

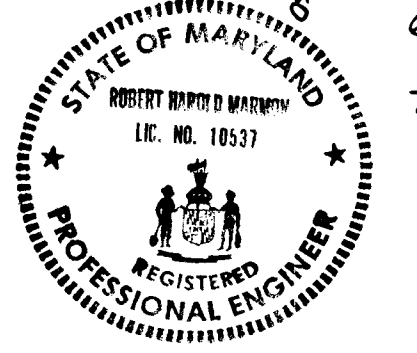
SEDIMENT CONTROL

by the Developer:
 *I/We certify that all development and construction will be done according to this plan, and that many 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.

Alvin R. Main 1-30-86
 Signature of Developer Date
 Print name below signature

By the Engineer:
 *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.

Robert H. Marmon 1-27-86
 Signature of Engineer Date
 Print name below signature
 Robert H. Marmon
 Reviewed for: **HOWARD S.C.D.**

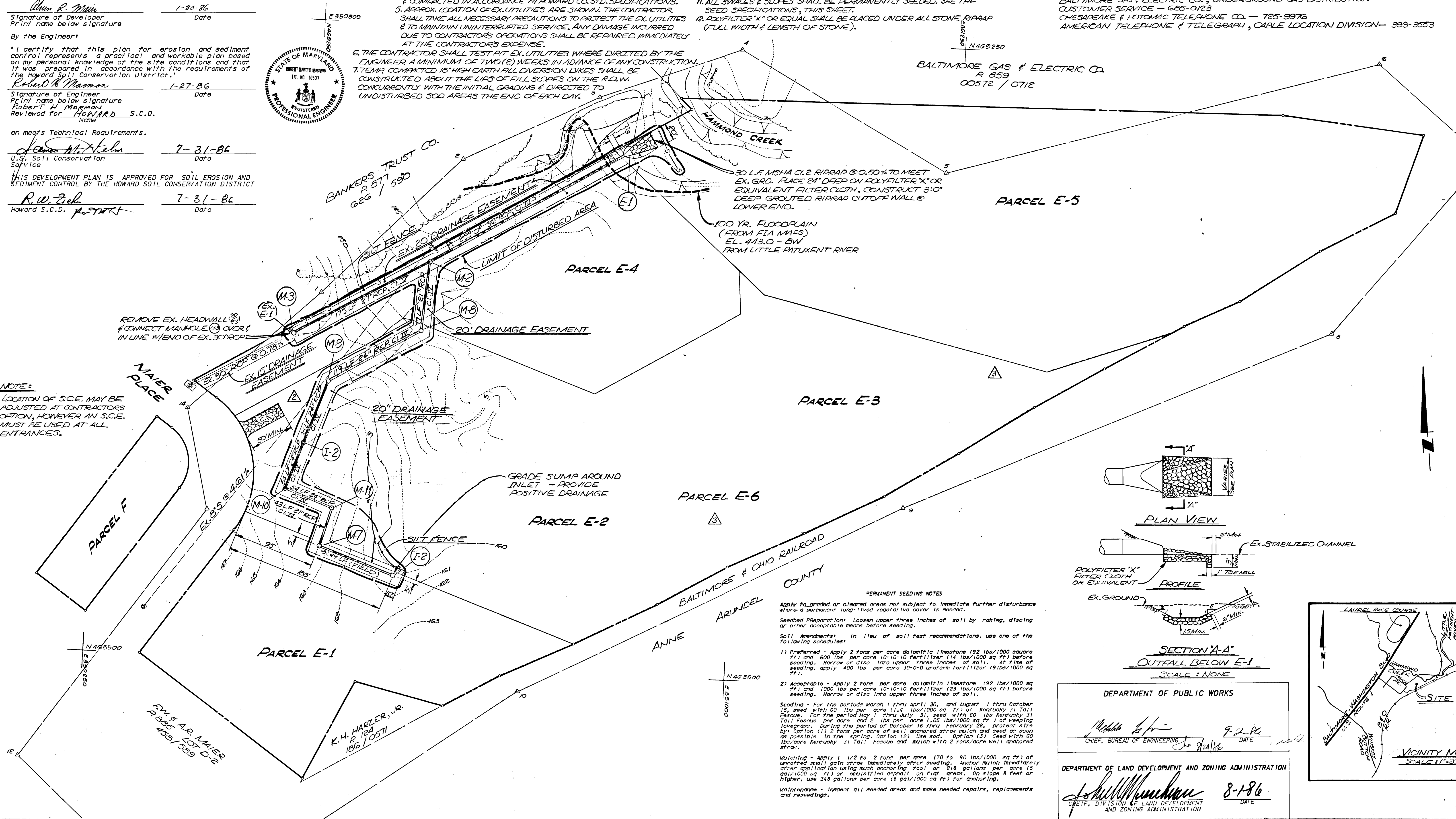


an meets Technical Requirements.
James M. Helm 7-31-86
 U.S. Soil Conservation Service Date

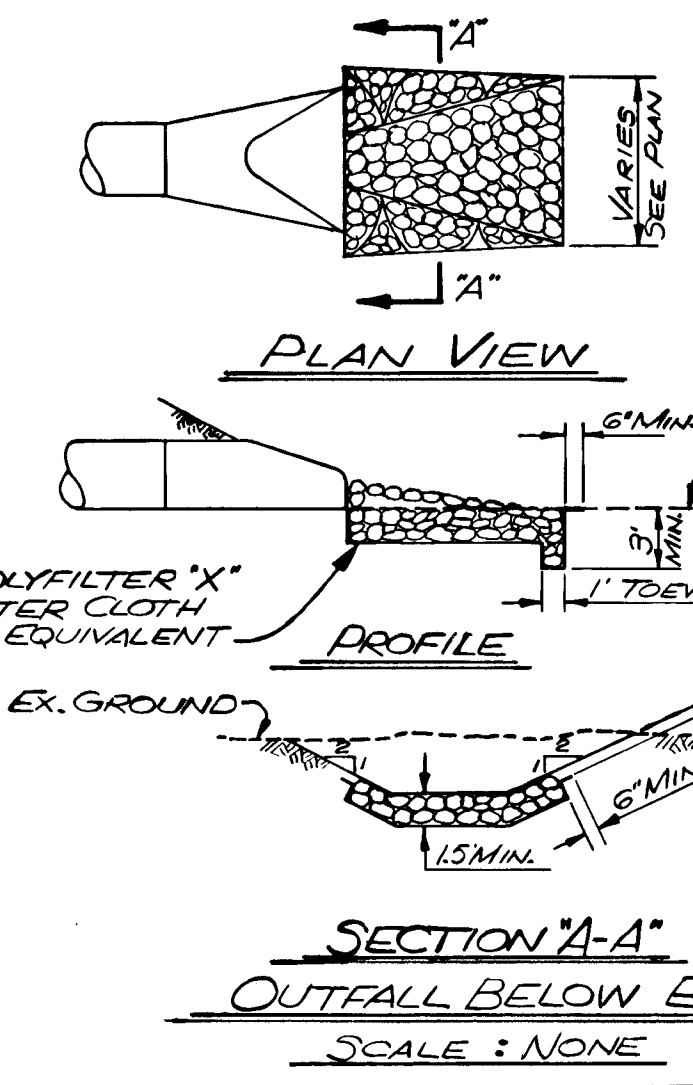
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
R.W. Zick 7-31-86
 Howard S.C.D. Date

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. II, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
2. ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HRS. IN ADVANCE OF CONSTRUCTION.
3. ALL INLETS SHALL BE HOWARD CO. STDS. UNLESS OTHERWISE SHOWN.
4. STORM DRAIN TRENCHES WITHIN RIGHTS-OF-WAY SHALL BE BACKFILLED & COMPACTED IN ACCORDANCE WITH HOWARD CO. STD. SPECIFICATIONS.
5. APPROX. LOCATION OF EX. UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EX. UTILITIES & TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL TEST PIT EX. UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CONSTRUCTION.
7. TEMP. COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOUT THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING & DIRECTED TO UNDISTURBED SOO AREAS THE END OF EACH DAY.
8. CONTRACTOR TO NOTIFY THE HOWARD CO. DEPT. OF INSPECTIONS & PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 992-2436.
9. ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
10. ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I.
11. ALL SWALES & SLOPES SHALL BE PERMANENTLY SEEDDED. SEE THE SEED SPECIFICATIONS, THIS SHEET.
12. POLYFILTER "X" OR EQUAL SHALL BE PLACED UNDER ALL STONE RIPRAP (FULL WIDTH & LENGTH OF STONE).
13. STONE FOR RIPRAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIPRAP SHALL BE UNPAVED, EXCEPT WHERE NOTED.
14. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO., UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE - 685-0123
 - BALTIMORE GAS & ELECTRIC CO., UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE - 685-0123
 - CHESAPEAKE & POTOMAC TELEPHONE CO. - 725-9976
 - AMERICAN TELEPHONE & TELEGRAPH, CABLE LOCATION DIVISION - 398-3553



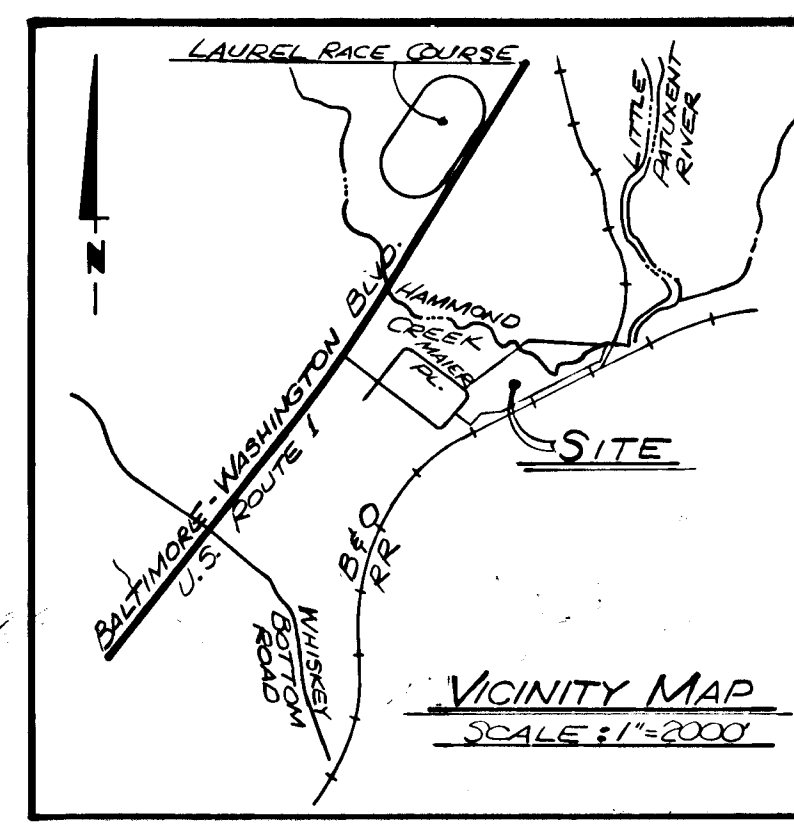
NOTE:
 LOCATION OF S.C.E. MAY BE ADJUSTED AT CONTRACTORS OPTION, HOWEVER AN S.C.E. MUST BE USED AT ALL ENTRANCES.



PERMANENT SEEDING NOTES
 Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
 Seeded 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 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 (91 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 2 1/2 gallons per acre (5 gal/1000 sq ft) or equivalent amount on flat areas. On slope 6 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.

DEPARTMENT OF PUBLIC WORKS
John J. Stalls 7-2-86
 CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John H. Murchison 8-1-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



OWNER / DEVELOPER:
ERNEST MAIER, INC.
 4700 ANNAPOLIS ROAD
 BLADENSBURG, MARYLAND 20710

No.	REVISION	DATE	BY
1	CHANGED STRUCTURES M5 & M8 TO INLETS	8-25-86	JDP
2	REVISED STORM DRAIN LOCATION AS PER SUP-B4-B1	9-25-89	GE O
3	REVISED PROP. LINES AS PER RESUBDIVISION PLAT	9-25-89	GE O



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
 (301) 948-0900
 ANNAPOLIS, MD • ATLANTA, GA • BECKLEY, WV • CULPEPER, VA • DENVER, CO • EXPORT, PA • FAIRFAX, VA
 GREENBELT, MD • GREENSBORO, NC • MONROE, MI • RALEIGH, NC • TAMPA, FL • WILLISTON PARK, NY

STORM DRAIN OUTFALL PLAN
MAIER INDUSTRIAL PARK
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

JSL DESIGN SCALE 1" = 50'
 JDP DRAWN 1 OF 3
 RHM CHECKED SHEET
 Jan., '86 DATE R-329-SD FILE No.

SEDIMENT CONTROL

by the Developer:

"I certify that all development and construction will be done according to this plan, and that many 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."

Alvin R. Main 1-30-86
Signature of Developer Date
Print name below signature

By the Engineer:

"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."

Robert H. Merman 1-27-86
Signature of Engineer Date
Print name below signature

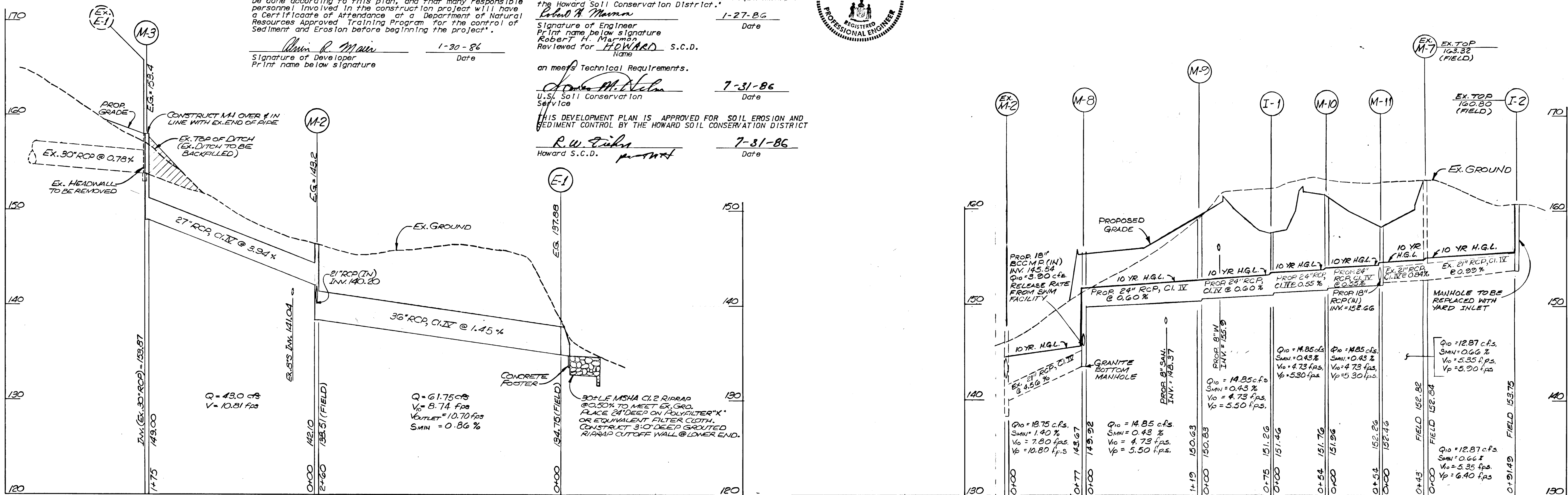
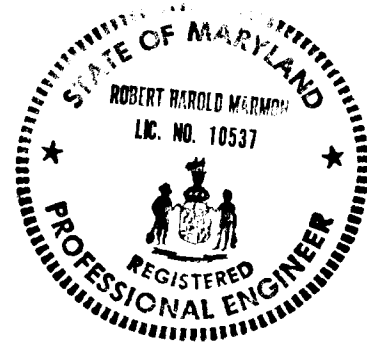
Reviewed for *HOWARD* S.C.D.
Name

on meet Technical Requirements.

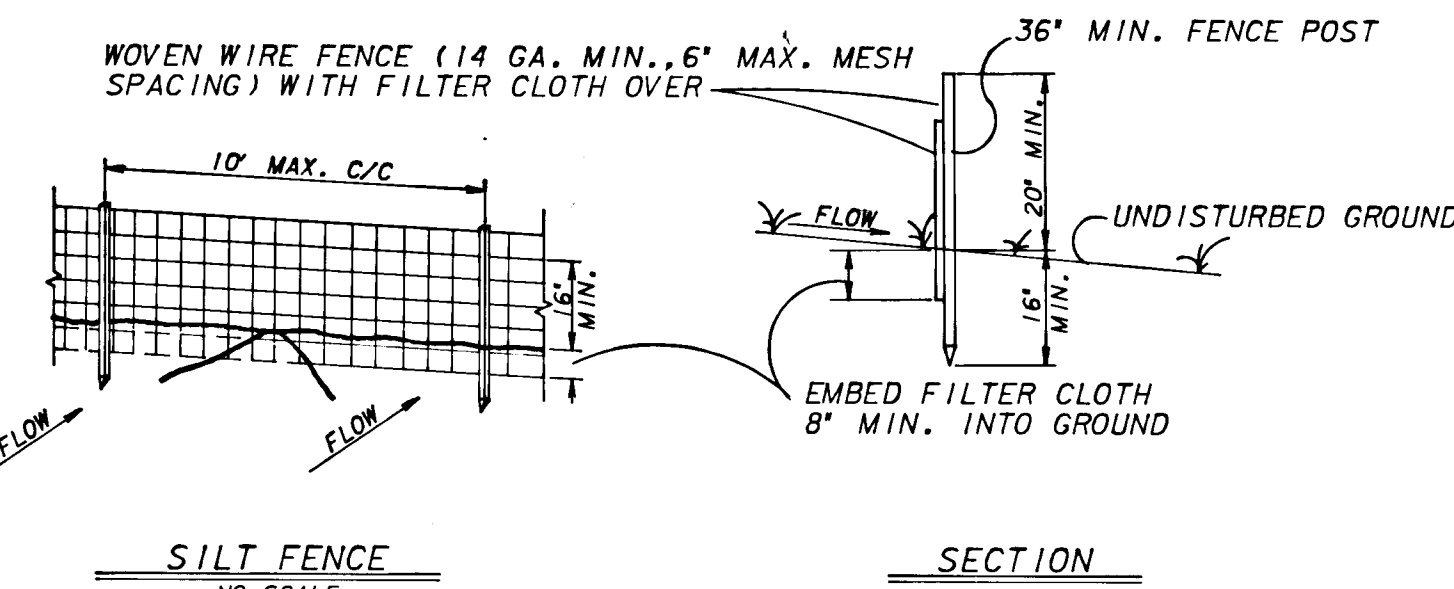
James M. Nelson 7-31-86
U.S. Soil Conservation Service Date

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

R.W. Fisher 7-31-86
Howard S.C.D. Date



No.	TYPE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
E-1	CONC. END SECTION	*134.75			HCDPW STD. SD 5.51
M-2	PRECAST SHALLOW MH	140.20 142.70	*138.51	146.30	HCDPW STD. G 5.13
M-3	PRECAST SHALLOW MH	153.87	149.00	152.10	HCDPW STD. G 5.13
M-7	PRECAST MH	*152.84	*152.82	*163.82	HCDPW STD. G 5.12
I-2	TYPE "S" INLET		153.75	*160.80	HCDPW STD SD 4.22



- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFIX100X, STABILINKA 114N OR APPROVED EQUAL
FABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

- 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	9.0	Acres
Area Disturbed	0.85	Acres
Area to be roofed or paved	0	Acres
Area to be vegetatively stabilized	0.85	Acres
Total Cut	0	Cu.yds.
Total Fill	0	Cu.yds.
Offsite waste/borrow area location		

0 SEE PLAN VIEW, SHIT. 1 OF 2, FOR STRUCTURE LOCATION & TIES.
2 ALL STORM DRAIN PIPE BEDDING TO BE CLASS "C" SHAPED SUBGRADE UNLESS OTHERWISE NOTED. IF ROCK IS ENCOUNTERED, THE TRENCH INVERT SHOULD BE OVEREXCAVATED 6" AND 6" REFILLED WITH GRANULAR MATERIAL.
* ELEVATIONS AND LENGTH WERE FIELD LOCATED.
** PROVIDE SILT TRAPPING, SEE DETAIL ON SHEET 3 OF 3.

SIZE	TYPE	LENGTH
21"	RCP, CI, II	212 L.F.
27"	RCP, CI, II	175 L.F.
36"	RCP, CI, II	260 L.F.
24"	RCP, CI, II	302 L.F.

No.	TYPE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
M-8	BRICK MH	148.23	143.67	155.42	HCDPW STD. G 5.01
M-9	BRICK MH	150.88	150.63	159.50	HCDPW STD. G 5.01
I-1	TYPE K INLET	151.46	151.26	157.50	HCDPW STD. SD 4.12
M-10	BRICK MH	151.96	151.76	161.04	HCDPW STD. G 5.01
M-11	BRICK MH	153.26	152.26	157.69	HCDPW STD. G 5.01

- CONSTRUCTION SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE
- Stone Size - Use 2" stone, or reclaimed 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 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 inspection and needed maintenance shall be provided after each rain.

- 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 redisturbance, 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. I, 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 solid (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.

DEPARTMENT OF PUBLIC WORKS

Michael L. ... 9-2-86
CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

Robert H. Merman 8-1-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

No.	REVISION	DATE	BY
1	CHANGED STRUCTURES M-5, M-8 TO INLETS	8-25-86	JDP
2	REVISED STORM DRAIN PROFILES AS PER SDR 81-81	9-25-87	GFO
3	REVISED PIPE AND STRUCTURE SCHEDULES	9-25-87	GFO

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

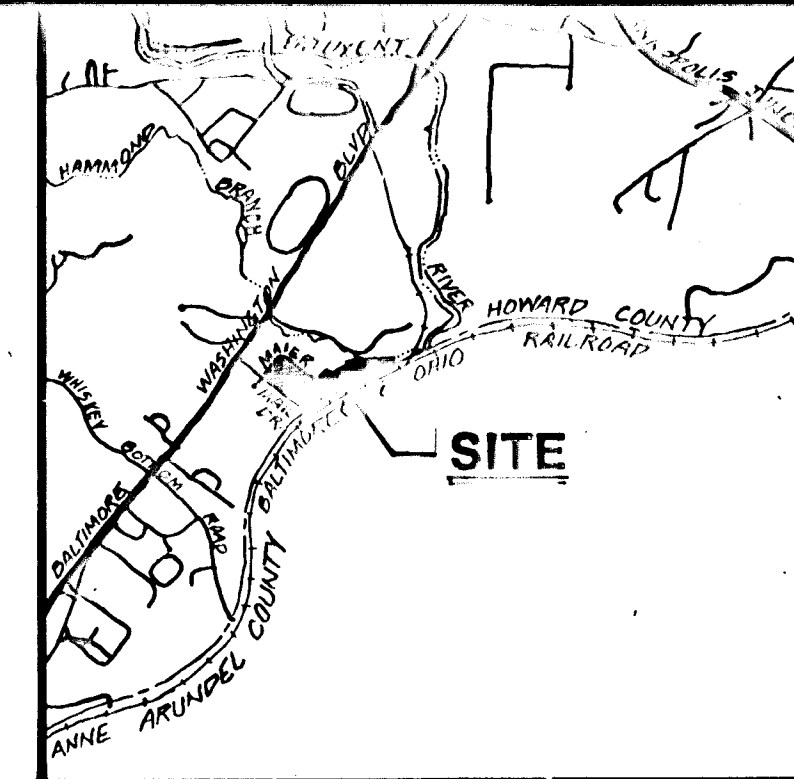
GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900

ANNAPOLIS, MD • ATLANTA, GA • BECKLEY, WV • CULPEPER, VA • DENVER, CO • EXPORT, PA • FAIRFAX, VA
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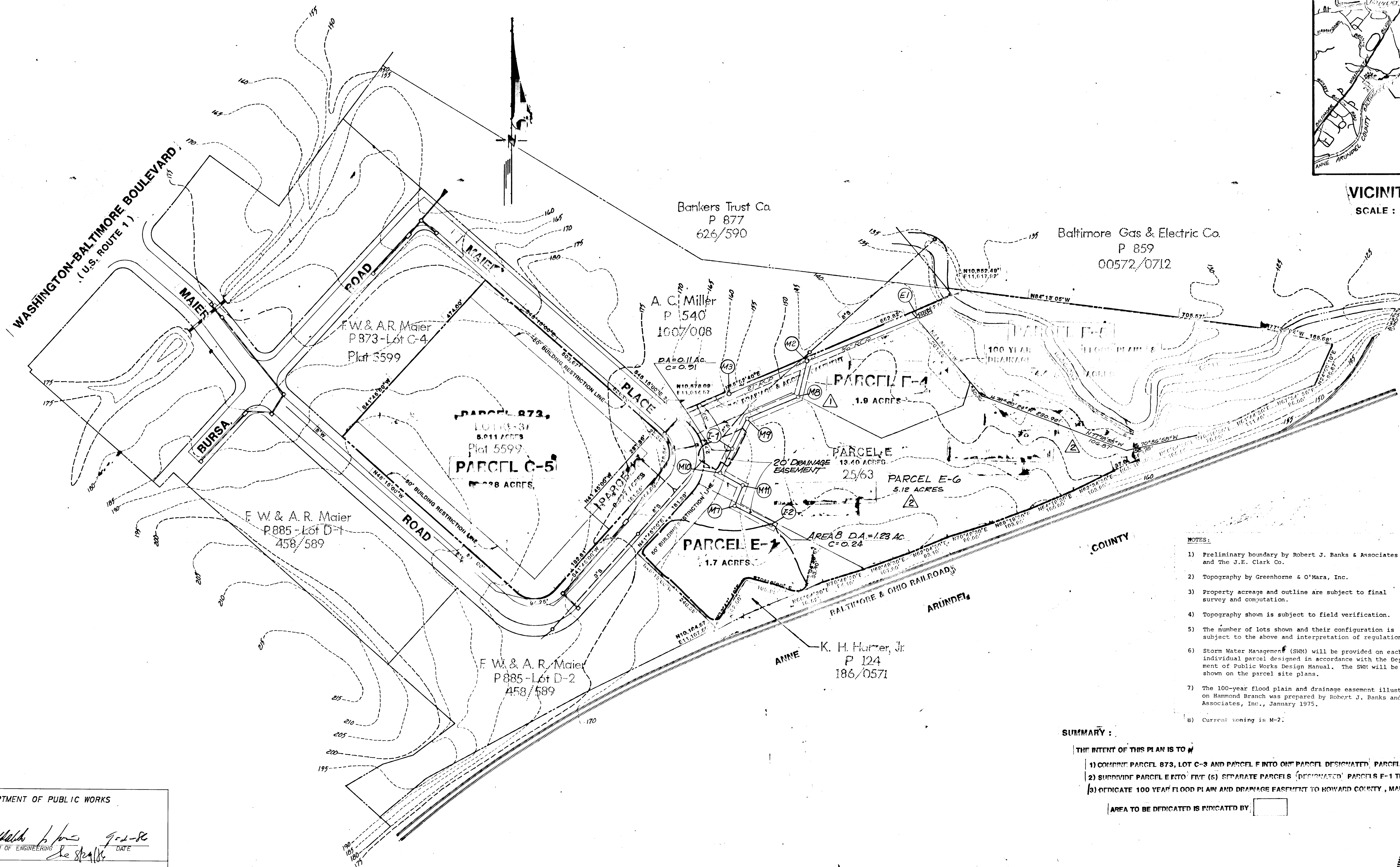
STORM DRAIN OUTFALL PLAN
MAIER INDUSTRIAL PARK
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

JSL DESIGN HORIZ. 1"=50'
SCALE VERT. 1"=5'

JDP DRAWN 2 OF 3
RHM CHECKED SHEET
JAN. '86 DATE R-329-SD JOB No. FILE No.



VICINITY MAP
SCALE: 1" = 2000'



- NOTES:
- 1) Preliminary boundary by Robert J. Banks & Associates and The J.E. Clark Co.
 - 2) Topography by Greenhorne & O'Mara, Inc.
 - 3) Property acreage and outline are subject to final survey and computation.
 - 4) Topography shown is subject to field verification.
 - 5) The number of lots shown and their configuration is subject to the above and interpretation of regulations.
 - 6) Storm Water Management (SWM) will be provided on each individual parcel designed in accordance with the Department of Public Works Design Manual. The SWM will be shown on the parcel site plans.
 - 7) The 100-year flood plain and drainage easement illustrated on Hammond Branch was prepared by Robert J. Banks and Associates, Inc., January 1975.
 - 8) Current zoning is M-2.

SUMMARY :

THE INTENT OF THIS PLAN IS TO :

- 1) COMBINE PARCEL 873, LOT C-3 AND PARCEL E INTO ONE PARCEL DESIGNATED PARCEL C-5.
- 2) SUBDIVIDE PARCEL E INTO FIVE (5) SEPARATE PARCELS (DESIGNATED PARCELS E-1 THRU E-5).
- 3) DEDICATE 100 YEAR FLOOD PLAIN AND DRAINAGE EASEMENT TO HOWARD COUNTY, MARYLAND (PARCEL E-5)

AREA TO BE DEDICATED IS INDICATED BY:

DEPARTMENT OF PUBLIC WORKS
Michael H. Jones 9-2-86
 CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. ... 8-1-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

No.	REVISION	DATE	BY
1	REVISED STORM DRAIN LOCATION AS PER SDP-89-81	9-25-89	GJO
2	REVISED PROP LINES AS PER RESUBDIVISION PLAT	9-25-89	GJO

GREENHORNE & O'MARA, INC.
 ENGINEERS • ARCHITECTS • PLANNERS • SURVEYORS
 2 RESEARCH PLACE
 ROCKVILLE, MD. 20850
 (301) 948-0900
 GREENHORN, INC. • ANNAPOLIS, MD. • FARMAX, VA. • NO. HERRINGTON, PA.

DRAINAGE AREA MAP
MAIER INDUSTRIAL PARK
 SIXTH ELECTION DISTRICT
 (HOWARD COUNTY, MARYLAND)

JSL DESIGN	SCALE 1" = 100'
JOP DRAWN	3 OF 3
RHM CHECKED	SHEET
JAN, 86	R-529-30
DATE	JOB No. FILE No.

F-86-104