

SITE DEVELOPMENT PLAN NOTES

1. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF WORK AT (410)-313-1880.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
3. THE EXISTING TOPOGRAPHY IS TAKEN FROM FILED RUN SURVEY PREPARED WITH 1-FOOT INTERVALS PREPARED BY KRIS CONSULTANTS, LLC, DATED 9/25/2006.
4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT # 30.0B & 0053(DARTMOUTH ROAD & PEBBLE DR.) AND THE PROPERTY CORNERS WERE USED FOR THIS PROJECT. HOWARD COUNTY RECORDED SHOWS COORDINATES OF THESE CONTROLS.
5. THERE ARE NO CURRENTLY APPROVED STORMWATER MANAGEMENT PLANS ON THIS PROJECT. THIS PROJECT CONTAINS 5,000 SF OF IMPERVIOUS AREA, WHICH EQUALS THE MAX. ALLOWED AT 5,000 SF. HENCE, SWM/BMP NOT REQUIRED.
6. EXISTING UTILITIES ARE BASED ON FIELD SURVEY DONE BY KRIS CONSULTANTS, LLC.
7. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
8. SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.

DALTON -LOT 41

SITE DEVELOPMENT PLAN

9. FOR DRIVEWAY ENTRANCE DETAILS, PLEASE REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL DMV-IV-SPECIFICATION R6.06.
10. THE SUBJECT PROPERTY IS ZONED R-20 PER THE HOWARD COUNTY COMPREHENSIVE ZONING PLAN: FEBRUARY 2, 2004 & JULY 28, 2006 (COMPLIATE REZONING)
11. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 10- FEET IN WIDTH MAY PROJECT NOT MORE THAN 4- FEET INTO ANY SETBACKS, PORCHES OR DECKS. OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10- FEET INTO THE FRONT OR REAR YARD SETBACK.

12. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.

13. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:

- WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE);
- SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING(1-1/2" MIN.);
- GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS;
- STRUCTURES (CULVERTS/BRIDGES)-CAPABLE OF SUPPORTING 25 GROSS TONS(H25 LOADING);
- DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1-FOOT DEPTH OVER DRIVEWAY SURFACE;
- MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE

14. THE 65 dBA NOISE CONTOUR LINE DRAWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65 dBA NOISE EXPOSURE. THE 65 dBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

15. THIS LOT IS EXEMPT FROM THE HOWARD COUNTY FOREST CONSERVATION PROGRAM BECAUSE THIS LOT IS LESS THAN 40,000 SQUARE- FEET IN AREA.

16. A 10-FOOT PRIVATE UTILITY EASEMENT WAS ESTABLISHED WITH THE PLAT. ONLY 5- FEET OF THIS EASEMENT IS ON LOT 4, THE OTHER 5- FEET IS ON ADJACENT LOT 74.

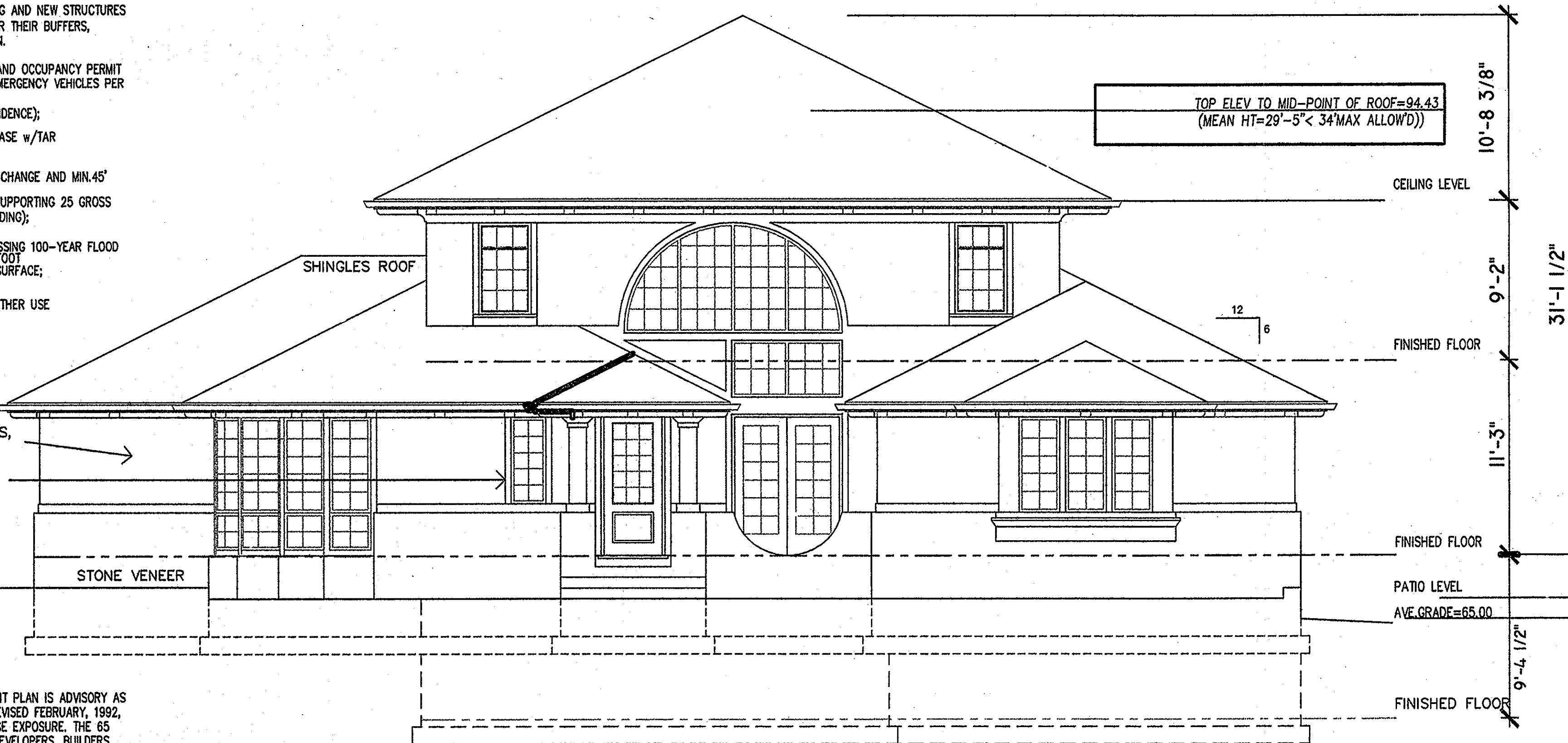
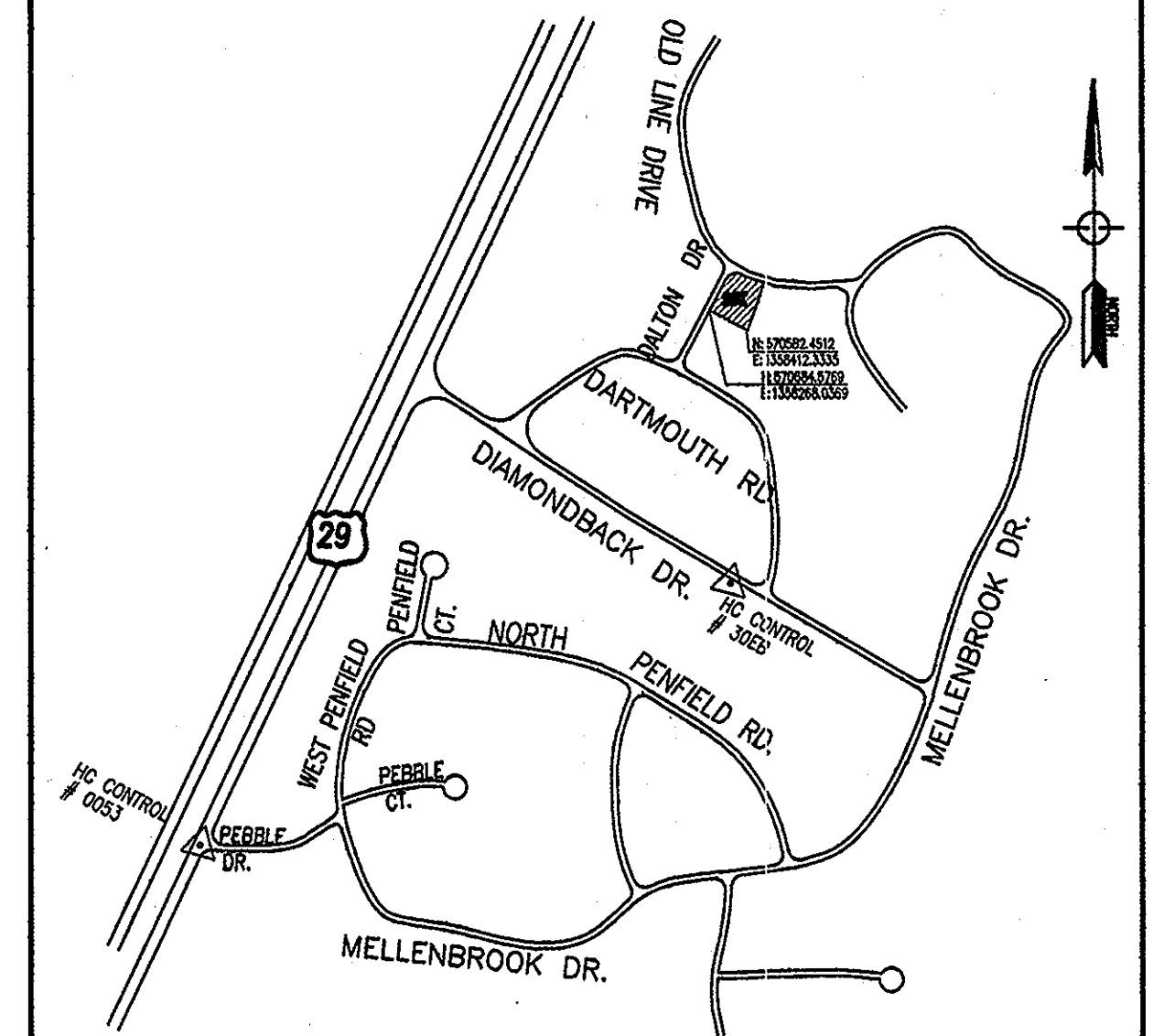
17. IN ACCORDANCE WITH SECTION 16.127(c)(2)(iii), A BUILDING MUST BE LOCATED TO MINIMIZE INFRINGEMENT ON THE PRIVACY OF ADJOINING RESIDENTIAL PROPERTIES. THIS NEW HOUSE WILL BE LOCATED MORE THAN 50- FEET FROM ANY EXISTING BUILDING/HOMES AND THE PERIMETERS WILL BE BUFFERED WITH LANDSCAPE TREE PLANTINGS.

18. LANDSCAPING FOR LOT 41 IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE DPW GRADING PERMIT APPLICATION IN THE AMOUNT OF \$ 100.00 FOR 2 SHADE TREES AND FOR 2 EVERGREEN TREES.

19. ANY FUTURE INCREASE IN IMPERVIOUS SURFACE/AREA WILL REQUIRE STORMWATER MANAGEMENT. EXISTING IMPERVIOUS AREA IS AT ALLOWABLE MAXIMUM OF 5,000 SQUARE FEET.

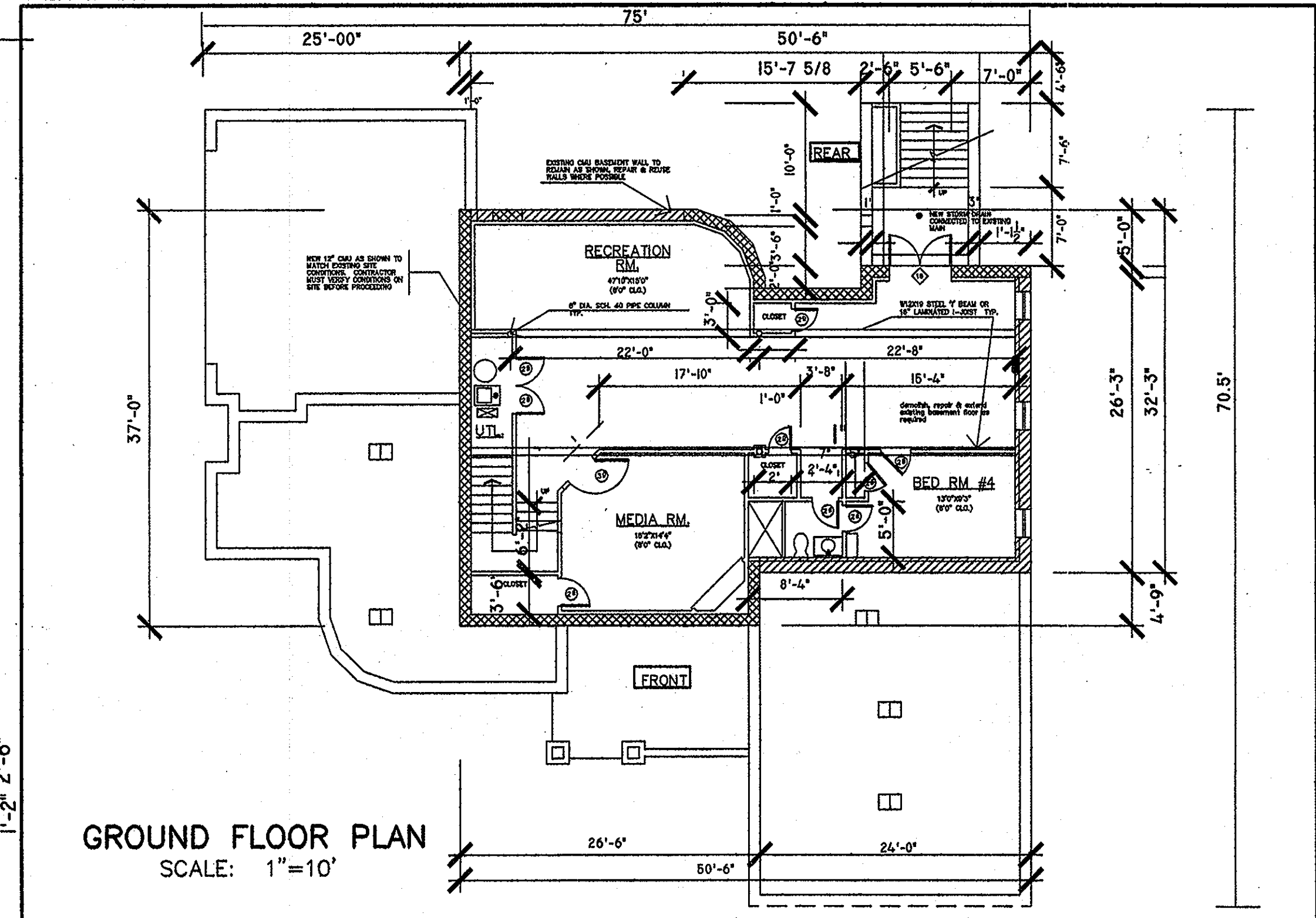
LEGEND

- SEWER LINE
- GAS LINE
- LP
- UP
- SDMH
- GUY
- SMH
- WMTR
- TRAV
- INLET
- FH
- WV
- 15"
- 15"P
- LIGHT POLE
- UTILITY POLE
- STORM DRAIN MANHOLE
- GUY
- SEWER MANHOLE
- WATER METER
- TRAVERSE CONTROL POINT
- STORM DRAIN INLET
- HYDRANT
- CLEAN OUT
- WATER VALVE
- TREE/SIZE
- SIGN
- PINE TREE/SIZE



PROPOSED FRONT ELEVATION (MEAN HT=29'-5")

SCALE: 1"=50'



GROUND FLOOR PLAN
SCALE: 1"=10'

SITE ANALYSIS DATA CHART

- (A). TOTAL PROJECT AREA=0.63 AC.
- (B). AREA OF PLAN SUBMISSION = SAME AS ABOVE.
- (C). LIMIT OF DISTURBED AREA-ONSITE = 0.30AC.
- (D).PRESENT ZONING DESIGNATION:R-20
- (E). PROPOSED USES FOR SITE AND STRUCTURES:RESIDENTIAL
- (F). FLOOR SPACE ON EACH LEVEL(COMMERCIAL:N/A)
- (G). TOTAL NUMBER OF UNITS ALLOWED: 1.
- (H). TOTAL # OF UNITS PROPOSED AT SUBMISSION:1.
- (I). MAX.# OF EMPLOYEES ON SITE: N/A
- (J). # OF PARKING SPACES REQUIRED: (N/A- RESIDENTIAL)2.
- (K). #OF PARKING SPACES PROVIDED:2 RESIDENTIAL.
- (L). UNDISTURBED AREA ON SITE: .33AC, AND 48% OF GROSS AREA.
- (M). BUILDING COVERAGE OF SITE: .33AC AND IS 48% OF GROSS AREA.
- (N). APPLICABLE DPZ FILE REFERENCES: F-126B

SHEET INDEX

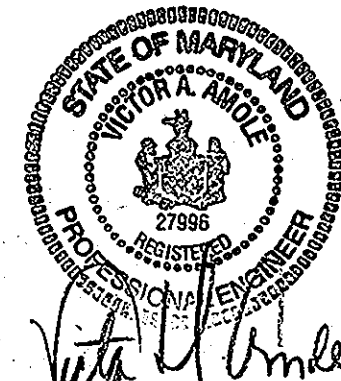
1. COVER SHEET.
2. SITE PLAN,GRADING, EROSION CONTRL AND LANDSCAPE PLANS.
3. EROSION & SEDIMENT CONTROLS PLAN-PHASE I
4. EROSION & SEDIMENT CONTROLS PLAN-PHASE II
5. EROSION & SEDIMENT CONTROLS DETAILS & NOTES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 2/12/07
 Chief, Division of Land Development: *[Signature]* 2/15/07
 Director: *[Signature]* 2/20/07

ENGINEER/SURVEYOR:	
NAME & ADDRESS:	VITECH ENGINEERING, INC. 1810 REDDY DRIVE P.O. BOX 373 WOODBRIIDGE, VA 22194-0373
	TEL:(703-730-3459) FAX: (703)-730-1934

vitech engineering
 Engineering, Planning, Surveying, GIS Mapping/Software Design
 1810 REDDY DRIVE
 P. O. BOX 373
 Woodbridge, Virginia 22194-0373
 Phone: (703)-730-3459; Fax: (703)-730-1934
 Email Address: vamole@msn.com



OWNER/DEVELOPER:	
NAME & ADDRESS:	MR. RAJ SHUKLA 732 KENNEDY STREET, NW WASHINGTON, D.C 20011
	TEL:(202) - 545 - 1338 FAX: (202 - 545 - 1339)

No	REVISION BLOCK DESCRIPTION	DATE
1		

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
41/164	9317 OLD LINE DRIVE

PERMIT INFORMATION CHART			
Subdivision Name: DALTON - SEC. 3	Section /Area (N/A)	Lot/Parcel No (41/164)	
PLAT BK 8 FOLIO 86	Grid #10	Zoning:R-20	Tax Map #30 Elec Distr (6TH)Census Tract 606601
Water Code (202-W)	Sewer Code (222-S)		
COVER SHEET			
SHEET		1 OF 5	

DEVELOPER'S/ BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.
 I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Raj Shukla
 SIGNATURE OF DEVELOPER

11/21/07
 DATE

LEGEND

- LEGEND
- SEWER LINE
 - GAS LINE
 - LP ☆ LIGHT POLE
 - UP ⚡ UTILITY POLE
 - SDMH Ⓞ STORM DRAIN MANHOLE
 - GUY ⊕ GUY
 - SMH Ⓞ SEWER MANHOLE
 - WMTR Ⓞ WATER METER
 - TRAV Ⓞ TRAVERSE CONTROL POINT
 - INLET □ STORM DRAIN INLET
 - FH Ⓞ HYDRANT
 - Ⓞ CLEAN OUT
 - WV Ⓞ WATER VALVE
 - 15' Ⓞ TREE/SIZE
 - 15'P Ⓞ PINE TREE/SIZE

NOTES

1. CONSULT INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) FOR TREE PLANTING DETAILS OF PLANTING DEPTH, PLANTING MEDIA, AND PLANTING ANGLE.
 2. EACH TREE SHALL BE PLANTED WITH THE ROOT BALL TO BE PLANTED AT THE TOP OF THE ROOT BALL.
 3. OTHER MANHOLES TO BE PLACED IN THE SPRING AFTER PLANTING.
 4. PLACE UPRIGHT STAKES 2'-4" HIGHER TO MARK TO BUILDER.
 5. KEEP MULCH 1" FROM TRUNK.
 6. SEE ARCHITECTURAL PLANS FOR ADJACENT PROPERTY FINISH GRADE ELEVATIONS.
 7. TREES ARE NOT TO BE PLANTED OVER EXISTING SEWERAGE EASEMENT.
- LEADER PLANT REMAIN INTACT DO NOT HEAVILY BRUISE THE TREE OR PLANTING FRAME ONLY BRUISE LEADS, CO-DOMINANT LEADERS AND BRANCHES OR DEAD BRANCHES. SOME INTERESTING BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN 2 BRANCHES OF ADVANCED PINE MUST BE SUPPORTED.
- BRIGHT STAKES - SET IN GROUND TO MARK BEARING BEYOND EDGE OF ROOT BALL. MIN. 9" CLIP BURIAL. ROPE AND WIRE LOOKS FROM TOP HALF OF ROOT BALL AND 2" FROM WIRE. MARK 9" MIN. 2" DEPTH MULCH # 50. 4" BARK MULCH.
- FINISH GRADE
- ROOT BALL SHALL BE FLUSH WITH ORIGINAL GRADE OR RAISED UP TO FINISH GRADE. PLANTING MIX - SEE PLANTING NOTES.
- PLACE ROOT BALL ON PLANTING HOLE. FINISH GRADE INDICATED ON FINISHED SOIL.
- ROOT BALL DIAMETER

TYPICAL TREE PLANTING AND STAKING

Map Unit Legend Summary

Howard County, Maryland

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	0.6	27.3
GmB	Glenville silt loam, 3 to 8 percent slopes	1.2	55.5
MaC	Manor loam, 8 to 15 percent slopes	0.4	17.2

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/12/07
 Chief, Development Engineering Division YQ
 Date

[Signature] 2/15/07
 Chief, Division of Land Development
 Date

[Signature] 2/20/07
 Director
 Date

IMPERVIOUS AREA CALCULATION:

ROOFTOP AREA = 3,040 SF
 DRIVEWAY AREA = 687 SF
 REAR STEP/STAIRWELL=168 SF
 FRONT PATIO = 1,105 SF
 TOTAL IMPERVIOUS AREA = 5,000.00 SF

LANDSCAPE SCHEDULE

KEY	QUAN	BOTANICAL NAME	TREE SIZE	NOTE
Ⓞ	2	ACER RUBRUM OCTOBER GLORY RED MAPLE	2 1/2 - 3" CAL	B & B
Ⓞ	2	PICEA ORNORIKIA SERBIAN SPRUCE	6'-8" HT	B & B

LANDSCAPE NOTES

1. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF THE LANDSCAPE SURETY UNTIL SUCH TIME WHEN ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATE.
2. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
3. LANDSCAPING FOR LOT 41 IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE DPW GRADING PERMIT APPLICATION IN THE AMOUNT OF \$1,900.00 FOR 2 SHADE TREES AND FOR 2 EVERGREEN TREES.
4. THIS PROJECT PROVIDES A 50-FOOT BUFFER BETWEEN THE ADJACENT ROADS (DALTON & OLD LINE DRIVE) AND THE PROPOSED HOUSE HEALTH CANOPY/DRIP LINES AND HEALTHY TREES EXISTS WITHIN THESE BUFFERS. DETERMINATION MADE BY VISUAL OBSERVATION SUGGESTS THAT NO STREET LANDSCAPE IS REQUIRED.
5. THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE, THE TOTAL LOT AREA IS LESS THAN 40,000 SQUARE FEET.

SCHEDULE 'A'
 PERIMETER LANDSCAPE EDGE

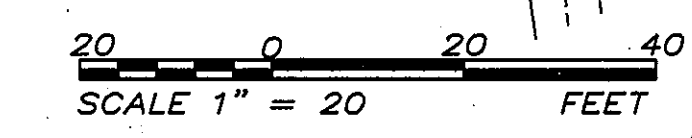
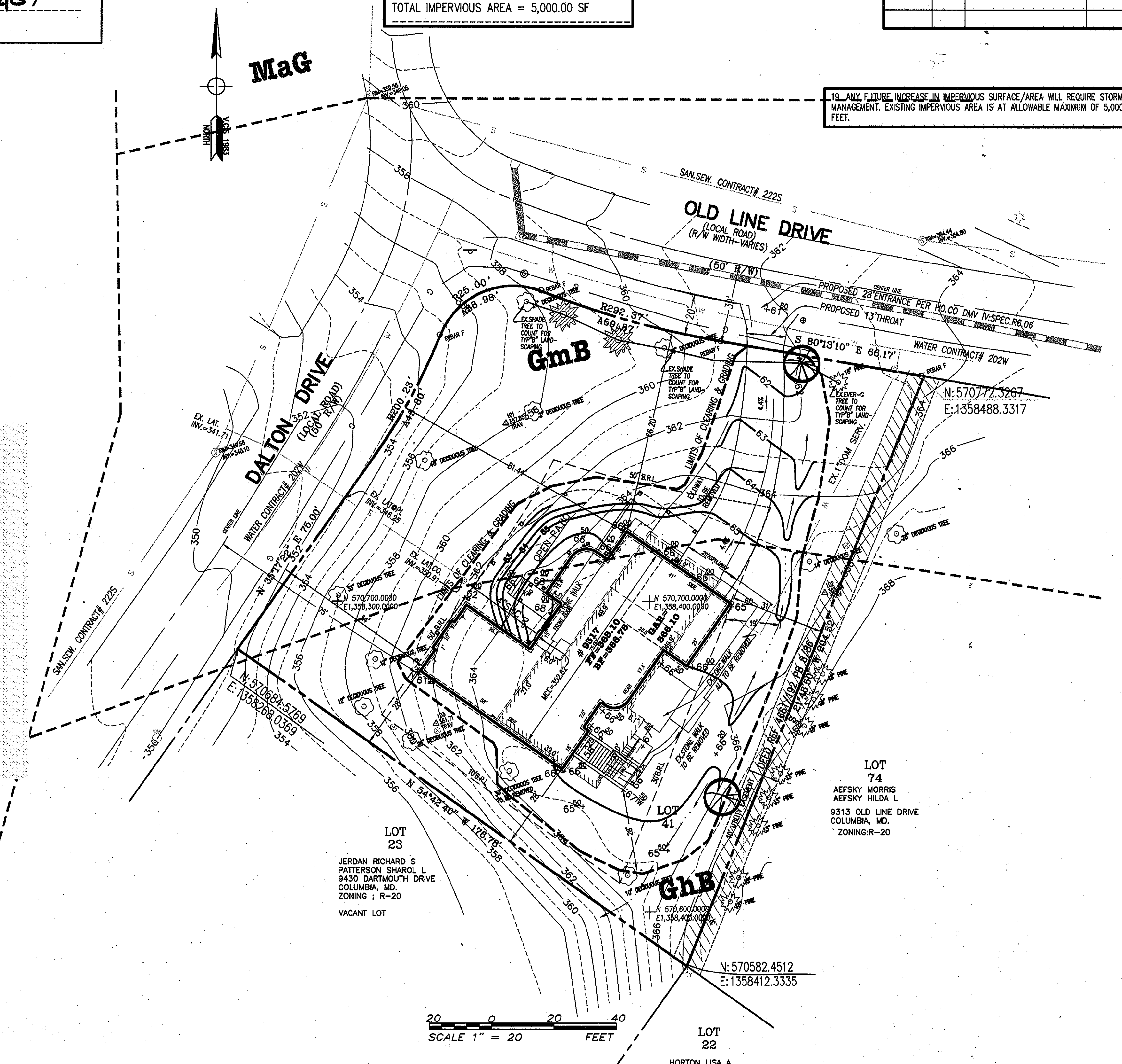
CATEGORY	ADJACENT TO ROADWAYS		ADJTO PERIMETER PROPERTIES	
	DALTON DRIVE		LOT 23	LOT 74
LANDSCAPE TYPE	N/A			
LINEAR FT OF ROADWAY FRONTAGE PERIMETER			177	204
CREDIT FOR EX. VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)			YES 4 TREES @ 177'	YES 2 TREES @ 204'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)			NO	NO
NUMBER OF PLANTS REQD. SHADE TREES EVERGREEN TREES SHRUBS			1/60'(0)	1/60'(1)
NUMBER OF PLANTS PROVIDED. SHADE TREES EVERGREEN TREES (DESCRIBE BELOW IF NEEDED)			0	1

SCHEDULE 'B'
 PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJTO PERIMETER PROPERTIES	
	OLD LINE DRIVE			
LANDSCAPE TYPE	B			
LINEAR FT OF ROADWAY FRONTAGE PERIMETER	150'			
CREDIT FOR EX. VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 2 EX SHADE 1 EX EVERG FOR CREDIT			
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A			
NUMBER OF PLANTS REQD. SHADE TREES EVERGREEN TREES SHRUBS	1/50'(1) 1/40'(3)			
NUMBER OF PLANTS PROVIDED. SHADE TREES EVERGREEN TREES (DESCRIBE BELOW IF NEEDED)	1/50'(2) 1/40'(2)*			

PROVIDE LOCALIZED EROSION CONTROL MEASURE FOR PROPOSED TREES ALONG OLD LINE DRIVE TO PREVENT SEDIMENT LADEN RUNOFFS FROM DRAINING TO GRASSED AREAS OF THE BUFFER. PROVIDE SILT FENCE AROUND PROPOSED TREE AFTER PLANTING.

* ONE (1) SHADE TREE WILL SUBSTITUTE FOR TWO (2) EVERGREEN TREES.

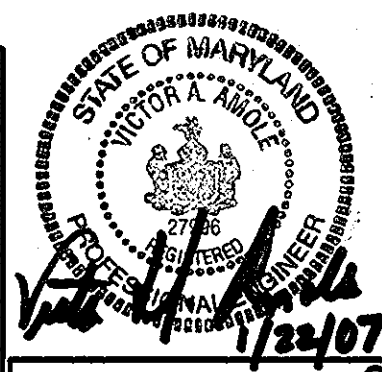


ENGINEER/SURVEYOR:

NAME & ADDRESS:	VITECH ENGINEERING, INC. 1810 REDDY DRIVE P.O BOX 373 WOODBRIIDGE, VA 22194-0373
TEL:	(703)-730-3459
FAX:	(703)-730-1934

OWNER/DEVELOPER:

NAME & ADDRESS:	RAJ SHUKLA 732 KENNEDY STREET, NW WASHINGTON, D.C 20011
TEL:	(202) - 545 - 1338
FAX:	(202) - 545 - 1339



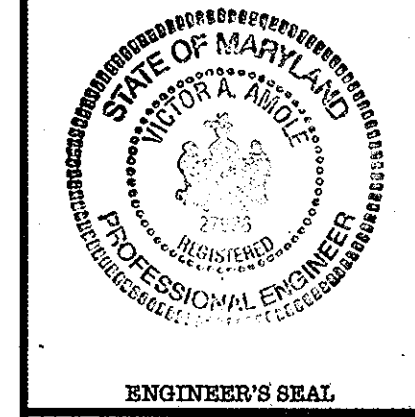
COPYRIGHT 2002. NO REPRODUCTION OR USE OF THIS DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VITECH ENGINEERING.

REVISION BLOCK

NO.	DESCRIPTION	APPROVED BY	DATE
1.			

COVER SHEET
 SHEET 2 OF 5

vitech engineering
 Planning, Surveying, Civil, GIS Mapping
 P. O. BOX 373
 Woodbridge, Virginia 22194-0373
 Phone: (703)-730-3459, Fax: (703)-730-5600
 Email Address: vaitche@vitech.com



SITE PLAN, GRADING, EROSION CONTROL AND LANDSCAPE PLANS
9317 OLD LINE DRIVE- LOT 41
 HOWARD COUNTY, MARYLAND
 6TH ELECTION DISTRICT

HORIZ. SCALE 1"=20'
 VERT. SCALE N/A
 DESIGN: VAA
 DRAWN: VAA
 CHECKED: CRW
 SHEET 2 OF 5
 VITECH PROJECT # 0128P
 DATE: SEPTEMBER 28, 2006
 SDP-07-32

SEQUENCE OF CONSTRUCTION:

1. ARRANGE FOR A PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR TO ENSURE ALL PHASE I CONTROLS ARE FUNCTIONING PROPERLY. (1-DAY).
2. BEGIN CONSTRUCTION OF PROPOSED HOUSE. (30-DAYS)
3. CONTRACTOR MUST REGULARLY CHECK ALL CONTROLS DAILY TO ENSURE THAT THEY FUNCTION PROPERLY.
4. PERMANENTLY STABILIZE ALL DISTURBED AREAS. (2-DAYS)
5. UPON APPROVAL OF THE COUNTY INSPECTOR, REMOVE ALL SC MEASURES.

SPECIAL NOTE:
CONTRACTOR SHALL ENSURE THAT SPECIAL PRECAUTIONS ARE IN PLACE (TRAFFIC MAINTENANCE CONTROL DEVICES) DURING CONSTRUCTION WITHIN PUBLICLY-MAINTAINED ROADS (OLD LINE DRIVE).
FURTHERMORE, NO STOCKPILING IS ALLOWED ON THE PREMISE.

TOTAL ESTIMATED CONSTRUCTION TIME=33-DAYS

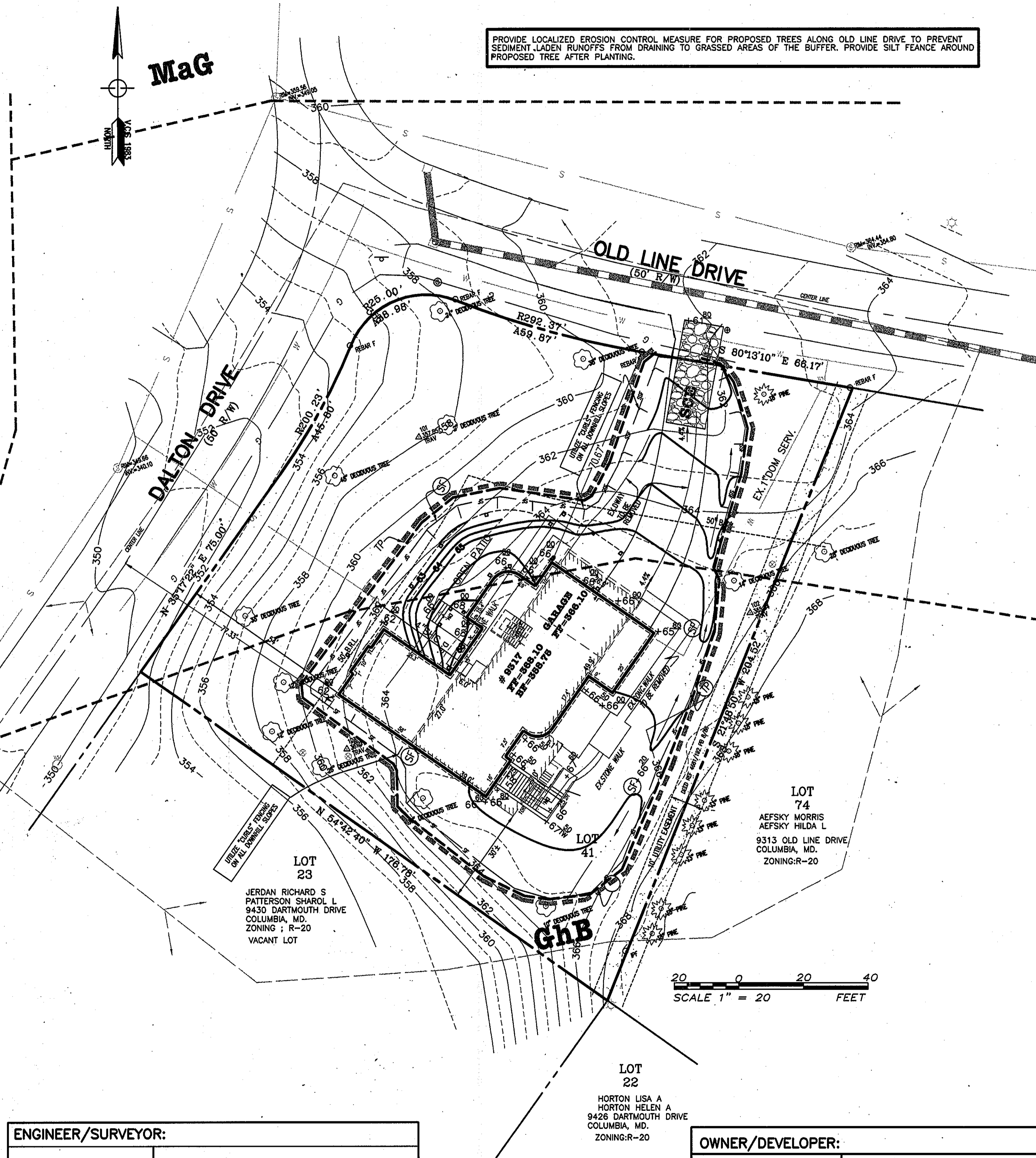
Map Unit Legend Summary			
Howard County, Maryland			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GhB	Glencg-Urban land complex, 0 to 8 percent slopes	0.6	27.3
GmB	Glenville silt loam, 3 to 8 percent slopes	1.2	55.5

LEGEND

- SEWER LINE
- GAS LINE
- LP ☆ LIGHT POLE
- UP ∅ UTILITY POLE
- SDMH ⊙ STORM DRAIN MANHOLE
- GUY ⊙ GUY
- SMH ● SEWER MANHOLE
- WMTR ⊕ WATER METER
- TRAV △ TRAVERSE CONTROL POINT
- INLET □ STORM DRAIN INLET
- FH ⊙ HYDRANT
- WW ⊕ CLEAN OUT
- 15" ⊕ WATER VALVE
- 15" ⊕ TREE/SIZE
- 15" ⊕ SIGN
- 15" ⊕ PINE TREE/SIZE



PROVIDE LOCALIZED EROSION CONTROL MEASURE FOR PROPOSED TREES ALONG OLD LINE DRIVE TO PREVENT SEDIMENT-LOADED RUNOFFS FROM DRAINING TO GRASSED AREAS OF THE BUFFER. PROVIDE SILT FENCE AROUND PROPOSED TREE AFTER PLANTING.

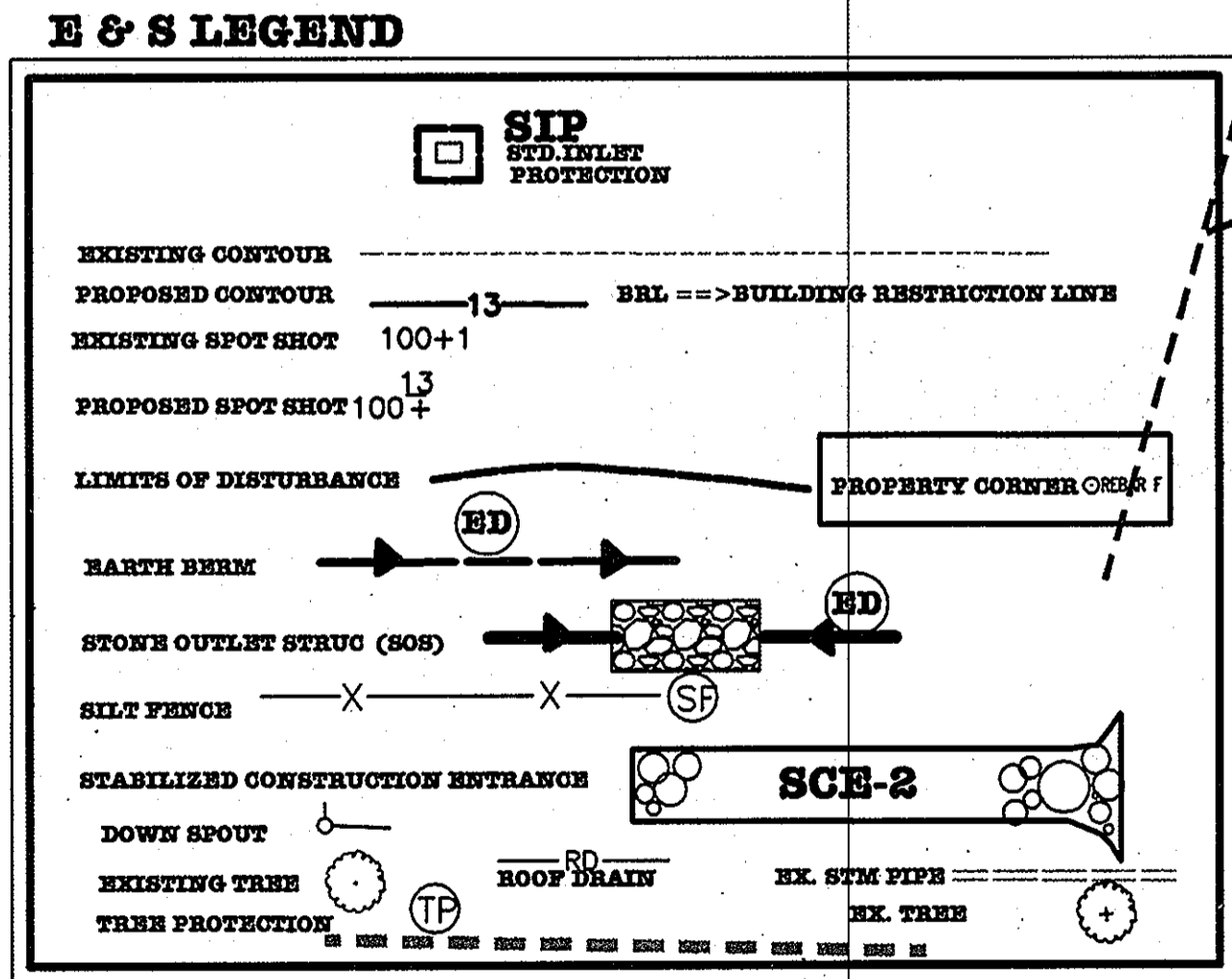


APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/12/07
Chief, Development Engineering Division Y&A
Date

[Signature] 2/15/07
Chief, Division of Land Development
Date

[Signature] 2/23/07
Director
Date



Reviewed for Howard SCD and meets Technical Requirements

[Signature] 2/11/07
USDA - Natural Resource Conservation Service
Date

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

[Signature] 2/11/07
Howard SCD
Date

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion control presents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

[Signature] 1/22/07
Signature of Engineer (print name below signature) Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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"

[Signature] 1/22/07
Signature of Developer (print name below signature) Date

COPYRIGHT 2002. NO REPRODUCTION OR USE OF THIS DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VITECH ENGINEERING.

REVISION BLOCK			
NO.	DESCRIPTION	APPROVED BY	DATE

ENGINEER/SURVEYOR:

NAME & ADDRESS: VITECH ENGINEERING, INC.
1810 REDDY DRIVE
P.O. BOX 373
WOODBIDGE, VA 22194-0373

TEL: (703)-730-3459
FAX: (703)-730-1934

OWNER/DEVELOPER:

NAME & ADDRESS: RAJ SHUKLA
732 KENNEDY STREET, NW
WASHINGTON, D.C 20011

TEL: (202) - 545 - 1338
FAX: (202) - 545 - 1339



COVER SHEET
EROSION & SEDIMENT CONTROLS PLAN (PHASE II)
SHEET 4 OF 5

vitech engineering
Planning, Surveying, Civil, GIS Mapping
P. O. BOX 373
Woodbridge, Virginia 22194-0373
Phone: (703)-730-3459, Fax: (703)-730-8609
Email Address: vteam@vitech.com

EROSION & SEDIMENT CONTROLS PLAN (PHASE II)
OLD LINE DRIVE-LOT 41

HOWARD COUNTY, MARYLAND
6TH ELECTION DISTRICT

HORIZ. SCALE: 1" = 20'
VERT. SCALE: N/A

DESIGN: VAA
DRAWN: VAA
CHECKED: CRW

SHEET 4 OF 5
VEI PROJECT # 0122P
DATE: DECEMBER 14, 2004
SDP-07-321

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

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

Conditions Where Practice Applies

- The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- The material is shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- The original soil to be vegetated contains material toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible.

For the purposes of these standards and specifications, areas having slopes steeper than 2:1 require special considerations and design for erosion stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization stress on the plans.

Construction and Material Specifications

- Topsoil removed from the existing site may be used to provide that it meets the standards set forth in these specifications. (Specify the depth of topsoil to be removed and any special tests that can be found in the appropriate soil profile section of the plan.)
- Topsoil specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, or silty loam. Heavy clay loam, heavy clay, or other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate authority. Topsoil shall be free of stones larger than 2 1/2 inches in diameter, roots, twigs, or other material larger than 1/2 inch in diameter.
 - Topsoil must be free of seeds of certain plants such as bermuda grass, quailgrass, johnsongrass, rye grass, and other weeds. Topsoil shall be free of any other seeds of plants that are listed in the appropriate table of the specifications.
 - When the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be applied to the topsoil at a rate of 100,000 pounds per acre (100 tons per acre) prior to the placement of topsoil. Limestone shall be distributed uniformly over disturbed areas and mixed into the soil in conjunction with site operations as described in the following procedures.
- For sites having disturbed areas under 0.5 acres:
 - Topsoil (if required) and apply topsoil amendments as specified in 20.0 vegetative stabilization - Section 1.
 - For sites having disturbed areas over 0.5 acres:
 - On-site meeting topsoil specifications, which shall include field and laboratory tests and analysis required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.8. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be added to raise the pH to 6.0 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 800 parts per million shall not be used.
 - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit degradation of prior-treatment materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate authority, may be used in lieu of natural topsoil.

21.0 STANDARDS AND SPECIFICATIONS FOR LANDGRADING

Definition
Reshaping of the existing land surface in accordance with a plan as determined by engineering and survey layout.

Purpose
The purpose of land grading specification is to provide for erosion control and vegetative establishment on those areas where grading and/or surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building design and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extensive grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal and vegetative treatment, etc.

Many counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices of erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, head ditches, reverse slope benches, surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into this plan:

- Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.
- Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed, the slope shall not be steeper than 3:1. If it is proposed to mow (mechanized) mowing steep slopes, grasses exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.)
- Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, rocks, rock outcrops, etc., shall also be taken into consideration when designing benches.

a. Benches shall be a minimum of six feet wide to provide for ease of maintenance.

b. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradients shall be the same as that of the slope above and shall be accompanied by appropriate design and computations. For flow channel stabilization see temporary works.

c. The face length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary works.

d. The face of the slope to be graded shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.

e. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainage, graded areas, downspouts, etc.

f. The face of the slope will be protected by special erosion control materials, to include, but not limited to approved vegetative stabilization practices (see section 6), riprap or other approved stabilization methods.

5. Cut slopes occurring in ripable rock shall be treated on shown on the following diagram. These serrations shall be made with conventional equipment as the excavation proceeds. Each step or serration shall be constructed on the contour and will have steps cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and cut to hold moisture, fine fertilizer and seed thus producing a much cooler and longer lived vegetative cover and better slope stabilization. Surface water shall be diverted from the top of all serrated slopes and carried to a suitable outlet.

6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, slippage, settlement, subsidence or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or other equipment (3 inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

9. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subject to the provisions of this standard and specifications.

10. All disturbed areas shall be stabilized structurally or vegetatively in compliance 20.0 Standards and Specifications for Vegetative Stabilization.

22.0 STANDARDS AND SPECIFICATIONS FOR SEEDING

Definition
Permanent and temporary seeding, sodding and mulching.

1. SITE PREPARATION
Permanent or temporary vegetation shall be established within (7) seven calendar days on the surface of all sediment control practices such as diversions, grade stabilization structures, basins, waterways, sediment control basins, and graded areas on the project site. Mulches may only be used on disturbed areas where vegetation is not feasible or where seeding cannot be completed because of weather.

2. SEEDING PREPARATION AND SEEDING APPLICATION
Loosen the top layer of the soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment or such as disc harrows, chisel plows or rippers mounted on construction equipment. Incorporate the lime and fertilizer into the top 3 to 5 inches of the soil by dragging or by other suitable means. Rough areas should not be rolled or crimped into the top 3 to 5 inches of the soil by dragging or by other suitable means. Rough areas should not be rolled or crimped into the top 3 to 5 inches of the soil by dragging or by other suitable means. Rough areas should not be rolled or crimped into the top 3 to 5 inches of the soil by dragging or by other suitable means.

3. SOIL ADJUSTMENTS
Soil tests shall be made on five over five acres to determine the exact requirements for both lime and fertilizer. For sites under five acres, in lieu of soil test, apply the following:

Fertilizer Nitrogen	2 lbs/ sq. ft.	(80 lbs/ac)
P ₂ O ₅	4 lbs/ sq. ft.	(175 lbs/ac)
K ₂ O	4 lbs/1,000 sq. ft.	(175 tons/ac)

For low maintenance areas apply 100 lbs/ac ureaform fertilizer (38-0-0) at 3.5 lbs/1,000 of in addition to the above. Ground limestone: 2 tons/ac.

4. SEDIMENT CONTROL PRACTICE SEEDING
Select a seeding mixture from tables 25 and 26 in section 6 of the 1994 Standards and Specifications. Document seeding on the erosion and sediment control plan using appropriate chart below. Note: If sediment control practices are in for longer than 12 months, permanent seeding is required.

5. TEMPORARY/PERMANENT SEEDING MIXTURES AND RATES
Select a seeding mixture from tables 25 and 26 in section 6 of the 1994 Standards and Specifications. Document seeding on the erosion and sediment control plan using appropriate chart below.

Permanent Seeding Summary

Seed Mixture (Hardness Zone 2a)		Fertilizer Rate 10-10-10	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Depth
Mix #7	Annual Ryegrass 50 Woolly Fescue 50	2/1-4/20 8/15-1/11	1/4"-1/2"
Mix #8	Annual Ryegrass 50 Woolly Fescue 50	2/1-4/20 8/15-1/11	1/4"-1/2"

600 lb/ac (15 lb/1,000sf)
2 tons/ac (100lb/1,000sf)

Temporary Seeding Summary

Seed Mixture (Hardness Zone 2a)		Fertilizer Rate 10-20-20	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates
1	Annual Ryegrass	50	2/1-4/20 8/15-1/11
2	Woolly Fescue	4	5/1-8/14 1/4"-1/2"

90 lb/ac (2.0 lb/1,000sf)
175 lb/ac (4 lb/1,000sf)
175 lb/ac (4 lb/1,000sf)
2 tons/ac (100lb/1,000sf)
Equals 900 lbs. of 10-20-20

23.0 STANDARDS AND SPECIFICATIONS FOR TURFGRASS ESTABLISHMENT
This includes lawn, golf courses, playgrounds, and commercial sites which will receive a medium to a high level of maintenance. Areas to receive seed shall be graded by hand or mechanical methods to a depth of 3 to 5 inches. Seeded areas shall be protected with a mulch of straw or other approved material to a depth of 1 1/2 inches in diameter shall be removed. The resulting residue shall be in such a condition that future mowing of grasses will not be difficult. Use certified material. Seed shall be applied immediately after mulch placement to minimize loss of wind or water. This may be done by hand or by mechanical means. Seed shall be applied to a depth of 1 to 2 inches. Seed shall be applied to a depth of 1 to 2 inches. Seed shall be applied to a depth of 1 to 2 inches.

24.0 STANDARDS AND SPECIFICATIONS FOR MULCHING
All seedings require mulching. Also mulch during non seeding dates until seeding can be done. Mulch shall be unchopped plant matter applied at a rate of 100 lbs/1,000 sq. ft. of 3/4" depth. If mulch anchoring tool is used, apply 2.5 tons/acre. Mulch material shall be relatively free of all kinds of weeds and shall completely free of noxious seeds. Seed mulch shall be applied mechanically by hand, to a depth of 1 to 2 inches. Mulch anchoring tool shall be used immediately after mulch placement to minimize loss of wind or water. This may be done by hand or by mechanical means. Mulch anchoring tool, wood cellulose fiber or liquid mulch binders.

25.0 STANDARDS AND SPECIFICATIONS FOR SOIL MAINTENANCE
Close of turfgrass seed shall be Maryland or Virginia State certified or approved seed. Soil shall be harvested, delivered and installed within a period of 30 hours. Seed is to be laid with long slopes parallel to the contour using staggered and with all ends tightly checked and not overlapping. Soil shall be rolled and thoroughly watered after installation. Only necessary to maintain 4 inches of moisture for the first week in rotation in the absence of rainfall. It is not to be applied on frozen ground.

26.0 STANDARDS AND SPECIFICATIONS FOR MAINTENANCE
a. Irrigate - Apply minimum 1" of water every 3 to 4 days depending on soil texture, when soil moisture becomes deficient to prevent loss of stand of protective vegetation.
b. Reports - If stand provides between 40% and 84% ground coverage, overseed and fertilize using half of the rate originally applied. If stand provides less than 40% coverage, reestablish stand following original rates and procedure.

Note: Use of this information does not preclude meeting all of the requirements of the 1994 Standards and Specifications for Soil Erosion and Sediment Control Vegetative Practices.

24.0 MATERIALS SPECIFICATIONS

Table 27 - Geotextile Fabric

CLASS	APPEARANT OPENING SIZE MM. MAX.	TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
(F) (See Note)	0.40-0.80**	90	190

** US Std. Spec. CW-02'15

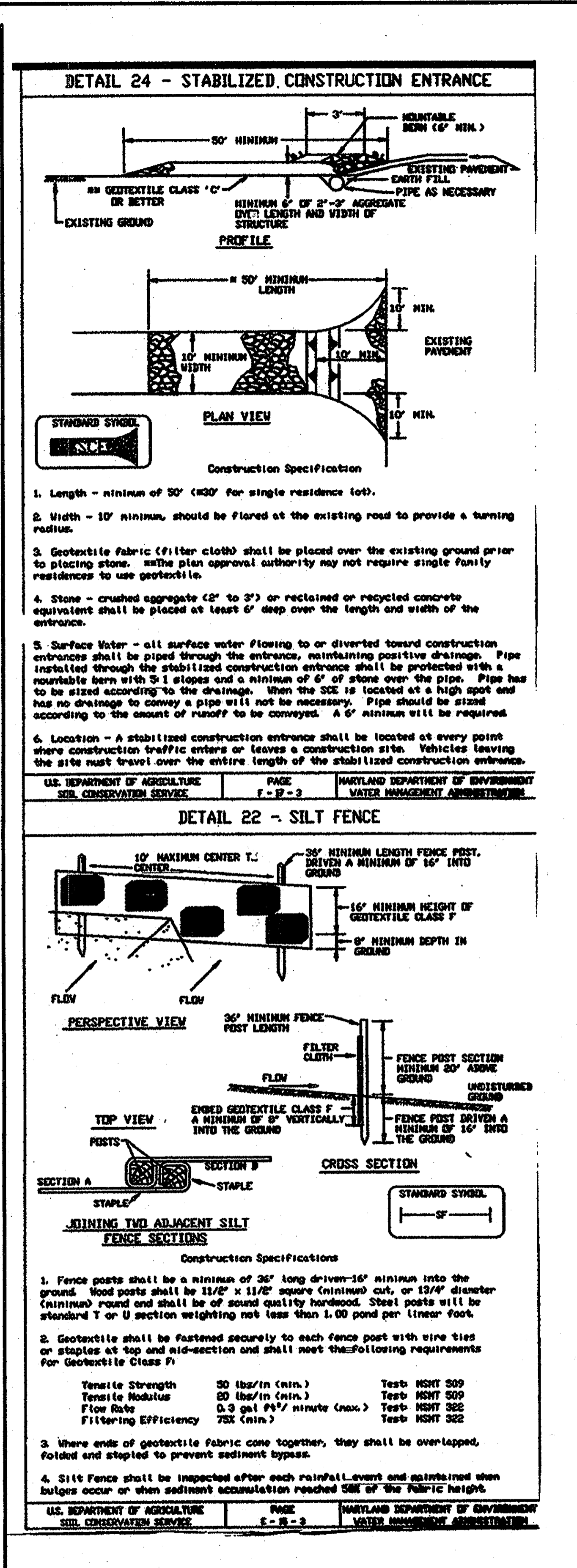
The properties shall be determined in accordance with the following procedures:
- Apparent opening size MSMT 323
- Tensile strength ASTM D 1682:
4 x 8" specimens, 1 x 2" opening, 12"/min. strain rate in both principal directions of geotextile fabric.
- Burst strength ASTM D 3786

24.0 MATERIALS SPECIFICATIONS

Table 28 - Stone Size

SIZE RANGE	D ₅₀	D ₁₀₀	ASSHTO	WEIGHT
NUMBER 57 3/8"-1 1/2"	1 1/2"	1 1/2"	M-43	N/A
NUMBER 1 2"-3"	2 1/2"	3"	M-43	N/A
RIP-RAP** 4"-7"	5 1/2"	7"	N/A	N/A
CLASS I N/A	9.5"	15"	N/A	150lb.max.
CLASS II N/A	16"	24"	N/A	700lb.max.
CLASS III N/A	23"	34"	N/A	2,000lb.max.

* This classification is to be used on the inside face of stone retaining or check dams.
** The State Highway Administration designation for this stone is Stones for Gablons (905.01.04)



DETAIL 33 - SUPER SILT FENCE

Construction Specifications

- The poles do not need to set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
- Filter cloth shall be fastened securely to the chain link fence with wire ties or staples every 24" at the top and mid-section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth meet each other, they shall be overlapped by 6" and stapled.
- Maintenance shall be performed on silt fences and silt basins equipped with "bump" devices in the silt basins.

DETAIL 31 TREE PROTECTION

Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut), or 1 3/4" 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.
- 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	30 lbs/in (min.)	Test MSMT 329
Tensile Modulus	20 lbs/in (min.)	Test MSMT 329
Flow Rate	0.3 gal ft ² /minute (max.)	Test MSMT 322
Filtering Efficiency	75% (min.)	Test MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when butholes occur or when sediment accumulation reaches 50% of the fabric height.

REVISION BLOCK

NO.	DESCRIPTION	APPROVED BY	DATE
1.			

NO. 1. DESCRIPTION APPROVED BY DATE

ENGINEER/SURVEYOR:

NAME & ADDRESS: VITECH ENGINEERING, INC.
1810 REDDY DRIVE
P.O. BOX 373
WOODBIDGE, VA 22194-0373

TEL: (703)-730-3459
FAX: (703)-730-1934

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/12/07
Chief, Development Engineering Division 702

[Signature] 2/15/07
Chief, Division of Land Development

[Signature] 2/26/07
Director

COVER SHEET

EROSION & SEDIMENT CONTROLS DETAILS & NOTES

SHEET 5 OF 5

VEI PROJECT # 012SP
DATE DECEMBER 14, 2006
[SDP-07-32]

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion control presents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

[Signature] 1/22/07
Signature of Engineer (print name below signature) Date

DEVELOPER'S CERTIFICATE

"I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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"

[Signature] 1/22/07
Signature of Developer (print name below signature) Date

vitech engineering

Planning, Surveying, Civil, GIS Mapping

P.O. BOX 373
Woodbridge, Virginia 22194-0373
Phone: (703)-730-3459 Fax: (703)-730-5609
Email Address: vma@vitech.com

STATE OF MARYLAND

ENGINEER'S SEAL

1/22/07

EROSION & SEDIMENT CONTROLS DETAILS & NOTES

OLD LINE DRIVE LOT 41

HOWARD COUNTY, MARYLAND

6TH ELECTION DISTRICT

HORIZ. SCALE N/A

VERT. SCALE N/A

DESIGN: VAA

DRAWN: VAA

CHECKED: CRW

SHEET 5 OF 5

VEI PROJECT # 012SP
DATE DECEMBER 14, 2006
[SDP-07-32]