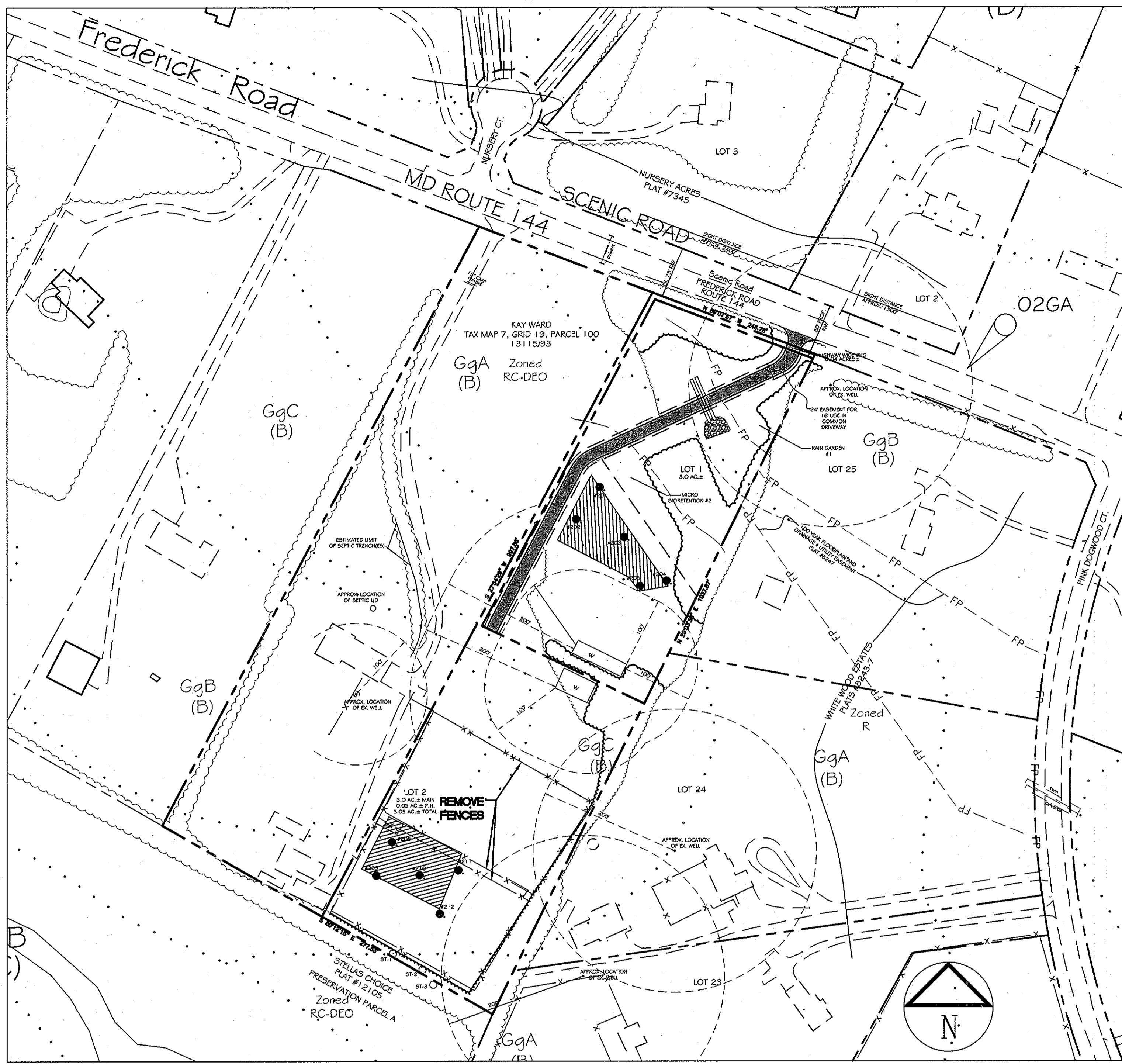


**GENERAL NOTES**

- 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) 318-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-TTTT 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 of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- The existing topography is taken from field run survey with maximum two foot contour intervals prepared by Shanabarger & Lane February, 2012.
- 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. O26A and O7AD were used for this project.
- Site is located outside the metropolitan district.
- Stormwater Management for this site is provided by environmental site design to the maximum extent practical consisting of rooftop and non-rooftop disconnection, rain garden and micro bio-retention, privately maintained.
- Existing utilities are based on plans of record, field run topography.
- 100 year floodplain study prepared by Tesseract Sites, Inc was submitted with ECP 13-027 which was approved on December 19, 2012.
- There are no wetlands or streams on this site based on site inspection by Exploration Research, Inc. dated 4/5/12, submitted with ECP 13-027.
- Vegetative Assessment provided by Exploration Research, Inc. submitted with ECP-13-027.
- This Plan is exempt from Forest Conservation Requirements per Section 16.1202(b)(1)(viii).
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- Any damage caused by the contractor to existing public right-of-way, existing paving, existing curb, and gutter, existing utilities, etc. shall be repaired at the contractor's expense.
- All hydraulic data is for the 100-year storm unless otherwise noted.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-180.
- All plan dimensions are to edge of paving unless otherwise noted. Numerically written dimensions take precedence over scale dimensions.
- There are no known cemeteries, burial grounds or historic sites and structures on this site.
- No grading, removal of vegetative cover of trees, paving and new structures shall be permitted within the 100 year floodplain, except as shown on this plan which is a necessary disturbance to provide access to the lots.
- All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel perforated, square tube sleeve (12 gauge) - 3' long. A galvanized steel pole cap shall be mounted on top of each post.
- The landscape plan has been prepared in accordance with Section 16.124 of the Howard County Code and the Howard County Landscape Manual. Landscaping for lots 1 and 2 is provided in accordance with a certified landscape plan as part of the construction drawings in accordance with section 16.124 of the Howard County Code and the landscape manual. Landscape surety in the amount of \$2400.00 (2 shade trees) will be posted with the grading permit.
- Signage at the street identifying the address is required.
- See previous DPZ Files ECP 13-027, NP 12-182.
- The property is zoned RC-DEO per the 10/06/13 comprehensive zoning plan.
- On July 26, 2012 the planning director granted a waiver of the following sections of the subdivision & land development regulations in NP 12-182:  
 section 16.120(c)(2)(i) -- to allow reducing the required 20-foot pipestem width to 7.12 feet.  
 section 16.120(c)(2) -- to allow public road frontage and driveway entrance to be in different locations.  
 section 16.120(b)(4)(ii)(b) -- to allow environmental features (100-year floodplain) to be on a residential lot of less than 10 acres.  
 Waiver approval was granted subject to: 1) submission of a final subdivision plat, 2) compliance with minimum "rc" lot size requirements including use of subsection 16.120(b)(2)(i) to allow for a 10% reduction in lot size for a minor subdivision dedicating public road right-of-way, and 3) providing a 10-foot landscape buffer between the ward property and the use-in-common driveway easement.
- For flag or pipestem lots, refuse collection, recycling, snow removal, and road maintenance are provided to the junction of the flag or pipestem and road right-of-way line and not onto the pipestem lot driveway.
- Pre Submission Community Meeting was held 2/6/13.
- There are no regulated steep slopes on site.
- Percolation Certification Plan prepared by Shanabarger & Lane approved 3/4/12.
- Frederick Road (MD Route 144) is a scenic road.
- Sight Distance Analysis prepared by Shanabarger & Lane and submitted approved in connection with NP 12-182.
- A design manual waiver of volume III, section 2.6.5, was approved by the chief, development engineering division on July 11, 2012 to allow a shared driveway instead of a public access place to cross a 100-year floodplain, subject to providing a driveway culvert that will pass the 100-year storm in accordance with transportation and special projects division comments, and subject to providing a minimum turning radius for driveway as required by fire & rescue services.
- Driveway(s) shall be provided prior to issuance of a use and occupancy permit to ensure safe access for fire and emergency vehicles per the following:  
 1) Width - 12 feet (16 feet if serving more than 1 residence)  
 2) Surface - six (6) inches of compacted "crusher run" base with top and chip coating (1-1/2" min.)  
 3) Geometry - max. 15% grade, max 10% grade change and minimum 45' turning radius  
 4) Structures (culverts/bridges) - capable of supporting 25 gross tons (25 loading)  
 5) Drainage elements - capable of safely passing 100-year flood with no more than 1-foot depth over driveway surface.  
 6) Maintenance - sufficient to ensure all weather use.



Scale: 1"=100'

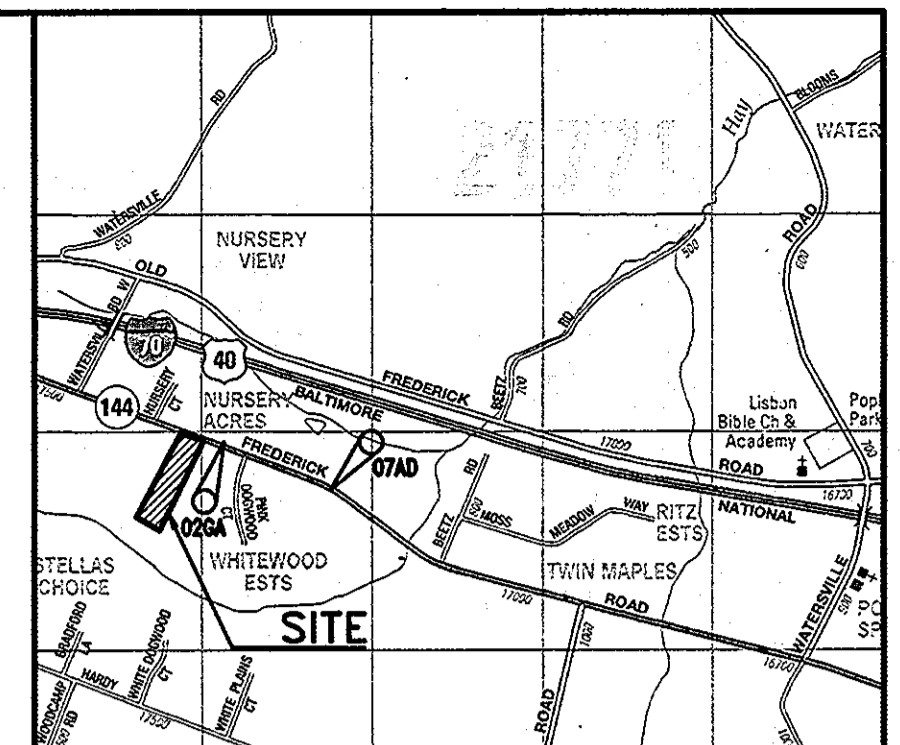
# Cover Sheet

for

# Coleianne Property

Howard County, Maryland

PARCEL 349



Vicinity Map - Scale: 1" = 2000'  
 ADC Map 4691 A5  
 ADC The Map People - Permitted Use # 20612205

**BENCHMARKS**  
 HO CO. 07AD  
 ELEV. 682.31 NAVD88  
 HO CO. 02GA  
 ELEV. 713.03 NAVD88

SHEET INDEX

SHEET	DESCRIPTION
1	Cover Sheet
2	Driveway Plan
3	Sediment & Erosion Control Plan & Details
4	Sediment & Erosion Control Plan & Details
5	Landscaping Plan & Details

**Tesseract**  
 TESSERACT SITES, INC.  
 401 Washington Ave, Suite 303  
 Towson, Maryland, 21284  
 P: 410.321.7600  
 F: 410.321.7601

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/14.

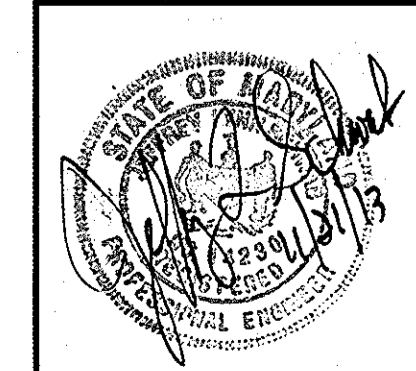
Coleianne Property  
 Lots 1 & 2

**COVER SHEET**

SUBMISSION NAME: COLEIANNE PROPERTY	SECTION/AREA: N/A	LOT/PARCEL: 349
PLAT OR L.P. 14059/437	DATE 1	REVISION 4th
WATER CODE: N/A	SEWER CODE: N/A	

**CONTACT**  
 Jeffrey L. Schwab P.E.  
 Tesseract Sites, Inc.  
 401 Washington Ave, Suite 303  
 Towson MD, 21204

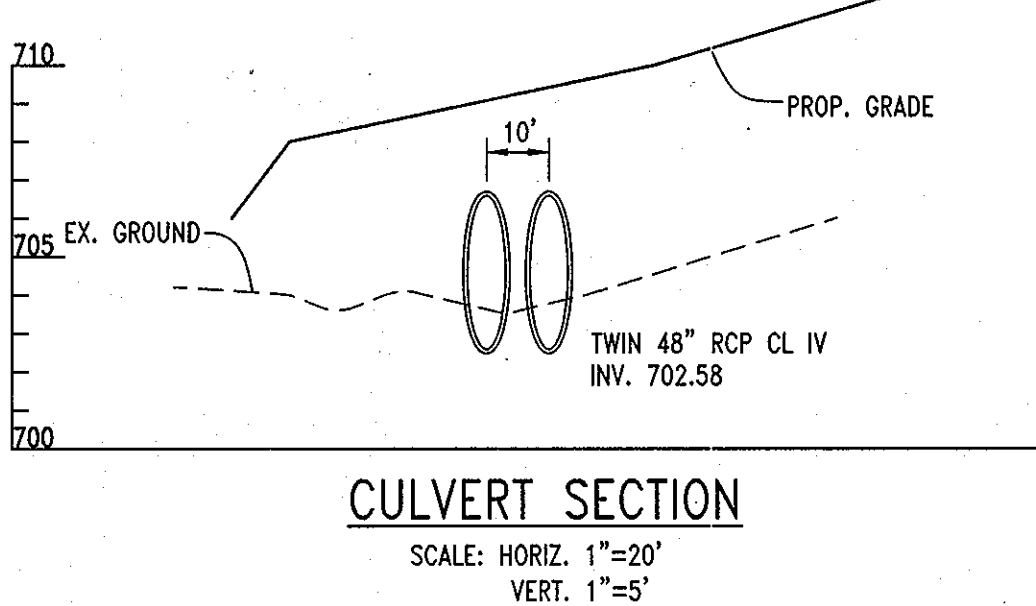
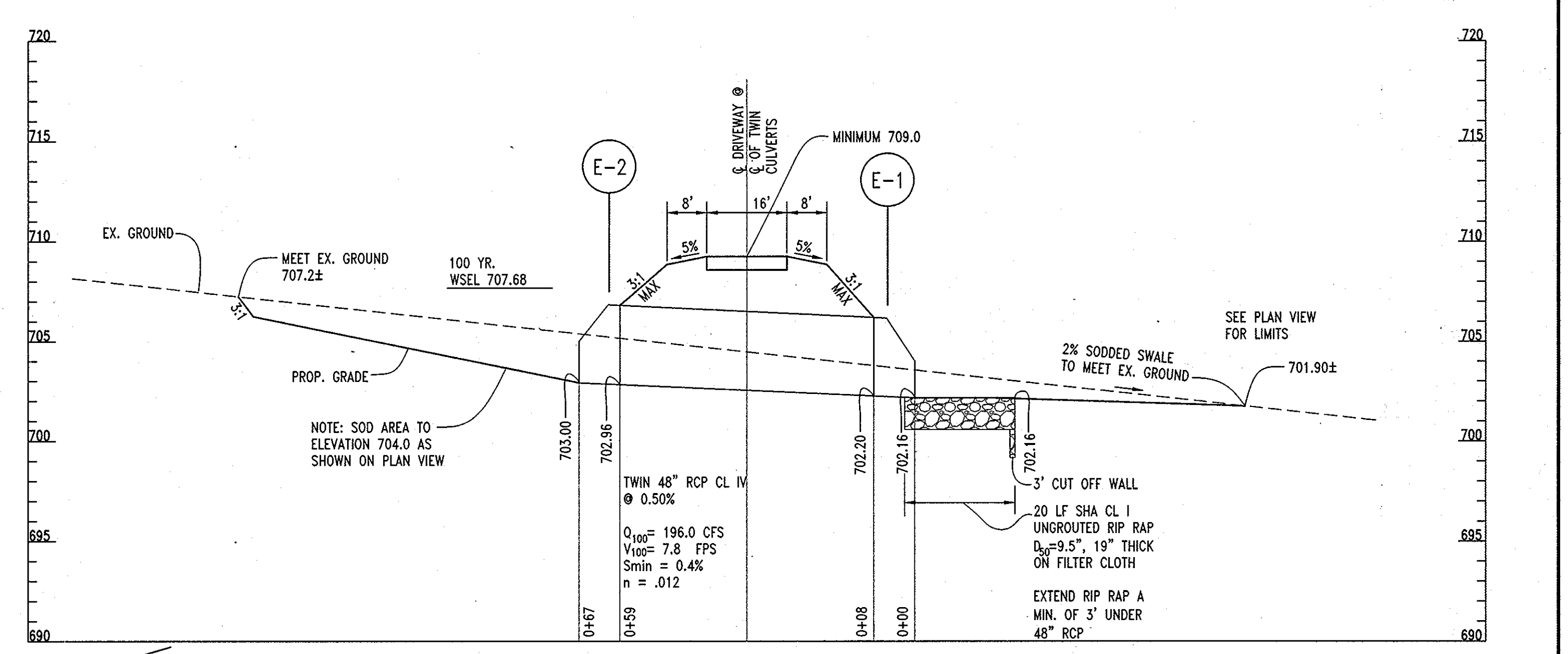
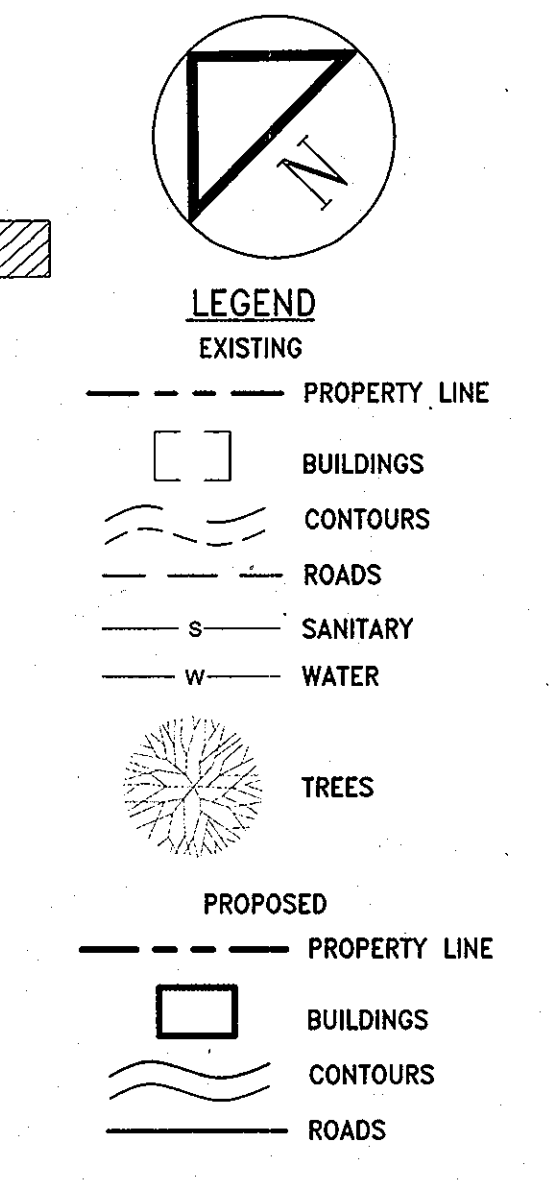
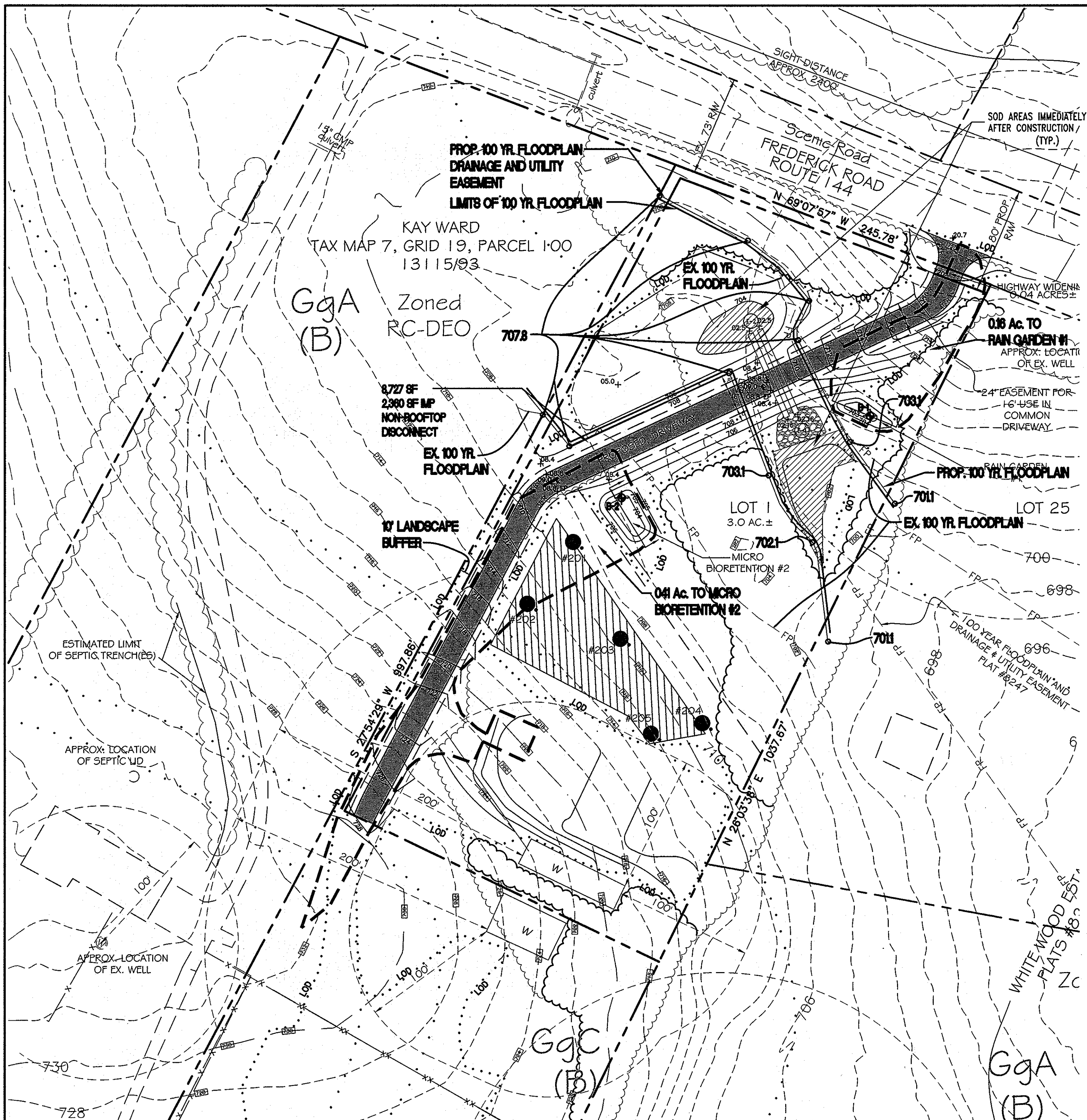
**OWNER**  
 Vincent R. Coleianne  
 815 Mindriver Drive  
 Sykesville, MD 21784  
 ph: 410-442-8068



Date: 8/13/2013  
 Proj. #: 12011  
 Scale: AS SHOWN

1 of 5

APPROVED: DEPARTMENT OF Planning & Zoning  
 [Signature] 11-26-13  
 Chief, Division of Land Development  
 [Signature] 11-21-13  
 Chief, Development Engineering Division



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

a. The Owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland Stormwater Design Manual Volume 11, Table A.4.1 and 2.

b. The Owner shall perform a plant in the spring and in the fall of each year. During the inspection, the Owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, treat diseased trees and shrubs, and replace all deficient stakes and wires.

c. The Owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.

d. The Owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

**TABLE 1 TEST PIT DATA**

Test Pit No.	Depth (Ft.) From To	Soil Descriptions and Remarks
TP-1	0 1.3	Topsoil
	1.3 6.0	Brown moist Clayey SILT, little of sand, trace rock frags (ML) (Silt Loam)
	6.0 10.0	Brown moist of SAND, and rock frags, some silt (SM) (Sandy Loam)
TP-2	0 1.0	Topsoil
	1.0 5.5	Brown moist Clayey SILT, little of sand, trace rock frags, (ML) (Silt Loam)
	5.5 10.0	Brown and reddish brown moist SILT, and of sand, some rock frags (SM) (Loam)

**TABLE B.3.2 MATERIALS SPECIFICATIONS FOR BIORETENTION**

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
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
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4632), puncture resistance (ASTM-D-4633)	n/a	for use as necessary beneath underdrains only
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
underdrain piping	F 758, Type FS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
poored in place concrete (if required)	MSHA Mix No. 3; 1'c = 3500psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-A615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.8/89; vertical loading (H-10 or H-20) allowable horizontal loading (based on soil pressures); and analysis of potential cracking
sand [1' deep]	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

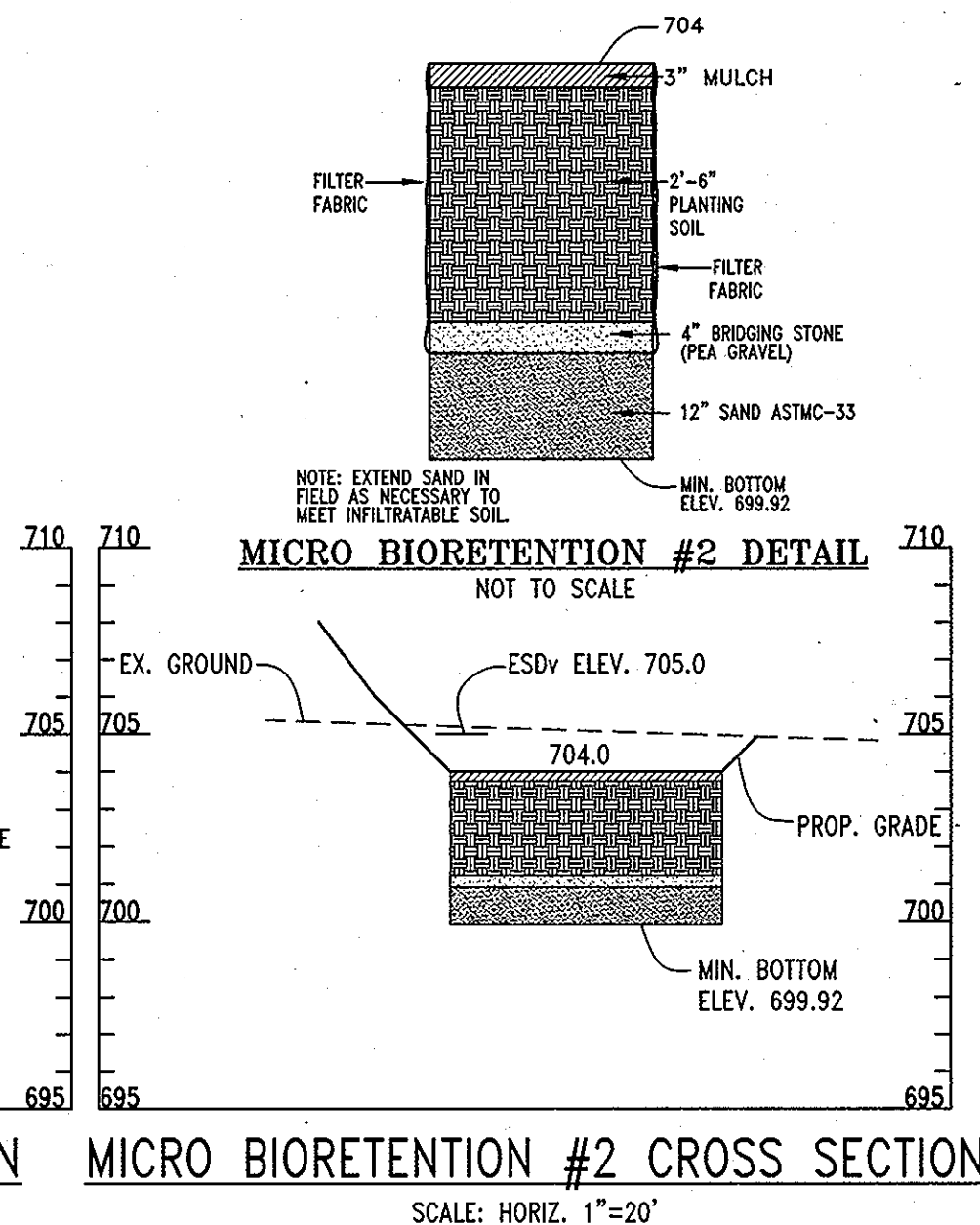
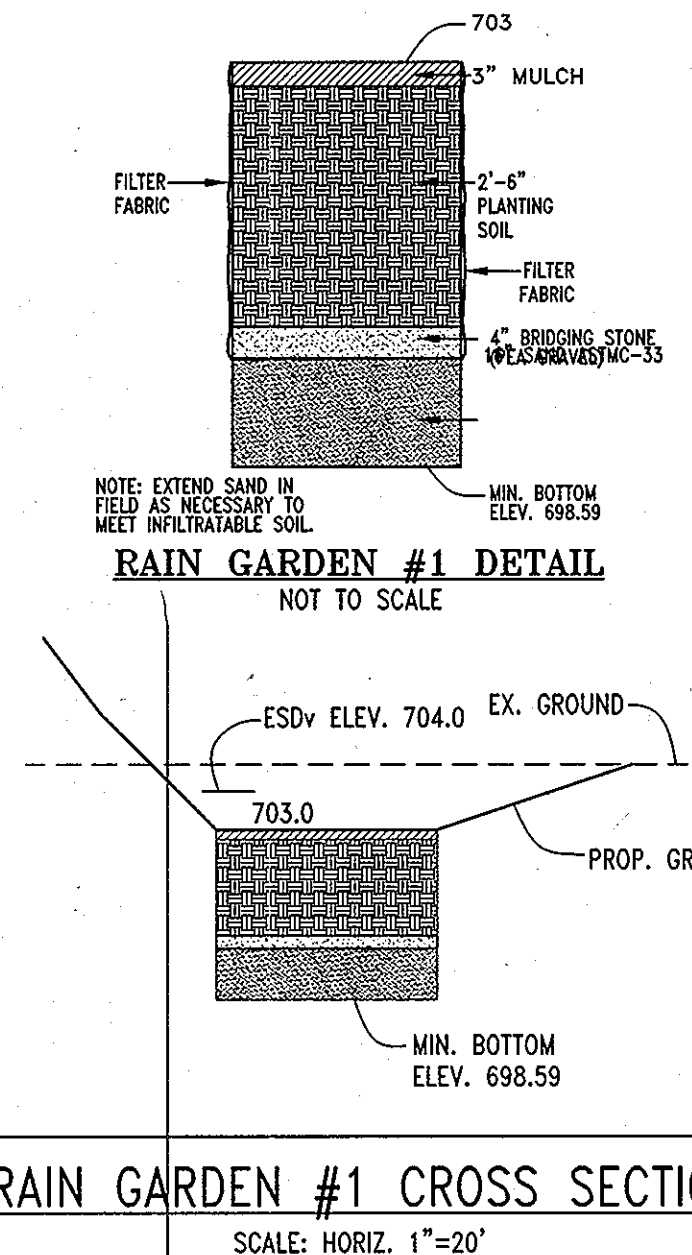
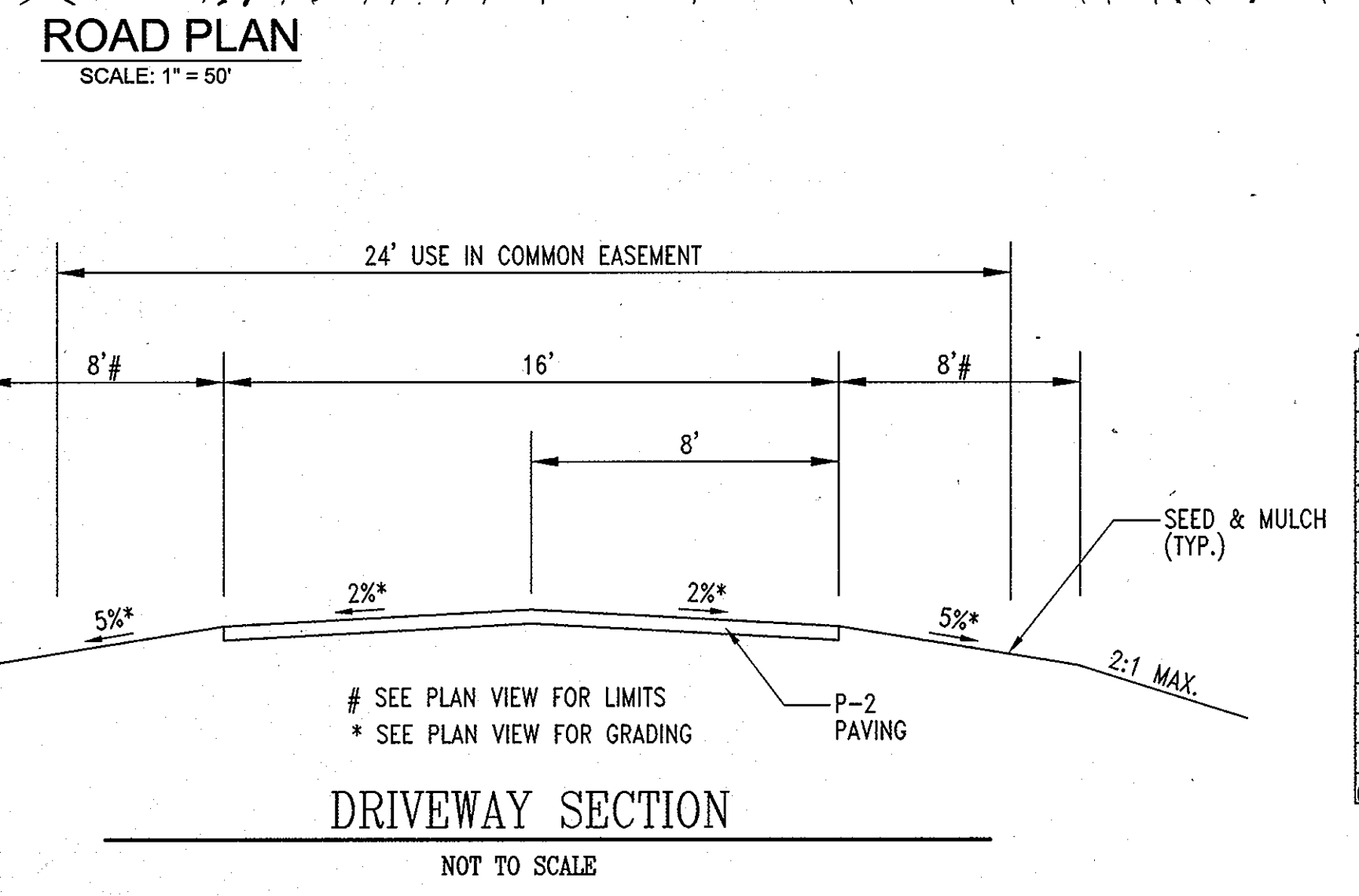
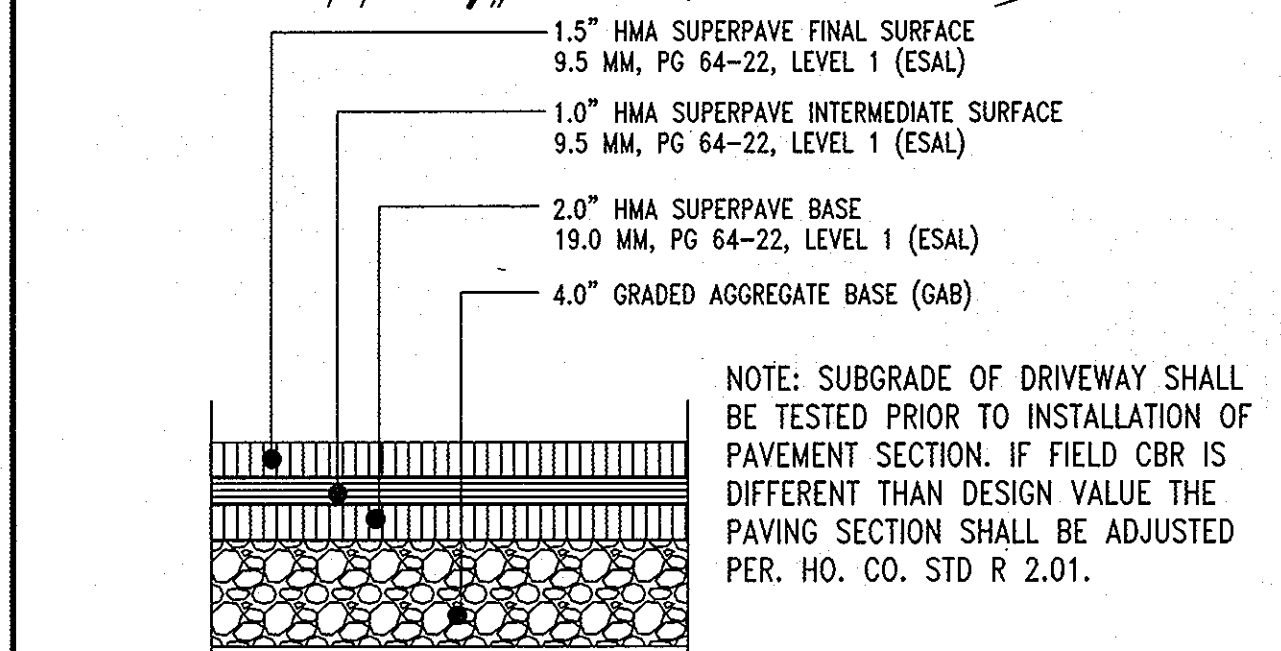
**INFILTRATION TEST DATA**

Boring No.	Approximate Infiltration Rate (Inches/hour)	Initial	
		Test Elev. (Ft.)	Test Head (Ft.)
TP-1	699	2	1" hour 4.92
		2	2" hour 4.92
		2	3" hour 4.92
		2	4" hour 5.52
TP-2	700	2	1" hour 13.56
		2	2" hour 13.80
		2	3" hour 13.68
		2	4" hour 9.12

**PIPE SCHEDULE**  
48" RCP CL IV 102 LF

**STRUCTURE SCHEDULE**

NO.	TYPE	INV. IN	INV. OUT	REMARKS	LOCATION
E-1	CONCRETE END SECTION	702.20	702.16	HO. CO. STD. D5.51 48" DIA.	SEE PLAN
E-2	CONCRETE END SECTION	703.00	702.96	HO. CO. STD. D5.51 48" DIA.	SEE PLAN



**SUMMARY OF BMPs**

LOT	BMP	Area (Ac.)	Code
LOT 1	1 RAIN GARDENS	0.16	M-7
	ROOFTOP DISCONNECTIONS	0.56	N-1
	NON ROOFTOP DISCONNECTIONS	0.20	N-2
LOT 2	1 MICRO BIORETENTION	0.41	M-6
	ROOFTOP DISCONNECTIONS	0.70	N-1
	NON ROOFTOP DISCONNECTIONS	0.70	N-2

NOTE: DESIGN AND DRAWING BASED ON THE MARYLAND COORDINATE SYSTEM HORIZONTAL - NAD 83/91, VERTICAL - NAVD 88

**CONTACT**  
Jeffrey L. Schwab  
Tesseract Sites, Inc.  
401 Washington Ave, Suite 303  
Towson MD, 21204

**OWNER**  
Vincent R. Coleanne  
815 Windriver Drive  
Sykesville, MD 21784  
ph: 410-442-8068

**Tesseract**  
Tesseract Sites, Inc.  
401 Washington Ave, Suite 303  
Towson, Maryland, 21204  
p. 410.321.7600  
f. 410.321.7601

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/14.

**Coleanne Property**  
Lots 1 & 2

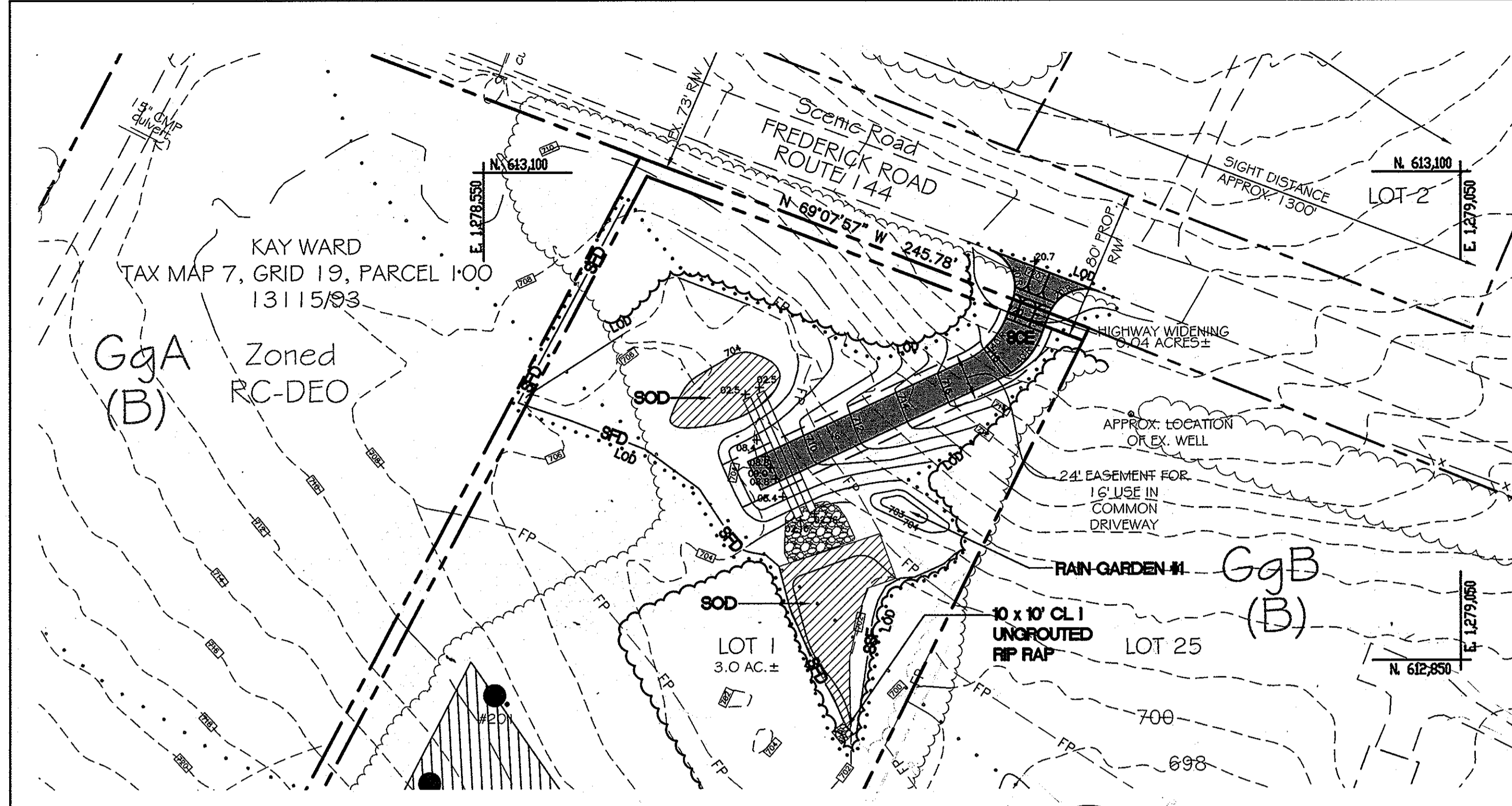
**ROAD PLAN**

SECTION/AREA: 4 LOT/PARCEL: 349  
PLAN OF LOT: 11251/195 SHEET: 1 OF 2  
DATE: 11-21-13

Date: 8/13/2013  
Proj. #: 12011  
Scale: 1"=50'

**2 of 5**

APPROVED: DEPARTMENT OF Planning & Zoning  
Date: 11-26-13  
Date: 11-21-13



**SEC PLAN PHASE 1**  
SCALE: 1" = 50'



**NOTE: TEMPORARY STOCKPILE AREAS SHALL NOT EXCEED 15' IN HEIGHT.**

**NOTE: IF REQUIRED BY THE SEDIMENT CONTROL INSPECTOR A DOUBLE ROW OF SSF IS TO BE INSTALLED AT THE CULVERT AREA.**

**NOTE: TEMPORARY OR PERMANENT SEEDING SHALL BE PERFORMED AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF ANY STANDARD NOTES.**

Seed Mixture (For Hardness Zone B)		Application Rate (lbs/ac)	Seeding Dates	Seeding Depth	Fertilizer Rate (10-20-20)	Lime Rate
No	Species					
1	Foxtail Millet	30	5/16-7/31	0.5 in.	436 lbs/ac (1019/1000 st)	2 tons/ac (90 lb/1000 st)
2	Annual Ryegrass	40	3/1-5/15 8/1-10/15	0.5 in.		
3	Pearl Millet	20	5/16-7/31	0.5 in.		

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 6 months. For longer duration of vegetative cover, Permanent Seeding is required.

Seed Mixture (For Hardness Zone B)		Application Rate (lbs/ac)	Seeding Dates	Seeding Depth	N	P205	K20	Lime Rate
No	Species							
1	Creeping Red Fescue Chewings Fescue Kentucky Bluegrass	30	3/1 - 5/15 8/1 - 10/15	1/4" - 1/2"	45 lbs/ac (10 lbs/1000 st)	90 lbs/ac (2 lbs/1000 st)	90 lbs/ac (2 lbs/1000 st)	2 tons/ac (90 lb/1000 st)

**FOR SEEDING DATES 5/16 - 7/31, ADD 4.0 LBS PER ACRE OF FOXTAIL OR PEARL MILLET TO SEED MIXTURE NO. 11.**

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT on 10/13/13.

**ENGINEER'S CERTIFICATE**  
I hereby certify that this plan for sediment and erosion 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.  
Signature: *Jeffrey L. Schwab* Date: 10/13/13  
Title: *Professional Engineer*

**DEVELOPER'S CERTIFICATE**  
I hereby certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Environmental 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.  
Signature: *Vincent R. Coleiarne* Date: 10/13/13  
Title: *Developer*

APPROVED: DEPARTMENT OF Planning & Zoning  
Chief, Division of Land Development *David...* Date: 11/26/13  
Chief, Development Engineering Division *...* Date: 10-28-13

SEQUENCE OF CONSTRUCTION PHASE 1	NO. OF DAYS
1. OBTAIN GRADING PERMIT AND OBTAIN SHA DISTRICT OFFICE PERMIT FOR DRIVEWAY AND REQUEST PRECONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR.	1
2. CLEAR & GRUB FOR AND INSTALL PHASE 1 SEDIMENT CONTROL MEASURES INCLUDING SSF, SCE AND SFD AND STABILIZE AREAS DISTURBED BY THIS PROCESS.	7
3. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR CLEAR AND GRUB REMAINING AREA WITHIN PHASE 1 L.O.D.	7
4. ROUGH GRADE AND INSTALL TWIN 48" CULVERTS AND RIP RAP, STABILIZE CHANNEL ABOVE AND BELOW RIP RAP WITH SOD WHERE SHOWN IN PLAN.	7
5. INSTALL DRIVEWAY TO LIMITS SHOWN ON PHASE 1.	7
6. STABILIZE ALL REMAINING DISTURBED AREAS WITH SEED AND MULCH. ONCE AREA DRAINING TO RAIN GARDEN HAS BEEN STABILIZED, INSTALL RAIN GARDEN.	7
7. UPON THE ESTABLISHMENT OF VEGETATIVE COVER WITHIN L.O.D. OF PHASE 1 AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE PHASE 1 SEDIMENT AND EROSION CONTROL MEASURES EXCEPT SCE AND STABILIZE AREAS DISTURBED BY THIS PROCESS.	1
8. PROCEED TO PHASE 2.	

**9-4.3 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS**

**Definition**  
The process of preparing the soil to sustain adequate vegetative stabilization.

**Purpose**  
To provide a suitable soil medium for vegetative growth.

**Conditions Where Practice Applies**  
Where vegetative stabilization is to be established.

**Criteria**

A. Soil Preparation

- Temporary Stabilization**
  - Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
  - Apply fertilizer and lime as prescribed on the plans.
  - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
- Permanent Stabilization**
  - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
    - Soil pH between 6.0 and 7.0.
    - Soluble salts less than 500 parts per million (ppm).
    - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if loessgrasses will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
    - Soil contains 1.5 percent minimum organic matter by weight.
  - Soil contains sufficient pore space to permit adequate root penetration.
  - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
  - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
  - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
  - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seeded preparation. Track slopes 3:1 or flatter with method equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.
- Topsoiling**
  - Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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 unacceptably soil texture.
  - Topsoil salvaged from an existing site may be used provided 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-NRCS.
  - Topsoiling 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 containing 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 lime is not feasible.
  - Areas having slopes steeper than 2:1 require special consideration and design.
- Topsoil Specification:** Soil to be used as topsoil must meet the following criteria:
  - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, snags, trash, or other materials larger than 1 1/2 inches in diameter.
  - Topsoil must be free of excess plant matter such as stems, grass, weeds, and other plants.
  - Topsoil must be free of animal wastes, or other materials as specified.
  - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- Topsoil Application**
  - Erosion and sediment control practices must be maintained when applying topsoil.
  - Uniformly distribute topsoil to a 5 to 6 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of ruts, puddles, or water pockets.
  - Topsoil must not be placed if the topsoil or subsoil is in a frozen or midday condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

B. Soil Amendments (Fertilizer and Lime Specifications)

- Soil tests must be performed to determine the exact fertilizer and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
- Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroxyferric which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 85 to 100 percent will pass through a #20 mesh sieve.
- Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- Where the subsoil is other than highly acidic or composed of heavy clays, spread ground limestone at the rate of 1 to 2 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

**9-4.4 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING**

**Definition**  
The application of seed and mulch to establish vegetative cover.

**Purpose**  
To protect disturbed soils from erosion during and at the end of construction.

**Conditions Where Practice Applies**  
To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

**Criteria**

A. Seed Mixture

- Specifications**
  - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to testing by a recognized seed laboratory. All seed used must have been tested within 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.1 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and testing rate.
  - Mulch alone may be applied between the fall and spring seedling dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
  - Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit kill weak bacteria and make the inoculant less effective.
  - Soil seed must not 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 dispersal of phyto-toxic materials.
- Application**
  - Incorporate seed into the subsoil as the seeds prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.**
  - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
  - Drill or Outdragger Seeding:** Mechanical seeders that apply and cover seed as specified.
  - Cultipacker seeders** are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
  - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
  - Hydroseeding:** Apply seed uniformly with the hydroseeder (slurry includes seed and fertilizer).
    - If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre; total of soluble nitrogen, P<sub>2</sub>O<sub>5</sub> (phosphorus), 200 pounds per acre; K<sub>2</sub>O (potassium), 200 pounds per acre.
    - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
    - Mix seed and fertilizer on site and seed immediately and without interruption.
  - When hydroseeding do not incorporate seed into the soil.

B. Mulching

- Mulch Materials (in order of preference)**
  - Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland State Seed and not musty, moldy, caked, decayed, or other materials that may be detrimental to proper grading and seedbed preparation.
  - Wood Cellulose Fiber Mulch (WCFFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
    - WCFFM is to be dry green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
    - WCFFM, including dyes, must contain no germination or growth inhibiting factors.
    - WCFFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must be free of blotter-like ground cover, on application, having moisture absorption and penetration properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
    - WCFFM material must not contain elements or compounds at concentrations levels that will be phyto-toxic.
    - WCFFM must conform to the following physical requirements: fiber length of approximately 10 millimeters; diameter approximately 1 millimeter; pH range of 4.0 to 8.5; wet content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
- Application**
  - Apply mulch to all seeded areas immediately after seeding.
  - When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
  - Wood cellulose fiber used as mulch must be applied at a dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to obtain a mixture with a maximum of 50 percent of wood cellulose fiber per 100 gallons of water.
- Anchoring**
  - Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
    - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 4 inches. This practice is most effective on large areas, but is limited to areas where equipment can operate safely. If used on sloping land, this practice should follow the contour.
    - Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water to a maximum of 50 percent of wood cellulose fiber per 100 gallons of water.
    - Synthetic binders such as Acrylic DLR (Acris-Tack), DCA-70, Penetrol, Tern II, Tern Tack AR, or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders tends to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
    - Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 500 to 3,000 feet long.

**9-4.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

**Definition**  
To stabilize disturbed soils with permanent vegetation.

**Purpose**  
To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

**Conditions Where Practice Applies**  
Exposed soils where ground cover is needed for 6 months or more.

**Criteria**

A. Seed Mixture

- General Uses**
  - Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
  - Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planning.
  - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
  - For areas receiving low maintenance, apply urea form fertilizer (45-0-0) at 3 1/2 pounds per 1000 square feet (10 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
- Fertilizer Mixtures**
  - Areas where fertilizers may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
  - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
    - Kentucky Bluegrass:** Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of total mixture by weight.
    - Kentucky Bluegrass/Perennial Rye:** Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
    - Tall Fescue/Kentucky Bluegrass:** Full Sun Mixture: For use in drought prone areas and/or areas receiving low maintenance. Recommended mixtures in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
    - Kentucky Bluegrass/Fine Fescue:** Shade Mixture: For use in areas with shade in bluegrass lawns. For establishment in high quality, intensively managed turf areas. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 19 to 25 pounds per 1000 square feet.

Notes:  
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland."  
Choose certified material. Certified material is the best guarantee of cultural purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

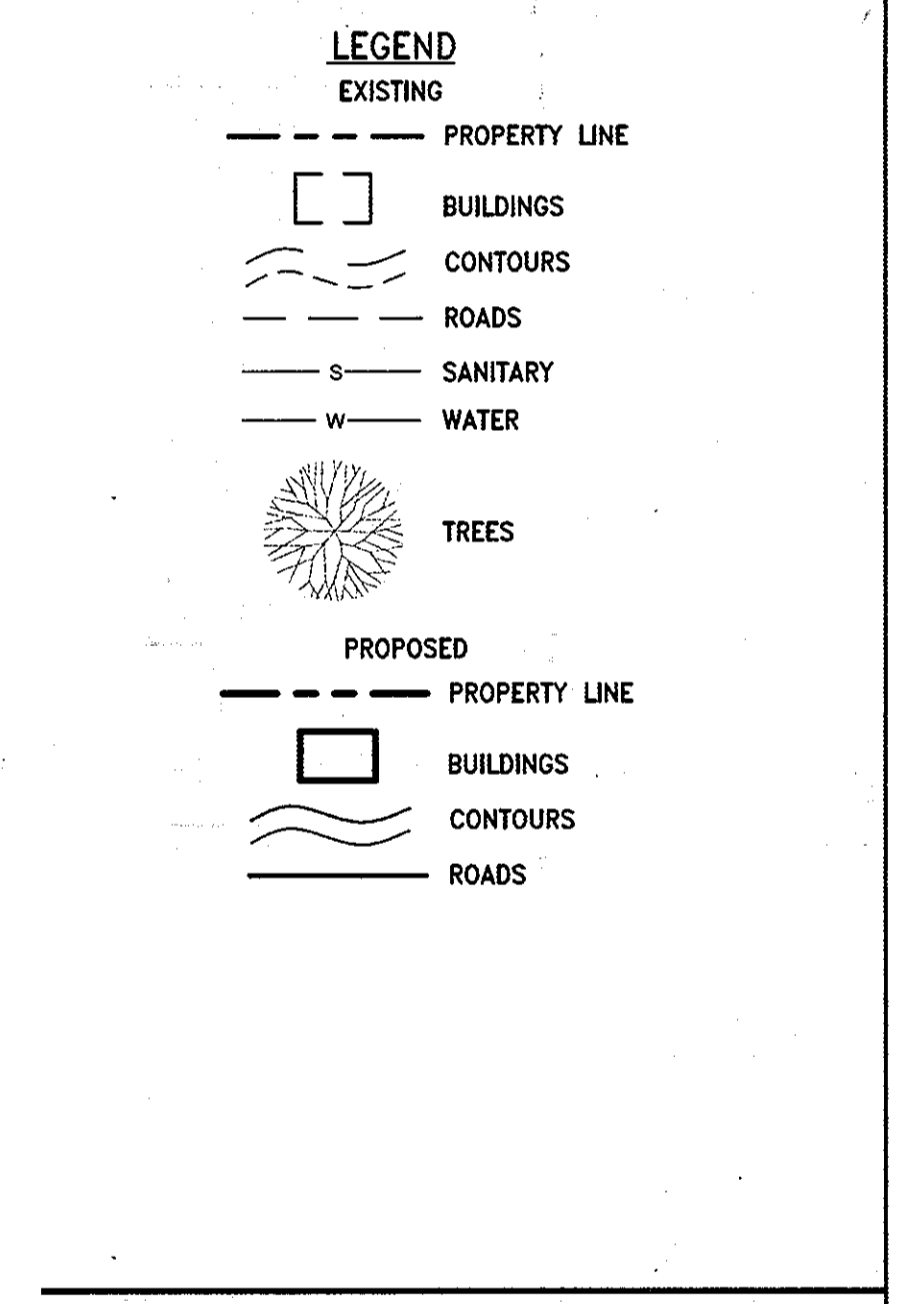
I. Ideal Times of Seeding For Turf Grass Mixtures  
Western MD: March 15 to June 1, August 1 to October 15 (Hardiness Zones: 5b, 6a)  
Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)  
Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

II. Tilt areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/4 inch in size. The seedbed must be smooth and free of clumps of weeds. The seedbed must be prepared in such a manner that the soil surface will be firm and not compact. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

- General Specifications**
  - Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
  - Sod must be machine cut to a uniform soil thickness of 1/2 inch, plus or minus 1/8 inch, at the time of cutting. Measurement cut at thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
  - Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp in the upper 10 percent of the section.
  - Sod must not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
  - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period must be approved by an agronomist or soil scientist prior to its installation.
- Sod Installation**
  - During periods of excessively high temperature or in areas having dry rainfall, lightly irrigate the subsoil immediately prior to laying the sod.
  - Lay the first row of sod in a straight line with subsoil rows placed parallel to it and tightly tucked against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the sod.
  - Whenever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent floating joints. Ensure solid contact exists between sod rows and the underlying soil surface.
  - Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
- Sod Maintenance**
  - In the absence of adequate rainfall, water daily during the first week or so after and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
  - After the first week, sod watering is required as necessary to maintain adequate moisture content.
  - Do not mow until the sod is firmly rooted. No more than 1/2 of the grass tuft must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

- HOWARD SOIL CONSERVATION DISTRICT**  
**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 most current 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) 3 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 7 days as to all other disturbed or graded areas on the project site.
  - All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment 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: 6.00 Acres  
Area to be graded: 1.50 Acres  
Area to be vegetatively stabilized: 0.82 Acres  
Total Cut: 1,655 Acres  
Total Fill: 1705 Cu. Yds.  
2114 Cu. Yds.  
Off-site wash/borrow area location: Unknown.
  - Any sediment control practices which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
  - Additional sediment control 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 by the end of each work day, whichever is shorter.
  - Any changes or revisions to the sequence of construction must be reviewed and approved by the plan approval authority prior to proceeding with construction.
  - A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the enforcement authority. Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time.



**Tesseract™**  
TERRACER SITES, INC.  
401 Washington Ave., Suite 303 P.O. #10,281,7600  
Towson, Maryland, 21284 P.#: 410,281,7601

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/14.

**Coleiarne Property**  
Lots 1 & 2

**SEDIMENT & EROSION CONTROL PLAN & DETAILS PHASE 1**

REVISION NUMBER: 4 LOT NUMBER: 349

DATE OF PLAN: 11/25/13 JOB: 00765 DRAWING NO: 00765-0101 SHEETS: 4 of 4

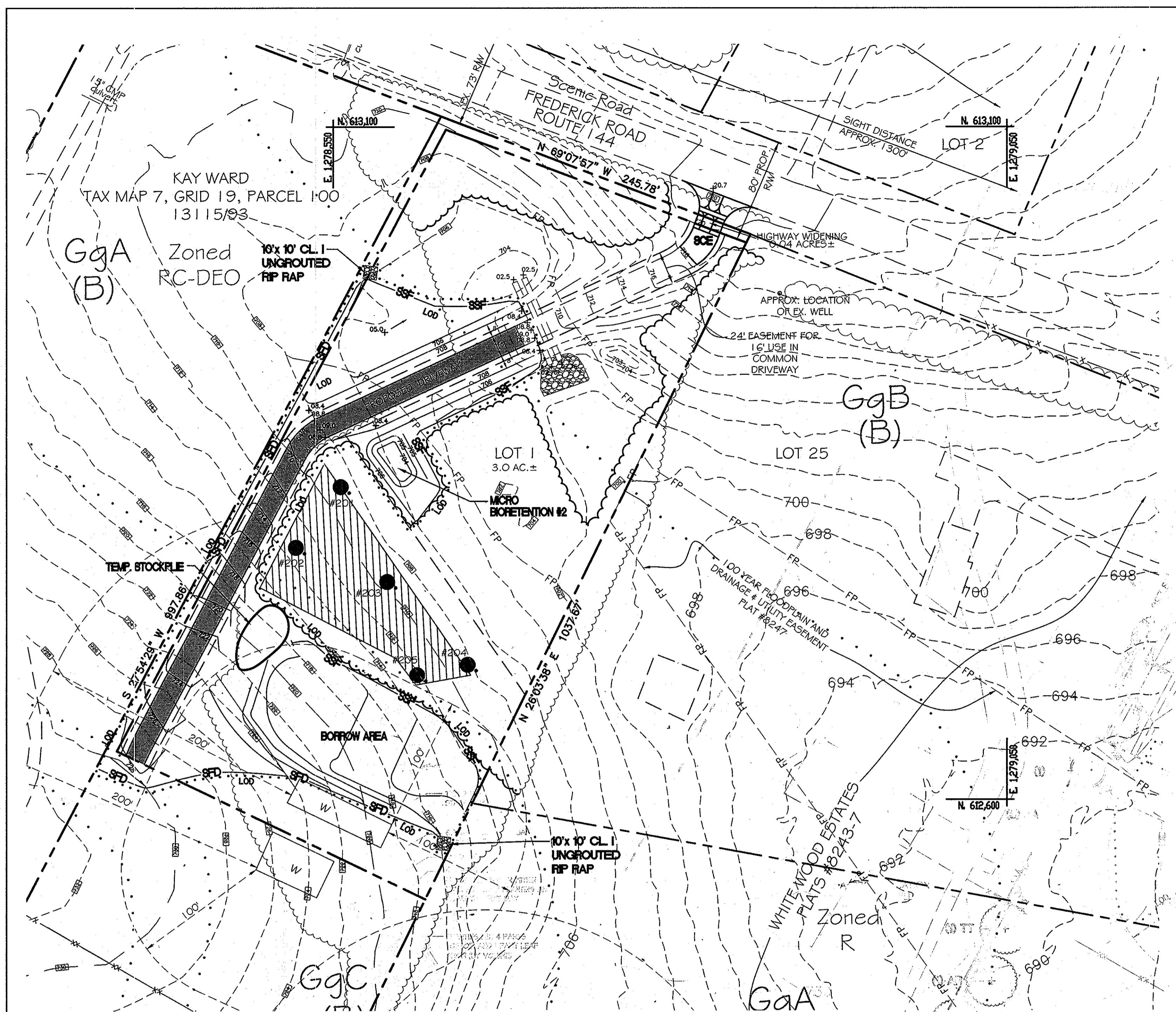
DATE OF SUBMITTAL: 11/25/13 JOB: 00765 DRAWING NO: 00765-0101 SHEETS: 4 of 4

**CONTACT**  
Jeffrey L. Schwab  
Tesseract Sites, Inc.  
401 Washington Ave., Suite 303  
Towson, MD, 21284

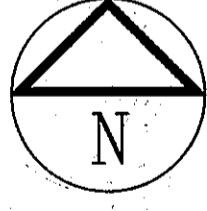
**OWNER**  
Vincent R. Coleiarne  
815 Nantuxer Drive  
Sykesville, MD 21784  
ph 410-442-8068

Date: 8/13/2013  
Proj. #: 12011  
Scale: 1"=50'

**3 of 5**



SEC PLAN PHASE 2  
SCALE: 1" = 50'



This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *John R. Schaub* Date: 10/11/13

**ENGINEER'S CERTIFICATE**  
 I hereby certify that this plan for sediment and erosion 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.  
 Signature: *John R. Schaub* Date: 10/13/13

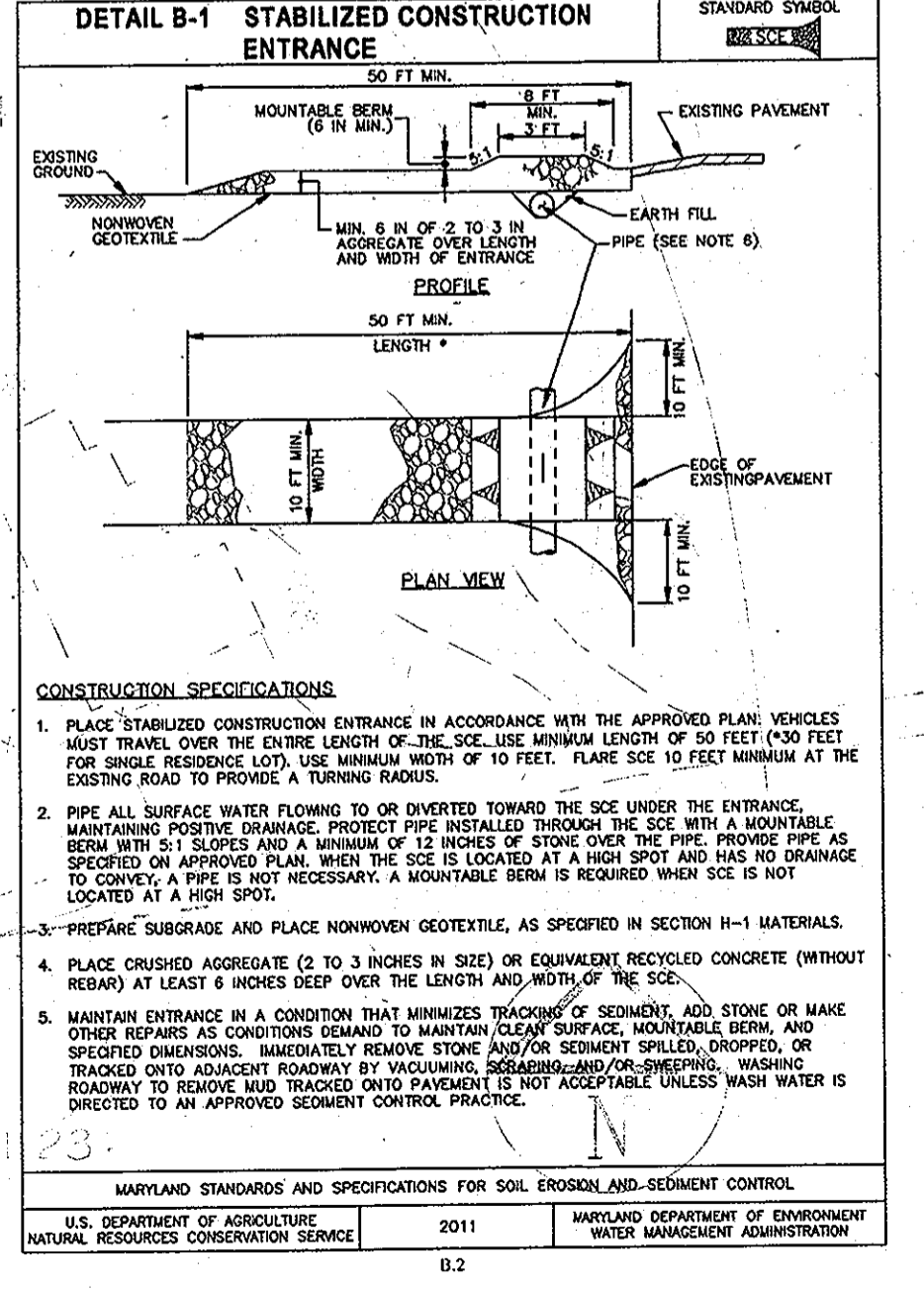
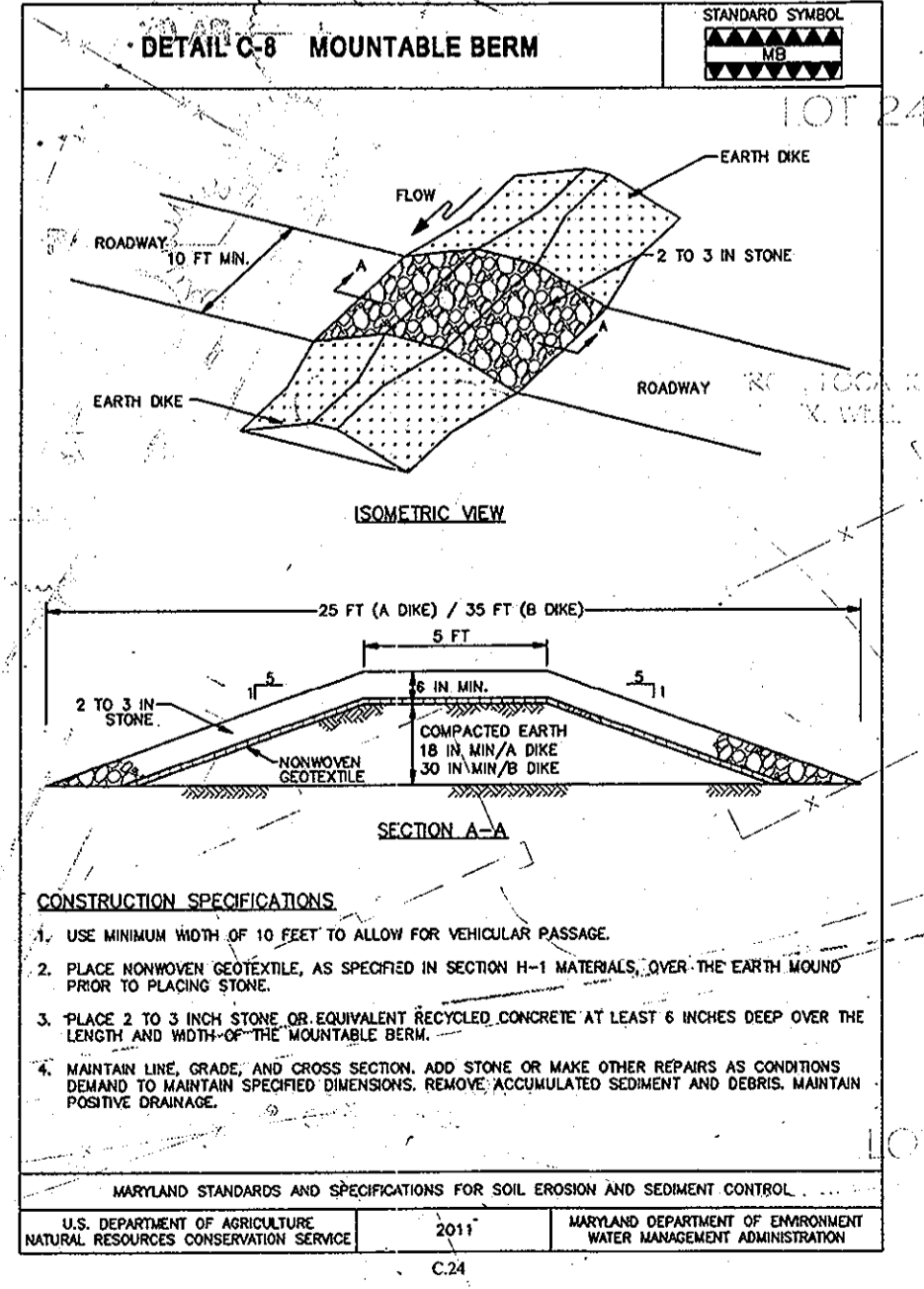
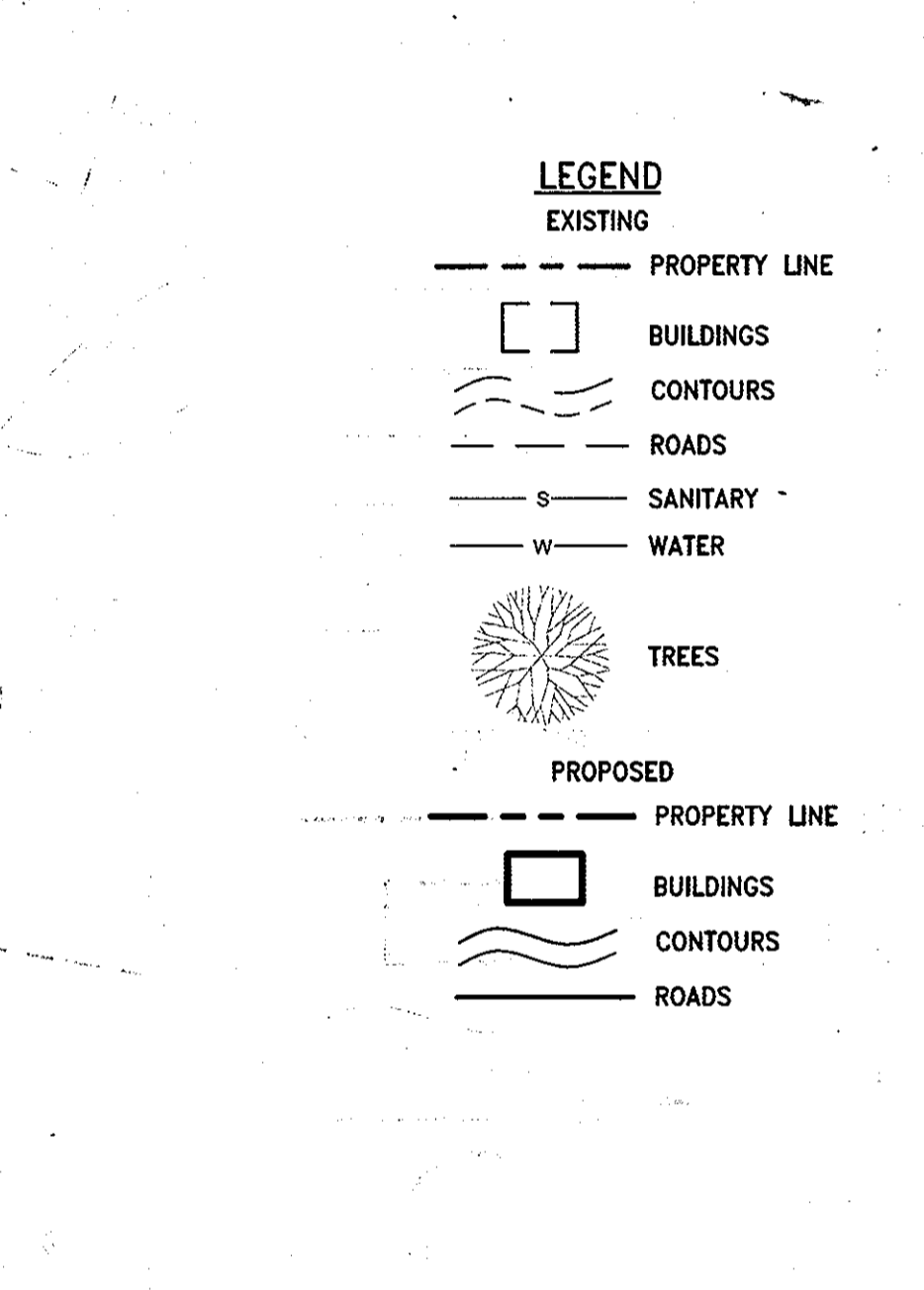
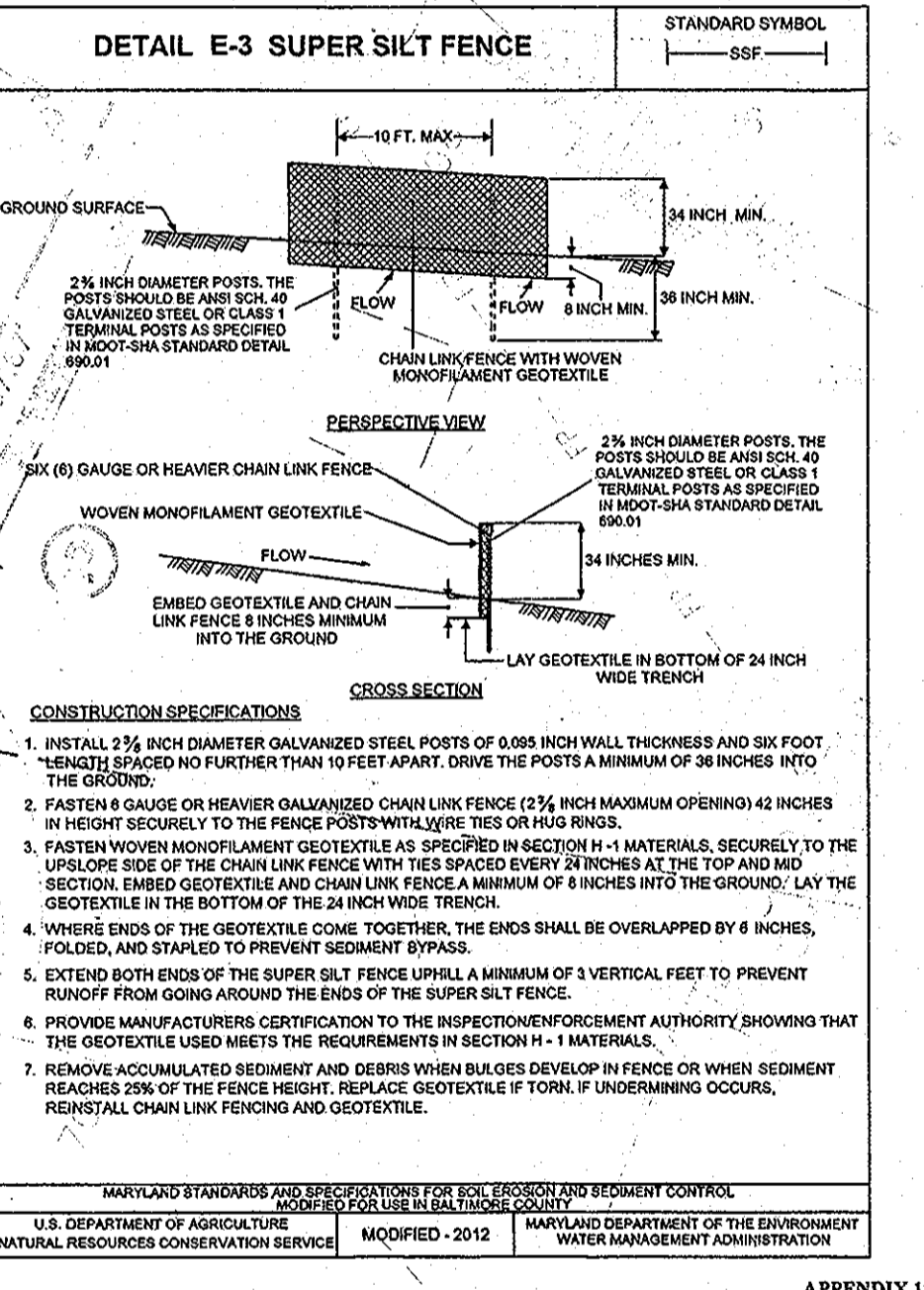
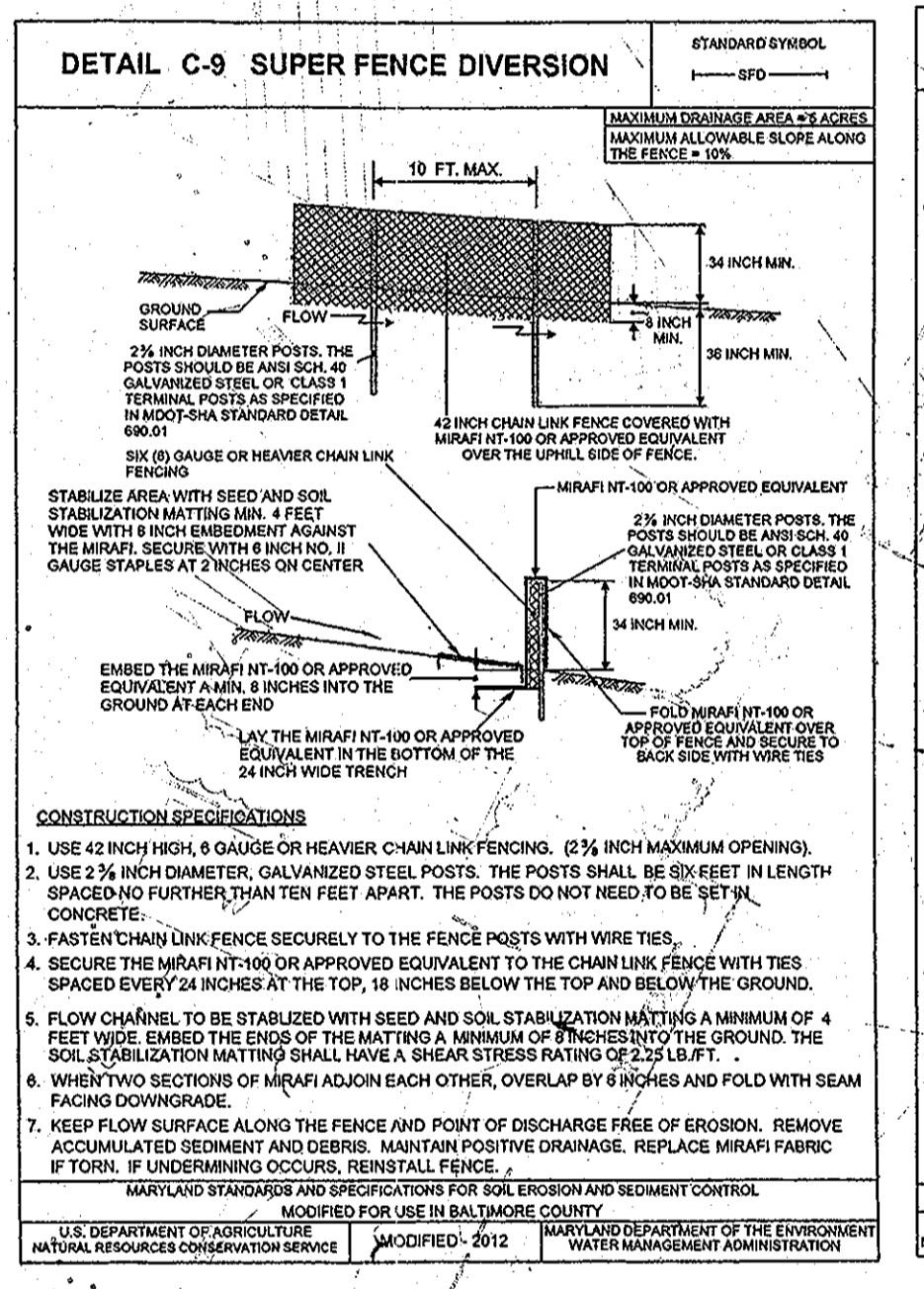
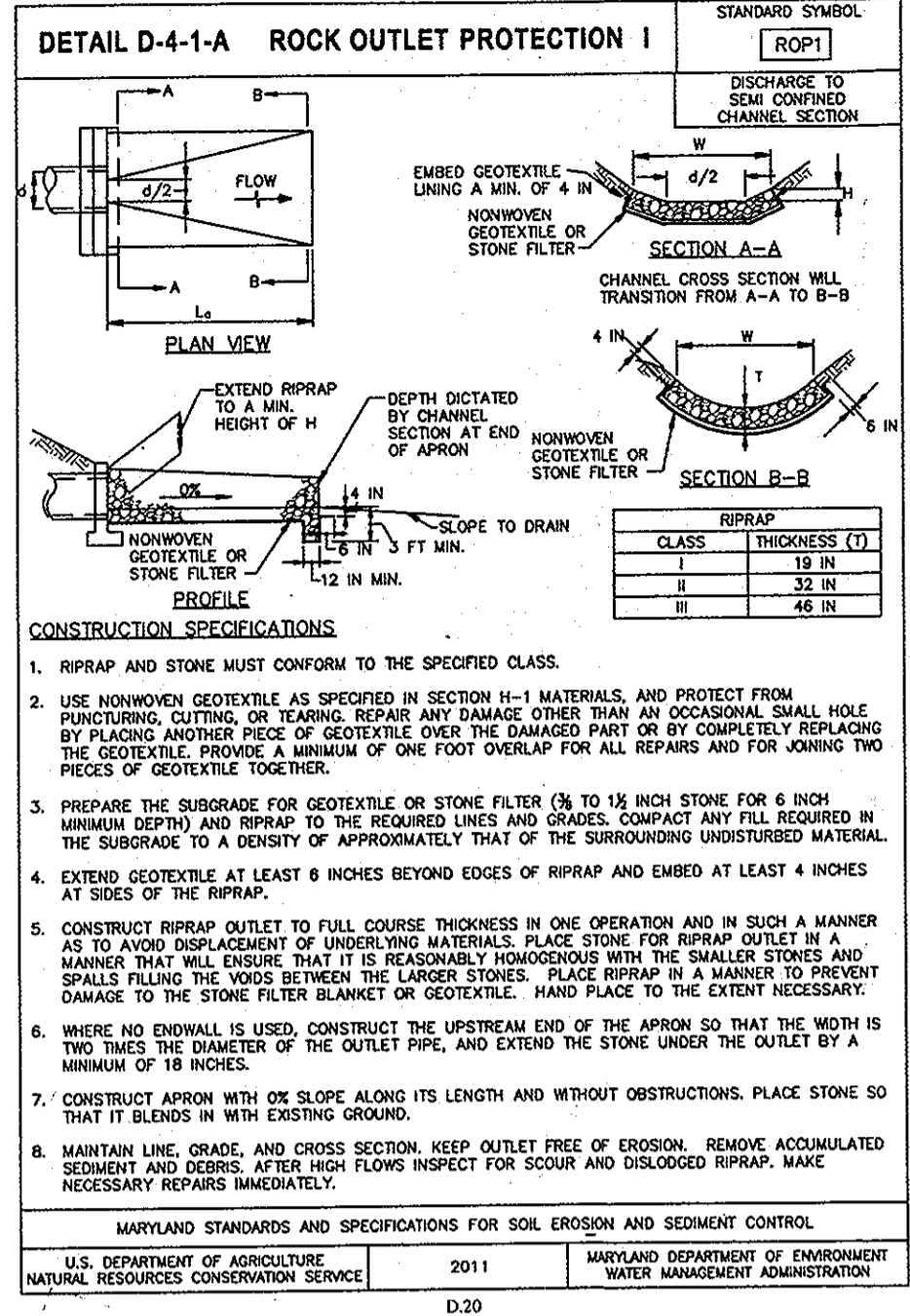
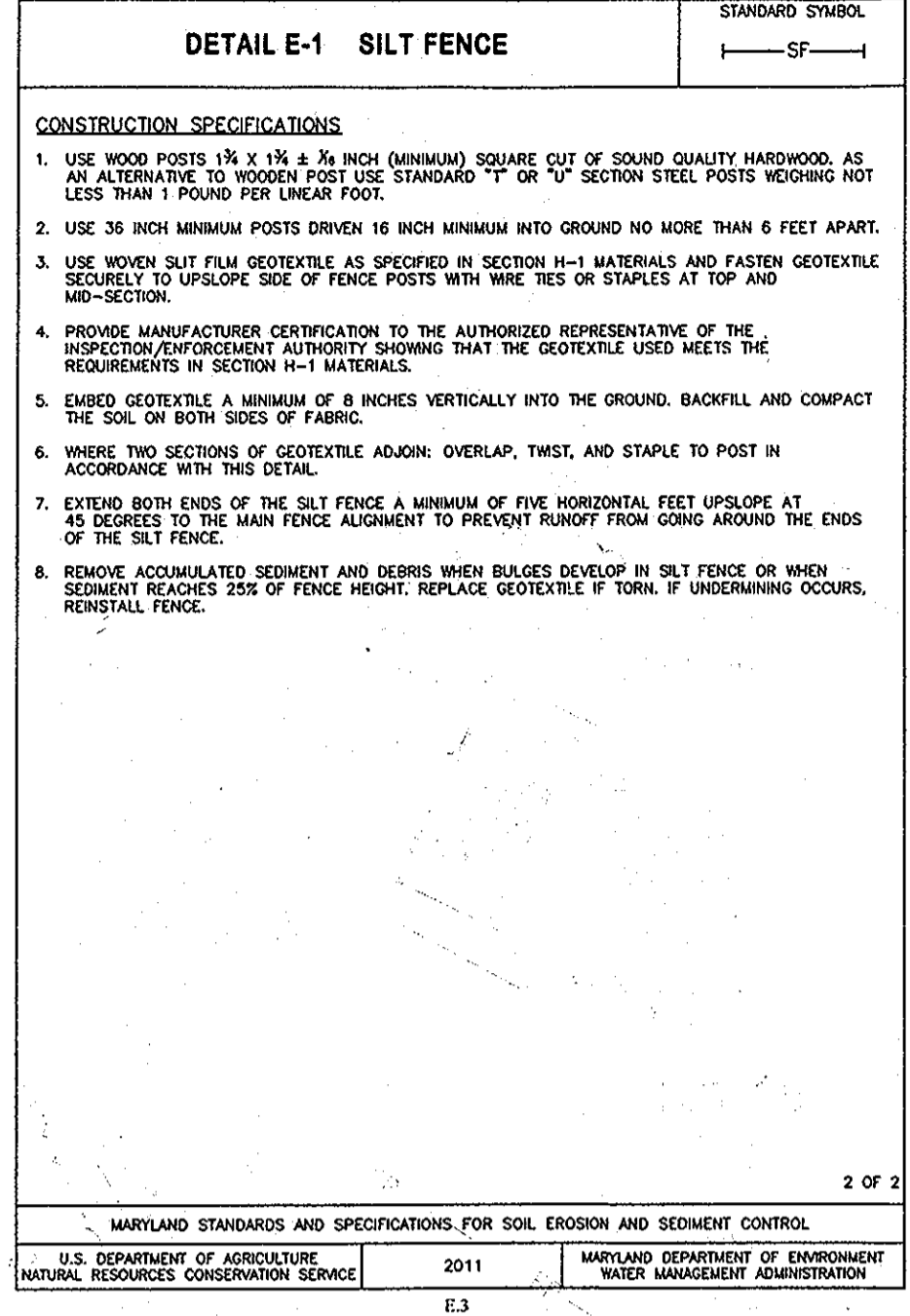
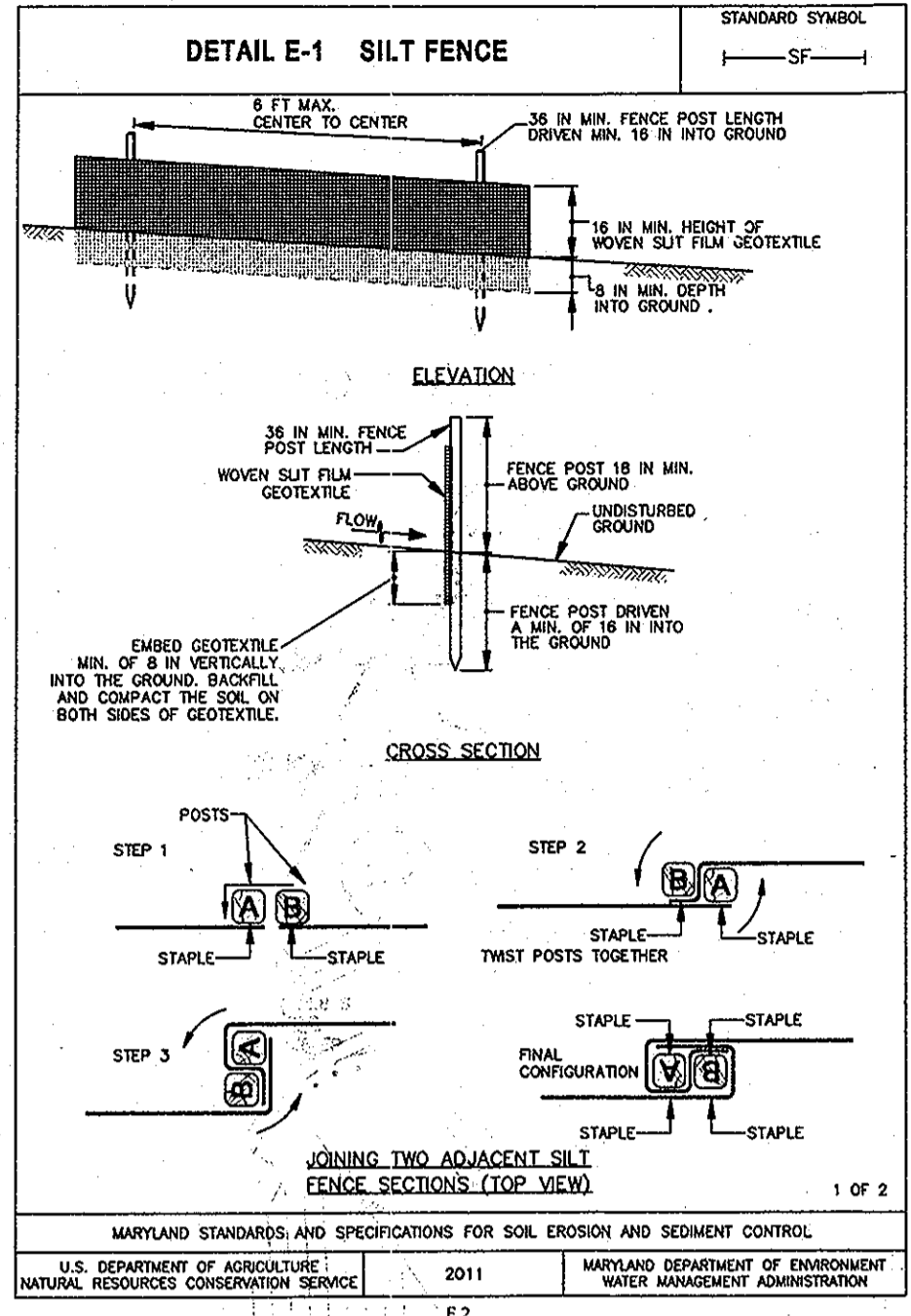
**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Environment 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.  
 Signature: *Vincent R. Colelano* Date: 10/13/13

APPROVED: DEPARTMENT OF Planning & Zoning  
 Chief, Division of Land Development  
 Chief, Development Engineering Division

NOTE: TEMPORARY STOCKPILE AREAS SHALL NOT EXCEED 15' IN HEIGHT.

SEQUENCE OF CONSTRUCTION - PHASE 2

NO. OF DAYS	DESCRIPTION
1	INSTALL PHASE 2 SEDIMENT & EROSION CONTROL MEASURES INCLUDING SFD AND SSF AND STABILIZE AREAS DISTURBED BY THIS PROCESS.
4	WITH PERMISSION THE SEDIMENT CONTROL INSPECTOR CLEAR & GRUB REMAINDER OF AREA WITHIN PHASE 2 LOD.
5	ROUGH GRADE FOR DRIVEWAY.
5	CONSTRUCT DRIVEWAY.
3	FINE GRADE AND STABILIZE REMAINING DISTURBED AREAS IN PHASE 2 WITH SEED AND MULCH.
7	UPON STABILIZATION OF THE AREA DRAINING TO MICRO BIOTRETENTION FACILITY, INSTALL MICRO BIOTRETENTION.
1	AFTER SITE IS PROPERLY STABILIZED, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING DISTURBED AREAS.



APPENDIX 17

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

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/14.

**Colelano Property**  
 Lots 1 & 2

**SEDIMENT & EROSION CONTROL PLAN & DETAILS PHASE 2**

SECTION NAME	SECTION AREA	LOT NUMBER
PLAN OR LOT	DATE	DATE
125/195	1 R-20	4th

CONTACT: Jeffrey L. Schwab, Tesseract Sites, Inc., 401 Washington Ave, Suite 303, Towson MD, 21204

OWNER: Vincent R. Colelano, 815 Minariver Drive, Sykesville, MD 21784, ph 410-442-8068

Date: 8/13/2013  
 Proj. #: 12011  
 Scale: 1"=50'

4 of 5

**PLANT SCHEDULE:** (for planting required by Landscape Manual)

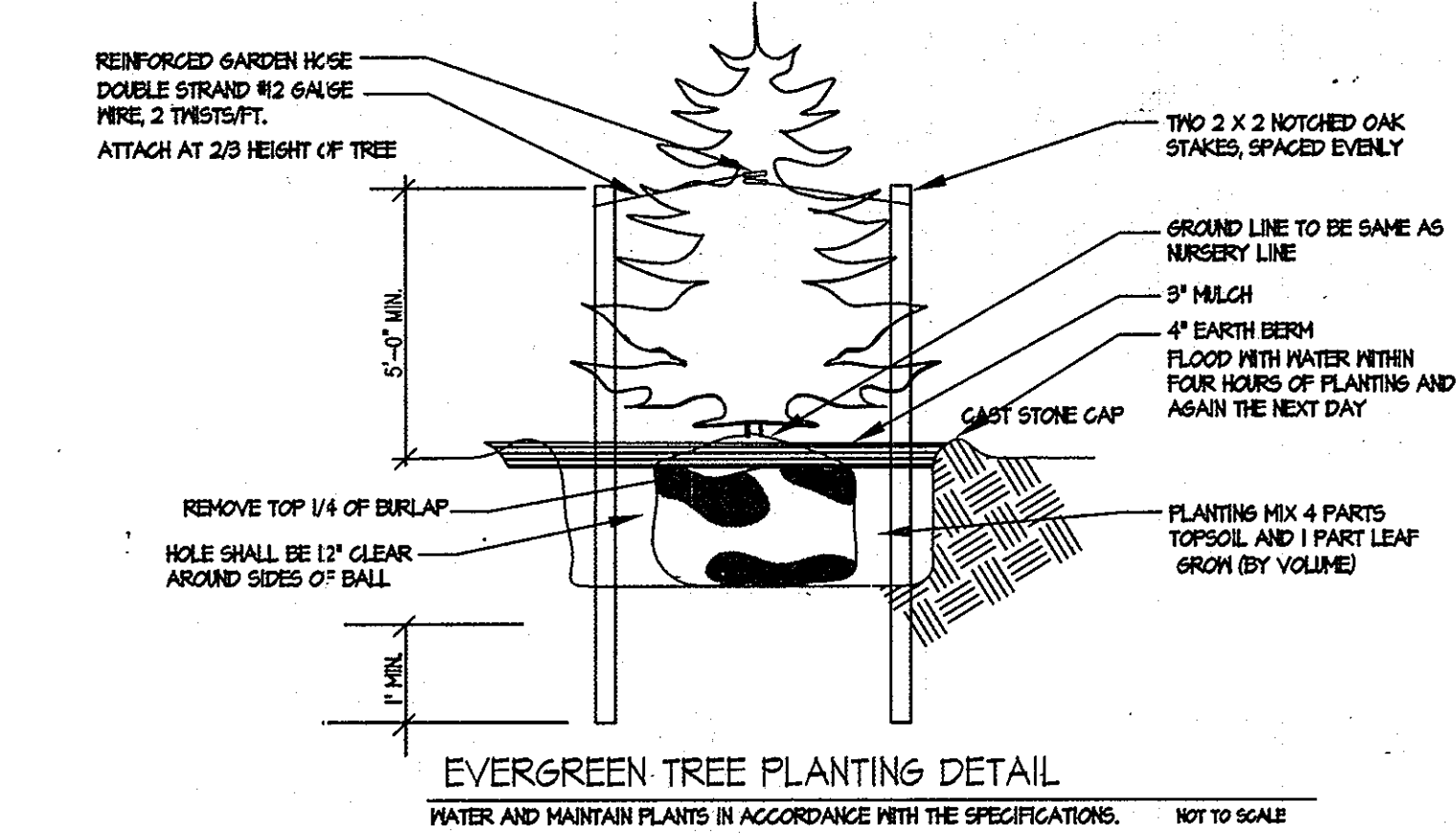
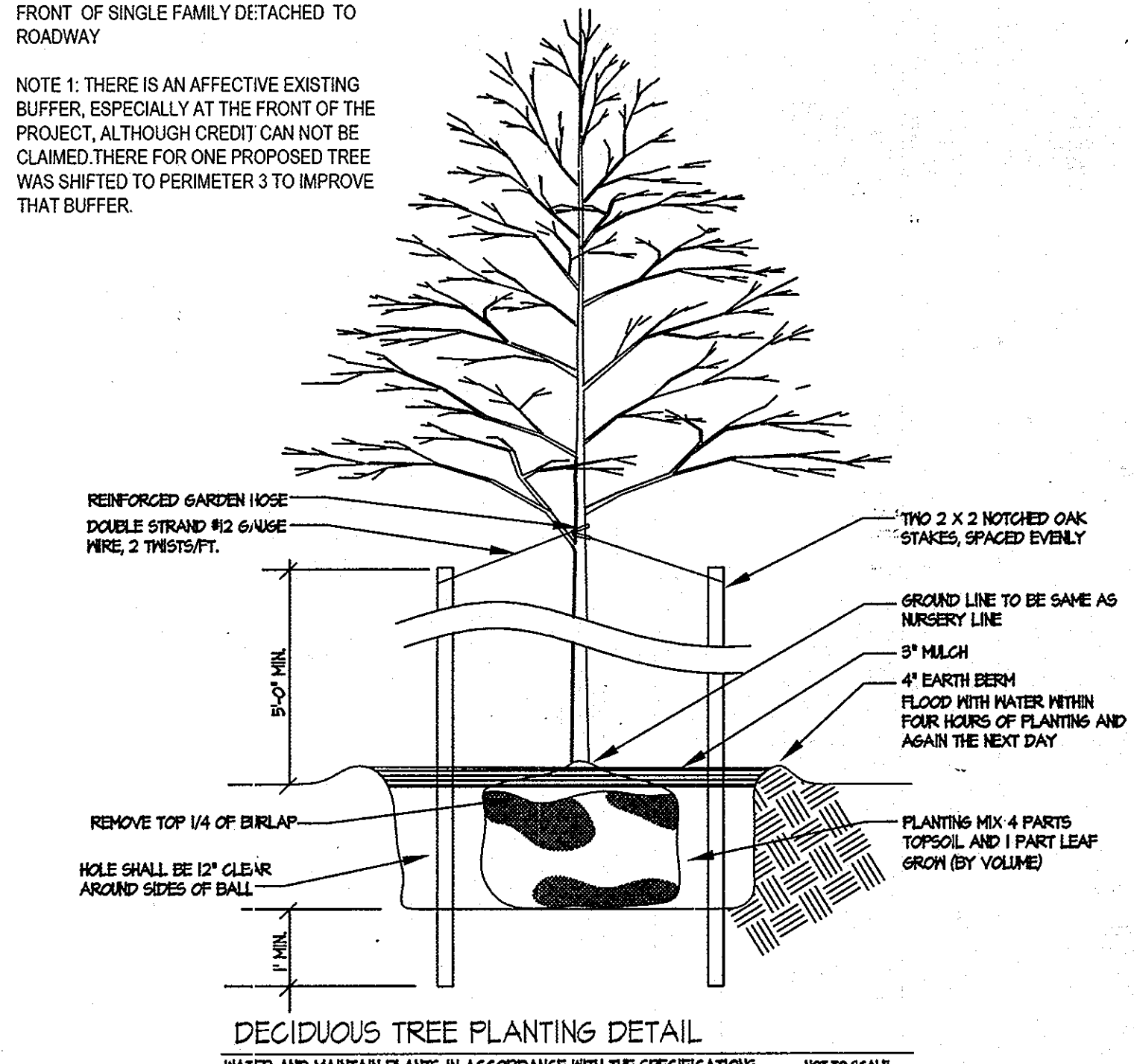
KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	COMMENTS
<b>MAJOR DECIDUOUS TREES</b>					
AR	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" CAL	1	B4B
OP	QUERCUS PHELLICIS	WILLOW OAK	2 1/2" CAL	4	B4B
TT	TILIA TORENTOSA	SILVER LINDEN	2 1/2" CAL	4	B4B
<b>MINOR (PLANTING) TREES</b>					
AA	ABELANCHIER 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8'-12' HT	4	B4B OR CONT. MULTI-STEMMED
LM	LAGERSTROEMIA INDICA x FAURIEI 'MUSKOGEE'	'MUSKOGEE' CREPE MYRTLE	8'-12' HT	3	B4B OR CONT. MULTI-STEMMED
<b>EVERGREEN TREES</b>					
IO	ILEX NELLIE STEVENS	NELLIE STEVENS HOLLY	5'-6' HT	4	B4B OR CONT.
PA	PICEA ABIES	NORWAY SPRUCE	6'-8' HT	1	B4B
PO	PICEA CMORICA	SERBIAN SPRUCE	6'-8' HT	2	B4B

SCHEDULE A - PERIMETER LANDSCAPING

Category	Adjacent to Roadways		Adjacent to Perimeter Properties	
	1	2	3	4
Landscape	N/A*	A	A	A
Linear Feet of Roadway Frontage/Perimeter	N/A	1038'	278'	998'
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	N/A	YES 560'	YES 45' +2 SPECIMEN TREES	YES 70'
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	N/A	NO	NO	NO
Number of Plants Required Shade Trees Evergreen Trees Shrubs	N/A	478/160-8 8	233/160-4 2 +2 SPECIMEN TREES	928/160-16 16
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	N/A	SEE NOTE 1 5 2 2	1 2 2	10 11 3

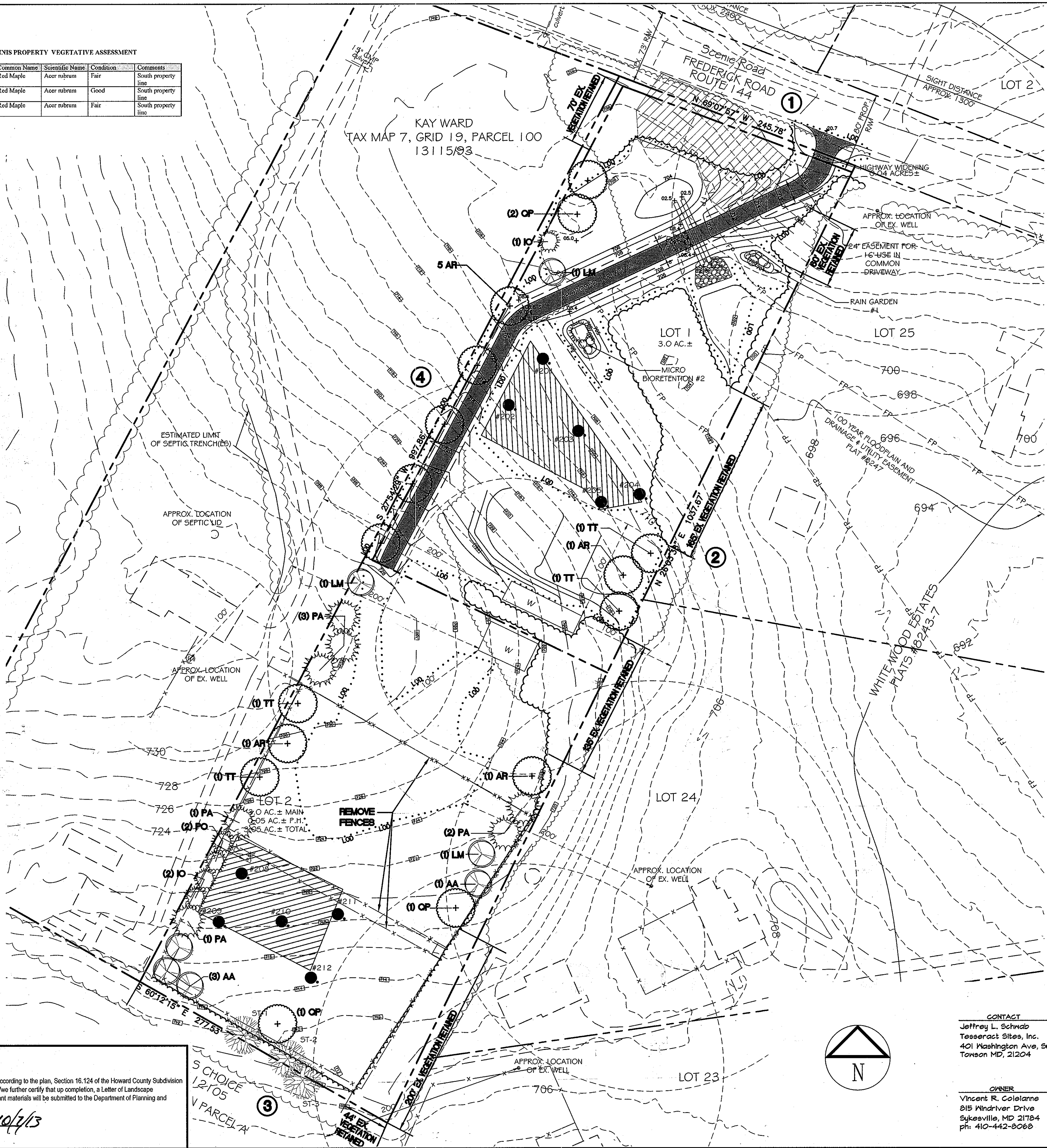
\* THERE IS NO LANDSCAPE REQUIREMENT FOR FRONT OF SINGLE FAMILY DETACHED TO ROADWAY

NOTE 1: THERE IS AN AFFECTIVE EXISTING BUFFER, ESPECIALLY AT THE FRONT OF THE PROJECT, ALTHOUGH CREDIT CAN NOT BE CLAIMED THERE FOR ONE PROPOSED TREE WAS SHIFTED TO PERIMETER 3 TO IMPROVE THAT BUFFER.



ANNIS PROPERTY VEGETATIVE ASSESSMENT

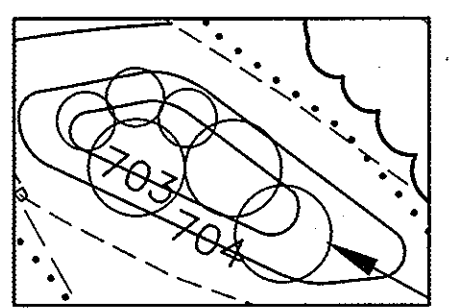
Tree #/DBH	Common Name	Scientific Name	Condition	Comments
ST-148"	Red Maple	Acer rubrum	Fair	South property line
ST-236"	Red Maple	Acer rubrum	Good	South property line
ST-340"	Red Maple	Acer rubrum	Fair	South property line



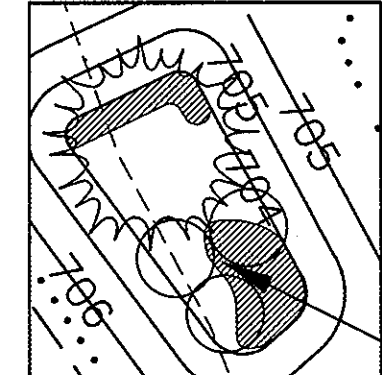
**SWM PLANTING PLANS & SCHEDULE**

SYM	BOTANICAL NAME	COMMON NAME	SIZE	#	COMMENTS
IOS	ILEX OPACA 'SATYR HILL'	SATYR HILL HOLLY	6' HT	1	B4B OR CONT.
CA	CLETHRA ALNIFOLIA	SUMPERBUSH	24" HT	6	B4B OR CONT.
VT	VIBURNUM TRILOBUM	AMERICAN GRANDBERRYBUSH VIBURNUM	30" HT	3	B4B OR CONT.
AC	ACORNUS CALANIS 'VARIEGATUS'	VARIEGATED SWEETFLAG	QUART	50	• 18" O.C.
PP	PACHYRANDRA PROCRUMBENS	ALLEGHENY SPURGE	EACH	400	• 6" O.C.

**RAIN GARDEN #1**  
SCALE: 1"=20'  
(3) CA  
(3) VT  
(400) PP  
In bottom



**MICRO BIORETENTION #2**  
SCALE: 1"=20'  
(1) IOS  
(3) CA  
(50) AC  
In hatched areas



**LEGEND**

**EXISTING**

- PROPERTY LINE
- BUILDINGS
- CONTOURS
- EX. TREES
- SANITARY
- WATER
- ROADS
- STEEP SLOPES > 25% AREA = 0.26 Ac.

**PROPOSED**

- PROPERTY LINE
- BUILDINGS
- CONTOURS
- ROADS
- MAJOR SHADE TREE
- EVERGREEN TREE
- MINOR DECIDUOUS TREE

**Tesseract**  
Tesseract Sites, Inc.  
401 Washington Ave, Suite 303  
Towson, Maryland, 21284  
p. 410.321.7600  
f. 410.321.7601

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/14.

**Coleianne Property**  
Lots 1 & 2

**LANDSCAPING PLAN AND DETAILS**

REVISION NO:	SECTION/AREA:	LOT/PARCEL:
1	4	349

DATE: 8/13/2013  
Proj. #: 12011  
Scale: 1"=50'

**5 of 5**

APPROVED: DEPARTMENT OF Planning & Zoning  
Chief, Division of Land Development  
Date: 10-24-13

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 Subdivision and Land Development Regulations and the Landscape Manual. I / we further certify that upon completion, a Letter of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.  
Name: Vincent R. Coleianne  
Date: 10/27/13  
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