INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	PLAN AND PROFILE – DAVIS RO.D
3	PLAN AND PROFILE – GOLDENSTRAW LANE
4	PLAN AND PROFILE – LONG MEADOW CT.
5	DRAINAGE AREA MAP, S.W.M. PLAN, GRADING AND SEDIMENT CONTROL PLAN
6	S.W.M. PROFILES AND SEDIMENT CONTROL DETAILS
7	SECTIONS AND DETAILS

( ) By the Engineer:

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

7/12/89
DATE

( ) By the Developer:

"I/We certify that all development and/or construction will be done according to these plans, and that any 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 will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

7-3-89
DATE

( ) These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

7/14/89
DATE

( ) These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

7/14/89
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

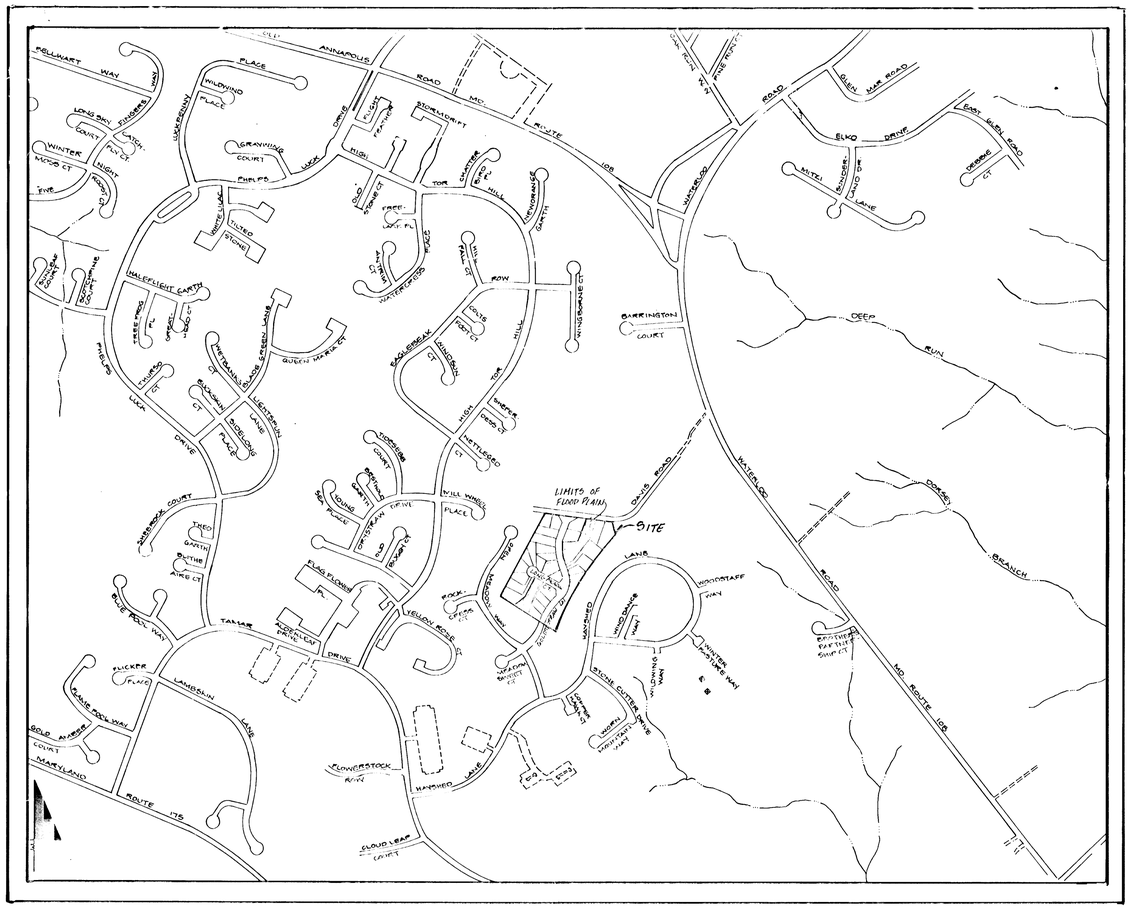
9/14/89
DATE

9/13/89
DATE

9-15-89
DATE

APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING

9/5/89
DATE

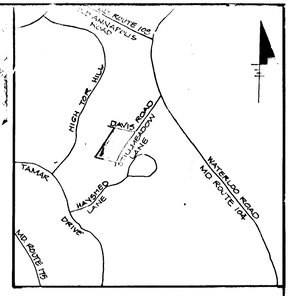


LOCATION MAP
SCALE: 1"=600'

BENCH MARKS

BM 1 = EX. FIRE HYDRANT ON NORTH SIDE OF DAVIS ROAD, EAST OF STILL MEADOW LANE INTERSECTION. ELEV. 479.32

BM 2 = IRON PIPE AT NORTHEAST PROPERTY CORNER. #2 ELEV. 461.97



VICINITY MAP
SCALE: 1"=2000'

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. ALL UTILITY COMPANIES MUST BE NOTIFIED 24-HOURS IN ADVANCE OF ANY CONSTRUCTION.
3. STORM DRAINAGE TRENCHES WITH ROAD RIGHT-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY CODE.
4. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TELEPHONE 792-7272.
6. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION, CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1984 REVISED EDITION.
8. STREET TREES TO BE PROVIDED AS REQUIRED BY SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
9. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

   STATE HIGHWAY ADMINISTRATION 531-5533
   BALTIMORE GAS & ELECTRIC-UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE 685-0123
   ENGINEERING-"DAMAGE CONTROL" 234-5611
   "MISS UTILITY" 1-559-0100
   CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY 725-9976
   AMERICAN TELEPHONE & TELEGRAPH -CABLE LOCATION DIVISION 393-3533
   COLONIAL PIPELINE COMPANY 795-1390
   BUREAU OF UTILITIES-HOWARD COUNTY 992-2366

LONG MEADOW-II

ROAD CONSTRUCTION DRAWINGS
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

LANDSCAPE SCHEDULE

SYMBOL	QUANTITY	NAME	SIZE	REMARKS
	70	ACER SACCAHARUM (SUGAR MAPLE)	2 1/2" CAL (MIN.)	BALLED AND BURLAPPED
	—	CRATEGUS PHAENOPYRUM (WASHINGTON HAWTHORN)	2 1/2" CAL (MIN.)	BALLED AND BURLAPPED

DESIGNED	D.T.	11/88 date
DRAWN	K.F.	11/88 date
CHECKED	J.E.	11/88 date
APPROVED	T.W.	11/88 date

REVISIONS

DATE	BY	DESCRIPTION

Dewberry & Davis
ARCHITECTS – ENGINEERS – PLANNERS – SURVEYORS
3300 N. RIDGE ROAD SUITE 100
ELLICOTT CITY, MD. 21043
(301) 461-7478

OWNER/DEVELOPER
LONG MEADOW VENTURERS
7050 OAKLAND MILLS ROAD
COLUMBIA, MARYLAND 21046

TITLE SHEET
LONG MEADOW II
LOTS 1 THRU LOTS 30
TAX MAP 36 PARCEL 264
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

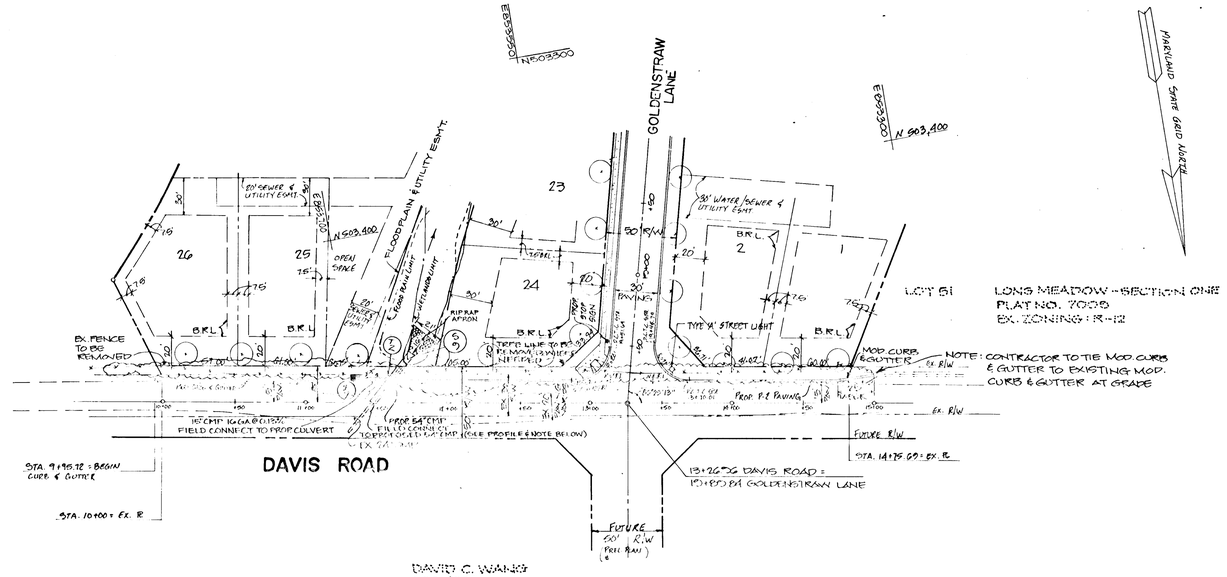
SCALE: AS SHOWN | PREVIOUS SUBMITTALS: S-87-89, P-88-26 | FILE NO. | SHEET 1 OF 7

1236

F-89-90

LIGHTING LEGEND

✧ TYPE 'A': 100 WATT HIGH PRESSURE SODIUM VAPOR LAMP MOUNTED ON A 14' HIGH FIBERGLASS BRONZE POLE



PLAN

1" = 50'

APPROVED: HOWARD COUNTY, MARYLAND
DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	7/13/89
DIRECTOR, DEPARTMENT OF PUBLIC WORKS	9/12/89
	9/13/89
	9-15-89

PLAN

PROFILE

NOTE BOOK

NO.

LONG MEADOW II

TAX MAP 36 PARCEL 264
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

PLAN AND PROFILE

DAVIS ROAD

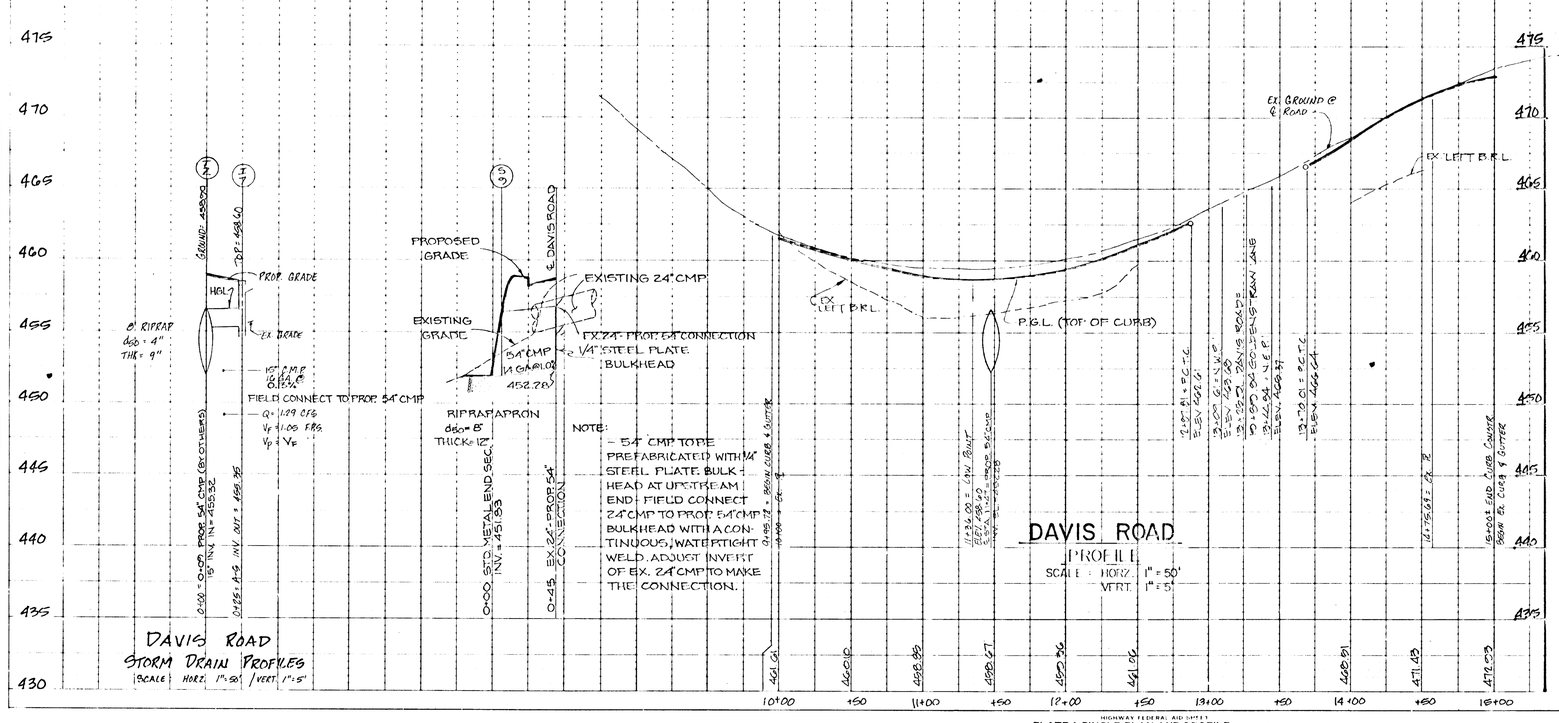
OWNER / DEVELOPER
LONG MEADOW VENTURERS
7050 OKLAND MILLS RD.
SUITE 100
COLUMBIA, MARYLAND 21046

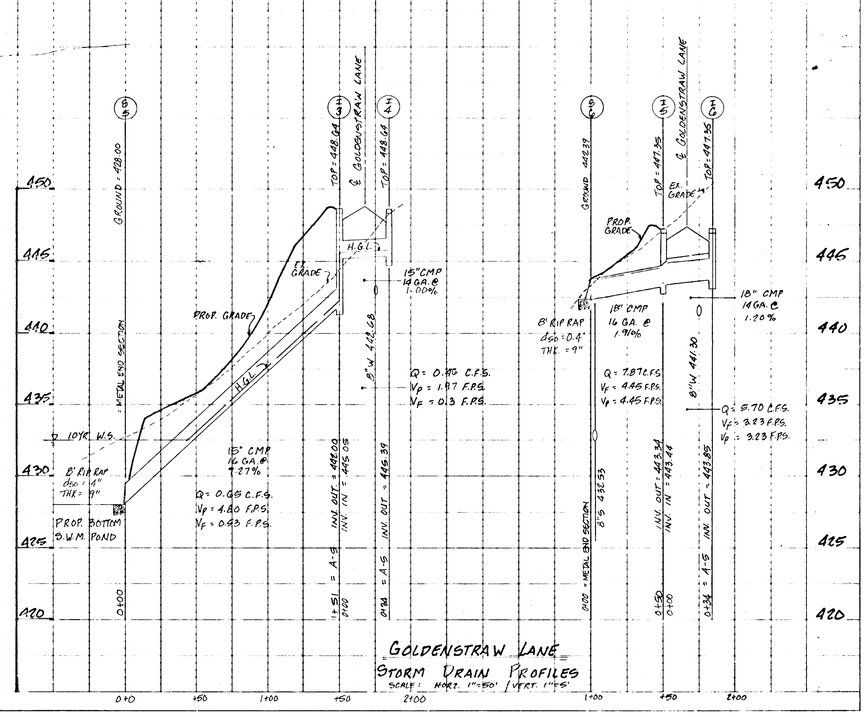
SCALE AS SHOWN	DATE NOV., 1988	SHEET 2 OF 7
DESIGNED BY D.T.	DRAWN BY C.L.D.	CHECKED BY J.H.B.

DEWBERRY & DAVIS
ARCHITECTS·ENGINEERS · PLANNERS · SURVEYORS
5500 NORTH RIDGE ROAD
ELLICOTT CITY, MARYLAND 21043
(301) 461-7478

STATE OF MARYLAND — JOSEPH H. BRUCHOLD — REGISTERED PROFESSIONAL ENGINEER

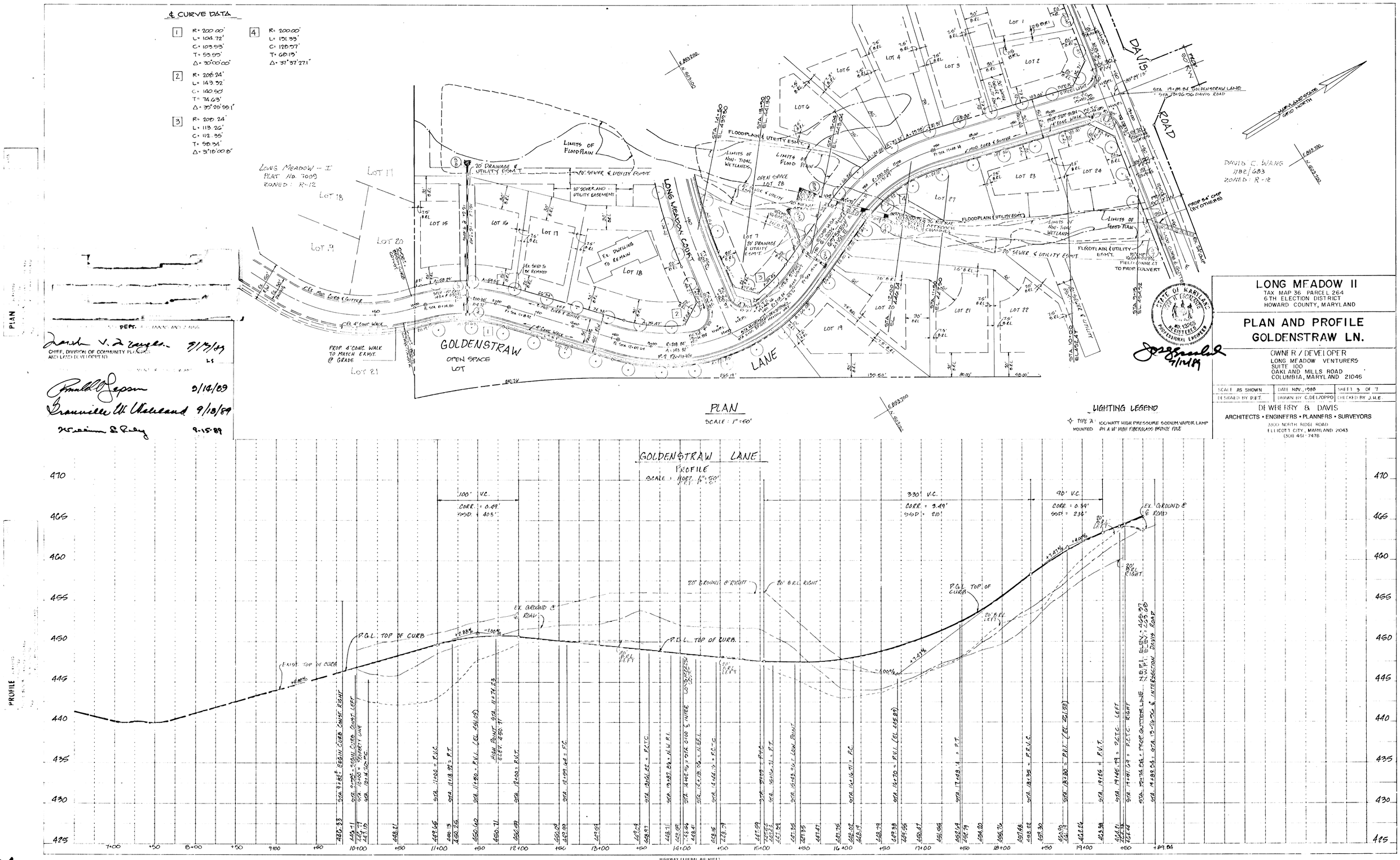
7/12/89





1236

F-89-90



DEPT. OF PLANNING AND ZONING

Marsh V. Douglas 9/13/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT LS

Ronald Lepson 9/14/89

Granville W. Wakeland 9/18/89

William E. Riley 9-15-89

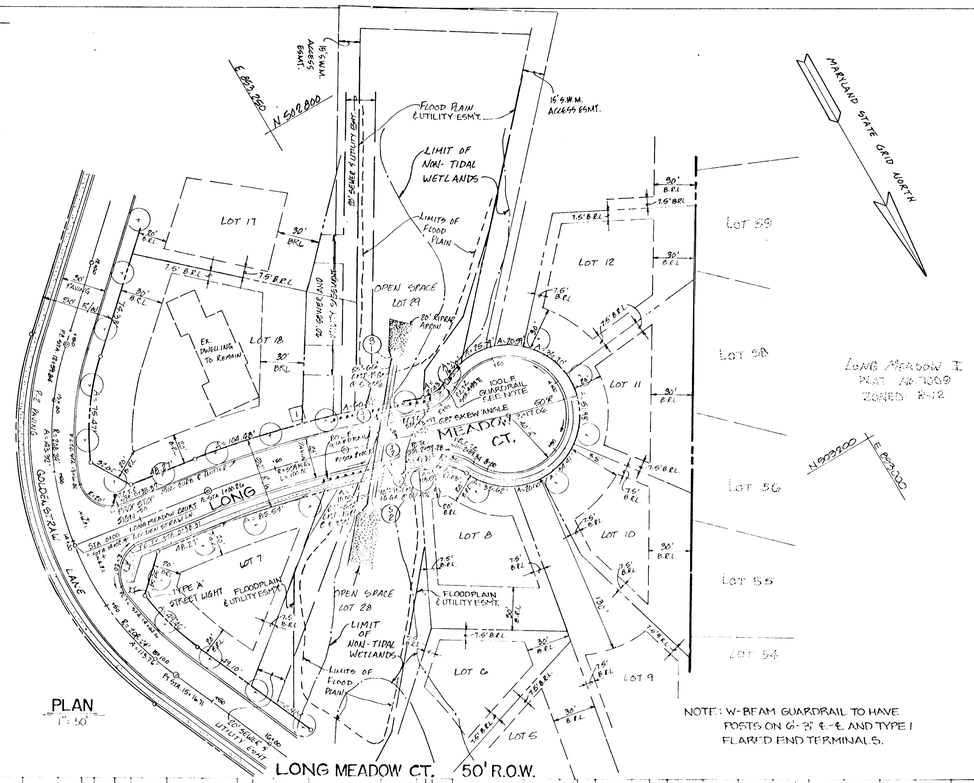
1236

F-89-90

F009-EC

CURVE DATA

1	R= 869.19'
	L= 100.01'
	C= 99.88'
	T= 50.14'
	Δ= 10° 14' 51.2"



PLAN
1" = 50'

NOTE: W-BEAM GUARDRAIL TO HAVE POSTS ON 6'-3" R.-E. AND TYPE I FLARED END TERMINALS.

DEPT. OF PLANNING AND ZONING

Marsha S. McLaughlin 9/13/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

LS

DEPT. OF PUBLIC WORKS

Ronald G. Lapan 9/14/89

Granville W. Wellman 9/13/89

William E. Riley 9-15-89

PLAN
SURVEYED
PLOTTED
NOTE BOOK
DATE CHECKED
DATE APPROVED
DATE OF FINAL DRAWING CHECKED

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
DATE CHECKED
DATE APPROVED
DATE OF FINAL DRAWING CHECKED

STATE OF MARYLAND
JOHN F. CONTOLE
No. 10265
REGISTERED PROFESSIONAL ENGINEER

Jos. F. Contole Jr. 7/14/89

LONG MEADOW II

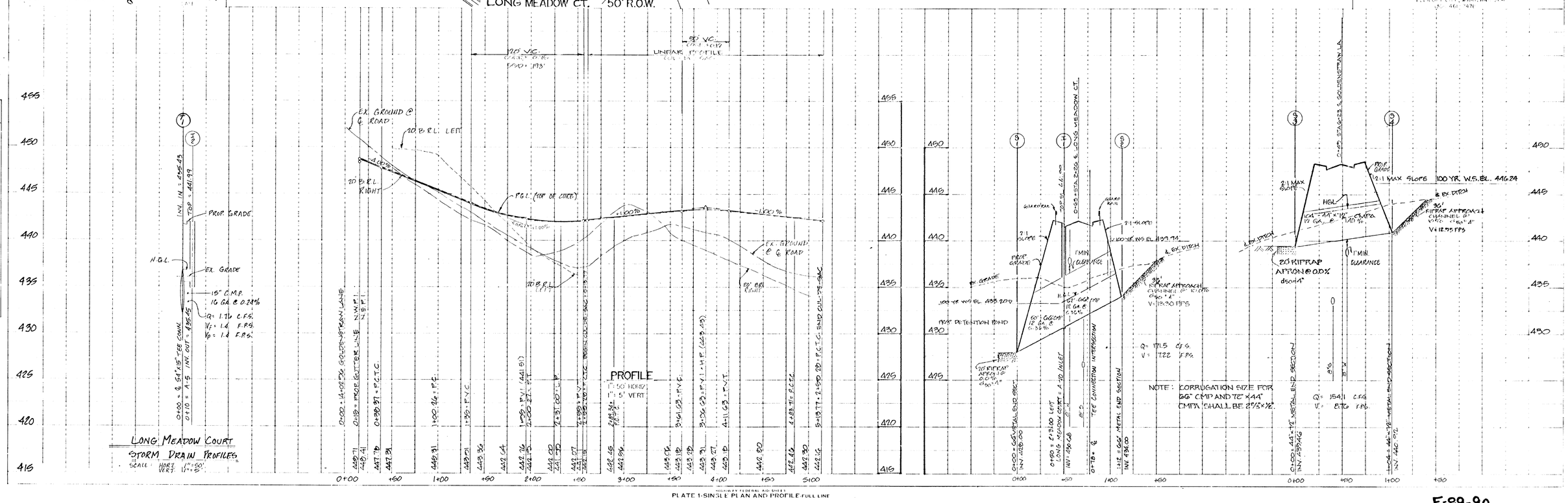
TAX MAP 36 PARCEL 264
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

PLAN AND PROFILE
LONG MEADOW COURT

OWNER / DEVELOPER
LONG MEADOW VENTURES
7050 OAKLAND MILLS ROAD
SUITE 100
COLUMBIA, MD. 21046

SCALE AS SHOWN	DATE NOV., 1988	SHEET 4 OF 7
DESIGNED BY MS	DRAWN BY KAF/CLD	REVISED BY J.H.E.

DE WBERRY & DAVIS
ARCHITECTS • ENGINEERS • PLANNERS • SURVEYORS
8551 NORTH RIDGE ROAD
ELLICOTT CITY, MARYLAND 21043
(301) 461-1471



LONG MEADOW COURT
STORM DRAIN PROFILES
SCALE: HORZ. 1"=50' VERT. 1"=5'

1236

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE FULL LINE
PRINTED IN U.S.A.

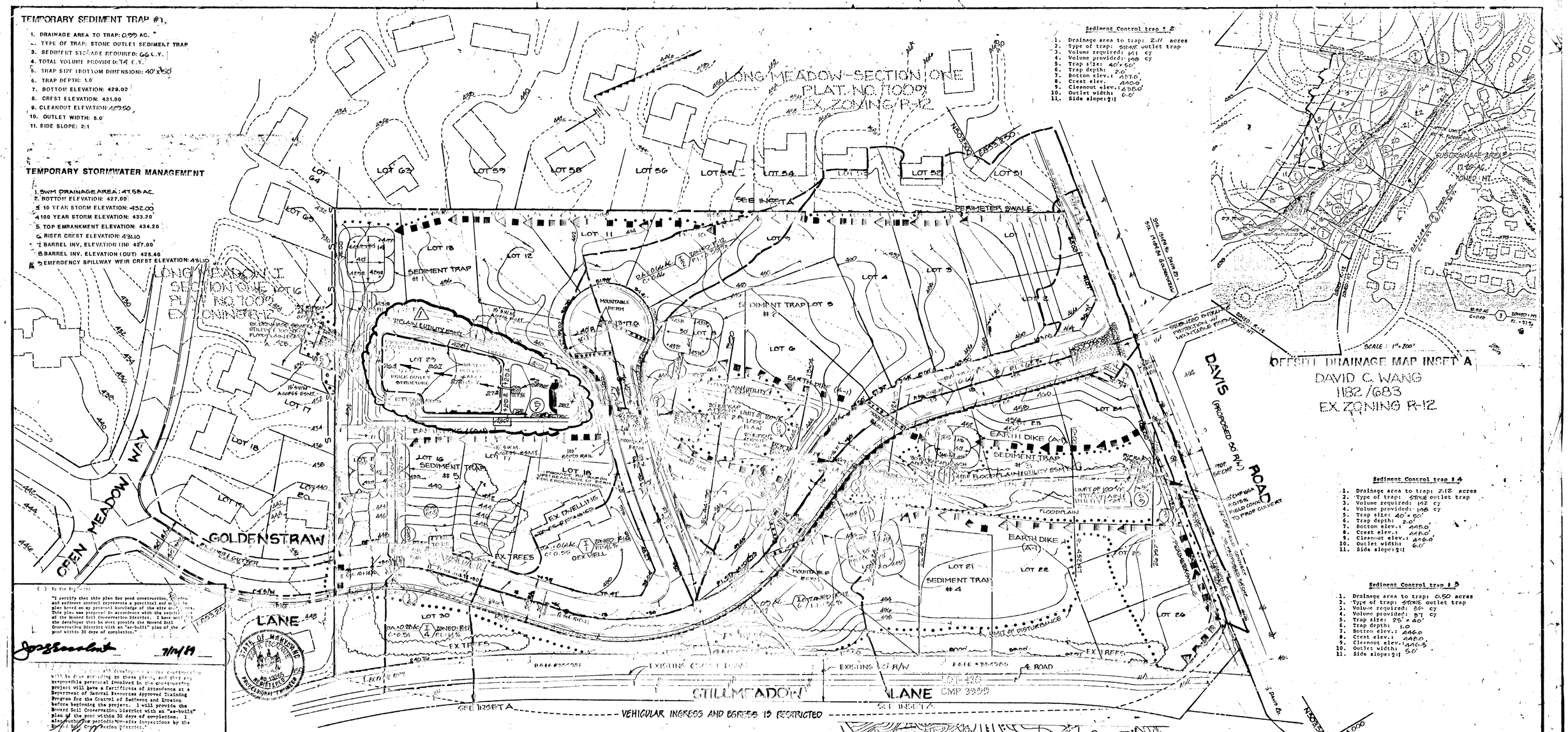
F-89-90

TEMPORARY SEDIMENT TRAP #1

1. DRAINAGE AREA TO TRAP: 0.99 AC.
2. TYPE OF TRAP: STONE OUTLET SEDIMENT TRAP
3. SEDIMENT STORAGE REQUIRED: 66 C.Y.
4. TOTAL VOLUME PROVIDED: 74 C.Y.
5. TRAP SIZE (BOTTOM DIMENSION): 40'x60'
6. TRAP DEPTH: 1.0'
7. BOTTOM ELEVATION: 429.00
8. CREST ELEVATION: 431.00
9. CLEANOUT ELEVATION: 429.50
10. OUTLET WIDTH: 5.0'
11. SIDE SLOPE: 2:1

TEMPORARY STORMWATER MANAGEMENT

1. SWM DRAINAGE AREA: 47.58 AC.
2. BOTTOM ELEVATION: 427.00
3. 10 YEAR STORM ELEVATION: 432.00
4. 100 YEAR STORM ELEVATION: 433.20
5. TOP EMBANKMENT ELEVATION: 434.20
6. RISER CREST ELEVATION: 431.10
7. BARREL INV. ELEVATION (IN) 427.00
8. BARREL INV. ELEVATION (OUT) 425.40
9. EMERGENCY SPILLWAY WEIR CREST ELEVATION: 431.10



Sediment Control trap # 2

1. Drainage area to trap: 2.11 acres
2. Type of trap: STONE outlet trap
3. Volume required: 141 cy
4. Volume provided: 148 cy
5. Trap size: 40'x 50'
6. Trap depth: 2.0'
7. Botton elev.: 437.0'
8. Crest elev. 440.0
9. Cleanout elev.: 438.0'
10. Outlet width: 6.0'
11. Side slope: 2:1

Sediment Control trap # 4

1. Drainage area to trap: 2.12 acres
2. Type of trap: STONE outlet trap
3. Volume required: 142 cy
4. Volume provided: 148 cy
5. Trap size: 40'x 50'
6. Trap depth: 2.0'
7. Botton elev.: 445.0'
8. Crest elev.: 448.0'
9. Cleanout elev.: 446.0'
10. Outlet width: 6.0'
11. Side slope: 2:1

Sediment Control trap # 3

1. Drainage area to trap: 0.50 acres
2. Type of trap: STONE outlet trap
3. Volume required: 86 cy
4. Volume provided: 87 cy
5. Trap size: 25' x 40'
6. Trap depth: 1.0
7. Botton elev.: 446.0
8. Crest elev.: 448.0
9. Cleanout elev.: 446.5
10. Outlet width: 5.0'
11. Side slope: 2:1

Sediment Control trap # 5

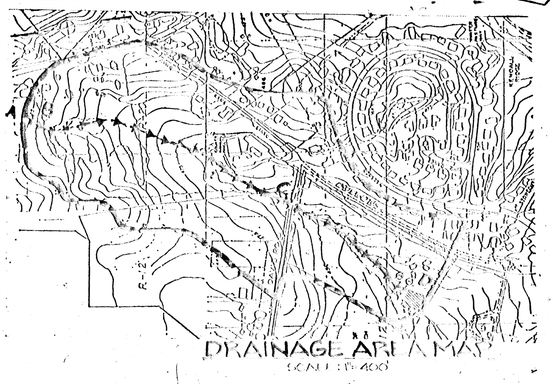
1. Drainage area to trap: 1.97 acres
2. Type of trap: STONE outlet trap
3. Volume required: 132 cy
4. Volume provided: 134 cy
5. Trap size: 40'x 45'
6. Trap depth: 2.0'
7. Botton elev.: 450.0'
8. Crest elev.: 453.0'
9. Cleanout elev.: 451.0'
10. Outlet width: 6.0'
11. Side slope: 2:1

NOTES:

1. AFTER AREA UPSTREAM OF INLET I-3 IS STABILIZED, REMOVE TEMPORARY E.S. 5 AND DEGRADE TEMPORARY SWM TRAP # 5 AND INSTALL PIPE IN ACCORDANCE WITH PLAN & PROFILE SHOWN.
2. ALL UTILITY CONSTRUCTION IN WETLANDS IS TO BE BROUGHT BACK TO ORIGINAL GRADE.
3. GRADING INDICATED WITHIN THE BUILDING LOTS IS TEMPORARY FOR THE PURPOSE OF ROAD CONSTRUCTION AND INSTALLATION OF SEDIMENT CONTROL MEASURES.

3. CONT.
THE FINAL SITE GRADING FOR THE LOTS WILL BE SHOWN IN COMPLIANCE WITH THE MINIMUM R-12 ZONING LOT SIZE REQUIREMENTS ON THE SITE DEVELOPMENT PLAN.

PLAN



LEGEND

- LIMIT OF DISTURBANCE
- INLET PROTECTION
- FLOODPLAIN
- WETLANDS
- TEMPORARY SWALE / EARTH DIKE
- EXISTING DWELLING

( ) By the Engineer

"I certify that this plan for pond construction, soil erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Joseph Gaudenzi 7/14/89

( ) By the Developer

"I certify that all pond construction and soil erosion and sediment control work will be done according to these plans, and that every 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 will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

D. Lathlinger 7-3-89

( ) These plans for soil pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

James M. Gilmore 7/14/89

( ) These plans for soil pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Robert W. Fuehrer 7/14/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul D. Lepson 9/14/89

Granville W. Weedon 9/13/89

9-15-89

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Director 7/13/89

					REVISIONS
DESIGNED	D.T.	11/88	DATE	BY	DESCRIPTION
DRAWN	M.S.	11/88	6-30-89		REV. AS PER COMMENTS & S.C. COMMENTS
CHECKED	J.E.	11/88	7-28-89	E.R.B.	REV. WATER QUALITY EUREKA TO S-1. MINOR GRADING IN SWM FACILITY
APPROVED	J.W.	11/88			

Dewberry & Davis

ARCHITECTS — ENGINEERS — PLANNERS — SURVEYORS

STATE OF MARYLAND JOSEPH GAUDENZI No. 13266 REGISTERED PROFESSIONAL ENGINEER

OWNER/DEVELOPER
LONG MEADOW VENTURERS
7050 OAKLAND MILLS ROAD
SUITE 100
COLUMBIA, MD. 21046

DRAINAGE AREA MAP, SWM PLAN & GRADING AND SEDIMENT CONTROL

LONG MEADOW II

TAX MAP 36 PARCEL 264
6 TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' | PREVIOUS SUBMITTALS: S-87-89, P-88-26 | F.E.E. NO. | SHEET 2 OF 7

1236

F-89-90

134350

PERMANENT SEEDING NOTES:

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

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

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

1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQUARE FT) AND 500 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 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9LBS/1000 SQ. FT.).

2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 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 60 LBS PER ACRE (1.4 LBS/1000 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 (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS 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 REDISTRUBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

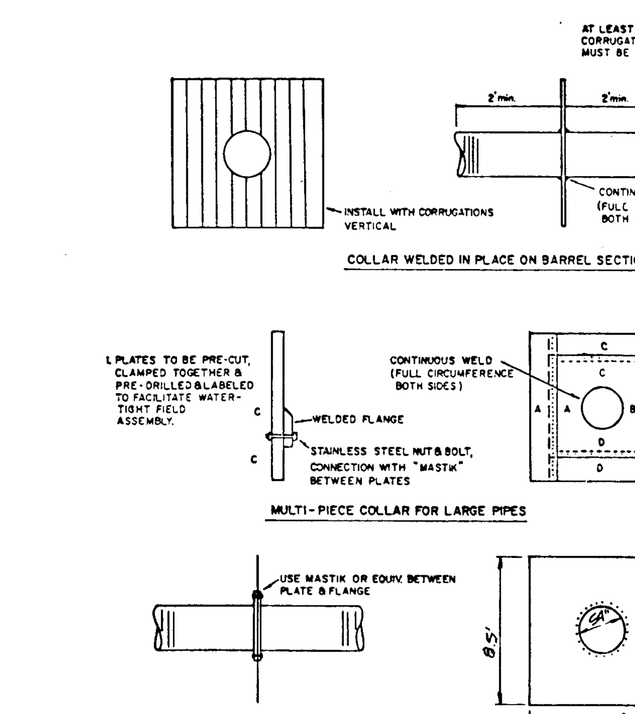
SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

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

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL 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 (.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

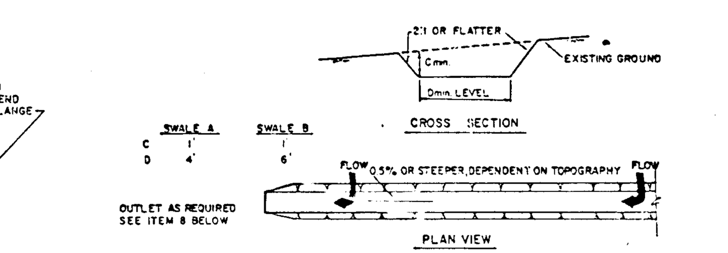
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8FT. OR HIGHER, USE 348 GAL 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.



ANTI - SEEP COLLAR

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED 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 IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE CHART BELOW:

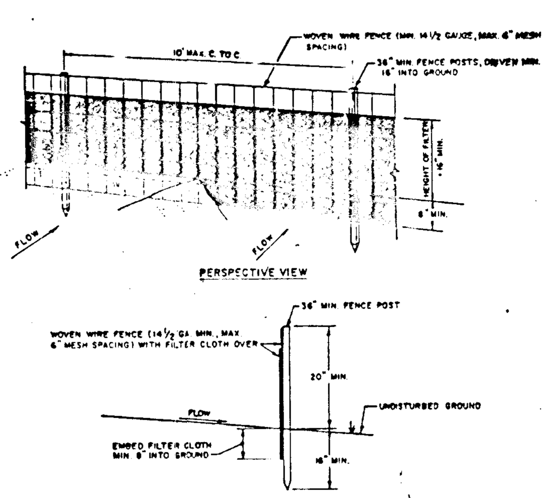
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC - 10 AC)
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
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR; SOD	LINED RIP-RAP 4-8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4-8" RIP-RAP	ENGINEERED DESIGN

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

TEMPORARY SWALE

NOT TO SCALE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

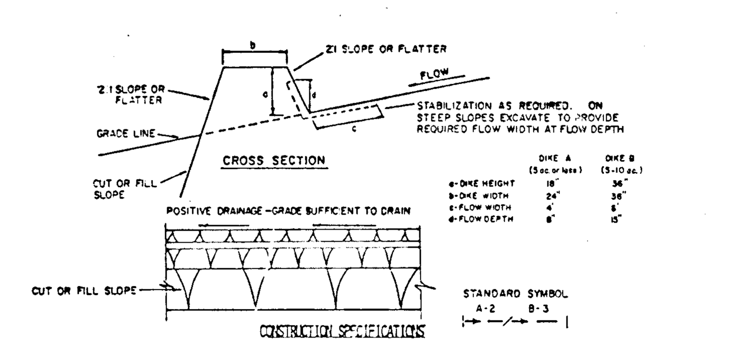
FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE

NOT TO 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 SAFE 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

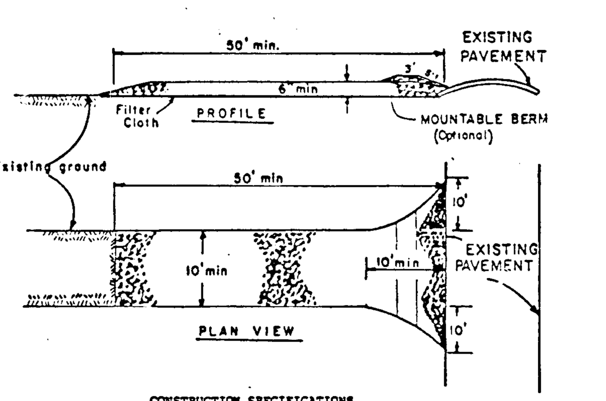
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP 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

NOT TO SCALE

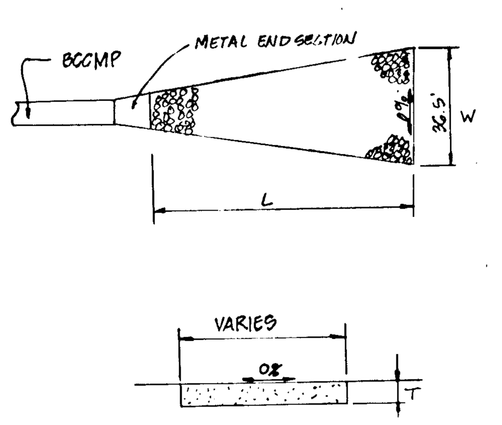


CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed 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 length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. 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.
8. 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 trap ping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



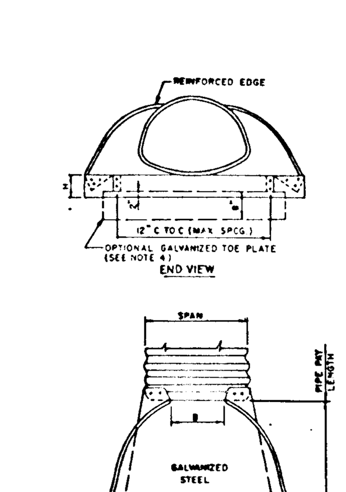
STRUCTURE	L	W	T	d50
S-4	20'		9"	4"
S-3	20'		9"	4"
POND OUTLET	20'	12.5	14"	4"~6"

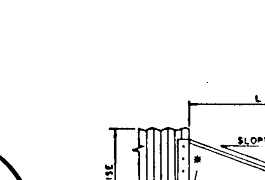
RIPRAP CHANNEL DETAIL

NOT TO SCALE

SEDIMENT CONTROL NOTES:

1. 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. (992-2437)
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTRUBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) AND (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:
   - TOTAL AREA OF SITE 10.08 ACRES
   - AREA DISTURBED 7.51 ACRES
   - AREA TO BE ROOFED OR PAVED 1.54 ACRES
   - AREA TO BE VEGETATIVELY STABILIZED 2.3 ACRES
   - TOTAL CUT 19,187 CU.YDS.
   - TOTAL FILL 18,367 CU.YDS.
   - OFFSITE WASTE/BORROW AREA LOCATION —
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.





* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS

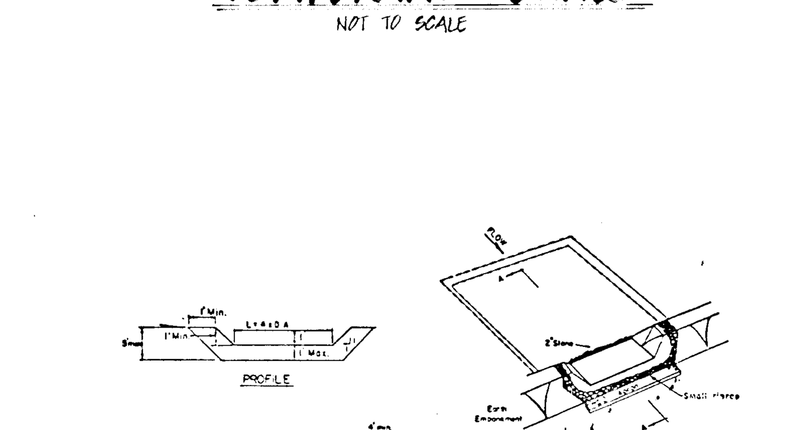
PIPE SIZE SPAN	PIPE SIZE RISE	GA	A 1"-	B MAX	H 1"-	L 1/2"-	W 2"-	APPROX. SLOPE	BODY
18"	11"	16	7"	9"	6"	19"	30"	2-1/2	1 PC
22"	13"	16	7"	10"	6"	23"	36"	2-1/2	1 PC
25"	16"	16	8"	12"	6"	28"	42"	2-1/2	1 PC
29"	18"	16	9"	14"	6"	32"	48"	2-1/2	1 PC
36"	22"	14	10"	16"	6"	39"	60"	2-1/2	1 PC
43"	27"	14	12"	18"	8"	46"	75"	2-1/2	1 PC
50"	31"	12	13"	21"	9"	53"	85"	2-1/2	2 PC
58"	36"	12	18"	26"	12"	63"	90"	2-1/2	2 PC
65"	40"	12	18"	30"	12"	70"	102"	2-1/4	2 PC
72"	44"	12	18"	33"	12"	77"	114	2-1/4	3 PC
79"	49"	12	18"	36"	12"	77"	126"	2	3 PC
85"	54"	12	18"	39"	12"	77"	138"	2	3 PC

NOTES

1. ALL 3 PIECE BODIES TO HAVE 12 GA SIDES AND 10 GA CENTER PANELS WIDTH OF CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIPHERY MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY 3/8" Ø GALVANIZED RIVETS OR BOLTS.
2. FOR THE 79"x 49" AND 85"x 54" SIZES, REINFORCED EDGE TO BE SUPPLEMENTED BY 2"x 2"x 1/4" GALVANIZED ANGLES THE ANGLES TO BE ATTACHED BY 3/8" Ø GALVANIZED NUTS AND BOLTS
3. ANGLE REINFORCEMENT WILL BE PLACED UNDER THE CENTER PANEL SEAMS ON THE 79"x 49" AND 85"x 54" SIZES
4. TOE PLATE SHALL BE USED WHEN SPECIFIED ON THE PLANS COST OF TOE PLATE TO BE INCLUDED IN BID PRICE PER EACH OF METAL END SECTION.
5. TYPE 3 CONNECTION INCLUDES ONE FOOT OF PIPE LENGTH FOR 65"x 40" THRU 85"x 54" DIAMETER AS A CONNETOR SECTION THE CONNECTOR SECTION WILL BE ATTACHED TO THE END SECTION BY GALVANIZED RIVETS AND BOLTS
6. WHERE END SECTION IS TO BE APPLIED TO A STRUCTURAL PLATE ARCH PIPE, THE END SECTION SHALL BE ORDERED WITHOUT THE ONE FOOT OF PIPE LENGTH AS STIPULATED IN NOTE 5, INSTEAD, DRILL HOLES AND FIELD BOLT THE END SECTION DIRECTLY TO THE STRUCTURAL PLATE ARCH PIPE

METAL END SECTION ARCH METAL PIPE

NOT TO SCALE



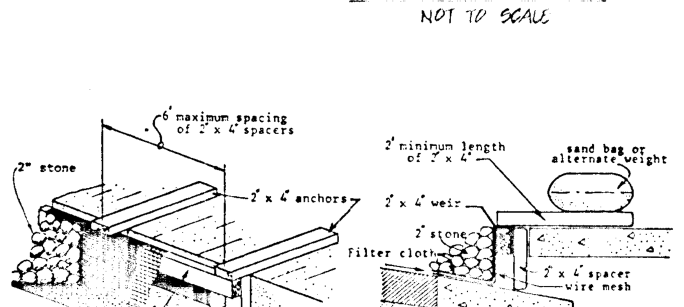
OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-V

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool 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 objectionable material. The embankment shall be compacted by traversing 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" 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.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ 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 than 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

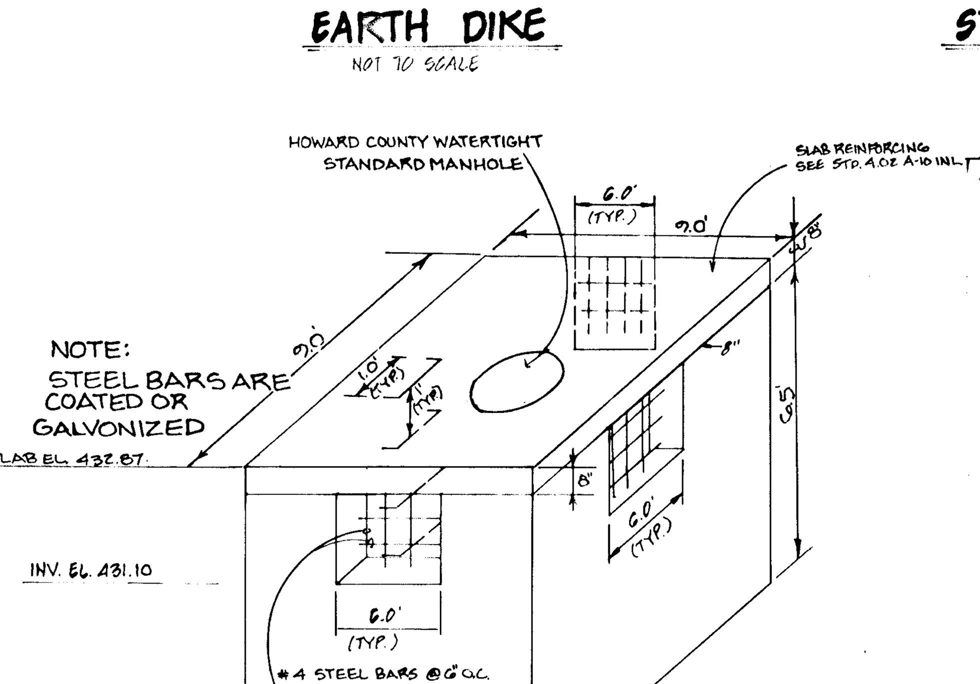
NOT TO SCALE



1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of 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.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

CURB INLET PROTECTION

NOT TO SCALE



TRASH RACK DETAIL

NOT TO SCALE

STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS

I. SITE PREPARATION

Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans. All fill material shall be CL or ML, as approved by Soils Engineer.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment, or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly. Compact all fill material to 95% of AASHTO T-99 density.

Core Trench

Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment, as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being 4-feet. The depth shall be at least 4-feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. Materials shall be CL or ML as approved by Soils Engineer.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed 4-inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than 4-feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a structure or pipe unless there is a compacted fill of 2-feet or greater over the structure or pipe.

IV. PIPE CONDUITS

A. CORRUGATED METAL PIPE

1. Materials - Metal Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with watertight coupling bands.
2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
5. Backfilling shall conform to structural backfill as shown above.
6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

V. CONCRETE

Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by permanent seeding and applying straw mulch in accordance with "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas" immediately after finish grading.

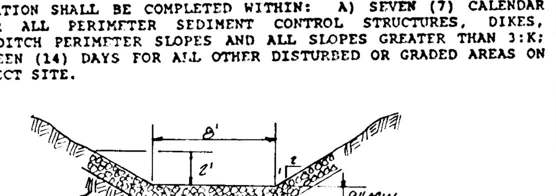
Fertilizer:	10-10-10	@ 11.5 lbs./1000 sq. ft.
Seed:	Crownvetch Inoculated	@ 0.5 lbs./1000 sq. ft.
	"KY-31" Tall Fescue	@ 1.5 lbs./1000 sq.ft.
Mulch:	Straw	@ 80 lbs./1000 sq.ft.
Asphalt Tie-down:	Slopes	@ 8 gal./1000 sq.ft.
	Flat areas	@ 5 gal./1000 sq.ft.

VII. FENCING

A 3'-6" chain-link fence shall be constructed in the location specified on the plan. Materials and construction shall be in accordance with Maryland State Highway Administration Standard Details 690.01 and 690.02.

CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SILT FENCE, TEMPORARY SWALE, SEDIMENT TRAP, AND STORMWATER MANAGEMENT BASIN.
3. START CLEARING AND GRUBBING.
4. CONSTRUCT STORM DRAIN SYSTEM WITH INLET PROTECTIONS, CONSTRUCT I-3 TO TEMPORARY END SECTION.
5. GRADE ROAD TO SUBGRADE, CONSTRUCT CURB AND LAY BASE COURSE.
6. FINE GRADE AND PERMANENTLY STABILIZE ALL DISTURBED AREAS WITH PERMANENT STABILIZATION MEASURES.
7. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAPS WHEN THE CLEANOUT ELEVATIONS ARE REACHED.
8. DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
9. REMOVE STONE CONSTRUCTION ENTRANCE.
10. CLEAN BASE COURSE. APPLY TACK COAT TO BASE COURSES AND LAY SURFACE COURSE. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING.
11. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
12. AFTER ALL CONSTRUCTION AND GRADING ARE COMPLETED, AND ALL AREAS ARE STABILIZED. REMOVE TEMPORARY END SECTION AND CONSTRUCT 15" PIPE AND END SECTION ACCORDING TO PLANS AND PROFILE SHOWN.
13. FILL AND REGRADE TRAP 5.
14. STABILIZE BY PERMANENT SEEDING.
15. FOLLOWING INITIAL SOIL DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) SEVEN (7) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) FOURTEEN (14) DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



RIPRAP APPROACH APRON

NOT TO SCALE

( ) By the Engineer:

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

[signature] 7/12/89 DATE

( ) By the Developer:

"I/We certify that all development and/or construction will be done according to these plans, and that any 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 will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

[signature] 7-3-89 DATE

( ) These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

James M. Helm / JRR 7/14/89
U.S. SOIL CONSERVATION SERVICE DATE

( ) These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Robert W. Zierhon / JRR 7/14/89
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 9/14/89
CHIEF, LAND DEVELOPMENT DIVISION DATE

Granville W. Wehland 9/13/89
CHIEF, BUREAU OF HIGHWAY DATE

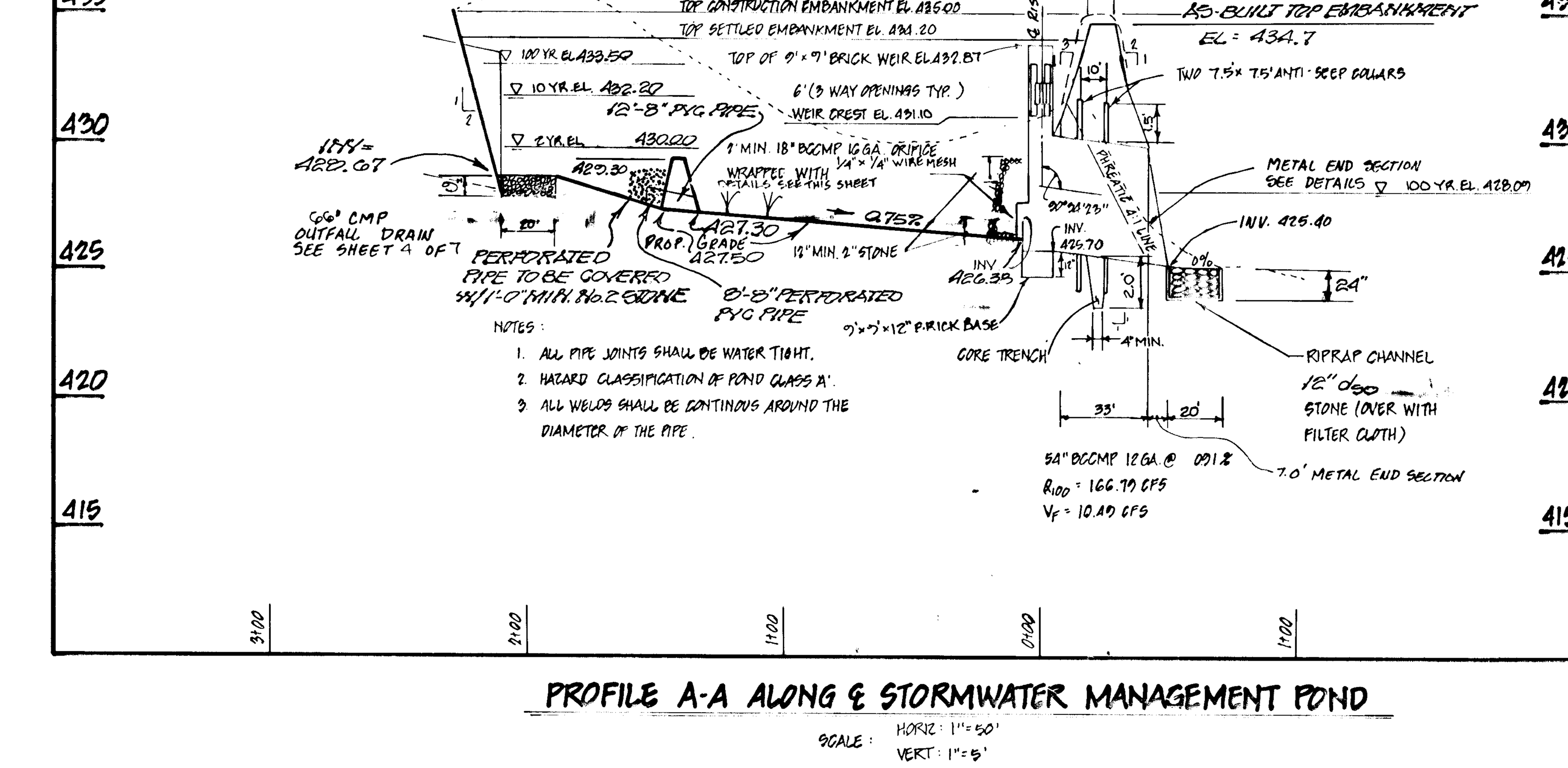
William E. Riley 9-15-89
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING

[signature] 9/15/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

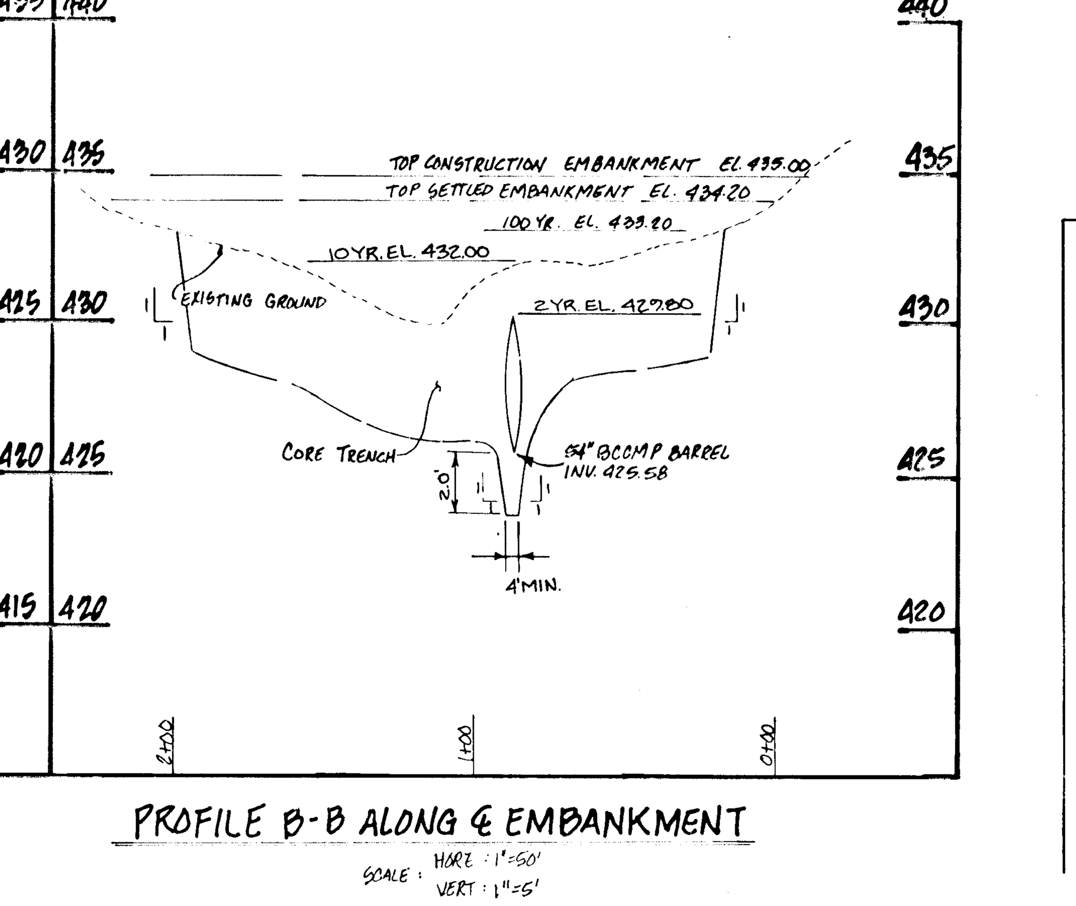
LS

STATE OF MARYLAND JOSE H. ESCALANTE 13265 REGISTERED PROFESSIONAL ENGINEER



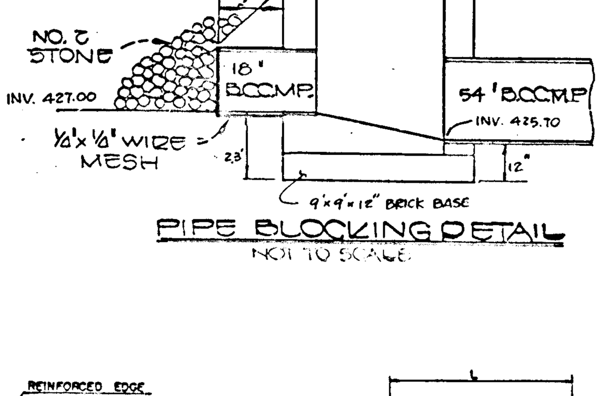
PROFILE A-A ALONG ℄ STORMWATER MANAGEMENT POND

SCALE: HORIZ: 1"=50' VERT: 1"=5'



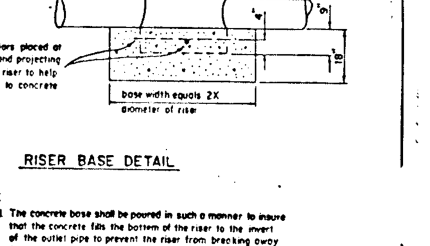
PROFILE B-B ALONG ℄ EMBANKMENT

SCALE: HORZ: 1"=50' VERT: 1"=5'



PIPE BLOCKING DETAIL

NOT TO SCALE



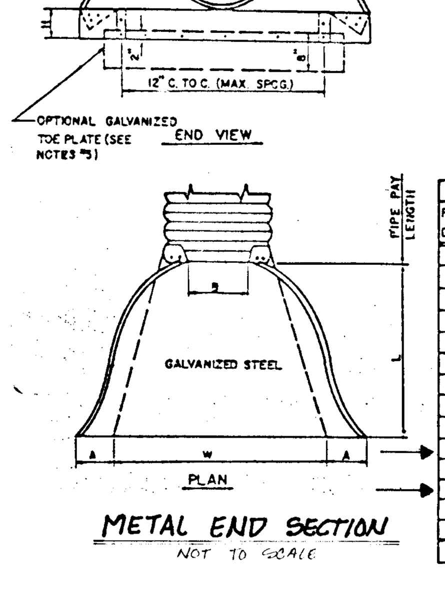
RISER BASE DETAIL

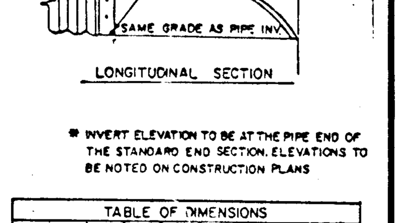
NOTES:

1. The concrete base shall be poured in such a manner to insure that the concrete fills the bottom of the riser to the invert of the outlet pipe to prevent the riser from breaking away from the base.
2. With aluminum or aluminized pipe, the embedded section must be painted with zinc chromate or equivalent.
3. Riser base may be sized as computed using floatation with a factor of safety of 1.2.

RISER BASE DETAIL SEDIMENT BASIN

NOT TO SCALE





* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS

TABLE OF DIMENSIONS

PIPE DIAM.	GA	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	APPROX. SLOPE	BODY
12"	16	5"	6"	5"	21"	24"	2 1/2	1 PC.
15"	16	7"	8"	6"	25"	30"	2 1/2	1 PC.
18"	16	8"	10"	6"	31"	36"	2 1/2	1 PC.
21"	16	9"	12"	6"	36"	42"	2 1/2	1 PC.
24"	16	10"	13"	6"	41"	48"	2 1/2	1 PC.
30"	14	12"	16"	8"	51"	60"	2 1/2	1 PC.
36"	14	14"	19"	9"	60"	72"	2 1/2	2 PC.
42"	12	16"	22"	11"	69"	84"	2 1/2	2 PC.
48"	12	18"	27"	12"	78"	90"	2 1/4	2 PC.
54"	12	18"	30"	12"	84"	102"	2	2 PC.
60"	12	18"	33"	12"	87"	114"	1 3/4	3 PC.
66"	12	18"	36"	12"	87"	120"	1 1/2	3 PC.
72"	12	18"	39"	12"	87"	125"	1 1/3	3 PC.
78"	12	18"	42"	12"	87"	132"	1 1/4	3 PC.
84"	12	18"	45"	12"	87"	138"	1 1/6	3 PC.

METAL END SECTION

NOT TO SCALE

DESIGNED	D.T.	11/88 date
DRAWN	D.P./C.D.	11/88 date
CHECKED	J.E.	11/88 date
APPROVED	T.W.	11/88 date

REVISIONS

DATE	BY	DESCRIPTION
7-28-93	E.R.B.	REV. PROFILE A-A TO ACCOMODATE REVISED FOREBAY & S-1

Dewberry & Davis

ARCHITECTS - ENGINEERS - PLANNERS - SURVEYORS
3300 N. RIDGE ROAD, SUITE 100
ELLICOTT CITY, MD. 21043
(301) 461-7478

STATE OF MARYLAND JOSE H. ESCALANTE NO. 13265 REGISTERED PROFESSIONAL ENGINEER

OWNER & DEVELOPER

LONG MEADOW VENTURERS
7050 OAKLAND MILLS ROAD
SUITE 100
COLUMBIA, MARYLAND 21046

STORMWATER MANAGEMENT PROFILES AND SEDIMENT CONTROL DETAILS

LONG MEADOW II

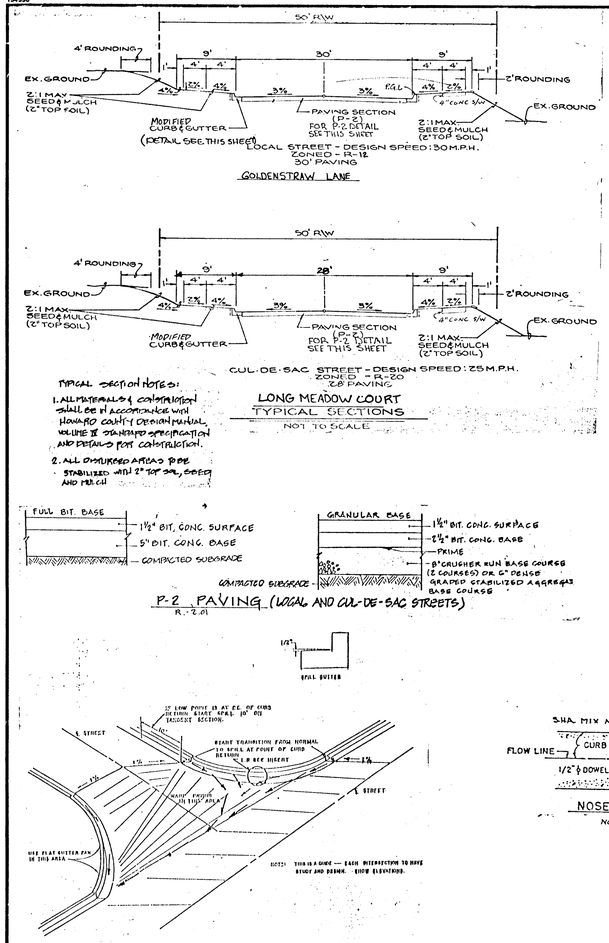
TAX MAP 36 PARCEL 264
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN | PREVIOUS SUBMITTALS: S-87-89, P-88-26 | FILE NO. F009-EC | SHEET 6 OF 7

1236 TCA

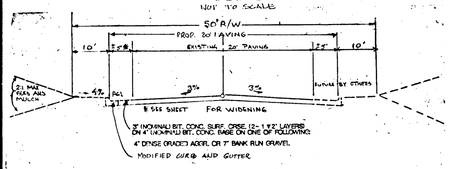
J&J COLUMBIA, MD.

F-89-90



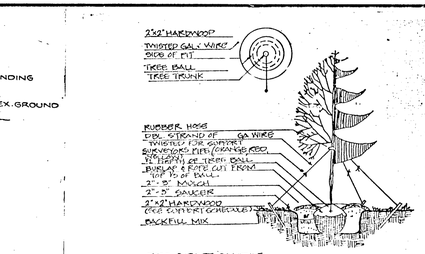
P-2 PAVING (LOCAL AND CUL-DE-SAC STREETS)
R-2.01

TYPICAL INTERSECTION GRADING DETAIL
NOT TO SCALE



LOCAL STREET/DESIGN SPEED 30 MPH
ZONED R-12

TYPICAL PAVING SECTION
DAVIS ROAD WIDENING
(NOT TO SCALE)



TREE SUPPORT SCHEDULE

TREE SIZE	SUPPORT
1½"-2" CAL.	2 STAKE & REG. 1 GA WIRE
2½"-3" CAL.	3 STAKES & REQ. 18 GA WIRE
3½"-4" CAL.	3 STAKES & REQ. 12 GA WIRE
4½"-6" CAL.	2" STAKE & REQ. 12 GA WIRE
20½"-6" CAL.	LEAGUE REQ. & CABLE & 1-2" TURNBUCKLE

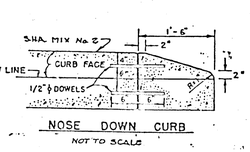
TREE GUYING DETAIL

Evergreen & Deciduous Trees over 2½ cal.) N.T.S.

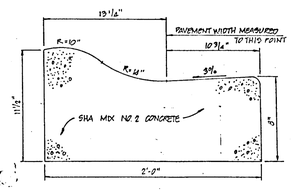
Contractor shall verify location of underground utilities prior to digging. Final location of trees may be adjusted slightly to accommodate field conditions. Planting procedures shall comply with "Landscape Specifications for Baltimore - Washington Metropolitan Areas." Substitutions to the above species may be permitted, provided that the planting is in accordance with the tree and landscape requirements as specified in section 16.131 of the Howard County Subdivision Regulations.

DENOTES APPROXIMATE LOCATION
planted 40 on center.

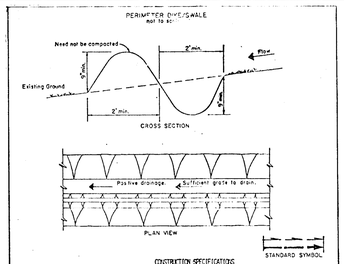
NOTE: REMOVE WIRE MESH FROM TREE ROOT BALL BEFORE BACKFILLING TREE PIT.



NOSE DOWN CURB
NOT TO SCALE



MODIFIED CURB & GUTTER
NOT TO SCALE
HO. CO. DETAIL R.3.01



CONSTRUCTION SPECIFICATIONS

1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NONERODIBLE VELOCITY.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SEED AND STRAW MULCH, AND SHALL BE DONE WITHIN 30 DAYS.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

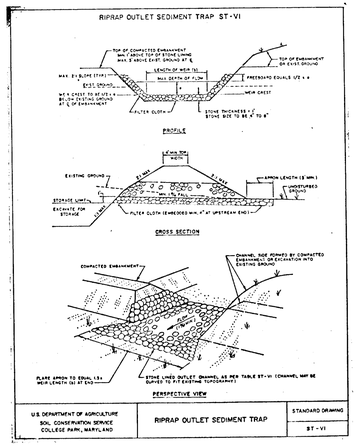
Max. Drainage Area Limit: 2 Acres

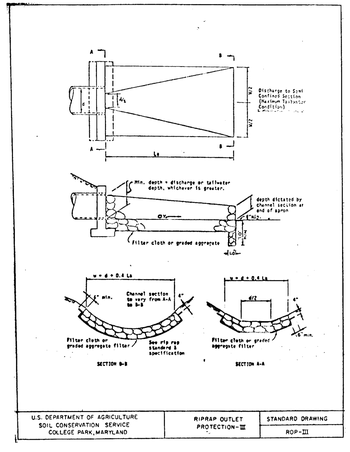
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	PERIMETER DIKE/SWALE	Standard Drawing PDS-1

Maryland SCS/WRA April 1983

CONSTRUCTION SPECIFICATIONS FOR ST-VI

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be four (4) to eight(8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
8. 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. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repaired as needed.
10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
12. Drainage area for this practice is limited to 15 acres or less.





Construction Specifications

1. Materials
   A. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
   B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
   C. Filter cloth must be of a type approved for this purpose resistant to sunlight with sieve size, E95, 40-85, to allow sufficient passage of water and removal of sediment.
2. Stone is to be 2" in size and clean, since fines would clog the cloth.

Curb Inlet Protection.

1. Attach a continuous piece of wire mesh (36" min. width by throat length plus 4') to the 2" x 4" weir framing throat length plus 2') as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions on the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 4' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of 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.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

ATEC Associates, Inc.
of Maryland
Geotechnical & Materials Engineers
RECORD OF SUBSURFACE EXPLORATION

CONTRACTED WITH: Long Meadow Ventures — BORING #: S-3
PROJECT NAME: Long Meadow II — JOB #: 87-93020
LOCATION: Howard County, Maryland
SAMPLER
Date: 3-13-1989 — Hammer Wt.: 140 Lbs. — Hole Diameter: 8 in. — Foreman: T. Murphy
Surf. Elev.: Ft. — Hammer Drop: 30 in. — Rock Core Dia.: — Inspector:
Date Started: 3-13-1989 — Pipe Size: 2 in. — Boring Method: HSA — Date Completed: 3-13-1989

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Plasticity, Max. Proportion)	STRA. DEPTH	DEPTH SCALE	SAMPLE Blows/6"	No.	Type	Rec.	BORING & SAMPLING NOTES
	N' VALUE							
	Grey to dark grey, moist very loose Silty fine to coarse SAND (SM), trace roots, clay, gravel and mica (FILL)	3.0	0	2 1-2	1	DS	18	Topsoil: 1.2 ft Water on Rod: 3.5 ft Completion: Water: 6 ft
	Tan, brown and grey, moist, med. dense Silty fine to coarse SAND (SM) little clay and mica (Sandy Loam)	5.5	5	3 5-6	2	DS	18	
	Tan, brown and grey, moist, medium dense to dense Silty fine to coarse SAND (SM), trace clay and mica (Loamy SAND)		10	6 7-6	3	DS	18	
				14 16-20	4	DS	14	
				12 14-29	5	DS	14	
	Terminated @ 15 ft.	15.0	15					
			20		6	DS		

SAMPLE CONDITIONS: D=DISTURBED, S=SPLIT, U=UNDISTURBED, C=CORE — SAMPLER TYPE: SS=SHELBY SPLIT SPOON, PT=PRESSED SHELBY TUBE, CA=CONTINUOUS FLIGHT AUGER, RC=ROCK CORE — GROUND WATER DEPTH: AT COMPLETION ___ Ft., AFTER ___ HRS. ___ Ft., AFTER 24 HRS. ___ Ft. — BORING METHOD: HSA=Hollow Stem Auger, FA=Flush Joint Auger, DC=Diamond Core, RC=Rock Core, DW=Drill Water, DR=Drill Rig
*STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30", COUNT MADE AT 6" INTERVALS

ATEC Associates, Inc.
of Maryland
Geotechnical & Materials Engineers
RECORD OF SUBSURFACE EXPLORATION

CONTRACTED WITH: Long Meadow Ventures — BORING #: S-3
PROJECT NAME: Long Meadow II — JOB #: 87-93020
LOCATION: Howard County, Maryland
SAMPLER
Date: 3-13-1989 — Hammer Wt.: 140 Lbs. — Hole Diameter: 8 in. — Foreman: T. Murphy
Surf. Elev.: Ft. — Hammer Drop: 30 in. — Rock Core Dia.: — Inspector:
Date Started: 3-13-1989 — Pipe Size: 2 in. — Boring Method: HSA — Date Completed: 3-13-1989

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Plasticity, Max. Proportion)	STRA. DEPTH	DEPTH SCALE	SAMPLE Blows/6"	No.	Type	Rec.	BORING & SAMPLING NOTES
	N' VALUE							
	Tan brown, moist to wet very loose Silty fine to coarse SAND (SM), trace to little clay and gravel FILL	3.0	0	1 1-1	1	DS	18	Topsoil:1.4 ft Water on Rod: Dry Completion: Water: Dry
	Light to dark brown, moist, med. dense Silty fine to coarse SAND (SM) trace clay and mica (Loamy Sand)		5	6 8-10	2	DS	18	
				5 8-13	3	DS	18	
	Auger Refusal	8.2		50/0	4	DS	N.R.	
			10					
			15		5	DS		
			20		6	DS		

SAMPLE CONDITIONS: D=DISTURBED, S=SPLIT, U=UNDISTURBED, C=CORE — SAMPLER TYPE: SS=SHELBY SPLIT SPOON, PT=PRESSED SHELBY TUBE, CA=CONTINUOUS FLIGHT AUGER, RC=ROCK CORE — GROUND WATER DEPTH: AT COMPLETION ___ Ft., AFTER ___ HRS. ___ Ft., AFTER 24 HRS. ___ Ft. — BORING METHOD: HSA=Hollow Stem Auger, FA=Flush Joint Auger, DC=Diamond Core, RC=Rock Core, DW=Drill Water, DR=Drill Rig
*STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30", COUNT MADE AT 6" INTERVALS

ATEC Associates, Inc.
of Maryland
Geotechnical & Materials Engineers
RECORD OF SUBSURFACE EXPLORATION

CONTRACTED WITH: Long Meadow Ventures — BORING #: S-2
PROJECT NAME: Long Meadow II — JOB #: 87-93020
LOCATION: Howard County, Maryland
SAMPLER
Date: 3-13-1989 — Hammer Wt.: 140 Lbs. — Hole Diameter: 8 in. — Foreman: T. Murphy
Surf. Elev.: Ft. — Hammer Drop: 30 in. — Rock Core Dia.: — Inspector:
Date Started: 3-13-1989 — Pipe Size: 2 in. — Boring Method: HSA — Date Completed: 3-13-1989

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Plasticity, Max. Proportion)	STRA. DEPTH	DEPTH SCALE	SAMPLE Blows/6"	No.	Type	Rec.	BORING & SAMPLING NOTES
	N' VALUE							
	Grey and tan, moist, very soft Silty CLAY (CL), trace roots	0.8	0	2 1-2	1	DS	18	Topsoil: 0.7 ft Water on Rod: 6 ft Completion: Water: 5 ft Cave-in: 6 ft
	FILL	3.0						
	Grey and tan, moist, med. dense Silty fine to coarse SAND (SM), little clay and mica (Sandy Loam)	6.0	5	6 8-11	2	DS	18	
	Light to dark brown, moist, very dense Silty fine to coarse SAND (SM) trace clay and mica Loamy Sand	9.2		10 9-6	3	DS	18	
	Auger Refusal		10	11 50/2"	4	DS	8	
			15		5	DS		
			20		6	DS		

SAMPLE CONDITIONS: D=DISTURBED, S=SPLIT, U=UNDISTURBED, C=CORE — SAMPLER TYPE: SS=SHELBY SPLIT SPOON, PT=PRESSED SHELBY TUBE, CA=CONTINUOUS FLIGHT AUGER, RC=ROCK CORE — GROUND WATER DEPTH: AT COMPLETION ___ Ft., AFTER ___ HRS. ___ Ft., AFTER 24 HRS. ___ Ft. — BORING METHOD: HSA=Hollow Stem Auger, FA=Flush Joint Auger, DC=Diamond Core, RC=Rock Core, DW=Drill Water, DR=Drill Rig
*STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30", COUNT MADE AT 6" INTERVALS

NOTE - SEE SHEET 5 OF 7 FOR BORING LOCATIONS.

( ) By the Engineer:

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

JOSEPH H. SCARLETT, MD REG. NO. 6275 — DATE 7/10/89

( ) By the Developer:

"I/We certify that all development and/or construction will be done according to these plans, and that any 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 will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District." — DATE 7-3-89

( ) These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control. — U.S. SOIL CONSERVATION SERVICE — DATE 7/14/89

( ) These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District. — HOWARD COUNTY SOIL CONSERVATION DISTRICT — DATE 7/14/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 9/12/89
CHIEF, BUREAU OF HIGHWAY — DATE 9/13/89
CHIEF, BUREAU OF ENGINEERING — DATE 9-15-89

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF DEVELOPMENT PLANNING AND LAND DEVELOPMENT — DATE 9/19/89

DESIGNED	date	REVISIONS	
DRAWN	date	DATE	BY	DESCRIPTION
CHECKED	date	6-30-89	KRI WDG.	REV. AS PER OPZ & HSC COMMENTS.
APPROVED	date			

Dewberry & Davis
ENGINEERS — ARCHITECTS — PLANNERS — SURVEYORS
3300 N. RIDGE ROAD, SUITE 100
ELLICOTT CITY, MD. 21043
(301) 461-7478

STATE OF MARYLAND — JOSEPH H. SCARLETT — NO. 6275 — REGISTERED PROFESSIONAL ENGINEER

OWNER & DEVELOPER
LONG MEADOW VENTURES
7050 OAKLAND MILLS ROAD
SUITE 100
COLUMBIA, MD 21046

SECTIONS AND DETAILS
LONG MEADOW II
TAX MAP: 36 PARCEL:264
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN — PREVIOUS SUBMITTALS: S-87-89, P-88-26 — FDP9-EC — FILE NO. — SHEET 7 OF 7

1236

F-89-90