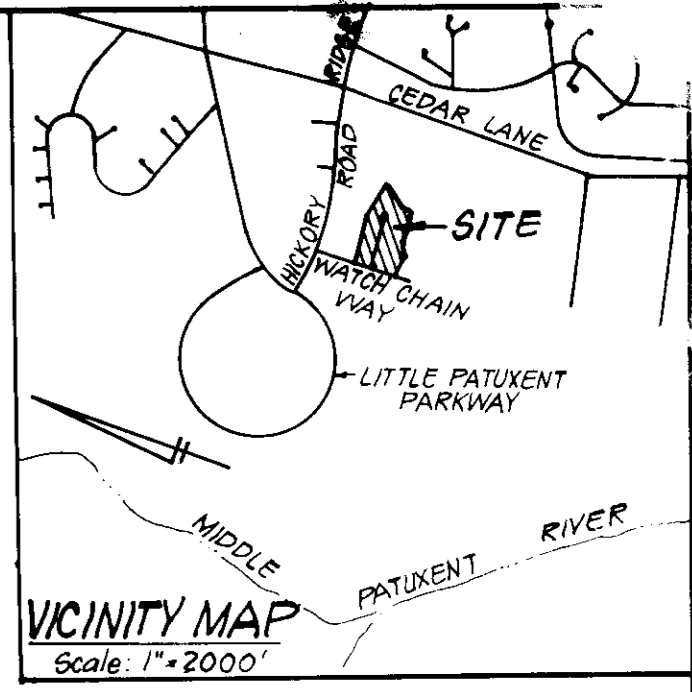
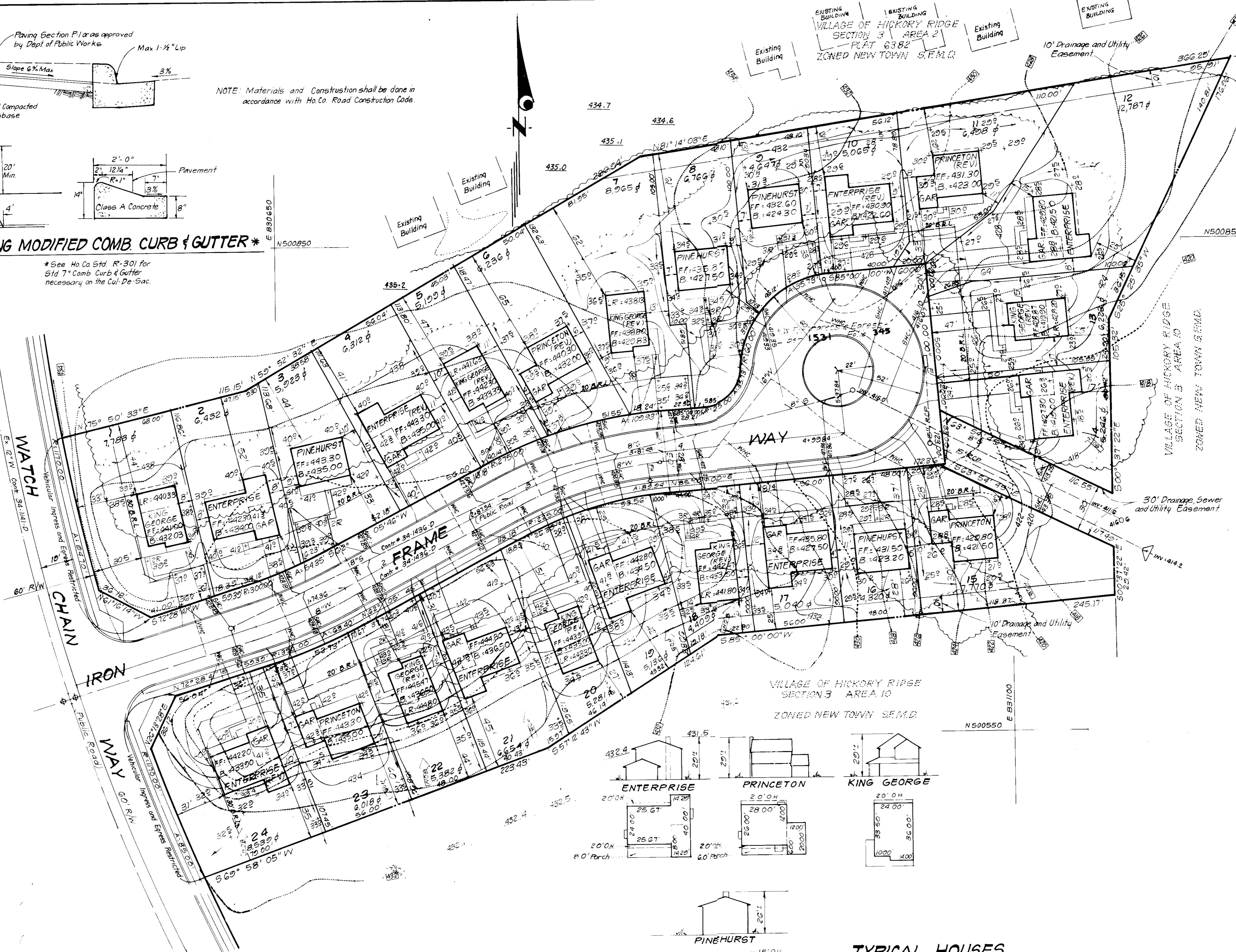


NOTE: Materials and Construction shall be done in accordance with H.O. Co. Road Construction Code.

DRIVEWAY ABUTTING MODIFIED COMB CURB & GUTTER*

- ALTERNATE #1
 1" Bit Conc. Surface
 2" Bit Conc. Base
 5" Gravel
- * See H.O. Co. Std. R-301 for Std. 7" Comb Curb & Gutter necessary on the Cul-De-Sac.



GENERAL NOTES:

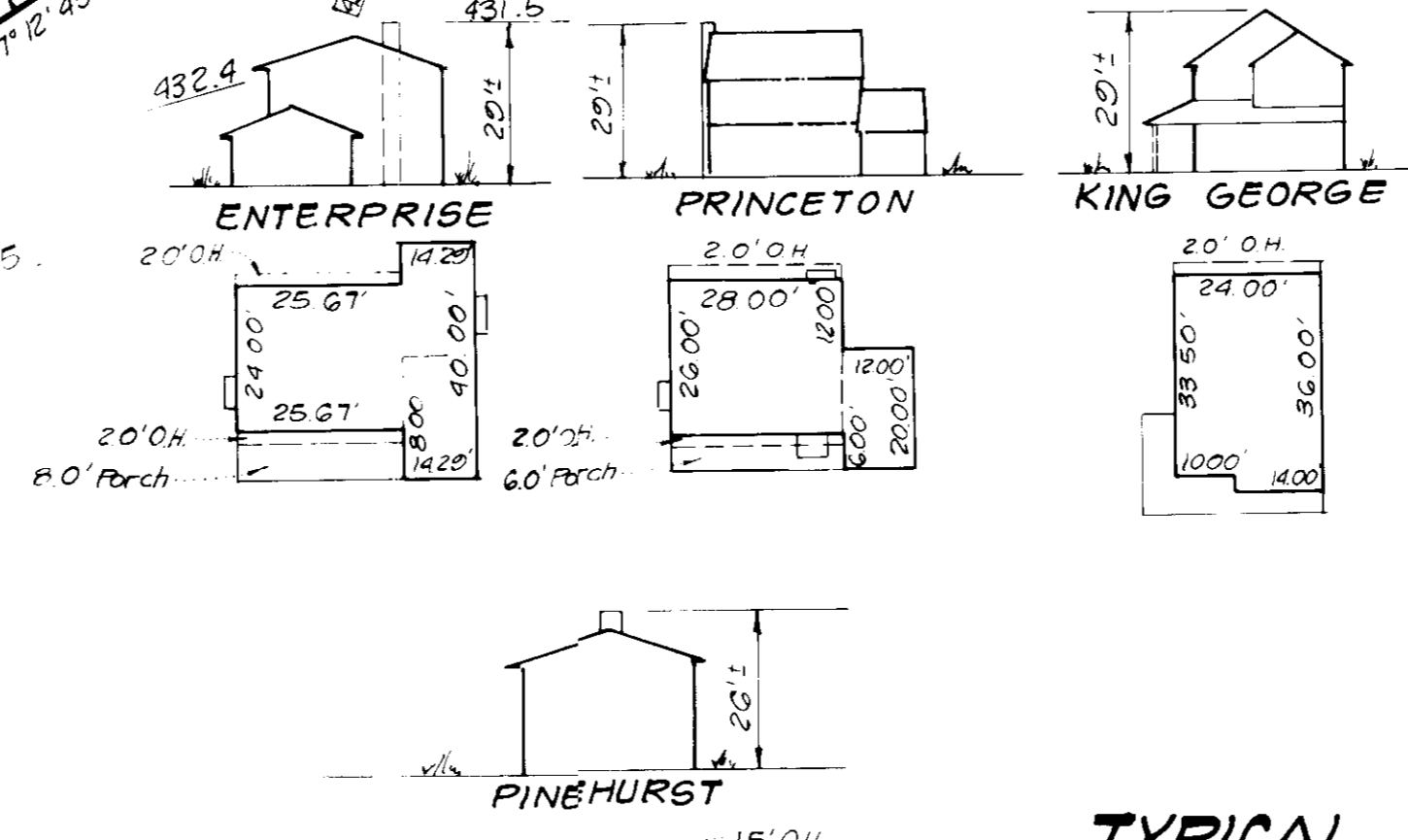
- The Land included is zoned New Town S.F.M.D.
- Coordinates are based upon the Maryland state plane coordinate system. Reference Howard County control points 2639002 and 2639003.
- All roads are public and existing.
- Any damage to county owned rights-of-way to be corrected at the Developer's expense.
- Total Area included: 3504 Ac.
- Total Number of Lots: 24
- Storm Water Management for this site has been provided in Central Facility in VOHR #1, F-83-120.
- Reference Final Development Plan Phase 1B Part III, FDP #3054-A-G03.
- The contractor or developer shall contact the Construction Inspection Division 24 hrs in advance of commencement of work at 792-2262.

LEGEND:

- Contour Interval: 2 Ft
- Existing Contour: (dashed line)
- Proposed Contour: (solid line)
- Spot Elevation: +105
- Direction of Drainage: (arrow)
- Existing Trees to be Saved: (circle with cross)
- Existing Spot Elevation: (circle with number)

ADDRESS CHART

LOT NO.	STREET	ADDRESS
1	5301	IRON FRAME WAY
2	5305	
3	5309	
4	5313	
5	5317	
6	5321	
7	5325	
8	5329	
9	5333	
10	5337	
11	5341	
12	5345	
13	5349	
14	5353	
15	5357	
16	5361	
17	5365	
18	5369	
19	5373	
20	5377	
21	5381	
22	5385	
23	5389	
24	5393	



TYPICAL HOUSES
Scale: 1" = 30'

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DATE: 10-1-86
 DATE: 10-1-86
 DATE: 9-26-86

CLARK · FINEFROCK & SACKETT
 ENGINEERS · PLANNERS · SURVEYORS

11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

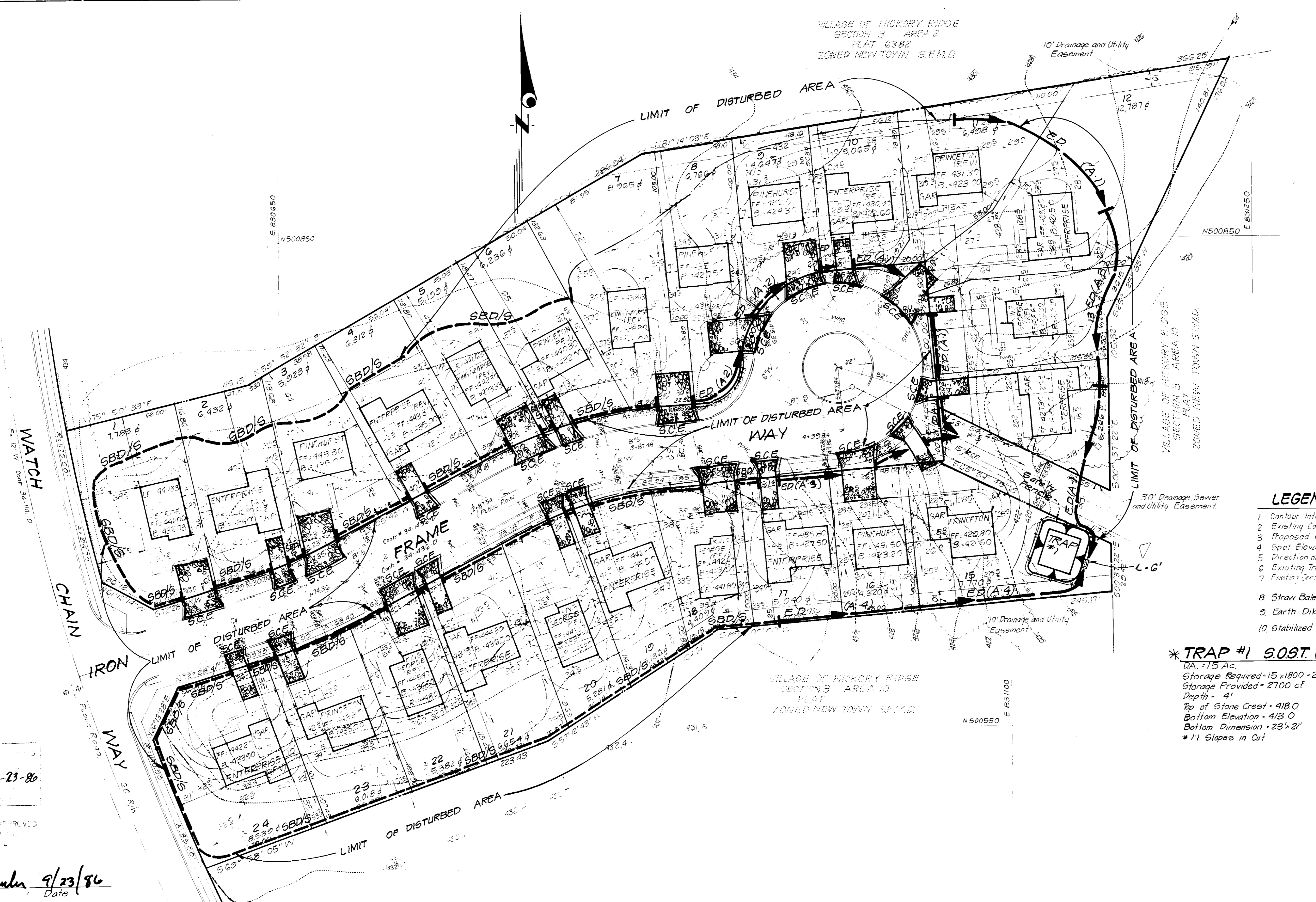
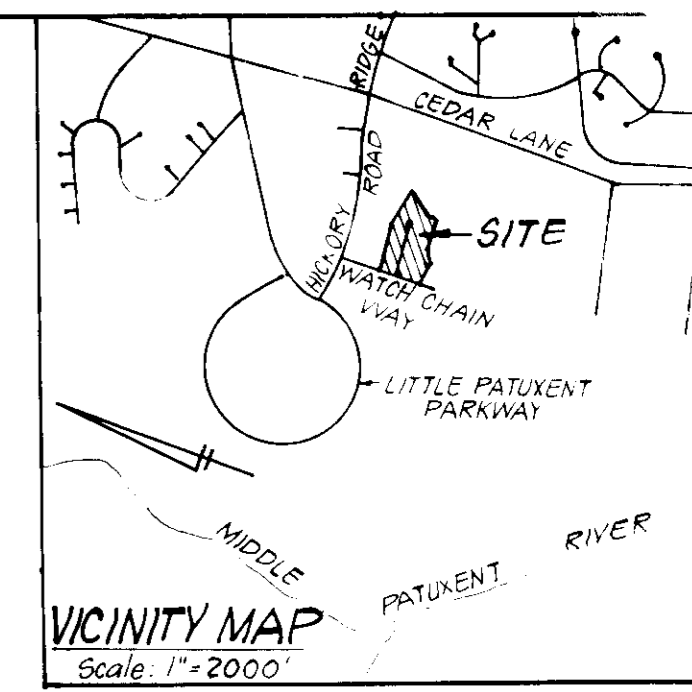
DESIGNED: CMS
 DRAWN: VHL
 CHECKED: JME
 DATE: 8.5.83

SITE DEVELOPMENT PLAN
 LOTS 1 THRU 24
COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 3, AREA 10
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR: THE RYLAND GROUP, INC.
 7130 Minstrel Way #215
 Columbia, Maryland 21045

SCALE: 1" = 30'
 DRAWING: 1 of 3
 JOB NO.: 86-038
 FILE NO.: 86-038-X

SDP-87-29c



- LEGEND:**
- 1 Contour Interval 2 Ft
 - 2 Existing Contour 410
 - 3 Proposed Contour 410
 - 4 Spot Elevation +105
 - 5 Direction of Drainage
 - 6 Existing Trees to be Saved
 - 7 Existing Tree Removal
 - 8 Straw Bale Dike/Silt Fence
 - 9 Earth Dike
 - 10 Stabilized Construction Entrance

***TRAP #1 S.O.S.T. (ST-V)**
 DA = 15 Ac.
 Storage Required = 15 x 1800 = 2700 cf
 Storage Provided = 2700 cf
 Depth = 4'
 Top of Stone Crest = 418.0
 Bottom Elevation = 413.0
 Bottom Dimension = 23' x 21'
 * 1:1 Slopes in Cut

HOWARD
James M. Hill 9-23-86

Approved
Stephen L. Fisher 9/23/86
 Date

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT	
COUNTY HEALTH OFFICER	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING	
PLANNING DIRECTOR	DATE
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
DIRECTOR	DATE
CHIEF BUREAU OF ENGINEERING	DATE

9-4-86
[Signature]

DEVELOPER'S/BUILDER'S CERTIFICATE
 I warrant that all development and construction will be done in accordance with the plans and specifications shown on this certificate and that all necessary permits and approvals have been obtained from the appropriate authorities.
Maurice M. Simpson 8/6/86
 Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE
 I warrant that the design and construction of the project shown on this certificate is in accordance with the applicable codes and standards of practice.
G. Nelson Clark 8-6-86
 Signature of Engineer Date

CLARK · FINEFROCK & SACKETT ENGINEERS · PLANNERS · SURVEYORS 1131E LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593 3400		
DESIGNED	JLS	SCALE 1" = 30'
DRAWN	VHL	DRAWING 2 of 2
CHECKED	JLS	JOB NO 86 038
DATE	8-5-86	FILE NO 86 038 5E

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 seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector
- 7) Site Analysis:
 Total Area of Site 3.504 Acres
 Area Disturbed 3.11 Acres
 Area to be roofed or paved 0.08 Acres
 Area to be vegetatively stabilized 2.13 Acres
 Total Cut 0 Cu. yds
 Total Fill 0 Cu. yds
 Offsite waste/borrow area location N/A
- 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.
- 12) All pipes to be blocked at the end of each day (see detail below). N/A
- 13) The total amount of straw bale dikes/silt fence equals 1470 L.F.

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, discing or other acceptable means before seeding.

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 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.

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.

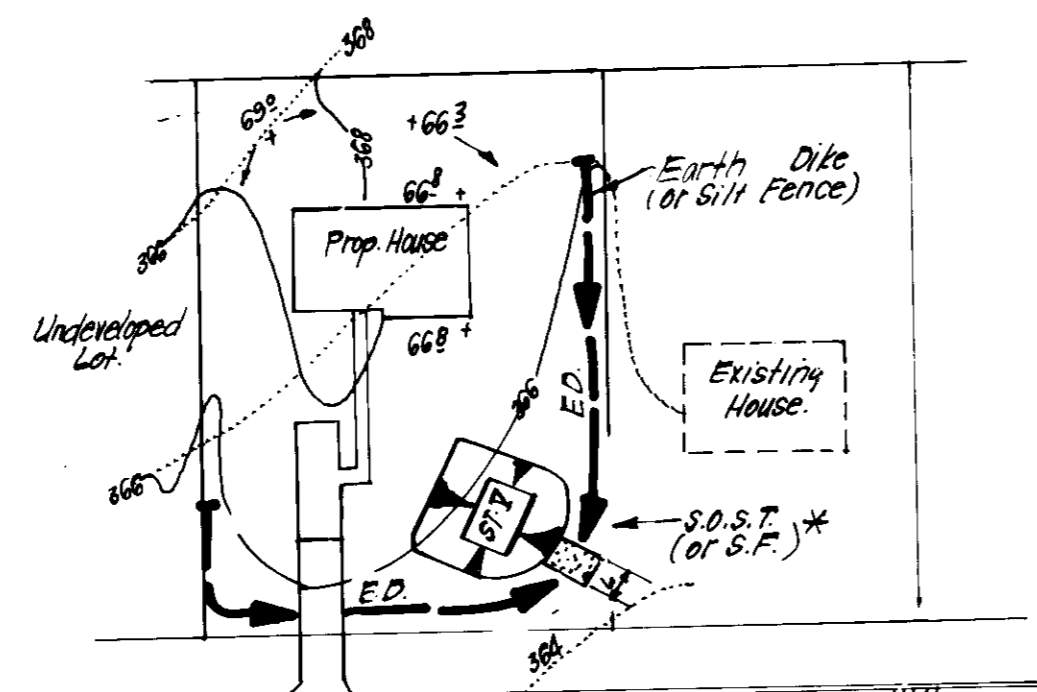
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

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 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.

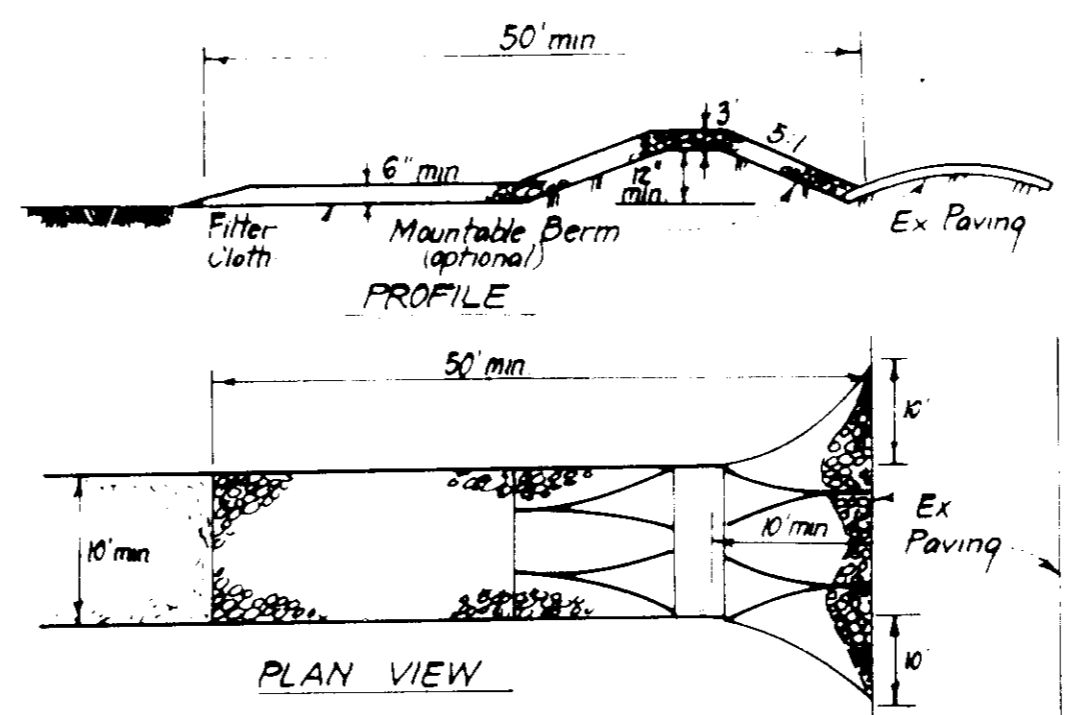


* NOTE: Single lot detail can not be utilized if any two lots sharing common property lines are to be disturbed at the same time or on any lots showing a sediment trap.

NO. S.O.S.T. (or S.F.)	LOT SIZE	VA	VA AC	VA AC	VA AC
1	2	2	2	2	2
2	11	11	11	11	11
3	12	12	12	12	12
4	12	12	12	12	12

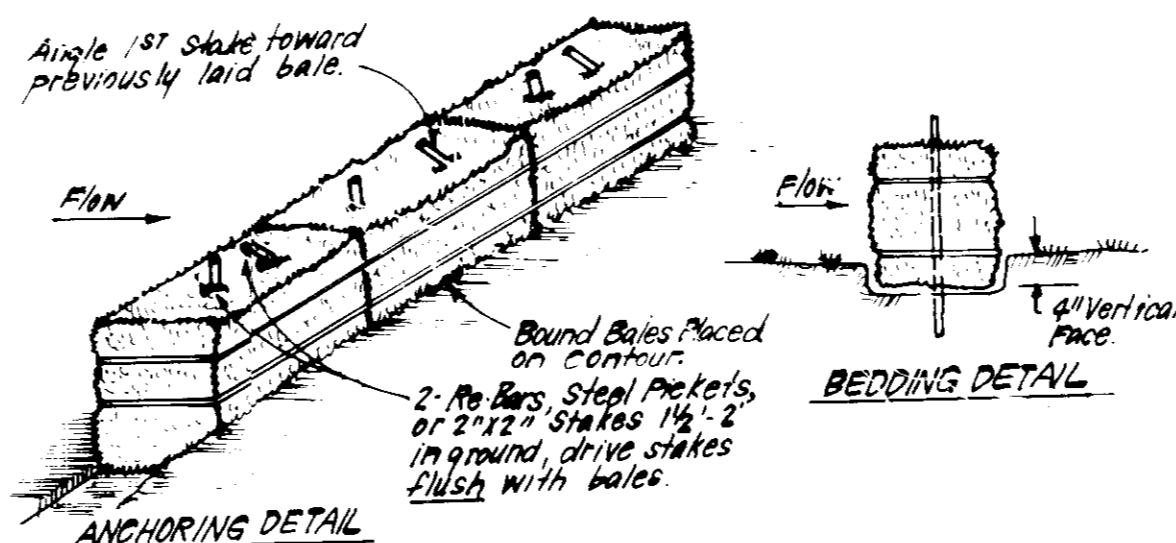
+ can be adjusted in field, but bottom area must be as given or greater

SINGLE LOT SEDIMENT CONTROL PLAN
NO SCALE



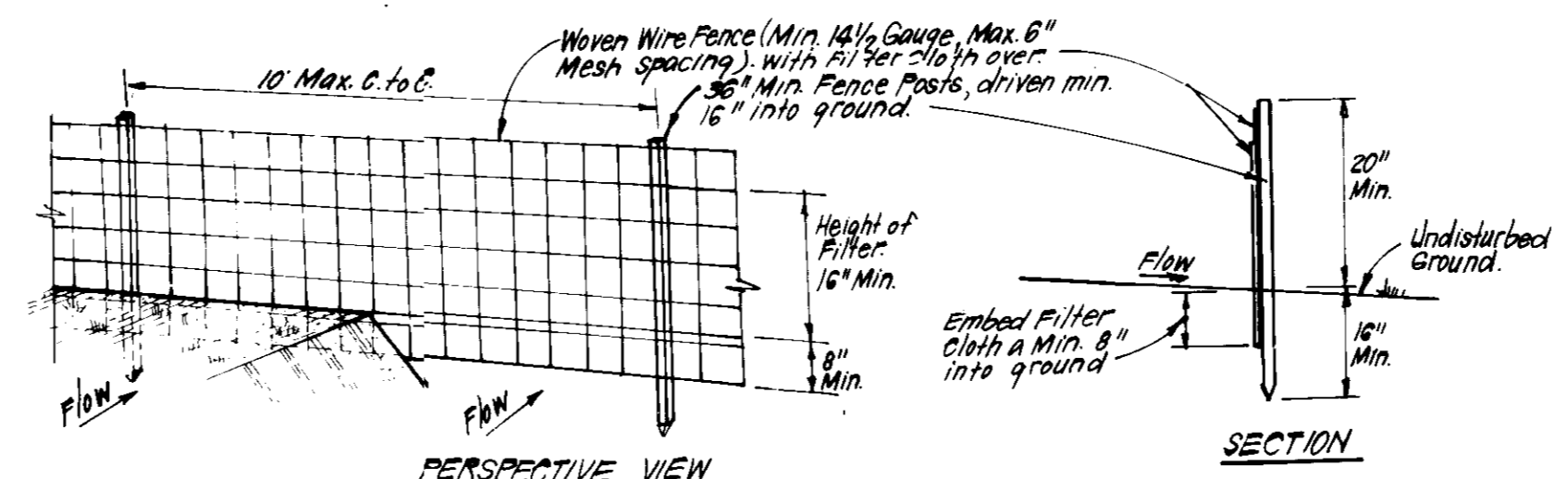
- CONSTRUCTION SPECIFICATIONS:**
- 1) Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 - 2) Length - As required, but not less than 50 feet, except on a single residence lot where a 30' minimum length would apply.
 - 3) Thickness - Not less than six (6) inches.
 - 4) Width -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

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE



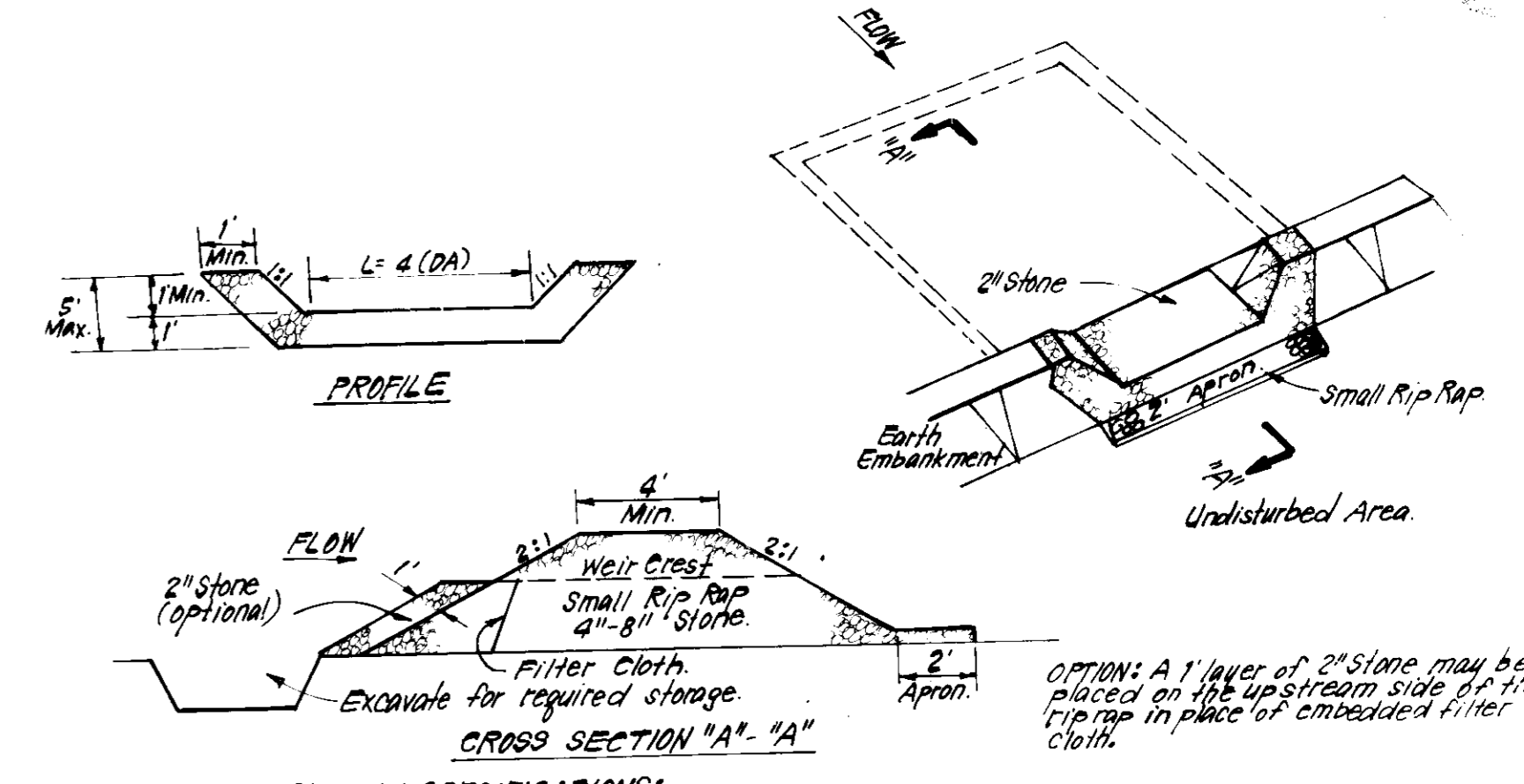
- CONSTRUCTION SPECIFICATIONS:**
1. Bales shall be placed at the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
 2. Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
 3. Bales shall be securely anchored in place by either 2 stakes or re bars driven thru the bale.
 4. The 1st stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bales.
 5. Inspection shall be frequent and repair replacement shall be made promptly as needed.
 6. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE DETAIL (SBD)
NO SCALE



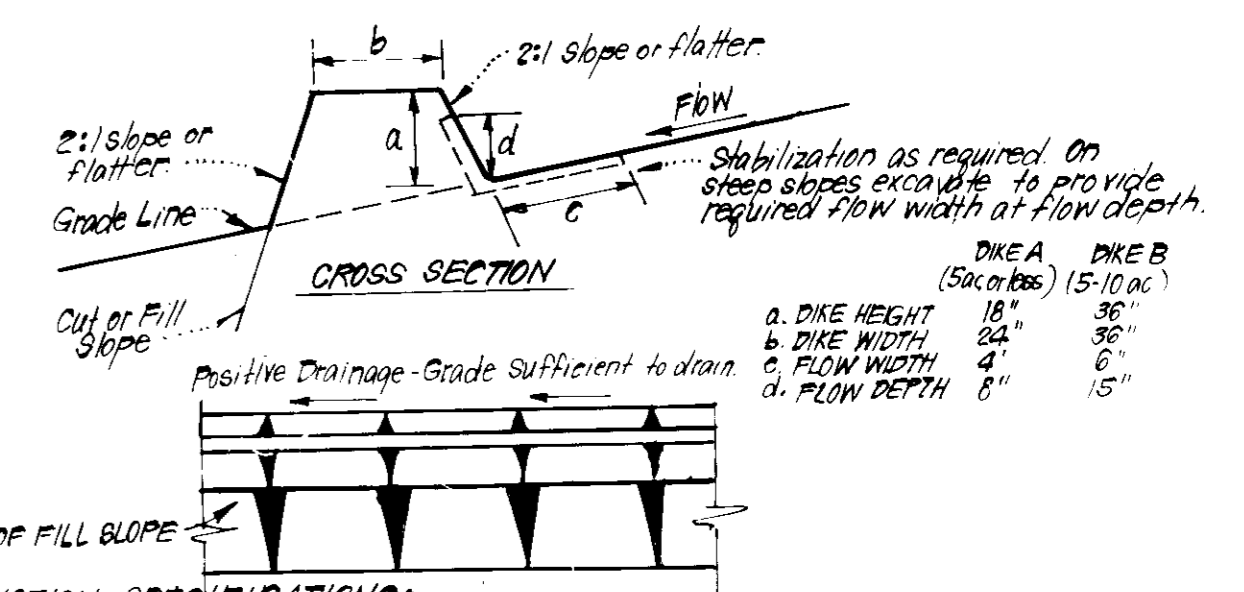
- CONSTRUCTION SPECIFICATIONS:**
1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
 3. When 2 sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 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 X, Mirafix 100X, Stabilinks, TIAUN or Approved Equivalent
 PREFABRICATED UNIT: Geofab, Envirofence, or Approved Equivalent

SILT FENCE DETAIL (S)
NO SCALE



- CONSTRUCTION SPECIFICATIONS:**
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The top surface shall be compacted.
 2. 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.
 3. All cut and fill slopes shall be small rip-rap 4"-8" along with 1" thickness of 2" aggregate placed on the up-slope side on the small rip-rap or embedded filter cloth in the rip-rap.
 4. The stone used in the outlet shall be restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
 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.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STR.
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 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 chart below.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5 - 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	3.1 - 6.0%	Seed & Straw Mulch	Seed, Willow, or Excelsior; Sod, 2" Stone
3	6.1 - 8.0%	Seed, Willow, or Sod; 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.

EARTH DIKE DETAIL (E.D.)
NO SCALE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

PLANNING DIRECTOR John W. Muleshian DATE 10/18/86
 CHIEF DIVISION OF LAND DEVELOPMENT
 AND ZONING ADMINISTRATION

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR _____ DATE _____
 CHIEF BUREAU OF ENGINEERING

APPROVED: DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION, HOWARD COUNTY, MARYLAND

DATE 9-4-86

HOWARD COUNTY

Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL CONSERVATION SERVICE, COUNTY OF HOWARD, MARYLAND

Stephen L. Fisher 8/23/86
 Approved Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I, the undersigned, certify that the development and construction will be done in accordance with the approved development and plan for erosion and sediment control and that the responsible personnel involved in the construction project will have adequate training and experience in the control of sediment and erosion. I also certify that the site will be maintained and the erosion and sediment control structures will be maintained and repaired as needed.

Walter M. Summers 8/23/86
 Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE

I, the undersigned, certify that the development and construction will be done in accordance with the approved development and plan for erosion and sediment control and that the responsible personnel involved in the construction project will have adequate training and experience in the control of sediment and erosion. I also certify that the site will be maintained and the erosion and sediment control structures will be maintained and repaired as needed.

G. Nelson Clark 8-6-86
 Signature of Engineer Date

CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS

11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED J.L.S.	SEDIMENT & EROSION CONTROL PLAN LOTS 1 THRU 24	SCALE As Shown
DRAWN VHL	COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 10	DRAWING 3 of 3
CHECKED J.L.S.	5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 86-038
DATE 8-5-86	FOR: THE RYLAND GROUP INC. 7130 Minnetonka Way, # 215 Columbia, MD 21045	FILE NO. 86-038-5

56P-87-242