

**GENERAL NOTES**

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- DEED REFERENCE: 8239/467
- GROSS AREA OF PROJECT: 0.3743 AC  
AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 0.00 AC  
AREA OF STEEP SLOPES: 0.00 AC  
NET AREA OF PROJECT: 0.3743 AC  
DWELLING UNITS PER NET ACRE ALLOWED: 2  
AREA OF PROPOSED BUILDABLE LOTS: 0.3743 AC  
AREA OF PROPOSED ROAD AND OPEN SPACE DEDICATION: 0.00 AC  
PROPOSED WATER & SEWER SYSTEMS ARE PUBLIC  
AREA OF OPEN SPACE REQUIRED: N/A  
AREA OF OPEN SPACE PROVIDED: N/A  
AREA OF PROPOSED RIGHT-OF-WAY: N/A
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY ROBERT H. VOGEL ENGINEERING INC., DATED FEBRUARY 2005. THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING INC., DATED FEBRUARY 2005.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 3805 AND 3806 AND WERE USED FOR THIS PROJECT.
- STORMWATER MANAGEMENT FOR THIS LOT IS PROVIDED BY RAIN GARDENS TO PROVIDE THE REQUIRED W<sub>60</sub> AND Rev. C<sub>60</sub> IS NOT REQUIRED SINCE THE 1-YR RUNOFF IS LESS THAN 2 CFS. RAINGARDENS ON LOTS 220A AND 222A WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OWNER OF LOTS 220A AND 222A.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY AS-BUILT DRAWINGS UNDER CONTRACT 23-S & W1088-34744.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.05.
- WATER AND SEWER FOR THIS PROJECT WILL BE BY PUBLIC WATER AND SEWER LINES. SEWER WILL BE PROVIDED TO LOTS 220A AND 222A BY A 1.5" LOW PRESSURE FORCE MAIN.
- THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
- NO HISTORIC STRUCTURES EXIST ON THIS SITE.
- A TRAFFIC STUDY IS NOT REQUIRED FOR THIS SITE.
- STREET LIGHTING IS NOT REQUIRED FOR THIS SITE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- A NOISE STUDY IS REQUIRED FOR THIS PROJECT. THIS SITE IS WITHIN A NOISE SENSITIVE AREA, IN CLOSE PROXIMITY OF THE CSX RAILWAY. A NOISE WALL IS PROPOSED FOR THIS PROJECT TO MEET THE STANDARD REQUIREMENT OF REDUCING THE NOISE LEVEL TO 55DB.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:  
A. WIDTH - 12' (16' FOR SERVING MORE THAN ONE RESIDENCE)  
B. SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN)  
C. GEOMETRY - MAX 15% GRADE, MAX 10% GRADE CHANGE, AND MIN 45' TURNING RADIUS  
D. STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADS)  
E. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT OF DEPTH OVER DRIVEWAY SURFACE  
F. MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- SUBJECT PROPERTY ZONED R-12 PER 07/28/06 COMPREHENSIVE ZONING PLAN.
- IN ACCORDANCE WITH SUBDIVISION SECTION 16.1202 (b) (vi) THIS PLAN IS EXEMPT FROM COMPLIANCE WITH THE REQUIREMENTS OF THE FOREST CONSERVATION ACT OF HOWARD COUNTY BECAUSE THE LOT SHOWN ON IT IS A PART OF A RESUBDIVISION DONE BY DEED PER WP-05-0127 THAT DID NOT CREATE ADDITIONAL LOTS.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, DAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT REAR YARD SETBACK.
- A REQUEST TO WAIVE SECTION 16.147 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, WHICH REQUIRES THE SUBMISSION AND APPROVAL OF A FINAL SUBDIVISION PLAN FOR THE PURPOSE OF MERGING FOUR EXISTING RESIDENTIAL LOTS INTO TWO BY USING THE ADJOINER DEED PROCESS, WAS APPROVED ON SEPTEMBER 9, 2005 BY WP-05-0127 SUBJECT TO THE FOLLOWING CONDITIONS:  
A. I: SUBMIT A COPY OF THE RECORDED MERGER DEED FOR THE SUBJECT LOTS FOR FILE RETENTION PURPOSES. THIS DEED MUST BE SUBMITTED TO THIS DIVISION WITHIN 45 DAYS (BY OCTOBER 24, 2005).  
II: COMPLIANCE WITH THE ATTACHED COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION.  
III: PRIOR TO THE DEVELOPMENT OF THE NEW LOTS, A SITE DEVELOPMENT PLAN MUST BE APPROVED WITH THE FORTHCOMING SITE DEVELOPMENT PLAN. THE APPLICANT MUST ADDRESS WETLANDS, 25' WETLANDS BUFFER AND 100-YEAR FLOODPLAIN. IF THESE ENVIRONMENTAL FEATURES ARE NOT CONTAINED WITHIN THE BOUNDARIES OF THE PROPOSED LOTS, A SIGNED AND SEALED CERTIFICATION FROM AN ENGINEER MUST BE SUBMITTED.  
IV: LANDSCAPING AND FOREST CONSERVATION REQUIREMENTS MUST BE SATISFIED WITH THE SITE DEVELOPMENT PLAN SUBMISSION.
- SUBJECT TO THE FOLLOWING CONDITIONS OF THE DEVELOPMENT ENGINEERING DIVISION:  
I: THE APPLICANT MUST SUBMIT AN APPROVED NOISE STUDY FOR SITE PLAN DEVELOPMENT PLAN APPROVAL.  
II: THE APPLICANT MUST DENOTE ON THE SITE DEVELOPMENT PLAN THAT PROPOSED LOTS WILL BE SERVICED BY A LOW PRESSURE SEWER.  
III: AS PART OF THE REQUIREMENTS FOR SITE DEVELOPMENT PLAN APPROVAL, THE APPLICANT MUST EXTEND THE EXISTING PUBLIC SEWER MAIN FROM THE TERMINOUS OF EXISTING MANHOLE #55 TO THE PROPERTY BEING SERVED.  
26. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$1,500.00 FOR THE REQUIRED 5 SHADE TREES SHALL BE PROVIDED WITH THE GRADING PERMIT APPLICATION OR THE DPW DEVELOPER'S AGREEMENT.  
27. THIS PROJECT IS NOT SUBJECT TO A SIGHT DISTANCE ANALYSIS, SINCE IT IS SITUATED AT A DEAD END ON EUCLID AVENUE.  
29. SPOIL FROM THE TRENCHING OPERATION WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.  
30. THERE ARE NO STREAMS, WETLANDS, OR FLOODPLAINS ON THIS SITE.

**LANDSCAPE NOTES**

- AT THE TIME OF PLANT 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, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BUT NOT LIMITED TO: WATERING, FERTILIZING, PRUNING, REPLACING, 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.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

**LANDSCAPE SCHEDULE NOTE:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH H&D PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO 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.

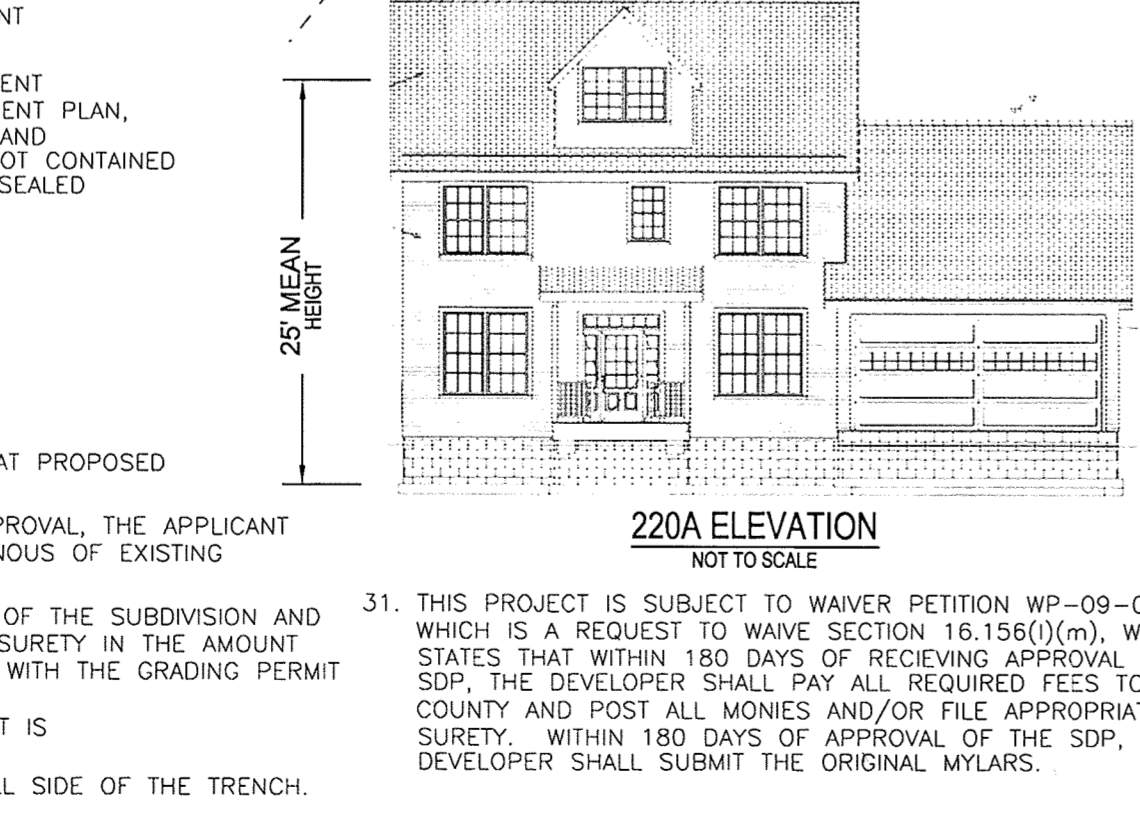
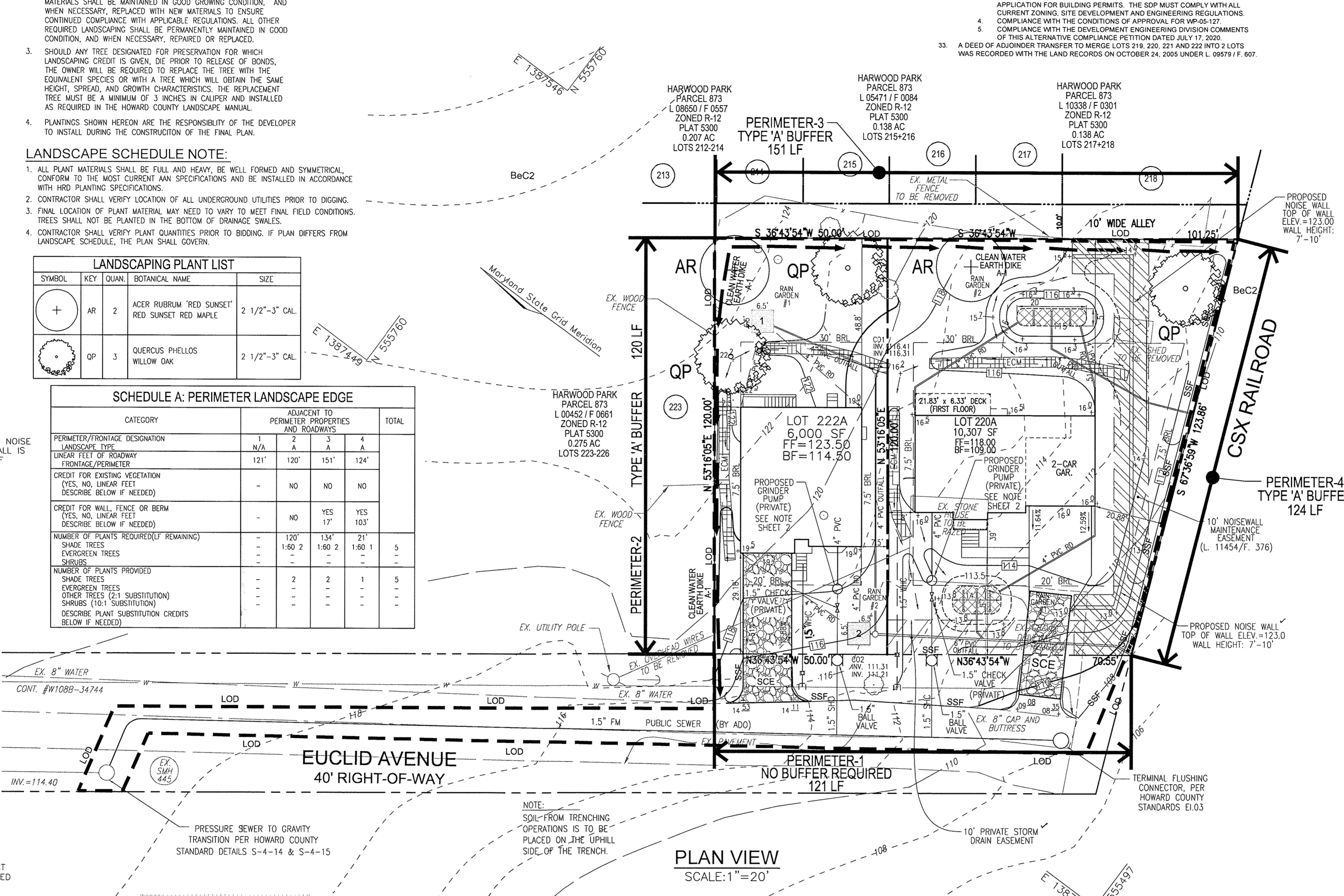
**LANDSCAPING PLANT LIST**

SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE
+	AR	2	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2"-3" CAL.
○	QP	3	QUERCUS PHellos WILLOW OAK	2 1/2"-3" CAL.

**SCHEDULE A: PERIMETER LANDSCAPE EDGE**

CATEGORY	1	2	3	4	TOTAL
PERIMETER/FRONTAGE DESIGNATION					
LANDSCAPE TYPE	N/A	A	A	A	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	121'	120'	151'	124'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	-	NO	NO	NO	
CREDIT FOR WALL FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	-	NO	YES	YES	
NUMBER OF PLANTS REQUIRED (LF REMAINING)		120'	134'	21'	
SHADE TREES		150	2	1	5
EVERGREEN TREES		-	-	-	-
SHRUBS		-	-	-	-
NUMBER OF PLANTS PROVIDED		2	2	1	5
SHADE TREES		-	-	-	-
EVERGREEN TREES		-	-	-	-
OTHER TREES (2:1 SUBSTITUTION)		-	-	-	-
SHRUBS (10:1 SUBSTITUTION)		-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED					

# SITE DEVELOPMENT PLAN HARWOOD PARK LOTS 220A & 222A



**PERMIT INFORMATION CHART**

PROJECT NAME	SECTION/AREA	PARCEL/LOT
HARWOOD PARK / LOTS 220A AND 222A	N/A	873/220A AND 222A
DEED REF 18686/208	BLOCK NO. 13	ZONE R-12
TAX MAP 38	ELECT. DIST. 1ST	CENSUS TR. 601202
WATER CODE: A-02	SEWER CODE: 2151800	

**ADDRESS CHART**

LOT #	STREET ADDRESS
220A	6463 EUCLID AVE
222A	6461 EUCLID AVE

**SHEET INDEX**

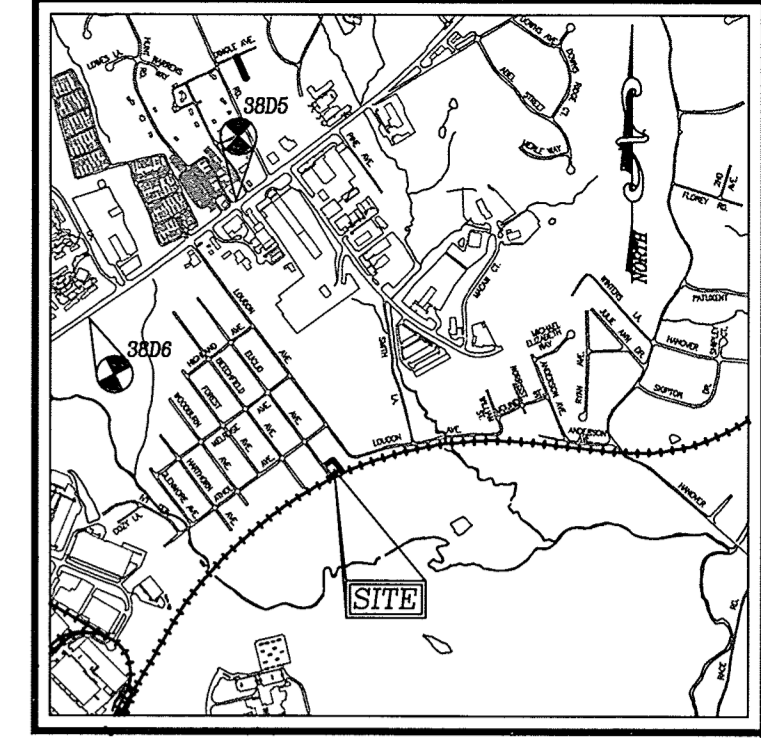
DESCRIPTION	SHEET NO.
SITE DEVELOPMENT AND LANDSCAPE PLAN	1 OF 2
SEDIMENT AND EROSION CONTROL NOTES AND DETAILS	2 OF 2

- GENERAL NOTES CONTINUED**
- THIS PROJECT IS SUBJECT TO WP-02-004, ON AUGUST 26, 2020, THE PLANNING DIRECTOR APPROVED THE REQUEST FOR ALTERNATIVE COMPLIANCE TO SECTION 16.1506(I)(X) WHICH REQUIRES THE DEVELOPER TO APPLY TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS FOR BUILDING PERMITS TO INITIATE CONSTRUCTION ON THE SITE WITHIN ONE YEAR OF SIGNATURE APPROVAL OF THE SITE DEVELOPMENT PLAN ORIGINAL.
  - APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:  
I. THE PETITIONER MUST APPLY TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS FOR BUILDING PERMITS TO INITIATE CONSTRUCTION ON THE SITE WITHIN 1 YEAR FROM APPROVAL OF THIS ALTERNATIVE COMPLIANCE (ON OR BEFORE AUGUST 26, 2021).  
II. THE PETITIONER MUST APPLY WITH THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS FOR ALL BUILDING PERMITS FOR ALL CONSTRUCTION AUTHORIZED BY THE APPROVED SITE DEVELOPMENT PLAN WITHIN 5 YEARS FROM APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION (ON OR BEFORE AUGUST 26, 2025).  
III. A PLAN MODIFICATION (RELATIVE TO SDP-28-010) MUST BE SUBMITTED TO THIS DEPARTMENT FOR REVIEW AND COMMENTS PRIOR TO FILING AN APPLICATION FOR BUILDING PERMITS. THE SDP MUST COMPLY WITH ALL CURRENT ZONING, SITE DEVELOPMENT AND ENGINEERING REGULATIONS COMPLIANCE WITH THE CONDITIONS OF APPROVAL FOR WP-02-127.  
IV. COMPLIANCE WITH THE DEVELOPMENT ENGINEERING DIVISION COMMENTS OF THIS ALTERNATIVE COMPLIANCE PETITION DATED JULY 17, 2020.
  - A DEED OF ADJOINER TRANSFER TO MERGE LOTS 218, 220, 221 AND 222 INTO 2 LOTS WAS RECORDED WITH THE LAND RECORDS ON OCTOBER 24, 2005 UNDER L. 09975 / F. 607.

**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 vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- CONDITIONS WHERE PRACTICE APPLIES**
- This practice is limited to areas having 2:1 or flatter slopes where:  
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 deep 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.
  - 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.

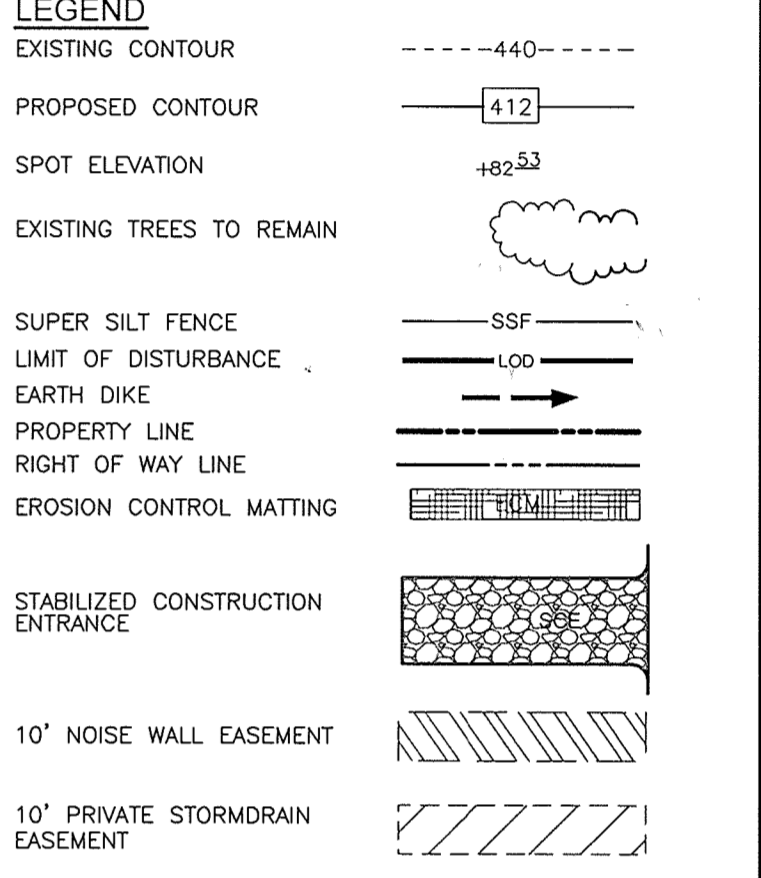
- CONSTRUCTION AND MATERIAL SPECIFICATIONS**
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.  
II. Topsoil Specifications - Soil to be used as topsoil must meet the following:  
1. 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 containing 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 and 1/2" in diameter.  
2. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.  
3. 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:  
II. For sites having disturbed areas under 5 acres:  
1. For sites having disturbed areas under 5 acres:  
a. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:  
i. pH for topsoil shall be between 6.0 and 7.5. If the lowest soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.  
ii. Organic content of topsoil shall be not less than 1.5 percent by weight.  
b. Topsoil having soluble salt content greater than 500 parts per million shall not be used.  
c. No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.  
NOTE: Topsoil substitutes or amendments as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.  
II. Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.
  - Topsoil Application  
1. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Berms.  
2. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.  
3. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.  
4. 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.



**VICINITY MAP**  
SCALE: 1"=2000'  
ADC MAP COORDINATES  
17 F10

**BENCHMARKS**

NO.	NORTHING	EASTING	ELEVATION
38D5	558,378.575	1,386,524.158	193.726'
38D6	557,155.459	1,384,992.262	175.228'



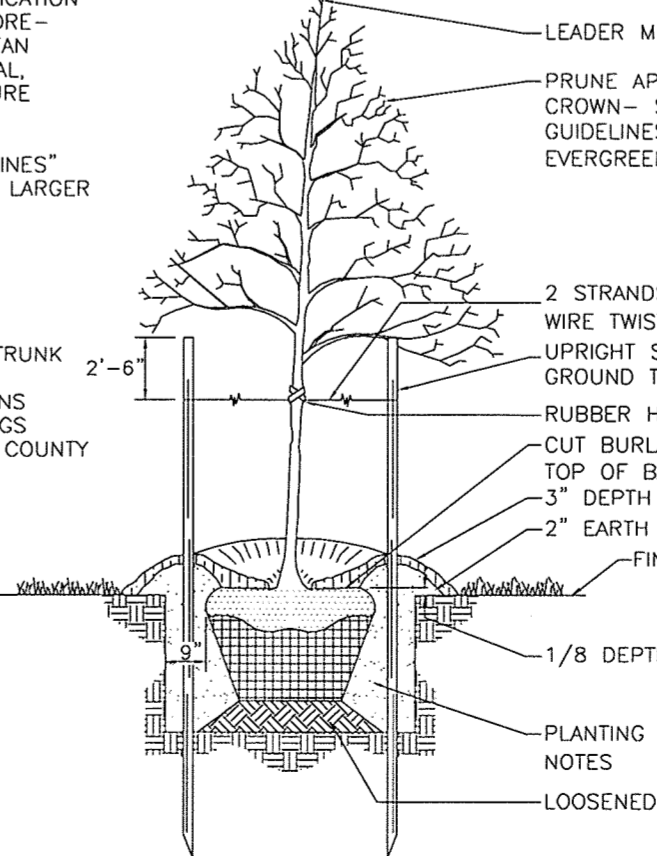
**SITE ANALYSIS DATA CHART**

LOCATION: TAX MAP 38, GRID 13, P/O TM PARCEL 873  
1ST ELECTION DISTRICT  
EXISTING ZONING: R-12  
GROSS AREA OF PROJECT: 0.3743 AC  
AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: N/A  
AREA OF STEEP SLOPES OUTSIDE THE FLOODPLAIN: N/A  
NET AREA OF PROJECT: 0.3743 AC  
AREA OF PROPOSED BUILDABLE LOTS: 0.3743 AC  
AREA OF OPEN SPACE REQUIRED: N/A  
AREA OF OPEN SPACE PROVIDED: N/A  
AREA OF RECREATIONAL OPEN SPACE REQUIRED: N/A  
AREA OF RECREATIONAL OPEN SPACE PROVIDED: N/A  
AREA OF PROPOSED RIGHT-OF-WAY: N/A  
NUMBER OF LOTS/PARCELS ALLOWED (2 PER NET ACRE): 2  
NUMBER OF LOTS/PARCELS PROPOSED: 2 SINGLE-FAMILY DETACHED  
TOTAL APPROXIMATE LIMIT OF DISTURBANCE: 21,073.74 SF OR 0.484 AC.

**OWNER/DEVELOPER**  
FAUSTO MORALES  
8049 KEETON ROAD  
ELKRIDGE, MD 21075  
(443) 889-2950

**NOTES**

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



**TREE PLANTING AND STAKING**  
DECIDUOUS TREES UP TO 2-1/2" CALIPER  
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 3/8/21

**OWNER/DEVELOPER CERTIFICATION:**  
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROL MEASURES AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODS ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.  
FAUSTO MORALES  
DATE: 2-10-21

**DESIGN CERTIFICATION:**  
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
ROBERT H. VOGEL  
DATE: 2/10/21

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
HOWARD S.C.D. DATE:

REVISED SITE DEVELOPMENT PLAN  
**HARWOOD PARK**  
LOTS 220-A & 222-A  
DEED REFERENCE: 18686/208  
TAX MAP: 38 PARCEL: 873  
1ST ELECTION DISTRICT  
GRID: 13 ZONING: R-12  
HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2022

DESIGN BY: RHV  
DRAWN BY: JMR  
CHECKED BY: RHV  
DATE: JANUARY 2021  
SCALE: AS SHOWN  
W.O. NO.: 04-172

1 SHEET OF 2



**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE DURING A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, digging 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./100 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 100 lbs. per acre 30-0-0 urea-form fertilizer (8 lbs./1000 sq.ft.).
- 2) Acceptable—Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc 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 (14 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 (0.5 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 well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use soil. 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 unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

**MAINTENANCE:** Inspect all seeded areas and make needed repairs, replacements and reseeding.

**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 (1313-1855).

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 thereto.

3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 10 days of completion for all permanent sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1. (3) 7 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 within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for permanent seeding, soil, temporary seeding, and mulching (Sec. 3). Temporary stabilization with mulch 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 permanent control has been obtained from the Howard County Sediment Control Inspector.

7. Site Analysis:

Total Area	0.3713 AC
Area Disturbed	21.0232 AC
Area to be seeded or paved	0.086 AC
Area to be vegetatively stabilized	0.28 AC
Total Soil	1.000 AC
Total Fill	0.000 CY

Off-site waste/narrow area location

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

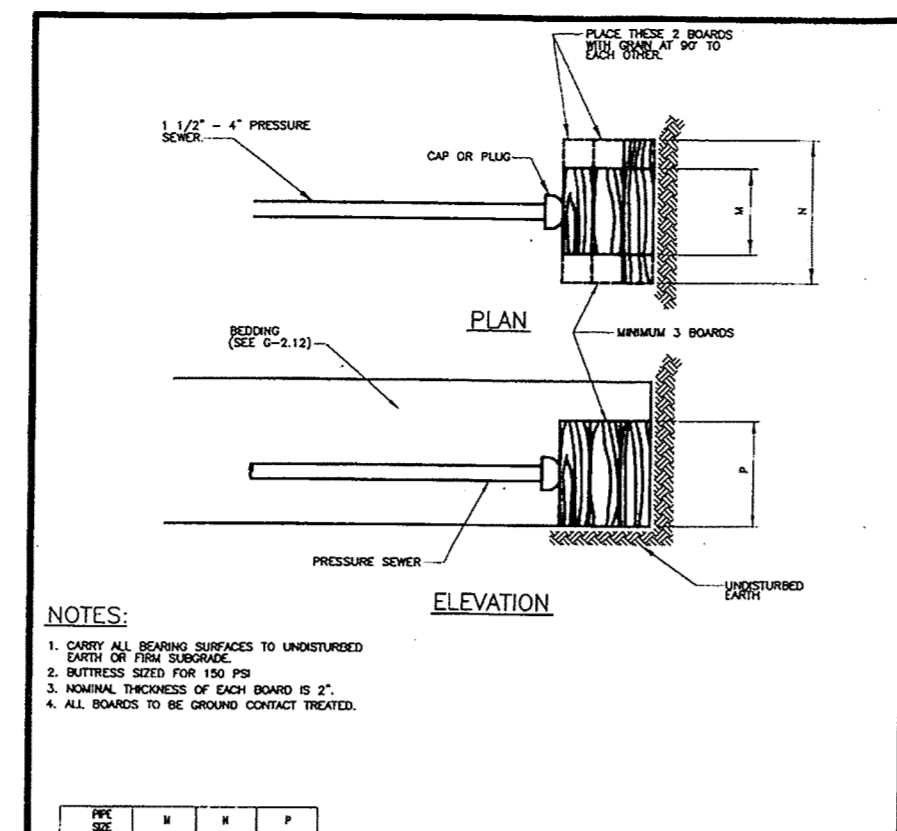
9. Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

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.

12. Estimates of earthwork quantities are provided solely for the purpose of calculating fees.

• To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit.

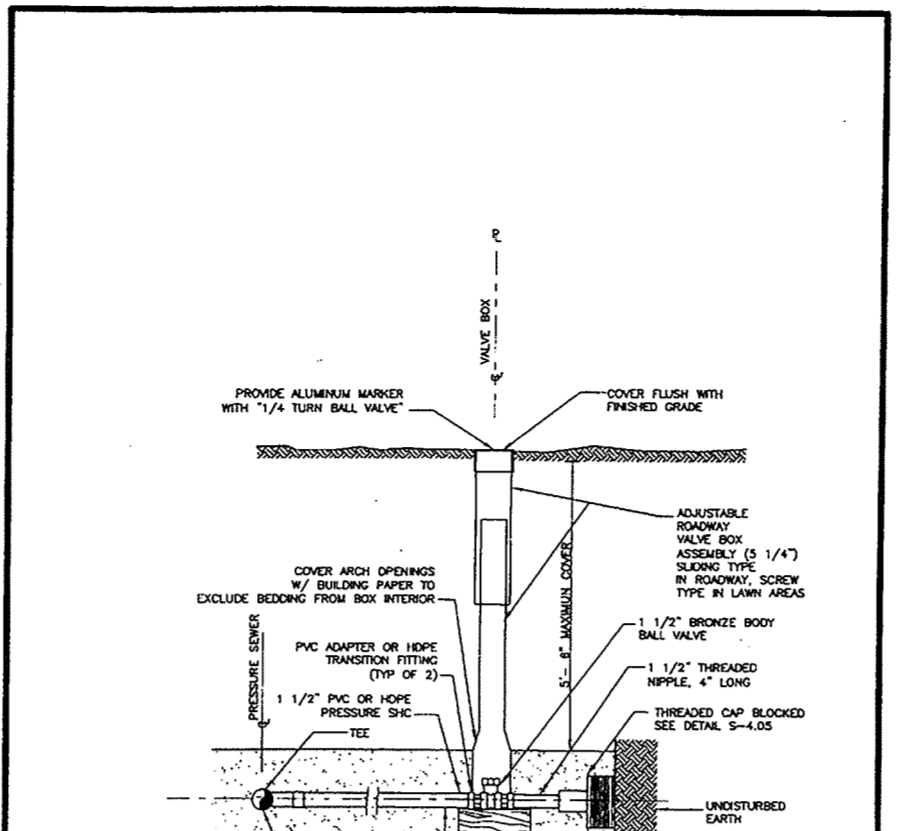


**NOTES:**

1. CAPS TO BE REMOVED TO UNOCCUPIED PORTION OF PIPE.
2. HOLE TO BE MAINTAINED BY OWNER OF LOT 220A.
3. ALL HOLES TO BE REPAIRED TO ORIGINAL CONDITION.
4. ALL HOLES TO BE REPAIRED TO ORIGINAL CONDITION.

NO.	DATE	BY	REVISION
1	1/1/17	JH	ADD
2	1/1/17	JH	ADD
3	1/1/17	JH	ADD
4	1/1/17	JH	ADD

Project	Howard County, Maryland	Pressure Sewer	Detail
Client	Department of Public Works	House Connection	S-4.05
Design	Robert H. Vogel	Cop & Plug Blocking	



**NOTES:**

1. SERVICE VALVE TO BE LEFT IN THE CLOSED POSITION.
2. SERVICE VALVE TO BE LEFT IN THE CLOSED POSITION.
3. SERVICE VALVE TO BE LEFT IN THE CLOSED POSITION.
4. SERVICE VALVE TO BE LEFT IN THE CLOSED POSITION.

Project	Howard County, Maryland	Pressure Sewer	Detail
Client	Department of Public Works	House Connection	S-4.03
Design	Robert H. Vogel	Service Valve Assembly	

**TEMPORARY SEEDING NOTES**

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, digging or other acceptable means before seeding, if not previously loosened.

**SOIL AMENDMENTS:** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.).

**SEEDING:** For the periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushels per acre of optimal mix (8.2 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 1 thru February 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 soil.

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

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

**SEQUENCE OF CONSTRUCTION**

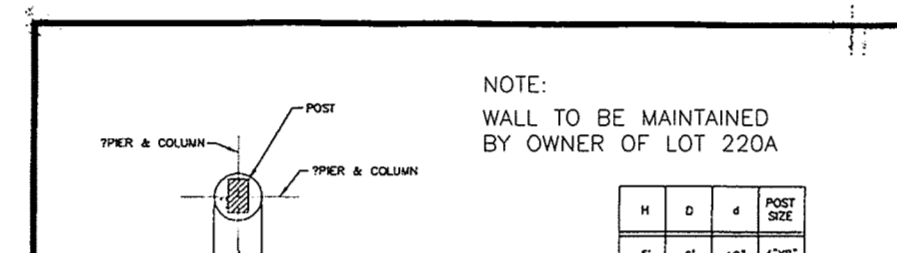
1. Obtain grading permit.
2. Notify Howard County Bureau Of Inspections and Permits (1 Day) (410.313.1880) at least 24 hours before starting any work (1 Day)
3. Construct Stabilized Construction Entrances. (1 Day)
4. Install silt fence and erosion control matting. (2 Days)
5. After obtaining permission from the sediment control inspector to proceed, rough grade site. (4 Days)
6. Construct house. The first floor elevation cannot be more than 1' higher or 0.2' lower than the elevations shown on this plan. The foundation footprint must be within the generic block. (3 Months)
7. Construct Noise Wall.
8. Install rain gardens, as shown on plans.
9. Upon stabilization of all disturbed areas and with the approval of the sediment control inspector, remove all sediment control devices. (2 Days)

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP
BeC2	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C

**RAIN GARDEN FACILITY ELEVATIONS**

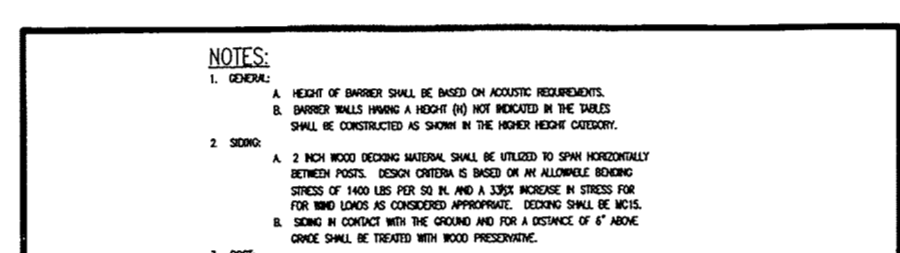
RAIN GARDEN	A	B	C	D	E	F	UNDERDRAIN INV. OUT	OUTFALL INV.	FACILITY SIZE
LOT 220A (1)	113.50	112.50	112.33	109.33	108.66	107.99	108.24	107.90	104 SF
(2)	116.00	115.00	114.83	111.16	110.49	110.74	110.50	110.50	96 SF
LOT 222A (1)	123.50	123.00	122.83	119.83	119.16	118.49	118.74	107.90	6.5'x6.5'
(2)	116.00	115.50	115.33	112.33	111.66	110.99	111.24	107.90	6.5'x6.5'



**NOTES:**

1. SEE PLAN S-4.04
2. SEE PLAN S-4.04
3. SEE PLAN S-4.04
4. SEE PLAN S-4.04

Project	Howard County, Maryland	Noise Wall	Detail
Client	Department of Public Works	Private	R-9.05
Design	Robert H. Vogel		

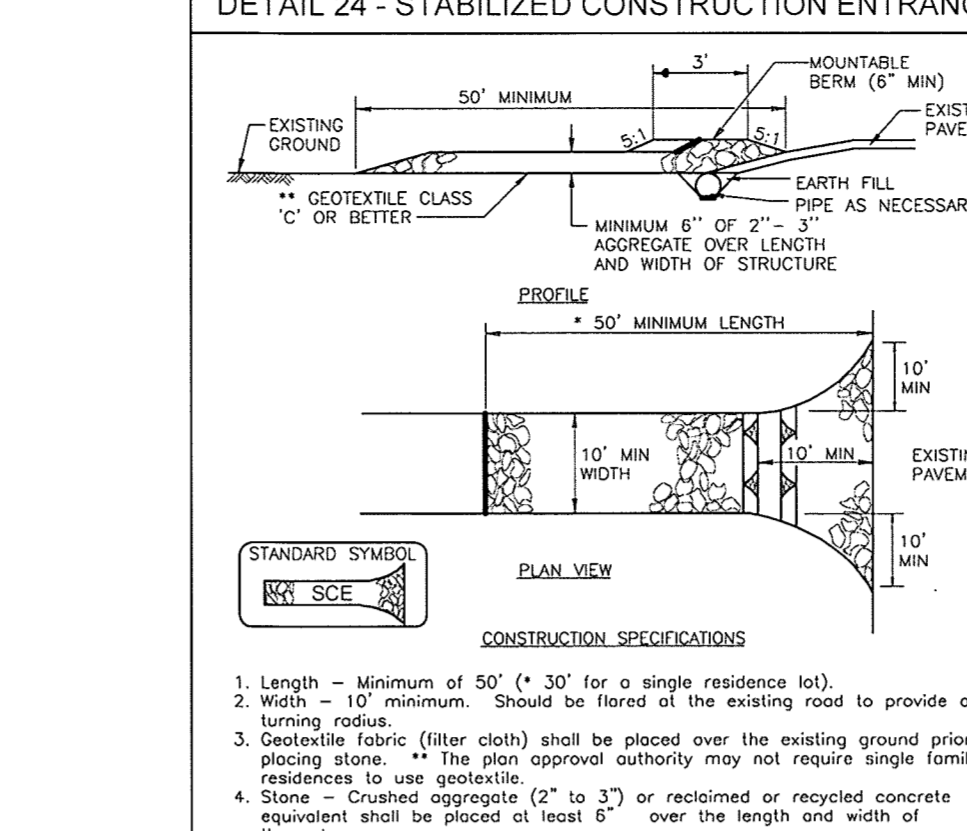


**NOTES:**

1. SEE PLAN S-4.04
2. SEE PLAN S-4.04
3. SEE PLAN S-4.04
4. SEE PLAN S-4.04

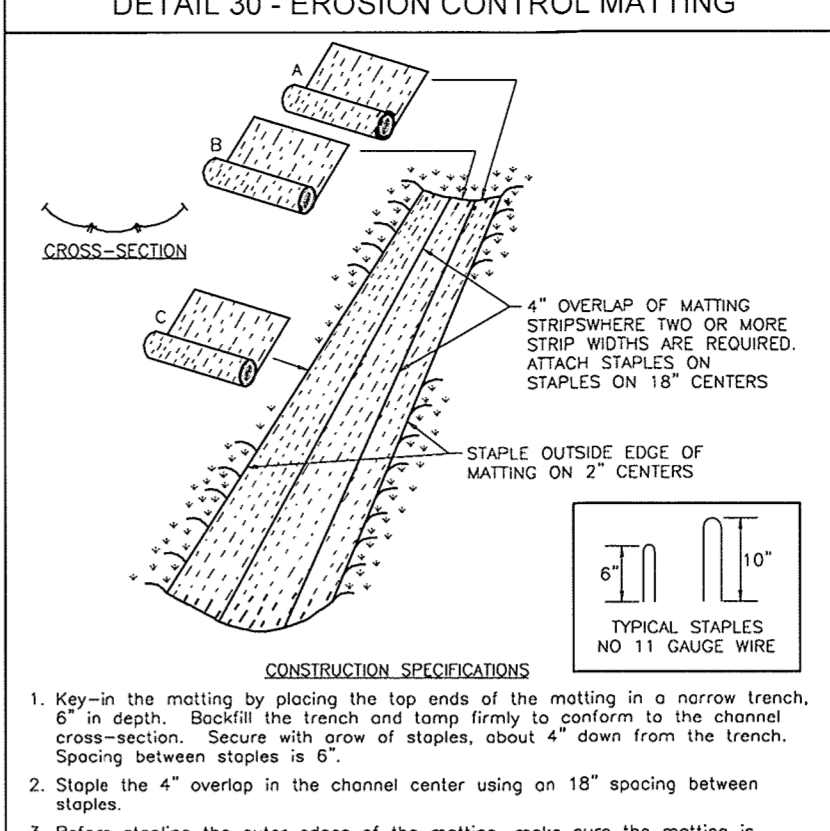
Project	Howard County, Maryland	Noise Wall	Detail
Client	Department of Public Works	Private	R-9.06
Design	Robert H. Vogel		

**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**



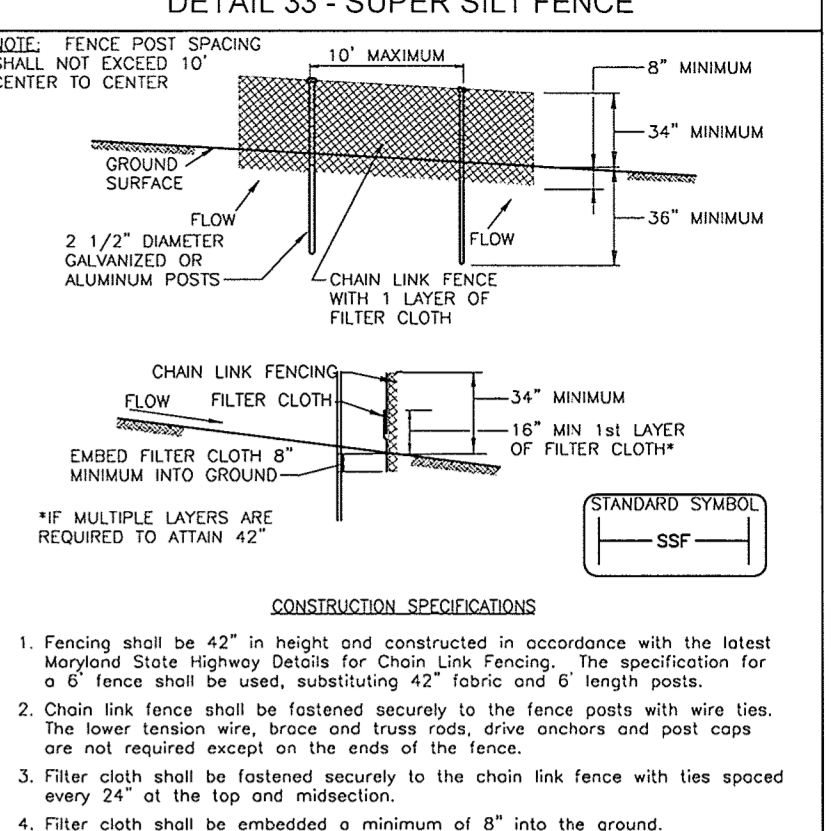
- CONSTRUCTION SPECIFICATIONS**
1. Length - Minimum of 50' (+ 30' for a single residence lot).
  2. Width - 10' minimum. Should be flared at the existing road to provide a turning radius.
  3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval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

**DETAIL 30 - EROSION CONTROL MATTING**



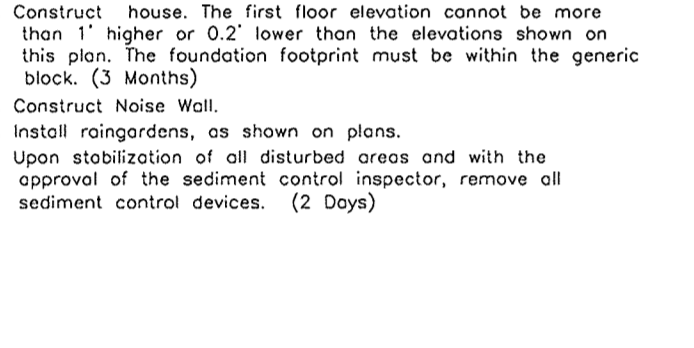
- CONSTRUCTION SPECIFICATIONS**
1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with grow of staples, about 4" down from the trench. Spacing between staples is 6".
  2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
  3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
  4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer row, and 2 alternating rows down the center.
  5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4" shingle fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
  6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

**DETAIL 33 - SUPER SILT FENCE**



- CONSTRUCTION SPECIFICATIONS**
1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 62" fabric and 6" length posts.
  2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
  3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and midsection.
  4. Filter cloth shall be embedded a minimum of 8" into the ground.
  5. When two sections of filter cloth adjoin each other, they shall be overlapped by 8" and folded.
  6. Maintenance shall be performed as needed and all bulges removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
  7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and midsection and shall meet the following requirements for Geotextile Class F:
- |                      |                                       |                |
|----------------------|---------------------------------------|----------------|
| Tensile Strength     | 50 lbs/in (min)                       | Test: MSMT 509 |
| Tensile Modulus      | 20 lbs/in (min)                       | Test: MSMT 509 |
| Flow Rate            | 0.3 gal/ft <sup>2</sup> /minute (max) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min)                             | Test: MSMT 322 |

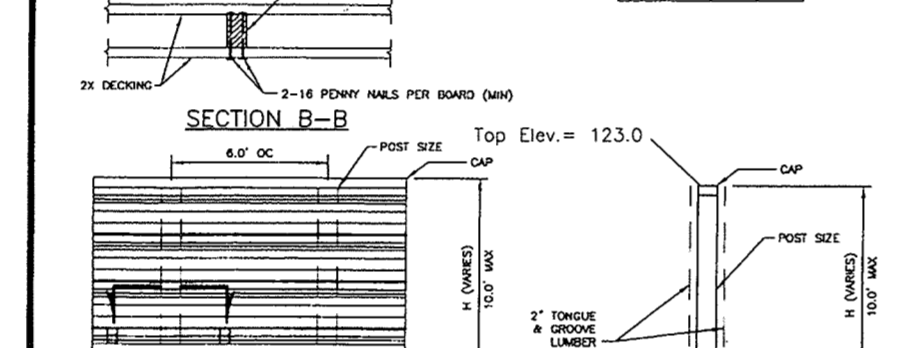
**HOUSE PLAN**



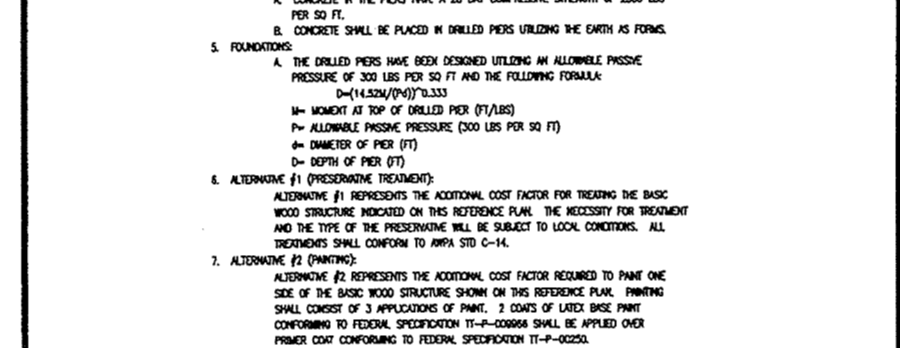
**ENVIRONMENTAL ONE GRINDER PUMP**



**1.5" PUBLIC FORCE MAIN PROFILE**



**RAIN GARDEN #2 PLANTING DETAIL (96 SF)**



**PLANTING SCHEDULE (LOT 220A RG-1)**

QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
4	LINDERA BENZON SPICEBUSH	3 GALLON	CONT
2	ILEX GLABRA INKBERRY	3 GALLON	CONT

1. SF x 0.0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED  
2. PLANTINGS REQUIRED: 2

**PLANTING SCHEDULE (LOT 220A RG-2)**

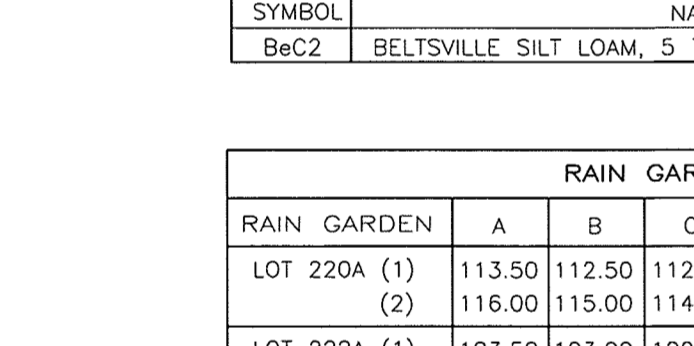
QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
4	LINDERA BENZON SPICEBUSH	3 GALLON	CONT
2	ILEX GLABRA INKBERRY	3 GALLON	CONT

1. SF x 0.0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED  
2. PLANTINGS REQUIRED: 2

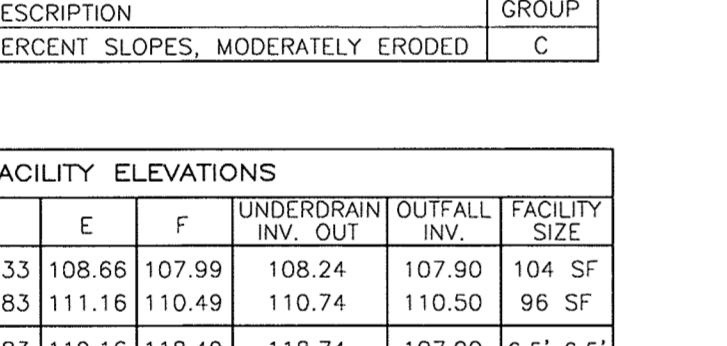
**OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDEN AREAS**

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND WIRE.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

**SECTION A-A**



**SECTION B-B**



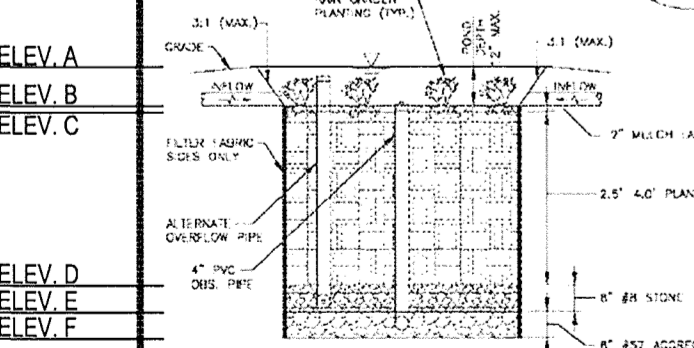
**NOTES**

1. SEE PLAN S-4.04
2. SEE PLAN S-4.04
3. SEE PLAN S-4.04
4. SEE PLAN S-4.04

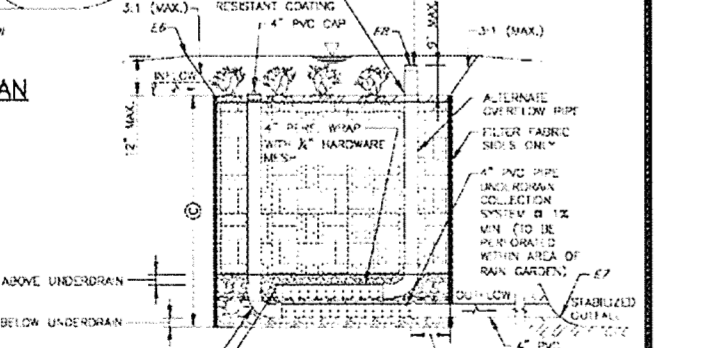
**NOTES**

1. SEE PLAN S-4.04
2. SEE PLAN S-4.04
3. SEE PLAN S-4.04
4. SEE PLAN S-4.04

**SECTION A-A**



**SECTION B-B**



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

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 3/8/21

CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 3/22/21

DIRECTOR  
DATE: 3/22/21

**OWNER/DEVELOPER CERTIFICATION**

I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

DATE: 2-10-21  
OWNER/DEVELOPER SIGNATURE: FAUSTO MORALES  
PRINTED NAME & TITLE: FAUSTO MORALES

**DESIGN CERTIFICATION**

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 2/10/21  
DESIGNER'S SIGNATURE: ROBERT H. VOGEL  
PRINTED NAME: ROBERT H. VOGEL  
DATE: 2/10/21  
M.D. REGISTRATION NO. 16193  
P.E., R.L.S., OR R.L.A. (Circle one)

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

HOWARD SOIL CONSERVATION DISTRICT

**REVISIONS**

NO.	REVISION	DATE
1	REVISE TO SHOW NEW GRADING, SWM, HOUSE LOCATION AND NOISE WALL	01-27-21

**HARWOOD PARK**

LOTS 220-A & 222-A  
DEED REFERENCE: 18666/208

TAX MAP: 38 PARCEL: 873  
1ST ELECTION DISTRICT

GRID: 13 ZONING: R-12  
HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

**TIMMONS GROUP**

PROFESSIONAL CERTIFICATE

DESIGN BY: JMV  
DRAWN BY: JMV  
CHECKED BY: RHV  
DATE: JANUARY 2021  
SCALE: AS SHOWN  
W.O. NO.: 04-172

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2022.