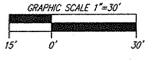


**MD ROUTE 108  
(OLD ANNAPOLIS RD.)**  
(STATE ROAD) MINOR ARTERIAL  
EX. 100' ROW/EX. 36± PAV

**SITE LAYOUT PLAN**  
SCALE: 1" = 30'



**LEGEND:**

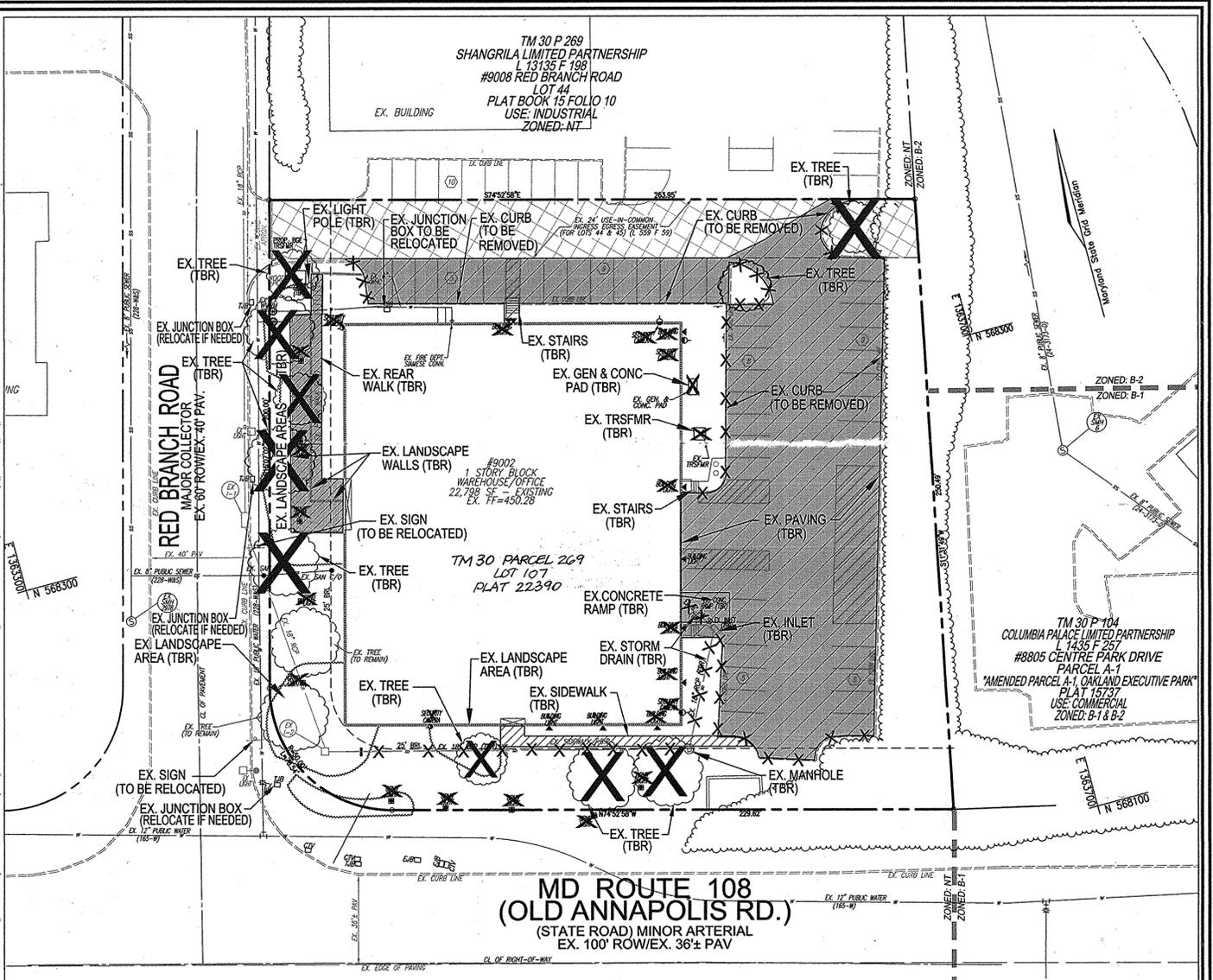
--- (dashed line)	PROPOSED CONTOUR	--- (dashed line)	EXISTING FENCE
--- (solid line)	EXISTING CONTOUR	--- (dashed line)	PROPERTY LINE
--- (dashed line)	EXISTING OVERHEAD LINES	--- (dashed line)	ADJACENT PROPERTY LINE
--- (dashed line)	EXISTING WATERLINE LINE	--- (dashed line)	RIGHT-OF-WAY LINE
--- (dashed line)	EXISTING GAS LINE	--- (dashed line)	PROPOSED SIDEWALK
--- (dashed line)	EXISTING GUARD RAIL	--- (dashed line)	EXISTING CURB AND GUTTER
--- (dashed line)	EXISTING METAL FENCE	--- (dashed line)	PROPOSED CURB AND GUTTER
--- (dashed line)	EXISTING WOOD FENCE	--- (dashed line)	PROPOSED WHEEL STOP
--- (dashed line)	EXISTING ELECTRICAL BOX	--- (dashed line)	PROPOSED STORM DRAIN INLET
--- (dashed line)	EXISTING POLE	--- (dashed line)	PROPOSED STORM DRAIN
--- (dashed line)	EXISTING LIGHT POLE WITH CONCRETE BASE	--- (dashed line)	20' PUBLIC WATER AND UTILITY EASEMENT
--- (dashed line)	EXISTING MAILBOX	--- (dashed line)	PROP. MICRO BIORETENTION AREA (M-6)
--- (dashed line)	EXISTING SIGN	--- (dashed line)	EX. 24' USE-IN-COMMON INGRESS/EGRESS EASEMENT (FOR LOTS 44 & 45) (L. 559 P. 59)
--- (dashed line)	EXISTING SANITARY MANHOLE	--- (dashed line)	UNITS OF NEW PAVING (PAVING SECTION ON SHEET 3)
--- (dashed line)	EXISTING CLEANOUT	--- (dashed line)	
--- (dashed line)	EXISTING FIRE HYDRANT	--- (dashed line)	
--- (dashed line)	PROPOSED PARKING COUNT	--- (dashed line)	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad Edwards* 6/5/15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Kathleen* 6-19-15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

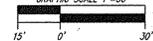
*Paul H. G. Co.* 6/19/15  
DIRECTOR DATE



**MD ROUTE 108  
(OLD ANNAPOLIS RD.)**  
(STATE ROAD) MINOR ARTERIAL  
EX. 100' ROW/EX. 36± PAV

**EXISTING PAVING AND  
LANDSCAPE WALK/WALLS  
TO BE REMOVED**

**DEMOLITION PLAN**  
SCALE: 1" = 30'



- DEMOLITION NOTES:**
1. DISCONNECT EXISTING LANDSCAPE IRRIGATION SYSTEM & REMOVE VALVES AT BUILDING.
  2. EXISTING BUILDING LIGHTING AND SECURITY CAMERAS TO BE REMOVED.
  3. EXISTING BUILDING DOWNSPOUTS AND STORM DRAIN PIPE ALONG EAST SIDE OF BUILDING TO BE REMOVED.
  4. EXISTING TELEPHONE JUNCTION BOXES, VALVES, METERS, AND SIGNS TO BE ADJUSTED TO GRADE AND/OR RELOCATED WITH THE INSTALLATION OF THE SIDEWALK ALONG RED BRANCH ROAD.

**DEVELOPER/OWNER**  
BUY THE BOOK LLC  
470 ENTERPRISE INFORMATION  
9002 RED BRANCH ROAD  
COLUMBIA, MD 21046  
(410) 343-1130

NO.	REVISION	DATE
1	REMOVE SWITCHBACK RAMP; ADD HANDICAP ACCESSIBLE SIDEWALK; REMOVE LOT LINE; CHANGE OWNERSHIP 8/14/15	

**SITE DEVELOPMENT PLAN  
SITE LAYOUT PLAN AND  
DEMOLITION PLAN**

**ezStorage**  
SELF-STORAGE  
9002 RED BRANCH ROAD  
LOT 107 PLAT 23390

TAX MAP 30 BLOCK 17 PARCEL 269, LOT 107  
2ND ELECTION DISTRICT ZONED: NT HOWARD COUNTY, MARYLAND

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

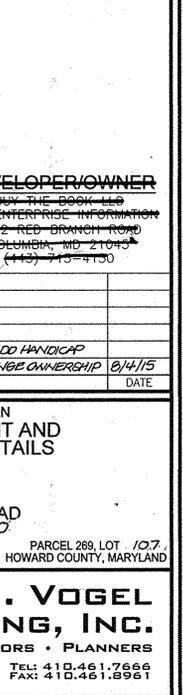
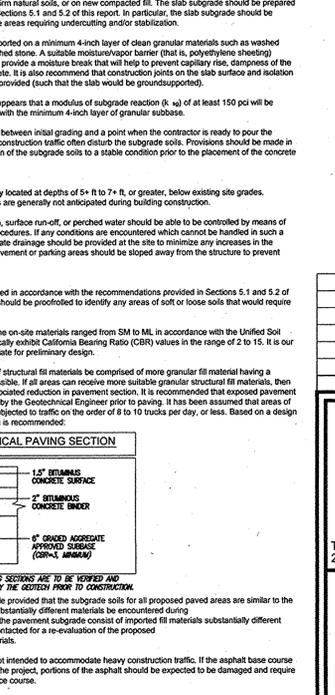
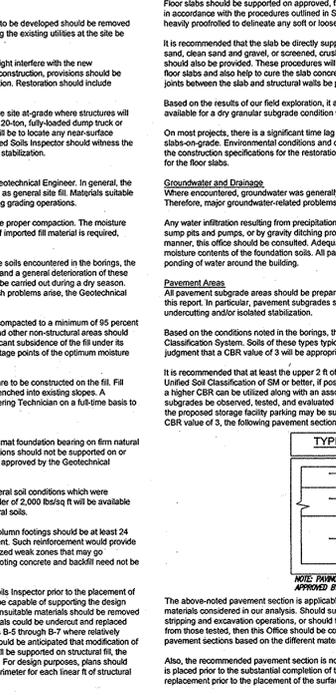
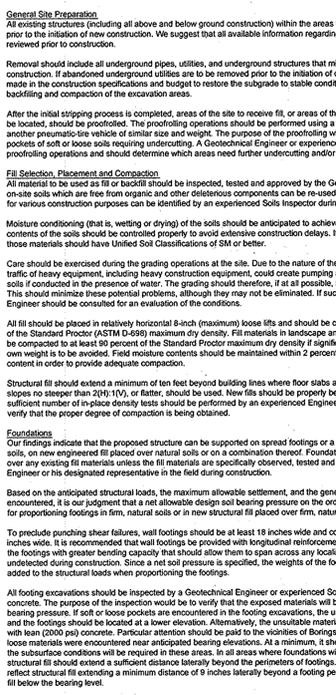
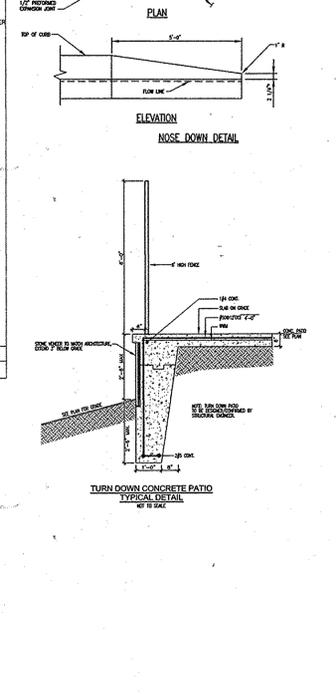
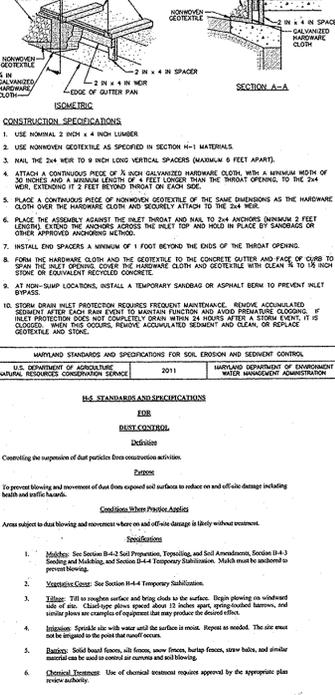
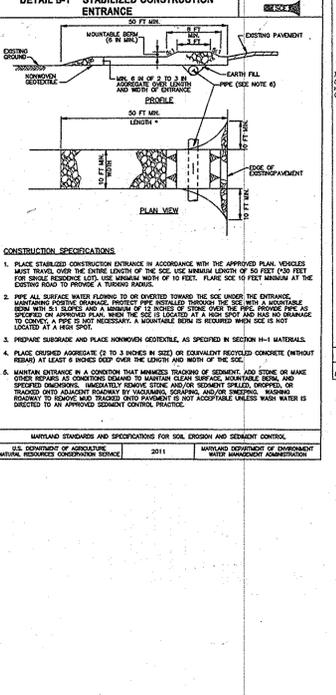
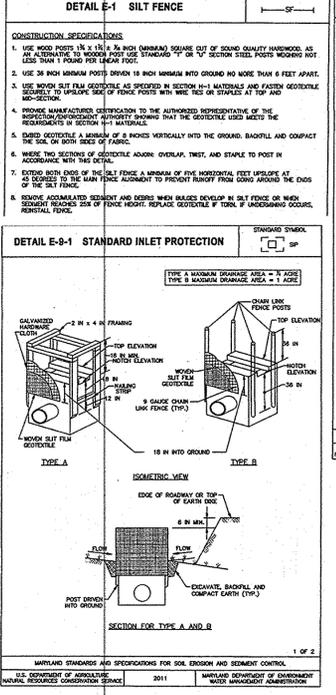
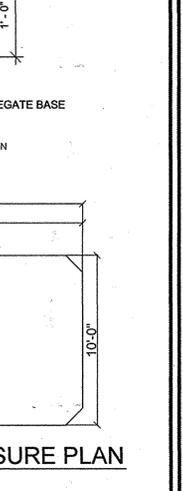
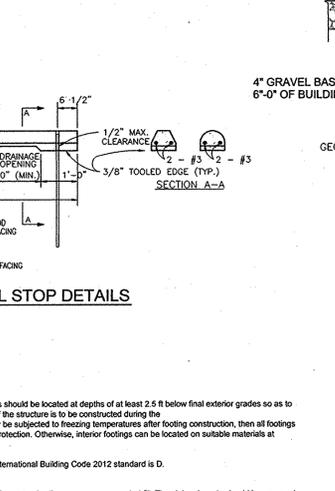
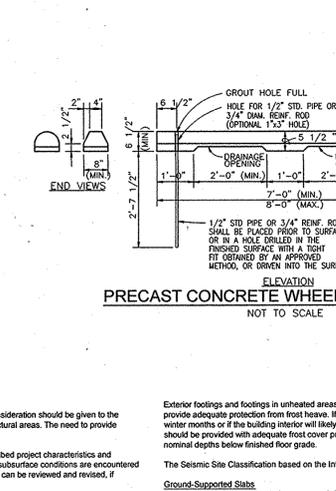
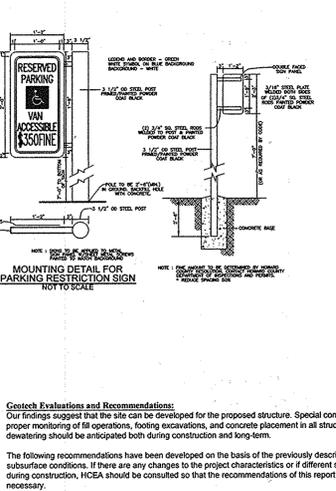
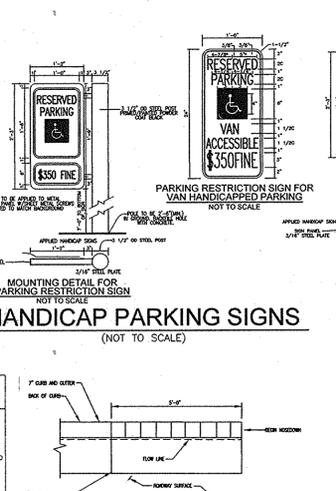
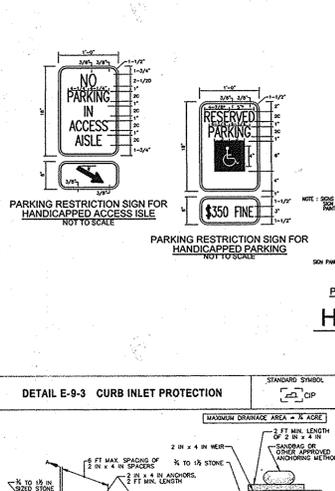
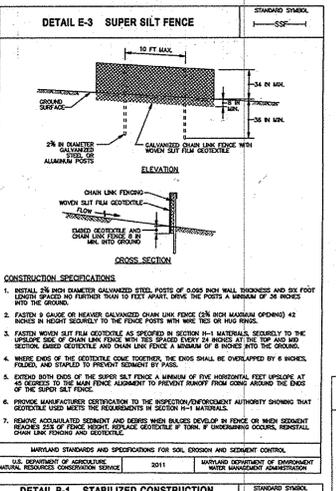
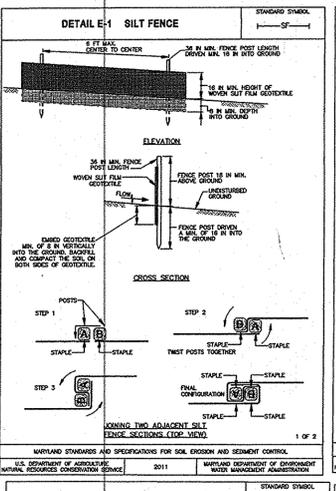
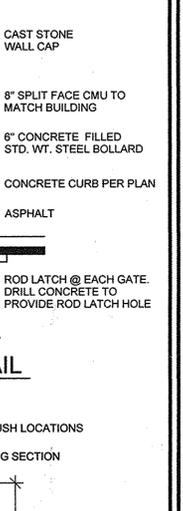
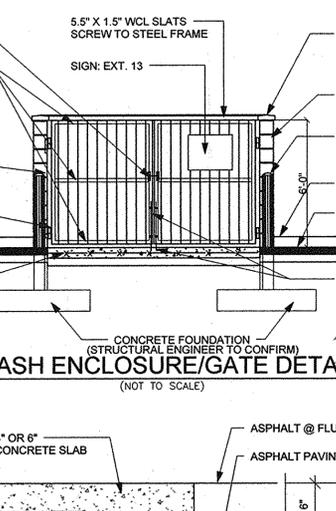
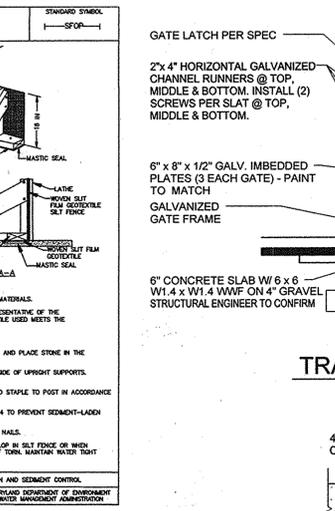
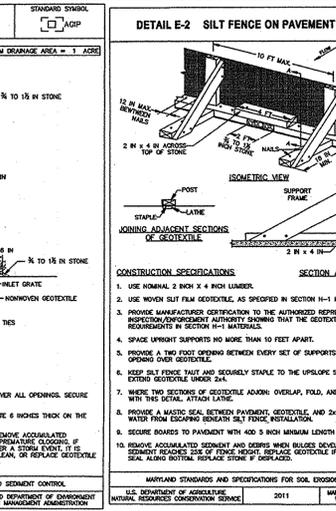
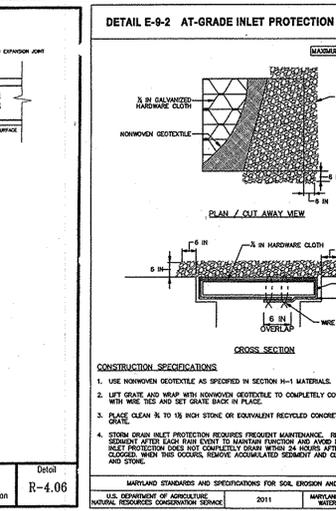
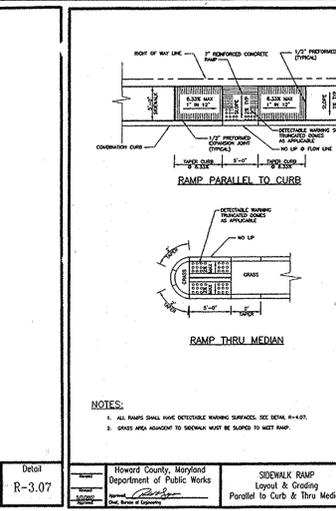
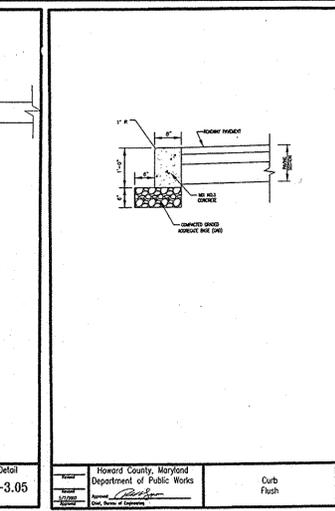
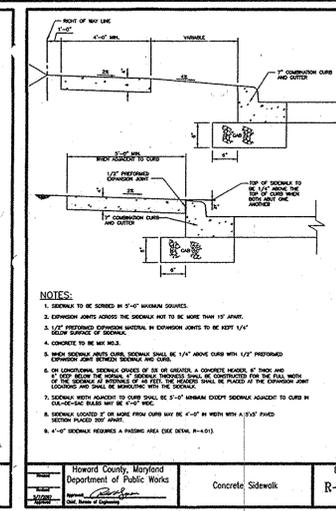
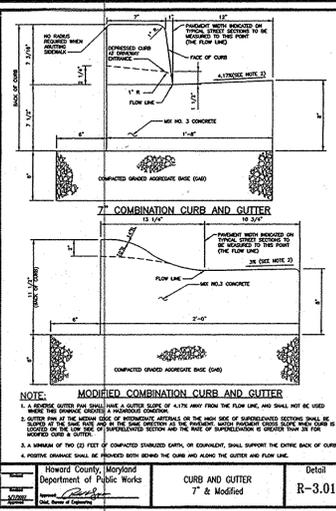
**PROFESSIONAL CERTIFICATE**

DESIGN BY: DZE  
DRAWN BY: DZE/KG  
CHECKED BY: RHY  
DATE: APRIL 2015  
SCALE: AS SHOWN  
W.O. NO.: 14-10

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: 09-27-2018.

2 SHEET OF 7

**OWNER/DEVELOPER**  
COLUMBIA NORTH LAND LLLP  
8221 SHONDEEN RIVER PARKWAY  
SUITE 300  
COLUMBIA, MARYLAND 21045



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 6/5/15

BY THE DEVELOPER:  
 [Signature]  
 DATE: 6/15/15

BY THE ENGINEER:  
 [Signature]  
 DATE: 6/15/15

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 [Signature]  
 DATE: 6/15/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/15/15

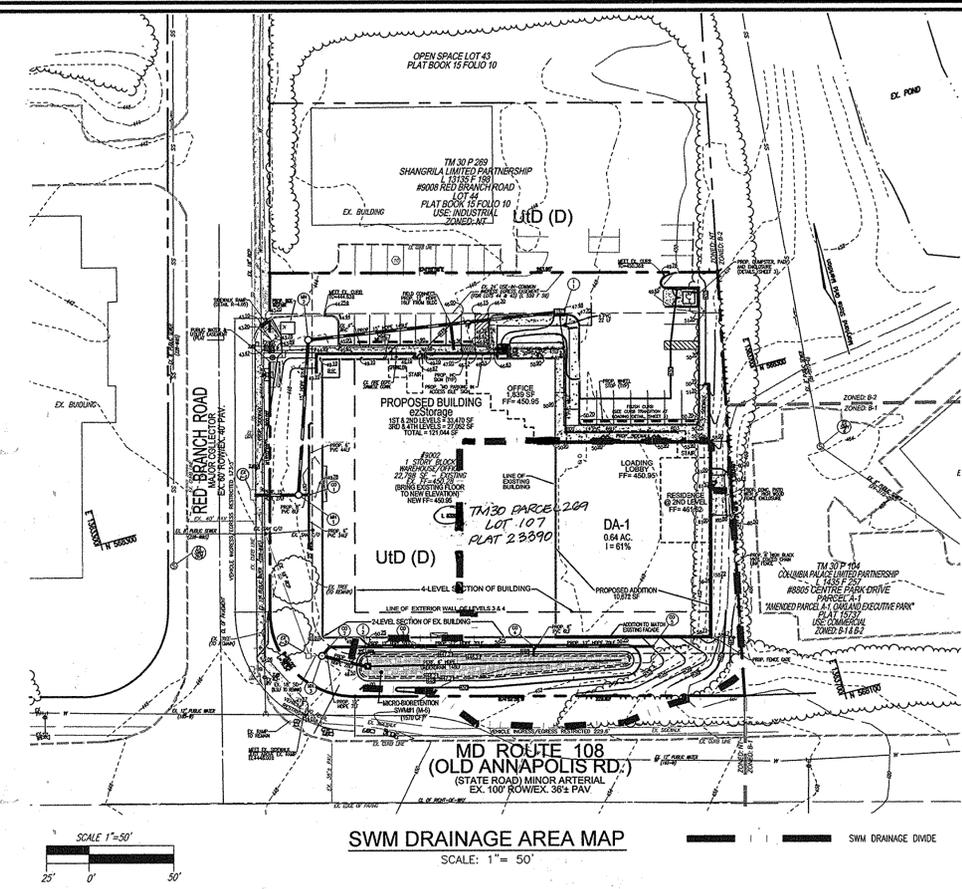
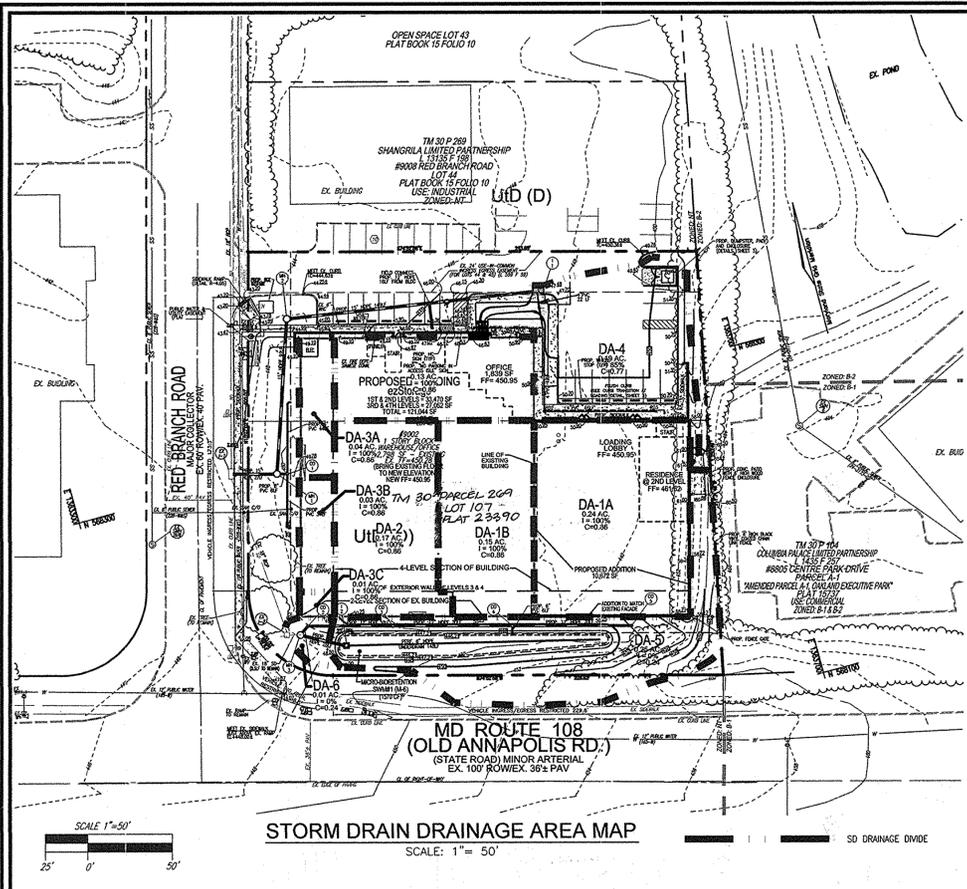
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/15/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/15/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/15/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/15/15





- LEGEND:**
- PROPOSED CONTOUR
  - - - EXISTING CONTOUR
  - EXISTING OVERHEAD LINES
  - EXISTING WATERLINE LINE
  - EXISTING GAS LINE
  - EXISTING GUARD RAIL
  - EXISTING METAL FENCE
  - EXISTING WOOD FENCE
  - EXISTING ELECTRICAL BOX
  - EXISTING POLE
  - EXISTING LIGHT POLE WITH CONCRETE BASE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - PROPOSED FIRE HYDRANT
  - PROPOSED PARKING COUNT
  - BORING
  - SOILS BOUNDARY
  - EXISTING FENCE
  - PROPERTY LINE
  - ADJACENT PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - PROPOSED SIDEWALK
  - EXISTING CURB AND GUTTER
  - PROPOSED CURB AND GUTTER
  - PROPOSED WHEEL STOP
  - PROPOSED STORM DRAIN INLET
  - PROPOSED STORM DRAIN
  - PROP. MICRO BIORETENTION AREA (M-B)
  - EX. 24" USE-IN-COMMON INGRESS/EGRESS CASSEMENT (FOR LOTS 44 & 45) (L. 559 F. 59)
  - DRAINAGE DIVIDE

**SOILS LEGEND**  
HOWARD COUNTY SOILS MAP 18

SYMBOL	NAME / DESCRIPTION	GROUP	Kc VALUE	ERODIBLE
Utd	URBAN LAND - UDORTHERTS COMPLEX, 0 TO 15 PERCENT SLOPES	D	0.37	YES

**NOTE:**  
THE STORMWATER MANAGEMENT DESIGN DETAILS ARE LOCATED ON SHEET 6.

HILLS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: EZ Storage Columbia North, Location: Columbia, Maryland, Boring No.: B-6, Job #: 14158A

Depth	Description	Boring and Sampling Notes	Ric.	NMR	SPT Blows	SPT Blows	SPT Blows
0'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
1'	Possible fill	1'	1.5	1.5	2	10	10
2'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
3'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
4'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
5'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
6'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
7'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
8'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
9'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
10'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
11'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
12'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10

HILLS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: EZ Storage Columbia North, Location: Columbia, Maryland, Boring No.: B-7, Job #: 14158A

Depth	Description	Boring and Sampling Notes	Ric.	NMR	SPT Blows	SPT Blows	SPT Blows
0'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
1'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
2'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
3'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
4'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
5'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
6'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
7'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
8'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
9'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
10'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
11'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
12'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10

HILLS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: EZ Storage Columbia North, Location: Columbia, Maryland, Boring No.: B-7, Job #: 14158A

Depth	Description	Boring and Sampling Notes	Ric.	NMR	SPT Blows	SPT Blows	SPT Blows
0'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
1'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
2'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
3'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
4'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
5'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
6'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
7'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
8'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
9'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
10'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
11'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
12'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10

HILLS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: EZ Storage Columbia North, Location: Columbia, Maryland, Boring No.: B-7, Job #: 14158A

Depth	Description	Boring and Sampling Notes	Ric.	NMR	SPT Blows	SPT Blows	SPT Blows
0'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
1'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
2'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
3'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
4'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
5'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
6'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
7'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
8'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
9'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
10'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
11'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10
12'	Dark Brown/Black silty clay with some sand (SL)	1'	1.5	1.5	2	10	10

**OWNER/DEVELOPER**  
COLUMBIA NORTH LAND L.L.P.  
8221 SNOWDEN RIVER PARKWAY  
SUITE 300  
COLUMBIA, MARYLAND 21045

**DEVELOPER/OWNER**  
EZ STORAGE  
9002 RED BRANCH ROAD  
COLUMBIA, MD 21045  
(410) 217-4170

NO.	REVISION	DATE
1	REMOVE SWITCHBACK RAMP; ADD HANDICAP ACCESSIBLE SIDEWALK; REMOVE LOT LINE; UPDATE OWNERSHIP	8/4/15

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN DRAINAGE AREA MAP**  
**AND SWM DRAINAGE AREA MAP**

ezStorage  
SELF-STORAGE  
9002 RED BRANCH ROAD  
LOT 107 - PLAT 23390  
ZONED: NT

TAX MAP 30 BLOCK 17  
2ND ELECTION DISTRICT

PARCEL 269, LOT 107  
HOWARD COUNTY, MARYLAND

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 6/5/15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 6-9-15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 6/19/15  
DIRECTOR DATE

PROFESSIONAL CERTIFICATE

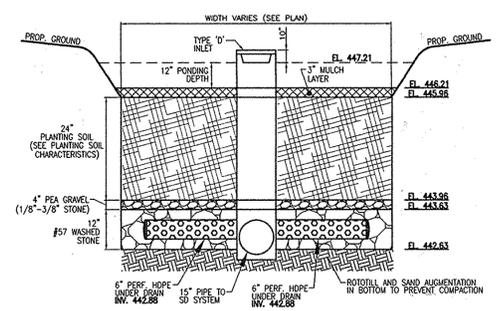
DESIGN BY: DZE  
DRAWN BY: DZE/KG  
CHECKED BY: RHY  
DATE: APRIL 2015  
SCALE: AS SHOWN  
W.O. NO.: 14-10

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 09-30-2018.

5 SHEET OF 7

**OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)**

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREATED DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.



- MICRO-BIORETENTION NOTES:**
1. ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.
  2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4\"/>

**MICRO-BIORETENTION (SWM #1)**

NOT TO SCALE

Pe=	2.00						
ESDv=(PexRvxA)/12							
Rv=0.05+0.009xI							
V min=1.0' rainfall	(1.0xRvxA)/12						
Vmax=1yr rainfall=2.6'	(2.6xRvxA)/12						
DA	% IMPERV	Rv	DA	ESDv	MINIMUM	MAXIMUM	VOLUME
1	54	0.54	0.45	1766	883	2296	1570
				TOTAL ESDv BY SUBAREA	1766		1570

\*Micro-bioretentions utilized in each subarea at the rate of 75%.

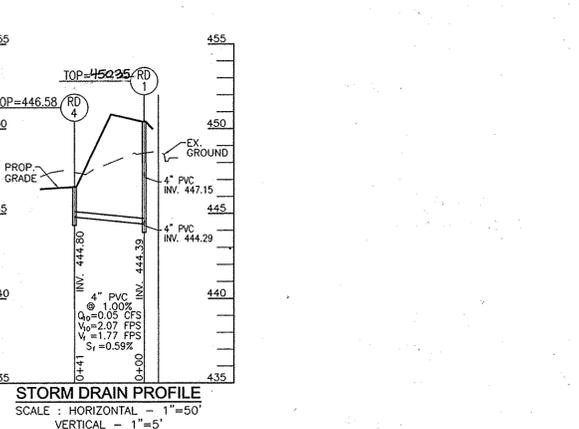
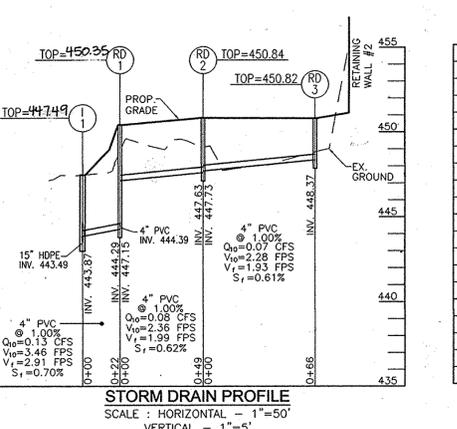
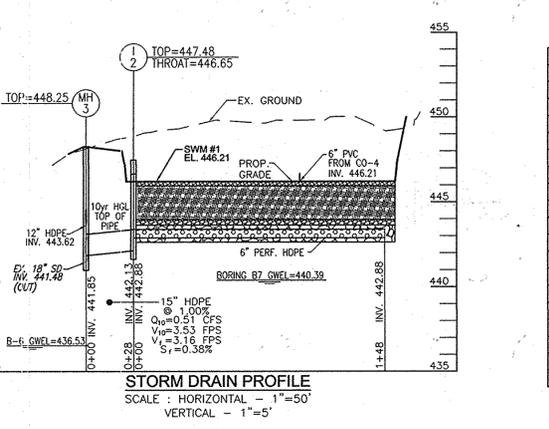
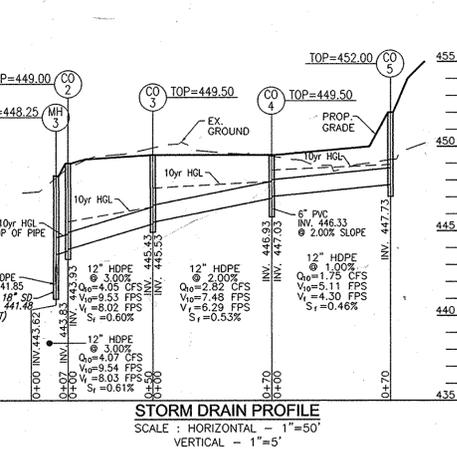
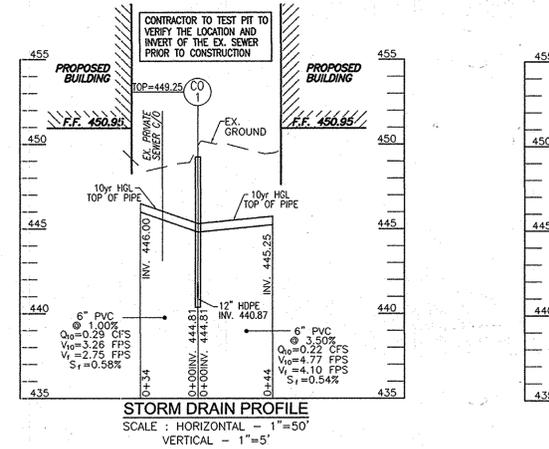
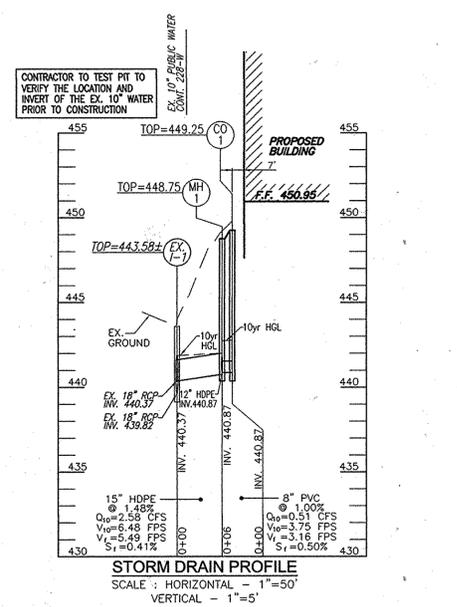
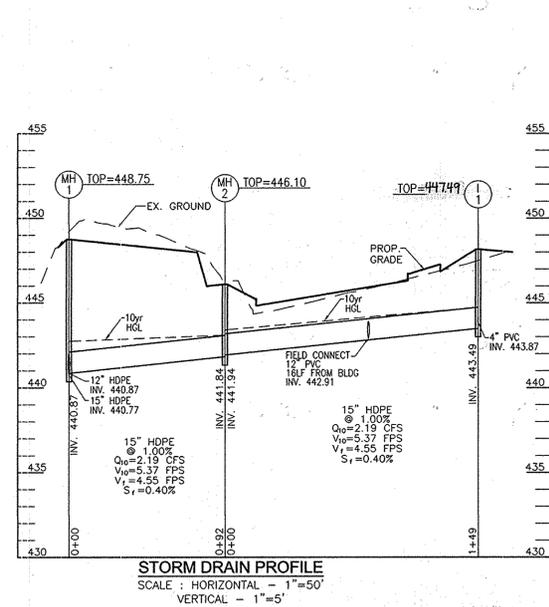
**Appendix B.4. Construction Specifications for Environmental Site Design Practices**

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%), and 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)		aged 6 months, minimum, no pine or wood chips
Mulch	shredded hardwood		
Perforated diaphragm	see Appendix A, Table A.4	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 3"	
Geotextile		n/a	PE Type I nonwoven
Gravel (underdrains and infiltration basins)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (1/8" TO 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-78	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe, 3/8" perf. @ 6" on center, 4 holes per row, minimum of 2' of gravel cover pipe; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch polypropylene geotextile.
Poured in place concrete (if required)	MHA Mix No. 3; F <sub>c</sub> = 3500 psi @ 28 days, normal weight, air-entrained; retaining in meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (see in-place or precast) not using previously approved design or design standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland; design to include meeting ACI Code 308.8R9; vertical loading (8x ft or 20x ft) allowable horizontal loading (based on soil pressure); analysis of potential cracking.
Sand	AASHTO M-66 or ASTM-C-33	0.075" to 0.04"	Sand substitutions such as Duxbury and Craystone (AASHTO) #10 are not acceptable. No calcium carbonate or dolomite sand substitutions are acceptable. No "rock dust" can be used for sand.

DRAINAGE AREA #	AREA TREATED	ENVIRONMENTAL SITE DESIGN PRACTICE										
		FACILITY NUMBER	PERMEABLE PAVEMENT	ADD UNDER PERM. PAVEMENT	LANDSCAPE INFILTRATION	PERVIOUS SIDEWALK	BIO SWALE	GRAVEL TRENCH	MICRO BIO RETENTION	ADD UNDER MICRO BIO	ESDv	
1	30927	SWM#1	0	0	0	0	0	0	0	1570	0	1570
SUBTOTAL 1		0	0	0	0	0	0	0	0	1570	0	1570
TOTALS:		0	0	0	0	0	0	0	0	1570	0	1570
TOTAL AREA		30927 SF										
		0.71 AC										
										TOTAL ESDv PROVIDED: 1570		

**APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS**

1. MATERIAL SPECIFICATIONS: THE ALLOWED MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
2. FILTERING MEDIA OR PLANTING SOIL: THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05. THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
  - \* SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
  - \* ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
  - \* CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
  - \* PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
 THE SOIL SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.
3. COMPACTION: IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION AIDS TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR WASH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TIRE TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE. COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH WASH TRACKS.
4. PLANT MATERIAL: RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.
5. PLANT INSTALLATION: COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE. ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRANDED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. GRASSES AND LEGUME SEED SHOULD BE DROPPED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS COVER PLANTING SPECIFICATIONS. THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS, DEFOLIANTS, OR AT A MINIMUM, IMPROVES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.
6. UNDERDRAINS: UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
  - \* PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 1/8" RIGID PIPE (E.G., PVC OF HDPE).
  - \* PERFORATIONS - IF PERFORATIONS ARE USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 40) GALVANIZED HARDWARE CLOTH.
  - \* GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
  - \* THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
  - \* A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
  - \* A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. UNDERDRAIN COVER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".
 THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).
7. MISCELLANEOUS: THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



**STRUCTURE SCHEDULE**

NO.	TYPE	LOCATION	TOP ELEV.	THROAT ELEV.	INV. IN	INV. OUT	COMMENTS
1-1	DOUBLE "WR" INLET	N 568360.0 E 1363596.5	447.49	-	-	443.49	HO. CO. STD. D-4.35
1-2	TYPE "D" INLET	N 568189.1 E 1363433.1	447.48	446.65	442.88	442.13	HO. CO. STD. D-4.10
MH-1	4"-0" STANDARD PRECAST MANHOLE	N 568297.4 E 1363420.1	448.75	-	440.87	440.77	HO. CO. STD. G-5.12
MH-2	4"-0" STANDARD PRECAST MANHOLE	N 568384.3 E 1363449.5	446.10	-	441.94	441.84	HO. CO. STD. G-5.12
MH-3	4"-0" STANDARD PRECAST MANHOLE	N 568202.1 E 1363408.6	448.25	-	443.62	441.85	HO. CO. STD. G-5.12
CO-1	CLEANOUT	N 568295.8 E 1363426.0	449.25	-	444.81	440.87	HO. CO. STD. S-2.22
CO-2	CLEANOUT	N 568208.1 E 1363414.2	449.00	-	443.93	443.83	HO. CO. STD. S-2.22
CO-3	CLEANOUT	N 568192.9 E 1363462.5	449.50	-	445.53	445.43	HO. CO. STD. S-2.22
CO-4	CLEANOUT	N 568174.6 E 1363530.5	449.50	-	447.03	446.33	HO. CO. STD. S-2.22
CO-5	CLEANOUT	N 568156.3 E 1363598.4	452.00	-	447.15	446.39	HO. CO. STD. S-2.22
RD-1	ROOF DRAIN	N 568339.3 E 1363594.4	450.35	-	-	444.29	
RD-2	ROOF DRAIN	N 568291.7 E 1363581.5	450.84	-	-	447.73	447.63
RD-3	ROOF DRAIN	N 568274.5 E 1363645.1	450.82	-	-	448.37	
RD-4	ROOF DRAIN	N 568350.1 E 1363554.6	446.58	-	-	444.80	

NOTE: 1. TOP ELEVATIONS ARE AT CENTER TOP OF DOUBLE TYPE "S" INLET, CENTER TOP OF MANHOLE FOR TYPE "D" INLET, AND TOP OF MANHOLE COVER FOR PRECAST MANHOLES.  
2. FOR TOP SLAB SLOPES SEE GRADING PLAN.  
3. SEE ARCHITECTURAL PLANS FOR DOWNSPOUT AND ROOF DRAIN DETAILS.  
4. ALL CUSTOM AND NON-STANDARD STRUCTURES TO BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER.

**PIPE SCHEDULE**

SIZE	TYPE	LENGTH
4"	PVC-SD	178 LF
6"	PVC-SD	78 LF
6"	PERF. HDPE (SWM)	148 LF
8"	PVC	6 LF
12"	HDPE	206 LF
15"	HDPE	296 LF

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad E. Smith* 6-5-15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*K. J. ...* 6-19-15  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Mark ...* 6/15/15  
DIRECTOR DATE

OWNER/DEVELOPER  
COLUMBIA NORTH LAND LLLP  
8221 SNOWDEN RIVER PARKWAY  
SUITE 300  
COLUMBIA, MARYLAND 21045

DEVELOPER/OWNER  
BUY THE BOOK!!!  
C/O ENTERPRISE INFORMATION  
8002 RED BRANCH ROAD  
COLUMBIA, MD 21045  
(410) 243-4130

NO.	REVISION	DATE
1	REMOVE SWITCHBACK RAMP; ADD HANDICAP ACCESSIBLE SIDEWALK; REMOVE LOT LINE; UPDATE OWNERSHIP	8/4/15

SITE DEVELOPMENT PLAN  
SWM DRAINAGE AREA MAP, SWM NOTES AND DETAILS; SOILS MAP

ezStorage  
SELF-STORAGE  
9002 RED BRANCH ROAD  
LOT 107 PLAT 23390  
ZONED: NT  
TAX MAP 30 BLOCK 17  
2ND ELECTION DISTRICT  
PARCEL 269, LOT 107  
HOWARD COUNTY, MARYLAND

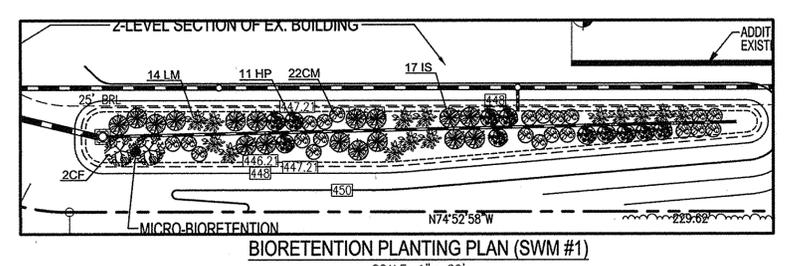
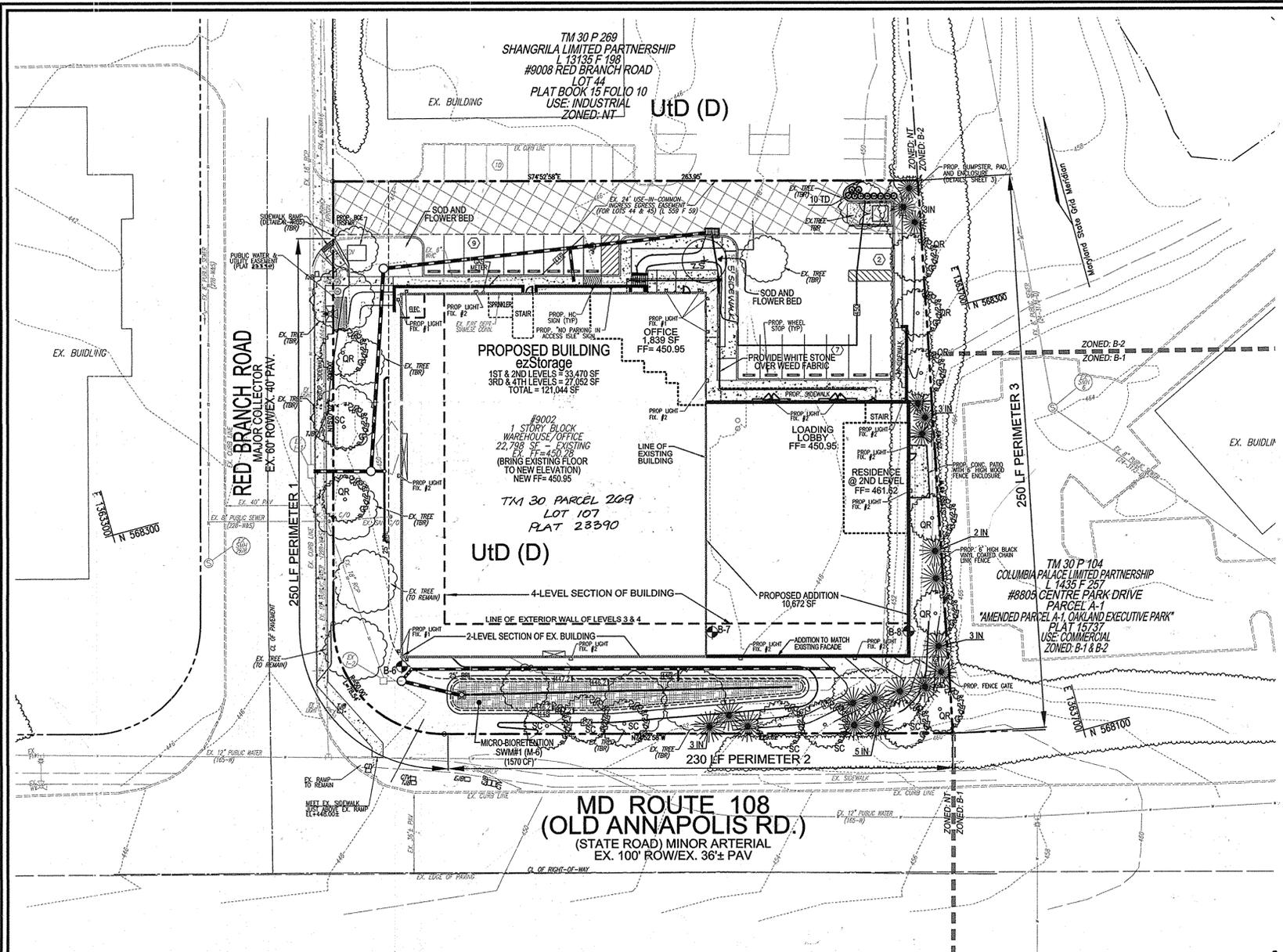
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLIOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

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. 17843, EXPIRATION DATE 09-30-2016.

DESIGN BY: DZE  
DRAWN BY: DZE/KG  
CHECKED BY: RHY  
DATE: APRIL 2015  
SCALE: AS SHOWN  
W.O. NO.: 14-10

6 SHEET OF 7



BIORETENTION PLANTING SCHEDULE

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
IS	17	IRIS SIBERICA 'BENNERUP BLUE' BENNERUP BLUE SIBERIAN	1 GALLON	18" O.C.
HP	11	HEMEROCALLIS X 'PRAIRIE BLUE EYES' PRAIRIE BLUE EYES DAYLILY	1 GALLON	30" O.C.
LM	14	LIRIOPE MUSCARI 'BIG BLUE' BIG BLUE LILYTURF	4' HT	SPECIM QUALITY STRAIGHT LEADER
CF	2	CORNUS SERICEA 'FLAVIRAMEA' YELLOW TWIGGED DOGWOOD	4' HT	SPECIM QUALITY STRAIGHT LEADER
CM	22	CONALLARIA MAJALIS LILY-OF-THE-VALLEY	1 QT.	12" O.C.

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	SWM#1
328 LF	328 LF
CREDIT FOR EXISTING VEGETATION (NO. YES AND LINEAR FEET)	NO
CREDIT FOR OTHER LANDSCAPING (NO. YES AND %)	YES, 100%*
NUMBER OF TREES REQUIRED (0 BUFFER) SHADE TREES 0 EVERGREEN TREES	SEE BIORETENTION PLANT LIST*
NUMBER OF TREES PROVIDED SHADE TREES 0 EVERGREEN TREES	SEE BIORETENTION PLANT LIST*

\*SURETY FOR BIORETENTION PROVIDED IN THE BID COST ESTIMATE

SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	18
NUMBER OF TREES REQUIRED (1/20 SPACES)	1
NUMBER OF TREES PROVIDED	1
SHADE TREES	1
OTHER TREES (2:1 SUBSTITUTION)	-
SHRUBS (10:1 SUBSTITUTION)	-

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT.
OR	8	QUERCUS RUBRA NORTHERN RED OAK	2 1/2"-3" CAL.	B & B
SC	7	PRUNUS SARGENTII SARGENT CHERRY	2 1/2"-3" CAL.	B & B
ZS	1	ZELKOVA SERRATA VILLAGE GREEN VILLAGE GREEN JAPANESE ZELKOVA	2 1/2"-3" CAL.	B & B
IN	18	LEX NELLIE 'R. STEVENS' NELLIE R. STEVENS HOLLY	5'-6" HT.	B & B
TD	10	TAXUS MEDIA 'DENSIFORMIS' DENSIFORMIS YEW	2 1/2"-3" HT.	B & B

SCHEDULE A: PERIMETER LANDSCAPE EDGE

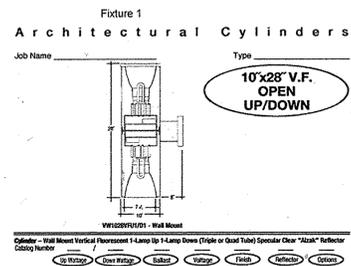
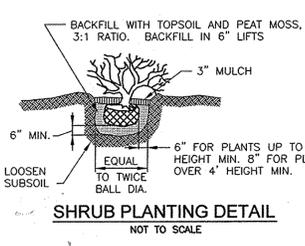
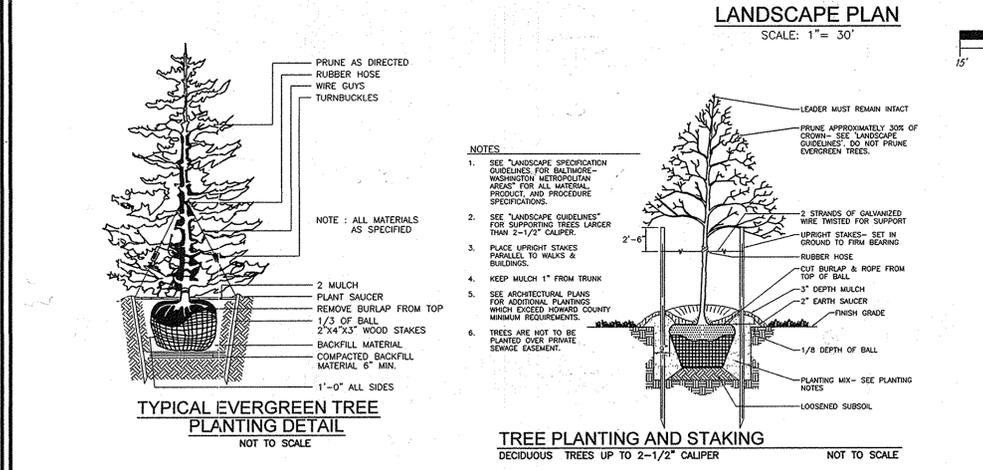
CATEGORY	ADJACENT TO PERIMETER PROPERTIES AND ROADWAYS				ADJACENT TO DUMPSTER
	B	C	A	D	
PERIMETER/FRONTAGE DESIGNATION	1	2	3	4	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	250'	230'	250'	30'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	1:50 5	1:40 6	1:60 5	1:40 1	1:7 17
SHADE TREES	1:40 6	1:20 12	-	1:20 2	20
EVERGREEN TREES	-	-	-	-	-
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED	3	6	5	1	15
SHADE TREES	0**	8**	10**	1	19
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	10*	10
EXISTING SHADE TREES	2	-	-	-	2
DESCRIBE PLANT SUBSTITUTION CREDITS (BELOW IF NEEDED)	SUBSTITUTE 1 SHADE TREE FOR 10 SHRUBS IN PERIMETER 1A. ** 6 REQUIRED EVERGREENS IN PERIMETER 1 PLANTED IN PERIMETER 3. 4 REQUIRED EVERGREENS IN PERIMETER 2 PLANTED IN PERIMETER 3.				

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$7,800.00 FOR THE REQUIRED 16 SHADE TREES, 20 EVERGREEN TREES.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED 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.



LED WATTAGE AND LUMEN VALUES

Quantity	Average Watt (Watt)	LED Lumens (lm)	Equivalent Incandescent Lumens*	Ball of Lumens Data
318A	35	300	1200	1200
318A	35	300	1200	1200
318A	35	300	1200	1200

OWNER/DEVELOPER  
COLUMBIA NORTH LAND LLLP  
8221 SHOWNEN RIVER PARKWAY  
SUITE 300  
COLUMBIA, MARYLAND 21045

DEVELOPER/OWNER  
BUY THE BOOK! 100  
670 ENTERPRISE INFORMATION  
9002 RED BRANCH ROAD  
COLUMBIA, MD 21015  
(410) 713-1130

REVISION TABLE

NO.	REVISION	DATE
1	REVISE PLAN TO REMOVE SWITCH BACK RAMP; ADD HANDICAP ACCESSIBLE SIDEWALK; REMOVE LOT LINE; UPDATE OWNERSHIP SHIFTS	

SITE DEVELOPEMENT PLAN  
LANDSCAPE PLAN  
ezStorage  
SELF-STORAGE  
9002 RED BRANCH ROAD  
LOT 107 PLAT 23390  
ZONED: NT  
PARCEL 269, LOT 107  
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLIOTT CITY, MD 21043  
TEL: 410.461.7666  
FAXI: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: DZE  
DRAWN BY: DZE/KG  
CHECKED BY: RHY  
DATE: APRIL 2015  
SCALE: AS SHOWN  
W.O. NO.: 14-10

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. 16183, EXPIRATION DATE 09-30-2018.

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