SHEET INDEX

NO	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING AND SEDIMENT CONTROL
4	SEDIMENT CONTROL DETAILS
5	DETAIL SHEET
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8	LANDSCAPE SCHEDULES AND DETAILS
9	RETAINING WALL CONSTRUCTION DETAILS

SITE DEVELOPMENT PLAN
MDG CORPORATE CENTRE II
COLUMBIA 100 OFFICE RESEARCH PARK
PARCEL K-4
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

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 PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

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

6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY RIEMER MUEGGE & ASSOCIATES DATED NOVEMBER 1999.

7. 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. 30FB AND 30FC WERE USED FOR THIS PROJECT.

8. WATER IS PUBLIC. CONTRACT NO. 24-1588-D

9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: 108 P.S CONTRACT NO. 24-1588-D

10. THE STORMWATER QUALITY AND QUANTITY MANAGEMENT IS PROVIDED FOR THE DEVELOPMENT BY A REGIONAL RETENTION FACILITY PER F-87-82. THE FACILITY IS LOCATED NORTH OF EXECUTIVE PARK DRIVE AND COLUMBIA 100 PARKWAY INTERSECTION.

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 UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.

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

13. NO WETLANDS ARE FOUND ON THIS PROJECT.

14. A TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED FEBRUARY 2004.

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

16. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY RIEMER MUEGGE & ASSOCIATES DATED OCTOBER 1998.

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

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-87-13, F-87-82, F-96-51, F-97-48, F-97-147, F-99-59, F-03-139, SDP-03-121, WP-04-40, F-04-63, F-04-144, SDP-04-38,

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

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

22. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.

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

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.

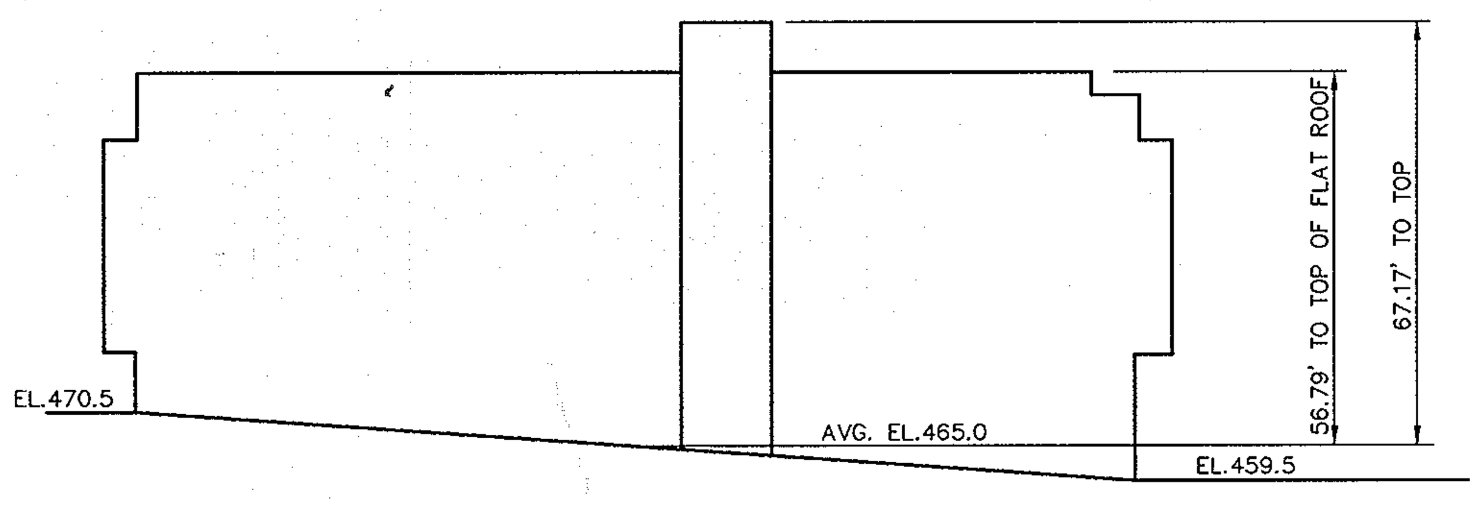
28. PER SECTION 16.1202.(b).(1).(iii) THIS PROJECT WAS SUBJECT TO FINAL PLANS AND MASS GRADING PLANS (GP-86-57) PRIOR TO THE FOREST CONSERVATION ACT, AND IS THEREFORE NOT SUBJECT TO THE FOREST CONSERVATION ACT.

29. DESIGN MANUAL WAIVERS OF SECTION 2.5.2 OF DESIGN MANUAL VOLUME III AND SECTION 5.4 OF DESIGN MANUAL VOLUME II WERE APPROVED on August 19 2003 and March 5, 2004, respectively.

30. A PRIVATE SHARED ACCESS AND PARKING AGREEMENT BETWEEN PARCEL J-2 AND K-4 FOR MUTUAL USE OF ALL DRIVEWAYS AND PARKING SPACES HAS BEEN RECORDED IN THE LAND RECORDS OF HOWARD COUNTY UNDER L. 8138 F. 350 DATED 3-10-04.

31. THIS PLAN IS SUBJECT TO THE AMENDED 5th EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

32. A PARKING NEEDS ANALYSIS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED NOVEMBER 12, 2009, SHOWS THAT WHILE THE FLOOR AREA FOR THIS BUILDING REQUIRES 188 SPACES, A LESSER PARKING RATIO IS SUFFICIENT TO SERVE THE BUILDING. THE LESSER RATIO IS REASONABLE FOR THIS BUILDING DUE TO THE NATURE OF THE CONDOMINIUM LEASING STRUCTURE AND THE NATURE OF THE TENANTS IN THE BUILDING. MOST OF THE BUSINESSES WITHIN THE BUILDING ARE SMALL BUSINESSES THAT HAVE A MINIMAL NUMBER OF EMPLOYEES, 1-2 EMPLOYEES IN MANY CASES. THE SITE IS ALSO SUBJECT TO A SHARED PARKING AGREEMENT WITH THE ADJACENT PARCEL - SEE NOTE 30 THIS SHEET.



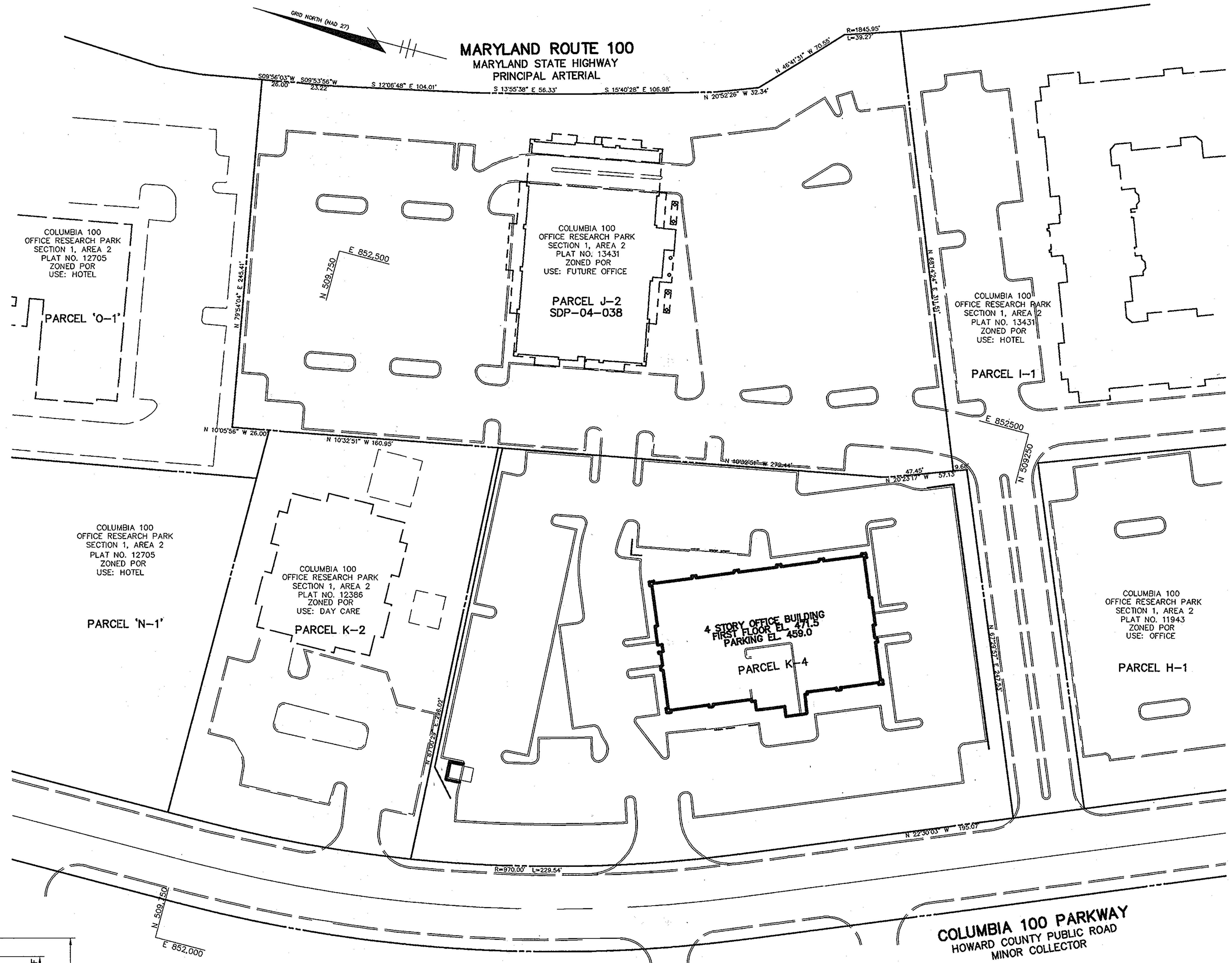
BUILDING ELEVATION
NO SCALE

NOTE: BUILDING SETBACK OF 92' FROM COLUMBIA 100 PARKWAY ALLOWS MAXIMUM HEIGHT OF BUILDING TO BE 81', THEREFORE 56.79' IS OK.

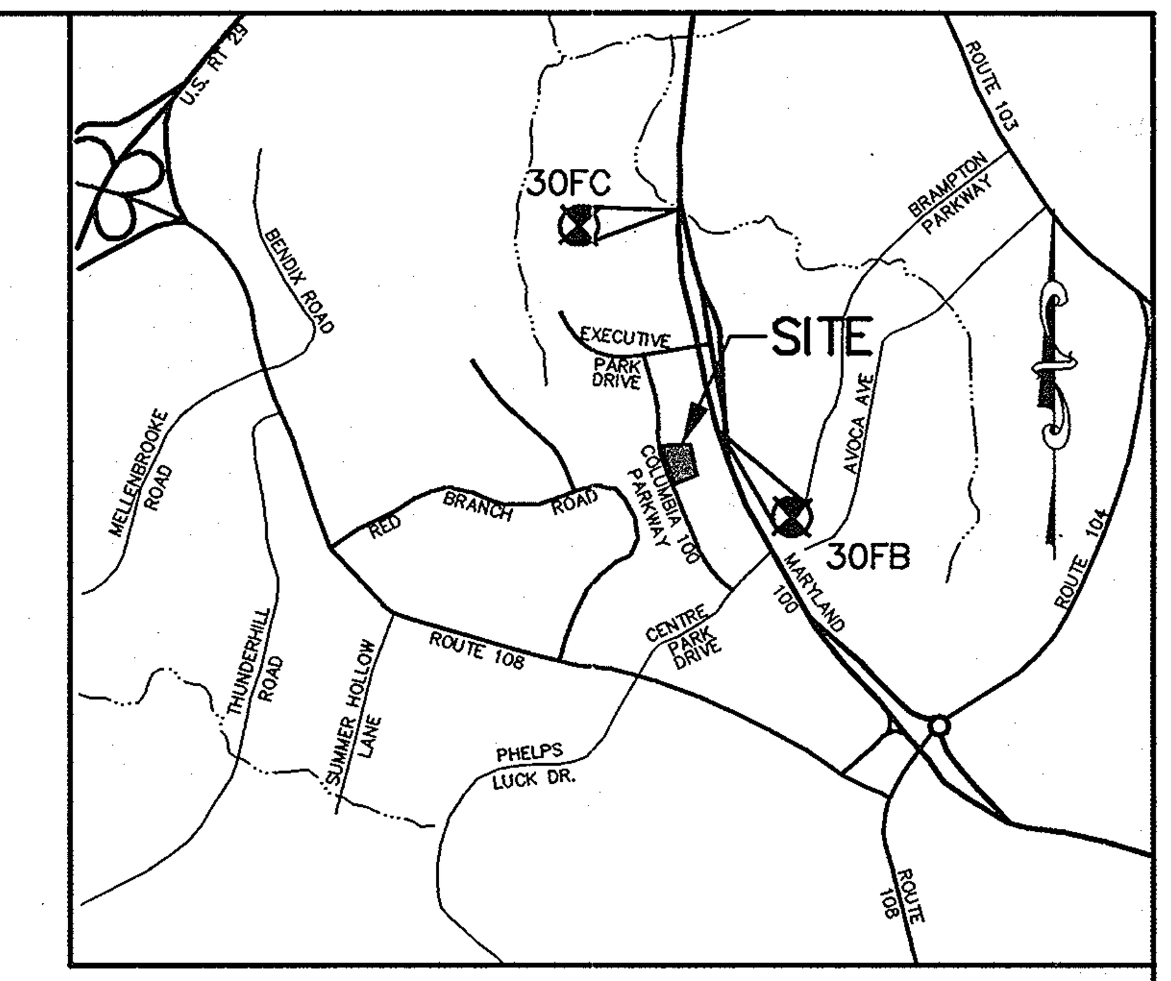
BENCH MARK

HOWARD COUNTY CONTROL STATION 30FB
N 570,134 (NAD83) — N 509,385 (NAD27)
E 1,365,194 (NAD 83) — E 852,776 (NAD 27)
ELEV. 500.63

HOWARD COUNTY CONTROL STATION 30FC
N 572,917 (NAD 83) — N 512,168 (NAD 27)
E 1,364,670 (NAD 83) — E 852,252 (NAD 27)
ELEV. 386.93



LOCATION PLAN
1" = 50'



VICINITY MAP
SCALE: 1"=2000'

COPYRIGHT ADC THE MAP PEOPLE
PERMITTED USE NO. 20894285

AREA TABULATION CHART

AREA OF PARCEL K-4 — 2.36 ACRES
LIMIT OF DISTURBED AREA — 2.9 ACRES
PRESENT ZONING — POR
PROPOSED USE — OFFICE

PROPOSED FLOOR AREAS
- FIRST FLOOR
  - OFFICE — 13,830 SF
- 2nd FLOOR — OFFICE 16,009 SF
- 3rd FLOOR — OFFICE 16,009 SF
- 4th FLOOR
  - OFFICE — 7,270 SF
- BASEMENT — OFFICE 3,694 SF

TOTAL OFFICE — 56,812 SF

REQUIRED PARKING*
- GENERAL OFFICE @ 3.3 SP./1,000 SF X 56,812 SF = 187.48
- TOTAL REQUIRED SPACES = 188 SPACES

PROPOSED PARKING — 186 SPACES (INCL. 7 HANDICAP SPACES)
- OUTSIDE PARKING = 173 SPACES *
- PARKING WITHIN BUILDING FOOTPRINT = 13 SPACES **
- * 50 SMALL CAR PARKING SPACES ARE PROPOSED (16'x8.5') AS ALLOWED BY ZONING REGULATION SECT. 133 C(2)

BUILDING COVERAGE — 13,830 SF (13.4% OF SITE)

** PARKING WITHIN BUILDING SHALL BE AVAILABLE FOR USE DURING ALL BUSINESS HOURS.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/28/04 — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 5/27/04 — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 5/28/04 — DATE

DATE	NO.	REVISION
12/2/09	1	ADDING OFFICE SPACE AND REMOVING PARKING

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT MDG CORPORATE CENTRE II
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA: TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: TITLE SHEET

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

ADDRESS CHART

PARCEL NUMBER	STREET ADDRESS
K-4	8860 COLUMBIA 100 PARKWAY

SUBDIVISION NAME		SECT./AREA		PARCEL	
COLUMBIA 100 OFFICE RESEARCH PARK		S/1 A/2		K-4	
PLAT NO.	BLOCK #	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
16621	18	POR	30	2	6023.02
WATER CODE	G02		SEWER CODE	5750639	

5.11.04
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 11872-3-2 C100COV
DATE : MAY 12, 2004
SCALE : AS SHOWN
DRAWING NO. 1 OF 9

SDP-04-020

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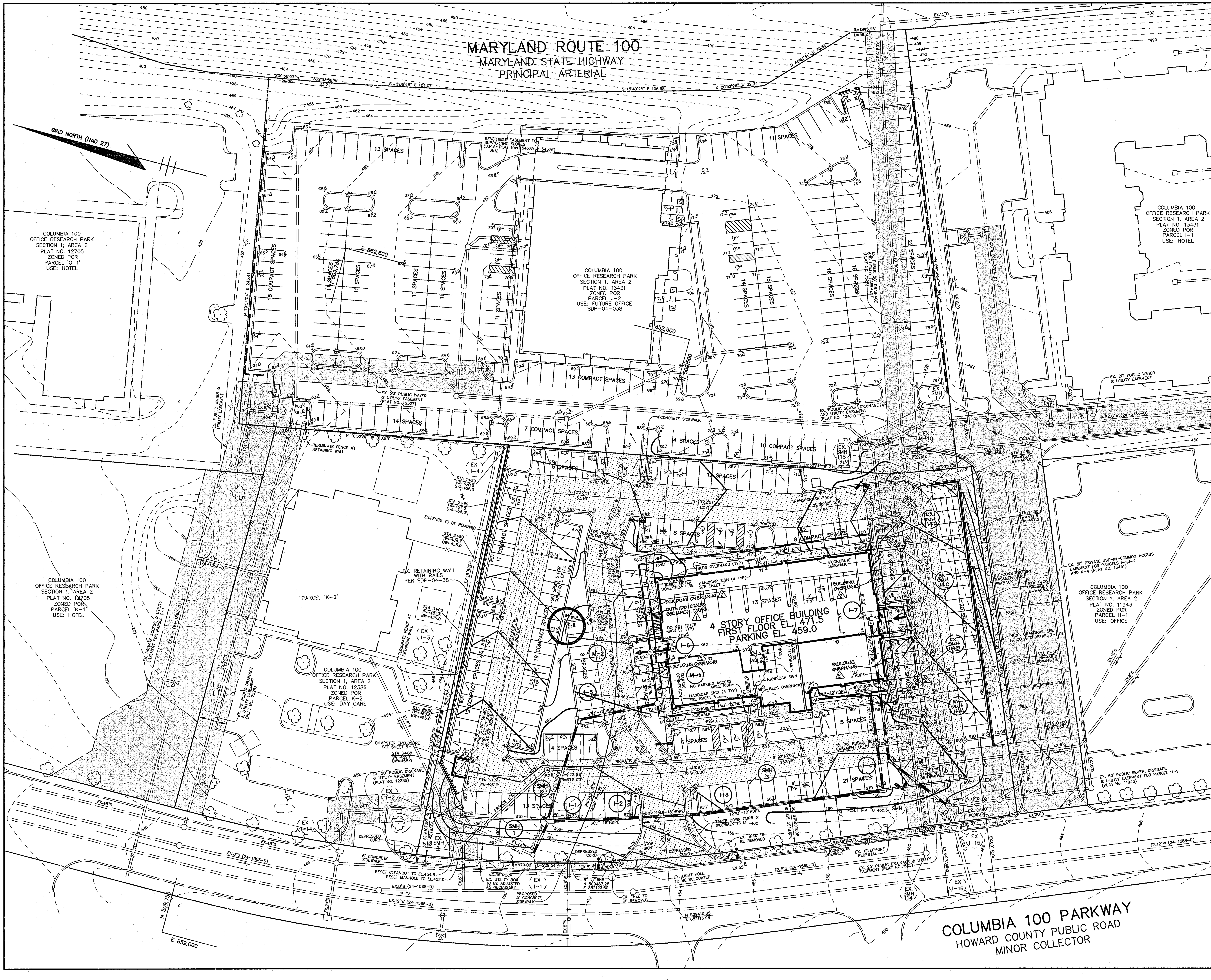

NOTES:

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
3. ALL ON-SITE ROADS ARE PRIVATE.
4. STD/REV/BARR.CURB ✱- DENOTES TRANSITION BETWEEN STANDARD, REVERSE & BARRIER CURB
5. ●━■ STREET LIGHT, 250 WATT HPS (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM.

LEGEND

—— —450——	EXISTING 10' CONTOURS
— — —448— —	EXISTING 2' CONTOURS
━━450━━	PROPOSED 10' CONTOURS
——448——	PROPOSED 2' CONTOURS
═══	PROPOSED CURB & GUTTER & BARRIER CURB
━━━	PROPOSED STORM DRAIN
⌒⌒⌒⌒	EXISTING TREELINE
⌒⌒⌒⌒	PROPOSED TREELINE
□	P-1 PAVING (HO.CO. DETAIL R-2.01)
▨	P-2 PAVING (HO.CO. DETAIL R-2.01)
▨	CONCRETE SIDEWALK (HO.CO. DETAIL R-3.05)
▨	EASEMENTS
1R	DENOTES NUMBER OF STEPS

LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	MOUNTING	DESCRIPTION	VOLTAGE	CATALOG NO.
●━■	250W MH	25' ROUND STRAIGHT ALUMINUM POLE	TYPE 3 CUT OFF PARKING LUMINAIRE (BLACK FINISH) WITH MATCHING POLE	208V	KIM LIGHTING #IAET325OMH BL-P/VSF-ISA POLE #PRA25-6188A/BL-P

2 WAIVER NOTE: A REQUEST TO WAIVE SECTION 5.4.B.5 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME II WATER AND SEWER REQUIRING A MINIMUM 10 FOOT HORIZONTAL CLEARANCE BETWEEN ANY PERMANENT STRUCTURE AND THE EDGE OF THE UTILITY EASEMENT WAS APPROVED ON SEPTEMBER 20, 2004, SUBJECT TO THE FOLLOWING NOTE:

NO IMPROVEMENTS SHALL BE CONSTRUCTED OR PLACED WITHIN THE PUBLIC WATER, SEWER AND UTILITY EASEMENTS WHICH WILL IMPEDE OR HINDER ACCESS TO THE PUBLIC WATER AND SEWER MAINS. IMPROVEMENTS SUCH AS AIR CONDITIONING UNITS, FIREPLACE CHIMNEYS, DECKS, FENCING, FOUNDATION PLANTINGS AND TREES SHALL NOT BE PLACED WITHIN THE EASEMENT.

DATE	NO.	REVISION
12/2/09	3	ADDING OFFICE SPACE AND REMOVING PARKING

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible] 5/28/04
DIRECTOR (ACTING) DATE

[illegible] 5/27/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE

[illegible] 5/28/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION
10-5-04	2	REV. EX. SEWER & BUILDING OVERHANGS & WAIVER NOTE
9-24-04	1	ADDED OUTSIDE STAIRS UP TO FIRST FLOOR

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT **MDG CORPORATE CENTRE II**
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

5.11.04
DATE

STATE OF MARYLAND CHRISTOPHER J. REID NO. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 11872-3-2 C400SIT.DWG
DATE : MAY 12, 2004
SCALE : 1" = 30'
DRAWING NO. 2 OF 9

SDP-04-020

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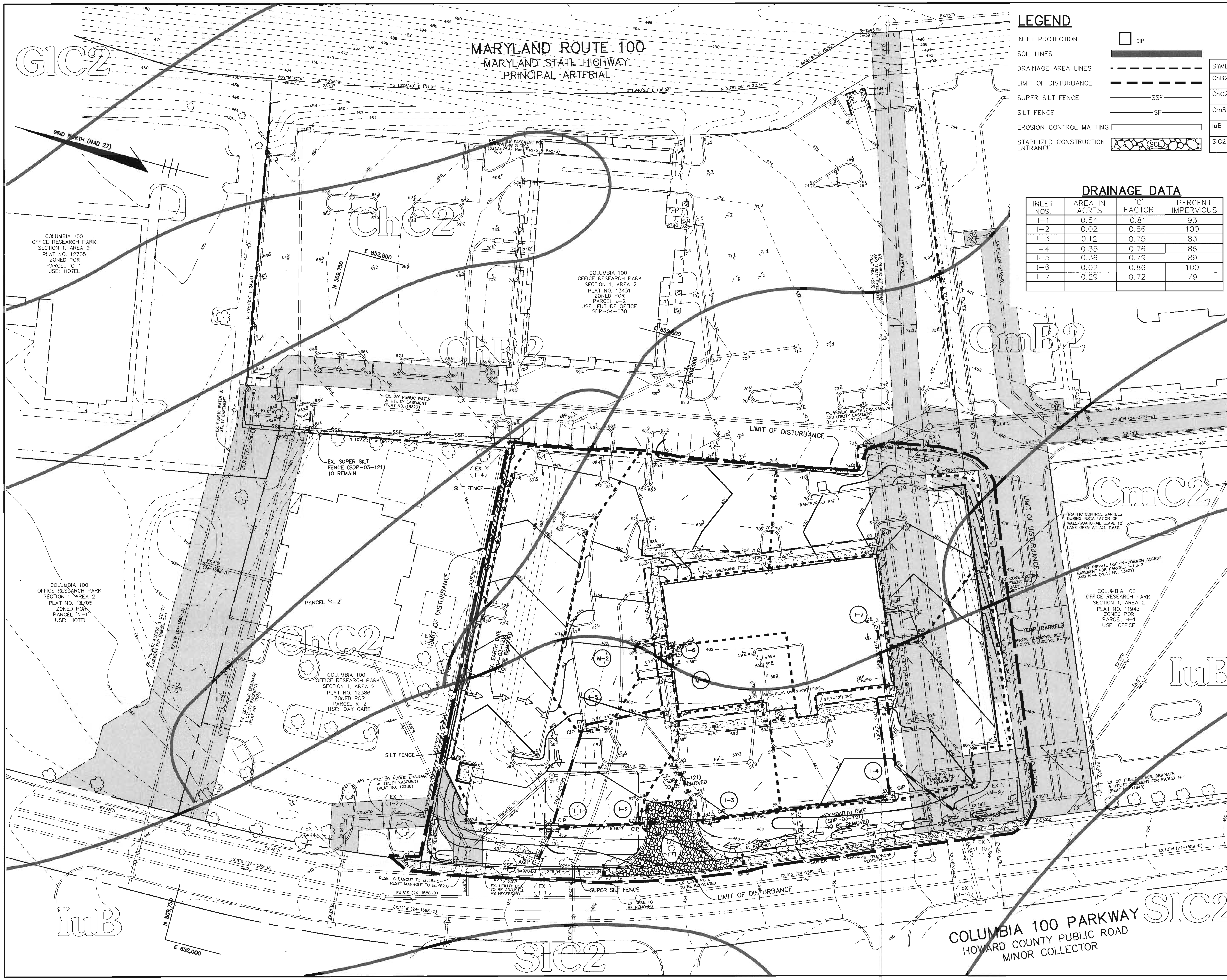

LEGEND

INLET PROTECTION	CIP
SOIL LINES	
DRAINAGE AREA LINES	
LIMIT OF DISTURBANCE	
SUPER SILT FENCE	SSF
SILT FENCE	SF
EROSION CONTROL MATTING	
STABILIZED CONSTRUCTION ENTRANCE	SCE

SOIL CHART

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChC2	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CmB2	CHILLUM SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	C
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B

DRAINAGE DATA

INLET NOS.	AREA IN ACRES	'C' FACTOR	PERCENT IMPERVIOUS
I-1	0.54	0.81	93
I-2	0.02	0.86	100
I-3	0.12	0.75	83
I-4	0.35	0.76	86
I-5	0.36	0.79	89
I-6	0.02	0.86	100
I-7	0.29	0.72	79

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.

Christine A Richards — 5/11/04
DEVELOPER — 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.

Christy J Reid — 5.11.04
ENGINEER — DATE

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

Jim Myers — 5/20/04
NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

John R Robertson — 5/20/04
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Stephen Lafferty — 5/28/04
DIRECTOR (Acting) — DATE

5/27/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

Cindy Hamilton — 5/28/04
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT **MDG CORPORATE CENTRE II**
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA: TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **GRADING, SEDIMENT CONTROL AND DRAINAGE AREA MAP**

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
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5.11.04
DATE

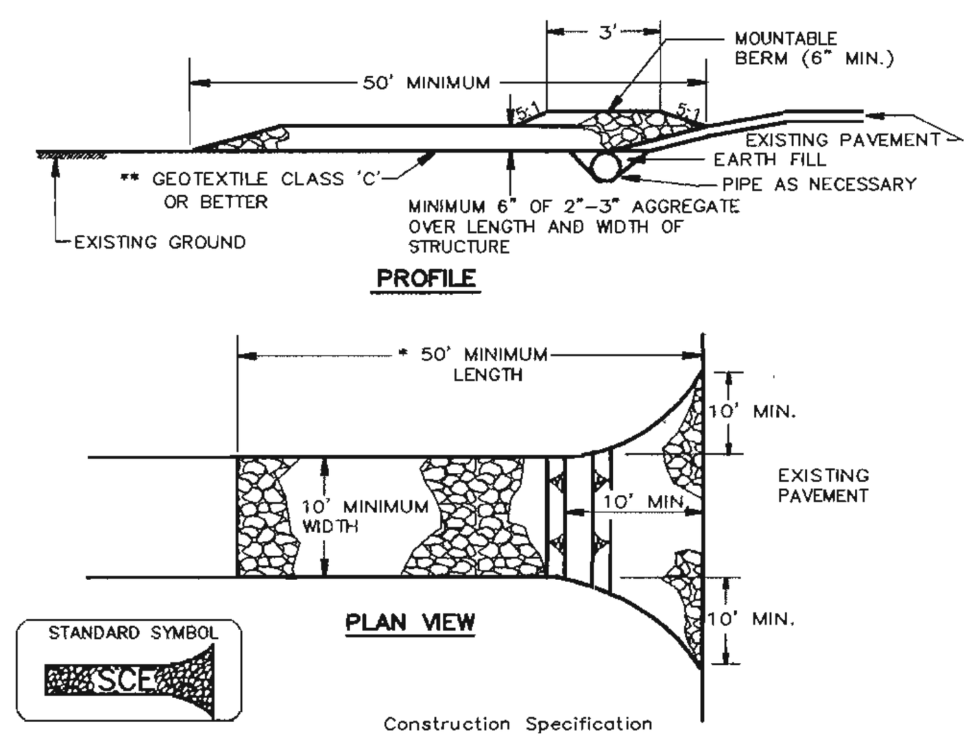
STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 REGISTERED — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 11872-3-2 C200ESC.DWG
DATE : MAY 12, 2004
SCALE : 1" = 30'
DRAWING NO. 3 OF 9

SDP-04-020

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flored at the existing road to provide o turning rodius.

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

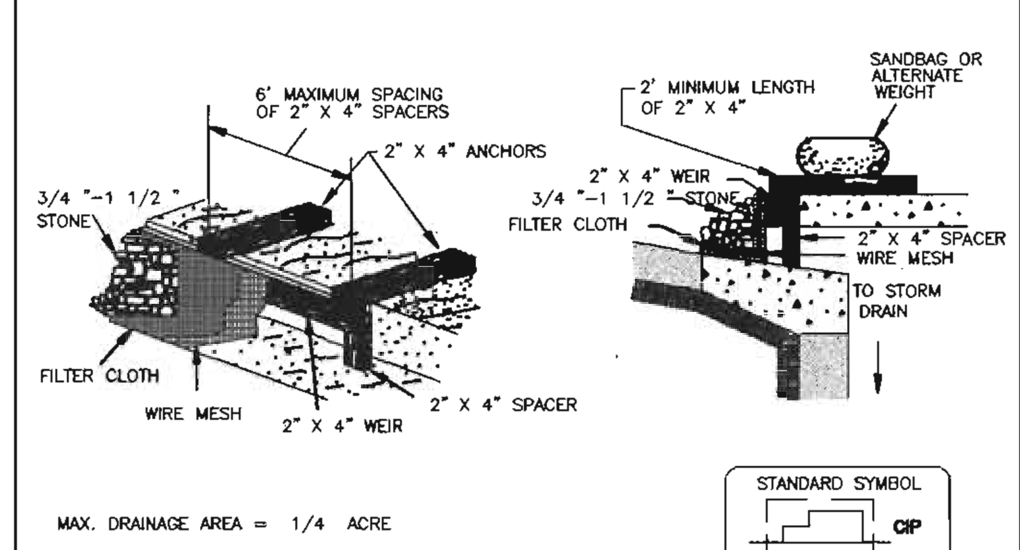
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the 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 SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23C - CURB INLET PROTECTION



Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

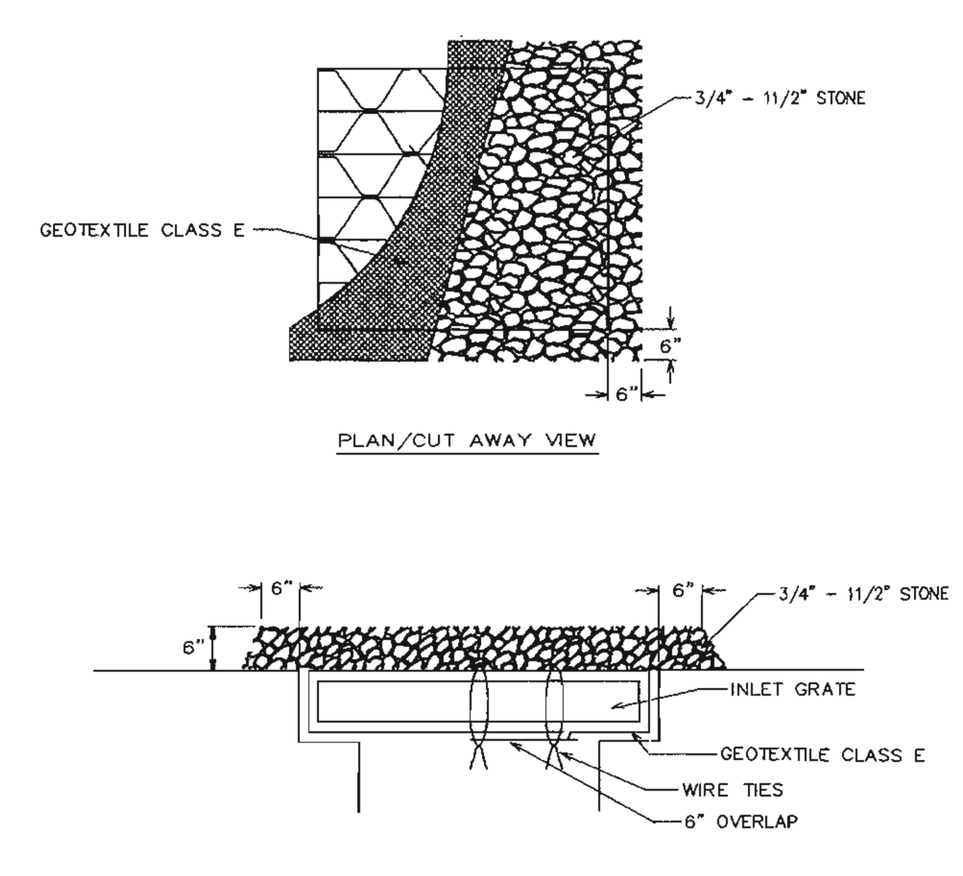
6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23B - AT GRADE INLET PROTECTION



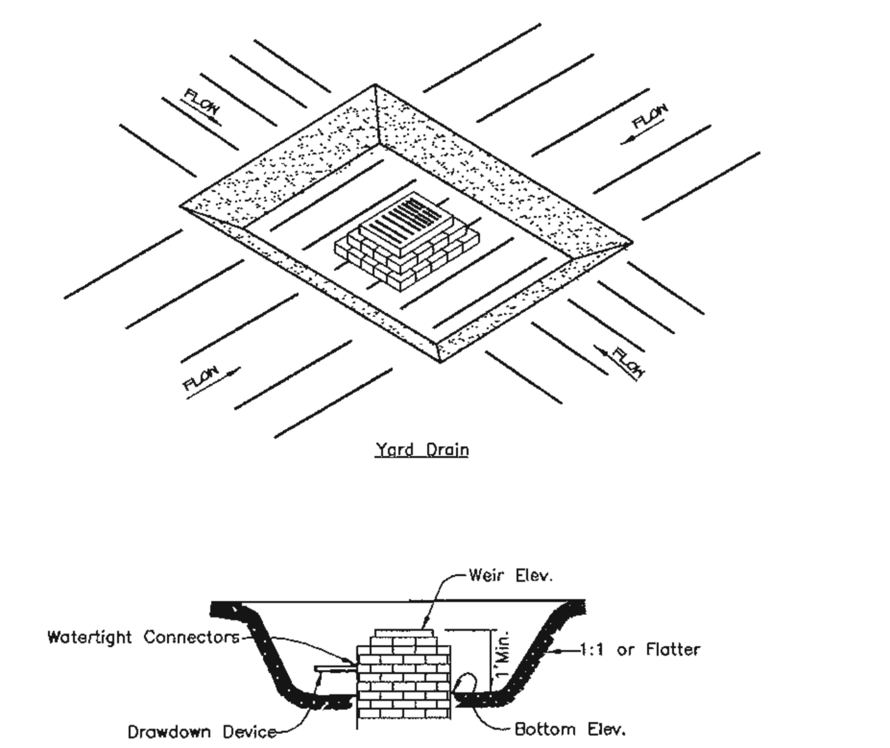
Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.

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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STORM INLET SEDIMENT TRAP ST-III



Construction Specifications For ST-III

1. Sediment shall be removed and then restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

2. The volume of sediment storage shall be 3600 cubic feet per acre of contributory drainage.

3. The structure shall be inspected after each rain and repairs made as needed.

4. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.

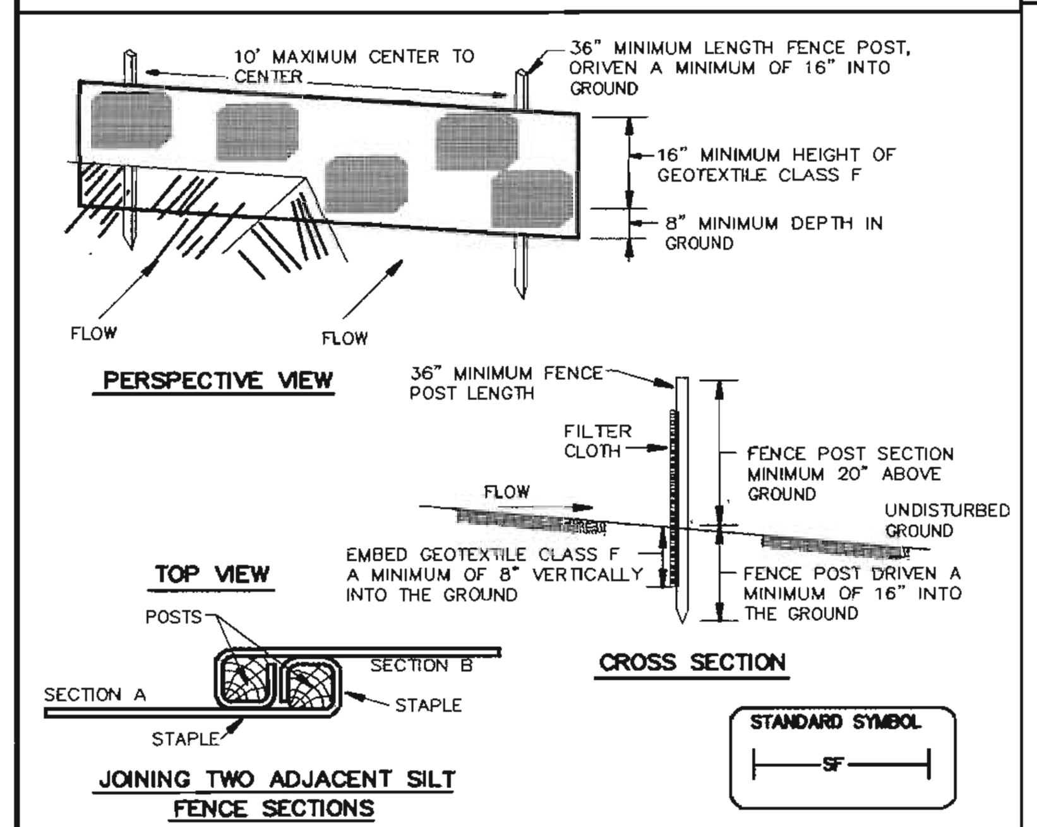
5. The sediment trap shall be removed and the area stabilized when the construction drainage area has been properly stabilized.

6. All cut slopes shall be 1:1 or flatter.

MAXIMUM DRAINAGE AREA: 3 ACRES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	16.10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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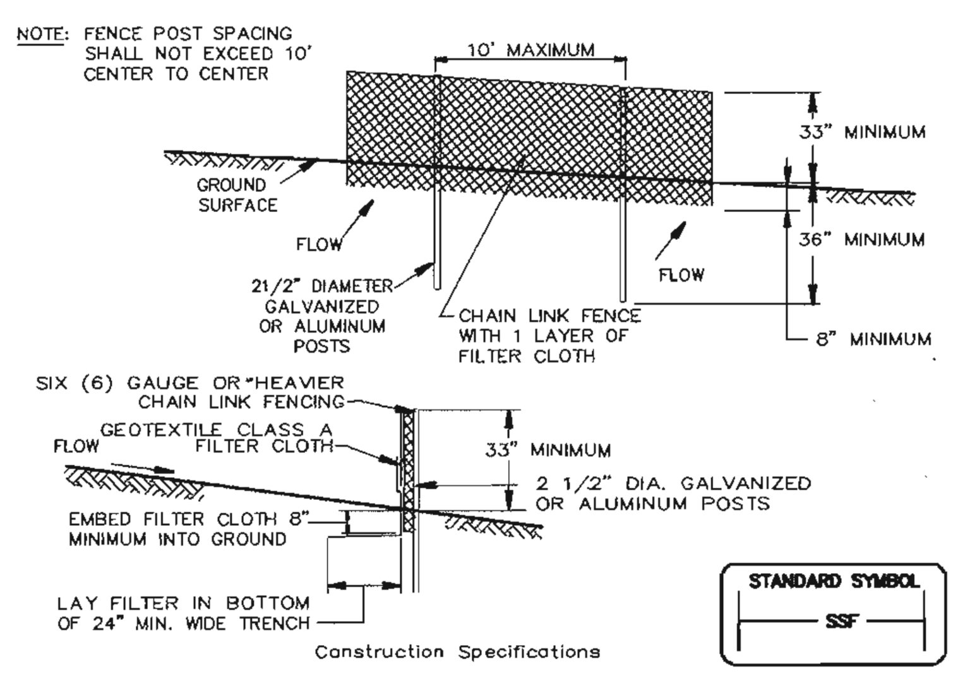
DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42" fabric and 6 foot length posts.

2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.

4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

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30.0 - DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS

1. MULCHES – SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGATATIVE COVER – SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILIAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION – THIS IS GENERALLY DONE AS AN EMERGENGY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS – SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMIILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE – APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

1. PERMANENT VEGETATION – SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING – COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

REFERENCES

1. AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREDICTING SOIL LOSS.
2. AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

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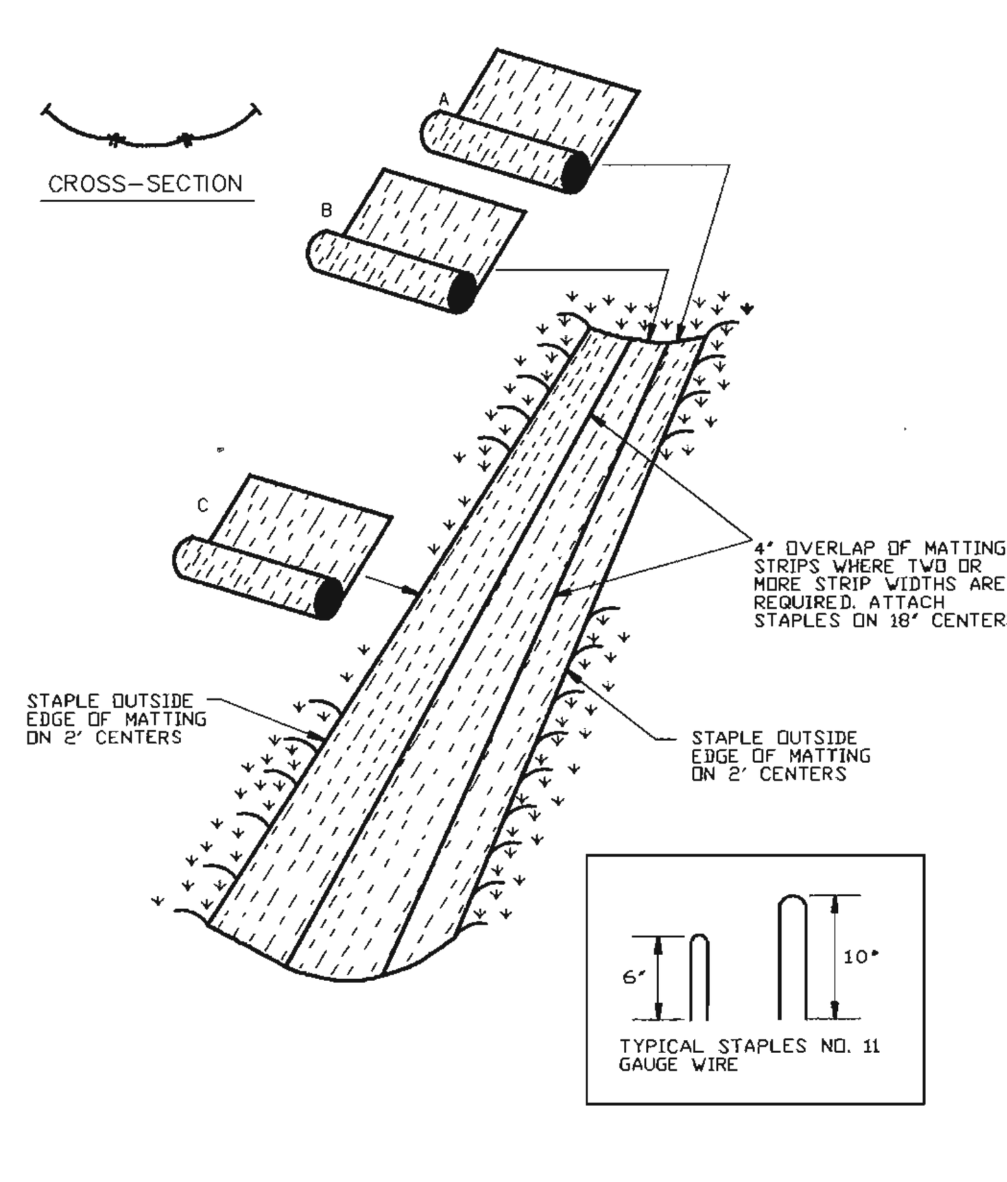
DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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 GRADATION.

CONDITIONS WHERE PRACTICE APPLIES
I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
--a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
-b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT 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 TOPSOIL.
-ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – 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 GRADING AND SEEDBED PREPARATION.

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

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 OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA OF SITE	2.36 ACRES
AREA DISTURBED	2.9 ACRES
AREA TO BE ROOFED OR PAVED	1.9 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.0 ACRES
TOTAL CUT	1500 CU. YARDS
TOTAL FILL	1500 CU. YARDS
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 DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

12. 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.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

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

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

SEEDING : FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS. PER 1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.07 LBS. PER 1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING : APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

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

PERMANENT SEEDING NOTES

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

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

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

1) PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS. PER 1000 SQ.FT.).

2) ACCEPTABLE – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING : FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS. PER 1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.05 LBS. PER 1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY ONE OF THE FOLLOWING OPTIONS :

1) 2 TONS PER ACRE OF WELL-ANCHORED MULCH STRAW AND SEED AS SOON AS POSSIBLE IN THE SPRING.

2) USE SOD.

3) SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.

MULCHING : APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

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

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.

2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SUPER SILT FENCE AND SILT FENCE. (2 DAYS) EXISTING SEDIMENT CONTROLS UNDER SDP-03-121 TO BE USED UNTIL SUCH TIME AS THE SEDIMENT CONTROL INSPECTOR ALLOWS FOR THEIR REMOVAL.

3. BEGIN ROUGH GRADING AND BUILDING CONSTRUCTION, REMOVING EXISTING TRAP WITH SEDIMENT CONTROL INSPECTOR'S PERMISSION.

4. PERFORM RETAINING WALL CONSTRUCTION. (1 WEEK)

5. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM INLETS, INLET PROTECTION AND WATER AND SEWER. (3 WEEKS)

6. INSTALL CURB AND GUTTER AND PAVE. (3 WEEKS)

7. PERFORM FINE GRADING, LANDSCAPING AND SIDEWALKS. (2 WEEKS)

8. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)

9. COMPLETE BUILDING CONSTRUCTION. (6 MONTHS)

10. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)

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.

Christine A Richards — 5/11/04
DEVELOPER — 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.

Christy J Reid — 5.11.04
ENGINEER — DATE

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

Jim Myers — 5/20/04
NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

John R Robertson — 5/20/04
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

5/28/04
DIRECTOR (Acting) — DATE

5/27/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

5/28/04
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT **MDG CORPORATE CENTRE II**
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA
TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL DETAILS

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

5.11.04
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	11872-3-2 C200DET.DWG
DATE :	MAY 12, 2004
SCALE :	AS SHOWN
DRAWING NO.	4 OF 9

SDP-04-020

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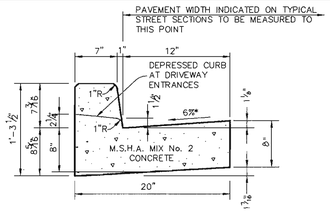
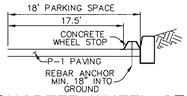


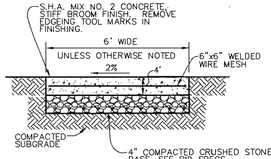
HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE

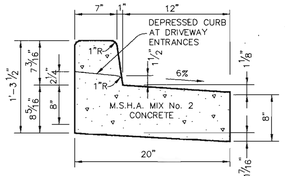


CONCRETE WHEEL STOP LOCATION PLAN
NO SCALE

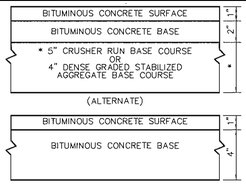


NOTES:
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.) PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

SIDEWALK w/ REINFORCING
NO SCALE

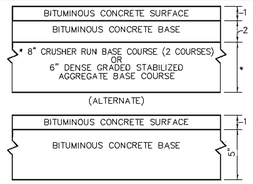


REVERSE 7" COMBINATION CURB AND GUTTER
NO SCALE



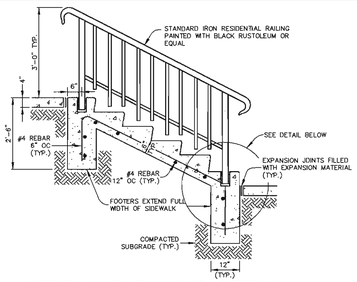
HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-1 PAVING
NO SCALE

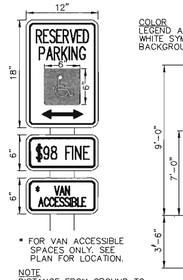


HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING
NO SCALE



STEP AND RAILING DETAIL
NO SCALE



COLOR
LEGEND AND BORDER – GREEN
WHITE SYMBOLS ON BLUE BACKGROUND
BACKGROUND – WHITE

* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

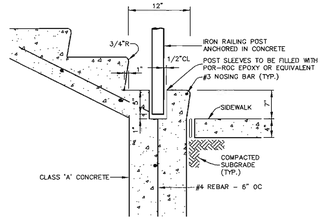
NOTE
DISTANCE FROM GROUND TO BOTTOM OF SIGN TO BE 7'.

HANDICAP SIGN DETAIL
NO SCALE

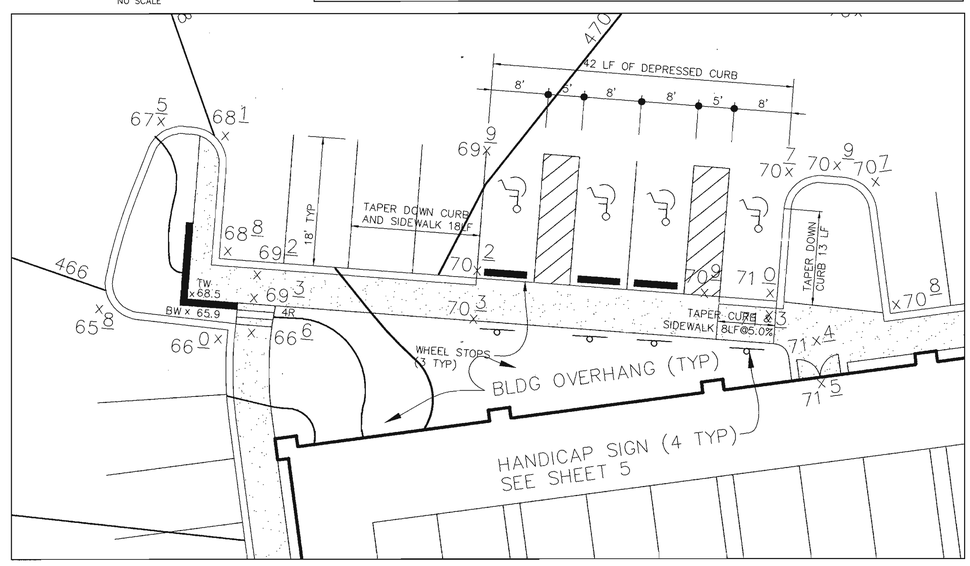
* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

NOTE
DISTANCE FROM GROUND TO BOTTOM OF SIGN TO BE 7'.

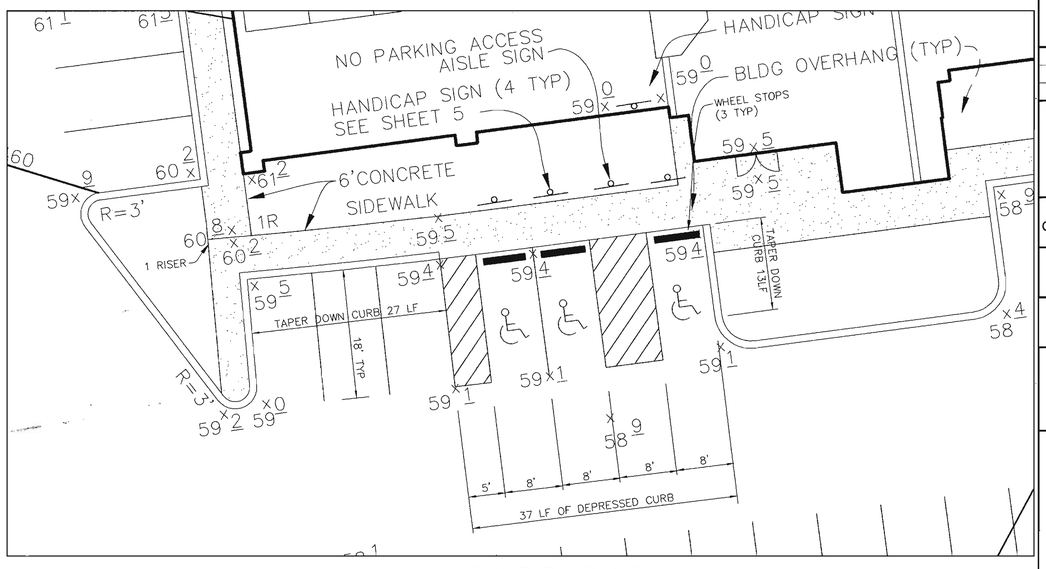
ACCESS AISLE SIGN
NO SCALE



TYPICAL CONCRETE STEP WITH RAIL DETAIL
NO SCALE

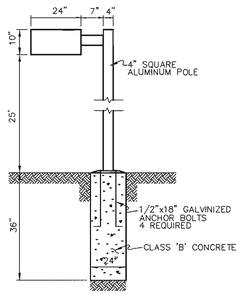


HANDICAP RAMP DETAIL
SCALE: 1" = 10'

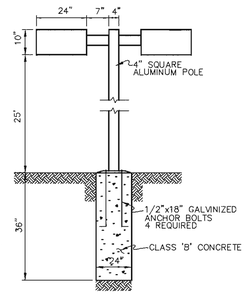


HANDICAP RAMP DETAIL
SCALE: 1" = 10'

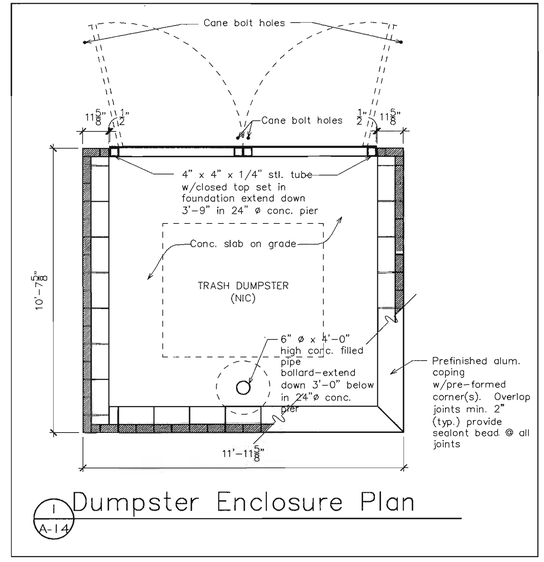
1. ALL LIGHT FIXTURES TO BE SINGLE LUMINARE 400 WATT MERCURY TYPE WITH METAL POLES AND DIRECTED DOWN-WARD
2. LOCATIONS OF LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THUS:
3. LIGHTS TO BE MODULE II TYPE AS MANUFACTURED BY MOLDCAST OR APPROVED EQUAL.
4. POLE AND FIXTURE TO HAVE BLACK POLYESTER ENAMEL FINISH.
5. POLE TO BE LOCATED 3' BACK FROM BACK OF CURB.



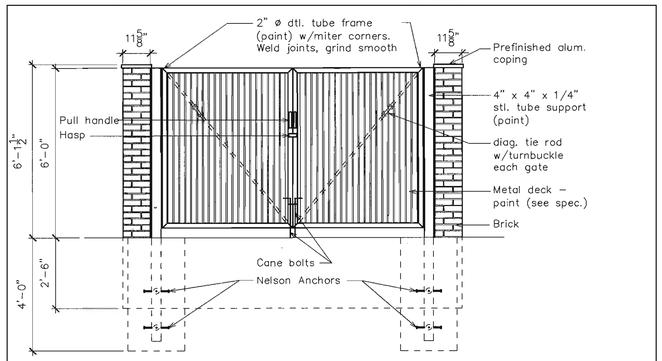
LIGHT POLE DETAIL
NO SCALE



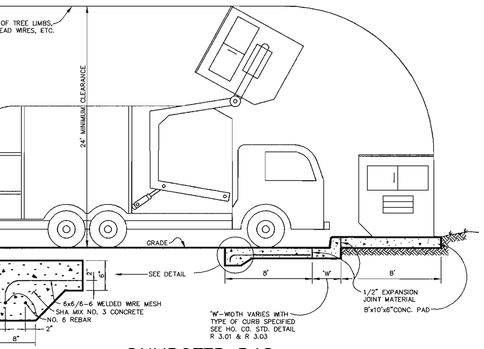
DUAL LIGHT POLE DETAIL
NO SCALE



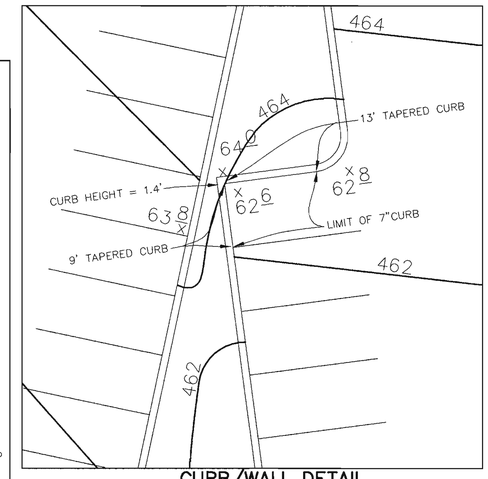
Dumpster Enclosure Plan
1 / A-14



Dumpster Enclosure Front Elevation
2 / A-14



DUMPSTER PAD
NO SCALE



CURB/WALL DETAIL
SCALE: 1" = 10'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 5/28/04

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/27/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/25/04

DATE	NO.	REVISION

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT
MDG CORPORATE CENTRE II
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA — TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
DETAIL SHEET

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

5-11-04
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — No. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	C.J.R.
DRAWN BY:	DAM
PROJECT NO :	11872-3-2 C900DET.DWG
DATE :	MAY 12, 2004
SCALE :	AS SHOWN
DRAWING NO.	5 OF 9

SDP-04-020

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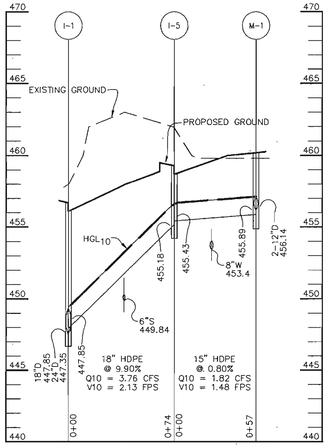
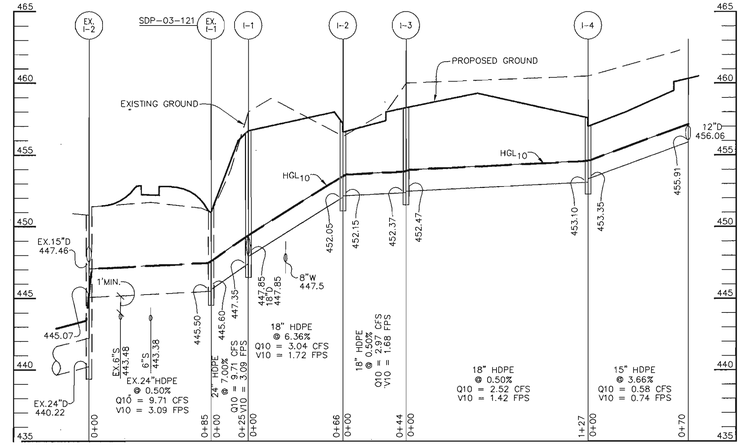


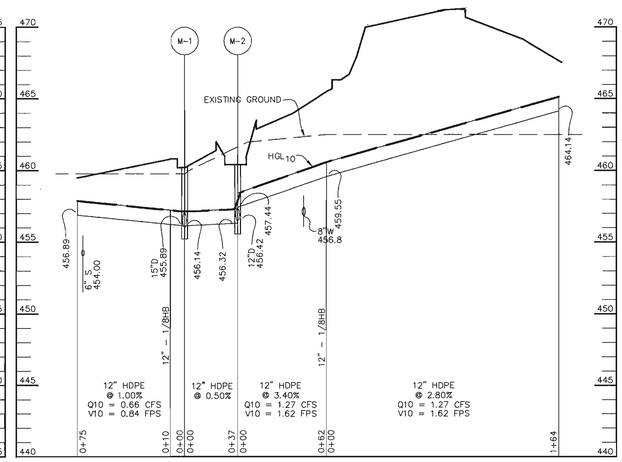
STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



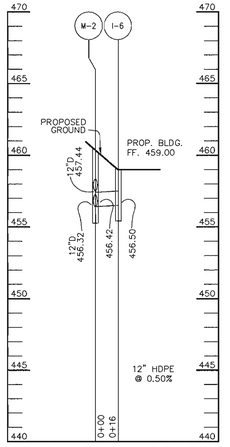
STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



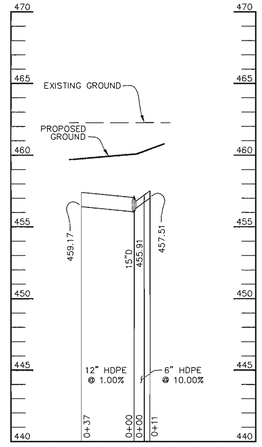
STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



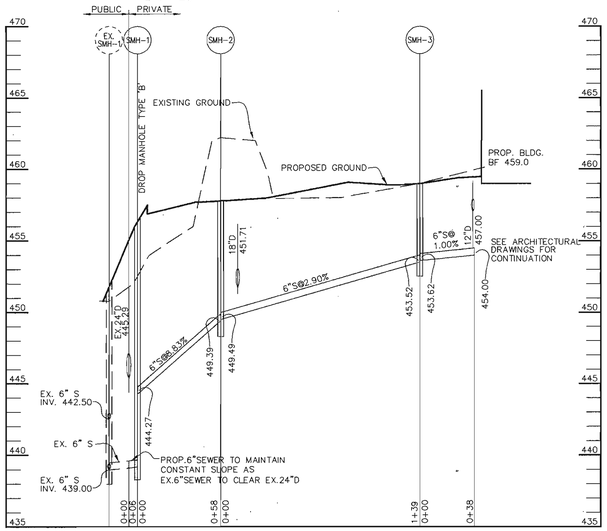
STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



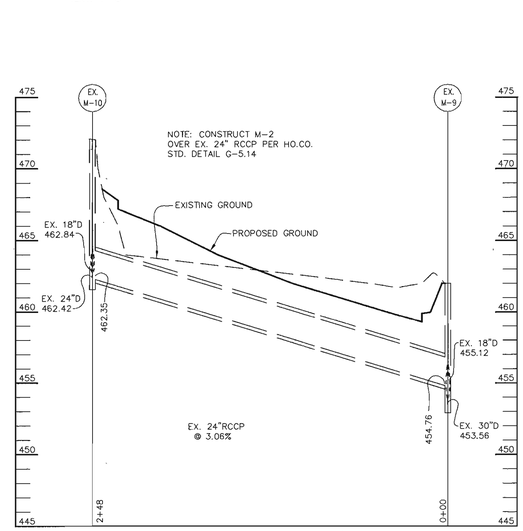
STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



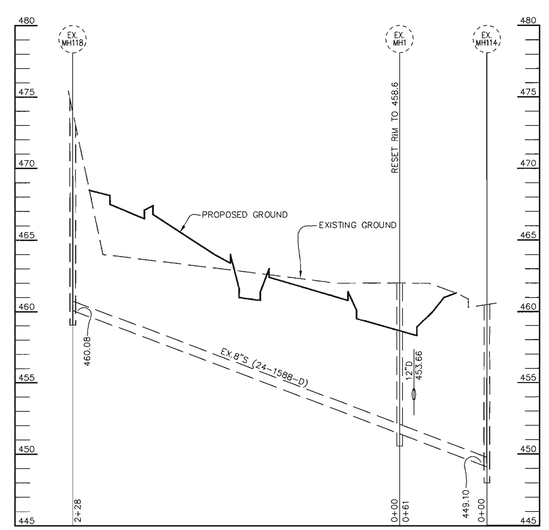
SEWER PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



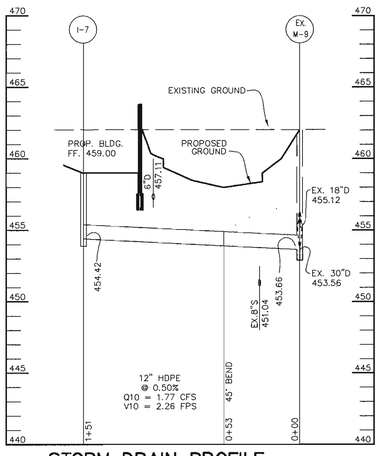
STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



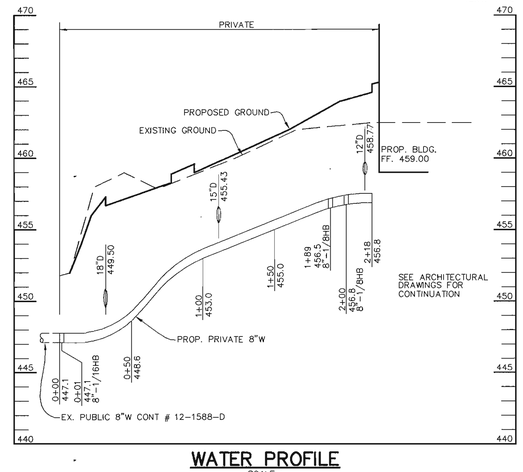
SEWER PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



STORM DRAIN PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'



WATER PROFILE

SCALE : HOR.-1"=50' VERT.-1"=5'

STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	A-10	N 509508.70 E 852146.89	447.85 (18") 447.85 (18")	447.35 (24")	456.7	HOCO STD. DETAIL SD-4.41
I-2	A-5	N 509444.77 E 852165.85	452.15 (18")	452.05 (18")	457.2	HOCO STD. DETAIL SD-4.40
I-3	A-5	N 509404.53 E 852180.16	452.47 (18")	452.37 (18")	458.3	HOCO STD. DETAIL SD-4.40
I-4	A-5	N 509286.87 E 852228.57	453.35 (15")	453.10 (18")	457.6	HOCO STD. DETAIL SD-4.40
I-5	A-5	N 509505.90 E 852220.66	455.43 (15")	455.18 (18")	459.3	HOCO STD. DETAIL SD-4.40
I-6	S	N 509454 E 852286	–	456.40 (12")	459.2	HOCO STD. DETAIL SD-4.22
I-7	S	N 509324 E 852339	–	454.42 (12")	459.2	HOCO STD. DETAIL SD-4.22
M-1	4'-0" DIA.	N 509455.47 E 852245.97	456.14 (12") 456.14 (12")	455.89 (15")	460.2	HOCO STD. DETAIL G-5.12
M-2	4'-0" DIA.	N 509469.47 E 852279.77	457.44 (12") 456.42 (12")	456.32 (15")	460.4	HOCO STD. DETAIL G-5.12
SMH-1	4'-0" DIA.	N 509550 E 852131	444.27 (6")	449.20 (6")	456.3	HOCO STD. DETAIL G-5.12
SMH-2	4'-0" DIA.	N 509518 E 852180	449.49 (6")	449.39 (6")	457.8	HOCO STD. DETAIL G-5.12
SMH-3	4'-0" DIA.	N 509386 E 852225	453.62 (6")	453.52 (6")	458.9	HOCO STD. DETAIL G-5.12

NOTES:
FOR END SECTIONS THE LOCATION IS CENTER OF THROAT OPENING AT FACE OF STRUCTURE.
LOCATION OF INLETS AND MANHOLES IS AT CENTER OF TOP COVER

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
11	6"	HDPE
524	12"	HDPE
127	15"	HDPE
311	18"	HDPE
25	24"	HDPE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 5/28/04

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/27/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/25/04

DATE	NO.	REVISION

OWNER
MJF ASSOCIATES LLLP
5550 STERRETT PLACE
SUITE 312
COLUMBIA, MARYLAND 21044
410-730-9091

DEVELOPER
MDG COMPANIES
5550 STERRETT PLACE
SUITE 312
COLUMBIA, MARYLAND 21044
410-730-9091

PROJECT
MDG CORPORATE CENTRE II
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA
TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILE SHEET

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

5.11.04 DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — NO. 19949 — REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : C.J.R.
DRAWN BY: DAM
PROJECT NO : 11872-3-2 C700PRO.DWG
DATE : MAY 12, 2004
SCALE : AS SHOWN
DRAWING NO. 6 OF 9

SDP-04-020

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MARYLAND ROUTE 100
MARYLAND STATE HIGHWAY
PRINCIPAL ARTERIAL

GRID NORTH (NAD 27)

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PLAT NO. 12705 ZONED POR PARCEL 'O-1' USE: HOTEL

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PLAT NO. 13431 ZONED POR PARCEL J-2 USE: FUTURE OFFICE SDP-04-038

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PLAT NO. 13431 ZONED POR PARCEL I-1 USE: HOTEL

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PLAT NO. 12705 ZONED POR PARCEL 'N-1' USE: HOTEL

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PLAT NO. 12386 ZONED POR PARCEL K-2 USE: DAY CARE

PARCEL 'K-2'

COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2 PLAT NO. 11943 ZONED POR PARCEL H-1 USE: OFFICE

4 STORY OFFICE BUILDING
FIRST FLOOR EL. 471.5
PARKING EL. 459.0

COLUMBIA 100 PARKWAY
HOWARD COUNTY PUBLIC ROAD
MINOR COLLECTOR

PERIMETER 1
TYPE 'E' BUFFER: 19'
(423' TOTAL)

PERIMETER 2
TYPE 'D' BUFFER: 11'

PERIMETER 1
TYPE 'E' BUFFER: 404'
(423' TOTAL)

LEGEND

- EX. TREELINE
- PROP. TREELINE
- PROPERTY LINE
- WETLANDS AND 25' BUFFER
- PERENNIAL STREAM AND 50' BUFFER
- 100-YEAR FLOODPLAIN
- CONTOUR LINES
- EX. BUILDING
- PROP. SHADE TREE
- PROP. EVERGREEN TREE
- PROP. ORNAMENTAL TREE
- PROP. SHRUBS
- PERIMETER LANDSCAPE REQUIREMENT (AR-3)
- PARKING LOT LANDSCAPE REQUIREMENT (PP 1)
- AMENITY LANDSCAPE PLANTING (PP 1)
- PERIMETER LANDSCAPE EDGE LIMITS
- CREDITED LANDSCAPE ISLAND

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 5/28/04

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/27/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/25/04

DATE	NO.	REVISION
12/2/09	1	ADDING OFFICE SPACE AND REMOVING PARKING

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT **MDG CORPORATE CENTRE II**
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **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

5-11-04
DATE

STATE OF MARYLAND — 797 — SCOTT R. WOLFORD

SCOTT R. WOLFORD #797

DESIGNED BY :	PJS
DRAWN BY:	PJS
PROJECT NO	11872-3-2 PLANS\L200LND
DATE :	MAY 12, 2004
SCALE :	1" = 30'
DRAWING NO.	7 OF 9

SDP-04-020

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SCHEDULE A - PERIMETER LANDSCAPE EDGE	ADJACENT TO ROADWAYS	
PERIMETER	1	2
LANDSCAPE TYPE	E	D
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	±423'	±11'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO -	NO -
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO	NO
LINEAR FEET REMAINING	±423'	±11'
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	 11 - 101	 - 1 -
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	 10 - 6 101	 - 1 - -

SCHEDULE 'A' NOTES:

REGULATIONS DO NOT REQUIRE LANDSCAPE EDGES, BUFFERING, OR SCREENING BETWEEN INTERNAL LOTS OR PARCELS WITHIN THE SAME DEVELOPMENT. (PAGE 17 OF THE Ho.Co. LANDSCAPE MANUAL)

SUBSTITUTION NOTES
PERIMETER 1 - 6 FLOWERING TREES SUBSITUTED FOR 3 SHADE TREE

2 SHADE TREES ARE PROPOSED TO REPLACE 2 EXISTING TREES TO BE REMOVED. SEE GENERAL NOTE 9.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
PARKING LOTS	1
NUMBER OF PARKING SPACES	173
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	9
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	 8 2
NUMBER OF ISLANDS PROVIDED(EQUIVALENT)	9

NOTE: 4 AMENITY TREES ARE PROPOSED IN ADDITION TO THE MINIMUM REQUIREMENTS.

PERIMETER AND PARKING LOT PLANT LIST

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
QP	10	Quercus phellos Willow Oak	2.5"-3" cal.	B&B	Plant as shown
ZS	12	Zelkova serrata 'Village Green' Green Japanese Zelkova	2.5"-3" cal.	B&B	Plant as shown
PS	8	Prunus serrulata 'Kwanzan' Kwanzan Cherry	1" - 2" cal.	B&B	Plant as shown
CL	1	Cupressocyparis leylandi Leyland Cypress	5'-6'	B&B	Plant as shown
ND	38	Nandina domestica 'Harbour Dwarf' Harbour Dwarf Nandina	24"-30"	B&B	Plant as shown
RS	42	Ilex verticillata 'Red Sprite' Red Sprite Winterberry	2.5'-3' ht.	B&B	Plant as shown
TC	21	Taxus cuspidata 'Nana' Dwarf Japanese Yew	24"-30"	B&B	Plant as shown

PLANTING SPECIFICATIONS

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 Washington and the Potomac Chapter of the American Society of Landscape Architects.

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 Landscape 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 fence at the drip line, see detail.

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 grade.

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 conditions differing from those indicated on drawings and specifications.

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 plan exist between the symbols and the callout leader, the number of symbols take precedence.

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 Leafgro 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. Ericaceous 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 as necessary to avoid dessication.

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 mulch shall be fine graded, grass seed planted, and covered with straw mulch.

GENERAL NOTES:

1. 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 MUST BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF $9,180.
20 SHADE TREES @ $300 = $6,000
0 ORNAMENTAL TREES @ $150 = $0
1 EVERGREEN TREES @ $150 = $150
101 SHRUBS @ $30 = $3,030

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. EXISTING TREES ALONG COLUMBIA 100 PARKWAY TO BE RETAINED WHERE POSSIBLE. ANY TREE WHICH IS REMOVED, DAMAGED OR DESTROYED BY THE PROPOSED DEVELOPMENT SHALL BE REPLACED BY THE DEVELOPER. THE TWO TO BE REMOVED BY THE ENTRANCE HAVE BEEN REPLACED WITH PROPOSED PERIMETER PLANTINGS.

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.

Christine A. Richards 5/11/04
SIGNATURE DATE

NOTES:

1. SEE PLANTING SPECIFICATIONS FOR PREPARATION OF PLANTING BED.

2. DO NOT HEAVILY PRUNE THE SHRUB AT PLANTING. PRUNE ONLY BROKEN, DAMAGED, OR Diseased BRANCHES.

3. DIG PLANTING PIT 12" WIDER THAN THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 18".

4. FOR B&B SHRUBS: REMOVE ALL TWINE, ROPE, AND BURLAP FROM TOP OF ROOT BALL.

5. ALL CONTAINERS SHALL BE REMOVED BEFORE INSTALLATION.

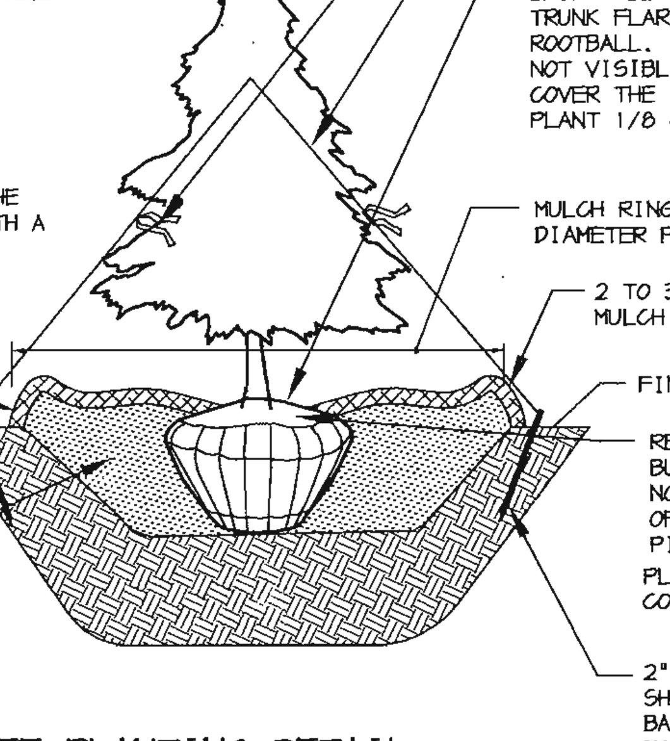
SHRUB BED PLANTING DETAIL - B&B AND CONTAINER SHRUBS
NOT TO SCALE

NOTES:

1. SELECT ONLY NURSERY STOCK WITH A SINGLE LEADER UNLESS OTHERWISE SPECIFIED ON PLAN. PLANTS WITH CO-DOMINANT, MISSING, OR DAMAGED LEADERS SHALL BE REJECTED.

2. STAKE TREES AS SHOWN.

3. DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.



EVERGREEN B&B TREE PLANTING DETAIL
NOT TO SCALE

NOTES:

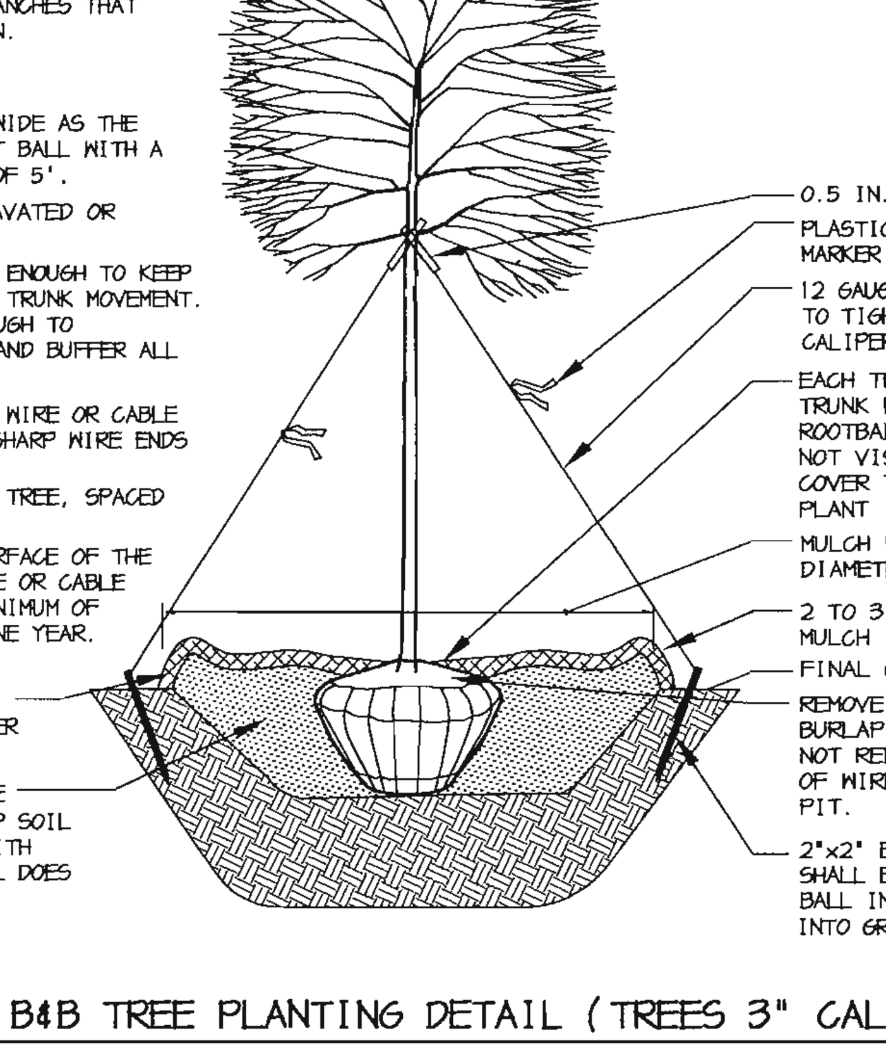
1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
2. STAKE TREES AS SHOWN.

3. DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.

4. PLACE ROOT BALL ON UNEXCAVATED OR COMPACTED SOIL.

5. TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.

6. TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.
7. INSTALL THREE GUY WIRES PER TREE, SPACED EVENLY AROUND THE TRUNK.
8. ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF 0.5 IN. REMOVE STAKES AFTER ONE YEAR.



DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR LARGER)
NOT TO SCALE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible] 5/28/04
DIRECTOR Acting DATE

[illegible] 5/27/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[illegible] 5/28/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER	DEVELOPER
MJF ASSOCIATES LLLP 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091	MDG COMPANIES 5550 STERRETT PLACE SUITE 312 COLUMBIA, MARYLAND 21044 410-730-9091

PROJECT **MDG CORPORATE CENTRE II**
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **LANDSCAPE SCHEDULES AND DETAILS**

Patton Harris Rust & Associates,pc
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

5.11.04
DATE

STATE OF MARYLAND 797 SCOTT R. WOLFORD BOARD OF EXAMINERS OF LANDSCAPE ARCHITECTS

SCOTT R. WOLFORD #797

DESIGNED BY : PJS
DRAWN BY: PJS
PROJECT NO : 11872-3-2ENGR PLANS\L201LND
DATE : MAY 12, 2004
SCALE : NOT TO SCALE
DRAWING NO. 8 OF 9

SDP-04-020

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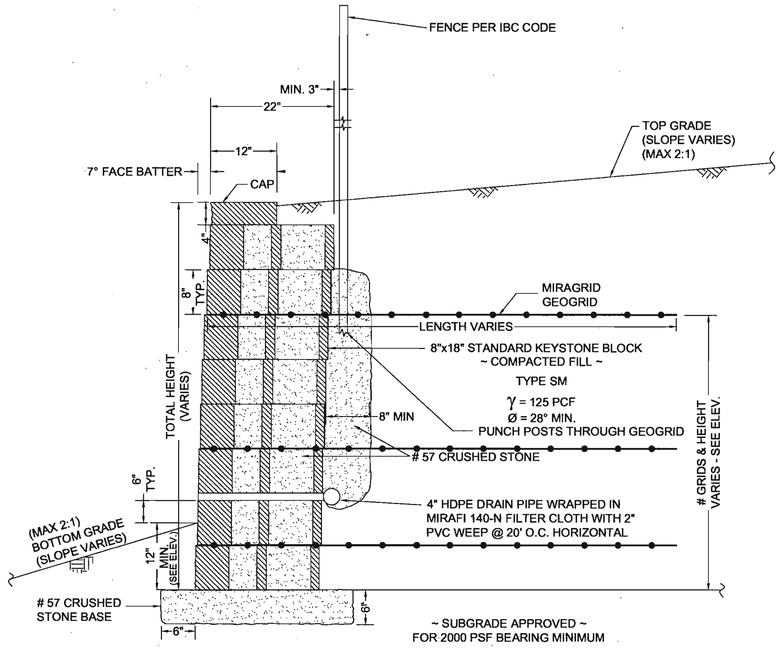
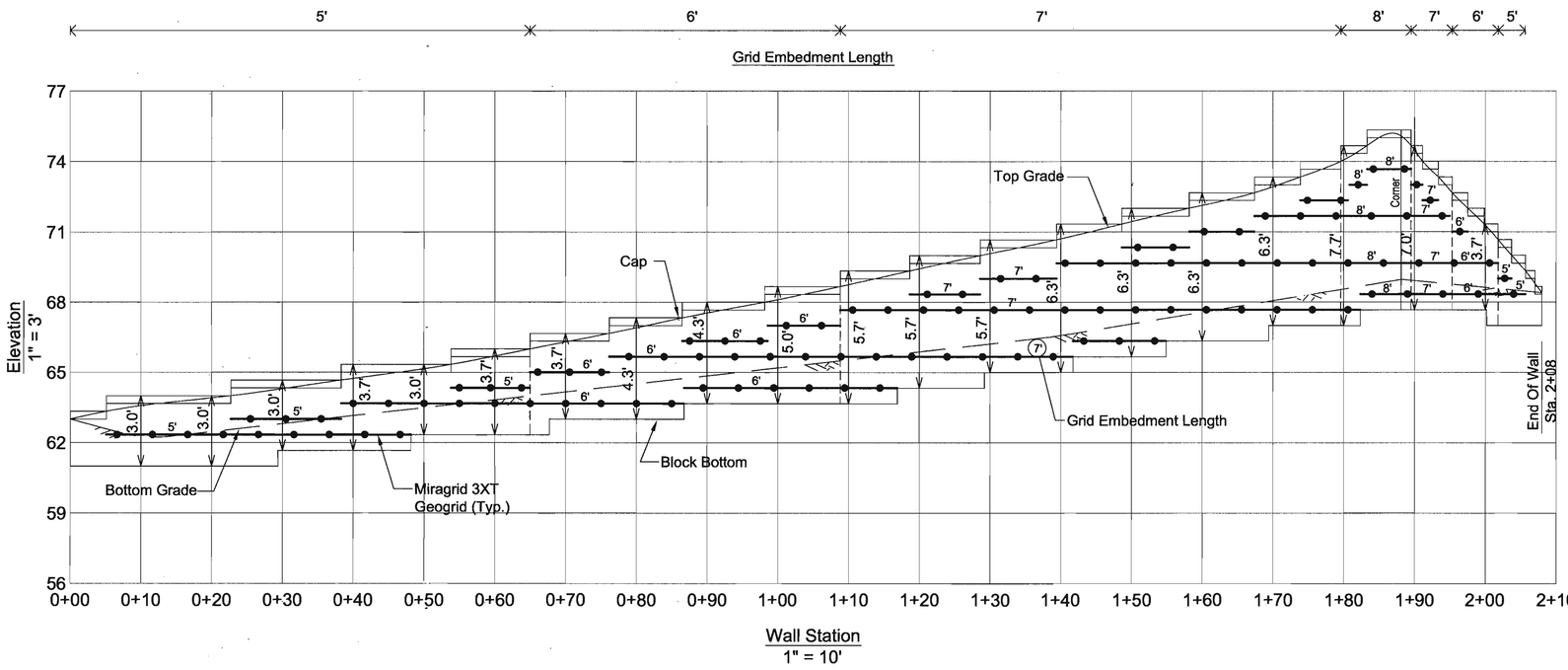


WALL SECTION
NTS



SPECIFICATIONS

KEYSTONE MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

1.01 Description

A. Work shall consist of furnishing and construction of a KEYSTONE Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.

B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.

C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

1.02 Delivery, Storage and Handling

A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.

B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Modular Concrete Retaining Wall Units

A. Modular concrete units shall conform to the following architectural requirements:
face color - concrete gray - standard manufacturers' color may be specified by the Owner.
face finish - sculptured rock face in angular tri-planer configuration. Other face finishes will not be allowed without written approval of Owner.
bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.
exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.

B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.

C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:
compressive strength = 3000 psi minimum;
absorption = 8 % maximum (6% in northern states) for standard weight aggregates;
dimensional tolerances = ± 1/8" from nominal unit dimensions not including rough split face, ±1/16" unit height - top and bottom planes;
unit size - 8" (H) x 18" (W) x 12" (D) minimum;
unit weight - 75 lbs/unit minimum for standard weight aggregates;
inter-unit shear strength - 1000 plf minimum at 2 psi normal pressure;
geogrid/unit peak connection strength - 1000 plf minimum at 2 psi normal force.

D. Modular concrete units shall conform to the following constructability requirements:
vertical setback = 1/8"± per course (near vertical) or 1"+ per course per the design;
alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;
maximum horizontal gap between erected units shall be - 1/2 inch.

2.02 Shear Connectors

A. Shear connectors shall be 1/2 inch diameter thermoset isopthalic polyester resin-protruded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F.

B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.03 Base Leveling Pad Material

A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

2.04 Unit Drainage Fill

A. Unit drainage fill shall consist of #57crushed stone

B. One cubic foot, minimum, of drainage fill shall be used for each square foot of wall face. Drainage fill shall be placed within cores of, between, and behind units to meet this requirement.

2.05 Reinforced Backfill

A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-35

Plasticity Index (PI) <15 and Liquid Limit <40 per ASTM D-4318.

B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

2.06 Geogrid Soil Reinforcement

A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

2.07 Drainage Pipe

A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

3.01 Excavation

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

3.02 Base Leveling Pad

A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.

B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 Modular Unit Installation

A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.

B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.

C. Install shear/connecting devices per manufacturer's recommendations.

D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.

E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

3.04 Structural Geogrid Installation

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.

B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.

C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to backfill placement on the geogrid.

D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

3.05 Reinforced Backfill Placement

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.

B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.

C. Reinforced backfill shall be compacted to 95 % of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.

D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.

E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.

G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3.06 Cap Installation

A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

3.07 Field Quality Control

A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.

B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.

NOTES:

1.) No trees shall be planted within 10 feet of the top of the retaining wall.

2.) Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.

3.) The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.

4.) The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.

5.) One soil boring is required every one hundred feet along the length of the wall. Copies of the boring reports shall be provided to the Howard County Inspector prior to the start of the construction.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 5/28/04

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/27/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/28/04

DATE	NO.	REVISION
		PHONE

OWNER
MJF ASSOCIATES LLLP
5550 STERRETT PLACE
SUITE 312
COLUMBIA, MARYLAND 21044
410-730-9091

DEVELOPER
MDG COMPANIES
5550 STERRETT PLACE
SUITE 312
COLUMBIA, MARYLAND 21044
410-730-9091

PROJECT: MDG CORPORATE CENTRE II
COLUMBIA 100 OFFICE RESEARCH PARK, SEC. 1 AREA 2
PARCEL K-4

AREA: TAX MAP 30, PARCEL K-4, ZONED POR
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: RETAINING WALL DETAILS

Patton Harris Rust & Associates, pc
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5/5/04 DME

Richard W. Sturtevant
P.E. #14434

DESIGNED BY :	RWS
DRAWN BY:	AM
PROJECT NO :	99109-D
DATE :	MARCH 19, 2004
SCALE :	AS SHOWN
DRAWING NO.	9 OF 9

SDP-04-020