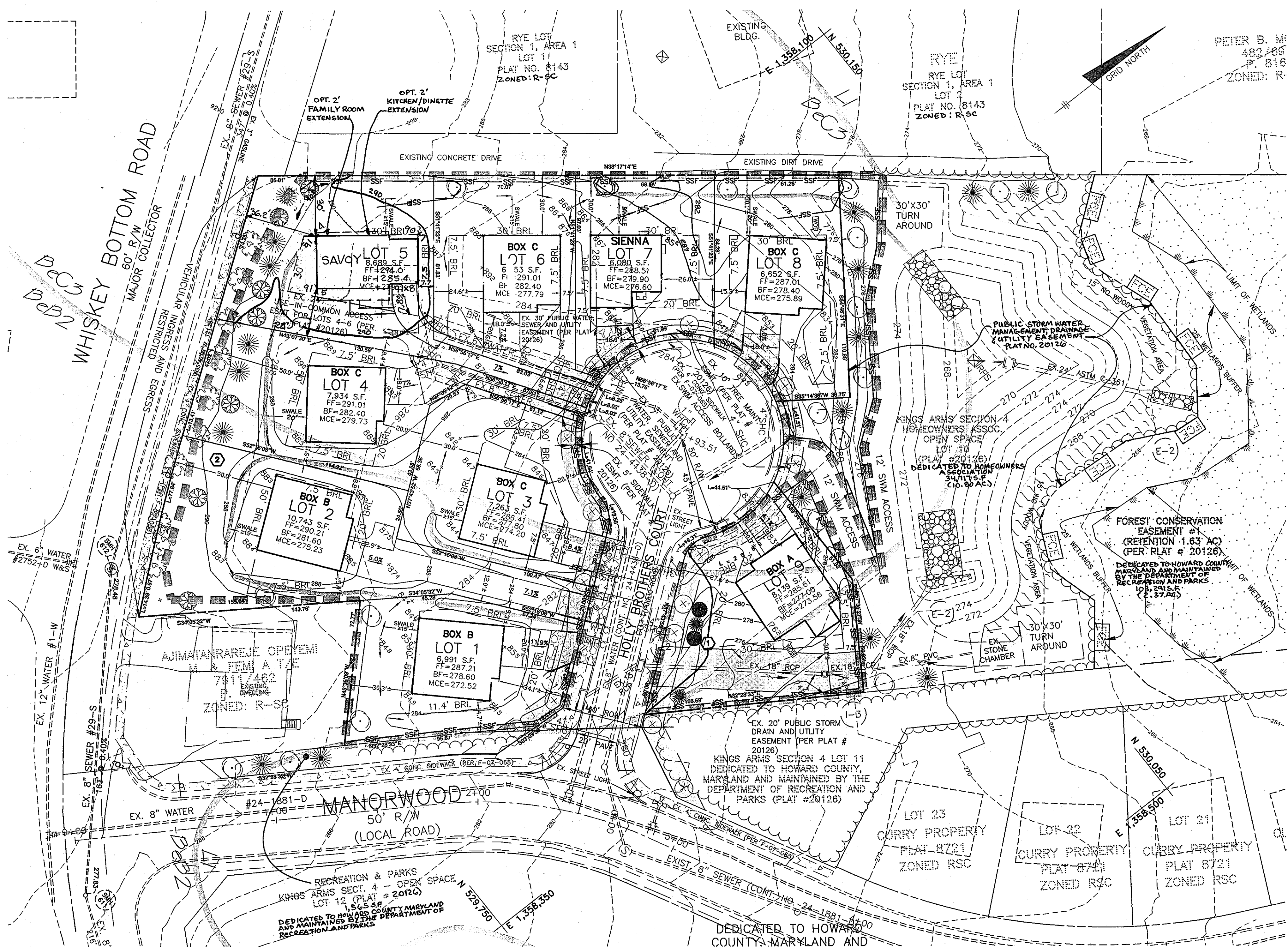
PERMIT INFORMATION CHART					
SUBDIVISION NAME:		SECTION/AREA:		LOT/PARCEL #	
KINGS ARM		SECTION IV LOTS 1-9		176	
PLAT No.	GRID No.	ZONE	TAX MAP	ELECTION DISTRICT	CENSUS TRACT
20126-20127	22	R-SC	47	SIXTH	6069.02
WATER CODE		SEWER CODE			
C03		7270000			

NO.		DATE		REVISION	
BENCHMARK ENGINEERING, INC. ENGINEERS • LAND SURVEYORS • PLANNERS 8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 phone: 410-465-8105 • fax: 410-465-6644 www.bel-civilengineering.com					
OWNER/BUILDER:			PROJECT:		
RYAN HOMES 6085 MARSHALEE DRIVE SUITE 140 ELKCRIDGE, MD 21075 410.796.0980			KINGS ARMS SECTION 4 LOTS 1-9		
LOCATION:			TITLE:		
TAX MAP: 47 PARCELS: 176 GRID: 22 ZONED: R-SC ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND			SITE DEVELOPMENT PLAN TITLE SHEET		
DATE:		PROJECT NO.:		SHEET:	
JUNE, 2008 SEPTEMBER, 2008		2129		1 OF 3	
DESIGN:	DRAFT:	CHECK:	SCALE:		
BFC	BFC	JC	1" = 50'		



SOILS LEGEND			
MAP SYMBOL	SOIL TYPE	MAPPING UNIT	
B&B2	C	BELTSVILLE SILT LOAM, 1 TO 1 PERCENT SLOPES, MODERATELY ERODED	
B&C1	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED	
L1	D	LEONARDTOWN SILT LOAM	

* INDICATES HYDRIC SOIL
SOILS MAP NO. 33



LEGEND	
	EXISTING CONTOURS PER F-03-134
	PROPOSED CONTOURS
	EXISTING TREE LINE
	INDICATES A WALKOUT EASEMENT
	STABILIZED CONSTRUCTION ENTRANCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	EROSION CONTROL MATTING
	SOILS TYPE
	SOILS DELINEATION LINE
	EXISTING LANDSCAPING F-07-068
	EXISTING FOREST CONSERVATION
	EXISTING FOREST CONSERVATION SIGNAGE
	EXISTING STR. (L' or M) PROVIDED PER F-07-068
	EXISTING SIDEWALK PER F-07-068

BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER: John Lewis 9/17/08 DATE

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 THIS IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER: Brian F. Deary, P.E. #28558 9/17/08 DATE

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 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.

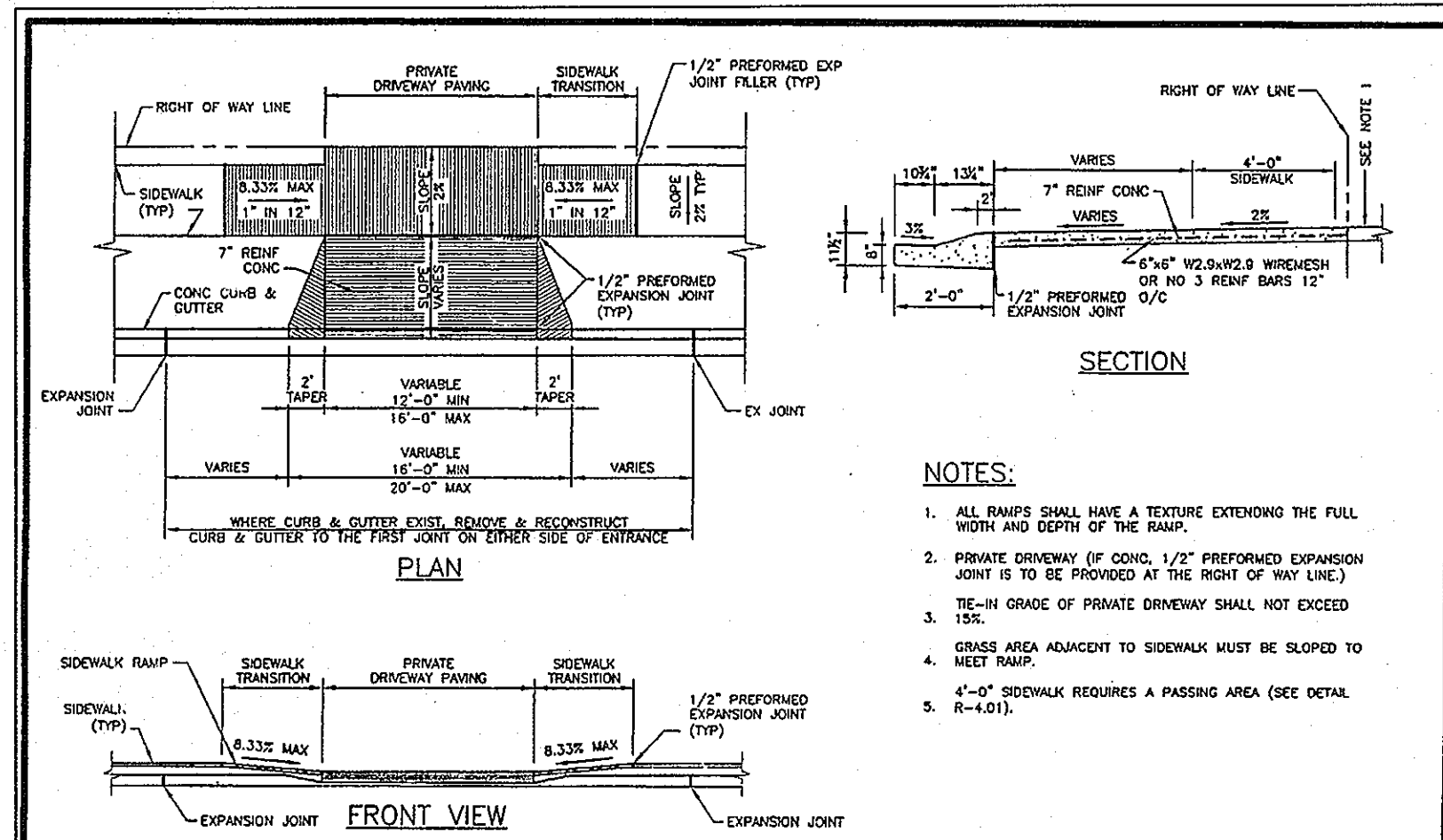
DEVELOPER: John Lewis 9/17/08 DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 9/13/08 DATE
HOWARD SCD

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Carol K. Hays 10/6/08 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION
Paul F. Meyer 10/6/08 DATE
DIRECTOR



SCHEDULE A LANDSCAPE		
CATEGORY	ADJ. TO ROADWAYS	TOTAL
LANDSCAPE TYPE	B	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	80'	80'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	
NUMBER OF PLANTS REQUIRED	80'	80'
SHADE TREES	2	2
EVERGREEN TREES	2	2
OTHER TREES (2:1 SUBSTITUTE)	-	-
SHRUBS	-	-

LANDSCAPE PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS
	2	PINUS STROBUS (Eastern White Pine)	6' - 8' ht.
	2	TILIA CORDATA (Greenspire Linden)	2-1/2" - 3" cal.

SITE PLAN
SCALE: 1" = 30'

PLANTING NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- TREES MUST BE PLANTED A MINIMUM OF 4 FEET FROM THE EDGE OF PAVING, 10' FROM A DRIVEWAY AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
- ALL PLANTINGS ARE THE RESPONSIBILITY OF THE BUILDER.
- FINANCIAL SURETY FOR PERIMETER LANDSCAPING, INTERNAL PARKING AND STORM WATER MANAGEMENT FOR 2 SHADE TREES AND 2 EVERGREENS SHALL BE POSTED WITH THE GRADING PERMIT FOR THIS PROJECT IN THE AMOUNT OF \$900.00 (\$600 FOR 2 SHADE TREES AND \$300 FOR 2 PINE TREES).
- MATURE TREE HEIGHTS OF PLANTED TREES SHALL NOT EXCEED THE EQUIVALENT DISTANCE AS MEASURED FROM THE BASE OF THE TREE TO THE CENTER LINE OF ANY STEEL TOWER STRUCTURE.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL 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; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

NO.	DATE	REVISION
3	10-9-09	REVISE GRADES & SPT ELEV. ON LOT 5 TO REFLECT AS-BUILT CONDITIONS
2	9-1-09	REVISE GRADES & SPT ELEV. ON LOT 7 TO REFLECT AS-BUILT CONDITIONS
1	6-3-09	REVISE LOT 5 TO SHOW A SAVANNAH AND REVISE GRADES

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 • FAX: 410-465-5644
WWW.BEI-CIVILENGINEERING.COM

Professional Certificate: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28559, Expiration Date: 7-22-2009.

OWNER/BUILDER:	RYAN HOMES 6085 MARSHALEE DRIVE SUITE 140 ELKRIDGE, MD 21075 410.796.0980			
PROJECT:	KINGS ARMS SECTION 4 LOTS 1-9			
LOCATION:	TAX MAP: 47 PARCELS: 176 GRID: 22 ZONED: R-SC ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND			
TITLE:	SITE DEVELOPMENT PLAN GRADING, SEDIMENT AND EROSION CONTROL AND LANDSCAPE PLAN			
DATE:	JUNE, 2008 SEPTEMBER, 2008			
PROJECT NO.:	2129			
DESIGN: RFC	DRAFT: BFC	CHECK: JC	SCALE: AS SHOWN	SHEET 2 OF 3

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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1 TO 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOULD 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 SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 49) 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)	1.59	ACRES
AREA DISTURBED	1.61*	ACRES
AREA TO BE ROOFED OR PAVED	0.60	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.99	ACRES
TOTAL CUT	1592	CY
TOTAL FILL	2666	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 EROSION CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.

*THE AREA DISTURBED INCLUDES PORTIONS OF OPEN SPACE LOT 10 FOR GRADING PURPOSES.

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF TOPSOIL 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 15 FT AT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR, AN ADDITIONAL ROW OF "SUPER" SILT FENCE IS TO BE PLACED AT THE EASTERN L.O.D.

- PERMANENT SEEDBED PREPARATIONS**
- SCHEDULES:**
 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 ONE OF THE FOLLOWING:
- 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. HARROW 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).
 - 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. HARROW 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 50 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WEEDING 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 SOD. 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 UNROOTED SMALL GRASS 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. NO MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

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 THIS IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER - BRUN F. CLEARY, P.E. # 28559 DATE 9/17/2008

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.

DEVELOPER - John Lewis DATE 9/17/08

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA, NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson DATE 9/23/08

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, DIVISION OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development DATE 10/6/08

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/6/08

DIRECTOR DATE 10/6/08

30.0 DUST CONTROL

- Definition:** Controlling dust blowing and movement on construction sites and roads.
- Purpose:** To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.
- Conditions Where Practice Applies:** This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.
- Specifications:**

- Temporary Methods**
- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tracked to prevent blowing.
 - Vegetative Cover - See standards for temporary vegetative cover.
 - Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
 - Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
 - Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control or curtail dust blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
 - Calcium Chloride - Apply at rates that will keep surface moist. May need replacement.
- Permanent Methods**
- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
 - Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
 - Stone - Cover surface with crushed stone or coarse gravel.

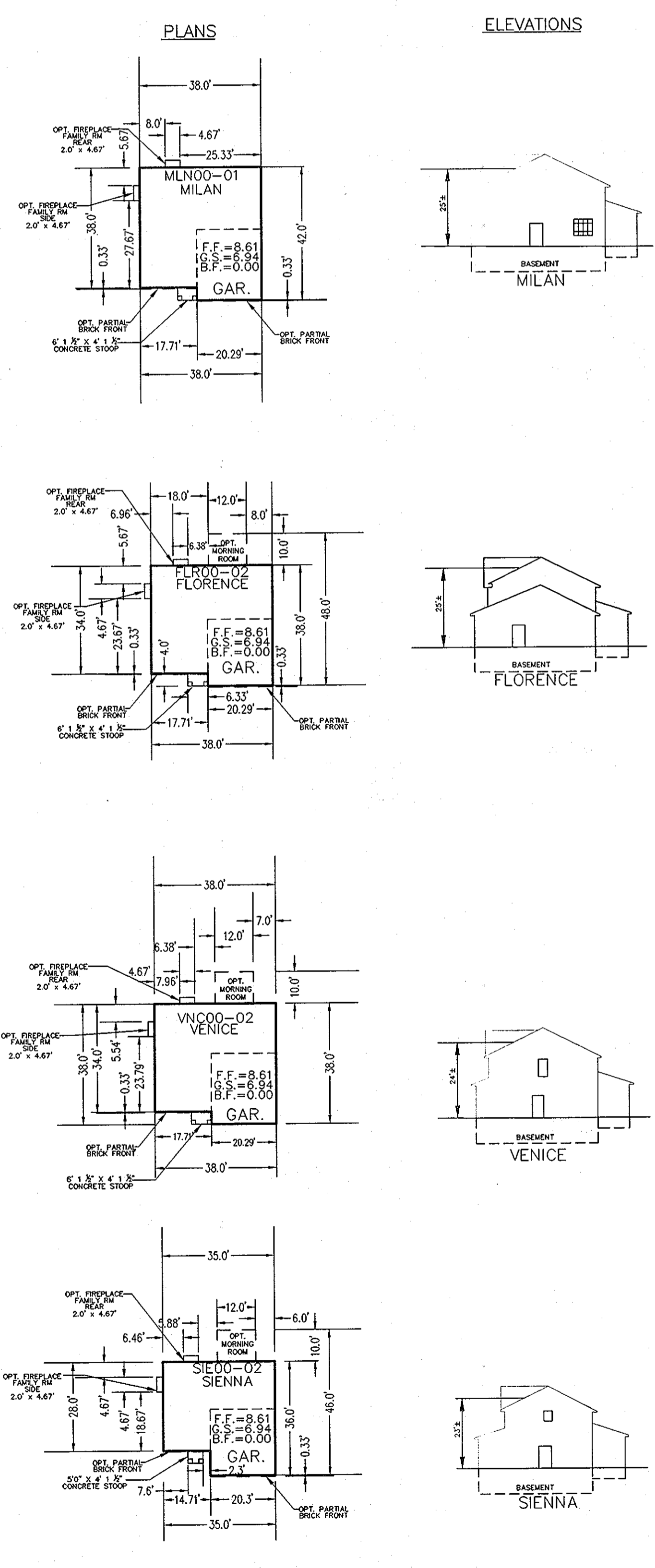
- References:**
- Agriculture Handbook 346, Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
 - Agriculture Information Bulletin 354, How to Control Wind Erosion, USDA-ARS.

TEMPORARY SEEDBED PREPARATIONS

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED UNDER 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 (0.7 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 SOD.
- MULCHING:** APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS 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.

HOUSE MODELS

SCALE: 1"=30"



DETAIL 33 - SUPER SILT FENCE	SUPER SILT FENCE	DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE																																				
	<p>CONSTRUCTION SPECIFICATIONS</p> <ol style="list-style-type: none"> Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Safety for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" height posts. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. Filter cloth shall be fastened to the chain link fence with ties spaced every 24" at the top and mid section. Filter cloth shall be embedded a minimum of 6" into the ground. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the filter cloth, 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 I: <table border="1"> <tr> <td>Tensile Strength</td> <td>50 lb/in (min.)</td> <td>Test: MSMT 509</td> </tr> <tr> <td>Tensile Modulus</td> <td>20 lb/in (min.)</td> <td>Test: MSMT 509</td> </tr> <tr> <td>Flow Rate</td> <td>0.3 gpm/ft/min (max.)</td> <td>Test: MSMT 522</td> </tr> <tr> <td>Filtering Efficiency</td> <td>75% (min.)</td> <td>Test: MSMT 522</td> </tr> </table> <p>SUPER SILT FENCE DESIGN CRITERIA</p> <table border="1"> <tr> <th>Slope</th> <th>Slope (Slopes)</th> <th>Length (ft)</th> <th>Silt Fence Length (ft)</th> </tr> <tr> <td>0 - 10%</td> <td>0 - 1:01</td> <td>Unlimited</td> <td>Unlimited</td> </tr> <tr> <td>10 - 20%</td> <td>1:01 - 5:1</td> <td>200 feet</td> <td>1,500 feet</td> </tr> <tr> <td>20 - 33%</td> <td>5:1 - 3:1</td> <td>100 feet</td> <td>1,000 feet</td> </tr> <tr> <td>33 - 50%</td> <td>3:1 - 2:1</td> <td>100 feet</td> <td>500 feet</td> </tr> <tr> <td>50% +</td> <td>2:1 +</td> <td>50 feet</td> <td>250 feet</td> </tr> </table>	Tensile Strength	50 lb/in (min.)	Test: MSMT 509	Tensile Modulus	20 lb/in (min.)	Test: MSMT 509	Flow Rate	0.3 gpm/ft/min (max.)	Test: MSMT 522	Filtering Efficiency	75% (min.)	Test: MSMT 522	Slope	Slope (Slopes)	Length (ft)	Silt Fence Length (ft)	0 - 10%	0 - 1:01	Unlimited	Unlimited	10 - 20%	1:01 - 5:1	200 feet	1,500 feet	20 - 33%	5:1 - 3:1	100 feet	1,000 feet	33 - 50%	3:1 - 2:1	100 feet	500 feet	50% +	2:1 +	50 feet	250 feet	
Tensile Strength	50 lb/in (min.)	Test: MSMT 509																																				
Tensile Modulus	20 lb/in (min.)	Test: MSMT 509																																				
Flow Rate	0.3 gpm/ft/min (max.)	Test: MSMT 522																																				
Filtering Efficiency	75% (min.)	Test: MSMT 522																																				
Slope	Slope (Slopes)	Length (ft)	Silt Fence Length (ft)																																			
0 - 10%	0 - 1:01	Unlimited	Unlimited																																			
10 - 20%	1:01 - 5:1	200 feet	1,500 feet																																			
20 - 33%	5:1 - 3:1	100 feet	1,000 feet																																			
33 - 50%	3:1 - 2:1	100 feet	500 feet																																			
50% +	2:1 +	50 feet	250 feet																																			
<p>U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE</p> <p>PAGE H - 26 - 3</p> <p>MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION</p>	<p>U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE</p> <p>PAGE E - 26 - 3A</p> <p>MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION</p>	<p>U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE</p> <p>PAGE F - 17 - 3</p> <p>MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION</p>																																				

DETAIL 30 - EROSION CONTROL MATTING

CONSTRUCTION SPECIFICATIONS

- STAPLE THE MATTING TO PLACEMENT THE TOP ENDS OF THE MATTING IN A HARBOR TRENCH AT 6" SPACING. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE GRADED SURFACE SECTION. STAPLES WITH A ROW OF STAPLES ARE TO BE DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
- STAPLE THE 4" OVERLAP OF THE MATTING CENTER USING AN 18" SPACING BETWEEN STAPLES.
- BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SPACING TO MAINTAIN FIRM CONTACT WITH THE SOIL.
- STAPLES SHALL BE PLACED 2" APART WITH A ROW 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 TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4". OVERLAP FEDERAL OVERLAP WITH A DOUBLE ROW OF STAPLES. PLACED 6" APART IN A STAGGERED PATTERN ON OTHER SIDE.
- THE OVERLAP END OF THE MATTING UNDER SHOULD BE SIMILARLY SECURED WITH WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEPT OPEN.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

PAGE G - 22 - 2

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NO.		DATE		REVISION	
<p>BENCHMARK ENGINEERING, INC.</p> <p>ENGINEERS • LAND SURVEYORS • PLANNERS</p> <p>8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 phone: 410-465-6105 • Fax: 410-465-6644 www.bei-civilengineering.com</p>					
OWNER/BUILDER:		PROJECT:			
RYAN HOMES 6085 MARSHALEE DRIVE SUITE 140 ELKBRIDGE, MD 21075 410.796.0980		KINGS ARMS SECTION 4 LOTS 1-9			
LOCATION:		TAX MAP: 47	PARCELS: 176	ZONING: R-3C	
TITLE: SITE DEVELOPMENT PLAN HOUSE MODELS, GENERIC BOXES AND SEDIMENT AND EROSION CONTROL NOTES AND DETAILS		ELECTION DISTRICT NO. 6		HOWARD COUNTY, MARYLAND	
DATE: JUNE, 2008	SEPTEMBER, 2008	PROJECT NO. 2129		SHEET 3 OF 3	
DESIGN: BFC	DRAFT: BFC	CHECK: JC	SCALE: AS SHOWN		