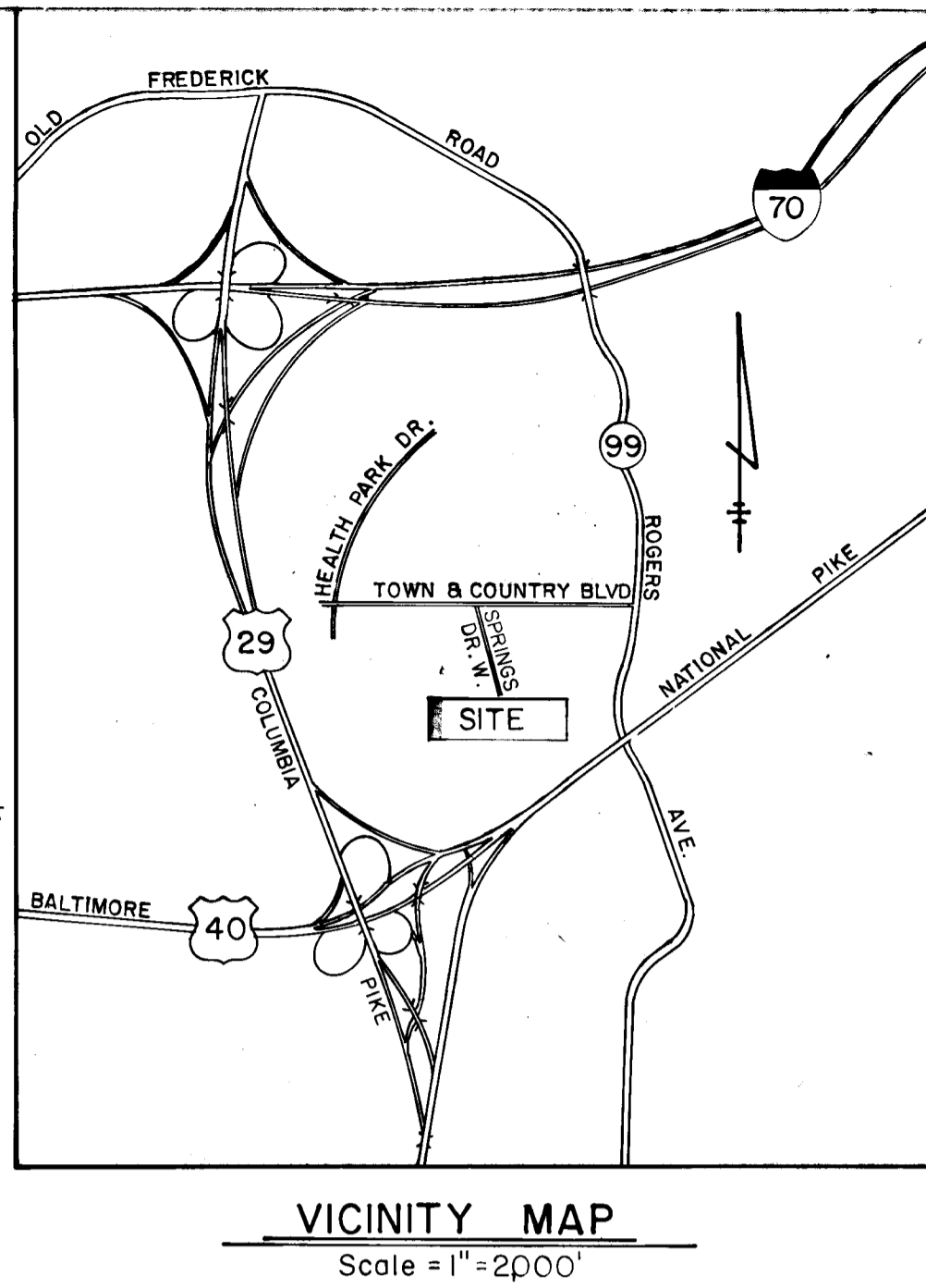
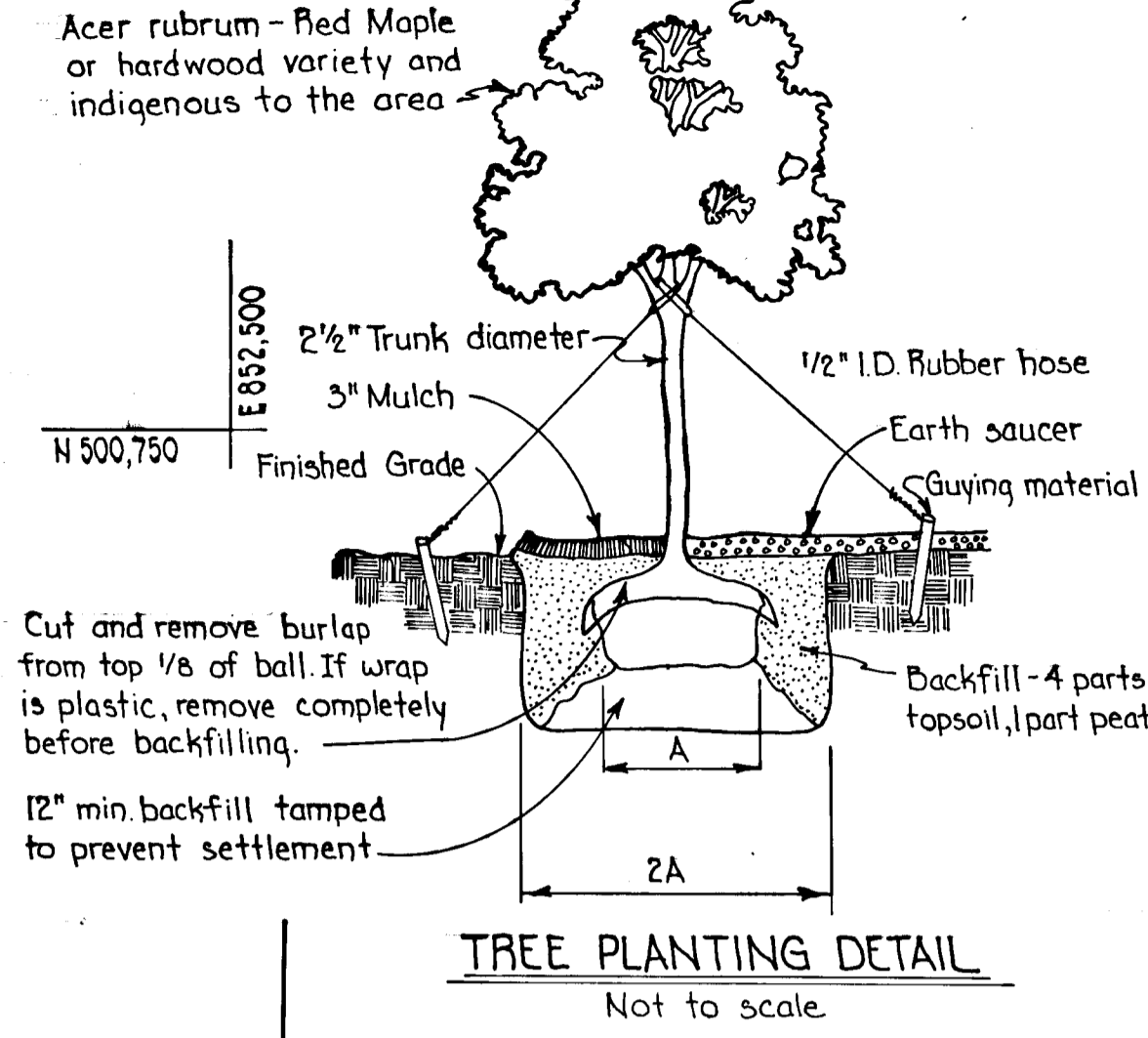
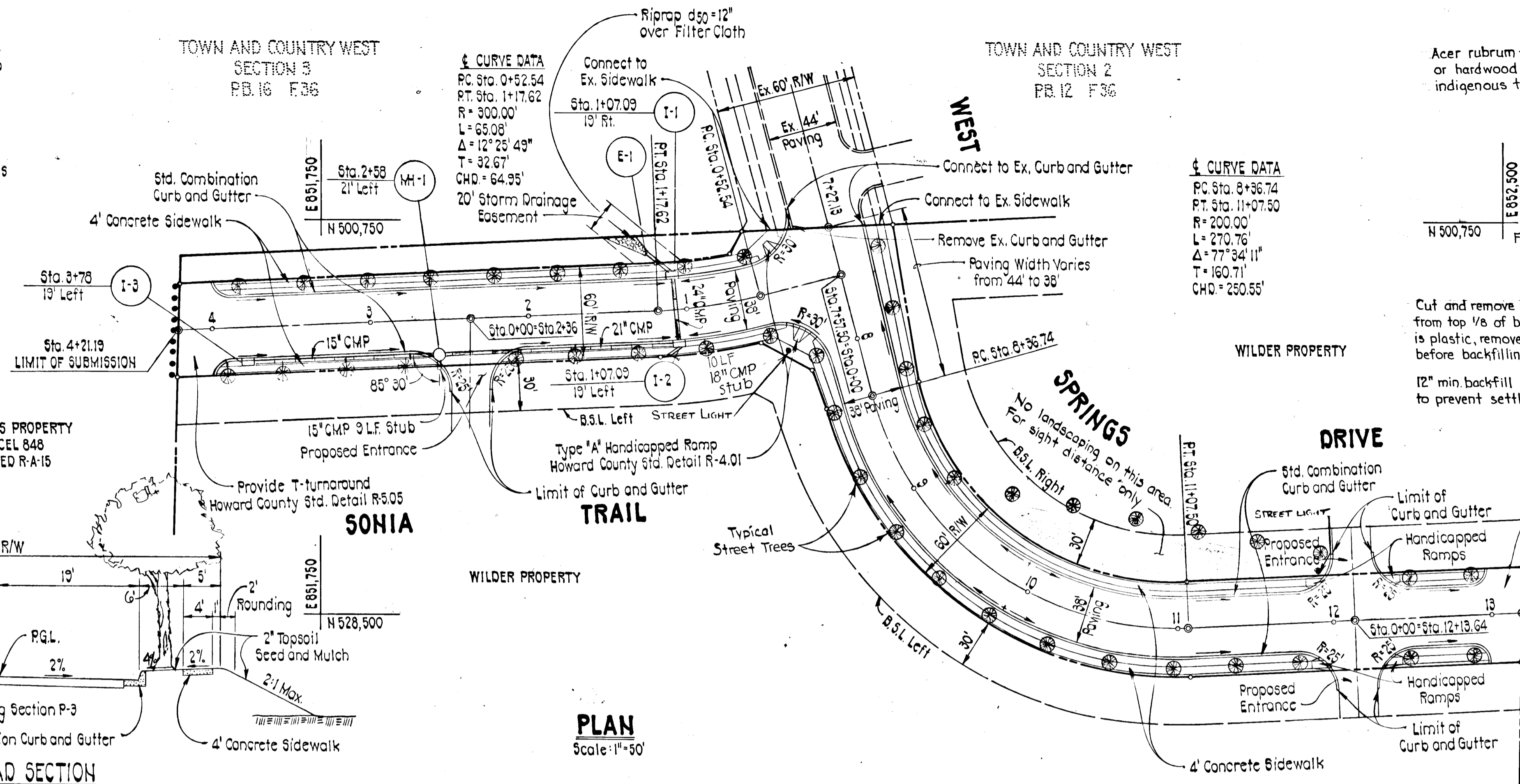


GENERAL NOTES

1. Construction shown herein shall be in accordance with the Howard County Standard Specifications and Details.
2. Page and drawing No's referenced herein are taken from the Howard County Standard Specifications and Details.
3. Elevations shown herein are based on the Howard County Vertical Control Datum.
4. The locations of existing utilities shown on the drawing are based on the latest available information. The Contractor shall, however, determine the exact locations and shall notify "Miss Utility" at least three (3) days prior to beginning work.
5. The developer shall notify the Howard County Inspection and Survey Division at least 24 hours prior to beginning any construction.
6. Provide street trees at 40' intervals. Trees shall have a minimum trunk of 2 1/2" and shall be hardwood variety and indigenous to the area.
7. All traffic control devices to be installed shall comply to MSHA Manual of Uniform Traffic Control Devices, 1978 Edition.

TOWN AND COUNTRY WEST
SECTION 3
PB. 16 F36

TOWN AND COUNTRY WEST
SECTION 2
PB. 12 F36



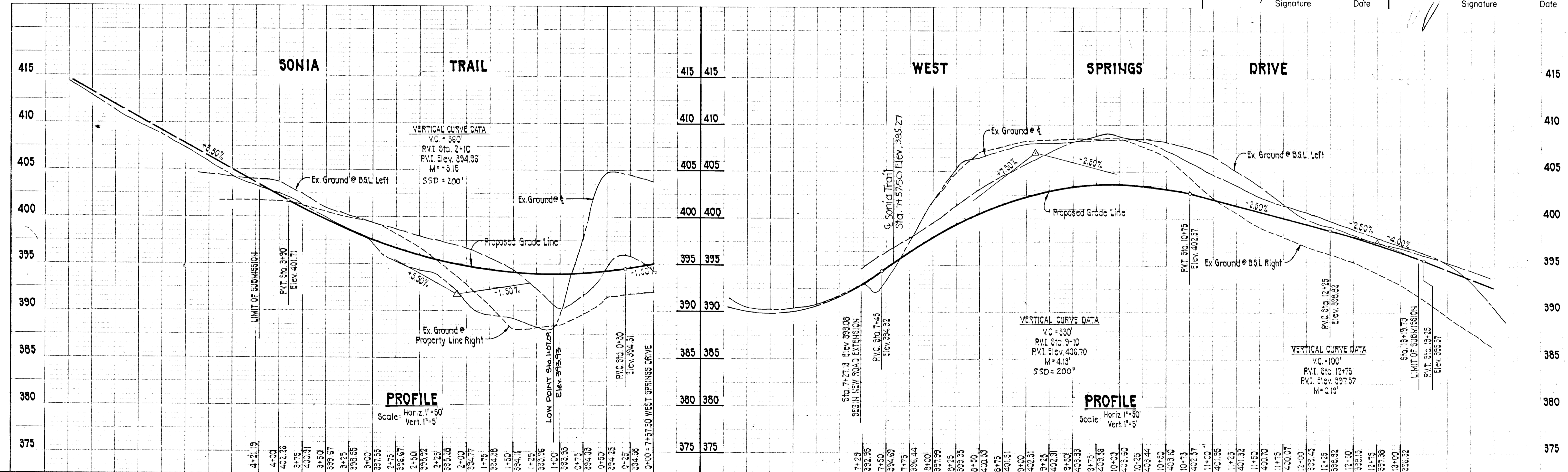
TYPICAL ROAD SECTION AND TREE LOCATION

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

Reviewed for Howard Soil Conservation District and meets technical requirements.

Approved: *Stephen L. Fisher* 2/18/87
Signature Date

Approved: *James M. Stoltz* 2-18-87
Signature Date



1249

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS

1023 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

Approved: Howard County Office of Planning and Zoning.

Paul M. ... 2-18-87
Chief Div. of Land Development and Zoning Administration Date

Approved: Howard County Department of Public Works.

William G. Rasch II 2-20-87
Chief, Bureau of Engineering Date

DEVELOPER'S CERTIFICATION

I certify that all development and construction will be done according to this plan any responsible personnel involved in the construction project will have a certificate of attendance at the Dept. of Natural Resources approved training program for the control of any sediment erosion before beginning the project.

Joseph Wilder 2/18/86

ENGINEERS CERTIFICATION

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

William G. Rasch II 2/21/86
Date



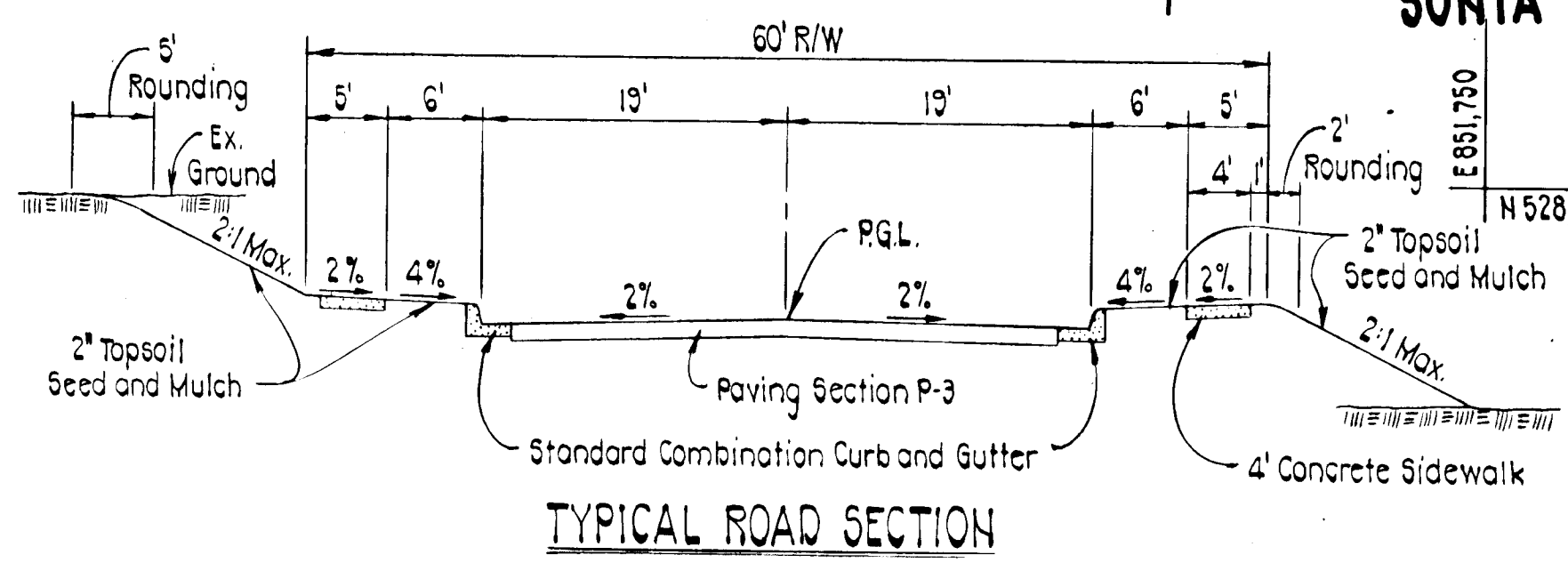
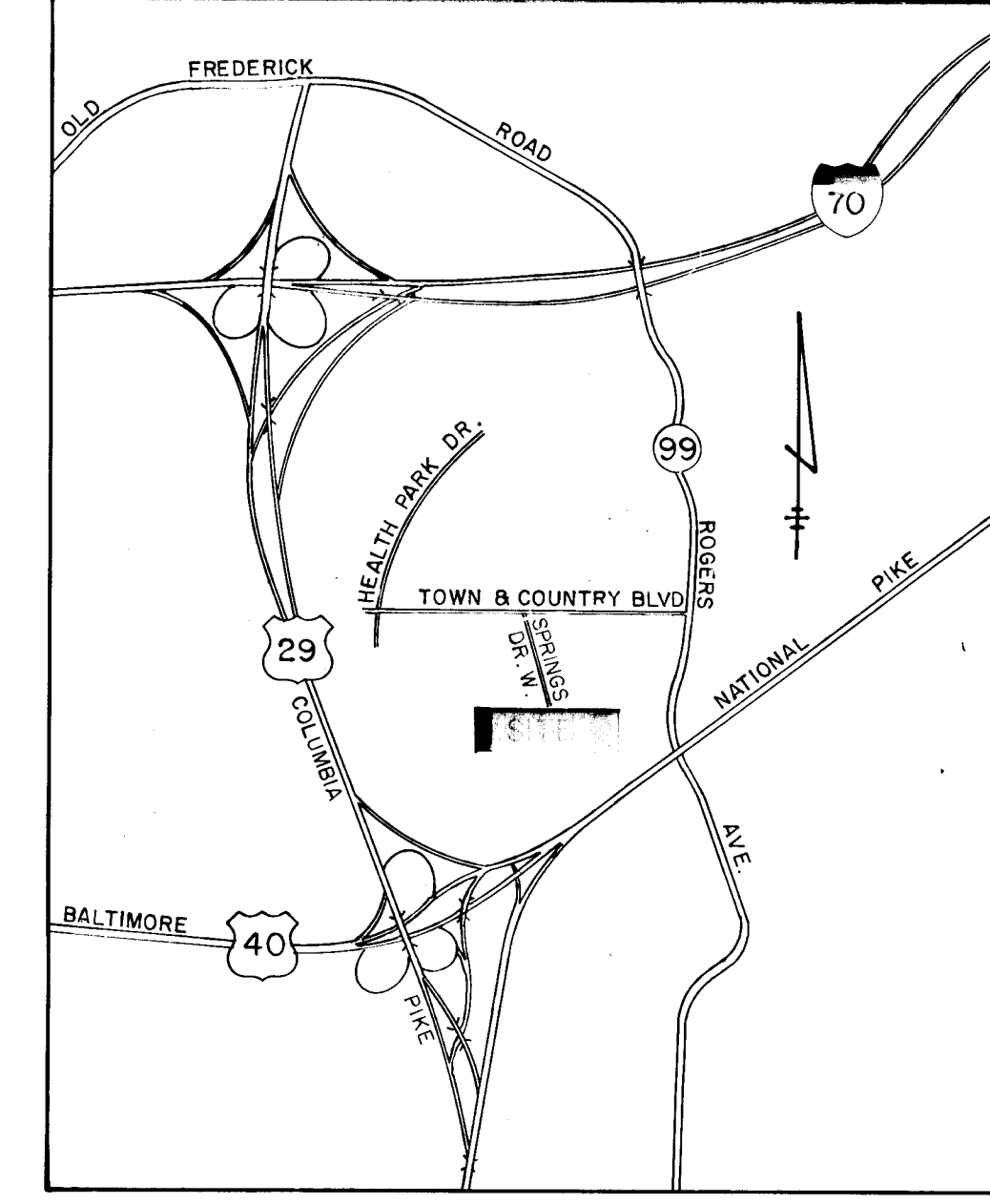
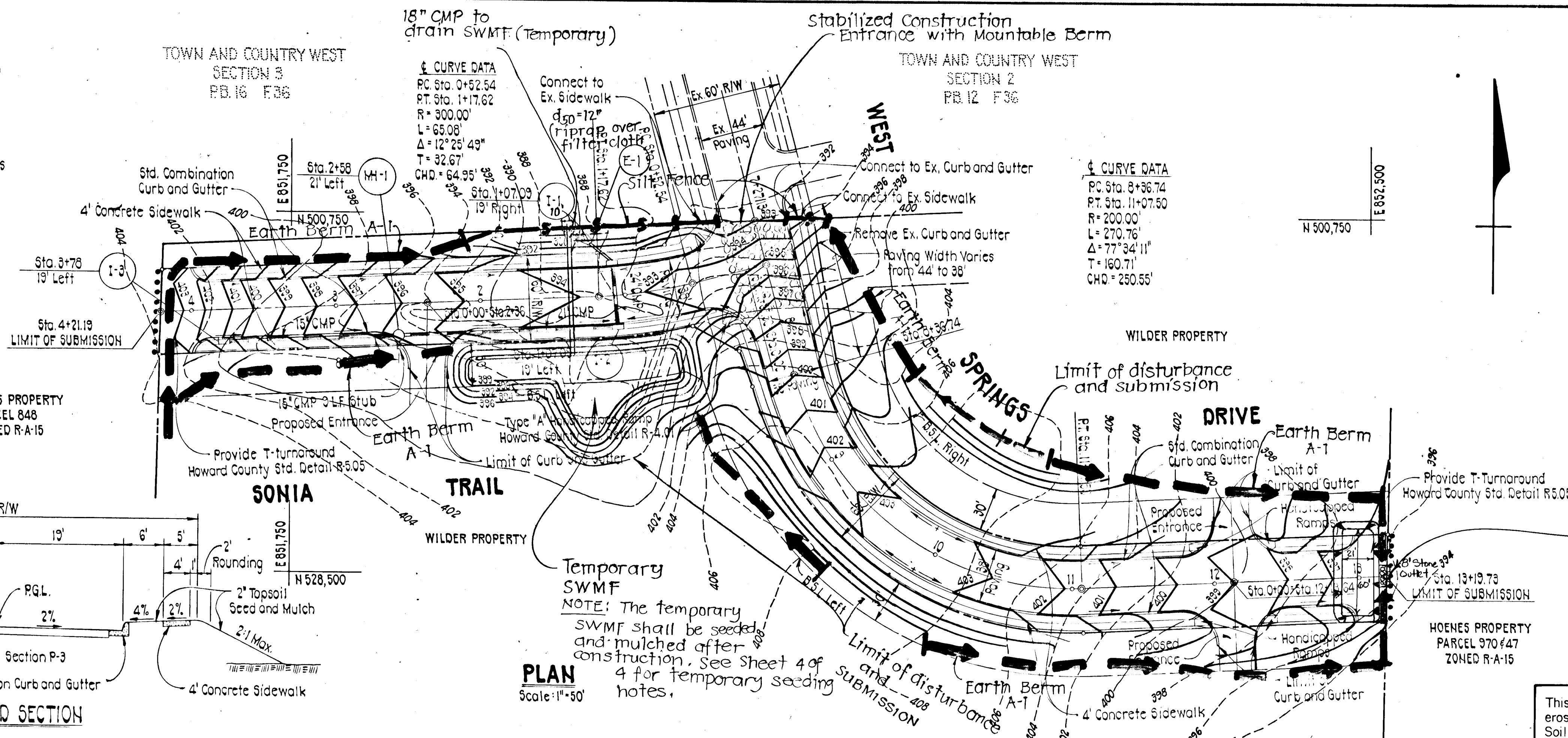
WILDER SUBDIVISION
ROAD PLAN & PROFILES - TREE PLANTING PLAN
PARCELS A-2, A-3, A-4 & A-5
A RESUBDIVISION OF A PORTION OF PARCEL A-1
HOENES PROPERTY
2nd ELECTION DISTRICT HOWARD COUNTY, MD.
TAX MAP NO. 17 PARCEL NO. 848
ZONED RA15 F-86-160 APRIL, 1986

SHEET 1 OF 4
DES. ATR
DRWN. ARW
CHK. ATR
J.O. NO. 5394-30

F-86-160

GENERAL NOTES

1. Construction shown hereon shall be in accordance with the Howard County Standard Specifications and Details.
2. Page and drawing No.'s referenced hereon are taken from the Howard County Standard Specifications and Details.
3. Elevations shown hereon are based on the Howard County Vertical Control Datum.
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6. Provide street trees at 40' intervals. Trees shall have a minimum trunk of 2 1/2" and shall be hardwood variety and indigenous to the area.
7. All traffic control devices to be installed shall comply to MSHA Manual of Uniform Traffic Control Devices, 1978 Edition.



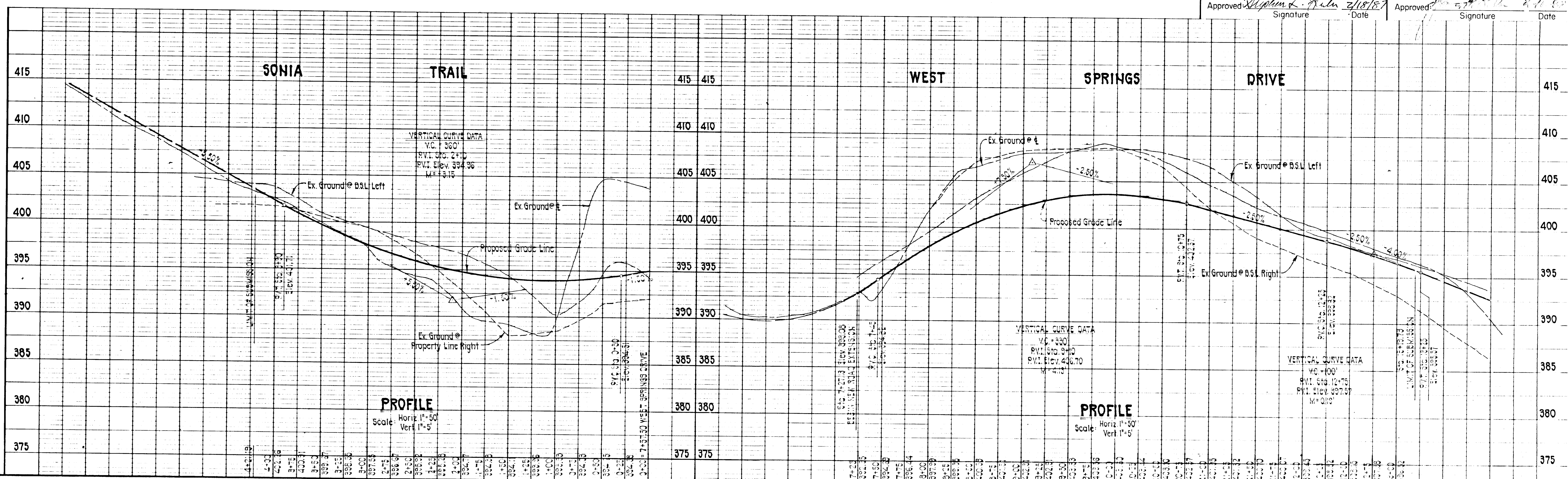
STONE OUTLET SEDIMENT TRAP

Drainage Area	= 1.03 Ac.
Volume Required	= 1.03 x 1800 = 1855 cf
Volume Provided	= 21 x 60 x 15 = 1890 cf
Bottom Elev.	= 394.50
Storage Limit Elev.	= 396.50
Stone Outlet Crest Elev.	= 397.00
Earth Dike Elev.	= 398.00
Length of Stone Outlet	= 1.03 x 4 = 8'
Cleanout Elev.	= 398.25

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

Approved: *Stephen L. Kuhn* 2/18/87
Signature Date

Approved: *[Signature]* 2/18/87
Signature Date



1249

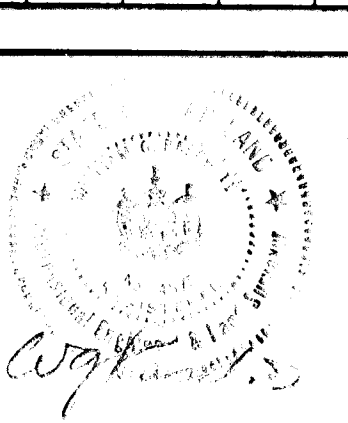
PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
 1023 North Calvert Street
 Baltimore, Maryland 21202
 301/837-0184

Approved: Howard County Office of Planning and Zoning.
William M. ... 2-18-87
 Chief Div. of Land Development and Zoning Administration

Approved: Howard County Department of Public Works.
[Signature] 2-20-87
 Chief, Bureau of Engineering

DEVELOPER'S CERTIFICATION
 I certify that all development and construction will be done according to this plan any responsible personnel involved in the construction project will have a certificate of attendance at the Dept. of Natural Resources approved training program for the control of any sediment erosion before beginning the project.
Joseph Wilder 3/15/86

ENGINEERS CERTIFICATION
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
William G. Rasch II 2/24/86
 Date



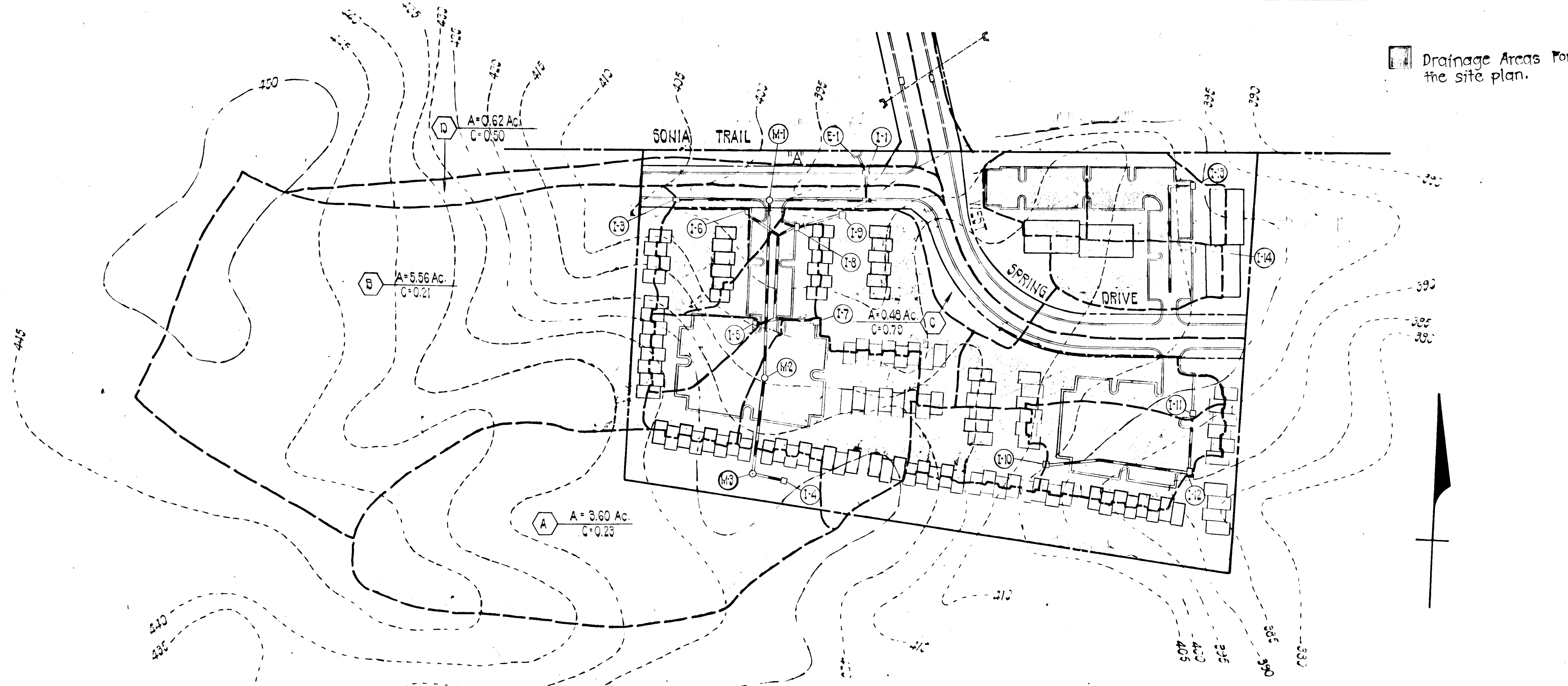
WILDER SUBDIVISION
 SEDIMENT CONTROL & GRADING PLAN
 PARCELS A-2, A-3, A-4 & A-5
 A RESUBDIVISION OF A PORTION OF PARCEL A-1
 HOENES PROPERTY
 2nd ELECTION DISTRICT HOWARD COUNTY, MD.
 TAX MAP NO. 17 PARCEL NO. 848
 ZONED RA15 F-86-160 APRIL, 1986

SHEET 2 OF 4
 DES. ATR
 DRWN. ARW
 CHK. ATR
 J.O. NO. 5394-30

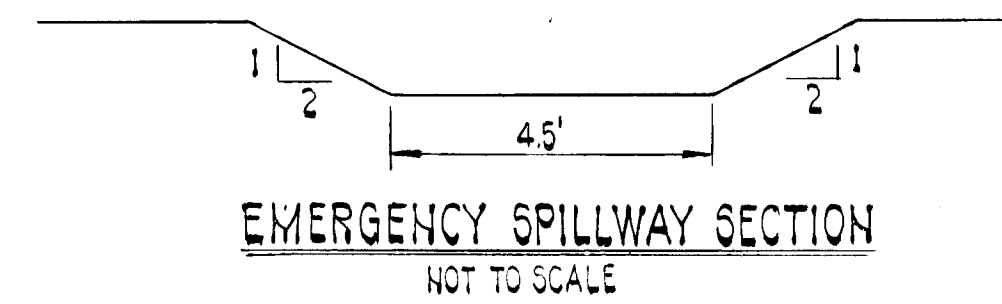
F-86-160

STRUCTURE SCHEDULE

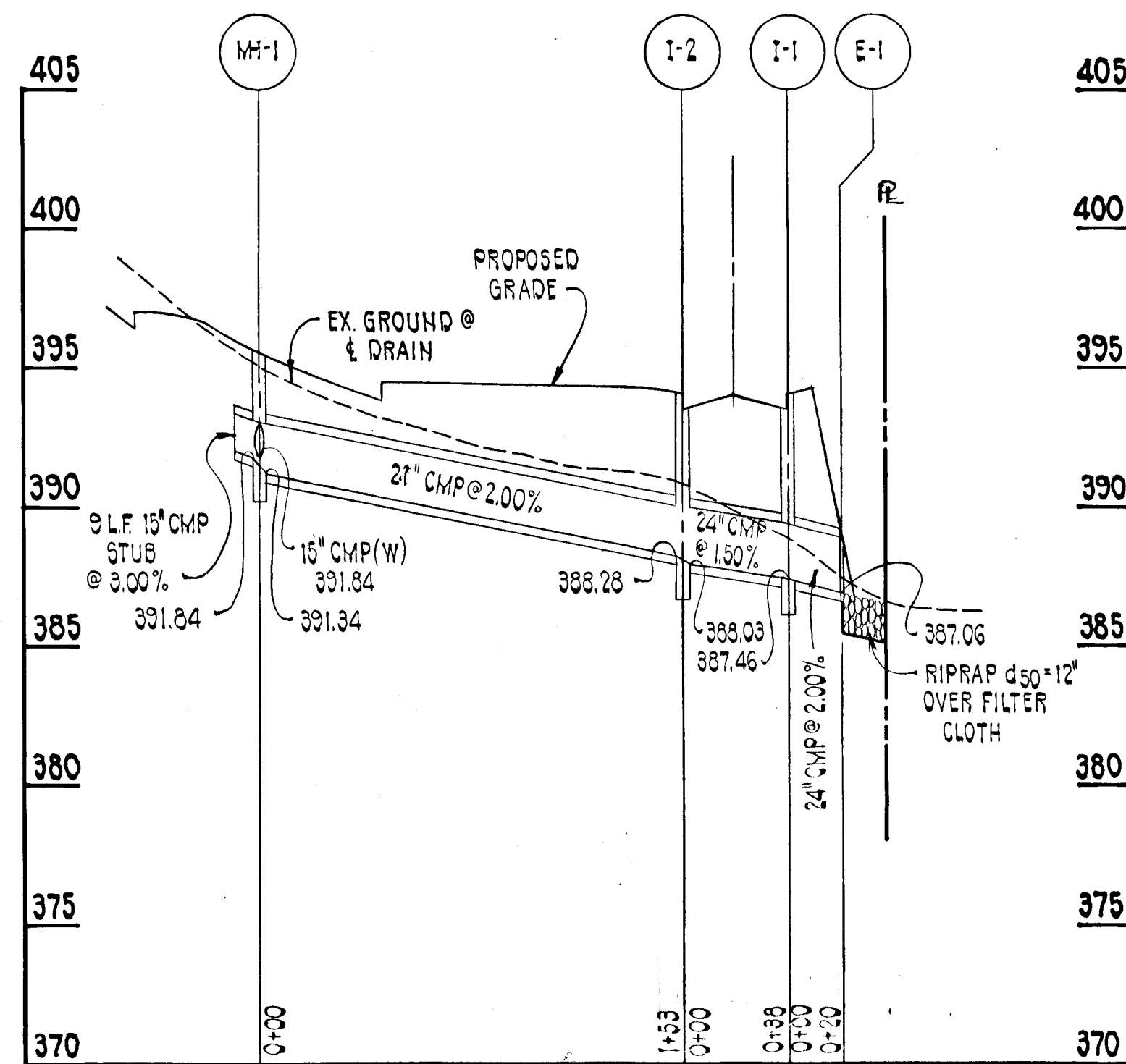
No.	TYPE	INN. IN	INV. OUT	TOP ELEV.	REMARKS
I-1	A-5	387.46	387.46	393.93	Ho. Co. SD. 401
I-2	A-10	388.28	388.03	393.93	Ho. Co. SD. 402
I-3	A-10 w/ DEF.	-	397.50	401.07	Ho. Co. SD. 403 Ho. Co. SD. 403
MH-1	MANHOLE	391.84	391.34	396.16	Ho. Co. G. B. 01 OR G. B. 11
E-1	METAL ENDSECTION	-	387.06	-	Ho. Co. SD. 561



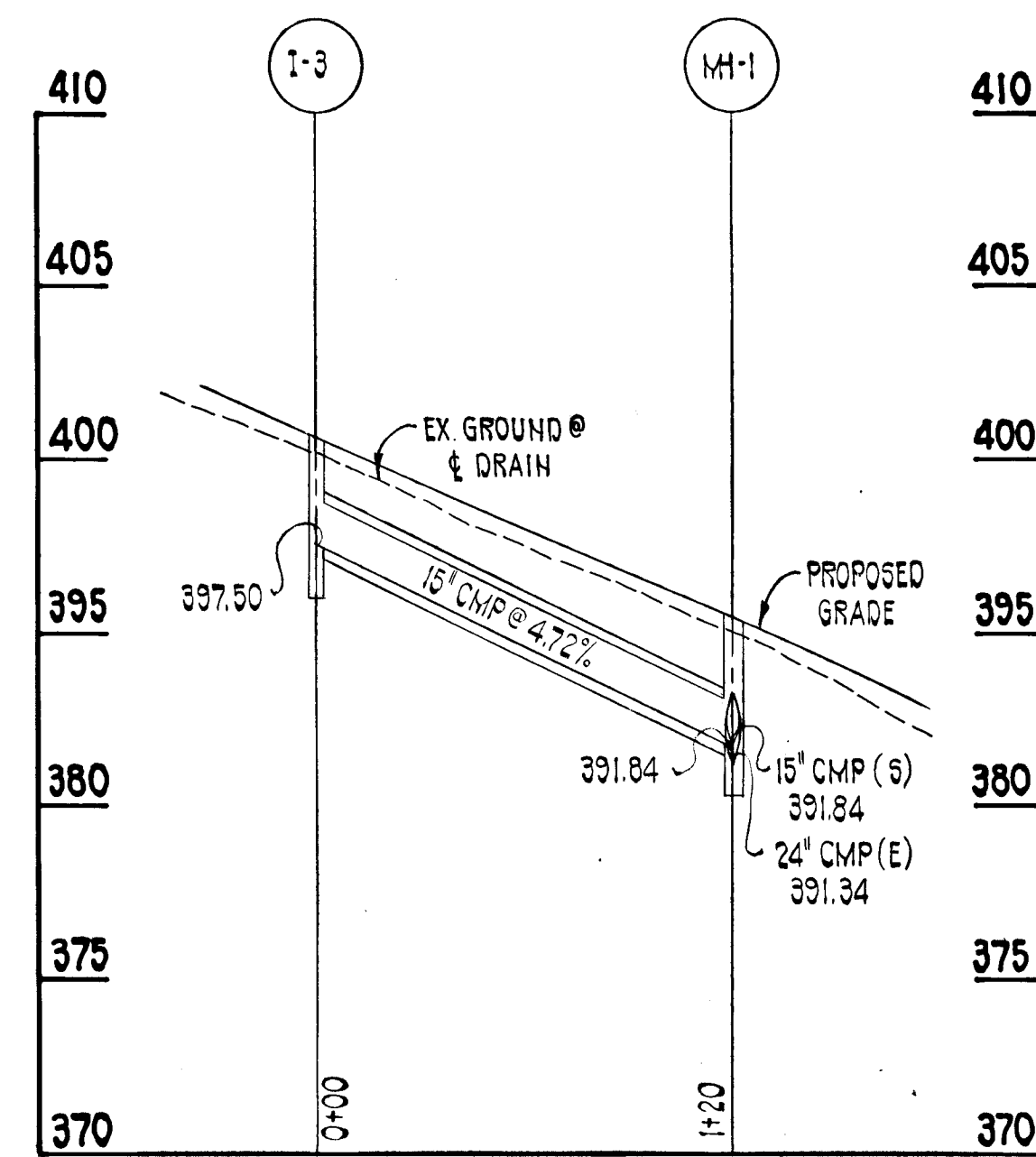
STORM DRAINAGE MAP
SCALE: 1"=100'



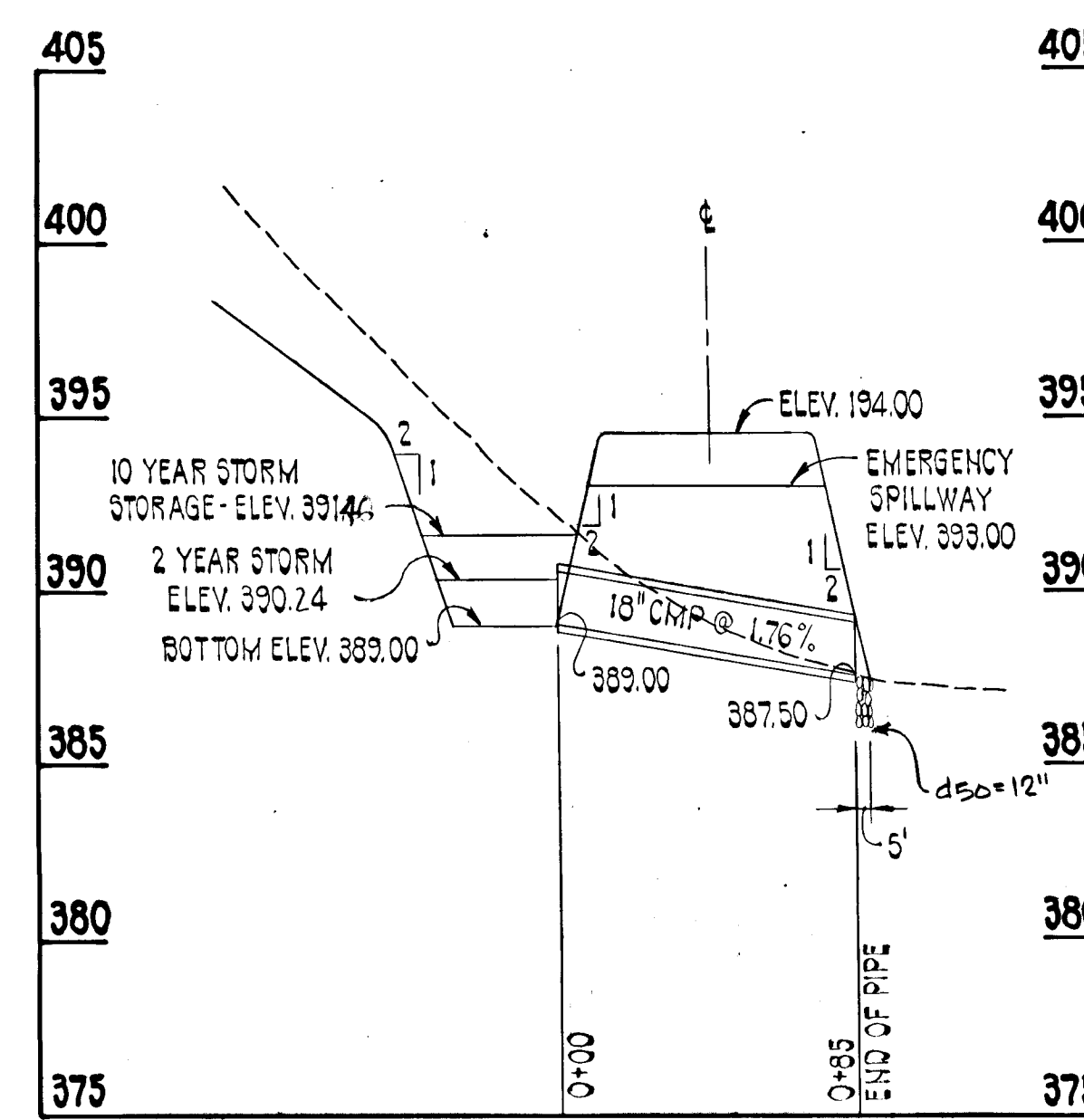
EMERGENCY SPILLWAY SECTION
NOT TO SCALE



STORM DRAIN PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



STORM DRAIN PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



TEMPORARY SWM FACILITY
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

Waiver Reference VP-87-77

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

Approved: *William G. Raach, II* 2/18/87
Signature Date

Reviewed for the Howard Soil Conservation District and meets technical requirements.

Approved: *[Signature]* 2-18-87
U.S. Soil Conservation District Date

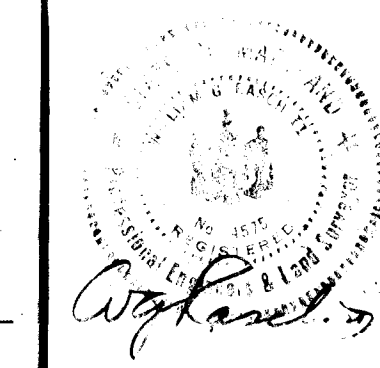
PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

APPROVED: Howard County Office of Planning and Zoning.
[Signature] 2-18-87
Chief, Division of Land Development and Zoning Administration. Date

APPROVED: Howard County Department of Public Works.
[Signature] 2-20-87
Chief, Bureau of Engineering Date

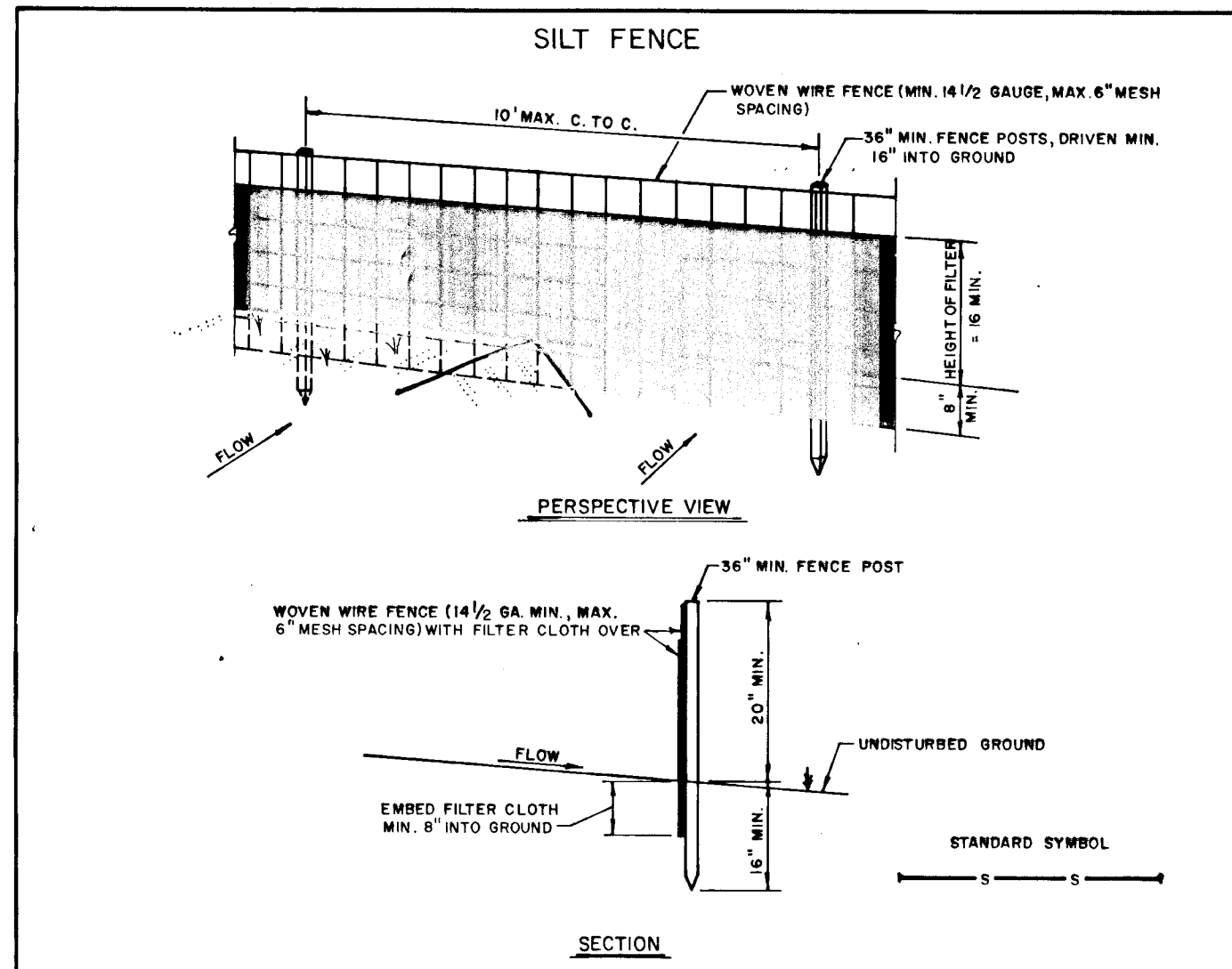
DEVELOPER'S CERTIFICATION
I certify that all development and construction will be done according to this plan and any responsible personnel involved in the construction project will have a certificate of attendance at the Department of Natural Resources approved training program for the control of any sediment erosion before beginning the project.
[Signature] 2/18/87
Signature Date

ENGINEER'S CERTIFICATION
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
[Signature] 3/24/86
William G. Raach, II Reg. No. 4575 Date



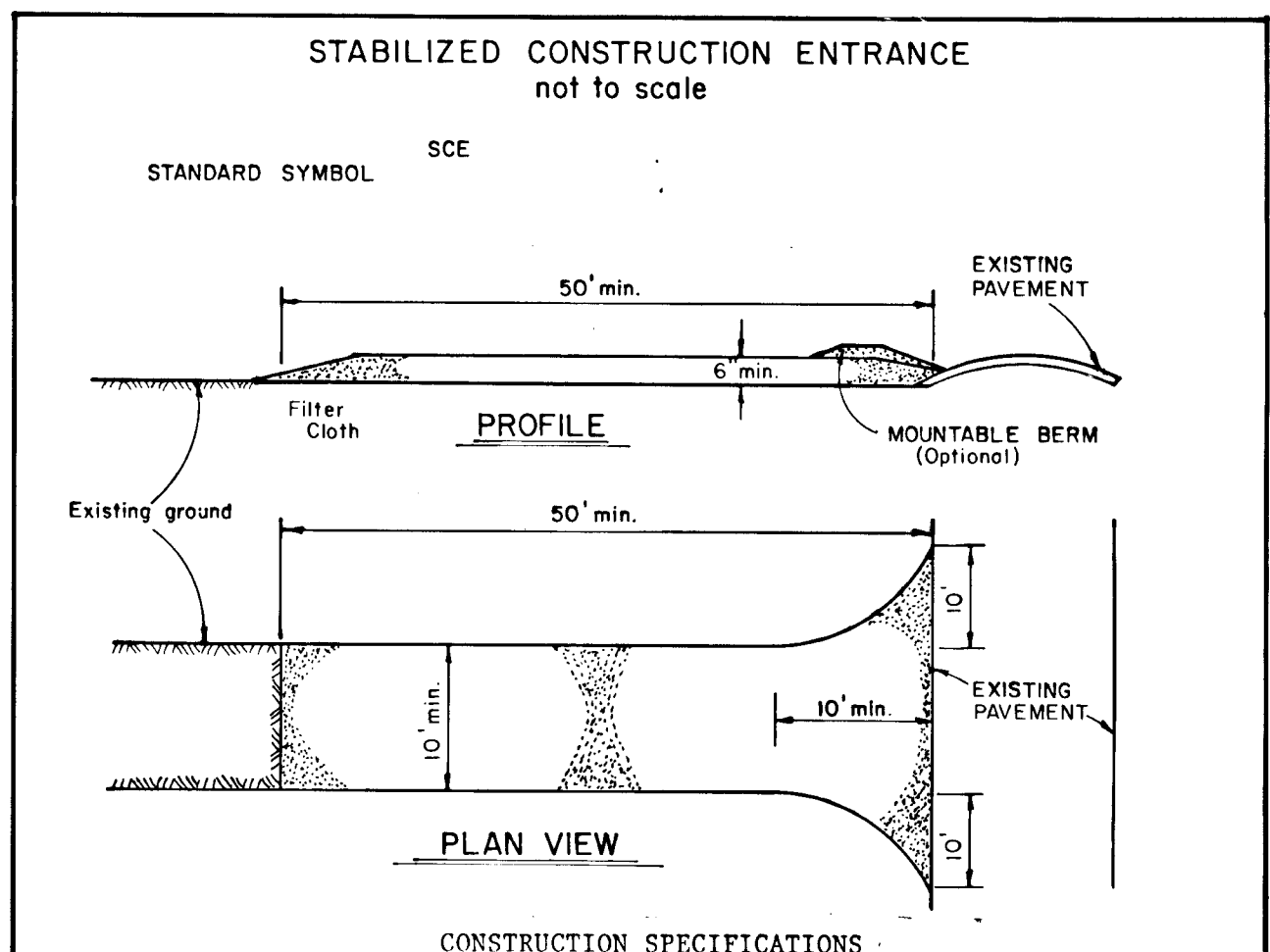
WILDER SUBDIVISION
DRAINAGE AREA MAP & STORM DRAIN PROFILES
PARCELS A-2, A-3, A-4 & A-5
A RESUBDIVISION OF A PORTION OF PARCEL A-1
HOENES' PROPERTY
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN APRIL, 1986
TAX MAP I7 F-86-160 PARCEL 848

SHEET 3 OF 4
DES. BY: ATR
DRWN. BY: ARW
CHK'D BY: ATR
J.O. NO. 5394-30



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- | | |
|--|---|
| 1. Woven wire fence to be fastened securely to fence posts with wire ties or staples. | POSTS: Steel either T or U Type or 2\"/> |
| 2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24\"/> | FENCE: Woven wire, 14 Ga. 6\"/> |
| 3. When two sections of filter cloth adjoin each other, they shall be overlapped by six inches and folded. | FILTER CLOTH: Filter X, Mirafil 100X, Stabilinka T140N, or approved equal |
| 4. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence. | PREFABRICATED UNIT: Geofab, Envirofence, or approved equal |



- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2\"/>
 - Length - As required, but not less than 50 feet (except on a single residence lot where a 30-foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public rights-of-way must be removed immediately.
 - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 - Periodic inspections and needed maintenance shall be provided after each rain.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent, long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing, or other acceptable means before seeding.

Soil Amendments: Use on the the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.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. of 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. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per 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.

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 area 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.

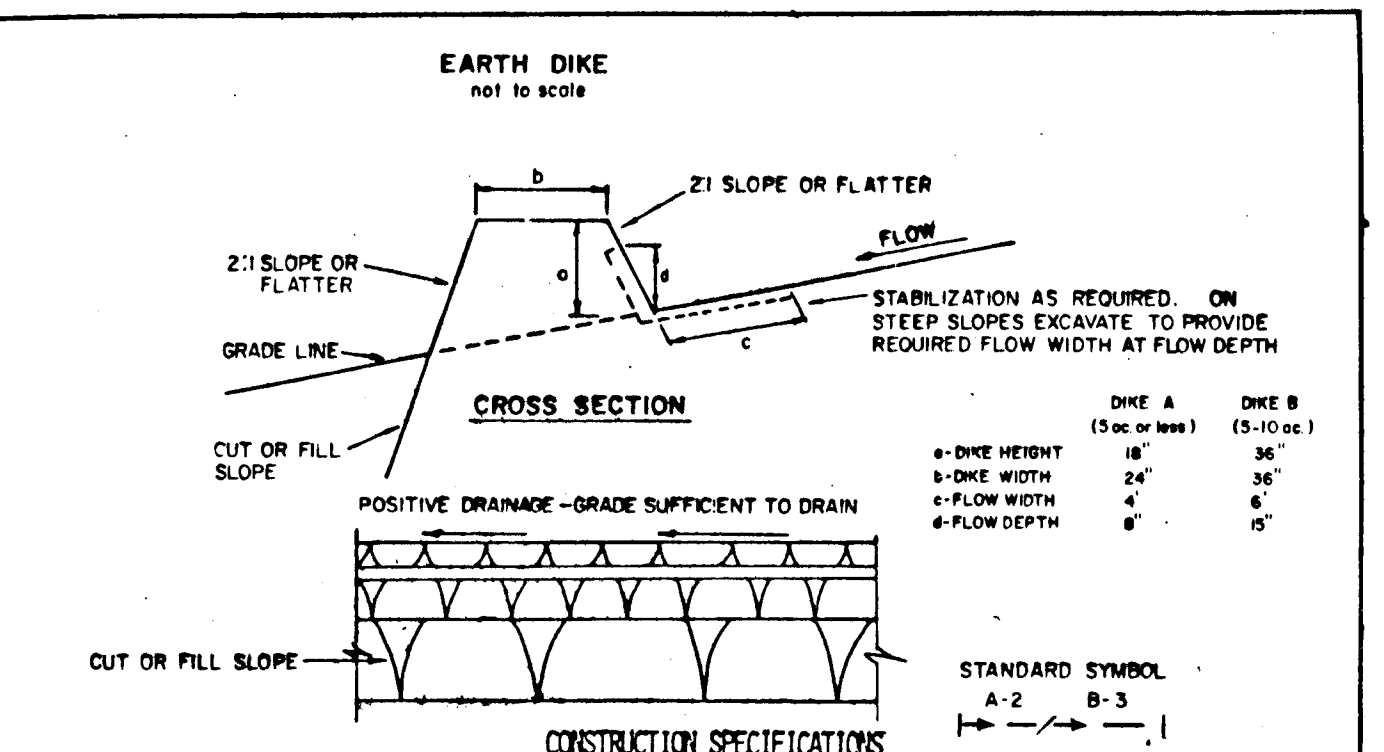
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, 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.

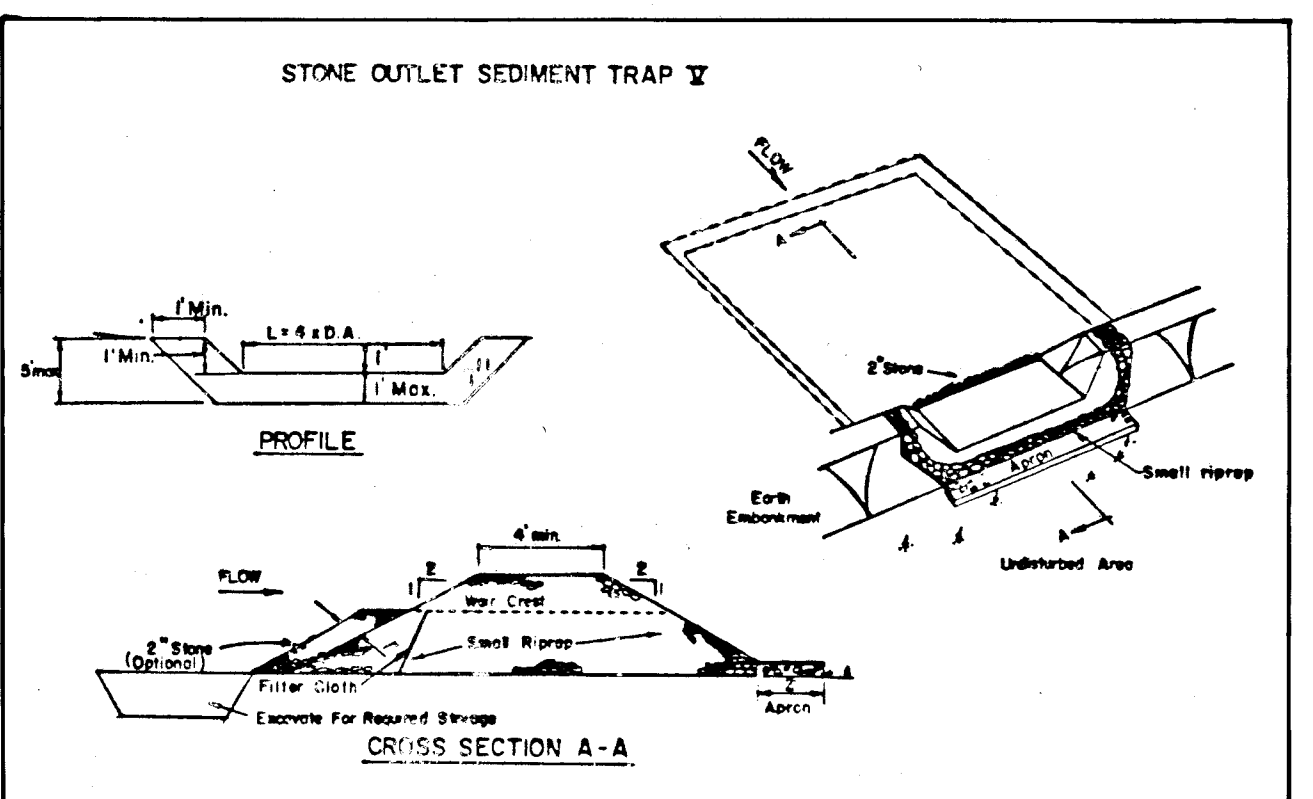
SEDIMENT CONTROL NOTES

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 (997-2437).
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. 51), sod (Sec. 54), temporary seeding (Sec. 50), and mulching (Sec. 52). Temporary stabilization with mulch along can only be done when recommended seeding dates do not allow proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:

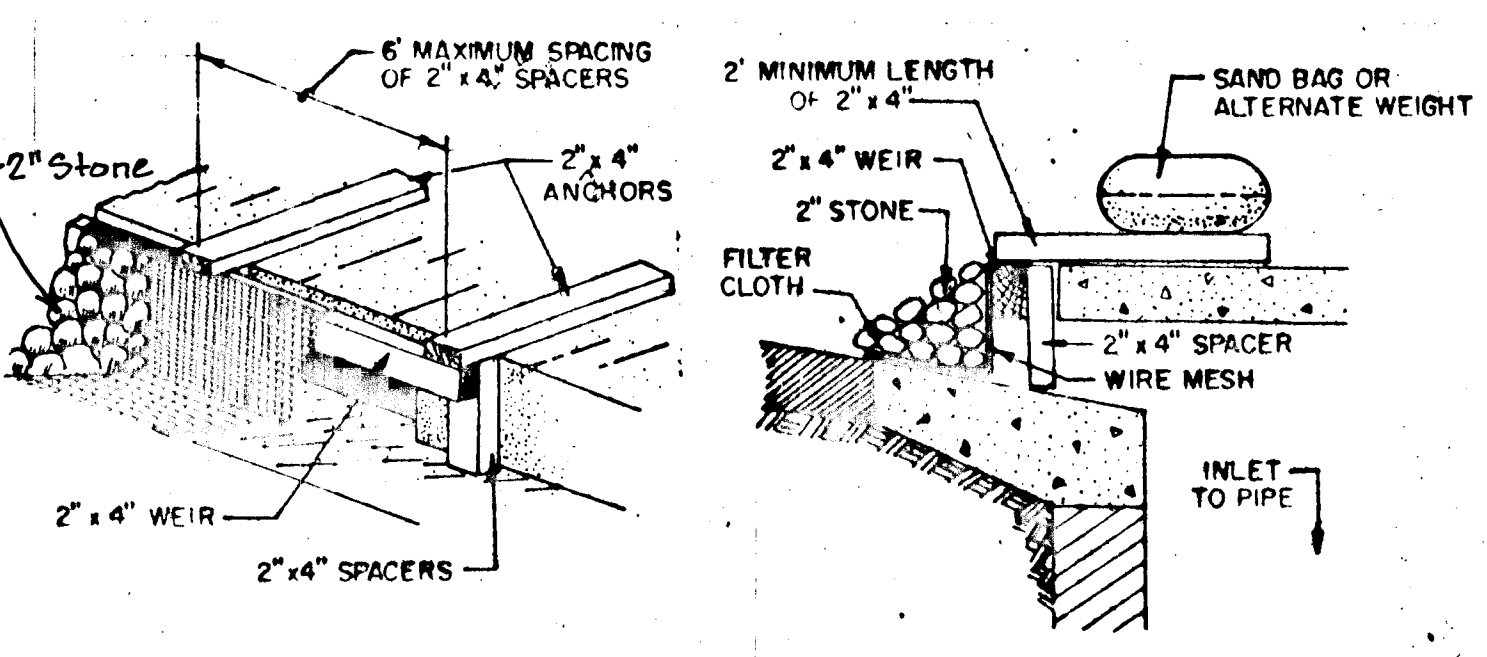
Total area of site	10.4 acres
Area disturbed	2.07 acres
Area to be roofed or paved	0.95 acres
Area to be vegetatively stabilized	1.12 acres
Total cut	5300 cu.yds.
Total fill	3750 cu.yds.
Office waste/borrow area location	NOT KNOWN
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls 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. On all site 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.



- CONSTRUCTION SPECIFICATIONS**
1. All dikes shall be compacted by earth-moving equipment.
 2. All dikes shall have positive drainage to an outlet.
 3. Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
 4. Field location should be adjusted as needed to utilize a stabilized safe outlet.
 5. Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
 6. Stabilization shall be: (A) in accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) flow channel as per the chart below.
- | TYPE OF TREATMENT | CHANNEL WIDTH | DIKE A | DIKE B |
|-------------------|---------------|-------------------------------|---|
| 1 | 5-3.0% | SEED AND STRAW MULCH | SEED AND STRAW MULCH |
| 2 | 3.1-5.0% | SEED AND STRAW MULCH | SEED USING JUTE, OR EXCELSTOR; SOD; 2\"/> |
| 3 | 5.1-8.0% | SEED WITH JUTE, OR SOD; STONE | LINED RIP-RAP 4-8\"/> |
| 4 | 8.1-20% | LINED RIP-RAP 4-8\"/> | ENGINEERING DESIGN |
- A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.
 B. Rip-rap to be 4-8 inches in a layer at least 8 inches thickness and pressed into the soil.
 C. Approved equivalents can be substituted for any of the above materials.
 7. Periodic inspection and required maintenance must be provided after each rain event.



- CONSTRUCTION SPECIFICATIONS FOR ST-V**
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. The stone used in the outlet shall be small riprap 4-8\"/>
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
 6. The structure shall be inspected after each rain and repairs made as needed.
 7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.



CURB INLET PROTECTION DETAIL

CONSTRUCTION SEQUENCE

1. Obtain grading permit - 15 days.
2. Clearing and grubbing for the installation of perimeter control. - 5 days.
3. Install sediment control devices - 5 days.
4. Clearing and grubbing of site. - 10 days.
5. Construct temporary SWMF. - 15 days
6. Start grading of roadway to subgrade. - 30 days
7. Install storm drain and utilities - 30 days and provide inlet protection.
8. Construct curb and gutter and start paving. - 30 days
9. Stabilize disturbed areas not to be paved and remove temp. SWMF. - 30 days.
10. Remove sediment control devices as per - 5 days approval of sed. control inspector.

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

Reviewed for Howard Soil Conservation District and meets technical requirements.

Approved: *Stephen L. Hanks* 2/18/87
 Signature Date
 U.S. Soil Conservation Dist. Date

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 301/837-0194

Approved: *John M. ...* 2-18-87
 Chief Div. of Land Development and Zoning Administration. Date

Approved: *William E. ...* 2-20-87
 Chief, Bureau of Engineering Date

DEVELOPER'S CERTIFICATION
 I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a certificate of attendance at the Dept. of Natural Resources approved training program for the control of any sediment and erosion before beginning the project.

Joseph Wilde 3/15/86
 Date

ENGINEER'S CERTIFICATION
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

William G. Rasch II 3/14/86
 Date

WILDER SUBDIVISION
SEDIMENT CONTROL DETAILS
 PARCELS A-2, A-3, A-4 & A-5
 A RESUBDIVISION OF A PORTION OF PARCEL A-1
 HOENES PROPERTY

2nd ELECTION DISTRICT HOWARD COUNTY, MD.
 TAX MAP NO. 17 PARCEL NO. 848
 ZONED RA15 F-86-160 APRIL, 1986

SHEET 4 OF 4
 DES. A.T.R.
 DRWN. A.R.W.
 CHK. A.T.R.
 J.O. NO. 5394-30