

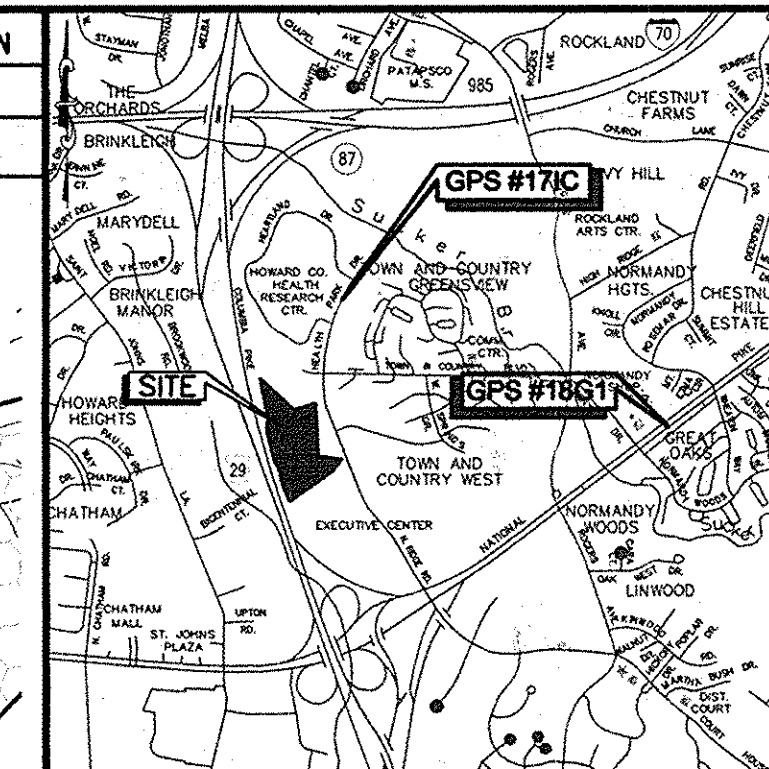
BENCHMARK DATA			
No.	NORTHING	EASTING	ELEV
1	588971.65	1362993.12	416.20
2	589778.33	1362905.76	441.80
3	589416.22	1362495.27	418.27

ENVIRONMENTAL CONCEPT PLAN

THE GATHERINGS AT ELLICOTT'S RETREAT

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

POINT	NORTHING	EASTING	ELEVATION
#171C	591056.92	1363154.63	415.41
#18G1	589985.06	1367750.24	407.74



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP 4815, GRID J-5

INDEX OF DRAWINGS

- ECP-1 - ENVIRONMENTAL CONCEPT PLAN TITLE SHEET
- ECP-2 - EXISTING CONDITIONS PLAN
- ECP-3 - EROSION & SEDIMENT CONTROL CONCEPT PLAN
- ECP-4 - STORMWATER MANAGEMENT CONCEPT PLAN
- ECP-5 - DRAINAGE AREA MAPS

APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN, SITE DEVELOPMENT PLAN, OR GRADING OR BUILDING PERMIT. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION, SITE DEVELOPMENT PLAN OR GRADING AND BUILDING PERMIT STAGES. BE ADVISED, FURTHER COMMENTS WILL BE GENERATED UPON REVIEW OF THE APPLICABLE DEVELOPMENT PLAN.

SITE NOTES

- SITE DATA:**
TAX ID: 379643
TAX MAP/GRID: 24/06
PARCEL: 1085
LIBER/FOLIO: 3771/91
PLATS: 19014-19015
AREA: 17.12 ACRES
ZONE: POR
ADC MAP/GRID: 4815/J-5
- TOPOGRAPHY SHOWN HEREON IS BASED ON AVAILABLE PLANS AND GIS TOPOGRAPHY AND A SUPPLEMENTAL FIELD RUN SURVEY PERFORMED BY KCI TECHNOLOGIES, INC. ON OR ABOUT DECEMBER 2013 AND REFLECT NATIONAL GEODETIC SURVEY NAD '83 (1991) AND NAVD '88 VALUES RESPECTIVELY.
- PROPERTY SHOWN HEREON LIES WITHIN ZONE X, AN AREA OF MINIMAL FLOODING, PER FEMA COMMUNITY PANEL NO. 24027C0090D EFFECTIVE DATE NOVEMBER 6, 2013.
- NO WETLAND AREAS WILL BE AFFECTED BY THE PROPOSED CONSTRUCTION.
- EXISTING UTILITY INFORMATION SHOWN HEREON IS BASED ON THE BEST AVAILABLE INFORMATION, WHICH INCLUDES A FIELD RUN SURVEY COMPLETED BY KCI TECHNOLOGIES, INC. ON OR ABOUT DECEMBER 2013.
- LIMIT OF DISTURBANCE (LOD): 10.10 AC. 50' STREAM BUFFER
- PROPOSED LAND USES WITHIN THE LOD:
BUILDING: 2.20 AC.
PARKING: 1.04 AC.
ROAD: 1.86 AC.
- EXISTING WETLAND AREA WITHIN LOD = 0 AC.
EXISTING WETLAND BUFFER AREA WITHIN THE LOD = 0 AC.
EXISTING FLOODPLAIN AREA WITHIN LOD = 0 AC.
EXISTING STREAM BUFFER AREA WITHIN LOD = 235 sqft.
FOREST CONSERVATION WITHIN LOD = 0 AC.
EXISTING STEEP SLOPE AREA (>15%) WITHIN LOD = 2.15 AC.
HIGHLY ERODIBLE SOILS WITHIN THE LOD = 0 AC.
ALL STORM DRAIN PIPE IS TO BE HDPE PIPES UNLESS OTHERWISE NOTED.
- NO CEMETERIES OR HISTORIC STRUCTURES EXIST ON SITE.
- NO EXISTING STRUCTURES EXIST ON SITE.
- THERE IS NO FLOODPLAIN ON THE SITE.
- FOREST CONSERVATION OBLIGATIONS FOR THIS SITE WERE PREVIOUSLY ADDRESSED. SEE FINAL PLANS F-96-009, F-99-208 AND F-07-098.
- A WAIVER WILL BE SUBMITTED FOR THE DISTURBANCE TO THE STREAM BUFFER ALONG THE WEST SIDE. THIS DISTURBANCE IS REQUIRED TO PROVIDE MAINTENANCE ACCESS ALONG THE BASE OF THE RETAINING WALL TO THE STORMWATER FACILITY PER SECTION 16.116(e) OF THE SUBDIVISION REGULATIONS.

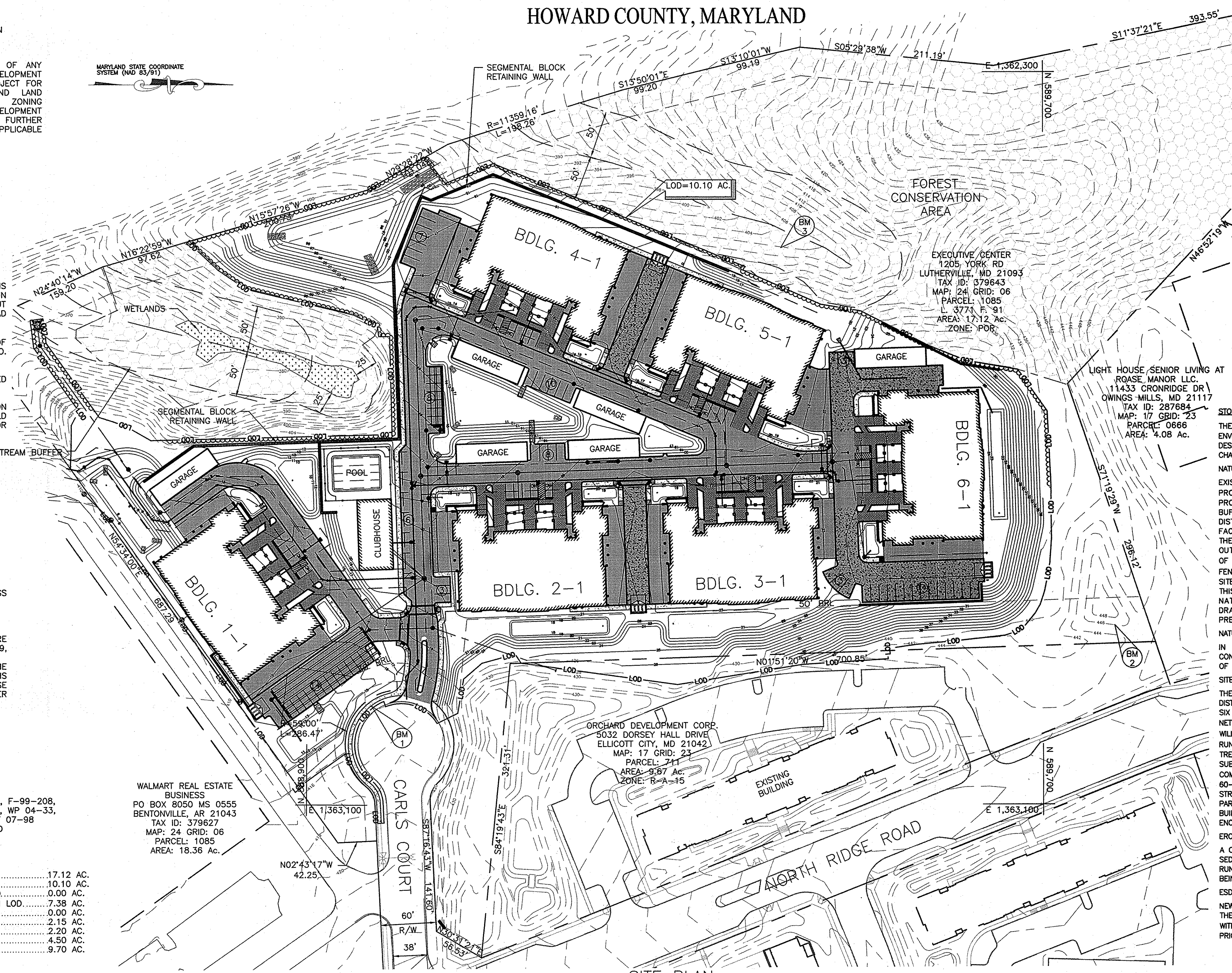
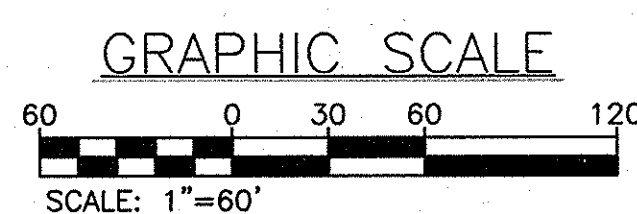
SITE DATA

- GENERAL SITE DATA**
 - PRESENT ZONE: POR
 - LOCATION: TAX MAP: 24, GRID 06, PARCEL 1085
 - APPLICABLE DPZ FILE REFERENCES: F-96-01, F-96-09, F-99-208, SDP-96-01, SDP-98-29, WP 99-52, WP 98-48, WP 04-33, WP 05-22, WP 06-32, WP 00-38, GP 98-81, F 07-98
 - PROPOSED USE OF SITE: RESIDENTIAL - AGE RESTRICTED
 - PROPOSED WATER AND SEWER SYSTEMS: PUBLIC
- AREA TABULATION**

a. TOTAL AREA OF SITE	17.12 AC.
b. AREA OF SITE TO BE DEVELOPED	10.10 AC.
c. APPROXIMATE AREA OF 100 YEAR FLOODPLAIN WITHIN LOD	0.00 AC.
d. APPROX. AREA OF STEEP SLOPES (15% OR MORE) WITHIN LOD	7.38 AC.
e. AREA OF ERODIBLE SOILS WITHIN LOD	0.00 AC.
f. AREA OF FOREST WITHIN LOD	2.15 AC.
g. AREA OF PROPOSED BUILDINGS	2.20 AC.
h. AREA OF GREEN OPEN SPACE WITHIN LOD	4.50 AC.
i. APPROXIMATE AREA OF LIMIT OF DISTURBANCE	9.70 AC.

PARKING TABULATION

REQUIRED	
2 SPACES PER UNIT:	162 UNITS X 2 SPACES = 324
0.3 SPACES PER UNIT:	162 UNITS X 0.3 = 49
TOTAL REQUIRED: 373 SPACES	
PROVIDED	
GARAGES IN BUILDING:	20 SPACES X 6 BLDGS. = 120
SPACED OUTSIDE GARAGES:	114
STAND-ALONE GARAGES:	7 SPACES X 6 BLDGS. = 42
REGULAR PARKING SPACES:	85
HANDICAP SPACES:	12
TOTAL PROVIDED: 373 SPACES	



LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- BUILDING OUTLINE
- 260 --- EXISTING CONTOUR
- EXISTING TREELINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED IMPERIOUS PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- FOREST CONSERVATION AREA
- LOD --- LIMIT OF DISTURBANCE
- GNB --- SOILS LINE
- MaC --- SOILS LINE

STORMWATER MANAGEMENT APPROACH

THE "STORMWATER MANAGEMENT ACT OF 2007" REQUIRES THE IMPLEMENTATION OF AN ENVIRONMENTAL SITE DESIGN TO THE MAXIMUM EXTENT PRACTICABLE. ENVIRONMENTAL SITE DESIGN TECHNIQUES PROMOTE GROUNDWATER RECHARGE BY TARGETING RUNOFF CHARACTERISTICS TO MIMIC WOODS IN A GOOD CONDITION AFTER DEVELOPMENT OF THE SITE.

NATURAL RESOURCES:

EXISTING WETLANDS ARE LOCATED ON SITE AT THE SOUTH WESTERN CORNER OF THE PROPERTY. THE WETLANDS AND 25' WETLANDS BUFFER WILL NOT BE DISTURBED BY THE PROPOSED WORK. THERE ARE TWO STREAMS LOCATED ON THE SITE. THE STREAMS AND BUFFERS WILL NOT BE DISTURBED EXCEPT FOR APPROXIMATELY 235SQFT. WILL BE DISTURBED TO PROVIDE ACCESS TO ONE OF THE PROPOSED STORMWATER MANAGEMENT FACILITIES. THE STEEP SLOPES WITHIN THE LIMIT OF DISTURBANCE WILL BE DISTURBED. THESE SLOPES ARE PRIMARILY FROM EXISTING STOCKPILES ON SITE. THE STEEP SLOPES OUTSIDE THE AREA OF WORK WILL BE PROTECTED FROM THE DEVELOPMENT THROUGH USE OF RETAINING WALLS AND TEMPORARY PROTECTION MEASURES (SILT FENCE, SUPER SILT FENCE, AND BLAZE ORANGE FENCE). THE EXISTING FOREST CONSERVATION AREAS ON SITE WILL REMAIN OUTSIDE THE LIMIT OF DISTURBANCE FOR THE DEVELOPMENT SHOWN ON THIS PLAN. SEDIMENT CONTROL DEVICES WILL BE INSTALLED TO PROTECT THESE NATURAL RESOURCES DURING CONSTRUCTION. THE PROPOSED OUTFALL FROM THE STORM DRAIN SYSTEM WILL BE EXTENDED DOWN THE EXISTING SLOPE TO THE FLAT AREA TO PREVENT EROSION OF THE EXISTING STEEP SLOPE.

NATURAL FLOW PATTERNS:

IN GENERAL EXISTING DRAINAGE PATTERNS WILL REMAIN UNCHANGED IN THE PROPOSED CONDITION. THE SITE WILL CONTINUE TO DRAIN TO THE WEST AND SOUTH. THE INSTALLATION OF NEW STORMWATER MANAGEMENT FACILITIES WILL PROVIDE A STABLE NATURAL WATERCOURSE.

SITE DESIGN:

THE SITE LAYOUT WAS DONE TO MAXIMIZE THE AMOUNT OF PROPOSED LIVING AREA WITHOUT DISTURBING THE WETLANDS AND FOREST CONSERVATION AREA ON THE PROPERTY. THERE ARE SIX PROPOSED BUILDINGS AND A COMMUNITY CENTER ALL CONNECTED BY A ROADWAY NETWORK STARTING AT THE END OF THE EXISTING CARLS COURT. (A-2) PERMEABLE PAVEMENT WILL BE USED BETWEEN BUILDINGS ALONG WITH (N-2) DISCONNECTION OF NON-ROOFTOP RUNOFF, (M-6) MICRO-BIORETENTION FACILITIES AND (M-2) SUBMERGED GRAVEL WETLANDS TO TREAT THE REQUIRED ESQ VOLUME. THE SITE LIES WITHIN THE TIBER-HUDSON SUB-WATERSHED. BECAUSE OF THIS, 100-YEAR STORM MANAGEMENT IS REQUIRED. A COMBINATION OF ABOVE GROUND STORAGE IN THE (M-6) MICRO-BIORETENTION FACILITIES AND 60-INCH UNDERGROUND STORAGE FACILITIES WILL FULFILL THE REQUIREMENT. A CONTROL STRUCTURE WILL BE INSTALLED AFTER BOTH STORAGE SYSTEMS TO MANAGE THE RELEASE. PARKING WILL BE PROVIDED THROUGH FIRST FLOOR GARAGES, IN FRONT OF EACH OF THE SIX BUILDINGS, AND STAND ALONE SPACES AROUND THE PROPERTY. THERE ARE ALSO SIX ENCLOSED, STAND ALONE GARAGES ON SITE.

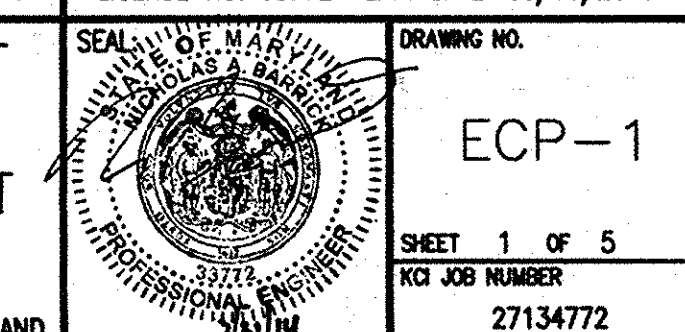
EROSION & SEDIMENT CONTROL:

A CONCEPTUAL EROSION & SEDIMENT CONTROL PLAN IS INCLUDED TO DEMONSTRATE THAT SEDIMENT CONTROL PRACTICES WILL BE PROVIDED TO EFFECTIVELY TREAT SEDIMENT LADEN RUNOFF DURING CONSTRUCTION WITHOUT IMPACTING THE TREATMENT PRACTICES THAT ARE BEING PROPOSED FOR PERMANENT RUNOFF TREATMENT.

ESD PLANNING TECHNIQUES:

NEW IMPERVIOUS AREA AND EXISTING IMPERVIOUS AREAS WILL BE TREATED BY ESD PRACTICES. THESE FACILITIES COMBINED WILL STORE AND TREAT THE REQUIRED ESQ VOLUME. THE SOILS WITHIN THE LOD ARE HSG 'B' AND 'C'. A GEOTECHNICAL INVESTIGATION WILL BE REQUIRED PRIOR TO DEVELOPMENT OF THE FINALIZED STORMWATER MANAGEMENT COMPUTATIONS.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2015



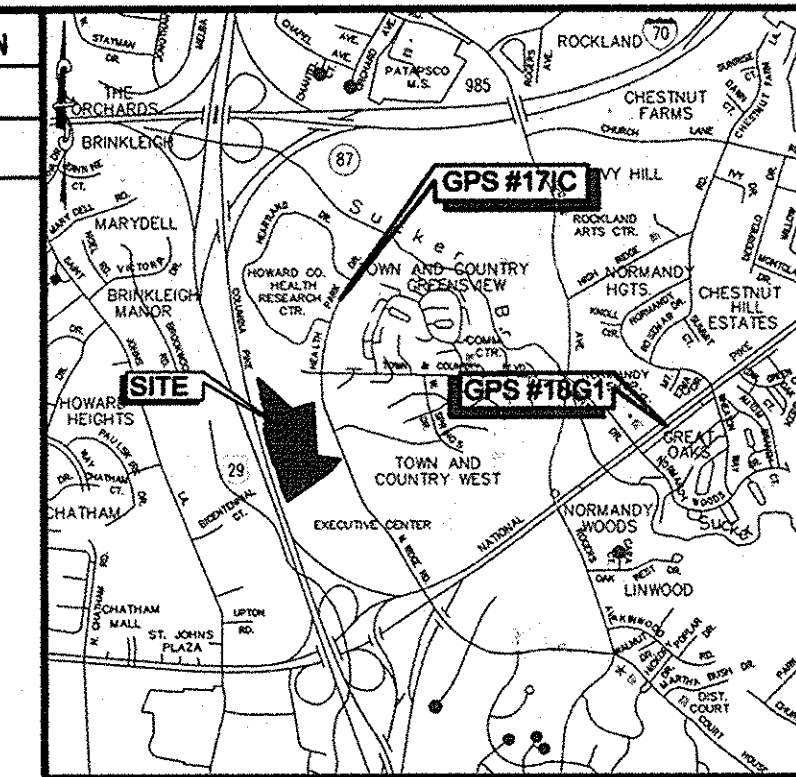
THE GATHERINGS AT ELLICOTT'S RETREAT
ENVIRONMENTAL CONCEPT PLAN
ENVIRONMENTAL CONCEPT PLAN TITLE SHEET
ZONING: POR
TAX MAP: 24 GRID: 06 PARCEL: 1085
HOWARD COUNTY, MARYLAND

OWNER COMMERCIAL CONTRACTORS INC. 1205 YORK ROAD LUTHERVILLE-TIMONUM, MD 21093 (410)-825-8400	 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS 8161 MARLE LAWS BOULEVARD SUITE 150 FULTON, MD 20779 TELEPHONE: (410)792-8086 FAX: (410)792-7419	APPROVED: HOWARD COUNTY DEPARTMENT PLANNING AND ZONING DATE: 4/9/14	REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY					DATE: 3-28-2014 SCALE: 1"=60' DESIGNED BY: NAB DRAWN BY: BRA
		NO.	DATE	DESCRIPTION	BY							
THE GATHERINGS AT ELLICOTT'S RETREAT ENVIRONMENTAL CONCEPT PLAN TITLE SHEET SECOND ELECTION DISTRICT			SHEET 1 OF 5 KCI JOB NUMBER: 27134772									

ECP-14-04A

MARYLAND STATE COORDINATE SYSTEM (NAD 83/91)

POINT	NORTHING	EASTING	ELEVATION
#171C	591056.92	1363154.63	415.41
#1801	589985.06	1367750.24	407.74



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP 4815, GRID J-5

LEGEND

- PROPERTY LINE
- - - ADJOINING PROPERTY LINE
- ▭ BUILDING OUTLINE
- - - 260 EXISTING CONTOUR
- ~ ~ ~ EXISTING TREELINE
- EXISTING EDGE OF PAVEMENT
- LOD — LIMIT OF DISTURBANCE
- GnB MaC SOILS LINE



EXECUTIVE/CENTER
1205 YORK RD
LUTHERVILLE, MD 21093
TAX ID: 379643
MAP: 24 GRID: 06
PARCEL: 1085
L: 3771 E: 911
AREA: 17.12 AC
ZONE: POR

LIGHT HOUSE SENIOR LIVING AT
ROSE MANOR LLC
11433 CRONRIDGE DR
OWINGS MILLS, MD 21117
TAX ID: 287684
MAP: 17 GRID: 23
PARCEL: 0666
AREA: 4.08 AC.

WALMART REAL ESTATE
BUSINESS
PO BOX 8050 MS 0555
BENTONVILLE, AR 21043
TAX ID: 379627
MAP: 24 GRID: 06
PARCEL: 1085
AREA: 18.36 AC.

ORCHARD DEVELOPMENT CORP
6032 DORSEY HALL DRIVE
ELICOTT CITY, MD 21042
MAP: 17 GRID: 23
PARCEL: 711
AREA: 9.67 AC
ZONE: R-4-15

SOILS TABLE

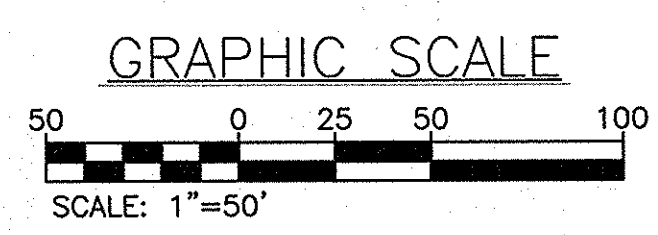
SYMBOL	DESCRIPTION	HYDROLOGIC SOILS GROUP	K-VALUE
GgB	GLENELG LOAM, 3-8% SLOPES	B	0.20
GgC	GLENELG LOAM, 8-15% SLOPES	B	0.20
GhB	GLENELG-URBAN LAND COMPLEX 0-8% SLOPES	B	0.20
GnB	GLENVILLE-BAILE SILT LOAMS, 0-8% SLOPES	C	0.37
MaC	MANOR LOAM, 8-15% SLOPES	B	0.24
MaD	MANOR LOAM, 15-25% SLOPES	B	0.24

SOIL MAP #13 (ELICOTT CITY SW)

EXISTING CONDITIONS
SCALE: 1"=50'

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NOTE:
TOTAL AREA INSIDE LOD = 9.70 AC.
TOTAL IMPERVIOUS AREA = 0 AC.
TOTAL OPEN SPACE/PERVIOUS AREA = 9.70 AC.



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8161 MARLE LANE BOULEVARD
SUITE 150
FULTON, MD 20759
TELEPHONE: (410)792-8086
FAX: (410)792-7419

APPROVED: HOWARD COUNTY DEPARTMENT PLANNING AND ZONING

Karl Schuch
CHIEF, DIVISION OF LAND DEVELOPMENT
4/16/14 DATE

Paul Schuch
CHIEF, DEVELOPMENT ENGINEERING DIVISION
4-9-14 DATE

NO.	DATE	REVISIONS DESCRIPTION	BY

THE GATHERINGS AT ELICOTT'S RETREAT
ENVIRONMENTAL CONCEPT PLAN
EXISTING CONDITIONS PLAN

ZONING: POR
TAX ACCOUNT # 379643
TAX MAP: 24 GRID: 06 PARCEL: 1085
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PROFESSIONAL ENGINEER
SEAL OF MARYLAND
2/11/14

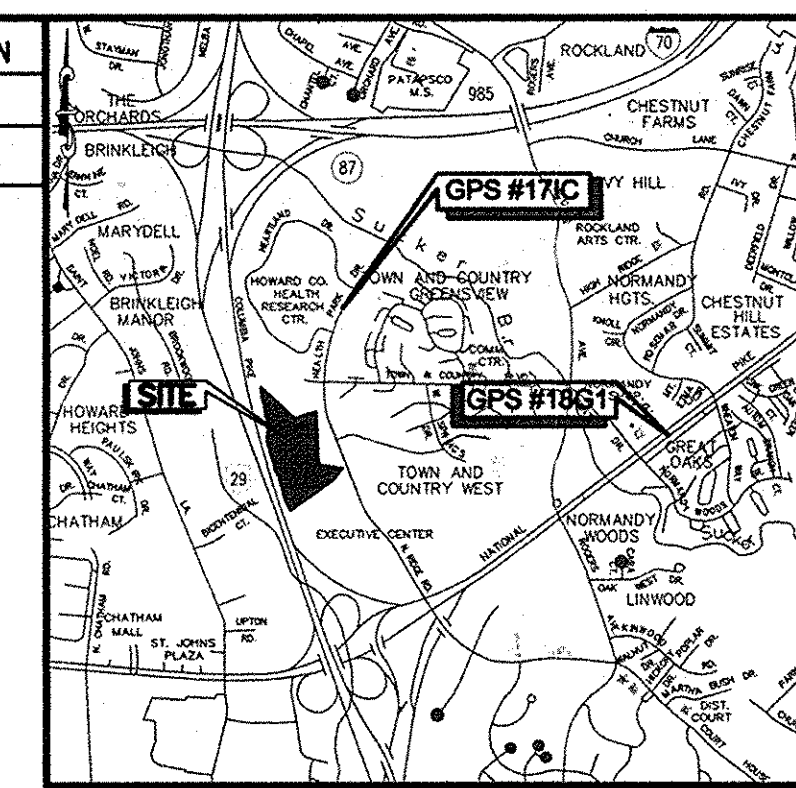
DRAWING NO.
ECP-2

SHEET 2 OF 5
KCI JOB NUMBER
27134772

ECP-14-049

BENCHMARK DATA			
No.	NORTHING	EASTING	ELEV.
1	588971.65	1362993.12	416.20
2	589778.33	1362905.76	441.80
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POINT	NORTHING	EASTING	ELEVATION
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VICINITY MAP
SCALE: 1" = 2000'
ADC MAP 4815, GRID J-5

LEGEND

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- - - EXISTING TREE OF PAVEMENT
- EXISTING TREE
- PROPOSED IMPERVIOUS PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- LOD LIMIT OF DISTURBANCE
- GnB SOILS LINE
- MaC SOILS LINE
- AGIP AT GRADE INLET PROTECTION

SEDIMENT CONTROL NARRATIVE

THE PROJECT CONSISTS OF CONSTRUCTING SIX (6) AGE RESTRICTED FOUR-STORY BUILDINGS, CLUBHOUSE AND POOL FOR A TOTAL OF 162 UNITS. THE SITE IS CURRENTLY CLEARED AND IS CURRENTLY BEING USED AS A STOCKPILE SITE. THERE ARE TWO STREAM CHANNELS ON THE WEST SIDE OF THE SITE WITH THE SOUTHWESTERN STREAM CHANNEL CONTAINING A SMALL WETLANDS AREA. EACH STREAM CHANNEL CONVEY RUNOFF TO TWO EXISTING 24" STORM DRAIN PIPES THAT RUN WEST UNDER ROUTE 29. THE EXISTING STORM DRAIN SYSTEM FOR THE APARTMENT COMPLEX TO THE EAST OUTFALLS ONTO THE SITE AND WILL BE RE-ROUTED THROUGH THE SITE AS A PART OF THE PROJECT.

THE SITE WILL BE ROUGH GRADED INITIALLY WITH SEDIMENT TRAPS NUMBER 1 AND NUMBER 2 CONSTRUCTED TO CONTAIN AND MANAGE THE RUNOFF FROM THE SITE. THE STORM DRAIN SYSTEM WILL BE CONSTRUCTED FROM THE OUTFALL AT THE SOUTH END OF THE SITE UP TO THE POINT OF CONNECTION OF THE EXISTING STORM DRAIN SYSTEM TO BYPASS RUNOFF AROUND THE WORK AREA. BERMS WILL BE CONSTRUCTED ALONG THE NORTH END OF THE SITE AS WELL TO DIVERT CLEAN WATER AROUND THE SITE. AS THE RETAINING WALL ALONG THE SOUTH AND WEST SIDE OF THE SITE IS CONSTRUCTED, SEDIMENT TRAP NUMBER 3 WILL BE CONSTRUCTED. EACH OF THE THREE TRAPS WILL BE SIZED TO MANAGE THE ONE YEAR STORM.

SOILS TABLE

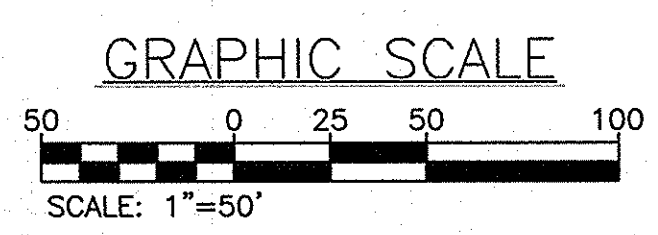
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SOIL MAP #13 (ELLCOTT CITY SW)

SEDIMENT & EROSION CONTROL PLAN

SCALE: 1"=50'

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FAX: (410)792-7419

APPROVED: HOWARD COUNTY DEPARTMENT PLANNING AND ZONING

[Signature] 4/9/14
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4-9-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

REVISIONS		DATE
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DATE: 3-28-2014
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DRAWN BY: BRA

THE GATHERINGS AT ELLCOTT'S RETREAT
ENVIRONMENTAL CONCEPT PLAN
SEDIMENT AND EROSION CONTROL

ZONING: POR
TAX ACCOUNT # 379643
MAP: 24 GRID: 06 PARCEL: 1085
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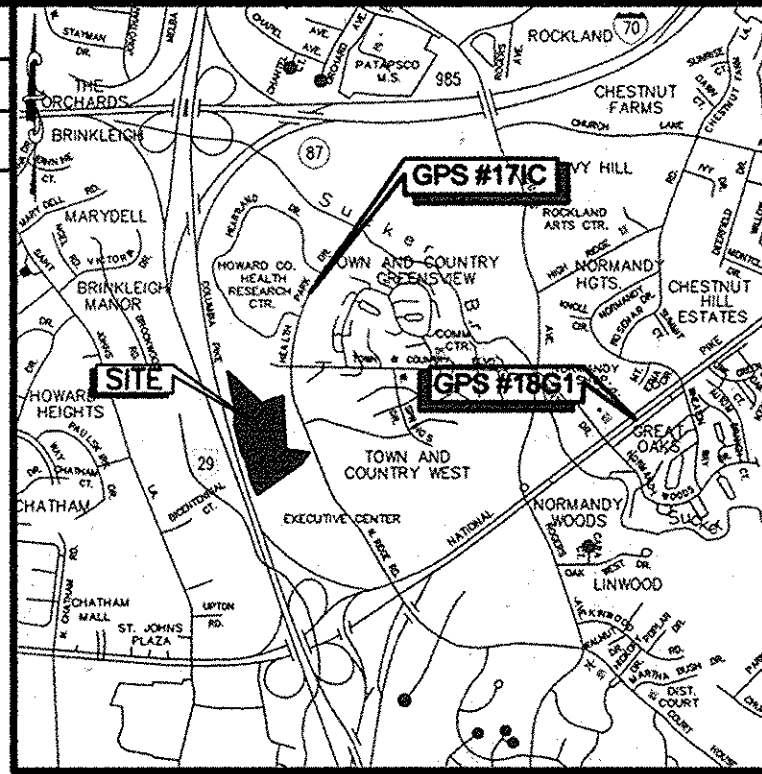
SEAL OF MARYLAND PROFESSIONAL ENGINEER

DRAWING NO. ECP-3
SHEET 3 OF 5
KCI JOB NUMBER 27134772

ECP-14-049

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- PROPOSED IMPERIOUS PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- LOD --- LIMIT OF DISTURBANCE
- G_nB --- SOILS LINE

STORMWATER MANAGEMENT FACILITY TABLE

FACILITY	DRAINAGE AREA (SF)	IMPERVIOUS AREA (S.F.)	%	PROVIDED	
				PE	ESD _v (C.F.)
SWM #1 (U-6) MICRO-BORATION	22,115	15,202	69%	1.10	1,350
SWM #2 (U-6) MICRO-BORATION	8,639	7,643	88%	0.30	182
SWM #3 (U-6) MICRO-BORATION	25,086	14,365	57%	1.66	1,966
SWM #4 (U-6) MICRO-BORATION	3,081	2,376	77%	1.77	339
SWM #5 (U-6) MICRO-BORATION	19,975	10,992	55%	2.49	2,261
SWM #6 (U-6) MICRO-BORATION	22,414	10,391	46%	2.55	2,226
SWM #7 (U-6) MICRO-BORATION	4,171	2,795	67%	1.59	322
SWM #8 (U-6) MICRO-BORATION	4,026	2,806	70%	1.73	394
SWM #9 (U-6) MICRO-BORATION	25,756	10,385	40%	2.60	2,304
SWM #10 (U-6) MICRO-BORATION	4,000	2,783	70%	2.22	500
SWM #11 (U-6) MICRO-BORATION	4,013	2,795	70%	2.03	460
SWM #12 (U-6) MICRO-BORATION	23,208	10,038	43%	2.60	2,209
SWM #13 (U-6) MICRO-BORATION	7,168	6,380	89%	1.03	524
SWM #14 (U-6) MICRO-BORATION	6,995	5,736	82%	1.59	730
SWM #15 (U-6) MICRO-BORATION	4,003	3,291	82%	1.91	502
SWM #16 (U-6) MICRO-BORATION	4,002	3,291	82%	1.75	462
SWM #17 (U-6) MICRO-BORATION	4,004	3,292	82%	1.85	488
SWM #18 (U-6) MICRO-BORATION	42,532	31,724	75%	2.15	5,497
SWM #19 (U-6) MICRO-BORATION	58,880	45,440	77%	1.94	7,100
SWM #20 (U-6) MICRO-BORATION	6,158	4,093	66%	2.60	865
SWM #21 PERVIOUS PAVEMENT	7,031	7,031	100%	2.50	551
SWM #22 PERVIOUS PAVEMENT	12,043	11,325	94%	2.50	1,525
SWM #23 PERVIOUS PAVEMENT	6,140	5,387	88%	2.50	958
SWM #24 PERVIOUS PAVEMENT	7,182	7,182	100%	2.50	560
NON-ROOFTOP DISCONNECT	6,158	6,158	100%	1.00	912

100-YEAR MANAGEMENT TABLE

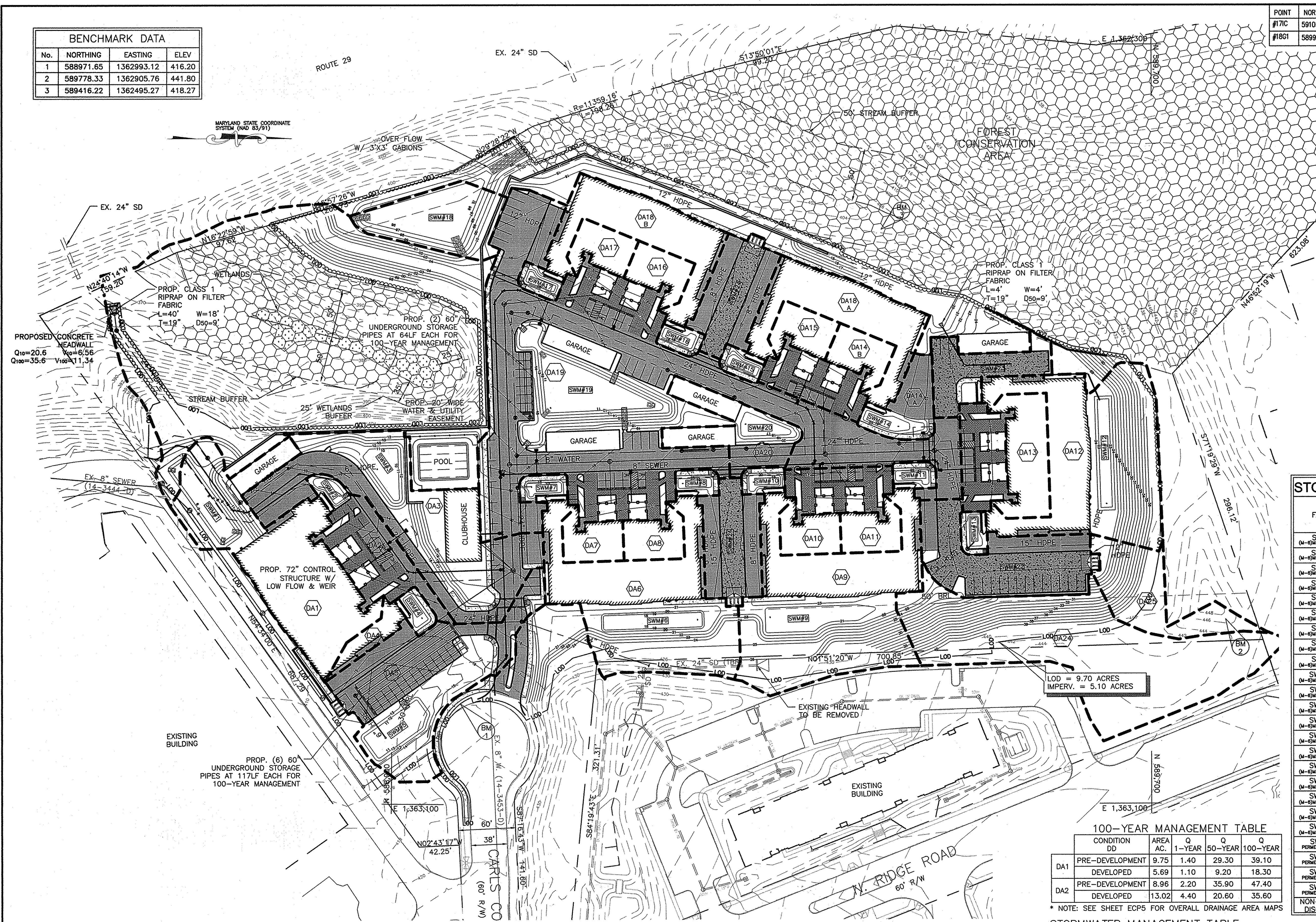
CONDITION	AREA AC.	Q		
		1-YEAR	50-YEAR	100-YEAR
DA1	9.75	1.40	29.30	39.10
DEVELOPED	5.69	1.10	9.20	18.30
PRE-DEVELOPMENT	8.96	2.20	35.90	47.40
DA2	13.02	4.40	20.60	35.60

* NOTE: SEE SHEET ECP5 FOR OVERALL DRAINAGE AREA MAPS

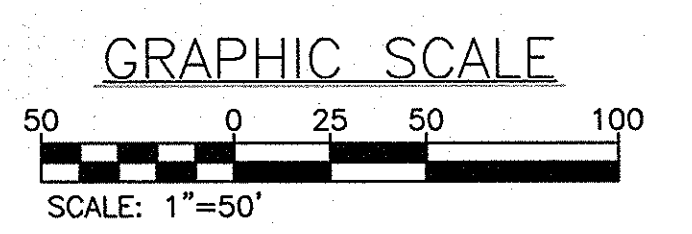
STORMWATER MANAGEMENT TABLE

AREA OF DISTURBANCE (AC.)	PROPOSED IMPERVIOUS (AC.)	%	PE	QE	ESD _v REQUIRED (CF)	ESD _v PROVIDED (CF)
10.10	5.10	50	1.80"	0.91"	33,291	34,468

STORMWATER MANAGEMENT CONCEPT PLAN
SCALE: 1"=50'



NOTE:
TOTAL AREA INSIDE LOD = 9.70 AC.
TOTAL IMPERVIOUS AREA = 5.10 AC.
TOTAL OPEN SPACE/PERVIOUS AREA = 4.60 AC.



OWNER
COMMERCIAL CONTRACTORS INC.
1205 YORK ROAD
LUTHERVILLE-TIMONIUM,
MD 21093
(410)-825-8400

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
KCI TECHNOLOGIES
8161 MAPLE LAWN BOULEVARD
SUITE 150
FUSION, MD 20759
TELEPHONE (410) 792-8086
FAX: (410) 792-7419

APPROVED: HOWARD COUNTY DEPARTMENT PLANNING AND ZONING

Kurt S. Duvall
4/28/14
CHIEF, DIVISION OF LAND DEVELOPMENT

Chad E. ...
4/9/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISIONS	BY

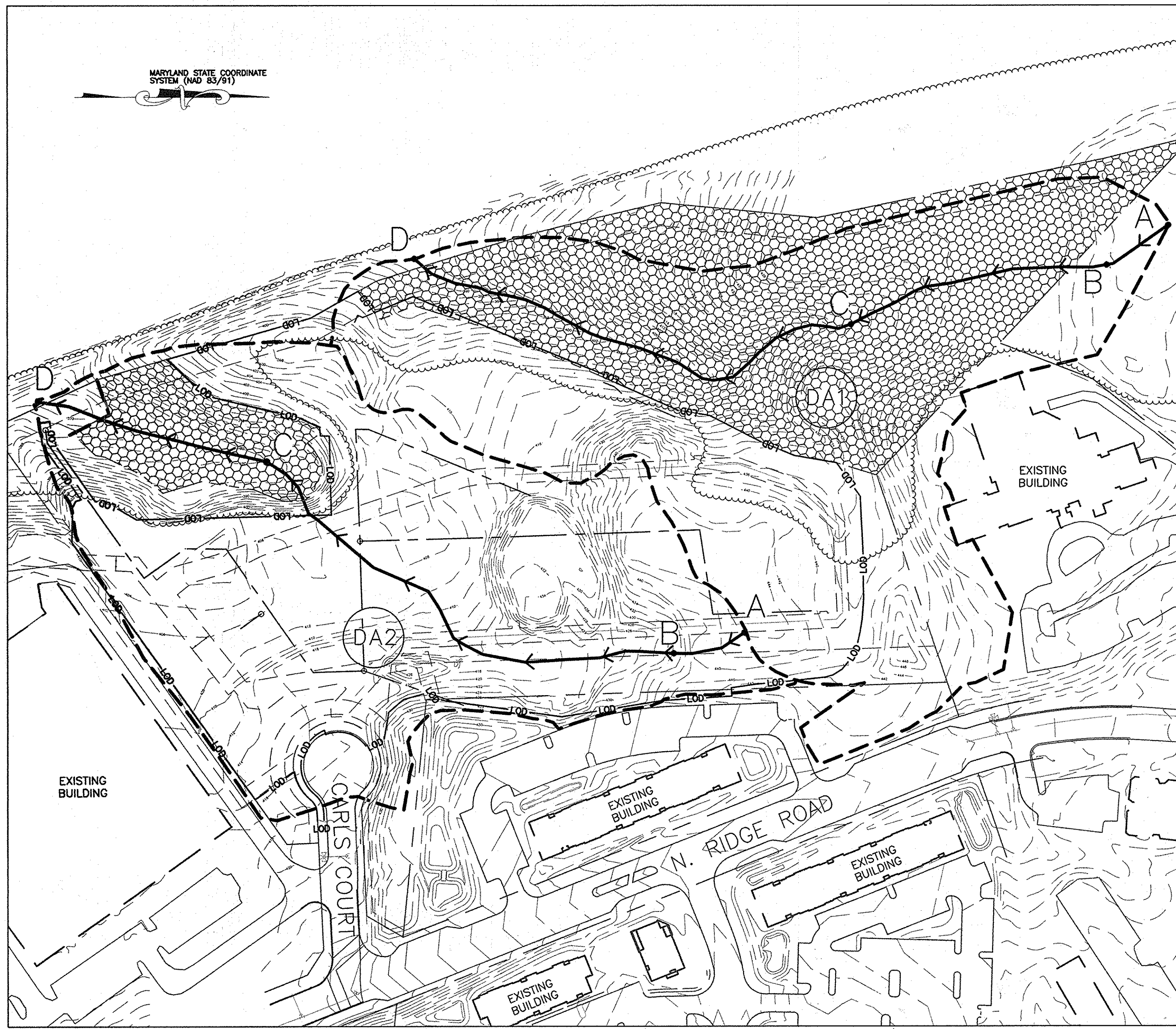
DATE: 3-28-2014
SCALE: 1"=50'
DESIGNED BY: MAB
DRAWN BY: BRA

THE GATHERINGS AT ELLICOTT'S RETREAT
ENVIRONMENTAL CONCEPT PLAN
STORMWATER MANAGEMENT CONCEPT PLAN
ZONING: POR
TAX ACCOUNT # 379643
TAX MAP: 24 GRID: 06 PARCEL: 1085
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

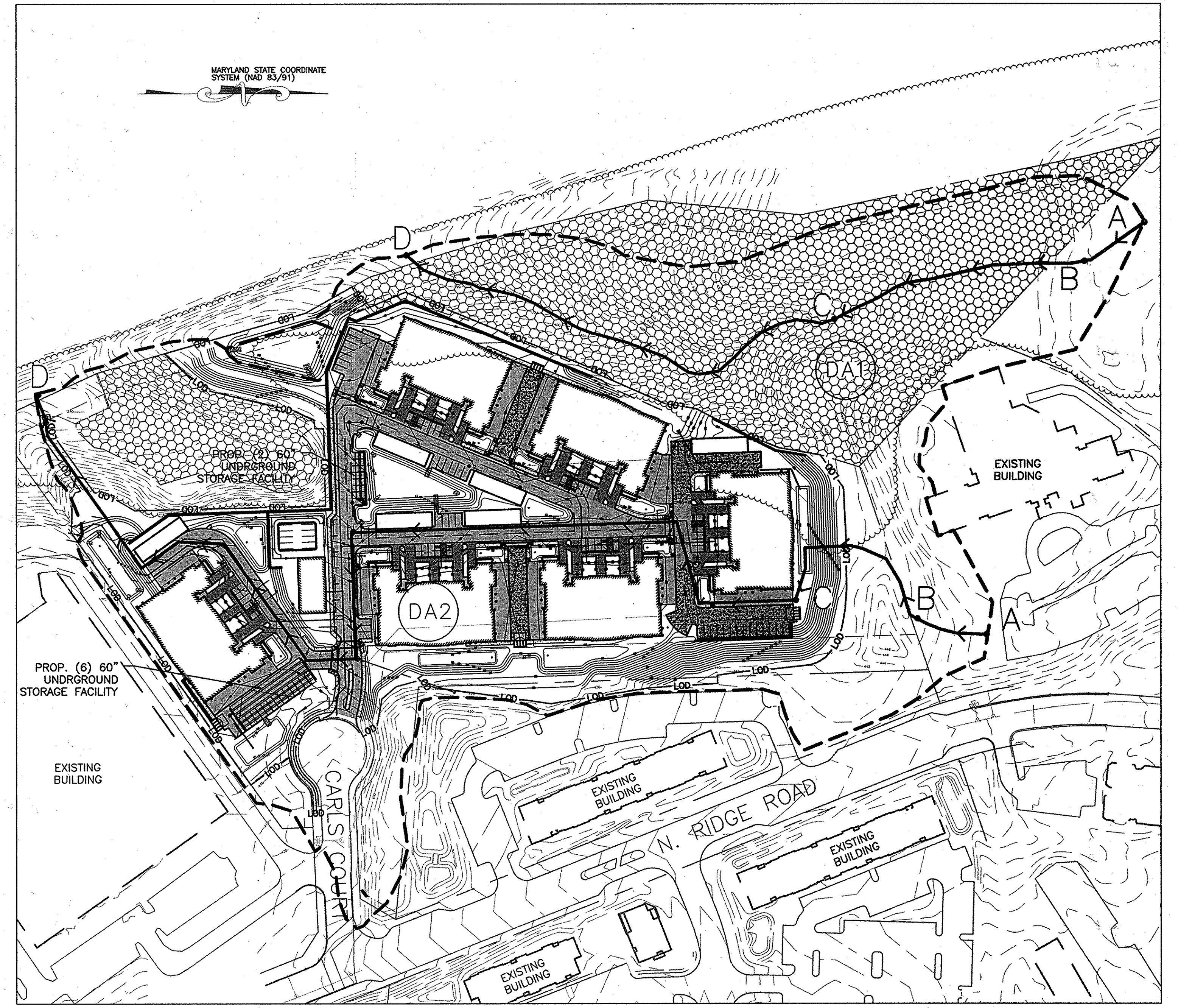
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2015

SEAL OF PROFESSIONAL ENGINEER
[Signature]
DRAWING NO. ECP-4
SHEET 4 OF 5
KCI JOB NUMBER 27134772

ECP-14-049



EXISTING DRAINAGE AREA
SCALE: 1"=100'

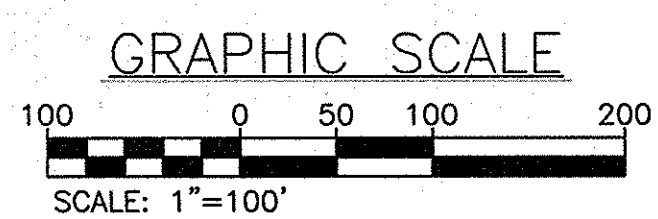


PROPOSED DRAINAGE AREA
SCALE: 1"=100'

DRAINAGE AREA	AREA (AC.)	IMP. AREA (AC.)	RCN	TC (HR.)	1-YR Q (cfs)	50-YR Q (cfs)	100-YR Q (cfs)
DA1	9.75	0	62	0.379	1.40	29.30	39.10
DA2	8.96	0.16	63	0.212	2.20	35.90	47.40

DRAINAGE AREA	AREA (AC.)	IMP. AREA (AC.)	RCN	TC (HR.)	1-YR Q (cfs)	10-YR Q (cfs)	100-YR Q (cfs)
DA1	5.69	0.203	---	---	1.10	9.20	18.30
DA2	13.02	1.162	---	---	4.40	20.60	35.60

NOTE: DATA SHOWN ABOVE IS FROM THE ROUTED TR-20 OUTPUT. SEE REPORT FOR ROUTING.



OWNER
COMMERCIAL CONTRACTORS INC.
1205 YORK ROAD
LUTHERVILLE-TIMONIUM,
MD 21093
(410)-825-8400

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
KCI TECHNOLOGIES
8161 MAPLE LAWN BOULEVARD
SUITE 150
FUSION, MD 20759
TELEPHONE (410)792-8086
FAX (410)792-7419

APPROVED: HOWARD COUNTY DEPARTMENT PLANNING AND ZONING
Veronica DeJure 4/24/14
CHIEF, DIVISION OF LAND DEVELOPMENT
Paul Edmund 4-9-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

REVISIONS		DATE
NO.	DESCRIPTION	BY

DATE: 3-28-2014
SCALE: 1"=100'
DESIGNED BY: NAB
DRAWN BY: BRA

THE GATHERINGS AT ELLICOTT'S RETREAT
ENVIRONMENTAL CONCEPT PLAN
DRAINAGE AREA MAPS
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SEAL: [Professional Engineer Seal]
DRAWING NO. ECP-5
SHEET 5 OF 5
KCI JOB NUMBER 27134772

ECP-14-049