SHEET INDEX DESCRIPTION TITLE SHEET SITE DEVELOPMENT PLAN SITE DEVELOPMENT PLAN SITE DEVELOPMENT PLAN AND DETAILS GRADING SEDIMENT CONTROL AND DRAINAGE AREA MAP GRADING SEDIMENT CONTROL AND DRAINAGE AREA MAP GRADING SEDIMENT CONTROL AND DRAINAGE AREA MAP **PROFILES** PROFILES SEDIMENT CONTROL DETAILS LANDSCAPE PLAN LANDSCAPE PLAN LANDSCAPE NOTES AND DETAILS FOREST STAND DELINEATION FOREST CONSERVATION PLAN FOREST CONSERVATION PLAN

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD

THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION

THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY

4. 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

5. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS

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. 38D5 AND 38D6 WERE

10. THE STORMWATER QUALITY AND QUANTITY MANAGEMENT IS PROVIDED FOR THE DEVELOPMENT BY SWMF #1 AND

11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING

13. WETLAND LOCATIONS FOR THIS PROJECT WERE TAKEN FROM PLAT# 16376 & 16377 AND BY STUDY PERFORMED

14. A TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED JULY 2004.

18. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.

19. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S. F-94-24, F-04-067, F-02-164

16. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY PATTON HARRIS RUST & ASSOCIATES, PC

20. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK

21. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES,

22. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION

23. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED

INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

FOREST CONSERVATION PLAN

COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE

ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

PREPARED BY PATTON HARRIS RUST & ASSOCIATES, PC, DATED APRIL 2004.

9. SEWER IS PUBLIC, SEWER DRAINAGE AREA: CONTRACT NO. 14-4230-D

12. A 100- YEAR FLOODPLAIN STUDY FOR THIS PROJECT IS NOT REQUIRED.

17. SUBJECT PROPERTY ZONED M-2 PER 02-02-04 COMPREHENSIVE ZONING PLAN.

UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION

15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.

GENERAL NOTES

EXCAVATION WORK BEING DONE.

USED FOR THIS PROJECT.

BY ECS LIMITED, DATED.

DATED MARCH 2004.

GRADE

SHOWN ON THESE DRAWINGS.

PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

8. WATER IS PUBLIC. CONTRACT NO. 14-4230-D

SWMF #4 PROPOSED UNDER F-94-24.

SITE DEVELOPMENT PLAN CABOT COMMERCE CENTER A'II BWT PATAPSCO VALLEY BUSINESS CENTER

Носо

SCALE: 1"=2000"

16.0 ACRES

M-2

COPYRIGHT ADC THE MAP PEOPLE

AREA TABULATION CHART

AREA OF PARCEL D-1 30.882 ACRES

LIMIT OF DISTURBED AREA

PRESENT ZONING

PROPOSED USE OFFICE/WAREHOUSE

BUILDING 200

OFFICE- 20,914 SF WAREHOUSE- 118,510 SF 139,424 SF (10 % OF SITE)

BUILDING COVERAGE

REQUIRED PARKING BUILDING 200

OFFICE-3.3 SPACES/1000 SF=69

WAREHOUSE - 0.5 SPACES/1000 SF=60

DATE

✓ DATE

PROVIDED PARKING

1071 SPACES (INCL. 21 HC SPACES)

BENCH MARK

HOWARD COUNTY CONTROL N 422,613 E 1,386,524

ELEV. 175.23

ELEV. 193.73 HOWARD COUNTY CONTROL STATION 38D6 N 422,147 E 1,384,992

ADDRESS CHART

SEWER CODE

LOCK # ZONING TAX MAP NO.

20 M-2

BUILDING

PATAPSCO VALLEY BUSINESS CENTER

SUBDIVISION NAME

WATER CODE

16375-16377

STREET ADDRESS

7401 COCA COLA DRIVE

D-1

6012.02

LECT. DIST. CENSUS TRAC

2150000

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND man his iste CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

5-10-05 / REVISED PLANVIEW, AREA TABULATION

DATE NO. REVISION

OWNER

CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108

DEVELOPER

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BWI PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PH: 617-305-6121

TITLE SHEET

Patton Harris Rust & Associates, pc Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive

5.10.65

CHRISTOPHER J. REID #19949

Columbia, MD 21045 T 410.997.8900 **F** 410.997.9282

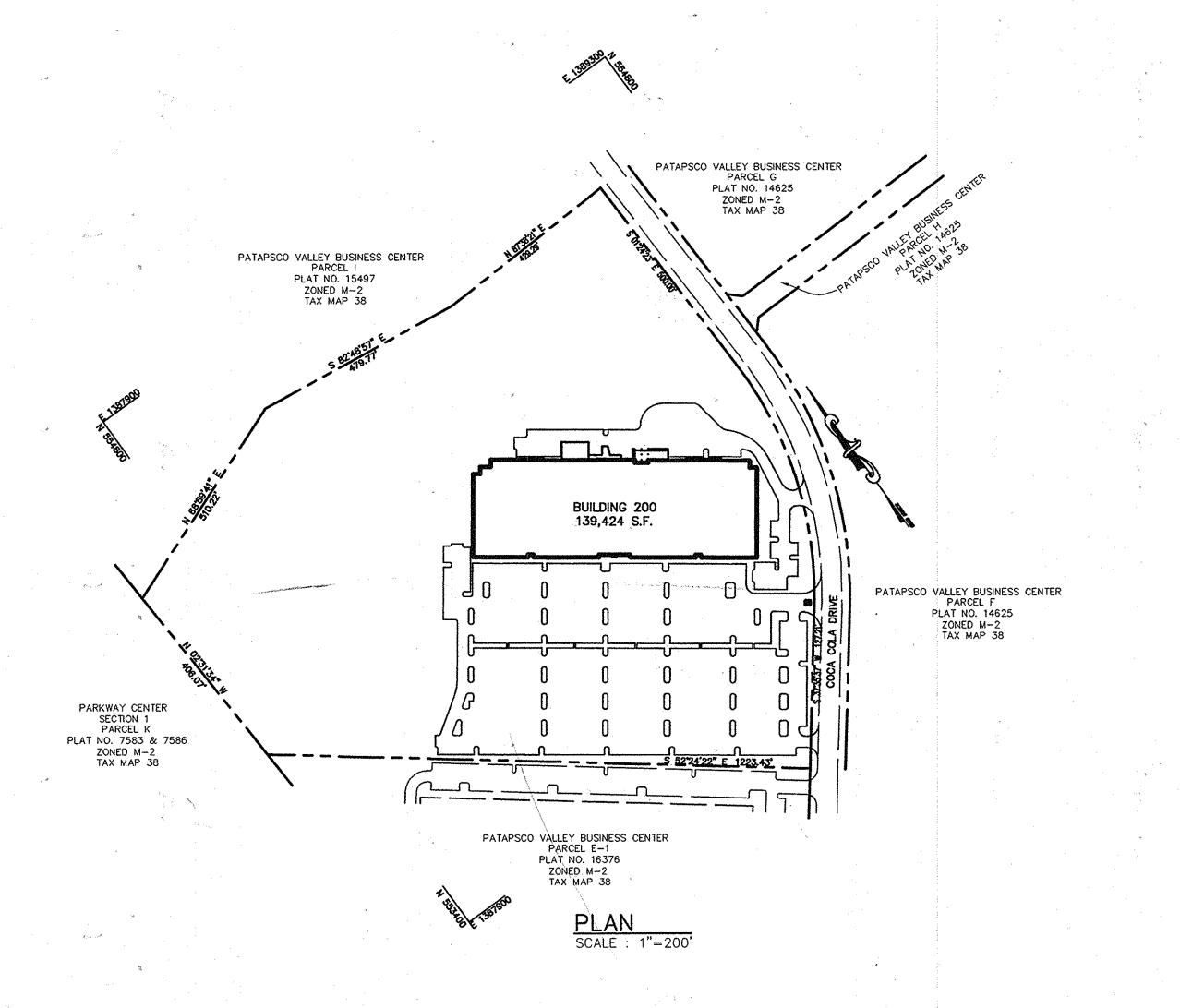
DESIGNED BY : C.J.R. DRAWN BY: DAM PROJECT NO : 12845/1-0/

DATE: MAY 10, 2005 SCALE: AS SHOWN

SDP-05-003

DRAWING NO. _ 1 _ 0F _ 18

PARCEL D-1 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BLDG. 200 ELEVATION

24. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS: 25. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS. 26. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS. 27. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180. 28. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION REGULATIONS. 29. ALL OUTDOOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134. 30. THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN SATISFIED BY THE CREATION OF A 2.41 ACRE ONSITE RETENTION EASEMENT AND SURETY IN THE AMOUNT OF \$20,995.92 (104,979.6 SF x \$0.20 / SF) HAS

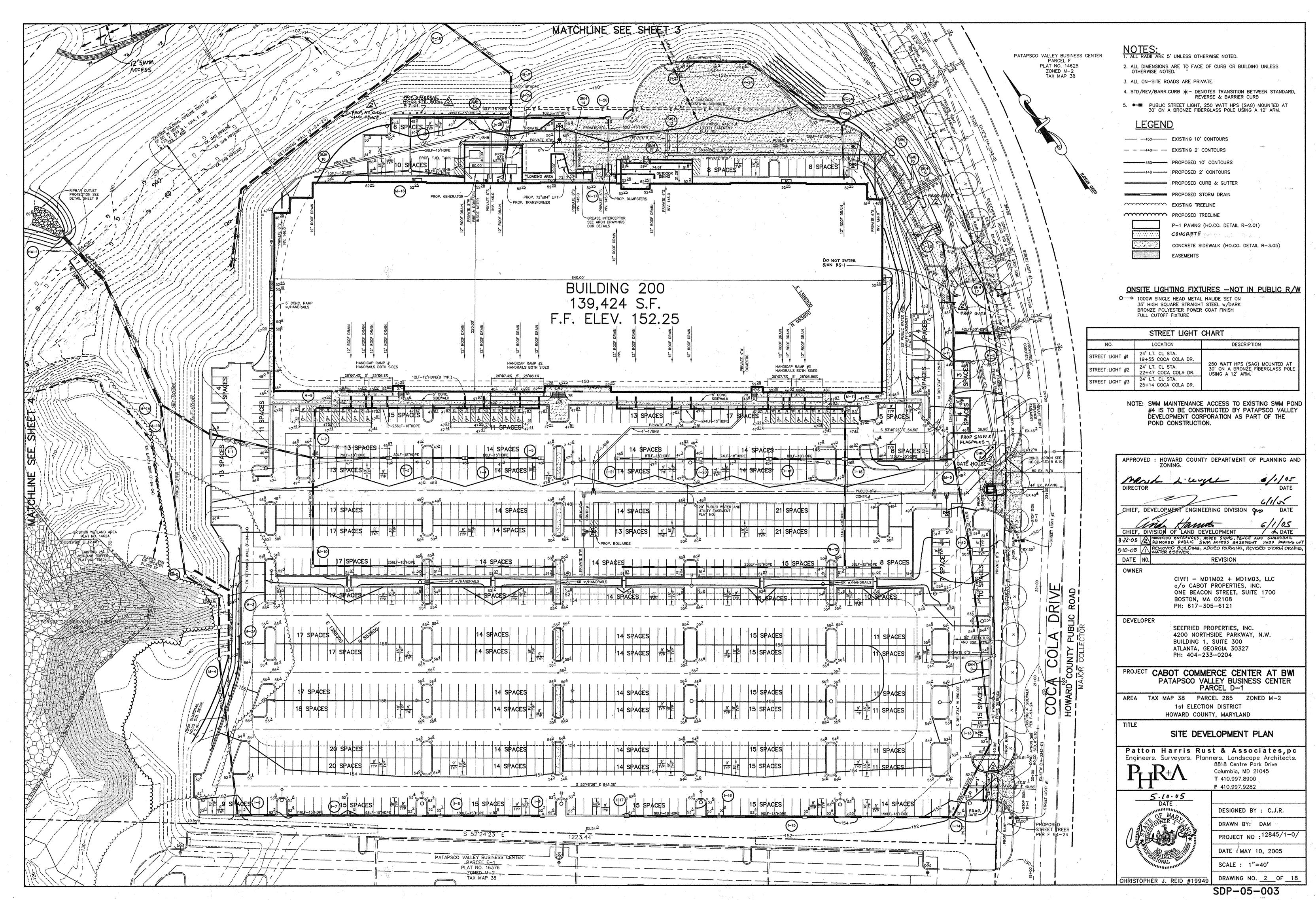
BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THIS EASEMENT. 31. NO REMOVAL OF VEGETATIVE COVER, GRADING, DISTURBANCE OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, WETLANDS BUFFERS, STREAM BUFFERS, FLOODPLAINS OR THE 21,258SF STEEP SLOPE AREA.

32. THE MINIMUM SPACING BETWEEN TREES AND STREET LIGHTS IS 20'.

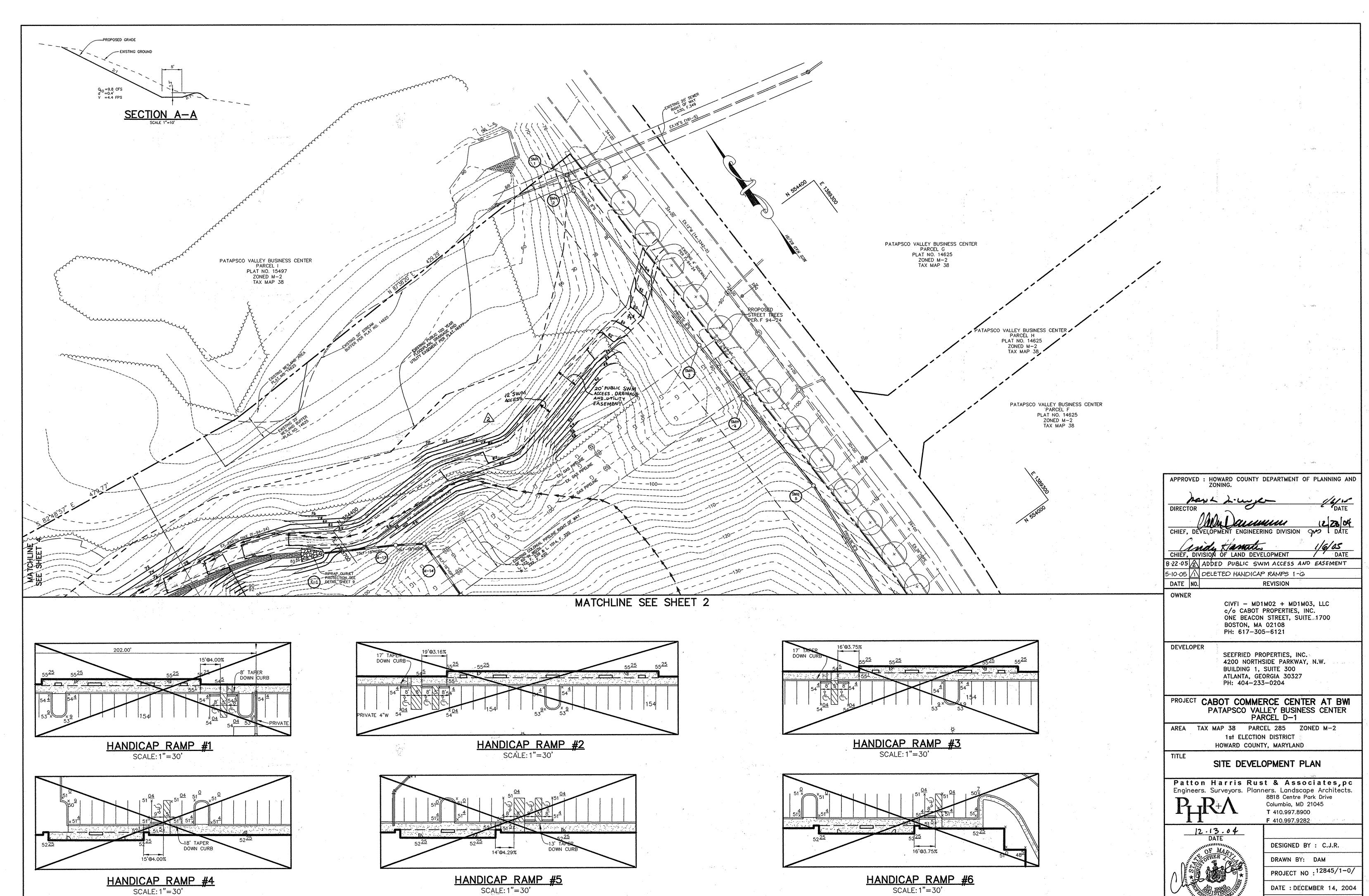
33. SIGN POSTS: ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GA.) INSERTED INTO A 2 1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GA.) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

34. WP-05-49 - A REQUEST TO WAIVE SECTION 16.123(a)(2) AND 16.155(a)(1) TO PERMIT THE ISSUANCE OF A GRADING PERMIT PRIOR TO THE APPROVAL OF A SITE DEVELOPMENT PLAN (SDP-05-003) WAS APPROVED ON NOVEMBER 30, 2004, SUBJECT TO THE FOLLOWING CONDITION: 1. A GRADING PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF INSPECTIONS, LICENSES AND

PERMITS BEFORE THE PROPOSED WORK CAN BEGIN.



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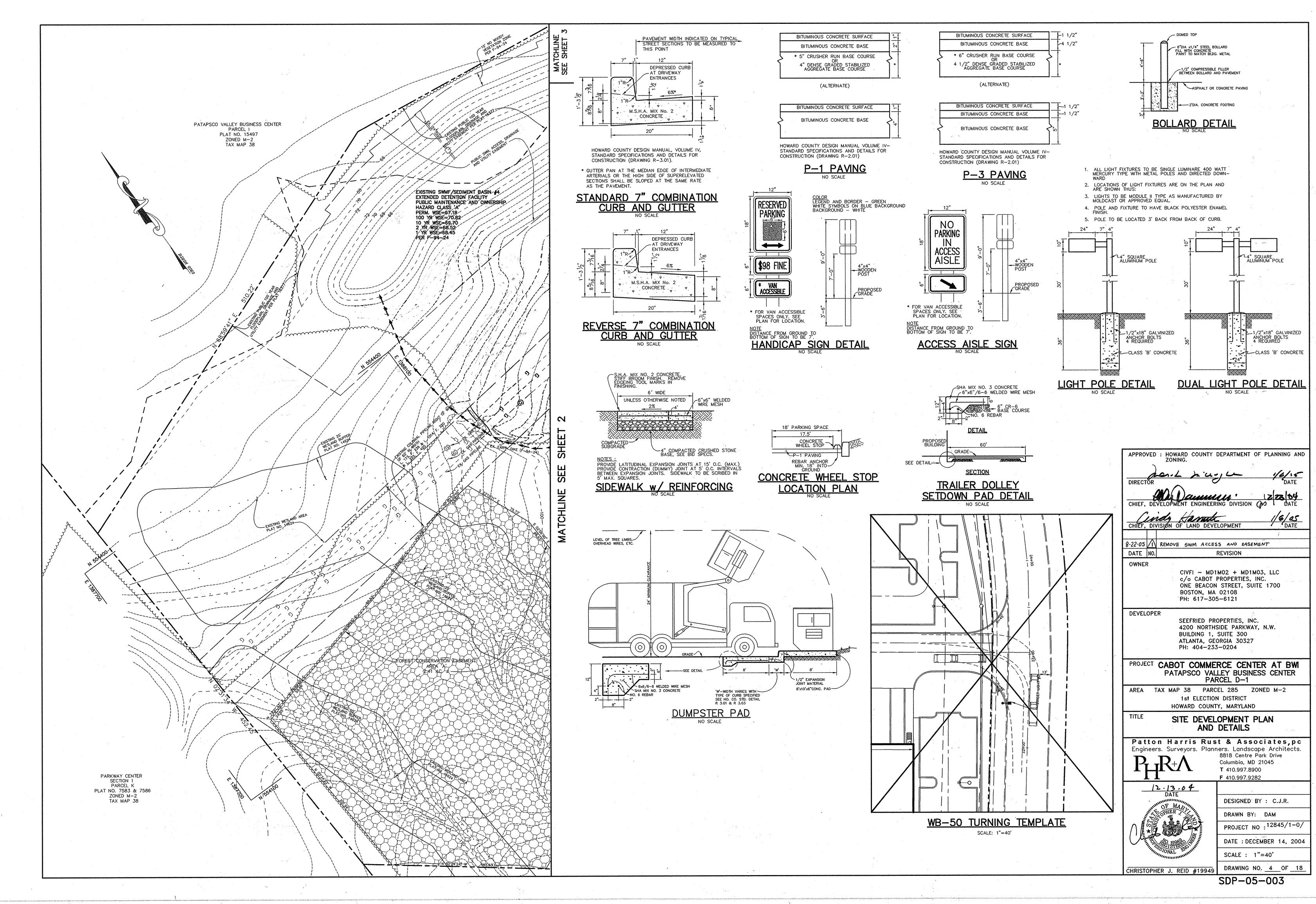


DRAWING NO. 3 OF 18
SDP-05-003

SCALE : 1"=40'

CHRISTOPHER J. REID #19949

project\12845\1-0\Plans\C4



P:\project\12845\1-0\Plans\C402SIT.dwg, 12/09/2004 05:56:47 PM, HP750C(36).pc3, 1:1

NOTE: SWM MAINTENANCE ACCESS TO EXISTING SWM POND #4 IS TO BE CONSTRUCTED BY PATAPSCO VALLEY DEVELOPMENT CORPORATION AS PART OF THE POND CONSTRUCTION.

BY THE DEVELOPER :

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 INSPECTIONS BY THE HOWARD SOIL

5.10.05

BY THE ENGINEER :

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.

5.10.05

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND

mark to cargle-

CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT A DATE

8-22-05 2 REMOVED PUBLIC SWM ACCESS EASEMENT THRU 5-10-05 REMOVED BUILDING, ADDED PARKING, REVISED STORM DRAIN, WATER AND SEWER REVISION

> CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC.
> ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BWI PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT

GRADING, SEDIMENT CONTROL

AND DRAINAGE AREA MAP Patton Harris Rust & Associates,pc Engineers. Surveyors. Planners. Landscape Architects.

8818 Centre Park Drive Columbia, MD 21045 **T** 410.997.8900 F 410.997.9282

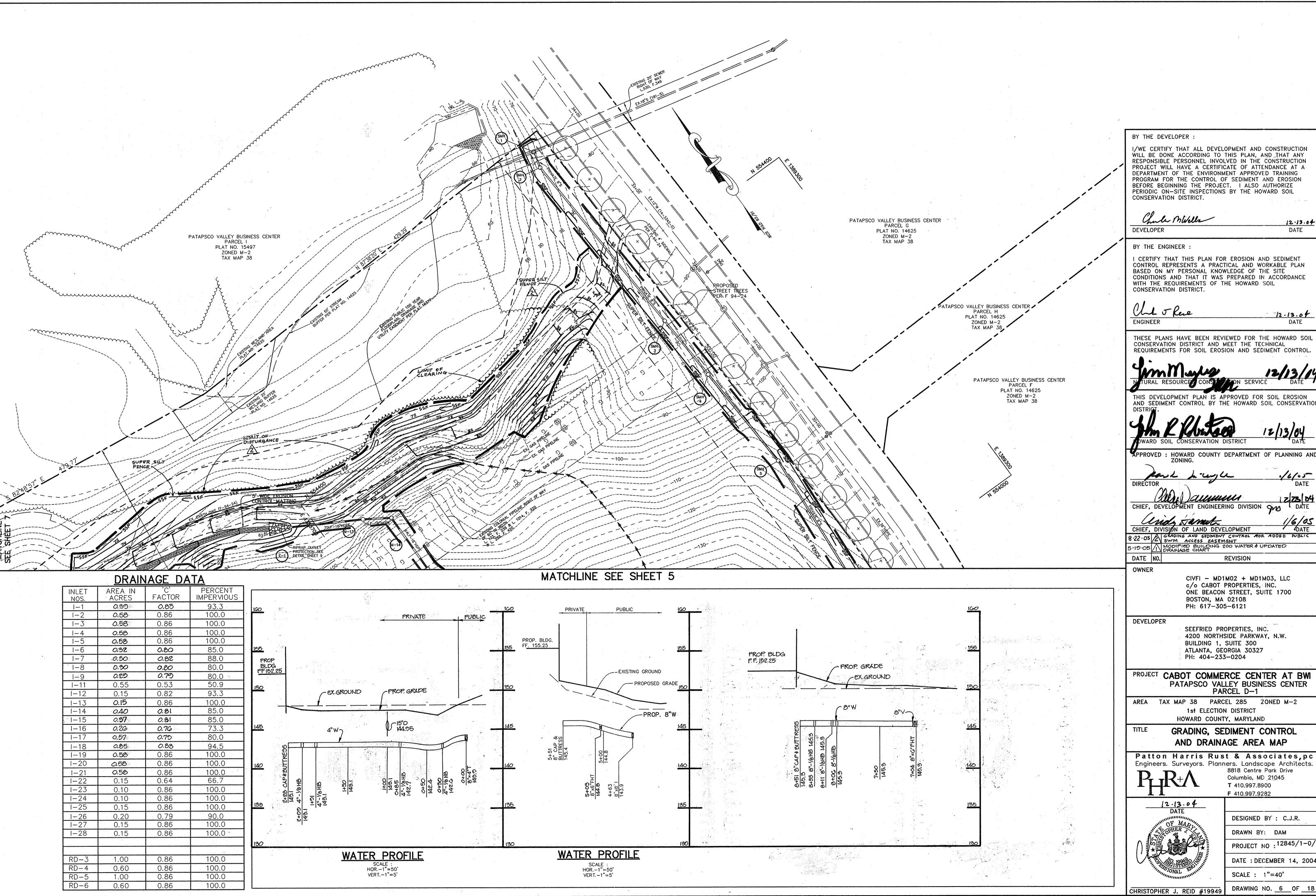


DESIGNED BY : C.J.R. DRAWN BY: DAM

PROJECT NO : 12845/1-0/

SCALE : 1"=40' DRAWING NO. 5 OF 18

DATE : MAY 10, 2005



BY THE DEVELOPER :

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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Chule Mills 12.13.04 DATE

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.

12.13.0f

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND

16/05

part bruje

CHIEF, DEVELOPMENT ENGINEERING DIVISION 900 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

8-22-05 A GRADING AND GEDIMENT CONTROL FOR ADDED PUBLIC SWM ACCESS EASEMENT

5-19-05 MODIFIED BUILDING 200 WATER & UPDATED DRAINAGE CHART

DATE NO. REVISION

CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BWI PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

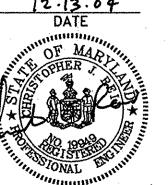
AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND GRADING, SEDIMENT CONTROL

AND DRAINAGE AREA MAP

Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045

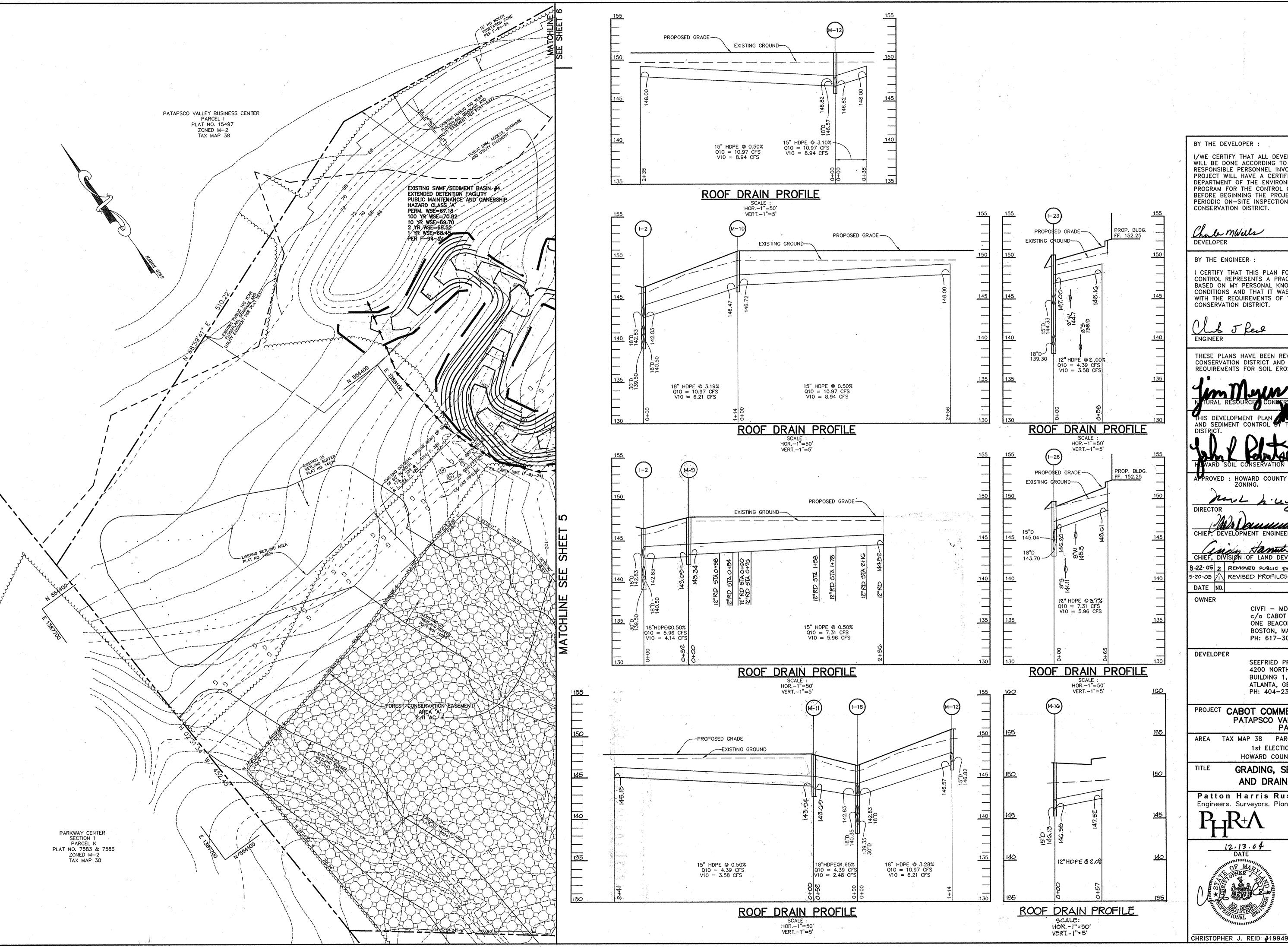
T 410.997.8900 F 410.997.9282



DESIGNED BY : C.J.R. DRAWN BY: DAM

PROJECT NO : 12845/1-0/ DATE: DECEMBER 14, 2004

SCALE : 1"=40' DRAWING NO. 6 OF 18



BY THE DEVELOPER

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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Chale Mwells 12-13-04 DATE

BY THE ENGINEER :

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.

12.13.0f DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND

CHIEF, DEVELOPMENT ENGINEERING DIVISION ON DATE

8-22-05 2 REMOVED PUBLIC SWM ACCESS AND EASEMENT. REVISED PROFILES

> CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121

REVISION

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BWI PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

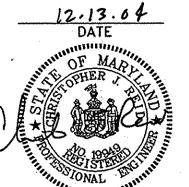
AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND GRADING, SEDIMENT CONTROL

AND DRAINAGE AREA MAP

Patton Harris Rust & Associates,pc Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive

Columbia, MD 21045 **T** 410.997.8900 **F** 410.997.9282

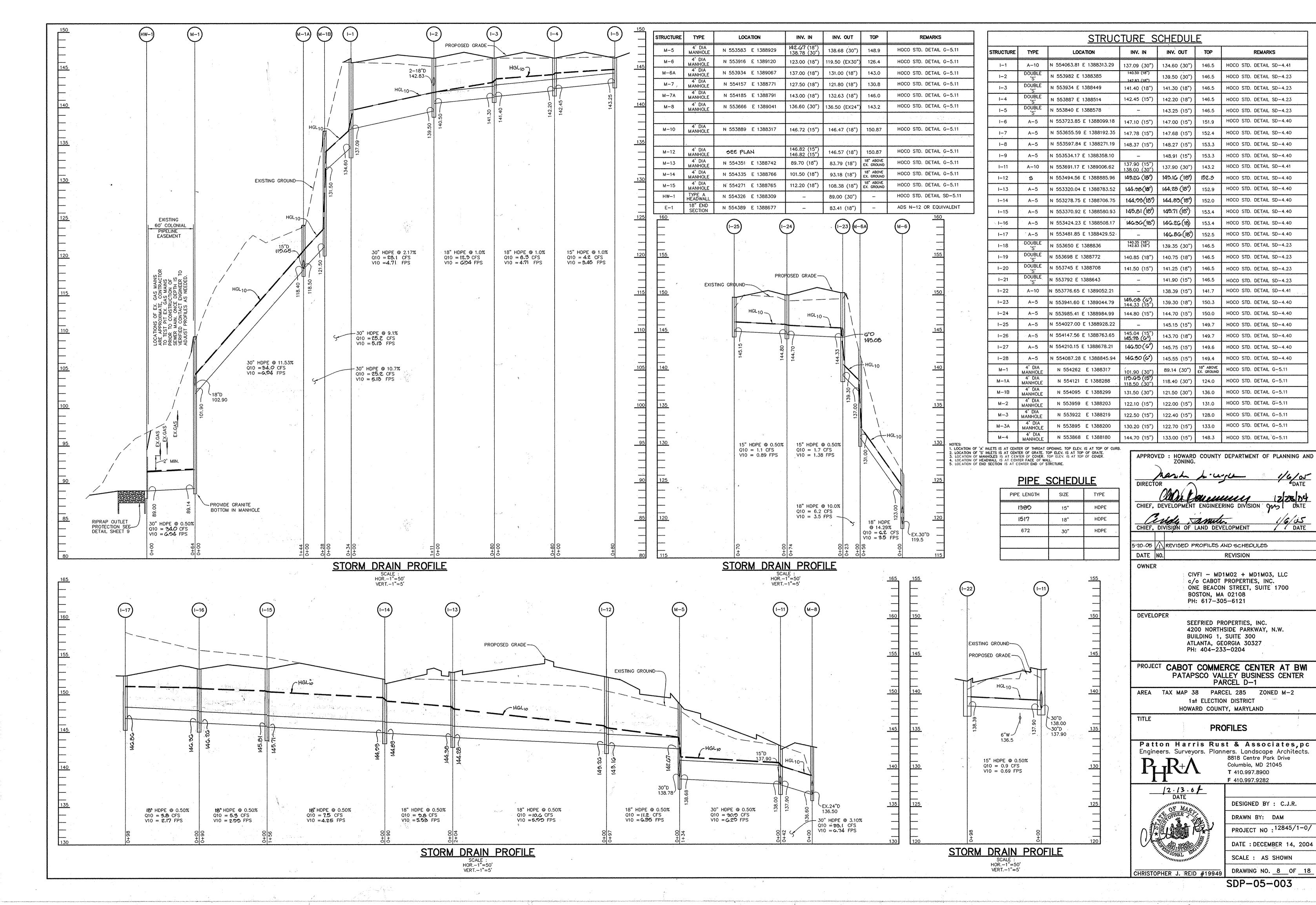


DESIGNED BY : C.J.R. DRAWN BY: DAM

> PROJECT NO: 12845/1-0/ DATE: DECEMBER 14, 2004

DRAWING NO. 7 OF 18

SCALE : 1"=40'



SDP-05-003

SCALE : AS SHOWN

8818 Centre Park Drive

DESIGNED BY : C.J.R.

PROJECT NO : 12845/1-0/

DATE: DECEMBER 14, 2004

DRAWING NO. <u>8</u> OF <u>18</u>

DRAWN BY: DAM

Columbia, MD 21045

T 410.997.8900 F 410.997.9282

REMARKS

HOCO STD. DETAIL SD-4.41

HOCO STD. DETAIL SD-4.23

HOCO STD. DETAIL SD-4.23

HOCO STD. DETAIL SD-4.23

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HOCO STD. DETAIL SD-4.41

HOCO STD. DETAIL SD-4.40

HOCO STD. DETAIL G-5.11

REVISION

/ DATE

CHRISTOPHER J. REID #19949

roject\12845\1-0\Plans\Construction\C900DET.dwg, 24X36, 05/10/2005 08:41:41 AM, HP750C(36).pc3, 1:1

Construction Specifications

MARYLAND DEPARTMENT OF ENVIRONMEN

Lift grate and wrap with Geotextile Class E to completely cover all openings.

2. Place 3/4" to 11/2" stone, 4"-6" thick on the grate to secure the fabric and

then set grate back in place.

provide additional filtration.

U.S. DEPARTMENT OF AGRICULTURE

2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR

1. AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND

2. AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

THEIR USES IN PREDICTING SOIL LOSS.

U.S. DEPARTMENT OF AGRICULTURE

REFERENCE

RIPRAP TO BE EMBEDDED IN PROPOSED TRANSITION SECTION FILTER CLOTH OR GRADED AGGREGATE FILTER-SECTION A-A SECTION

NC	TE: O V 2	E DEPTH CA	ICHIATED A'	T END OF RIPE	RAP OUT	FT CHANN	JFI
	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q ₁₀	. v	DEPTH
E-1	9.5"	20'	18'	19"	9.8	6.8	0.5'
HW-1	9.5"	35'	20'	19"	38.5	8.4	0.75
		F					
	€ici +e [®]						
NOT	E: USE CLAS	S I RIPRAP					

RIPRAP OUTLET PROTECTION DETAIL

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
- . THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
- 3. GEOTEXTILE CLASS C OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
- 4. STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMANGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC.HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
- 5. THE STONE SHALL BE PLACED SO THAT IT BLENDS 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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.

2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND MAINTAIN ANY EXISTING CONTROLS PREVIOUSLY INSTALLED UNDER F-94-24. (1 WEEK)

3. BEGIN ROUGH GRADING AND BUILDING CONSTRUCTION.

4. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM INLETS, INLET PROTECTION AND WATER AND SEWER. (6 WEEKS)

5. INSTALL CURB AND GUTTER THEN PROCEED WITH CONCRETE POUR FOR TRUCK

SETDOWN PAD AND ASPHALT PAVING. (6 WEEKS) 6. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT

SEEDING NOTES. (2 DAYS) 8. PERFORM FINE GRADING, LANDSCAPING, LIGHTING, SIDEWALK, AND COMPLETE BUILDING

CONSTRUCTION. (6 MONTHS) 9. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING

SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAY)

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

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

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

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 -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.

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 MATERIAL SPECIFICATIONS

I. 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 EXPERIMENTATION STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING: -i. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1-1/2" IN DIAMETER. -ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED. -iii. WHERE 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.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES: -i. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IIII. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES: -i. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING: --a. 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.

--b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT. --c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED. --d. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

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

-ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE <u>STABILIZATION</u> — SECTION I — VEGETATIVE STABILIZATION METHODS AND MATERIALS. V. TOPSOIL APPLICATION

-i. 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. -ii. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION. -iii. 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. -iv. 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

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 AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITE 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. --b. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2

PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE

APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE. --c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET. --d. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE. REFERENCES: GUIDELINE SPÉCIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

GRADING AND SEEDBED PREPARATION.

STANDARD SEDIMENT CONTROL NOTES

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER 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 THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE,
- 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED
- 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:
- TOTAL AREA OF SITE AREA DISTURBED
- AREA TO BE ROOFED OR PAVED
- AREA TO BE VEGETATIVELY STABILIZED
- TOTAL CUT
- OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT
- 8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF
- 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. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- 13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- 14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

BY THE DEVELOPER :

CONSERVATION DISTRICT.

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 INSPECTIONS BY THE HOWARD SOIL

12.13.04 DEVELOPER DATE

BY THE ENGINEER:

30.882 ACRES

10000 CU. YARDS

10000 CU. YARDS

16.0 ACRES

12.2 ACRES

3.8 ACRES

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.

12.13.04 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL



AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION

AFTROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND

OF LAND DEVELOPMENT / / DATE

DATE NO. REVISION

OWNER

CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121

DEVELOPER

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BWI PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL DETAILS

Patton Harris Rust & Associates, pc

Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 **T** 410.997.8900 **F** 410.997.9282

12.13.64

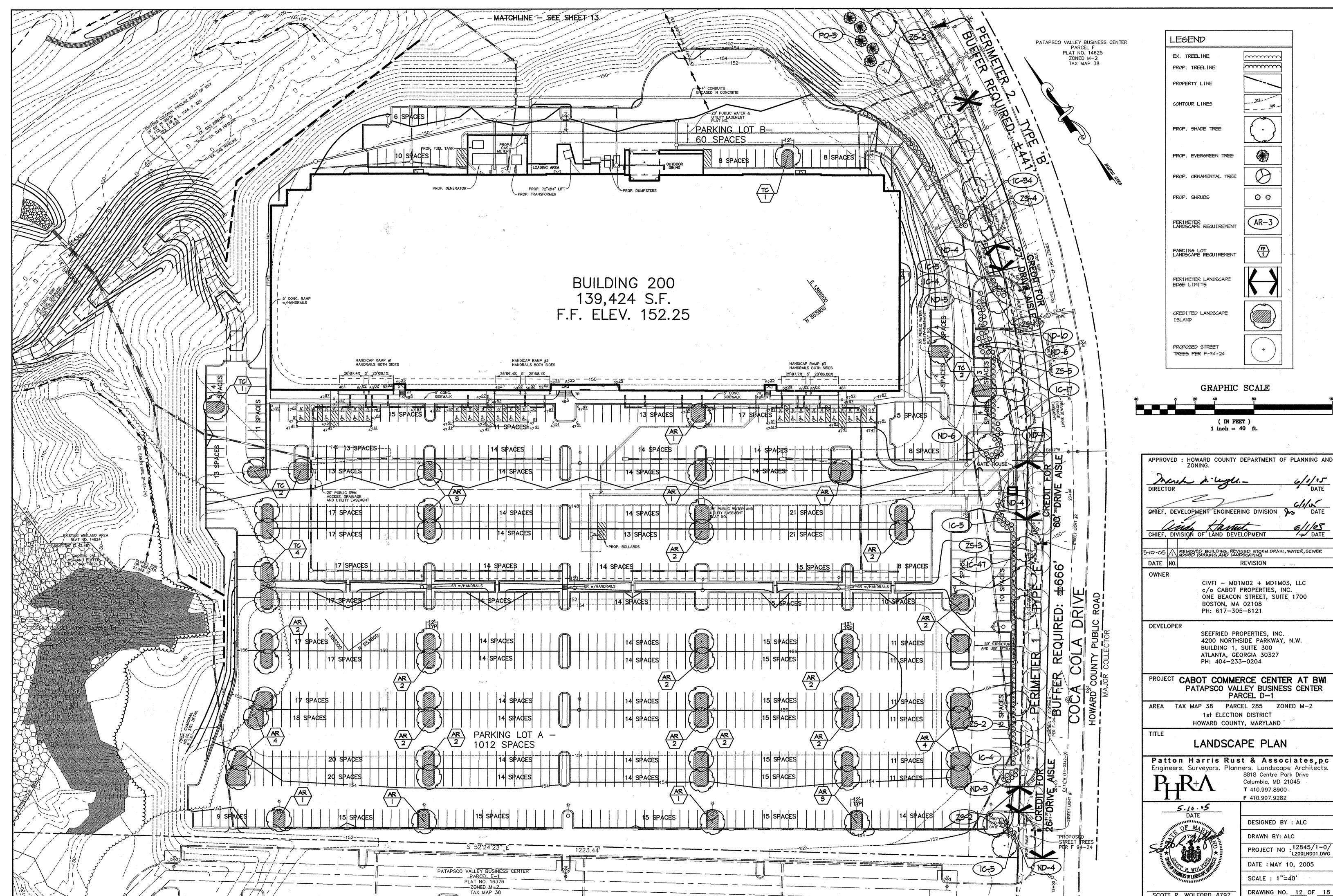
DESIGNED BY : C.J.R. DRAWN BY: DAM

PROJECT NO : 12845/1-0/

SCALE: AS SHOWN

DATE: DECEMBER 14, 2004

DRAWING NO. 11 OF 18 CHRISTOPHER J. REID #19949



DRAWING NO. 12 OF 18

SDP-05-003

SCOTT R. WOLFORD #797

LEGEND

EX. TREELINE.

PROP. TREELINE

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CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121

DEVELOPER

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BW PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

LANDSCAPE PLAN

Patton Harris Rust & Associates,pc Engineers. Surveyors. Planners. Landscape Architects.

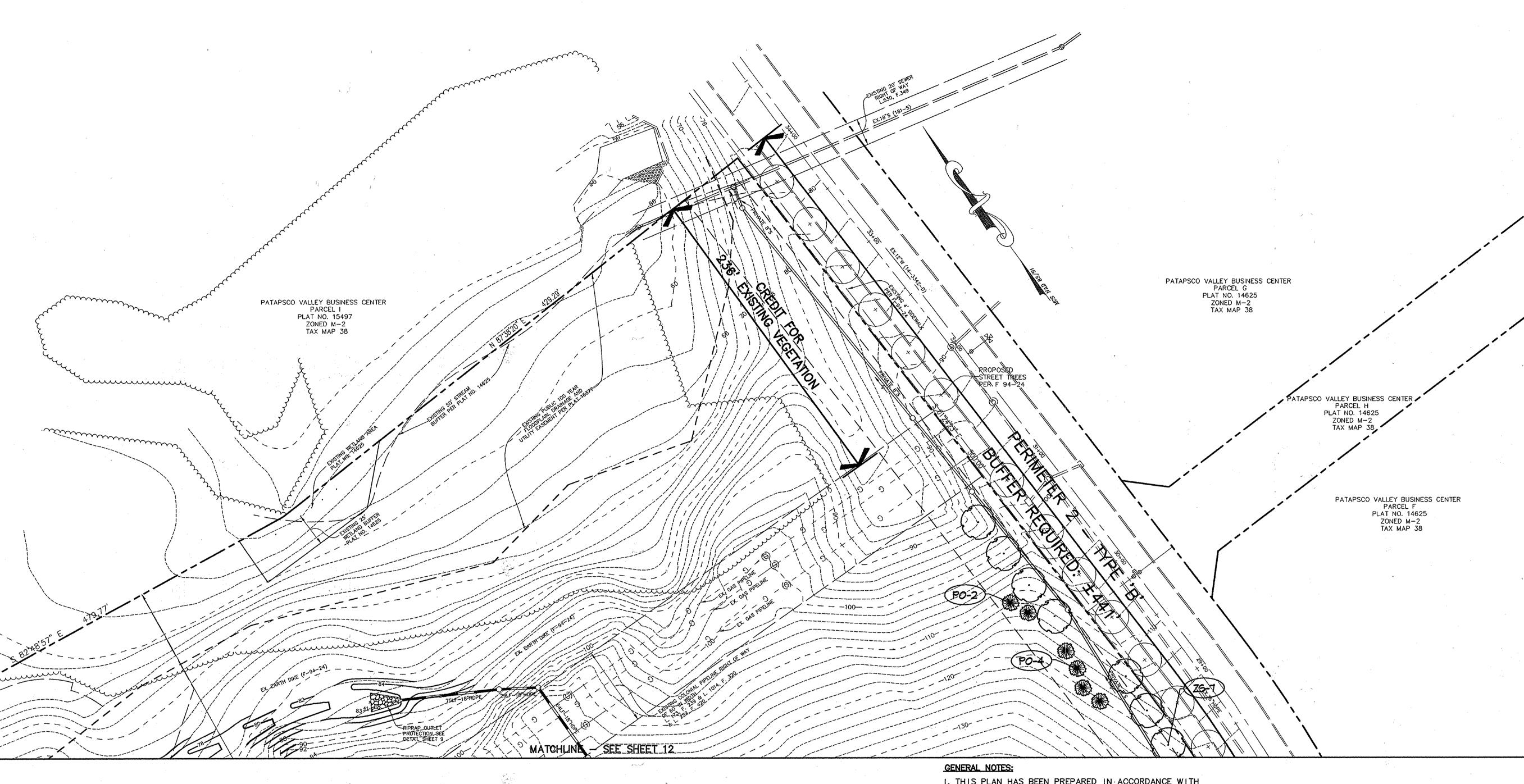
8818 Centre Park Drive Columbia, MD 21045 **T** 410.997.8900 F 410.997.9282

5.10.05 DATE

DESIGNED BY : ALC DRAWN BY: ALC PROJECT NO : 12845/1-0/ L200LND02.DWG

DATE : MAY 10, 2005 SCALE : 1/"=40"

DRAWING NO. __13_OF __18_



SCHEDULE A - PERIMETER LA	NDSCAPE ED	GE
ADJACENT TO ROADWAYS		
PERIMETER	1	2
LANDSCAPE TYPE	E	В
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	779'±	677'±
CREDIT FOR EXISTING DRIVE AISLE (LINEAR FEET)	113'	\ \ \ \
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO -	YES 236 '
LINEAR FEET REMAINING	666'±	441'±
CREDIT FOR WALL, FENCE, OR BERM (YES/NO/LINEAR FEET)	NO -	NO -
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	17 167	9 11 -
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	17 - 167	9 11 -

(PAGE 17 OF THE HO.CO. LANDSCAPE MANUAL)

n en		
SCHEDULE B - PARKING LOT A INTERNAL	LANDSCAPIN	G
ARKING LOT	A (BLDG 200)	B (BLD6 200)
UMBER OF PARKING SPACES	1012-1011	60
UMBER OF SHADE TREES REQUIRED (1/20 SPACES)	51	3
UMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	51 -	3 -
UMBER OF ISLANDS REQUIRED (200 SF. AREA / ISLAND)	51	3
UMBER OF ISLANDS PROVIDED	51	3 .

SCHEDULE 'A' NOTES: REGULATIONS DO NOT REQUIRE LANDSCAPE EDGES, BUFFERING, OR SCREENING BETWEEN INTERNAL LOTS OR PARCELS WITHIN THE SAME DEVELOPMENT.

I. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,560.00

43 SHADE TREES @ \$300 = 12,900 O ORNAMENTAL TREES @ \$150 = 0

II EVERGREEN TREES @ \$150 = 1,650 167 SHRUBS @ \$30

3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.

4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

6. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.

7. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.

8. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

9. MINIMUM SPACING BETWEEN TREES AND STREET LIGHTS IS 20'.

10. ALL LANDSCAPE ISLANDS ARE A MINIMUM OF 12' WIDE.

DEVELOPER'S/BUILDER'S CERTIFICATE:

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

Chile Whells

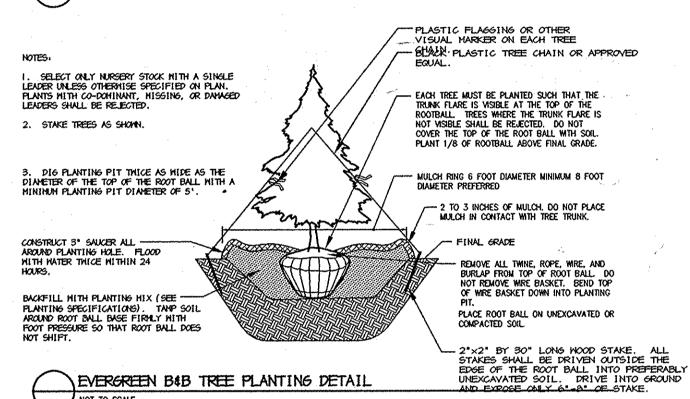
5.10.05 SIGNATURE

DATE SCOTT R. WOLFORD #797

I. SEE PLANTING SPECIFICATIONS FOR PREPARATION OF PLANTING BED. 2. DO NOT HEAVILY PRUNE THE SHRUB AT PLANTING.
PRUNE ONLY BROKEN, DAMASED, OR DISCOSED
BRANCHES.

- DO NOT COVER THE TOP OF THE ROOT BALL MITH SOIL. PLANT 1/6 OF ROOTBALL ABOVE FINAL GRADE. ---FINAL GRADE TAMP SOIL AROUND BALL BASE FIRMLY WITH FOOT PRESSURE SO THE ROOT BALL DOES NOT SHIFT.

SHRUB BED PLANTING DETAIL - B&B AND CONTAINER SHRUBS



1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed—in plants or plants from cold storage will be accepted.

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD. DC. & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washinaton and

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscope Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material. 5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing

and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor. 6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or XCupressacyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work. 9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope). 13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Legigro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Encaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yews): Top dress after planting with 1/4 to 1/2 cup lime each.

14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail. 15. Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances

is a pesticide containing chlorpyrifos to be used as a means of pest control 16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and a

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches. 18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulci shall be fine graded, grass seed planted, and covered with straw mulch.

VEGETATIVE ESTABLISHMENT DETAILS AND SPECIFICATIONS FOR PROJECTS WITHIN 4 MILES OF THE BWI AIRPORT July 1, 2004

References to ITEM #s noted below are found in Maryland Aviation Administration's manual entitled Specifications for Performing Landscaping

Activities for the Maryland Aviation Administration dated May 2001

SOIL TESTS

1. Following initial soil disturbances or re-disturbance, permanent or temporary stabilization shall be completed within seven calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days for all other disturbed or graded areas on the project site.

2. Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6-week incubation period to allow oxidation of sulfates.

3. The minimum soil conditions required for permanent vegetative establishment are:

> a. Soil pH shall be between 6.0 and 7.0. b. Soluble salts shall be less than 500 parts per million (ppm). c. The soil shall contain less than 40% clay but enough fine

grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. d. Soil shall contain 1.5% minimum organic matter by weight. e. Soil must contain sufficient pore space to permit adequate root

If these conditions cannot be met by soils on site, adding topsoil is required in accordance ITEM 901 or amendments made as recommended by a certified

SEEDING ITEM 903 SEEDING

DESCRIPTION

903-1.1 GENERAL. This item provides specifications for seeding of areas as designated on plans or as directed by the MAA Engineer. The species, mixtures, and methods of application provided in this item have been designed to reduce the attractiveness of airport grounds to wildlife. Only MAA-approved species, mixtures, and rates of application provided in this item may be used to establish vegetation. All activities associated with seeding including soil preparation, seed application, fertilization, and maintenance shall also conform to these approved standards

MATERIALS

903-2.1 SEED. All seed shall comply with the Maryland Seed Law (Agricultural Article of the Annotated Code of Maryland). Only MAA-approved species, mixtures, and rates of application provided in this item may be used to establish vegetation. Seed will be sampled and tested by an inspector from the Turf and Seed Section, Maryland Department of Agriculture (MDA), Annapolis, Maryland. All lawn and turf seed and mixtures shall be free from the following state-listed restricted noxious weeds:

corn cockle (Agrostemma githago), bentgrass (Agrostis spp.)', redtop (Agrostis gigantea) wild onion (Allium canadense). wild garlic (Allium vineale), bindwccd (Calstegia spp.), dodder (Cuscuta spp.).

Bermuda grass (Cynodon dactylon orchardgrass (Dactylis glomerata tall fescue (Festuca arundinacea meadow fescue (Festuca pratensis velvetgrass (Holeus lanatus), annual bluegrass (Poa annue

rough blucgrass (Poa trivialis)

Johnson grass (Sorgum halepense)

serrated tussock (Nassella trichotoma).

timothy (Phleum pratense), and

Restricted noxious-weed seed may not exceed 0.5 percent by weight of any seed mixture. In addition, all seeds sold in Maryland shall be free from the following listed prohibited

¹ These species may be included as a labeled component of a mixture when each is present in excess of five percent of the mixture by weight noxious weeds: balloonvine (Cardiospermum halicacabum), quackgrass (Elytrigia repens), sicklepod (Senna obtusifolia), sorghum (Sorghum spp.), Canada thistle (Cirsium arvense), plumeless thistle (Carduus spp.-includes musk thistle and curled thistle), and

903-2 1.1 APPROVED SPECIES. The following table contains species that are approved by MAA for use in seed mixtures. Purity requirements and germination requirements are also provided.

	Purity* Not Less than %	Minimum % Germination*	Pure Live Se Factor
Certified Turf-Type Tall Fescue (Festuca arundinacea)	98	90	1.13
Certified Kentucky Bluegrass (Poa pratensis)	90	80	1.39
Hard Fescue (Festuca longifolia)	98	90	1.13
Chewings Red Fescue (Festuca rubra commutata)	98	90	1.13
Annual Ryegrass (Lolium multiflorum)	95	85	1.24
Perennial Ryegrass (Lolium perenne)	90	80	1.39
Fowl Meadow Grass (Poa palustris)	90	80	1.39
Little Bluestem (Andropogon scoparius)	62	94	1.71

903-2.1.2 PURITY. All seed shall be free of all state-designated noxious weeds listed in Paragraph 2.1.1 and conform to MAA specifications. To ensure compliance, MAA requires sampling and testing of seed by the Turf and Seed Section, Marvland Department of Agriculture (MDA). The Contractor shall furnish the MAA Engineer with duplicate signed copies of a statement by the Turf and Seed Section certifying that each lot of seed has been laboratory tested within six months of date of delivery. This statement shall include the following information:

reentage of germination shall be actual sprouts and shall not include hard seeds unless specifically permitted by the MAJ

name and address of laboratory,

lot number. the results of tests as to name, percentages of purity and of germination percentage of weed content for the seed furnished, and, in the case of a mixture, the proportions of each kind of seed.

Seed shall be furnished in standard containers with the seed name, lot number, net weight, percentages of purity, germination rate and hard seed, and percentage of maximum weed seed content clearly marked. All seed containers shall be tagged with a MDA supervised mix program seed tag.

903-2.1.3 MIXTURES AND APPLICATION RATES. Only seed mixtures and application rates described in this item may be used unless otherwise approved by the MAA Engineer. Seed mixtures shall meet criteria detailed in Paragraph 903-2.1.2. Seed mixtures have been formulated to minimize the attractiveness of areas to wildlife of common landscape scenarios. The appropriate seed mixture for application will be designated based on environmental conditions and may vary from site to site. All planting rates listed are in pounds of Pure Live Seed (PLS) per acre.

Seed mixtures, application scenarios, and rates for permanent cool-season grasses are as

- a. Seed Mixture No. 1 relatively flat areas (grade less than 4:1) subject to
- conditions and regular moving (Application rate = 234 lbs PLS/acre); b. Seed Mixture No. 2 - sloped areas (grade greater than 4:1) not subject to
- mowing (Application rate = 115 lbs PLS/acre); and c. Seed Mixture No. 3 - wetlands and their associated buffer zones (Application

Seed Mixture No. 1: Relatively flat areas regularly mowed and exposed to normal conditions (Application rate = 234 lbs PLS/acre)

131 lbs PLS/acre)

Annual Rycgrass

Rate of Application (lbs of LS/acre) 85% Certified Turf-Type Tall Fescus 10% Certified Kentucky Bluegrass 5% Perennial Ryegrass Supplemental Seed

Seed Mixture No. 2: Sloped areas not subject to regular mowing (Application rate = 115

Application (lbs of PLS/acre) 75% Hard Fescue 20% Chewings Fescue 5% Kentucky Bluegrass Supplemental Seed

Seed Mixture No. 3 - Wetland areas and their associated buffer zones (Application rate =

Sand		Rate of Applica
Seed	. (lbs of PLS/acre)	
60%	Fowl Meadow Grass	83
30%	Chewings Fescue	34
10%	Perennial Ryegrass	14
Supplementa	1 Seed	•
Redto		

903-2.1.4 SEEDING SEASONS. Application of seed and seed mixtures shall occur within a specified seeding season unless otherwise approved by the MAA Engineer. No seed or seed mixtures are to be applied on frozen ground or when the temperature is at or below 35 degrees Farenheit (7.2 degrees Centigrade). Under these conditions, a layer of mulch should be applied in accordance with Item 905, Mulching, to stabilize the site, and permanent seeding should occur in the subsequent seeding season. Seed application may occur during the seeding season dates listed below. Seeding performed after October 20 should be a temporary cover of annual ryegrass and followed by overseeding of the appropriate seed mixture during the spring seeding season.

SEEDING SEASONS			
Permanent Cool-Season Grasses	March I to April 20 and August I to October 20, inclusive		
	,		
Temporary Cover of Annual Rye/Redtop	March I to April 30 and August I to November 30, inclusive		
Temporary Cover of Warm-Scason	May 1 to July 31, inclusive. Rate of application should be 13.6 lbs.		
Grasses (Little Bluestem only)	PLS per acre.		

Seeding seasons are based on typical years and can be subject to variation, which may be modified by the MAA Engineer based on seasonal trends. If the time required to complete any of the operations necessary under this item, within

the specified planting season or any authorized extensions thereof, extends beyond the

Contract period, then such time will be charged against the Contract time, and liquidated

damages will be enforced with respect to this portion of work. 903-2.2 LIME. Lime shall consist of ground limestone and contain at least 85 percent total carbonates. Lime shall be ground to a fineness so that at least 90 percent will pass through a No. 20 mesh sieve and 50 percent will pass through a No. 100 mesh sieve. Dolomitic lime or a high magnesium lime shall contain at least 10 percent magnesiur oxide. Lime shall be applied by approved methods detailed in Section 903-3.3 of this

item. The rate of application will be based on results of soil tests.

903-2.3 FERTILIZER. Fertilizer shall be standard commercial fertilizer (supplied separately or in mixtures) and meet the requirements of applicable state and federal laws (O-F-241) as well as standards of the Association of Official Agricultural Chemists. litrogen-Phosphorus-Potassium (N-P-K) concentrations shall be determined from analysis of soil samples. <u>(Approved fertilizer rate: 21 pounds of 10-10-10 per 1.000 square feet.)</u> Methods of fertilizer application shall conform to standards described in Section 903-3.3 of this item. Fertilizer shall be furnished in standard containers that are clearly labeled with name, weight, and guaranteed analysis of the contents (percentage of total nitrogen, available phosphoric acid, and water-soluble potash). Mixed fertilizers shall not contain any hydrated lime or cyanamide compounds. Fertilizers failing to meet the specified analysis may be approved by the MAA Engineer, providing sufficient materials are applied to conform with the specified nutrients per unit of measure without

additional cost to MAA. The fertilizers may be supplied in the following forms:

a. A dry, free-flowing fertilizer suitable for application by a common fertilizer

b. A finely ground fertilizer soluble in water, suitable for application by power sprayers; or

		PLANT LIST	• :		A
SYMBOL	QTY.	SCIENTIFIC / COMMON NAME	SIZE	ROOT	SPACING
AR	44	ACER RUBRUM 'BRANDYWINE' BRANDYWINE RED MAPLE	2.5"- 3" CAL	B&B	PLANT AS SHOWN
TC	10	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LITTLELEAF LINDEN	2.5"- 3" CAL	B&B	PLANT AS SHOWN
	* .		X		
zs	26	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA	2.5"- 3" CAL	B&B	PLANT AS SHOWN
РО	11	PICEA OMORIKA SERBIAN SPRUCE	6'-8' HT.	B&B	PLANT AS SHOWN
IC	121	ILEX CORNUTA 'BURFORDII NANA' DWARF BURFORD CHINESE HOLLY	2.5'- 3' HT.	CONT.	PLANT 5' O.C.
N _D	51	NANDINA DOMESTICA 'GULF STREAM' GULF STREAM NANDINA	2.5'- 3' HT.	CONT.	PLANT AS SHOWN

PLANT LIST NOTES:

1. SURETY AMOUNT IS BASED ON REQUIRED LANDSCAPE MATERIAL ONLY. SEE GENERAL NOTE #2 FOR SURETY TOTAL.

2. RED MAPLE NEEDS TO BE A MALE VARIETY (SEEDLESS)

A granular or pellet form suitable for application by blower equipment.

The rate of application will be based on results of soil tests performed by the University of Maryland Soil Testing Laboratory. By law, persons applying fertilizer to State-owned land shall follow the recommendations of the University of Maryland as set forth in the 'Plant Nutrient Recommendations Based on Soil Tests for Turf Maintenance" and the "Plant Nutrient Recommendations Based on Soil Tests for Sod Production" (see Appendix B). Application of the fertilizer shall be in a manner that is consistent with the recommendations of the University of Maryland Cooperative Extension.

CONSTRUCTION METHODS AND EQUIPMENT

903-3.1 GENERAL. This section provides approved methods for the application of and includes standards for seedbed preparation, methods of application, and equipment to be used during the process. Lime and fertilizer shall be applied to seeded areas before the seed is spread. The mixture of seed will be determined for sites based on environmental conditions as described in Paragraph 903-2.1.3.

903-3.2 ADVANCE PREPARATION. Areas designated for seeding shall be properly prepared in advance of seed application. The area shall be tilled and graded prior to pplication of lime and fertilizer, and the surface area shall be cleared of any stones larger than 1 inch in diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. Damage caused by erosion or other forces that occur after the completion of grading shall be repaired prior to the application of fertilizer and lime. The Contractor will repair such damage, which may include filling gullies, smoothing irregularities, and repairing other incidental damage before beginning the application of fertilizer and ground limestone

If an area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, all grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then searified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory condition by discing or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

An area to be seeded shall be considered a satisfactory seedbed (without requiring additional treatment) if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches; the top 3 inches of soil is loose, friable, and is reasonably free from large clods, rocks, large roots, or other undesirable matter; appropriate amounts of fertilizer and lime have been added; and, if it has been shaped to the required grade immediately prior to seeding. For slope areas steeper than 3:1 (three horizontal to one vertical), the subsoil shall be loose to a depth of 1 inch.

After completion of tilling and grading, lime and fertilizer shall be applied within 48 hours according to the specified rate (Paragraphs 903-2.2 and 2.3) and methods (Paragraphs 903-3.3.1 and 903-3.3.2) approved by MAA. The seeding mixture shall be applied within 48 hours after application of lime and fertilizer. To firm the seeded areas, cultipacking shall occur immediately after seeding.

903-3.3 METHODS OF APPLICATION. Lime, fertilizer, and seed mixes shall be applied by either the dry or wet application methods that have been approved by MAA

903-3.3.1 DRY APPLICATION METHOD

a. Liming. If soil test results indicate that lime is needed, the following procedures will be used: following advance preparation of the seedbed, lime shall be applied prior to the application of any fertilizer or seed and only on seedbeds that have been prepared as described in paragraph 903-3.2. The limit shall be uniformly spread and worked into the top 2 inches of soil, after which the seedbed shall be properly graded again.

b. Fertilizing. Following advance preparations (and liming if necessary) fertilizer shall be spread uniformly at the specified rate to provide no less than the minimum quantity stated in Paragraph 903-2.3.

c. Seeding. Seed mixtures shall be sown immediately after fertilization of the seedbed. The fertilizer and seed shall be lightly raked to a depth of 1 inch for newly graded and disturbed areas.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted using a cultipacker or an approved lawnroller.

903-3.3.2 WET APPLICATION METHOD/HYDROSEEDING

a. General. The Contractor may elect to apply seed and fertilizer as per Paragraphs c and d of this section in the form of an aqueous mixture by spraying over the previously prepared seedbed using methods and equipment approved by MAA. The rates of application shall be as specified in Paragraphs 903-2.1

b. Spraying Equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge capable of reading increments of 50 gallons or less over the entire range of the tank capacity. The liquid level gauge shall be mounted so as to be visible to the nozzle operator at all times The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The spraying equipment shall also include a pressure pump capable of delivering 100 gallons per minute at a pressure of 100 pounds per square inch. The

> pressure pump assemblage shall be configured to allow the mixture to flow through the tank when not being sprayed from the nozzle. All pump passages and pipelines shall be capable of providing clearance for 5/8-inch solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. A pressure gauge shall be connected to and mounted immediately behind the nozzle.

> The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operato can control and regulate the amount of flow of mixture to be supplied so that mixtures may be properly sprayed over a distance varying from 20 feet to 100 feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For ease of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings. In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzles may be connected.

c. Mixtures. Lime shall be applied separately in the quantity specified, prior to the fertilizing and seeding operations. Lime should be added to and mixed with water at a concentration not to exceed 220 pounds of lime for every 100 gallons of water. After time has been applied, the tank should be emptied and rinsed with fresh water. Seed and fertilizer shall be mixed together in the relative proportions specified, but the resulting concentration should not exceed 220 pounds of mixture per 100 gallons of water and should be applied within 30 minutes to prevent fertilizer burn of the seeds.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify all sources of water to the MAA Engineer at least two weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the Engineer following

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within 30 minutes from the time they were mixed or they shall be wasted and disposed of at a location acceptable to the Engineer.

d. Spraying. Lime shall be sprayed upon previously prepared seedbeds on which the lime, if required, shall have been worked in already. The mixtures shall be applied using a high-pressure spray which shall always be directed upward into

the air so that the mixtures will fall to the ground in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner that might produce crosion or runoff. Particular care shall be exercised to ensure that the application is made uniformly, at the prescribed rate, and to guard against misses and overlapped areas. Predetermined quantities of the mixture shall be used in accordance with specifications to cover specified sections of known areas. To checks the rate and uniformity of application, the applicator will observe the degree of wetting of the ground or distribute test sheets of paper or pans over the area at intervals and observe the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the MAA Engineer, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried. 903-3.4 MAINTENANCE OF SEEDED AREAS. The contractor shall protect seeded

areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and

When either the dry or wet application method outlined above is used for work performed out of season, the Contractor will be required to establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. If at the time when the contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for the unaccepted portions of the areas seeded out of season will be withheld until such time as these requirements have been met.

MULCHING

Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after

Mulch shall be applied as per ITEM 905.

TEMPORARY SEEDING

100 pounds of dolomitic limestone per 1,000 square feet 15 pounds of 10-10-10 per 1,000 square feet

Per ITEM 903

Mulch shall be applied as per ITEM 905.

Seed:

No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8 inches. All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel County Code - Article 21, Section 2-308, and compacted to 90% density; compaction to be determined by ASTM D-1557-66T (Modified Proctor). Any fill within the building area is to be compacted to a minimum of 95% density as determined by methods previously mentioned. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent crosion and slippage.

SODDING

Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted above. Lime and fertilizer per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved crosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme emperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod.

Install sod as per ITEM 904.

MINING OPERATIONS

Sediment control plans for mining operations must include the following seeding dates For seeding dates of: February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and red top at the minimum rate of 0.5 pounds per 1,000 square feet

NOTE: Use of this information does not preclude meeting all of the requirements of the current Maryland Standards and Specifications for Soil Erosion and Sediment Control.

ZONING. CHIEF, DIVISION OF LAND DEVELOPMENT DATE 5-10-05 REVISED PLANT LIST DATE NO. REVISION OWNER CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121 DEVELOPER SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND

PROJECT CABOT COMMERCE CENTER AT BW PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

BUILDING 1, SUITE 300

PH: 404-233-0204

ATLANTA, GEORGIA 30327

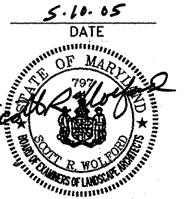
AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

LANDSCAPE NOTES AND DETAILS

Patton Harris Rust & Associates, pc

Engineers. Surveyors. Planners. Landscape Architects.

8818 Centre Park Drive Columbia, MD 21045 **T** 410.997.8900 **F** 410.997.9282



DESIGNED BY : ALC DRAWN BY: ALC PROJECT NO : 12845/1-0/ L200LND03.DWG

DATE: MAY 10, 2005 SCALE : AS SHOWN

DRAWING NO. 14 OF 18 SCOTT R. WOLFORD #797



. project\12845\1-0\Plans\L200FSD01.dwg, Layout1, 12/10/2004 07:49:37 AM, HP750C(36).pc3, 1:

DRAWING NO. 15 OF 18
SDP-05-003

SCOTT R. WOLFORD #797

SCOTT R. WOLFORD #797

FOREST PRESERVATION AREAS SHALL BE PERMANENTLY PROTECTED BY FOREST CONSERVATION EASEMENTS.

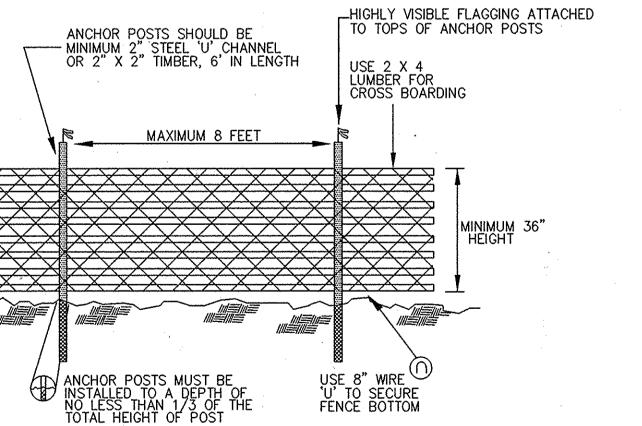
III. GENERAL CONSTRUCTION NOTE: THERE WILL BE NO STAGING OR STORING OF EQUIPMENT WITHIN THE LIMIT OF DISTURBANCE.

IV. POST CONSTRUCTION MANGEMENT PRACTICE: A TWO-YEAR POSTED CONSTRUCTION AND MANAGEMENT PROGRAM TO ENSURE FOREST HEALTH IS REQUIRED AND INCLUDES THE FOLLOWING:

I-MAINTENANCE OF SIGNS, FENCES, AND TREE PROTECTION DEVICES TO 2-PREVENT UNWARRANTED INTRUSION AND DAMAGE. 3-CAREFUL REMOVAL OF ALL TEMPORARY STRUCTURES AFTER CONSTRUCTION.

4-ROUTINE INSPECTIONS OF FOREST CONSERVATION EASEMENTS.

AREA ACRES 2.41 AC ± TOTAL 2.41 AC \pm



BLAZE ORANGE OR BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE, ONLY. SUPER SILT FENCE MAY BE SUBSTITUTED FOR TREE PROTECTION FENCING.

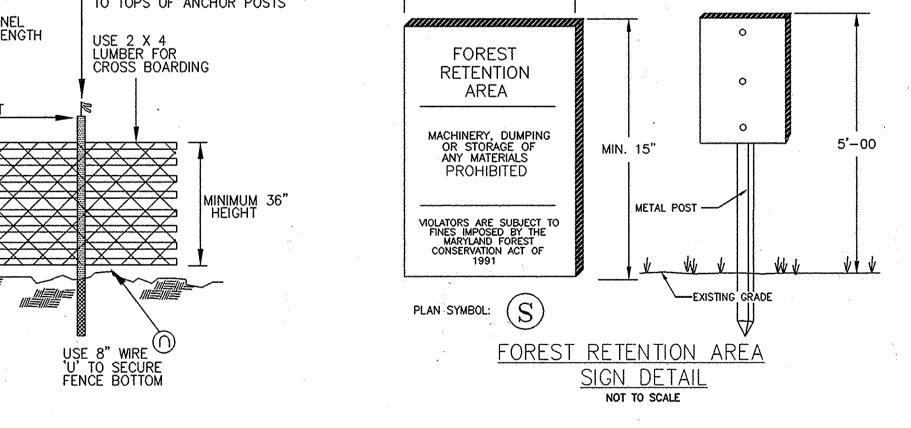
BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.

4. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED

PRIOR TO INSTALLING DEVICE. 5. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER

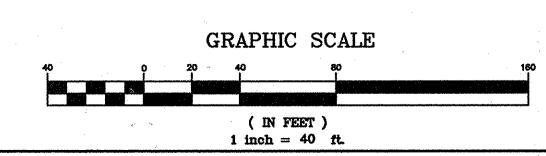
LARGE ROOTS WHEN INSTALLING POSTS. PROTECTION SIGNS ARE REQUIRED, SEE SIGN DETAIL. 7. FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

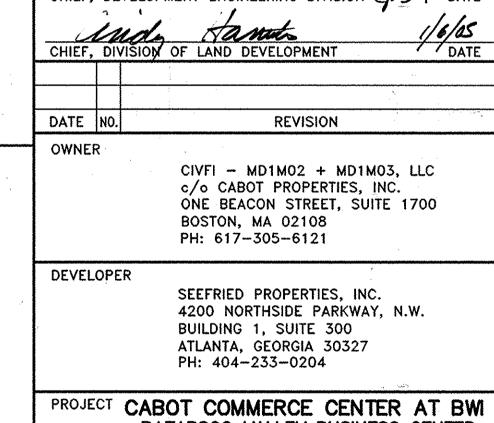
> TREE PROTECTION FENCING NOT TO SCALE



1. SIGNAGE SHALL BE LOCATED ON FOREST CONSERVATION / REFORESTATION / AFFORESTATION EASEMENT BORDER.

2. SEE PLAN FOR SPACING. 3. SIGNS TO BE PLACED ON METAL POSTS 5' +/- ABOVE FINISH GRADE. PLACE SIGNS EVERY 100' AROUND PERIMETER OF FOREST RETENTION AREA.



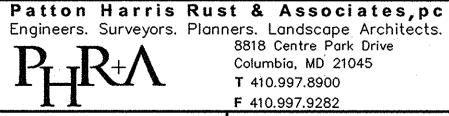


PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

AREA TAX MAP 38 PARCEL 285 ZONED M-2 1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

FOREST CONSERVATION PLAN



Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 **F** 410.997.9282

DATE

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mm



SCOTT R. WOLFORD #797

DESIGNED BY : ALC

DRAWN BY: ALC PROJECT NO : 12845/1-0/ L300FCP02.DWG DATE: DECEMBER 14, 2004

SCALE : 1"=40' DRAWING NO. 17 OF 18

## SEQUENCE OF OPERATIONS

#### PRE-CONSTRUCTION SITE PREPARATION

- 1. FIELD STAKE LIMITS OF DISTURBANCE (L.O.D.) AT 25' INTERVALS.
- 2. REVIEW L.O.D. IN FIELD AND ADJUST IF PRACTICAL.
- 3. INSTALL TREE PROTECTION FENCE AT THE L.O.D. AND IMPLEMENT TREE PROTECTION
- 4. CLEAR AND GRUB AS NECESSARY TO FACILITATE ROOT PRUNING TO A DEPTH OF 2-3 FEET WITHIN THE LIMITS OF THE PROPOSED REFORESTATION AREA. CLEAR REMAINING TREES IN A WAY THAT "SAVE TREES' ARE NOT DISTURBED. GRIND STUMPS 12" IN DIAMETER AND LARGER THAT ARE WITHIN 25' OF THE L.O.D.
- 5. DO NOT ATTEMPT TO SAVE TREES WITHIN 25' FROM THE LO.D. UNLESS, IN THE OPINION OF THE CONSULTING ARBORIST, THEY HAVE A 75% CHANCE OR BETTER OF
- 6. PRUNE AND FERTILIZE DESIRABLE 'EDGE TREES' AS PER CONSULTING ARBORIST'S
- 7. THERE SHALL BE NO STAGING, STORAGE, OR STOCKPILING OF MATERIALS WITHIN THE NONTIDAL WETLANDS OR 25' NONTIDAL WETLANDS BUFFER.
- 8. REMOVE OR TREAT WITH AN ACCEPTABLE METHOD, NOXIOUS PLANT MATERIAL SUCH AS MULTIFLORA ROSE, TEARTHUMB, AND JOHNSON GRASS BEFORE INSTALLING REFORESTATION PLANTS.
- 9. INSTALL TREE PROTECTION SIGNAGE.
- 10. STABILIZE ANY DISTURBED AREAS USING THE SPECIFIED STABILIZATION MIXTURE WHICH ALLOWS FOR NATURAL REVEGETATION OF FOREST COMMUNITIES.
- FOREST CONSERVATION SEQUENCE OF OPERATIONS
- 1. The Limits of Disturbance (LOD) pertinent to the preservation of wooded areas shall be staked in the field with final adjustments being made as necessary to insure adequate protection of the Critical Root Zone of trees designated for retention. Stakes to be used shall be those specified for the "TREE PROTECTION DEVICE" to which approved protective material will be attached. Alternate means of defining the LOD may be used if approved by the DPZ.
- 2. All forest retention areas shall be protected by highly visible, well anchored temporary protection devices (see detail), which shall be securely in place prior to any clearing or grading
- 3. Grading operations or other construction operations which could dislodge or otherwise damage the protective devices shall be avoided along the edges of the LOD lines if possible. Any protective devices which are damaged during site construction operations shall be properly repaired immediately by the Contractor.
- 4. After site grading has been completed, all trees adjacent to the LOD line shall be inspected for indications of crown die—back (summer indicator), damage within respective critical root zones or any dead wood or other conditions which might be hazardous to pedestrians, buildings, utility lines vehicular access ways or parked vehicles.
- 5. Should there be evidence of any damage to tree trunks, branches or the critical root zone of trees within the protected areas, or to isolated specimen trees to be preserved, the damage shall be examined within a period of two (2) days from the date of observance by a licensed tree care professional. Exposed roots should be covered immediately to a depth of 6-8inches with soil, preferably mixed with 50% peat moss or leaf mold.
- 6. Remove damaged, dead or dying trees or limbs only if the trees or limbs pose an immediate safety hazard to buildings, utility lines, vehicles, or access and egress drives or pedestrian areas. Trees designated for pruning or removal shall be pruned or removed using equipment and methods which will not damage or destroy adjacent large trees or understory trees or
- 7. All temporary forest protection devices will be carefully removed after all general construction, necessary tree surgery, removal of debris, etc. regrading and reseeding of sediment and erosion control disturbance have been completed and acceptance and approval of the work and site conditions have been given by the DPZ.

#### GENERAL NOTES:

1. THE MAJORITY OF THE PLAN HAS BEEN PREPARED USING PHR+A FIELD RUN TOPOGRAPHY. PORTIONS OF THE EXISTING AERIAL TREELINE AND SPECIMEN TREES WERE FIELD APPROXIMATED.

2. SOME SPECIMEN TREE LOCATIONS AND PORTIONS OF THE TREE LINE ARE FIELD

3. NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE

4. NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.

5. THERE ARE NO KNOWN CEMETERIES OR BURIAL PLOTS LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY CEMETERIES INVENTORY. 6. THERE ARE NO EXISTING BUILDINGS ON THE SITE. STRUCTURES ARE PROPOSED

7. THIS SITE CONTAINS ONE SOIL WITH POSSIBLE HYDRIC INCLUSIONS, COMUS

8. THE FSD, DATED JULY 7, 2004, HAS BEEN PREPARED BY PATTON HARRIS RUST & ASSOCIATES IN CONJUNCTION WITH THESE PLANS.

9. THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND THESE PLANS.

10. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION. II. THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN SATISFIED

BY THE CREATION OF A 2.41 ACRE ONSITE RETENTION EASEMENT AND SURETY IN THE AMOUNT OF \$20,995.92 (104,979.6 SF X \$0.20 /SF) HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THIS EASEMENT.

12. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

13. BEARINGS AND DISTANCES FOR THE EXISTING FOREST CONSERVATION EASEMENTS ARE PROVIDED ON A PLAT OF FOREST CONSERVATION EASEMENT AS

## EX. TOPOGRAPY PROP. CONTOURS EX. TREELINE $\sim\sim\sim\sim$ PROP. TREELINE mmm PROPERTY LINE WETLANDS 'V' 'V AND 25' BUFFER 100-YEAR FLOODPLAIN -PROP. BUILDING TREE PROTECTION DEVICE (TPD) BLAZE ORANGE PLASTIC MESH) FOREST RETENTION SIGNAGE LIMIT OF DISTURBANCE FOREST CONSERVATION

LEGEND

#### **Howard County Forest Conservation Worksheet**

Patapsco Valley Business Center Project Name: County File #:

Net Tract Area Total Tract Area Other Deductions 100 Year Floodplain Area Disturbed Under F-92-24 Net Tract Area Net Tract Area = (A-B-C) Land Use Category:\_CIA\_ Afforestation Threshold (Net Tract Area X \_ 15% Conservation Threshold (Net Tract Area X \_\_ 15% Existing Forest Cover Existing Forest Cover within the Net Tract Area Area of Forest Above Conservation Threshold If the Existing Forest Cover (F) is greater than Conservation Threshold (G), then G = Existing Forest Cover (F) - Conservation Threshold (E); Otherwise G = 0 Break Even ( Amount of forest that must be retained so that no mitigation is required) H = 2.41(1) If the area of forest above the Conservation Threshold (G) is greater than zero, then H = (0.2 X the area of forest above Conservation Threshold (G)) + the Conservation (2) If the area of forest above the Conservation Threshold (G) is equal to zero, then H = Existing Forest Cover (F) I = 4.25 Forest Clearing Permitted Without Mitigation I = Existing Forest Cover (F) - Break Even Point (H) Proposed Forest Clearing Total Area of Forest to be Cleared Total Area of Forest to be Retained K = Existing Forest Cover (F) - forest to be cleared (J) Planting Requirements If the Total Area of Forest to be Cleared (K) is at or above the Breakeven Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0); If not, calculate the planting requirement below. Reforestation for Clearing Above the Conservation Threshold (1) if the total area of forest to be retained (K) is greater than the Conservation Threshold (E), then L = the area of forest to be cleared (J) X 0.25: or (2) If the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then L = area of forest above Conservation Threshold (G) X 0.25 Reforestation for Clearing Below the Conservation Threshold M = 0.00(1) if Existing Forest Cover (F) is greater than Conservation Threshold (E) and the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 X (the Conservation Threshold (E) - the forest to be retained (K)) (2) If Existing Forest (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 X Forest to be cleared (J). N = 1.07Credit for Retention Above the Conservation Threshold If the area of forest to be retained (K) is greater than the Conservation Threshold (E), then N = K - EP = 0.00 Q = 0.00Total Reforestation Required P = L + M - N Total Afforestation Required (1) If Existing Forest Cover (F) is less than the Afforestation Threshold (D) then Q = the Afforestation Threshold (D) - the Existing Forest Cover (F) R = 0.00Total Planting Requirement R = P + Q

GRAPHIC SCALE

( IN FEET )

1 inch = 40 ft.

June 29, 2004

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND DATE NO. REVISION OWNER CIVFI - MD1M02 + MD1M03, LLC c/o CABOT PROPERTIES, INC. ONE BEACON STREET, SUITE 1700 BOSTON, MA 02108 PH: 617-305-6121 DEVELOPER

SEEFRIED PROPERTIES, INC. 4200 NORTHSIDE PARKWAY, N.W. BUILDING 1, SUITE 300 ATLANTA, GEORGIA 30327 PH: 404-233-0204

PROJECT CABOT COMMERCE CENTER AT BWIL PATAPSCO VALLEY BUSINESS CENTER PARCEL D-1

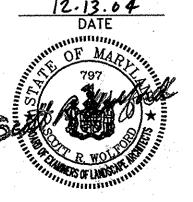
AREA TAX MAP 38 PARCEL 285 ZONED M-2

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

## FOREST CONSERVATION PLAN

Patton Harris Rust & Associates, pc Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045

**T** 410.997.8900 F 410.997.9282 DESIGNED BY : ALC



SCALE : 1,"=40' DRAWING NO. 18 OF 18 SCOTT R. WOLFORD #797

SDP-05-003

DRAWN BY: ALC

PROJECT NO : 12845/1-0/ L300FCP03.DWG

DATE : DECEMBER 14, 2004