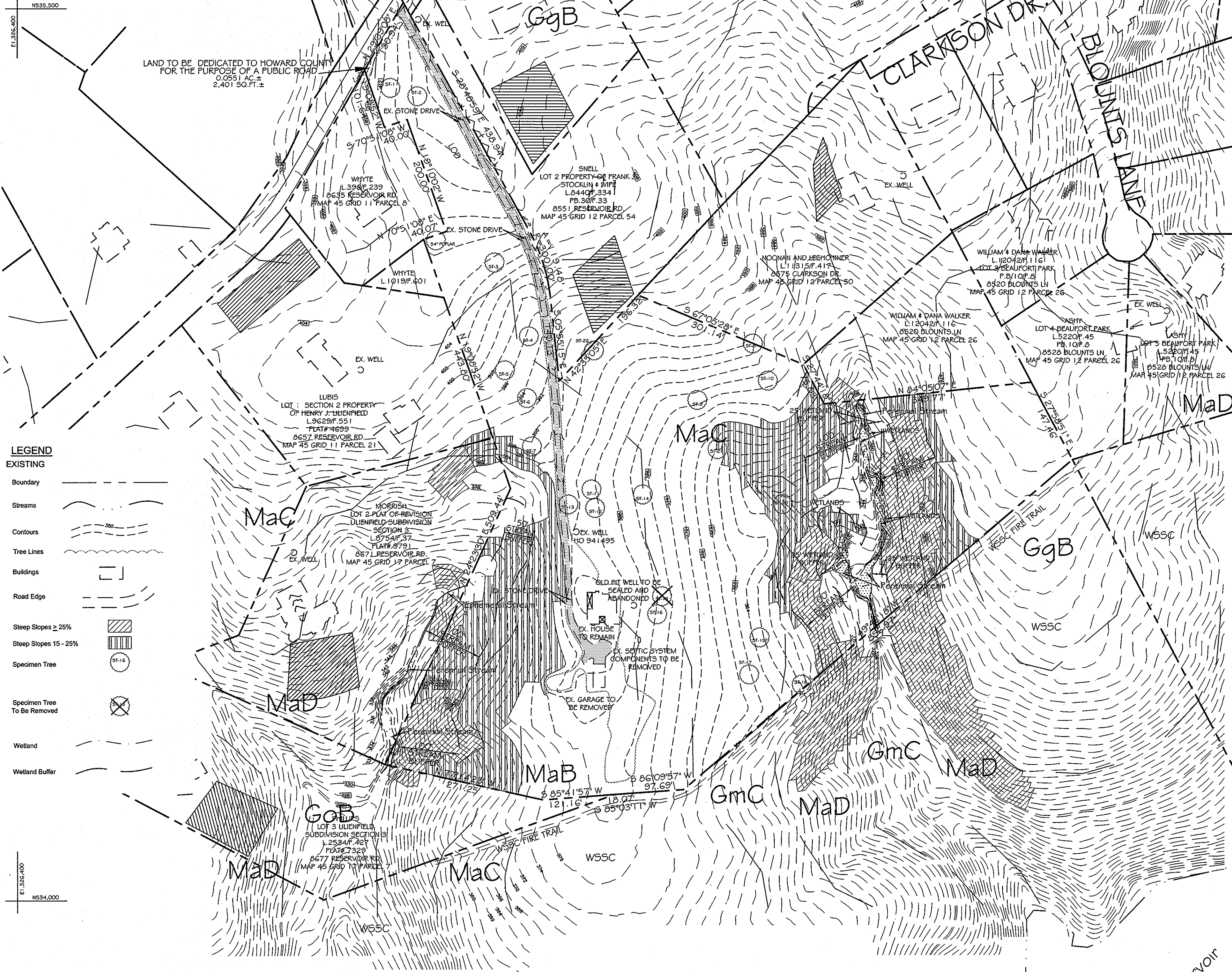


DESIGN NARRATIVE

The property is currently developed with an existing residence and driveway. There are two existing stream systems on the property and there are steep slopes and wetlands associated with them. These stream systems and their buffers are not being disturbed. There are three additional lots proposed along with improvements to the existing driveway. Stormwater Management for these lots and driveway improvements is provided by environmental site design to the maximum extent practical and will consist of non rooftop disconnections, rainwater harvesting, micro bioretention facilities, and pervious concrete paving.



LEGEND

EXISTING

- Boundary
- Streams
- Contours
- Tree Lines
- Buildings
- Road Edge
- Steep Slopes ≥ 25%
- Steep Slopes 15 - 25%
- Specimen Tree
- Specimen Tree To Be Removed
- Wetland
- Wetland Buffer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

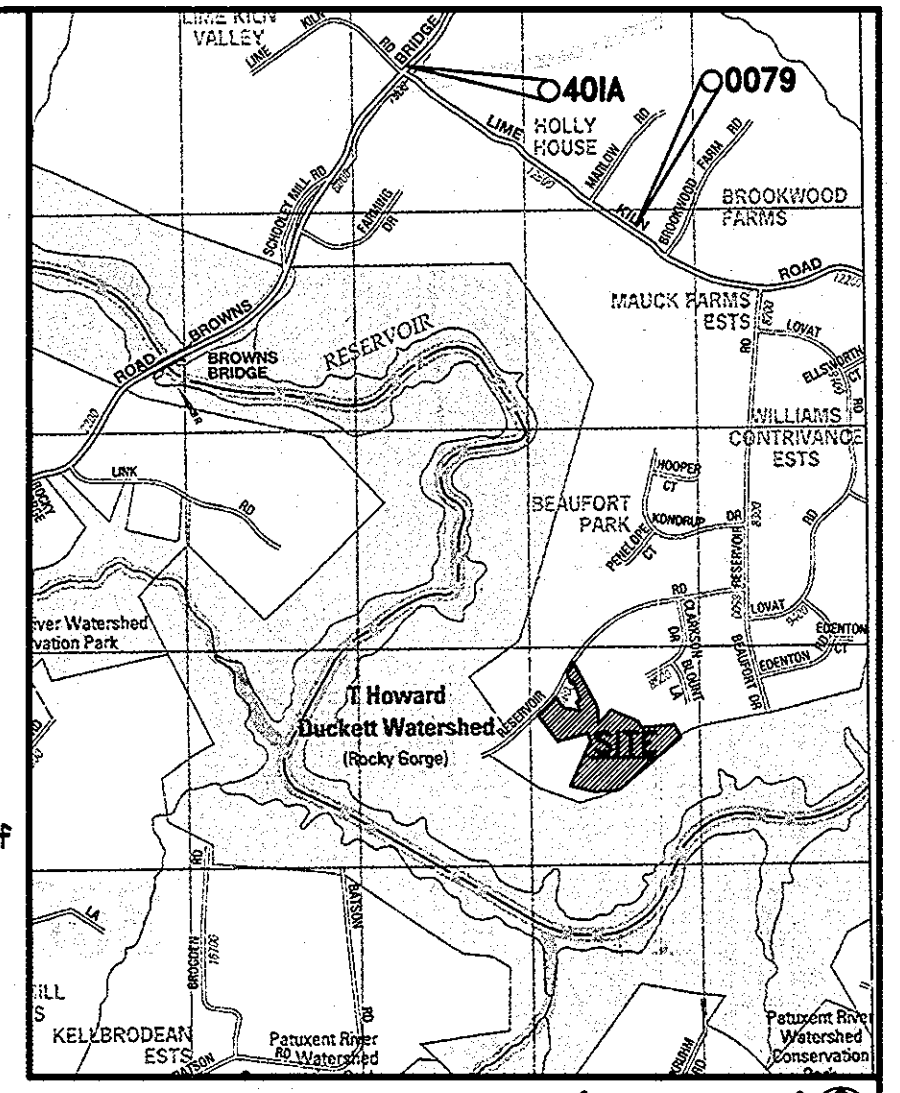
Chief, Development Engineering Division 11/20/13
 DATE

Chief, Division of Land Development 11/19/13
 DATE

Howard County, Maryland (MAP #27)	Map Unit Name	Acres in AOI	Percent of AOI	K Factor Rock Free	K Factor Whole Soil
GgB	Glensie loam, 3 to 8 percent slopes	31.4	24.0%	.28	.20
GmC	Glennville silt loam, 8 to 15 percent slopes	5.1	3.9%	.43	.37
GnB	Glennville-Baile silt loams, 0 to 8 percent slopes	2.0	1.5%	.43	.37
GoB	Glennville-Codorus silt loams, 0 to 8 percent slopes	5.0	3.8%	.43	.37
MaB	Manor loam, 3 to 8 percent slopes	11.1	8.5%	.28	.24
MaC	Manor loam, 8 to 15 percent slopes	36.4	27.9%	.28	.24
MaD	Manor loam, 15 to 25 percent slopes	35.5	27.2%	.28	.24
W	Water	3.6	2.7%		

SITE ANALYSIS CHART

- Proposed Use: Single Family Detached, Residential.
- Area Tabulations: Total: 14.6 Ac Floodplain: 0 Ac Wetlands & Buffers: 2.73 Ac Steep Slopes: 1.07 Ac > 25%, 2.66 Ac 15-25% Forests: Prop. 12.25 Ac, Exist. 13.5 Ac. Limit of Disturbance 2.22 Ac. Proposed Impervious: 0.64 Ac.
- This property will be served by private water (well) and private sewer (septic).
- Wetland and Forest Stand Delineation and report prepared by Eco Science Professionals Dated 1/14/13.
- Forest Conservation Requirements will be met by retention of onsite forest on the lots as permitted by WP 13-116.
- No cemeteries exist onsite.
- No floodplains exist onsite.
- There are historic structures onsite Ref. ID 58409.
- Perc Plan approved March 1, 2012 by Howard County Health Department.
- Approval of the ECF does not constitute approval of any subsequent and associated subdivision plat or site development plan and/or redline revisions. Review of this project for compliance with the Subdivision and Land Development and Zoning Regulations shall occur at the applicable plan stage process. Review of applicable future plans will generate additional comments as the project progresses through the plan review process.
- Erosion control matting shall be provided in all swales.
- Topography shown hereon within buildable areas, perc areas, driveway area, wetlands and stream areas was field run by Shanaberger & Lane in June, 2012. The other topography shown hereon is Howard County Aerial Topography.
- Ho. Co. DPZ Files WP-13-116.



Vicinity Map - Scale: 1" = 2000'

ADC The Map People - Permitted Use # 20612205
 MAP 5051 J9
 BENCHMARK DESCRIPTIONS

The courses and coordinates shown hereon are based on the following Howard County monuments:

Point	Northing	Easting	Elevation
401A	N 541725.7952	E 1325316.8410	Elev. 359.470
0079	N 540070.9966	E 1327702.7611	Elev. 426.227

Waiver Petition WP-13-116

The Director of the Department of Planning and Zoning considered your request for a waiver from the Howard County Subdivision and Land Development Regulations.

- On July 2, 2013, the Planning Director approved your request to waive:
- Section 16.117(b): To allow forest conservation easement on residential lots
 - Section 16.120(b)(4)(i): To allow lots not having a regular, rectangular shape
 - Section 16.120(b)(4)(ii): To allow lots exceeding a 3:1 Depth/Width Ratio
 - Section 16.120(b)(4)(iii): To allow wetlands, streams, buffers and forest conservation easement on lots under 10 acres.
 - Section 16.120(b)(6)(i): To allow more than 2 adjoining pipestem lots.
 - Section 16.120(b)(6)(vi): To allow less than a 10-foot setback from the use-in-common driveway to the project boundary
 - Section 16.1206(a)(1): To allow removal of 1 specimen tree.

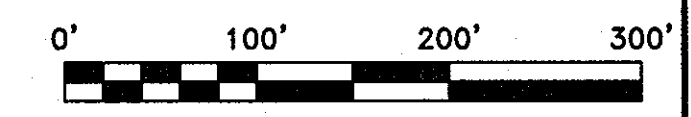
Approval is subject to the following conditions:

- The applicant is strongly encouraged to consider alternatives to developing this site, such as the creation of a forest conservation bank.
- The owner shall submit a Final Plan for review and approval with the County, and shall comply with Subdivision Review Committee (SRC) requirements. Additional waiver petitions may be required at that time if there are extraordinary hardships or practical difficulties in meeting SRC comments.
- With the submission of a subdivision plan to the Department of Planning and Zoning, the environmental consultant, on behalf of the applicant, shall furnish a letter from the Maryland Department of the Environment (MDE) stating that no threatened or endangered species have been identified in the area. If MDE reports endangered species in the area, the applicant will be asked to provide an updated Forest Stand Delineation that includes surveys for habitat identified species on the site which may result in additional conditions of approval for the Final Plan.
- Notes shall be placed on the Final Plan that directs the timing and practices during construction to comply with the guidelines for limiting impacts to Forest Interior Dwelling Species (FIDS) habitat.
- Wildlife-friendly and aesthetically pleasing fencing and additional signage (placed every 50 feet along the entire perimeter of the forest conservation easement) are to be placed on all lots containing forest conservation easements as an additional reminder to residents in order to discourage encroachment into the easement areas.
- No grading, removal of vegetative cover and trees, paving and new structures are permitted within the stream, forest conservation easement and required buffers.
- Proof of education material provided to each lot purchaser explaining the restrictions on encroachment into the Forest Conservation Easement, stream and their buffers will be required as part of the Forest Conservation Easement inspection process.
- Whenever possible, the builder should strive to maintain a minimum of 100' separation between any proposed house and the forest conservation easement when applying for building permits.
- Removal of the one (1) tulip poplar specimen tree will require mitigation with the planting of two (2) new native shade trees. Surely of these shade trees shall be incorporated into the landscape surely with as part of the Final Plan.
- Final driveway location, construction, configuration and perimeter landscaping along the driveway shall be reviewed and approved with the Final Plan.
- The waiver petition number, the sections being waived, and the date and conditions of approval shall be added to the plat and supplemental plan as a general note.

Note: The Standard Sediment Control Plan may not be used to obtain a grading permit for this project.

OWNER:
 DONALD MUNRO
 3914 HUNTINGTON ST. NW
 WASHINGTON DC 20015-1914
 PHONE: 202-879-3922

ENGINEER:
 JEFFREY L. SCHWAB PE
 TESSERACT SITES, INC.
 401 WASHINGTON AVE, SUITE 303
 TOWSON, MD 21204
 PHONE: 410-321-7600



SPECIMEN TREES TO REMAIN

NUMBER	TYPE	CONDITION
ST-1	30" WHITE OAK	GOOD
ST-2	33" YELLOW POPLAR	FAIR
ST-3	36" YELLOW POPLAR	GOOD
ST-4	31" YELLOW POPLAR	GOOD
ST-5	35" YELLOW POPLAR	GOOD
ST-6	37" YELLOW POPLAR	GOOD
ST-7	33" YELLOW POPLAR	GOOD
ST-8	38" YELLOW POPLAR	GOOD
ST-9	33" YELLOW POPLAR	GOOD
ST-10	30" YELLOW POPLAR	GOOD
ST-11	35" YELLOW POPLAR	GOOD
ST-12	34" YELLOW POPLAR	FAIR
ST-13	35" YELLOW POPLAR	GOOD
ST-14	39" YELLOW POPLAR	FAIR
ST-16	32" AMERICAN SYCAMORE	FAIR
ST-17	36" YELLOW POPLAR	GOOD
ST-18	34" YELLOW POPLAR	GOOD
ST-19	30" YELLOW POPLAR	FAIR
ST-20	30" YELLOW POPLAR	GOOD
ST-21	27" 3/4" TWIN YELLOW POPLAR	FAIR
ST-22	31" YELLOW POPLAR	GOOD

SPECIMEN TREES TO BE REMOVED

NUMBER	TYPE	CONDITION
ST-15	32" YELLOW POPLAR	GOOD

SHEET INDEX

C-1	ENVIRONMENTAL CONCEPT PLAN	EXISTING CONDITIONS
C-2	ENVIRONMENTAL CONCEPT PLAN	PROPOSED CONDITIONS
C-3	PRELIMINARY SEDIMENT & EROSION CONTROL PLAN	

Tesseract
TESSERACT SITES, INC.

401 Washington Ave, Suite 303
 Towson, Maryland, 21204 P. 410.321.7600
 F. 410.321.7601

Environmental Concept Plan
Existing Conditions
Munro Property
 Howard County, Maryland

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. 14230, Expiration Date: 12/09/14.

DATE	BY	DATE	BY	DATE	BY
9 & 50		3704/323	3835/76	N/A	
09/12	09/12	09/12	09/12	09/12	09/12

Date: 11/7/13
 Proj. #: 12013
 Scale: 1" = 100'

C-1

DESIGN: DRAWN: MAS CHECKED: XXX



LEGEND

EXISTING

- Boundary
- Streams
- Contours
- Tree Lines
- Buildings
- Road Edge
- Steep Slopes ≥ 25%
- Steep Slopes 15 - 25%
- Specimen Tree
- Specimen Tree To Be Removed
- Wetland
- Wetland Buffer

PROPOSED

- Contours
- House
- Road Edge
- Septic Reserve Area
- Limit of Disturbance
- Storm drain
- Pervious Concrete
- Spot Elevation
- Super Silt Fence
- Super Fence Diversion
- Stabilized Construction Entrance w/ Mountable Berm
- Super Silt Fence Inlet Protection

SUMMARY OF BMP'S

LOT 1	NON ROOFTOP DISCONNECTIONS	791 SF
	MICRO BIORETENTION	10952 SF
LOT 2	RAINWATER HARVESTING	1777 SF
	MICRO BIORETENTION	38956 SF
LOT 3	RAINWATER HARVESTING	824 SF
	MICRO BIORETENTION	15653 SF
	PERVIOUS CONCRETE PAVING	1307 SF
USE IN COMMON DRIVEWAY	NON ROOFTOP DISCONNECTIONS	2800 SF
LOT 4	NOT REQUIRED	

STORMWATER DESIGN SUMMARY

ESDv Required	3999 cf
ESDv Provided	
Non Rooftop Disconnections	466 cf
Pervious Concrete Paving	256 cf
Rainwater Harvesting	206 cf
Micro Bio Retention	3129 cf
Total	4117 cf
LOD	2.22 acres
Proposed Impervious Area	0.64 acres
Pe	1.6"
Soils	Type B

OWNER:
DONALD MUNRO
3914 HUNTINGTON ST. NW
WASHINGTON DC 20015-1914
PHONE: 202-879-3922

ENGINEER:
JEFFREY L. SCHWAB PE
TESSERACT SITES, INC.
401 WASHINGTON AVE, SUITE 303
TOWSON, MD 21204
PHONE: 410-321-7600

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief Clerk 11-20-13
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Chief, Division of Land Development 11/19/13
CHIEF, DIVISION OF LAND DEVELOPMENT

Tesseract
TESSERACT SITES, INC.
Jeffrey Schwab
401 Washington Ave, Suite 303
Towson, Maryland, 21204
P. 410-321-7600
F. 410-321-7601

**Environmental Concept Plan
Proposed Conditions
Munro Property
Howard County, Maryland**

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. 14230, Expiration Date: 12/09/14.

DATE: 9 & 50	ISSUE NO: 3704/323	DATE: 3835/76	SCALE: N/A
DATE: 12	DATE: 45	DATE: 5TH	DATE: 3RD

Date: 11/7/13
Proj. #: 10020
Scale: 1" = 100'

C-2

DESIGN: DRAWN: MMS CHECKED: JCC

