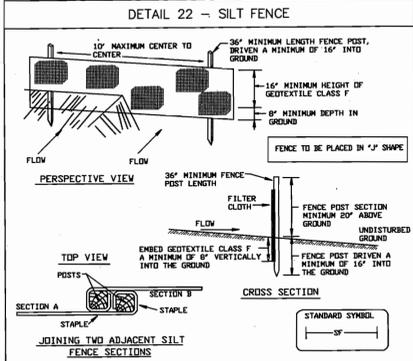


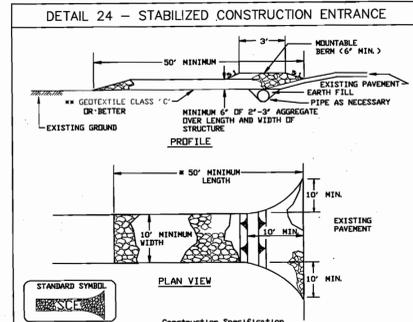
- 1) A minimum of 48 hours notice must be given to the Howard County Department of Inspections, licenses and permits, sediment control division prior to the start of any construction (313-1855).
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in for soil erosion and sediment control and re-vegetation thereto.
- 3) Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all permanent sediment control structures, silt fences, perimeter slopes and all slopes steeper than 3:1, b) 14 days for 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 1984 Maryland standards and specifications for soil erosion and sediment control for permanent seeding (Sec. 51), 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 removal has been obtained from the Howard County sediment control inspector.
- 7) Site Analysis:
 - Total area of site 0.50 acres
 - Area disturbed 0.28 acres
 - Area to be roofed or paved 0.09 acres
 - Area to be vegetatively stabilized 0.25 acres
 - Total cut 600 cu.yds.
 - Total fill 300 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.

- SEQUENCE OF CONSTRUCTION**
1. Obtain grading permit.
 2. Install sediment controls as shown on Plan. (1 day)
 3. Construct stream crossing (5 days)
 4. Perform necessary grading and stabilize the site (2 days)
 5. Construct dwelling on site (90 days)
 6. After the site is stabilized and permission is granted from the sediment control inspector, remove sediment controls and stabilize any remaining disturbed areas.
- TEMPORARY SEEDING NOTES**
- Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.
- Seeded preparation:**
- Loosen upper three inches of soil by raking, discing or other acceptable means before seeding. If not previously loosened.
- Soil Amendments:**
- Apply 600 LBS. Per acre 10-10-10 fertilizer (14 lbs./1,000 Sq. Ft.)
- Seeding:**
- For the periods March 1 through April 30, and August 15 through November 15, seed with 1/2 bushel per annual ryegrass (3.2 lbs./1,000 sq.ft.) for the period May 1 thru August 14. Seed with 1/3 bushel/acre of weeping lovegrass (0.7 lbs./1,000 sq. ft.) for the period November 16 thru February 28. Protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring or use soil.
- Mulching:**
- Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1,000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1,000 sq.ft.) of emulsified asphalt on flat areas, on slopes 8 feet or higher. Use 348 gallons per acre (8 gal./1,000 sq.ft.) for anchoring.
- Refer to the 1988 Maryland standards and specification for soil erosion and sediment control for rate and methods not covered.
- Permanent Seeding Notes**
- All disturbed areas shall be stabilized as follows:
- Seeded preparation:**
- Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.
- Soil Amendments:**
- Apply two tons per acre Dolomitic limestone (92 lbs./1,000 sq. ft.) and 600 lbs. per acre 0-20-20 fertilizer (14 lbs./1,000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 38-0-0 ureaform fertilizer (9 lbs./1,000 sq. ft.) and 500 lbs. per acre 01.5 lbs./1,000 sq. ft.) of 10-20-20 fertilizer.
- Seeding:**
- For the periods March 1 through April 30, and August 1 through October 15, seed with 100 lbs. per acre (2.3 lbs./1,000 sq. ft.) of Kentucky 31 tall fescue, for the period May 1 through July 31, seed with 80 lbs/acre (1.8 lbs./1,000 sq. ft.) Kentucky 31 tall fescue and 2 lbs. per acre (0.05 lbs./1,000 sq. ft.) of weeping lovegrass. During the period of October 16 through February 28, project site by: Option (1) Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring option (2) - use 500; option (3) - seed with 100 lbs./acre Kentucky 31 tall fescue and mulch with two tons/acre well anchored straw. All slopes should be hydroseeded.
- Mulching:**
- Apply 1 1/2 to 2 tons per acre (10 to 90 lbs./1,000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gal./1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher use 348 gallons per acre (8 gal./1,000 sq. ft.) for anchoring.
- Maintenance:**
- Inspect all seeded areas and make needed repairs, replacements and reseedings.
- ? For public ponds substitute chernom crownweath at 15 lbs./acre and Kentucky 31 tall fescue at 40 lbs/acre as the seeding requirement. Optimum seeding date for this mixture is March 1 to April 30.
- Topsoil specifications - soil to be used as topsoil must meet the following:**
- Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting texture subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots trash, or other materials larger than 1 1/2" in diameter.
- Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
- Where the topsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedure:



- Construction Specifications**
1. 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 pound 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 MMT 509
Tensile Modulus	20 lbs/in (min.)	Test MMT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test MMT 382
Filtering Efficiency	75% (min.)	Test MMT 382
 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 reaches 50% of the fabric height.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-19-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

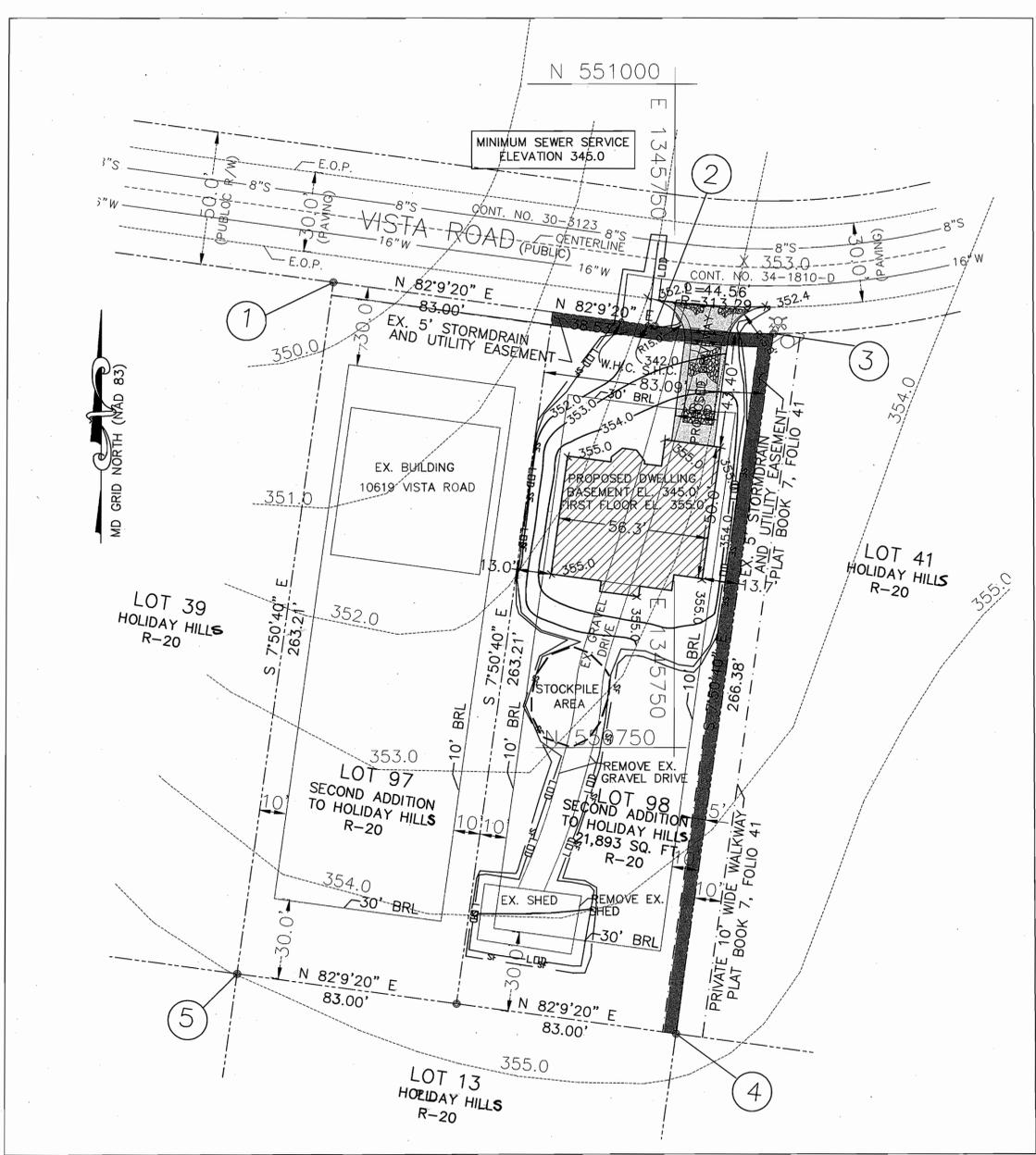


- Construction Specification**
1. Length - minimum of 50' (#50' for single residence lot).
 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. Within plan approval authority may not require single family residences to use geotextile.
 4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete 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 S.C.E. 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.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MISS UTILITY

CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THESE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH THESE REQUIREMENTS.

- CONSTRUCTION SEQUENCE**
- 1) PLACE THE SUBBASE GRAVEL AT FINISHED GRADE TO BE USED AS TEMPORARY ENTRANCE
 - 2) INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN
 - 3) EXCAVATE THE BASEMENT AND GRADE THE SITE
 - 4) SEED AND MULCH NEW SLOPES
 - 5) COMPLETE BUILDING CONSTRUCTION
 - 6) PLACE WEARING SURFACE ASPHALT ON DRIVEWAY
 - 7) REMOVE E&S MEASURES AFTER SLOPES ARE STABILIZED AND INSPECTED



SITE DEVELOPMENT AND EROSION AND SEDIMENT CONTROL

- NOTES**
1. OWNER/BUILDER: MR. & MRS. THOMAS LEAKE, & MS. LANA LEAKE 10617 VISTA ROAD COLUMBIA, MARYLAND 21044
 2. PROPERTY INFORMATION: LOT 98, HOLIDAY HILLS SECTION 6, RECORDED AS PLAT NO. 12171 DATED MAY 20, 1996 LIBER 288, FOLIO 588
 3. SURVEYED BY BAZIKIAN CONSULTANTS, LTD. (SEPTEMBER 18, 2002)
 4. BASED ON FEMA AND HOWARD COUNTY FLOODPLAIN STUDY PROPOSED LOT IS OUTSIDE OF 100-YR FLOODPLAIN LIMITS
 5. PROPOSED HOUSE IS TWO STORY STRUCTURE WITH BASEMENT
 6. SITE SOILS TYPE G1C2
 7. AREA OF DISTURBANCE = 12000 SQUARE FEET

DEVELOPER CERTIFICATION

I/We certify that all development and construction will be done according to the plan, and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of the environment approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on site inspection by the Howard Soil Conservation District.

Signature of Developer: *Thomas Leake* Date: 12.20.02

ENGINEER'S CERTIFICATION

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.

Signature of Engineer: *Alvin Bazikian* Date: 12/18/02

ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
98	10617 VISTA ROAD, COLUMBIA, MD 21044

PERMIT INFORMATION CHART

Subdivision Name	Section area	Lot/Parcel No.			
HOLIDAY HILLS		98			
Plat # or L/F	Grid #	Zoning	Tax Map No.	Elect Distr	Census Tract
PLAT #12171	6	R-20	41	5	8051.02
Water Code E22		Sewer Code	6581000		

SINGLE FAMILY UNIT

MR. & MRS. THOMAS LEAKE & MS. LANA LEAKE RESIDENCE

SECOND ADDITION TO HOLIDAY HILLS, LOT 98, SECTION 6, TAX MAP 41, PARCEL 220

PLAT NO. 12171, RECORDED MAY 20, 1996

ELECTION DISTRICT NO. 5, HOWARD COUNTY, MARYLAND

SCALE: 1"=30'

DATE: OCTOBER 15, 2002

REVISED: NOV. 29, 2002

SHEET 1 OF 1

Reviewed For Howard SCD and meets Technical Requirements

Jim Mayes 12/30/02
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John Whitford 12/30/02
HOWARD SCD DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Alvin Bazikian 11/3/03
Chief, Development Engineering Division DATE

Conrad Hamilton 11/13/03
Chief, Division of Planning and Development DATE

David Smith 11/8/03
Director DATE

BAZIKIAN CONSULTANTS, LTD.

ENGINEERS

701 BURNT MILLS COURT, SILVER SPRING, MD 20901
TEL (301) 593 9755 - FAX (301) 593 0059
INFO@BAZIKIAN.COM

CIVIL, TRANSPORTATION, PLANNING, STRUCTURES AND ENVIRONMENTAL



OWNER:

MR. & MRS. THOMAS LEAKE & MS. LANA LEAKE

5310 CEDAR LANE APT. # 206
COLUMBIA, MD 21044
(301) 596 4068

