

EMERSON R WILLIAMS AND BETTY J WILLIAMS PARCEL 310

Drainage Area = 3.87 AC ±
 Volume Required = 6966 CU FT
 Volume Provided = 6966 CU FT
 Top Dimensions = 100' x 24'
 Bottom Dimensions = 93' x 17'
 Depth = 3.5'
 Weir Crest Elevation = 333.0
 Bottom Elevation = 328.5
 Cleanout Elevation = 330.25
 Length of Weir = 15.5'

CONSTRUCTION SEQUENCE

- OBTAIN GRADING PERMIT
- NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTION AND PERMITS, AND THE CONSTRUCTION INSPECTION/SURVEYS DIVISION AT 752-7272 AT LEAST 24 HOURS PRIOR TO BEGINNING GRADING OPERATIONS.
- REMOVE 30' L.F. OF EXISTING GUARD RAIL SECTIONS AT ENTRANCE.
- INSTALL DRIVEWAY CULVERT AT ENTRANCE.
- PROVIDE STRAW BALE DIKES (SBD) AS SHOWN ON PLAN PRIOR TO DISTURBING SITE.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (SCE) AREA.
- CONSTRUCT WATER AND SEWER UTILITIES. APPLY TEMPORARY STABILIZATION TO ALL AFFECTED AREAS.
- CONSTRUCT THE HOUSES, WATER AND SEWER TAPS, PAVE PRIVATE ROAD, PAVE DRIVEWAYS.
- FINAL GRADE AND STABILIZE ALL REMAINING DISTURBED AREAS, PHASE OUT SEDIMENT TRAP AS CONTRIBUTING AREAS ARE STABILIZED.
- WITH APPROVAL OF THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS, REMOVE ALL TEMPORARY SEDIMENT CONTROL DEVICES AND APPLY PERMANENT STABILIZATIONS TO AFFECTED AREA.

GENERAL NOTES

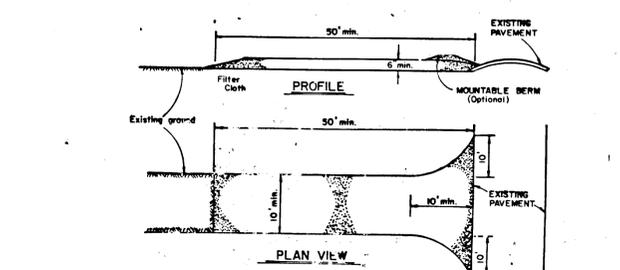
- TAX MAP: 41 PARCEL: 367 LOTS: 1,2,3,4,5
- TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY PREPARED BY UNI-VERSAL ENGINEERING MANAGEMENT INC. DATED NOV., 1976.
- EXISTING ZONING: NEW TOWN LAND USE: SINGLE FAMILY UNITS.
- ALL CONSTRUCTION AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- 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.
- PUBLIC WATER AND PUBLIC SEWER WILL BE UTILIZED WITHIN THIS DEVELOPMENT.

COMMON DRIVEWAY SECTION
NOT TO SCALE

SEDIMENT CONTROL NOTES

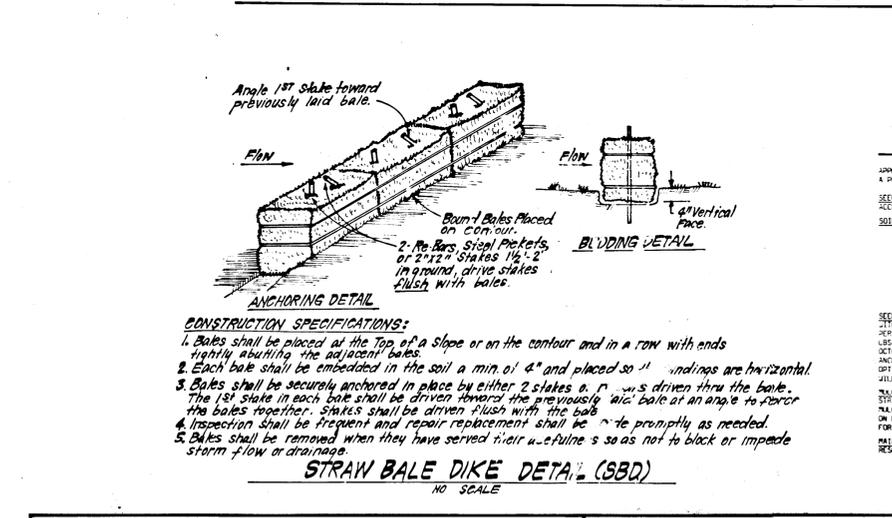
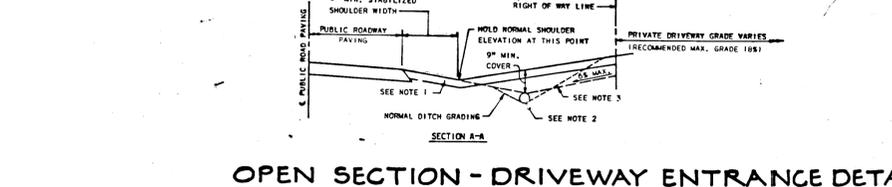
- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction (992-2431).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or disturbances, permanent or temporary stabilization shall be completed within 7 calendar days for permanent sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, or 14 days as to other disturbed or graded areas on the project site.
- All sediment traps/ditches shown must be fenced and warning signs posted around their perimeter in accordance with Vol. I, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for permanent stabilization (Sec. 50 and Sec. 54). Temporary seeding (Sec. 50) and mulching (Sec. 52) temporary stabilization with mulch along can only be done when recommended seeding does not allow for proper germination and establishment of grasses.
- Sediment control structures are to be 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 | 216 Acres |
| Area Disturbed | 1.13 Acres |
| Area to be roofed or paved | 0.245 Acres |
| Area to be vegetatively stabilized | 0.285 Acres |
| Total | 0.72 Cuyds. |
| Total Fill | 0 Cuyds. |
| Offsite waste/borrow area location | |
- 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 controls must be provided if deemed necessary by the Howard County DPW sediment control inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is received.



CONSTRUCTION SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE

- Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - as required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.
- 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 Wash - All surface water flowing or diverted toward construction entrance shall be captured at the entrance. If piping is impractical, a mounded berm with 5:1 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 top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.



PERMANENT SEEDING NOTES

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

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

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

- PHOSPHORUS - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (90 LBS/1000 SQ. FT.) AND 100 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 POUNDS PER ACRE 30-0-0 UREAPFORM FERTILIZER (8 LBS/1000 SQ. FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (90 LBS/1000 SQ. FT.) AND 100 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 25 LBS. PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE (3.6 LBS/1000 SQ. FT.) OF PENNSYLVANIA 31 TALL FESCUE. DURING THE PERIOD OF OCTOBER 15 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE 500.0 OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE FULL ANCHORED STRAW.

MULCHING: APPLY 11 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNLIMITED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY BY PER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. OR SLICKS 8 FT OR HIGHER, USE 348 GALS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

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

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

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

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 25 LBS. PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (1.07 LBS./1000 SQ. FT.). FOR THE PERIOD NOVEMBER 15 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OR USE SOO.

MULCHING: APPLY 11 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNLIMITED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. OR SLICKS 8 FT OR HIGHER, USE 348 GALS PER ACRE (8 GAL/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.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

Reviewed for Howard Soil Conservation District and meets technical requirements.

Approved: *Stephen J. Hales* 11/1/88
 Date: 11/1/88

Approved: *John J. Schmitt* 12-2-88
 Date: 12-2-88

ENGINEER'S STATEMENT

"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."

John J. Schmitt 12/25/87
 ENGINEER DATE

DEVELOPER'S CERTIFICATE

"I certify that all development and construction will be done according to this plan, and that many responsible persons involved in the construction project will possess a Certificate of Attendance of a Department of Natural Resources Approved Training Program for the control of Sediment and Erosion before beginning the project."

Michael D. Canell (AGENT) 2-27-87
 DEVELOPER - COLUMBIA HOME GROUP, INC. DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Michael D. Canell 12/13/88
 CHIEF, LAND DEVELOPMENT DIVISION DATE

APPROVED: OFFICE OF ENGINEERING
John J. Schmitt 12-13-88
 CHIEF, BUREAU OF ENGINEERING DATE

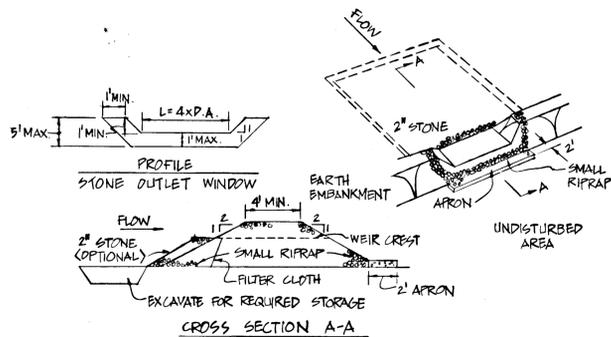
APPROVED: OFFICE OF PLANNING AND ZONING
Michael J. J. Wright 12-20-87
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

HUDKINS ASSOCIATES INC.
 ENGINEERS - SURVEYORS
 231 JOSEPH SQUARE
 COLUMBIA, MD. 21044

DESIGNED COMMON DRIVEWAY, GRADING AND SEDIMENT CONTROL PLAN
DRAWN CONGEDO PROPERTY
CHECKED MDC
DATE FEB 27, 1987

SCALE: 1"=50'
 DRAWING: 1 OF 2
 JOB NO.:
 FILE NO.:

OWNER: CONGEDO 2915 DUVALL ROAD BURTONTSVILLE, MD. 20730
 DEVELOPER: COLUMBIA HOME GROUP INC. 1772 REISTERSTOWN ROAD BALTIMORE, MD. 21208

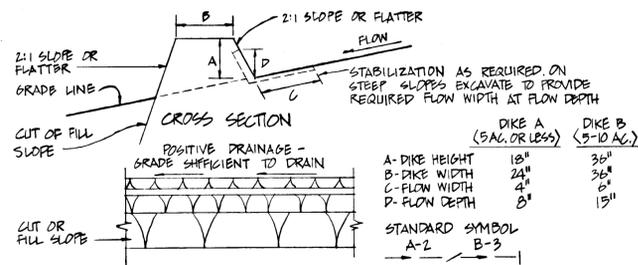


OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP IN PLACE OF THE EMBEDDED FILTER CLOTH.

STONE OUTLET SEDIMENT TRAP V
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS FOR ST-V

- AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
- 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 OBJECTIONAL MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
- THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
- 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.
- 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.



EARTH DIKE
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

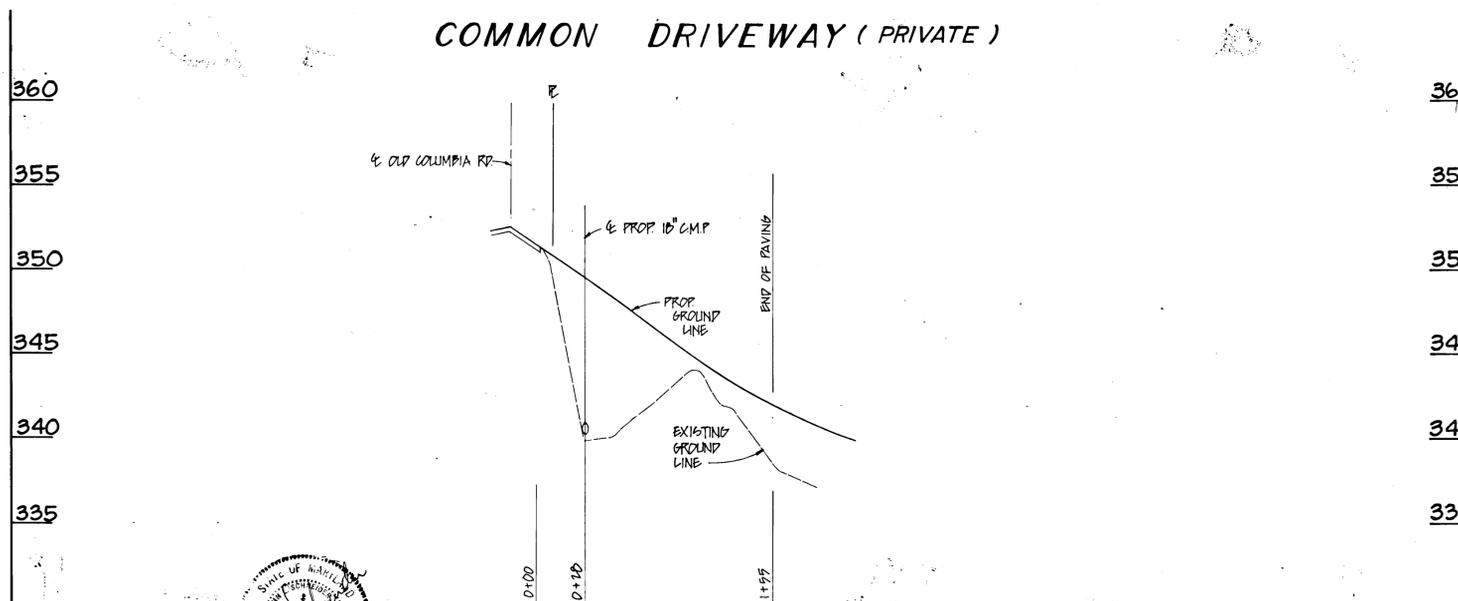
- ALL DIKES SHALL BE CONSTRUCTED BY EARTH MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- 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.
- 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 AND STRAW MULCH | SEED AND STRAW MULCH |
| 2 | 3.1-5.0% | SEED AND STRAW MULCH | SEED USING JUTE, OR EXCELSIOR, SOD; 2" STONE |
| 3 | 5.1-8.0% | SEED WITH JUTE, OR SOD; 2" STONE | LINED RIP-RAP 4"-8" |
| 4 | 8.1-20% | LINED RIP-RAP 4"-8" | ENGINEERING DESIGN |

- STONE TO BE 2" STONE, OR RECYCLED CONCRETE EQUIVALENT IN A LAYER AT LEAST 3" IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
 - RIP-RAP TO BE 4"-8" IN A LAYER AT LEAST 8" THICKNESS AND PRESSED INTO THE SOIL.
 - APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

COMMON DRIVEWAY (PRIVATE)



PROFILE ALONG 1/4 COMMON DRIVEWAY

SCALE: H 1" = 50'
V 1" = 5'

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
U.S. SOIL CONSERVATION DISTRICT DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: *Stephen L. Huber* 12-1-88
SIGNATURE DATE

HUDKINS ASSOCIATES INC.
ENGINEERS - SURVEYORS
231 JOSEPH SQUARE
COLUMBIA, MD. 21044



| | |
|----------|------|
| DES: | |
| DRN: | |
| CHK: | |
| DATE: | |
| BY: | NO. |
| REVISION | DATE |

PROFILE

CONGEDO PROPERTY
LOTS 1-5
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 2

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul W. Johnson 12/15/88
CHIEF, LAND DEVELOPMENT DIVISION DATE

Michael E. Ray 12-13-88
CHIEF, BUREAU OF ENGINEERING DATE

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEM NECESSARY.

Michael E. Ray 11-27-88
DEVELOPER - COLUMBIA HOME GROUP, INC. DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John L. Schneider 10/2/88
ENGINEER DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

John L. Schneider 12-2-88
SOIL CONSERVATION SERVICE DATE

APPROVED: OFFICE OF PLANNING & ZONING

Frank J. DeAngelis 12-21-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John L. Schneider 10-21-88
SOIL CONSERVATION DISTRICT DATE