

# SYMPHONY WOODS PARK - PHASE 1

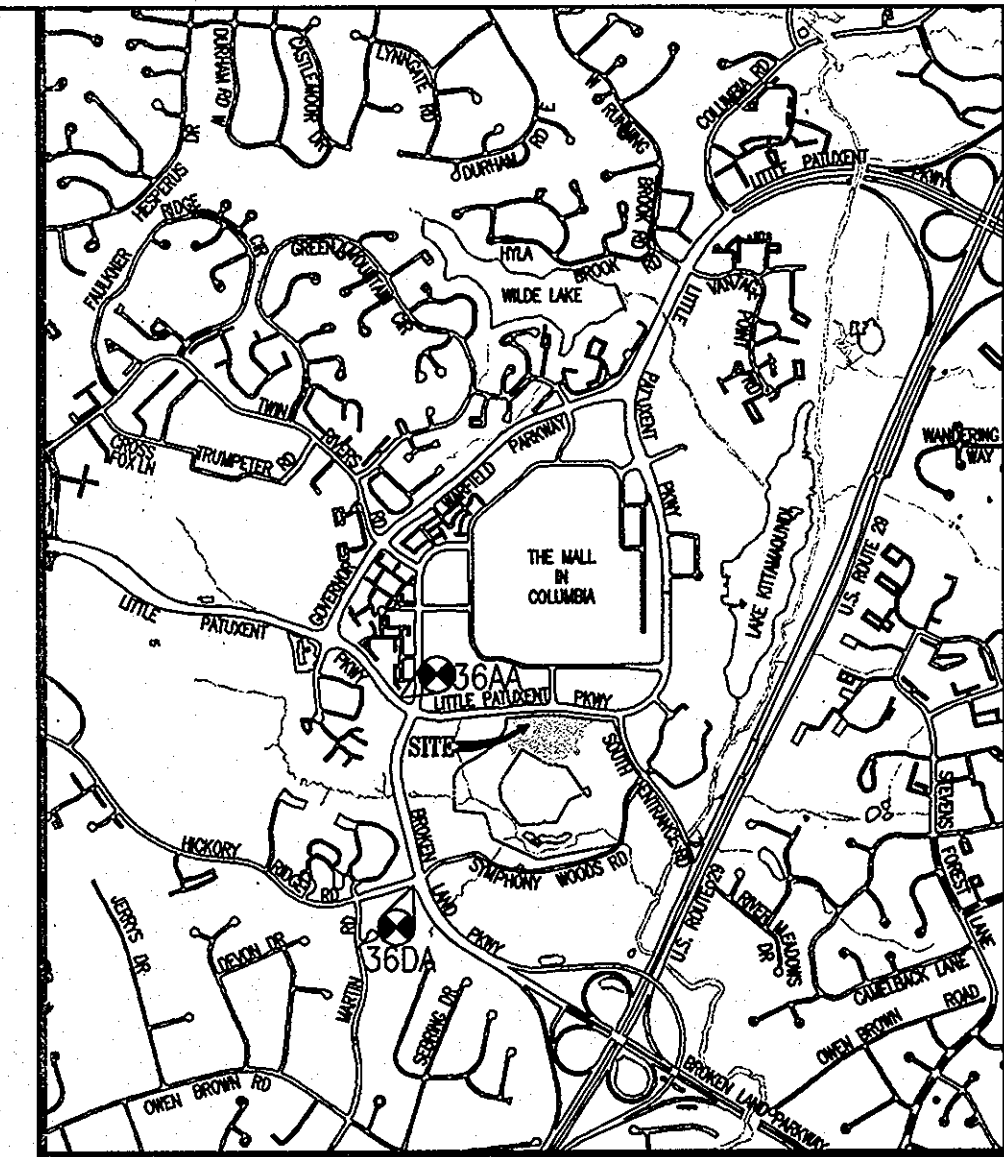
## ENVIRONMENTAL CONCEPT PLAN

### HOWARD COUNTY, MARYLAND

#### DPZ # ECP-12-004

#### BENCHMARK DATA

36AA: N 562,804.8537, E 1,349,906.1701 ELEV. 359.151  
 36DA: N 560,849.3491, E 1,350,037.4422, ELEV. 363.643



ADC MAP: 4935  
 GRID: C7  
**VICINITY MAP**  
 SCALE: 1" = 2,000'

#### SITE ANALYSIS DATA CHART

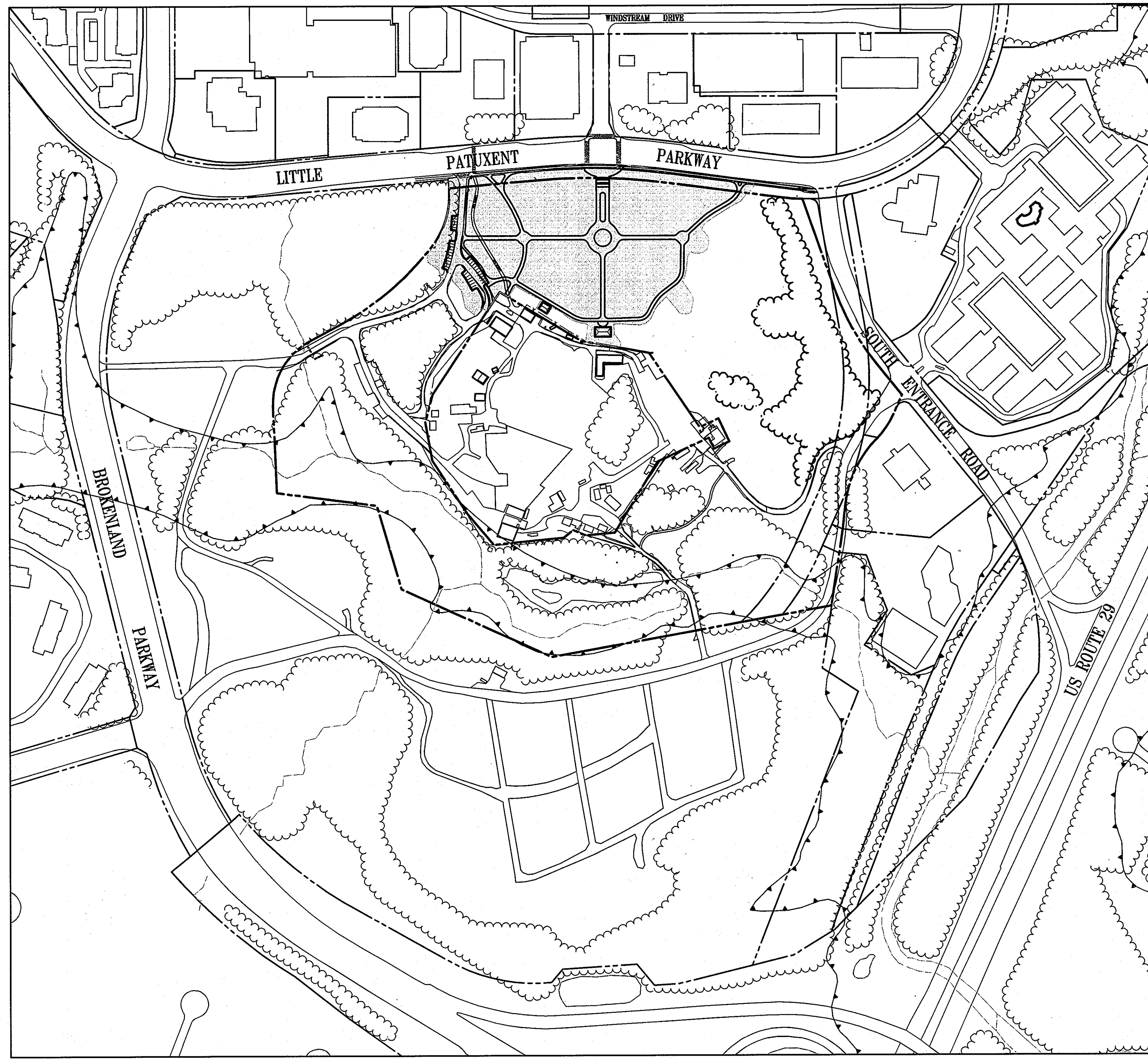
TOTAL PROPERTY AREA: LOT 23 - 36.2326 AC  
 LOT 9B - 1.134 AC  
 AREA OF PLAN SUBMISSION: 8.5 ACRES  
 LIMIT OF DISTURBED AREA: 4.0 ACRES  
 WETLANDS AND BUFFERS: 0 ACRES  
 FLOODPLAINS: 0 ACRES  
 EXISTING FORESTS: 0 ACRES  
 STEEP SLOPES >15%: 0.25 ACRES  
 PROPOSED IMPERVIOUS AREA: 1.5 ACRE  
 PROPOSED GREEN OPEN AREA: 7.0 ACRES  
 PRESENT ZONING DESIGNATION: NT  
 PROPOSED USES: DOWNTOWN PARK  
 APPLICABLE DPZ FILE NUMBERS: FDP-DC-MSW-1

#### LEGEND

- WOODSLINE
- SITE AREA
- 100-YR FLOODPLAIN
- STREAM
- PROPERTY LINE

#### LIST OF DRAWINGS

1. ECP1.0 COVER SHEET
2. ECP1.1 ENVIRONMENTAL CONCEPT PLAN
3. ECP2.0 SEDIMENT CONTROL CONCEPT PLAN



**LOCATION MAP**  
 1" = 200'

#### ENVIRONMENTAL DESIGN NARRATIVE

THE SITE WAS EVALUATED FOR STORMWATER MANAGEMENT, AS REQUIRED BY THE STORMWATER MANAGEMENT ACT OF 2007 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME 1. THESE REGULATIONS REQUIRE THAT ENVIRONMENTAL SITE DESIGN (ESD) BE IMPLEMENTED TO THE MAXIMUM EXTENT POSSIBLE FOR EVERY NEW PROJECT. ENVIRONMENTAL SITE DESIGN IS A SITE DESIGN STRATEGY TO:

- OPTIMIZE CONSERVATION OF NATURAL FEATURES.
- MINIMIZE IMPERVIOUS SURFACES.
- SLOWING DOWN RUNOFF TO MAINTAIN DISCHARGE TIMING AND INCREASE INFILTRATION AND EVAPOTRANSPIRATION.
- USING OTHER NONSTRUCTURAL PRACTICES AND INNOVATIVE TECHNOLOGIES AS APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE).

BY IMPLEMENTING ESD, THE ULTIMATE GOAL IS TO MAINTAIN THE RUNOFF CHARACTERISTICS OF THE SITE TO MIMIC PREDEVELOPMENT WOODS IN GOOD CONDITIONS.

TO SIZE THE ESD PRACTICES, RCN VALUES ARE DETERMINED BASED ON A SITE AREA'S LAND USE OF WOODS IN GOOD CONDITION. PE TARGETS ARE THEN ESTABLISHED FROM THE VALUES SET IN TABLE 5.3 OF THE ENVIRONMENTAL SITE DESIGN CRITERIA. A TARGET ESD VOLUME IS THEN CALCULATED FOR THE DRAINAGE AREA BASED ON THE PE AND THE PROPOSED SITE IMPERVIOUS.

INDIVIDUAL ESD PRACTICES ARE THEN LOCATED WITHIN THE DRAINAGE AREA AND SIZED BASED ON THE DRAINAGE AREA AND IMPERVIOUS AREA FLOWING TO THE PRACTICE. THE TOTAL OF THE ESD VOLUMES CAPTURED BY EACH ESD PRACTICE WITHIN THE DRAINAGE AREA SHOULD MEET THE TARGET ESD VOLUME INITIALLY CALCULATED FOR THE ENTIRE SITE DRAINAGE AREA.

BY MEETING ESD VOLUMES, WATER QUALITY VOLUME (WQV) AND RECHARGE VOLUME (REV) AND CHANNEL PROTECTION VOLUME (CPV) ARE SATISFIED AND NO ADDITIONAL STRUCTURAL STORMWATER MANAGEMENT FACILITIES ARE REQUIRED.

ESD STRATEGIES FOR THE PARK START BY CONSIDERING SITE DESIGN TO REDUCE PAVEMENT AREAS AND IMPERVIOUS FOOTPRINTS. WHERE PAVING OR STRUCTURES ARE REQUIRED, REDUCING IMPERVIOUS SURFACES WERE EVALUATED WITH ALTERNATIVES SUCH AS PERVIOUS PAVEMENTS AND GREEN ROOFS.

THE NEXT LEVEL OF ESD CONSIDERS THE USE OF NATURAL TOPOGRAPHY TO ALLOW RUNOFF TO BE FILTERED AND SOAKED INTO THE GROUND. THESE ARE CALLED DISCONNECTION PRACTICES WHERE RUNOFF FROM IMPERVIOUS SURFACES ARE DIRECTED OVER NATURAL LANDSCAPING OR CONSERVATION AREAS.

FINALLY, ESD PROMOTES MICROSCALE PRACTICES IN THE STORMWATER MANAGEMENT DESIGN WHICH INCLUDE LANDSCAPE INFILTRATION AREAS, RAIN GARDENS, AND SUBMERGED GRAVEL WETLANDS.

FOR SYMPHONY WOODS PARK, RUNOFF FROM 100% OF THE PROPOSED AND EXISTING IMPERVIOUS AREAS WITHIN THE DEVELOPMENT DRAINAGE WILL BE MANAGED BY ESD TO ACHIEVE POST DEVELOPMENT RUNOFF CONDITIONS TO WOODED CONDITIONS. SYMPHONY WOODS PARK DOES NOT QUALIFY FOR REDEVELOPMENT STATUS SINCE LESS THAN 40% OF THE EXISTING SITE AREA CONTAINS IMPERVIOUS SURFACES. REDEVELOPMENT STORMWATER MANAGEMENT REQUIRES A REDUCTION IN IMPERVIOUS AREA BY 50% OR IMPLEMENTING ESD PRACTICES TO PROVIDE QUALITY TREATMENT FOR 50% OF THE EXISTING IMPERVIOUS AREAS.

IN THIS PROJECT, THE OVERALL EXISTING DRAINAGE AREAS ARE MOSTLY MAINTAINED TO NATURAL DRAINAGE CONDITIONS. NO IMPACTS ARE PROPOSED TO THE EXISTING FLOODPLAINS, STREAMS OR STEEP SLOPES ON THE SITE.

THE PAVEMENT WIDTHS PROPOSED WILL FACILITATE SAFE TRAVEL BY THE ANTICIPATED USE AND THE ALIGNMENTS ARE CONFIGURED TO MINIMIZE IMPACTS TO THE EXISTING TREES.

THE SITE WILL MAXIMIZE THE USE OF ESD PRACTICES BY INCORPORATING PERVIOUS PAVEMENTS, LANDSCAPE INFILTRATION, NON-ROOFTOP DISCONNECTION PRACTICES, RAINGARDENS AND SUBMERGED GRAVEL WETLANDS. EROSION AND SEDIMENT CONTROLS WILL BE USED TO MINIMIZE ADDITIONAL IMPACT FROM CONSTRUCTION AND TO CONTROL SEDIMENT RUNOFF FROM THE DISTURBANCE.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9/23/11  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 9/21/11  
 CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER:		PERMIT INFORMATION CHART			
COLUMBIA ASSOCIATION 100221 WINCOPIN CIRCLE COLUMBIA, MD 21044		WATER CODE: PUBLIC	SEWER CODE: PUBLIC	BUILDING N/A	STREET ADDRESS 10441 LITTLE PATUXENT PKWY
VOICE 410-381-0312 FAX 410-312-6237		PROJECT NAME: SYMPHONY WOODS PARK		SECTION/AREA 1/1	PARCEL 452
L/F 3324/191	GRID #1	ZONING NT	TAX MAP BLOCK 36	ELEC. DIST. 5	CENSUS TRACT 6056.02

REVISIONS	

**ca**  
 Columbia Association

10221 Wincopin Circle  
 Columbia, Maryland 21044  
 Phone: 410-381-0312  
 Fax: 410-312-6237

**WR&A**

WHITMAN, REQUARDT  
 & ASSOCIATES, LLP  
 801 South Caroline Street, Baltimore, Maryland 21231  
 Phone: 410-235-3450 Fax: 410-243-5716

PROPERTY
SECTION 1 AREA 1
LOT 23/9B
TAX MAP 36, GRID 1, PARCEL 452
ZONING: NT
ELECTION DISTRICT 5

GRAPHIC SCALES
0 200' 400' SCALE: 1" = 200'
0 2000' 4000' SCALE: 1" = 2000'

SIGNATURE

*[Signature]*

PROFESSIONAL CERTIFICATION.  
 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. 19376  
 EXPIRATION DATE: 08/22/2011

### SYMPHONY WOODS PARK

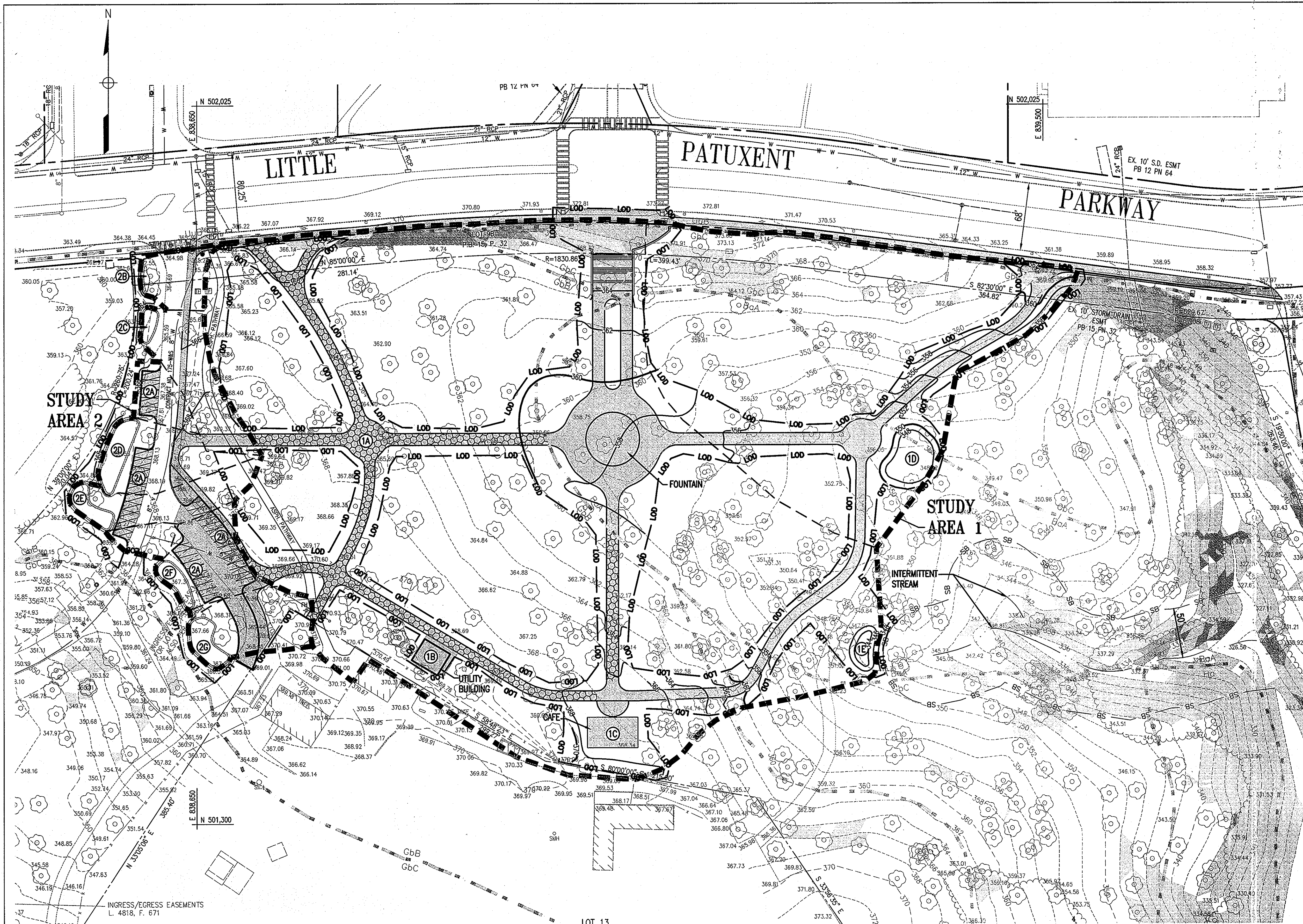
COVER SHEET

Drawing No.  
**ECP1.0**

Scale: AS SHOWN

Date: 09/12/2011 Sheet 1 of 3

Des: CYH Drawn: CYH Check: AUO



**SURVEY LEGEND**

- - - MAJOR CONTOURS
- - - MINOR CONTOURS
- ⊕ FIRE HYDRANT
- ⊠ LIGHT POLE
- ⊞ TELE/CABLE PEDESTAL
- ⊙ ROAD SIGN
- ⊞ ELECTRIC TRANSFORMER
- ⊞ ELECTRIC SIGNAL CONTROL BOX
- CONTROL BOX
- BOLLARD
- ⊙ SANITARY SEWER MANHOLE
- ⊙ CLEAN OUT
- ⊙ POST
- ⊙ ELEC. METER
- ⊞ ELEC. JUNCTION BOX
- ⊞ EXISTING NATURAL FOREST

**SITE LEGEND**

- - - MAJOR DRAINAGE DIVIDE
- - - SUBAREA DRAINAGE DIVIDE
- ▨ PROPOSED IMPERVIOUS AREA
- ▨ POROUS PAVEMENT
- ▨ NON-ROOFTOP DISCONNECTION
- ⊙ SOILS BOUNDARY
- ▨ 15-24.9% SLOPES
- ▨ >25% SLOPES
- SB 50' STREAM BUFFER
- ⊙ ESD ID NUMBER
- LOD LIMIT OF DISTURBANCE

**SOILS LEGEND**

SOIL SYMBOL	HSG	DESCRIPTION
BaA	D	BAILE SILT LOAM, 0 TO 3% SLOPES
GbB	B	GLADSTONE LOAM, 3 TO 8% SLOPES
GbC	B	GLADSTONE LOAM, 8 TO 15% SLOPES
Ha	D	HATBORO-CODORUS SILT LOAMS, 0 TO 3% SLOPES
UuB	D	URBAN LAND-UDORTMENTS COMPLEX, 0 TO 8% SLOPES

REVISIONS	

**ca**  
Columbia Association

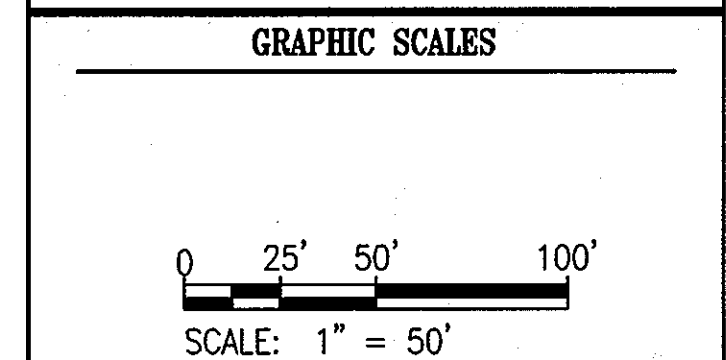
10221 Wincopin Circle  
Columbia, Maryland 21044  
Phone: 410-381-0312  
Fax: 410-312-6237



**WHITMAN, REQUARDT & ASSOCIATES, LLP**  
801 South Caroline Street, Baltimore, Maryland 21231  
Phone: 410-235-3450 Fax: 410-243-5716

**PROPERTY**

SECTION 1 AREA 1  
LOT 23/9B  
TAX MAP 36, GRID 1, PARCEL 452  
ZONING: NT  
ELECTION DISTRICT 5



**SIGNATURE**

PROFESSIONAL CERTIFICATION.  
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. 19376.  
EXPIRATION DATE: 09/22/2011

**SYMPHONY WOODS PARK**

**ENVIRONMENTAL CONCEPT PLAN**

Drawing No.  
**ECP1.1**

Scale: 1" = 50'

Date: 09/12/2011 Sheet 2 of 3  
Des: CYH Drawn: CYH Check: AUO

**DRAINAGE AREA PROPERTIES**

SA	DA (ac)		tc (min)		Impervious (ac)		RCN		ESD
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	
1	7.79	7.78	0.23	0.25	0.07	1.11	67	71	62
2	1.01	1.01	0.19	0.18	0.27	0.48	71	79	55

**ESD SUMMARY**

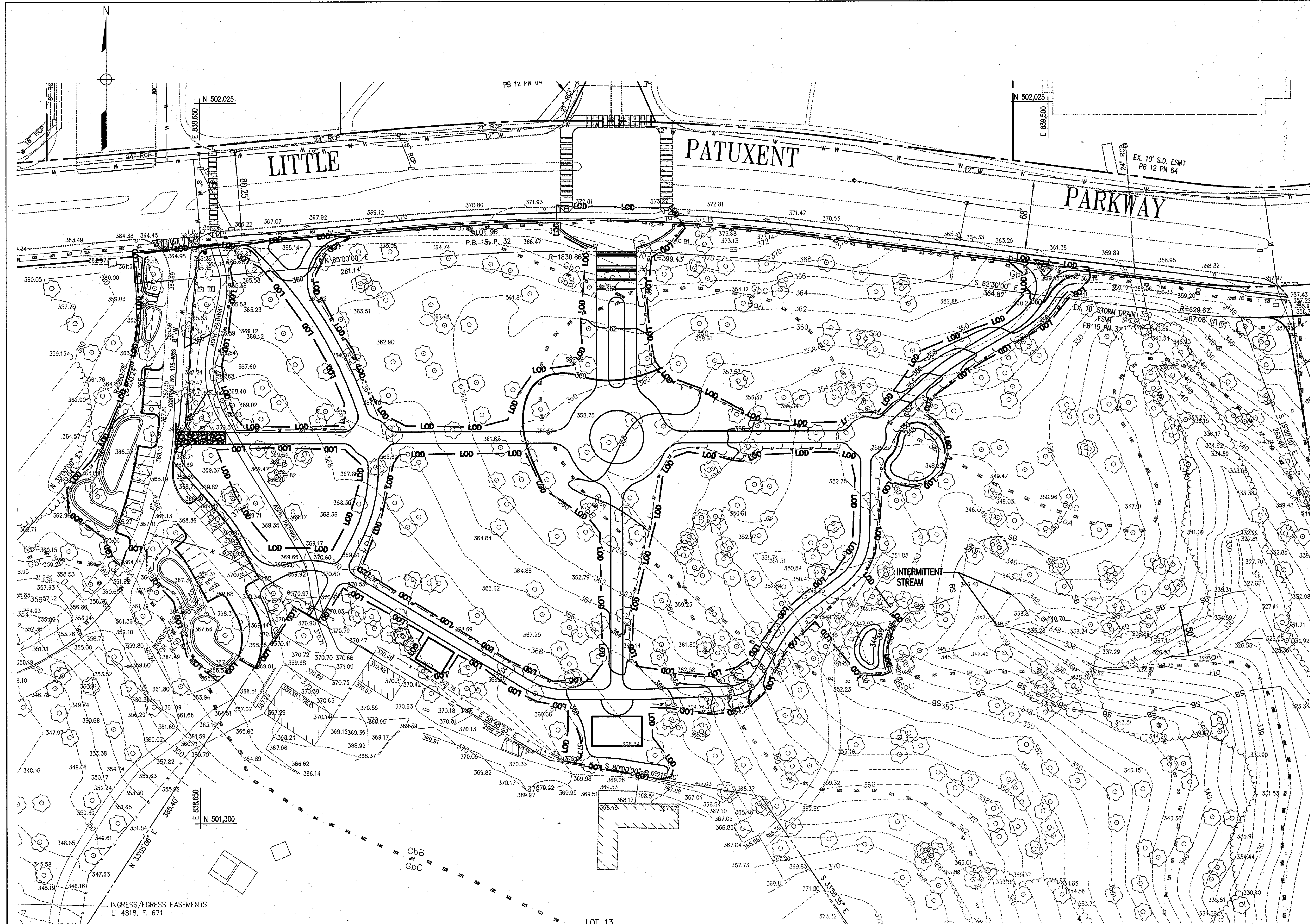
ID	Drainage Area (sf)	Impervious Area (sf)	ESD Practice	Treated ESDv (cf)	A <sub>t</sub> (sf)
1A	14,835	14,835	Non-rooftop Disconnection	1,174	-
1B	950	750	Rain Garden	169	200
1C	1,900	1,500	Rain Garden	337	400
1D	85,270	7,252	Submerged Gravel Wetland	2,518	1,805
1E	254,198	22,461	Submerged Gravel Wetland	857	408
2A	5,459	5,459	Porous Pavement	1,070	-
2B	3,247	1,452	Infiltration Berm	342	-
2C	7,560	2,397	Landscape Infiltration	592	346
2D	7,368	2,111	Landscape Infiltration	529	500
2E	6,413	1,618	Landscape Infiltration	415	772
2F	6,830	2,300	Landscape Infiltration	563	670
2G	7,210	2,014	Landscape Infiltration	507	1,025

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9/23/11  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 9/23/11  
CHIEF, DIVISION OF LAND DEVELOPMENT

FILENAME: \\N:\2011\20110912\20110912-481818-01-01.dwg



**SURVEY LEGEND**

- - - MAJOR CONTOURS
- - - MINOR CONTOURS
- ⊕ FIRE HYDRANT
- ⊠ LIGHT POLE
- ⊞ TELE/CABLE PEDESTAL
- ⊙ ROAD SIGN
- ⊞ ELECTRIC TRANSFORMER
- ⊞ ELECTRIC SIGNAL CONTROL BOX
- CONTROL BOX
- BOLLARD
- ⊙ SANITARY SEWER MANHOLE
- ⊙ CLEAN OUT
- ⊞ POST
- ⊙ ELEC. METER
- ⊞ ELEC. JUNCTION BOX
- ⊞ EXISTING NATURAL FOREST

**SEDIMENT CONTROL LEGEND**

- ▨ STABILIZED CONSTRUCTION ENTRANCE
- SF - SILT FENCE
- SSF - SUPER SILT FENCE
- LOD - LIMIT OF DISTURBANCE
- - - MAJOR CONTOUR
- - - MINOR CONTOUR

**SOILS LEGEND**

SOIL SYMBOL	HSG	DESCRIPTION
BaA	D	BAILE SILT LOAM, 0 TO 3% SLOPES
GbB	B	GLADSTONE LOAM, 3 TO 8% SLOPES
GbC	B	GLADSTONE LOAM, 8 TO 15% SLOPES
Ha	D	HATBORO-CODORUS SILT LOAMS, 0 TO 3% SLOPES
UuB	D	URBAN LAND-UDORTHENTS COMPLEX, 0 TO 8% SLOPES

REVISIONS


**ca**  
Columbia Association

10221 Wincopin Circle  
Columbia, Maryland 21044  
Phone: 410-381-0312  
Fax: 410-312-6237

**WR&A**

**WHITMAN, REQUARDT & ASSOCIATES, LLP**  
801 South Caroline Street, Baltimore, Maryland 21231  
Phone: 410-235-3450 Fax: 410-243-5716

PROPERTY

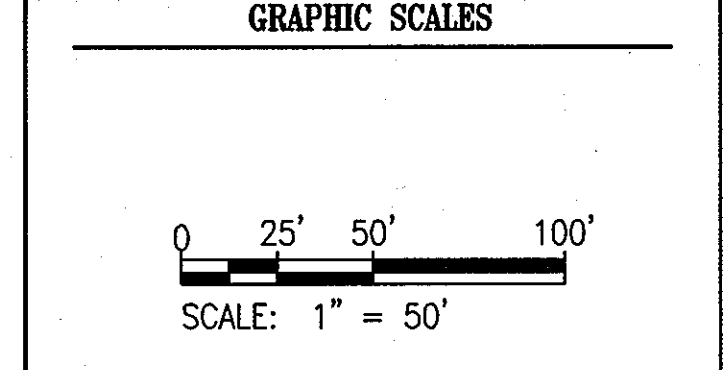
SECTION 1 AREA 1

LOT 23/9B

TAX MAP 36, GRID 1, PARCEL 452

ZONING: NT

ELECTION DISTRICT 5



SIGNATURE

*William Allen*

PROFESSIONAL CERTIFICATION:  
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. 19376. EXPIRATION DATE: 09/22/2011.

**SYMPHONY WOODS PARK**

**SEDIMENT CONTROL CONCEPT PLAN**

Drawing No.  
**ECP1.2**

Scale: 1" = 50'

Date: 09/12/2011	Sheet 3 of 3
Des: CYH	Drawn: CYH
Check: AVO	

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*William Allen* 9/23/11  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Robert Shee* 9/21/11  
CHIEF, DIVISION OF LAND DEVELOPMENT

FILENAME: W:\2009-2010\CAD\DCP-4\2009DCP1-2.DWG