

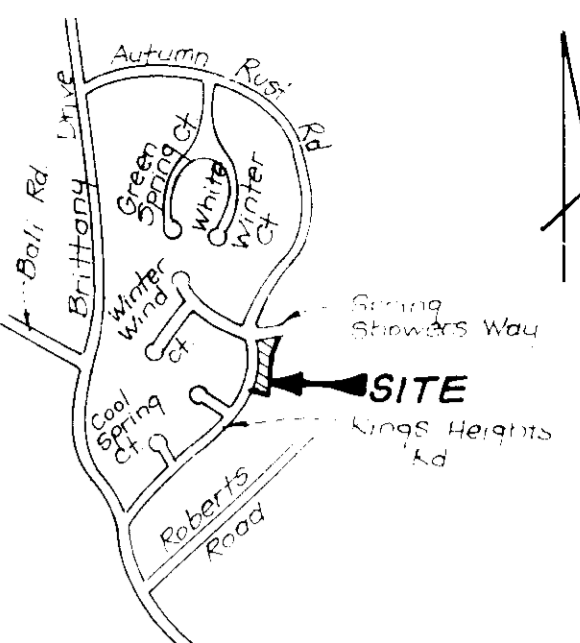
LOT NO.	STREET ADDRESS
184	8380 KINGS HEIGHTS ROAD
185	8376 " " "
186	8374 " " "
187	8372 " " "
188	8368 " " "

SPECIAL NOTES

- All road construction, storm drainage facilities and public water and sewer are shown for reference only. Use approved Howard County plans for all phases of construction.

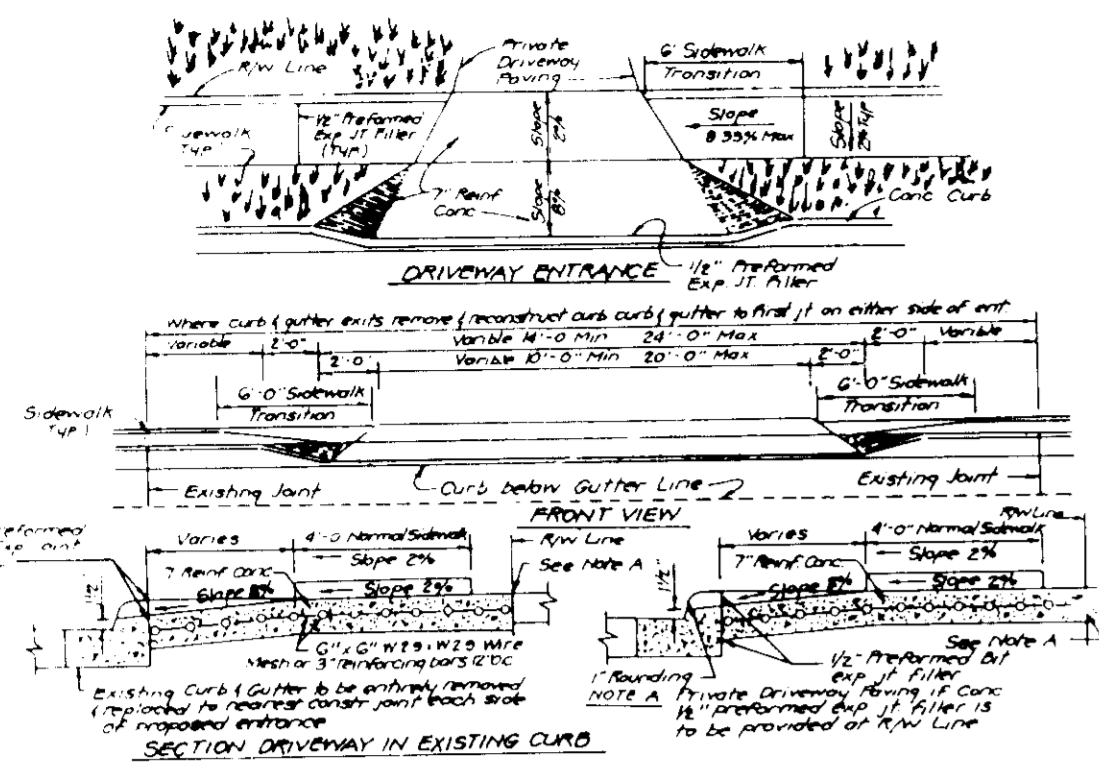
GENERAL NOTES

- Subject property zoned R 20 as per B 2 85 Comprehensive Zoning Plan.
- The coordinates shown hereon are based on The Maryland State Grid System and derived from the following Howard County Control Stations 3043001 and 3143006.
- All roadways are public and existing.
- Total area included in this submission: 75,952 sq ft or 1.7436 Ac.
- Total number of lots: 5.
- Any damage to county owned right-of-ways shall be corrected at the Developer's expense.
- Maximum lot coverage is 30%.
- Reference plans S-80-14, P-87-78, F-88-141 and F-89-157.
- The Contractor or Developer shall contact the Construction/Inspection Survey Division, 24 hours in advance of commencement of work at 792-2630.
- The existing topography shown was field run by Fisher, Collins & Carter, Inc.
- Improvements to property: Single Family Density Units.
- Stormwater Management provided in Autumn Manor 1/1 F-85-134.

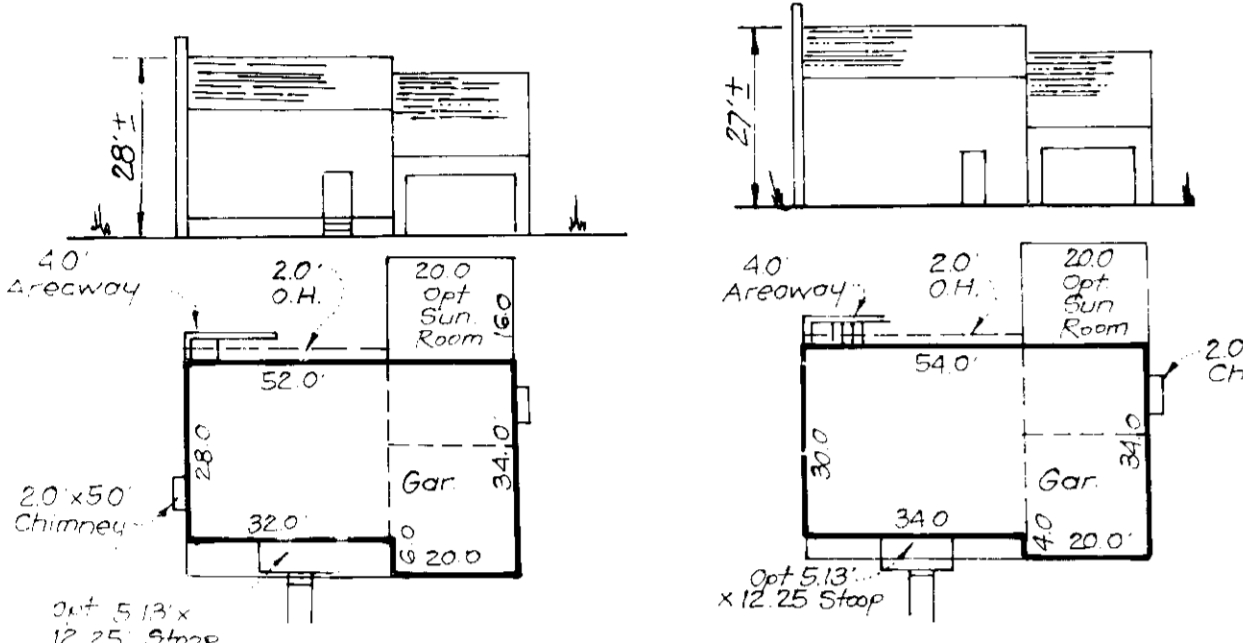


LEGEND

- Contour Interval: 2 FT
- Existing Contour: (dashed line)
- Proposed Contour: (solid line)
- Spot Elevation: +10.5
- Direction of Drainage: (arrow)
- Walk out Basement: (cloud symbol)
- Ex Trees to be saved: (tree symbol)



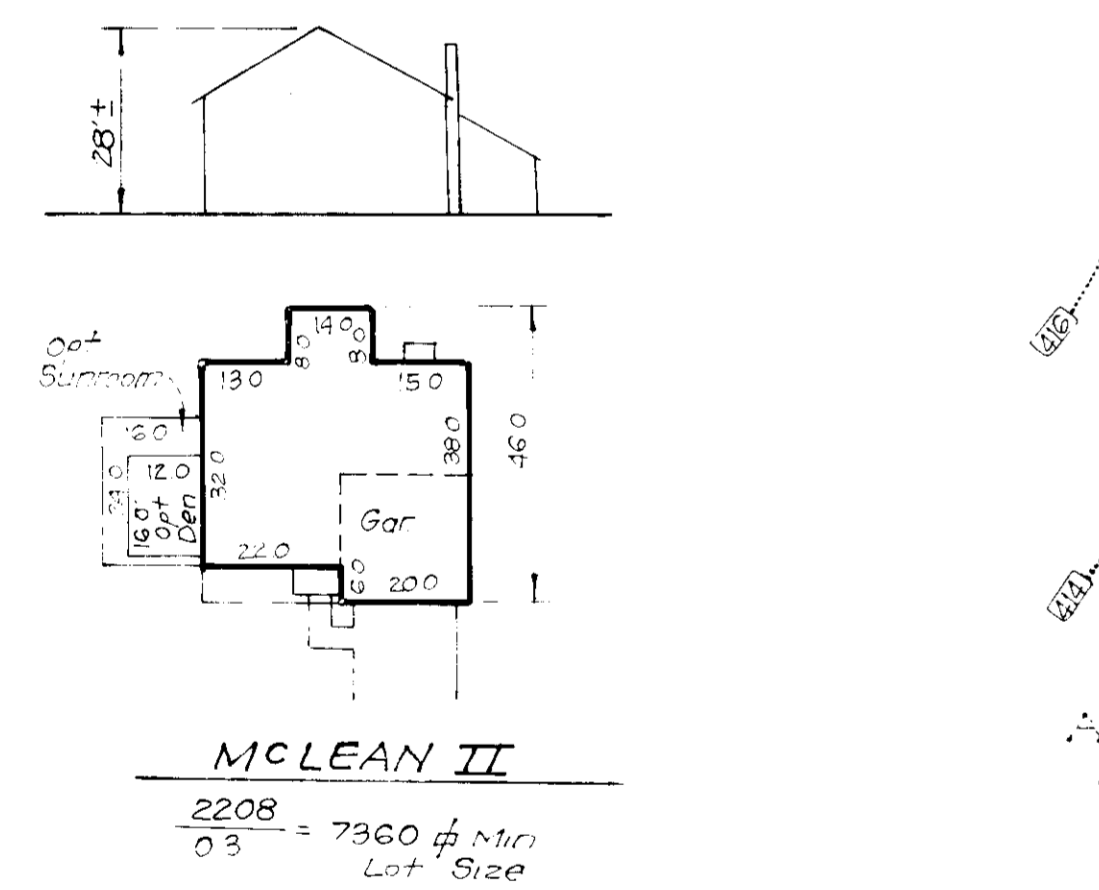
DRIVEWAY ABUTTING CLOSED SECTION WITH STD 7" COMB CURB + GUTTER + SIDEWALK SET BACK FROM CURB



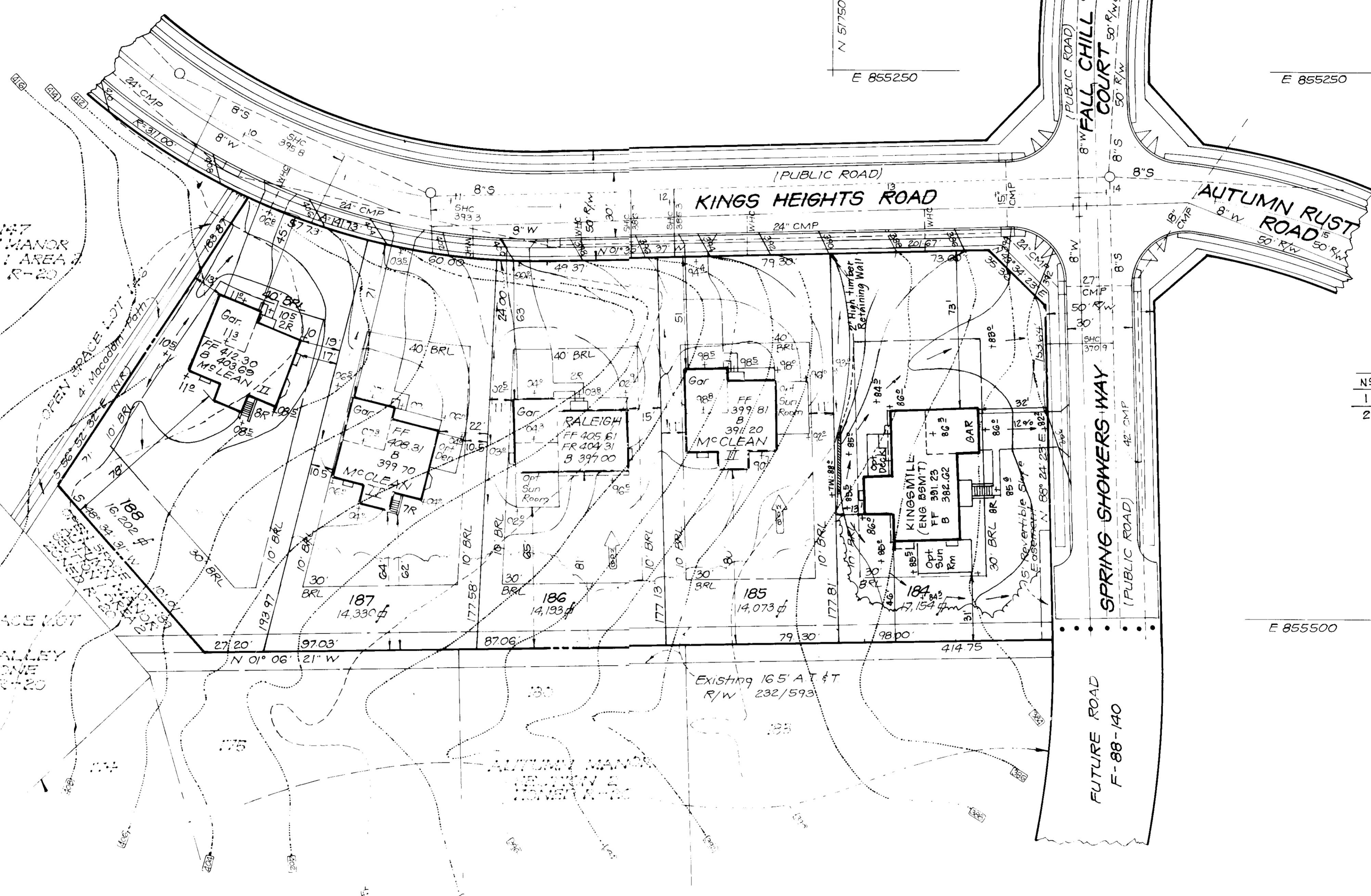
RALEIGH
2212 = 7373.33 sq ft Min Lot Size

CHAPEL HILL
2284 = 7613.34 sq ft Min Lot Size

TYPICAL HOUSES
SCALE: 1" = 30'



MCLEAN II
2208 = 7360 sq ft Min Lot Size



NO	REVISION	Date
1	Rev hse & grd. Lot 184 from Kingmill (Eng. Barnt)	7-13-90
2	Rev hse & grd. Lot 188 from Chapel Hill to McLean II	6-15-91

Block No	19	Zone	R 20	Tr. Area	25	Elem. Dist.	2.00	Census Tr.	6024
Water Code	F 05	Sanitary Code	1400150						

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
James M. ... 10/24/89
COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
James ... 11/6/89
DIRECTOR

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James ... 10/23/89
DIRECTOR

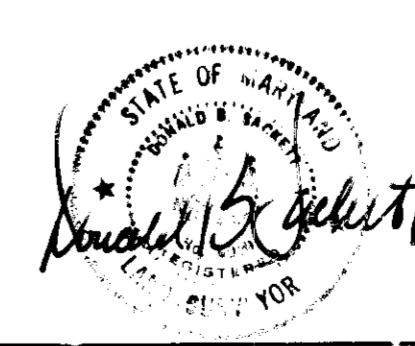
CHIEF BUREAU OF ENGINEERING

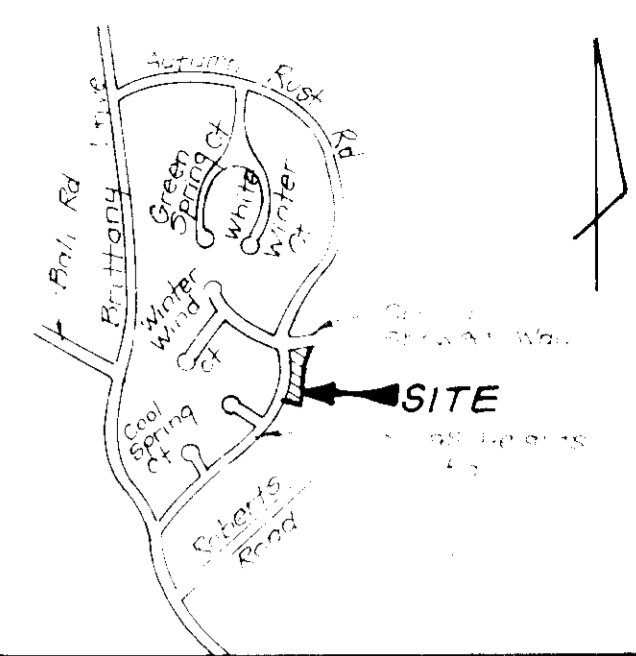
OWNER / DEVELOPER
AUTUMN MANOR JOINT VENTURE
96 LAND DESIGN AND DEVELOPMENT
8307 Main Street
Ellicott City, Md 21043

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

1350 MINISTERIAL WAY • BELTERRA, MD 21034 • TEL: 410-775-1411 • FAX: 410-775-1412

DESIGNED	JME	SITE DEVELOPMENT PLAN LOTS 184 - 188 AUTUMN MANOR SECTION 1 AREA 2 2ND ELECTION DISTRICT HOWARD COUNTY MARYLAND	SCALE	1" = 30'
DRAWN	BAL		DRAWING	1 OF 3
CHECKED	JME		JOB NO	88-162
DATE	AUGUST 1989		FILE NO	88-163X
FOR: N.V. HOMES, INC. 10230 New Hampshire Ave. #203 Silver Spring, Maryland 20910				

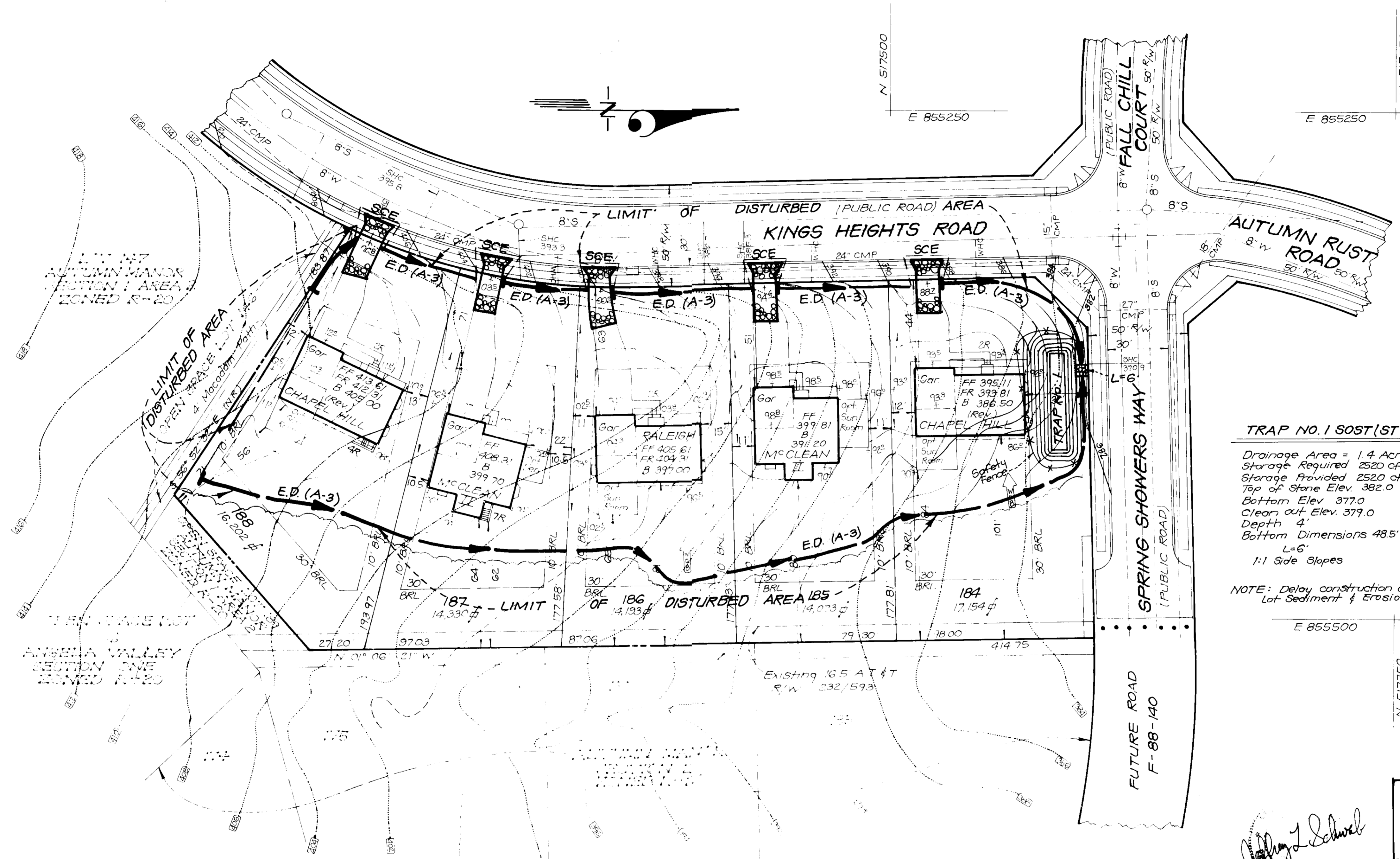




VICINITY MAP
Scale 1" = 1200'

LEGEND

- Contour Interval 2 FT
- Existing Contour
- Proposed Contour
- Spot Elevation
- Direction of Drainage
- Walk out Basement
- Ex Trees to be saved
- Earth Dike ED (A-3)
- Stabilized Construction Entrance



TRAP NO. 1 SOST (ST II)
 Drainage Area = 1.4 Acres
 Storage Required 2520 cf
 Storage Provided 2520 cf
 Top of Stone Elev. 382.0
 Bottom Elev. 377.0
 Clean out Elev. 379.0
 Depth 4'
 Bottom Dimensions 48.5' x 8'
 L=6'
 1:1 Side Slopes

NOTE: Delay construction of Lot 184 see Single Lot Sediment & Erosion Control Detail sheet 5

OWNER/DEVELOPER
 AUTUMN MANOR JOINT VENTURE
 5% LAND DESIGN AND DEVELOPMENT
 8307 Main Street
 Ellicott City, Md. 21043

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER
 DATE 10/24/89

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 DIRECTOR
 DATE 11/8/89

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT
 CHIEF BUREAU OF ENGINEERING
 DATE 10-23-89

Approved for HOWARD SCD
 Name
 Signature
 Date 9/27/89
 U.S. Soil Conservation Service

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

Approved
 Signature
 Date 9/26/89

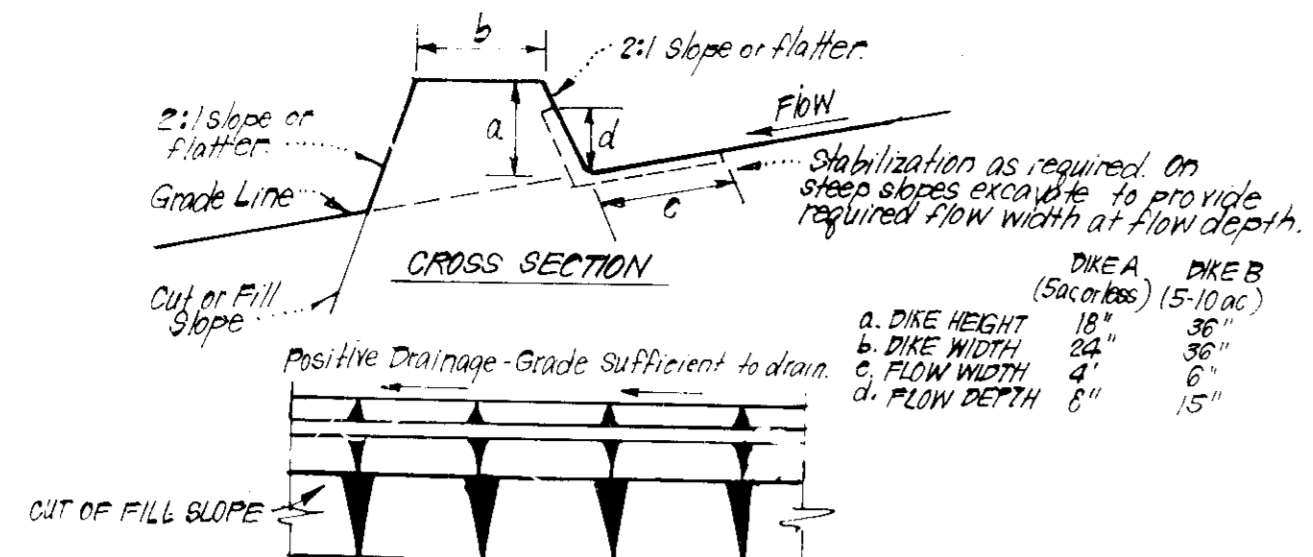
DEVELOPER'S/BUILDER'S CERTIFICATE

I hereby certify that this plan for Foundation and Erosion Control represents a practical and suitable 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 of Developer/Builder
 Date 8-9-89

Signature of Engineer
 Date 8/11/89

CLARK • FINEROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS		SCALE 1" = 30'
DESIGNED KIWM	SEDIMENT & EROSION CONTROL PLAN LOTS 184 - 188 AUTUMN MANOR SECTION 1 AREA 2	DRAWING 2 OF 3
DRAWN BAL		JOB NO. 88-163
CHECKED KIWM	2ND ELECTION DISTRICT HOWARD COUNTY MARYLAND	FILE NO. 88-163se
DATE AUG. 1ST 1989	FOR N.V. HOMES, INC. 10236 New Hampshire Ave. # 210 Silver Spring, Maryland 20910	



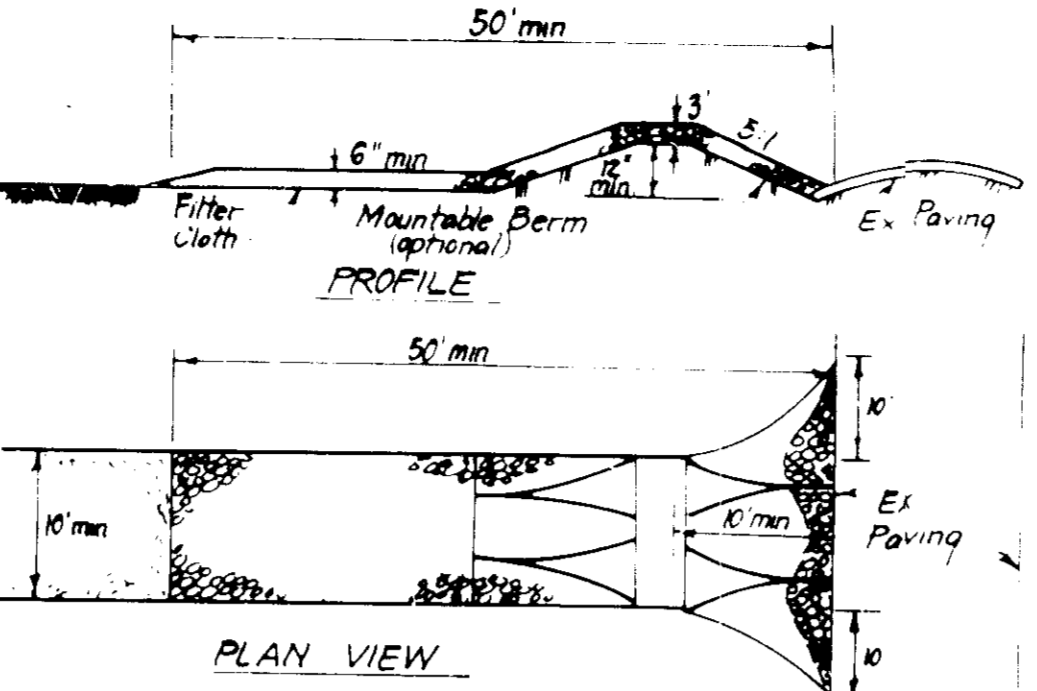
- CONSTRUCTION SPECIFICATIONS:**
- All dikes shall be compacted by earth-moving equipment.
 - All dikes shall have positive drainage to an outlet.
 - Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
 - Filter location should be adjusted as needed to utilize a stabilized slope outlet.
 - Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
 - Stabilization shall be: (A) in accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) flow channel as per chart below.

TYPE OF TREATMENT	CHANNEL GRADE	FLOW CHANNEL STABILIZATION	
		DIKE A	DIKE B
1	0.5 - 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	3.1 - 5.0%	Seed & Straw Mulch	Seed with or without 2" Stone
3	5.1 - 8.0%	Seed with or without 2" Stone	Lined Rip Rap 4" - 8" 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.

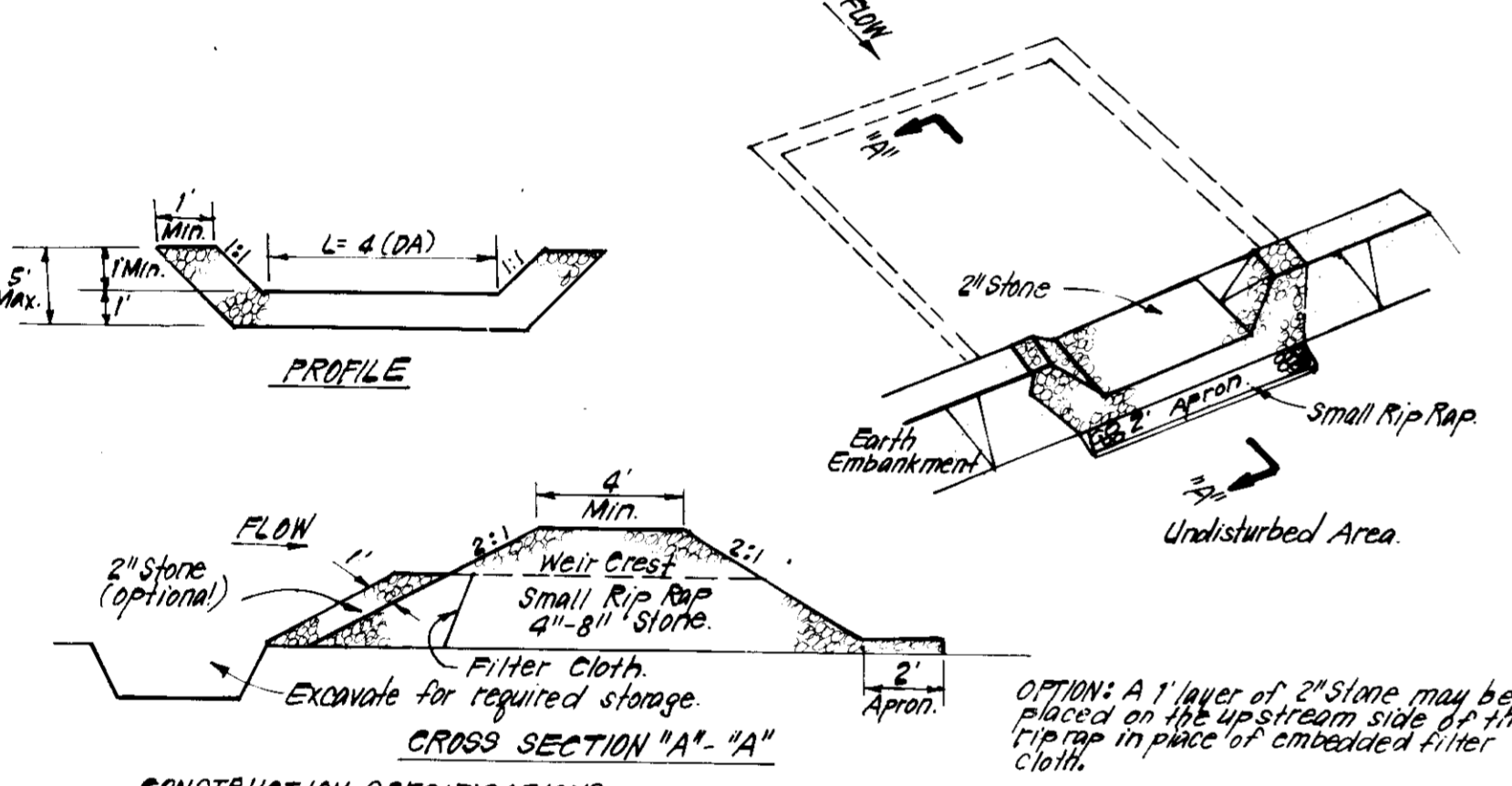
7. Periodic inspection and required maintenance must be provided after each rain.

EARTH DIKE DETAIL (E.D.)
NO SCALE



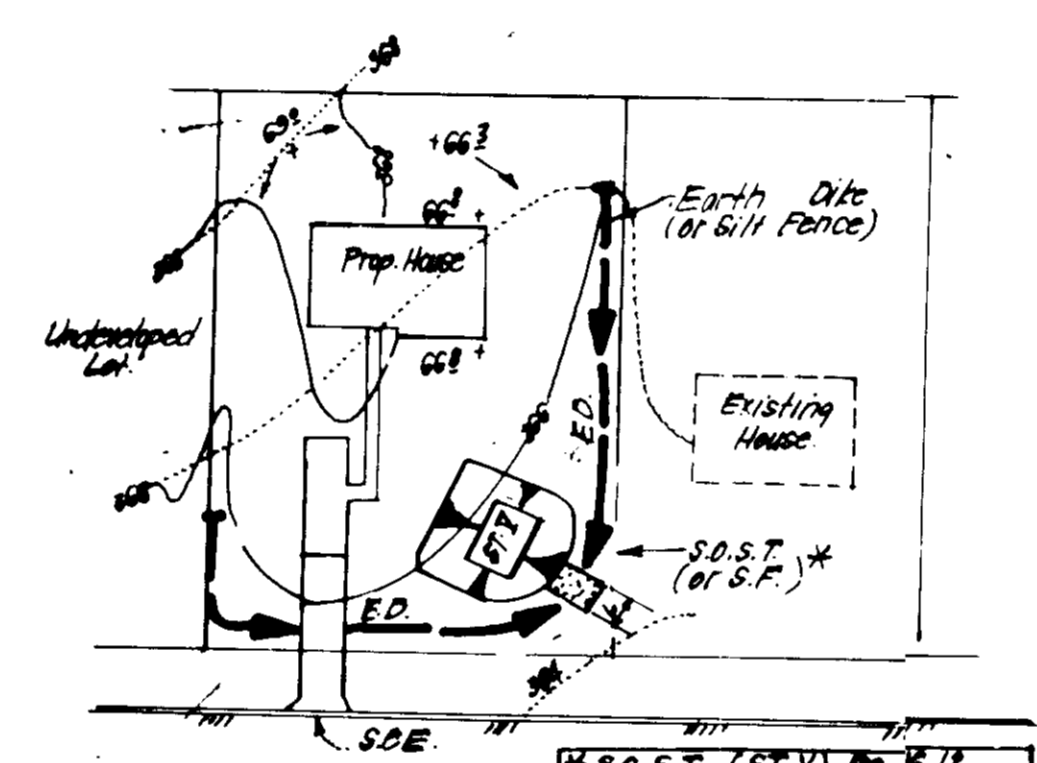
- CONSTRUCTION SPECIFICATIONS:**
- Stone size - Use 2" stone, or recycled or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet except on a single residence lot where a 30 foot minimum length would apply.
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) foot minimum, but not less than the full width 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 cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 - Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE



- CONSTRUCTION SPECIFICATIONS:**
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil area shall be compacted.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip rap 4" - 8" along with 1" thickness of 2" aggregate placed on the up-grade side on the small rip rap or embedded filter cloth in the rip rap.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
 - The structure shall be inspected after each rain and repairs made as needed.
 - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STY.
NO SCALE



* NOTE: Single lot detail can not be utilized if any two lots sharing common property lines are to be disturbed at the same time or on any lots sharing a sediment trap.

LOT SIZE	MAX. VOLUME	TRAP
1/4 AC.	2,000	1
1/2 AC.	4,000	2
3/4 AC.	6,000	3
1 AC.	8,000	4
1 1/4 AC.	10,000	5
1 1/2 AC.	12,000	6
2 AC.	16,000	8
3 AC.	24,000	12
4 AC.	32,000	16
5 AC.	40,000	20
6 AC.	48,000	24
8 AC.	64,000	32
10 AC.	80,000	40

* Can be adjusted in field, but surface area must be as given or greater.

SINGLE LOT SEDIMENT CONTROL PLAN
NO SCALE

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:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (16 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).
- 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.

Inspection - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed 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 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.

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, 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 EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and sod (Sec. 52), 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	1.743 Acres
Area Disturbed	1.43 Acres
Area to be roofed or paved	0.95 Acres
Area to be vegetatively stabilized	1.08 Acres
Total Cut	2100 Cu. yds
Total Fill	1988 Cu. yds
Offsite waste/borrow area location	Undetermined
- 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 DPM 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.
- If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
- All pipes to be blocked at the end of each day (see detail below). N/A
- The total amount of straw bale dikes/silt fence equals -0- L.F.

CONSTRUCTION SEQUENCE:

Sequence	No. of Days
A. Obtain Grading Permit and Install Sediment and Erosion Control Devices and Stabilize.	7
* B. Excavate for Foundations and Rough Grade & temporarily stabilize.	30
C. Construct Structures, Sidewalks and Driveways.	120
D. Final Grade and stabilize in accordance with Stds. & Specs.	30
E. Upon approval of the sediment control inspector, remove sediment and erosion controls and stabilize.	7

* Delay construction on lot 184 until Trap #1 is removed.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 Director: James M. [Signature] 10/24/89
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Director: [Signature] 11/8/89
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Director: [Signature] 10/23/89
 Chief Bureau of Engineering: [Signature] 10-23-89

Reviewed for: HOWARD COUNTY SOI
 Name: [Signature]
 Signature: [Signature] 9/27/89
 U.S. Soil Conservation Service

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

Approved: [Signature] 9/26/89
 Date: [Signature]

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done according to the plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a minimum of Attendance in the Dept. of Natural Resources Approved Training Program for the Control of Erosion and Sedimentation beginning the project. The authorized official on site will monitor the project and observe and report to the appropriate agents as required.

Signature of Developer/Builder: [Signature] 8/9/89
 Date: [Signature]

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and suitable 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 of Engineer: [Signature] 8/11/89
 Date: [Signature]

OWNER / DEVELOPER
 AUTUMN MANOR JOINT VENTURE
 % LAND DESIGN AND DEVELOPMENT
 8307 Main Street
 Ellicott City, Md. 21043

[Signature]

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA MD 21046 • (301) 381-7500 - BALTO. • (410) 621-8611 - WASH.

DESIGNED KIWM	SEDIMENT & EROSION CONTROL PLAN LOTS 184-188	SCALE AS SHOWN
DRAWN BAL	AUTUMN MANOR SECTION 1 AREA 2	DRAWING 3 OF 3
CHECKED KIWM	2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO 89-163
DATE: AUGUST 1989	FOR: NV HOMES 10230 New Hampshire Ave. #203 Silver Spring, Md. 20903	FILE NO 89-163X