

**General Notes:**

1. All Storm Drain & Sewing shall be Constructed in Accordance with the latest edition of specifications of Howard County, MD SHA.
2. Types of Storm Drainage refer to the Standard Details of Howard County and MD SHA.
3. Trench Compacting for Storm Drains within Road or Street Right of Way Limits shall be in accordance with Howard County Design Manual Vol. II (Class C trench Backfill to be used for all Storm drains except where shown otherwise.)
4. Information concerning underground utilities was obtained from Available records, but the Contractor must determine the Exact Location and Elevation of the Mains by digging test pits by hand, at all utility crossings, well in advance of construction.
5. All Utility companies shall be notified 24 hours in advance of construction.
6. All traffic services, parking & signing to be done in Accordance with the "Manual of Uniform Traffic Control Devices", 1988 edition.
7. Sag and Crest Vertical Curves were designed in Accordance with "Howard County Design Manual Vol. II".
8. Provide concrete Sidewalk ramps, Howard County Std. type A, R-1.0. Where shown in Plans.
9. The Contractor or developer shall contact the Construction Ins. (410) Survey Division 24 hours in advance of commencement of work (#313-1880).
10. Design Speed: See Chart, Sht. 708 Zoning: R-20
11. Storm Water management provided by Calvert Ridge.
12. Stopping Site Distances are not shown in Cul-de-sac area. Since turns, parking & travel speeds dictate the conditions for stopping rather than the Standard Stopping Sight Distance of a traveled way.
13. FOR DRIVEWAY REQUIREMENTS SEE SHEET 3.
14. Street lights shall be provided at the locations shown in the Street Light Schedule shown on this sheet and in accordance with Volume III of the Howard County Design Manual.
15. REFERENCE FILE #3: 8-89-56, P-89-78 (NP-22-82).

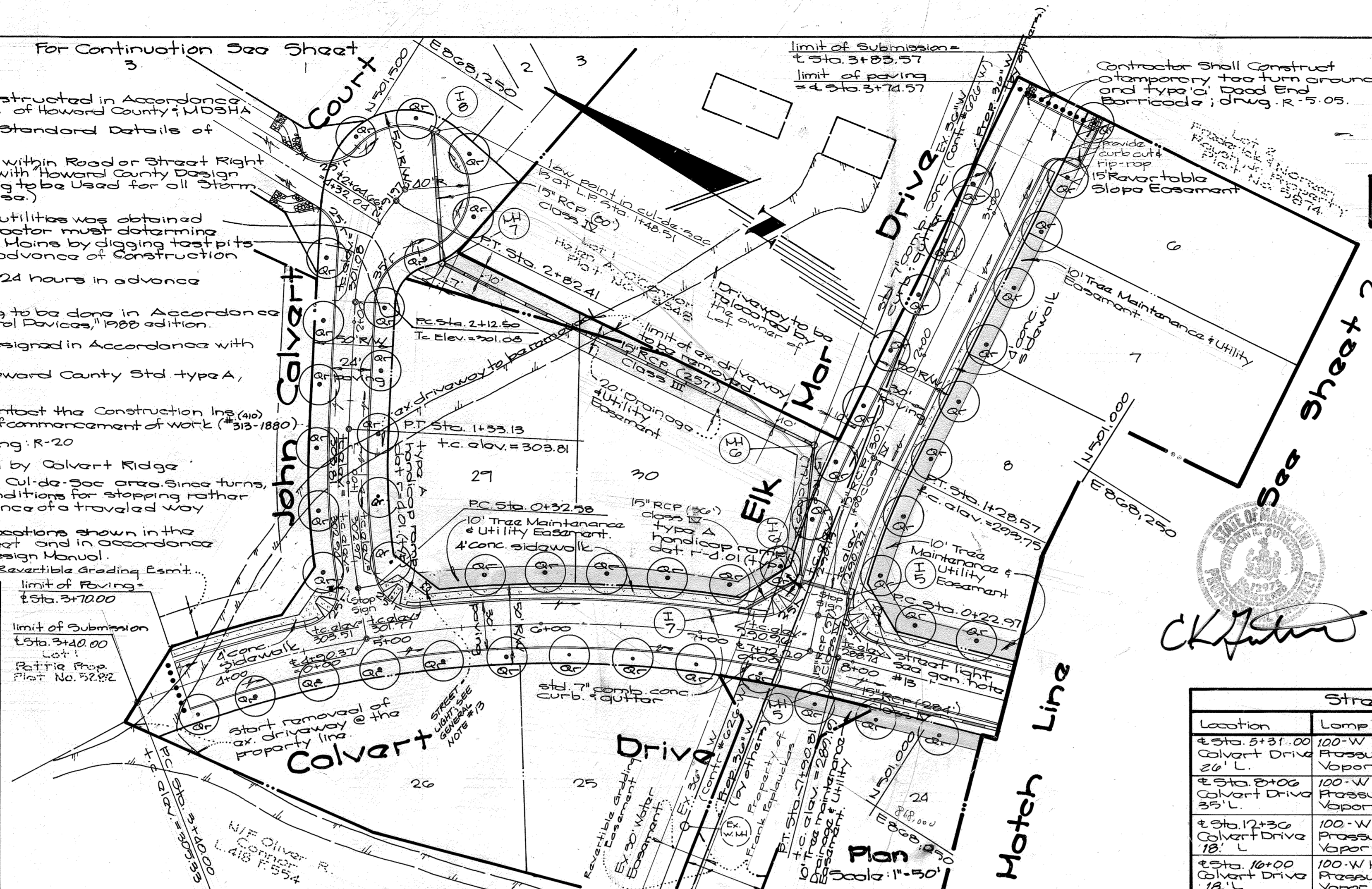
Approved Department of Public Works  
*Helen A. O'Connor* 4/6/95  
 Chief, Land Development Div. MK Date

Approved Department of Highways  
*William M. Parker* 5-26-95  
 Chief, Bureau of Highways /HS Date

Approved Department of Engineering  
*James J. ...* 6/8/95  
 Chief, Bureau of Engineering Date

Approved Department of Planning & Zoning  
*Anna Swinbank* 6/12/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

For Continuation See Sheet 3



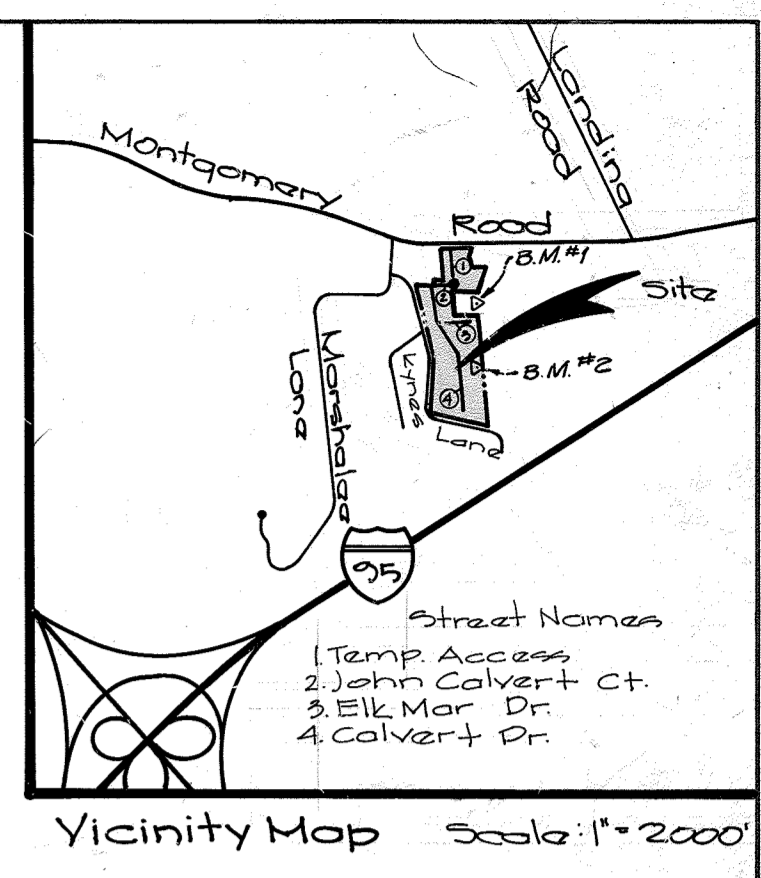
General Notes (cont.)  
 16. Sidewalk ramps at intersections shall conform to ADA req.  
 17. Fill areas shall meet 95% composition in accordance with methods accepted for each construction operation.

**Note:**  
 See Sheet 3 for important note regarding dedication of public roads in this subdivision.

DATE	REVISION	BY
3-7-97	Rev. Lot Line for Lots 21421 per 12014	GT

ENGINEER'S CERTIFICATE  
 I certify that this plan for road 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.  
*CK Johnson* 2-14-91  
 Date

DEVELOPER'S/BUILDER'S CERTIFICATE  
 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 of a Department of the Environment 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 HSD.  
*Helen A. O'Connor* 2/14/91  
 Signature of Developer/Builder Date



\*SEE SHEET 2 FOR PLANTING DETAIL AND LOCATION OF PLANTINGS FOR THE STORMWATER MANAGEMENT FACILITY.

Tree Schedule							
Symbol	Name (Botanical / Common)	Size	Quant.	Remarks			
Qr	Quercus Rubra / Red Oak	2 1/2" dia	106	B.P. Full Rod			

Curve Data							
Road Name	PC Sta.	PCC Sta.	PT Sta.	Arc	Radius	Delta	Tangent
Calvert Drive	3+40.00		7+70.81	450.81'	725.00'	95°37'38"	232.90'
John Calvert Ct.	0+32.58		1+33.18	100.55'	100.00'	172°51'27"	150.40'
John Calvert Ct.	2+12.50		2+82.21	69.92'	100.37'	37°39'35"	36.27'
Elk Mar Drive	0+22.97		1+28.57	105.60'	450.00'	157°26'45"	53.01'

Street Light Schedule			
Location	Lamp Type	Mounting	Pole Type
Sta. 3+31.00 Calvert Drive 26' L.	100-W High Pressure Sodium Vapor	TRADITIONAL POST TOP	14' Black Fiberglass
Sta. 8+08 Calvert Drive 55' L.	100-W High Pressure Sodium Vapor	TRADITIONAL POST TOP	14' Black Fiberglass
Sta. 12+30 Calvert Drive 18' L.	100-W High Pressure Sodium Vapor	TRADITIONAL POST TOP	14' Black Fiberglass
Sta. 18+00 Calvert Drive 18' L.	100-W High Pressure Sodium Vapor	TRADITIONAL POST TOP	14' Black Fiberglass

**GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20886  
 TEL.: (301) 421-4024

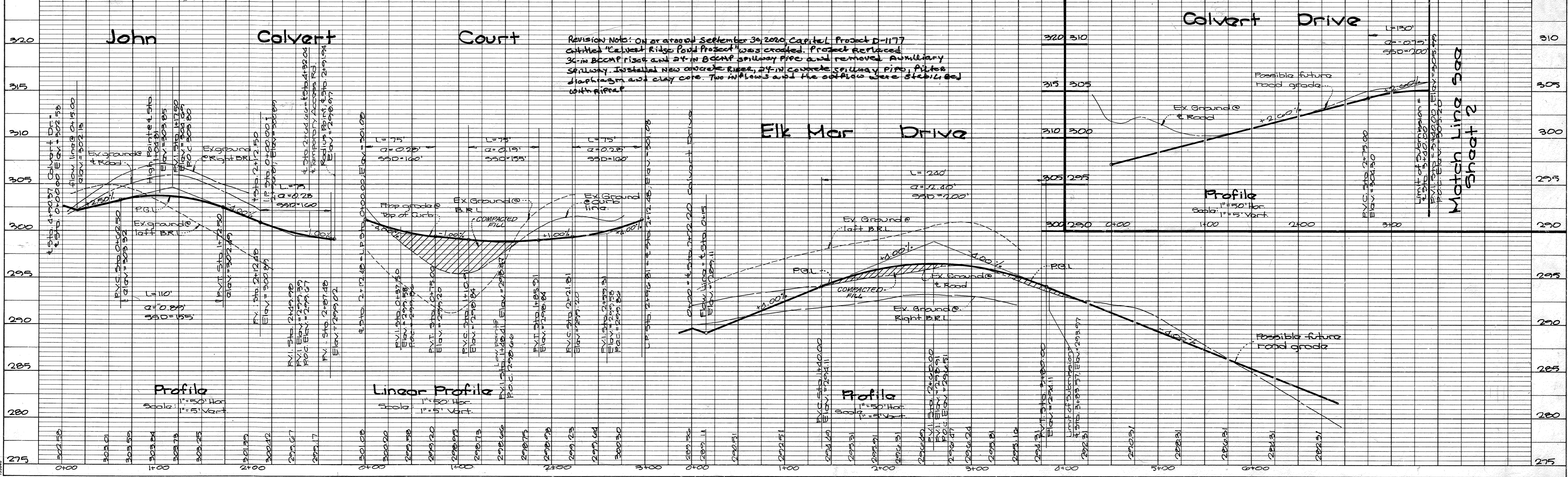
DESIGNED DE.V.  
 DRAWN M.C.F.  
 CHECKED C.K.G.  
 DATE MAY 1994

**Calvert Ridge**  
 Lots 1 thru 31  
 First Election District  
 Howard County, Maryland

OWNER:  
 Helen A. O'Connor  
 6740 Montgomery Road  
 Elkridge, Md 21227

SCALE AS SHOWN  
 DRAWING 1 of 10  
 JOB NO. 88-100

1651



REVISION NOTE: On or around September 30, 2020, Capital Project D-1177 entitled 'Calvert Ridge Road Project' was executed. Project replaced 36" in BCCP rises and 24" in BCCP subway pipe and removed Auxiliary Subway. Installed New concrete rises, 24" in concrete subway pipe, 12" dia diaphragm and clay core. Two inlets and the outlet were stabilized with riprap.



NOTE: THE 50' TEMPORARY IMPROVED/EGRESS EASEMENT WITHIN LOT 1 IS TO REMAIN IN EFFECT AND BE PRIVATELY MAINTAINED UNTIL CALVERT DRIVE IS CONNECTED WITH A ROAD EXTENSION THRU AN ADJACENT SUBDIVISION. AT THAT TIME, THIS SUBDIVISION SHALL DISCONTINUE USE OF THE PRIVATE ACCESS ROAD AND THE DEVELOPER IS RESPONSIBLE FOR REMOVING THE ROAD PAVEMENT, REGRADING AND RESEEDING THE AFFECTED AREA SEE SHEET 4 FOR PLAN VIEW OF FINAL ROAD IMPROVEMENT.

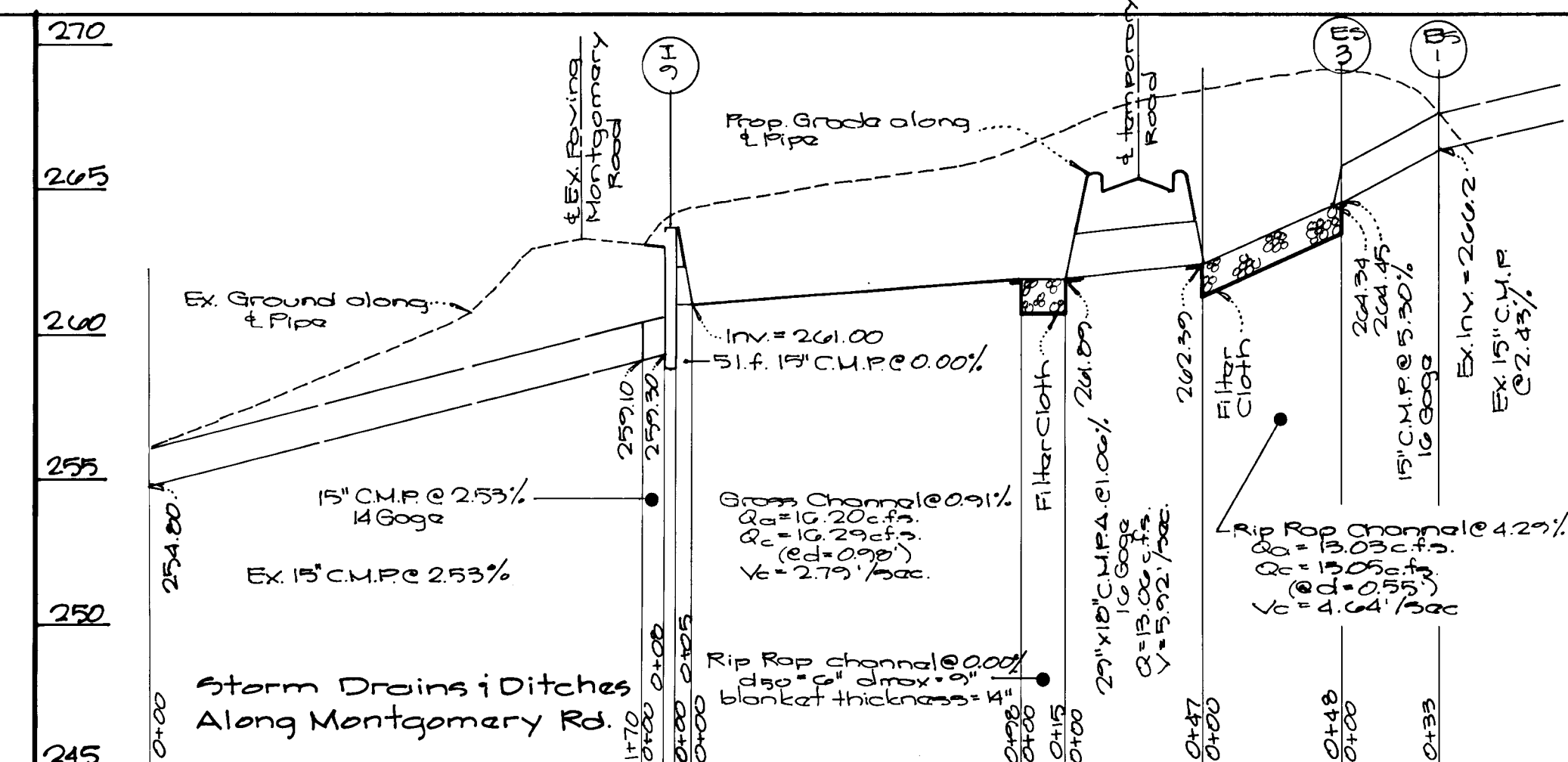
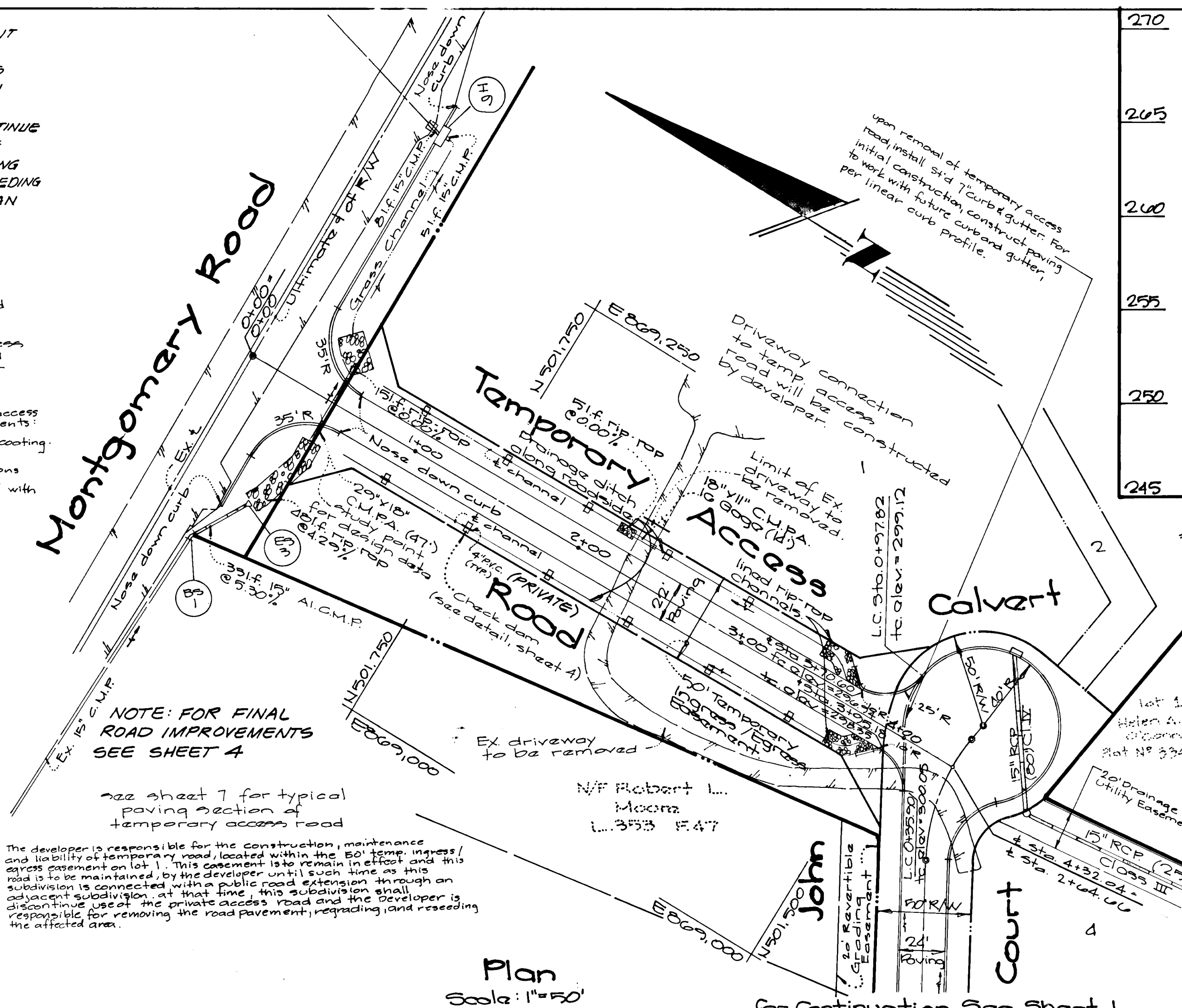
Design Data for Temporary Access Road  
 Smax = 11.4% (max. along south-southbound)  
 Vmax = 2.0' / 100' (max. at 29' x 18' C.M.P.A.)

Since max. velocity anticipated in swale is less than 4 mph, this swale treatment will be rigid bedding. Solid bedding will also be used for the check dams.

Driveway Requirements  
 1. Driveways shall be provided to residential occupancy to insure safe access for fire & emergency vehicles per the following minimum requirements:  
 a. width - 12 ft. (10 ft. serving more than one residence)  
 b. surface - 1/2" of compacted crusher run base with top 2" chip coating  
 c. geometry - max. 15% grade, max. 10% grade change & min. of 45 feet turning radius  
 d. structures (culvert/bridges): capable of supporting 25 gross tons (125 loading)  
 e. drainage elements - capable of safely passing a 100-year flood with no more than one foot depth over driveway surface  
 f. structure clearances - minimum 12 feet  
 g. maintenance - sufficient to insure all-weather use.

Approved Department of Public Works  
 Chief, Land Development Div. MK Date 6/16/95  
 Chief, Bureau of Highways 1/8 Date 5-26-95  
 Chief, Bureau of Engineering Date 6/18/95

Approved Department of Planning & Zoning  
 Chief, Division of Land Development, DATE AND RESEARCH 6/12/95



operations & maintenance guidelines  
 1. Owner shall keep accurate records of inspections & maintenance type repairs. These records should include a copy of "as-built" plans and 24-hour punch list.  
 2. Owner shall make a visual inspection of the facility at least twice per year once the summer after facilities are installed and during the winter when the vegetation is inactive. Additional inspections shall be made during and after extreme weather events. The owner shall check for cracking, rutting, potholes, and other signs of wear and damage. If any of these conditions are observed, the owner shall contact a professional engineer to assess the problem and make a suggestion to remedy it as quickly as possible. The Howard County Department of Maryland Law Safety Division shall be contacted before major repairs are made.  
 3. During extreme weather events, the owner shall check for cracking, rutting, potholes, and other signs of wear and damage. If any of these conditions are observed, the owner shall contact a professional engineer to assess the problem and make a suggestion to remedy it as quickly as possible. The Howard County Department of Maryland Law Safety Division shall be contacted before major repairs are made.  
 4. The owner shall check for stone deterioration or stone loss and spillway failure.  
 5. Rip rap outlet: check for stone deterioration or stone loss and spillway failure.  
 6. Dewatering device: remove blockages.  
 7. Vegetation: remove vegetation cover to stabilize all embankments and ensure that the vegetation is properly maintained.  
 8. Trees and brush: trees and brush shall be removed from the roadway and inside the fenced area. Also remove any blockages.  
 9. Mowing: mowing is necessary to control the establishment of weeds and grasses and to maintain the appearance of the embankment. A 25-foot wide (except in wetland stream buffers) strip adjacent to the top of the embankment shall be mowed at least once a year (mid to late summer) but may be done more often by the subdivision residents.  
 10. Signs: the following warning signs should be placed for when inspecting for seepage problems: (1) check (long term) and (2) short term for seepage signs on adjacent stream.  
 11. Seepage: long cracks, slides, slumping and excessive settlement are signs of embankment instability and a need for repair. Repair must be approved by Howard County Soil Conservation District.  
 12. Safety: check for ditches, which can lead to seepage and remove debris when encountered.

ENGINEER'S CERTIFICATE  
 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.  
 Date 2-14-91  
 DEVELOPER'S/BUILDER'S CERTIFICATE  
 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 the Environment 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 HSCD.  
 Date 2/14/91  
 Signature of Developer/Builder

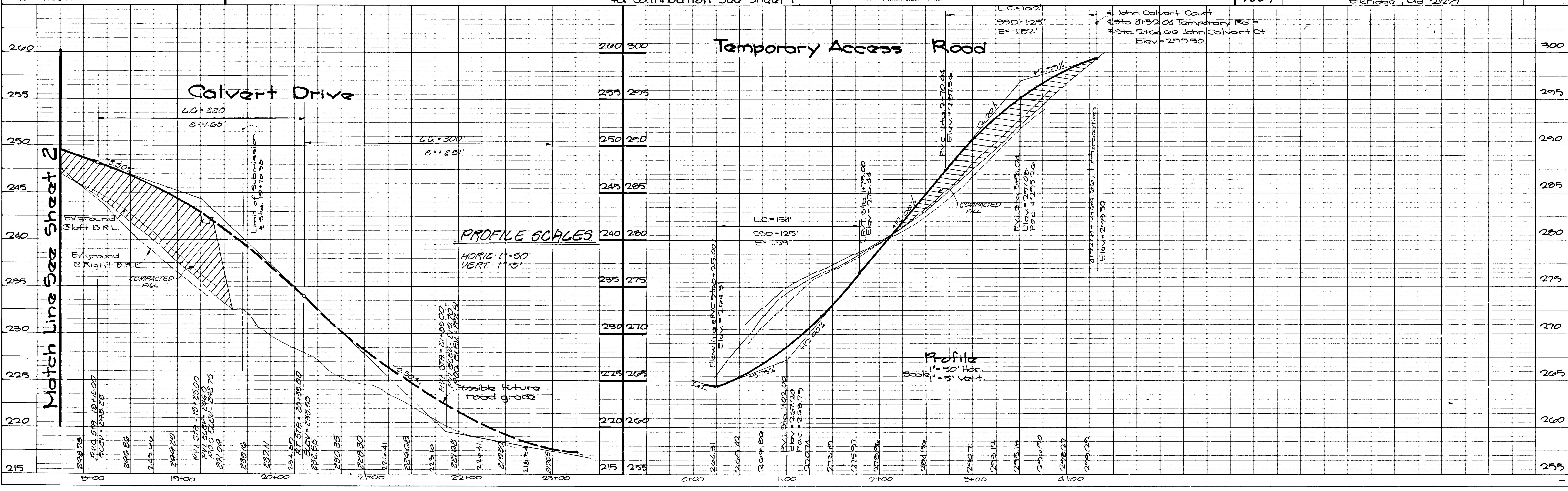
**G.W. GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE - SUITE 250 BURTNSVILLE OFFICE PARK - BURTNSVILLE, MD 20866  
 TEL: (301) 421-4024

DESIGNED DEV: MCF  
 DRAWN MCF  
 CHECKED CKS  
 DATE MAY 1994

SCALE: As Shown  
 DRAWING: 3 of 10

**Calvert Ridge**  
 Lots 1 thru 31  
 First Election District  
 Howard County, Maryland

OWNER: Alan A. O'Connor  
 6520 Montgomery Road  
 Elkridge, Md 21227  
 JOB NO: 88-100



1651

**Stone Outlet Sediment Trap**

Drainage Area = 2.98 Ac  
 Volume Required = 672 cf  
 Bottom Elevation = 202.00  
 Bottom Dimensions: Varies  
 L.O.S. Elevation = 203.00  
 Depth = 3.0'  
 Cleanout Elev. = 203.50  
 Top of Dam Elev. = 207.00  
 Weir Crest = 204.00

**LEGEND**

- W --- W --- LIMIT OF WETLANDS
- 208 --- EXISTING CONTOUR
- 208 --- PROPOSED CONTOUR
- --- DRAINAGE AREA DIVIDE
- LIMIT OF DISTURBANCE
- E.D. → EARTH DIKE
- S --- STRAIN BALE/BILT FENCE
- STONE CONSTRUCTION ENTRANCE

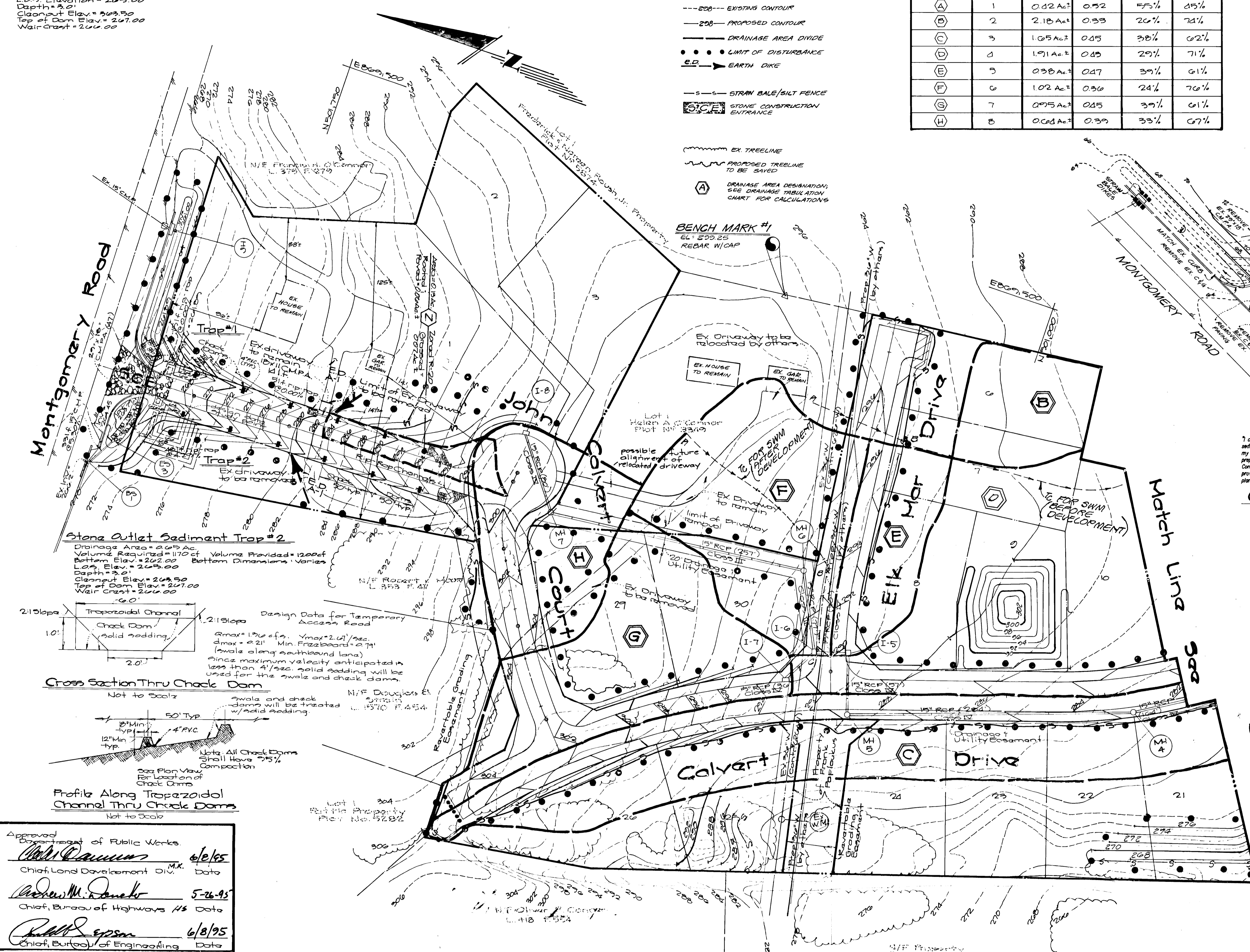
**Drainage Area Tabulation**

Drainage Area	Inlet No.	Area	C Value	% Roofed	% Area Grassed
A	1	0.02 Ac.	0.52	75%	0%
B	2	2.18 Ac.	0.33	26%	70%
C	3	1.05 Ac.	0.45	38%	0%
D	4	1.91 Ac.	0.45	29%	71%
E	5	0.38 Ac.	0.47	39%	0%
F	6	1.02 Ac.	0.36	24%	70%
G	7	0.95 Ac.	0.45	39%	0%
H	8	0.04 Ac.	0.39	33%	0%

- EX. TREELINE
- PROPOSED TREELINE TO BE SAVED
- (A) DRAINAGE AREA DESIGNATION; SEE DRAINAGE TABULATION CHART FOR CALCULATIONS

**BENCH MARK #1**  
 EL. 200.25  
 REBAR W/CAP

**FINAL ROAD IMPROVEMENTS**  
 SCALE: 1" = 50'



**ENGINEER'S CERTIFICATE**  
 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.

*CK Futrowski* 2/14/91  
 Date

**DEVELOPER'S/BUILDER'S CERTIFICATE**  
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*John A. O'Connor* 2/14/91  
 Signature of Developer/Builder Date

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

*Robert W. Zickler* 6/6/95  
 Howard Soil Conservation District Date

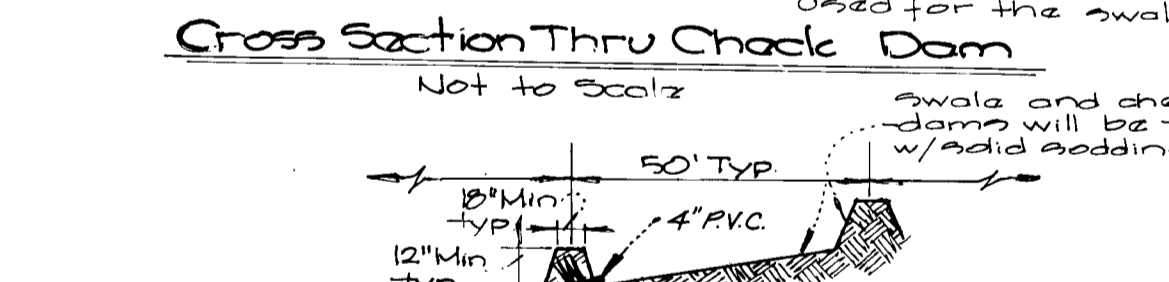
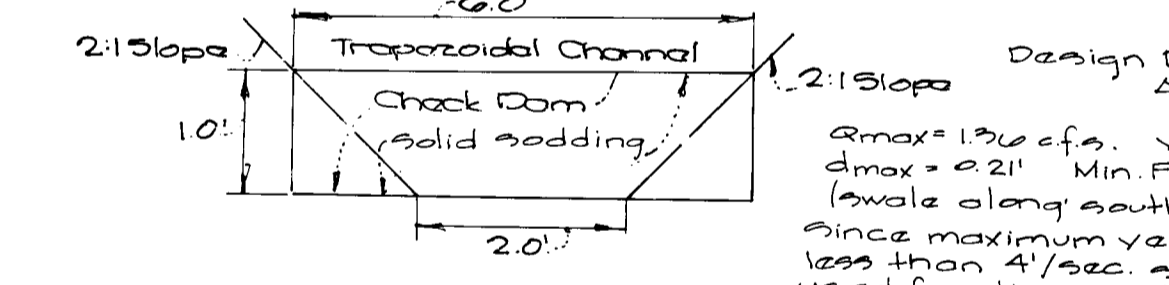
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

*R.G. Campbell* 6/6/95  
 S. Soil Conservation Service Date

**Construction Sequence**

1. Obtain grading permit.
2. Install stone construction entrance as shown on these plans.
3. Install silt fence and construct ramp as shown on these plans. Install low flow blocking and S.O.S.T. #1 & #2.
4. Install storm drains in order to divert runoff to Sediment Basin.
5. Basin grading and install utilities.
6. Repair stone construction entrance as necessary after installation of utilities is complete.
7. Bring roadgrades up to subgrade and direct flow to inlet openings.
8. Install curb, gutter, sidewalks and paving as shown.
9. After paving is completed, stabilize all disturbed areas in accordance with permanent seeding notes.
10. Upon approval of the Howard County Sediment Control Insp., remove all sediment control devices and convert ramp sediment control basin to stormwater management pond as follows:
  - a. pump out impounded water from the basin
  - b. Remove all sediment from the basin and place it as per the directions of the Sediment Control Inspector.
11. Contractor shall make all necessary repairs to the stormwater management pond to insure that it conforms with the grad as shown on these plans.
12. Upon completion of stabilization of disturbed area and with the COUNTY INSPECTOR'S PERMISSION REMOVE THE SEDIMENT CONTROL DEVICES.

**Stone Outlet Sediment Trap #2**  
 Drainage Area = 0.09 Ac  
 Volume Required = 1170 cf  
 Bottom Elev. = 202.00  
 Bottom Dimensions: Varies  
 L.O.S. Elev. = 203.00  
 Depth = 3.0'  
 Cleanout Elev. = 203.50  
 Top of Dam Elev. = 207.00  
 Weir Crest = 204.00



Approved Department of Public Works  
*John A. O'Connor* 6/6/95  
 Chief, Land Development Div. MK Date

Approved Bureau of Highways  
*Robert M. Danek* 5-26-95  
 Chief, Bureau of Highways HS Date

Approved Bureau of Engineering  
*Robert W. Zickler* 6/8/95  
 Chief, Bureau of Engineering Date

Approved Department of Planning & Zoning  
*Jim Jimenez* 6/12/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

**NOTE: TIME OF CONCENTRATION AFTER DEVELOPMENT FOR STORMWATER MANAGEMENT BECOMES RIPE FLOW TO THE POND AT I-G. (POINT C)**

**G.W. GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD 20886  
 TELEPHONE: (301) 421-4024

DATE	REVISION	BY	APPR.
8-7-77	Rev. Lot Line for Lots 27 & 30 Per Plat No. 12579	GT	

PREPARED FOR:  
 Holan A. O'Connor  
 6840 Montgomery Road  
 Ellicott City, MD 21127

**Mass Grading Plan**  
**Calvert Ridge**  
 Lots 1 thru 31  
 First Election District  
 Howard County, Maryland

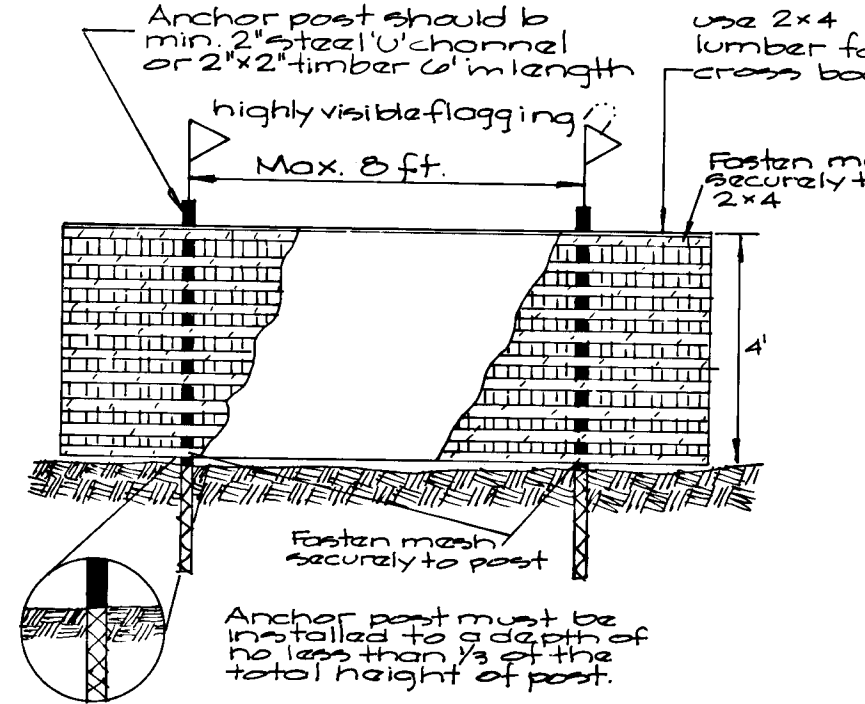
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As Shown	R-20	88-100
DATE	TAX MAP No.	SHEET
MAY 1994	37	4 of 10

1651

# Legend

- W—W— Limit of Wetlands
- 298--- Existing Contour
- 298— Proposed Contour
- Drainage Area Divide
- Limit of Disturbance
- E.D. → Earth Dike
- Straw Bale / Silt Fence
- 5'CE Stone Construction Entrance
- ▲ Stream Buffer
- Wetlands Buffer
- ~ Ex Traze Line
- ~ Proposed Traze Line to be Saved
- A Drainage Area Designation, See Drainage Area Tabulation Chart for Calculations
- x-x-x-x Tree Protection Fence

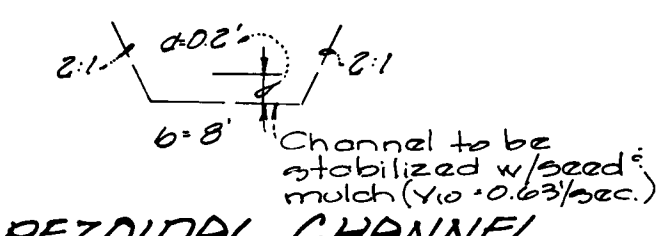
## Blaze Orange Plastic Mesh



- Notes:
- Boundaries of retention area should be staked and flagged prior to installing device.
  - Root damage should be avoided.
  - Device should be maintained throughout construction.

## TRAPEZOIDAL CHANNEL DETAIL

NOT TO SCALE



Pipe Schedule	Length	Notes
15" CMP 10 Gauge	331 f.	
15" CMP 14 Gauge	131 f.	
20" x 10" CMPA 10 Gauge	471 f.	
18" x 12" CMPA 10 Gauge	141 f.	
15" RCP class III	771 f.	
15" RCP class IV	1504 f.	
18" RCP class III	172 f.	
24" BCCMP 10 Gauge	351 f.	
12" BCCMP 10 Gauge	51 f.	
30" BCCMP 10 Gauge	41 f.	
54" BCCMP 14 Gauge	21 f.	

Drainage Area	1/100th	Area (Ac. Area)	C Value	Roofed / Paved	Area / Gross
A	1	0.42	0.52	59%	45%
B	2	2.18	0.39	26%	74%
C	3	1.65	0.45	30%	62%
D	4	1.91	0.43	29%	71%

Structure No.	Type	In	Out	Top Elev.	Bottom Elev.	Remarks	Centerline Road Station
I-1	A-5 w/diact	244.55	244.30	280.80	280.64	5+0.01, 5+0.25	7+75 Calvert Dr. 15.52'R
I-2	A-10 w/diact	246.53	246.42	280.04	280.04	5+0.42, 5+0.48	12+39 Calvert Dr. 15.52'R
I-3	A-10 w/diact	275.07	274.00	280.72	280.72	5+0.42, 5+0.48	12+46 Calvert Dr. 15.52'R
I-4	A-10	276.45	281.14	280.54	280.42	5+0.42	11+95 Calvert Dr. 15.52'L
I-5	A-5 w/diact	285.91	285.77	280.35	280.15	5+0.41, 5+0.49	0+41 Elk Mar Dr. 15.52'L
I-6	"	286.45	286.14	280.15	280.15	"	0+41 Elk Mar Dr. 15.52'L
I-7	"	286.63	291.42	281.21	"	"	7+25 Calvert Dr. 15.52'L
I-8	A-5	285.30	286.64	286.64	286.64	5+0.41	L.P. Sta. 1+48.41 John Calvert Ct. 5+0.41
I-9	A-10	281.00	289.30	285.67	285.67	5+0.42	5+0.42
MH-1	Std.	239.50	236.15	—	—	G. 5.01	See Plan
MH-2	"	230.68	236.17	264.84	—	G. 5.01	16+72 Calvert Dr. 15.52'R
MH-3	"	257.00	256.79	262.04	—	G. 5.01	15+06 Calvert Dr. 15.52'R
MH-4	"	279.25	279.15	283.64	—	G. 5.01	10+70 Calvert Dr. 21'R
MH-5	"	285.17	285.07	289.45	—	G. 5.01	7+89 Calvert Dr. 20'R
MH-6	"	291.29	291.19	—	—	G. 5.01	See Plan
MH-7	"	294.60	294.50	—	—	G. 5.01	See Plan
ES-1	End Section	234.10	234.50	236.20	—	5.0 5.51	See Plan

DEVELOPER'S/BUILDER'S CERTIFICATE

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*John A. O'Connor* 2/14/91  
Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE

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*J.G. Wadsworth* 2-14-91  
Signature of Engineer Date

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

*Rod W. Zick* 4/6/94  
Howard Soil Conservation District 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.

*J.G. Wadsworth* 4/6/94  
Howard Soil Conservation District Date

Approved Department of Public Works  
*John A. O'Connor* 4/6/95  
Chief, Land Development Div. M.K. 05.10

Approved Department of Highways  
*Andrew M. Danek* 5-26-95  
Chief, Bureau of Highways AS Data

Approved Department of Engineering  
*Paul J. Sapon* 4/6/95  
Chief, Bureau of Engineering Date

Approved Department of Planning & Zoning  
*Gina Surinami* 6/12/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

**G.L.W. GUTSCHICK LITTLE & WEBER, P.A.**  
ENGINEERS, PLANNERS, SURVEYORS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866  
TELEPHONE: (301) 421-4024

NO.	DATE	REVISION	BY	APP'R.
1	2/2/92	Add riprap to taken spillway & added sediment control information @ S.W.M. Pond.		M.E.F.

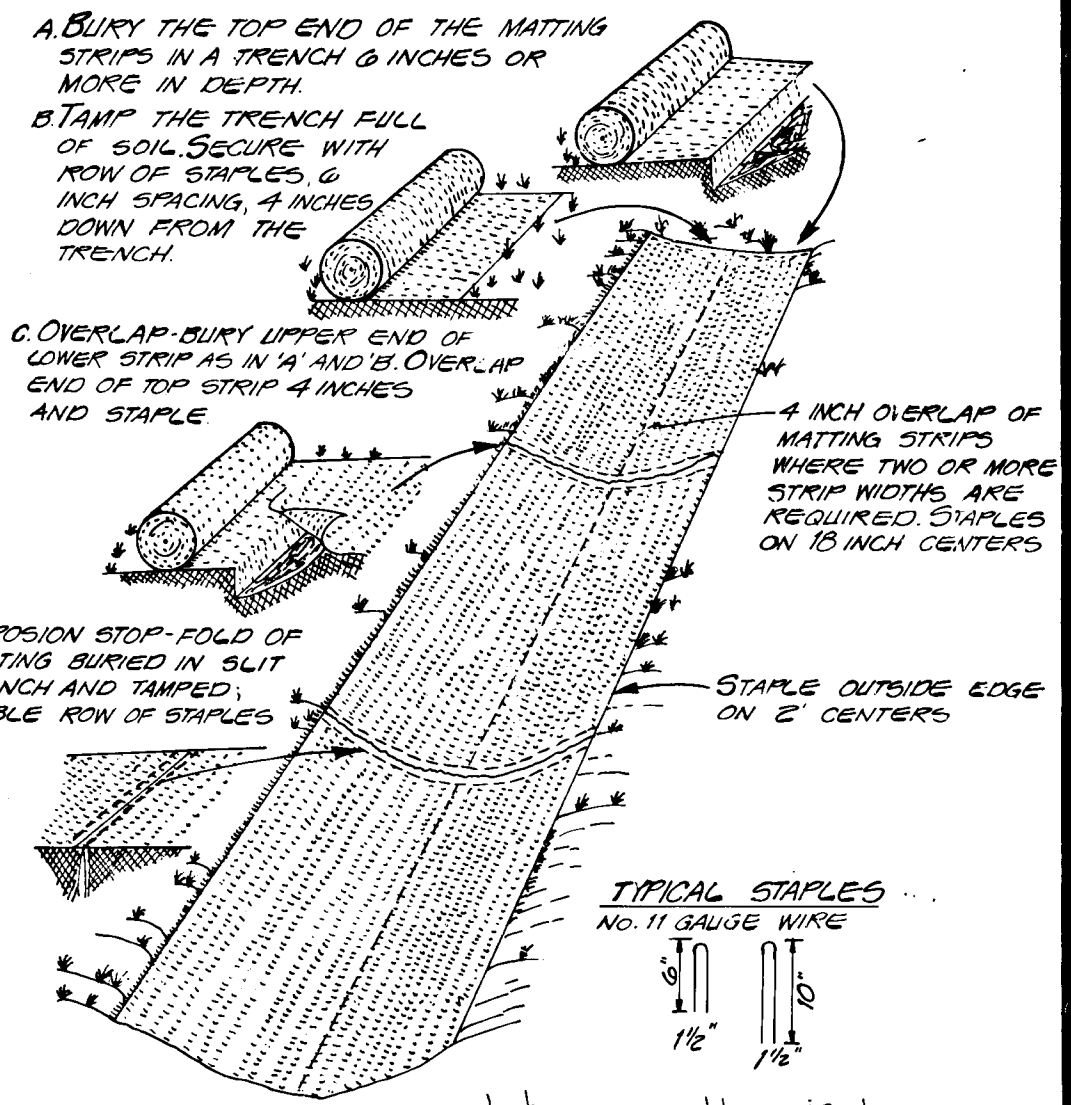
PREPARED FOR:  
John A. O'Connor  
6340 Montgomery Road  
Elkridge, Md 21227

Mass Grading Plan  
**Calvert Ridge**  
Lots 1 thru 31  
First Election District  
Howard County, Maryland

SCALE	ZONING	G.L.W. FILE NO.
As Shown	R-20	88-100
DATE	TAX MAP NO.	SHEET
MAY 1994	37	5 of 10

NOTE: NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLAND BUFFER EXCEPT THE AREA ADJACENT TO PROPOSED CALVERT DRIVE WHICH WAS DETERMINED ESSENTIAL BY THE DEPARTMENT OF PLANNING AND ZONING PER P 85-78.

### DETAIL FOR STABILIZING WATERWAYS WITH JUTE OR EXCESSION MATTINGS



Jute or matting is to be used for the construction of the trapezoidal channel along lot 18 within 60' government.

1651

ENGINEER'S CERTIFICATE

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.

*CK [Signature]* 2-14-91  
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel engaged 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 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 HSCD.

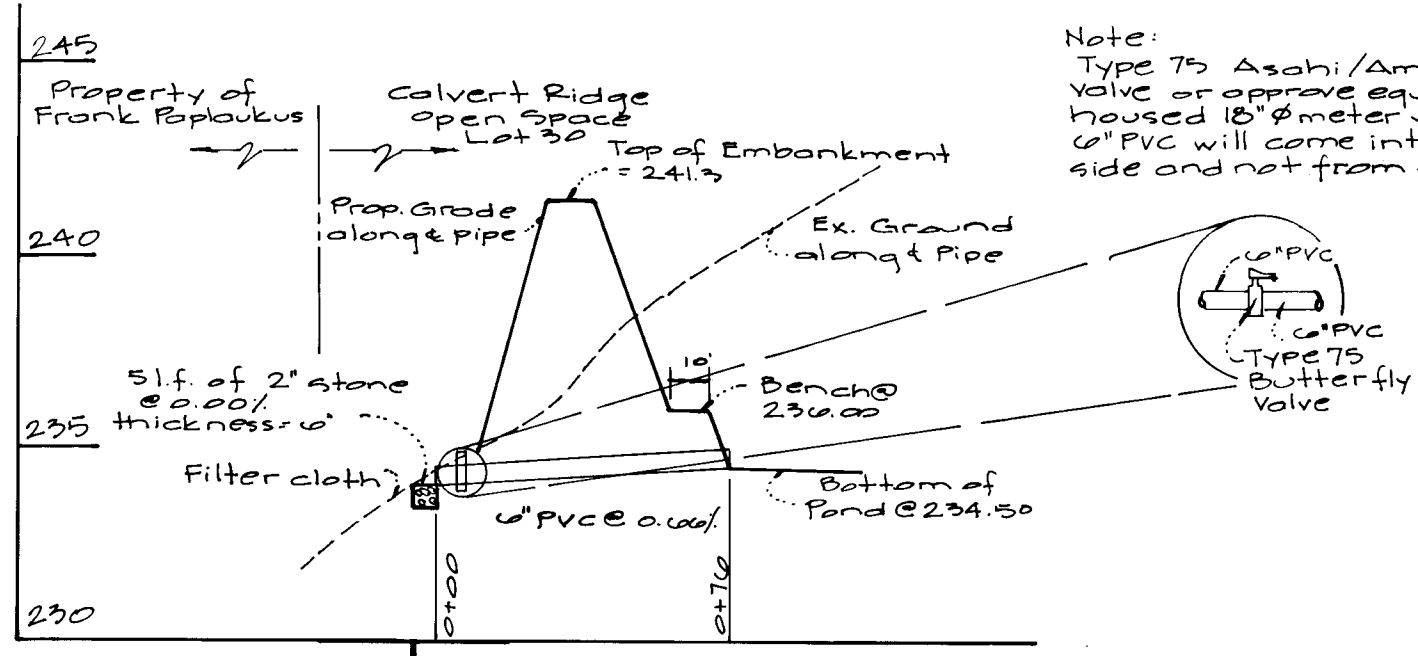
*[Signature]* 2/14/91  
Signature of Developer/Builder Date

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

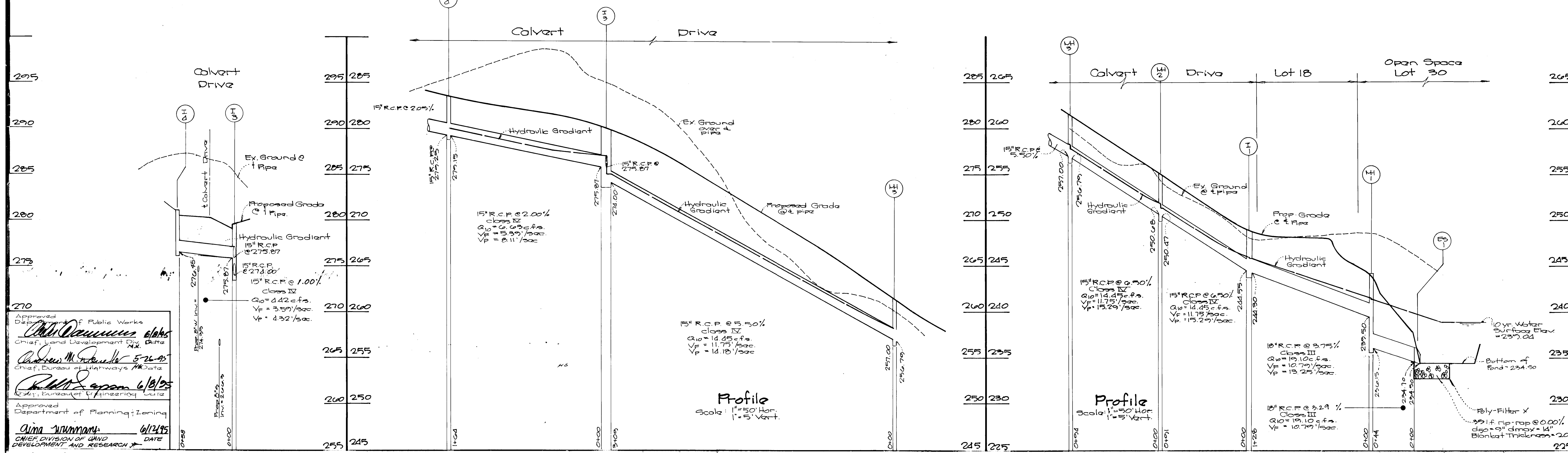
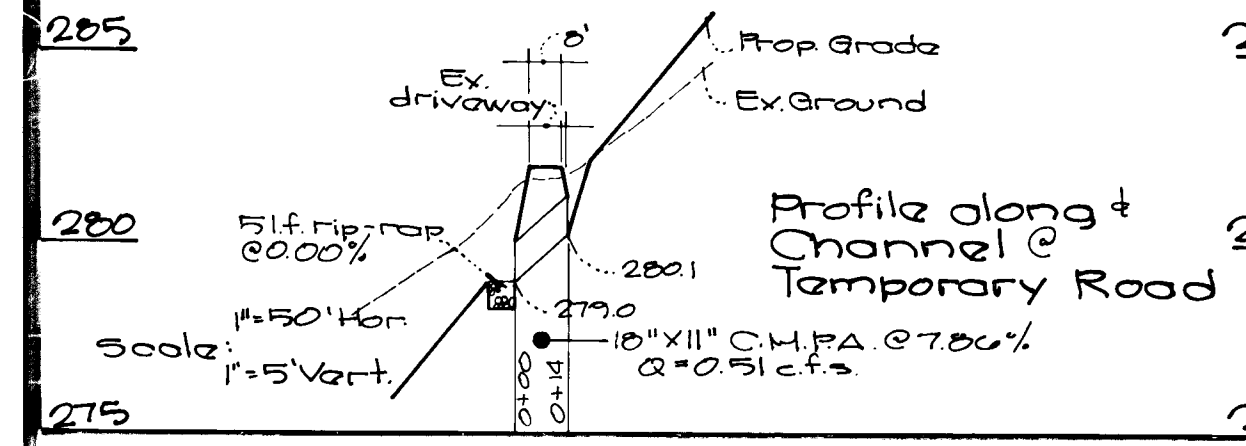
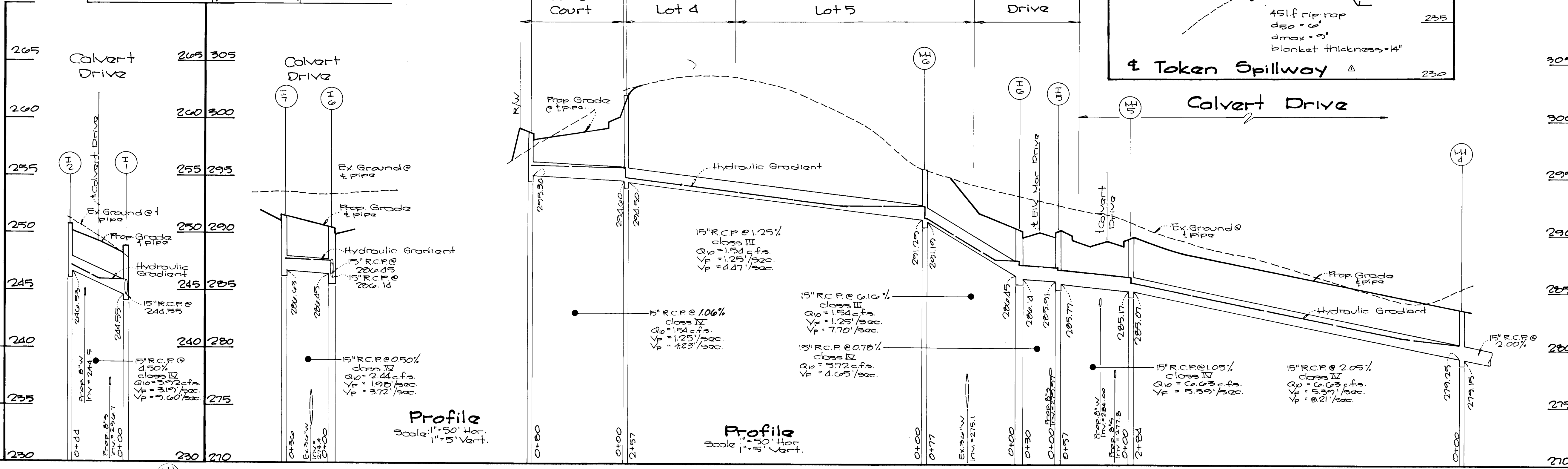
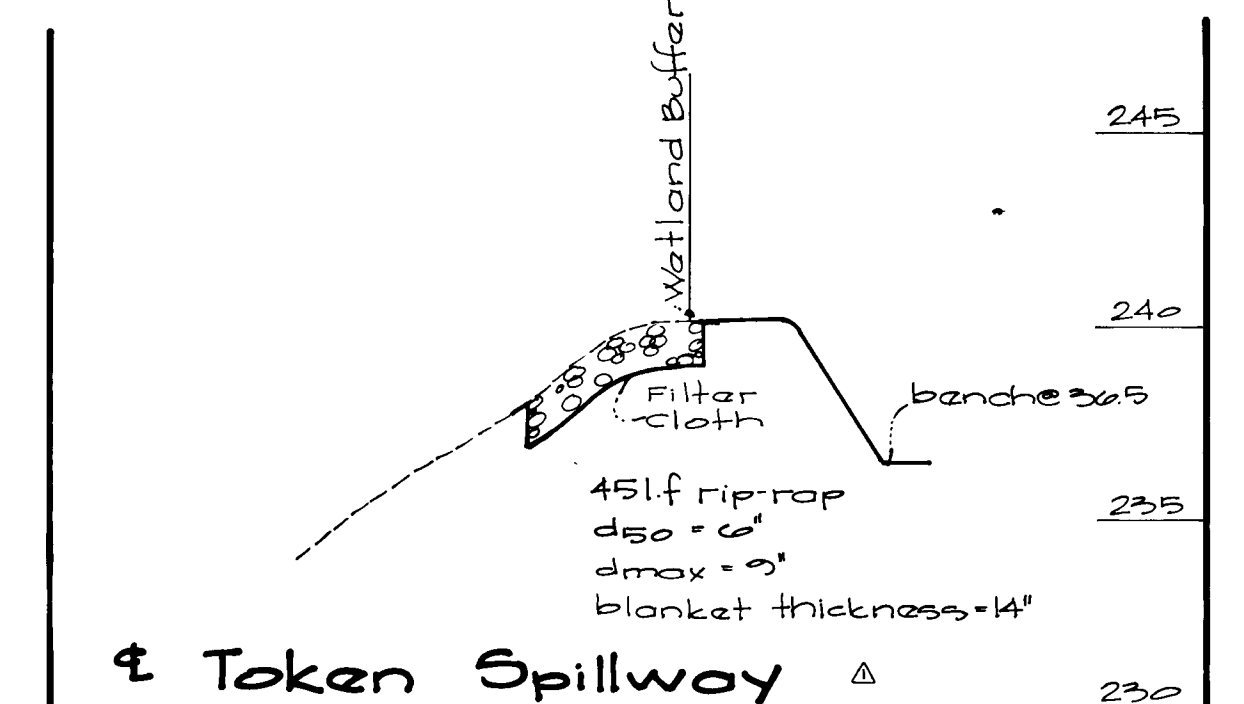
*[Signature]* 4/28/91  
Howard Soil Conservation District Date

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.

*[Signature]* 4/28/91  
HSCD Soil Conservation District Date



Note: Type 75 Asahi/America Butterfly Valve or approve equal, is to be housed 15" meter vault per W.3.31. uPVC will come into vault from side and not from underneath.



Approved Department of Public Works  
*[Signature]*  
Chief, Land Development Div. Data M.K.

Approved Department of Planning & Zoning  
*[Signature]*  
Chief, Division of Land Development and Research DATE

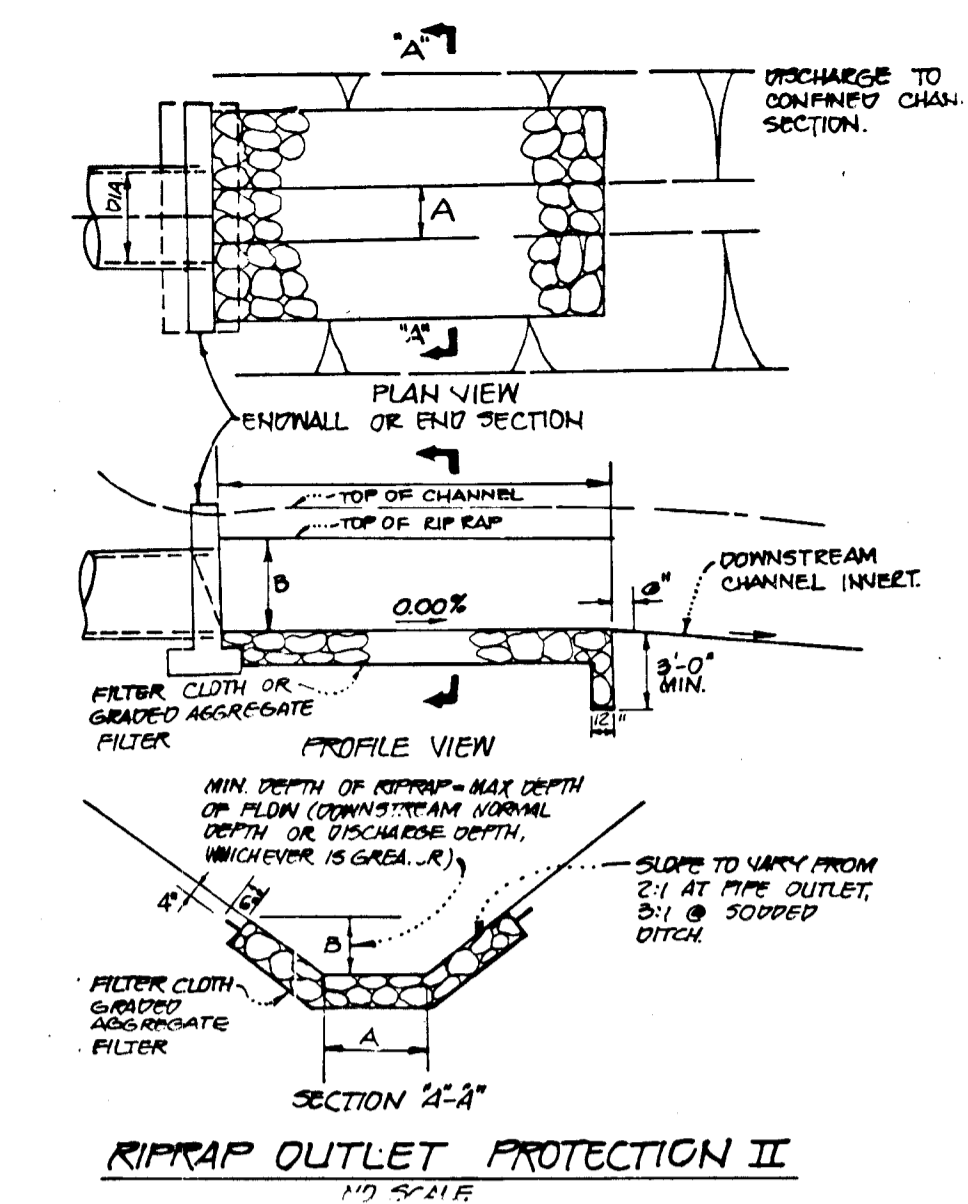
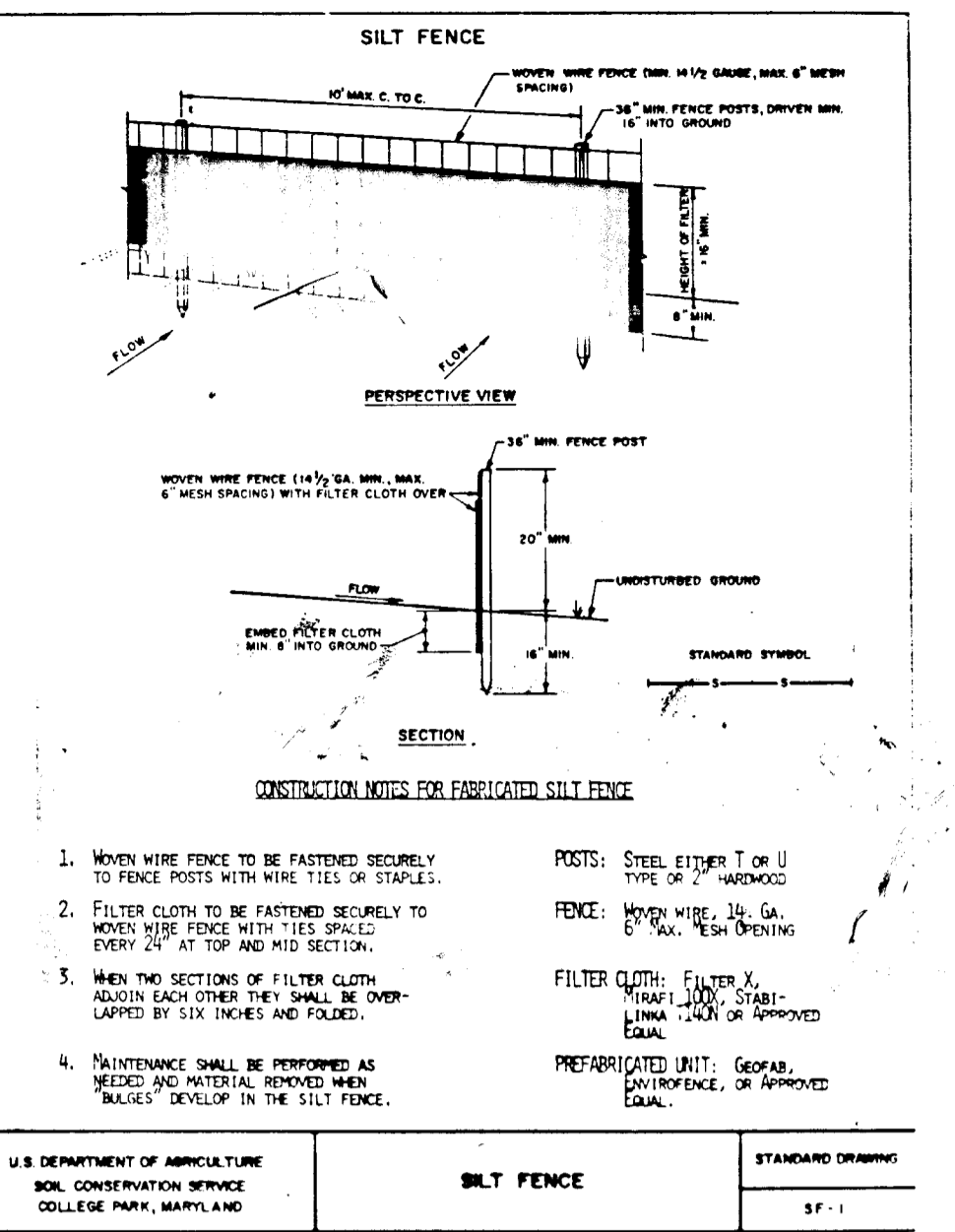
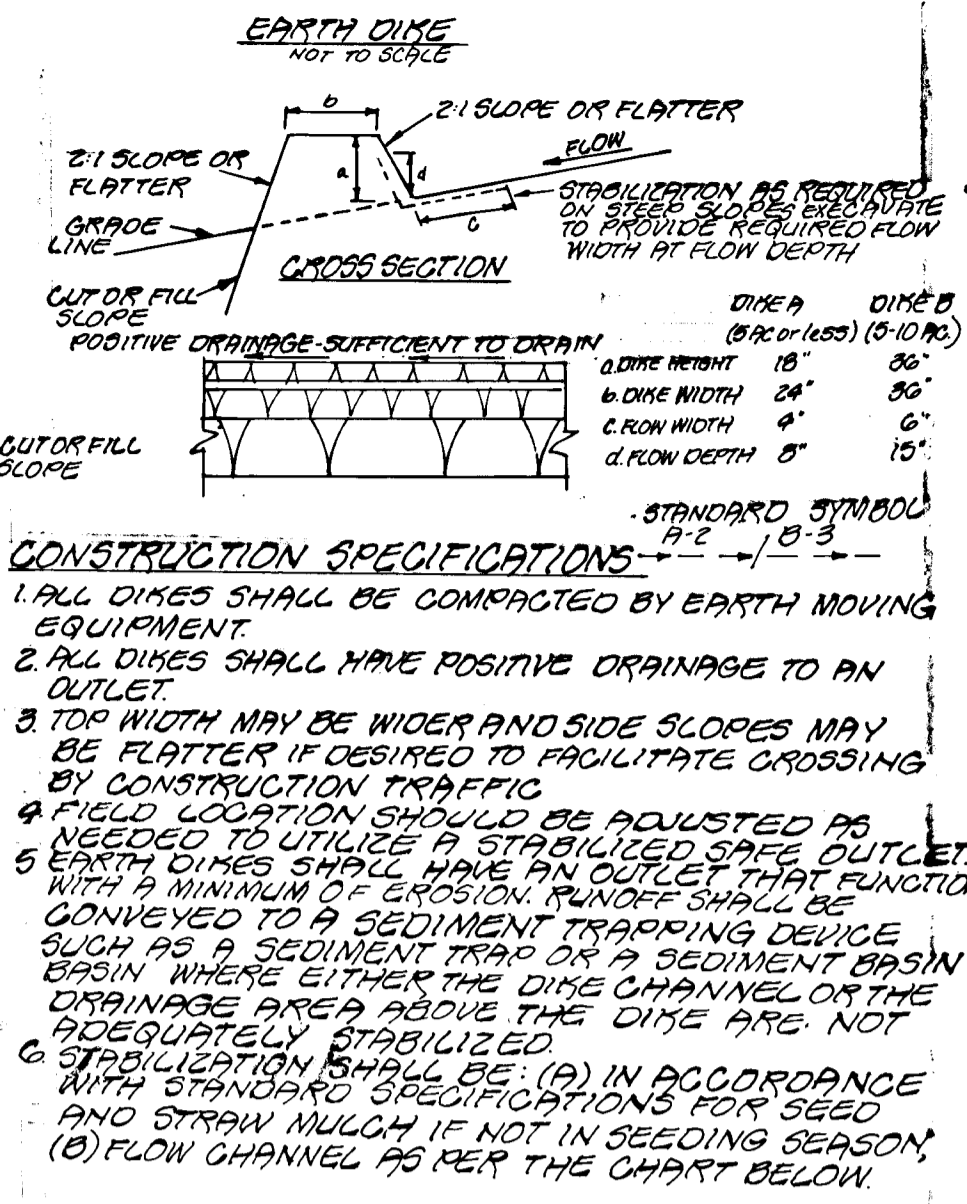
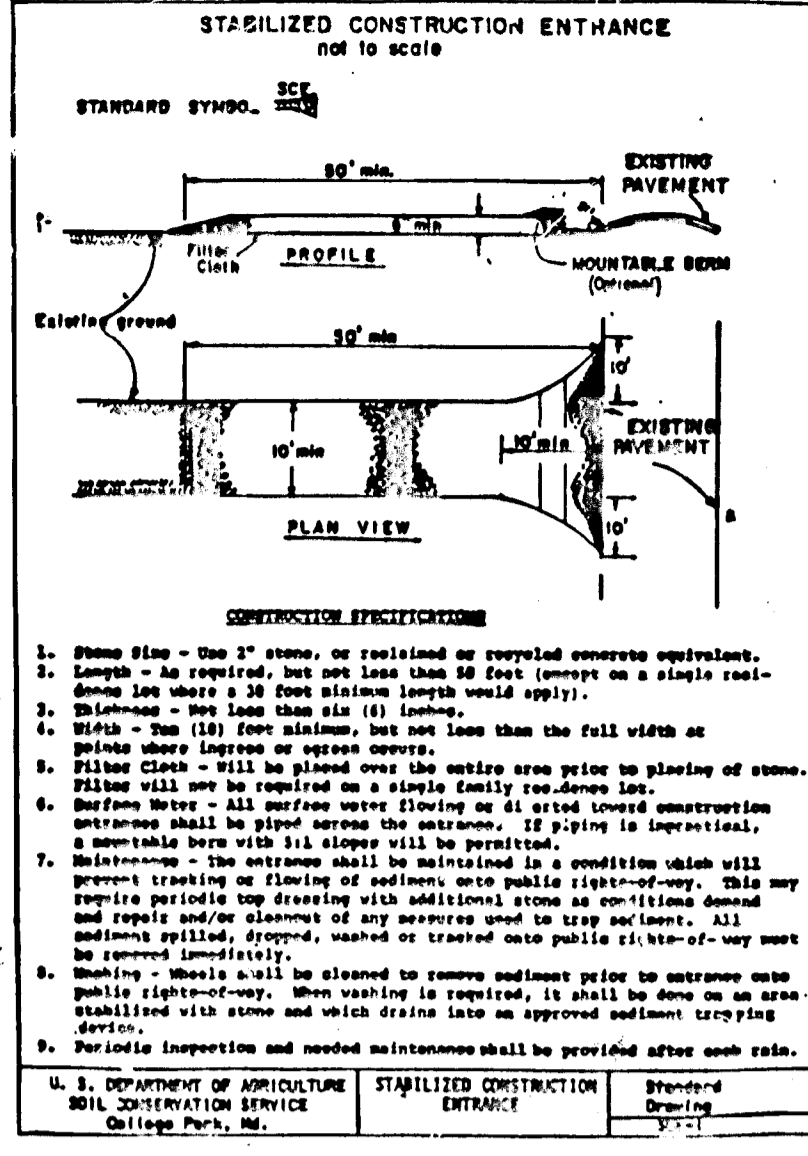
**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
ENGINEERS, PLANNERS, SURVEYORS  
3909 NATIONAL DRIVE SUITE 250 BURTONSVILLE OFFICE PARK BURTONSVILLE, MD 20866  
TELEPHONE (301) 421-4024

PREPARED FOR:  
Helen A. O'Connor  
6540 Montgomery Road  
Elkridge, Md 21227

Stormdrain Profiles  
**Culvert Ridge**  
Lots 1 thru 31  
First Election District  
Howard County, Maryland

SCALE	7 ZONING	GLW FILE NO.
As Shown	R-20	88-100
DATE	TAX MAP NO.	SHEET
MAY 1994	37	6 of 10

1651



**SEDIMENT CONTROL NOTES**

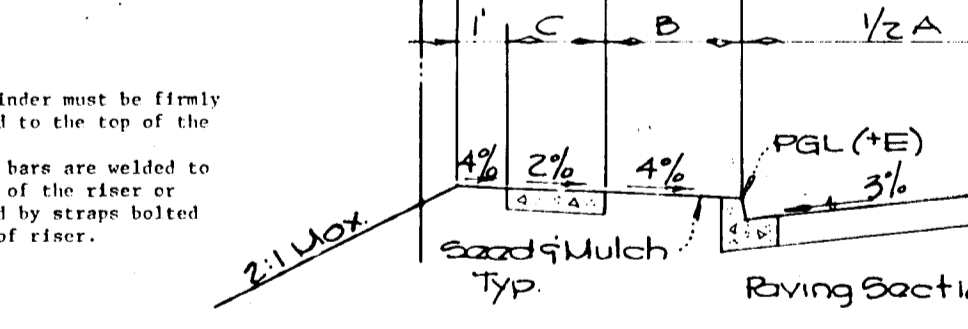
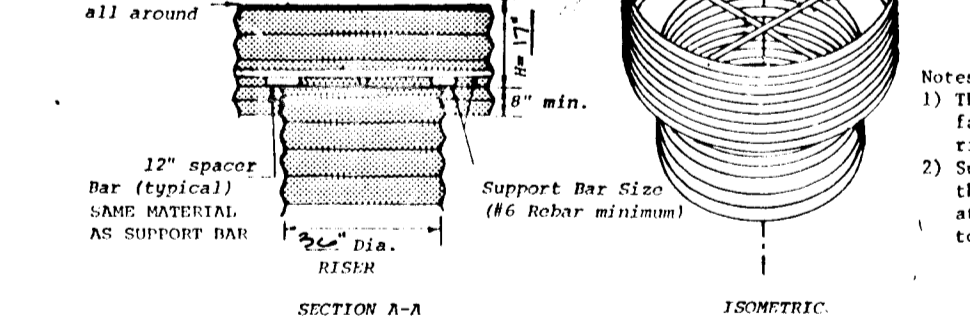
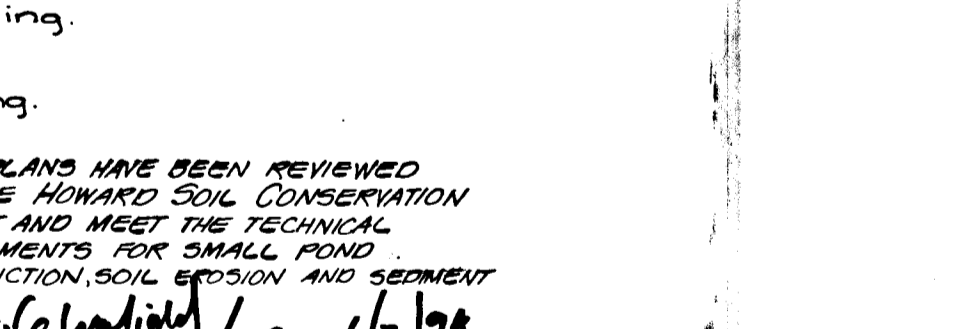
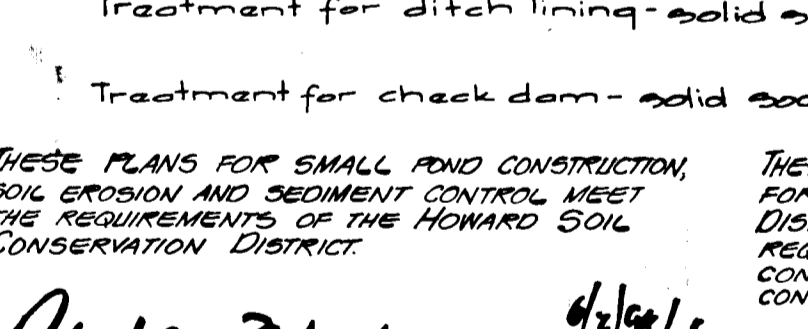
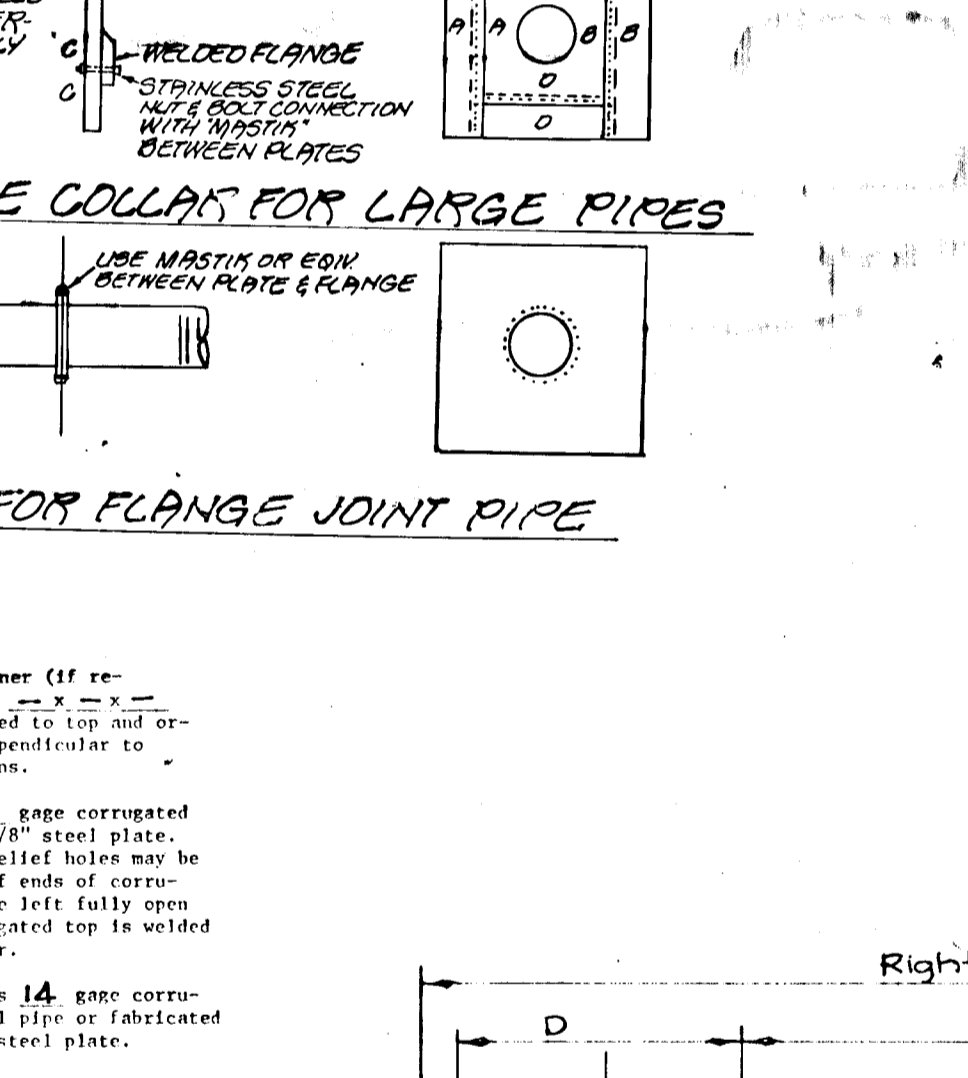
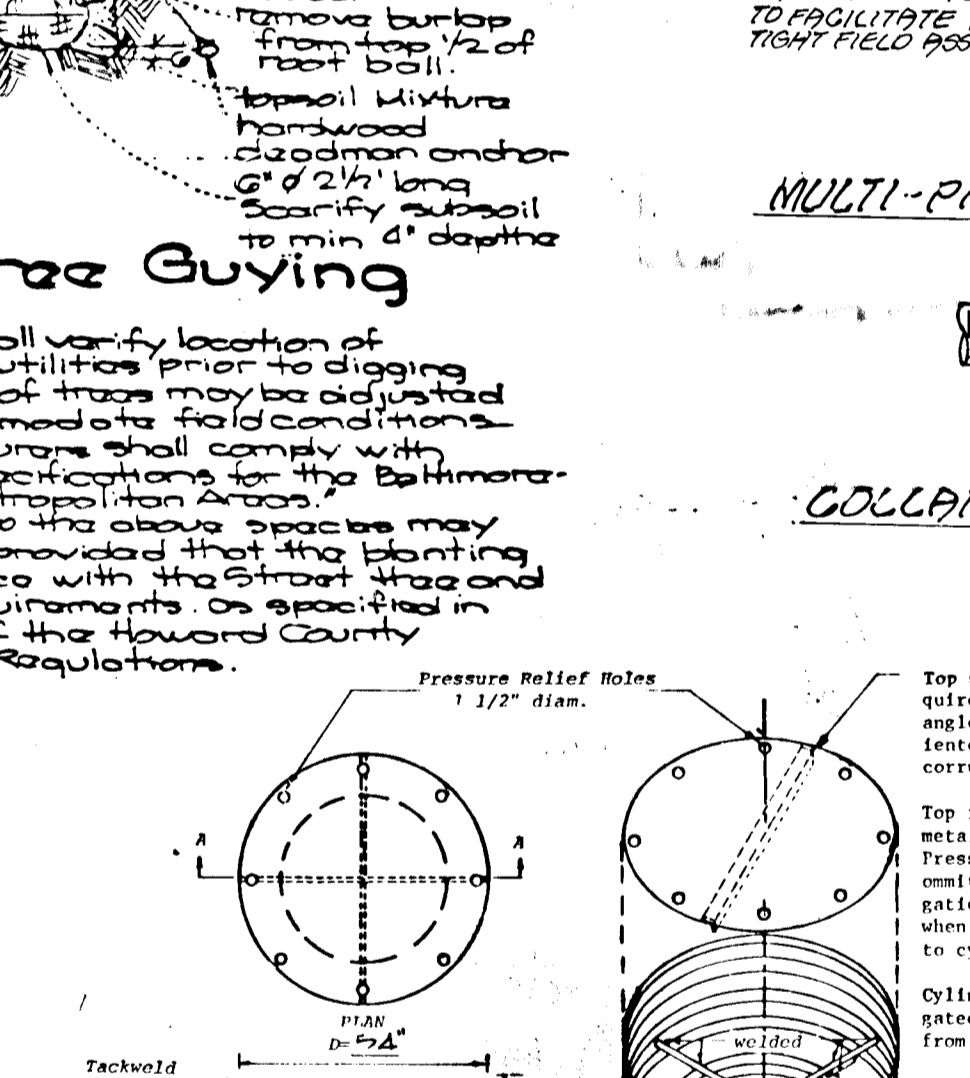
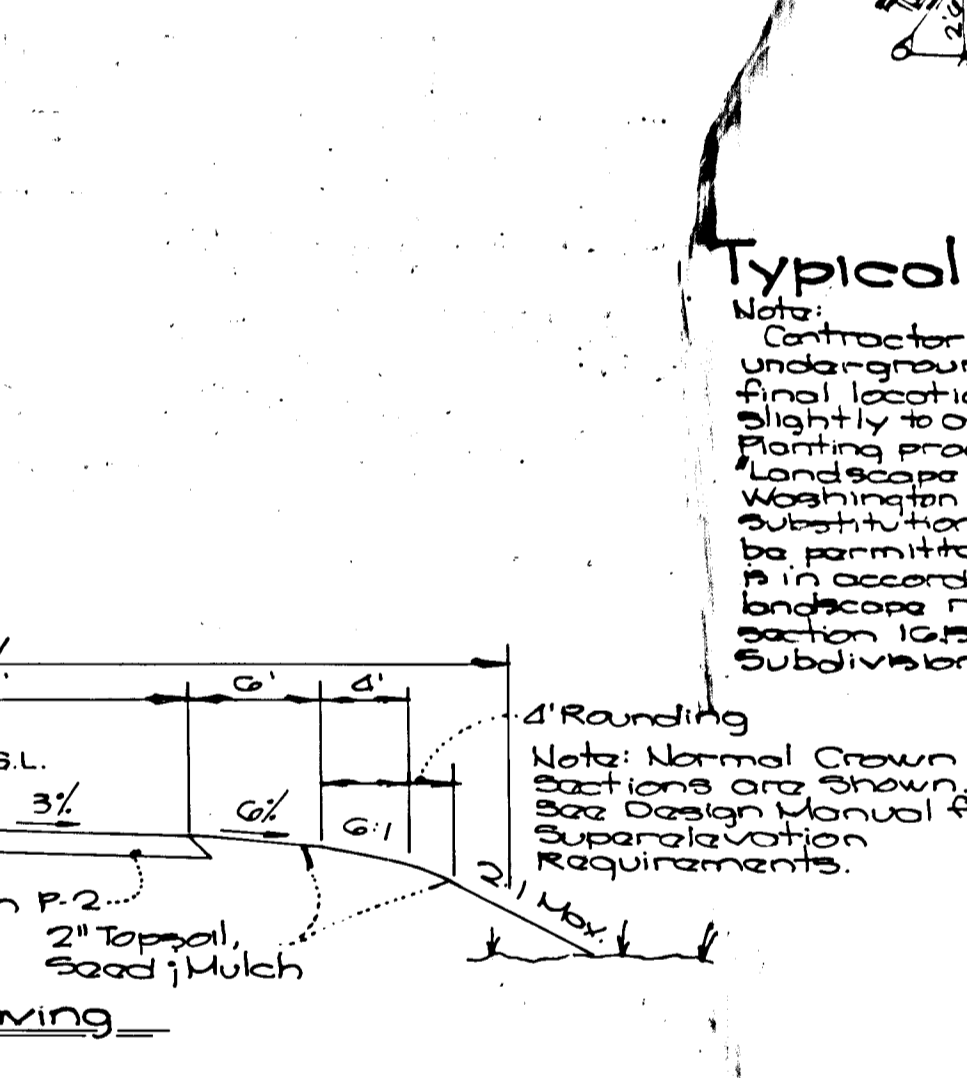
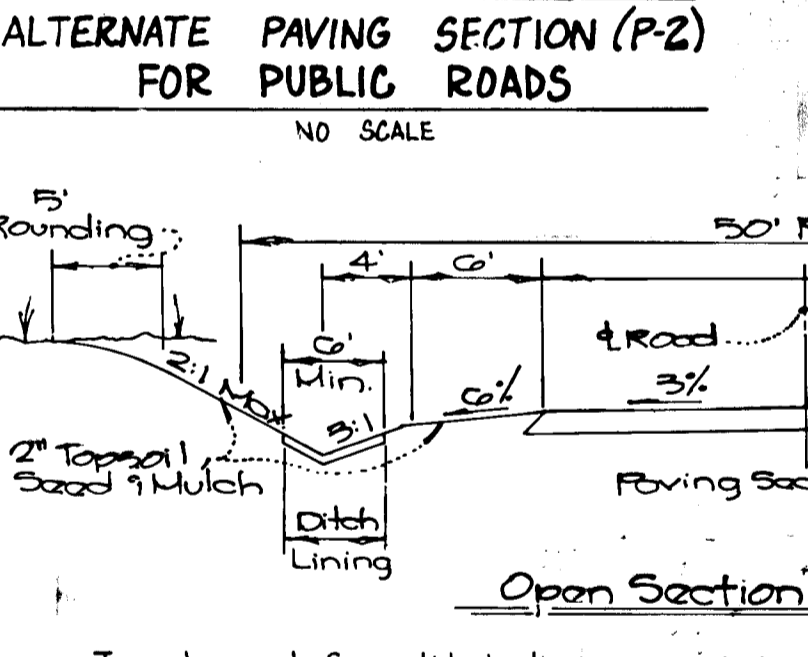
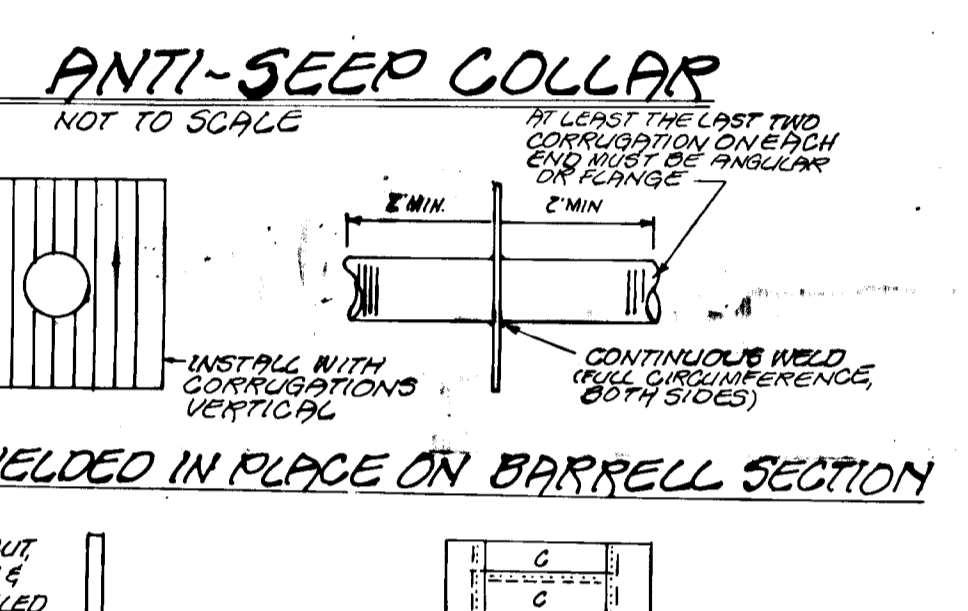
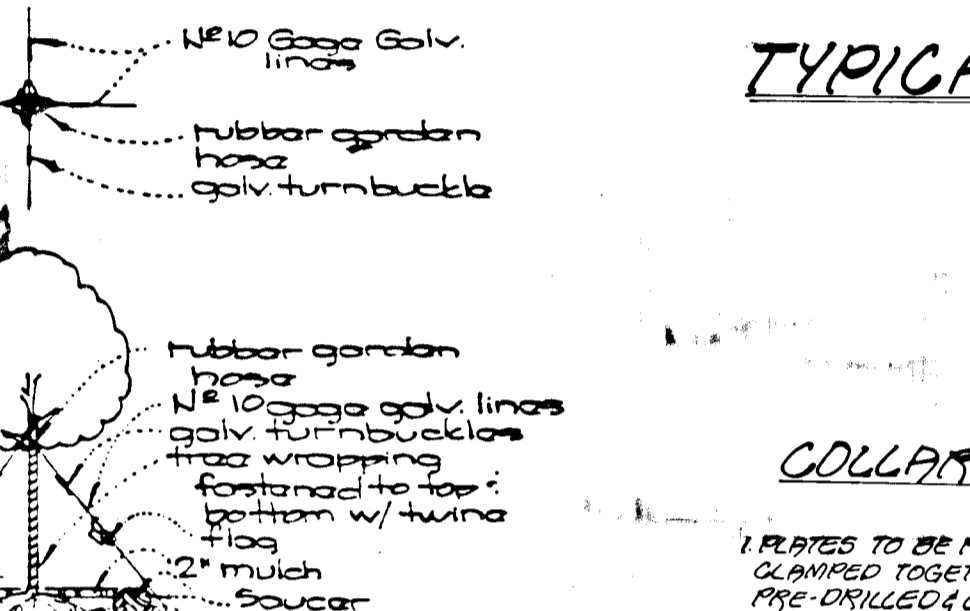
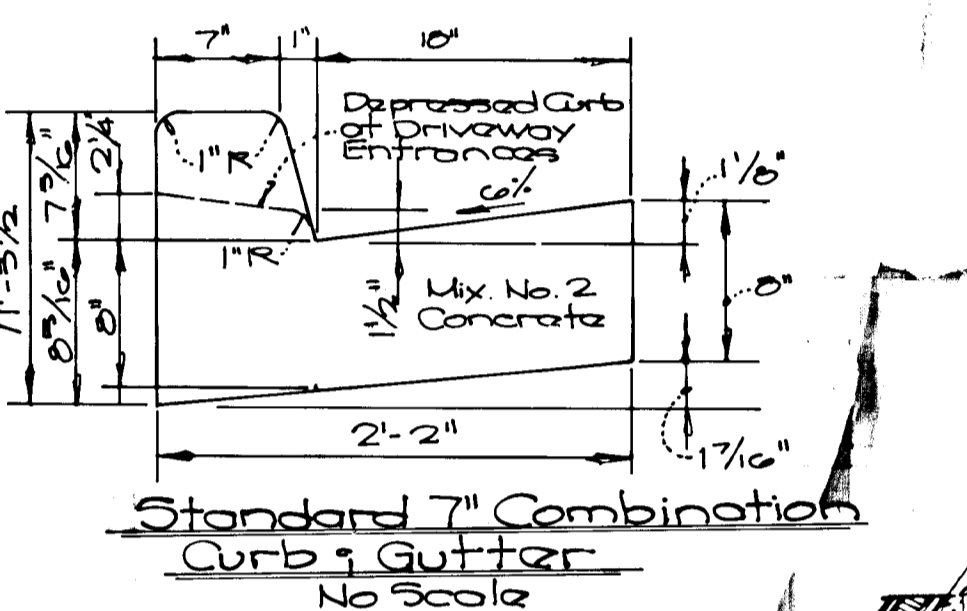
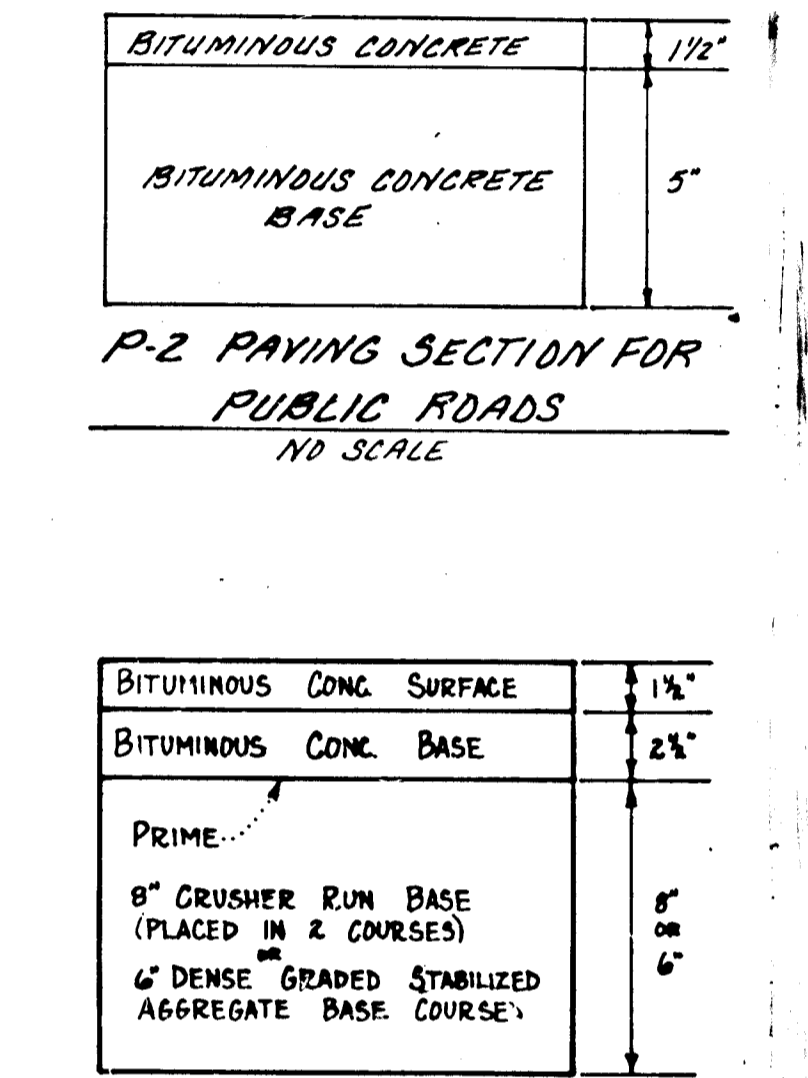
- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 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.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSIONS AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (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.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:  
Total Area of Site: 2071 Acres  
Area Disturbed: 6336 Acres  
Area to be roofed or paved: 201 Acres  
Total Cut 4110 Cu. Yds.  
Total Fill 4607 Cu. Yds.  
Off-Site waste/borrow area location Excess to be used on-site during Site Development.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County 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 made.

**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 (unless previously loosened).
- Soil Amendments: In lieu of soil test recommendations, use one of the following schedules
- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 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 ureaformal fertilizer (9 lbs/1000 sq ft).
  - 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 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.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 redistributed 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 (unless 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, 8 ft 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.



THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert Z. Zelnick* 4/24/91  
HOWARD SOIL CONSERVATION DISTRICT DATE

ENGINEER'S CERTIFICATE  
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.

APPROVED: *David S. Weber* 2-14-91  
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.

APPROVED: *John M. Kalkas* 4/24/91  
HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPER'S/BUILDER'S CERTIFICATE  
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 the Environment 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 HSCD.

APPROVED: *John M. Kalkas* 4/24/91  
DATE

APPROVED: *John M. Kalkas* 6/10/95  
CHIEF, LAND DEVELOPMENT DIVISION M.A.R. DATE

APPROVED: *Andrew M. Oude* 6-26-95  
CHIEF, BUREAU OF HIGHWAYS M.S. DATE

APPROVED: *Paul J. Eason* 6/8/95  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: *Gina Surranami* 6/12/95  
CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE

STRAAT NAME & STATION TYPE OF TRAFFIC

Street Name & Station	Type of Traffic	A	B	C	D	R/W	Zoning	E	Design Speed	Paving Section
Colvert Drive	local	30'	4'	4'	9'	50'	R-20	0.10'	30	P-2
John Colvert Court	cul-de-sac	24'	-	-	9'	50'	R-20	0.10'	25	P-2
Elk-Mor Drive	local	30'	4'	4'	9'	50'	R-20	0.10'	30	P-2

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
ENGINEERS, PLANNERS, SURVEYORS  
3909 NATIONAL DRIVE SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD 20886  
TELEPHONE: (301) 421-4024

PREPARED FOR: Helen A. O'Connor, 6940 Montgomery Road, Elkridge, Maryland 21227

DATE	REVISION	BY	APPR.
2/2/92	Show bolts for attaching rebar cage to 12" B.C.C.M.P.	M.G.F.	

SEDIMENT CONTROL NOTES & DETAIL  
**Colvert Ridge**  
Lots 1-31  
First Election District  
Howard County, Maryland

SCALE	ZONING	G.L.W. FILE NO.
As Shown	R-20	88-100
DATE	TAX MAP NO.	SHEET
MAY 1994	37	7 of 10

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
8-5-92

1651

**STORM WATER MANAGEMENT POND NOTES**

**I. SITE PREPARATION:**

A. Areas designated for borrow areas, embankment, and structural works shall be cleared grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped no steeper than 1:1.

B. Areas to be covered by pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, logs, and stumps shall be cut approximately level with the ground surface.

C. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

**II. EARTH FILL**

A. MATERIAL: The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversized 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 above the design elevation (including freeboard) as shown on the plans.

B. 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.

C. 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 the required degree of compaction can be obtained with the equipment used. Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer. It is recommended that the Core be constructed in 8" thick layers, each compacted to minimum of 95% of the maximum dry density determined by the standard moisture density relationship test (ASTM D-1557).

D. CUTOFF TRENCH: Where specified, a cutoff 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 as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be SC, CC, CL, or CH ONLY and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

**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 four 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 four feet measured horizontally, to any part of the structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

**IV. PIPE CONDUITS: (all pipes shall be circular in cross-section)**

**A. CORRUGATED METAL PIPE:**

1. MATERIALS: (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be placed with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings are commercially available: Mexon, Plasti-Cote, Bloc-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

MATERIALS: (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

MATERIALS: (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, end section, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of Zinc Chromate Primer. Hot dip galvanized bolts may be used for connections. The PH of the surrounding soils shall be less than 9 and greater than 4.

2. CONNECTIONS: All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around where the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be 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.

**B. REINFORCED CONCRETE PIPE:**

1. MATERIALS: Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. An approved equivalent is AWWA Specification C-301.

2. BEDDING: All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3", or as shown on the drawings.

3. LAYING PIPE: Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

4. Backfilling shall conform to structural backfill as shown above.

5. Other details (anti-seep collars, valves, etc.) shall be shown on the drawings.

C. For pipes of other materials, specific specifications shall be shown on the drawings.

**V. CONCRETE:**

A. MATERIALS:  
1. CEMENT - Normal Portland cement shall conform to latest ASTM Specification C-150.

2. WATER - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

3. FINISHING - Defective concrete, honey combed areas, voids left by removal of the rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry patching mortar.

H. PROTECTION AND CURING - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least three days. All concrete shall be kept continuously moist for at least ten days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compound may also be used.

I. PLACING TEMPERATURE - Concrete may not be placed at temperature below 37°F with temperature falling, or 34°F with the temperature rising.

VII. STABILIZATION  
All borrow areas shall be graded to provide drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing, and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VIII. EROSION AND SEDIMENT CONTROL  
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

**V. A. (continued)**

3. SAND - The sand used in concrete shall be clean, hard, strong, and durable, and shall be well graded with 100% passing a one quarter inch sieve. Limestone sand shall not be used.

4. COARSE AGGREGATE - The coarse aggregate shall be clean, hard, strong and durable, and free from clay and dirt. It shall be well graded with a maximum size of one-and-one-half (1-1/2) inches.

5. REINFORCING STEEL - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

B. DESIGN MIX - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gals. of water/94-pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of the aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

C. MIXING - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixture and of the introduction of the materials including water, into the mixer. Water shall be added prior to, during, and following the mixer-changing operations. Excessive overmixing requiring the addition of water to preserve concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

D. FORMS - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping and vibration without deflection from the prescribed lines. They should be mortar-tight and constructed so they can be removed without hammering or prying against the concrete. The inside of the forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed. Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

E. REINFORCING STEEL - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

F. CONSOLIDATION - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners and around embedded items.

G. FINISHING - Defective concrete, honey combed areas, voids left by removal of the rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry patching mortar.

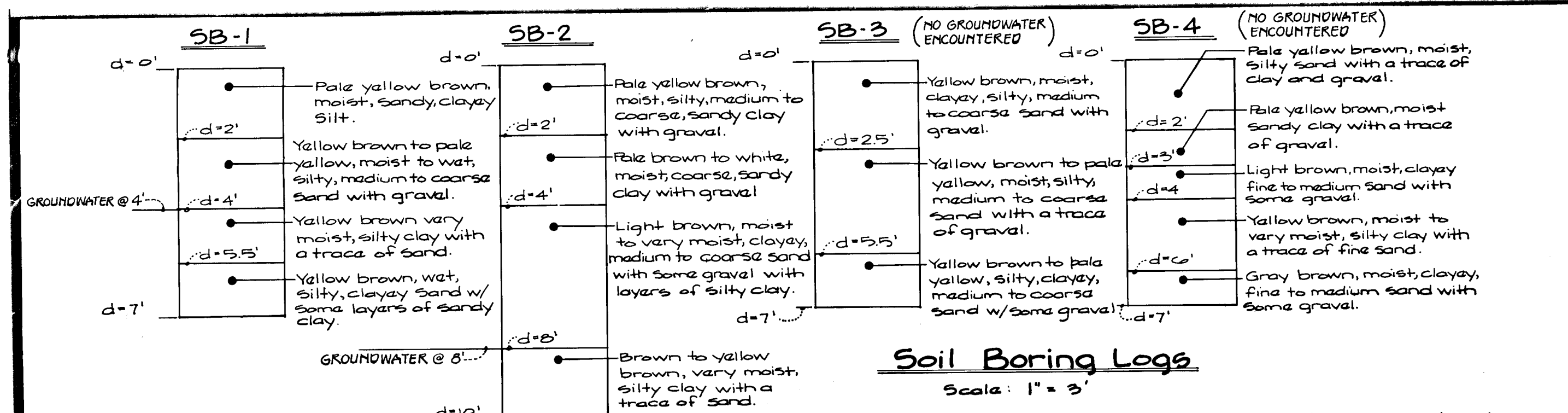
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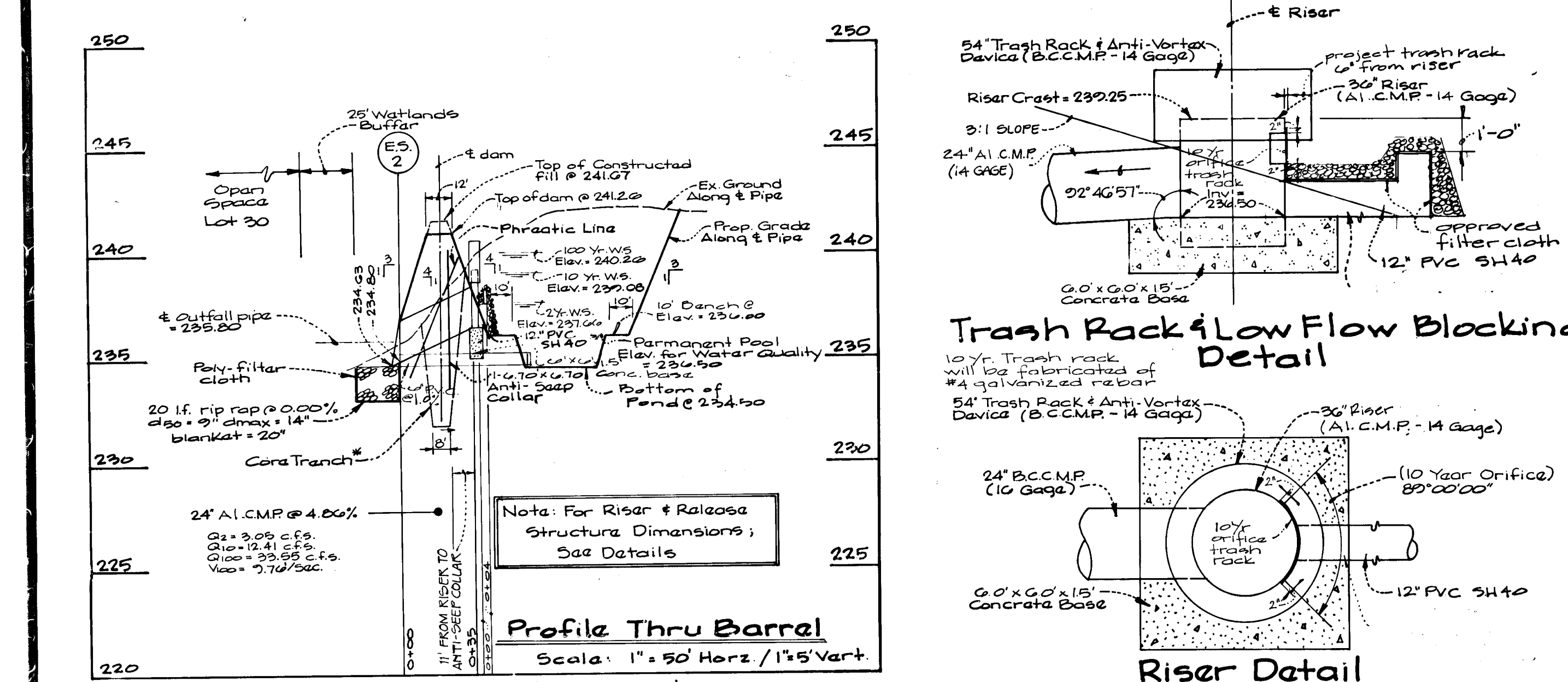
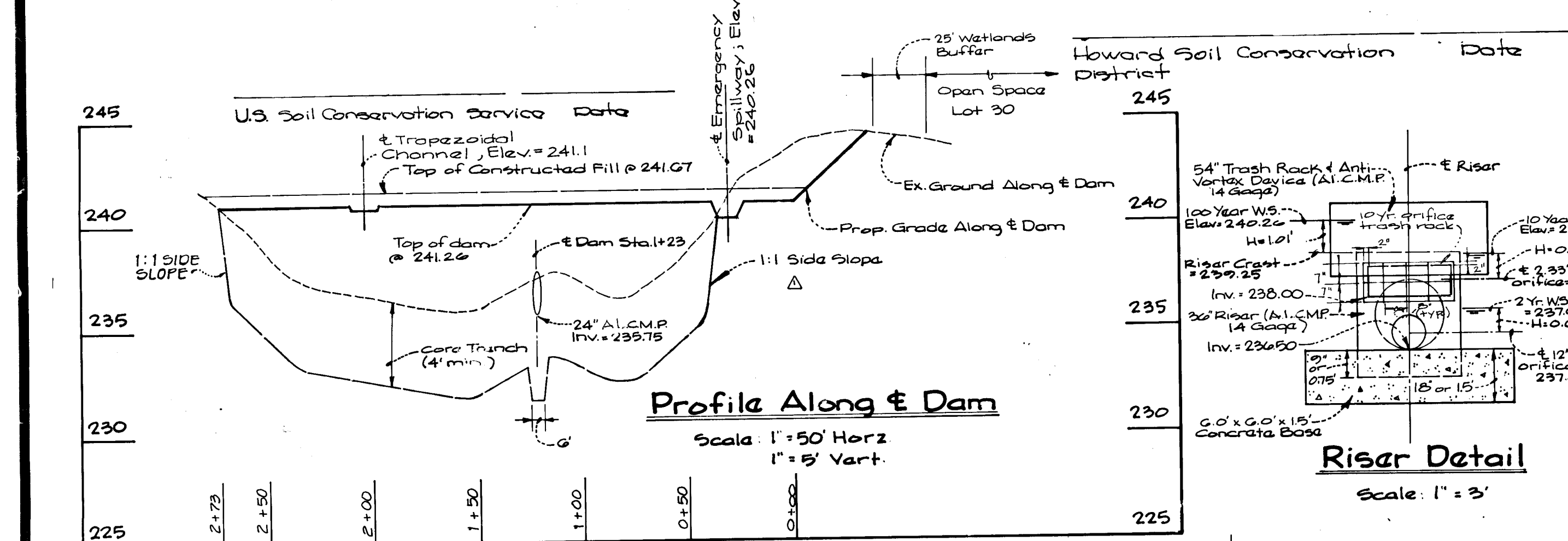
**VII. STABILIZATION**

All borrow areas shall be graded to provide drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing, and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VIII. EROSION AND SEDIMENT CONTROL  
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



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.



\*Note for core trench material placement  
The backfill material for the core trench shall be 95, CL, ML, CL, and CH.

The contractor shall pump the core trench of water prior to the placement of the trench material.

**DEVELOPER'S/BUILDER'S CERTIFICATE**

"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 HSCD."

Signature of Developer/Builder: Helen A. O'Connor  
Date: 2/14/91

Approved Department of Public Works  
Chief, Land Development Div. Date: 4/8/91  
Chief, Bureau of Highways Date: 5-26-91  
Chief, Bureau of Engineering Date: 6/8/91  
Approved Department of Planning/Zoning  
Chief, Division of Land Development, Date: 6/12/91

**ENGINEER'S CERTIFICATE**

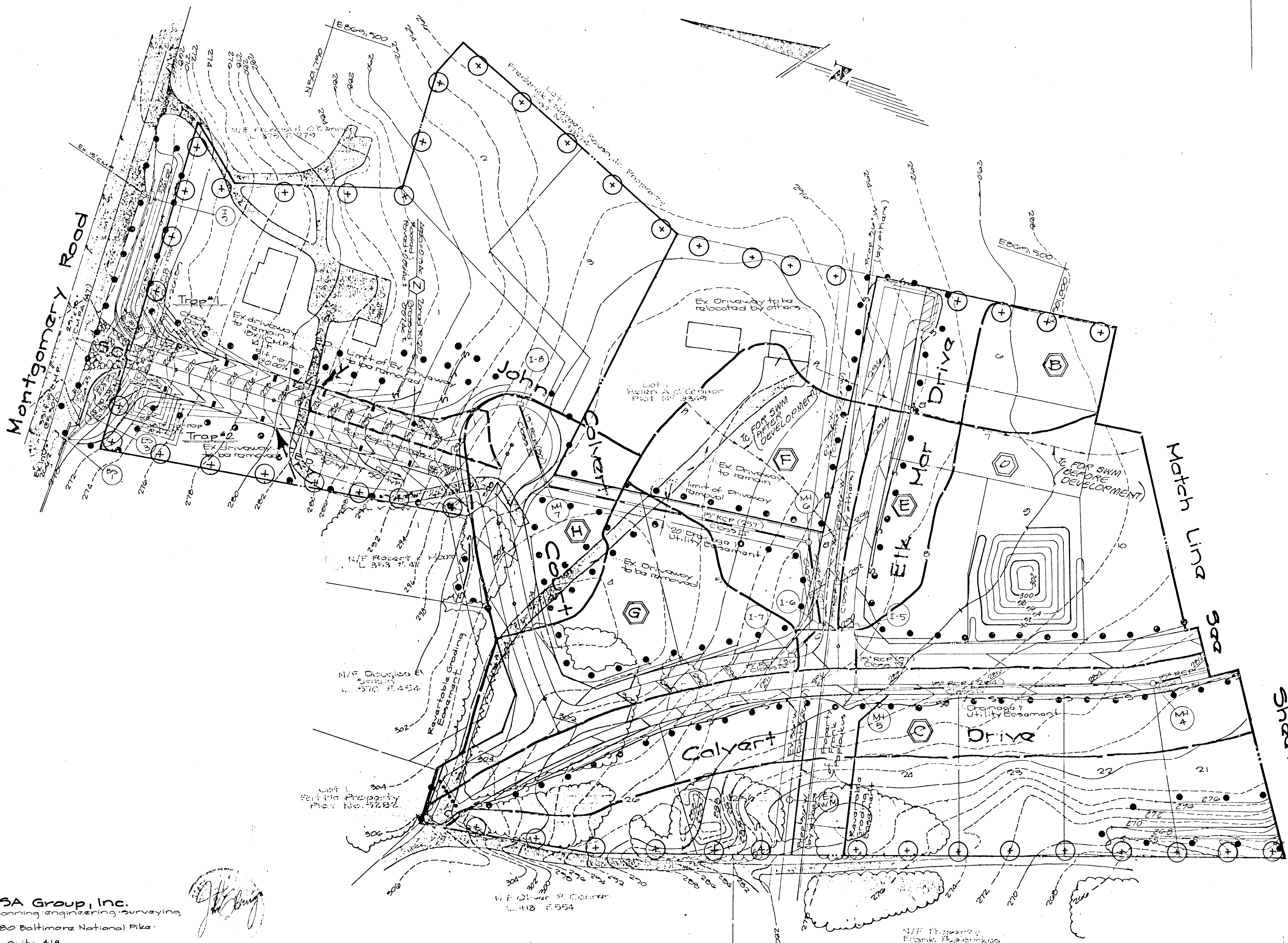
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer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

Signature: CK Peterson  
Date: 2-14-91

<b>GW GUTSCHICK LITTLE &amp; WEBER, P.A.</b> ENGINEERS, PLANNERS, SURVEYORS 1909 NATIONAL DRIVE - SUITE 150 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD 20866 TELEPHONE (301) 421-4024		PREPARED FOR: Helen A. O'Connor 6520 Montgomery Road Elkridge, Md 21227	<b>Storm Water Management Pond Notes &amp; Details</b> <b>Cohart Ridge</b> Lots 1 thru 31 First Election District Howard County, Maryland	SCALE: As Shown ZONING: R-20 DATE: MAY 1994 TAX MAP NO.: 37 SHEET: 8 of 10	G.L.W. FILE NO.: 88-100
DATE: 2/12/92 REVISION: Revise core trench material note & core trench	DATE: 2/12/92 BY: MCF APPR:				

1651





PLANT LIST			
SYMBOL	QUANTITY	NAME	REMARKS
(+)	05	ACER RUBRUM RED MAPLE	2 1/2" MINIMUM CALIBER 240' FULL HEAD

category	Schedule A	
	Perimeter Adjacent to Roadways	Edge Adjacent to Perimeter Properties
landscape type	none	A
linear feet of Roadway frontage/perimeter	2271.0 LF	5079 LF
credit for ex. vegetation	No	Yes 1570 LF
credit for wall, fence & berm	No	No
Number of plants required	0.0	0.0
Shade trees	0.0	0.0
Evergreens	0.0	0.0
shrubs	0.0	0.0

Schedule B & C Are not applicable to this project.

SCHEDULE D	
STORMWATER MANAGEMENT AREA LANDSCAPING	
LANDSCAPE EDGE	TYPE B
LINEAR FEET OF PERIMETER	480
NUMBER OF TREES REQUIRED	0
SHADE TREES	12
EVERGREEN TREES	0
CREDIT FOR EXIST. VEGETATION	YES, 25%
CREDIT FOR OTHER LANDSCAPING	NO

- Landscaping Notes:
1. Perimeter landscaping where required shall be provided with the site development plan.
  2. The developer shall be responsible for the street trees and preservation of the perimeter vegetation to remain where applicable.
  3. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
  4. Financial surety for required landscaping has been posted as part of the Department of Public Works Developer's Agreement in the amount of \$1,000.00.

TSA Group, Inc.  
 planning engineering surveying  
 6480 Baltimore National Pike  
 Suite 418  
 Ellicott City, Maryland 21043

*[Signature]*

11-22-93  
 1. BASE INFORMATION PROVIDED BY GUTSCHICK, LITTLE, & WEBER, P.A.  
 2. CERTIFICATION FOR THIS PLAN BY TSA GROUP, INC. APPLIES TO PERIMETER LANDSCAPING ONLY.

Plan  
 Scale: 1"=50'

Approved  
 Department of Public Works  
*[Signature]* 6/10/95  
 Chief, Land Development Division M.K. Data

*[Signature]* 5-26-95  
 Chief, Bureau of Highways J.S. Data

*[Signature]* 6/8/95  
 Chief, Bureau of Engineering Data

Approved  
 Department of Planning & Zoning  
*[Signature]* 6/13/95  
 Chief, Division of Land Development Data & Research

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD 20886  
 TELEPHONE: (301) 421-4024

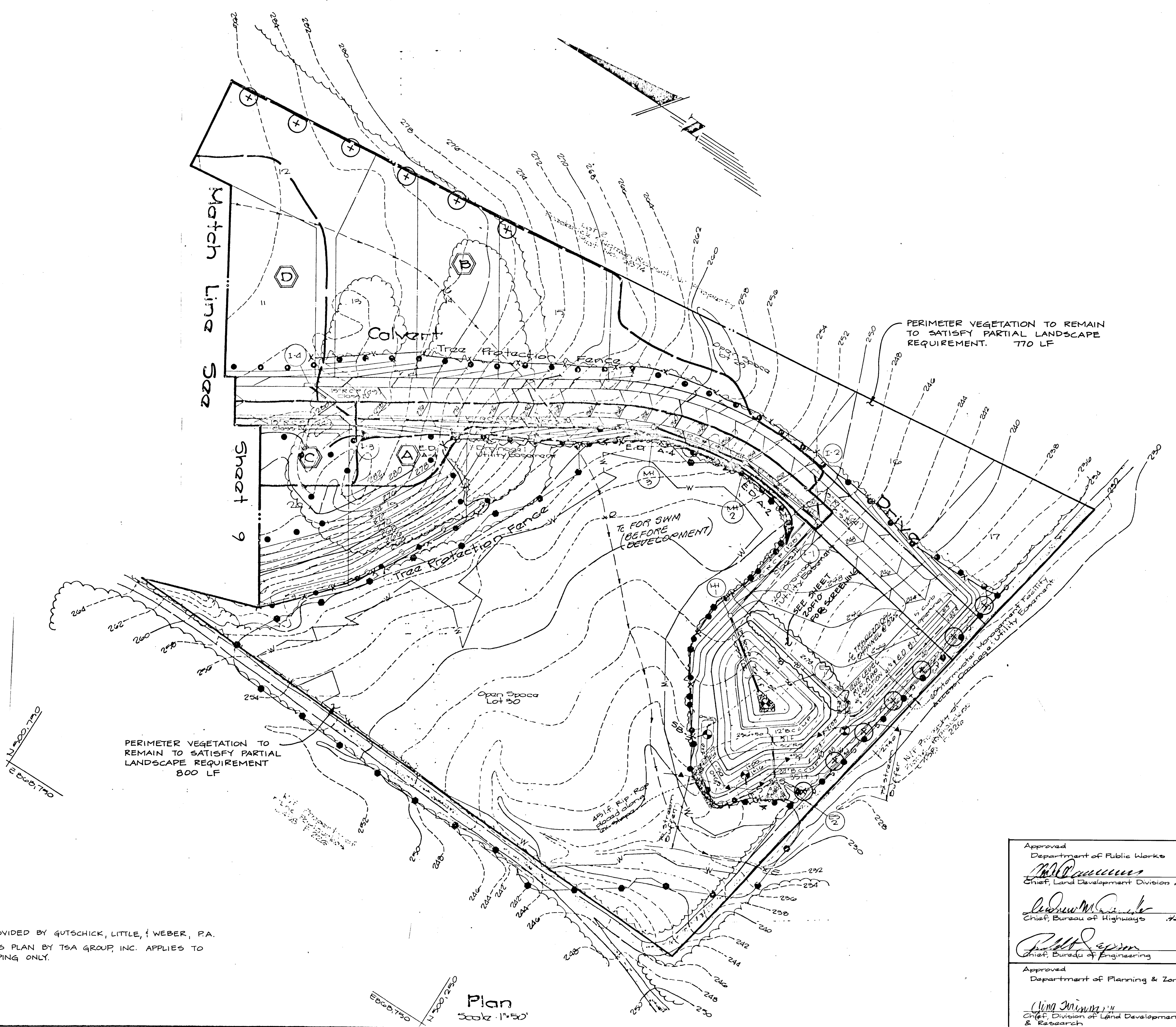
DATE	REVISION	BY	APP'R.
11/22/93	Rev. perimeter planting & planting schedule	KLP	

PREPARED FOR:  
 Helen A. O'Connor  
 6240 Montgomery Road  
 Ellicott City, MD 21047

LANDSCAPE PLAN  
**Calvert Ridge**  
 Lots 1 thru 31  
 First Election District  
 Howard County, Maryland

SCALE	ZONING	G.L.W. FILE NO.
As Shown	R-20	88-100
DATE	TAX MAP NO.	SHEET
May 1994	37	9 OF 10

1651



TSA Group, Inc.  
 planning engineering surveying  
 8480 Baltimore National Pike, Suite 410  
 Ellicott City, Maryland 21043

*J.M. [Signature]*

NOTES:  
 1. BASE INFORMATION PROVIDED BY GUTSCHICK, LITTLE, & WEBER, P.A.  
 2. CERTIFICATION FOR THIS PLAN BY TSA GROUP, INC. APPLIES TO PERIMETER LANDSCAPING ONLY.

Approved  
 Department of Public Works  
*[Signature]* 6/10/95  
 Chief, Land Development Division M.K. Date

*[Signature]* 5-26-95  
 Chief, Bureau of Highways Date

*[Signature]* 6/2/95  
 Chief, Bureau of Engineering Date

Approved  
 Department of Planning & Zoning  
*[Signature]* 6/10/95  
 Chief, Division of Land Development & Research Date

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD 20866  
 TELEPHONE: (301) 421-4024

DES.	DRN.	CHK.	DATE	REVISION	BY	APPR.

PREPARED FOR:  
 Helen A. O'Connor  
 6930 Montgomery Road  
 Elkridge, Md 21227

LANDSCAPE PLAN  
**Calvert Ridge**  
 Lots 1 thru 31  
 First Election District  
 Howard County, Maryland

SCALE	ZONING	G.L.W. FILE No.
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