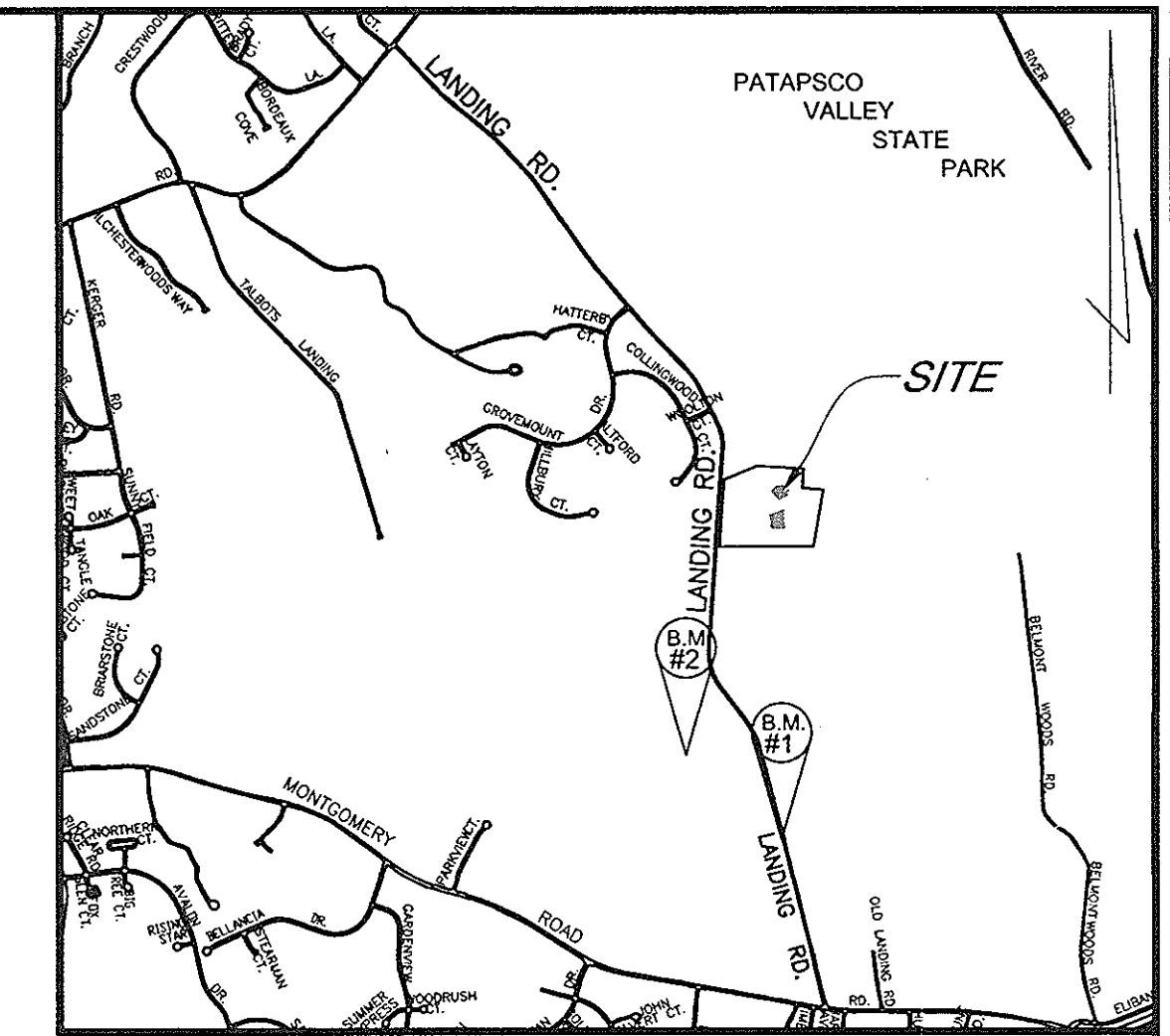


GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
 - THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED FEBRUARY 2004.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE, COORDINATE SYSTEM, HOWARD COUNTY MONUMENT NOS. 3111 AND 37CA WERE USED FOR THIS PROJECT.
37CA N 564,321.638 E 1,382,742.840
 - THIS PLAN IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. NOVEMBER 2008.
 - THE SUBJECT PROPERTY IS ZONED R-ED PER THE 02/02/2004 COMPREHENSIVE ZONING PLAN, AND THE COMPREHENSIVE LITE ZONING AMENDMENTS 07/26/2006.
 - THIS PLAN IS IN COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
 - IN ACCORDANCE WITH THE APPROVED SIMPLIFIED ECP FOR THIS RESUBDIVISION, THE STORMWATER PROPOSAL FOR LOTS 45 - 49 INCLUDES THE USE OF ALTERNATIVE SURFACE - PERMEABLE SURFACE DRIVEWAYS AND A MICROSACLE PRACTICE - DRYWELLS.
- AS APPROVED UNDER F 09-122 STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 STORMWATER DESIGN MANUAL. THIS PROJECT MEETS THE CRITERIA OUTLINED IN THE MDC GUIDELINES TO GRANT AN ADMINISTRATIVE WAIVER. F09-122 RECEIVED PRELIMINARY APPROVAL SP06-15 ON 10/6/2006. A GRADING PERMIT SHALL BE APPROVED PRIOR TO MAY 4, 2013. THIS PLAN IS SUBJECT TO THE EXPIRATION OF THIS WAIVER UNLESS ALL STORMWATER PRACTICES ARE CONSTRUCTED BY MAY 14, 2017. STORMWATER MANAGEMENT IS PROVIDED BY TWO MICROPOOL PONDS (P-5), BIO-RETENTION, RAINGARDENS AND DRYWELLS.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
 - ANY DAMAGE TO THE COUNTY'S RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
 - SHC ELEVATIONS ARE LOCATED AT THE PROPERTY LINE.
 - FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.01 OR R-6.03.
 - THERE IS AN EXISTING DWELLING LOCATED ON LOT 2 TO BE REMOVED AND PREVIOUSLY ON LOT 39 WHICH WAS REMOVED UNDER F 09-122.
 - DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
B) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.)
C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 CROSS TONS (H25 LOADING)
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
F) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
 - 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. NONE ARE PROPOSED PER THIS PLAN PROPOSAL.
 - THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
 - WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
 - WATER AND SEWER SERVICE FOR THIS PROJECT WILL BE PUBLIC. WATER WILL BE PROVIDED THROUGH CONTRACT NO. 14-4412-D.
 - PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
 - TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO HISTORIC STRUCTURES EXIST ON THIS SITE.
 - UNDER F09-122 AND F13-055, FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF HOWARD COUNTY FOREST CONSERVATION ACT. 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.
 - THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT WERE PROVIDED UNDER F-09-122 AND F13-055.
- THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT HAS BEEN FULFILLED IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL BY THE RETENTION OF 1.00 ACRE OF EXISTING FOREST AND BY THE PLANTING OF 1.80 ACRES OF REFORESTATION AND 0.78 ACRES OF AFFORESTATION WHICH WAS SUFFICIENT TO MEET REQUIRED OBLIGATIONS. REFER TO PLATS 21469-21472. SURETY HAS BEEN POSTED WITH THE DEVELOPERS AGREEMENT FOR F-09-122.
- THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT HAS BEEN FULFILLED IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL BY
 - 1.00 ACRE OF EXISTING FOREST RETENTION
 - [PLAT 21470, 0.45[SHEET 2] + PLAT 21472, 0.27[SHEET 4] + PLAT 21472, 0.28[SHEET 4]]
 - 1.99 ACRES OF REFORESTATION (+ 0.19 AC., F13-055)
 - 0.66 ACRES OF AFFORESTATION (- 0.12 AC., F13-055)
 - 3.65 ACRES TOTAL FOREST CONSERVATION EASEMENT PROVIDED (NET INCREASE 0.07 AC)
- DEED REFERENCE: LOT 2 - L. 7947 - F. 237
LOT 39 - L. 13156 - F. 1
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON THIS SITE.
 - THERE IS A 100-YEAR FLOODPLAIN LOCATED ON THIS SITE, SHOWN ON SP 08-15 AND F 09-122.
 - AS COMPLETED UNDER SP06-15, F09-122 THE REQUIRED FOREST STAND DELINEATION PLAN PREPARED BY JOHN CANOLES, ECO-SCIENCE PROFESSIONALS, DATED DECEMBER 2005.
 - AS COMPLETED UNDER SP06-15, F09-122 THE STREAMS AND/OR WETLANDS SHOWN HEREON WERE DELINEATED BY JOHN CANOLES, ECO-SCIENCE PROFESSIONALS, INC., DATED DECEMBER 2005.
 - AS APPROVED UNDER SP 08-15, HOWARD COUNTY POLICY DID NOT REQUIRE A TRAFFIC STUDY. NO APPO INTERSECTION WAS WITHIN THE REQUIREMENTS THAT WOULD WARRANT A STUDY.
 - STORMWATER MANAGEMENT AND PERIMETER LANDSCAPING HAS BEEN PROVIDED IN ACCORDANCE WITH F09-122. SURETY WAS POSTED WITH THE DEVELOPER'S AGREEMENT FOR F09-122.
 - PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH F09-122. FINANCIAL SURETY HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR F09-122.
 - F09-122 AND F13-055 OPEN SPACE LOTS 4, 43, AND 44 TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 - AS APPROVED UNDER SP 08-15, A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
 - THE HOMEOWNERS ASSOCIATION DOCUMENTS HAVE BEEN RECORDED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION AS RECORDING REFERENCE NUMBER D13445358 ON FEBRUARY 26, 2010.
 - HOMEOWNERS ASSOCIATION COVENANTS AND RESTRICTIONS WERE RECORDED SIMULTANEOUSLY WITH F 09-122 AS LIBER 13065 FOLIO 9 ON DECEMBER 9, 2010.
 - REFERENCE WAIVER WP-07-100, APPROVED 3/26/07, GRANTING AN EXTENSION TO SUBMIT THE PRELIMINARY EQUIVALENT SKETCH PLANS FOR SIGNATURE.
 - IN ACCORDANCE WITH APPROVED SP-06-15, A DESIGN MANUAL WAIVER APPROVED OCTOBER 29, 2009, TO ALLOW A 40' PUBLIC ROAD RIGHT-OF-WAY.
 - THE PLANNING BOARD ON FEBRUARY 16, 2012 REVIEWED AND APPROVED SDP-12-034 FOR LOT 1. IT WAS DETERMINED THAT NO FURTHER PLANNING BOARD MEETINGS WERE REQUIRED FOR FUTURE SITE DEVELOPMENT PLANS.
 - USE IN COMMON MAINTENANCE AGREEMENTS FOR LOTS 24-29 HAVE BEEN RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MD AS LIBER 14123 FOLIO 119 ON JULY 6, 2012.
 - STREET SIDE LANDSCAPING FOR LOTS 45 SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. SURETY SHALL BE PROVIDED WITH THE GRADING PERMIT FOR THE SITE DEVELOPMENT PLAN FOR LOT 45.
 - STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. PLEASE REFER TO APPROVED PLAN F-09-122.
 - PLEASE REFER TO F-09-122. ALL SIGNS ARE INSTALLED UNDER F-09-122.
 - A PRE-SUBMISSION MEETING WAS HELD WITH DEPARTMENT OF PLANNING AND ZONING ON JANUARY 9, 2013 AND THE ATTENDEES WERE MARSHA McLAUGHLIN DPZ-DIRECTOR, KENT SHEUBROOKS DLD DIVISION CHIEF, CHARLES DANMERS DED DIVISION CHIEF, CHAD EDMONSON DED, THE DEVELOPER AND THE ENGINEER.
 - IN ACCORDANCE WITH THE R-ED ZONE, THE MINIMUM LOT SIZE ALLOWED FOR THIS SUBDIVISION IS 6,000 SQ.FT.
- THE MINIMUM LOT SIZE CREATED IS 6,549 SQ.FT. (LOT 34)
 - PLANNING BOARD CASE NO. 400 WAS APPROVED BY PLANNING BOARD ON SEPTEMBER 30, 2013.

PRELIMINARY EQUIVALENT SKETCH PLAN GROVEMONT OVERLOOK PHASE 3 - LOTS 45 - 49 HOWARD COUNTY, MARYLAND

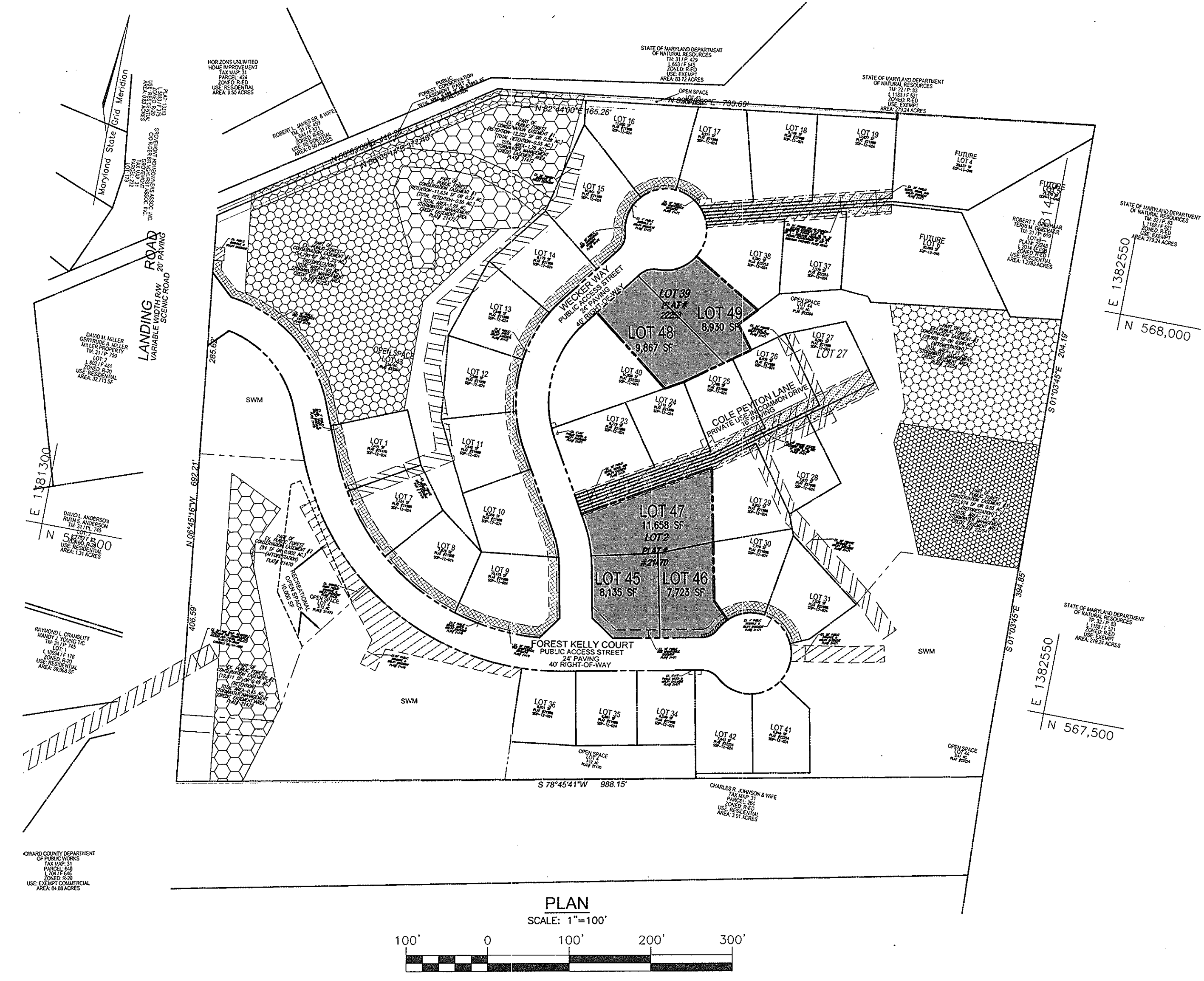


VICINITY MAP
SCALE: 1"=2000'

BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	
1	37CA	564,321.638	1,382,742.840	257.684'
2	3111	565,004.699	1,381,586.92	306.017'

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	PRELIMINARY EQUIVALENT SKETCH PLAN
3	GRADING & SEDIMENT CONTROL PLAN
4	STORMWATER MANAGEMENT DETAILS



GROVEMONT OVERLOOK - DENSITY TABULATION

PROJECT	TOTAL SUBDIVISION AREA (GROSS AREA)	FLOODPLAIN	STEEP SLOPES	NET AREA	UNITS PERMITTED BY NET (NET/2)	UNITS PROPOSED	TOTAL UNITS REMAINING
PHASE 1 - F09-122	17,8523 ACRES	0.11 ACRES	0.98 ACRES	16.76 AC.	33	3 (1 PROP, 2 EX)	30
PHASE 2 - F12-064	17,8523 ACRES	0.11 ACRES	0.98 ACRES	16.76 AC.	33	3 F09-122 + 30	0
PHASE 2 - F13-055	17,9588 ACRES	0.12 ACRES	0.98 ACRES	16.86 AC.	33	3 F12-064	0
PHASE 3 - F13-055	17,9588 ACRES	0.12 ACRES	0.98 ACRES	16.86 AC.	33	3 *	0

* LOTS 45 - 49 = 5 UNITS - 2 EXISTING UNITS (F09-122) RAZED = 3 PROPOSED UNITS
DENSITY FOR THE 3 PROPOSED UNITS SHALL BE TRANSFERRED FROM BELMONT PER COUNTY COUNCIL BILL NUMBER 33-2012 (ZRA141)

OPEN SPACE TABULATION:

IN ACCORDANCE WITH SECTION 16.121(A)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS THE OPEN SPACE REQUIREMENTS FOR THIS R-ED PROJECT IS 50% OF GROSS AREA.

PHASE	GROSS AREA	50% OPEN SPACE	OPEN SPACE PROVIDED
PHASE 1 F09-122	17,8523 AC.	8,9262 AC.	9,0361 AC.
PHASE 2 F12-064	17,8523 AC.	8,9262 AC.	9,0361 AC.
PHASE 2 F13-055	17,9588 AC.	8,9794 AC.	9,0862 AC.
PHASE 3 FUTURE PLAT	17,9588 AC.	8,9794 AC.	9,0862 AC.

OPEN SPACE PROVIDED

PHASE	PLAT	CREATED	NON-CREDITED	TOTAL
F-09-122	PHASE 1 (PLAT 21469 - 21472)	9,0362 AC	0.0000 AC	9,0362 AC
F-12-064	PHASE 2 (PLAT 21987 - 21989)	9,0362 AC	0.0000 AC	9,0362 AC
F-13-055	RESUB PHASE 2 (PLAT 21252 - 21254)	9,0862 AC	0.0000 AC	9,0862 AC

SITE DATA

LOCATION: TAX MAP 31, GRID 24 & 23, PARCELS 619 & 749
1ST ELECTION DISTRICT
EXISTING ZONING: R-ED
GROSS AREA OF PROJECT: 1.0632 AC (PART OF ORIGINAL 17.9588 AC)
AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 0.0000 AC
AREA OF STEEP SLOPES: 0.0000 AC
AREA OF WETLANDS AND BUFFERS: 0.0000 AC
AREA OF FOREST: 0.0000 AC
NET AREA OF PROJECT: 1.0632 AC
ERODIBLE SOILS: N/A
AREA OF PROPOSED BUILDABLE LOTS: 1.0632 AC
AREA OF OPEN SPACE REQUIRED: 50% x 17.9588 AC = 8,9794 AC (F13-055)
AREA OF OPEN SPACE PROVIDED: 9,0862 AC (F13-055)
AREA OF RECREATIONAL OPEN SPACE REQUIRED: 300 SF x 36 LOTS = 10,800 SF
AREA OF RECREATIONAL OPEN SPACE PROVIDED: 11,000 SQ.FT.
* REFER TO ALLOWED AMENITIES POLICY DATED JUNE 15, 2012
AREA OF RIGHT-OF-WAY: 1.6520 AC (F 09-122)
NUMBER OF LOTS/PARCELS ALLOWED (2 PER NET ACRE): 33 BUILDABLE LOTS (16,858 AC. x 2 = 33.7)
NUMBER OF LOTS/PARCELS PROPOSED: 33 BUILDABLE LOTS (F09-122, F12-064, F13-055)
TOTAL NUMBER OF LOTS/PARCELS PROPOSED: 36 BUILDABLE LOTS (5 - 2 EXISTING = 3 PROPOSED)
TOTAL APPROXIMATE LIMIT OF DISTURBANCE: 1.5 AC +/-
* ONLOT (1.1 AC +/-) AND RIGHT-OF-WAY WORK FOR SERVICE CONNECTIONS
PROPOSED WATER SYSTEM: PUBLIC
PROPOSED SEWER SYSTEM: PUBLIC
PROPOSED USES FOR SITE AND STRUCTURES: RESIDENTIAL SINGLE FAMILY DETACHED (SFD)

* PROPOSED RECREATIONAL AMENITIES ARE TWO (2) PICNIC TABLES WITH BENCHES OR EQUAL FOR A 1,000 SF CREDIT TO BE LOCATED ON OPEN SPACE LOT 4, WHICH WILL ACCOUNT FOR THE REQUIRED 800 SF SHORTAGE OF THE DUE TO THE ADDITIONAL 3 DENSITY RECEIVING UNITS TO BE TRANSFERRED FROM THE BELMONT PROPERTY.



NO. _____ REVISION _____ DATE _____

**PRELIMINARY EQUIVALENT SKETCH PLAN
COVER SHEET**

GROVEMONT OVERLOOK
PHASE 3 - LOTS 45 - 49
A RESUBDIVISION OF PHASE 1 - LOT 2 AND PHASE 2 - LOT 39

TAX MAP 31 BLOCK 24 ZONED R-ED PARCELS 749
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
PREVIOUS SUBMITTALS: WP-07-100, SP-06-15, F-78-90/LEGS PROPERTY, LOTS 1 & 2;
F-87-87/LEGAL PROPERTY, LOTS 3 & 4; F-84-214/GEELHAAR PROPERTY, LOT 1, F-09-122
SDP-12-024, SDP-12-034, F-12-064, F-13-054, F-13-055, ECP 13-046

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.9961

DESIGN BY: RVH/EDS
DRAWN BY: EDS
CHECKED BY: RHV
DATE: MARCH 2013
SCALE: 1" = 50'
W.O. NO.: 04-57

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2014

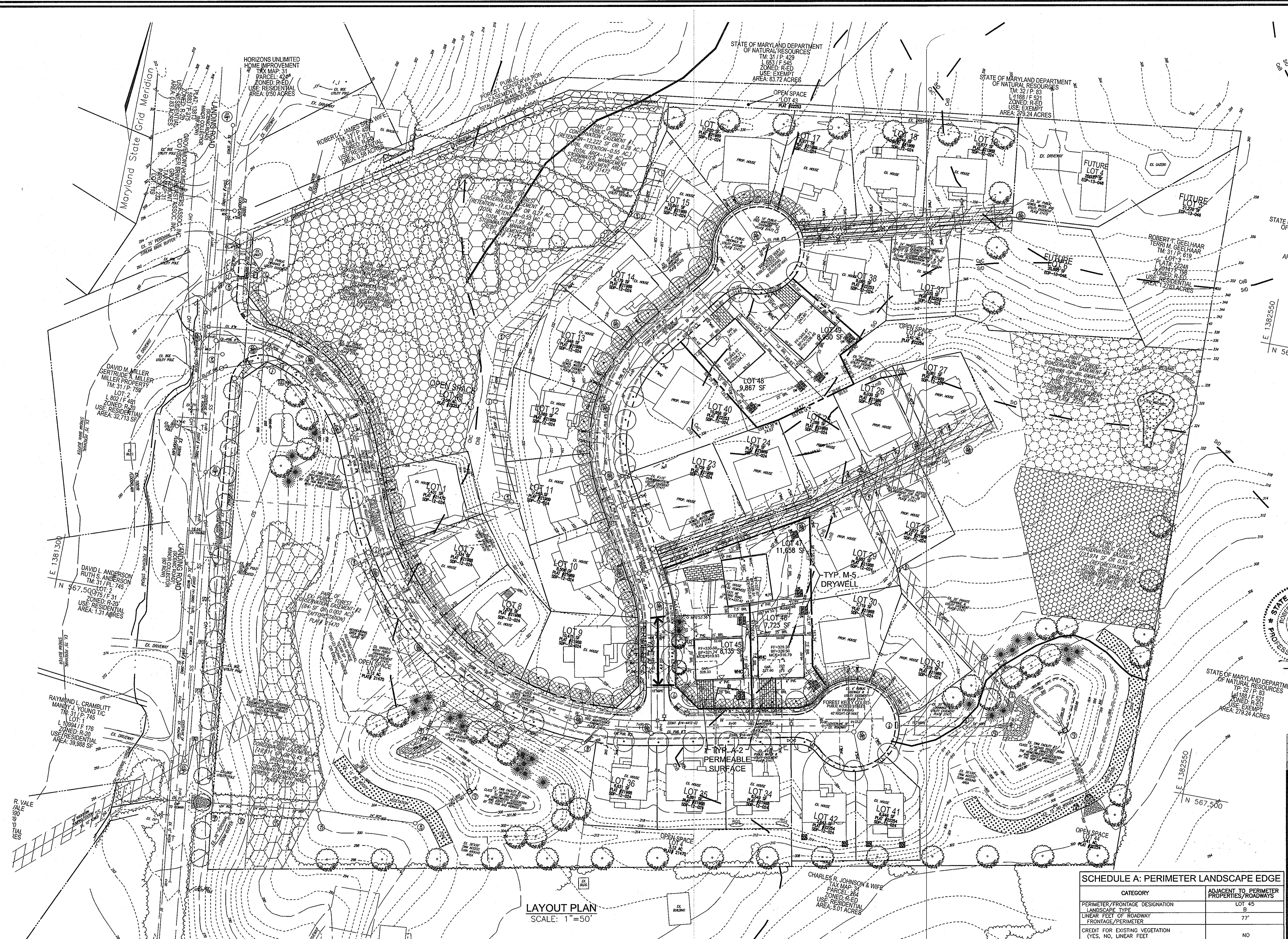
1 SHEET OF 4

NOTES:

- ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE METER SETTINGS.

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Marsha McLaughlin 11/26/13
PLANNING DIRECTOR DATE



LEGEND:

- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANDOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING STORM DRAIN
- DIRECTION OF FLOW
- STORM DRAIN FLOW THROUGH STRUCTURE
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EXISTING SIDEWALK
- EXISTING STREET TREE
- STREAM CENTERLINE
- STREAM BUFFER
- EXISTING 20' TEMPORARY REVERTIBLE FOREST CONSERVATION EASEMENT (CONTRACT NUMBER F-09-122)
- EX. PUBLIC FOREST CONSERVATION EASEMENT (RETENTION) (F-09-122)
- EX. PUBLIC FOREST CONSERVATION EASEMENT (REFORESTATION) (F-09-122)
- EX. PUBLIC DRAINAGE AND UTILITY EASEMENT (F-09-122)
- EX. PUBLIC TREE MAINTENANCE EASEMENT (F-09-122)
- EX. PRIVATE DRAINAGE AND UTILITY EASEMENT (F-09-122)
- EX. 3' PUBLIC WATER AND UTILITY EASEMENT (F-09-122)
- EX. BALTIMORE GAS AND ELECTRIC RED ZONE (F-09-122)
- SAC - EXISTING SEWER CONNECTION
- MWC - EXISTING WATER CONNECTION
- EX. 15' NO WOODY (F-09-122)
- SID - SOILS BOUNDARY

HOUSE BOX

- GARAGE
- FRONT ORIENTATION
- WALKOUT AVAILABLE
- PROPOSED DRY WELL
- PROPOSED PERMEABLE SURFACE
- SDP 12-024 RAIN GARDEN
- SDP 12-024 DRY WELL

STATE OF MARYLAND PROFESSIONAL ENGINEER

50' 0 50' 100' 150'

JERICO LLC
5331 LANDING ROAD
ELKRIE, MD 21075
ATTN: MR. GARY CALTON
443-367-0422

OWNER - LOT 39

JERICO LLC
5331 LANDING ROAD
ELKRIE, MD 21075
ATTN: MR. DON REUWER
443-367-0422

DEVELOPER

LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE
SUITE 102
ELLCOTT CITY, MD 21042
ATTN: MR. DON REUWER
(443) 367-0422

NO.	REVISION	DATE

**PRELIMINARY EQUIVALENT SKETCH PLAN
SITE LAYOUT PLAN
GROVEMONT OVERLOOK**
PHASE 3 - LOTS 45 - 49
A RESUBDIVISION OF PHASE 1 - LOT 2 AND PHASE 2 - LOT 39

TAX MAP 31 BLOCK 24 PARCELS '749'
1ST ELECTION DISTRICT ZONED R-ED HOWARD COUNTY, MARYLAND
PREVIOUS SUBMITTALS: WP-07-100, SP-06-15, F-78-90/LEGAL PROPERTY, LOTS 1 & 2;
F-87-87/LEGAL PROPERTY, LOTS 3 & 4; F-84-214/GEEHAR PROPERTY, LOT 1, F-09-122
SDP-12-024, SDP-12-034, F-12-064, F-13-034, F-13-035, DEP 13-046

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

STATE OF MARYLAND PROFESSIONAL ENGINEER

DESIGN BY: RVH/EDS
DRAWN BY: EDS
CHECKED BY: RHY
DATE: MARCH 2013
SCALE: 1" = 50'
W.O. NO.: 04-57

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. 16193
EXPIRATION DATE: 09-27-2014

2 SHEET OF 4

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES/ROADWAYS
PERIMETER/FRONTAGE DESIGNATION	LOT 45
LANDSCAPE TYPE	B
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	77
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 (IF REMAINING)	77
SHADE TREES	1:50 2
EVERGREEN TREES	1:40 2
SHRUBS	2
NUMBER OF PLANTS PROVIDED	2
SHADE TREES	2
EVERGREEN TREES	1
OTHER TREES (2:1 SUBSTITUTION)	1
SHRUBS (10:1 SUBSTITUTION)	1
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
AR	2	ACER RUBRUM OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL	B & B
PS	2	PINUS STROBUS EASTERN WHITE PINE	6"-8" HT.	B & B

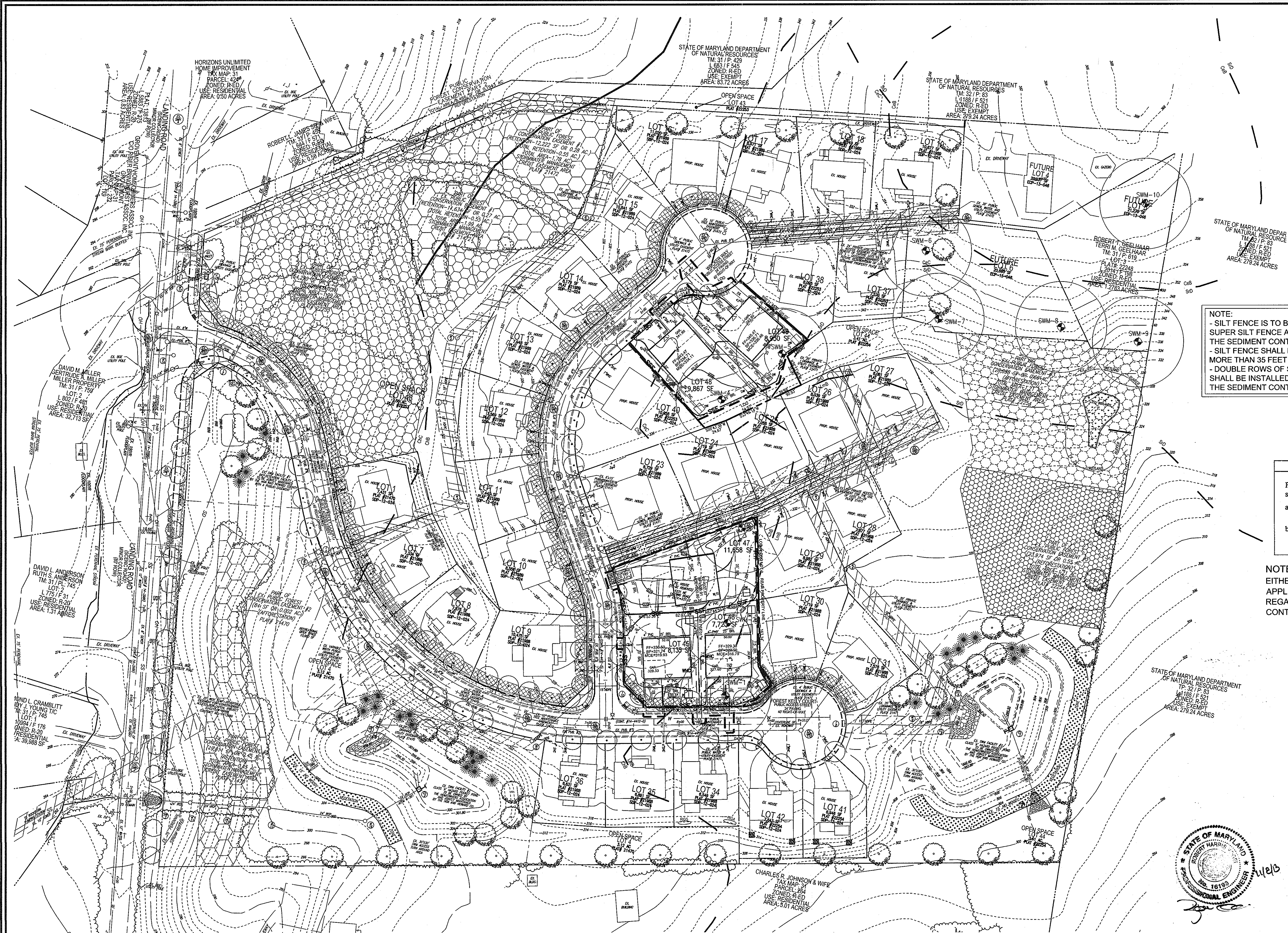
LAYOUT PLAN
SCALE: 1"=50'

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

David L. Anderson 3/16/13
PLANNING DIRECTOR DATE

- NOTES:**
- UNDER F09-122 AND F13-055, FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF HOWARD COUNTY FOREST CONSERVATION ACT. 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.
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 - STORMWATER MANAGEMENT AND PERIMETER LANDSCAPING HAS BEEN PROVIDED IN ACCORDANCE WITH F09-122. SURETY WAS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THE F09-122.
 - PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH F09-122. FINANCIAL SURETY HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR F09-122.
 - STREET SIDE LANDSCAPING FOR LOTS 45 SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. SURETY SHALL BE PROVIDED WITH THE GRADING PERMIT FOR THE SITE DEVELOPMENT PLAN FOR LOT 45.

ALL PROJECTS OF STATE ENGINEERING CONSULTANTS, PHASE II, PRELIMINARY SKETCHING



LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS
	EXISTING TREE LINE
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	STABILIZED CONSTRUCTION ENTRANCE
	DIVERSION FENCE
	SPOT ELEVATION
	DIRECTION OF FLOW
	TEST PIT

NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

Standard Stabilization Note
 Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:
 a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
 b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

NOTE:
 EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

OWNER - LOT 2
 JERICHO LLC
 5331 LANDING ROAD
 ELKBRIDGE, MD 21075
 ATTN: MR. GARY CALTON
 443-367-0422

OWNER - LOT 39
 ELLICOTT CITY LAND HOLDING, INC.
 5300 DORSEY HALL DRIVE, SUITE 102
 ELLICOTT CITY, MD 21042-7819
 ATTN: MR. DON REUWER
 443-367-0422

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DRIVE
 SUITE 102
 ELLICOTT CITY, MD 21042
 ATTN: MR. DON REUWER
 (443) 367-0422

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

 PLANNING DIRECTOR
 DATE: 1/26/13



GRADING PLAN
 SCALE: 1"=50'

MAPPED SOILS TYPES

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K-FACTOR	PERCENT	PERCENT	PERCENT
ChB	CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO
ChC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO
CmB	CHILLUM-RUSSETT LOAMS, 2 TO 5 PERCENT SLOPES	B	NO	NO	0.32	YES	NO	NO
LmB	LEGONRE-MONTALTO SILT LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.32	YES	NO	NO
Sd	SASSAFRAS AND CROOM, 10 TO 15 PERCENT SLOPES	B	NO	NO	0.26	NO	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 K-FACTOR = $K_w \times 0.4 \text{ DEPTH}$
 NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

NO.	REVISION	DATE

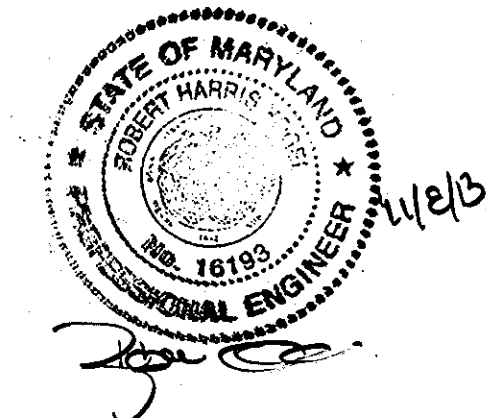
**PRELIMINARY EQUIVALENT SKETCH PLAN
 GRADING & SEDIMENT CONTROL PLAN
 GROVEMONT OVERLOOK**
 PHASE 3 - LOTS 45-49
 A RESUBDIVISION OF PHASE 1 - LOT 2 AND PHASE 2 - LOT 39
 TAX MAP 31 BLOCK 24 PARCELS '749'
 1ST ELECTION DISTRICT ZONED R-ED HOWARD COUNTY, MARYLAND
 PREVIOUS SUBMITTALS: WP-07-100, SP-06-15, F-78-90/LEGAL PROPERTY, LOTS 1 & 2;
 F-87-87/LEGAL PROPERTY, LOTS 3 & 4; F-84-214/GEELHAAR PROPERTY, LOT 1, F-09-122
 SDP-12-024, SDP-12-034, F-12-064, F-13-054, F-13-055, ECP 13-046

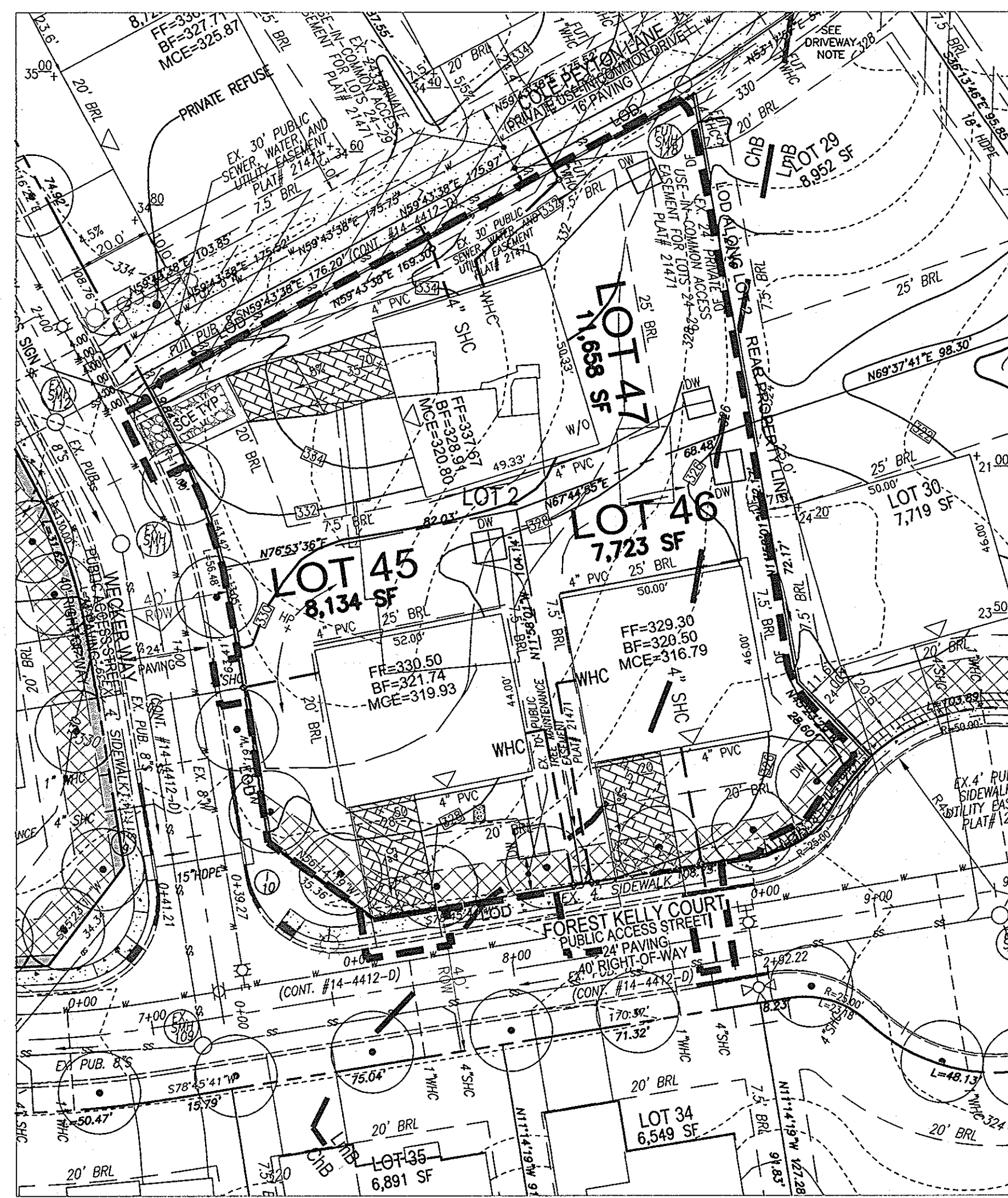
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043 TEL: 410.461.7666
 FAX: 410.461.8961

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. 16193, EXPIRATION DATE: 09-27-2014

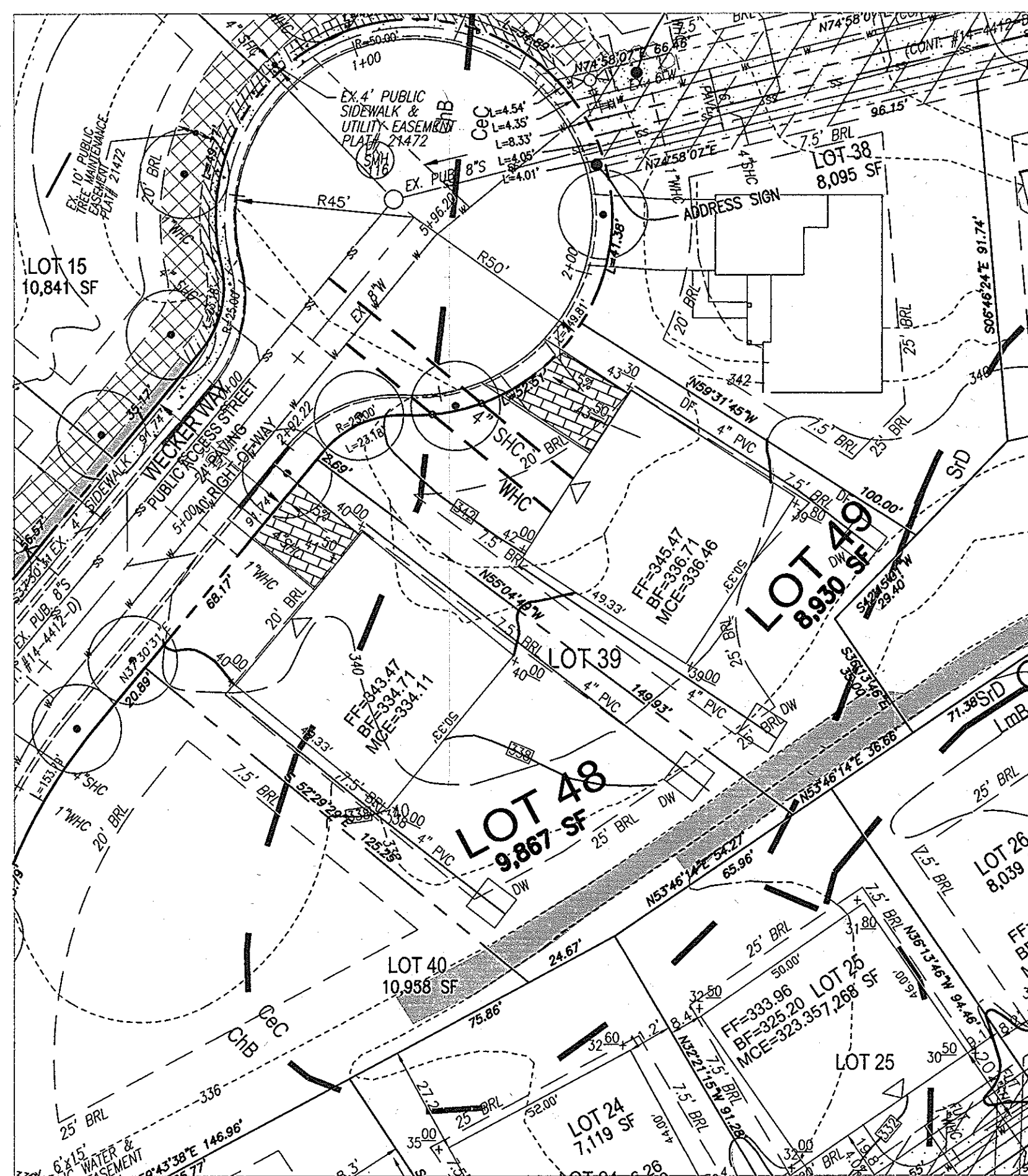
DESIGN BY: RVH/EDS
 DRAWN BY: EDS
 CHECKED BY: RVH
 DATE: MARCH 2013
 SCALE: 1"=50'
 W.O. NO.: 04-57

3 SHEET OF 4

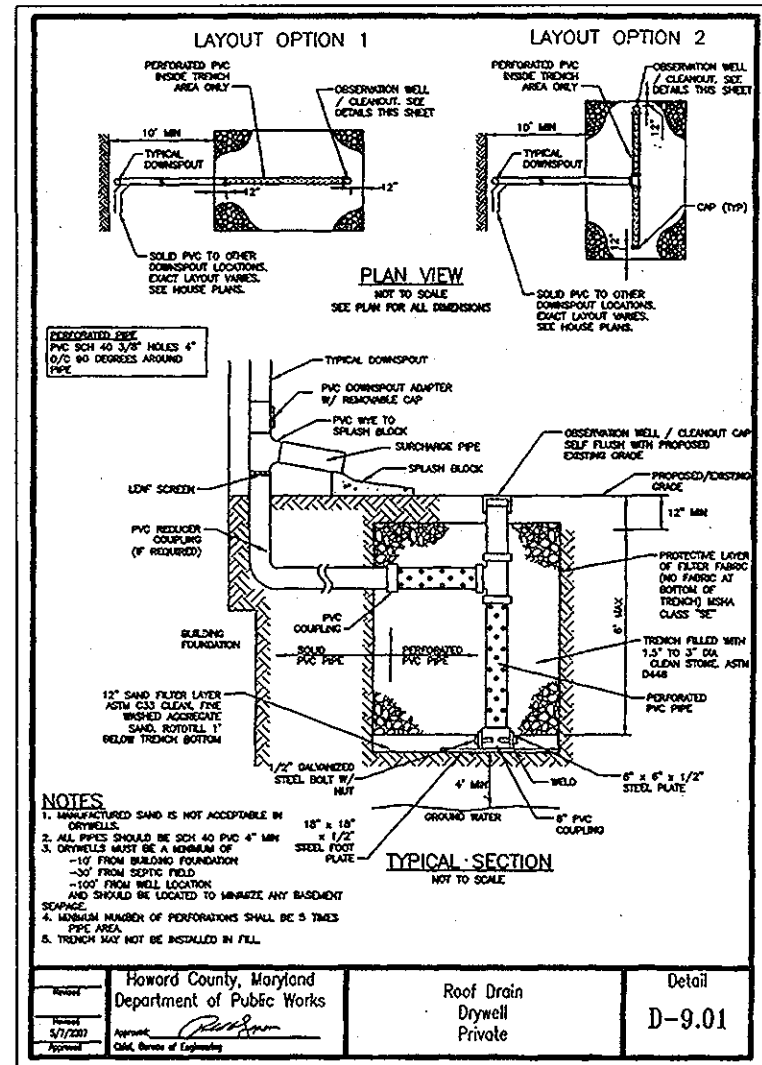




SWM LAYOUT PLAN - LOTS 45-47
SCALE: 1"=30'



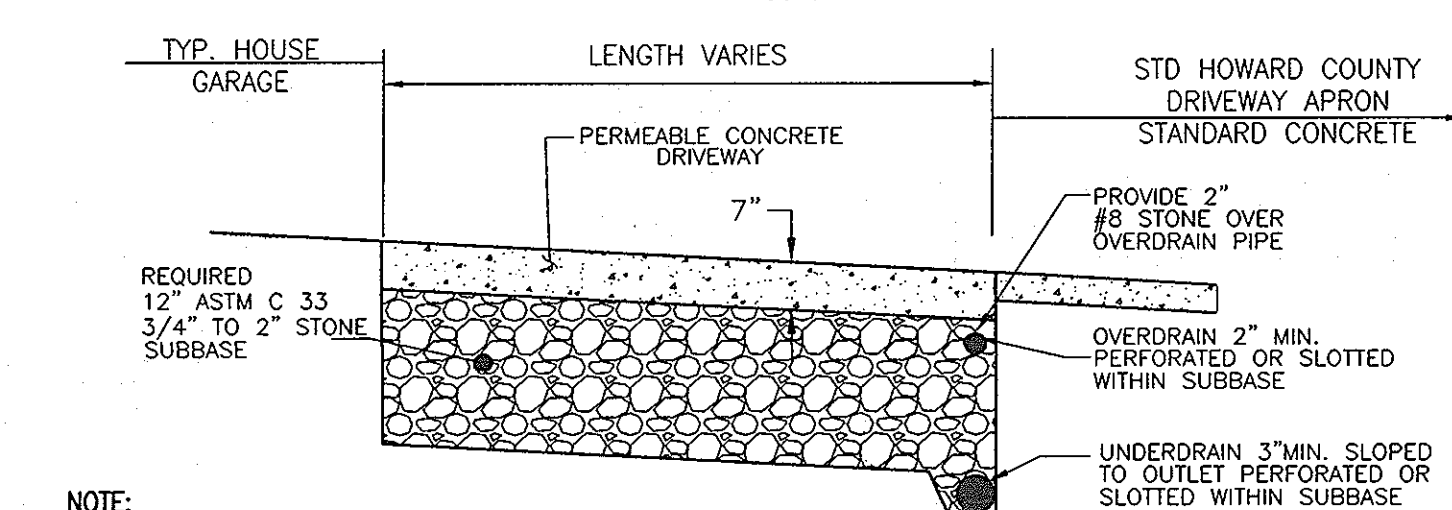
SWM LAYOUT PLAN - LOTS 48 & 49
SCALE: 1"=30'



HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRYWELL (M-5)

A. THE OWNER SHALL INSPECT & CLEAN ANNUALLY, INCLUDING PIPES, GUTTERS, DOWNSPOUTS AND FILTERS.

B. PONDING STANDING WATER OR ALGAL GROWTH ON THE TOP OF A DRYWELL MAY INDICATE FAILURE DUE TO SEDIMENTATION IN THE GRAVEL MEDIA. IF WATER PONDING FOR MORE THAN 48 HOURS AFTER A MAJOR STORM OR MORE THAN SIX INCHES OF SEDIMENT HAS ACCUMULATED, THE GRAVEL MEDIA SHOULD BE EXCAVATED AND REPLACED.



NOTE:
1. PAVEMENT CROSS SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
2. UNDERDRAIN SHALL BE LOCATED SUCH THAT IT CAN DAYLIGHT TO THE CURB INTO A BIO-RETENTION FACILITY OR TO THE REAR OF THE LOT
3. OVERDRAIN SHALL COMBINE WITH UNDERDRAIN OR DAYLIGHT AS DETAILED FOR UNDERDRAIN, SEE NOTE 2.

DETAIL - PERMEABLE CONCRETE DRIVEWAY - 5% OR LESS
NOT TO SCALE
ALL PERMEABLE CONCRETE THICKNESS, MIX AND SUB-BASE TO BE DETERMINED BY GEOTECHNICAL ENGINEER.

B.4.B SPECIFICATIONS FOR PERMEABLE PAVEMENTS & REINFORCED TURF
THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING. THE DESIGNER IS RESPONSIBLE FOR DEVELOPING SPECIFICATIONS FOR INDIVIDUAL PROJECTS AND SPECIFIC CONDITIONS.

- PERVIOUS CONCRETE SPECIFICATIONS**
DESIGN THICKNESS - PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE CONCRETE SLAB SHALL SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED. APPLICATIONS MAY BE DESIGNED USING EITHER STANDARD PAVEMENT PROCEDURES (E.G., AASHTO, A3 325.5R, A3 300R) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES.
MIX & INSTALLATION - TRADITIONAL PORTLAND CEMENTS (ASTM C 150, C 1157) MAY BE USED IN PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADMIXTURES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TYPICAL BATCHING) PRIOR TO CONSTRUCTION SO THAT CRITICAL PROPERTIES (E.G., SETTING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY, PERMEABILITY) CAN BE DETERMINED.
AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE COMPONENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO. 10) AND NO. 28 (3/8 IN. TO NO. 20) SIZES. SINGLE-SIZED AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED.
WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.27 AND 0.30 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADMIXTURES. WATER QUALITY SHOULD MEET A30. AS A GENERAL RULE, POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 94 OR A310 IS ALSO PERMITTED.
ADMIXTURES - CHEMICAL ADMIXTURES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADMIXTURES SHOULD MEET ASTM C 494 (CHEMICAL ADMIXTURES) AND ASTM C 260 (AIR ENTRAINING ADMIXTURES) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS.
BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
- PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP)**
PAVER BLOCKS - BLOCKS SHOULD BE EITHER 3/4 IN. OR 4 IN. THICK AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (COS PROPERTIES) OF THE SURFACE AREA OPEN. INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED.
INFILL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED SAND OR SANDY LOAM. PICP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33 SAND.
BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
- REINFORCED TURF**
REINFORCED GRASS PAVEMENT (RGP) - WHETHER USED WITH GRASS OR GRAVEL, THE RGP THICKNESS SHALL BE AT LEAST 1-3/4" THICK WITH A LOAD CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.

- A-2. PERMEABLE PAVEMENTS
- CONSTRUCTION CRITERIA:
- EROSION AND SEDIMENT CONTROL - FINAL GRADING FOR INSTALLATION SHOULD NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED AROUND PROPOSED PAVEMENT LOCATIONS.
 - SOIL COMPACTION - SUB SOILS SHALL NOT BE COMPACTED. CONSTRUCTION SHOULD BE PERFORMED WITH LIGHTWEIGHT, WIDE TRACKED EQUIPMENT TO MINIMIZE COMPACTION. EXCAVATED MATERIALS SHOULD BE PLACED IN A CONTAINED AREA.
 - DISTRIBUTION SYSTEMS - OVERDRAIN, UNDERDRAIN, AND DISTRIBUTION PIPES SHALL BE CHECKED TO INSURE THAT BOTH THE MATERIAL AND PERFORMING MEET SPECIFICATIONS (SEE APPENDIX B.4). THE UPSTREAM ENDS OF PIPES SHOULD BE CAPPED PRIOR TO INSTALLATION. ALL UNDERDRAIN OR DISTRIBUTION PIPES USED SHOULD BE INSTALLED FLAT AGAINST THE BED BOTTOM.
 - SUBBASE INSTALLATION - SUBBASE AGGREGATE SHALL BE CLEAN AND FREE OF FINES. THE SUBBASE SHALL BE PLACED IN LIFTS AND LIGHTLY ROLLED ACCORDING TO THE SPECIFICATIONS (SEE APPENDIX B.4).
- INSPECTION:
- REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:
- DURING EXCAVATION TO SUB GRADE.
 - DURING PLACEMENT AND BACKFILL OF ANY DRAINAGE OR DISTRIBUTION SYSTEMS.
 - DURING PLACEMENT OF THE CONCRETE SURFACE MATERIAL.
 - DURING PLACEMENT OF THE SURFACE MATERIAL.
 - UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.
- MAINTENANCE CRITERIA:
- THE FOLLOWING PROCEDURES SHOULD BE CONSIDERED ESSENTIAL FOR MAINTAINING PERMEABLE PAVEMENT SYSTEMS:
- PAVEMENTS SHOULD BE USED ONLY WHERE REGULAR MAINTENANCE CAN BE PERFORMED. MAINTENANCE AGREEMENTS SHOULD CLEARLY SPECIFY HOW TO CONDUCT ROUTINE TASKS TO ENSURE LONG-TERM PERFORMANCE.
 - PAVEMENT SURFACES SHOULD BE SWEEP AND VACUUMED TO REMOVE DEBRIS AND TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING SYSTEMS AND COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
 - DRAINAGE PIPES, INLETS, STONE EDGE DRAINS, AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED OUT AT REGULAR INTERVALS.
 - TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND TURF AND GRIT INTO THE PERVIOUS SURFACES, LEADING TO CLOSING OF SURFACE PORES. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.
 - DEBRIS SHOULD BE USED IN MODERATION. WHEN USED, DEBRIS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT. SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

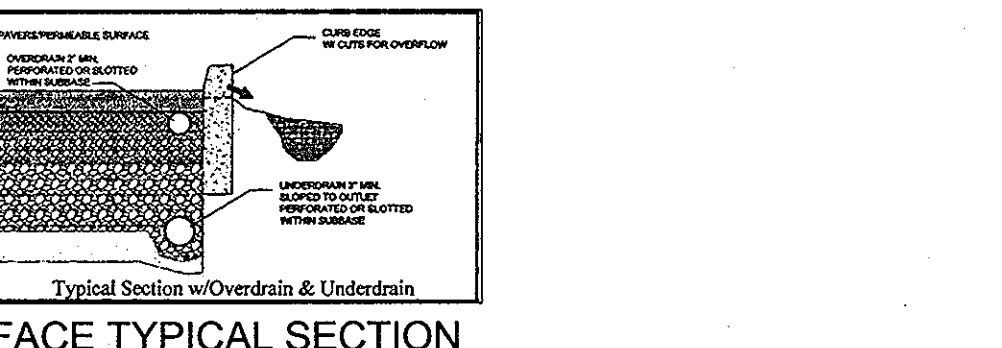
HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

A. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.

B. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.

C. THE OWNER SHALL USE DECIDERS IN MODERATION. DECIDERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.

D. THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE-INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.



PERMEABLE SURFACE TYPICAL SECTION
NOT TO SCALE

PROJECT:		GROVEMONT PHASE 2 LOTS 45-49 - SITE DATA									
TOTAL AREA (LOT):		0.63		AC NEW DEVELOPMENT							
TARGET Pe:		1.80		IN							
IMPERVIOUS:		36.51		PERCENT							
SITE Rv:		0.3786									
SITE ESDv:		1.558		CF		865 CF for 1"					
LOT AREA	IMPERVIOUS AREA	GRASS AREA	TOTAL AREA	PERCENT IMPERVIOUS	Rv	ESDv MIN(1)	ESDv MAX(2)	ESDv SITE	PERCENT OF SITE	ESDv	
45	3210	4024	8134	0.39	0.41	275	714	384	0.30		
PERMEABLE SURFACE DRIVEWAY 540 SF 0.196											
DRYWELL 2 8.5 8.5 4 0.3 173 CF											
279 CF PROV.											
46	3210	4513	7723	0.42	0.42	273	710	382	0.28		
PERMEABLE SURFACE DRIVEWAY 540 SF 0.196											
DRYWELL 2 8.5 8.5 4 0.3 173 CF											
279 CF PROV.											
47	3600	8058	11658	0.31	0.33	319	828	446	0.42		
PERMEABLE SURFACE DRIVEWAY 950 SF 0.196											
DRYWELL 2 7.5 7.5 4 0.3 135 CF											
321 CF PROV.											
10000	TOTAL AREA	27515 SF				866	2252	1213		880 CF PROV.	
			0.63 AC			CUFT	CUFT	CUFT			

NOTE:
1. These lots drain toward an existing Stormwater Management Facility designed for the Grovemont Overlook F-09-122 project. Stormwater Management for this lot is provided for 1" as quantity management has been provided.

PROJECT:		GROVEMONT PHASE 2 LOTS 45-49 - SITE DATA									
TOTAL AREA (LOT):		0.43		AC NEW DEVELOPMENT							
TARGET Pe:		1.80		IN							
IMPERVIOUS:		31.18		PERCENT							
SITE Rv:		0.3306									
SITE ESDv:		929		CF		516 CF for 1"					
LOT AREA	IMPERVIOUS AREA	GRASS AREA	TOTAL AREA	PERCENT IMPERVIOUS	Rv	ESDv MIN(1)	ESDv MAX(2)	ESDv SITE	PERCENT OF SITE	ESDv	
48	2920	6947	9867	0.30	0.32	260	676	364	0.52		
PERMEABLE SURFACE DRIVEWAY 360 SF 0.196											
DRYWELL 2 9.0 9.0 4 0.3 194 CF											
265 CF PROV.											
49	2920	6010	8930	0.33	0.34	256	666	359	0.48		
PERMEABLE SURFACE DRIVEWAY 360 SF 0.196											
DRYWELL 2 9.0 9.0 4 0.3 194 CF											
265 CF PROV.											
5840	TOTAL AREA	18797 SF				516	1342	723		530 CF PROV.	
			0.43 AC			CUFT	CUFT	CUFT			

NOTE:
1. These lots drain toward an existing Stormwater Management Facility designed for the Grovemont Overlook F-09-122 project. Stormwater Management for this lot is provided for 1" as quantity management has been provided.

ENVIRONMENTAL SITE DESIGN COMPUTATIONS

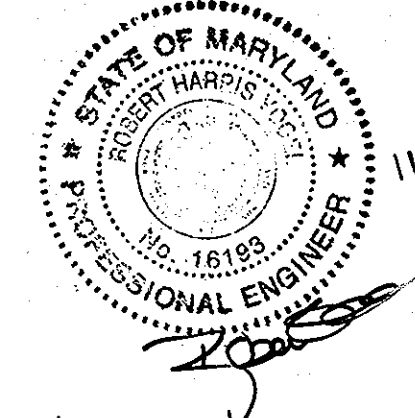
Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2' to 4' deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (20%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	strawed hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	FE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-275	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe, 3/8" per' @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-A615-60	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.8R; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressure); and analysis of potential cracking.
Sand	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

OWNER - LOT 2
JERICHO LLC
5331 LANDING ROAD
ELK RIDGE, MD 21075
ATTN: MR. GARY CALTON
443-367-0422

OWNER - LOT 39
JERICHO LLC
ELLCOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DRIVE, SUITE 102
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PRELIMINARY EQUIVALENT SKETCH PLAN
STORMWATER MANAGEMENT DETAILS
GROVEMONT OVERLOOK
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