

SITE DEVELOPMENT PLAN

MEADOWRIDGE BUSINESS PARK

PARCEL D-1

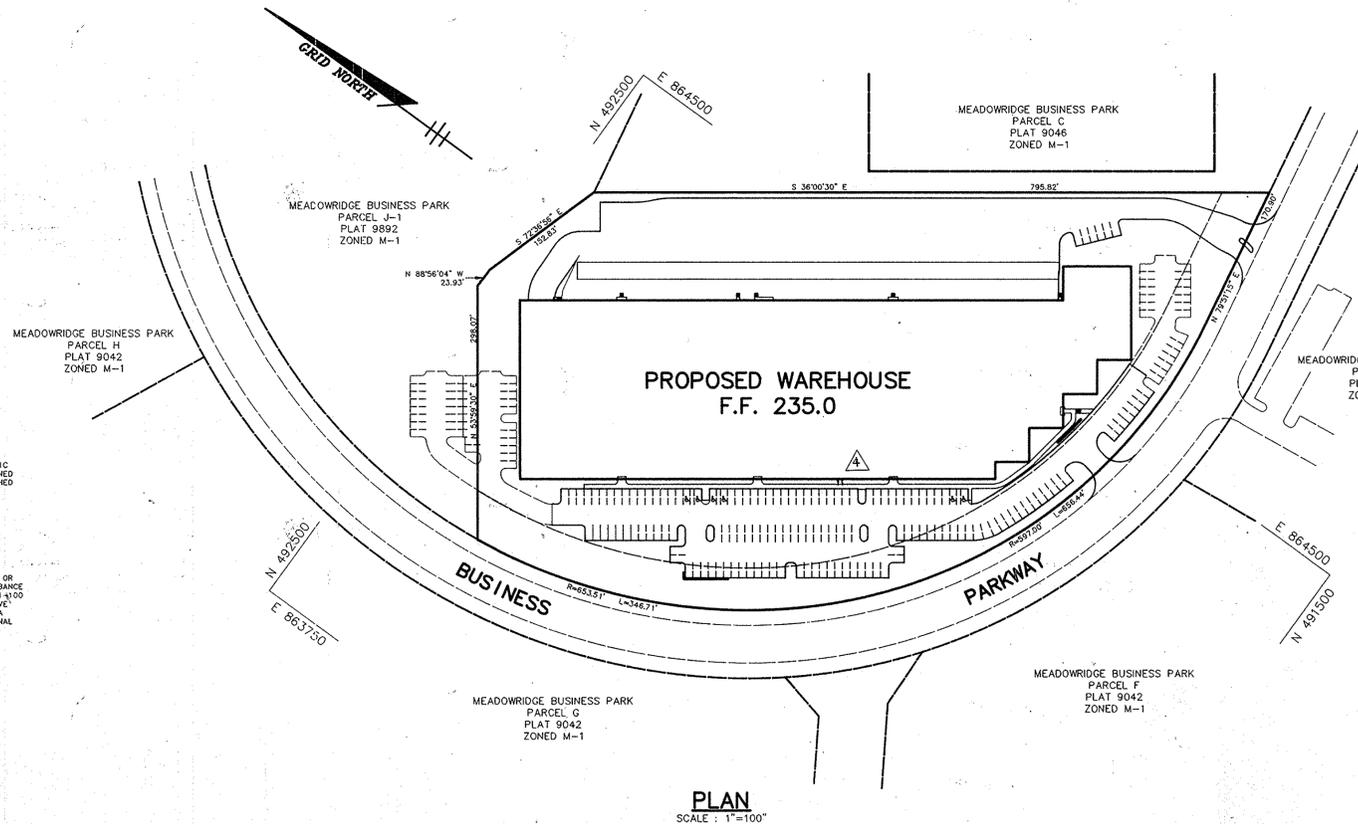
1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

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SHT. NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING AND SEDIMENT CONTROL PLAN
4	DRAINAGE AREA MAP & ENVIRONMENTAL ANALYSIS
5	PROFILES AND DETAIL SHEET
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8	LANDSCAPE PLAN

GENERAL NOTES

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.F., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1991 AMENDMENTS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. 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.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAY BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
 - MISS UTILITY 1-800-287-7777
 - GW TELEPHONE COMPANY 725-9979
 - HOWARD COUNTY BUREAU OF UTILITIES 982-2366
 - AT&T CABLE LOCATION DIVISION 383-3553
 - BALTIMORE GAS & ELECTRIC COMPANY 685-0123
 - STATE HIGHWAY ADMINISTRATION 531-0533
 - HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK) 782-7272
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE ∇ INVERT.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
- TOPOGRAPHY TAKEN FROM FIELD RUN SURVEY DATED AUGUST, 1990 BY RIEMER MUEGG & ASSOCIATES, INC.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL 02.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- THE OWNER SHALL PROVIDE A SEPARATE AND INDEPENDENT SEWER CONNECTION FOR EACH TENANT OR OCCUPANT OF ANY BUILDING, SHOWN ON THIS SITE DEVELOPMENT PLAN, WHO WILL DISCHARGE NON-DOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM IF THIS WASTE IS REGULATED UNDER SECTION 18.122A OF THE HOWARD COUNTY CODE. EACH SEPARATE AND INDEPENDENT SEWER CONNECTION SHALL INCLUDE A STANDARD MANHOLE AND OTHER WATER PRETREATMENT DEVICES AS REQUIRED AND APPROVED BY HOWARD COUNTY. MANHOLE AND INDEPENDENT SEWER CONNECTION SHALL BE DESIGNED, CONSTRUCTED OR MODIFIED SUCH THAT NON-DOMESTIC WASTE WILL BE DISCHARGED TO THE SEPARATE AND INDEPENDENT SEWER CONNECTION. NO PLAN SHALL DISCHARGE REGULATED NON-DOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM PRIOR TO INSTALLATION OF THE SEPARATE AND INDEPENDENT SEWER CONNECTION AND RELATED INTERIOR WASTE LINES. THE ABOVE REQUIREMENTS SHALL APPLY TO ALL INITIAL AND FUTURE OCCUPANTS OR TENANTS.
- STORMWATER MANAGEMENT QUANTITY CONTROL FOR THIS DEVELOPMENT IS PROVIDED UNDER F-89-163. THE FACILITY IS A RETENTION POND.
- THE OWNER SHALL PROVIDE MAINTENANCE FOR THE WATER QUALITY STRUCTURE PROVIDED FOR THIS DEVELOPMENT.
- THE PAVEMENT DETAILS SHOWN ON SHEET 6 OF 8 OF THIS PLAN REFLECT THE HOWARD COUNTY MINIMUM STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE.
- WETLANDS SHOWN ON THIS PLAN ARE AS PER PLAT NOS. 8043 & 8046. THE WETLANDS BUFFER INDICATED ON THIS PLAN 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 BUFFER AREA. MAINTENANCE OF BUILDINGS, PARKING, LANDSCAPING AND UTILITIES IS PERMITTED.
- WP-91-100. A REQUEST TO WAIVE SECTION 16.116(c)(6) WHICH PROHIBITS GRADING OR REMOVAL OF VEGETATION WITHIN 25 FEET OF A WETLAND, AND ALLOW BUFFER DISTANCE ON ALL PARCELS FOR WHICH THERE IS NO APPROVED SITE DEVELOPMENT PLAN. WP-91-100 WAS GRANTED APPROVAL ON MARCH 1, 1991 AS PER APPROVAL CONDITION #4 WE HAVE PROVIDED A SNOW FENCE ALONG THE LIMIT OF DISTURBANCE IN THE 25' BUFFER AREA (SEE SHEET 3 OF 8) AS PER APPROVAL CONDITION #5 WE HAVE PROVIDED ADDITIONAL LANDSCAPING IN THE BUFFER AREAS ON SHEET 8 OF 8.

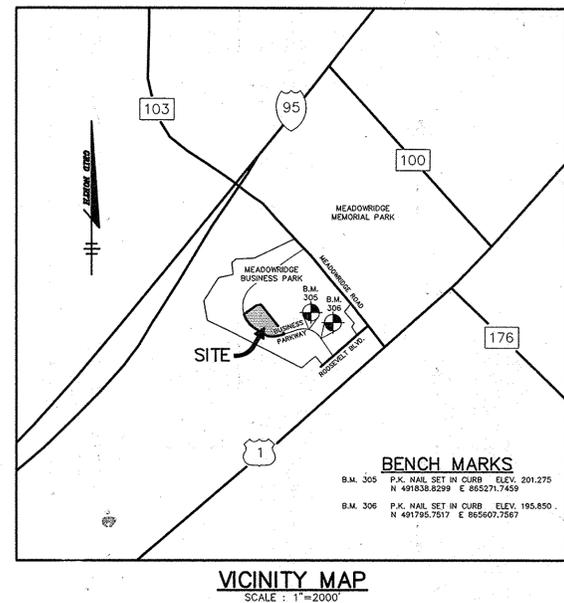


PLAN
SCALE: 1"=100'

SITE TABULATION

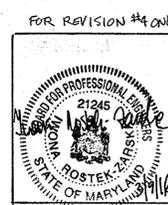
TOTAL AREA OF PARCEL	360,609 SQ. FT. (8.278 AC.)
PRESENT ZONING	M-1
PROPOSED USE	WAREHOUSE/DISTRIBUTION BUILDING - ONE STORY
PROPOSED BUILDING COVERAGE	141,600 S.F. (3.25 AC.) (39.3% OF TOTAL ACREAGE)
NO. PARKING SPACES REQUIRED AT 150'/1,000 S.F.	142
NO. PARKING SPACES PROVIDED	37
FUTURE PARKING #1	21
FUTURE PARKING #2	206 (INCLUDES 6 HANDICAPPED)
NO. PARKING SPACES PROVIDED, ALL PHASES	228
AREA OF PARKING	50,692 S.F.
LANDSCAPED ISLANDS REQUIRED	2,535 S.F. (5%)
LANDSCAPED ISLANDS PROVIDED	2,790 S.F. (5.5%)
UNBUILT GREEN AREA	2.34 AC. (28.3% OF TOTAL ACREAGE)

- NOTES:**
- REQUIRED PARKING PER DEVELOPER'S LETTER CONCERNING USER'S NEEDS.
 - THE PARKING SPACES PROVIDED ON THIS SITE DEVELOPMENT PLAN ARE THE MINIMUM REQUIRED FOR BULK STORAGE WAREHOUSE USE ONLY AND ANY CONVERSION OF THE USE IN THE FUTURE IS SUBJECT TO THE PARKING REQUIREMENTS OF SECTION 127 OF THE ZONING REGULATIONS.



VICINITY MAP
SCALE: 1"=2000'

AS-BUILT-CERTIFICATE	
ARTHUR E. MUEGGE #8707	DATE:
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.	
<i>Joseph B. Bralle</i> COUNTY HEALTH OFFICER CSM	9-13-91 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>James Smith</i> DIRECTOR	9/17/91 DATE
<i>Elmira Helmer</i> CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	9/16/91 DATE
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.	
<i>James J. Shaw</i> DIRECTOR	9/9/91 DATE
<i>William B. Riley</i> CHIEF, BUREAU OF ENGINEERING	7.2.91 DATE
2/11/16	ADDED NEW DOOR AND SIDEWALK, 010/010, INC.
DATE NO.	REVISION
OWNER / DEVELOPER	
WINCHESTER HOMES, INC. 4081 POWDER MILL ROAD SUITE 500 CALVERTON, MARYLAND 20705 (301) 937-3111	
PROJECT MEADOWRIDGE BUSINESS PARK PARCEL D-1 A WAREHOUSE BUILDING	
AREA	ZONED M-1 TAX MAP 37 & 43 PLAT NO. 9892 MEADOWRIDGE BUSINESS PARK, PARCEL D-1 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE TITLE SHEET	
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 3105 North Ridge Road Ellicott City, Maryland 21043 301-461-2690 FAX: 301-750-3176	
DATE 6-3-91	DATE 9-11-01
DESIGNED BY: W.C.W.	
DRAWN BY: W.C.W.	
PROJECT NO.: 74001	
DATE: JUNE 3, 1991	
SCALE: AS SHOWN	
DRAWING NO. 1 OF 8	

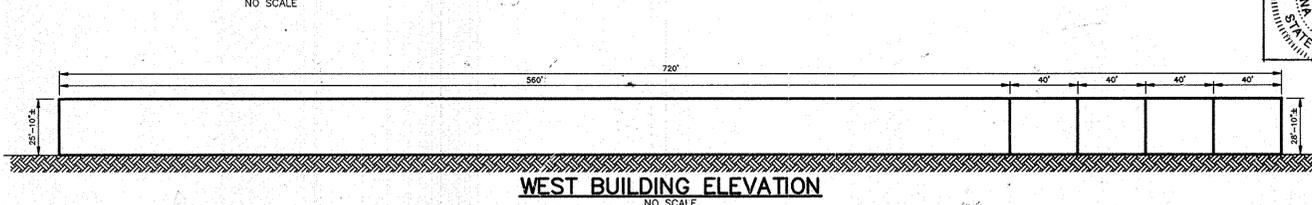
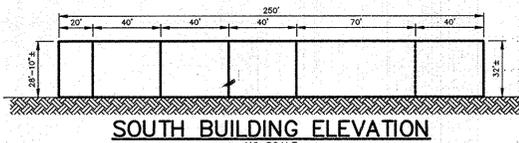


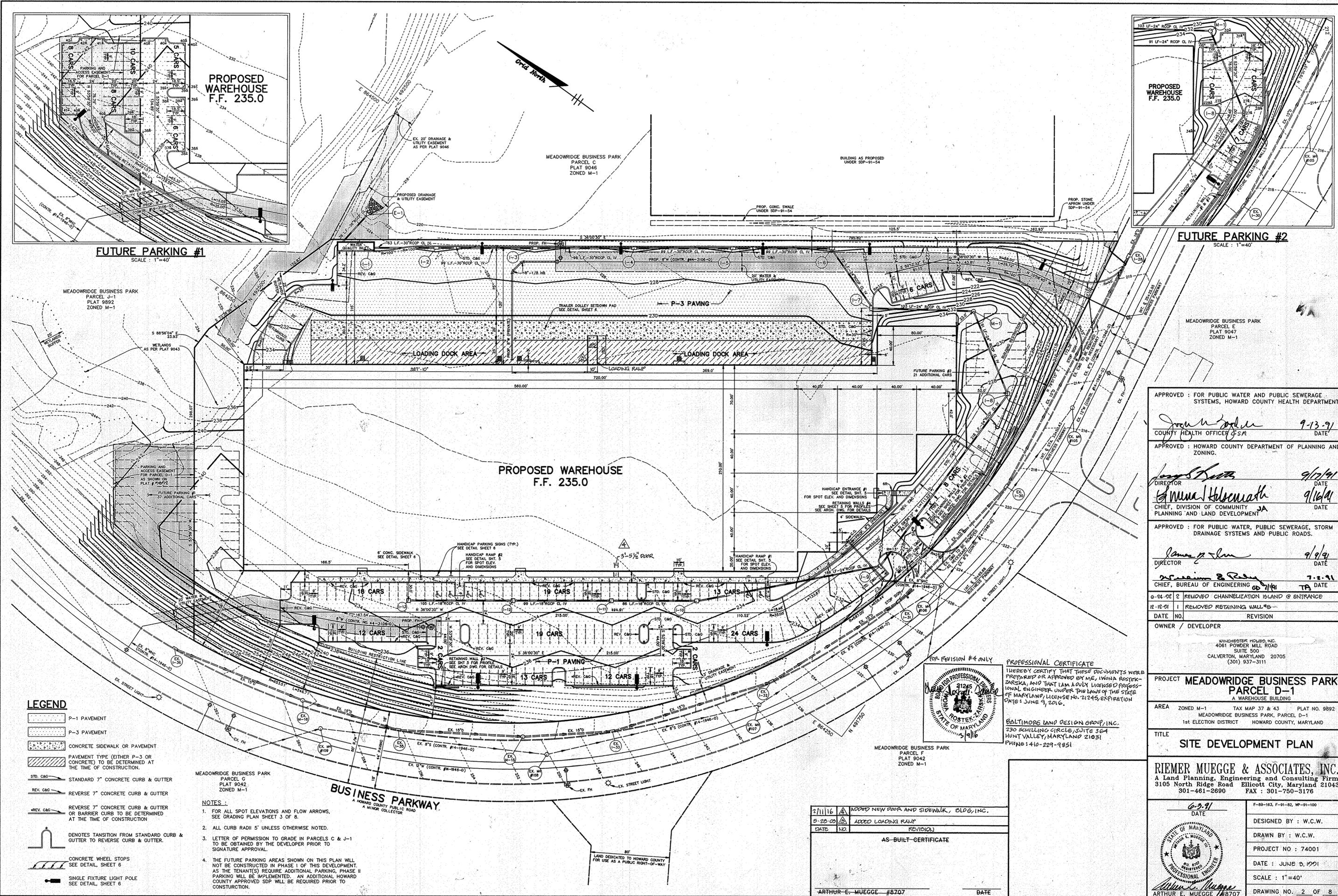
FOR REVISION #4 ONLY

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, IWONA ROSTEK-ZARSKI, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21243, EXPIRATION DATE: JUNE 9, 2016.

BALTIMORE LAND DESIGN GROUP, INC.
230 SCHILLING CIRCLE, SUITE 364
HUNT VALLEY, MARYLAND 21031
PHONE: 410-229-9851

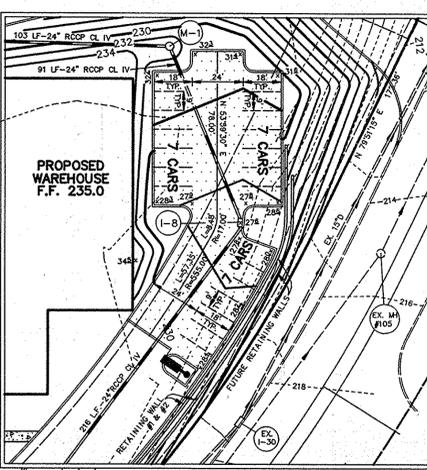
ADDRESS CHART	
PARCEL	STREET ADDRESS
D-1	6675 BUSINESS PARKWAY
SUBDIVISION NAME - MEADOWRIDGE BUSINESS PARK	SECT./AREA - PARCEL -
PLAT # - 9892	BLOCK # - 22 & 5
ZONING - M-1	TAX MAP NO. - 37 & 43
ELECT. DIST. - 1st	CENSUS TRACT - 6012
WATER CODE - B01	SEWER CODE - 2153000





PROPOSED WAREHOUSE F.F. 235.0

FUTURE PARKING #1
SCALE: 1"=40'



FUTURE PARKING #2
SCALE: 1"=40'

PROPOSED WAREHOUSE F.F. 235.0

- LEGEND**
- P-1 PAVEMENT
 - P-3 PAVEMENT
 - CONCRETE SIDEWALK OR PAVEMENT
 - PAVEMENT TYPE (EITHER P-3 OR CONCRETE) TO BE DETERMINED AT THE TIME OF CONSTRUCTION.
 -
 -
 -
 - DENOTES TRANSITION FROM STANDARD CURB & GUTTER TO REVERSE CURB & GUTTER.
 - CONCRETE WHEEL STOPS SEE DETAIL SHEET 6
 - SINGLE FIXTURE LIGHT POLE SEE DETAIL SHEET 6

- NOTES:**
1. FOR ALL SPOT ELEVATIONS AND FLOW ARROWS, SEE GRADING PLAN SHEET 3 OF 8.
 2. ALL CURB RADII 5' UNLESS OTHERWISE NOTED.
 3. LETTER OF PERMISSION TO GRADE IN PARCELS C & J-1 TO BE OBTAINED BY THE DEVELOPER PRIOR TO SIGNATURE APPROVAL.
 4. THE FUTURE PARKING AREAS SHOWN ON THIS PLAN WILL NOT BE CONSTRUCTED IN PHASE 1 OF THIS DEVELOPMENT. AS THE TENANT(S) REQUIRE ADDITIONAL PARKING, PHASE II PARKING WILL BE IMPLEMENTED. AN ADDITIONAL HOWARD COUNTY APPROVED SDP WILL BE REQUIRED PRIOR TO CONSTRUCTION.

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, IJONA ROSTEK-ZARSKA, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21245, EXPIRATION DATE: JUNE 9, 2016.

BALTIMORE LAND DESIGN GROUP, INC.
230 SCHILLING CIRCLE, SUITE 364
HUNT VALLEY, MARYLAND 21081
PHONE: 410-229-9851

2/11/16	ADD NEW DOOR AND SIDEWALK, BLDG, INC.
5-20-09	ADD LOADING RAMP
DATE	NO. REVISION
AS-BUILT-CERTIFICATE	
ARTHUR E. MUEGGE #8707	DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Jeanne J. Smith 9-13-91
COUNTY HEALTH OFFICER JSM DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Joseph S. Smith 9/12/91
DIRECTOR DATE

Anna M. Hlubomath 9/16/91
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James P. Smith 9/9/91
DIRECTOR DATE

William B. Ryan 7-2-91
CHIEF, BUREAU OF ENGINEERING WBR DATE

0-24-92 2 REMOVED CHANNELIZATION ISLAND @ ENTRANCE

12-12-01 1 REMOVED RETAINING WALL #5

DATE NO. REVISION

OWNER / DEVELOPER
WINCHESTER HOLDING, INC.
4061 POWDER MILL ROAD
SUITE 500
CALVERTON, MARYLAND 20705
(301) 937-3111

PROJECT MEADOWRIDGE BUSINESS PARK PARCEL D-1
A WAREHOUSE BUILDING

AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 9892
MEADOWRIDGE BUSINESS PARK, PARCEL D-1
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road Ellicott City, Maryland 21043
301-461-2690 FAX: 301-750-3176

6-29-91
DATE

F-89-163, P-91-82, WP-91-100

DESIGNED BY: W.C.W.

DRAWN BY: W.C.W.

PROJECT NO: 74001

DATE: JUNE 9, 1991

SCALE: 1"=40'

DRAWING NO. 2 OF 8

Arthur E. Muegge
ARTHUR E. MUEGGE #8707

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- INSTALL S&E #1 AND #2, TEMPORARY SWALE, EARTH DIKES, SILT FENCE AND STONE OUTLET SEDIMENT TRAPS #1 AND #2 (1 WEEK).
- PERFORM GRADING FOR BUILDING PAD AND PARKING AREAS AND BEGIN BUILDING CONSTRUCTION. (2 WEEKS)
- INSTALL STORM DRAIN SYSTEM INCLUDING STONE FILTER INLET PROTECTION AS SHOWN. INSTALL WATER AND SEWER. (2 WEEKS)
- STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE TEMPORARY SEEDING NOTES.
- GRADE PARKING AREAS TO SUBGRADE AND INSTALL CURB AND GUTTER. STABILIZE PARKING AREAS BY INSTALLING GRAVEL SUB-BASE OR FIRST COURSE OF ASPHALT PAVING.
- UPON PERMISSION OF THE HOWARD COUNTY DEPARTMENT OF LICENSES AND PERMITS SEDIMENT CONTROL INSPECTOR REMOVE TRAPS #1 AND #2 AS WELL AS ASSOCIATED EARTH DIKES AND SWALES.
- COMPLETE BUILDING CONSTRUCTION, INCLUDING PAVING. (3 WEEKS)
- STABILIZE ALL AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.
- UPON PERMISSION OF THE HOWARD COUNTY DEPARTMENT OF LICENSES AND PERMITS REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

NOTES:

- SEDIMENT CONTROL TO BE PROPERLY ADDRESSED DURING ALL PHASES OF CONSTRUCTION AS INSTRUCTED BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- AREAS BETWEEN THE SIDEWALK, CURB & GUTTER AND EDGE OF PAVEMENT AND THE PROPOSED BUILDING WILL BE SODED, AS SHOWN ON THE PLAN.
- LIMIT OF DISTURBANCE IS AT PROPERTY LINE AND AT LIMITS OF WETLANDS AT SNOW FENCE UNLESS OTHERWISE NOTED BY THE LIMIT OF DISTURBANCE LINE SYMBOL.

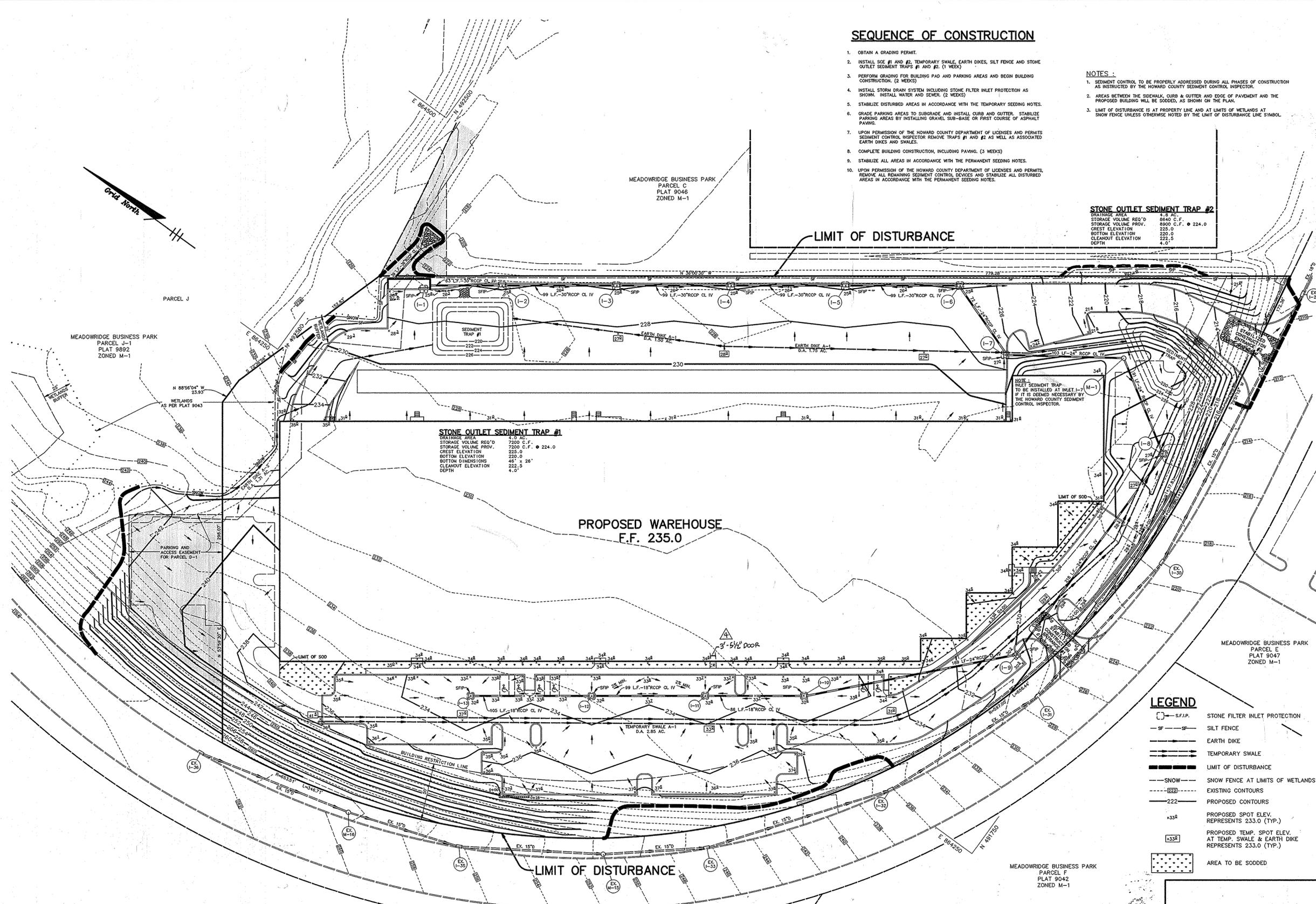
STONE OUTLET SEDIMENT TRAP #2
 DRAINAGE AREA 4.6 AC.
 STORAGE VOLUME REQ'D 8540 C.F.
 STORAGE VOLUME PROV. 8500 C.F. @ 224.0
 CREST ELEVATION 225.0
 BOTTOM ELEVATION 220.0
 CLEANOUT ELEVATION 222.5
 DEPTH 4.0'

STONE OUTLET SEDIMENT TRAP #1
 DRAINAGE AREA 7.9 AC.
 STORAGE VOLUME REQ'D 7200 C.F.
 STORAGE VOLUME PROV. 7200 C.F. @ 224.0
 CREST ELEVATION 225.0
 BOTTOM ELEVATION 220.0
 BOTTOM DIMENSIONS 40' x 26'
 CLEANOUT ELEVATION 222.5
 DEPTH 4.0'

NOTE:
 INLET SEDIMENT TRAP TO BE INSTALLED AT INLET (M-1) IF IT IS DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

LEGEND

- S.F.I.P. STONE FILTER INLET PROTECTION
- SF SILT FENCE
- EARTH DIKE
- TEMPORARY SWALE
- LIMIT OF DISTURBANCE
- SNOW FENCE AT LIMITS OF WETLANDS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED SPOT ELEV. REPRESENTS 233.0 (TYP.)
- PROPOSED TEMP. SPOT ELEV. AT TEMP. SWALE & EARTH DIKE REPRESENTS 233.0 (TYP.)
- AREA TO BE SODED



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] 5/31/91
 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] 6-3-91
 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] 6/13/91
 SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 6/12/91
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

[Signature] 9-13-91
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 9/12/91
 DIRECTOR DATE

[Signature] 9/16/91
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

[Signature] 9/9/91
 DIRECTOR DATE

[Signature] 7-2-91
 CHIEF, BUREAU OF ENGINEERING DATE

2/11/91	4	ADD NEW DOOR AND SIDEWALK, SUPPLYING.
12-12-91	1	REMOVED RETAINING WALL #5
DATE NO.		REVISION

OWNER / DEVELOPER
 WINCHESTER HOMES, INC.
 4081 POWDER MILL ROAD
 SUITE 500
 CALVERTON, MARYLAND 20705
 (301) 937-3111

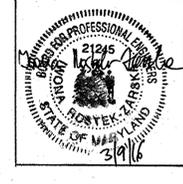
PROJECT **MEADOWRIDGE BUSINESS PARK PARCEL D-1**
 A WAREHOUSE BUILDING
 AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 9892
 MEADOWRIDGE BUSINESS PARK, PARCEL D-1
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE **GRADING AND SEDIMENT CONTROL PLAN**

RIEMER MUEGGE & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 3105 North Ridge Road Ellicott City, Maryland 21043
 301-461-2890 FAX: 301-750-3176

DATE 6-3-91
 DESIGNED BY: W.C.W.
 DRAWN BY: W.C.W.
 PROJECT NO: 74001
 DATE: JUNE 3, 1991
 SCALE: 1"=40'
 DRAWING NO. 3 OF 8

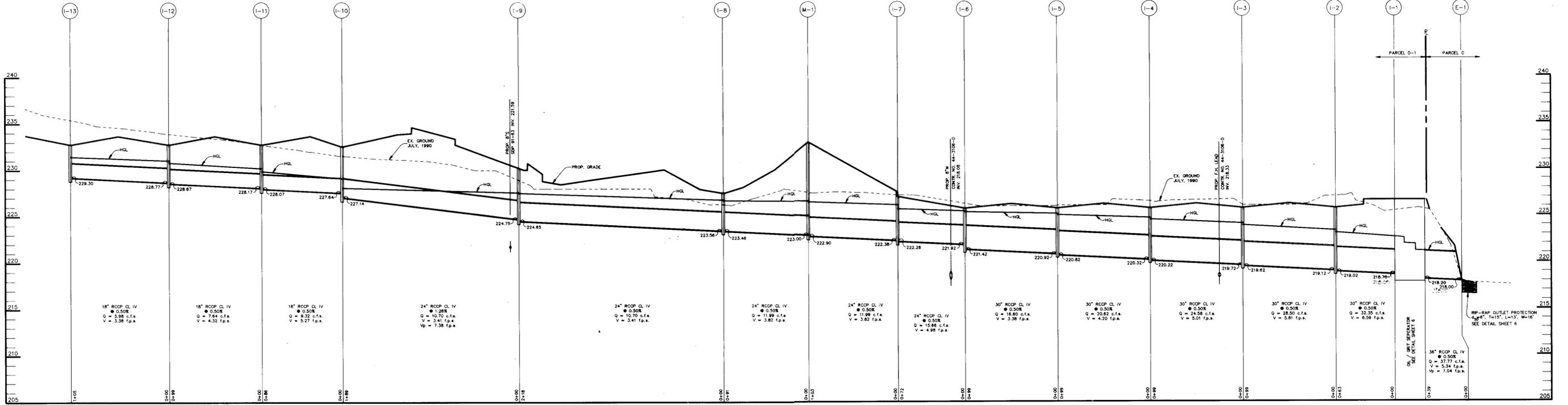
FOR REVISION # 4 ONLY



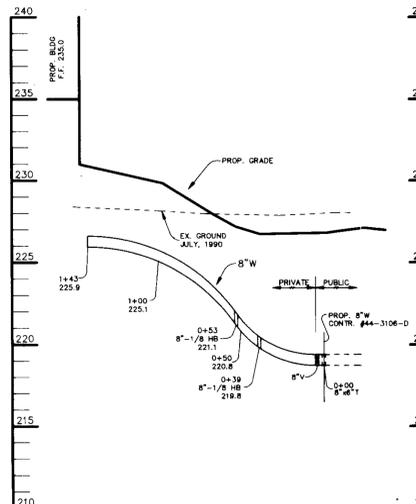
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BALTIMORE LAND DESIGN GROUP, INC.
 230 SCHILLING CIRCLE, SUITE 364
 HUNT VALLEY, MARYLAND 21031
 PHONE: 410-229-9851

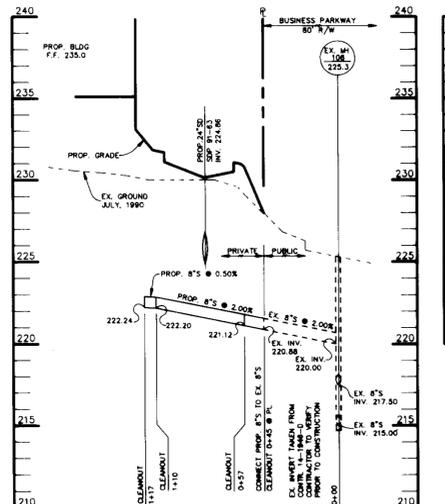
AS BUILT CERTIFICATE
 [Signature] 9.1.92
 DATE
 ARTHUR E. MUEGGE #8707
 JAYKANT D. PAREKH #10148



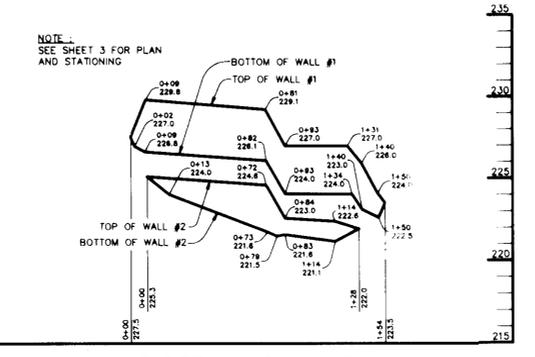
STORM DRAIN PROFILE
SCALE: HOR. - 1"=50', VERT. - 1"=5'



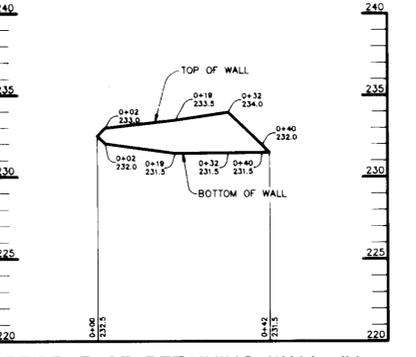
WATER PROFILE
SCALE: HOR. - 1"=50', VERT. - 1"=5'



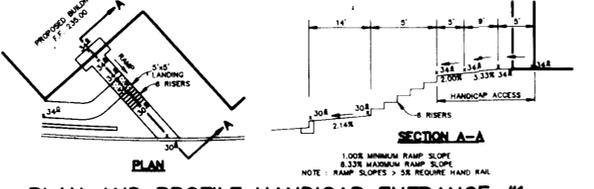
SEWER PROFILE
SCALE: HOR. - 1"=50', VERT. - 1"=5'



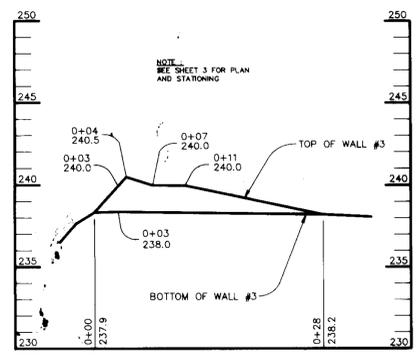
PROFILE OF RETAINING WALLS #1 & #2
SCALE: HOR. - 1"=50', VERT. - 1"=5'



PROFILE OF RETAINING WALL #4
SCALE: HOR. - 1"=20', VERT. - 1"=5'



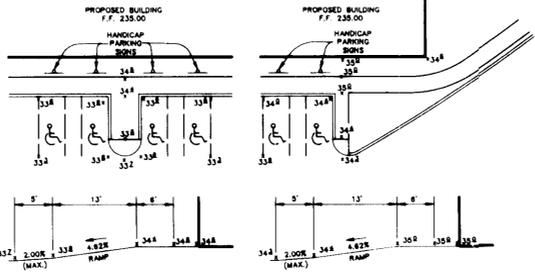
PLAN AND PROFILE HANDICAP ENTRANCE #1
NO SCALE



PROFILE OF RETAINING WALL #3
SCALE: HOR. - 1"=10', VERT. - 1"=5'

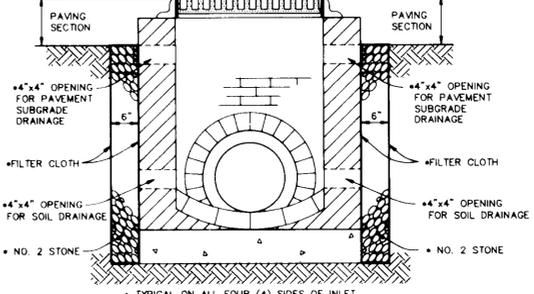
STRUCTURE SCHEDULE

NO.	TYPE	T.C. ELEV.	INV. IN	INV. OUT	REMARKS
1-1	Water Quality Inlet	226.60/227.00	218.20	218.20	See Sheet 2 for location of structures.
1-2	5' Combination	226.60/226.50	216.50	216.50	All 5' type inlets to have rectangular grates as per Howard County Standard Detail SD-4-33.
1-3	5' Combination	226.38	219.72	219.02	For inlet weep hole design, see inlet detail, this sheet.
1-4	5' Combination	226.38	220.32	220.42	
1-5	5' Combination	226.38	220.92	220.42	
1-6	5' Combination	226.38	221.92	221.42	
1-7	4'-0" Dia. 5' Combination	227.68	222.38	222.28	
1-8	5' Inlet	227.80	223.58	223.48	
1-9	5' Combination	230.78	224.75	224.65	
1-10	5' Inlet	232.6	227.84	227.14	
1-11	5' Inlet	232.8	228.17	228.07	
1-12	5' Inlet	232.8	228.77	228.67	
1-13	5' Inlet	232.8	229.30	229.20	
M-1	4'-0" Dia. Precast Manhole	233.3	223.00	222.90	
E-1	36" Concrete Endsection	218.00		218.00	



PLAN AND PROFILE HANDICAP RAMP #2
NO SCALE

PLAN AND PROFILE HANDICAP RAMP #1
NO SCALE



INLET DETAIL
NO SCALE

AS BUILT CERTIFICATE

ARTHUR E. MUEGGE #8707

9.1.92 DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

John G. ... 9/13/91
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James ... 9/12/91
DIRECTOR DATE

Shirley ... 9/16/91
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James ... 9/9/91
DIRECTOR DATE

Arthur E. Muegge 7-2-91
CHIEF, BUREAU OF ENGINEERING DATE

REMOVED RETAINING WALL #5 PROFILE

DATE NO. REVISION

OWNER / DEVELOPER

WINCHESTER HOUSING
4061 POWDER MILL ROAD
SUITE 500
CALVERTON, MARYLAND 20705
(301) 937-3111

PROJECT **MEADOWRIDGE BUSINESS PARK**
PARCEL D-1
A WAREHOUSE BUILDING

AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 0002
MEADOWRIDGE BUSINESS PARK, PARCEL D-1
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

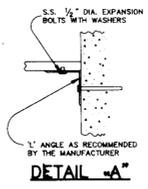
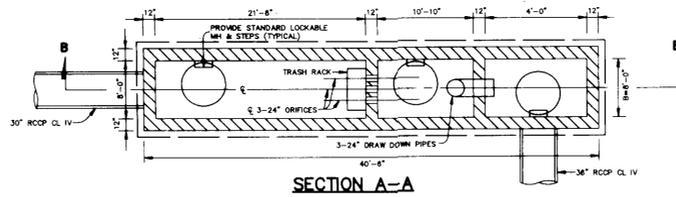
TITLE **PROFILES AND DETAILS**

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road Ellicott City, Maryland 21043
301-461-2690 FAX: 301-750-3176

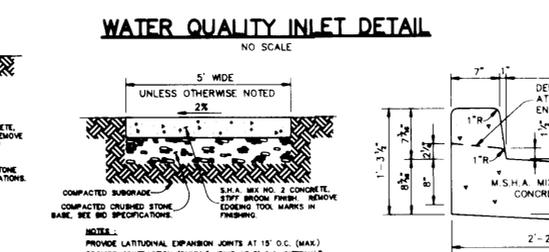
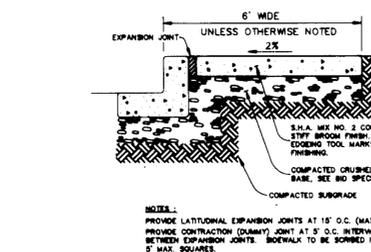
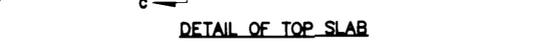
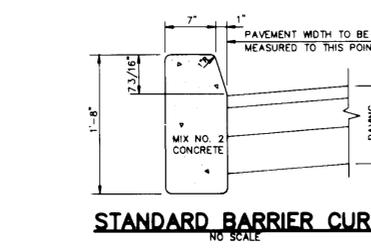
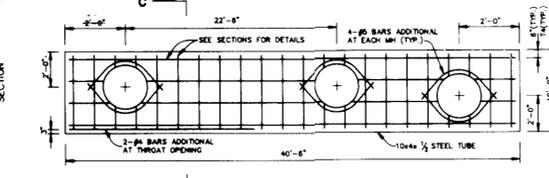
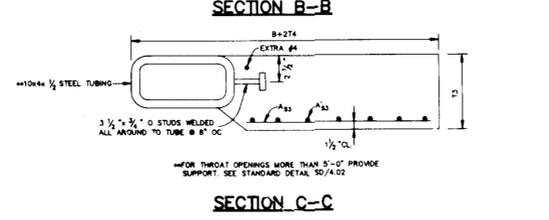
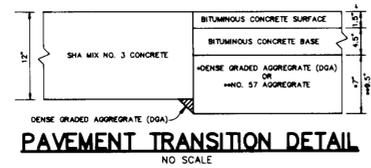
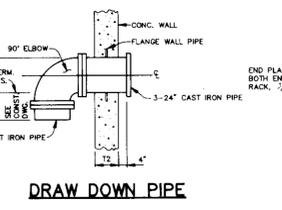
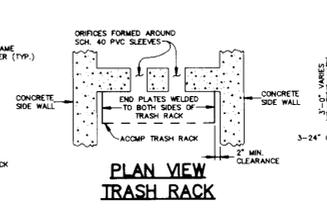
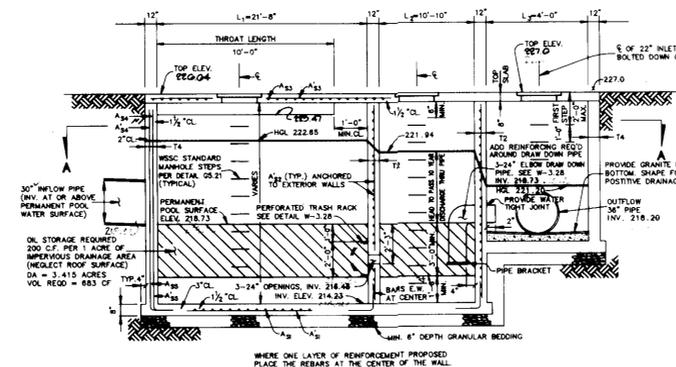
DATE: 6.3.91

DESIGNED BY: W.C.W.
DRAWN BY: W.C.W.
PROJECT NO: 74001
DATE: JUNE 3, 1991
SCALE: AS SHOWN
DRAWING NO. 5 OF 8

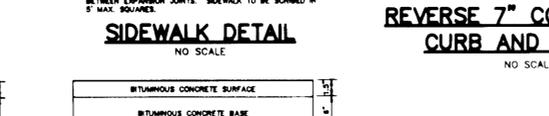
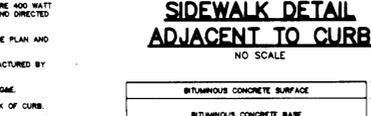
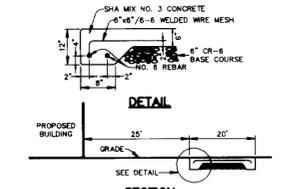
ARTHUR E. MUEGGE #8707



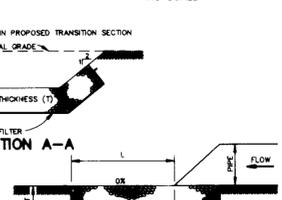
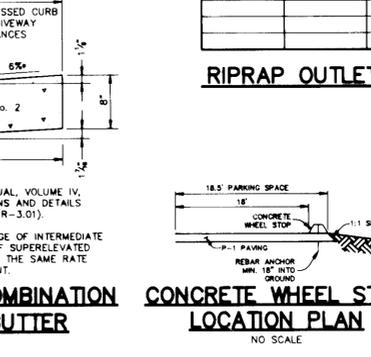
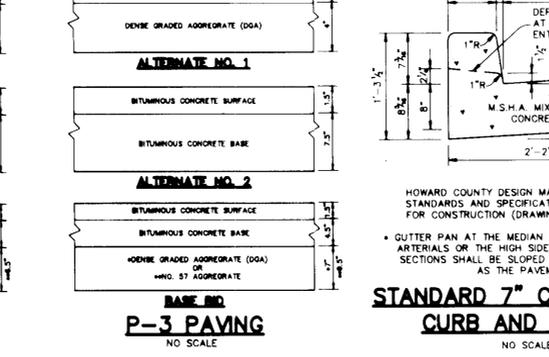
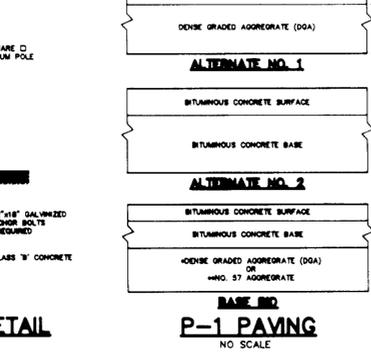
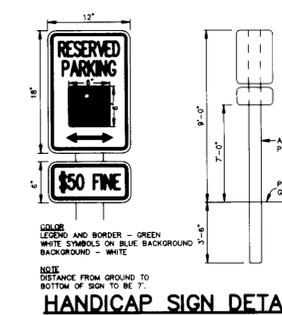
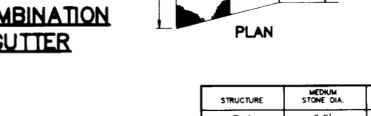
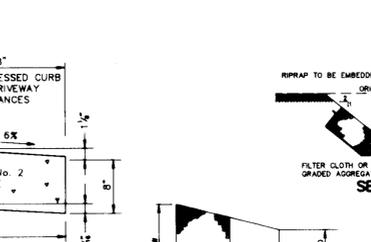
LIMITS		BASE SLAB		PARTITION WALLS			TOP SLAB			OUTER WALLS							
B FT.	H FT.	L FT.	T1 INS.	A51	A51	T2 INS.	A52	A52	T3 INS.	A53	A53	T4 INS.	A54	A54	A55	A55	
FOR L ₁ L ₂	8'	12'	15'	8"	+6"	+4"	12"	+6"	+6"	8"	+6"	+5"	12"	+7"	+4"	+5"	+6"
FOR L ₁	8'	12'	21'-8"	8"	+6"	6"	12"	+6"	+6"	8"	+6"	+6"	12"	+6"	+5"	+5"	+6"



- ### WATER QUALITY STRUCTURE NOTES
- DESIGN AND GENERAL NOTES**
- Use poured in place concrete for the entire structure.
 - Refer to Maryland State Highway Administration for materials and methods of construction.
 - Wall thickness shall be as per Howard County Standard Details W-3.28 and W-3.27.
 - FC - 4,000 psi at 28 days.
 - All reinforcing steel to be ASTM A615, GR.60.
 - For details concerning throat openings, refer to Howard County Standard Detail SD-4.01.
 - For details not noted in this standard, refer to Howard County Standard Detail SD-4.01, W-3.27 and W-3.28.
 - The top 4 inches of walls may be brick masonry for leveling, if required brick masonry shall comply with the latest SIA specifications.
 - When grate opening is used, refer to the appropriate SIA Standard for details. Details shall be shown on the plan.
 - When inside width of structure is greater than 10'-0", reinforcing shall be revised as needed.
 - When structure is subject to traffic loading, reinforcing shall be designated for the appropriate traffic loads. Design loads shall be indicated on the plan.
 - All inlets and openings shall be checked for possible backwater or tailwater problems.
- MAINTENANCE NOTES**
- Water Quality Structures will require periodic cleaning.
 - Owners of these facilities will have to clean them as needed or on a frequency that the County determines is appropriate. Owners of water quality structures will be notified by the County of the frequency of maintenance.
 - Maintenance of these facilities will consist of cleaning out the separator and disposal of the waste and the repair of the facility as needed.
 - The disposal of the liquid and solid matter shall be as follows:
 - All liquid material in the separator shall be pumped into a suitable tank truck and disposed of at an approved sanitary district discharge manifold or be taken to an approved sewerage treatment plant for discharge.
 - The solid material shall be landfilled in an approved sanitary landfill.
 - The inlet pipes, from roads, grades and structural parts shall be repaired as needed.



- ### CONSTRUCTION NOTES
- Silt and debris shall not be allowed to enter the structures until contributing drainage areas have been permanently stabilized.
 - All openings to structures shall be protected with the appropriate sediment control measures during construction.
- ### INSPECTION NOTES
- Prior to start of construction on water quality structure, the Howard County Department of Public Works Inspector must be called 48 hours in advance of 7:00-28:00.
 - The Howard County Department of Public Works Inspector must be notified (782-2850) at each of the following stages:
 - Approval of subgrade for footings.
 - Forming formed and steel set prior to pouring.
 - Structure above formed and steel set prior to pouring.
 - Prior to top soil and mulch being set, Howard County Department of Public Works Inspector must check structure and all debris and all in structure removed.
 - When site is permanently stabilized and sediment control measures to protect trial are to be removed.



BUILT CERTIFICATE

ARTHUR E. MUEGGE #8707 DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

John E. Miller 9-13-91 DATE
COUNTY HEALTH OFFICER (S/A)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James R. Smith 9/17/91 DATE
DIRECTOR

Anna M. Hubenath 9/16/91 DATE
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

James P. Kelly 9/8/91 DATE
DIRECTOR

William B. Kelly 7-2-91 DATE
CHIEF, BUREAU OF ENGINEERING

DATE NO. REVISION

OWNER / DEVELOPER
WINCHESTER HOUSE, INC.
4061 POWDER MILL ROAD
SUITE 500
CALVERTON, MARYLAND 20705
(301) 937-3111

PROJECT MEADOWRIDGE BUSINESS PARK
PARCEL D-1
A WAREHOUSE BUILDING

AREA ZONED M-1 TAX MAP 37 & 43 PLAT NO. 989Z
MEADOWRIDGE BUSINESS PARK, PARCEL D-1
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE CONSTRUCTION DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road Ellicott City, Maryland 21043
301-481-2690 FAX: 301-750-3176

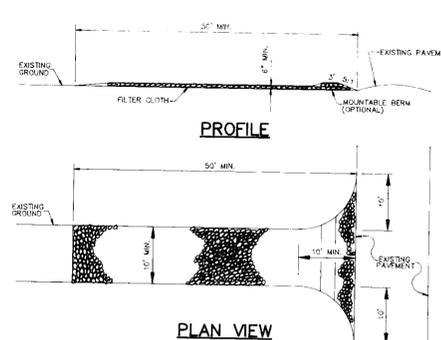
6-29-91 DATE
DESIGNED BY: W.C.W.
DRAWN BY: W.C.W.
PROJECT NO: 74001
DATE: JUNE 5, 1991
SCALE: AS SHOWN
DRAWING NO. 6 OF 8

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1982 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1; b) 14 days or to other disturbed or graded areas on the project site.
- All sediment traps/structures shall be fenced and warning signs posted around the perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN CODE.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1982 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary stabilization (Sec. 50) and any other methods approved by the Howard County Department of Public Works Sediment Control Inspector.
- 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.
- Site Analysis:
 - Total Area of Site: 8,278 acres
 - Area Disturbed: 8,900 acres
 - Area to be seeded or sod: 4,43 acres
 - Area to be vegetatively stabilized: 3,20 acres
 - Total Seeded: 3,850 cu. yds.
 - Total Sod: 35,000 cu. yds.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.
- Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
- Sediment will be removed from traps when its depth reaches clean out elevation shown on the plans.
- Cut and fill quantities provided under site analysis do not represent bid quantities. These quantities do not distinguish between topsoil, structural fill or embankment materials; nor do they reflect consideration of undercutting or removal of unsuitable materials. The contractor shall consult the firm with site conditions which may affect the work.
- Proposed fill material to be imported from Meadowridge Parcel E, 992-142.

STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

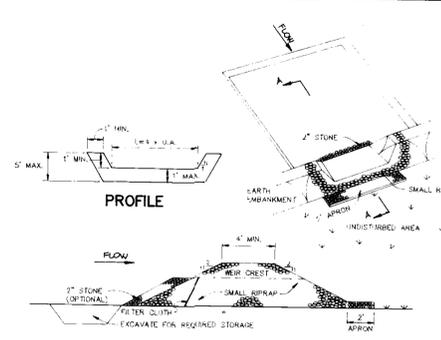
- Definition**
Stabilize sediment producing areas by establishing long-term stands of grass with sod.
- Purpose**
To stabilize the soil, reduce damage from sediment and runoff to downstream areas, enhance natural beauty.
- Conditions Where Practice Applies**
On exposed soils where a quick vegetative cover is desired, on sites which can be maintained with ground equipment (2" or rotor slope).
- Specifications**
- Grass seed shall be Maryland or Virginia State Certified, or Maryland or Virginia State approved seed.
 - Sod shall be machine cut of a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness shall exclude top growth and thatch.
 - Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when supplied vertically with a firm grasp on the upper 10 percent of the section.
 - Individual pieces of sod shall be cut to the specified width and length. Maximum allowable deviation from standard width and length shall be 5 percent. Broken sods and torn or uneven ends will not be acceptable.
 - Sod shall not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod shall be harvested, delivered and installed within a period of 36 hours. Sod not transported within this period shall be inspected and approved prior to its installation.
- Site Preparation**
- Fertilizer and lime application rates shall be determined by soil tests provided by the contractor. Under unusual circumstances where there is insufficient time for a complete soil test, fertilizer and lime materials may be applied in amounts shown under B, below.
- Prior to adding the surface shall be cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing and liming operations.
 - Where the soil is acid or composed of heavy clay, ground limestone shall be applied at the rate of 2 tons/acre or 100 pounds per 1,000 square feet. In all soils 1,000 pounds per acre or 25 pounds per 1,000 square feet of 10-10-10 fertilizer or equivalent shall be uniformly applied and mixed into the top 3 inches of soil with the required lime.
 - Areas receiving sod shall be uniformly fine graded. Hard-packed earth shall be scarified prior to placement of sod.
- Sod Installation**
- During periods of excessively high temperature the sod shall be lightly irrigated immediately prior to laying the sod.
 - The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Joints that are not staggered or wedged and that all joints are butted tight in order to prevent wide weed, would cause or cause of the roots.
 - On sloping areas where erosion may be a problem, sod shall be laid with the long edges parallel to the contour and with staggered joints. Secure the sod by liming and pegging or other approved methods.
 - As sodding is completed in any one section, the entire area shall be rolled or tamped to insure solid contact of roots with the soil. Sod shall be watered immediately after rolling or tamping. Watering should be done during the heat of the day to prevent wilting. The operations of rolling, tamping and irrigating for any piece of sod shall be completed within eight hours.
- Sod Maintenance**
- In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain soil moisture to a depth of 4 inches. Watering should be done during the heat of the day to prevent wilting.
 - After the first week sod shall be watered as necessary to maintain adequate moisture and insure establishment, and as directed by the owner.
 - First mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cutting. Grass height shall be maintained between 2 and 3 inches unless otherwise specified.
 - Maintenance of established sod should follow specifications outlined in Table.
 - The contractor shall maintain the sod until such time that the owner finds it acceptable.



CONSTRUCTION SPECIFICATIONS

- Stone Size - Use 2" stone, or fractured or recycled concrete equivalent.
- Length - As required, but not less than 20 feet (except on a single residence lot where a 30 foot minimum would apply).
- Thickness - Not less than 6" (6" inches).
- Width - Ten (10) foot minimum, but not less than the full width of points where ditches and areas occur.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
- Surface Water - All surface water flowing or diverted toward construction entrance shall be passed across the entrance. If piping is impractical, a mountable beam with 6:1 slope will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic brooming or blowing of sediment onto public rights-of-way. This may require brooming or blowing of sediment onto public rights-of-way. This may require brooming or blowing of sediment onto public rights-of-way.

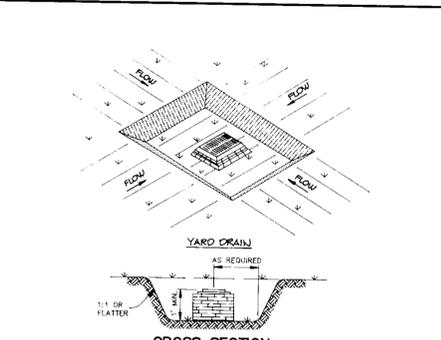
STABILIZED CONSTRUCTION ENTRANCE



CROSS SECTION A-A

- OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE STOP BAR IN PLACE OF THE EXISTING FILTER CLOTH.
- AREA UNDER EMBANKMENT SHALL BE CLEANED, UNBUILT AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE FILL AREA SHALL BE CLEANED.
 - THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OTHER DEBRIS, RUBBER, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHEE IT IS BEING CONSTRUCTED.
 - ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
 - THE STONE USED IN THE OUTLET SHALL BE SMALL RRRAIP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-SLOPE SIDE OF THE SMALL RRRAIP OR EMBEDDED FILTER CLOTH IN THE RRRAIP.
 - SEDMINT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
 - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
 - THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

STONE OUTLET SEDIMENT TRAP



CROSS SECTION

- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVE SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- THE VOLUME OF SEDIMENT STORAGE SHALL BE 1800 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
- THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONTRIBUTORY DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- ALL CUT SLOPES SHALL BE 1:1 OR FLATTER.
- INLET SEDIMENT TRAP TO BE INSTALLED AT INLET 1-2 IF IT IS DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

STORM INLET SEDIMENT TRAP



TEMPORARY SEEDING NOTES

- Apply to graded or cleared areas ready to be restabilized where a short-term vegetative cover is needed.
- Seeded Preparation:** Loosen upper three inches of soil by raking, tilling 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 ryegrass (12 lbs. per 1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of annual ryegrass (30 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 or soon as possible in the spring, or use sod.
- Mulching:** Apply 1-1/2 to 2 tons per acre (20 to 30 lbs. per 1000 sq. ft.) of untreated straw mulch immediately after seeding. Anchor mulch immediately after application using machete anchoring tool or 2/8 gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 147 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.
- Refer to the 1982 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods of application.

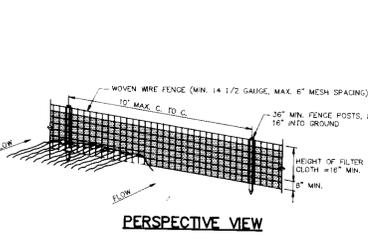
PERMANENT SEEDING NOTES

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-term vegetative cover is needed.
- Seeded Preparation:** Loosen upper three inches of soil by raking, tilling or other acceptable means before seeding. If not previously loosened.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
- Waterfowl - 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. Harvest 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.).
 - 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. Harvest or disc into upper three inches of soil.
- Seeding:** For the period March 1 thru April 30 and from August 15 thru October 31, seed with 40 lbs. per acre (14 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 (0.56 lbs. per 1000 sq. ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:
- 5 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring.
 - Use sod.
 - 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 (20 to 30 lbs. per 1000 sq. ft.) of untreated straw mulch immediately after seeding. Anchor mulch immediately after application using machete anchoring tool or 2/8 gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 147 gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.
- Maintenance:** Impact on seeded areas and make needed repairs, replacements and seedings.

Annual Maintenance Fertilization for Permanent Sod Use Soil Test Recommendations or Rates Shown Below

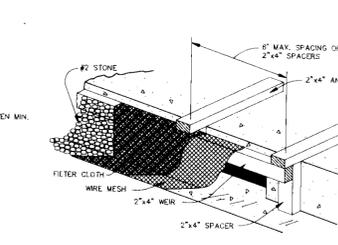
Seeding Mixture	Formulation	Lbs./Ac./Yr.	Lbs./1000 S.F.	Time	Mowing
*Ky-31 tall fescue Kentucky Bluegrass Red Fescue	20-10-10	220	5	Sept. 1 Oct. 1 Nov. 1	Now no closer than 2 inches for bluegrass and 3 inches for fescue.
Bermudagrass Tall fescue	10-10-10	440	10	May 1 July 1 Aug. 1	Now no closer than 1-2 inches
Seeding Mixture	Formulation	Lbs./Ac./Yr. <td>Lbs./1000 S.F. <td>Time <td>Mowing</td> </td></td>	Lbs./1000 S.F. <td>Time <td>Mowing</td> </td>	Time <td>Mowing</td>	Mowing
Kentucky Bluegrass Red Fescue	20-10-10	440	10	Sept. 1 Nov. 1	

Equivalent amounts of fertilizer may be applied with other formulations.



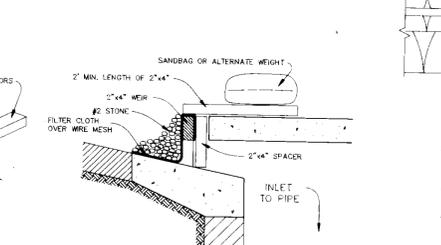
CONSTRUCTION SPECIFICATIONS

- WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
 - WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND STONE, WITH WATER FILL, IMPOUNDED AGAINST IT.
 - FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SANGHAT WITH A SEVE SIZE, EGS 40, 80, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
 - STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
- PROCEDURE FOR CURB INLET PROTECTION**
- ATTACH A CONTINUOUS PIECE OF WIRE MESH (NOT MIN. WIDTH BY THREAT LENGTH PLUS 4") TO THE 2"x4" WIRE (MEASURING THROUGH LENGTH PLUS 2") AS SHOWN ON THE DRAWING.
 - PLACE A PIECE OF APPROVED FILTER CLOTH (40-80 SEIVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2"x4" WIRE.



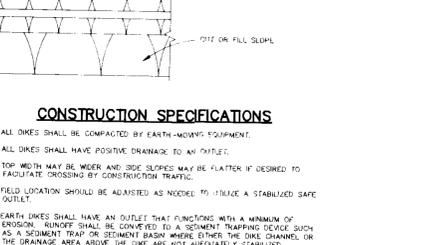
CONSTRUCTION SPECIFICATIONS

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRUCKS.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO MAINTAIN A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONFINED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- STABILIZATION SHALL BE: (a) IN ACCORDANCE WITH SEEDING SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF IN SEEDING SEASON; (b) FLOW CHANNEL STABILIZATION AS PER THE CHART BELOW.



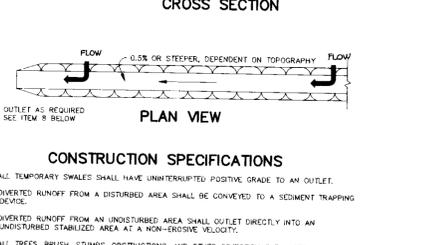
CONSTRUCTION SPECIFICATIONS

- ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
- DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
- DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSIVE VELOCITY.
- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- THE SWALE SHALL BE EXCAVATED OR SHARPEL TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPED NORMAL FLOW.
- FIELDS SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- STABILIZATION SHALL BE AS PER THE CHART BELOW.



CONSTRUCTION SPECIFICATIONS

- FLOW CHANNEL STABILIZATION**
- | TYPE OF TREATMENT | CHANNEL GRADE | DIKE A | DIKE B |
|-------------------|---------------|--|---|
| 1 | 0.5-3.0% | SEED & STRAW MULCH | SEED & STRAW MULCH |
| 2 | 3.1-8.0% | SEED & STRAW MULCH | SEED USING JUTE OR EXCELSION, 500, 2" STONE |
| 3 | 8.1-8.0% | SEED WITH JUTE OR EXCELSION, 500, 2" STONE | SEED WITH JUTE OR EXCELSION, 500, 2" STONE |
| 4 | 8.1-20.0% | LINED RRRAIP 4"-8" | EMPAVED DESIGN |
- STONE TO BE 2" HIGH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PLACED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
 - RRRAIP TO BE 4-8 INCHES IN A LAYER AT LEAST 3 INCHES THICKNESS AND BE PLACED INTO THE SOIL.
 - APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
 - PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



CONSTRUCTION SPECIFICATIONS

- FLOW CHANNEL STABILIZATION**
- | TYPE OF TREATMENT | CHANNEL GRADE | DIKE A | DIKE B |
|-------------------|---------------|--|---|
| 1 | 0.5-3.0% | SEED & STRAW MULCH | SEED & STRAW MULCH |
| 2 | 3.1-8.0% | SEED & STRAW MULCH | SEED USING JUTE OR EXCELSION, 500, 2" STONE |
| 3 | 8.1-8.0% | SEED WITH JUTE OR EXCELSION, 500, 2" STONE | SEED WITH JUTE OR EXCELSION, 500, 2" STONE |
| 4 | 8.1-20.0% | LINED RRRAIP 4"-8" | EMPAVED DESIGN |
- STONE TO BE 2" HIGH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PLACED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
 - RRRAIP TO BE 4-8 INCHES IN A LAYER AT LEAST 3 INCHES THICKNESS AND BE PLACED INTO THE SOIL.
 - APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
 - PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- Woven wire fence to be fastened securely to fence posts with wire ties or staples, every 18" at top and mid sections.
 - Filter cloth to be fastened securely to woven wire fence with the method shown on the drawing.
 - When two sections of filter cloth adjoin each other they shall be overlapped by 12" and secured with staples.
 - Maintenance shall be performed as needed and material removed when "bulges" develop in the filter cloth.
- POSTS:** Steel, either 1" or 1 1/2" or 2" diameter.
- FENCE:** Woven wire, 14 Ga., 6" mesh spacing.
- PRE-FABRICATED UNIT:** 12' length, 6" mesh spacing.

SILT FENCE DETAIL



CONSTRUCTION SPECIFICATIONS

- WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
 - WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND STONE, WITH WATER FILL, IMPOUNDED AGAINST IT.
 - FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SANGHAT WITH A SEVE SIZE, EGS 40, 80, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
 - STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
- PROCEDURE FOR CURB INLET PROTECTION**
- ATTACH A CONTINUOUS PIECE OF WIRE MESH (NOT MIN. WIDTH BY THREAT LENGTH PLUS 4") TO THE 2"x4" WIRE (MEASURING THROUGH LENGTH PLUS 2") AS SHOWN ON THE DRAWING.
 - PLACE A PIECE OF APPROVED FILTER CLOTH (40-80 SEIVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2"x4" WIRE.

STONE FILTER INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRUCKS.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO MAINTAIN A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONFINED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
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EARTH DIKE



CONSTRUCTION SPECIFICATIONS

- ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
- DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
- DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSIVE VELOCITY.
- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- THE SWALE SHALL BE EXCAVATED OR SHARPEL TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPED NORMAL FLOW.
- FIELDS SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- STABILIZATION SHALL BE AS PER THE CHART BELOW.

TEMPORARY SWALE



AS BUILT CERTIFICATE

ARTHUR E. MUEGGE #8707 DATE

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.

DATE: 5/31/91

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.

DATE: 6-2-91

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

DATE: 6/12/91

DATE: 6/12/91

DATE: 9-13-91

DATE: 9/17/91

DATE: 9/16/91

DATE: 9/8/91

DATE: 7-2-91

