SITE DEVELOPMENT PLAN

MEADOWRIDGE BUSINESS PARK

PARCEL N

1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

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3	GRADING PLAN, SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP
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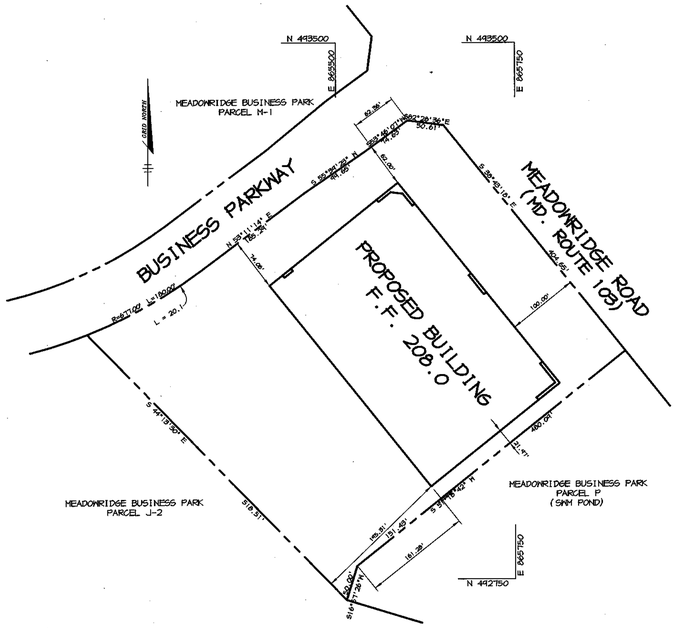
GENERAL NOTES

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 AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. A PORTION OF THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY WINGS, INC. DATED FEBRUARY, 1994. THE REMAINDER CONSISTS OF THE PROPOSED GRADING UNDER GP-96-156, AS WELL AS SUPPLEMENTAL FIELD SURVEY PERFORMED BY RIEMER MUEGGE & ASSOCIATES INC., IN OCTOBER 1997.
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. 305 AND 306 WERE USED FOR THIS PROJECT.
8. WATER IS PUBLIC. CONTRACT NO. 14-1946-D.
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: PATAPSCO CONTRACT NO. 14-1946-D.
10. THE STORMWATER MANAGEMENT QUANTITY AND WATER QUALITY PROPOSED FOR THIS SITE IS EXISTING UNDER F-89-163. THE FACILITY IS AN EXTENDED DETENTION POND AND IS PRIVATELY MAINTAINED.
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 IS NOT REQUIRED FOR THIS PROJECT.
13. THE WETLANDS DELINEATION FOR THIS PROJECT IS FROM RECORDED PLAT NOS. 9044, 9045 AND 12199. A PERMIT APPLICATION FOR BUFFER DISTURBANCE HAS BEEN SUBMITTED.
14. APFO TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP INC. AND WAS APPROVED DECEMBER 9, 2002.
15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
16. A GEOTECHNICAL STUDY IS NOT REQUIRED FOR THIS PROJECT.
17. THE BOUNDARY FOR THIS PROJECT IS BASED ON PREVIOUSLY RECORDED PLAT NOS. 9044, 9045 AND 12199.
18. SUBJECT PROPERTY ZONED M-1 PER 10-18-93 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NOs WP-96-115, GP-96-155, WP-03-24, F-99-146, F-03-118.
21. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. 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.
24. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
25. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
26. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
27. ALL PIPE ELEVATIONS SHOWN ARE INVERT ⌒ ELEVATIONS.
28. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
29. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
30. THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE IT IS PART OF PLANNED BUSINESS PARK.
31. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS OR THEIR BUFFERS.
32. THE WETLAND BUFFER INDICATED ON THE PLAT (F-98-146, PLAT NO. 13193) DOES NOT AFFECT THE INITIAL CONSTRUCTION OF THE GRADING, BUILDING, PARKING AND UTILITIES ON A LOT OR PARCEL. IT DOES PROHIBIT SUBSEQUENT CLEARING, GRADING OR CONSTRUCTION IN BUFFERS AREA. MAINTENANCE OF BUILDINGS, PARKING, LANDSCAPING AND UTILITIES IS PERMITTED.
33. NO PERMIT SHALL BE GRANTED BY HOWARD COUNTY FOR ANY TYPE OF CONSTRUCTION WITHIN PARCELS SHOWN ON THE PLAT (F-98-146, PLAT NO. 13193) UNTIL A WETLAND PERMIT IS ISSUED BY THE CORPS OF ENGINEERS AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT OR UNTIL A CERTIFICATE IS SUBMITTED BY THE ENGINEER STATING THAT NO CONSTRUCTION WILL BE ALLOWED WITHIN THE DELINEATED WETLAND.
34. WP-03-24 A WAIVER WAS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING BY A LETTER DATED OCTOBER 11, 2002 TO WAIVE SECTION 16.156 (k) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO REACTIVATE SDP-98-75 WHICH WAS VOIDED BY THE DEPARTMENT OF PLANNING AND ZONING ON DECEMBER 23, 1998.

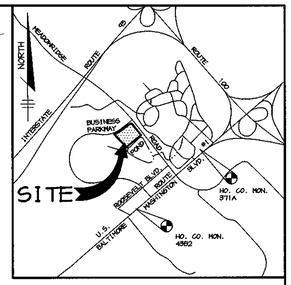
    APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

    1. THE SITE DEVELOPMENT PLAN MUST BE REVISED IN ACCORDANCE WITH THE ATTACHED COMMENTS TO THE LETTER. WITHIN 45 DAYS OF THE DATE OF THE LETTER (BY NOVEMBER 25, 2002), THE DEVELOPER MUST SUBMIT 10 COPIES OF THE REVISED PLAN AND APFO STUDY FOR REVIEW BY THE STATE HIGHWAY ADMINISTRATION, THE HOWARD SOIL CONSERVATION DISTRICT, THE DEVELOPMENT ENGINEERING DIVISION AND THE DEPARTMENT OF PLANNING AND ZONING. SUBSEQUENT TO THE REVIEW AND APPROVAL OF THE PLAN BY THESE AGENCIES, AMENDED DEADLINES FOR THE SUBMISSION OF THE ORIGINAL SITE DEVELOPMENT PLAN WILL BE ESTABLISHED.
35. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
36. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $ 4,000.00 FOR 38 SHADE TREES, 5 EVERGREEN TREES AND 101 SHRUBS.



PLAN

SCALE: 1" = 100'



VICINITY MAP

SCALE: 1" = 2000'

BENCHMARKS

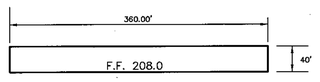
BM 43B2 P.K. NAIL SET IN CURB
N 490,906.0 E 865,758.6

BM 371A P.K. NAIL SET IN CURB
N 492,566.2 E 867,563.8

SITE ANALYSIS

AREA OF PARCEL	5.71 ACRES (248,816 SF)
DISTURBED AREA	5.25 ACRES (228,580 SF)
PRESENT ZONING	M-1
PROPOSED USE	OFFICE/WAREHOUSE FACILITY (ONE STORY)
BUILDING COVERAGE	
WAREHOUSE AREA	74,520 SF
OFFICE AREA	8280 SF
TOTAL AREA	82,800 SF (33.3% OF SITE)
# OF PARKING SPACES REQUIRED	
WAREHOUSE AREA @ 0.5 SP/1000 SF*	38 SPACES
OFFICE AREA @ 3.3 SP/1000 SF*	28 SPACES
TOTAL SPACES	66 SPACES
# OF PARKING SPACES PROVIDED	89 SPACES (INCLUDING 4 HC)
APPLICABLE REFERENCES	GP-96-155, WP-96-115

* PER HOWARD COUNTY ZONING REGULATIONS SECTION 133



BUILDING ELEVATION

NO SCALE

ADDRESS CHART

PARCEL	STREET ADDRESS
N	6605 BUSINESS PARKWAY

SUBDIVISION NAME –		SECT./AREA –		PARCEL –	
MEADOWRIDGE BUSINESS PARK		–		N	
PLAT # –	BLOCK # –	ZONING –	TAX MAP NO. –	ELECT. DIST. –	CENSUS TRACT –
13193, 15827	22	M-1	37	1st	6012
WATER CODE –		SEWER CODE –			
B01		2153000			

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR, Acting — DATE 6/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/30/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/30/03

DATE	NO.	REVISION

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: TITLE 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

6-18-03
DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP1.DWG
DATE :	MAY 30, 2003
SCALE :	AS SHOWN
DRAWING NO.	1 OF 7

SDP-98-75

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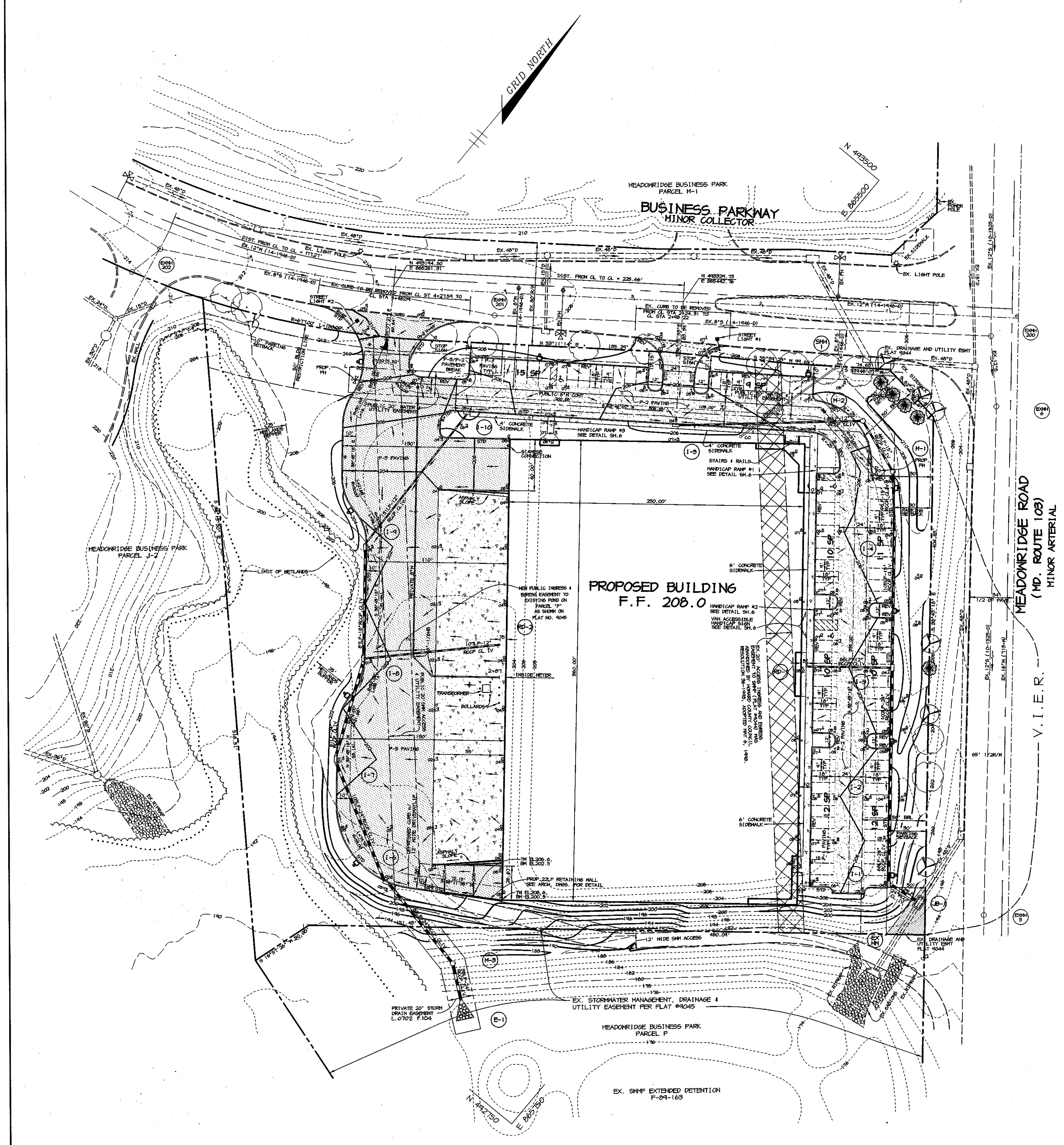

LEGEND

(blank box)	P-1 PAVING (PARKING BAYS)
(stippled box)	P-2 PAVING (DRIVE LANES)
(shaded box)	P-3 PAVING (TRUCK ENTRANCE & COURT)
(stippled box)	CONCRETE SIDEWALK OR CONCRETE TRUCK PAD (SEE DETAIL SHEET 4)
STD * REV	DENOTES TRANSITION FROM STANDARD TO REVERSE CURB AND GUTTER
(symbol)	25' POLE SQUARE STEEL 400 WATT SHOEBOX METAL HALIDE (SEE NOTE 1)
(symbol)	250 WATT HPS VAPOR PENDANT FIXTURE (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE, USING A 12' ARM.
V.I.E.R.	VEHICULAR INGRESS/EGRESS RESTRICTED

NOTES:

1. ALL LIGHTS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

2. ALL CURB RADII ARE 5' UNLESS OTHERWISE LABELED.

3. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE SHOWN.

4. ALL ON-SITE ROADS ARE PRIVATE.

5. SEE SHEET 1 FOR BUILDING LOCATION DIMENSIONS.

STREET LIGHT LOCATION

#1 36' LEFT OF STA. 2+30, BUSINESS PARKWAY

#2 39' LEFT OF STA. 5+20, BUSINESS PARKWAY ANGLE ARM TO CENTER OF INTERSECTION

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR, Acting — 6/30/03 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 6/25/03 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 6/30/03 DATE

DATE	NO.	REVISION

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK
PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **SITE DEVELOPMENT PLAN**

Patton Harris Rust & Associates,pc
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6.16.03
DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY : CJR
DRAWN BY: DAM
PROJECT NO : 97320 SDP2.DWG
DATE : MAY 30, 2003
SCALE : 1" = 40'
DRAWING NO. 2 OF 7

SDP-98-75

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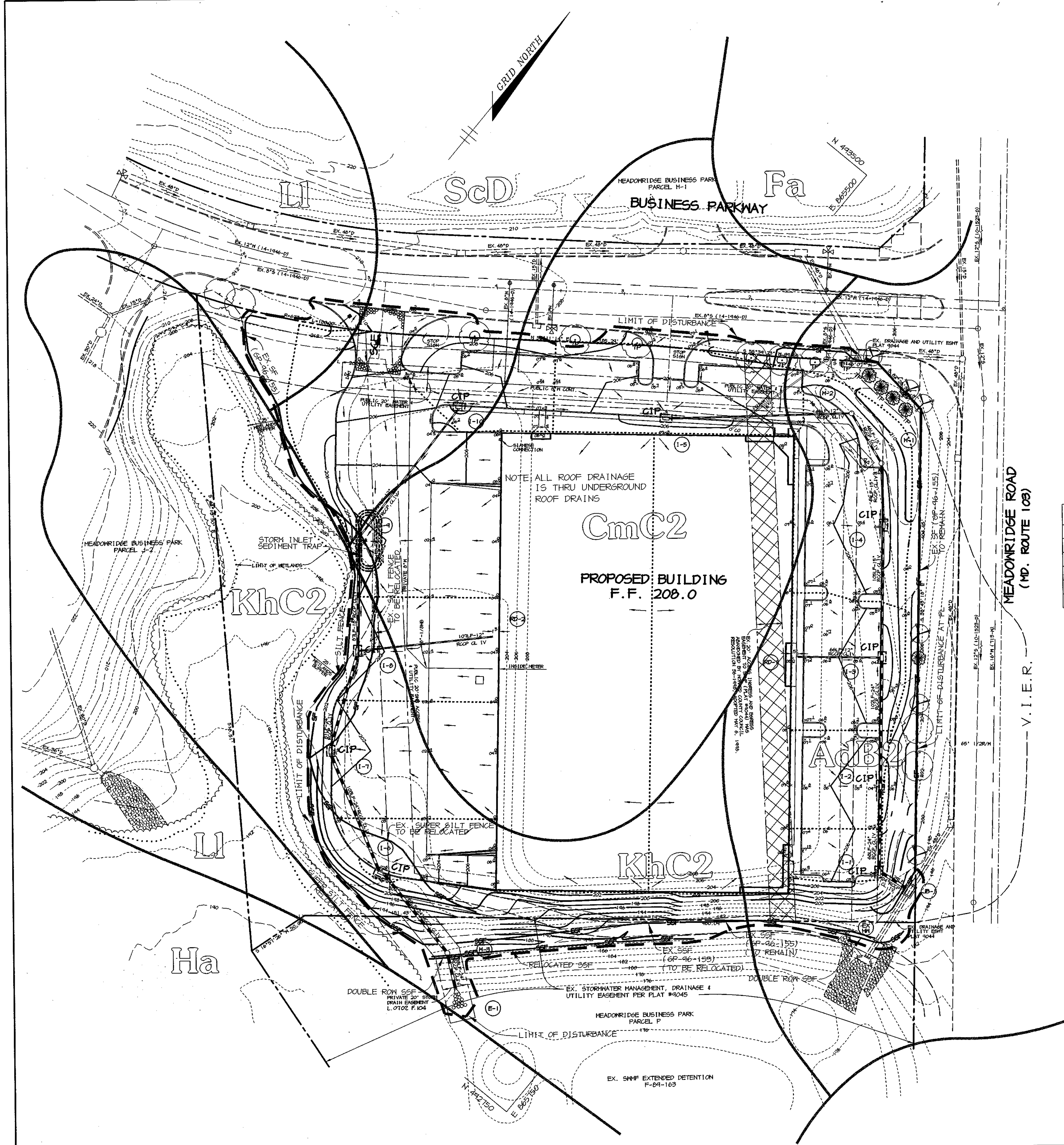

STORM INLET SEDIMENT TRAP #1 (I-9)

DRAINAGE AREA	0.58 AC.
STORAGE VOLUME REQUIRED	1044 CF (WET/DRY)
STORAGE VOLUME PROVIDED	1044 CF @ 199.8 (WET)=DRAW DOWN DEVICE ELEV.
STORAGE VOLUME PROVIDED	1340 CF @ 201.5 (DRY)
WEIR ELEVATION	201.5
BOTTOM ELEVATION	198.0
CLEANOUT ELEVATION	199.5
SIDE SLOPES	1:1
CREST WIDTH	5'
BOTTOM DIMENSIONS	12'X40'
DEPTH	3.5'

N 493500
E 865750

SOIL CHART

SYMBOL	DESCRIPTION
AdB2	ALDINO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CmC2	CHILLUM SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
Fa	FALLSINGTON LOAM
Ha	HATBORO SILT LOAM
KhC2	KEYPORT SLIT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED
Ll	LEONARDTOWN SILT LOAM

DRAINAGE DATA

INLET NOS.	AREA IN ACRES	'C' FACTOR	PERCENT IMPERVIOUS
1	0.07	0.86	100%
2	0.14	0.81	92%
3	0.19	0.76	85%
4	0.33	0.58	57%
5	0.29	0.63	66%
6	0.13	0.86	100%
7	0.27	0.86	100%
8	0.21	0.86	100%
9	0.58	0.71	76%
10	0.18	0.53	50%

* ALL SOILS ARE ASSUMED TYPE 'C' AS THE SITE HAS BEEN MASS GRADED.

LEGEND

Symbol	Description
CIP	CURB INLET PROTECTION
—SSF——SSF—	SUPER SILT FENCE
— — —	LIMIT OF DISTURBANCE
········	DRAINAGE AREA DIVIDE
—TP——TP—	TREE PROTECTION FENCE
SCE	STABILIZED CONSTRUCTION ENTRANCE

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.

[signature] 6/10/03
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.

[signature] 6.10.03
ENGINEER DATE

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

[signature] 6/20/03
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

[signature] 6/20/03
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 6/30/03
DIRECTOR, Acting DATE

[signature] 6/25/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[signature] 6/30/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT **MEADOWRIDGE BUSINESS PARK PARCEL N**
A WAREHOUSE BUILDING

AREA TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

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

Patton Harris Rust & Associates,pc
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6.10.03
DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP3.DWG
DATE :	MAY 30, 2003
SCALE :	1" = 40'
DRAWING NO.	3 OF 7

SDP-98-75

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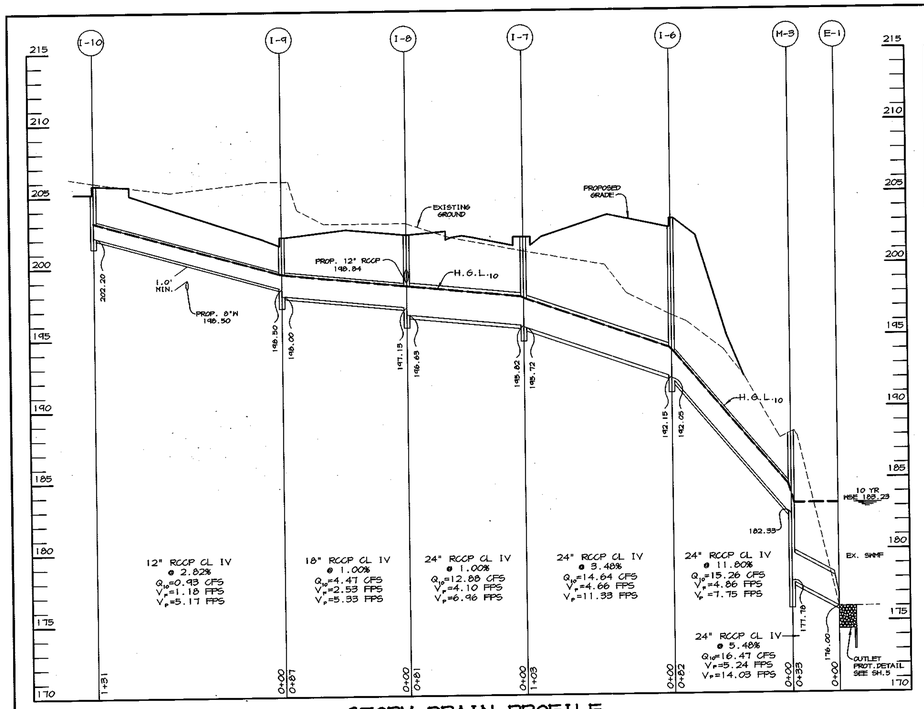

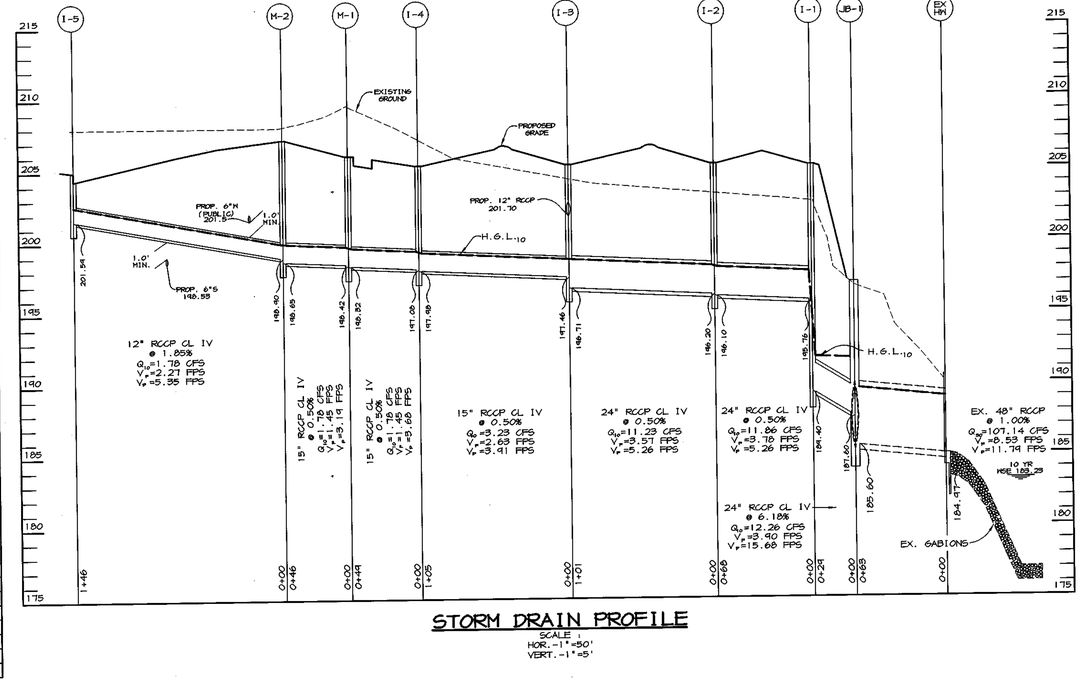

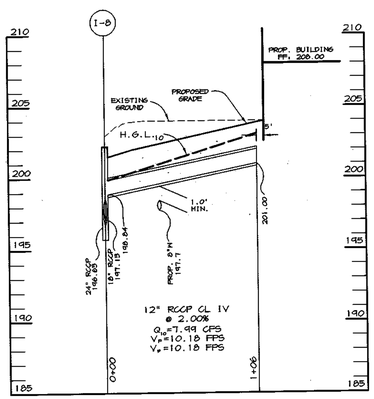

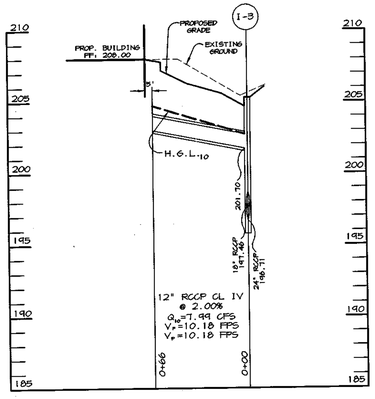

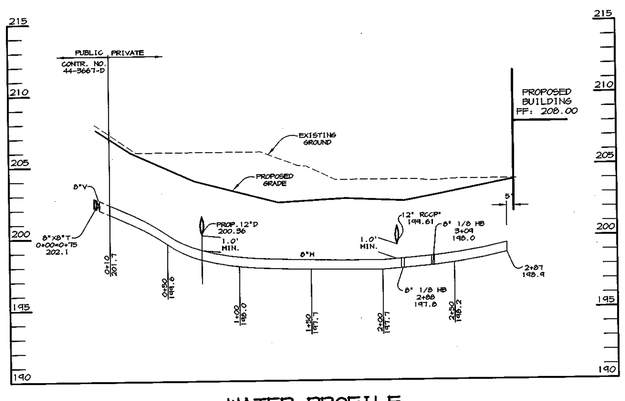

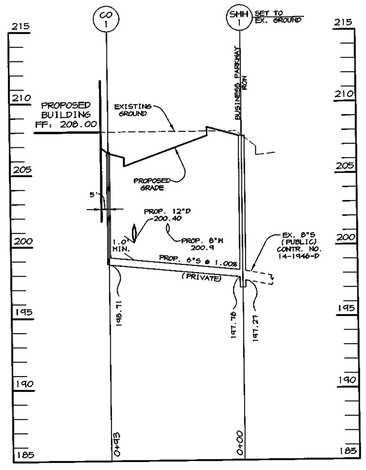

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR, Acting — 6/30/03 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 6/25/03 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 6/30/03 DATE

DATE	NO.	REVISION

OWNER/DEVELOPER

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PROJECT MEADOWRIDGE BUSINESS PARK
PARCEL N
A WAREHOUSE BUILDING

AREA TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILE SHEET

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Columbia, MD 21045
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F 410.997.9282

6-18-03 DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — #19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : CJR
DRAWN BY: DAM
PROJECT NO : 97320 SDP4.DWG
DATE : MAY 30, 2003
SCALE : AS SHOWN
DRAWING NO. 4 OF 7

SDP-98-75

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SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS 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 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO 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 12, 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	5.71	ACRES
AREA DISTURBED	5.25	ACRES
AREA TO BE ROOFED OR PAVED	3.85	ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.40	ACRES
TOTAL CUT	6000	CU.YDS.
TOTAL FILL	6000	CU.YDS.

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. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
12. 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.
13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., 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.
14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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 1983 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.

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" 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.

II. For sites having disturbed areas under 5 acres:
 i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – bSection I – Vegetative Stabilization Methods and Materials.

III. 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 – bSection 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:

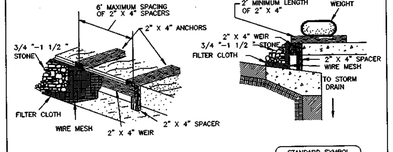
 i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for site having disturbed areas under 5 acres shall conform to the following requirements:
  a. Composted sludge shall be supplied by, or originate from, 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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT FOR SITE PLAN.
2. INSPECT/REPAIR ALL EXISTING SEDIMENT CONTROLS INSTALLED UNDER GP-96-155. RELOCATE SILT FENCE AS NOTED. (3 DAYS)
3. BEGIN BUILDING CONSTRUCTION.
4. AS SUBGRADE ELEVATIONS ARE REACHED, INSTALL STORM DRAIN SYSTEM AND WATER & SEWER. PROVIDE INLET PROTECTION AND INLET TRAP AT INLET #9 AS NECESSARY. (2 WEEKS)
5. INSTALL CURB & GUTTER AND CONCRETE PAD, THEN PAVE. (3 WEEKS)
6. STABILIZE DISTURBED AREAS AS NECESSARY AND. COMPLETE REMAINING CONSTRUCTION. (16 WEEKS)
7. UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, REMOVE TEMPORARY SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 DAYS)

DETAIL 23C – CURB INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

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.

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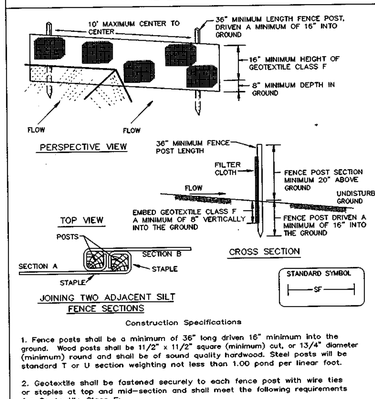
DETAIL 22 – SILT FENCE



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 ⁷/ 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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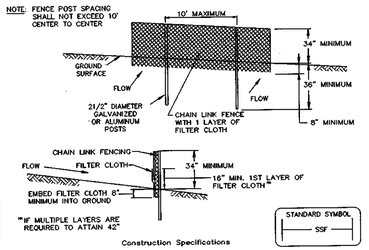
DETAIL 33 – SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. 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
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

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

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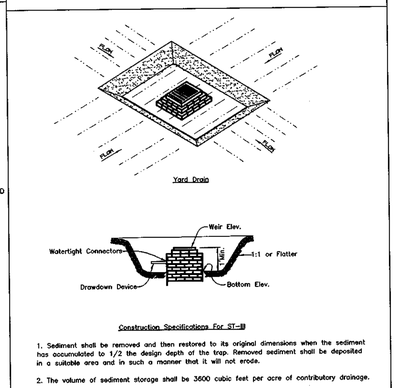
STORM INLET SEDIMENT TRAP ST-III



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

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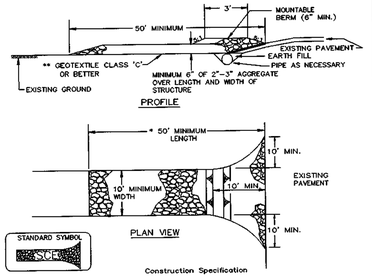
DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require 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.

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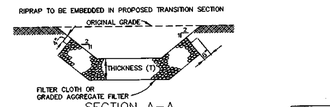
RIPRAP CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. GEOTEXTILE 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 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.



NOTE: Q_{10}, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q_{10}
E-1	9.5"	12'	14'	19"	16.47 cfs

RIPRAP OUTLET PROTECTION DETAIL

NO SCALE

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
449	12"	RCCP CL IV
200	15"	RCCP CL IV
87	18"	RCCP CL IV
497	24"	RCCP CL IV

STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS	INTERIOR DIMENSIONS
I-1	A-5	N 443,081.07 E 865,855.75	195.76 (24")	194.40 (24")	205.2	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-2	A-5	N 443,133.88 E 865,813.41	196.20 (24")	196.10 (24")	205.3	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-3	A-5	N 443,212.90 E 865,750.06	201.70 (12") 197.46 (15")	196.71 (24")	205.3	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-4	A-5	N 443,294.46 E 865,684.67	197.08 (15")	197.98 (15")	205.3	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-5	A-5	N 443,252.78 E 865,499.14	-	201.59 (12")	205.0	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-6	A-5	N 442,834.04 E 865,558.93	192.15 (24")	192.05 (24")	203.2	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-7	A-5	N 442,882.83 E 865,468.55	195.82 (24")	195.72 (24")	202.0	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-8	A-5	N 442,956.89 E 865,429.81	197.13 (18") 198.84 (12")	196.63 (24")	202.2	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-9	A-5	N 443,024.73 E 865,375.42	198.50 (12")	198.00 (18")	202.1	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-10	A-5	N 443,156.31 E 865,367.48	-	202.20 (12")	205.8	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
M-1	4' DIA. MANHOLE	N 443,331.84 E 865,653.44	198.42 (15")	198.32 (15")	206.0	HOCO. STD. DETAIL 6 5.11	-
M-2	4' DIA. MANHOLE	N 443,347.43 E 865,610.16	198.40 (12")	198.65 (15")	207.2	HOCO. STD. DETAIL 6 5.11	-
M-3	4' DIA. MANHOLE	N 442,817.20 E 865,634.55	182.33 (24")	177.78 (24")	188.2	HOCO. STD. DETAIL 6 5.11	-
SWM-1	4' DIA. MANHOLE	N 443,361.54 E 865,567.78	197.78 (6")	197.27 (8")	207.7	HOCO. STD. DETAIL 6 5.11	-
E-1	24" END SECTION	N 442,747.34 E 865,660.29	-	176.00 (24")	-	HOCO. STD. DETAIL SD 5.51	-
JB-1	JUNCTION BOX	N 443,085.86 E 865,884.48	187.60 (24")	185.60 (EX. 2-48")	197.0	MSHA. STD. DETAIL MD 386.11	5'-0" x 8'-2"

NOTES: LOCATION IS AT CENTER OF THROAT OPENING AT FACE OF CURB FOR CURB INLETS (CENTER OF GRATE FOR I-14). TOP ELEVATION IS TOP OF CURB/GRATE/RIM.

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.

DEVELOPER — DATE 6/10/03

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.

ENGINEER — DATE 6.16.03

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 6/20/03

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/20/03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/20/03

DATE	NO.	REVISION

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL 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

6.16.03 DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP5.DWG
DATE :	MAY 30, 2003
SCALE :	AS SHOWN
DRAWING NO.	5 OF 7

SDP-98-75

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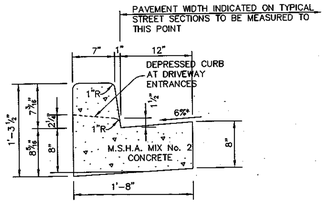
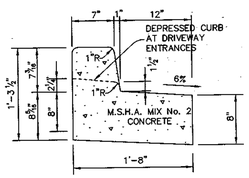


HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* 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.

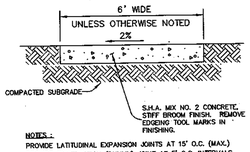
STANDARD 7" COMBINATION CURB AND GUTTER

NO SCALE



REVERSE 7" COMBINATION CURB AND GUTTER

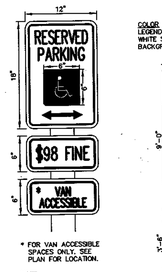
NO SCALE



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 DETAIL

NO SCALE



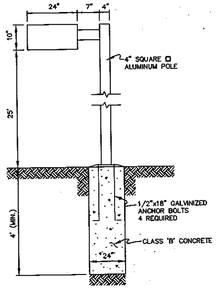
* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

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

HANDICAP SIGN DETAIL

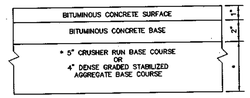
NO SCALE

1. ALL LIGHT FIXTURES TO BE SINGLE LUMINAIRE 400 WATT MERCURY TYPE WITH METAL POLES AND DIRECTED DOWNWARD
2. LOCATIONS OF LIGHT FIXTURES ARE ON THE PLAN AND ARE SHOWN THUS:
3. LIGHTS TO BE MODULE 5 TYPE AS MANUFACTURED BY HOLOPHANE 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



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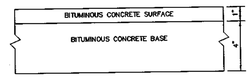
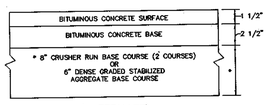


HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-1 PAVING

NO SCALE



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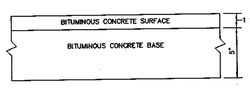
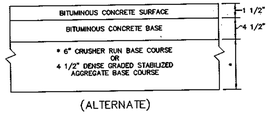


HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING

NO SCALE



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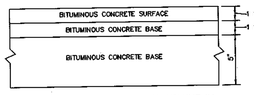
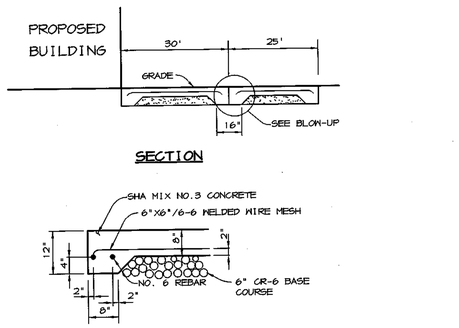


HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-3 PAVING

NO SCALE



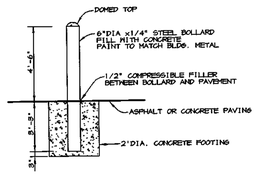
SECTION

BLOW-UP

NOTES:
1. SAW JOINTS AT 15' SPACING IN BOTH DIRECTIONS WITH DEPTH OF JOINT EQUAL TO 1/4 DEPTH OF SLAB.
2. CONSTRUCTION JOINTS: AS NEEDED, USING 3/4" DIA. SMOOTH DOWELS COATED TO PREVENT BOND @ 12"o/c(MAX.) WITH SMOOTH CUT EDGE. DOWEL: EXTEND 8" INTO CONCRETE ON EACH SIDE OF JOINT.

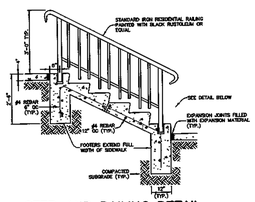
CONCRETE PAD FOR LOADING AREA

NO SCALE



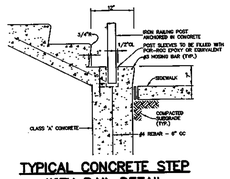
BOLLARD DETAIL

NO SCALE



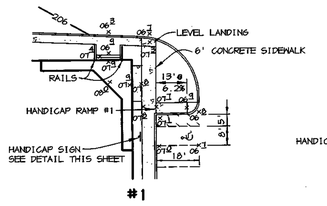
STEP AND RAILING DETAIL

NO SCALE



TYPICAL CONCRETE STEP WITH RAIL DETAIL

NO SCALE



HANDICAP RAMPS DETAILS

SCALE: 1"=30'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/25/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/20/03

DATE	NO.	REVISION

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK
PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: 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

6.16.03
DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP6.DWG
DATE :	MAY 30, 2003
SCALE :	AS SHOWN
DRAWING NO.	6 OF 7

SDP-98-75

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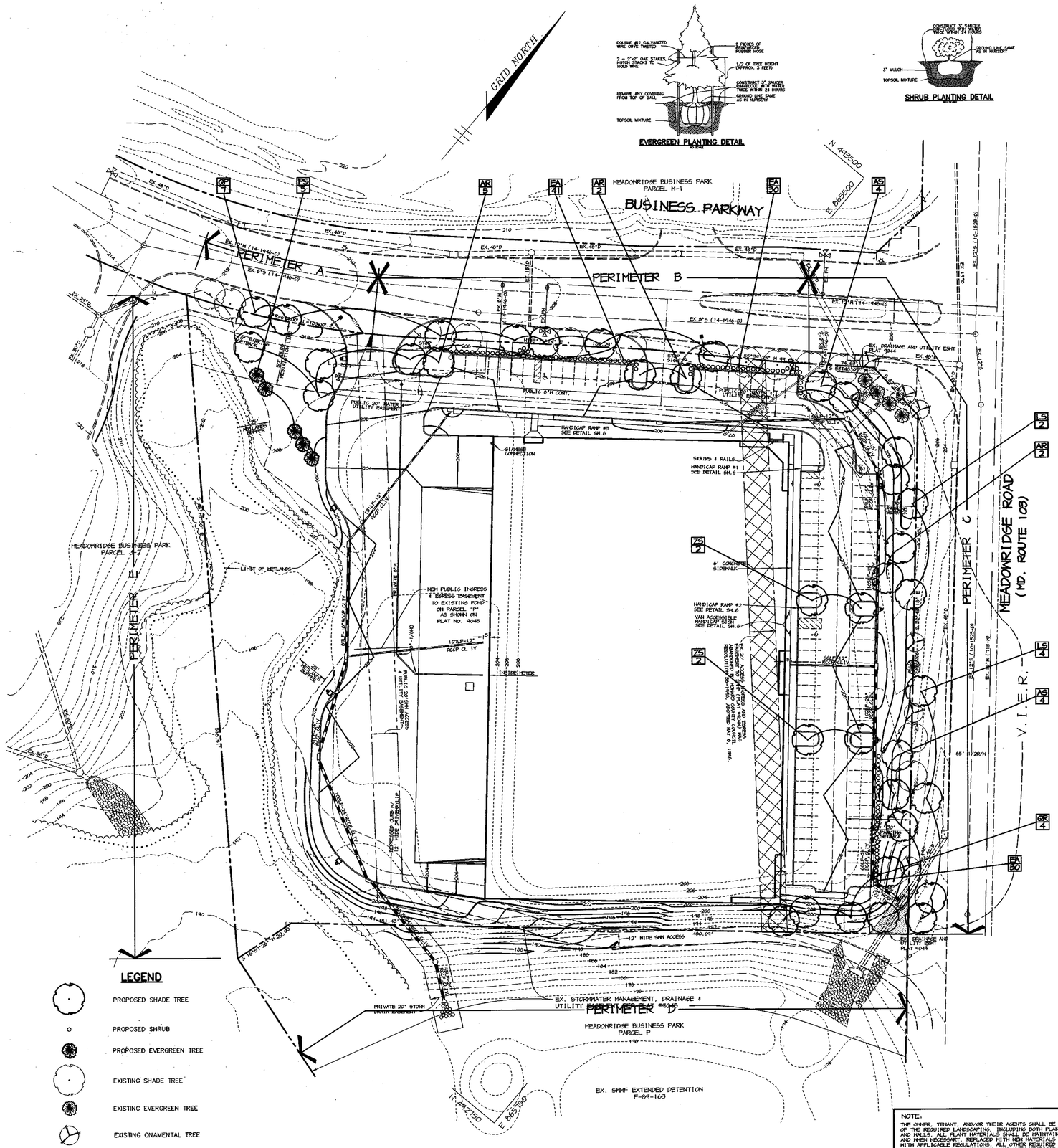
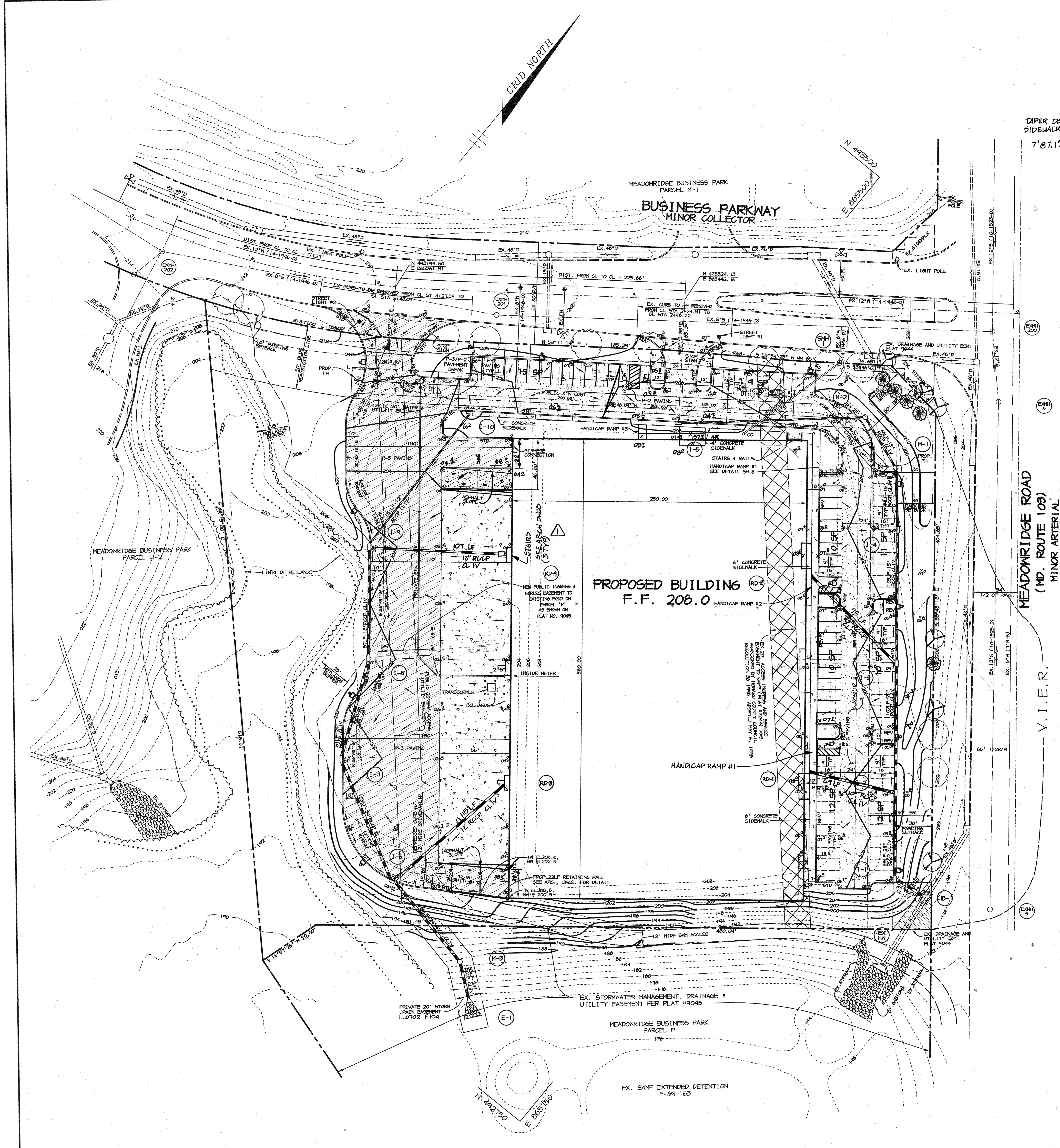
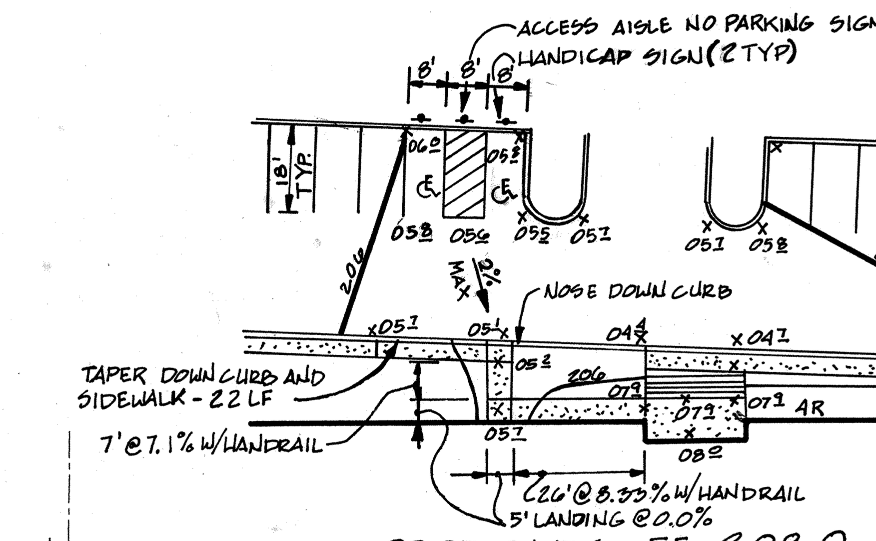
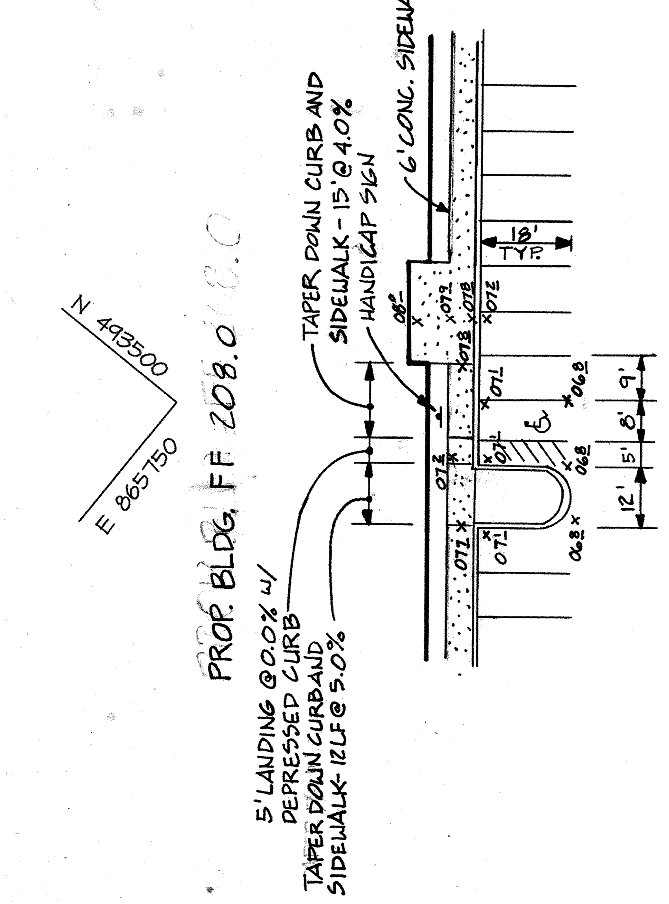

GRID NORTH
MEADOWRIDGE BUSINESS PARK
PARCEL M-1
BUSINESS PARKWAY
PERIMETER A
PERIMETER B
PERIMETER C
PERIMETER D
MEADOWRIDGE BUSINESS PARK
PARCEL M-2
MEADOWRIDGE BUSINESS PARK
PARCEL P
MEADOWRIDGE ROAD
(MD. ROUTE 103)
V.I.E.R.
LIMIT OF WETLANDS
NEW PUBLIC INGRESS & EGRESS EASEMENT TO EXISTING POND ON PARCEL 'P' AS SHOWN ON PLAT NO. 9045
EX. STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT PER PLAT #9045
EX. SWMF EXTENDED DETENTION F-84-163
PROPOSED 12" WATER MAIN
PROPOSED 8" SEWER MAIN
PROPOSED 20' STORM DRAIN EASEMENT
PROPOSED 12" WIDE SWM ACCESS
PROPOSED 15" HIDE DRIVEWAY UP
PROPOSED 6" CONCRETE SIDEWALK
HANDICAP RAMP #1 SEE DETAIL SH.6
HANDICAP RAMP #2 SEE DETAIL SH.6
HANDICAP RAMP #3 SEE DETAIL SH.6
STAIRS 4 RAILS
VAN ACCESSIBLE HANDICAP SIGN SEE DETAIL SH.6
INSTALL 12" RCP CL IV
INSTALL 15" RCP CL IV
INSTALL 18" RCP CL IV
INSTALL 24" RCP CL IV
INSTALL 30" RCP CL IV
INSTALL 36" RCP CL IV
INSTALL 42" RCP CL IV
INSTALL 48" RCP CL IV
INSTALL 54" RCP CL IV
INSTALL 60" RCP CL IV
INSTALL



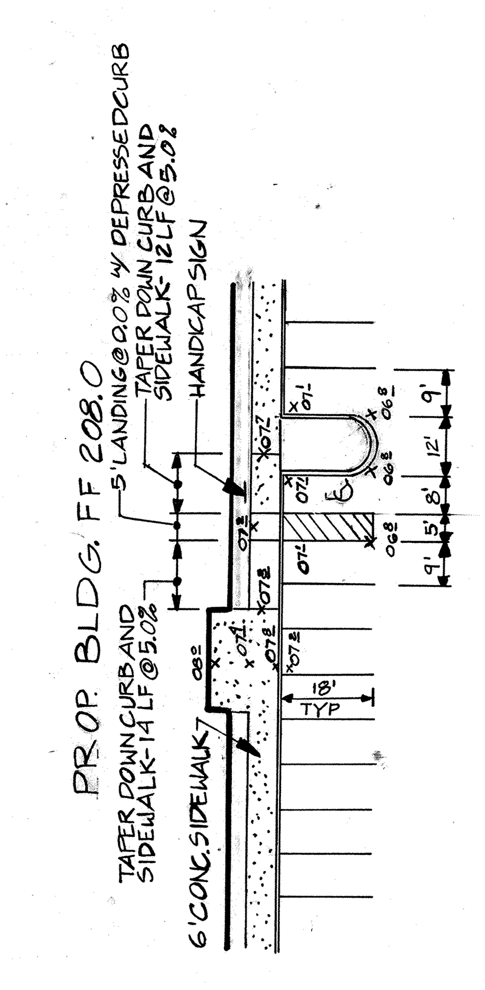


HANDICAP RAMP #3

SCALE : 1" = 30'



HANDICAP RAMP #2



HANDICAP RAMP #1

SCALE: 1" = 30'

LEGEND

	P-1 PAVING (PARKING BAYS)
	P-2 PAVING (DRIVE LANES)
	P-3 PAVING (TRUCK ENTRANCE & COURT)
	CONCRETE SIDEWALK OR CONCRETE TRUCK PAD (SEE DETAIL SHEET 4)
STD * REV	DENOTES TRANSITION FROM STANDARD TO REVERSE CURB AND GUTTER
	25' POLE SQUARE STEEL 400 WATT SHOEBOX METAL HALIDE (SEE NOTE 1)
	250 WATT HPS VAPOR PENDANT FIXTURE (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE, USING A 12' ARM.
V.I.E.R.	VEHICULAR INGRESS/EGRESS RESTRICTED

NOTES:

1. ALL LIGHTS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

2. ALL CURB RADII ARE 5' UNLESS OTHERWISE LABELED.

3. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE SHOWN.

4. ALL ON-SITE ROADS ARE PRIVATE.

5. SEE SHEET 1 FOR BUILDING LOCATION DIMENSIONS.

STREET LIGHT LOCATION

#1	36' LEFT OF STA. 2+30, BUSINESS PARKWAY
#2	39' LEFT OF STA. 5+20, BUSINESS PARKWAY ANGLE ARM TO CENTER OF INTERSECTION

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR, Acting [signature]	DATE 6/30/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION [signature]	DATE 6/25/03
CHIEF, DIVISION OF LAND DEVELOPMENT [signature]	DATE 6/30/03

DATE	NO.	REVISION
4-22-04	1	RELOCATED BLDG ENTRANCES, ROOF DRAINS LOADING RAMPS

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK
PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st 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

6.16.03
DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP2.DWG
DATE :	MAY 30, 2003
SCALE :	1" = 40'
DRAWING NO.	2 OF 7

SDP-98-75

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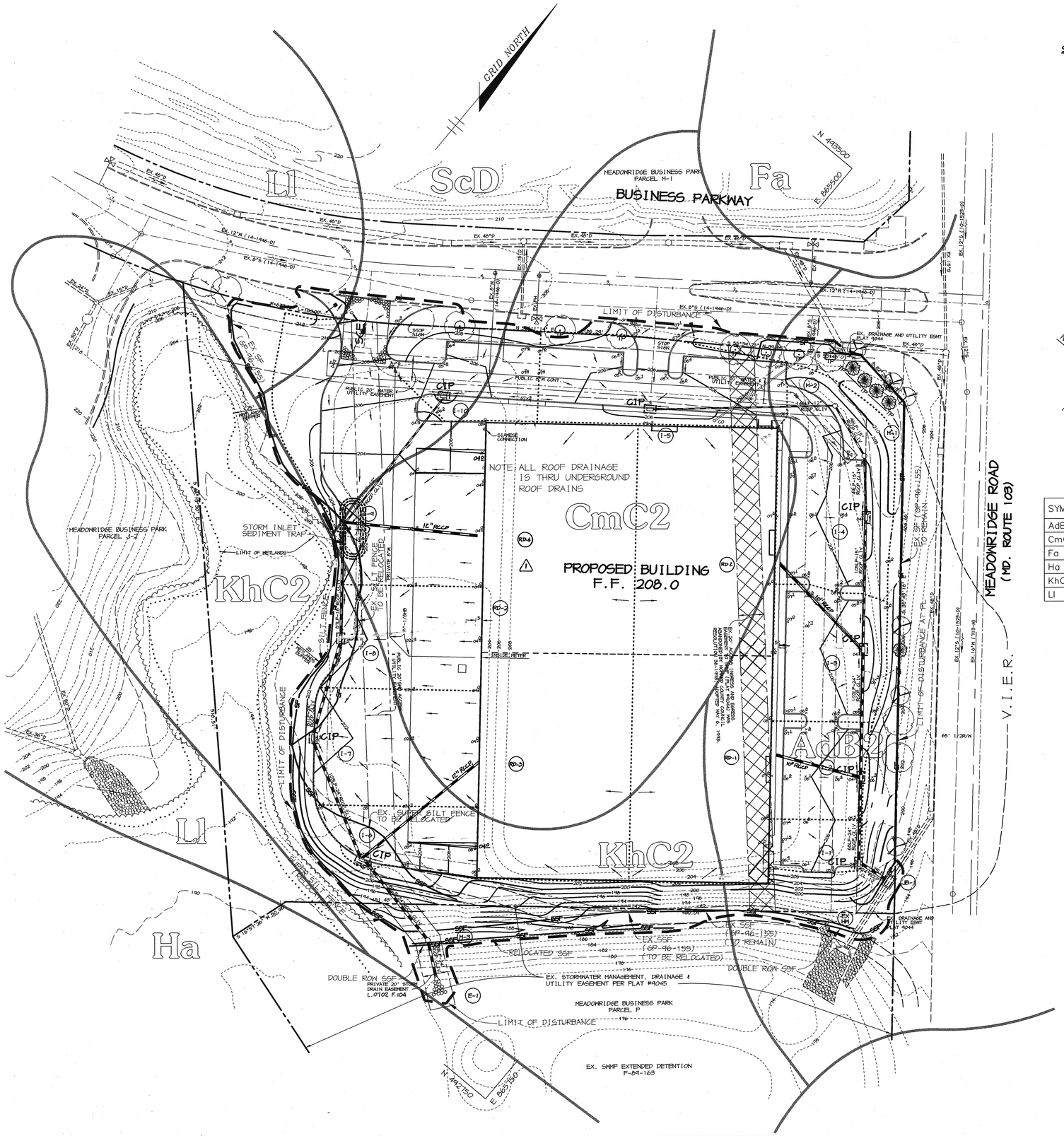

STORM INLET SEDIMENT TRAP #1 (I-9)

DRAINAGE AREA	0.58 AC.
STORAGE VOLUME REQUIRED	1044 CF (WET/DRY)
STORAGE VOLUME PROVIDED	1044 CF @ 199.8 (WET)=DRAW DOWN DEVICE ELEV.
STORAGE VOLUME PROVIDED	1340 CF @ 201.5 (DRY)
WEIR ELEVATION	201.5
BOTTOM ELEVATION	198.0
CLEANOUT ELEVATION	199.5
SIDE SLOPES	1:1
CREST WIDTH	5'
BOTTOM DIMENSIONS	12'X40'
DEPTH	3.5'

SOIL CHART

SYMBOL	DESCRIPTION
AdB2	ALDINO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CmC2	CHILLUM SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
Fa	FALLSINGTON LOAM
Ha	HATBORO SILT LOAM
KhC2	KEYPORT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED
LI	LEONARDTOWN SILT LOAM

DRAINAGE DATA

INLET NOS.	AREA IN ACRES	'C' FACTOR	PERCENT IMPERVIOUS
1	0.07	0.86	100%
2	0.14	0.81	92%
3	0.19	0.76	85%
4	0.33	0.58	57%
5	0.29	0.63	66%
6	0.13	0.86	100%
7	0.27	0.86	100%
8	0.21	0.86	100%
9	0.58	0.71	76%
10	0.18	0.53	50%

* ALL SOILS ARE ASSUMED TYPE 'C' AS THE SITE HAS BEEN MASS GRADED.

LEGEND

- CIP — CURB INLET PROTECTION
- SSF — SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- DRAINAGE AREA DIVIDE
- TP — TREE PROTECTION FENCE
- SCE — STABILIZED CONSTRUCTION ENTRANCE

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.

DEVELOPER — DATE 6/10/03

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.

ENGINEER — DATE 6.10.03

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 6/20/03

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/20/03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR, DPZ — DATE 6/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/25/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/20/03

DATE	NO.	REVISION
4-23-04	1	RELOCATED BLDG ENTRANCES, ROOF DRAINS, LOADING RAMPS

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GRADING PLAN, SEDIMENT CONTROL PLAN, 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

6.10.03 DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP3.DWG
DATE :	MAY 30, 2003
SCALE :	1" = 40'
DRAWING NO.	3 OF 7

SDP-98-75

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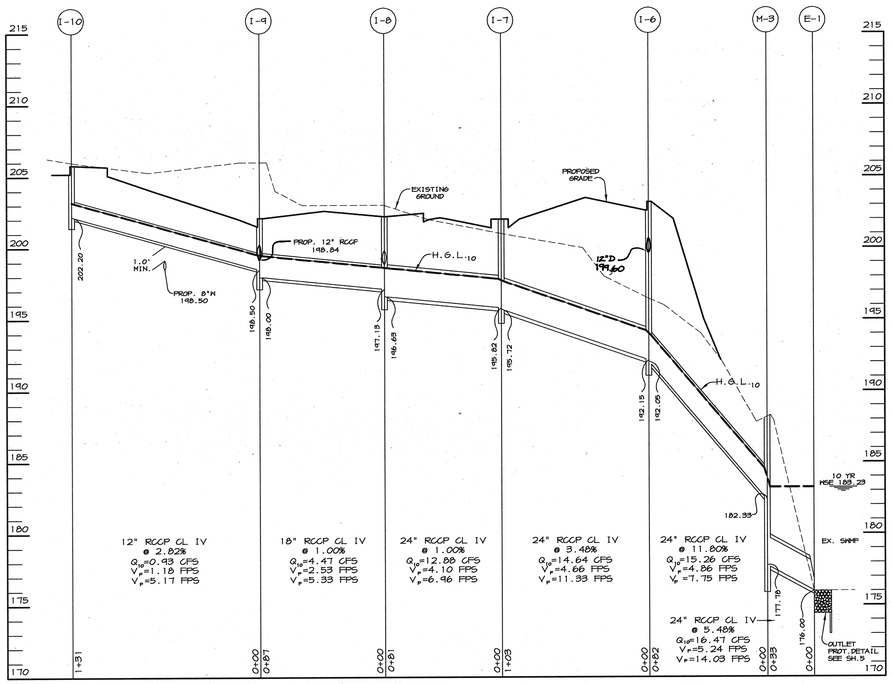
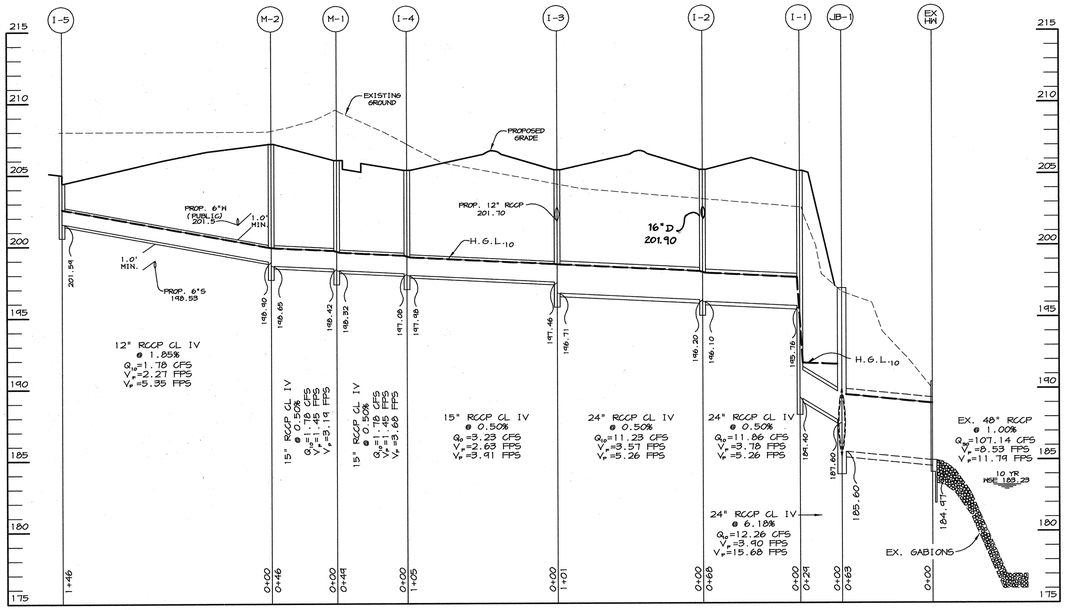


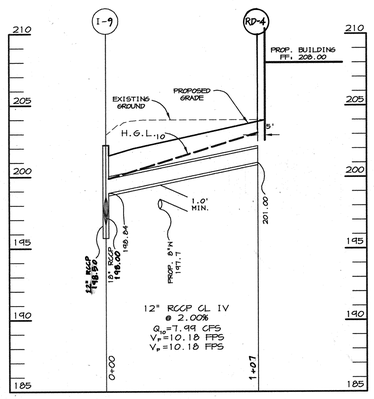
STORM DRAIN PROFILE

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



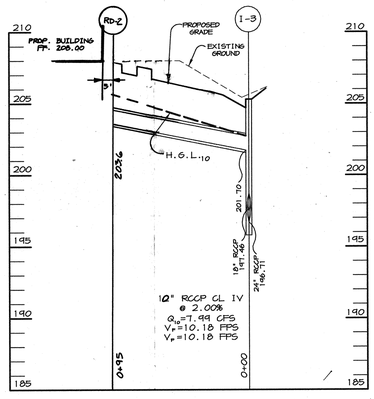
STORM DRAIN PROFILE

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



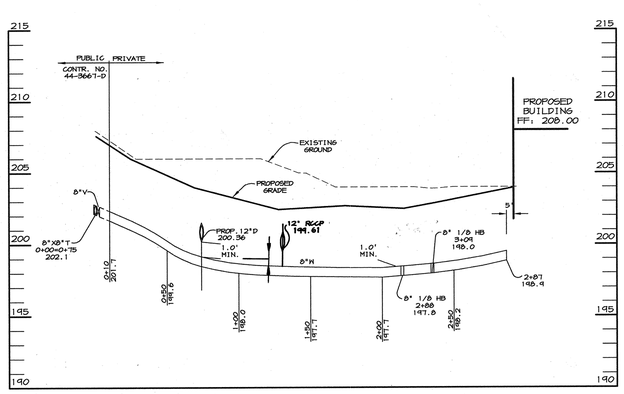
STORM DRAIN PROFILE

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



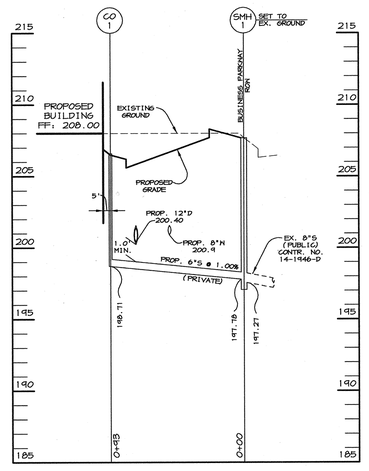
STORM DRAIN PROFILE

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



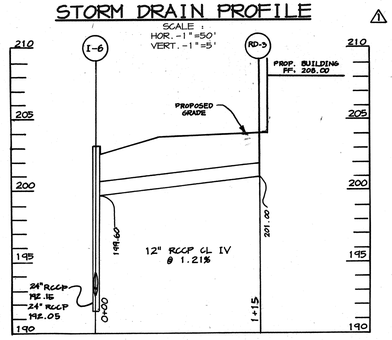
WATER PROFILE

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



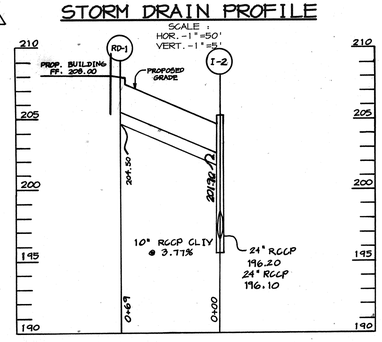
SEWER PROFILE

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



STORM DRAIN PROFILE

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



STORM DRAIN PROFILE

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/25/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/30/03

DATE	NO.	REVISION
4-23-04	⚠1	ADDED ROOF DRAIN PROFILES

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT MEADOWRIDGE BUSINESS PARK PARCEL N
A WAREHOUSE BUILDING

AREA TAX MAP NO. 37 ZONED M-1 PARCEL N
1st 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

6-18-03
DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — 19949 — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY : CJR
DRAWN BY: DAM
PROJECT NO : 97320 SDP4.DWG
DATE : MAY 30, 2003
SCALE : AS SHOWN
DRAWING NO. 4 OF 7

SDP-98-75

P:\project\97320\SDP4.DWG, 05/30/2003 10:30:55 AM, HP750C(36).pc3

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS 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 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO 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 12, 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	5.71	ACRES
AREA DISTURBED	5.25	ACRES
AREA TO BE ROOFED OR PAVED	3.85	ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.40	ACRES
TOTAL CUT	6000	CU.YDS.
TOTAL FILL	6000	CU.YDS.

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. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
12. 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.
13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., 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.
14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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 1983 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.

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" 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.

II. For sites having disturbed areas under 5 acres:
 i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - bSection I - Vegetative Stabilization Methods and Materials.

III. 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 - bSection 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.

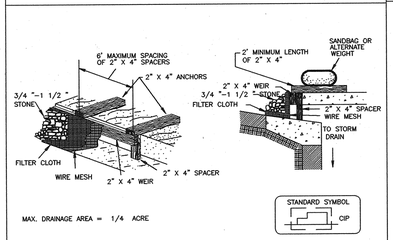
VI. Alternative for Permanent Seeding - instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested 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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT FOR SITE PLAN.
2. INSPECT/REPAIR ALL EXISTING SEDIMENT CONTROLS INSTALLED UNDER GP-96-155. RELOCATE SILT FENCE AS NOTED. (3 DAYS)
3. BEGIN BUILDING CONSTRUCTION.
4. AS SUBGRADE ELEVATIONS ARE REACHED, INSTALL STORM DRAIN SYSTEM AND WATER & SEWER. PROVIDE INLET PROTECTION AND INLET TRAP AT INLET #9 AS NECESSARY. (2 WEEKS)
5. INSTALL CURB & GUTTER AND CONCRETE PAD, THEN PAVE. (3 WEEKS)
6. STABILIZE DISTURBED AREAS AS NECESSARY AND COMPLETE REMAINING CONSTRUCTION. (16 WEEKS)
7. UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, REMOVE TEMPORARY SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 DAYS)

DETAIL 23C - CURB INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL: CIP

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.

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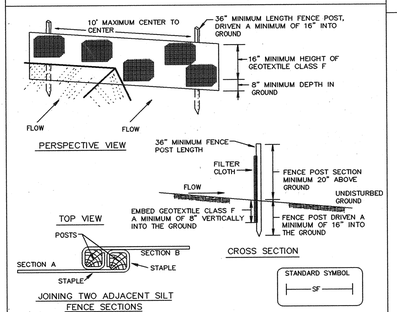
DETAIL 22 - SILT FENCE



STANDARD SYMBOL: SF

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 /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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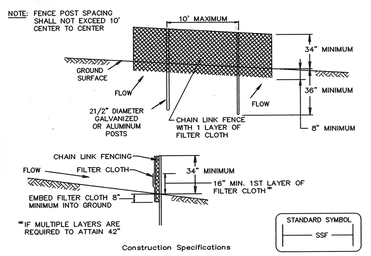
DETAIL 33 - SUPER SILT FENCE



STANDARD SYMBOL: SSF

Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. 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
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

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

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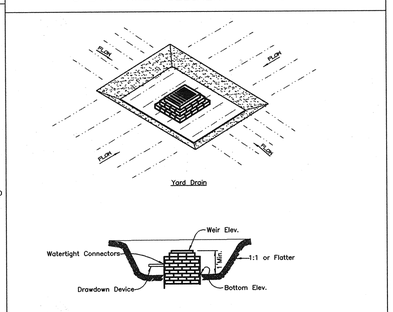
STORM INLET SEDIMENT TRAP ST-III



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

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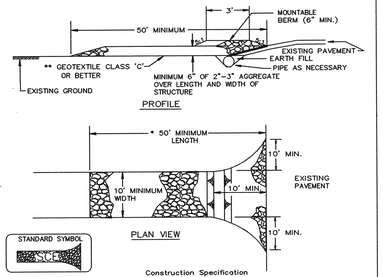
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require 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.

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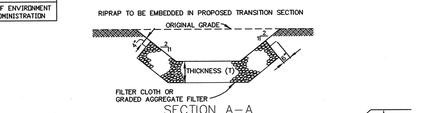
RIPRAP CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. GEOTEXTILE 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 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.



NOTE: Q_{10} , V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q_{10}
E-1	9.5"	12'	14'	19"	16.47 cfs

RIPRAP OUTLET PROTECTION DETAIL

NO SCALE

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
~~489~~	12"	RCCP CL. IV
200	15"	RCCP CL. IV
87	18"	RCCP CL. IV
497	24"	RCCP CL. IV
~~169~~	~~30"~~	RCCP CL. IV

STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS	INTERIOR DIMENSIONS
I-1	A-5	N 443,081.07 E 865,855.75	195.76 (24")	194.40 (24")	205.2	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-2	A-5	N 443,133.88 E 865,813.41	**201.90 (10")**	196.10 (24")	205.3	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-3	A-5	N 443,212.90 E 865,750.06	201.70 (10") 197.46 (15")	196.71 (24")	205.3	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-4	A-5	N 443,294.46 E 865,684.67	197.08 (15")	197.98 (15")	205.3	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-5	A-5	N 443,252.78 E 865,499.14	-	201.54 (12")	205.0	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-6	A-5	N 442,834.04 E 865,553.93	**199.60 (12")**	192.05 (24")	203.2	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-7	A-5	N 442,882.83 E 865,463.55	195.82 (24")	195.72 (24")	202.0	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-8	A-5	N 442,956.89 E 865,429.81	197.13 (18")	196.63 (24")	202.2	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-9	A-5	N 443,024.73 E 865,375.42	~~198.84 (12")~~ 198.50 (12")	198.00 (18")	202.1	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
I-10	A-5	N 443,156.31 E 865,367.48	-	202.20 (12")	205.8	HOCO. STD. DETAIL SD 4.40	2'-6" x 5'-0"
M-1	4' DIA. MANHOLE	N 443,331.84 E 865,653.44	198.42 (15")	198.32 (15")	206.0	HOCO. STD. DETAIL 6 5.11	-
M-2	4' DIA. MANHOLE	N 443,347.43 E 865,610.16	198.90 (12")	198.65 (15")	207.2	HOCO. STD. DETAIL 6 5.11	-
M-3	4' DIA. MANHOLE	N 442,817.20 E 865,634.55	182.33 (24")	177.78 (24")	188.2	HOCO. STD. DETAIL 6 5.11	-
SMH-1	4' DIA. MANHOLE	N 443,367.54 E 865,567.78	197.78 (6")	197.27 (8")	207.7	HOCO. STD. DETAIL 6 5.11	-
E-1	24" END SECTION	N 442,797.34 E 865,660.29	-	176.00 (24")	-	HOCO. STD. DETAIL SD 5.51	-
JB-1	JUNCTION BOX	N 443,085.86 E 865,884.48	187.60 (24")	185.60 (EX. 2-48")	197.0	MSHA. STD. DETAIL MD 386.11	5'-0" x 8'-2"

NOTES: LOCATION IS AT CENTER OF THROAT OPENING AT FACE OF CURB FOR CURB INLETS (CENTER OF GRATE FOR I-14). TOP ELEVATION IS TOP OF CURB/GRATE/RIM.

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.

DEVELOPER — DATE 6/10/03

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.

ENGINEER — DATE 6.16.03

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 6/20/03

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/20/03

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/30/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/20/03

DATE	NO.	REVISION
4-23-04	1	REVISED STRUCTURE SCHEDULE

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL 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

6-16-03 DATE

STATE OF MARYLAND — CHRISTOPHER J. REID — PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DESIGNED BY :	CJR
DRAWN BY:	DAM
PROJECT NO :	97320 SDP5.DWG
DATE :	MAY 30, 2003
SCALE :	AS SHOWN
DRAWING NO.	5 OF 7

SDP-98-75

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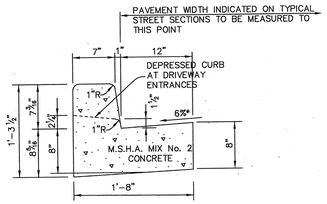
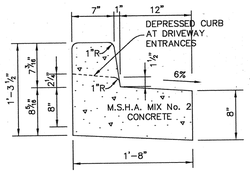


HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* 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.

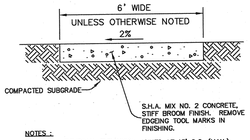
STANDARD 7" COMBINATION CURB AND GUTTER

NO SCALE



REVERSE 7" COMBINATION CURB AND GUTTER

NO SCALE



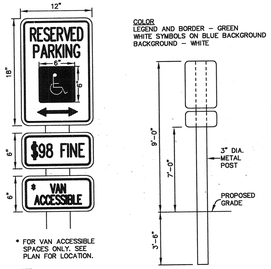
NOTES :-

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 DETAIL

NO SCALE



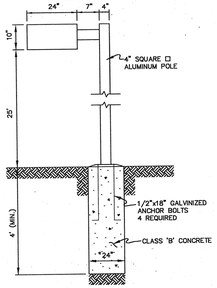
* FOR VAN ACCESSIBLE SPACES ONLY. SEE PLAN FOR LOCATION.

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

HANDICAP SIGN DETAIL

NO SCALE

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

BITUMINOUS CONCRETE SURFACE	1"
BITUMINOUS CONCRETE BASE	1 1/2"
* 5" CRUSHER RUN BASE COURSE OR 4" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	*

(ALTERNATE)

BITUMINOUS CONCRETE SURFACE	1"
BITUMINOUS CONCRETE BASE	4"

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

P-1 PAVING

NO SCALE

BITUMINOUS CONCRETE SURFACE	1 1/2"
BITUMINOUS CONCRETE BASE	2 1/2"
* 8" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	*

(ALTERNATE)

BITUMINOUS CONCRETE SURFACE	1 1/2"
BITUMINOUS CONCRETE BASE	5"

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

P-2 PAVING

NO SCALE

BITUMINOUS CONCRETE SURFACE	1 1/2"
BITUMINOUS CONCRETE BASE	4 1/2"
* 6" CRUSHER RUN BASE COURSE OR 4 1/2" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	*

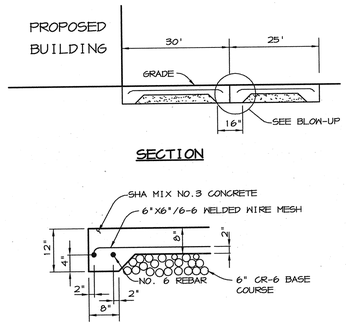
(ALTERNATE)

BITUMINOUS CONCRETE SURFACE	1 1/2"
BITUMINOUS CONCRETE BASE	1 1/2"
BITUMINOUS CONCRETE BASE	5"

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

P-3 PAVING

NO SCALE



SECTION

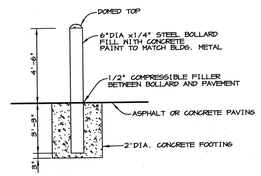
BLOW-UP

NOTES: 1. SAW JOINTS AT 15' SPACING IN BOTH DIRECTIONS WITH DEPTH OF JOINT EQUAL TO 1/4 DEPTH OF SLAB.

2. CONSTRUCTION JOINTS: AS NEEDED, USING 3/4" DIA. SMOOTH DOWELS COATED TO PREVENT BOND @ 12'o/c(MAX.) WITH SMOOTH CUT EDGE. DOWEL: EXTEND 8" INTO CONCRETE ON EACH SIDE OF JOINT.

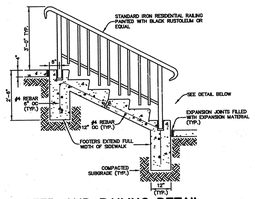
CONCRETE PAD FOR LOADING AREA

NO SCALE



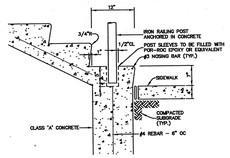
BOLLARD DETAIL

NO SCALE



STEP AND RAILING DETAIL

NO SCALE



TYPICAL CONCRETE STEP WITH RAIL DETAIL

NO SCALE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 6/20/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/25/03

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/20/03

DATE	NO.	REVISION
4-23-04	1	DELETED HC RAMP DETAILS

OWNER/DEVELOPER

MALAGA, LLC
7250 PARKWAY DRIVE, SUITE 130
HANOVER, MARYLAND 21076
410-712-4466

PROJECT: MEADOWRIDGE BUSINESS PARK PARCEL N
A WAREHOUSE BUILDING

AREA: TAX MAP NO. 37 ZONED M-1 PARCEL N
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: NOTES AND DETAILS

Patton Harris Rust & Associates, pc
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
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T 410.997.8900
F 410.997.9282

6.18.03
DATE

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

CHRISTOPHER J. REID #19949

DESIGNED BY : CJR
DRAWN BY: DAM
PROJECT NO : 97320 SDP6.DWG
DATE : MAY 30, 2003
SCALE : AS SHOWN
DRAWING NO. 6 OF 7

SDP-98-75

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