

**TREE PLANTING DETAIL**  
NO SCALE

**CURBS & GUTTER LEGEND:**  
 Modified Comb. C&G  
 Std. 7" C&G  
 REV. 7" C&G

**STREET TREE TABLE**

SYM	TYPE	SIZE	QUANT	REMARKS
(2)	ZELKOVA SERRATA GREEN VASE ZELKOVA	2 1/2" CAL.	45	B&B Heavy Heads.

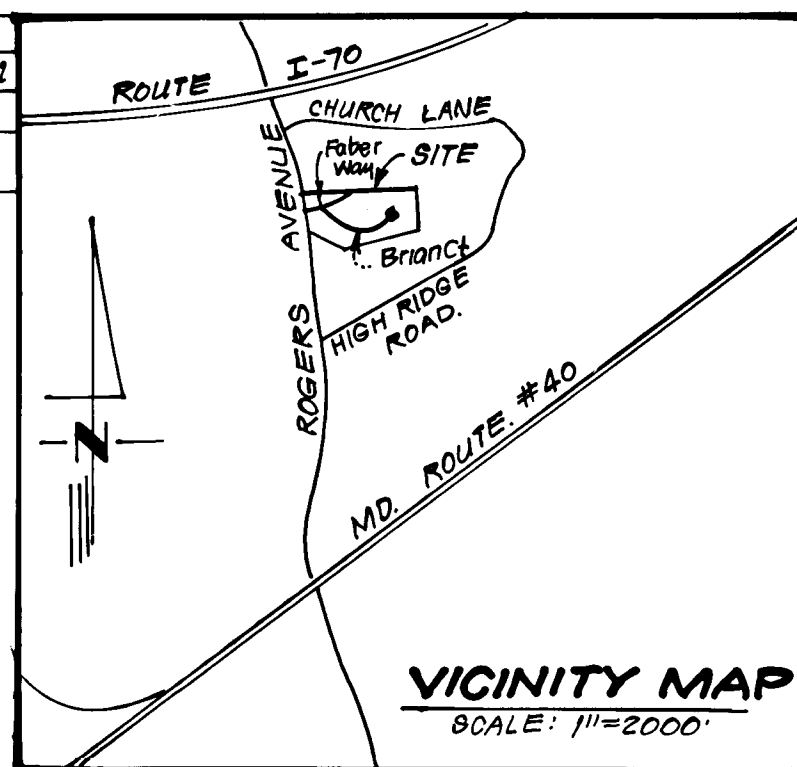
- The contractor shall verify location of underground utilities prior to digging location of trees may be adjusted slightly to meet field conditions.
- The location, type & number of trees shown are tentative and are used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and City's landscape program. Bond release is contingent upon Section 16.131 of the Howard County Subdivision Regulations as approved by the Office of Planning and Zoning.

**CENTERLINE CURVE DATA**

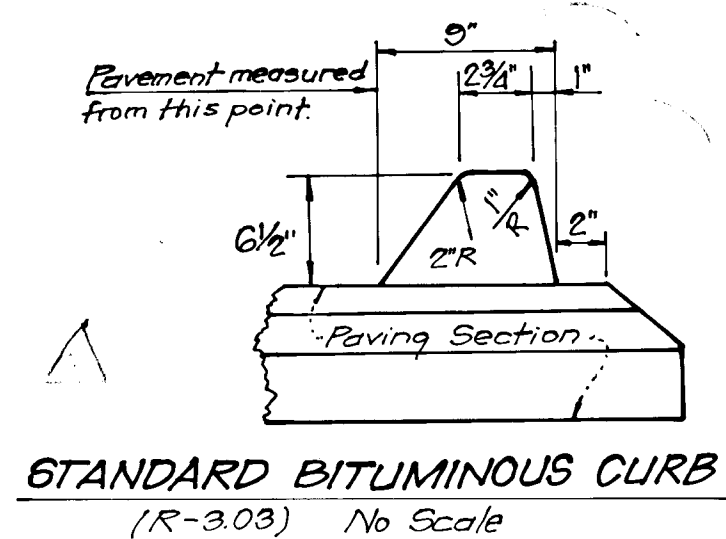
PC to PT	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
PC: 0+00 to PT: 1+30.52	310.00	25°13'54"	136.52	63.38	135.42	N78°55'26"E
PC: 2+36.52 to PT: 3+76.78	275.00	29°13'22"	140.26	71.69	138.74	N76°55'42"E

**REVISION**

No.	REVISION	DATE
1	Revised Riser/Barrel at I-4	3-12-91
2	Revised Storm Drain Layout & Grading	7-9-91
3	Remove Tee - Turnaround & correct future entrance	8-19-92
4	Delete Guardrail	6-7-94



- GENERAL NOTES**
- All work shall be done in accordance with Hb.Co. Design Manual, Vol. III, Specs. and Specs and Details for Construction, 1989 Amendments.
  - Types of storm drains refer to the standard details of Hb.Co. & MDSA.
  - Trench compaction for storm drains within road or street right-of-way limits shall be in accordance with Hb.Co. Design Manual, Vol. III, Std. G.2.0.
  - Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of mains by digging test pits by hand, at all utility crossings, well in advance of construction.
  - All utility companies shall be notified 24 hrs. in advance of construction.
  - All traffic services parking and signing to be done in accordance with the Manual of Uniform Traffic Control Devices, 1988 Ed. Hb.Co.
  - Sag and crest vertical curves were designed in accordance with Hb.Co. Design Manual, Vol. III.
  - Provide Curb, Sidewalk Ramps Hb.Co. Std. Type A R4.01 where shown in plan.
  - Design Speed: See Table Sht. 3, Zoning: R & R-20, See Plan.
  - The contractor or developer shall contact the Construction Inspection 24 hrs. in advance of commencement of work Ph. 792-7272.



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: *James M. Hales* 4/3/90  
U.S. Soil Conservation Service

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

Approved: *Robert G. Ziehl* 4/3/90  
Howard S.C.D.

**Developers Certification:**

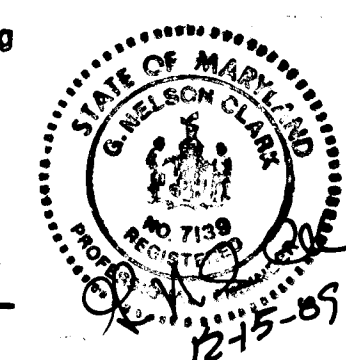
"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion 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."

*Robert G. Ziehl* 12-16-89  
Director of Developer

**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 a red-lined "as built" of the pond within 30 days of completion."

*Ph. Ziehl* 12-15-89  
Signature of Engineer



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Robert G. Ziehl* 4/25/90  
Chief, Land Development Division

*Shawelle W. Williams* 4/17/90  
Chief, Bureau of Highways

*Robert G. Ziehl* 4-26-90  
Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Mark J. Ziehl* 4/25/90  
Chief, Division of Community Planning & Land Development

**CLARK • FINEFROCK & SACKETT, INC.**  
ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 - BALTO • (301) 621-8100 - WASH

DESIGNED	KIWM	SCALE	As Shown
DRAWN	KIWM	DRAWING	10F6
CHECKED	JLS	JOB NO.	88-013
DATE	12-18-89	FILE NO.	88-013-D

**ROAD CONSTRUCTION PLANS  
FABER WAY**

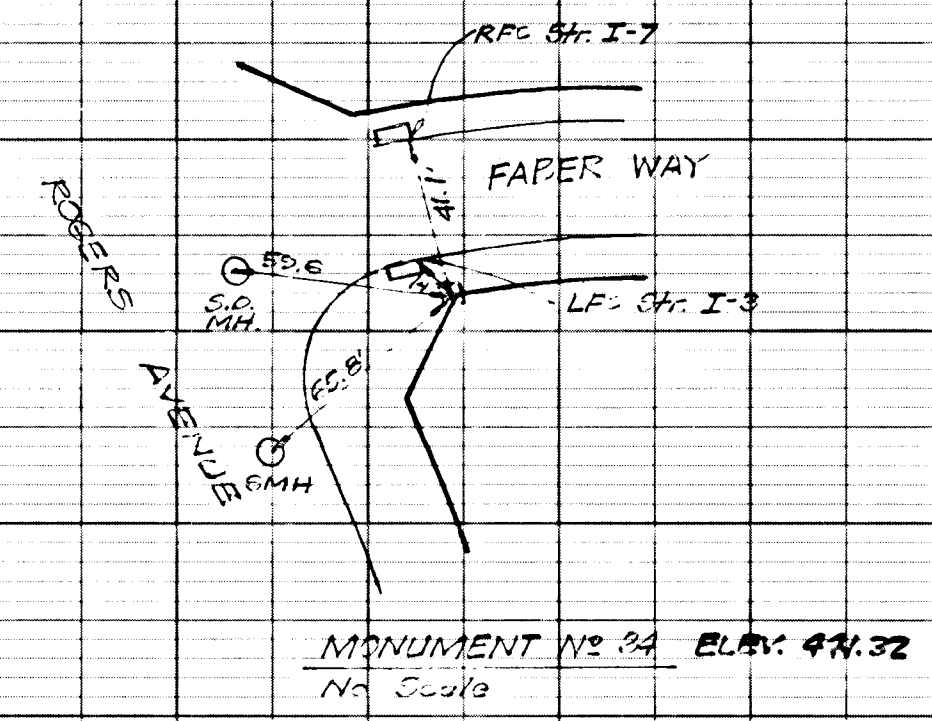
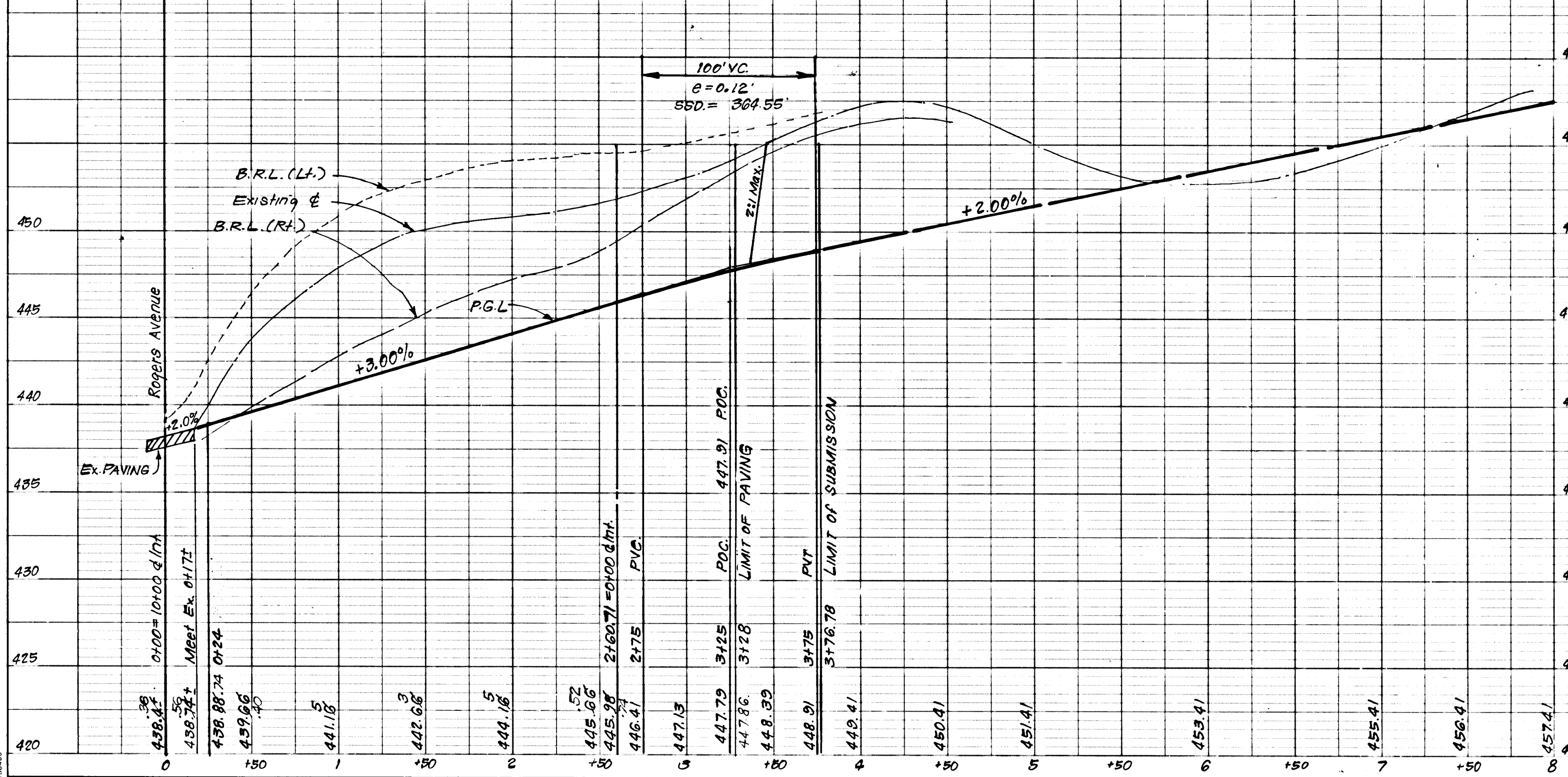
**BRUECKMANN PROPERTY**

**2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND**

FOR: ROCKLAND PARTNERSHIP  
1206 MCGEE WAY  
ELLCOTT CITY, MD 21043

1565

**PROFILE - FABER WAY**



For AS-BUILT  
by C&S, Inc.

**PROFILE SCALE**  
HORIZ. 1"=50'  
VERT. 1"=5'

Reviewed for HOWARD S.C.D. Name and meets Technical Requirements  
 Signature: *Robert W. Zimm* 9/3/90  
 U.S. Soil Conservation Service

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

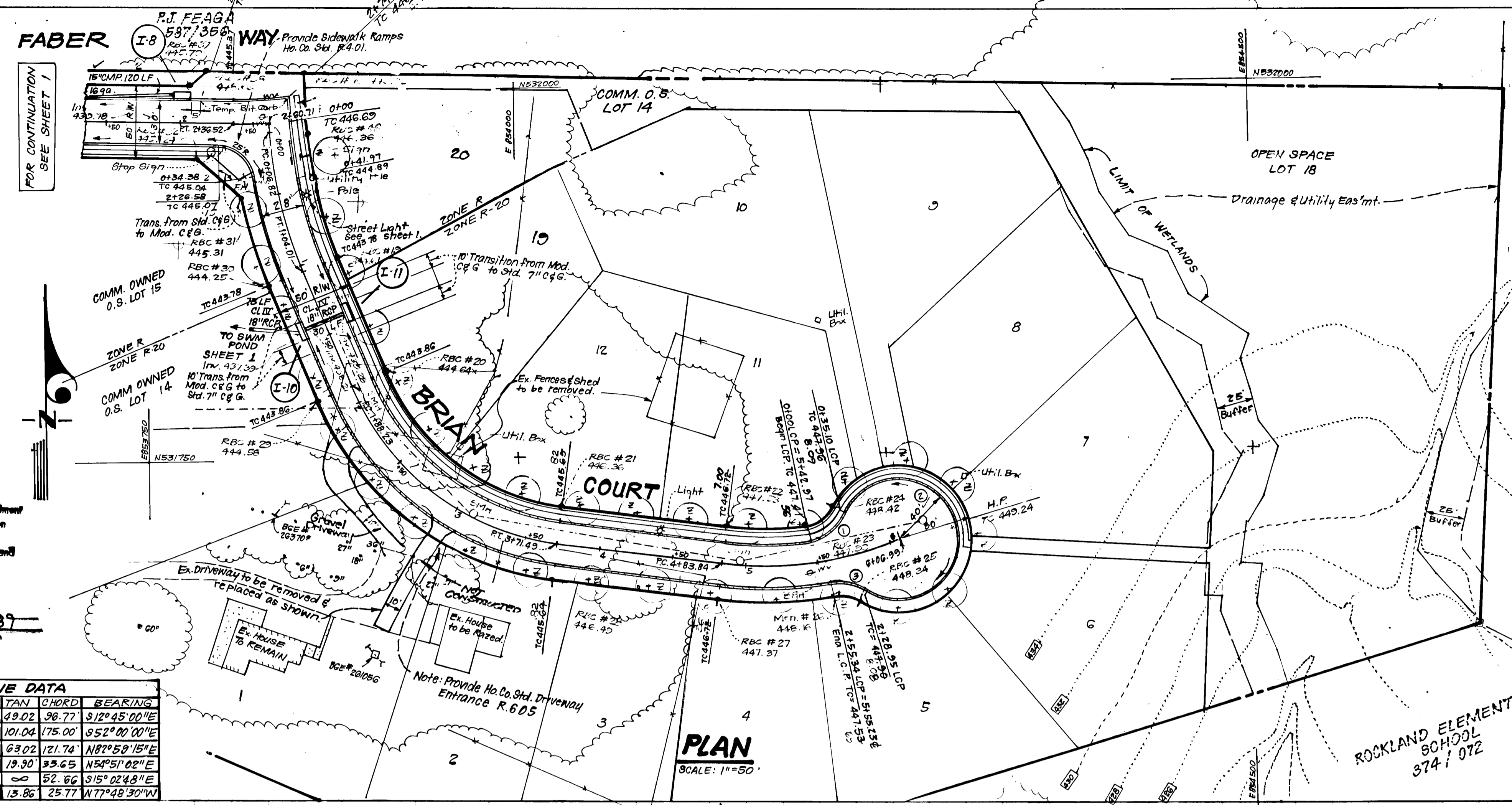
Approved: *Robert W. Zimm* 9/3/90  
 Date

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

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

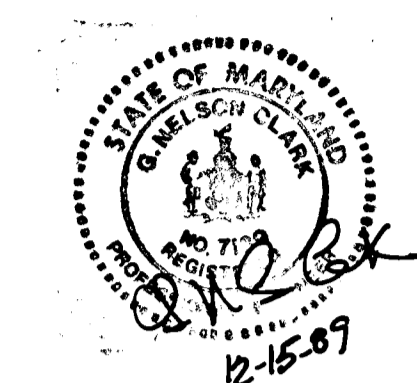
Signature of Developer/Builder: *Robert W. Zimm* Date: 12-9-89

CENTERLINE & CURVE DATA					
BRIAN COURT	RADIUS	DELTA	ARC	TANG	CHORD
PC: 0106.82 to PT: 1104.01	301.00'	183° 00' 00"	97.13'	49.02'	96.77'
PC: 1188.23 to PT: 3171.43	175.00'	60° 00' 00"	183.26'	101.04'	175.00'
PC: 4183.84 to PT: 6108.99	235.00'	300° 01' 20"	123.15'	63.02'	121.74'
CUL-DE-SAC ①	35.00'	57° 28' 03"	33.11'	19.90'	33.63'
CUL-DE-SAC ②	40.00'	277° 40' 23"	193.85'	52.80'	155° 02' 48" E
CUL-DE-SAC ③	35.00'	43° 11' 46"	26.39'	13.86'	25.77'



**PLAN**  
 SCALE: 1"=50'

No	REVISIONS	Date
1	Remove fee turnaround	8/19/92



**ENGINEER'S CERTIFICATE**  
 I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature: *G. Nelson Clark* Date: 12-15-89

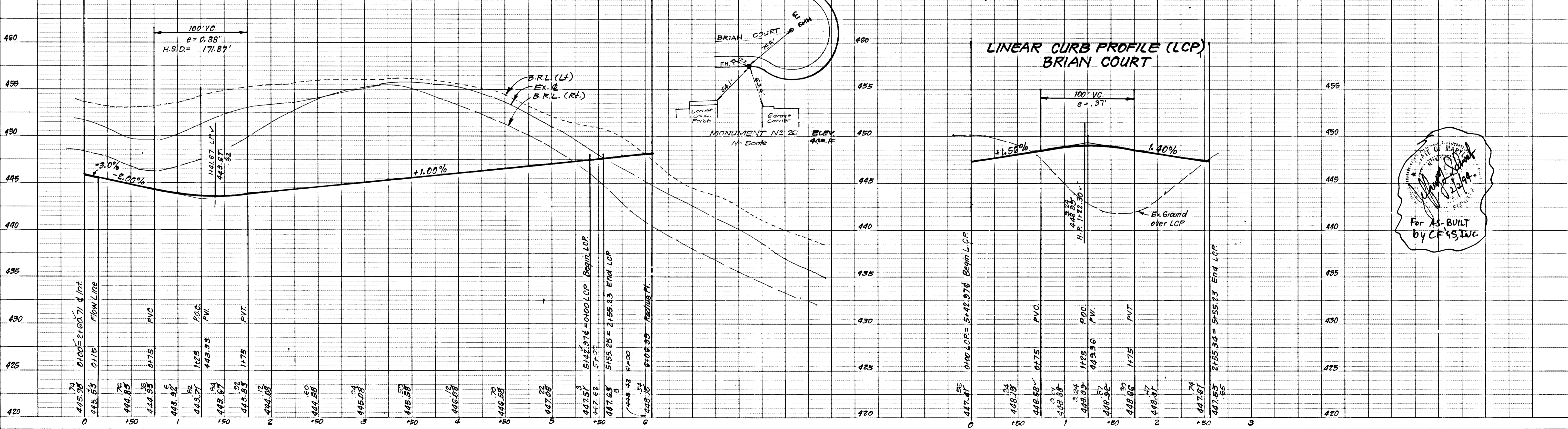
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 Signature: *Paul D. Brown* Date: 4/25/90  
 Chief, Land Development Division  
 Signature: *Lawrence W. Helms* Date: 4/17/90  
 Chief, Bureau of Highways  
 Signature: *W. C. ...* Date: 4-26-90  
 Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.  
 Signature: *Frank ...* Date: 9/2/89  
 Chief, Division of Community Planning & Land Development

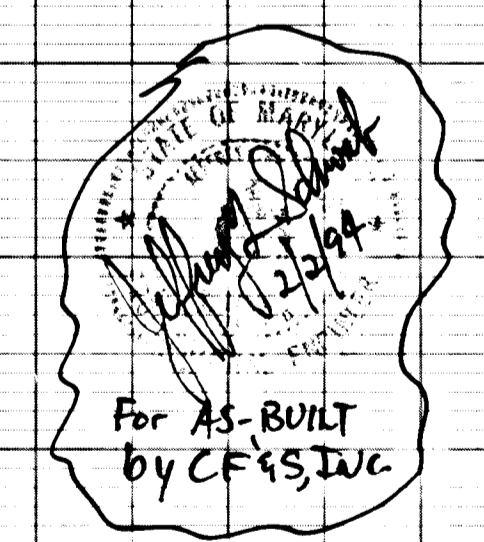
**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 - BALTO • (301) 621-8100 - WASH.

DESIGNED	ROAD CONSTRUCTION PLANS	SCALE
KIWM	BRIAN COURT	As Shown
DRAWN	<b>BRUECKMANN PROPERTY</b>	2 OF 6
CHECKED	2ND ELECTION DISTRICT	JOB NO.
JLB	HOWARD COUNTY, MARYLAND	88-013
DATE	FOR: ROCKLAND PARTNERSHIP	FILE NO.
12-18-89	11206 MCGEE WAY	88-013-D
	ELLICOTT CITY, MD. 21043	

**PROFILE - BRIAN COURT**

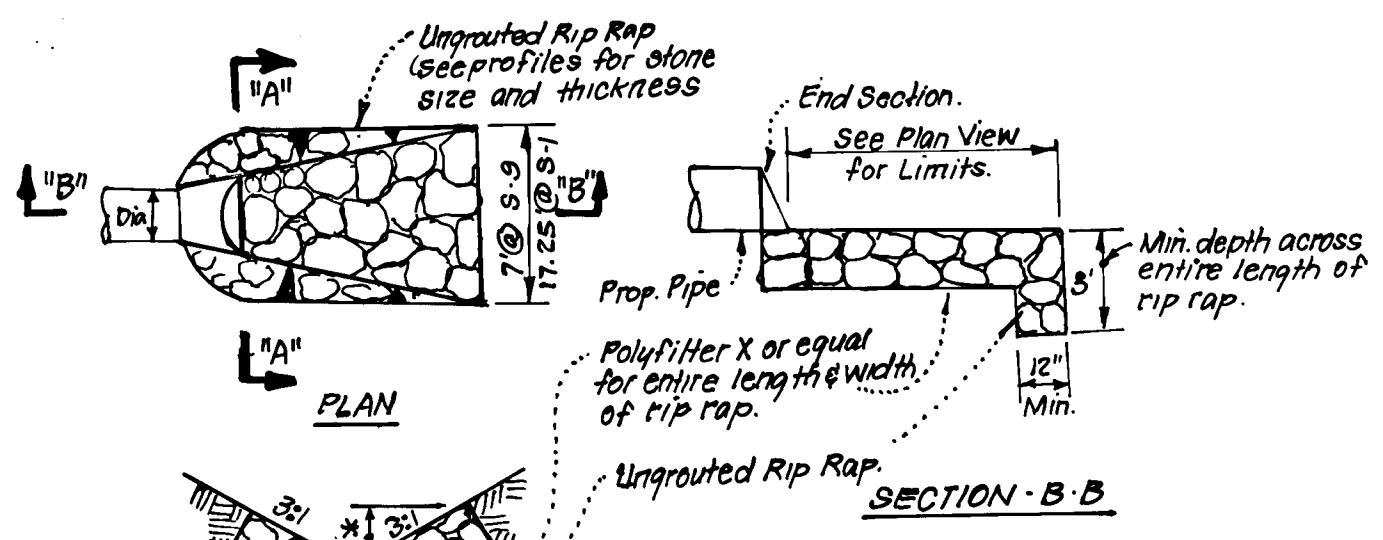


PROFILE SCALE  
 HORIZ. 1"=50'  
 VERT. 1"=5'



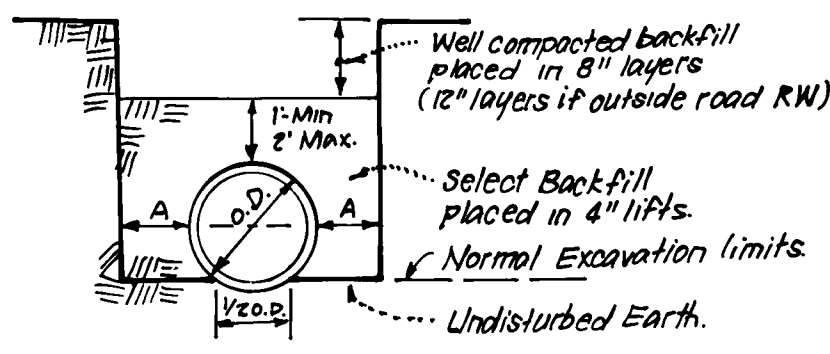
For AS-BUILT by CF&S, Inc.

1565

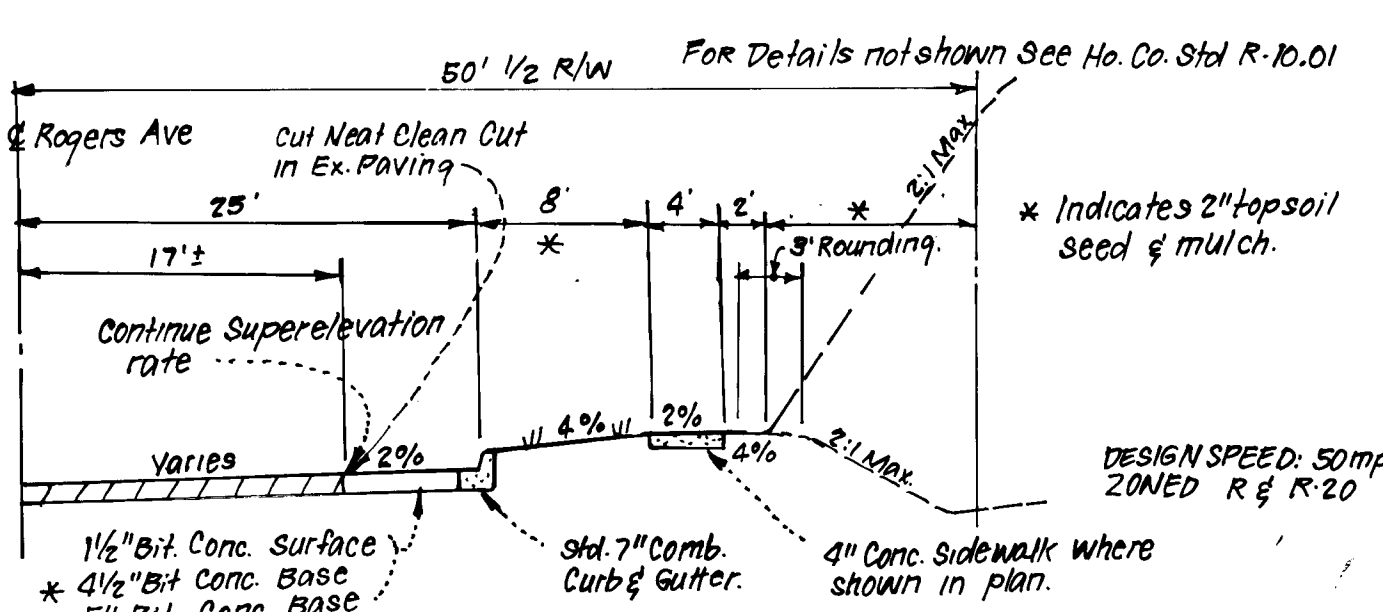


SECTION A-A  
UNGRAVOUTED RIP RAP PAVING DETAILS  
NO SCALE

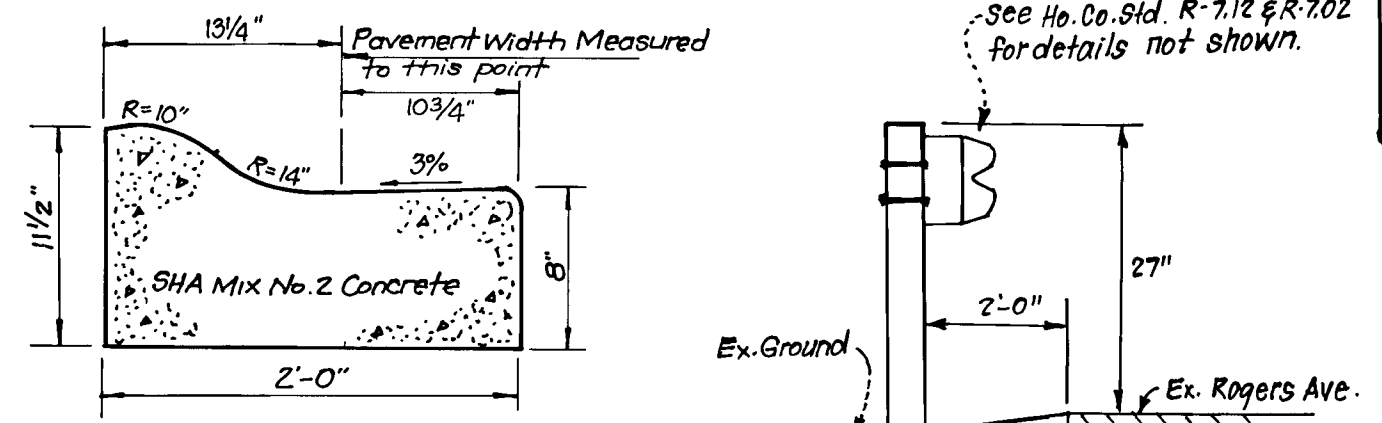
Notes: 1. For O.D. of Pipe See Manufacturers Specs or field measure circumference of pipe and ÷ by 3.14.  
2. Within road R/W Trench Composition Density shall be 95% as determined by AASHTO T-160-A.  
3. For conditions requiring solid sheeting or trench shields A shall not exceed 30°.



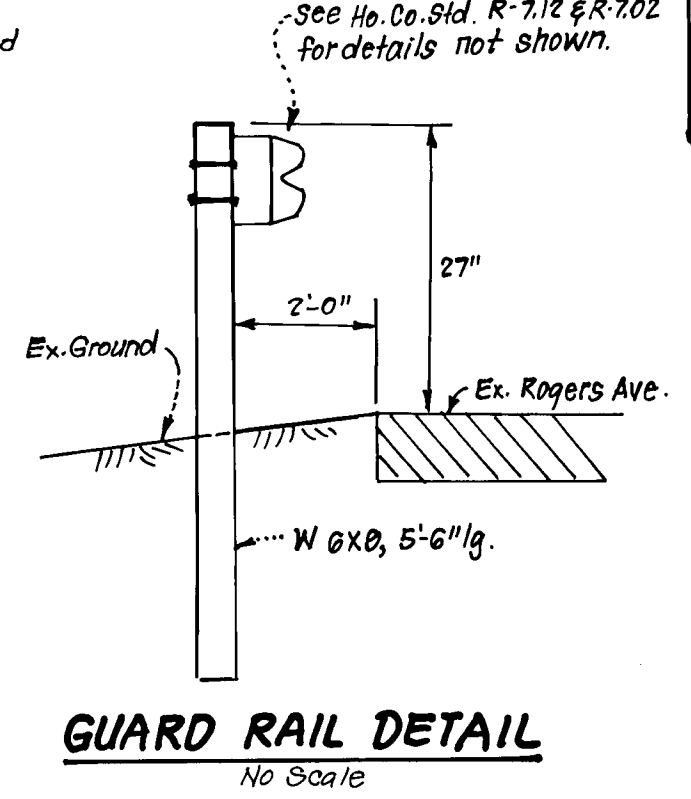
TRENCH BEDDING DETAIL  
NO SCALE



MINOR ARTERIAL  
TYPICAL HALF SECTION - ROGERS AVE.  
NO SCALE



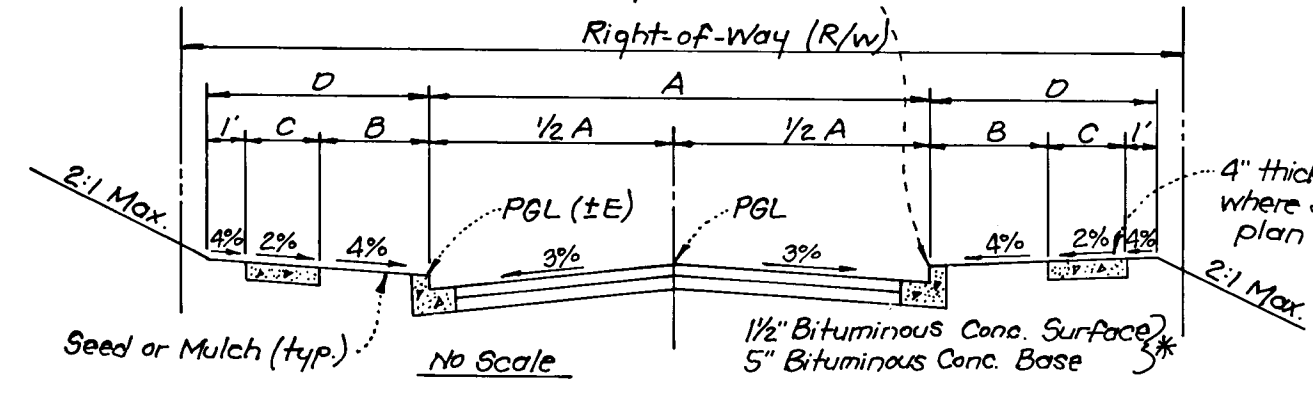
MODIFIED COMBINATION CURB & GUTTER  
No Scale



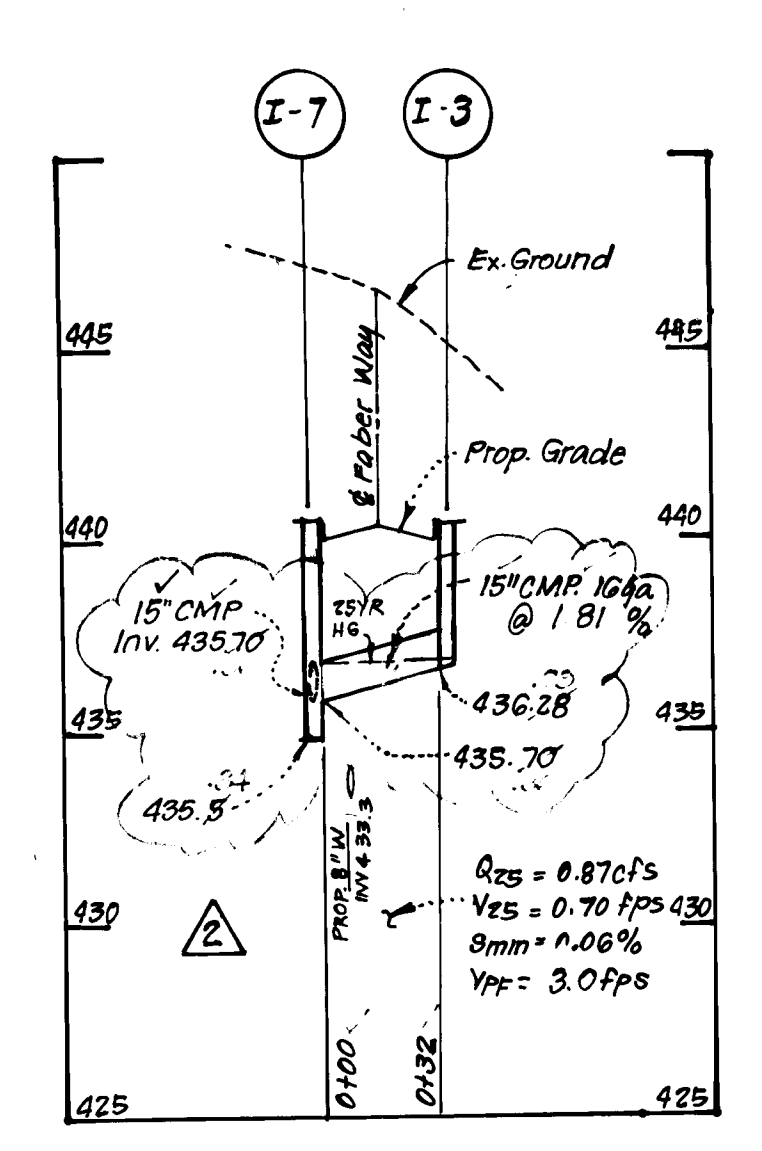
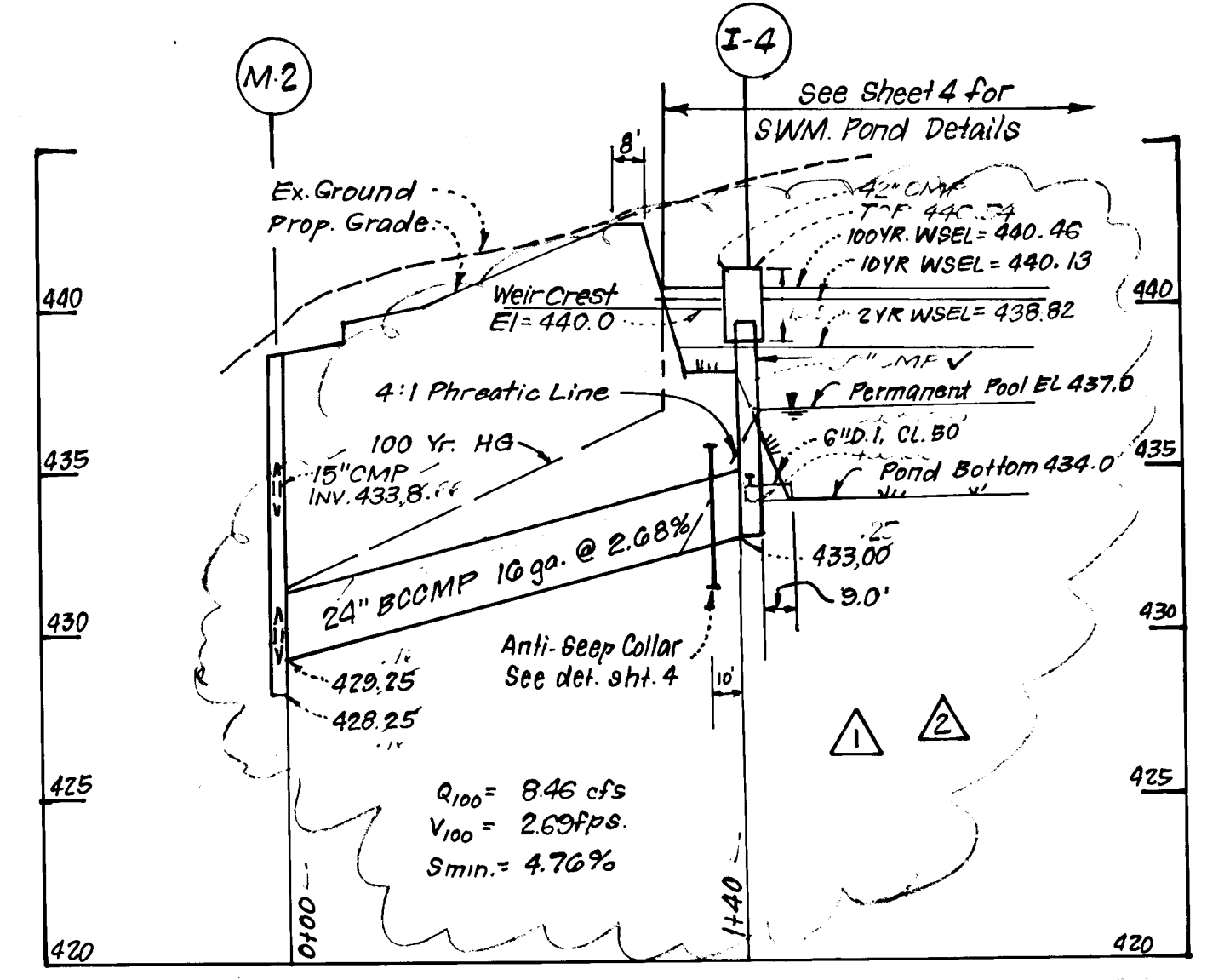
GUARD RAIL DETAIL  
No Scale

STREET NAME & STATION	TYPE OF TRAFFIC	A	B	C	D	R/W	20' N/S	DESIGN SPEED	E
FABER WAY 0+00 to 0+25	LOCAL	30'	4'	4'	3'	50'	R-12 & R	30	11
BRIAN CT. 0+00 to 0+25	OUT-DE-SAC.	28'	4'	4'	9'	50'	R-12 & R	25	10

For Curb & Gutter Type - See Plan - Right-of-Way (R/W)



TYPICAL PAVING SECTION - PUBLIC ROADS  
For Alternate Paving Section - see detail this sht.



PIPE SCHEDULE

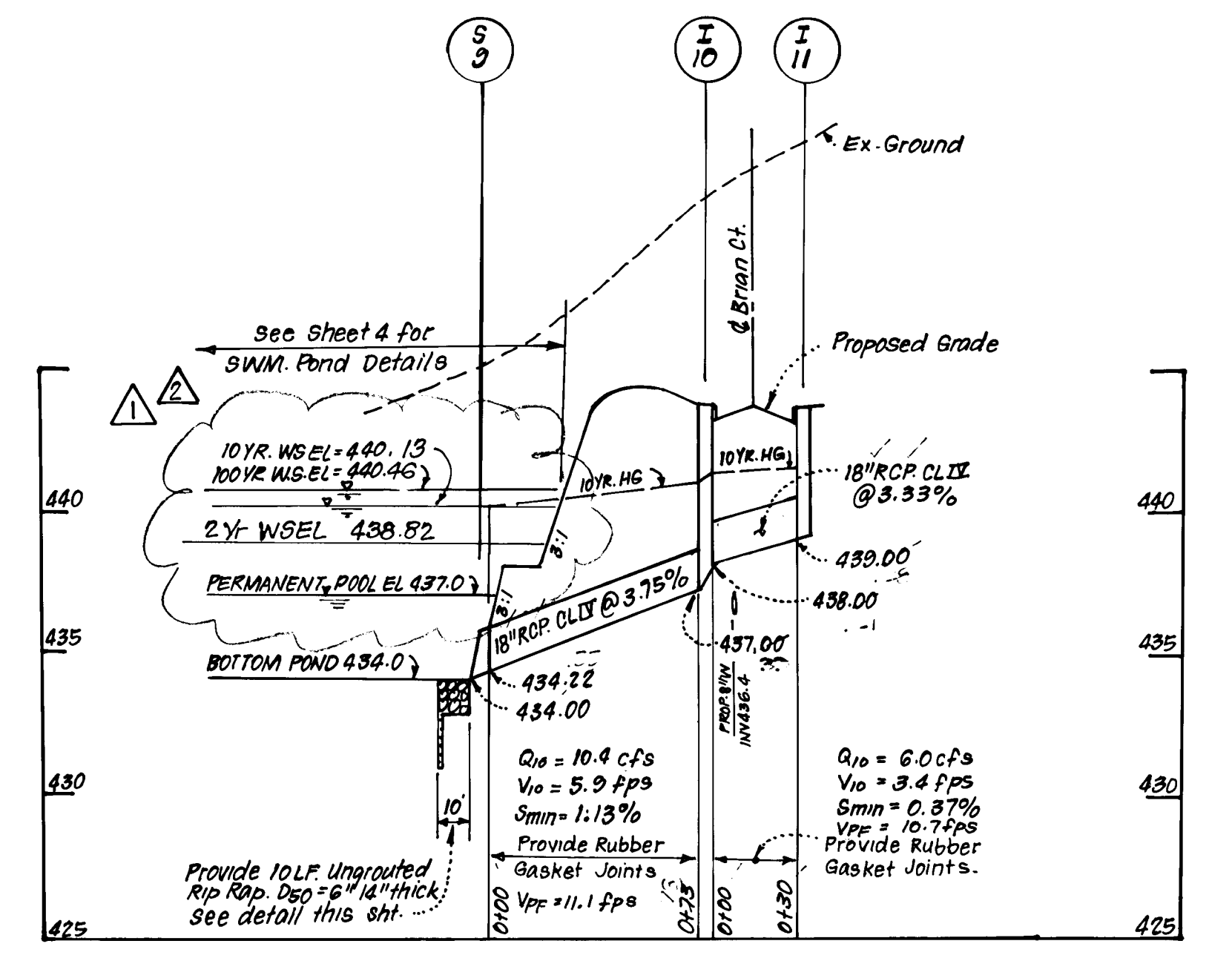
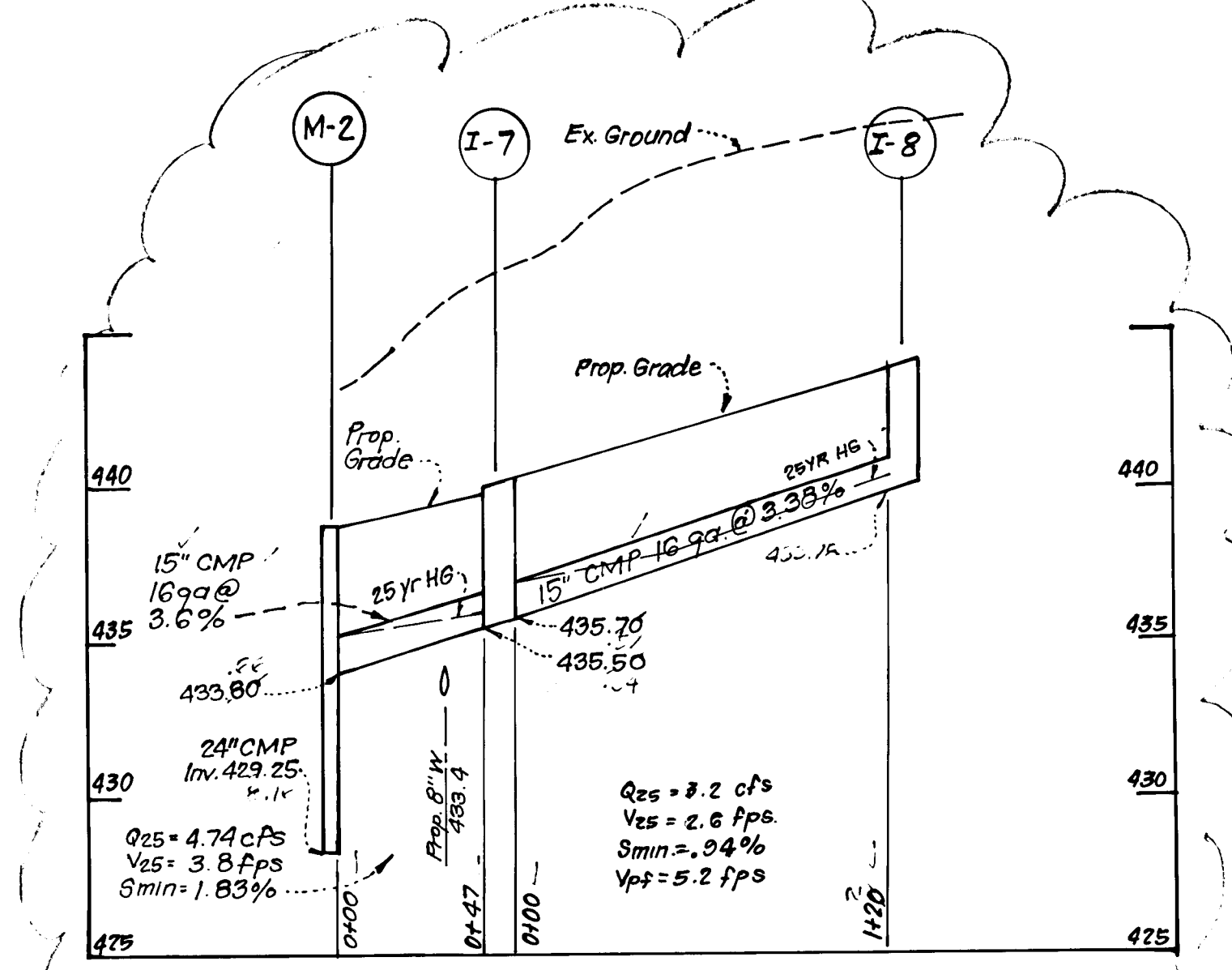
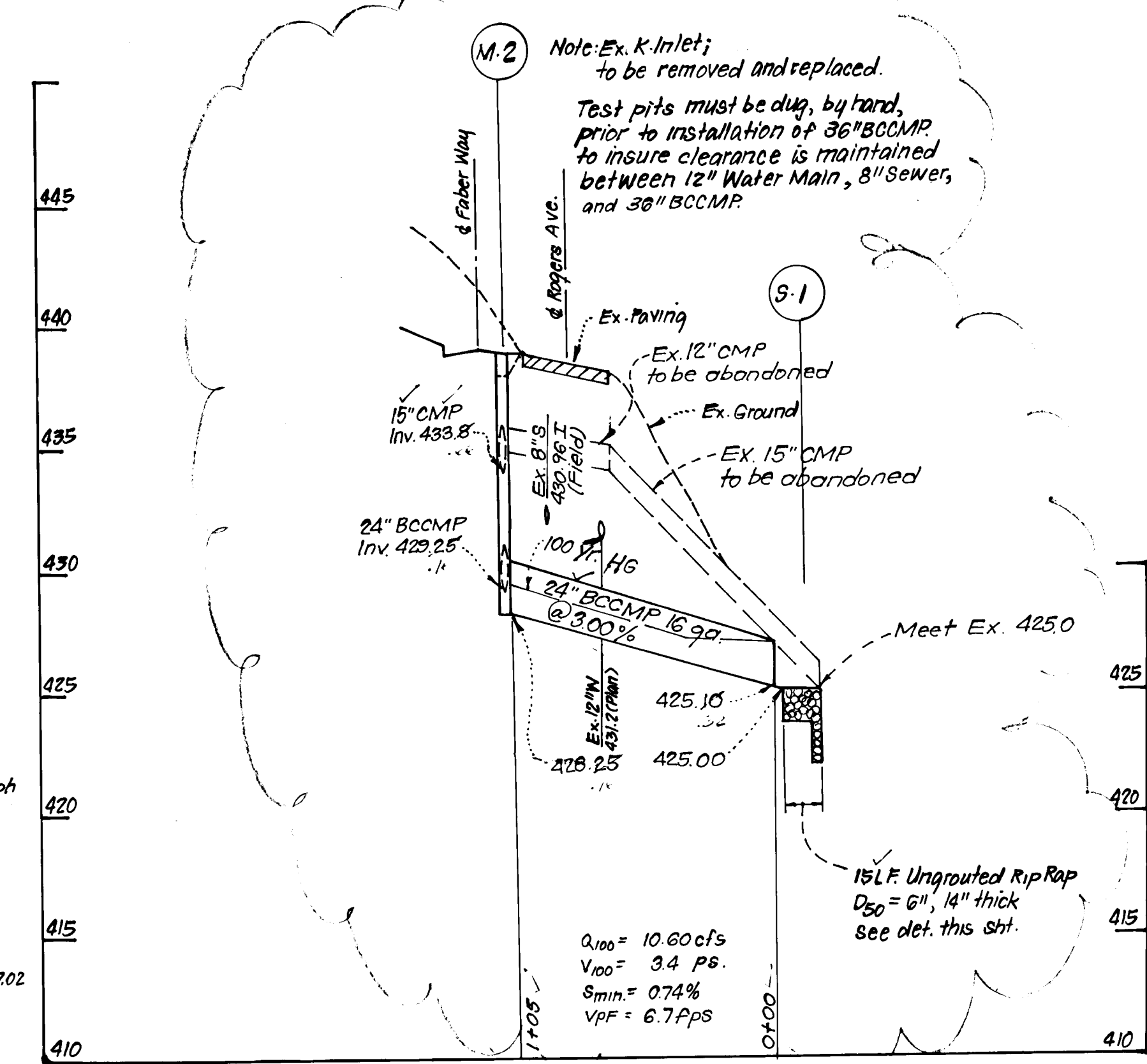
SIZE	TYPE	LENGTH
15"	CMP	169.9
18"	RCP	CL. II
24"	BCCMP	16.92

1.2% x 1/2" Corrugations.

STRUCTURE SCHEDULE

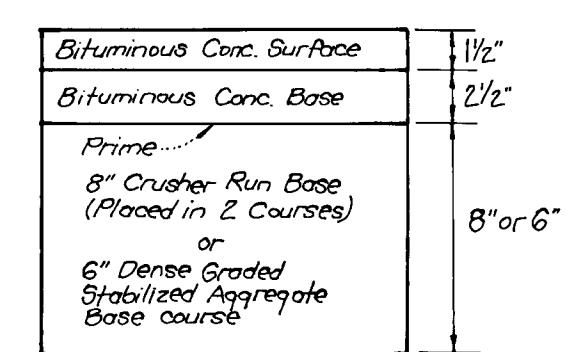
No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION UPPER LOWER	REMARKS	LOCATION
S-1	Metal End Section	425.00	425.10	-	Ho. Co. Std. SD 5.61	36"Ø See Plan
M-2	Manhole	433.8	428.25	438.73	Ho. Co. Std. G-5.01	4'-0"Ø @ MH 0+25 Faber Way 8 Rt.
I-3	A-5 Inlet	-	436.28	440.39 - 440.20	Ho. Co. Std. SD 4.01	W=2'-6" @ Inlet 0+72 Faber Way 15 Rt.
I-4	Special	-	-	+ 441.25	See Detail - Sht. 4	@ Inlet 1+57 Faber Way 92 Rt.
I-7	A-10 Inlet	435.7	435.50	440.47 - 440.13	Ho. Co. Std. SD 4.02	W=2'-6" @ Inlet 0+12 Faber Way 15 Lt.
I-8	A-10 Inlet w/Deflec.	-	439.75	444.44 - 444.10	Ho. Co. Std. SD 4.02	W=2'-6" @ Inlet 2+00 Faber Way 15 Lt.
S-9	Comp. End Section	434.22	434.00	-	Ho. Co. Std. SD 5.51	18"Ø @ SH. 1+60 BRIAN CT. 85 Rt.
I-10	A-10 Inlet	438.00	437.00	443.81 -	Ho. Co. Std. SD 4.02	W=2'-6" @ Inlet 1+41.67 BRIAN CT. 14 Rt.
I-11	A-10 Inlet	-	439.00	443.81 -	Ho. Co. Std. SD 4.02	W=2'-6" @ Inlet 1+41.67 BRIAN CT. 14 Lt.

All Inverts are fully developed.  
\* Provide Inlet Deflectors See Ho. Co. Std. 4-83.  
+ Top of Anti-Vortex Device

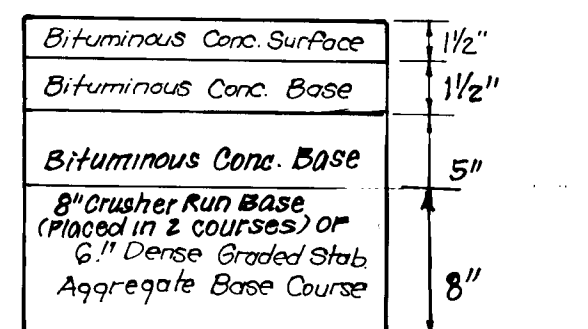


PROFILES

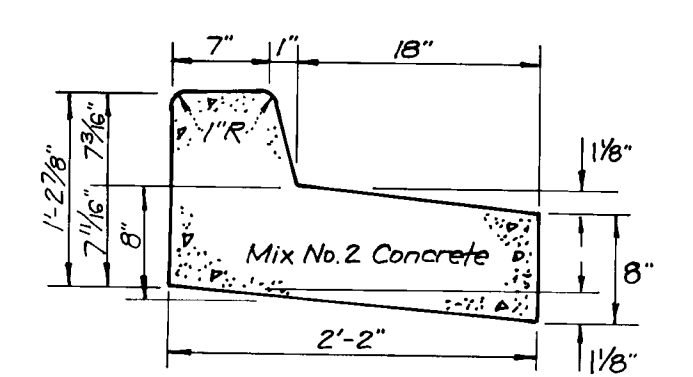
SCALES: HORIZ. 1"=50'  
VERT. 1"=5'



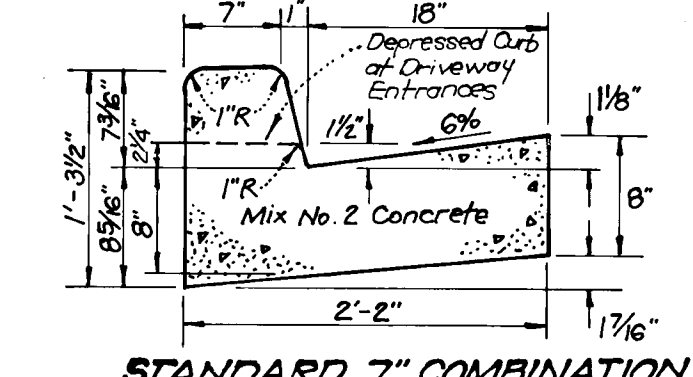
ALTERNATE PAVING SECTION FOR PUBLIC ROADS  
No Scale (Section P-2)



ALTERNATE PAVING SECTION FOR ROGERS AVE.  
No Scale (Section P-5)



REVERSE 7" COMBINATION CURB & GUTTER  
No Scale



STANDARD 7" COMBINATION CURB & GUTTER  
No Scale

Reviewed for S.C.D. and meets Technical Requirements  
Signature: *Jamie M. Hulse* 4/13/90  
Name: *Jamie M. Hulse*  
Date: 4/13/90  
U.S. Soil Conservation Service

Reviewed for S.C.D. and meets Technical Requirements  
Signature: *Robert W. Zuhn* 4/13/90  
Name: *Robert W. Zuhn*  
Date: 4/13/90  
U.S. Soil Conservation Service

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."  
Signature: *Robert W. Zuhn* 12-16-89  
Name: *Robert W. Zuhn*  
Date: 12-16-89

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature: *G. Nelson Clark* 12-15-89  
Name: *G. Nelson Clark*  
Date: 12-15-89

2	Revised Storm Drain Profiles due to NEW Layout	7-9-91
1	Revision to Profiles due to changes in Str. #I-4	3-12-91
No.	REVISION	DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
Signature: *Donald J. Brown* 4/25/90  
Name: *Donald J. Brown*  
Date: 4/25/90  
Title: Chief, Bureau of Highways

Signature: *Draville W. Cheneard* 4/17/90  
Name: *Draville W. Cheneard*  
Date: 4/17/90  
Title: Chief, Bureau of Engineering

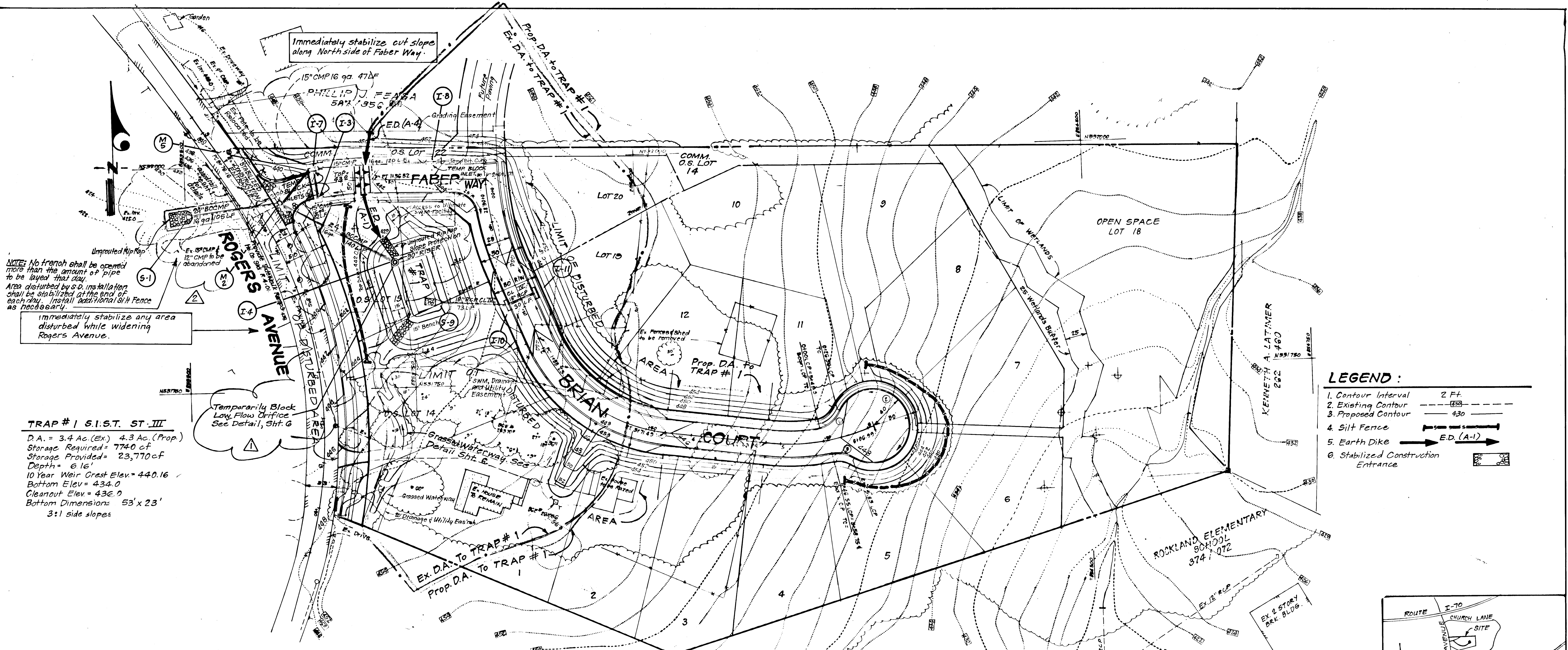
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.  
Signature: *John C. Zuhn* 4/25/90  
Name: *John C. Zuhn*  
Date: 4/25/90  
Title: Chief, Division of Community Planning & Land Development

**CLARK • FINEFROCK & SACKETT, INC.**  
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DESIGNED	SCALE
KINW	As Shown
DRAWN	DRAWING
KINW	3 OF 6
CHECKED	JOB NO.
JLS	88-013
DATE	FILE NO.
12-18-89	88-013-D

**ROAD CONSTRUCTION PLANS**  
**BRUECKMANN PROPERTY**  
2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
FOR: ROCKLAND PARTNERSHIP  
11206 MOORE WAY  
ELLCOTT CITY, MD. 21043





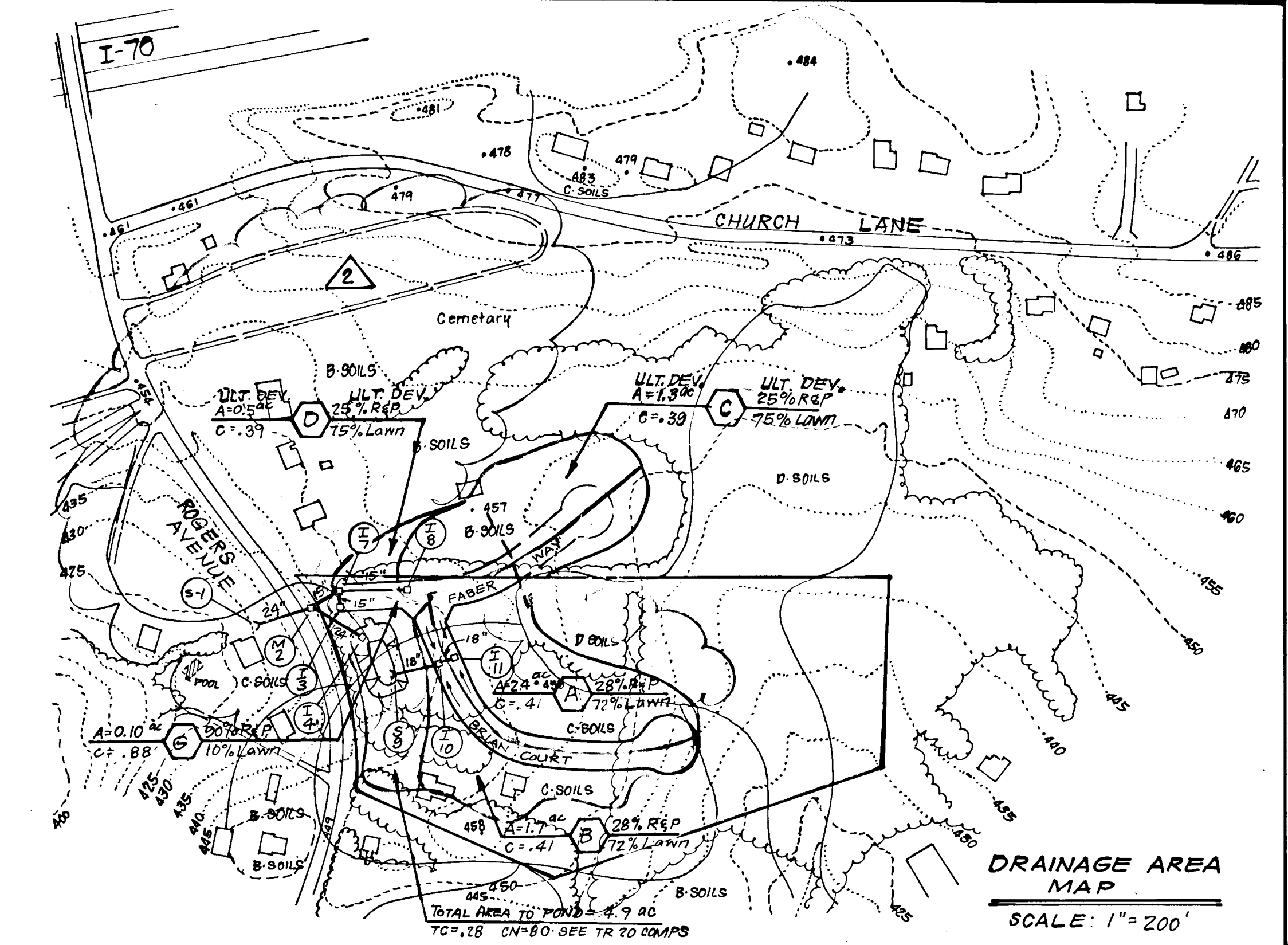
NOTE: No trench shall be opened more than the amount of pipe to be laid that day. Area disturbed by S.D. installation shall be stabilized at the end of each day. Install additional Silt Fence as necessary.

Immediately stabilize any area disturbed while widening Rogers Avenue.

**TRAP #1 S.I.S.T. ST. III**  
 D.A. = 3.4 Ac. (Ex.) 4.3 Ac. (Prop.)  
 Storage Required = 7740 cf  
 Storage Provided = 23,770 cf  
 Depth = 6.16'  
 10 Year Weir Crest Elev. = 440.16  
 Bottom Elev. = 434.0  
 Cleanout Elev. = 436.0  
 Bottom Dimensions = 53' x 23'  
 3:1 side slopes

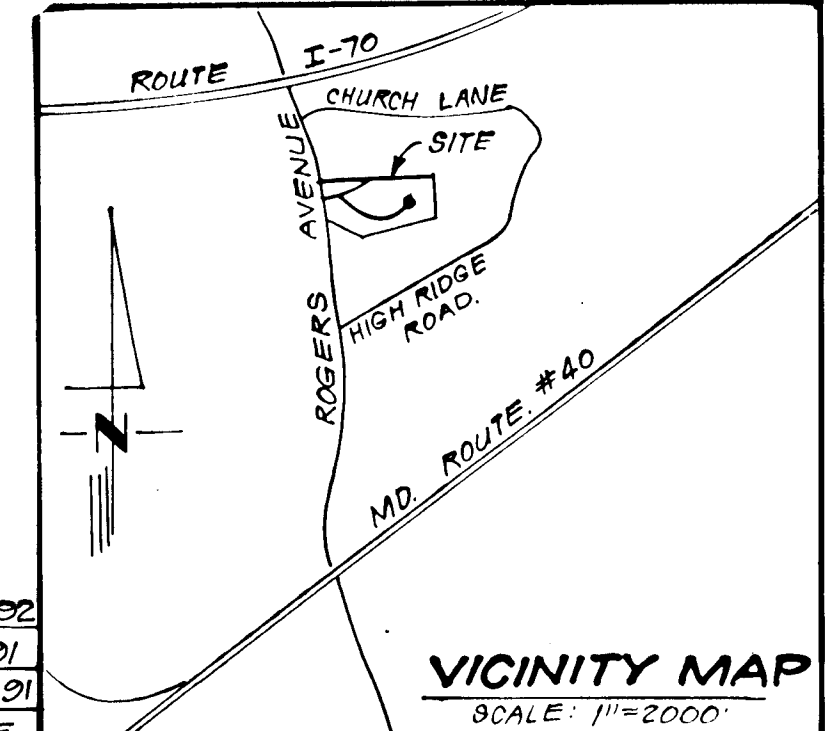
**LEGEND :**

1. Contour Interval	2 Ft.
2. Existing Contour	---
3. Proposed Contour	---
4. Silt Fence	—+—+—+—+—+—+—+—+—+—
5. Earth Dike	—+—+—+—+—+—+—+—+—+—
6. Stabilized Construction Entrance	—+—+—+—+—+—+—+—+—+—



**PLAN**  
 SCALE: 1" = 50'

No.	REVISION	DATE
3	Remove feet around & rev. grading	8-19-92
2	Rev. to reflect new Storm Drain Layout	7-9-91
1	Added Note; Corrected Rise/Barrel I-4	8-12-91



Reviewed for Howard S.C.D. Name  
 and meets Technical Requirements  
 Signature: James M. Nelson 4/3/90 Date  
 U.S. Soil Conservation Service

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

Signature: Robert W. Ziehm 4/3/90 Date  
 Approver: JRR

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

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as deemed necessary."

Signature: Robert W. Ziehm 4/3/90 Date  
 Signature of Developer/Builder

**ENGINEER'S CERTIFICATE**

Thereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: G. Nelson Clark 12-15-89 Date  
 Signature of Engineer

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature: Donald J. Jenson 4/25/90 Date  
 Chief, Land Development Division

Signature: Craville W. Cleveland 4/17/90 Date  
 Chief, Bureau of Highways

Signature: William B. Fiedel 4-26-90 Date  
 Chief, Bureau of Engineering

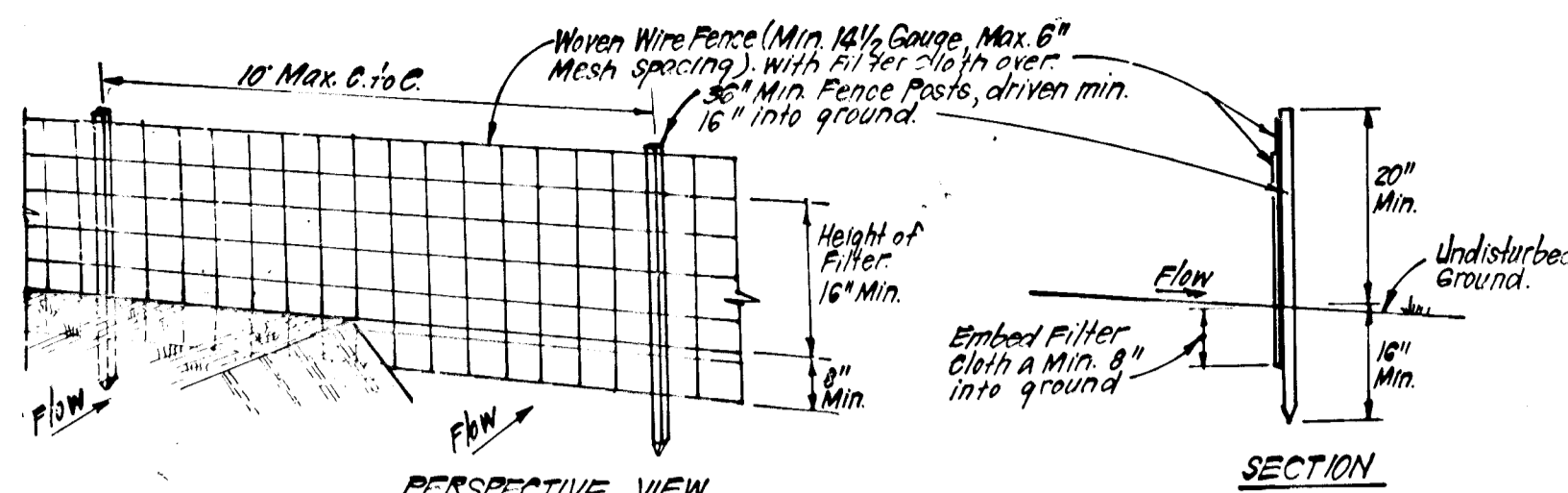
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Signature: Paul W. Taylor 4/25/90 Date  
 Chief, Division of Community Planning & Land Development

**CLARK • FINEPROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7155 WINDSTREL WAY • COLUMBIA MD 21045 • (301) 381-7500 • FAX (301) 381-7501 • WASH.

DESIGNED	KJWM	SCALE	As Shown
DRAWN	VLM	DRAWING	50-F6
CHECKED	JLS	JOB NO.	88-013
DATE	12-18-89	FILE NO.	88-013-D

FOR: ROCKLAND PARTNERSHIP  
 11206 MCGEE WAY  
 ELLICOTT CITY, MD 21043



**CONSTRUCTION SPECIFICATIONS:**

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 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and posts driven into ground.
4. Maintenance shall be performed as needed and material removed when "bulges" develop in silt fence.

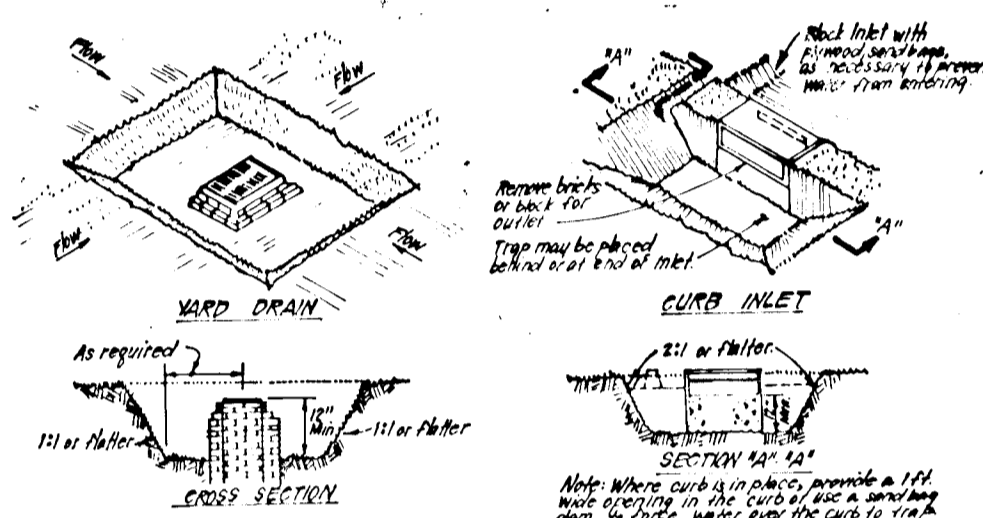
**POSTS:** Steel either T or U Type or 2" Hardwood

**FENCE:** Woven Wire, 14 1/2 Gauge, 6" Max. Mesh Opening

**FILTER CLOTH:** Filter, Miraflo, 100% Siltlink, T1000 or Approved

**PREFABRICATED UNIT:** Geotab, Envirofence, or Approved equal

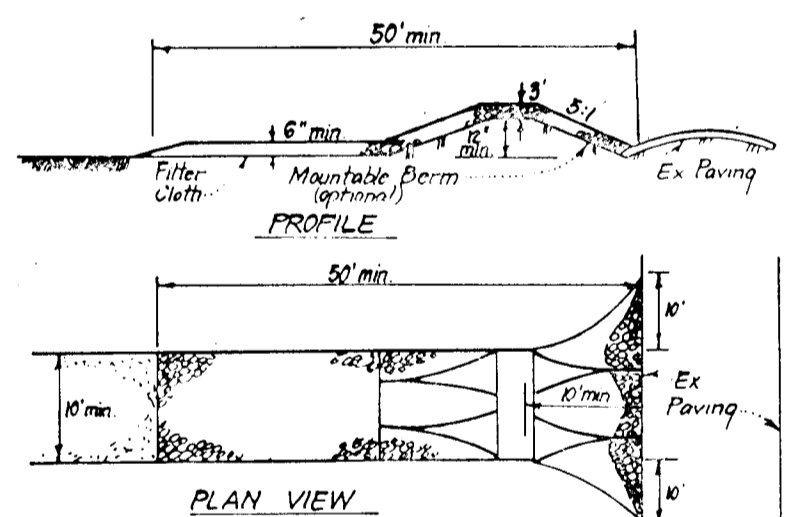
**SILT FENCE DETAIL (S)**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

1. Sediment trap shall be removed and the trap replaced with gravel or crushed stone when sediment has accumulated to 1/2 the depth of the trap. The trap shall be replaced in a suitable area and backfill with gravel or crushed stone.
2. The volume of sediment storage shall be 100% of the contributing drainage area.
3. The structure shall be designed to trap sediment and debris. The structure shall be designed to trap sediment and debris.
4. Construction materials shall be carried out in such a manner that erosion and other problems shall be minimized.
5. The sediment trap shall be removed and the area stabilized when the contributing drainage area has been properly stabilized.
6. All cut slopes shall be 1:1 or flatter.

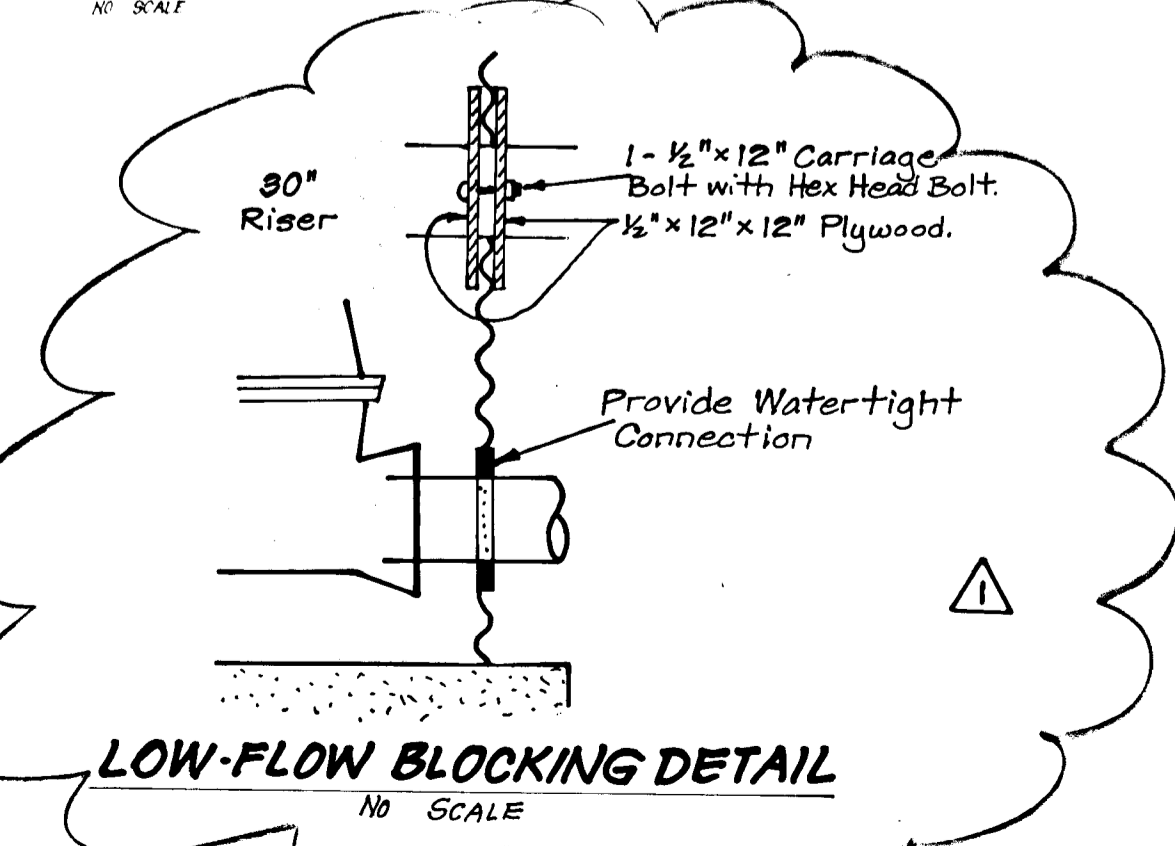
**STORM INLET SEDIMENT TRAP (SIST) ST III**  
NO SCALE



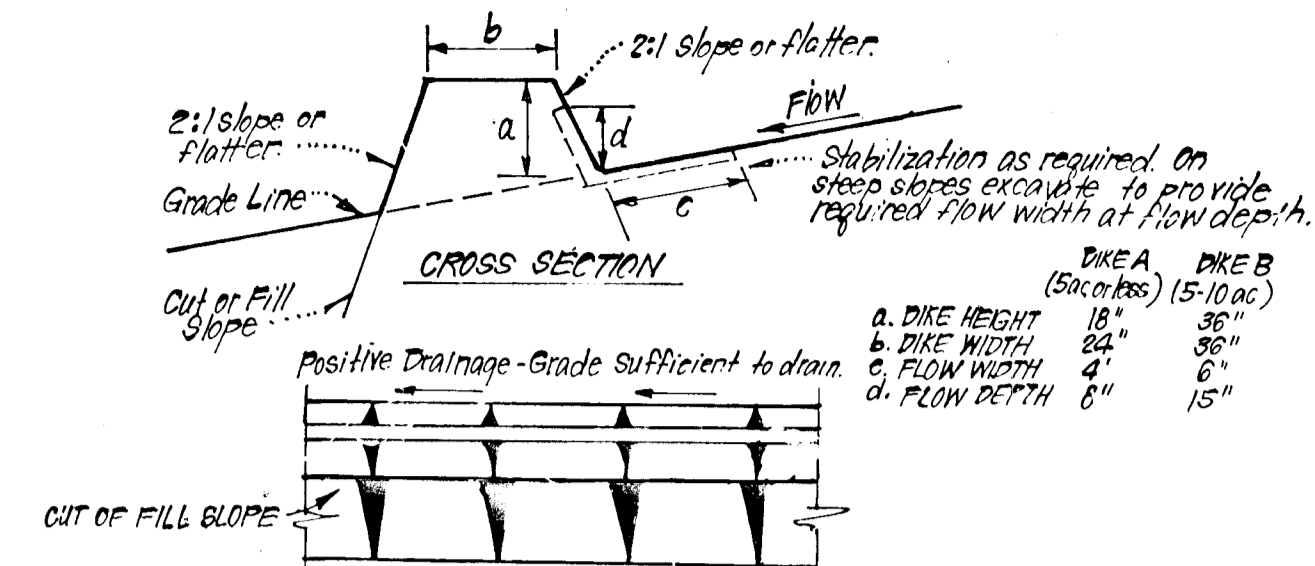
**CONSTRUCTION SPECIFICATIONS:**

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 20 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 of points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to raking 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 storm with 2:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment into public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dragged, 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 established with stone and which directs an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

**STABILIZED CONSTRUCTION ENTRANCE (SCE)**  
NO SCALE



**LOW-FLOW BLOCKING DETAIL**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

1. All dikes shall be compacted by earth-moving equipment.
2. All dikes shall have positive drainage to an outlet.
3. Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized soft 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 chart below.

FLOW CHANNEL STABILIZATION		
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A
1	0.5 - 3.0%	Seed & Straw Mulch
2	3.1 - 5.0%	Seed & Straw Mulch
3	5.1 - 8.0%	Seed, White, or Excelsior; Sod; 2" Stone
4	8.1 - 20.0%	Lined Rip Rap 4-8" Stone Engineering Design

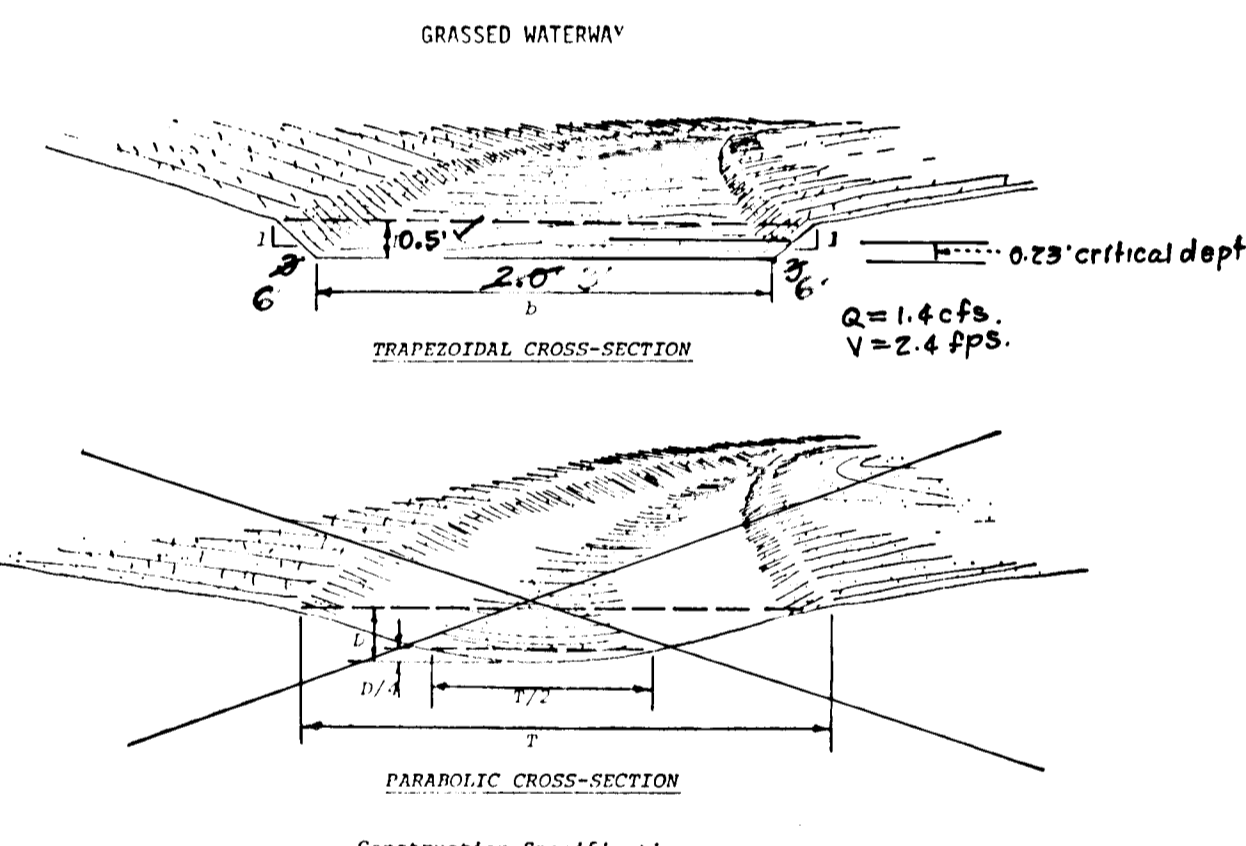
A. Stone to be 2" Stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.

B. Rip Rap to be 4-8" in a layer at least 8" thick, pressed into 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.

**EARTH DIKE DETAIL (E.D.)**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

1. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of as not to interfere with the proper functioning of the waterway.
2. The waterway 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.
3. Fills shall be compacted as needed to prevent undue settlement that would cause damage in the complete waterway.
4. All earth removed and not needed in construction shall be spread or disposed of so that it will not interfere with the functioning of the waterway.
5. Stabilization shall be done according to the appropriate Standard and Specifications for Vegetative Practices.
  - A. For design velocities of less than 3.5 ft. per sec., seeding and mulching may be used for the establishment of the vegetation. It is recommended that, when conditions permit, temporary diversions or other means should be used to prevent water from entering the waterway during the establishment of the vegetation.
  - B. For design velocities of more than 3.5 ft. per sec., the waterway shall be stabilized with sod, with seeding protected by jute or excelsior matting or with seeding and mulching including temporary diversion of the water until the vegetation is established.
  - C. Structural - Vegetative Protection
    - (i) Subsurface drain for base flow shall be constructed as shown on the Standard Drawing and as specified in the Standard and Specifications for Subsurface Drain.

Reviewed for HOWARD S.C.D. Name and meets Technical Requirements James M. Nelson 4/3/90 Signature U.S. Soil Conservation Service

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

Robert W. Ziehm 4/3/90 Approved Date

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

I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as deemed necessary.

Signature of Developer/Builder: Robert W. Ziehm Date: 4/3/90

**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 redistribution, 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 disturbed 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 seeding (Sec. 50) and (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and (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	11,064 Acres
Area Disturbed	2.47 Acres
Area to be roofed or paved	1.11 Acres
Area to be vegetatively stabilized	2.37 Acres
Total Cut	24,727 Cu. yds
Total Fill	1,637 Cu. yds
Offsite waste/borrow area location	Undetermined
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
10. 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.
11. If houses are to be constructed on an "As-Built" basis, at random, Single Lot Sediment Control as shown below shall be implemented. N/A
12. All pipes to be blocked at the end of each day (see detail below).
13. The total amount of straw bale dikes/silt fence equals 450 L.F.

**CONSTRUCTION SEQUENCE**

1. Obtain grading permit.	7 Days
2. Stabilize area disturbed by the installation of S-1, M-2	1 Day
3. Install Sediment Trap #1 and SCE.	30 Days
4. Clear and rough grade site. Immediately stabilize cut slope along north side of Faber Way. Continuous maintenance of ED will be necessary to insure positive drainage to Trap #1.	90 Days
5. Complete remaining storm drainage installation. Blocking inlets 1-3, 1-7 and 1-8.	30 Days
6. Construct utilities. Construct waterway and seed to permanent vegetation specs. Fine grade and construct paving.	1 Day
7. Stabilize all disturbed areas onsite in accordance with standards and specifications. Flush out all storm drains.	140 Days

1. No trench shall be opened more than the amount of pipe to be laid that day.
2. Area disturbed by storm drain installation shall be stabilized at the end of each day.

**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas 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, disking or other acceptable means before seeding, if not previously loosened.

**Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) 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 ureaform fertilizer (9 lbs/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 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 rotted 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 reseeds.

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

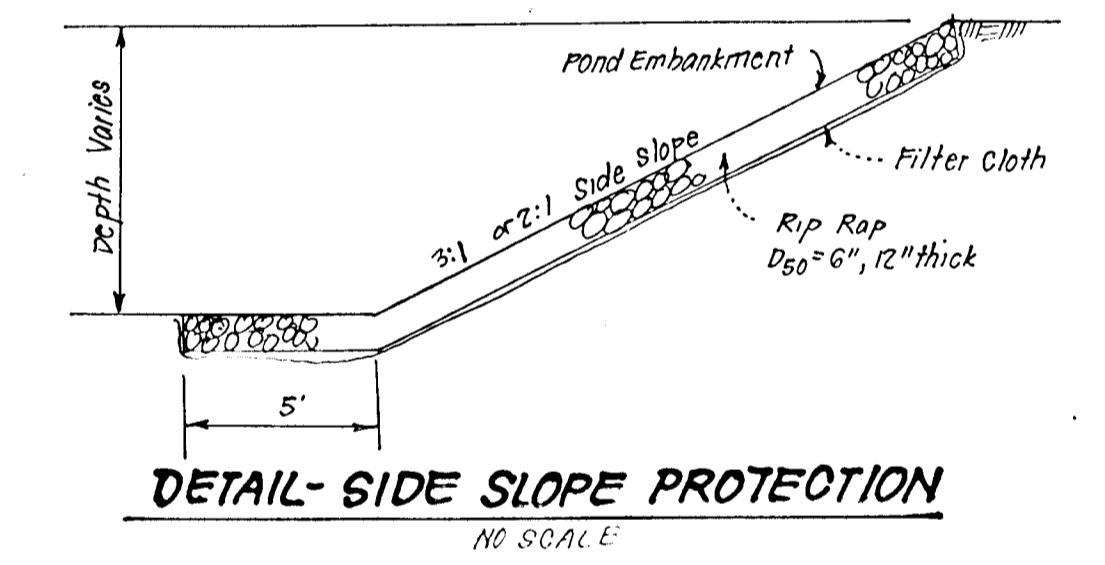
**Seedbed Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

**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 25 bushel per acre of annual ryegrass (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 rotted 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.



**DETAIL-SIDE SLOPE PROTECTION**  
NO SCALE

2	Rev. 8/1/89 to reflect new Storm Drain Layout	7-9-91
1	Revised Low Flow Blocking Detail	3-12-91
No.	REVISION	DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul D. Lapan, Chief, Bureau of Highways, 4/25/90

David W. W. W., Chief, Bureau of Engineering, 4/17/90

4-26-90

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

David W. W. W., Chief, Division of Community Planning & Land Development, 4/25/90

**CLARK • FINEROCK & SACKETT, INC.**  
ENGINEERS • PLANNERS • SURVEYORS

7100 MERRILL WAY • GAITHERSBURG, MD 20878 • (301) 278-7000 • FAX (301) 278-7000 • (301) 278-7000

DESIGNED	KLWM	SCALE	As Shown
DRAWN	VLM	DRAWING	6066
CHECKED	KLW	JOB NO	88-013
DATE	JLS	FOR:	2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
			FILE NO 88-013-D

FOR: ROCKLAND PARTNERSHIP  
11006 MAGGEE WAY  
ELLICOTT CITY, MD 21043