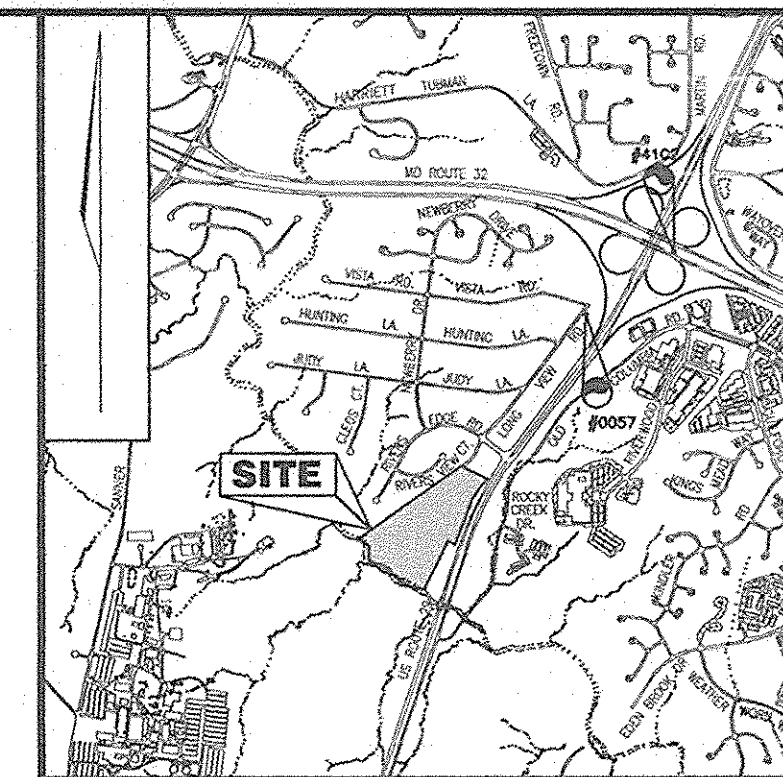


# PRELIMINARY PLAN

# HEARTHSTONE AT RIVERSIDE

## SINGLE FAMILY LOTS 4-24 and OPEN SPACE LOTS 25-30

# HOWARD COUNTY, MARYLAND



VICINITY MAP  
SCALE: 1"=2000'

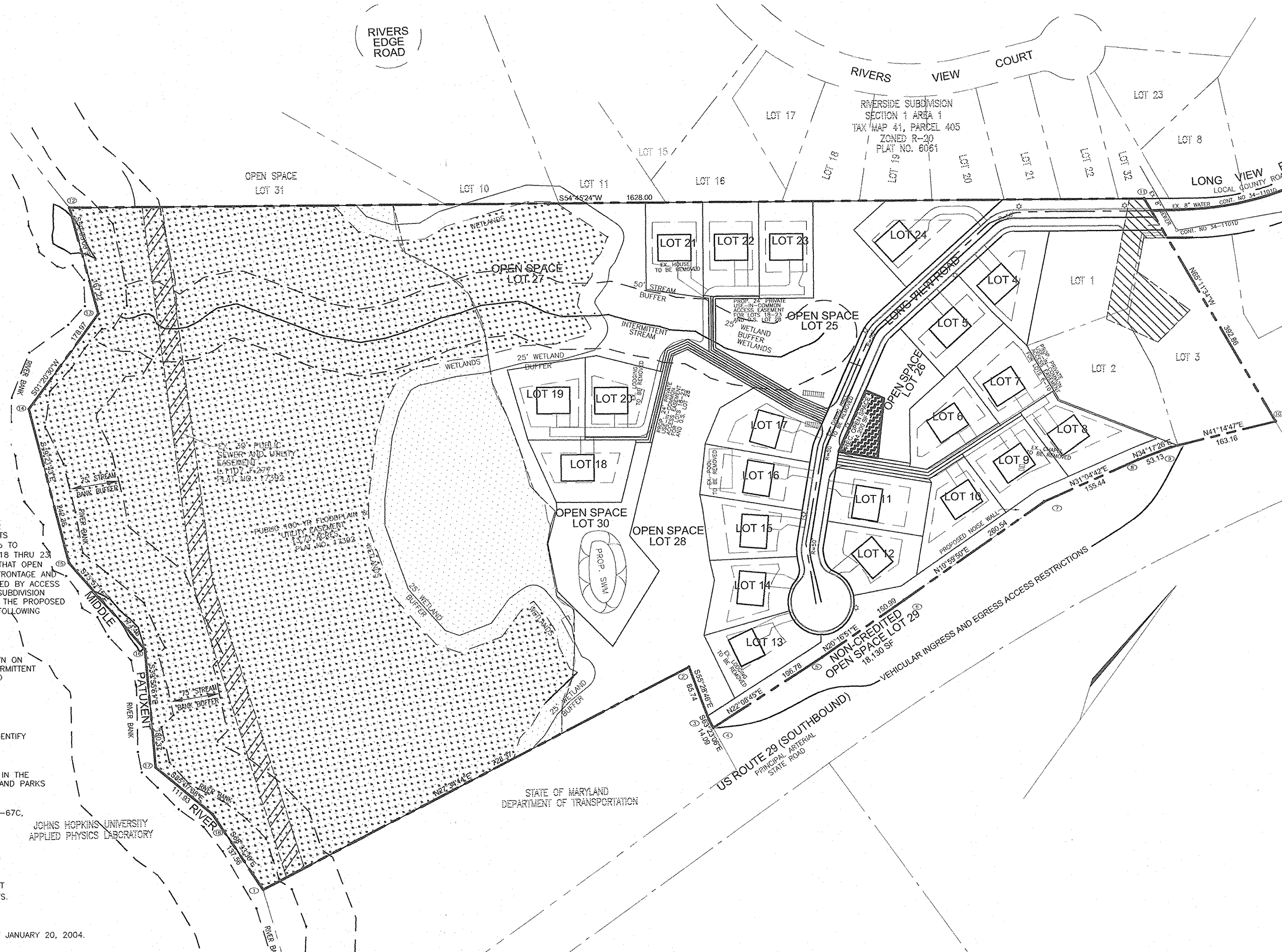
1. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NUMBERS 0057 AND 41C2 WERE USED FOR THIS PROJECT.

### GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- DEED REFERENCE: L. 9351 F.200 ; PARCEL 179
- SITE DATA  
LOCATION: 5TH ELECTION DISTRICT  
EXISTING ZONING: R-20  
GROSS AREA OF PROJECT: 28.70 AC.  
BUILDABLE BULK PARCEL 'A' (F-05-11): 26.84 AC.  
LOTS 1-3 (F-05-11): 1.86 AC.  
AREA OF 100-YEAR FLOODPLAIN & UTILITY EASEMENT: 13.71 AC.  
AREA OF STEEP SLOPES OUTSIDE OF 100-YR. FLOODPLAIN: 1.38 AC.  
NET AREA OF PROJECT: 13.61 AC.  
AREA OF CREDITED OPEN SPACE REQUIRED: 40% x 28.70 AC. (INCLUDES THE AREA FOR LOTS 1, 2, AND 3 PER F-05-11) = 11.48 AC. (BASED ON 12,000 SQ. FT. MINIMUM LOT SIZE).  
AREA OF CREDITED OPEN SPACE PROVIDED: 19.24 ACRES. (19.24 + 0.417 ACRES. N.C.O.S. = 19.65 ACRES.)  
AREA OF NON-CREDITED OPEN SPACE PROVIDED: 0.417 AC.  
AREA OF RECREATIONAL OPEN SPACE REQUIRED: 4,200 S.F. (200 S.F. PER LOT).  
AREA OF RECREATIONAL OPEN SPACE PROVIDED: 4,200 S.F.  
AREA OF PROPOSED ROAD: 1.02 AC.  
AREA OF PROPOSED BUILDABLE LOTS: 6.17 AC.  
NUMBER OF LOTS/PARCELS PROPOSED: 21  
TOTAL APPROXIMATE LIMIT OF DISTURBANCE: 11.51 AC
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SURVEYS INC., DATED FEBRUARY
- WATER WILL BE PROVIDED THROUGH CONTRACT NO. 34-1101-D. SEWER WILL BE PROVIDED THROUGH CONTRACT NO. 30-1001.
- STORM WATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY A POCKET POND AND WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
- FLOODPLAIN SHOWN ON SITE IS BASED ON A STUDY PREPARED BY HOWARD COUNTY DATED JULY 2003 AND APPROVED UNDER F-05-11.
- FOREST STAND DELINEATION PLAN PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED NOVEMBER 2004.
- FOREST CONSERVATION PLAN PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED OCT. 2006.
- TOTAL OBLIGATION IS 3.84 AC. TO BE FULFILLED BY RETENTION OF 1.66 AC (\$14,461.92), REFORESTATION OF 2.18 AC. (\$47,480.40) TOTAL FINANCIAL SURETY OBLIGATION IS \$61,942.32.
- 51 STREET TREES PER THE STREET TREE PLAN WILL BE POSTED AS PART OF THE FUTURE FINAL PLANS BECAUSE STREET TREES ARE INCLUDED AS PART OF THE DEV/DOW CONSTRUCTION COST ESTIMATE. FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$17,250.00 FOR THE REQUIRED 41 SHADE TREES AND 33 EVERGREEN TREES.
- APFD TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED JUNE 2004.
- ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL SHALL BY COMPLIED WITH.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETARIES, GRAVE SITES, OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
- STREET TREES ARE REQUIRED FOR THIS SUBDIVISION IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL.
- A NOISE STUDY WAS PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED OCTOBER 18, 2006.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE 100-YR FLOODPLAIN, WETLANDS, STREAMS, OR THEIR BUFFERS, EXCEPT THOSE AREAS SPECIFIED IN WP-05-87, AND WP-07-66. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS.
- LOTS 6-10, LOTS 18-20, AND LOTS 21-23 WILL UTILIZE USE-IN-COMMON DRIVEWAYS. HOWARD COUNTY STANDARD DETAIL NO. R-6.06 WILL BE UTILIZED FOR THE ENTRANCE AT THE INTERSECTION OF THE PUBLIC ROAD AND EACH USE-IN-COMMON DRIVEWAY.
- REFUSE COLLECTION, SNOW REMOVAL, AND MAINTENANCE FOR LOTS 6-10, 18-20 AND 21-23 SHALL BE PROVIDED AT THE JUNCTION OF EACH PRIVATE USE-IN-COMMON ACCESS EASEMENT AND THE PROP. ROAD.
- TREE PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO ENVIRONMENTAL AREAS AND RETENTION FOREST CONSERVATION AREAS.
- ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE - 3' LONG). A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.
- WP-05-87, TO WAIVE SECTION 16.116(a)(2) TO ALLOW GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, AND PAVING DISTURBANCES WITHIN THE INTERMITTENT STREAM AND 50' STREAM BUFFER AND 25' WETLANDS BUFFER, FOR THE USE OF THE EXISTING 16' WIDE PAVED DRIVEWAY TO ACCOMMODATE A USE-IN-COMMON DRIVEWAY TO SERVE LOTS 18 THRU 23 AND OPEN SPACE LOTS 27, 28, AND 30 (INITIALLY PART OF LOT 28); FROM SECTION 16.120(d)(4)(iii) TO ALLOW THE INTERMITTENT STREAM AND 50' STREAM BUFFER TO BE LOCATED WITHIN THE PIPESTEM AREAS OF LOTS 18 THRU 23 FOR RESIDENTIAL LOTS OR PARCELS LESS THAN 10 ACRES IN SIZE; FROM SECTION 16.121(e)(1) WHICH REQUIRES THAT OPEN SPACE LOTS 27, 28, AND 30 (INITIALLY PART OF LOT 28) BE PROVIDED WITH THE MINIMUM 40' OF PUBLIC ROAD FRONTAGE AND FROM SECTIONS 16.121(e)(2)(ii) AND 16.120(b)(4)(iv) WHICH REQUIRES THAT RESIDENTIAL LOTS NOT BE ENCUMBERED BY ACCESS EASEMENTS FOR STORM WATER MANAGEMENT FACILITIES OR OPEN SPACE, EXCEPT PER SECTION 16.121(e) OF THE SUBDIVISION REGULATIONS TO ALLOW SWM ACCESS FOR OPEN SPACE LOTS 28 AND 30 (INITIALLY PART OF LOT 28), BY WAY OF THE PROPOSED USE-IN-COMMON DRIVEWAY EASEMENT FOR LOTS 18 THRU 23 WAS APPROVED MARCH 17, 2005 SUBJECT TO THE FOLLOWING CONDITIONS:  
1. THE WAIVER PETITION APPROVAL PERTAINS ONLY TO THE LIMIT OF DISTURBANCE WITHIN THE INTERMITTENT STREAM AND 50' STREAM BUFFER FOR USE OF THE EXISTING 16' WIDE PAVED DRIVEWAY AND ANY MINIMAL IMPROVEMENTS AND/OR GRADING ASSOCIATED WITH THE USE-IN-COMMON DRIVEWAY UPGRADE TO SERVE LOTS 18 THRU 23 AND OPEN SPACE LOTS 27, 28, AND 30 (INITIALLY PART OF LOT 28) AS SHOWN ON ON THE WAIVER PETITION PLAN EXHIBIT AND 5-05-06. THE LIMIT OF DISTURBANCE LOCATED WITHIN THE INTERMITTENT STREAM AND 50' BUFFER SHALL BE THE MINIMUM NECESSARY TO ACCOMMODATE ANY NECESSARY OR REQUIRED WIDENING IMPROVEMENTS OR GRADING ASSOCIATED WITH THE USE OF THE EXISTING DRIVEWAY TO FUNCTION AS THE USE-IN-COMMON DRIVEWAY TO SERVE LOTS 18 THRU 23 AND OPEN SPACE LOTS 27, 28, AND 30 (INITIALLY PART OF LOT 28).  
2. THE DEVELOPER SHALL INSTALL BOLLARD MARKERS OR SOME OTHER FORM OF SIGNS AS SPECIFIED BY THE DEPARTMENT OF RECREATION AND PARKS ALONG THE USE-IN-COMMON DRIVEWAY ACCESS EASEMENT FOR LOTS 18 THRU 23 AND OPEN SPACE LOTS 27, 28, AND 30 (INITIALLY PART OF LOT 28) TO CLEARLY IDENTIFY PEDESTRIAN AND MAINTENANCE VEHICLE ACCESS TO THE OPEN SPACE LOTS AND THE SWM FACILITY.  
3. THE USE-IN-COMMON DRIVEWAY ACCESS MAINTENANCE AGREEMENT FOR LOTS 18 THRU 23 AND OPEN SPACE LOTS 27, 28, AND 30 (INITIALLY PART OF LOT 28) SHALL NOT REQUIRE THE COUNTY TO PARTICIPATE IN THE MAINTENANCE OF THE USE-IN-COMMON DRIVEWAY SINCE THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS HAS REQUESTED DEDICATION OF OPEN SPACE LOT 27 TO THE COUNTY.
- THIS PLAN IS SUBJECT TO THE FOLLOWING DPZ FILES, F-05-11, WP-07-66, WP-04-69 (VOID), BA-03-67C, BA-82-40E, BA-891C, BA-952C, SDP-79-16, SDP-83-91, S-05-06, WP-05-87, BA-91-36E, AND VP-75-05.
- THE SUBJECT PROPERTY IS ZONED "R-20" IN ACCORDANCE WITH THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
- THERE ARE EXISTING DWELLINGS TO REMAIN LOCATED ON LOTS 1, 2 AND 3 RECORDED UNDER F-05-11.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY RECORDS AND FIELD SURVEY.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED JANUARY 20, 2004.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNES DATED JUNE 26, 2006.
- WAIVER PETITION WP-07-66 WAS APPROVED ON 2/12/07. THIS WAIVER IS A DEPARTURE FROM SECTION 16.116(a)(2) TO ALLOW GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, AND PAVING DISTURBANCES WITHIN THE 50' INTERMITTENT STREAM BUFFER FOR THE CONSTRUCTION OF THE LONG VIEW ROAD EXTENSION INTO THE SITE WITH ASSOCIATED RETAINING WALL AND FOR THE CONSTRUCTION OF A USE-IN-COMMON DRIVEWAY T-TURN AROUND AND ASSOCIATED RETAINING WALLS WHICH PROVIDE ACCESS TO ACCOMMODATE LOTS 21 THROUGH 23.

### APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

- THE WAIVER PETITION APPROVAL PERTAINS ONLY TO THE ADDITIONAL LIMIT OF DISTURBANCE WITHIN THE 50' INTERMITTENT STREAM BUFFER FOR CONSTRUCTION OF THE LONG VIEW ROAD EXTENSION AND ASSOCIATED RETAINING WALL, AND FOR THE CONSTRUCTION OF THE USE-IN-COMMON DRIVEWAY T-TURN AROUND AND ASSOCIATED RETAINING WALL TO ACCOMMODATE LOTS 21 THROUGH 23.
  - COMPLIANCE WITH ALL SRC AGENCY COMMENTS PERTAINING TO THE PROCESSING OF P-07-08.
  - COMPLIANCE WITH ALL PREVIOUS CONDITIONS OF APPROVAL FOR WP- 05-87.
- THE SEWER LINE EXTENSION ADJACENT TO LOTS 14 AND 15 LOCATED THROUGH THE CONTIGUOUS 25% OR GREATER STEEP SLOPE AREA OVER 20,000 SQUARE FEET WAS DETERMINED TO BE ESSENTIAL IN ACCORDANCE WITH SECTION 16.116 (C) OF THE SUBDIVISION REGULATIONS.
  - THE 100 YEAR FLOOD PLAIN EASEMENT LIMITS INDICATED ON THE PROPOSED SUBDIVISION PLAN ALONG THE MATCH LINE IS INCONSISTENT WITH THE RECORDED FLOOD PLAN LIMITS SHOWN ON PLAT NO. 17392 (F-05-11). HOWEVER THE RESUBDIVISION PLAT PER THE PROPERTY WILL CORRECTLY REESTABLISH THE 100 YEAR FLOOD PLAN LIMITS.



PLAN VIEW  
SCALE 1"=100'

SHEET INDEX		
DESCRIPTION	SHEET NO.	
COVER SHEET	1 OF 8	
SUBDIVISION LAYOUT PLAN	2 OF 8	
SUBDIVISION LAYOUT PLAN	3 OF 8	
GRADING AND SEDIMENT & EROSION CONTROL PLAN	4 OF 8	
GRADING AND SEDIMENT & EROSION CONTROL PLAN	5 OF 8	
FOREST CONSERVATION AND LANDSCAPE PLAN	6 OF 8	
FOREST CONSERVATION AND LANDSCAPE PLAN	7 OF 8	
DRAINAGE AREA MAP	8 OF 8	

COORDINATE TABLE					
POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
1	547182.72	1344852.18	10	548641.90	1345705.89
2	547828.38	1345189.30	11	548806.73	1345349.29
3	547779.79	1345259.95	12	547867.29	1344019.68
4	547773.48	1345272.54	13	547759.92	1344147.88
5	547955.74	1345346.72	14	547531.00	1344143.69
6	548091.37	1345398.66	15	547423.16	1344327.60
7	548342.20	1345488.15	16	547380.82	1344496.84
8	548476.33	1345568.39	17	547242.51	1344612.61
9	548519.22	1345598.32	18	547233.00	1344724.14

TENTATIVELY APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY

*David A. Lytle* 5/2/07  
PLANNING DIRECTOR DATE

COVER SHEET

**HEARTHSTONE AT RIVERSIDE**  
SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
A RESUBDIVISION OF BULK PARCEL 'A'

TAX MAP 41 GRID 11 PARCEL 179  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

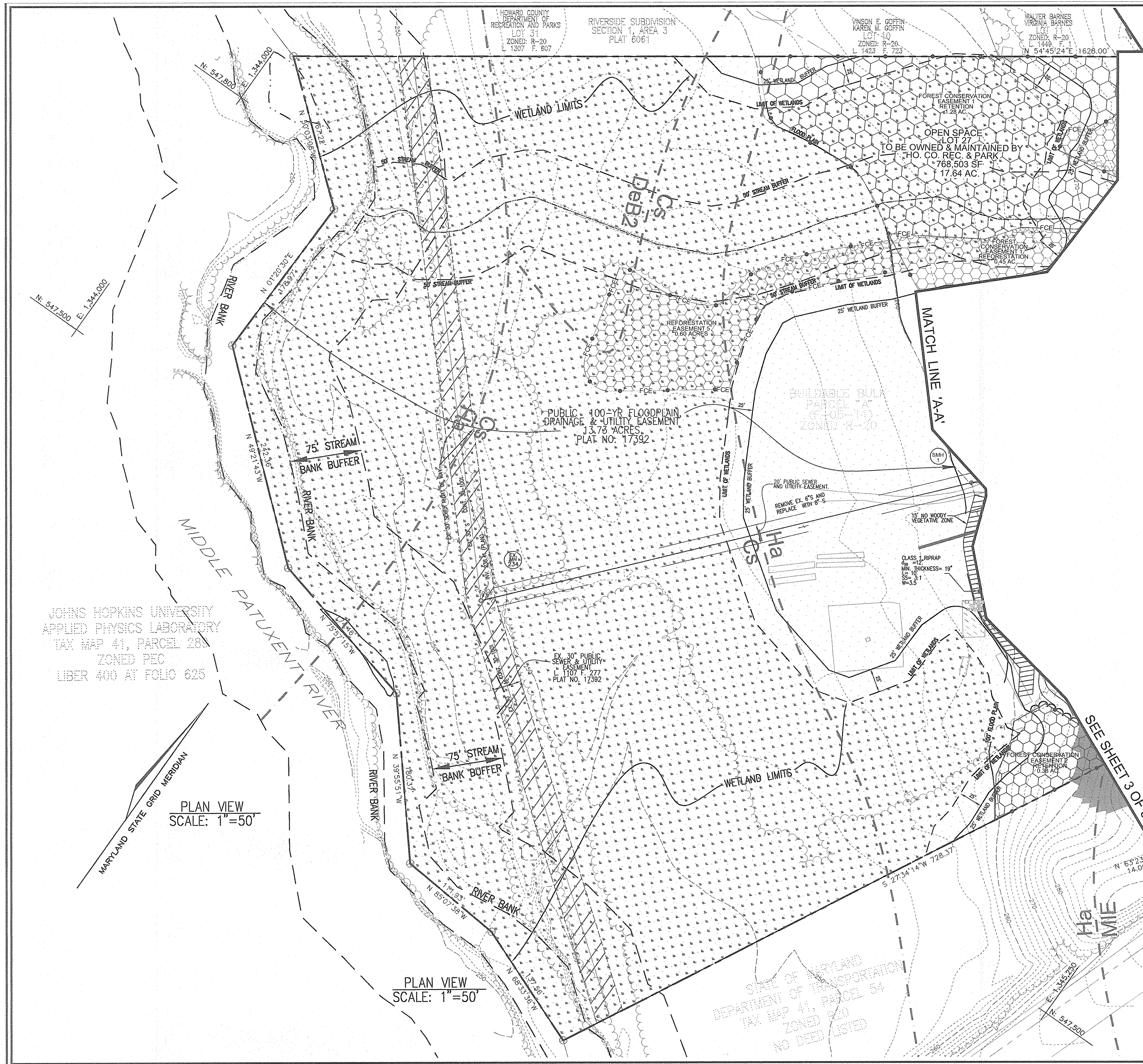
DESIGN BY: MR/RJ  
DRAWN BY: RT  
CHECKED BY: RHV  
DATE: OCTOBER 2006  
SCALE:  
W.O. NO.: 03-29

1 SHEET OF 8

OWNER/DEVELOPER  
HEARTHSTONE AT RIVERSIDE, L.L.C.  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MD 21042  
TEL: 443-967-0422

P-07-08





**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREES TO REMAIN
- PROPOSED STREET TREE
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 25 PERCENT OR GREATER SLOPES
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)
- PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
- WETLANDS
- EXISTING UTILITY EASEMENT
- WETLANDS BUFFER
- STREAM CENTERLINE
- STREAM BUFFER
- NON-CREDITED OPEN SPACE
- RECREATION OPEN SPACE
- NO WOODY BUFFER
- PROP. STREET LIGHT
- PROP. STREET SIGNS
- FOREST CONSERVATION SIGN
- SOILS

MINIMUM LOT SIZE CHART			
LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
6	12,620 SF	528 SF	12,092 SF
7	13,315 SF	1,286 SF	12,029 SF
8	13,756 SF	1,478 SF	12,278 SF
9	13,015 SF	976 SF	12,039 SF
10	12,746 SF	692 SF	12,054 SF
18	13,946 SF	1,456 SF	12,490 SF
19	13,802 SF	1,765 SF	12,037 SF
20	13,122 SF	1,054 SF	12,068 SF
21	13,017 SF	1,001 SF	12,016 SF
22	13,115 SF	957 SF	12,158 SF
23	13,260 SF	1,170 SF	12,090 SF

NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE

JOHNS HOPKINS UNIVERSITY  
APPLIED PHYSICS LABORATORY  
TAX MAP 41, PARCEL 285  
ZONED PEC  
LIBER 400 AT FOLIO 625

PLAN VIEW  
SCALE: 1"=50'

PLAN VIEW  
SCALE: 1"=50'

TENTATIVELY APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY

*Paul A. Leger* 5/10/07  
PLANNING DIRECTOR DATE

SUBDIVISION LAYOUT PLAN

**HEARTHSTONE AT RIVERSIDE**  
SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
A RESUBDIVISION OF BULK PARCEL 'A'

TAX MAP 41 GRID 11 PARCEL 179  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

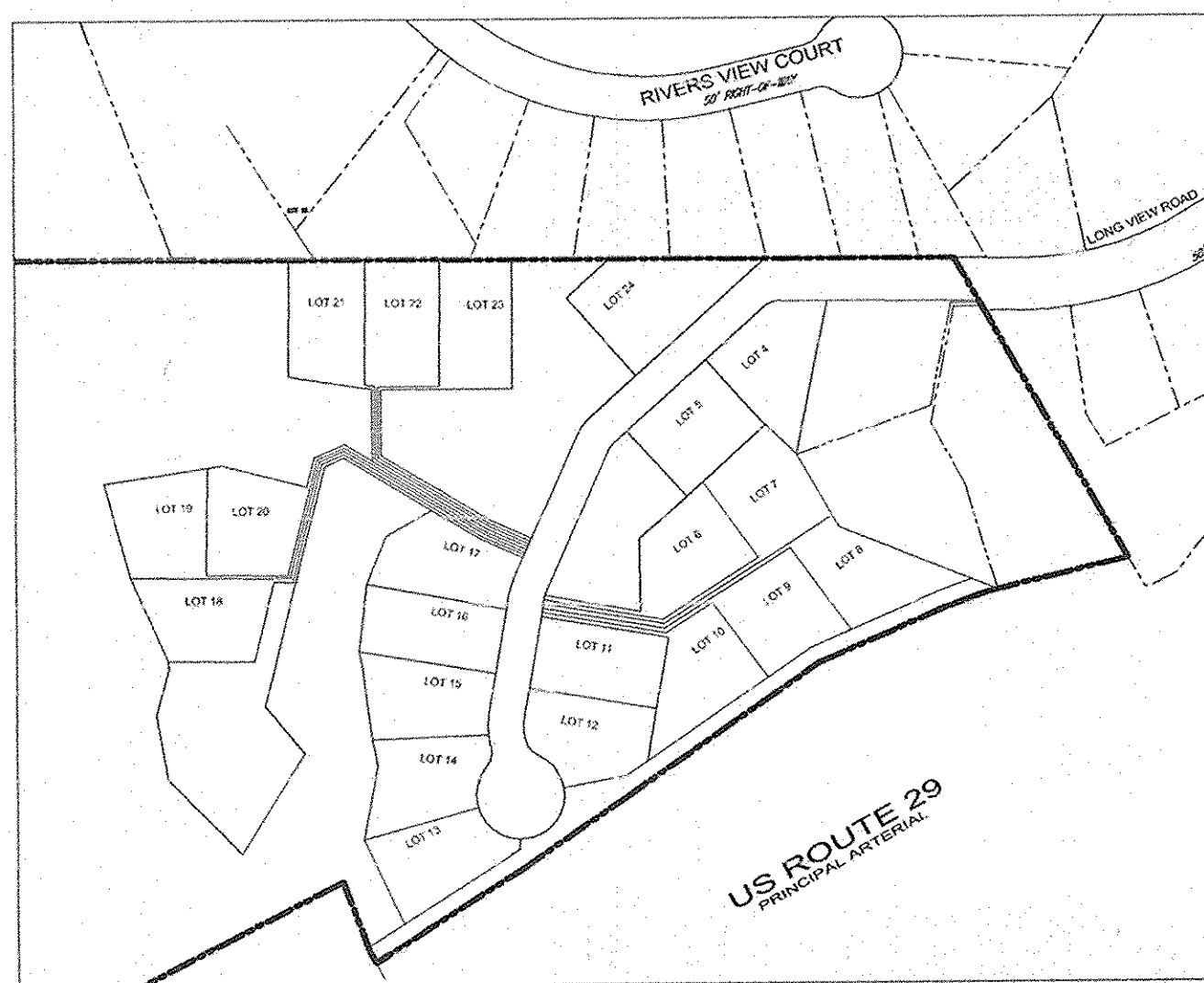
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET TEL: 410.461.7666  
ELLCOTT CITY, MD 21042 FAX: 410.461.8961

DESIGN BY: MR/RJ	
DRAWN BY: RT	
CHECKED BY: RHV	
DATE: OCTOBER 2006	
SCALE: 03-29	

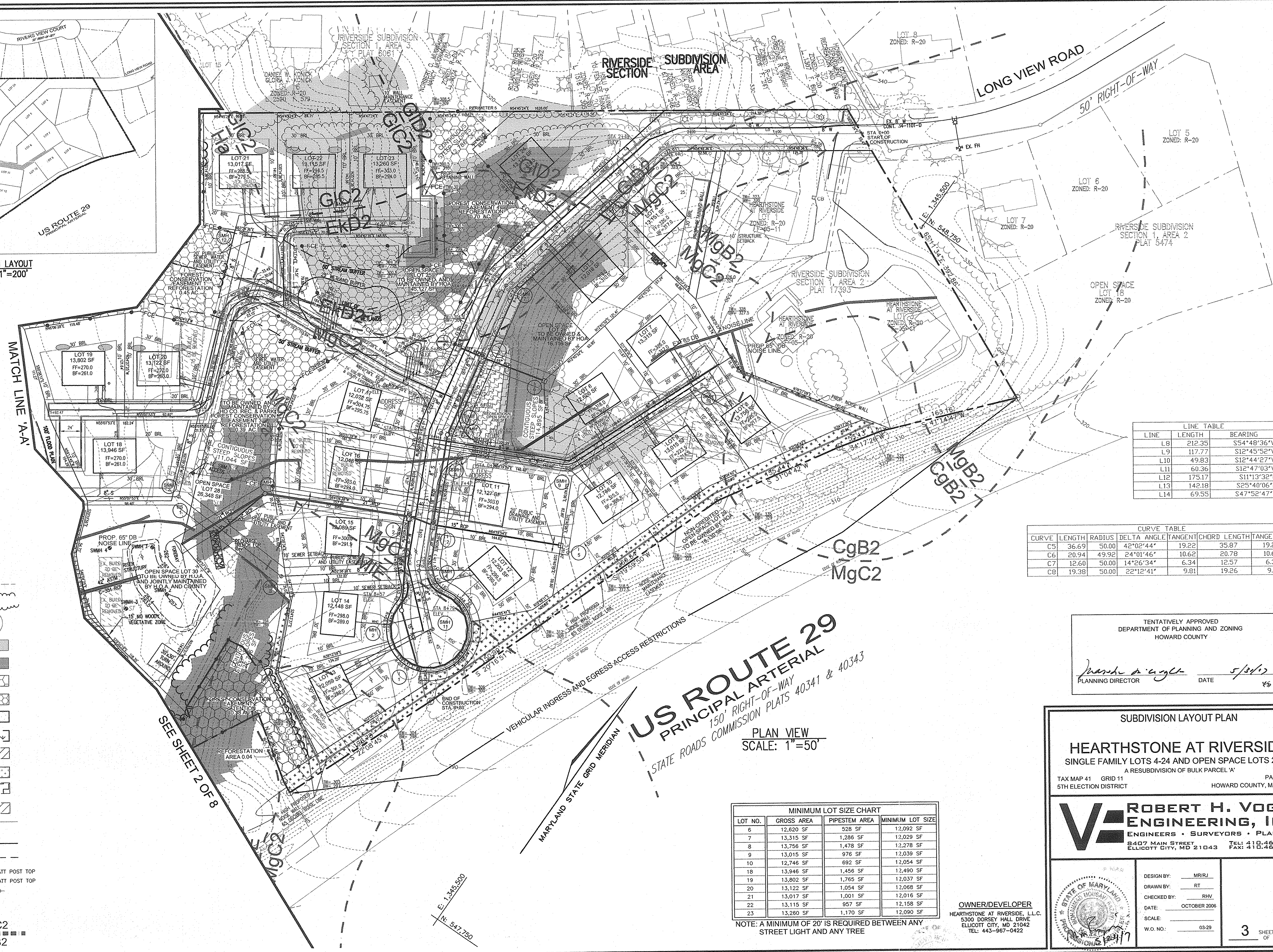
OWNER/DEVELOPER  
HEARTHSTONE AT RIVERSIDE, L.L.C.  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MD 21042  
TEL: 443-867-0422

2 SHEET OF 8





PIPESTEM LAYOUT  
SCALE: 1"=200'



LINE TABLE

LINE	LENGTH	BEARING
L8	212.35	S54°48'36"W
L9	117.77	S12°45'52"W
L10	49.83	S12°44'27"W
L11	60.36	S12°47'03"W
L12	175.17	S11°13'32"E
L13	142.18	S25°40'06"E
L14	69.55	S47°52'47"E

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD LENGTH	TANGENT
C5	36.69	50.00	42°02'44"	19.22	35.87	19.22
C6	20.94	49.92	24°01'46"	10.62	20.79	10.62
C7	12.60	50.00	14°26'34"	6.34	12.57	6.34
C8	19.38	50.00	22°12'41"	9.81	19.26	9.81

- LEGEND**
- EXISTING CONTOUR
  - EXISTING TREES TO REMAIN
  - PROPOSED STREET TREE
  - AREA OF 15 TO 24.9 PERCENT SLOPES
  - AREA OF 25 PERCENT OR GREATER SLOPES
  - PROP. FOREST CONSERVATION AREA (RETENTION)
  - PROP. FOREST CONSERVATION AREA (REFORESTATION)
  - PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
  - WETLANDS
  - EXISTING UTILITY EASEMENT
  - NON-CREDITED OPEN SPACE
  - RECREATION OPEN SPACE
  - NO WOODY BUFFER
  - WETLANDS BUFFER
  - STREAM CENTERLINE
  - STREAM BUFFER
  - PROP. STREET LIGHT
  - PROP. STREET SIGNS
  - FOREST CONSERVATION SIGN
  - SOILS

**US ROUTE 29**  
PRINCIPAL ARTERIAL  
150' RIGHT-OF-WAY  
STATE ROADS COMMISSION PLATS 40341 & 40343  
PLAN VIEW  
SCALE: 1"=50'

MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
6	12,620 SF	528 SF	13,092 SF
7	13,315 SF	1,286 SF	13,029 SF
8	13,756 SF	1,478 SF	13,278 SF
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22	13,115 SF	957 SF	12,158 SF
23	13,260 SF	1,170 SF	12,090 SF

NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE

TENTATIVELY APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY

*Mark A. Angle*  
PLANNING DIRECTOR

5/31/17  
DATE

SUBDIVISION LAYOUT PLAN  
**HEARTHSTONE AT RIVERSIDE**  
SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
A RESUBDIVISION OF BULK PARCEL 'A'

TAX MAP 41 GRID 11 PARCEL 179  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

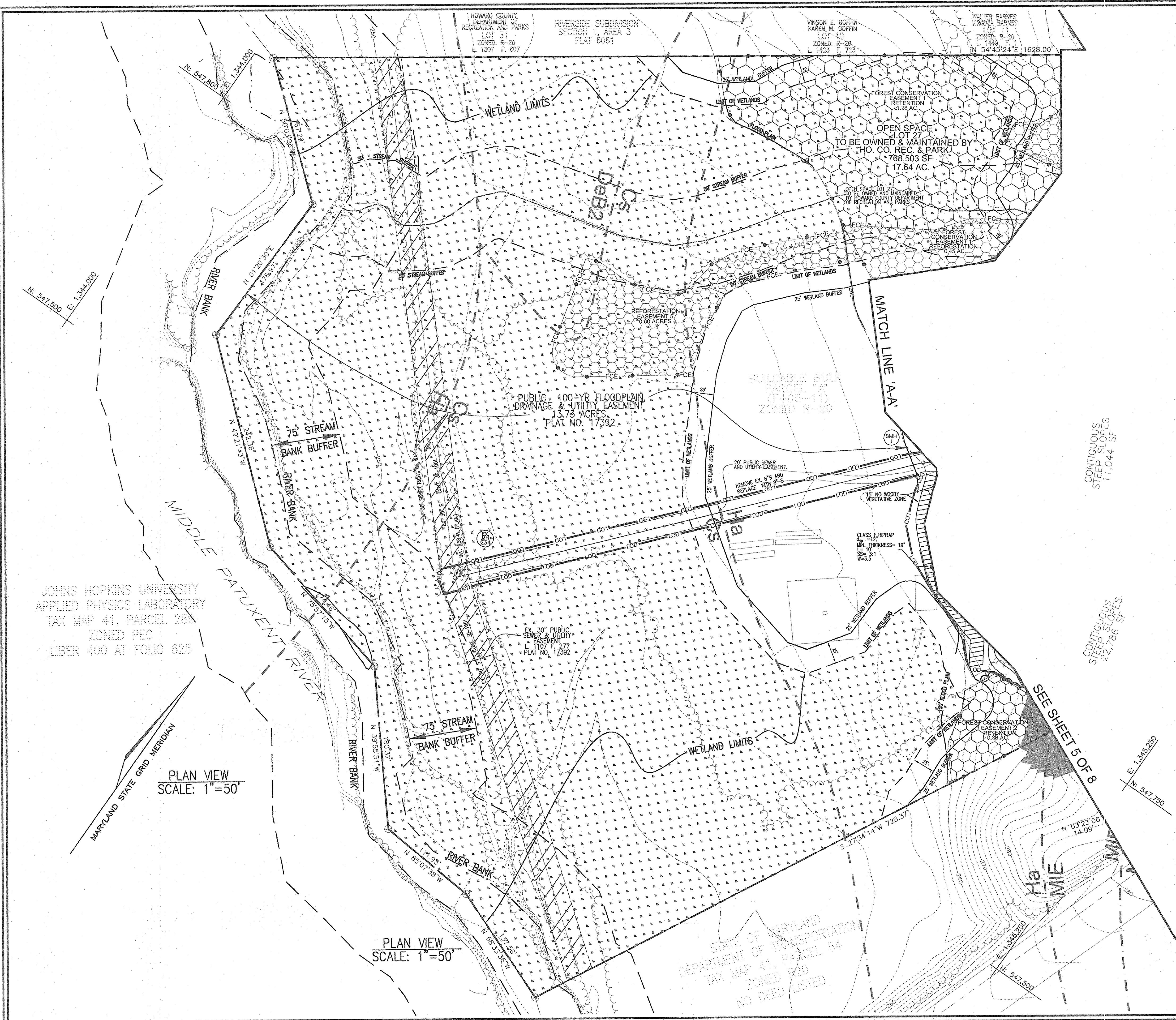
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: MR/RJ  
DRAWN BY: RT  
CHECKED BY: RHY  
DATE: OCTOBER 2006  
SCALE:  
W.O. NO.: 03-29

3 SHEET OF 8

OWNER/DEVELOPER  
HEARTHSTONE AT RIVERSIDE, L.L.C.  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MD 21042  
TEL: 443-967-0422





**LEGEND**

EXISTING CONTOUR	---440---
PROPOSE CONTOUR	---113---
EXISTING TREES TO REMAIN	
PROPOSED STREET TREE	
AREA OF 15 TO 24.9 PERCENT SLOPES	
AREA OF 25 PERCENT OR GREATER SLOPES	
PROP. FOREST CONSERVATION AREA (RETENTION)	
PROP. FOREST CONSERVATION AREA (REFORESTATION)	
PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT	
WETLANDS	
EXISTING UTILITY EASEMENT	
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STREAM CENTERLINE	
STREAM BUFFER	
NON-CREDITED OPEN SPACE	
RECREATION OPEN SPACE	
NO WOODY BUFFER	
PROP. STREET LIGHT	
PROP. STREET SIGNS	
FOREST CONSERVATION SIGN	
SOILS	

JOHNS HOPKINS UNIVERSITY  
 APPLIED PHYSICS LABORATORY  
 TAX MAP 41, PARCEL 285  
 ZONED PEC  
 LIBER 400 AT FOLIO 625

PLAN VIEW  
 SCALE: 1"=50'

PLAN VIEW  
 SCALE: 1"=50'

TENTATIVELY APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY

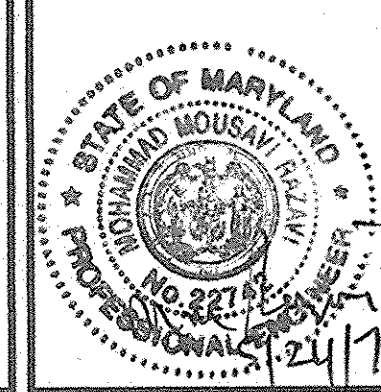
*Mark Wright* 5/31/07  
 PLANNING DIRECTOR DATE

GRADING AND SEDIMENT CONTROL PLAN

**HEARTHSTONE AT RIVERSIDE**  
 SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
 A RESUBDIVISION OF BULK PARCEL 'A'

TAX MAP 41 GRID 11 PARCEL 179  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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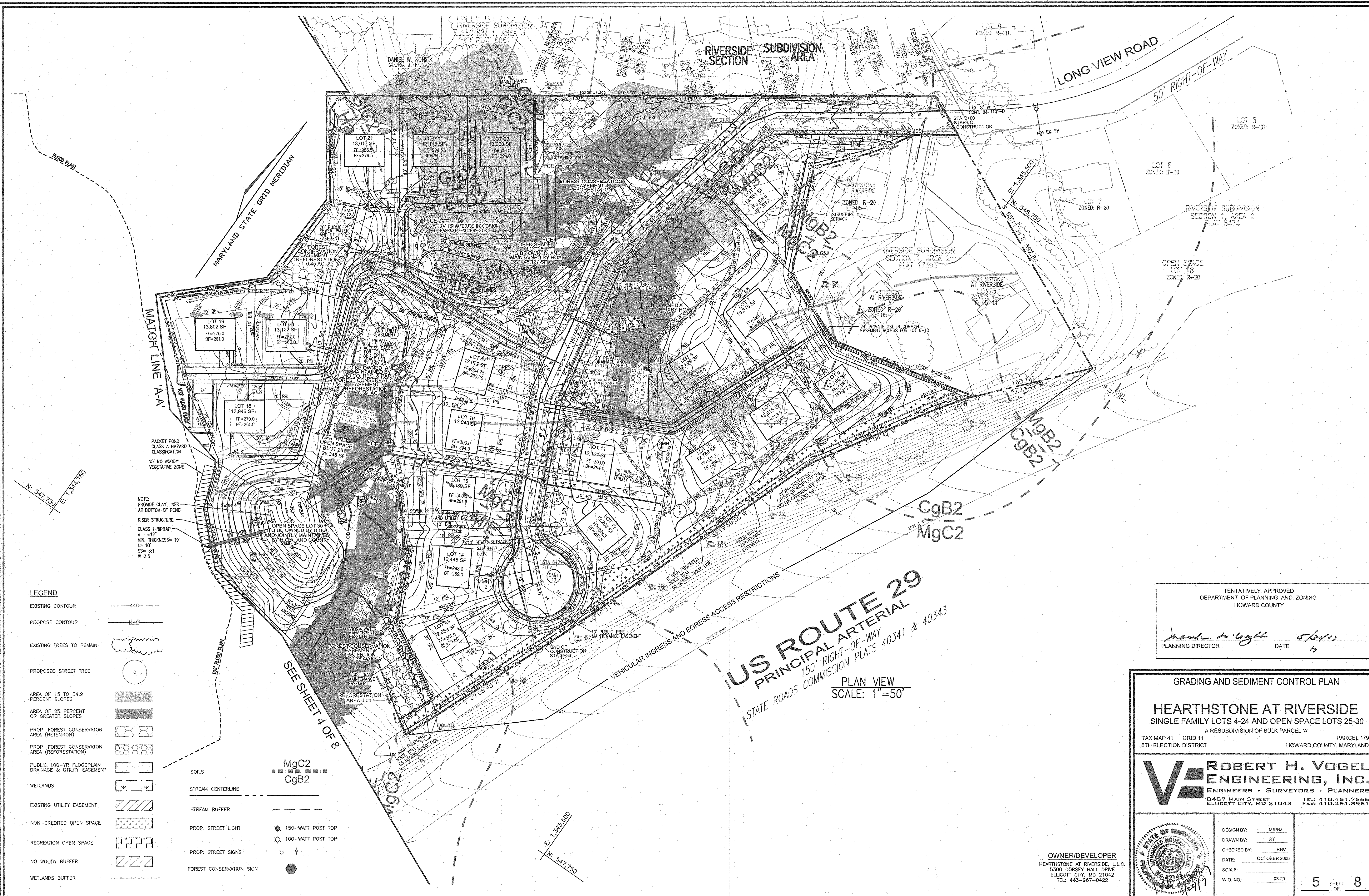


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4 OF 8

OWNER/DEVELOPER  
 HEARTHSTONE AT RIVERSIDE, L.L.C.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MD 21042  
 TEL: 443-967-0422





NOTE:  
 PROVIDE CLAY LINER AT BOTTOM OF POND  
 RISER STRUCTURE CLASS 1 RFRAP 4  
 MIN. THICKNESS= 19"  
 L= 10'  
 SS= 3:1  
 W= 3.5

**LEGEND**

- EXISTING CONTOUR
- PROPOSE CONTOUR
- EXISTING TREES TO REMAIN
- PROPOSED STREET TREE
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 25 PERCENT OR GREATER SLOPES
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)
- PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
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- NO WOODY BUFFER
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- SOILS
- STREAM CENTERLINE
- STREAM BUFFER
- PROP. STREET LIGHT
- PROP. STREET SIGNS
- FOREST CONSERVATION SIGN

**US ROUTE 29**  
 PRINCIPAL ARTERIAL  
 150' RIGHT-OF-WAY  
 STATE ROADS COMMISSION PLATS 40341 & 40343  
 PLAN VIEW  
 SCALE: 1"=50'

TENTATIVELY APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY  
 Planning Director: *Mark A. Light* DATE: 5/24/10

GRADING AND SEDIMENT CONTROL PLAN

**HEARTHSTONE AT RIVERSIDE**  
 SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
 A RESUBDIVISION OF BULK PARCEL 'A'

TAX MAP 41 GRID 11 PARCEL 179  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET TEL: 410.461.7666  
 ELLICOTT CITY, MD 21043 FAX: 410.461.8951

DESIGN BY: MR/RJ  
 DRAWN BY: RT  
 CHECKED BY: RHV  
 DATE: OCTOBER 2006  
 SCALE:  
 W.O. NO.: 03-29

5 SHEET OF 8

OWNER/DEVELOPER  
 HEARTHSTONE AT RIVERSIDE, L.L.C.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MD 21042  
 TEL: 443-967-0422





JOHNS HOPKINS UNIVERSITY  
 APPLIED PHYSICS LABORATORY  
 TAX MAP 41, PARCEL 284  
 ZONED PEC  
 LIBER 400 AT FOLIO 625

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
Cs	COMUS SILT LOAM	B
Cg2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
De2	DELANCO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
Ek2	ELIOAK SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	C
GIC2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
GID2	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
Ho	HATBORO SILT LOAM	D
MgC2	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
MIE	MANOR LOAM, 25 TO 45 PERCENT SLOPES	B

PLAN VIEW  
 SCALE: 1"=50'

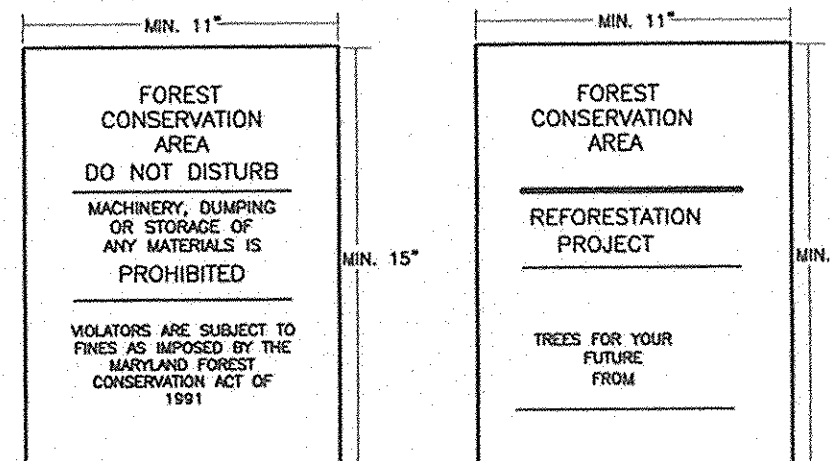
**Forest Conservation Worksheet 2.2**

Net Tract Area	A = 26.84				
A. Total Tract Area	B = 13.71				
B. Deductions	C = 13.13				
C. Net Tract Area					
Land Use Category					
Input the number "1" under the appropriate land use zoning, and limit to only one entry					
ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	1	0	0
D. Afforestation Threshold ( Net Tract Area x 15% )	D = 1.97				
E. Conservation Threshold ( Net Tract Area x 20% )	E = 2.63				
F. Existing Forest Cover within the Net Tract Area	F = 3.61				
G. Area of Forest Above Conservation Threshold	G = 0.88				
H. Break Even Point	H = 2.82				
I. Forest Clearing Permitted Without Mitigation	I = 0.79				
J. Total Area of Forest to be Cleared	J = 1.95				
K. Total Area of Forest to be Retained	K = 1.66				
L. Reafforestation for Clearing Above the Conservation Threshold	L = 0.25				
M. Reafforestation for Clearing Below the Conservation Threshold	M = 1.33				
N. Credit for Retention above the Conservation Threshold	N = 0.00				
O. Total Reafforestation Required	O = 2.18				
P. Total Afforestation Required	P = 0.00				
Q. Total Planting Requirement	Q = 2.18				

OBLIGATION TO BE FULFILLED BY RETENTION OF .166 AC (\$14,461.92) AND REAFForestation OF 2.18 AC. (\$47,480.40)  
 TOTAL FINANCIAL SURETY OBLIGATION IS \$61,942.32.

**FOREST CONSERVATION EASEMENT TABLE**

TOTAL RETENTION: 1.66 AC.	
TOTAL REAFForestation: 2.18 AC.	
FOREST CONSERVATION EASEMENT 1	RETENTION 1.28 AC.
REAFForestation	0.45 AC.
TOTAL	1.73 AC.
FOREST CONSERVATION EASEMENT 2	RETENTION 0.38 AC.
REAFForestation	0.04 AC.
TOTAL	0.42 AC.
FOREST CONSERVATION EASEMENT 3	REAFForestation 0.39 AC.
FOREST CONSERVATION EASEMENT 4	REAFForestation 0.7 AC.
FOREST CONSERVATION EASEMENT 5	REAFForestation 0.6 AC.
TOTAL RETENTION	1.66 AC.
TOTAL REAFForestation	2.18 AC.



- NOTE:
- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
  - SIGNS TO BE PLACED AT A MAXIMUM SPACING OF 50-100 FEET. CONDITIONS ON-SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
  - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

**LEGEND**

EXISTING CONTOUR

PROPOSED CONTOUR

EXISTING TREES TO REMAIN

PROPOSED STREET TREE

AREA OF 15 TO 24.9 PERCENT SLOPES

AREA OF 24 PERCENT OR GREATER SLOPES

PROP. FOREST CONSERVATION AREA (RETENTION)

PROP. FOREST CONSERVATION AREA (REAFForestation)

PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT

WETLANDS

EXISTING UTILITY EASEMENT

WETLANDS BUFFER

STREAM CENTERLINE

STREAM BUFFER

NON-CREDITED OPEN SPACE

RECREATION OPEN SPACE

NO WOODY BUFFER

PROP. STREET LIGHT

150-WATT POST TOP

100-WATT POST TOP

PROP. STREET SIGNS

FOREST CONSERVATION SIGN

SOILS

MgC2

CgB2

**REAFForestation PLANT SCHEDULE**  
 TOTAL REAFForestation AREA=2.18 AC.  
 PLANTING DENSITY 2.18 AC OF 1" CAL TREES @ 200 PER ACRE  
 719 AC ARE TREES  
 TOTAL AREA 2.18 AC = 436 TREES

QTY	BOTANICAL NAME	SIZE	SPACING
88	ALICE RUBRUM RED MAPLE	1" CAL	15'x15'
87	LIQUID AMBER STRACIFLUA AMERICAN SWEETGUM	1" CAL	15'x15'
87	ALICE RUBRUM RED MAPLE	1" CAL	15'x15'
87	PRUNUS SEROTINA BLACK CHERRY	1" CAL	15'x15'
87	QUERCUS FLUSTRIS PIN OAK	1" CAL	15'x15'

*John Canoles*  
 JOHN CANOLES  
 DNR QUALIFIED PROFESSIONAL

TENTATIVELY APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY

*Janet M. Wyle* DATE 5/21/07  
 PLANNING DIRECTOR

**FOREST CONSERVATION AND LANDSCAPE PLAN**

**HEARTHSTONE AT RIVERSIDE**  
 SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
 A RESUBDIVISION OF BULK PARCEL 'A'

TAX MAP 41 GRID 11 PARCEL 179  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

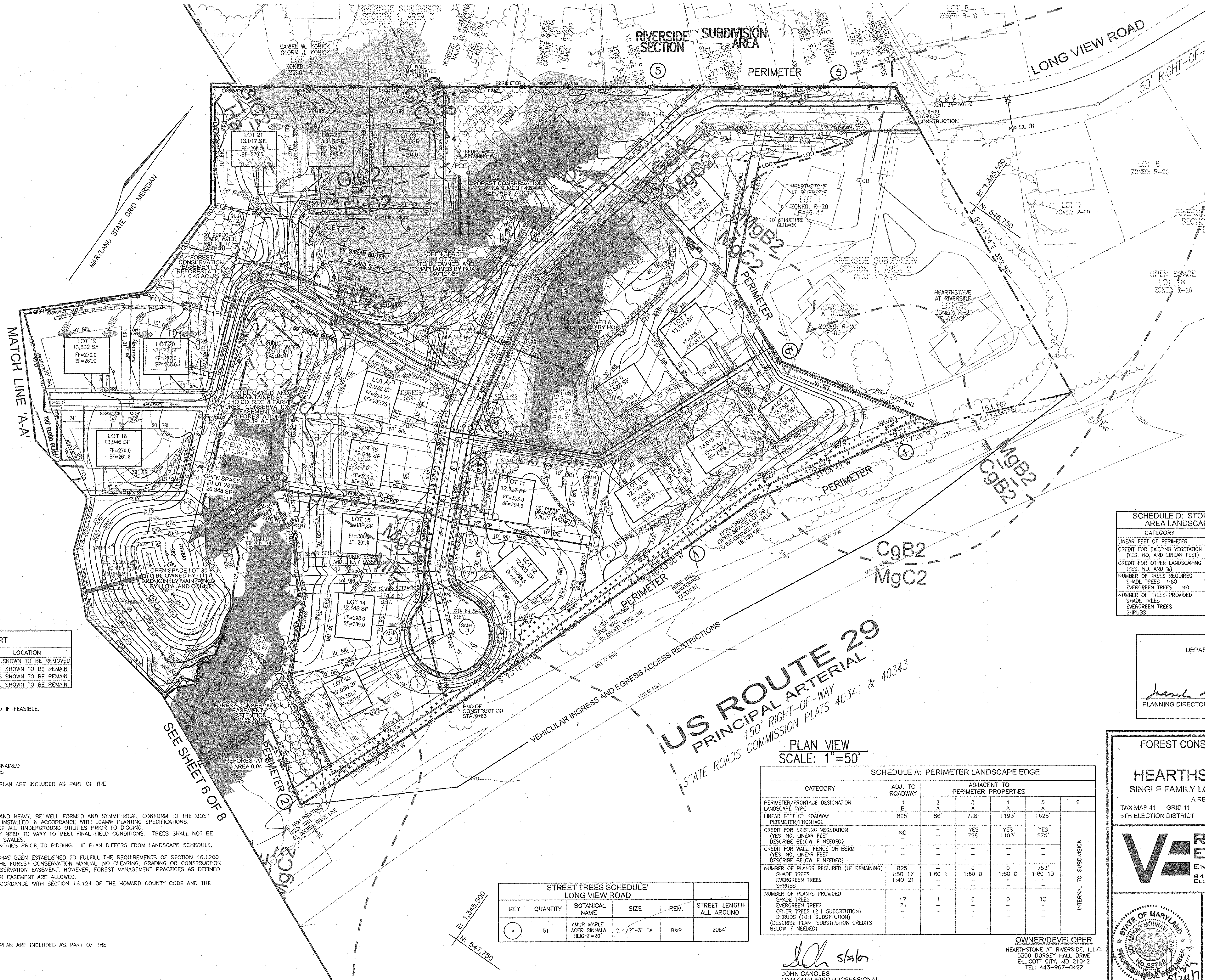
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DESIGN BY: MR/RJ  
 DRAWN BY: RT  
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 DATE: OCTOBER 2008

SCALE: W.O. NO.: 03-29

6 SHEET OF 8





**LEGEND**

- EXISTING CONTOUR
- PROPOSE CONTOUR
- EXISTING TREES TO REMAIN
- PROPOSED STREET TREE
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 25 PERCENT OR GREATER SLOPES
- PROP. PUBLIC UTILITY EASEMENT
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- PROP. FOREST CONSERVATION AREA (RETENTION)
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- PROP. STREET LIGHT
- PROP. STREET SIGNS
- FOREST CONSERVATION SIGN
- SOILS

**SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING-TYPE 'B' BUFFER**

CATEGORY	SIWMF 1
LINEAR FEET OF PERIMETER	582'
CREDIT FOR EXISTING VEGETATION (YES, NO, AND LINEAR FEET)	YES* 101'
CREDIT FOR OTHER LANDSCAPING (YES, NO, AND %)	-
NUMBER OF TREES REQUIRED	481
SHADE TREES 1:50	10
EVERGREEN TREES 1:40	12
NUMBER OF TREES PROVIDED	10
SHADE TREES	12
EVERGREEN TREES	-
SHRUBS	-

**SPECIMEN TREE CHART**

NO.	SIZE	SPECIES	CONDITION	LOCATION
ST-1	60.5" DBH	WHITE OAK	FAIR	AS SHOWN TO BE REMOVED
ST-2	32" DBH	WHITE OAK	GOOD	AS SHOWN TO BE REMAIN
ST-3	38" DBH	WHITE OAK	GOOD	AS SHOWN TO BE REMAIN
ST-4	40" DBH	PIN OAK	GOOD	AS SHOWN TO BE REMAIN

**NOTE:**  
 1. ALL SPECIMEN TREES SHOULD BE RETAINED IF FEASIBLE.

**GENERAL NOTES**

- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- 51 STREET TREES PER THE STREET TREE PLAN ARE INCLUDED AS PART OF THE DEED/DPW CONSTRUCTION COST ESTIMATE.
- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAWM PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 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.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

**DEVELOPER'S AGREEMENT**

51 STREET TREES PER THE STREET TREE PLAN ARE INCLUDED AS PART OF THE DEED/DPW CONSTRUCTION COST ESTIMATE.

**STREET TREES SCHEDULE LONG VIEW ROAD**

KEY	QUANTITY	BOTANICAL NAME	SIZE	REM.	STREET LENGTH ALL AROUND
	51	AMUR MAPLE ACER GINNALA HEIGHT=20'	2-1/2"-3" CAL.	B&B	2054'

**US ROUTE 29**  
 PRINCIPAL ARTERIAL  
 150' RIGHT-OF-WAY  
 STATE ROADS COMMISSION PLATS 40341 & 40343

PLAN VIEW  
 SCALE: 1"=50'

**SCHEDULE A: PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJ. TO ROADWAY					ADJACENT TO PERIMETER PROPERTIES				
	1	2	3	4	5	6	7	8	9	10
PERIMETER/FRONTAGE DESIGNATION	B	A	A	A	A	6				
LINEAR FEET OF ROADWAY, PERIMETER/FRONTAGE	825'	86'	728'	1193'	1628'					
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	-	YES 728'	YES 1193'	YES 875'					
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	-	-	-	-	-					
NUMBER OF PLANTS REQUIRED (LF REMAINING)	825'	-	0	0	753'					
SHADE TREES	1:50 17	1:60 1	1:60 0	1:60 0	1:60 13					
EVERGREEN TREES	1:40 21	-	-	-	-					
SHRUBS	-	-	-	-	-					
NUMBER OF PLANTS PROVIDED										
SHADE TREES	17	1	0	0	13					
EVERGREEN TREES	21	-	-	-	-					
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-					
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-					
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)										

**OWNER/DEVELOPER**  
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*John Canoles*  
 JOHN CANOLES  
 DNR QUALIFIED PROFESSIONAL

TENTATIVELY APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY

*Frank M. Lough*  
 PLANNING DIRECTOR DATE 5/21/06

**FOREST CONSERVATION AND LANDSCAPE PLAN**  
**HEARTHSTONE AT RIVERSIDE**  
 SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
 A RESUBDIVISION OF BULK PARCEL 'A'  
 TAX MAP 41 GRID 11 PARCEL 179  
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 DRAWN BY: RT  
 CHECKED BY: RHV  
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 W.O. NO.: 03-29





**LEGEND**

- EXISTING CONTOUR 440
- PROPOSE CONTOUR 440
- EXISTING TREES TO REMAIN
- PROPOSED STREET TREE
- AREA OF 15 TO 24.9 PERCENT SLOPES
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- PROP. STREET LIGHT 150-WATT POST TOP
- PROP. STREET SIGN 100-WATT POST TOP
- FOREST CONSERVATION SIGN
- SOILS MgC2
- CgB2

**DRAINAGE AREA TABULATIONS**

NO.	AREA	% C	% IMP.	SOIL TYPE	ZONE
I-1	1.20 AC.	0.40	12%	B	R-20
I-2	1.20 AC.	0.31	36%	B	R-20
I-3	0.63 AC.	0.49	57%	B	R-20
I-4	0.20 AC.	0.62	65%	B	R-20
I-5	0.52 AC.	0.26	30%	B	R-20
I-6	0.62 AC.	0.26	30%	B	R-20

TENTATIVELY APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY

*March L. Long* 5/31/02  
 PLANNING DIRECTOR DATE

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP
Cs	COMUS SILT LOAM	B
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
DeB2	DELANCO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
EkD2	ELIOAK SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	C
GIC2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
GID2	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
Ho	HATBORO SILT LOAM	D
MgC2	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
MIE	MANOR LOAM, 25 TO 45 PERCENT SLOPES	B

PLAN VIEW  
 SCALE: 1"=50'

**PROPOSED STORM DRAIN DRAINAGE AREA MAPS**  
**HEARTHSTONE AT RIVERSIDE**  
 SINGLE FAMILY LOTS 4-24 AND OPEN SPACE LOTS 25-30  
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