

**GENERAL NOTES**

- Subject property zoned "R-SA-B" per 2/02/04 Comprehensive Zoning Plan and the Comp Lite Zoning Amendments adopted 7/28/06.
- Property is within the Metropolitan District.
- Public water and sewer will be used within this site. Contr. # 24-3585-D & 178-W will be utilized.
- Number of parking spaces required: 32 (2 per unit)  
Total number of parking spaces provided: 64 (4 parking spaces provided per unit)  
Number of parking spaces provided with one-car garage/driveway units: 32  
Number of common-area parking spaces provided: 32
- The Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:  
State Highway Administration 410.531.5533  
BGE(Contractor Services) 410.850.4620  
BGE(Underground Damage Control) 410.787.9068  
Pisa Utility 1.800.257.7777  
Colonial Pipeline Company 410.795.1949  
Howard County, Dept. of Public Works, Bureau of Utilities 410.315.4900  
Howard County Health Department 410.315.2640  
AT&T 1.800.252.1153  
Verizon 1.800.743.0033/410.224.9210
- The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- The contractor shall notify the Department of Public Works/Bureau of Engineering Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- The lots shown herein comply with the minimum ownership, width and lot area as required by the Maryland State Department of the Environment.
- The project is in conformance with the latest Howard County Standards unless waivers have been approved.
- All curb and gutter to be Howard County Modified R-3.01 Curb and Gutter unless otherwise noted. See Detail Sheet 4.
- Related Howard County file numbers: F-06-226, F-07-148, WP-06-82, Contract #24-4375-D.
- The coordinates shown herein are based upon the Howard County Geodetic Control which is based on the Maryland State Plane Coordinate system. Howard County monument numbers 42E3 and 42E4 were used for this project.
- There are no floodplains, steep slopes, historic structures or cemeteries on-site.
- No grading, removal of vegetative cover or trees, or placement of new structures is permitted within the limits of wetlands, streams, or their buffers and forest conservation easement areas.
- All paving to be P-2 unless otherwise noted, see sheet 4 for details.
- All proposed spot elevations along curb and gutter are to the flowline unless otherwise noted.
- All construction shall be in accordance with the latest standards and specifications of Howard County in addition to MSHA standards and specifications if applicable.
- Any damage to public right-of ways, paving or existing utilities will be corrected at the contractor's expense.
- Existing utilities are located by the use of any or all of the following: Road Construction Plans, Field Surveys, Public Water and Sewer Plans and other available record drawings. Approximate location of the existing utilities are shown for the contractor's information. Contractor shall locate existing utilities well in advance of construction activities and take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to the contractor's operation shall be repaired immediately at the contractor's expense.
- All reinforced concrete for storm drain structures shall have a minimum of twenty-eight (28) days strength at 3,500 psi. Any RCP Storm Drain pipe bedding shall be Class "C".
- All HDPE pipe specification and installation shall meet AASHTO M-252 Type S, M-294 Type S and AASHTO D2321, respectively.
- Soil compaction specifications, requirements, methods and materials are to be in accordance with the recommendations of the project Geotechnical Engineer. Geotechnical Engineer to confirm acceptability of proposed paving section, based on soil test, prior to construction.
- All traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- Estimates of Earthwork quantities are provided solely for the purpose of calculating fees.
- All exterior light fixtures shall be oriented to direct light inwards and downwards on-site away from all adjoining residential properties and public roads in accordance with Section 134 of the Howard County Zoning Regulations.
- A.P.F.O. traffic study prepared by MARS Group, Inc., Approved on August 30, 2006.
- Wetlands Delineation and Report and Forest Stand Delineation prepared by Exploration Research Inc.
- All sign posts used for traffic control signs installed in the County Right-of-Way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) - 3' long. A galvanized steel pole cap shall be mounted on top of each post.
- In accordance with Section 128 of the Howard County Zoning Regulations, bay windows, chimneys, or exterior stairways not more than 16 feet in width and not more than 4 feet in height are permitted. Porches, or decks, open or enclosed may project not more than 10 feet into the front or rear yard setback. BRL's shown taken from Howard County Zoning Regulation for the Zoning District.
- Driveway(s) shall be provided prior to issuance of a use and occupancy permit for any new dwelling to insure safe access for fire and emergency vehicles per the following (minimum) requirements:  
a) Width-12 feet (16' serving more than one residence).  
b) Surface-6 inches of compacted crusher run base with 1 1/2" Min. tar and chip coating.  
c) Geometry-max. 14% grade, max. 10% grade change, and 45 foot turning radius.  
d) Structures (bridges/culverts)-capable of supporting 25 gross tons (H25-loading).  
e) Drainage elements-capable of safely passing 100 year flood with no more than one foot depth over driveway surface.  
f) Structure clearance-minimum 12 feet.  
g) Maintenance-sufficient to insure all weather use.
- Boundary and existing Topography Survey prepared by FSH Associates in July 2005.
- The existing topography is taken from a field survey with maximum 2 foot contour
- The forest conservation obligation for the site of 0.32 acres (13,939 sq. ft.) of afforestation has been met by:  
A. The creation of onsite 0.13 acre/5,516 sq. ft. afforestation FCE #1, for which forest conservation surety in the amount of \$2,358.00 (5,516 sq. ft. - 800 sq. ft. of credit for 2 landscape trees = 4,716 sq. ft. x \$0.50 = \$2,358.00) has been posted with the Developer's Agreement, and;  
B. Due to space limitations on site and the small outstanding afforestation obligation, a fee-in-lieu payment of \$6,317.25 has been made to the Howard County Forest Conservation Fund for the remain 8,423 sq. ft. of outstanding afforestation obligation. (13,939 sq. ft. = 5,516 sq. ft. of FCE#1 = 8,423 sq. ft. x \$0.75 = \$6,317.25)
- Street light placement and type of fixture and pole shall be in accordance with the Howard County Design Manual Volume III (1993) and as modified by Guidelines for Street Lights in Residential Developments (June 1993). A minimum spacing of 20 feet shall be maintained between any street light and any tree.
- Stormwater management for this site is provided as follows:  
a. CPV; The site is exempt due to one subdrainage area generating less than 2 CFS and one drainage area draining into an existing stormwater management facility without net increase in RCN.  
b. WGV and REV is provided in a Grass Channel, Two Dry Swales and a Perimeter Sand Filter.  
c. The Grass Channel, Two Dry Swales, and Perimeter Sand Filter will be privately owned and maintained by the H.O.A.
- Stormwater management for this site is privately owned and maintained by the Homeowner Association.
- This project is subject to WP-06-82. On 3/3/06 the planning director approved a waiver from section 16.144(a) and (f) to not have to submit and obtain approval of sketch and preliminary plans before submitting a final plan to combine two deeded multi-family zoned parcels into one parcel.
- Trash pickup shall be private.
- This plan is subject to Design Manual waiver from section 5.2.4.1 in Design Manual I which requires that there be a 25' setback from the end of a Rip-Rap outfall to any property line. On 11/2/2006 The Chief of Development Engineering Division approved a waiver allowing the required 25 foot distance be reduced to zero (0) feet.

# SITE DEVELOPMENT PLANS

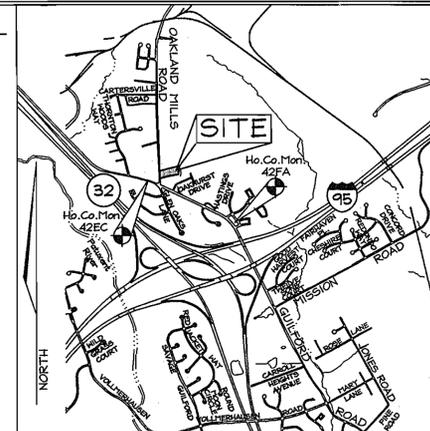
## OAKLAND PLACE

### UNITS 1 THRU 16

### HOWARD COUNTY, MARYLAND

**LEGEND**

- Existing Contour
- Proposed Contour
- Existing Spot Elevation
- Proposed Spot Elevation
- Direction of Flow
- Existing Trees to Remain
- Wetlands



VICINITY MAP  
SCALE: 1"=2000'  
ADC MAP 20, GRID 2-B  
GEODEIC SURVEY CONTROLS

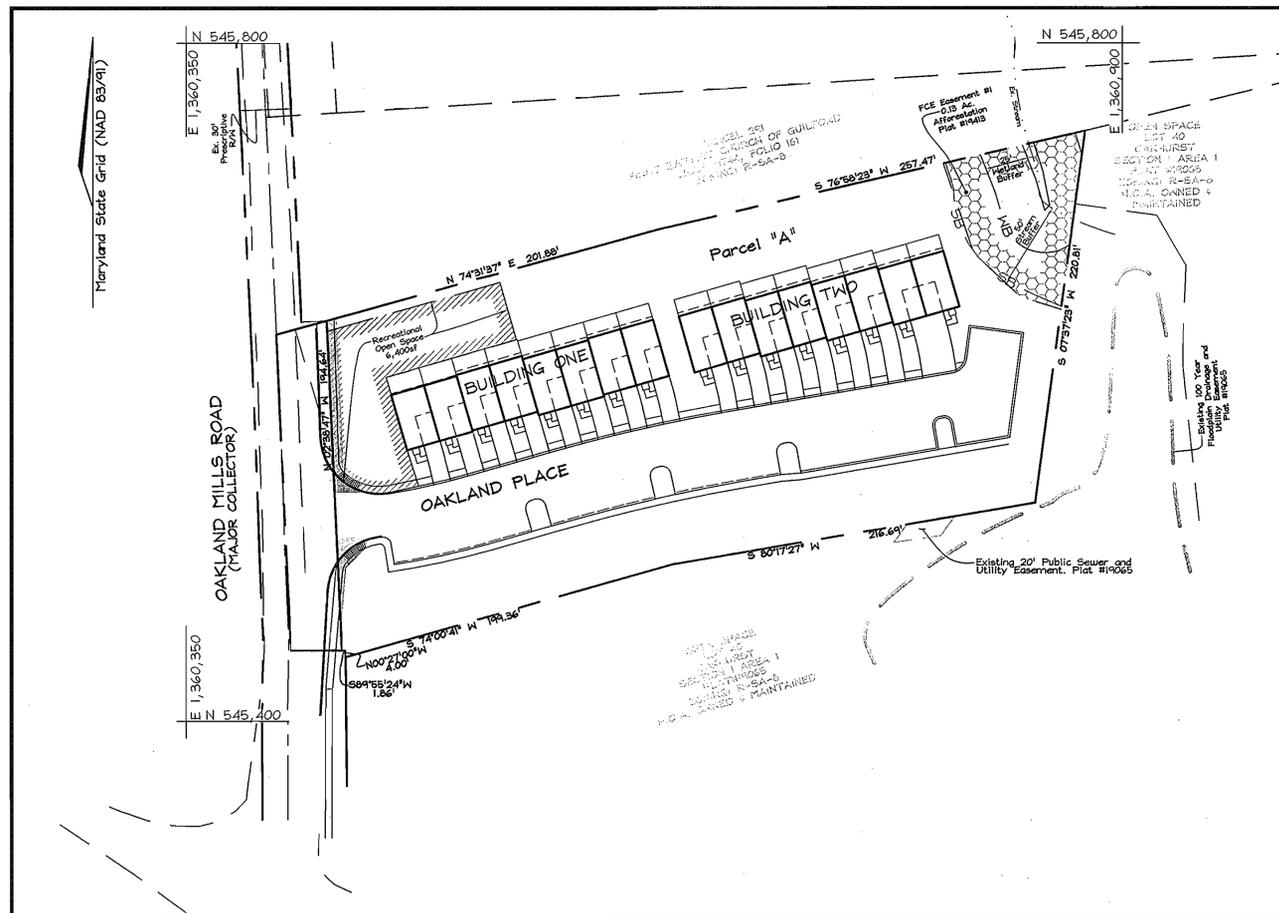
Sta. 42EC	N 545,417.005	E 1,360,140.3872	El.: 365.406 (feet)
Sta. 42FA	N 544,412.816	E 1,362,179.37	El.: 341.829 (feet)

**ADDRESS CHART**

UNIT	STREET
1	0215 OAKLAND PLACE
2	0217 OAKLAND PLACE
3	0219 OAKLAND PLACE
4	0221 OAKLAND PLACE
5	0223 OAKLAND PLACE
6	0225 OAKLAND PLACE
7	0227 OAKLAND PLACE
8	0229 OAKLAND PLACE
9	0231 OAKLAND PLACE
10	0233 OAKLAND PLACE
11	0237 OAKLAND PLACE
12	0239 OAKLAND PLACE
13	0241 OAKLAND PLACE
14	0243 OAKLAND PLACE
15	0245 OAKLAND PLACE
16	0247 OAKLAND PLACE

**SHEET INDEX**

DESCRIPTION	SHEET No.
Cover Sheet	2 of 10
Site Development Plan	2 of 10
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Sediment and Erosion Control Details	4 of 10
Storm Drain Drainage Area Map & Profiles	4 of 10
Landscape Plan	5 of 10
Stormwater Management, Sewer, Notes and Details	6 of 10
Perimeter Sand Filter Structure Notes and Details	7 of 10
Forest Conservation Plan	8 of 10
Forest Conservation Plan, Notes and Details	9 of 10
Existing Conditions Plan	10 of 10



LOCATION MAP  
SCALE: 1"=50'

**SITE ANALYSIS DATA CHART**

- Total project area: 1.991 ac.± (Parcel 'A' F-06-226).  
Gross area before public road Right of Way widening dedication: 2.122 ac.±  
Net area: 2.122 ac.± (No Floodplain or Steep Slopes on site).
- Area of plan submission: 1.991 ac.
- Limit of disturbed area: 1.96ac.
- Area of Right of Way Dedication = 0.131 Ac.± (under F-06-226)
- Present zoning: "R-SA-B" per 02/02/04 Comprehensive Zoning Plan and the Comp Lite Zoning Amendments adopted 7/28/2006.
- Proposed uses for site & structures: Single Family Attached
- Floor space on each level of building(s) per use lot: Floor: 680sf per unit
- Total number of units allowed (8 per net acre): 16
- Total number of units proposed: 16
- Number of parking spaces required: 32 (2 per unit)
- Total number of parking spaces provided: 64 (4 parking spaces provided per unit)
- Number of parking spaces provided with one-car garage/driveway units: 32
- Number of common area parking spaces provided: 32
- Open Space/Area required: 0.53ac.± or 25% of Gross area
- Open Space/Area provided:  
Credited Open Space: 1.00 ac.± or 47% of Gross area  
Recreational Open Space/Area required: 400sf per unit or 16 units x 400sf = 6,400sf  
Recreational Open Space/Area provided: 6,400sf
- Building coverage of site: 14,200 sf or 15.4%
- Required Moderate income housing units (at least 10% of total): 2 units  
Provided Moderate income housing units: 2 units  
The MHU agreement and covenants were recorded on: 11/21/07 at L.10979 F.214-221 & L.10979 F.222-228.
- Howard County Reference file Numbers:  
F-06-226, F-07-148, WP-06-82, Contract #24-4375-D.

**PROFESSIONAL CERTIFICATION**

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22418, Expiration Date: 6/28/08.

**PERMIT INFORMATION CHART**

Subdivision Name: Oakland Place PARCEL 'A'	Section/Area: N/A	Lot/Parcel No. PARCEL A
Plot # 19412 & 19413	Grid 17	Zoning R-SA-B
Water Code E 14	Sewer Code 5200400	Tax Map No. 42
		Elect. District 6th
		Census Tract 6067.03

**OWNER/DEVELOPER**

OAKLAND PLACE, L.L.C.  
c/o Brian D. Boy  
9695 Norfolk Avenue  
Laurel, Maryland 20723  
(410) 742-2665

**COVER SHEET**

OAKLAND PLACE  
PARCEL "A"

TAX MAP 42 GRID 17  
6TH ELECTION DISTRICT

PARCEL 68, 363  
HOWARD COUNTY, MARYLAND



**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkridge, MD 21075  
Tel: 410-587-5200 Fax: 410-796-1562  
E-mail: info@fsh.com

DESIGN BY: PS  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: As Shown  
DATE: Oct. 12, 2007  
W.O. No.: 3328  
SHEET No.: 1 of 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 10/19/07  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 10/19/07  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 10/22/07  
DIRECTOR DATE

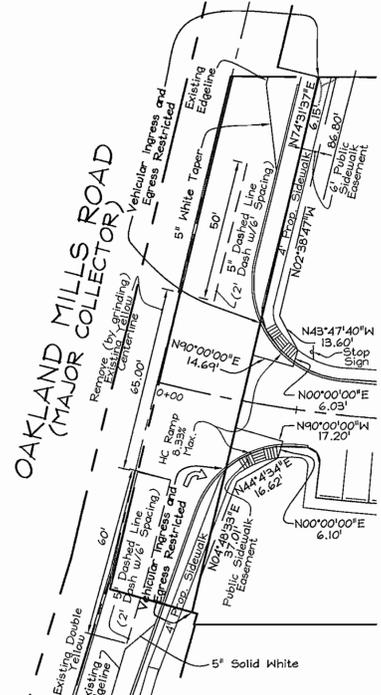
**OAKLAND MILLS PROPERTY**

**STORMWATER MANAGEMENT SUMMARY TABLE**

CATEGORY	DA 1	DA 2	DA 3	DA 4	DA 5	COMMENTS
CHANNEL PROTECTION VOLUME (Cp)	N/A	N/A	N/A	N/A	N/A	See Note No. 1
WATER QUALITY VOLUME (WQ)	1724/11251	588/7826	475/1379	1049/71089	118/216	See Note No. 2
RECHARGE VOLUME (Rv)	211/215	109/109	74/74	111/111	0/0/0	See Note No. 3
OVERBANK FLOOD STORAGE (Op)	N/A	N/A	N/A	N/A	N/A	Not Required by Howard County
EXTREME FLOOD VOLUME (Ov)	N/A	N/A	N/A	N/A	N/A	Not Required by Howard County

- Notes:
- Channel protection volume (Cp) is required and provided within the existing SWM structure on Oakhurst (F-97-107) since pond was sized to handle runoff volume generated from this site.
  - Way for Drainage Area 1 is treated by grass channel credit. Areas 2 & 3 are treated within Engineered Dry Swale structure. Way for Area 4 is provided within a perimeter sand filter. Area 5 is treated thru the use of sheet flow to buffer credits, and Natural Area Conservation for undeveloped conservation area.
  - Proposed management of recharge volume (Rv) will be provided in a gravel chamber beneath the Engineered Dry Swale structure for DA-2.
  - Overbank and extreme flood storage volume is not required for this site.

DA	Q1 EXISTING	Q1 PROPOSED	Q10 EXISTING	Q10 PROPOSED	Q100 EXISTING	Q100 PROPOSED
1 (0.87 Ac)	.52	1.26	1.86	3.52	9.76	5.07
2 (1.57 Ac)	1.08	2.10	3.53	6.64	9.69	10.20



**SIDEWALK, EASEMENT, INGRESS/EGRESS LIMITS AND STREET MARKING DETAIL**  
Scale: 1"=30'

NOTE: Driveway entrance to be constructed per Design Manual Volume IV Standard Detail R-6.07

NOTE: Grass channel, Dry swales and Sand Filters are privately owned and maintained by the Homeowner's Association.

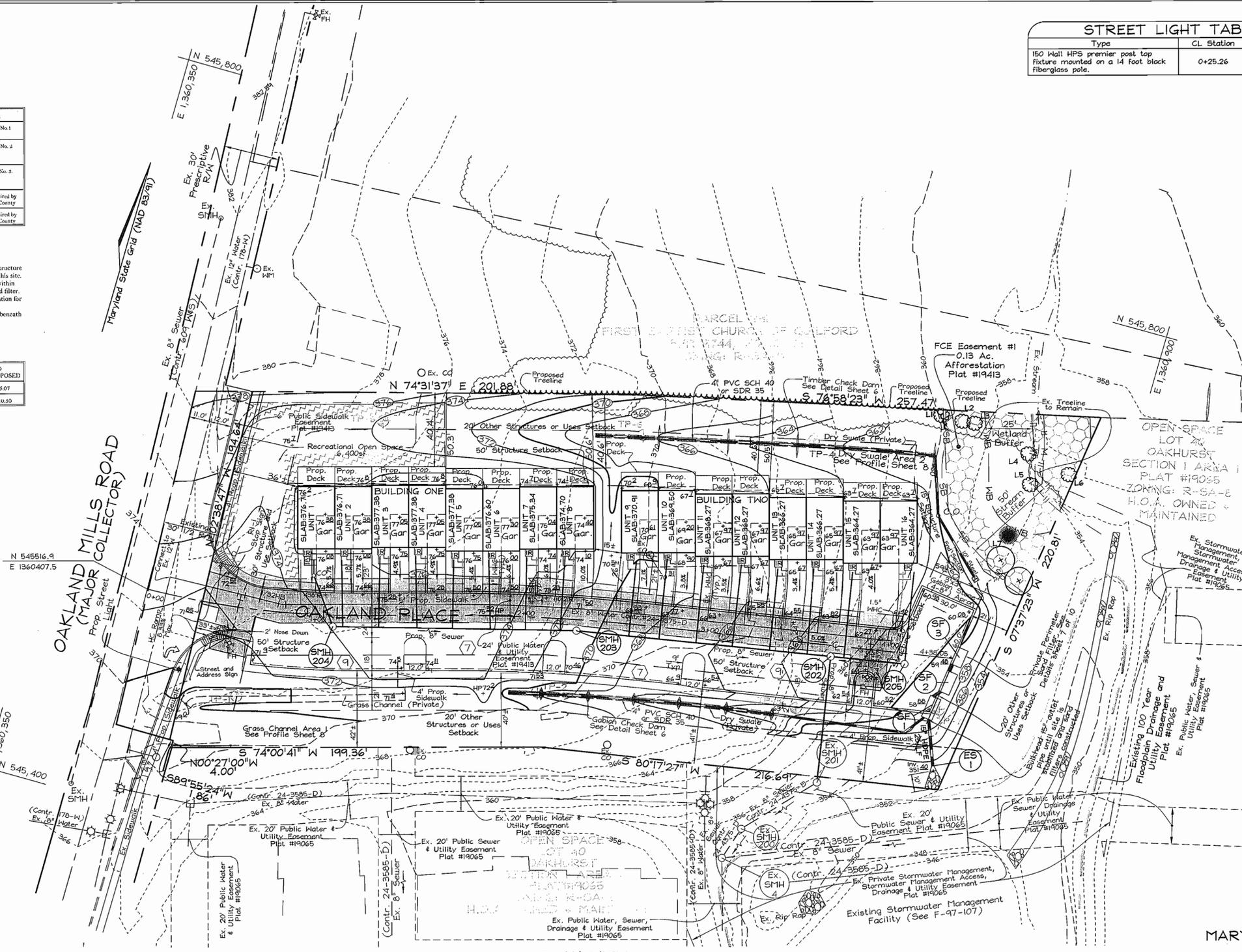
NOTE: TRASH PICKUP IS PRIVATE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

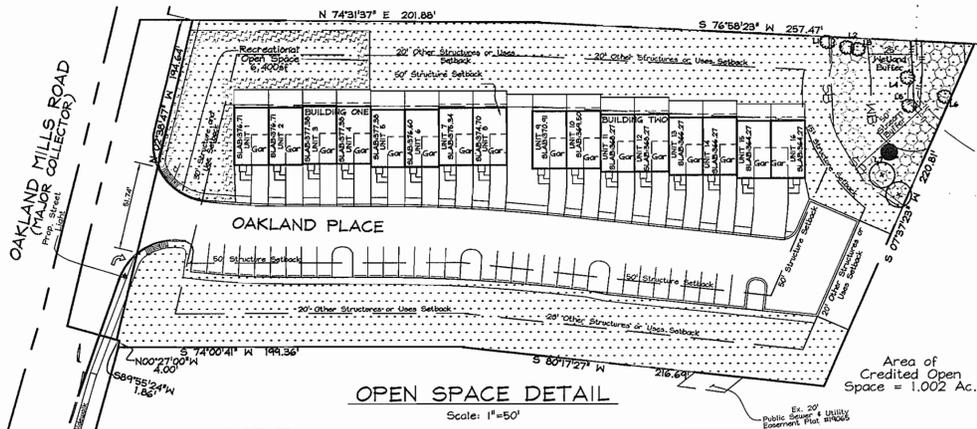
*[Signature]* 10/19/07  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 10/19/07  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 10/19/07  
DIRECTOR DATE



**PLAN VIEW**  
Scale: 1"=30'



**OPEN SPACE DETAIL**  
Scale: 1"=50'

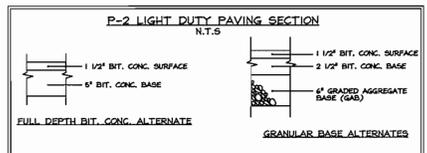
NOTE: All W/C are 1.5" in size.

**STREET LIGHT TABLE**

Type	CL Station	Offset
150 Watt HPS premier post top fixture mounted on a 14 foot black fiberglass pole.	0+25.26	38.71' R

**LEGEND**

- Existing Contour: ---382
- Proposed Contour: ---382
- Spot Elevation: +82.53
- Direction of Flow: --->
- Existing Trees to Remain: [Tree Symbol]
- Parking Spots: [Spot Symbol]
- Existing Spot: [Spot Symbol]
- Existing Sewer Cleanout: [Cleanout Symbol]
- Existing Utility Pole: [Pole Symbol]
- Proposed Street Light: [Light Symbol]
- Credited Open Space: [Dotted Area]

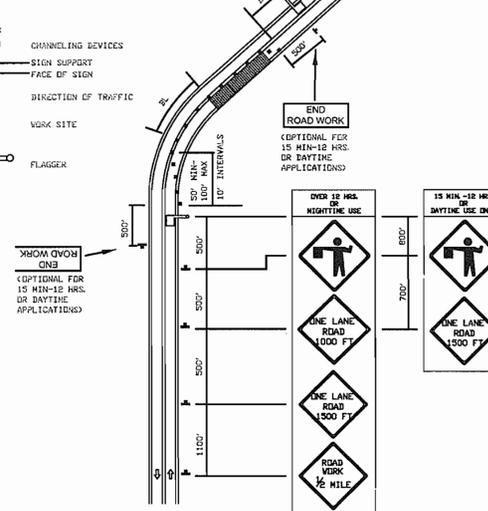


Note: Paving sections shown relates to a CBR value of 7. Actual CBR test results may cause modification of these paving sections.

**TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION**

NOTE: THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE GENERAL NOTES TO 104.02-10 - MD 104.02-18 AND STANDARD DETAILS TO 104.02-01 - MD 104.02-02

NOTE: FLAGGER SHALL NEVER BE STATIONED MORE THAN 1500' AWAY FROM THE ADVANCE FLAGGER SIGN.



**MARYLAND STATE HIGHWAY STANDARD DETAIL MD 104.02-10**  
NOT TO SCALE

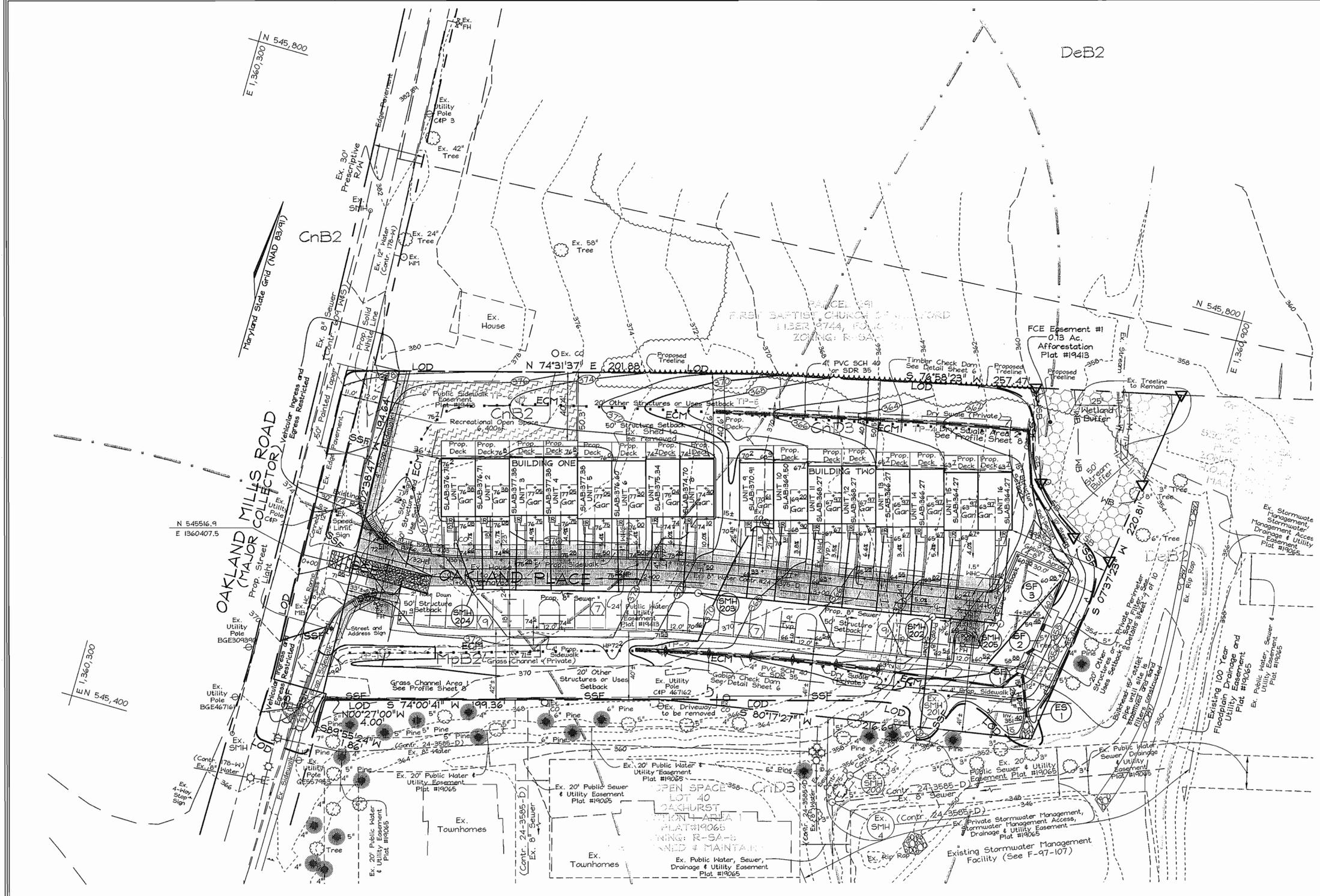
**OWNER/DEVELOPER**  
OAKLAND PLACE, L.L.C.  
c/o Brian D. Boy  
9645 Norfolk Avenue  
Laurel, Maryland 20723  
(410) 792-2565

**SITE DEVELOPMENT PLAN**  
**OAKLAND PLACE**  
PARCEL "A"

TAX MAP 42 GRID 17 6TH ELECTION DISTRICT PARCEL 68, 363 HOWARD COUNTY, MARYLAND

**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkridge, MD 21075  
Tel: 410-567-5200 Fax: 410-796-1562  
E-mail: info@fshnet.com

DESIGN BY: PS  
DRAWN BY: CRH2  
CHECKED BY: ZTF  
SCALE: As Shown  
DATE: Oct. 12, 2007  
H.O. No.: 3328  
SHEET No.: 2 OF 10



PLAN  
SCALE: 1"=30'

**LEGEND**

- Existing Contour: - - - - -302
- Proposed Contour: ————+02.53
- Spot Elevation: +02.53
- Direction of Flow: ————>
- Tree Protection Fence: [Symbol]
- Existing Trees to Remain: [Symbol]
- Stabilized Construction Entrance: [Symbol]
- Super Silt Fence: ————SSF———SSF———
- Limit of Disturbance: ————LOD———
- Erosion Control Matting: [Symbol]
- Soil Boundary: [Symbol]
- Test Pit (TP-#): TP-3
- Stream Banks: [Symbol]

**TEST PIT TABLE**

TP-#	DEPTH(FT)	FINDINGS
1	11	No rock or water was found.
2	15	No rock or water was found.
3	16	No rock or water was found.
4	10	No rock or water was found.
5	13	No rock or water was found.
6	12	No rock or water was found.

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
CnB2	Chillum-Fairfax loams, 1 to 5 percent slopes, moderately eroded	C
CnB3	Chillum-Fairfax loams, 5 to 15 percent slopes, severely eroded	C
DeB2	Delanco silt loam, 3 to 8 percent slopes, moderately eroded	C
MpB2	Montalto silt loam, 3 to 8 percent slopes, moderately eroded	B

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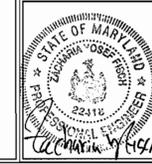
**SEDIMENT AND EROSION CONTROL PLAN**  
**OAKLAND PLACE**  
 PARCEL "A"  
 TAX MAP 42 GRID 17 6TH ELECTION DISTRICT PARCEL 68, 363  
 HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 10/19/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 10/19/07  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 10/22/07  
 DIRECTOR

REVIEWED FOR HOWARD SCD AND MEET [Signature] REGULATORY REQUIREMENTS  
 [Signature] 10/19/07  
 USGS-NATURAL RESOURCES CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 [Signature] 10/19/07  
 HOWARD SCD

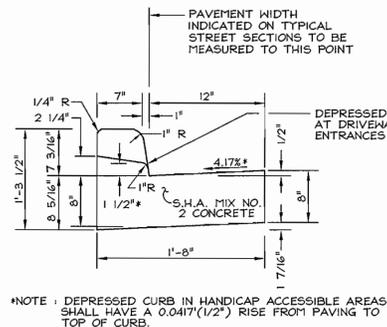
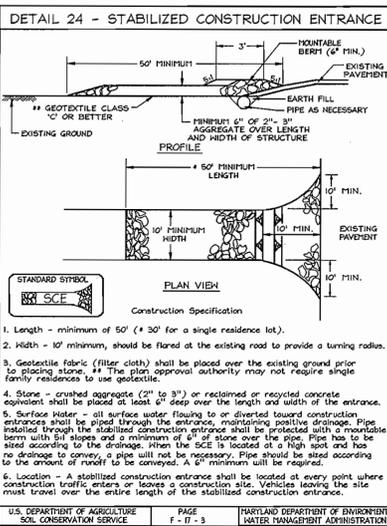
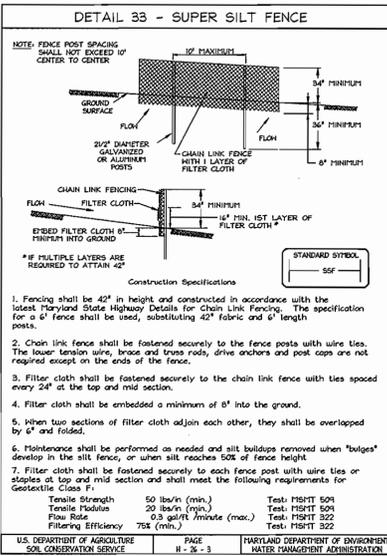
**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 10/11/07  
 SIGNATURE OF ENGINEER  
 ZACHARIA Y. FISCH

**DEVELOPER'S CERTIFICATE**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 10/11/07  
 SIGNATURE OF DEVELOPER



**FSH Associates**  
 Engineers Planners Surveyors  
 6339 Howard Lane, Elkridge, MD 21075  
 Tel: 410-567-5200 Fax: 410-796-1562  
 E-mail: info@fsher.com

DESIGN BY: PS  
 DRAWN BY: CRH2  
 CHECKED BY: ZYF  
 SCALE: 1"=30'  
 DATE: Oct. 12, 2007  
 W.O. No.: 3328  
 SHEET No.: 3 OF 10



### STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
ES-1	15" HDPE End Section	N 545,540.98 E 1,360,842.48	350.15	-	351.40	Manhole or equivalent
SC-1	Perimeter Sand Filter (F-3)	N 545,570.91 E 1,360,833.00	354.98	356.88	352.06	STC 4501

NOTE: 1. Top elevations for STC 4501 is to the center, edge of grate at the low point.  
2. Top slope of structures to conform to slope of paving

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/19/07

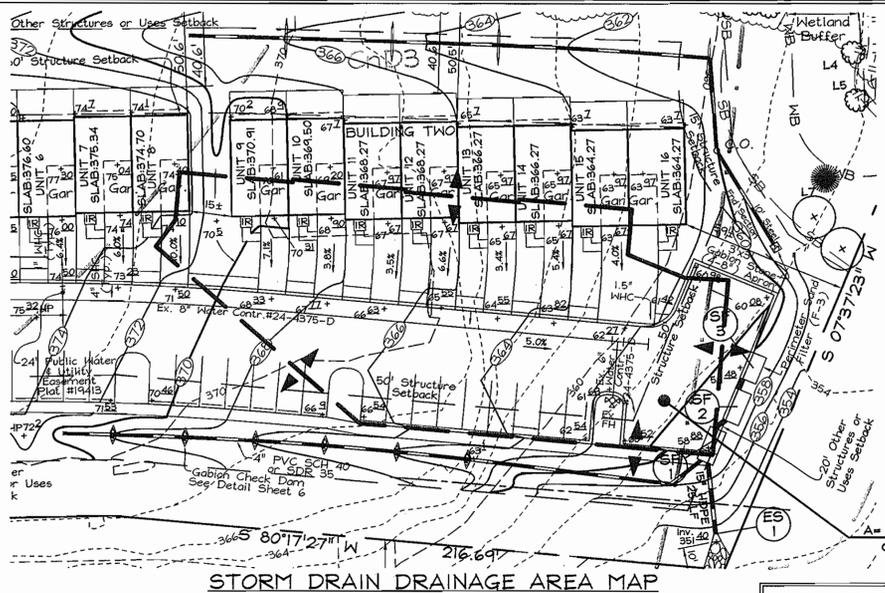
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 10/19/07

DIRECTOR DATE 10/22/07

## SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (318-1855).
- All vegetation and structural practices to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
 

Total Area	1.92 Acres
Area Disturbed	1.34 Acres
Area to be roofed or paved	0.82 Acres
Area to be vegetatively stabilized	0.98 Acres
Total Cut	41,260 CU
Total Fill	81,552 CU
Offsite waste/borrow area location	**
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
- Earthwork quantities are solely for the purpose of calculating fees. Contractor to verify all quantities prior to the start of construction.
- To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit.



## 21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

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

**Conditions Where Practice Applies**

- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
  - The original soil to be vegetated contains material toxic to plant growth.
  - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

**Construction and Material Specifications**

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loamy, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2" in diameter.
  - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
  - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

## OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORM WATER FILTRATION SYSTEMS (F-2 AND F-3)

- The sediment chamber outlet devices shall be cleaned and/or repaired when draughtdown times within the chamber exceed 36 hours.
- Debris and litter shall be removed if necessary to insure proper operation of the system.
- Sediment shall be cleaned out of the sedimentation chamber when it accumulates to a depth of 6 inches. Vegetation within the sediment chamber shall be limited to 18 inches.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A logbook shall be maintained to determine the rate at which the facility drains.
- The maintenance logbook shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

## OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS (O-1 AND O-2)

- The open channel system shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The open channel shall be mowed a minimum of as needed during the growing season to maintain a maximum grass height of less than 6 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the open channel system shall be repaired as soon as it is noticed.
- Remove silt in the open channel system when it exceeds 25% of the original flow.

## SEQUENCE OF CONSTRUCTION

- Obtain grading permit.
- Notify Howard County Department of Inspections, License and Permits at (410) 318-1880 at least 24 hours before starting any work.
- Install stabilized construction entrance and super silt fence. (1 week)
- After receiving permission from the sediment control inspector, rough grade site. (1 week)
- Construct roads, storm drain perimeter sand filter and widening of Oakland Mills Road (installing SSF after rough grading) and begin building construction. Block inlets to sand filter and block 15" outlet pipe in SF-1. (1 month)
- Complete building construction, construct grass channels, dry swales, first grade site and install Erosion Control Matting. (4 months)
- Install landscaping plantings. (1 week)
- Upon stabilization of all disturbed areas and with the permission of the Sediment Control Inspector, remove all sediment control measures, unblock inlets to sand filter, unblock 15" outlet pipe in SF-1, and stabilize any remaining disturbed area. (1 week)
- Dry swale underdrains and gravel to be protected from sedimentation with a geotextile fabric wrap at the end of each day's work. Run-off to be temporarily diverted around swale construction area with shallow trench.
- SSF protection shown within road widening area may be omitted as a field change with permission of Howard County Sediment Control Inspector.

## PERMANENT SEEDING SUMMARY

No.	Species	Seed Mixture (Hardness Zone 7a and 6b)		Fertilizer Rate (10-20-20)			Lime Rate
		Application Rate (lb/acre)	Seeding Dates	Seeding Depths	N	P205	
10	Tall Fescue (80%) Hard Fescue (20%)	120 30	3/1-5/15 8/15-11/15	0.5 in.	90lb/ac (2.0lb/1000sf)	175lb/ac (4lb/1000sf)	175lb/ac (4lb/1000sf)

## TEMPORARY SEEDING NOTES

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

**SOIL AMENDMENTS:** In lieu of soil test recommendations, use the following schedule: Apply 2 tons per acre dolomitic limestone (92 lbs/1000 s.f.) And 600 lbs. / acre (15 lbs./1000s.f.) of 10-10-10 before seeding. Harrow or disc into upper 3 in. of soil. **SEEDING:** Apply a mixture of Turf Type Tall fescue (80% and Hard Fescue (20%) in accordance with seeding dates and rates shown in the Temporary Seeding Summary shown on this sheet. For stabilization outside of the seeding dates, apply straw mulch at rates and methods specified below and apply permanent seeding when within proper seeding dates. **MULCHING:** Immediately following seeding, apply a uniform 1-2 in. Deep layer of un-rotted small grain straw at a rate of 2 tons/acre. (Apply 2.5 Tons/acre if a mulch anchoring tool is used). Straw may be anchored with wood cellulose fiber at a rate of 750 lbs. / acre mixed at a ratio of 50 lbs. of wood fiber/ 100 gal. of water. Synthetic liquid binders such as Terra Tax II, Acrylic DLR (Agra-Tack), DCA-70, Petroset and other approved equals may be used at rates recommended by the manufacturers.

**MULCHING:** Immediately following seeding, apply a uniform 1-2 in. Deep layer of un-rotted small grain straw at a rate of 2 tons/acre. (Apply 2.5 Tons/acre if a mulch anchoring tool is used). Straw may be anchored with wood cellulose fiber at a rate of 750 lbs. / acre mixed at a ratio of 50 lbs. of wood fiber/ 100 gal. of water. Synthetic liquid binders such as Terra Tax II, Acrylic DLR (Agra-Tack), DCA-70, Petroset and other approved equals may be used at rates recommended by the manufacturers.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

## TEMPORARY SEEDING SUMMARY

No.	Species	Seed Mixture (Hardness Zone 6a and 7a)		Fertilizer Rate (10-10-10)			Lime Rate
		Application Rate (lb/acre)	Seeding Dates	Seeding Depths	N	P205	
2	Barley or Rye plus Foxtail Millet	150 lbs (3.5lbs/1000sf)	2/1-11/30 (7a) 3/15-10/31 (6a)	1/4 in 1/2 in	600 lb/ac (15lb/1000sf)	600 lb/ac (15lb/1000sf)	2 tons/acre (100lb/1000sf)

## OWNER/DEVELOPER

OAKLAND PLACE, L.L.C.  
c/o Brian D. Boy  
9695 Norfolk Avenue  
Laurel, Maryland 20723  
(410) 792-2565

### SEDIMENT AND EROSION CONTROL DETAILS

### STORM DRAIN DRAINAGE AREA MAP & PROFILES

## OAKLAND PLACE

### PARCEL "A"

TAX MAP 42 GRID 17 6TH ELECTION DISTRICT PARCEL 68, 363 HOWARD COUNTY, MARYLAND

DESIGN BY: PS  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: As Shown  
DATE: Oct. 12, 2007  
W.O. No.: 3926  
SHEET No.: 4 OF 10

**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkridge, MD 21075  
Tel: 410-567-5200 Fax: 410-796-1582  
E-mail: info@fsh.com

## ENGINEER'S CERTIFICATE

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

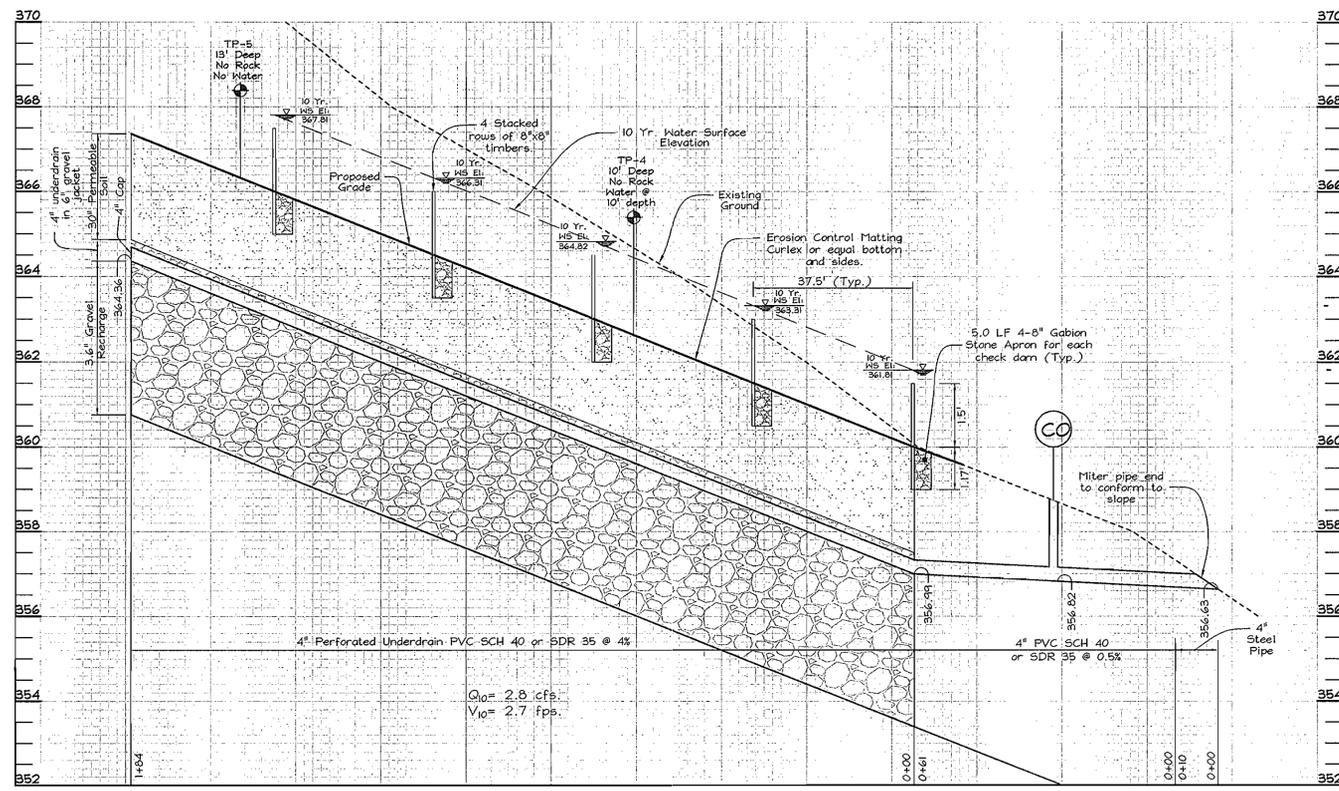
Zacharia Y. Fisch  
SIGNATURE OF ENGINEER  
10/11/07  
DATE

## DEVELOPER'S CERTIFICATE

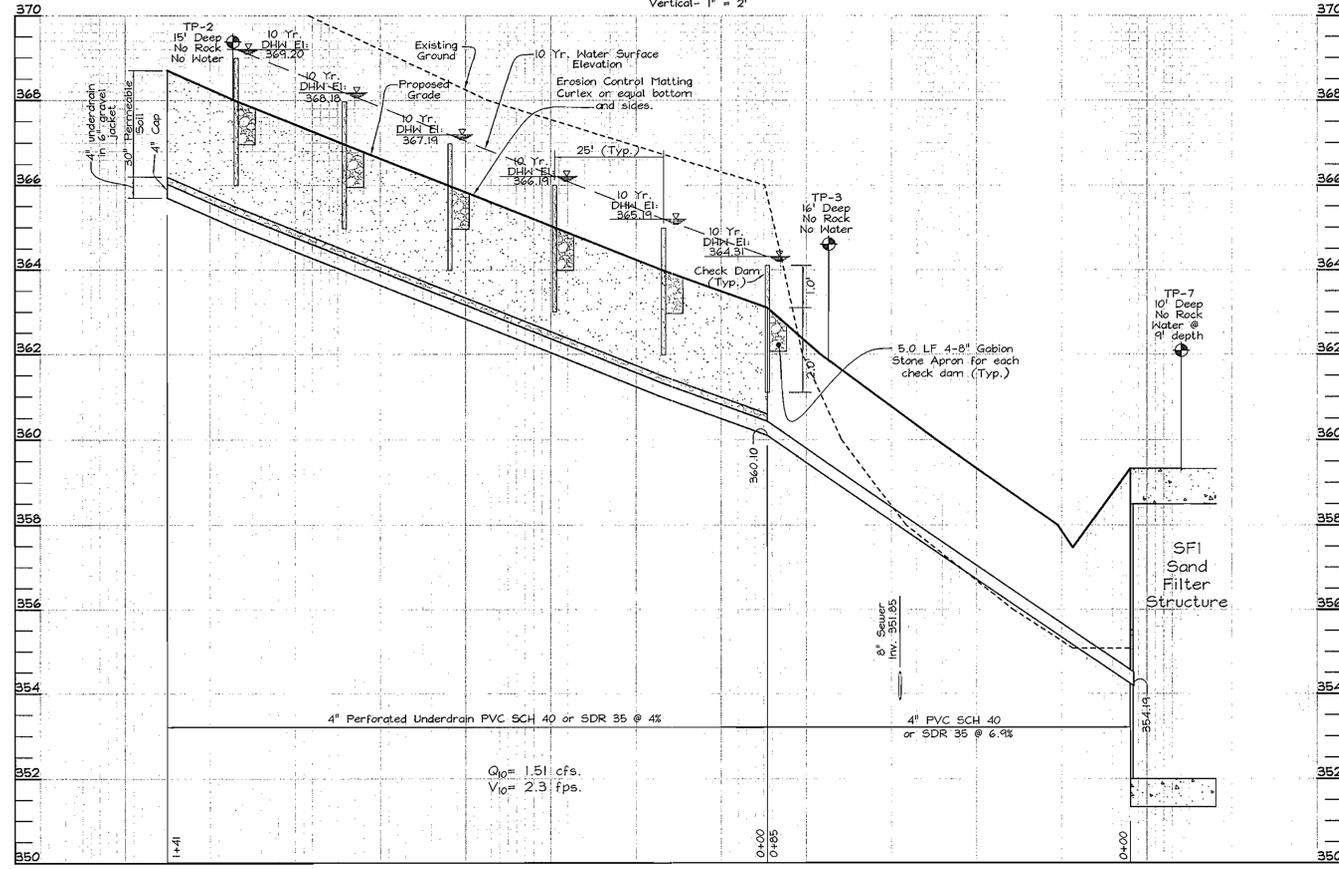
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

10/4/07  
SIGNATURE OF DEVELOPER  
DATE

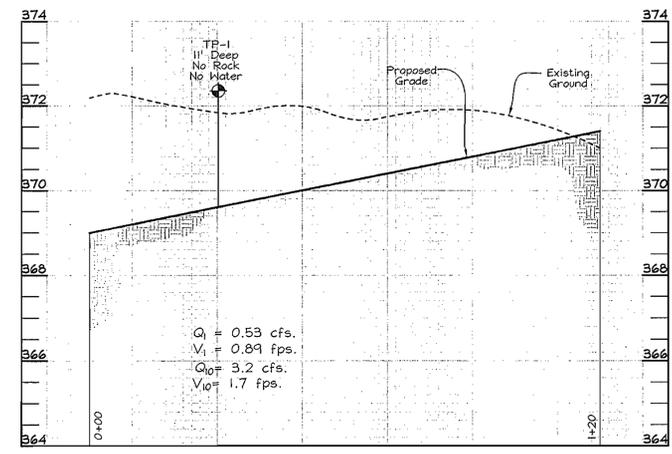




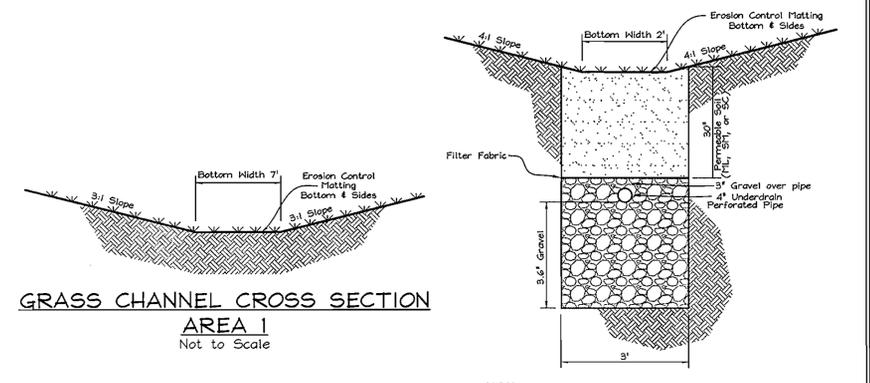
**DRY SWALE PROFILE AREA 2**  
SCALE: Horizontal - 1" = 20'  
Vertical - 1" = 2'



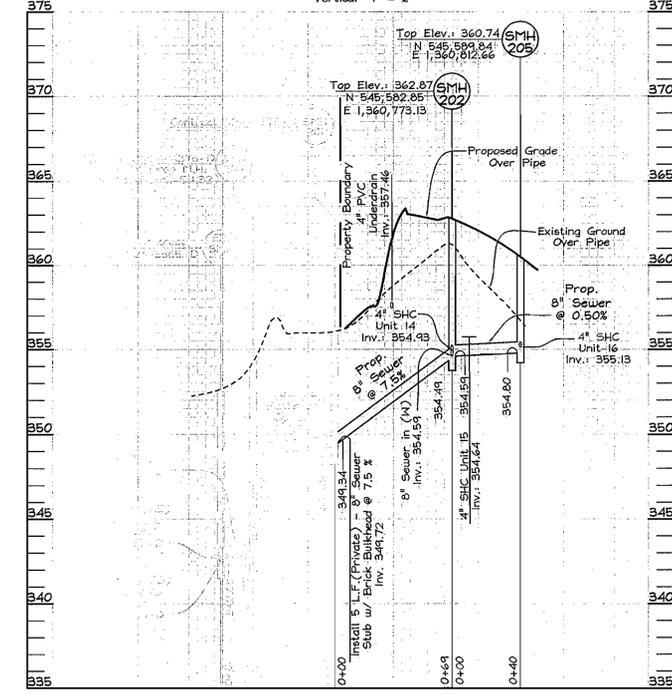
**DRY SWALE PROFILE AREA 3**  
SCALE: Horizontal - 1" = 20'  
Vertical - 1" = 2'



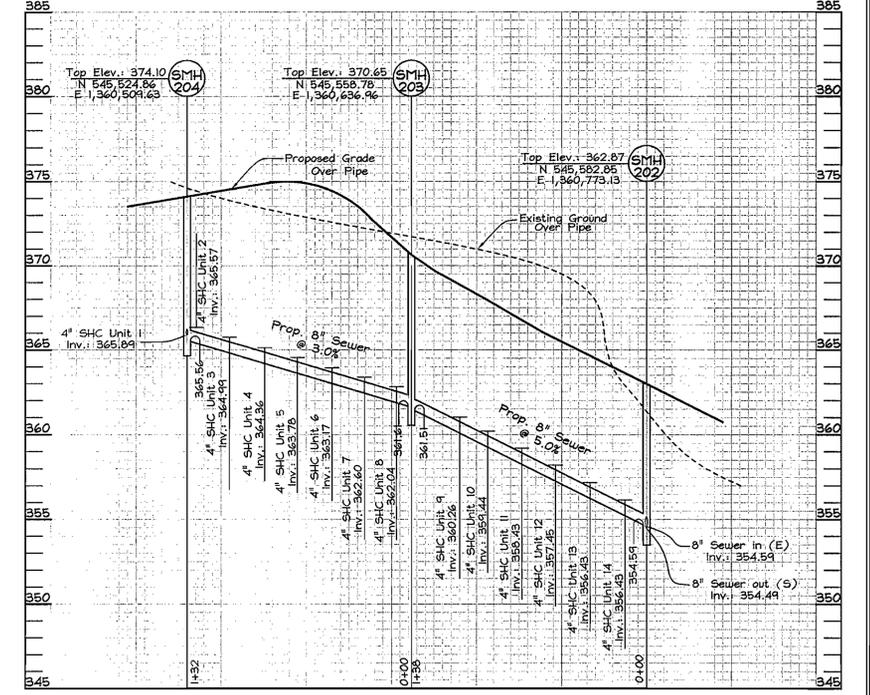
**GRASS CHANNEL PROFILE AREA 1**  
SCALE: Horizontal - 1" = 20'  
Vertical - 1" = 2'



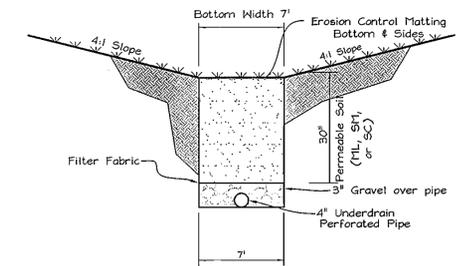
**DRY SWALE CROSS SECTION AREA 2**  
Not to Scale



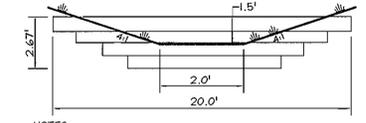
**SEWER PROFILE**  
SCALE: Horizontal - 1" = 50'  
Vertical - 1" = 5'



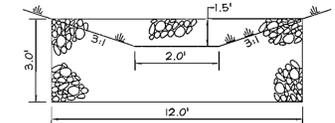
**SEWER PROFILE**  
SCALE: Horizontal - 1" = 50'  
Vertical - 1" = 5'



**DRY SWALE CROSS SECTION AREA 3**  
Not to Scale



**TIMBER CHECK DAM CROSS SECTION AREA 2**  
Not to Scale



**GABION CHECK DAM CROSS SECTION AREA 3**  
Not to Scale

NOTES:  
1. Pressure treated timbers to be treated at AHPA Standard C6.  
2. All timbers to be 8"x8" embedded 3.0 ft. into side slopes.

**OWNER/DEVELOPER**  
OAKLAND PLACE, L.L.C.  
c/o Brian D. Boy  
4645 Norfolk Avenue  
Laurel, Maryland 20723  
(410) 792-2565

**STORM WATER MANAGEMENT, SEWER, NOTES AND DETAILS**  
**OAKLAND PLACE**  
PARCEL "A"  
TAX MAP 42 GRID 17 6TH ELECTION DISTRICT  
PARCEL 68, 363 HOWARD COUNTY, MARYLAND

**FSH Associates**  
Engineers Planners Surveyors  
8339 Howard Lane, Elridge, MD 21075  
Tel: 410-587-5200 Fax: 410-796-1562  
E-mail: info@fisher.com

DESIGN BY: FS  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: As Shown  
DATE: Oct. 12, 2007  
P.O. No.: 3328  
SHEET No.: 6 OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Howard County Seal*  
10/16/07 DATE  
10/12/07 DATE  
10/22/07 DATE

**SAND FILTER LAYER AND SPECIFICATIONS:**

Upper Filter Layer: The washed gravel or aggregate layer at the top of the filter may be 1 to 3 inches thick meeting ASTM standard specifications for one (1) inch maximum diameter or SHA #57 gravel.

Geotextile Fabric: Refer to table B.3.1 Material Specifications for Sand Filters for specifications.

The fabric roll shall be cut with sufficient dimensions to cover the entire wetted perimeter of the filter area with a six-inch minimum overlap.

Sand Filter Layer: The sand filter layer shall be 12 inches deep. Clean AASHTO M-6/ASTM C-33 concrete sand is recommended, but sand with similar specifications may be used.

Top/Bottom Gravel Layer: The top/bottom gravel layer above the sand layer and surrounding the collector (perforated) pipes shall be AASHTO M-43 and 1/2 to 2 inch in diameter gravel and provide at least 3 inches cover of over the drainage pipes. No gravel is required under the pipes.

The gravel and the sand layer must be separated by a layer of geotextile fabric that meets the specification listed above.

Underdrain Piping: The underdrain piping consist of three 6-inch perforated pipes and shall be reinforced to withstand the load of the overburden. Perforations shall be 3/8 inch max. All piping shall be to Schedule 40 polyvinyl chloride or greater strength.

The minimum grade of piping shall be 1/8 inch per foot or 1% of the slope. Access should be provided for cleaning underdrain piping. Clean-outs for each pipe shall extend to the invert of overflow weir or to the maximum surface elevation of the structure.

Refer to table B.3.1 Material Specifications for Sand Filters for more detail.

**CONSTRUCTION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS OF SAND FILTER SYSTEMS**

**1) Construction Specifications**

The Perimeter Sand Filter structure may be either cast-in-place or precast. Precast structures require advance approval by the Department of Planning and Zoning, Development and Engineering Division (410-313-2420) and Engineer in charge. Cast-in-place shall be designed to meet the requirements of the "Standards Specification for Highway Bridges" American Association of State Highway Official (Reference 17)

\* Access manholes and steps to the filtration system shall conform to standard details referenced on sheets C-6.5

\* After completion of the structure shell, a leak test shall be performed to verify water tightness before the filter layers are installed.

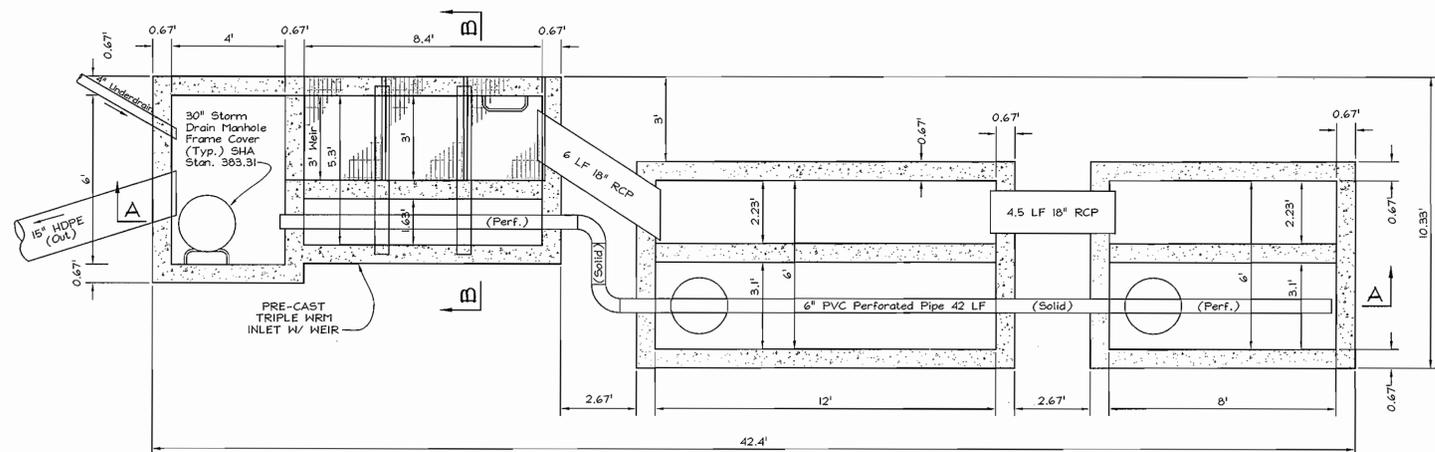
\* The approved erosion and sediment control plans shall include specific measures to provide for the protection of the filter system before the final stabilization of the site.

\* Excavation for the structure and connecting pipes shall include removal of all materials and objects encountered in the excavation; disposal of excavated material as specified in the approved erosion and sediment control plans, maintenance and subsequent removal of any sheeting, shoring and bracing, dewatering and precautions and work necessary to prevent damage to adjacent properties resulting from this excavation.

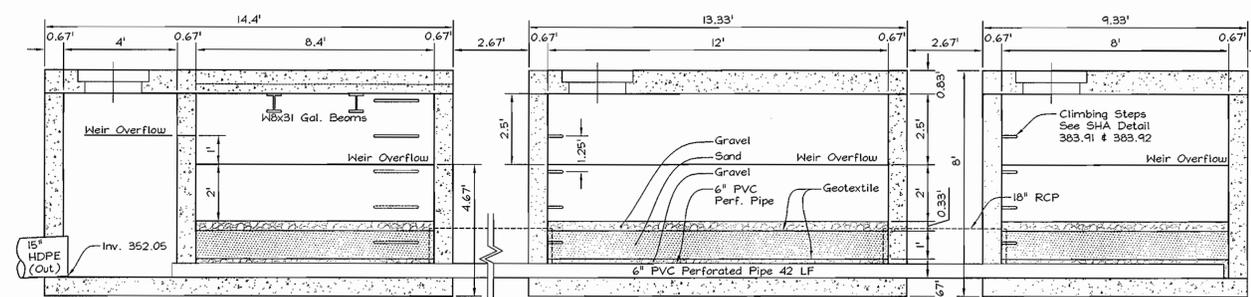
\* All filter materials in the second chamber shall be placed according to construction and materials standards and specifications, as specified on the approved construction plan.

\* No runoff shall be allowed to enter the sand filter system prior to completion of all construction activities, including revegetation and final site stabilization. Construction runoff shall be treated in separate sedimentation basins and routed to bypass the filter system. Should construction runoff enter the filter system prior to final site stabilization, all contaminated materials must be removed and replaced with new clean filter materials before a regulatory inspector approved the completion.

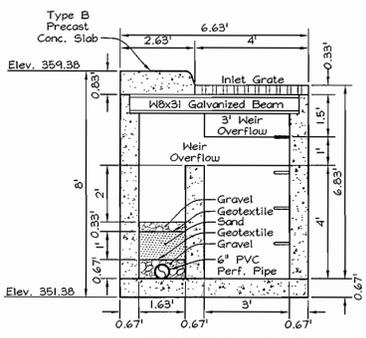
\* The water level in the filter chamber shall be monitored by the owner after the first storm event, before the project is certified as having been completed. If the dewatering time of the filter chamber takes longer than 24 hours, the top gravel layer and filter fabric underneath must be replaced with a more rapid draining fabric and clean gravel. The structure shall then be checked again to ensure a detention time that is less than 24 hours.



TOP VIEW



SECTION A-A



SECTION B-B

PERIMETER SAND FILTER (F-3)  
SCALE: 1"=3'

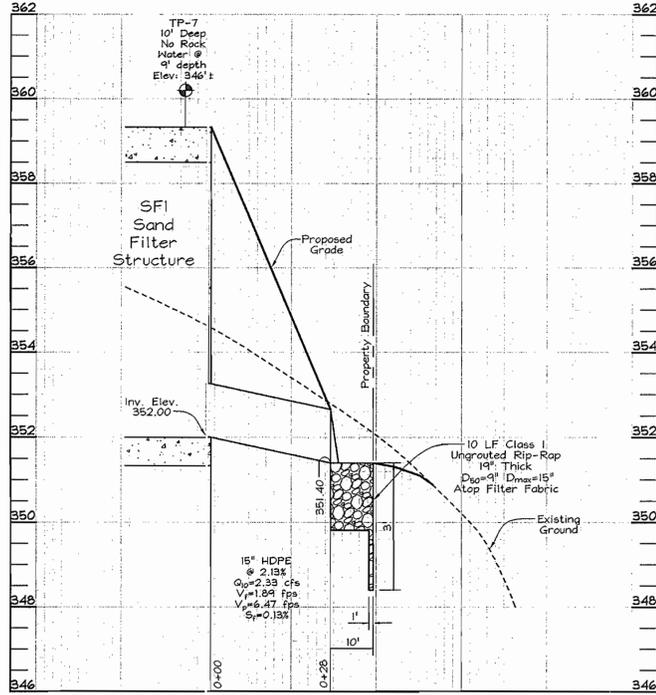
TABLE B.3.1 MATERIAL SPECIFICATIONS FOR SAND FILTERS			
MATERIAL	SPECIFICATIONS/TEST METHOD	SIZE	NOTES
SAND	CLEAN AASHTO-M-6 OR ASTM-C-33 CONCRETE SAND	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.
UNDERDRAIN GRAVEL	AASHTO-M-43	0.375" TO 0.75"	
GEOTEXTILE FABRIC (IF REQUIRED)	ASTM-D-4833 (PUNCTURE STRENGTH-125 LB.) ASTM-D-4632 (TENSILE STRENGTH-300 LB.)	0.09" THICK EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 GPM PER SQ.FT FLOW RATE. NOTE: A 4" PEA GRAVEL LAYER MAY BE SUBSTITUTED FOR GEOTEXTILES MEANT TO "SEPARATE" SAND FILTER LAYERS.
UNDERDRAIN PIPING	F 750, TYPE PS 28 OR AASHTO-M-278	6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
CONCRETE (CAST-IN-PLACE)	MISHA STANDARDS AND SPECS. SECTION 902, MIX NO. 3 f <sub>c</sub> =3500 PSI, NORMAL WEIGHT, AIR-ENTRAINED, REINFORCING TO MEET ASTM-616-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED. 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND.
CONCRETE (PRE-CAST)	PER PRE-CAST MANUFACTURER	N/A	SEE ABOVE NOTE
NON-REBAR STEEL	ASTM A-36	N/A	STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED ASTM-A-123

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS (O-1 AND O-2)**

- The open channel system shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The open channel shall be mowed a minimum of as needed during the growing season to maintain a maximum grass height of less than 6 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the open channel shall be repaired as soon as it is noticed.
- Remove silt in the open channel system when it exceeds 25% of the original WQ.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER FILTRATION SYSTEMS (F-2 AND F-3)**

- The sediment chamber outlet devices shall be cleaned and/or repaired when drawdown times within the chamber exceed 36 hours.
- Debris and litter shall be removed as necessary to insure proper operation of the system.
- Sediment shall be cleaned out of the sediment chamber when it accumulates to a depth of 6 inches. Vegetation within the sediment chamber shall be limited to a height of 18 inches.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A logbook shall be maintained to determine the rate at which the facility drains.
- The maintenance logbook shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



PROFILE: OUTFALL FROM SFI TO SWIM POND  
SCALE: Horizontal 1"=20'  
Vertical 1"=2'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 10/19/07

  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 11/21/07

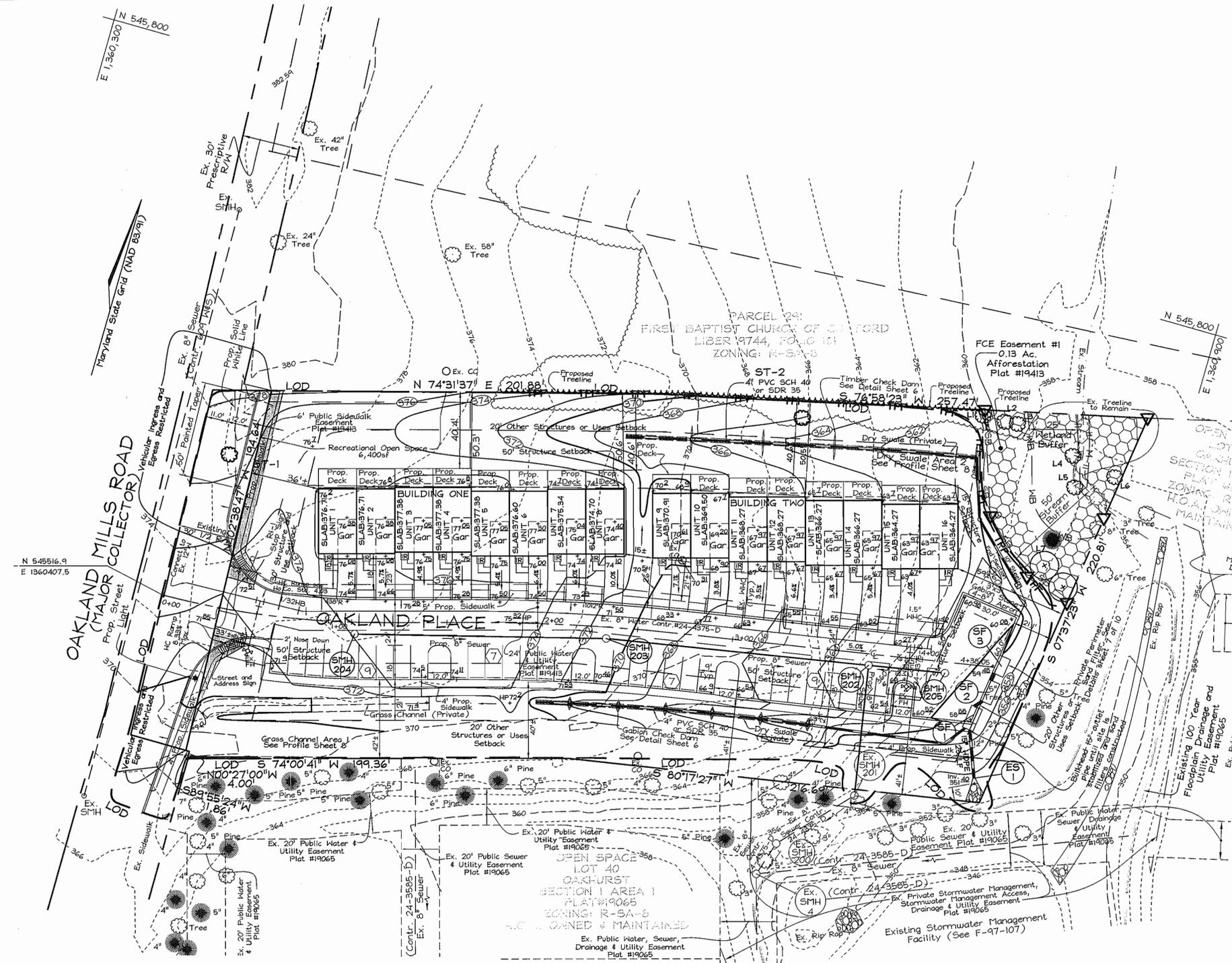
  
 DIRECTOR

**OWNER/DEVELOPER**  
OAKLAND PLACE, L.L.C.  
c/o Brian D. Boy  
9695 Norfolk Avenue  
Laurel, Maryland 20723  
(410) 792-2565

**PERIMETER SAND FILTER STRUCTURE NOTES AND DETAILS**  
**OAKLAND PLACE**  
PARCEL "A"  
TAX MAP 42 GRID 17  
6TH ELECTION DISTRICT  
PARCEL 68, 363  
HOWARD COUNTY, MARYLAND

**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkridge, MD 21075  
Tel: 410-567-5200 Fax: 410-796-1582  
E-mail: info@fsn.com

DESIGN BY: PS  
DRAWN BY: CRH2  
CHECKED BY: ZTF  
SCALE: As Shown  
DATE: Oct. 12, 2007  
W.O. No.: 3928  
SHEET No.: 7 OF 10



**FOREST CONSERVATION NARRATIVE**

This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Act of 1991.

The total tract area consists of 2.12 acres of land. The site contains no forest resources and two specimen trees. Neither will be retained; one is within public right-of-way dedication and the other, already in poor condition, will be removed for site grading.

Per the county review letter dated March 21, 2006, the area of the stream buffer, though smaller than 10,000 square feet, shall be put into a forest conservation easement. This area totals 0.13 acres or 5,516 sq. ft.

The forest conservation obligation for the site of 0.32 acres (13,939 sq. ft.) of afforestation has been met by:

A. The creation of onsite 0.13 acres/5,516 sq. ft. afforestation FCE #1, for which forest conservation surety in the amount of \$2,358.00 (5,516 sq. ft. x \$429.00 = \$2,358.00) has been posted with the Developer's Agreement, and;

B. Due to space limitations on site and the small outstanding afforestation obligation, a fee-in-lieu payment of \$6,317.25 has been made to the Howard County Forest Conservation Fund for the remain 0.423 acres of outstanding afforestation obligation. (13,939 sq. ft. x 0.423 = 5,898 sq. ft. of FCE#1 = 0.423 acres x \$13,939 = \$6,317.25)

**LEGEND**

Existing Contour	--- 382
Proposed Contour	--- 382
Spot Elevation	+825.5
Direction of Flow	→
Existing Trees to Remain	
Ex. Light Poles	*
Prop. Light Poles	* (with star)
Ex. Trees	
Existing Traffic Flow	→
Existing Spot	o
Existing Sewer Cleanout	o with cross
Soil Boundary	---
BGE	o
Forest Conservation Easement	
FCE Signage	△
Tree Protection Fence	TPF

**SPECIMEN TREES**

NO.	DBH	COMMON NAME	SCIENTIFIC NAME	CONDITION	RETAINED
ST-1	33"	Red Oak	Quercus rubra	Fair	NO
ST-2	36"	Black Cherry	Prunus serotina	Poor	NO

**FOREST CONSERVATION WORKSHEET**

Item	Description	Acres
A.	Total Tract Area	2.12
B.	Area Within 100 Year Floodplain	---
C.	Other deductions	---
D.	Net Tract Area	2.12
Zoning Use Category: RESIDENTIAL-SUBURBAN		
Land Use Category		
E.	Afforestation Minimum (15 % x D)	0.32
F.	Conservation Threshold (20 % x D)	0.42
Existing Forest Cover		
G.	Existing Forest on Net Tract Area	0
H.	Forest Area Above Conservation Threshold	0
Breakeven Point		
I.	Forest Retention Above Threshold with no Mitigation	NA
J.	Clearing Permitted without Mitigation	0
Proposed Forest Clearing		
K.	Forest Areas to be Cleared	0
L.	Forest Areas to be Retained	0
Planting Requirements		
M.	Reforestation for Clearing Above Threshold	0
N.	Reforestation for Clearing Below the Threshold	0
P.	Credit for Retention Above Conservation Threshold	0
Q.	Total Reforestation Required	0
R.	Total Afforestation Required	0.32
S.	Total Reforestation and Afforestation Requirement	0.32

**Notes:**

- See Sheet 10 for existing features to be relocated or removed.
- See Sheet 9 for Forest Conservation Details.

**PLAN**  
SCALE: 1"=30'

**AFFORESTATION AREA : 5,515 Sq. ft. (0.13 Ac)**  
 3,625 Sq. ft. (350 TPA) 2'-3' Whip planting  
 1,089 Sq. ft. (200 TPA) B&B 1" - 1 1/2" cal shade trees  
 871 Sq. ft. (Approx. 170 TPA) B&B 2 1/2" - 3" cal shade trees

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes	SF Credit/Plant	Total Credit
11	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container	125	1,375
11	Prunus serotina	Black Cherry	WHIP 2-3'	11' o.c.	1-3 Gallon Container	125	1,375
7	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.		125	875
5+	Quercus palustris	Pin Oak	1" Cal	15' o.c.	B & B	217.8	1,089
2	Quercus rubra	Red Oak	2 1/2"-3" Cal.	Locations Specified	B & B Landscape Planting	435.6	871.2

\* Larger 1" Cal stock shall be planted along interior easement edge, along stream buffer.  
 NOTE: See Sheet 5, Landscape Plan, for B&B tree planting details.

**FOREST CONSERVATION EASEMENT TABLE**

EASEMENT	TYPE	AREA (ACRES)
I	AFFORESTATION	0.13
TOTAL		0.13

**Plant Material Size Table.**

Material Size	Spacing	TPA	Sq. Ft. per Plant	Sq. Ft. Credit	Comments
2" caliper trees	20' x 20'	100	435.6	B & B	
1" caliper trees	15' x 15'	200	217.8	B & B	
seedlings or whips	11' x 11'	350	125		Container 1-3 gal w/tree shelters
seedlings or shrubs	8' x 8'	700	62		Bare root

**OWNER/DEVELOPER**  
 OAKLAND PLACE, L.L.C.  
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 9695 Norfolk Avenue  
 Laurel, Maryland 20723  
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**FOREST CONSERVATION PLAN**  
**OAKLAND PLACE**  
 PARCEL "A"

TAX MAP 42 GRID 17  
 6TH ELECTION DISTRICT

PARCEL 68, 363  
 HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 10/19/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION + DATE

*[Signature]* 10/22/07  
 CHIEF, DIVISION OF LAND DEVELOPMENT + DATE

*[Signature]* 10/22/07  
 DIRECTOR + DATE

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS

6339 HOWARD LANE  
 ELKRIE, MARYLAND 21075  
 TEL: (410) 587-5200 FAX: (410) 796-1582

*[Signature]*

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 Engineers Planners Surveyors

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DESIGN BY: PS  
 DRAWN BY: CRH2  
 CHECKED BY: ZTF  
 SCALE: 1"=30'  
 DATE: Oct. 12, 2007  
 W.O. No.: 3328  
 SHEET No.: 8 OF 10

**Management Notes for Forest Areas**

- All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
- After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place on-site, a preconstruction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate County Inspectors shall attend.
- Tree protection for all retained areas:
  - All retention areas within 50 feet of proposed construction activities shall be protected by highly visible, well anchored temporary protection devices (silt fence or blaze orange plastic mesh).
  - All protection devices shall be in place prior to any grading or land clearing.
  - All protection devices shall be properly maintained and shall remain in place until construction has ceased.
  - Attachment of signs, fencing or other objects to trees is prohibited.
  - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
- If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:
  - Prune roots with a clean cut using proper pruning equipment (see root pruning detail).
  - Water and fertilize as needed.
- During construction phase, monitor and correct condition of retained trees for: soil compaction, root injury, flood conditions, drought conditions and other stress signs.
  - Inspect existing trees around the perimeter of disturbed limits for evidence of soil compaction, root injury, limb injury, or other stress signs and correct with proper management techniques such as root or limb pruning, soil aeration, fertilization, crown reduction or watering. Inspection and evaluation shall be performed by a licensed arborist.
  - Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
  - No burial of discarded materials will occur on-site within the conservation areas.
  - No burning within 100 feet of wooded area.
  - All temporary forest protection structures will be removed after construction. Temporary signage shall be replaced with permanent signage on posts in locations shown.
  - Following completion of construction, prior to use, the County Inspector shall inspect the entire area.

**Soil Protection Zone Notes**

- The Soil Protection Zone shall include all areas contained inside the Limit of Disturbance.
- Where possible, the Soil Protection Zone shall extend to the drip line of specimen trees. For other groups of trees, the zone shall be the drip line or 40% of the height of the tree, whichever is greater.
- No construction activity is permitted within the Soil Protection Zone.
- If soil has been compacted or grading has taken place in the vicinity of the Soil Protection Zone, root pruning shall be implemented per Root Pruning detail, shown on this plan.
- Root pruning shall occur prior to the beginning of construction.
- Where the Soil Protection Zone must encroach inside the Critical Root Zone of a tree, soil disturbance shall be mitigated with vertical mulching, radial trenching, or another method approved by the ERI Forest Conservation Professional.
- Prior to construction, the Limits of Disturbance shall be marked and the ERI Professional shall determine which trees will need preventative treatment or removal.
- Tree maintenance and removal shall be undertaken by a qualified MD Tree Expert to ensure damage to surrounding trees is minimized.
- Brush and limbs removed for construction shall be chipped and spread at the edge of the Soil Protection Zone to a depth of 6 inches. This shall occur outside the Soil Protection Zone where compaction could impact otherwise unprotected Critical Root Zone.

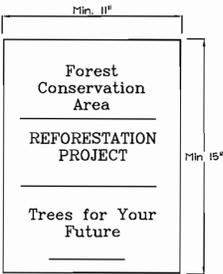
**Afforestation Area Monitoring Notes**

- Monthly visits during the first growing season are to assess the success of the plantings and to determine if supplemental watering, pest control or other actions are necessary. Early spring visits will document winter kill and autumn visits will document summer kill.
- The minimum survival rate shall be 75% of the total number of trees planted per acre at the end of the two year maintenance period. Wild tree seedlings from natural regeneration on the planting site may be counted up to 50% toward the total survival number if they are healthy native species at least 12 inches tall.
- Certification at the end of the two-year post construction period must indicate that the survival rates will result in a 100 tree per acre ratio for a forest and the 3 to 4 foot height standard for whips by the end of the two growing season post construction period, with at least 50% of those trees having the potential of attaining a 2" caliper DBH within 7 years.
- Survival will be determined by a stratified random sample of the plantings. The species composition of the sample population should be proportionate to the amount of each species in the entire planting to be sampled.
- Effective monitoring will assess plant survivability during the first growing season and make recommendations for reinforcement planting if required at that time.

**Afforestation Area Planting Notes**

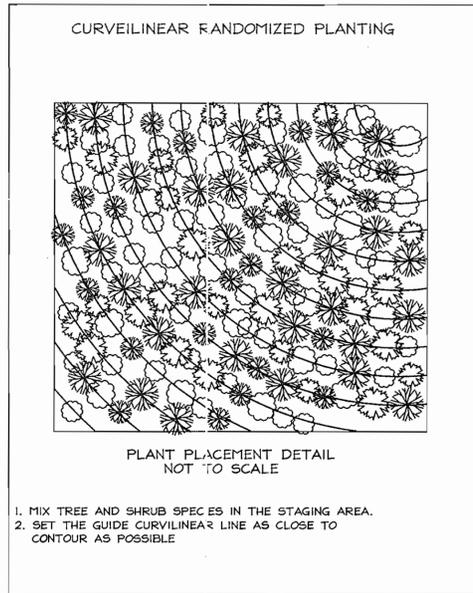
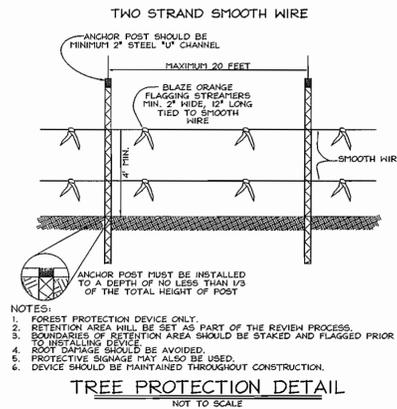
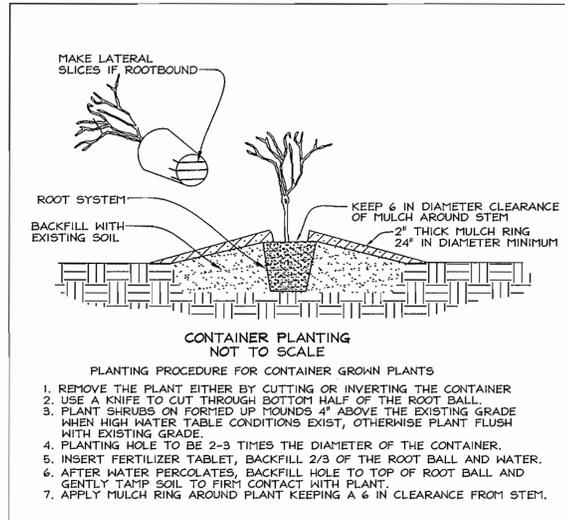
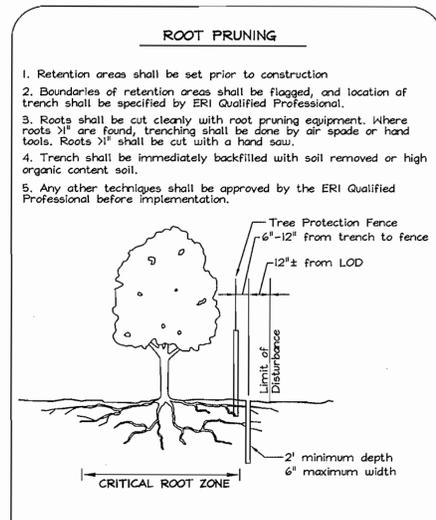
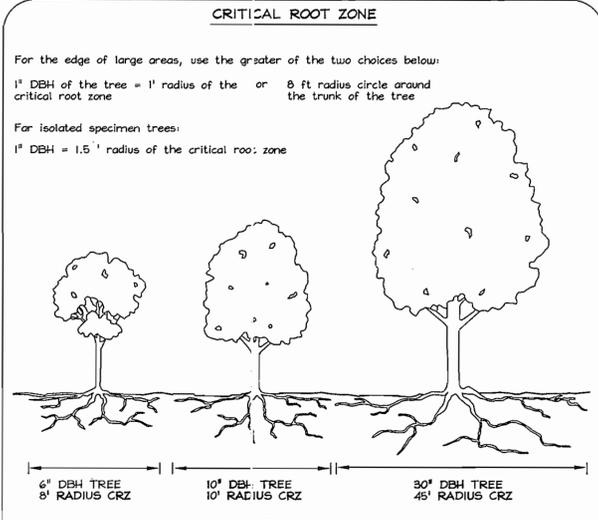
- Initial planting inspection and certification required. Planting contractor to notify ERI qualified professional 24 hours in advance of planting.
- Afforestation areas may be planted as soon as reasonable to do so. Late winter- early spring plantings are preferred. Earliest planting dates will vary from year to year but planting may generally begin as soon as the ground is no longer frozen. Alternate planting dates may be considered as conditions warrant.
- Soil amendments and fertilization recommendations will be made based upon the results of soil analysis for nitrogen, phosphorus, potassium, organic matter content and pH. If required, fertilizer will be provided using a slow release, soluble 16-8-16 analysis designed to last 5-8 years contained in polyethylene perforated bags such as manufactured by ADCO Works, P.O. Box 310 Hollins, N.Y. 11423 or approved equal.
- Plant stock must be protected from desiccation at all times prior to planting. Materials held for planting shall be moistened and placed in cool shaded areas until ready for placement.
- Planting materials shall be nursery grown and inspected prior to planting. Plants not conforming to the American Standards for Nursery Stock specifications for size, form, vigor, or roots, or due to trunk wounds, breakage, desiccation, insect or disease must be replaced.
- Newly planted trees may require watering at least once per week during the first growing season depending on rainfall in order to get established. The initial planting operation should allow for watering during installation to completely soak backfill materials.
- Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
- Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical angling is preferred with scarification of the sides of each hole.
- All nursery stock to be sprayed with deer repellent containing Bitrex such as Repellex All nursery stock to be grown with deer repellent tablets in growing medium, such as Repellex Tablets.

**Reforestation and Afforestation Area Protection Signage**



**SIGN DETAIL: PERMANENT SIGN**

SIGNAGE NOTE: ALL TREE PROTECTION SIGNS SHALL BE PLACED ON METAL "T" POSTS OR PRESSURE TREATED WOOD POLES. NO ATTACHMENT OF SIGNS TO TREES IS PERMITTED.



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**FOREST CONSERVATION PLAN NOTES AND DETAILS**  
**OAKLAND PLACE**  
 PARCEL "A"

TAX MAP 42 GRID 17 PARCEL 68, 363  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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DESIGN BY: PS  
 DRAWN BY: CRH2  
 CHECKED BY: ZYF  
 SCALE: 1"=30'  
 DATE: Oct. 12, 2007  
 H.O. No.: 3928  
 SHEET No.: 3 OF 10

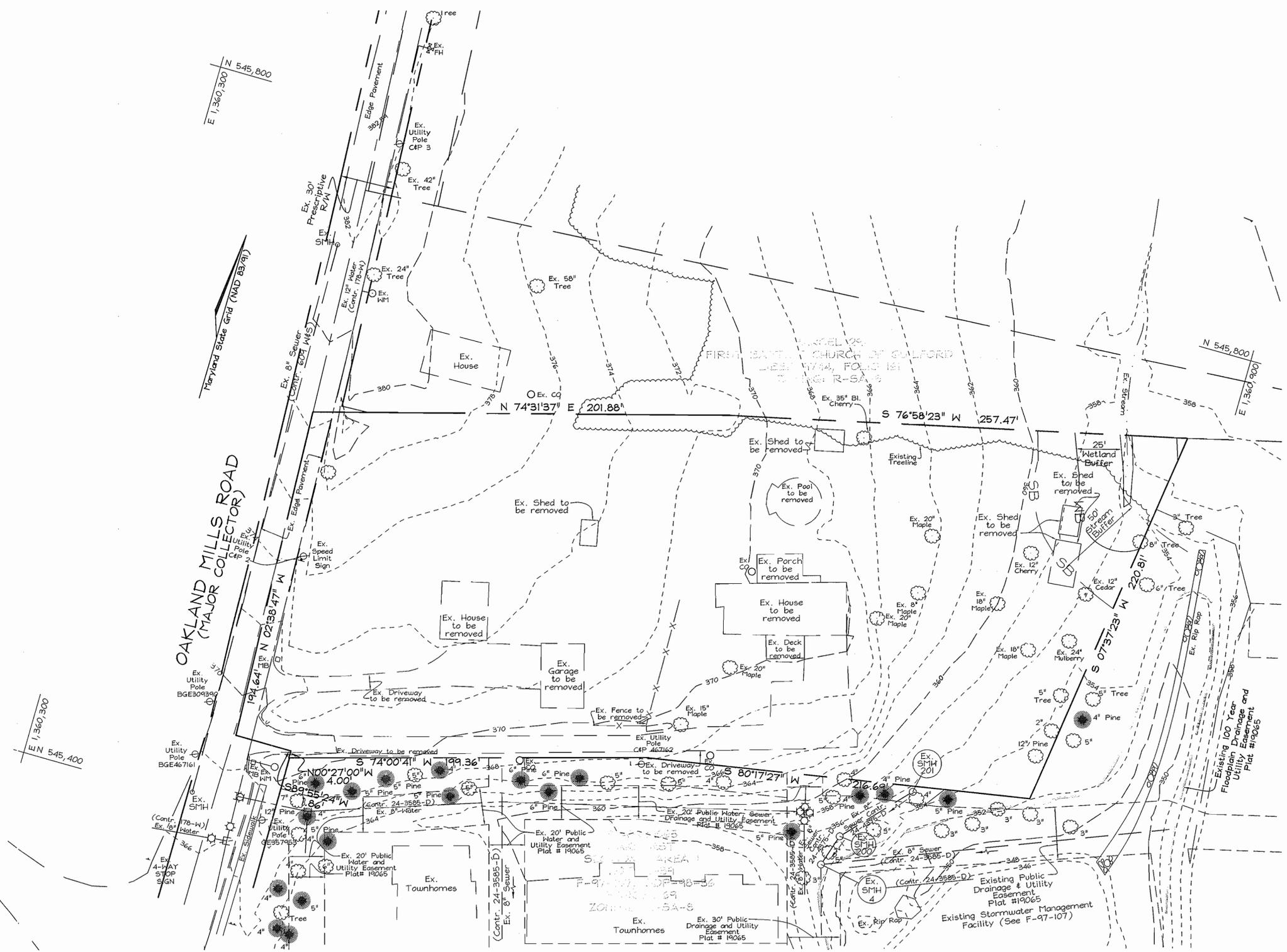
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 10/19/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 10/19/07  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 1/22/08  
 DIRECTOR DATE

LEGEND	
Existing Contour	
Proposed Contour	
Spot Elevation	
Direction of Flow	
Existing Trees to Remain	
Ex. Light Poles	
Existing Spot	
Existing Sewer Cleanout	
Existing Utility Pole	
Existing Trees to be removed	



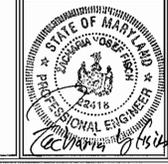
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 Laurel, Maryland 20723  
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**EXISTING CONDITIONS PLAN**  
**OAKLAND PLACE**  
 PARCEL "A"

TAX MAP 42 GRID 17 PARCEL 68, 363  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

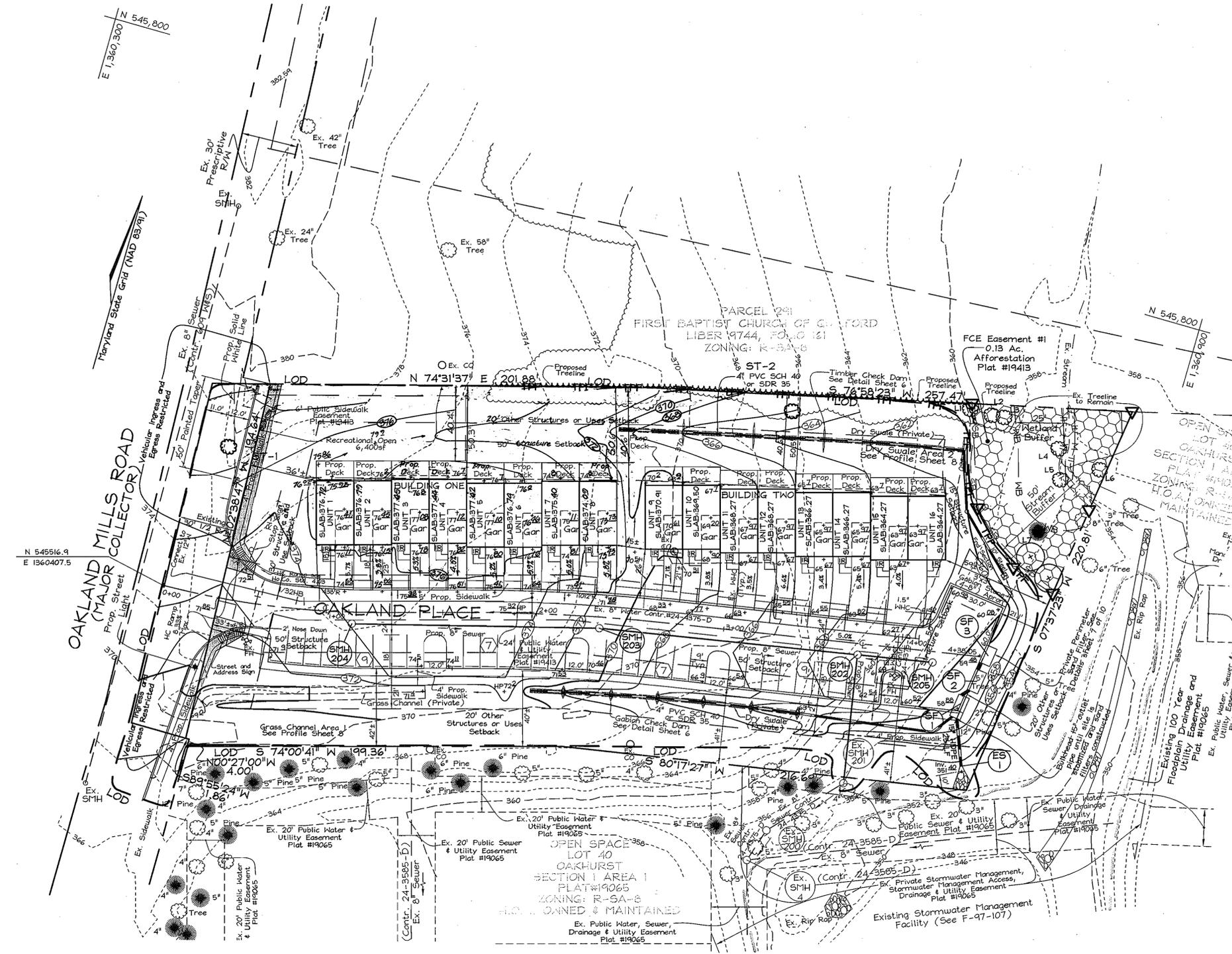
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Howard County Seal*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/19/15  
*Chris Harris*  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 10/19/15  
*Frank D. Cuyler*  
 DIRECTOR DATE 10/23/15

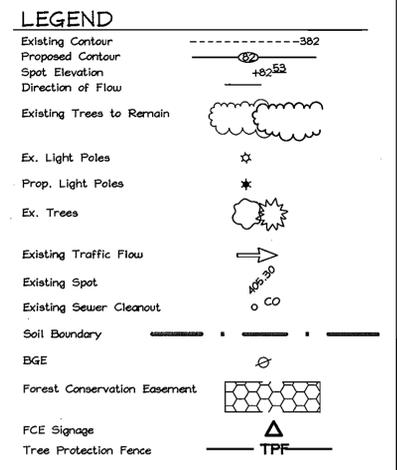


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 SCALE: 1"=30'  
 DATE: Oct. 12, 2007  
 A.O. No.: 3328  
 SHEET No. 10 OF 10



**FOREST CONSERVATION NARRATIVE**  
 This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Act of 1991.  
 The total tract area consists of 2.12 acres of land. The site contains no forest resources and two specimen trees. Neither will be retained; one is within public right-of-way dedication and the other, already in poor condition, will be removed for site grading.  
 Per the county review letter dated March 21, 2006, the area of the stream buffer, though smaller than 10,000 square feet, shall be put into a forest conservation easement. This area totals 0.13 acres or 5,516 s.f.  
 The forest conservation obligation for the site of 0.32 acres (19,939 sq. ft.) of afforestation has been met by:  
 A. The creation of onsite 0.13 acre/5,516 sq. ft. afforestation FCE #1, for which forest conservation surety in the amount of \$2,358.00 (5,516 sq. ft. x \$0.43 = \$2,358.00) has been posted with the Developer's Agreement, and;  
 B. Due to space limitations on site and the small outstanding afforestation obligation, a fee-in-lieu payment of \$6,317.25 has been made to the Howard County Forest Conservation Fund for the remain 8,423 sq. ft. of outstanding afforestation obligation. (19,939 sq. ft. x 0.32 = 6,380 sq. ft. of FCE#1 = 8,432 sq. ft. x \$0.75 = \$6,317.25)



**SPECIMEN TREES**

NO.	DBH	COMMON NAME	SCIENTIFIC NAME	CONDITION	RETAINED
ST-1	33"	Red Oak	Quercus rubra	Fair	NO
ST-2	36"	Black Cherry	Prunus serotina	Poor	NO

**FOREST CONSERVATION WORKSHEET**

Item	Description	Acres
A.	Total Tract Area	2.12
B.	Area Within 100 Year Floodplain	--
C.	Other deductions	--
D.	Net Tract Area	2.12
Zoning Use Category: RESIDENTIAL-SUBURBAN		
Land Use Category		
E.	Afforestation Minimum (15 % x D)	0.32
F.	Conservation Threshold (20 % x D)	0.42
Existing Forest Cover		
G.	Existing Forest on Net Tract Area	0
H.	Forest Area Above Conservation Threshold	0
Breakeven Point		
I.	Forest Retention Above Threshold with no Mitigation	NA
J.	Clearing Permitted without Mitigation	0
Proposed Forest Clearing		
K.	Forest Areas to be Cleared	0
L.	Forest Areas to be Retained	0
Planting Requirements		
M.	Reforestation for Clearing Above Threshold	0
N.	Reforestation for Clearing Below the Threshold	0
O.	Credit for Retention Above Conservation Threshold	0
P.	Total Reforestation Required	0
R.	Total Afforestation Required	0.32
S.	Total Reforestation and Afforestation Requirement	0.32

**Notes:**  
 1. See Sheet 10 for existing features to be relocated or removed.  
 2. See Sheet 9 for Forest Conservation Details.

**PLAN**  
 SCALE: 1"=30'

**AFFORESTATION AREA : 5,515 Sq. ft. (0.13 Ac)**  
 3,625 Sq. ft. (350 TPA) 2'-3" Whip planting  
 1,089 Sq. ft. (200 TPA) B#B 1" - 1 1/2" cal shade trees  
 871 Sq. ft. (Approx. 170 TPA) B#B 2 1/2" - 3" cal shade trees

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7	Quercus palustris	Pin Oak	WHIP 2-3'	11' o.c.		125	875
54	Quercus palustris	Pin Oak	1" Cal	15' o.c.	B # B	217.8	1,089
2	Quercus rubra	Red Oak	2 1/2" - 3" Cal.	Locations Specified	B # B Landscape Planting	495.6	871.2

\* Larger 1" Cal stock shall be planted along interior easement edge, along stream buffer.  
 NOTE: See Sheet 5, Landscape Plan, for B#B tree planting details.

**FOREST CONSERVATION EASEMENT TABLE**

EASEMENT	TYPE	AREA (ACRES)
I	AFFORESTATION	0.13
TOTAL		0.13

**Plant Material Size Table.**

Material Size	Spacing	TPA	Sq. Ft. Credit per Plant	Comments
2" caliper trees	20' x 20'	100	495.6	B # B
1" caliper trees	15' x 15'	200	217.8	B # B
seedlings or whips	11' x 11'	350	125	Container 1-3 gal w/tree shelters
seedlings or shrubs	8' x 8'	700	62	Bare root

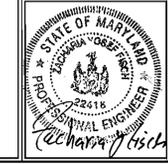
No.	Revision	Date
1	Revised grading around Unit 1	11/21/2006

**OWNER/DEVELOPER**  
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 c/o Brian D. Boy  
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**FOREST CONSERVATION PLAN**  
**OAKLAND PLACE**  
 PARCEL "A"  
 TAX MAP 42 GRID I7 6TH ELECTION DISTRICT  
 PARCEL 68, 363 HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 10/19/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 10/19/07  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 10/22/07  
 DIRECTOR

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SCHEDULE A PERIMETER LANDSCAPE EDGE					
CATEGORY	Adjacent to Roadways		Adjacent to Perimeter Properties		
	C	B	1	2	3
Perimeter/Frontage Designation	4	5	1	2	3
Linear Feet of Roadway	176	18	454	221	416
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	No	3 Tree	3 Tree	No
Remaining Perimeter Length	No	No	No	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)	No	No	No	No	No
Remaining Perimeter Length	140	140	140	140	140
Number of Plants Required	1:40	4	1:40	1:50	1:50
Shade Trees	1:20	4	1:20	1:40	1:40
Evergreen Trees	-	-	-	-	-
Number of Plants Provided	4	1	4	2	6
Shade Trees	4	-	23	5	15
Evergreen Trees	-	-	-	-	-
Other Trees (2:1 Substitution)	-	-	-	-	-
Shrubs (10:1 Substitution)	-	5	-	-	-
(Describe Plant Substitution Credits Below if needed)					

LEGEND	
Existing Contour	-----382
Proposed Contour	-----382
Existing Spot	102.30
Spot Elevation	+82.52
Direction of Flow	→
Existing Trees to Remain	○ ● ○
Ex. Light Poles	*
Prop. Light Poles	*
Existing Sewer Cleanout	○
Soil Boundary	DeB2
BGE Utility Pole	⊙
Limit of Disturbance (LOD)	LOD

**LANDSCAPE NOTES**

- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscaping Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- Financial surety for the required landscaping will be posted as part of the Developer's Agreement in the amount of \$25,200.00 (45 shade trees @ \$300.00 ea., 6 ornamental trees @ \$150.00 ea., 62 evergreen trees @ \$150.00 ea. and 5 shrubs @ \$50.00 ea.).

STREET TREE CHART			
STREET NAME	LF REQUIRED	TREES REQUIRED	TREES PROVIDED
Oakland Mills Road	179'	(1:30) 6	6
Oakland Place	438'	(1:40) 11	11

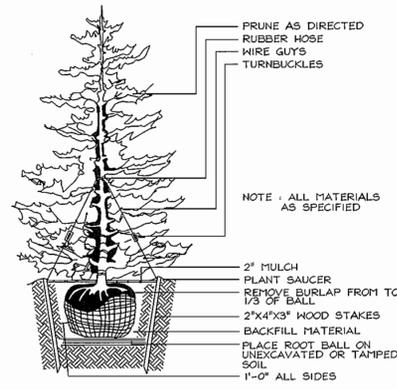
SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces	32
Number of Trees Required	1:10 3
Number of Trees Provided	
Shade Trees	3
Other Trees (2:1 Substitution)	-

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
Number of Dwelling Units	16
Number of Trees Required (1:10 SFA; 1:3 DU Apts.)	16
Number of trees provided	
Shade Trees	11
Other Trees (2:1 Substitution)	10

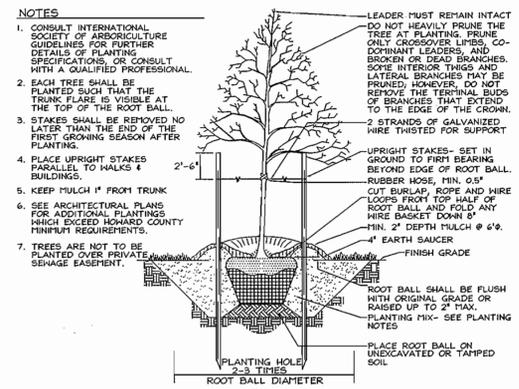
No.	Revision	Date
1	Revised grading around Unit 1	11/2/2006

**PLAN**  
SCALE: 1"=30'

CREDIT FOR EXISTING VEGETATION		
KEY	DIA.	BOTANICAL NAME
L1	22.5"	Hickory
L2	6"	Black Cherry
L3	8"	Black Cherry
L4	11.5"	Pin Oak
L5	6.5"	Red Maple
L6	7"	Elm
L7	6"	Spruce



**TYPICAL EVERGREEN TREE PLANTING DETAIL**  
NOT TO SCALE



**TYPICAL TREE PLANTING AND STAKING**  
DECIDUOUS TREES UP TO 2-1/2" CALIPER  
NOT TO SCALE

**OWNER/DEVELOPER**  
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**LANDSCAPE PLAN**  
**OAKLAND PLACE**  
PARCEL "A"  
TAX MAP 42 GRID 17 6TH ELECTION DISTRICT  
PARCEL 68, 363  
HOWARD COUNTY, MARYLAND

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SCALE: 1"=30'  
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M.O. No.: 3328  
SHEET No.: 5 OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 10/19/07  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

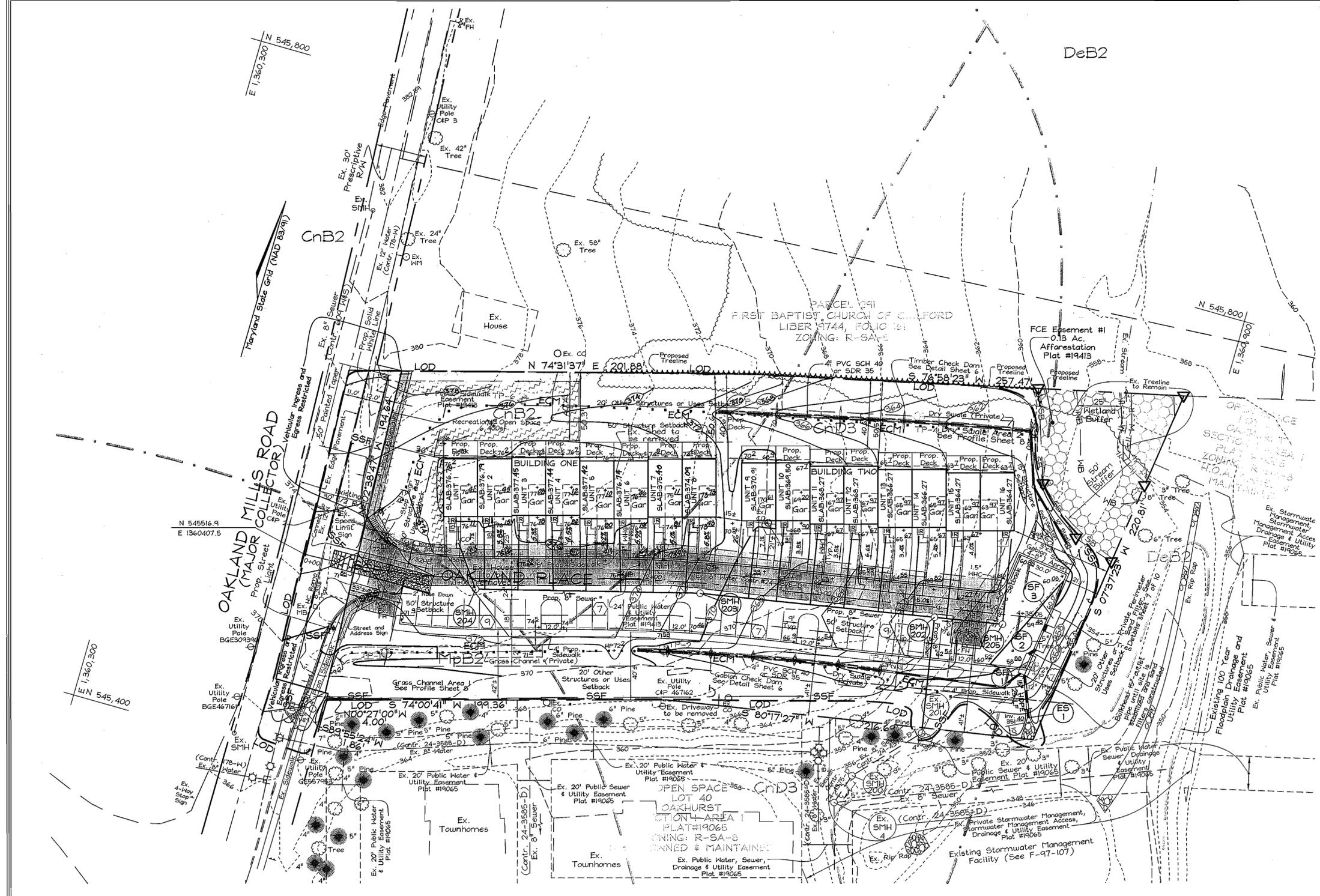
*[Signature]* 10/19/07  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 10/22/07  
DIRECTOR DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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

*[Signature]* 10/11/07  
SIGNATURE OF DEVELOPER DATE



**LEGEND**

- Existing Contour: --- 382
- Proposed Contour: --- 382
- Spot Elevation: +82.53
- Direction of Flow: --->
- Tree Protection Fence: [Symbol]
- Existing Trees to Remain: [Symbol]
- Stabilized Construction Entrance: [Symbol]
- Super Silt Fence: --- SSF ---
- Limit of Disturbance: --- LOD ---
- Erosion Control Matting: --- ECM ---
- Soil Boundary: --- [Symbol] ---
- Test Pit (TP-#): [Symbol] TP-3
- Stream Banks: --- [Symbol] ---

**TEST PIT TABLE**

TP-#	DEPTH(Ft)	FINDINGS
1	11	No rock or water was found.
2	15	No rock or water was found.
3	16	No rock or water was found.
4	10	No rock or water was found.
5	13	No rock or water was found.
6	12	No rock or water was found.

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
CnB2	Chillum-Fairfax loams, 1 to 5 percent slopes, moderately eroded	C
CnD3	Chillum-Fairfax loams, 5 to 15 percent slopes, severely eroded	C
DeB2	Delanco silt loam, 3 to 8 percent slopes, moderately eroded	C
PipB2	Montalto silt loam, 3 to 8 percent slopes, moderately eroded	B

**PLAN**  
SCALE: 1"=30'

**OWNER/DEVELOPER**  
OAKLAND PLACE, L.L.C.  
c/o Brian D. Boy  
9695 Norfolk Avenue  
Laurel, Maryland 20723  
(410) 792-2565

**SEDIMENT AND EROSION CONTROL PLAN**  
**OAKLAND PLACE**  
PARCEL "A"  
TAX MAP 42 GRID I7 PARCEL 68, 363  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Howard County Seal*  
DATE: 10/19/07  
DATE: 10/19/07  
DATE: 10/22/07

REVIEWED FOR HOWARD SCD AND MEETS REGULATORY REQUIREMENTS  
USDA-NATURAL RESOURCES CONSERVATION SERVICE  
DATE: 10/19/07  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*John R. Roberts*  
DATE: 10/19/07

**ENGINEERS CERTIFICATE**  
"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*Zacharia Y. Fisch*  
SIGNATURE OF ENGINEER  
ZACHARIA Y. FISCH  
DATE: 10/11/07

**DEVELOPER'S CERTIFICATE**  
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
*Brian D. Boy*  
SIGNATURE OF DEVELOPER  
DATE: 10/11/07

No.	Revision	Date
1	Revised grading around Unit 1	11/21/2008



**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkridge, MD 21075  
Tel: 410-567-5200 Fax: 410-796-1562  
E-mail: info@fsher.com

DESIGN BY: PS  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: 1"=30'  
DATE: Oct. 12, 2007  
W.O. No.: 3328  
SHEET No.: 3 OF 10

