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SITE DEVELOPMENT PLAN HARMON PROPERTY

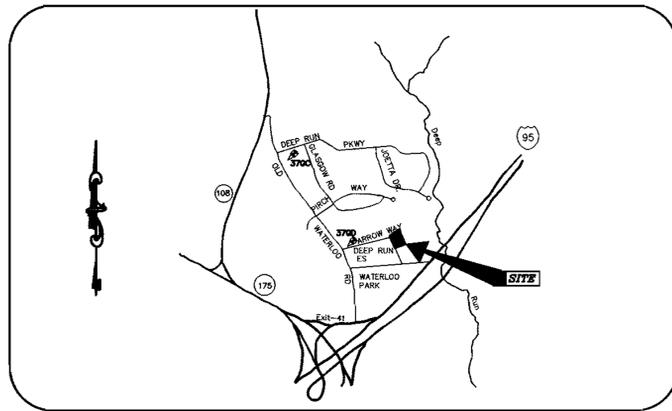
SFA/CONDOS, UNITS 1 TO 16

1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ADDRESS CHART		ADDRESS CHART	
LOT NO.	STREET ADDRESS	LOT NO.	STREET ADDRESS
1	6919 OLD WATERLOO ROAD	9	6903 OLD WATERLOO ROAD
2	6917 OLD WATERLOO ROAD	10	6901 OLD WATERLOO ROAD
3	6915 OLD WATERLOO ROAD	11	6899 OLD WATERLOO ROAD
4	6913 OLD WATERLOO ROAD	12	6897 OLD WATERLOO ROAD
5	6911 OLD WATERLOO ROAD	13	6895 OLD WATERLOO ROAD
6	6909 OLD WATERLOO ROAD	14	6893 OLD WATERLOO ROAD
7	6907 OLD WATERLOO ROAD	15	6891 OLD WATERLOO ROAD
8	6905 OLD WATERLOO ROAD	16	6889 OLD WATERLOO ROAD

PERMIT INFORMATION CHART					
SUBDIVISION NAME HARMON PROPERTY		SECTION/AREA N/A		LOT/PARCEL # PARCEL 453.837	
PLAT # OR L/F	BLOCK #	ZONE	TAX MAP #	ELEC. DIST.	CENSUS TRACT
N/A	21	RSA-B	37	1st	6011.02
WATER CODE D-06		SEWER CODE 2500000			
PROPOSED IMPROVEMENTS: SFA (CONDOMINIUMS)					

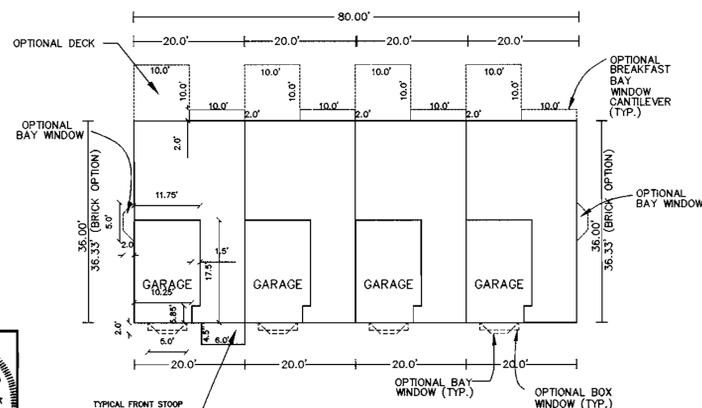
MIN. SEWER ELEVATION CHART			
LOT	MIN. SLAB EL.	LOT	MIN. SLAB EL.
1	267.00	9	260.13
2	265.66	10	260.13
3	264.32	11	260.80
4	263.35	12	260.80
5	262.98	13	261.98
6	261.64	14	263.32
7	258.79	15	264.66
8	259.46	16	266.00



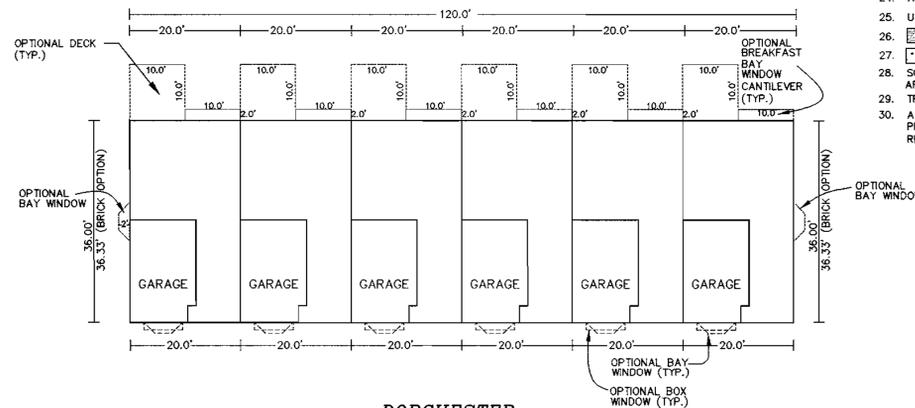
VICINITY MAP
SCALE: 1" = 200'



ELEVATIONS
N.T.S.



DORCHESTER
FOUR UNIT BUILDING
N.T.S.



DORCHESTER
SIX UNIT BUILDING
N.T.S.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	(800) 257-7777
VERIZON TELEPHONE COMPANY	(410) 725-9976
HOWARD COUNTY BUREAU OF UTILITIES	(410) 313-4900
AT&T CABLE LOCATION DIVISION	(410) 393-3533
BALTIMORE GAS & ELECTRIC	(410) 686-0123
STATE HIGHWAY ADMINISTRATION	(410) 531-5533
HOWARD COUNTY DEPT. OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION	(410) 313-1880
- SITE ANALYSIS DATA CHART:
LOCATION: FIRST ELECTION DISTRICT, TAX MAP 37, PARCEL 453
ZONING: RSA-B
TOTAL TRACT AREA: 2.00 Ac.±
LIMIT OF DISTURBED AREA: 1.84 Ac.± (INCLUDING THE AREA DISTURBED ON THE EASEMENT PROVIDED ON PARCEL 637 UNDER LIBER 1638 FOLIO 680)
PROPOSED USE: SFA
TOTAL NO. OF UNITS ALLOWED: 16
TOTAL NO. OF UNITS PROPOSED: 16
TOTAL NUMBER OF PARKING SPACES REQUIRED: 32
TOTAL NUMBER OF PARKING SPACES PROVIDED: 38
ONE CAR PER GARAGE X 16 = 16 SPACES
ONE CAR PER DRIVEWAY X 16 = 16 SPACES
SIX (6) OVERFLOW SPACES = 6 SPACES
TOTAL: 38 SPACES
BUILDING COVERAGE OF SITE: 0.267 AC.±, 13.34% OF GROSS AREA
DEED REFERENCE: L.4965 F.395
- TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD SURVEY DONE BY MILDENBERG, BOENDER AND ASSOC., INC. ON DECEMBER 1999.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 37GD AND 37GC.

STA. No. 37GD	NORTHING	EASTING	ELEVATION
	533237.204	1372353.605	290.92'
STA. No. 37GC	555250.791	1370846.348	331.83'
- NO STEEP SLOPES EXIST ON-SITE.
- WATER AND SEWER ARE PUBLIC (CONTRACT # 14-3835-D CONNECTED TO PROJECT #14-9390-D).
- WATER METERS SHALL BE LOCATED OUTSIDE OF ALL BUILDINGS.
- NO FLOODPLAIN EXISTS ON-SITE.
- NO BURIAL GROUNDS OR CEMETERY SITES EXIST ON-SITE.
- THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS, STREAMS AND THEIR BUFFERS, EXCEPT AS SHOWN ON APPROVED PLANS, AND THIS SITE DEVELOPMENT PLAN. INITIAL DISTURBANCE IN THE WETLAND BUFFER AND WETLAND AREA (IF APPLICABLE) IS CONSIDERED ESSENTIAL DISTURBANCE FOR WATER AND SEWER CONSTRUCTION.
- SNOW REMOVAL FOR PRIVATE ROAD WILL BE THE RESPONSIBILITY OF THE H.O.A.
- TRASH COLLECTION WILL BE PRIVATE.
- USE RESIDENTIAL DRIVEWAY ENTRANCE HOWARD COUNTY STD. R-6.03 UNLESS OTHERWISE NOTED.
- THIS SUBDIVISION IS ZONED R-SA-8 PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACK, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD OR PROJECT BOUNDARY SETBACK.
- NO FOREST STANDS EXIST ON-SITE.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS DEVELOPMENT WILL BE FULFILLED VIA PAYMENT OF A FEE-IN-LIEU OF AFFORESTATION IN THE AMOUNT OF \$4,312.50 FOR 14,375 SQ. FT. OF AFFORESTATION.
- WETLAND DELINEATION IS BASED ON A FIELD SURVEY DONE BY MILDENBERG, BOENDER AND ASSOC. IN OR AROUND DEC.1999
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. ALL LIGHTING SHALL BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS.
- STREET LIGHT LOCATION CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
PRIVATE DRIVEWAY	0+30	15' L	100 watt HPS VAPOR "TRADITIONAIRE" POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
PRIVATE DRIVEWAY	3+21	16' L	
PRIVATE DRIVEWAY	4+68	23' L	
- ALL EXISTING STRUCTURES AND PAVING TO BE REMOVED.
- USE MODIFIED CURB AND GUTTER H.C. STD. R-3.01
- DENOTES PROPOSED PAVEMENT.
- DENOTES WETLANDS
- SCHOOL BUS PICKUP WILL BE AT INTERSECTION OF DRIVEWAY WITH ARROW WAY DRIVE.
- TRASH PICKUP WILL BE PRIVATE.
- A MAINTENANCE AGREEMENT FROM THE SHERWOOD CROSSING HOA WHICH ALLOWS THE HARMON PROPERTY DEVELOPMENT FOR THE USE ARROW WAY DRIVE HAS BEEN RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND, RECORDED AS LIBER 1638 / FOLIO 680.

OWNER
HARMON LLC
6901 OLD WATERLOO RD
ELKRIDGE MD 21075-6529

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO.: _____
DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

DEVELOPER'S CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 9/22/00
PRINTED NAME OF DEVELOPER: **Daniel S. Thomas Jr.**

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 9/26/00
PRINTED NAME OF ENGINEER: **Paul M. [Name]**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature] DATE: 10/12/00
USDA - NATURAL RESOURCE CONSERVATION SERVICE

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

[Signature] DATE: 10/12/00
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 _____ DATE: 10/12/00
 _____ DATE: 10/22/00
 _____ DATE: 10/25/00
 DIRECTOR



project	99061	date	MAY 2000
illustration	SAA	engineering	JBM
scale	SAA	approval	JBM
NTS			

description	revisions	date

HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453.837 - GRID 21
FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Borsary Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 987-0296 Fax, (301) 621-5521 Wash., (410) 987-0298 Fax

PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES A (PERIMETERS P/O 4 & 5)	ADJACENT TO PERIMETER PROPERTIES B (PERIMETERS 2, 3, & P/O 4)	ADJACENT TO PERIMETER PROPERTIES C (PERIMETER 1)	DUMPSTER BUFFER D (PERIMETER 6)
LANDSCAPE TYPE	360.20 LF	711.87 LF	260.60 LF	26 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 34.17 LF	YES, 255.87 LF	NO	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	YES, 85 LF OF SWM LANDSCAPING	NO	NO
NUMBER OF PLANTS REQUIRED	6 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	8 SHADE TREES 9 EVERGREEN TREES 0 SHRUBS	7 SHADE TREES 13 EVERGREEN TREES 0 SHRUBS	1 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED	8 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS (10:1 SUBSTITUTION)	8 SHADE TREES 9 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	7 SHADE TREES 13 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	1 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

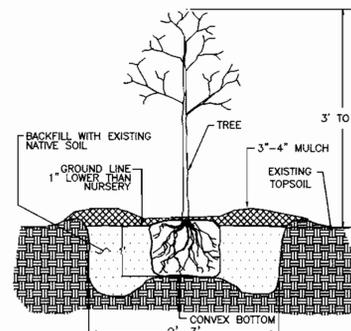
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
16		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
39		PINUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
12		ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL.
10		ACER PLATANOIDES	NORWAY MAPLE	2 1/2" - 3" CAL.
TOTAL				
77 TREES (38 SHADE TREES, 39 EVERGREEN TREES (INCLUDES 8 SUBSTITUTION TREES))				

NOTES:

- TOPOGRAPHY IS BASED ON FIELD RUN TOPO. BY MILDENBERG, BOENDER AND ASSOCIATES, INC. ON OR ABOUT DECEMBER 1999.
- SOILS SHOWN HEREON WERE BASED ON THE HOWARD COUNTY SOIL SURVEY MAPS.
- ALL PERIMETER LANDSCAPING AND ALL SWM LANDSCAPING IS THE RESPONSIBILITY OF THE DEVELOPER.
- 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 16 INTERNAL LANDSCAPE TREES, 14 SWM EVERGREEN TREES, 22 PERIMETER SHADE TREES, AND 25 PERIMETER EVERGREEN TREES (38 SHADE TREES AND 39 EVERGREENS TOTAL) IN THE AMOUNT OF \$17,250.00 IS PART OF THE DEVELOPER'S AGREEMENT.
- PROPOSED SILT FENCING SHALL PROVIDE PROTECTIVE TREE FENCING.
- IN CONSIDERATION OF SAFETY ISSUES, NO LANDSCAPE SCREEN PROVIDED AT BUS STOP.
- THE STOCKPILE AREA SHALL NOT BE PLACED NEAR THE 72" SYCAMORE.

PERIMETER EDGE CALCULATIONS

PERIMETER	EDGE TYPE
PERIMETER 1 SFA TO ROAD - 260.60 LF 1 SHADE TREE / 40 LF 1 EVERGREEN / 20 LF	C
PERIMETER 2 SFA TO SFA - 371.00 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
PERIMETER 3 SFA TO SFA - 255.87 LF CREDIT FOR EXISTING TREES TO REMAIN	B
PERIMETER 4 18.00 LF ENTRANCE SFA TO NON-RES - 34.17 LF CREDIT FOR EXISTING TREES TO REMAIN SFA TO NON-RES - 173.03 LF 1 SHADE TREE / 60 LF	N/A
PERIMETER 5 SFA TO NON-RES - 153.00 LF 1 SHADE TREE / 60 LF	A
PERIMETER 6 DUMPSTER - 26 LF 1 SHADE TREE / 60 LF 1 EVERGREEN / 10 LF	D
TOTAL PLANTING OBLIGATION SHADE TREES EVERGREENS SHRUBS	22 25 0



TREE PLANTING DETAIL

* NOTE : SEE "DIMENSION PLAN", SHEET 6, FOR FURTHER DETAILS, SETBACKS, AND NOTES.

STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	273 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 67 LF
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED SHADE TREES EVERGREEN TREES	4 SHADE TREES 6 EVERGREEN TREES
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES SUBSTITUTIONS	0 SHADE TREES 6 EVERGREEN TREES 8 EVERGREEN TREES (4 SHADE TREES @ 2:1 SUBSTITUTION)

SWM PERIMETER CALCULATIONS

SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 48 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER B - 73 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER C - 67 LF 67 LF EXISTING TREES TO REMAIN	N/A
SWM PERIMETER D - 85 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
TOTAL PLANTING OBLIGATION SHADE TREES EVERGREEN TREES SHRUBS	4 6 0

**SCHEDULE C:
RESIDENTIAL DEVELOPMENT
INTERNAL LANDSCAPING**

NUMBER OF DWELLING UNITS	16
NUMBER OF TREES REQUIRED (1 DU SFA: 1:3 DU ADPTS)	16
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	16 0

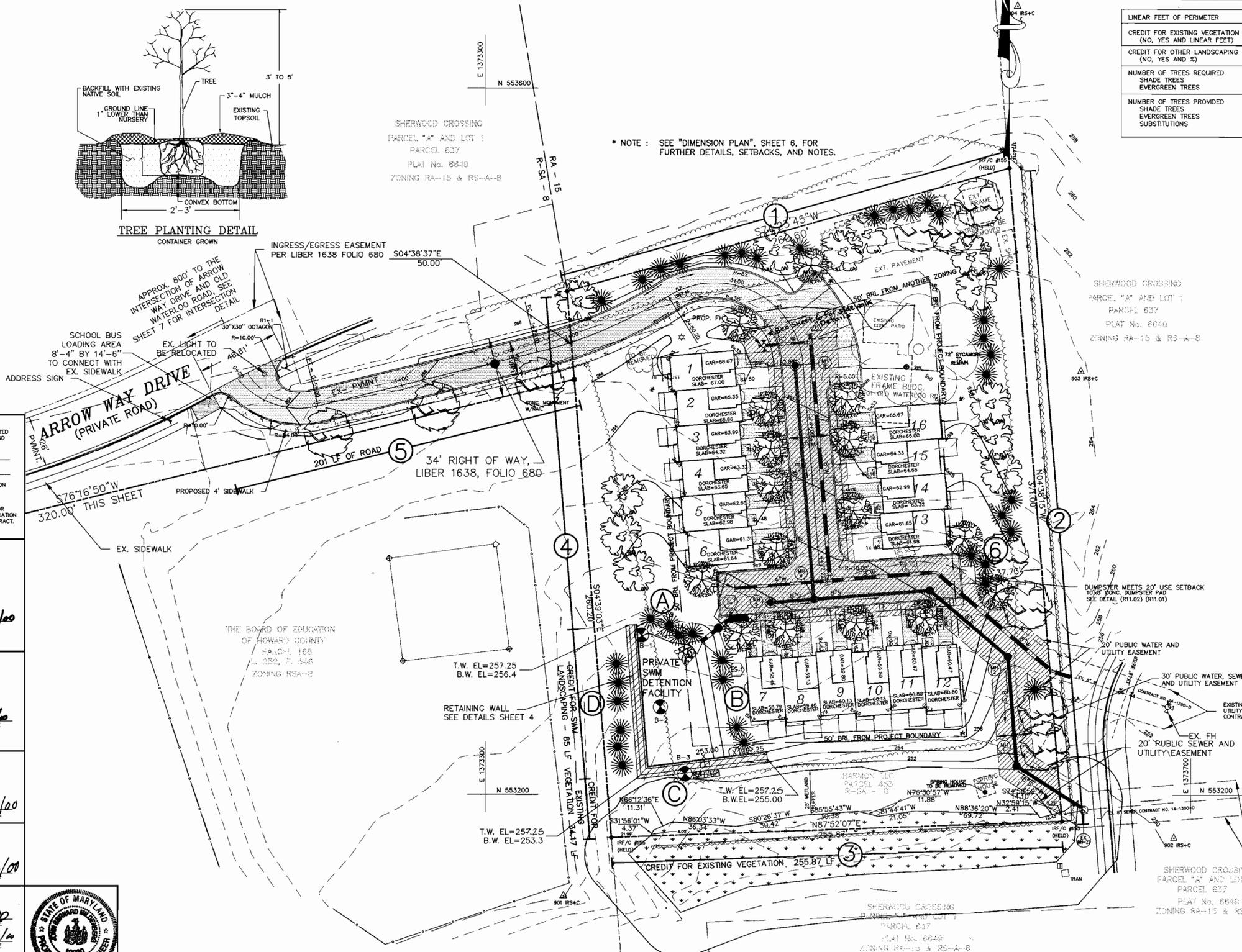
LEGEND

- DENOTES PERIMETER LANDSCAPE EDGE
- DENOTES PUBLIC WATER, SEWER AND UTILITY EASEMENT
- DENOTES PROPOSED PAVEMENT
- DENOTES EXISTING WETLANDS
- DENOTES EXISTING TREE LINE
- DENOTES PROPOSED TREE LINE
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED STREET LIGHT TO BE RELOCATED
- EXISTING CONTOUR 2' INTERVAL
- PROPOSED CONTOUR 2' INTERVAL
- PROPOSED CONTOUR 10' INTERVAL
- SPOT ELEVATION
- SILT FENCE
- SSP
- LIMIT OF DISTURBANCE
- STABILIZED CONSTR. ENTRANCE

EXISTING WATER AND UTILITY EASEMENT CONT. # 14-1390-D

OWNER

HARMON LLC
6901 OLD WATERLOO RD
ELK RIDGE MD 21075-6529



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____
DATE: _____

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I DO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 9/22/00
PRINTED NAME OF DEVELOPER: **Dennis R. Parnell, Jr.**

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 9/22/00
PRINTED NAME OF ENGINEER: **John P. Hunter**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature] DATE: 10/12/00
NCSA - NATURAL RESOURCE CONSERVATION SERVICE

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

[Signature] DATE: 10/12/00
John P. Hunter
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF OF DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 10/12/00
CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 10/23/00
DIRECTOR: *[Signature]* DATE: 11/23/00



MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Bait. (301) 621-5521 Wash. (410) 997-0288 Fax.

HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453,637 - GRID 21
FIRST ELECTION DISTRICT HOWARD COUNTY

LANDSCAPING & SITE DEVELOPMENT PLAN

Project: 99061 MAY 2000
Illustration: SAA
Scale: SAA
Date: MAY 2000
Description: LANDSCAPING & SITE DEVELOPMENT PLAN
Revisions: 1
No.: 1

2 OF 7

**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:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER 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. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER 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 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE 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 31 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 WEED FREE SMALL GRASS 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 (6 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 REDISTURBED 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, FOR NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.7 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE 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 PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (6 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 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.

- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 - TOTAL AREA OF SITE: 2.00 ± ACRES
 - AREA TO BE ROOFED OR PAVED: 1.84 ± ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 0.16 ± ACRES
 - TOTAL CUT: 7500 ± CU. YDS.
 - TOTAL FILL: 7500 ± CU. YDS.

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITY MEASUREMENTS.

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHICH:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

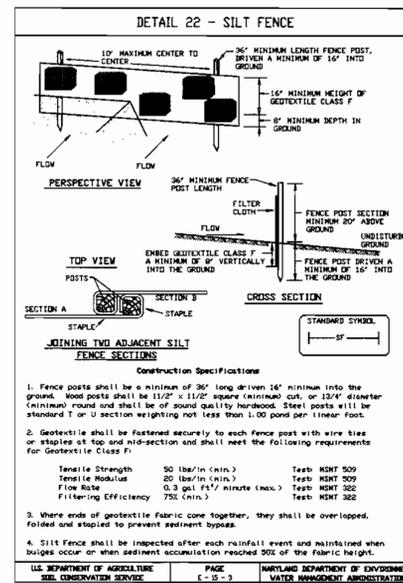
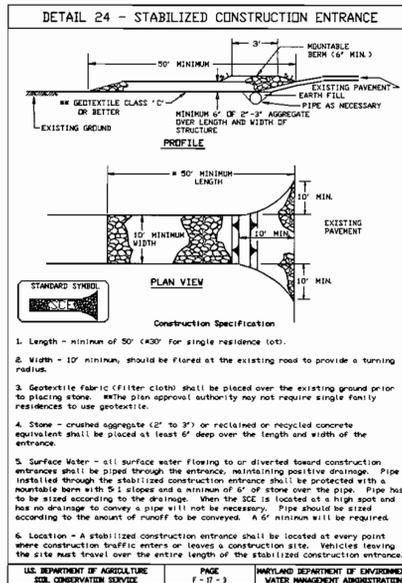
CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SSS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF SANDS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON-SOON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - pH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A pH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PROVIDED TO RAISE THE pH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL, UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- TOPSOIL APPLICATION
 - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
- ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 - COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
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- ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
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REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.



SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

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

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO.: _____
DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES THE ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGGING THE PROJECT. I ALSO AUTHORIZE PERSONS ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE: *[Signature]* DATE: 9/28/04

PRINTED NAME OF DEVELOPER: **DENNIS R. ROSS JR.**

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE: *[Signature]* DATE: 9/28/04

PRINTED NAME OF ENGINEER: **HOWARD M. WOODWARD**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE: *[Signature]* DATE: 10/12/04

USE - NATURAL RESOURCE CONSERVATION SERVICE

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

SIGNATURE: *[Signature]* DATE: 10/12/04

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

SIGNATURE: *[Signature]* DATE: 10/17/04

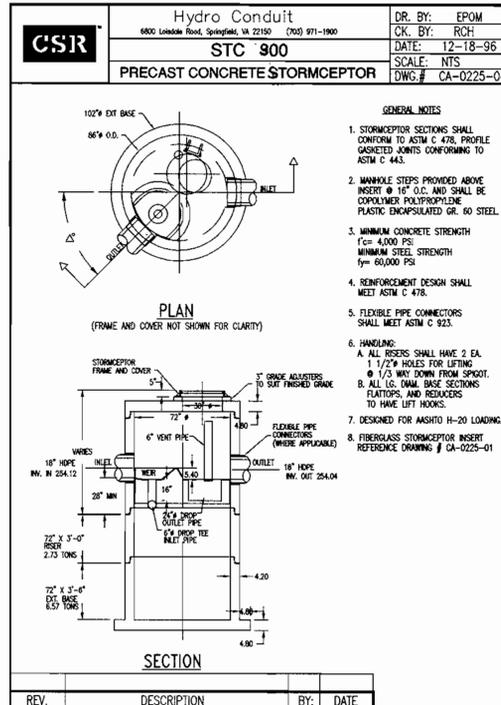
CHIEF, DEVELOPMENT ENGINEERING DIVISION

SIGNATURE: *[Signature]* DATE: 10/23/04

CHIEF, DIVISION OF LAND DEVELOPMENT

SIGNATURE: *[Signature]* DATE: 11/25/04

DIRECTOR



**Order Request Form
Precast Concrete**

CONTRACTOR INFORMATION

Name: _____
Address: _____
City: _____
State: _____
Zip Code: _____
Phone: _____
Fax: _____

OWNER INFORMATION

Name: HARMON PROPERTY
Phone: _____
Fax: _____

IMPERVIOUS DRAINAGE AREA FOR THIS UNIT

Stormceptor Model	Insert Size	Manhole Number
STC 900	SINGLE INLET DISK	SC-1
1200	MULTIPLE INLET DISK	259-4
1800		254-12
2400		254-04

Manhole Number: SC-1
Top Elevation (ft): 259.4
Inlet Pipe Invert (ft): 254.12
Outlet Pipe Invert (ft): 254.04
Pipe Type: HDPE
Inlet Pipe Inside Diameter (in): 18"
Inlet Pipe Outside Diameter (in): 18"
Outlet Pipe Inside Diameter (in): 18"
Outlet Pipe Outside Diameter (in): 18"

Project Name: HARMON PROPERTY
Approximate time frame of delivery (weeks): _____
Delivery Address: Street _____
City: _____ State: _____ Zip Code: _____
Designer Company: MILDENBERG, BOENDER & ASSOC., INC.
Designer Contact: J.B.MILDENBERG Phone: 410-997-0296 Fax: 410-997-0298

PLEASE FILL OUT COMPLETELY AND FAX TO:
CSR HYDRO CONDUIT FAX: (703) 922-3659
PHONE: (703) 971-1900

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, WITH MOUNTABLE BERMS, AT LOCATION SHOWN (1 DAY).
- CONSTRUCT SILT FENCES (1 DAY).
- BRING SITE TO GRADE INCLUDING CONSTRUCTION OF SWM FACILITY (30 DAYS).
- AREA OF LOTS 7 THROUGH 12 MAY BE USED FOR TEMPORARY SPOIL SITE.
- CONSTRUCT BUILDINGS AND UTILITIES (30 DAYS).
- WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS. (3 DAYS)

date FEB 2000
project 99081
illustration
scale
approval JPM

description
revisions

date

no.

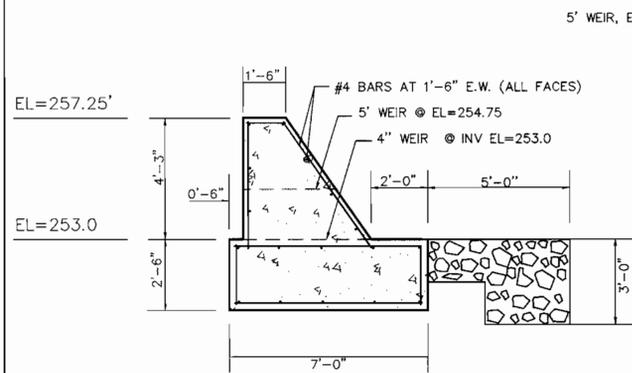
HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 PARCEL 453 GRID 21
HOWARD COUNTY, MARYLAND

FIRST ELECTION DISTRICT

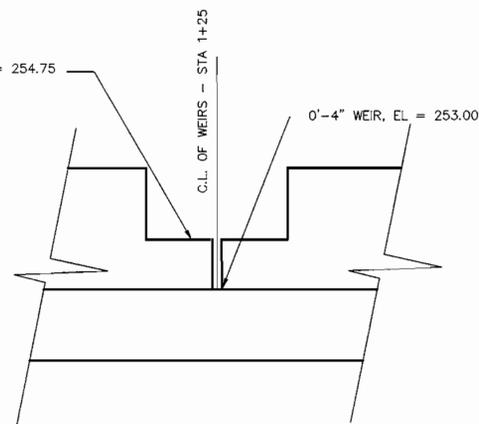
SEDIMENT CONTROL NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Fax (301) 621-5521 Wash. (410) 997-0298 Fax

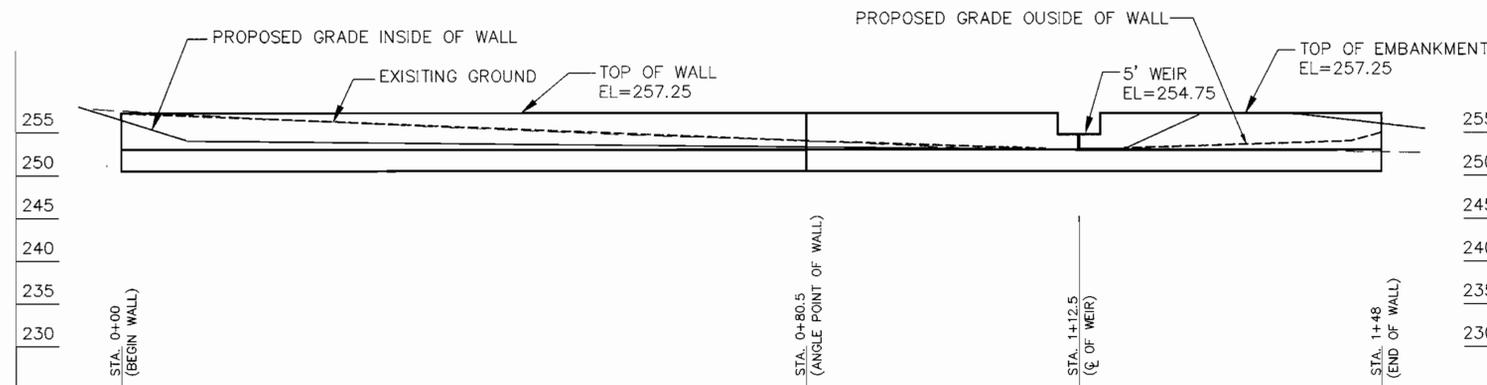
3 OF 6



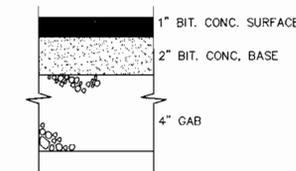
**TYPICAL SECTION
RETAINING WALL**
SCALE: 1"=30'



**SECTION AT WEIR
RETAINING WALL**
SCALE: 1"=30'

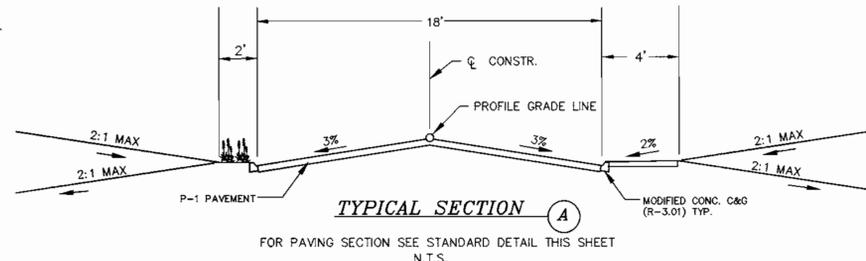


PROFILE OF THE RETAINING WALL
SCALE: 1"=10'

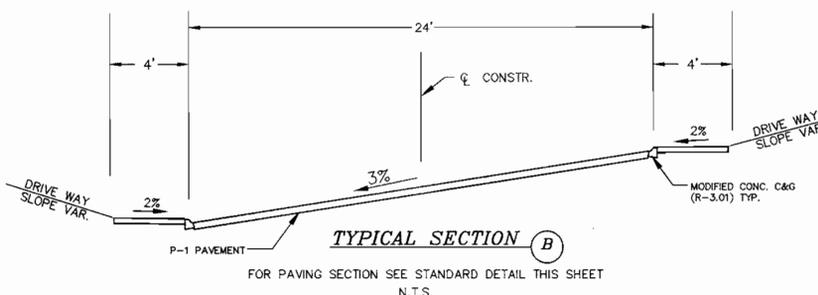


**PAVING SECTION
P-1**
N.T.S.

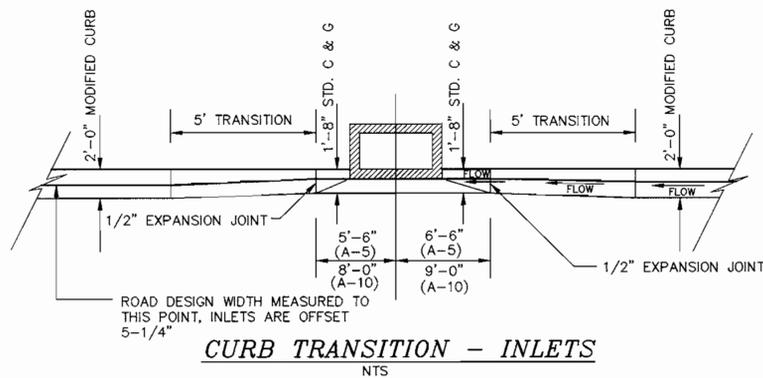
- GENERAL NOTES:**
1. ALL CONCRETE SHALL BE MSHA MIX NO.3 FC=2,000 PSI, FY=60,000 PSI
 2. ALLOWABLE BEARING ON SUBGRADE SHALL NOT EXCEED 2,000 PSF. SUBGRADE TO BE APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING FOOTINGS.
 3. ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED (3/4 IN X 3/4 IN)
 4. CONSTRUCTION KEYS SHALL BE A MINIMUM OF 2"x 4" NOMINAL.
 5. CONCRETE COVER TO BE 3" TYPICAL
 6. THE PROPOSED CONSTRUCTION SHALL BE PERFORMED UNDER THE OBSERVATION OF A MARYLAND REGISTERED PROFESSIONAL ENGINEER.



TYPICAL SECTION A
FOR PAVING SECTION SEE STANDARD DETAIL THIS SHEET
N.T.S.



TYPICAL SECTION B
FOR PAVING SECTION SEE STANDARD DETAIL THIS SHEET
N.T.S.



CURB TRANSITION - INLETS
NTS

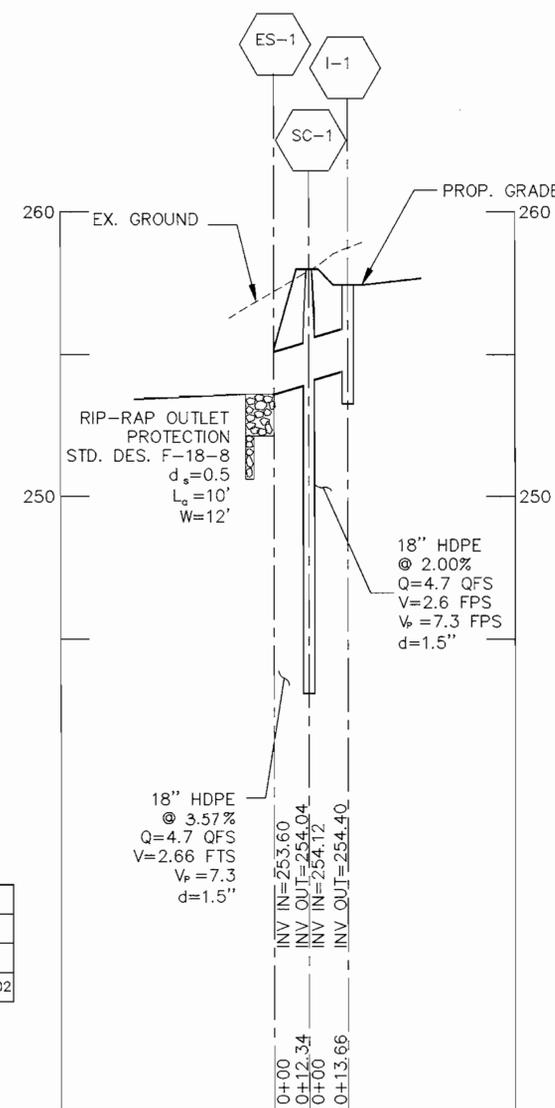
STRUCTURE SCHEDULE

NO.	LOCATION	TOP	INV. IN	INV. OUT	COMMENTS
SC-1	N 553294.20 E 1373432.24	258.00	254.12	254.04	STORM CEPTOR 900
ES-1	N 553286.53** E 1373422.57**	----	253.6	----	END SECTION STANDARD SD 5.61
I-1*	N 553301.98* E 1373443.85*	257.46	----	254.4	TYPE "A-10" INLET STANDARD SD 4.02

- NOTES:**
1. HGL EQUALS TOP OF PIPE UNLESS OTHERWISE NOTED.
 2. * DENOTES CURB TRANSITION INLET (SEE DETAIL)
 3. ** DENOTES LOCATION TAKEN AT MID OF INLET INTERSECTING WITH EDGE OF PAVEMENT
 4. ** DENOTES LOCATION TAKEN AT THE JUNCTION OF PIPE AND END SECTION.

PIPE SCHEDULE

PIPE SIZE	LENGTH
18" HDPE	27 FT



STORM DRAIN PROFILE
SCALE: H: 1"=30'
V: 1"=3'

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____ DATE: _____

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERSON ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: _____ DATE: 9/23/00

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: _____ DATE: 9/23/00

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

USDA - NATURAL RESOURCE CONSERVATION SERVICE

DATE: 10/12/00

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

DATE: 10/12/00

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 10/17/00

DATE: 11/23/00

DATE: 11/23/00



OWNER
HARMON LLC
6901 OLD WATERLOO RD
ELK RIDGE MD 21075-6529

project: 99061
date: MAY 2000
illustration: SAA
scale: AS SHOWN
approval: JBM

no. _____
description: _____
revisions: _____

date: MAY 2000

HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453 - GRID 21
HOWARD COUNTY
FIRST ELECTION DISTRICT

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Surveyors Planners
5072 Bessy Hall Drive, Suite 202, Beltsville City, Maryland, 21042
(410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0298 Fax.

MISC. DETAILS AND PROFILES

4 OF 7

POND SPECIFICATIONS

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

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED TO THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

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

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND OUT TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SO, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

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

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

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

CUT OFF TRENCH - THE CUFF OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO BE FULLY COMPACTED ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE: 1. MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A WITH WATER TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. STEEL PIPES WITH POLYMERIC COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE, THE FOLLOWING COATINGS OR AN APPROVED EQUAL MAY BE USED: NEXON, PLASTICOAT, BLAC-KLAD, AND BETH-CU-LOY. COATED CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M-245 AND M-246.

MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC. MUST BE COMPOSED OF THE SAME MATERIAL AS THE PIPE. METALS MUST BE ISOLATED FROM DISSIMILAR MATERIALS WITH USE RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONSTRUCTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE ROLLED AND ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WIDTH. THE END OF EACH PIPE SHALL BE ACCEPTABLE FOR PIPE LESS THAN 24" IN DIAMETER. FLANGES ON BOTH ENDS OF THE PIPE, A 12" WIDE STANDARD LAP TYPE BAND WITH 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET; AND A 12" WIDE HUGGER TYPE BAND WITH O-RING GASKETS HAVING MINIMUM DIAMETER OF 1/2" GREATER THAN THE CORRUGATION DEPTH. PIPES 24" IN DIAMETER AND LARGER SHALL BE CORRODED BY A 7/8" LONG ANNULAR CORRUGATED BAND USING RODS AND LUGS. A 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED ON THE END OF EACH PIPE FOR A TOTAL OF 24".

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

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

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

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

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

1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361.

2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED, CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

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

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

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

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.

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

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

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

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 68, MIX NO. 3.

ROCK RIP RAP

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

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

CARE OF WATER DURING CONSTRUCTION

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

STABILIZATION

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

EROSION AND SEDIMENT CONTROL

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

RECOMMENDED CONSTRUCTION SPECIFICATIONS (Site Grading)

OFF-SITE BORROW, IF REQUIRED, SHOULD MEET UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) DESIGNATION DM, DP, SW, GP, GM, OR GW AND BE APPROVED BY THE GEOTECHNICAL ENGINEER. NEW FILLS CONSTRUCTED ON SLOPES STEEPER THAN 5H:1V (HORIZONTAL TO VERTICAL) SHOULD BE KEVED INTO EXISTING SLOPES TO PROTECT THE STABILITY OF THE EMBANKMENT. ALL FILL SLOPES STEEPER THAN 5H:1V SHOULD BE PLACED AS STRUCTURAL FILL AND BE CONTROLLED AND COMPACTED TO MINIMUM DENSITIES AND SPECIFIED BELOW.

ALL FILLS SHOULD BE CONSTRUCTED IN 8-INCH LOOSE LIFTS AND COMPACTED TO THE FOLLOWING SPECIFICATIONS:

FILLS SUPPORTING FOUNDATIONS, RETAINING WALLS, FLOOR SLABS, AND WITHIN WALLS OR SLOPES STEEPER THAN 4H:1V 92% OF ASTM D-1557

FILLS WITHIN TOP 1 FOOT OF PAVEMENT 95% OF ASTM D-1557

FILLS BELOW 1 FOOT OF PAVEMENT 92% OF ASTM D-1557

FILL CONSTRUCTION SHOULD BE MONITORED BY A FULL-TIME SOILS TECHNICIAN UNDER THE DIRECT SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER. ALL COMPACTIVE EFFORT SHOULD BE VERIFIED BY IN-PLACE DENSITY TESTING.

OPERATION, MAINTENANCE AND INSPECTION

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

OPERATION AND MAINTENANCE SCHEDULE FOR EXTENDED DETENTION POND

ROUTINE MAINTENANCE:

1. THE PARTY RESPONSIBLE FOR MAINTENANCE OF THE FACILITY SHALL INSPECT IT BIANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.

2. THE EMBANKMENT OF THE POND CONSISTING OF THE OUTSIDE SIDE SLOPE, THE TOP AND INSIDE SIDE SLOPE SHALL BE MOWED A MINIMUM OF ONCE PER YEAR TO CONTROL WOODY VEGETATION, TO CONTROL GRASS AND NOXIOUS WEEDS, MOW TWICE PER YEAR, ONCE IN LATE JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES, POND BOTTOM, AND MAINTENANCE ACCESS ARE TO BE MOWED AS NEEDED.

3. DEBRIS, TRASH, AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS OR AS DEEMED NECESSARY.

4. NO WOODY VEGETATION (TREES, SHRUBS, BRUSH, ETC.) IS ALLOWED WITHIN A 50 FOOT RADIUS OF THE POND PRINCIPAL SPILLWAY INLET CONTROL STRUCTURE OR ANYWHERE ON THE MANMADE EMBANKMENT.

5. BORROWING ANIMALS ARE TO BE REMOVED FROM THE MANMADE EMBANKMENT AREA AND THE BORROWS BACKFILLED.

6. VISIBLE SIGNS OF EROSION ALONG THE INFLOW CHANNELS, WITHIN THE POND, AND AT THE OUTFALL SHALL BE REPAIRED IMMEDIATELY.

NON-ROUTINE MAINTENANCE:

1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE EMBANKMENT, RISER, BARREL, WEIR, ETC. SHALL BE REPAIRED UPON DETECTION OF DAMAGE.

2. PERIODIC CLEANING, RECOATING, WELDING, ETC. OF THE POND TRASH RACK, RISER, BARREL, LOW FLOW DEWATERING DEVICE, ETC. IMMEDIATELY UPON DETECTION OF A PROBLEM.

3. SEDIMENT SHALL BE REMOVED WHEN THE ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERES WITH THE FUNCTION OF THE RISER OR WHEN DEEMED NECESSARY FOR THE PROPER OPERATION OF THE FACILITY.

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

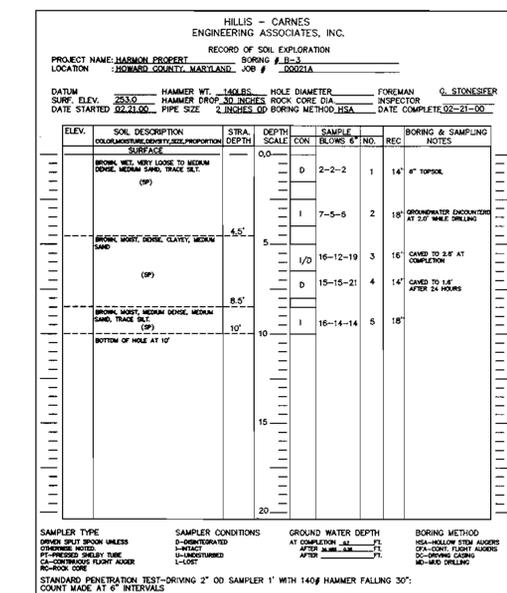
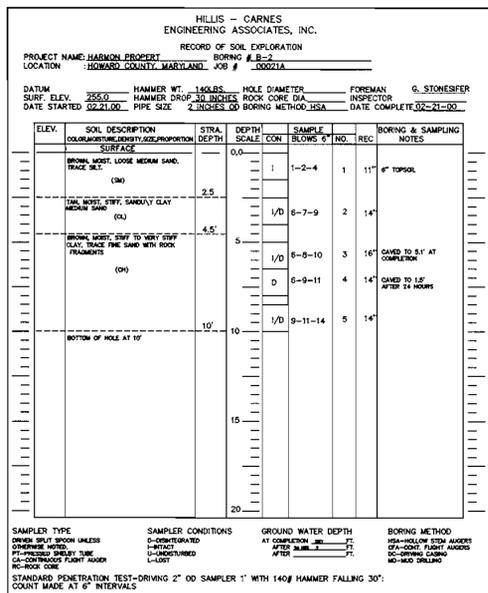
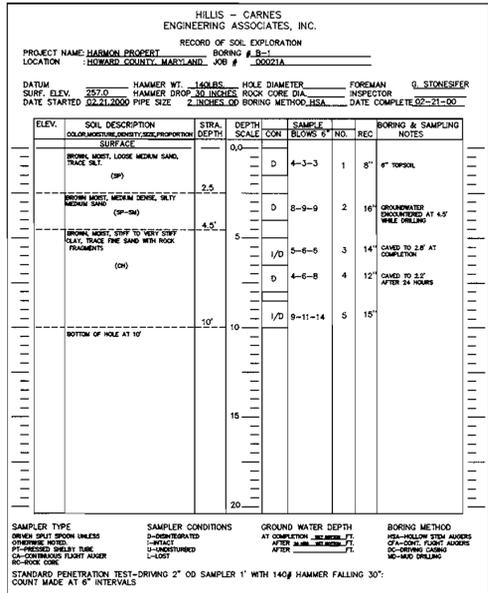
1. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE PERIODICALLY INSPECTED AND CLEANED TO MAINTAIN OPERATION AND FUNCTION. THE OWNER SHALL INSPECT THE STORMCEPTOR UNIT YEARLY AT MINIMUM. UTILIZING THE STORMCEPTOR INSPECTION/MONITORING FORM, INSPECTIONS SHALL BE DONE BY USING A CLEAR PLEXIGLASS TUBE ("SLUDGE JUDGE") TO EXTRACT A WATER COLUMN SAMPLE, WHEN SEDIMENT DEPTHS EXCEED THE LEVEL SPECIFIED IN TABLE 6 OF THE STORMCEPTOR TECHNICAL MANUAL, THE UNIT SHALL BE CLEANED.

2. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES.

3. THE MAINTENANCE OF THE STORMCEPTOR UNIT SHALL BE DONE USING THE VACUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING HYDROCARBONS AND OTHER MATERIALS IN THE UNIT. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.

4. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND THE OWNER SHALL HAVE THEM REMOVED. STRUCTURAL PARTS OF THE STORMCEPTOR UNIT SHALL BE REPAIRED AS NEEDED.

5. THE OWNER SHALL RETAIN AND MAKE THE STORMCEPTOR INSPECTION/MONITORING FORMS AVAILABLE TO THE HOWARD COUNTY OFFICIALS UPON THEIR REQUEST.



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____ DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERSONS ON-SITE INSPECTION BY THE NANTUX RESOURCE CONSERVATION SERVICE.

SIGNATURE OF REVIEWER: _____ DATE: 9/22/00

PRINTED NAME OF DEVELOPER: _____

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NANTUX RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: _____ DATE: 9/25/00

PRINTED NAME OF ENGINEER: _____

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE: J. H. Daulton DATE: 10/12/00

HOWARD COUNTY SOIL CONSERVATION SERVICE

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

SIGNATURE: John R. Robertson DATE: 10/12/00

HOWARD COUNTY SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

SIGNATURE: _____ DATE: 10/17/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION

SIGNATURE: Cindy Hamble DATE: 10/25/00

CHIEF, DIVISION OF LAND DEVELOPMENT

SIGNATURE: _____ DATE: 10/25/00

DIRECTOR

STATE OF MARYLAND PROFESSIONAL ENGINEER

DATE: MAY 2000
PROJECT: 99061
ILLUSTRATION: SAA
SCALE: SAA
DATE: NTS
APPROVED: JBM

HARMON PROPERTY STA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453 - GRID 21 - BLOCK 6
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
STORMWATER MANAGEMENT NOTES & DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0266 Fax: (301) 621-5521 Wash. (410) 997-0268 Fax.

OWNER: HARMON LLC
6901 OLD WATERLOO RD
ELKRIDGE MD 21075-6529

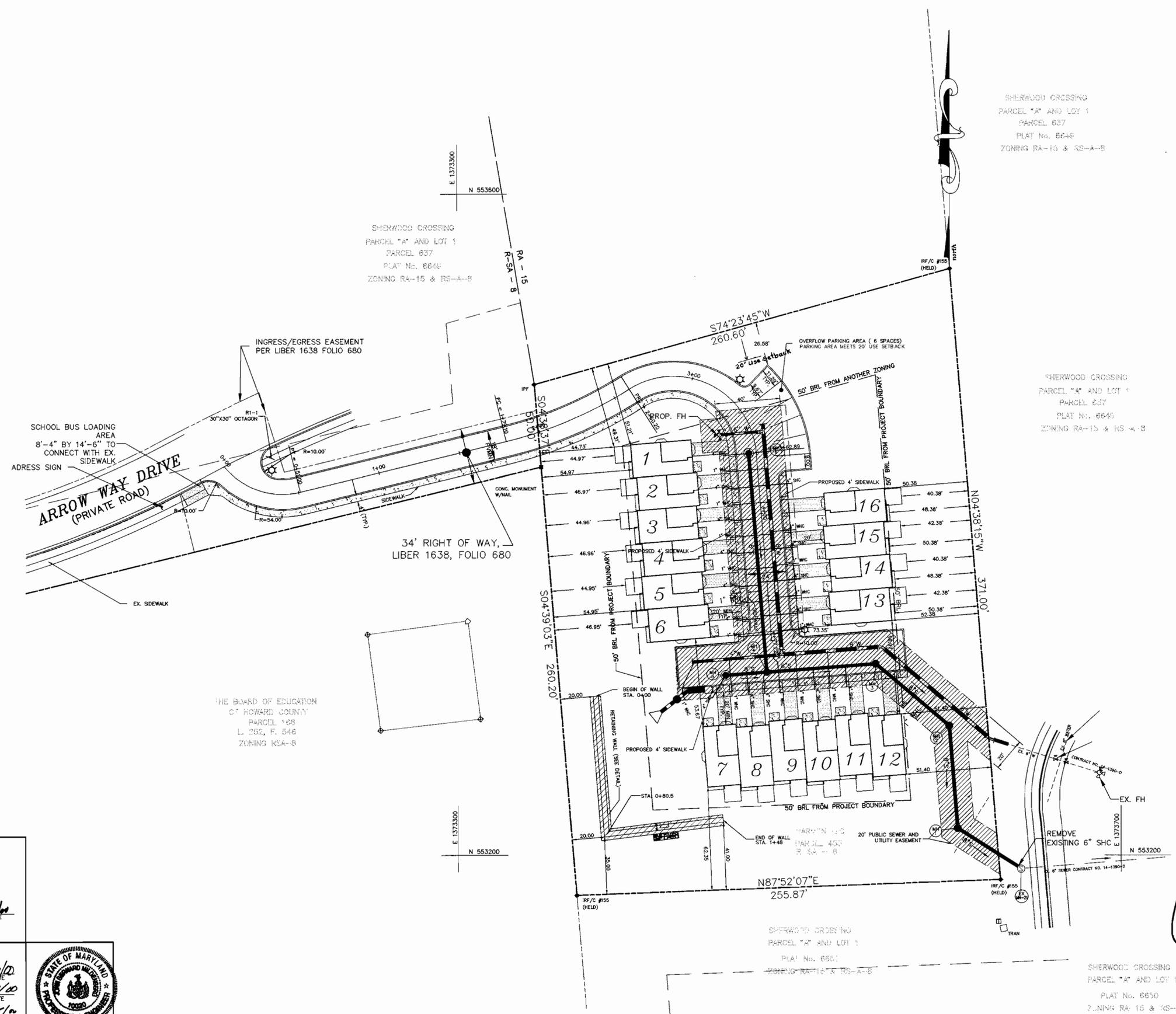
5 OF 7

date	MAY 2000
project	99061
illustration	SAA
scale	1"=30'
engineering	SAA
approval	JBM

no.		description	revisions

HARMON PROPERTY
SFA CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453 - GRID 21
FIRST ELECTION DISTRICT
HOWARD COUNTY
DIMENSION PLAN

MILDENBERG,
BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsy Hill Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Bal. (301) 621-6624 Wash. (410) 997-0298 Fax.



SHERWOOD CROSSING
PARCEL "A" AND LOT 1
PARCEL 637
PLAT No. 8646
ZONING RA-15 & RS-A-8

SHERWOOD CROSSING
PARCEL "A" AND LOT 1
PARCEL 637
PLAT No. 8646
ZONING RA-15 & RS-A-8

THE BOARD OF EDUCATION
OF HOWARD COUNTY
PARCEL 128
L. 252, F. 546
ZONING KSA-8

[Signature]
9/22/00

OWNER
HARMON LLC
6901 OLD WATERLOO RD
ELK RIDGE MD 21075-6529

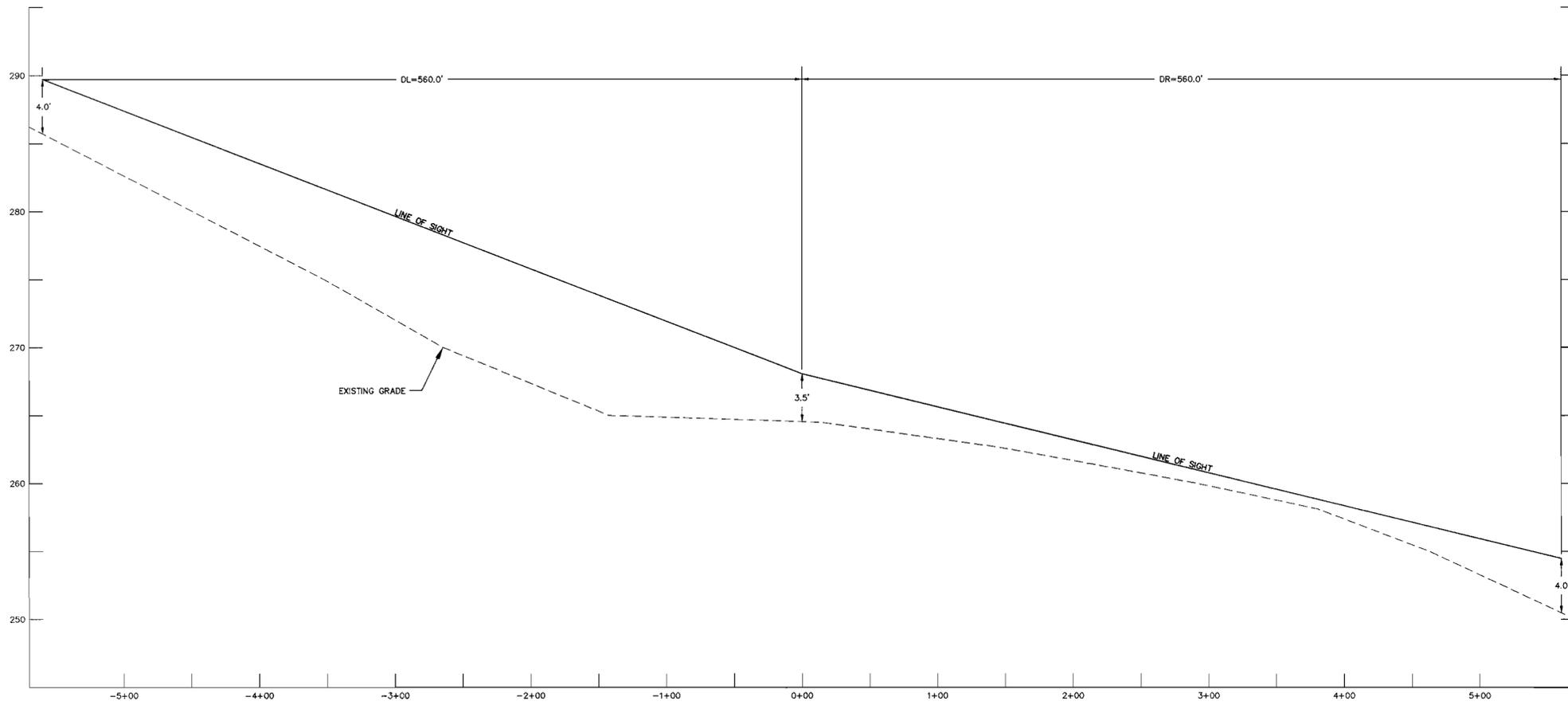
SHERWOOD CROSSING
PARCEL "A" AND LOT 1
PLAT No. 8630
ZONING RA-15 & RS-A-8

DEVELOPERS CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 9/22/00
PRINTED NAME OF DEVELOPER: **Donald R. Harmon Jr.**

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 10/17/00
CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 10/23/00
DIRECTOR: *[Signature]* DATE: 11/25/00





INTERSECTION SIGHT DISTANCE ANALYSIS

	DISTANCE LEFT (DL)	DISTANCE RIGHT (DR)
LEFT TURN	330' X (1.7) = 561' (CONTROL)	330' X (1.7) = 561' (CONTROL)
RIGHT TURN	300' X (1.0) = 300'	N/A

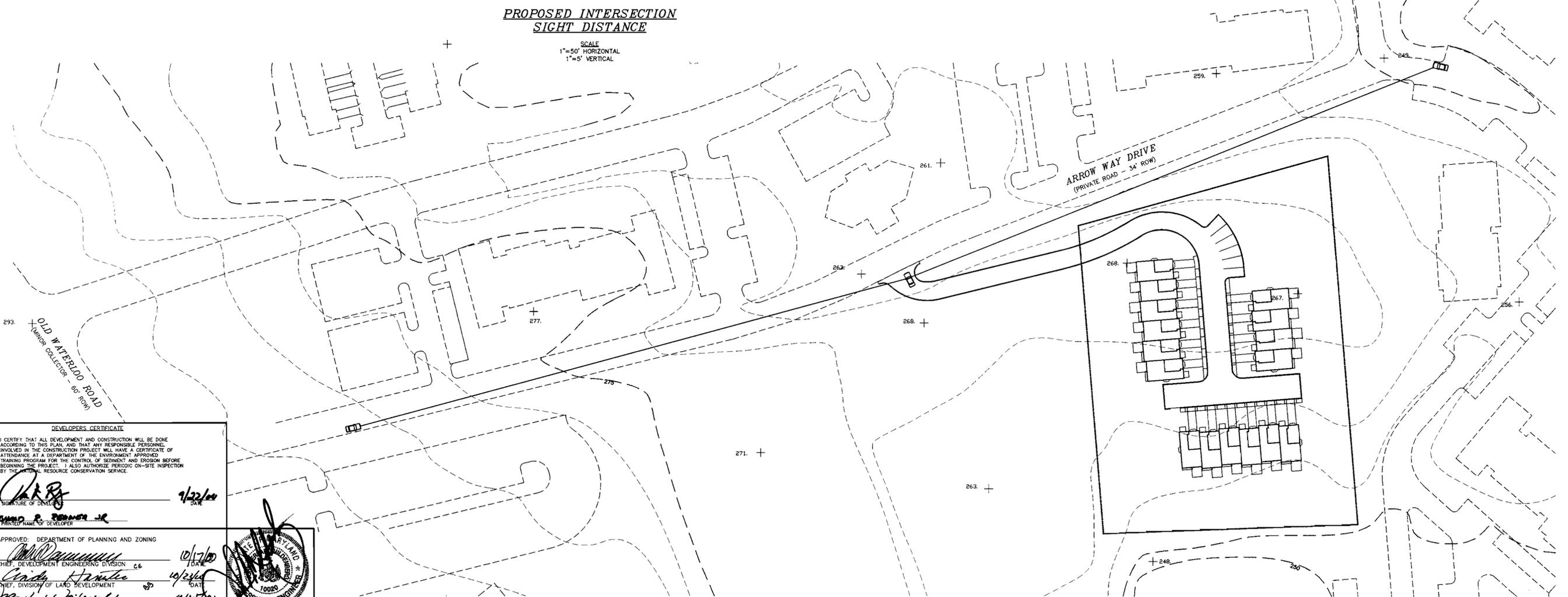
OPERATING SPEED=25 MPH (BASED ON 85TH PERCENTILE SPEED ON EXISTING ROAD)

GENERAL NOTES

- ADDITIONAL OFF SITE TOPOGRAPHY BASED ON HOWARD COUNTY 200 SCALE ARIAL TOPOGRAPHY.
- ARROW WAY DRIVE CONSTRUCTED UNDER SDP 85-202

PROPOSED INTERSECTION SIGHT DISTANCE

SCALE
1"=50' HORIZONTAL
1"=5' VERTICAL



DEVELOPERS CERTIFICATE

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

Signature: *[Signature]* DATE: 1/22/00

Printed Name of Developer: **James R. Bennett, Jr.**

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 12/17/00

Chief, Division of Land Development: *[Signature]* DATE: 10/23/00

Director: *[Signature]* DATE: 10/23/00



date	MAY 2000
project	990061
illustration	KR
scale	1"=50'
approval	KR

no.		description	revisions

HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453 - GRID 21
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SIGHT DISTANCE ANALYSIS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Bldg. (301) 621-5521 Wash. (410) 997-0288 Fax.

SHEET INDEX	
SHEET	TITLE
1 OF 7	COVER SHEET
2 OF 7	SITE DEVELOPMENT PLAN
3 OF 7	SEDIMENT CONTROL NOTES AND DETAILS
4 OF 7	MISC. DETAILS AND PROFILES.
5 OF 7	STORMWATER MANAGEMENT NOTES & DETAILS
6 OF 7	DIMENSION PLAN
7 OF 7	SIGHT DISTANCE ANALYSIS

SITE DEVELOPMENT PLAN

HARMON PROPERTY

SFA/CONDOS, UNITS 1 TO 16

1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

ADDRESS CHART		ADDRESS CHART	
LOT NO.	STREET ADDRESS	LOT NO.	STREET ADDRESS
1	6919 OLD WATERLOO ROAD	9	6903 OLD WATERLOO ROAD
2	6917 OLD WATERLOO ROAD	10	6901 OLD WATERLOO ROAD
3	6915 OLD WATERLOO ROAD	11	6899 OLD WATERLOO ROAD
4	6913 OLD WATERLOO ROAD	12	6897 OLD WATERLOO ROAD
5	6911 OLD WATERLOO ROAD	13	6895 OLD WATERLOO ROAD
6	6909 OLD WATERLOO ROAD	14	6893 OLD WATERLOO ROAD
7	6907 OLD WATERLOO ROAD	15	6891 OLD WATERLOO ROAD
8	6905 OLD WATERLOO ROAD	16	6889 OLD WATERLOO ROAD

PERMIT INFORMATION CHART					
SUBDIVISION NAME		SECTION/AREA	LOT/PARCEL #		
HARMON PROPERTY		N/A	PARCEL 453,637		
PLAT # OR L/F	BLOCK #	ZONE	TAX MAP	ELEC. DIST.	CENSUS TRACT
N/A	21	RSA-8	37	1st	8011, 02
WATER CODE	SEWER CODE	PROPOSED IMPROVEMENTS:			
D-06	2500000	SFA (CONDOMINIUMS)			

MIN. SEWER ELEVATION CHART			
LOT	MIN. SLAB. EL.	LOT	MIN. SLAB. EL.
1	263.06	9	256.24
2	262.01	10	256.70
3	261.06	11	259.30
4	260.06	12	253.82
5	259.06	13	253.13
6	258.06	14	259.34
7	256.90	15	260.29
8	256.60	16	263.04

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____
 DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM AND CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 9/22/00
 PRINTED NAME OF DEVELOPER: **THOMAS S. BOENDER, JR.**

ENGINEER'S CERTIFICATE

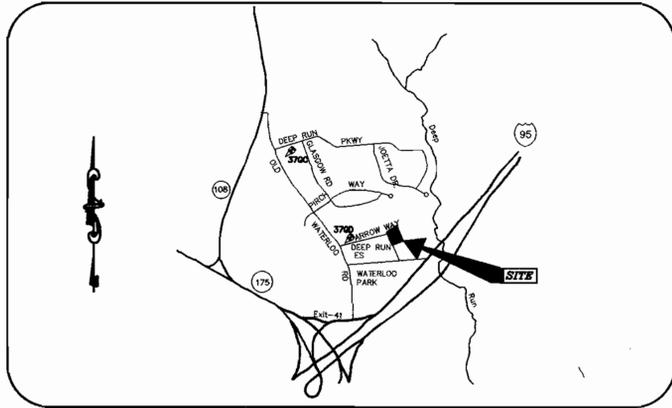
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 9/22/00
 PRINTED NAME OF ENGINEER: **John M. Worfield**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

USDA - NATURAL RESOURCE CONSERVATION SERVICE DATE: 10/12/00
 HOWARD SOIL CONSERVATION DISTRICT DATE: 10/12/00

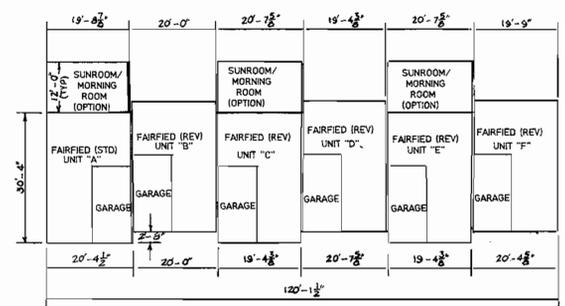
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 10/12/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 10/23/00
 DIRECTOR DATE: 10/25/00



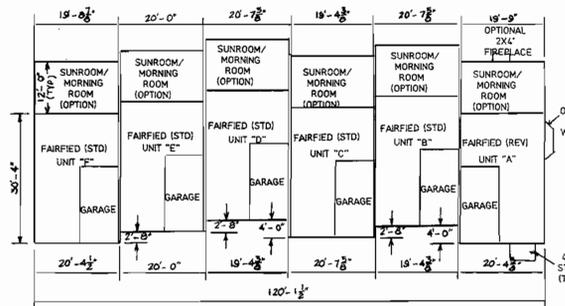
VICINITY MAP
 SCALE: 1" = 2000'



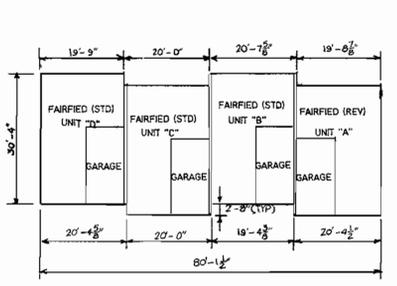
ELEVATIONS
 N.T.S.



FAIRFIELD (LOTS 1 THRU 6)
 SIX UNIT BUILDING
 N.T.S.



FAIRFIELD (LOTS 7 THRU 12)
 SIX UNIT BUILDING
 N.T.S.



FAIRFIELD (LOTS 13 THRU 16)
 FOUR UNIT BUILDING
 N.T.S.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	(800) 257-7777
VERIZON TELEPHONE COMPANY	(410) 725-9976
HOWARD COUNTY BUREAU OF UTILITIES	(410) 313-4900
AT&T CABLE LOCATION DIVISION	(410) 393-3533
BALTIMORE GAS & ELECTRIC	(410) 685-0123
STATE HIGHWAY ADMINISTRATION	(410) 531-5533
HOWARD COUNTY DEPT. OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION	(410) 313-1880
- SITE ANALYSIS DATA CHART:

LOCATION: FIRST ELECTION DISTRICT, TAX MAP 37, PARCEL 453	
ZONING: RSA-8	
TOTAL TRACT AREA:	2.00 AC ±
LIMIT OF DISTURBED AREA:	1.84 AC ± (INCLUDING THE AREA DISTURBED ON THE EASEMENT PROVIDED ON PARCEL 637 UNDER LIBER 1838 FOLIO 680)
PROPOSED USE:	SFA
TOTAL NO. OF UNITS ALLOWED:	16
TOTAL NO. OF UNITS PROPOSED:	16
TOTAL NUMBER OF PARKING SPACES REQUIRED:	32
TOTAL NUMBER OF PARKING SPACES PROVIDED:	38
ONE CAR PER GARAGE X 16	= 16 SPACES
ONE CAR PER DRIVEWAY X 16	= 16 SPACES
SIX (6) OVERFLOW SPACES = 6 SPACES	
TOTAL:	38 SPACES
- BUILDING COVERAGE OF SITE: 0.267 AC ±, 13.34% OF GROSS AREA
 DEED REFERENCE: L4965 F.395
- TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD SURVEY DONE BY MILDENBERG, BOENDER AND ASSOC., INC. ON DECEMBER 1999.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3700 AND 370C.

NORTHING	EASTING	ELEVATION.
STA. No. 3700	533237.204	1372353.605
STA. No. 370C	555250.791	1370946.348
		290.92'
		331.83'
- NO STEEP SLOPES EXIST ON SITE.
- WATER AND SEWER ARE PUBLIC (CONTRACT # 14-3835-D CONNECTED TO PROJECT #14-8390-D).
- WATER METERS SHALL BE LOCATED OUTSIDE OF ALL BUILDINGS.
- NO FLOODPLAIN EXISTS ON-SITE.
- NO BURIAL GROUNDS OR CEMETERY SITES EXIST ON-SITE.
- THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS, STREAMS AND THEIR BUFFERS, EXCEPT AS SHOWN ON APPROVED PLANS, AND THIS SITE DEVELOPMENT PLAN. INITIAL DISTURBANCE IN THE WETLAND BUFFER (AND WETLAND AREA IF APPLICABLE) IS CONSIDERED ESSENTIAL DISTURBANCE FOR WATER AND SEWER CONSTRUCTION.
- SNOW REMOVAL FOR PRIVATE ROAD WILL BE THE RESPONSIBILITY OF THE H.O.A.
- TRASH COLLECTION WILL BE PRIVATE.
- USE RESIDENTIAL DRIVEWAY ENTRANCE HOWARD COUNTY STD. R-6.03 UNLESS OTHERWISE NOTED.
- THIS SUBDIVISION IS ZONED R-SA-8 PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACK, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD OR PROJECT BOUNDARY SETBACK.
- NO FOREST STANDS EXIST ON-SITE.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS DEVELOPMENT WILL BE FULFILLED VIA PAYMENT OF A FEE-IN-LIEU OF AFFORESTATION IN THE AMOUNT OF \$4,312.50 FOR 14,375 SQ. FT. OF AFFORESTATION.
- WETLAND DELINEATION IS BASED ON A FIELD SURVEY DONE BY MILDENBERG, BOENDER AND ASSOC. IN OR AROUND DEC.1999.
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1983) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)," THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. ALL LIGHTING SHALL BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS.
- STREET LIGHT LOCATION CHART:

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
PRIVATE DRIVEWAY	0+30	15' L	100 watt HPS VAPOR "TRADITIONAIRE"
PRIVATE DRIVEWAY	3+21	16' L	POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
PRIVATE DRIVEWAY	4+88	23' L	

- ALL EXISTING STRUCTURES AND PAVING TO BE REMOVED.
- USE MODIFIED CURB AND GUTTER H.C. STD. R-3.01
- DENOTES PROPOSED PAVEMENT.
- ... DENOTES WETLANDS
- SCHOOL BUS PICKUP WILL BE AT INTERSECTION OF DRIVEWAY WITH ARROW WAY DRIVE.
- TRASH PICKUP WILL BE PRIVATE.
- A MAINTENANCE AGREEMENT FROM THE SHERWOOD CROSSING HOA WHICH ALLOWS THE HARMON PROPERTY DEVELOPMENT FOR THE USE ARROW WAY DRIVE HAS BEEN RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND, RECORDED AS LIBER 1838, FOLIO 680.

OWNER
 HARMON LLC
 6901 OLD WATERLOO RD
 ELK RIDGE MD 21075-6529

Project	99061	Scale	NTS
Date	MAY 2000	Illustration	SA
Approval	SA	Scale	SA
Approval	SA	Scale	SA
Approval	SA	Scale	SA

Project	99061	Scale	NTS
Date	MAY 2000	Illustration	SA
Approval	SA	Scale	SA
Approval	SA	Scale	SA
Approval	SA	Scale	SA

HARMON PROPERTY
 SFA/CONDOS, UNITS 1 TO 16
 TAX MAP 37 - PARCEL 453,637 - GRID 21
 HOWARD COUNTY, MARYLAND
 FIRST ELECTION DISTRICT
 COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Surveyors
 5072 Dorsou Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0266, Fax: (301) 621-5521, Wash. (410) 997-0288, Fax

PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	DUMPSTER BUFFER
LANDSCAPE TYPE	A (PERIMETERS P/O 4 & 5)	B (PERIMETERS 2, 3, & P/O 4)	C (PERIMETER 1)	D (PERIMETER 6)
LINEAR FEET OF PERIMETER	360.20 LF	711.87 LF	260.60 LF	26 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 34.17 LF	YES, 255.87 LF	NO	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	YES, 85 LF OF SWM LANDSCAPING	NO	NO
NUMBER OF PLANTS REQUIRED				
SHADE TREES	6 SHADE TREES	8 SHADE TREES	7 SHADE TREES	1 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	9 EVERGREEN TREES	13 EVERGREEN TREES	3 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS
NUMBER OF PLANTS PROVIDED				
SHADE TREES	6 SHADE TREES	8 SHADE TREES	7 SHADE TREES	1 SHADE TREES
EVERGREEN TREES	0 EVERGREEN TREES	9 EVERGREEN TREES	13 EVERGREEN TREES	3 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES
SHRUBS (10:1 SUBSTITUTION)	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

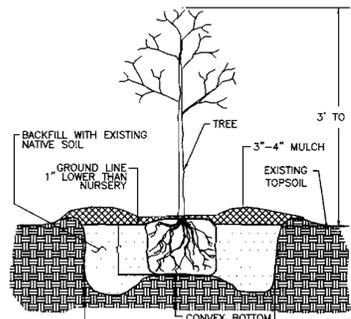
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
16		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
39		PINUS STROBUS	EASTERN WHITE PINE	6" - 8" HT.
12		ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL.
10		ACER PLATANOIDES	NORWAY MAPLE	2 1/2" - 3" CAL.
TOTAL				
77 TREES				(38 SHADE TREES, 39 EVERGREEN TREES (INCLUDES 8 SUBSTITUTION TREES))

NOTES:

1. TOPOGRAPHY IS BASED ON FIELD RUN TOPO. BY MILDENBERG, BOENDER AND ASSOCIATES, INC. ON OR ABOUT DECEMBER 1999.
2. SOILS SHOWN HEREON WERE BASED ON THE HOWARD COUNTY SOIL SURVEY MAPS.
3. ALL PERIMETER LANDSCAPING AND ALL SWM LANDSCAPING IS THE RESPONSIBILITY OF THE DEVELOPER.
4. 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 16 INTERNAL LANDSCAPE TREES, 14 SWM EVERGREEN TREES, 22 PERIMETER SHADE TREES, AND 25 PERIMETER EVERGREEN TREES (38 SHADE TREES AND 39 EVERGREENS TOTAL) IN THE AMOUNT OF \$17,250.00 IS PART OF THE DEVELOPER'S AGREEMENT.
5. PROPOSED SILT FENCING SHALL PROVIDE PROTECTIVE TREE FENCING.
6. IN CONSIDERATION OF SAFETY ISSUES, LANDSCAPE SCREEN PROVIDED AT BUS STOP.
7. THE STOCKPILE AREA SHALL NOT BE PLACED NEAR THE 72" STYCOMORE.

PERIMETER EDGE CALCULATIONS

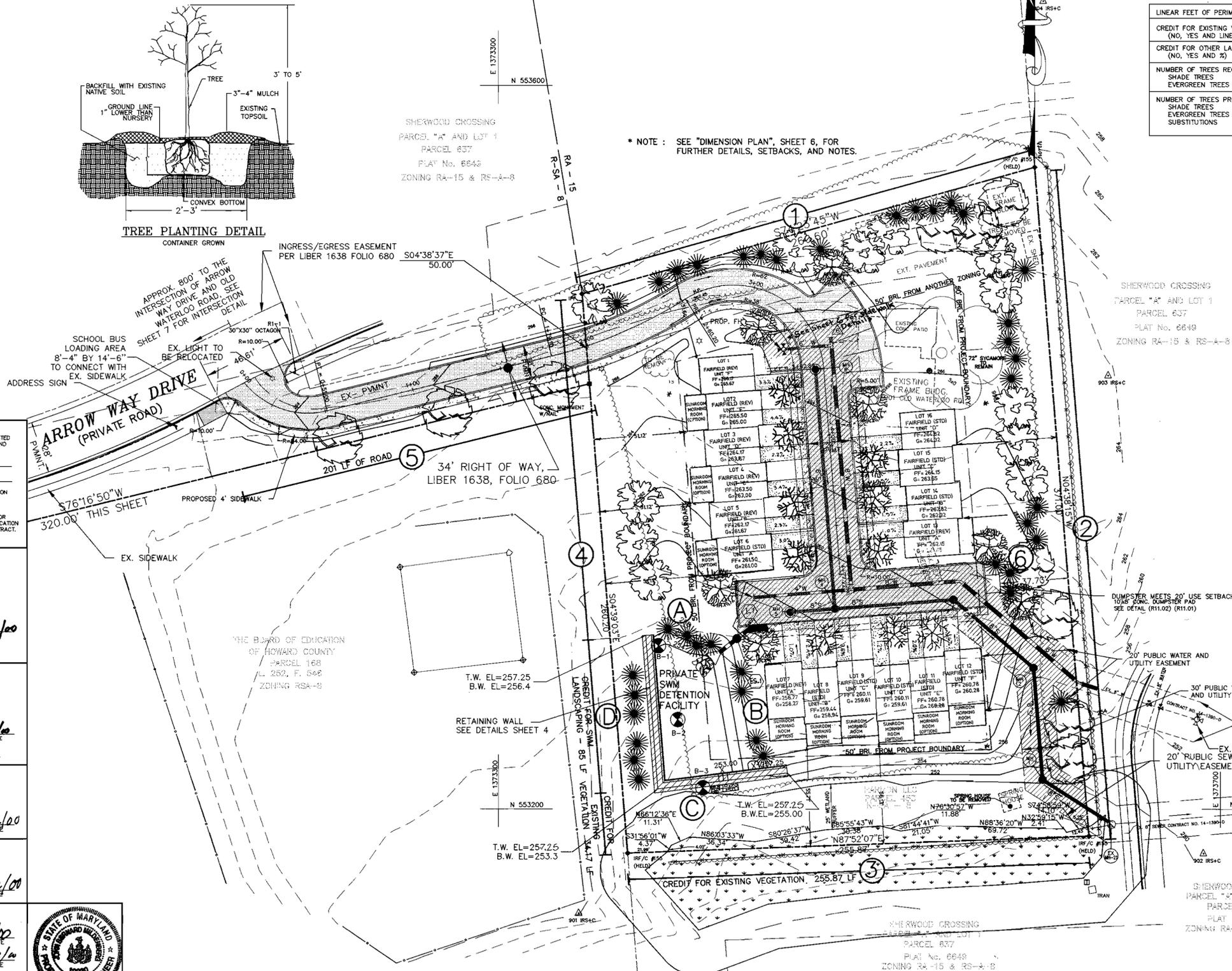
PERIMETER	EDGE TYPE	DESCRIPTION	QUANTITY
PERIMETER 1	C	SFA TO ROAD - 260.60 LF	
		1 SHADE TREE / 40 LF	7
		1 EVERGREEN / 20 LF	13
PERIMETER 2	B	SFA TO SFA - 371.00 LF	
		1 SHADE TREE / 50 LF	8
		1 EVERGREEN / 40 LF	9
PERIMETER 3	B	SFA TO SFA - 255.87 LF	
		CREDIT FOR EXISTING TREES TO REMAIN	
PERIMETER 4	N/A	18.00 LF ENTRANCE	
		SFA TO NON-RES - 34.17 LF	
		CREDIT FOR EXISTING TREES TO REMAIN	
		SFA TO NON-RES - 173.03 LF	
		1 SHADE TREE / 60 LF	3
		SWM TO NON-RES - 85 LF	
		CREDIT FOR SWM LANDSCAPING	
PERIMETER 5	A	SFA TO NON-RES - 153.00 LF	
		1 SHADE TREE / 60 LF	3
PERIMETER 6	D	DUMPSTER - 26 LF	
		1 SHADE TREE / 60 LF	1
		1 EVERGREEN / 10 LF	3
TOTAL PLANTING OBLIGATION			
		SHADE TREES	22
		EVERGREENS	25
		SHRUBS	0



TREE PLANTING DETAIL

CONTAINER GROWN INGRESS/EGRESS EASEMENT PER LIBER 1638 FOLIO 680 S04°38'37"E 50.00'

* NOTE : SEE "DIMENSION PLAN", SHEET 6, FOR FURTHER DETAILS, SETBACKS, AND NOTES.



STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	273 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 67 LF
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED	4 SHADE TREES 6 EVERGREEN TREES
NUMBER OF TREES PROVIDED	0 SHADE TREES 6 EVERGREEN TREES 8 EVERGREEN TREES (4 SHADE TREES @ 2:1 SUBSTITUTION)

SWM PERIMETER CALCULATIONS

SWM PERIMETER	EDGE TYPE	DESCRIPTION	QUANTITY
SWM PERIMETER A - 48 LF	B	1 SHADE TREE / 50 LF	1
		1 EVERGREEN / 40 LF	2
SWM PERIMETER B - 73 LF	B	1 SHADE TREE / 50 LF	1
		1 EVERGREEN / 40 LF	2
SWM PERIMETER C - 67 LF	N/A	67 LF EXISTING TREES TO REMAIN	
SWM PERIMETER D - 85 LF	B	1 SHADE TREE / 60 LF	2
		1 EVERGREEN / 40 LF	2
TOTAL PLANTING OBLIGATION			
		SHADE TREES	4
		EVERGREEN TREES	6
		SHRUBS	0

SCHEDULE C : RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	16
NUMBER OF TREES REQUIRED (1:0.5 SFA: 1.3 DU APTS)	16
NUMBER OF TREES PROVIDED	16
SHADE TREES	16
OTHER TREES (2:1 SUBSTITUTION)	0

LEGEND

- DENOTES PERIMETER LANDSCAPE EDGE
- DENOTES PUBLIC WATER, SEWER AND UTILITY EASEMENT
- DENOTES PROPOSED PAVEMENT
- DENOTES EXISTING WETLANDS
- DENOTES EXISTING TREELINE
- DENOTES PROPOSED TREELINE
- DENOTES PROPOSED FIRE HYDRANT
- DENOTES PROPOSED STREET LIGHT TO BE RELOCATED
- EXISTING CONTOUR 2' INTERVAL
- EXISTING CONTOUR 10' INTERVAL
- PROPOSED CONTOUR 2' INTERVAL
- PROPOSED CONTOUR 10' INTERVAL
- SPOT ELEVATION
- SILT FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTR. ENTRANCE

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____ DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AND ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

DEVELOPER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 9/22/00
 PRINTED NAME OF DEVELOPER: **Dennis P. Rowe, Jr.**

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 9/22/00
 PRINTED NAME OF ENGINEER: **John S. Weisfeld**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

DATE: 10/12/00
 DATE: 10/23/00

DATE: 10/23/00
 DATE: 10/23/00

DATE: 10/23/00
 DATE: 10/23/00

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 10/12/00
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 10/23/00
 DIRECTOR: *[Signature]* DATE: 10/23/00



date	MAY 2000	engineering	SA	approval	JBM
project	99001	illustration	SA	scale	1"=30'

REVISE BUILDING TO FAREFIELD ARCHITECTURE	02/12/01	date
description	1	no.

HARMON PROPERTY
 SPA/CONDOS UNITS 1 TO 16
 TAX MAP 37 - PARCEL 453,637 - GRID 21
 HOWARD COUNTY
 FIRST ELECTION DISTRICT
LANDSCAPING & SITE DEVELOPMENT PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

SITE DEVELOPMENT PLAN HARMON PROPERTY SFA/CONDOS, UNITS 1 TO 16 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET INDEX	
SHEET	TITLE
1 OF 7	COVER SHEET
2 OF 7	SITE DEVELOPMENT PLAN
3 OF 7	SEDIMENT CONTROL NOTES AND DETAILS
4 OF 7	MISC. DETAILS AND PROFILES.
5 OF 7	STORMWATER MANAGEMENT NOTES & DETAILS
6 OF 7	DIMENSION PLAN
7 OF 7	SIGHT DISTANCE ANALYSIS

ADDRESS CHART		ADDRESS CHART	
LOT No.	STREET ADDRESS	LOT No.	STREET ADDRESS
1	6919 OLD WATERLOO ROAD	9	6903 OLD WATERLOO ROAD
2	6917 OLD WATERLOO ROAD	10	6901 OLD WATERLOO ROAD
3	6915 OLD WATERLOO ROAD	11	6899 OLD WATERLOO ROAD
4	6913 OLD WATERLOO ROAD	12	6897 OLD WATERLOO ROAD
5	6911 OLD WATERLOO ROAD	13	6895 OLD WATERLOO ROAD
6	6909 OLD WATERLOO ROAD	14	6893 OLD WATERLOO ROAD
7	6907 OLD WATERLOO ROAD	15	6891 OLD WATERLOO ROAD
8	6905 OLD WATERLOO ROAD	16	6889 OLD WATERLOO ROAD

PERMIT INFORMATION CHART					
SUBDIVISION NAME		SECTION/AREA	LOT/PARCEL #		
HARMON PROPERTY		N/A	PARCEL 453,837		
PLAT # OR L/T	BLOCK #	ZONE	TAX MAP	ELEC. DIST.	CENSUS TRACT
N/A	Z1	RS-A-8	37	1st	8011.02
WATER CODE	SEWER CODE				
D-06	2500000				
PROPOSED IMPROVEMENTS: SFA (CONDOMINIUMS)					

MIN. SEWER ELEVATION CHART			
LOT	MIN. SLAB. EL.	LOT	MIN. SLAB. EL.
1	263.06	9	256.24
2	262.01	10	256.70
3	261.06	11	255.30
4	260.06	12	253.82
5	259.06	13	253.19
6	258.06	14	252.34
7	256.90	15	260.29
8	256.60	16	263.04

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____
DATE: _____

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

DEVELOPERS CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM REGARDING CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 9/22/00

PRINTED NAME OF DEVELOPER: **DANIEL R. REYNOLDS, JR.**

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 10/26/00

PRINTED NAME OF ENGINEER: **DAVID M. WOODWARD**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE: *[Signature]* DATE: 10/12/00

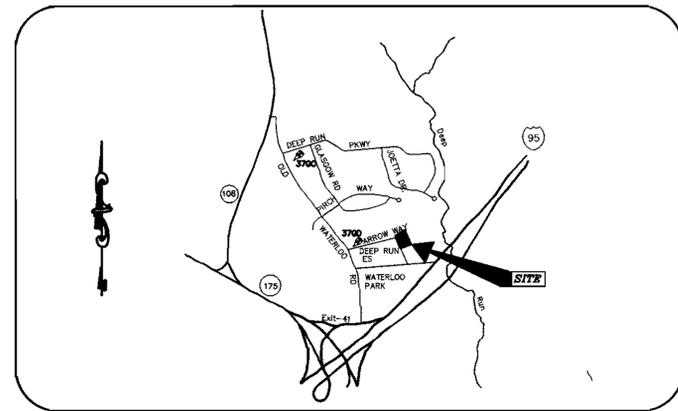
PRINTED NAME OF REVIEWER: **Charles S. J. A. Warfield**

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

SIGNATURE: *[Signature]* DATE: 10/12/00

PRINTED NAME OF REVIEWER: **John D. Roberts**

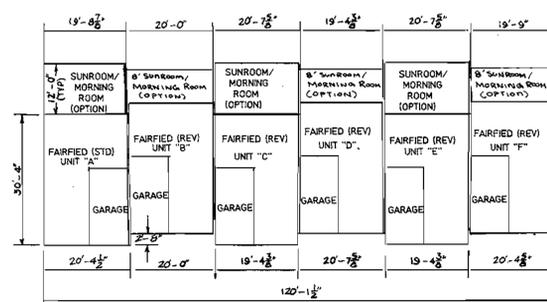
APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 10/12/00
CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 10/23/00
DIRECTOR: *[Signature]* DATE: 10/25/00



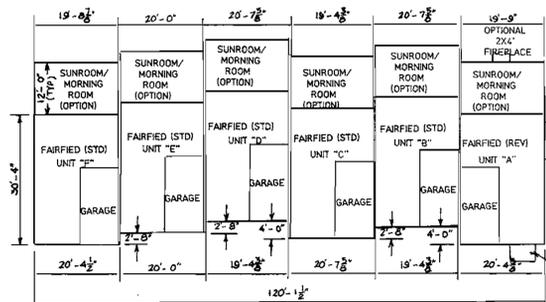
VICINITY MAP
SCALE: 1" = 2000'



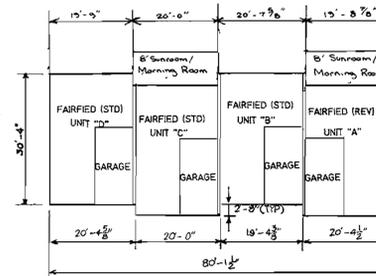
ELEVATIONS
N.T.S.



FAIRFIELD (LOTS 1 THRU 6)
SIX UNIT BUILDING
N.T.S.



FAIRFIELD (LOTS 7 THRU 12)
SIX UNIT BUILDING
N.T.S.



FAIRFIELD (LOTS 13 THRU 16)
FOUR UNIT BUILDING
N.T.S.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	(800) 257-7777
VERIZON TELEPHONE COMPANY	(410) 725-9876
HOWARD COUNTY BUREAU OF UTILITIES	(410) 313-4900
AT&T CABLE LOCATION DIVISION	(410) 393-3533
BALTIMORE GAS & ELECTRIC	(410) 685-0123
STATE HIGHWAY ADMINISTRATION	(410) 531-5833
HOWARD COUNTY DEPT. OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION	(410) 313-1880
- SITE ANALYSIS DATA CHART:
LOCATION: FIRST ELECTION DISTRICT, TAX MAP 37, PARCEL 453
ZONING: RSA-8
TOTAL TRACT AREA: 2.00 AC ±
LIMIT OF DISTURBED AREA: 1.84 AC ± (INCLUDING THE AREA DISTURBED ON THE EASEMENT PROVIDED ON PARCEL 637 UNDER LIBER 1638 FOLIO 680)
PROPOSED USE: SFA
TOTAL NO. OF UNITS ALLOWED: 16
TOTAL NO. OF UNITS PROPOSED: 16
TOTAL NUMBER OF PARKING SPACES REQUIRED: 32
TOTAL NUMBER OF PARKING SPACES PROVIDED: 38
ONE CAR PER GARAGE X 16 = 16 SPACES
ONE CAR PER DRIVEWAY X 16 = 16 SPACES
SIX (6) OVERFLOW SPACES = 6 SPACES
TOTAL = 38 SPACES
BUILDING COVERAGE OF SITE: 0.267 AC ± 13.34% OF GROSS AREA
DEED REFERENCE: L.4965 F.395
- TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD SURVEY DONE BY MILDENBERG, BOENDER AND ASSOC., INC. ON DECEMBER 1999.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS No. 37GD AND 37GC.

STA. No. 37GD	NORTHING	EASTING	ELEVATION
	533237.204	1372353.605	290.92'
STA. No. 37GC	555250.791	1370946.348	331.83'
- NO STEEP SLOPES EXIST ON SITE.
- WATER AND SEWER ARE PUBLIC (CONTRACT # 14-3835-D CONNECTED TO PROJECT #14-9390-D).
- WATER METERS SHALL BE LOCATED OUTSIDE OF ALL BUILDINGS.
- NO FLOODPLAIN EXISTS ON-SITE.
- NO BURIAL GROUNDS OR CEMETERY SITES EXIST ON-SITE.
- THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS, STREAMS AND THEIR BUFFERS, EXCEPT AS SHOWN ON APPROVED PLANS, AND THIS SITE DEVELOPMENT PLAN. INITIAL DISTURBANCE IN THE WETLAND BUFFER AND WETLAND AREA IF APPLICABLE IS CONSIDERED ESSENTIAL DISTURBANCE FOR WATER AND SEWER CONSTRUCTION.
- SNOW REMOVAL FOR PRIVATE ROAD WILL BE THE RESPONSIBILITY OF THE H.O.A.
- TRASH COLLECTION WILL BE PRIVATE.
- USE RESIDENTIAL DRIVEWAY ENTRANCE HOWARD COUNTY STD. R-6.03 UNLESS OTHERWISE NOTED.
- THIS SUBDIVISION IS ZONED R-SA-8 PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACK. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD OR PROJECT BOUNDARY SETBACK.
- NO FOREST STANDS EXIST ON-SITE.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS DEVELOPMENT WILL BE FULFILLED VIA PAYMENT OF A FEE-IN-LIEU OF AFFORESTATION IN THE AMOUNT OF \$4,312.50 FOR 14,375 SQ. FT. OF AFFORESTATION.
- WETLAND DELINEATION IS BASED ON A FIELD SURVEY DONE BY MILDENBERG, BOENDER AND ASSOC. IN OR AROUND DEC. 1999.
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. ALL LIGHTING SHALL BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS.
- STREET LIGHT LOCATION CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
PRIVATE DRIVEWAY	0+30	15' L	100 watt HPS VAPOR "TRADITIONAIRE"
PRIVATE DRIVEWAY	3+21	16' L	POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
PRIVATE DRIVEWAY	4+68	23' L	

- ALL EXISTING STRUCTURES AND PAVING TO BE REMOVED.
- USE MODIFIED CURB AND GUTTER H.C. STD. R-3.01
- DENOTES PROPOSED PAVEMENT.
- DENOTES WETLANDS
- SCHOOL BUS PICKUP WILL BE AT INTERSECTION OF DRIVEWAY WITH ARROW WAY DRIVE.
- TRASH PICKUP WILL BE PRIVATE.
- A MAINTENANCE AGREEMENT FROM THE SHERWOOD CROSSING HOA WHICH ALLOWS THE HARMON PROPERTY DEVELOPMENT FOR THE USE ARROW WAY DRIVE HAS BEEN RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND, RECORDED AS LIBER 1638, FOLIO 680.

OWNER
HARMON LLC
6901 OLD WATERLOO RD
ELKRDGE MD 21075-6529

project: 99061
date: MAY 2000
illustration: SAA
scale: SAA
description: NTS
revisions: JEM

3/28/01
2/17/01
date: 1, 3, 5, 15, 15
description: REVISION TO FAIRFIELD ARCHITECTURE
no. 1

HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453,837 - GRID 21
FIRST ELECTION DISTRICT
COVER SHEET

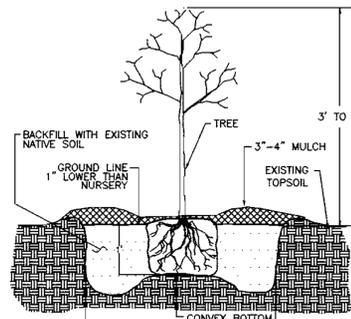
MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0286 Fax (301) 621-6521 Wash. (410) 997-0286 Fax

PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES A (PERIMETERS P/O 4 & 5)	ADJACENT TO PERIMETER PROPERTIES B (PERIMETERS 2, 3, & P/O 4)	ADJACENT TO PERIMETER PROPERTIES C (PERIMETER 1)	DUMPSTER BUFFER D (PERIMETER 6)
LANDSCAPE TYPE	A (PERIMETERS P/O 4 & 5)	B (PERIMETERS 2, 3, & P/O 4)	C (PERIMETER 1)	D (PERIMETER 6)
LINEAR FEET OF PERIMETER	360.20 LF	711.87 LF	260.60 LF	26 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 34.17 LF	YES, 255.87 LF	NO	NO
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	YES, 85 LF OF SWM LANDSCAPING	NO	NO
NUMBER OF PLANTS REQUIRED	6 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	8 SHADE TREES 9 EVERGREEN TREES 0 SHRUBS	7 SHADE TREES 13 EVERGREEN TREES 0 SHRUBS	1 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED	6 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS (10:1 SUBSTITUTION)	8 SHADE TREES 9 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	7 SHADE TREES 13 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	1 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS

PERIMETER EDGE CALCULATIONS

PERIMETER	EDGE TYPE
PERIMETER 1 SFA TO ROAD - 260.60 LF 1 SHADE TREE / 40 LF 1 EVERGREEN / 20 LF	C
PERIMETER 2 SFA TO SFA - 371.00 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
PERIMETER 3 SFA TO SFA - 255.87 LF CREDIT FOR EXISTING TREES TO REMAIN	B
PERIMETER 4 18.00 LF ENTRANCE SFA TO NON-RES - 34.17 LF CREDIT FOR EXISTING TREES TO REMAIN SFA TO NON-RES - 173.03 LF 1 SHADE TREE / 60 LF SWM TO NON-RES - 85 LF CREDIT FOR SWM LANDSCAPING	N/A
PERIMETER 5 SFA TO NON-RES - 153.00 LF 1 SHADE TREE / 60 LF	A
PERIMETER 6 DUMPSTER - 26 LF 1 SHADE TREE / 60 LF 1 EVERGREEN / 10 LF	D
TOTAL PLANTING OBLIGATION SHADE TREES 22 EVERGREENS 25 SHRUBS 0	



TREE PLANTING DETAIL

APPROX 800 TO THE INTERSECTION OF ARROW WAY DRIVE AND OLD WATERLOO ROAD, SEE SHEET 7 FOR INTERSECTION DETAIL

SCHOOL BUS LOADING AREA 8'-4" BY 14'-6" TO CONNECT WITH EX. SIDEWALK

EX. LIGHT TO BE RELOCATED

ADDRESS SIGN

INGRESS/EGRESS EASEMENT PER LIBER 1638 FOLIO 680 S04°38'37"E 50.00'

34' RIGHT OF WAY, LIBER 1638, FOLIO 680

PROPOSED 4' SIDEWALK

376°16'50"W 320.00' THIS SHEET

EX. SIDEWALK

T.W. EL=257.25 B.W. EL=256.4

RETAINING WALL SEE DETAILS SHEET 4

T.W. EL=257.25 B.W. EL=253.3

EXISTING VEGETATION 255.87 LF

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
16	(Symbol)	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
39	(Symbol)	PINUS STROBUS	EASTERN WHITE PINE	6' - 8' HT.
12	(Symbol)	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL.
10	(Symbol)	ACER PLATANOIDES	NORWAY MAPLE	2 1/2" - 3" CAL.
TOTAL				
77 TREES (38 SHADE TREES, 39 EVERGREEN TREES (INCLUDES 8 SUBSTITUTION TREES))				

NOTES:

- TOPOGRAPHY IS BASED ON FIELD RUN TOPO. BY MILDENBERG, BOENDER AND ASSOCIATES, INC. ON OR ABOUT DECEMBER 1999.
- SOILS SHOWN HEREON WERE BASED ON THE HOWARD COUNTY SOIL SURVEY MAPS.
- ALL PERIMETER LANDSCAPING AND ALL SWM LANDSCAPING IS THE RESPONSIBILITY OF THE DEVELOPER.
- 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 16 INTERNAL LANDSCAPE TREES, 14 SWM EVERGREEN TREES, 22 PERIMETER SHADE TREES, AND 25 PERIMETER EVERGREEN TREES (38 SHADE TREES AND 39 EVERGREENS TOTAL) IN THE AMOUNT OF \$17,250.00 IS PART OF THE DEVELOPER'S AGREEMENT.
- PROPOSED SILT FENCING SHALL PROVIDE PROTECTIVE TREE FENCING.
- IN CONSIDERATION OF SAFETY ISSUES, NO LANDSCAPE SCREEN PROVIDED AT BUS STOP.
- THE STOCKPILE AREA SHALL NOT BE PLACED NEAR THE 72" SYCAMORE.

STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	273 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 67 LF
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED SHADE TREES EVERGREEN TREES	4 SHADE TREES 6 EVERGREEN TREES
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES SUBSTITUTIONS	0 SHADE TREES 6 EVERGREEN TREES 8 EVERGREEN TREES (4 SHADE TREES @ 2:1 SUBSTITUTION)

SWM PERIMETER CALCULATIONS

SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 48 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER B - 73 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
SWM PERIMETER C - 67 LF 67 LF EXISTING TREES TO REMAIN	N/A
SWM PERIMETER D - 85 LF 1 SHADE TREE / 50 LF 1 EVERGREEN / 40 LF	B
TOTAL PLANTING OBLIGATION SHADE TREES 4 EVERGREEN TREES 6 SHRUBS 0	

SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

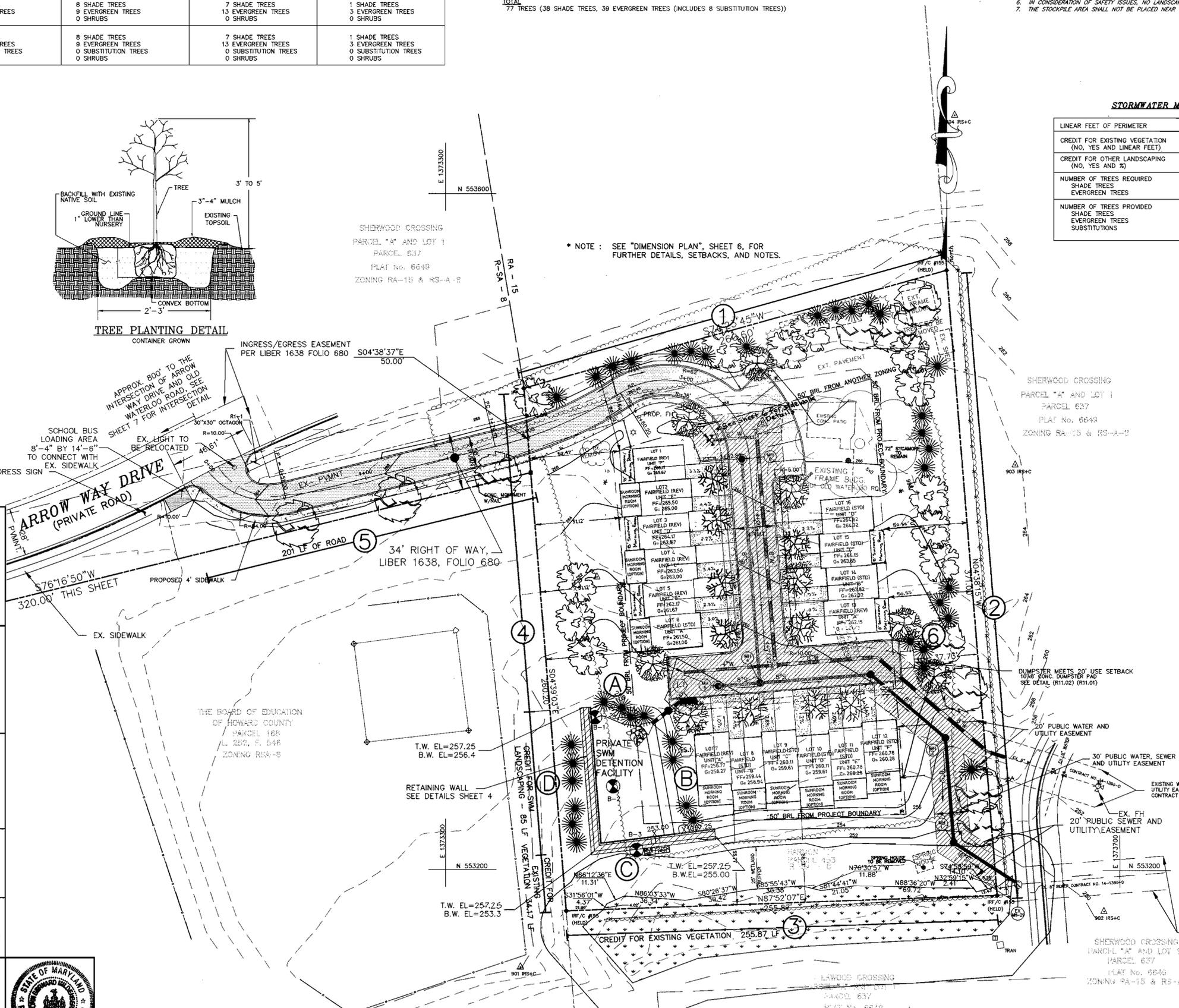
NUMBER OF DWELLING UNITS	16
NUMBER OF TREES REQUIRED (1 DU SFA: 1.5 DU APTS)	16
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	16 0

LEGEND

- (Symbol) DENOTES PERIMETER LANDSCAPE EDGE
- (Symbol) DENOTES PUBLIC WATER, SEWER AND UTILITY EASEMENT
- (Symbol) DENOTES PROPOSED PAVEMENT
- (Symbol) DENOTES EXISTING WETLANDS
- (Symbol) DENOTES EXISTING TREELINE
- (Symbol) DENOTES PROPOSED TREELINE
- (Symbol) DENOTES PROPOSED FIRE HYDRANT
- (Symbol) DENOTES PROPOSED STREET LIGHT
- (Symbol) DENOTES STREET LIGHT TO BE RELOCATED
- (Symbol) EXISTING CONTOUR 2' INTERVAL
- (Symbol) EXISTING CONTOUR 10' INTERVAL
- (Symbol) PROPOSED CONTOUR 2' INTERVAL
- (Symbol) PROPOSED CONTOUR 10' INTERVAL
- (Symbol) SPOT ELEVATION
- (Symbol) SFT SILT FENCE
- (Symbol) SUPER SILT FENCE
- (Symbol) LIMIT OF DISTURBANCE
- (Symbol) STABILIZED CONSTR. ENTRANCE
- (Symbol) EXISTING SEWER AND UTILITY EASEMENT CONT. # 14-1390-D

OWNER

HARMON LLC
6901 OLD WATERLOO RD
ELK RIDGE MD 21075-6529



AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE: _____ P.E. NO. _____
DATE: _____

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I DO NOT AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER: *[Signature]* 9/22/00
DATE: 9/22/00
PRINTED NAME OF DEVELOPER: **Dennis R. Rennie, Jr.**

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER: *[Signature]* 9/22/00
DATE: 9/22/00
PRINTED NAME OF ENGINEER: **John P. Wainwright**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

DATE: 10/12/00

DATE: 11/23/00

DATE: 11/23/00

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 10/12/00

DATE: 11/23/00

DATE: 11/23/00



99061 DWS, SDP-REV

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0236 Fax (301) 621-5521 Wash. (410) 997-0236 Fax

HARMON PROPERTY
SFA/CONDOS, UNITS 1 TO 16
TAX MAP 37 - PARCEL 453,637 - GRID 21
FIRST ELECTION DISTRICT

HOWARD COUNTY
LANDSCAPING & SITE DEVELOPMENT PLAN

Project: 99061
date: MAY 2000
illustration: engineering
scale: SAA
revision: 1
description: REVISE BUILDING TO FAIRFIELD ARCHITECTURE
date: 02/12/01
revision: 2
no. 1

2 OF 7