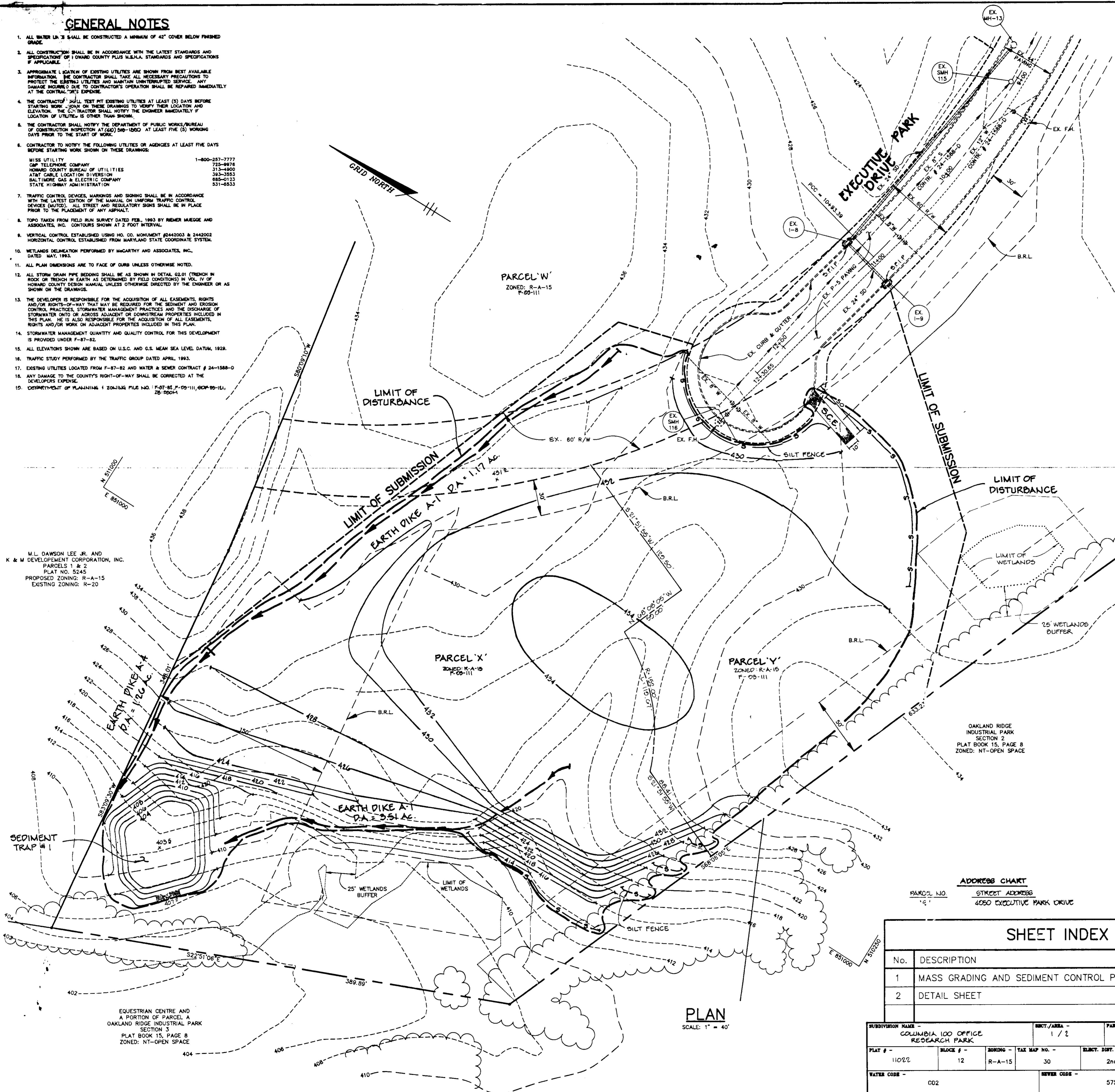


GENERAL NOTES

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLZ 15.6.1.1. STABILITY AND SPECIFICATIONS IF APPLICABLE.
- 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 ALL EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK. SHOW ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT (410) 580-1500 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
 MISS UTILITY 1-800-257-7777
 COM TELEPHONE COMPANY 725-6676
 HOWARD COUNTY BUREAU OF UTILITIES 31-1500
 AT&T CABLE LOCATION DIVISION 383-3585
 BALTIMORE GAS & ELECTRIC COMPANY 885-0113
 STATE HIGHWAY ADMINISTRATION 331-5533
- 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.
- TOPO TAXES FROM FIELD RUNS SURVEY DATED FEB. 1993 BY RIEMER MUEGGE AND ASSOCIATES, INC. CONTOURS SHOWN AT 2 FOOT INTERVAL.
- VERTICAL CONTROL ESTABLISHED USING HO. CO. MONUMENT #2442003 & 2442002 HORIZONTAL CONTROL ESTABLISHED FROM MARYLAND STATE COORDINATE SYSTEM.
- WETLANDS DELINEATION PERFORMED BY MACARTHY AND ASSOCIATES, INC. DATED MAY, 1993.
- 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 THESE 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, STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ADJACENT TO 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.
- STORMWATER MANAGEMENT QUANTITY AND QUALITY CONTROL FOR THIS DEVELOPMENT IS PROVIDED UNDER F-87-82.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- TRAFFIC STUDY PERFORMED BY THE TRAFFIC GROUP DATED APRIL, 1993.
- EXISTING UTILITIES LOCATED FROM F-87-82 AND WATER & SEWER CONTRACT # 24-1588-D.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- COMPLETION OF PLANNING & ZONING FILE NO.: F-87-82, F-09-111, 60P-09-151, 25-200A.

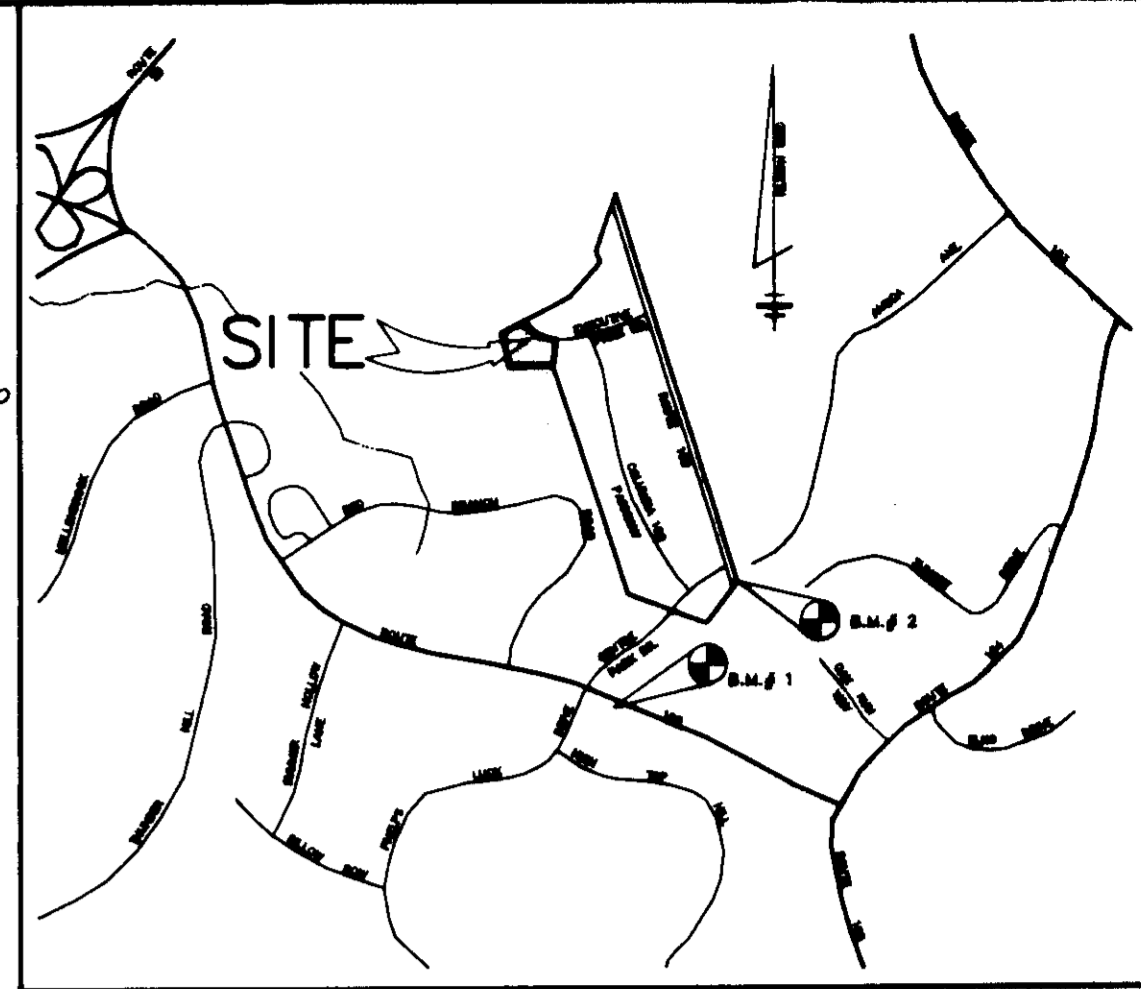
M.L. DAWSON LEE JR. AND
K & M DEVELOPMENT CORPORATION, INC.
PARCELS 1 & 2
PLAT NO. 5245
PROPOSED ZONING: R-A-15
EXISTING ZONING: R-20

EQUESTRIAN CENTRE AND
A PORTION OF PARCEL A
OAKLAND RIDGE INDUSTRIAL PARK
SECTION 3
PLAT BOOK 15, PAGE 8
ZONED: NT-OPEN SPACE



STONE SEDIMENT TRAP # 1

DRAINAGE AREA:	4.41 AC.
STORAGE VOLUME REQUIRED:	7030 C.F.
STORAGE VOLUME PROVIDED:	8744 C.F. @ 406.00
TOP ELEV.:	408.00
CREST ELEV.:	407.00
CLEANOUT ELEV.:	404.0
DEPTH:	3.5'
SIDE SLOPES:	2:1
OUTLET WIDTH:	20'
BOTTOM ELEV.:	403.5



BENCHMARKS

B.M. #1 ELEV. 402.20
 HO. CO. 2745010-R
 3/4" REBAR 0.4' BELOW SURFACE, 0.4' SOUTH OF CURB ON MARYLAND ROUTE 100 175' EAST OF CL PHELPS LUCK DRIVE.
 B.M. #2 ELEV. 515.51
 NAIL IN STONE AT PROPERTY CORNER COLUMBIA 100 - OFFICE RESEARCH PARK.

AS BUILT CERTIFICATE

JAYKANT D. PAREKH #19148 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.

J. Gallinger 11-30-93
 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.

J. Farrell 12-3-93
 ENGINEER DATE

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

Patricia Eueler 12-15-93
 U.S. SOIL CONSERVATION SERVICE DATE

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

J. R. Robertson 12/13/93
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James J. Gillis 12/30/93
 DIRECTOR DATE

Dina Summari 12/30/93
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

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

James J. Gillis 12/30/93
 DIRECTOR DATE

John J. Harriott 12/21/93
 CHIEF, BUREAU OF ENGINEERING DATE

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

James M. Donaldson 12/29/93
 COUNTY HEALTH OFFICER DATE

OWNER / DEVELOPER
 ODC CROSSING, INC.
 C/O EARL ARMIGER
 THE EXECUTIVE CENTER
 3300 NORTH RIDGE ROAD
 SUITE 230
 ELLICOTT CITY, MD. 21043

PROJECT **ORCHARD CROSSING**
 MASS GRADING PLAN

AREA TAX MAP 30 PARCEL 408
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 COLUMBIA 100 OFFICE RESEARCH PARK, SECTION 1, AREA 2, PARCELS 1 & 2

TITLE **MASS GRADING AND SEDIMENT CONTROL PLAN**

RIEMER MUEGGE & ASSOCIATES, INC.
 Planners Engineers Surveyors
 8818 Centre Park Drive Suite 200 Columbia, Md. 21045
 410-997-8900 FAX: 410-997-9282

12-3-93
 DATE

F-87-82 ZB:930M
 F-93-111 SOP-05-121
 DESIGNED BY: J.T.D.
 DRAWN BY: J.T.D.
 PROJECT NO: 91001
 DATE: 8/31/93
 SCALE: AS SHOWN
 DRAWING NO. 1 OF 2

J. Farrell
 JAYKANT D. PAREKH #19148

SHEET INDEX

No.	DESCRIPTION
1	MASS GRADING AND SEDIMENT CONTROL PLAN
2	DETAIL SHEET

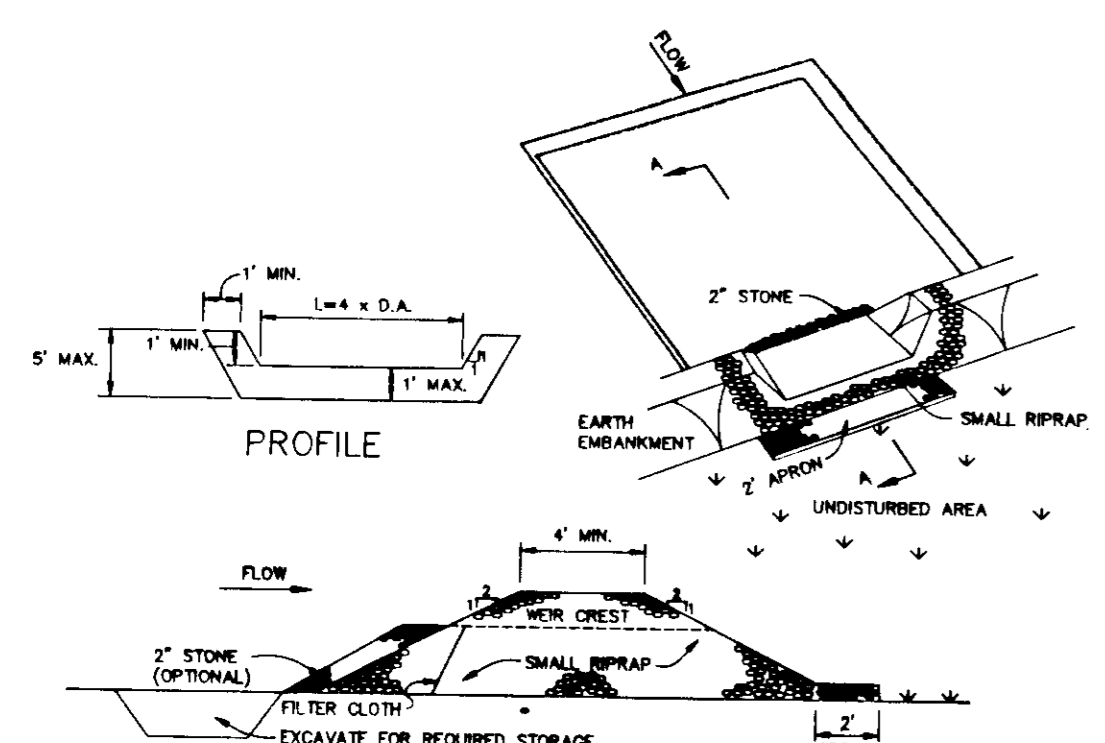
SUBDIVISION NAME - COLUMBIA 100 OFFICE RESEARCH PARK
 SHEET / AREA - 1 / 2
 PARCELS - W, X, Y

PLAT # - 11022	BLOCK # - 12	ZONING - R-A-15	TAX MAP NO. - 30	ELECT. DIST. - 2nd	CENSUS TRACT - 6023.02
WATER CODE - 002	SEWER CODE - 5750639				

PLAN
 SCALE: 1" = 40'

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
16	4050 EXECUTIVE PARK DRIVE



CROSS SECTION A-A

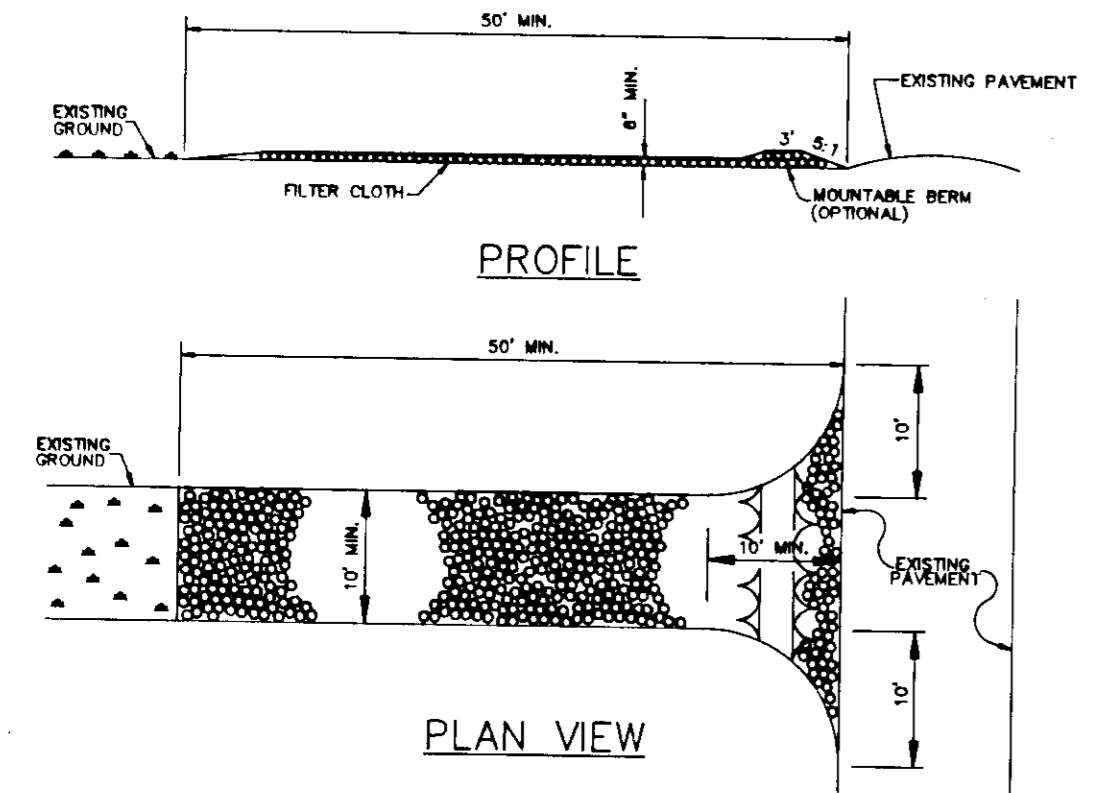
OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP IN PLACE OF THE EMBEDDED FILTER CLOTH.

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE TOPO AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBSTRUCTIVE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

STONE OUTLET SEDIMENT TRAP

NO SCALE

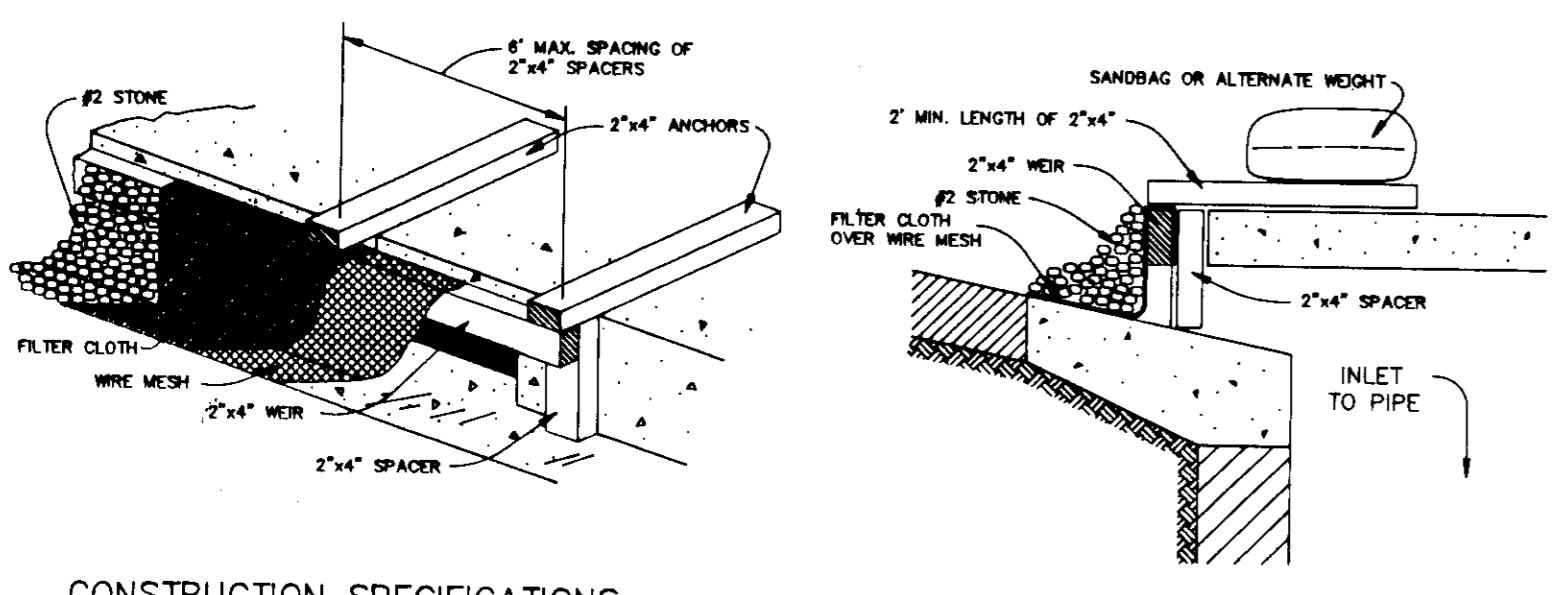


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE OR RECYCLED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM APPLY).
3. THICKNESS - NOT LESS THAN 5" (6" INCHES).
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PAID ACROSS THE ENTRANCE BY PAVING IS IMPRACTICAL.
7. MAINTENANCE - THE ENTRANCE IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT SHALL BE REMOVED IMMEDIATELY.
8. WASHING - RIBBLES SHALL BE CLEARED TO REMOVE SEDIMENT PRIOR TO IT SHALL BE DONE. WASHING IS REQUIRED. WHEN WASHING IS REQUIRED, DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE

NO SCALE

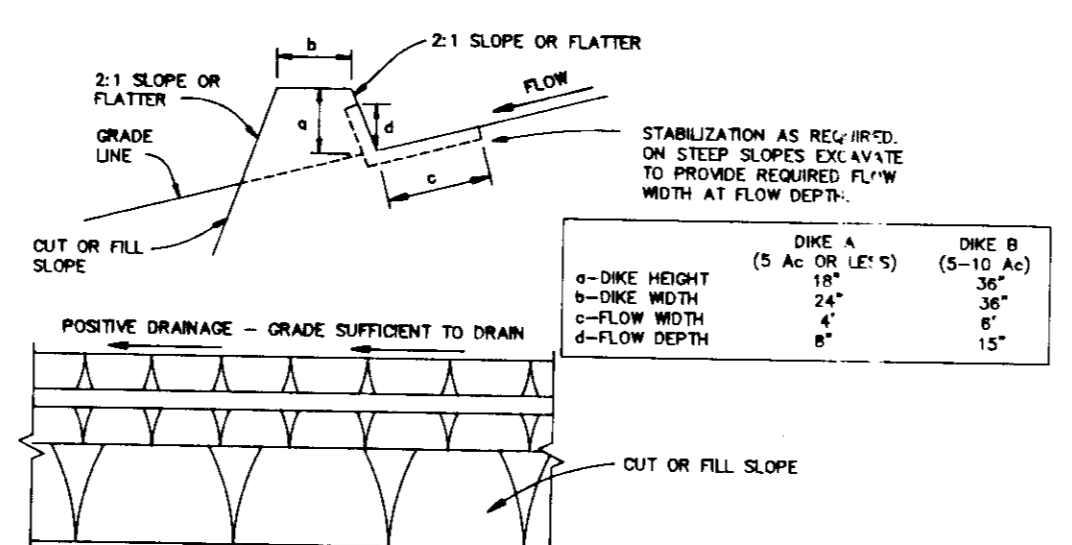


CONSTRUCTION SPECIFICATIONS

- A. WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
- B. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC AND STONE, WITH WATER FULLY BACKED AGAINST IT.
- C. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SUNLIGHT WITH A SEVE SIZE, EGS 40-85, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
- D. STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
- E. PROTECTION FOR CURB INLET PROTECTION:
 - A. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2"x4" WEIR (MEASURING THROUGH LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
 - B. PLACE A PIECE OF APPROVED FILTER CLOTH (40-85 SEVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER AND SECURELY ATTACH TO THE 2"x4" WEIR.
 - C. SECURELY NAIL THE 2"x4" WEIR TO 8" LONG VERTICAL SPACERS TO BE LOCATED BETWEEN THE WEIR AND INLET FACE (MAX. 8" APART).
 - D. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2" LENGTHS) OF 2"x4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS. THESE 2"x4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
 - E. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1" BEYOND BOTH ENDS OF THE THROAT OPENING.
 - F. FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE OUTLET AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE FILTER CLOTH.
 - G. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOSED WITH SEDIMENT.
 - H. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DRES DIRECTING FLOW INTO INLET.

STONE FILTER INLET PROTECTION

NO SCALE



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED FASE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED 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.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON; (B) FLOW CHANNEL AS PER THE CHART BELOW.

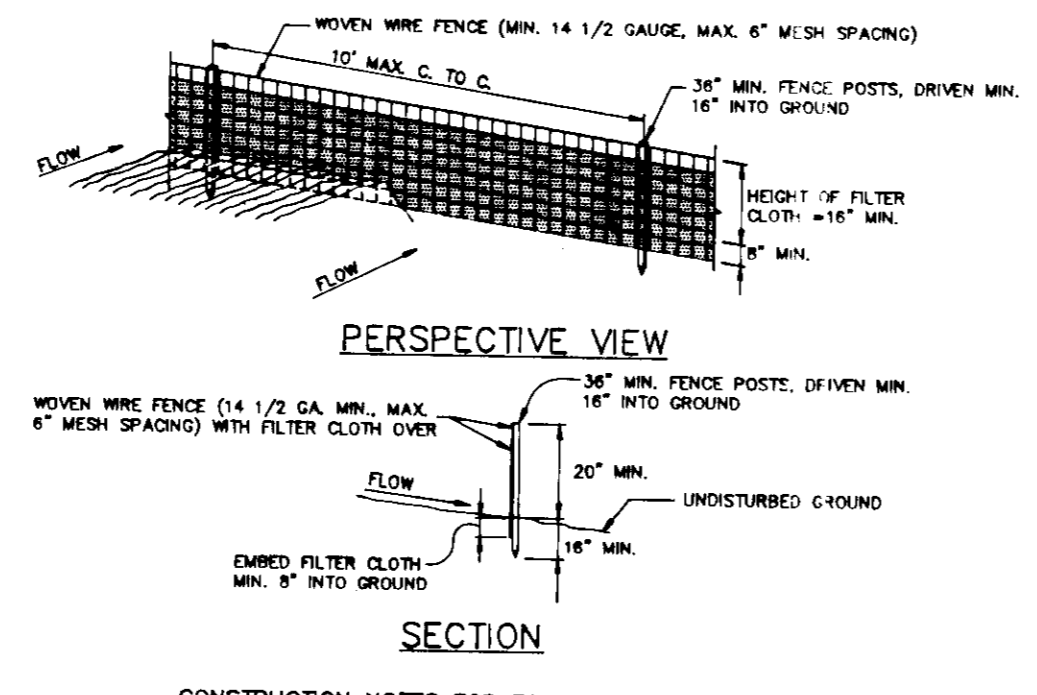
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	SEED & STRAW MULCH	SEED & STRAW MULCH
2	3.1-5.0%	SEED & STRAW MULCH	SEED USING JUTE, OR EXCELSDOR, 500:2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOO, 2" STONE	LINED RIPRAP 4-8"
4	8.1-20%	LINED RIPRAP 4-8"	ENGINEERED DESIGN

- A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 2 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL.
 - B. RIPRAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
 - C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE

NO SCALE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES AND ITAPLES AND MID SECTION.
2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. BEND TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES (6") AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BUILD-UP" DEVELOPS IN THE SILT FENCE.

SILT FENCE DETAIL

NO SCALE

TEMPORARY SEEDING NOTES
Apply to grades of cleared areas likely to be reseeded where a short-term vegetative cover is needed.
Standard Preparation: Loosen upper 3" subgrade of soil by rotary, hand or other appropriate means before seeding. If soil previously seeded, it may be reseeded as follows:
Substrate: 1000-800 LBS. per acre (10-10-10 fertilizer 214 lbs. per 1000 sq. ft.)
Seeding: For seedbed March 15, April 30, and from August 15, to November 15, seed with 2.5 bushels per acre of ryegrass (21 lbs. per 1000 sq. ft.) and 2.5 bushels per acre of clover (21 lbs. per 1000 sq. ft.) in a 1:1 ratio. For other dates, use 2.5 bushels per acre of ryegrass (21 lbs. per 1000 sq. ft.) and 2.5 bushels per acre of clover (21 lbs. per 1000 sq. ft.) in a 1:1 ratio. For other dates, use 2.5 bushels per acre of ryegrass (21 lbs. per 1000 sq. ft.) and 2.5 bushels per acre of clover (21 lbs. per 1000 sq. ft.) in a 1:1 ratio.
Application: Apply 1/2-1/2 lbs. 2-10-10 fertilizer (21 lbs. per 1000 sq. ft.) of ureaformaldehyde granules immediately after seeding. Another granular fertilizer application may be made 4-6 weeks after seeding. (See notes, 8" or higher, use 1/2 lbs. per acre (6 gal. per 1000 sq. ft.) for ureaformaldehyde granules.)
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR rates and methods not covered.

PERMANENT SEEDING NOTES
Apply to grades of cleared areas not subject to immediate further disturbance where a permanent long-term vegetative cover is needed.
Standard Preparation: Loosen upper 3" subgrade of soil by rotary, hand or other appropriate means before seeding. If soil previously seeded, it may be reseeded as follows:
Substrate: 1000-800 LBS. per acre (10-10-10 fertilizer 214 lbs. per 1000 sq. ft.)
Seeding: For seedbed March 15, April 30, and from August 15, to November 15, seed with 2.5 bushels per acre of ryegrass (21 lbs. per 1000 sq. ft.) and 2.5 bushels per acre of clover (21 lbs. per 1000 sq. ft.) in a 1:1 ratio. For other dates, use 2.5 bushels per acre of ryegrass (21 lbs. per 1000 sq. ft.) and 2.5 bushels per acre of clover (21 lbs. per 1000 sq. ft.) in a 1:1 ratio. For other dates, use 2.5 bushels per acre of ryegrass (21 lbs. per 1000 sq. ft.) and 2.5 bushels per acre of clover (21 lbs. per 1000 sq. ft.) in a 1:1 ratio.
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Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR rates and methods not covered.

SEEDING NOTES
1) 2 lbs. per acre of ureaformaldehyde granules (21 lbs. per 1000 sq. ft.) and 2 lbs. per acre of ureaformaldehyde granules (21 lbs. per 1000 sq. ft.) may be used where available. (See notes, 8" or higher, use 1/2 lbs. per acre (6 gal. per 1000 sq. ft.) for ureaformaldehyde granules.)
2) Use seed.
3) Seed with 80 lbs. per acre of ureaformaldehyde granules (21 lbs. per 1000 sq. ft.) and 80 lbs. per acre of ureaformaldehyde granules (21 lbs. per 1000 sq. ft.)
Application: Apply 1/2-1/2 lbs. 2-10-10 fertilizer (21 lbs. per 1000 sq. ft.) of ureaformaldehyde granules immediately after seeding. Another granular fertilizer application may be made 4-6 weeks after seeding. (See notes, 8" or higher, use 1/2 lbs. per acre (6 gal. per 1000 sq. ft.) for ureaformaldehyde granules.)
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR rates and methods not covered.

SEDIMENT CONTROL NOTES
1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permitting prior to the start of any construction (992-2473).
2. All materials and structural provisions are to be installed according to the provisions of this plan and the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL.
3. Following initial site disturbance or re-disturbance, permanent sedimentation shall be installed within 30' of construction area for all perimeter sediment control structures. When permanent erosion and all areas greater than 2' x 18' steps or to other disturbed or graded areas on the project site.
4. All sediment traps/structures must be located and working when placed around the perimeter in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL. No permanent mulching (see note 52). Temporary stabilization with mulch shall not be used for permanent stabilization of disturbed areas.
6. All sediment control structures are to remain in place and are to be maintained in operating condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:
Total Area of Site: 4.00 acres
Area to be reseeded: 0.44 acres
Area to be vegetated: 4.44 acres
Total: 4.88 acres
8. Any sediment control practices which is disturbed by grading activity for construction 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 Department of Public Works Sediment Control Inspector.
10. No grading or high utility other than perimeter sediment control measures shall be installed until the depth reaches less than 18" above the ground surface.
11. Sediment will be removed from traps when the depth reaches less than 18" above the ground surface.
12. Out and fill quantities provided under this analysis do not include the quantities of soil to be removed from the site. The contractor shall be responsible for the removal of soil from the site. The contractor shall be responsible for the removal of soil from the site. The contractor shall be responsible for the removal of soil from the site.

MATERIALS
Material and Methods:
1) Stone - Stone shall be crushed and graded to the size of 1 1/2" to 2" and per acre (20 to 30 GALS/1000 SF). Such materials shall be crushed and graded to the size of 1 1/2" to 2" and per acre (20 to 30 GALS/1000 SF). Such materials shall be crushed and graded to the size of 1 1/2" to 2" and per acre (20 to 30 GALS/1000 SF).
2) Asphalt mulch - Asphalt mulch shall be 800 to 1000 GALS per acre (10 to 20 GALS/1000 SF). This is suitable for a limited period of time where erosion by erosion, weather or moisture is not a problem.
3) Synthetic mulch - Synthetic mulch may be used according to manufacturer's instructions.
4) Mulch - Mulch shall be applied immediately after final placement to prevent loss of soil or erosion. This mulch shall be applied to the surface in a uniform and even manner. Lighter mulches of paper, plastic and other mulch materials may be used where erosion is not a problem. If used to be removed, do not use mulch material.
5) Wood chips - Wood chips of approximately 8 inches per acre (275 LB/1000 SF) may be used where available and where feasible to use.
6) Crushed rock, stone, gravel or other materials - Apply at rate of 20 to 100 lbs. per acre (400 to 4000 LB/1000 SF) with coarsest material applied at the highest rate.

Mulch Application
Mulch application shall be accomplished immediately after final placement to prevent loss of soil or erosion. This mulch shall be applied to the surface in a uniform and even manner. Lighter mulches of paper, plastic and other mulch materials may be used where erosion is not a problem. If used to be removed, do not use mulch material.
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2) Mulch Application - Mulch shall be applied to the surface in a uniform and even manner. Lighter mulches of paper, plastic and other mulch materials may be used where erosion is not a problem. If used to be removed, do not use mulch material.
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SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL SILT FENCE, BUILD EARTH DIKES, INSTALL STABILIZED CONSTRUCTION ENTRANCE AND GRADE IN SEDIMENT TRAP (#1).
3. BEGIN GRADING.
4. STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.
5. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE AS NEEDED AS PER THE PERMANENT SEEDING NOTES.

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.
P. Callinger 11-30-93
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.
P. Callinger 11-30-93
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Patricia Engler 12-15-93
U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 12/13/93
HOWARD SOIL CONSERVATION DISTRICT DATE

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
James A. Kuth 12/30/93
DIRECTOR DATE

APPROVED : FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
Jim Surmanni 12/30/93
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
James A. Kuth 12/29/93
DIRECTOR DATE

OWNER / DEVELOPER
ODC CROSSING, INC.
C/O EARL ARMIGER,
THE EXECUTIVE CENTER
3300 NORTH RIDGE ROAD
SUITE 230
ELLCOTT CITY, MD. 21043

PROJECT ORCHARD CROSSING
MASS GRADING PLAN
AREA TAX MAP 30 PARCEL 406
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
COLUMBIA 100 OFFICE RESEARCH PARK, SECTION 1, AREA 2, PARCELS W, X, Y
TITLE DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
Planners Engineers Surveyors
8818 Centre Park Drive Suite 200 Columbia, Md. 21045
410-997-8900 FAX: 410-997-9282

DATE 12-29-93
F-87-82 28:930M
F-93-111 SDP-93-121
DESIGNED BY : J.T.D.
DRAWN BY : J.T.D.
PROJECT NO : 91001
DATE : 8/31/93
SCALE : AS SHOWN
DRAWING NO. 2 OF 2
J. Farrell
JAYKANT D. PAREKH #19148 DATE

AS BUILT CERTIFICATE
JAYKANT D. PAREKH #19148 DATE