

Martin O'Malley
Governor



Anthony G. Brown
Lt. Governor

Margaret G. McHale
Chair

Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401

(410) 260-3460 Fax: (410) 974-5338

www.dnr.state.md.us/criticalarea/

July 10, 2008

Ms. Lori Allen
Anne Arundel County
Office of Planning and Zoning
2664 Riva Road, MS 6305
Annapolis, Maryland 21401

Re: Holly Beach Farm, CBF, Parks
C 08-005200NC, G 02013508

Dear Ms. Allen:

I have received information regarding the above mentioned site plan for review. It appears from the plans that the applicant proposes to construct an approximately 1,250 square foot garage and an approximately 9,600 square foot gravel parking lot on an undeveloped 4.98 acre property. The property is within the Critical Area and is designated as a Resource Conservation Area (RCA). I have provided my comments below:

1. The applicant states in the submitted narrative, "the Chesapeake Bay Foundation has development on other parts of the residue and it is considered a commercial use." It does not appear that the proposed development or the existing commercial development fit under any of the permitted uses in the RCA listed in the County's Code. Therefore, please have the applicant provide information that illustrates under which of the County's permitted uses of the RCA the proposed and existing development are permitted.
2. It is unclear why such an extensive area is proposed to be cleared and developed as lot coverage with the proposed parking area surrounding the garage. Please have the applicant either demonstrate the necessity of the large parking area surrounding the garage, or reduce the proposed clearing and impervious surface area.
3. Our records indicate that there is a federally protected species located in the vicinity of the project area. Therefore, the applicant must obtain a letter from the Maryland Department of Natural Resources' Wildlife and Heritage Service (WHS) that indicates whether any protected species are on the property or in the vicinity. The applicant should incorporate into the plans any WHS recommendations for protection of the species from the proposed development impacts.
4. The "Forestation Required/Provided" table on page two of the applicant's plans indicates that one 1/2-inch caliper tree equals 100 square feet of mitigation planting credit, and two 1/2-inch

TTY for the Deaf

Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

caliper trees equal 400 square feet of planting credit. This is not correct. This office recognizes 100 square feet of planting credit per 2-inch caliper tree and 50 square feet of planting credit per seedling or shrub. If a large tree is planted in a cluster with either two smaller trees or three shrubs in a 3-5 gallon container, this office will recognize 400 square feet of planting credit for each cluster. Please have the applicant revise the planting plan accordingly.

5. It appears that there are three reforestation areas proposed. Please provide the acreage of these areas, and show that they will be placed in a conservation easement. Also, COMAR 27.01.02.04(C)(2) and 27.01.02.05(C)(8) provide that no more than 20% of any forest or developed woodland may be removed from forest use for development activities in the RCA, and that the remaining 80% shall be maintained through recorded, restrictive covenants or similar instruments. Therefore, the applicant should show at least 80% of the existing 4.98 acres of existing forested area in an easement on the plat and plans.
6. The applicant indicates that the proposed clearing and grading will be permitted under what seems to be described as an existing Vegetative Management Plan that was previously granted for removing 28 dead or dying trees. This is incorrect and the applicant must obtain a grading permit for the newly proposed clearing and grading.
7. Please clarify who is the applicant for the grading permit and who will be responsible for providing the required mitigation plantings. It seems that the Chesapeake Bay Foundation is the responsible party based on its ownership of the land.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,



Amber Widmayer
Natural Resources Planner

cc: AA 273-08

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June 11, 2009

Ms. Kelly Krinetz
Anne Arundel County
Office of Planning and Zoning
2664 Riva Road, MS 6305
Annapolis, Maryland 21401

Re: Holly Beach Farm, CBF, Parks
C 08-005200NC, G 02013508

Dear Ms. Krinetz:

I have received information regarding the above mentioned site plan for review. The property is within the Critical Area and is designated as a Resource Conservation Area (RCA). Upon this office's last receipt of application materials for this site development plan, the applicant proposed to construct a 1,250 square foot garage and an approximately 9,600 square foot gravel parking lot on an undeveloped 4.98 acre property, and this office provided a July 10, 2008 comment letter.

The most recently submitted application materials indicate that a clearing violation occurred on the property, that the originally proposed permit application has been withdrawn, and only a planting plan has been submitted at this time for review. The planting plan shows proposed plantings to address the clearing violation at a 3:1 ratio for the 23,000 square foot area that was cleared. I have reviewed the planting plan and find that the proposed number and type of plantings are sufficient to address the violation. This office recommends that some of the plantings be located in the area that was cleared to spur the regeneration of that area in vegetative cover.

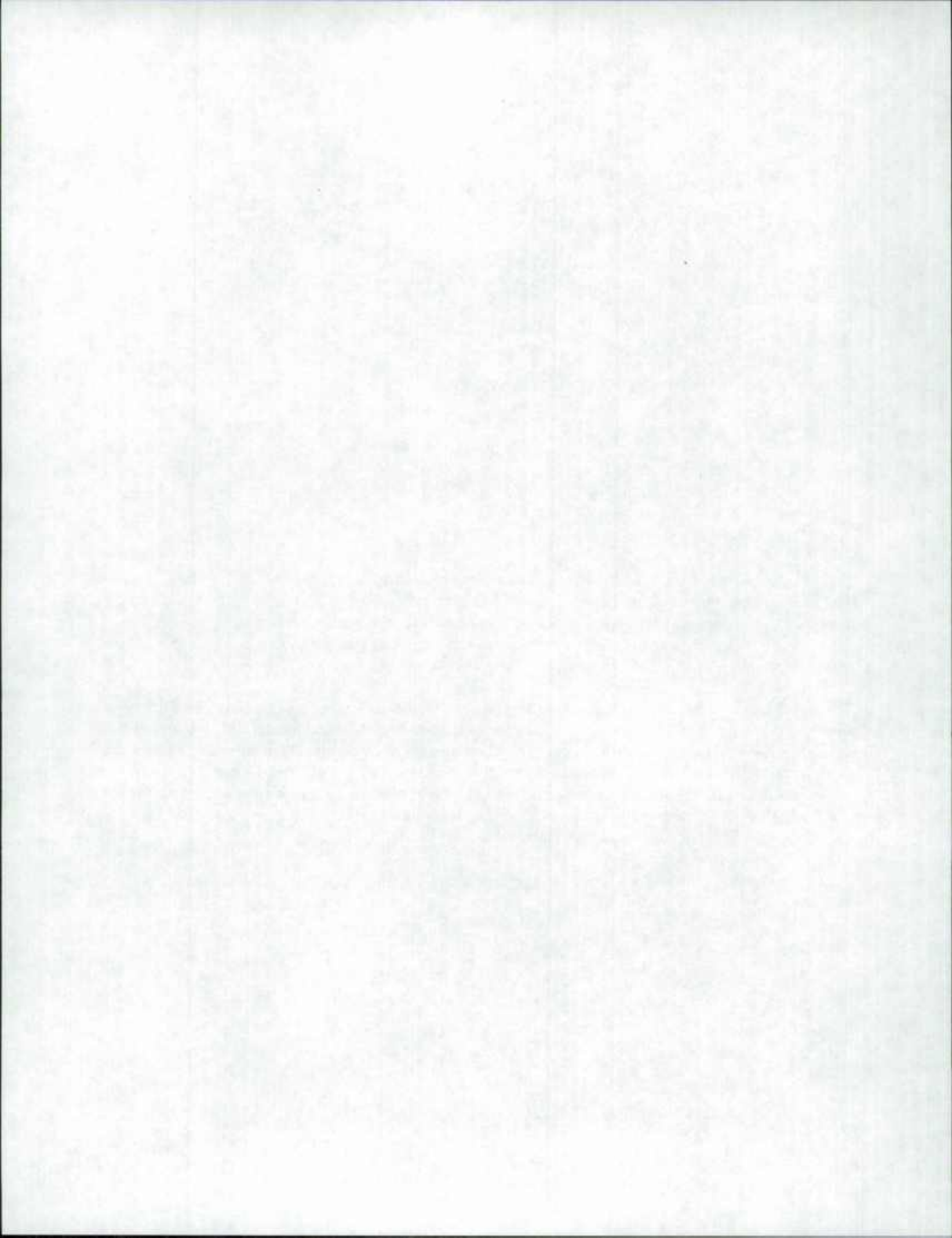
Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

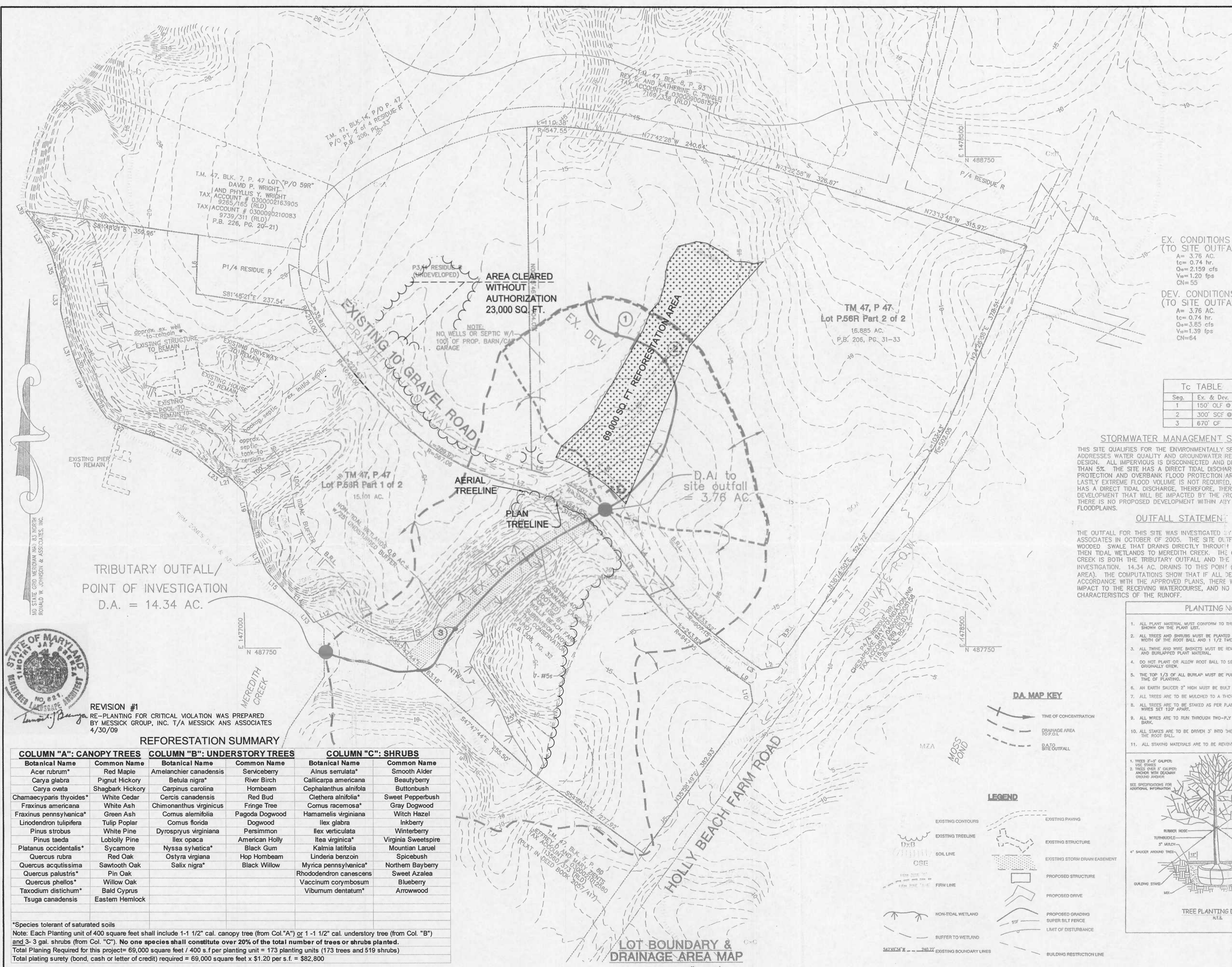
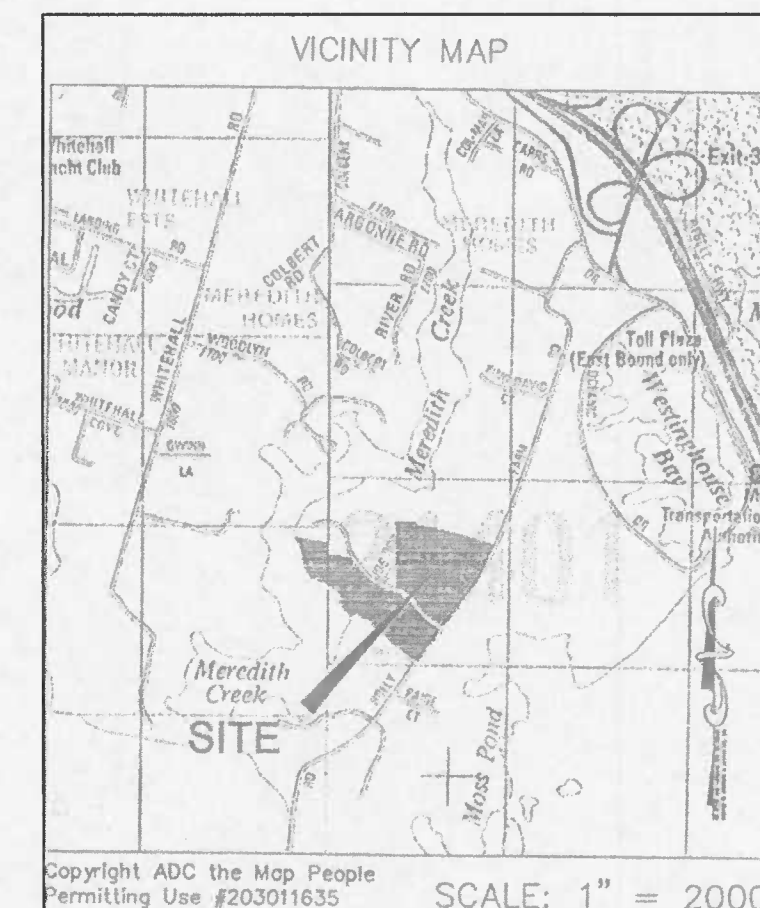
Sincerely,

A handwritten signature in dark ink, appearing to read "AW", written over a light blue horizontal line.

Amber Widmayer
Natural Resources Planner

cc: AA 273-08





EX. CONDITIONS (TO SITE OUTFALL)
 A= 3.76 AC.
 t_c= 0.74 hr.
 Q= 2.159 cfs
 V= 1.20 cfs
 CN= 55

DEV. CONDITIONS (TO SITE OUTFALL)
 A= 3.76 AC.
 t_c= 0.74 hr.
 Q= 3.85 cfs
 V= 1.39 cfs
 CN= 64

Tc TABLE

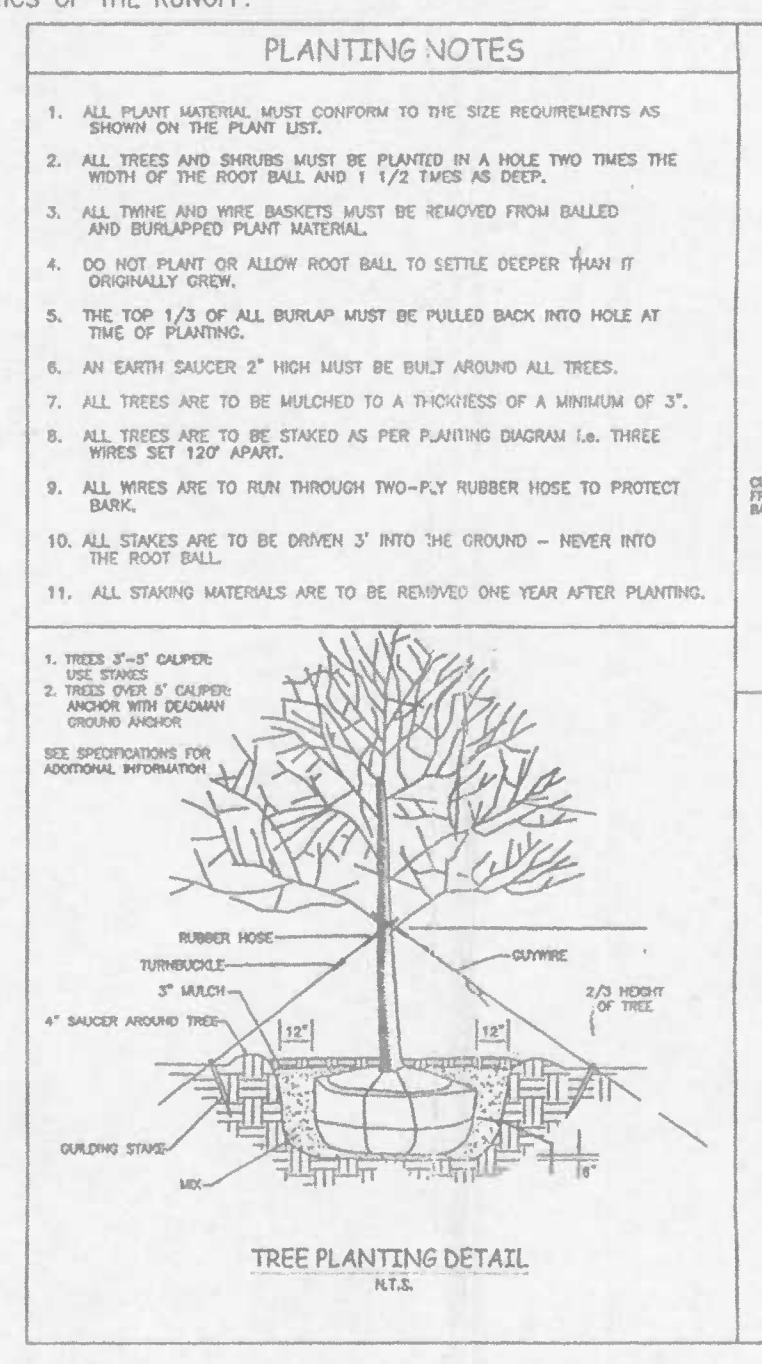
Seg.	Ex. & Dev. Cond.
1	150' OLF @ 1%
2	300' SCF @ 2.3%
3	670' CF

STORMWATER MANAGEMENT STATEMENT
 THIS SITE QUALIFIES FOR THE ENVIRONMENTALLY SENSITIVE CREDIT WHICH ADDRESSES WATER QUALITY AND GROUNDWATER RECHARGE BY SITE DESIGN. ALL IMPERVIOUS IS DISCONNECTED AND DRAINS TO SLOPES LESS THAN 5%. THE SITE HAS A DIRECT TIDAL DISCHARGE, SO CHANNEL PROTECTION AND OVERBANK FLOOD PROTECTION ARE NOT REQUIRED. LASTLY EXTREME FLOOD VOLUME IS NOT REQUIRED, BECAUSE THE SITE HAS A DIRECT TIDAL DISCHARGE. THEREFORE, THERE IS NO DOWNSTREAM DEVELOPMENT THAT WILL BE IMPACTED BY THE PROPOSED IMPROVEMENTS. THERE IS NO PROPOSED DEVELOPMENT WITHIN ANY FEMA 100 YEAR FLOODPLAINS.

OUTFALL STATEMENT
 THE OUTFALL FOR THIS SITE WAS INVESTIGATED BY RONALD W. JOHNSON ASSOCIATES IN OCTOBER OF 2005. THE SITE OUTFALL IS A SHALLOW WOODED SWALE THAT DRAINS DIRECTLY THROUGH NON-TIDAL WETLANDS, THEN TIDAL WETLANDS TO MEREDITH CREEK. THE OUTFALL AT MEREDITH CREEK IS BOTH THE TRIBUTARY OUTFALL AND THE POINT OF INVESTIGATION. 14.34 AC. DRAINS TO THIS POINT (MOSTLY FROM THE SITE AREA). THE COMPUTATIONS SHOW THAT IF ALL DEVELOPMENT IS DONE IN ACCORDANCE WITH THE APPROVED PLANS, THERE WILL BE NO ADVERSE IMPACT TO THE RECEIVING WATERCOURSE, AND NO CHANGE TO THE CHARACTERISTICS OF THE RUNOFF.

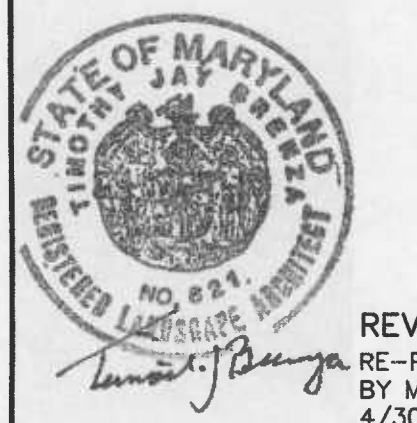
SWM SUMMARY TABLE

CRITERIA	HOW ADDRESSED	BMP
WATER QUALITY-WQV	WATER QUALITY HAS BEEN ADDRESSED VIA THE ENVIRONMENTALLY SENSITIVE CREDIT	#5
RECHARGE-Rev	RECHARGE HAS BEEN PROVIDED VIA THE ENVIRONMENTALLY SENSITIVE CREDIT	#5
CHANNEL PROTECTION-Cp	DIRECT TIDAL OUTFALL - NOT REQUIRED	N/A
OVERBANK FLOOD PROTECTION-Of	DIRECT TIDAL OUTFALL - NOT REQUIRED	N/A
EXTREME FLOOD-Qf	DEVELOPMENT OUTSIDE OF FLOODPLAIN - NOT REQUIRED.	N/A



LINE TABLE

LINE	LENGTH	BEARING
L1	77.23	N87°42'28"W
L2	35.45	N91°01'05"E
L3	38.65	S54°08'14"E
L4	138.46	S39°23'16"E
L5	15.34	S73°24'07"E
L6	119.84	S02°37'15"W
L7	58.88	S73°24'07"E
L8	138.46	S39°23'16"E
L9	38.35	S54°08'14"E
L10	35.32	S09°04'42"E
L11	115.36	S60°28'08"E
L12	54.24	N67°44'34"E
L13	31.33	N38°09'08"W
L14	49.65	S46°05'18"E
L15	60.25	S44°25'42"E
L16	12.59	S29°12'17"E
L17	40.04	S24°24'28"E
L18	57.11	S11°22'41"E
L19	59.06	S12°45'28"E
L20	45.22	S46°17'55"E
L21	13.33	N77°21'37"E
L22	2.90	S51°35'08"E
L23	26.64	S19°30'19"E
L24	50.58	S50°50'05"E
L25	62.22	S64°27'58"E
L26	62.77	S74°27'52"E
L27	65.13	S84°45'10"E
L28	64.24	S32°52'31"E
L29	55.36	S25°45'24"E
L30	14.65	S19°30'19"E
L31	50.73	S19°30'17"E
L32	54.57	S13°46'54"E
L33	41.01	S01°23'50"W
L34	25.58	S16°04'27"E
L35	42.84	S14°45'58"E
L36	24.87	S21°26'49"E
L37	42.37	S29°34'00"E
L38	42.28	S36°02'28"E
L39	1.92	N02°47'01"E



REFORESTATION SUMMARY

COLUMN "A": CANOPY TREES		COLUMN "B": UNDERSTORY TREES		COLUMN "C": SHRUBS	
Botanical Name	Common Name	Botanical Name	Common Name	Botanical Name	Common Name
Acer rubrum*	Red Maple	Amelanchier canadensis	Serviceberry	Alnus serrulata*	Smooth Alder
Carya glabra	Pignut Hickory	Betula nigra*	River Birch	Callicarpa americana	Beautyberry
Carya ovata	Shagbark Hickory	Carpinus caroliniana	Hornbeam	Cephalanthus alifolia	Butterbush
Chamaecyparis thyoides*	White Cedar	Cercis canadensis	Red Bud	Clethra alnifolia*	Sweet Pepperbush
Fraxinus americana	White Ash	Chimonanthus virginicus	Fringe Tree	Cornus racemosa*	Gray Dogwood
Fraxinus pennsylvanica*	Green Ash	Cornus allemitifolia	Pagoda Dogwood	Hamamelis virginiana	Witch Hazel
Lindodendron tulipifera	Tulip Poplar	Cornus florida	Dogwood	Ilex glabra	Inkberry
Pinus strobus	White Pine	Dryopteris virginiana	Persimmon	Ilex verticillata	Winterberry
Pinus taeda	Loblolly Pine	Ilex opaca	American Holly	Ita virginica*	Virginia Sweetspire
Platanus occidentalis*	Sycamore	Nyssa sylvatica*	Black Gum	Kalmia latifolia	Mountain Laurel
Quercus rubra	Red Oak	Ostrya virginiana	Hop Hornbeam	Lindera benzoin	Spicebush
Quercus acutissima	Sawtooth Oak	Salix nigra*	Black Willow	Myrica pennsylvanica*	Northern Bayberry
Quercus palustris*	Pin Oak			Rhododendron canadense	Sweet Azalea
Quercus phellos*	Willow Oak			Vaccinium corymbosum	Blueberry
Taxodium distichum*	Bald Cypress			Viburnum dentatum*	Arrowwood
Tsuga canadensis	Eastern Hemlock				

*Species tolerant of saturated soils.
 Note: Each Planting unit of 400 square feet shall include 1-1 1/2" cal. canopy tree (from Col. "A") or 1-1 1/2" cal. understory tree (from Col. "B") and 3-3 gal. shrubs (from Col. "C"). No one species shall constitute over 20% of the total number of trees or shrubs planted.
 Total Planting Required for this project: 69,000 square feet / 400 s.f. per planting unit = 173 planting units (173 trees and 519 shrubs)
 Total planting surety (bond, cash or letter of credit) required = 69,000 square feet x \$1.20 per s.f. = \$82,800



Ronald W. Johnson Associates, Inc.
 Consulting Engineers . Land Planners . Surveyors
 2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401
 Phone: 410.841.5221 410.266.6612 Fax: 410.841.5124 E-mail: RonJ@RWJAI.com



NO. _____ DATE BY _____

REVISION _____

CRITICAL AREA COMMISSION
 Drake & Atlantic Coastal Hwy.

CRITICAL AREA REFORESTATION PLAN *

DRAWN BY L.K.B. SCALE AS SHOWN
 CHECKED BY S.R.K. SHEET 1 OF 1
 DATE SEPTEMBER 2005 PROJ. NO. 1915.A
 G02011698

PARKS PROPERTY
 HOLLY BEACH FARM ROAD
 ANNAPOLIS, MD 21401
 TAX MAP 47, BLOCK 7 PARCEL 47
 "PARKS AND GATELY PROPERTIES"
 PLAT BOOK 206 PAGE 31-33 "LOT P.56R"
 3RD TAX DISTRICT A. A. CO., MD
 SCALE: AS SHOWN SEPTEMBER, 2005

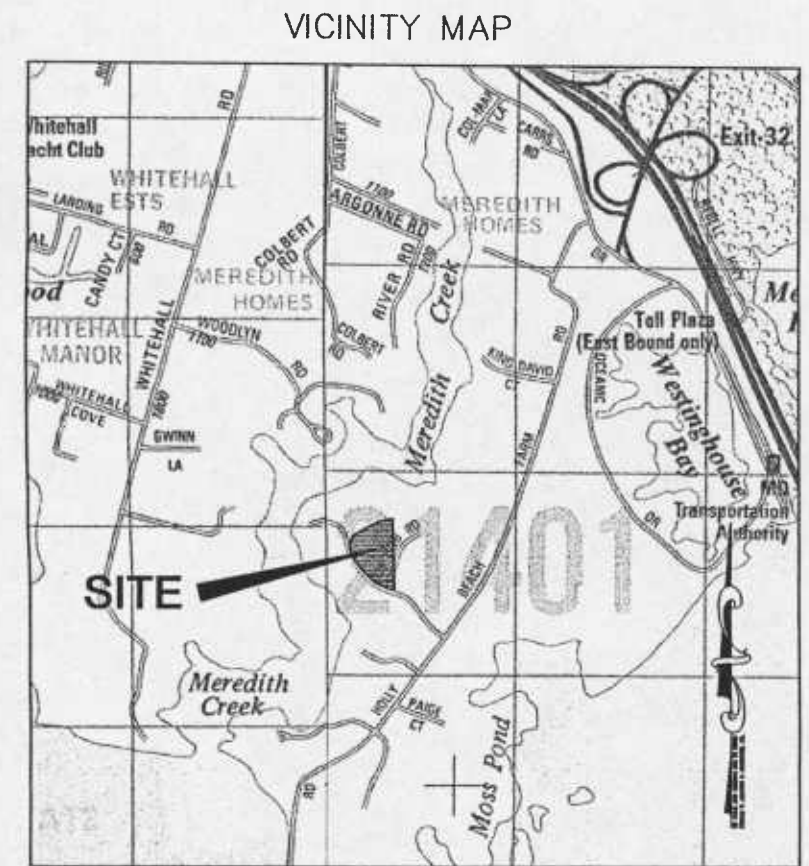
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JUL 08 2008

CRITICAL AREA COMMISSION

RESIDUE R - PT 3 OF 4 @ HOLLY BEACH FARM

GRADING, SEDIMENT AND EROSION CONTROL AND SITE DEVELOPMENT PLANS AND BUILDING PERMIT SITE PLAN FOR BARN/CAR GARAGE



ANNE ARUNDEL SOIL CONSERVATION DISTRICT DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT:

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: 1) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL FURROWS, DITCHES, SWALES, FURROWS, FURROWS, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); 2) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE; 3) THE ABOVE REQUIREMENTS DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED OR TO INTERIOR AREAS OF A SURFACE MINE SITE WHERE THE STABILIZATION MATERIAL WOULD CONTAMINATE THE RECOVERABLE RESOURCE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE 1985 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

1. PERMANENT SEEDING:
a. SOIL TESTS:
LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF INITIAL ROUGH GRADING OR AS RECOMMENDED BY THE SEDIMENT CONTROL INSPECTOR. NOTES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.

1. OCCURRENCE OF ACID SULFATE SOILS (GRAYISH-BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKING OF MATERIAL IS ALLOWED IF NEEDED. SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 2 WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.

THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

- Soil pH shall be less than 6.0 and 7.0
- Soluble salts shall be less than 500 parts per million (ppm)
- The soil shall contain less than 40% clay but enough fine grained material (30% all plus clay) to provide the capacity to hold a moderate amount of moisture. An example of a soil with low organic or aerobic lespedeza is to be planted, then a sandy soil (C-20% all plus clay) would be acceptable.
- Soil shall contain 1% minimum organic matter by weight.
- Soil must contain sufficient pore space to permit adequate root penetration.
- If these conditions cannot be met by soils on site, adding top soil is required in accordance with Section 21 Standards and Specifications for Top Soil or amendments made as recommended by certified agronomist.

B. SEEDING PREPARATION:
AREA TO BE SEEDED SHALL BE LOOSE AND FRABLE TO A DEPTH OF AT LEAST 3 INCHES. THE TOP LAYER SHALL BE LOOSED BY RAKING, TENDING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS OF DOLICMIC LIME AND 21 POUNDS OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR RAKE LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3 INCHES OR FLIPPER FLATTER THAN 3:1.

C. SEEDING:
1. 4-8 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE (BENNETT 11) AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31, APPLY SEED UNIFORMLY ON A LAUSTY FIRM SEEDBED WITH A CYCLONE SEEDER DRILL, OULIPOCKER SEEDER OR HYDROSEEDER (MUSTY FIRM SEEDS AND FERTILIZER RECOMMENDED ON STEEP SLOPES ONLY). SEEDING DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE WHERE NECESSARY TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FULLY ESTABLISHED. IF OTHER SEEDS ARE TO BE USED, SELECT FROM TABLE 25, ENTITLED "PERMANENT SEEDING FOR LOW MAINTENANCE AREAS" FROM THE CURRENT STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MIXES SUITABLE FOR THIS ARE 1, 3 AND 5-7. MIXES 5-7 ARE SUITABLE IN NON-WOODED SITUATIONS.

D. MULCHING:
MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED. MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING. MULCH SHALL BE UNROTTED, UNCHIPPED, SMALL GRASS STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 80 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES.

E. SECURING STRAW MULCH:
STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED:

- USE A MULCH ANCHORING TOOL WHICH IS DESIGNED TO PENETRATE AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH. HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREA WHERE EQUIPMENT CAN OPERATE SAFELY.
- WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER UNDER A NET WITH HEIGHT OF 750 POUNDS PER ACRE. FIBER SHOULD BE APPLIED WITH WATER, USE 30 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- LIQUID BINDERS MAY BE USED. APPLY AT HIGHER RATES AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER MULCH APPLICATION. BINDERS MUST MEET THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURERS.
- LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

2. TEMPORARY SEEDING:
LIME: 100 POUNDS OF DOLICMIC LIME PER 1,000 SQUARE FEET.
FERTILIZER: 15 POUNDS OF 10-10-10 PER 1,000 SQUARE FEET.
SEED: PERENNIAL RYE - 0.92 POUNDS PER 1,000 SQUARE FEET (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15 THROUGH NOVEMBER 1).
MILLET - 0.92 POUNDS PER 1,000 SQUARE FEET (MAY 1 THROUGH AUGUST 15).
MULCH: SAME AS 1 D AND E ABOVE.

3. NO FILLS MAY BE PLACED ON FROZEN GROUND.
ALL FILLS TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL FILLS IN ROADWAYS AND PARKING AREAS IS TO BE CLASSIFIED TYPE 2 AS PER ANNE ARUNDEL COUNTY CODE - ARTICLE 16, SECTION 2-307, AND COMPACTED TO 90% DENSITY; COMPACTION TO BE DETERMINED BY ASTM D-1557-86 (WOOD PROCTOR). ANY FILL WITHIN THE BUILDING AREA IS TO BE COMPACTED TO A MINIMUM OF 85% AS DETERMINED BY METHODS PREVIOUSLY MENTIONED. FILLS FOR POND EMBALEMENTS SHALL BE COMPACTED AS PER MD-378 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND SLURRING.

4. PERMANENT SOIL:
INSTALLATION OF SOIL SHOULD FOLLOW PERMANENT SEEDING DATES. PERMANENT SOIL IS TO BE TALL FESCUE, STATE APPROVED SOIL. LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY BROADCAST SOIL PRIOR TO LAYING SOIL. SOIL IS TO BE LAD ON THE COUNTER WITH ALL DIRT TIGHTLY ABUTTING. JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL OR TAMP SOIL TO INSURE POSITIVE ROOT CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 2:1 AS SHOWN, ARE TO BE PERMANENTLY SOILED OR PROTECTED WITH AN APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOIL IS NOT TO BE APPLIED ON FROZEN GROUND. SOIL SHALL NOT BE TRANSPORTED WHEN MOISTURE CONTENT (PER NET) AND/OR EXCESS TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO INSURE ESTABLISHED SOIL.

5. MINING OPERATIONS:
SEDIMENT CONTROL PLANS FOR MINING OPERATIONS MUST INCLUDE THE FOLLOWING SEEDING DATES AND MIXTURES:
FOR SEEDING DATES OF:
FEBRUARY 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 31, USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICEA LESPEDeza AT THE RATE OF 0.5 POUNDS PER 1,000 SQUARE FEET.

6. TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATION FOR TOPSOIL FROM THE CURRENT STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".

NOTE: PROJECTS WITHIN 4 MILES OF THE BWI AIRPORT WILL NEED TO ADHERE TO MARYLAND AVIATION ADMINISTRATION SEEDING SPECIFICATION RESTRICTION.

CONSTRUCTION & MATERIAL SPECIFICATIONS:

1. 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 IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOILS SPECIFICATIONS - SOIL TO BE USED AS "TOPSOIL MUST MEET THE FOLLOWING:
1. 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 MEDIUM OR CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 6% BY VOLUME OF ONIONS, STONE, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.

II. TOPSOIL MUST BE FREE OF NUTRIENTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSONGRASS, PLANTS, POISON IVY, THISTLE OR OTHERS, AS SPECIFIED.

III. WHERE THE SUBSOIL IS EITHER HIGHLY ERODED OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (2000-400 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 "MULCH" OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

IV. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

1. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATION STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
1. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

- 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 PERFORMED TO RAISE THE pH TO 6.5 OR HIGHER.
- ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
- TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

NO SOIL 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 DISPERSION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL, SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN PLACE OF NATURAL TOPSOIL.

2. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATION STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION
1. 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.

II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED, ALBERT 4" TO 8" HIGHER IN ELEVATION.

III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN "4" - 6" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOONER OR LATER SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND LIME. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN FROZEN OR MUDDY CONDITION WHEN THE SUBSOIL IS EXCESSIVELY WET OR A CONDITION THAT MAY BE OTHERWISE DETRIMENTAL TO PROPER GRADING AND SEEDING 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:
1. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 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 SOLMS 52.06.06.
- 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 THE 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 AMENED 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 SOODING, MD-VA, PUMBI, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED, 1973.

STANDARDS 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:
1. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT 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.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRING SPECIAL CONSERVATION AND DESIGN AND ACCURATE STABILIZATION, AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

GENERAL NOTES:

1. GRID TICS AS SHOWN HEREON ARE BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM AS PROJECTED BY THE ANNE ARUNDEL COUNTY OFFICE OF PLANNING AND ZONING. (NAD 83).

2. ELEVATIONS AND CONTOURS SHOWN ON THESE PLANS ARE TAKEN FROM A FIELD SURVEY BY RUM BASED ON AN ASSUMED SYSTEM DATED APRIL, 2003. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS AND CONTOURS TO HIS OWN SATISFACTION PRIOR TO STARTING WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.

3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS AND STANDARD SPECIFICATIONS FOR CONSTRUCTION SEPTEMBER 1988 AND THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF HIS CONSTRUCTION WITH THE CONSTRUCTION BY OTHER CONTRACTORS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REPLACING ANY EXISTING FENCES, DRIVEWAYS, ETC. DAMAGED OR REMOVED DURING CONSTRUCTION.

6. THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION BEFORE STARTING CONSTRUCTION. NEITHER THE OWNER NOR THE ENGINEER WARRANT OR GUARANTEE THE COMPLETENESS OR CORRECTNESS OF THE INFORMATION.

7. THE CONTRACTOR SHALL NOTIFY THE ANNE ARUNDEL COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS, ANNAPOLIS, MARYLAND (410) 222-7780, 48 HOURS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

8. EXCESS MATERIAL FROM EXCAVATION MUST BE PLACED ON AN APPROVED SITE. IF AN APPROVED SITE IS NOT AVAILABLE THE CONTRACTOR WILL SUBMIT TO THE SOIL CONSERVATION DISTRICT, ANNAPOLIS, MARYLAND (410) 222-7822, A PLAN FOR APPROVAL PRIOR TO DUMPING OF EXCESS MATERIAL.

9. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS, AND ANY DAMAGE TO THEM DUE TO CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

10. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES (1-800-257-7777) THREE (3) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

11. PROPERTY SHOWN HEREON LIES WITHIN ZONE C, AN AREA OF MINIMAL FLOODING AND AREA (AE)1-A AN AREA OF 100 YEAR FLOODING, SHOWN ON MAP 21C.

12. ALL UTILITIES INCLUDING GAS, ELECTRIC AND COMMUNICATIONS SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSIONS STATEMENT DATES OF JULY 14, 1998.

13. THIS PROPERTY IS SERVED BY A SHARED PRIVATE WELL AND INDIVIDUAL PRIVATE SEPTIC SYSTEMS.

14. THERE ARE NO WETLANDS ON SITE.

15. THIS PROPERTY IS SERVED BY A SHARED PRIVATE WELL AND INDIVIDUAL PRIVATE SEPTIC SYSTEMS.

16. THERE ARE NO WETLANDS ON SITE.

17. THE DEVELOPER/CONSULTANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF MARYLAND.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF MARYLAND.

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30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF MARYLAND.

STANDARD RESPONSIBILITY NOTES:

I. (WE) CERTIFY THAT:
1. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZED THE RIGHT OF ENTRY FOR PERSONS ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.

2. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

RESPONSIBLE PERSONNEL ON SITE:
JEROME PARKS

3. IF APPLICABLE, THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASIN(S) INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE IN COMPLIANCE WITH THE ANNE ARUNDEL COUNTY CODE.

4. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN.

5. INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS FOR THE SURFACE SURFACE OF ALL CONTROLS, DICES, SWALES, DITCHES, FURROWS, SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FORTY-EIGHT (48) HOURS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. TEMPORARY STABILIZATION OF THE SURFACE OF FURROWS, CONTROLS, DICES, SWALES, DITCHES, AND FURROWS MAY BE ALLOWED AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.

6. THE SEDIMENT CONTROL APPROVALS ON THIS PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK.

7. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM OBTAINING WITH ANY FEDERAL, STATE OR COUNTY REQUIREMENTS APPERTAINING TO ENVIRONMENTAL ISSUES.

8. THE DEVELOPER MUST REQUEST THAT THE SEDIMENT CONTROL INSPECTOR APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE.

9. ALL MATERIALS SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT AND CONTROL PLAN.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF TWO ACRES, APPROVAL OF THE SEDIMENT CONTROL INSPECTOR SHALL BE REQUIRED ON COMPLETION OF INSTALLATION OF PERMANENT EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH RESHAPING OR GRADING. THIS INCLUDES PRELIMINARY INSPECTIONS, GRADING INSPECTIONS, APPROVALS MAY NOT BE INITIATED UNTIL THE FINAL APPROVAL BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IS OBTAINED.

11. APPROVAL SHALL BE REQUESTED ON FINAL STABILIZATION OF ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES BEFORE REMOVAL OF CONTROLS.

12. EXISTING TOPOGRAPHY MUST BE FIELD VERIFIED BY RESPONSIBLE PERSONNEL TO SATISFACTION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING WORK.

NAME: JEROME PARKS
TITLE: DEVELOPERS/OWNERS
AFFILIATION: N/A
ADDRESS: 1764 Holly Beach Farm Road
Annapolis, MD, 21401
TELEPHONE: (410)-268-4680

CONSULTANT'S CERTIFICATION:

"THE DEVELOPER/CONSULTANT TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION ON THE PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER."

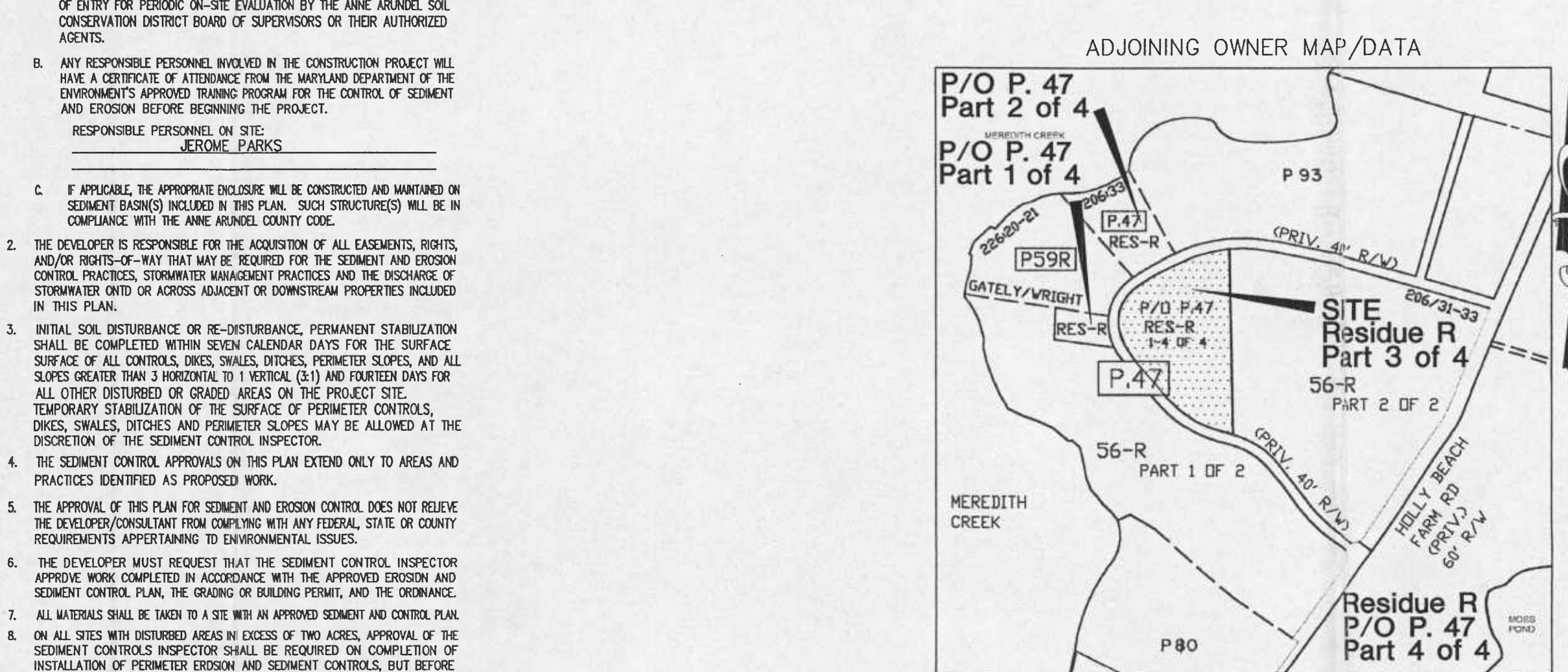
MD PE License # 19991
MD Land Survey License #
MD Landscape Architect #
Name: Ronald W. Johnson
Firm Name: Ronald W. Johnson Associates, Inc.
Street Address: 2661 RIVA ROAD, BLDG. 400, STE. 420
ANNAPOLIS, MARYLAND 21401 410-841-5121

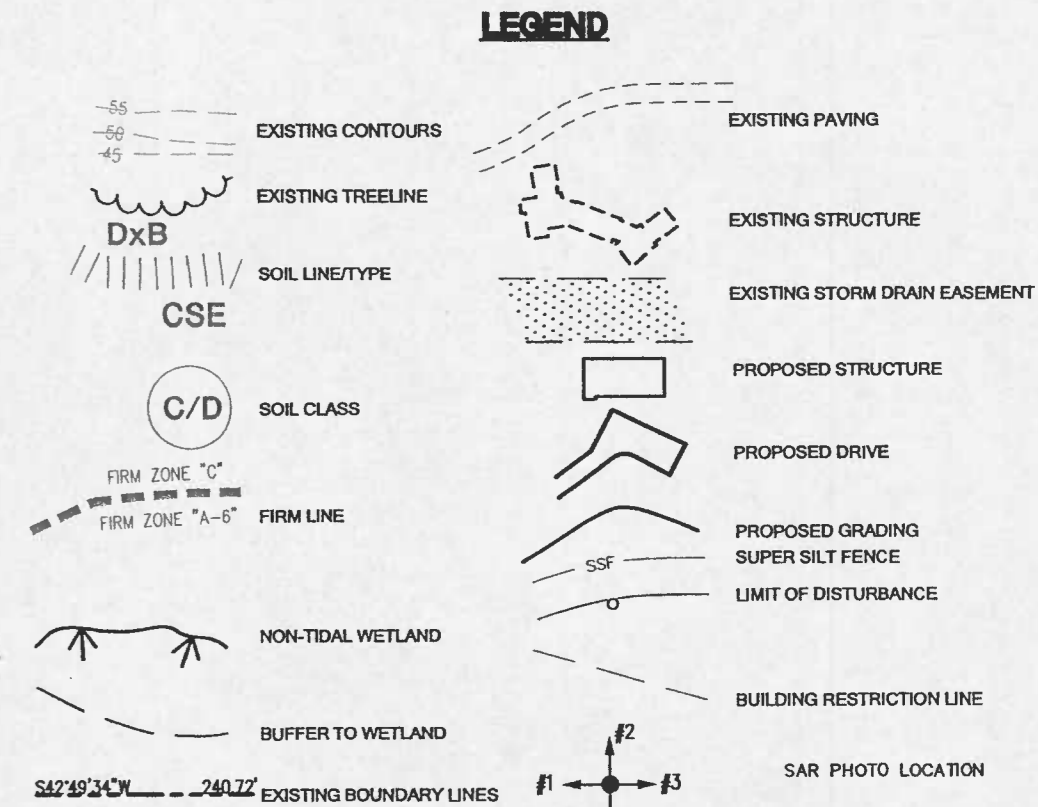
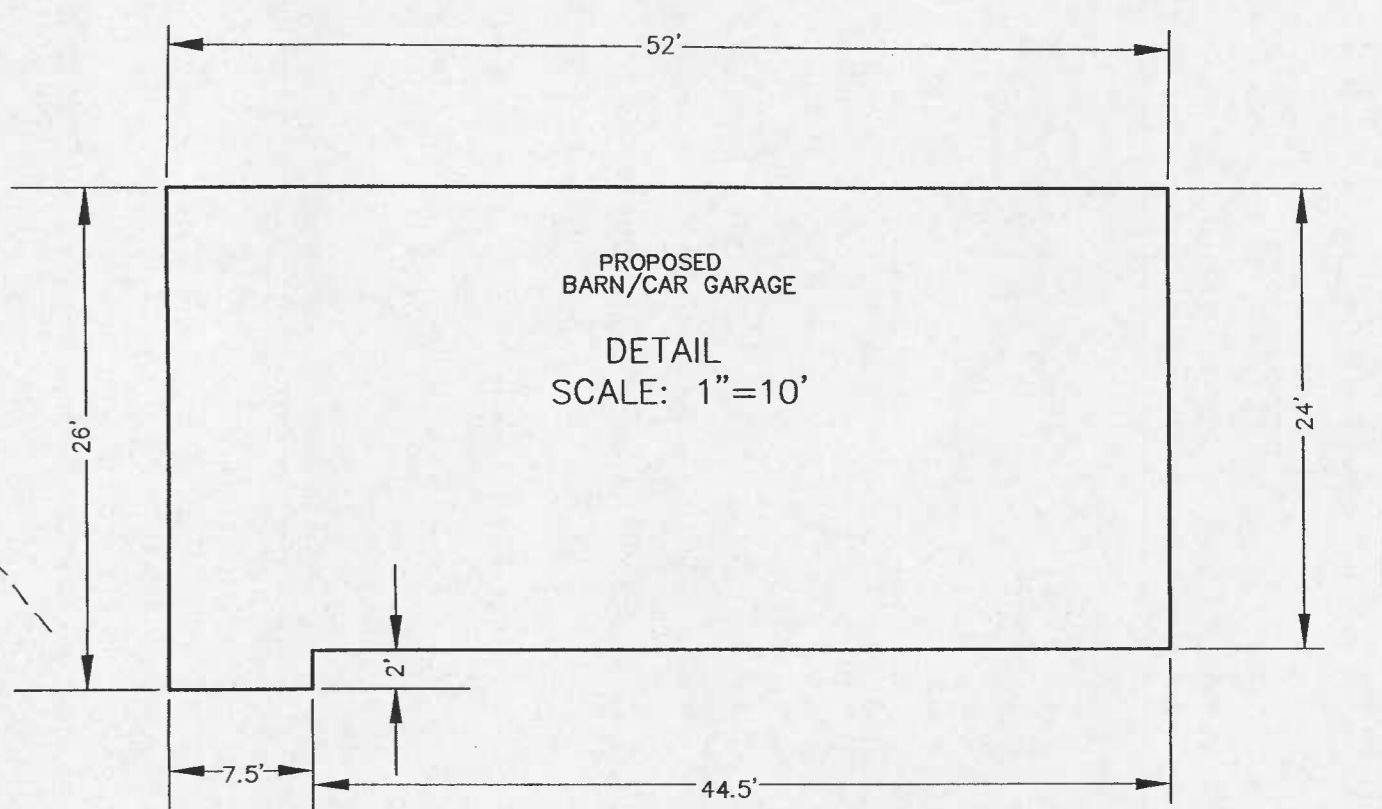
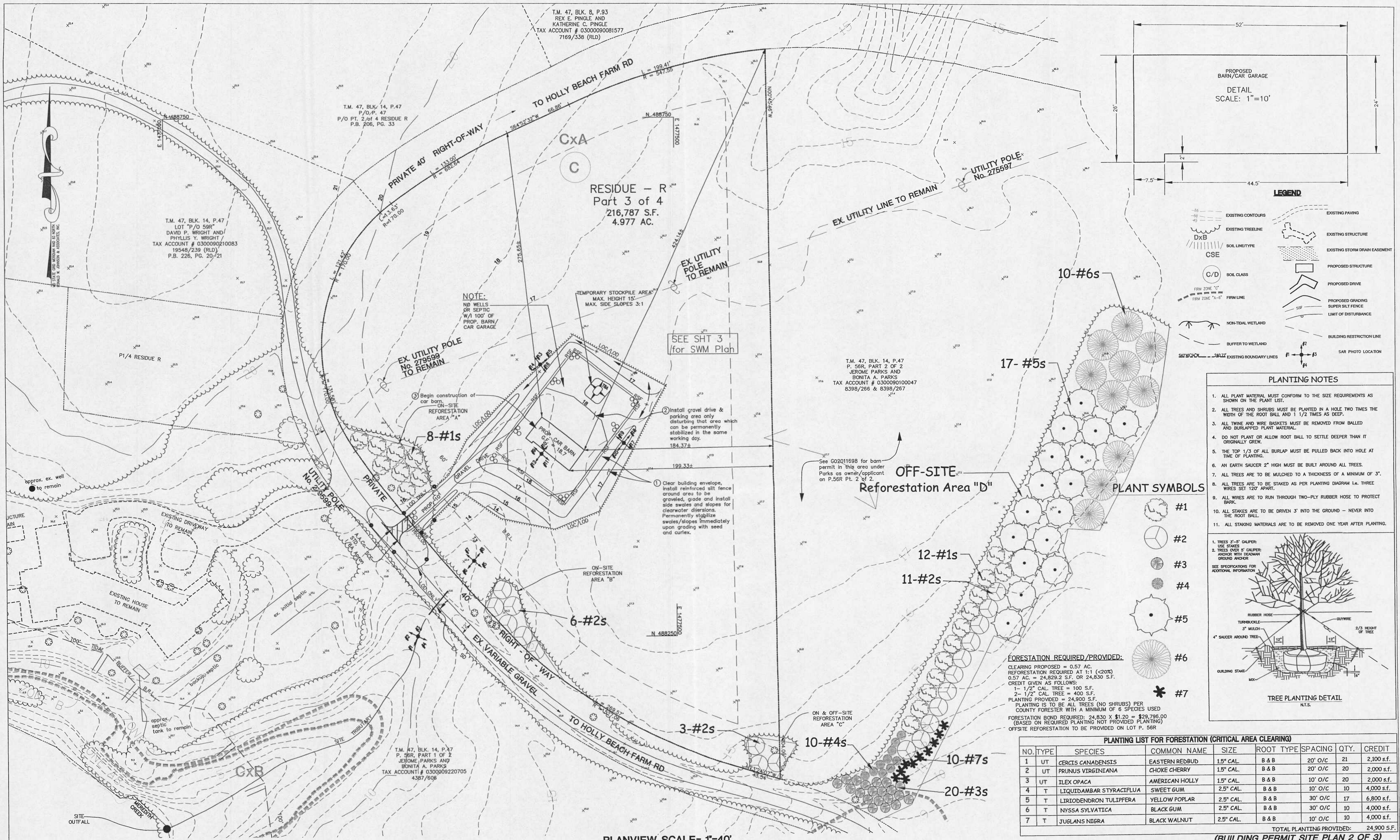
CONSTRUCTION SEQUENCE

PRECONSTRUCTION MEETING: THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF INSPECTIONS AND PERMITS AT (410)222-7780 FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING WORK. WORK MAY BE COMMENCED UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET WITH THE SITE WITH A REPRESENTATIVE OF THE DEPARTMENT TO REVIEW THE APPROVED PLANS.

ITEM	DURATION
PHASE I	
1. GRADE & INSTALL STABILIZED CONSTRUCTION ENTRANCE	1 DAY
2. OBTAIN PHASE ONE INSPECTION.	1 DAY
3. CLEAR, GRADE BUILDING ENVELOPE. INSTALL REINFORCED SILT FENCE AROUND AREA TO BE GRAVELED. INSTALL SWALES FOR CLEARWATER DIVERSION. IMMEDIATELY STABILIZE SWALES WITH SEED AND CURLEX.	3 DAYS
PHASE II	
1. GRADE FOR AND BEGIN BARN CONSTRUCTION.	5 DAYS
2. INSTALL GRAVEL DRIVE AND PARKING AREA ONLY DISTURBING THAT WHICH CAN BE STABILIZED IN SAME WORKING DAY. BACKFILL AND TEMPORARILY STABILIZE AS NECESSARY WITH SEED & MULCH. REFER TO TOP-SOILING SPECS WHEN NECESSARY.	2 MONTHS
3. UPON COMPLETION OF CONSTRUCTION, PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS WITH SEED & MULCH.	1 WEEK
4. WHEN THE SITE IS PERMANENTLY STABILIZED AND WITH THE APPROVAL OF THE INSPECTOR, REMOVE REINFORCED SILT FENCE.	

RECEIVED JUL 08 2008 CRITICAL AREA COMMISSION

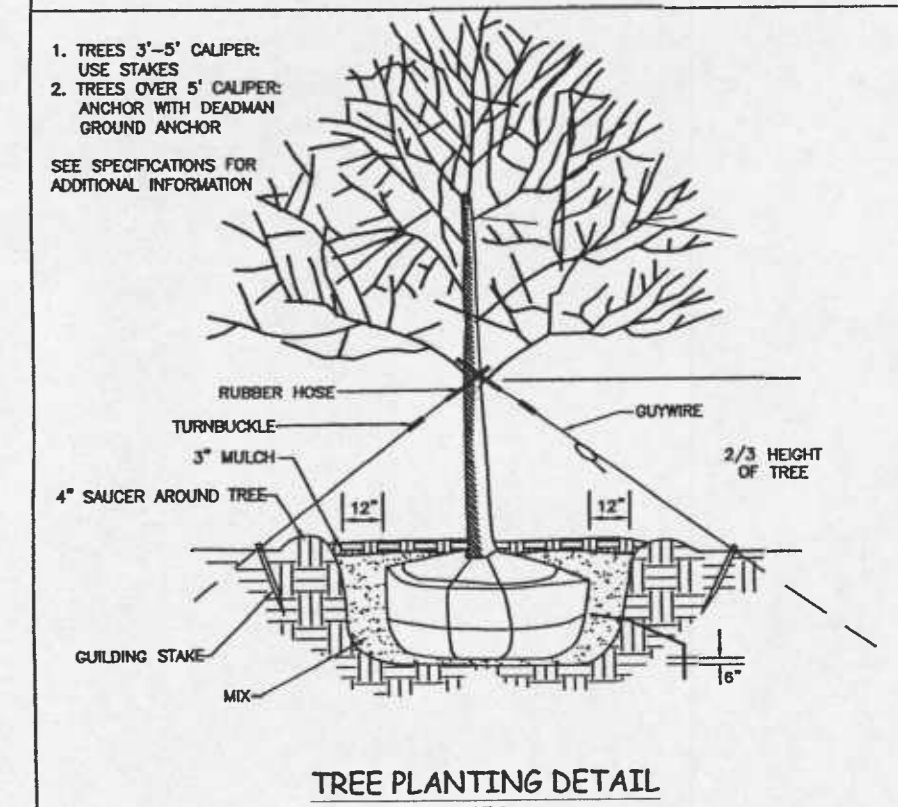
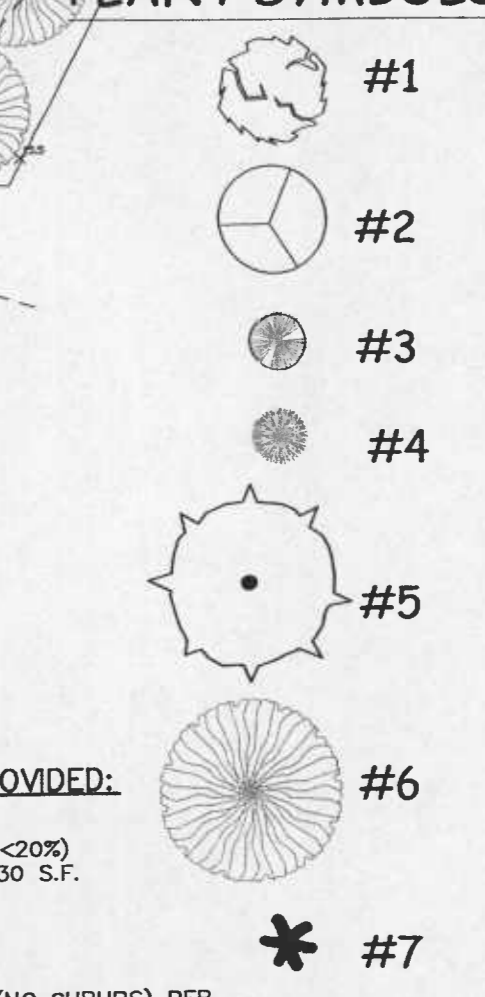




PLANTING NOTES

1. ALL PLANT MATERIAL MUST CONFORM TO THE SIZE REQUIREMENTS AS SHOWN ON THE PLANT LIST.
2. ALL TREES AND SHRUBS MUST BE PLANTED IN A HOLE TWO TIMES THE WIDTH OF THE ROOT BALL AND 1 1/2 TIMES AS DEEP.
3. ALL TWINE AND WIRE BASKETS MUST BE REMOVED FROM BALLED AND BURLAPPED PLANT MATERIAL.
4. DO NOT PLANT OR ALLOW ROOT BALL TO SETTLE DEEPER THAN IT ORIGINALLY GREW.
5. THE TOP 1/3 OF ALL BURLAP MUST BE PULLED BACK INTO HOLE AT TIME OF PLANTING.
6. AN EARTH SAUCER 2" HIGH MUST BE BUILT AROUND ALL TREES.
7. ALL TREES ARE TO BE MULCHED TO A THICKNESS OF A MINIMUM OF 3".
8. ALL TREES ARE TO BE STAKED AS PER PLANTING DIAGRAM I.E. THREE WIRES SET 120° APART.
9. ALL WIRES ARE TO RUN THROUGH TWO-PLY RUBBER HOSE TO PROTECT BARK.
10. ALL STAKES ARE TO BE DRIVEN 3" INTO THE GROUND - NEVER INTO THE ROOT BALL.
11. ALL STAKING MATERIALS ARE TO BE REMOVED ONE YEAR AFTER PLANTING.

PLANT SYMBOLS



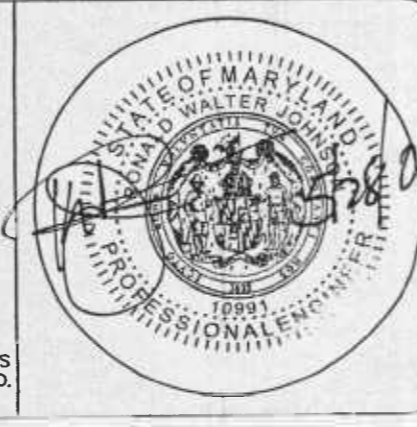
FORESTATION REQUIRED/PROVIDED:
 CLEARING PROPOSED = 0.57 AC.
 REFORESTATION REQUIRED AT 1:1 (<20%)
 0.57 AC. = 24,829.2 S.F. OR 24,830 S.F.
 CREDIT GIVEN AS FOLLOWS:
 1- 1/2" CAL. TREE = 100 S.F.
 2- 1/2" CAL. TREE = 400 S.F.
 PLANTING PROVIDED = 24,900 S.F.
 PLANTING IS TO BE ALL TREES (NO SHRUBS) PER COUNTY FORESTER WITH A MINIMUM OF 6 SPECIES USED
 FORESTATION BOND REQUIRED: 24,830 X \$1.20 = \$29,796.00
 (BASED ON REQUIRED PLANTING NOT PROVIDED PLANTING)
 OFFSITE REFORESTATION TO BE PROVIDED ON LOT P, 56R

PLANTING LIST FOR FORESTATION (CRITICAL AREA CLEARING)								
NO.	TYPE	SPECIES	COMMON NAME	SIZE	ROOT TYPE	SPACING	QTY.	CREDIT
1	UT	CERCIS CANADENSIS	EASTERN REDBUD	1.5" CAL.	B & B	20' O/C	21	2,100 s.f.
2	UT	PRUNUS VIRGINIANA	CHOKE CHERRY	1.5" CAL.	B & B	20' O/C	20	2,000 s.f.
3	UT	ILEX OPACA	AMERICAN HOLLY	1.5" CAL.	B & B	10' O/C	20	2,000 s.f.
4	T	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	2.5" CAL.	B & B	10' O/C	10	4,000 s.f.
5	T	LIRIODENDRON TULIPIFERA	YELLOW POPLAR	2.5" CAL.	B & B	30' O/C	17	6,800 s.f.
6	T	NYSSA SYLVATICA	BLACK GUM	2.5" CAL.	B & B	30' O/C	10	4,000 s.f.
7	T	JUGLANS NIGRA	BLACK WALNUT	2.5" CAL.	B & B	10' O/C	10	4,000 s.f.

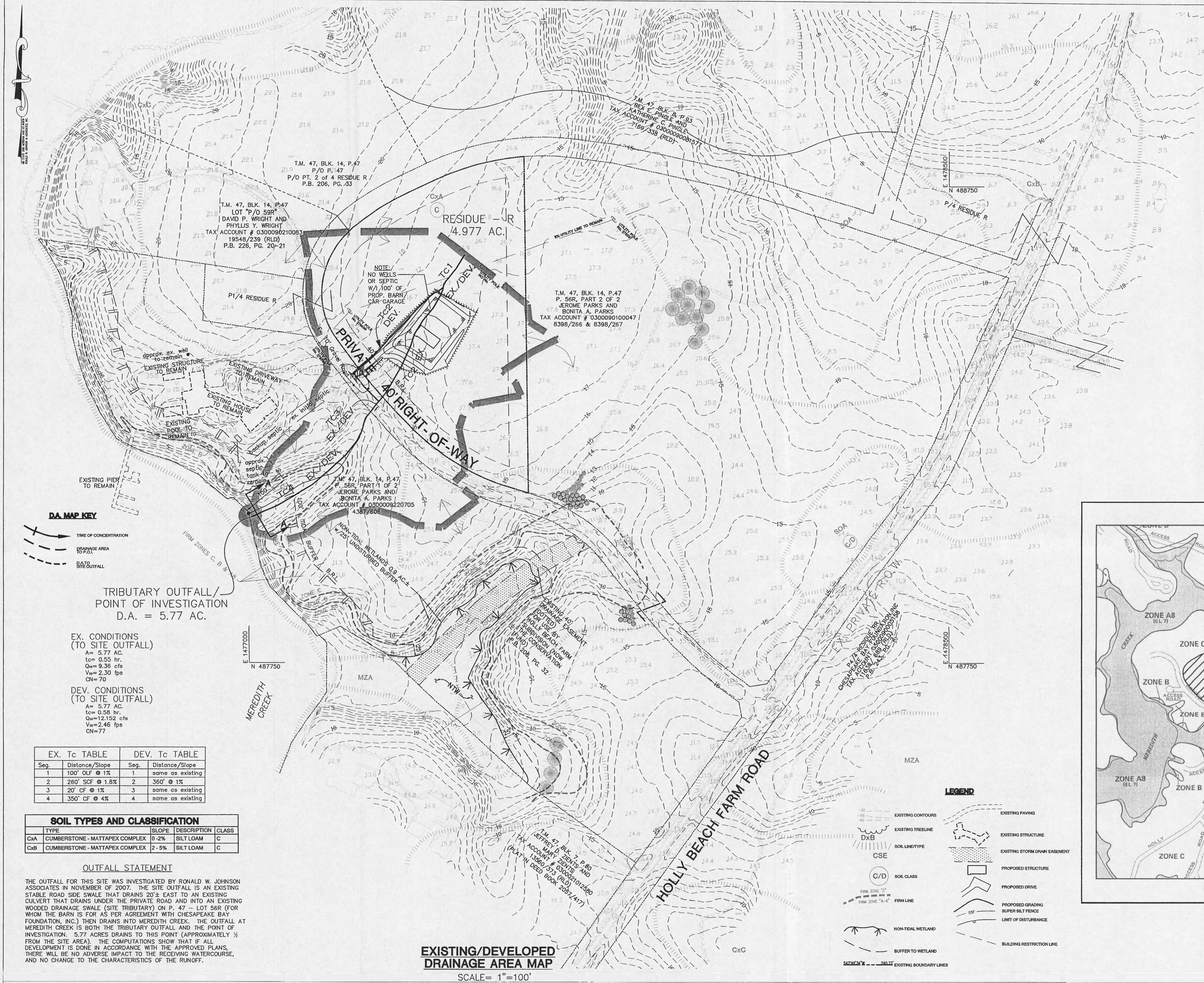
TOTAL PLANTING PROVIDED: 24,900 S.F.
 (BUILDING PERMIT SITE PLAN 2 OF 3)
 40 SCALE PLANVIEW & ON/OFFSITE REFORESTATION PLAN



Ronald W. Johnson Associates, Inc.
 Consulting Engineers, Land Planners, Surveyors
 2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401
 410.841.5221 410.266.6612 Fax 410.841.5124



GRADING, SEDIMENT & EROSION CONTROL & SITE DEVELOPMENT PLANS			
SCALE	AS SHOWN	RESIDUE R - PT 3 OF 4 HOLLY BEACH FARM ROAD ANNAPOLIS, MD 21401 TAX MAP 47, BLOCK 14, P/O PARCEL 47 PARKS AND GATELY PROPERTIES P.B. 206, PGS 31-33 NAD 83; ZONING RLD PRD TAX DISTRICT SCALE: AS SHOWN ANNE ARUNDEL CO., MD NOV., 2009	
DRAWN BY	GML/M		
CHECKED BY	STACX/RWJ/JCM		
SHEET	#2 OF #3		
PROPOSAL NO.	#2555.00		



STORMWATER MANAGEMENT PRACTICE/CREDIT STATEMENT

THIS SITE QUALIFIES FOR THE ENVIRONMENTALLY SENSITIVE CREDIT WHICH ADDRESSES WATER QUALITY AND GROUNDWATER RECHARGE BY SITE DESIGN. ALL IMPERVIOUS IS DISCONNECTED AND DRAINS TO THE PROPERTY LINE THROUGH VEGETATED SWALES ON SLOPES LESS THAN 5% OR DRYWELL COMPENSATION IS PROVIDED. CHANNEL PROTECTION AND OVERBANK FLOOD PROTECTION ARE NOT REQUIRED SINCE THERE ARE NO PROPOSED ROADWAYS AS OUTLINED IN THE CREDIT CRITERIA. LASTLY, EXTREME FLOOD VOLUME IS NOT REQUIRED BECAUSE THE SITE LIES OUTSIDE THE 100 YEAR FLOODPLAIN.

SWM SUMMARY TABLE		
CRITERIA	HOW ADDRESSED	BMP
WATER QUALITY-WQv	WATER QUALITY HAS BEEN ADDRESSED VIA THE ENVIRONMENTALLY SENSITIVE CREDIT	#6
RECHARGE-Rev	RECHARGE HAS BEEN PROVIDED VIA THE ENVIRONMENTALLY SENSITIVE CREDIT	#6
CHANNEL PROTECTION-Cpv	NOT REQUIRED, NO ROADS	N/A
OVERBANK FLOOD PROTECTION-Op	NOT REQUIRED, NO ROADS NON-EROSIVE VELOCITIES; ADEQUATE OUTFALL	N/A
EXTREME FLOOD-Of	DEVELOPMENT OUTSIDE OF FLOODPLAIN - NOT REQUIRED.	N/A

DA MAP KEY

- TIME OF CONCENTRATION
- DRAINAGE AREA TO P.O.I.
- BATE SITE OUTFALL

TRIBUTARY OUTFALL/
POINT OF INVESTIGATION
D.A. = 5.77 AC.

EX. CONDITIONS (TO SITE OUTFALL)
 A= 5.77 AC.
 t_c = 0.55 hr.
 Q₁₀₀ = 9.36 cfs
 V₁₀₀ = 2.30 fps
 CN = 70

DEV. CONDITIONS (TO SITE OUTFALL)
 A= 5.77 AC.
 t_c = 0.58 hr.
 Q₁₀₀ = 12.152 cfs
 V₁₀₀ = 2.46 fps
 CN = 77

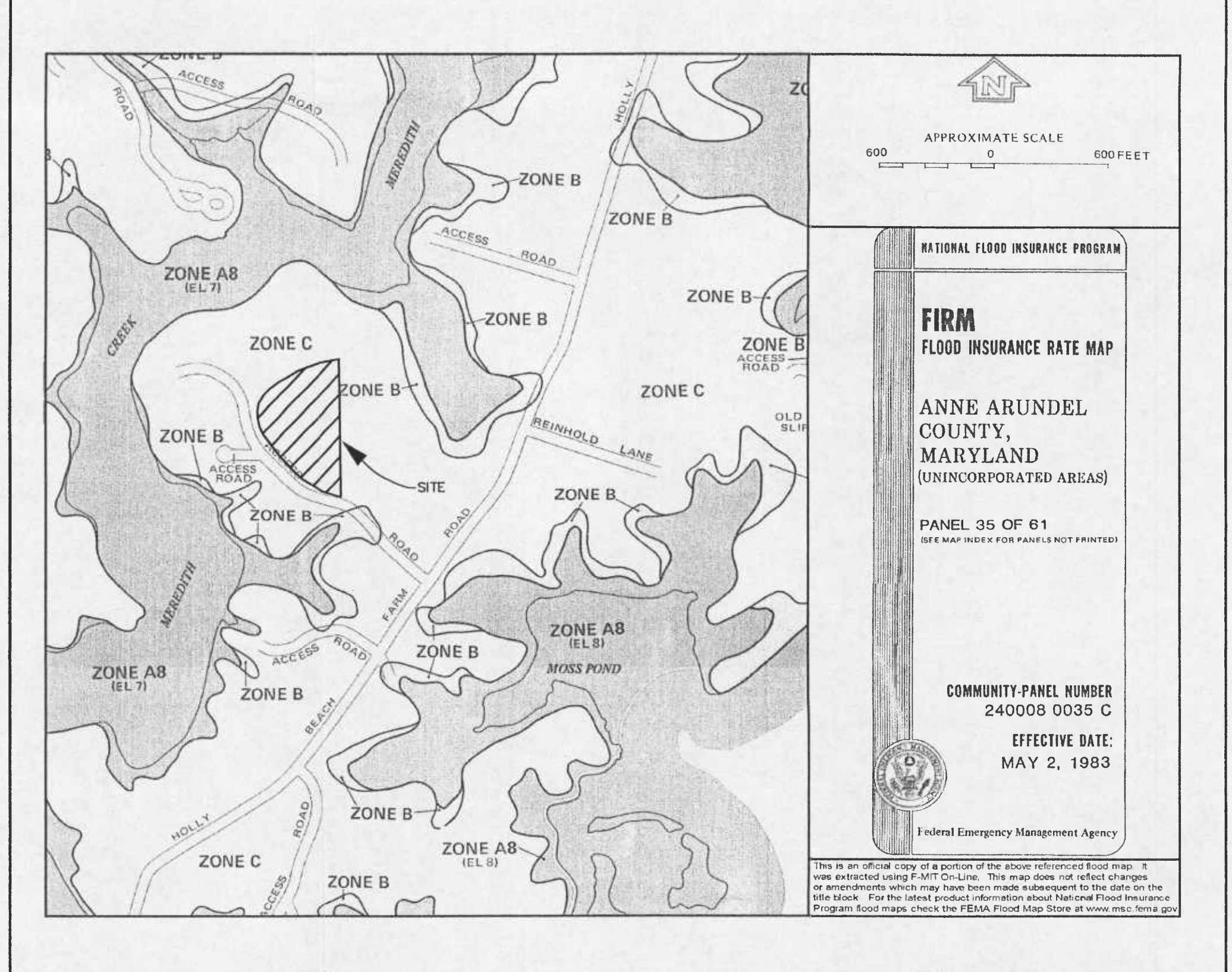
EX. T _c TABLE		DEV. T _c TABLE	
Seg.	Distance/Slope	Seg.	Distance/Slope
1	100' OLF @ 1%	1	same as existing
2	260' SCF @ 1.8%	2	360' @ 1%
3	20' CF @ 1%	3	same as existing
4	350' CF @ 4%	4	same as existing

SOIL TYPES AND CLASSIFICATION				
TYPE	SLOPE	DESCRIPTION	CLASS	
CxA	CUMBERSTONE - MATTAPEX COMPLEX	0-2%	SILT LOAM	C
CxB	CUMBERSTONE - MATTAPEX COMPLEX	2-5%	SILT LOAM	C

OUTFALL STATEMENT

THE OUTFALL FOR THIS SITE WAS INVESTIGATED BY RONALD W. JOHNSON ASSOCIATES IN NOVEMBER OF 2007. THE SITE OUTFALL IS AN EXISTING STABLE ROAD SIDE SWALE THAT DRAINS 20'± EAST TO AN EXISTING CULVERT THAT DRAINS UNDER THE PRIVATE ROAD AND INTO AN EXISTING WOODED DRAINAGE SWALE (SITE TRIBUTARY) ON P. 47 - LOT 56R (FOR WHOM THE BARN IS FOR AS PER AGREEMENT WITH CHESAPEAKE BAY FOUNDATION, INC.) THEN DRAINS INTO MEREDITH CREEK. THE OUTFALL AT MEREDITH CREEK IS BOTH THE TRIBUTARY OUTFALL AND THE POINT OF INVESTIGATION. 5.77 ACRES DRAINS TO THIS POINT (APPROXIMATELY 1/2 FROM THE SITE AREA). THE COMPUTATIONS SHOW THAT IF ALL DEVELOPMENT IS DONE IN ACCORDANCE WITH THE APPROVED PLANS, THERE WILL BE NO ADVERSE IMPACT TO THE RECEIVING WATERCOURSE, AND NO CHANGE TO THE CHARACTERISTICS OF THE RUNOFF.

EXISTING/DEVELOPED DRAINAGE AREA MAP
SCALE = 1"=100'

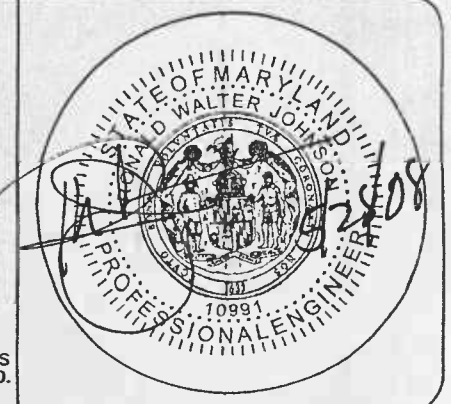


LEGEND

- EXISTING CONTOURS
- EXISTING TREE LINE
- SOIL LINE TYPE
- SOIL CLASS
- FIRM LINE
- NON-TOTAL WETLAND
- BUFFER TO WETLAND
- EXISTING PAVING
- EXISTING STRUCTURE
- EXISTING STORM DRAIN EASEMENT
- PROPOSED STRUCTURE
- PROPOSED DRIVE
- PROPOSED GRADING
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- BUILDING RESTRICTION LINE



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GRADING, SEDIMENT & EROSION CONTROL & SITE DEVELOPMENT PLANS	
SCALE	AS SHOWN
DRAWN BY	GMLM
CHECKED BY	STACR@RWJ.COM
SHEET	#5 OF #3
PROJECT NO.	# 23559.00
PROPOSAL NO.	

RESIDUE R - PT 3 OF 4
 HOLLY BEACH FARM ROAD
 ANNAPOLIS, MD 21401
 TAX MAP 47, BLOCK 14, P/O PARCEL 47
 PARKS AND GATED PROPERTIES P. 206, Pgs. 31-33
 NAD 83; ZONING RLD

1937 TAX DISTRICT
 SCALE: AS SHOWN
 ANNE ARUNDEL CO., MD
 NOV., 2007