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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

WESLEY WOODS

SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONING "R-12"

TAX MAP No. 38 PARCEL No. : 162 GRID No. 4

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 10-16-00
 CHIEF, BUREAU OF HIGHWAYS 73 DATE

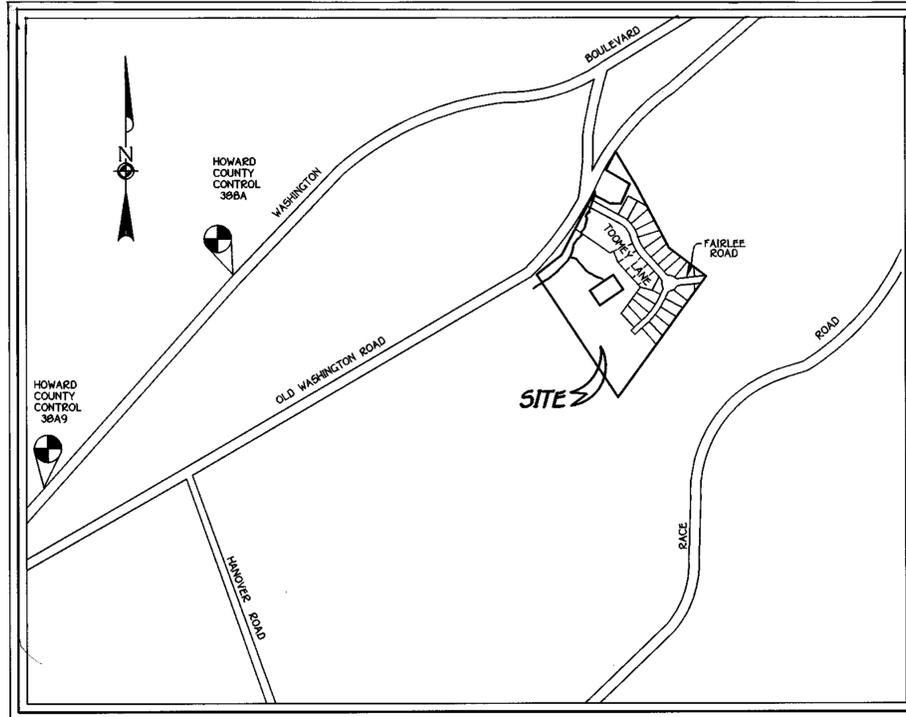
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 10/19/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Drummer 10/17/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 68 DATE

STREET LIGHT CHART				
DWG No.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2	TOOMEY LANE	CL. STA. 0+29	20' R	150-WATT H.P.S. VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
2	TOOMEY LANE	CL. STA. 5+46	15' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	TOOMEY LANE	CL. STA. 7+80	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
3	TOOMEY LANE	CL. STA. 10+74	12' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	TOOMEY LANE	CL. STA. 3+12	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	TOOMEY LANE	CL. STA. 9+16	15' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	FAIRLEE ROAD	CL. STA. 0+70	17' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE

TRAFFIC CONTROL SIGNS				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
TOOMEY LANE	0+28	19' LT	STOP	R1-1
TOOMEY LANE	2+00	14' LT	STOP AHEAD	W3-1a
TOOMEY LANE	2+00	14' RT	SPEED LIMIT '25'	R2-1
TOOMEY LANE	7+00	14' LT	SPEED LIMIT '25'	R2-1
TOOMEY LANE	8+00	20' RT	YIELD	R1-2
TOOMEY LANE	9+00	20' LT	YIELD	R1-2
TOOMEY LANE	10+50	14' RT	ROAD NARROWES	W5-1
TOOMEY LANE	11+00	14' LT	ROAD NARROWES	W5-1
FAIRLEE ROAD	0+50	20' LT	YIELD	R1-2
TOOMEY LANE	7+75	2' L	KEEP RIGHT	R4-7
TOOMEY LANE	9+25	2' R	KEEP RIGHT	R4-7
FAIRLEE ROAD	0+75	2' R	KEEP RIGHT	R4-7



VICINITY MAP
 SCALE 1" = 600'

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1080 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MSS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE 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)".
 NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL SURVEY PERFORMED BY HARFORD AERIAL MAPPING COMPANY, INC. PHOTOGRAPHED FEBRUARY 16, 1999.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT Nos. 37BA AND 37BB WERE USED FOR THIS PROJECT.
 38BA N 562,553.304 E 1,390,967.889
 37A9 N 561,056.363 E 1,389,634.097
- WATER IS PUBLIC, CONTRACT No. 44-0906
- SEWER IS PUBLIC, CONTRACT No. 22-5
- S.W.M. WILL BE PROVIDED BY A PUBLIC FACILITY WITH A WET POOL DESIGN, FOR THE 2, 10, AND 25-YEAR STORM EVENTS.
 IN ADDITION, THE SWM PROVIDED WITH THIS SUBMISSION IS FOR THE PROPOSED 26 LOTS SHOWN ON THIS PLAN ONLY. FURTHER SUBDIVISION OF BULK PARCEL 'B' WILL REQUIRE THAT ADDITIONAL SWM MEASURES BE INVESTIGATED.
- FLOODPLAIN SHOWN ON THIS SITE IS BASED ON A STUDY PREPARED BY FISHER, COLLINS AND CARTER INC. DATED SEPTEMBER, 1999 (P 99-14)
- WETLANDS INFORMATION FOR THIS SITE WAS TAKEN FROM A REPORT BY EXPLORATION RESEARCH, INC. DATED MARCH, 1998
- A TRAFFIC IMPACT ANALYSIS FOR PHASE I WAS PREPARED BY STREET TRAFFIC STUDIES, LTD. DATED MARCH, 1998 AND APPROVED UNDER 5-98-14
- BACKGROUND INFORMATION:
 A. SUBDIVISION NAME: WESLEY WOODS (FORMERLY RUSSELL-TOOMEY PROPERTY)
 B. TAX MAP NO.: 38
 C. PARCEL NO.: 162
 D. ZONING: R-12
 E. ELECTION DISTRICT: FIRST
 F. TOTAL TRACT AREA: 19.417 AC. +
 G. NO. OF BUILDABLE LOTS: 26
 H. NO. OF OPEN SPACE LOTS: 4
 I. OPEN SPACE: REQUIRED: 3.157 AC. (SECTION ONE)
 J. OPEN SPACE PROVIDED: 3.342 AC.
 K. PRELIMINARY PLAN APPROVAL DATE: NOVEMBER 3, 1999
 L. PREVIOUS FILE Nos.: 5-98-14, P-99-14
- NO CEMETERIES EXIST ON THE PROPERTY.
- FOREST STAND DELINEATION PROVIDED BY EXPLORATION RESEARCH, INC. DATED MARCH, 1998.
- SEE HOWARD COUNTY PLANNING & ZONING FILE No. 5-98-14 AND P-99-14 FOR PAST PROJECT HISTORY. THE SKETCH PLAN WAS APPROVED ON DECEMBER 9, 1998 AND THE PRELIMINARY PLAN ON NOVEMBER 3, 1999.
- BOUNDARY INFORMATION SHOWN HEREON IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS AND CARTER, INC. ON DECEMBER 9, 1997.
- ALL STREET TREE PLANTINGS, PERIMETER AND S.W.M. AREA LANDSCAPING WILL BE INSTALLED BY THE DEVELOPER IN CONJUNCTION WITH THE FINAL ROAD PLANS.
- FOREST CONSERVATION FOR ANY FUTURE SUBDIVISION OF NON-BUILDABLE BULK PARCEL 'B' SHALL BE BASED ON THE NET TRACT AREA OF THE PARCEL, EXCLUDING ACRESAGES OF THE SECTION 1 FOREST CONSERVATION EASEMENT AREAS AND THE L.O.D. AREA LOCATED ON IT. (See note Z1 below).
- THE PURPOSE OF THIS SUBDIVISION IS TO CREATE 26 BUILDABLE LOTS AND 4 OPEN SPACE LOTS UNDER SECTION 1 AND CREATE A NON-BUILDABLE BULK PARCEL FOR FUTURE SUBDIVISION, AS SECTION 2 IF THE OWNER DESIRES. FOR THIS REASON A "DECLARATION OF INTENT FOR SUBDIVISION FOR REAL ESTATE TRANSACTION" FOR THE NON-BUILDABLE BULK PARCEL 'B' HAS BEEN SUBMITTED AND WITH THIS AT FINAL PLAN.
- THE NON-BUILDABLE BULK PARCEL 'B' IS NON-BUILDABLE UNTIL APFO ALLOCATIONS ARE APPLIED AND RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED IN ACCORDANCE WITH THE HOWARD COUNTY SUBDIVISION REGULATIONS.
- A NOISE STUDY WAS PREPARED BY WILDMAN ENVIRONMENTAL SERVICES DATED MARCH, 1998 AND APPROVED ON 12/9/98 UNDER 5-98-14.
- PLAN IS SUBJECT TO MDE PERMIT NUMBER 1999-60963, N.T.W.W. DIVISION NUMBER 98-NT-0680 FOR CONSTRUCTION OF ROADWAY ACROSS EXISTING STREAM.
- THE SHOWN CONCEPTUAL LOT AND ROAD LAYOUT ON NON-BUILDABLE BULK PARCEL 'B' HAS NOT BEEN REVIEWED OR APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.

ROAD CLASSIFICATION CHART		
ROAD NAME	CLASSIFICATION	R/W WIDTH
TOOMEY LANE	PUBLIC ACCESS PLACE	50' & 40'
FAIRLEE ROAD	PUBLIC ACCESS STREET	50'

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES, AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

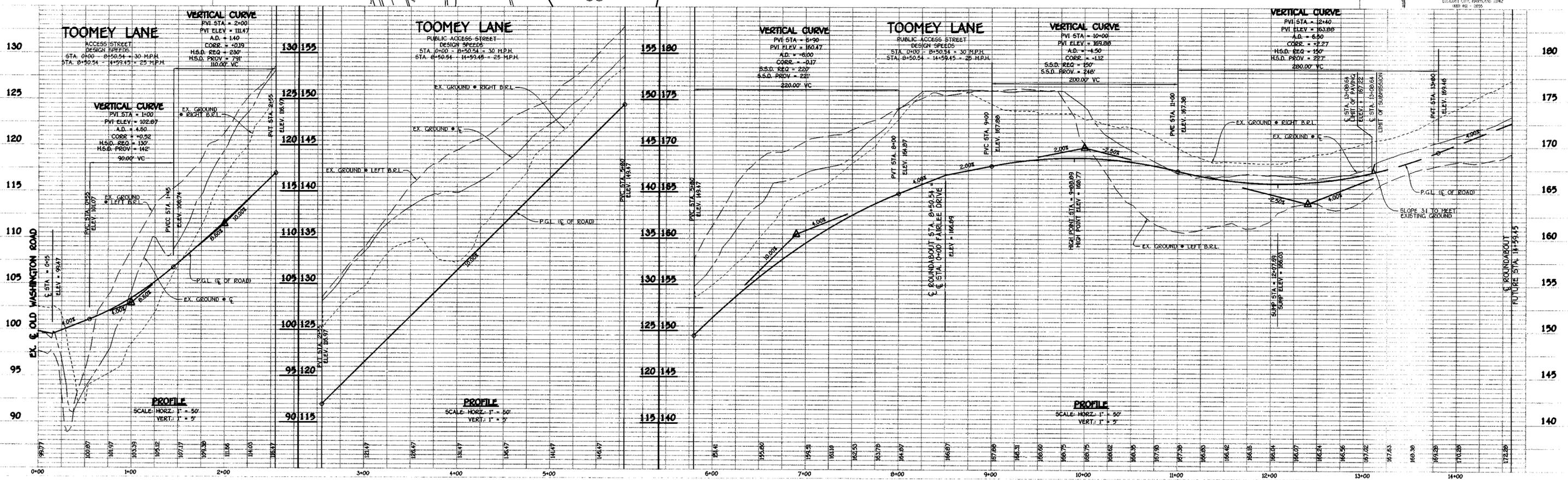
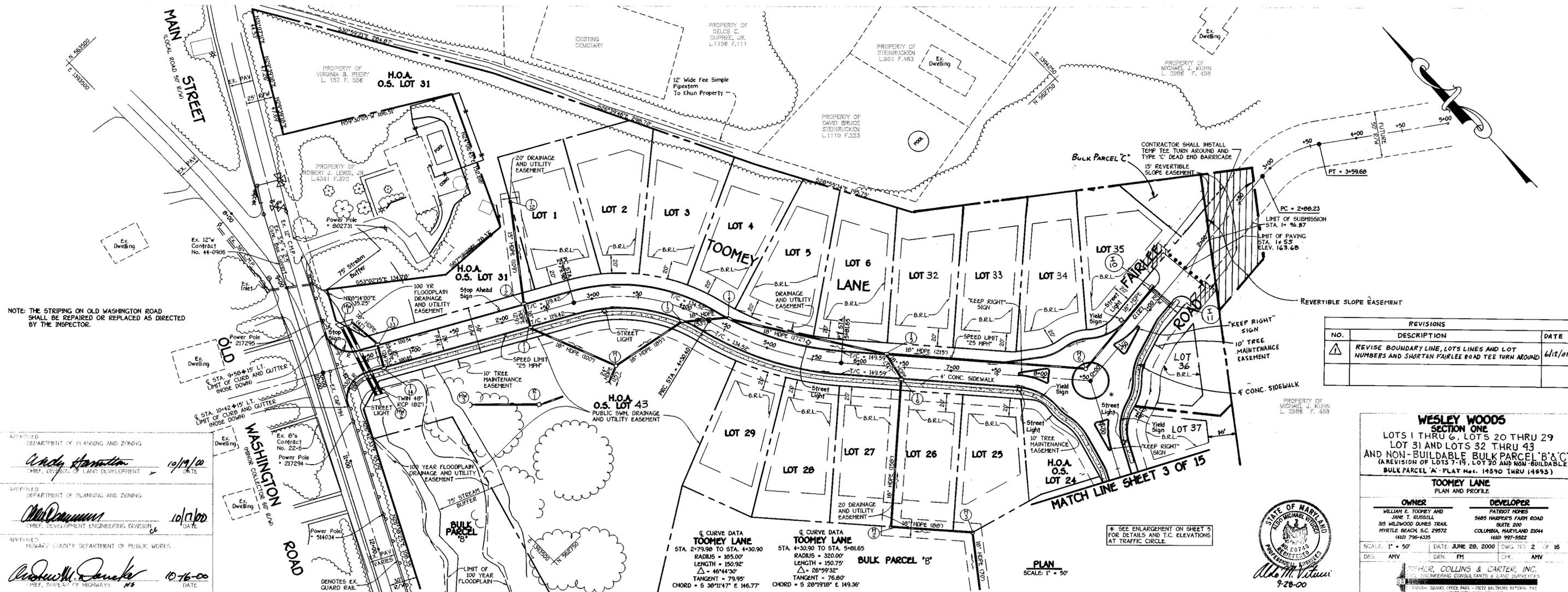
OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522



ALDO H. VITUCCI, P.E. 6-28-00 DATE

FINAL PLANS
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONING: R-12
 TAX MAP: 38 PARCEL: 162 GRID: 4
 1ST. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JULY 28, 2000
 SHEET 1 OF 16



NOTE: THE STRIPING ON OLD WASHINGTON ROAD SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE INSPECTOR.

APPROVED
 DEPARTMENT OF PLANNING AND ZONING
Wendy Hamilton 10/19/00
 CHIEF, DIVISION OF LAND DEVELOPMENT (DATE)

APPROVED
 DEPARTMENT OF PLANNING AND ZONING
Mike Deamus 10/17/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION (DATE)

APPROVED
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Decker 10/16/00
 CHIEF, DIVISION OF HIGHWAYS (DATE)

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

WESLEY WOODS SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCEL 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 20 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT No. 14590 THRU 14593)

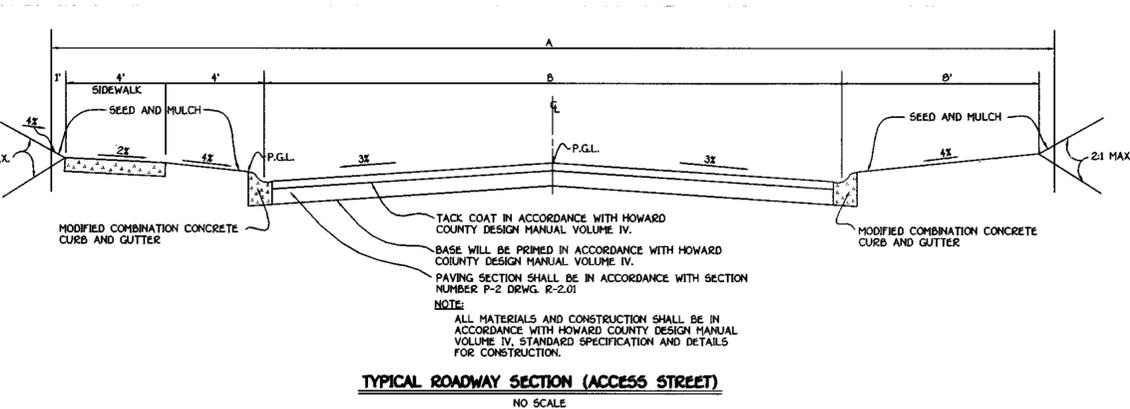
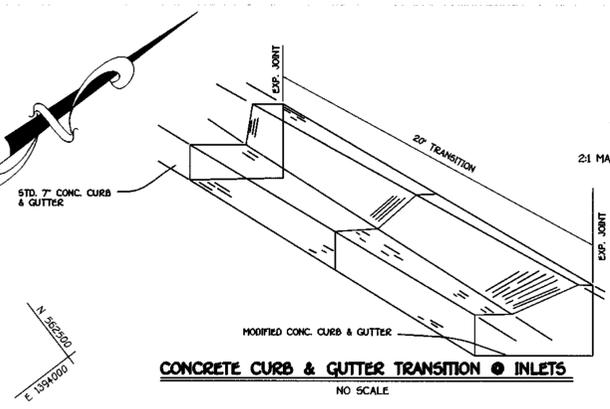
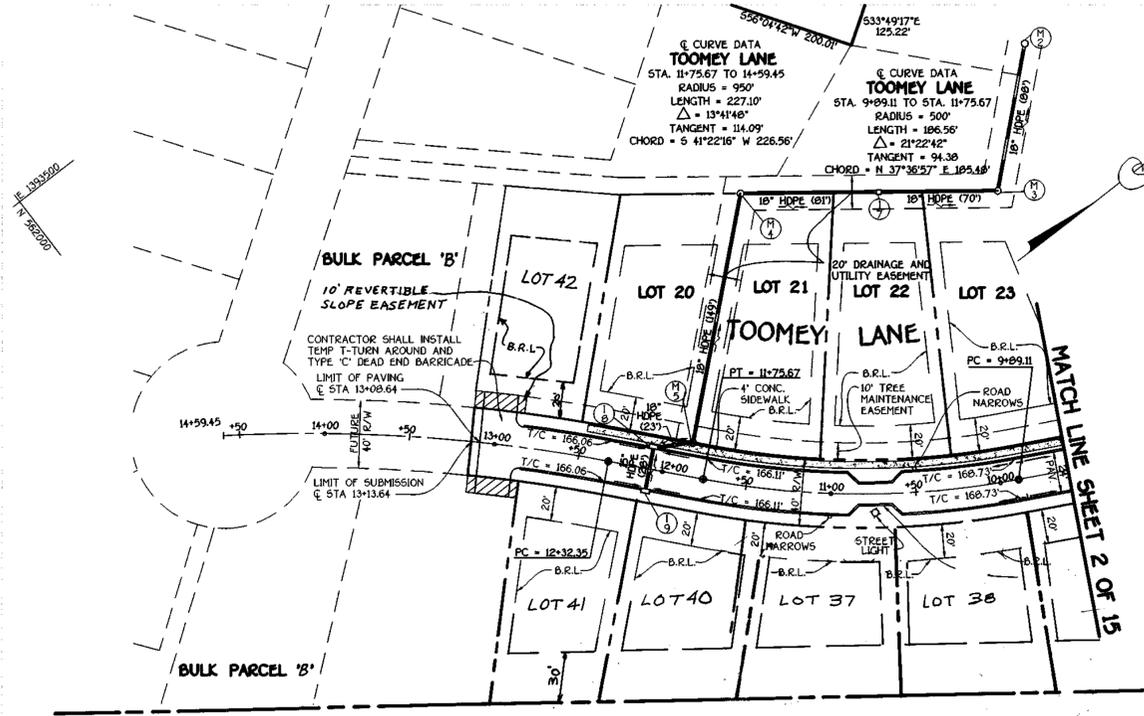
TOOMEY LANE
 PLAN AND PROFILE

OWNER	DEVELOPER
WILLIAM E. TOOMEY AND JANE T. RUSSELL 315 WILLOW DUNES TRAIL MYRTLE BEACH, S.C. 29572 (410) 796-4335	PATRIOT HOMES 5405 HARRIS FARM ROAD SUITE 300 COLUMBIA, MARYLAND 21044 (410) 997-5522

SCALE: 1" = 50'
 DATE: JUNE 20, 2000
 DWG. NO. 2 OF 16
 DES. AMV DRN. FM CHK. AMV

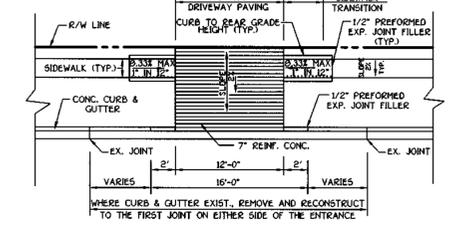
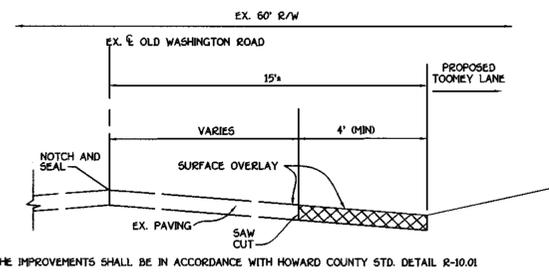
INSHER, COLLINS & CARTER, INC.
 PROFESSIONAL ENGINEERING CONSULTANTS & ARCHITECTS
 11000 BROADWAY OFFICE PARK - 19722 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21043
 (410) 661-3000

STATE OF MARYLAND
 REGISTERED PROFESSIONAL ENGINEER
Alfred M. Williams
 9-28-00



ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	A	B	PAVING SECTION
TOOMEY LANE	PUBLIC ACCESS STREET	30 MPH	R-12	0+00 TO 8+50.54	50'	24'	P-2
TOOMEY LANE	PUBLIC ACCESS STREET	25 MPH	R-12	8+50.54 TO 13+08.64	40'	24'	P-2
FAIRLEE DRIVE	PUBLIC ACCESS STREET	25 MPH	R-12	0+00 TO 1+35	50'	24'	P-2



WESLEY WOODS SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS B&C
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL A - PLAT Nos. 14590 & 14512)

TOOMEY LANE PLAN AND PROFILE

OWNER	DEVELOPER
WILLIAM & TOOMEY AND JANE T. RUSSELL 315 WILDWOOD DUNES TRAIL MYRTLE BEACH, SC 29572 (410) 796-4335	PATRIOT HOMES 5185 HARPER'S FARM ROAD SUITE 200 COLUMBIA, MARYLAND 21044 (410) 997-8922

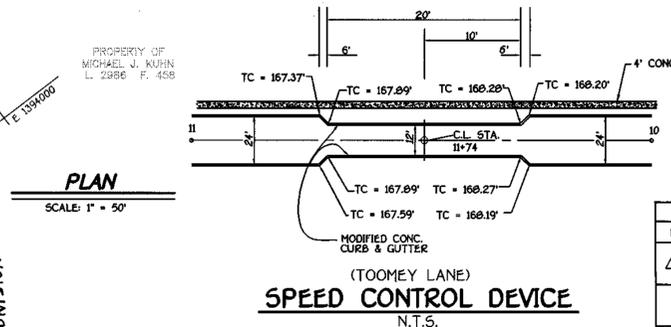
SCALE: 1" = 50' DATE: JUNE 28, 2000
 DESIGNED BY: AMV DRAWN BY: FJM CHECKED BY: AMV

PREPARED BY: COLLINS & CARTER, INC.
 ENGINEERING CONSULTANTS & LAND SURVEYORS
 10000 GREENBRIAR SQUARE OFFICE PARK - 10002 SIX THOUSAND KATYHOPE PLACE
 SUITE 101, MARYLAND JUNE 2000 (410) 461-1995

APPROVED
 DEPARTMENT OF PLANNING AND ZONING
Cindy Hanston 10/19/00
 CHIEF, BUREAU OF LAND DEVELOPMENT DATE

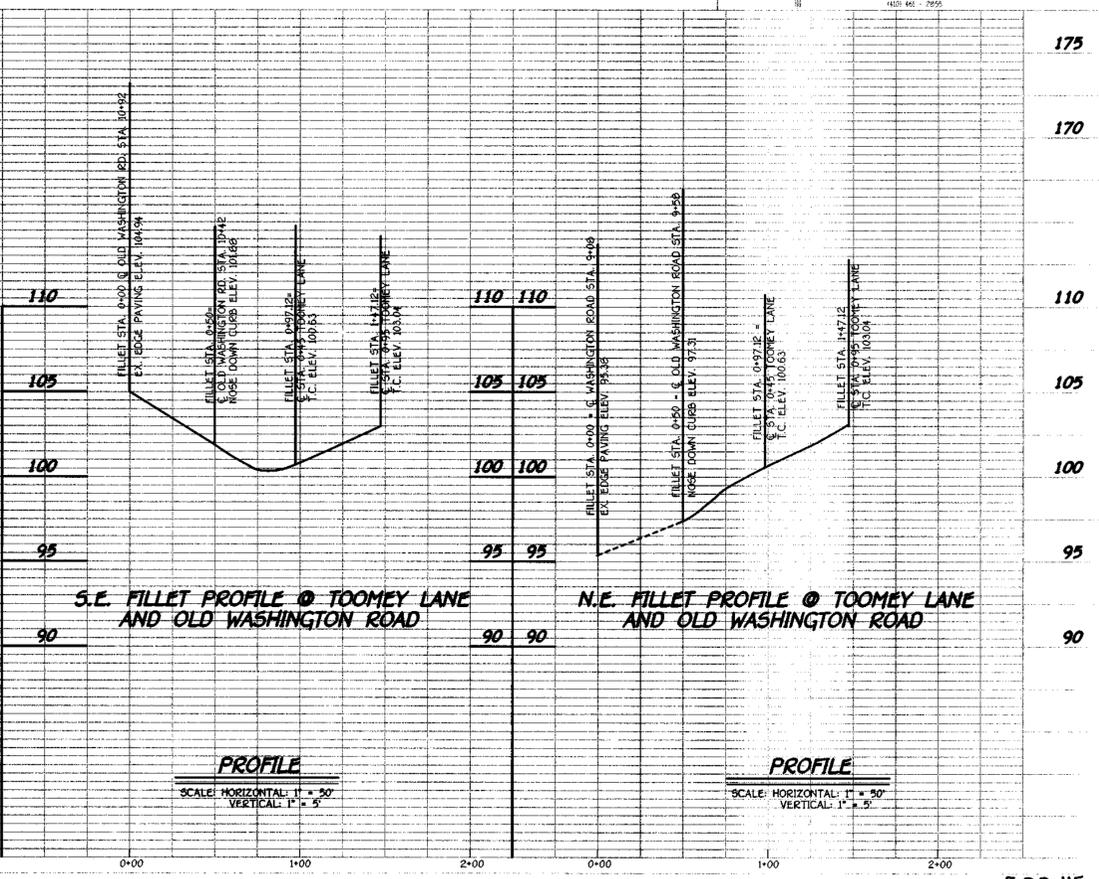
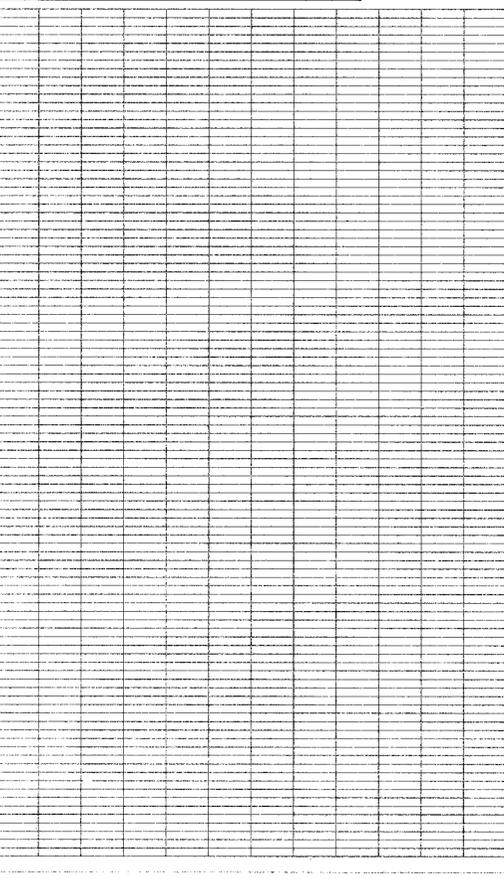
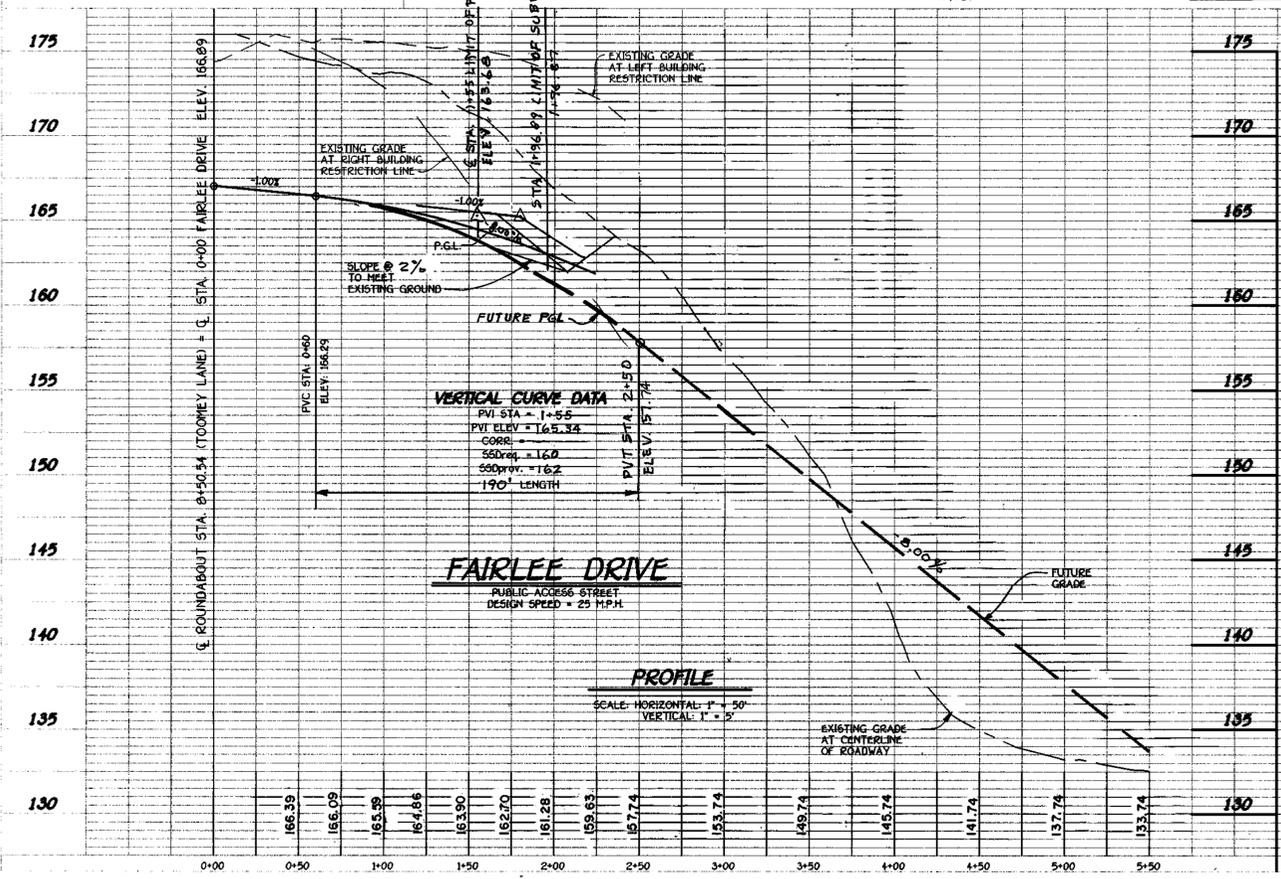
APPROVED
 DEPARTMENT OF PLANNING AND ZONING
William D. ... 10/17/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. ... 10/16/00
 CHIEF, BUREAU OF HIGHWAYS DATE



REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBER AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01





By The Developer:
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans. And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: Bruce A. Harvey Date: 9-28-00
 Printed Name Of Developer: Bruce A. Harvey

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On The Best Available Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: Alpo M. Vitucci Date: 9-28-00
 Printed Name Of Engineer: Alpo M. Vitucci

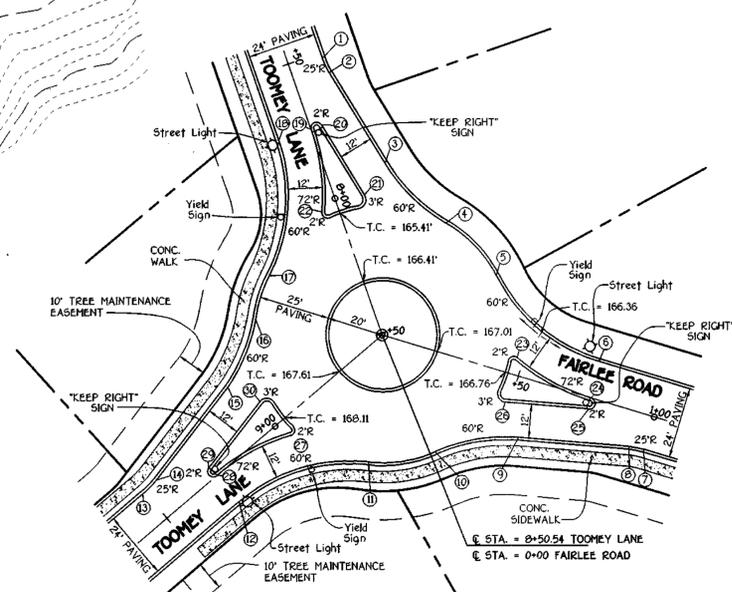
Approved Department of Public Works:
 Signature: Andrew M. Daveler Date: 10-16-00
 Chief, Bureau of Highways

Approved Department of Planning And Zoning:
 Signature: Wanda Hamilton Date: 10/19/00
 Chief, Division Of Land Development

Signature: Alpo M. Vitucci Date: 10/17/00
 Chief, Development Engineering Division

ROUNDABOUT TOP OF CURBS CHART

No.	ROAD NAME	STATION	OFFSET	TOP OF CURB ELEVATION
1	TOOMEY LANE	7+52.14	12' L	162.60
2	TOOMEY LANE	7+57.50	12.50' L	162.26
3	TOOMEY LANE	7+54.85	20.74' L	163.35
4	TOOMEY LANE	8+21.07	34.00' L	163.01
5	TOOMEY LANE	8+44.65	44.61' L	166.06
6	FAIRLEE ROAD	0+76.42	12' L	166.05
7	FAIRLEE ROAD	0+99.72	12' R	165.46
8	FAIRLEE ROAD	0+94.53	12.54' R	165.19
9	FAIRLEE ROAD	0+56.31	20.66' R	166.23
10	TOOMEY LANE	8+53.04	43.23' L	166.77
11	TOOMEY LANE	8+83.30	37.86' L	167.19
12	TOOMEY LANE	9+26.97	12' L	168.30
13	TOOMEY LANE	9+49.44	12' R	168.55
14	TOOMEY LANE	9+44.21	12.50' R	168.48
15	TOOMEY LANE	9+06.94	20.52' R	167.71
16	TOOMEY LANE	8+20.09	33.94' R	166.70
17	TOOMEY LANE	8+17.79	30.86' R	165.87
18	TOOMEY LANE	7+74.12	12' R	163.72
19	TOOMEY LANE	7+74.36	0	164.09
20	TOOMEY LANE	7+73.94	3.95' L	163.96
21	TOOMEY LANE	8+02.46	10.20' L	164.90
22	TOOMEY LANE	8+02.93	5.80' R	165.00
23	FAIRLEE ROAD	0+47.61	6.17' L	165.54
24	FAIRLEE ROAD	0+76.78	0	166.39
25	FAIRLEE ROAD	0+77.19	3.96' R	166.47
26	FAIRLEE ROAD	0+48.08	10.14' R	166.43
27	TOOMEY LANE	8+98.18	3.95' L	167.99
28	TOOMEY LANE	9+26.82	0	168.66
29	TOOMEY LANE	9+27.23	3.96' R	168.54
30	TOOMEY LANE	8+98.84	10.05' R	167.88



ROUNDABOUT DETAIL
 SCALE: 1" = 30'

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
WESLEY WOODS
 SECTION ONE

ZONED R-12
 TAX MAP NO. 30 PARCEL NO. 162 GRID NO. 4
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 5 OF 16

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINE AND LOT NUMBER AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

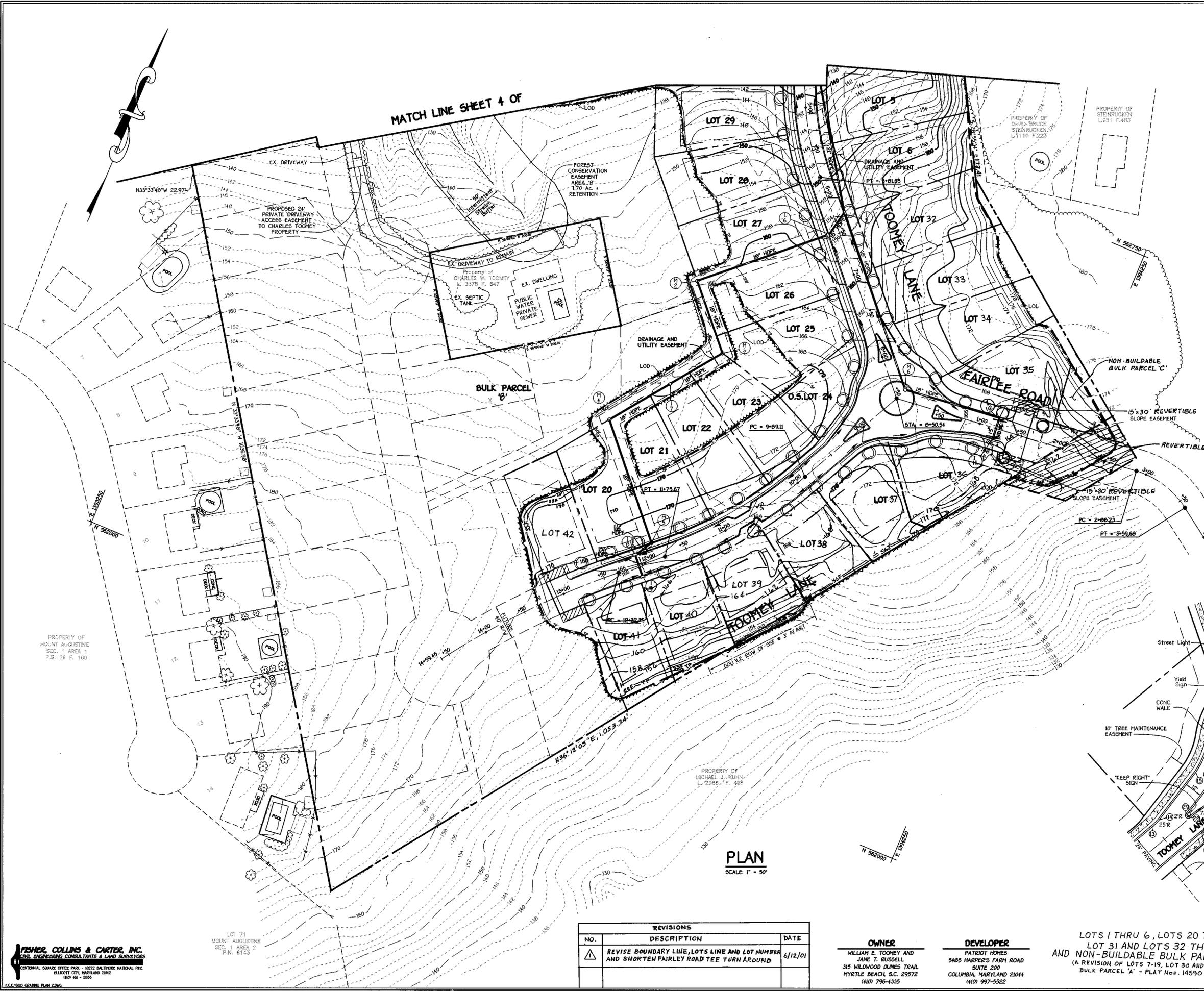
OWNER
 WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK • 10772 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 410 484 - 2855

LOT 71
 MOUNT AUGUSTINE
 SEC. 1 AREA 2
 P.N. 6143

PLAN
 SCALE: 1" = 50'



MATCH LINE SHEET 4 OF

PLAN
SCALE: 1" = 50'

By The Developer:
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans. And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Bruce A. Harvey* 9-28-00
 Printed Name Of Developer: Bruce A. Harvey Date

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Standards Of The Howard Soil Conservation District. I Have Notified The Developer That I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *Alpo M. Vitucci* 9-28-00
 Printed Name Of Engineer: Alpo M. Vitucci Date

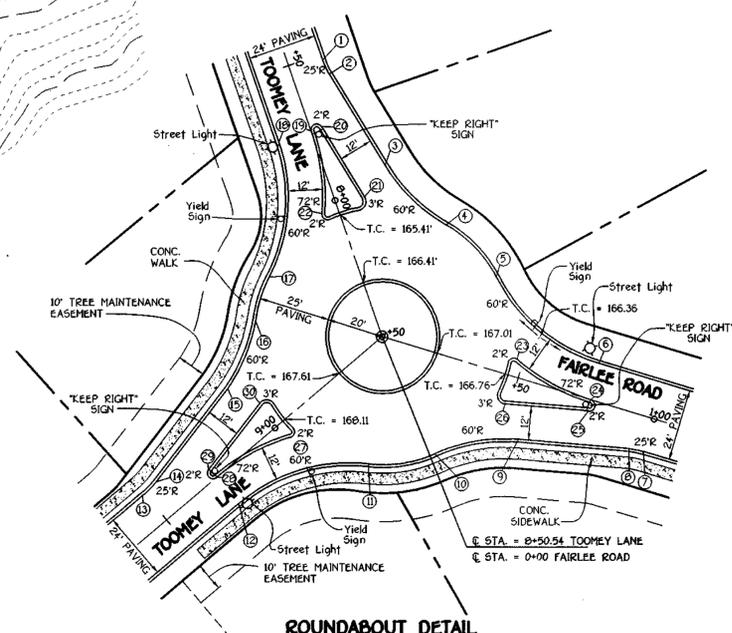
Approved: Department Of Public Works
 Signature: *Andrew M. Daveler* 10-16-00
 Chief, Bureau Of Highways Date

Approved: Department Of Planning And Zoning
 Signature: *Wanda Hamilton* 10/19/00
 Chief, Division Of Land Development Date

Signature: *Alpo M. Vitucci* 10/17/00
 Chief, Development Engineering Division Date

ROUNDABOUT TOP OF CURB CHART

No.	ROAD NAME	STATION	OFFSET	TOP OF CURB ELEVATION
1	TOOMEY LANE	7+82.14	12' L	162.60
2	TOOMEY LANE	7+57.50	12.50' L	162.06
3	TOOMEY LANE	7+94.65	20.74' L	163.35
4	TOOMEY LANE	8+21.07	34.00' L	162.00
5	TOOMEY LANE	8+44.66	44.61' L	166.06
6	FAIRLEE ROAD	0+76.42	12' L	166.05
7	FAIRLEE ROAD	0+92.72	12' R	162.40
8	FAIRLEE ROAD	0+94.23	12.54' R	162.40
9	FAIRLEE ROAD	0+56.31	20.66' R	166.23
10	TOOMEY LANE	8+63.04	43.23' L	166.77
11	TOOMEY LANE	8+23.30	30.85' L	167.19
12	TOOMEY LANE	9+26.37	12' L	168.30
13	TOOMEY LANE	9+49.44	12' R	168.35
14	TOOMEY LANE	9+44.21	12.50' R	168.40
15	TOOMEY LANE	9+06.54	20.62' R	167.71
16	TOOMEY LANE	8+80.09	33.94' R	166.78
17	TOOMEY LANE	8+17.79	30.86' R	165.87
18	TOOMEY LANE	7+74.12	12' R	163.72
19	TOOMEY LANE	7+74.36	0	164.08
20	TOOMEY LANE	7+73.94	3.95' L	163.98
21	TOOMEY LANE	8+02.46	10.20' L	164.98
22	TOOMEY LANE	8+02.93	5.91' R	165.00
23	FAIRLEE ROAD	0+77.61	8.17' L	165.54
24	FAIRLEE ROAD	0+76.76	0	166.39
25	FAIRLEE ROAD	0+77.19	3.96' R	166.47
26	FAIRLEE ROAD	0+48.08	10.14' R	166.43
27	TOOMEY LANE	9+88.16	5.92' L	167.98
28	TOOMEY LANE	9+26.82	0	168.26
29	TOOMEY LANE	9+27.23	3.96' R	168.54
30	TOOMEY LANE	8+98.84	10.05' R	167.88



ROUNDABOUT DETAIL
 SCALE: 1" = 30'

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
 WESLEY WOODS
 SECTION ONE

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINE AND LOT NUMBER AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

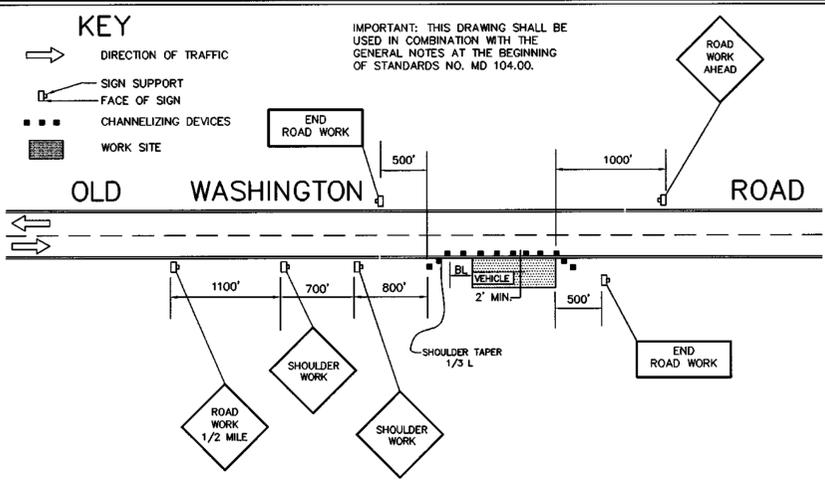
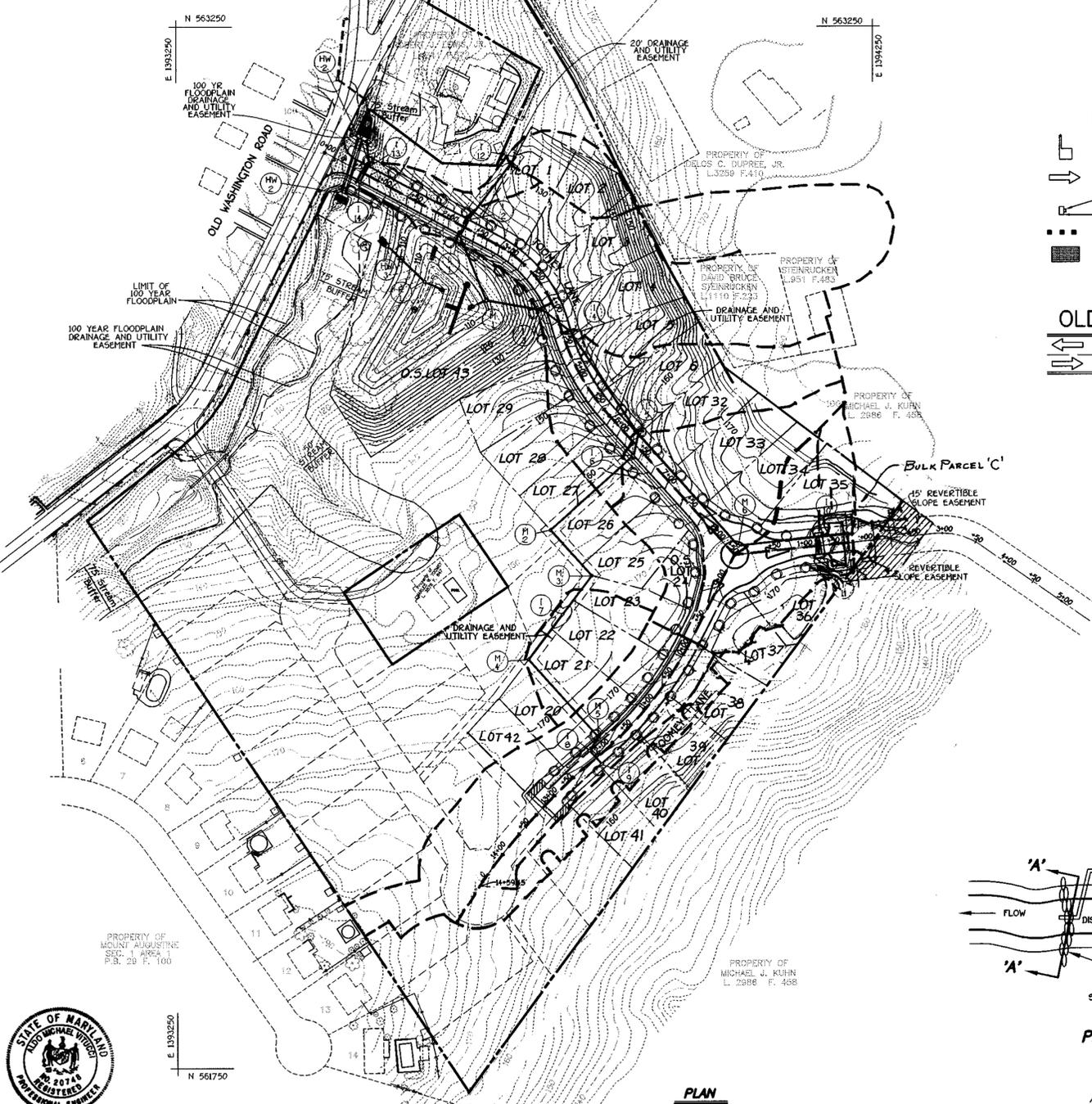
OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 2405 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

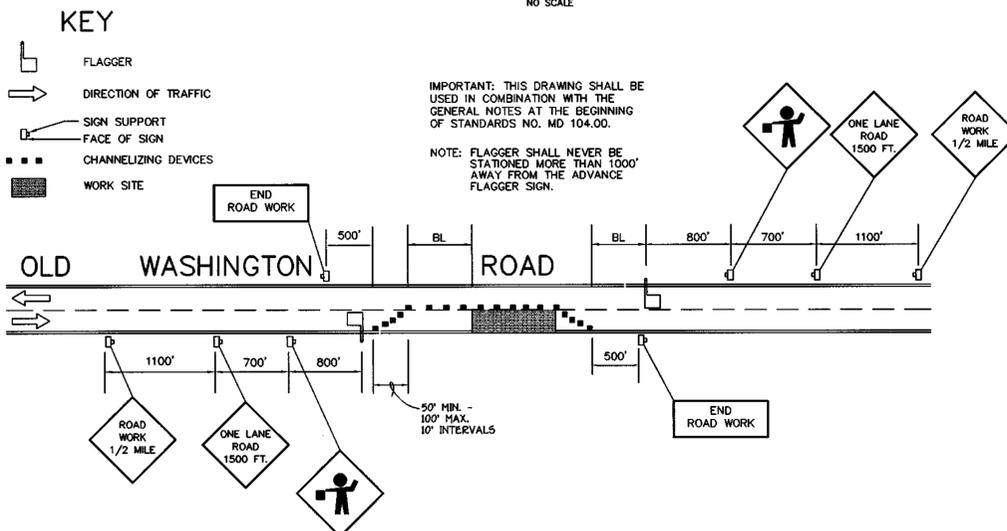
LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCEL 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
 TAX MAP NO. 30 PARCEL NO. 162 GRID NO. 4
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 5 OF 16

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA (Ac)	C FACTOR	ZONED	Tc (min)
I-1	I-1	0.10	0.68	R-12	10
I-2	I-2	1.72	0.43	R-12	13
I-3	I-3	0.40	0.52	R-12	10
I-4	I-4	0.85	0.44	R-12	12
I-5	I-5	0.72	0.46	R-12	12
I-6	I-6	0.48	0.50	R-12	10
I-7	I-7	0.46	0.40	R-12	10
I-8	I-8	1.12	0.54	R-12	10
I-9	I-9	.78	0.53	R-12	10
I-10	I-10	.23	0.46	R-12	10
I-11	I-11	.44	0.49	R-12	10
I-12	I-12	0.28	0.33	R-12	10
I-13	I-13	0.22	0.39	R-12	10
I-14	I-14	0.10	0.42	R-12	10



TEMPORARY TRAFFIC CONTROL PLAN
NO SCALE

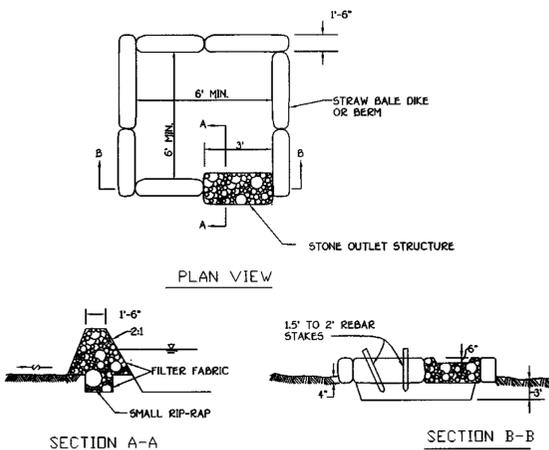


TEMPORARY TRAFFIC CONTROL PLAN
NO SCALE

Approved: Department of Public Works
Richard M. ... 10/16/00
 Chief, Bureau of Highways Date

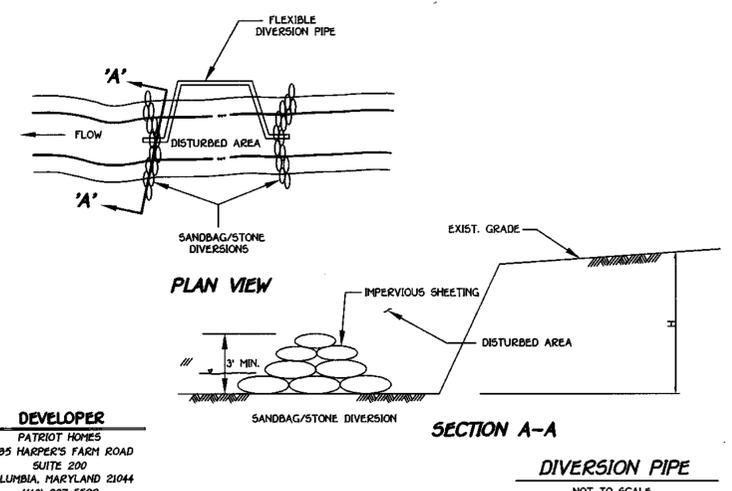
Approved: Department of Planning and Zoning
... 10/19/00
 Chief, Division of Land Development Date

... 10/17/00
 Chief, Development Engineering Division Date



- I. DESCRIPTION
 THE WORK SHALL CONSIST OF THE CONSTRUCTION OF A DEWATERING BASIN FOR THE PURPOSE OF RECEIVING SEDIMENT-LADEN WATER PUMPED FROM A CONSTRUCTION SITE TO ALLOW FILTRATION BEFORE THE WATER RE-ENTERS THE WATERWAY.
- II. MATERIAL SPECIFICATIONS
- RIPRAP SHALL CONSIST OF 4-8 INCH WASHED STONE OR GRAVEL.
 - FILTER FABRIC: THE FILTER CLOTH SHALL BE A WOVEN OR NONWOVEN FABRIC CONSISTING ONLY OF CONTINUOUS CHAIN POLYMERIC FILAMENTS OR YARNS OF POLYESTER. THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS, HYDRO-CARBONS, MILDEW, AND ROT RESISTANT. NO. 6 STONE (AASHTO 57) MAY BE USED ON THE INNER-FACE FOR FILTERING INSTEAD OF FABRIC.
 - STRAWBALES: STRAWBALES SHALL MEET THE CRITERIA AS SPECIFIED IN THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- III. CONSTRUCTION REQUIREMENTS
- THE CONTRACTOR SHALL INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES AT THE FIRST ORDER OF BUSINESS.
 - EXCAVATED MATERIALS SHALL BE STORED SUCH THAT SEDIMENTS ARE PREVENTED FROM ENTERING THE WATERWAY; I.E., SEDIMENT PERIMETER CONTROLS MAY BE NECESSARY.
 - EXCAVATED SUBSOIL AND TOPSOIL SHALL BE KEPT SEPARATE AND REPLACED IN THEIR NATURAL ORDER.
 - ANY DEWATERING OF THE CONSTRUCTION AREA SHALL BE FILTERED THROUGH A DEWATERING BASIN PRIOR TO ENTERING THE WATERWAY.
 - THE DEWATERING BASIN SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 3 FEET. ONCE THE DEWATERING BASIN BECOMES FILLED TO 1/2 OF THE EXCAVATED DEPTH, ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A SCD APPROVED DISPOSAL AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY WRA.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL. ALL GROUND CONTOURS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE ADMINISTRATION.

DEWATERING BASIN
(V.P.D. 11)
NO SCALE



SECTION A-A
DIVERSION PIPE
NOT TO SCALE

- I. DESCRIPTION
 THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS CULVERT CONSTRUCTION OR CULVERT REPLACEMENT.
- II. MATERIAL SPECIFICATIONS
- SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (E.G., SAND, FINE GRAVEL, ETC.).
 - STONE: STONE SHALL BE WASHED AND HAVE A MINIMUM DIAMETER OF 6 INCHES.
 - SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.
- III. CONSTRUCTION REQUIREMENTS
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 - THE HEIGHT OF THE SANDBAG/STONE DIVERSION STRUCTURE SHALL BE ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BANK PLUS ONE FOOT, AS INDICATED IN SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH, PREPARED SURFACE.
 - ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF IN A SCD APPROVED DISPOSAL AREA OUTSIDE THE 100 YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A FILTER BAG OF OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 - THE DIVERSION PIPE SHALL HAVE A MINIMUM DIAMETER OF SUFFICIENT SIZE TO CONVEY THE NORMAL STREAM FLOW.
 - IF NECESSARY, SILT FENCE OR STRAWBALES SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

TRAFFIC CONTROL PLAN AND
 STORM DRAIN DRAINAGE AREA MAP
WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT NO. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 6 OF 16

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 No. 20748
 6-28-00
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK • 10772 BALTIMORE NATIONAL PIKE
 ELKROTT CITY, MARYLAND 21114
 (410) 961-2055

LOT 71
 MOUNT AQUISTINE
 SEC. 1 AREA 2
 P.L. 5143

OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

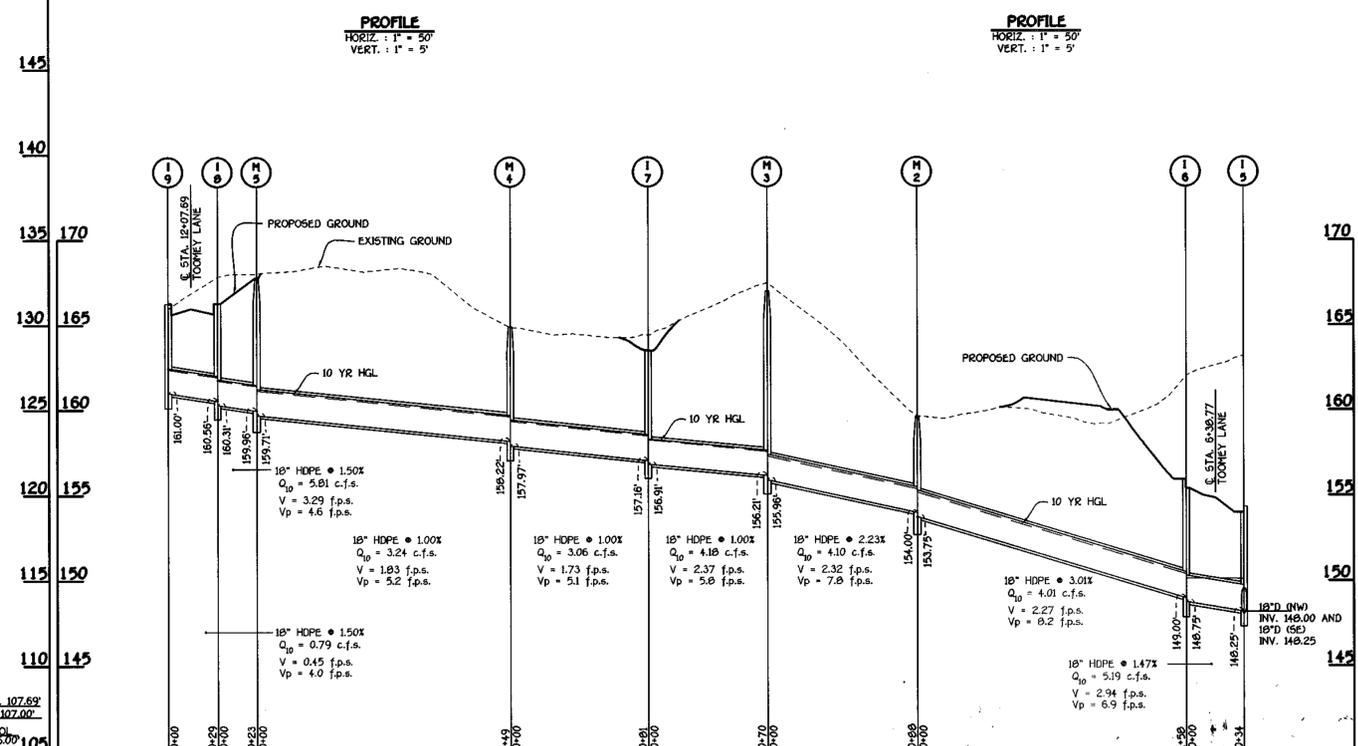
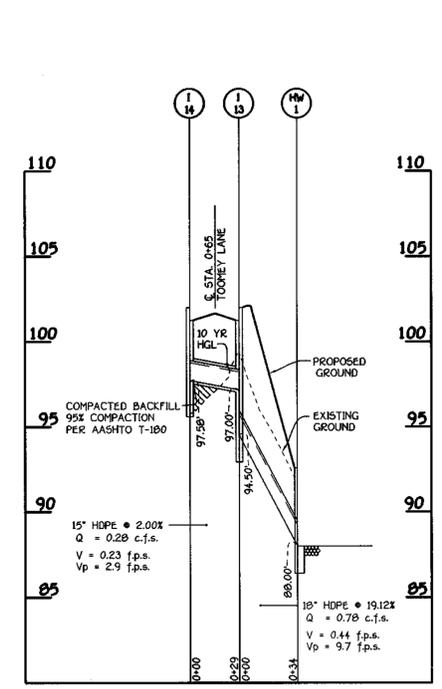
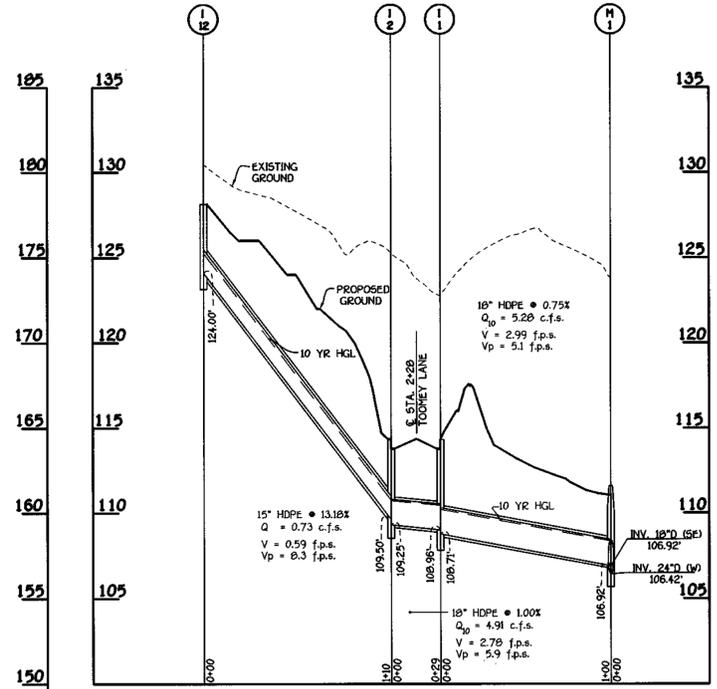
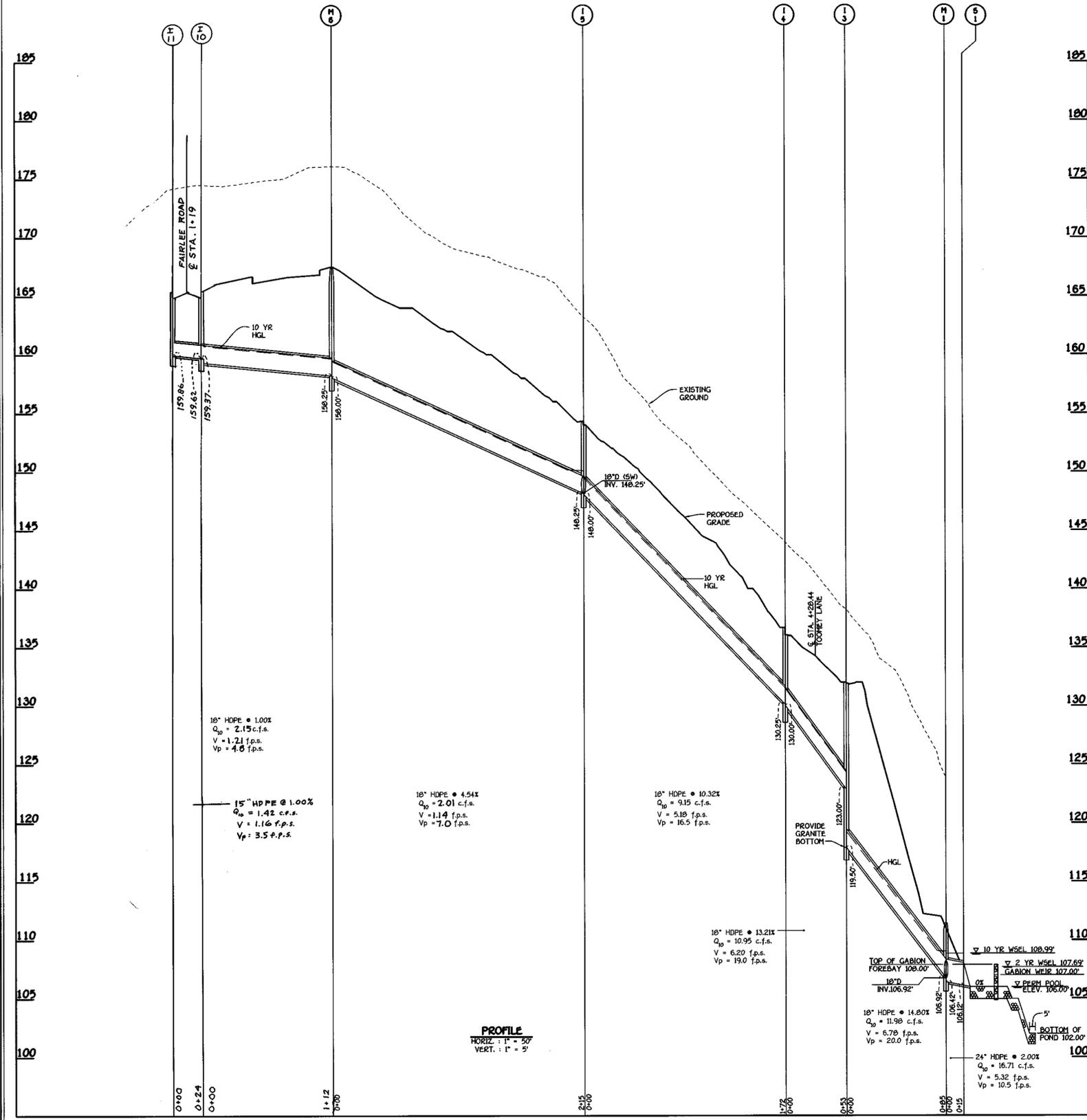
DEVELOPER
 PATRIOT HOMES
 5185 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

Approved: Department Of Planning And Zoning
Clayton Hamilton 10/19/20
 Chief, Division Of Land Development Date

Michael J. ... 10/17/20
 Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works
Richard M. ... 10-16-00
 Chief, Bureau Of Highways Date

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 3072 BALTIMORE NATIONAL PKWY
 ELICOTT CITY, MARYLAND 21042
 (410) 481-2000

OWNER
 WILLIAM E. TOONEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, SC. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5922



STORM DRAIN PROFILES WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 25, 2000
 SHEET 7 OF 16

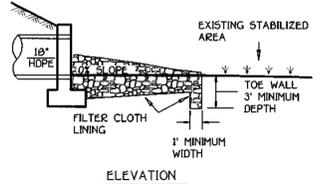
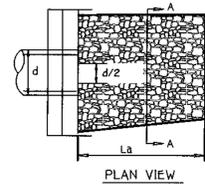
Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Chief, Development Engineering Division
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways

10/19/00
 10/17/00
 10-16-00

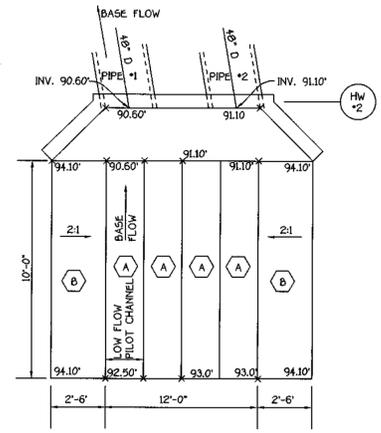
ROCK OUTLET PROTECTION III • HW-1

ROCK OUTLET PROTECTION

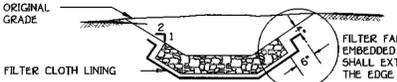
SIZE	MATERIAL	LENGTH
15"	HDPE	153'
18"	HDPE	1432'
24"	HDPE	15'
24"	RCCP	70'
48"	RCCP	164'



- Construction Specifications
- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
 - The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
 - Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
 - Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
 - The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.



(A) DENOTES PVC COATED 10' x 3' x 1.5' D GABION BASKET
 (B) DENOTES PVC COATED 10' x 2'-6\"/>

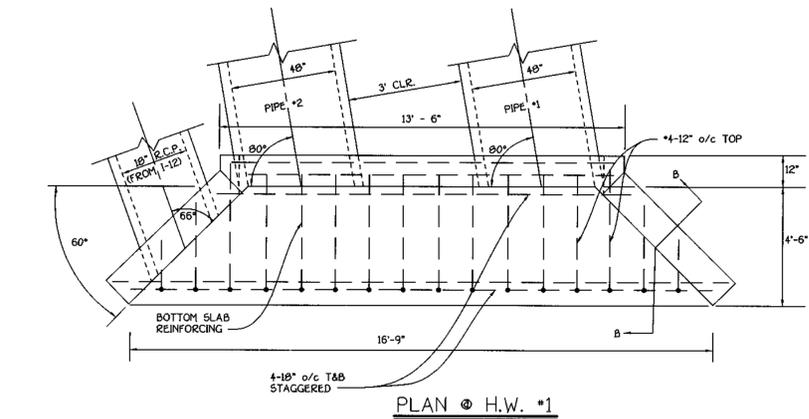


GABION INFLOW PROTECTION
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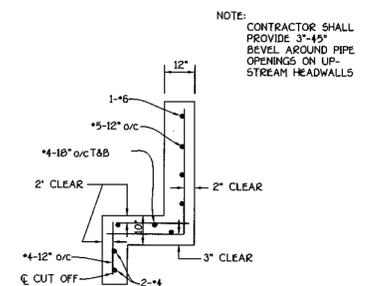
STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	114.25	108.96	108.71	TOOMEY LANE	CL. STA. 2+28	12'R	A-10 INLET	S.D. 4.41
I-2	114.25	109.50	109.25	TOOMEY LANE	CL. STA. 2+28	12'L	A-10 INLET	S.D. 4.41
I-3	132.09	123.00	119.50	TOOMEY LANE	CL. STA. 4+04	12'R	A-10 INLET	S.D. 4.41
I-4	136.69	130.25	130.00	TOOMEY LANE	CL. STA. 4+50	12'L	A-10 INLET	S.D. 4.41
I-5	154.35	148.25	148.00	TOOMEY LANE	CL. STA. 6+30	12'L	A-10 INLET	S.D. 4.41
I-6	155.86	149.00	148.75	TOOMEY LANE	CL. STA. 6+48	12'R	A-10 INLET	S.D. 4.41
I-7	163.80	157.16	156.91	-----	-----	-----	"S" INLET	S.D. 4.22
I-8	166.25	160.56	160.31	TOOMEY LANE	CL. STA. 12+07.69	12'R	A-10 INLET	S.D. 4.41
I-9	166.25	-----	161.00	TOOMEY LANE	CL. STA. 12+07.69	12'L	A-10 INLET	S.D. 4.41
I-10	165.28	159.62	159.37	FAIRLEE ROAD	CL. STA. 1+19	12'L	A-5 INLET	S.D. 4.40
I-11	165.28	-----	159.86	FAIRLEE ROAD	CL. STA. 1+19	12'R	A-5 INLET	S.D. 4.40
I-12	128.00	-----	124.00	-----	-----	-----	"S" INLET	S.D. 4.22
I-13	101.72	96.00	94.50	TOOMEY LANE	CL. STA. 0+65	12'L	A-10 INLET	S.D. 4.41
I-14	101.72	-----	96.50	TOOMEY LANE	CL. STA. 0+65	12'R	A-10 INLET	S.D. 4.40
M-1	111.50	106.92	106.92	TOOMEY LANE	CL. STA. 3+23	75'R	STD. MANHOLE	G - 5.05
M-2	159.60	154.00	153.75	-----	-----	-----	STD. MANHOLE	G - 5.05
M-3	167.00	156.21	155.96	-----	-----	-----	STD. MANHOLE	G - 5.05
M-4	165.00	158.22	157.97	-----	-----	-----	STD. MANHOLE	G - 5.05
M-5	167.77	159.96	159.71	TOOMEY LANE	CL. STA. 11+86	20'R	STD. MANHOLE	G - 5.05
M-6	167.50	158.25	158.00	TOOMEY LANE	CL. STA. 8+44	13'L	STD. MANHOLE	G - 5.05
S-1	108.00	-----	106.00	-----	-----	-----	HDPE END SECTION	-----
HW-1	-----	90.60	88.50	TOOMEY LANE	CL. STA. 0+36.41	41.71'L	MOD. TYPE 'A'	SEE PLAN
HW-2	-----	90.60	-----	TOOMEY LANE	CL. STA. 0+52.46	39.15'R	MOD. TYPE 'A'	SEE PLAN
HW-3	-----	-----	101.00	-----	-----	-----	TYPE 'A' HEADWALL	-----

SECTION A-A

NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

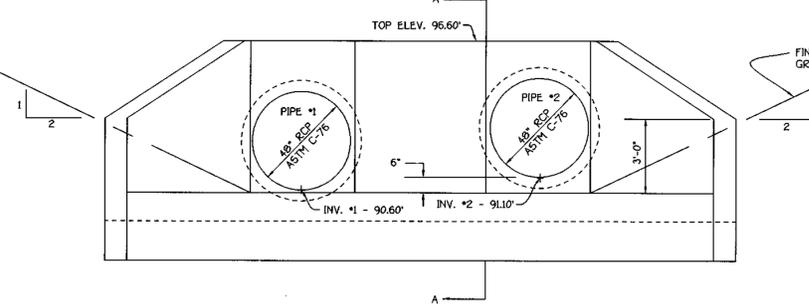


PLAN @ H.W. #1

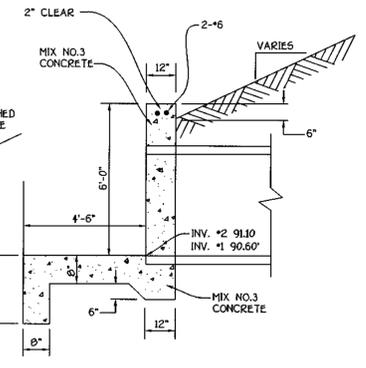


SECTION B-B

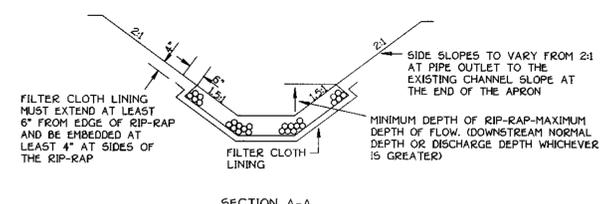
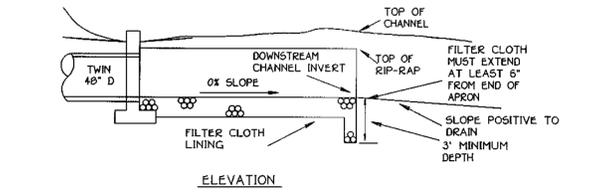
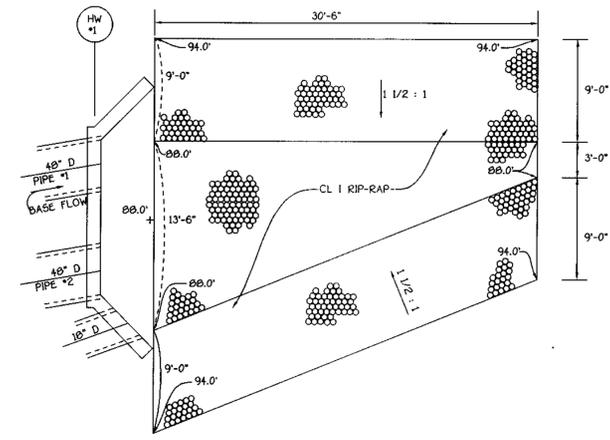
NOTE: CONTRACTOR SHALL PROVIDE 3'-4\"/>



FRONT ELEVATION @ H.W. #2



SECTION A-A @ H.W. - 2



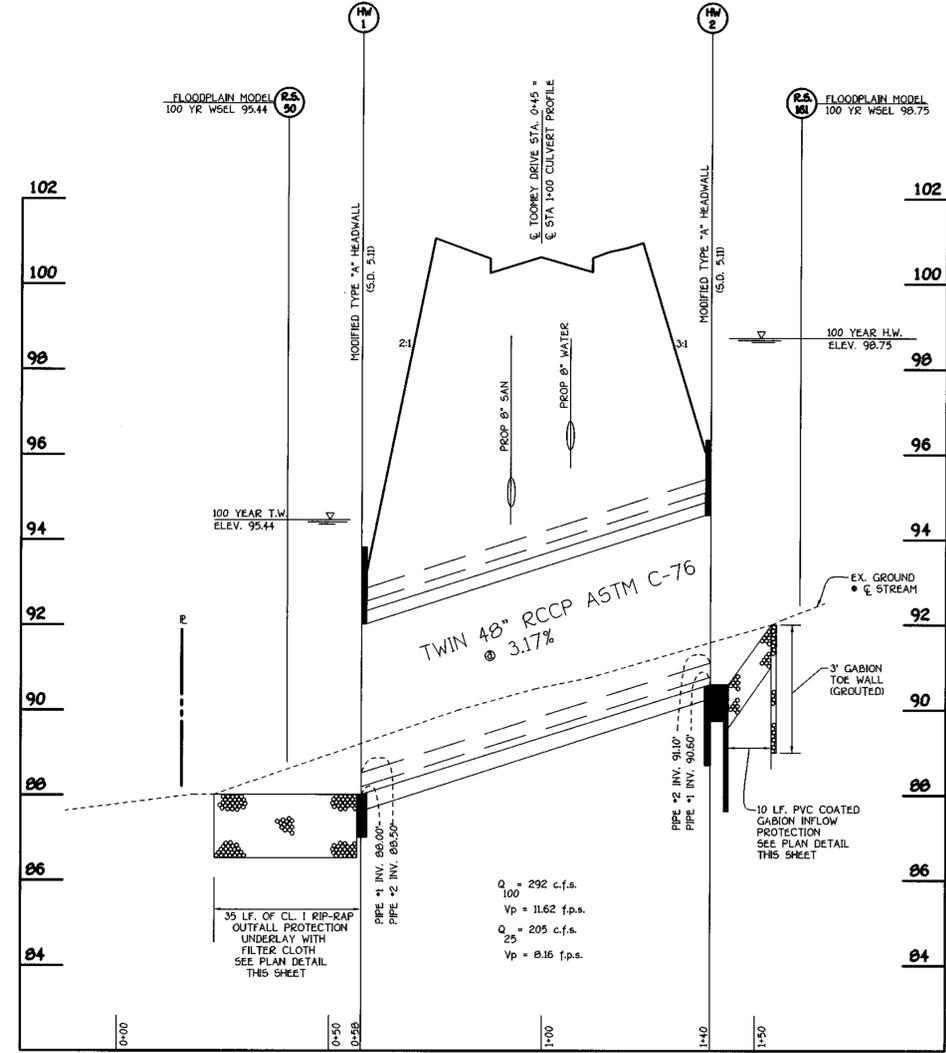
NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

ROCK OUTLET PROTECTION II • HW-1
 NO SCALE

STORM DRAIN PROFILES AND DETAILS
 WESLEY WOODS

SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - FLAT Nos. 14590 THRU 14593)

ZONED R-12
 PARCEL NO. 162
 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000.
 SHEET 8 OF 18



PROFILE

SCALE: HORIZ. 1" = 20'
 VERT. 1" = 2'

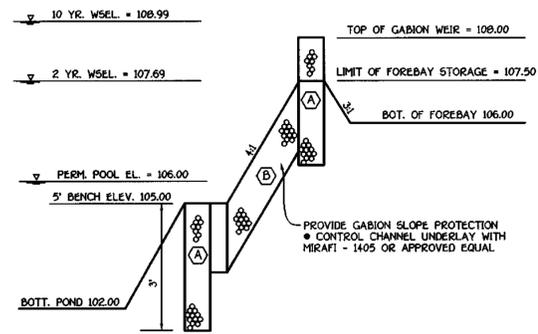
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL OFFICE: 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 441-2855



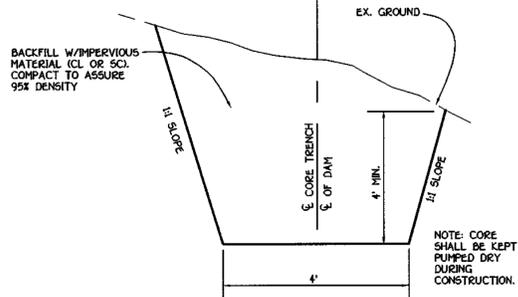
OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5185 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

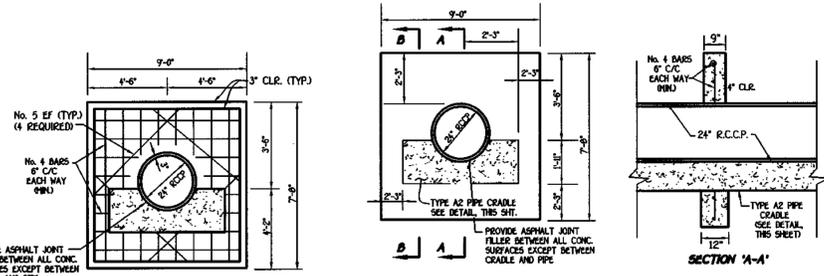
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01



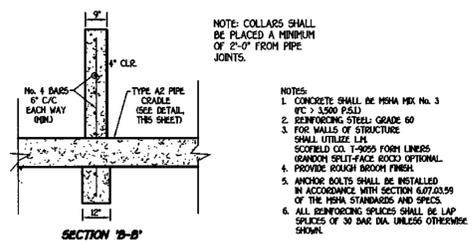
SECTION 'B'
SCALE: HORIZ. 1" = 10'
VERT. 1" = 2'



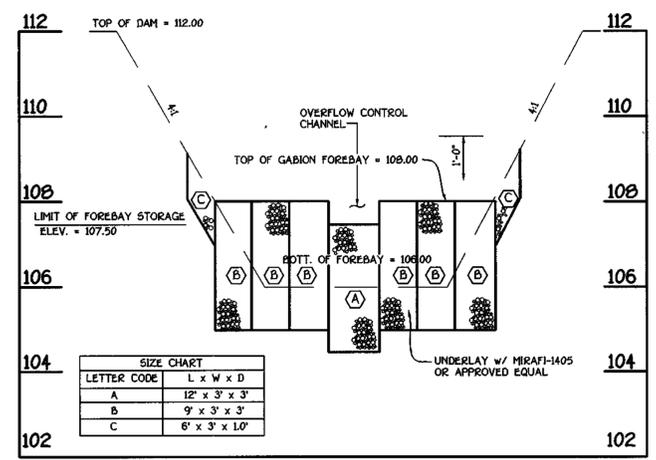
CORE TRENCH DETAIL
NOT TO SCALE



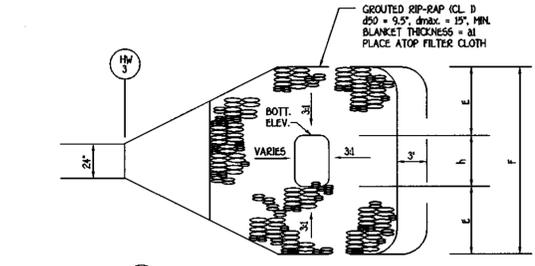
ANTI-SEEP COLLAR
NOT TO SCALE



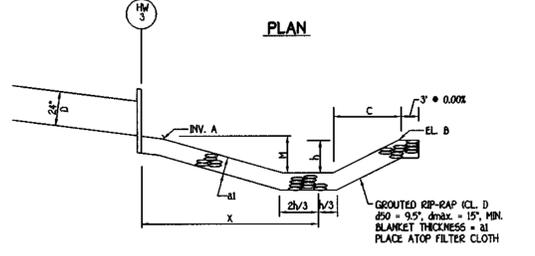
TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR
NO SCALE



GABION FOREBAY PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



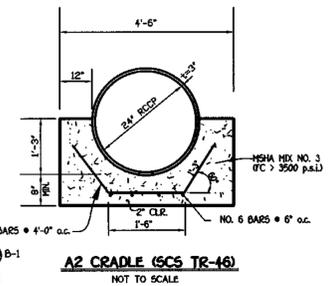
PLAN



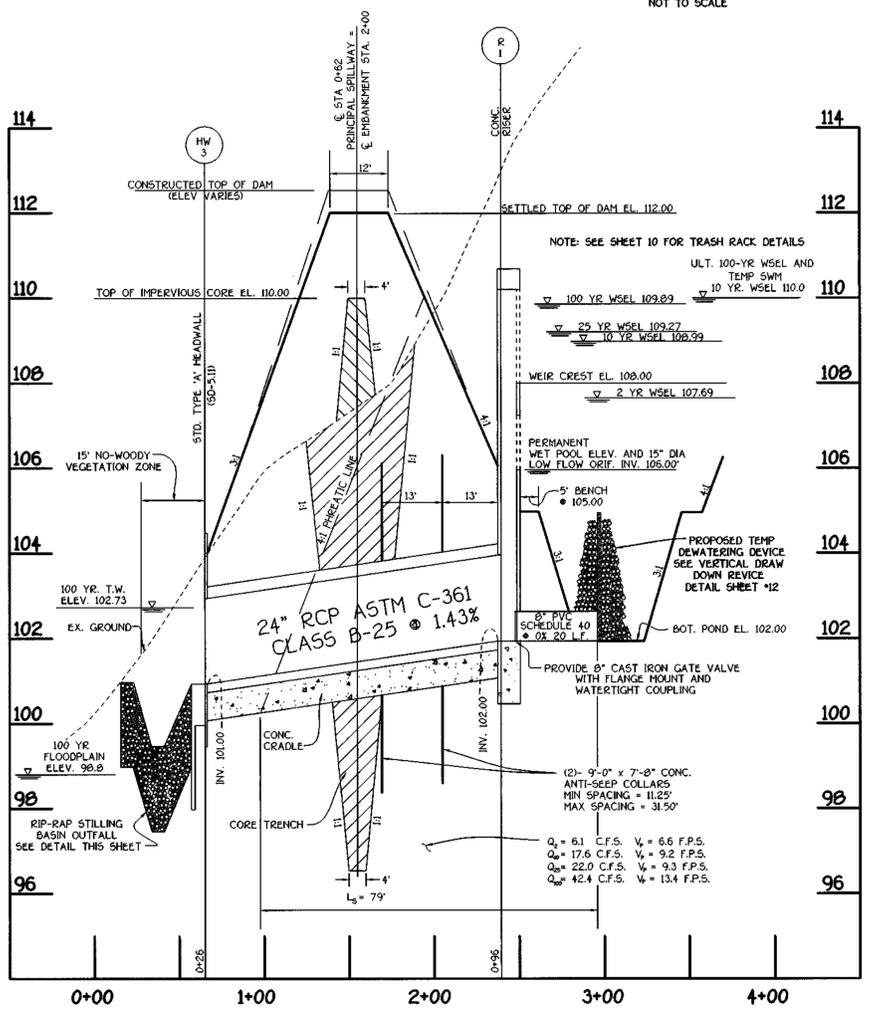
PROFILE

STILLING BASIN OUTFALL DETAIL • HW-3
NO SCALE

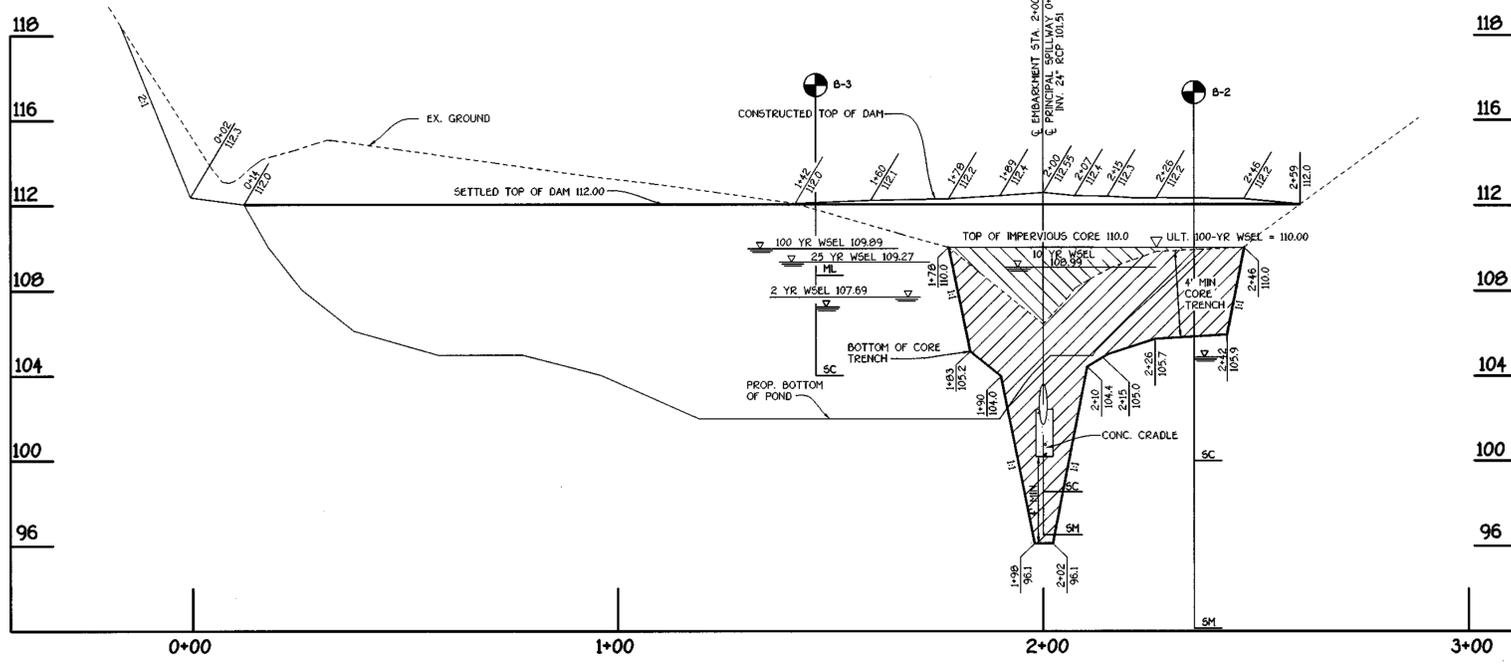
STILLING BASIN DATA										
STRUCTURE NO.	INV.	EL.	C	D	E	F	h	M	ai	X
HW-3	101.00'	101.00'	4.5'	2.0'	4.5'	10.5'	2.0'	2.0'	19'	12.5'



A2 CRADLE (SCS TR-46)
NOT TO SCALE



PROFILE ALONG PRINCIPAL SPILLWAY
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



PROFILE ALONG EMBANKMENT
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'

By The Developer:
I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: Bruce A. Harvey Date: 9-28-00
Printed Name Of Developer: Bruce A. Harvey
By The Engineer:
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That I Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: Aldo M. Vitucci Date: 6-28-00
Printed Name Of Engineer: Aldo M. Vitucci
These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: J.G. Washburn Date: 10/10/00
LURA-Natural Resources Conservation Service
These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: [Signature] Date: 10/10/00
Howard Soil Conservation District
Approved Department Of Public Works
Signature: [Signature] Date: 10-10-00
Chief, Bureau Of Highways
Approved Department Of Planning And Zoning
Signature: [Signature] Date: 10/17/00
Chief, Division Of Land Development
Signature: [Signature] Date: 10/17/00
Chief, Development Engineering Division

AS-BUILT CERTIFICATION
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: _____ P.E. No. _____
Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

A. ROUTINE MAINTENANCE
Facility Shall Be Inspected Annually And After Major Storms. Inspections Should Be Performed During Wet Weather To Determine If The Pond Is Functioning Properly.
Top And Side Slopes Of The Embankment Shall Be Mowed A Minimum Of Two (2) Times A Year, Once In June And Once In September. Other Side Slopes, The Bottom Of The Pond, And Maintenance Access Should Be Mowed As Needed.
Debris And Litter Next To The Outlet Structure Shall Be Removed During Regular Mowing Operations And As Needed.
Visible Signs Of Erosion In The Pond As Well As Rip-Rap Outlet Area Shall Be Repaired As Soon As It Is Noticed.

B. NON-ROUTINE MAINTENANCE
Structural Components Of The Pond Such As The Dam, Riser Structure And The Pipes Shall Be Inspected Upon The Detection Of Any Damage. The Components Should Be Inspected During Routine Maintenance Operations.
Sediment Should Be Removed When Its Accumulation Significantly Reduces The Design Storage, Interferes With The Function Of The Riser, When Deemed Necessary For Aesthetic Reasons, Or When Deemed Necessary By The Howard County Department Of Public Works.

S.W.M. NOTES AND DETAILS
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT NOS. 14590 THRU 14593)

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARYLINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855

OWNER
WILLIAM E. TOOMEY AND
JANE T. RUSSELL
315 WILLOW DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER
PATRIOT HOMES
5485 HARBER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522

TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 9 OF 16

STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

I. SITE PREPARATION: AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BIRDS SHALL BE SLOPED TO NO STEEPER THAN 1:1.

AREAS TO BE COVERED BY THE POND OR RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREE, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH GROUND SURFACE. FOR DRY STORM WATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

II. EARTH FILL:

MATERIAL: THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA OR AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZE STONES, FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNITED SOIL CLASSIFICATION GC, SC, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT: AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN 8-INCH MAXIMUM THICKNESS (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMISSIBLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION: THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ±2% OF THE OPTIMUM EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

CUTOFF TRENCH: THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACK FILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STRUCTURE BACK FILL: BACK FILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACK FILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE PIPE UNLESS THERE IS A COMPACTED FILL OF TWENTY-FOUR INCHES OR GREATER OVER THE STRUCTURE OR PIPE.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

(PUBLIC FACILITY)

A. ROUTINE MAINTENANCE

- Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as rip-rap pilet area shall be repaired as soon as it is noticed.

B. NON-ROUTINE MAINTENANCE

- Structural components of the pond such as the dam, riser structure and the pipes shall be repaired upon the detection of any damage. The components should be inspected during maintenance operations.
- Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.

Embankment and Cut-off Trench Construction

THE AREA OF THE PROPOSED SWM POND SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOFROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 378 SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL. IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. BASED ON OUR VISUAL CLASSIFICATIONS IT APPEARS THAT SOME OF THE ON-SITE SOILS, ESPECIALLY THE NEAR SURFACE SOILS, WILL BE SUITABLE FOR USE AS CORE TRENCH MATERIAL. IT IS RECOMMENDED THAT ADDITIONAL EXPLORATION AND LABORATORY TESTING BE PERFORMED PRIOR TO POND CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED WITH MD SC5 378 SPECIFICATIONS.

III. PIPE CONDUITS: ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

- MATERIALS -** REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361.
- BEDDING -** ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.
- LAYING PIPE -** BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.
- BACK FILLING SHALL CONFORM TO "STRUCTURE BACK FILL".**
- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.**

POLYVINYL CHLORIDE (PVC) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:

- MATERIALS -** PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241.
- JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.**
- BEDDING -** THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.
- BACK FILLING SHALL CONFORM TO "STRUCTURE BACK FILL".**
- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.**

IV. CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 600, MIX NO. 3.

V. ROCK RIP RAP

ROCK RIP RAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 905.

THE RIP RAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN THE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIP RAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE PLACED UNDER ALL RIP RAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 919.12.

VI. CARE OF WATER DURING CONSTRUCTION

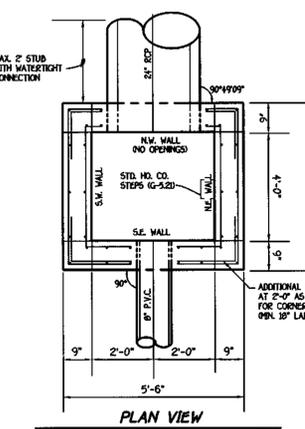
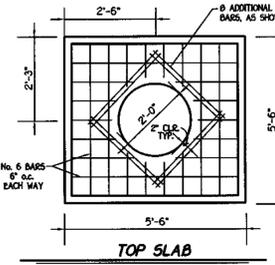
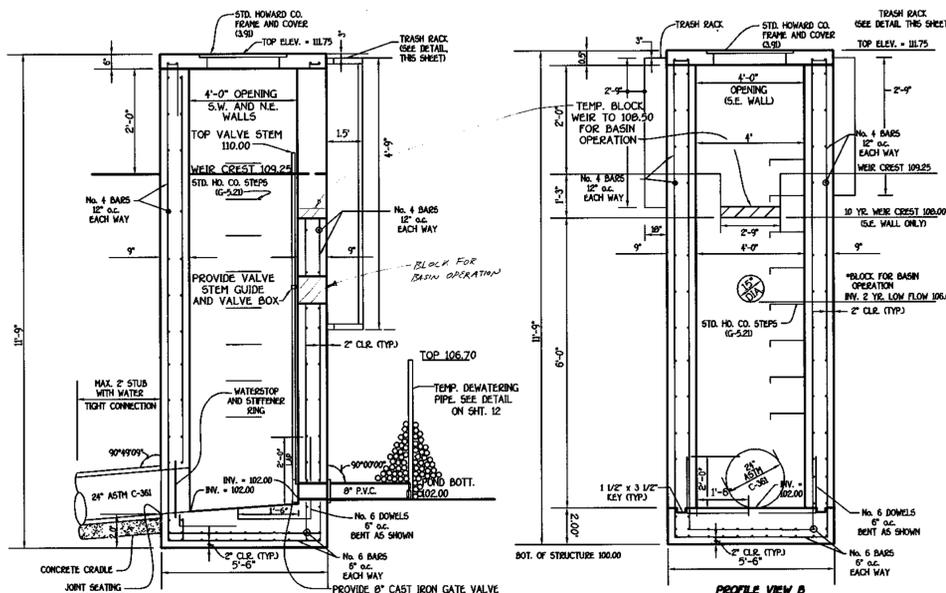
ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DICES, LEVEES, COUNTERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS, DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

VII. STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILL AND BORROW AREAS, AND BEDS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING AS REQUIRED IN ACCORDANCE WITH THE MARYLAND SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

VIII. EROSION & SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED & WATER & AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.



- RISER NOTES:**
- CONCRETE SHALL BE MSHA MIX NO. 3 (FC - 3200 PSD)
 - FORMWORK SHALL BE GRADE 60
 - FACE FORMS FOR WALLS OF OUTLET STRUCTURE SHALL UTILIZE LAM. SCOTCH CO. F-9025 FORM LINERS. RANDOM SPLIT-FACE ROCK OPTIONAL.
 - PROVIDE SLOUGH BROWN FINISH ON TOP OF SLAB.
 - ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 627.05.09 OF THE MSHA STANDARDS AND SPECS.
 - ALL EXPOSED METAL SURFACES SHALL BE PAINTED IN ACCORDANCE WITH SECTION 627.05.02 OF THE MSHA STANDARDS AND SPECS.
 - ALL REINFORCING SPICES SHALL BE LAP SPICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.
 - ALL FILTER FABRIC SHALL BE POLY FILTER-FAB OR EQUAL.
 - ALL EXPOSED EDGES OF CONCRETE TO BE CHAMFERED 1/2" x 1/2".

By The Developer:
I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Bruce A. Harvey* Date: 9-28-00
Printed Name Of Developer: Bruce A. Harvey

By The Engineer:
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer "As-Built" Plans Of The Pond Within 30 Days Of Completion. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *Adrian M. Vitucci* Date: 6-29-00
Printed Name Of Engineer: Adrian M. Vitucci

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *Robert L. Allyn* Date: 10/16/00
Printed Name Of Engineer: Robert L. Allyn
USDA Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *D. G. Winfield, Inc.* Date: 10/16/00
Printed Name Of Engineer: D. G. Winfield, Inc.
Howard Soil Conservation District

Approved: Department Of Public Works
Signature: *Richard M. Daniels* Date: 10-16-00
Printed Name Of Engineer: Richard M. Daniels
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
Signature: *Cinda Handman* Date: 10/19/00
Printed Name Of Engineer: Cinda Handman
Chief, Division Of Land Development

Signature: *Adrian M. Vitucci* Date: 10/17/00
Printed Name Of Engineer: Adrian M. Vitucci
Chief, Development Engineering Division

AS-BUILT CERTIFICATION

I hereby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

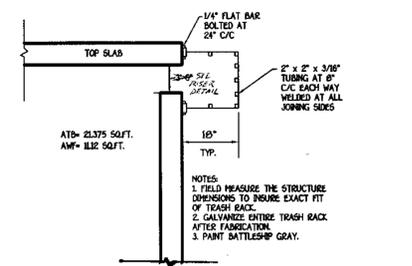
Signature: _____ P.E. No. _____

Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

DESIGN STORM	ALLOWABLE RELEASE RATE	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEVATION	STORAGE VOLUME (ACFT)
2 YEAR	7.2 c.f.s.	17.2 c.f.s.	6.1 c.f.s.	107.69	0.349
10 YEAR	19.3 c.f.s.	37.2 c.f.s.	17.6 c.f.s.	108.99	.740
25 YEAR	22.6 c.f.s.	42.7 c.f.s.	22.0 c.f.s.	109.27	0.833
100 YEAR	N/A	60.9 c.f.s.	42.4 c.f.s.	109.89	1.038

STRUCTURE CLASSIFICATION LOW HAZARD, CLASS 'A' POND
STORAGE - HEIGHT PRODUCT 0.833 Ac. ft. x 10.00' = 8.33
WATERSHED AREA TO FACILITY (ACRES): ULTIMATE 10.25 ACRES
LEVEL OF MANAGEMENT PROVIDED BY FACILITY: TWO, TEN, AND TWENTY FIVE YEAR STORMS



BORING B-1

DESCRIPTION OF MATERIALS	DEPTH SURFACE	REMARKS
TOPSOIL		
ORANGE BROWN MOIST, CLAYEY SAND SAND TRACE GRAVEL (SC)	1.2'	1" TOPSOIL NO GROUNDWATER ENCOUNTERED
ORANGE BROWN/TAN MOIST SILTY SAND LITTLE TO SOME CLAY TRACE GRAVEL (GM-SC)	10.5'	
TAN MOIST SAND TRACE SILT AND GRAVEL (SP)	18.0'	
	19.5'	IN-SITU INFILTRATION TEST PERFORMED AT EL. 80'
RED BROWN TO TAN MOIST FINE SAND LITTLE TO SOME SILT TRACE GRAVEL (GM-SP)	8.0'	
	10.0'	BACKFILLED AT COMPLETION

BORING B-2

DESCRIPTION OF MATERIALS	DEPTH SURFACE	REMARKS
TOPSOIL		
ORANGE BROWN MOIST, CLAYEY SAND SAND TRACE GRAVEL (SC)	1.5'	1" TOPSOIL NO GROUNDWATER ENCOUNTERED
ORANGE BROWN/TAN MOIST SILTY SAND LITTLE TO SOME CLAY TRACE GRAVEL (GM-SC)	10.5'	
TAN MOIST SAND TRACE SILT AND GRAVEL (SP)	18.0'	PERCHED WATER NOTED SEEPING INTO EXCAVATION FROM 15' - 5.0'
	19.5'	IN-SITU INFILTRATION TEST PERFORMED AT EL. 80'
	19.5'	BACKFILLED AT COMPLETION

BORING B-3

DESCRIPTION OF MATERIALS	DEPTH SURFACE	REMARKS
TOPSOIL		
BROWN MOIST TO WET, MICA/CALCIOUS SANDY SILT WITH WEATHERED ROCK FRAGMENTS (ML)	0.5'	
GREEN, WET, FINE SANDY SILT WITH SOME MICA AND WEATHERED ROCK FRAGMENTS (SH)	2.5'	GROUNDWATER ENCOUNTERED AT 1.5' WHILE DRILLING
	8.0'	* CAVED IN AT 4.5' AT COMPLETION
	8.0'	BOTTOM OF HOLE AT 8.0'

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TIE TURN AROUND	6/12/01

OWNER
WILLIAM E. TOOMEY AND JANE I. RUSSELL
315 WILLOW DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER
PATRIOT HOMES
5405 HARPER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5922

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 8022 BALTIMORE NATIONAL PIKE
BLADENBORO CITY, MARYLAND 20714
(410) 461-2995

S.W.M. NOTES AND DETAILS
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 10 OF 10

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 vegetative 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 is so shallow that vegetation 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. Typical 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 Experiment Station.
- Topsoil specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate authority. Topsoil shall not be a mixture of contrasting textures and shall contain less than 5% by volume of clasts, stones, silt, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnson grass, nutgrass, 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.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results detailing fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.0. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

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

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, silt fence and sediment traps and basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, altered or higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and sodding preparation.
- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents may be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (330-1955).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, IN 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 52, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), 500 (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS

TOTAL AREA OF SITE	2040 ACRES
AREA TO BE DISTURBED	1042 ACRES
AREA TO BE GRADED OR PAVED	1.64 ACRES
AREA TO BE VEGETATIVELY STABILIZED	678 ACRES
TOTAL CUT	20,000 CU.YDS.
TOTAL FILL	20,000 CU.YDS.
- OFFSITE WASTE/BORROW AREA LOCATION N/A CU.YDS.
- 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 OBTAINED 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.

20.0 STANDARDS AND SPECIFICATIONS

FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary and Permanent Vegetative Stabilization. Examples of Applicable Areas for Temporary Seeding are Temporary Soil Stockpiles, cleared areas left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other similar stockpile and erosion control areas.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff. Infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil. Subsequent plant growth will reduce the amount of sediment and nutrients that will be carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeding, mulching and vegetative establishment to prevent large quantities of sediment and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation
 - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- Soil Amendments (Fertilizer and Lime Specifications)
 - Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, fertilizer name, trademark, and warranty of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime may be substituted which contains at least 50% total oxide (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
- Seeded Preparation
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment. Such as disc harrow, chisel plow, or other similar equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas greater than 3:1 should be trenched leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
 - Permanent Seeding
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soil shall contain less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay, but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is for legumes or sericea lespedeza is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
 - Soil shall contain 1% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soil on site, adding topsoil is required.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5". To permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by diking or other suitable means. Lawn areas should be rolled to smooth the surface. Steep slopes (greater than 3:1) should be treated by a dower leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeding loosening may not be necessary on newly disturbed areas.
 - Seed Specifications
 - All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to retesting by a recognized seed laboratory to be held within the 6 months immediately preceding the date of sowing such material on the job.
 - Note: Seed tags shall be available to the inspector to verify type and rate of seed used.
 - Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen fixing bacteria specifically selected for the species. Inoculant shall be applied to the seed at the rate indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until use. Temperature above 80 degrees Fahrenheit will reduce the bacteria and make it less effective.
- Methods of Seeding
 - Hydroseeding - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cutspreader seeder.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed 100 lbs. per acre maximum. (200 lbs. per acre total of soluble nutrients).
 - P205 (phosphorous) 200 lbs/acre, K2O (potassium) 200 lbs/acre.
 - Lime, 0.1 to 1.0 tons per acre may be applied by hydroseeding. Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Seed and fertilizer shall be mixed on site and applied immediately and uniformly.
 - Dry Seeding - This includes use of conventional drop or broadcast spreaders.
 - Seed spread rate shall be incorporated into the subsoil at the rates prescribed on the Seed Specifications and Tables 25 or 26. The seed and fertilizer shall be mixed and the seed and fertilizer shall then be rolled with a weighted roller to provide good seed to soil contact.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply the seeding rate in each direction.
 - Drill or Cutspreader Seeding - Mechanized seeders that apply and cover seed with soil.
 - At least 1/4 inch of seed covering is required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply the seeding rate in each direction.
- Mulch Specifications (in order of preference)
 - Straw shall consist of thoroughly threshed wheat, rice or oat straw, reasonable bright in color, and shall be free of mold, weed seeds, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 - Wood cellulose fiber (WCF)
 - WCF shall consist of specially prepared wood cellulose processed into a uniform fibrous physical unit.
 - WCF shall be dried green or contain a green dye that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCF, including dye, shall contain no germination or growth inhibiting factors.
 - WCF materials shall be manufactured and processed in such a manner that the wood cellulose fiber which will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry.
 - The slurry shall form a blather-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCF material shall not be chemically or otherwise at concentrations levels that will be phytotoxic.
 - WCF must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of less than 10% and water holding capacity of 500 times dry weight.
 - Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
- Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.
 - If grading is completed outside of the seeding season, mulch shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 - When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch spreading tool is to be used, the rate should be increased to 2.5 tons/acre.
 - Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber mulch shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch Anchoring - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods listed by preference, depending upon size of area and erosion hazard:
 - A mulch anchor tool is a tractor draw implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas and in areas where equipment is available. The mulch anchor tool shall be used after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 (Petrolac), Terra Tack II, Terra Tack III, etc. - of equivalent quality may be used at rates recommended by the manufacturer to anchor mulch.
 - Application of liquid binders should be heavier at the edges where wind catches much, such as corners and along the sides of the area. The mulch anchor tool shall be used after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 (Petrolac), Terra Tack II, Terra Tack III, etc. - of equivalent quality may be used at rates recommended by the manufacturer to anchor mulch.
 - Lightweight plastic netting may be stepped over the mulch according to manufacturers' recommendations. Netting is usually available in rolls 4' to 12' feet wide and 300 to 3,000 feet long.

- Incremental Stabilization - Cut Slopes
 - All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
 - Construction sequence (refer to Figure 3 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 - Perform Phase 1 excavation, dress and stabilize.
 - Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
 - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.
- Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation of the seeding season will necessitate the application of temporary stabilization.
- Incremental Stabilization of Embankments - Fill Slopes
 - Embankments shall be constructed in lifts as prescribed on the plans.
 - Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15' or when the grading operation ceases as prescribed in the plans.
 - At the end of each lift, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
- Construction sequence (refer to Figure 4 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope all tests on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
 - Place Phase 1 embankment, dress and stabilize.
 - Place Phase 2 embankment, dress and stabilize.
 - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.
- Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation of the seeding season will necessitate the application of temporary stabilization.

SECTION 2 - TEMPORARY SEEDING

Vegetation - Annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed mixtures - Temporary Seeding

- Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.
- For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

Seed Mixture (Hardiness Zone - 5b -) From Table 25				Fertilizer Rate 01-10-10	Lime Rate
No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depths	
1	BARLEY	122	3/1 - 5/15	1" - 2"	2 tons/acre
	OATS	96	8/15 - 10/15	1" - 2"	05 lb/1000sq ft
	RYE	140		1" - 2"	000 lb/1000sq ft

SECTION 3 - PERMANENT SEEDING

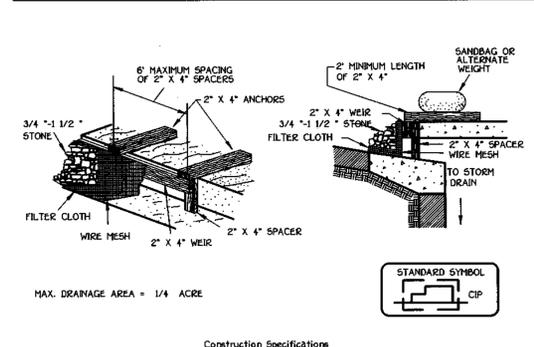
Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

A. Seed mixtures - Permanent Seeding

- Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planning, for special farm maintenance areas, see Sections IV 50d and V Turfgrass.
- For sites having disturbed areas over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
- For areas receiving low maintenance, apply ureamorph fertilizer (46-0-0) at 1 1/2 lbs/1000 sq. ft. (50 lb/acre), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardiness Zone - 5b -) From Table 25				Fertilizer Rate 01-20-20			Lime Rate
No.	Species	Application Rate (lb/acre)	Seeding Dates	N	P205	K2O	
3	TALL FESCUE (60%)	125	3/1 - 5/15	90 lb/acre	175 lb/acre	175 lb/acre	2 tons/acre
3	PERENNIAL RYE GRASS (50%)	125	8/15 - 10/15	120 lb/acre	14 lb/acre	14 lb/acre	000 lb/1000sq ft
10	TALL FESCUE (60%)	120	3/1 - 5/15				
	HARD FESCUE (20%)	30	8/15 - 10/15				

CURB INLET PROTECTION (COG OR COS INLETS)

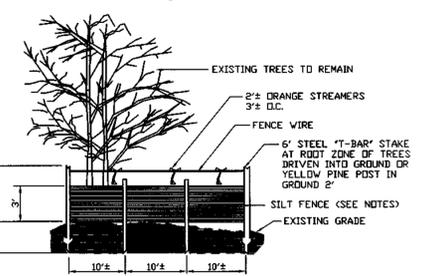


- MAX. DRAINAGE AREA = 1/4 ACRE
- Construction Specifications
- Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4" to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
 - Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
 - Securely nail the 2" x 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (min. 4" apart).
 - Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
 - The assembly shall be placed so that the end spacers are a minimum 1" beyond both ends of the throat opening.
 - Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
 - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
 - Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- NOTE THE EXISTING 3.5' x 2.5' CONC. CULVERT UNDER OLD WASHINGTON ROAD MUST BE CLEANED OUT SATISFACTORILY TO FUNCTION PROPERLY TO CONVEY THE 25-YEAR STORM EVENT.
- NOTIFY MISS UTILITIES AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK.
- CLEAR AND GRUB FOR PHASE I SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE (2 weeks)
- BEGIN PHASE I OF CONSTRUCTION:
 - CONSTRUCT THE TWIN 48-INCH CULVERT FROM HW-1 TO HW-2.
 - INSURE FULL PERMANENT STABILIZATION OF THE AREA.
 - ON COMPLETION, OBTAIN PERMISSION FROM THE INSPECTOR TO PROCEED WITH PHASE II WORK.
- INSTALL REMAINING SEDIMENT CONTROL MEASURES, BASIN/POND, EARTH DIKES, TREE PROTECTION FENCE, AND SILT FENCE AS INDICATED ON THE PLANS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED POND. WHERE NECESSARY, RIPPING AND JACK HAMMERS SHOULD BE UTILIZED IN THE EXCAVATION OF EACH FACILITY. (2 weeks)
- OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEED.
- BEGIN PHASE II OF CONSTRUCTION.
 - CONSTRUCT THE STORM WATER MANAGEMENT FACILITY ALONG WITH THE ACCESS ROAD. ALSO CONSTRUCT PART OF THE STORM DRAIN SYSTEM FROM S-1 TO I-1. (6 weeks)
 - INSURE FULL PERMANENT STABILIZATION OF THE 5HM FACILITY.
 - ONCE PHASE II WORK IS COMPLETE AND STABILIZED, OBTAIN PERMISSION FROM THE INSPECTOR TO PROCEED WITH THE REMAINING SITE WORK.
- CLEAR AND GRUB FOR PHASE III OR THE REMAINDER OF SITE. (1 week)
- GRADE SITE TO PROPOSED SUBGRADE AND INSTALL REMAINING STORM SYSTEM.
- STABILIZE ALL ROADWAY SLOPES IMMEDIATELY UPON COMPLETION OF GRADING AS SHOWN ON THESE PLANS. (4 weeks)
- ONCE PHASE III WORK IS COMPLETE AND STABILIZED, OBTAIN PERMISSION FROM THE INSPECTOR TO PROCEED WITH THE REMAINING SITE WORK.
- INSTALL BASE COURSE FOR THE PROPOSED ROADS. (1 week)
- STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTORS TO PROCEED.
- APPLY TACK COAT TO SUB-BASE AND LAY SURFACE COURSE. (1 week)
- WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND PONDS HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICE MAY BE REMOVED AND/OR BACK FILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 weeks)
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT.

TREE PROTECTION FENCE



- Silt fence to be heeled into the soil.
- Wire, snow fence, etc. for tree protection only.
- Boundaries of Retention Area will be established as part of the Forest Conservation Review process.
- Boundaries of Retention Area should be staked and flagged prior to installing device.
- Avoid any damage when placing anchor posts.
- Device should be properly maintained throughout construction.
- Protection signs are also required, see Figure C-4.
- Locate fence outside the Critical Root Zone.

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES WESLEY WOODS SECTION ONE

LOTS 1 THRU 6, LOTS 20 THRU 29, LOT 31 AND LOTS 32 THRU 43 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'

(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCELS 'A' - PLAT Nos. 14590 THRU 14593)

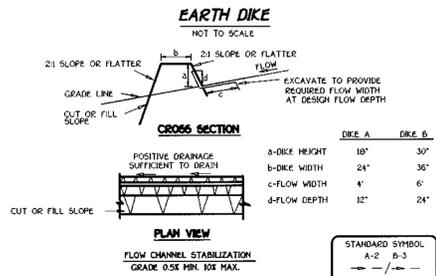
ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JULY 2000
SHEET 11 OF 18

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TO TURN AROUND	6/12/01

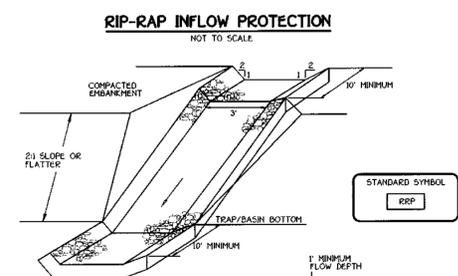
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
EDITORIAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 468 - 2000

OWNER
WILLIAM E. TOOMEY AND
JANE T. RUSSELL
315 WILWOOD DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

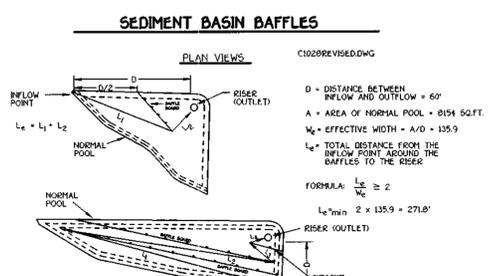
DEVELOPER
PATRIOT HOMES
5485 HARPER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522



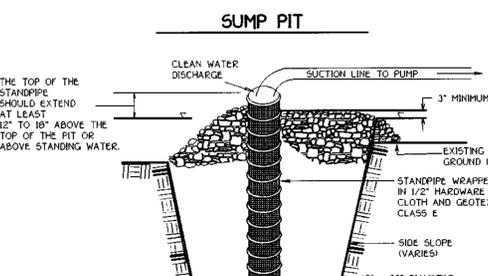
1. Seed and cover with straw mulch.
2. Seed and cover with erosion control matting or line with sod.
3. 4" x 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.
- Construction Specifications**
1. All temporary earth dikes shall have uninterupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
 4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 6. Fill shall be compacted by earth moving equipment.
 7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 8. Inspection and maintenance must be provided periodically and after each rain event.



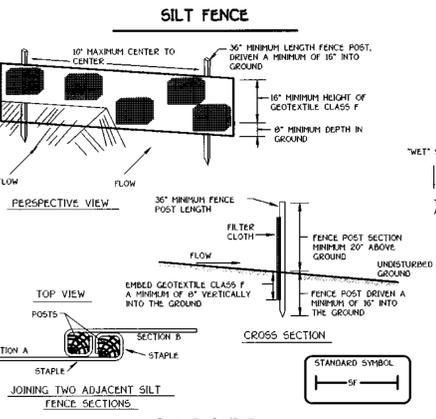
- Construction Specifications**
1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3" (min) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 10".
 2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
 3. Entrance and exit sections shall be installed as shown on the detail section.
 4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
 5. Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
 6. Rip-rap should blend into existing ground.
 7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1 for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.



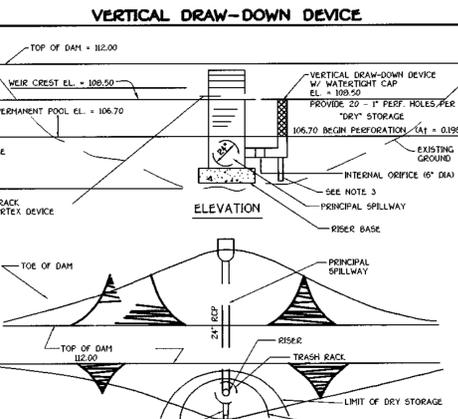
- Construction Specifications**
1. Baffle dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
 2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class C. The perforations shall be 1/2" x 6" slits or 1" diameter holes.
 3. A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
 4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.



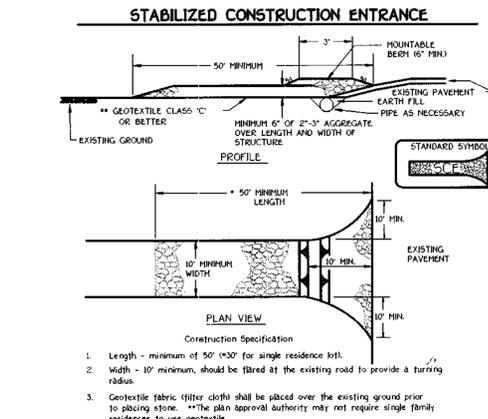
- Construction Specifications**
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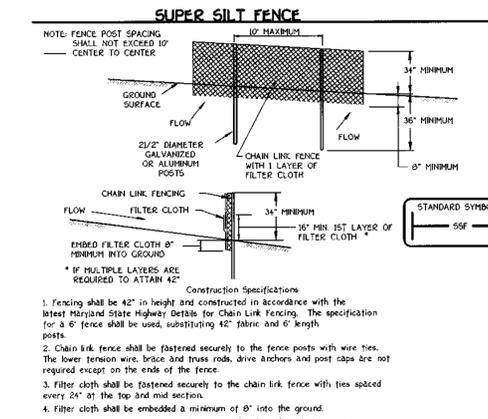
- Construction Specifications**
1. Fence posts shall be a minimum of 30" long driven 10" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square minimum cut, or 1 1/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 100 pound per linear foot.
 2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|----------------------------|---------------|
| Tensile Strength | 50 lbs/in (min) | Test: MHT 509 |
| Tensile Modulus | 20 lbs/in (min) | Test: MHT 509 |
| Flow Rate | 0.3 gal (1 / minute (max)) | Test: MHT 322 |
| Filtering Efficiency | 75% (min) | Test: MHT 322 |
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.



- Construction Specifications**
1. PERFORATIONS IN THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE.
 2. THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF THE INTERNAL ORIFICE.
 3. THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.
 4. PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE OR 1" BY 4" SQUARE OR 2" ROUND WOODEN POSTS SET 3" MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 12 GAUGE MINIMUM WIRE.



- Construction Specifications**
1. Length - minimum of 50' (30' for single residence lot).
 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
 4. Stone - crushed aggregate 1/2" to 3/4" or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
 5. Surface Water - All surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable beam with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



- Construction Specifications**
1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 1/2" fabric and 6" length posts.
 2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire brace and those rods, drive anchors and post caps are not required except on the ends of the fence.
 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 4. Filter cloth shall be embedded a minimum of 8" into the ground.
 5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 6. Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|----------------------------|---------------|
| Tensile Strength | 50 lbs/in (min) | Test: MHT 509 |
| Tensile Modulus | 20 lbs/in (min) | Test: MHT 509 |
| Flow Rate | 0.3 gal (1 / minute (max)) | Test: MHT 322 |
| Filtering Efficiency | 75% (min) | Test: MHT 322 |

By The Developer:

I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Bruce A. Harvey* Date: 9-28-00

Printed Name Of Developer: Bruce A. Harvey

By The Engineer:

I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *Alpo M. Vitucci* Date: 6-29-00

Printed Name Of Engineer: Alpo M. Vitucci

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *Dea Wadsworth* Date: 10/10/00

Printed Name: Dea Wadsworth

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *John L. Alj* Date: 10/10/00

Printed Name: John L. Alj

Approved: Department Of Public Works

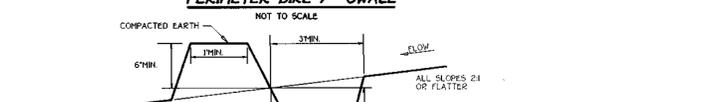
Signature: *Richard M. Damske* Date: 10-16-00

Printed Name: Richard M. Damske

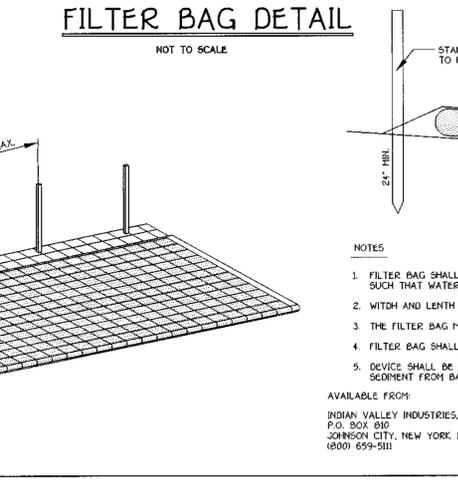
Approved: Department Of Planning And Zoning

Signature: *Cindy Hamilton* Date: 10/17/00

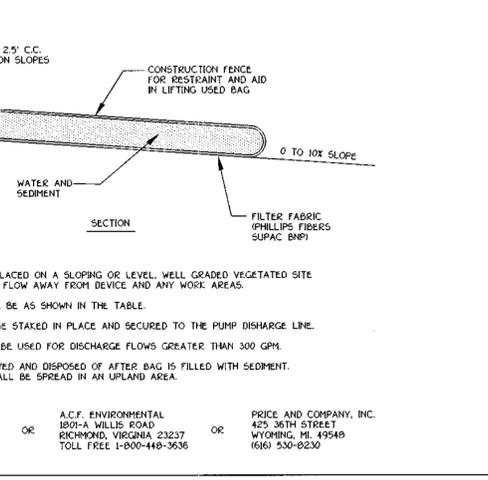
Printed Name: Cindy Hamilton



- Construction Specifications**
1. All perimeter dikes/swales shall have an uninterupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 3. Runoff diverted from an undisturbed area shall outlet into an undisturbed stabilized area at a non-erosive velocity.
 4. The swale shall be excavated or shaped to line, grade, and cross-section as required to meet the criteria specified in the standards.
 5. Fill shall be compacted by earth moving equipment.
 6. Stabilization with seed and mulch or as specified of the area disturbed by the dike and swale shall be completed within 7 days upon removal.
 7. Inspection and required maintenance shall be provided after each rain event.
- Note: The maximum drainage area for this practice is 2 acres.



- NOTES**
1. FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
 2. WIDTH AND LENGTH SHALL BE AS SHOWN IN THE TABLE.
 3. THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
 4. FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.
 5. DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.
- AVAILABLE FROM:
- | | | |
|--|---|---|
| INDIAN VALLEY INDUSTRIES, INC.
P.O. BOX 890
JOHNSON CITY, NEW YORK 13790
(800) 659-5111 | A.C.F. ENVIRONMENTAL
425 36TH STREET
RICHMOND, VIRGINIA 23237
TOLL FREE 1-800-448-3636 | PRICE AND COMPANY, INC.
425 36TH STREET
WYOMING, MI 49548
(616) 530-8230 |
|--|---|---|



- NOTES**
1. FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
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 5. DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER

WILLIAM E. TOOMEY AND JANE T. RUSSELL
315 WILLOW DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER

PATRIOT HOMES
5185 HARPER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522

SEDIMENT AND EROSION CONTROL
DETAILS AND NOTES
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 12 OF 16

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 10-10-00
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Harvath 10/19/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

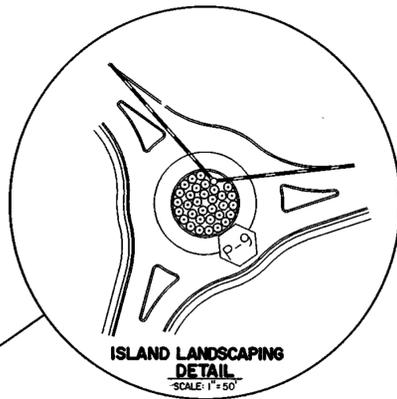
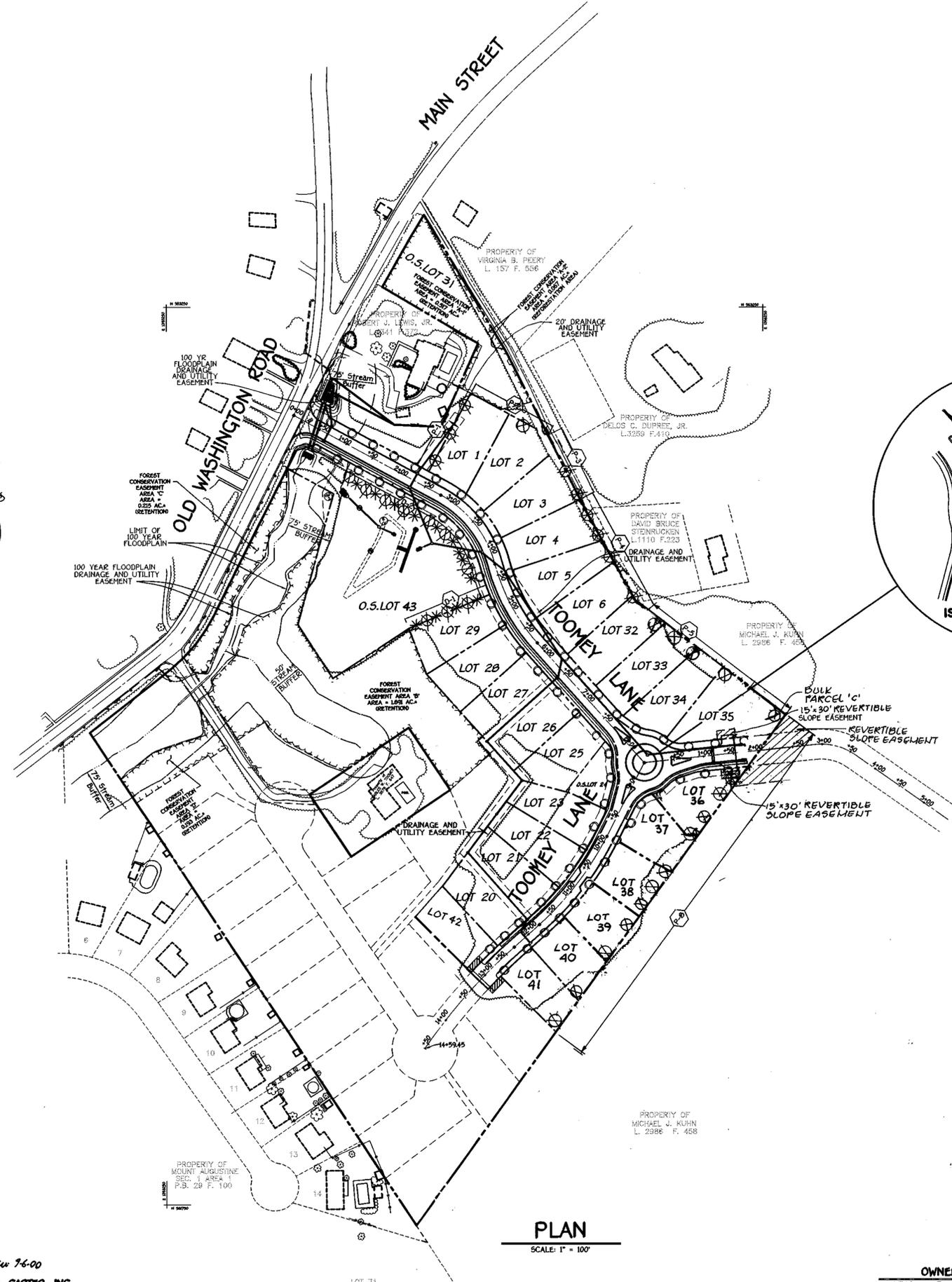
M. J. ... 10/17/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
36	⊗	ACER RUBRUM 'OCTOBER GLODY' (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&B
13	⊛	PINUS STROBUS EASTERN WHITE PINE	6'-8' HT.
32	○	AZALEA 'EXBURY' EXBURY AZALEA	18"-24" SP.

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL." FINANCIAL SURETY FOR THE 49 REQUIRED LANDSCAPE TREES AND 32 SHRUBS HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$ 13,710.00.

SCHEDULE D STORM WATER MANAGEMENT AREA LANDSCAPING		
PERIMETER	D-1	D-2
LANDSCAPE TYPE	B	B
LINEAR FEET OF PERIMETER	147'	349'
NUMBER OF TREES REQUIRED		
SHADE TREES	3	7
EVERGREEN TREES	4	9
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES, AND %)	NO	NO
NUMBER OF TREES PROVIDED		
SHADE TREES	3	7
EVERGREEN TREES	4	9
OTHER TREES (2:1 SUBSTITUTION)		

SCHEDULE A PERIMETER LANDSCAPE EDGE								
PERIMETER	P-1	P-2	P-3	P-4	P-5		P-8	P-9
CATEGORY	ADJACENT TO RESIDENTIAL		ADJACENT TO RESIDENTIAL	ISLAND LANDSCAPING				
LANDSCAPE TYPE	A	A	A	a	a		A	E
LINEAR FEET OF PERIMETER	140'	140'	120'	219'	292'		659'	125'
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	YES 100'	NO	NO	NO		NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES, AND %)	NO	NO	NO	NO	NO		NO	NO
NUMBER OF TREES REQUIRED								
SHADE TREES	3	3	2	4	5		11	0
EVERGREEN TREES	-	-	-	-	-		-	0
NUMBER OF TREES PROVIDED								
SHADE TREES	3	1	2	4	5		11	-
EVERGREEN TREES	-	-	-	-	-		-	-
SHRUBS (1:1 shrub/tree SUBSTITUTION)	-	-	-	-	-		-	32



PLAN
 SCALE: 1" = 100'

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK • 10272 BALTIMORE NATIONAL PIKE
 GAITHERSBURG, MARYLAND 20878
 (410) 961-2855

OWNER
 WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 HYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5405 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

**LANDSCAPE PLAN
 WESLEY WOODS
 SECTION ONE**
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 38 • PARCEL NO. 162 • GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET #3 OF 16

FOREST CONSERVATION WORKSHEET

NET TRACT AREA	
A.Gross Tract Area	13.907
B.Area within 100 Yr Floodplain	0.997
C.Area Ag Use or Preservation Parcel	0.00
D.Net Tract Area	12.91
LAND USE CATEGORY	
E.Afforestation Minimum(15%)	1.94
F.Conservation Threshold(20%)	2.58
EXISTING FOREST COVER	
G.Existing Forest on Net Tract Area	12.77
H.Forest Area Above Afforestation Threshold	10.83
I.Forest Area Above Conservation Threshold	10.19
BREAKEVEN POINT	
J.Forest Retention Above Threshold with No Mitigation	4.62
K.Clearing Permitted With No Mitigation	8.15
PROPOSED FOREST CLEARING	
L.Forest Area to be Cleared	10.15
M.Forest Area to be Retained	2.617
PLANTING REQUIREMENTS	
N.Reforestation for Clearing	2.54
Above Threshold	0.0
P.Reforestation for Clearing Below Threshold	0.0
Q.Credit for Retention Above Forest Conservation Threshold	0.04
R.Total Reforestation Required	2.50
S.Total Afforestation Required	0.0
T.Total Reforestation and Afforestation Required	2.50

This Forest Conservation Worksheet is based on development proposed for Section One only.

Note: The total gross tract area was derived from the following tabulation:

1. Area of Section 1(Lots/Roads)=10.407 ac+/-
2. Area of Forest Conservation Easements =2.099 ac+/- on Bulk Parcel 'A'
3. Area of L.O.D. included in Bulk Parcel 'A'= 0.41 ac+/-
4. Total Floodplain Area on Site= 0.997 ac+/-
4. Total Gross Tract Area to be used in Calculations= 13.907 ac+/-

Forest Conservation for any future subdivision of non-buildable Bulk Parcel 'A' shall be based on the Net Tract Area of the Parcel excluding acreages of the Section One Forest Conservation Easement Areas and the L.O.D. Area located on it

FOREST CONSERVATION EASEMENT AREA TABLE

FOREST CONSERVATION ESMNT AREA A-1: 0.517 Ac. (Retention)
FOREST CONSERVATION ESMNT AREA A-2: 0.067 Ac. (Reforestation)
FOREST CONSERVATION ESMNT AREA B: 1.691 Ac. (Retention)
FOREST CONSERVATION ESMNT AREA C: 0.215 Ac. (Retention)
FOREST CONSERVATION ESMNT AREA D: 0.193 Ac. (Retention)
TOTAL FOREST CONSERVATION AREA : 2.683 Ac.

CONSTRUCTION SEQUENCE

1. Obtain grading and building permits for all structures as required.
2. Install tree protection fencing along disturbed limits per plan.
3. Complete construction of structures per plan.
4. Remove temporary tree protection measures.

FOREST MANAGEMENT NOTES

PRECONSTRUCTION

Construct a preconstruction meeting with the contractor(s) to review forest protection measures and practices. Consultant to select edge trees to remove as appropriate.

DURING CONSTRUCTION

Provide maintenance to tree protection measures.

Water trees having critical root zone impacts on a bi-weekly basis or as needed.

Monitor conditions of remaining trees for signs of stress (leaf discoloration, leaf drop, insect infestation, etc.)*

POST CONSTRUCTION (TWO YEAR MINIMUM)

Inspect existing trees around the perimeter of disturbed limits for damage or stress signs from construction, including excessive compaction in the root zone.*

Evaluate remaining trees for signs of stress and conduct appropriate cultural management: crown reduction, pruning, watering, soil aeration, fertilizing, etc. Remove dead or dying trees and evaluate for hazard trees.*

*A licensed arborist or forester should be retained for these services.

PRESERVATION AREA NOTES

1. All proposed activities shall conform to the terms, conditions and schedules of an approved Soil Erosion and Sediment Control Plan.
2. Blaze orange plastic fence or silt fence (where applicable) shall be installed along all tree save areas that are within 50 feet of proposed construction activities. The Tree Protective Devices shall be in place at the time of construction activities commence. No protective device shall be installed along tree save areas that are greater than 50 feet from construction activity. The location of all Tree Protective Devices shall be shown on the Soil Erosion and Sediment Control Plan which will be incorporated into this Forest Conservation Plan by reference.

LEGEND

- CONSERVATION AREA ———
- SPECIMEN TREE ○ ST-1
- LIMIT OF DISTURBANCE ——— LOD
- TREE PROTECTION FENCE ———
- PERMANENT TREE PROTECTION SIGNAGE ▲
- TEMPORARY TREE PROTECTION SIGNAGE △
- EXISTING WOODLAND [Symbol]
- REFORESTATION AREA [Symbol]
- PROPOSED TREELINE [Symbol]

Approved: Department Of Public Works
Andrew M. Javelle 10-16-00
 Chief Bureau Of Highways Date

Approved: Department Of Planning And Zoning
Cindy Hamilton 10/19/00
 Chief, Division Of Land Development Date

Mr. Donnan 10/17/00
 Chief, Development Engineering Division Date

SOILS LEGEND

SOIL	NAME	CLASS
Bw2	BELLEVILLE SILT LOAM, 15 TO 35 SLOPES, MODERATELY BROOD	C
Bw3	BELLEVILLE SILT LOAM, 10% TO 15% SLOPES, MODERATELY BROOD	C
B7	BRANFORD LOAM, 2% TO 6% SLOPES	C
C1C3	CHILLUM GRAVELLY LOAM, 8% TO 10% SLOPES, SEVERELY BROOD	C
C1C2	CHILLUM GRAVELLY LOAM, 15% TO 20% SLOPES, MODERATELY BROOD	C
W	WIDE LOAM, LOCAL ALLUVIUM, 1% TO 3% SLOPES	C
W	WIDE LOAM	C
S2	SANDY AND CLAYEY LOAM, MODERATELY SLOPPY	C
S4	SANDY AND CLAYEY LOAM, MODERATELY STEEP	C
S4	SASSAPARA SOIL, 15% TO 40% SLOPES	B

SPECIMEN TREE LIST

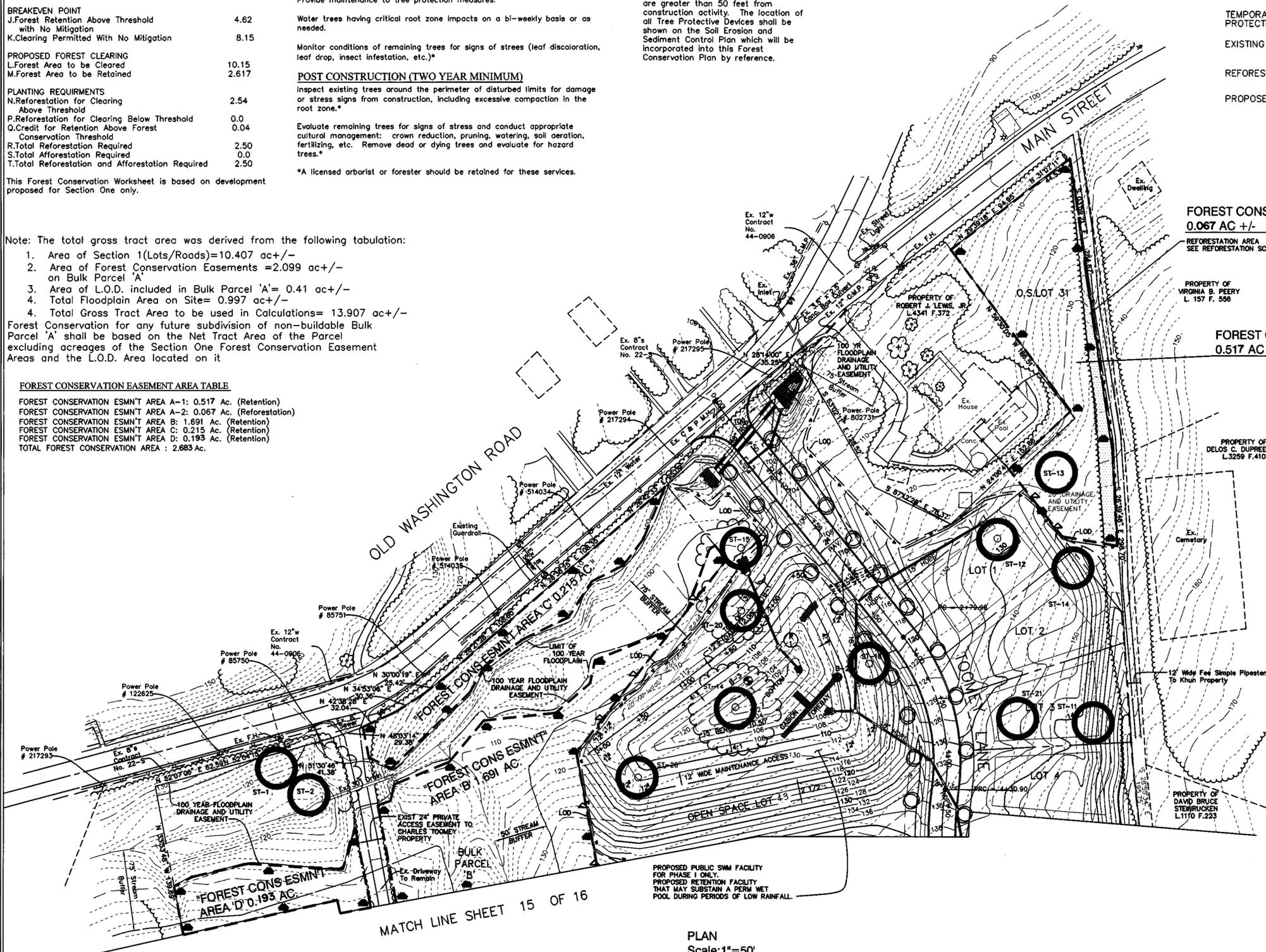
SPECIMEN TREE #	INCHES	SPECIES	COMMON NAME	CONDITION	RETAIN/REMOVE
1	36	<i>Platanus occidentalis</i>	Sycamore	Good	Retain
2	32	<i>Platanus occidentalis</i>	Sycamore	Good	Retain
3	42	<i>Acer rubrum</i>	Red Maple	Fair	Retain
4	38	<i>Quercus coccinea</i>	Scarlet Oak	Fair	Retain
5	30	<i>Quercus coccinea</i>	Scarlet Oak	Good	Retain
6	30	<i>Liriodendron tulipifera</i>	Tulip Poplar	Poor	Retain
7	64	<i>Quercus rubra</i>	Red Oak	Poor	Remove
8	36	<i>Quercus rubra</i>	Red Oak	Fair	Remove
9	30	<i>Quercus rubra</i>	Red Oak	Good	Remove
10	35	<i>Quercus alba</i>	White Oak	Fair	Remove
11	32	<i>Quercus rubra</i>	Red Oak	Fair	Remove
12	40	<i>Quercus rubra</i>	Red Oak	Fair	Remove
13	38	<i>Quercus rubra</i>	Red Oak	Good	Remove
14	33	<i>Quercus alba</i>	White Oak	Good	Remove
15	32	<i>Liriodendron tulipifera</i>	Tulip Poplar	Fair	Remove
16	31	<i>Liriodendron tulipifera</i>	Tulip Poplar	Fair	Remove
17	32	<i>Quercus rubra</i>	Red Oak	Fair	Remove
19	30	<i>Fagus grandifolia</i>	American Beech	Good	Remove
20	36	<i>Quercus prinus</i>	Chestnut Oak	Poor	Remove
21	30	<i>Liriodendron tulipifera</i>	Tulip Poplar	Fair	Remove

FOREST CONSERVATION NARRATIVE:

THIS FOREST CONSERVATION PLAN WAS PREPARED IN ACCORDANCE WITH THE HOWARD COUNTY FOREST CONSERVATION MANUAL WHEREBY PRIORITY FOREST AREAS WERE PRESERVED TO THE GREATEST EXTENT PRACTICAL. DISTURBANCE TO STEEP SLOPES AND STREAM BUFFERS IS MINIMIZED. THE REFORESTATION REQUIREMENT FOR THIS SITE IS COMPUTED TO BE 2.50 ACRES. ON-SITE REFORESTATION OF 0.067 ACRES IS PROPOSED. PAYMENT OF A FEE-IN-LIEU FOR THE 0.933 ACRES OF THE REQUIRED REFORESTATION IS PROPOSED. *IN CONJUNCTION WITH 1.50 AC. OF REFORESTATION TO BE PURCHASED FROM THE WINKLER FOREST MITIGATION BANK.

FOREST CONSERVATION NOTES:

1. SURETY IN THE AMOUNT OF \$11,399.65 WILL BE POSTED FOR THE 2.617 ACRES OF ON-SITE RETENTION FEE'S.
2. SURETY IN THE AMOUNT OF \$875.56 WILL BE POSTED FOR THE .067 ACRES OF ON-SITE REFORESTATION FEE.
3. A FEE-IN-LIEU OF \$12,192.44 WILL BE PAID TO THE HOWARD COUNTY FOREST CONSERVATION FUND FOR THE REMAINING REFORESTATION OBLIGATION OF 0.933 ACRE.



MATCH LINE SHEET 15 OF 16

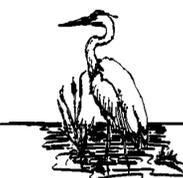
PLAN Scale: 1"=50'

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBER AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER
 WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, SC. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 208
 COLUMBIA, MARYLAND 21044
 (410) 997-5522



EXPLORATION RESEARCH INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 2000 PINEBROOK DRIVE
 BELLEVILLE, MARYLAND 20826
 TEL: (410) 780-1300 FAX: (410) 780-1700



FOREST CONSERVATION PLAN
WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 36 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 14 OF 16

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

Approved: Department of Public Works
Thomas M. Davelle 10-16-00
 Chief Bureau of Highways MS Date

Approved: Department of Planning And Zoning
Craig Hamilton 11/19/00
 Chief, Division Of Land Development Date

Michael J. Russell 10/17/00
 Chief, Development Engineering Division CE Date

MATCH LINE SHEET 14 OF 15

FOREST CONSERVATION EASEMENT 'B' 1.691 AC.

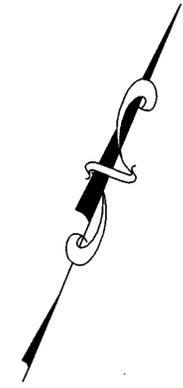
LEGEND

CONSERVATION AREA	---
SPECIMEN TREE	○ ST-1
LIMIT OF DISTURBANCE	---
TREE PROTECTION FENCE	---
PERMANENT TREE PROTECTION SIGNAGE	▲
PERMANENT TREE PROTECTION SIGNAGE	▲
EXISTING WOODLAND	~~~~~
PROPOSED TREELINE	~~~~~



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TIE TURN AROUND	6/12/01

PLAN SCALE: 1" = 50'



FOREST CONSERVATION PLAN
 WESLEY WOODS
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 LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 30 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 15 OF 16

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481-2855

OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD BLINES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

EXPLORATION RESEARCH INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 6800 FORT MONROE AVENUE
 BELLEVILLE CITY, MARYLAND 21038
 TEL: (410) 700-2800 FAX: (410) 700-7000

REFORESTATION SCHEDULE (0.14 Ac.)						
Qty	Botanical Name	Common Name	Min. Size	Spacing P.U.	Total P.U.	Total P.U.
1G	Acer rubrum	Red Maple	1/4" cal.	11' o.c.	2	32
17	Fraxinus pennsylvanica	Green Ash	1/4" cal.	11' o.c.	2	34
1G	Quercus palustris	Pin Oak	1/4" cal.	11' o.c.	2	32

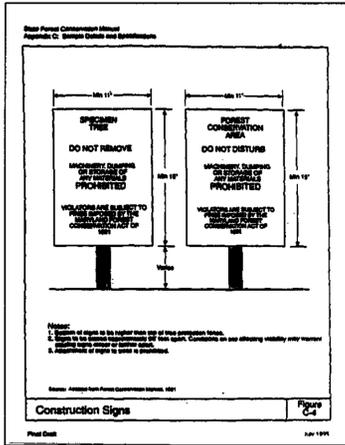
Planting Units Required: 98
Planting Units Provided: 98

REFORESTATION AREA MONITORING NOTES

1. 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.
2. 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.
3. Survival will be determined by a stratified random sampling 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.
4. Effective monitoring will assess plant survivability during the first growing season and make recommendations for reinforcement plantings if required at that time.

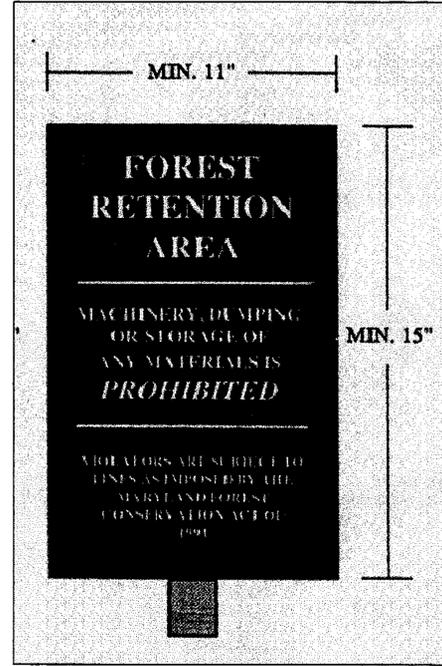
REFORESTATION PLANTING NOTES

1. Reforestation 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 condition warrants.
2. 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.
3. Plant materials will be planted in accordance with the Planting Distribution Diagram, Planting Details and plant schedule.
4. Plant material shall be nursery grown and inspected prior to planting. Plants not conforming to the American Standard for Nursery Stock specifications for size, form, vigor, or roots, or due to trunk wounds, breakage, desiccation, insect or disease must be replaced.
5. Planting 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.
6. 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 material.
7. Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical angering is preferred with scarification of the sides of each hole.
8. Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
9. Deer and Rodent Protection
Place Repellex(tm) tablets in planting pits of all deciduous plant materials furnished. Rate of application shall be in accordance with manufacturer's recommendations.

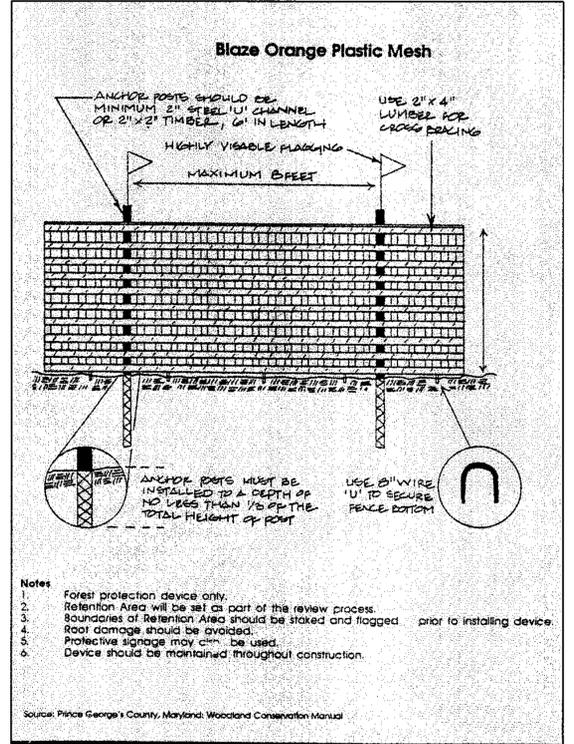


SIGN DETAIL: TEMPORARY CONSTRUCTION SIGN

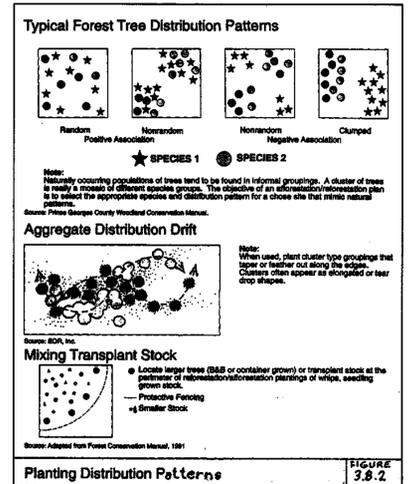
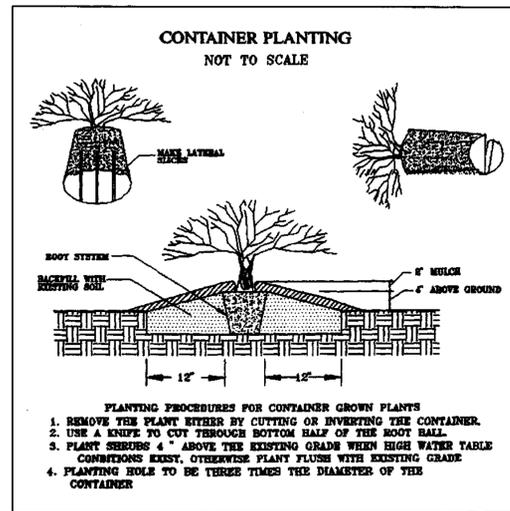
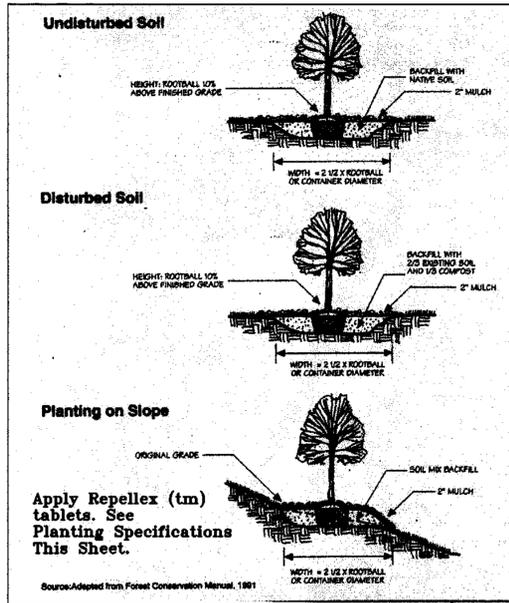
SIGNAGE NOTE: ALL TREE PROTECTION SIGNS SHALL BE PLACED ON ALUMINUM POSTS OR PRESSURE TREATED WOOD POLES. NO ATTACHMENT OF SIGNS TO TREES IS PERMITTED.



SIGN DETAIL: PERMANENT SIGN



- Notes
1. Forest protection device only.
 2. Retention Area will be set as part of the review process.
 3. Boundaries of Retention Area should be staked and flagged prior to installing device.
 4. Root damage should be avoided.
 5. Protective signage may also be used.
 6. Device should be maintained throughout construction.



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

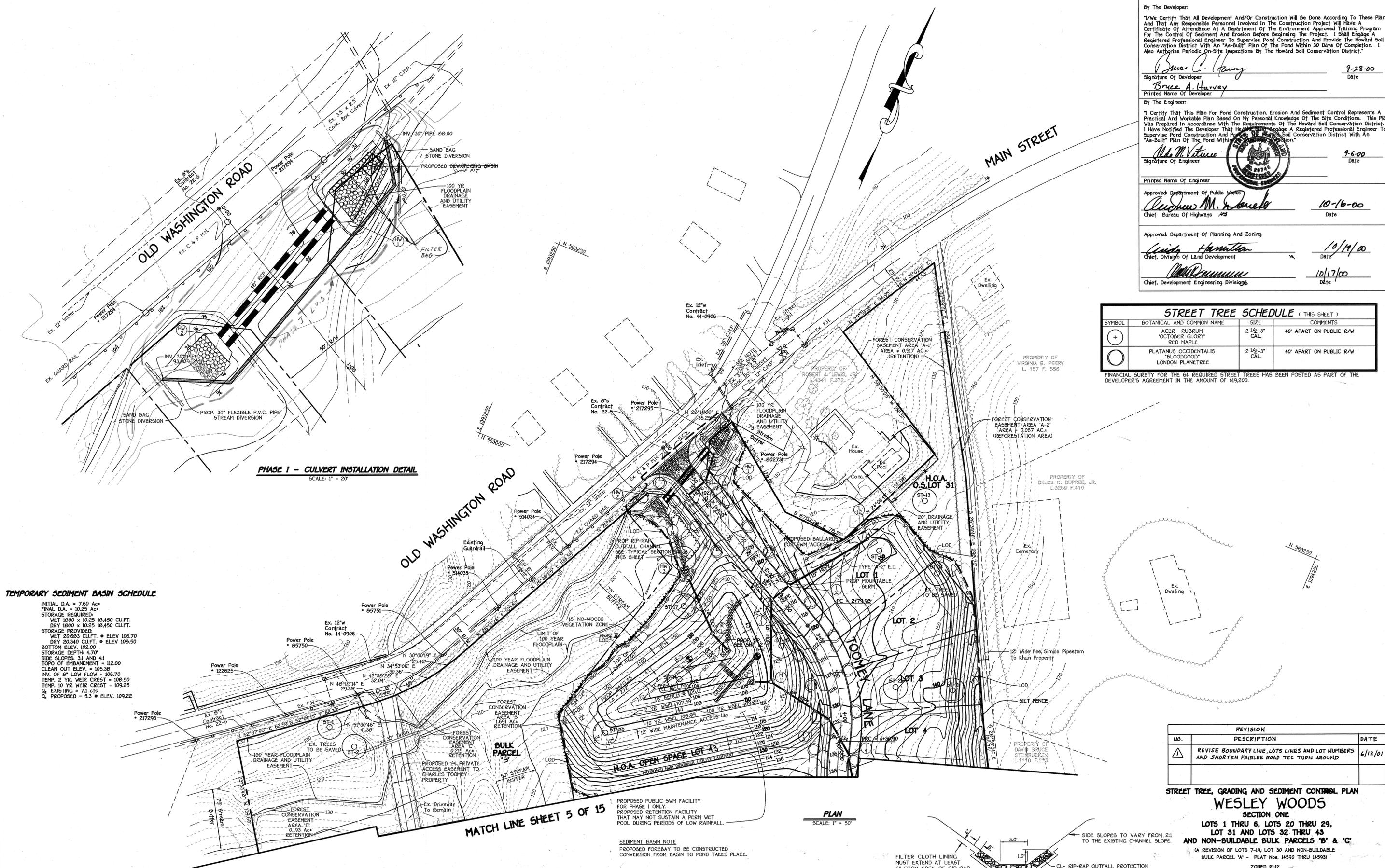
OWNER
WILLIAM C. TOOMEY AND
JANE T. RUSSELL
315 WILDWOOD DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER
PATRIOT HOMES
5485 HARPER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522



EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
500 JENNIFER STREET
BLOOMING GATE, MARYLAND 21114
TEL: (410) 796-1200 FAX: (410) 796-7800

FOREST CONSERVATION PLAN
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
BULK PARCEL 'A' - FLAT Nos. 14590 THRU 14593)
ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 16 OF 18



PHASE I - CULVERT INSTALLATION DETAIL
SCALE: 1" = 20'

TEMPORARY SEDIMENT BASIN SCHEDULE

INITIAL D.A. = 7.60 AC±
FINAL D.A. = 10.25 AC±
STORAGE REQUIRED:
WET 1800 x 10.25 18,450 CU.FT.
DRY 1800 x 10.25 18,450 CU.FT.
STORAGE PROVIDED:
WET 20,683 CU.FT. @ ELEV 106.70
DRY 20,340 CU.FT. @ ELEV 108.50
BOTTOM ELEV. 102.00
STORAGE DEPTH 4.70'
SIDE SLOPES: 3:1 AND 4:1
TOPO OF EMBANKMENT = 112.00
CLEAN OUT ELEV. = 105.30
INV. OF 8" LOW FLOW = 106.70
TEMP. 2 YR WEIR CREST = 108.50
TEMP. 10 YR WEIR CREST = 109.25
Q₁ EXISTING = 71 cfs
Q₂ PROPOSED = 5.3 @ ELEV. 109.22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL FREE
ELICOTT CITY, MARYLAND 21042
410-681-2825

NOTE: THE EXISTING 3.5' x 2.5' CONC. BOX CULVERT MUST BE CLEANED OUT SATISFACTORILY TO FUNCTION PROPERLY TO CONVEY THE 25-YEAR STORM EVENT

PROPOSED PUBLIC SWM FACILITY FOR PHASE I ONLY.
PROPOSED RETENTION FACILITY THAT MAY NOT SUSTAIN A PERM WET POOL DURING PERIODS OF LOW RAINFALL.

SEDIMENT BASIN NOTE
PROPOSED FOREBAY TO BE CONSTRUCTED CONVERSION FROM BASIN TO POND TAKES PLACE.

PLAN
SCALE: 1" = 50'



TYPICAL SECTION A-A @ HW-3 OUTFALL

By The Developer:
"I/We Certify That All Development And/OR Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."
Signature Of Developer: *Bruce A. Harvey* Date: 9-28-00
Printed Name Of Developer: Bruce A. Harvey

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."
Signature Of Engineer: *Wesley Woods* Date: 9-6-00
Printed Name Of Engineer: Wesley Woods

Approved: Department Of Public Works
Signature: *Richard M. Daniels* Date: 10-16-00
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
Signature: *Wanda Hamilton* Date: 10/19/00
Chief, Division Of Land Development

Signature: *Wesley Woods* Date: 10/17/00
Chief, Development Engineering Division

STREET TREE SCHEDULE (THIS SHEET)

SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
+	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
○	PLATANUS OCCIDENTALIS 'BLOODGOOD' LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

FINANCIAL SURETY FOR THE 64 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,200.

NO.	REVISION	DESCRIPTION	DATE
1	REVISION	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 4 OF 15

Qty	Botanical Name	Common Name	Min. Size	Spacing	P.U.	Total P.U.
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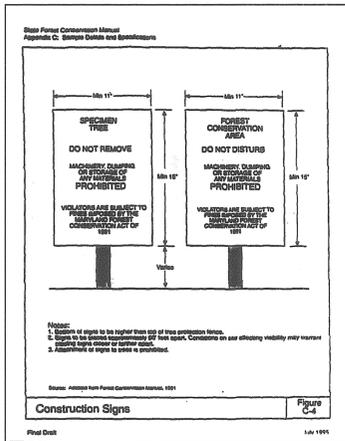
Planting Units Required: 98
Planting Units Provided: 98

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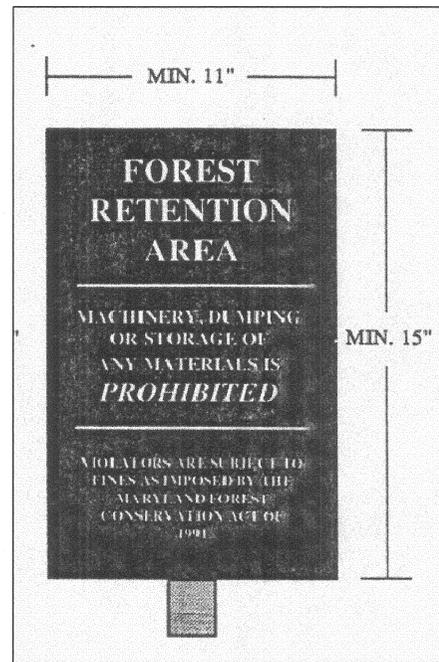
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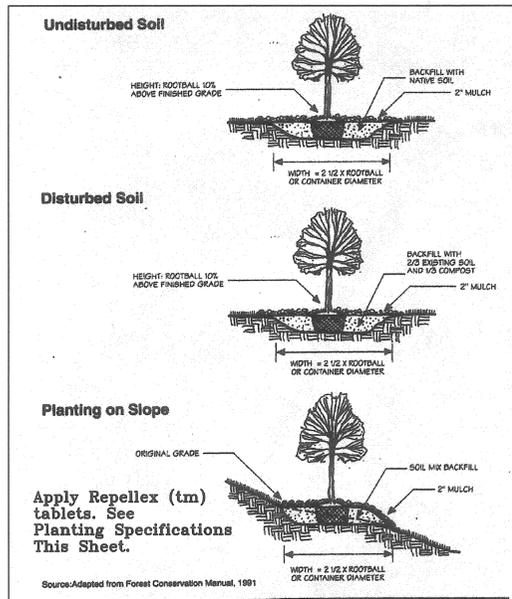


SIGN DETAIL: TEMPORARY CONSTRUCTION SIGN

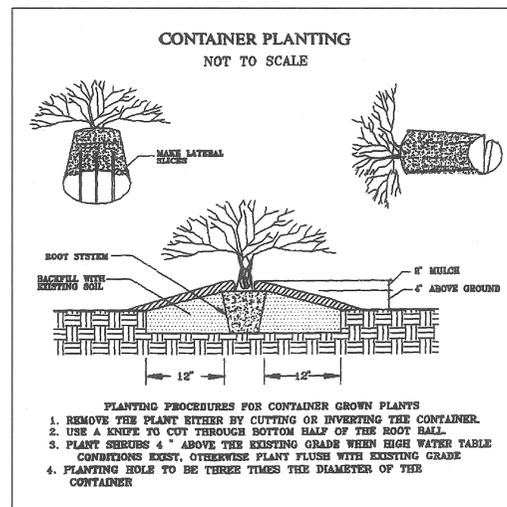
SIGNAGE NOTE: ALL TREE PROTECTION SIGNS SHALL BE PLACED ON ALUMINUM POSTS OR PRESSURE TREATED WOOD POLES. NO ATTACHMENT OF SIGNS TO TREES IS PERMITTED.



SIGN DETAIL: PERMANENT SIGN



Source: Adapted from Forest Conservation Manual, 1991

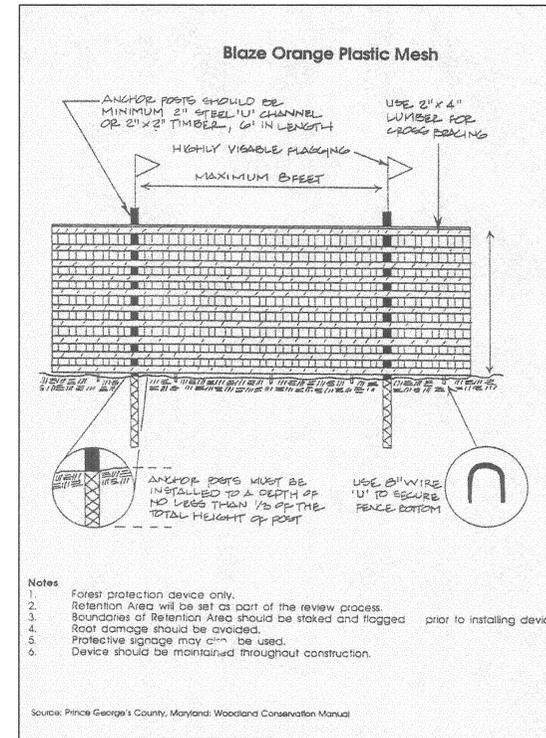


- PLANTING PROCEDURES FOR CONTAINER GROWN PLANTS**
1. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER.
 2. USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
 3. PLANT SHOULDS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
 4. PLANTING HOLE TO BE THREE TIMES THE DIAMETER OF THE CONTAINER.

Approved: Department of Public Works
Chief: Bureau of Highways
Date: 10-16-00

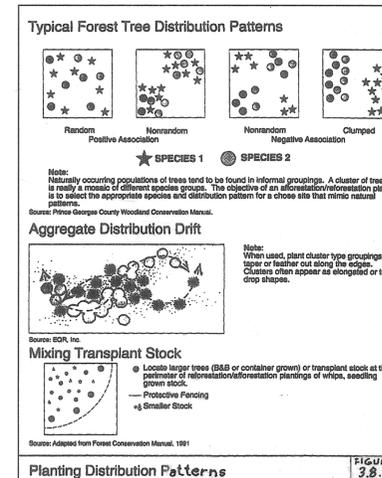
Approved: Department of Planning and Zoning
Chief: Division of Land Development
Date: 10/17/00

Approved: Department of Planning and Zoning
Chief: Development Engineering Division
Date: 10/17/00



- Notes**
1. Forest protection device only.
 2. Retention Area will be set as part of the review process.
 3. Boundaries of Retention Area should be staked and flagged prior to installing device.
 4. Root damage should be avoided.
 5. Protective signage may also be used.
 6. Device should be maintained throughout construction.

Source: Prince George's County, Maryland: Woodland Conservation Manual



Planting Distribution Patterns FIGURE 3.8.2



EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
5010 ROCKHILL AVENUE
BELLEVILLE CITY, MARYLAND 21048
TEL: (410) 760-1150 FAX: (410) 760-7880

**FOREST CONSERVATION PLAN
WESLEY WOODS**
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 16 OF 16

NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER
WILLIAM E. TOOMEY AND
JANE T. RUSSELL
315 WILDWOOD DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER
PATRIOT HOMES
5485 HARPER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
1000 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 481-2555

Approved: Department Of Public Works
Andrew M. Swick
 Chief, Bureau Of Highways MS
 10-16-00
 Date

Approved: Department Of Planning And Zoning
Cindy Hamilton
 Chief, Division Of Land Development
 11/19/00
 Date

Mark Dammann
 Chief, Development Engineering Division CE
 10/17/00
 Date

MATCH LINE SHEET 14 OF 15

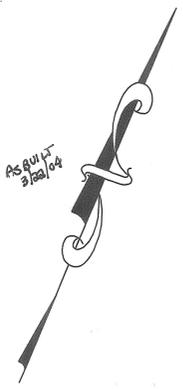
FOREST CONSERVATION EASEMENT 'B' 1.691 AC.

- LEGEND**
- CONSERVATION AREA
 - SPECIMEN TREE
 - LIMIT OF DISTURBANCE
 - TREE PROTECTION FENCE
 - PERMANENT TREE PROTECTION SIGNAGE
 - PERMANENT TREE PROTECTION SIGNAGE
 - EXISTING WOODLAND
 - PROPOSED TREELINE



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

PLAN
SCALE: 1" = 50'



**FOREST CONSERVATION PLAN
 WESLEY WOODS
 SECTION ONE**
 LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 36 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 15 OF 16

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2855

OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5222

EXPLORATION RESEARCH, INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 6805 FOREST STREET
 BELLEVILLE CITY, MARYLAND 21034
 TEL (410) 700-1100 FAX (410) 700-7000

F-00-115
 AS-BUILT 3-22-04

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Casale 10-10-00
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Clayton Hamilton 10/19/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael J. Kuhn 10/17/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
36	⊗	ACER RUBRUM "OCTOBER GLORY" (OCTOBER RED MAPLE)	2 1/2" - 3 CALIPER FULL CROWN, 8-8S
13	⊗	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.
32	⊙	AZALEA "EXBURY" EXBURY AZALEA	18"-24" SP.

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL." FINANCIAL SURETY FOR THE 49 REQUIRED LANDSCAPE TREES AND 32 SHRUBS HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$13,710.00.

SCHEDULE D STORM WATER MANAGEMENT AREA LANDSCAPING		
PERIMETER	D-1	D-2
LANDSCAPE TYPE	B	B
LINEAR FEET OF PERIMETER	147'	349'
NUMBER OF TREES REQUIRED		
SHADE TREES	3	7
EVERGREEN TREES	4	9
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO
NUMBER OF TREES PROVIDED		
SHADE TREES	3	7
EVERGREEN TREES	4	9
OTHER TREES (2:1 SUBSTITUTION)		

SCHEDULE A PERIMETER LANDSCAPE EDGE							
PERIMETER	P-1	P-2	P-3	P-4	P-5	P-6	P-9
CATEGORY	ADJACENT TO RESIDENTIAL	ISLAND LANDSCAPING					
LANDSCAPE TYPE	A	A	A	a	a	A	E
LINEAR FEET OF PERIMETER	148'	148'	120'	219'	292'	659'	125'
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	YES 100'	NO	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO	NO	NO	NO
NUMBER OF TREES REQUIRED							
SHADE TREES	3	3	2	4	5	11	0
EVERGREEN TREES	-	-	-	-	-	-	0
NUMBER OF TREES PROVIDED							
SHADE TREES	3	1	2	4	5	11	-
EVERGREEN TREES	-	-	-	-	-	-	-
SHRUBS (10:1 shrub/tree SUBSTITUTION)	-	-	-	-	-	-	32

**LANDSCAPE PLAN
 WESLEY WOODS
 SECTION ONE**
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 36 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET #3 OF 16

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

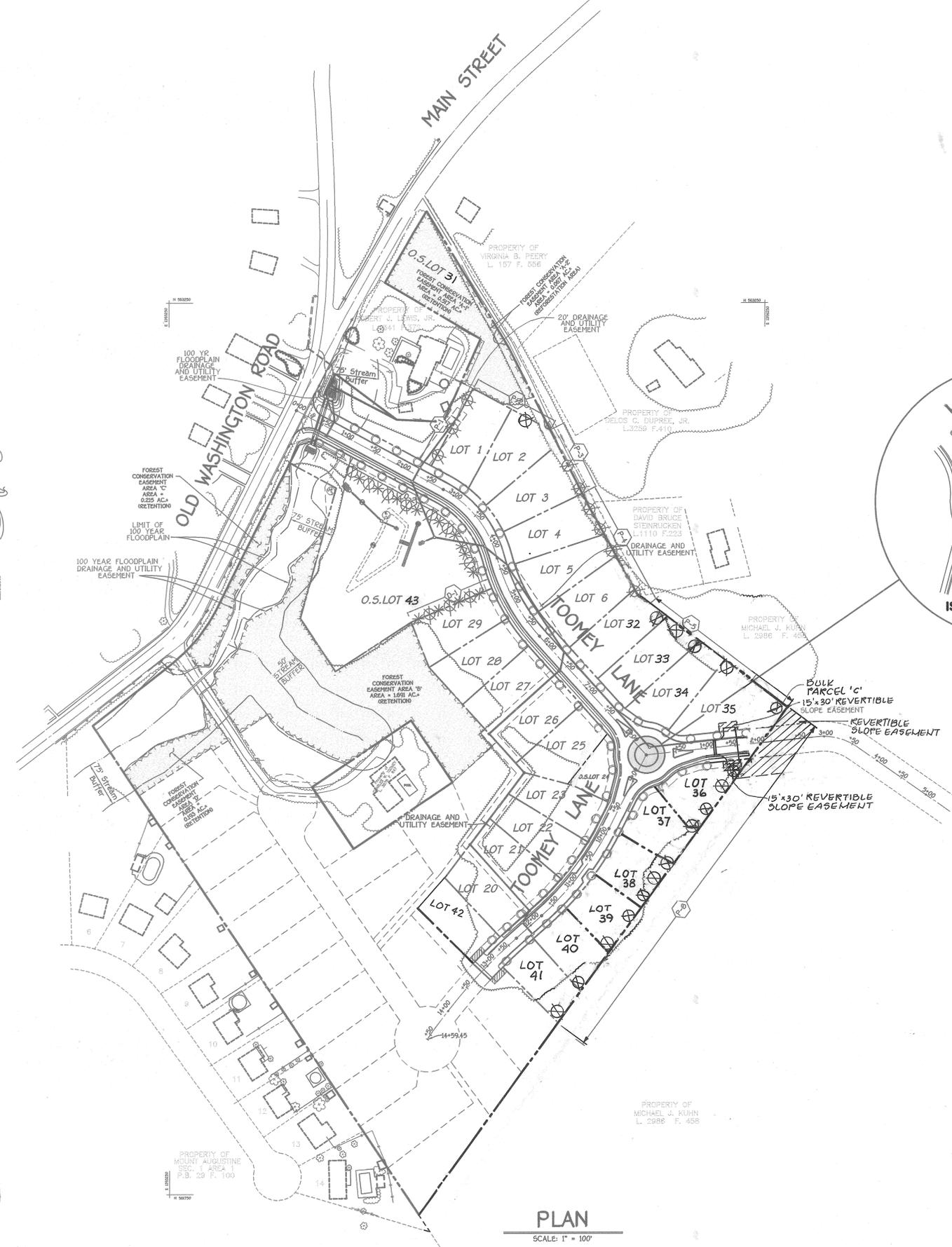


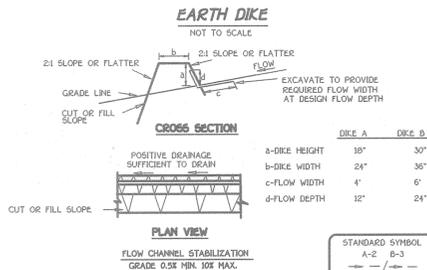
PLAN
 SCALE: 1" = 100'

OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

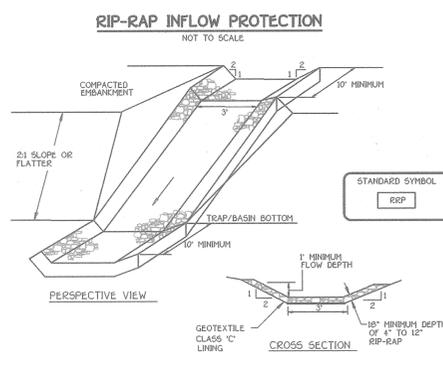
DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK • 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 (410) 481-2855

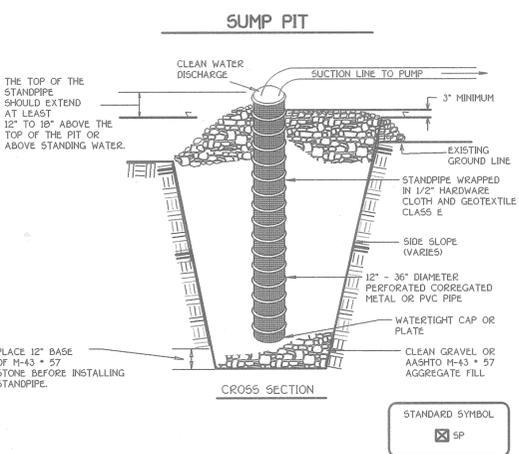
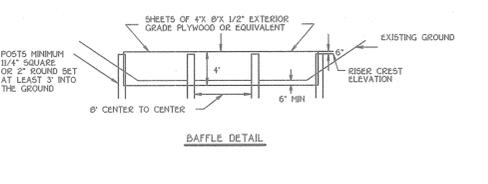
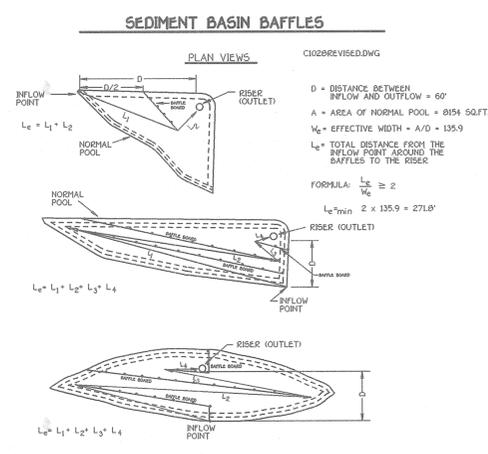




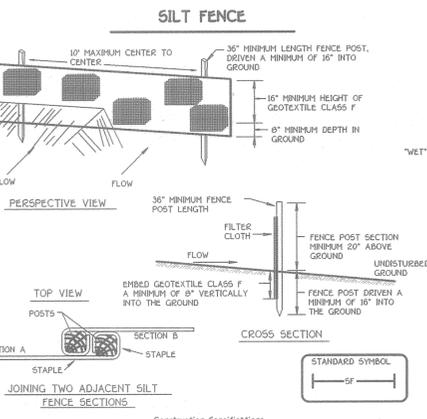
- Construction Specifications
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or line with sod.
 - 4" x 2" stone or recycled concrete equivalent pressed into the soil 7" minimum.
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 - The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.



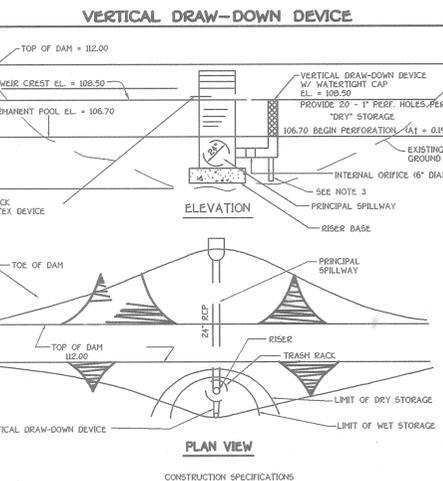
- Construction Specifications
- Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 10'.
 - Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
 - Entrance and exit sections shall be installed as shown on the detail section.
 - Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
 - Cation Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
 - Rip-rap should blend into existing ground.
 - Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1. For slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.



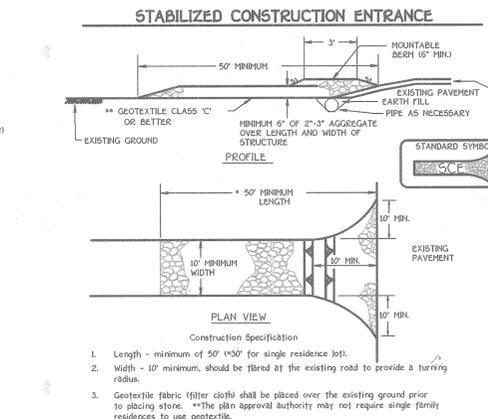
- Construction Specifications
- Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
 - The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class E. The perforations shall be 1/2" x 6" slots or 1" diameter holes.
 - A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
 - The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.



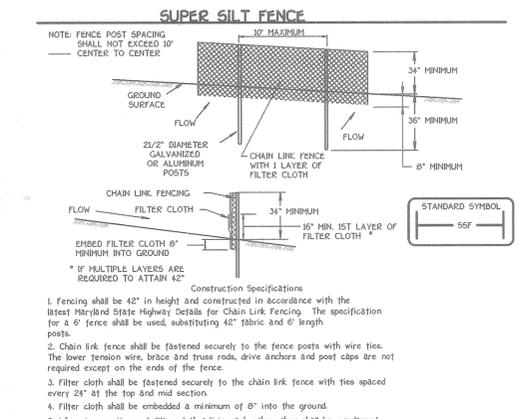
- Construction Specifications
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 100 pound per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|---------------------------|----------------|
| Tensile Strength | 50 lbs/in (min) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min) | Test: MSMT 509 |
| Flow Rate | 0.3 gal ft / minute (max) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min) | Test: MSMT 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.



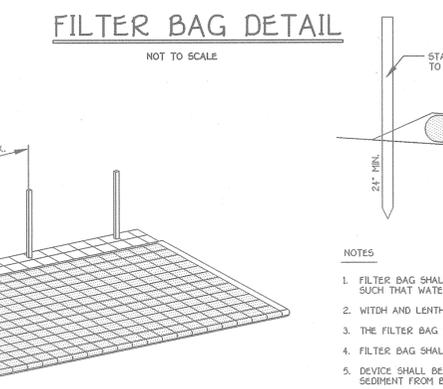
- CONSTRUCTION SPECIFICATIONS
- PERFORATIONS IN THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE.
 - THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF THE INTERNAL ORIFICE.
 - THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.
 - PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE, OR 1" BY 4" SQUARE OR 2" ROUND WOODEN POSTS SET 3' MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 1/2" GAUGE MINIMUM WIRE.



- Construction Specification
- Length - minimum of 50' (30' for single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
 - Stone - crushed aggregate (4" to 3") or reclaimed 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 mountable berm with 4:1 slopes and a minimum of 6" of stone over the pipe. Pipe shall be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 - 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.



- Construction Specifications
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 6" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|---------------------------|----------------|
| Tensile Strength | 50 lbs/in (min) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min) | Test: MSMT 509 |
| Flow Rate | 0.3 gal ft / minute (max) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min) | Test: MSMT 322 |



- NOTES
- FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
 - WIDTH AND LENGTH SHALL BE AS SHOWN IN THE TABLE.
 - THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
 - FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.
 - DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.
- AVAILABLE FROM:
- | | | |
|--|--|---|
| INDIAN VALLEY INDUSTRIES, INC.
P.O. BOX 810
JOHNSON CITY, NEW YORK 13790
(800) 659-5111 | A.C.F. ENVIRONMENTAL
1801-A WILLIS ROAD
RICHMOND, VIRGINIA 23237
TOLL FREE 1-800-448-3636 | PRICE AND COMPANY, INC.
425 36TH STREET
WYOMING, NE 49548
(408) 530-8230 |
|--|--|---|

By The Developer:

I/We Certify That All Development And/or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature of Developer: Bruce A. Harvey
Date: 9-28-00

Printed Name of Developer: Bruce A. Harvey

By The Engineer:

I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: Aldo M. Vitucci
Date: 6-28-00

Printed Name of Engineer: Aldo M. Vitucci

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

US Natural Resources Conservation Service
Signature: [Signature]
Date: 10/10/00

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Howard Soil Conservation District
Signature: [Signature]
Date: 10/10/00

Approved: Department Of Public Works
Signature: [Signature]
Date: 10-16-00

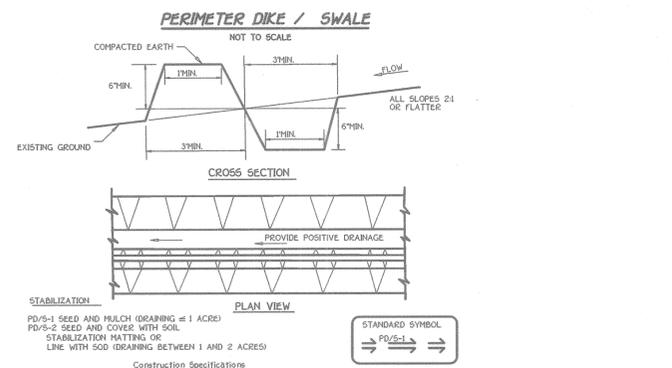
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
Signature: [Signature]
Date: 10/17/00

Chief, Division Of Land Development

Signature: [Signature]
Date: 10/17/00

Chief, Development Engineering Division



- Construction Specifications
- All perimeter dikes/swales shall have an uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet into an undisturbed stabilized area at a non-erosive velocity.
 - The swale shall be excavated or shaped to line, grade, and cross-section as required to meet the criteria specified in the standard.
 - Fill shall be compacted by earth moving equipment.
 - Stabilization with seed and mulch or as specified of the area disturbed by the dike and swale shall be completed within 7 days upon removal.
 - Inspection and required maintenance shall be provided after each rain event.
- Note: The maximum drainage area for this practice is 2 acres.

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES

WESLEY WOODS

SECTION ONE

LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE BULK PARCELS 'B' & 'C'

(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
TAX MAP NO. 39 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 12 OF 15

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER	DEVELOPER
WILLIAM E. TOOMEY AND JANE T. RUSSELL 315 WILDWOOD DUNES TRAIL MYRTLE BEACH, S.C. 29572 (410) 796-4335	PATRIOT HOMES 5485 HARPER'S FARM ROAD SUITE 200 COLUMBIA, MARYLAND 21044 (410) 997-5522

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 vegetative 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

1. 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 Experiment Station.

2. Topsoil Specifications - Soil to be used as topsoil must meet the following:

- Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsols and shall contain less than 5% by volume of cinders, stones, silt, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
- Topsoil must be free of plants or plant parts such as bermudagrass, quackgrass, Johnson grass, 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 4-6 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Limestone shall be uniformly over deposited areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

3. 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.

4. For sites having disturbed areas over 5 acres:

- On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for pest control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

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

6. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Silt Fence and Sediment Traps and Basins.
- Grades on areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

7. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.02.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
- Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (331-9595).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 TO 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 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 50), SOIL EROSION (SEC. 50), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	20.40 ACRES
AREA DISTURBED	10.42 ACRES
AREA TO BE ROOFED OR PAVED	3.64 ACRES
AREA TO BE VEGETATIVELY STABILIZED	6.78 ACRES
TOTAL DISTURBED	20.00 CU.YDS.
TOTAL FILL	20,000 CU.YDS.
- OFFSITE WASTE/BORROW AREA LOCATION: N/A CU.YDS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, EARLY 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.

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more resistant to infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Temporary Seeding includes Temporary Seeding Areas, Temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on infiltration, especially on volume and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent runoff. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation
 - Final erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- Soil Amendments (Fertilizer and Lime Specifications)
 - Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed at the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be all delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 90% calcium oxide and magnesium oxide. Limestone shall be ground to such fineness that at least 90% will pass through a #20 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
- Seeded Preparation
 - Temporary Seeding
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas greater than 3:1 should be tracked along the contour of the slope in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - In corporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
 - Permanent Seeding
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay, but at least 40% silt and clay (silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if legumes or species leguminosae is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
 - Soil shall contain 1% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soil on site, adding topsoil is required.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade. Then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by diking or other suitable means. Lawn areas should be rolled to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application, where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to rough the surface. Slopes steeper than 3:1 should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

Seed Mixture (Hardness Zone - 6b -)		From Table 26		Fertilizer Rate		Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth	0.0-10.0'	10.0-20.0'	20.0-30.0'
1	BARLEY	122	3/1 - 5/15,	1" - 2"	600 lb/ac	2 tons/ac	
	OATS	96	8/15 - 10/15	1" - 2"	05 lb/1000sq	000 lb/1000sq	
	RYE	140		1" - 2"			

SECTION 2 - TEMPORARY SEEDING

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed mixtures - Temporary Seeding

- Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.
- For sites having soil tests performed, the sites shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

Seed Mixture (Hardness Zone - 6b -)		From Table 26		Fertilizer Rate		Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth	0.0-10.0'	10.0-20.0'	20.0-30.0'
1	BARLEY	122	3/1 - 5/15,	1" - 2"	600 lb/ac	2 tons/ac	
	OATS	96	8/15 - 10/15	1" - 2"	05 lb/1000sq	000 lb/1000sq	
	RYE	140		1" - 2"			

SECTION 3 - PERMANENT SEEDING

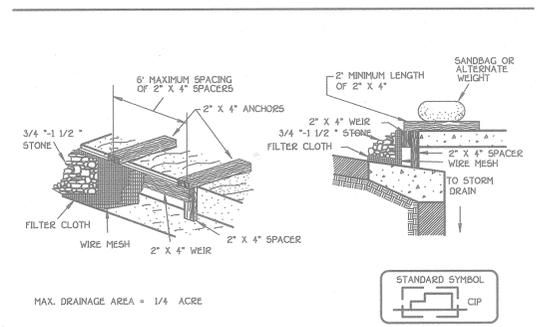
Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

A. Seed mixtures - Permanent Seeding

- Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardness Zone (from Figure 5) and enter them in the Permanent Seeding summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 26 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide Section 345, Critical Area Planting, for special maintenance areas, see Sections IV S04 and V Turfgrass.
- For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
- For areas receiving low maintenance, apply urea-form fertilizer (46-0-0) at 1/2 lb/1000 sq. ft. (50 lb/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardness Zone - 6b -)		From Table 25		Fertilizer Rate			Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth	N	P205	K2O	
3	TALL FESCUE (60%)	125	3/1 - 5/15,	1" - 2"	90 lb/ac	175 lb/ac	175 lb/ac	2 tons/ac
	PERennial RYE GRASS (10%)	15	8/15 - 10/15	1" - 2"	02.0 lb/1000sq	14 lb/1000sq	14 lb/1000sq	000 lb/1000sq
	KENTUCKY BLUEGRASS (85%)	100		1" - 2"				
10	TALL FESCUE (60%)	125	3/1 - 5/15,	1" - 2"				2 tons/ac
	HAIR FESCUE (40%)	100	8/15 - 10/15	1" - 2"				000 lb/1000sq

CURB INLET PROTECTION (COG OR COS INLETS)

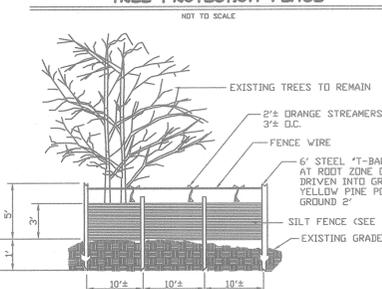


- MAX. DRAINAGE AREA = 1/4 ACRE
- Construction Specifications
- Attach a continuous piece of wire mesh (30" minimum width by length plus 4") to the 2" x 4" weir (measuring through length plus 2") as shown on the standard drawing.
 - Place a continuous piece of Geotextile E15 (the same dimensions as the wire mesh) over the weir mesh and secure it attach it to the 2" x 4" weir.
 - Securely nail the 2" x 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4" apart).
 - Place the assembly against the inlet throat and nail minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
 - The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
 - Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place slabs 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
 - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
 - Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- NOTE THE EXISTING 3.5' x 2.5' CONC. CULVERT UNDER OLD WASHINGTON ROAD MUST BE CLEANED OUT SATISFACTORILY TO FUNCTION PROPERLY TO CONVEY THE 25-100 CFS STORM EVENT.
- NOTIFY MISS UTILITY AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK.
- CLEAR AND GRUB FOR PHASE I SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE (2 weeks)
- BEGIN PHASE I OF CONSTRUCTION:
 - CONSTRUCT THE TWIN 48-INCH CULVERT FROM HW-1 TO HW-2.
 - INSURE FULL PERMANENT STABILIZATION OF THE AREA.
 - UPON COMPLETION, OBTAIN PERMISSION FROM THE INSPECTOR TO PROCEED WITH PHASE II WORK.
- INSTALL REMAINING SEDIMENT CONTROL MEASURES, BASIN/POND, EARTH DIKES, TREE PROTECTION FENCE, AND SILT FENCE AS INDICATED IN THE PLANS. THE REMAINING WILL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED POND. WHERE NECESSARY, RIPPING AND JACK HAMMING SHOULD BE UTILIZED IN THE EXCAVATION OF EACH FACILITY. (2 weeks)
- OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEED.
- BEGIN PHASE II OF CONSTRUCTION:
 - CONSTRUCT THE STORM WATER MANAGEMENT FACILITY ALONG WITH THE ACCESS ROAD. ALSO CONSTRUCT PART OF THE STORM DRAIN SYSTEM FROM SW-1 TO HW-1 AND ON A DAILY BASIS, REMOVE SEDIMENTS FROM ALL YEARS WITHIN THE EXCAVATION OF THE PROPOSED POND.
 - INSURE FULL PERMANENT STABILIZATION OF THE SWM FACILITY.
 - ONCE PHASE II WORK IS COMPLETE AND STABILIZED, OBTAIN PERMISSION FROM THE INSPECTOR TO PROCEED WITH THE REMAINING SITE WORK.
- CLEAR AND GRUB FOR PHASE III OR THE REMAINDER OF SITE. (1 week)
- GRADE SITE TO PROPOSED SUBGRADE AND INSTALL REMAINING STORM SYSTEM. STABILIZE ALL ROADWAY SLOPES IMMEDIATELY UPON COMPLETION OF GRADING AS SHOWN ON THESE PLANS. (4 weeks)
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWING FROM AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL YEARS WHEN CLEAN OUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF AN APPROVED TRAP DEVICE. (1 week)
- INSTALL BASE COURSE FOR THE PROPOSED ROADS. (1 week)
- STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTORS TO PROCEED.
- APPLY TACK COAT TO SUB-BASE AND LAY SURFACE COURSE. (1 week)
- WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND PONDS HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICE MAY BE REMOVED AND/OR BACK FILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 weeks)
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT.

TREE PROTECTION FENCE



- Silt Fence to be heeled into the soil.
- Wire, snow fence, etc. for tree protection only.
- Boundaries of Retention Area will be established as part of the forest conservation plan review process.
- Boundaries of Retention Area should be staked and flagged prior to installation.
- Avoid root damage when placing anchor posts.
- Device should be properly maintained throughout construction.
- Protection signs are also required, see Figure C-4.
- Locate fence outside the Critical Root Zone.

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES

WESLEY WOODS SECTION ONE

LOTS 1 THRU 6, LOTS 20 THRU 29, LOT 31 AND LOTS 32 THRU 43 AND NON-BUILDABLE BULK PARCELS 'B' & 'C' (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
TAX MAP NO. 36 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 11 OF 16

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOT LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TREE TURN AROUND	6/12/01

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTRAL SQUARE OFFICE PARK - 10775 BALTIMORE NATIONAL PkE
ELLSWORTH CITY, MARYLAND 21041
(410) 411-2955

F.C.C. #6153 SED DETAILSDWG

OWNER
WILLIAM E. TOOMEY AND JANE T. RUSSELL
315 WILDWOOD DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER
PATRIOT HOMES
5485 HARPERS FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522

STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-37B. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

I. SITE PREPARATION: AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1.

AREAS TO BE COVERED BY THE POND OR RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCE, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREE AND STUMP REMOVAL SHALL BE CUT APPROXIMATELY LEVEL WITH GROUND SURFACE. FOR DRY STORM WATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OUTSIDE THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL MATERIALS.

II. EARTH FILL:

MATERIAL FOR THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA OR AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZE STONES, FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO THE FOLLOWING CLASSIFICATION GC, SC, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT: AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN 8-INCH MAXIMUM THICKNESS LAYERS. LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL, THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION: THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR CONSTRUCTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER Tired OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ±2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

CUTOFF TRENCH: THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACK FILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STRUCTURE BACK FILL: BACK FILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE BACK FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACK FILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE PIPE UNLESS THERE IS A COMPACTED FILL OF TWENTY-FOUR INCHES OR GREATER OVER THE STRUCTURE OR PIPE.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

A. ROUTINE MAINTENANCE

- Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather, to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as rip-rap puller area shall be repaired as soon as it is noticed.

B. NON-ROUTINE MAINTENANCE

- Structural components of the pond such as the dam, riser structure and the pipes shall be repaired upon the detection of any damage. The components should be inspected during maintenance operations.
- Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.

Embarkment and Cut-off Trench Construction

THE AREA OF THE PROPOSED SWM POND SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROTECTED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. AN EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROFFOLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 37B SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. BASED ON OUR VISUAL CLASSIFICATIONS IT APPEARS THAT SOME OF THE ON-SITE SOILS, ESPECIALLY THE NEAR SURFACE SOILS, WILL BE SUITABLE FOR USE AS CORE TRENCH MATERIAL. IT IS RECOMMENDED THAT ADDITIONAL EXPLORATION AND LABORATORY TESTING BE PERFORMED PRIOR TO POND CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED WITH MD SC5 37B SPECIFICATIONS.

III. PIPE CONDUITS: ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

- MATERIALS** - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION 151.
- BEDDING** - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10X OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.

- LAYING PIPE** - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.
- BACK FILLING** SHALL CONFORM TO "STRUCTURE BACK FILL".

- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

POLYVINYL CHLORIDE (PVC) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:

- MATERIALS** - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241.

- JOINTS AND CONNECTIONS** TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.

- BEDDING** - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

- BACK FILLING** SHALL CONFORM TO "STRUCTURE BACK FILL".

- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

IV. CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 609, MIX NO. 3.

V. ROCK RIP RAP

ROCK RIP RAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 905.

THE RIP RAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN THE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIP RAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE PLACED UNDER ALL RIP RAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 919.2.

VI. CARE OF WATER DURING CONSTRUCTION

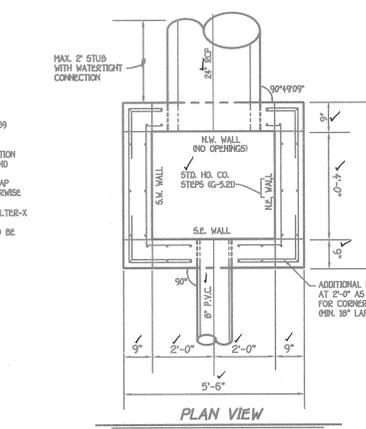
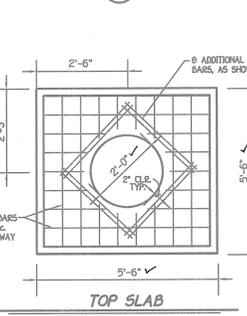
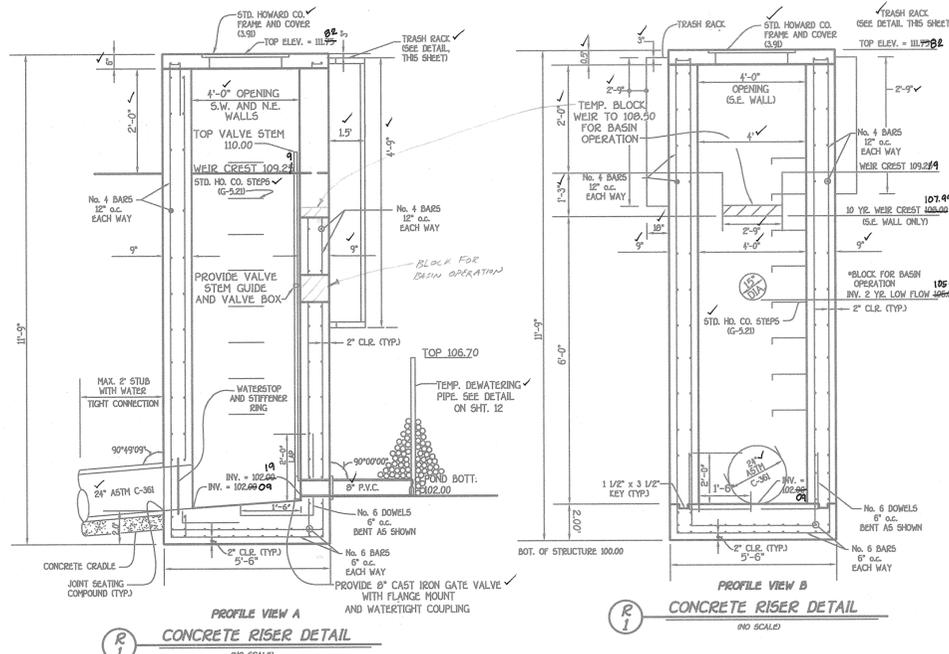
ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS, DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO PUMPS FROM WHICH THE WATER SHALL BE PUMPED.

VII. STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING AS REQUIRED IN ACCORDANCE WITH THE MARYLAND SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

VIII. EROSION & SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED & WATER & AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.



BORING B-2		
DESCRIPTION OF MATERIALS	DEPTH SURFACE	REMARKS
TOPSOIL	1.5'	18" TOPSOIL
ORANGE BROWN MOIST, CLAYEY SAND SAND TRACE GRAVEL (SC)	1.5'	NO GROUNDWATER ENCOUNTERED
ORANGE BROWN/TAN MOIST SILTY SAND LITTLE TO SOME CLAY TRACE GRAVEL (SM-SC)	10.5'	PERCHED WATER NOTED SEEPING INTO EXCAVATION FROM 1.5' - 5.0'
TAN, MOIST SAND TRACE SILT AND GRAVEL (SP)	18.0'	IN-SITU INFILTRATION TEST PERFORMED AT EL.102
BOTTOM OF HOLE AT 19.5'	19.5'	BACKFILLED AT COMPLETION

BORING B-3		
DESCRIPTION OF MATERIALS	DEPTH SURFACE	REMARKS
TOPSOIL	6.0'	6" TOPSOIL
BROWN MOIST TO WET, MICACIOUS SANDY SILT WITH WEATHERED ROCK FRAGMENTS (ML)	0.5'	GROUNDWATER ENCOUNTERED AT 1.5' WHILE DRILLING
GREEN, WET, FINE SANDY SILT WITH SOME MICA AND WEATHERED ROCK FRAGMENTS (SM)	2.5'	CAVED IN AT 4.5' AT COMPLETION
BOTTOM OF HOLE AT 8.0'	8.0'	

By The Developer:
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Bruce A. Harvey* Date: 9-28-00
 Printed Name Of Developer: Bruce A. Harvey

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer And The Howard Soil Conservation District A Registered Professional Engineer To Supervise Pond Construction And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *W. M. Vitucci* Date: 6-28-00
 Printed Name Of Engineer: W. M. Vitucci

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature Of Engineer: *Robert C. Alty* Date: 10/10/00
 Printed Name Of Engineer: Robert C. Alty

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer: *D. G. Worfield, Inc.* Date: 10/10/00
 Printed Name Of Engineer: D. G. Worfield, Inc.

Approved Department Of Public Works: *Richard M. Daniels* Date: 10-16-00
 Chief, Bureau Of Highways

Approved Department Of Planning And Zoning: *Cindy Hamilton* Date: 10/19/00
 Chief, Division Of Land Development

Approved Department Of Planning And Zoning: *W. M. Vitucci* Date: 10/17/00
 Chief, Development Engineering Division

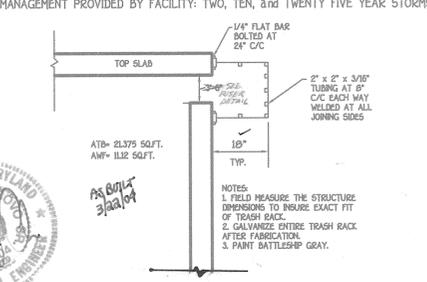
AS-BUILT CERTIFICATION
 I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.
 Signature: *W. M. Vitucci* Date: 10/20/00
 P.E. No. 38424

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Commonly Accepted Industry Practices.

DESIGN SUMMARY

DESIGN STORM	ALLOWABLE RELEASE RATE	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEVATION	STORAGE VOLUME (ACFT)
2 YEAR	7.2 c.f.s.	17.2 c.f.s.	6.1 c.f.s.	107.69	0.349
10 YEAR	19.3 c.f.s.	37.2 c.f.s.	17.6 c.f.s.	108.99	.740
25 YEAR	22.6 c.f.s.	42.7 c.f.s.	22.0 c.f.s.	109.27	0.833
100 YEAR	N/A	60.9 c.f.s.	42.4 c.f.s.	109.89	1.036

STRUCTURE CLASSIFICATION, LOW HAZARD, CLASS 'A' POND
 STORAGE - HEIGHT PRODUCT 0.833 Ac. ft. x 10.00' = 8.33
 WATERSHED AREA TO FACILITY (ACRES): ULTIMATE 10.25 ACRES
 LEVEL OF MANAGEMENT PROVIDED BY FACILITY: TWO, TEN, AND TWENTY FIVE YEAR STORMS



TRASH RACK DETAIL

(NO SCALE)

S.W.M. NOTES AND DETAILS

SECTION ONE

LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'

(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
 TAX MAP NO. 30 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 10 OF 16

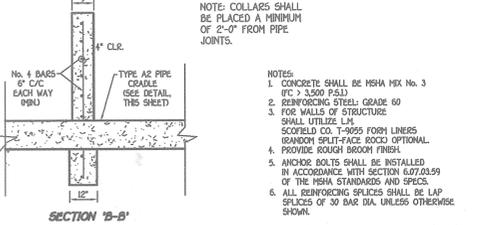
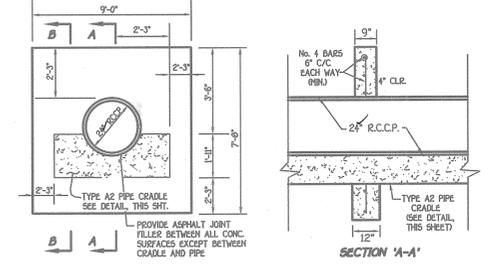
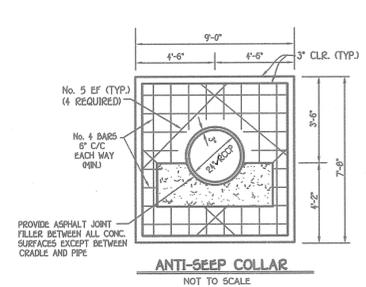
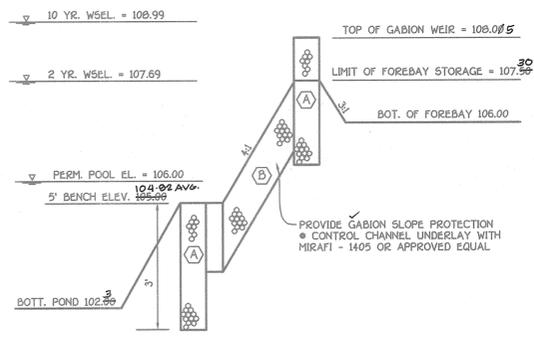
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

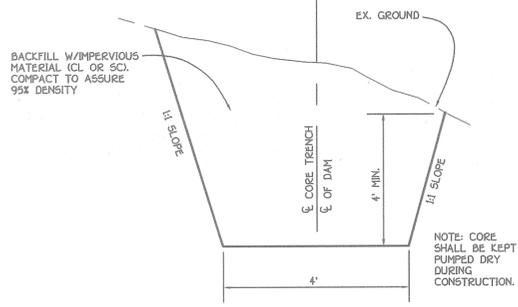
DEVELOPER
 PATRIOT HOMES
 5405 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21041
 (410) 481-2955

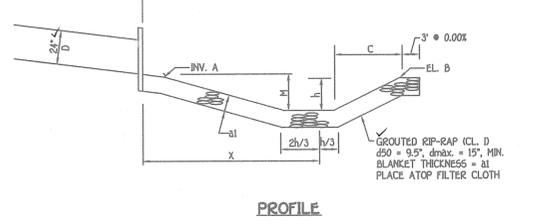
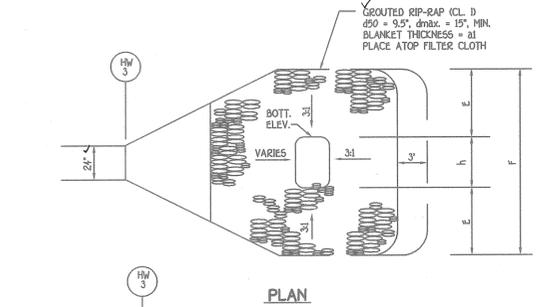
F.C.C. #0113 SWM DETAILS.DWG



TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR
NO SCALE

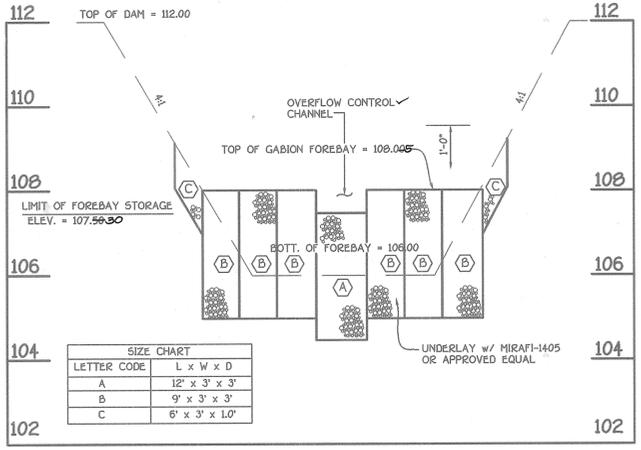


CORE TRENCH DETAIL
NOT TO SCALE

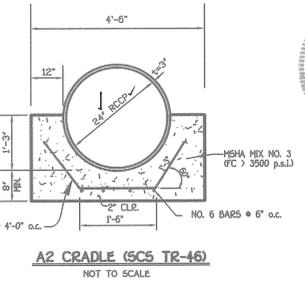


STILLING BASIN OUTFALL DETAIL • HW-3
NO SCALE

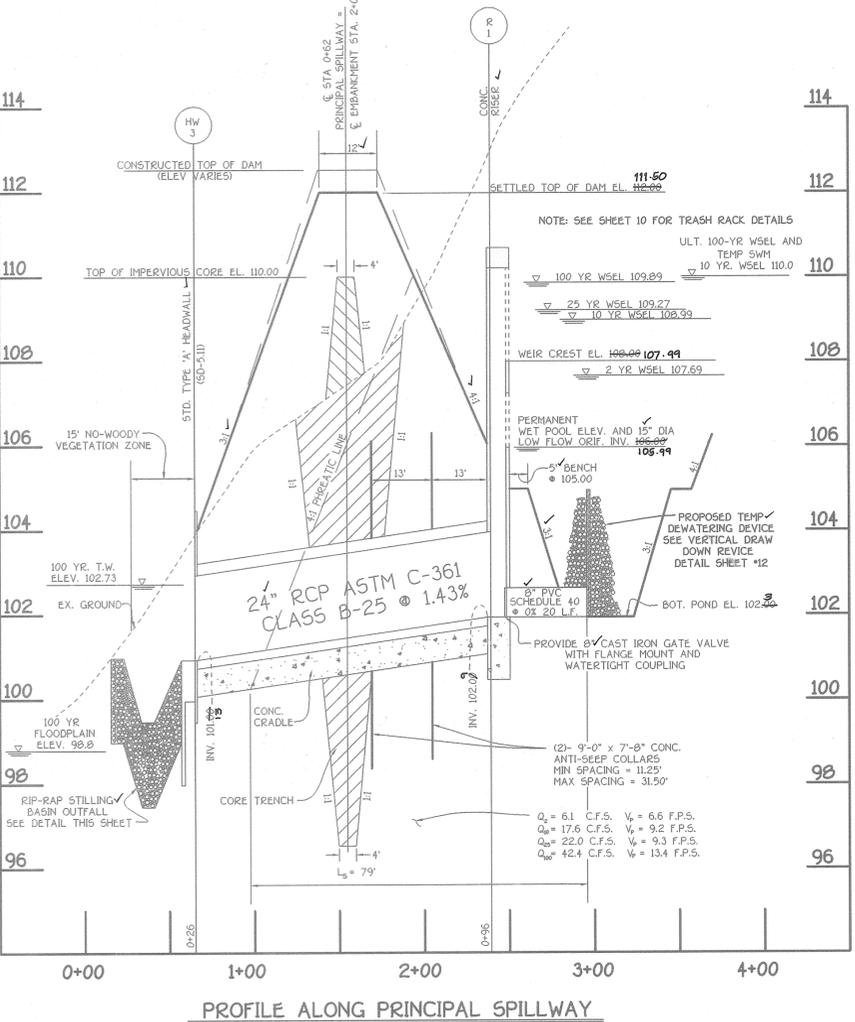
STILLING BASIN DATA										
STRUCTURE NO.	INV.	EL.	C	D	E	F	H	M	DI	X
HW-3	101.60	101.60	4.5'	2.0'	4.5'	10.5'	2.0'	2.0'	19'	12.5'
	1B	1B				1A'				



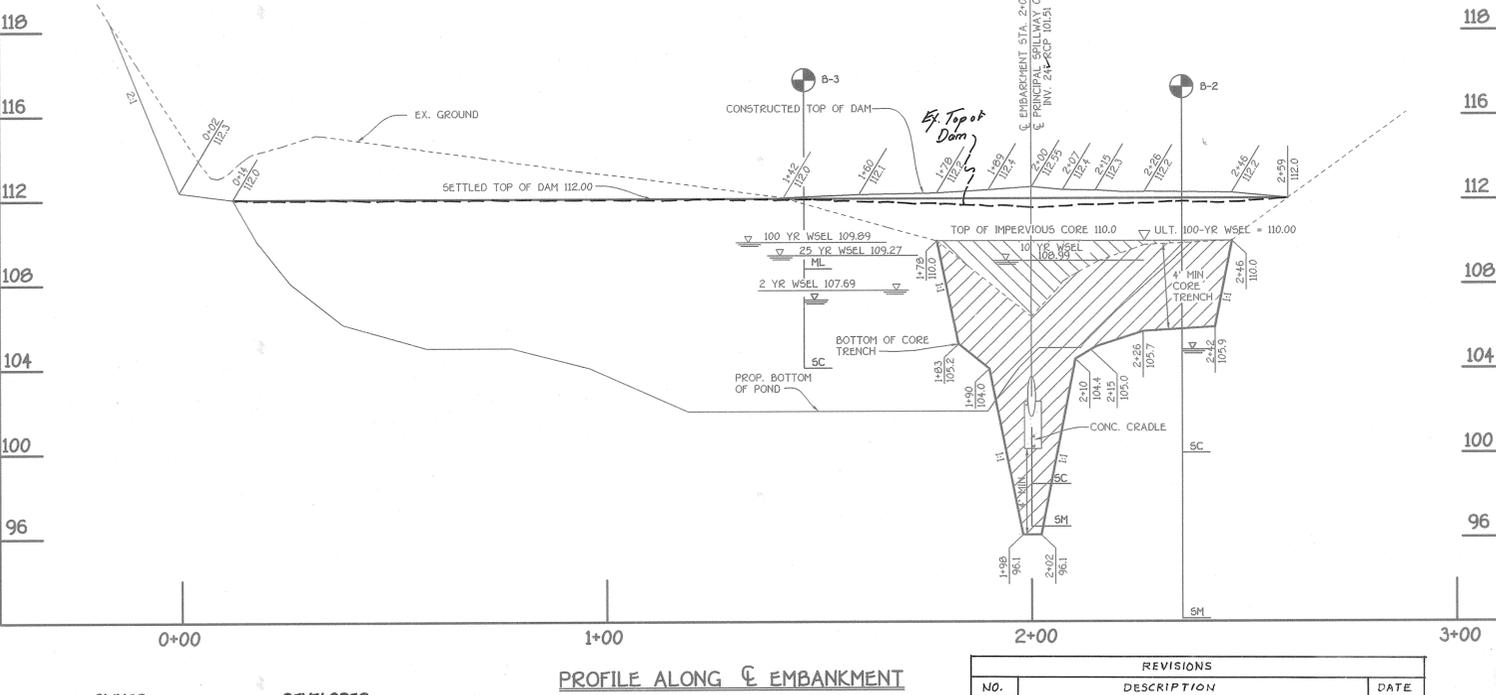
GABION FOREBAY PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



A2 CRADLE (SCS TR-16)
NOT TO SCALE



PROFILE ALONG PRINCIPAL SPILLWAY
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



PROFILE ALONG EMBANKMENT
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'

By The Developer:
"I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."
Signature Of Developer: Bruce A. Harvey
Printed Name Of Developer: Bruce A. Harvey
Date: 9-28-00

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."
Signature Of Engineer: Aldo M. Vitucci
Printed Name Of Engineer: Aldo M. Vitucci
Date: 6-28-00

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
Signature: J.G. Confield, Inc.
Date: 10/10/00
ULI-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
Signature: [Signature]
Date: 10/10/00
Howard Soil Conservation District

Approved: Department Of Public Works
Signature: [Signature]
Date: 10-10-00
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
Signature: [Signature]
Date: 10/17/00
Chief, Division Of Land Development

Signature: [Signature]
Date: 10/17/00
Chief, Development Engineering Division

AS-BUILT CERTIFICATION
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.
Signature: [Signature]
Date: 12/01/04
P.L. No. 2/20/04

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

A. ROUTINE MAINTENANCE
Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
Top and Side Slopes of the Embankment shall be Mowed a Minimum of Two (2) Times A Year, Once In June and Once In September. Other side Slopes, The Bottom of the Pond, and Maintenance Access should be Mowed As Needed.
Debris And Litter Next To the Outlet Structure shall be Removed During Regular Mowing Operations And As Needed.
Visible Signs of Erosion In the Pond As Well As Rip-Rap Outlet Area shall be Repaired As Soon As It is Noticed.

B. NON-ROUTINE MAINTENANCE
Structural Components of the pond such as the Dam, Riser Structure And The Pipes shall be Repaired Upon the Detection of Any Damage. The Components should be Inspected During Routine Maintenance Operations.
Sediment should be Removed when its Accumulation Significantly Reduces The Design Storage, Interferes with the Function of the Riser, when Deemed Necessary for Aesthetic Reasons, Or when Deemed Necessary by the Howard County Department of Public Works.

S.W.M. NOTES AND DETAILS
WESLEY WOODS
SECTION ONE
LOTS 1 THRU 6, LOTS 20 THRU 29,
LOT 31 AND LOTS 32 THRU 43
AND NON-BUILDABLE PARCELS 'B' & 'C'
(A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - FLAT Nos. 14590 THRU 14593)

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

ZONED R-12
TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: JUNE 28, 2000
SHEET 9 OF 16

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL PIKE
ELKLOFT CITY, MARYLAND 21042
(410) 481 - 2855

OWNER
WILLIAM E. TOOMEY AND
JANE T. RUSSELL
315 WILDWOOD DUNES TRAIL
MYRTLE BEACH, S.C. 29572
(410) 796-4335

DEVELOPER
PATRIOT HOMES
5405 HARPER'S FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
(410) 997-5522

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Chief, Development Engineering Division
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways

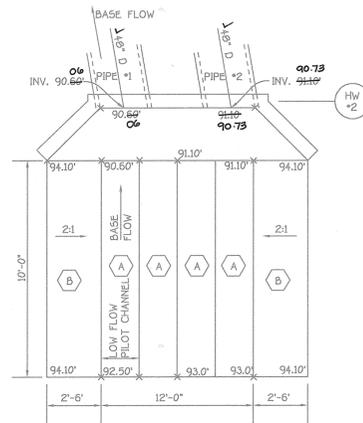
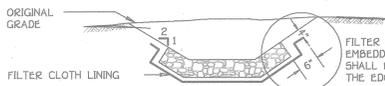
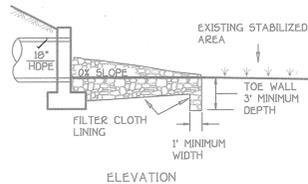
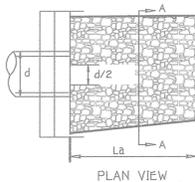
10/19/00
 10/17/00
 10-16-00

ROCK OUTLET PROTECTION III • HW-1

ROCK OUTLET PROTECTION

Construction Specifications

- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
- Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
- The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.



(A) DENOTES PVC COATED 10'L x 3'W x 1.5'D GABION BASKET
 (B) DENOTES PVC COATED 10'L x 2'-6\"/>

GABION INFLOW PROTECTION

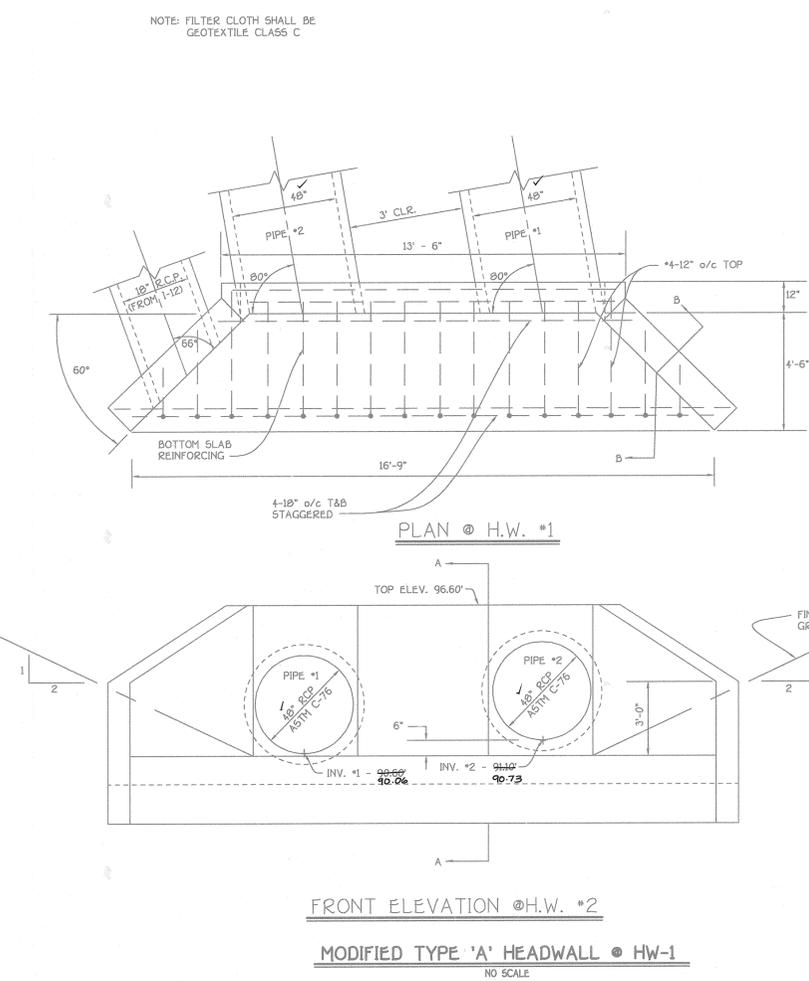
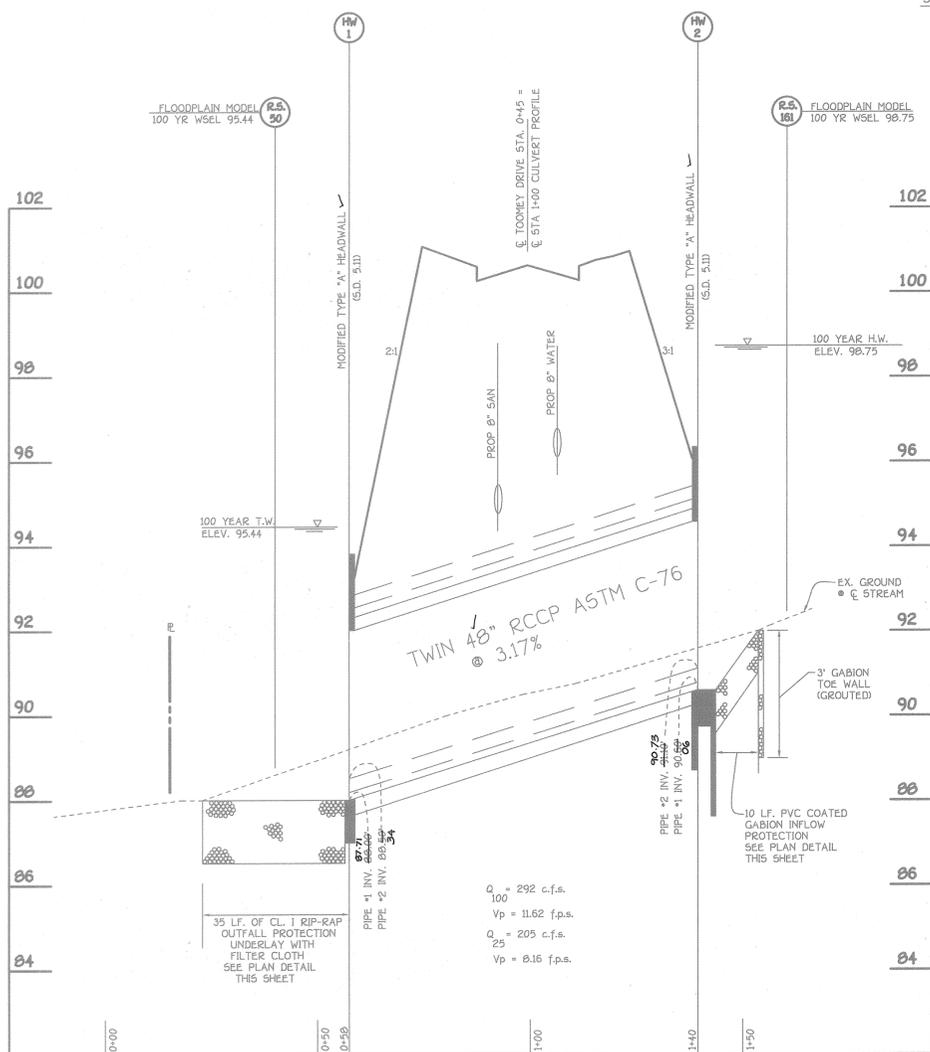
NO SCALE

STRUCTURE SCHEDULE

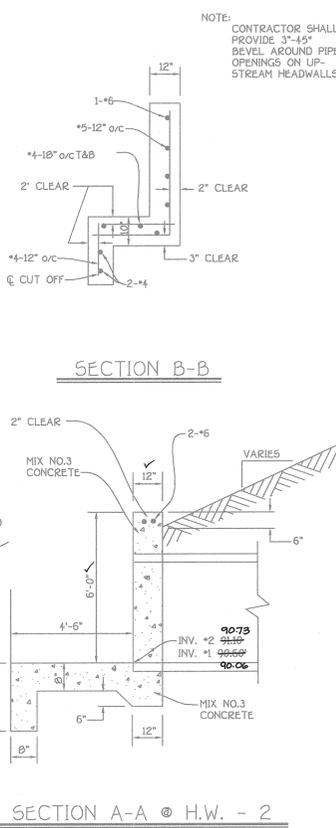
STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	114.2504	100.96 109.03	100.71 64	TOOMEY LANE	C.L. STA. 2+27.93	12'R	A-10 INLET	S.D. 4.41
I-2	114.2552	109.50 77	109.25 50	TOOMEY LANE	C.L. STA. 2+27.80	12'L	A-10 INLET	S.D. 4.41
I-3	132.0910	123.00 122.34	119.80 07	TOOMEY LANE	C.L. STA. 4+04	12'R	A-10 INLET	S.D. 4.41
I-4	136.6941	147.82 136.25 121.73	130.09 120.51	TOOMEY LANE	C.L. STA. 4+50.40	12'L	A-10 INLET	S.D. 4.41
I-5	154.3523	149.30 140.25	140.00 140.91	TOOMEY LANE	C.L. STA. 6+30.23	12'L	A-10 INLET	S.D. 4.41
I-6	155.8699	149.00 14	140.25 149.10	TOOMEY LANE	C.L. STA. 6+40.50	12'R	A-10 INLET	S.D. 4.41
I-7	164.1000	157.40 00	156.00 157.05	---	---	---	5' INLET	S.D. 4.22
I-8	166.2513	160.50 3	160.31 40	TOOMEY LANE	C.L. STA. 12+07.00	12'R	A-10 INLET	S.D. 4.41
I-9	166.2516	---	161.07 1	TOOMEY LANE	C.L. STA. 12+07.00	12'L	A-10 INLET	S.D. 4.41
I-10	165.2280	159.62 159.95	159.37 159.77	FAIRLEE ROAD	C.L. STA. 1+119	12'L	A-5 INLET	S.D. 4.40
I-11	165.2286	---	159.86 27	FAIRLEE ROAD	C.L. STA. 1+119	12'R	A-5 INLET	S.D. 4.40
I-12	120.5000	---	124.00 19	---	---	---	5' INLET	S.D. 4.22
I-13	101.7012	96.00 73	94.50 62	TOOMEY LANE	C.L. STA. 0+61.4	12'L	A-10 INLET	S.D. 4.41
I-14	101.7214	---	96.50 97.02	TOOMEY LANE	C.L. STA. 0+61.4	12'R	A-5 INLET	S.D. 4.40
M-1	111.50 99	106.92 73	106.40 57	TOOMEY LANE	C.L. STA. 3+23	7'5"	STD. MANHOLE	G - 5.05
M-2	159.60 3	154.00 01	153.71 154.00	---	---	---	STD. MANHOLE	G - 5.05
M-3	166.30 00	156.21 00	155.90 156.37	---	---	---	STD. MANHOLE	G - 5.05
M-4	164.10 00	150.20 03	157.77 158.00	---	---	---	STD. MANHOLE	G - 5.05
M-5	166.10 00	159.90 9	159.77 7	TOOMEY LANE	C.L. STA. 11+06.5	20' x 20"	STD. MANHOLE	G - 5.05
M-6	157.50 05	150.25 157.03	150.00 157.55	TOOMEY LANE	C.L. STA. 8+42.50	13' x 12'	---	G - 5.05
S-1	100.00 20	---	106.00 20	---	---	---	---	---
HW-1	90.73	87.71	88.00 (2)	TOOMEY LANE	C.L. STA. 0+36.41	41.71'	MOD. TYPE 'A'	SEE PLAN
HW-2	90.60	---	---	TOOMEY LANE	C.L. STA. 0+52.40	39.15'	MOD. TYPE 'A'	SEE PLAN
HW-3	06	---	101.00 13	---	---	---	MOD. TYPE 'A' HEADWALL	---

PIPE SCHEDULE

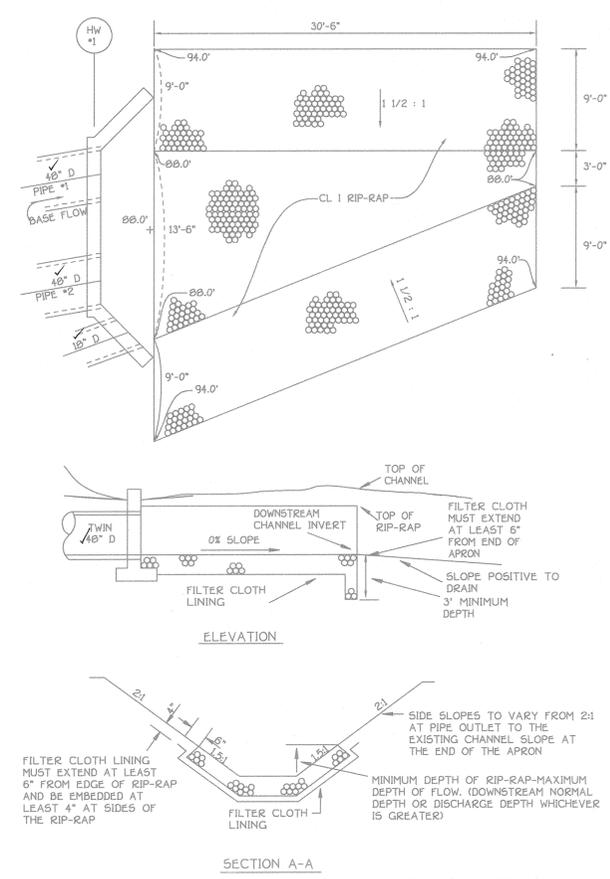
SIZE	MATERIAL	LENGTH
15"	HDPE	163'
18"	HDPE	1432'
24"	HDPE	15'
24"	RCCP	70'
48"	RCCP	164'



FRONT ELEVATION @ H.W. #2
 MODIFIED TYPE 'A' HEADWALL • HW-1
 NO SCALE



SECTION A-A @ H.W. - 2



ROCK OUTLET PROTECTION II • HW-1
 NO SCALE

STORM DRAIN PROFILES AND DETAILS
 WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

ZONED R-12
 PARCEL NO. 162
 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 8 OF 16

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21114
 410-488-2895



OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

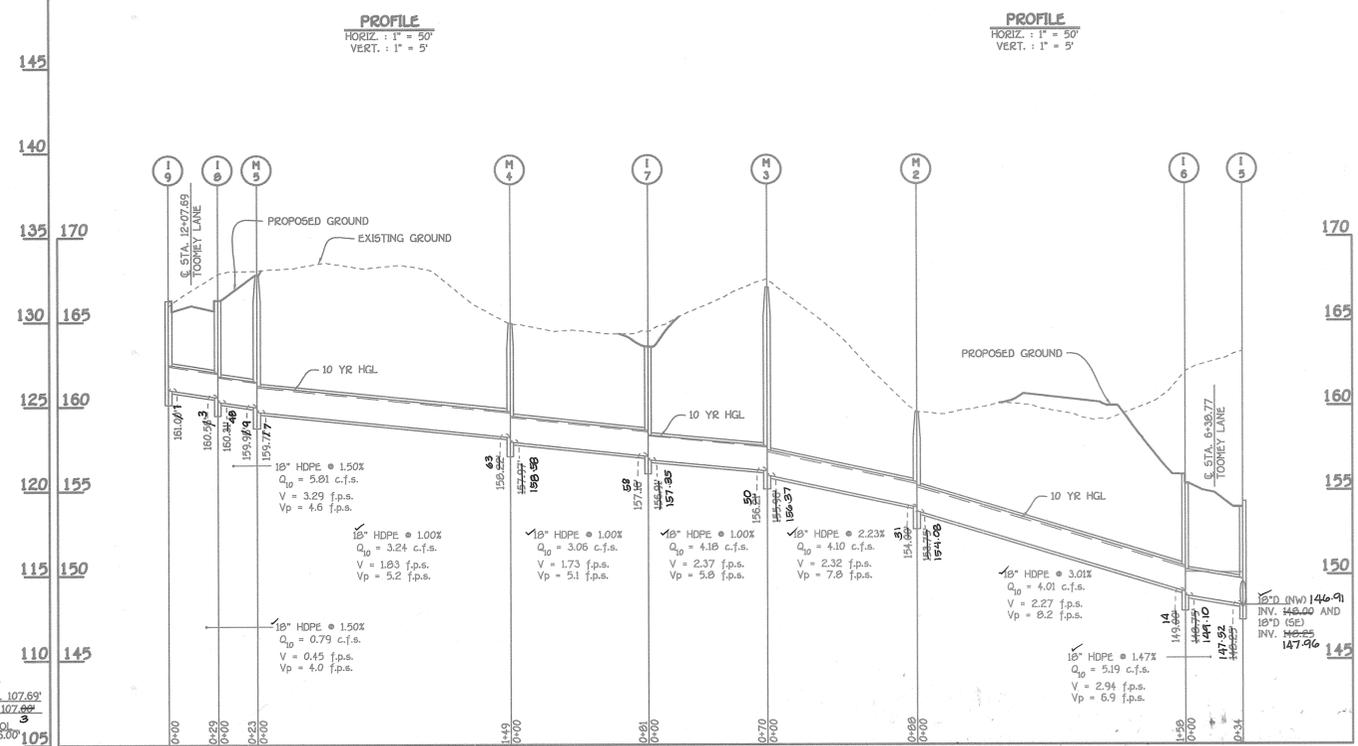
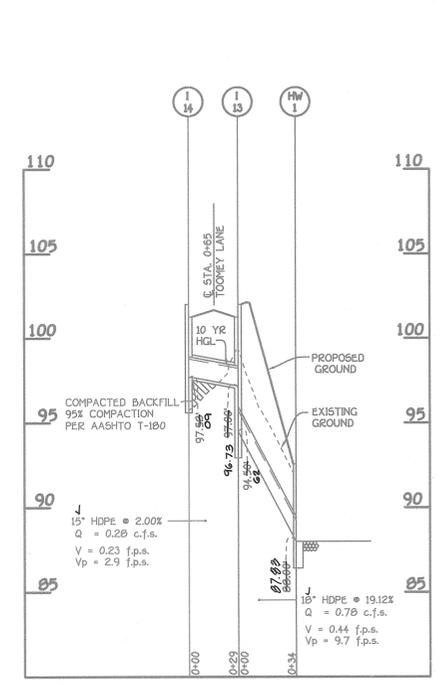
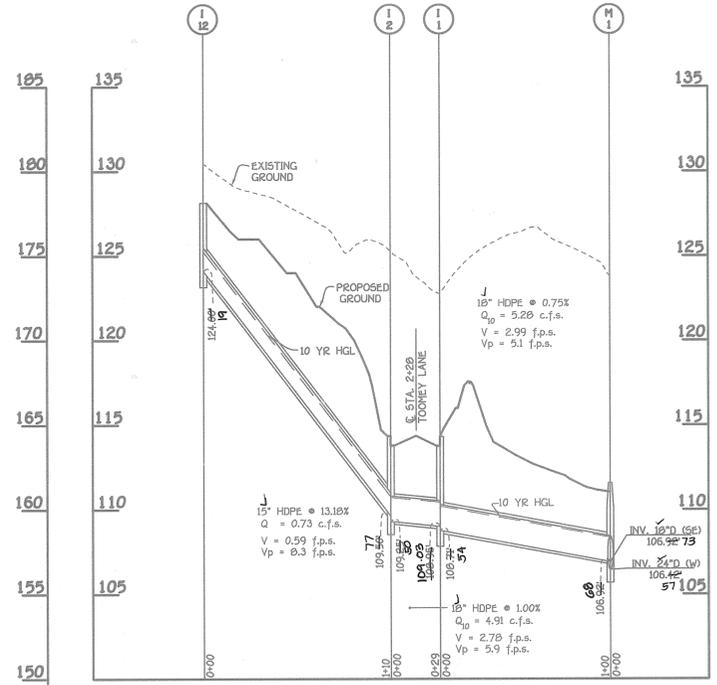
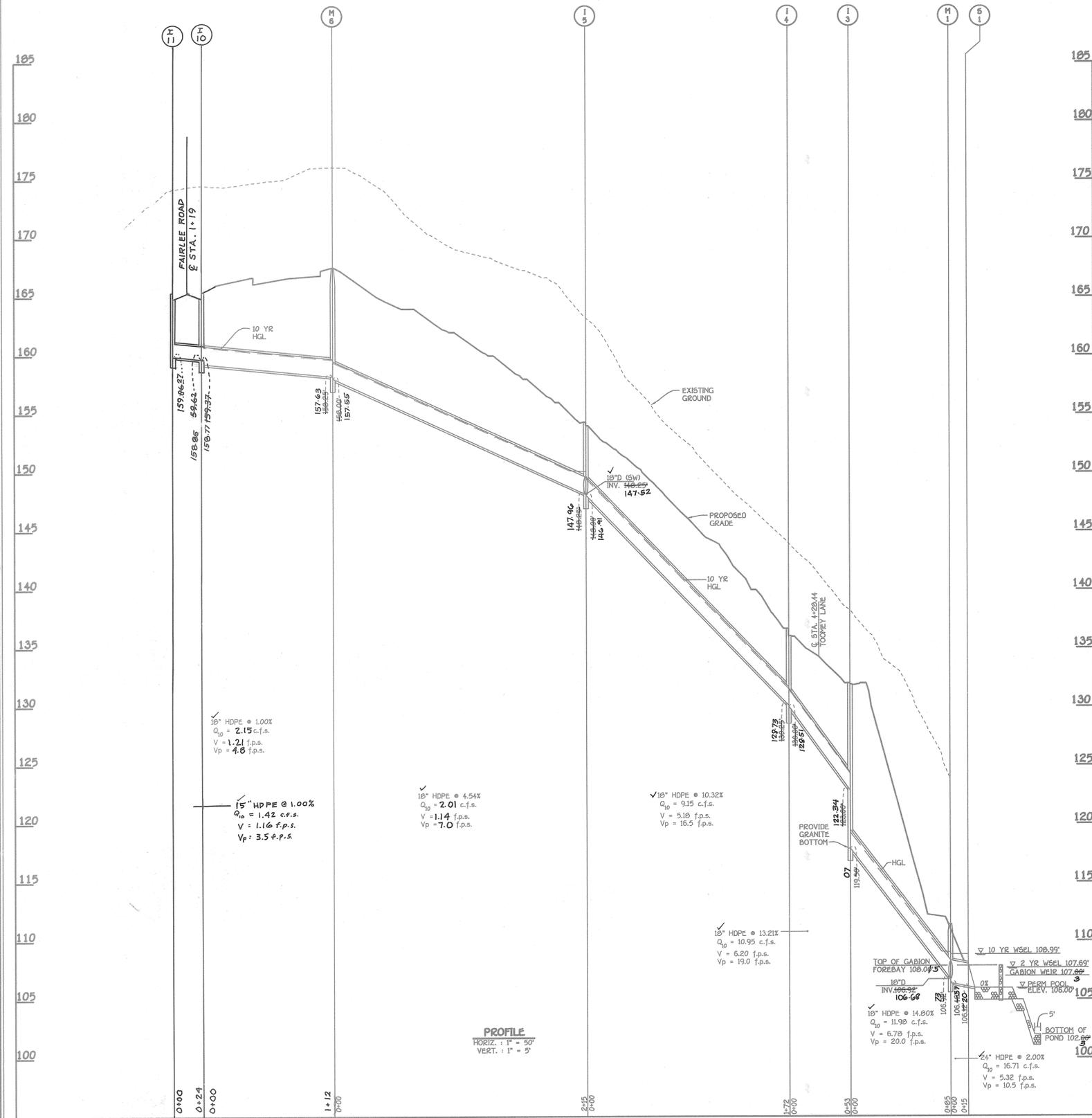
DEVELOPER
 PATRIOT HOMES
 5185 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

Approved: Department Of Planning And Zoning
Cindy Hamilton
 Chief, Division Of Land Development
 Date: 10/19/10

Approved: Chief, Development Engineering Division
[Signature]
 Date: 10/17/10

Approved: Howard County Department Of Public Works
Russell M. Duvall
 Chief, Bureau Of Highways
 Date: 10-16-10

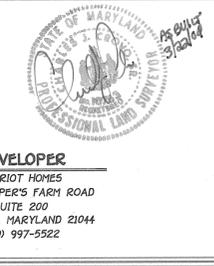
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01



STORM DRAIN PROFILES WESLEY WOODS

SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT NOS. 14590 THRU 14593)

ZONED R-12
 TAX MAP NO. 36 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 7 OF 16

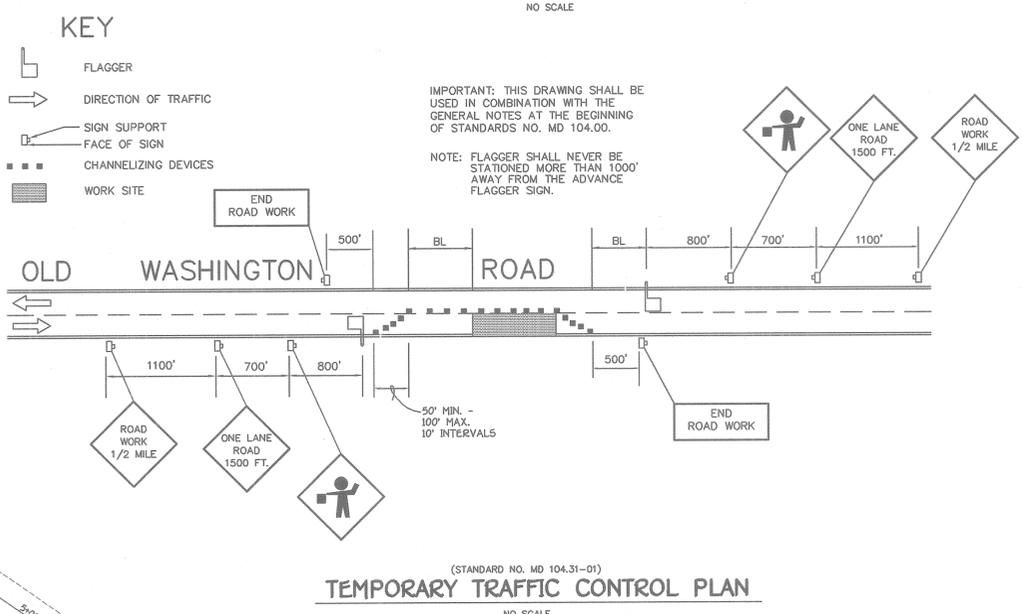
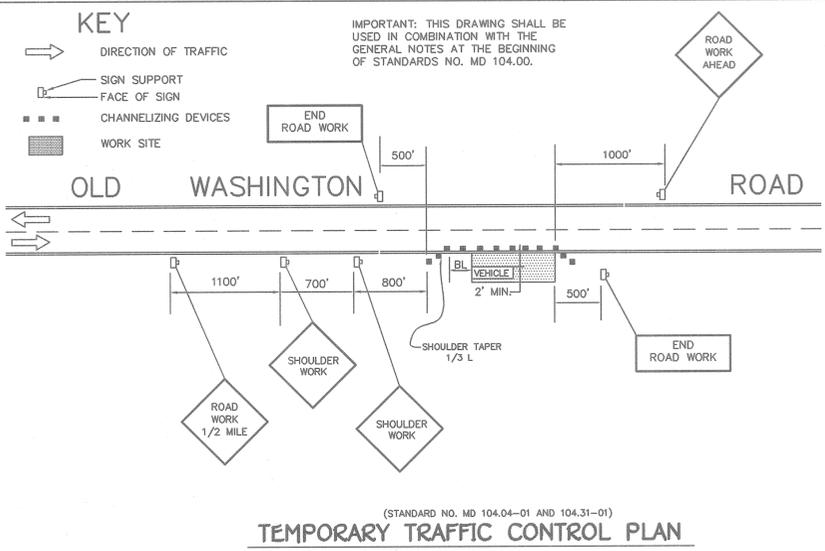
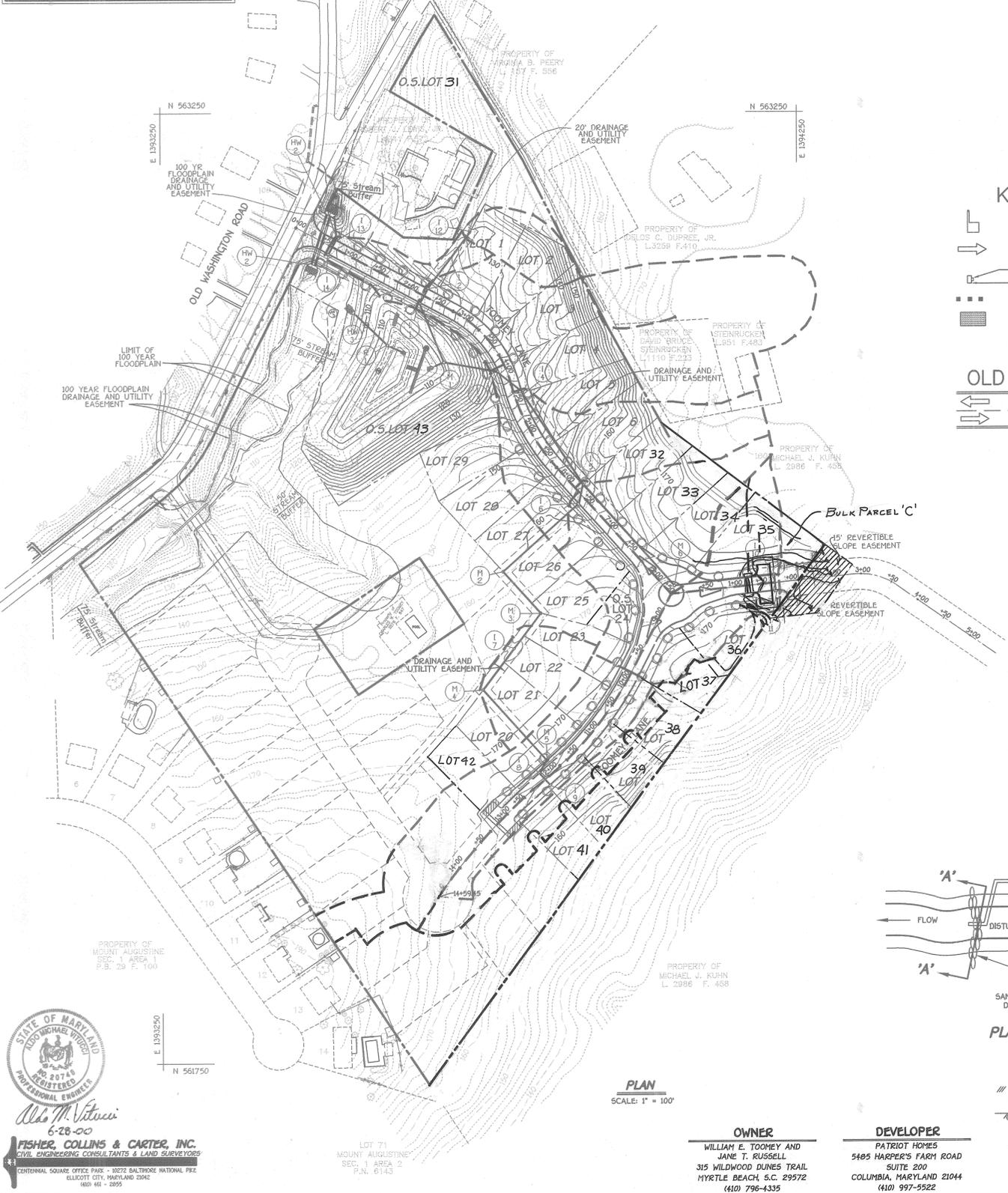


OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1872 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 410-481-2855

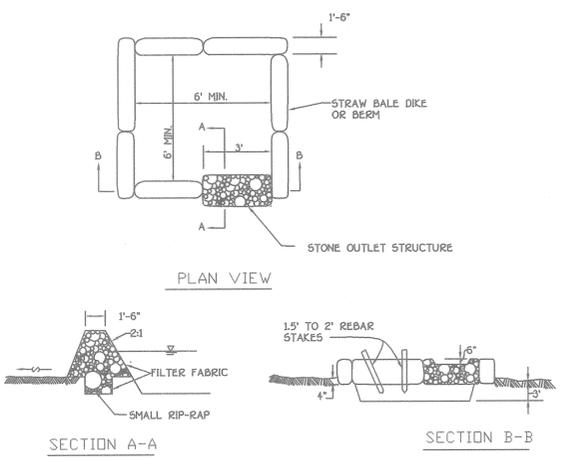
STRUCTURE NO.	DRAINAGE AREA	AREA (Ac)	C FACTOR	ZONED	Tc (min)
I-1	I-1	0.10	0.68	R-12	10
I-2	I-2	1.72	0.43	R-12	13
I-3	I-3	0.40	0.52	R-12	10
I-4	I-4	0.85	0.44	R-12	12
I-5	I-5	0.72	0.46	R-12	12
I-6	I-6	0.48	0.50	R-12	10
I-7	I-7	0.45	0.40	R-12	10
I-8	I-8	1.12	0.54	R-12	10
I-9	I-9	0.78	0.53	R-12	10
I-10	I-10	0.23	0.46	R-12	10
I-11	I-11	0.44	0.49	R-12	10
I-12	I-12	0.28	0.33	R-12	10
I-13	I-13	0.22	0.39	R-12	10
I-14	I-14	0.10	0.42	R-12	10



Approved Department of Public Works
Richard M. Javelle 10/16/00
 Chief, Bureau of Highways Date

Approved Department of Planning and Zoning
Cindy Hamotta 11/19/00
 Chief, Division of Land Development Date

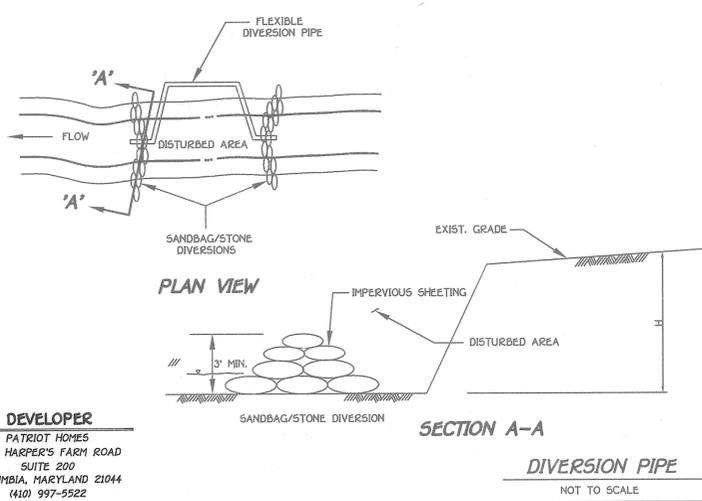
Michael J. Kuhn 10/17/00
 Chief, Development Engineering Division Date



- I. DESCRIPTION**
- THE WORK SHALL CONSIST OF THE CONSTRUCTION OF A DEWATERING BASIN FOR THE PURPOSE OF RECEIVING SEDIMENT-LADEN WATER PUMPED FROM A CONSTRUCTION SITE TO ALLOW FILTRATION BEFORE THE WATER RE-ENTERS THE WATERWAY.
- II. MATERIAL SPECIFICATIONS**
- RIP-RAP SHALL CONSIST OF 4-8 INCH WASHED STONE OR GRAVEL.
 - FILTER FABRIC: THE FILTER CLOTH SHALL BE A WOVEN OR NONWOVEN FABRIC CONSISTING ONLY OF CONTINUOUS CHAIN POLYMERIC FILAMENTS OR YARNS OF POLYESTER. THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS, HYDRO-CARBONS, MILDEW, AND ROT RESISTANT. NO. 6 STONE (AASHTO 57) MAY BE USED ON THE INNER-FACE FOR FILTERING INSTEAD OF FABRIC.
 - STRAWBALES: STRAWBALES SHALL MEET THE CRITERIA AS SPECIFIED IN THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- III. CONSTRUCTION REQUIREMENTS**
- THE CONTRACTOR SHALL INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES AT THE FIRST ORDER OF BUSINESS.
 - EXCAVATED MATERIALS SHALL BE STORED SUCH THAT SEDIMENTS ARE PREVENTED FROM ENTERING THE WATERWAY, I.E., SEDIMENT PERIMETER CONTROLS MAY BE NECESSARY.
 - EXCAVATED SUBSOIL AND TOPSOIL SHALL BE KEPT SEPARATE AND REPLACED IN THEIR NATURAL ORDER.
 - ANY DEWATERING OF THE CONSTRUCTION AREA SHALL BE FILTERED THROUGH A DEWATERING BASIN PRIOR TO ENTERING THE WATERWAY.
 - THE DEWATERING BASIN SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 3 FEET.
 - ONCE THE DEWATERING BASIN BECOMES FILLED TO 1/2 OF THE EXCAVATED DEPTH, ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A SCD APPROVED DISPOSAL AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY WRA.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL. ALL GROUND CONTOURS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE ADMINISTRATION.

DEWATERING BASIN
 (M.P.D. 11)
 NO SCALE

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01



- I. DESCRIPTION**
- THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS CULVERT CONSTRUCTION OR CULVERT REPLACEMENT.
- II. MATERIAL SPECIFICATIONS**
- SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (I.E., SAND, FINE GRAVEL, ETC.).
 - STONE: STONE SHALL BE WASHED AND HAVE A MINIMUM DIAMETER OF 6 INCHES.
 - SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.
- III. CONSTRUCTION REQUIREMENTS**
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 - THE HEIGHT OF THE SANDBAG/STONE DIVERSION STRUCTURE SHALL BE ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BANK PLUS ONE FOOT, AS INDICATED IN SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH, PREPARED SURFACE.
 - ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF IN A SCD APPROVED DISPOSAL AREA OUTSIDE THE 100 YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A FILTER BAG OF OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 - THE DIVERSION PIPE SHALL HAVE A MINIMUM DIAMETER OF SUFFICIENT SIZE TO CONVEY THE NORMAL STREAM FLOW.
 - IF NECESSARY, SILT FENCE OR STRAWBALES SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

TRAFFIC CONTROL PLAN AND STORM DRAIN DRAINAGE AREA MAP
WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29, LOT 31 AND LOTS 32 THRU 43 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONED R-12
 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 6 OF 16

STATE OF MARYLAND
 JUDICIAL CIRCUIT
 REGISTERED PROFESSIONAL ENGINEER
 19744
Alto M. Vitucci
 6-28-00
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1827 BALTIMORE NATIONAL PIKE
 ELKLOTT CITY, MARYLAND 21042
 410-481-2855

OWNER
 WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

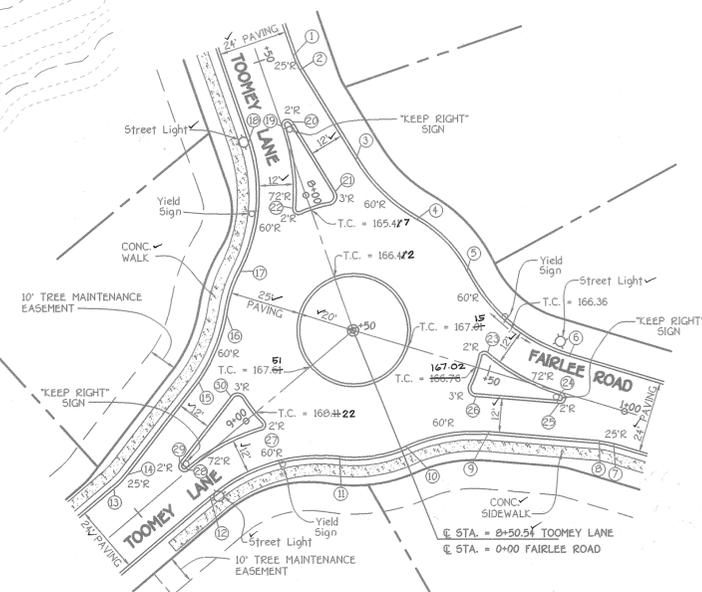
DEVELOPER
 PATRIOT HOMES
 5405 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522



By The Developer:
 "I/We Certify That All Development And/Or Construction Will Be Done According To These Plans. And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."
 Signature Of Developer: *Bruce A. Harvey* 9-28-00 Date
 Printed Name Of Developer: Bruce A. Harvey
 By The Engineer:
 "I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer To Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."
 Signature Of Engineer: *Alfred M. Vitucci* 9-28-00 Date
 Printed Name Of Engineer: Alfred M. Vitucci
 Approved Department Of Public Works: *Christine M. Daveler* 10-16-00 Date
 Chief, Bureau Of Highways
 Approved Department Of Planning And Zoning: *Wendy Hanania* 10/19/00 Date
 Chief, Division Of Land Development
Alfred M. Vitucci 10/17/00 Date
 Chief, Development Engineering Division

ROUNDABOUT TOP OF CURB CHART

No.	ROAD NAME	STATION	OFFSET	TOP OF CURB ELEVATION
1	TOOMEY LANE	7+52.14	12' L	162.60 87
2	TOOMEY LANE	7+57.50	12.58' L	162.86 73
3	TOOMEY LANE	7+94.85	20.74' L	163.31 4
4	TOOMEY LANE	8+21.07	34.00' L	165.01 18
5	TOOMEY LANE	8+44.65	44.61' L	166.66 22
6	FAIRLEE ROAD	0+76.42	12' L	166.65 46
7	FAIRLEE ROAD	0+99.72	12' R	165.66 49
8	FAIRLEE ROAD	0+94.53	12.54' R	165.72
9	FAIRLEE ROAD	0+56.31	20.66' R	166.23 81
10	TOOMEY LANE	8+63.04	43.23' L	166.77
11	TOOMEY LANE	8+93.30	30.86' L	167.43 29
12	TOOMEY LANE	9+26.97	12' L	168.30 6
13	TOOMEY LANE	9+49.44	12' R	168.56 63
14	TOOMEY LANE	9+44.21	12.59' R	168.45 57
15	TOOMEY LANE	9+06.94	20.52' R	167.76
16	TOOMEY LANE	8+80.09	33.94' R	166.70 61
17	TOOMEY LANE	8+17.79	30.86' R	165.87 97
18	TOOMEY LANE	7+74.12	12' R	163.72 97
19	TOOMEY LANE	7+74.36	0	164.00 0
20	TOOMEY LANE	7+73.94	3.95' L	163.98 8
21	TOOMEY LANE	8+02.46	10.20' L	164.98 168.17
22	TOOMEY LANE	8+02.93	5.91' R	165.80 39
23	FAIRLEE ROAD	0+47.61	5.17' L	166.24 167.62
24	FAIRLEE ROAD	0+76.78	0	166.39 62
25	FAIRLEE ROAD	0+77.19	3.98' R	166.43 81
26	FAIRLEE ROAD	0+49.09	10.14' R	166.43 91
27	TOOMEY LANE	8+98.16	5.95' L	167.99 166.32
28	TOOMEY LANE	9+26.82	0	168.86 71
29	TOOMEY LANE	9+27.23	3.98' R	168.94 68
30	TOOMEY LANE	8+98.84	10.05' R	167.69 168.28



ROUNDABOUT DETAIL
 SCALE: 1" = 30'
STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
WESLEY WOODS SECTION ONE
 ZONED R-12
 TAX MAP NO. 30 PARCEL NO. 162 GRID NO. 4
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 5 OF 16

PLAN
 SCALE: 1" = 50'

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINE AND LOT NUMBER AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER
 WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

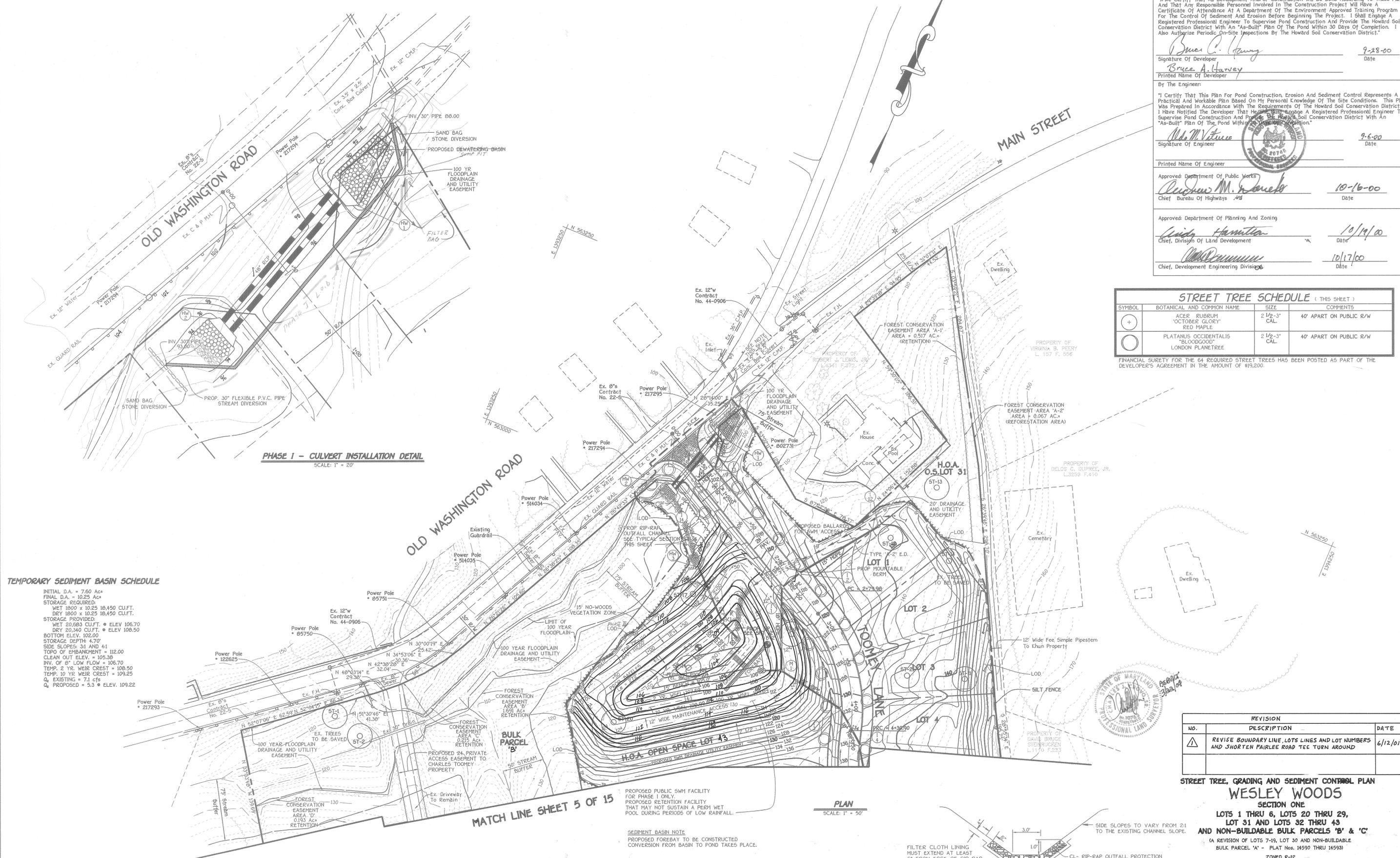
LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCEL 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE, OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21104
 (410) 461-2255

By The Developer:
 "I/We Certify That All Development And/Or Construction Will Be Done According To These Plans. And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."
 Signature Of Developer: *Bruce A. Harvey* Date: 9-28-00
 Printed Name Of Developer: Bruce A. Harvey
 By The Engineer:
 "I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."
 Signature Of Engineer: *John M. Vitale* Date: 9-6-00
 Printed Name Of Engineer: John M. Vitale
 Approved: Department Of Public Works
 Signature: *Regina M. Daniels* Date: 10-16-00
 Chief, Bureau Of Highways
 Approved: Department Of Planning And Zoning
 Signature: *David Hamilton* Date: 10/14/00
 Chief, Division Of Land Development
 Signature: *John P. ...* Date: 10/17/00
 Chief, Development Engineering Division

STREET TREE SCHEDULE (THIS SHEET)			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
+	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
○	PLATANUS OCCIDENTALIS "BLOODGOOD" LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

FINANCIAL SURETY FOR THE 64 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,200.



PHASE I - CULVERT INSTALLATION DETAIL
 SCALE: 1" = 20'

TEMPORARY SEDIMENT BASIN SCHEDULE
 INITIAL D.A. = 7.50 Aca
 FINAL D.A. = 10.25 Aca
 STORAGE REQUIRED:
 WET 1800 x 10.25 18,450 CU.FT.
 DRY 1800 x 10.25 18,450 CU.FT.
 STORAGE PROVIDED:
 WET 20,693 CU.FT. @ ELEV 106.70
 DRY 20,340 CU.FT. @ ELEV 108.50
 BOTTOM ELEV. 102.00
 STORAGE DEPTH: 4.70'
 SIDE SLOPES: 3:1 AND 4:1
 TOPO OF EMBANKMENT = 112.00
 CLEAN OUT ELEV. = 105.30
 INV. OF 8" LOW FLOW = 106.70
 TEMP. 2 YR. WEIR CREST = 108.50
 TEMP. 10 YR. WEIR CREST = 109.25
 Q₂ EXISTING = 7.3 cfs
 Q₂ PROPOSED = 5.3 @ ELEV. 109.22

MATCH LINE SHEET 5 OF 15

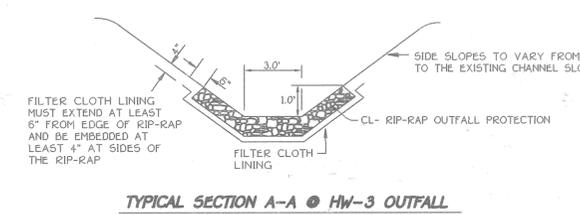
PROPOSED PUBLIC SWM FACILITY FOR PHASE I ONLY. PROPOSED RETENTION FACILITY THAT MAY NOT SUSTAIN A FRESH WET POOL DURING PERIODS OF LOW RAINFALL.

SEDIMENT BASIN NOTE
 PROPOSED FOREBAY TO BE CONSTRUCTED CONVERSION FROM BASIN TO POND TAKES PLACE.

NOTE: THE EXISTING 3.5' x 2.5' CONC. BOX CULVERT MUST BE CLEANED OUT SATISFACTORILY TO FUNCTION PROPERLY TO CONVEY THE 25-YEAR STORM EVENT

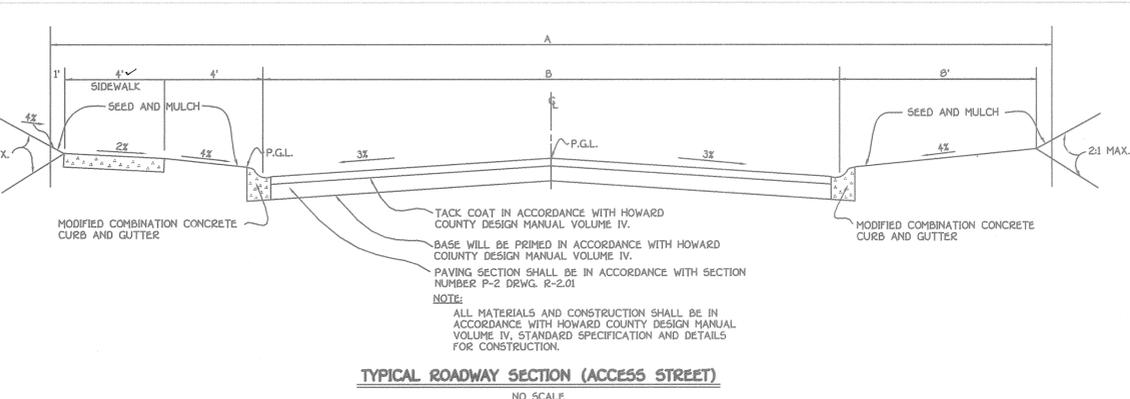
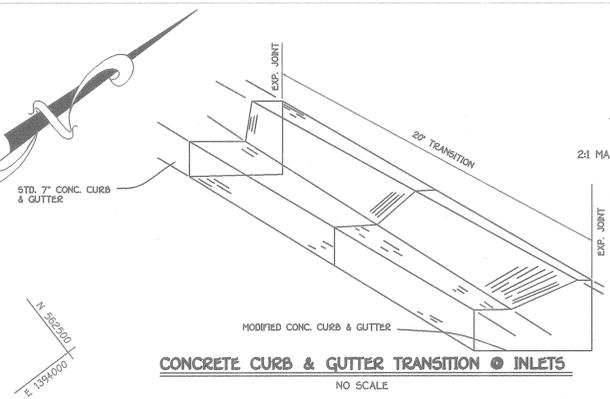
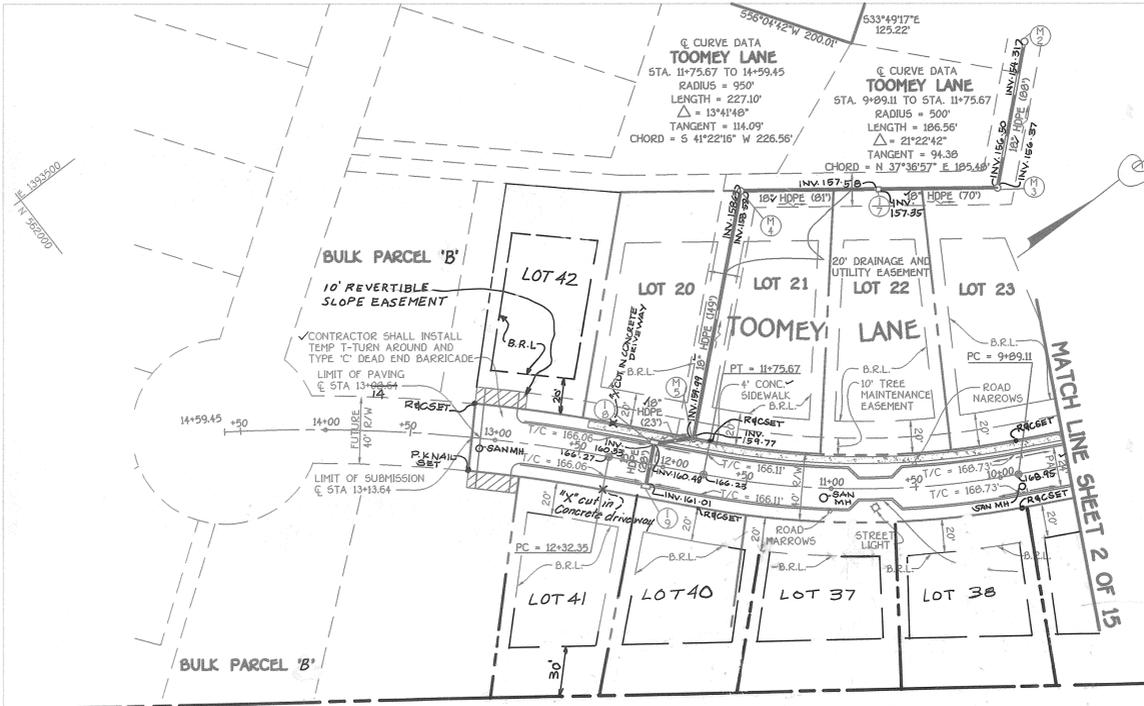
OWNER
 WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5405 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522

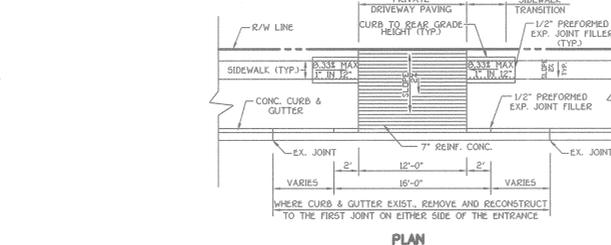
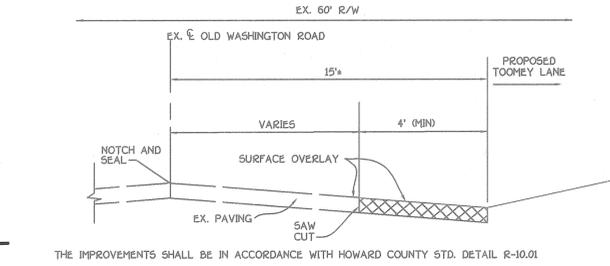


NO.	REVISION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT NOS. 14590 THRU 14593)
 ZONED R-12
 TAX MAP NO. 38 PARCEL NO. 162 GRID NO. 4
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JUNE 28, 2000
 SHEET 4 OF 15



ROADWAY INFORMATION CHART							
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	A	B	PAVING SECTION
TOOMEY LANE	PUBLIC ACCESS STREET	30 M.P.H.	R-12	0+00 TO 0+50.54	50'	24'	P-2
TOOMEY LANE	PUBLIC ACCESS STREET	25 M.P.H.	R-12	0+50.54 TO 13+00.00	40'	24'	P-2
FAIRLEE DRIVE	PUBLIC ACCESS STREET	25 M.P.H.	R-12	0+00 TO 1+55.00	50'	24'	P-2



WESLEY WOODS SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS B, C & D
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL A - PLAT Nos. 14590 & 14593)

TOOMEY LANE
 PLAN AND PROFILE

OWNER: WILLIAM E. TOOMEY AND JANE T. RUSSELL
 315 WILLOW DUNES TRAIL, HYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER: PATRIOT HOMES
 5485 HARPER'S FARM ROAD, SUITE 200, COLUMBIA, MARYLAND 21044
 (410) 997-5822

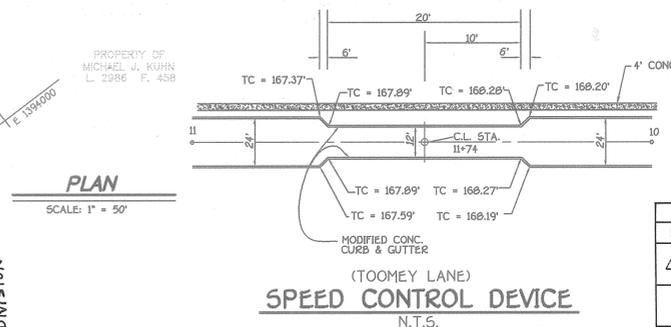
SCALE: 1" = 50' DATE: JUNE 28, 2000 DWG. NO. 3 OF 16
 DES. AMV DRN. FJM CHK. AMV

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE ELLICOTT CITY, MARYLAND 21114
 410.461.2900

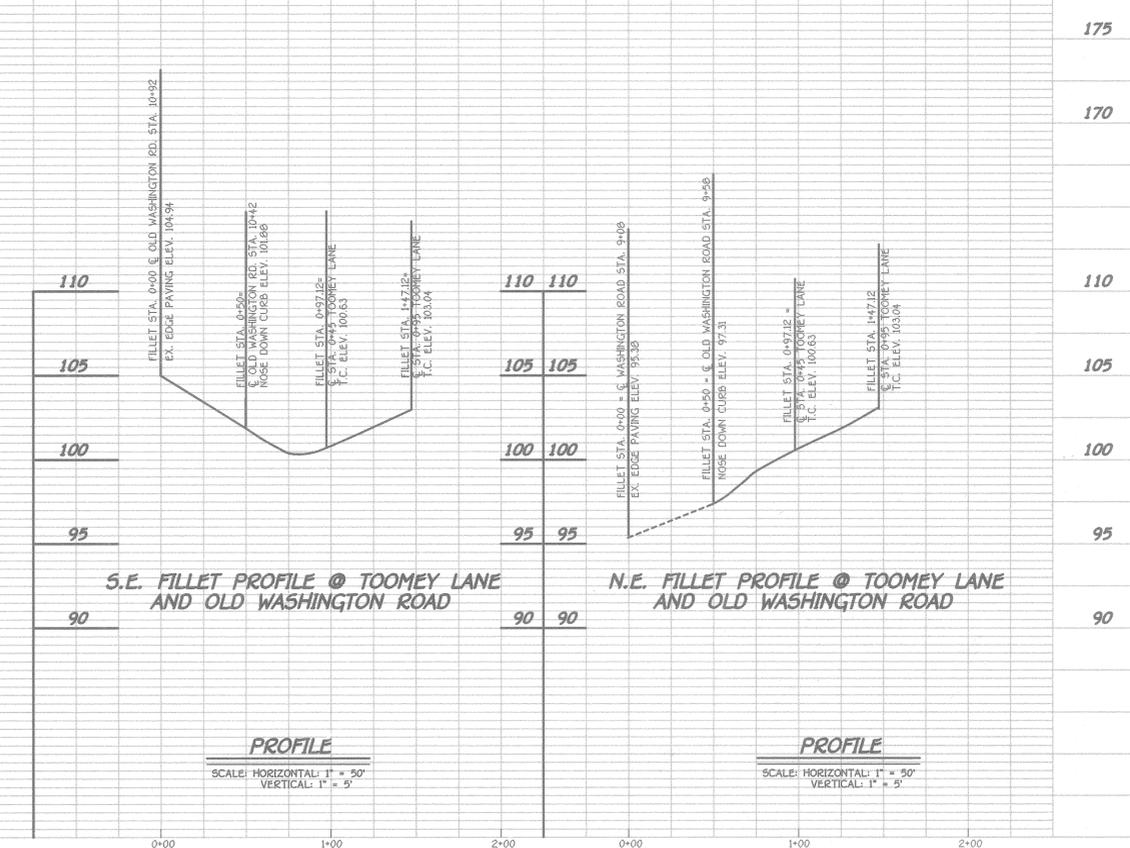
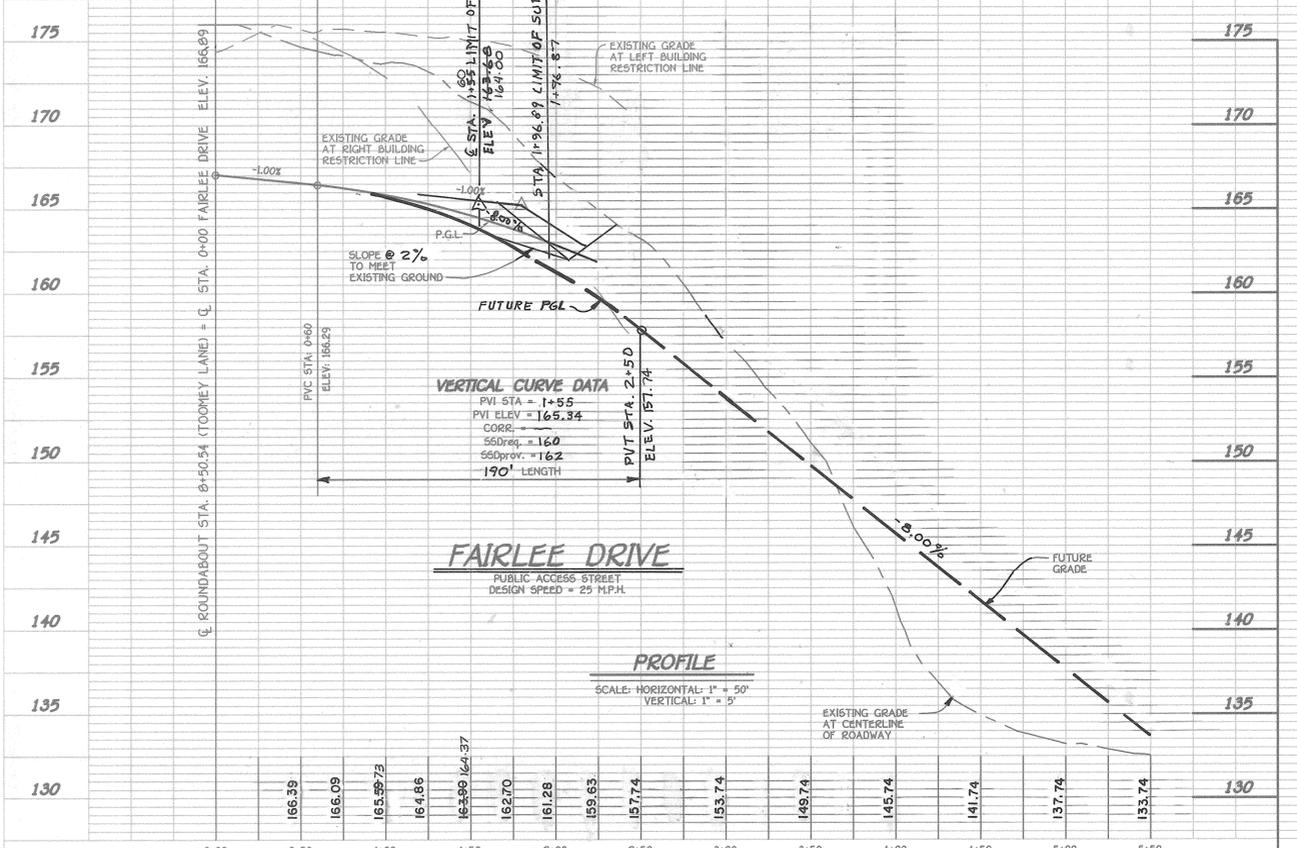
APPROVED DEPARTMENT OF PLANNING AND ZONING
Condy Hanston 10/19/00
 CHIEF, DIVISION OF LAND DEVELOPMENT

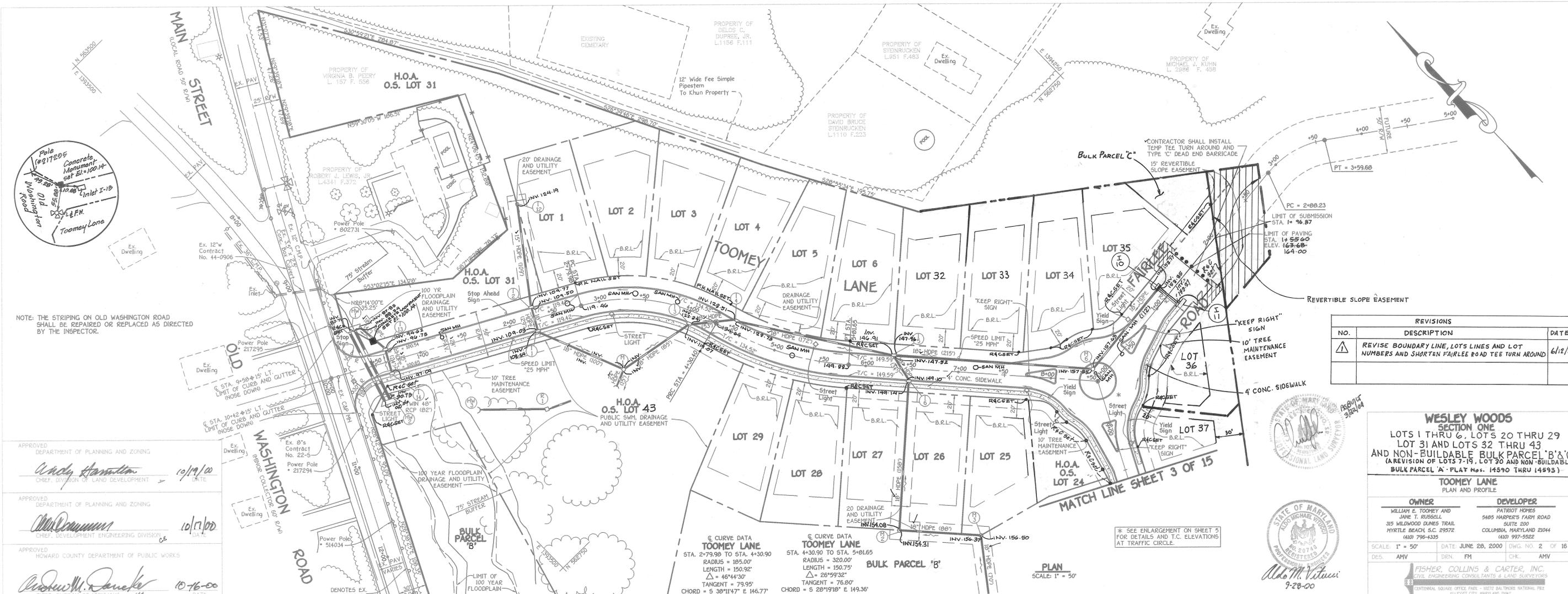
APPROVED DEPARTMENT OF PLANNING AND ZONING
Mike Dammann 10/17/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Pankle 10-16-00
 CHIEF, BUREAU OF HIGHWAYS



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBER AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01



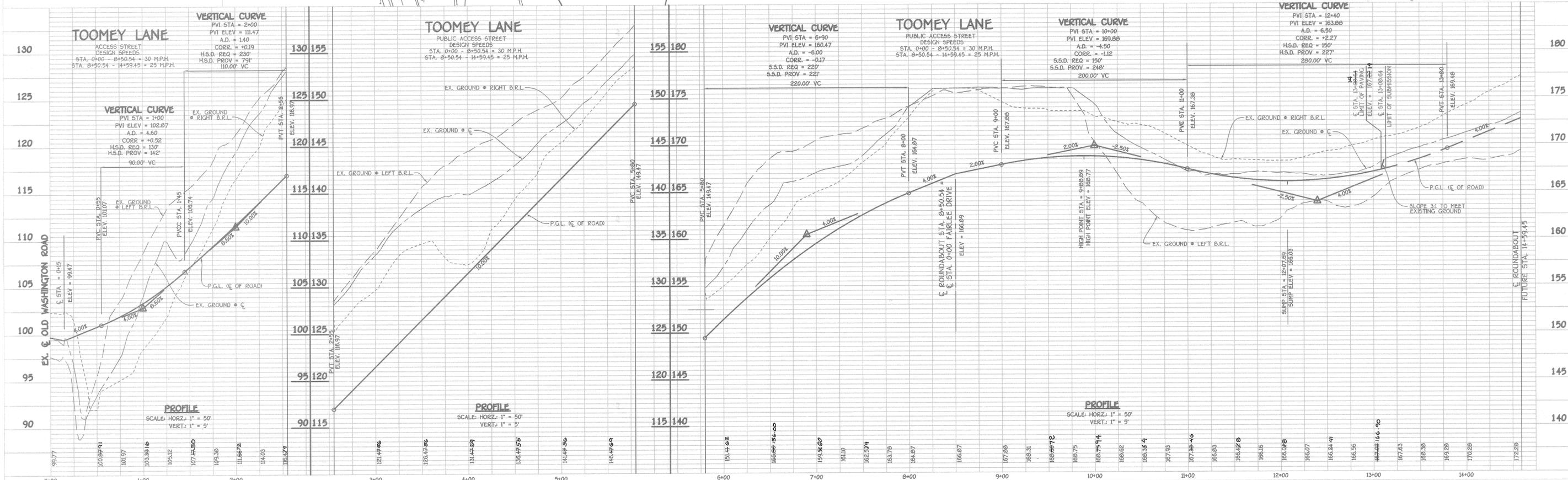


REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

WESLEY WOODS
 SECTION ONE
 LOTS 1 THRU 6, LOTS 20 THRU 29
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCEL 'B' & 'C'
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

TOOMEY LANE PLAN AND PROFILE			
OWNER		DEVELOPER	
WILLIAM E. TOOMEY AND JANE T. RUSSELL 315 WILWOOD DUNES TRAIL MYRTLE BEACH, S.C. 29572 (410) 798-4335		PATRIOT HOMES 5485 HARPER'S FARM ROAD SUITE 200 COLUMBIA, MARYLAND 21044 (410) 997-5522	
SCALE: 1" = 50'	DATE: JUNE 20, 2000	DWG. NO. 2	OF 16
DES. AMV	DRN. FM	CHK. AMV	

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK • 8072 BALDWIN NATIONAL PIKE
 CLARKVILLE, MARYLAND 21024
 (410) 961-2255



SHEET INDEX	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	TOOMEY LANE PLAN AND PROFILE
3	TOOMEY LANE PLAN AND PROFILE
4	STREET TREE, GRADING, AND SEDIMENT CONTROL PLAN
5	STREET TREE, GRADING, AND SEDIMENT CONTROL PLAN
6	STORM DRAIN DRAINAGE AREA MAP
7	STORM DRAIN PROFILES
8	STORM DRAIN PROFILES AND DETAILS
9	S.W.M. NOTES AND DETAILS
10	S.W.M. NOTES AND DETAILS
11	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
12	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
13	LANDSCAPING PLAN
14	FOREST CONSERVATION PLAN AND DETAILS
15	FOREST CONSERVATION PLAN AND DETAILS
16	FOREST CONSERVATION PLAN AND DETAILS

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS WESLEY WOODS

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 10-16-00
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 10/19/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

W. Drummond 10/19/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SECTION ONE LOTS 1 THRU 6, LOTS 20 THRU 29, LOT 31 AND LOTS 32 THRU 43 AND NON-BUILDABLE BULK PARCELS 'B' & 'C' (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

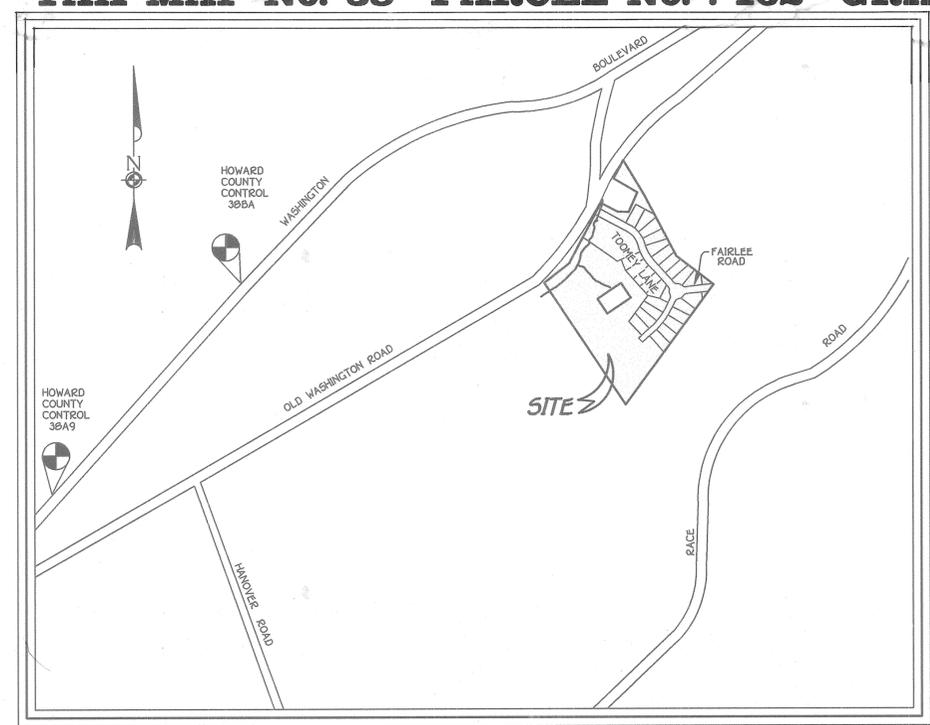
ZONING "R-12"

TAX MAP No. 38 PARCEL No. : 162 GRID No. 4

STREET LIGHT CHART				
DWG No.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2	TOOMEY LANE	CL. STA. 0+29	20' R	150-WATT H.P.S. VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM
2	TOOMEY LANE	CL. STA. 5+48	15' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	TOOMEY LANE	CL. STA. 7+80	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
3	TOOMEY LANE	CL. STA. 10+74	12' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	TOOMEY LANE	CL. STA. 3+12	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	TOOMEY LANE	CL. STA. 9+16	15' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.
2	FAIRLEE ROAD	CL. STA. 0+70	17' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14'-FOOT BLACK FIBERGLASS POLE.

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.

TRAFFIC CONTROL SIGNS				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
TOOMEY LANE	0+28	19' LT	STOP	R1-1
TOOMEY LANE	2+00	14' LT	STOP AHEAD	W3-1a
TOOMEY LANE	2+00	14' RT	SPEED LIMIT '25'	R2-1
TOOMEY LANE	7+00	14' LT	SPEED LIMIT '25'	R2-1
TOOMEY LANE	8+00	20' RT	YIELD	R1-2
TOOMEY LANE	9+00	20' LT	YIELD	R1-2
TOOMEY LANE	10+50	14' RT	ROAD NARROWS	W5-1
TOOMEY LANE	11+00	14' LT	ROAD NARROWS	W5-1
FAIRLEE ROAD	0+50	20' LT	YIELD	R1-2
TOOMEY LANE	7+75	2' L	KEEP RIGHT	R4-7
TOOMEY LANE	9+25	2' R	KEEP RIGHT	R4-7
FAIRLEE ROAD	0+75	2' R	KEEP RIGHT	R4-7



VICINITY MAP
SCALE 1" = 600'

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE 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)".
NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL SURVEY PERFORMED BY HARFORD AERIAL MAPPING COMPANY, INC. PHOTOGRAPHED FEBRUARY 16, 1999.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT Nos. 378A AND 378B WERE USED FOR THIS PROJECT.
 √ 388A N 562,553.304
 E 1,390,967.809
 √ 378A N 561,056.383
 E 1,389,634.097
- WATER IS PUBLIC, CONTRACT No. 44-0906
- SEWER IS PUBLIC, CONTRACT No. 22-5
- S.W.M. WILL BE PROVIDED BY A PUBLIC FACILITY WITH A WET POOL DESIGN, FOR THE 2, 10, AND 25-YEAR STORM EVENTS. IN ADDITION, THE S.W.M. PROVIDED WITH THIS SUBMISSION IS FOR THE PROPOSED 26 LOTS SHOWN ON THIS PLAN ONLY. FURTHER SUBDIVISION OF BULK PARCEL 'B' WILL REQUIRE THAT ADDITIONAL S.W.M. MEASURES BE INVESTIGATED.
- FLOODPLAIN SHOWN ON THIS SITE IS BASED ON A STUDY PREPARED BY FISHER, COLLINS AND CARTER INC. DATED SEPTEMBER, 1999 (P 99-14)
- WETLANDS INFORMATION FOR THIS SITE WAS TAKEN FROM A REPORT BY EXPLORATION RESEARCH, INC. DATED MARCH, 1998
- A TRAFFIC IMPACT ANALYSIS FOR PHASE I WAS PREPARED BY STREET TRAFFIC STUDIES, LTD. DATED MARCH, 1998 AND APPROVED UNDER 5-98-14
- BACKGROUND INFORMATION:
 A. SUBDIVISION NAME: WESLEY WOODS (FORMERLY RUSSELL-TOOMEY PROPERTY)
 B. TAX MAP NO.: 38
 C. PARCEL NO.: 162
 D. ZONING: R-12
 E. ELECTION DISTRICT: FIRST
 F. TOTAL TRACT AREA: 19.417 AC. ±
 G. NO. OF BUILDABLE LOTS: 26
 H. NO. OF OPEN SPACE LOTS: 4
 I. OPEN SPACE REQUIRED: 3.157 AC. (SECTION ONE)
 J. OPEN SPACE PROVIDED: 3.342 AC.
 K. PRELIMINARY PLAN APPROVAL DATE: NOVEMBER 3, 1999
 L. PREVIOUS FILE Nos.: 5-98-14, P-99-14
- NO CEMETERIES EXIST ON THE PROPERTY.
- FOREST STAND DELINEATION PROVIDED BY EXPLORATION RESEARCH, INC. DATED MARCH, 1998.
- SEE HOWARD COUNTY PLANNING & ZONING FILE No. 5-98-14 AND P-99-14 FOR PAST PROJECT HISTORY. THE SKETCH PLAN WAS APPROVED ON DECEMBER 9, 1998 AND THE PRELIMINARY PLAN ON NOVEMBER 3, 1999.
- BOUNDARY INFORMATION SHOWN HEREON IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS AND CARTER, INC. ON DECEMBER 9, 1997.
- ALL STREET TREE PLANTINGS, PERIMETER AND S.W.M. AREA LANDSCAPING WILL BE INSTALLED BY THE DEVELOPER IN CONJUNCTION WITH THE FINAL ROAD PLANS.
- FOREST CONSERVATION FOR ANY FUTURE SUBDIVISION OF NON-BUILDABLE BULK PARCEL 'C' SHALL BE BASED ON THE NET TRACT AREA OF THE PARCEL, EXCLUDING ACRESAGES OF THE SECTION 1 FOREST CONSERVATION EASEMENT AREAS AND THE L.O.D. AREA LOCATED ON IT. (see note E1 below).
- THE PURPOSE OF THIS SUBDIVISION IS TO CREATE 26 BUILDABLE LOTS AND 4 OPEN SPACE LOTS UNDER SECTION 1 AND CREATE A NON-BUILDABLE BULK PARCEL FOR FUTURE SUBDIVISION, AS SECTION 2 IF THE OWNER DESIRES. FOR THIS REASON A "DECLARATION OF INTENT FOR SUBDIVISION FOR REAL ESTATE TRANSACTION" FOR THE NON-BUILDABLE BULK PARCEL 'B' HAS BEEN SUBMITTED AND WITH THIS AT FINAL PLAN.
- THE NON-BUILDABLE BULK PARCEL 'B' IS NON-BUILDABLE UNTIL APFO ALLOCATIONS ARE APPLIED AND RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED IN ACCORDANCE WITH THE HOWARD COUNTY SUBDIVISION REGULATIONS.
- A NOISE STUDY WAS PREPARED BY WILDMAN ENVIRONMENTAL SERVICES DATED MARCH, 1998 AND APPROVED ON 12/9/98 UNDER 5-98-14.
- PLAN IS SUBJECT TO MDE PERMIT NUMBER 1999-60963, N.T.W.M. DIVISION NUMBER 98-NT-0688 FOR CONSTRUCTION OF ROADWAY ACROSS EXISTING STREAM.
- THE SHOWN CONCEPTUAL LOT AND ROAD LAYOUT ON NON-BUILDABLE BULK PARCEL 'B' HAS NOT BEEN REVIEWED OR APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.

ROAD CLASSIFICATION CHART		
ROAD NAME	CLASSIFICATION	R/W WIDTH
TOOMEY LANE	PUBLIC ACCESS PLACE	50' & 40'
FAIRLEE ROAD	PUBLIC ACCESS STREET	50'

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE BOUNDARY LINE, LOTS LINES, AND LOT NUMBERS AND SHORTEN FAIRLEE ROAD TEE TURN AROUND	6/12/01

OWNER
 WILLIAM E. TOOMEY AND
 JANE T. RUSSELL
 315 WILDWOOD DUNES TRAIL
 MYRTLE BEACH, S.C. 29572
 (410) 796-4335

DEVELOPER
 PATRIOT HOMES
 5485 HARPER'S FARM ROAD
 SUITE 200
 COLUMBIA, MARYLAND 21044
 (410) 997-5522



**FINAL PLANS
 WESLEY WOODS
 SECTION ONE**

**LOTS 1 THRU 6, LOTS 20 THRU 29,
 LOT 31 AND LOTS 32 THRU 43
 AND NON-BUILDABLE BULK PARCELS 'B' & 'C'**
 (A REVISION OF LOTS 7-19, LOT 30 AND NON-BUILDABLE
 BULK PARCEL 'A' - PLAT Nos. 14590 THRU 14593)

ZONING: R-12
 TAX MAP: 38 PARCEL: 162 GRID: 4
 1ST. ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: JULY 28, 2000
 SHEET 1 OF 16