

GENERAL NOTES
FINAL PLAN

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS ANY STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATION SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHTING PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL AREAS". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY (SUPPLEMENTED BY FIELD SURVEY) WITH TWO-FOOT CONTOUR INTERVALS PREPARED BY VANMAR ASSOCIATES, INC., DATED FEBRUARY 2005.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MOUNTAIN NOS. 0031 AND 07CA WERE USED FOR THIS PROJECT.
- WATER IS PRIVATE.
- SEWER IS PRIVATE.
- THE PURPOSE OF BUILDABLE PRESERVATION PARCEL A IS TO SUPPORT ONE DWELLING UNIT PROVIDE A 0.4876 ACRES OF FOREST EASEMENT (AFFORESTATION), AND TO PROVIDE STORM WATER QUALITY FEATURES, AND TO PROVIDE PASTURE, FOREST AND UNDEVELOPED LAND FOR AGRICULTURAL PURPOSES.
- THE PURPOSE OF PRESERVATION PARCEL "B" IS TO PROVIDE A 0.4876 ACRES OF FOREST EASEMENT (AFFORESTATION) AND TO PROVIDE STORM WATER QUALITY FEATURES, AND TO PROVIDE PASTURE, FOREST AND UNDEVELOPED LAND FOR AGRICULTURAL PURPOSES.
- SWM PRESERVATION PARCELS B, C, AND D ARE FOR THE PURPOSE OF PROVIDING STORM WATER MANAGEMENT. THE EASEMENT HOLDER WILL BE HOWARD COUNTY IN ACCORDANCE WITH SECTION 104.F.4.3 OF THE ZONING REGULATIONS.
- PRESERVATION PARCELS A & B AND NON-BUILDABLE PRESERVATION PARCELS C & D ARE ENCUMBERED BY AN EASEMENT AGREEMENT WITH WOODBINE CROSSING HOA AND HOWARD COUNTY. THIS AGREEMENT PROHIBITS FURTHER SUBDIVISION OF THE PARCEL, OUTLINES THE AGRICULTURAL USE, STORM WATER MANAGEMENT, FOREST EASEMENT AND MAINTENANCE RESPONSIBILITIES OF ITS OWNER AND ENUMERATES THE USES PERMITTED ON THESE PARCELS.
- STORMWATER MANAGEMENT WILL BE PROVIDED BY NON-ROOF TOP DISCONNECT CREDIT AND THREE ONSITE WATER QUALITY FACILITIES. THE FACILITIES, LOCATED IN SWM PRESERVATION PARCELS B, C, AND D, WILL BE OWNED BY THE HOA. HOWARD COUNTY WILL BE THE INTENDED EASEMENT HOLDER OF THE THREE SWM PRESERVATION PARCELS.
- PRESERVATION PARCELS OWNERSHIP, EASEMENTS, AND SWM MAINTENANCE:
 - BUILDABLE PRESERVATION PARCEL A
 - OWNER: PRIVATE OWNER
 - EASEMENT HOLDER: HOWARD COUNTY AND WOODBINE CROSSING HOA
 - NON-BUILDABLE PRESERVATION PARCEL B
 - OWNER: WOODBINE CROSSING HOA; Easement holder: H Co
 - MAINTENANCE BY: HOA
 - NON-BUILDABLE PRESERVATION PARCEL C
 - OWNER: WOODBINE CROSSING HOA
 - EASEMENT HOLDER: HOWARD COUNTY
 - MAINTENANCE BY:
 - INFILTRATION TRENCH: WOODBINE CROSSING HOA
 - CPV DETENTION BASIN: WOODBINE CROSSING HOA AND HOWARD COUNTY
 - NON-BUILDABLE PRESERVATION PARCEL D
 - OWNER: WOODBINE CROSSING HOA
 - EASEMENT HOLDER: HOWARD COUNTY
 - MAINTENANCE BY:
 - POCKET SAND FILTER: WOODBINE CROSSING HOA
 - CPV DETENTION BASIN: WOODBINE CROSSING HOA AND HOWARD COUNTY
- THE EXISTING UTILITIES ARE BASED ON HOWARD COUNTY CONTRACT DRAWINGS AND SUPPLEMENTAL FIELD SURVEY INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THE EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION.
- THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY VANMAR ASSOCIATES, INC., APRIL 2006 AND APPROVED PER PRELIMINARY SKETCH PLANS 8/9/06.
- THERE ARE NO WETLANDS ON THIS SITE.
- THE TRAFFIC STUDY WAS FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES, LTD., JULY 2005, SUPPLEMENTED ON APRIL 2006 AND APPROVED PER PRELIMINARY SKETCH PLANS 8/9/06.
- THE NOISE STUDY FOR THIS PROJECT WAS PREPARED BY WILDMAN ENVIRONMENTAL SERVICES, DECEMBER 2005 AND APPROVED PER PRELIMINARY SKETCH PLANS 8/9/06.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GIA JULY 2005.
- THE PRELIMINARY STORMWATER FACILITY REPORT WAS PREPARED BY VANMAR ASSOCIATES, INC., JULY 2005, REVISED OCTOBER 2005 AND APPROVED PER PRELIMINARY SKETCH PLANS 8/9/06.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 18.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. FOREST CONSERVATION PLAN WAS APPROVED PER PRELIMINARY SKETCH PLANS 8/9/06.
- LANDSCAPING AND STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 18.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, NEW STRUCTURES AND PAVING IS PERMITTED WITHIN WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AREA AND FOREST CONSERVATION EASEMENT AREAS.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE)
 - SURFACE - 2" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN)
 - GEOMETRY - MAX. 15% GRADE, MAX 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 - YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.

PROJECT BACKGROUND INFORMATION:

SUBDIVISION NAME:	WOODBINE CROSSING (FORMERLY PATAPSCO OVERLOOK SECTION 4)
ZONING:	RC-DEO
TAX MAP:	2
GRID:	24
PARCEL:	32
ELECTION DISTRICT:	4TH
GROSS TRACT AREA:	33.47 ACRES
TOTAL AREA OF STEEP SLOPES:	0.00 ACRES
TOTAL AREA FLOODPLAIN AREA:	0.41 ACRES
25% OR GREATER STEEP SLOPE AREA:	0.00 ACRES
NET AREA OF PROPERTY TRACT:	33.06 ACRES
NUMBER OF BUILDABLE LOTS/PARCELS:	16
PRELIMINARY PLANS:	APPROVED 8/9/06 (FINAL PLAN TO BE SUBMITTED BY DECEMBER 11, 2006)

26. A WAIVER TO DESIGN MANUAL, VOLUME III, SECTION 2.5.2.H, REQUIRING A PROPOSED INTERSECTION TO MEET INTERSECTION SIGHT DISTANCE REQUIREMENTS WAS APPROVED ON JUNE 7, 2006. THE APPROVAL WAS BASED ON THE ANALYSIS AND EXHIBITS SUBMITTED ON APRIL 13, 2006 INDICATING THAT THE PROPOSED INTERSECTION INTO OLD FREDERICK ROAD WILL MEET STOPPING SIGHT DISTANCE FOR A 6 INCH HIGH OBJECT LOCATED AT THE FLOW LINE OF THE PROPOSED INTERSECTION.

27. A WAIVER TO DESIGN MANUAL, VOLUME III, SECTION 2.4.1; ROADWAY TYPICAL SECTION TO ALLOW A MODIFIED ROAD SECTION WAS APPROVED ON MARCH 31, 2006. APPROVAL BASED ON THE MODIFIED ROAD SECTION PROVIDES FOR A WIDER SHOULDER.

28. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL No. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL No. 75-2003.

29. A DEMOLITION PERMIT MUST BE PROVIDED FOR STRUCTURES TO BE REMOVED AT THE FINAL PLAN STAGE. 95% COMPACTION REQUIRED IN FILL AREA PER AASHTO-T80 SPECIFICATIONS.

30. THE FOLLOWING HOWARD COUNTY STANDARD NOTES ARE PROVIDED AS FOLLOWS:

- A 5-FOOT HORIZONTAL CLEARANCE AND A 1-FOOT VERTICAL CLEARANCE SHALL BE MAINTAINED FROM ALL EXISTING AND PROPOSED WATER LINES, SEWER LINES, FIRE HYDRANTS, STORM DRAINS AND RELATED APPURTENANCES WHEN INSTALLING CABLE, TRANSFORMER PEDESTALS, GAS LINES, UTILITY POLES, AND GUIDE WIRES.
- ANY PEDESTAL PLACED IN CONFLICT WITH SIDEWALK OR COUNTY OWNED/MAINTAINED UTILITY WILL BE MOVED AT THE COMPANY'S EXPENSE.
- SIGN POSTS: ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

W. J. ... 3-4-08
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy ... 3/21/08
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEVELOPMENT ENGINEERING DIVISION

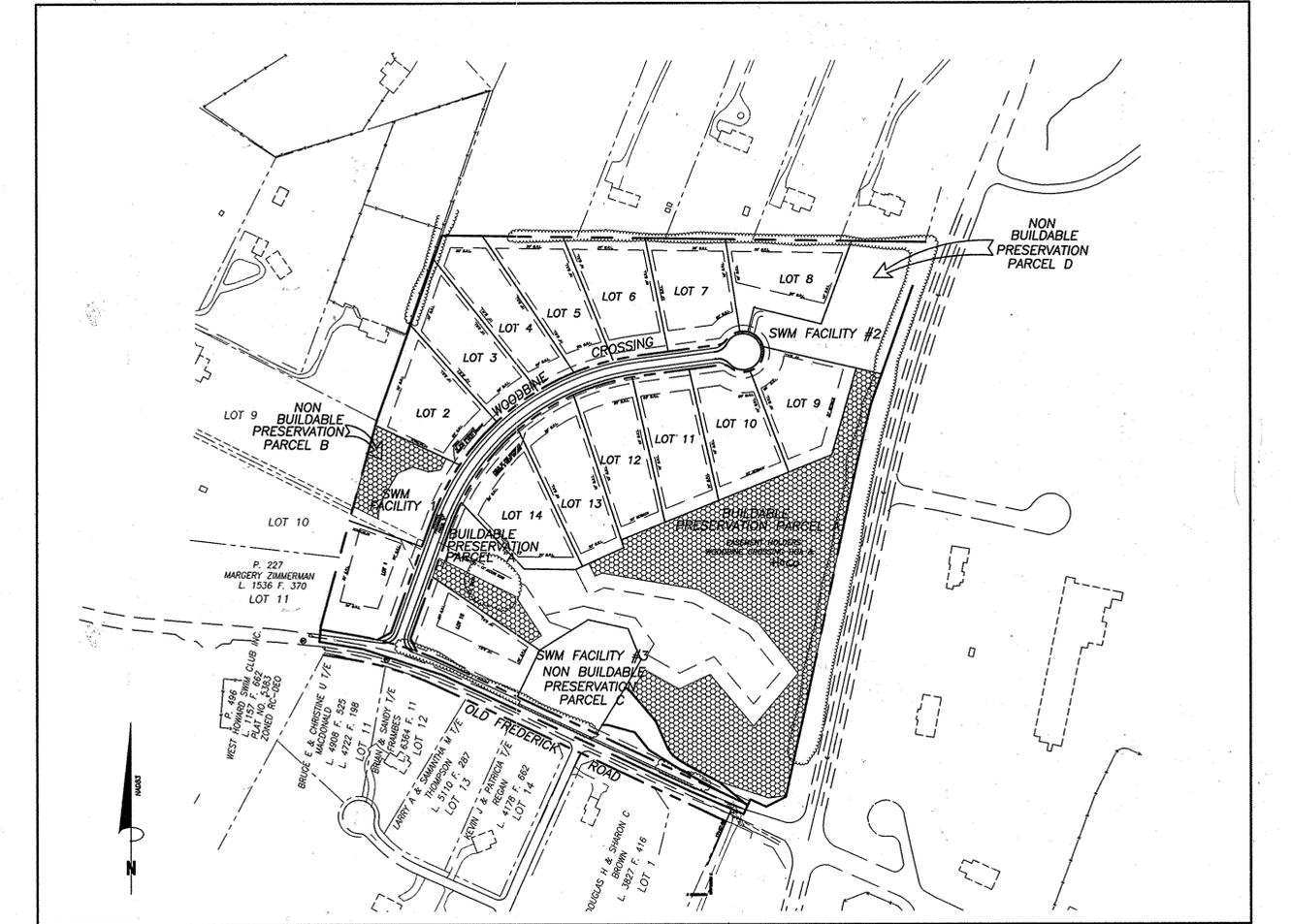
... 3/21/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

WOODBINE CROSSING

(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)
SINGLE FAMILY DETACHED

ELECTION DISTRICT No. 4
HOWARD COUNTY, MARYLAND

FINAL ROAD CONSTRUCTION, STORM DRAIN, AND STORMWATER MANAGEMENT PLANS



LOCATION MAP
SCALE: 1" = 200'

1. HORIZONTAL DATUM FOR THIS AS-BUILT SURVEY IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM INCORPORATING THE FOLLOWING HOWARD COUNTY, MARYLAND CONTROL STATIONS: STATION 0031 N 612408.142 E 1292244.2993 STATION 07CA N 610731.3071 E 1292224.2993

2. THIS AS-BUILT WAS PERFORMED BY VANMAR ASSOC., INC.

3. THE INSTRUMENTS WERE USED IN PERFORMING THIS AS-BUILT SURVEY: LEICA SYSTEM 120 GPS & ROTARY TOTAL STATION.

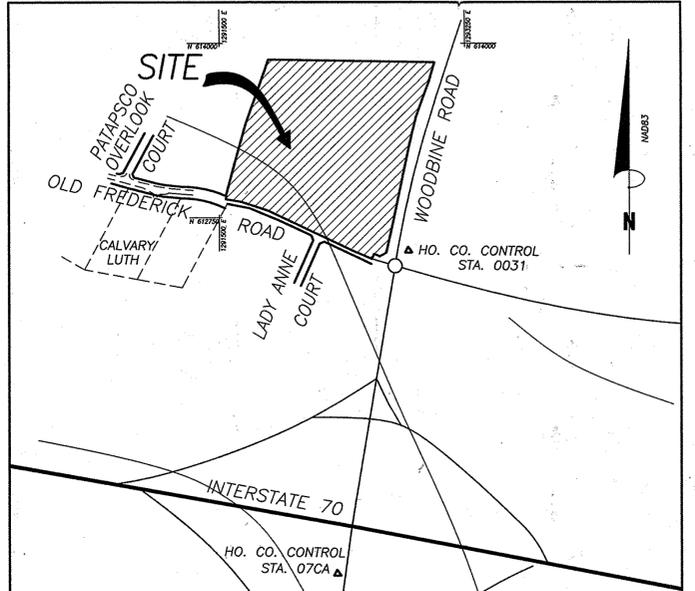
PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-08.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

VANMAR ASSOCIATES, INC.
Engineers-Surveyors Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 828-2890 (301)831 5015 (410) 549-2751

DATE	REVISIONS
03/21/07	RESPONSE TO COUNTY 1/12/07 COMMENTS
06/15/07	RESPONSE TO COUNTY 5/04/07 COMMENTS
08/31/07	RESPONSE TO COUNTY 7/19/07 COMMENTS
11/19/07	RESPONSE TO COUNTY 10/05/07 COMMENTS
12/31/07	RESPONSE TO S.C. 12/135/07 COMMENTS



VICINITY MAP
SCALE: 1"=600'
ADC MAP: 3, GRID: E-7

NOTES

THIS SURVEY IS IN THE MARYLAND STATE PLANE COORDINATE SYSTEM BASED ON GPS OBSERVATIONS INCORPORATING THE FOLLOWING HOWARD COUNTY, MARYLAND CONTROL STATIONS:
STATION 0031 N 612408.142 E 1292244.2993
STATION 07CA N 610731.3071 E 1292224.2993

BENCH MARKS (NAD83)

BENCHMARK NO. 1 - HO. CO. NO. 0031
HOWARD COUNTY STAMPED DISK LOCATED IN LISBON CENTER SHOPPING CENTER (CORNER OF RTE 94 & RTE 99).
N 612408.142 E 1292244.2993 ELEV. 632.325

BENCHMARK NO. 2 - HO. CO. NO. 07CA
HOWARD COUNTY STAMPED DISK LOCATED ALONG WEST SIDE OF RTE 94 JUST NORTH OF BRIDGE OVER I-70.
N 610731.3071 E 1292224.2993 ELEV. 619.431

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OWNER / DEVELOPER

LDG INC.
LEE PLAZA, SUITE 200
8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910
(301) 585-7000

CONSTRUCTION PLANS COVER SHEET

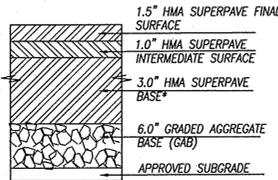
WOODBINE CROSSING (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED
RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DECEMBER, 2006 SHEET 1 OF 27

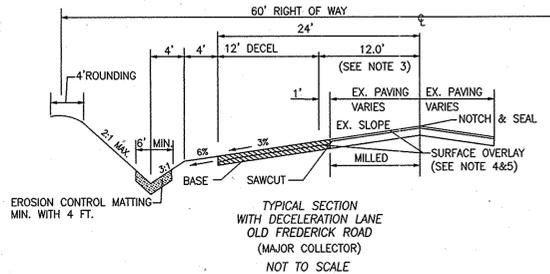
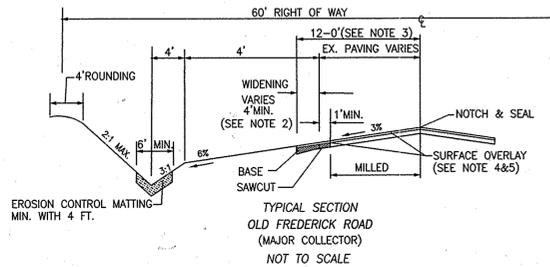
DPZ FILES: SP-06-003

**OLD FREDERICK ROAD PAVEMENT SECTION
SECTION NUMBER P-3**



*PAVING SECTION P-3 TO BE INSTALLED PER
HO. CO. STD. DETAIL R-2.01

NOTE: CONSTRUCTION OF ROAD BASE PAVEMENT IS NOT PERMITTED UNTIL DPW APPROVES THE PAVEMENT DESIGN RECOMMENDATIONS SUBMITTED IN THE SOILS EVALUATION AND PAVEMENT DESIGN REPORT REQUIRED IN SECTION 2.4 OF THE DESIGN MANUAL VOLUME II.

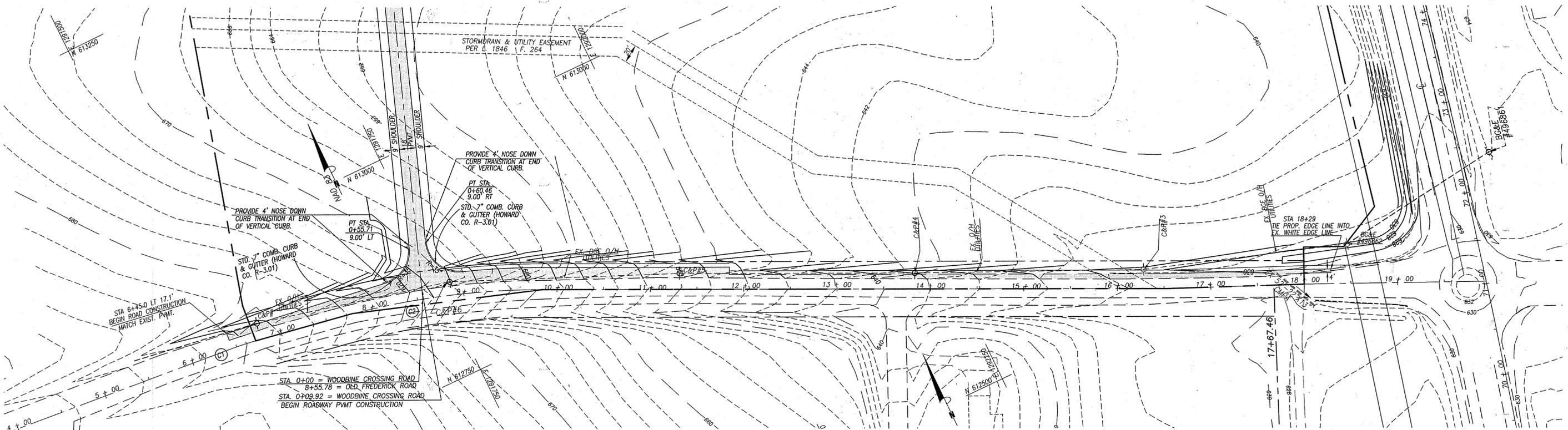


OLD FREDERICK ROAD TYPICAL SECTION NOTES:

- ROADWAY WIDENING SHALL CONFORM WITH HO. CO. STD. DETAIL R1.08.
- 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'.
- THE SURFACE OVERLAY SHALL BE CARRIED TO THE CL. OF THE ROAD AND NOTCHED AND SEALED.
- THE SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION.
- CL. OF ROAD TO BE MILLED AT DEPTH OF 1-1/2"x1' WIDE, USING MILLING MACHINE.

PAVING NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS SHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- ALL CONNECTIONS AT EXISTING IMPROVEMENTS SHALL BE WITH A CLEAN VERTICAL JOINT. SEE HOWARD COUNTY STANDARD DETAIL GA.01.
- ALL SPOT GRADES SHOWN ARE FLOW LINE ELEVATIONS (FL) UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 48 HOURS IN ADVANCE OF ANY EXCAVATION.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- CURBS, GUTTERS, SIDEWALKS, AND ALL PAVING SHALL BE INSTALLED IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE OF ALL AREAS SO THERE IS NO ACCUMULATION OF SURFACE WATER.
- ALL CURB AND GUTTERS SHOWN ON THE PLANS AREA HOWARD COUNTY STANDARDS AND DETAILS.
- ALL ROADWAY SUBGRADE SHALL MEET HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- ALL DRIVEWAY APRONS SHALL BE CONSTRUCTED AS PER HOWARD COUNTY STANDARD DETAIL R-6.06
- ALL CURB FILLET RADII SHALL BE 25' UNLESS NOTED OTHERWISE.
- GRADE ALL DISTURBED AREAS TO PROVIDE POSITIVE DRAINAGE.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS BASED ON FIELD SURVEY LOCATION, FIELD OBSERVATION, BUT THE CONTRACTOR MUST DETERMINE THE EXACT UTILITY LOCATION AND ELEVATIONS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN, OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.



**OLD FREDERICK ROAD
(60' ROW - MAJOR COLLECTOR - PUBLICLY MAINTAINED)
SCALE: 1" = 50'**

CENTERLINE COORDINATE TABLE				
STA. 17+02.68	WOODBINE ROAD / STA. 19+95.14	OLD FREDERICK ROAD	N 612371.8326	E 1292762.8969
STA. 0+00	WOODBINE CROSSING ROAD / STA. 8+55.78	OLD FREDERICK ROAD	N 612844.9099	E 1291726.9227
STA. 16+56.51	OLD FREDERICK ROAD	ANGLE POINT	N 612510.4438	E 1292453.9464

CURVE TABLE								
CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHD LENGTH	PC STATION	PT STATION
C1	300.00	24.90	4°45'19"	12.46	N82°40'43"W	24.89	7+60.13	9+83.80
C2	815.00	223.67	15°43'27"	112.54	N72°26'20"W	222.97	6+45.15	6+70.05

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Hunt 3/24/08
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
W. R. ... 3-4-08
CHIEF, BUREAU OF HIGHWAYS



DATE	REVISIONS

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

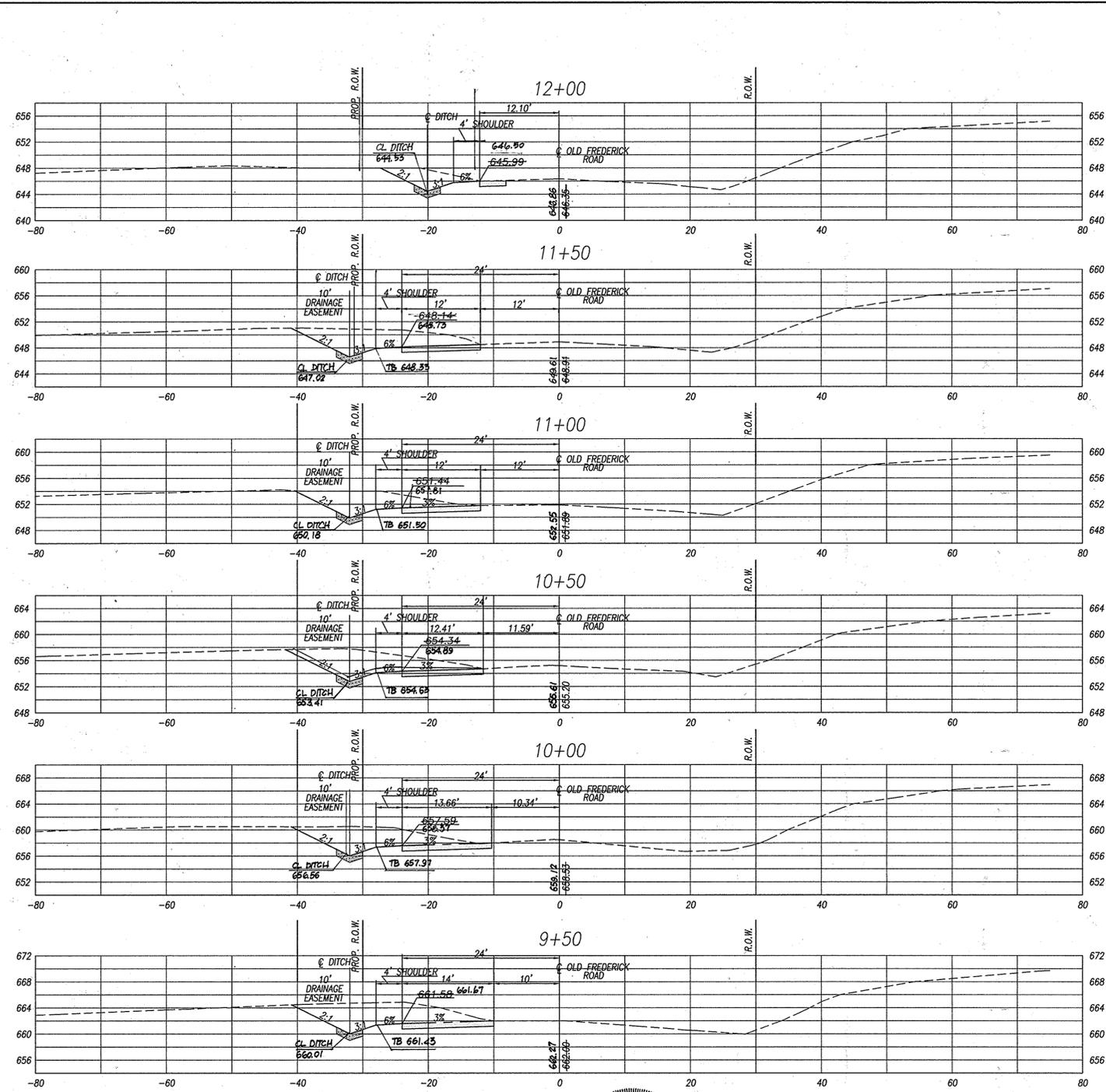
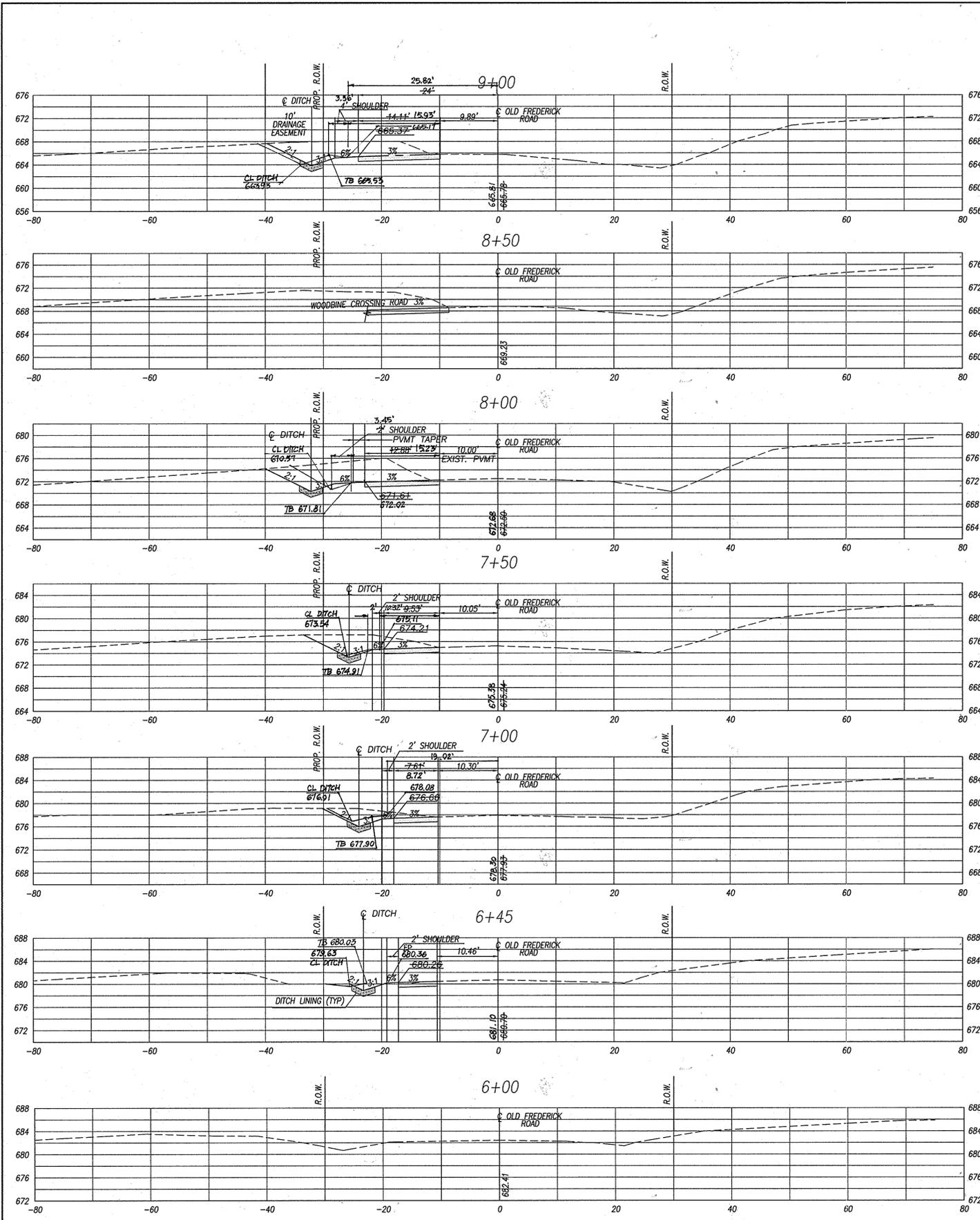
"AS-BUILT"
OLD FREDERICK ROAD
PLAN

WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
DECEMBER, 2006 SHEET 2 OF 27

DPZ FILES: SP-06-003 INDEX No. RP-1



AS-BUILT CERTIFICATION
 I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on the approved plans and specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 18417
 Date: 8/14/08



PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT"
OLD FREDERICK ROAD
WOODBINE ROAD (MARYLAND RTE 94)
CROSS SECTIONS

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" &
 NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED
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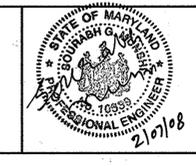
TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 10'-0" HORIZ. & VERT.
 DECEMBER, 2006 SHEET 4 OF 27

DPZ FILES: SP-06-003 INDEX No. RP-3

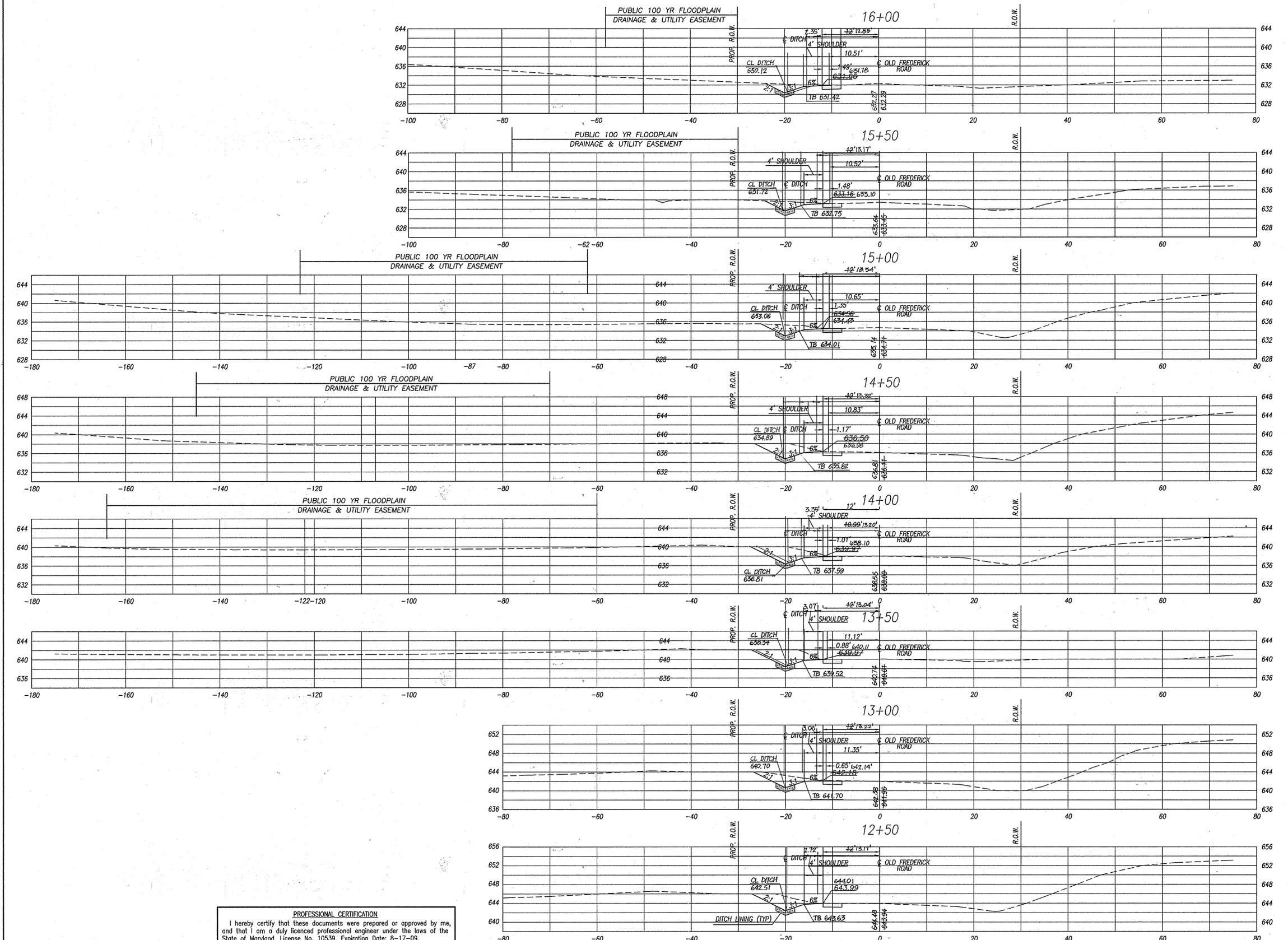
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 3/24/08
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 3-4-08
 CHIEF, BUREAU OF HIGHWAYS

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829-2890 (301)831-5015 (410) 549-2751



DATE	REVISIONS



PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

AS-BUILT CERTIFICATION
 I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on the AS-BUILT plan meet the Approved Plans and Specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 18417
 11/6/2015
 Date

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910. (301) 585-7000

"AS-BUILT"
OLD FREDERICK ROAD
CROSS SECTIONS

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 10'-0" HORIZ. & VERT.
 DECEMBER, 2006 SHEET 5 OF 27

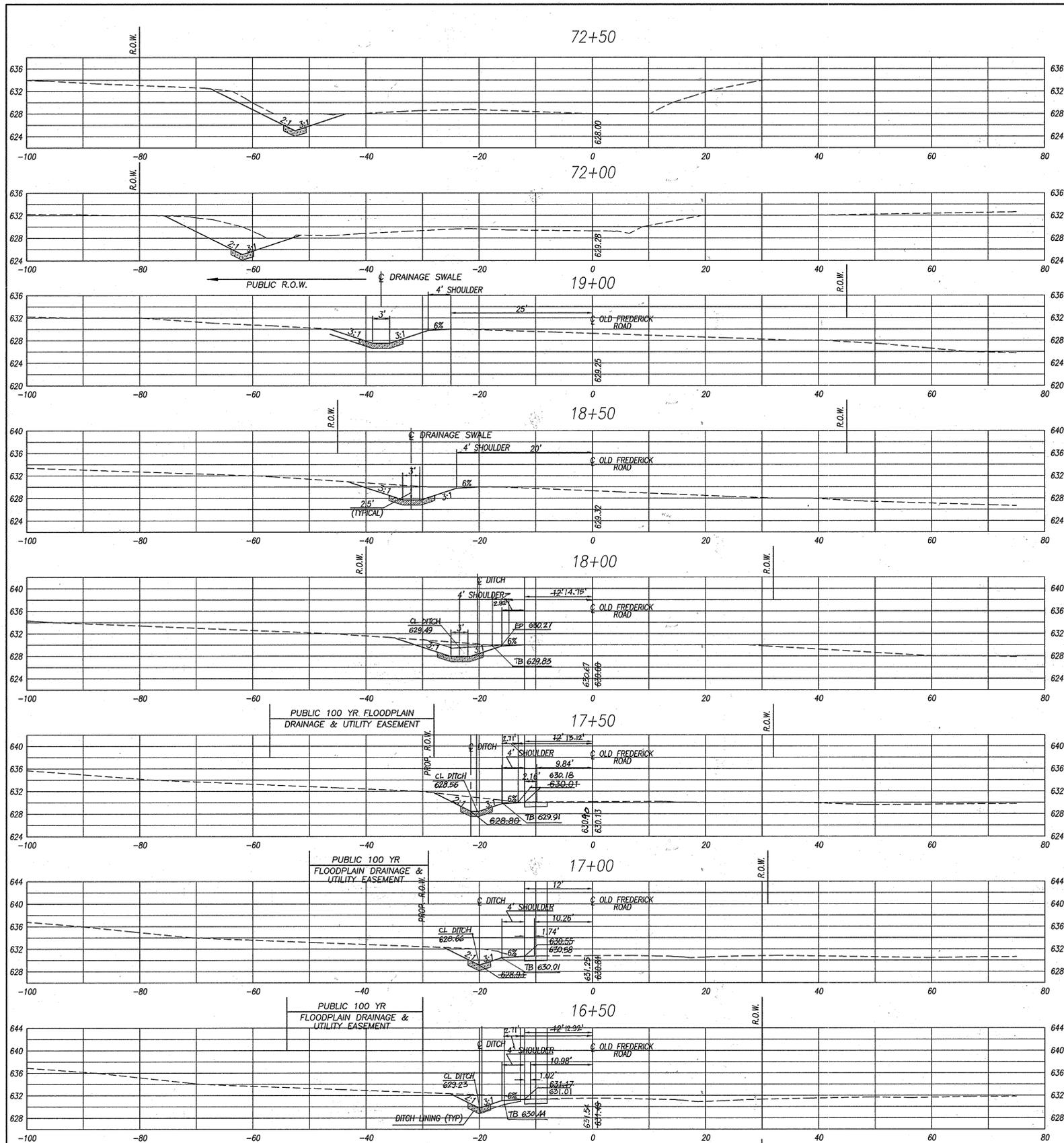
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 3/2/08
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature]
 CHIEF, BUREAU OF HIGHWAYS
 2-4-08
 DATE

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS



AS-BUILT CERTIFICATION
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 Professional Engineer Registration No. 18417
 Date: 11/6/2015



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DATE	REVISIONS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Date: 3/2/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 3-4-08



OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

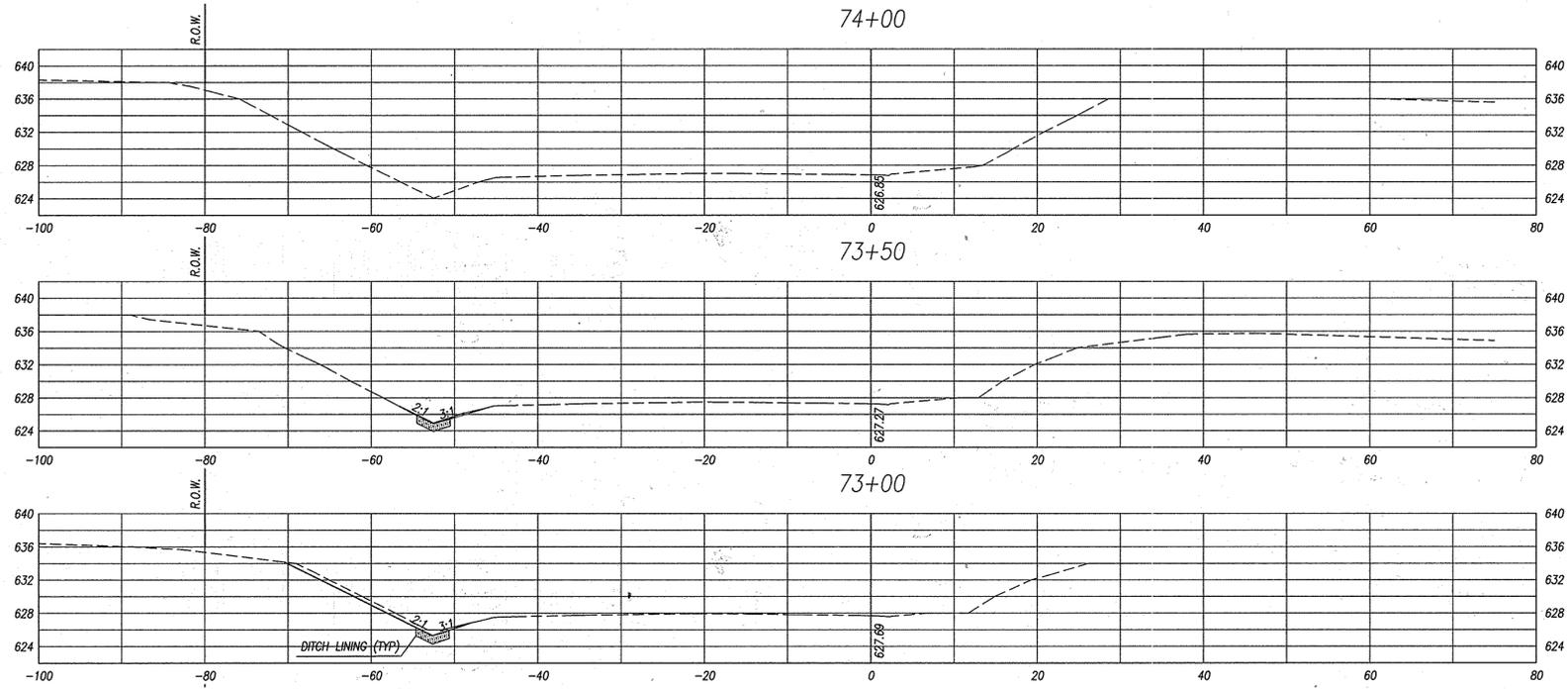
"AS-BUILT"
WOODBINE ROAD (MARYLAND RTE 94)
CROSS SECTIONS

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

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 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 10'-0" HORIZ. & VERT.
 DECEMBER, 2006 SHEET 6 OF 27

DPZ FILES: SP-06-003 INDEX No. RP-5



NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT"
OLD FREDERICK ROAD
WOODBINE ROAD (MARYLAND RTE 94)
CROSS SECTIONS

WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" &
NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"

PART OF LANDS CONVEYED TO LDG INC. BY DEED
RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: 1" = 10'-0" HORIZ. & VERT.
DECEMBER, 2006 SHEET 7 OF 27

DPZ FILES: SP-06-003 INDEX No. RP-6

PROFESSIONAL CERTIFICATION
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and that I am a duly licensed professional engineer under the laws of the
State of Maryland, License No. 10539, Expiration Date: 8-17-09.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Andy Hamb 3/24/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. Williams 3/10/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

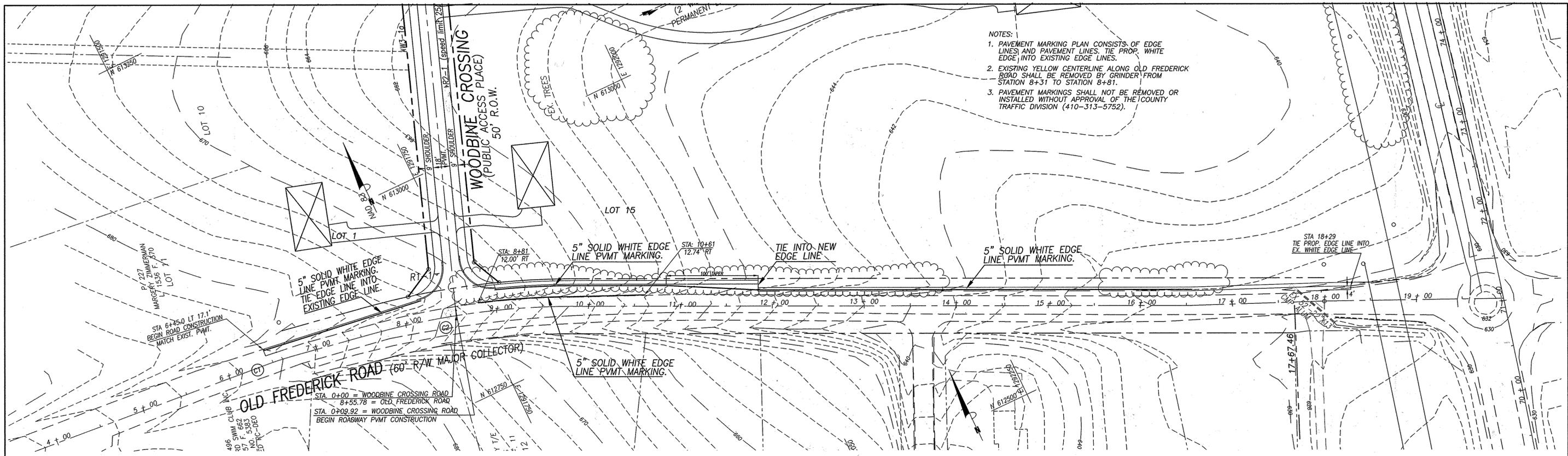
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William J. Williams 3-4-08
CHIEF, BUREAU OF HIGHWAYS DATE

 **VANMAR ASSOCIATES, INC.**
Engineers Surveyors Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751



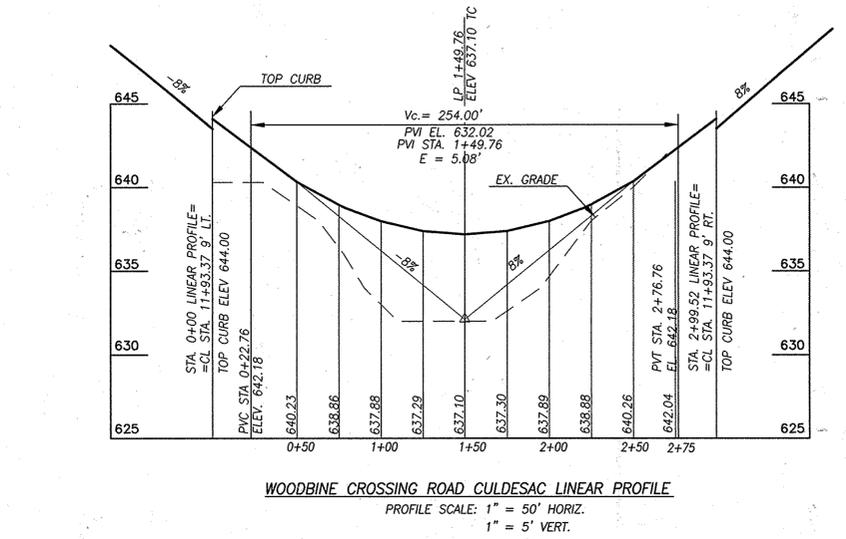
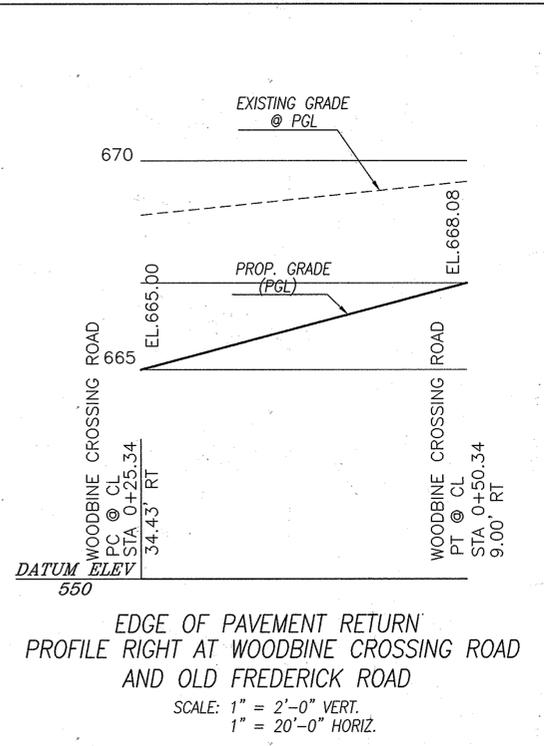
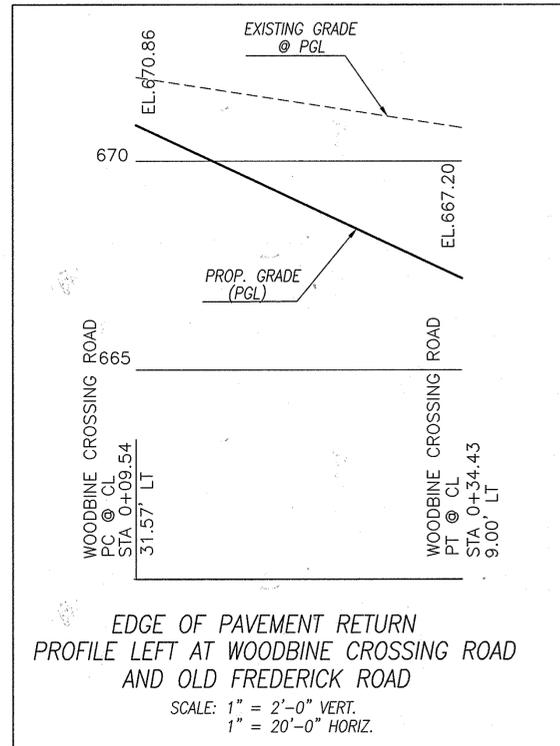
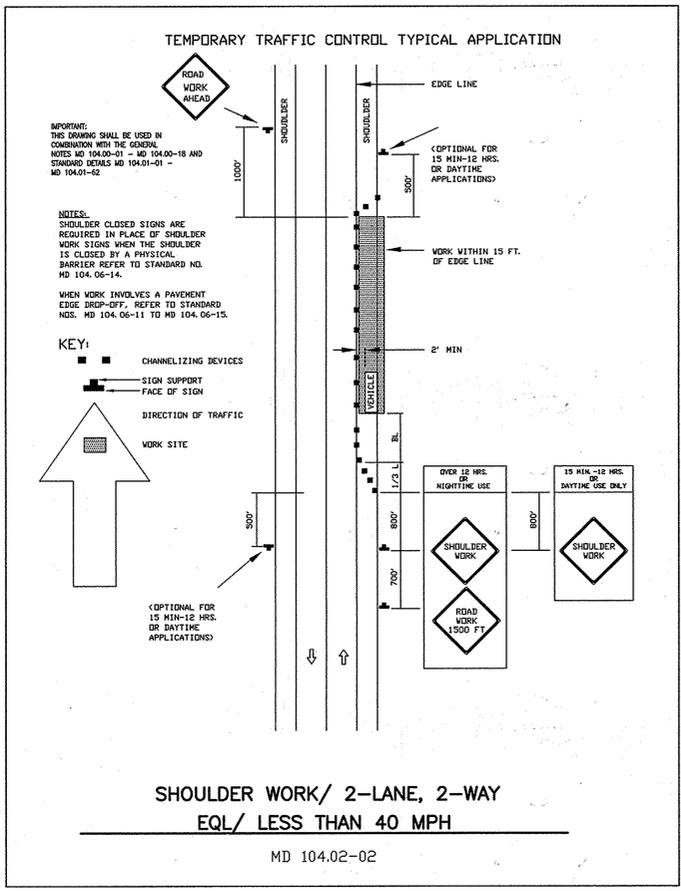
DATE	REVISIONS



- NOTES:
1. PAVEMENT MARKING PLAN CONSISTS OF EDGE LINES AND PAVEMENT LINES. TIE PROP. WHITE EDGE INTO EXISTING EDGE LINES.
 2. EXISTING YELLOW CENTERLINE ALONG OLD FREDERICK ROAD SHALL BE REMOVED BY GRINDER FROM STATION 8+31 TO STATION 8+81.
 3. PAVEMENT MARKINGS SHALL NOT BE REMOVED OR INSTALLED WITHOUT APPROVAL OF THE COUNTY TRAFFIC DIVISION (410-313-5752).

OLD FREDERICK ROAD
(60' ROW - MAJOR COLLECTOR - PUBLICLY MAINTAINED)
PAVEMENT MARKING PLAN & STREET SIGNS
SCALE: 1" = 50'

TRAFFIC SIGN CHART	
SIGN	LOCATION
R1-1	WOODBINE CROSSING ROAD STA. 0+50 LT
R2-1 (SPEED LIMIT 25)	WOODBINE CROSSING ROAD STA. 2+50 RT
W3-1a (STOP AHEAD)	WOODBINE CROSSING ROAD STA. 3+00 LT



NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
"AS-BUILT"
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

ROADWAY
PROFILES, DETAILS,
TRAFFIC MARKING & SIGNING PLAN
WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamrick 3/21/08
CHIEF, DIVISION OF LAND DEVELOPMENT (H) DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter R. ... 3-4-08
CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
Engineers/Surveyors/Planners
510 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829-2890 (301)851-5015 (410) 549-2751

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

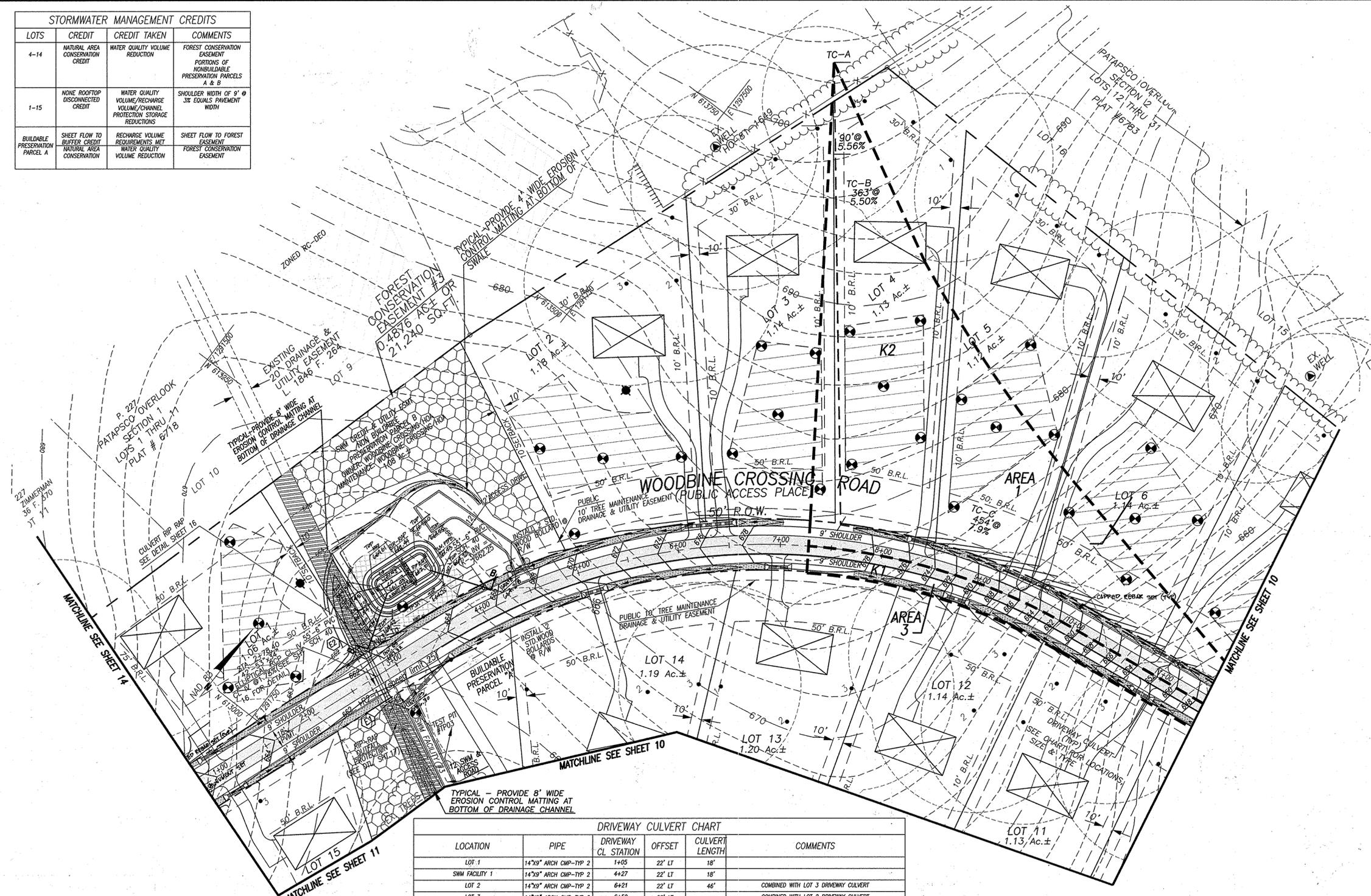
STATE OF MARYLAND
SOUTH MOUNTAIN
PROFESSIONAL ENGINEER
2/17/08

SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DECEMBER, 2006 SHEET 8 OF 27
DPZ FILES: SP-06-003

STORMWATER MANAGEMENT CREDITS			
LOTS	CREDIT	CREDIT TAKEN	COMMENTS
4-14	NATURAL AREA CONSERVATION CREDIT	WATER QUALITY VOLUME REDUCTION	FOREST CONSERVATION EASEMENT PORTIONS OF NON-BUILDABLE PRESERVATION PARCELS A & B
1-15	NONE ROOFTOP DISCONNECTED CREDIT	WATER QUALITY VOLUME/RECHARGE VOLUME/CHANNEL PROTECTION STORAGE REDUCTIONS	SHOULDER WIDTH OF 9' @ 3% EQUALS PAVEMENT WIDTH
BUILDABLE PRESERVATION PARCEL A	SHEET FLOW TO BUFFER CREDIT NATURAL AREA CONSERVATION	RECHARGE VOLUME REQUIREMENTS MET WATER QUALITY VOLUME REDUCTION	SHEET FLOW TO FOREST PRESERVATION EASEMENT

LEGEND:

- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAN
- NO WOODY ZONE LIMITS
- LIMIT OF DISTURBANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
- OVERHEAD UTILITIES
- 25' WETLAND BUFFER LINE
- CONSERVATION SIGNAGE
- EXISTING TREE LINE
- STORM DRAIN DRAINAGE AREA
- STRUCTURE NO.
- SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PERC LOCATION
- EXISTING WELL
- PUBLIC EASEMENT FOR DRAINAGE UTILITY AND FLOOD PLAN
- PROPOSED BOLLARD



AS-BUILT CERTIFICATION
 I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this AS-BUILT plan meets the Approved Plans and Specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 18417

CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

DRIVEWAY CULVERT CHART					
LOCATION	PIPE	DRIVEWAY CL. STATION	OFFSET	CULVERT LENGTH	COMMENTS
LOT 1	14"x9" ARCH CMP-TYP 2	1+05	22' LT	18'	
SWM FACILITY 1	14"x9" ARCH CMP-TYP 2	4+27	22' LT	18'	
LOT 2	14"x9" ARCH CMP-TYP 2	6+21	22' LT	46'	COMBINED WITH LOT 3 DRIVEWAY CULVERT
LOT 3	14"x9" ARCH CMP-TYP 2	6+50	22' LT	-	COMBINED WITH LOT 2 DRIVEWAY CULVERT
LOT 4	14"x9" ARCH CMP-TYP 2	8+37	22' LT	18'	
LOT 5	14"x9" ARCH CMP-TYP 2	9+28	22' LT	43'	COMBINED WITH LOT 6 DRIVEWAY CULVERT
LOT 6	14"x9" ARCH CMP-TYP 2	9+56	22' LT	-	COMBINED WITH LOT 5 DRIVEWAY
LOT 7	14"x9" ARCH CMP-TYP 2	10+95	22' LT	18'	
LOT 8	14"x9" ARCH CMP-TYP 2	12+71	51' RT	-	
SWM FACILITY 2	14"x9" ARCH CMP-TYP 2	12+90	49.5' LT	-	
LOT 9	14"x9" ARCH CMP-TYP 2	12+82	53' RT	-	
LOT 10	14"x9" ARCH CMP-TYP 2	12+48	50' RT	-	
LOT 11	14"x9" ARCH CMP-TYP 2	10+95	29' RT	18'	
LOT 12	14"x9" ARCH CMP-TYP 2	8+86	29' RT	18'	
LOT 13	14"x9" ARCH CMP-TYP 2	7+02	29' RT	18'	
LOT 14	14"x9" ARCH CMP-TYP 2	5+12	29' RT	18'	
BUILDABLE PRESERVATION PARCEL A	14"x9" ARCH CMP-TYP 2	3+34	29' RT	60'	COMBINED WITH SWM FACILITY 3
SWM FACILITY 3	14"x9" ARCH CMP-TYP 2	2+96	29' RT	-	CONTINUOUS CULVERT WITH PRESERVATION PARCEL A
LOT 15	14"x9" ARCH CMP-TYP 2	1+04	29' RT	18'	

NOTE: ALL DRIVEWAYS AND SWM FACILITY ACCESS ROADS ARE 12' WIDE. GRADE DITCH TO DRIVEWAY CULVERT FLOWLINE.

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Conda Hanna
 CHIEF, DIVISION OF LAND DEVELOPMENT
 3/24/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Mike Z. Smith
 CHIEF, BUREAU OF HIGHWAYS
 3-4-08

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829 2890 (301) 831 5015 (410) 549 2751

STATE OF MARYLAND
 RENEWED
 2/12/08

DATE	REVISIONS

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" GRADING, STORM DRAIN & DRAINAGE AREA MAP

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
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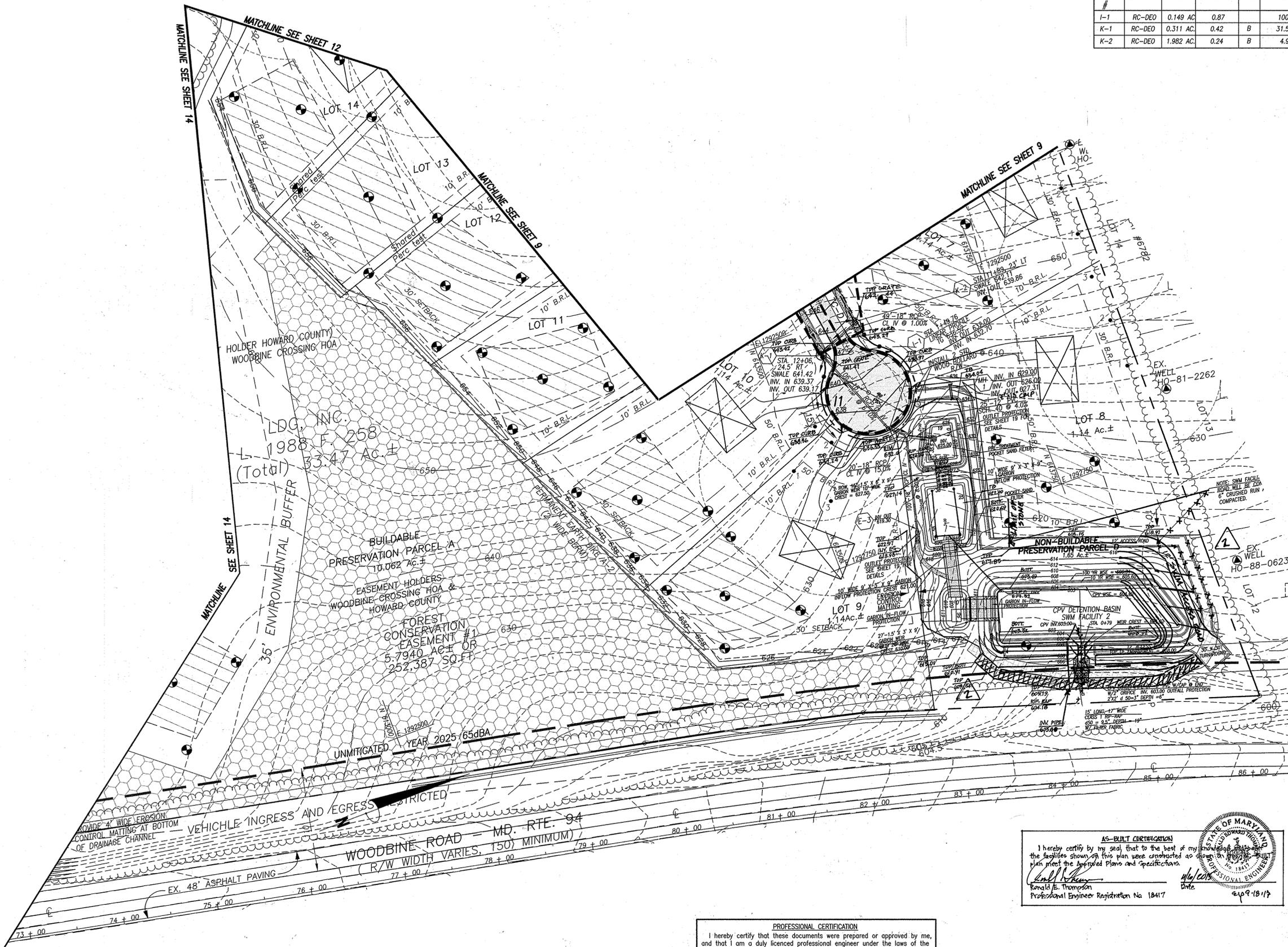
TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50'
 DECEMBER, 2006 SHEET 9 OF 27

DPZ FILES: SP-06-003 INDEX No. GSD-1 F-07-103

DA #	ZONING	AREA	C FACTOR	SOIL	% IMPERVIOUS
I-1	RC-DEO	0.149 AC	0.87		100%
K-1	RC-DEO	0.311 AC	0.42	B	31.5%
K-2	RC-DEO	1.982 AC	0.24	B	4.9%

LEGEND:

- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAIN
- NO WOODY ZONE LIMITS
- LIMIT OF DISTURBANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
- OVERHEAD UTILITIES
- 25' WETLAND BUFFER LINE
- CONSERVATION SIGNAGE
- EXISTING TREE LINE
- STORM DRAIN DRAINAGE AREA
- STRUCTURE NO.
- SILT FENCE
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- PUBLIC EASEMENT FOR DRAINAGE UTILITY AND FLOOD PLAN
- PROPOSED BOLLARD
- EARTH DIKE



CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" GRADING, STORM DRAIN & DRAINAGE AREA MAP

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)
 LOTS 1-15 & BUILDBLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
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TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50'
 DECEMBER, 2006 SHEET 10 OF 27

AS-BUILT CERTIFICATION
 I hereby certify by my seal that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on the approved plans and specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 18417
 DATE 3/10/14

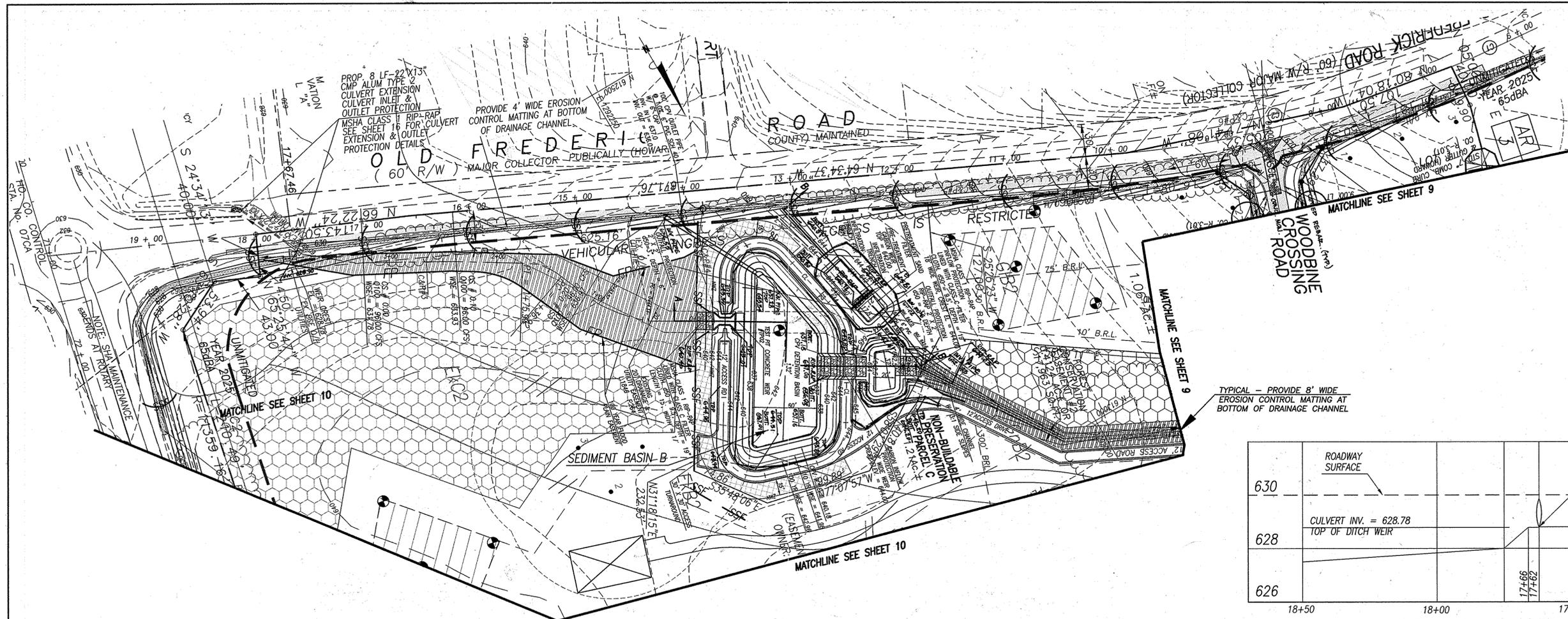
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Condy Hamer 3/10/14
 CHIEF, DIVISION OF LAND DEVELOPMENT
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
With 2 initials 3-4-08
 CHIEF, BUREAU OF HIGHWAYS

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829-2890 (301)831-5015 (410) 549-2751

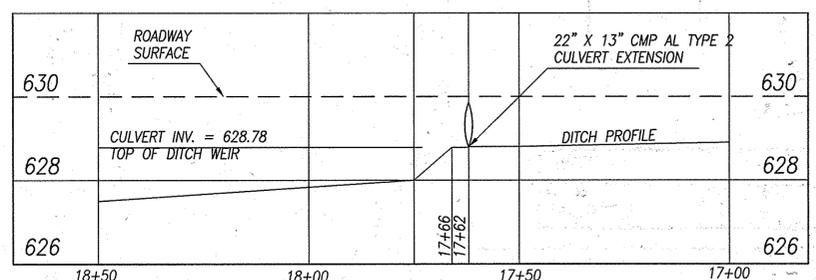


DATE	REVISIONS
7/11/2014	SWIM FACILITY #2 REVISIONS

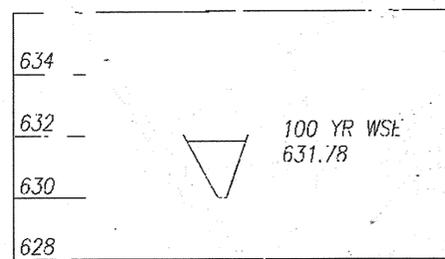


LEGEND:

- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAN
- NO WOODY ZONE LIMITS
- LIMIT OF DISTURBANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
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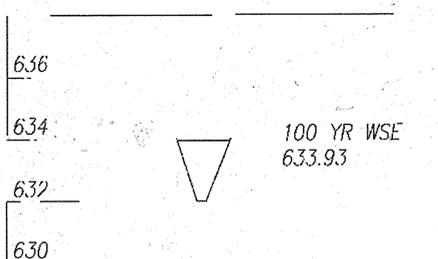


OLD FREDERICK ROAD DITCH PROFILE @ CULVERT EXTENSION & DITCH WEIR
SCALE: 1" = 2'-0" VERT.
1" = 20'-0" HORIZ.



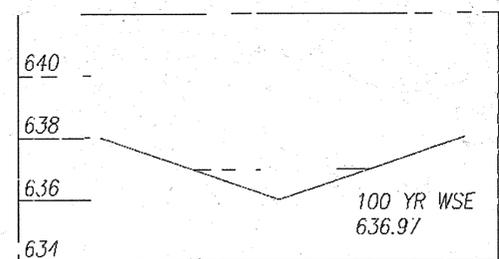
CROSS SECTION 0.0

SCALE
1" = 2' VERTICAL
1" = 20' HORIZONTAL



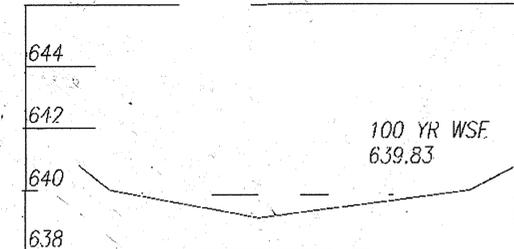
CROSS SECTION 0.1

SCALE
1" = 2' VERTICAL
1" = 20' HORIZONTAL



CROSS SECTION 0.2

SCALE
1" = 2' VERTICAL
1" = 20' HORIZONTAL



CROSS SECTION 0.3

SCALE
1" = 2' VERTICAL
1" = 20' HORIZONTAL

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Ronald E. Thompson
Ronald E. Thompson
Professional Engineer Registration No. 18417

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" GRADING, STORM DRAIN & DRAINAGE AREA MAP

WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
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SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 11 OF 27

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland; License No. 10539, Expiration Date: 8-17-09.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Krantz
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 3/2/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter J. Smith
CHIEF, BUREAU OF HIGHWAYS
DATE: 3-4-08

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)851 5015 (410) 549 2751



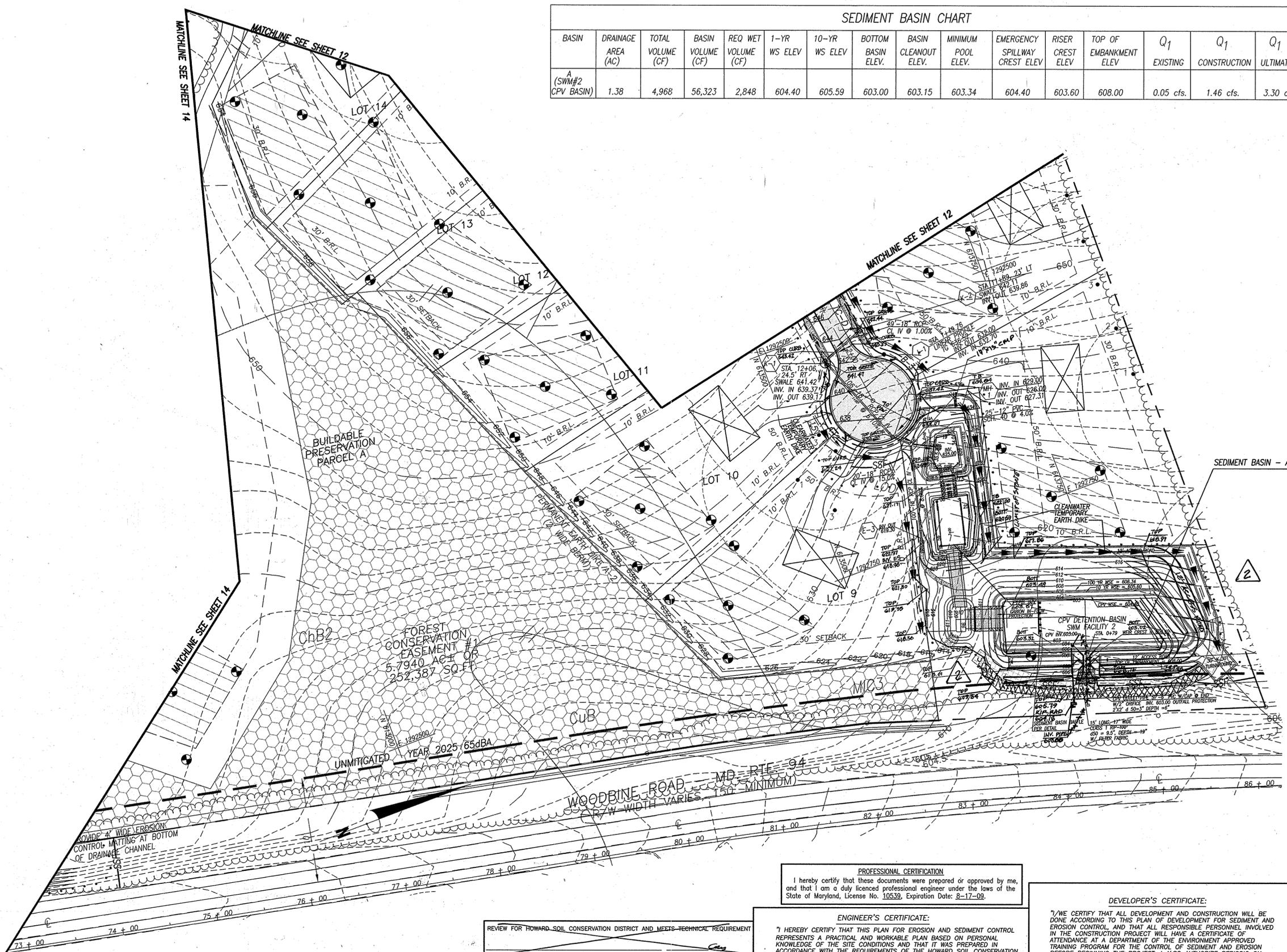
DATE	REVISIONS

SEDIMENT BASIN CHART

BASIN	DRAINAGE AREA (AC)	TOTAL VOLUME (CF)	BASIN VOLUME (CF)	REQ WET VOLUME (CF)	1-YR WS ELEV	10-YR WS ELEV	BOTTOM BASIN ELEV.	BASIN CLEANOUT ELEV.	MINIMUM POOL ELEV.	EMERGENCY SPILLWAY CREST ELEV	RISER CREST ELEV	TOP OF EMBANKMENT ELEV	Q ₁ EXISTING	Q ₁ CONSTRUCTION	Q ₁ ULTIMATE
A (SWM#2 CPV BASIN)	1.38	4,968	56,323	2,848	604.40	605.59	603.00	603.15	603.34	604.40	603.60	608.00	0.05 cfs.	1.46 cfs.	3.30 cfs.

LEGEND:

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- LIMIT OF DISTURBANCE
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- PUBLIC EASEMENT FOR DRAINAGE UTILITY AND FLOOD PLAIN
- PROPOSED BOLLARD
- EROSION CONTROL MATTING
- EARTH DIKE



SEDIMENT BASIN-A
 SEDIMENT BASIN A WILL BE CONSTRUCTED IN THE LOCATION OF THE CPV DETENTION BASIN. UPON STABILIZATION OF THE ROADWAY CONSTRUCTION, THE REMAINING FACILITY ELEMENTS OF SWM FACILITY MAY BE CONSTRUCTED. SEDIMENT BASIN SHALL BE CONSTRUCTED AS DETAILED IN SEQUENCE OF CONSTRUCTION #8.
 UPON STABILIZATION OF SWM CPV DETENTION BASIN #2, CONSTRUCT PERMANENT EARTH DIKE A-2 AT THE REAR OF LOTS 9-14.



AS-BUILT CERTIFICATION
 I hereby certify by my seal that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan and the Approved Plans and Specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 18417
 Date: 4/6/2013

CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" SEDIMENT & EROSION CONTROL PLAN

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED
 RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: 1"=50'
 DECEMBER, 2006 SHEET 13 OF 27

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

ENGINEER'S CERTIFICATE:
 "I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Sourabh G. Munshi, P.E.
 DATE: 2/07/08

DEVELOPER'S CERTIFICATE:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."
 Developer: [Signature]
 DATE: 2/12/08

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 NATURAL RESOURCES CONSERVATION SERVICE DATE: 2/28/08
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD COUNTY CONSERVATION DATE: 2/28/08

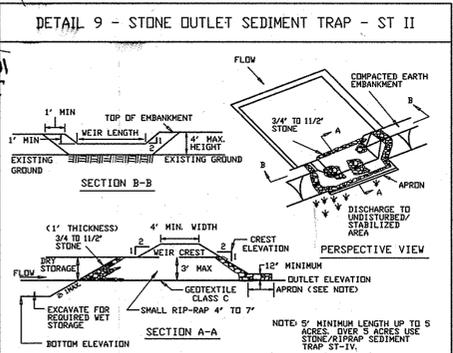
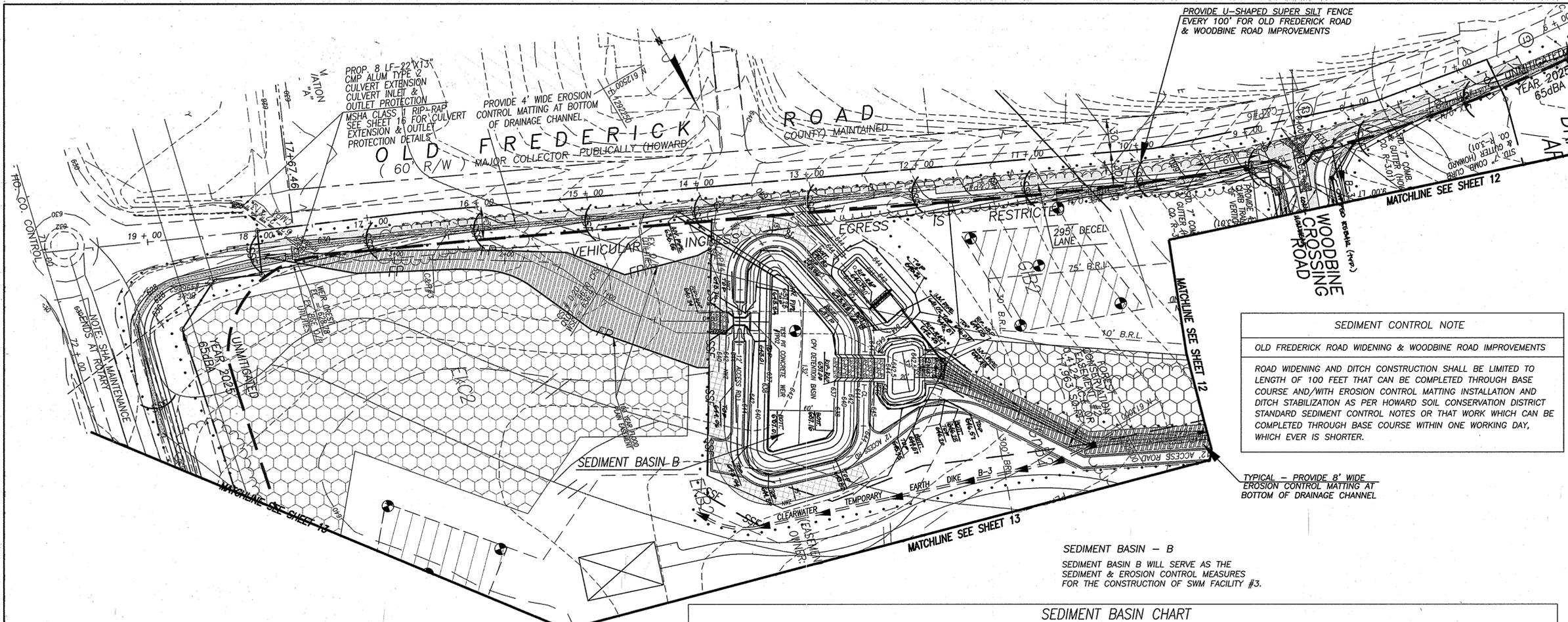
VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS
6/20/2013	SOIL CONSERVATION DESIGN SIGNATURE
7/11/2014	SWM FACILITY #2 REVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 DATE: 3/24/13

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature]
 DATE: 3-4-08



SEDIMENT CONTROL NOTE

OLD FREDERICK ROAD WIDENING & WOODBINE ROAD IMPROVEMENTS

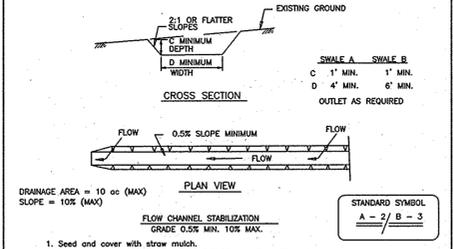
ROAD WIDENING AND DITCH CONSTRUCTION SHALL BE LIMITED TO LENGTH OF 100 FEET THAT CAN BE COMPLETED THROUGH BASE COURSE AND WITH EROSION CONTROL MATTING INSTALLATION AND DITCH STABILIZATION AS PER HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES OR THAT WORK WHICH CAN BE COMPLETED THROUGH BASE COURSE WITHIN ONE WORKING DAY, WHICH EVER IS SHORTER.

- Construction Specifications
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable materials. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected periodically and after each rain and repairs made as needed.
 - Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
 - The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been stabilized.
 - Refer to Section D for specifications concerning trap dewatering.
 - Minimum trap depth shall be measured from the weir elevation.
 - The elevation of the top of any dike directing water into trap must equal or exceed the elevation of the trap embankment.
 - Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.
 - Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

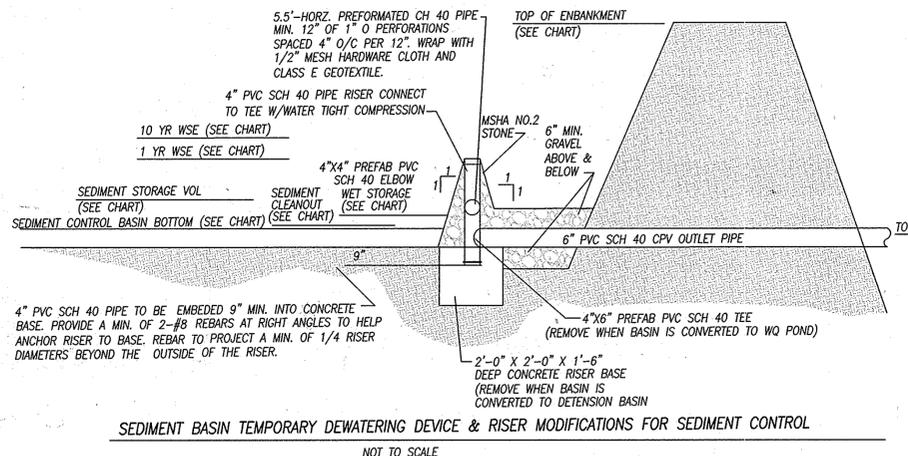
SEDIMENT BASIN CHART

BASIN	DRAINAGE AREA (AC)	TOTAL VOLUME (CF)	BASIN VOLUME (CF)	REQ WET VOLUME (CF)	1-YR WS ELEV	10-YR WS ELEV	BOTTOM BASIN ELEV.	BASIN CLEANOUT ELEV.	MINIMUM POOL ELEV.	MINIMUM SPILLWAY CREST ELEV	RISER CREST ELEV	TOP OF EMBANKMENT ELEV	Q1 EXISTING	Q1 CONSTRUCTION	Q1 ULTIMATE
B (SWM#3 CPV BASIN)	2.61	9,396	87,773	4,698	640.20	641.98	637.00	637.28	637.71	640.20	637.71	644.00	0.10 cfs.	0.10 cfs.	0.10 cfs.

DETAIL 2 - TEMPORARY SWALE



- Construction Specifications
- All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed receiving area at a non-stroke velocity.
 - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
 - The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill, if necessary, shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
 - Inspection and maintenance must be provided periodically and after each rain event.



CONVERSION NOTES: TEMPORARY DEWATERING DEVICE TO CPV OUTLET PIPE

(SEE TEMPORARY DEWATERING DEVICE & DETAIL ON SWM FACILITY 2 - CPV BASIN - SWM PLAN, & PROFILE & DETAILS, SHEET 18 - 19.

- OBTAIN PERMISSION FROM EROSION & SEDIMENT CONTROL INSPECTOR. REMOVE MSHA NO. 2 STONE, 4" PVC RISER, 4"x6" PVC TEE, 4"x4" PVC ELBOW, 4" PVC PERFORATED PIPE FROM THE RISER TO THE EARTH BERM. MAINTAIN 6" PVC SCH 40 CPV OUTLET PIPE. REPLACE OR REPAIR ANY DAMAGE TO CONTROL STRUCTURE RESULTING FROM THE REMOVAL OF THE DEWATERING DEVICE & APPURTENANCES.
- BRING BASIN TO PROPOSED GRADES AS SHOWN ON THE SWM PLAN.
- DRESS UP & STABILIZE DISTURBED AREA AS REQUIRED.

AS-BUILT CERTIFICATION

I hereby certify by my seal that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the approved Plans and Specifications.

Ronald E. Thompson
Professional Engineer Registration No. 18417

11/4/2015

TEMPORARY DEWATERING DEVICE & RISER MODIFICATION CHART

	BASIN A	BASIN B
SEDIMENT CONTROL BASIN BOTTOM EL.	603.00	637.00
SEDIMENT CLEANOUT CLEANOUT EL.	603.15	637.28
CPV OUTLET PIPE INVERT	603.00	637.00
WET STORAGE EL.	603.34	637.71
TOP OF EMBANKMENT EL.	608.00	644.00
10 YR W.S.E.	604.40	641.90
1 YR W.S.E.	605.59	640.20

- LEGEND:**
- FOREST CONSERVATION EASEMENT
 - 100 YR FLOOD PLAIN
 - NO WOODY ZONE LIMITS
 - LIMIT OF DISTRIBUTANCE
 - SEPTIC SYSTEM AREA
 - PROPOSED WELL LOCATION
 - OVERHEAD UTILITIES
 - 25' WETLAND BUFFER LINE
 - CONSERVATION SIGNAGE
 - EXISTING TREE LINE
 - STORM DRAIN DRAINAGE AREA
 - STRUCTURE NO.
 - SILT FENCE
 - SUPER SILT FENCE
 - STABILIZED CONSTRUCTION ENTRANCE
 - PROPOSED PERC LOCATION
 - EXISTING WELL
 - PUBLIC EASEMENT FOR DRAINAGE UTILITY AND FLOOD PLAIN
 - PROPOSED BOLLARD
 - EROSION CONTROL MATTING
 - EARTH DIKE

DEVELOPER'S CERTIFICATE:

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

Ronald E. Thompson 2/12/08
DEVELOPER DATE

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Sourabh G. Munshi 2/07/08
SOURABH G. MUNSHI, P.E. DATE

OWNER / DEVELOPER:

LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" SEDIMENT & EROSION CONTROL PLAN NOTES & DETAILS

WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 14 OF 27

Reviewed for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD 2/28/08 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Harrel 3/21/08 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Michael J. ... 3/10/08 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Michael J. ... 3-4-08 DATE
CHIEF, BUREAU OF HIGHWAYS

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 528
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751

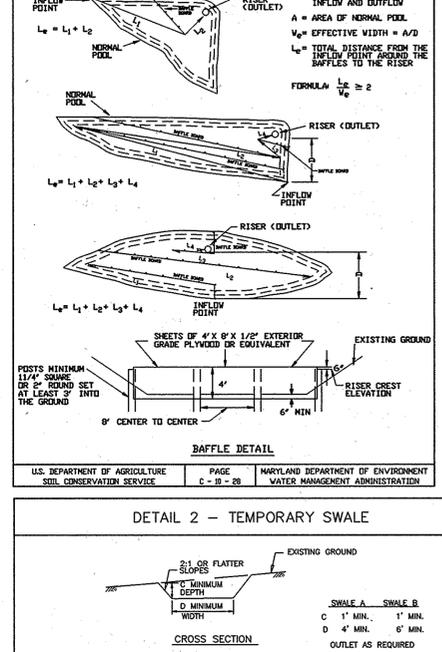
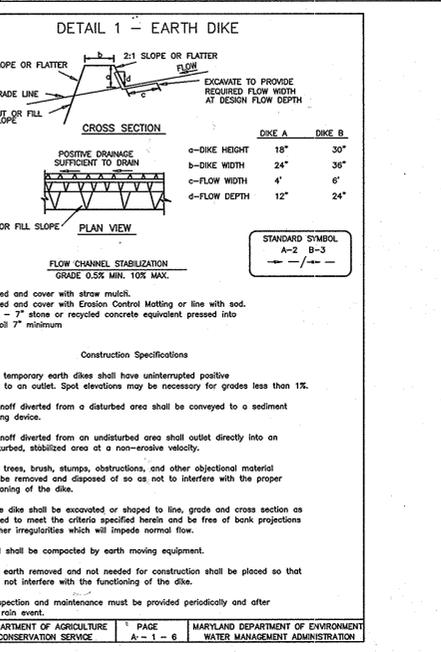
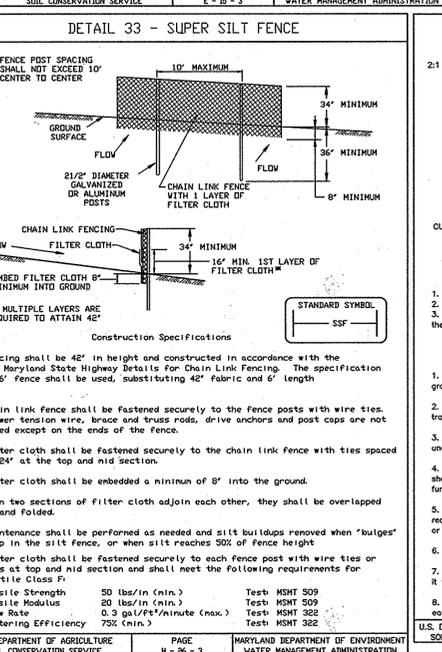
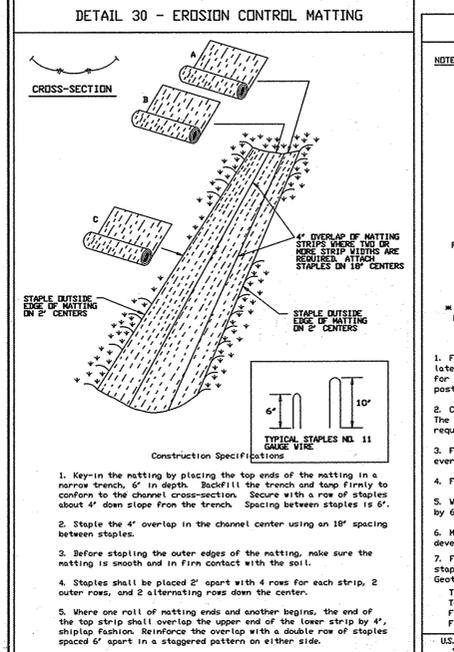
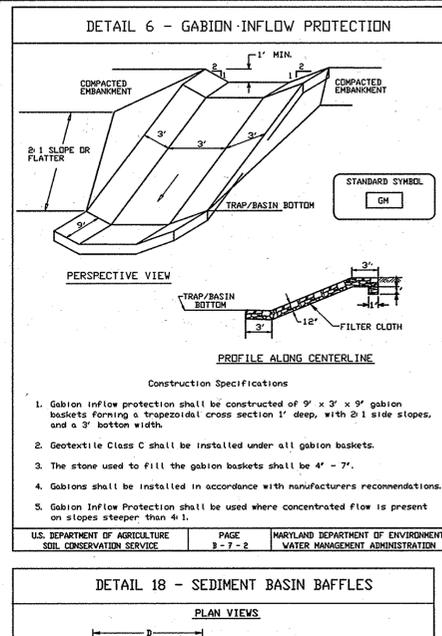
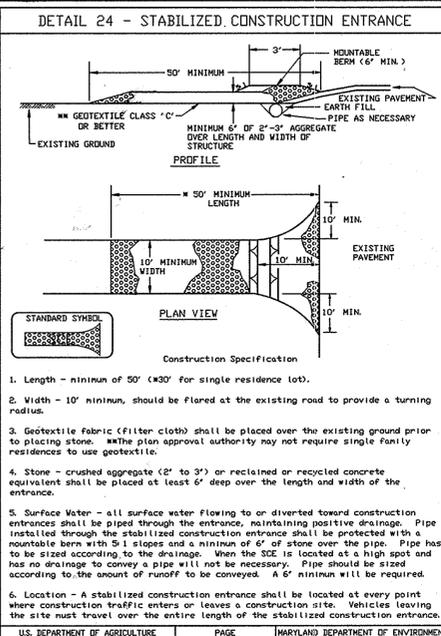
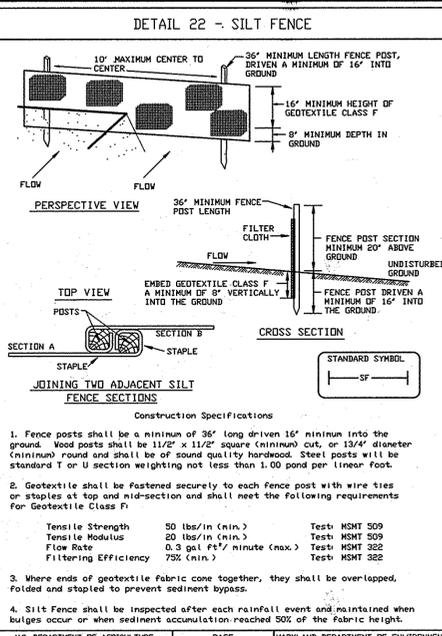
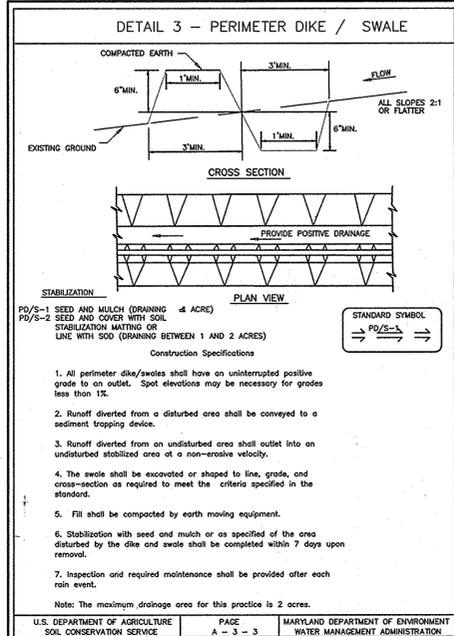
PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

Ronald E. Thompson 2/27/08
PROFESSIONAL ENGINEER

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

DATE	REVISIONS



HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, Licenses and Permits, Sediment Control Division prior to the start of any construction, (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1. 14 days as to all other disturbed or graded areas on the project site.
4. All disturbed areas must be stabilized within the time period specified above in accordance with the 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
5. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
6. Site Analysis:
 - Total Area of Site: 33.5 Acres
 - Area Disturbed: 8.3 Acres
 - Area to be roofed or paved: 7.4 Acres
 - Area to be vegetatively stabilized: 2.4 Acres
 - Total Cut: 18,333 Cu. Yds.
 - Total Fill: 18,333 Cu. Yds.
 Offsite waste/borrow area location **LOG INC. LIVESTOCK ROAD**. Location must have active grading permit and/or approved by Inspector.
7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
9. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
10. Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

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

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

1. Preferred—Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.).
2. Acceptable—Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding: For the periods March 1-April 30, and August 1-October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1-July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of creeping lovegrass. During the period of October 16-February 28, protect site by applying 2 tons of well anchored straw mulch and seed as soon as possible in the spring.

Option 2—Use sod.

Option 3—Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

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

Soil Amendments: Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

Seeding: For periods March 1-April 30, and from August 15-October 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1-August 14, seed with 3 lbs/acre of creeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 15-February 28, protect site by applying 2 tons of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for addition rates and methods not covered.

MATERIALS SPECIFICATIONS

TABLE - GEOTEXTILE FABRICS

CLASS	APPROXIMATE OPENING SIZE MIL MAX	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30	250	500
B	0.50	200	350
C	0.30	200	350
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

*US SIEVE CW-02215

THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
 -APPROXIMATE OPENING SIZE: MS323
 -GRAB TENSILE STRENGTH: ASTM D 1682-43* SPECIMEN, 1X2" CLAMPS, 12" MIN. STRAIN RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.
 -BURST STRENGTH: ASTM D 3786

THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MILDEW RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS, AND COMPOSED OF A MINIMUM OF 80% BY WEIGHT OF POLYESTERS, POLYESTERS, OR POLYAMIDES. THE GEOTEXTILE FABRIC SHALL RESIST DETERIORATION FROM ULTRAVIOLET EXPOSURE.

IN ADDITION, CLASSES A THROUGH E SHALL HAVE A 0.01 CM/SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND APPARENT MINIMUM ELONGATION OF 20 PERCENT (20%) WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.

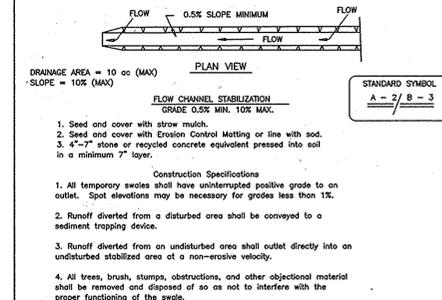
SILT FENCE
 CLASS F GEOTEXTILE FABRICS FOR SILT FENCE SHALL HAVE A 50 LB./IN. MINIMUM TENSILE STRENGTH AND A 20 LB./IN. MINIMUM TENSILE MODULUS WHEN TESTED IN ACCORDANCE WITH MSMT 609. THE MATERIAL SHALL ALSO HAVE A 0.3 GAL/FITZ/MIN. FLOW RATE AND SEVENTY-FIVE PERCENT (75%) MINIMUM FILTERING EFFICIENCY WHEN TESTED IN ACCORDANCE WITH MSMT 322.

GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF SILT FENCE SHALL RESIST DETERIORATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 DEGREES F.

TABLE - STONE SIZE

NUMBER	SIZE RANGE	D50	D100	ASTH0	WEIGHT
NUMBER 57*	3/8" - 1 1/2"	1/2"	1 1/2"	M-43	N/A
NUMBER 1	2" - 3"	2 1/2"	3"	M-43	N/A
NUMBER 2	4" - 7"	2 1/2"	7"	N/A	N/A
CLASS I	N/A	18"	24"	N/A	150 LB MAX
CLASS II	N/A	24"	36"	N/A	200 LB MAX
CLASS III	N/A	24"	36"	N/A	2000 LB MAX

* THIS CLASSIFICATION IS TO BE USED ON THE INSIDE FACE OF STONE OUTLETS AND CHECK DAMS.
 ** THIS CLASSIFICATION IS TO BE USED WHENEVER SMALL RIP-RAP IS REQUIRED. THE STATE HIGHWAY ADMINISTRATION DESIGNATION FOR THIS STONE IS STONE FOR GABIONS (90501 04)



VEGETATIVE SPECIFICATIONS AND NOTES

1. Disturb as small an area of the present cover as possible while performing grading.
2. Limit duration of exposure of bare earth from grading operation to 7 days by the establishment of temporary vegetation (or mulching if appropriate) or by completing permanent seeding within 14 days.
3. Establish permanent vegetative cover immediately after final grading is completed. (This includes all grading on or off site that is affected by this construction.) If final grading is completed at a time other than the seeding season, a temporary ground cover such as mulching will be used to stabilize the bare soil.
4. Recommended temporary seed mixtures:
 - Seed: Bullock Ryegrass 150 lbs. per acre
 - Lime: 2 tons ground limestone per acre
 - Fertilizer: 10-10-10 1,000 lbs. per acre
 - Mulch: Straw at 1.5 tons per acre
 - Asphalt: SS-1 or equivalent at 200 gal. per acre
5. Recommended permanent seed mixture:
 - Seed: Ky. 31 Fescue at 60 lbs. per acre
 - Lime: 2 tons ground limestone per acre
 - Fertilizer: 10-10-10 at 1,000 lbs. per acre
 - Asphalt: SS-1 or equivalent at 200 gal. per acre
6. All points of construction ingress and egress shall be protected by 50 ft. (linear) of crushed stone to prevent tracking of mud onto public roads.
7. Following initial soil disturbance or redistribution, permanent or temporary stabilization (specified on plans) shall be completed within seven calendar days as to the surface of all perimeter control, dikes, swales ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days as to all other disturbed or graded areas on the project site.
8. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Approval shall be requested upon final stabilization of all sites with disturbed areas in excess of 2 acres before removal of sediment controls.

SUPPLEMENTAL REQUIREMENTS

THESE REQUIREMENTS ARE CONCERNED WITH HEALTH AND SAFETY ASPECTS OF SEDIMENT BASINS. THE STRUCTURAL DESIGN OF ANY DAM FOR A SEDIMENT BASIN CONFORM TO THE CRITERIA AND REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT OR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, AS APPROPRIATE.

THE SEDIMENT DEPOSITS AND ANY LONG TERM PONDING OF WATER IN THE BASIN MAY CREATE A HEALTH OR SAFETY HAZARD. TO MINIMIZE THESE POTENTIAL HAZARDS THE FOLLOWING ARE REQUIRED:

1. ALL SEDIMENT BASINS SHALL HAVE SUITABLE WARNING SIGNS POSTED AROUND THEIR PERIMETER AT INTERVALS NOT GREATER THAN 100 FEET. SIGNS SHALL NOT BE MAILED TO TREES.
2. ALL SEDIMENT TRAPS AND BASINS IN RESIDENTIAL AREAS OR IN RESIDENTIAL DEVELOPMENTS EXPECTED TO HAVE OCCUPANTS BEFORE THEIR REMOVAL SHALL BE FENCED IF THE MAXIMUM DEPTH FOR THE SEDIMENT VOLUME EXCEEDS 18 INCHES. FENCING SHALL BE EQUIVALENT TO SNOW FENCING IN HEIGHT, ABILITY TO BE SEEN AND ABILITY TO RESTRICT INADVERTENT PASSAGE.

DEVELOPER'S CERTIFICATE:

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

Samir 2/12/08
 DEVELOPER DATE

ENGINEER'S CERTIFICATE:

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

Sourabh Munshi 2/12/08
 SOURABH G. MUNSHI, P.E. DATE

Revised for HOWARD SCD and meets Technical Requirements.

USDA/Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Cindy Hamble 2/24/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John 2/24/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Vanmar Associates, Inc. 3-4-08
 CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (410) 823-2900 (301)851-5015 (410) 549-2751

REVISIONS

NO.	DATE	REVISIONS

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS BEFORE START OF CONSTRUCTION

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

OWNER / DEVELOPER

LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" SEDIMENT & EROSION CONTROL NOTES & DETAILS

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LGD INC. BY DEED RECORDED IN LIBER 198B FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 DECEMBER, 2006 SHEET 15 OF 27

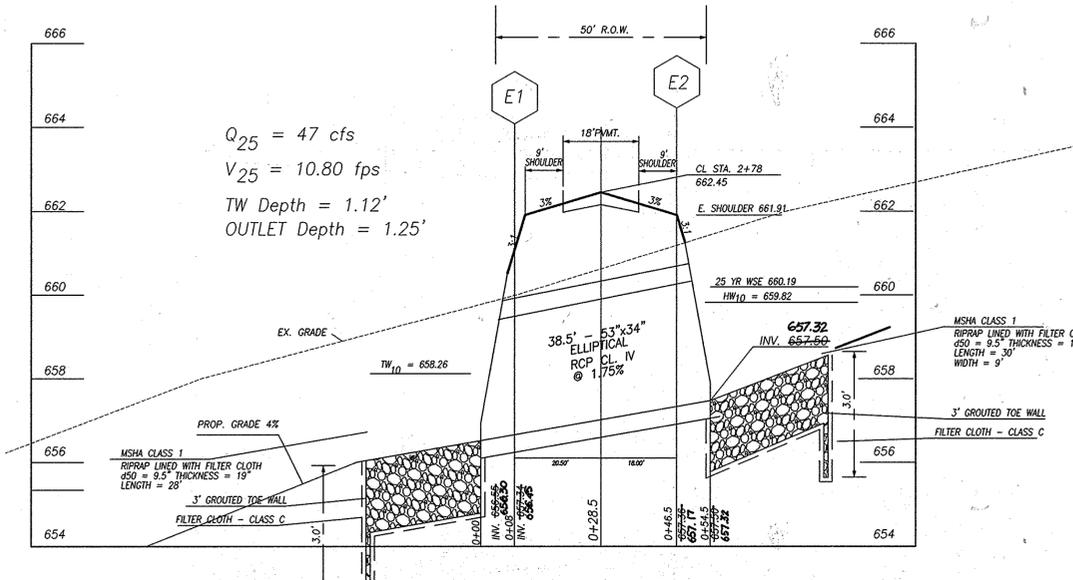
DPZ FILES: SP-06-003 INDEX No. SC-3

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

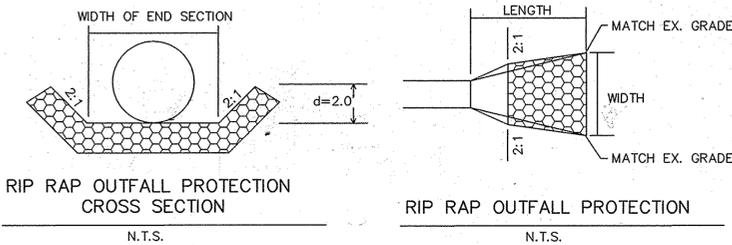
STORM DRAIN NOTES

1. ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST STANDARD AND SPECIFICATION OF HOWARD COUNTY PLUS SHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. FOR TYPES OF STRUCTURES, REFER TO THE STANDARD STORM DRAINAGE DETAILS OF HOWARD COUNTY.
3. WHERE THE DRAIN ON THE MAIN LINE THROUGH A STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1:12.1 OR FLATTER, A ROUNDED CHANNEL SHALL BE BUILT TO THE CROWN OF THE PIPES.
4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
5. CONTRACTOR MAKING ADJUSTMENTS TO EXISTING UTILITIES MUST BE APPROVED AND WORK UNDER THE SUPERVISION OF THE UTILITY COMPANY AND/OR HOWARD CO. DEPT. OF PUBLIC WORKS. REQUIRED MATERIALS MUST BE APPROVED BY THE APPROPRIATE UTILITY OWNER OR/AND THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
6. ALL INLETS SHALL BE PROVIDED WITH KEEP HOLES AND FOUNDATION DRAINAGE MATERIALS PER HOWARD CO. STANDARDS.
7. WHERE ANY PART OF THE STORM DRAIN SYSTEM IS LOCATED IN FILL SECTION, PROVIDED SLEET FILL MATERIAL COMPACTED TO 95% AASHTO T-180 DENSITY FROM ORIGINAL UNDISTURBED GROUND UP TO STRUCTURE BOTTOM SLABS AND PIPE BEDDING. PROVIDE BEDDING PER HOWARD COUNTY STD. DETAIL #201.
8. ELEVATIONS SHOWN ON PROFILES ARE AT PIPE INVERTS, UNLESS OTHERWISE NOTED.
9. GRADE ALL DISTURBED AREAS TO PROVIDE POSITIVE DRAINAGE.
10. ALL STANDARD STORM DRAINAGE STRUCTURES ARE SUBJECT TO MODIFICATION BY THE FIELD INSPECTOR TO MEET FIELD REQUIREMENTS.
11. CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-257-7777), 48 HOURS IN ADVANCE OF ANY EXCAVATION.



WOODBINE CROSSING ROAD CULVERT PROFILE

SCALE: HOR: 1"=20'
VERT: 1"=2'



RIP RAP OUTFALL PROTECTION CROSS SECTION

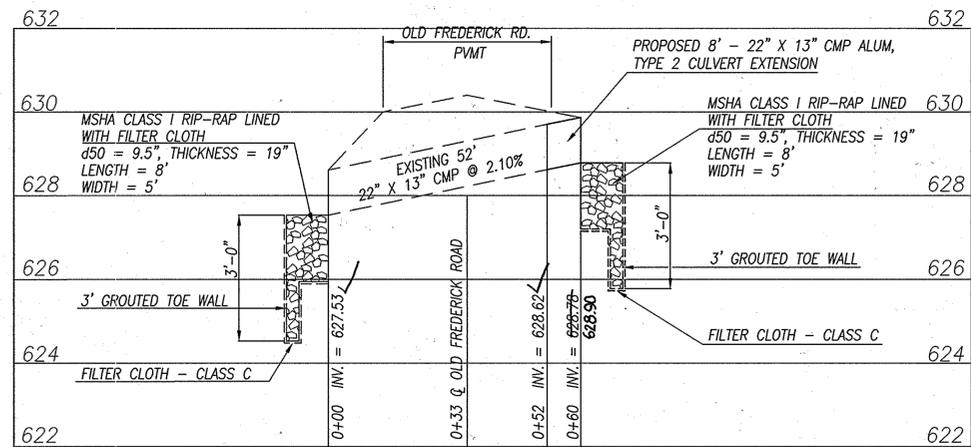
RIP RAP OUTFALL PROTECTION LENGTH

N.T.S.

N.T.S.

ROCK OUTLET PROTECTION

- 1) The subgrade for the filter, rip-rap, or Gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- 2) The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- 3) Geotextile Class C28 or better shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile fabric over the damaged part or by completely replacing the geotextile fabric. All overlaps whether for repairs or for joining two pieces of geotextile fabric shall be a minimum of one foot.
- 4) Stone for the rip-rap or Gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile fabric. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
- 5) The stone shall be placed so that it blends with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.



OLD FREDERICK ROAD CULVERT EXTENSION

SCALE: HOR: 1"=20'
VERT: 1"=2'

STRUCTURE SCHEDULE

STR. NO.	STRUCTURE TYPE	STRUCTURE LOCATION	STRUCTURE ELEVATION	INVERT (IN)	INVERT (OUT)	REMARKS
K-2	TYPE K INLET HOWARD CO. STD. D-4.12	WOODBINE CROSSING ROAD STA. 11+89, 23.0' LT	642.44 642.11 (SWALE)	XXXX	639.85 639.86	ONE SIDE CONCRETE VALLEY GUTTER WITH OTHER SIDE EARTH BERM
K-1	TYPE K INLET HOWARD CO. STD. D-4.12	WOODBINE CROSSING ROAD STA. 12+06 24.5' RT	642.47 641.42 (SWALE)	638.67 639.37	639.20 639.17	ONE SIDE CONCRETE VALLEY GUTTER WITH OTHER SIDE EARTH BERM
E-2	53"x34" ELLIPTICAL RCP PRECAST END SECTION	WOODBINE CROSSING ROAD STA. 2+78 RT 24.00'	XXXX	ES 657.32 658.00	XXXX	CULVERT INLET
E-1	53"x34" ELLIPTICAL RCP PRECAST END SECTION	WOODBINE CROSSING ROAD STA. 2+78 LT 22.00'	XXXX	XXXX	ES 656.30 657.30	CULVERT OUTLET
I-1	PRECAST STD. "WR" INLET HOWARD CO. STD. D-4.35	WOODBINE CROSSING ROAD STA. 1+49.76 CUL-DE-SAC LINEAR PROFILE	636.33 636.52	632.03 632.27	631.73 632.00	LOCATED IN SUMP
E-3	18" RCP CL IV END SECTION HOWARD CO. STD. D-5.51	N 613590.8417 E 1292739.9078	XXXX	XXXX	618.98 619.30	PIPE OUTLET
K-3	TYPE K INLET HOWARD CO. STD. D-4.12	N 613239.5186 E 1291850.5394	664.20 664.00 (SWALE)	XXXX	662.12 662.67	ONE SIDE CONCRETE VALLEY GUTTER WITH OTHER SIDE EARTH BERM
MH-1	PRECAST MANHOLE HOWARD CO. STD. G-5.12	N 613615.6429 E 1292643.1292	632.07 632.00	628.67 629.00	627.30 625.97	

PIPE SCHEDULE

SIZE	TYPE	LENGTH	REMARKS
18"	RCP-CL IV	274 L. F.	WOODBINE CROSSING ROAD CUL-DE-SAC OUTLET PIPE
53"x34"	RCP - CL IV ELLIPTICAL	42 L. F.	WOODBINE CROSSING ROAD CROSS CULVERT
22"x13"	CMP ALUM TYPE 2	8 L. F.	EXTENSION OF OLD FREDERICK ROAD EXIST CULVERT

NOTES:

1. PIPE LENGTH SHOWN ON SCHEDULE ARE BASED ON PROFILED LENGTHS FROM CENTERLINE OF THE STRUCTURES FOR PRECAST TYPE STRUCTURES.
2. PIPES SHOWN HEREON ARE CORRUGATED ALUMINUM ALLOY CULVERT PIPE PER HOWARD CO. STANDARDS AND SPECIFICATIONS OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
3. ALL PRECAST STRUCTURES SHALL BE PER HOWARD CO. STANDARDS AND SPECIFICATIONS OR APPROVED EQUAL.

NOTES:

1. OFFSET FOR INLETS IS TO FACE OF CURB AND FOR MAINHOLES IS TO CENTER OF STRUCTURE.

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

AS-BUILT CERTIFICATION
I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on the "AS-BUILT" plan meeting Approved Plans and Specifications.
Ronald E. Thompson
Professional Engineer Registration No. 18417
Date: 11/6/2005

"AS-BUILT"

OWNER / DEVELOPER

LDG INC.
LEE PLAZA, SUITE 200 . 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

STORM DRAIN PROFILES NOTES & DETAILS

WOODBINE CROSSING (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DECEMBER, 2006 SHEET 16 OF 27

DPZ FILES: SP-06-003

INDEX No. SD-1

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 7/24/05

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
Date: 3-4-08

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829-2800 (301)851-5015 (410) 549-2751

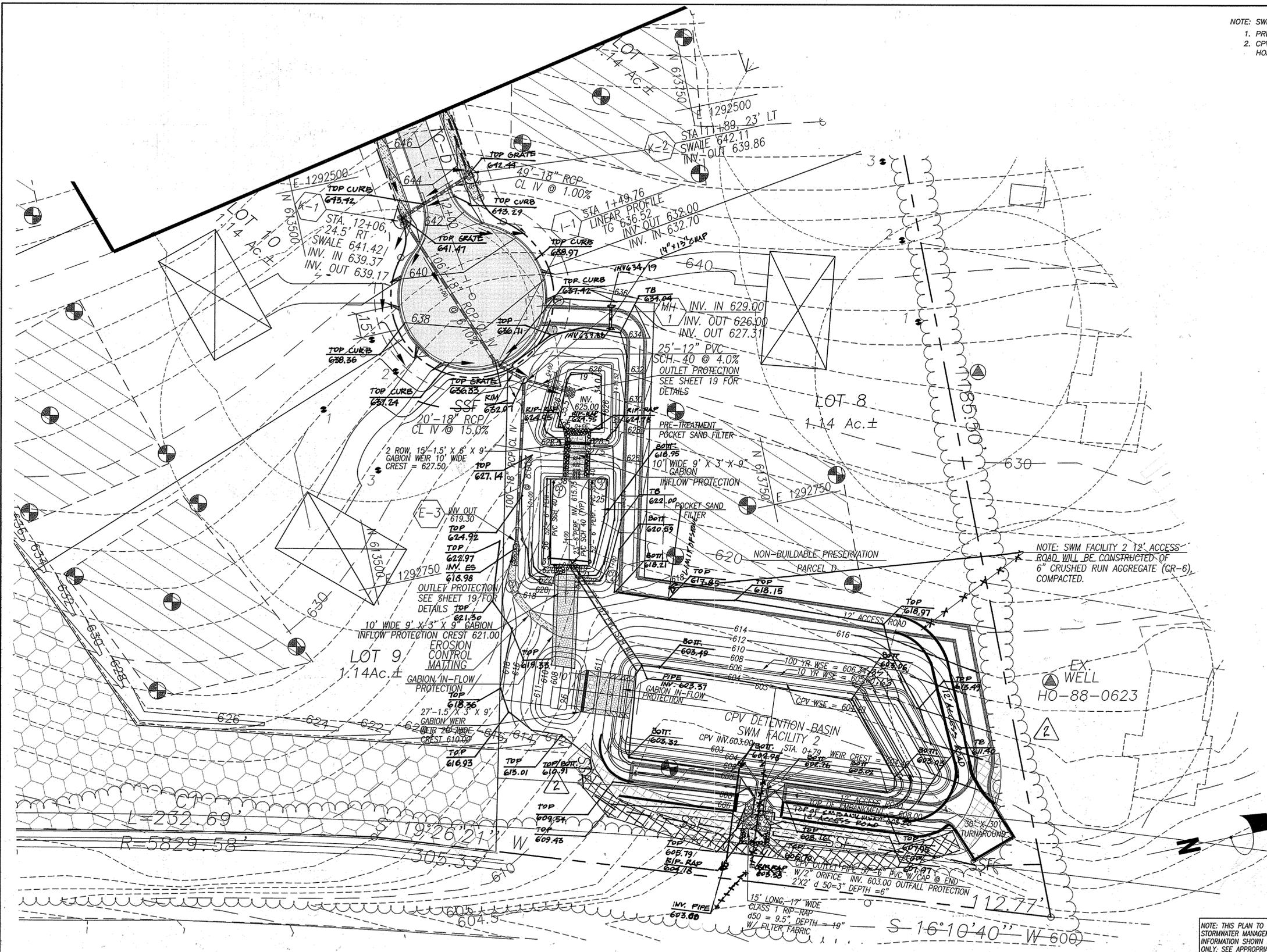
PROFESSIONAL ENGINEER
Ronald E. Thompson
Professional Engineer Registration No. 18417
Date: 11/6/2005

DATE	REVISIONS

0: AutoDesk Vbbs 089-2244 Polopaco 0: verlook.dwg 89-2244 CONSTRUCTION.DWG: 2/5/2008 1:33:34 PM

NOTE: SWM FACILITY #2 MAINTENANCE IS AS FOLLOWS:
 1. PRETREATMENT & SAND FILTER BY WOODBINE CROSSING HOA.
 2. CPV DETENTION BASIN BY WOODBINE CROSSING HOA & HOWARD COUNTY.

SOIL BORING TEST LOCATION	
S.W.M. FACILITY	TEST PIT NO.
1	TP3A
2	TP1
3	TP2



SWM FACILITY 2 (NON-BUILDABLE PRESERVATION PARCEL D)

1"=30'

NOTE: SWM FACILITY 2 12' ACCESS ROAD WILL BE CONSTRUCTED OF 6" CRUSHED RUN AGGREGATE (CR-6), COMPACTED.

NOTE: THIS PLAN TO BE USED FOR STORMWATER MANAGEMENT ONLY. ALL OTHER INFORMATION SHOWN FOR REFERENCE PURPOSE ONLY. SEE APPROPRIATE CONSTRUCTION DRAWINGS FOR OTHER INFORMATION.

AS-BUILT CERTIFICATION
 I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.
Ronald E. Thompson
 Ronald E. Thompson
 Professional Engineer Registration No. 18417
 4/6/2015
 Date

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" STORMWATER MANAGEMENT FACILITY 2 PLAN

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
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TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 DECEMBER, 2006 SHEET 18 OF 27

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamel
 CHIEF, DIVISION OF LAND DEVELOPMENT
 3/18/15
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Wade J. Smith
 CHIEF, BUREAU OF HIGHWAYS
 3-4-15
 DATE

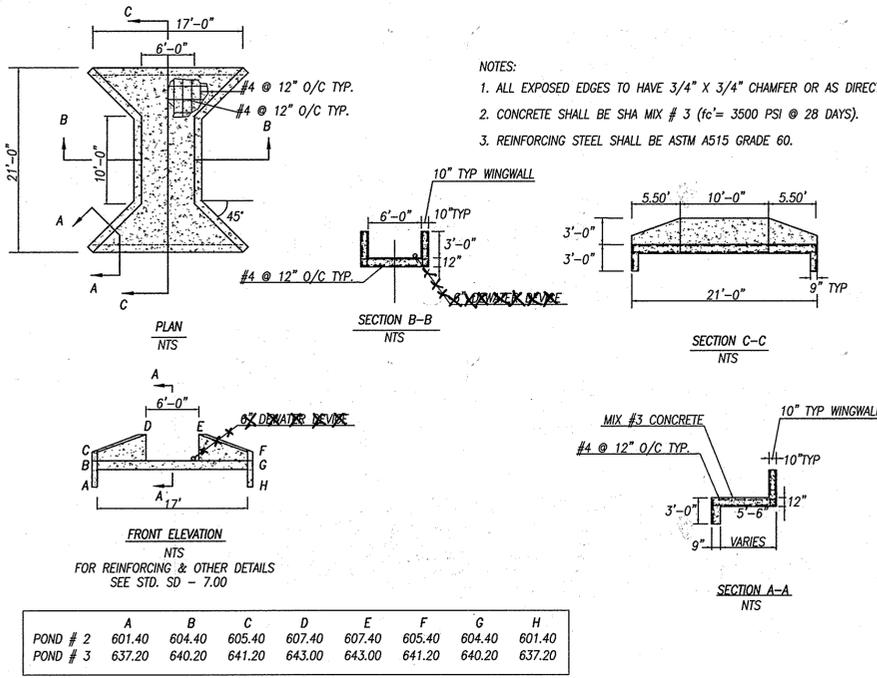
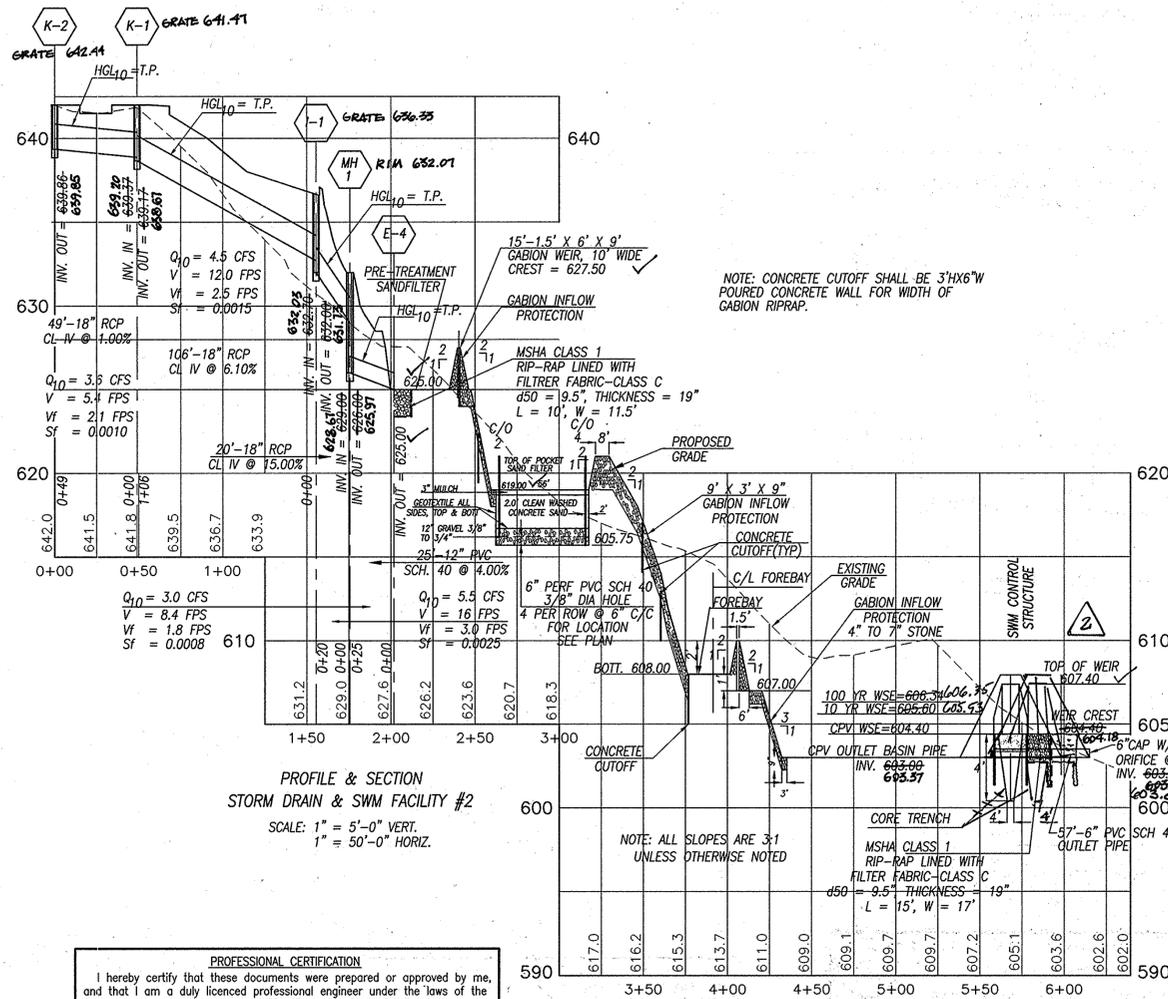
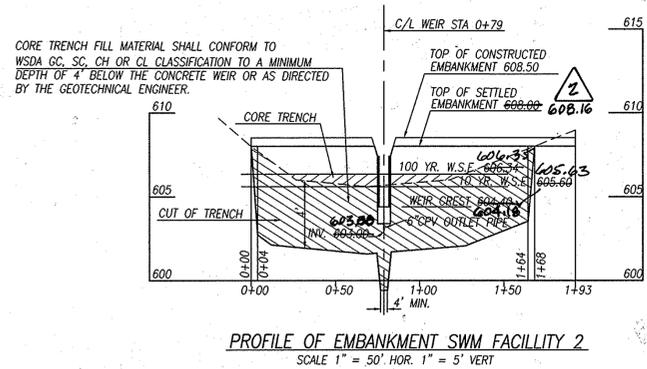
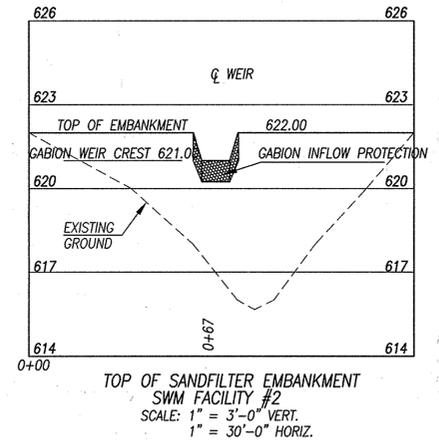
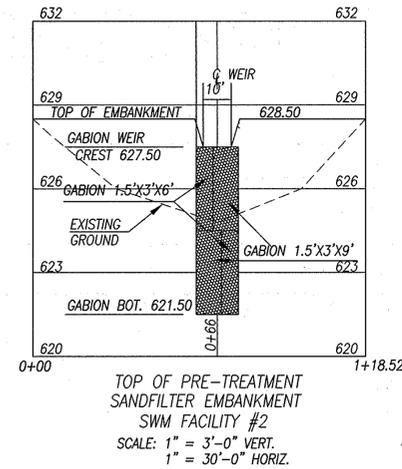
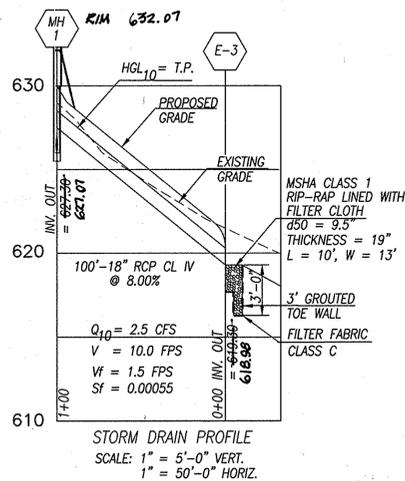
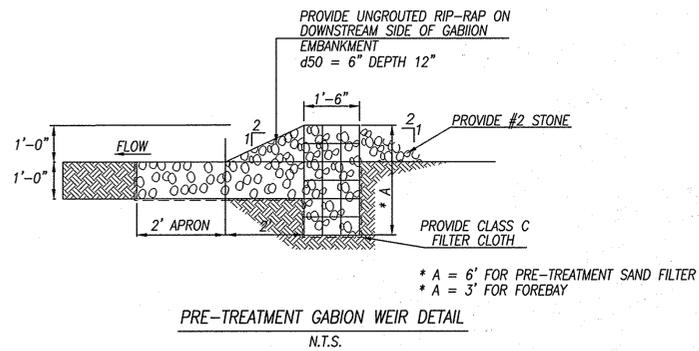
VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 510 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829 2890 (301)831 5015 (410) 549 2751

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.



DATE	REVISIONS
7/11/2014	SWM FACILITY #2 REVISIONS 2

CALL "MISS UTILITY" AT
 1-800-287-7777
 48 HOURS BEFORE START OF CONSTRUCTION



	A	B	C	D	E	F	G	H
POND # 2	601.40	604.40	605.40	607.40	607.40	605.40	604.40	601.40
POND # 3	637.20	640.20	641.20	643.00	643.00	641.20	640.20	637.20

AS-BUILT CERTIFICATION
 I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan in accordance with the Approved Plans and Specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 18417
 Date: 11/4/2015
 DATE: 3/10/2016

NOTE: THIS PLAN TO BE USED FOR STORMWATER MANAGEMENT ONLY. ALL OTHER INFORMATION SHOWN FOR REFERENCE PURPOSE ONLY. SEE APPROPRIATE CONSTRUCTION DRAWINGS FOR OTHER INFORMATION.

CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" STORMWATER MANAGEMENT FACILITY 2 PLAN & PROFILES

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 DECEMBER, 2006 SHEET 19 OF 27

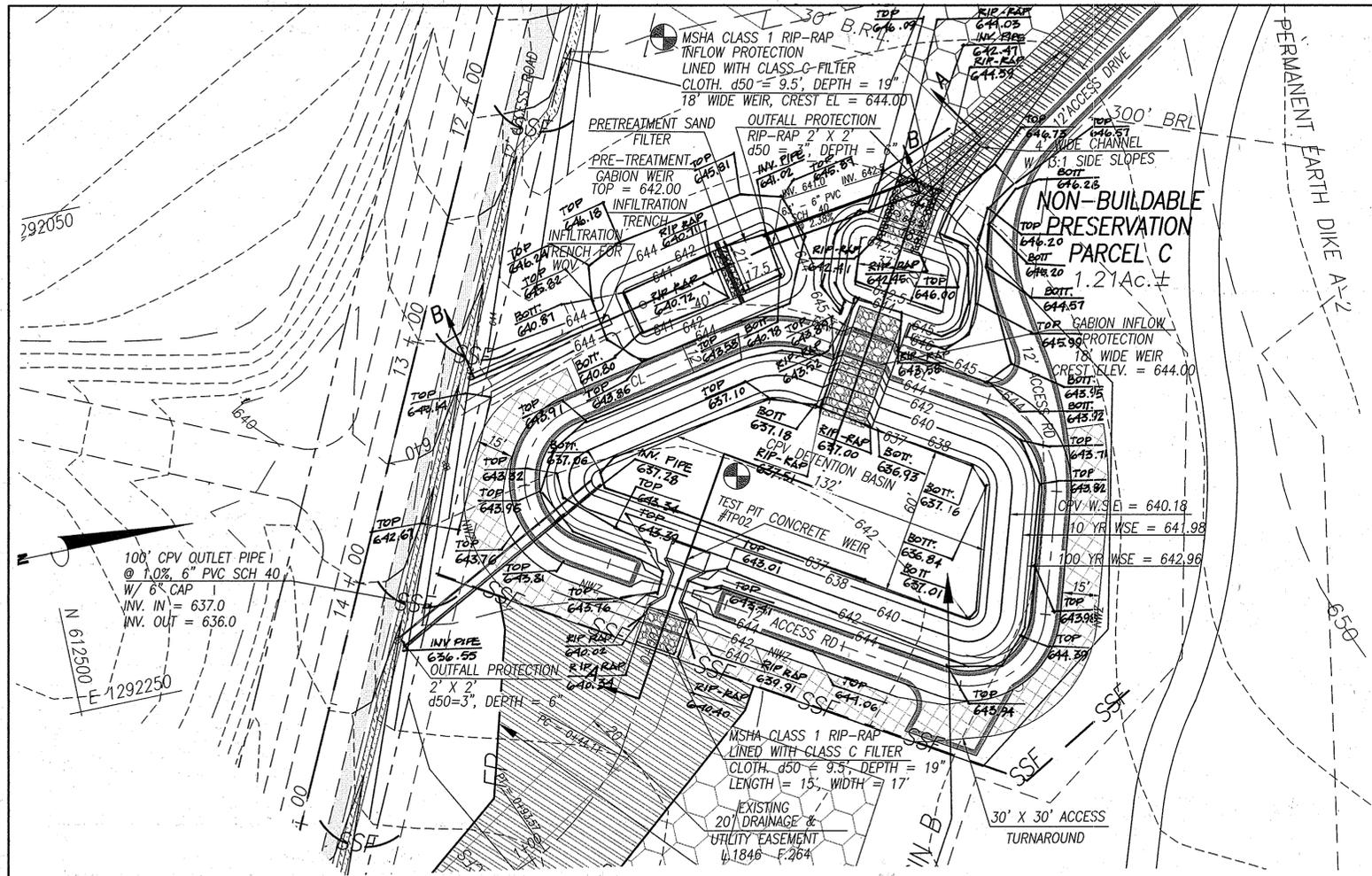
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 DATE: 3/10/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 DATE: 3-4-16

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 823 2890 (301)851 5015 (410) 549 2751

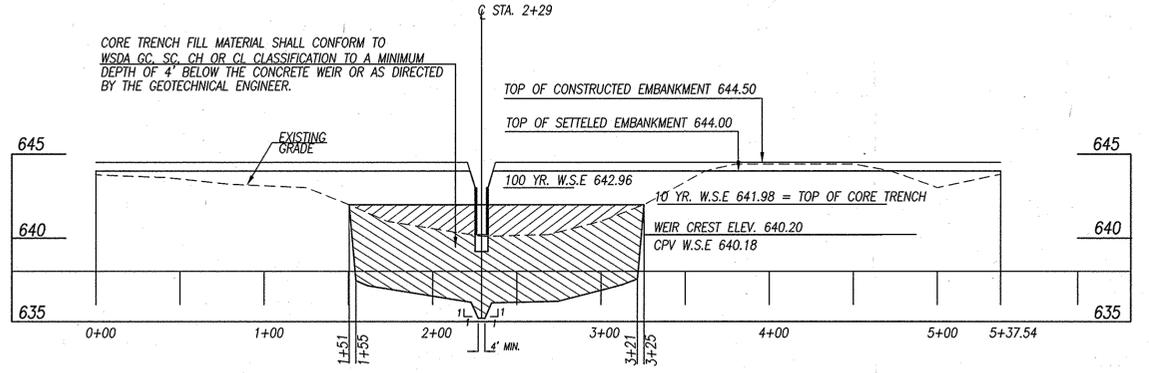
PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

DATE	REVISIONS
7/11/2014	SWM FACILITY #2 REVISIONS

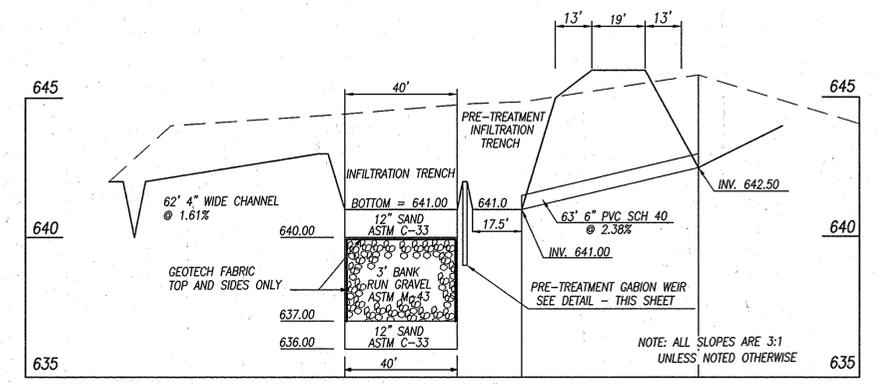


SWM FACILITY 3 (NON-BUILDABLE PRESERVATION PARCEL C)

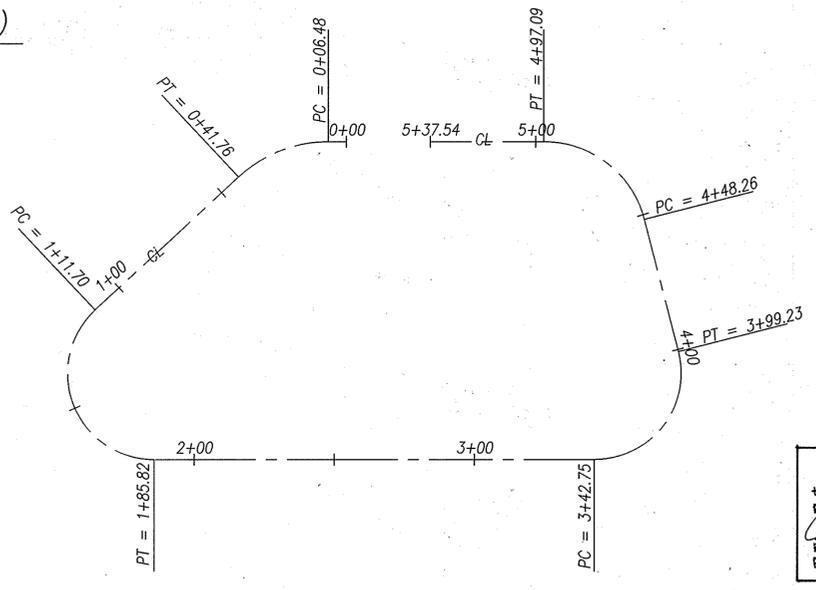
1"=30'



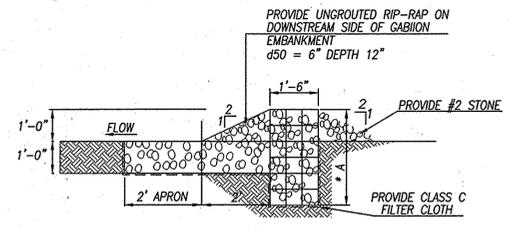
C/L EMBANKMENT PROFILE SWM FACILITY 3
SCALE: 1" = 50' HOR, 1" = 5' VERT.



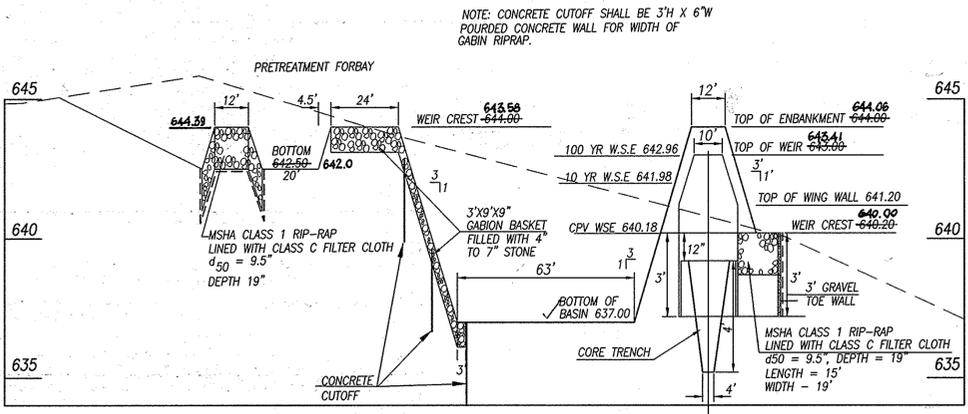
SECTION THROUGH INFILTRATION TRENCH & PRETREATMENT INFILTRATION TRENCH
SCALE: 1" = 30' HORIZ, 1" = 3' VERT.



C/L STATIONING ALONG EMBANKMENT SWM FACILITY 3
SCALE: 1" = 30'-0"



PRE-TREATMENT GABOR WEIR DETAIL



SEC A - A FACILITY 3
SCALE: 1" = 30' HORIZ, 1" = 3' VERT.



AS-BUILT CERTIFICATION
I hereby certify by my seal that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on the AS-BUILT plan meet the Approved Plans and Specifications.
Ronald E. Thompson
Professional Engineer Registration No. 18417
Date: 4/6/2008

- NOTE: SWM FACILITY #3 MAINTENANCE IS AS FOLLOWS:
1. PRETREATMENT & INFILTRATION TRENCHES BY WOODBINE CROSSING HOA.
2. CPV DETENTION BASIN BY WOODBINE CROSSING HOA & HOWARD COUNTY.

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" STORMWATER MANAGEMENT FACILITY 3 PLAN & PROFILES

WOODBINE CROSSING (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
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ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DECEMBER, 2006 SHEET 20 OF 27

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hans
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 3/24/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Willa Z. W...
CHIEF, BUREAU OF HIGHWAYS
DATE: 3-4-08

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

SOIL BORING TEST LOCATION	TEST PIT NO.
S.W.M. FACILITY	TP3A
	TP1
	TP2

GEOTECHNICAL CONCLUSIONS & RECOMMENDATIONS FOR STORMWATER MANAGEMENT FACILITIES—GEOTECH—GTA, INC.

BASED ON THIS EXPLORATION, IT IS OUR OPINION THAT CONSTRUCTION OF THE PROPOSED IMPROVEMENTS IS FEASIBLE, GIVEN THAT THE FOLLOWING RECOMMENDATIONS ARE OBSERVED, AND THAT THE STANDARD LEVEL OF CARE IS MAINTAINED DURING CONSTRUCTION. GTA'S PRELIMINARY RECOMMENDATIONS ARE PROVIDED IN THE FOLLOWING PARAGRAPHS.

GTA UNDERSTANDS THAT THE PROPOSED SWM FACILITIES ARE TO BE TRENCHES, AND WILL NOT INCLUDE EMBANKMENTS WHICH REQUIRE DESIGN IN ACCORDANCE WITH MARYLAND SPECIFICATION 378 (MD 378) WHICH GOVERNS DESIGN AND CONSTRUCTION PONDS.

BASED ON THE REFERENCED PLANS, WE UNDERSTAND THAT EXCAVATIONS RANGING FROM 5 TO 10 FEET WILL BE REQUIRED TO ACHIEVE THE PROPOSED FACILITY BOTTOM ELEVATIONS. BACKHOE REFUSAL WAS ENCOUNTERED WITHIN TEST PITS TP-1 AND TP-3 AT DEPTHS OF 6.9 AND 7.6 FEET, RESPECTIVELY, AND THE SURFACE OF THE WEATHERED ROCK IS EXPECTED TO BE VARIABLE ACROSS THE SITE. AS A RESULT, ROCK EXCAVATION METHODS, INCLUDING BLASTING, MAY BE REQUIRED WITHIN THE PROPOSED EXCAVATIONS. BASED ON OUR OBSERVATIONS OF THE TEST PITS, THE MAJORITY OF THE PROPOSED EXCAVATIONS ARE EXPECTED TO BE ACCOMPLISHED UTILIZING STANDARD EARTH EXCAVATION PROCEDURES.

GROUNDWATER WAS NOT ENCOUNTERED WITHIN THE TEST PITS, HOWEVER IF ENCOUNTERED, DEWATERING OF THE EXCAVATIONS WOULD BE REQUIRED DURING THE CONSTRUCTION PHASE.

BASED ON THE IN-SITU INFILTRATION TESTING, THE USE OF INFILTRATION AND/OR RECHARGE MAY BE FEASIBLE. THE INFILTRATION TESTS WERE PERFORMED WITHIN EACH OF THE STORMWATER MANAGEMENT TEST PITS TO MEASURE THE RATE OF WATER RECHARGE AT THE PROPOSED STORMWATER MANAGEMENT FACILITIES. THE DEPTHS OF THE TESTS WERE DETERMINED BY THE SOIL CONDITIONS AND THE ANTICIPATED FACILITY BOTTOM ELEVATION, AND THE TEST DEPTH WAS RAISED IF VERY DENSE MATERIALS WERE ENCOUNTERED. THE TEST DEPTHS AND THE DEPTHS TO LIMITING ZONES ARE INCLUDED IN TABLE A BELOW.

TEST PIT NUMBER	DEPTH TO LIMITING ZONE (FT)	INFILTRATION INFLTRATION TEST DEPTH (FT)	INFILTRATION RATE (INCHES PER HOUR)	USDA CLASSIFICATION
TP-1	6.9 FT. TO BACKHOE REFUSAL	2	0.25	CLAY LOAM
TP-2	NONE ENCOUNTERED TO 13.2 FT.	7	1.02	SANDY LOAM
TP-3	7.6 FT. TO BACKHOE REFUSAL	3	1.22	LOAM
TP-3A	NONE ENCOUNTERED TO 10.5 FT.	5.5	0.7	LOAM

AS REQUIRED BY HOWARD COUNTY, AN INFILTRATION RATE OF 1.02 INCHES PER HOUR IS REQUIRED FOR THE INFILTRATION TO BE UTILIZED, AND THE USE OF INFILTRATION IS CONSIDERED FEASIBLE AT TP-2 AND TP-3 AT THE ABOVE REFERENCED DEPTHS. THE USE OF RECHARGE MAY BE CONSIDERED AT TP-1 AT THE ELEVATION INDICATED ABOVE.

FACILITY	DRAINAGE AREA	Rev (%Area Method)		WQv (75% of WQv)		Cpv		Qp10	Qf100
		Required	Provided	Required	Provided	Required	Provided		
	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	3a	0.13 AC-FT	MET W/ WQv	1960 CFT	3683 CFT	0.32 AC-FT	0.32 AC-FT	N/A	N/A
2	2	0.72 AC-FT	0.75 AC-FT	7907 CFT	7891 CFT	0.32 CFS	0.37 CFS	N/A	N/A
3	3b	0.17 AC-FT	MET W/ WQv	3484 CFT	5338 CFT	0.62 CFS	0.73 CFS	N/A	N/A
	3c	N/A	N/A	N/A	N/A				

REV - DRAINAGE AREA 2—REQUIREMENTS ARE MET BY USING THE PERCENT AREA METHOD WITH THE NON-ROOFTOP DISCONNECTION AND SHEET FLOW TO BUFFER CREDITS.

DRAINAGE AREA 3a & 3b -REQUIREMENTS ARE MET SIMULTANEOUSLY WHILE TREATING WQv WITH INFILTRATION.

WQv - DRAINAGE AREA 2—REQUIREMENTS ARE MET BY USING A POCKET SAND FILTER DESIGN. DRAINAGE AREAS 3a & 3b ARE MET BY THE USE OF INFILTRATION TRENCHES.

CPv - REQUIREMENTS HAVE BEEN MET VIA A DETENTION BASIN FOR AREAS 2 & 3, NO CPv IS REQUIRED FOR DRAINAGE AREA 1.

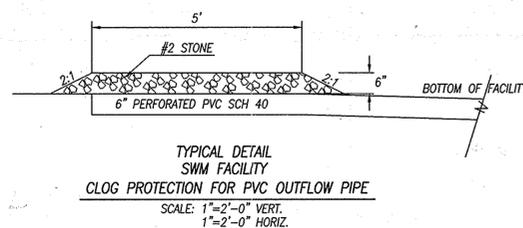
FACILITY SUMMARY & NOTES

FACILITY 1 - INFILTRATION TRENCH WITH PRETREATMENT.

FACILITY 2 - SEPARATE SURFACE SAND FILTER AND CPv DETENTION BASIN WITH PRETREATMENT.

FACILITY 3 - SEPARATE INFILTRATION TRENCH AND CPv DETENTION BASIN WITH PRETREATMENT.

SEE SHEET 1 - GENERAL NOTE 13 FOR SWM FACILITY OWNERSHIP—MAINTENANCE RESPONSIBILITIES. MAINTENANCE OF SAND FILTERS, PRETREATMENT AND INFILTRATION TRENCHES SHALL BE BY WOODBINE CROSSING HOA. MAINTENANCE OF CPv DETENTION BASINS SHALL BE BY HOWARD COUNTY AND WOODBINE CROSSING HOA.



SEQUENCE OF CONSTRUCTION

- (2 WEEKS)
 1. OBTAIN ALL REQUIRED GRADING, MDE PERMITS, APPROVALS AND LICENSES FROM APPROPRIATE AGENCIES.
- (1 DAY)
 2. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1855 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.
- (2 DAYS)
 3. INSTALL STABILIZED CONSTRUCTION ENTRANCE. CONFIRM ALL TREE CONSERVATIONS SIGNS AND TREE PROTECTION FENCES HAVE BEEN INSTALLED.
- (8 WEEKS)
 4. INSTALL REMAINING SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES FOR CONSTRUCTION OF SHEETS 12-15. CONSTRUCT SEDIMENT TRAPS AND SEDIMENT BASIN A (SWM BASIN #2) AS FOLLOWS:
 - A. INSTALL SILT FENCE BELOW CPV DETENTION BASIN.
 - B. INSTALL TEMPORARY EMBANKMENT DIKE AS SHOWN ON THE PLAN.
 - C. CLEAR AND GRUB AREA.
 - D. CONSTRUCT OUTFLOW DEVICES INCLUDING WEIRS, OUTFLOW PIPES AND CLOG PROTECTION FOR OUTFLOW PIPES.
 - E. COMPLETE EMBANKMENT FILLS AND EXCAVATE FOR CPV DETENTION BASIN PER PLAN. CPV DETENTION BASIN WILL BE UTILIZED AS SEDIMENT CONTROL BASIN DURING ROADWAY CONSTRUCTION WITH SEDIMENT BASIN CONVERTED TO CPV DETENTION BASIN AT THE END OF STABILIZATION OF ROADWAY CONSTRUCTION. RESPECTIVELY, FOR SEDIMENT CONTROL—GRADE CPV DETENTION BASIN TO FINAL GRADES SHOWN ON SEDIMENT CONTROL PLANS AND GRADING/SWM PLANS.
 - F. INSTALL INFLOW PROTECTION DEVICES AND ALL OTHER ASSOCIATED SEDIMENT CONTROL APPURTENANCES.
 - G. REMOVAL OF ANY CONTROLS MAY NOT OCCUR UNTIL PERMISSION IS GRANTED BY INSPECTOR.
 - H. UPON COMPLETION OF ALL SEDIMENT CONTROL MEASURES, SECURE PERMISSION FROM INSPECTOR BEFORE PROCEEDING.
- (6 WEEKS)
 5. BEGIN CONSTRUCTION OF SUBDIVISION ROADWAYS. REMOVE TOPSOIL IN APPROVED STOCKPILE LOCATION. COMPLETE ROADWAY GRADING AFTER INSTALLATION OF STORM DRAINS, CULVERTS AND CONSTRUCTION THROUGH INITIAL BITUMINOUS PAVING COURSE AND STABILIZE ROADWAY DITCHES. COMPLETE ROADWAY/CUL-DE-SAC CURB AND GUTTER.
- (3 WEEKS)
 6. INSTALL STORM DRAINS, CULVERTS AND CONSTRUCT DRAINAGE SWALES. INSTALL EROSION CONTROL MATTING AS SHOWN ON PLANS AND STABILIZE DRAINAGE SWALES IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- (3 WEEKS)
 7. BEGIN CONSTRUCTION OF OLD FREDERICK ROAD WIDENING. REMOVE TOPSOIL IN APPROVED STOCKPILE LOCATION. COMPLETE ROADWAY GRADING AND DITCH CONSTRUCTION AFTER EXTENSION OF ROADWAY CULVERT AND CONSTRUCTION THROUGH INITIAL BITUMINOUS PAVING COURSE AND STABILIZE ROADWAY DITCHES.
- (8 WEEKS)
 8. CONSTRUCT STORMWATER MANAGEMENT FACILITIES 1, 2, 3, AS FOLLOWS:
 - A. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1855 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING THIS WORK.
 - B. THE SCHEDULE AND SEQUENCE OF ALL SWM FACILITIES SHOULD BE COORDINATED WITH OTHER SITE CONSTRUCTION ELEMENTS AND CONSTRUCTION SHOULD NOT BEGIN UNTIL COMPLETION OF SITE GRADING ELEMENTS AND STABILIZATION OF SUBDIVISION ROADWAYS.
 - C. SWM FOREBAY, PRETREATMENT, SAND FILTER FACILITIES SHALL BE CONSTRUCTED ONLY AFTER STABILIZATION OF ALL ROADWAY, DRAINAGE AND UTILITY CONSTRUCTION.
 - D. PRIOR TO STARTING CONSTRUCTION ON SWM FACILITY #3, CONSTRUCT TEMPORARY CLEARWATER EARTH DIKE ABOVE FACILITY. DRAINAGE AND UTILITY CONSTRUCTION.
 - E. CLEAR AND GRUB AREA FOR SWM FACILITIES. REMOVE TOPSOIL TO APPROVED STOCKPILE LOCATIONS.
 - F. INITIAL SWM FACILITY EXCAVATION SHOULD BE CARRIED TO WITHIN 1 FOOT OF THE FINAL ELEVATION OF THE BASIN FLOOR. FINAL EXCAVATION TO THE FINISHED GRADE SHOULD BE DEFERRED UNTIL ALL DISTURBED AREAS OF THE WATERSHED HAVE BEEN STABILIZED OR PROTECTED. THE FINAL PHASE FLOOR. EXCAVATION SHOULD REMOVE ALL ACCUMULATED SEDIMENT. RELATIVELY LIGHT TRACKED EQUIPMENT IS RECOMMENDED FOR THIS OPERATION TO AVOID COMPACTION OF THE SWM FACILITY ON THE PLANS.
 - G. INSTALL SWM FACILITY UNDERDRAINS, AND OTHER SWM ELEMENTS PER THE INDIVIDUAL SWM FACILITY DESIGN AS SHOWN
 - H. AFTER THE FINAL GRADING IS COMPLETED, THE SWM FACILITY FLOOR SHOULD BE DEEPLY TILLED BY MEANS OF ROTARY TILLERS OR DISC HARROWS TO PROVIDE A WELL-AERATED, HIGHLY POROUS SURFACE TEXTURE.
 - I. STABILIZE SWM FACILITIES BY SELECTION OF SUITABLE VEGETATIVE MATERIALS AND APPLICATION OF REQUIRED FERTILIZER AND MULCHES SHALL BE DONE IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - J. UPON STABILIZATION OF SWM CPV DETENTION BASIN #2, CONSTRUCT PERMANENT EARTH DIKE A-2 AT THE REAR OF LOTS 9-14.
 - K. COMPLETE CONSTRUCTION OF SWM #1, #2, #3 ELEMENTS AND STABILIZE PRIOR TO REMOVAL OF SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES.
 - L. REMOVE TEMPORARY CLEARWATER EARTH DIKES, CONSTRUCT SWM FACILITY #2 ACCESS ROAD AND STABILIZE.

- (1 WEEKS)
 9. CONSTRUCT PERMANENT EARTH DIKE A-2 BEHIND LOTS 9-14.
- (2 WEEKS)
 10. COMPLETE FINAL SURFACE COURSE ROADWAY PAVING FOR SUBDIVISION ROAD AND OLD FREDERICK ROAD.
- (1 WEEK)
 11. UPON COMPLETION OF ROADWAY CONSTRUCTION AND STABILIZATION OF SWM MANAGEMENT FACILITIES, REMOVE SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES, FILL ALL DISTURBED AREAS AND STABILIZE AREAS IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- (2 WEEKS)
 12. INSTALL STREET NAME SIGN AND INTERSECTION STREET LIGHT AS REQUIRED IN SECTION 5 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME III.
- (2 WEEKS)
 13. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF COMPLETED PROJECT.

STORMWATER MANAGEMENT FACILITY (2 & 3) MAINTENANCE SCHEDULE

- 1. ROUTINE MAINTENANCE (H.O.A.)
 - 1.1 FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
 - 1.2 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 FACILITIES, AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
 - 1.3 DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 - 1.4 VISIBLE SIGNS OF EROSION IN THE FACILITY AS WELL AS RIP RAP OUTLET OUTLET SHALL BE REPAIRED AS SOON AS NOTICED.
 - 1.5 SAND FILTERS PRETREATMENT AND INFILTRATION TRENCH MAINTAINED BY WOODBINE CROSSING HOA.
- 2. NON-ROUTINE MAINTENANCE (HOWARD COUNTY)
 - 2.1 CPV DETENTION BASINS TO BE MAINTAINED BY WOODBINE CROSSING HOA & HOWARD COUNTY.
 - 2.2 STRUCTURAL COMPONENTS OF THE FACILITIES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
 - 2.3 SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, WHEN DEEMED NECESSARY BY THE HOWARD COUNTY OF PUBLIC WORKS.

NOTE: THIS PLAN TO BE USED FOR STORMWATER MANAGEMENT ONLY. ALL OTHER INFORMATION SHOWN FOR REFERENCE PURPOSE ONLY. SEE APPROPRIATE CONSTRUCTION DRAWINGS FOR OTHER INFORMATION.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER

LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" STORMWATER MANAGEMENT SPECIFICATIONS & DETAILS

WOODBINE CROSSING (FORMERLY PATAPSCO OVERLOOK—SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER. 1988 FOLIO 258 -

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT NO. 4, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DECEMBER, 2006 SHEET 21 OF 27

Reviewed for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service Date 3/24/08

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD Date 3/24/08

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD COUNTY CONSERVATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 3/24/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3/24/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 3-24-08
CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 825 2890 (301)831 5015 (410) 549 2751

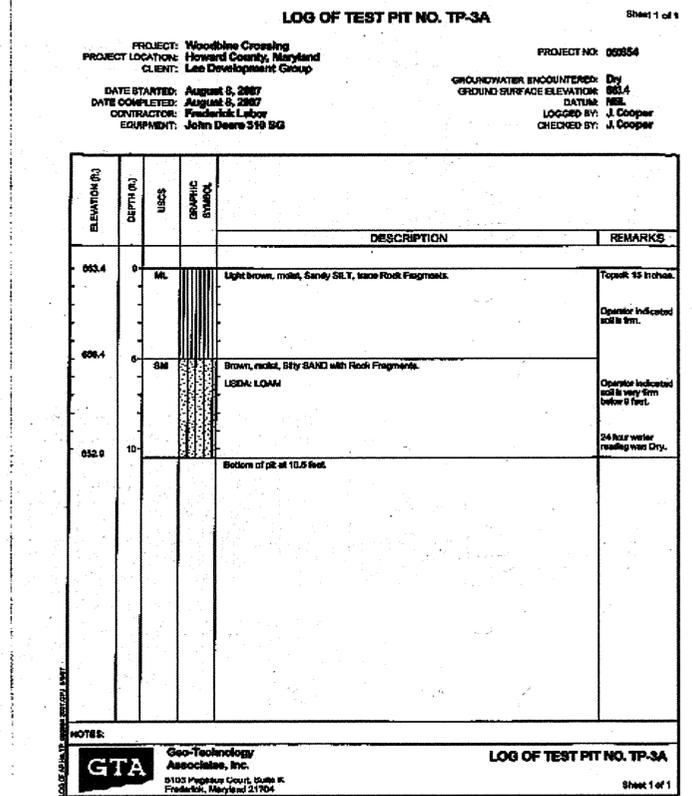
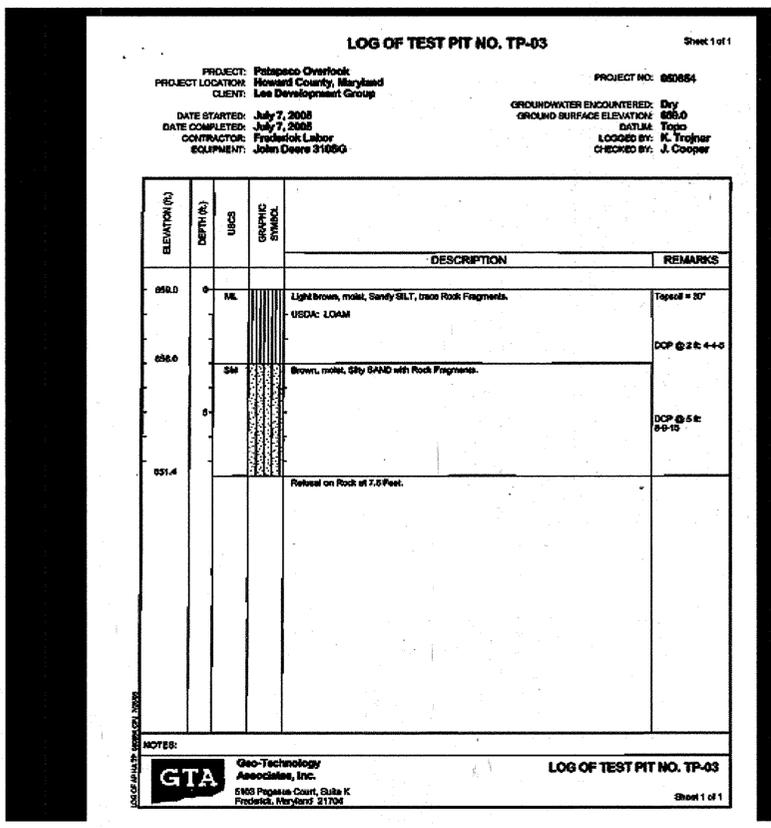
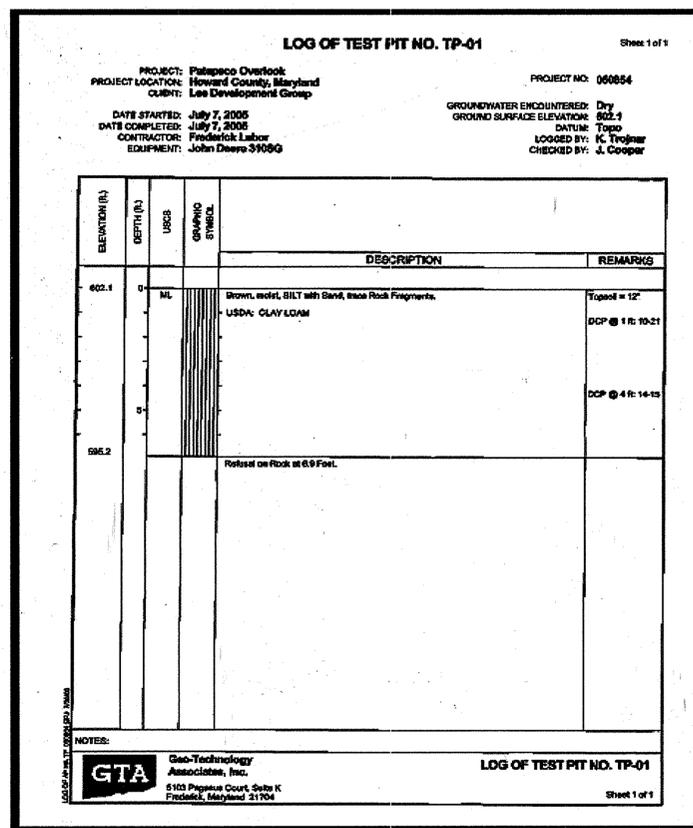
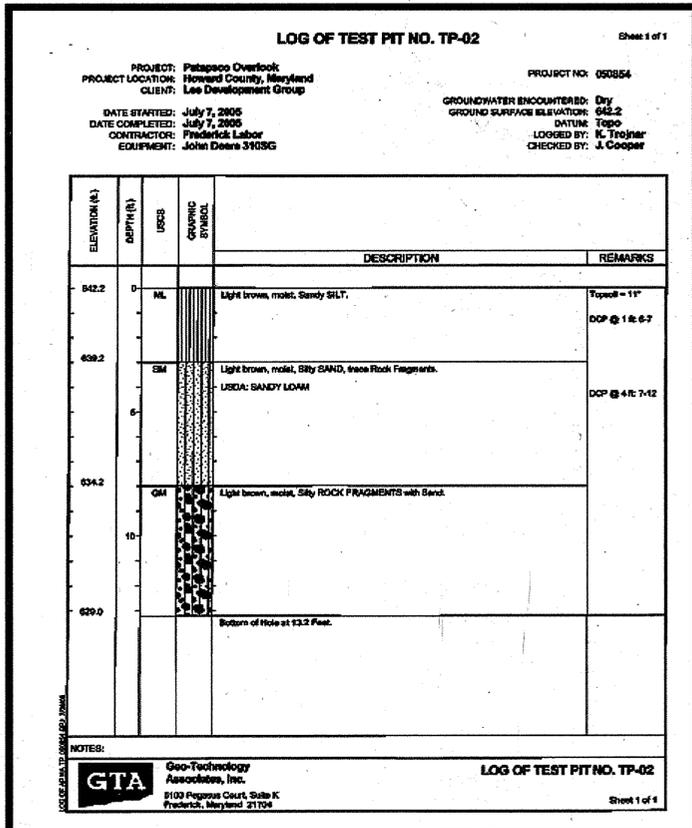
PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

[Signature] 3/27/08
PROFESSIONAL ENGINEER

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

DATE	REVISIONS



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 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

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CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

STORMWATER MANAGEMENT BORING LOGS "AS-BUILT"

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

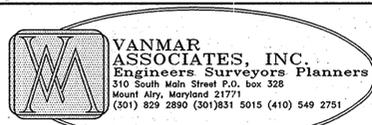
LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 DECEMBER, 2006 SHEET 22 OF 27

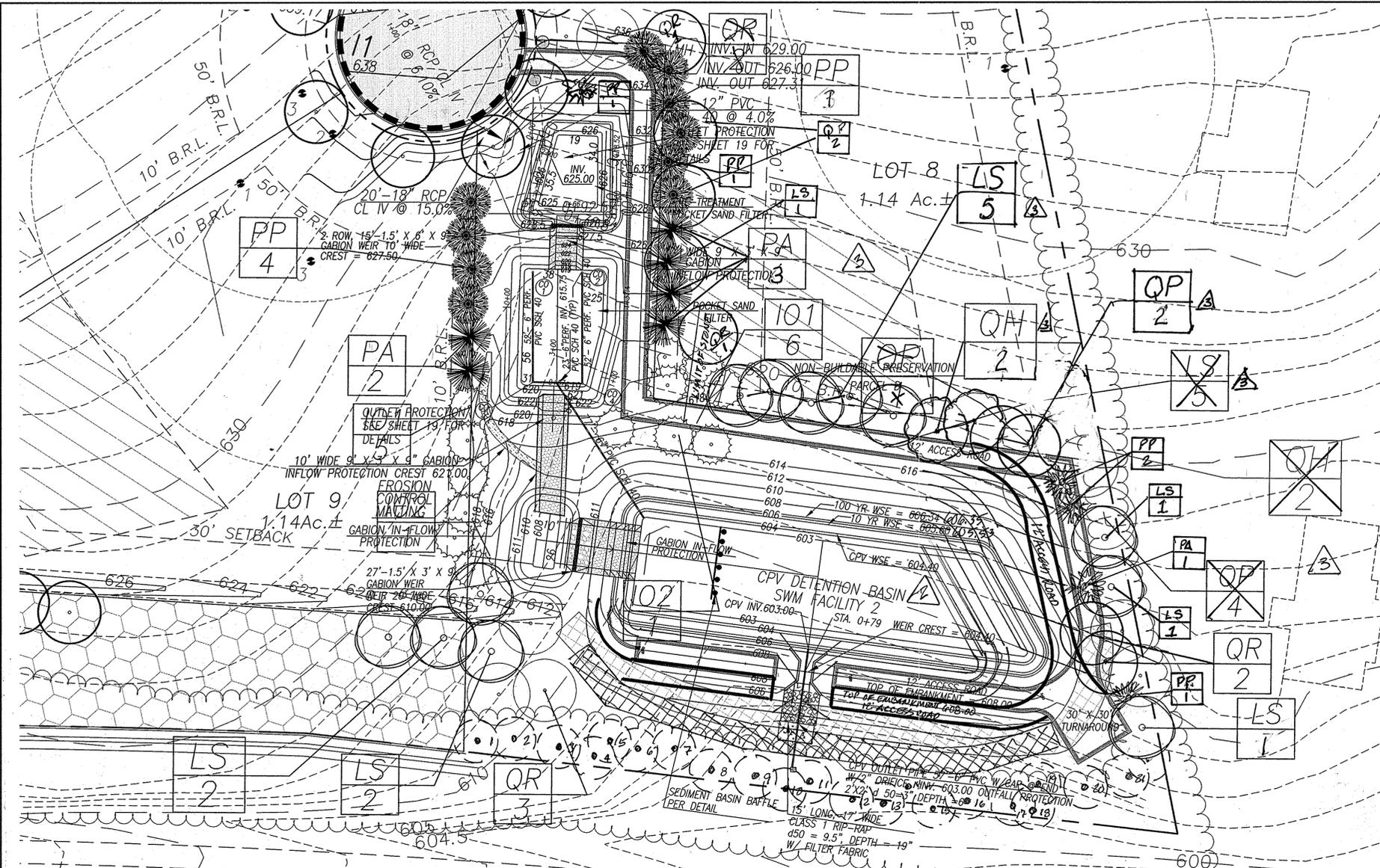
DPZ FILES: SP-06-003 INDEX No. SWM-6

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Harris 3/24/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. ... 3-4-08
 CHIEF, BUREAU OF HIGHWAYS DATE



DATE	REVISIONS



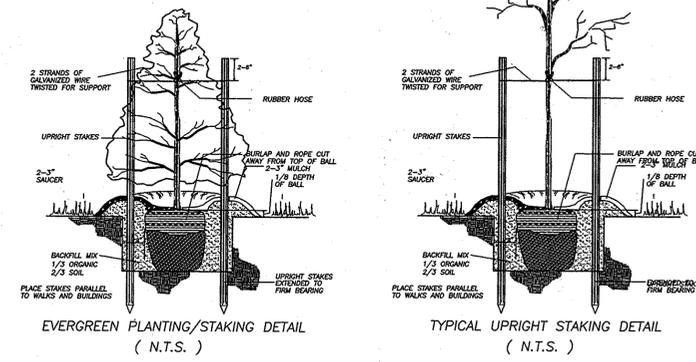
PLANTING SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
LS	10	<i>Liquidambar styraciflua</i> Sweet Gum	2-2.5" CAL.	B&B	AS SHOWN
QH	2	<i>Quercus phellos</i> Willow Oak	2-2.5" CAL.	B&B	AS SHOWN
QP	4	<i>Quercus palustris</i> Pin Oak	2-2.5" CAL.	B&B	AS SHOWN
QR	7	<i>Quercus rubra</i> Red Oak	2-2.5" CAL.	B&B	AS SHOWN
IO1	11	<i>Ilex opaca</i> 'Jersey Princess' 'Jersey Princess' American Holly	6-8' HT.	B&B	AS SHOWN
IO2	2	<i>Ilex opaca</i> 'Jersey Knight' 'Jersey Knight' American Holly	6-8' HT.	B&B	AS SHOWN
PA	6	<i>Picea abies</i> Norway Spruce	6-8' HT.	B&B	AS SHOWN
PP	10	<i>Picea pungens</i> Colorado Spruce	6-8' HT.	B&B	AS SHOWN

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING			
FACILITY	1	2	3
LINEAR FEET OF PERIMETER	342	1158	664
NUMBER OF TREES REQUIRED			
SHADE TREES	7	23	13
EVERGREEN TREES	9	29	17
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	0	0	0
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	0	0	0
NUMBER OF TREES PROVIDED			
SHADE TREES	7	23	4
EVERGREEN TREES	9	29	17
OTHER TREES (2:1 SUBSTITUTION)	0	0	18
SHRUBS (10:1 SUBSTITUTION)	0	0	0

SWM FACILITY 2 (NON-BUILDABLE PRESERVATION PARCEL D)

1"=30'

- *General Landscaping Guidance for All Stormwater BMP's**
1. Trees, shrubs, and/or any type of woody vegetation are not allowed on the embankment.
 2. Plant trees and shrubs at least 15ft away from the toe of slope of a dam.
 3. Plant trees and shrubs at least 25ft away from perforated pipes.
 4. Plant trees and shrubs at least 25ft away from principal spillway structure.
 5. Provide 15ft clearance from a non-clogging, low flow orifice.
 6. Use erosion control mats and fabrics in channels to reduce the potential for erosion.
 7. Divert flows temporarily from seeded areas until stabilized.
 8. Do not block maintenance access to structures with trees and shrubs.
 9. To reduce thermal warming, shade inflow and outflow channels as well as southern exposures of ponds.
 10. For planting success, soils should be loosened to a depth of 3 to 5 inches.
 11. Soils should be loosened regardless of plant type.
 12. Whenever possible, topsoil should be spread to a depth of 4-8 inches and lightly compacted to a minimum thickness of 4 inches.
 13. Be sure to provide a source of water, especially in dry periods.
 14. Native plant species should be specified over exotic or foreign species.
 15. Species layout should generally be random and natural.
 16. A canopy should be established with an understory of shrubs and herbaceous material.
 17. Existing and proposed utilities must be identified and considered.
- *These guidelines were taken from the 2000 Maryland Stormwater Design Manual.



NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

DEVELOPER'S/BUILDER'S CERTIFICATE:
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 [Signature] 2/12/08
 DEVELOPER/BUILDER DATE

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

SWM LANDSCAPE PLAN
 FACILITY 2
 "AS-BUILT"

WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 NOVEMBER, 2006 SHEET 23 OF 27

CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

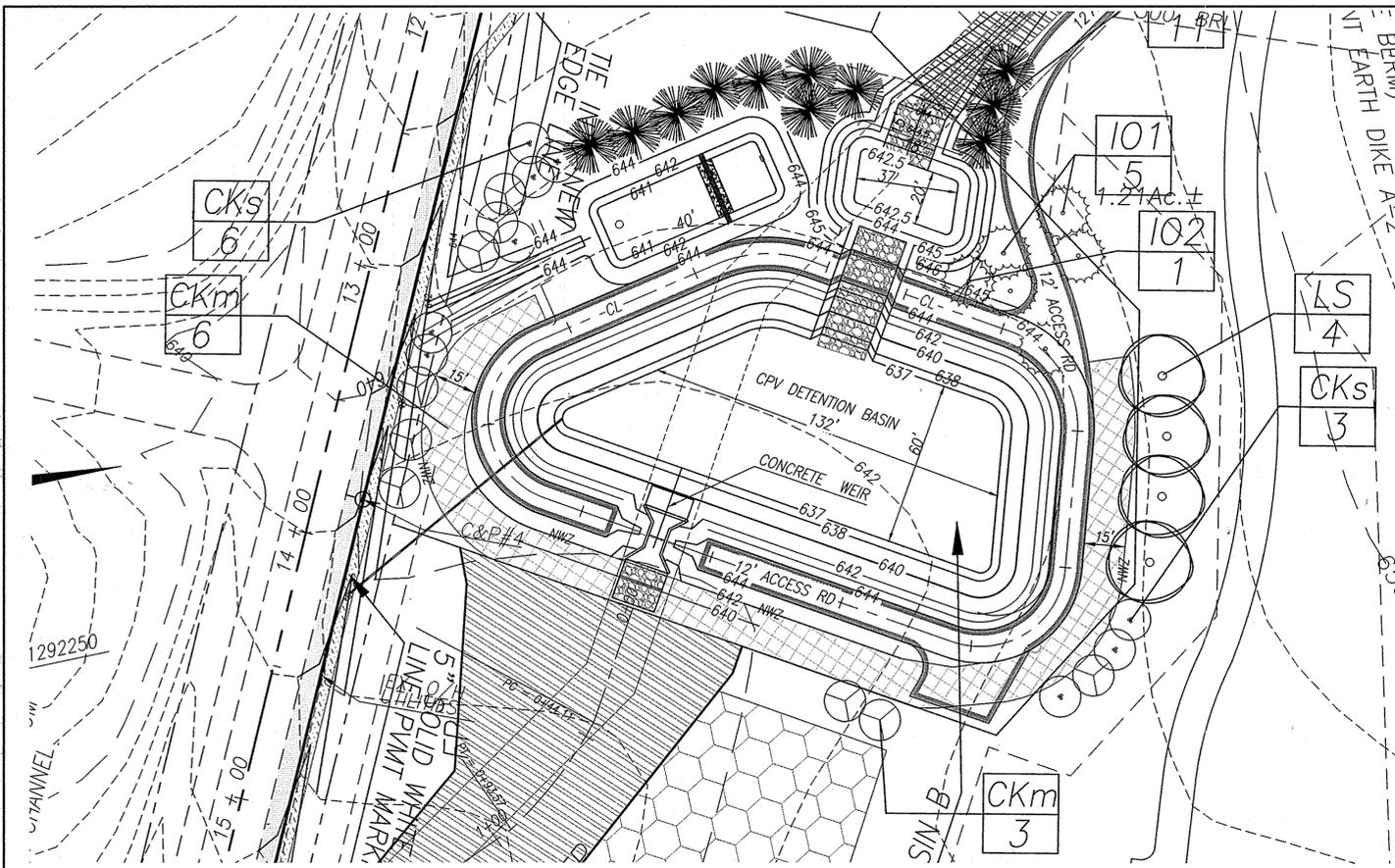
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2/21/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 3-4-08
 CHIEF, BUREAU OF HIGHWAYS DATE

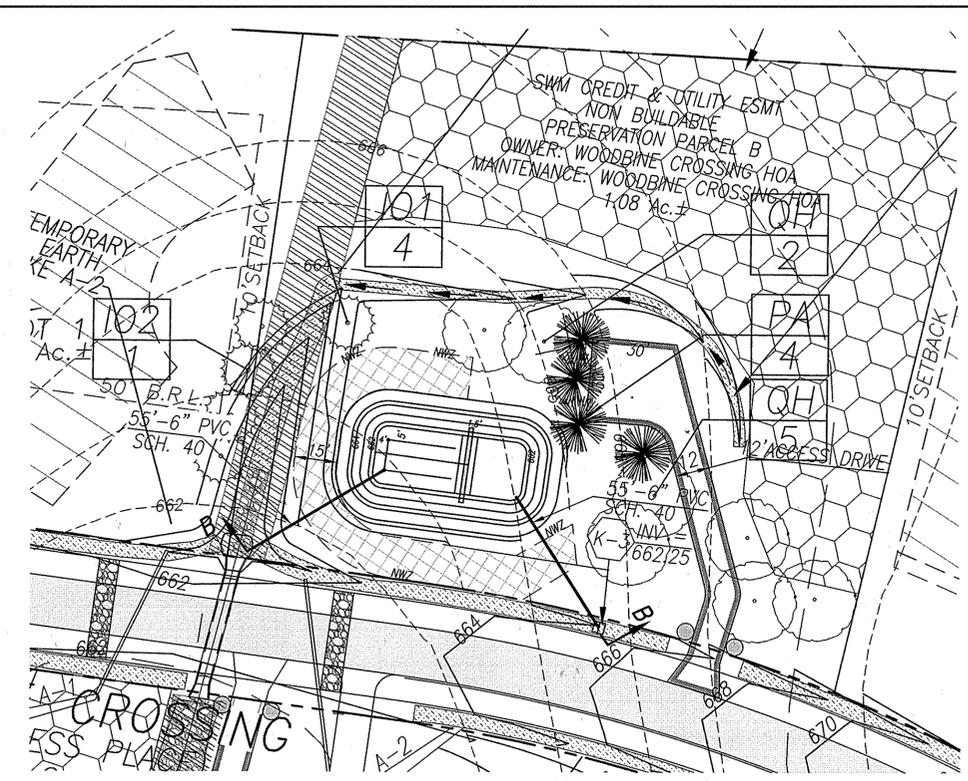
VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829 2890 (301)851 5015 (410) 549 2751

STATE OF MARYLAND
 DANIEL ALLMAN KORN
 [Signature] 2/17/08
 No. 589
 LANDSCAPE ARCHITECT

DATE	REVISIONS
7/11/2014	1/2 SWM FACILITY #2 REVISION
7/11/2014	3/3 SWM FACILITY #2 LANDSCAPE REVISION



SWM FACILITY 3 (NON-BUILDABLE PRESERVATION PARCEL C)
1"=30'



SWM FACILITY 1 (NON-BUILDABLE PRESERVATION PARCEL B)
1"=30'

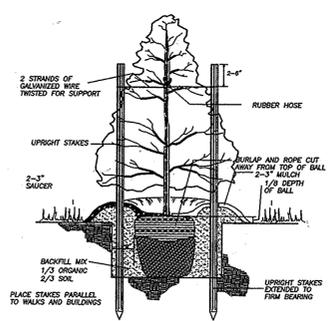
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4. Plant trees and shrubs at least 25ft away from principal spillway structure.
5. Provide 15ft clearance from a non-clogging, low flow orifice.
6. Use erosion control mats and fabrics in channels to reduce the potential for erosion.
7. Divert flows temporarily from seeded areas until stabilized.
8. Do not block maintenance access to structures with trees and shrubs.
9. To reduce thermal warming, shade inflow and outflow channels as well as southern exposures of ponds.
10. For planting success, soils should be loosened to a depth of 3 to 5 inches.
11. Soils should be loosened regardless of plant type.
12. Whenever possible, topsoil should be spread to a depth of 4-8 inches and lightly compacted to a minimum thickness of 4 inches.
13. Be sure to provide a source of water, especially in dry periods.
14. Native plant species should be specified over exotic or foreign species.
15. Species layout should generally be random and natural.
16. A canopy should be established with an understory of shrubs and herbaceous material.
17. Existing and proposed utilities must be identified and considered.

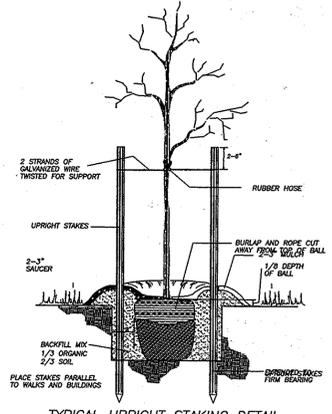
*These guidelines were taken from the 2000 Maryland Stormwater Design Manual.

1"=30'

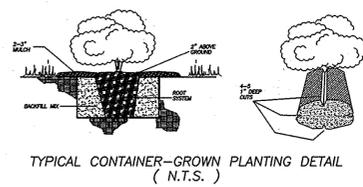
SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING			
FACILITY	1	2	3
LINEAR FEET OF PERIMETER	342	1158	664
NUMBER OF TREES REQUIRED	7	23	13
SHADE TREES	9	29	17
EVERGREEN TREES	0	0	0
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	0	0	0
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	0	0	0
NUMBER OF TREES PROVIDED	7	23	4
SHADE TREES	9	29	17
EVERGREEN TREES	0	0	18
OTHER TREES (2:1 SUBSTITUTION)	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0



EVERGREEN PLANTING/STAKING DETAIL
(N.T.S.)



TYPICAL UPRIGHT STAKING DETAIL
(N.T.S.)



TYPICAL CONTAINER-GROWN PLANTING DETAIL
(N.T.S.)

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

DEVELOPER'S/BUILDER'S CERTIFICATE:
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
[Signature] 2/12/08
DEVELOPER/BUILDER DATE

SOIL BORING TEST LOCATION	
S.W.M. FACILITY	TEST PIT NO.
1	B1
2	B2
3	B3

SWM #3 - PLANTING SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
LS	4	<i>Liquidambar styraciflua</i> Sweet Gum	2-2.5" CAL.	B&B	AS SHOWN
IO1	5	<i>Ilex opaca</i> 'Jersey Princess' 'Jersey Princess' American Holly	6-8' HT.	B&B	AS SHOWN
IO2	1	<i>Ilex opaca</i> 'Jersey Knight' 'Jersey Knight' American Holly	6-8' HT.	B&B	AS SHOWN
PA	11	<i>Picea abies</i> Norway Spruce	6-8' HT.	B&B	AS SHOWN
CKm	9	<i>Cornus kousa</i> 'Milky Way' 'Milky Way' Kousa Dogwood	6-8' HT.	B&B	AS SHOWN
CKs	9	<i>Cornus kousa</i> 'Satomi' 'Satomi' Kousa Dogwood	6-8' HT.	B&B	AS SHOWN

SWM #1 - PLANTING SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
QH	7	<i>Quercus phellos</i> Willow Oak	2-2.5" CAL.	B&B	AS SHOWN
IO1	4	<i>Ilex opaca</i> 'Jersey Princess' 'Jersey Princess' American Holly	6-8' HT.	B&B	AS SHOWN
IO2	1	<i>Ilex opaca</i> 'Jersey Knight' 'Jersey Knight' American Holly	6-8' HT.	B&B	AS SHOWN
PA	4	<i>Picea abies</i> Norway Spruce	6-8' HT.	B&B	AS SHOWN

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
CHIEF, BUREAU OF HIGHWAYS
3-4-08
DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

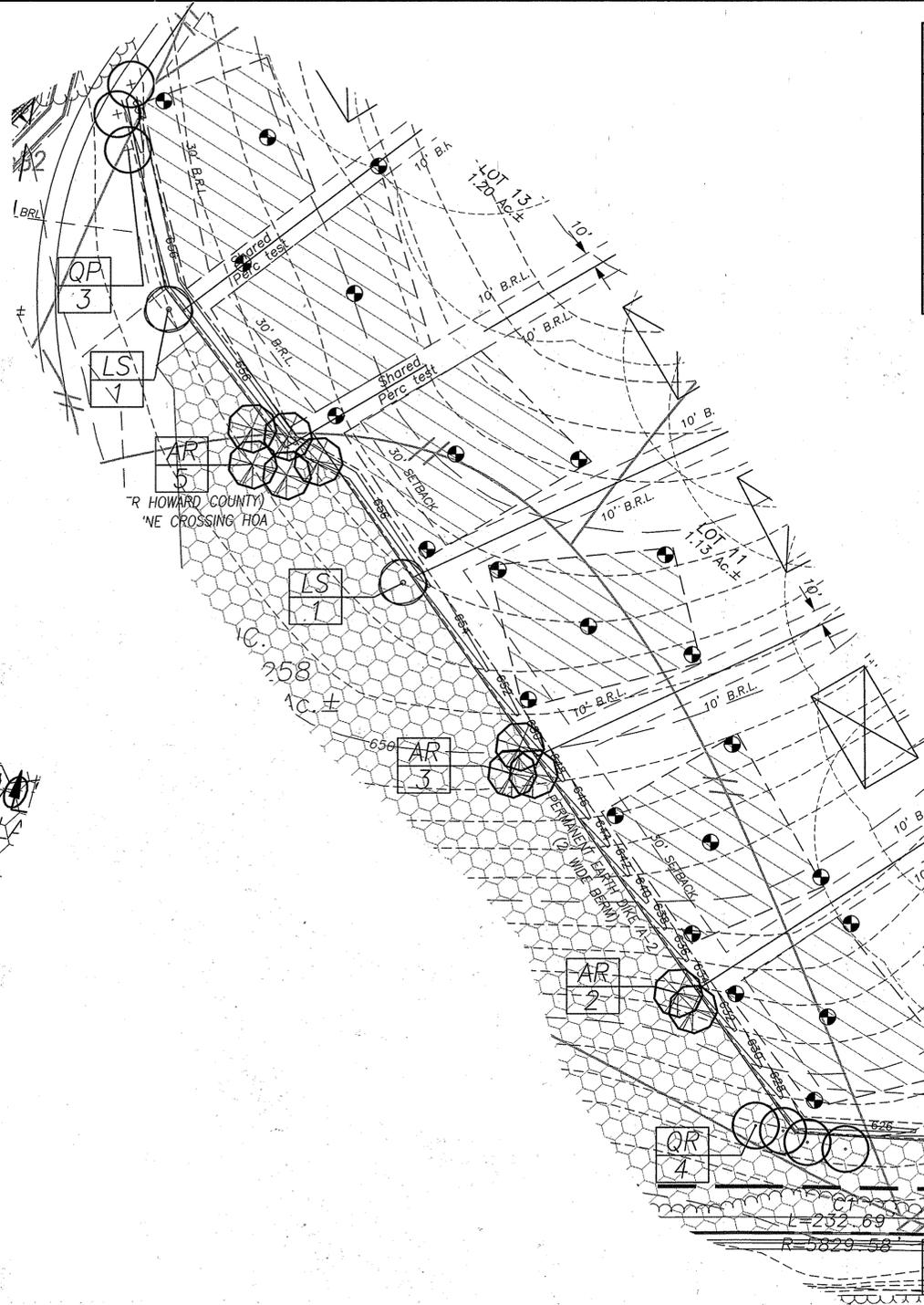
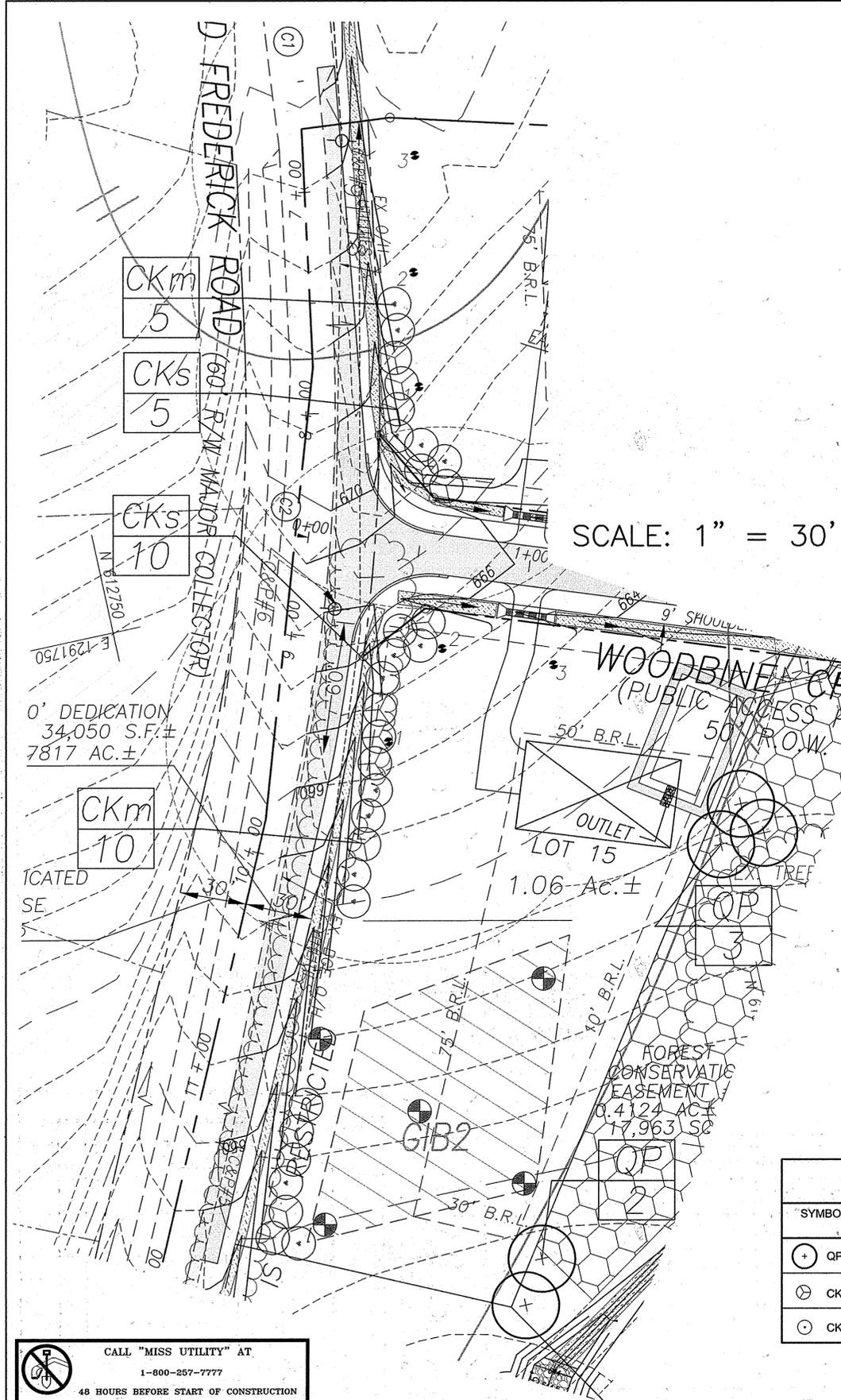
"AS-BUILT" SWM LANDSCAPE PLAN
FACILITIES 1 & 3

WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED RECORDED IN LIBER 1988 FOLIO 258

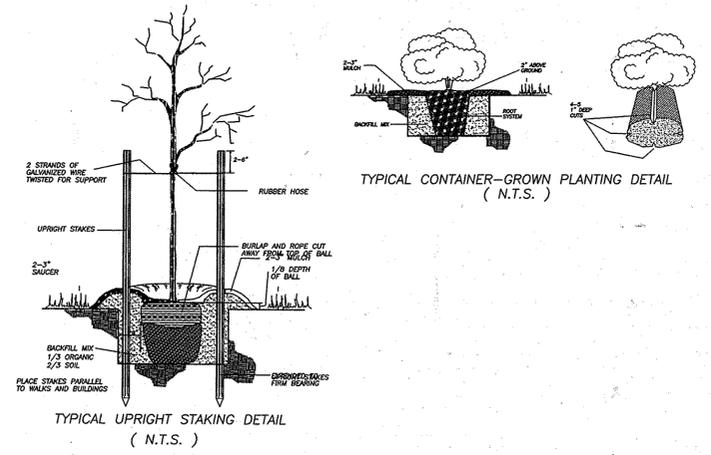
TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
DECEMBER, 2006 SHEET 24 OF 27

DPZ FILES: SP-06-003 INDEX No. SWM LS-2



PLANTING SCHEDULE - LOT 9-14, LOT 8

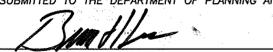
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
⊗ AR	10	<i>Acer rubrum</i> 'October Glory' 'October Glory' Red Maple	2-2.5" CAL.	B&B	AS SHOWN
⊙ LS	4	<i>Liquidambar styraciflua</i> Sweet Gum	2-2.5" CAL.	B&B	AS SHOWN
⊖ QH	2	<i>Quercus phellos</i> Willow Oak	2-2.5" CAL.	B&B	AS SHOWN
⊕ QP	4	<i>Quercus palustris</i> Pin Oak	2-2.5" CAL.	B&B	AS SHOWN
⊙ QR	4	<i>Quercus rubra</i> Red Oak	2-2.5" CAL.	B&B	AS SHOWN



PLANTING SCHEDULE - LOT 1 & 15

SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
⊕ QP	5	<i>Quercus palustris</i> Pin Oak	2-2.5" CAL.	B&B	AS SHOWN
⊗ CKm	15	<i>Cornus kousa</i> 'Milky Way' 'Milky Way' Kousa Dogwood	6-8' HT.	B&B	AS SHOWN
⊙ CKs	15	<i>Cornus kousa</i> 'Satomi' 'Satomi' Kousa Dogwood	6-8' HT.	B&B	AS SHOWN

DEVELOPER'S/BUILDER'S CERTIFICATE:
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 DEVELOPER/BUILDER: _____ DATE: 2/12/08

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

**"AS-BUILT"
 LANDSCAPE PLAN &
 STREET TREE PLAN**

**WOODBINE CROSSING
 (FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)**

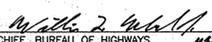
LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" &
 NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
 PART OF LANDS CONVEYED TO LDG INC. BY DEED
 RECORDED IN LIBER 1988 FOLIO 258

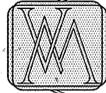
TAX MAP 2, GRID 24, PARCEL 32
 SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
 ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 DECEMBER, 2006 SHEET 25 OF 27


CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

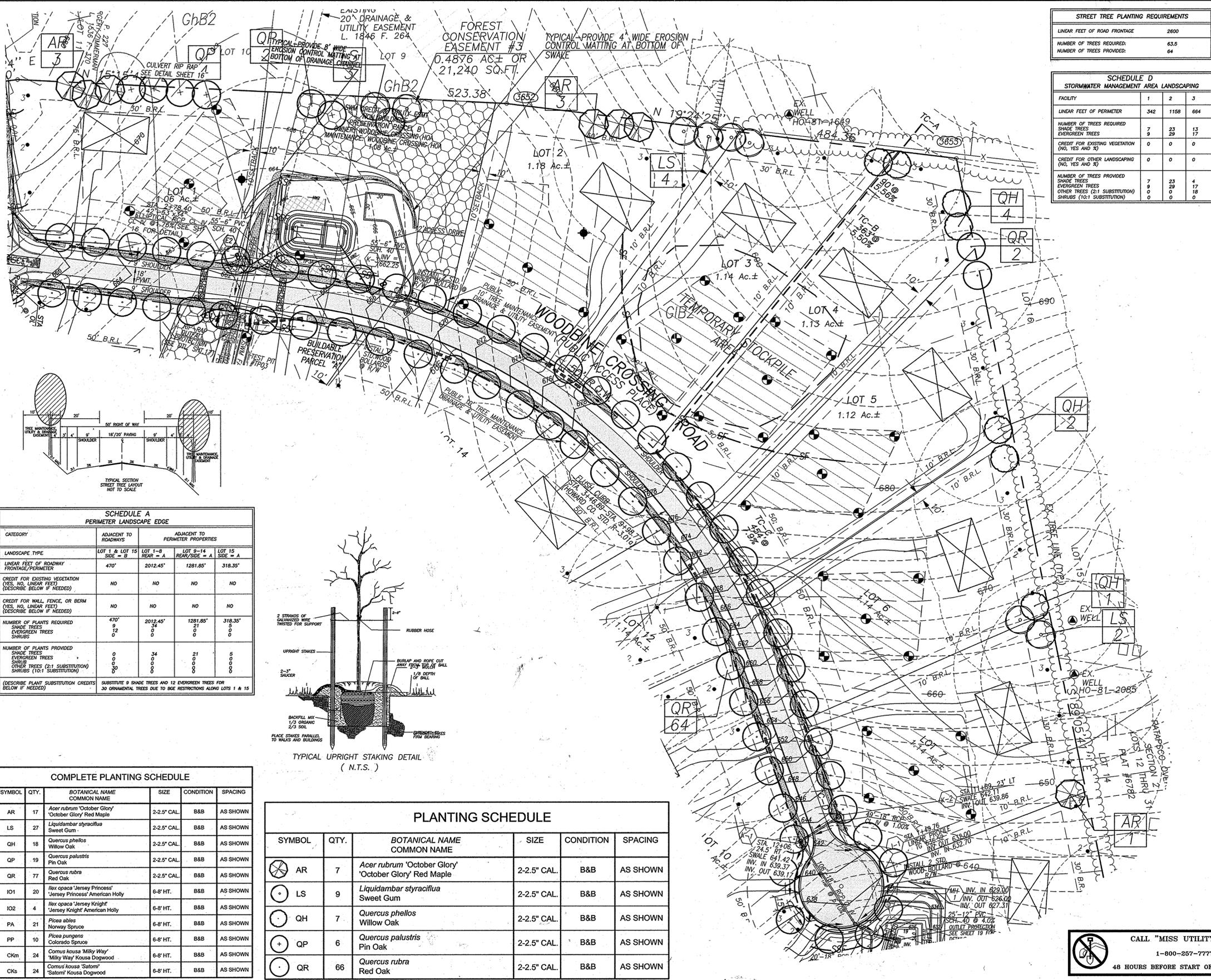
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/24/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

 CHIEF, BUREAU OF HIGHWAYS
 DATE: 3-4-08


VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829-2890 (301)851-5015 (410) 549-2751


 LANDSCAPE ARCHITECT
 DATE: 2/12/08

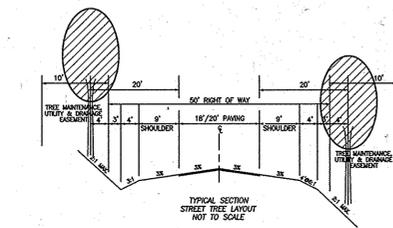
DATE	REVISIONS



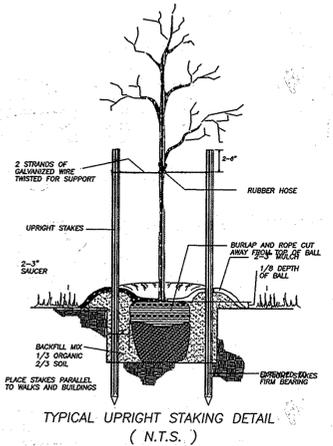
STREET TREE PLANTING REQUIREMENTS	
LINEAR FEET OF ROAD FRONTAGE	2800
NUMBER OF TREES REQUIRED:	63.9
NUMBER OF TREES PROVIDED:	64

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING			
FACILITY	1	2	3
LINEAR FEET OF PERIMETER	342	1158	664
NUMBER OF TREES REQUIRED	7	23	13
SHADE TREES	9	29	17
EVERGREEN TREES	0	0	0
CREDIT FOR EXISTING VEGETATION (NO. YES AND NO)	0	0	0
CREDIT FOR OTHER LANDSCAPING (NO. YES AND NO)	0	0	0
NUMBER OF PLANTS PROVIDED	7	23	4
SHADE TREES	9	29	17
EVERGREEN TREES	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0

- LANDSCAPE NOTES**
- Plants shall conform to current *American Standards for Nursery Stock* by American Association of Nurserymen (AAN), particularly with regards to site, growth, and size of ball and density of branch structure. Contractor to ensure conformance to national and local building codes and ordinances.
 - All plants (B&B or container) shall be properly identified by weatherproof labels securely attached hereto before delivery to the project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the owners representative.
 - Any material and/or work may be rejected by the owners representative if it does not meet the requirements of the specifications, the contractor shall remove all rejected materials from the site.
 - The contractor shall furnish all plants in quantities and sizes to complete the work as specified in plant schedule. The landscape contractor shall be responsible to verify all plant quantities on the plans prior to commencement of work. Quantities in the plant schedule are for the contractors convenience only and do not constitute the final count.
 - Substitutions in plant species or size shall not be permitted except with the written approval of the owners representative.
 - Plants shall be located as shown on the drawings and as designated in the field by the owners representative. Tree locations to be field adjusted as required to maintain 10' minimum clearance from all utilities, street lights, and driveways. All locations are to be approved by the owners representative before excavation. The contractor shall note that in the case of a discrepancy between the scaled and figured dimensions shown on these plans, the figured dimension shall govern.
 - The location of existing utilities shown hereon are approximate only. Contractor shall excavate to verify the existence, location, and depth of any utilities (constructed and existing) and shall notify the engineer of any discrepancies prior to the beginning of all work, excavation, grading, landscaping, etc.
 - Contractor shall locate and mark all underground utility lines and irrigation systems prior to excavating plant beds or pits. All utility easement areas where no planting shall take place shall also be marked on the site, prior to locating and digging the tree pits. If utility lines are encountered in excavation of tree pits, other locations for the trees shall be selected by the owners representative. Such changes shall be made by the contractor without additional compensation. No changes of location shall be made without the approval of the owners representative. Any utility (whether shown or not) damaged due to construction shall be repaired immediately. The contractor shall be responsible for removing or replacing any existing fences, driveways, etc., damaged or removed by the contractor during construction. All offsite disturbed areas shall be returned to their original condition.
 - All equipment and tools shall be placed so as not to interfere or hinder pedestrian and vehicular traffic flow. During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
 - All tree pits are to be excavated to a minimum depth to allow the tree root ball to be a minimum of 4" higher than finish grade, the tree root ball is to rest on undisturbed soil, or a compacted bed must be prepared for the tree root ball to rest on which will not subside causing the tree to sink below finish grade. All tree pits are to be a minimum of 12" larger on every side of the trees root ball.
 - The topsoil to be used to fill the tree pits is to be plant specific. The topsoil for trees shall consist of a maximum of 2/3 existing topsoil from the site, which is cleaned and free of clay, a minimum of 1/3 organic material. These materials are to be mixed prior to backfilling when planting.
 - The contractor is responsible to ensure that all tree pits are well drained. The landscape contractor, without cost to the owner, will replace all plant material which is affected by poor drainage.
 - All lawn areas are to be seeded with grass seed appropriate for the sunlight conditions which exist on the site.
 - All lawn areas are to be tilled to a depth of 6" and all foreign material removed which will inhibit the healthy growth of the lawn. All old grass and grass roots are to be removed from the site. New topsoil of a minimum 4" is to be placed over the areas to be seeded. The grass areas are to be fine graded to ensure that no undulations occur on the lawn. The lawns are to be graded in such a way as to appear perfectly well tailored and even. The lawn topsoil is to be rolled and lightly irrigated prior to placing of the seed. The seed is not to be laid on frozen or soaked soil.
 - Existing trees are to be protected during the preparation of the lawn areas. The roots of the trees are to be undisturbed during the cleaning of the topsoil.
 - All plants are to be handled with the best care and attention to ensure that the plants are not bruised, broken, torn, or damaged in any way which will affect the plants general appearance and well being.
 - All trees are to be planted with the accepted standards of the American Association of Nurserymen. The trees are to be properly watered and backfilled during planting. All care must be taken to ensure that the trees are upright, a tree's best side is exposed to the point of greatest visibility.
 - The trees must be staked in accordance with acceptable nursery practice to ensure that they are secure in the ground and will grow straight and uniform. The trees are to be wrapped if the contractor deems it necessary to protect the trees from sun scald or insect attack.
 - Contractor is to provide a 1-year guarantee for all plant material and other work done on site.
 - Quantities as shown on the plan shall govern over plant list quantities. Contractor to verify plant list totals with quantities shown on plan.
 - Plant material source: Within 100 mile radius of Maryland if possible.
 - VanMar Associates, Inc. is not responsible for the contractor's utilization of men, materials, equipment, or safety measures in performance of any work for this construction. The contractor assumes all responsibility for performing the work correctly and in conformance with all code requirements.
 - Should the contractor discover discrepancies between the plans and field conditions, the work shall be stopped immediately and the engineer notified immediately to resolve the situation. Should the contractor make field corrections or adjustments without notifying the engineer, then the contractor assumes all responsibility for those changes.
 - It is the intent of these plans and specifications to provide 100% completed work and this shall be the project scope. It shall be distinctly understood that failure to notify the engineer of discrepancies found on these plans and specifications, specifically and work which would naturally and/or normally be required to complete the project shall not relieve the contractor of his responsibility to perform such work.
 - This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
 - Financial surety for the required landscaping has been posted with the Developer's Agreement in the amount of \$43,650 for:
 - 94 Shade Trees @ \$300 each = \$28,200
 - 55 Evergreen Trees @ \$150 each = \$8,250
 - 48 Ornamental Trees @ \$150 each = \$7,200
 - Total = \$43,650



SCHEDULE A PERIMETER LANDSCAPE EDGE				
CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES	
	LOT 1 & LOT 15 SIDE = B	LOT 1-8 REAR = A	LOT 9-14 REAR = A	LOT 15 SIDE = A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	470'	2012.45'	1281.85'	318.35'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	470'	2012.45'	1281.85'	318.35'
SHADE TREES	9	34	0	0
EVERGREEN TREES	12	0	0	0
SHRUBS	0	0	0	0
NUMBER OF PLANTS PROVIDED	0	34	21	6
SHADE TREES	0	0	0	0
EVERGREEN TREES	0	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	SUBSTITUTE 9 SHADE TREES AND 12 EVERGREEN TREES FOR 30 ORNAMENTAL TREES DUE TO B&B RESTRICTIONS ALONG LOTS 1 & 15			



COMPLETE PLANTING SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
AR	17	<i>Acer rubrum</i> 'October Glory' 'October Glory' Red Maple	2-2.5" CAL.	B&B	AS SHOWN
LS	27	<i>Liquidambar styraciflua</i> Sweet Gum	2-2.5" CAL.	B&B	AS SHOWN
QH	18	<i>Quercus phellos</i> Willow Oak	2-2.5" CAL.	B&B	AS SHOWN
QP	19	<i>Quercus palustris</i> Pin Oak	2-2.5" CAL.	B&B	AS SHOWN
QR	77	<i>Quercus rubra</i> Red Oak	2-2.5" CAL.	B&B	AS SHOWN
IO1	20	<i>Ilex opaca</i> 'Jersey Princess' 'Jersey Princess' American Holly	6-8" HT.	B&B	AS SHOWN
IO2	4	<i>Ilex opaca</i> 'Jersey Knight' 'Jersey Knight' American Holly	6-8" HT.	B&B	AS SHOWN
PA	21	<i>Picea abies</i> Norway Spruce	6-8" HT.	B&B	AS SHOWN
PP	10	<i>Picea pungens</i> Colorado Spruce	6-8" HT.	B&B	AS SHOWN
CKm	24	<i>Cornus kousa</i> 'Milky Way' 'Milky Way' Kousa Dogwood	6-8" HT.	B&B	AS SHOWN
CKs	24	<i>Cornus kousa</i> 'Salomi' 'Salomi' Kousa Dogwood	6-8" HT.	B&B	AS SHOWN

PLANTING SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
AR	7	<i>Acer rubrum</i> 'October Glory' 'October Glory' Red Maple	2-2.5" CAL.	B&B	AS SHOWN
LS	9	<i>Liquidambar styraciflua</i> Sweet Gum	2-2.5" CAL.	B&B	AS SHOWN
QH	7	<i>Quercus phellos</i> Willow Oak	2-2.5" CAL.	B&B	AS SHOWN
QP	6	<i>Quercus palustris</i> Pin Oak	2-2.5" CAL.	B&B	AS SHOWN
QR	66	<i>Quercus rubra</i> Red Oak	2-2.5" CAL.	B&B	AS SHOWN

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

DEVELOPER'S/BUILDER'S CERTIFICATE:
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
[Signature] 2/12/08
DEVELOPER/BUILDER DATE

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000
"AS-BUILT"
LANDSCAPE PLAN & STREET TREE PLAN
WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)
LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"
PART OF LANDS CONVEYED TO LDG INC. BY DEED
RECORDED IN LIBER 1988 FOLIO 258
TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
DECEMBER, 2006 SHEET 26 OF 27
DPZ FILES: SP-06-003

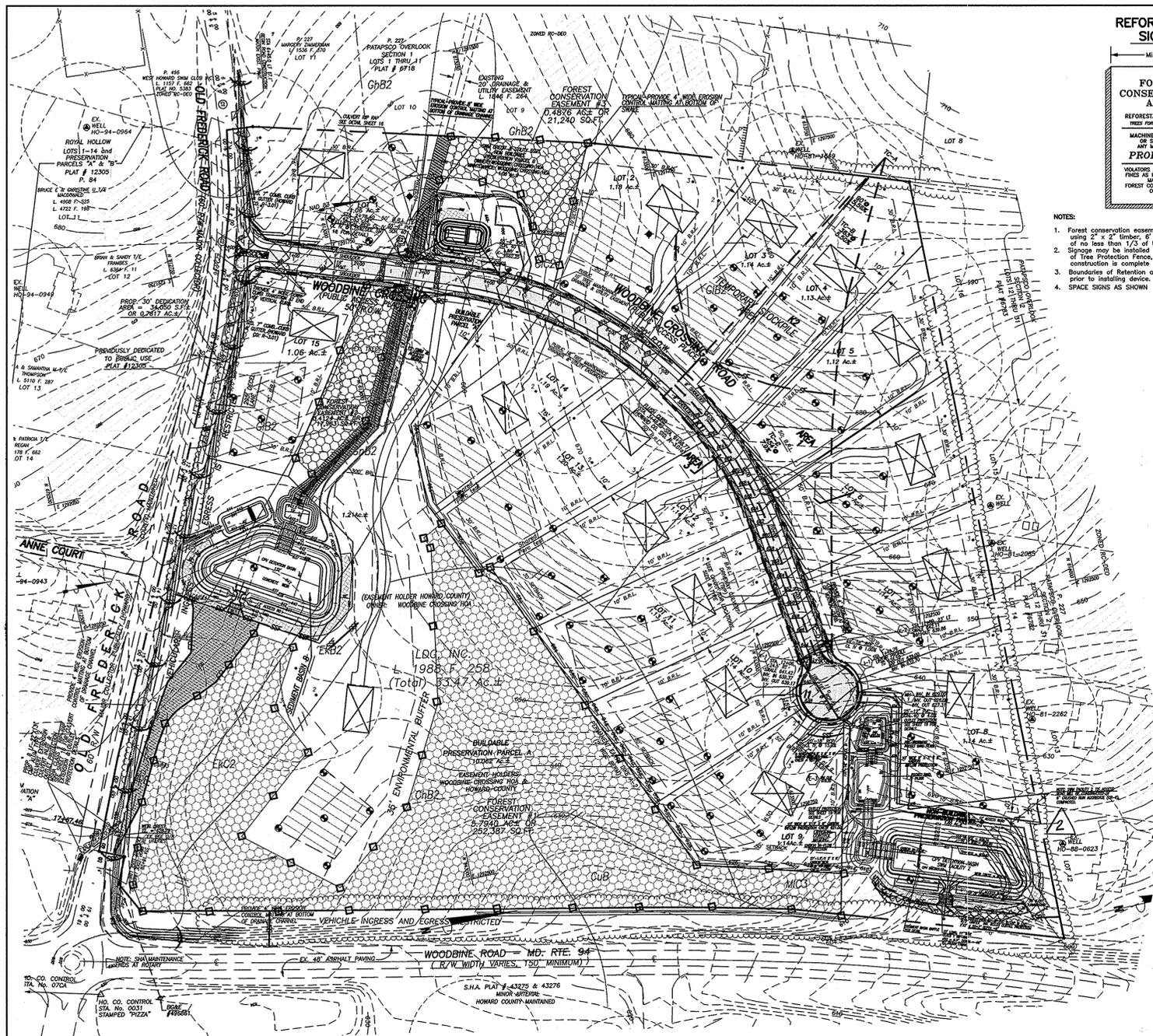
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 3/6/08
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 2/12/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 3-4-08
CHIEF, BUREAU OF HIGHWAYS

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS



- NOTES:**
1. Forest conservation easement signage to be installed using 2" x 2" timber; 6' in length and installed to a depth of no less than 1/3 of the total height of post.
 2. Signage may be installed on anchor posts used for support of Tree Protection Fence, and post may remain after construction is complete and mesh is removed.
 3. Boundaries of reforestation area should be staked and flagged prior to installing device.
 4. SPACED SIGNS AS SHOWN

REFORESTATION NOTES

ACREAGE OF PLANTING: 6.694 x Acres 350 whips/acre = 2343 whips required

TYPE OF PREPARATION NEEDED: Remove existing wire fence, silt fence and invasive species, if present. See Forest Conservation Specifications for discussion regarding removal of invasives. Minimize soil disturbances as much as possible. All exposed soil areas to be stabilized with a mix of native and naturalized grasses and legumes designed for use in reforestation areas, or in wetland soil areas, a mix of native or naturalized grasses adapted to survival in temporarily or seasonally saturated soils.* Mow area prior to planting.

PLANTING SPECIFICATIONS:
Plant whips in tree shelters per detail and in accordance with manufacturers recommendations. Whips to be planted on a 11' x 11' grid and mixed in a random manner per detail.

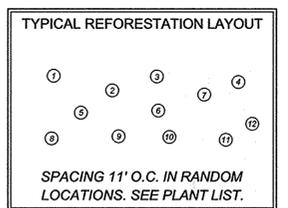
Source: Within 100 mile radius of Maryland if possible

Seed Mix: "Field and Forest Mix" and "Wet Mix" available from Sylva Native Nursery & Seed Co. or approved equal.

Sylva Native Nursery & Seed Co.
3815 Roser Road
Glen Rock, PA 17327
P: 717-227-0486
F: 717-227-0484
www.sylvanative.com



SOIL TYPE	SYMBOL	LAND CAPABILITY	Kw	SLOPE %	HYDRIC?	HYDROLOGIC SOIL GROUP
Chester Silt Loom	ChB2	Ile-4	<=35	3-8%	NO	B
Comus Silt Loom	CuB	Ile-6	<=35	3-8%	NO	B
Eloak Silt Loom	EKB2	Ile-4	<=35	3-8%	NO	B
Eloak Silt Loom	EKC2	Ile-4	<=35	8-15%	NO	B
Genelet Loom	GB2	Ile-4	>35	3-8%	NO	B
Genelet Loom	GC2	Ile-4	>35	8-15%	NO	B
Geneville Silt Loom	GB2	Ile-3	>35	3-8%	NO	C
Monor Loom	MIC3	Ive-25	>35	8-15%	NO	B



AFFORESTATION PLANTING SCHEDULE

KEY	SPECIES	DOMINANT PIONEER 24%	WHIPS
1	Red Maple	Acer rubrum	140
2	Tulip Poplar	Liriodendron tulipifera	141
3	Black Gum	Nyssa sylvatica	140
4	Pin Oak	Quercus palustris	141
DOMINANT CLIMAX 36%			
5	Pignut Hickory	Carya glabra	210
6	Mockernut Hickory	Carya formicosa	211
7	White Oak	Quercus alba	211
8	Red Oak	Quercus rubra	211
UNDERSTORY 40%			
9	Sawtooth	Amelanchier canadensis	234
10	Flowering Dogwood	Coronilla varia	235
11	Wildhazel	Hamamelis virginica	234
12	Spicebush	Lindera benzoin	235
TOTAL			2343

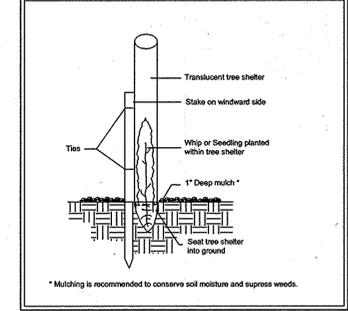
TREE PLANTING AND MAINTENANCE CALENDAR

Tasks	Months											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Transplant of 2" DBH or Greater												
Planting Seedlings, Whips												
Minimum Monitoring			*					*				*
Fertilizer (if Needed)												
Water												
Pruning												

NOTES:

1. Activities during November through February depend on ground conditions.
2. No fall planting of oaks and pines
3. The planting and care of trees is most successful when coordinated with the local conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

WHIP PLANTING DETAIL



CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

ACCEPTABLE SUBSTITUTIONS

#14 Horned Lark	Carpinus canadensis
Panicum	Asimina triloba
Sassafras	Diospyros virginiana
	Sassafras alabum
#58 White Oak	Quercus phellos
Black Oak	Carya cordata
	Quercus velutina
#12 Eastern Redbud	Chionanthus virginicus
	Cercis canadensis

LANDSCAPE NOTES:

1. All plant material shall comply with American Standards for Nursery Stock (American Association of Nurserymen) and installation shall be as specified in the Landscape Specification Guidelines for the Baltimore-Washington Metropolitan Area. All plant material shall include a one-year warranty.
2. Do not plant within 20' of a property line abutting and agricultural use.
3. Source: Within 100 mile radius of Maryland if possible.
4. Spacing shown is approximate. Tree locations to be field adjusted as required to maintain 10' minimum clearance from all utilities, street lights, and driveways.
5. The location of existing utilities shown hereon are approximate only. Contractor shall excavate to verify the existence, location, and depth of all utilities (constructed and existing) and shall notify the engineer of any discrepancies prior to the beginning of all work, excavation, grading, landscaping, etc.
6. The contractor shall notify "Miss Utility" at 1-800-257-7777, three (3) working days prior to beginning any work in the vicinity of the utilities.
7. Contractor shall verify all locations and elevations prior to construction. Any utility (shown or not) damaged due to construction shall be repaired immediately. The contractor shall be responsible for removing or replacing any existing fences, driveways, etc., damaged or removed by the contractor during construction. All off-site disturbed areas shall be returned to their original condition.
8. VanMar Associates, Inc. is not responsible for the contractor's utilization of men, materials, equipment, or safety measures in performance of any work for this construction. The contractor assumes all responsibility for performing the work correctly and in conformance with all code requirements.
9. Should the contractor discover discrepancies between the plans and field conditions, the work shall be stopped immediately and the engineer notified immediately to resolve the situation. Should the contractor make field corrections or adjustments without notifying the engineer, then the contractor assumes all responsibility for those changes.
10. The contractor shall note that in the case of a discrepancy between the scaled and figured dimensions shown on these plans, the figured dimension shall govern.
11. It is the intent of these plans and specifications to provide 100% completed work and this shall be the project scope. It shall be distinctly understood that failure to notify the engineer of discrepancies found on these plans and specifications and work which would naturally and normally be required to complete the project shall not relieve the contractor of his responsibility to perform such work.
12. At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height, requirements and size 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.

GENERAL NOTES

1. These perpetual forest easements are established in accordance with the Howard County Forest Conservation Manual (FCM), as specifically set forth in the terms of the recorded forest easement.
2. There is no 100 year floodplain on site per FEMA Map, Community Panel No. 240044 0002 B
3. Tree protection signs shall be installed as shown on plan and inspected prior to any grading or disturbance activities on site.
4. A forest conservation easement will be placed around each forest preservation area and a deed of easement will be recorded specifying long-term protection of the area.
5. The owner will execute a forest public works agreement.
6. A preconstruction meeting is to be arranged as follows:
After the boundaries of the limits of disturbance have been staked and flagged, and the forest protection devices have been installed, and before any disturbance has taken place on site, a pre construction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate local inspectors should attend. The purpose of this meeting will be to:
A. Identify the locations of the forest retention areas, specimen trees, limits of construction, employee parking areas, and equipment staging areas on site plans.
B. Inspect all flagged boundaries, protection devices, and sediment and erosion control devices on site.
C. Make all necessary adjustments.
D. Assign responsibilities as appropriate and discuss penalties.
7. This plan sheet is to show the on site forest retention, afforestation, easement area and location of signs only.
8. All contractors performing work on this site shall notify "Miss Utility" 48 hours prior to any construction or grading by calling 1-800-257-7777 for the location of all utilities.
9. The contractors performing work in the site are responsible for protecting existing native & noninvasive plantings during construction.
10. All planting, pruning, and maintenance shall be according to the National Arborist Standards and the Howard County Forest Conservation Manual, latest edition.
11. The requirements of Section 16.1200 of the Howard County Code for Forest Conservation shall be fulfilled by the placement of 6.6940 acres of afforestation into easement which is sufficient to meet the afforestation threshold of 6.6049 acres. Surety in the amount of \$145,795.32 for required afforestation (6.6940 acres x \$0.50) is posted with the Developer's Agreement for this project.

SEQUENCE OF CONSTRUCTION

1. Flag limits of tree planting and brush removal.
2. Call "Miss Utility" at 1-800-257-7777 prior to any work for the location of all utilities.
3. Install tree protection measures, tree protection signage, and conduct brush removal and site afforestation measures as called for on the plans.
4. After site has been stabilized and all planting has been completed, remove tree protection measures and signage.

26 MONTH MAINTENANCE PLAN

1. Fence and sign the area as per details.
2. Water at planting time, then as required depending on rainfall.
3. Fertilize, if necessary, only after the first growing season. Fertilize with organic or slow release type.
4. Mow twice annually after mid-July, or herbicide areas, if preferred.
5. If survival rate is low, additional plants must be added to meet REQUIRED success rate at 75 percent survival at the second year inspection.
6. The fence can be removed after second year inspection approval. Signage is to remain.

ON SITE FOREST CONSERVATION EASEMENT NOTE

THE FOREST CONSERVATION EASEMENTS SHOWN HEREON HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS. ANY UNAUTHORIZED ACTIVITIES THAT RESULT IN ADDITIONAL CLEARING, OR THAT AFFECT PROPOSED PLANTING/RETENTION AREAS SHOWN ON THE FOREST CONSERVATION PLAN MAY RESULT IN A REQUEST FOR RECALCULATION OF FOREST CONSERVATION REQUIREMENTS AND DESIGNATION OF ADDITIONAL PLANTING/RETENTION AREAS IF NEEDED TO MEET THE OBLIGATIONS OF THE FOREST CONSERVATION PROGRAM. ANY FUTURE RESUBDIVISION, DEVELOPMENT, OR CHANGE IN LAND USE MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

FOREST CONSERVATION WORKSHEET

NET TRACT AREA	A= 33.470
A. TOTAL TRACT AREA:	B= 0.000
B. DEDUCTIONS:	C= 33.470
C. NET TRACT AREA:	
LAND USE CATEGORY	INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING AND LIMIT TO ONLY ONE ENTRY
D. AFFORESTATION THRESHOLD (NET TRACT AREA X 20%):	D= 6.694
E. CONSERVATION THRESHOLD (NET TRACT AREA X 50%):	E= 16.735
EXISTING FOREST COVER	
F. EXISTING FOREST COVER WITHIN THE NET TRACT AREA:	F= 0.000
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD:	G= 0.000
BREAK EVEN POINT	
H. BREAK EVEN POINT:	H= 0.000
I. FOREST CLEARING PERMITTED WITHOUT MITIGATION:	I= 0.000
BREAK EVEN POINT	
J. TOTAL AREA OF FOREST TO BE CLEARED:	J= 0.000
K. TOTAL AREA OF FOREST TO BE RETAINED:	K= 0.000
PLANTING REQUIREMENTS	
L. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD.	L= 0.000
M. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD.	M= 0.000
N. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD.	N= 0.000
P. TOTAL REFORESTATION REQUIRED.	P= 0.000
Q. TOTAL AFFORESTATION REQUIRED.	Q= 6.694
R. TOTAL PLANTING REQUIRED.	R= 6.694

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" FOREST CONSERVATION PLAN

WOODBINE CROSSING
(FORMERLY PATAPSCO OVERLOOK-SECTION FOUR)

LOTS 1-15 & BUILDABLE PRESERVATION PARCEL "A" & NON-BUILDABLE PRESERVATION PARCELS "B, C, AND D"

PART OF LANDS CONVEYED TO LDG INC. BY DEED
RECORDED IN LIBER 1988 FOLIO 258 --

TAX MAP 2, GRID 24, PARCEL 32
SITUATED ON WOODBINE ROAD & OLD FREDERICK ROAD
ELECTION DISTRICT No. 4, HOWARD COUNTY, MARYLAND
SCALE: 1" = 100'
DECEMBER, 2006 SHEET 27 OF 27

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Candy Hunter 3/4/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. Williams 3/4/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William J. Williams 3-4-08
CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 528
Mount Airy, Maryland 21771
(301) 829-2890 (301)851-5015 (410) 549-2751



DATE	REVISIONS
7/11/2014	2 SWM FACILITY #2 REVISIONS