

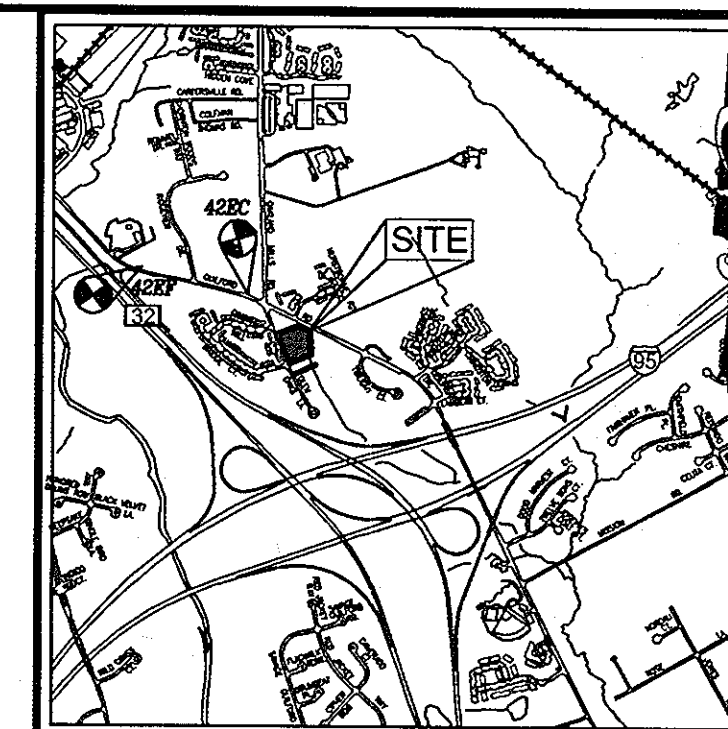
**GENERAL NOTES**

- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:  
MISS UTILITY 1-800-257-7777  
BELL ATLANTIC TELEPHONE CO. 725-9576  
HOWARD COUNTY BUREAU OF UTILITIES: 313-2366  
VERIZON CABLE LOCATION DIVISION: 393-3553  
B.G.&E. CO. CONTRACTOR SERVICES: 850-4320  
B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620  
STATE HIGHWAY ADMINISTRATION: 531-5533
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:  
A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)  
B) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING  
C) GEOMETRY - MAXIMUM 1% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS  
D) STRUCTURES (CULVERTS/BRIDGES) - MUST SUPPORT 25 GROSS TON LOADING (H25 LOADING)  
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE  
F) STRUCTURE CLEARANCES - MINIMUM 12 INCHES  
G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- THE SUBJECT PROPERTY IS ZONED R-SA-8 PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE ON 7/28/06.
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERS, INC. ON AUGUST 29, 2006.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHICAL SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. ON AUGUST 29, 2006.
- ACCESS TO PUBLIC WATER AND PUBLIC SEWER HAS BEEN PROVIDED UNDER CONTRACT NO. 609 W&S
- NO BURIAL GROUNDS OR CEMETERIES ARE LOCATED ON THIS PROPERTY.
- THE PERENNIAL STREAM SHOWN IS LOCATED OFFSITE ON THE ADJACENT PROPERTY.
- THE 100 YEAR FLOODPLAINS EXISTS ON SITE.
- NO STEEP SLOPES EXIST ON SITE.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.05.
- GARAGES SHALL BE USED FOR PARKING PURPOSES ONLY AND ARE NOT PERMITTED TO BE CONVERTED TO OTHER USES PER THE HOWARD COUNTY ZONING REGULATIONS. UNLESS THE 2 OFF-STREET PARKING SPACES ARE PROVIDED WITHIN THE RESIDENTIAL UNIT DRIVEWAY.  
A. SUPPLEMENTARY BULK REGULATIONS  
THE FOLLOWING SUPPLEMENTARY REGULATIONS SHALL APPLY IN ADDITION TO THE REQUIREMENTS OF THE APPLICABLE ZONING DISTRICT.  
1. EXCEPTIONS TO SETBACK REQUIREMENTS  
a. IN ALL DISTRICTS EXCEPT THE NT DISTRICT, CORNICES, EAVES AND CANTILEVERED BUILDING FEATURES MAY PROJECT NOT MORE THAN THREE FEET INTO ANY REQUIRED SETBACK AREA.  
b. IN ALL DISTRICTS EXCEPT THE NT DISTRICT, THE FOLLOWING BUILDING FEATURES, IF NOT MORE THAN 16 FEET IN WIDTH, MAY PROJECT NOT MORE THAN FOUR FEET INTO ANY REQUIRED SETBACK AREA OR REQUIRED DISTANCE BETWEEN BUILDINGS: BAY WINDOWS AND WINDOW WALLS; ORIELS; VESTIBULES; BALCONIES; CHIMNEYS; HEATING OR AIR CONDITIONING UNITS; AND EXTERIOR STAIRWAYS OR RAMPS, WHETHER ABOVE OR BELOW GROUND LEVEL.  
c. IN ALL RESIDENTIAL DISTRICTS (BUT NOT IN THE NT DISTRICT), OPEN OR ENCLOSED PORCHES AND DECKS MAY PROJECT NOT MORE THAN 10 FEET INTO, ANY REQUIRED FRONT OR REAR SETBACK AREA OR INTO A REQUIRED SETBACK FROM A PROJECT BOUNDARY OR DIFFERENT ZONING DISTRICT, EXTERIOR STAIRWAYS OR RAMPS, ABOVE OR BELOW GROUND LEVEL, MAY EXTEND NOT MORE THAN 10 FEET INTO A FRONT SETBACK AREA OR A SETBACK FROM A PROJECT BOUNDARY OR DIFFERENT ZONING DISTRICT, AND NOT MORE THAN 16 FEET INTO A REAR SETBACK AREA.  
2. EXCEPTIONS TO LOT COVERAGE REQUIREMENTS  
IN RESIDENTIAL, SEMI-RESIDENTIAL, LAND USE AREAS OF THE PGCC AND MND DISTRICTS, BUT NOT IN THE NT DISTRICT, OPEN DECKS (DECKS WITHOUT ROOF OR WALLS) SHALL NOT BE CONSIDERED STRUCTURES FOR LOT COVERAGE PURPOSES WHEN CONSTRUCTED INTO A SINGLE-FAMILY ATTACHED DWELLING.
- THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO 45-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO 75-2003. DEVELOPMENT CONSTRUCTION ON THIS PROJECT IN ACCORDANCE WITH REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.  
30. REFERENCE BA CASE NO. 042-D, APPROVED SEPTEMBER 29, 2006 TO REDUCE THE SETBACK OF UNITS 11 AND 13 TO 3' AND UNITS 10 AND 12 TO 3' AND TO THE GLEN OAKS LANE RIGHT-OF-WAY.  
31. REFERENCE AA-00-011 DENIED MAY 28, 2008 REQUESTING THE REDUCTION OF THE 40'-FOOT STRUCTURE SETBACK TO GLEN OAKS LANE TO 30' AND 3' AND THE REDUCTION OF THE 50' STRUCTURE SETBACK TO 42.9' FOR GUILDFORD RD. OF THE 50' STRUCTURE SETBACK TO 42.9' FOR GUILDFORD RD.
- OAKHURST II CONDOMINIUM, INC. HAS BEEN ESTABLISHED AS THE CONDOMINIUM ASSOCIATION FOR THIS PROJECT AND IS REGISTERED WITH MARYLAND DEPARTMENT OF ASSESSMENT AND TAXATION AS CHARTER NO. D11511821.
- ALL TRASH COLLECTION TO BE PRIVATE.
- THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.
- STORMWATER MANAGEMENT IS PROVIDED FOR THIS DEVELOPMENT. THE STORMWATER MANAGEMENT FACILITY IS A SAND FILTER SYSTEM PROVIDING THE REQUIRED WQ AND REV FOR THE DEVELOPMENT. CPU IS PROVIDED ABOVE THE SAND FILTER.
- FOREST CONSERVATION PLAN PREPARED BY ECO SCIENCE PROFESSIONAL, INC. DATED JANUARY 2007. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL WITH AN AFFORESTATION OBLIGATION OF 0.33 ACRES. THE OBLIGATION WILL BE FULFILLED BY THE ON-SITE AFFORESTATION IN THE AMOUNT OF 0.33 AC. AFFORESTATION - (0.33 AC.) 14,374.80 SF x .50 = \$7,187.00 THE FOREST CONSERVATION EASEMENTS BOUNDARY WAS RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE AS PLAT NO. 18571-19809.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT LANDSCAPE SURETY IN THE AMOUNT OF \$30,600.00 FOR THE REQUIRED 74 SHADE AND 56 EVERGREEN TREES
- IN ACCORDANCE WITH SECTION 128A.10 OF THE ZONING REGULATION THE COMMON PROPERTY LINE DIVIDING THESE TWO PARCELS WILL BE ELIMINATED AND THE TWO PARCELS MERGED TOGETHER IN TO ONE PARCEL WITH THE SUBMISSION OF A FINAL SUBDIVISION PLAT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMIT OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOOD PLAN AND FOREST CONSERVATION EASEMENTS.
- THERE ARE TWO (2) REQUIRED MODERATE INCOME HOUSING UNITS (MIHU) FOR THIS PROJECT WHICH ARE PROVIDED OFF SITE AT ELLICOTT GARDENS, SDP-07-038.
- THE WETLAND Delineation AND FORESTATION DELINEATION HAS BEEN PREPARED BY ECON. SCIENCE PROFESSIONALS DATED 11/26/06.
- IN ACCORDANCE WITH SECTION 13.402(E) OF THE HOWARD COUNTY CODE, THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT HAS APPROVED THE TRANSFER OF MODERATE INCOME HOUSING UNITS (MIHUS) FROM OAKHURST III TO ELLICOTT GARDENS (SDP-07-038) AT A RATIO OF 1:1.75. THE REQUIRED 4 MIHU UNITS (SFA) AT OAKHURST III WILL BE MET BY PROVIDING 4 MIHU UNITS AT ELLICOTT GARDENS.

# SITE DEVELOPMENT PLAN OAKHURST III TOWNHOUSE UNITS 1-17

**LEGEND**

- EXISTING 2 FT CONTOUR
- EXISTING 10 FT CONTOUR
- PROPOSED 2 FT CONTOUR
- PROPOSED 10 FT CONTOUR
- LIMIT OF DISTURBANCE
- SHADE TREE
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- EROSION CONTROL MATTING
- SPOT ELEVATION
- DIRECTION OF FLOW
- WALK OUT BASEMENT
- TEE TURN AROUND AREA
- WATER EASEMENT
- SOILS
- LIMIT OF WETLAND
- 100 YEAR FLOOD PLAN
- WETLAND BUFFER
- STREET LIGHT
- PROP. FOREST CONSERVATION AREA (AFFORESTATION)
- RECREATIONAL OPEN SPACE



**VICINITY MAP**  
SCALE: 1"=2000'  
ADC MAP Coordinates: 20 B3

**BENCHMARK INFORMATION**

THE BEARINGS SHOWN ON THIS PLAT ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED IN THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS:

	NORTH	EAST	ELEVATION
42EC	545,417.0027	1,360,140.3852	365.410
42EF	545,623.3641	1,359,044.4442	347.044

**GENERAL SITE DATA**

PRESENT ZONING: R-SA-8  
APPLICABLE DPZ FILE REFERENCE: F-07-209-AA-00-011, EA-02-D  
PROPOSED USE OF SITE: SINGLE FAMILY ATTACHED  
PROPOSED WATER SYSTEM: PUBLIC  
PROPOSED SEWER SYSTEM: PRIVATE WITH CONNECTION TO A PUBLIC SYSTEM

**AREA TABULATION**

TOTAL AREA OF BUILDABLE UNITS: 10,742.89 SF. (0.24 AC.)  
TOTAL PROJECT AREA: 2.24 AC.  
TOTAL FLOOD PLAN AREA: 0.10855 AC.  
NET AREA OF SITE: 2.13145 AC.  
APPROXIMATE LIMIT OF DISTURBANCE: 76,672.65 SF (1.76 AC.)

**SITE ANALYSIS:**

**DENSITY TABULATION**

TRACT AREA	2.24 AC.
100-YEAR FLOODPLAIN	0.10855 AC.
STEEP SLOPES OUTSIDE FLOODPLAIN	0.0 AC.
NET AREA	2.13145 AC.
DENSITY	8.0 DWELLING UNITS/NET AREA
TOTAL NUMBER OF UNITS ALLOWED AND PROPOSED:	17
OPEN SPACE CALCULATION: 25% OF GROSS PROPERTY AREA	
OPEN SPACE REQUIRED:	0.56 AC. (24,393.6 SF)
CREDITED OPEN SPACE PROVIDED (26%):	25,369.34 SF (0.58 AC.)
NON CREDITED OPEN SPACE PROVIDED:	N/A
RECREATION OPEN SPACE REQUIRED:	400 SF PER UNIT
RECREATION OPEN SPACE PROVIDED:	0.16 AC. (6,800 SF)
RECREATION OPEN SPACE PROVIDED:	0.18 AC. (7,887 SF)

PASSIVE RECREATIONAL OPEN SPACE ONLY: NO STRUCTURES ARE ALLOWED UNLESS THEY COMPLY WITH THE MINIMUM 20' OTHER STRUCTURE AND USE SETBACK LINE FROM THE PROJECT BOUNDARY AND THE 20' USE SETBACK LINE FROM THE GLEN OAKS LANE R/W. RECREATIONAL FACILITIES SUCH AS BASKETBALL OR TENNIS COURTS, FENCES, SWIMMING POOLS, PLAYGROUND EQUIPMENT OR TOT LOTS, ETC. THAT ARE PERMANENTLY ATTACHED TO THE GROUND ARE CONSIDERED TO BE STRUCTURES AND ARE NOT PERMITTED WITHIN THE PROPOSED RECREATIONAL AREA.

10% MODERATE INCOME HOUSING REQUIRED: 2 UNITS  
10% MODERATE INCOME HOUSING PROVIDED: 2 UNITS\*

\*PROVIDED OFFSITE AT ELLICOTT GARDENS SDP 07-038.

**SHEET INDEX**

DESCRIPTION	SHEET NO
SITE DEVELOPMENT PLAN	1 OF 6
SEDIMENT AND EROSION CONTROL NOTES AND DETAILS	2 OF 6
SITE DETAILS	3 OF 6
SEWER PROFILES & SEDIMENT DETAILS	4 OF 6
LANDSCAPING & FOREST CONSERVATION PLAN AND DETAILS	5 OF 6
SURFACE SAND FILTER DETAILS	6 OF 6

**PERMIT INFORMATION CHART**

PROJECT NAME	SECTION/AREA	LOT/PARCEL
OAKHURST III	N/A	/70
PLAT REF 19809-19809	BLOCK NO 17	ZONE R-SA-8
TAX MAP	42	ELECT DIST 6TH
CENSUS TR		605703
WATER CODE: 103	SEWER CODE: 6740000	

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP
D62	DELANCO SILT LOAM, 0 TO 3 PERCENT SLOPES	C
E8A	ELLSBORO LOAM, 0 TO 3 PERCENT SLOPES	B
Kn	KINKORA SILT LOAM	B
Mp82	MONALTO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C

PAGES 30 OF THE HOWARD COUNTY SOIL SURVEY

1. REVISION INTERESTED SOILS UNIT TO 4'-FEET 2/1/2009 2/1/2009  
2. REVISION INTERESTED SOILS UNIT TO 4'-FEET 2/1/2009 2/1/2009  
3. REVISION INTERESTED SOILS UNIT TO 4'-FEET 2/1/2009 2/1/2009  
1. ADD GENERAL NOTES REBASING AA-00-011 & BA 042-D 11/2/09  
2. REVISION ELLICOTT GARDENS UNITS 10-13; ADD MORNING ROOM & OPT. DECK UNIT 14-8 10-13.

NO.	REVISION	DATE

**COORDINATE TABLE**

POINT	NORTHING	EASTING
101	544,699.58	1,360,627.50
102	544,797.92	1,360,852.98
103	545,040.45	1,360,828.19
104	545,111.53	1,360,681.11
103	545,040.45	1,360,828.19
104	545,111.53	1,360,681.11
105	545,026.01	1,360,496.42
106	544,923.39	1,360,536.47

**ADDRESS CHART**

LOT NO	STREET ADDRESS
1	9404 CHESSIE LANE
2	9408 CHESSIE LANE
3	9408 CHESSIE LANE
4	9410 CHESSIE LANE
5	9420 CHESSIE LANE
6	9422 CHESSIE LANE
7	9424 CHESSIE LANE
8	9426 CHESSIE LANE
9	9428 CHESSIE LANE
10	9429 CHESSIE LANE
11	9427 CHESSIE LANE
12	9425 CHESSIE LANE
13	9423 CHESSIE LANE
14	9411 CHESSIE LANE
15	9409 CHESSIE LANE
16	9407 CHESSIE LANE
17	9405 CHESSIE LANE

**PARKING TABULATION**

TOTAL NUMBER OF UNITS ALLOWED AND PROPOSED 17  
REQUIRED AT 2.0 SPACES PER DU. 2 SPACES PER UNIT=34 SPACES  
PARKING SPACES REQUIRED: 39 SPACES  
PARKING SPACES PROVIDED: UNIT= 1 GARAGE/1 DRIVEWAY=2 SPACES  
1 SPACE IN GARAGE=17 SPACES (FOR 17 UNITS)  
1 SPACE ON DRIVEWAY=17 SPACES (FOR 17 UNITS)  
PARKING ON SITE=5 SPACES  
TOTAL PARKING SPACES PROVIDED: =39 SPACES

IN ACCORDANCE WITH ZONING SECTIONS 133.C.1.a AND 133.D.2.a IN THE GARAGES IN UNITS 1-17 MUST BE USED FOR PARKING ONLY. PARKING IS NOT PERMITTED WITHIN THE SHOWN 20' OR 50' STRUCTURE AND USE SETBACK.

**STORMWATER MANAGEMENT SUMMARY TABLE**

AREA AC.	REQUIREMENT	VOLUME REQUIREMENT W/O CREDITS	CREDITS	VOLUME REQUIREMENT AFTER CREDITS	NOTES
1	WATER QUALITY VOLUME WQV	0.087 AC.FT.	0	0.087 AC.FT.	SAND FILTER
2	RECHARGE VOLUME REV	0.018 AC.FT.	0	0.0183	BELOW SAND FILTER
3	CHANNEL PROTECTION VOLUME CPV	0.13 AC.FT.	N/A	0.13 AC.FT.	ATTENUATION ABOVE SAND FILTER
4	OVERBANK FLOOD PROTECTION, OP	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME, EF	N/A	N/A	N/A	

**SITE DEVELOPMENT PLAN**

SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 4/2/08

REVIEWED FOR HOWARD COUNTY AND MEETS TECHNICAL REQUIREMENTS  
USDA-NATIONAL RESOURCES CONSERVATION SERVICE  
DATE: 3/11/08

**ENGINEERS CERTIFICATE**

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

DATE: 2/26/08

**DEVELOPER'S CERTIFICATE**

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

DATE: 2/26/08

**EX. HOUSE ADDRESS**

1. 9529 GLEN OAKS LN COLUMBIA MD  
2. 9537 GLEN OAKS LN COLUMBIA MD

**OWNER/DEVELOPER**  
ELLICOTT CITY LAND HOLDING, INC  
5300 DORSEY HALL DR STE 102  
ELLICOTT CITY MD 21042-7819  
443-367-0422



DESIGN BY: MR.  
DRAWN BY: KG  
CHECKED BY: MR.  
DATE: FEBRUARY, 2008  
SCALE: AS SHOWN  
W.O. NO.: 06-29

1 SHEET OF 6

# 21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

## DEFINITION

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

## PURPOSE

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

## CONDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

- A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. 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 MATERIALS

### SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- A. 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 A SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
- B. TOPSOIL MUST BE FREE OF PLATS OR PLAT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDEGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- C. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-9 TONS/ACRE (200-400 LBS/1000 SF) PRIOR TO THE PLACEMENT OF TOPSOIL. LIMESTONE SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

- A. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

- A. ON SOIL MEETING TOPSOIL SPECIFICATION, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
  1. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
  2. ORGANIC CONTENT OF TOPSOIL SHALL NOT BE LESS THAN 1.5 PERCENT BY WEIGHT.
  3. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
  4. 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 PREVENT DISSIPATION OF PHYTO-TOXIC MATERIALS.
- NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
- B. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION:

- A. 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.
- B. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8" HIGHER IN ELEVATION.
- C. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED B. 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.
- D. 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.

# TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

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

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL/ACRE ANNUAL RYE (3.2 LBS/1000 SF). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS/ACRE WEEPING LOVEGRASS (0.07 LBS/1000 SF). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/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/ACRE (70 TO 90 LBS/1000 SF) OF UNROOTED SMALL-GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS/ACRE (5 GAL/1000 SF) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GALLONS/ACRE (8 GAL/1000 SF) FOR ANCHORING.

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

## 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, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SF) AND 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SF) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING. APPLY 400 LBS/ACRE 20-0-0 UREAFORM FERTILIZER (9 LBS/1000 SF)
2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SF) AND APPLY 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SF) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS/ACRE (1.4 LBS/1000 SF) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS/ACRE OF KENTUCKY 31 TALL FESCUE AND 2 LBS/ACRE (0.05 LBS/1000 SF) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 29, PROTECT SITE BY: OPTION 1) 2 TONS/ACRE 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/ACRE (70 TO 90 LBS/1000 SF) OF UNROOTED SMALL-GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS/ACRE (5 GAL/1000 SF) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GALLONS/ACRE (8 GAL/1000 SF) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

## SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313-1855.
  2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
  3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 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.
  4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
  5. ALL DISTURBED AREAS MUST BE STABILIZED WITH THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC C) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
  6. 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.
  7. SITE ANALYSIS:
 

TRACT AREA	2.24 AC.
NET AREA	2.17 AC.
AREA DISTURBED	1.76 AC. ✓
AREA TO BE ROOFED OR PAVED	0.5 AC.
AREA TO BE VEGETATIVELY STABILIZED	1.4 AC.
TOTAL CUT	1000 CY
TOTAL FILL	1000 CY
OFFSITE WASTE/BORROW AREA LOCATION	N/A
  8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
  9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
  10. 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.
  11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- \*TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.

# SEQUENCE OF CONSTRUCTION

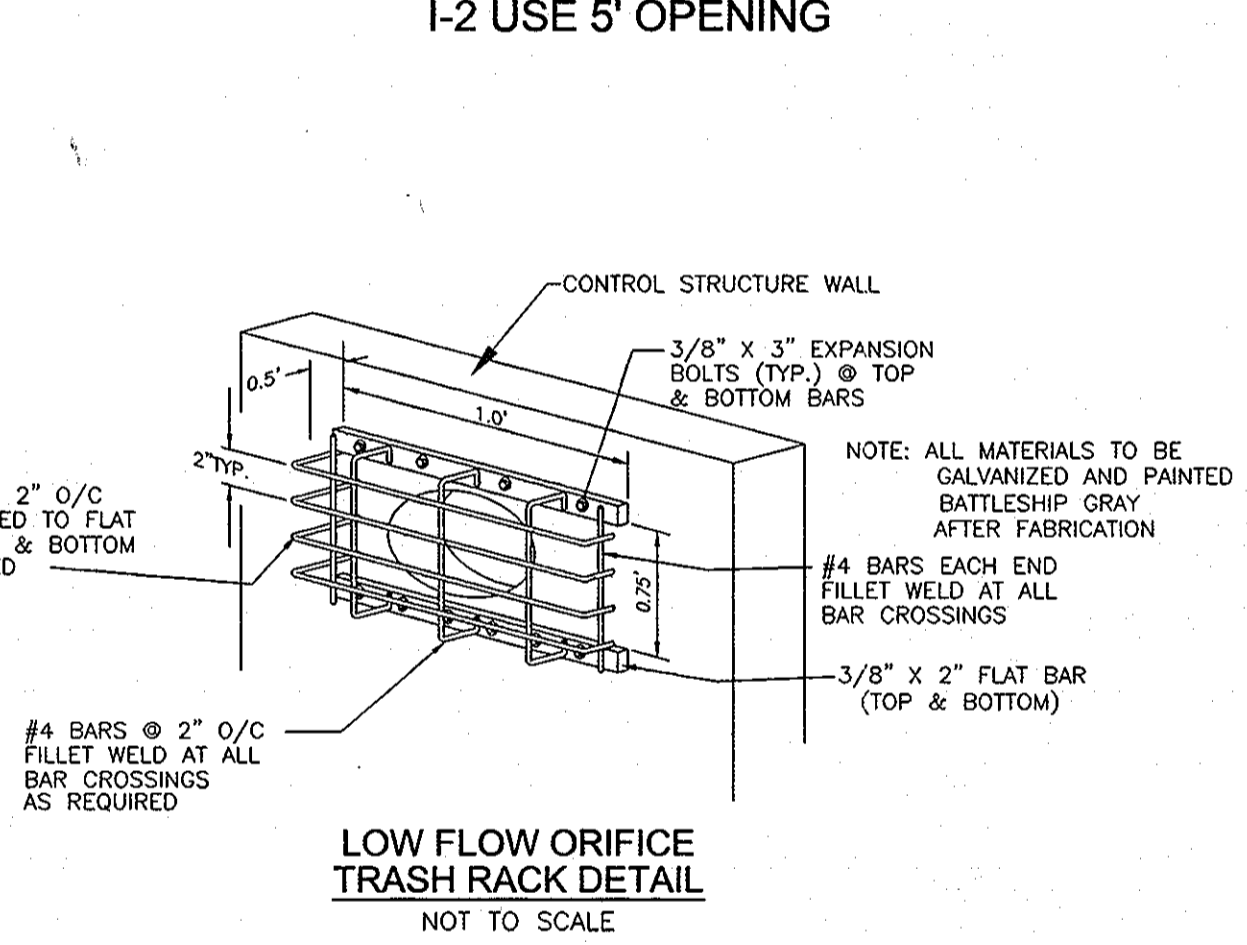
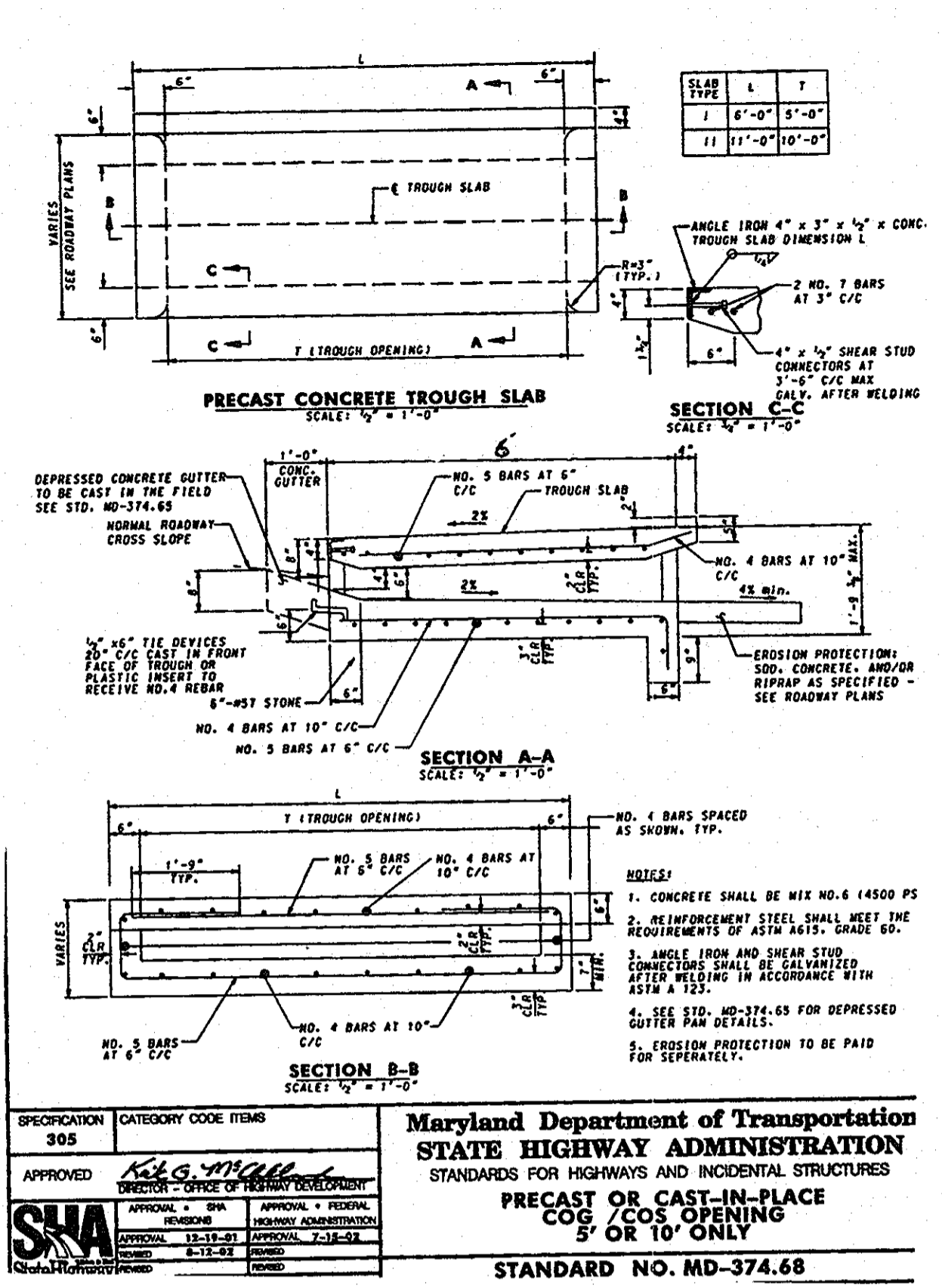
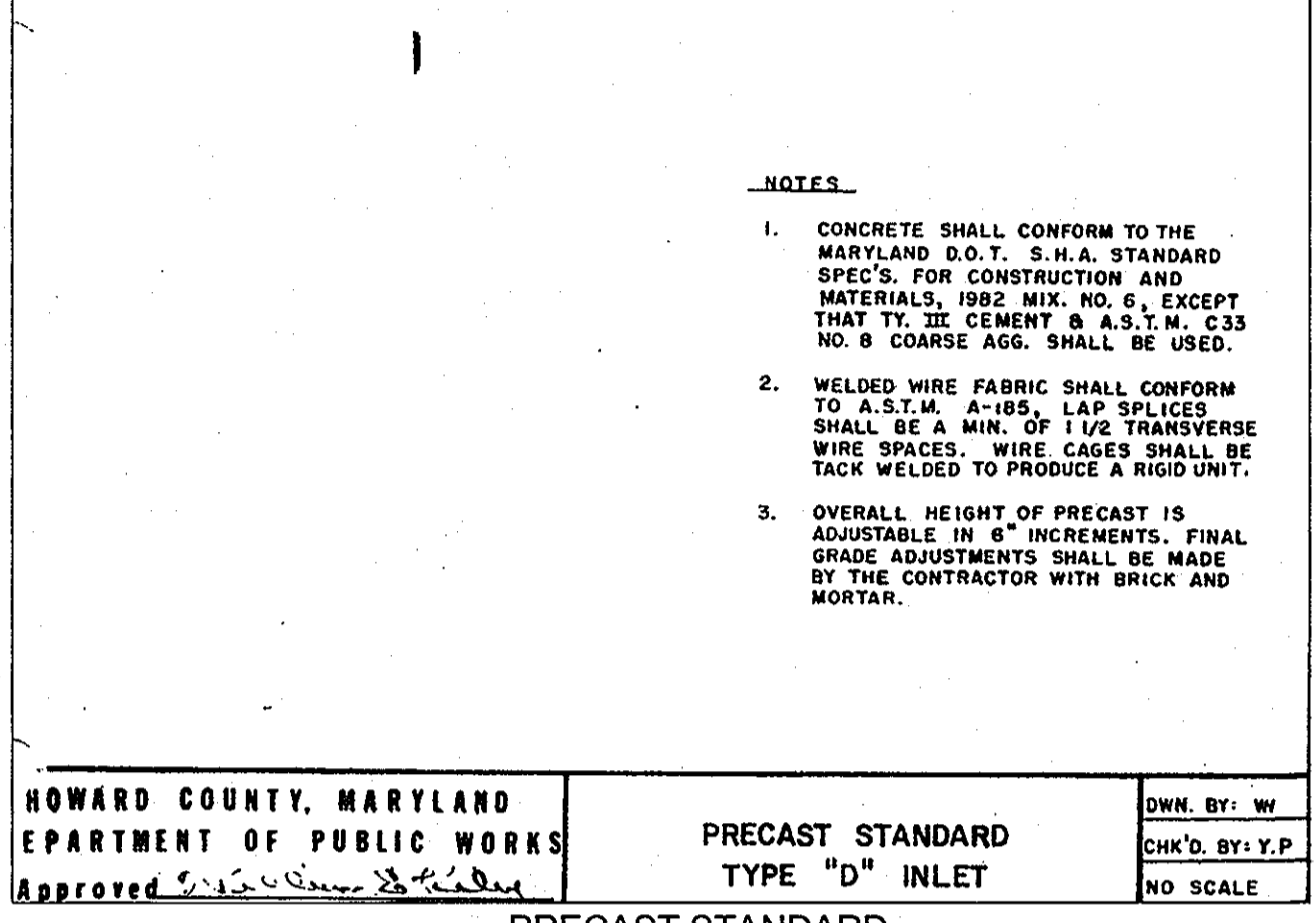
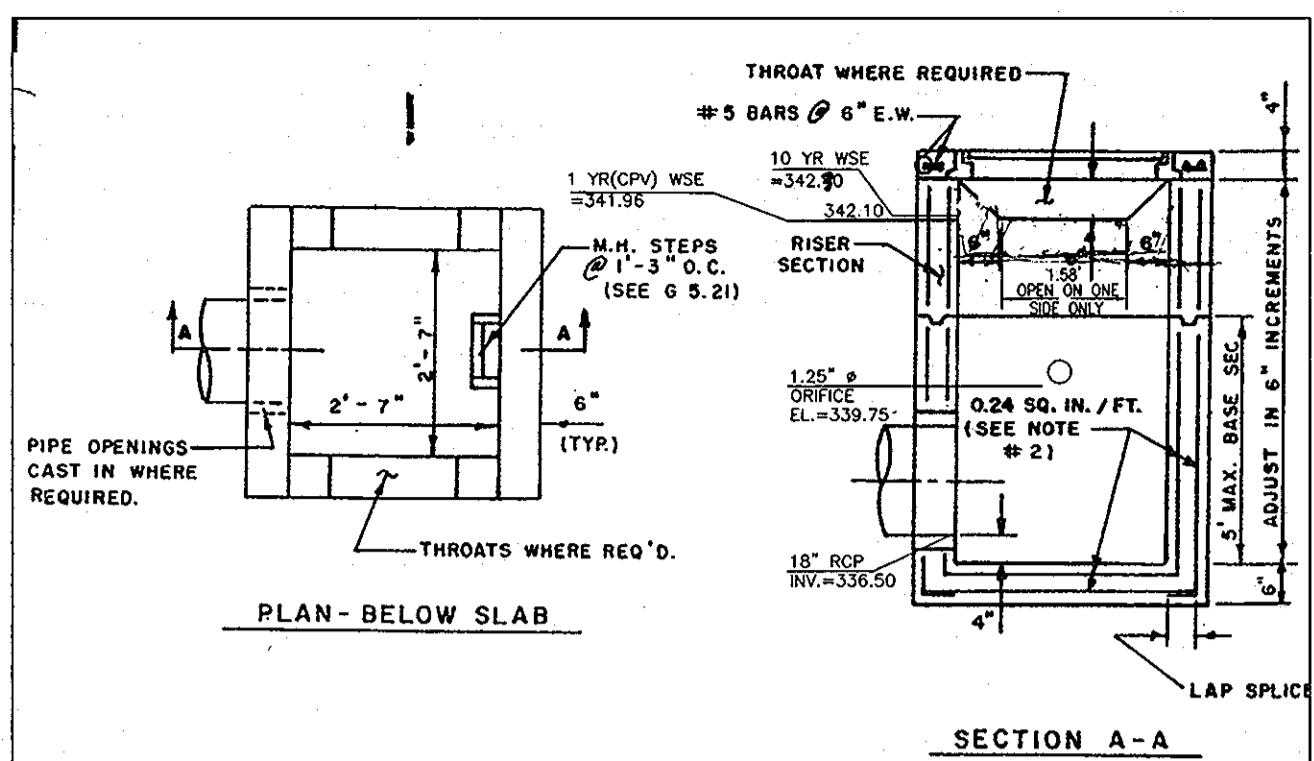
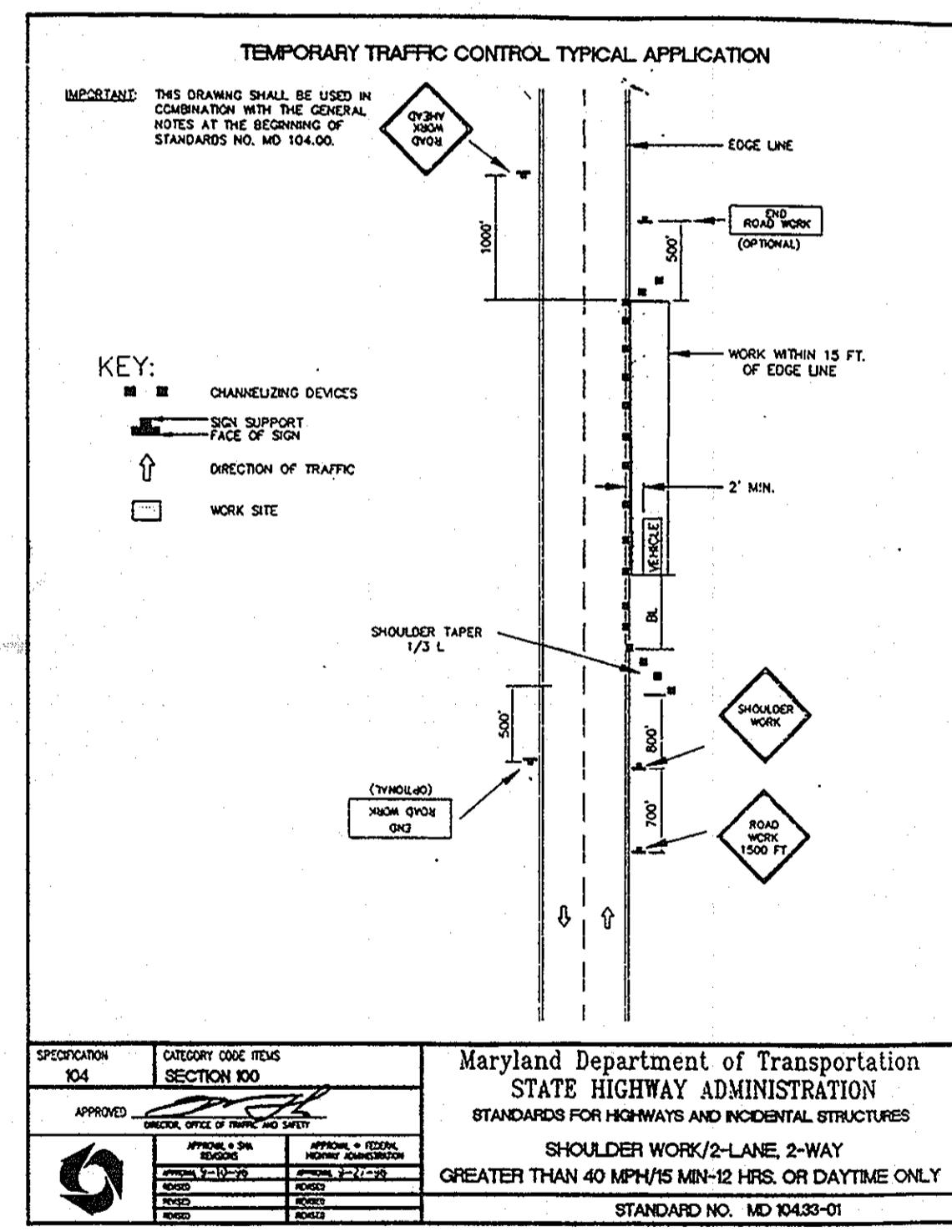
1. OBTAIN GRADING PERMIT.
2. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410.313.1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
3. INSTALL SEDIMENT CONTROL MEASURES AS SHOWN ON PLAN AND IN ACCORDANCE WITH DETAILS PERIODICALLY AND AFTER RAIN (5 DAYS)
4. AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED, GRADE SITE. (2 WEEKS)
5. BEGIN CONSTRUCTION OF UTILITIES.
6. CONSTRUCT HOUSES. THE FIRST FLOOR ELEVATIONS CANNOT BE MORE THAN 1" HIGHER OR 0.2' LOWER THAN THE ELEVATIONS SHOWN ON THIS PLAN. (6 MONTHS)
7. BEGIN CONSTRUCTION OF STORMWATER MANAGEMENT FACILITY.
8. INSTALL LANDSCAPING. (3 DAYS)
9. UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES. (2 DAYS)

## NOTES

1. DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLIED WITH.

# OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER FILTRATION SYSTEMS

1. THE SEDIMENT CHAMBER OUTLET DEVICES SHALL BE CLEANED AND/OR REPAIRED WHEN DRAINAGE TIMES WITHIN THE CHAMBER EXCEED 36 HOURS.
2. DEBRIS AND LITTER SHALL BE REMOVED AS NECESSARY TO INSURE PROPER OPERATION OF THE SYSTEM.
3. SEDIMENT SHALL BE CLEANED OUT OF THE PRETREATMENT BASIN WHEN IT ACCUMULATES TO A DEPTH OF 6 INCHES. VEGETATION WITHIN THE PRETREATMENT BASIN SHALL BE LIMITED TO A HEIGHT OF 18 INCHES.
4. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TIP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE OWNER MUST FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID.
5. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
6. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
7. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



NO.	REVISION	DATE

### SITE DEVELOPMENT PLAN

## OAKHURST III

### TOWNHOUSE UNITS 1-17

### SEDIMENT AND EROSION CONTROL

### NOTES AND DETAILS

TAX MAP #42  
6TH ELECTION DISTRICT

PARCEL A  
HOWARD COUNTY, MARYLAND.

**ROBERT H. VOGEL**  
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET  
ELLICOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

DESIGN BY: MR/KG  
DRAWN BY: KG  
CHECKED BY: MR  
DATE: JANUARY, 2007  
SCALE: AS SHOWN  
W.O. NO.: 06-29

ELLIOTT CITY LAND HOLDING, INC  
5300 DORSEY HALL DR STE 102  
ELLIOTT CITY MD 21042-7819

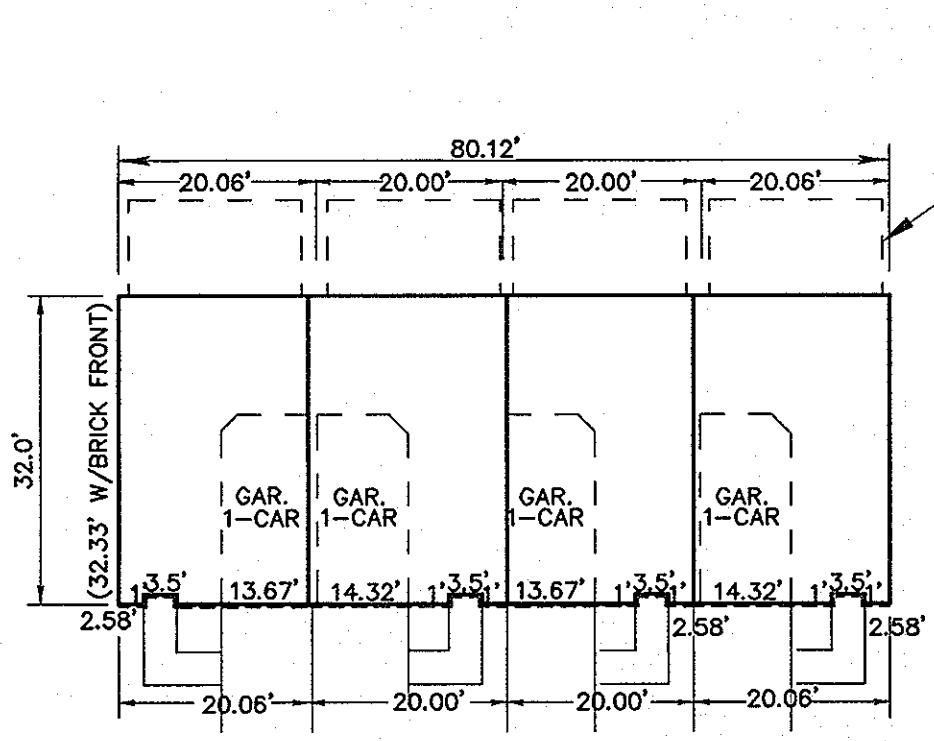
2 SHEET OF 6

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
[Signature]  
4/1/08  
DATE  
[Signature]  
4/5/08  
DATE  
[Signature]  
4/9/08  
DATE

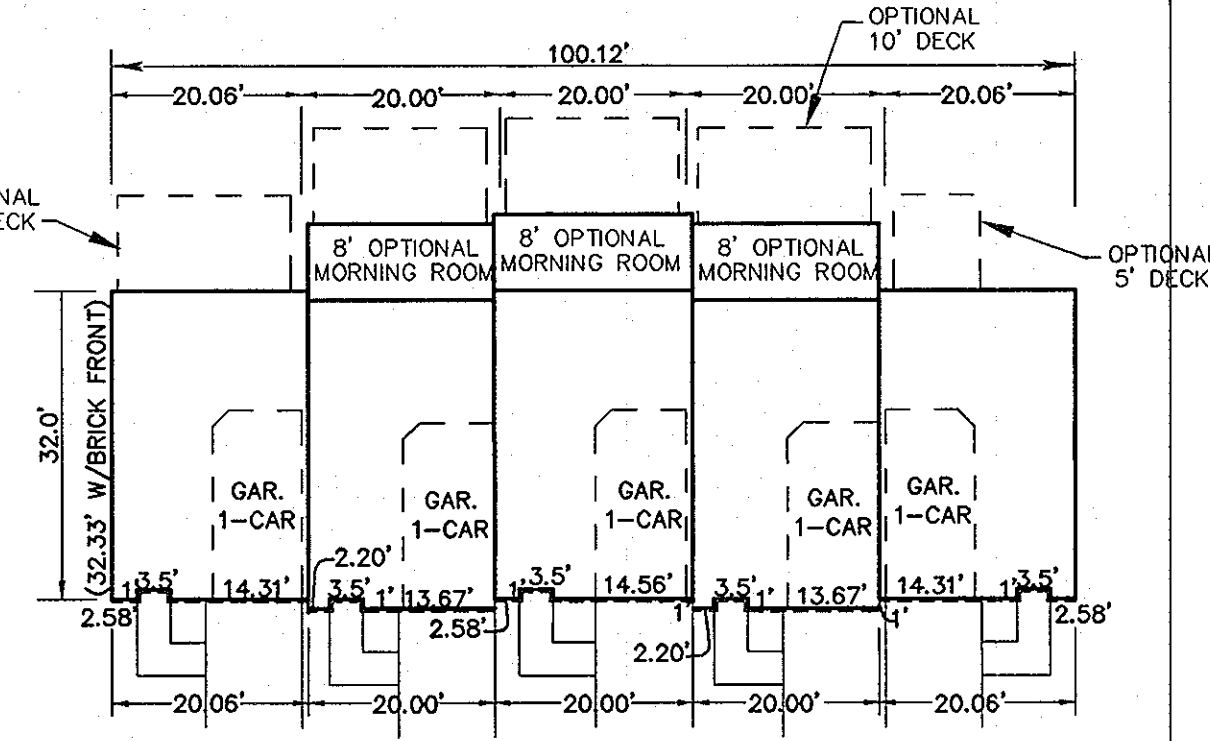
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
[Signature]  
DATE  
[Signature]  
DATE  
[Signature]  
DATE

ENGINEERS CERTIFICATE  
I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature]  
2/26/08  
DATE

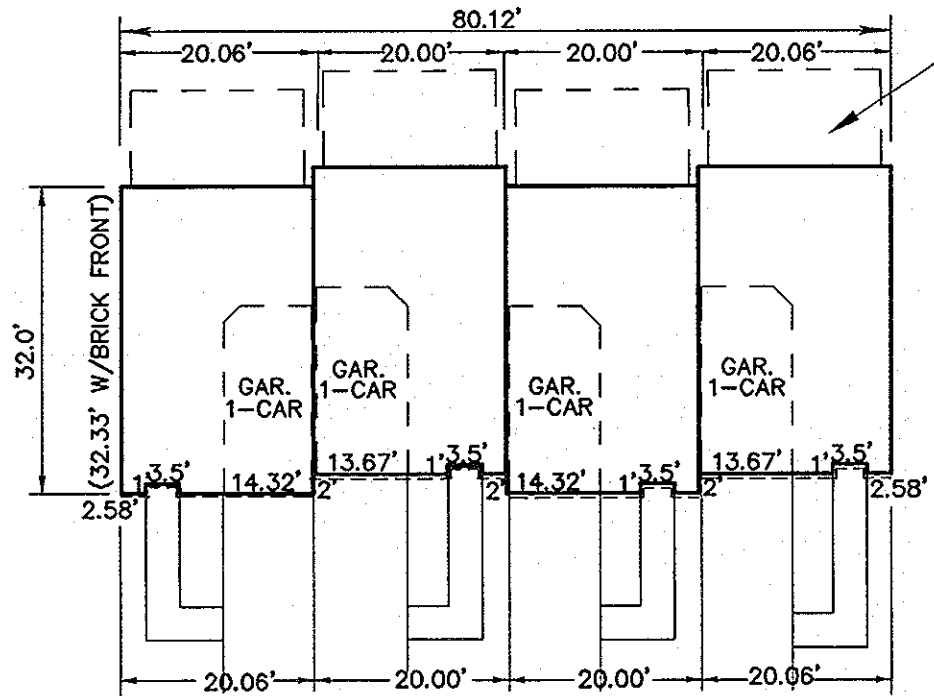
DEVELOPER'S CERTIFICATE  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature]  
2/26/08  
DATE



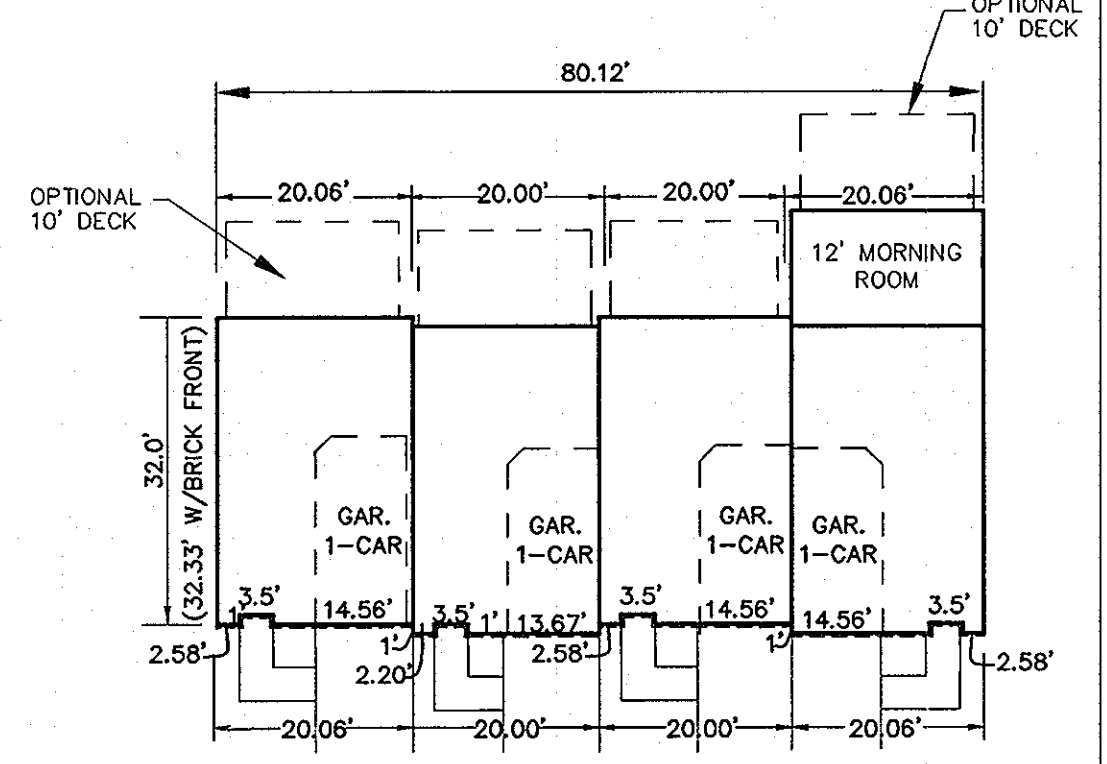
**4 UNITS HOUSE TEMPLATE**  
UNITS 1 TO 4  
(NO MORNING ROOM OR SUNROOMS PERMITTED)



**5 UNITS HOUSE TEMPLATE**  
UNITS 5 THRU 9 (SEE PLANS FOR MORNING ROOM)

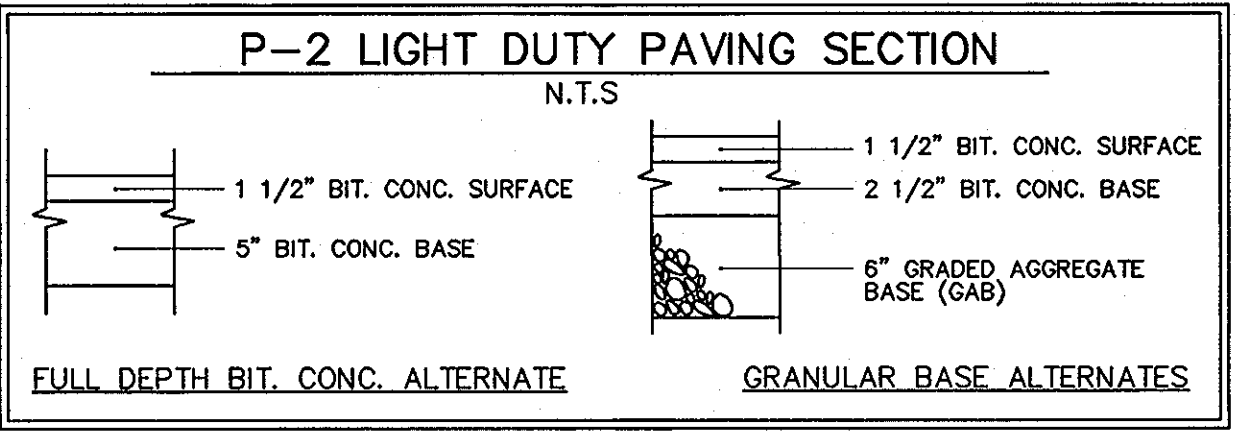


**4 UNITS HOUSE TEMPLATE**  
UNITS 10 TO 13  
(NO MORNING ROOM OR SUNROOMS PERMITTED)

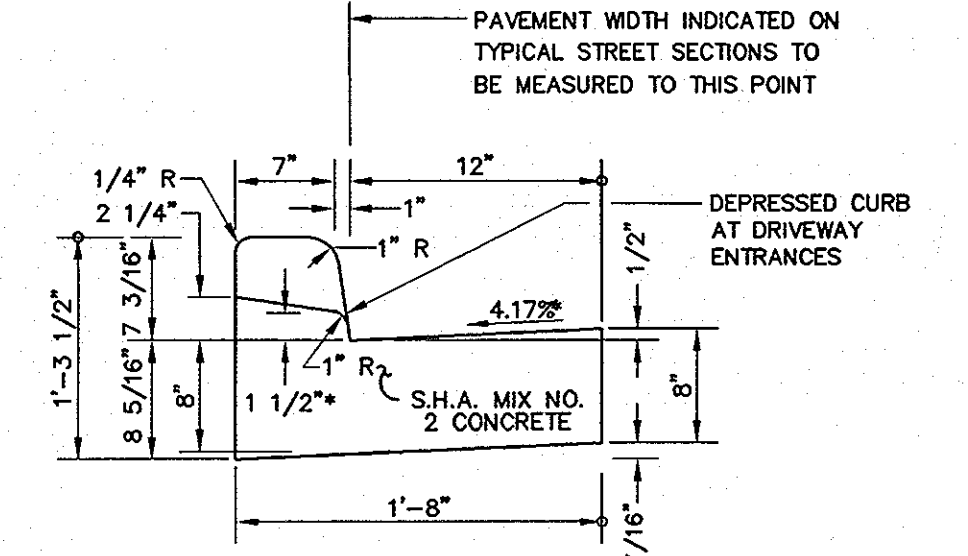


**4 UNITS HOUSE TEMPLATE**  
UNITS 14 TO 17  
(NO MORNING ROOM OR SUNROOMS PERMITTED EXCEPT FOR LOT 14)

**HOUSE TEMPLATES**  
SCALE: 1=20'

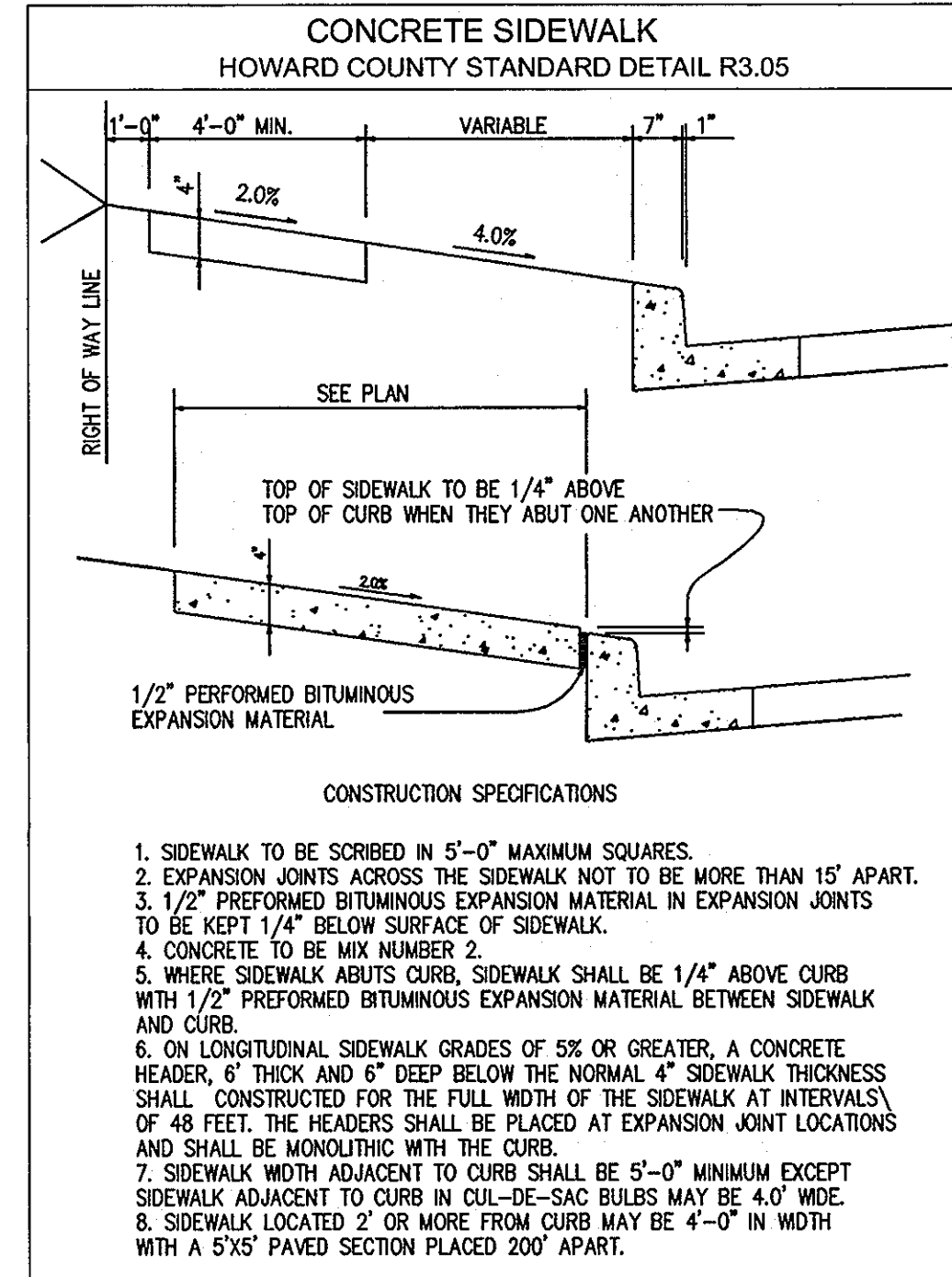


PAVING SECTION IS SUBJECT TO GEOTECHNICAL ENGINEER VERIFICATION.

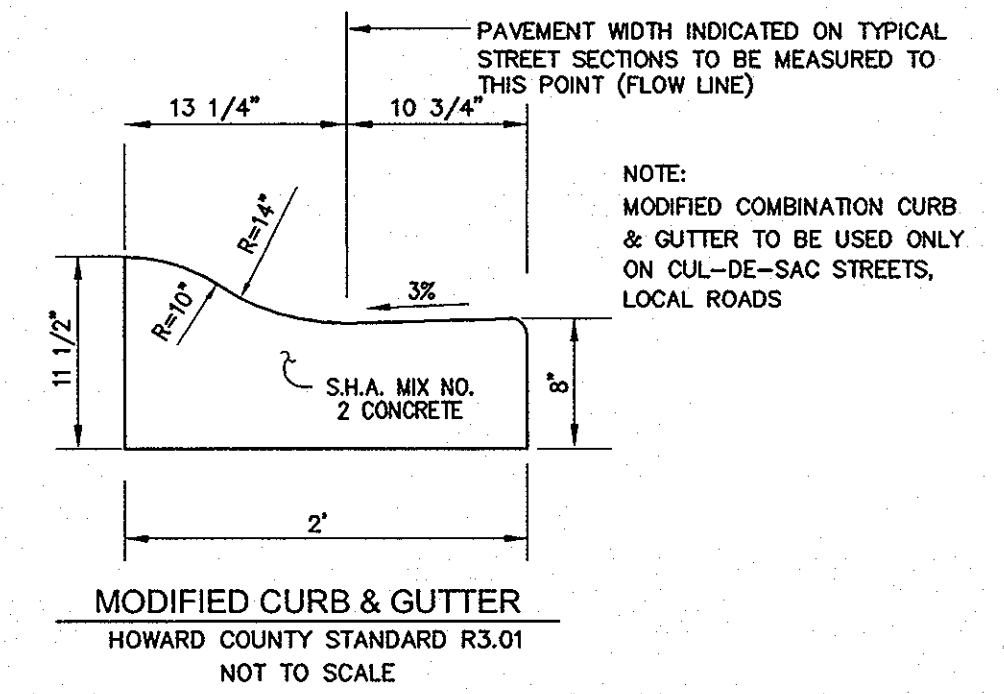


NOTE: DEPRESSED CURB IN HANDICAP ACCESSIBLE AREAS SHALL HAVE A 0.0417(1/24) RISE FROM PAVING TO TOP OF CURB.

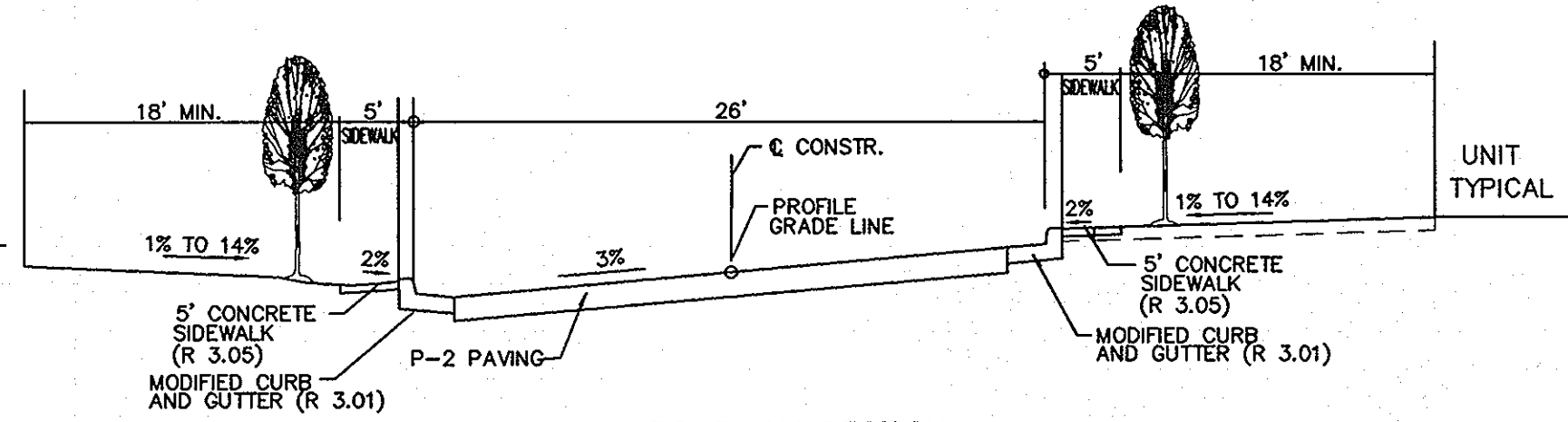
**STANDARD COMBINATION CURB AND GUTTER**  
HOWARD COUNTY STANDARD R-3.01  
NOT TO SCALE



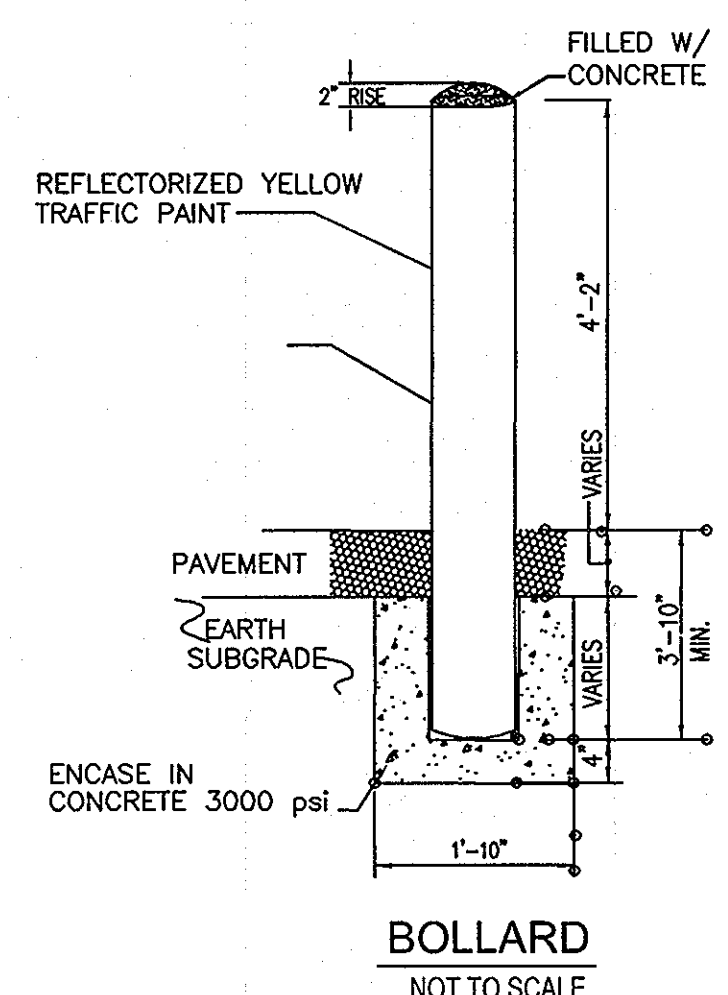
- CONSTRUCTION SPECIFICATIONS**
1. SIDEWALK TO BE SCRIBED IN 5'-0" MAXIMUM SQUARES.
  2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
  3. 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
  4. CONCRETE TO BE MIX NUMBER 2.
  5. WHERE SIDEWALK ABUTS CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB.
  6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 6" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 48 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE CURB.
  7. SIDEWALK WIDTH ADJACENT TO CURB SHALL BE 5'-0" MINIMUM EXCEPT SIDEWALK ADJACENT TO CURB IN CUL-DE-SAC BULBS MAY BE 4'-0" WIDE.
  8. SIDEWALK LOCATED 2' OR MORE FROM CURB MAY BE 4'-0" IN WIDTH WITH A 5'X5' PAVED SECTION PLACED 200' APART.



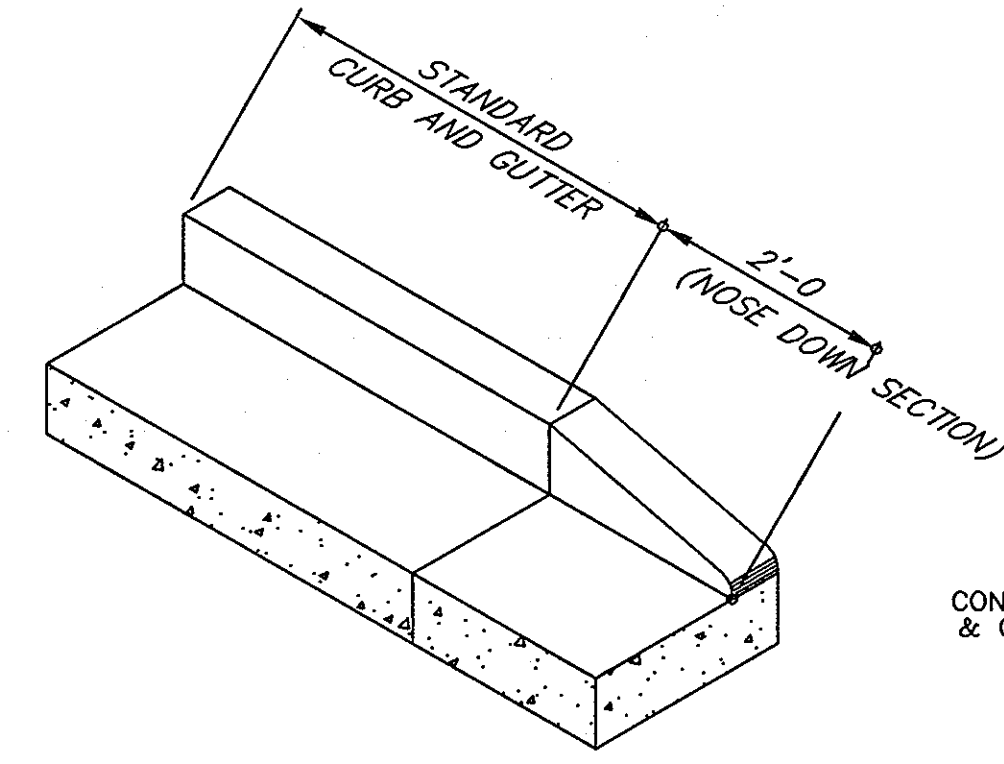
**MODIFIED CURB & GUTTER**  
HOWARD COUNTY STANDARD R3.01  
NOT TO SCALE



**ROADWAY SECTION**  
CLASSIFICATION: PRIVATE ACCESS STREET  
CHESSIE LANE  
DESIGN SPEED : 15 MPH  
SECTION NOT TO SCALE

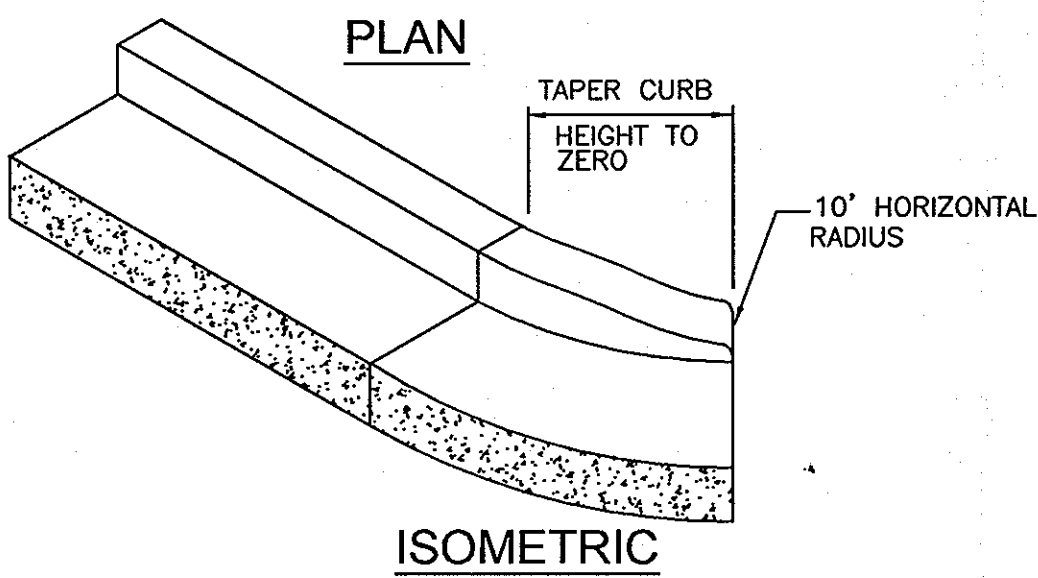
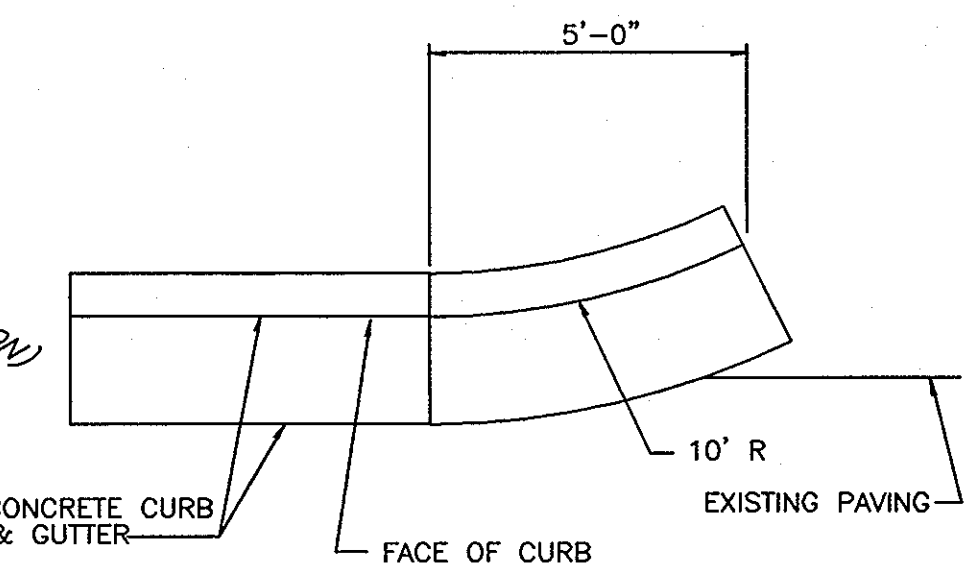


**BOLLARD**  
NOT TO SCALE



NOTE: REFER TO HCDPW STD NO. R3.01 AND SPECIFICATIONS FOR DETAILS NOT SHOWN.

**NOSE DOWN CURB**



**ISOMETRIC**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
**Chief Engineer** 4/7/08  
**Chief, Division of Land Development** 4/8/08  
**Director** 4/9/08

**ENGINEERS CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 2/26/08

**DEVELOPER'S CERTIFICATE**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 2/29/08

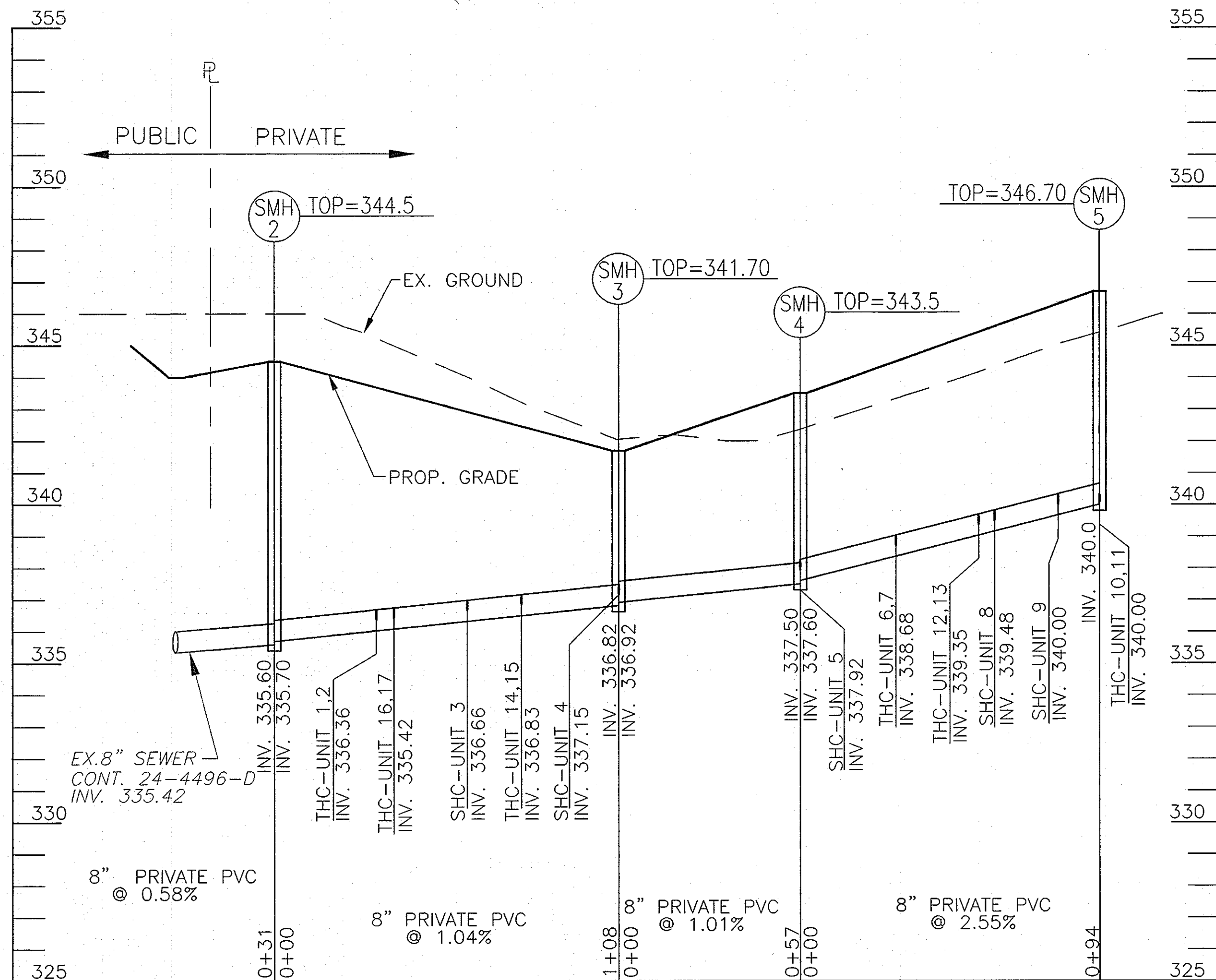
**OWNER/DEVELOPER**  
 ELLICOTT CITY LAND HOLDING, INC  
 5300 DORSEY HALL DR. STE 102  
 ELLICOTT CITY MD 21042-7819  
 443-367-0422

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**OAKHURST III TOWNHOUSE UNITS 1-17 SITE DETAILS**  
 TAX MAP #42 6TH ELECTION DISTRICT  
 PARCEL A HOWARD COUNTY, MARYLAND

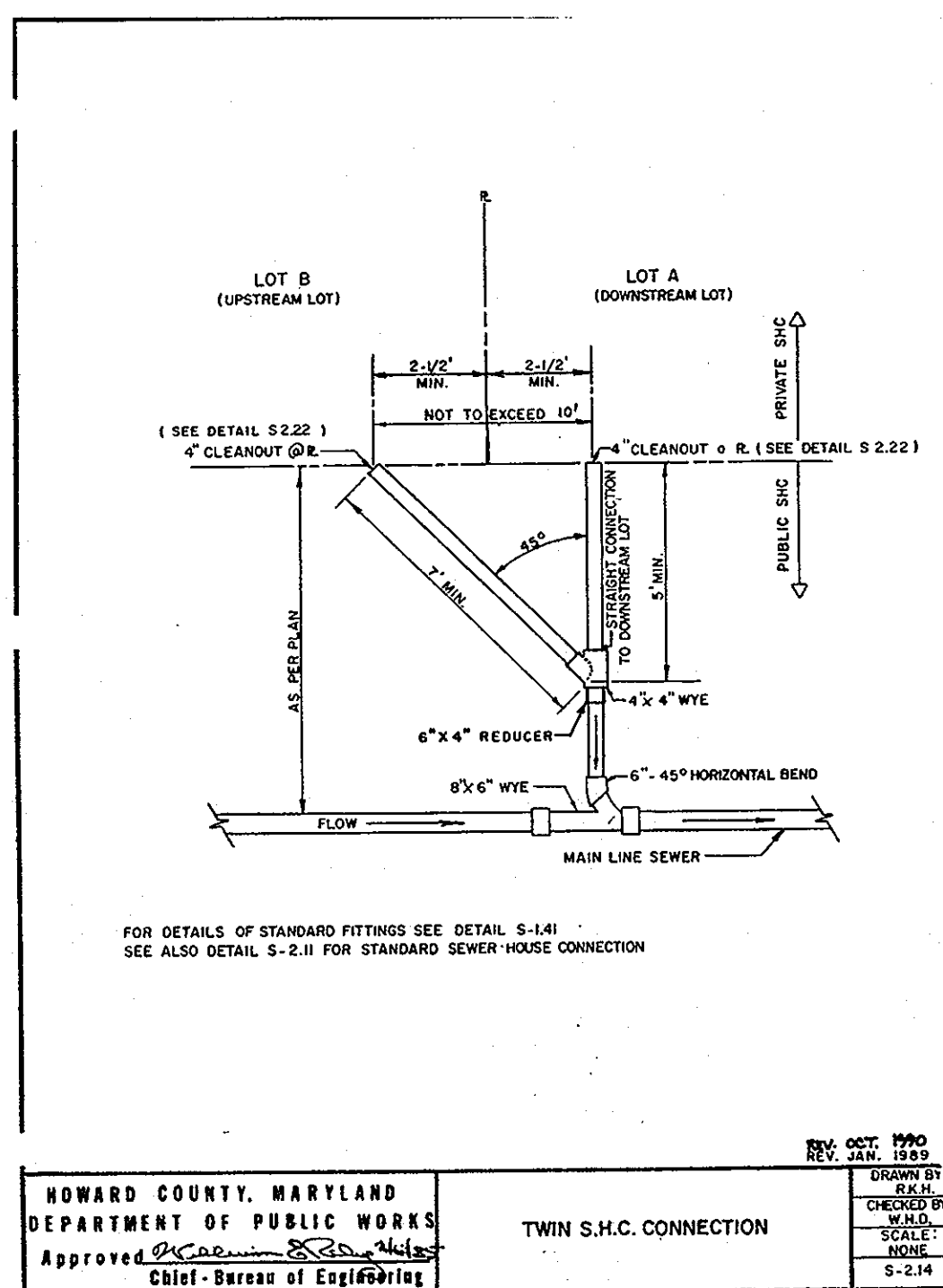
**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: MR  
 DRAWN BY: KG  
 CHECKED BY: MR  
 DATE: FEBRUARY, 2008  
 SCALE: AS SHOWN  
 W.O. NO.: 08-29  
 3 SHEET OF 6



**PRIVATE SEWER PROFILE**

SCALE : HORIZONTAL - 1"=30'  
VERTICAL - 1"=5'

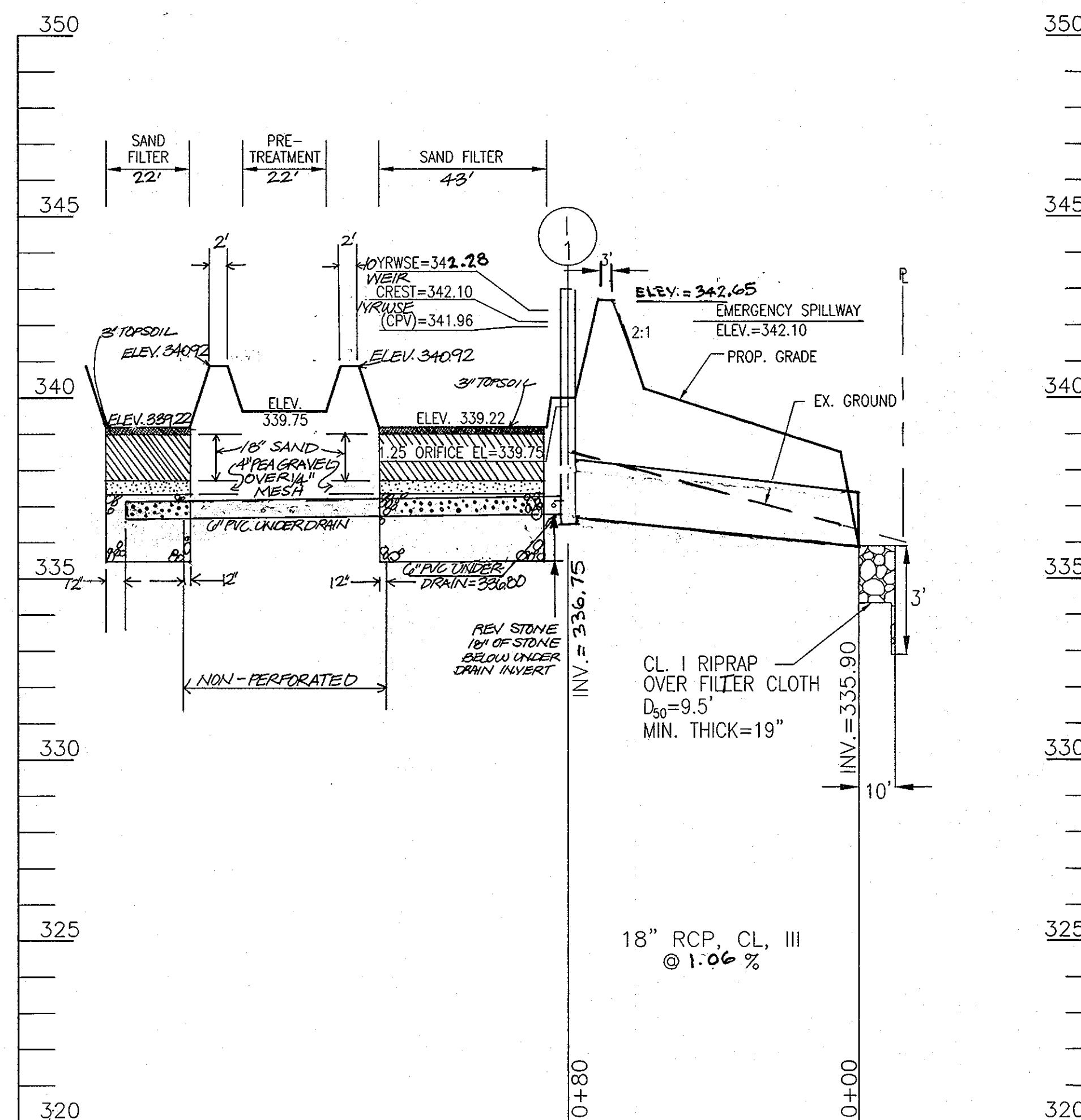


HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]*  
Chief - Bureau of Engineering

SANITARY SEWER							
NO.	TYPE	LOCATION	TOP ELEV.	THROAT ELEV.	INV. IN	INV. OUT	COMMENTS
SMH-1	STD 5'-0" MANHOLE	N 544848 E 1360587	344.0	-	335.34	333.80	HO. CO. STD. G-5.13
SMH-2	STD 4'-0" MANHOLE	N 544833 E 1360608	344.5	-	335.7	335.6	HO. CO. STD. G-5.12
SMH-3	STD 4'-0" MANHOLE	N 544875 E 1360707	341.7	-	337.92	336.82	HO. CO. STD. G-5.12
SMH-4	STD 4'-0" MANHOLE	N 544933 E 1360708	343.5	-	337.6	337.5	HO. CO. STD. G-5.12
SMH-5	STD 4'-0" MANHOLE	N 545015 E 1360625	346.7	-	-	340.0	HO. CO. STD. SD-5.12

NOTE : 1. TOP ELEVATIONS ARE AT CENTER TOP OF HEADPIECE FOR TYPE "A-5", "A-10", AND DOUBLE TYPE "S" COMB. INLETS; TOP ELEVATIONS ARE AT CENTER TOP OF GRATE FOR SINGLE AND DOUBLE TYPE "S" INLETS; AND TOP ELEVATION OF MANHOLE ARE AT CENTER TOP OF MANHOLE COVER.  
2. FOR TOP SLAB SLOPES SEE GRADING PLAN.  
3. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN DETAILS.  
4. ALL CUSTOM AND NON-STANDARD STRUCTURES TO BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER.

SEWER CONNECTION TABULATION						
LOT NO	TYPE	ELEV. @ MAIN	ELEV. @ R/W OR EASEMENT	ELEV. @ UNIT	M.C.E.	
1-2	4" THC @ 2.0%	336.36	43' 337.22	47' 337.30	339.50	
3	4" SHC @ 2.0%	336.66	44' 337.54	47' 337.60	340.00	
4	4" SHC @ 2.0%	336.83	43' 337.69	47' 337.77	345.31	
5	4" SHC @ 2.0%	337.92	30' 338.52	38' 338.68	342.10	
6-7	4" THC @ 2.0%	338.68	35' 339.38	38' 339.44	341.82	
8	4" SHC @ 2.0%	339.48	35' 340.18	40' 340.28	342.15	
9	4" SHC @ 2.0%	340.00	37' 340.74	41' 340.82	342.50	
10-11	4" THC @ 2.0%	340.00	28' 340.56	33' 340.66	342.78	
12-13	4" THC @ 2.0%	339.35	41' 340.17	49' 340.33	342.78	
14-15	4" THC @ 2.0%	336.83	22' 337.27	27' 337.37	342.00	
16-17	4" THC @ 2.0%	335.42	22' 335.86	27' 335.96	339.50	



**PRINCIPAL SPILLWAY PROFILE**

SCALE : HORIZONTAL - 1"=30'  
VERTICAL - 1"=3'

**DETAIL 1 - EARTH DIKE**

**CONSTRUCTION SPECIFICATIONS**

- SEED AND COVER WITH STRAW MULCH.
- SEED AND COVER WITH EROSION CONTROL MATTING OR LINE WITH SOO.
- 4" - 7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

**DETAIL 33 - SUPER SILT FENCE**

**CONSTRUCTION SPECIFICATIONS**

- FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6" FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6" LENGTH POSTS.
- CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS ROIDS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIE STAPLES EVERY 24" AT THE TOP AND MID SECTION.
- FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**

**CONSTRUCTION SPECIFICATION**

- LENGTH - MINIMUM OF 50' (\* 30' FOR A SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. \*\* THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE COVER OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SOE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

APPROVED: *[Signature]* 4/16/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 4/16/05  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 4/16/05  
DIRECTOR

RENEWED FOR HOWARD SCD (AND MEETS REQUIREMENTS)

USDA-NATURAL RESOURCES CONSERVATION SERVICE

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

*[Signature]* 3/16/05  
HOWARD SCD

ENGINEERS CERTIFICATE

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

*[Signature]* 2/26/05  
DATE

DEVELOPER'S CERTIFICATE

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

*[Signature]* 2/26/05  
DEVELOPER

**SITE DEVELOPMENT PLAN**

OAKHURST III  
TOWNHOUSE UNITS 1-17  
SEWER PROFILE & SEDIMENT DETAILS  
PARCEL A

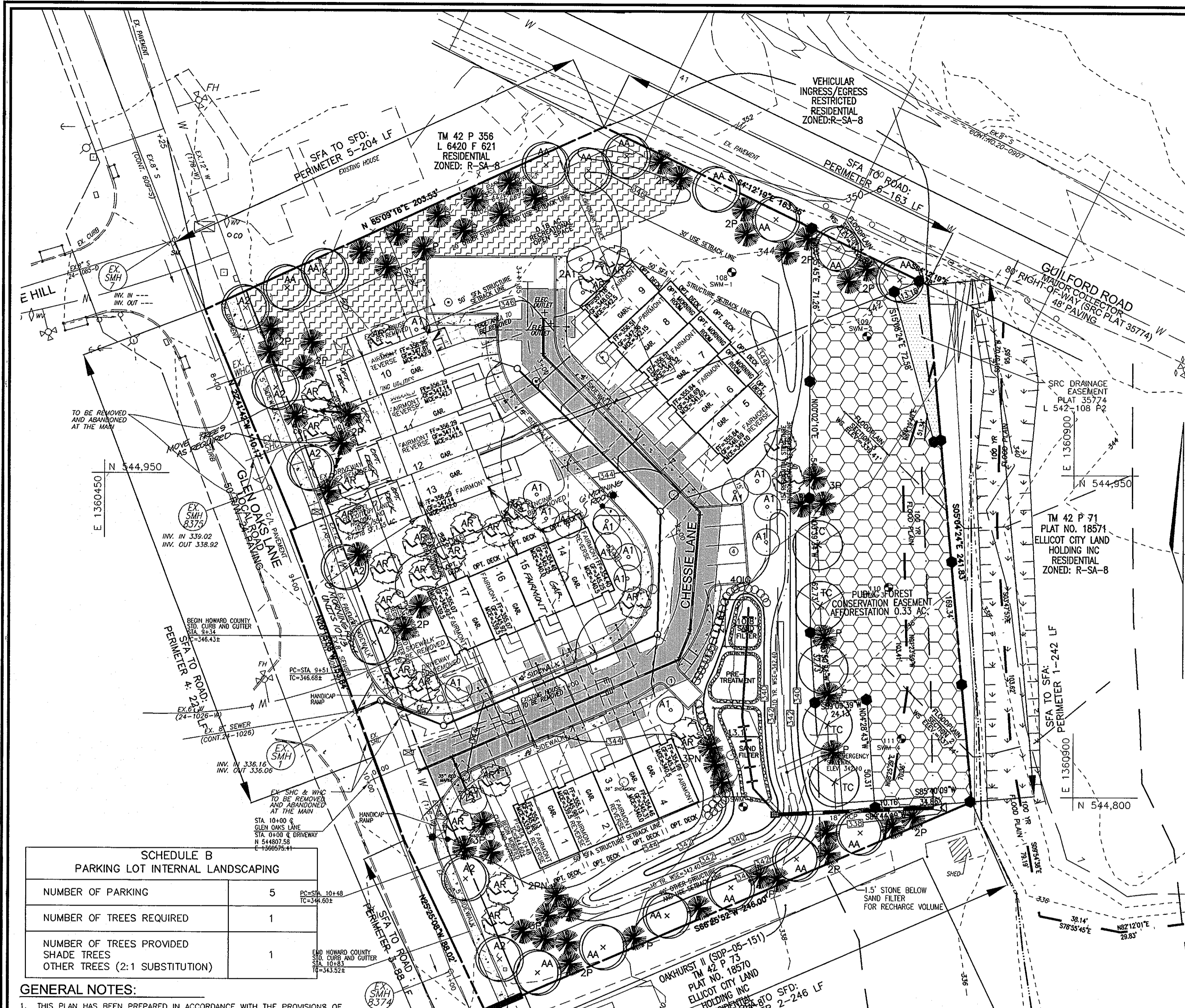
TAX MAP #42  
6TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLICOTT CITY, MD 21043  
TEL: 410-461-7666  
FAX: 410-461-8961

DESIGN BY: MR  
DRAWN BY: KG  
CHECKED BY: MR  
DATE: JUNE, 2007  
SCALE: AS SHOWN  
W.O. NO.: 06-29

4 SHEET OF 6



**STREET TREE CALCULATIONS/SCHEDULE**

STREET NAME	LINEAR FEET	NO. REQUIRED		SPECIES	SIZE/ROOT
		NO. PROVIDED	NO. PROVIDED		
A1 CHESLIE LANE	650/40	17	17	ACER GRISEUM PAPERBARK MAPLE	2 1/2" - 3" Cal. B & B
A2 GLEN OAKS	290/40	7	7	ACER GRISEUM PAPERBARK MAPLE	2 1/2" - 3" Cal. B & B

**SCHEDULE A: PERIMETER LANDSCAPE EDGE**

CATEGORY	TOTAL					
	1	2	3	4	5	6
PERIMETER FRONTAGE DESIGNATION	B	C	C	C	C	C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	242'	246'	88'	223'	204'	163'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (IF REMAINING)	1:50 5	1:40 6	1:40 2	1:40 6	1:40 5	1:40 4
SHADE TREES	1:40 6	1:20 12	1:20 4	1:20 11	1:20 10	1:20 8
EVERGREEN TREES						
SHRUBS						
NUMBER OF PLANTS PROVIDED						
SHADE TREES	5	6	2	6	5	4
EVERGREEN TREES	6	12	4	11	10	8
SHRUBS (2:1 SUBSTITUTION)						
SHRUBS (1:1 SUBSTITUTION)						
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED						

**SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING**

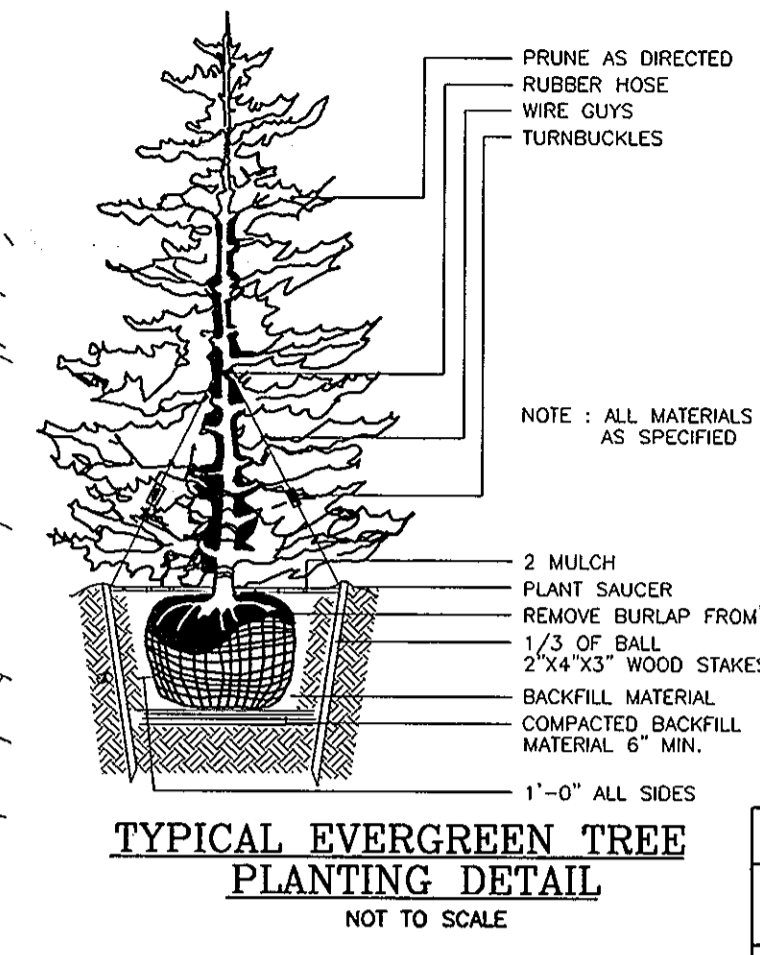
NUMBER OF DWELLING UNITS	17
NUMBER OF TREES REQUIRED (1:1 DU SFA)	17
NUMBER OF TREES PROVIDED	17
SHADE TREES	17
OTHER TREES (2:1 SUBSTITUTION)	

**AFFORESTATION PLANT SCHEDULE**  
TOTAL AFFORESTATION AREA = .33 AC.  
PLANTING DENSITY 0.33 AC. OF 1" GAL TREES @ 200 PER ACRES  
0.33 AC. = 66 TREES  
TOTAL AREA 0.33 AC. = 66 TREES

QTY.	BOTANICAL NAME	SIZE	SPACING
22	ACER RUBRUM RED MAPLE	1" CAL	15' x 15'
22	LIQUID AMBER STRACIFULA AMERICAN SWEETGUM	1" CAL	15' x 15'
22	QUERCUS COCCINEA/ SCARLET OAK	1" CAL	15' x 15'

**LANDSCAPE SCHEDULE**

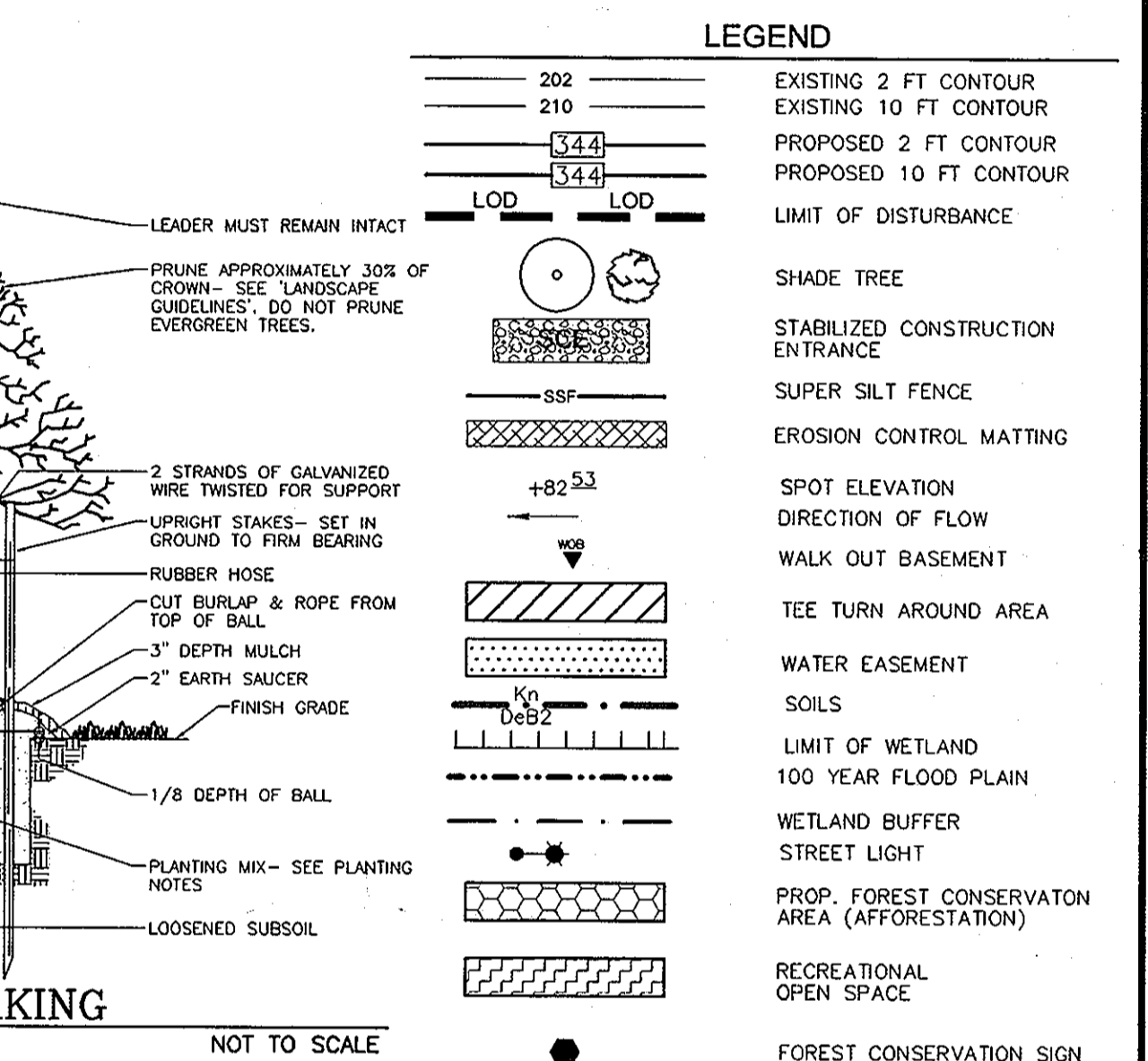
QUAN.	BOTANICAL NAME	SIZE	REM.
15	Acer rubrum 'Armstrong' Columnar Red Maple (Shade trees)	2 1/2" - 3" Cal.	B & B
25	Acer rubrum 'Red Sunset' Red Sunset Maple (Shade trees)	2 1/2" - 3" Cal.	B & B
5	Tilia cordata 'Greenspire' / Greenspire Littleleaf Linden (Shade Tree)	2 1/2" - 3" Cal.	B & B
51	PICEA ABIES NORWAY SPRUCE (Evergreen trees)	6"-8" HT.	B & B



**STORMWATER POND PERIMETER LANDSCAPE SCHEDULE**

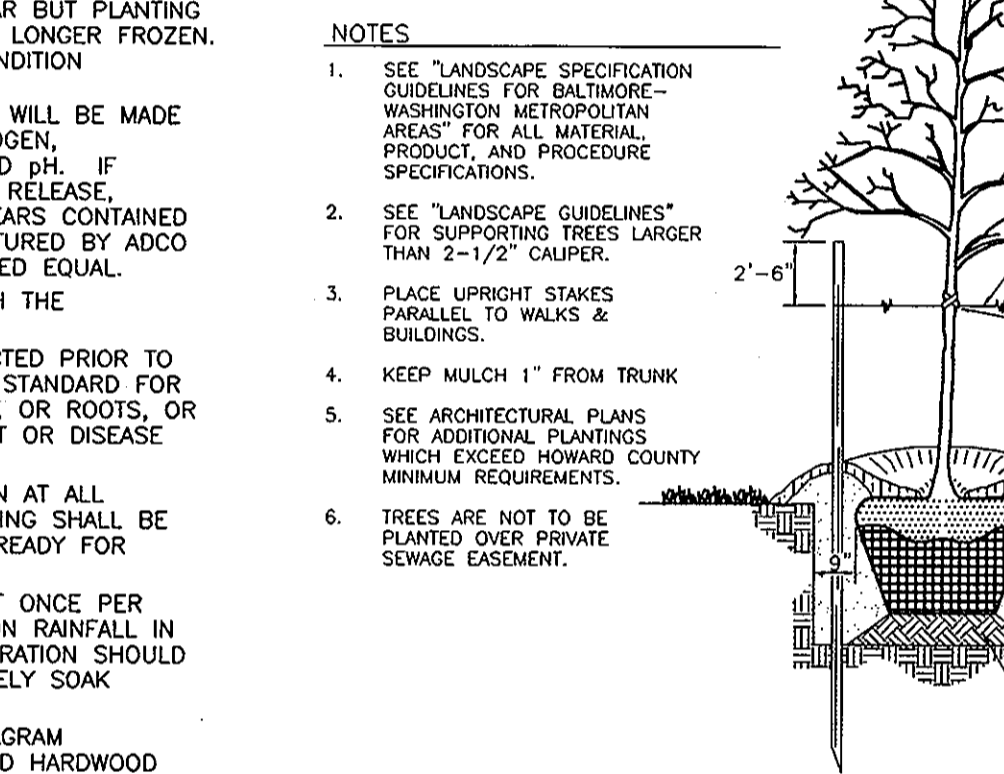
KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
IG	40	Ilex glabra 'compacta' / Inkberry	2 1/2" - 3" CU.	B&B
PN	5	Pinus Nigra Austrian Pine (evergreen tree)	6'-8" ht	B&B

\* SHRUBS REPLACE FOR SHADE TREES.



**REFORESTATION PLANTING NOTES**

- REFORESTATION AREAS MAY BE PLANTED AS SOON AS REASONABLE TO DO SO. LATE WINTER-EARLY SPRING PLANTINGS ARE PREFERRED. EARLIEST PLANTING DATES WILL VARY FROM YEAR TO YEAR BUT PLANTING MAY GENERALLY BEGIN AS SOON AS THE GROUND IS NO LONGER FROZEN. ALTERNATE PLANTING DATES MAY BE CONSIDERED AS CONDITION WARRANTS.
- SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND pH. IF REQUIRED, FERTILIZER WILL BE PROVIDED USING A SLOW RELEASE, SOLUBLE 16-8-16 ANALYSIS DESIGNED TO LAST 5-8 YEARS CONTAINED IN POLYETHYLENE PERFORATED BAGS SUCH AS MANUFACTURED BY ADDO WORKS, P.O. BOX 310 HOLLIS, N.Y. 11423 OR APPROVED EQUAL.
- PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
- PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, FORM, VIGOR, OR ROOTS, OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE MUST BE REPLACED.
- PLANTING STOCK MUST BE PROTECTED FROM DESICCATION AT ALL TIMES PRIOR TO PLANTING. MATERIALS HELD FOR PLANTING SHALL BE MOISTENED AND PLACED IN COOL SHADED AREAS UNTIL READY FOR PLACEMENT.
- NEWLY PLANTED TREES MAY REQUIRE WATERING AS LEAST ONCE PER WEEK DURING THE FIRST GROWING SEASON DEPENDING ON RAINFALL IN ORDER TO GET ESTABLISHED. THE INITIAL PLANTING OPERATION SHOULD ALLOW FOR WATERING DURING INSTALLATION TO COMPLETELY SOAK BACKFILL MATERIAL.
- MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDED HARDWOOD BARK MULCH, FREE OF WOOD ALCOHOL.
- ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONTAINING BITREX, SUCH AS REPELLEX. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPELLEX TABLETS.



**REFORESTATION AREA MONITORING NOTES**

- MONTHLY VISITS DURING THE FIRST GROWING SEASON ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING, PEST CONTROL, OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DOCUMENT WINTER KILL AND AUTUMN VISITS WILL DOCUMENT SUMMER KILL.
- THE MINIMUM SURVIVAL RATE SHALL BE 75% NUMBER OF TREES PLANTED PER ACRE AT THE END OF THE TWO YEAR MAINTENANCE PERIOD. WILD TREE SEEDLINGS FROM NATURAL REGENERATION ON THE PLANTING SITE MAY BE COUNTED UP TO 50% TOWARD THE TOTAL SURVIVAL NUMBER IF THEY ARE HEALTHY NATIVE SPECIES AT LEAST 12 INCHES TALL.
- SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE PLANTINGS. THE SPECIES COMPOSITION OF THE SAMPLE POPULATION SHOULD BE PROPORTIONATE TO THE AMOUNT OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.
- EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVABILITY DURING THE FIRST AND SECOND YEARS AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

**ZONED R-SA-8 NET TRACT AREA:**

A. TOTAL TRACT AREA	2.24 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.07 AC
C. NET TRACT AREA	2.17 AC

**LAND USE CATEGORY**

ARA	MDR	IDA	HR	MPD	CIA
0	0	0	1	0	0

**EXISTING FOREST COVER:**

F. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) =	0 AC
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD =	0 AC

**BREAK EVEN POINT:**

H. BREAK EVEN POINT	0 AC
I. CLEARING PERMITTED WITHOUT MITIGATION =	0 AC

**PROPOSED FOREST CLEARING:**

J. TOTAL AREA OF FOREST TO BE CLEARED =	0 AC
K. TOTAL AREA OF FOREST TO BE RETAINED =	0 AC

**PLANTING REQUIREMENTS:**

L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD =	0 AC
M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD =	0 AC
N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD =	0 AC
O. TOTAL REFORESTATION REQUIRED (N+P-Q) =	0 AC
P. TOTAL AFFORESTATION REQUIRED =	0.33 AC
Q. TOTAL REFORESTATION AND AFFORESTATION REQUIRED =	0.33 AC

**LANDSCAPE SCHEDULE NOTE:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

**SCHEDULE B PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING	5
NUMBER OF TREES REQUIRED	1
NUMBER OF TREES PROVIDED	1
SHADE TREES	
OTHER TREES (2:1 SUBSTITUTION)	

**GENERAL NOTES:**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. INV. IN 332.59 THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$30,000.00 FOR THE REQUIRED 74 SHADE TREES, 56 EVERGREEN TREES.
- AT THE TIME OF PLANTING INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS. THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

**SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION**

- PRECONSTRUCTION MEETING / SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- INSTALL TREE PROTECTION FENCING; FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
- PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
- TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

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

LINEAR FEET OF PERIMETER	FACILITY
380 LF	380 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO YES
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	YES*
NUMBER OF TREES REQUIRED SHADE TREES (1:50) EVERGREEN TREES (1:40)	4 SHADE TREES 5 EVERGREEN TREES
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES SHRUBS	40 SHRUBS ARE SUBSTITUTED 5 EVERGREEN TREES

**FOREST PROTECTION NOTES**

**PRE-CONSTRUCTION ACTIVITIES:**

- FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
- FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
- A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED, WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

**CONSTRUCTION PHASE:**

- NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
- NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
- IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

**POST-CONSTRUCTION ACTIVITIES:**

- AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
- FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
- DO NOT REMOVE SIGNS.

**DEVELOPER'S LANDSCAPE CERTIFICATE**

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

DATE: 2/26/08  
DEVELOPER: JOHN GARDNER

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**

4/2/08  
4/15/08  
4/3/08

**REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS**

USDA-NATURAL RESOURCES CONSERVATION SERVICE  
DATE: 2/26/08  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

**ENGINEERS CERTIFICATE:**

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

DATE: 2/26/08

**DEVELOPER'S CERTIFICATE:**

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

DATE: 2/26/08

**OWNER/DEVELOPER**

ELLIOTT CITY LAND HOLDING, INC  
5300 DORSEY HALL DR STE 102  
ELLIOTT CITY MD 21042-7819  
443-367-0422

**LANDSCAPE AND FOREST CONSERVATION PLAN AND DETAILS**  
OAKHURST III TOWNHOUSE UNITS 1-17

TAX MAP #42  
6TH ELECTION DISTRICT

PARCEL A  
HOWARD COUNTY, MARYLAND

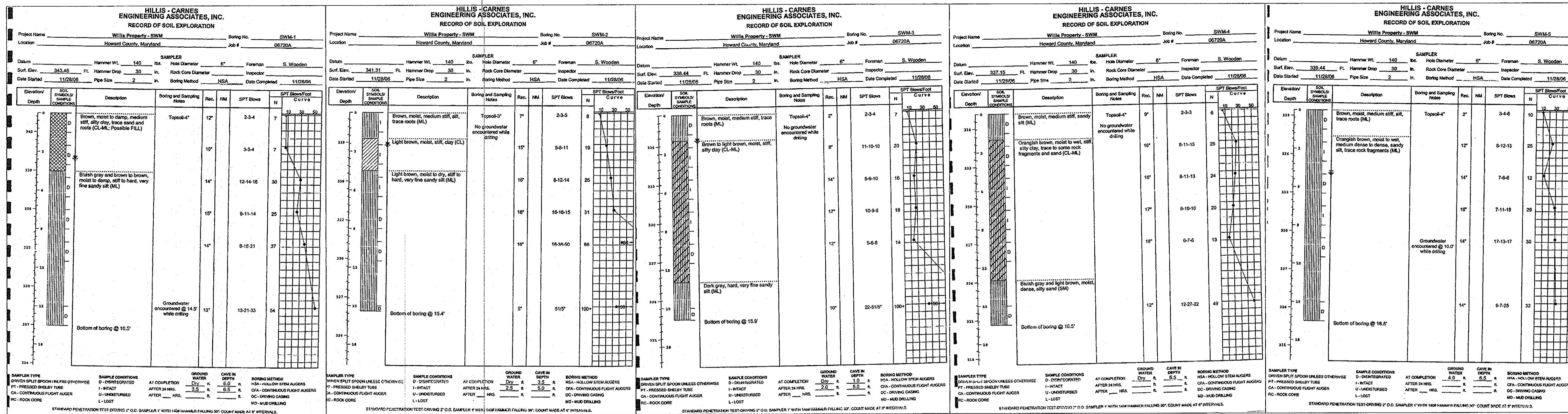
NO.	REVISION	DATE
3	REVISE INTERIOR SIDEWALK WIDTHS TO 4'-FEET	5/7/09
1	REVISE BLDG. LOCATION UNITS 10-15, ADD HOVING IN FROM OPT. CDD UNIT 14-15	11/24/09

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET  
ELLIOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

DESIGN BY: MR.  
DRAWN BY: KG  
CHECKED BY: MR.  
DATE: FEBRUARY, 2008  
SCALE: AS SHOWN  
W.O. NO.: 06-29

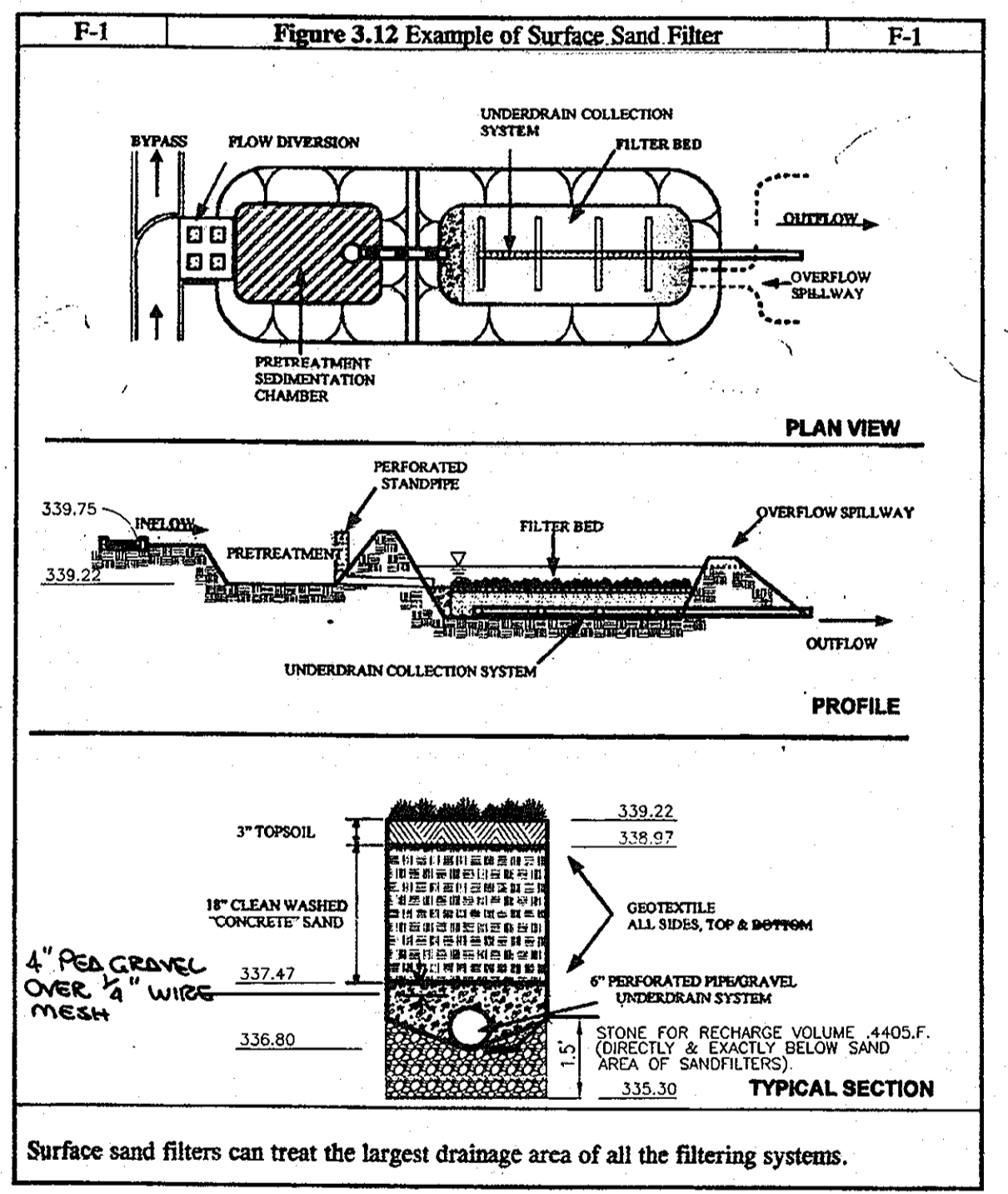
5 SHEET OF 6



Chapter 3. Performance Criteria for Urban BMP Design ..... Stormwater Filtering Systems

**Table B.3.1 Material Specifications for Sand Filters**

Material	Specification/Test Method	Size	Notes
sand	clean AASHTO-M-6 or ASTM-C-33 concrete sand	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions acceptable. No "rock dust" can be used for sand.
peat	ash content: < 15% pH range: 5.2 to 4.9 loose bulk density 0.12 to 0.15 g/cc	n/a	The material must be reed-seg hemic peat, shredded, uncompacted, uniform, and clean.
leaf compost		n/a	
underdrain gravel	AASHTO-M-43	0.375" to 0.75"	
geotextile fabric (if required)	ASTM-D-4833 (puncture strength - 125 lb.) ASTM-D-4632 (Tensile Strength - 300 lb.)	0.08" thick equivalent opening size of #80 sieve	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel layer may be substituted for geotextiles meant to "separate" sand layers.
impermeable liner (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (Tear resistance - 150 lb./in) ASTM-D-471 (water adsorption: +8 to -2% mass)	30 mil thickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.
underdrain piping	F 758, Type PS 28 or AASHTO-M-278	4" - 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes



Surface sand filters can treat the largest drainage area of all the filtering systems.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 4/1/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 4/1/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 4/1/08  
 DIRECTOR

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
 [Signature]  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 HOWARD SCD

ENGINEERS CERTIFICATE  
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 2/26/08  
 DATE

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 [Signature] 2/26/08  
 DEVELOPER DATE

NO. \_\_\_\_\_ REVISION \_\_\_\_\_ DATE \_\_\_\_\_

**SITE DEVELOPMENT PLAN**  
**SURFACE SAND FILTER DETAILS**  
**OAKHURST III**  
**TOWNHOUSE UNITS 1-17**

TAX MAP #42  
 6TH ELECTION DISTRICT

PARCEL A  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL**  
**ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8961

DESIGN BY: MR  
 DRAWN BY: KG  
 CHECKED BY: MR  
 DATE: JUN. 2007  
 SCALE: AS SHOWN  
 W.D. NO.: 06-29

OWNER/DEVELOPER  
 ELLICOTT CITY LAND HOLDING, INC  
 5300 DORSEY HALL DR STE 102  
 ELLICOTT CITY MD 21042-7819  
 443-367-0422

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