SOILS LEGEND SYMBOL NAME / DESCRIPTION BAILE SILT LOAM

Optional Cartillevere Fireplace 2' x 5'

Optional Ex Mindom 2' x 4'

-OPT. W/OUT BASEMENT

OVERALL LENGTH 52.01

			1
GIC2	GLENELG LOAM, 8 TO 16 PERCENT SLOPES, MODERATELY ERODED	8	
NOTE: HO	ARD COUNTY SOIL SURVEY, MAP NUMBER 15 / 18.		

Alexandria Marie

GlC2

GIB2 GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED B

LOT #	LOT SIZE	STREET	ADDRESS	SHC INV € PROP LINE	MIN. BSM1 ELEV.
i	15,733 S.F.	3038	SOUTHVIEW ROAD	413.24	418.7 <i>4</i>
5	16,166 S.F.	3034	SOUTHVIEW ROAD	413.46	419.64
3	16,689 S.F.	3030	SOUTHVIEW ROAD	413.67	420.57

NOTE: LOT 1 IS FIRST FLOOR SANITARY SERVICE ONLY. LOT 2 MAY REQUIRE A PIPE SLEEVE THROUGH THE FOUNDATION FOOTING.

INDEX OF SHEETS

- TITLE SHEET & SITE DEVELOPMENT PLAN
- SEDIMENT CONTROL PLAN & DETAILS SEDIMENT CONTROL DETAILS
- SWM PLAN & DETAILS
- UTILITY PROFILES & SITE DETAILS

LANDSCAPE PLAN & DETAILS

- Proposed used for site & structure: 3 Single family detached homes Total number of units allowed for project per plat: 3 single family lots Total number of units proposed on submission: 3 single family detached homes
 - Number of parking spaces required by Howard County Zoning Regulations: 2 per lot Number of parking spaces provided: 2 per lot

Limit of Disturbed Area: 1.17 acres / 50,965 s.f.

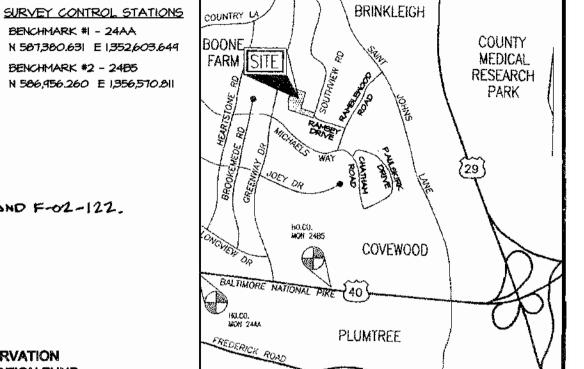
Site Analysis Data Chart

a. Total Project Area: 1.6928 acres / 73,736 s.f.

- Open Space on site: <u>5773 acres</u> and <u>34%</u> of gross area.

 Building coverage of site: <u>5200 s.f. / 0.12 acres</u> and <u>7 %</u> of gross area.

 Applicable DPZ file references: F-01-113, Howard County Plat Reference Number 15209, AND F-02-122.
- Site zoning: R-20.



BENCHMARK #1 - 24AA

BENCHMARK #2 - 2485

Vicinity Map Scale 1" = 2000°

GENERAL NOTES:

- 1. THE PROPERTY OUTLINE IS BASED ON A RECORD PLAT, NO. 15029, RECORDED 10/24/01, PERFORMED BY FREDERICK WARD ASSOCIATES, INC. PLAN NUMBER F-02-122
- 2. THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON TOPOGRAPHY PROVIDED US BY FREDERICK WARD ASSOCIATES, INC. AND CHECKED BY MRA OCT. 2001.
- 3. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- 4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- 5. 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. 24AA AND 24B5 WERE USED FOR THIS PROJECT.
- STORMWATER MANAGEMENT REQUIREMENTS FOR THIS PROJECT CONSIST OF A FEE-IN-LIEU PAYMENT FOR STORMWATER MANAGEMENT AND ON SITE WATER QUALITY MANAGEMENT OF 1" OF RUNOFF OVER IMPERVIOUS. THIS, IN ACCORDANCE WITH SECTION 5.23.A.3 OF THE DESIGN MANUAL, VOLUME 1 AS APPROVED ON FEBRUARY 2, 2001, AND RECORDED WITH F-01-113.
- 7. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06
- REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF PRIVATE 24 FOOT USE-IN-COMMON ACCESS EASEMENT AND SOUTHVIEW ROAD RIGHT-OF-WAY AND NOT ONTO AFFORESAID PRIVATE 24 FOOT WIDE ACCESS EASEMENT.
- 10. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION, AND ALL ADDENDA THERETO.
- FOR DETAILS NOT SHOWN NOT SHOWN ON THESE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARDS SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.

- WATER CONTRACT NO. IS 11-W. SEWER CONTRACT NUMBER IS 32-S
- FINAL PLAN REFERENCE NO. F 01-113, F-02-122.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT, FOR THIS SUBDIVISION WAS FULFILLED BY PAYMENT OF \$13,503.60 TO THE HOWARD COUNTY FOREST CONSERVATION FUND FOR 0.62 ACRES OF AFFORESTATION OBLIGATION PER PLAT 15029 / F-01-113, 4 =-62-122.
- LOTS 1-3 CONTAIN A COMMON DRIVEWAY AND USE-IN-COMMON ACCESS EASEMENT PER FINAL PLAN F 01-113 RECORDED UNDER PLAT NO. 15029. THE DECLARATION OF MAINTENANCE OBLIGATION FOR THE PRIVATE USE-IN-COMMON ACCESS EASMENT SERVING LOTS 1-3 WAS RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY SIMULTANEOUSLY WITH PLAT NO. 15029.
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- IN ACCORDANCE WITH SECT. 128.A.1.B. OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR SETBACK.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S), OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
- NO 100 YEAR FLOODPLAIN EXISTS ON SITE.
- OPEN SPACE LOT 4 WAS DEDICATED TO HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
- AS A CONSEQUENCE OF ITS SUBMISSION ON NOV. 9, 2001, THIS SITE DEVELOPMENT PLAN IS GRANDFATHERED TO THE 4TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLWOING MINIMUM REQUIREMENTS.
- A) WIDTH 12 FEET (14 FEET SERVING MORE THAN ONE RESIDENCE).
- B) SURFACE 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
- C) GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45-FOOT TURNING RADIUS. D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
- E) DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100-YR FLOOD WITH NO MORE THAN 1-FT DEPTH OVER DRIVEWAY SURFACE.
- F) STRUCTURE CLEARANCES MINIMUM 12 FEET.

Vernon & Gwendolyn L. Brokke

Chris Rachuba - President - Rachuba Home Builders

1111 Vineyard Hill Road

Catonsville, Maryland 21228

Contract Purchaser

Eldersburg, Maryland 21784

946 - A Marimich Court

Phone: (410) 781-3400

G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.

MORRIS & RITCHIE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

4/23/02

CENSUS TR.

6022.00

LOT/PARCEL #

ELEC. DIST.

1405500

9090 JUNCTION DRIVE, SUITE 9 ANNAPOLIS JUNCTION, MARYLAND 20701 (410) 792-9792 or (301) 776-1690 FAX (410) 792-7395



Southview Road Lots 1-3 and Open Space Lot 4

TAX MAP # 17, GRID: 22 2ND ELECTION DISTRICT

" to hing	10 1 10 CEPT 19-12-02	PARCEL: P/O 420,730 DEED REF.: L. 5014/F. 389	HOWARD	COUNTY, MD	
DATE	REVISIONS		JOB NO.:	12282	
5/15/02	REV. HOUSE MA	DELTYPE ON LOT 3	SCALE:	1" = 30'	
			DATE:	3/22/02	
			DRAWN BY	C: DWM/TCN	
			DESIGN B	Y: DWM/TCN	
			REVIEW BY	: PVM	
			SHEET:	1 of 6	

approved: department of planning and zoning

BLOCK NO. ZONING TAX/ZONE MAP

PROPOSED USE

ADDRESS CHART

SINGLE FAMILY RESIDENTIAL

SEWER CODE

STREET ADDRESS

3038 SOUTHVIEW ROAD

3034 SOUTHVIEW ROAD

3030 SOUTHVIEW ROAD

CHIEF, DEVELOPMENT ENGINEERING DIVISION GNAS

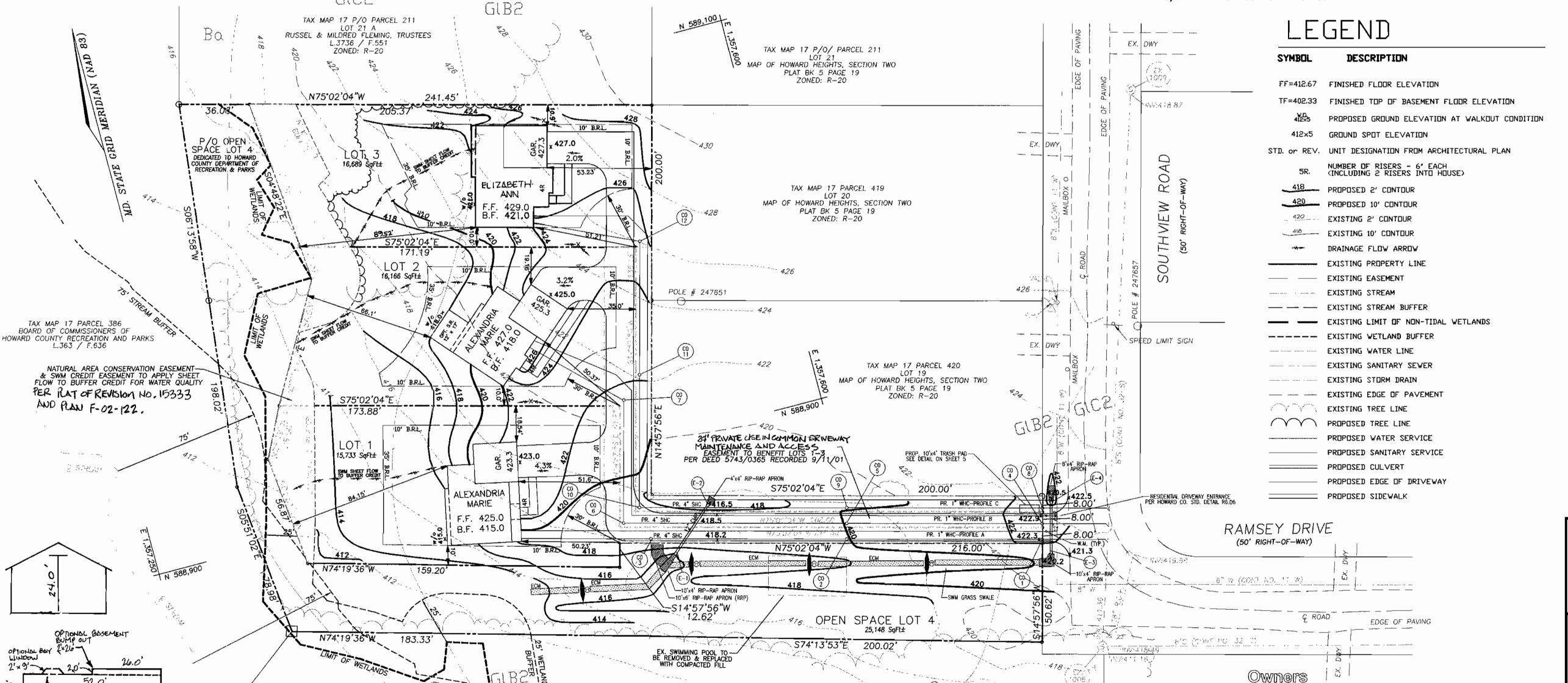
SOUTHVIEW ROAD

H04

LOT NUMBER

15029 6 15333

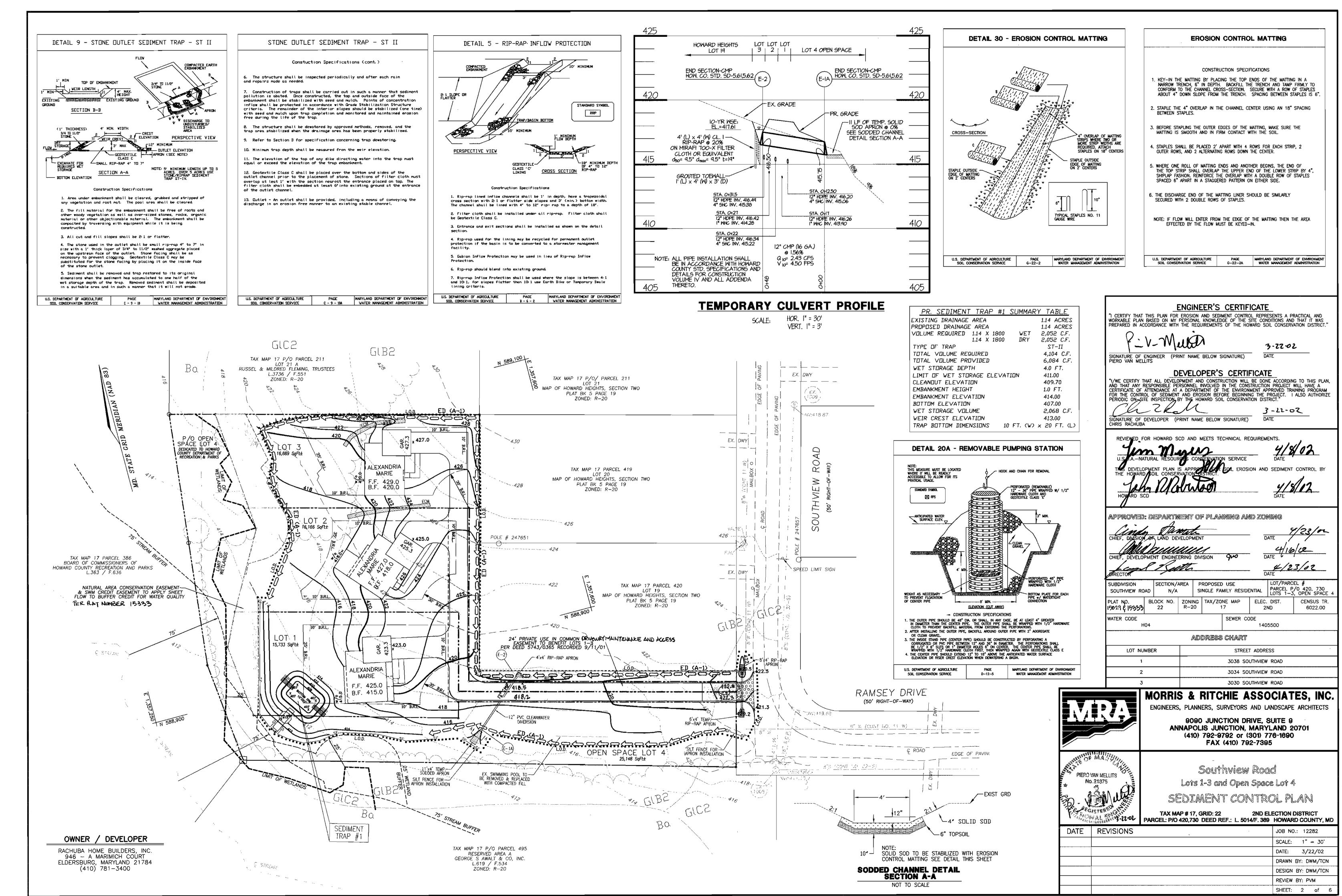
WATER CODE



TAX MAP 17 P/O PARCEL 495 RESERVÉD AREA A

GEORGE S AWALT & CO, INC. L.619 / F.534 ZONED: R-20

BO



STANDARDS AND SPECIFICATION FOR TOPSON.

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

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

CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE IS LIMITED TO AREAS HAVING 24 OR FLATTER
- THE TEXTURE OF THE EXPOSED SUBSCIL/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.

- THE DRIGINAL SUIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH,
- THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS
- II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2,1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREA HAVING SLOPES STEEPER THAN 21 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 STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN REPRESENTATIVES 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
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSDILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVELS, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUICKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - III. WHERE THE SUBSUIL 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 SF) 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 SITE HAVING DISTURBED AREAS UNDER 5 ACRE

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

III. TOPSOIL APPLICATION

- WHEN TOPSDILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- II. GRADES ON THE AREAS TO BE TOPSDILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4'-8' HIGHER IN ELEVATION.
- III. TOPSOIL SHALL BE UNIFORMLY DISTURBED 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
- IV. TOPSOIL SHALL NOT 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
- VI. ALTERNATIVE FOR PERMANENT SEEDING-INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - I. COMPOSTED SLUDGE MATERIAL FOR USE A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRE SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUBGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, AND 0.2 PERCENT POTASSIUM AND HAVE A OH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1
- II. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4LB/1,000 SF, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA. PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTE. REVISED 1973.

STANDARDS AND SPECIFICATIONS FOR LAND GRADING

RESHAPING OF THE EXISTING LAND SURFACE IN ACCORDANCE WITH A PLAN AS DETERMINED BY ENGINEERING SURVEY AND LAYOUT.

THE PURPOSE OF A LAND GRADING SPECIFICATION IS TO PROVIDE FOR EROSION CONTROL AND VEGETATIVE ESTABLISHMENT ON THOSE AREAS WHERE THE EXISTING LAND SURFACE IS TO BE RESHAPED BY GRADING ACCORDING TO PLAN.

DESIGN CRITERIA

THE GRADING PLAN SHOULD BE BASED UPON THE INCORPORATION OF BUILDING DESIGNS AND STREET LAYOUTS THAT FIT AND UTILIZE EXISTING TOPOGRAPHY AND DESIRABLE NATURAL SURROUNDINGS TO AVOID EXTREME GRADE MODIFICATIONS. INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE LIMITATIONS THAT MUST BE IMPOSED ON THE GRADING OPERATION RELATED TO SLOPE STABILITY, EFFECT ON ADJACENT PROPERTIES AND DRAINAGE PATTERNS, MEASURES FOR DRAINAGE AND WATER REMOVAL AND VEGETATIVE TREATMENT, ETC.

MANY COUNTIES HAVE REGULATIONS AND DESIGN PROCEDURES ALREADY ESTABLISHED FOR LAND GRADING AND CUT AND FILL SLOPES. WHERE THESE REQUIREMENTS EXIST, THEY SHALL BE FOLLOWED. THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS OF THE AREA(S) TO BE GRADED. THE PLAN SHALL ALSO INCLUDE PRACTICES FOR EROSION CONTROL, SLOPE STABILIZATION, SAFE DISPOSAL OF RUNDFF WATER AND DRAINAGE, SUCH AS WATERWAYS, LINED DITCHES, REVERSE SLOPE BENCHES (INCLUDE GRADE AND CROSS SECTION), GRADE STABILIZATION STRUCTURES, RETAINING WALLS, AND SURFACE AND SUBSURFACE DRAINS. THE PLAN SHALL ALSO INCLUDE PHASING OF THESE PRACTICES. THE FOLLOWING SHALL BE INCORPORATED INTO THE PLAN-

- PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE RUNDFF TO STORM DRAINS, PROTECTED DUTLETS OR TO STABLE WATER COURSES TO INSURE THAT SURFACE RUNDFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.
- CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASSES SHALL NOT BE STEEPER THAN 2:1. (WHERE THE SLOPE IS TO BE MOVED THE SLOPE SHOULD BE NO STEEPER THAN 3:1. 4:1 IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOVING STEEP SLOPES.> SLOPES EXCEEDING 2:1 SHALL REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS THAT SHALL BE ADEQUATELY SHOWN ON THE
- III. REVERSE BENCHES SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEEDS 20 FEET; FOR 3:1 SLOPE IT SHALL BE INCREASED TO 30 FEET AND FOR 4:1 TO 40 FEET. BENCHES SHALL BE LOCATED TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY THE WATER TO A STABLE DUTLET. SOILS, SEEPS, ROCK DUTCROPS, ETC., SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.
 - A. BENCHES SHALL BE A MINIMUM OF SIX FEET WIDE TO PROVIDE FOR EASE OF MAINTENANCE.
 - BENCHES SHALL BE DESIGNED WITH A REVERSE SLOPE OF 64 OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. BENCH GRADIENT TO THE OUTLET SHALL BE BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.
 - C. THE FLOW LENGTH WITHIN A BENCH SHALL NOT EXCEED 800' UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS. FOR FLOW CHANNEL STABILIZATION SEE TEMPORARY SWALE.
- IV. SURFACE WATER SHALL BE DIVERTED FROM THE FACE OF ALL CUT AND/OR FILL SLOPES BY THE USE OF EARTH DIKES, DITCHES AND SWALES OR CONVEYED DOWNSLOPE BY THE USE OF A DESIGNED STRUCTURE, EXCEPT WHERE:
 - A. THE FACE OF THE SLOPE IS OR SHALL BE STABILIZED AND THE FACE OF ALL GRADED SLOPES SHALL BE PROTECTED FORM SURFACE RUNDFF UNTIL THEY ARE
 - THE FACE OF SLOPE SHALL NOT BE SUBJECT TO ANY CONCENTRATED FLOWS OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGEWAYS, GRADED SWALES, DOWNSPOUTS,
 - THE FACE OF THE SLOPE WILL BE PROTECTED BY SPECIAL EROSION CONTROL MATERIALS, TO INCLUDE, BUT NOT LIMITED TO APPROVED VEGETATIVE STABILIZATION PRACTICES (SEE SECTION G), RIP-RAP OR OTHER APPROVED STABILIZATION METHODS.
- CUT SLOPES OCCURRING IN RIPABLE ROCK SHALL BE SERRATED AS SHOWN ON THE FOLLOWING DIAGRAM. THESE SERRATIONS SHALL BE MADE WITH CONVENTIONAL EQUIPMENT AS THE EXCAVATION IS MADE. EACH STEP OR SERRATION SHALL BE CONSTRUCTED ON THE CONTOUR AND WILL HAVE STEPS CUT AT NOMINAL TWO-FOOT INTERVALS WITH NOMINAL THREE-FOOT HORIZONTAL SHELVES. THESE STEPS WILL VARY DEPENDING ON THE SLOPE RATIO OR THE CUT SLOPE, THE NOMINAL SLOPE LINE IS 14. THESE STEPS WILL WEATHER AND ACT TO HOLD MOISTURE, LIME, FERTILIZER AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER LIVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION. OVERLAND FLOW SHALL BE DIVERTED FROM THE TOP OF ALL SERRATED CUT SLOPES AND CARRIED TO A SUITABLE OUTLET.
- SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE
- VII. SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATELY PROTECTING SUCH PROPERTIES AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGES.
- VIII. FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIAL. IT SHOULD BE FREE OF STONES OVER TWO (2) INCHES IN DIAMETER WHERE COMPACTED BY HAND OR MECHANICAL TAMPERS OR OVER EIGHT (8) INCHES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER EQUIPMENT. FROZEN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL BE PLACED ON A FROZEN FOUNDATION.
- IX. STOCKPILES, BORROW AREAS AND SPOIL SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATIONS.
- ALL DISTURBED AREAS SHALL BE STABILIZED STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH 20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION.

VEGETATIVE STABILIZATION

Permanent and Temporary Seeding, Sodding and Mulching

I. SITE PREPARATION

PERMANENT OR TEMPORARY VEGETATION SHALL BE ESTABLISHED WITHIN SEVEN (7) DAYS ON THE SURFACE OF ALL SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, SEDIMENT CONTROL BASINS, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND WITHIN 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE, MULCHING MAY ONLY BE USED ON DISTURBED AREAS AS TEMPORARY COVER WHERE VEGETATION IS NOT FEASIBLE OR WHERE SEEDING CAN NOT BE COMPLETED BECAUSE OF

II. SEEDED PREPARATION AND SEEDING APPLICATION

LOOSEN THE TOP LAYER OF THE SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT SUCH AS DISC HARROWS, CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF THE SOIL BY DISCING OR BY OTHER SUITABLE MEANS. ROUGH AREAS SHOULD NOT BE ROLLED OR DRAGGED SMOOTH , BUT LEFT IN A ROUGHENED CONDITION. STEEP SLOPES GREATER THAN 3:1 SHOULD BE TRACKED BY A DOZER, LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL SHOULD BE LODSE AND FRIABLE. PERMANENT COVER MAY REQUIRE AN APPLICATION OF TOPSOIL. SD, IT MUST MEET THE REQUIREMENTS SET FORTH IN SECTION 21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL FROM THE 1994 STANDARDS AND SPECIFICATIONS.

SOIL TESTS SHALL BE MADE ON SITES OVER FIVE ACRES TO DETERMINE THE EXACT REQUIREMENTS FOR BOTH LIME AND FERTILIZER. FOR SITES UNDER 5 ACRES, IN LIEU OF A SOIL TEST, APPLY THE FOLLOWING

FERTILIZER NITROGEN 2 LBS/1000 SF (90 LBS/AC) 4 LBS/1000 SF (175 LBS/AC) 4 LBS/1000 SF (174 LBS/AC)

GROUND LIMESTONE 2 TONS/AC

BARLEY OR RYE PLU

FOXTAIL MILLET

FESCUE (85%)

FESCUE (10%)

GRASS (5%)

SECTION.

KENTUCKY BLUE

?VI. TURFGRASS ESTABLISHMEN?

CHEWINGS

IV. SEDIMENT CONTROL PRACTICE SEEDING

SELECT A SEEDING MIXTURE FROM TABLE 25 OR 26 IN SECTION "G" OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE NOTE: IF SEDIMENT CONTROL PRACTICES ARE IN FOR LONGER THAN 12 MONTHS, PERMANENT SEEDING IS REQUIRED.

V. TEMPORARY/PERMANENT SEEDING MIXTURES AND RATES

SEED MIXTURE(HARDINESS ZONE 7a)

SEED MIXTURE(HARDINESS ZONE 7a)

FROM TABLE 28

APPLICATION

RATE (LB/AC)

8/15-11/30

8/15-11/30

8/15-11/30

THIS INCLUDES LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL

MAINTENANCE. AREA TO RECEIVE SEED SHALL BE TILLED BY

INCHES, LEVELED AND RAKED TO PREPARE A PROPER SEEDBED.

STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER SHALL BE

G-20 OF THE 1994 STANDARDS AND SPECIFICATIONS OR SELECT

RECOMMENDATIONS FOR MARYLAND". SEE MIMED AT END OF THIS

PUBLICATION, AGRONOMY MIMED #77, 'TURFGRASS CULTIVAR

FROM THE LIST IN THE MOST CURRENT UNIVERSITY OF MARYLAND

DISCING OR BY OTHER APPROVED METHODS TO A DEPTH OF 3 TO 5

REMOVED. THE RESULTING SEEDBED SHALL BE IN SUCH CONDITION

THAT FUTURE MOWING OF CHOOSE A TURFGRASS MIXTURE FROM PATE

SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF

SELECT A SEEDING MIXTURE FROM APPROPRIATE TABLE 25 OR 26 IN SECTION "G" OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BELOW.

TEMPORARY SEEDING SUMMARY

DEPTH

1/4"-1/2"

1/4"-1/2"

application seeding seeding

8/15-11/30 | 8/15-11/30 | 1/4*-1/2*

RATE (LB/AC) DATE

DATE

8/15-11/30

8/15-11/30

8/15-11/30 | 1/4*-1/2*

VII. MULCHING

ALL SEEDING REQUIRE MULCHING. ALSO MULCH DURING NON-SEEDING DATES UNTIL SEEDING CAN BE DONE. MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF A 2 TONS/ACRE OR 90 LBS/1000 SF (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS/ACRE, MULCH MATERIAL SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY MULCH NETTINGS, MULCH ANCHORING TOOL, WOOD CELLULOSE FIBER OR LIQUID MULCH

APPLY WOOD CELLULOSE FIBER AT A DRY WEIGHT OF 1,500 LBS/ACRE. IF MIXED WITH WATER, USE 50 LBS. OF WOOD CELLULOSE FIBER PER 1000 GALLONS OF WATER.

LIQUID BINDER SHOULD BE APPLIED HEAVIER AT THE EDGE, WHERE WIND CATCHES MULCH IN VALLEYS, AND ON CREST OF BANKS. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. APPLY RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR AND MULCH. STABLE LIGHT WEIGHT, PLASTIC NETTING OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD DE 36 HOURS. SOD IS TO BE LAID WITH THE LONG EDGES. PARALLEL TO THE CONTOUR USING STAGGERED JOINTS WITH ALL ENDS TIGHTLY ABUTTED AND NOT OVER LAPPING. SOD SHALL BE ROLLED AND THOROUGHLY WATERED AFTER INSTALLATION. DAILY WATERING TO MAINTAIN 4 INCH DEPTH OF MOISTURE FOR THE FIRST WEEK IS REQUIRED IN THE ABSENCE OF RAINFALL. SOD IS NOT TO

FERTILIZER RATE LIME RATE

600 LB/AC 2 TONS/AC

(15 LB/1000 SF) (100 LB/1000 SF)

4 LB/ | 4 LB/ | 2 TONS/AC

1000 SF) 1000 SF) 1000 SF) 1000 SF)

=900 LBS/AC DF 10-20-20

(10-10-10)

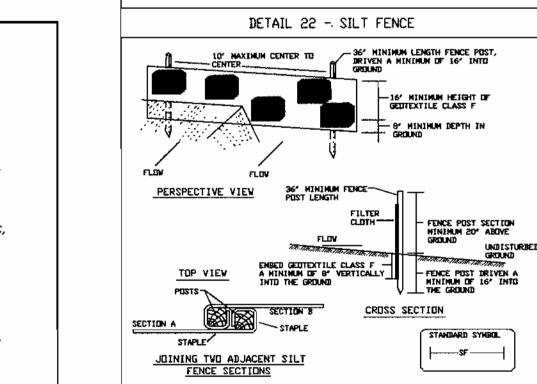
FERTILIZER RATE

P205

(10-20-20)

BE APPLIED ON FROZEN GROUND.

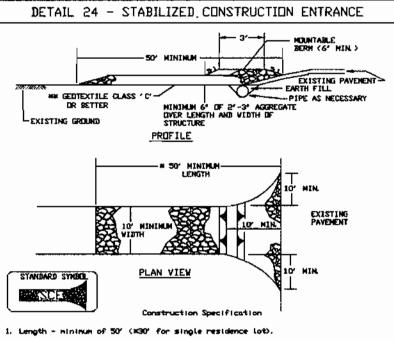
- IRRIGATE-APPLY MINIMUM 1" OF WATER EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE, WHEN SOIL MOISTURE BECOMES DEFICIENT TO PREVENT LOSS OF STAND OF PROTECTIVE
- REPAIRS- IF STAND PROVIDES BETWEEN 40% TO 94% GROUND COVERAGE, OVERSEED AND FERTILIZER USING HALF OF THE RATES ORIGINALLY APPLIED. IF STAND PROVIDES LESS THAN 40% COVERAGE, REESTABLISH AND STAND FOLLOWING DRIGINAL RATES AND PROCEDURES.
- NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL VEGETATIVE PRACTICES.



Construction Specifications

Test MSNT 509 Test MSNT 509 Tensile Strength 50 lbs/in (min.) Tensile Hodulus 20 lbs/in (nin.) 0.3 gal ft*/ minute (max.) Test MSMT 322 75% (min.) Test MSMT 322 Filtering Efficiency 75% (min.)

Where ends of geotextite fabric come together, they shall be overlapped, 'olded and stapled to prevent sediment bypass. budges occur or when sediment accumulation reached 50% of the fabric height. U.S. DEPARTMENT OF AGRICULTURE PAGE HARYLAND DEPARTMENT OF ENVIRONMENT SUD., CONSERVATION SERVICE E - 15 - 3 VATER MANAGEMENT ADMINISTRATION



2. Width - 10' minimum, should be flored at the existing road to provide a turning

Geotextile Pabric (filter cloth) shall be placed over the existing ground prior
to placing stone. mathe plan approval authority may not require single family
residences to use geotextile.

4. 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 5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pi installed through the stabilized construction entrance shall be protected with a

nountable bern with \$1 slopes and a minimum of 6' of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE 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.

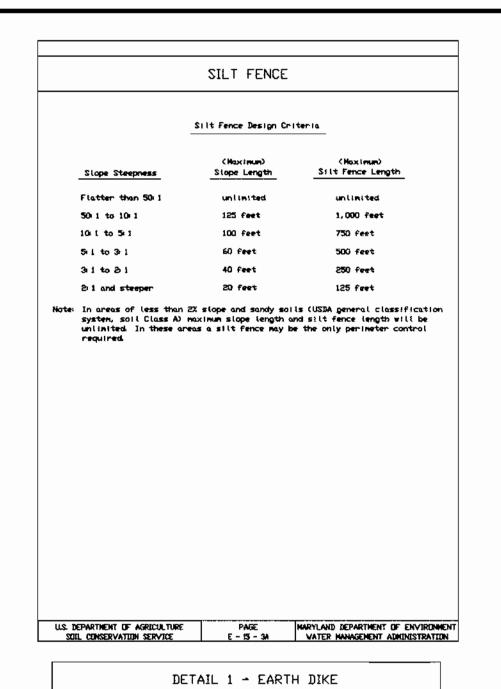
U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE F-B-3 WATER MANAGEMENT ADMINISTRATION

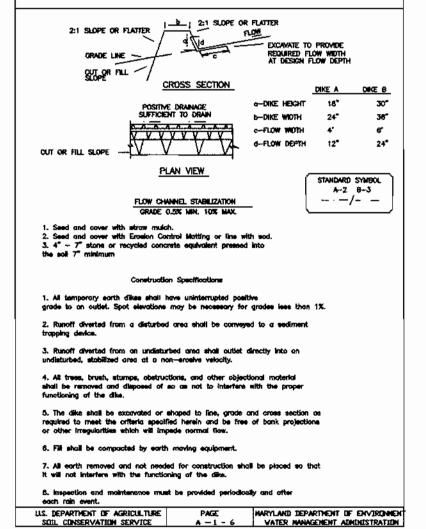
2 DAYS

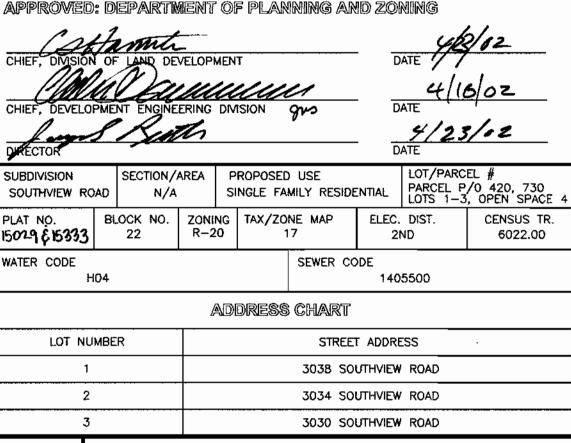
SEQUENCE OF CONSTRUCTION

1.	OBTAIN ALL NECESSARY PERMITS. CONTACT THE HOWARD COUNTY OFFICE OF INSPECTIONS AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK.	1 DAY
2.	CLEAR AND GRUB FOR INSTALLATION OF SEDIMENT CONTROLS ONLY.	2 DAYS
3.	INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES PER THIS PLAN. CONSTRUCT TEMPORARY 12" CMP CLEANWATER DIVERSION. SEE DETAIL ON SHEET 2.	10 DAYS
4.	CLEAR AND GRUB SITE AREA. BEGIN GRADING FOR HOUSE CONSTRUCTION.	15 DAYS
5.	WITH GRADING INSPECTOR'S APPROVAL, BEGIN HOUSE CONSTRUCTION. STABILIZE ALL AREAS AS THEY ARE BROUGHT TO FINAL GRADE. INSTALL SOIL STABILIZATION MATTING IN ALL SWALES PER SEDIMENT CONTROL PLAN.	3 MONTHS
6.	FINALIZE GRADING FOR GRASS SWALE AND CONVERT 12" CNP DIVERSION TO DRIVEWAY CULVERT. SEE DETAIL ON SHEET 2. ONCE SWALE AND ALL. UPSTREAM AREA ARE STABLIZED, AND WITH SEDIMENT CONTROL INSPECTOR'S APPROVAL, REMOVE SEDIMENT TRAP	10 DAYS
7.	WITH SEDIMENT CONTROL INSPECTOR'S APPROVAL, REMOVE ALL REMAINING	

SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.



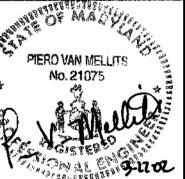






| MORRIS & RITCHIE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9090 JUNCTION DRIVE, SUITE 9 ANNAPOLIS JUNCTION, MARYLAND 20701 (410) 792-9792 or (301) 776-1690 FAX (410) 792-7395



Southview Road Lots 1-3 and Open Space Lot 4 SEDIMENT CONTROL DETAILS

TAX MAP # 17, GRID: 22 PARCEL: P/O 420,730 DEED REF.: L. 5014/F. 389 HOWARD COUNTY, MD

REVISIONS JOB NO.: 12282 SCALE: N/A DATE: 3/22/02 DRAWN BY: DWM/TCN DESIGN BY: DWM/TCN REVIEW BY: PVM

LIME RATE

(100 LB/

SITE ANALYSIS

TOTAL AREA OF SITE	1.70 A	CRES
AREA DISTURBED	1.17 A	CRES
AREA TO BE ROOFED OR PAVED	0.31 A	CRES
AREA TO BE VEGETATIVELY STABILIZED	0.86 A	CRES
TOTAL CUT	1,697 CU.	YDS.
TOTAL FILL	1,054 CU.	YDS.
OFFSITE WASTE/BORROW AREA LOCATION		N/A
"THE EARTHWORK QUANTITIES SHOWN HEREON ARE PURPOSES ONLY. MRA MAKES NO GUARANTEE OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EART ENCOUNTERED DURING CONSTRUCTION."	ACCURACY (OF ACTOR

RACHUBA HOME BUILDERS, INC. 946 - A MARIMICH COURT ELDERSBURG, MARYLAND 21784 (410) 781-3400

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS. NATURAL RESOURALS CONSERVATION SERVICE SOIL EROSION AND SEDIMENT CONTROL BY

OWNER / DEVELOPER

SHEET: 3 of 6 SDP-02-50

2ND ELECTION DISTRICT

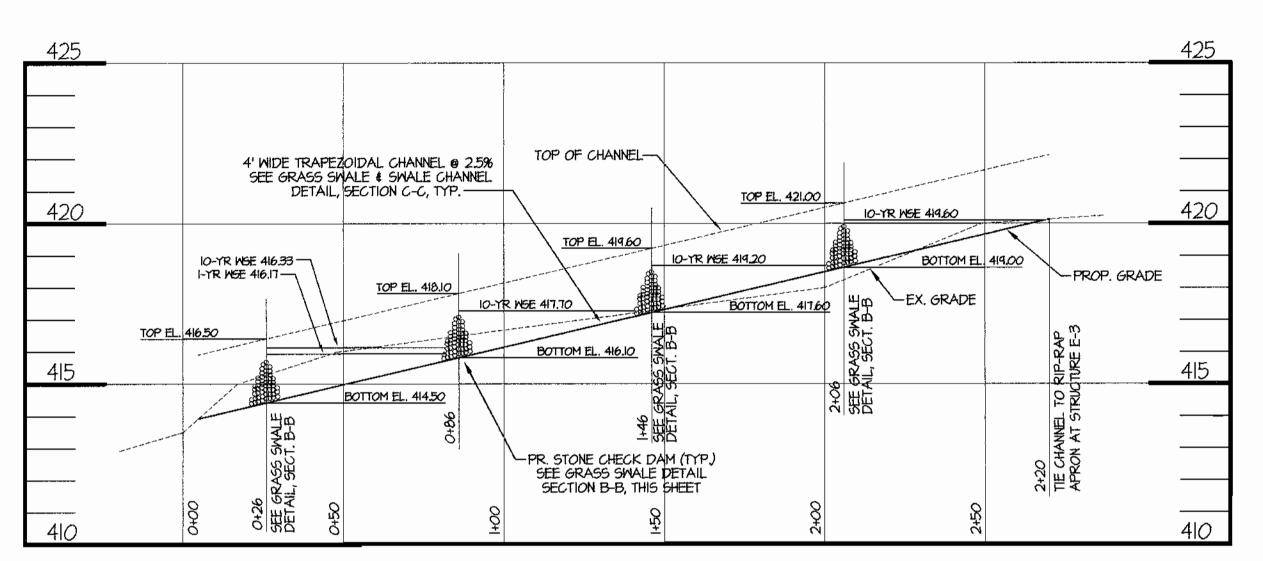
ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)

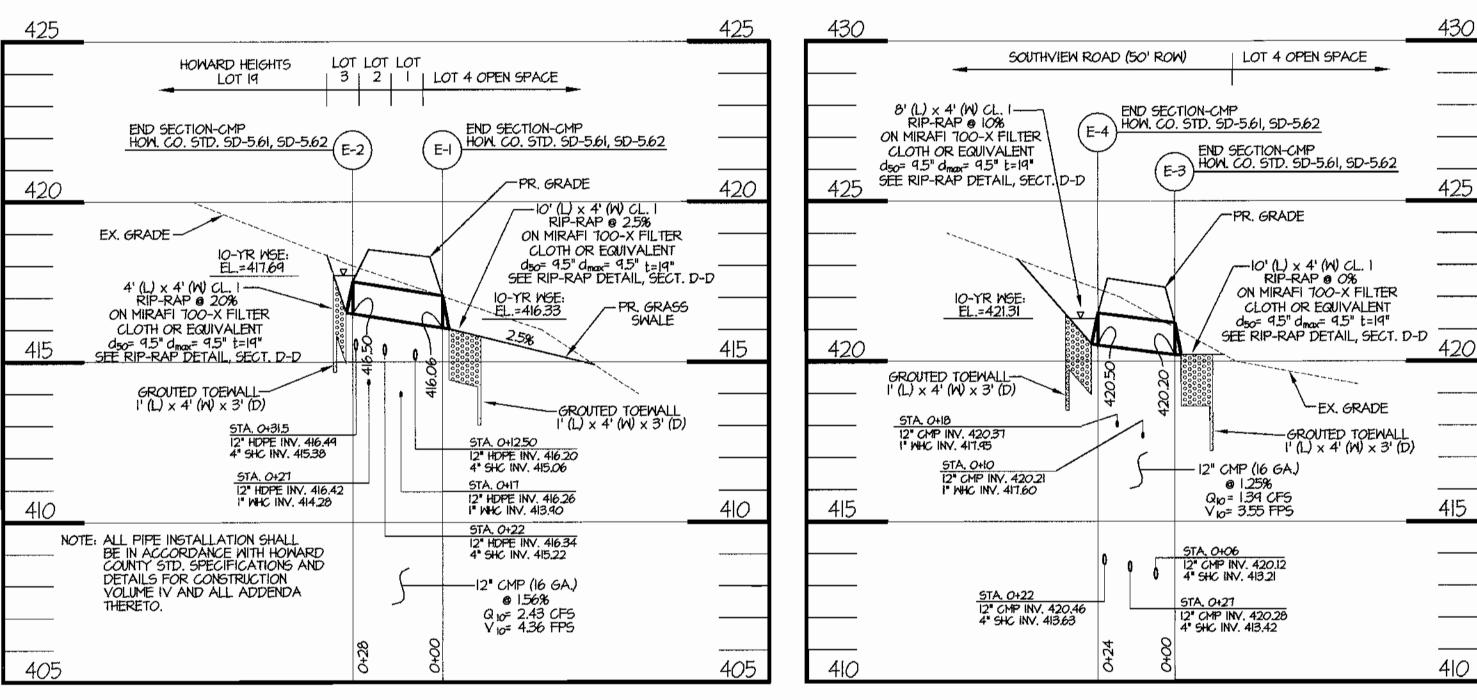
3-22-02

DEVELOPER'S CERTIFICATE "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON—SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT." CKar 3-22-02 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)



GRASS CHANNEL - PROFILE

HOR. I" = 30' SCALE: VERT. $1^n = 3^n$



CULVERT PROFILE

HOR, 1" = 30" VERT. 1" = 3"

CULVERT PROFILE

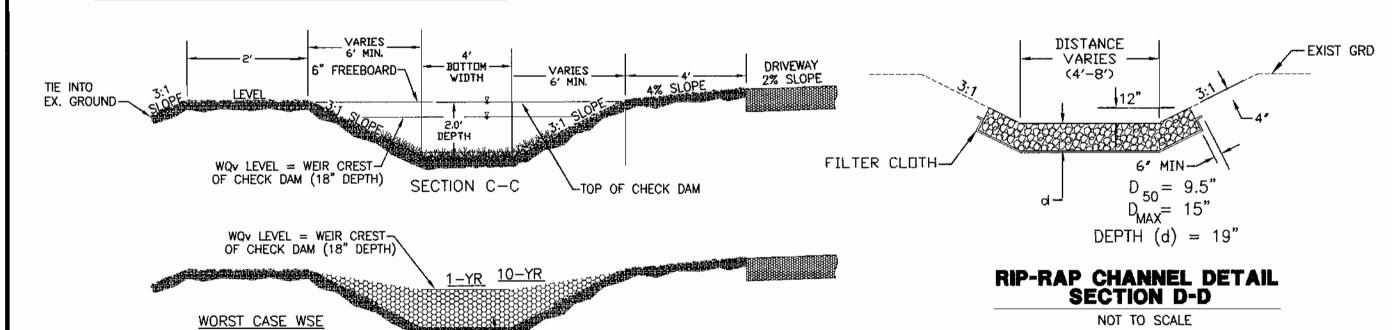
HOR, 1" = 30" VERT. I" = 3"

COORDINATES TO CENTER OF STRUCTURE AT EDGE OF PIPE

	STORM DRAIN STRUCTURE SCHEDULE • LOCATION								
STR NO.	TOP ELEV	INV IN	INV IN	INV OUT	TYPE	REMARKS	NORTHING	EASTING	
E-1	417.06			416.06	CMP END SECTION, HOW. CO. DET. SD-5.61,5.62	CMP - 16 GA.	588,842.99	1,357,508.20	
E-2	417.50			416.50	CMP END SECTION, HOW. CO. DET. SD-5.61,5.62	CMP - 16 GA.	588,861.59	1,357,529.16	
E-3	421,20			420.20	CMP END SECTION, HOW. CO. DET. SD-5.61,5.62	CMP - 16 GA.	588,794.35	1,357,794.35	
E-4	421.50			420.50	CMP END SECTION, HOW. CO. DET. SD-5.61,5.62	CMP - 16 GA.	588,817.54	1,357,817.54	

STORM		RAIN	PIPE	SCHEDULE
SIZE		TYPE		LENGTH
12"	CMP (16		GA.)	52'

1-YR: 416.17 D=1.67 10-YR: 416.33 D=1.83'



STONE CHECK DAM SEE DETAIL THIS SHEET FOR LOCATION WITHIN SWALE SEE PLAN VIEW

GRASS SWALE DETAIL

SECTION B-B

MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.

MAINTENANCE OF GRASS CHANNEL FACILITY

DETAIL 26 - ROCK OUTLET PROTECTION II

PLAN VIEW

Q% SLOPE

FILTER CLOTH

ELEVATION

FILTER CLOTH-

SECTION A-A

SLOPE POSITIVE TO

SIDE SLOPES TO VARY FROM 2: 1 AT PIPE OUTLET TO THE

EXISTING CHANNEL SLOPE AT THE END OF THE APRON

BEPTH OF FLOW. (DOWNSTREAM NORMAL DEPTH OR DISCHARGE DEPTH VHICHEVER IS GREATER)

NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

VATER MANAGEMENT ADMINISTRATION

IN GENERAL, THE PRACTICES CONTAINED IN THE "MAINTENANCE AND REPAIR" CHAPTER OF THE "MARYLAND DAM SAFETY MANUAL', DNR-WRA 1988, SHOULD BE FOLLOWED AND CONDUCTED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER FAMILIAR WITH DAM CONSTRUCTION, OPERATION, MAINTENANCE, AND REPAIR.

6' FROM EDGE OF RIP-RAP AND BE EMBEDDED AT LEAST 4' AT SIDES OF THE RIP-RAP

IN ADDITION, THE MD-378 DAM INSPECTION CHECKLIST MAY BE USED AS A GUIDE FOR MAINTENANCE AND INSPECTION.

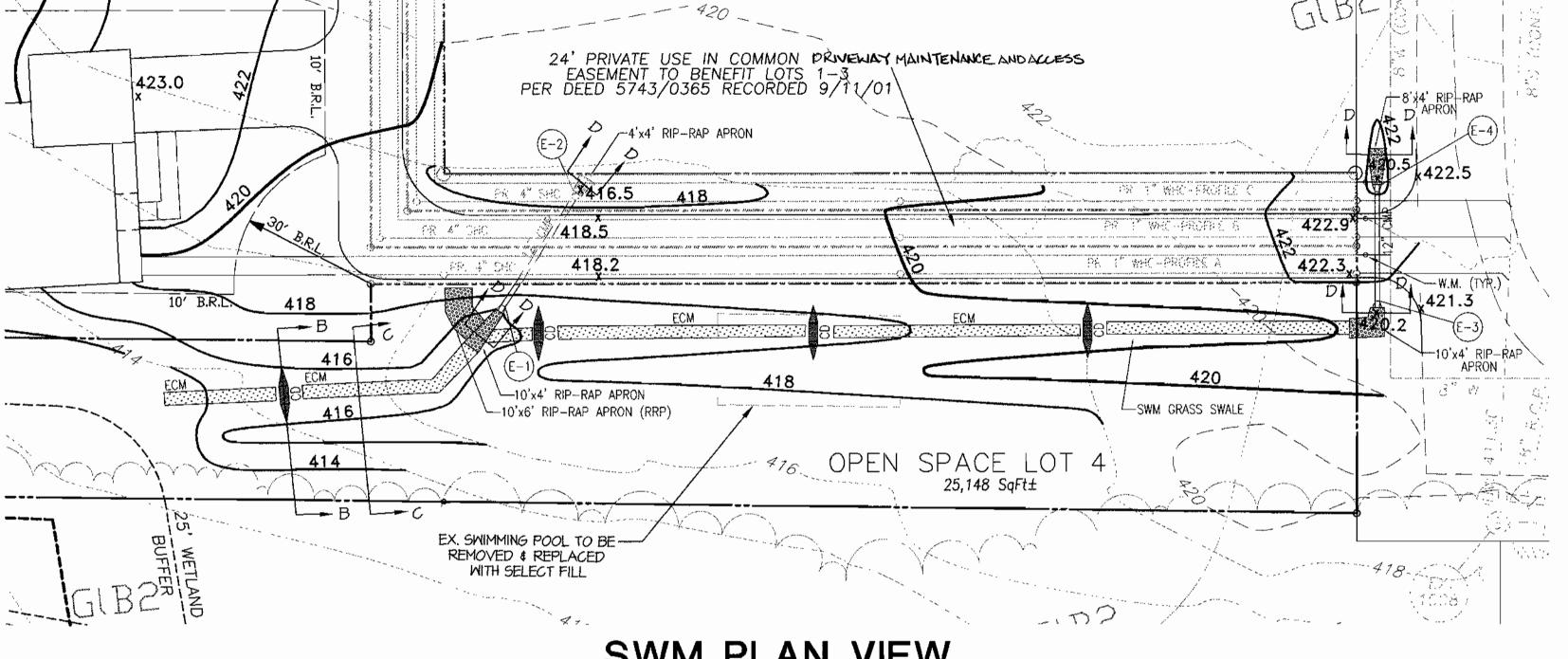
- AT A MINIMUM, THE STURMWATER MANAGEMENT FACILITY SHALL BE INSPECTED BI-ANNUALLY FUR THE FOLLOWING ITEMS.
- 1. CONDITION OF SWALE EMBANKMENT. 2. CONDITION OF VEGETATIVE COVER.
- 3. CONDITION OF STONE CHECK DAMS.
- 4. CONDITION OF POND RESURVOIR STORAGE AREA. 5. SEDIMENT LOAD IN SWALE.
- SEEPAGE THROUGH SWALE EMBANKMENT. 7. ANY DITHER ITEMS WHICH COULD AFFECT THE FUNCTION OF THE SWM FACILITY.
- 8. EVIDENCE OF CLOGGING OF STONE CHECK DAMS.
- 9. ERDSION OF SWALE EMBANKMENT OR SWALE SIDE SLOPES. 10. EVIDENCE OF ANIMAL TUNNELING THROUGH SWALE EMBANKMENT.
- THE SWALE EMBANKMENT AND CHANNEL SHALL BE MOWED TWICE A YEAR AND ANY TREES OR BUSHES GROWING ON OR ALTING THE SWALE EMBANKMENT SHALL BE REMOVED. ANY NEEDED MAINTENANCE OR REPAIR OF SWALE EMBANKMENT OR CHECK DAMS

SHALL BE DONE UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER.

IN ADDITION TO BIANNUAL INSPECTIONS, INSPECTIONS SHALL BE DONE DURING WET SEASON, AND AFTER MAJOR STORMS. ALL DEBRIS, LITTER, OR SEDIMENT ACCUMULATED IN SWALE BOTTOM AND BEHIND STONE CHECK DAMS SHALL BE REMOVED.

DRIVEWAY GRADING NOTE

CONTRACTOR TO WARP GRADING NEAR LOWPOINT AT DRIVEWAY CULVERT TO ENSURE RUNOFF FROM LOTS 1-3 ENTERS THE GRASS SWALE THROUGH THE PROPOSED 10' x 6' RIP-RAP APRON SHOWN NEAR STRUCTURE E-1. SEE RIP-RAP INFLOW PROTECTION DETAIL ON SHEET 2 FOR INSTALLATION DETAILS.



SWM PLAN VIEW SCALE: 1"-20"

ROCK DUTLET PROTECTION II

Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of

geotextile shall be a minimum of one foot.

permanent works.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

MARYLAND DEPARTMENT OF ENVIRONMENT VATER MANAGEMENT ADMINISTRATION SUIL CUNSERVATION SERVICE

STANDARD SYMBOL

PAGE MARYLAND DEPARTMENT OF ENVIRONMENT
B-8-5 WATER MANAGEMENT ADMINISTRATION

DETAIL 7 - STONE CHECK DAM

DITCH PROFILE

CROSS SECTION

Construction Specifications

2. The check dam shall be constructed of 4'-7' stone. The stone shall be placed so that it completely covers the width of the channel and keyed into the channel banks.

4. The maximum height of the check dam at the center shall not exced 2° .

5. The upstream side of the check dam shall be lined with approximately 3 of 3/4 to 1-1/2 crushed aggregate.

The top of the check dan shall be constructed so the the center is approximately 6° lower than the outer edges, forming a weir that water can flow across.

SPACING

STANDARD STONE CHECK DAM DESIGN

GEDTEXTILE CLASS 'C'

EXIST GRD WORST CASE WSE 1-YR: 416.17 D=1.67' 10-YR: 416.33 D=1.83'

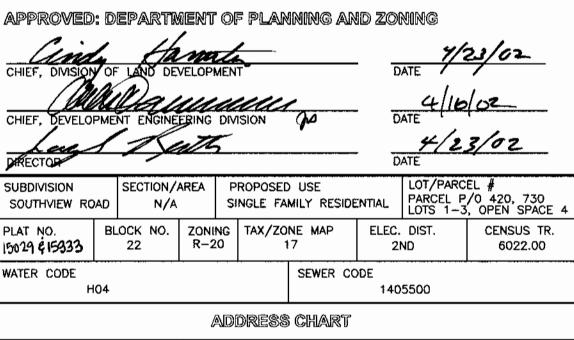
4" TOPSOIL, SEED, & MULCH 4" TOPSOIL, SEED & MULCH TO BE STABILIZED WITH EROSION CONTROL MATTING SEE DETAIL

ON SHEET 2 (SEDIMENT CONTROL DETAILS). SWALE CHANNEL DETAIL

SECTION C-C NOT TO SCALE

OWNER / DEVELOPER

RACHUBA HOME BUILDERS, INC. 946 - A MARIMICH COURT ELDERSBURG, MARYLAND 21784 (410) 781 - 3400

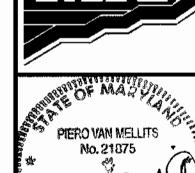


STREET ADDRESS

3038 SOUTHVIEW ROAD 1 2 3034 SOUTHVIEW ROAD

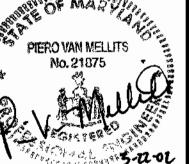
3030 SOUTHVIEW ROAD MORRIS & RITCHIE ASSOCIATES, INC.

LOT NUMBER



ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 9090 JUNCTION DRIVE, SUITE 9

ANNAPOLIS JUNCTION, MARYLAND 20701 (410) 792-9792 or (301) 776-1690 FAX (410) 792-7395



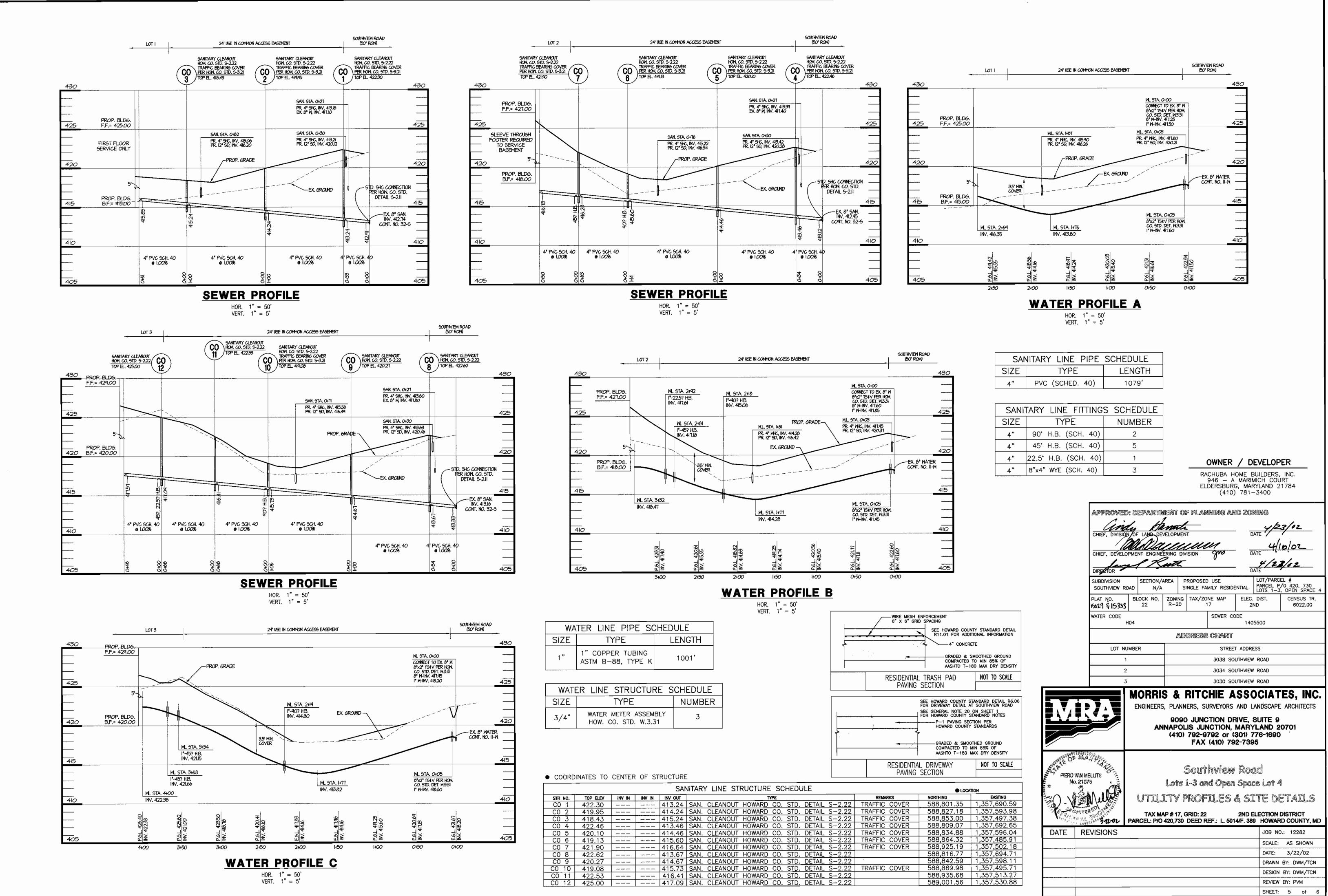
Southview Road Lots 1-3 and Open Space Lot 4

SWM PLAN & DETAILS

うれる PARCEL: P/O 420,730 DEED REF.: L. 5014/F. 389 HOWARD COUNTY, MD DATE | REVISIONS JOB NO.: 12282 SCALE: AS SHOWN DATE: 3/22/02 DRAWN BY: DWM/TCN DESIGN BY: DWM/TCN REVIEW BY: PVM SHEET: 4 of 6

TAX MAP # 17, GRID: 22

2ND ELECTION DISTRICT



GENERAL NOTES:

SIZE AND SPECIES.

- 1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 2. TREES AND SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY. HAVE NORMAL GROWTH HABITS, WELL DEVELOPED, DENSELY FOLIATED BRANCHES,
- AND VIGOROUS, FIBROUS ROOT SYSTEMS. 3. TREES AND SHRUBS SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT OR PROPERLY ACCLIMATED TO CONDITIONS OF
- THE LOCALITY OF THE PROJECT. 4. TREES AND SHRUBS SHALL BE FREE FROM DEFECTS AND INJURIES AND CERTIFIED BY APPROPRIATE FEDERAL AND STATE AUTHORITIES TO BE FREE OF DISEASES AND INSECT INFESTATIONS
- 5. THE LANDSCAPE CONTRACTOR SHALL WARRANTY ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) FULL YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION AGAINST DEFECTS, UNGATISFACTORY GROWTH, DISEASE OR DEATH.
- UNSATISFACTORY, UNHEALTHY, DYING OR DEAD PLANT MATERIAL (IN THE OPINION OF THE LANDSCAPE ARCHITECT) SHALL BE REPLACED WITH THE SAME
- 6. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPED AREAS, WHICH SHALL INCLUDE WATERING, CLEANING OF WEEDS AND DEBRIS, PRUNING AND TRIMMING, REPLACEMENT OF DEAD OR DISEASED PLANTINGS, AND FERTILIZING TO MAINTAIN
- 7. THE LANDSCAPE CONTRACTOR SHALL STAKEOUT PLANT LOCATIONS IN THE FIELD. THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE SHALL OBSERVE THESE LOCATIONS PRIOR TO COMMENCING PLANT PIT EXCAVATION. THE LANDSCAPE CONTRACTOR SHALL MAKE ANY ADJUSTMENTS AS REQUESTED BY THE
- LANDSCAPE ARCHITECT. 8. ALL PLANT SAUCERS AND PLANT BEDS SHALL BE MULCHED WITH DOUBLE SHREDDED HARDWOOD MULCH, A MINIMUM OF 3" IN DEPTH.
- 4. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE PERMITTED WITHOUT WRITTEN AUTHORIZATION OF THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE. THIS SHALL APPLY TO SUBSTITUTIONS OF SPECIES, SIZE AND QUANTITY.
- 10. THE LANDSCAPE CONTRACTOR SHALL INSTALL SHREDDED HARDWOOD BARK MULCH TO A DEPTH OF 3" UNDER AND SURROUNDING ALL NEW LANDSCAPED MASS PLANTING AREAS TO PROVIDE A UNIFORM AND CONTINUOUS SURFACE AND APPEARANCE BETWEEN AND AROUND ALL PLANT MATERIAL, BUILDING LINES AND PAVED AREAS. IN GENERAL, THIS PERTAINS TO ALL PLANT MATERIAL THAT IS PLANTED CLOSER THAN SIX (6) PEET CENTER TO CENTER. IT IS THE INTENT OF THIS CONTRACT TO INSTALL LANDSCAPE MAT UNDER THE ENTIRE AREA OF SHREDDED BARK MULCH.
- 11. TREES SHALL BE LOCATED A MINIMUM OF 5' FROM SEMER/WATER CONNECTIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC AND PRIVATE UTILITIES, WATER AND SENER LINES.

- 12. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
- 13. CONTRACTOR SHALL SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. FINISHED PLANTING BEDS SHALL BE GRADED SO AS NOT TO IMPEDE DRAINAGE AWAY FROM BUILDINGS.
- 14. TREE STAKING AND GUYING SHALL BE DONE PER DETAILS. CONTRACTOR SHALL ENSURE THAT TREES REMAIN PLUMB AND UPRIGHT FOR THE DURATION OF THE GUARANTEE PERIOD.
- 15. ALL TREE PITS, SHRUB BEDS, AND PREPARED PLANTING BEDS ARE TO BE COMPLETELY EXCAVATED IN ACCORDANCE WITH THE PLANTING DETAILS. 16. CROWN OF ROOT BALL SHALL BE HIGHER (AFTER SETTING) THAN
- 17. SHADE TREES: HEIGHT SHALL BE MEASURED FROM THE CROWN OF THE ROOT BALL TO THE TOP OF MATURE GROWTH. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE CROWN FROM THE CENTER OF THE TRUNK, MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH, SINGLE TRUNK TREES SHALL BE FREE OF 'V' CROTCHES THAT COULD BE POINTS OF WEAK LIMB STRUCTURE OR DISEASE INFESTATION.
- 16. CONTRACTOR MUST CONTACT THE OWNER AT LEAST TEN WORKING DAYS IN ADVANCE TO SCHEDULE ACCEPTANCE INSPECTION(S). CONTRACTOR MUST REPLACE ALL DEAD OR UNACCEPTABLE PLANTS DURING THE FOLLOWING RECOMMENDED PLANTING SEASON.
- 19. TREES SHALL BE PLANTED DURING ACCEPTABLE PLANTING SEASONS: BETWEEN MARCH 15 AND MAY 15 AND BETWEEN AUGUST 15 AND NOVEMBER 15 OR AS APPROVED BY OWNERS REPRESENTATIVE.
- 20. ALL TREE STAKING AND GUYING SHALL BE REMOVED BY THE CONTRACTOR AFTER THE TREES ARE ESTABLISHED.
- 21. SEEDED AREAS THAT WASH OUT MUST BE FILLED AND GRADED AS NECESSARY AND THE RESEEDED. SOME TYPE OF ANCHORING METHOD SHOULD THEN BE USED TO HOLD SEED AND MULCH IN PLACE; THIS IS ESPECIALLY IMPORTANT AROUND WATER COURSED, IN SHALES AND AREAS OF CONCENTRATED
- 22. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- 23. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPERS ASPERIENT OR SEADING PERMIT (AS
- APPLICABLE) IN THE AMOUNT OF \$6,600.00, BASED UPON THE REGUIRED \$300.00 PER (22) SHADE TREE GENERATED BY THE PERIMETER PLANTING REQUIREMENTS OF

SCHEDULE A PERIMETER LANDSCAPE EDGE

	I	ADJACENT TO	ADJACENT TO	ADJACENT TO	ADJACENT TO	ADJACENT TO	ADJACENT TO
CATEGORY	ADJACENT TO ROADWAYS	PERIMETER PROPERTIES	PERIMETER PROPERTIES	PERIMETER PROPERTIES	PERIMETER PROPERTIES	PERIMETER PROPERTIES	PERIMETER PROPERTIES
LANDSCAPE TYPE	NONE REQUIRED	TYPE 'A'	TYPE ' A '	TYPE 'A'	TYPE 'A'	TYPE 'A'	TYPE 'A'
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	1 51.0	② 384.0	3 79.0	4 198.0	5 242.0	6 200.0	7 200.0
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE, BELOW IF NEEDED)	N / A	NO	Yes, 79' see note below	Yes, 198' see note below	Yes, 90' see note below	N / A	N/A
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE, BELOW IF NEEDED)	N / A	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	N / A	7 0 0	2 0 0	2 0 0	3 0 0	4 0 0	4 0 0
NUMBER OF PLANTS PROPOSED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	1 1 0 0	7 8 0 0	0 0 0	0 0 0	3 0 0 0	3 0 0 18	0 0 0 20
PLANT SUBSTITUTION CREDITS	1 Shade & 1 Evergreen trees when none are required.	8 Evergreen # 4 Shade Trees.	Existing forest credit claimed for alternative compliance due to the protected resource on this and the adjacent property.	Existing forest credit claimed for alternative compliance due to the protected resource on this and the adjacent property.	Existing forest credit claimed for alternative compliance due to the protected resource on this and the adjacent property.	18 shrubs = 1.8 shade trees planting unit equivalents.	20 shrubs = 2.6 shade trees planting unit equivalents.

Due to the subdivided nature of the property and the required alignment of the utilities within the common access easement little more than shrubs may be planted within this area. This required a few of the generated planting requirements to be placed elsewhere on site. This project generates planting unit requirements equivalent to 22.0 Shade Trees, proposed plantings equate to 22.3 Shade Tree equivalents, PER ALTERNATIVE COMPLIANCE PROVISIONS OF THE LANDSCAPE MANUAL.

PLANT LIST

SYMBOL QUANTITY

T - 1

BOTANICAL NAME / COMMON NAME

Phone: (410) 781-3400

Acer rubrum / Red Maple

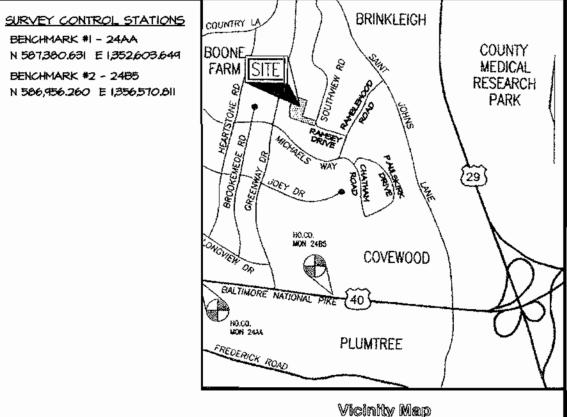
- WRAP TRUNK WITH TREE WRAP TO SECOND TIER OF BRANCHES - HOSE OVER WIRE - THIN 1/3 OF INITIAL BRANCHING, RETAINING NATURAL FORM STAKES (3 REQUIRED) - REMOVE COVERING FROM TOP - FIRST LATERAL ROOT FLUSH WITH FINISHED GRADE - 3" SOIL WELL FINISHED GRADE UNDISTURBED SOIL - PLANTING SOIL

DECIDUOUS TREE DETAIL

SIZE

2 1/2" - 3"

ROOT



Scale 1" = 2000"





BENCHMARK #1 - 24AA

BENCHMARK #2 - 2485

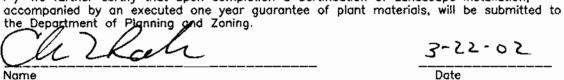
EVERGREEN TREE



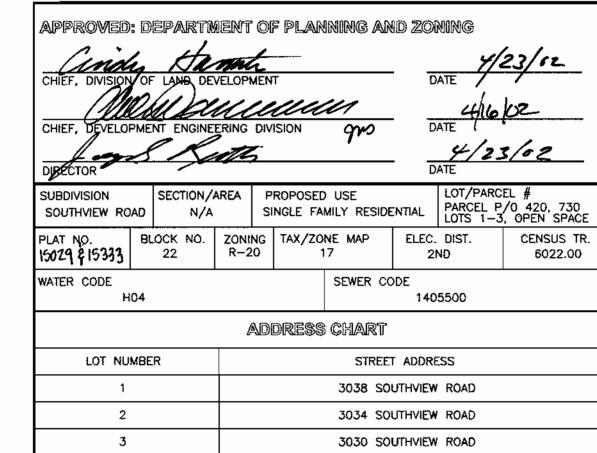
SHRUB

PR. LIMITS OF CLEARING

I / We certify that the landscaping shown on this plan will be done according to the plan, Section 16.126 of the Howard County Code and the Howard County Landscape Manual. I / We further certify that upon completion a Certification of Landscape Installation,



The owner, tenant, 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.

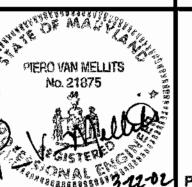




MORRIS & RITCHIE ASSOCIATES, INC.

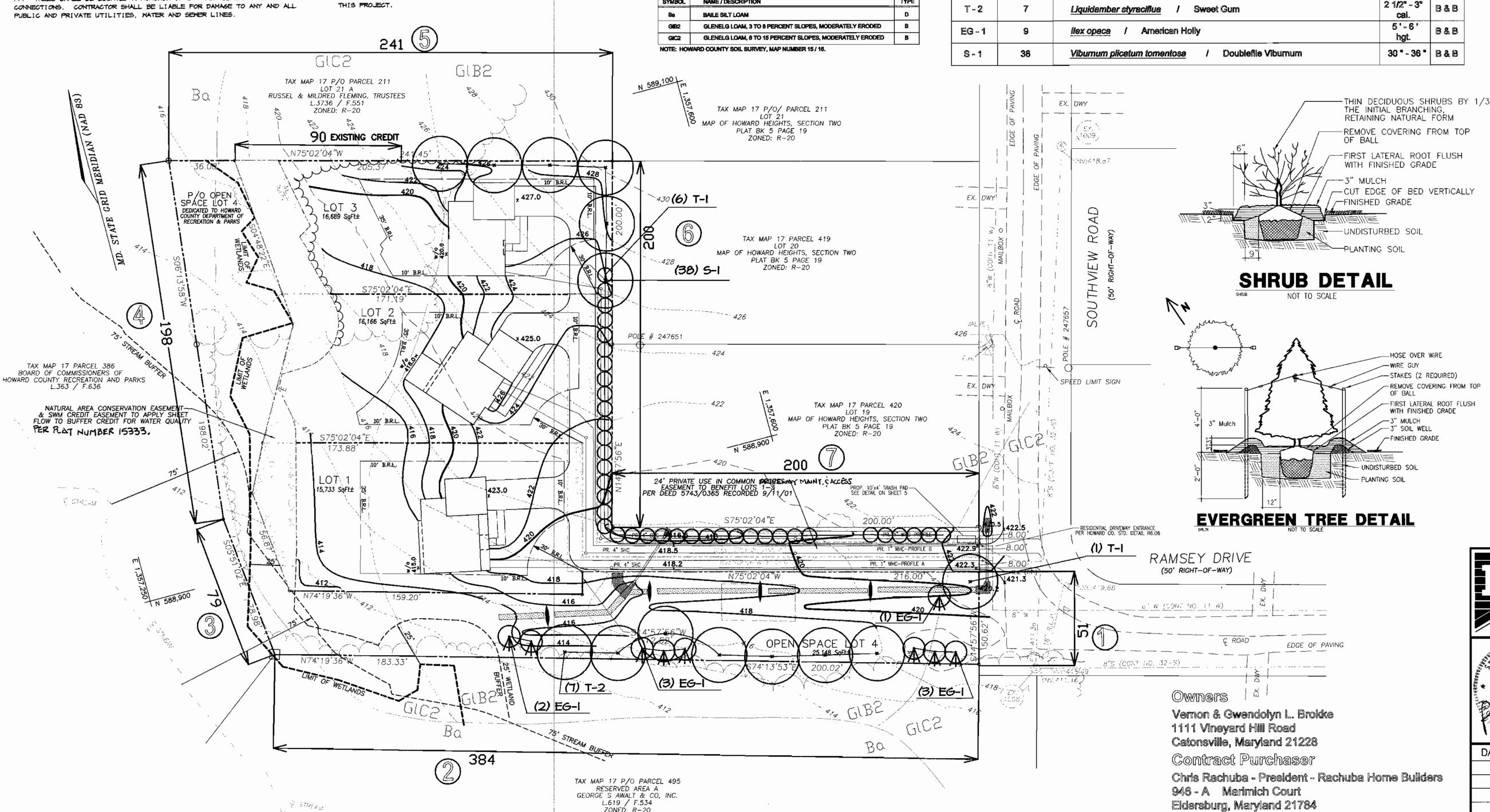
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9090 JUNCTION DRIVE, SUITE 9 **ANNAPOLIS JUNCTION, MARYLAND 20701** (410) 792-9792 or (301) 776-1690 FAX (410) 792-7395



Southview Road Lots 1-3 and Open Space Lot 4

`	BEBRUE	28 g 10 5 8 8 8 8 3 12 0 U	PARCEL: P/O 420,730 DEED REF.: L. 5014/F. 389	HOWARD COUNTY, MD
)A	TE	REVISIONS		JOB NO.: 12282
				SCALE: 1" = 30'
				DATE: 03/22/02
				DRAWN BY: DWM
				DESIGN BY: DWM/TCN
				REVIEW BY: PVM
			·	



ZONED: R-20

SOILS LEGEND

SYMBOL NAME / DESCRIPTION

2ND ELECTION DISTRICT