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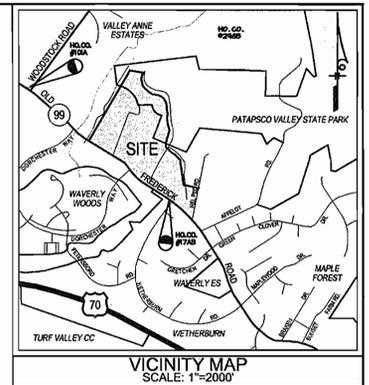
# SITE DEVELOPMENT PLAN

# MOUNT PLEASANT

## HOWARD COUNTY CONSERVANCY

### 3rd ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND

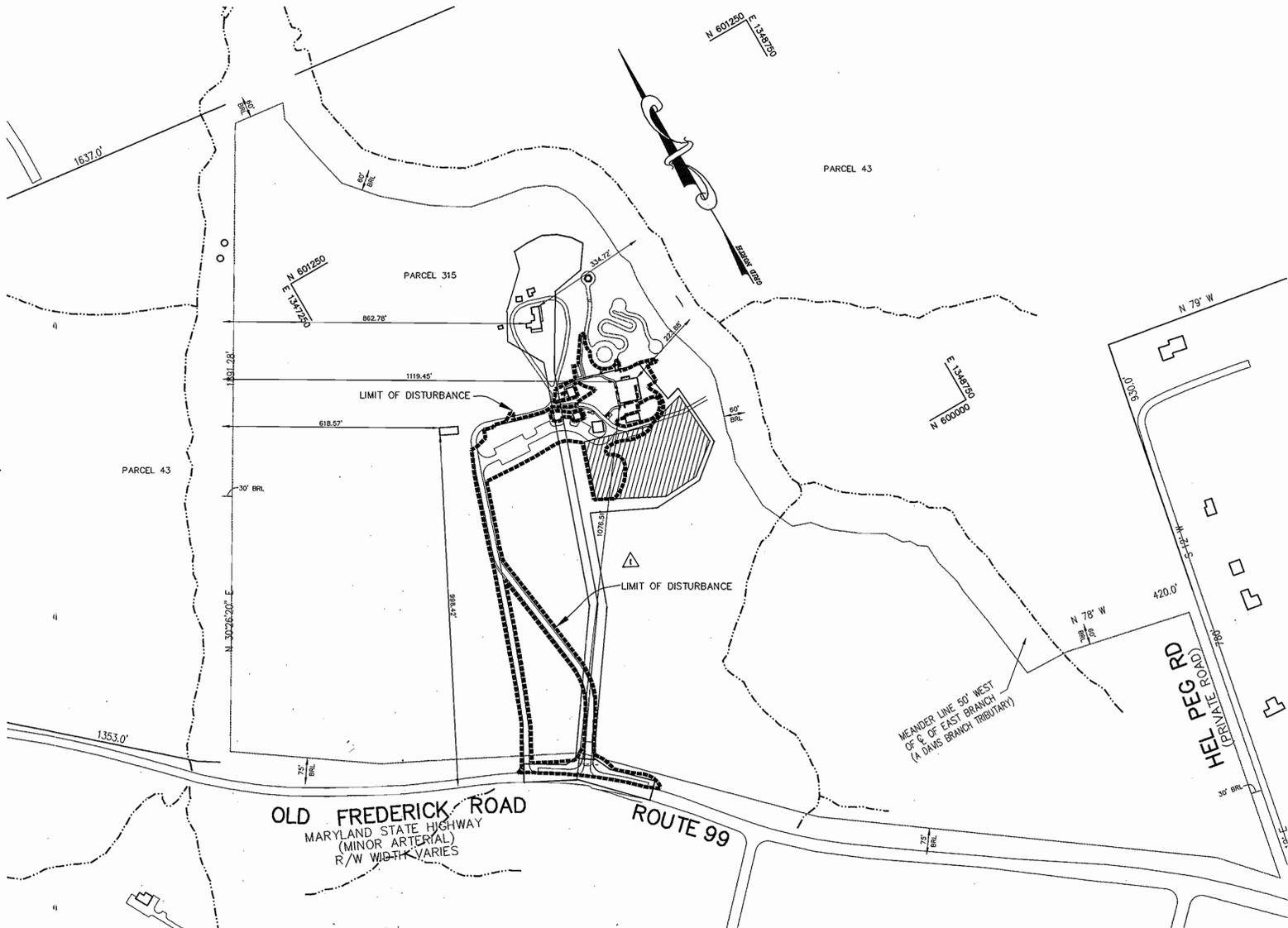


**BENCH MARKS**

HOWARD COUNTY CONTROL STATION 101A	N 540246.2	ELEV. 442.707
	E 832922.5	
HOWARD COUNTY CONTROL STATION 17AB	N 537686.2	ELEV. 509.178
	E 836197.4	

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY BY PATTON HARRIS RUST & ASSOCIATES, PC, DATED OCTOBER, 2001.
- 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. 101A AND 17AB WERE USED FOR THIS PROJECT.
- WATER IS PRIVATE, GWAP # HO-1-0330012(01)
- SEWER IS PRIVATE.
- THE STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED VIA THREE PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES AND GRASS CHANNELS AND NON-ROOFTOP DISCONNECT CREDITS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- THE 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THERE ARE NO WETLANDS ON THIS SITE WITHIN 25' OF THE LIMIT OF DISTURBANCE SHOWN ON THIS SHEET.
- THE TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP, DATED DECEMBER, 2002.
- THE GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT FOR THIS PROJECT WAS PREPARED BY MRA/GTA, DATED MARCH, 2003.
- THE SOURCE OF THE SITE BOUNDARY IS A PLAT PREPARED BY RIEMER MUEGGE AND ASSOCIATES, INC. DATED DECEMBER 8, 1992. THE PLAT WAS PREPARED BY USING THE 1883 DEED FOR PARCEL ONE LIBER 60, FOLIO 38, THUS WITHOUT BENEFIT OF A BOUNDARY SURVEY OR TITLE REPORT. ALL COURSES, DISTANCES, AND PROPERTY LINE DESCRIPTIONS FROM THE PLAT HAVE BEEN SHOWN.
- SUBJECT PROPERTY ZONED RC-DEO AND RR-DEO, PER THE 2/2/2004 COMP. ZONING PLAN.
- ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S: BA-02-10C, WP-03-146, GP-04-02, AND F-04-19.
- THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO 199.
- BA-02-10C - A CONDITIONAL USE FOR A PHILANTHROPIC INSTITUTION AND FOR A NEW ASSEMBLY BUILDING WAS APPROVED MAY 15, 2002, SUBJECT TO THE FOLLOWING CONDITIONS, AND WITH THE RECOMMENDATION THAT SCREENING LANDSCAPING IN FRONT OF THE PARKING LOTS IS UNNECESSARY DUE TO THE SIGNIFICANT DISTANCE BETWEEN THE PARKING LOTS AND THE HOMES TO THE SOUTH ACROSS MD 99:



**SITE TABULATION**

SITE AREA	81.70 ACRES (3,558,852 SF)
LIMIT OF DISTURBED AREA	3.43 ACRES
PRESENT ZONING	RC-DEO and RR-DEO
PROPOSED USE	ASSEMBLY BUILDING AND HONORS GARDEN
PROPOSED FLOOR SPACE:	
BASEMENT FLOOR	3411 SF
FIRST FLOOR	3875 SF
LOFT	1450 SF
TOTAL:	8736 SF
PARKING:	
PARKING REQUIRED (10 SP. / 1000 SF)	88 SPACES
PROPOSED GRAVEL PARKING**	38 SPACES (INCL. 2 PAVED H.C. SPACES)
PLANNING AND ZONING FILE No.	BA-02-10C

\*\* - PER SUBMITTED PARKING NEEDS ANALYSIS APPROVED BY HOWARD COUNTY

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

<i>Barbara Houston</i>	5/27/04
COUNTY HEALTH OFFICER	DATE
HOWARD COUNTY HEALTH DEPARTMENT	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Mark DeAngelis</i>	6/7/04
DIRECTOR	DATE
<i>Chris Hammit</i>	6/7/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chris Hammit</i>	6/7/04
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

3-31-05	Added Lot lines & Plat Number
DATE	REVISION
OWNER / DEVELOPER	
HOWARD COUNTY CONSERVANCY, INC.	
BOARD OF TRUSTEES	
c/o JAMES MOXLEY	
P.O. BOX 175	
WOODSTOCK, MARYLAND 21163	
410-465-8877	
PROJECT	
MOUNT PLEASANT	
HOWARD COUNTY CONSERVANCY	
AREA TAX MAP 10	PARCEL 315 ZONED RC-DEO
3rd ELECTION DISTRICT	
HOWARD COUNTY, MARYLAND	
TITLE	
TITLE SHEET	

**Patton Harris Rust & Associates, pc**  
Engineers, Surveyors, Planners, Landscape Architects.  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282

4-21-04  
DATE

FILE NAME: 01002/1-0/ENGR/PLANS/C1000COV.DWG

DESIGNED BY: C.J.R.

DRAWN BY: MAD

PROJECT NO: 11612-1-0

DATE: APRIL 21, 2004

SCALE: AS SHOWN

DRAWING NO. 1 OF 12

CHRISTOPHER J. REID #19949

**PLAN**  
SCALE: 1" = 200'

**BUILDING ELEVATION**  
NO SCALE

MEAN HEIGHT =  $\frac{26.3' + 37.3'}{2} = 31.8'$

**AS-BUILT CERTIFICATION**

DOMENICO COLANGELO #27208  
DATE 9/15/04

**SEWAGE DESIGN FLOW CALCULATIONS**

- 300 PEOPLE X 10 GPP/DAY = 3000 GAL. - VISITOR
- 1 PERSON (3 BEDROOM HOUSE) X 450 GPP/DAY = 450 GAL. - 1 STAFF MEMBER WHO IS RESIDENT
- 3 PEOPLE X 15 GPP/DAY = 45 GAL. - STAFF MEMBERS
- TOTAL = 3495 GAL. - USE 3500 GAL.

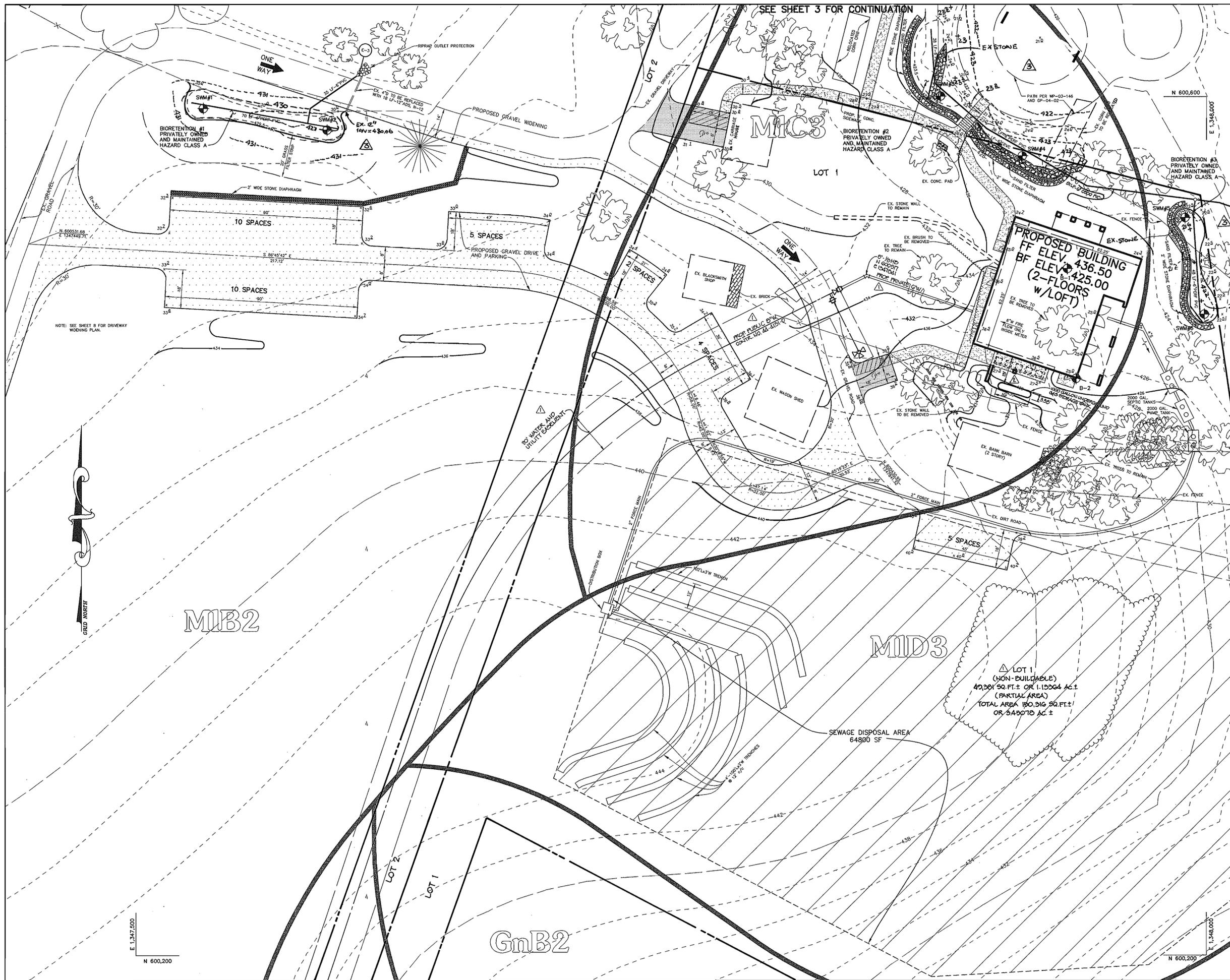
**TRENCH DESIGN**  
3500 GAL. @ 0.8 GPD @ 3' WIDTH = 1458 LF X .42 = 613 LF OF TRENCH

**PRIVATE WATER AND SEWER GENERAL NOTES**

- THIS AREA DESIGNATES A PRIVATE SEWAGE DISPOSAL EASEMENT OF AT LEAST 10,000 SQ.FT., AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA. ARE RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECONSTRUCTION OF A WOODRIDGE SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- PERC HOLES SHOWN HEREON HAVE BEEN FIELD LOCATED BY RIEMER MUEGGE, A DIVISION OF PATTON HARRIS RUST & ASSOCIATES, PC. ON OR ABOUT APRIL 3, 2001.
- SUBJECT PROPERTY ZONE, RC-DEO.
- PERC HOLES:  PASSED,  FAILED,  HELD FOR WET SEASON TEST.
- ALL WELLS AND SEPTIC SYSTEMS WITHIN 100' OF PROPERTY LINES HAVE BEEN SHOWN.
- THERE ARE NO SLOPES 25% OR GREATER WITHIN 25' OF PROPOSED SEPTIC AREA.
- GROUNDWATER APPROPRIATION PERMIT (GWAP) TO BE OBTAINED PRIOR TO SIGNATURE OF THE SITE DEVELOPMENT PLAN. IF PROPERTY CONNECTED TO PUBLIC WATER SYSTEM THEN NO GWAP IS REQUIRED.
- EXISTING SEPTIC TANK TO BE REPLACED AT TIME OF CONSTRUCTION OF NEW BUILDINGS SEPTIC SYSTEM.
- PROVIDE WATER METER AT INCOMING WATER LINE, ALONG WITH WELL PUMP.

ADDRESS CHART	
PARCEL	STREET ADDRESS
315	10520 OLD FREDERICK ROAD

PROJECT NAME	MOUNT PLEASANT	SECT./AREA		PARCEL	315, LOTS 1-2
PLAT # FOR PC	HOWARD COUNTY CONSERVANCY	BLOCK # ZONING	24 & 6 RC-DEO	TAX MAP NO.	10 & 16
DATE	4/21/04	ELECT. DIST. CENSUS TRACT			6012
WATER CODE	H05	SEWER CODE	N/A		



**NOTES:**

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
5. P-1 PAVING (HO.CO. DETAIL R-2.01)
6. GRAVEL
7. ASPHALT PATH
8. CONCRETE SIDEWALK (HO.CO. DETAIL R-3.05)

9-15-05	ADDED AS-BUILT BIORETENTION #1, #2, #3
DATE	NO. REVISION

AS-BUILT CERTIFICATION

*Domenick Colangelo* 7/15/04  
 APPROVED: DOMENICK COLANGELO # 27200 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

*Denny Bonarum* 5-27-04  
 COUNTY HEALTH OFFICER JAD DATE  
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Domenick Colangelo* 6/7/04  
 DIRECTOR DATE

*Mike Daneman* 5/10/04  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

*Annika Hamrick* 6/1/04  
 CHIEF, DIVISION OF LAND DEVELOPMENT #P DATE

9-21-05	ADDED 1000 GALLON GAS TANK
9-11-05	ADDED WATER MAIN & LOT LINES

DATE	NO.	REVISION
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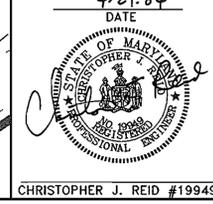
OWNER / DEVELOPER  
 HOWARD COUNTY CONSERVANCY, INC.  
 BOARD OF TRUSTEES  
 c/o JAMES MOXLEY  
 P.O. BOX 175  
 WOODSTOCK, MARYLAND 21163  
 410-465-8877

PROJECT **MOUNT PLEASANT**  
**HOWARD COUNTY CONSERVANCY**  
 AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
 3rd ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

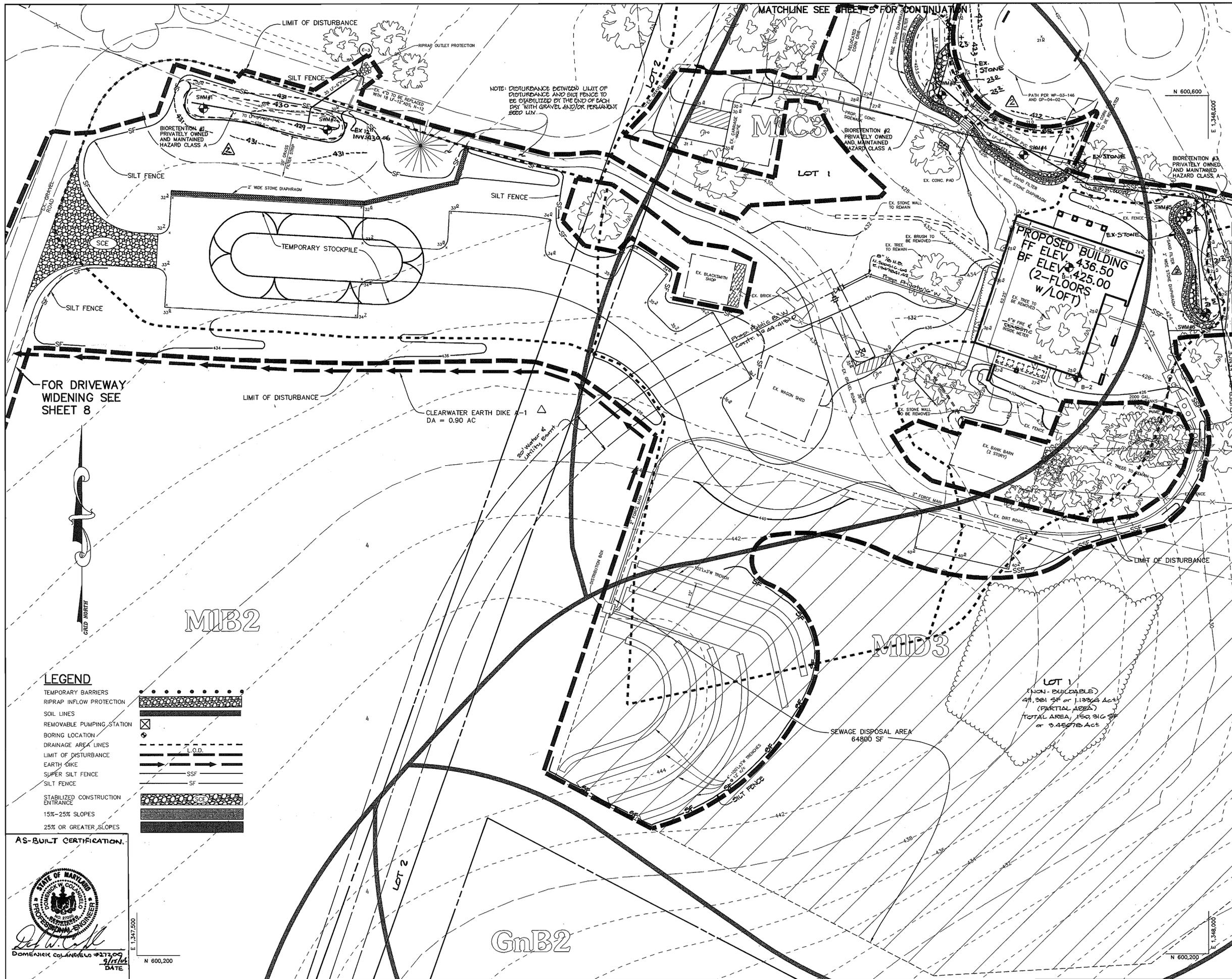
TITLE **SITE DEVELOPMENT PLAN**

**Patton Harris Rust & Associates, pc**  
 Engineers, Surveyors, Planners, Landscape Architects.  
 8818 Centre Park Drive  
 Columbia, MD 21045  
 T 410.997.8900  
 F 410.997.9282

4.21.04 DATE	FILE NAME: 01002/1-0/ENGR/ PLANS/C400SIT.DWG
DESIGNED BY: C.J.R.	
DRAWN BY: MAD	
PROJECT NO: 11612-1-0	
DATE: APRIL 21, 2004	
SCALE: 1"=20'	
DRAWING NO. 2 OF 12	







**MATCHLINE SEE SHEET 5 FOR CONTINUATION**

**NOTE: CONTRACTOR TO PROVIDE ECM ALONG ALL AREA OF DITCHES, SWALES, AND OTHER AREAS WHERE FLOW IS CONCENTRATED.**

**BY THE DEVELOPER:**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*J. E. Tullman, Pres* 4-22-04  
DEVELOPER DATE

**BY THE ENGINEER:**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Chris J. Reid* 4-21-04  
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*Jim Munnias* 5/5/04  
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John S. ...* 5/5/04  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

*Debra ...* 5-27-04  
COUNTY HEALTH OFFICER DATE  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Marsha ...* 4/7/04  
DIRECTOR DATE

*Mr. ...* 5/10/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*...* 6/1/04  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

9-15-05 **ADDED AS-BUILT BIO-RETENTION #1, #2, #3**

8-31-00 **Added Lot lines and Water Main**

DATE	NO.	REVISION

OWNER / DEVELOPER  
HOWARD COUNTY CONSERVANCY, INC.  
BOARD OF TRUSTEES  
c/o JAMES MOXLEY  
P.O. BOX 175  
WOODSTOCK, MARYLAND 21163  
410-465-8877

PROJECT **MOUNT PLEASANT HOWARD COUNTY CONSERVANCY**

AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
3rd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE **GRADING AND SEDIMENT CONTROL PLAN**

**Patton Harris Rust & Associates, pc**  
Engineers, Surveyors, Planners, Landscape Architects.  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282

4-21-04  
DATE

FILE NAME: 01002/1-0/ENGR/PLANS/C200ESC.DWG  
DESIGNED BY: C.J.R.  
DRAWN BY: MAD  
PROJECT NO: 11612-1-0  
DATE: APRIL 21, 2004  
SCALE: 1"=20'  
DRAWING NO. 4 OF 12  
SDP-03-123

CHRISTOPHER J. REID #19949

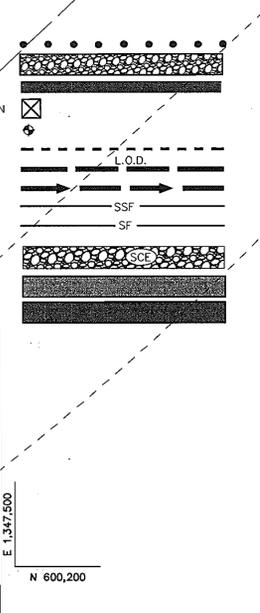
**LEGEND**

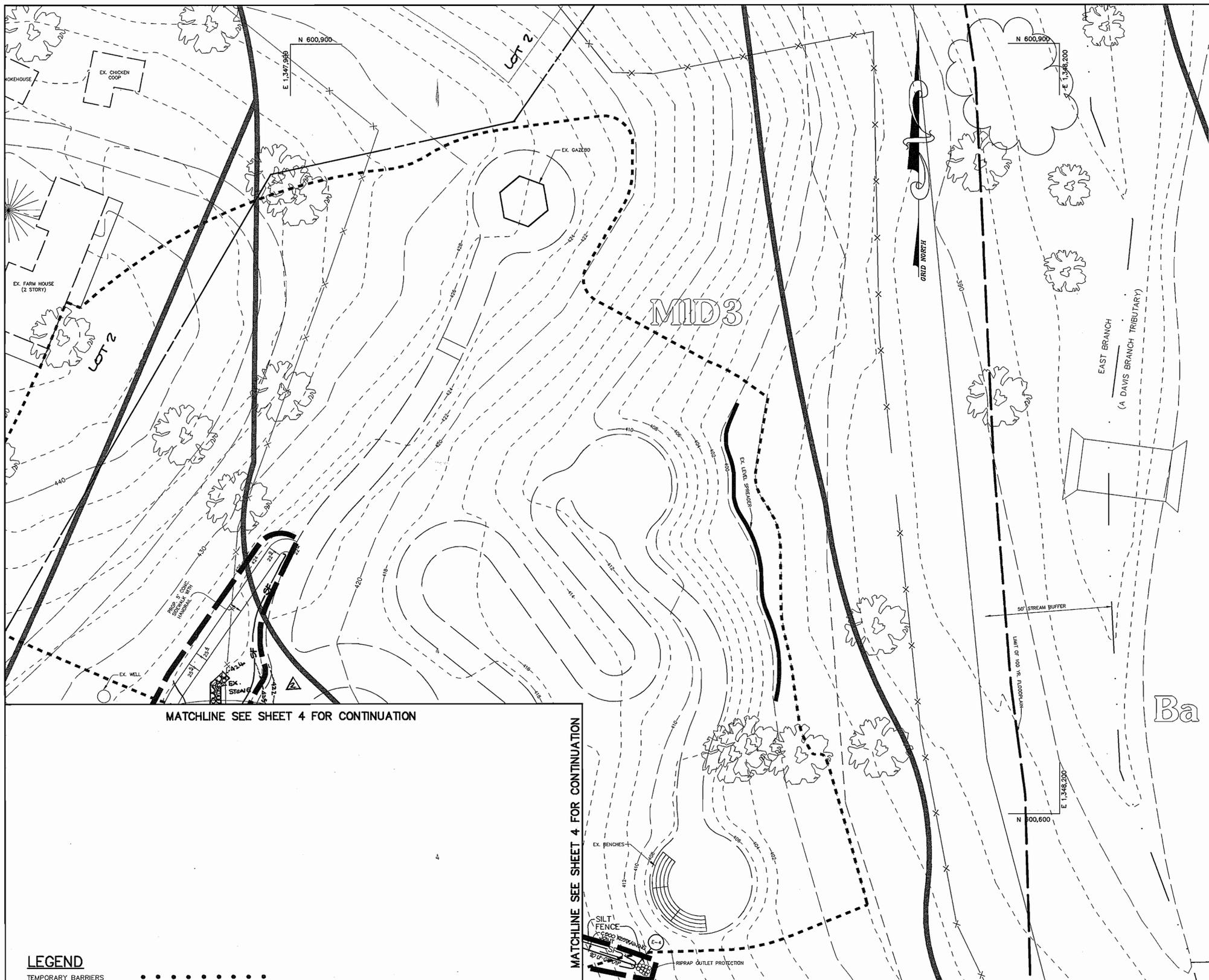
- TEMPORARY BARRIERS
- RIPRAP INFLOW PROTECTION
- SOIL LINES
- REMOVABLE PUMPING STATION
- BORING LOCATION
- DRAINAGE AREA LINES
- LIMIT OF DISTURBANCE
- EARTH DIKE
- SUPER SILT FENCE
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- 15%-25% SLOPES
- 25% OR GREATER SLOPES

**AS-BUILT CERTIFICATION**

*Debra ...*  
DOMENIEK COLANGELO #27200  
DATE 5/17/04

STATE OF MARYLAND  
DOMENIEK COLANGELO #27200  
DATE 5/17/04





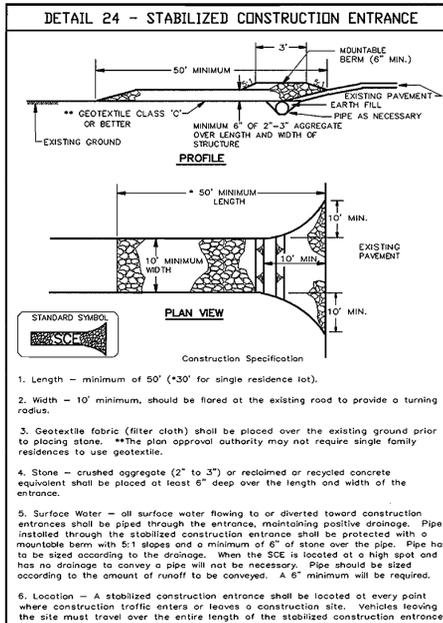
MATCHLINE SEE SHEET 4 FOR CONTINUATION

MATCHLINE SEE SHEET 4 FOR CONTINUATION

**LEGEND**

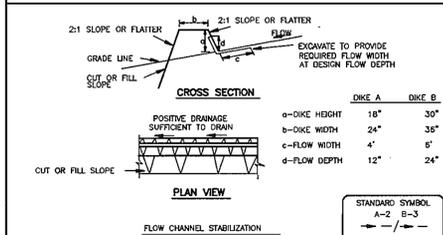
TEMPORARY BARRIERS	
RIPRAP INFLOW PROTECTION	
SOIL LINES	
REMOVABLE PUMPING STATION	
BORING LOCATION	
DRAINAGE AREA LINES	
LIMIT OF DISTURBANCE	
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SUPER SILT FENCE	
SILT FENCE	
STABILIZED CONSTRUCTION ENTRANCE	
15%-25% SLOPES	
25% OR GREATER SLOPES	

<b>AS-BUILT CERTIFICATION</b>	
<i>Christopher J. Reid</i> CHRISTOPHER J. REID # 19949 DATE: 9/15/04	
BY THE DEVELOPER : I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>J.E. Tillman, Pres</i> DEVELOPER: J.E. Tillman, Pres DATE: 4-22-04	
BY THE ENGINEER : I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>Chris J. Reid</i> ENGINEER: Chris J. Reid DATE: 4-21-04	
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.	
<i>Jim Myer, Inc</i> NATURAL RESOURCES CONSERVATION SERVICE: Jim Myer, Inc DATE: 5/5/04	
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>John S. Saly</i> HOWARD SOIL CONSERVATION DISTRICT: John S. Saly DATE: 5/5/04	
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS	
<i>Penn Bonville, M.D.</i> COUNTY HEALTH OFFICER: Penn Bonville, M.D. HOWARD COUNTY HEALTH DEPARTMENT DATE: 5-27-04	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Patrick L. Layton</i> DIRECTOR: Patrick L. Layton DATE: 6/7/04	
<i>Chris Dammann</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ: Chris Dammann DATE: 5/10/04	
<i>Carole K. Hannon</i> CHIEF, DIVISION OF LAND DEVELOPMENT: Carole K. Hannon DATE: 6/2/04	
415105  ADDED AS-BUILT RETENTIONS #2.	
3105  Added Lot Lines	
DATE	REVISION
OWNER / DEVELOPER HOWARD COUNTY CONSERVANCY, INC. BOARD OF TRUSTEES c/o JAMES MOXLEY P.O. BOX 175 WOODSTOCK, MARYLAND 21163 410-465-8877	
PROJECT <b>MOUNT PLEASANT</b> <b>HOWARD COUNTY CONSERVANCY</b>	
AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE <b>GRADING AND SEDIMENT CONTROL PLAN</b>	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
<i>Christopher J. Reid</i> DATE: 4-21-04	
FILE NAME: 01002/1-0/ENGR/PLANS/C201ESC.DWG	
DESIGNED BY: C.J.R.	
DRAWN BY: MAD	
PROJECT NO: 11612-1-0	
DATE: APRIL 21, 2004	
SCALE: 1"=20'	
DRAWING NO. 5 OF 12	
CHRISTOPHER J. REID #19949	



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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### DETAIL 1 - EARTH DIKE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A-1-6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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### 30.0 - DUST CONTROL

**DEFINITION**  
CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

**PURPOSE**  
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

**CONDITIONS WHERE PRACTICE APPLIES**  
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

**SPECIFICATIONS**

**TEMPORARY METHODS**

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
- VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEHIND PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12\"/>
- IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOST REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
- BARRIERS - SOLID BOARD FENCES, SILENT FENCES, SNOW FENCES, BURIAL FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 FEET. THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOSTLY MOIST. MAY NEED RETREATMENT.

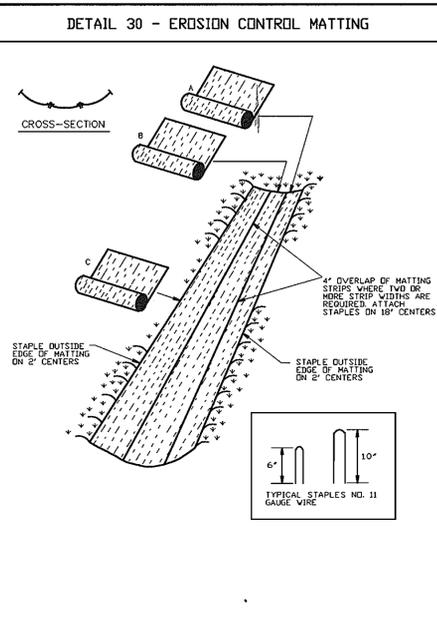
**PERMANENT METHODS**

- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOIL. EXISTING TREES OR LARGE SHRUBS WILL AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
- STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

**REFERENCES**

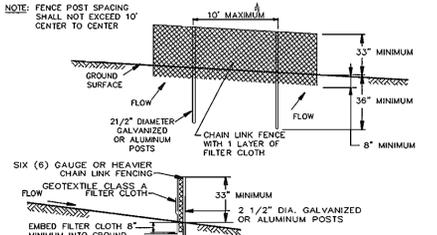
- AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREVENTING SOIL LOSS.
- AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

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### DETAIL 33 - SUPER SILT FENCE



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### 21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

**Definition**  
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

**Purpose**  
To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

**Conditions Where Practice Applies**

- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil material is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
  - The original soil to be vegetated contains material toxic to plant growth.
  - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these standards and specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

**Construction and Material Specifications**

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimentation Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2\"/>
  - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
  - Where subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
  - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments and approved by the appropriate approval authority may be used in lieu of natural topsoil. a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher. b. Organic content of topsoil shall be not less than 1.5 percent by weight. c. Topsoil having soluble salt content greater than 500 parts per million shall not be used. d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

**Topsoil Application**

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
- Grades on areas to be topsoiled, which have been previously established, shall be maintained, albeit 4\"/>
- Topsoil shall be uniformly distributed in a 4\"/>
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

**VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:**

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall conform to the following requirements:
  - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
  - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
  - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
  - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

**References:** Guideline Specifications, Soil Preparation and Seeding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

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### TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

**Seeded Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**Soil Amendments:** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.).

**Seeding:** For the period March 1 thru April 30 and from August 15 thru November 15, apply 1 1/2 bushels per acre of annual ryegrass (25 lbs. per 1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of creeping lovegrass (10 lb. per 1000 sq. ft.) or for the period November 16 thru February 28, protect site by applying 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring, or use sod.

**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes or higher, use 341 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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### PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

**Seeded Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.) before seeding. At time of seeding, apply 400 lbs. per acre three inches of soil. If time of seeding, apply 400 lbs. per acre dolomitic limestone fertilizer (92 lbs. per 1000 sq. ft.)
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.

**Seeding:** For the period March 1 thru April 30 and from August 1 thru October 31, apply 1 1/2 bushels per acre of annual ryegrass (25 lbs. per 1000 sq. ft.) or for the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (10 lbs. per 1000 sq. ft.) of creeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well-anchored straw.

**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes or higher, use 341 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.

**Maintenance:** Inspect all seeded areas and make needed repairs, replacements and reseeding.

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### STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1. B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOP, TEMPORARY SEEDING, AND MULCHING (SEC. 6.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:  
TOTAL AREA OF SITE 01.70 ACRES  
AREA DISTURBED 3.43 ACRES  
AREA TO BE ROOFED OR PAVED 0.91 ACRES  
AREA TO BE VEGETATIVELY STABILIZED 2.46 ACRES  
TOTAL CUT 847 CU. YARDS  
TOTAL FILL 2340 CU. YARDS  
OFFSITE BORROW AREA LOCATION TO HAVE ACTIVE GRADING PERMIT.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

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### SEQUENCE OF CONSTRUCTION

- OBTAIN ROUGH GRADING PERMIT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CLEARWATER EARTH DIKE. (5 DAYS).
- CONTRACTOR TO PROCEED WITH ROUGH GRADING OF ENTIRE SITE. CONTRACTOR TO PROVIDE DUST CONTROL AS NECESSARY.
- UPON ACCEPTANCE BY THE COUNTY INSPECTOR, CONTRACTOR TO CONTINUE WITH ROUGH GRADING & START BUILDING CONSTRUCTION. NO WORK, INCLUDING PLACEMENT OF SEDIMENT CONTROLS IS TO BE DONE WITHIN THE WETLANDS, FLOODPLAIN OR STREAM AREAS.
- AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM DRAINS, WATER, AND SEWER. (5 DAYS)
- PAVE ROADWAYS. (3 DAYS)
- APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)
- PERFORM FINE GRADING, SITE LANDSCAPING, LIGHTING AND SIDEWALKS. (2 WEEKS)
- CONSTRUCT AND LANDSCAPE BIO-RETENTION FACILITY AFTER STABILIZATION OF DRAINAGE AREAS TO BIO-RETENTION FACILITIES IS COMPLETE. PERFORM REMAINING LANDSCAPING. (2 DAYS)
- UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 DAYS)

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### AS-BUILT CERTIFICATION

**DATE** 4-21-04  
**REVISION**

**OWNER / DEVELOPER**  
HOWARD COUNTY CONSERVANCY, INC.  
BOARD OF TRUSTEES  
c/o JAMES MOXLEY  
P.O. BOX 175  
WOODSTOCK, MARYLAND 21163  
410-465-8877

**PROJECT**  
MOUNT PLEASANT  
HOWARD COUNTY CONSERVANCY

**AREA TAX MAP 10** PARCEL 315 ZONED RC-DEO  
3rd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**TITLE**  
SEDIMENT CONTROL  
NOTES AND DETAILS

**Patton Harris Rust & Associates, pc**  
Engineers, Surveyors, Planners, Landscape Architects.  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282

**DATE** 4-21-04  
**FILE NAME:** 01002/1-0/ENGR/PLANS/C903DET.DWG  
**DESIGNED BY:** C.J.R.  
**DRAWN BY:** MAD  
**PROJECT NO :** 11612-1-0  
**DATE :** APRIL 21, 2004  
**SCALE :** AS SHOWN  
**DRAWING NO. :** 6 OF 12

**DATE NO.** REVISION

**APPROVED:** FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
Domenick Colangelo, 5/15/04, DATE  
Domenick Colangelo #27200, DATE

**APPROVED:** HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
Chris J. Reid, 4-21-04, DATE  
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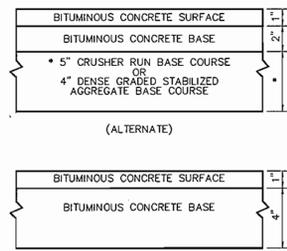
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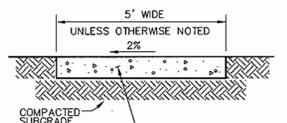
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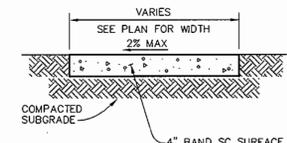
HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

**P-1 PAVING**  
NO SCALE

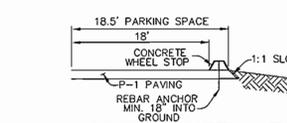


NOTES:  
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)  
PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS  
BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN  
5' MAX. SQUARES.

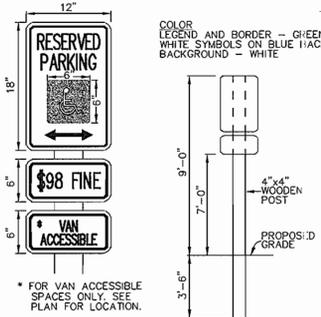
**SIDEWALK DETAIL**  
NO SCALE



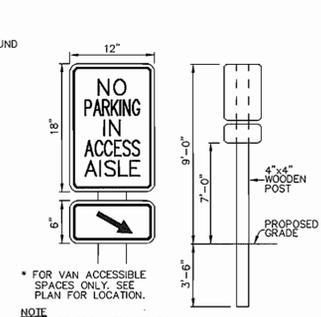
**ASPHALT WALK DETAIL**  
NO SCALE



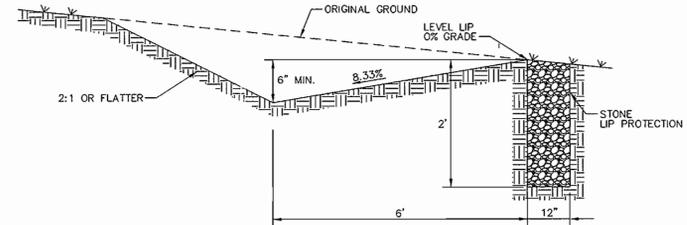
**CONCRETE WHEEL STOP  
LOCATION PLAN**  
NO SCALE



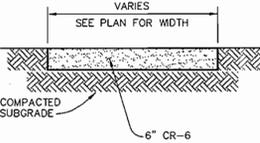
**HANDICAP SIGN DETAIL**  
NO SCALE



**ACCESS AISLE SIGN**  
NO SCALE



**LEVEL SPREADER**  
NO SCALE



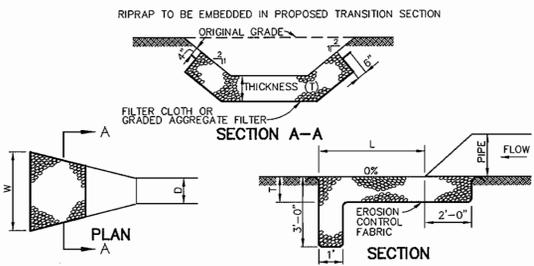
**GRAVEL WIDENING AND  
PARKING DETAIL**  
NO SCALE

**PIPE SCHEDULE**

PIPE LENGTH	SIZE	TYPE
168	6"	PVC
199	6"	PERF PVC
63	15"	CMP 14 Ga.

**STRUCTURE SCHEDULE**

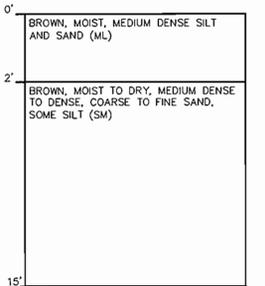
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
E-1	15" CMP END SECTION	N 599660 E 1347271	338.00(9'9")	-	-	SHA STD. DETAIL MD 910.01
E-2	15" CMP END SECTION	N 599624 E 1347324	338.82(9'10")	-	-	SHA STD. DETAIL MD 910.01
E-3	6" END SECTION	N 600611 E 1347604	426.00(6')	-	-	ADS, N-12
E-4	6" END SECTION	N 600539 E 1348041	412.00(6')	-	-	ADS, N-12



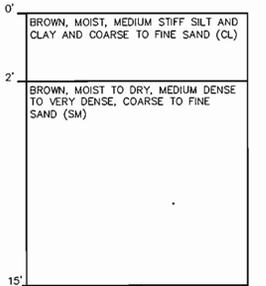
NOTE: Q<sub>10</sub>, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q <sub>25</sub>	V <sub>p</sub>	DEPTH
E-1	9.5" CL 1	12'	10'	19"	0	0	0
E-2	9.5" CL 1	10'	10'	19"	0	0	0
E-4	9.5" CL 1	10'	10'	19"	0	0	0

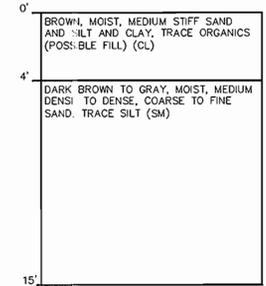
**RIPRAP OUTLET PROTECTION DETAIL**  
NO SCALE



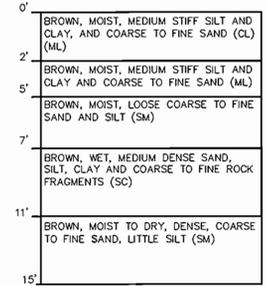
**BORING SWM-1**  
NO SCALE



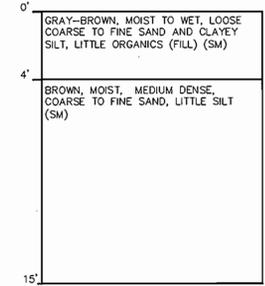
**BORING SWM-2**  
NO SCALE



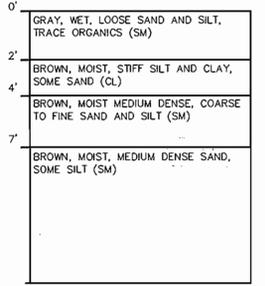
**BORING SWM-3**  
NO SCALE



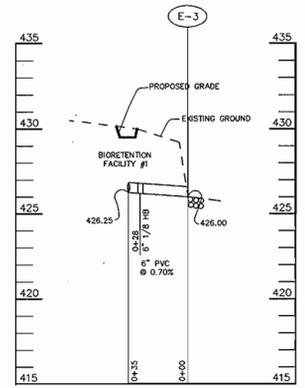
**BORING SWM-4**  
NO SCALE



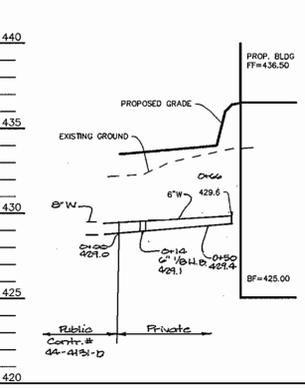
**BORING SWM-5**  
NO SCALE



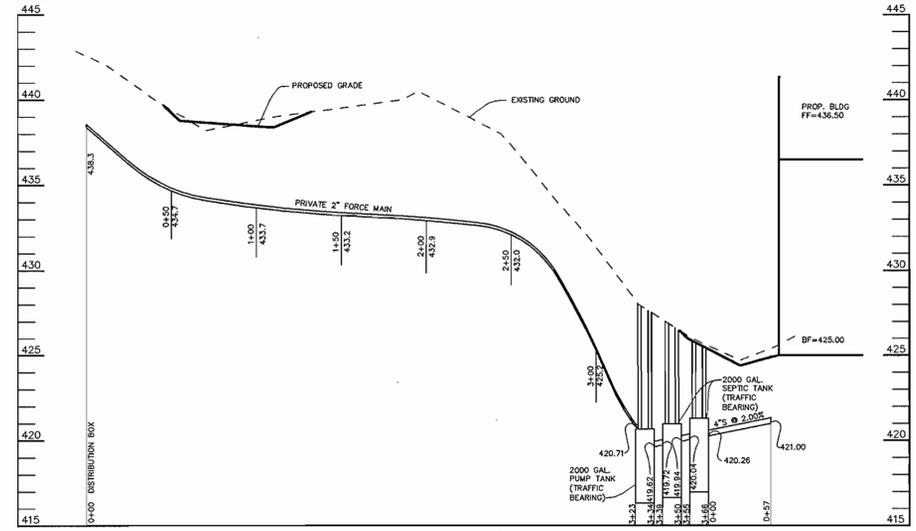
**BORING SWM-6**  
NO SCALE



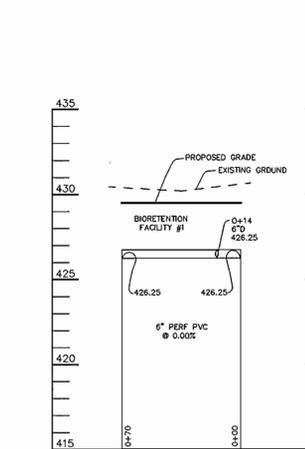
**STORM DRAIN PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



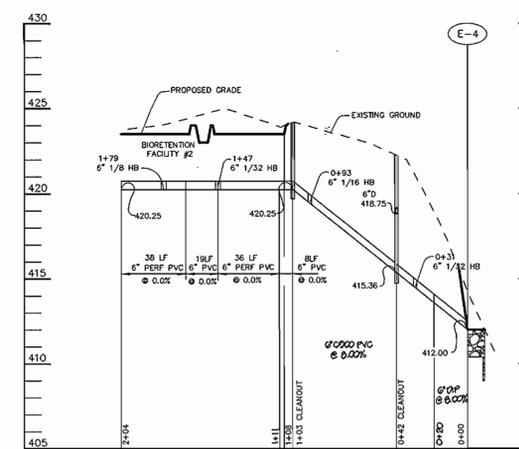
**WATER PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



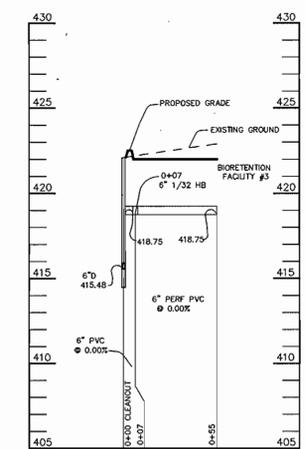
**SEWER PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



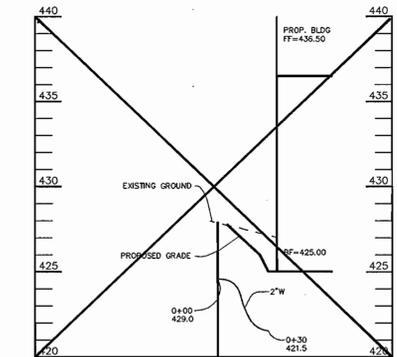
**STORM DRAIN PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



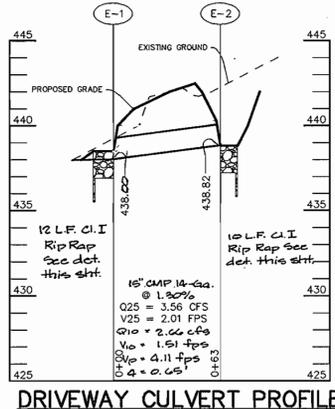
**STORM DRAIN PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



**STORM DRAIN PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



**WATER PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'



**DRIVEWAY CULVERT PROFILE**  
SCALE: HOR.-1"=50' VERT.-1"=5'

- CONSTRUCTION SPECIFICATIONS**
- THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
  - THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
  - GEOTEXTILE CLASS C OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
  - STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
  - THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
*Donna Boudin* COUNTY HEALTH OFFICER DATE 5/27/04  
 HOWARD COUNTY HEALTH DEPARTMENT  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Mark Wolfe* DIRECTOR DATE 6/1/04  
*Mike Deussen* CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/1/04  
*David Stanek* CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/1/04

3-21-05 Revised Water Profiles & SHA Culvert  
 DATE NO. REVISION  
 OWNER / DEVELOPER  
 HOWARD COUNTY SCONVANCY, INC.  
 BOARD OF TRUSTEES  
 c/o JAMES MOXLEY  
 P.O. BOX 175  
 WOODSTOCK, MARYLAND 21163  
 410-465-8877

PROJECT **MOUNT PLEASANT**  
**HOWARD COUNTY SCONVANCY**  
 AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
 3rd ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**PROFILES AND DETAILS**

**Patton Harris Rust & Associates, pc**  
 Engineers, Surveyors, Planners, Landscape Architects.  
 8818 Centre Park Drive  
 Columbia, MD 21045  
 T 410.997.8900  
 F 410.997.9282

FILE NAME: 01002/1-0/ENGR/PLANS/901DET.DWG  
 DESIGNED BY: C.J.R.  
 DRAWN BY: M.J.R.  
 PROJECT NO: 11612-1-0  
 DATE: APRIL 21, 2004  
 SCALE: AS SHOWN  
 DRAWING NO. 7 OF 12  
 SDP-03-123

**AS-BUILT CERTIFICATION**

*Christopher J. Reid*  
 DOMENICK COLANGELO # 27200 DATE 6/15/06

Table: Materials Specifications for Bioretention			
MATERIAL	SPECIFICATIONS	SIZE	NOTES
PLANTINGS	SEE LANDSCAPE PLAN SHEET	N/A	
PLANTING SOIL (2.5' TO 4' DEEP)	SAND 35 - 60 % SILT 30 - 55 % CLAY 10 - 25 %	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM, OR LOAM
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
STONE DIAGHRAM AND CURTAIN DRAIN	PEA GRAVEL: ASTM-D-448 ORNAMENTAL STONE: WASHED COBBLES	PEA GRAVEL: No. 6 STONE: 2" to 5"	
GEOTEXTILE	CLASSE "C"-APPARENT OPENING SIZE (ASTM-D-4751), GRAB TENSILE STRENGTH (ASTM-D-4632), PUNCTURE RESISTANCE (ASTM-D-4822)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY.
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" to 0.75"	
UNDERDRAIN PIPE	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6"O/C, 4 HOLES PER ROW;
SAND	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRANITE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.

**BIO-RETENTION FACILITIES  
OPERATION AND MAINTENANCE GUIDELINES**

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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 AND PRUNING.
- SCHEDULE OF PLANTING INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASE VEGETATION CONSIDERED BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- AREAS DEVOID OF MULCH SHOULD BE RE-MULCHED ON ANNUAL BASIS. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE A MONTH AND AFTER HEAVY STORMS.

**Specifications for Bioretention**

**1. Material Specifications**

The allowable materials to be used in bioretention area are detailed in Table "Materials Specifications for Bioretention on this sheet.

**2. 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 bioretention area 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:

pH range	5.2 - 7.0
organic matter	1.5 - 4% (by weight)
magnesium	35 lb./ac
phosphorus (phosphate - P2O5)	75 lb./ac
potassium (potash - K2O)	85 lb./ac
soluble salts	Not to exceed 500 ppm

All bioretention areas shall have a minimum of one test. Each test shall consist of both the standard soil test for pH, phosphorus, and potassium 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.

Since different labs calibrate their testing equipment differently, all testing results shall come from the same testing facility.

Should the pH fall out of the acceptable range, it may be modified (higher) with lime or (lower) with iron sulfate plus sulfur.

**3. Compaction**

It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoes to remove original soil. Use of equipment with narrow tracks or narrow tires, rubber tires with large tugs, 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 primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure 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.

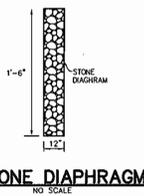
When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

**4. Plant Installation**

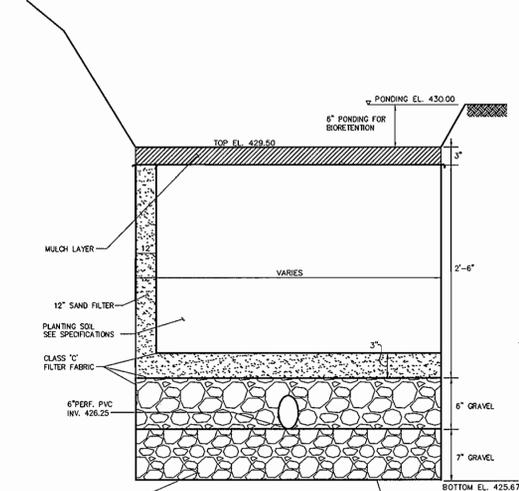
Mulch should be placed to a uniform thickness of 2" to 3". Shredded hardwood mulch is the only accepted mulch. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Root stock 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.

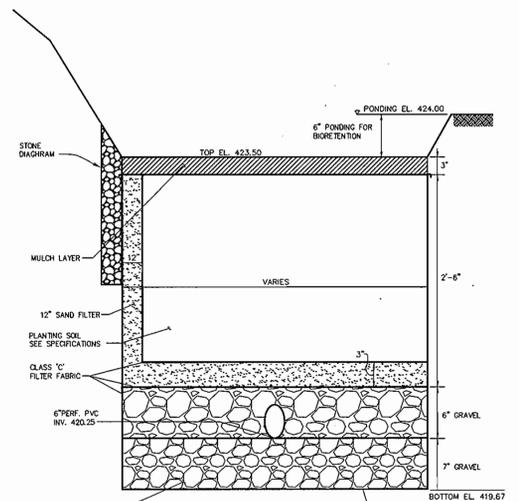
Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.



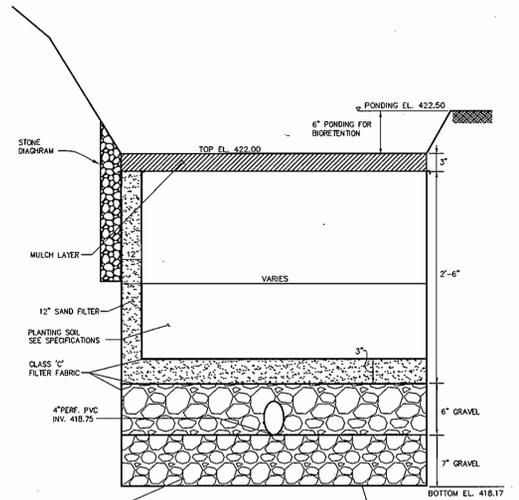
**STONE DIAPHRAGM**  
NO SCALE



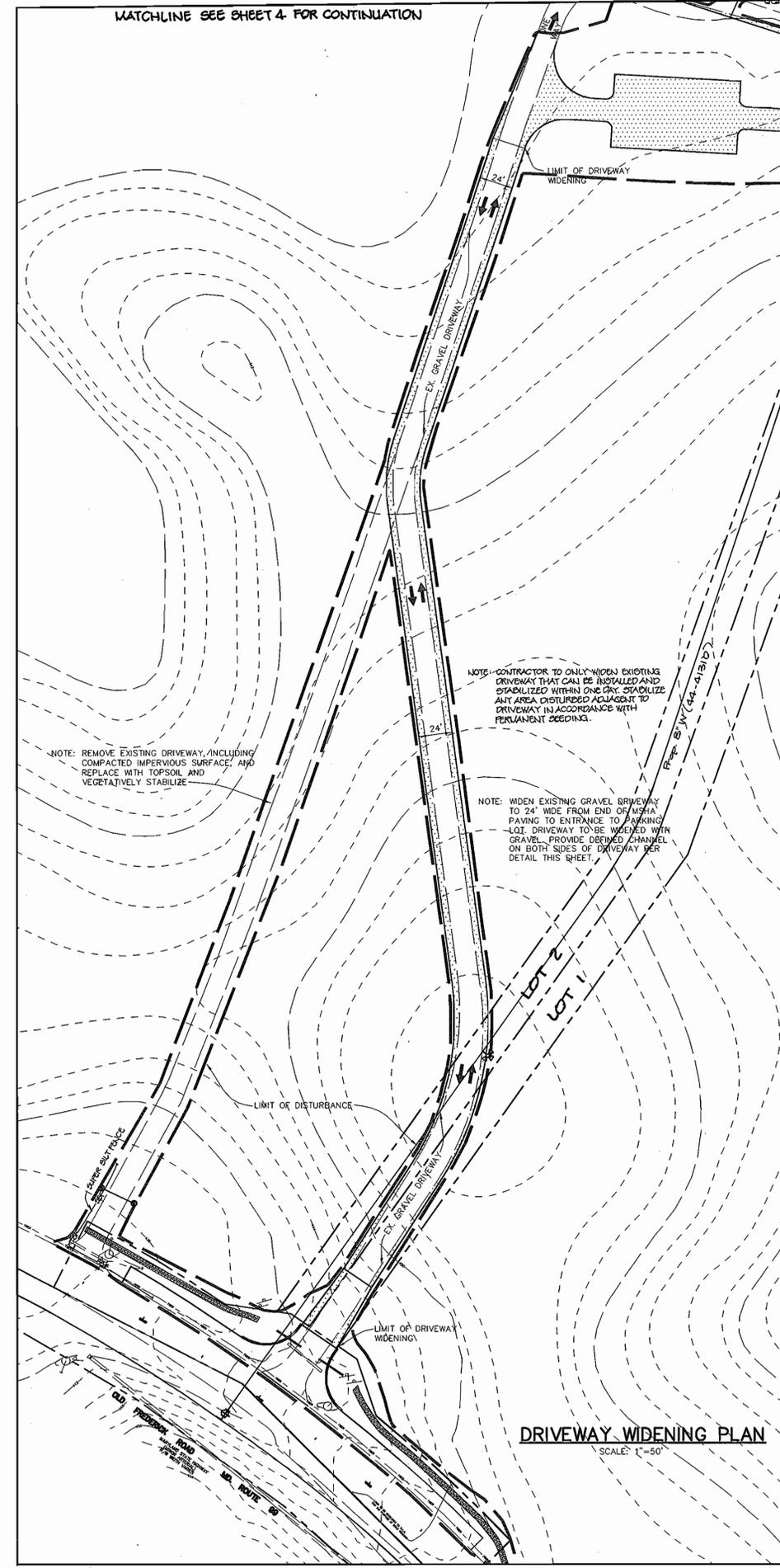
**BIORETENTION FACILITY #1 SECTION**  
SCALE: HOR. 1"=5'  
VERT. 1"=1'



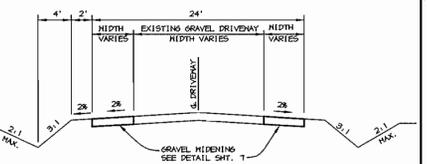
**BIORETENTION FACILITY #2 SECTION**  
SCALE: HOR. 1"=5'  
VERT. 1"=1'



**BIORETENTION FACILITY #3 SECTION**  
SCALE: HOR. 1"=5'  
VERT. 1"=1'



**DRIVEWAY WIDENING PLAN**  
SCALE: 1"=50'



**EXISTING DRIVEWAY  
TYPICAL SECTION**  
NO SCALE

**AS-BUILT CERTIFICATION**

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
DOMENICK COLANGELO #27200  
DATE 9/15/06

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
COUNTY HEALTH OFFICER JAB DATE 5/27/04  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
DIRECTOR DATE 6/7/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAB DATE 5/10/04  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/2/04

3-21-05 Added Water Main  
DATE NO. REVISION

OWNER / DEVELOPER  
HOWARD COUNTY CONSERVANCY, INC.  
BOARD OF TRUSTEES  
c/o JAMES MOXLEY  
P.O. BOX 175  
WOODSTOCK, MARYLAND 21163  
410-465-8877

PROJECT **MOUNT PLEASANT  
HOWARD COUNTY CONSERVANCY**

AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
3rd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE **BIORETENTION FACILITIES  
NOTES AND DETAILS**

Patton Harris Rust & Associates, pc  
Engineers, Surveyors, Planners, Landscape Architects.  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282

4.21.04  
DATE

FILE NAME: 01002/1-0/ENGR/  
PLANS/C300DET.DWG

DESIGNED BY: C.J.R.

DRAWN BY: MAD

PROJECT NO: 11612-1-0

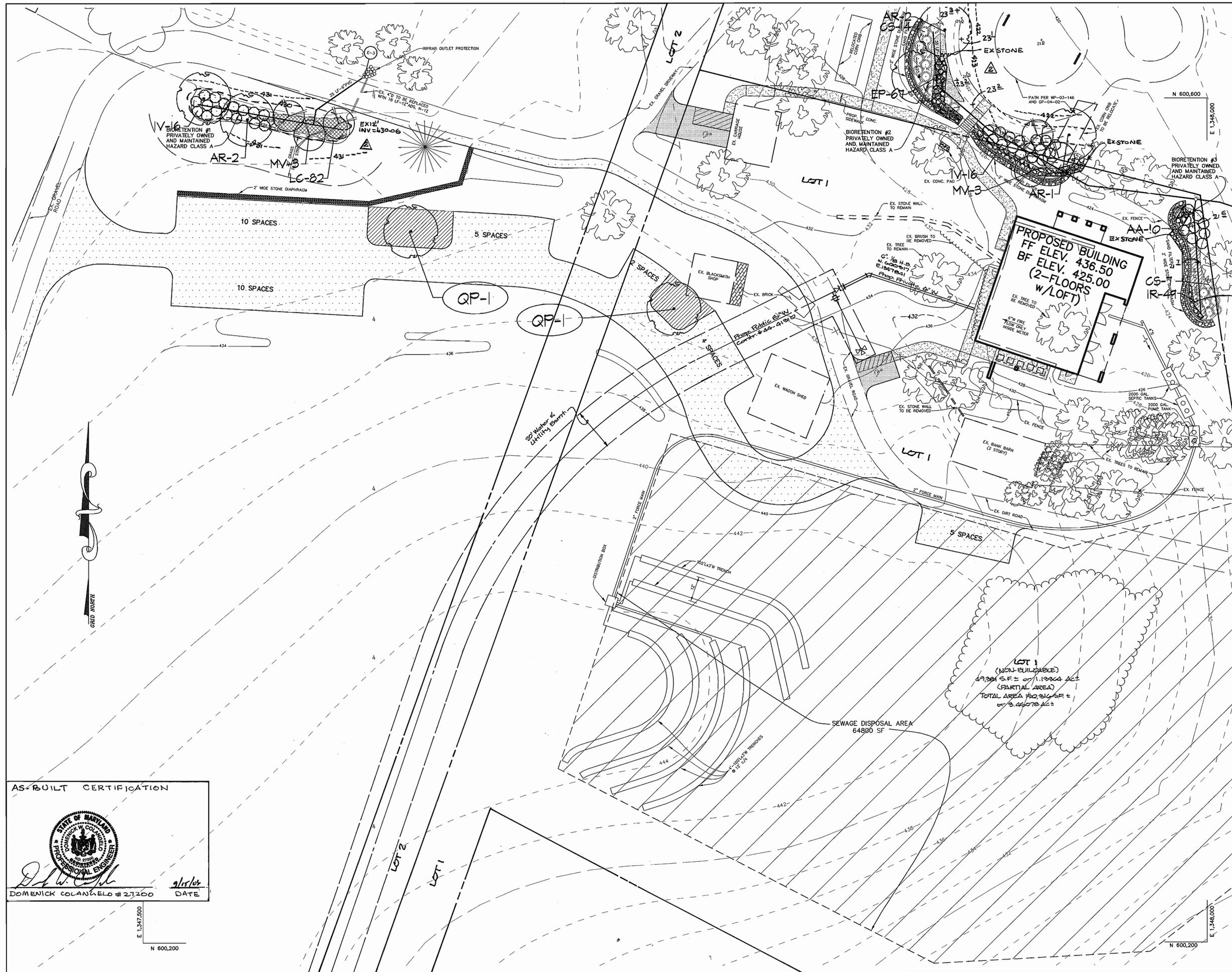
DATE: APRIL 21, 2004

SCALE: AS SHOWN

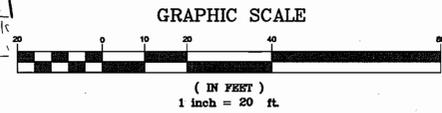
DRAWING NO. 8 OF 12

CHRISTOPHER J. REID #19949

SDP-03-123



LEGEND	
EX. TREELINE	
PROP. TREELINE	
PROPERTY LINE	
WETLANDS AND 25' BUFFER	
PERENNIAL STREAM AND 50' BUFFER	
100-YEAR FLOODPLAIN	
CONTOUR LINES	
EX. BUILDING	
PROP. SHADE TREE	
PROP. SHRUBS	
LANDSCAPE REQUIREMENT	
BIORETENTION PLANTING	
CREDITED LANDSCAPE ISLAND	



APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

*[Signature]* 5/27/04  
 COUNTY HEALTH OFFICER JPH DATE  
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*[Signature]* 6/2/04  
 DIRECTOR DATE

*[Signature]* 5/10/04  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

*[Signature]* 6/2/04  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

9-15-03 ADDED AS BUILT BIO-RETENTION #1, #2, #3

3-21-02 Added Water Main & Lot Lines

DATE	NO.	REVISION

OWNER / DEVELOPER  
 HOWARD COUNTY CONSERVANCY, INC.  
 BOARD OF TRUSTEES  
 c/o JAMES MOXLEY  
 P.O. BOX 175  
 WOODSTOCK, MARYLAND 21163  
 410-465-8877

PROJECT **MOUNT PLEASANT HOWARD COUNTY CONSERVANCY**

AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
 3rd ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE **LANDSCAPE PLAN**

**Patton Harris Rust & Associates, pc**  
 Engineers, Surveyors, Planners, Landscape Architects.  
 8818 Centre Park Drive  
 Columbia, MD 21045  
 T 410.997.8900  
 F 410.997.9282

4-21-04  
 DATE

FILE NAME: 01002/1-0/ENGR/  
 PLANS/L200LND.DWG  
 DESIGNED BY: K.L.S.

DRAWN BY: K.L.S.  
 PROJECT NO: 11612-1-0  
 DATE: APRIL 21, 2004  
 SCALE: 1"=20'  
 DRAWING NO. 9 OF 12

SCOTT R. WOLFORD #797  
 SDP-03-123

AS-BUILT CERTIFICATION

*[Signature]* 4/15/04  
 DOMENICK COLANINELLO #271200 DATE

E 1,347,500  
 N 600,200

E 1,348,000  
 N 600,200

**PLANTING SPECIFICATIONS**

1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence.

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed-in plants or plants from cold storage will be accepted.

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant *Pinus strobus* or *Xyprussacyparis leylandii* between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.

9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope).

13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. *Taxus baccata* 'Repandens' (English weeping yew): Top dress after planting with 1/4 to 1/2 cup lime each.

14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.

15. Weed & Insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing *chlorpyrifos* to be used as a means of pest control.

16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid desiccation.

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.

18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.

**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 BOARD OF APPEALS AND DEPARTMENT OF PLANNING AND ZONING HAVE DETERMINED THAT PERIMETER LANDSCAPING IS NOT REQUIRED DUE TO THE SIGNIFICANT DISTANCE BETWEEN THE PROPOSED BUILDING AND PARKING AREAS AND THE ADJOINING PROPERTIES AND ROADWAYS.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$600.00.  
2 SHADE TREES @ \$300 = \$600  
0 ORNAMENTAL TREES @ \$150 = \$0  
0 EVERGREEN TREES @ \$150 = \$0  
0 SHRUBS @ \$30 = \$0
- THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
PARKING LOT	1
NUMBER OF PARKING SPACES	31
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	2
NUMBER OF TREES PROVIDED	
SHADE TREES	2
OTHER TREES (2:1 SUBSTITUTION)	-
NUMBER OF ISLANDS PROVIDED	2

PARKING LOT PERIMETER PLANT LIST					
SYMBOL	QTY.	SCIENTIFIC COMMON NAME	SIZE	ROOT	REMARKS
B*	2	<i>Quercus phellos</i> Millon Oak	2.5'-3" cal.	B&B	Plant as shown

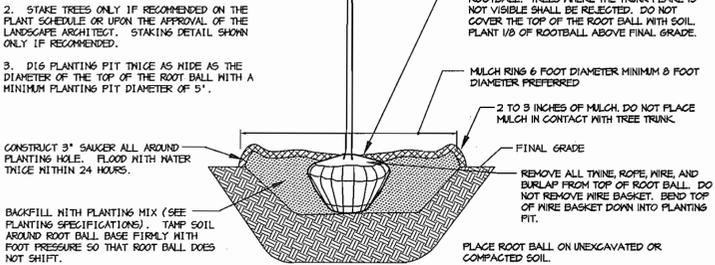
BIORETENTION PLANT LIST						
KEY	QTY.	SCIENTIFIC COMMON NAME	SIZE	ROOT	SPACING	ZONE*
AR	5	<i>ACER RUBRUM</i> 'OCTOBER GLORY' RED MAPLE	2.5'-3' CAL.	B&B	PLANT AS SHOWN	(3,4),5
MV	6	<i>MAGNOLIA VIRGINIANA</i> SWAMP MAGNOLIA	6'-8' HT.	B&B	PLANT AS SHOWN	***
AA	10	<i>ARGENTIA ARGENTIFOLIA</i> RED CHOKEBERRY	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
CS	21	<i>CORNUS SERICEA</i> RED TIGER DOGWOOD	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
IV	32	<i>ITEA VIRGINICA</i> 'HENRY'S GARNET' VIRGINIA SWEETSPICE	2.5'-3' HT.	CONT.	PLANT AS SHOWN	***
EP	67	<i>EUPATORIUM PURPUREA</i> JOE PYE WEED	1 GAL.	CONT.	24" SPACING	****
IR	41	<i>IRIS VERSICOLOR</i> 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	24" SPACING	(1, 2), 3
LC	82	<i>LOBELIA CARDINALIS</i> CARDINAL FLOWER	1 GAL.	CONT.	24" SPACING	1, (2, 3), 4

**BIORETENTION PLANT LIST NOTES:**

- \* HYDROLOGIC ZONES ACCORDING TO APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.
- \*\* ALSO KNOWN: *CAREX STRICTA* 'AJUREA'
- \*\*\* KNOWN TO TOLERATE INUNDATION AS WELL AS DRY AREAS ACCORDING TO DIRR, MICHAEL A., MANUAL OF WOODY LANDSCAPE PLANTS
- \*\*\*\* COMMONLY USED BIORETENTION SPECIES ACCORDING TO TABLE A.4 IN APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.

**NOTES:**

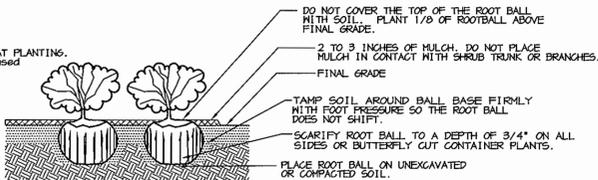
- DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LINES, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR THIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- STAKE TREES ONLY IF RECOMMENDED ON THE PLANT SCHEDULE OR UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. STAKING DETAIL SHOWN ONLY IF RECOMMENDED.
- DIG PLANTING PIT THREE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.



DECIDUOUS B&B TREE PLANTING DETAIL  
NOT TO SCALE

**NOTES:**

- SEE PLANTING SPECIFICATIONS FOR PREPARATION OF PLANTING BED.
- DO NOT HEAVILY PRUNE THE SHRUB AT PLANTING. PRUNE ONLY BROKEN, DAMAGED, OR DISEASED BRANCHES.
- DIG PLANTING PIT 12" WIDER THAN THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 18".
- FOR B&B SHRUBS, REMOVE ALL THINE, ROPE, AND BURLAP FROM TOP OF ROOT BALL.
- ALL CONTAINERS SHALL BE REMOVED BEFORE INSTALLATION.



SHRUB BED PLANTING DETAIL - B&B AND CONTAINER SHRUBS  
NOT TO SCALE

**AS-BUILT CERTIFICATION**

*[Signature]* 9/15/04  
DOMENICK COLANGELO # 27200 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
*[Signature]* 5/27/04  
COUNTY HEALTH OFFICER JTB DATE  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*[Signature]* 6/2/04  
DIRECTOR DATE

*[Signature]* 5/10/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

*[Signature]* 6/7/04  
CHIEF, DIVISION OF LAND DEVELOPMENT HP DATE

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*[Signature]* 4-22-04  
SIGNATURE DATE

DATE	NO.	REVISION

OWNER / DEVELOPER  
HOWARD COUNTY CONSERVANCY, INC.  
BOARD OF TRUSTEES  
c/o JAMES MOXLEY  
P.O. BOX 175  
WOODSTOCK, MARYLAND 21163  
410-465-8877

PROJECT  
**MOUNT PLEASANT**  
**HOWARD COUNTY CONSERVANCY**

AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
3rd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

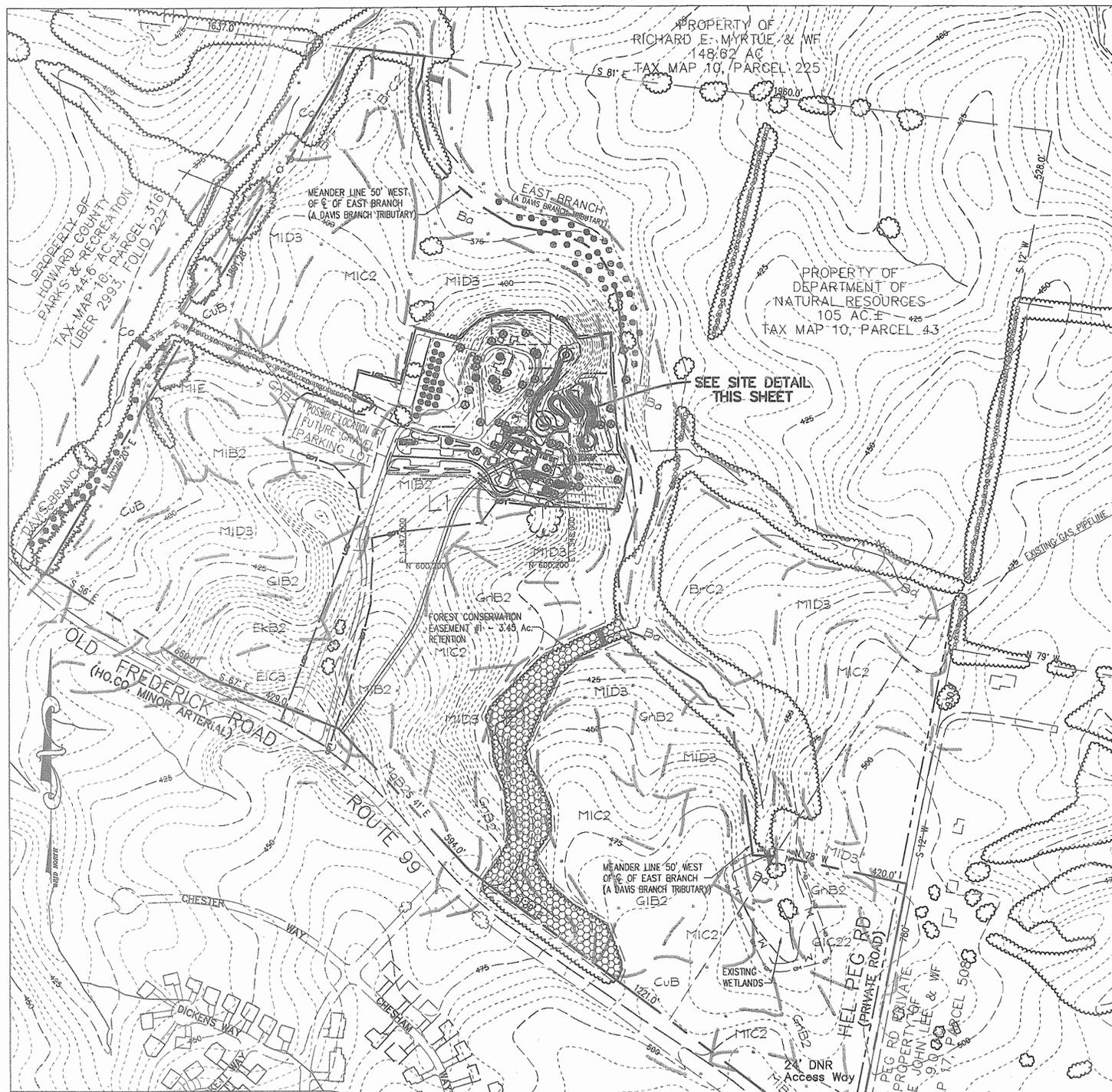
**LANDSCAPE NOTES AND DETAILS**

**Patton Harris Rust & Associates, pc**  
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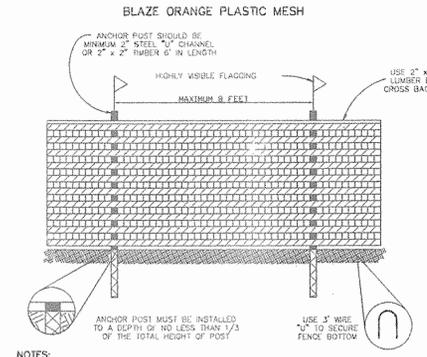
4-21-04  
DATE

DESIGNED BY: K.L.S.  
DRAWN BY: K.L.S.  
PROJECT NO: 11612-1-0  
DATE: APRIL 21, 2004  
SCALE: 1"=20'  
DRAWING NO. 10 OF 12

SCOTT R. WOLFORD #797



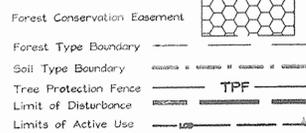
SITE PLAN - OVERALL  
SCALE 1"=200'



TREE PROTECTION DETAIL  
NOT TO SCALE

Forest Conservation Easement Table

Easement	Retention	3.45 Ac.
Total		3.45 Ac.

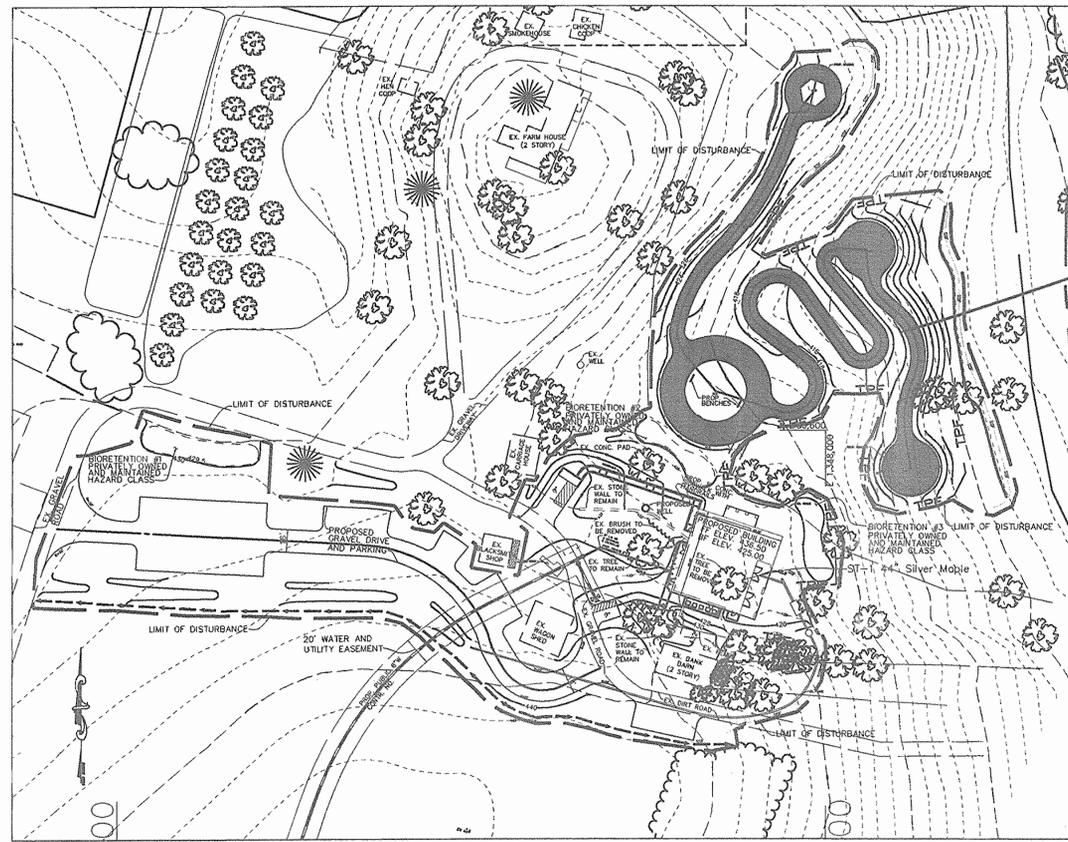


SPECIMEN TREES

Key	Name	Scientific Name	Size	Condition
ST-1	Silver Maple	Acer saccharinum	44"	Poor

SOILS LEGEND - AFFECTED SOILS ONLY

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GIB2	Glenelg loam, 3 to 8 percent slopes, moderately eroded	B
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
MIB2	Minor loam, 3 to 8 percent slopes, moderately eroded	B
MIC2	Minor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Minor loam, 8 to 15 percent slopes, severely eroded	B
MID3	Minor loam, 15 to 25 percent slopes, severely eroded	B



SITE PLAN - DETAIL  
SCALE 1"=60'

FOREST STAND ANALYSIS TABLE

KEY	TYPE OF COMMUNITY	AREA	SOIL INFORMATION				EXISTING VEGETATION (Type and approx. %)	STAND CHARACTERISTICS			FOREST AREA IN SENSITIVE ENVIRONMENTS
			SOIL TYPE	TYPICAL FOREST COVER	WOODLAND SUITABILITY INDEX	HABITAT VALUE		SIZE AVG. DIAM.	AGE	GENERAL CONDITIONS	
FI	Mixed Hardwood	3.45 AC	GnB2	Water Tolerant Hardwoods	65-74	GOOD	Tulip 60% American Poplar 20%	6-30+ in.	100±	Good	All, in stream buffer, stream channel, or on steep slopes.
			MID3	Mixed Upland Hardwoods	65-74	FAIR	White Birch 10% Oak 5% Black Cherry 5% Black Willow 5%	10-24 in. 4-12 in. 10-20 in.			
LI	Lawn	1.34 ac.	N/A	N/A	N/A	N/A	N/A	N/A	Good		

Forest Stand Narrative

This 81.70 Acre site is contained within a Conservation Easement administered by the Maryland Department of Natural Resources (DNR). The areas being evaluated for this FSD include the area within the existing limits of disturbance and forested area. There are only a few scattered trees proposed to be removed, and the associated plan will not be dealing with site as a whole. The remainder of the site is in field or hedgerous, and will not be affected by any development. This area has not been evaluated. There are numerous specimen trees on site, but these have not been cataloged except for the one which is to be removed for the proposed structure.

FI This 3.45 Acre forest is well developed. The overstory contains tulip poplar, American beech, white oak, black cherry, and willow. The middle-story contains tulip poplar, American beech, and black cherry. In the understory spice bush, multiflora rose, Japanese honeysuckle, and saplings of black cherry, American beech, and tulip poplar are found. The stand is in good health without significant invasive infestation. It is actively managed under a Forest Management Plan, created by the DNR. The stand surrounds a perennial stream and also contains steep slopes.

LI The remainder of the evaluated area, 14.89 Ac., is maintained as lawn with scattered individual trees, and includes the buildings and other used areas.

Forest Conservation Narrative

This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Manual and the 1991 Forest Conservation Act.

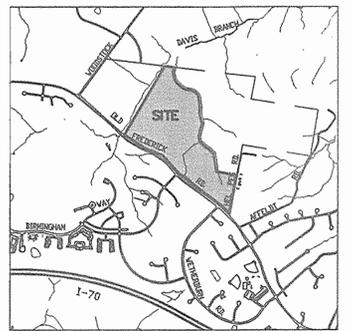
The existing site consists of 81.70 acres, from which 78.91 ac. of non-disturbed area had been netted out for a net tract area of 2.79 ac. The entire site is protected from development under and existing Environmental Conservation Easement. This Forest Conservation Plan is being undertaken due to the disturbance of over 5000 sq. ft. for the construction of a building. The net tract area only includes areas on-site that are being disturbed for this plan. Areas within preexisting Limits of Disturbance, forest preservation, agricultural preservation or forest planting areas have been netted out. The site has 3.45 acres of existing forest. Additionally there is 17.05± ac. of existing managed CREP forest planting areas.

We are proposing placing the existing forest into a Forest Conservation Easement on top of a preexisting Conservation Easement, administered by the state. Specimen trees will be protected where possible. One specimen tree is proposed to be removed from within the proposed building envelope. This tree and the proposed building are located within a previously existing building foundation from an old barn. Due to the unique nature of this site and as part of the requirements of the existing easement, no Forest Conservation Easement signage is being proposed. No forest mitigation is required.

Surety will be provided in the amount of \$30,056.40 (3.45ac retention = 150,282 s.f. @ \$20/s.f.)

MANAGEMENT NOTES FOR FOREST RETENTION AREAS

- All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
- After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place on-site, a preconstruction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate County inspectors shall attend.
- Tree protection for all retained areas:
  - All retention areas within 50 feet of proposed construction activities shall be protected by highly visible, well anchored temporary protection devices (silt fence or blaze orange plastic mesh).
  - All protection devices shall be in place prior to any grading or land clearing.
  - All protection devices shall be properly maintained and shall remain in place until construction has ceased.
  - Attachment of signs, fencing or other objects to trees is prohibited.
  - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
- If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:
  - Prune roots with a clean cut using proper pruning equipment (see root pruning detail).
  - Water and fertilizer as needed.
- During construction phase, monitor and correct condition of retained trees for soil compaction, root injury, limb injury, or other stress signs and other stress signs.
  - Inspect existing trees around the perimeter of disturbed limits for evidence of soil compaction, root injury, limb injury, or other stress signs and correct with proper management techniques such as root or limb pruning, soil aeration, fertilization, sun reduction or watering. Inspection and evaluation shall be performed by a licensed arborist.
  - Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
  - No burial of discarded materials will occur on-site within the conservation areas.
  - No burning within 100 feet of wooded area.
  - All temporary forest protection structures will be removed after construction.
  - Following completion of construction, prior to use, the County inspector shall inspect the entire area.



VICINITY MAP  
SCALE 1"=2000'

FOREST CONSERVATION WORKSHEET

	Acres
Net Tract Area	
A. Total Tract Area	81.70
B. Area Within 100 Year Floodplain	0
C. Other deductions	78.91
D. Net Tract Area	2.79
Land Use Category	Institutional
E. Afforestation Minimum (15 % x D)	0.42
F. Conservation Threshold (20 % x D)	0.56
Existing Forest Cover	
G. Existing Forest on Net Tract Area	0.0
H. Forest Area Above Conservation Threshold	0.0
Break-even Point	
I. Forest Retention for no Mitigation	0.0
J. Clearing Permitted without Mitigation	0.0
Proposed Forest Clearing	
K. Forest Areas to be Cleared	0
L. Forest Areas to be Retained	* 3.45
Planting Requirements	
M. Reforestation for Clearing Above Threshold	0
N. Reforestation for Clearing Below the Threshold	0
P. Credit for Retention Above Conservation Threshold	0
Q. Total Reforestation Required	0
R. Total Afforestation Required	0.42
S. Total Reforestation and Afforestation Requirement	0.42

\* On-site, but outside of the Net Tract Area.



**EXPLORATION RESEARCH, INC.**  
ENVIRONMENTAL CONSULTANTS  
LANDSCAPE ARCHITECTS  
6315 FOREST STREET  
ELLSWORTH CITY, MARYLAND 21045  
TEL: (410) 750-1100 FAX: (410) 750-7550  
EMAIL: EXPLORATION@BSCDCOM

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Donna Dwyer* 6/2/04  
DIRECTOR DATE

*John J. ...* 5/10/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE

*Carole ...* 6/2/04  
CHIEF, DIVISION OF LAND DEVELOPMENT HP DATE

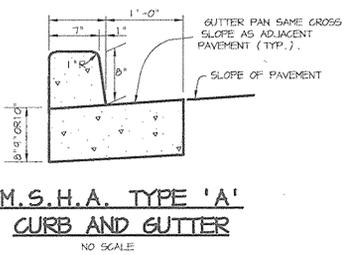
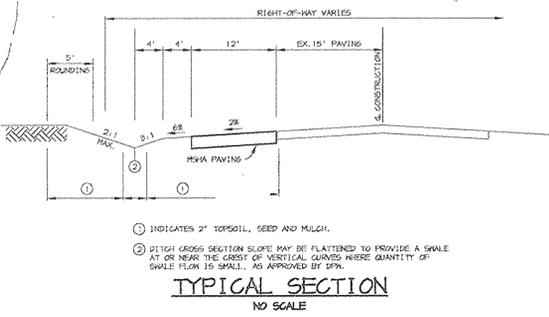
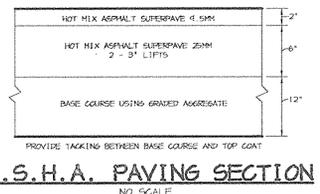
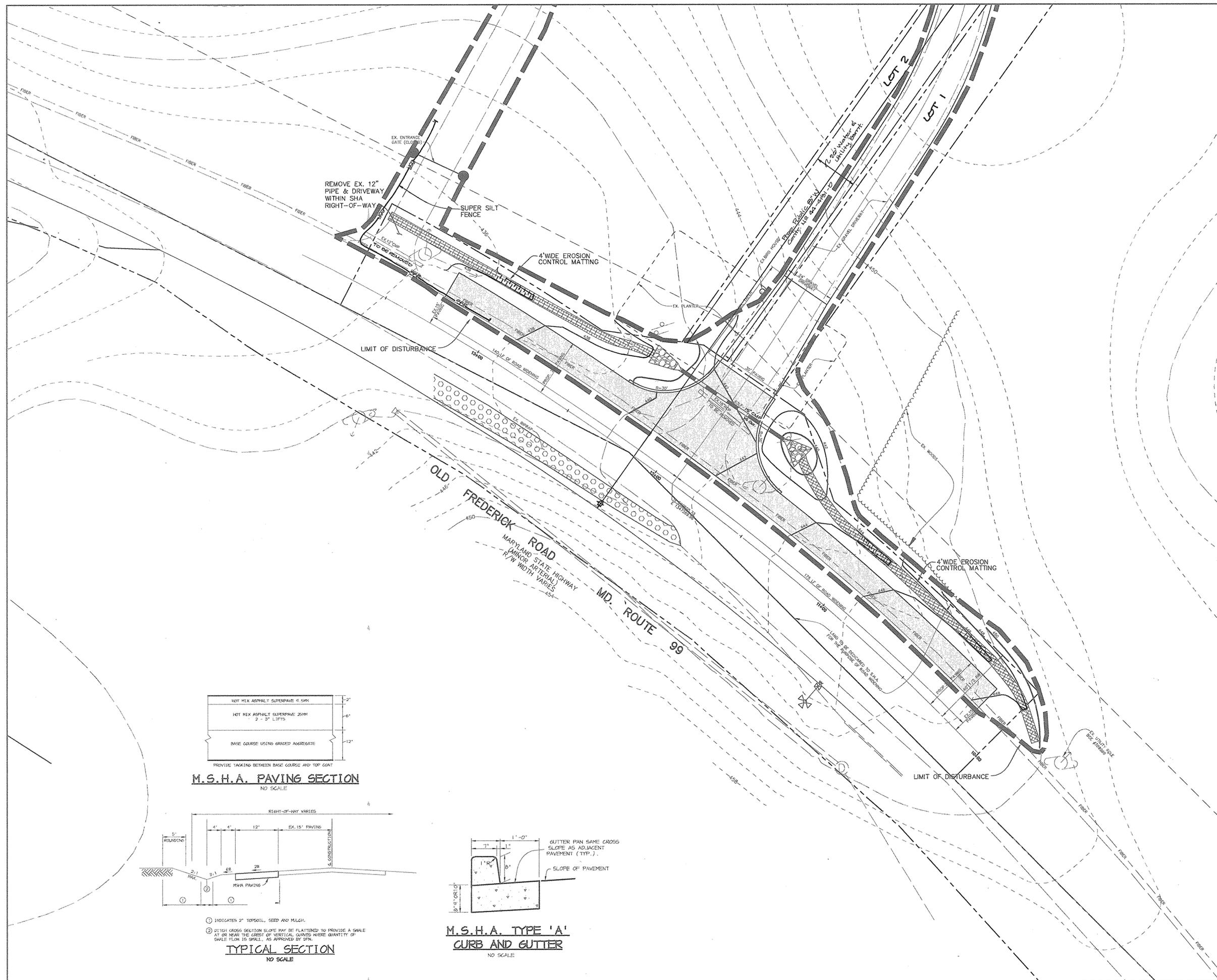
DATE	NO.	REVISION

OWNER / DEVELOPER  
HOWARD COUNTY CONSERVANCY, INC.  
BOARD OF TRUSTEES  
c/o JAMES MOXLEY  
P.O. BOX 175  
WOODSTOCK, MARYLAND 21163  
410-465-8877

PROJECT  
MOUNT PLEASANT  
HOWARD COUNTY CONSERVANCY  
AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO  
3rd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE  
COMBINED FOREST STAND DELINEATION  
AND FOREST CONSERVATION PLAN  
Patton Harris Rust & Associates, pc  
Engineers, Surveyors, Planners, Landscape Architects.  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282

FILE NAME:  
DESIGNED BY: C.J.R. /RAB  
DRAWN BY: MAD / RAB  
PROJECT NO: 11612-1-0  
DATE: JAN 2, 2004  
SCALE: AS SHOWN  
DRAWING NO. 11 OF 12



<b>AS-BUILT CERTIFICATION</b>	
<i>Christopher J. Reid</i> 2/15/04 DOMENICK COLANGABLO #27200 DATE	
BY THE DEVELOPER : I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>J. E. Tillman, Pres</i> 4-22-04 DEVELOPER DATE	
BY THE ENGINEER : I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>Chris J Reid</i> 4-21-04 ENGINEER DATE	
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.	
<i>Jim Meyer</i> 5/5/04 NATURAL RESOURCES CONSERVATION SERVICE DATE	
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>John J. Hill</i> 5/5/04 HOWARD SOIL CONSERVATION DISTRICT DATE	
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS	
<i>Debra Brantley</i> 5-27-04 COUNTY HEALTH OFFICER JAB DATE HOWARD COUNTY HEALTH DEPARTMENT	
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Mark D. Engel</i> 6/7/04 DIRECTOR DATE	
<i>Chris J Reid</i> 6/10/04 CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ DATE	
<i>Carole Khamati</i> 6/7/04 CHIEF, DIVISION OF LAND DEVELOPMENT DATE	
3-31-05 Add Lot Lines, Water Main, Address SHA Comments	
DATE	NO. REVISION
OWNER / DEVELOPER HOWARD COUNTY CONSERVANCY, INC. BOARD OF TRUSTEES c/o JAMES MOXLEY P.O. BOX 175 WOODSTOCK, MARYLAND 21163 410-465-8877	
PROJECT <b>MOUNT PLEASANT HOWARD COUNTY CONSERVANCY</b>	
AREA TAX MAP 10 PARCEL 315 ZONED RC-DEO 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE <b>ROAD WIDENING PLAN</b>	
<b>Patton Harris Rust &amp; Associates, pc</b> Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
<i>Chris J Reid</i> 4-21-04 DATE	
FILE NAME: 01002/1-0/ENGR/PLANS/C400ROAD.DWG DESIGNED BY : C.J.R.	
DRAWN BY: MAD	
PROJECT NO : 11612-1-0	
DATE : APRIL 21, 2004	
SCALE : 1"=20'	
DRAWING NO. 12 OF 12	
CHRISTOPHER J. REID #19949	