

# Public Meeting for Contractors, including Construction, Marine, Shoreline Restoration and Solar Construction

Presented by the Talbot County Office of Permits & Inspections

And Representatives from:

The Departments of Planning & Zoning and Public Works, Talbot  
County Environmental Health and the Talbot Soil Conservation District

# Presenters

## **Office of Permits & Inspections:**

Grace Foringer – Permit Tech 1

Maria Brophy – Staff Assistant

Larry Schuyler & Steve Thomas – Building,  
Inspection & Code Compliance Officers

Judith Shuler – Manager

## **Department of Planning & Zoning:**

Florence Ball – Zoning Coordinator

Elisa Deflaux – Environmental Planner

# Presenters

**Talbot County Public Works Department:**

Mike Mertaugh – Assistant County Engineer

**Talbot County Office of Environmental Health:**

David Russ – Program Supervisor

**Talbot Soil Conservation District**

Craig Zinter – District Manager

# Agenda

- ▶ Applicable Codes
  - ▶ Procedures & Fees
  - ▶ Revisions & Amendments/Change of Contractor
  - ▶ Planning & Zoning Reviews
  - ▶ Substantial Improvement/Construction Document Review
  - ▶ Environmental Health Submission & Review
  - ▶ Public Works Reviews & Agreements
  - ▶ Erosion & Sediment Control Plan Submission & Review
  - ▶ Inspections
  - ▶ Questions & General Discussion
- 

# APPLICABLE CODES

**Maryland Building Performance Standards as listed  
under COMAR 05.02.07, Effective July 1, 2015**

**2015 International Building Code (IBC)**

**2015 International Residential Code (IRC)**

**2015 International Energy Conservation Code (IECC)**

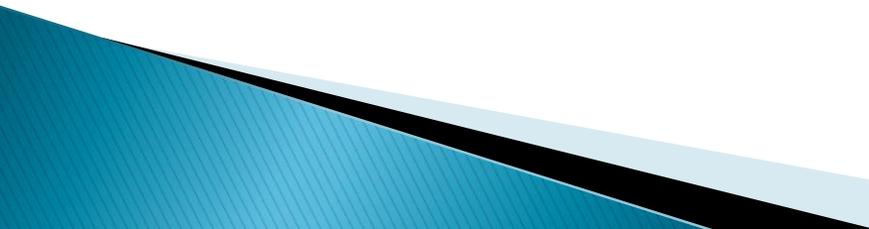
**2012 International Green Conservation Code (IGCC)**

**Electrical – Currently under Nat. Electrical Code, 2008 Ed.**

**Mechanical – Currently under 2003 Int'l Mechanical Code**

**Plumbing – Currently under 2003 Nat. Std. Plumbing Code**

**Fuel Gas – Currently under 2002 Nat. Fuel Gas Code**



# PROCEDURES AND FEES

Forms –

- ▶ Building Permit, Zoning Permit, Marine Permit
  - ▶ Checklist
  - ▶ 4 Site Plans – to scale
  - ▶ Construction documents with detail
  - ▶ Critical Area Lot Coverage Computation Worksheet
  - ▶ WRC (Western Rural Conservation Zoning District Lot Coverage & Disturbance Calculation Worksheet
  - ▶ Disturbance Calculations Outside Critical Area
  - ▶ For Marine – Zoning Permit & MDE Permit, as applicable
- 



Application Number: \_\_\_\_\_  
**Talbot County Office of Permits and Inspections**  
 215 Bay Street, Suite 3  
 Easton, Maryland 21601  
 410-770-6840 Fax: 410-770-6843

**Building Permit/Zoning Certificate Application**  
 ITEMS IN Bold Type ARE REQUIRED INFORMATION

Type of Construction (Circle One): Residential Commercial Agricultural  
 Project Description: \_\_\_\_\_

FEES PAID:	Building Permit.....	\$	00
	Zoning Fee... (Required Fee).....	\$	35.00
	Floodplain Surcharge.....	\$	00
	Title Fees.....	\$	00
	Other.....	\$	00
<b>Total Fees Paid:</b>		<b>\$</b>	<b>00</b>

Please check one of the boxes below for primary contact to receive permit information.

**Property Owner:**

Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Contractor:**

Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 MHIC #: \_\_\_\_\_ MHBR #: \_\_\_\_\_ MDE #: \_\_\_\_\_

**Applicant:**

Name: \_\_\_\_\_  
 Mail Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Property Information:**

Zoning: \_\_\_\_\_ Acres: \_\_\_\_\_ Map: \_\_\_\_\_ Grid: \_\_\_\_\_ Parcel: \_\_\_\_\_ Lot: \_\_\_\_\_ Section: \_\_\_\_\_

Tax Identification Number: \_\_\_\_\_

Subdivision Name: \_\_\_\_\_

Location of Project (Physical/911 Address): \_\_\_\_\_

Road Frontage: \_\_\_\_\_ Longest Depth (front to rear): \_\_\_\_\_ Water Frontage (tidal): \_\_\_\_\_

Flood Zone (Circle All That Apply): X Shaded-X A AE\* V VE\* \*Coastal A  
 \*Existing Elevation Required \_\_\_\_\_

**Setbacks:**

Proposed: Front: \_\_\_\_\_ Side: \_\_\_\_\_ Side: \_\_\_\_\_ Rear: \_\_\_\_\_ MHW: \_\_\_\_\_

Required: Front: \_\_\_\_\_ Side: \_\_\_\_\_ Side: \_\_\_\_\_ Rear: \_\_\_\_\_ MHW: \_\_\_\_\_

Type of Construction: (Circle One) Site-built / Pre-engineered / Manufactured / Modular

**Dimensions**

Width (ft): \_\_\_\_\_ Length (ft): \_\_\_\_\_ Height (ft): \_\_\_\_\_ # of Stories: \_\_\_\_\_

Heated Area SF: \_\_\_\_\_ Plan Area SF (footprint): \_\_\_\_\_ Non-Heated Area SF: \_\_\_\_\_

Total number of bedrooms: \_\_\_\_\_ Total number of bathrooms: \_\_\_\_\_

**Sub-Contractor Information:**

Electrical Work Planned: Yes / No Contact MDIA - 410-822-8300

Contractor Name: \_\_\_\_\_ License No. \_\_\_\_\_

Plumbing Work Planned: Yes / No If YES, FEE: \$60.00 (Paid at Permit application)

Contractor Name: \_\_\_\_\_ License No. \_\_\_\_\_

Mechanical/HVAC Work Planned: Yes / No If YES, FEE: \$60.00 (Paid at Permit application)

Contractor Name: \_\_\_\_\_ License No. \_\_\_\_\_

Type of Heat: \_\_\_\_\_

Fuel Gas Permit: Yes / No If YES, FEE: \$60.00 (Paid at Permit application)

Contractor Name: \_\_\_\_\_ License No. \_\_\_\_\_

Fire Sprinklers to be installed?: Yes / No \*Required for NEW residential dwellings.

Sanitary Facilities (Please Circle) Water: On Site / Public Sewer: On Site / Public

Value of Construction: \$ \_\_\_\_\_

**Office Use Only:**

Approvals: Building Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

Health Department: \_\_\_\_\_ Date: \_\_\_\_\_

Planning Office: \_\_\_\_\_ Date: \_\_\_\_\_

Department of Public Works: \_\_\_\_\_ Date: \_\_\_\_\_

Comments/Special Conditions: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Applicant's Certification: By completing this application the applicant hereby certifies as follows, under penalty of perjury: (1) I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as their agent; (2) That the information in this application and construction documents provides full disclosure and a complete description of the project; and (3) That the information contained in the application and construction documents is in compliance with all applicable covenants and or deed restrictions.

If a permit is issued the applicant further certifies as follows; (1) That I will comply with all applicable codes of Talbot County and the State of Maryland; (2) That I will perform no work on the above property not specifically included in this application and construction documents; and, (3) That County Officials or Permits & Inspections/Applications permits/building permit.docx shall have authority to enter areas covered by such permit to enforce the codes applicable to such permit.

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name (Applicant): \_\_\_\_\_

Application taken by: \_\_\_\_\_ Date: \_\_\_\_\_

Entered in Manus by: \_\_\_\_\_ Date: \_\_\_\_\_



Check # \_\_\_\_\_

### APPLICATION COMPUTATION FORM

Talbot County Office of Permits and Inspections  
215 Bay Street, Suite 3 Easton, MD 21601 410-770-6840 FAX 410-770-6843

For Office Use Only

APPLICATION # \_\_\_\_\_

<b>Zoning Certificate Fee</b>		
Fixed Fee .....	\$35.00	\$35.00
<b>Building Permit Fee Computation</b>	<b>Fee</b>	<b>Computed Fee</b>
Value of Construction \$ _____		
Up to \$1,000	\$25.00	_____
\$1,001 up to \$5,000	\$40.00	_____
\$5,001 up to \$20,000 + \$50.00	\$4.00 per \$1,000	_____
\$20,001 and over + \$110.00	\$5.00 per \$1,000	_____
Amendment to Building Permit	\$40.00	_____
Plumbing Work	\$60.00	_____
HVAC Work	\$60.00	_____
Fuel Gas Work	\$60.00	_____
Flood Plain	\$35.00	_____
Forestry	\$25.00	_____
Guaranty Fund	\$50.00	_____
Re-Inspection Fee	\$40.00	_____
Other _____		_____
<b>2-YEAR Trades Registration</b>	<b>Fee</b>	<b>Computed Fee</b>
Master Plumber/Gas Fitter	\$125.00	_____
HVACR	\$125.00	_____
Fuel Gas	\$125.00	_____
Journeyman-Biennial	\$10.00	_____
<b>TOTAL FEE TO BE COLLECTED</b>		<b>\$ _____</b>

Applicant (Print Name & Sign) \_\_\_\_\_ Date: \_\_\_\_\_

Fee Computed By \_\_\_\_\_ Date: \_\_\_\_\_

Revised 6/9/15



# Revised Application Computation Form

# Revisions Amendments Change of Contractor

Forms to Fill Out Are Located on P&I Website



Talbot County  
 Office of Permits and Inspections  
 215 Bay Street, Suite 3  
 Easton, MD 21601

### CHANGE OF CONTRACTOR FORM

Select project type:

- HVAC Permit \_\_\_\_\_
- Plumbing Permit \_\_\_\_\_
- Fuel Gas Permit \_\_\_\_\_
- Building Permit \_\_\_\_\_
- Marine Permit \_\_\_\_\_
- Other (Zoning) Permit \_\_\_\_\_

I certify that I have been consulted in reference to Building/Zoning Permit Number: \_\_\_\_\_ dated \_\_\_\_\_ containing my signature. Please have me/my firm removed as contractor of this project. I concur with the request to have this permit transferred to another contractor.

Signature \_\_\_\_\_ License/Registration # \_\_\_\_\_ Date \_\_\_\_\_

\*\*\*\*\*

*New contractor of Record:*

I certify that I have been retained by and that I will abide by the previously approved plans and specifications submitted to the Talbot County Office of Permits and Inspections on the above referenced permit.

Signature \_\_\_\_\_ License/Registration # \_\_\_\_\_ Date \_\_\_\_\_

\*\*\*\*\*

**\*\* Please note that in addition to this form, the property owner is to acknowledge this contractor change in writing before work commences.**

# Change of Contractor Form >>

**SUBSTANTIAL IMPROVEMENT**

**CONSTRUCTION DOCUMENT  
REVIEW**

Grace Foringer

Larry Schuyler & Steve Thomas

# INSPECTIONS

Maria Brophy, Larry Schuyler,  
Steve Thomas

# The Inspection Request Line

410-770-6840 Extension 7037

Calls before 3:30 p.m. = Inspection the following day.

Listen to the message and respond after the beep.

More than 1 inspection may be requested on one call – but only for the same property.

Be sure you provide a contact number where we can reach someone if we are on site and have a question.

*Unless otherwise requested, all inspections are performed the next day.*

# Reviews by the Department of Planning and Zoning

Florence Ball  
Elisa DeFlaux



# Talbot County Planning and Zoning Critical Area and Buffer Management Plans

**August 2015**

**Elisa Deflaux, Environmental Planner**

**410-770-8034**

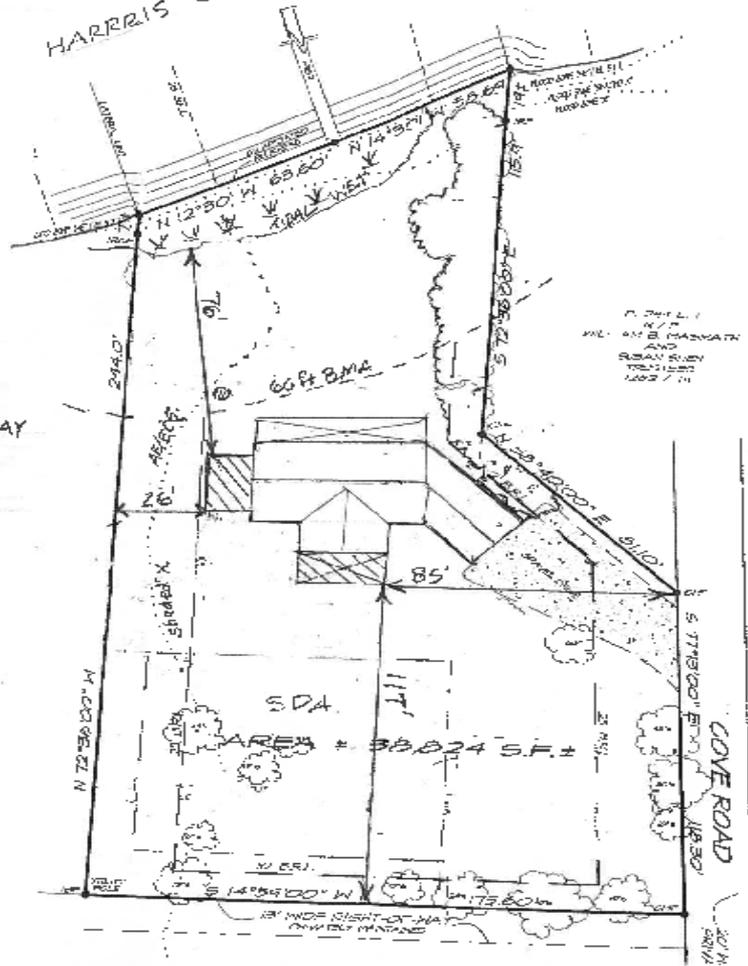




HARRIS CREEK

CORRECT WAY  
TO SHOW  
PROPOSED  
SETBACKS

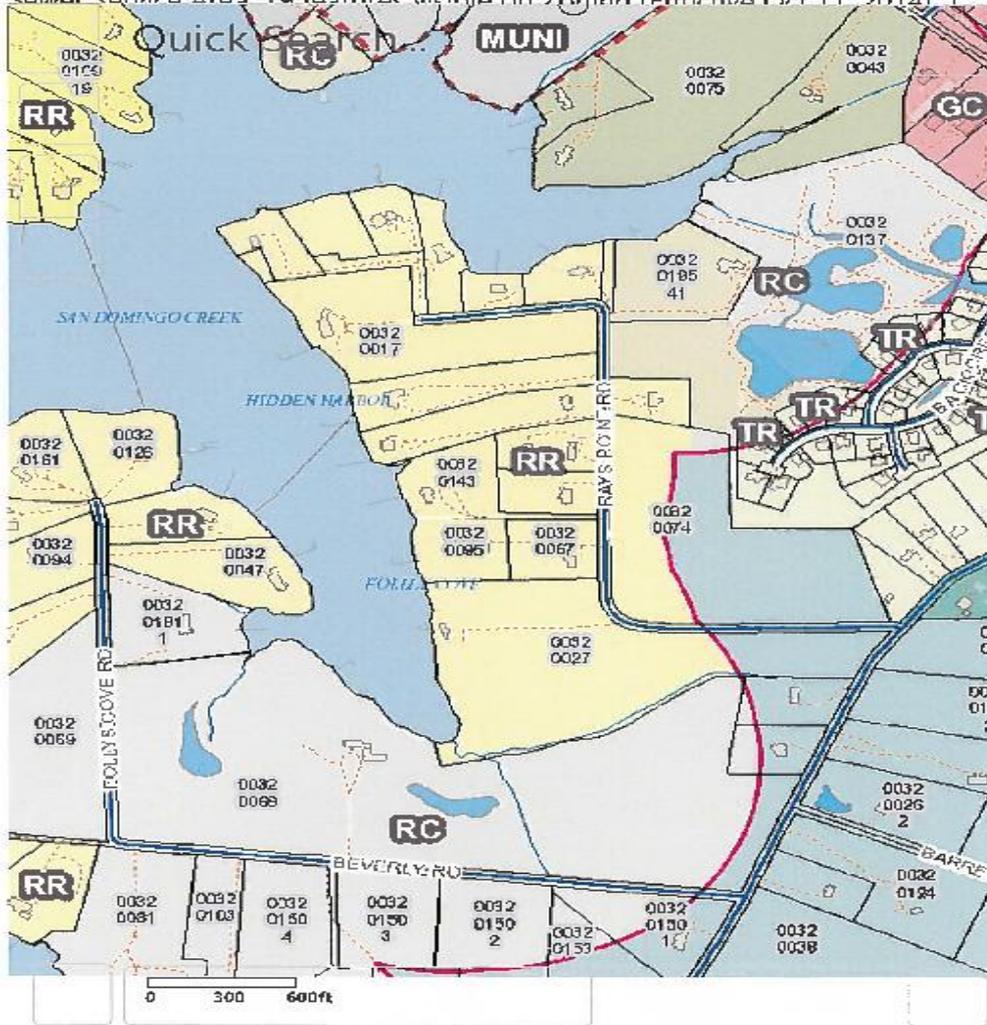
1" = 40'



COVE ROAD

20' W. DRIVE

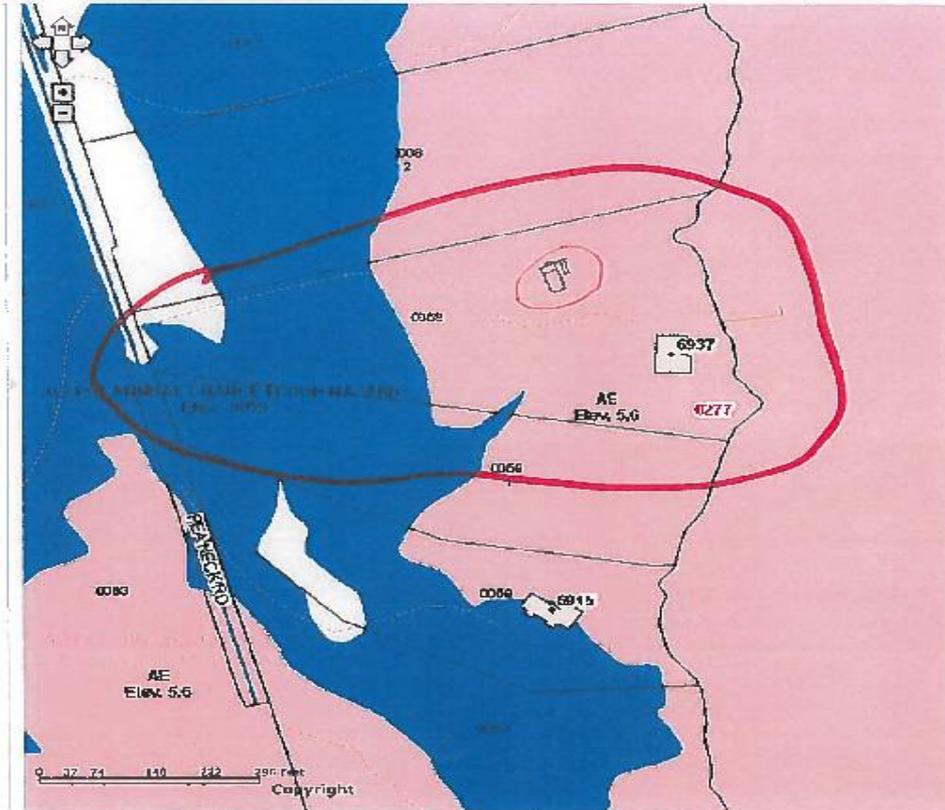
Map Changed. Center latitude: 38.7668° North, Center longitude: 76.2085° West. Visible Features: 382 features visible on Parcels, 2 features visible on Under Construction, 1 features visible on Zoning (Effective Oct 11, 2014), 1 features visible on Sewer Service Area.



### Talbot Development Review Web Map

FEMA Flood Plats SDAT Deeds

Print Search Address Locate Parcel Search Owner Search Tax Account ID Find Road

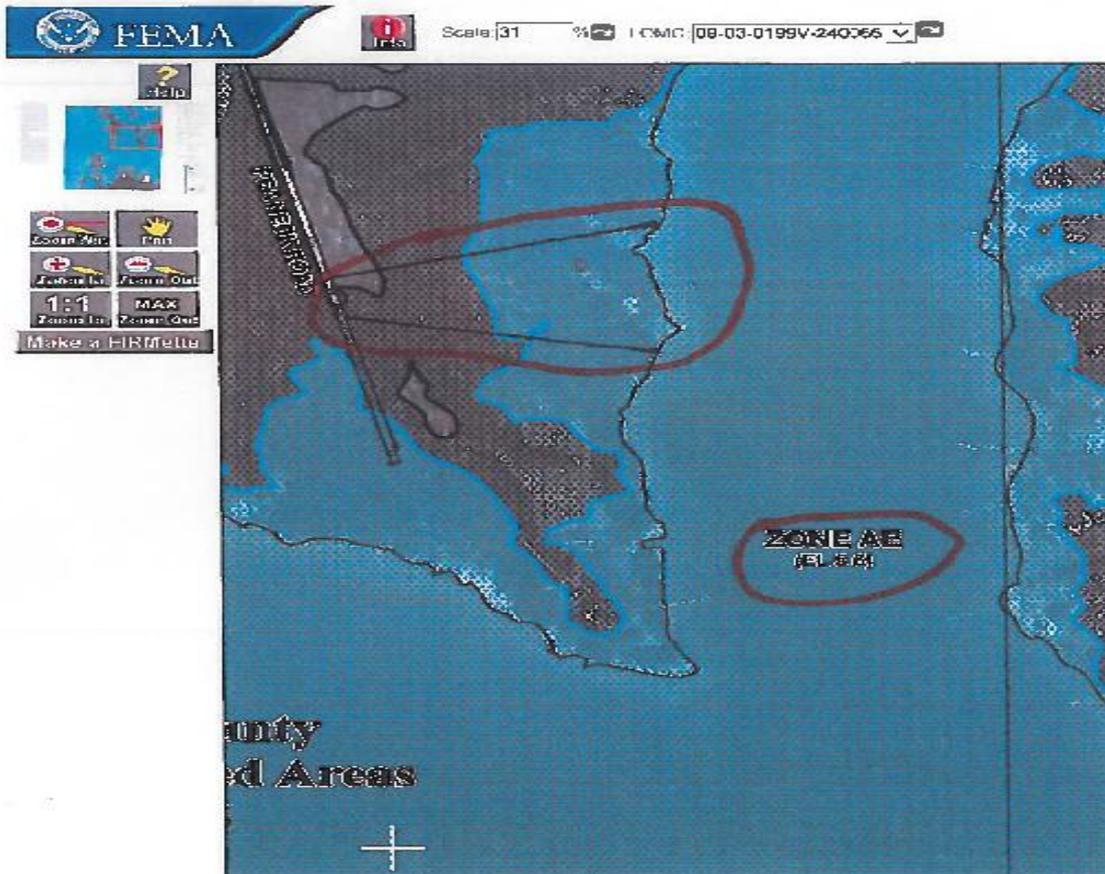


**DALE PERMIT 14-279: EXISTING GARAGE IS IN AE/EL 5.6**

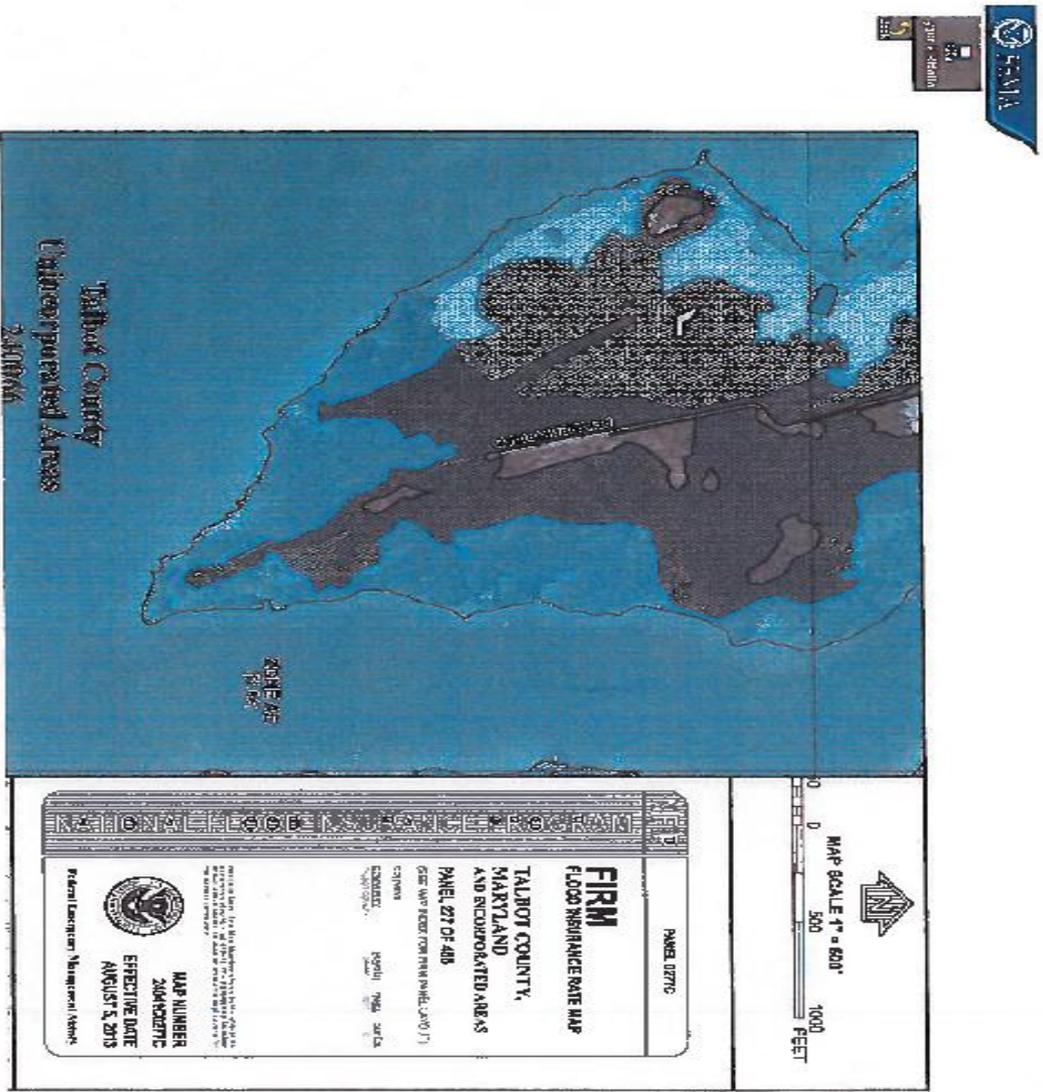
*This is the information as shown on the County GIS Resource Development Map overlaid with the official currently effective FEMA DFIRMS:*

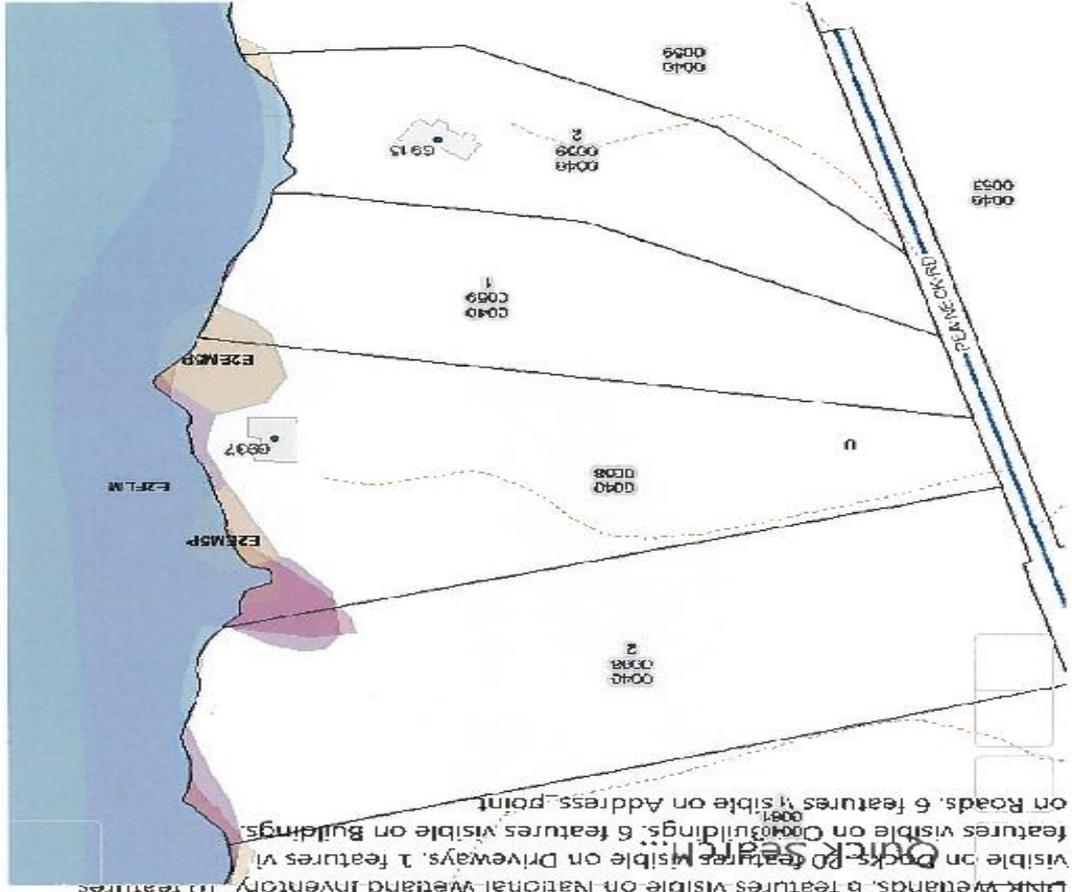
Flood Zone Info for: 6937 Pea Neck Rd, Tilghman MD, Tax Map 40, parcel 58

Flood Zones X, Shaded X & AE/EL 5.6 Per FEMA Panel 24041C0277C effective 08/05/2013



**DALE PERMIT 14-279: EXISTING GARAGE IS IN AE/EL 5.6**  
*This is the information as shown on the official currently effective FEMA DFIRMS:*  
Flood Zone info for: 6937 Pea Neck Rd, Tilghman MD, Tax Map 40, parcel 58  
Flood Zones X, Shaded X & AE/EL 5.5 Per FEMA Panel 24041C0277C effective 08/05/2013



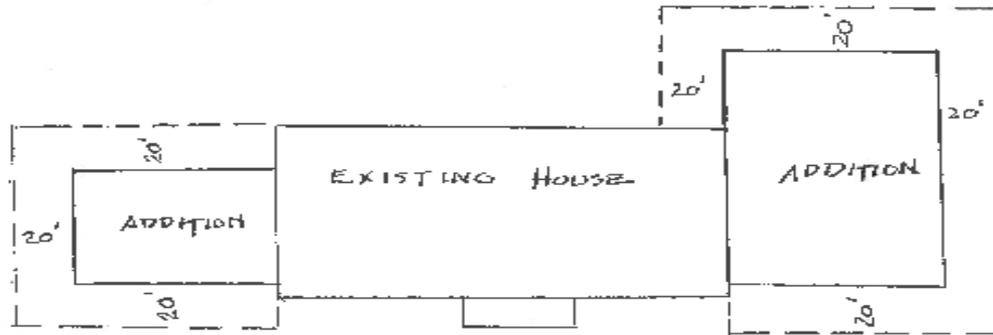




Map changed. Center latitude: 38.7486 - North center longitude: 76.1967.  
Visible Features: 10 features visible on Parcels, 9 features visible on Blocks,  
Under Construction: 10 features visible on Driveways, 4 features visible on Out Buildings, 5 features  
10 features visible on Driveways, 4 features visible on Out Buildings, 5 features

### Computing Disturbance on Additions:

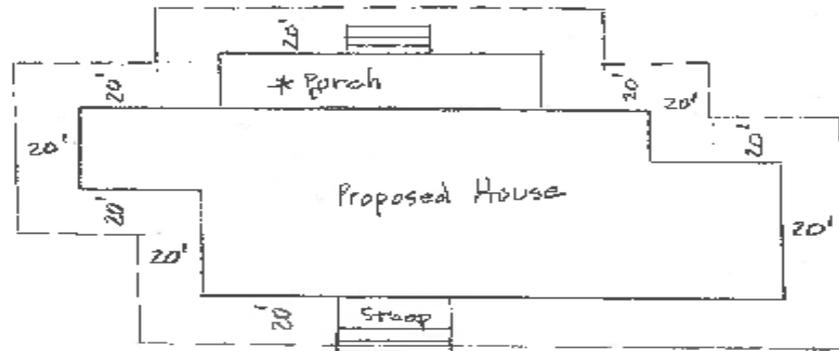
Add 20 feet to each side except any side that is connected to the existing structure and multiply :



### Computing Disturbance for New Structures:

Add 20 feet to each side of structure and to each end and multiply the sums of length x width:

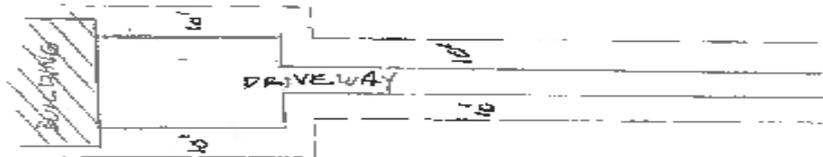
$$(\text{width of structure} + 40 \text{ ft}) \times (\text{length of structure} - 40 \text{ ft}) = \text{Disturbance}$$



### Computing Disturbance for driveways, sidewalks, concrete slabs:

Driveways and sidewalks:

Width plus 10 feet on each side multiplied by length =  $\text{Width} + 20 \text{ ft} \times \text{Length} = \text{Disturbance}$



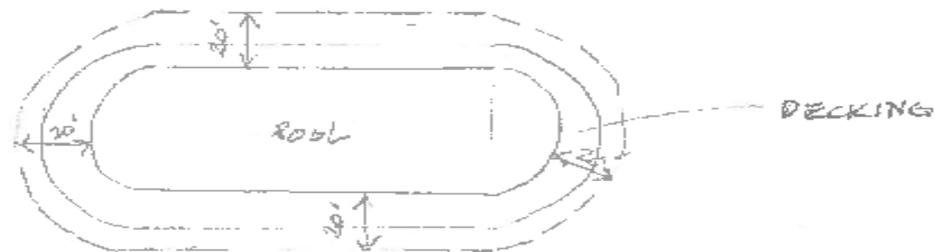
Concrete slabs, patios, etc:

Add 10 feet to each side that is not attached to a building or existing structure.

### Computing Disturbance for Inground swimming Pools:

Add 20 feet to each side of the width and length of the pool itself. Do not include any decking in the calculation.

$(\text{pool width} + 40 \text{ feet}) \times (\text{pool length} + 40 \text{ feet}) = \text{Disturbance}$



**Comparative Number of Building Permit Applications Submitted  
2006 through 2015**

YEAR	January-June	July - December	Count for Entire Year	% increased over prior year	% decreased from prior year
2006	599	451	1,050		
2007	507	460	967		7.9%
2008	486	411	900		6.9%
2009	302	348	650		27.7%
2010	327	331	658	1.2%	
2011	293	287	580		11.8%
2012	307	281	588	1.3%	
2013	335	307	642	8.4%	
2014	263	299	562		12.5%
2015*	251				

\* Count of permit applications submitted to date through 30 June 2015

**Building Permit Applications for New Homes Submitted 2008 through 2015**

YEAR	New Development	Replacement Homes
2008	34	36
2009	22	11
2010	17	15
2011	16	6
2012	17	18
2013	7	9
2014	16	12
2015	11*	4*

\*Count to date as of 30 June 2015.

# Talbot County Planning and Zoning

- Land Use, Subdivision, and Site Plan Decisions  
Planning Commission  
Planning Officer
- Zoning Matters, such as Special Exception,  
Variances and Appeals  
Board of Appeals
- Administration of Zoning Map, Zoning Rules,  
Regulations, Critical Area Regulations  
Staff



# Talbot County Critical Area

- Talbot County adopted the Local program in 1989.
- Critical Area-1000 feet from mean high water and tidal wetlands
- Talbot County has 600 miles of shoreline.

# All Waterfront Properties

- The new regulations regarding the Buffer that were passed in 2010 affect all waterfront property owners when a new development activity occurs.
- Properties are required to prepare a buffer management plan to improve buffer function by enhancing the habitat value and filtering run off .

# Critical Area Buffer



- Talbot County calls the Critical Area Buffer the Shoreline Development Buffer
- Most Shoreline Development Buffers are 100'
- Lots created after 2010 have Shoreline Development Buffer of 200'

# Permits are required to remove vegetation anywhere in the Critical Area

- Property Maintenance Permits
- Forest Preservation Plan
- Simplified Buffer Management Plans
- Minor Buffer Management Plans
- Major Buffer Management Plans



# All Waterfront Properties

- The new regulations regarding the Buffer that were passed in 2010 affect all waterfront property owners when a new development activity occurs.
- Properties are required to prepare a buffer management plan to improve buffer function by enhancing the habitat value and filtering run off .

# Buffer Management Plans

## Buffer Establishment

Generally,

- Additions, new accessory structures-based on new lot coverage
- Substantial Alteration-based entire lot coverage for the lot
- New Lots-full buffer establishment

# Sample application



Permit Number: 13-619

Talbot County Office of Planning and Permits  
215 Bay Street, Suite 2  
Easton, Maryland 21601  
410-770-8030

## Buffer Management Plan/Critical Area Forest Preservation Plan Application

Minor Buffer Management Plan  Major Buffer Management Plan:

Please follow instructions in the Talbot County Buffer Management Plan Guidelines and Plant List, located on our website: [www.talbotcountymd.gov](http://www.talbotcountymd.gov)

Property Owner(s): Linda & Richard Zecher mail: \_\_\_\_\_

Address of Owner: P.O. Box 61, Keswick, VA 22947

Project Address if different from above: 7508 Cooper Point Rd.,  
Bozman, MD 21612

If the property has not been assigned a 9-1-1 address, list the street name from which access to the property is gained.

Telephone Number: 443-838-6299 Cell Number: \_\_\_\_\_

Tax Map: 0031 Grid: 0022 Parcel: 0078 Lot: \_\_\_\_\_ Size: \_\_\_\_\_ Zone: \_\_\_\_\_

Building Permit Number: \_\_\_\_\_

Property Owner(s) Signature: \_\_\_\_\_

Contractor/Agent Signature: \_\_\_\_\_

### Office Use Only:

Inspections as provided below:

Inventory: \_\_\_\_\_ Date: \_\_\_\_\_

Planting: by Dec 1, 2014 Date: \_\_\_\_\_

Survival: \_\_\_\_\_ Date: \_\_\_\_\_ Rate: \_\_\_\_\_

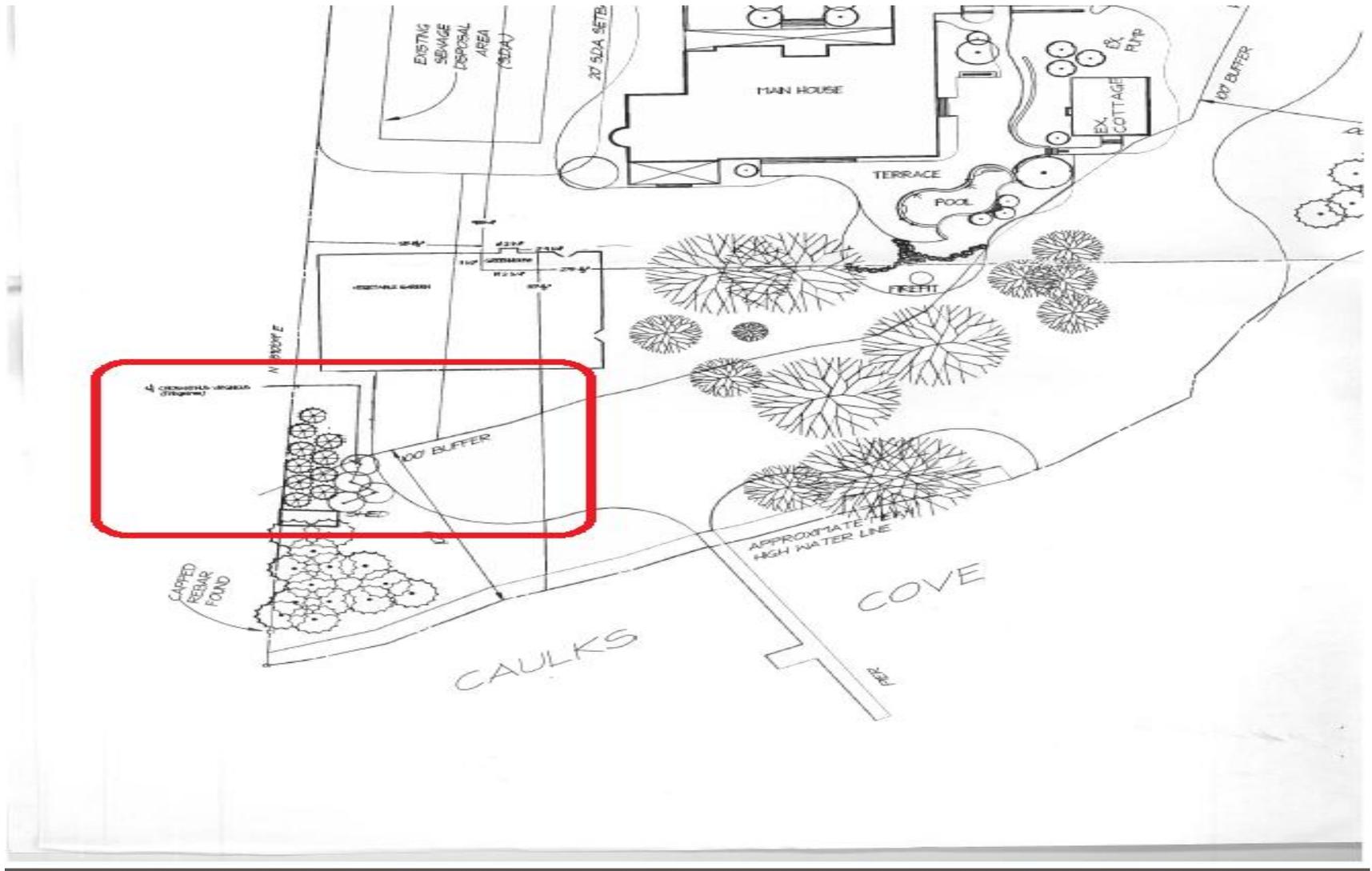
Fee: \_\_\_\_\_ Date: \_\_\_\_\_

Surety: \_\_\_\_\_ Date: \_\_\_\_\_



MAR 27 2014

# Sample Drawing



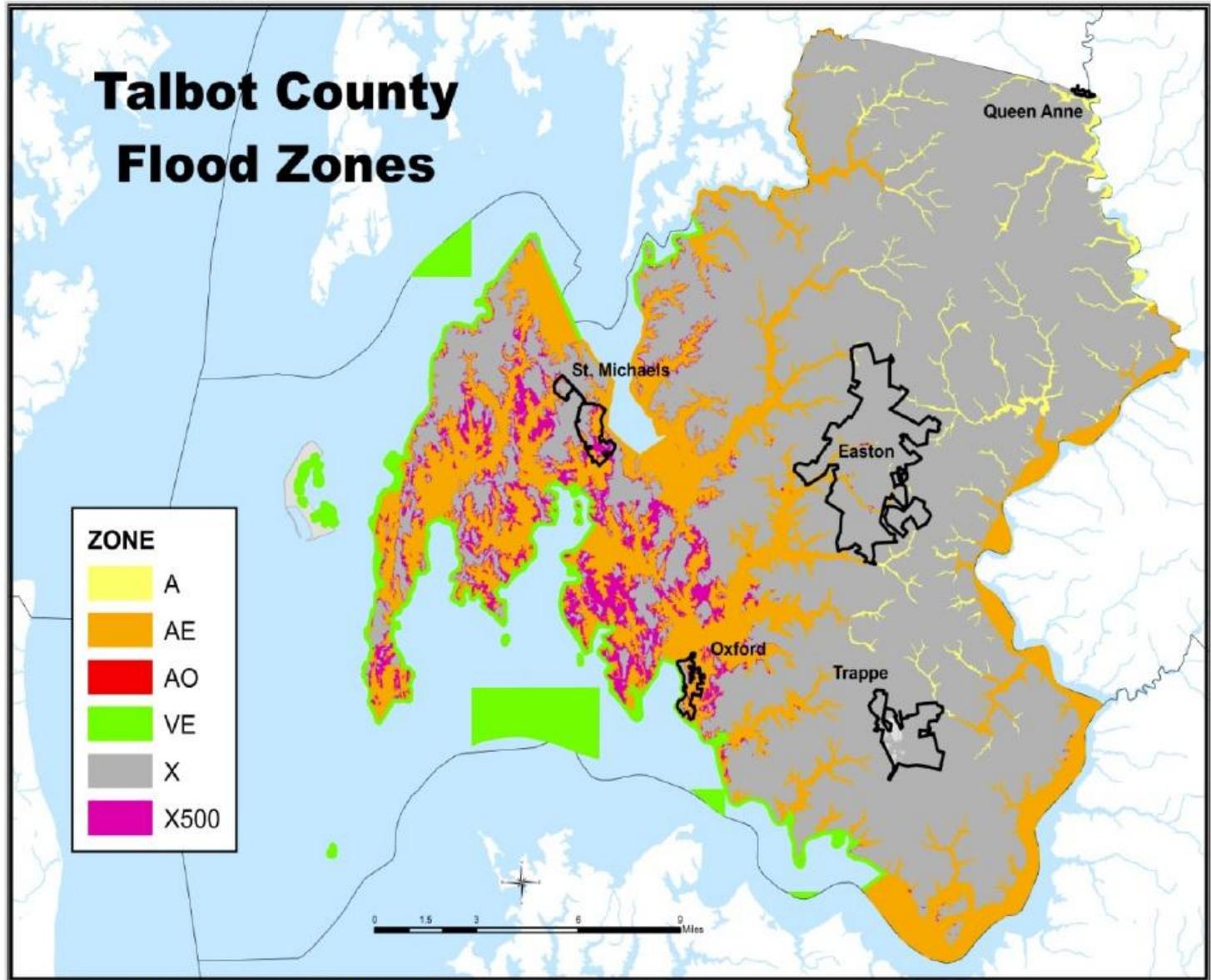


# Talbot County Flood Management Program

What's going on and how does it affect my work?

**FACT:** In 2010 it was estimated that a total of 5,407 structures were located in the 100 year floodplain which is 32% of the total number of structures in Talbot County (Source: Talbot Co. 2010 Hazard Mitigation Plan).

Map 3 – Flood Zones



Source: 2010 Talbot County Hazard Mitigation Plan

# Special Flood Hazard Area

Flood Recurrence Intervals	Chance of Occurrence in any given year
10-year	10%
50-year	2%
100-year (BASE FLOOD=SFHA)	1%
500-year	0.2%

High Risk Zones: A, AE, AO

Moderate to Low Risk: X, Shaded X (.2%)

In Talbot County we have additional high risk zones: VE Zones and Coastal A Zones (CAZ)=high velocity waves.

**FACT:** Since 1965, Talbot County has experienced 26 Flash Flood events

# Chapter 70 Floodplain Management–Adopted in 2013

## Key provisions:

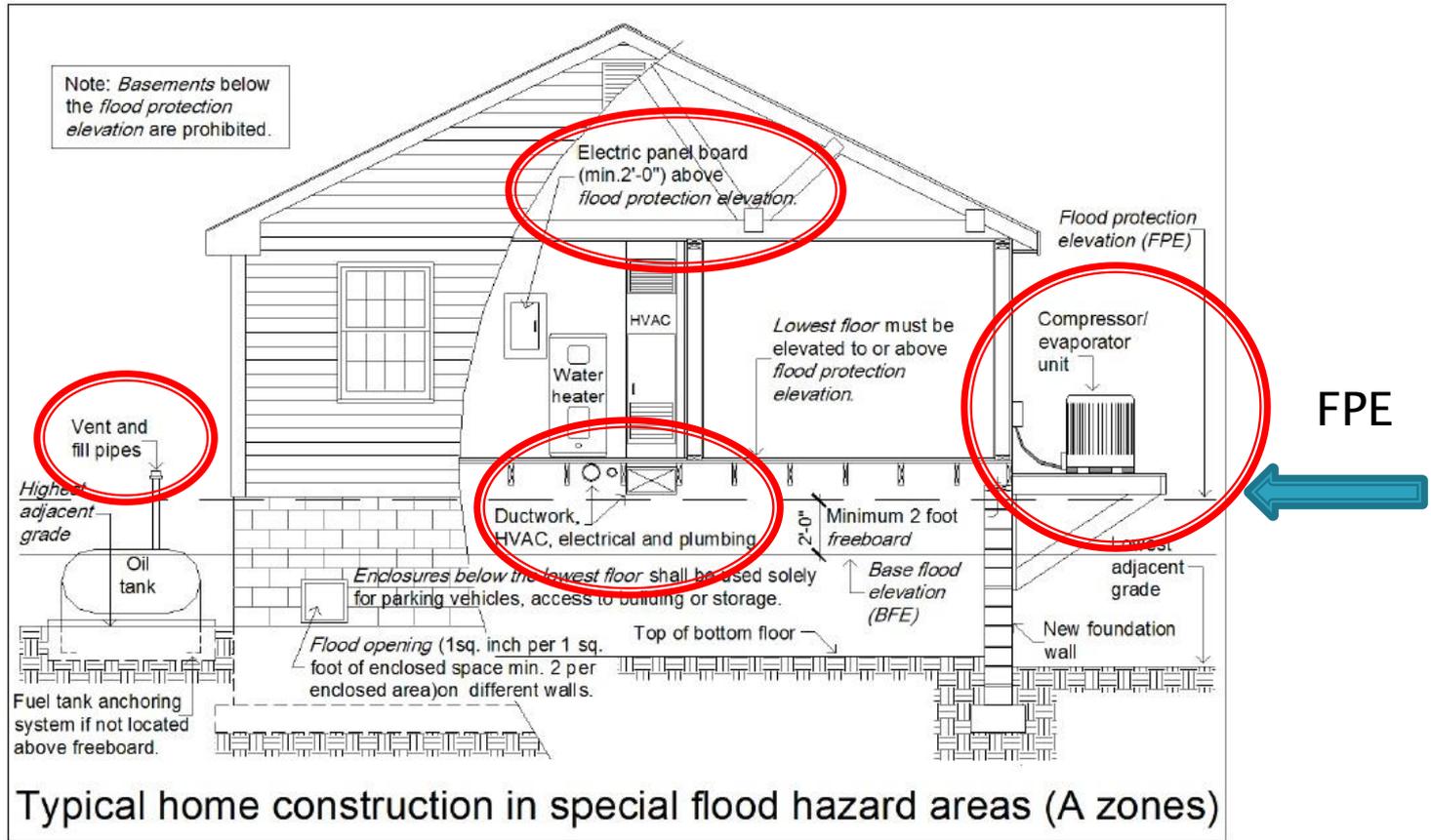
- ▶ 70–14 B. Development may not occur in a SFHA where alternative locations exist. Before a Building Permit is issued, the applicant shall demonstrate that new structures cannot be located out of the floodplain and that encroachments onto the floodplain are minimized.
- ▶ 70–28 New residential structures and residential portions of mixed use structures, and substantial improvements of existing residential structures and residential portions of mixed use structures shall comply with floodplain regulations.

**This means 2 ft. freeboard!**
- ▶ 70–30 Any lateral addition proposed for a structure that was constructed after May 15, 1985 shall comply with the floodplain regulations.
- ▶ 70–30D For lateral additions with independent foundations that area not structurally connected to the base building and the common wall with the base building is modified by one doorway per story, with a width not exceeding 36 inches, the base building is not required to be brought into compliance.

FLOODPLAIN MANAGEMENT

70 Attachment 1

Talbot County



# How do we prove it has been built to the correct elevation or is flood protected? Why does it matter?

- ▶ **Elevation Certificates (EC)** must be provided to certify that the structure has been built to required elevations.
  - ▶ If EC's are used, must be prepared and signed by a registered engineer or surveyor.
  - ▶ Insurance reasons and our local responsibilities to manage floodplain development.
- 

# Elevation Certificates

U.S. DEPARTMENT OF HOMELAND SECURITY  
FEDERAL EMERGENCY MANAGEMENT AGENCY  
National Flood Insurance Program

## ELEVATION CERTIFICATE

OMB No. 1660-0008  
Expiration Date: July 31, 2015

Important: Read the instructions on pages 1-9.

SECTION A - PROPERTY INFORMATION		FOR INSURANCE COMPANY USE
A1. Building Owner's Name L. COURTLAND LEE		Policy Number:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 23528 SCOTT'S LANE		Company NAIC Number:
City ST. MICHAELS	State MD	ZIP Code 21663

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)  
TAX MAP 31 GRID 5 PARCEL 3

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL  
 A5. Latitude/Longitude: Lat. 38.47097N Long. 76.15414W Horizontal Datum:  NAD 1927  NAD 1983  
 A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.  
 A7. Building Diagram Number 9  
 A8. For a building with a crawlspace or enclosure(s):  
 a) Square footage of crawlspace or enclosure(s) 2012 sq ft  
 b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 10  
 c) Total net area of flood openings in A8.b 2000 sq in  
 d) Engineered flood openings?  Yes  No  
 A9. For a building with an attached garage:  
 a) Square footage of attached garage NA sq ft  
 b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 0  
 c) Total net area of flood openings in A9.b 0 sq in  
 d) Engineered flood openings?  Yes  No

### SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number TALBOT 240056	B2. County Name TALBOT	B3. State MARYLAND
B4. Map/Panel Number 24041C0142C	B5. Suffix C	B6. FIRM Index Date 8-5-2013
B7. FIRM Panel Effective/Revised Date 8-5-2013	B8. Flood Zone(s) AC	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 5.7

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in item B9.  
 FIS Profile  FIRM  Community Determined  Other/Source: \_\_\_\_\_  
 B11. Indicate elevation datum used for BFE in item B9:  NGVD 1929  NAVD 1988  Other/Source: \_\_\_\_\_  
 B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?  
 Designation Date: \_\_\_\_\_  CBRS  OPA  Yes  No

### SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on:  Construction Drawings\*  Building Under Construction\*  Finished Construction  
 \*A new Elevation Certificate will be required when construction of the building is complete.  
 C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/VA, AR/VAO. Complete Items C2-a-h below according to the building diagram specified in item A7. In Puerto Rico only, enter meters.  
 Benchmark Utilized: BM3 Vertical Datum: NAVD88  
 Indicate elevation datum used for the elevations in items a) through h) below.  NGVD 1929  NAVD 1988  Other/Source: \_\_\_\_\_  
 Datum used for building elevations must be the same as that used for the BFE.

- Check the measurement used.
- |  |            |  |
|--|------------|--|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor)  | <u>4.0</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| b) Top of the next higher floor  | <u>7.8</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (V Zones only)  | <u>NA</u>  | <input type="checkbox"/> feet <input type="checkbox"/> meters            |
| d) Attached garage (top of slab)   | <u>NA</u>  | <input type="checkbox"/> feet <input type="checkbox"/> meters            |
| e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) | <u>7.8</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| f) Lowest adjacent (finished) grade next to building (LAG)   | <u>5.0</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| g) Highest adjacent (finished) grade next to building (HAG)  | <u>5.7</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support                               | <u>5.2</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |

### SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.  
 Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor?  Yes  No  
 Check here if attachments.  
 Certifier's Name CHRISTOPHER WATERS License Number 11052  
 Title LAND SURVEYOR Company Name WATERS LAND SURVEYING  
 Address 29515 SKIPTON CORDOVA RD. City CORDOVA State MD ZIP Code 21625  
 Signature [Signature] Date 11/17/14 Telephone 410-819-3363



### ELEVATION CERTIFICATE, page 2

<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>	FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 23528 SCOTT'S LANE	Policy Number:
City ST. MICHAELS State MD ZIP Code 21663	Company NAIC Number:

### SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments C2e, IS BASED ON A.C. UNIT 10 SMART VENTS IN FOUNDATION

[Signature] 11/17/14  
Signature Date

### SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.  
 E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).  
 a) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_ feet  meters  above or  below the HAG.  
 b) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_ feet  meters  above or  below the LAG.  
 E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A items 8 and/or 9 (see pages 8-9 of Instructions), the next higher floor elevation (C2.b) in the diagrams of the building is \_\_\_\_\_ feet  meters  above or  below the HAG.  
 E3. Attached garage (top of slab) is \_\_\_\_\_ feet  meters  above or  below the HAG.  
 E4. Top of platform of machinery and/or equipment servicing the building is \_\_\_\_\_ feet  meters  above or  below the HAG.  
 E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance?  Yes  No  Unknown. The local official must certify this information in Section G.

### SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.  
 Property Owner's or Owner's Authorized Representative's Name \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP Code \_\_\_\_\_  
 Signature \_\_\_\_\_ Date \_\_\_\_\_ Telephone \_\_\_\_\_  
 Comments \_\_\_\_\_  
 Check here if attachments.

### SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in items G8-G10. In Puerto Rico only, enter meters.  
 G1.  The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)  
 G2.  A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.  
 G3.  The following information (Items G4-G10) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy issued
G7. This permit has been issued for: <input type="checkbox"/> New Construction <input type="checkbox"/> Substantial Improvement		
G8. Elevation of as-built lowest floor (including basement) of the building: _____ feet <input type="checkbox"/> meters	Datum _____	
G9. BFE or (in Zone AO) depth of flooding at the building site: _____ feet <input type="checkbox"/> meters	Datum _____	
G10. Community's design flood elevation: _____ feet <input type="checkbox"/> meters	Datum _____	
Local Official's Name _____	Title _____	
Community Name _____	Telephone _____	
Signature _____	Date _____	
Comments _____		

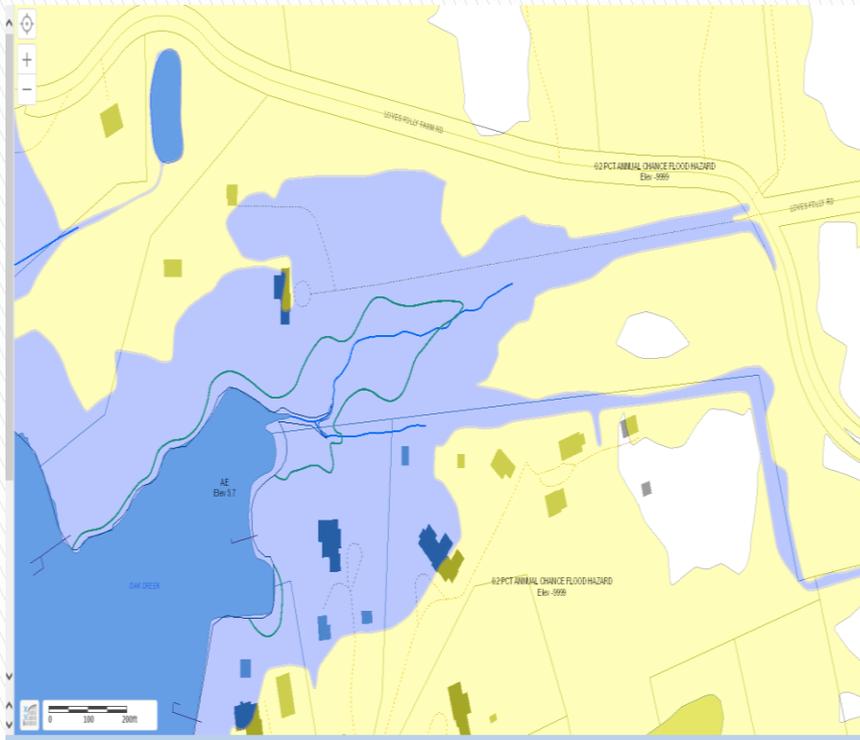
Check here if attachments.

# To change the flood hazard designation for properties in a SFHA area

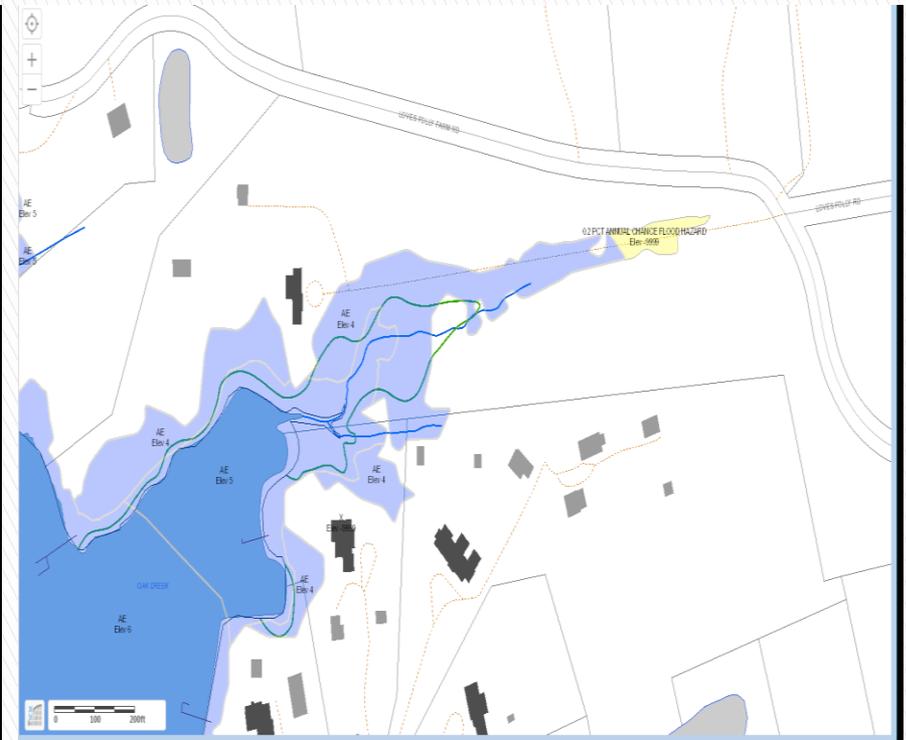
- ▶ LOMA (Letter of Map Amendment) process for properties on naturally high ground;
- ▶ CLOMR-F (Conditional Letter required before final letter issued)
- ▶ LOMR-F (Letter of Map Revision based on Fill) process for properties elevated by the placement of fill.

LOMAs and LOMR-Fs are letter determinations that officially amend an effective FIRM. They can establish that a property is not in an SFHA and by doing so, remove the federal flood insurance requirement. Only applies to defined project area.

# Changes between Effective and Preliminary FIRMS



Effective August 2015



Proposed Effective Spring 2016

# 90 day appeal period

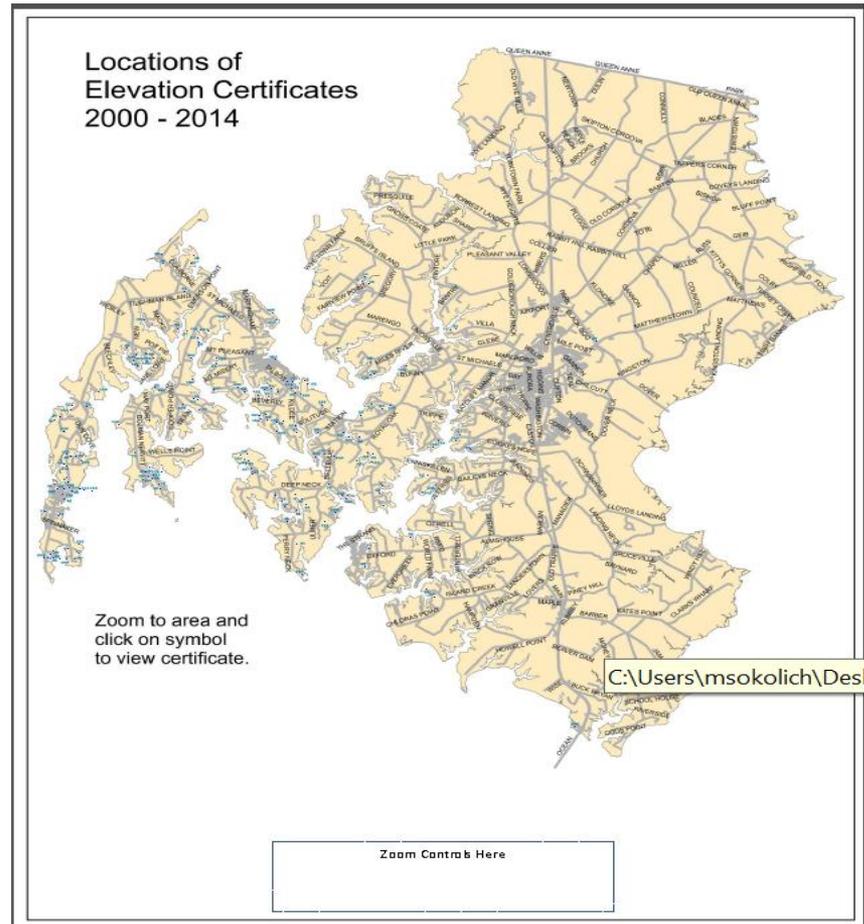
- ▶ Appeal requests due to P&Z October 2, 2015 on form provided by our office
  - ▶ FEMA will review and make a decision related to appeals
  - ▶ FEMA will issue a Letter of Final Determination
  - ▶ County will have 6 months to adopt FIRMs.
- 

# We are now a CRS 8 Community!

## What did we do to deserve this?

- ❑ 2 ft. freeboard
  - ❑ Elevating electric panelboards 4 ft. above BFE
  - ❑ Limiting fill in CAZ and VE zones
  - ❑ Not allowing manufactured homes in CAZ and VE zones
  - ❑ Limiting recreational vehicles in the floodplain to only 7 days
  - ❑ Public Outreach
  - ❑ Information distribution
- 

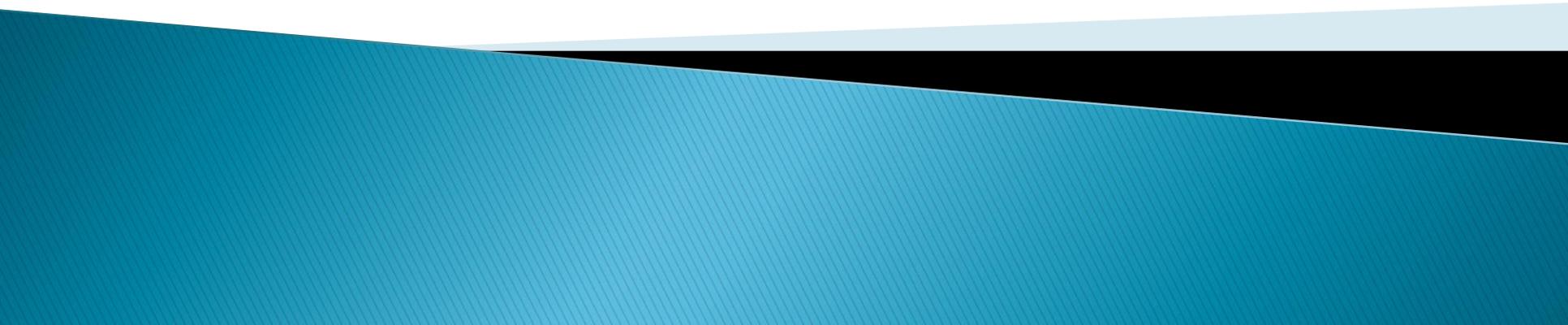
# Elevation Certificates are now on the Talbot County website! [www.talbotcountymd.gov](http://www.talbotcountymd.gov)

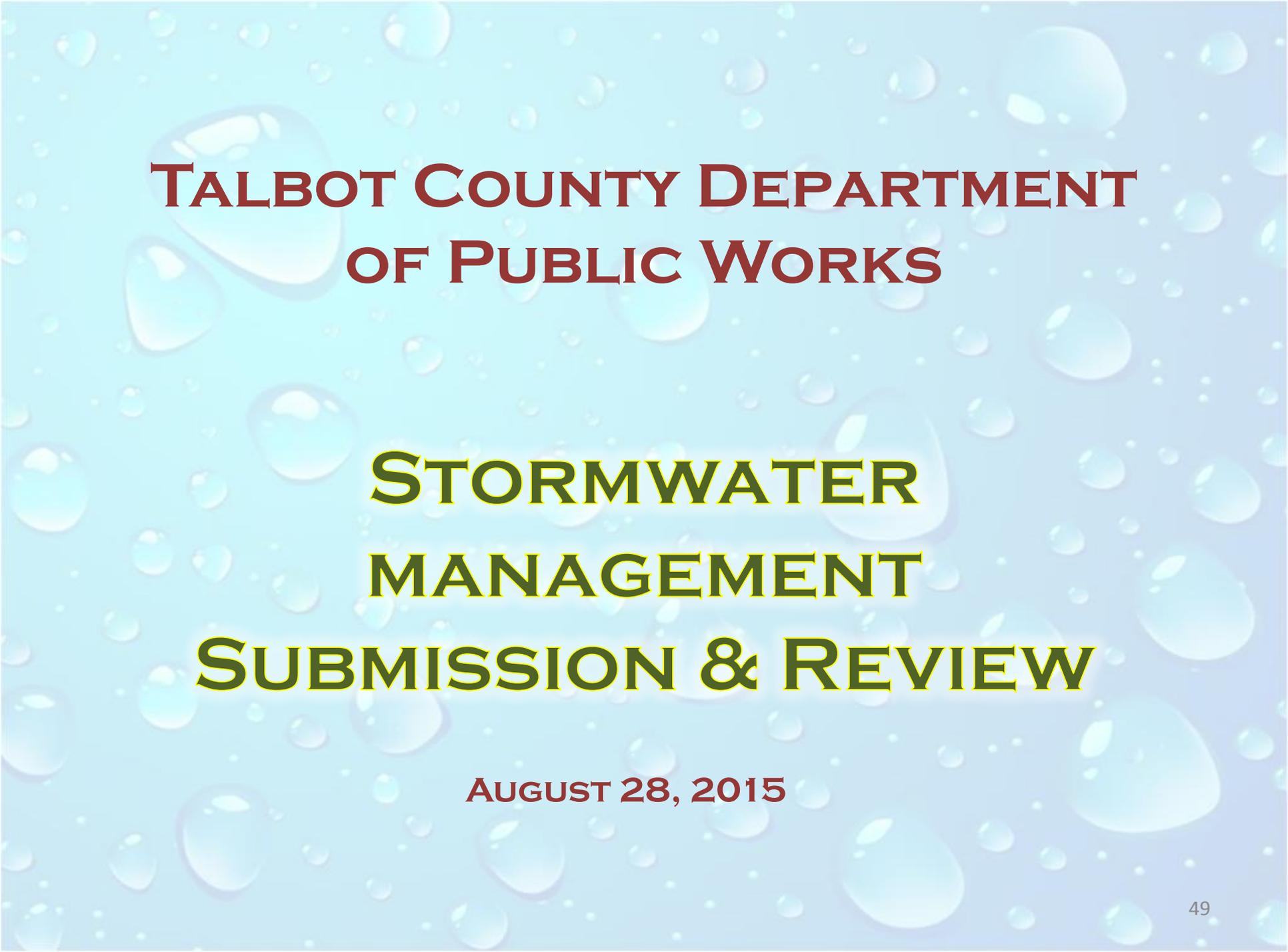


# Stormwater Management Submission & Review

## Public Works Agreements

Mike Mertaugh





**TALBOT COUNTY DEPARTMENT  
OF PUBLIC WORKS**

**STORMWATER  
MANAGEMENT  
SUBMISSION & REVIEW**

**AUGUST 28, 2015**

**TALBOT COUNTY DEPT. OF PUBLIC WORKS**  
**PHONE No.: 410-770-8170**

**Stormwater Management Program**

- 💧 **Ray Clarke – County Engineer**
- 💧 **Mike Mertaugh – Assistant County Engineer  
Subdivision & Commercial Development  
stormwater management review and back up for  
single family home development.**
- 💧 **Austin Eckert – Engineer  
Most stormwater management reviews for  
single family home development.**

# “DISCLAIMER”

- 💧 This presentation is a brief overview of the County stormwater management program.
- 💧 It is primarily focused on “typical” residential development of existing lots in the County.
- 💧 The requirements are a bit more involved for complex projects.



**Typical**



**“Not so much”**

# STORMWATER MANAGEMENT CODE

- ◆ The current County Stormwater Management Code was adopted in 2010.
- ◆ This Code is based on State mandated regulations established by the Stormwater Management Act of 2007.
- ◆ These regulations emphasize Environmental Site Design to the Maximum Extent Practicable (ESD to the MEP), which is focused on water quality.

# STORMWATER MANAGEMENT THRESHOLD

- Stormwater management must be addressed for land disturbances of 5,000 square feet or greater (similar to the erosion & sediment control requirements).
- Depending on the circumstances of each development site, addressing stormwater management does not necessarily mean that additional improvements for stormwater management are required (particularly for conventional residential development).

# STORMWATER MANAGEMENT OBJECTIVES

- There are two main elements of stormwater management review and approval.
- Water Quality – Controlling pollutants & sediment in the runoff.
- Water Quantity – Controlling the volume of runoff leaving the project site.
- For most residential developments, the focus of water quantity is avoidance of adverse drainage conditions on adjoining properties.

# TYPICAL RESIDENTIAL DEVELOPMENT

- ◆ **For most homes, stormwater management can be addressed with roof top and non-rooftop disconnection.**
- ◆ Large houses and/or complex sites may necessitate “structural” stormwater management measures, such as rain gardens, bioretention, constructed wetlands, etc.

# STORMWATER DEFINITION

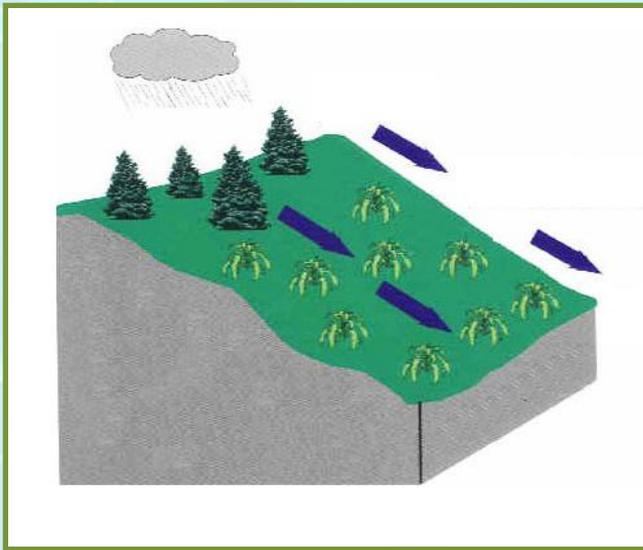
- **Disconnection** is essentially converting drainage point discharges, such as from a pipe or downspout, to sheet flow over vegetated ground cover.



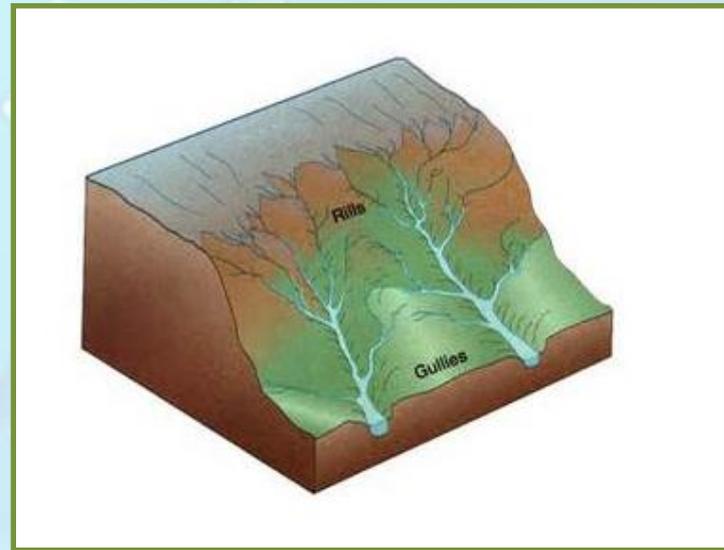
*“DISCONNECTION FROM A DRAINAGE SYSTEM”*

# STORMWATER DEFINITION

- ◆ **Sheetflow:** Water flowing in a thin layer or sheet, spread over a width of level grade.



YES



NO

# STORMWATER DEFINITION

- 💧 **Impervious Cover**: Surfaces that cannot infiltrate rainfall such as, building roofs, pavement, driveways, sidewalks, etc.

This includes gravel and even vegetated or bare earth areas if they are subject to vehicle traffic (cars, trucks, etc.).



# ROOFTOP DISCONNECTION

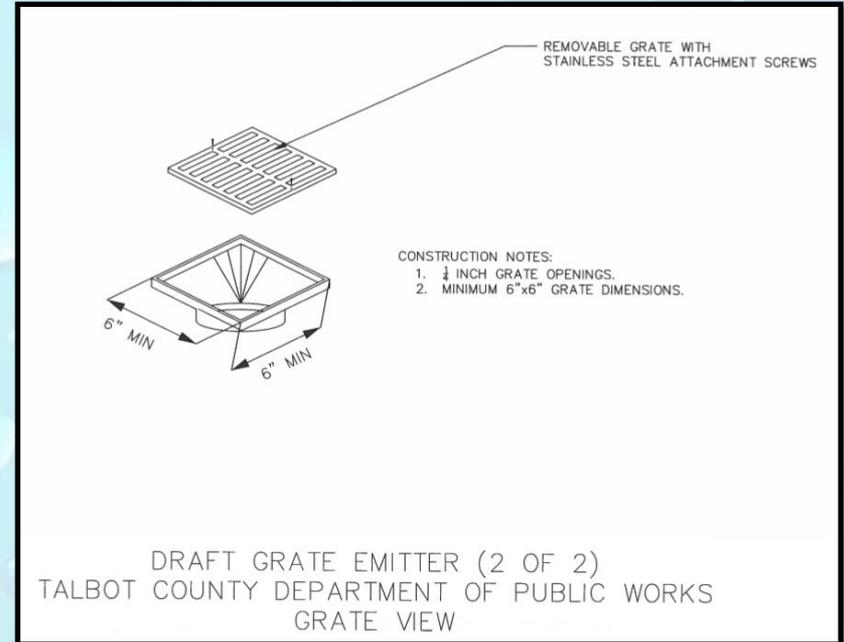
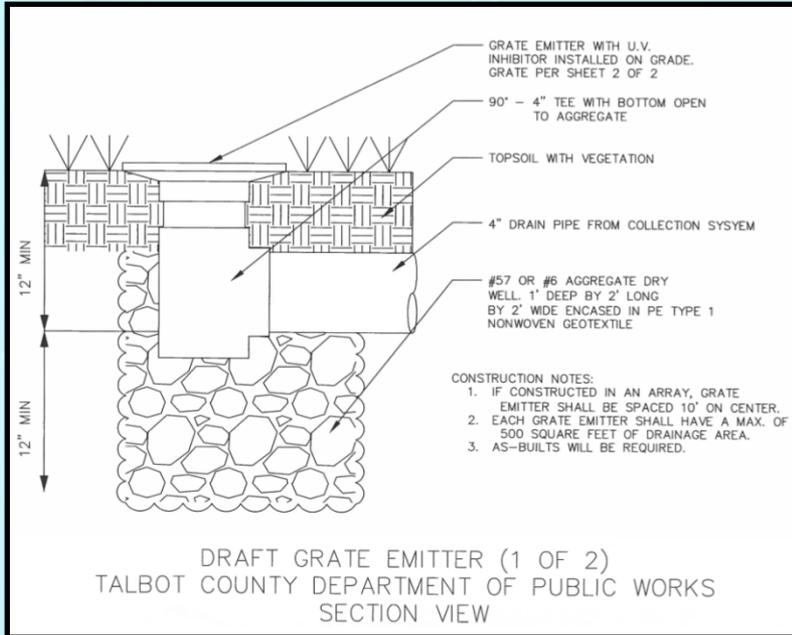
- ◆ Not more than 500 square feet of roof area to a single downspout.
- ◆ At least 75 feet of overland flow from downspout discharge to edge of site.
- ◆ The overland flow length must be vegetated.
- ◆ The overland flow length must be at a grade of 5% or less.

# ROOFTOP DISCONNECTION CONCERNS

- Down spout locations should not be within 10 feet of driveways or other paved surfaces to ensure the runoff does not flow along (on) the impervious cover.
- Down spouts should not discharge to a ditch or pipe without sufficient overland flow.

Both of the above circumstances can likely be resolved with a “grate emitter” system. This is essentially a 4 or 6 inch pipe from a downspout, terminated with a small grate structure at a location where the necessary sheet flow can be achieved.

# GRATE EMITTER SYSTEM



# NON-ROOFTOP DISCONNECTION

- Commonly used for driveways and smaller parking lots (1,000 square feet or less and no wider than 75 feet).
- **Runoff must be conveyed as sheet flow from the impermeable surface onto and across permeable area.**
- The overland flow length equals the length of contributing impervious cover, or 10 feet, whichever is greater.
- **The overland flow area must be vegetated.**
- The overland flow area must be at a grade of 5% or less.

# ALTERNATIVE SOLUTIONS

If a proposed project does not or cannot meet the standards of rooftop and non-rooftop disconnection...

**Come see us.** There are alternative techniques that may be possible to avoid “structural” stormwater management facilities such as the use of,

Flat bottom swales

Grate emitter arrays

Level spreaders

If we can avoid the use of “structural” stormwater management facilities we will, but in the end, the stormwater management requirements must be met.

# SITE PLAN

## Necessary Information

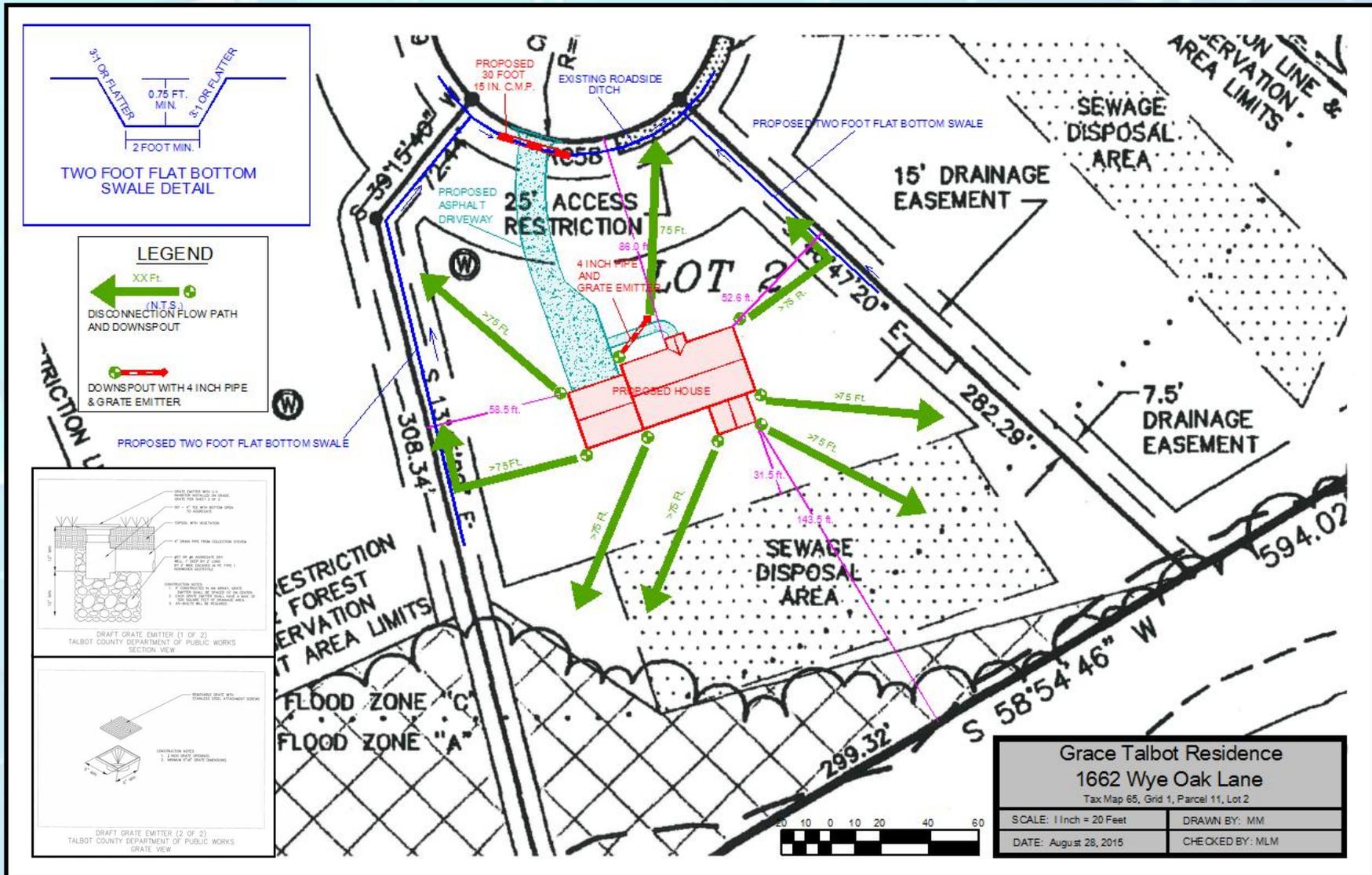
- ◆ Drawn to scale.
- ◆ Improvements (existing and proposed).
- ◆ Drainage ways and other natural features.
- ◆ Topography if significant grading is proposed or significant on site elevation changes exist.
- ◆ Dimensions & setbacks from property lines.

# SITE PLAN (CONTINUED)

## Necessary Information (Continued)

- ◆ Downspout locations.
- ◆ Downspout flow paths (direction & length).
- ◆ Other proposed drainage improvements such as culverts, swales, significant grading, etc.
- ◆ Details of proposed drainage features, such as, swale cross sections, grate emitters or “structural” stormwater management facilities.

# SITE PLAN EXAMPLE

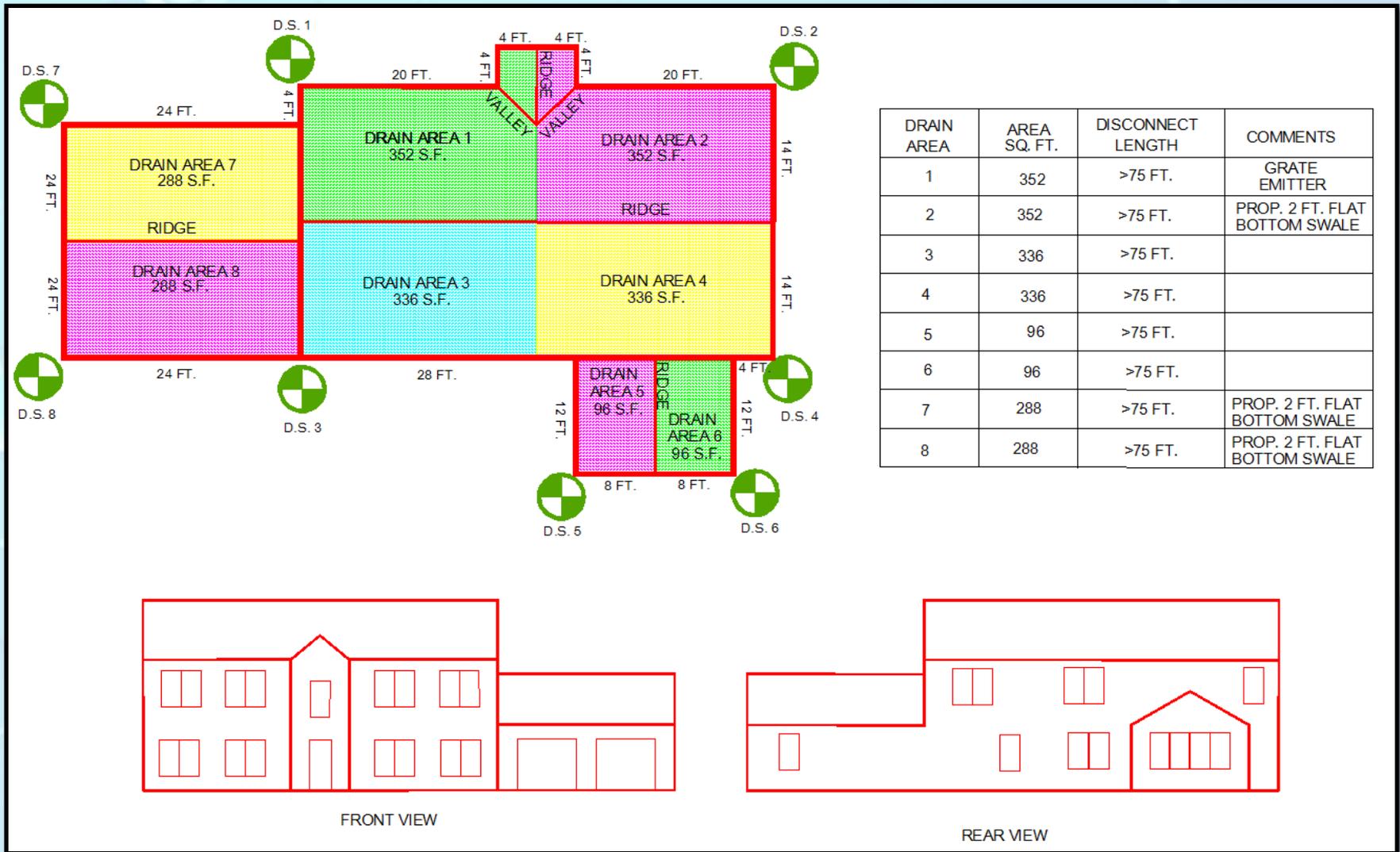


# ROOFTOP PLAN

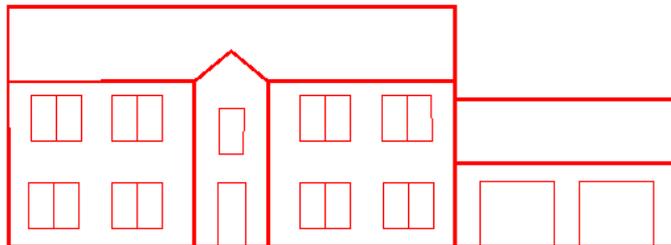
## Necessary Information

- ◆ Roof plan view with dimensions.
- ◆ Roof valleys and ridges, defining flow directions.
- ◆ Downspout locations.
- ◆ Roof areas to each downspout.
- ◆ Elevation views may be necessary for buildings with complex or multi-level roof systems.

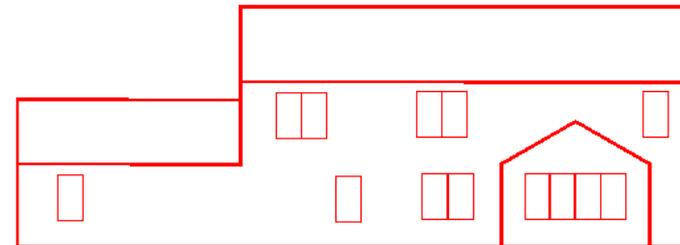
# ROOF PLAN EXAMPLE



DRAIN AREA	AREA SQ. FT.	DISCONNECT LENGTH	COMMENTS
1	352	>75 FT.	GRATE EMITTER
2	352	>75 FT.	PROP. 2 FT. FLAT BOTTOM SWALE
3	336	>75 FT.	
4	336	>75 FT.	
5	96	>75 FT.	
6	96	>75 FT.	
7	288	>75 FT.	PROP. 2 FT. FLAT BOTTOM SWALE
8	288	>75 FT.	PROP. 2 FT. FLAT BOTTOM SWALE



FRONT VIEW



REAR VIEW

**TALBOT COUNTY DEPARTMENT  
OF PUBLIC WORKS**

**PUBLIC WORKS AGREEMENTS**

**AND**

**MAINTENANCE & INSPECTION**

**AGREEMENTS**

# PUBLIC WORKS AGREEMENTS

## ✧ SEPTIC AND SEWER ✧

### Required for:

- New connections or changes to existing connections to the County sewer system.
- Best Available Technology, or BAT systems (e.g. de-nitrification systems) if grant money through the County is involved.

These documents are drafted by Public Works.

# PUBLIC WORKS AGREEMENTS

## \*STORMWATER MANAGEMENT\*

- ◆ Required for constructed stormwater management facilities such as raingardens, ponds, created wetlands, etc.
- ◆ Typically only required for commercial, industrial and some multi lot subdivisions.
- ◆ For most residential development, a hold on occupancy is used instead of this agreement.

These agreements are drafted by Public Works.

# MAINTENANCE & INSPECTION AGREEMENTS STORMWATER MANAGEMENT

- 🔥 Required for constructed stormwater management facilities such as raingardens, ponds, created wetlands, etc.
- 🔥 Recorded in the Talbot County Land Records.
- 🔥 *Public Works* drafts the agreement.
- 🔥 Applicant provides design drawings that become part of the agreement.

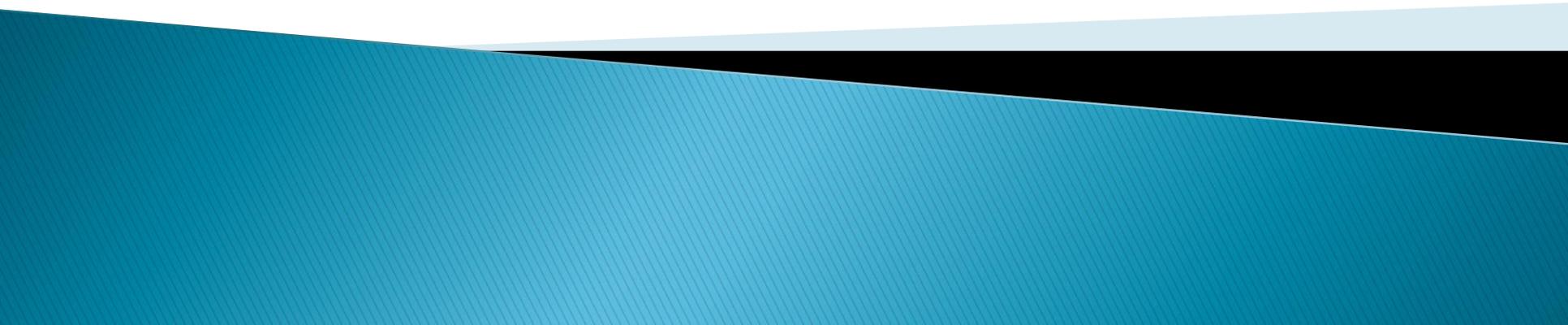
# TALBOT COUNTY DEPARTMENT OF PUBLIC WORKS



**PHONE No.: 410-770-8170**

# Environmental Health Submission Review – When is it needed?

David Russ



# Construction Contractors, Marine, Shoreline Restoration and Solar Construction

August 28, 2015

Talbot County Community Center

Craig S. Zinter, District Manager, Talbot Soil Conserv.

[craig.zinter@maryland.gov](mailto:craig.zinter@maryland.gov)

## Erosion and Sediment Control in Maryland

The effects of erosion and sedimentation are well known. Typically, when disturbed earth is exposed to the impacts of rainfall, there is an increase in the volume and velocity of runoff.

This sets off a chain reaction that results in the transport and deposition of sediment, reduced stream capacity, and ultimately increased stream scour and flooding.

Additionally, suspended sediment contributes to a decline in water quality by blocking sunlight, reducing photosynthesis, decreasing plant growth, destroying bottom dwelling species' habitat, carrying attached pollutants such as phosphorous, and so on. The list of negative impacts is long.



## Erosion and Sediment Control in Maryland

The effects of erosion and sedimentation are well known. Typically, when disturbed earth is exposed to the impacts of rainfall, there is an increase in the volume and velocity of runoff.

This sets off a chain reaction that results in the transport and deposition of sediment, reduced stream capacity, and ultimately increased stream scour and flooding.

Additionally, suspended sediment contributes to a decline in water quality by blocking sunlight, reducing photosynthesis, decreasing plant growth, destroying bottom dwelling species' habitat, carrying attached pollutants such as phosphorous, and so on. The list of negative impacts is long.



## Erosion and Sediment Control in Maryland (cont'd)



Legislation, established to protect Maryland waters from various pollutants, has existed since the early 1930s. In 1961, the Maryland's Attorney General determined sediment to be a pollutant. This determination was based upon an interpretation of a 1957 State statute and authorized sediment control regulations to be developed.

A statewide sediment control program was mandated in 1970 when the General Assembly passed the Sediment Control Law. From a historical perspective, Maryland's incentive for having an erosion and sediment control program is the Chesapeake Bay. From a practical standpoint, federal involvement via the National Pollutant Discharge Elimination System (NPDES) provides an incentive for State and local program development. The Chesapeake Bay initiatives in 1983, the U.S. Environmental Protection Agency's (EPA) 319 Nonpoint Source Program, and the NPDES municipal stormwater program have stimulated additional emphasis.

## Erosion and Sediment Control in Maryland (cont'd)

The program developed in 1970 is essentially the same that exists today with **an approved plan being required for any earth disturbance of 5,000 square feet or more and 100 cubic yards or more**; plan approval exemptions for agricultural uses; plan review and approval by local Soil Conservation Districts (SCD); grading ordinance adoption by local jurisdictions; utility construction inspection by the Washington Suburban Sanitary Commission (WSSC); and criminal penalties for sediment pollution. Various programmatic improvements have included requiring sediment control plan approval prior to issuing grading and building permits (1973); requiring training and certification of "responsible personnel" (1980); shifting enforcement authority from local to State control and establishing delegation criteria (1984); requiring NPDES stormwater discharge permits for construction activity (1991); subjecting agricultural land management practices to enforcement action for sediment pollution (1992); and establishing a maximum grading unit of 20 acres (2011).



## Erosion and Sediment Control in Maryland (cont'd)



Maryland's Erosion Control Law and regulations specify the general provisions for program implementation; procedures for delegation of enforcement authority; requirements for erosion and sediment control ordinances; exemptions from plan approval requirements; requirements for training and certification programs; criteria for plan submittal, review, and approval; and procedures for inspection and

enforcement. Proper design, installation, and maintenance of erosion and sediment control practices is essential to having an effective program. MDE has established minimum criteria for effective erosion and sediment control practices. The **2011 Standards and Specifications for Soil Erosion and Sediment Control** are incorporated by reference into State regulations and serve as the official guide for erosion and sediment control principles, methods, and practices.

In order to protect the natural resources of the State, the Maryland General Assembly set forth in the **Maryland Annotated Code of Regulations (COMAR), Environment Article, Subtitle 1. Sediment Control, § 4-101** that the Secretary of the Environment, in consultation with the Secretary of Natural Resources adopt criteria and procedures for the counties and soil conservation districts to implement soil erosion control plans.

The outcome of that charge resulted in the development and adoption of the Maryland Standards and Specifications for Soil Erosion and Sediment Control. This document is overseen by the Maryland Department of the Environment in association with the Natural Resources Conservation Service and State Soil Conservation Committee. The Foreword of the Standards and Specifications states in a general overview the what, when, how, and where of erosion control.

**It states:**

At the onset, it is necessary to establish the fact that soil erosion and sediment control are only the overall management of stormwater during and after site development. As the original ground cover of a site is disturbed and removed, the runoff characteristics are modified. Velocities of flow are increased and the total runoff volume is also increased. Limited management of runoff during the construction phase is provided by sediment control practices. Runoff control after the site development is accomplished by means of permanent stormwater management practices such as infiltration trenches or ponds. The practices contained in these standards and specifications are designed to provide a protective transition from initial site disturbance until implementation of permanent stabilization and stormwater management facilities. The practices described herein are minimum requirements. Local concerns may require practices that are more restrictive than these minimum standards.

***FOREWORD – Maryland Standards and Specifications for Soil Erosion and Sediment Control***

In order to protect the natural resources of the State, the Maryland General Assembly set forth in the [Maryland Annotated Code of Regulations \(COMAR\), Environment Article, Subtitle 1. Sediment Control, § 4-101](#) that the Secretary of the Environment, in consultation with the Secretary of Natural Resources adopt criteria and procedures for the counties and [soil conservation districts](#) to implement soil erosion control plans.

The outcome of that charge resulted in the development and adoption of [the Maryland Standards and Specifications for Soil Erosion and Sediment Control](#). This document is overseen by the Maryland Department of the Environment in association with the Natural Resources Conservation Service and State Soil Conservation Committee. The Foreword of the Standards and Specifications states in a general overview the what, when, how, and where of erosion control.

**It states:**

At the onset, it is necessary to establish the fact that soil erosion and sediment control are only the overall management of stormwater during and after site development. As the original ground cover of a site is disturbed and removed, the runoff characteristics are modified. Velocities of flow are increased and the total runoff volume is also increased. Limited management of runoff during the construction phase is provided by sediment control practices. Runoff control after the site development is accomplished by means of permanent stormwater management practices such as infiltration trenches or ponds. The practices contained in these standards and specifications are designed to provide a protective transition from initial site disturbance until implementation of permanent stabilization and stormwater management facilities. The practices described herein are minimum requirements. Local concerns may require practices that are more restrictive than these minimum standards.

***FOREWORD – Maryland Standards and Specifications for Soil Erosion and Sediment Control***

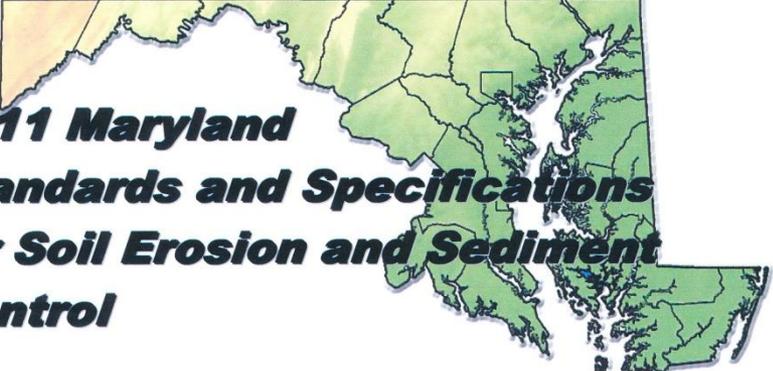
In order to protect the natural resources of the State, the Maryland General Assembly set forth in the [Maryland Annotated Code of Regulations \(COMAR\), Environment Article, Subtitle 1. Sediment Control, § 4-101](#) that the Secretary of the Environment, in consultation with the Secretary of Natural Resources adopt criteria and procedures for the counties and [soil conservation districts](#) to implement soil erosion control plans.

The outcome of that charge resulted in the development and adoption of [the Maryland Standards and Specifications for Soil Erosion and Sediment Control](#). This document is overseen by the Maryland Department of the Environment in association with the Natural Resources Conservation Service and State Soil Conservation Committee. The Foreword of the Standards and Specifications states in a general overview the what, when, how, and where of erosion control.

**It states:**

At the onset, it is necessary to establish the fact that soil erosion and sediment control are only the overall management of stormwater during and after site development. As the original ground cover of a site is disturbed and removed, the runoff characteristics are modified. Velocities of flow are increased and the total runoff volume is also increased. Limited management of runoff during the construction phase is provided by sediment control practices. Runoff control after the site development is accomplished by means of permanent stormwater management practices such as infiltration trenches or ponds. [The practices contained in these standards and specifications are designed to provide a protective transition from initial site disturbance until implementation of permanent stabilization and stormwater management facilities.](#) The practices described herein are minimum requirements. Local concerns may require practices that are more restrictive than these minimum standards.

***FOREWORD – Maryland Standards and Specifications for Soil Erosion and Sediment Control***



# ***2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control***

*December 2011*

*Maryland Department of the Environment  
Water Management Administration  
in association with*



*Natural Resources Conservation Service*

*and*



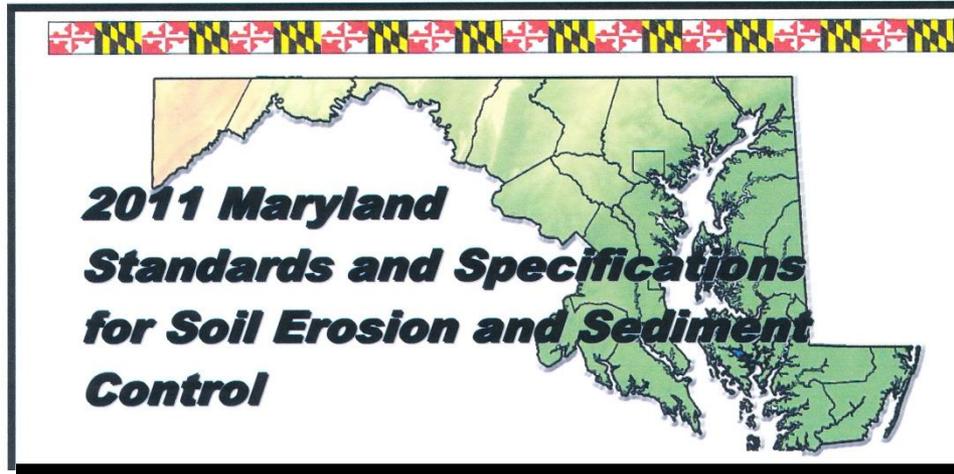
*Maryland Association of Soil Conservation Districts*



Martin O'Malley, Governor  
Anthony G. Brown, Lt. Governor  
Robert M. Summers, Secretary

1800 Washington Blvd.  
Baltimore, MD 21230  
410-537-3000  
[www.mde.state.md.us](http://www.mde.state.md.us)





<http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/SoilErosionandSedimentControl/Documents/2011%20MD%20Standard%20and%20Specifications%20for%20Soil%20Erosion%20and%20Sediment%20Control.pdf>

## Disturbance Limits and Calculations

In general, if earth disturbance activity is less than 5,000 sq. ft. and or less than 100 cu. yds., the activity is exempt from erosion and sediment control review and approval. There are various activities that require erosion and sediment control submittal, review, and approval. The following is a breakdown of disturbances and the type of erosion and sediment control plan required.

If the minimum thresholds listed below are reached, erosion and sediment control review and approval is required.

Type	Disturbance minimum	Disturbance maximum
<b>Forest Harvest</b>	5,000 sq. ft.	
<b>Shoreline</b>	5,000 sq. ft.	
<b>Standard Plan</b> - for individual single family homes on lots < 2 acres	5,000 sq. ft. and/or 100 cu. yds.	15,000 sq. ft. and/or 500 cy. yds.
<b>Site Specific</b> - for <u>any</u> disturbance on lots > 2 acres	21,780 sq. ft. (one half acre) – No minimum cu. yds.	20 acre increments

Erosion and sediment control plan requirements and assistance are available at the Talbot SCD office. Engineering firms are also a good source for erosion and sediment control plan development.

## Disturbance Limits and Calculations

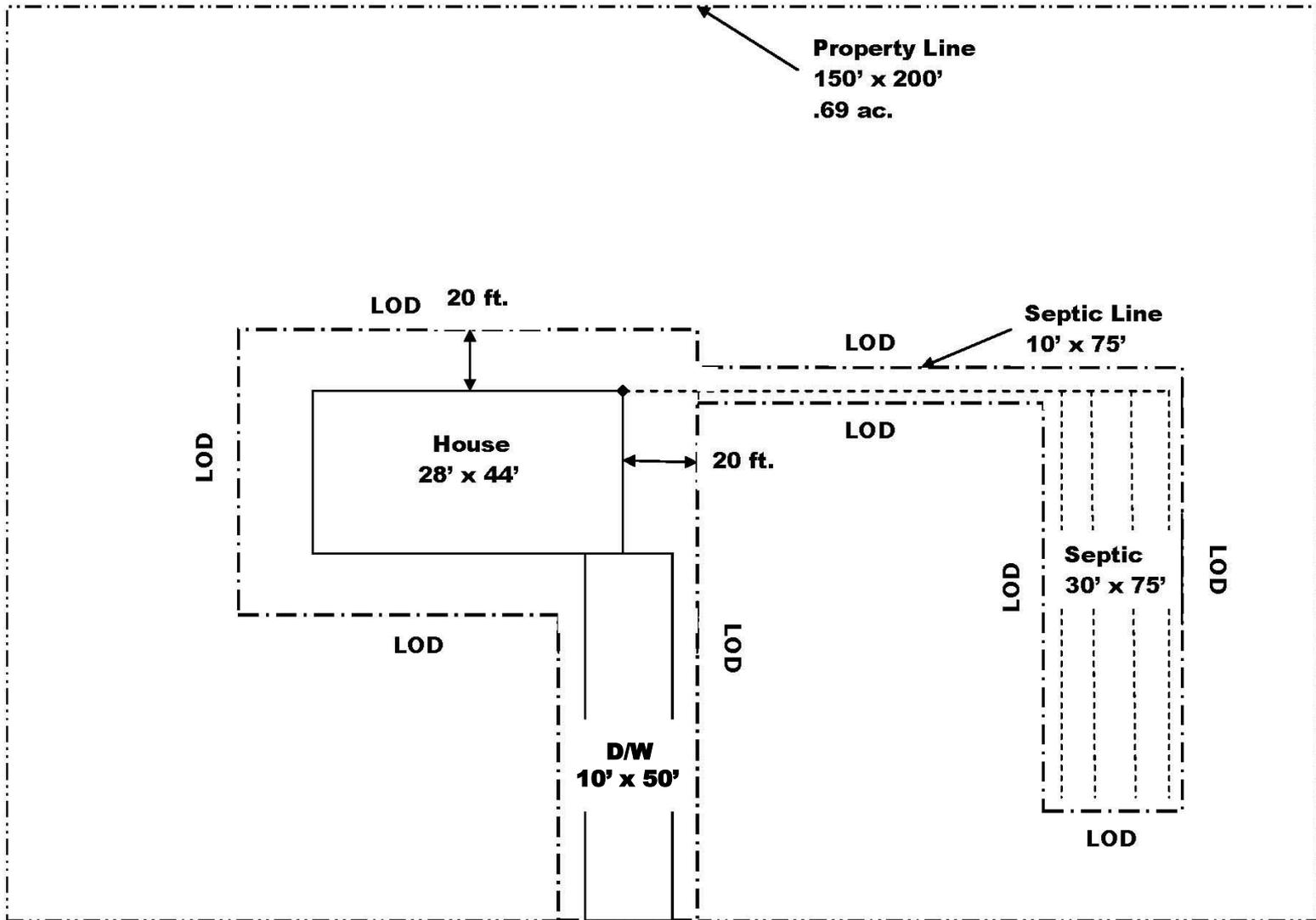
In general, if earth disturbance activity is less than 5,000 sq. ft. and or less than 100 cu. yds., the activity is exempt from erosion and sediment control review and approval. There are various activities that require erosion and sediment control submittal, review, and approval. The following is a breakdown of disturbances and the type of erosion and sediment control plan required.

If the minimum thresholds listed below are reached, erosion and sediment control review and approval is required.

Type	Disturbance minimum	Disturbance maximum
<b>Forest Harvest</b>	5,000 sq. ft.	
<b>Shoreline</b>	5,000 sq. ft.	
<b>Standard Plan</b> - for individual single family homes on lots <b>&lt; 2 acres</b>	5,000 sq. ft. and/or 100 cu. yds.	15,000 sq. ft. and/or 500 cy. yds.
<b>Site Specific</b> - for <u>any</u> disturbance on lots <b>&gt; 2 acres</b>	21,780 sq. ft. (one half acre) – No minimum cu. yds.	20 acre increments

Erosion and sediment control plan requirements and assistance are available at the Talbot SCD office. Engineering firms are also a good source for erosion and sediment control plan development.

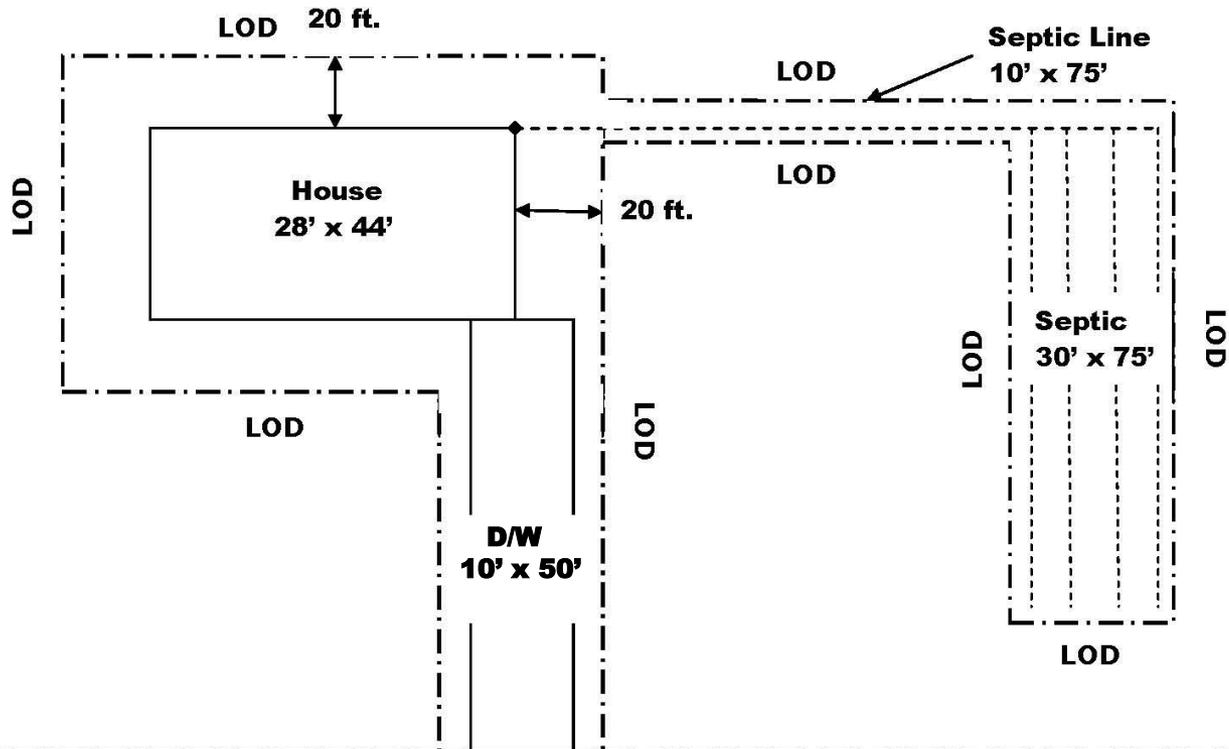
# How do you determine disturbance?



Disturbance Calculations:

House:  
28' x 44' + 20' incidental buffers =  
68' x 84' = 5,712 s.f.

Property Line  
150' x 200'  
.69 ac.



## Disturbance Calculations:

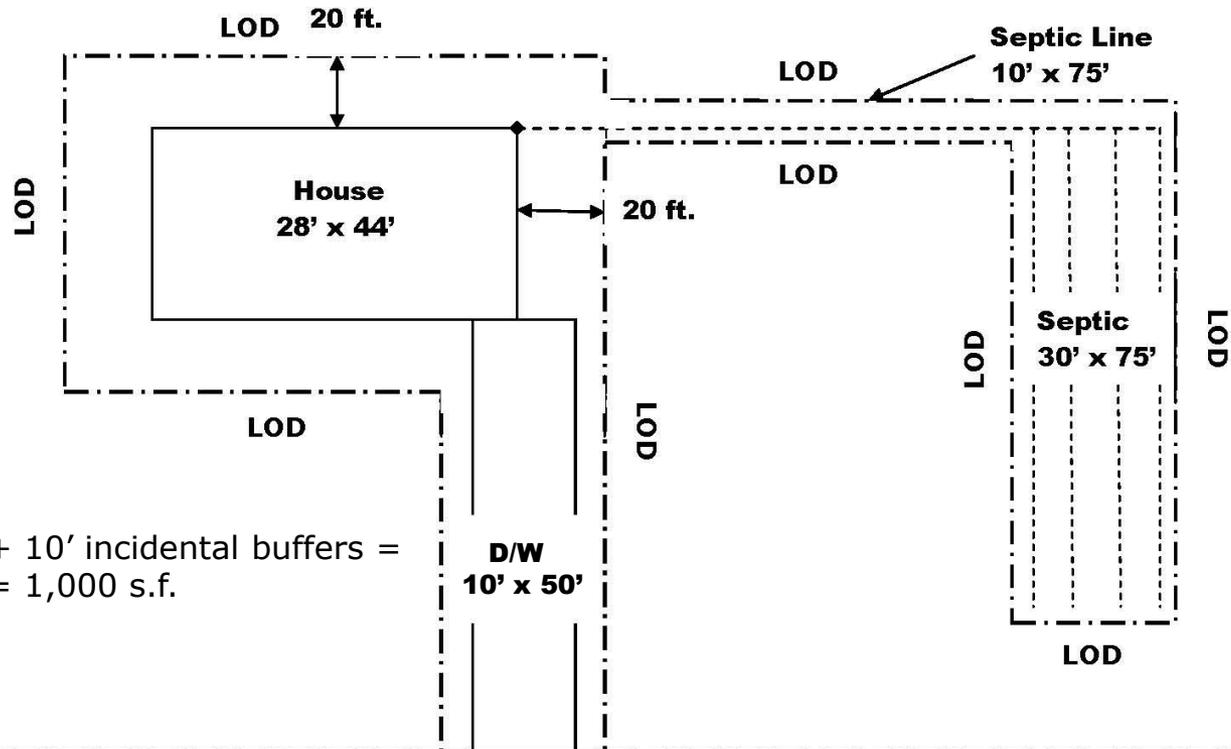
House:

$28' \times 44' + 20'$  incidental buffers =  
 $68' \times 84' = 5,712$  s.f.

**Property Line**

**150' x 200'**

**.69 ac.**



Driveway:

$10' \times 50' + 10'$  incidental buffers =  
 $20' \times 50' = 1,000$  s.f.

**Septic Line**

**10' x 75'**

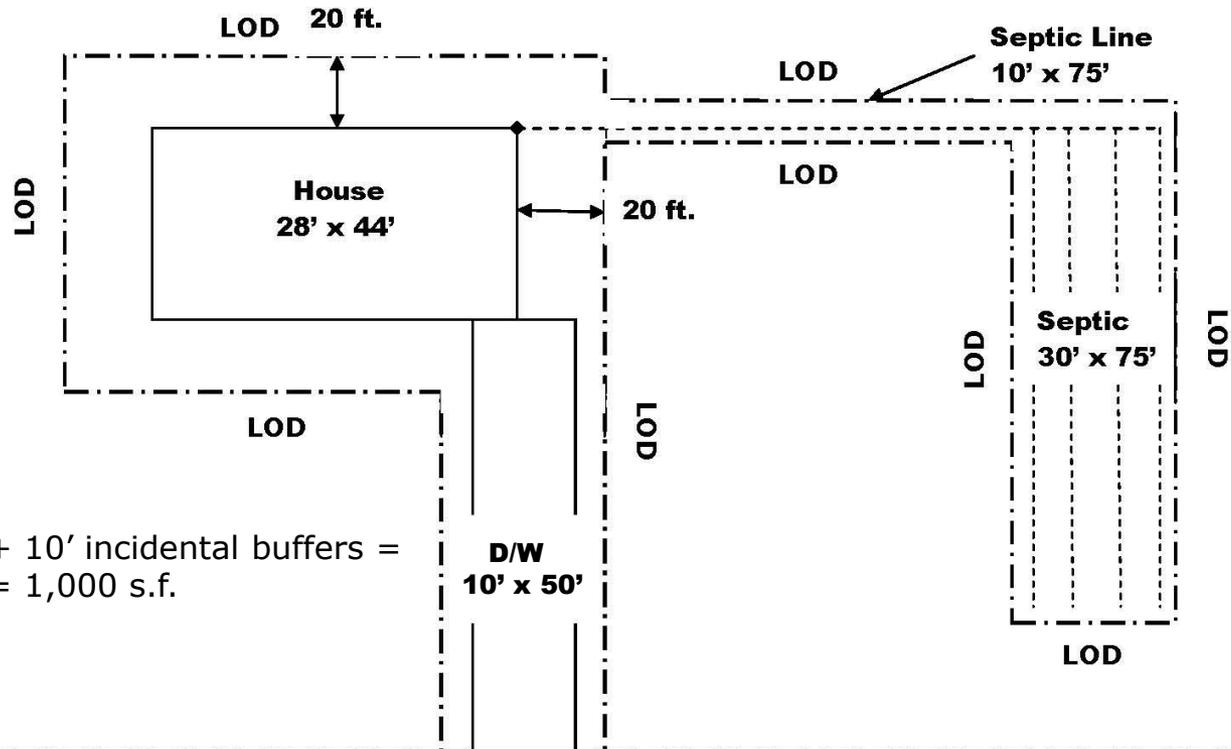
**Septic**  
**30' x 75'**

**Disturbance Calculations:**

House:  
28' x 44' + 20' incidental buffers =  
68' x 84' = 5,712 s.f.

**Property Line**  
150' x 200'  
.69 ac.

Septic Line:  
10' x 75' = 750 s.f.



Driveway:  
10' x 50' + 10' incidental buffers =  
20' x 50' = 1,000 s.f.

**Septic Line**  
10' x 75'

**D/W**  
10' x 50'

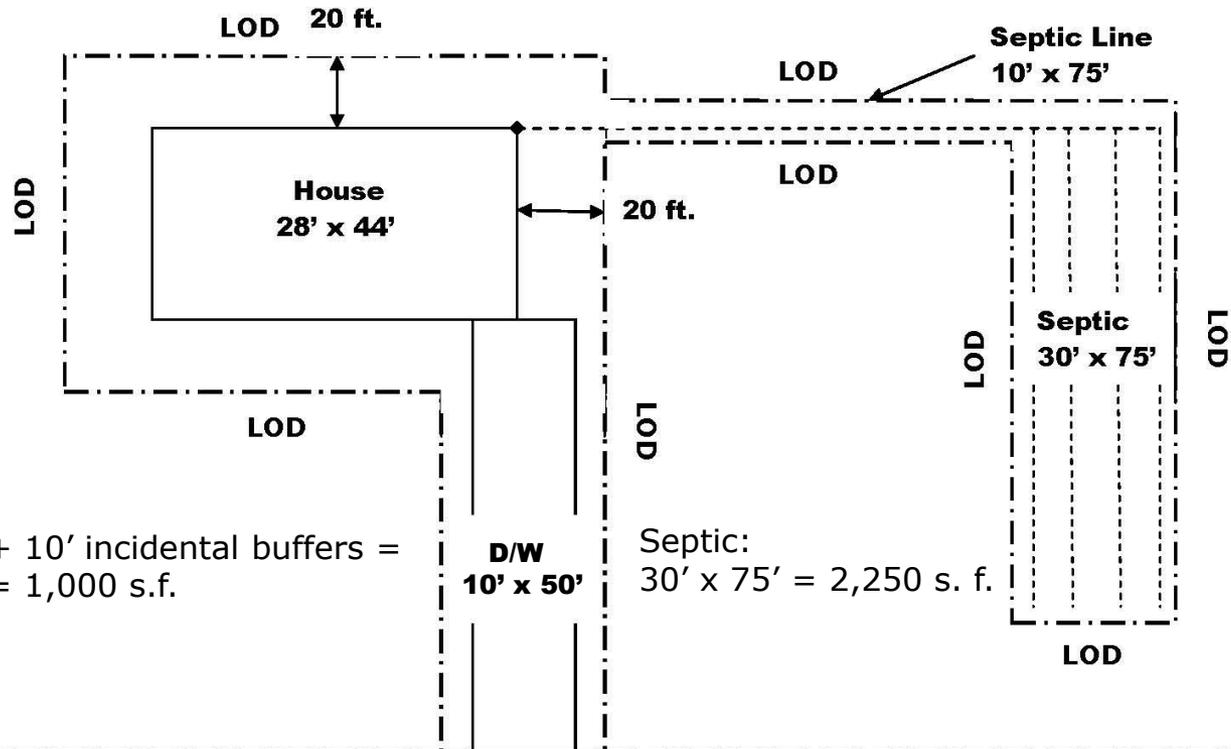
**Septic**  
30' x 75'

Disturbance Calculations:

House:  
28' x 44' + 20' incidental buffers =  
68' x 84' = 5,712 s.f.

Property Line  
150' x 200'  
.69 ac.

Septic Line:  
10' x 75' = 750 s.f.



Driveway:  
10' x 50' + 10' incidental buffers =  
20' x 50' = 1,000 s.f.

Septic:  
30' x 75' = 2,250 s. f.

## Disturbance Calculations:

House	5,712 s.f.	
D/W	1,000 s.f.	
Septic Line		750 s.f.
Septic	<u>2,250 s.f.</u>	
TOTAL	<u>9,712 s.f.</u>	

## Cubic Yardage Disturbance Calculations:

### House and D/W:

Total footprint at a 9" (.75 ft.) average cut

House - 28' x 44' = 1,232 s.f.

D/W - 10' x 50' = 500 s.f.

TOTAL 1,732 s.f. x .75 ft. = 1,299 cu. ft. ÷ 27 cu. ft./yd. = **48 cu. yds.**

### Septic Line and Septic:

Septic Line trench - 5' wide x 5' deep x 75' long = 1,875 cu. ft.

Septic field trench - 2 trenches x 5' wide x 5' deep x 75' long = 3,750 cu. ft.

TOTAL 1,875 cu. ft. + 3,750 cu. ft. = 5,625 cu. ft. ÷ 27 cu. ft./yd. = **208 cu. yds.**

**GRAND TOTAL - 48 cu. yds. + 208 cu. yds. = 256 cu. yds.**

## Disturbance Calculations:

DISTURBANCE TOTAL  
CUBIC YARDAGE TOTAL

9,712 sq. ft.  
256 cu. yds.

Type	Disturbance minimum	Disturbance maximum
<b>Forest Harvest</b>	5,000 sq. ft.	
<b>Shoreline</b>	5,000 sq. ft.	
<b>Standard Plan</b> - for individual single family homes on lots < 2 acres	5,000 sq. ft. and/or 100 cu. yds.	15,000 sq. ft. and/or 500 cy. yds.
<b>Site Specific</b> - for <u>any</u> disturbance on lots < 2 acres	21,780 sq. ft. (one half acre) – No minimum cu. yds.	20 acre increments

**TALBOT COUNTY  
STANDARD EROSION AND SEDIMENT CONTROL PLAN**

Project Name/Location: \_\_\_\_\_

Tax Map \_\_\_\_\_ Block \_\_\_\_\_ Parcel \_\_\_\_\_ Lot No. \_\_\_\_\_  
 ADC Road Map Coordinates Page: \_\_\_\_\_ Block: \_\_\_\_\_ / \_\_\_\_\_ Critical Area Property: Yes No

Owners Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Owners Address: \_\_\_\_\_

Contractors Name: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Contractors Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Engineer/Surveyor: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Total area of site: \_\_\_\_\_ square feet.  
 Total area of disturbance: \_\_\_\_\_ square feet. \_\_\_\_\_ acre/tenths of an acre.  
 Total volume of excavation or fill: \_\_\_\_\_ cubic yards.

Distance of disturbed area from the Mean High Water Line of any tidal water: \_\_\_\_\_ feet.  
 Distance of disturbed area from any nontidal wetland: \_\_\_\_\_ feet.  
 Distance of disturbed area from any nontidal wetland of special State concern: \_\_\_\_\_ feet.  
 Distance of disturbed area from any perennial stream and its associated 100-year floodplain: \_\_\_\_\_ feet.

**Certification**

I hereby certify that I have the authority to make the foregoing application; that the information provided and on the attached plan meets the specified Limitations and that all work will be done according to the following Conditions and Provisions set forth by his agreement.

Signature of Applicant \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name of Applicant \_\_\_\_\_

Corporate Name (if applicable) \_\_\_\_\_

**Approved:**  
 Talbot Soil Conservation District \_\_\_\_\_ Date: \_\_\_\_\_  
 215 Bay St. \_\_\_\_\_ U.S. Natural Resources Conservation Service \_\_\_\_\_  
 Easton, MD. 21601 410.822.1577 \_\_\_\_\_ Date: \_\_\_\_\_  
 Talbot Soil Conservation District

**Conditions:**

- A. This standard erosion and sediment control plan may be used instead of a detailed plan for earth disturbances where all of the following conditions are met:
1. No more than 15,000 square feet of earth will be disturbed and no more than 500 cubic yards of cut or fill will occur.
  2. No slope steeper than 3 horizontal to 1 vertical (3:1) will be disturbed or created.
  3. Cuts and/or fills will not exceed 10 feet in depth or height.
  4. No earth disturbance shall occur within the limits of the 100-year floodplain of any stream, or 100 feet of any perennial stream, water body, Mean High Water Line of any water body affected by tidal action, or tidal wetland.
  5. No earth disturbance shall occur within 25 feet of any nontidal wetland or within 100 feet of any nontidal wetland of special State concern.
  6. The proposed work does not require a State Waterway or Wetland Permit.
  7. The owner, builder, or developer is not the same owner, builder, or developer of any contiguous lots undergoing development.
  8. The project is not within a developing subdivision.

TALBOT COUNTY  
STANDARD EROSION AND SEDIMENT CONTROL PLAN

Project Name/Location: \_\_\_\_\_

Tax Map \_\_\_\_\_ Block \_\_\_\_\_ Parcel \_\_\_\_\_ Lot No. \_\_\_\_\_  
ADC Road Map Coordinates Page: \_\_\_\_\_ Block: \_\_\_\_\_ / \_\_\_\_\_ Critical Area Property: Yes No

Owners Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Owners Address: \_\_\_\_\_

Contractors Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Contractors Address: \_\_\_\_\_

Engineer/Surveyor: \_\_\_\_\_ Phone: \_\_\_\_\_

Total area of site: \_\_\_\_\_ square feet.  
Total area of disturbance: \_\_\_\_\_ square feet. \_\_\_\_\_ acre/tenths of an acre.  
Total volume of excavation or fill: \_\_\_\_\_ cubic yards.

Distance of disturbed area from the Mean High Water Line of any tidal water: \_\_\_\_\_ feet.  
Distance of disturbed area from any nontidal wetland: \_\_\_\_\_ feet.  
Distance of disturbed area from any nontidal wetland of special State concern: \_\_\_\_\_ feet.  
Distance of disturbed area from any perennial stream and its associated 100-year floodplain: \_\_\_\_\_ feet.

**Certification**

I hereby certify that I have the authority to make the foregoing application; that the information provided and on the attached plan meets the specified Limitations and that all work will be done according to the following Conditions and Provisions set forth by his agreement.

Signature of Applicant \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name of Applicant \_\_\_\_\_

Corporate Name (if applicable) \_\_\_\_\_

**Approved:**  
Talbot Soil Conservation District \_\_\_\_\_ Date: \_\_\_\_\_  
215 Bay St. U.S. Natural Resources Conservation Service  
Easton, MD. 21601 410.822.1577 \_\_\_\_\_ Date: \_\_\_\_\_  
Talbot Soil Conservation District

**Conditions:**

- A. This standard erosion and sediment control plan may be used instead of a detailed plan for earth disturbances where all of the following conditions are met:
  1. No more than 15,000 square feet of earth will be disturbed and no more than 500 cubic yards of cut or fill will occur.
  2. No slope steeper than 3 horizontal to 1 vertical (3:1) will be disturbed or created.
  3. Cuts and/or fills will not exceed 10 feet in depth or height.
  4. No earth disturbance shall occur within the limits of the 100-year floodplain of any stream, or 100 feet of any perennial stream, water body, Mean High Water Line of any water body affected by tidal action, or tidal wetland.
  5. No earth disturbance shall occur within 25 feet of any nontidal wetland or within 100 feet of any nontidal wetland of special State concern.
  6. The proposed work does not require a State Waterway or Wetland Permit.
  7. The owner, builder, or developer is not the same owner, builder, or developer of any contiguous lots undergoing development.
  8. The project is not within a developing subdivision.

**Provisions:**

- A. Nothing herein relieves the applicant from complying with any and all federal, State, and local requirements (e.g., Stormwater Management, Critical Area, Forest Conservation, Grading, etc.)
3. The applicant shall notify the Maryland Department of the Environment/Water Management Administration at 410.901.4020 at least 48 hours prior to starting site work.
- C. The Maryland Department of the Environment/Water Management Administration shall have access to the property for inspection purposes.
- D. If adequate erosion and sediment control measures are not provided in accordance with this plan, the Maryland Department of the Environment/Water Management Administration reserves the right to require corrective action.
- E. This erosion and sediment control plan remains valid for two (2) years from the approval date.

**Project Information:** (see attached example)

- A. The following information must be provided and attached to the standard plan:
  1. Plat showing the dimensions of property lines and road frontage.
  2. Location and dimensions of all existing and proposed structures (e.g., house, garage, driveway, well, septic system, etc.)
  3. If present, the location of the Critical Area buffer, nontidal and tidal wetlands, and perennial streams and their associated floodplain.
  4. Limits of disturbance.
  5. Direction of surface water drainage and points of discharge.
  6. Erosion and sediment control provisions to minimize on-site erosion and prevent off-site sedimentation.

**Requirements:**

- A. Erosion and sediment control measures shall be installed prior to any earth disturbance except that necessary for installation of the controls.
3. All erosion and sediment control practices shall be installed and maintained according to the criteria contained in the most current version of the Maryland Standards and Specifications for Soil Erosion and Sediment Control.
  - C. All clearing and grading shall be completed in the following sequence:
    1. Limit initial clearing and grubbing for the installation of the construction entrance, perimeter controls, and any remaining controls.
    2. Install stabilized construction entrance, perimeter silt fence, and any other sediment controls.
    3. Clear, grub, and grade the remainder of the site as specified by the limits of disturbance shown on the attached plat.
    4. Provide temporary stabilization of any area that will not be actively graded within fourteen (14) days.
    5. Construct any structures and utilities.
    6. Provide final grading and stabilization according to the seeding or sodding specifications (minimum stabilization by seeding and mulching).
    7. After the site has been stabilized with adequate vegetation, and with the permission of the sediment control inspector, remove sediment control practices and stabilize remaining disturbed areas.
  - D. All erosion and sediment control devices require continual maintenance. Any controls that are damaged or disturbed shall be restored or repaired before the end of each day.
- E. Development activities shall not impair any drainage, create an erosion hazard, or create a source of sediment to any adjacent watercourse, wetland, or property.
- F. Any pumping of water must be filtered and done according to the criteria contained in the most current version of the Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- G. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within seven (7) calendar days on the surface areas of all sediment controls, stockpiles, and perimeter slopes; and fourteen (14) days for all other disturbed areas on the site not being actively graded.

*All Talbot Soil Conservation District programs and services are offered on a non discriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.*

**GENERAL NOTES**

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL REGULATIONS, BEST PRACTICES OF THE INDUSTRY TRADES AND TO THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREIN.

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND NOT A CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL CONFORM TO ALL CONSTRUCTION PHASE REQUIREMENTS.

NEW: 10000-000  
REVISED: 10000-000  
ADD: 10000-000

IF ANY CHANGE OCCUR TO ANY UTILITIES, THEY SHALL BE REPAIRED PRIOR TO THE CONSTRUCTION OF THIS PROJECT.

ALL EXISTING UTILITIES SHALL BE PROTECTED BY SHIELDING OR PROTECTIVE CASING. ALL UTILITIES SHALL BE PROTECTED BY SHIELDING OR PROTECTIVE CASING. ALL UTILITIES SHALL BE PROTECTED BY SHIELDING OR PROTECTIVE CASING.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

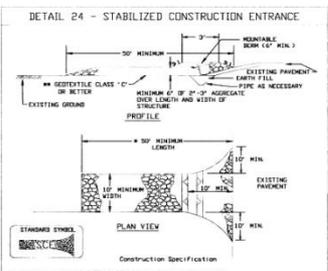
**LEGEND**

These standard symbols will be found in the drawing.

↓ DIRECTION OF EXISTING FLOW

--- LIMITS OF DISTURBANCE

--- SILT FENCE



**Construction Specifications**

- Length - minimum of 30' (400' for single residence lots).
- Width - 12' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (Filter Class B) shall be placed over the existing ground prior to placing stone. A site plan approval authority may not require single family residences to use geotextile fabric.
- Stone - crushed aggregate (2" to 3") or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- 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 metal beam with 5-lb slope and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the pipe is located at a high spot and has an average to contrary slope, pipe will not be necessary. Pipe which is at a low spot according to the amount of runoff to be conveyed, a 6" minimum will be required.
- 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.

DATE: 08/27/03  
DRAWN BY: JDOE  
CHECKED BY: JDOE

**REVIEWED FOR THE TALBOT SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS**

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

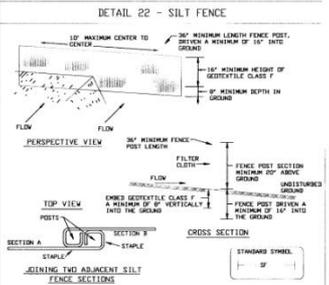
DATE: \_\_\_\_\_

**SILT FENCE**

Silt Fence Design Criteria

Slope Steepness	(Maximum) Silt Fence Length	(Maximum) Silt Fence Length
Flatter than 3:1	unlimited	unlimited
3:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
3:1 to 3:1	60 feet	500 feet
3:1 to 1:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



**Construction Specifications**

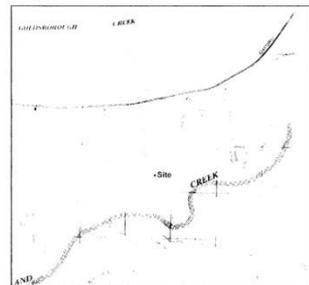
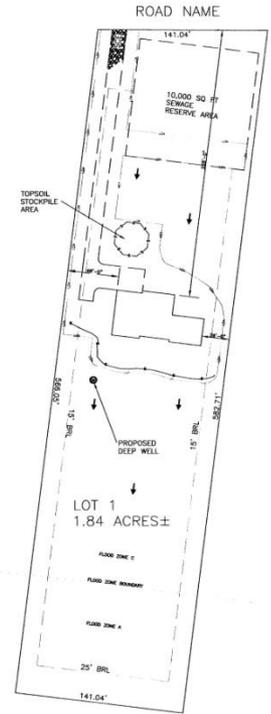
- Fence posts shall be a minimum of 30" long driven 18" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 1/2" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and bottom and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min)	Test: MSMT 300
Tensile Modulus	20 lbs/in (min)	Test: MSMT 309
Flow Rate	0.2 gal / 15" minute (max.)	Test: MSMT 302
Filtering Efficiency	75% (min.)	Test: MSMT 302
- Where ends of geotextile fabric come together, they shall be overlapped. Fabric will be stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

DATE: 08/27/03  
DRAWN BY: JDOE  
CHECKED BY: JDOE

**PHASE OF CONSTRUCTION**

- CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) AT 410-901-4020 TWO WEEKS PRIOR TO START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW PLANS AND BECOME FAMILIAR WITH ALL PERMITS.
- INSTALL STABILIZED CONSTRUCTION ENTRANCES AND SILT FENCE (SP).
- PERFORM EXCAVATION AND SITE GRADING/RESURFACING AS REQUIRED AND SHOWN ON PLAN.
- CONSTRUCT BUILDINGS, STRUCTURES, DRIVEWAYS AND INSTALL UTILITIES AS SHOWN ON PLAN.
- MAINTAIN ALL SEDIMENT AND EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION.
- FINE GRADE, TOPSOIL, SEED AND MULCH PER SPECIFICATIONS.
- ONCE THE SITE IS FULLY STABILIZED, AND THROUGH COORDINATION AND APPROVAL OF THE SOIL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES.



SCALE: 1" = 50'

**EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

- Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days to the surface of all perimeter controls, ditches, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and further down (14:1) as to all other disturbed or graded areas on the project site.
- All temporary erosion and sediment control devices are to be provided as indicated on this plan with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
- Cleaning and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
- Temporary seeding shall be accomplished between February 1st through April 30th, or August 15th through November 1st. During other times, temporary mulching shall be provided.
- Temporary seeding shall conform to the following applications: 600 lbs. per acre of 10-10-10, 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual programs shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

Species	Seed Mixture (For Hardness Zone 7a) (From Table 2)		Seeding Dates	Seeding Depths	Fertilizer Rate (10-10-10)	Lime Rate
	Species	Appl. Rate (Bt./Ac.)				
ANNUAL RYEGRASS	50%	211 - 430 (815 - 1111)	3/1 - 5/1	3/4" - 1"	600 lb/ac 15 lb/1000 sf	2 tons/ac 100 lb/1000 sf

- Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2-3 tons per acre. Anchor mulch with a mulch anchor tool on the contour or with wood chalking or other suitable means. Annual programs shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished according to manufacturer recommendations.
- Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through November 15th. Permanent seeding for other than specified times shall be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3"-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in item #6 of these specifications.

No.	Species	Seed Mixture (For Hardness Zone 7a) (From Table 2)		Seeding Dates	Seeding Depths	N	P2O5	K2O	Lime Rate
		Species	Appl. Rate (Bt./Ac.)						
10	KY31 TALL FESCUE HARD FESCUE	100%	30W	3/1-5/15 6/15-11/15	3/4" - 1"	90 lb/ac 4 lb/1000sf	175 lb/ac 4 lb/1000sf	175 lb/ac 4 lb/1000sf	2 tons/ac 100 lb/1000sf

- Any spot or borrow will be placed at a site approved by the Soil Conservation District.
- All areas remaining or intended to remain disturbed for longer than fourteen (14) days shall be stabilized in accordance with the USDA, National Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.

It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

DATE: 08/27/03  
DESIGNED BY: JDOE  
DRAWN BY: JDOE  
CHECKED BY: JDOE

SITE & SEDIMENT CONTROL PLAN FOR  
JOHN DOE  
LOT 1 - EASTON FAIRWAYS  
FIRST ELECTION DISTRICT  
TALBOT CO., MD

ACME ENGINEERING  
725 HERE STREET  
NOWHERE, MARYLAND 21212







**GENERAL NOTES**

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL REGULATIONS, BEST PRACTICES OF THE INDUSTRY TRADES AND TO THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREON.

THIS DRAWING IS AN INSTRUMENT OF SERVICE FOR A SINGLE PROJECT AND IS NOT TO BE REPRODUCED OR COPIED FOR ANY OTHER PROJECT OR PURPOSE. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AND DOES NOT EXTEND TO ANY OTHER MATTER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO AGENCIES PRIOR TO START OF CONSTRUCTION AND SHALL COMPLY WITH ALL CONSTRUCTION PHASE REQUIREMENTS:

MDA - NATURAL RESOURCE CONSERVATION DISTRICT

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

EXCUTED SOIL CONSERVATION DISTRICT

NOTE: THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY, OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE ACCORDING TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

DATE: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE AGENCIES OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SUCH CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.

2. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

PROJECT LOCATION: \_\_\_\_\_

SC-NOTES

TOTAL AREA OF SITE: \_\_\_\_\_ ACRES

TOTAL AREA OF DISTURBANCE: \_\_\_\_\_ ACRES

TOTAL VOLUME OF CUT AND/OR FILL: \_\_\_\_\_ CU YD

SOIL TYPES: \_\_\_\_\_

**LEGEND**

These standard symbols will be used in the drawing.

↓ DIRECTION OF EXISTING FLOW

--- LIMITS OF DISTURBANCE

--- SILT FENCE

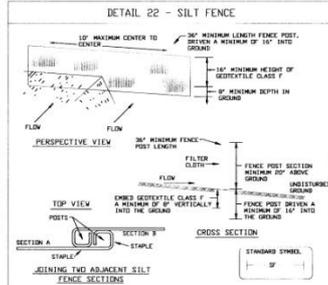


**SILT FENCE**

Silt Fence Design Criteria

Slope Steepness	(Maximum) Silt Fence Length	(Maximum) Silt Fence Length
Flatter than 3:1	unlimited	unlimited
3:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



- PHASE OF CONSTRUCTION**
- CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) AT 410-801-8020 TWO WEEKS PRIOR TO START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW PLANS AND BECOME FAMILIAR WITH ALL PERMITS.
  - INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND SILT FENCE (SF).
  - PERFORM EXCAVATION AND SITE GRADING/RESURFACING AS REQUIRED AND SHOWN ON PLAN.
  - CONSTRUCT BUILDINGS, STRUCTURES, DRIVEWAYS AND INSTALL UTILITIES AS SHOWN ON PLAN.
  - MAINTAIN ALL SEDIMENT AND EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION.
  - FINE GRADE, TOPSOIL, SEED AND MULCH PER SPECIFICATIONS.
  - ONCE THE SITE IS FULLY STABILIZED, AND THROUGH COORDINATION AND APPROVAL OF THE SOIL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES.

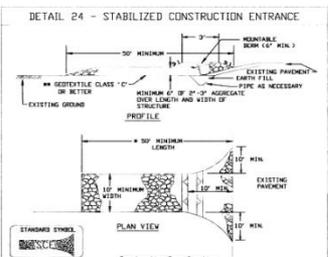
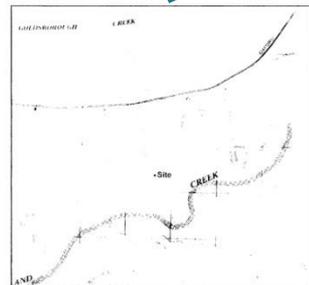
Date: 08/27/03

Designed: YOU

Drawn: YOU

Checked: ME

Vicinity Map



US-22 (REVISED) OF REGULATIONS, P. 10-3

MDA - NATURAL RESOURCE CONSERVATION DISTRICT

SCALE: 1" = 50'

- EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**
- Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary seeding shall be completed within seven (7) calendar days on the surface of all perimeter controls, ditches, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and further down (14) ft to all other disturbed or graded areas on the project site. All temporary erosion and sediment control devices are to be provided as indicated on this plan, with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
  - Cleaning and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
  - Temporary seeding shall be accomplished between February 1st through April 30th, or August 15th through November 1st. During other times, temporary seeding shall be provided.
  - Temporary seeding shall conform to the following applications: 600 lbs. per acre of 10-10-10, 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual programs shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

Seed Mixture (For Hardness Zone 7a)				Seeding Dates	Seeding Depths	Fertilizer Rate (10-10-10)	Lime Rate
Species	Appl. Rate (Bt./Ac.)	Seeding Rates	Seeding Dates				
ANNUAL RYEGRASS	50#	311 - 430	3/1 - 11/1	3" - 5"	600 lb/ac	2 tons/ac	100 lb/1000 sf

- Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2.2% tons per acre. Anchor mulch with a mulch anchoring tool on the surface or with seed/disking or other suitable means. Annual programs shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.
- Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through November 15th. Permanent seeding at other than specified times shall be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3"-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in item #6 of these specifications.

Seed Mixture (For Hardness Zone 7a)						Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Appl. Rate (Bt./Ac.)	Seeding Dates	Seeding Depths	N	P2O5	K2O	Lime Rate	
10	KY31 TALL FESCUE HARD FESCUE	120# 30#	3/1-5/15 8/1-11/15	3"-5"	90 lb/ac	2 lb/1000sf	175 lb/ac	4 lb/1000sf	2 tons/ac

- Any spot or borrow will be placed at a site approved by the Soil Conservation District.
  - All areas remaining or intended to remain disturbed for longer than fourteen (14) days shall be stabilized in accordance with the USDA, National Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.
- It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from the plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

SITE & SEDIMENT CONTROL PLAN FOR

JOHN DOE

LOT 1 - EASTON FAIRWAYS

FIRST ELECTION DISTRICT

TALBOT CO., MD

ACME ENGINEERING

725 HERE STREET

NOWHERE, MARYLAND 21212

**GENERAL NOTES**

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL REGULATIONS, BEST PRACTICES OF THE INDUSTRY TRADES AND TO THE GENERAL SPECIFICATIONS AND DETAILS REFERRED TO HEREIN.

THE MARYLAND DEPARTMENT OF ENVIRONMENT AND CONSERVATION (MDE) HAS REVIEWED THIS PLAN AND APPROVED THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE MARYLAND DEPARTMENT OF ENVIRONMENT AND CONSERVATION (MDE) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE MARYLAND DEPARTMENT OF ENVIRONMENT AND CONSERVATION (MDE) PRIOR TO THE START OF CONSTRUCTION.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO AGENCIES PRIOR TO START OF CONSTRUCTION AND SHALL COMPLY WITH ALL CONSTRUCTION PHASE REQUIREMENTS:

NEW: 10000-0000  
 NEW: 10000-0000  
 NEW: 10000-0000

IF ANY CHANGE OCCUR TO ANY UTILITIES, THEY SHALL BE REPAIRED PRIOR TO THE START OF CONSTRUCTION.

ALL EXISTING UTILITIES SHALL BE PROTECTED BY QUALIFIED PROFESSIONALS. ALL UTILITIES LOCATIONS SHALL BE INDICATED BY SYMBOLS AND COORDINATES ON THIS PLAN (1:5000 SCALE). ANY CHANGES TO EXISTING UTILITIES SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

ANY PROPERTY LINE INFORMATION OBTAINED FROM RECORD DRAWINGS SHALL BE VERIFIED BY SURVEY AT THE CONTRACTOR'S EXPENSE.

OWNER: [Name]  
 ENGINEER: [Name]  
 DATE: [Date]

**REVIEWED FOR THE TALBOT SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS**

DATE: [Date]  
 APPROVED: [Signature]

**EXCISE SOIL CONSERVATION DISTRICT**

NOTE: THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO AMEND, DELETE, MODIFY, OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE ACCORDING TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

DATE: [Date]

1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE AGENCIES OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR.

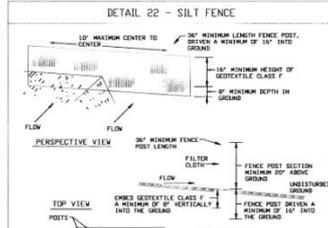
2. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

**SILT FENCE**

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 3:1	unlimited	unlimited
3:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
3:1 to 3:1	60 feet	500 feet
3:1 to 1:1	40 feet	250 feet
1:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



- PHASE OF CONSTRUCTION**
- CONTACT THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) AT 410-901-0020 TWO WEEKS PRIOR TO START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW PLANS AND BECOME FAMILIAR WITH ALL PERMITS.
  - INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE) AND SILT FENCE (SF).
  - PERFORM EXCAVATION AND SITE GRADING/RESURFACING AS REQUIRED AND SHOWN ON PLAN.
  - CONSTRUCT BUILDINGS, STRUCTURES, DRIVEWAYS AND INSTALL UTILITIES AS SHOWN ON PLAN.
  - MAINTAIN ALL SEDIMENT AND EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION.
  - FINE GRADE, TOPSOIL, SEED AND MULCH PER SPECIFICATIONS.
  - ONCE THE SITE IS FULLY STABILIZED, AND THROUGH COORDINATION AND APPROVAL OF THE SOIL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES.

**LEGEND**

These standard symbols will be used in the drawing.

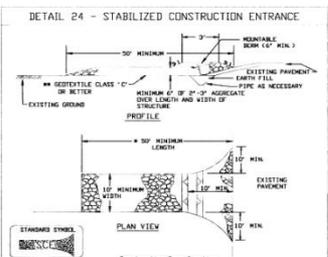
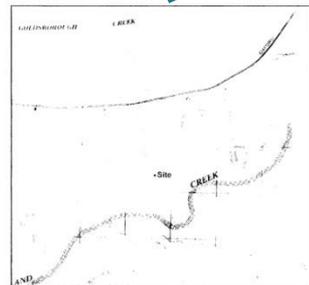
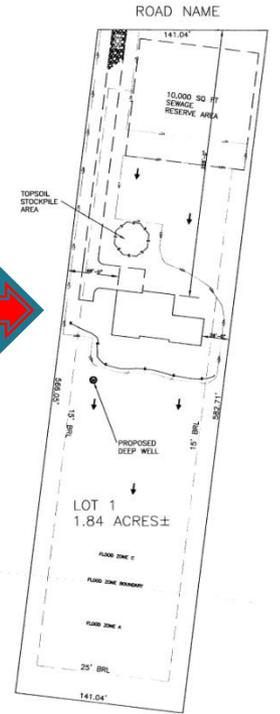
↓ DIRECTION OF EXISTING FLOW

--- LIMITS OF DISTURBANCE

--- SILT FENCE



**Plat or Site Plan**



USE: [Name] SOIL CONSERVATION SERVICE. PROJECT: [Name] WATER MANAGEMENT ADMINISTRATION.

SCALE: 1" = 50'

- EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**
- Contractor shall install erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary seeding shall be completed within seven (7) calendar days as to the surface of all perimeter controls, ditches, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and further down (14) as to all other disturbed or graded areas on the project site.
  - All temporary erosion and sediment control devices are to be provided as indicated on this plan, with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
  - Cleaning and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
  - Temporary seeding shall be accomplished between February 1st through April 30th, or August 15th through November 1st. During other times, temporary mulching shall be provided.
  - Temporary seeding shall conform to the following applications: 600 lbs. per acre of 10-10-10, 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual program shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

Species	Seed Mixture (For Hardness Zone 7a)		Seeding Dates	Seeding Depths	Fertilizer Rate (10-10-10)	Lime Rate
	Appl. Rate (lb./ac.)	Seeding Rates				
ANNUAL RYEGRASS	50#	311 - 430 815 - 1111	'3 - '4	1/2"	600 lb/ac 15 lb/1000 sf	2 tons/ac 100 lb/1000 sf

- Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2-3 tons per acre. Anchor mulch with a mulch anchor tool on the surface or with wood chinking or other suitable means. Annual program shall be applied at a rate of 50 lbs. per acre using suitable equipment.
- Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through November 15th. Permanent seeding at other than specified times will be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3'-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in item #8 of these specifications.

No.	Species	Seed Mixture (For Hardness Zone 7a)		Seeding Dates	Seeding Depths	N	P2O5	K2O	Lime Rate
		Appl. Rate (lb./ac.)	Seeding Rates						
10	KY31 TALL FESCUE HARD FESCUE	120# 30#	3/1-5/15 6/15-11/15	'3 - '4	90 lb/ac 2 lb/1000sf	175 lb/ac 4 lb/1000sf	175 lb/ac 4 lb/1000sf	2 tons/ac 100 lb/1000 sf	

- Any spot or borrow will be placed at a site approved by the Soil Conservation District.
  - All areas remaining or intended to remain disturbed for longer than fourteen (14) days shall be stabilized in accordance with the USDA, National Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.
- It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

Date: 08/27/03  
 Drawn: YOU  
 Checked: ME

DESIGNED FOR: JOHN DOE  
 LOT 1 - EASTON FAIRWAYS  
 FIRST ELECTION DISTRICT  
 TALBOT CO., MD

ACME ENGINEERING  
 725 HERE STREET  
 NOWHERE, MARYLAND 21212



**GENERAL NOTES**

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL REGULATIONS, BEST PRACTICES OF THE INDUSTRY TRADES AND TO THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREIN.

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND NOT A CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL CONFORM TO ALL CONSTRUCTION PHASE REQUIREMENTS.

NEW: 10000-000  
REVISED: 10000-000  
ADD: 10000-000

IF ANY CHANGE OCCUR TO ANY UTILITIES, THEY SHALL BE REPAIRED PRIOR TO THE CONSTRUCTION OF THIS PROJECT.

ALL EXISTING UTILITIES SHALL BE PROTECTED BY SHIELDING OR PROTECTIVE CASING. ALL UTILITIES SHALL BE PROTECTED BY SHIELDING OR PROTECTIVE CASING. ALL UTILITIES SHALL BE PROTECTED BY SHIELDING OR PROTECTIVE CASING.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CONSENTS, APPROVALS AND OTHER REQUIREMENTS AND CONFORMING TO ALL APPLICABLE REGULATIONS AND ORDINANCES.

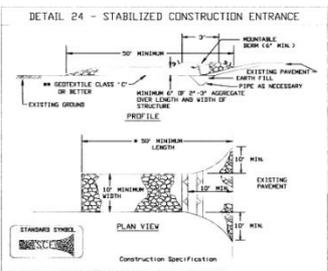
**LEGEND**

These standard symbols will be used in the drawing.

↓ DIRECTION OF EXISTING FLOW

--- LIMITS OF DISTURBANCE

--- SILT FENCE



- Length - minimum of 30' (400' for single residence lots).
- Width - 12" minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (Filter Class 100) shall be placed over the existing ground prior to placing stone. Written plan approval authority may not require single family residences to use geotextile fabric.
- Stone - crushed aggregate (2" to 3") or crushed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- 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 metal grate with 1/2" slope and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the pipe is located at a high spot and has an average to contrary slope, pipe will not be necessary. Pipe which is at a low spot according to the amount of runoff to be conveyed, a 6" minimum will be required.
- 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.

DATE: 08/27/03  
DRAWN: YOU  
CHECKED: ME

**REVIEWED FOR THE TALBOT SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS**

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

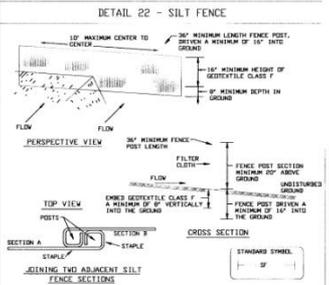
DATE: \_\_\_\_\_

**SILT FENCE**

Silt Fence Design Criteria

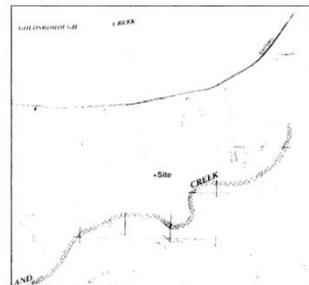
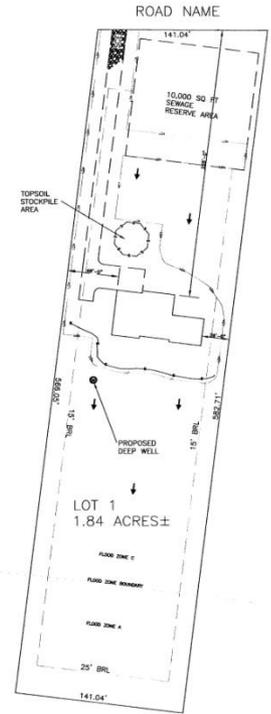
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 3:1	unlimited	unlimited
3:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
3:1 to 3:1	60 feet	500 feet
3:1 to 1:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



- Construction Specifications**
- Fence posts shall be a minimum of 30" long driven 18" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) oak, or 1 1/2" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighting not less than 1.00 pound per linear foot.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and bottom and shall meet the following requirements for Geotextile Class 100:
 

Tensile Strength	50 lbs/in (min)	Test: MSMT 300
Tensile Modulus	20 lbs/in (min)	Test: MSMT 309
Flow Rate	0.2 gal / 15" minute (max.)	Test: MSMT 302
Filtering Efficiency	75% (min.)	Test: MSMT 302
  - Where ends of geotextile fabric come together, they shall be overlapped. Fabric will be stapled to prevent sediment bypass.
  - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.
- DATE: 08/27/03  
DRAWN: YOU  
CHECKED: ME



SCALE: 1" = 50'

- PHASE OF CONSTRUCTION**
- CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) AT 410-901-8020 TWO WEEKS PRIOR TO START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW PLANS AND BECOME FAMILIAR WITH ALL PERMITS.
  - INSTALL STABILIZED CONSTRUCTION ENTRANCES AND SILT FENCE (SP).
  - PERFORM EXCAVATION AND SITE GRADING/RESURFACING AS REQUIRED AND SHOWN ON PLAN.
  - CONSTRUCT BUILDINGS, STRUCTURES, DRIVEWAYS AND INSTALL UTILITIES AS SHOWN ON PLAN.
  - MAINTAIN ALL SEDIMENT AND EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION.
  - FINE GRADE, TOPSOIL, SEED AND MULCH PER SPECIFICATIONS.
  - ONCE THE SITE IS FULLY STABILIZED, AND THROUGH COORDINATION AND APPROVAL OF THE SOIL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES.

- EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**
- Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days on the surface of all perimeter controls, ditches, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and further down (14:1) as to all other disturbed or graded areas on the project site.
  - All temporary erosion and sediment control devices are to be provided as indicated on this plan with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
  - Cleaning and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
  - Temporary seeding shall be accomplished between February 1st through April 30th, or August 15th through November 1st. During other times, temporary mulching shall be provided.
  - Temporary seeding shall conform to the following applications: 600 lbs. per acre of 10-10-10, 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual program shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

Species	Seed Mixture (For Hardness Zone 7a) (From Table 2)		Seeding Dates	Seeding Depths	Fertilizer Rate (10-10-10)	Lime Rate
	Species	Appl. Rate (Bt./Ac.)				
ANNUAL RYEGRASS	50%	211 - 430 (815 - 1111)	3/1 - 5/1	3/4" - 1"	600 lb/ac 15 lb/1000 sf	2 tons/ac 100 lb/1000 sf

- Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2.25 tons per acre. Anchor mulch with a mulch anchor tool on the surface or with wood chipping or other suitable means. Annual program shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished according to manufacturer recommendations.
- Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through November 15th. Permanent seeding for other than specified times shall be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3"-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in item #8 of these specifications.

No.	Species	Seed Mixture (For Hardness Zone 7a) (From Table 2)		Seeding Dates	Seeding Depths	N	P2O5	K2O	Lime Rate
		Species	Appl. Rate (Bt./Ac.)						
10	KY31 TALL FESCUE HARD FESCUE	100%	30W	3/1-5/15 8/15-11/15	3/4" - 1"	90 lb/ac 4 lb/1000sf	175 lb/ac 4 lb/1000sf	175 lb/ac 4 lb/1000sf	2 tons/ac 100 lb/1000sf

- Any spot or borrow will be placed at a site approved by the Soil Conservation District.
  - All areas remaining or intended to remain disturbed for longer than fourteen (14) days shall be stabilized in accordance with the USDA, National Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.
- It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

DATE: 08/27/03  
DRAWN: YOU  
CHECKED: ME

SITE & SEDIMENT CONTROL PLAN FOR  
JOHN DOE  
LOT 1 - EASTON FAIRWAYS  
FIRST ELECTION DISTRICT  
TALBOT CO., MD

ACME ENGINEERING  
725 HERE STREET  
NOWHERE, MARYLAND 21212

# Wrap-Up: Questions / Discussion

## **CONTACT INFORMATION:**

Permits & Inspections: 410-770-6840

Planning & Zoning: 410-770-8030

Public Works: 410-770-8170

Environmental Health: 410-770-6880

Soil Conservation District: 410-822-1577