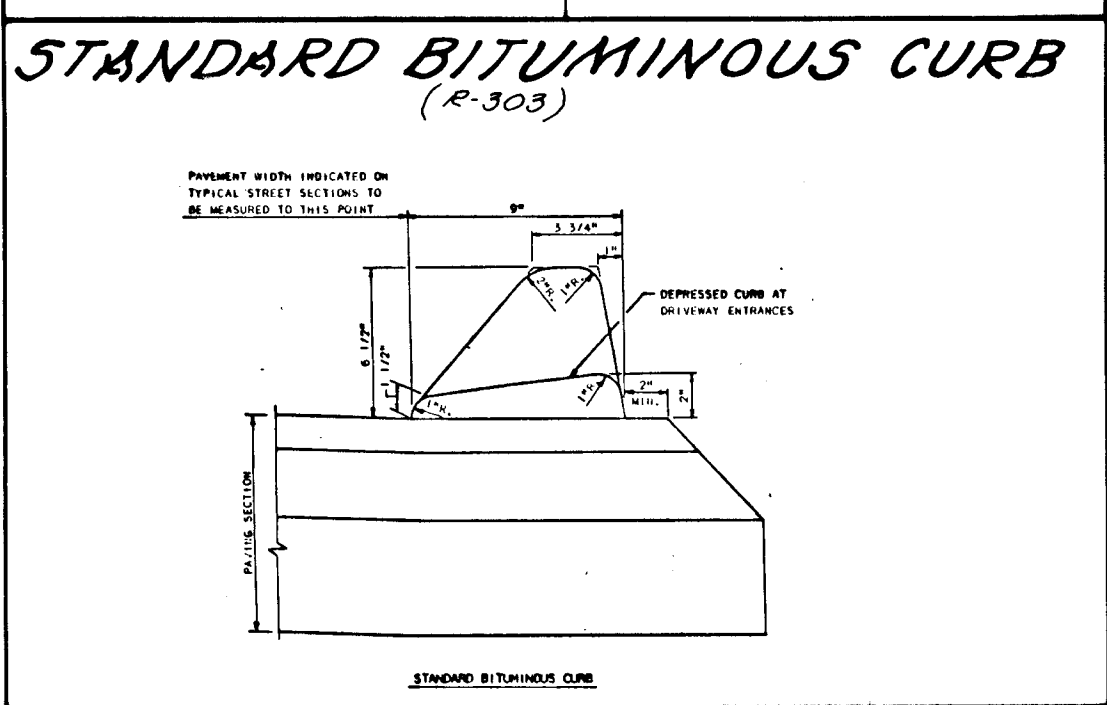


**8 CURVE DATA**

CURVE NO.	RADIUS	LENGTH	TAN	Δ	CHORD BEARING & DIST.
7	1023.37'	65.92'	36.28'	37°09'46"	63.67'



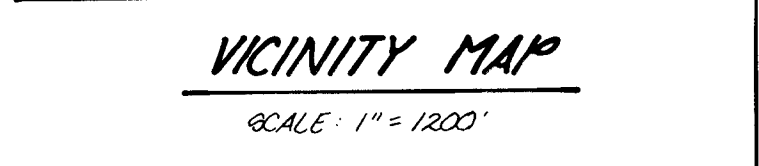
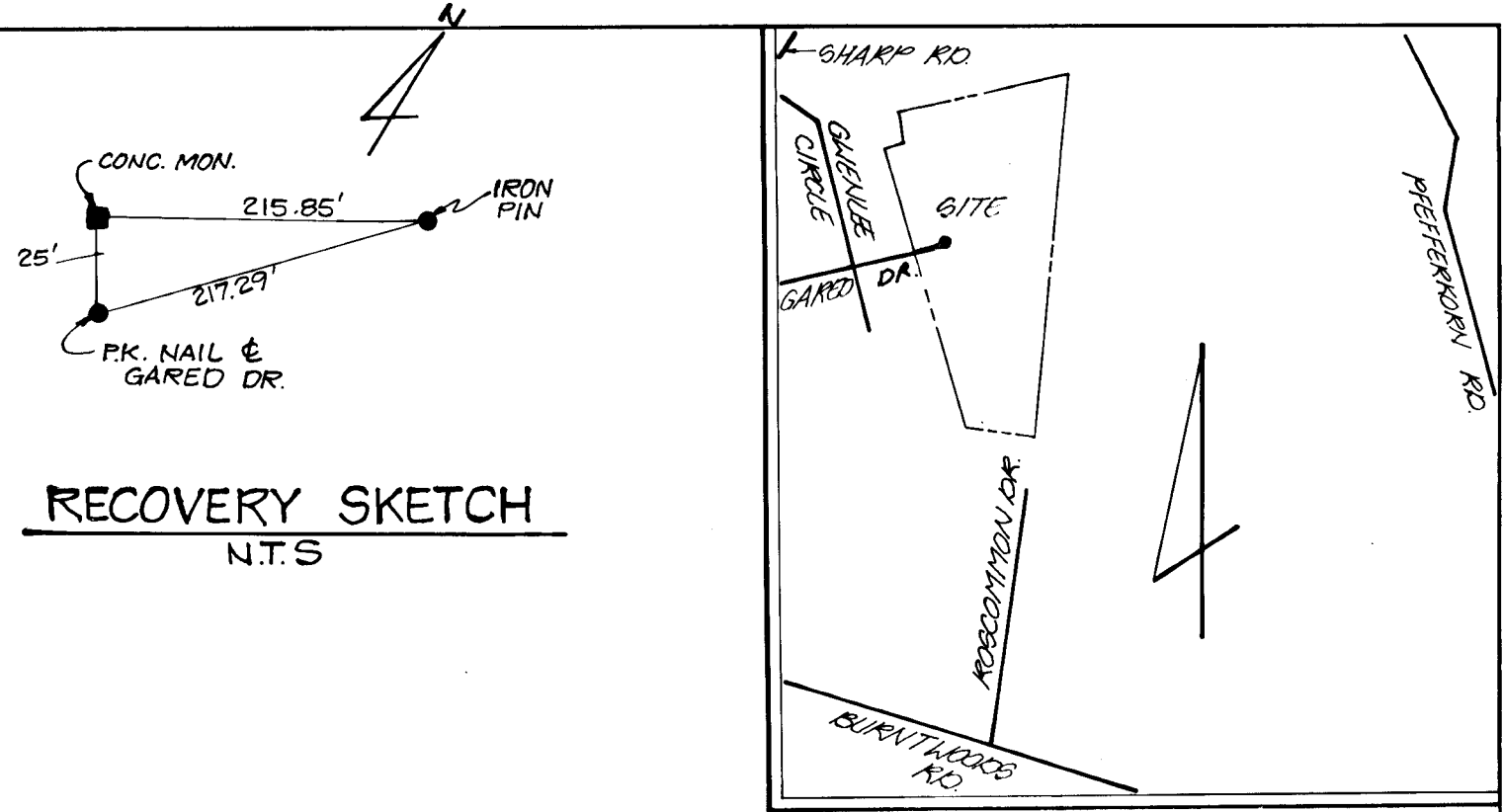
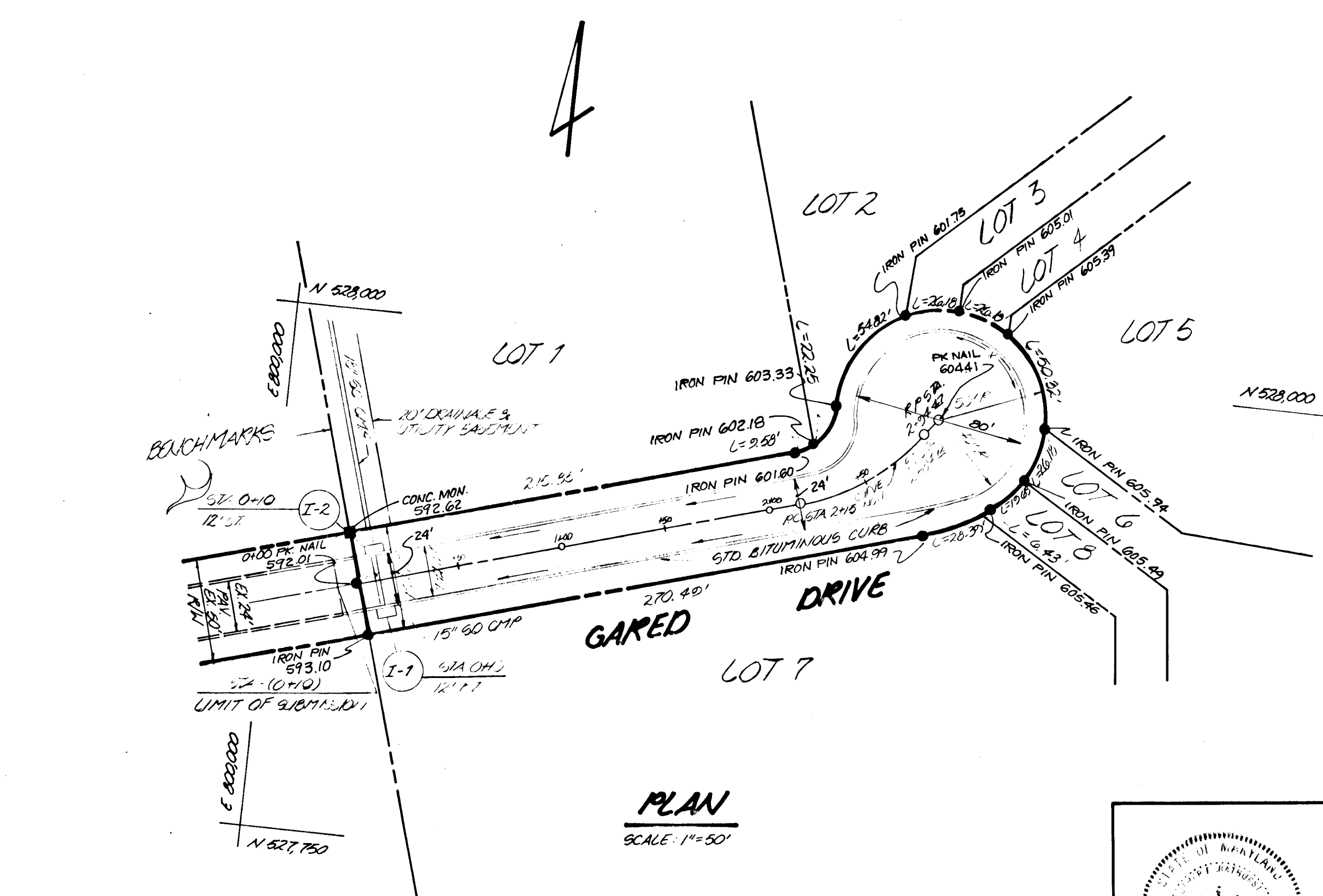
**CUL-DE-SAC: GARED DR**

1. STA. 10+15 TO 2+45.00  
 2. DESIGN SPEED 25 MPH  
 3. ZONING: R  
 4. NOT TO SCALE

ZONING DISTRICTS	A	B	C	D	R/W	PAVING SECTION
R-1, R-2, R-3, R-4, R-5, R-6, R-7, R-8, R-9, R-10, R-11, R-12, R-13, R-14, R-15, R-16, R-17, R-18, R-19, R-20, R-21, R-22, R-23, R-24, R-25, R-26, R-27, R-28, R-29, R-30, R-31, R-32, R-33, R-34, R-35, R-36, R-37, R-38, R-39, R-40, R-41, R-42, R-43, R-44, R-45, R-46, R-47, R-48, R-49, R-50, R-51, R-52, R-53, R-54, R-55, R-56, R-57, R-58, R-59, R-60, R-61, R-62, R-63, R-64, R-65, R-66, R-67, R-68, R-69, R-70, R-71, R-72, R-73, R-74, R-75, R-76, R-77, R-78, R-79, R-80, R-81, R-82, R-83, R-84, R-85, R-86, R-87, R-88, R-89, R-90, R-91, R-92, R-93, R-94, R-95, R-96, R-97, R-98, R-99, R-100 <td></td> <td></td> <td></td> <td></td> <td></td> <td>P-2</td>						P-2

**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT FOR EXISTING UTILITIES AT LEAST FIVE (5) DATE PRIOR TO STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAY PRIOR TO BEGINNING WORK SHOWN ON THESE DRAWINGS:  
 MESS UTILITY: 552-0100  
 BELL TELEPHONE SYSTEM: 393-3449  
 LONG DISTANCE CABLE DIVISION: 393-3537/3554  
 BALTIMORE GAS & ELECTRIC COMPANY: 525-8000  
 HOWARD COUNTY BUREAU OF UTILITIES: 592-2366  
 HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR OF COMMENCEMENT OF WORK): 792-7732
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 25' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1978 EDITION (REVISED).
- PIPE SHALL NOT BE INSTALLED BY CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS.  
 GARED DRIVE - 50' R/W (CUL-DE-SAC) - DESIGN SPEED 25 MPH
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND O.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAYS AND/OR UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% COMPACTION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED R-20 PER 08-07-85 COMPREHENSIVE ZONING PLAN.
- TOPO SHOWN HEREON WAS FIELD RUN BY BOENDER ASSOCIATES ON 11/11/88. NO PITS SHALL BE LAID IN PLACE UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO WITHIN SIX (6) INCHES OF FINISHED GRADE ELEVATIONS.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4 OF THE HOWARD COUNTY DESIGN MANUAL, VOL. 1, UNLESS OTHERWISE NOTED.



DATE	REVISION	BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Span* 6/17/88  
 Chief, Land Development Division Date

*Franklin W. Weiland* 6/27/88  
 Chief, Bureau of Highways Date

*Elizabeth Anderson Colia* 6/29/89  
 Chief, Bureau of Engineering Date

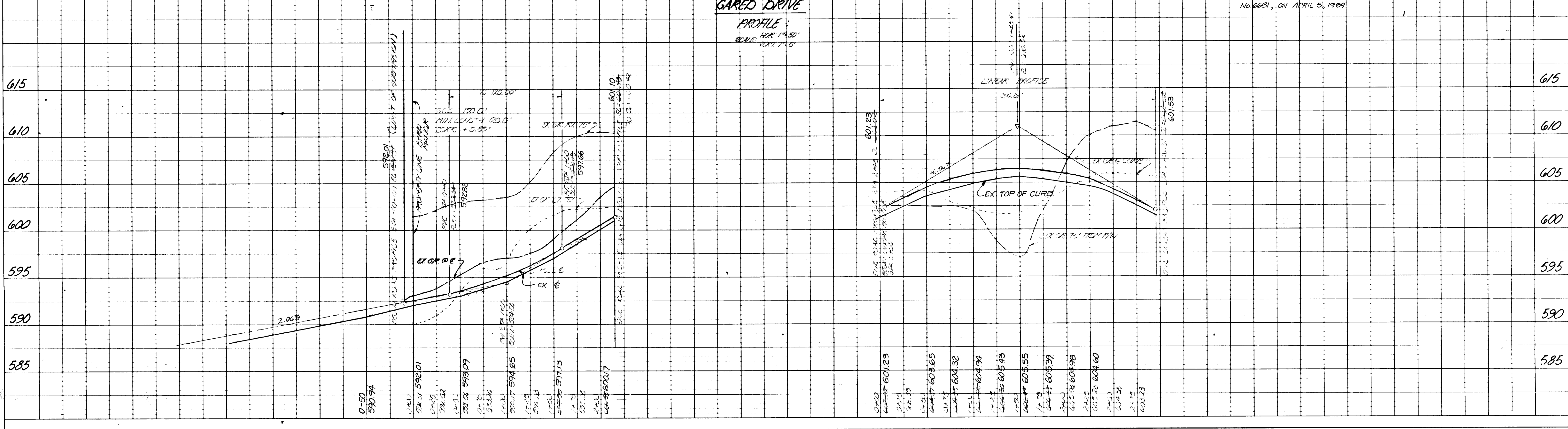
APPROVED: OFFICE OF PLANNING AND ZONING

*Joseph S. Rost* 6/27/88  
 Chief, Division of Community Planning And Land Development Date

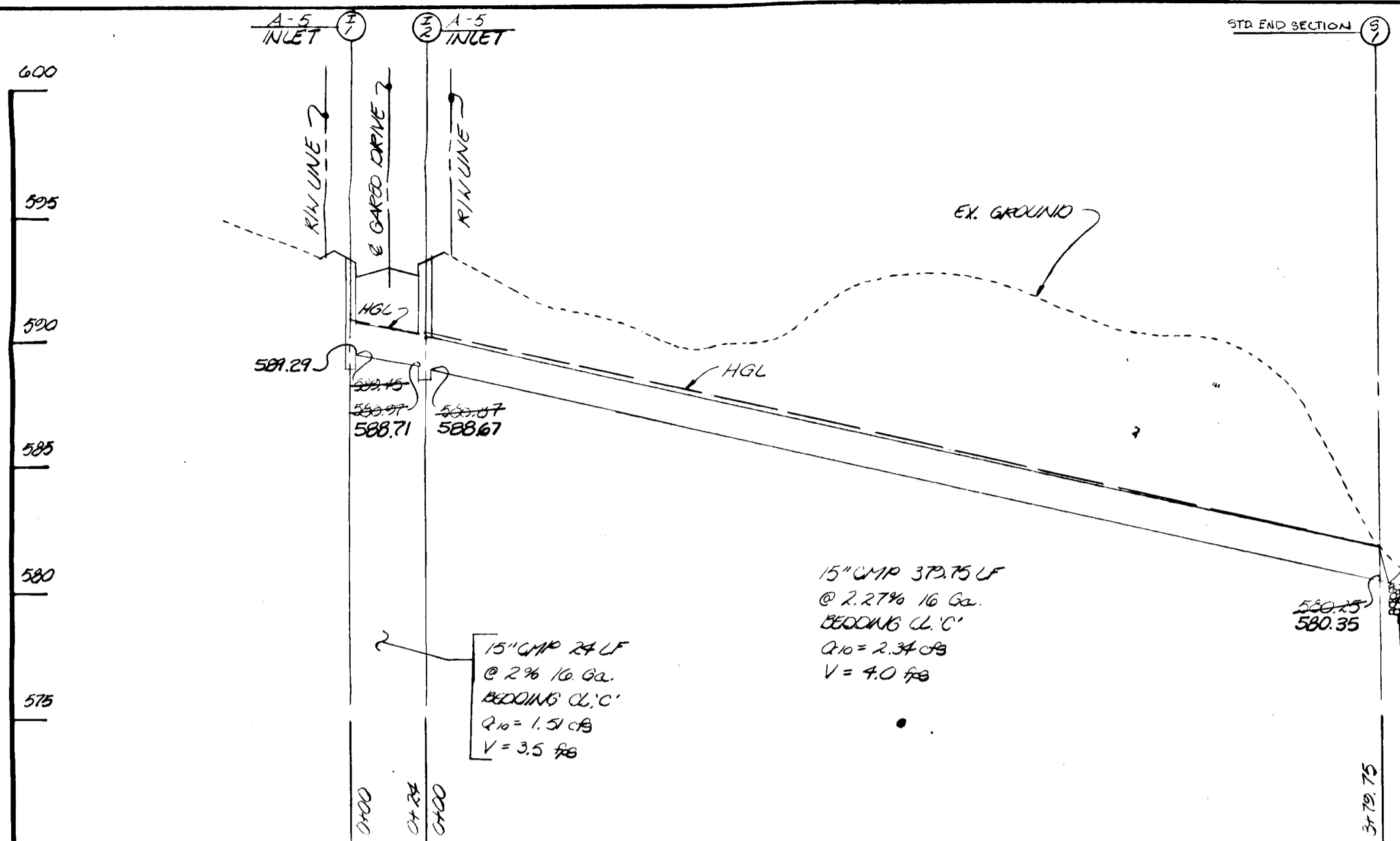
**boender associates inc.**  
 consulting engineers  
 land surveyors  
 land planners

COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD. 21043  
 (301) 465-7777

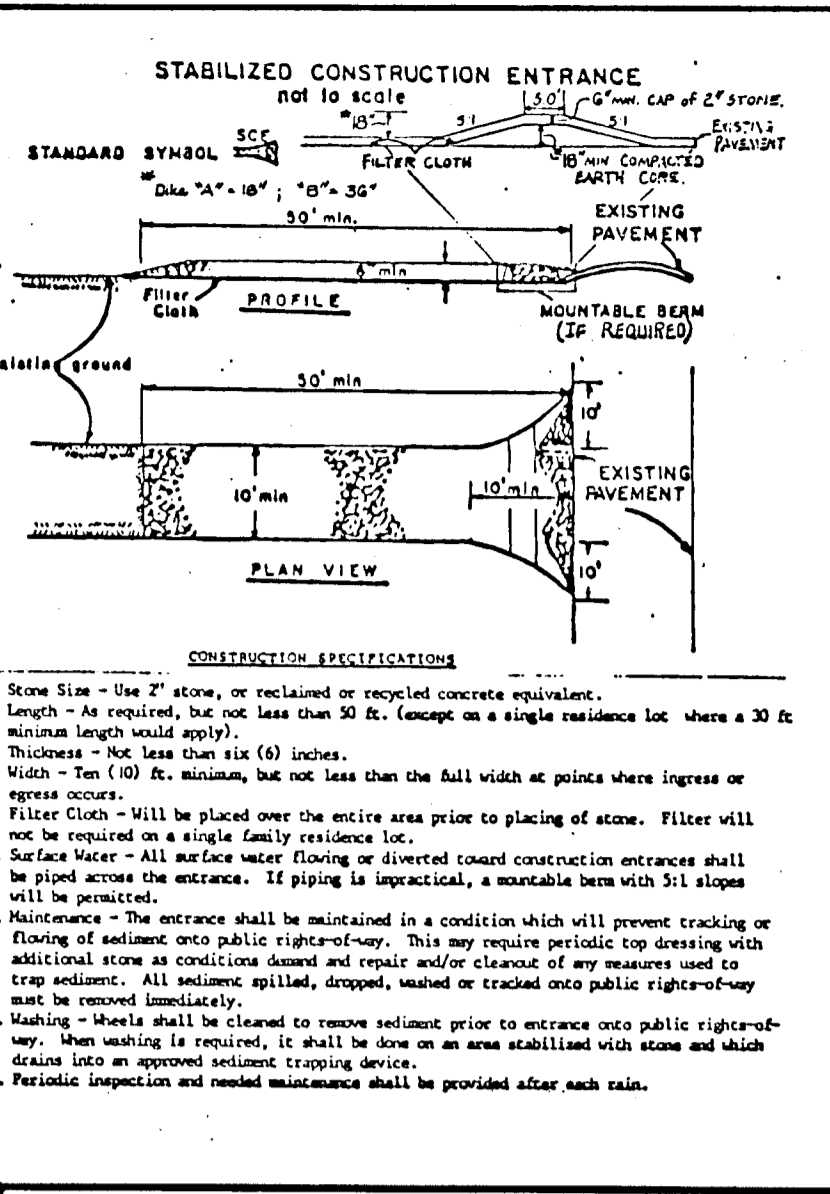
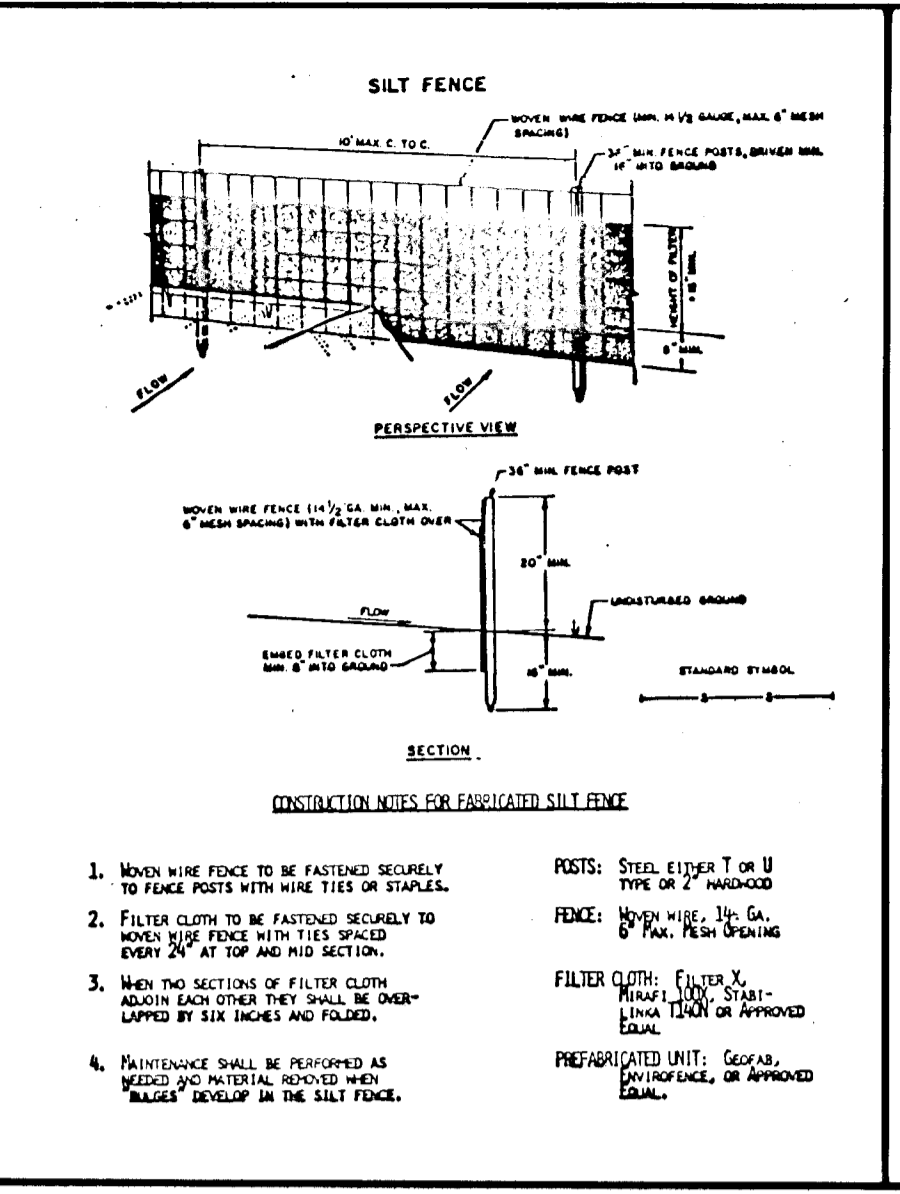
TITLE: FINAL ROAD CONSTRUCTION PLAN  
 PROJECT: BYRD MANOR  
 LOCATION: 3,100 ELECTION DISTRICT TAX MAP 15, HOWARD CO., MD.  
 SCALE: AS SHOWN  
 DESIGNED BY: E.P.C.  
 DRAWN BY: J.C.O.  
 CHECKED BY: L.E.B.  
 DATE: MARCH 1987  
 FIELD BOOK: 85-118  
 JOB NO.: 8532  
 DRAWING NO.: 1 OF 3



AS-BUILT SURVEY CERTIFIED BY  
 PAMPHIL SIKIRAH DILLON, M.D. P.E.  
 No. 6681, ON APRIL 5, 1989



STRUCTURE	TYPE	IN	OUT	TOP ELEVATION	HOWARD CO STD
I-1	A-5 W/DEFLECTION	589.75	592.42	592.42	S.D.-40/6.D.-A.3
I-2	A-5	588.71	592.42	592.42	S.D.-4.01
S-1	END SECTION	586.35	582	581.55	S.D.-5.61



**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas not subject to immediate further disturbance and permanent vegetative cover is desired.

**Soil Preparation:** Loosen up three inches of soil by raking, discing or other acceptable means before seeding. If not previously loosened, use one of the following methods:

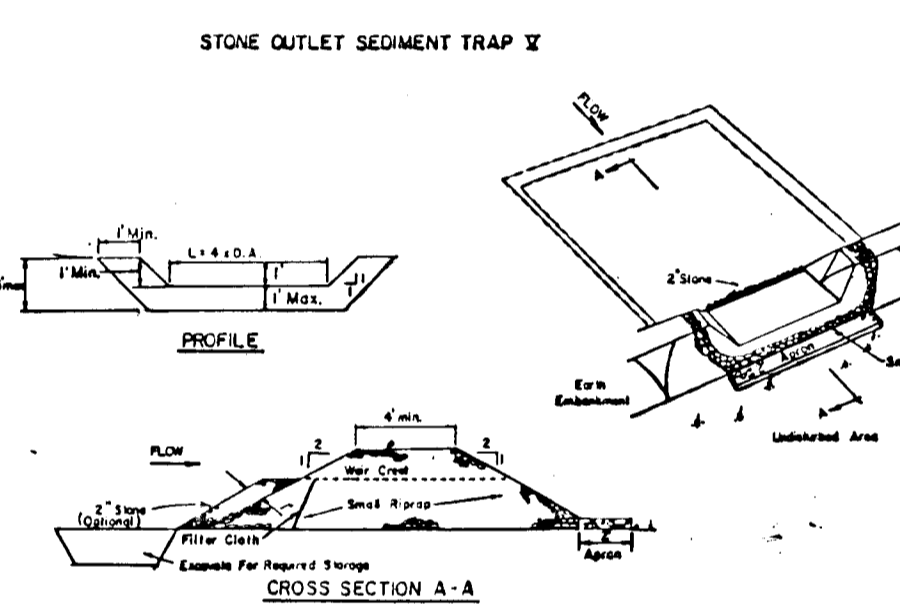
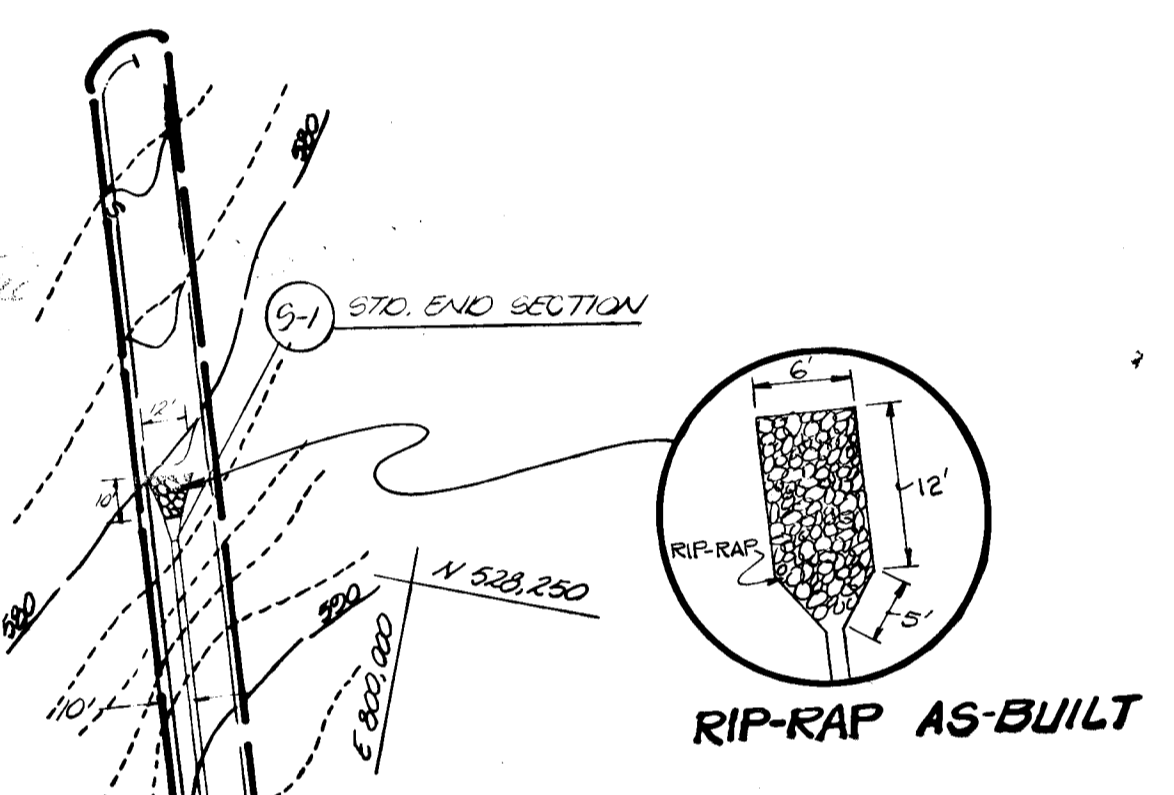
- Preferred - Apply 2 tons per acre detrital limestone (92 100/1000 #/ft.) before seeding. Harvest at 40 lbs. per acre 30-40 lbs. seed (100/1000 #/ft.)
- Acceptable - Apply 2 tons per acre detrital limestone 100 100/1000 #/ft. before seeding. Harvest at 40 lbs. per acre 30-40 lbs. seed (100/1000 #/ft.)

**Seeding:** For the periods March 1 thru April 30, and August 1 thru October 31, apply 40 lbs. per acre (100/1000 #/ft.) of Kentucky 31 Fescue. For the period May 1 thru July 31, apply 40 lbs. per acre of Tall Fescue. For the period October 1 thru February 28, apply 40 lbs. per acre of Ryegrass. During the period of October 1 thru February 28, protect site from erosion by using approved sediment control devices and seed as soon as possible in the spring. Option (1) Use seed. Option (2) Seed with 40 lbs. per acre of Ryegrass and 20 lbs. per acre of Fescue with anchored straw.

**Mulching:** Apply 10 lbs. of 2 tons per acre (100/1000 #/ft.) of mulch immediately after seeding. Another 10 lbs. of mulch shall be applied with another 10 lbs. of mulch per acre 15 days after seeding. On slopes 8 ft or higher, use 200 gal per acre (40 gal/1000 sq. ft.) for anchoring.

**Maintenance:** Inspect all seeded areas and make needed repairs, treatments and amendments.

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



**CONSTRUCTION SPECIFICATIONS FOR ST-IV**

- Area under subbank shall be cleared, grubbed and stripped of any vegetation and rock mat. The pool area shall be cleared.
- The fill material for the subbank shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The subbank shall be compacted by vibrating 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 riprap 4"-8" along with a 1" thickness of 2" aggregate placed on the up-grade side on the small riprap embedded filter cloth in the riprap.
- Sediment shall be removed and trap returned to its original dimensions when the sediment has accumulated to 1/4 the drain depth of the trap.
- The structure shall be inspected after each rain and repair 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.

**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. (92C-24.7)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 HARBORLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 72 calendar days for all perimeter sediment control structures, ditches, perimeter slopes and all slopes greater than 5:1 in 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 Part 1, Chapter 10 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 HARBORLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (Sec. 52). Temporary seedings (Sec. 53) and mulching (Sec. 54). Temporary stabilization with mulch alone may only be done when recommended seeding rates 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: 1.44 Acres  
Area Disturbed: 1.44 Acres  
Area to be vegetatively stabilized: 1.44 Acres  
Total Cut: 1.44 Cu. Yds.  
Total Fill: 1.44 Cu. Yds.
- 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 controls must be provided, if deemed necessary by the Howard County SPM 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 approval may not be authorized until this initial approval by the inspection agency is made.

**CONSTRUCTION SEQUENCE**

- OBTAIN GRADING PERMIT
- NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS AND THE CONSTRUCTION INSPECTION SURVEYS DIVISION @ (301) 792-7272 AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- NOTIFY M&B UTILITY @ 555-0100 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- INSTALL TEMP SEDIMENT CONTROL MEASURES (8 C.C., 6, 7, 8, 9) 1 WEEK
- CLEAR AND ROUGH GRADE SITE. 1 WEEK
- INSTALL INLETS, STORM DRAINS AND BLOCK INLETS. 3 WEEKS
- BRING ROADS TO SUBGRADE. 4 DAYS
- PAVE ROAD. 4 DAYS
- CONSTRUCT BITUMINOUS CURB AND GUTTER. 2 DAYS
- FINE GRADE SITE AND VEGETATIVELY STABILIZE DISTURBED AREAS AS REQUIRED. 2 DAYS
- WITH APPROVAL OF HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS, REMOVE TEMP SEDIMENT CONTROL MEASURES AND STABILIZE REMAINING DISTURBED AREAS. 4 DAYS

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

*James McElroy* 6/17/88  
U.S. SOIL CONSERVATION SERVICE DATE

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

SOIL CONSERVATION DISTRICT DATE

**DEVELOPER'S CERTIFICATE**

I 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 DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*Dennis M. Ruda (operator)* 4/1/88  
DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*James E. Burt* 4/11/88  
ENGINEER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James E. Burt* 6/17/88  
Chief, Land Development Division Date

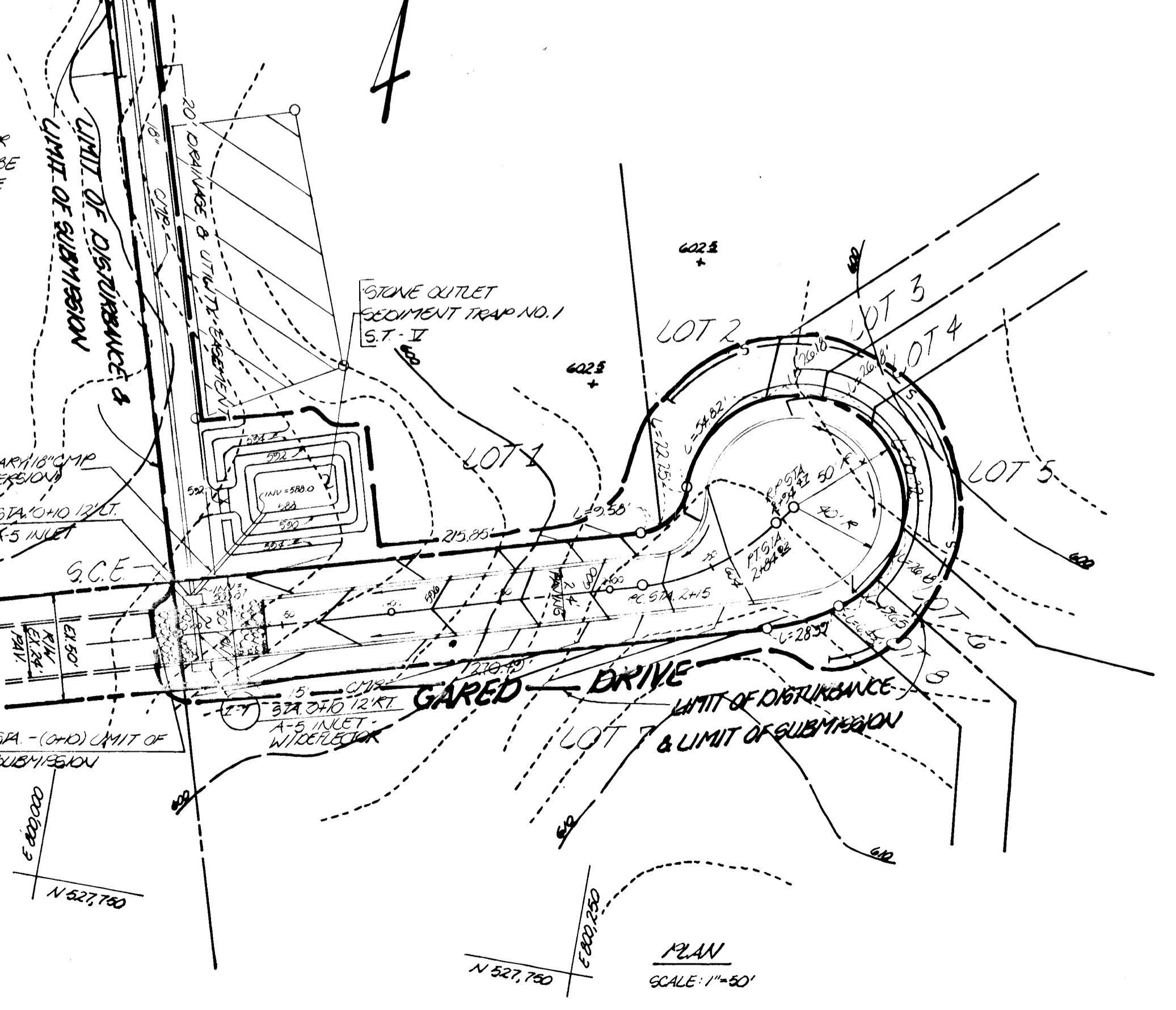
*James E. Burt* 6/17/88  
Chief, Bureau of Highways Date

*James E. Burt* 6/17/88  
Chief, Bureau of Engineering, acting Date

APPROVED: OFFICE OF PLANNING AND ZONING

*James E. Burt* 6/29/88  
Chief, Division of Community Planning Date  
And Land Development

NOTE: ALL MATERIAL EXCAVATED FOR STORM DRAIN PIPE SHALL BE STORED ON THE HIGH SIDE OF THE TRENCH.



NO.	DATE	LINE	TOP OF CURB	BOTTOM	D.A.	VOLUME	VOLUME
					(%)	(%)	
1	5/92	593	594	36x16	2670	497745	520272



TITLE: **STORM DRAIN PLAN**

PROJECT: **BYRD FARM**

LOCATION: 3 RD ELECTION DISTRICT HOWARD CO., MD

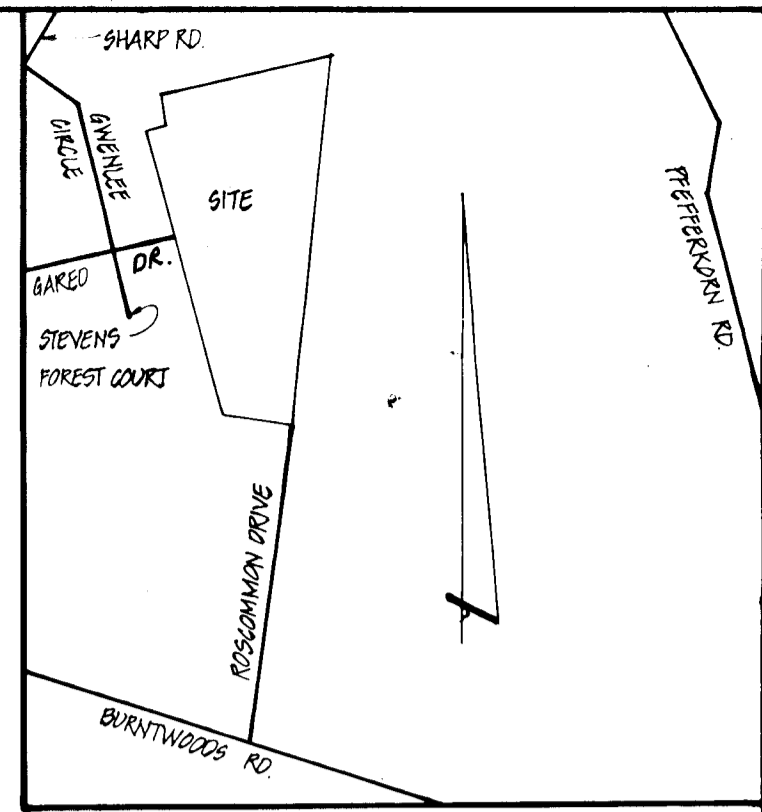
SCALE: AS SHOWN DESIGNED BY: L.E.B. DRAWN BY: J.C.O. CHECKED BY: L.E.B. DATE: MARCH 1988

FIELD BOOK: PAGE NO.: JOB NO.: DRAWING NO.:  
XG 86-118 8232 3 OF 3

**boender associates inc.**  
consulting engineers  
land surveyors  
land planners

COURTHOUSE SQUARE  
3565 ELLICOTT MILLS DRIVE  
ELLICOTT CITY, MD 21043  
1301-465-7177

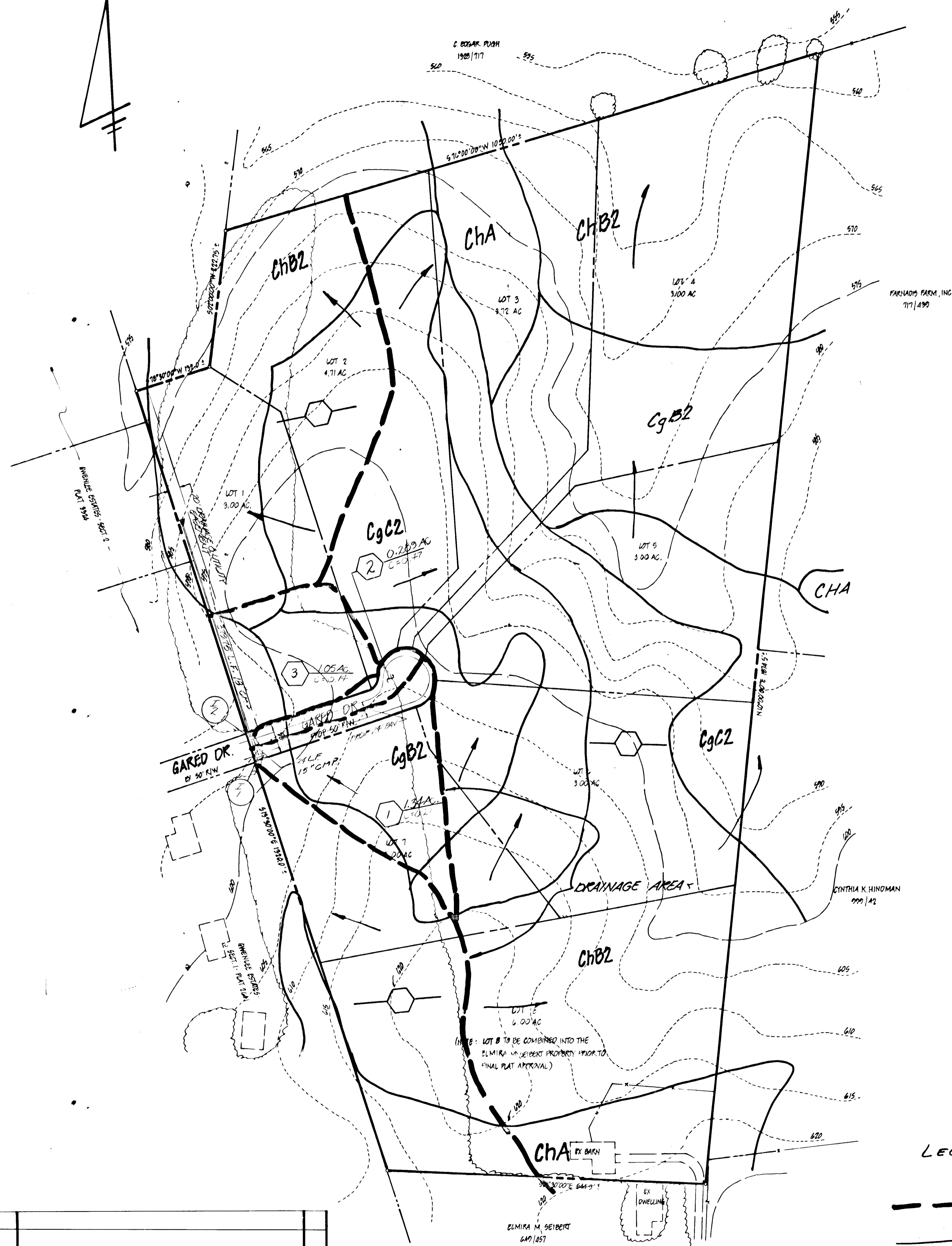
AS-BUILT 4-5-89



VICINITY MAP  
SCALE: 1" = 1000'

GENERAL NOTES

1. TAX MAP: 19, PARCEL: 19, BLOCK: 19
2. DEED REFERENCE: 190132
3. EXISTING ZONING: R
4. TOTAL AREA OF SITE:
5. TOTAL AREA OF LOTS:
6. TOTAL AREA OF ROAD DEDICATION: 0.49 AC
7. TOTAL NO. OF LOTS:
8. PRIVATE WATER AND PRIVATE SEWERAGE TO BE UTILIZED.
9. BOUNDARY SHOWN HEREON IS BASED ON A DEED PLATTING.
10. TOPOGRAPHY SHOWN HEREON IS BASED ON 1" = 200' AERIAL PHOTOGRAMMETRIC MAPS.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Ronald J. Soren* 6/17/88  
 Chief, Land Development Division Date  
*Granville W. Wescott* 6/27/88  
 Chief, Bureau of Highways Date  
*Whitcomb Anderson* 6/29/88  
 Chief, Bureau of Engineering Date

APPROVED: OFFICE OF PLANNING AND ZONING  
*Howard R. Smith* 6/29/88  
 Chief, Division of Community Planning Date  
 And Land Development

DATE	REVISION	BY

LEGEND:  
 - - - - - D.A.  
 \_\_\_\_\_ SOILS



OWNER & DEVELOPER  
 MURAT SEIBERT  
 9250 ROSSCOMMON DRIVE  
 BENEVA, MARYLAND 21137

TITLE: DRAINAGE & SOILS MAP		PROJECT: BYRD MANOR	
LOCATION: 3 RD	ELECTION DISTRICT: PARCEL 19	TAX MAP: 19	HOWARD CO., MD.
SCALE: 1" = 100'	DESIGNED BY: D.K.	DRAWN BY: D.P. 130	CHECKED BY: S.B.
FIELD BOOK:	PAGE NO.:	JOB NO.: 8592	DATE: MARCH 1988
DRAWING NO.: 2 OF 3		DRAWING NO.: 2 OF 3	

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 (301) 465-7777