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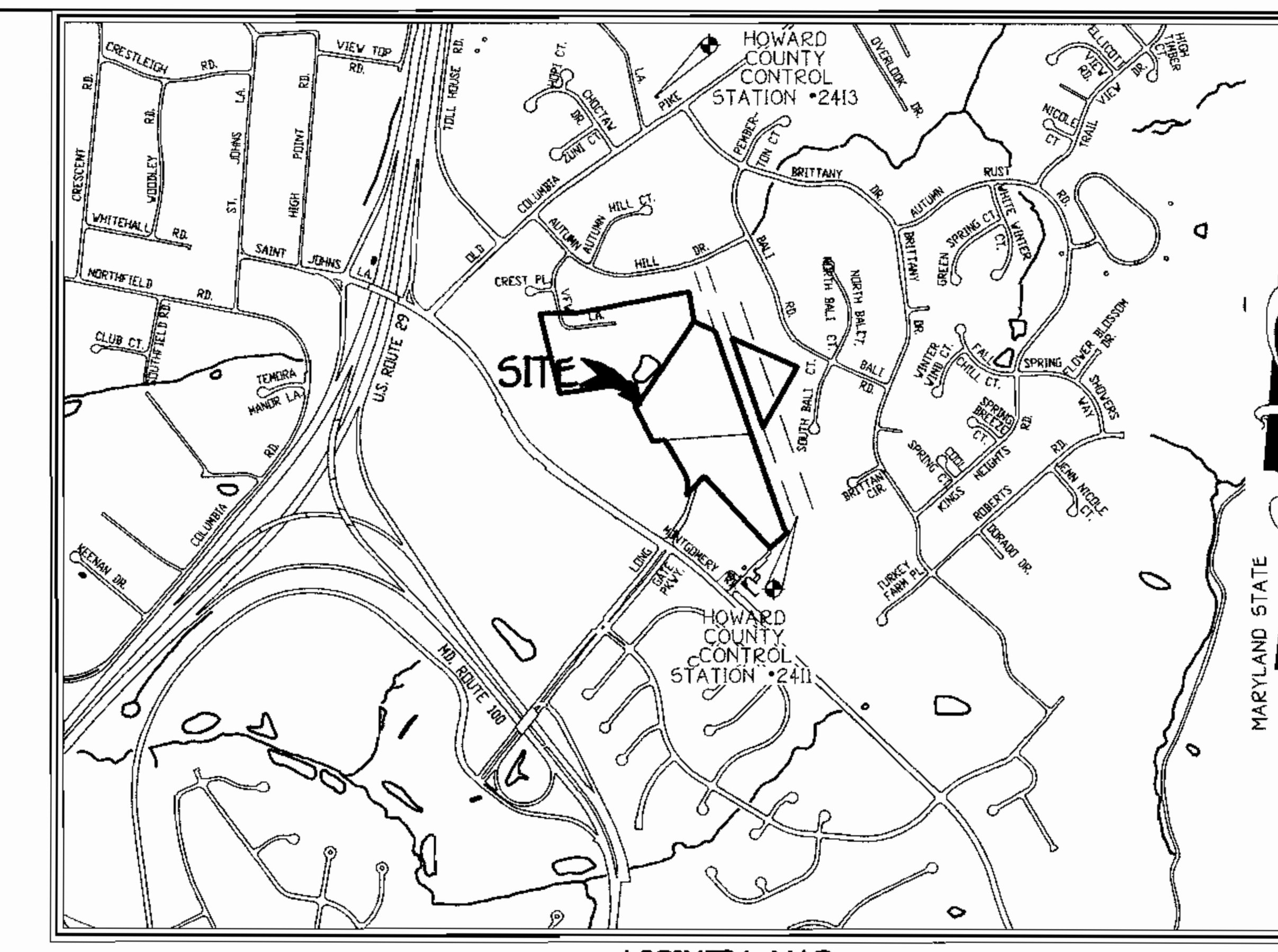
MASS GRADING PLAN
FUTURE
NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No.: 24 P.O. PARCEL No.: 321 & 767

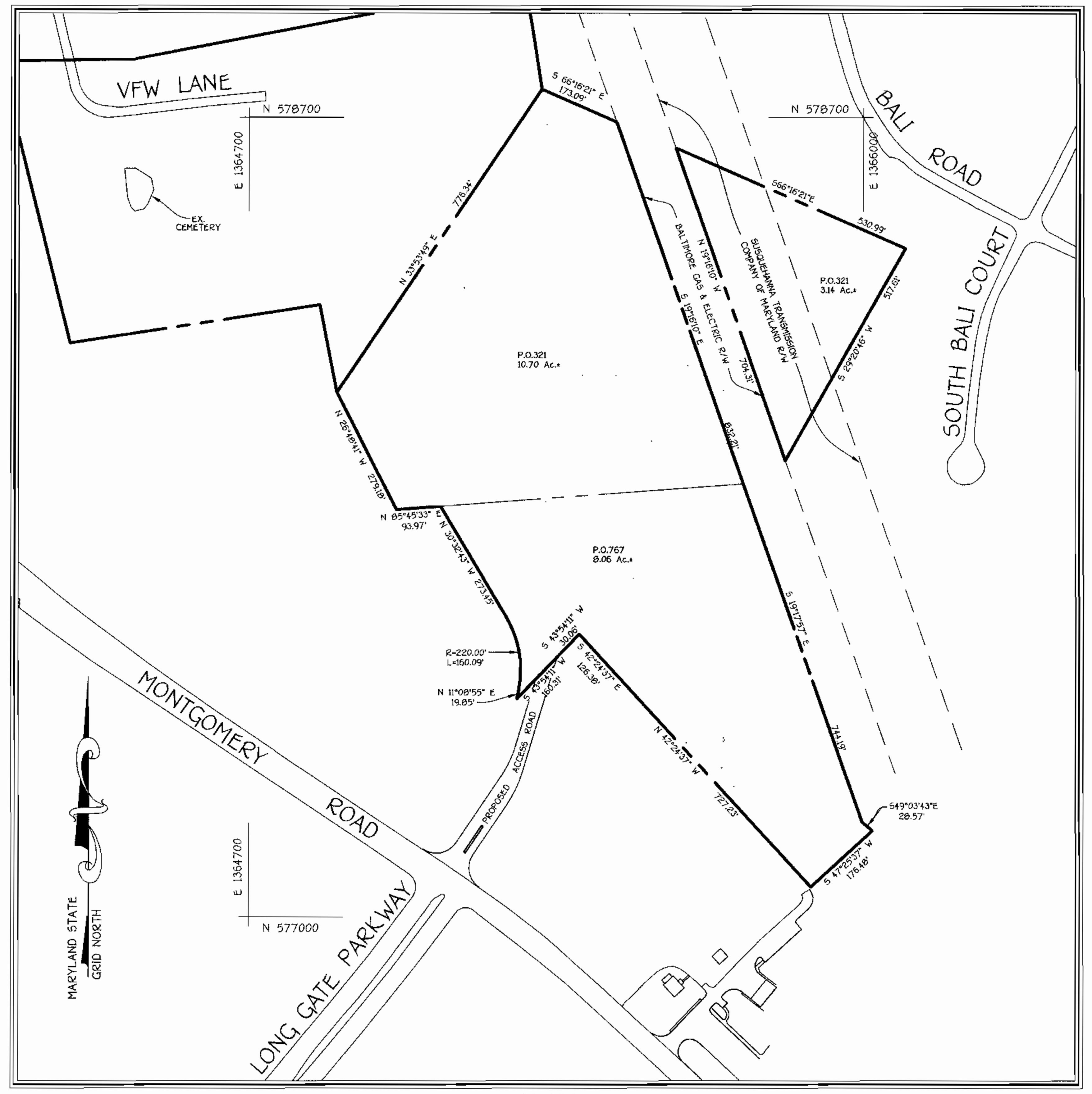
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1" = 1200'

SITE ANALYSIS DATA

1. General Site Data:
   A. Present Zoning: R-20, R-SA-8-I and R-SC-I
   B. Proposed use of site or structure: Institutional; Public School
   C. Public water and sewer to be utilized.
2. Area Tabulation:
   A. Total project area: 21.90 Ac±
   B. Area of this plan submission: 13.61 Ac.± is the limit of submission and grading disturbance for the proposed mass grading operation.
   C. Impervious Coverage: None



PLAN
SCALE: 1" = 200'

General Notes

1. All construction shall be accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five working days prior to start of work.
3. The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any digging and excavation work.
4. The contractor shall notify The Baltimore Gas & Electric Company at 410-597-6953 at least five working days before starting work.
5. Project Background:
Location: Tax Map 24, Grid 24, P.O. Parcels 321 & 767
Zoning: This project is zoned R-20, R-SA-8-1 and R-SC-1 per the 2/2/04 comprehensive zoning plan.
Election District: SECOND
Section/Area: N/A
Site Area: 21.90 Ac.±
6. Existing topography and features were derived from a field run survey by Fisher, Collins and Carter Inc. and Harford Aerial Surveys inc. on or about March 22, 2003.
7. Coordinates are based on NAD 83 Maryland Coordinates System as projected by Howard County Geodetic Control Stations.

Station	Coordinates
2411	N 577,298.654 E 1,366,075.133 ELEV. 473.805
2413	N 580,648.910 E 1,364,974.458 ELEV. 404.518

8. Public water and sewer is to be utilized for this project
9. Permanent stormwater management will be provided for this site at the future site development plan phase associated with the actual school construction. For the interim period temporary storm water management is provided by three (3) sediment traps to remain in place until future site development plan is approved.
10. Any damage to County and or State owned right-of-way to be corrected at the contractor's expense.
11. There are no known grave sites or cemeteries on this site. Based on a visual site visit and based on an examination of the Howard County Cemetery Inventory Map. An existing cemetery/grave sites were identified and located on the adjacent VFW parcel, p/o Parcel No. 321 which is not a part of this submission.
12. This Project is recorded among the land records in Howard County, Maryland as Deeds. 9030/201, 9030/437 & 9030/445
13. A Forest Conservation Report Is Provided By Eco-Science Professionals, Inc. Dated February 21, 2005.
14. A Wetland delineation report was prepared by Eco-Science Professionals Inc. dated February 21, 2005.
15. No grading removal of vegetative cover on trees or placement of new structures is permitted within the limits of wetlands, stream(s) or their buffers.
16. This SDP is subject to the First Amendment to the Fifth Edition of the Subdivision and Land Development Regulations dated October 2, 2003 and the Comprehensive Zoning Plan and Regulations adopted on 2/2/04.
17. See recorded plat under ___________ for Forest Conservation Easement Area, for bearing and distance information.
18. The Forest Conservation Act requirements for this project will be met through the retention of 3.8 acres of net tract area forest within the limits of a Forest Conservation Easement and the afforestation/reforestation of 2.1 acres on site and 1.6 acres of forest at the Bellows Spring Elementary School property off of Old Stockbridge Lane. (SDP 02-36). The Total Forest Conservation Obligation On For This Project is 7.5 Ac.
19. The Baltimore Gas And Electric Company has granted permission in accordance with a letter dated March 24, 2005 for construction of temporary access road and associated grading within their Right Of Way.
20. The bearings and distances for the existing wetlands boundaries have been shown on the Forest Conservation Easement Plats.
21. Landscaping in accordance with Section 16.124 of the Howard County Code and the Landscape Manual will be addressed and provided with a future SDP for the actual school construction.

LEGEND

Description	Symbol
Existing Contour	--400----
Proposed Contour	—400—
Existing Tree & Treeline	
New Treeline	~~~~~~~~
Existing Fence	X——X——X——X
Limit of Grading Disturbance (L.O.D.)	▬ ▬ ▬ ▬ ▬ ▬
Wetland Buffer	——— ——— ———
Stream Buffer	——— ———
Wetland Area	↓ ↓ ↓
Super Silt Fence	SSF——SSF——SSF
Silt Fence	SF—— SF ——SF
Forest Conservation Easement	
Existing Paving	
Tree Protection Fence	TP ——TP ——TP
Permanent Protection Signage and Temporary Protection Fence	▲——▲——▲

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

[illegible] 5-23-05
Signature Of Engineer Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

[illegible] 6/1/05
U.S.D.A. - Natural Resources Conservation Service Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

[illegible] 5.23.05
Signature Of Developer Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

[illegible] 6/1/05
District Howard Soil Conservation Dist. Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 6/8/05
Director - Department of Planning and Zoning Date

[illegible] 6/8/05
Chief, Division of Land Development Date

[illegible] 6/2/05
Chief, Development Engineering Division Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT	SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.	N/A	321 & 767

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-I R-SC-I	24	SECOND	6028.00

WATER CODE	SEWER CODE
F04	5750615

TITLE SHEET

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 19, 2005

SHEET 1 OF 13
SDP-05-109

K:\SDSKPROJ\40385\

PLAN
SCALE: 1" = 40'

℄ BARRICADED ROADWAY FOR ODD NUMBER POST BARRICADE (FOR EVEN NUMBER POST BARRICADE ℄ OF ROADWAY IS AT CENTER OF CENTER SPAN)
1'-5 1/2"
SPAN
SPAN
2"-BOLT, 5/8"ϕ-11-NC-2 AND NUT.
2'-0" END SECTION SEE ST'D. R-7.01
WITH BEAM SECTION ST'D. R-7.01
RAIL SPLICE SEE ST'D. R-7.02
FOR DETAILS OF CONNECTION FIXTURES AND THEIR ASSEMBLY SEE ST'D. NO
TOP OF GROUND
POSTS TO BE W6X9, 5'-9" LONG SEE ST'D. R-7.02

MINIMUM NUMBER OF SPANS = 2
MINIMUM NUMBER OF POSTS = 3
MAXIMUM SPAN: 12'-6"
ALL SPANS TO BE EQUAL LENGTH.
LENGTH OF BARRICADE NOTED ON PLANS REFERS TO DISTANCE FORM CENTER TO CENTER OF END POSTS.

GUARDRAIL WITH BEAM BARRICADE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT. THE CONTRACT PRICE BID SHALL INCLUDE THE FURNISHING AND INSTALLATION OF ALL POSTS, WITH BEAM, POST AND SPLICE BOLTS WITH NUTS, END SECTIONS, GALVANIZING, THE COST OF ALL EXAVATION, BACKFILLING AND TAMPING INCIDENTAL TO SETTING THE POSTS, OR THE COST OF DRIVING THE POSTS. THE COST OF THE REMOVAL OF EXISTING PAVEMENT WHERE NECESSARY, AS WELL AS THE COST OF ALL LABOR, APPROVED TOOLS AND EQUIPMENT INCIDENTAL TO FURNISHING AND INSTALLING THE BARRICADE AT LOCATIONS NOTED ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER.
PROVIDE REFLECTORIZED STRIPPING (RED & WHITE)

4"
24"

GUARD RAIL DETAIL
NOT TO SCALE

TREE PROTECTION DETAIL
NOT TO SCALE

BLAZE ORANGE PLASTIC MESH
ANCHOR POST SHOULD BE MINIMUM 2" STEEL "U" CHANNEL OR 2" x 2" TIMBER 6' IN LENGTH
HIGHLY VISIABLE FLAGGING
MAXIMUM 8 FEET
USE 2" x 4" LUMBER FOR CROSS BACKING
ANCHOR POST MUST BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3 OF THE TOTAL HEIGHT OF POST
USE 3' WIRE "U" TO SECURE FENCE BOTTOM

NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

FISHER, COLLINS & CARTER, INC.
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[illegible] 5-23-05
Signature Of Engineer Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

[illegible] 6/1/05
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Director - Department of Planning and Zoning Date

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Chief, Division of Land Development Date

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Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
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ANNAPOLIS, MARYLAND 21401
(301) 261-8700

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P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-5A-8-I R-5C-I	24	SECOND	6028.00

WATER CODE	SEWER CODE
F04	5750615

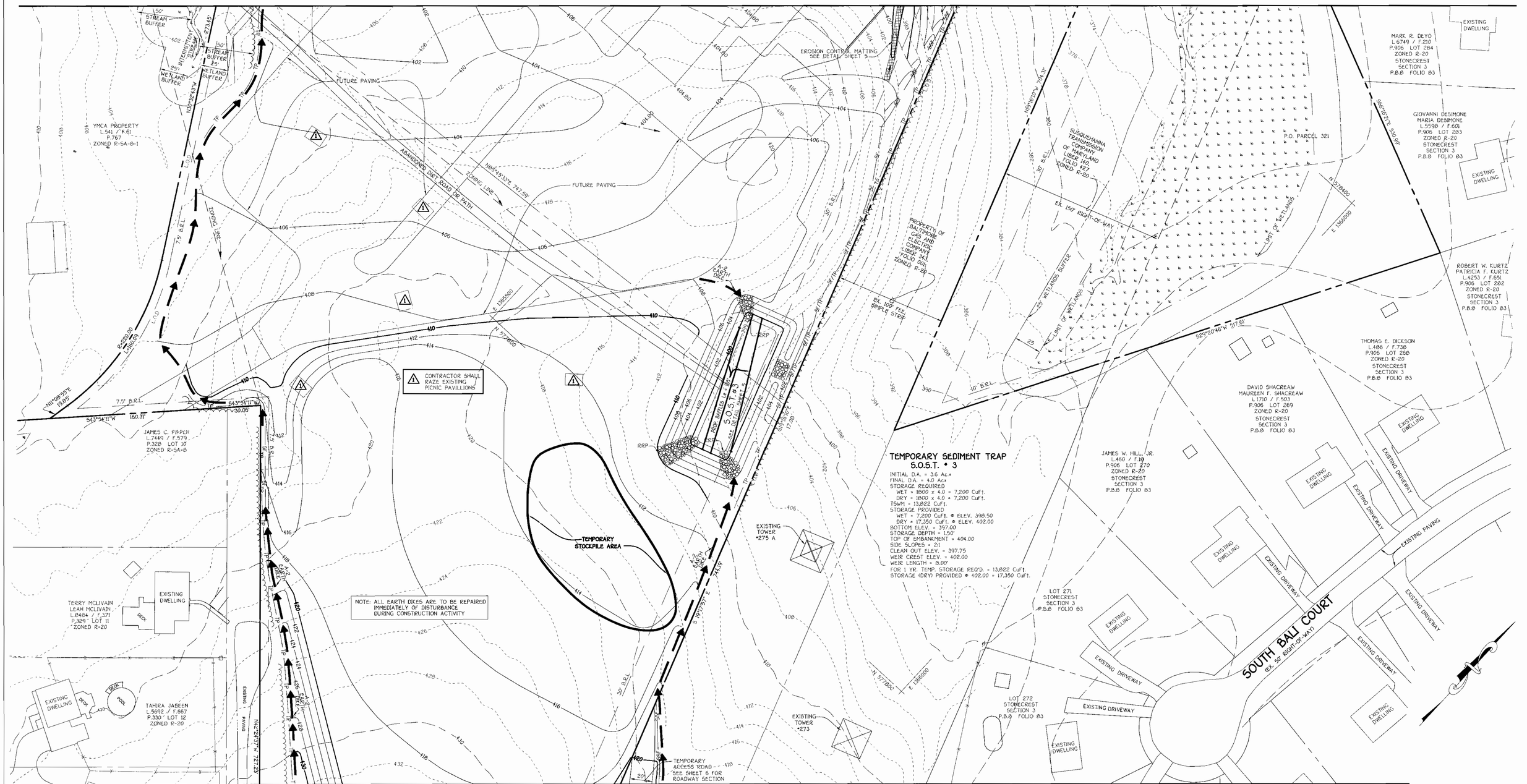
MASS GRADING PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 2 OF 13
SDP-05-109

MATCH LINE SEE SHEET 4



MATCH LINE SEE SHEET 2

PLAN

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Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 6/1/05 Date

Approved This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/6/05 Date

Chief, Division of Land Development — 6/5/05 Date

Chief, Development Engineering Division — 6/1/05 Date

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ELLICOTT CITY, MARYLAND 21042
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410-313-6798

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9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-1 R-SC-1	24	SECOND	6028.00
WATER CODE		SEWER CODE			
F04		5750615			

MASS GRADING PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 3 OF 13

SDP-05-109

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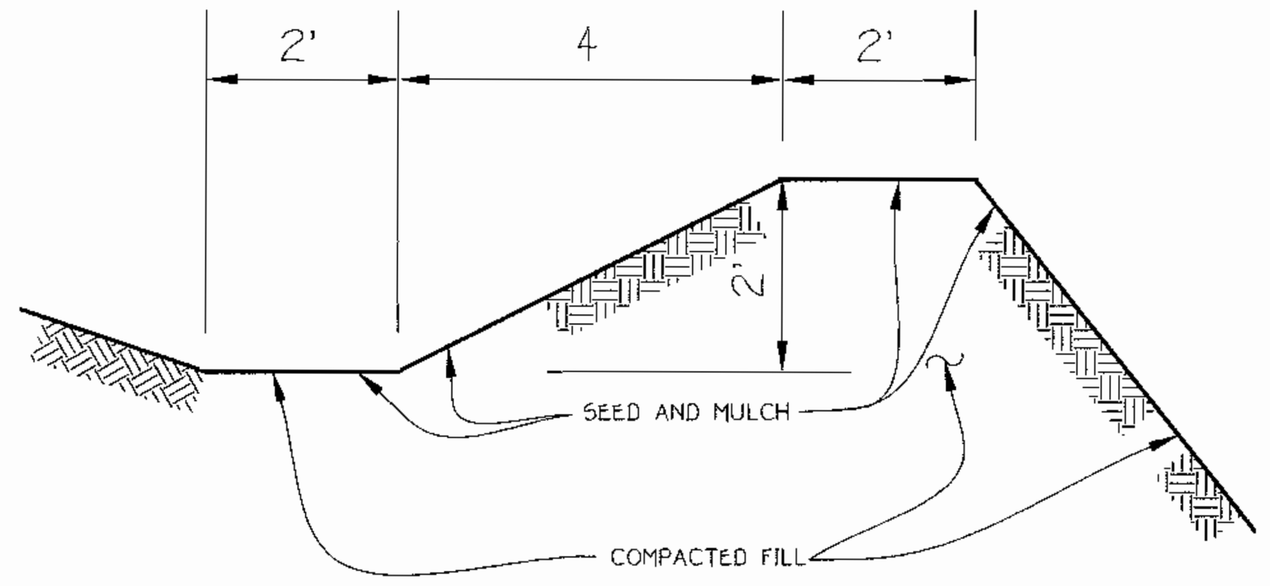

SECTION A-A
STORM WATER DIVERSION CHANNEL
NOT TO SCALE

MATCH LINE SEE SHEET 3

PLAN
SCALE: 1" = 40'

FISHER, COLLINS & CARTER, INC.
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Signature Of Engineer — Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

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U.S.D.A. - Natural Resources Conservation Service — Date

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9030/201, 9030/437 & 9030/445	24	R-20 R-5A-8-I R-5C-I	24	SECOND	6028.00
WATER CODE F04			SEWER CODE 5750615		

MASS GRADING PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 4 OF 13
SDP-05-109

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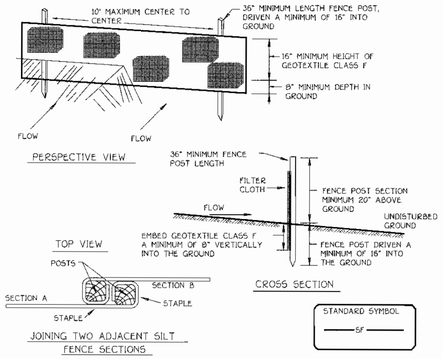


Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

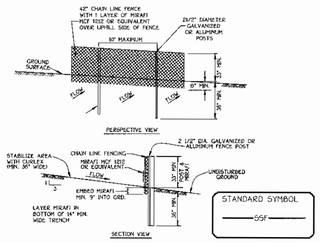
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F.

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

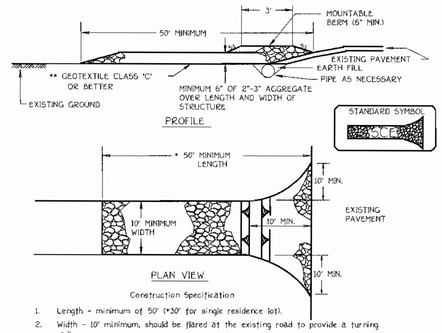
1. FENCING SHALL BE 42" HIGH CHAIN CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS #610.01 AND #610.02 FOR CHAIN LINK FENCING. THE SPECIFICATIONS FOR A 6'-0" FENCE SHALL BE USED, SUBSTITUTING KEY FABRIC AND 6' POSTS. POSTS SHALL BE PLACED WITHOUT CONCRETE ENCASHMENT.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH TO BE FASTENED SECURELY TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF EMBEDDED CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED.

Fabric Properties	Value	Test Method
Grab Tensile Strength (lbs.)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs.)	40	ASTM D751
Slurry Flow Rate (gal/min/sf)	0.3	Modified DOT VTM-51
Equivalent Opening Size	40-80	US Std. Sieve CW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	400 feet	1,500 feet
20 - 33%	5:1 - 3:1	300 feet	1,000 feet
33 - 50%	3:1 - 2:1	200 feet	500 feet
50% +	2:1 *	100 feet	250 feet

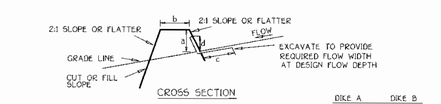
SUPER SILT FENCE
NOT TO SCALE



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Lime Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete Rate equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - All surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

STANDARD SYMBOL
A-2 / B-3

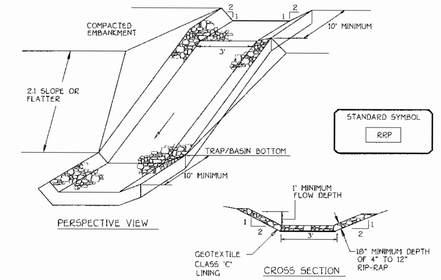
FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

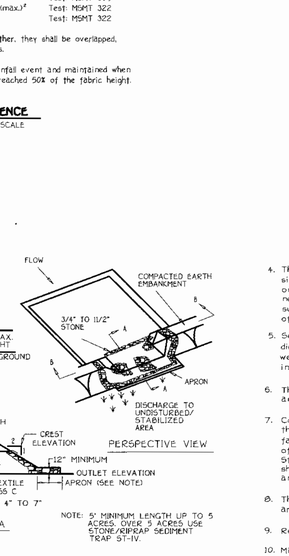
EARTH DIKE
NOT TO SCALE



Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min) bottom width. The channel shall be lined with 4" to 12" rip- rap to a depth of 18".
2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
3. Entrance and exit sections shall be installed as shown on the detail section.
4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
5. Gabion inflow Protection may be used in lieu of Rip-rap Inflow Protection.
6. Rip-rap should blend into existing ground.
7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

RIP-RAP INFLOW PROTECTION
NOT TO SCALE



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
6. The structure shall be inspected periodically and after each rain and and repairs made as needed.
7. Construction of traps shall be carried out in such a manner that that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
8. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
9. Refer to Section D for specifications concerning trap dewatering.
10. Minimum trap depth shall be measured from the weir elevation.
11. The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
12. Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.
13. Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

STONE OUTLET SEDIMENT TRAP - ST II
NOT TO SCALE

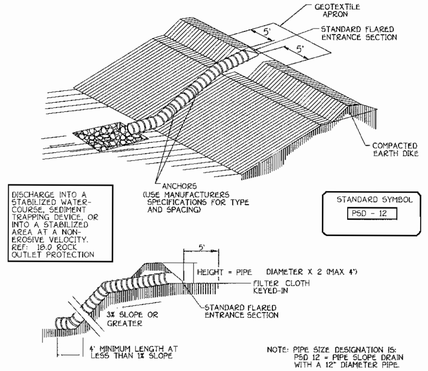


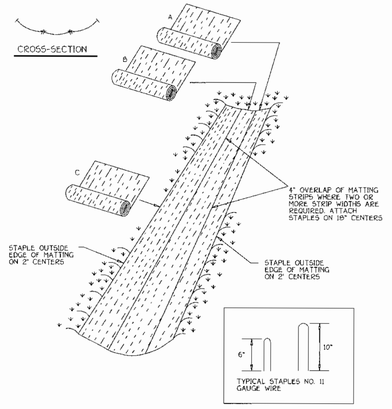
Table 6 Design Criteria for Pipe Slope Drain

Size	Pipe/Tubing Diameter (D) in	Maximum Drainage Area (Acres)
PSD-12	12	0.5
PSD-18	18	1.5
PSD-21	21	2.5
PSD-24	24	3.5
PSD-24 (2)	24	5.0

PIPE SLOPE DRAIN
NOT TO SCALE

Construction Specifications - Pipe Slope Drain

1. The Pipe Slope Drain (PSD) shall have a slope of 3 percent or steeper.
2. The top of the earth dike over the inlet pipe shall be at least 2 times the pipe diameter measured at the invert of the pipe.
3. Flexible tubing is preferred. However, corrugated metal pipe or equivalent PVC pipe can be used. All connections shall be watertight.
4. A flared end section shall be attached to the inlet end of pipe with a watertight connection. Filter cloth shall be placed under the inlet of the pipe slope drain and shall extend out 5' from the inlet. The filter cloth shall be "keyed in" on all sides.
5. The Pipe Slope Drain shall be securely anchored to the slope by staking at the grommets provided. Spacing for anchors shall be as provided by manufacturer's specification. In no case shall less than two (2) anchors be provided, equally spaced along the length of pipe. These details should be provided by pipe suppliers.
6. The soil around and under the pipe and end section shall be hand tamped in 4 inch lifts to the top of the earth dike.
7. All pipe connections shall be watertight.
8. Whenever possible where a PSD drains an unstabilized area, it shall outlet into a sediment trap or basin. If this is not possible then the slope drain will discharge into a stable conveyance that leads to a sediment trap or basin. When discharging into a trap or basin the PSD shall discharge at the same elevation as the wet pool elevation. The discharge from the PSD must be as far away from the sediment control outlet as possible.
9. When the drainage area is stabilized, the PSD shall discharge onto a stabilized area at a non-erosive velocity.
10. Inspection and any required maintenance shall be performed periodically and after each rain event.
11. The inlet must be kept open at all times.



Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

EROSION CONTROL MATTING
NOT TO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A True 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 of Engineer — 5-23-05 Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — 5-23-05 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 6/1/05 Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/30/05 Date

Chief, Division of Land Development — 6/30/05 Date

Chief, Development Engineering Division — 6/30/05 Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-1 R-SC-1	24	SECOND	6028.00
WATER CODE		SEWER CODE		
F04		5750615		

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 19, 2005

SHEET 5 OF 13

SDP-05-109

K:\SDSKPROJ\403365\dwg\Mass Grading\403365 NOTES AND DETAILS (SHEET 5 S & 6).dwg, 5/19/2005 4:10:53 PM

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (Up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.
Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.
Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation

i. Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98-100% will pass through a #20 mesh sieve.

iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

C. Seedbed Preparation

i. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" 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 should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. In corporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment.

1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (ppm).
3. The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or sericia lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per soil test or as included on the plans.

d. Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder.

a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen: maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac; K20 (potassium): 200 lbs/ac.

b. 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.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 26b or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

ii. Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

d. WCFM materials shall 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 shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm. , diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

I Incremental Stabilization - Cut Slopes

i. All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.

ii. Construction sequence (Refer to Figure 3 below)

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
b. Perform Phase 1 excavation, dress, and stabilize.
c. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation completing the operation out of the seeding season will necessitate the application of temporary stabilization.

J. Incremental Stabilization of Embankments - Fill Slopes

i. Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15', or when the grading operation ceases as prescribed in the plans.

iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.

iv. Construction sequence: Refer to Figure 4 (below).

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
b. Place Phase 1 embankment, dress and stabilize.
c. Place Phase 2 embankment, dress and stabilize.
d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of of temporary stabilization.

SECTION 2 - TEMPORARY SEEDING

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed mixtures - Temporary Seeding

i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.

ii. For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (1 DAY)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK. NOTIFY THE BALTIMORE GAS AND ELECTRIC COMPANY AT 410-597-6953 FIVE WORKING DAYS BEFORE STARTING WORK.
3. INSTALL TREE PROTECTION FENCE AS INDICATED ON THE PLANS. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY ACCESS ROAD THROUGH B.G. & E. R/W. CLEAR AND GRUB FOR SEDIMENT TRAPS. (3 DAYS)
4. INSTALL SEDIMENT TRAPS; SUPER SILT FENCE AND SILT FENCE AS INDICATED ON THE PLANS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE SEDIMENT TRAP EMBANKMENTS. WHERE NECESSARY, RIPPING AND JACK HAMMERING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITIES. (3 WEEKS) NOTE THAT ALL SEDIMENT TRAPS ARE TO REMAIN IN PLACE UNTIL AN APPROVED SDP ADDRESSING PERMANENT SWM HAS BEEN SIGNED AND A GRADING PERMIT ISSUED.
5. RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. CLEAR AND GRUB FOR REMAINING SEDIMENT CONTROL MEASURES. INSTALL REMAINING SEDIMENT CONTROL MEASURES, EARTH DIKES, SUPER SILT FENCE AND SILT FENCE AS INDICATED ON THE PLANS. (1 WEEK)
6. RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. CLEAR AND GRUB THE REMAINDER OF THE SITE. (3 DAYS)
7. GRADE SITE TO THE PROPOSED GRADES SHOWN. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING WITH TEMPORARY SEEEDING. NOTE THAT FILL OPERATIONS SHALL BE REFORMED TO ALLOW ALL EARTH DIKES FUNCTION PROPERLY TO TRAPS. (12 WEEKS)
8. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE TRAPS WHEN THE CLEANOUT ELEVATIONS HAVE BEEN REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE SEDIMENT TRAPS.
9. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.
10. AFTER GRADING HAS BEEN COMPLETED AND THE SITE HAS BEEN STABILIZED WITH PERMANENT SEEDING, THE REMOVAL OF THE SEDIMENT TRAPS IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2) 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.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 50, SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6) 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.
7) SITE ANALYSIS:

TOTAL AREA OF SITE	21.9 ACRES
AREA DISTURBED	13.6 ACRES
AREA TO BE ROOFED OR PAVED	0.0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	13.6 ACRES
TOTAL CUT	97,700 CU.YDS.
TOTAL FILL	97,700 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	0.00 CU.YDS.

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10) 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.
11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

SPECIFICATIONS

TEMPORARY METHODS

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR OR TACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

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

Seed Mixture (Hardiness Zone 6a) from Table 26					Fertilizer Rate (10-10-10)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
1	Rye	140	8/1 TO 10/31 3/15 TO 5/31	1-2 IN	600 lb/ac (13 lb/1000sf)	2 tons/ac (100 lb/1000sf)
2	Barley Or Rye Plus - Foxtail Millet	150	3/15 TO 10/31	1 IN.		
3	Annual Rye Grass	50	3/15 TO 5/31 8/1 TO 10/31	1/4 -1/2 IN.		

SECTION 3 - PERMANENT SEEDING

Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

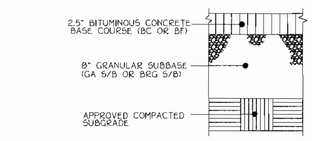
A. Seed mixtures - Permanent Seeding

i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.

iii. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardiness Zone 6a) from Table 25					Fertilizer Rate (10-20-20)			
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
1	Tall Fescue (85%) Perennial Ryegrass (10%) Kentucky Bluegrass (5%)	125 15 10	3/15 TO 6/1 8/1 TO 10/1	1-2 IN	90 lb/ac (2.0 lb/1000sf)	175 lb/ac (4 lb/1000sf)	175 lb/ac (4 lb/1000sf)	2 tons/ac (100 lb/1000sf)
2	Tall Fescue (80%) Hard Fescue (20%)	120 30	3/15 TO 6/1 8/1 TO 10/1	1-2 IN.				
3	Hard Fescue (100%)	0.75	3/15 TO 6/1 8/1 TO 10/1	1-2 IN.				



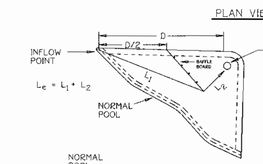
TEMPORARY ACCESS ROAD PAVING DETAIL

NOT TO SCALE

SEDIMENT BASIN BAFFLES

PLAN VIEWS

C1028REVISED.DWG



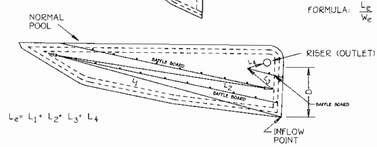
D = DISTANCE BETWEEN INFLOW AND OUTFLOW

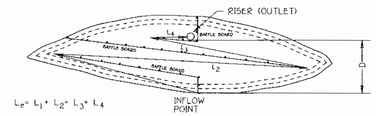
A = AREA OF NORMAL POOL

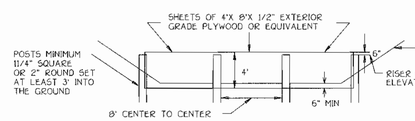
We = EFFECTIVE WIDTH = A/D

Le = TOTAL DISTANCE FROM THE INFLOW POINT AROUND THE BAFFLES TO THE RISER

FORMULA: $\frac{Le}{We} \geq 2$







BAFFLE DETAIL

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature — 5-23-05 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 6/1/05 Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — 5-23-05 Date

Approved This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/6/05 Date

Chief, Division of Land Development — 6/6/05 Date V3

Chief, Development Engineering Division — 6/3/05 Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6790

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Address Chart	
Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-I R-SC-I	24	SECOND	6028.00
WATER CODE		SEWER CODE		
F04		5750615		

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 19, 2005

SHEET 6 OF 13

SDP-05-109

K:\SDSKPROJ\4038\dwg\Mass Grading\4038S NOTES AND DETAILS (SHEETS 5 & 6).dwg, 5/19/2005 4:11:27 PM

PLAN
SCALE: 1" = 40'

SOILS LEGEND

SOIL	NAME	CLASS
* KeB2	Kelly silt loam, 3 to 8 percent slopes, moderately eroded	D
LeB2	Legore silt loam, 3 to 8 percent slopes, moderately eroded	B
LgC3	Legore silty clay loam, 8 to 15 percent slopes, severely eroded	B
MIE	Manor loam, 25 to 45 percent slopes	B
NeB2	Neshaminy silt loam, 3 to 8 percent slopes, moderately eroded	B
NeC2	Neshaminy silt loam, 8 to 15 percent slopes, moderately eroded	B
** WaB	Watchung silt loam, 3 to 8 percent slopes	D

NOTES: SOILS MAP NO.20
* Hydric soils and/or contains hydric inclusions
** May contain hydric inclusions

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
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ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

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STATE OF MARYLAND ALDO M. VITIELLO REGISTERED PROFESSIONAL ENGINEER

[illegible] 5-23-05
Signature Of Engineer — Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

[illegible] 6/1/05
U.S.D.A. - Natural Resources Conservation Service — Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

[illegible] 5.23.05
Signature Of Developer — Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

[illegible] 6/1/05
District Howard Soil Conservation Dist. — Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 6/4/05
Director - Department of Planning and Zoning — Date

[illegible] 6/8/05
Chief, Division of Land Development — Date

[illegible] 6/2/05
Chief, Development Engineering Division — Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT	SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.	N/A	321 & 767

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-5A-8-I R-5C-I	24	SECOND	6028.00

WATER CODE	SEWER CODE
F04	5750615

SOILS MAP

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 7 OF 13
SDP-05-109

K:\SDSKPROJ\40385\dwg\Mass Grading\40385 SOILS MAP (SHEETS 7,8 & 9).dwg, 5/19/2005 4:12:50 PM

MATCH LINE SEE SHEET 9

SOILS LEGEND

SOIL	NAME	CLASS
* KeB2	Kelly silt loam, 3 to 8 percent slopes, moderately eroded	D
LeB2	Legore silt loam, 3 to 8 percent slopes, moderately eroded	B
LgC3	Legore silty clay loam, 8 to 15 percent slopes, severely eroded	B
MlE	Manor loam, 25 to 45 percent slopes	B
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NOTES: SOILS MAP NO.20

* Hydric soils and/or contains hydric inclusions

** May contain hydric inclusions

MATCH LINE SEE SHEET 7

PLAN

SCALE: 1" = 40'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

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[illegible] 5-23-05
Signature Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

[illegible] 6/1/05
U.S.D.A. - Natural Resources Conservation Service Date

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[illegible] 5.23.05
Signature Of Developer Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

[illegible] 6/1/05
District Howard Soil Conservation Dist. Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 6/1/05
Director - Department of Planning and Zoning Date

[illegible] 6/1/05
Chief, Division of Land Development Date

[illegible] 6/1/05
Chief, Development Engineering Division Date

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P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA		P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A		321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-5A-8-I R-5C-I	24	SECOND	6028.00
WATER CODE F04			SEWER CODE 5750615		

SOILS MAP

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 8 OF 13 SDP-05-109

K:\SDSKPROJ\40385\dwg\Mass Grading\40385 SOILS MAP (SHEETS 7,8 & 9).dwg, 5/19/2005 4:13:44 PM

SOILS LEGEND

SOIL	NAME	CLASS
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LeB2	Legore silt loam, 3 to 8 percent slopes, moderately eroded	B
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** WaB	Watchung silt loam, 3 to 8 percent slopes	D

NOTES:

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** May contain hydric inclusions

SOILS MAP NO.20

MATCH LINE SEE SHEET 8

PLAN

SCALE: 1" = 40'

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Signature Of Engineer — 5-23-05 Date

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CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 6/1/05 Date

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Signature Of Developer — 5.23.05 Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District - Howard Soil Conservation District — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/6/05 Date

Chief, Division of Land Development — 6/6/05 Date

Chief, Development Engineering Division — 6/2/05 Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
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ANNAPOLIS, MARYLAND 21401
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PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-1 R-SC-1	24	SECOND	6028.00
WATER CODE		SEWER CODE			
F04		5750615			

SOILS MAP

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 9 OF 13

SDP-05-109

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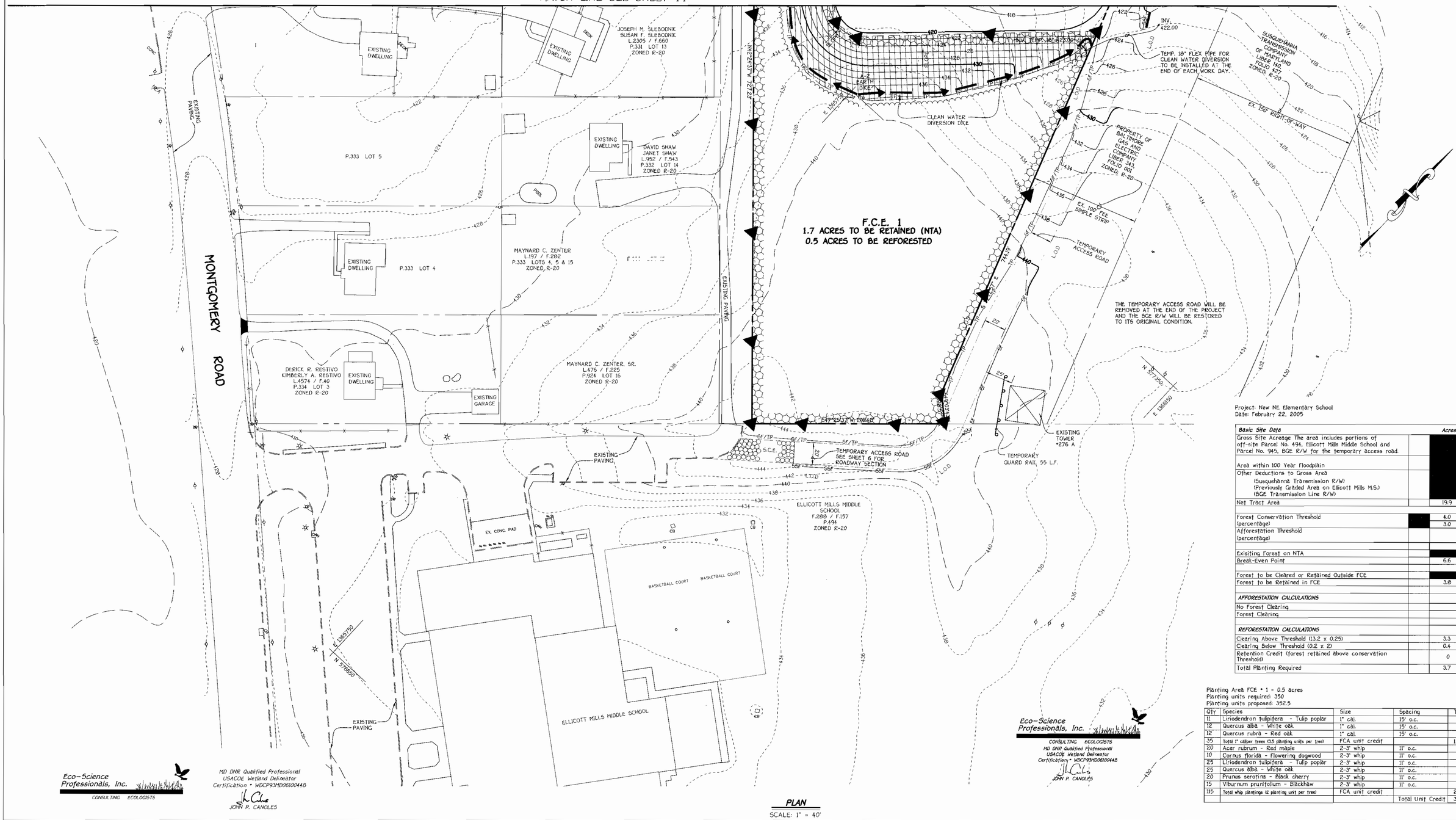
MATCH LINE SEE SHEET 11



Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification • WDCP93MD0610044B
JOHN P. CANOLES

PLAN
SCALE: 1" = 40'

Project: New NE Elementary School
Date: February 22, 2005

Basic Site Data		Acres
Gross Site Acreage The area includes portions of off-site Parcel No. 494, Ellicott Mills Middle School and Parcel No. 945, BGE R/W for the temporary access road.		
Area within 100 Year Floodplain		
Other Deductions to Gross Area (Susquehanna Transmission R/W) (Previously Graded Area on Ellicott Mills M.S.) (BGE Transmission Line R/W)		
Net Tract Area		19.9
Forest Conservation Threshold (percentage)		4.0
		3.0
Afforestation Threshold (percentage)		
Exisiting Forest on NTA		
Break-Even Point		6.6
Forest to be Cleared or Retained Outside FCE		
Forest to be Retained in FCE		3.8
AFFORESTATION CALCULATIONS		
No Forest Clearing		
Forest Clearing		
REFORESTATION CALCULATIONS		
Clearing Above Threshold (13.2 x 0.25)		3.3
Clearing Below Threshold (0.2 x 2)		0.4
Retention Credit (forest retained above conservation Threshold)		0
Total Planting Required		3.7

Planting Area FCE • 1 - 0.5 acres
Planting units required: 350
Planting units proposed: 352.5

Qty	Species	Size	Spacing	Total Units
11	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
12	Quercus rubra - Red oak	1" cal.	15' o.c.	
35	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		122.5
20	Acer rubrum - Red maple	2-3' whip	11' o.c.	
10	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
25	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
25	Quercus alba - White oak	2-3' whip	11' o.c.	
20	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
15	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
115	Total whip plantings (2 planting unit per tree)	FCA unit credit		230
			Total Unit Credit	352.5

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USACOE Wetland Delineator
Certification • WDCP93MD0610044B
JOHN P. CANOLES

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(410) 461 - 2855

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer — 5.23.05 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 6/1/05 Date

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District Howard Soil Conservation Dist. — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/7/05 Date

Chief, Division of Land Development — 6/1/05 Date

Chief, Development Engineering Division — 6/1/05 Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA		P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A		321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-1 R-SC-1	24	SECOND	6028.00
WATER CODE		SEWER CODE			
F04		5750615			

FOREST CONSERVATION PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 10 OF 13

SDP-05-109

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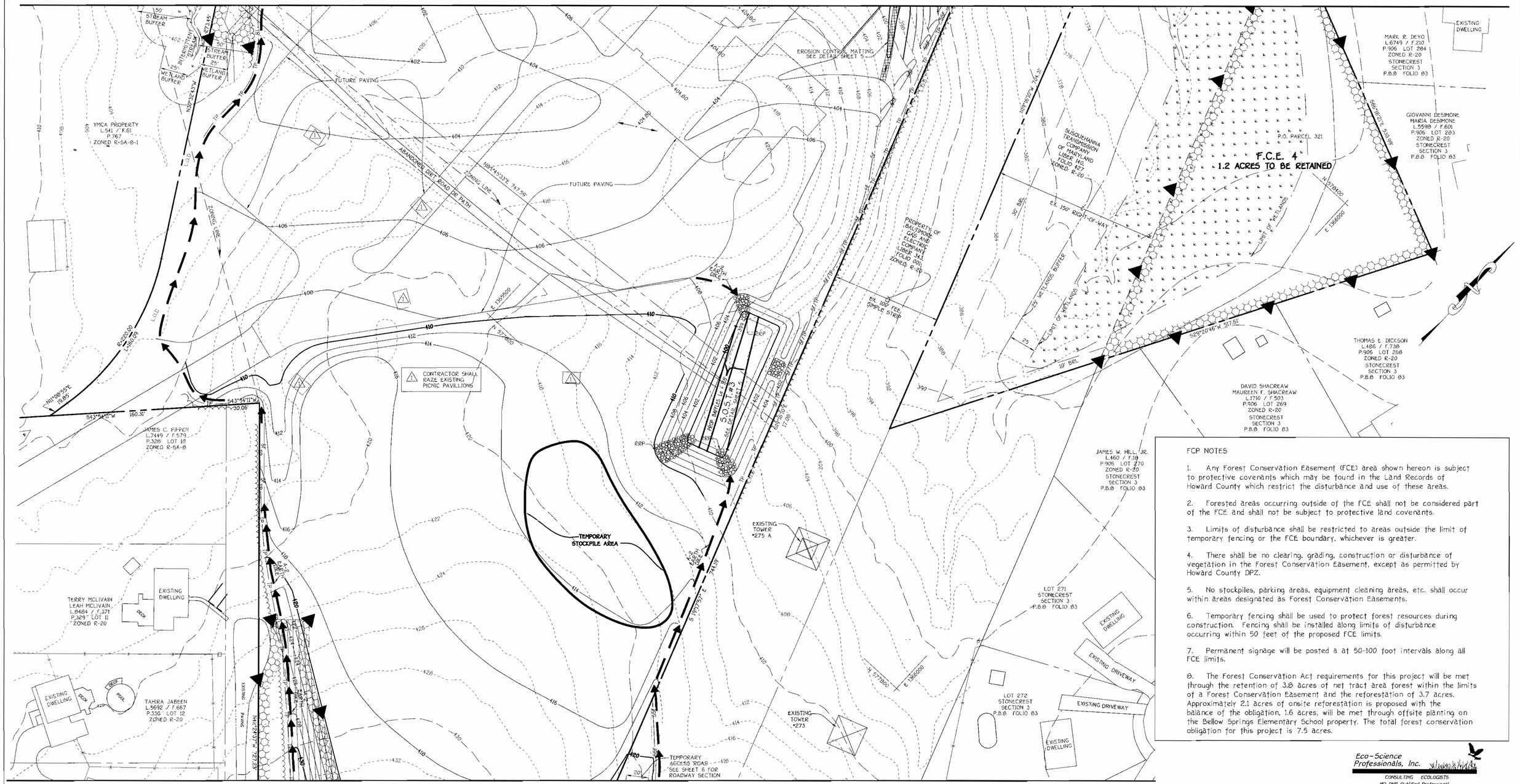
MATCH LINE SEE SHEET 12



MATCH LINE SEE SHEET 10

PLAN
SCALE: 1" = 40'

FCP NOTES

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.

2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.

3. Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.

4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.

5. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.

6. Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits.

7. Permanent signage will be posted a at 50-100 foot intervals along all FCE limits.

8. The Forest Conservation Act requirements for this project will be met through the retention of 3.8 acres of net tract area forest within the limits of a Forest Conservation Easement and the reforestation of 3.7 acres. Approximately 2.1 acres of onsite reforestation is proposed with the balance of the obligation, 1.6 acres, will be met through offsite planting on the Bellow Springs Elementary School property. The total forest conservation obligation for this project is 7.5 acres.

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Chief, Development Engineering Division — 6/6/05 Date

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WATER CODE			SEWER CODE	
F04			5750615	

FOREST CONSERVATION PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 11 OF 13

SDP-05-109

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Planting Area FCE • 2 - 1.3 acres
Planting units required: 910
Planting units proposed: 917.5

Qty	Species	Size	Spacing	Total Units
15	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
15	Quercus alba - White oak	1" cal.	15' o.c.	
15	Quercus rubra - Red oak	1" cal.	15' o.c.	
45	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		157.5
80	Acer rubrum - Red maple	2-3' whip	11' o.c.	
30	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
95	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
95	Quercus alba - White oak	2-3' whip	11' o.c.	
50	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
30	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
380	Total whip plantings (2 planting unit per tree)	FCA unit credit		760
			Total Unit Credit	917.5

Planting Area FCE • 3 - 0.3 acres
Planting units required: 210
Planting units proposed: 210

Qty	Species	Size	Spacing	Total Units
12	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
12	Quercus rubra - Red oak	1" cal.	15' o.c.	
36	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		126
12	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
10	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
10	Quercus alba - White oak	2-3' whip	11' o.c.	
10	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
42	Total whip plantings (2 planting unit per tree)	FCA unit credit	11' o.c.	84
			Total Unit Credit	210

F.C.E. 2
0.9 ACRES TO BE RETAINED (NTA)
1.3 ACRES TO BE REFORESTED

F.C.E. 3
0.3 ACRES
TO BE REFORESTED

5.O.S.T. #1
SEE DETAIL SHEET 5

S.W.M. #2
SEE DETAIL SHEET 5

INITIAL TYPE 'A-2' E.D. TO BE BUILT UP DAILY DURING FILL OPERATION

EROSION CONTROL MATTING SEE DETAIL SHEET 6

NOTE: FOR SEDIMENT TRAP SCHEDULE SEE SHEET 6

EX. 6' WIDE OLD DIRT ROAD

MATCH LINE SEE SHEET 11

PLAN
SCALE: 1" = 40'

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USACOE Wetland Delineator
Certification • WDCP93MD0800448
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Signature Of Engineer — 5-23-05 Date

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WATER CODE	F04		SEWER CODE	5750615	

FOREST CONSERVATION PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 12 OF 13 SDP-05-109

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OFFSITE REFORESTATION FCE#8
NORTHEASTERN ELEMENTARY SCHOOL
1.6 acres

Planting units required: 1120
Planting units proposed: 1125

Qty	Species	Size	Spacing	Total Units
10	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
10	Quercus alba - White oak	1" cal.	15' o.c.	
10	Quercus rubra - Red oak	1" cal.	15' o.c.	
30	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		105
90	Acer rubrum - Red maple	2-3' whip	11' o.c.	
55	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
100	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
100	Quercus alba - White oak	2-3' whip	11' o.c.	
90	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
75	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
510	Total whip plantings (2 planting unit per tree)	FCA unit credit		1020
			Total Unit Credit	1125

Planting Notes/Key:

1. One inch caliper trees shall be planted along the outer edge of the FCE along. The species may be randomly placed.

2. Whip plantings should be installed in a curvilinear pattern to facilitate maintenance but avoid a grid appearance. Tree shelters should be installed on all whip plantings.

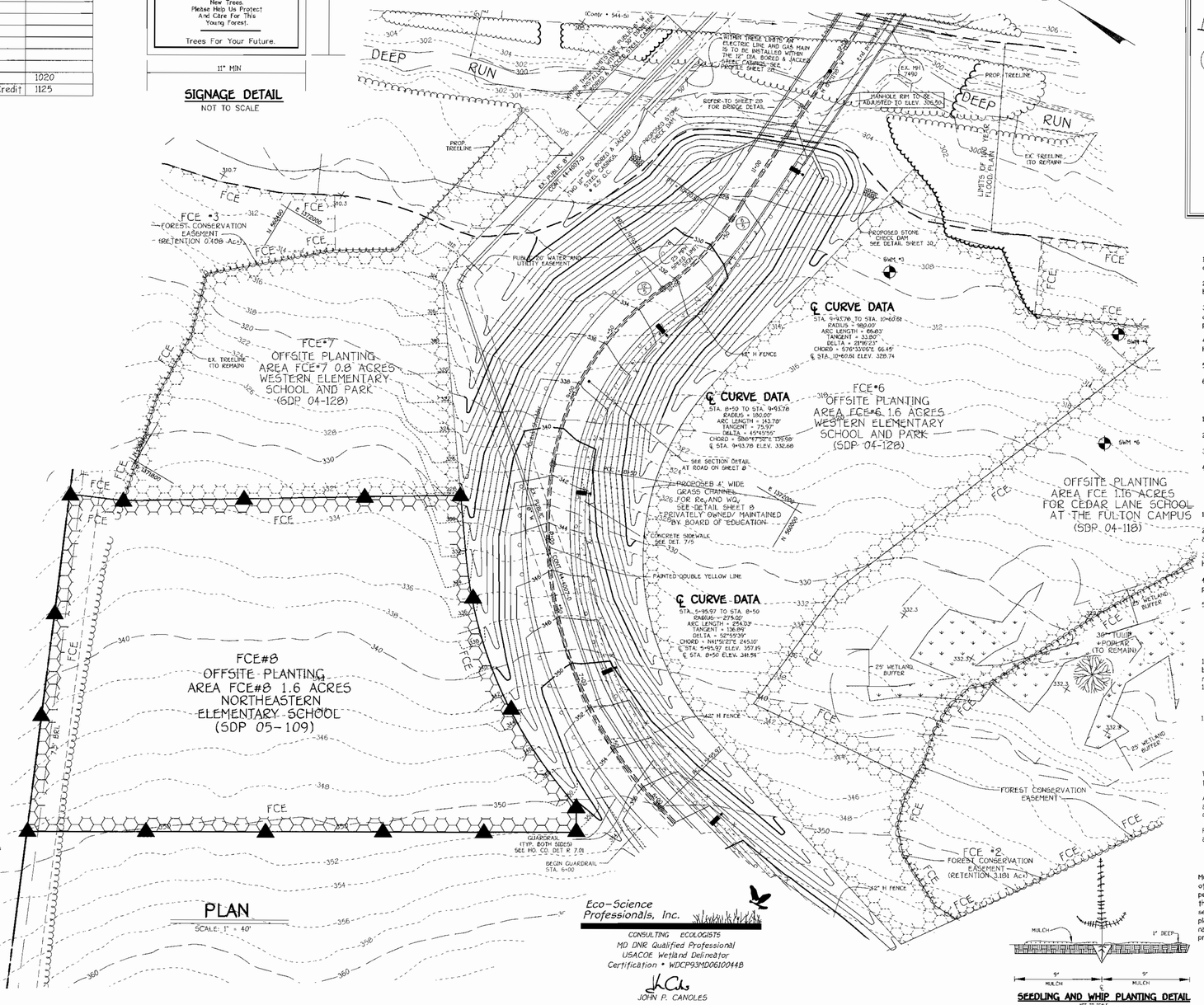
SIGNAGE DETAIL
NOT TO SCALE

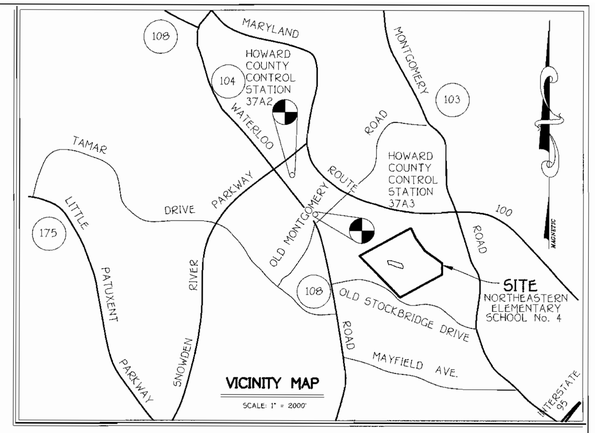
THIS PLAN IS FOR FOREST PLANTING ONLY

FCE LEGEND

Denotes Public Forest Conservation Easement.

Permanent signage location spaced at 100' intervals (maximum) and at every angle break.





PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

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

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

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

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

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

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

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

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

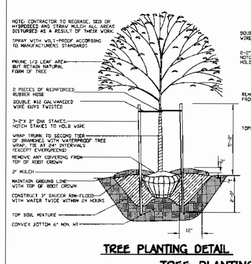
Positive drainage shall be maintained in planting beds (2 percent slope).

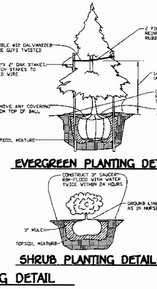
Planting mix shall be as Follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 2 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only - see other plan sheets for more information on grading, sediment control, layout, etc.





Planting/Soil Specifications

1. Installation of bareroot plant stock shall take place between March 15 - April 20; b&b/container stock March 15 -May 30 or September 15 - November 15. Fall planting of B&B stock is not recommended.

2. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.

3. Bareroot plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.

4. Fertilizer shall consist of Agriform 22-8-8-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plants shall be fertilized with Osmocote 8-8-8-12.

5. Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to planting.

6. All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

1. Sediment control shall be installed in accordance with general construction plan for site.

2. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.

3. Upon completion of the planting, signage shall be installed as shown.

4. Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project..

Maintenance of Plantings

1. Maintenance of plantings shall last for a period of 2 years.

2. Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second growing season, once a month during May-September, if needed.

3. Invasive exotics and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide application (see groundcover note where appropriate). Old field successional species will be retained.

4. Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.

5. Dead branches will be pruned from plantings..

Guarantee Requirements

1. A 75 percent survival rate of forestation plantings will be required at the end of 2 growing seasons. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. Wild trees arising from natural regeneration may be counted up to 50 percent towards the total survival number if they are healthy, native species at least 12 inches tall.

Surety for Forestation

1. The developer shall post a surety (bond, letter of credit) to ensure that forestation plantings are completed.

Planting Notes

When possible, plants shall be installed within 24 hours of delivery. If installation cannot be performed within this time frame, plant stock shall be watered and protected from dessication.

Application of herbicide, Round-up or equivalent, may be used to reduce plant competition from old field successional growth at the time of installation. Mowing, re-application of herbicide, or a combination thereof, may be used to control unwanted, competing vegetation.

Planting shall be installed within one year or two growing seasons of subdivision Approval. Plantings shall be installed in accordance with the time schedule included in Note 1 of the planting /Seeding Specifications.

Multiflora Rose Control Note

Multiflora rose is prevalent in certain areas to be afforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicides treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturers specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

NOTE: THE 1.6 AC. OF FOREST PLANTING AT NORTHEASTERN ELEMENTARY SCHOOL #4 SDP 02-36 IS TO SATISFY THE REQUIRED FOREST PLANTING THAT IS REQUIRED TO FULLFILL THE FORESTATION REQUIREMENTS OF THE FUTURE NEW NORTHEASTERN ELEMENTARY SCHOOL SITE. SDP 05-109.

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WATER CODE: F04		SEWER CODE: 5750615			

OFF-SITE FOREST PLANTING PLAN AT NORTHEASTERN ELEMENTARY SCHOOL SDP02-36

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 19, 2005

SHEET 13 OF 13 SDP-05-109

OFFSITE REFORESTATION FCE#8
NORTHEASTERN ELEMENTARY SCHOOL
2.8 acres

Planting units required: 1960
Planting units proposed: 1967

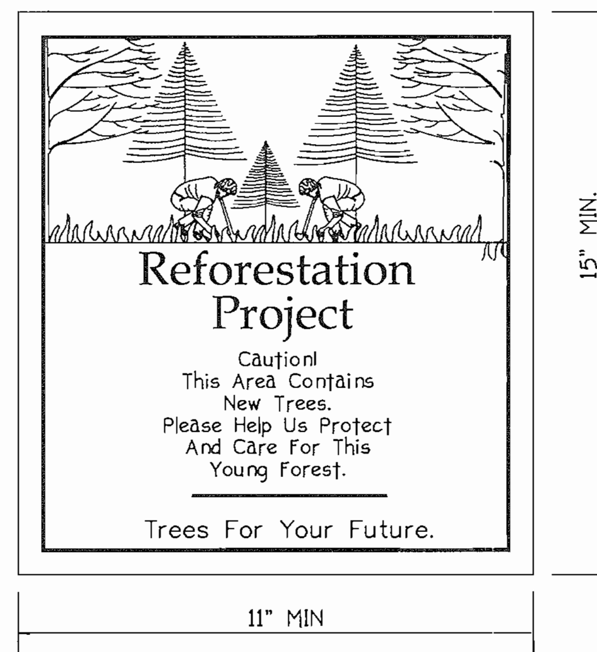
Qty	Species	Size	Spacing	Total Units
14	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
14	Quercus alba - White oak	1" cal.	15' o.c.	
14	Quercus rubra - Red oak	1" cal.	15' o.c.	
42	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		147
160	Acer rubrum - Red maple	2-3' whip	11' o.c.	
100	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
180	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
160	Quercus alba - White oak	2-3' whip	11' o.c.	
160	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
150	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
910	Total whip plantings (2 planting unit per tree)	FCA unit credit		1820
			Total Unit Credit	1967

Planting Notes/Key:

1. One inch caliper trees shall be planted along the outer edge of the FCE along. The species may be randomly placed.

2. Whip plantings should be installed in a curvilinear pattern to facilitate maintenance but avoid a grid appearance. Tree shelters should be installed on all whip plantings.

DATE	REVISION	BY
10-14-05	△ REVISED FOREST CONSERVATION EASEMENT NO. 8	FCC



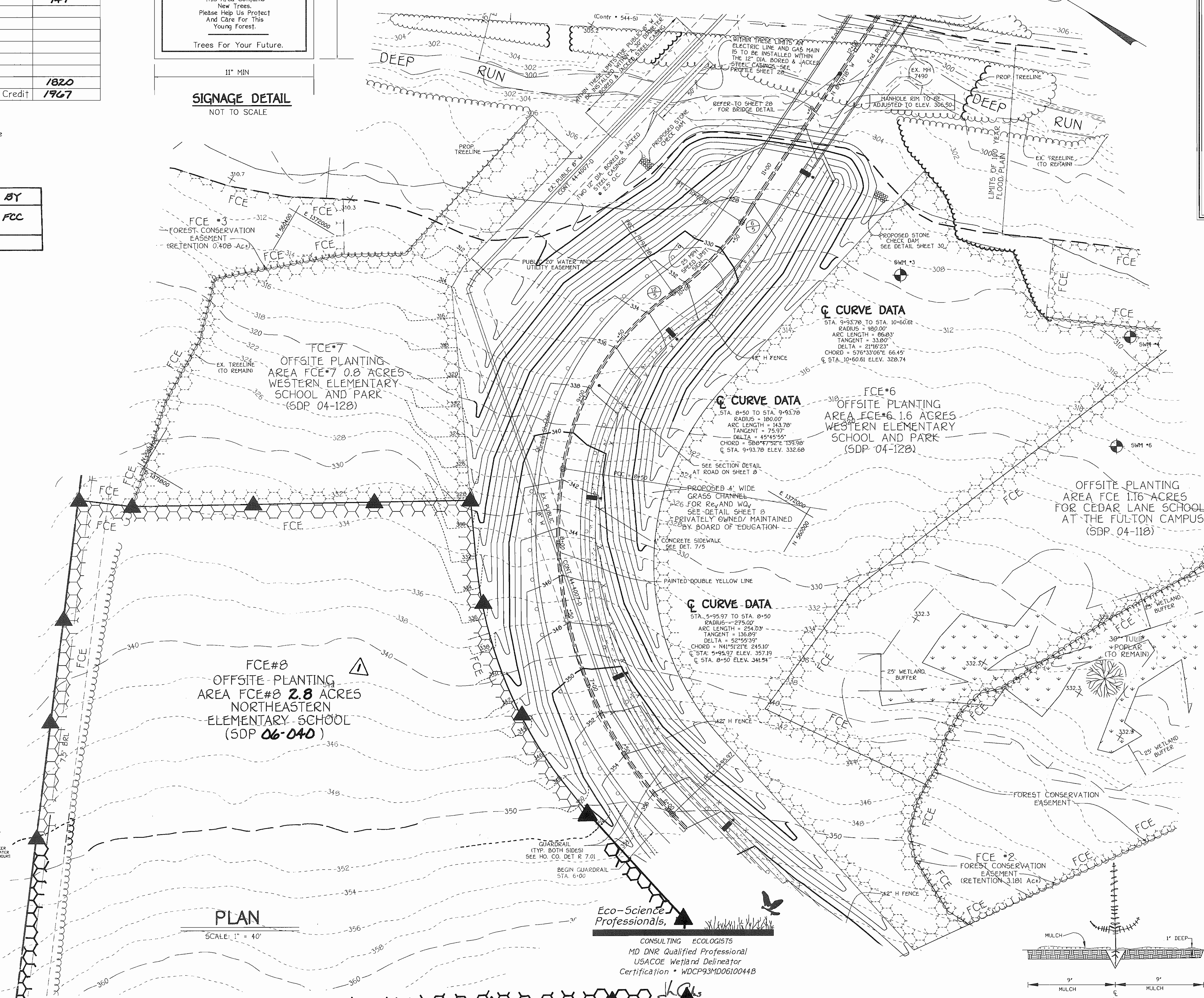
SIGNAGE DETAIL
NOT TO SCALE

THIS PLAN IS FOR FOREST PLANTING ONLY

FCE LEGEND

Denotes Public Forest Conservation Easement.

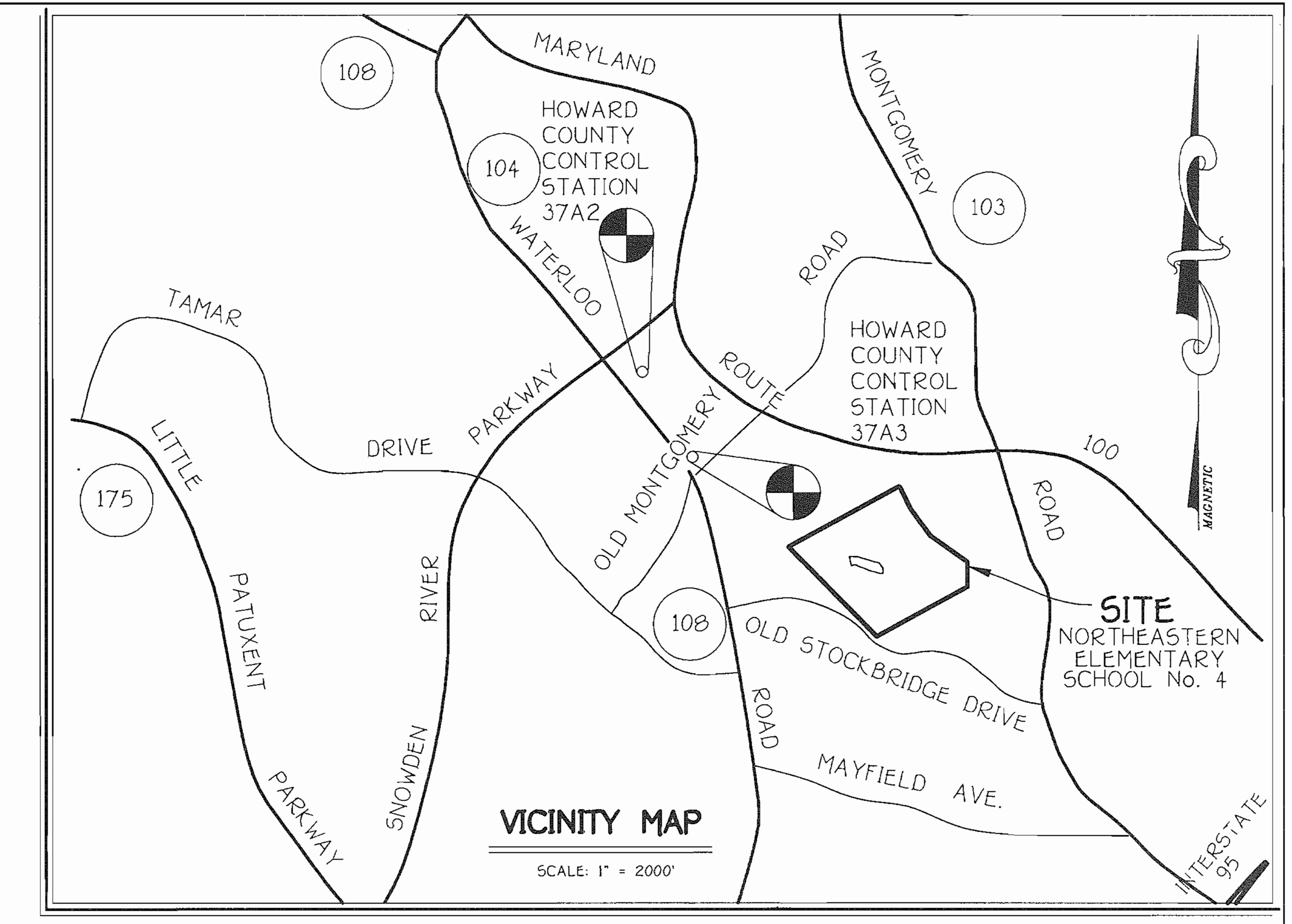
▲ Permanent signage location spaced at 100' intervals (maximum) and at every angle break.



SEEDLING AND WHIP PLANTING DETAIL
NOT TO SCALE

PLAN
SCALE: 1" = 40'

Eco-Science Professionals,
CONSULTING ECOLOGISTS
MD DNR Qualified Professional
USACOE Wetland Delineator
Certification • WDCP93MD0610044B
JOHN P. CANOLES



VICINITY MAP
SCALE: 1" = 2000'

Planting/Soil Specifications

1. Installation of bareroot plant stock shall take place between March 15 - April 20; b&b/container stock March 15 -May 30 or September 15 - November 15. Fall planting of B&B stock is not recommended.

2. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.

3. Bareroot plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.

4. Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plants shall be fertilized with Osmocote 8-6-12.

5. Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to planting.

6. All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

1. Sediment control shall be installed in accordance with general construction plan for site.

2. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.

3. Upon completion of the planting, signage shall be installed as shown.

4. Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project..

Maintenance of Plantings

1. Maintenance of plantings shall last for a period of 2 years.

2. Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second growing season, once a month during May-September, if needed.

3. Invasive exotics and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide application (see groundcover note where appropriate). Old field successional species will be retained.

4. Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.

5. Dead branches will be pruned from plantings..

Guarantee Requirements

1. A 75 percent survival rate of forestation plantings will be required at the end of 2 growing seasons. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. Wild trees arising from natural regeneration may be counted up to 50 percent towards the total survival number if they are healthy, native species at least 12 inches tall.

Surety for Forestation

1. The developer shall post a surety (bond, letter of credit) to ensure that forestation plantings are completed.

Planting Notes

When possible, plants shall be installed within 24 hours of delivery. If installation cannot be performed within this time frame, plant stock shall be watered and protected from dessication

Application of herbicide, Round-up or equivalent, may be used to reduce plant competition from old field successional growth at the time of installation. Mowing, re-application of herbicide, or a combination thereof, may be used to control unwanted, competing vegetation.

Planting shall be installed within one year or two growing seasons of subdivision approval. Plantings shall be installed in accordance with the time schedule included in Note 1 of the planting /Seeding Specifications.

Multiflora Rose Control Note

Multiflora rose is prevalent in certain areas to be afforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicides treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturers specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

NOTE: THE 2.8 AC. OF FOREST PLANTING AT NORTHEASTERN ELEMENTARY SCHOOL #4 SDP 02-36 IS TO SATISFY THE REQUIRED FOREST PLANTING THAT IS REQUIRED TO FULLFILL THE FORESTATION REQUIREMENTS OF THE FUTURE NEW NORTHEASTERN ELEMENTARY SCHOOL SITE. SDP 06-040.

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

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

unless otherwise specified, a;; general conditions, planting operations, details and planting specification shall conform to 'Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas', (hereinafter 'Landscape Guidelines') approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

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

Contractor shall be responsible for notifying utility companies, utility contractors and 'Miss Utility' a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expenseof the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

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

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

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

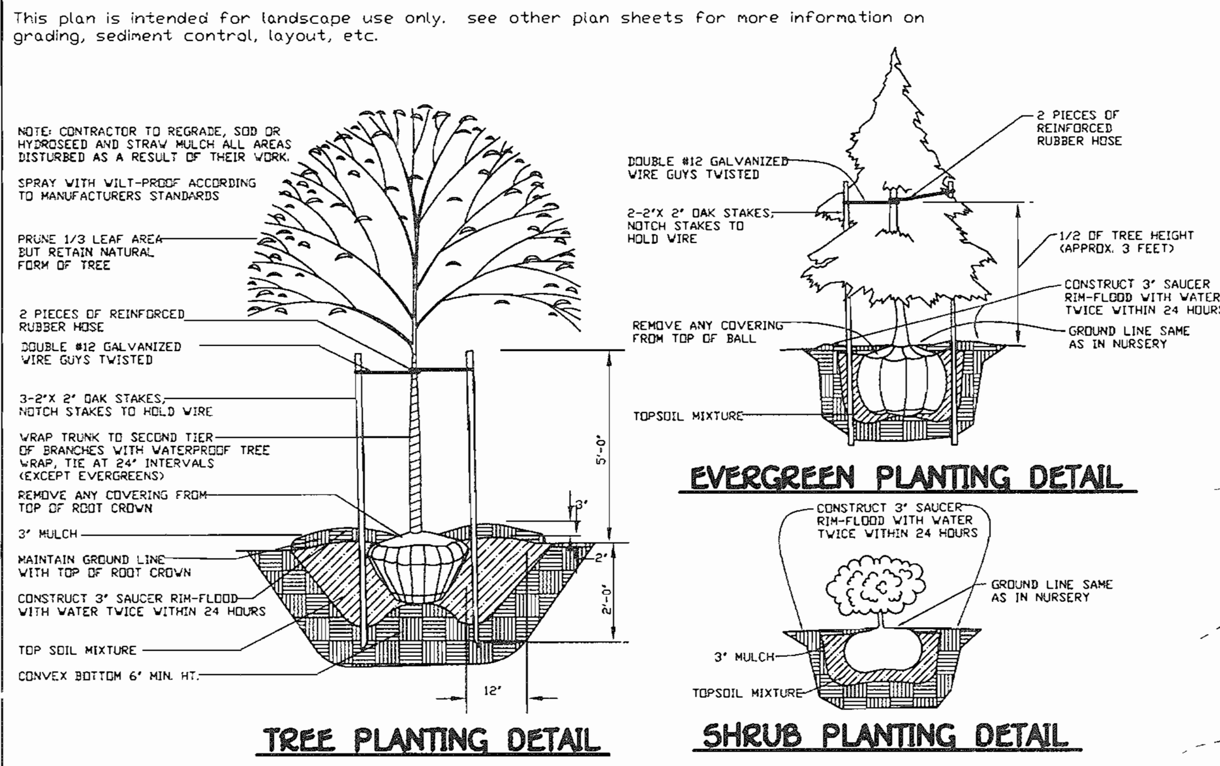
Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.



TREE PLANTING DETAIL
NOT TO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer — Date: 5-23-05

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — Date: 6/1/05

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — Date: 5-23-05

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — Date: 6/1/05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date: 6/8/05

Chief, Division of Land Development — Date: 6/8/05

Chief, Development Engineering Division — Date: 6/1/05

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA		P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A		321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-I R-SC-I	24	SECOND	6028.00
WATER CODE			SEWER CODE		
F04			5750615		

OFF-SITE FOREST PLANTING PLAN AT NORTHEASTERN ELEMENTARY SCHOOL SDP02-36

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 19, 2005

SHEET 13 OF 13

SDP-05-109

DATE	REVISION	BY
10-14-05	⚠ Revise F.C.E. No. 2 and eliminate F.C.E. No. 3.	FCC

Planting Area FCE # 2 - 1.1 acres
Planting units required: 770
Planting units proposed: 776

Qty	Species	Size	Spacing	Total Units
12	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
12	Quercus rubra - Red oak	1" cal.	15' o.c.	
36	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		126
70	Acer rubrum - Red maple	2-3' whip	11' o.c.	
20	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
85	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
85	Quercus alba - White oak	2-3' whip	11' o.c.	
40	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
25	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
325	Total whip plantings (2 planting unit per tree)	FCA unit credit		650
			Total Unit Credit	776

~~Planting Area FCE # 3 - 0.3 acres~~
~~Planting units required: 210~~
~~Planting units proposed: 210~~

Qty	Species	Size	Spacing	Total Units
12	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
12	Quercus rubra - Red oak	1" cal.	15' o.c.	
36	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		126
12	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
10	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
10	Quercus alba - White oak	2-3' whip	11' o.c.	
10	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
42	Total whip plantings (2 planting unit per tree)	FCA unit credit	11' o.c.	84
			Total Unit Credit	210

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
MD. DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B
JOHN P. CANOLES

F.C.E. 2
0.9 ACRES TO BE RETAINED (NTA)
1.1 ACRES TO BE REFORESTED
Total Area = 2.0 Ac.

S.O.S.T. #1 SEE DETAIL SHEET 5
S.O.S.T. #2 SEE DETAIL SHEET 5
EARTH DIKE
STORM WATER DIVERSION CHANNEL
EROSION CONTROL MATTING SEE DETAIL SHEET 5
NOTE FOR SEDIMENT TRAP SCHEDULE SEE SHEET 6
EX. 6' WIDE OLD DIRT ROAD
INITIAL TYPE 'A-2' E.D. TO BE BUILT UP DAILY DURING FILL OPERATION
EXISTING POND WS 376.2
EXISTING DWELLING
EX. WOOD FENCE
EXISTING DRIVEWAY
POOL
CONC.
DECK
EX. 100' FEE SIMPLE STRIP
EXISITING TOWER #274
EX. 150' RIGHT-OF-WAY
FUTURE SCHOOL
FUTURE PAVING
OLD DIRT ROAD OR PATH
ZONING LINE
PROPERTY OF BALTIMORE GAS AND ELECTRIC COMPANY LIBER 343, FOLIO 001 ZONED R-20
OPEN SPACE LOT 35
PARCEL 321

BETHEL BAPTIST CHURCH L.788 / F.406 P.322 ZONED RSI
BETHEL BAPTIST CHURCH L.3816 / F.584 P.323 ZONED RSI
JOHN GOETLER L.8357 / F.33 P.324 ZONED R-5A-8
MARY G. HOWARD ELEANOR BAKER L.3377 / F.15 P.325 ZONED R-5A-8
TRIANGLE OLD ANNAPOLIS ASSOCIATES LLC L.8776 F.163 P.326 ZONED R-5A-8
VETERANS OF FOREIGN WARS L.229 / F.213 P.321 ZONED R-20
LOT 9 TAYLOR PROPERTY SECTION ONE PLAT 5322 ZONED R-20
LOT 12 TAYLOR PROPERTY SECTION ONE PLAT 5322 ZONED R-20
DAVID L. GUNTMAN FAITH E. GUNTMAN L.1262 / F.748 P.838 LOT 10 ZONED R-20 TAYLOR PROPERTY SECTION ONE PLAT 5322
MARK R. DEYO L.6749 / F.210 P.906 LOT 284 ZONED R-20 STONECREST SECTION 3 P.88 FOLIO 83
SUSQUEHANNA TRANSMISSION COMPANY OF MARYLAND LIBER 140, FOLIO 457 ZONED R-20

MATCH LINE SEE SHEET 11

PLAN
SCALE: 1" = 40'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer — 5.23.05 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 6/1/05 Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — 5.23.05 Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/6/05 Date

Chief, Division of Land Development — 6/10/05 Date

Chief, Development Engineering Division — 6/2/05 Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-5A-8-I R-SC-I	24	SECOND	6028.00
WATER CODE		SEWER CODE			
F04		5750615			

FOREST CONSERVATION PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL NOS.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 12 OF 13

SDP-05-109

K:\SDS\PROJ\A03850\dwg\Mass Grading\A03850 FOR-CON PLAN (SHEETS 10,11,12).dwg, 6/26/2006 3:10:33 PM

DATE	REVISIONS
10-14-05	⚠ REVISED FOREST CONSERVATION EASEMENT #2 AND ELIMINATE FOREST CONSERVATION EASEMENT #3

MATCH LINE SEE SHEET 12

FCP NOTES

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
3. Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
5. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
6. Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits.
7. Permanent signage will be posted a at 50-100 foot intervals along all FCE limits.
8. The Forest Conservation Act requirements for this project will be met through the retention of **3.7** acres of net tract area forest within the limits of a Forest Conservation Easement and the reforestation of **4.5** acres. Approximately **1.6** acres of onsite reforestation is proposed with the balance of the obligation, **2.9** acres, will be met through offsite planting on the Bellow Springs Elementary School property. The total forest conservation obligation for this project is **8.2** acres.

MATCH LINE SEE SHEET 10

PLAN
SCALE: 1" = 40'

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
MD DNR Qualified Professional
USACOE Wetland Delineator
Certification • WDCP93MD0810048
JOHN P. CANOLES

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
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ENGINEER'S CERTIFICATE

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Signature of Engineer — Date 5-23-05

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — Date 6/1/05

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — Date 5.23.05

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — Date 6/1/05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 6/8/05

Chief, Division of Land Development — Date 6/8/05

Chief, Development Engineering Division — Date 6/6/05

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6798

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-1 R-SC-1	24	SECOND	6028.00
WATER CODE		SEWER CODE			
F04		5750615			

FOREST CONSERVATION PLAN

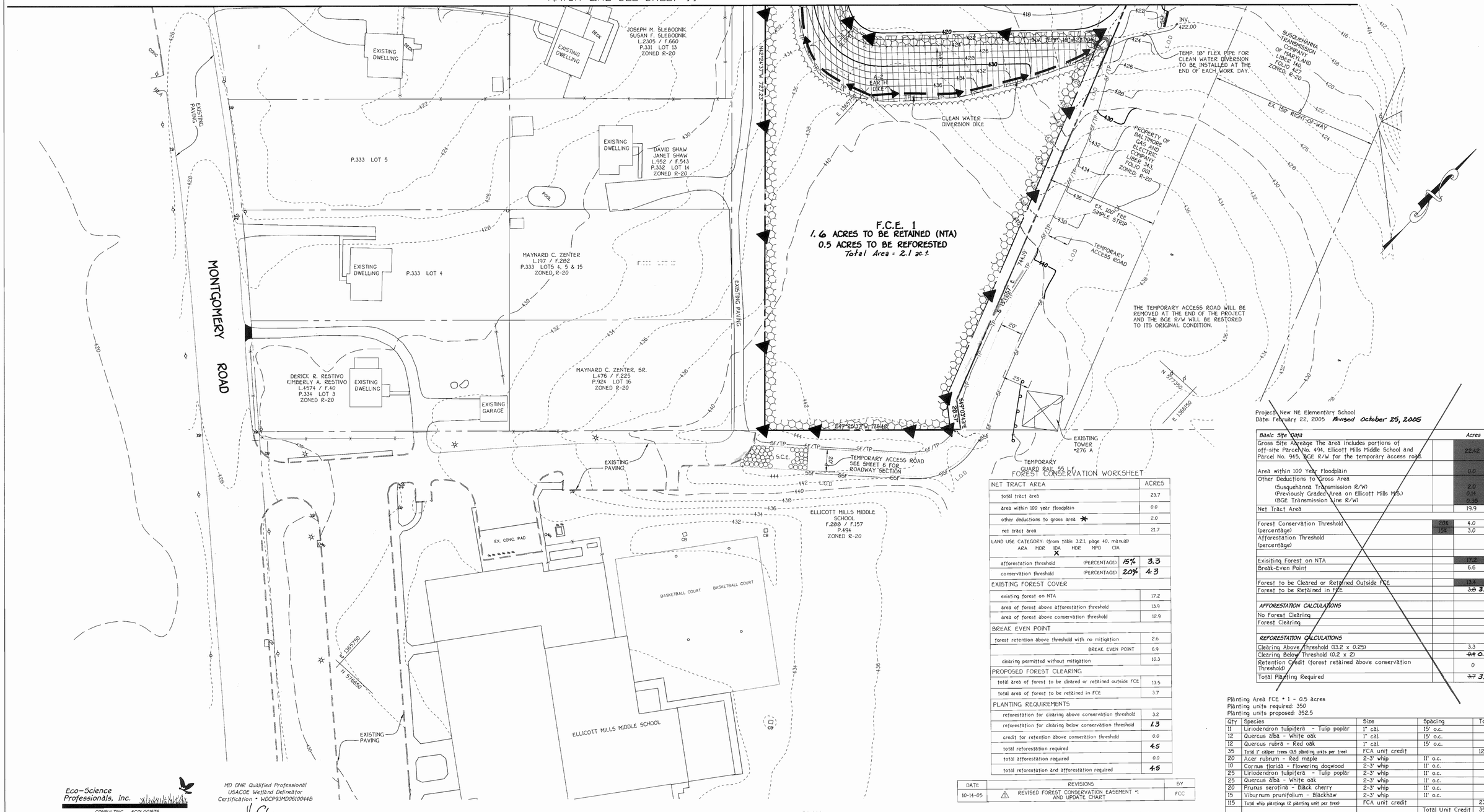
MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 11 OF 13

SDP-05-109

MATCH LINE SEE SHEET 11



PLAN
SCALE: 1" = 40'

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification • WDCP93M006100448
JOHN P. CANOLES

Project: New NE Elementary School
Date: February 22, 2005 *Revised October 25, 2005*

Basic Site Data		Acres
Gross Site Acreage The area includes portions of off-site Parcel No. 494, Ellicott Mills Middle School and Parcel No. 945, BGE R/W for the temporary access road.		22.42
Area within 100 Year Floodplain		0.0
Other Deductions to Gross Area		
(Susquehanna Transmission R/W)		2.0
(Previously Graded Area on Ellicott Mills MS.)		0.14
(BGE Transmission Line R/W)		0.38
Net Tract Area		19.9
Forest Conservation Threshold (percentage)	20%	4.0
	15%	3.0
Afforestation Threshold (percentage)		
Exisiting Forest on NTA		17.2
Break-Even Point		6.6
Forest to be Cleared or Retained Outside FCE		13.5
Forest to be Retained in FCE		~~3.8~~ 3.7
AFFORESTATION CALCULATIONS		
No Forest Clearing		
Forest Clearing		
REFORESTATION CALCULATIONS		
Clearing Above Threshold (13.2 x 0.25)		3.3
Clearing Below Threshold (0.2 x 2)		~~0.4~~ 0.6
Retention Credit (forest retained above conservation Threshold)		0
Total Planting Required		~~3.7~~ 3.9

FOREST CONSERVATION WORKSHEET

NET TRACT AREA		ACRES
total tract area		23.7
area within 100 year floodplain		0.0
other deductions to gross area *		2.0
net tract area		21.7
LAND USE CATEGORY: (from table 3.2.1, page 40, manual) ARA MDR IDA HDR MPD CIA X		
afforestation threshold (PERCENTAGE)	15%	3.3
conservation threshold (PERCENTAGE)	20%	4.3
EXISTING FOREST COVER		
existing forest on NTA		17.2
area of forest above afforestation threshold		13.9
area of forest above conservation threshold		12.9
BREAK EVEN POINT		
forest retention above threshold with no mitigation		2.6
BREAK EVEN POINT		6.9
clearing permitted without mitigation		10.3
PROPOSED FOREST CLEARING		
total area of forest to be cleared or retained outside FCE		13.5
total area of forest to be retained in FCE		3.7
PLANTING REQUIREMENTS		
reforestation for clearing above conservation threshold		3.2
reforestation for clearing below conservation threshold		1.3
credit for retention above conseration threshold		0.0
total reforestation required		4.5
total afforestation required		0.0
total reforestation and afforestation required		4.5

Planting Area FCE = 1 - 0.5 acres
Planting units required: 350
Planting units proposed: 352.5

Qty	Species	Size	Spacing	Total Units
11	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
12	Quercus rubra - Red oak	1" cal.	15' o.c.	
35	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		122.5
20	Acer rubrum - Red maple	2-3' whip	11' o.c.	
10	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
25	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
25	Quercus alba - White oak	2-3' whip	11' o.c.	
20	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
15	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
115	Total whip plantings (2 planting unit per tree)	FCA unit credit		230
			Total Unit Credit	352.5

DATE	REVISIONS	BY
10-14-05	⚠ REVISED FOREST CONSERVATION EASEMENT #1 AND UPDATE CHART	FCC

* - "Other Deductions" include BG&E R/W, Susquehanna Transmission R/W & Previously Graded areas for Ellicott Mills Middle School.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer — Date 5-23-05

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — Date 6/1/05

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — Date 5.23.05

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District - Howard Soil Conservation Dist. — Date 6/1/05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 6/1/05

Chief, Division of Land Development — Date 6/1/05

Chief, Development Engineering Division — Date 6/1/05

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6790

TCA ARCHITECTS
2661 RIVA ROAD, SUITE 120
ANNAPOLIS, MARYLAND 21401
(301) 261-8700

Address Chart

Parcel Number	Street Address
P.O. 321	VFW LA OFF COLUMBIA PIKE
P.O. 767	4443 MONTGOMERY ROAD

PROJECT			SECTION/AREA	P.O. PARCEL
FUTURE NORTHEASTERN ELEMENTARY SCH.			N/A	321 & 767
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9030/201, 9030/437 & 9030/445	24	R-20 R-SA-8-I R-SC-I	24	SECOND	6028.00
WATER CODE		SEWER CODE			
F04		5750615			

FOREST CONSERVATION PLAN

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL NOS.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: MAY 19, 2005

SHEET 10 OF 13

SDP-05-109

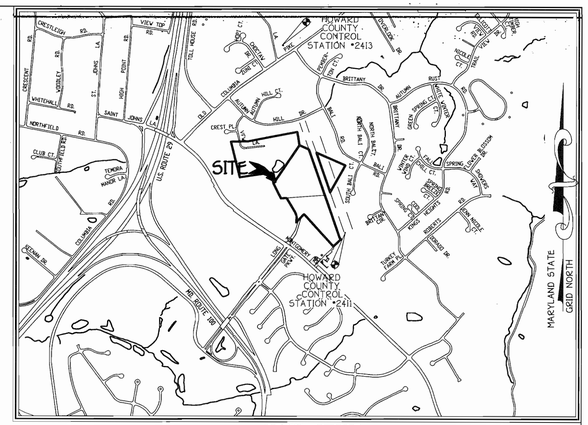
K:\SDSKPROJ\40385\dwg\Mass Grading\40385 FOR-CON PLAN (SHEETS 10,11,12).dwg, 5/25/2005 3:08:34 PM

MASS GRADING PLAN
FUTURE
NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No.: 24 P.O. PARCEL No.: 321 & 767

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

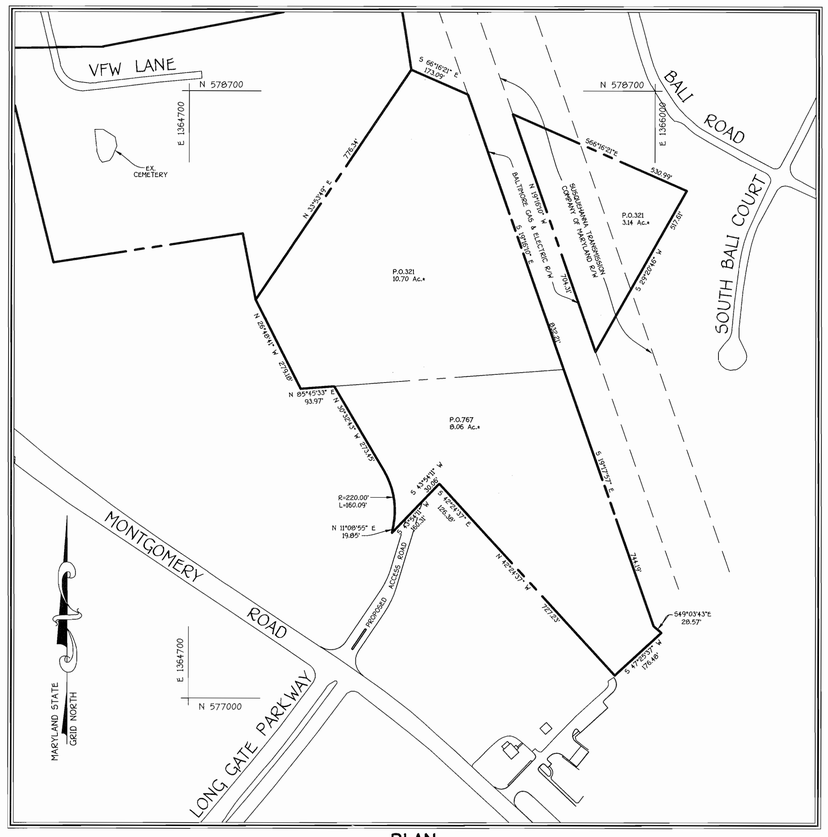
SHEET INDEX



VICINITY MAP
SCALE: 1" = 1200'

SITE ANALYSIS DATA

1. General Site Data:
   A. Present Zoning: R-20, R-SA-8-1 and R-SC-1
   B. Proposed use of site or structure: Institutional; Public School
   C. Public water and sewer to be utilized.
2. Area Tabulation:
   A. Total project area: 21.90 Ac.±
   B. Area of this plan submission: 13.61 Ac.± is the limit of submission and grading disturbance for the proposed mass grading operation.
   C. Impervious Coverage: None



PLAN
SCALE: 1" = 200'

LEGEND

Description	Symbol
Existing Contour	--400--
Proposed Contour	—400—
Existing Tree & Treeline	
New Treeline	
Existing Fence	X——X——X——X
Limit of Grading Disturbance (L.O.D.)	
Wetland Buffer	
Stream Buffer	
Wetland Area	
Super Silt Fence	SSF——SSF——SSF
Silt Fence	SF——SF——SF
Forest Conservation Easement	
Existing Paving	
Tree Protection Fence	TP——TP——TP
Permanent Protection Signage and Temporary Protection Fence	

BGE R/W & FOREST CONSERVATION EASEMENT NOTE:

"Based on a determination by DPZ in a letter dated 9/16/05, the Department of Planning and Zoning may authorize the trimming or the removal of trees or vegetation within the forest conservation easements located immediately adjacent to the BGE R/W or Easement, if BGE determines the trees are compromising the safety of a transmission line located within their Utility R/W or Easement. If BGE intends to trim or remove trees within a forest conservation easement, a letter specifying the location and scope of work needs to be sent to DPZ atleast 30 days in advance of undertaking the work. DPZ understands Constellation Energy's need to protect its transmission lines and will not unreasonably withhold permission".

DATE	REVISIONS
10-14-05	⚠ UPDATE GENERAL NOTE #18

General Notes

1. All construction shall be accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five working days prior to start of work.
3. The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any digging and excavation work.
4. The contractor shall notify The Baltimore Gas & Electric Company at 410-597-6953 at least five working days before starting work.
5. Project Background:
Location: Tax Map 24, Grid 24, P.O. Parcels 321 & 767
Zoning: This project is zoned R-20, R-SA-8-1 and R-SC-1 per the 2/2/04 comprehensive zoning plan.
Election District: SECOND
Section/Area: N/A
Site Area: 21.90 Ac.±
6. Existing topography and features were derived from a field run survey by Fisher, Collins and Carter Inc. and Harford Aerial Surveys inc. on or about March 22, 2003.
7. Coordinates are based on NAD 83 Maryland Coordinates System as projected by Howard County Geodetic Control Stations. 2411 N 577,298.654 E 1,366,075.133 ELEV. 473.805; 2413 N 580,648.910 E 1,364,974.458 ELEV. 404.518
8. Public water and sewer is to be utilized for this project
9. Permanent stormwater management will be provided for this site at the future site development plan phase associated with the actual school construction. For the interim period temporary storm water management is provided by three (3) sediment traps to remain in place until future site development plan is approved.
10. Any damage to County and or State owned right-of-way to be corrected at the contractor's expense.
11. There are no known grave sites or cemeteries on this site. Based on a visual site visit and based on an examination of the Howard County Cemetery Inventory Map. An existing cemetery/grave sites were identified and located on the adjacent VFW parcel, p/o Parcel No. 321 which is not a part of this submission.
12. This Project is recorded among the land records in Howard County, Maryland as Deeds. 9030/201, 9030/437 & 9030/445
13. A Forest Conservation Report Is Provided By Eco-Science Professionals, Inc. Dated February 21, 2005.
14. A Wetland delineation report was prepared by Eco-Science Professionals Inc. dated February 21, 2005.
15. No grading removal of vegetative cover on trees or placement of new structures is permitted within the limits of wetlands, stream(s) or their buffers.
16. This SDP is subject to the First Amendment to the Fifth Edition of the Subdivision and Land Development Regulations dated October 2, 2003 and the Comprehensive Zoning Plan and Regulations adopted on 2/2/04.
17. See recorded plat under 18014 - 18018 for Forest Conservation Easement Area, for bearing and distance information.
18. The Forest Conservation Act requirements for this project will be met through the retention of **3.7** acres of net tract area forest within the limits of a Forest Conservation Easement and the afforestation/reforestation of **1.6** acres on site and **2.8** acres of forest at the Bellows Spring Elementary School property off of Old Stockbridge Lane. (SDP 02-36). The Total Forest Conservation Obligation On For This Project is **8.1** Ac.
19. The Baltimore Gas And Electric Company has granted permission in accordance with a letter dated March 24, 2005 for construction of temporary access road and associated grading within their Right Of Way.
20. The bearings and distances for the existing wetlands boundaries have been shown on the Forest Conservation Easement Plats.
21. Landscaping in accordance with Section 16.124 of the Howard County Code and the Landscape Manual will be addressed and provided with a future SDP for the actual school construction.

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District Howard Soil Conservation Dist. — 6/1/05 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 6/8/05 Date

Chief, Division of Land Development — 6/8/05 Date

Chief, Development Engineering Division — 6/7/05 Date

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WATER CODE			SEWER CODE		
F04			5750615		

TITLE SHEET

MASS GRADING PLAN FOR FUTURE NORTHEASTERN ELEMENTARY SCHOOL

TAX MAP No.: 24 GRID No: 24 P.O. PARCEL Nos.: 321 & 767
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 19, 2005

SHEET 1 OF 13

SDP-05-109