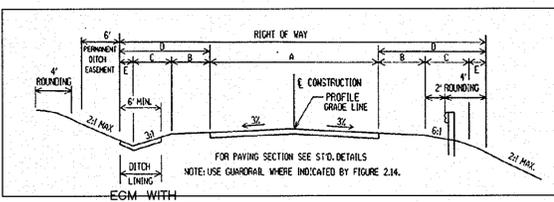


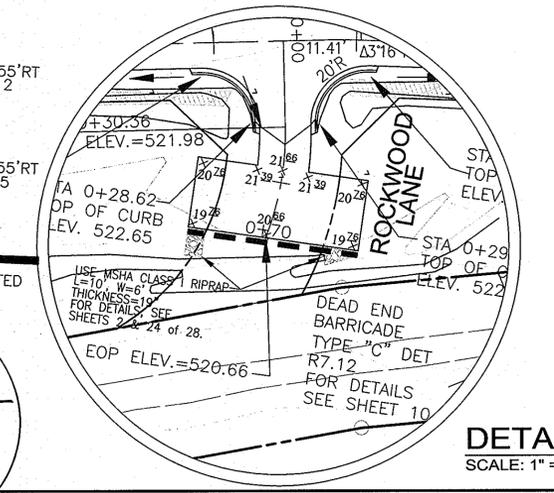
PLAN
SCALE: 1" = 50'

Curve	Radius	Length	Delta	Chord	Chord Bearing
C-3	120.00'	51.84'	24°45'00"	51.43'	S 52°08'09" E
C-4	80.00'	75.25'	53°53'34"	72.50'	N 35°50'50" W
C-5	320.00'	163.26'	29°13'53"	161.50'	S 35°16'46" W
C-11	280.00'	142.85'	29°13'53"	141.31'	N 35°16'46" E
C-12	220.00'	125.55'	3°16'10"	125.55'	S 22°17'55" W

TYPICAL PAVEMENT SECTION
GREEN HOLLOW WAY & ROCKWOOD LANE*



CLASSIFICATION	A	B	C	D	E	R/W
PUBLIC-200 ADT ACCESS PLACE	18'	4'	4'	11'	3'	40'



DETAIL
SCALE: 1" = 30'

STREET TREES PLANT SCHEDULE				
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
	ACER SACCHARUM	GREEN MOUNTAIN MAPLE	40	2 1/2"-3" Cal.

DRAWING NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2	GREEN HOLLOW WAY	0+37	22' R	250-WATT HPS VAPOR PENDANT FIXTURE (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM

NOTE: STREET SIGN TO BE MOUNTED ON STREET LIGHT POLE

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Madala Jr.
CHIEF, BUREAU OF HIGHWAYS 3-25-04 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Hamstra
CHIEF, DIVISION OF LAND DEVELOPMENT 4/1/04 DATE

Chris Hamstra
CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/29/04 DATE

NO.	DATE	REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E

PROJECT NAME
OWINGS PROPERTY
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
5th ELECTION DISTRICT TAX MAP # 40, GRID
HOWARD COUNTY, MARYLAND

TITLE
ROAD PROFILE
S-01-18 P-02-018 F-03-133

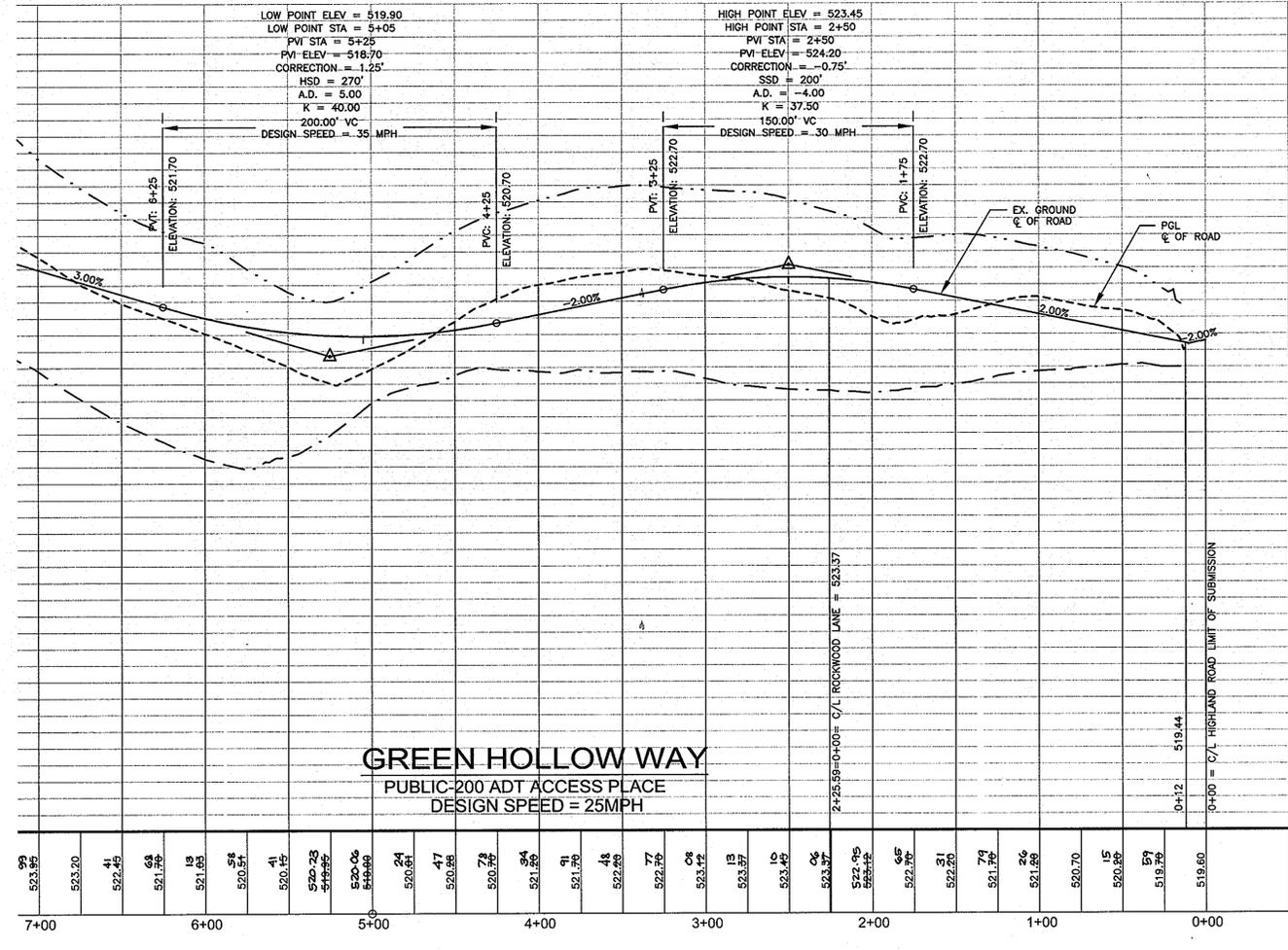
OWNERS: MR. & MRS. HARWOOD OWINGS
13009 HIGHLAND ROAD
HIGHLAND, MARYLAND 20777

DEVELOPER: DALE THOMPSON BUILDERS
6300 WOODSIDE COURT
COLUMBIA, MARYLAND 21046
(410) 935-8738
(410) 381-8747

PREPARED BY:
Dewberry & Davis LLC
203 PERRY PARKWAY
GAITHERSBURG, MD 20877
TEL: (301) 948-8300
FAX: (301) 298-7807

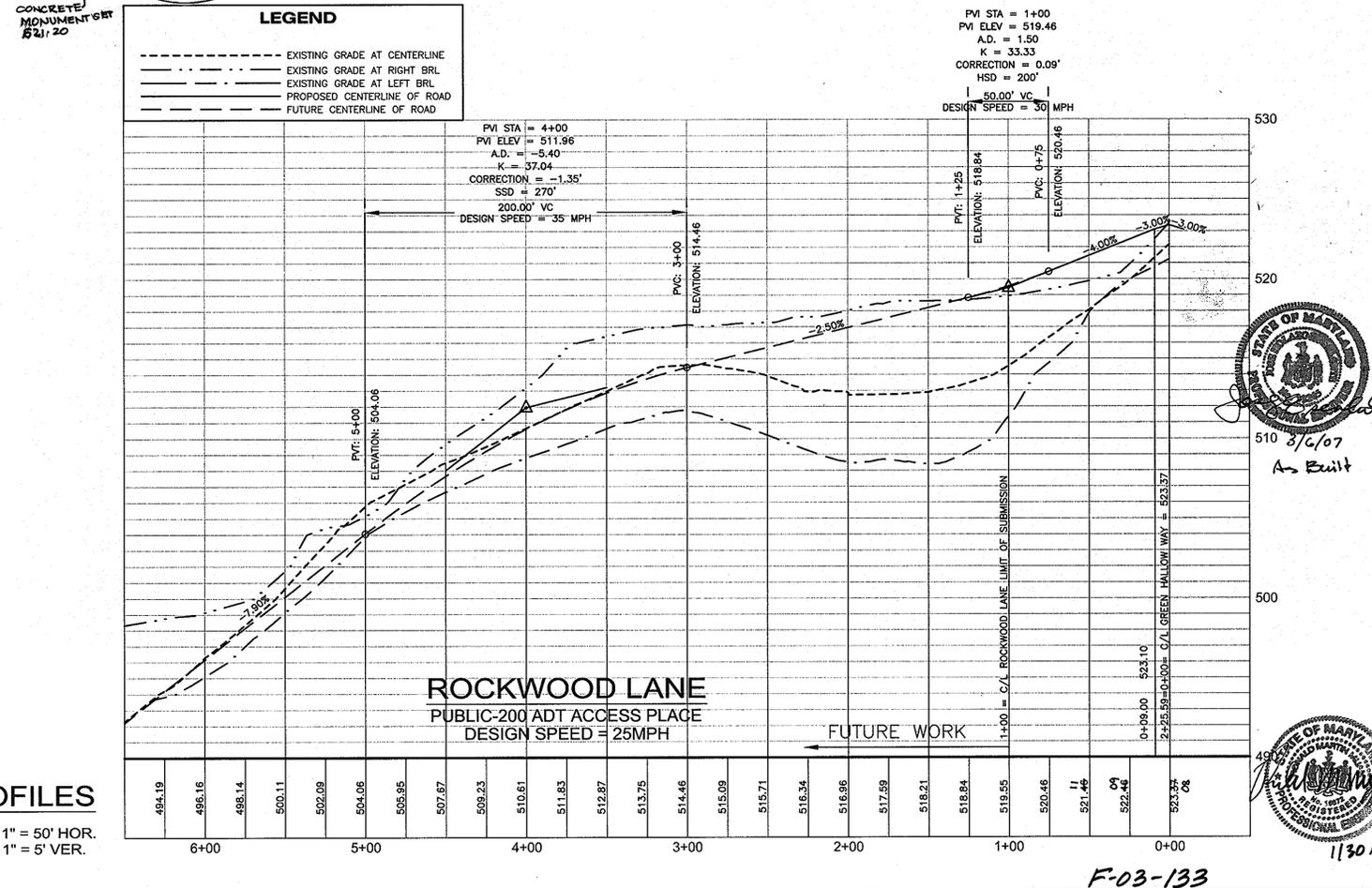
DES.: IEV JOB: XXX
DRW.: SGB PROJ.: OZ745
CHK.: MM DATE: DEC. 2003

SCALE: AS SHOWN SHEET 2 OF 29



GREEN HOLLOW WAY
PUBLIC-200 ADT ACCESS PLACE
DESIGN SPEED = 25MPH

PROFILES
SCALE: 1" = 50' HOR.
1" = 5' VER.

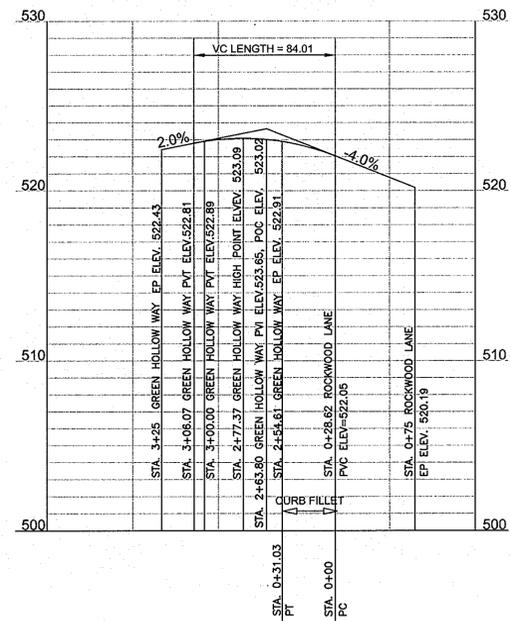
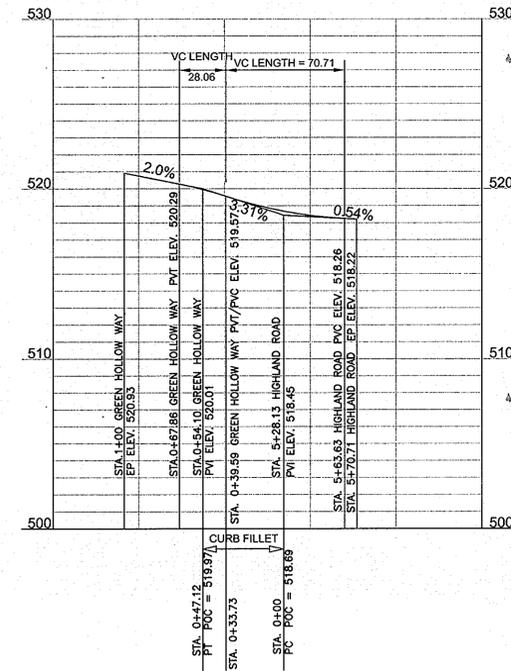
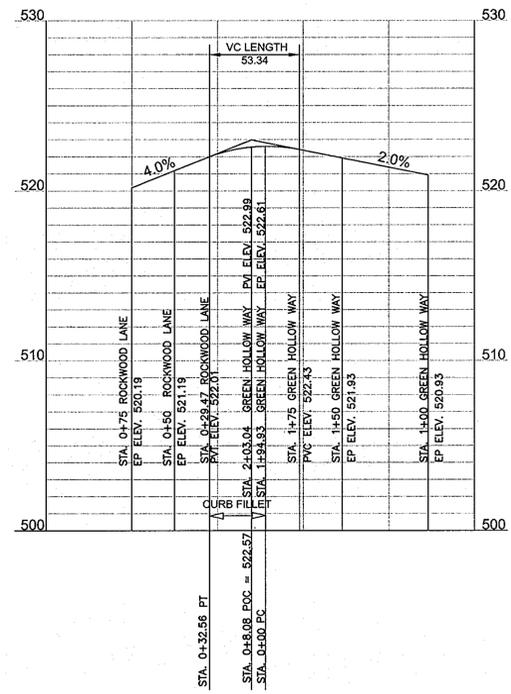
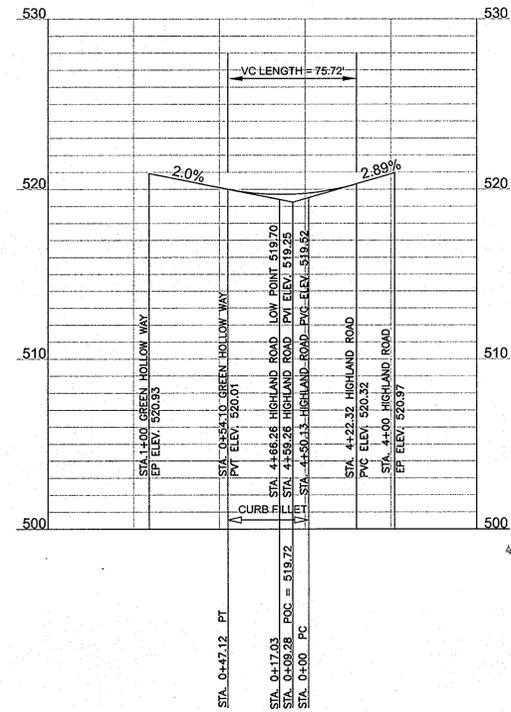


ROCKWOOD LANE
PUBLIC-200 ADT ACCESS PLACE
DESIGN SPEED = 25MPH



As Built





**EDGE OF PAVEMENT FILLET PROFILES
GREEN HOLLOW WAY AND HIGHLAND RD**

SCALE: 1" = 50' HOR.
1" = 5' VER.

**EDGE OF PAVEMENT FILLET PROFILES
GREEN HOLLOW WAY AND ROCKWOOD LN**

SCALE: 1" = 50' HOR.
1" = 5' VER.



APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William J. ...</i> CHIEF, BUREAU OF HIGHWAYS		3-25-04 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Condy ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT		4/1/04 DATE
APPROVED: <i>...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION		2/29/04 DATE
NO. _____ DATE _____ REVISIONS _____		
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE FILLET ROAD PROFILE S-01-18 P-02-018 F-03-133		OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY : Dewberry & Davis LLC A Dewberry Company	203 PERRY PARKWAY GATHERSBURG, MD 20877 TEL: (301) 948-8300 FAX: (301) 258-7607	DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747
DES. : IEV	JOB : XXX	SCALE : AS SHOWN
DRW. : SGB	PROJ. : OZ745	SHEET 4 OF 29
CHK. : MM	DATE : DEC. 2003	

P.370 RESIDENTIAL
RRDEO
FOUNTAIN C. J &
G. V WF

P 117 AGRICULTURAL
RRDEO
MCDANIEL JOHN P &
ELLEN G

HIGHLAND RD R/W VARIES
50' C/L TO P/L
ALONG PROPERTY
MAJOR COLLECTOR

P 117. MAP 34
DEED REF. 1174/ 541
AGRICULTURAL - RRDEO
MCDANIEL JOHN P
& ELLEN G

P 117. MAP 34
DEED REF. 1174/ 541
AGRICULTURAL - RRDEO
MCDANIEL JOHN P
& ELLEN G

P.401. LOT 1 AGRICULTURAL
RRDEO
MCDANIEL JOHN P & ELLEN G

HIGHLAND RD R/W VARIES
50' C/L TO P/L
ALONG PROPERTY

P.401. LOT 2
AGRICULTURAL
RRDEO
MCDANIEL JOHN
P & ELLEN G

P.78 P.78. LOT A
AGRICULTURAL
RRDEO
SANBORN JAMES M
& EMILIE S



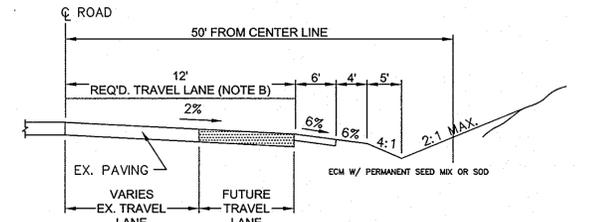
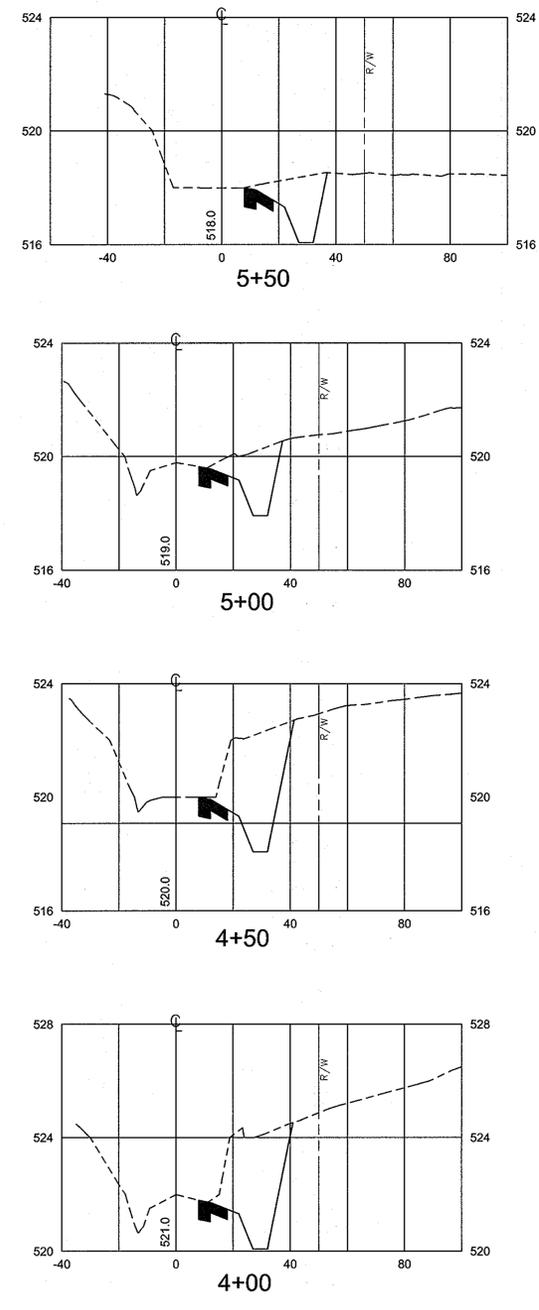
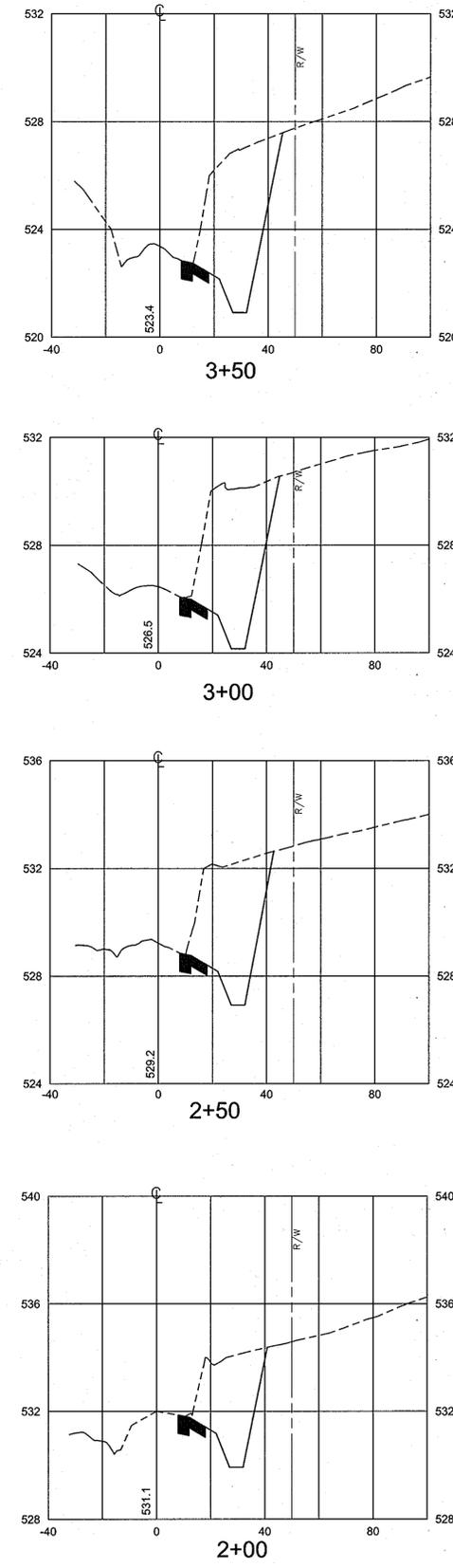
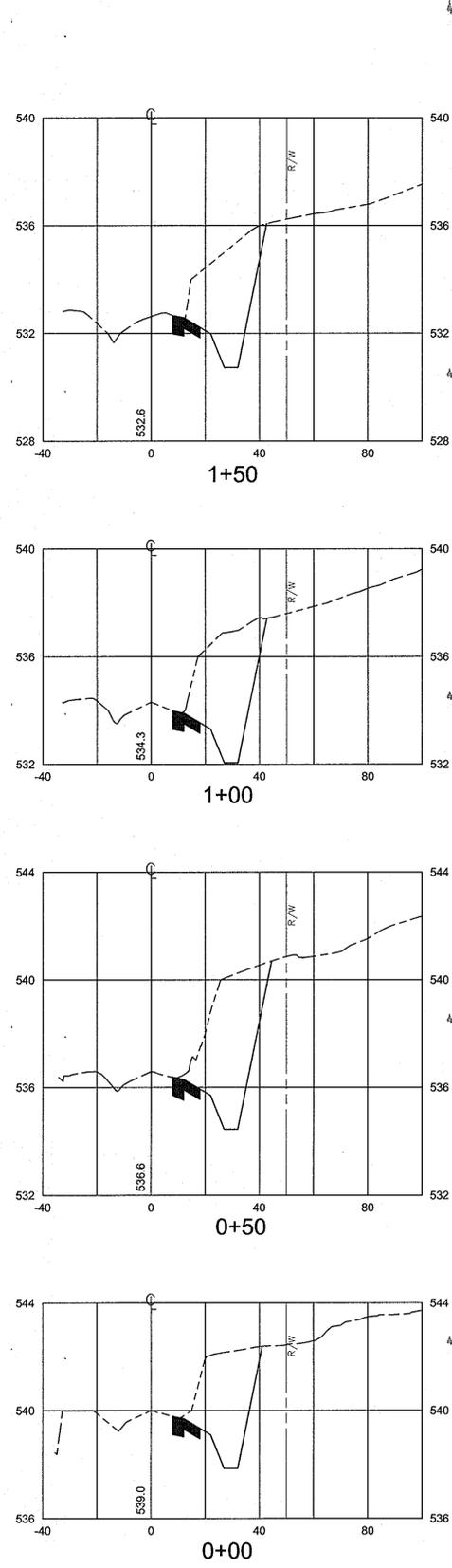
APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William J. Mahan Jr.</i> CHIEF, BUREAU OF HIGHWAYS DATE: 3-25-04		
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Ardis Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 4/1/04		
APPROVED: DEPARTMENT OF PUBLIC WORKS <i>Robert J. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 3/21/04		
NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING OF LOTS 6-16 AND PARCELS A-E		
PROJECT NAME OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE HIGHLAND ROAD PLAN S-01-18 P-02-018 F-03-133	OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777	
PREPARED BY : Dewberry & Davis LLC A Heery Company	203 PERRY PARKWAY GAITHERSBURG, MD 20877 TEL: (301) 948-8300 FAX: (301) 258-7907	
DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-3747		
DES. : IEV	JOB : XXX	SCALE : 1" = 40'
DRW. : SGB	PROJ. : 02745	SHEET 5 OF 29
CHK. : MM	DATE : DEC. 2003	

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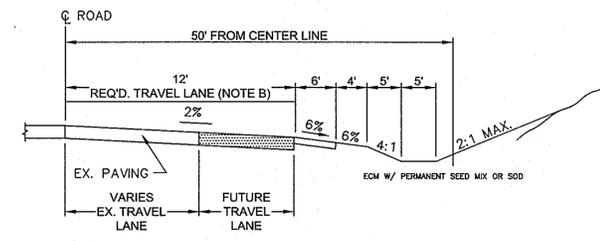
SCALE:
HORIZ: 1"=30'
VERT: 1"=3'

LEGEND

- CENTER LINE
- - - - EXISTING EDGE OF PAVEMENT
- ==== PROPOSED EDGE OF PAVEMENT
- - - - EXISTING GRADE
- ==== R/W



IMPROVEMENT ALONG HIGHLAND ROAD (MAJOR COLLECTOR)
 STA. 5+00 TO STA. 18+05.96
 NOT TO SCALE



IMPROVEMENT ALONG HIGHLAND ROAD (MAJOR COLLECTOR)
 STA. 0+00 TO STA. 5+00
 NOT TO SCALE

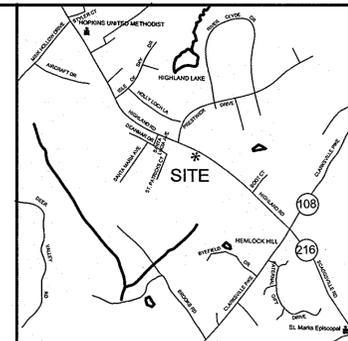
- NOTE A - WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED 12' LANE CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING ROAD BED TO PROVIDE A MINIMUM BASE WIDENING OF 4'
- NOTE B - THE SURFACE OVERLAY SHALL BE CARRIED TO THE E OF THE ROAD AND NOTCHED AND SEALED
- NOTE C - SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION
- NOTE D - E OF ROAD TO BE MILLED AT DEPTH OF 1/2" x 1' WIDE USING A MILLING MACHINE.
- NOTE E - THE IMPROVEMENTS TO THE E OF HIGHLAND ROAD ARE TO BE IN ACCORDANCE WITH HOWARD COUNTY DETAILS, R-1001.
- NOTE F - PROVIDE AT LEAST ONE-FOOT FULL DEPTH SAWCUT ONTO HIGHLAND ROAD PAVEMENT.

APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William J. Melton Jr.</i> CHIEF, BUREAU OF HIGHWAYS	3-25-04 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Janis Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	4/1/04 DATE
<i>Chris Dammann</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	3/2/04 DATE

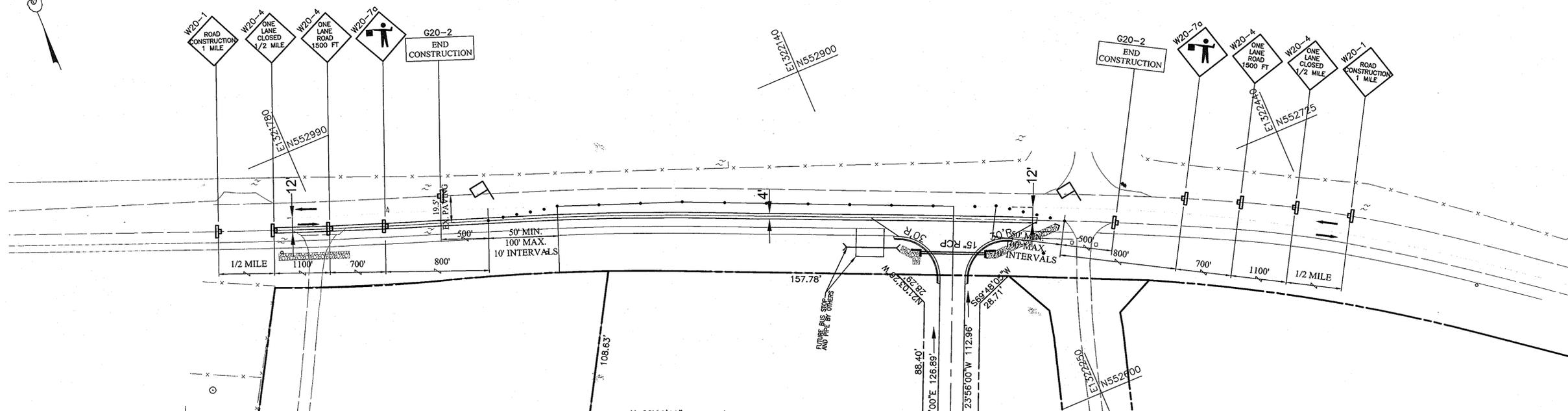
NO. _____		DATE _____		REVISIONS _____	
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E					
PROJECT NAME OWINGS PROPERTY					
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND					
TITLE HIGHLAND ROAD SHOULDER IMPROVEMENTS CROSS SECTIONS S-01-18 P-02-018 F-03-133		OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND HIGHLAND, MARYLAND 20777			
PREPARED BY : Dewberry & Davis LLC A Deloitte Company		203 PERRY PARKWAY GATHERSBURG, MD 20877 TEL: (301) 946-8300 FAX: (301) 258-7607		DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747	
DES. : IEV	JOB : XXX	SCALE : AS SHOWN		SHEET 6 OF 28	
DRW. : SGB	PROJ. : OZ745	DATE : DEC. 2003			
CHK. : MM					



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VICINITY MAP
SCALE: 1"=2000'



TEMPORARY TRAFFIC CONTROL PLAN

SCALE: 1" = 40'

MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS

GENERAL

1. THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE TO TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
2. PROPERTY TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPERTY APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
3. THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE ANY COMBINATION OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE HOWARD COUNTY HIGHWAY DEPARTMENT TRAFFIC ENGINEER.
4. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 1988 OR LATEST EDITION, ESPECIALLY PART VI, AND TO SECTION 814 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY, 1982 OR LATEST; INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.)
5. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FOR IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUEST TO MAKE MINOR CHANGES TO THE TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
6. NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE UNTIL COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.

7. GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACES WHEN SPECIFIC OWNER TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE HOWARD COUNTY HIGHWAY DEPARTMENT TRAFFIC ENGINEER.
- NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
8. THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION AND MOVE WHEN NECESSARY OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
9. ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TCP SHALL BE KEPT IN GOOD CONDITION FULLY PERFORMING AS SET FORTH IN THE TCP, THE MUTCD, AND/OR SECTION 814 OF THE SPECIFICATIONS FOR REFLECTIVE DEVICES. A PARTICULAR DEVICE IS ASSUMED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO - REFLECTANCE CAPABILITY OF AT LEAST 80% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 90% OF THE VISIBLE REFLECTIVE SURFACE.
10. ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
11. THROUGHOUT THE PERIODS OF WORK ACTIVITIES TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TCP PREPARED FOR THIS PROJECT AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP WHOLLY OR IN PART OF HIS OWN DESIGN FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCP'S MAY BE IMPLEMENTED, WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TCP'S JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
12. THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER UNLESS OTHERWISE NOTED.
13. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT UNLESS OTHERWISE NOTED, NO TRAVEL LANE(S) OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.

NOTES:

1. FLAGGER SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.
2. THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARDS NO. MD. 104.00.

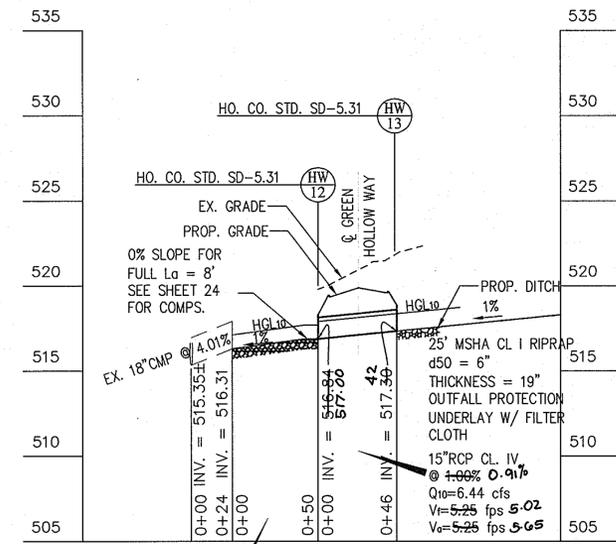
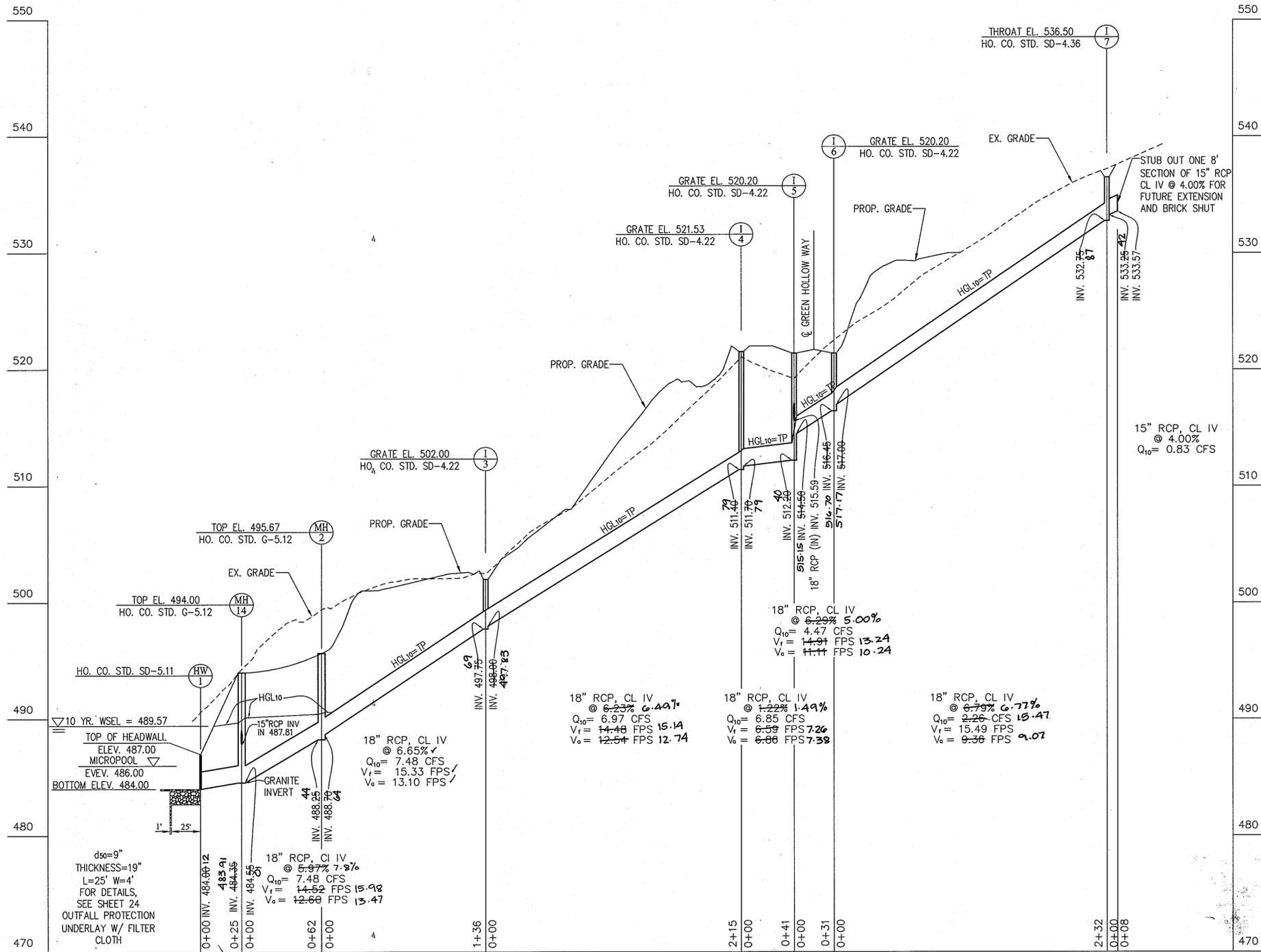
KEY

- CHANNELIZING DEVICES
- WORK AREA
- SIGN
- DIRECTION OF TRAFFIC
- FLAGGER



NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William J. ...</i> CHIEF, BUREAU OF HIGHWAYS	3-25-04 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Janice Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	4/1/04 DATE
<i>...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	3/21/04 DATE
NO. DATE REVISIONS	
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E	
PROJECT NAME OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND	
TITLE HIGHLAND ROAD TRAFFIC CONTROL PLAN S-01-18 P-02-018 F-03-133	OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY : Dewberry & Davis LLC A Deloitte Company	DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747
203 PERRY PARKWAY GATHERSBURG, MD 20877 TEL: (301) 946-8000 FAX: (301) 258-7607	
DES. : KK	JOB : XXX
DRW. : KK	PROJ. : OZ745
CHK. : RMM	DATE : DEC. 2003
SCALE : 1" = 40'	SHEET 7 OF 29



d₅₀=9"
THICKNESS=19"
L=25' W=4'
FOR DETAILS,
SEE SHEET 24
OUTFALL PROTECTION
UNDERLAY W/ FILTER
CLOTH

18" RCP, CL IV
@ 6.65%
Q₁₀ = 7.48 CFS
V_r = 14.52 FPS
V₀ = 12.68 FPS

18" RCP, CL IV
@ 6.23%
Q₁₀ = 6.97 CFS
V_r = 14.48 FPS
V₀ = 12.57 FPS

18" RCP, CL IV
@ 1.22%
Q₁₀ = 6.85 CFS
V_r = 6.59 FPS
V₀ = 6.88 FPS

18" RCP, CL IV
@ 6.73%
Q₁₀ = 2.26 CFS
V_r = 15.49 FPS
V₀ = 9.36 FPS

18" RCP, CL IV
@ 1.00%
Q₁₀ = 9.47 CFS
V_r = 8.41 FPS
V₀ = 8.91 FPS

PROFILE
SCALE: 1" = 50' HOR.
1" = 5' VER.

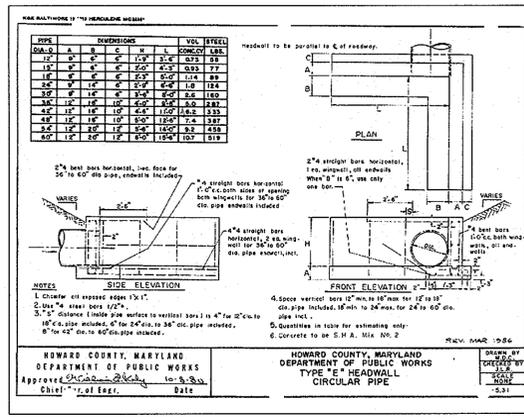
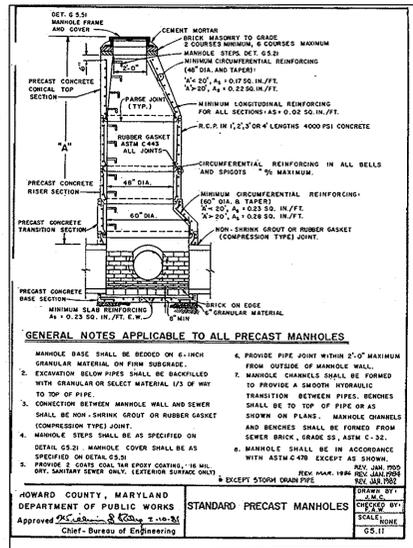
PROFILE
SCALE: 1" = 50' HOR.
1" = 5' VER.



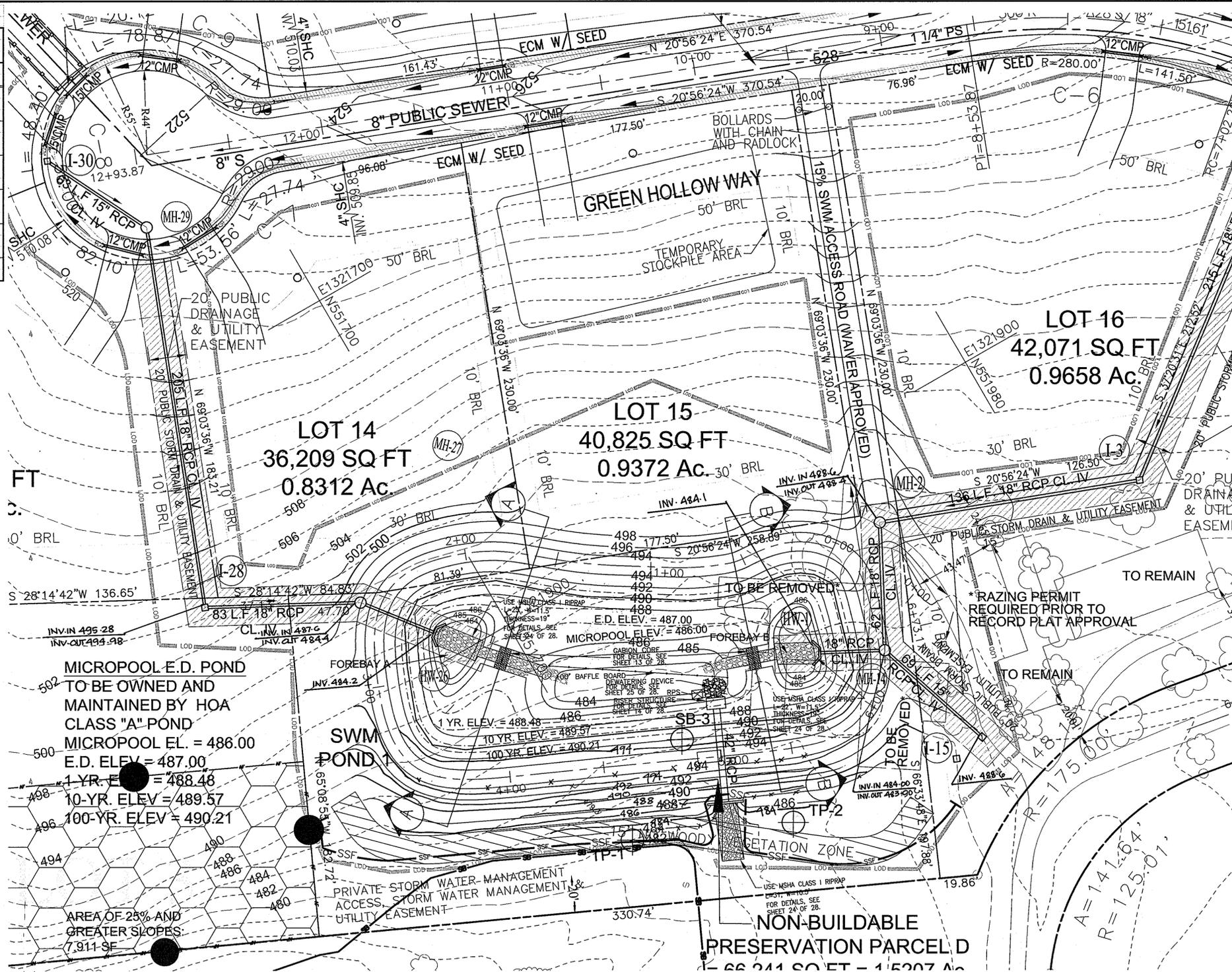
NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William J. ...</i> CHIEF, BUREAU OF HIGHWAYS DATE: 3-25-04	
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Cynthia ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 7/1/04	
APPROVED: DEPARTMENT OF ENGINEERING <i>...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 3/2/04	
NO. DATE REVISIONS	
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E	
PROJECT NAME OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND	
TITLE STORM DRAIN PROFILES S-01-18 P-02-018 F-03-133	OWNERS: MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY: Dewberry & Davis LLC A Dewberry Company	DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 361-8747
DES.: IEV	JOB: XXX
DRW.: SGB	PROJ.: 02745
CHK.: MM	DATE: DEC. 2003
SCALE: AS SHOWN	SHEET 8 OF 29

P:\PROJECT\2002\02745-Owings\FINAL Lot3\15-SDPROF-01.dwg



SUMMARY OF CONTROLS PROVIDED IN POND 1					
Control Element	Type/Size of Control	Storage Provided	Elevation	Discharge	Remarks
		Acre-Feet	MSL	cfs	
Micro-pool		0.11	486.0	0	Part of WQv
Forebay		0.046	486.0	0	In addit. To Micro-pool volume
Extended Detention	6" pipe sized to 1.65" Dia.	0.1	487.0	0.06	Average release rate 0.17
Channel Protection	6" pipe sized to 1.37" Dia.	0.4	488.48	0.17	0.7 cfs- pre-rate release rate 0.19 cfs
Qp-10			489.57	21.95	14.5 cfs Pre-rate safety storm
Qp-100			490.21	49.09	14.5 cfs Post-rate safety storm



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 START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE 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 ENGINEERS 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.	
BY THE ENGINEER:	
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS 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 AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.	
SIGNATURE	3/31/04
DATE	
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 THE 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	3/17/04
DATE	
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.	
SIGNATURE	3/17/04
DATE	
THE DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.	
SIGNATURE	3/17/04
DATE	
APPROVED: DEPARTMENT OF PUBLIC WORKS	
SIGNATURE	3/17/04
DATE	
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
SIGNATURE	3/17/04
DATE	

LEGEND	
	EXISTING 2 FOOT CONTOURS
	EXISTING 10 FOOT CONTOURS
	PERC TEST HOLE: PASSED
	PERC TEST HOLE: FAILED
	PROPOSED WELL LOCATION
	FOREST CONSERVATION EASEMENT
	PROPOSED SHARED SEPTIC AREA
	EXISTING 15-24.9% SLOPES
	EXISTING 25% AND GREATER SLOPES
	SOILS LINE
	LIMITS OF DISTURBANCE

NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

BASED ON THE FIELD SURVEY DONE ON THE POND BY ERIK C. MARKS AS CERTIFIED BY HIM ON 12/20/06 (SHT 12/28) AND CERTIFICATION OF GARLAND L. BRIAN, SR. DATED FEBRUARY 5, 2007, ON THE INSTALLATION OF THE ANTI-SEEP COLLAR AND RISER, FURTHER BASED ON MY TR20 ANALYSIS OF THE DATA, I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN IN THE "AS-BUILT" PLAN AND MEETS THE APPROVED PLAN AND SPECIFICATIONS.



NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-277-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	DATE	REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E

PROJECT NAME: **OWINGS PROPERTY**
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID
 PARCEL 44
 HOWARD COUNTY, MARYLAND

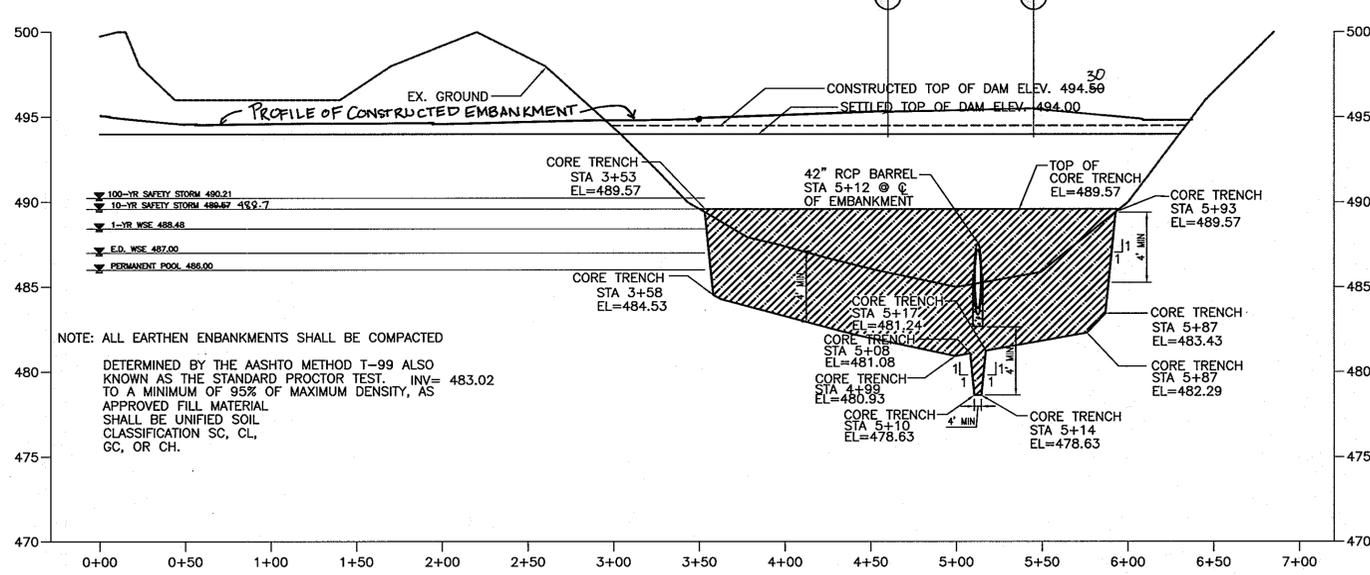
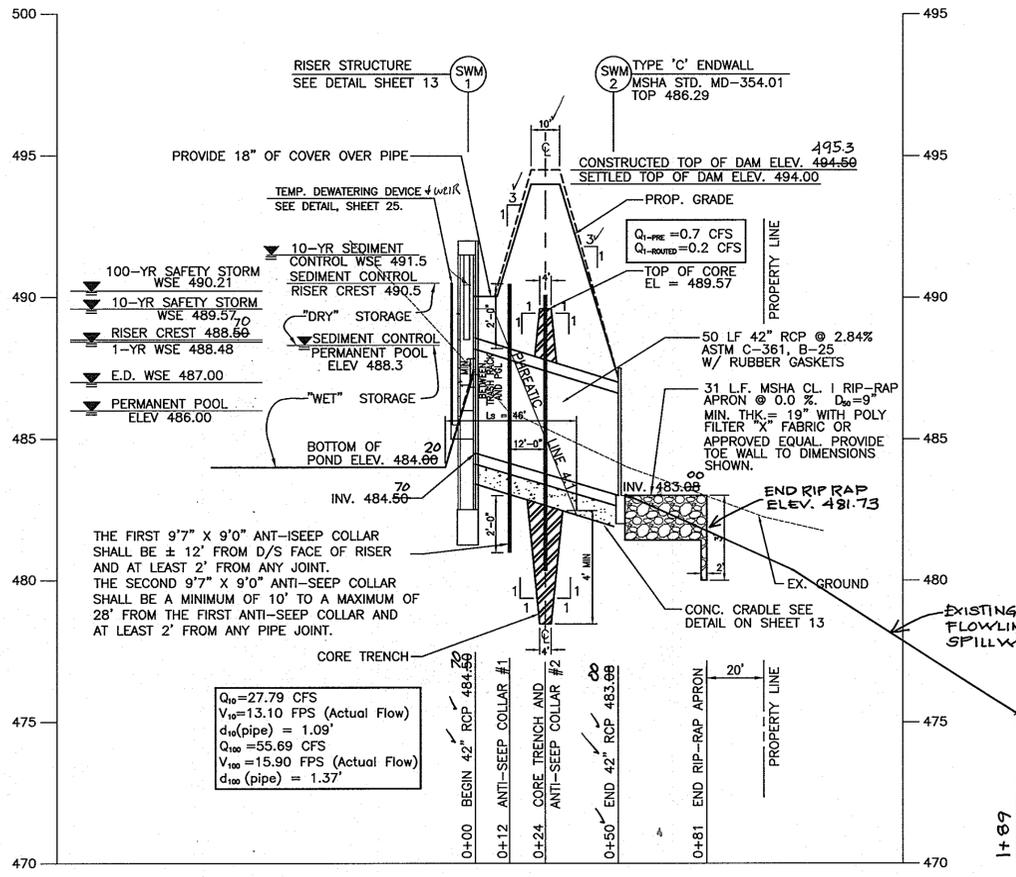
TITLE: **SWM POND #1 PLAN & DETAILS**
 S-01-18 P-02-018 F-XXX-XX

OWNERS: MR. & MRS. HARWOOD OWINGS
 13009 HIGHLAND ROAD
 HIGHLAND, MARYLAND 20777

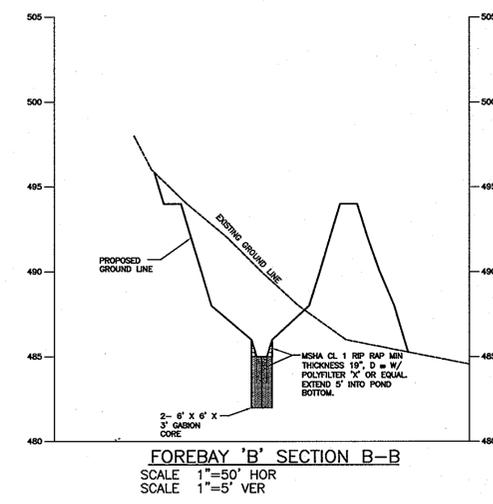
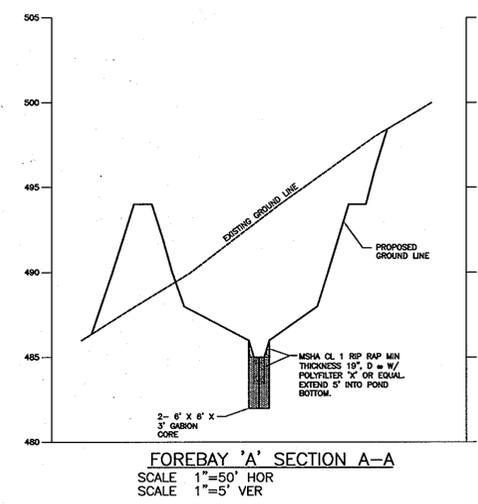
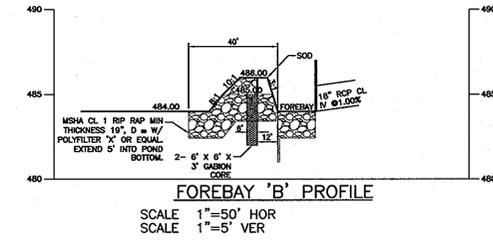
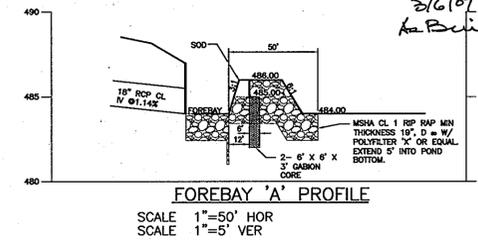
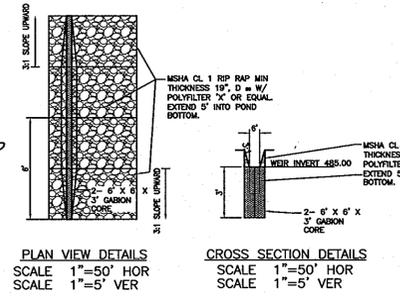
DEVELOPER: DALE THOMPSON BUILDERS
 6300 WOODSIDE COURT
 COLUMBIA, MARYLAND 21046
 (410) 995-6736
 (410) 381-8747

PREPARED BY: Dewberry & Davis LLC
 203 PERRY PARKWAY
 GAITHERSBURG, MD 20877
 TEL: (301) 948-8300
 FAX: (301) 288-7807

DES.: MM JOB: XXX
 DRW.: SGB PROJ.: OZ745 SCALE: 1" = 30'
 CHK.: JMC DATE: DEC. 2003 SHEET 12 OF 28



BASED ON THE FIELD SURVEY DONE ON THE POND BY ERIK C MARKS AS CERTIFIED BY HIM ON 12/20/06 (SHT 12/28) AND THE CERTIFICATION OF GARLAND L BRIAN, SR. DATED FEBRUARY 5, 2007, ON THE INSTALLATION OF THE ANTI-SEEP COLLAR AND RISER, I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN IN THE "AS-BUILT" PLAN AND MEETS THE APPROVED PLAN AND SPECIFICATIONS



GTA GEOTECHNICAL EXPLORATION

2. Basin Excavation and Embankment Construction

Based on the referenced pond drawing, excavation of up to 8 feet will be required to achieve the proposed basin bottom elevation of 484 MSL. Additional excavation will be required to construct sand filter and recharge volumes. Fills up to 9 feet will be required to achieve embankment top elevation of 494 MSL. From test pit data and review of the referenced plans, excavation of the basin can generally be accomplished by standard means, such as scraping and possibly ripping.

Groundwater was observed in Test Pits TP-1 and TP-2 at approximate elevations of 473.5 to 477.5 MSL, respectively. These test pits were located in an existing swale near the downstream toe of the proposed embankment. Test Pit TP-3, located within the proposed basin, was dry to the bottom elevation of 470.5 MSL. Accordingly, groundwater is not expected in excavations to the proposed pond bottom elevation of 480 MSL, and groundwater is not expected to impact pond construction or the stability of excavated slopes.

Existing fill, topsoil, and unstable materials are not considered suitable for support of the proposed embankment or structures. Prior to the placement of compacted fill or the construction of the outfall and structures, areas supporting the proposed embankment and structures should be stripped and grubbed to remove existing fill, topsoil and any organic matter. Unsuitable materials should be removed to the bottom of the proposed cutoff trench. The existing fill encountered in Test Pit TP-3 appears generally suitable for reuse as structural fill. After removal, existing fill meeting the project requirements for structural fill, and free of deleterious materials may be reused.

Based on the test pit data, a topsoil stripping thickness up to 24 inches may occur at the outfall. GTA recommends an average stripping thickness of 12 inches be used for earthwork estimates. The actual stripping thickness will be impacted by contractor methodology, season of construction, and localized topsoil development.

After stripping, the subgrade should be proof-rolled as directed by a geotechnical engineer or his qualified representative. Unsuitable soils identified by proofrolling should be removed from subgrade. No fills should be placed or foundations constructed until the geotechnical engineer approves the subgrade.

Fills for cutoff trench and embankment construction should be placed in eight-inch loose lifts, and compacted to at least 95 percent of the maximum dry density in accordance with the Standard Proctor, ASTM D-698. Fills around the outfall works should be placed in 4-inch lifts and compacted to the same standard with hand equipment. Based on laboratory analysis, on-site soils are likely to be wet of the optimum moisture for compaction, and moisture conditioning may be required. Construction during a dry season is recommended to facilitate the drying of soils. Compactive effort should be monitored with in-place density testing as performed by a qualified representative under the direction of a professional engineer.

Construction Observation and Testing Scope

If requested by Dale Thompson Builders, during site development GTA will provide observation and testing services to observe that the work is being performed in accordance with the intent of this report and the project plans.

LIMITATIONS

This report has been prepared for the exclusive use of Dale Thompson Builders, in accordance with generally accepted geotechnical engineering practice. No other warranty, express or implied, is made.

The analysis and recommendations contained in this report are based on the data obtained from limited observation and testing of the surface materials. The test pits indicate soil conditions only at specific locations and times, and only to the depths penetrated. They do not necessarily reflect strata variations that may exist between the test pit locations. Consequently, the analysis and recommendations must be considered preliminary until the subsurface conditions can be verified by direct observation at the time of construction. If variations in subsurface conditions from those described are noted during construction, recommendations in this report may need to be re-evaluated.

In the event that any changes in the nature, design, or location of the facilities are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report are verified in writing. Geo-Technology Associates, Inc. is not responsible for any claims, damages, or liability associated with interpretation of subsurface data or reuse of the subsurface data or engineering analysis without the express written authorization of Geo-Technology Associates, Inc.

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 START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TEST 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.

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS 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 AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE: *Ronald M. Miano* DATE: 3/16/04
 PRINTED NAME OF ENGINEER: **Ronald M. Miano**

BY THE DEVELOPER:

I HEREBY 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 AND GENERAL SERVICES PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL EMPLOY 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: *Dale H. Thompson* DATE: 3/19/04
 PRINTED NAME OF DEVELOPER: **Dale H. Thompson**

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

SIGNATURE: *Jin Nguyen* DATE: 3/16/04
 U.S.D.A. - NATURAL RESOURCE CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE: *Charles J. Kelly* DATE: 3/17/04
 DISTRICT HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
 SIGNATURE: *William J. Marlowe* DATE: 3-25-04
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 SIGNATURE: *Conrad Hamilton* DATE: 4/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT

SIGNATURE: *Paul Williams* DATE: 3/21/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER PONDS (P-1 THROUGH P-5)

ROUTINE MAINTENANCE (BY HOA)

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 NOTICED.

NON-ROUTINE MAINTENANCE (BY HOA)

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.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATIONS, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



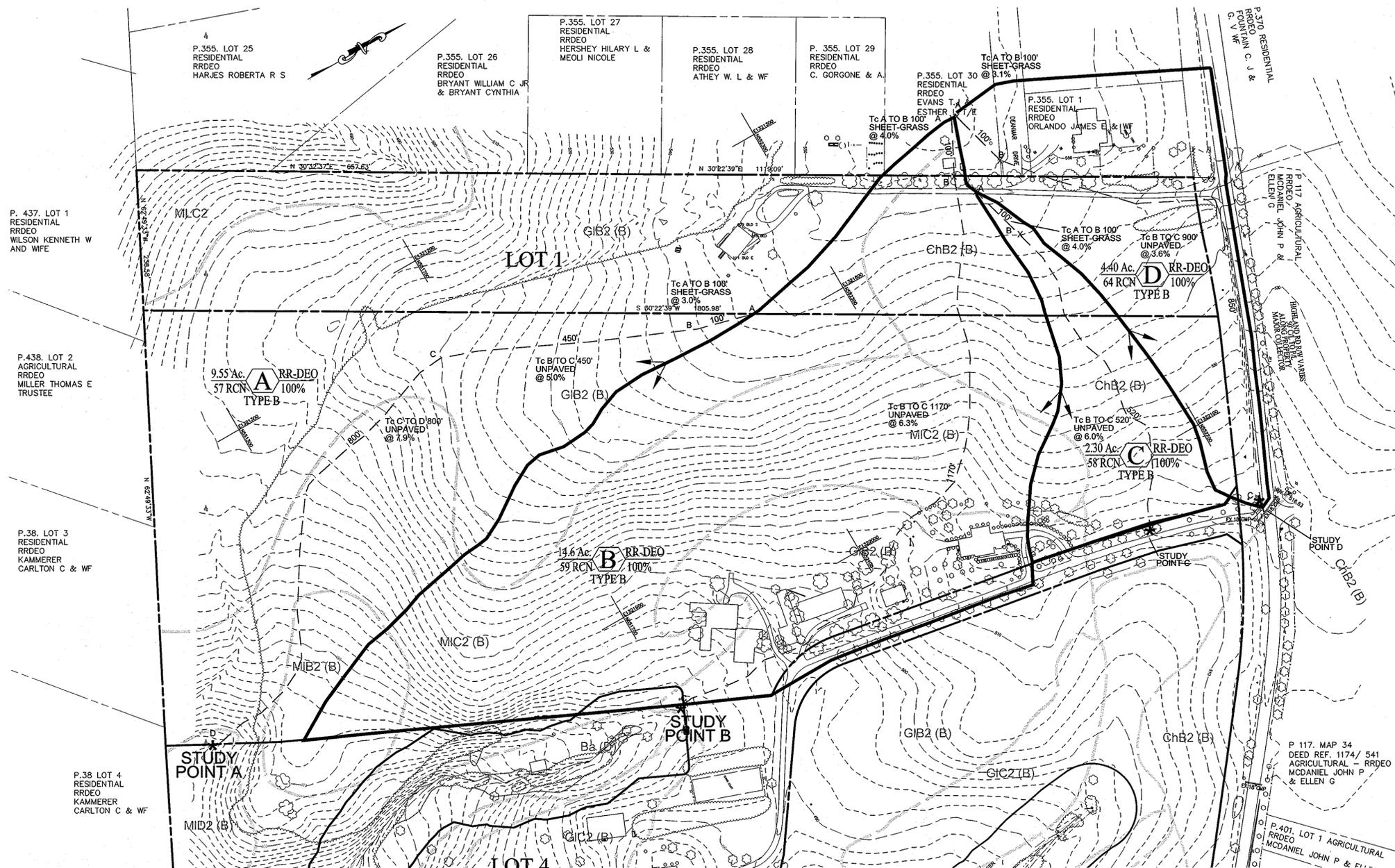
NO.	DATE	REVISIONS
A RESUBMISSION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME: OWINGS PROPERTY		
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE: SWM POND #1 NOTES & DETAILS S-01-18 P-02-018 F-03-133	OWNERS: MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777	DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747
PREPARED BY: Dewberry & Davis LLC A Heery Company	203 PERRY PARKWAY, SUITE 1 GATHERSBURG, MD 20877 TEL: (301) 948-8300 FAX: (301) 258-7807	DES.: MM JOB: XXX DRW.: SGB PROJ.: 02745 CHK.: RMM DATE: DEC. 2003
SCALE: AS SHOWN		SHEET 13 OF 29

**SOILS LEGEND
HOWARD COUNTY**

- NON-HYDRIC SOILS LIST**
- CHB2 CHESTER SILT LOAM,
3 TO 8 PERCENT SLOPES,
MODERATELY ERODED
 - GLB2 GLENELG LOAM,
3 TO 8 PERCENT SLOPES,
MODERATELY ERODED
 - MLB2 MANOR LOAM,
3 TO 8 PERCENT SLOPES,
MODERATELY ERODED
 - MLC2 MANOR LOAM,
8 TO 15 PERCENT SLOPES,
MODERATELY ERODED
 - MLD2 MANOR LOAM,
15 TO 25 PERCENT SLOPES,
MODERATELY ERODED
- HYDRIC SOILS LIST**
- NO HYDRIC SOILS ON SITE
- DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

LEGEND

- - - - - EXISTING 2 FOOT CONTOURS
- - - - - EXISTING 10 FOOT CONTOURS
- - - - - SOILS LINE
- MIC2 SOIL TYPE (SEE SOIL LEGEND)
- — — — — DRAINAGE DIVIDE
- — — — — To FLOWPATH



NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-251-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

**OPERATION AND MAINTENANCE SCHEDULE
OF PRIVATELY OWNED AND MAINTAINED
STORMWATER MANAGEMENT FACILITY
WET POND**

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 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.

When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.



OPERATION, MAINTENANCE, AND INSPECTION

Inspection of the pond shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards and Specifications For Ponds* (MD378). The pond owner(s) and their heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William J. Maloney Jr.</i> CHIEF, BUREAU OF HIGHWAYS <i>MS</i> 3-25-04 DATE		
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Grady Hamrick</i> CHIEF, DIVISION OF LAND DEVELOPMENT <i>DL</i> 4/1/04 DATE		
<i>Chad D. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>4</i> 3/21/04 DATE		
NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE EXISTING SWM DRAINAGE AREA MAP S-01-18 P-02-018 F-03-133	OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777	
PREPARED BY : Dewberry & Davis LLC A Dewberry Company	203 PERRY PARKWAY GAITHERSBURG, MD 20877 TEL: (301) 948-8300 FAX: (301) 258-7607	
DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-8735 (410) 351-8747		
DES. : IEV	JOB : XXX	
DRW. : SGB	PROJ. : OZ745	SCALE : 1" = 100'
CHK. : RMM	DATE : DEC. 2003	SHEET 15 OF 29

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**SOILS LEGEND
HOWARD COUNTY**

NON-HYDRIC SOILS LIST

- CHB2 CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- GLB2 GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- MLB2 MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- MIC2 MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
- MLD2 MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED

HYDRIC SOILS LIST

NO HYDRIC SOILS ONSITE

DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

SUBAREA 'A'

Tc 0.220 hr
RCN 61
DA 8.4 Ac.
Soils TYPE B
1 Acre Lots 2.1 Ac.
Open 3.72 Ac.
Woods 2.58 Ac.

Credits
Environmentally Sensitive Development 8.40 Ac.
Natural Area of Conservation (Forest Conservation Easement) 3.64 Ac.

SUBAREA 'B'

Tc .208 hr
RCN 68
DA 17.1 Ac.
Soils TYPE B
1 Acre Lots 9.76 Ac.
Onsite 2.63 Ac.
Offsite 2.63 Ac.
Open 3.99 Ac.
Pavement 0.60 Ac.
Onsite 0.12 Ac.
Offsite 0.12 Ac.

Credits
Grass Channel Ditch for Rev

SUBAREA 'B1'

DRAINAGE AREA TO POND BASIN

Tc .208 hr
RCN 68
DA 15.5 Ac.

SUBAREA 'D'

Tc 0.395 hr
RCN 68
DA 4.80 Ac.
Soils TYPE B
1 Acre Lots 0.98 Ac.
Onsite 1.98 Ac.
Offsite 1.98 Ac.
Street A 0.40 Ac.
Open 0.69 Ac.
Onsite 0.69 Ac.
Offsite 0.75 Ac.

Credits
Grass Channel 4.8 Ac.

SUBAREA 'C'

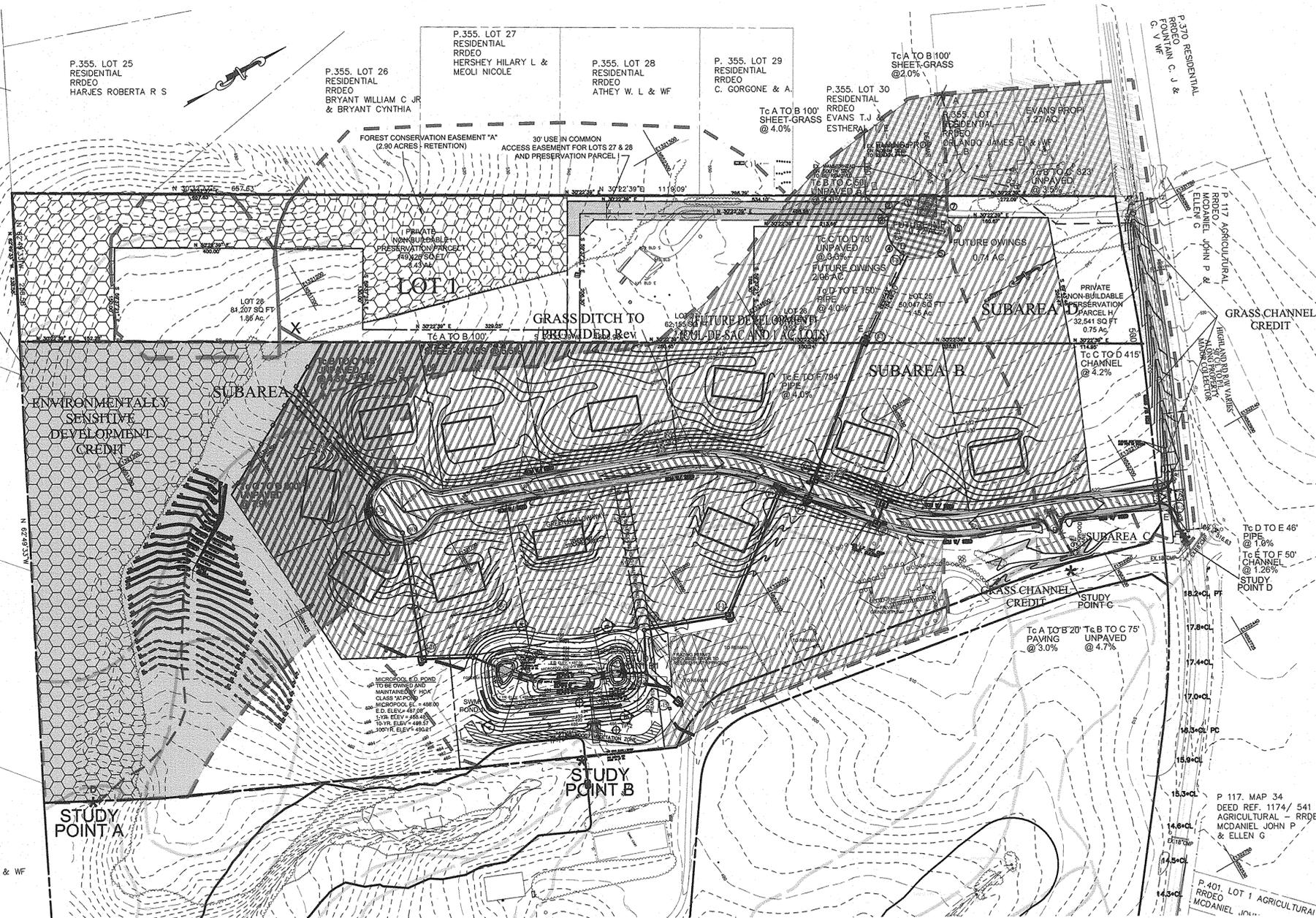
Tc 0.217 hr
RCN 68
DA 0.55 Ac.
Soils TYPE B
1 Acre Lots 0.32 Ac.

Green Hollow Way 0.04 Ac.
Open 0.19 Ac.

Credits
Grass Channel 0.55 Ac.

LEGEND

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- SOILS LINE
- SOIL TYPE (SEE SOIL LEGEND)
- ENVIRONMENTAL CREDIT (SUB AREA A)
- DRAINAGE DIVIDE
- To FLOWPATH
- DITCH PROVIDING Rev
- NATURAL CONSERVATION AREA (FOREST CONSERVATION)
- GRASS CHANNEL CREDIT Rev & WQV
- OPEN
- PAVEMENT
- 1 ACRE LOTS



SUMMARY OF CONTROLS PROVIDED IN POND 1

Control Element	Type/Size of Control	Storage Provided	Elevation	Discharge	Remarks
Units		Acre-Feet	MSL	cfs	
Micro-pool		0.19	486.0	0	Part of WQv
Forebay		0.046	486.0	0	In addit. To Micro-pool volume
Extended Detention	6" pipe sized to 1.65" Dia.	0.22	487.0	0.06	Average release rate 0.17
Channel Protection	6" pipe sized to 1.37" Dia.	0.4	488.48	0.17	0.7 cfs pre-rate release rate 0.19 cfs
Qp-10			489.57	21.95	14.5 cfs Pre-rate safety storm
Qp-100			490.21	49.09	14.5 cfs safety storm

OPERATION, MAINTENANCE, AND INSPECTION

Inspection of the pond shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards and Specifications For Ponds (MD378). The pond owner(s) and their heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY WET POND

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 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.

When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.



NOTE

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-251-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ...
 CHIEF, BUREAU OF HIGHWAYS 3-25-04 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... ..
 CHIEF, DIVISION OF LAND DEVELOPMENT 4/1/04 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... ..
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/21/04 DATE

NO. DATE REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E

PROJECT NAME: **OWINGS PROPERTY**
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID
 PARCEL 44
 HOWARD COUNTY, MARYLAND

TITLE: **PROPOSED SWM DRAINAGE AREA MAP**
 S-01-18 P-02-018 F-03-133

OWNERS: MR. & MRS. HARWOOD OWINGS
 13009 HIGHLAND ROAD
 HIGHLAND, MARYLAND 20777

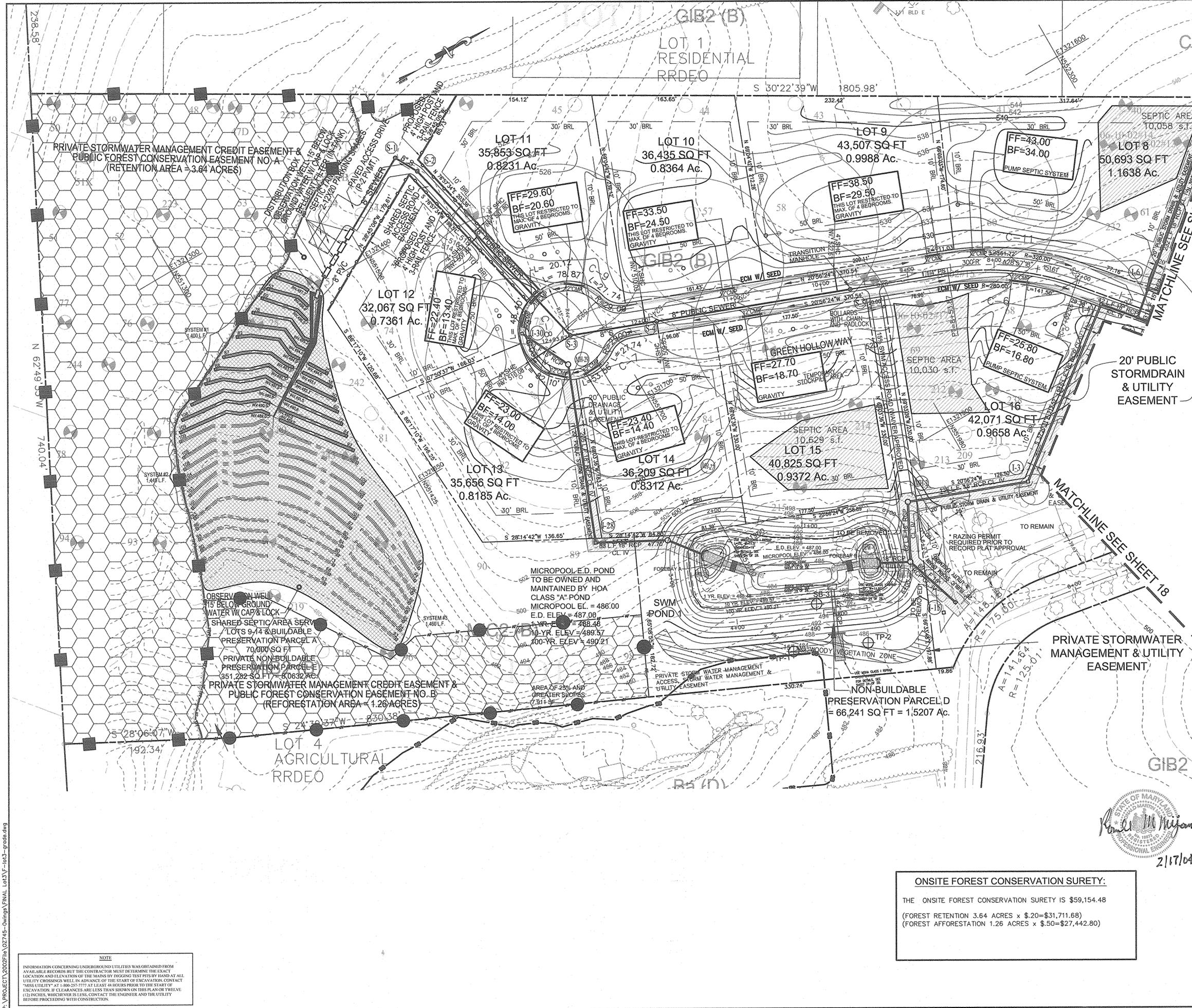
DEVELOPER: DALE THOMPSON BUILDERS
 6300 WOODSIDE COURT
 COLUMBIA, MARYLAND 21046
 (410) 995-6736
 (410) 381-8747

PREPARED BY: **Dewberry & Davis LLC**
 804 WEST DIAMOND AVE.
 GAITHERSBURG, MD 20878
 TEL: (301) 948-8300
 FAX: (301) 258-7807

DES.: IEV JOB.: XXX
 DRW.: SGB PROJ.: 02745
 CHK.: RMM DATE.: DEC. 2003

SCALE: 1" = 100'
 SHEET 16 OF 29

P:\PROJECT\2002\02745-Owings\Drawings\FINAL Lot 3\F-03-133-proposal\MDAmp.dwg, 1/29/2004 3:10:39 PM, jphook



ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature of Engineer: *Rud M. Nijm* Date: 3/8/04

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE REEMED NECESSARY.
 Signature of Developer: *[Signature]* Date: 3/9/04

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE DATE
 THE DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 DISTRICT HOWARD SOIL CONSERVATION LIST DATE
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

LEGEND

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- PERC TEST HOLE: PASSED
- PERC TEST HOLE: FAILED
- PROPOSED WELL LOCATION
- FOREST CONSERVATION EASEMENT
- PROPOSED SHARED SEPTIC AREA
- EXISTING 15-24.9% SLOPES
- EXISTING 25% AND GREATER SLOPES
- SOILS LINE

NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *William J. ...* Date: 3-25-04
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* Date: 4/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* Date: 3/24/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME: OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE: GRADING PLAN S-01-18 P-02-018 F-03-133		OWNERS: MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY: Dewberry & Davis LLC	203 PERRY PARKWAY GAITHERSBURG, MD 20877 TEL: (301) 948-8500 FAX: (301) 258-7607	DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747
DES.: IEV	JOB: XXX	SCALE: 1" = 50'
DRW.: SGB	PROJ.: OZ745	SHEET 17 OF 29
CHK.: MM	DATE: DEC. 2003	

ONSITE FOREST CONSERVATION SURETY:
 THE ONSITE FOREST CONSERVATION SURETY IS \$59,154.48
 (FOREST RETENTION 3.64 ACRES x \$.20=\$31,711.68)
 (FOREST AFFORESTATION 1.26 ACRES x \$.50=\$27,442.80)

NOTE
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1.800.257.3777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

P:\PROJECT\2002\Owings\Owings\FINAL Lot 3 V - 103 - grade.dwg

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

Richard M. Mijam 3/18/04
 SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE REEMED NECESSARY.

John A. Shyne 3/9/04
 SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A.—NATURAL RESOURCES CONSERVATION SERVICE DATE

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

DISTRICT HOWARD SOIL CONSERVATION LIST DATE

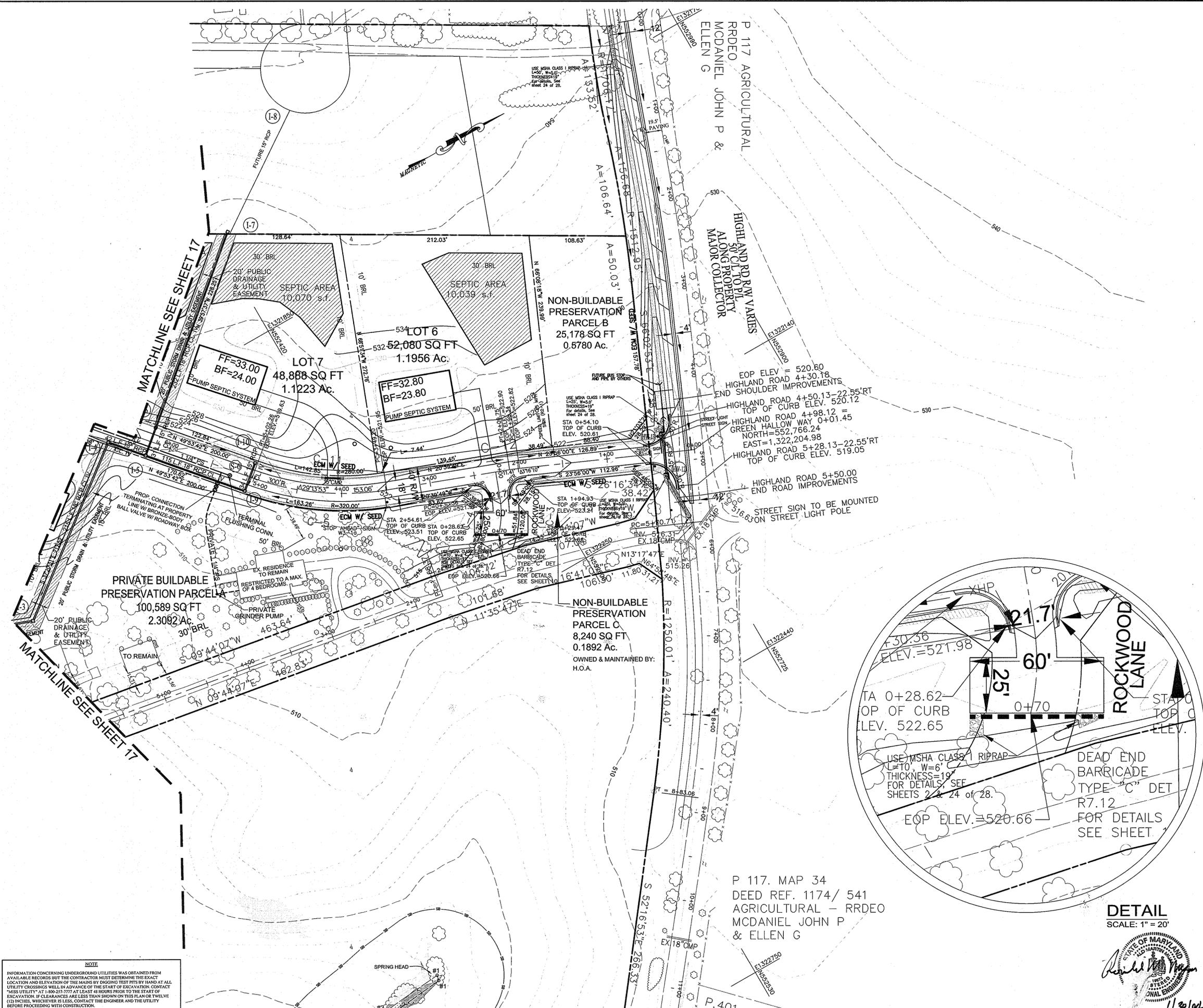
APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

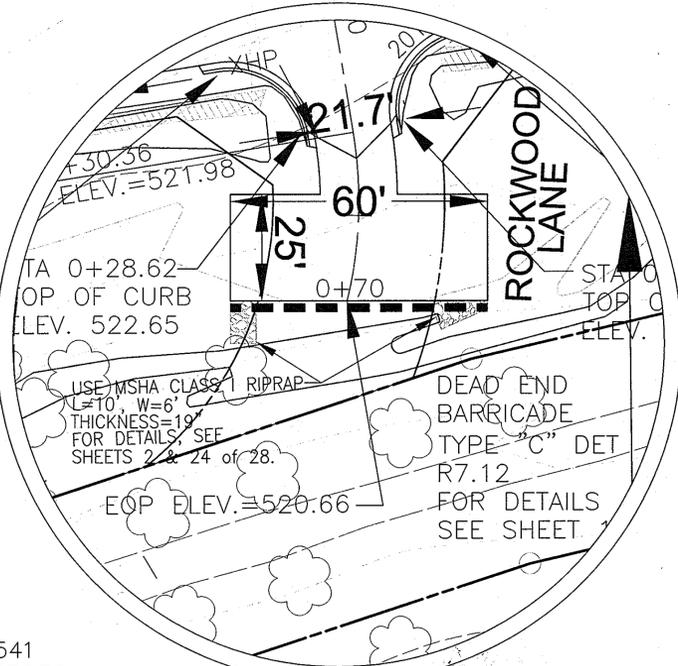
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



- LEGEND**
- EXISTING 2 FOOT CONTOURS
 - EXISTING 10 FOOT CONTOURS
 - PERC TEST HOLE: PASSED
 - PERC TEST HOLE: FAILED
 - PROPOSED WELL LOCATION
 - ▨ FOREST CONSERVATION EASEMENT
 - ▨ PROPOSED SHARED SEPTIC AREA
 - ▨ EXISTING 15-24.9% SLOPES
 - ▨ EXISTING 25% AND GREATER SLOPES
 - SOILS LINE

NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES



DETAIL
 SCALE: 1" = 20'



NOTE
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WILL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED: DEPARTMENT OF PUBLIC WORKS	<i>William F. Whelan Jr.</i>	3-25-04
CHIEF, BUREAU OF HIGHWAYS	HW	DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	<i>John A. Shyne</i>	4/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT	PL	DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	<i>Richard M. Mijam</i>	3/29/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DE	DATE

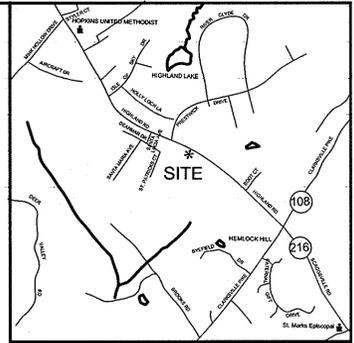
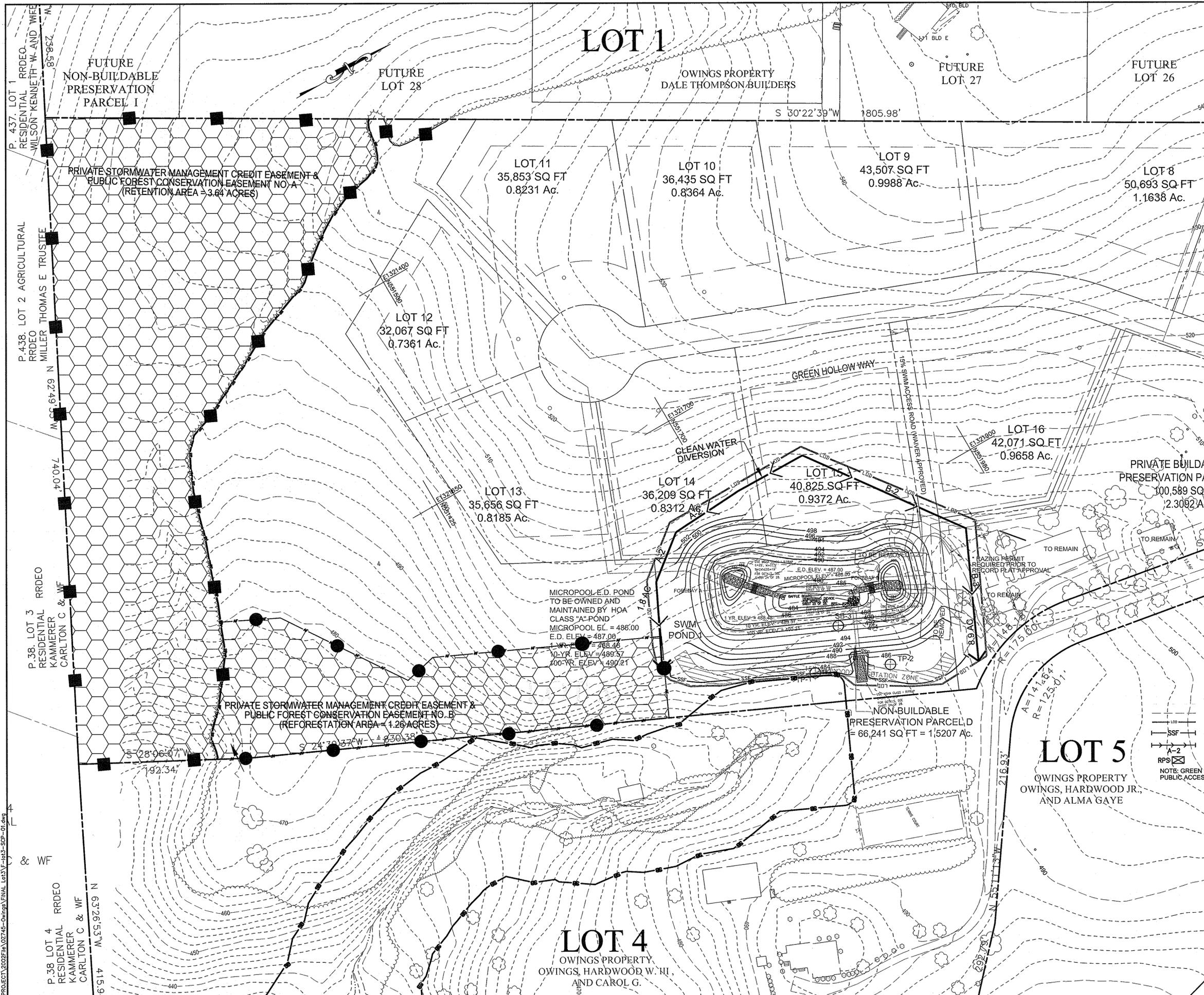
NO.	DATE	REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E
PROJECT NAME
OWINGS PROPERTY
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID
 PARCEL 44
 HOWARD COUNTY, MARYLAND

TITLE GRADING PLAN S-01-18 P-02-016 F-03-133	OWNERS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY: Dewberry & Davis LLC A subsidiary company	DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747
DES.: IEV	JOB: XXX
DRW.: SGB	PROJ.: 02745
CHK.: MM	DATE: DEC. 2003
SCALE: 1" = 50'	SHEET 18 OF 29

P:\PROJECT\2002\0215\02745-0\owings\FINAL_Lots3V-1a15-grane2.dwg

F-03-133



VICINITY MAP
SCALE: 1"=2000'

NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

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 START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE 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 CERTIFICATE FROM RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.	
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 NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.	
SIGNATURE	DATE
PRINTED NAME OF ENGINEER	
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	DATE
PRINTED NAME OF DEVELOPER	
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.	
SIGNATURE	DATE
U.S.D.A. - 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	DATE
DISTRICT HOWARD SOIL CONSERVATION DISTRICT	
APPROVED: DEPARTMENT OF PUBLIC WORKS	
SIGNATURE	DATE
APPROVED: BUREAU OF HIGHWAYS	
SIGNATURE	DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
SIGNATURE	DATE
APPROVED: DIVISION OF LAND DEVELOPMENT	
SIGNATURE	DATE
APPROVED: DEPARTMENT OF ENGINEERING DIVISION	
SIGNATURE	DATE

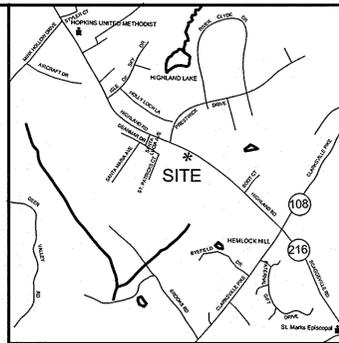
MATCHLINE SEE SHEET 20



LEGEND
 EXISTING 2 FOOT CONTOURS
 EXISTING 10 FOOT CONTOURS
 LIMITS OF DISTURBANCE
 SUPER SILT FENCE
 EARTH DIKE
 REMOVABLE PUMPING STATION
 NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

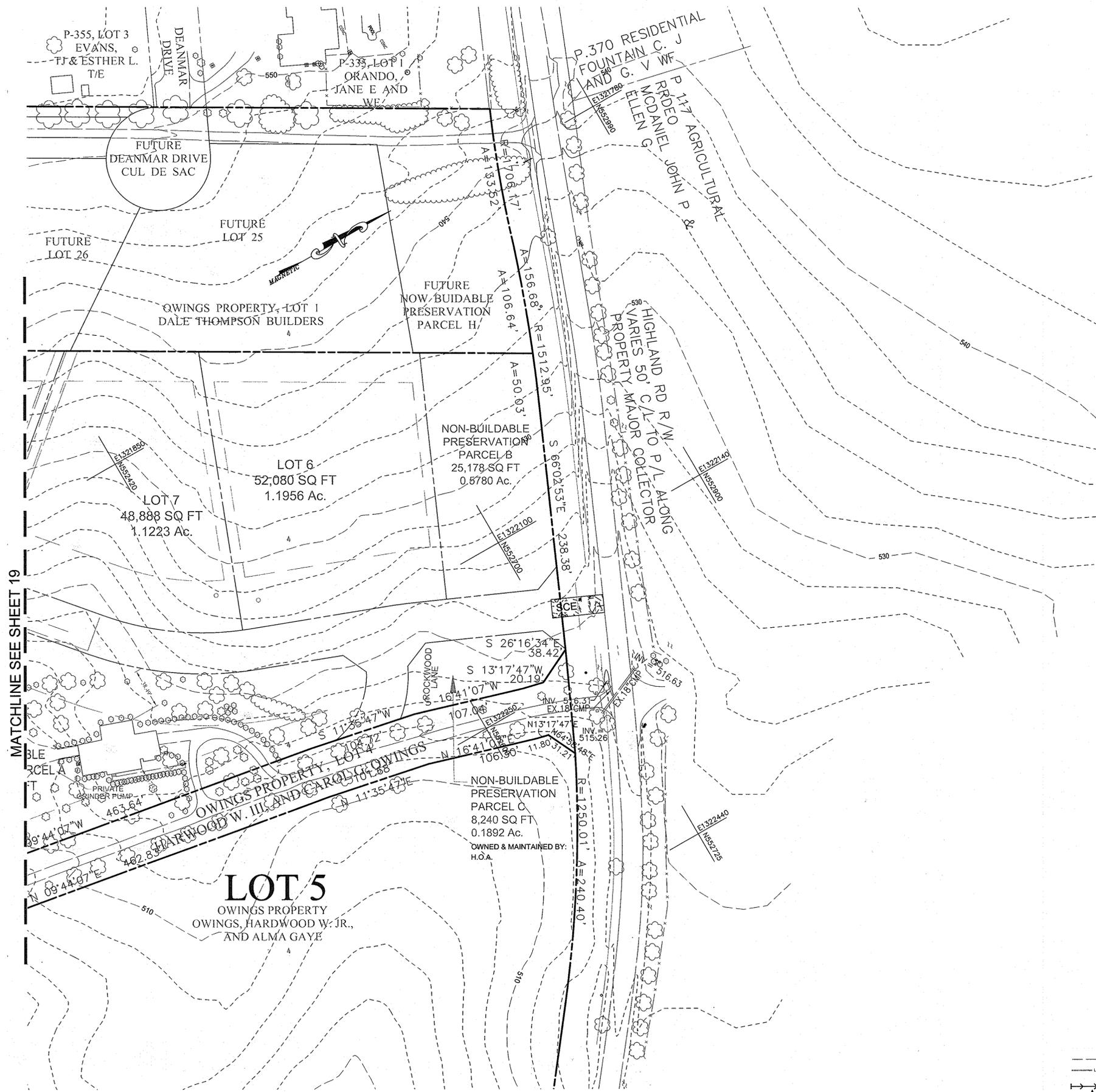
NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING OF LOTS 6-16 AND PARCELS A-E		
PROJECT NAME: OWINGS PROPERTY		
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE: SEDIMENT CONTROL - PHASE 1		OWNERS: MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY: Dewberry & Davis LLC		DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-0736 (410) 381-8747
DES.: IEV	JOB: XXX	
DRW.: SGB	PROJ.: 02745	SCALE: 1" = 50'
CHK.: MM	DATE: DEC. 2003	SHEET 19 OF 29

P. 437. LOT 1 RESIDENTIAL RRDEO WILSON KENNETH W. AND WIFE
 P. 438. LOT 2 AGRICULTURAL RRDEO MILLER THOMAS E TRUSTEE
 P. 439. LOT 3 RESIDENTIAL RRDEO KAMMERER CARLTON C & WIFE
 P. 440. LOT 4 RESIDENTIAL RRDEO KAMMERER CARLTON C & WIFE
 P. 441. LOT 5 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 442. LOT 6 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 443. LOT 7 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 444. LOT 8 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 445. LOT 9 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 446. LOT 10 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 447. LOT 11 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 448. LOT 12 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 449. LOT 13 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 450. LOT 14 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 451. LOT 15 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 452. LOT 16 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 453. LOT 17 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 454. LOT 18 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 455. LOT 19 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 456. LOT 20 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 457. LOT 21 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 458. LOT 22 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 459. LOT 23 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 460. LOT 24 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 461. LOT 25 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 462. LOT 26 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 463. LOT 27 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 464. LOT 28 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 465. LOT 29 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 466. LOT 30 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 467. LOT 31 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 468. LOT 32 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 469. LOT 33 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 470. LOT 34 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 471. LOT 35 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 472. LOT 36 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 473. LOT 37 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 474. LOT 38 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 475. LOT 39 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 476. LOT 40 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
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 P. 481. LOT 45 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 482. LOT 46 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 483. LOT 47 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
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 P. 485. LOT 49 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
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 P. 488. LOT 52 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
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 P. 491. LOT 55 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 492. LOT 56 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
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 P. 496. LOT 60 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 497. LOT 61 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 498. LOT 62 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 499. LOT 63 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 500. LOT 64 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 501. LOT 65 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 502. LOT 66 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 503. LOT 67 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 504. LOT 68 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 505. LOT 69 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 506. LOT 70 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 507. LOT 71 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 508. LOT 72 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 509. LOT 73 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 510. LOT 74 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 511. LOT 75 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 512. LOT 76 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 513. LOT 77 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 514. LOT 78 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 515. LOT 79 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 516. LOT 80 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 517. LOT 81 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 518. LOT 82 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 519. LOT 83 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 520. LOT 84 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 521. LOT 85 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 522. LOT 86 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 523. LOT 87 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 524. LOT 88 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 525. LOT 89 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 526. LOT 90 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 527. LOT 91 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 528. LOT 92 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 529. LOT 93 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 530. LOT 94 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 531. LOT 95 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 532. LOT 96 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 533. LOT 97 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 534. LOT 98 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 535. LOT 99 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE
 P. 536. LOT 100 OWINGS PROPERTY OWINGS, HARDWOOD JR. AND ALMA GAYE



VICINITY MAP
SCALE: 1"=2000'

NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION CONTACT "MISS UTILITY" AT 1-800-272-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.



MATCHLINE SEE SHEET 19

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.

DATE: 3/8/04
SIGNATURE: [Signature]

DATE: 3/8/04
SIGNATURE: [Signature]

DATE: 3/9/04
SIGNATURE: [Signature]

DATE: 3/12/04
SIGNATURE: [Signature]

DATE: 3/12/04
SIGNATURE: [Signature]

DATE: 3/25/04
SIGNATURE: [Signature]

DATE: 4/1/04
SIGNATURE: [Signature]

DATE: 2/23/04
SIGNATURE: [Signature]

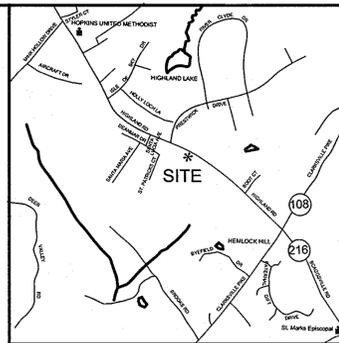


LEGEND

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- LIMITS OF DISTURBANCE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE

NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME: OWINGS PROPERTY		
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE: SEDIMENT CONTROL-PHASE 1		OWNERS: MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY: Dewberry & Davis LLC		DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 985-6735 (410) 381-5747
DES. : IEV	JOB : XXX	SCALE : 1" = 50'
DRW. : SGB	PROJ. : OZ745	SHEET 20 OF 29
CHK. : MM	DATE : DEC. 2003	



VICINITY MAP
SCALE: 1"=2000'

NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT MISS UTILITY AT 1-800-227-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICH EVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

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.

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS 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.

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.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

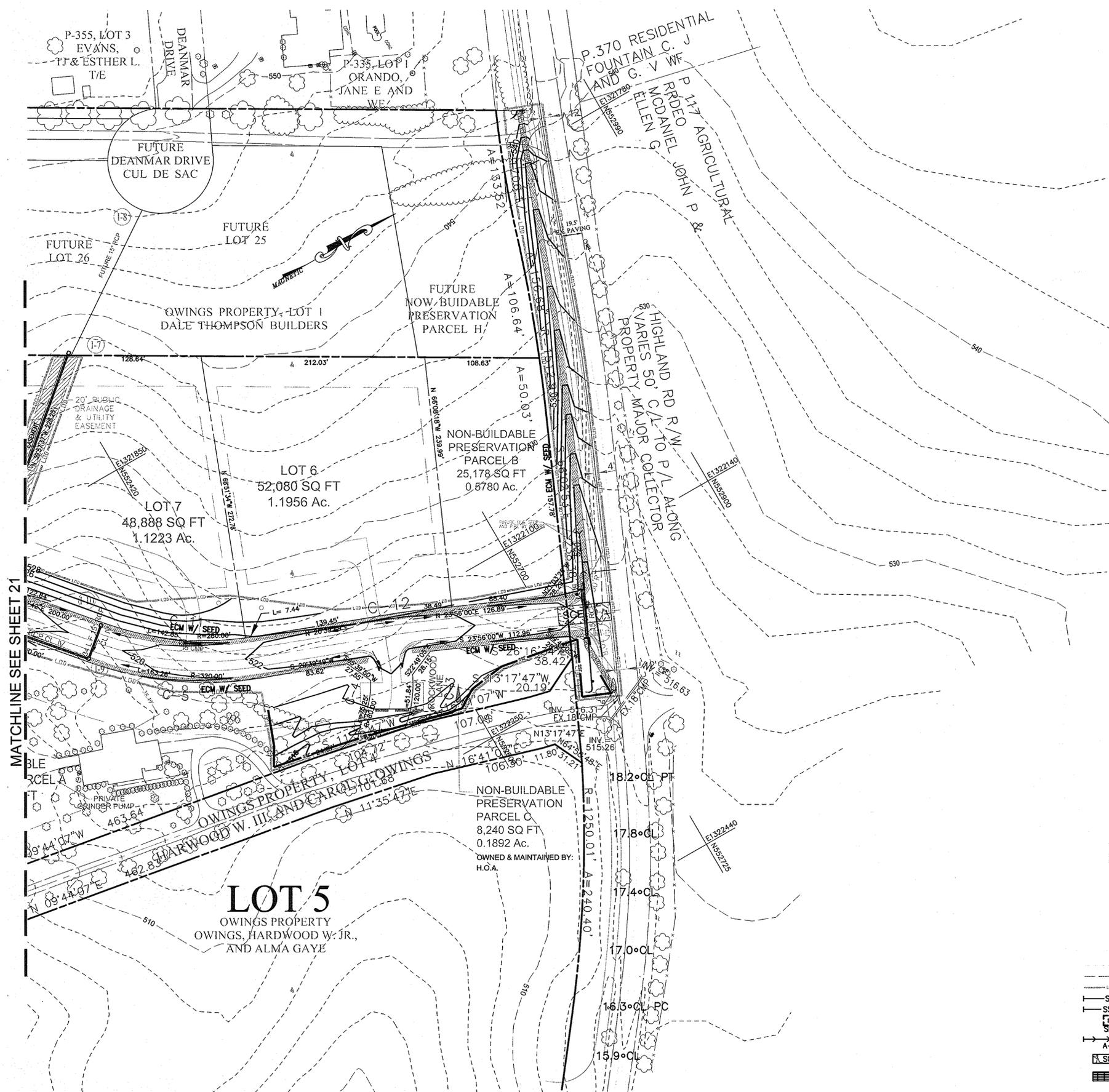
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION



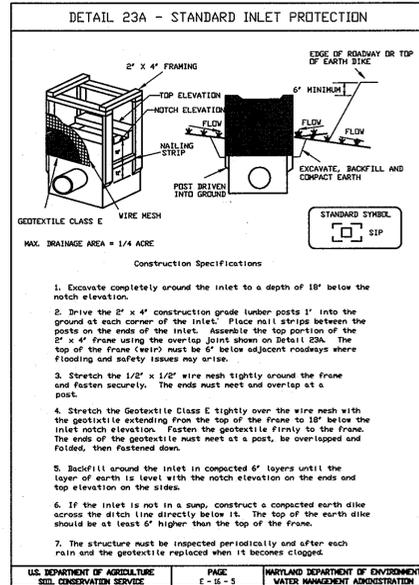
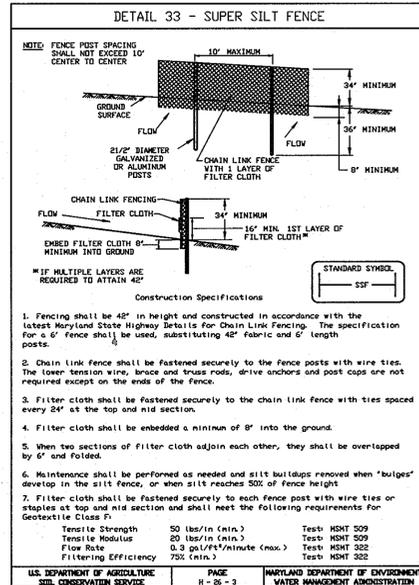
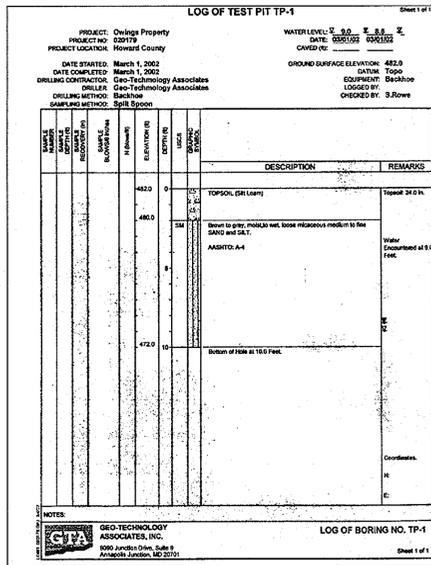
MATCHLINE SEE SHEET 21

- LEGEND**
- EXISTING 2 FOOT CONTOURS
 - EXISTING 10 FOOT CONTOURS
 - LIMITS OF DISTURBANCE
 - SF SILT FENCE
 - SF SUPER SILT FENCE
 - STANDARD INLET PROTECTION
 - EARTH DIKE
 - [Symbol] STABILIZED CONSTRUCTION ENTRANCE
 - [Symbol] EROSION CONTROL MATTING W/ SEED

NOTE: EROSION CONTROL MATTING W/ SEED OR SOD IS TO BE PROVIDED IN ALL AREAS OF CONCENTRATED FLOW SUCH AS SWALE, OPEN SECTION ROAD DITCH, ETC.

NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

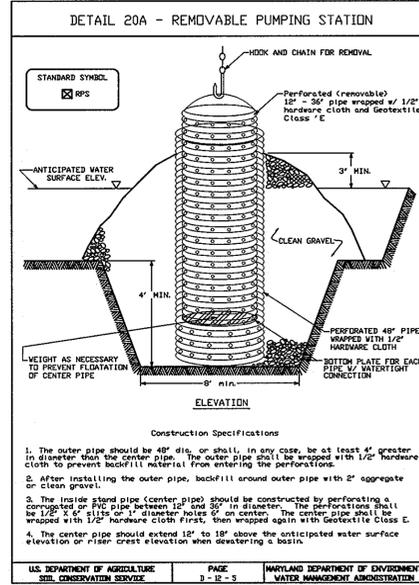
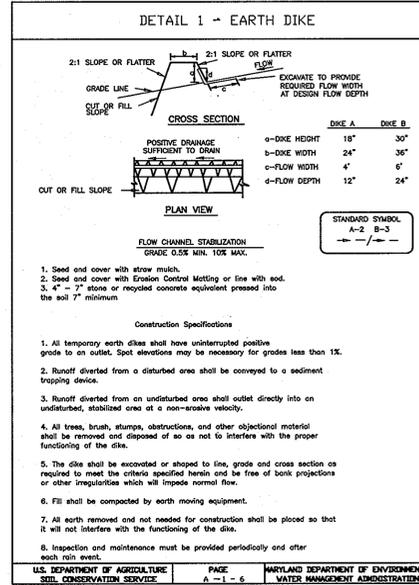
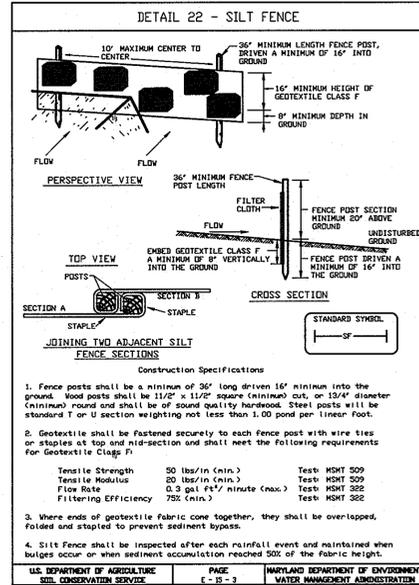
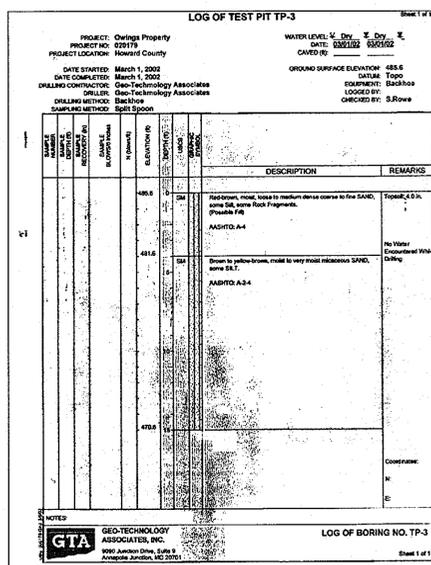
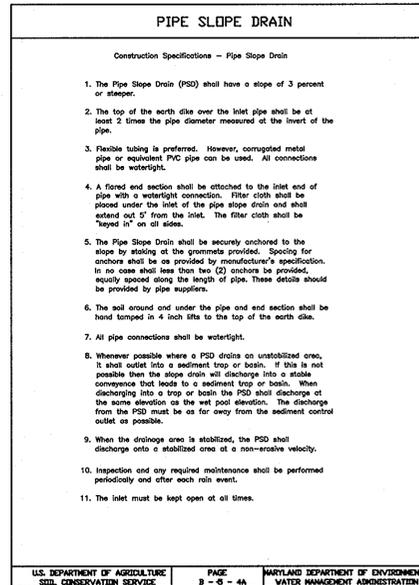
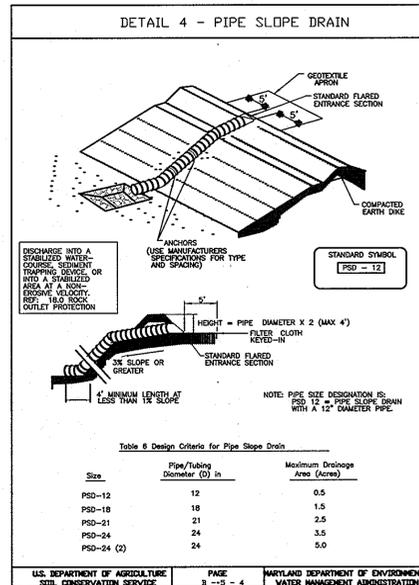
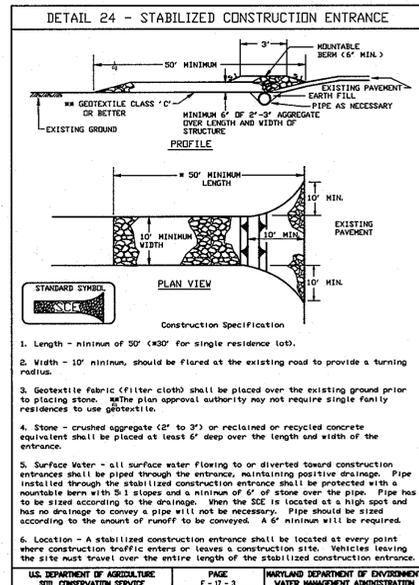
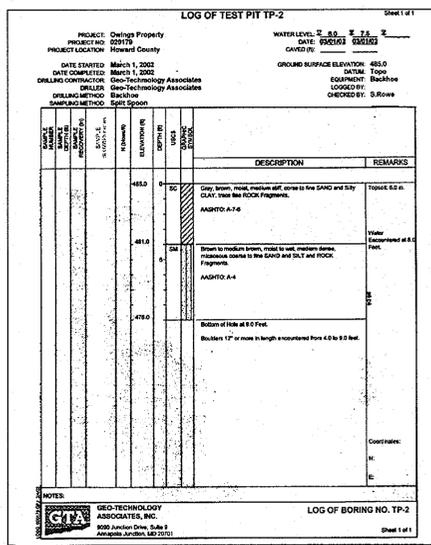
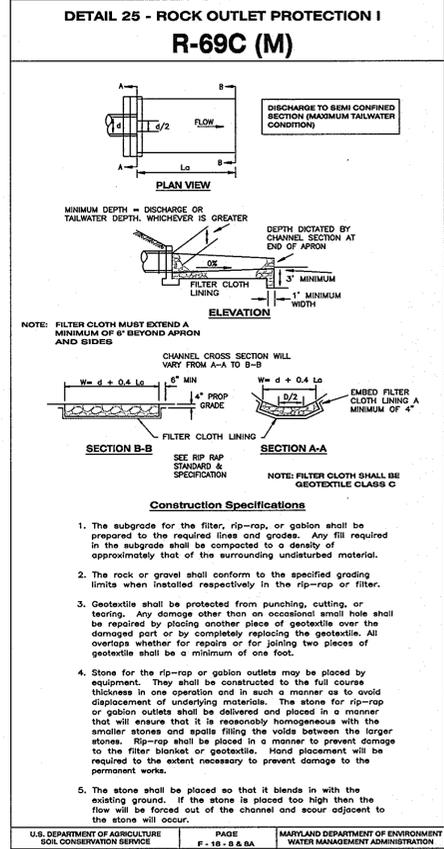
NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME OWINGS PROPERTY LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE SEDIMENT CONTROL-PHASE 2 S-01-18 P-02-018 F-03-133		OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
PREPARED BY : Dewberry & Davis LLC 203 PERRY PARKWAY GAITHERSBURG, MD 20877 TEL: (301) 949-8300 FAX: (301) 258-7807	DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 361-8747	DES. : IEV JOB : XXX DRW. : SGB PROJ. : OZ745 CHK. : MM DATE : DEC. 2003
SCALE : 1" = 50'		SHEET 22 OF 29



ROCK OUTLET PROTECTION CLASS I
(HC SCD STANDARD AND SPECIFICATIONS 18.0)

OUTFALL STRUCTURE NO.	Q10	TW	DISCHARGE VELOCITY	PIPE SIZE	La	W
HW-1	9.47	TW>=0.5	8.91	18"	6' MIN. USE 22"	11.5'
HW-12	6.40	TW>=0.5	6.44	15"	8'	5.0'
HW-26	3.0	TW>=0.5	5.32	18"	4' MIN. USE 25"	11.5'
RISER	27.79	TW>=0.5	13.10	42"	31'	10.5'

NOTE: USE MD SHA CLASS I RIPRAP
D50 = 9.5"
THICKNESS = 19"



ENGINEER'S CERTIFICATE

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

Donald M. Wijn 3/5/04
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Rob N. Shyne 3/9/04
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Jim Nijis 3/12/04
U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

William J. Wainwright 3/12/04
DISTRICT HOWARD SOIL CONSERVATION LIST DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Wainwright 3-25-04
CHIEF, BUREAU OF HIGHWAYS DATE

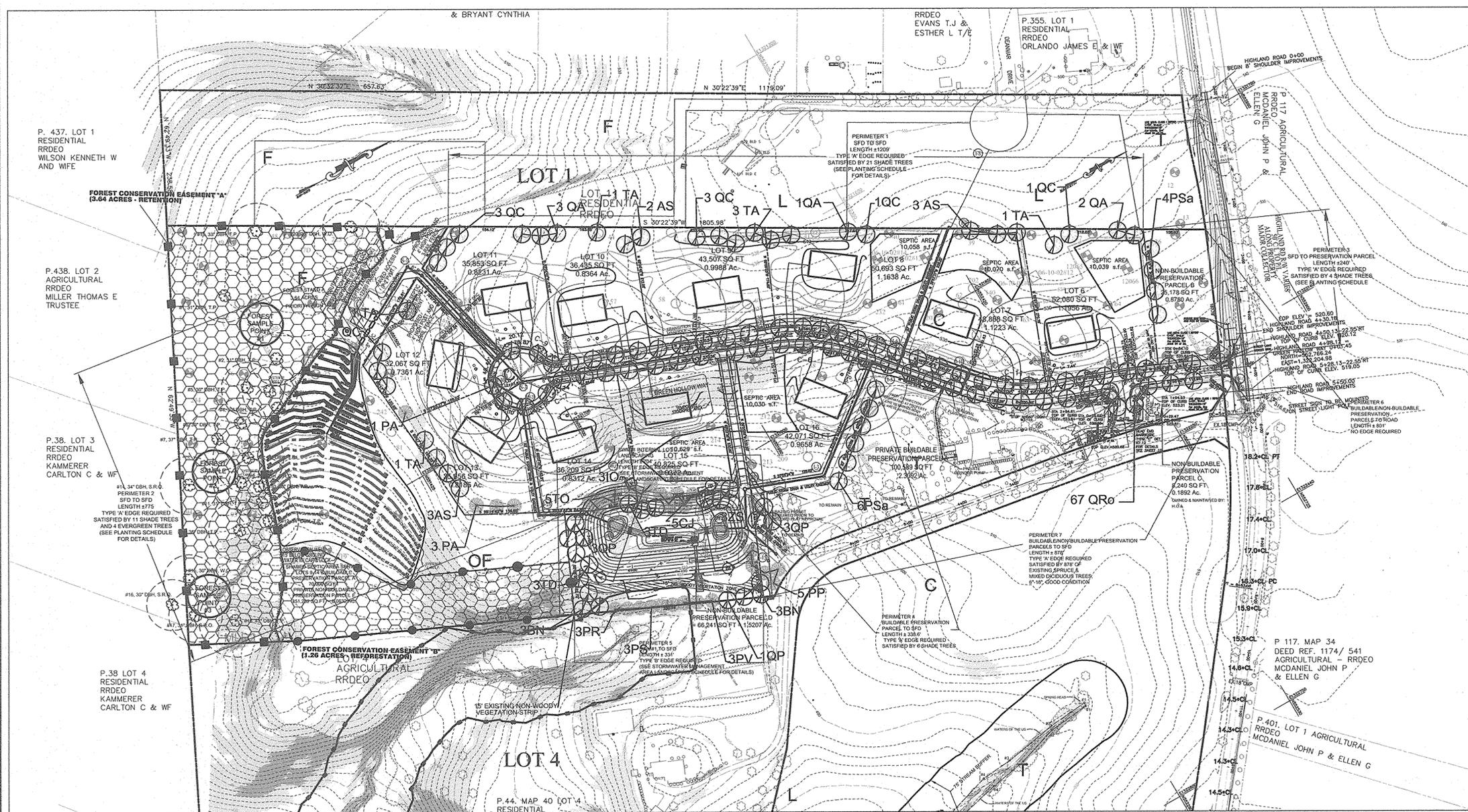
APPROVED: DEPARTMENT OF PLANNING AND ZONING
William J. Wainwright 4/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. Wainwright 3/22/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
OWINGS PROPERTY		
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E		
5th ELECTION DISTRICT TAX MAP # 40, GRID		
PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE		OWNERS : MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777
SEDIMENT CONTROL DETAILS AND BORING LOGS		DEVELOPER : DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 555-0735 (410) 381-8747
S-01-18 P-02-018 F-03-133		
PREPARED BY : Dewberry & Davis LLC A Dewberry Company 203 PERRY PARKWAY GATHERSBURG, MD 20787 TEL: (301) 948-8300 FAX: (301) 258-7607		
DES. : RMM	JOB : XXX	
DRW. : SGB	PROJ. : OZ745	SCALE : 1" = 50'
CHK. : RMM	DATE : DEC. 2003	SHEET 24 OF 29

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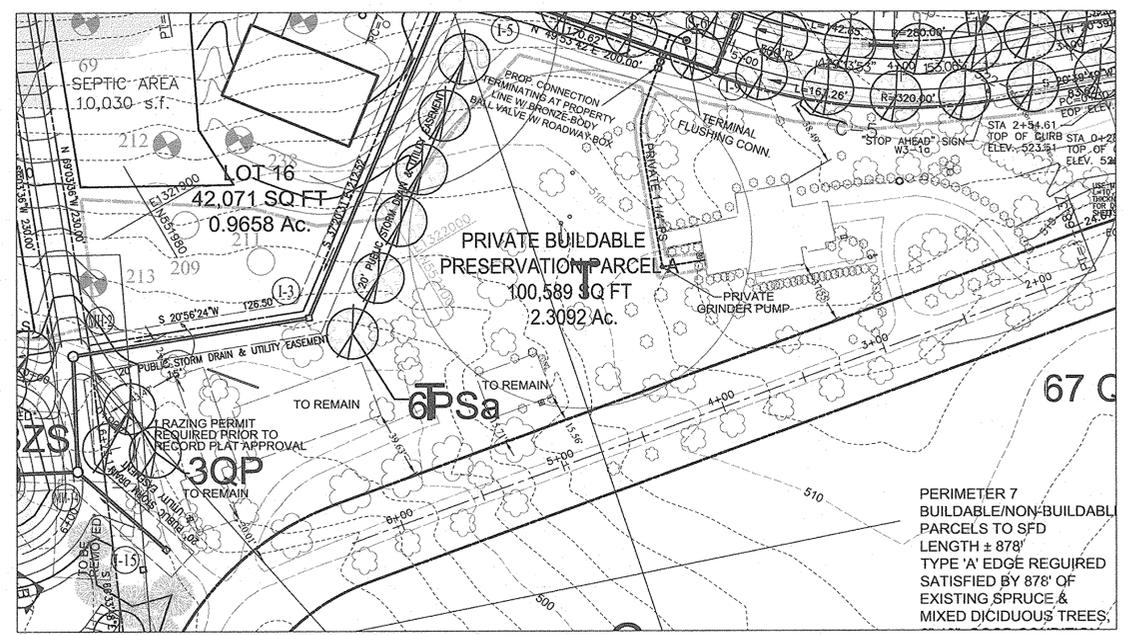


- ### GENERAL NOTES
- TOTAL AREA OF TRACT: 24.50 Ac.; 1,067,230± SQ.FT.
 - EXISTING ZONING: RRDEO
 - BOUNDARY FROM TAX MAP (40)
 - TOPOGRAPHY FROM SURVEY CONTOUR INTERVAL 2 FEET.
 - THERE ARE NO 100-YEAR FLOODPLAINS ON THIS SITE ACCORDING TO AVAILABLE INFORMATION (MDMERLIN.NET), AND SITE VISIT.
 - THERE ARE NO WETLANDS AND BUFFERS ON THIS SITE ACCORDING TO MDMERLIN.NET, AND SITE VISIT.
 - THE PRESENCE OF RARE, THREATENED & ENDANGERED SPECIES, OR CRITICAL HABITATS IS CURRENTLY BEING INVESTIGATED BY DNR.
 - THERE ARE NO CULTURAL OR HISTORIC FEATURES ON THIS SITE ACCORDING TO MDMERLIN.NET.
 - THE SUBJECT PROPERTY FALLS WITHIN THE ROCKY GORGE DAM SUB-WATERSHED (USE CLASS 1), OF THE PATUXENT WATERSHED.
 - THERE IS ONE FOREST STAND ON THIS SITE TOTALING 3.64 ACRES. SITE INVESTIGATIONS PERFORMED ON 2/10/02, BY DEWBERRY & DAVIS LLC.
 - THERE ARE NO HYDRIC SOILS ON THE SUBJECT PROPERTY ACCORDING TO THE HOWARD COUNTY SOIL SURVEY OF MARYLAND.

SPECIMEN TREE IDENTIFICATION LIST

BOTANICAL NAME/ COMMON NAME	TRUNK Ø (D.B.H.)	TREE HEIGHT	TREE CANOPY	TREE CONDITION
Liriodendron tulipifera TULIP POPLAR	31"	65'	40'	GOOD
Liriodendron tulipifera TULIP POPLAR	31"	60'	30'	FAIR
Liriodendron tulipifera TULIP POPLAR	32"	60'	20'	POOR
Liriodendron tulipifera TULIP POPLAR	30"	50'	30'	FAIR
Liriodendron tulipifera TULIP POPLAR	30"	50'	30'	GOOD
Liriodendron tulipifera TULIP POPLAR	30"	55'	30'	GOOD-TWIN
Liriodendron tulipifera TULIP POPLAR	37"	50'	35'	GOOD
Liriodendron tulipifera TULIP POPLAR	41"	60'	40'	FAIR
Liriodendron tulipifera TULIP POPLAR	32"	50'	25'	FAIR
Quercus falcata SOUTHERN RED OAK	36"	45'	30'	FAIR
Liriodendron tulipifera TULIP POPLAR	31"	60'	40'	GOOD-TWIN
Liriodendron tulipifera TULIP POPLAR	34"	45'	40'	GOOD
Liriodendron tulipifera TULIP POPLAR	36"	65'	40'	EXCELLENT
Quercus falcata SOUTHERN RED OAK	34"	55'	40'	GOOD
Quercus falcata SOUTHERN RED OAK	30"	60'	45'	POOR
Quercus falcata SOUTHERN RED OAK	30"	60'	40'	FAIR
Quercus falcata SOUTHERN RED OAK	31"	60'	50'	GOOD
Liriodendron tulipifera TULIP POPLAR	43"	65'	40'	GOOD
Liriodendron tulipifera TULIP POPLAR	31"	60'	50'	GOOD
Quercus alba WHITE OAK	33"	65'	40'	GOOD

STRUCTURES TO REMAIN FOR PRESERVATION PARCEL A (1"=50')



LEGEND

- FOREST RETENTION AREA SIGN
- AFFORESTATION AREA SIGN
- CRITICAL ROOT ZONE (CRZ) (ESTIMATED RADIUS = 1.5' X DBH)
- EXIST. TREE >24" D.B.H.
- ▨ AREAS WITH 15-25% SLOPES
- ▩ AREAS WITH 25% & GREATER SLOPES
- TREE LINE
- FOREST SAMPLE POINT #1
- C CROPS
- F FOREST
- OF OPEN FIELD

NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-557-7377 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

LEGEND

- LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE (TO BE INSTALLED PRIOR TO CONSTRUCTION)
- REFORESTATION FENCE (TO BE INSTALLED AFTER PLANTING)
- EXIST. TREE >24" D.B.H.
- TREE >24" D.B.H. TO BE REMOVED
- ▨ FOREST CONSERVATION EASEMENTS (RETENTION AND AFFORESTATION)
- PROPOSED FOREST RETENTION AREA SIGN (TO BE INSTALLED PRIOR TO CONSTRUCTION) (9 TOTAL)
- PROPOSED REFORESTATION AREA SIGN (TO BE INSTALLED AFTER CONSTRUCTION) (11 TOTAL)

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of Howard County Code and the Landscape Manual. I further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plan materials will be submitted to the Department of Planning and Zoning.

Chad H. Hays 3/9/04
Owner/Developer Signature Date

APPROVED: DEPARTMENT OF PUBLIC WORKS	<i>William F. ...</i>	3-25-04
CHIEF, BUREAU OF HIGHWAYS	NS	DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	<i>...</i>	4/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT	NS	DATE
APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>...</i>	3/21/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	NS	DATE

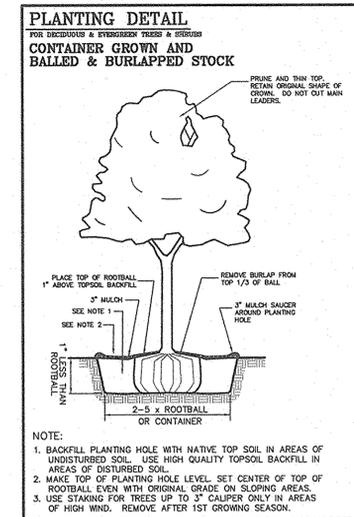
NO.	DATE	REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME: OWINGS PROPERTY		
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E		
5th ELECTION DISTRICT TAX MAP # 40, GRID		
PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE: LANDSCAPE / FOREST CONSERVATION PLAN	OWNERS: MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777	
PREPARED BY: Dewberry & Davis LLC	804 WEST DIAMOND AVE. GAITHERSBURG, MD 20878 TEL: (301) 948-8300 FAX: (301) 258-7607	DEVELOPER: DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 955-6736 (410) 381-8747
DES.: IEV	JOB:	SCALE: 1" = 100'
DRW.: SGB	PROJ.: OZ745	SHEET 26 OF 29
CHK.: MM	DATE: DEC. 2003	

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F-02733

SCHEDULE "A" PERIMETER LANDSCAPE EDGE (TOTAL)		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	± 451'	± 3,162.6'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES, 878'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	NONE, SEE SCHEDULE "A" PERIMETER LANDSCAPE EDGE (FOR EACH PERIMETER) FOR DETAILS.	42.71 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	NA	43 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS

SCHEDULE "A" PERIMETER LANDSCAPE EDGE (FOR EACH PERIMETER)											
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
1	SFD TO SFD	A	± 1209'	NO	NO	20.15	--	--	21	--	--
2	SFD TO SFD	A	± 775'	NO	NO	12.92	--	--	11	--	--
3	SFD TO NON-BUILDABLE PRESERVATION PARCEL	A	± 240'	NO	NO	4	--	--	4	--	--
4	SFD TO BUILDABLE PRESERVATION PARCEL	A	± 338.6'	NO	NO	5.64	--	--	6	--	--
5	SWM#1 TO SFD	B- SEE SCHEDULE "D" FOR DETAILS	± 331'	NO	NO	SEE SCHEDULE "D" FOR DETAILS					
6	BUILDABLE/NON-BUILDABLE PRESERVATION PARCELS TO ROAD	NONE REQUIRED	± 801'	NO	NO	--	--	--	--	--	--
7	SFD TO BUILDABLE/NON-BUILDABLE PRESERVATION PARCELS	A	± 878'	YES, 878' OF EXISTING SPRUCE AND MIXED DECIDUOUS TREES; 6" -18", GOOD CONDITION.	NO	--	--	--	--	--	--
TOTAL TABULATION FOR LOT 3:						42.71	--	--	42	--	--



PLANTING SCHEDULE FOR STREET TREE PLANTING (STREET LENGTH = ± 1,338)						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
67	ORo	QUERCUS ROBUR 'FASTIGIATA'	COLUMNAR ENGLISH OAK	2" - 2 1/2" CAL	B & B	40' O.C. EXCEPT WHERE NOTED ON PLAN

SCHEDULE "D" STORMWATER MANAGEMENT AREA LANDSCAPING		
PERIMETER TYPE	ADJACENT TO INTERNAL DEVELOPMENT	ADJACENT TO PERIMETER PROPERTIES (NON-RESIDENTIAL TO SFD)
LANDSCAPE TYPE	B	B
LINEAR FEET OF PERIMETER	± 704'	± 331'
NUMBER OF TREES REQUIRED SHADE TREES EVERGREEN TREES	14.08 6.62	6.62 8.28
CREDIT FOR EXISTING VEGETATION (NO, YES, AND %)	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES, AND %)	NO	NO
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION)	15 18	7 9

PLANTING SCHEDULE "A" FOR PERIMETER 1--SFD TO SFD (TYPE A EDGE) (PERIMETER LENGTH = ± 1209')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
5	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
5	AS	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN MAPLE	2 1/2"-3" CAL	B & B	
5	TA	TILIA AMERICANA 'REDMONT'	REDMONT LINDEN	2 1/2"-3" CAL	B & B	
6	QA	QUERCUS ALBA	WHITE OAK	2 1/2"-3" CAL	B & B	

PLANTING SCHEDULE "A" FOR PERIMETER 2--SFD TO SFD (TYPE A EDGE) (PERIMETER LENGTH = ± 775')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
6	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
5	AS	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN MAPLE	2 1/2"-3" CAL	B & B	
2	TA	TILIA AMERICANA 'REDMONT'	REDMONT LINDEN	2 1/2"-3" CAL	B & B	
EVERGREEN TREES						
4	PA	PICEA ABIES	NORWAY SPRUCE	6"-8"	B & B	

NOTE TO REVIEWER

1. NO PLANTING SCHEDULE TYPES "B" or "C" ARE REQUIRED FOR THIS PROJECT.

PLANTING SCHEDULE "A" FOR PERIMETER 3--SFD TO NON-BUILDABLE PRESERVATION PARCEL (TYPE A EDGE) (PERIMETER LENGTH = ± 240')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
4	PSa	PRUNUS SARGENTII	SARGENT CHERRY	2 1/2"-3" CAL	B & B	

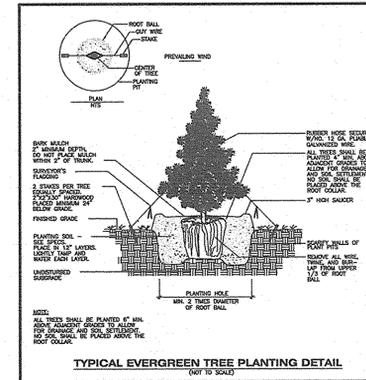
PLANTING SCHEDULE "A" FOR PERIMETER 4--SFD TO PRESERVATION PARCEL (TYPE A EDGE) (PERIMETER LENGTH = ± 338.6')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
6	PSa	PRUNUS SARGENTII	SARGENT CHERRY	2 1/2"-3" CAL	B & B	

PLANTING SCHEDULE "D" FOR PERIMETER 5--SWM#1 TO SFD (TYPE B BUFFER) (PERIMETER LENGTH = ± 331')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
6	BN	BETULA NIGRA 'HERITAGE'	HERITAGE CLUMP BIRCH	10'-12' HEIGHT	B & B	
1	QP	QUERCUS PHELLOS	WILLOW OAK	2 1/2"-3" CAL	B & B	
EVERGREEN TREES						
3	PR	PINUS RESIDA	PITCH PINE	6"-8"	B & B	
3	PV	PINUS VIRGINIANA	VIRGINIA PINE	6"-8"	B & B	
3	PS	PINUS STROBUS	EASTERN WHITE PINE	6"-8"	B & B	

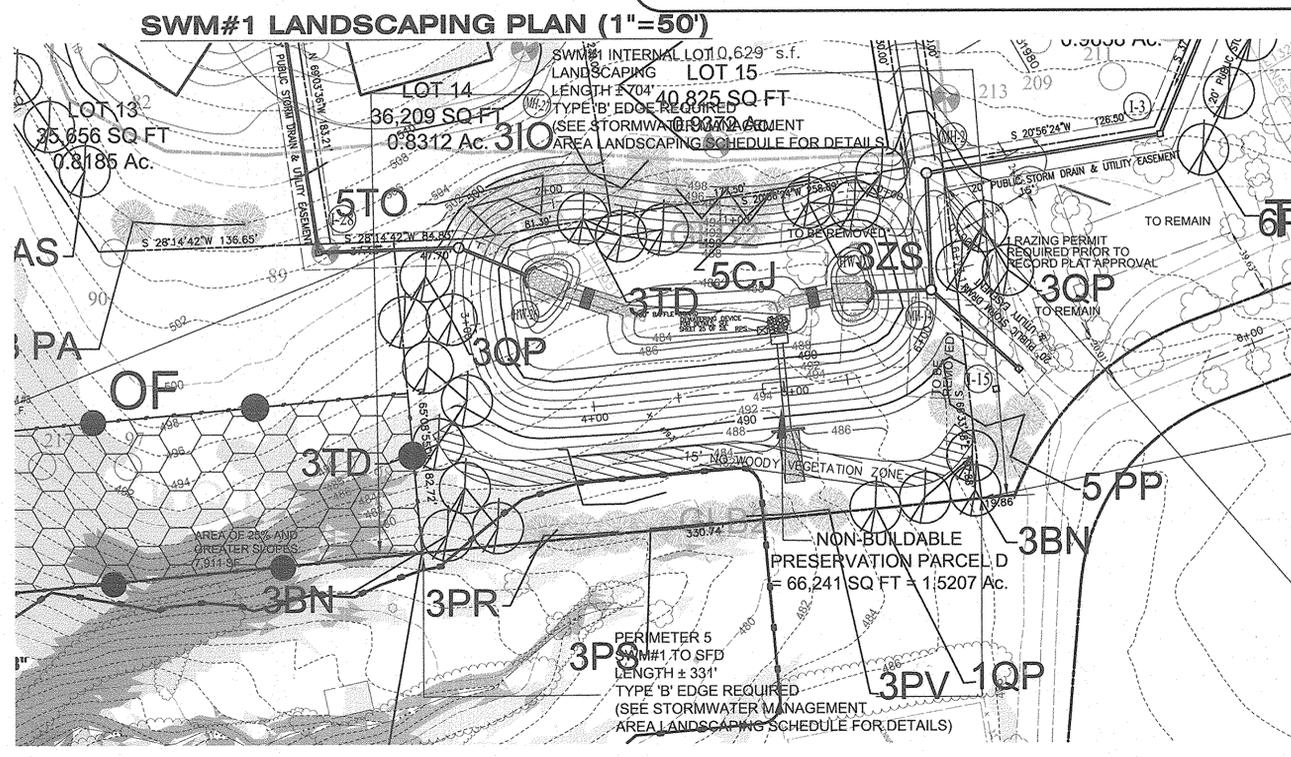
SUMMARY PLANTING SCHEDULE FOR OWINGS LOT 3						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
11	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
8	AS	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN MAPLE	2 1/2"-3" CAL	B & B	
7	TA	TILIA AMERICANA 'REDMONT'	REDMONT LINDEN	2 1/2"-3" CAL	B & B	
6	QA	QUERCUS ALBA	WHITE OAK	2 1/2"-3" CAL	B & B	
6	BN	BETULA NIGRA 'HERITAGE'	HERITAGE CLUMP BIRCH	10'-12' HEIGHT	B & B	
7	QP	QUERCUS PHELLOS	WILLOW OAK	2 1/2"-3" CAL	B & B	
6	TD	TAXODIUM DISTICHUM	COMMON BALD CYPRESS	2 1/2"-3" CAL	B & B	
3	ZS	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN JAPANESE ZELKOVA	2 1/2"-3" CAL	B & B	
67	ORo	QUERCUS ROBUR 'FASTIGIATA'	COLUMNAR ENGLISH OAK	2" - 2 1/2" CAL	B & B	
10	PSa	PRUNUS SARGENTII	SARGENT CHERRY	2 1/2"-3" CAL	B & B	
EVERGREEN TREES						
4	PA	PICEA ABIES	NORWAY SPRUCE	6"-8"	B & B	
3	PV	PINUS VIRGINIANA	VIRGINIA PINE	6"-8"	B & B	
3	PS	PINUS STROBUS	EASTERN WHITE PINE	6"-8"	B & B	
5	TO	THUJA OCCIDENTALIS	WHITE CEDAR	6"-8"	B & B	
5	CJ	CRYPTOMERIA JAPONICA	JAPANESE CRYPTOMERIA	6"-8"	B & B	
5	PP	PICEA PUNGENS	COLORADO SPRUCE	6"-8"	B & B	
3	IO	ILEX OPACA	AMERICAN HOLLY	5"-6"	B & B	

NOTE TO CONTRACTOR:

1. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.



PLANTING SCHEDULE "D" FOR-SWM#1 TO INTERNAL LOT PERIMETERS (TYPE B BUFFER) (PERIMETER LENGTH = ± 704')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
SHADE TREES						
6	TD	TAXODIUM DISTICHUM	COMMON BALD CYPRESS	2 1/2"-3" CAL	B & B	
6	QP	QUERCUS PHELLOS	WILLOW OAK	2 1/2"-3" CAL	B & B	
3	ZS	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN JAPANESE ZELKOVA	2 1/2"-3" CAL	B & B	
EVERGREEN TREES						
5	TO	THUJA OCCIDENTALIS	WHITE CEDAR	6"-8"	B & B	
5	CJ	CRYPTOMERIA JAPONICA	JAPANESE CRYPTOMERIA	6"-8"	B & B	
5	PP	PICEA PUNGENS	COLORADO SPRUCE	6"-8"	B & B	
3	IO	ILEX OPACA	AMERICAN HOLLY	5"-6"	B & B	



APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Mahan Jr.
 CHIEF, BUREAU OF HIGHWAYS 3-25-04 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Colleen...
 CHIEF, DIVISION OF LAND DEVELOPMENT 4/1/04 DATE

Chad...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/23/04 DATE

NO.	DATE	REVISIONS
3	11/18/03	DELETED "A" FROM THE NUMBER OF PLANTS REQUIRED, EVERGREEN TREE TOTAL, TOTAL TABULATION FOR LOT 3.
2	10/15/03	DELETED "A" FROM THE NUMBER OF PLANTS REQUIRED, EVERGREEN TREE TOTAL, TOTAL TABULATION FOR LOT 3.
1	10/6/03	DELETED "A" FROM THE NUMBER OF PLANTS REQUIRED, EVERGREEN TREE TOTAL, TOTAL TABULATION FOR LOT 3.

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E

PROJECT NAME
OWINGS PROPERTY
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID
 HOWARD COUNTY, MARYLAND

TITLE LANDSCAPE NOTES AND DETAILS
 S-01-18 P-02-018 F-03-133

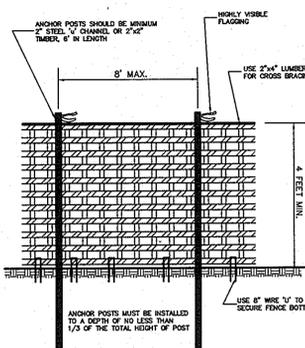
OWNERS: MR. & MRS. HARWOOD OWINGS
 13008 HIGHLAND ROAD
 HIGHLAND, MARYLAND 20777

PREPARED BY: Dewberry & Davis LLC
 203 PERRY PARKWAY
 GAITHERSBURG, MD 20877
 TEL: (301) 949-8300
 FAX: (301) 295-7607

DEVELOPER: DALE THOMPSON BUILDERS
 6300 WOODSIDE COURT
 COLUMBIA, MARYLAND 21046
 (410) 995-6736
 (410) 381-8747

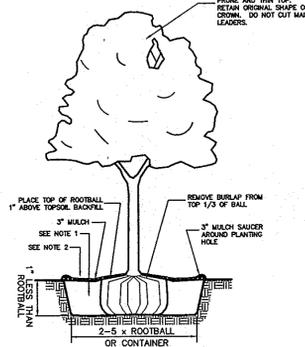
DES.: IEV **JOB:**
DRW.: SGB **PROJ.:** OZ745 **SCALE:** 1" = 100' **SHEET 27 OF 29**
CHK.: MM **DATE:** DEC. 2003

TREE PROTECTION FENCING
BLAZE ORANGE PLASTIC MESH



- NOTE:
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREAS SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOT DAMAGE SHOULD BE AVOIDED.
 5. PROTECTIVE SIGNAGE IS REQUIRED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

PLANTING DETAIL
CONTAINER GROWN AND BALLED & BURLAPPED STOCK



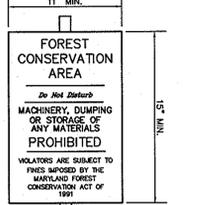
- NOTE:
1. BACKFILL PLANTING HOLE WITH NATIVE TOP SOIL IN AREAS OF UNDISTURBED SOIL. USE HIGH QUALITY TOPSOIL BACKFILL IN AREAS OF DISTURBED SOIL.
 2. MAKE TOP OF PLANTING HOLE LEVEL. SET CENTER OF TOP OF ROOTBALL EVEN WITH ORIGINAL GRADE ON SLOPING AREAS.
 3. USE STAKING FOR TREES UP TO 3\"/>

SIGNAGE
AFFORESTATION AREAS



- NOTE:
1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 2. SIGNS SHOULD BE PROPERLY MAINTAINED.
 3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR SIGNS.
 4. SIGNS SHOULD BE PLACED AT A MAX. INTERVAL OF 100' ALONG ALL REFORESTATION AREAS (PLACE ALONG REFORESTATION FENCE IF INSTALLED)

SIGNAGE
FOREST RETENTION AREAS



- NOTE:
1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 2. SIGNS SHOULD BE PROPERLY MAINTAINED.
 3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR SIGNS.
 4. SIGNS SHOULD BE PLACED AT A MAX. INTERVAL OF 100' ALONG ALL L.O.D.'S AND/OR STREAM BUFFERS IN AREAS OF FOREST RETENTION.

FCE NOTES

1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
2. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
4. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
7. PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.

THE AREA OF STREAM BUFFER/REFORESTATION PLANTING SHALL BE PROTECTED DURING CONSTRUCTION PER THE FOLLOWING:

FOREST PROTECTION PROCEDURES-PRECONSTRUCTION PHASE
STRESS REDUCTION AND PROTECTION OF SPECIMEN TREES ISOLATED FROM FOREST RETENTION AREAS AND GENERAL FOREST RETENTION AREAS (AS THEY MAY APPLY)

- 1) THE EDGE OF THE WOODS TO BE PROTECTED WILL BE MARKED (STAKED OR FLAGGED) IN THE FIELD PER THE LIMITS OF DISTURBANCE SHOWN IN THE APPROVED FINAL CONSTRUCTION PLAN PRIOR TO THE START OF CONSTRUCTION ACTIVITY. ALL AREAS WITHIN PROTECTIVE FENCES ARE TO BE CONSIDERED "OFF LIMITS" TO ANY CONSTRUCTION ACTIVITIES. THE PROTECTIVE FENCING SHALL BE INSTALLED AT THE OUTSIDE EDGE OF FORESTED AREAS AND SPECIMEN TREES TO BE RETAINED AND SHOULD BE COMBINED WITH SEDIMENT CONTROL DEVICES WHEN POSSIBLE. THE LIMIT OF CRITICAL ROOT ZONE AND THEREFORE THE LOCATION OF THE PROTECTIVE DEVICES IS TO BE DETERMINED AS FOLLOWS:

- A) ISOLATED SPECIMEN TREES- 1.5 FEET OF PROTECTIVE RADIUS PER INCH OF DBH
- B) EDGE OF FORESTED AREA- 1 FOOT OF PROTECTIVE RADIUS/INCH OF DBH OR AN EIGHT FOOT PROTECTIVE RADIUS, WHICHEVER IS GREATER.

- A) PLACING OR STOCKPILING BACKFILL OR TOP SOIL IN PROTECTED AREAS
- B) FELLING TREES INTO PROTECTED AREAS
- C) DRIVING CONSTRUCTION EQUIPMENT INTO OR THROUGH PROTECTED AREAS
- D) BURNING IN OR IN CLOSE PROXIMITY TO PROTECTED AREAS
- E) STACKING OR STORING SUPPLIES OF ANY KIND
- F) CONCRETE WASH-OFF AREAS
- G) CONDUCTING TRENCHING OPERATIONS
- H) GRADING BEYOND THE LIMITS OF DISTURBANCE
- I) PARKING VEHICLES OR CONSTRUCTION EQUIPMENT
- J) REMOVAL OR ROOT MAT OR TOPSOIL
- K) SIGHTING AND CONSTRUCTION OF: UTILITY LINE, ACCESS ROADS, IMPERVIOUS SURFACES, STORM WATER MANAGEMENT DEVICES, AND STAGING AREAS

- 3) PROTECTIVE FENCING (SEE FIGURE "PROTECTIVE FENCING") SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL AFFIX SIGNS TO THE FENCING AT 25' MINIMUM INTERVALS INDICATING THAT THESE AREAS ARE "FOREST RETENTION AREA" OR "SPECIMEN TREE" (SEE FIGURE "SIGNAGE"). THE GENERAL CONTRACTOR SHALL TAKE GREAT CARE TO ASSURE THE RESTRICTED AREAS ARE NOT VIOLATED AND THAT ROOT SYSTEMS ARE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN-OFF, SPILLAGE AND DRAINAGE OR SOLUTIONS CONTAINING MATERIALS HAZARDOUS TO TREE ROOTS.

- 4) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TREE DAMAGED OR DESTROYED WITHIN THE PRESERVATION AREAS WHETHER CAUSED BY THE CONTRACTOR, HIS AGENTS, EMPLOYEES, SUBCONTRACTORS, OR LICENSEES.

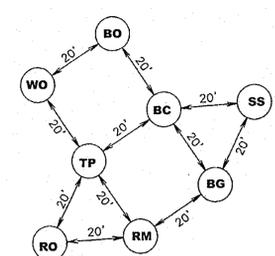
- 5) FOOT TRAFFIC SHALL BE KEPT TO A MINIMUM IN THE PROTECTIVE AREAS.

- 6) ALL TREES WHICH ARE NOT TO BE PRESERVED WITHIN FIFTY FEET OF ANY TREE PRESERVATION AREAS ARE TO BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THOSE TREES THAT ARE DESIGNATED FOR PRESERVATION. IT IS HIGHLY RECOMMENDED THAT TREE STUMPS WITHIN THIS FIFTY FOOT AREA BE GROUND OUT WITH A STUMP GRINDING MACHINE TO MINIMIZE DAMAGE.

- 7) THE GENERAL CONTRACTOR SHALL DESIGNATE A "WASH OUT" AREA ON-SITE FOR CONCRETE TRUCKS WHICH WILL NOT DRAIN TOWARD A PROTECTED AREA.

- 8) A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH LOCAL AUTHORITIES BEFORE ANY DISTURBANCE HAS TAKEN PLACE ON SITE.

TYPICAL PLANTING DIAGRAM



- WO= WHITE OAK
BO= BLACK OAK
TP= TULIP POPLAR
BC= BLACK CHERRY
RM= RED MAPLE
BG= BLACK GUM
SS= SHADBLOW SERVICEBERRY
RO= RED OAK

NOTE TO CONTRACTOR:

1. THE CONTRACTOR SHOULD REMOVE ANY DEAD OR DISEASED TREES.
2. TREES ARE TO BE PLACED IN A RANDOM PATTERN TO CREATE A NATURAL EFFECT. THEY ARE TO BE MIXED IN THE RATIOS DESCRIBED ABOVE AND THEY ARE TO BE SPACED APPROXIMATELY 20 FEET APART.

PLANTING PLAN

THE TREE SPECIES SELECTED ARE CONSISTENT WITH THE MIXED UPLAND OAK ASSOCIATION NATIVE TO THE SOILS. THE COUNTY MANUAL RECOMMENDS A PLANTING DENSITY OF 100 STEMS PER ACRE IF 2" STOCK IS PLANTED, AND THE SCHEDULE BELOW MEETS THAT RECOMMENDATION. SPECIES WILL BE RANDOMLY MIXED AND PLANTED APPROXIMATELY 20' APART FROM OTHER PLANTINGS. STRAIGHT ROWS SHOULD BE AVOIDED TO SIMULATE A MORE NATURAL ARRANGEMENT. THE TOTAL NUMBER OF PLANTS WILL BE 126 TREES BASED ON 1.26 ACRES AT 100 TREES/ACRES.

(PIONEER)	(CLIMAX)
TULIP POPLAR DOM.	BLACK GUM DOM.
BLACK CHERRY (UNDERSTORY)	S. RED OAK DOM.
FLOWERING DOGWOOD (UNDERSTORY)	BLACK GUM (UNDERSTORY)
	RED MAPLE (UNDERSTORY)
	WHITE OAK DOM.

TREE PLANTING LIST	COMMON NAME	SCIENTIFIC NAME	%	QUANTITY
	WHITE OAK	QUERCUS ALBA	15	19
	BLACK OAK	QUERCUS VELUTINA	15	19
	S. RED OAK	QUERCUS FALCATA	15	19
	TULIP POPLAR	LIRIODENDRON TULIPIFERA	15	19
	BLACK CHERRY	PRUNUS SEROTINA	10	13
	RED MAPLE	ACER RUBRUM	10	13
	BLACK GUM	NYSA SYLVATICA	10	12
	SHADBLOW SERVICEBERRY	AMELACHIER CANADENSIS	10	12

OTHER PLANTING INSTRUCTIONS

PLANT MATERIAL SHOULD BE OBTAINED FROM A REPUTABLE NURSERY AND ORDERED 3 TO 6 MONTHS BEFORE DESIRED DELIVERY. DELIVERY SHOULD BE ARRANGED TO OCCUR AS CLOSE TO PLANTING TIME AS POSSIBLE, AND STOCK SHOULD BE PROTECTED FROM DIRECT SUN AND DRYING UNTIL PLANTING. PLANTING DATES ARE OCTOBER THROUGH MAY, WITH SPRING MONTHS PREFERRED.

STOCK SHOULD BE INSPECTED BEFORE PLANTING FOR SIGNS OF DAMAGE, DISEASE, OR INSECT INFESTATION, VIGOR, AND SIZE. DAMAGED OR INFERIOR PLANTS SHOULD BE REPLACED.

UPON PLANTING CONTAINER GROWN STOCK, PLANTS SHOULD BE REMOVED FROM THE CONTAINER AND THE SOIL GENTLY LOOSENED FROM THE ROOTS. IF ROOTS ENCIRCLE THE ROOT BALL, OR ARE J-SHAPED OR KINKED, CONSIDER REPLACEMENT. DO NOT TRIM ROOTS ON-SITE.

THE PLANTING FIELD SHOULD BE DUG AND BACK FILLED WITH THE NATIVE SOIL. RAKE THE SURFACE AND COVE THE DISTURBED AREAS WITH APPROXIMATELY 4 INCHES OF MULCH, BUT AVOID BURYING THE BASE OF THE STEM TO PREVENT FUNGAL ROT. WATER IMMEDIATELY TO SETTLE THE SOIL AROUND THE ROOTS.

MAINTENANCE AND PROTECTION OF PLANTED AREA

SOILS SHOULD BE TESTED TO DETERMINE THE NEED FOR FERTILIZER. IF FERTILIZER IS NEEDED, IT SHOULD BE APPLIED AT THE TESTING LAB'S RECOMMENDED RATES AFTER THE FIRST GROWING SEASON (LATE FALL OR EARLY SPRING). ORGANIC OR SLOW-RELEASE FERTILIZERS ARE PREFERRED.

WATERING SHOULD BE PLANNED TO COMPENSATE FOR DEFICIENT RAINFALL. NEW PLANTINGS NEED WATER ONCE A WEEK FOR THE FIRST GROWING SEASON. THE SECOND YEAR, WATERING MAY ONLY BE NECESSARY IN JULY AND AUGUST, AND IN SUBSEQUENT YEARS ONLY WATER DURING DROUGHT PERIODS. WATERING SHOULD BE DONE SLOWLY ENOUGH TO PERMIT DEEP SOAKING OF THE ROOT ZONE.

MONITOR THE YOUNG TREES FOR SEVERAL YEARS FOR HEALTH, INSECT DAMAGE, AND INVASIVE VINES. REPLACE DEAD AND DYING TREES. THE SURVIVAL RATE SHALL BE A MINIMUM OF 90% OF THE PLANTINGS AFTER THE FIRST GROWING SEASON, AND 75% AFTER THE SECOND SEASON. DO NOT SPRAY INSECTICIDES UNLESS IT HAS BEEN DETERMINED THAT AN INFESTATION WITH THE POTENTIAL TO THREATEN THE SURVIVAL OF THE TREES IS PRESENT. CONTROL INVASIVE VINES MANUALLY, OR BY CAREFUL AND SELECTIVE USE OF APPROPRIATE HERBICIDE.

POST PROTECTIVE SIGNAGE THAT STATES THAT THIS AREA IS A FOREST CONSERVATION AREA AND TREES HAVE BEEN PLANTED FOR REFORESTATION. AN EFFORT SHOULD BE MADE TO INFORM AND GAIN THE COOPERATION OF THE ADJACENT RESIDENTS TO MONITOR AND PROTECT THE PLANTINGS.

FOREST PROTECTION PLAN

THE FOREST CONSERVATION AND REFORESTATION AREAS WILL NEED TO BE PROTECTED FROM INJURY DURING THE LAND CLEARING AND CONSTRUCTION PROCESS, AND FROM ANY FUTURE LAND USE CHANGES. LONG-TERM PROTECTION WILL REQUIRE FLAGGING OF THE FOREST IN A PERMANENT, UNDEVELOPED, NON-DEVELOPABLE, OPEN SPACE OR CONSERVATION EASEMENT. THE LEGAL DOCUMENT ESTABLISHING THIS PROTECTION WILL BE REQUIRED FOR FINAL FCP APPROVAL.

CONSTRUCTION PHASE

PROTECTIVE MEASURES DURING THE CONSTRUCTION STAGE WILL FOCUS ON PROTECTING THE CRITICAL ROOT ZONE OF THE RETAINED TREES ALONG THE NEW FOREST EDGE. THE FINAL LOD LINE WILL BE STAKED IN THE FIELD BY A QUALIFIED PROFESSIONAL WHO WILL DETERMINE WHICH INDIVIDUAL TREES WILL BE SAVED, AND THE EXTENT OF THE CRITICAL ROOT ZONE BASED ON TREE SPECIES AND SIZE. THE RESULTING BOUNDARY WILL BE FENCED WITH APPROVED FENCING AND POSTED AS A TREE PRESERVATION AREA, AND NO DISTURBANCE TO THE VEGETATION WITHIN THE RETENTION AREA WILL BE ALLOWED, EXCEPT THAT WHICH MAY BE NECESSARY TO MANAGE THE HEALTH OF THE TREES, SUCH AS THINNING, PRUNING, OR VINE CONTROL. ANY GRADING AND CONSTRUCTION THAT WILL OCCUR UPHILL FROM THE FOREST WILL REQUIRE SEDIMENT CONTROL MEASURES SUCH AS A SILT FENCE OR OTHER DEVICE THAT WILL PREVENT SILTATION IN THE CRITICAL ROOT ZONE OF RETAINED TREES.

TWO-YEAR POST-CONSTRUCTION MANAGEMENT PROGRAM

HOWARD COUNTY REQUIRES THE DEVELOPER TO COMMIT TO A MINIMUM OF TWO YEARS OF RESPONSIBILITY FOR THE MANAGEMENT OF THE FOREST CONSERVATION AREA. THE PROGRAM MUST BE SUPERVISED BY A QUALIFIED PROFESSIONAL. THE OBLIGATIONS INCLUDE: PERIODIC (BEGINNING AND END OF GROWING SEASON) INSPECTION OF THE CONDITION OF THE FOREST; NECESSARY MANAGEMENT SUCH AS MAINTENANCE OF FENCING AND SIGNAGE, TREATMENT OR REMOVAL OF DAMAGED OR DYING TREES, OR INVASIVE PLANT CONTROL; EVALUATION OF NEW LAND OWNERS OR OCCUPANTS ABOUT ALLOWABLE ACTIVITIES AND FUTURE RESPONSIBILITIES FOR THE FOREST; AND A FINAL INSPECTION AND CERTIFICATION THAT THE FOREST IS INTACT AND THE CONDITIONS OF THE FCP HAVE BEEN MET SUBMITTED TO THE COUNTY. UPON REVIEW OF THE FINAL CERTIFICATION, THE COUNTY WILL NOTIFY THE DEVELOPER OF RELEASE FROM ALL FUTURE OBLIGATIONS, AND THEIR TRANSFERAL TO THE OWNER.

FOREST CONSERVATION EASEMENT STANDARD NOTES:

THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.12000 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

APPENDIX E
FOREST CONSERVATION WORKSHEET

I. BASIC SITE DATA	
GROSS SITE AREA	24.50 ACRES
AREA WITHIN 100 YEAR FLOOD PLAIN	0.00 ACRES
AREA WITHIN PRESERVATION PARCEL	0.00 ACRES
(IF APPLICABLE)	
NET TRACT AREA	24.50 ACRES
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C10, I)	R-S

II. INFORMATION FOR CALCULATIONS	
A. NET TRACT AREA	24.50 ACRES (A)
B. REFORESTATION THRESHOLD (25% X A)	6.13 ACRES (B)
C. AFFORESTATION MINIMUM (20% X A)	4.90 ACRES (C)
D. EXISTING FOREST ON NET TRACT AREA	3.64 ACRES (D)
E. FOREST AREAS TO BE CLEARED	0.00 ACRES (E)
F. FOREST AREAS TO BE RETAINED	3.64 ACRES (F)

- III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION
1. REFORESTATION:

IF EXISTING FOREST AREAS EQUAL OR EXCEED THE AFFORESTATION MINIMUM (IF D EQUALS OR IS MORE THAN C), AND CLEARING OF FOREST AREAS IS PROPOSED, REFORESTATION REQUIREMENTS MAY APPLY.

GO TO SECTION IV

- IV. REFORESTATION CALCULATIONS
- | | |
|--------------------------------------|-----------------|
| V. AFFORESTATION CALCULATIONS | |
| A. NET TRACT AREA | 24.50 ACRES (A) |
| B. AFFORESTATION MINIMUM (20% X A) | 4.90 ACRES (C) |
| C. EXISTING FOREST ON NET TRACT AREA | 3.64 ACRES (D) |
| D. FOREST AREAS TO BE CLEARED | 0.00 ACRES (E) |
| E. FOREST AREAS TO BE RETAINED | 3.64 ACRES (F) |

GO TO SECTION V

- SELECT THE ALTERNATIVE THAT APPLIES:
1. NO CLEARING BELOW THE MINIMUM

IF EXISTING FOREST ARE LESS THAN THE AFFORESTATION MINIMUM (IF D IS LESS THAN C) AND NO CLEARING IS PROPOSED, THE FOLLOWING CALCULATIONS APPLY:

TOTAL AFFORESTATION REQUIRED	1.26 ACRES (G)
C0	
AFFORESTATION MUST MAKE TOTAL FOREST AREA EQUAL TO THE MINIMUM REQUIRED.	

2. CLEARING BELOW THE MINIMUM

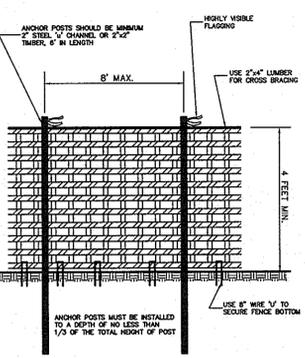
IF EXISTING FORESTS ARE LESS THAN THE AFFORESTATION MINIMUM (IF D IS LESS THAN C) AND CLEARING IS PROPOSED, THE FOLLOWING CALCULATIONS APPLY:

AFFORESTATION FOR FORESTED AREAS BELOW MINIMUM	N/A
C0	
AFFORESTATION FOR CLEARING BELOW MINIMUM	N/A
E X 2	
TOTAL AFFORESTATION REQUIRED	N/A
(C0) + (E X 2)	

- VI. TOTAL AFFORESTATION AND REFORESTATION REQUIREMENT: 1.26 ACRES
- VII. PROPOSED QUANTITY OF AFFORESTATION AND REFORESTATION ON-SITE: 1.26 ACRES

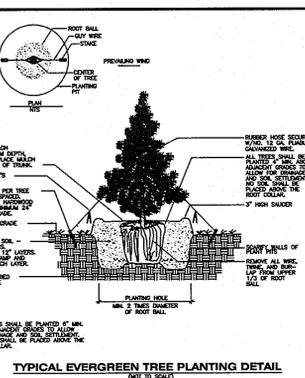
AFFORESTATION REQUIREMENT WILL BE SATISFIED BY:
1. 1.26 ACRES OF ON-SITE AFFORESTATION.

REFORESTATION FENCING
BLAZE ORANGE PLASTIC MESH



- NOTE:
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREAS SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOT DAMAGE SHOULD BE AVOIDED WHEN INSTALLING DEVICE.
 5. PROTECTIVE SIGNAGE IS REQUIRED. 10' MAX SPACING ALONG ALL L.O.D.'S AND/OR STREAM BUFFERS.
 6. DEVICE SHOULD BE MAINTAINED AFTER CONSTRUCTION AND MAINTAINED FOR 2 YEARS.

TYPICAL EVERGREEN TREE PLANTING DETAIL
(10' TO 20' SIZE)



APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. Mahan Jr. 3-25-04
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Colleen... 4/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF ENGINEERING
... 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO. DATE REVISIONS

PROJECT NAME: OWINGS PROPERTY

LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
5th ELECTION DISTRICT TAX MAP # 40, GRID
PARCEL 44
HOWARD COUNTY, MARYLAND

TITLE: FOREST CONSERVATION NOTES AND DETAILS
S-01-18 P-02-018 F-03-133

PREPARED BY: Dewberry & Davis LLC
203 PERRY PARKWAY
GAITHERSBURG, MD 20877
TEL: (301) 946-6200
FAX: (301) 258-7607

DEVELOPER: DALE THOMPSON BUILDERS
6300 WOODSIDE COURT
COLUMBIA, MARYLAND 21046
(410) 995-6736
(410) 381-8747

DRW.: SGB JOB: SCALE: SHEET 28 OF 29
CHK.: MM DATE: DEC. 2003 NA

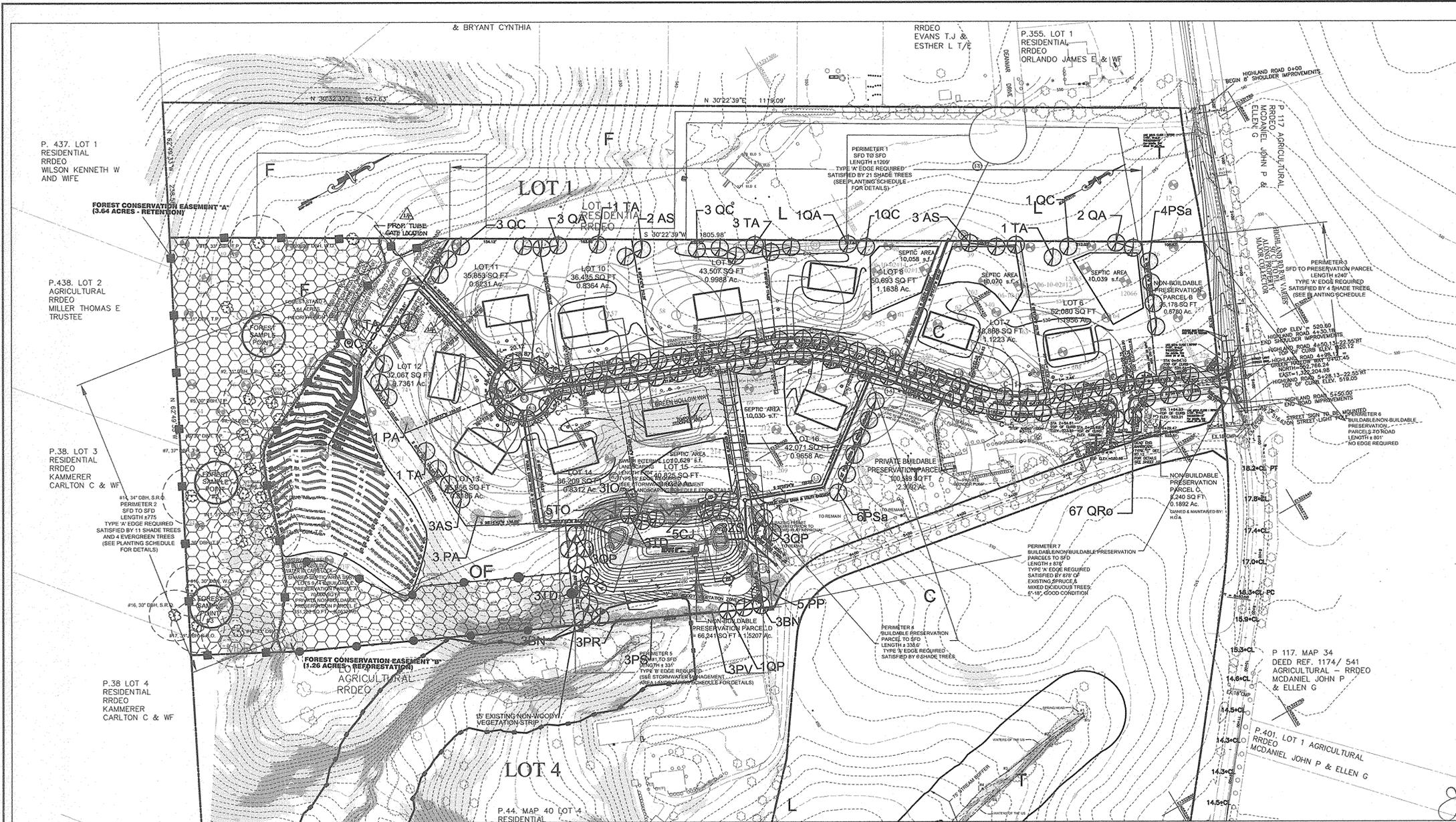


NOTE:
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WITHIN THE FOREST. THE START OF EXCAVATION SHOULD BE "MISS UTILITY" AT 1400-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT
APPROVED: DEPARTMENT OF ENGINEERING
CHIEF, DEVELOPMENT ENGINEERING DIVISION

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of Howard County Code and the Landscape Manual. I further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plan materials will be submitted to the Department of Planning and Zoning.

Owner/Developer Signature: *...* Date: 4/2/2004

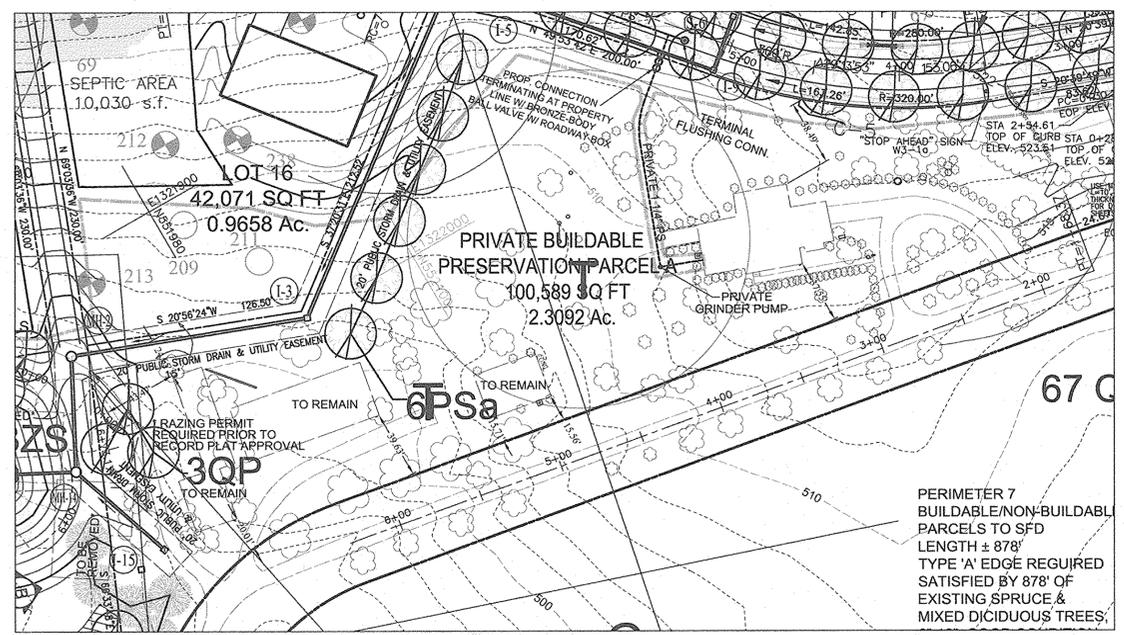


- ### GENERAL NOTES
- TOTAL AREA OF TRACT: 24.50 Ac.; 1,067,230 sq. ft.
 - EXISTING ZONING: RRDEO
 - BOUNDARY FROM TAX MAP (40)
 - TOPOGRAPHY FROM SURVEY CONTOUR INTERVAL 2 FEET
 - THERE ARE NO 100-YEAR FLOODPLAINS ON THIS SITE ACCORDING TO AVAILABLE INFORMATION (MDMRLIN.NET), AND SITE VISIT.
 - THERE ARE NO WETLANDS AND BUFFERS ON THIS SITE ACCORDING TO MDMRLIN.NET, AND SITE VISIT.
 - THE PRESENCE OF RARE, THREATENED & ENDANGERED SPECIES, OR CRITICAL HABITATS IS CURRENTLY BEING INVESTIGATED BY DNR.
 - THERE ARE NO CULTURAL OR HISTORIC FEATURES ON THIS SITE ACCORDING TO MDMRLIN.NET.
 - THE SUBJECT PROPERTY FALLS WITHIN THE ROCKY GORGE DAM SUB-WATERSHED (USE CLASS 1), OF THE PATUXENT WATERSHED.
 - THERE IS ONE FOREST STAND ON THIS SITE TOTALING 3.64 ACRES. SITE INVESTIGATIONS PERFORMED ON 2/10/12, BY DEWBERRY & DAVIS LLC.
 - THERE ARE NO HYDRIC SOILS ON THE SUBJECT PROPERTY ACCORDING TO THE HOWARD COUNTY SOIL SURVEY OF MARYLAND.

SPECIMEN TREE IDENTIFICATION LIST

BOTANICAL NAME/COMMON NAME	TRUNK Ø (DBH)	TREE HEIGHT	TREE CANOPY	TREE CONDITION
1. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	65'	40'	GOOD
2. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	60'	30'	FAIR
3. <i>Liriodendron tulipifera</i> TULIP POPLAR	32"	60'	20'	POOR
4. <i>Liriodendron tulipifera</i> TULIP POPLAR	30"	50'	30'	FAIR
5. <i>Liriodendron tulipifera</i> TULIP POPLAR	30"	50'	30'	GOOD
6. <i>Liriodendron tulipifera</i> TULIP POPLAR	30"	55'	30'	GOOD-TWIN
7. <i>Liriodendron tulipifera</i> TULIP POPLAR	37"	50'	35'	GOOD
8. <i>Liriodendron tulipifera</i> TULIP POPLAR	41"	60'	40'	FAIR
9. <i>Quercus falcata</i> SOUTHERN RED OAK	32"	50'	25'	FAIR
10. <i>Liriodendron tulipifera</i> TULIP POPLAR	36"	45'	30'	FAIR
11. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	60'	40'	GOOD-TWIN
12. <i>Liriodendron tulipifera</i> TULIP POPLAR	34"	45'	40'	GOOD
13. <i>Liriodendron tulipifera</i> TULIP POPLAR	36"	65'	40'	EXCELLENT
14. <i>Quercus falcata</i> SOUTHERN RED OAK	34"	55'	40'	GOOD
15. <i>Quercus alba</i> WHITE OAK	30"	60'	45'	POOR
16. <i>Quercus falcata</i> SOUTHERN RED OAK	30"	60'	40'	FAIR
17. <i>Quercus falcata</i> SOUTHERN RED OAK	31"	60'	50'	GOOD
18. <i>Liriodendron tulipifera</i> TULIP POPLAR	43"	65'	40'	GOOD
19. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	60'	50'	GOOD
20. <i>Quercus alba</i> WHITE OAK	33"	65'	40'	GOOD

STRUCTURES TO REMAIN FOR PRESERVATION PARCEL A (1"=50')



LEGEND

- FOREST RETENTION AREA SIGN
- AFFORESTATION AREA SIGN
- CRITICAL ROOT ZONE (CRZ) (ESTIMATED RADIUS = 1.5 X DBH)
- EXIST. TREE >24" D.B.H.
- ▨ AREAS WITH 15-25% SLOPES
- ▩ AREAS WITH 25% & GREATER SLOPES
- TREE LINE
- FOREST SAMPLE POINT #1
- C CROPS
- F FOREST
- T GROUP OF TREES
- O OPEN FIELD

NOTE
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MMS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

LEGEND

- LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE (TO BE INSTALLED PRIOR TO CONSTRUCTION)
- REFORESTATION FENCE (TO BE INSTALLED AFTER PLANTING)
- EXIST. TREE >24" D.B.H.
- TREE >24" D.B.H. TO BE REMOVED
- ▨ FOREST CONSERVATION EASEMENTS (RETENTION AND AFFORESTATION)
- PROPOSED FOREST RETENTION AREA SIGN (TO BE INSTALLED PRIOR TO CONSTRUCTION) (9 TOTAL)
- PROPOSED REFORESTATION AREA SIGN (TO BE INSTALLED AFTER CONSTRUCTION) (11 TOTAL)

REVISION NO. 1 IS BY DALE THOMPSON BUILDERS, INC. THE ENGINEER'S SEAL AND SIGNATURE ARE HEREWITH AFFIXED

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of Howard County Code and the Landscape Manual. I further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plan materials will be submitted to the Department of Planning and Zoning.

Owner/Developer Signature: *Clayton H. ...* Date: 3/9/04

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 3-25-04
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Clayton H. ... 4/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Dale Thompson 3/21/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO. 10-04-07 DATE REMOVED EXISTING FENCING FROM STREET TO PROP. GATE LOCATION REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E

PROJECT NAME: **OWINGS PROPERTY**
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID
 PARCEL 44 HOWARD COUNTY, MARYLAND

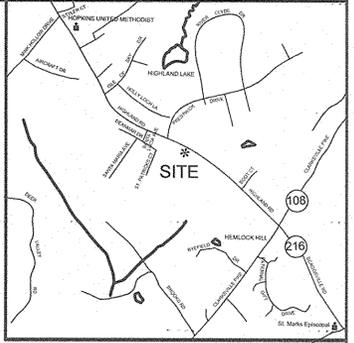
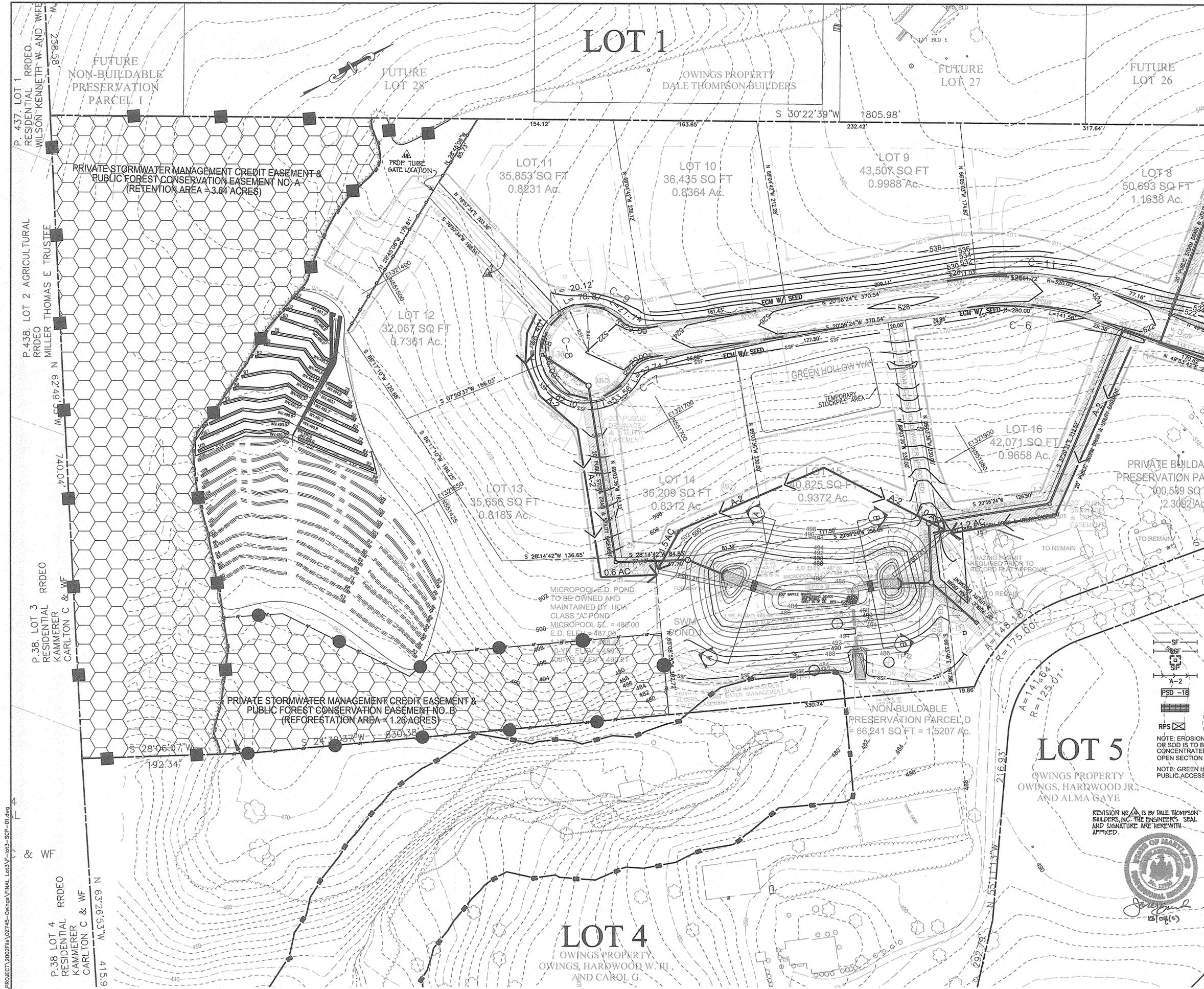
TITLE: **LANDSCAPE / FOREST CONSERVATION PLAN**
 S-01-18 P-02-018 F-03-133

OWNERS: MR. & MRS. HARWOOD OWINGS
 13009 HIGHLAND ROAD
 HIGHLAND, MARYLAND 20777

PREPARED BY: **Dewberry & Davis LLC**
 804 WEST DIAMOND AVE.
 GAITHERSBURG, MD 20878
 TEL: (301) 948-8300
 FAX: (301) 258-7607

DEVELOPER: DALE THOMPSON BUILDERS
 6300 WOODSIDE COURT
 COLUMBIA, MARYLAND 21046
 (410) 955-5736
 (410) 381-8747

DES.: IEV JOB:
 DRW.: SGB PROJ.: 02745 SCALE: 1" = 100'
 CHK.: MM DATE: DEC. 2003 SHEET 26 OF 29



NOTE
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS IN HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION CONTACT 'MISCELLANEOUS' AT 1-800-273-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

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 START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE 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.

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS 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 SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 SIGNATURE *Ronald M. Mijan* 3/13/04
 PRINTED NAME OF ENGINEER **Ronald M. Mijan** DATE

BY THE DEVELOPER:
 I HEREBY 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 EMPLOY 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 *Dale H. Thompson* 3/9/04
 PRINTED NAME OF DEVELOPER **DALE H. THOMPSON** DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE 3/6/04
 DATE
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 DISTRICT HOWARD SOIL CONSERVATION LIST 3/6/04
 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Walter E. ... 3-25-04
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy ... 4/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Chris ... 3/29/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MATCHLINE SEE SHEET 22

LEGEND

- EXISTING 2 FOOT CONTOURS
 - EXISTING 10 FOOT CONTOURS
 - LIMITS OF DISTURBANCE
 - SILT FENCE
 - SUPER SILT FENCE
 - STANDARD INLET PROTECTION
 - EARTH DIKE
 - PIPE SLOPE DRAIN
 - EROSION CONTROL MATTING W/ SEED
 - REMOVABLE PUMPING STATION
- NOTE: EROSION CONTROL MATTING W/ SEED OR SOD IS TO BE PROVIDED IN ALL AREAS OF CONCENTRATED FLOW SUCH AS SWALES, OPEN SECTION ROAD DITCHES, ETC.
 NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

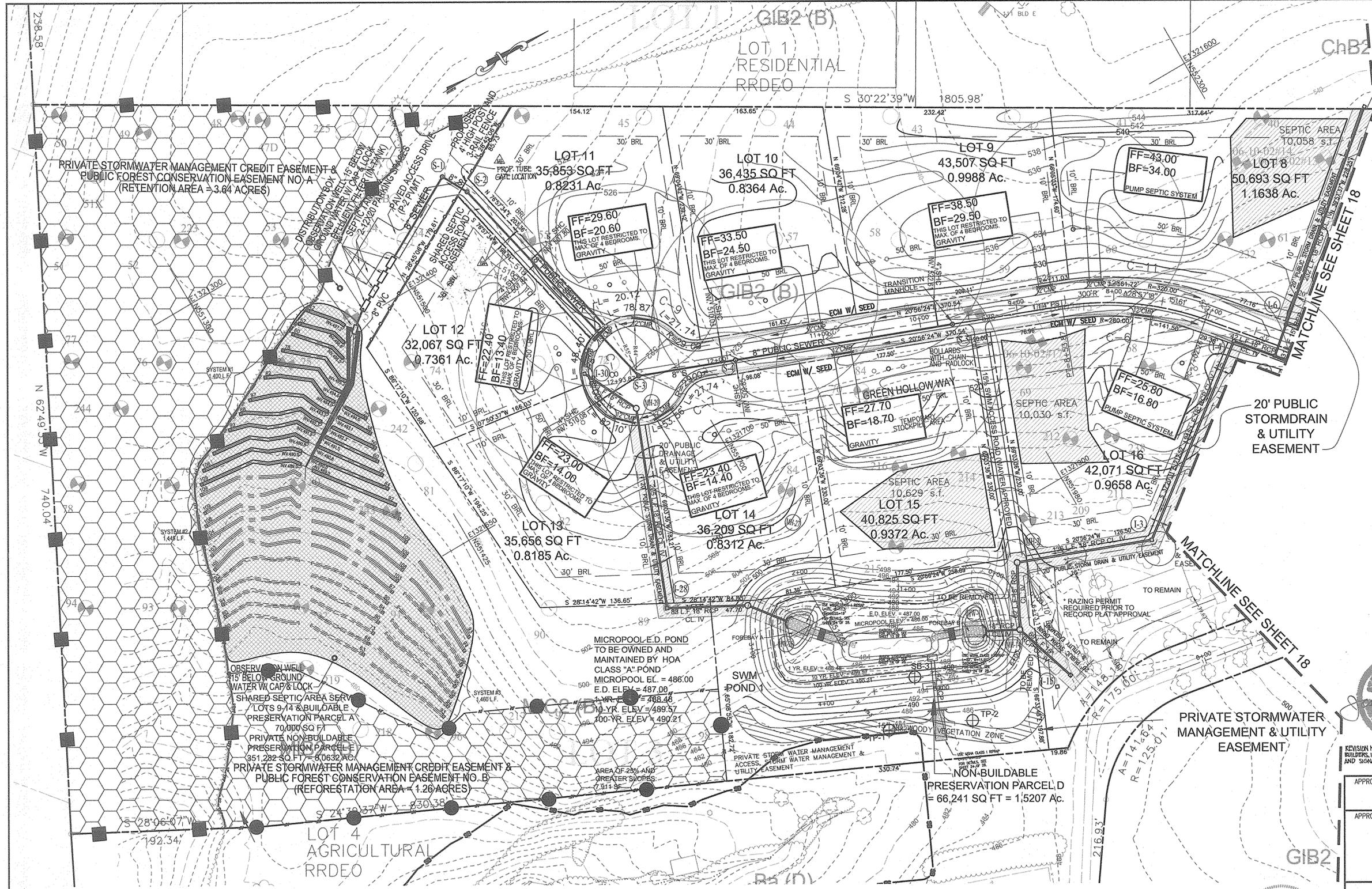
NO.	10-D4-DT	REMOVED EXISTING FENCING FROM STREET TO PROP. GATE LOCATION
DATE		REVISIONS
A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E		
PROJECT NAME OWINGS PROPERTY		
LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44 HOWARD COUNTY, MARYLAND		
TITLE	SEDIMENT CONTROL - PHASE 2	
PREPARED BY:	Dewberry & Davis LLC A Detsky Company	
DES.:	IEV	JOB: XXX
DRW.:	SGB	PROJ.: 02745
CHK.:	MM	DATE: DEC. 2003
TITLE	OWINGS PROPERTY	
OWNERS:	MR. & MRS. HARWOOD OWINGS 13009 HIGHLAND ROAD HIGHLAND, MARYLAND 20777	
DEVELOPER:	DALE THOMPSON BUILDERS 6300 WOODSIDE COURT COLUMBIA, MARYLAND 21046 (410) 995-6736 (410) 381-8747	
SCALE:	1" = 50'	
SHEET 21 OF 29		

P:\PROJECT\2002\10\02745-OWINGS\FINAL\Lot3\F-1013-SCP-01.dwg



Ronald M. Mijan
 12/04/03

F-03-133



ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature of Engineer: *Rudolf M. Nijm* DATE: 3/3/04

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE REEMER NECESSARY.
 Signature of Developer: *[Signature]* DATE: 3/3/04

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE DATE: _____
 THE DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. DATE: _____
 DISTRICT HOWARD SOIL CONSERVATION LIST DATE: _____
 APPROVED: DEPARTMENT OF PUBLIC WORKS DATE: _____
 CHIEF, BUREAU OF HIGHWAYS DATE: _____
 APPROVED: DEPARTMENT OF PLANNING AND ZONING DATE: _____
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: _____
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: _____

LEGEND

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- PERC TEST HOLE: PASSED
- PERC TEST HOLE: FAILED
- PROPOSED WELL LOCATION
- FOREST CONSERVATION EASEMENT
- PROPOSED SHARED SEPTIC AREA
- EXISTING 15-24.9% SLOPES
- EXISTING 25% AND GREATER SLOPES
- SOILS LINE



REVISION NO. 10 IS BY DALE THOMPSON BUILDERS, INC. THE ENGINEER'S SEAL AND SIGNATURE HEREWITH APPLIED. NOTE: GREEN HOLLOW WAY AND ROCKWOOD LANE ARE PUBLIC ACCESS PLACES

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *William A. Wilson* DATE: 3-25-04
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *[Signature]* DATE: 4/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *[Signature]* DATE: 3/3/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO. 10-D4-07 DATE 10-11-07
 REMOVED EXISTING FENCING FROM STREET TO PROP. GATE LOCATION REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING LOTS 6-16 AND PARCELS A-E
PROJECT NAME: OWINGS PROPERTY
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID
 PARCEL 44
 HOWARD COUNTY, MARYLAND

TITLE: GRADING PLAN
 S-01-18 P-02-018 F-03-133

OWNERS: MR. & MRS. HARWOOD OWINGS
 13009 HIGHLAND ROAD
 HIGHLAND, MARYLAND 20777

PREPARED BY: Dewberry & Davis LLC
 203 PERRY PARKWAY
 GAITHERSBURG, MD 20877
 TEL: (301) 948-8200
 FAX: (301) 958-7607

DEVELOPER: DALE THOMPSON BUILDERS
 6300 WOODSIDE COURT
 COLUMBIA, MARYLAND 21046
 (410) 995-6736
 (410) 381-8747

DES.: IEV **JOB:** XXX
DRW.: SGB **PROJ.:** OZ745
CHK.: MM **DATE:** DEC. 2003

SCALE: 1" = 50'
SHEET 17 OF 29

ONSITE FOREST CONSERVATION SURETY:
 THE ONSITE FOREST CONSERVATION SURETY IS \$59,154.48
 (FOREST RETENTION 3.64 ACRES x \$20=\$71,711.68)
 (FOREST AFFORESTATION 1.26 ACRES x \$50=\$27,442.80)

NOTE
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

STREET TREES PLANT SCHEDULE				
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
	ACER SACCHARUM	GREEN MOUNTAIN MAPLE	33	2 1/2"-3" Col.



REVISION NUMBER BY DALE THOMPSON BUILDERS, INC. THE ENGINEER'S SEAL AND SIGNATURE ARE HEREWITH AFFIXED.

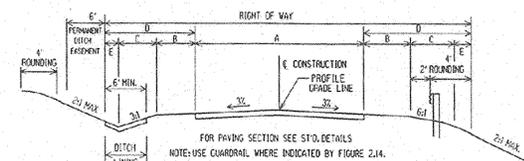
APPROVED: DEPARTMENT OF PUBLIC WORKS
William R. Malon Jr. 3-25-04
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 4/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT

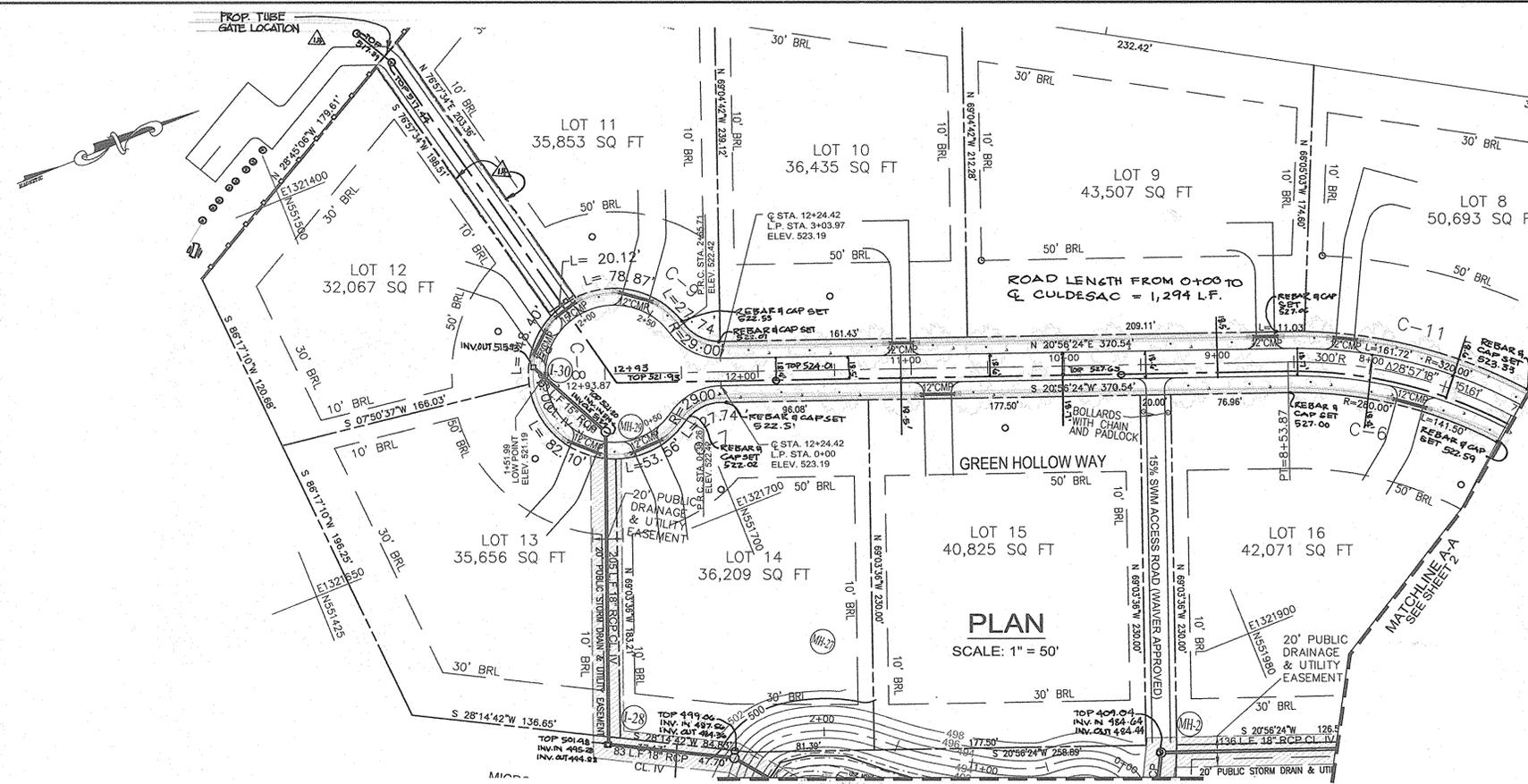
APPROVED: DEPARTMENT OF DEVELOPMENT ENGINEERING DIVISION
[Signature] 3/21/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

CURVE TABLE					
Curve	Radius	Length	Delta	Chord	Chord Bearing
C-6	280.00'	141.50'	28°57'18"	140.00'	S 35°25'03" W
C-7	29.00'	27.74'	54°47'50"	26.69'	S 06°27'31" E
C-8	56.00'	283.05'	289°35'41"	64.56'	N 69°03'36" W
C-9	29.00'	27.74'	54°47'50"	26.69'	N 48°20'20" E
C-11	280.00'	142.85'	29°13'53"	141.31'	N 35°16'46" E

TYPICAL PAVEMENT SECTION
 GREEN HOLLOW WAY & ROCKWOOD LANE*



CLASSIFICATION	A	B	C	D	E	R/W
PUBLIC-200 ADT ACCESS PLACE*	18'	4'	4'	11'	3'	40'



NO. 10-04-01 DATE 10/10/07
 REMOVED EXISTING FENCING FROM STREET TO PROP. GATE LOCATION
 REVISIONS

A RESUBDIVISION OF LOT 3, CONSISTING OF LOTS 6-16 AND PARCELS A-E

PROJECT NAME **OWINGS PROPERTY**
 LOTS 6 THRU 16 AND PRESERVATION PARCELS A THRU E
 5th ELECTION DISTRICT TAX MAP # 40, GRID PARCEL 44
 HOWARD COUNTY, MARYLAND

TITLE **ROAD PROFILE**
 S-01-18 P-02-018 F-03-133

OWNERS: MR. & MRS. HARWOOD OWINGS
 13009 HIGHLAND ROAD
 HIGHLAND, MARYLAND 20777

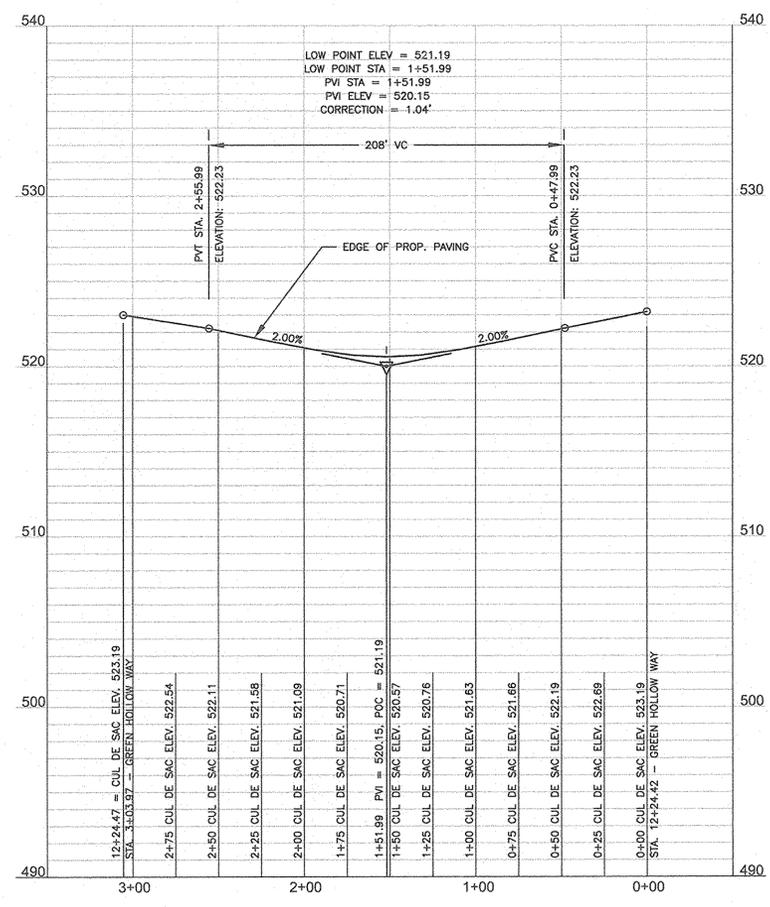
DEVELOPER: DALE THOMPSON BUILDERS
 8300 WOODSIDE COURT
 COLUMBIA, MARYLAND 21046
 (410) 995-6736
 (410) 381-8747

PREPARED BY: **Dewberry & Davis LLC**
 203 PERRY PARKWAY
 GAITHERSBURG, MD 20877
 TEL: (301) 948-8300
 FAX: (301) 256-7607

DES.: IEV JOB: XXX
 DRW.: SGB PROJ.: OZ745
 CHK.: MM DATE: DEC. 2003

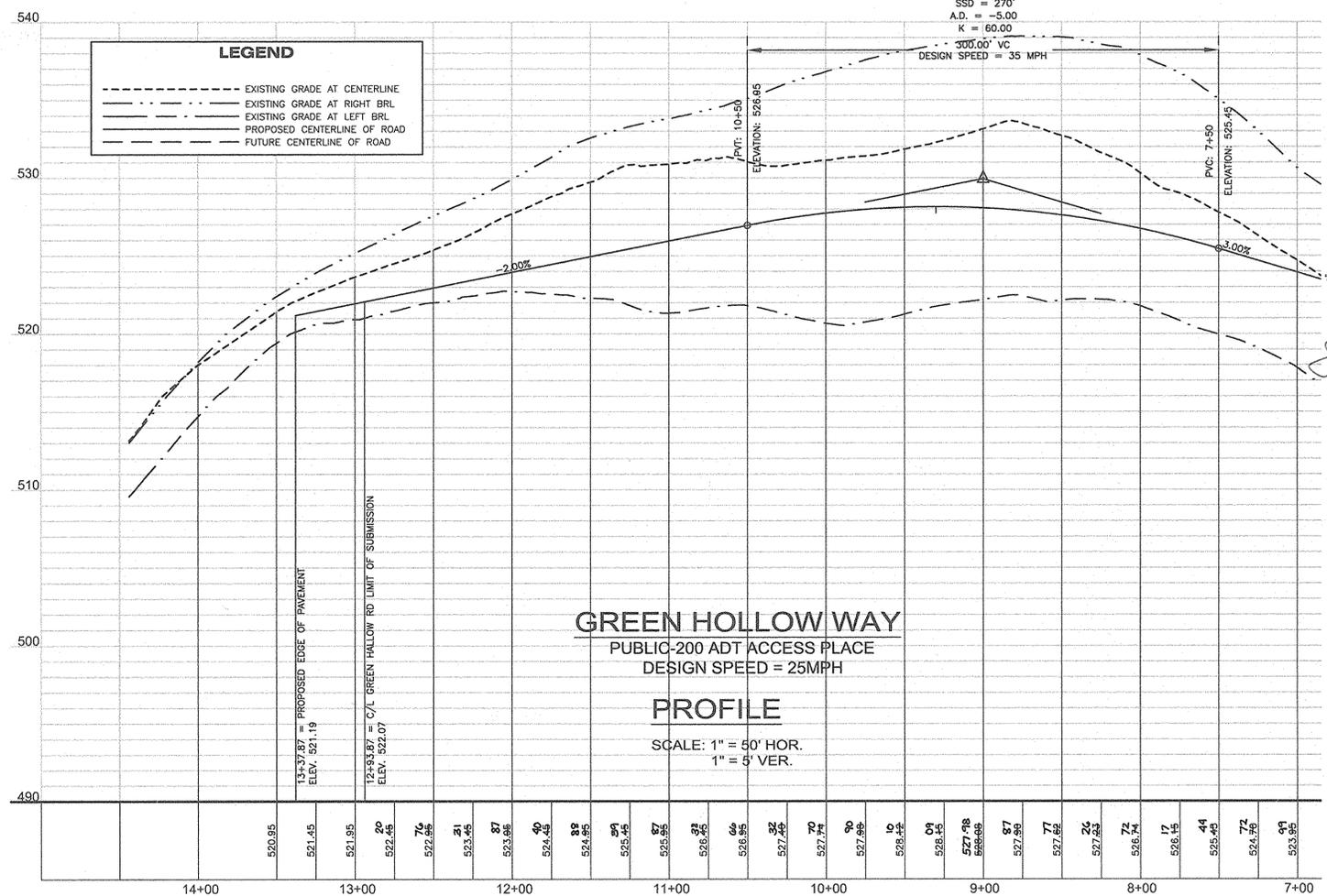
SCALE: AS SHOWN SHEET 3 OF 29

FOR CONTINUATION SEE SHEET 16



LINEAR PROFILE EDGE OF PAVEMENT

SCALE: 1" = 50' HOR.
 1" = 5' VER.



3/16/07
 M. Beutl



11/30/04

F-03-133