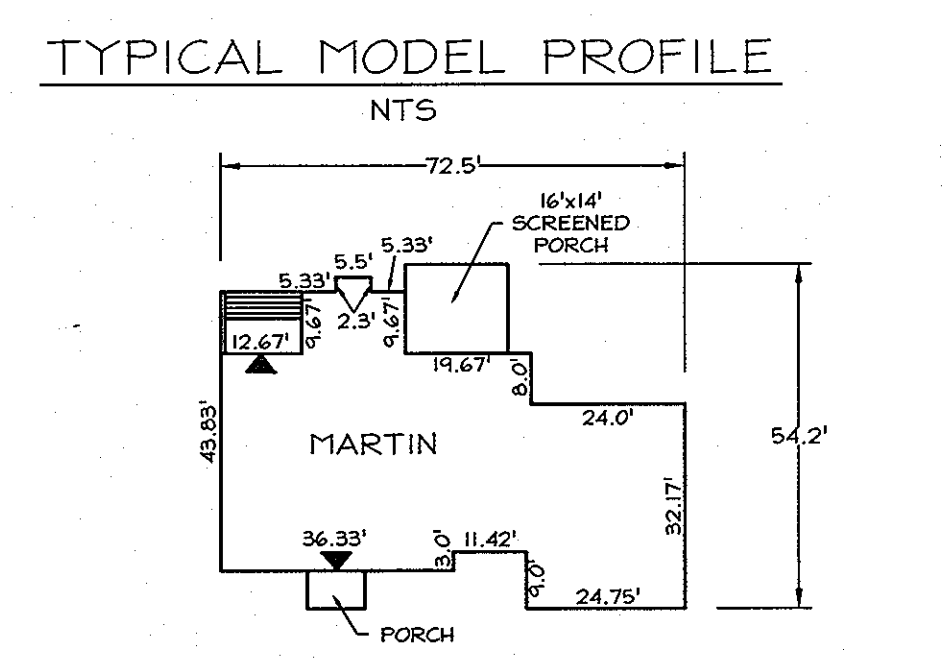
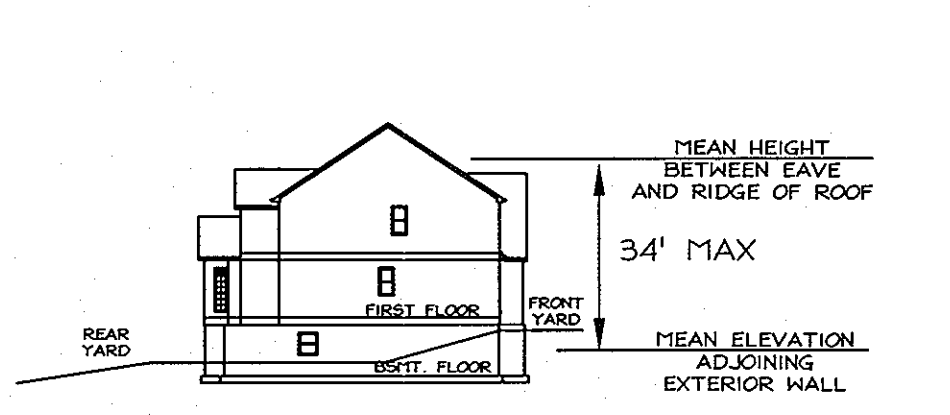
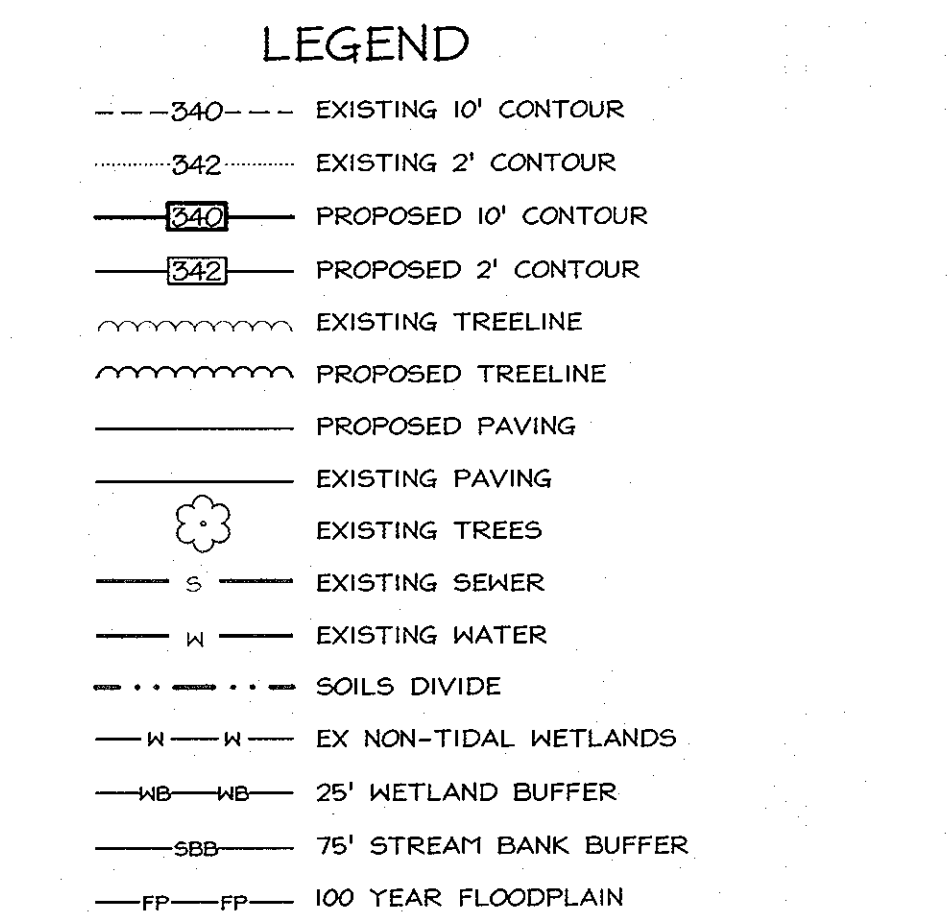
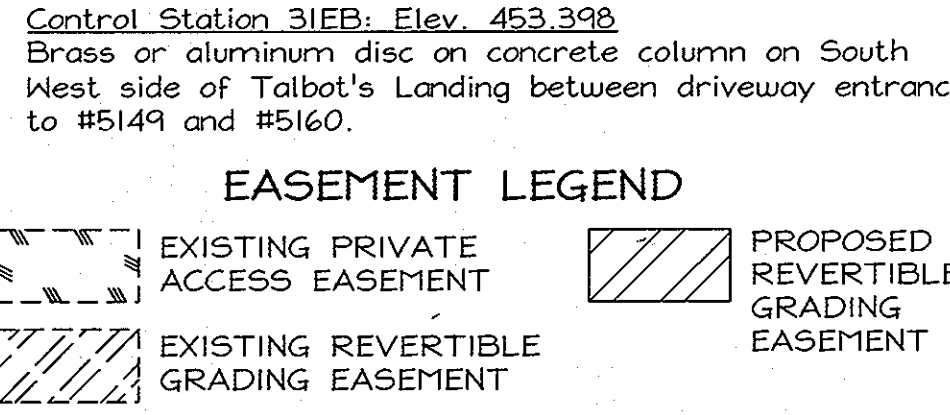


INDEX OF SHEETS	
1	SITE DEVELOPMENT PLAN
2	GRADING, SOIL EROSION & SEDIMENT CONTROL PLAN
3	GRADING, SOIL EROSION & SEDIMENT CONTROL - DETAILS
4	STORMWATER MANAGEMENT & LANDSCAPE NOTES & DETAILS

**BENCHMARKS:**  
 Control Station 31FA: Elev. 469.604  
 Brass or aluminum disc on concrete column on South side of Ilchester Road near BGE substation.  
 Control Station 31EB: Elev. 453.398  
 Brass or aluminum disc on concrete column on South West side of Talbot's Landing between driveway entrance to #5149 and #5160.



**Soil Legend**

Symbol	Name	Hydrologic Soil Group
CrB2	Chillum-Fairfax loams, 1 to 5 percent slopes, moderately eroded	B
EnB2	Elsinboro loam, 3 to 8 percent slopes, moderately eroded	B
MrE	Montalto and Relay soils, 15 to 45 percent slopes	C
MpC2	Montalto silt loam, 0 to 15 percent slopes, moderately eroded	C

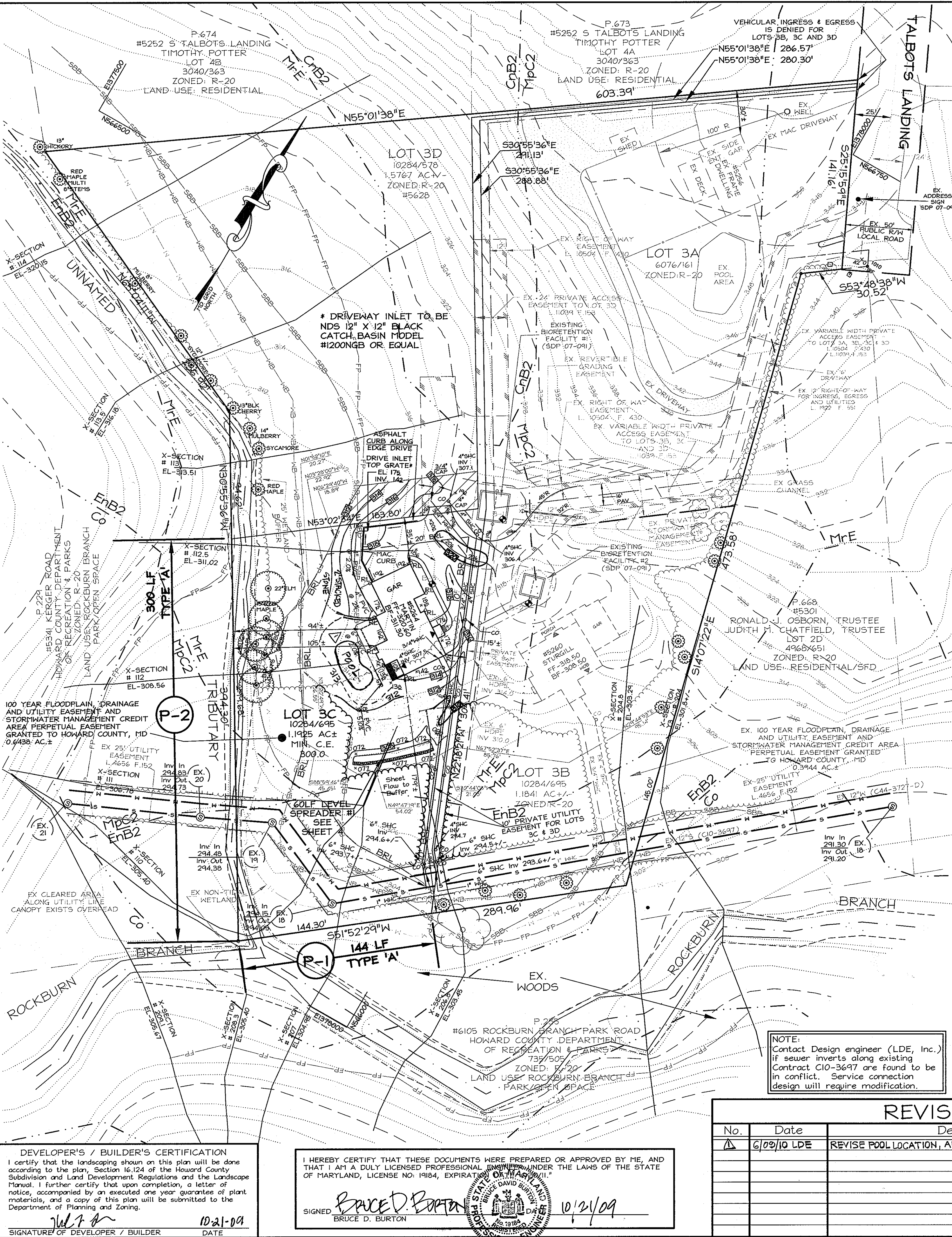
**NOTE:**  
 REFER TO SOILS MAP NUMBER 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 11/4/09 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 11/10/09 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 11/10/09 DATE  
 DIRECTOR, DEP.



**GENERAL NOTES:**

- The subject property is zoned R-20 per the 2/2/04 Comprehensive Zoning Plan and per Comp-Lite Zoning Regulations dated 7/28/06. All construction shall be in accordance with the latest Standards and Specifications of Howard County Design Manual Vol. IV and current MSHA Standards & Specifications.
- Project Background:**  
 Subdivision Name: Talbot's Last Shift Lot 3C  
 Property of: Kassit, LLC  
 Tax Map: Map 31 / Grid: 16  
 Section / Area: N/A  
 Lot / Tax Map Parcels: 3C / 671  
 Zoning: R-20  
 ZB / BA Reference: N/A  
 Election District: N/A  
 Final Plan Approval Date: N/A  
 DPZ Reference Number: SDP-07-091, HP-09-171, SDP-04-050  
 Number of Proposed Lots: 1  
 Max. Lot Coverage Permitted: N/A  
 Submission Area: 1.0808 Ac  
 Improvement to Property: Single Family Detached Dwelling  
 Current Deed Reference: Parcel 671 / LOT 3C L. 10284 F. 695  
 The Boundary shown herein is based on a field run boundary by LDE, Inc. dated January, 2007.
- The existing topography is taken from field run survey with maximum two foot contour intervals prepared by LDE, Inc. dated June, 2006 & February 2007. Topography shown on Lot 3B is proposed contours from SDP 07-091.
- The coordinates shown herein are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Horizontal and Vertical Datums are related to the Maryland State Plane Coordinate System (NAD 83/NAVD83).
- Any demarcation by the contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractor's expense.
- The existing utilities shown herein are located from field surveys and construction drawings of record. The contractor shall locate existing utilities to his own satisfaction and well in advance of any construction activities. Additionally, the contractor shall take all necessary precautions to protect all existing utilities and maintain uninterrupted service. Any damage incurred to utilities or existing features due to contractor's operation shall be repaired immediately at the contractor's expense.
- There may be additional utilities not shown on these plans. The engineer assumes no responsibility for utility locations not shown and it shall be the responsibility of the contractor to verify the locations of all existing utilities within the limits of construction and notify the engineer of any discrepancies, prior to the start of construction.
- Site Analysis Data:**
  - a. Total Project Area: 1.0808 Acres
  - b. Area of Plan Submission: 1.1 Acres +/-
  - c. Limit of Disturbed Area: 0.79 Acres
  - d. Present Zoning Designation: R-20
  - e. Proposed Site and Structure Use: 1 SFD home
  - f. Building coverage of site: 2,700 s.f. (0.062Ac) , 5.7%
  - g. Applicable DPZ File References: SDP 07-091, HP-09-171, SDP-04-050
- The wetlands shown on this site are per a field investigation by LDE, Inc. dated February, 2007.
- In accordance with Section 128 of the Howard County Zoning Regulations, bay windows, chimneys or exterior stairways not more than 16 feet in width may project not more than 4 feet into any setback, porch or deck, open or enclosed, and shall not project more than 10 feet into the front or rear yard setbacks.
- The existing private common driveway provides vehicular access to Lots 3B, 3C and 3D and secondary access to Lot 3A.
- Flag poles shall remain on the property and road maintenance is provided to the junction of the flag or pipestem and road right-of-way line and not onto the lot driveway.
- See Architectural Plans for building dimensions and design details prior to stakeout for construction. It shall be the architect's/Builder's responsibility to provide LDE, Inc. with the most recent set of house plans prior to construction stakeout.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscaping Manual.
- Financial Surety for Landscaping is not required for this project. Landscaping requirement is met by retention of existing vegetation within the projects wetland / stream buffers and 100 Year Floodplain.
- No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the required wetlands, streams or their buffers (See HP-09-171). Forest Conservation Easement areas and 100 Year Floodplain. Per Section 16.116(c) of the Subdivision Regulations, necessary disturbance is required for the water & sewer service connections.
- The Contractor or Developer shall notify the Department of Public Works/Bureau of Engineering / Construction Inspection Division at (410) 313-1881 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work being done.
- The existing driveway shall be upgraded to the use-in-common driveway standards as required by the Howard County Design Manual prior to residential occupancy permit. Use any new driveways to insure safe access for fire and emergency vehicles per the following minimum requirements:
  - a. Width - 12' (6' serving more than one residence);
  - b. Surface - 6" of compacted crusher run base with tar and chip coating (1-1/2" min.);
  - c. Geometry - Max. 14% grade, max. 10% grade change minimum 45 ft. radius;
  - d. Structures (culverts/bridges) - capable of supporting 25 gross tons (H25 loading);
  - e. Drainage Elements - capable of safely passing 100 year flood with no more than 1 ft. depth over driveway surface;
  - f. Maintenance - sufficient to insure weather use.
- Public water connection is provided for this lot via Water Contract No. 44-3727-D. Public sewer connection will be provided for this lot via Sewer Contract No. 10-3647. The sewer house connection and water house connection within the existing 25' Public Utility Easement shall be installed by the Developers Contractor under the Advanced Deposit Order (ADO) process. The water and sewer connections from the edge of the public easement to the proposed dwelling will be installed under separate permit by the builder's plumber.
- Stormwater Management for the proposed improvements is provided by Sheet Flow to Buffer credit to include the use of a 1-level Spreader.
- Any damage to Public "Right-of-Ways" or paved public roads shall be repaired immediately at the contractor's expense in accordance with the Howard County Standards and Specifications.
- All fill shall be rolled to a minimum degree of composition of 95% of the dry unit weight as determined by AASHTO T-100.
- Earthwork quantities shown on this plan are estimated and should not be used for bid purposes. Contractors should perform independent earthwork analysis for bid purposes.
- Deviations from these plans and specifications without prior written consent of the civil engineer (LDE, Inc.) may cause the work to be unacceptable.
- The dimensioned distances shall govern if scaled and dimensioned distances on this plan are found to be in disagreement.



ADDRESS CHART			
Lot/Parcel#	Street Address		
3C / 671	5264 TALBOTS LANDING		

PERMIT INFORMATION CHART			
Subdivision Name:	Section/Area:	Lot/Parcel No.	
TALBOT'S LAST SHIFT	N/A	3C / 671	
Plat# or L/V#	Grid No.	Zoning	Tax Map No.
10284 / 695	16	R-20	31
Water Code	Parcel Code	Election District	Census Tract
D03	1254550	1st	601101

DESIGNED			
EDS	SITE DEVELOPMENT PLAN		
DRAWN			
LDE	PROPERTY OF KASSIT, LLC		
CHECKED			
BDB	TALBOT'S LAST SHIFT		
DATE			
10/2009	TAX MAP 31	GRID 16	PARCEL 671
	1st ELECTION DISTRICT		HOWARD COUNTY MD
	Previous Submittals: SDP 07-091, HP-09-171		
OWNER/DEVELOPER:			
KASSIT, LLC	BUILDER: SASLOW HOMES		
1021 Minicopin Circle, Suite 600, Columbia, MD 21044	7520 Main Street, Suite 204, Sykesville, MD 21784		
JOB NO.			
06-020.1			FILE NO.
			SDP 09-050

**REVISIONS**

No.	Date	Description
1	6/09/10	LDE REVISE POOL LOCATION, AMEND NOTE # 39

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 19184, EXPIRATION DATE: 08/31/2011.

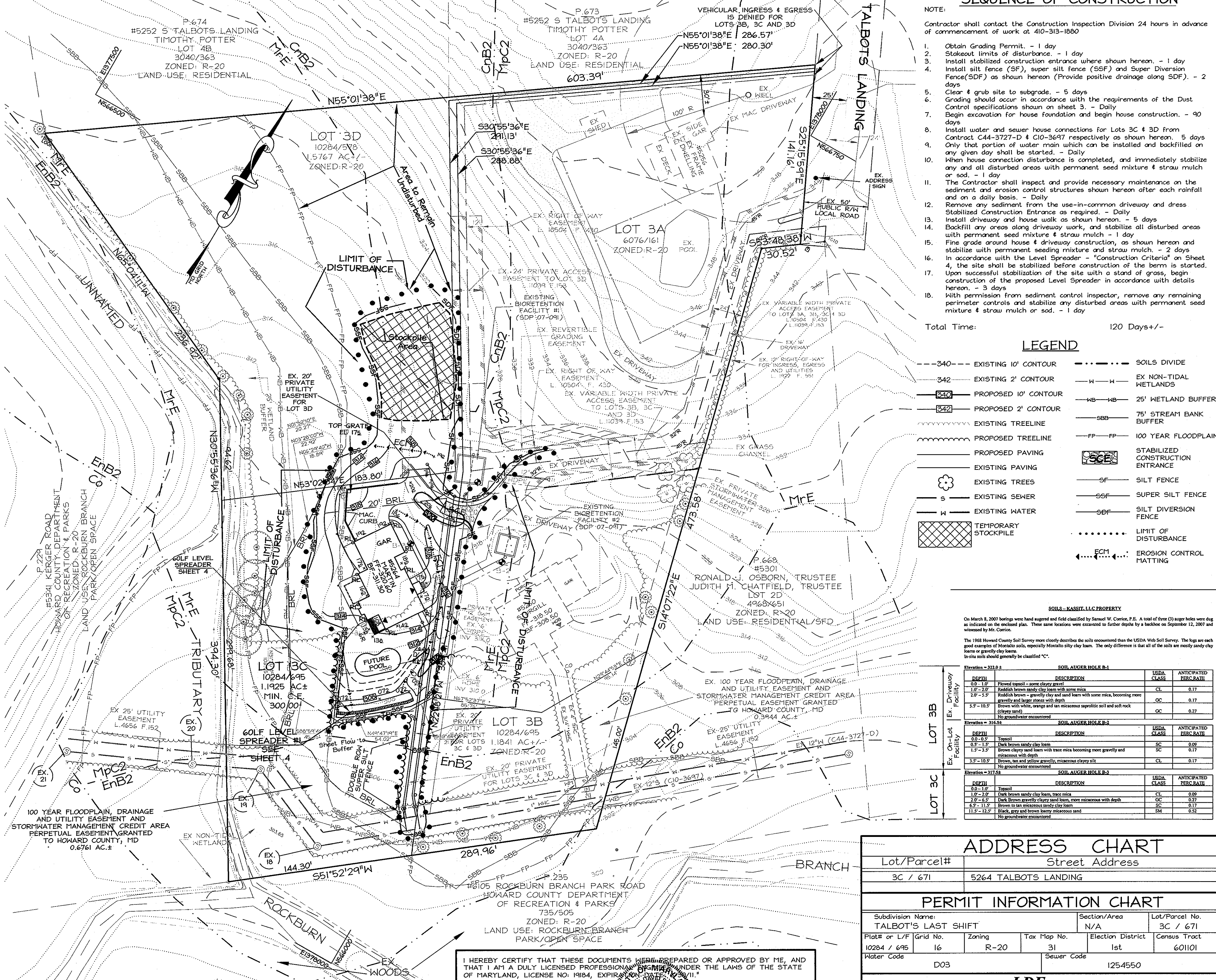
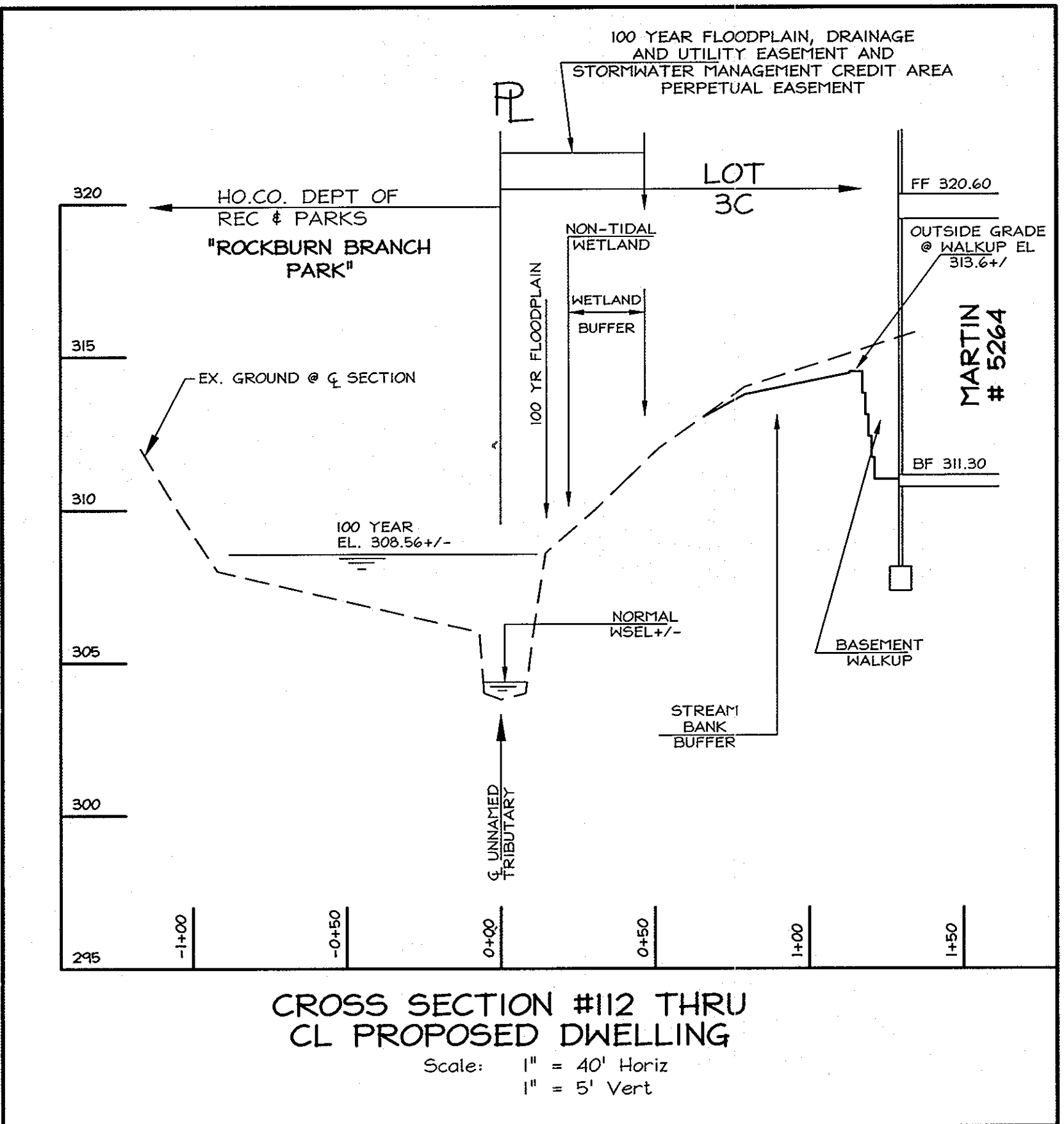
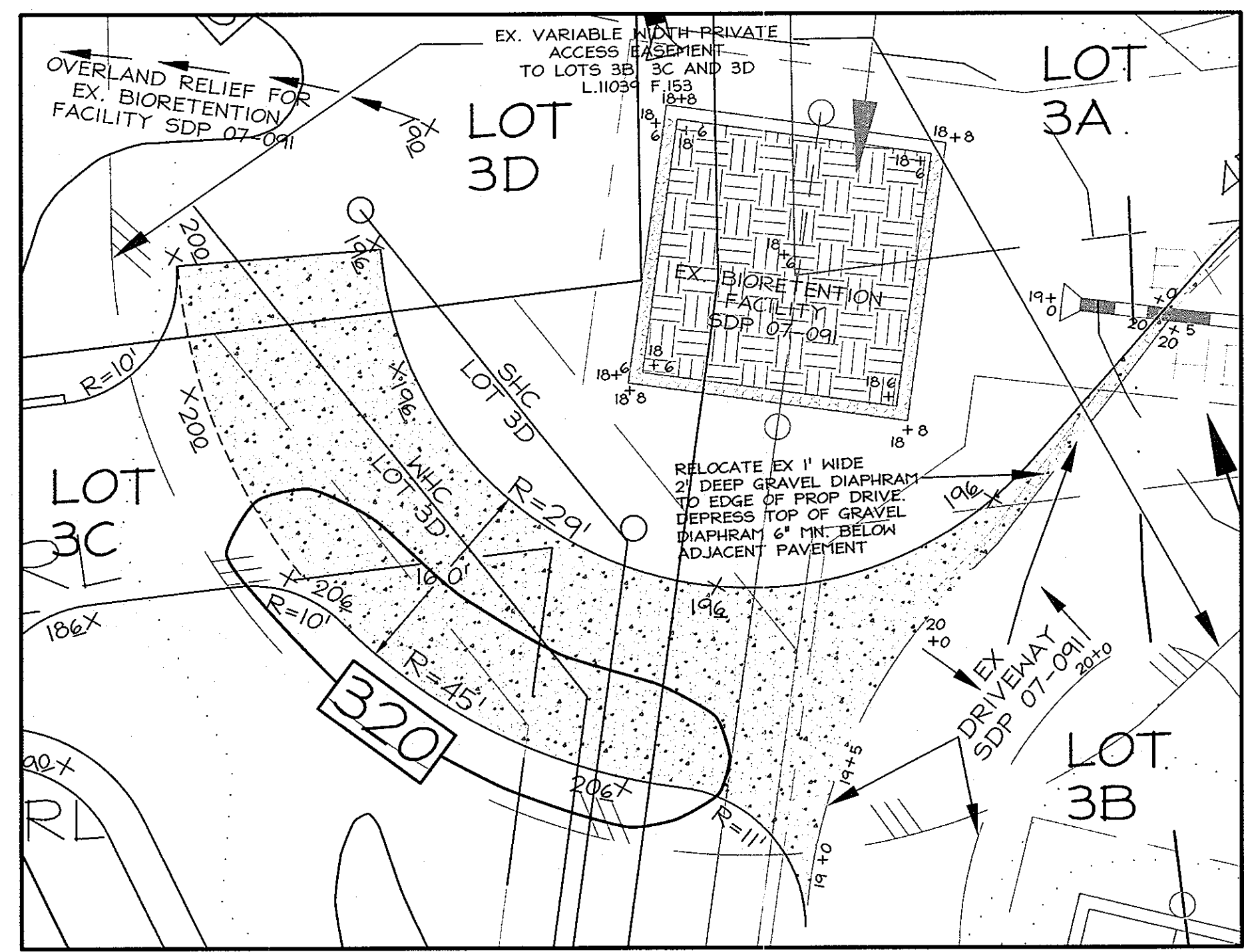
SIGNED: *[Signature]* 10/21/09  
 BRUCE D. BURTON

**DEVELOPER'S / BUILDER'S CERTIFICATION**

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Subdivision and Land Development Regulations and the Landscaping Manual. I further certify that upon completion, a letter of notice, accompanied by an executed one year guarantee of plant materials, and a copy of this plan will be submitted to the Department of Planning and Zoning.

*[Signature]* 10-21-09 DATE  
 SIGNATURE OF DEVELOPER / BUILDER

P:\06-020-1\map\06-020-1\01 SDP09-050.dwg, SDP\_10202009-144647.PLT



- SEQUENCE OF CONSTRUCTION**
- NOTE: Contractor shall contact the Construction Inspection Division 24 hours in advance of commencement of work at 410-313-1880
- Obtain Grading Permit. - 1 day
  - Stakeout limits of disturbance. - 1 day
  - Install stabilized construction entrance where shown hereon. - 1 day
  - Install silt fence (SF), super silt fence (SSF) and Super Diversion Fence (SDF) as shown hereon (Provide positive drainage along SDF). - 2 days
  - Clear & grub site to subgrade. - 5 days
  - Grading should occur in accordance with the requirements of the Dust Control specifications shown on sheet 3. - Daily
  - Begin excavation for house foundation and begin house construction. - 90 days
  - Install water and sewer house connections for Lots 3C & 3D from Contract C44-3727-D & C10-3697 respectively as shown hereon. 5 days
  - Only that portion of water main which can be installed and backfilled on any given day shall be started. - Daily
  - When house connection disturbance is completed, and immediately stabilize any and all disturbed areas with permanent seed mixture & straw mulch or sod. - 1 day
  - The Contractor shall inspect and provide necessary maintenance on the sediment and erosion control structures shown hereon after each rainfall and on a daily basis. - Daily
  - Remove any sediment from the use-in-common driveway and dress Stabilized Construction Entrance as required. - Daily
  - Install driveway and house walk as shown hereon. - 5 days
  - Backfill any areas along driveway work, and stabilize all disturbed areas with permanent seed mixture & straw mulch - 1 day
  - Fine grade around house & driveway construction, as shown hereon and stabilize with permanent seeding mixture and straw mulch. - 2 days
  - In accordance with the Level Spreader - "Construction Criteria" on Sheet 4, the site shall be stabilized before construction of the berm is started. Upon successful stabilization of the site with a stand of grass, begin construction of the proposed Level Spreader in accordance with details hereon. - 3 days
  - With permission from sediment control inspector, remove any remaining perimeter controls and stabilize any disturbed areas with permanent seed mixture & straw mulch or sod. - 1 day
- Total Time: 120 Days +/-

**LEGEND**

- 340 --- EXISTING 10' CONTOUR
- 342 --- EXISTING 2' CONTOUR
- 344 --- PROPOSED 10' CONTOUR
- 342 --- PROPOSED 2' CONTOUR
- --- EXISTING TREELINE
- --- PROPOSED TREELINE
- --- EXISTING PAVING
- --- PROPOSED PAVING
- --- EXISTING PAVING
- --- EXISTING TREES
- --- EXISTING SEWER
- --- EXISTING WATER
- --- TEMPORARY STOCKPILE
- --- SOILS DIVIDE
- --- EX NON-TIDAL WETLANDS
- --- 25' WETLAND BUFFER
- --- 75' STREAM BANK BUFFER
- --- 100 YEAR FLOODPLAIN
- --- STABILIZED CONSTRUCTION ENTRANCE
- --- SILT FENCE
- --- SUPER SILT FENCE
- --- SILT DIVERSION FENCE
- --- LIMIT OF DISTURBANCE
- --- EROSION CONTROL MATTING

**SOILS - KASSIT, LLC PROPERTY**

On March 8, 2007 borings were hand augured and field classified by Samuel W. Corwin, P.E. A total of three (3) auger holes were dug as indicated on the enclosed plan. These same locations were excavated to further depths by a backhoe on September 12, 2007 and witnessed by Mr. Corwin.

The 1988 Howard County Soil Survey more closely describes the soils encountered than the USDA Web Soil Survey. The logs are each good examples of Mosaic soils, especially Mosaic silty loam. The only difference is that all of the soils are nearly sandy clay loam or gravelly clay loam. In situ soils should generally be classified "C".

DEPTH	DESCRIPTION	USDA CLASS	ANTICIPATED PERCENTAGE
0.0 - 1.0'	Flowed topsoil - some clayey silt	CL	0.17
1.0 - 2.0'	Reddish brown sandy clay loam with some mica	SC	0.17
2.0 - 3.5'	Reddish brown - generally clay and sand loam with some mica, becoming more gravelly and larger stones with depth	OC	0.17
3.5 - 10.5'	Brown to white, orange and tan micaceous siltstone silty sand with rock (clayey sand)	OC	0.27
No groundwater encountered			

DEPTH	DESCRIPTION	USDA CLASS	ANTICIPATED PERCENTAGE
0.0 - 0.5'	Topsoil	SC	0.17
0.5 - 1.5'	Dark brown sandy clay loam	SC	0.17
1.5 - 3.5'	Brown clayey sand loam with trace mica becoming more gravelly and micaceous with depth	SC	0.17
3.5 - 10.5'	Brown, tan and yellow gravelly, micaceous silty silt	CL	0.17
No groundwater encountered			

DEPTH	DESCRIPTION	USDA CLASS	ANTICIPATED PERCENTAGE
0.0 - 1.0'	Topsoil	SC	0.09
1.0 - 2.0'	Dark brown sandy clay loam, trace mica	SC	0.09
2.0 - 4.5'	Dark brown sandy clay loam, trace mica, more micaceous with depth	OC	0.09
4.5 - 11.5'	Brown to tan micaceous sandy clay loam	SC	0.17
11.5 - 12.5'	Black, grey and brown micaceous sand	SM	0.32
No groundwater encountered			

**ADDRESS CHART**

Lot/Parcel#	Street Address
3C / 671	5264 TALBOTS LANDING

**PERMIT INFORMATION CHART**

Subdivision Name:	Section/Area	Lot/Parcel No.
TALBOT'S LAST SHIFT	N/A	3C / 671

Plat# or L/F	Grid No.	Zoning	Tax Map No.	Election District	Census Tract
10284 / 695	16	R-20	31	1st	60101

Water Code	Sewer Code
D03	1254550

**LDE Inc.**  
Engineers, Surveyors, Planners  
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045  
(410)715-1070 - (800)596-3424 - FAX (410)715-8540

DESIGNED	SCALE
EDS	1" = 40'

DRAWN	DRAWING
LDE	2 OF 4

CHECKED	JOB NO.
BDB	06-020.1

DATE	OWNER/DEVELOPER:	BUILDER:	FILE NO.
10/2009	KASSIT, LLC 10211 Wincoop Circle Suite 204 Columbia, MD 21044	SASLOW HOMES 7520 Main Street, Suite 204 Sykesville, MD 21784	SDP 09-050

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]*  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]*  
DIRECTOR, DEP

**DEVELOPER'S / BUILDER'S CERTIFICATION**

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Subdivision and Land Development Regulations and the Landscape Manual. I further certify that upon completion, a letter of notice, accompanied by an executed one year guarantee of plant materials, and a copy of this plan will be submitted to the Department of Planning and Zoning.

*[Signature]* 10-21-09  
SIGNATURE OF DEVELOPER / BUILDER DATE

**THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.**

*[Signature]* 11/20/09  
SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10/21/09  
SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 10-21-09  
SIGNATURE OF DEVELOPER DATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRES 08/31/11.

*[Signature]* 10/21/09  
BRUCE D. BURTON

**REVISIONS**

No.	Date	Description

SDP-09-050

**HOWARD SOIL CONSERVATION DISTRICT  
STANDARD SEDIMENT CONTROL NOTES**

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction, (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. I, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 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 (Section G) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
 

Total Area of Site	1.19	Acres
Area Disturbed	0.87	Acres
Area to be roofed or paved	0.20	Acres
Area to be vegetatively stabilized	0.67	Acres
Total Cut	500	Cu. Yds. #
Total Fill	500	Cu. Yds. #

- \* Contractor shall complete their own earthwork analysis - See Note 26 Sheet 1  
Offsite waste/borrow area location N/A
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
  - Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
  - On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
  - Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

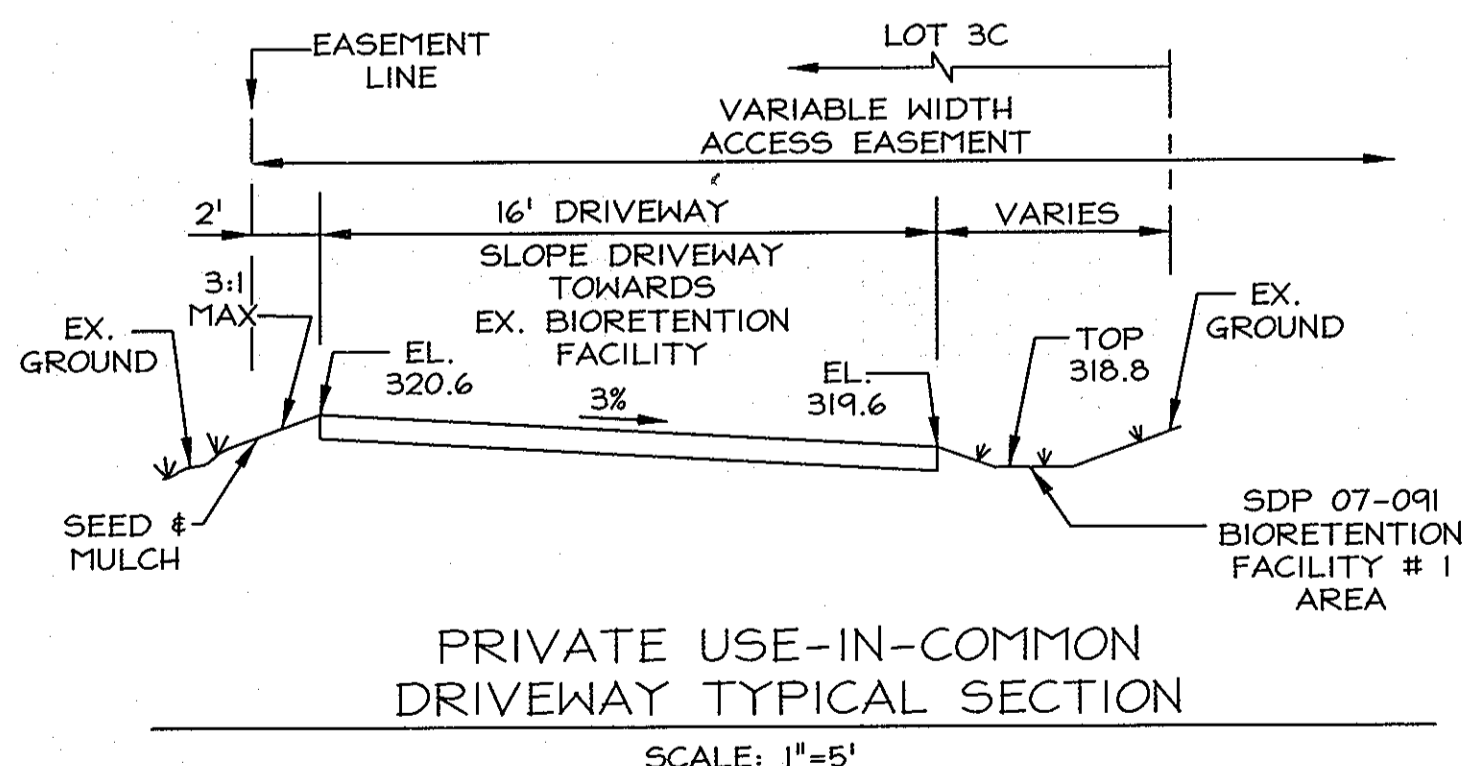
**HOWARD SOIL CONSERVATION DISTRICT  
PERMANENT SEEDING NOTES**

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.
- SOIL AMENDMENTS:** In lieu of soil test recommendations, use one of the following schedules:  
 1) PREFERRED: Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq.ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaformal fertilizer (9 lbs/1000sq.ft.)  
 2) ACCEPTABLE: Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq.ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

- SEEDING:** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31, Tall Fescue and 2 lbs. per acre (.05lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.
- MULCHING:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. 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/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.
- MAINTENANCE:** Inspect all seeding areas and make needed repairs, replacements and reseeding.

**HOWARD SOIL CONSERVATION DISTRICT  
TEMPORARY SEEDING NOTES**

- Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
- SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.
- SOIL AMENDMENTS:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq. ft.).
- SEEDING:** For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. 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 sod.
- MULCHING:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.
- Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.



**21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL**

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

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

**Conditions Where Practice Applies:**

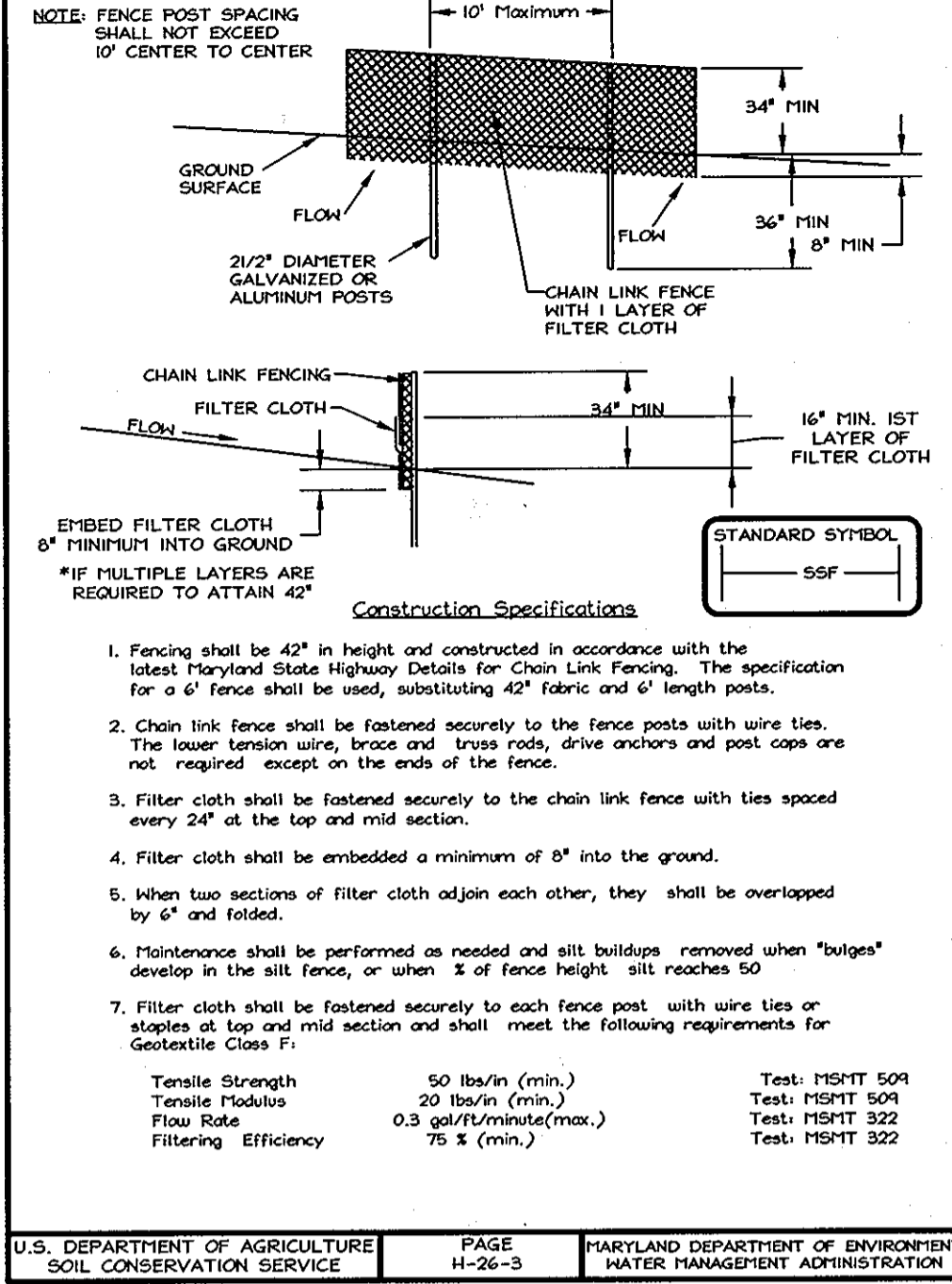
- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - The soil moisture is such that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture 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 purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

**Construction and Material Specifications:**

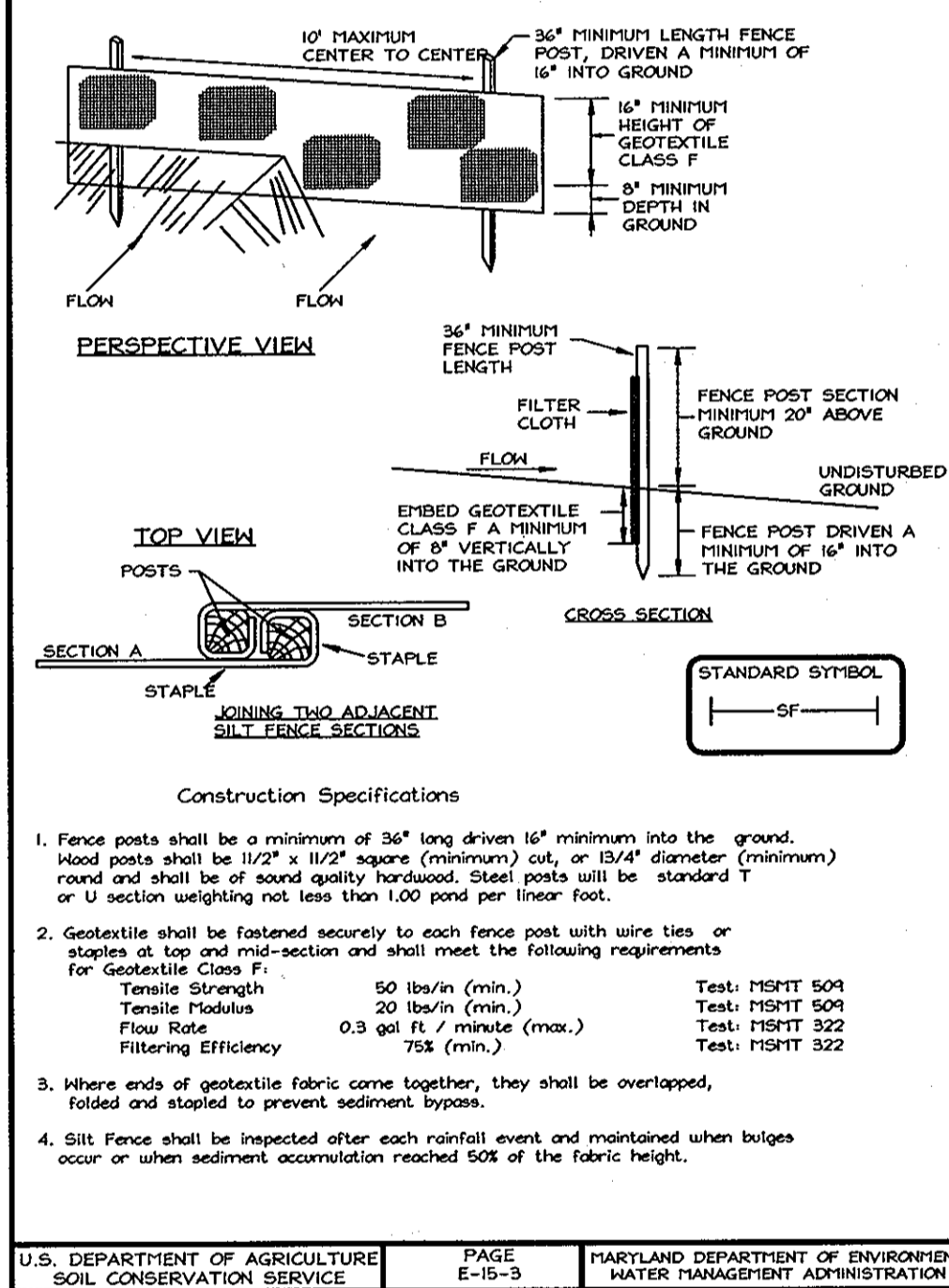
- Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section of the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silty loam, sandy clay loam, loamy sand, or 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 textured subsoils and shall contain less than 5% by volume of cinders, stones, coarse fragments, gravel, sticks, rocks, trash, or other materials larger than 1/2" in diameter.
  - Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
  - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1000 square feet) prior to the topsoil being placed. Limestone shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedure.
  - For sites having disturbed areas under 5 acres:
 

Tensile Strength	50 lbs/in. (min.)	Test: MSHT 509
Tensile Modulus	20 lbs/in. (min.)	Test: MSHT 509
Flow Rate	0.3 gal./ft. / minute (max.)	Test: MSHT 322
Filtering Efficiency	75 % (min.)	Test: MSHT 322
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
  - For sites having disturbed areas over 5 acres:
    - On soil meeting Topsoil specifications, obtain test results indicating fertilizer and lime amendments required to bring the soil into compliance with the following:
      - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      - Organic content of topsoil shall be not less than 1.5 percent by weight.
      - Topsoil having suitable soil content greater than 500 parts per million shall not be used.
      - No sod or seed shall be placed on soil which has been treated with soil stabilizers or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
    - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

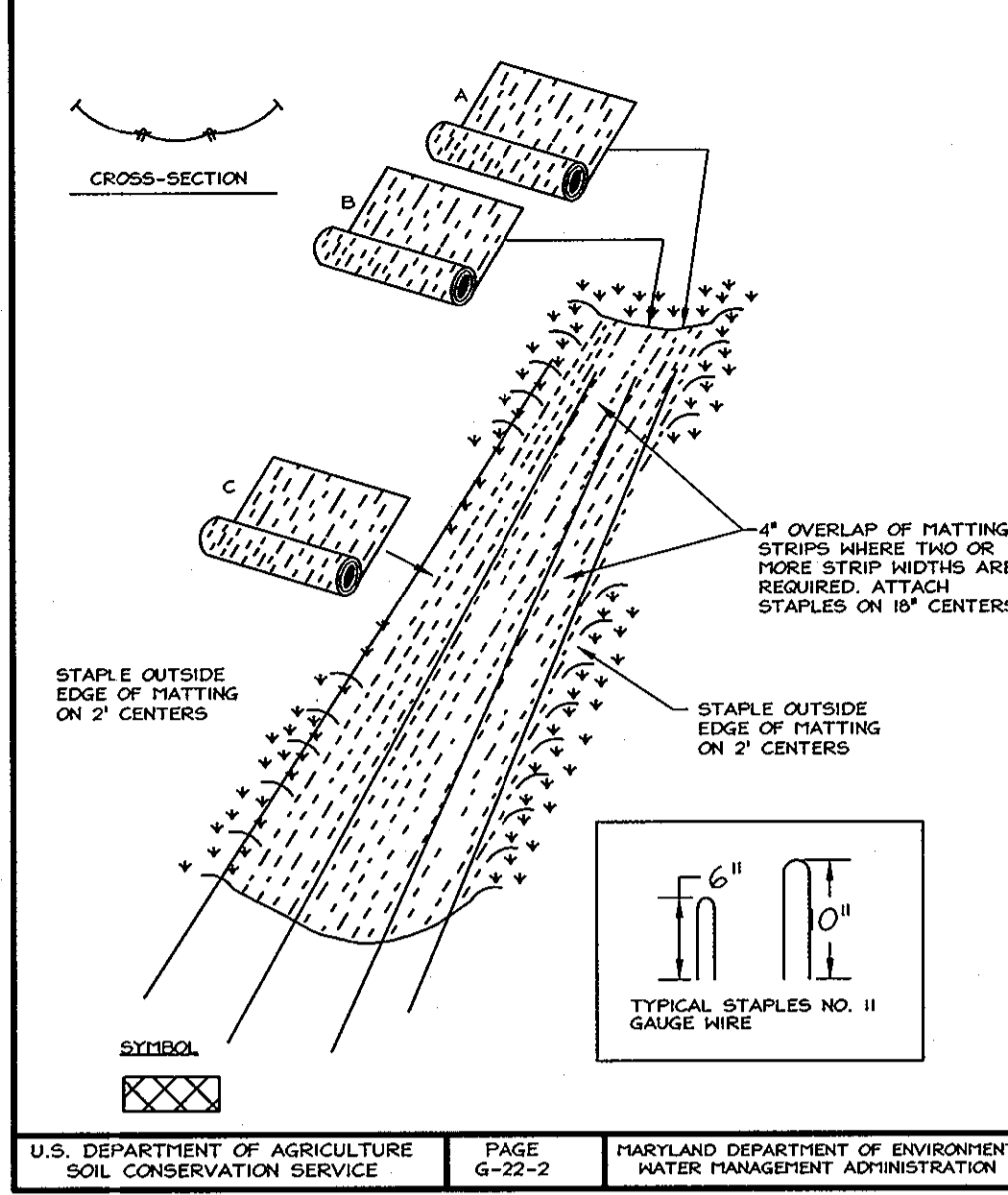
**DETAIL 33 - SUPER SILT FENCE**



**DETAIL 22 - SILT FENCE**



**DETAIL 30 - EROSION CONTROL MATTING**



**EROSION CONTROL MATTING**

**Construction Specifications:**

- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth then 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".
- Staple the 4" overlap in the channel center using an 18" spacing between staples.
- Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
- Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
- 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", shipping fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
- 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 affected by the flow must be keyed-in.

**SECTION 30.0 - DUST CONTROL**

**30.0 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:**

- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- 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 an 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.
- 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.
- Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, 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.
- Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

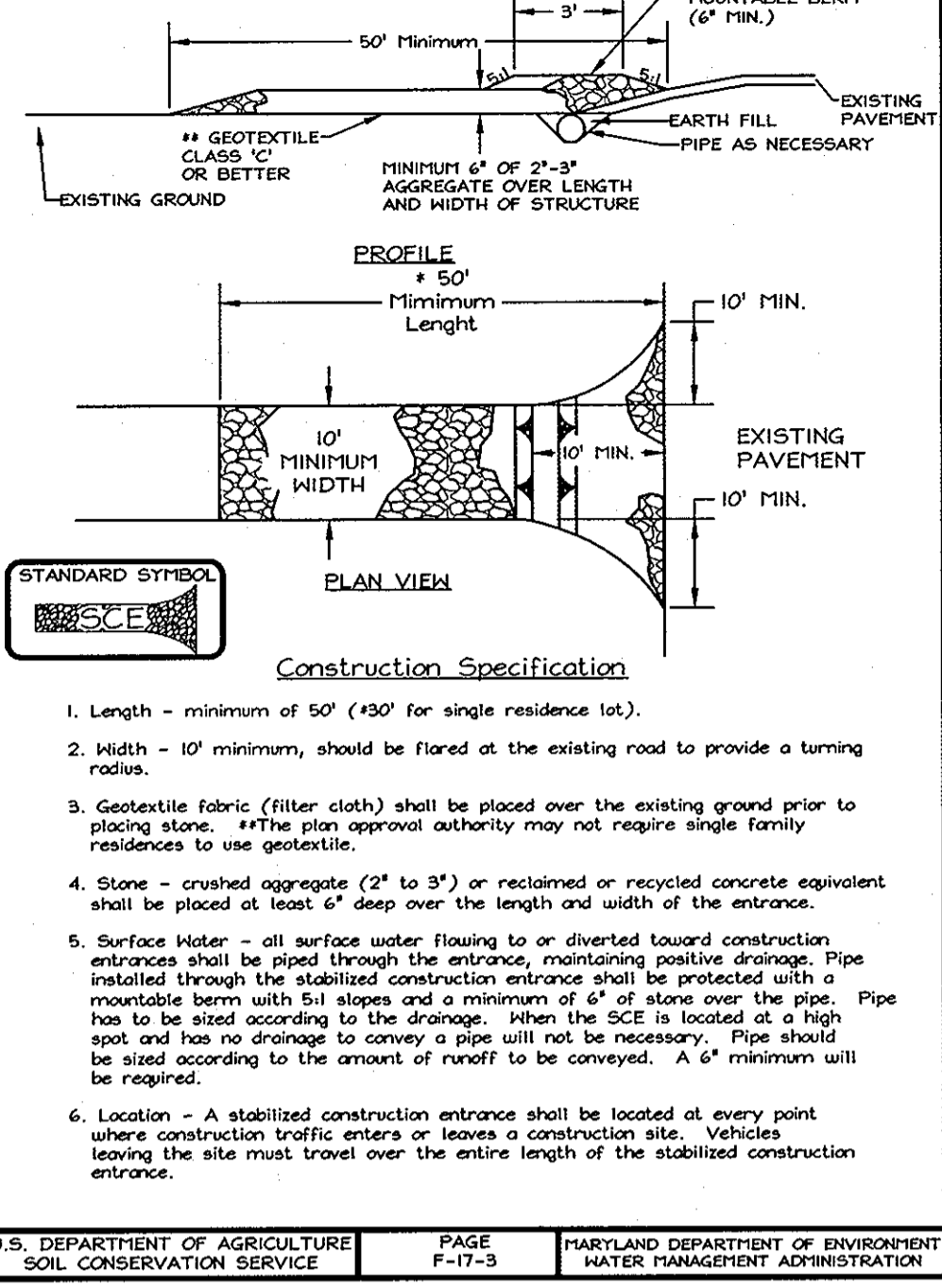
**Permanent Methods:**

- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with soil. Existing trees or large shrubs must afford valuable protection if left in place.
- Topsoiling - Covering with less erosive materials. See standards for topsoiling.
- Stone - Cover surface with crushed stone or coarse gravel.

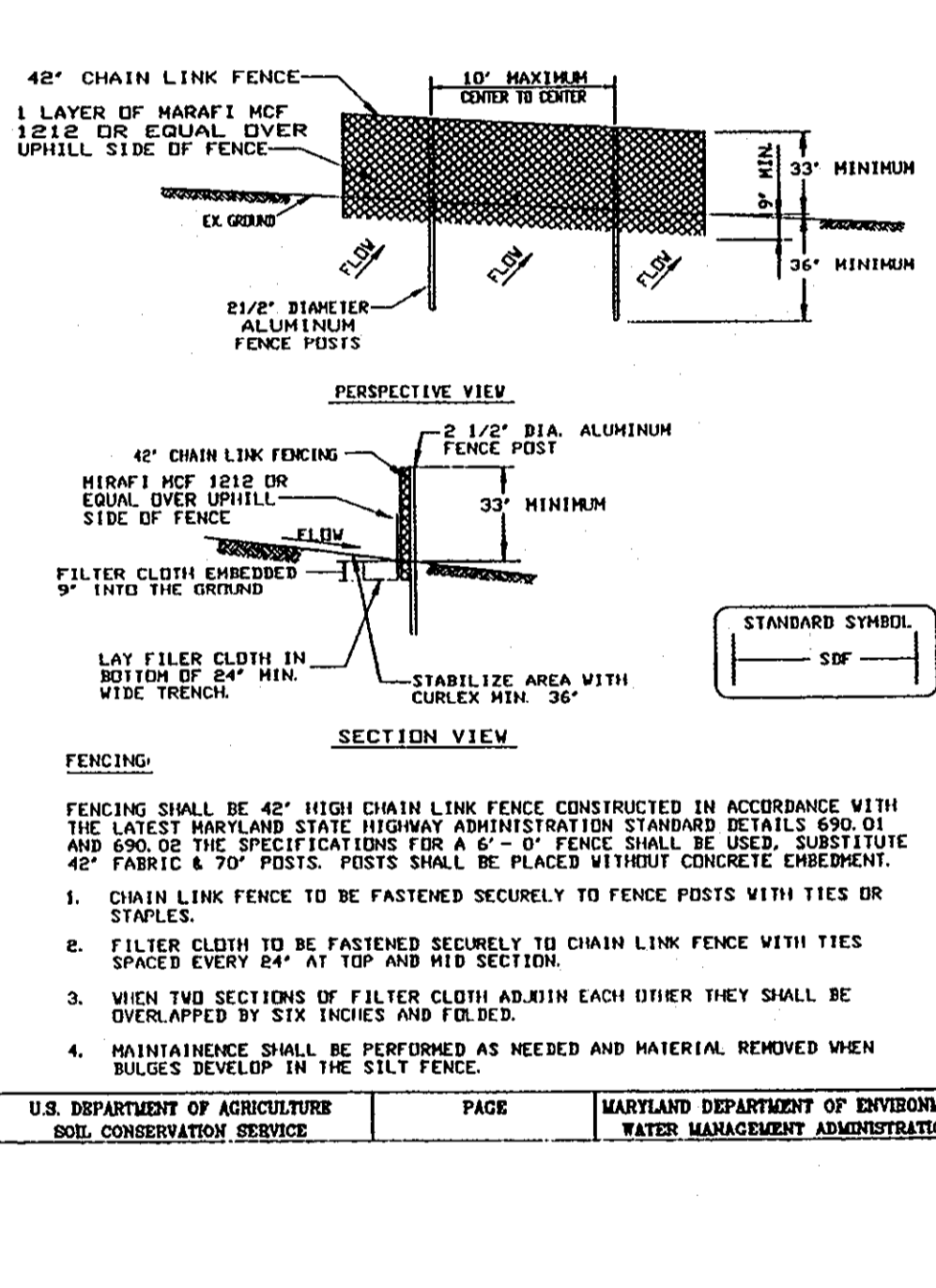
**References:**

- Agriculture Handbook, Wind erosion Forces in the United States and Their Use in Predicting Soil Loss.
- Agriculture Information Bulletin 354, How to Control Wind Erosion, USDA-ARS.

**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**



**DETAIL - SUPER DIVERSION FENCE**



**NOTE:**

Quantities are provided for informational purposes only and are based upon comparison of existing ground to proposed grades shown herein. Contractor to make his own analysis prior to placing a bid on grading work / earthwork.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 J.P. [Signature] 11/4/09 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 11/09/09 DATE

DIRECTOR, DEP.  
 [Signature] 11/4/09 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF ENGINEER: BRUCE D. BURTON 10/21/09 DATE

**DEVELOPER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF DEVELOPER: [Signature] 10-21-09 DATE

No.	Date	Description

**LDE Inc.**  
 Engineers, Surveyors, Planners  
 9250 Ramsay Road, Suite 106 Columbia, Maryland - 21045  
 (410)715-1070 - (301)596-3424 - FAX (410)715-9540

DESIGNED	GRADING, SOIL EROSION & SEDIMENT CONTROL PLAN - DETAILS	SCALE	As Shown
DRAWN	PROPERTY OF KASSIT, LLC TALBOT'S LAST SHIFT LOT 3C FOR SINGLE FAMILY DWELLING AND LOT 3D FOR STOCKPILE	DRAWING	3 OF 4
CHECKED	TAX MAP 31 GRID 16 PARCEL 671 1st ELECTION DISTRICT HOWARD COUNTY MD	JOB NO.	06-020.1
DATE	10/20/09	Previous Submittals: SDP 07-091, WP-09-171	FILE NO. SDP 09-050

OWNER/DEVELOPER: KASSIT, LLC  
 10211 Hincoppin Circle, Suite 600, Columbia, MD 21044  
 BUILDER: SASLOW HOMES  
 7520 Main Street, Suite 204, Sykesville, MD 21784

SDP-09-050

**GENERAL NOTES**

- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code, Landscape Manual and Forest Conservation Manual.
- The Owner/Developer is responsible for the planting of all plant material required to meet the standards established by the Howard County Landscape Manual.
- Financial Surety for Landscaping is not required for this project. Landscaping requirement is met by retention of existing vegetation within the projects wetland / stream buffers and 100 Year Floodplain.
- Should any trees designated for preservation for which landscaping credit is given, die prior to release of bonds, the owner will be required to replace the trees with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 5 inches in caliper and installed as required in the Howard County Landscape Manual.
- 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 material 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 and replaced.
- As the time of installation, 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 relocation 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 landscape surety until such time as all required materials are planted and/or revision made to applicable plans and certificates.

**TREE PLANTING NOTES**

- Notify "Miss Utility" 72 hours prior to installation of all plant material.
- Plant installation must conform to the minimum standards cited in the latest edition of Landscape Specification Guidelines, published by the Landscape Contractors Association.
- Plants to be located in the field by the owner or owner's representative. Notify owner 72 hours in advance of planting.
- A Certification of Landscape Installation is required as per the Howard County Landscape Ordinance.
- Trees may not be planted within 5 feet of drain inlets, 5 feet of an open space access strip and 10 feet of a driveway.
- Balled and burlapped plant material shall not be accepted if ball is cracked or broken before or during planting. Protect all plants from drying by either sun or wind.
- Tree pits shall be backfilled with 50% topsoil, 25% peat 25% sand with one pound of 10-10-10 fertilizer per pit.
- Top soil shall be sandy loam soil free from noxious weeds or grasses, roots, clay clumps, stones, sticks, etc. Peat moss shall be commercial with pH 4.5 to 6.5, free of woody material or harmful minerals.
- All plants shall be watered at planting with weekly watering thereafter for the first 80 days. Watering shall continue bimonthly or as necessary to maintain plants in a healthy condition during the guarantee period.
- Maintain the site in an orderly manner. Streets and sidewalks shall be swept clean. All rejected or dead materials shall be immediately removed from the site.
- Plant material to be alive and healthy at the time of the guarantee period (one year), as specified in the Howard County Landscape Ordinance.
- Maintenance shall begin immediately after planting and continue to the end of guarantee period.
- Maintenance consists of pruning, watering weeding, re-mulching, resetting plants to proper grades as needed and repairing guys and stakes as needed.

**TREE PLANTING DETAILS**

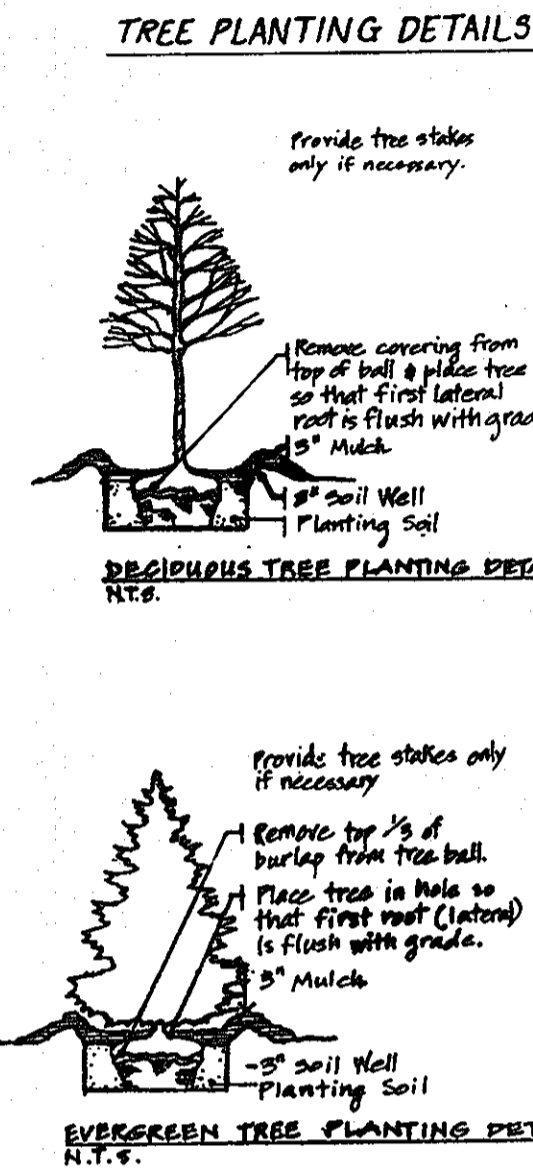
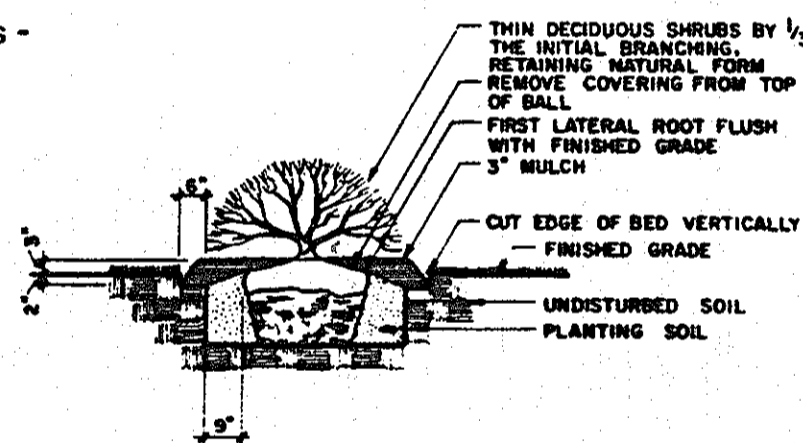


Figure 6-3. Planting Details - Shrub

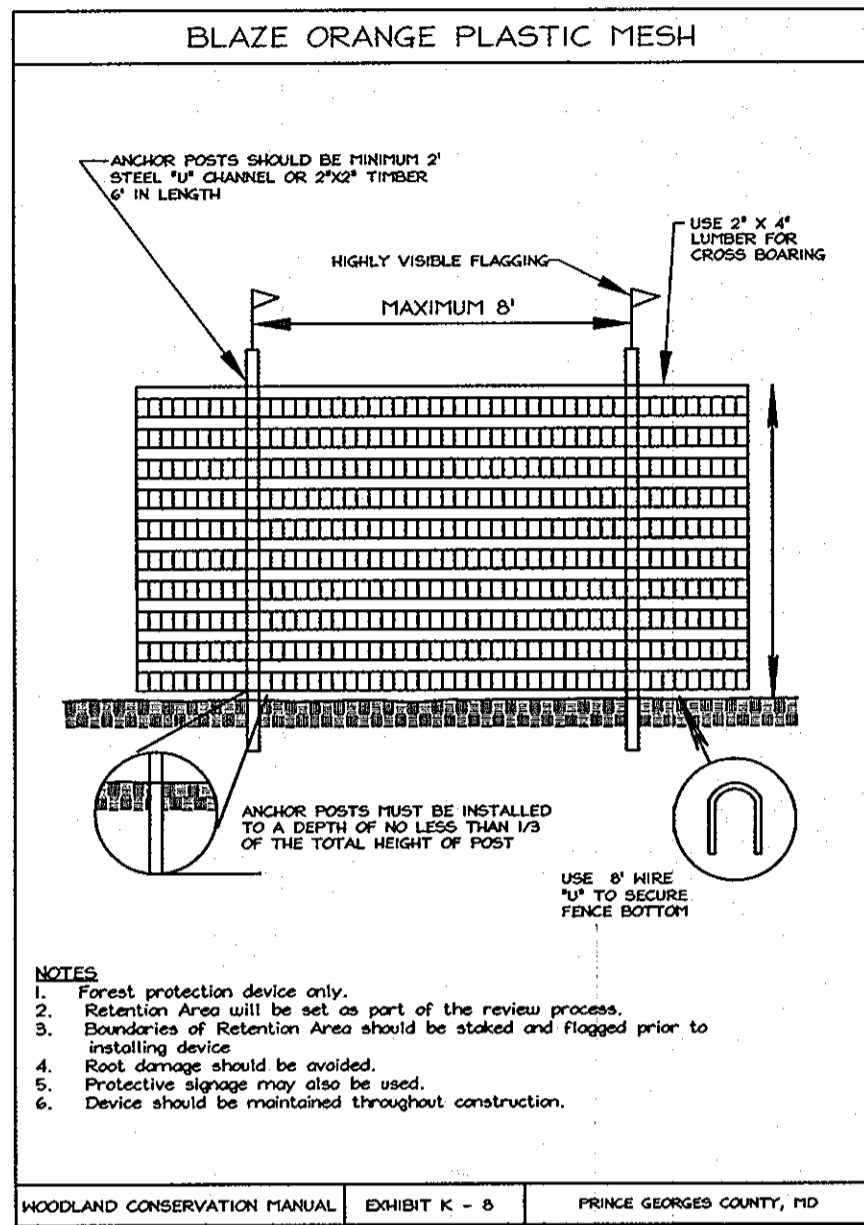


**SCHEDULE A PERIMETER LANDSCAPE EDGE**

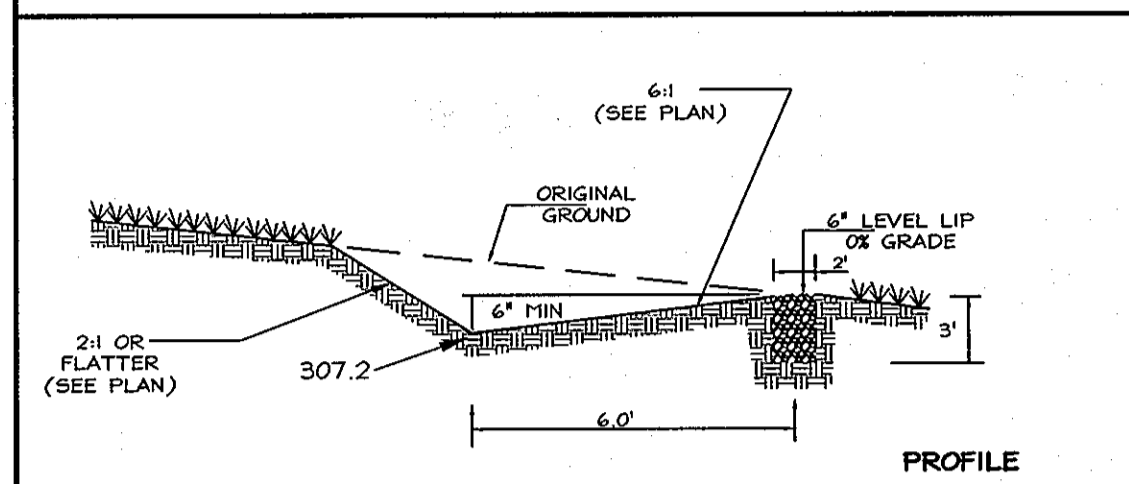
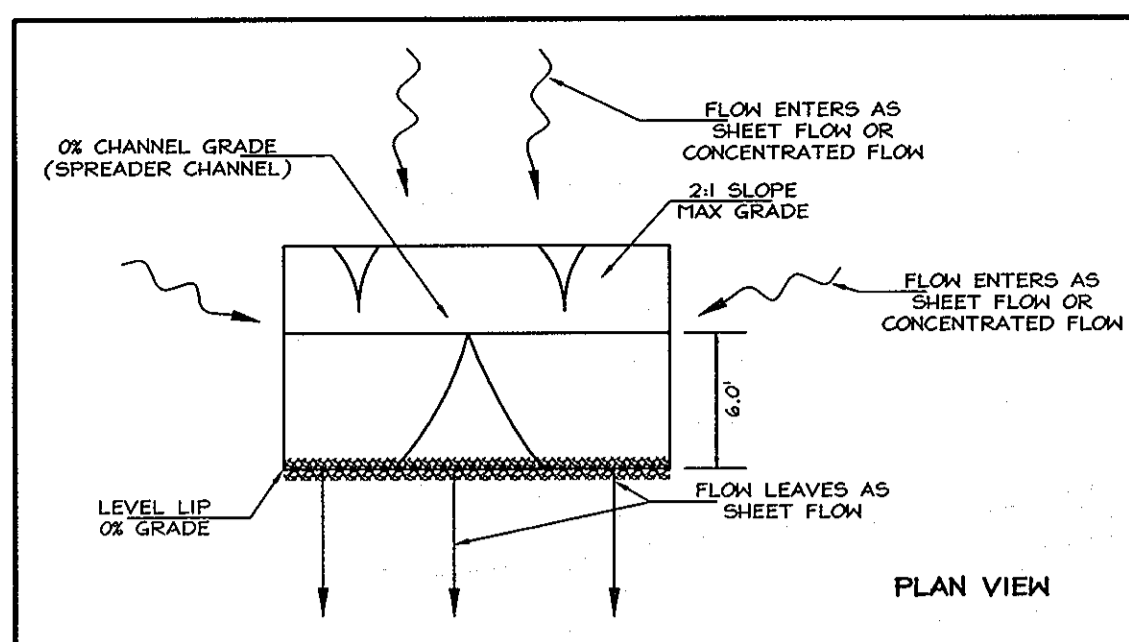
Category	Adjacent to Perimeter Properties	Perimeter Properties
Perimeter	P-1	P-2
Landscape Type	A	A
Linear Feet of Roadway Frontage / Perimeter	144 L.F.	300 L.F.
Credit for Existing Vegetation (Yes, No, Linear Feet)	Yes *	Yes **
Credit For Wall, Fence or Berm (Yes, No, Linear Feet)	No	No
Number of Plants Required	3	5
Number of Plants Provided		
Shade Trees	0	0
Evergreens	0	0
Shrubs	0	0

\* Credit for wooded perimeter along Parcel 235 Rockburn Branch Park  
 \*\* Credit for wooded perimeter along Parcel 224 Rockburn Branch Park

**BLAZE ORANGE PLASTIC MESH**



TREE PROTECTION FENCE



LEVEL SPREADER NUMBER	TOP STONE ELEV	INV STONE ELEV	LEVEL LIP ELEV
1	307.7	304.7	307.7

**LEVEL SPREADER (Sheet Flow to Buffer Credit)**

**OPERATION AND MAINTENANCE SCHEDULE FOR LEVEL SPREADERS**

- LEVEL SPREADERS shall be installed after the contributing site has been stabilized unless filter fabric is placed over the device immediately after construction to divert sediment from entering the device.
- After the site has been stabilized and with the inspector's approval, the fabric may be removed.
- Maintenance shall be performed on a level spreader by the lot / homeowner when sediment is visually apparent within the stone voids. The portion of the stones that are affected shall be removed and replaced by the lot / homeowner with clean stone.

**SUMMARY TABLE - STUDY POINT # 1**

LOT 3C

Drainage Area = 0.57 Acres  
 Water Quality Management = SHEET FLOW TO BUFFER  
 Water Quantity (Cp) Management = See Note Below\*\*  
 Groundwater Recharge Volume (Rw) Required = 53 cu.ft.  
 Groundwater Recharge Volume (Rw) Provided = 53 cu.ft.  
 Water Quality Volume (WQ) Required = 375 cu.ft.  
 Water Quality Volume (WQ) Provided = 375 cu.ft.  
 Channel Protection Volume (Cp) Required = N/A cu.ft.  
 Channel Protection Volume (Cp) Provided = N/A cu.ft.

\* Provided per use of "Sheet Flow to Buffer Credit" & Level Spreader  
 \*\* Provided per use of "Sheet Flow to Buffer Credit" & Level Spreader

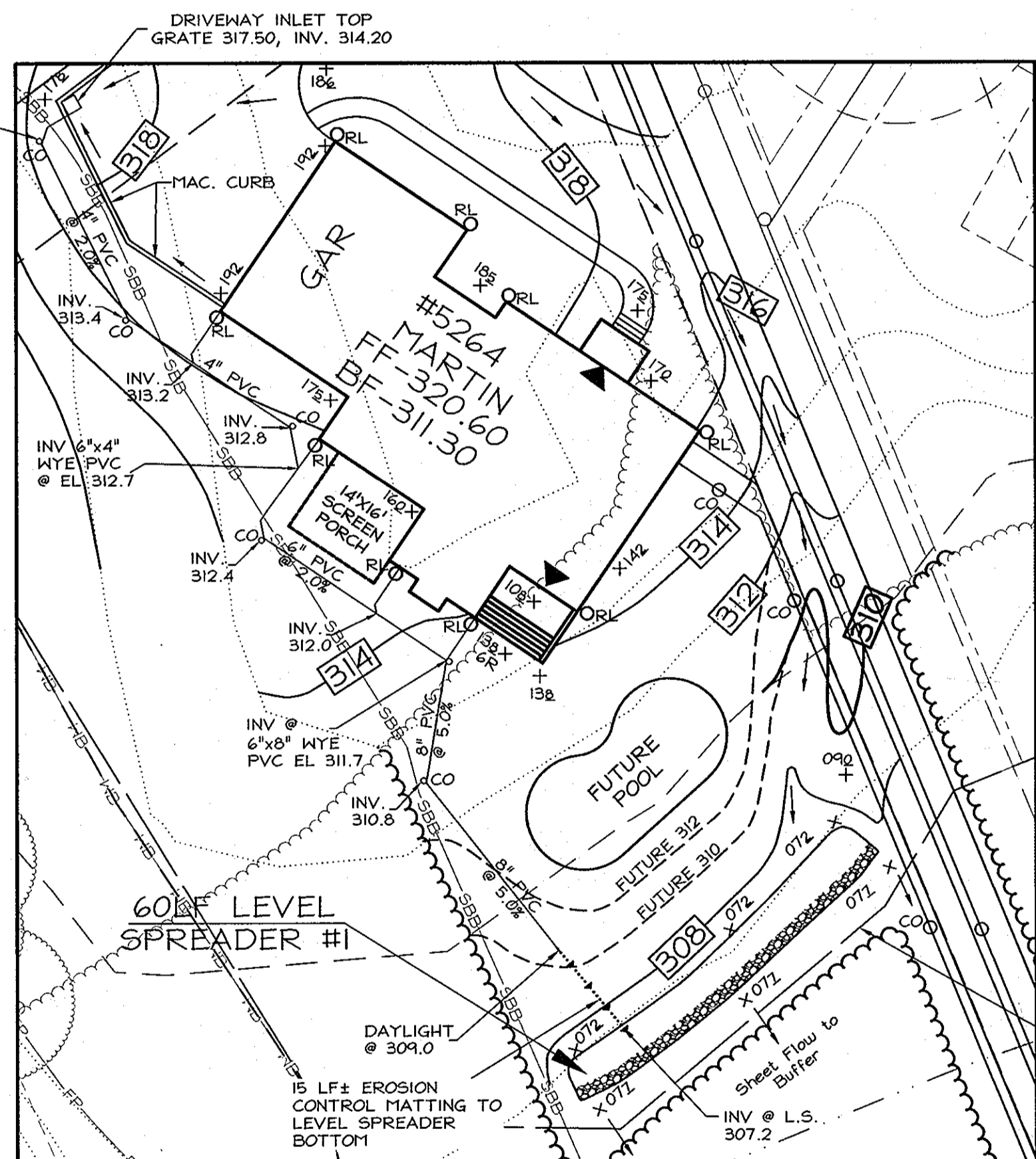
STUDY POINT # 1

	1 Year	Opt0 Year	Opt100 Year
Total Existing Flow (cfs)	2.7	13.3	24.0
Total Developed Flow (cfs)	2.7	13.2	23.9

**NOTE:**

LOT 3C "SUBAREA" WILL UTILIZE SHEET FLOW TO BUFFER CREDIT FOR THE ELIMINATION OF IMPERVIOUS AREA TO MEET THE WQV REQUIREMENT AND TO MEET REV REQUIREMENTS BY CREDIT.

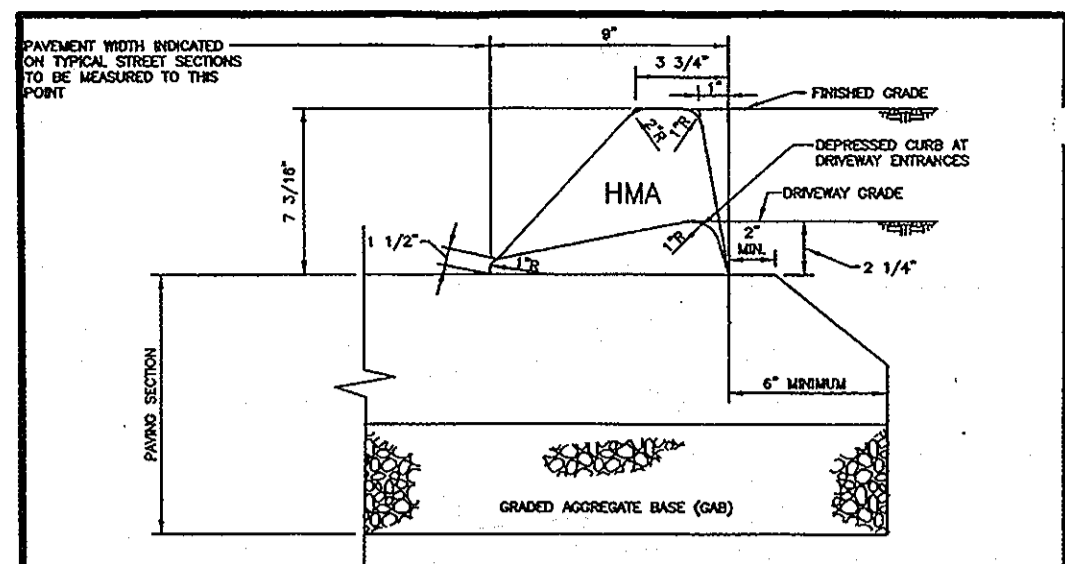
AS PROPOSED UNDER SDP 07-091, THE ENTIRE PROPOSED USE-IN-COMMON DRIVEWAY "SUBAREA" WILL UTILIZE GRASS CHANNEL CREDIT TO AUTOMATICALLY MEET THE REV REQUIREMENTS AND SORRETENTION FACILITY #1 TO MEET HWQ. IT SHOULD BE NOTED UNDER SDP 07-091, THE ENTIRE DRIVEWAY WAS NOT CONSTRUCTED. THIS PLAN EXTENDS THE DRIVEWAY HOWEVER THE FINAL COMPLETION WILL BE DONE UNDER THE DEVELOPMENT OF LOT 3D.



**PLAN VIEW**

**60 LF LEVEL SPREADER**

Scale 1" = 20'



NOTE:  
 1. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED DIRT, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.  
 2. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE OUTER AND FLOW LINE.

Howard County, Maryland Department of Public Works Approved: [Signature] Date: [Date]	CURBS Hot Mix Asphalt & Concrete Barrier	Detail R-3.03
--	--	------------------

**NOTE:**

DRIVEWAY SHALL BE SURROUNDED BY ASPHALT CURBING AS SHOWN ON SHEET 1. CURBING SHALL DIRECT RUNOFF TO INLET AS DETAILED ON SHEET 1 & HEREON.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRING ON 10/20/11.

SIGNED: Bruce D. Burton 10/21/09  
 BRUCE D. BURTON

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNED: Bruce D. Burton 10/21/09  
 SIGNATURE OF ENGINEER  
 BRUCE D. BURTON, P.E. 19184

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNED: Mal Saslow 10-21-09  
 SIGNATURE OF DEVELOPER  
 HOWARD SASLOW

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]  
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] 11/14/09  
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] 11/09/09  
 DIRECTOR: [Signature] 11/10/09

**REVISIONS**

No.	Date	Description

**LDE Inc.**  
 Engineers, Surveyors, Planners  
 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045  
 (410)715-1070 - (301)596-3424 - FAX (410)715-9240

DESIGNED	EDS	STORMWATER MANAGEMENT, LANDSCAPE, NOTES & DETAILS	SCALE	As Shown
DRAWN	LDE	PROPERTY OF KASSIT, LLC TALBOT'S LAST SHIFT LOT 3C FOR SINGLE FAMILY DWELLING AND LOT 3D FOR STOCKPILE	DRAWING	4 OF 4
CHECKED	BDB	TAX MAP 31 GRID 16 PARCEL 671 1st ELECTION DISTRICT HOWARD COUNTY MD	JOB NO.	06-020.1
DATE	10/20/09	Previous Submittals: SDP 07-091, WP-09-171	FILE NO.	SDP 09-050
OWNER/DEVELOPER:	KASSIT, LLC 10211 Winthrop Circle, Suite 600 Columbia, MD 21044	BUILDER:	SASLOW HOMES 7520 Main Street, Suite 204 Sykesville, MD 21784	

SDP-09-050