

SHEET INDEX	
1	COVER SHEET
2	ROAD PLAN & PROFILE & DETAILS
3	STORM DRAIN PROFILES & DETAILS
4	SEDIMENT CONTROL PLAN
5	SEDIMENT CONTROL DETAILS

COLUMBIA GATEWAY

6TH ELECTION DISTRICT

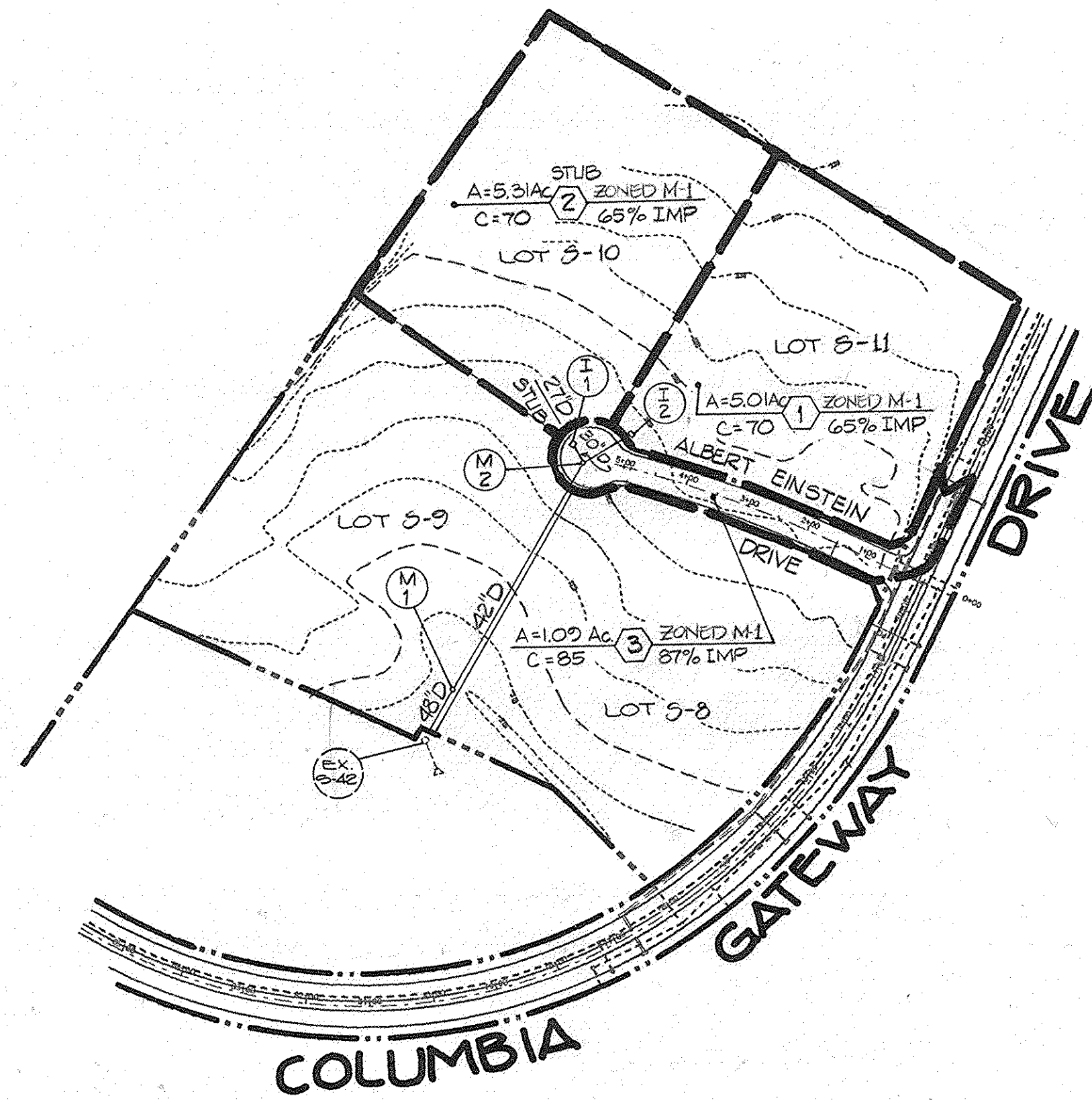
HOWARD COUNTY, MARYLAND

GENERAL NOTES

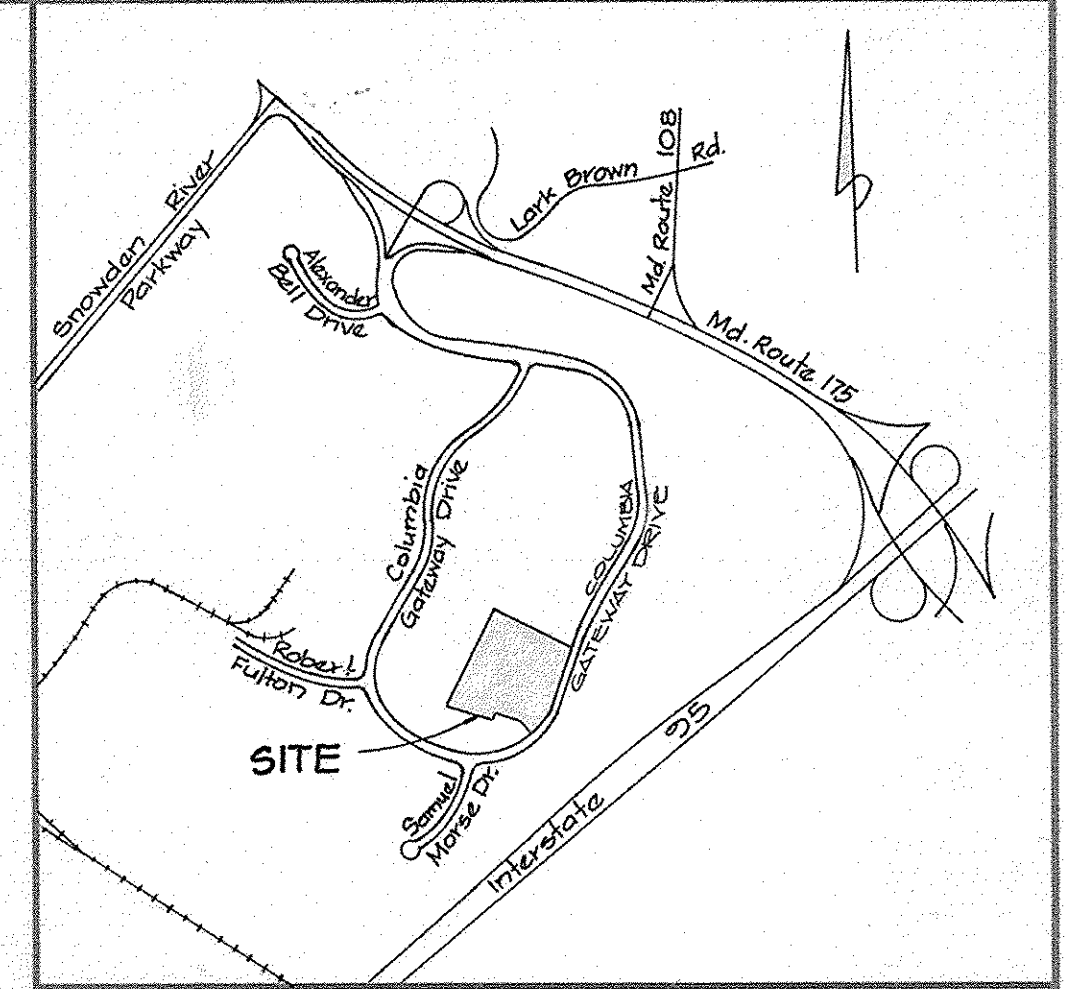
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1988 AMENDMENTS
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS 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 EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	752-9976
HOWARD COUNTY BUREAU OF UTILITIES	982-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS AND ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION/SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272
- TOPOGRAPHY TAKEN FROM AERIAL SURVEY COMPILED BY "MAPS, INC." WITH SUBSEQUENT REVISIONS ACCORDING TO FIELD RUN TOPO & AS-BUILT DRAWINGS.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- THIS PLAN AND THE COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND STATE PLAN COORDINATE SYSTEM. REFERENCE HOWARD COUNTY CONTROL POINTS 2243002, 2243003, 2344002.
- STORM DRAIN STRUCTURES TO BE IN ACCORDANCE WITH HOWARD COUNTY STD. SPEC. & DETAILS, AND MD. S.H.A., ALL STORM DRAIN PIPE TO BE RCCP OR C.M.P.
- TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT OF WAY LIMITS SHALL BE IN ACCORDANCE WITH THE 1982 HOWARD COUNTY ROAD CODE.
- MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES IN ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
- ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 1988 EDITION.
- PROVIDE CONCRETE SIDEWALK RAMPS IN CURBS, WHERE SHOWN IN PLAN (MAX. 12:1 SLOPE; SEE HOWARD COUNTY STD. DETAILS, R-4.0.1.)
- STREET LIGHTS SHALL BE 250 WATT HIGH PRESSURE SODIUM LAMP POST W/ PENDANT TOP FIXTURES ON 30-FOOT BRONZE FIBERGLASS POLES.
- STREET TREES WILL BE PROVIDED IN ACCORDANCE WITH SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- STORMWATER MANAGEMENT REQUIREMENT FOR THIS SUBDIVISION HAS BEEN PROVIDED IN ACCORDANCE WITH CP-87-83 (GP-87-36).
- STD. CURB & GUTTER SHALL BE USED THROUGHOUT THIS SUBDIVISION EXCEPT AS SHOWN ON THE PLANS.
- NON-TIDAL WETLANDS EXISTED ON THIS SITE. FILLING OF THE WETLANDS ON THIS LOT WAS AUTHORIZED BY THE FOLLOWING PERMITS:

U.S. ARMY CORP OF ENGINEERS - CEHAB-OP-RV-1010-3
 MD DEPT OF ENVIRONMENT - SDWD-0481
 WETLAND FILL OPERATIONS HAVE BEEN COMPLETED



DRAINAGE AREA MAP
SCALE 1"=200'



VICINITY MAP
SCALE: 1" = 2000'

HORIZONTAL & VERTICAL CONTROL
 BASED ON HOWARD COUNTY TRAVERSE POINTS # 2243002, 2243003 & 2344002

ROAD AS-BUILT INFORMATION DESIGNATED AS **AS-BUILT**
ROAD AS-BUILT

G. SCOTT SHANBERGER
 PROFESSIONAL LAND SURVEYOR # 10849 DATE

SHANBERGER & LANE
 8725 TOWN & COUNTRY BLVD.
 SUITE 107
 ELLICOTT CITY, MARYLAND 21043

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>John M. Terzaghi</i>	7/23/90
CHIEF, LAND DEVELOPMENT DIVISION MK	DATE
<i>Priscilla W. Weiland</i>	7/18/90
CHIEF, BUREAU OF HIGHWAYS	DATE
<i>William E. Rubin</i>	7-30-90
CHIEF, BUREAU OF ENGINEERING	DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Mark J. Langley</i>	8/20/90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE
	J.B.

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

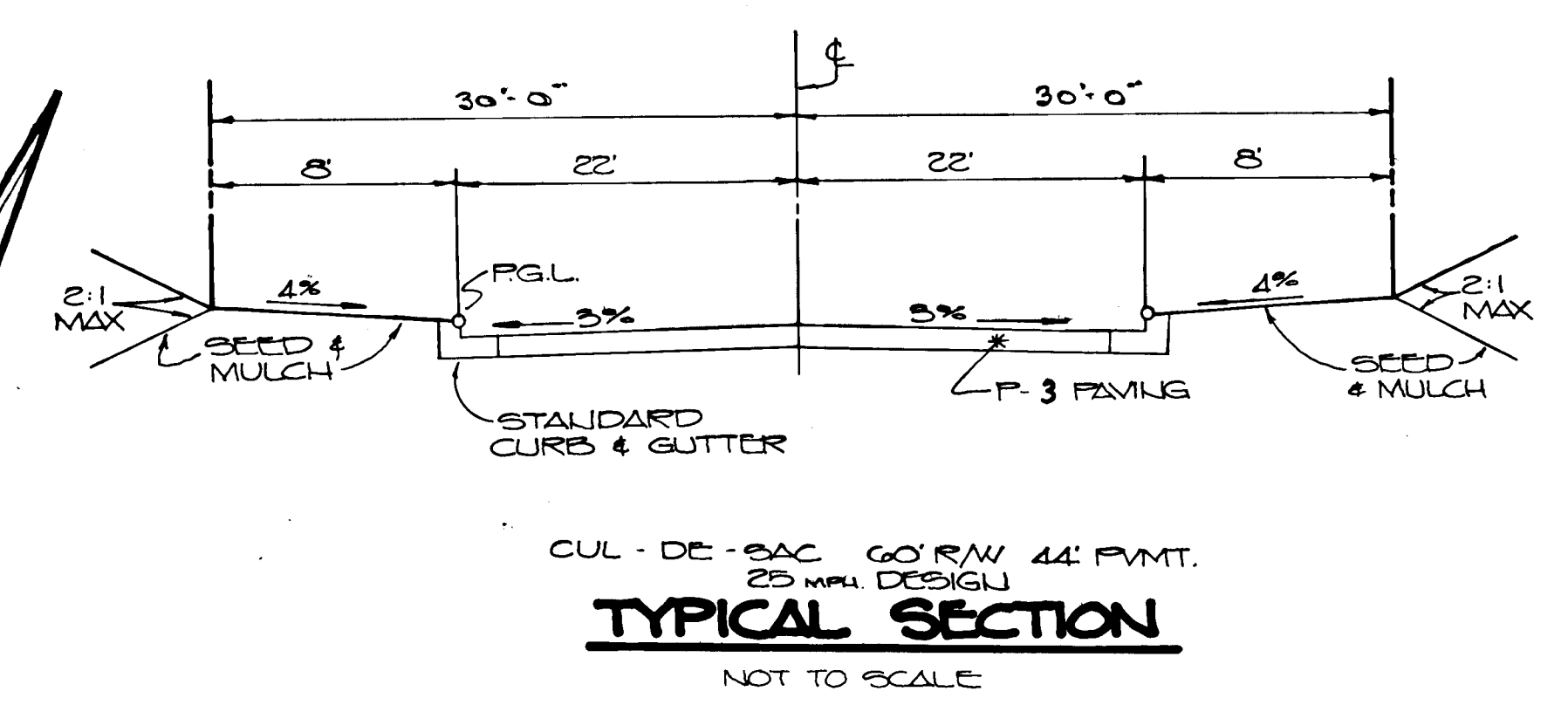
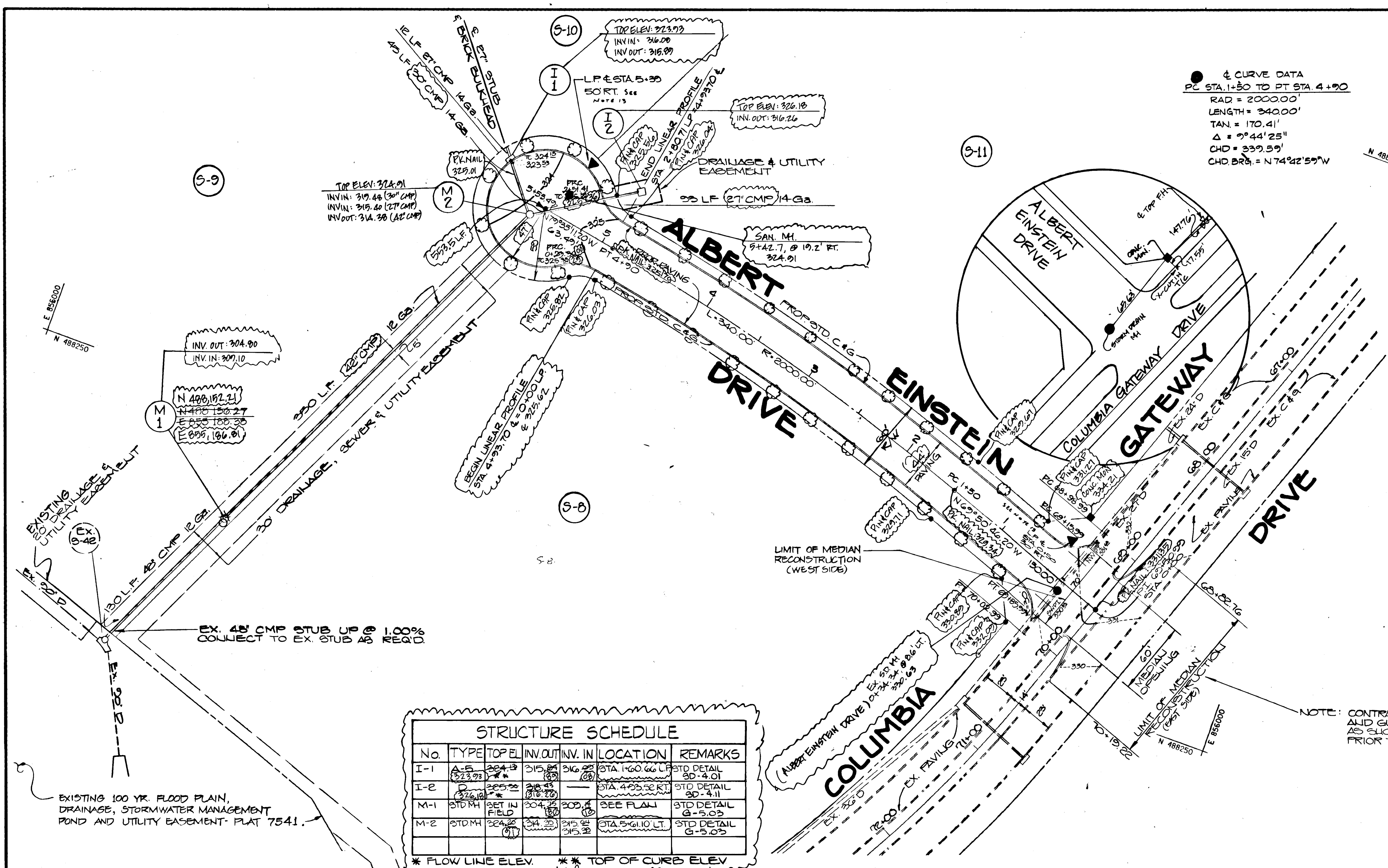
DESIGNED J.J.D.	COLUMBIA GATEWAY PARCELS 5-8 THRU 5-11 A RESUBDIVISION OF PARCELS 5-6 COVER SHEET, VICINITY MAP DRAINAGE AREA MAP, GENERAL NOTES 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN DRAWING OF 5
DRAWN M.D.D.		JOB NO. 01
CHECKED D.N.M.		89295
DATE 2.9.90		FILE NO.

OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

AS-BUILT
 1/27/91

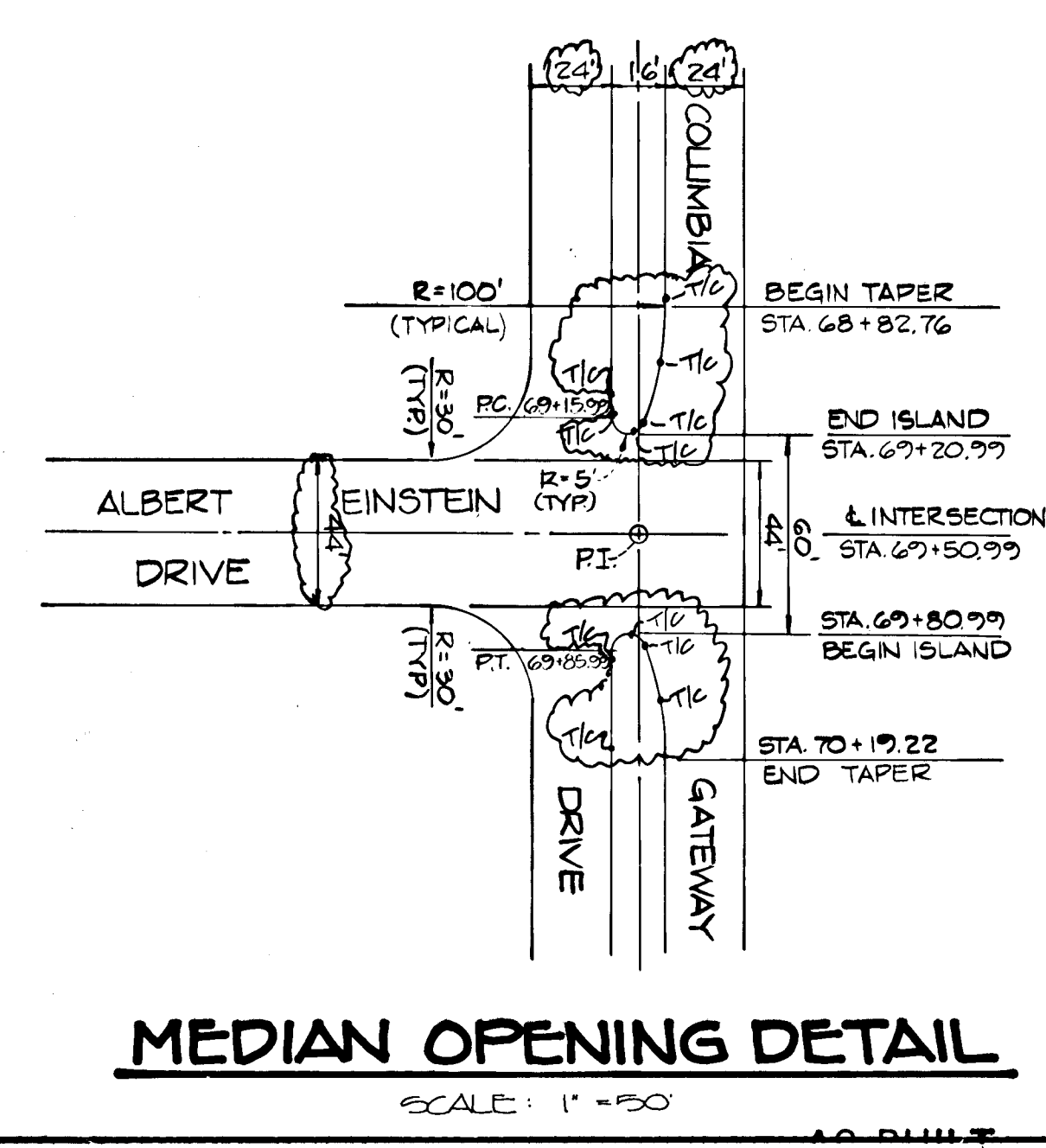
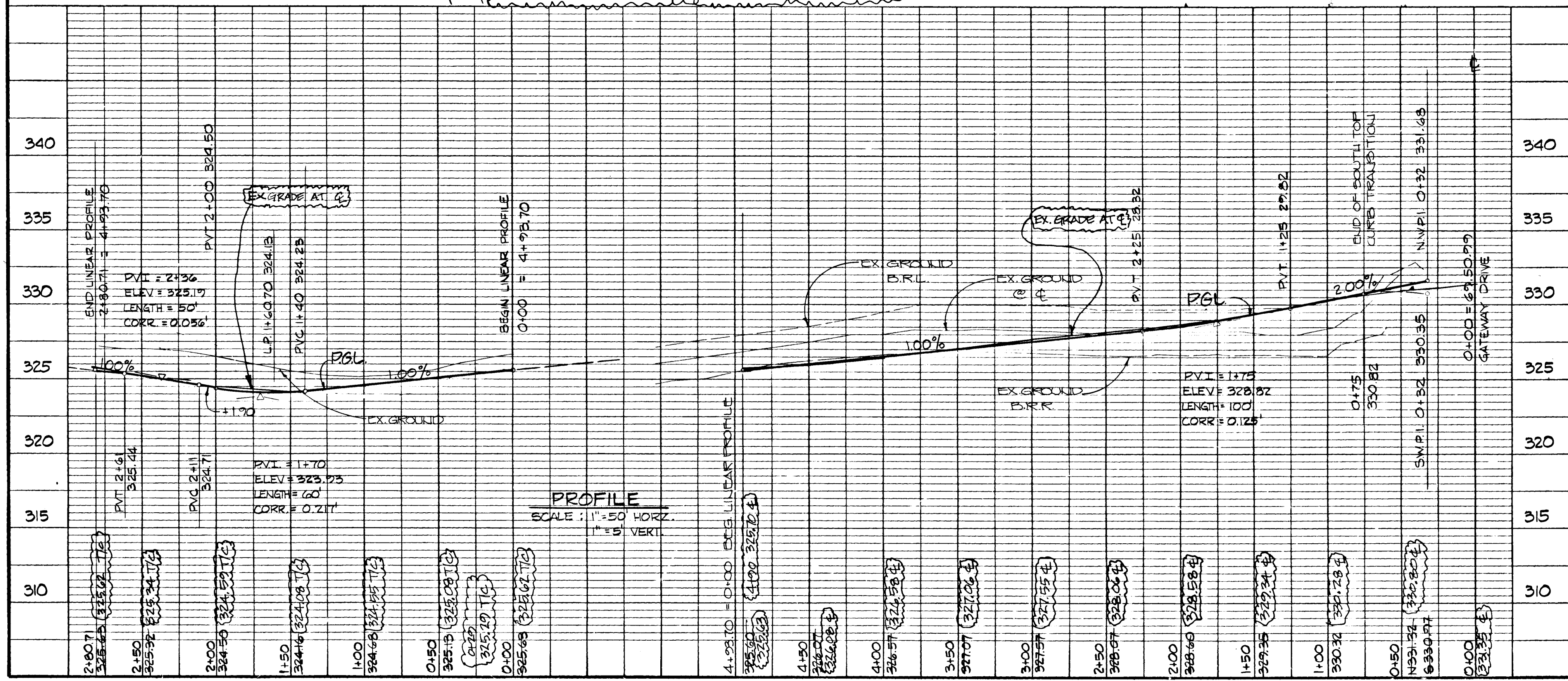
F-90-138

1158



No.	TYPE	TOP EL.	INV. OUT.	INV. IN.	LOCATION	REMARKS
I-1	A-S	324.3	315.84	316.22	STA 1+60.66 LF	STD DETAIL 30-4.01
I-2	D	325.22	324.48	324.41	STA 4+25.32 RT	STD DETAIL 30-4.11
M-1	STD MH	327.20	320.4	320.4	SEE PLAN	STD DETAIL G-5.03
M-2	STD MH	324.2	315.2	315.2	STA 5+10.17 LT	STD DETAIL G-5.03

* FLOW LINE ELEV. ** TOP OF CURB ELEV.



SHANABERGER & LANE
 8726 TOWN & COUNTRY BLVD.
 SUITE 107
 ELLICOTT CITY, MARYLAND 21043

ROAD AS-BUILT INFORMATION IS DESIGNATED AS **THIS**.
ROAD AS-BUILT
 BY SCOTT SHANABERGER
 PROFESSIONAL LAND SURVEYOR #10849

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Duggan 7/23/90
 CHIEF, LAND DEVELOPMENT DIVISION MK DATE

Granville W. Wehland 7/18/90
 CHIEF, BUREAU OF HIGHWAYS DATE

James E. Rely 7-30-90
 CHIEF, BUREAU OF ENGINEERING DATE

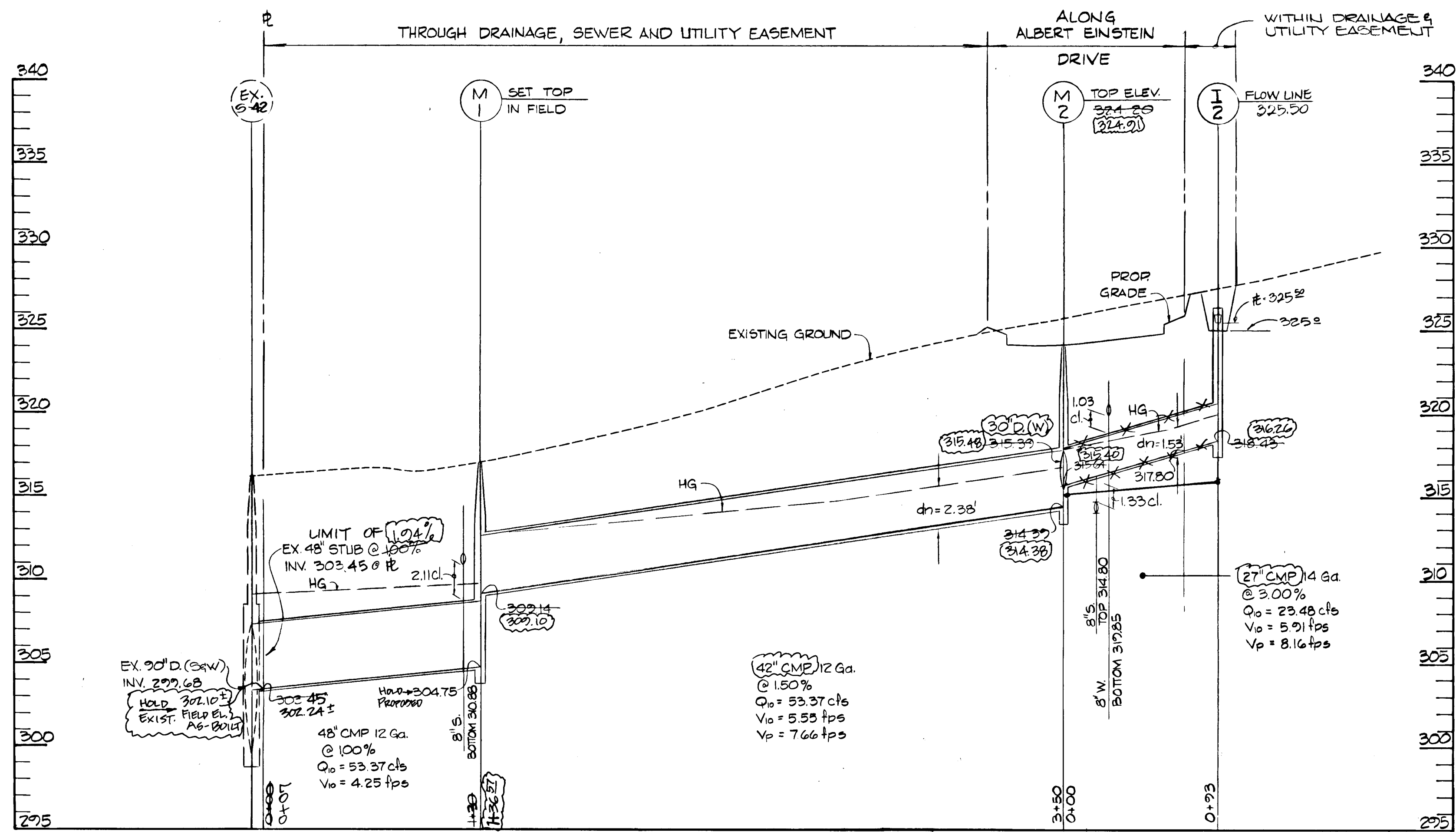
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Mark C. Dwyer 7/25/90
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

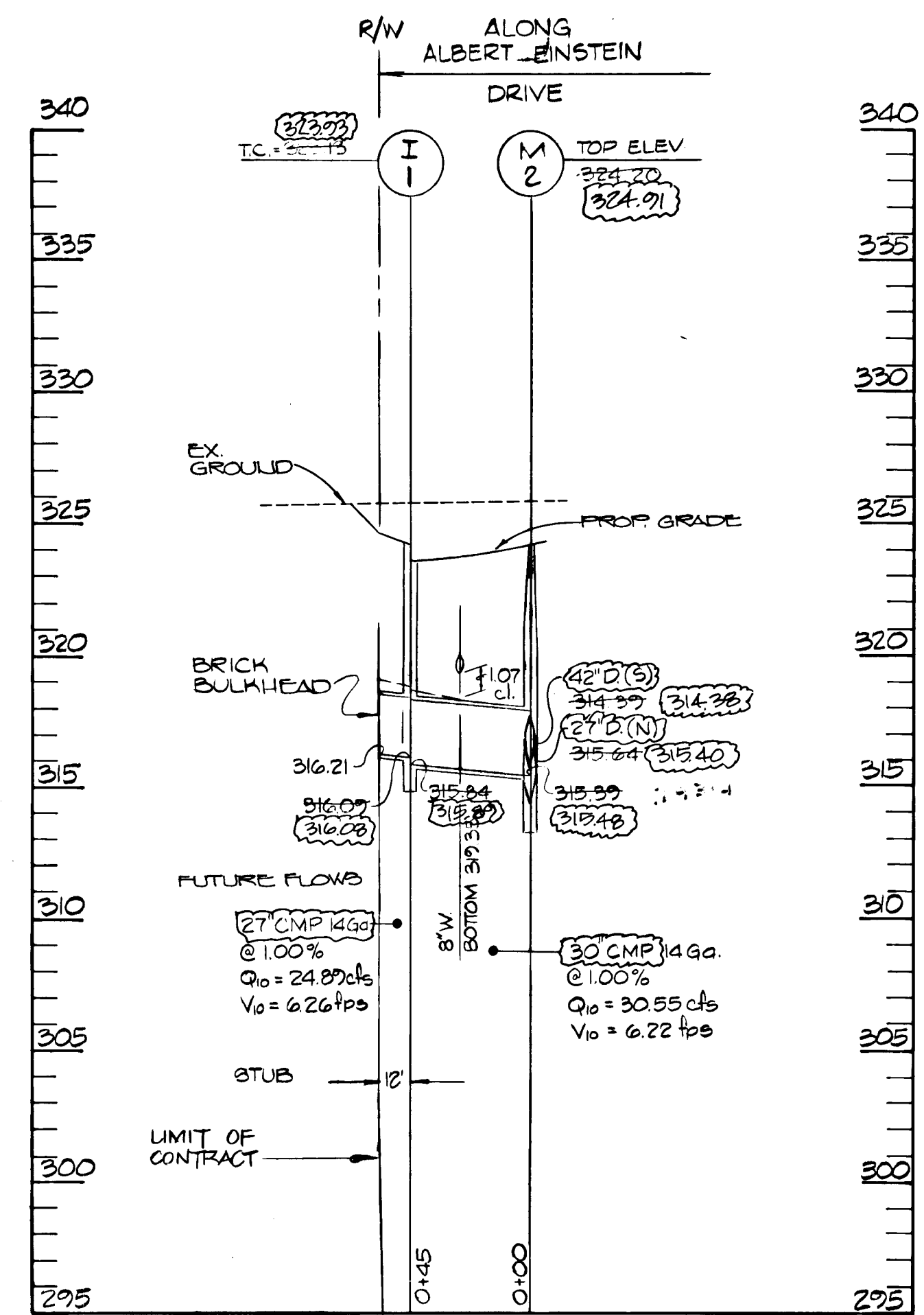
COLUMBIA GATEWAY PARCELS 5-8 THRU 5-11
 A RESUBDIVISION OF PARCELS 5-6
ROAD PLAN & PROFILE, DETAILS

OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

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



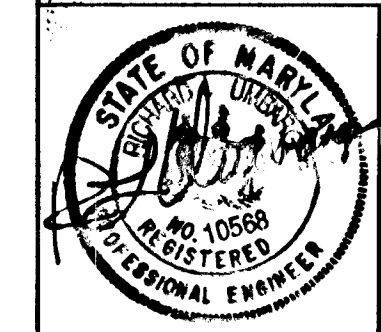
PROFILE
SCALE: 1" = 5' VERT.
1" = 50' HORIZ.

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 107
ELIJAH CITY, MARYLAND 21043

ROAD AS-BUILT INFORMATION DESIGNATED AS THIS
ROAD AS-BUILT

BY SCOTT SHANABERGER
PROFESSIONAL LAND SURVEYOR # 10049

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Langston 7/23/90
CHIEF, LAND DEVELOPMENT DIVISION MK DATE
Francis W. Wollard 7/18/90
CHIEF, BUREAU OF HIGHWAYS DATE
James E. R. R. R. 7-30-90
CHIEF, BUREAU OF ENGINEERING DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Richard L. Taylor 7/24/90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE 26.

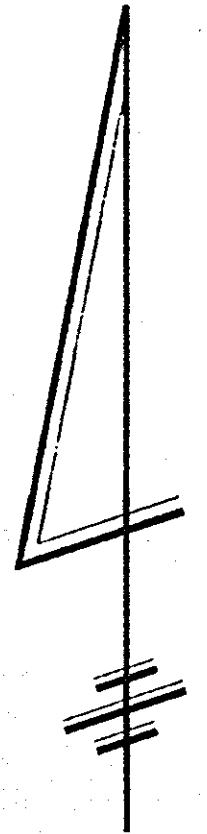


KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED J.J.D.
DRAWN M.D.D.
CHECKED D.L.M.
DATE 2/2/90
COLUMBIA GATEWAY PARCELS 5-8 THRU 5-11
A RESUBDIVISION OF PARCELS 5-C
STORM DRAIN PROFILES & DETAILS
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

1/58

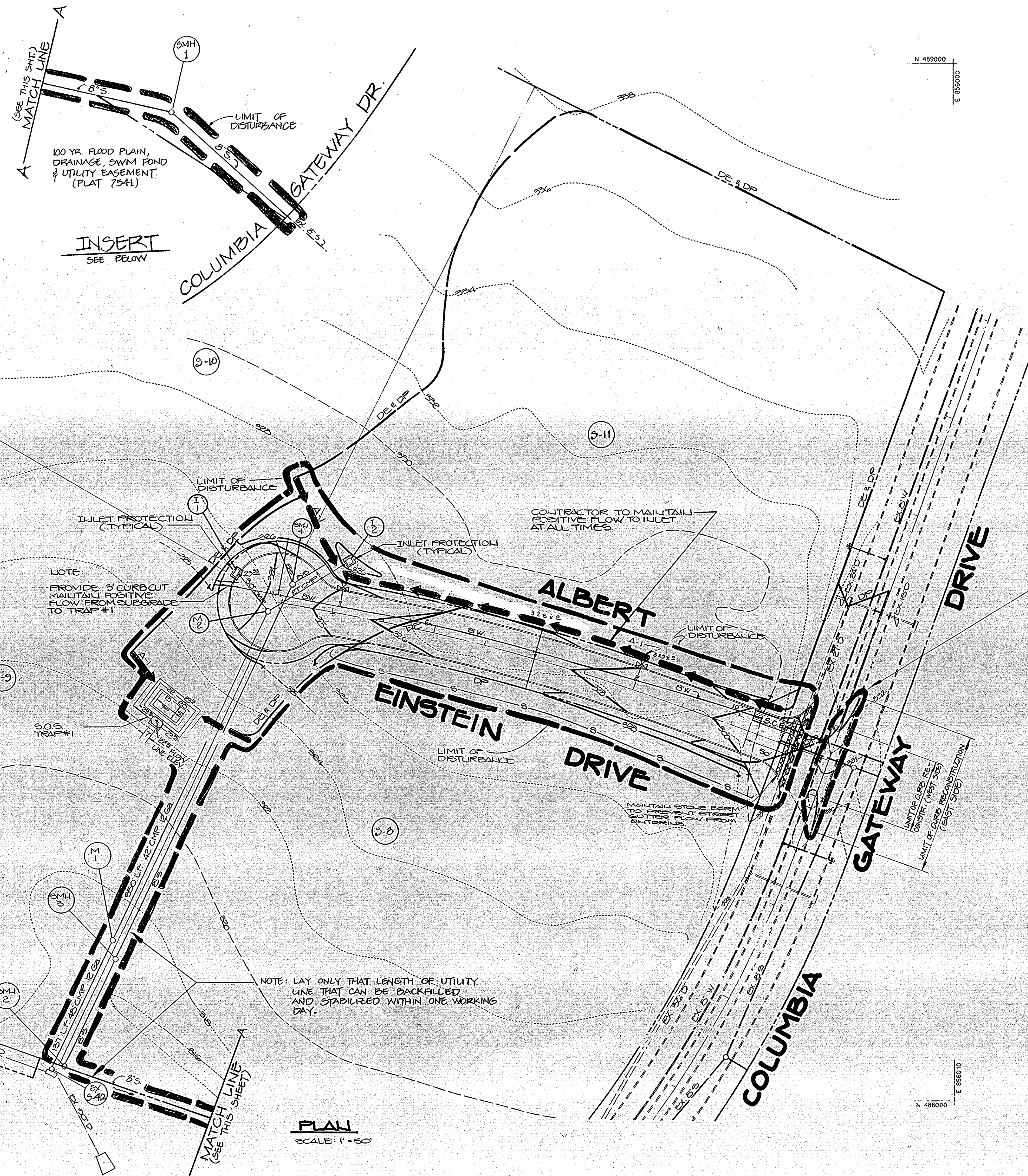


N 483000
E 855000

N 489000
E 856000

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E 855000

N 488000
E 856000



INSERT
SEE BELOW

NOTE:
PROVIDE 3' CURB CUT
MAINTAIN POSITIVE
FLOW FROM SUBGRADE
TO TRAP #1

NOTE: LAY ONLY THAT LENGTH OF UTILITY
LINE THAT CAN BE BACKFILLED
AND STABILIZED WITHIN ONE WORKING
DAY.

PLAN
SCALE: 1" = 50'

OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND/OR OTHER AUTHORIZED AGENTS.

DEVELOPER: Albert F. Edwards DATE: 2-20-90

ALBERT F. EDWARDS
THE HOWARD RESEARCH & DEVELOPMENT CORP
10275 LITTLE PATUXENT PARKWAY, COLUMBIA, MD 21044
PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: Richard L. Umberger MD. LICENSE NO. 10568

NAME: RICHARD L. UMBERGER DATE: 2/20/90

NOTE:
MEDIAN CURBS AND PAVING RECONSTRUCTION SHALL BE ACCOMPLISHED IN AN EXPEDIENT MANNER. MEDIAN EARTHWORK AND BASE COURSE PLACEMENT SHALL BE ACCOMPLISHED IN ONE WORKING DAY. DISTURBED AREA BEHIND PROPOSED FACE OF CURB SHALL BE STABILIZED WITH SEED & STRAW MULCH IMMEDIATELY FOLLOWING DISTURBANCE.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

SIGNATURE: James M. Miller (S.S.) DATE: 7/13/90

U.S. SOIL CONSERVATION SERVICE

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

SIGNATURE: Clifford W. Abing DATE: 7/13/90

HOWARD S.C.D.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

SIGNATURE: Alan M. Dungan DATE: 7/23/90

CHIEF, LAND DEVELOPMENT DIVISION M1K

SIGNATURE: Frederick W. Ueland DATE: 7/18/90

CHIEF, BUREAU OF HIGHWAYS

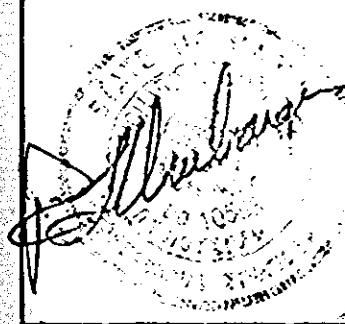
SIGNATURE: William S. Reddy DATE: 7-30-90

CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPT OF PLANNING AND ZONING

SIGNATURE: Paul J. Langley DATE: 8/2/90

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED J.J.D.	COLUMBIA GATEWAY PARCELS 8-8 THRU 8-11 A RESUBDIVISION OF PARCEL 8-6 SEDIMENT & EROSION CONTROL PLAN 6111 ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
DRAWN M.D.D.		DRAWING 4045
CHECKED D.L.M.		JOB NO. 01
DATE 2-20-90		82235
		FILE NO.

OWNER/DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

F-90-138

1158

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

SPECIFICATIONS

- CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
 - SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
 - STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN EDGES AND TORN OR UNEVEN ENDS SHALL NOT BE ACCEPTABLE.
 - SOD SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT EXCESSIVELY DRY OR WET MAY ADVERSELY AFFECT ITS SURVIVAL.
 - SOD SHALL BE INVESTED, DELIVERED AND INSTALLED WITHIN PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.
7. SITE PREPARATION
- FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TESTS. UNDER UNUSUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN BELOW.
- PRIOR TO SODDING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, CRUDE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
 - WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1,000 SQUARE FEET. ALL SOILS 1,000 POUNDS PER ACRE OR 25 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.
 - ALL AREAS RECEIVING SOD SHALL UNIFORMLY FINE GRADED. HARD-PACKED EARTH SHALL BE CAREFULLY PREPARED PRIOR TO PLACEMENT OF SOD.
8. SOD INSTALLATION
- DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING OF SOD.
 - THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. INSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT JOINTS ARE TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
 - ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOD BY TAMPING AND PEGGING OR OTHER APPROVED METHODS.
 - AS SODDING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOLID CONTACT OF ROOTS WITH THE SOIL SURFACE. SOD SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMPING UNDE THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATION OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.
9. SOD MAINTENANCE
- IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHOULD BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.
 - FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOD IS FULLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
 - MAINTENANCE OF ESTABLISHED SOD SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE S-4-1.

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.
 - 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 re-disturbance, permanent or temporary stabilization shall be completed within 7 calendar days for perimeter erosion control structures, dikes, ditches, slopes and slopes greater than 3:1, 14 days as to 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. 5) and temporary seedings (Sec. 5a) and Sec. 5c. Temporary stabilization with mulch alone can 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.
7. Site Analysis:
- | | |
|------------------------------------|-------------|
| Total Area of Site | 22.00 Acres |
| Area Disturbed | 2.00 Acres |
| Area to be reseeded or paved | 0.20 Acres |
| Area to be vegetatively stabilized | 0.80 Acres |
| Total Cut | 0.4 yds. |
| Offsite waste/borrow area location | 1/4 A |
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be rechecked on the same day of disturbance.
 - Additional sediment controls must be provided if deemed necessary by the Howard County DPW sediment control inspector.
 - On sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion 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.

TEMPORARY SEEDING NOTES

- SEEDBED PREPARATION:
LOOSEN UPPER 3 INCHES BY DISCING, RAKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:
APPLY 600 LBS. PER ACRE (14 LBS./1,000 SQ. FT.) OF 10-10-10 FERTILIZER.
- SEEDING:
FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 1/2 BU. PER ACRE OF ANNUAL RYE (3.2 LBS./1,000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUG. 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.7 LBS./1,000 SQ. FT.). FOR PERIOD NOV. 15 THRU FEB. 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./1,000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 2 1/2 GALLONS PER ACRE (5 GALLONS/1,000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS OR FLORES 8 FEET OR HIGHER USE 348 GALLONS PER ACRE (8 GALLONS/1,000 SQ. FT.) FOR ANCHORING.

PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDBED PREPARATION:
LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:
APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1,000 SQ. FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 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 UREA-FORM FERTILIZER (9 LBS./1,000 SQ. FT.).
- SEEDING:
FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1,000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU AUG. 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.05 LBS./1,000 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, OR 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./1,000 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 GALLONS/1,000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES OF 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALLONS/1,000 SQ. FT.) FOR ANCHORING.

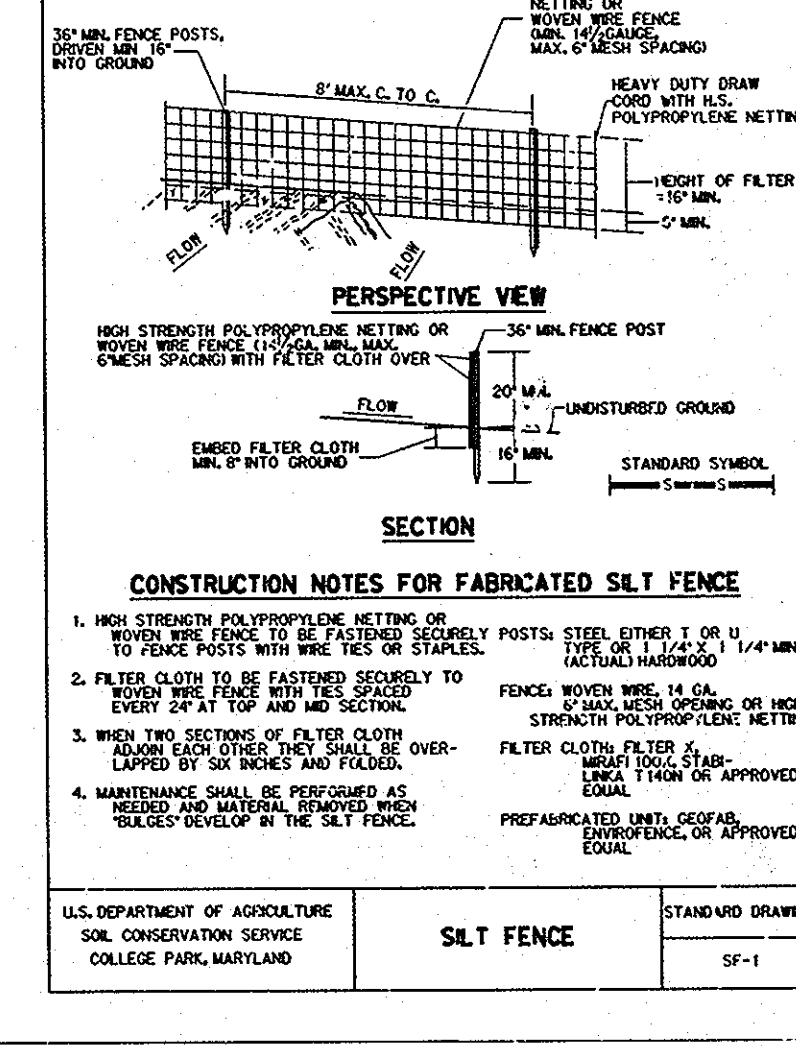
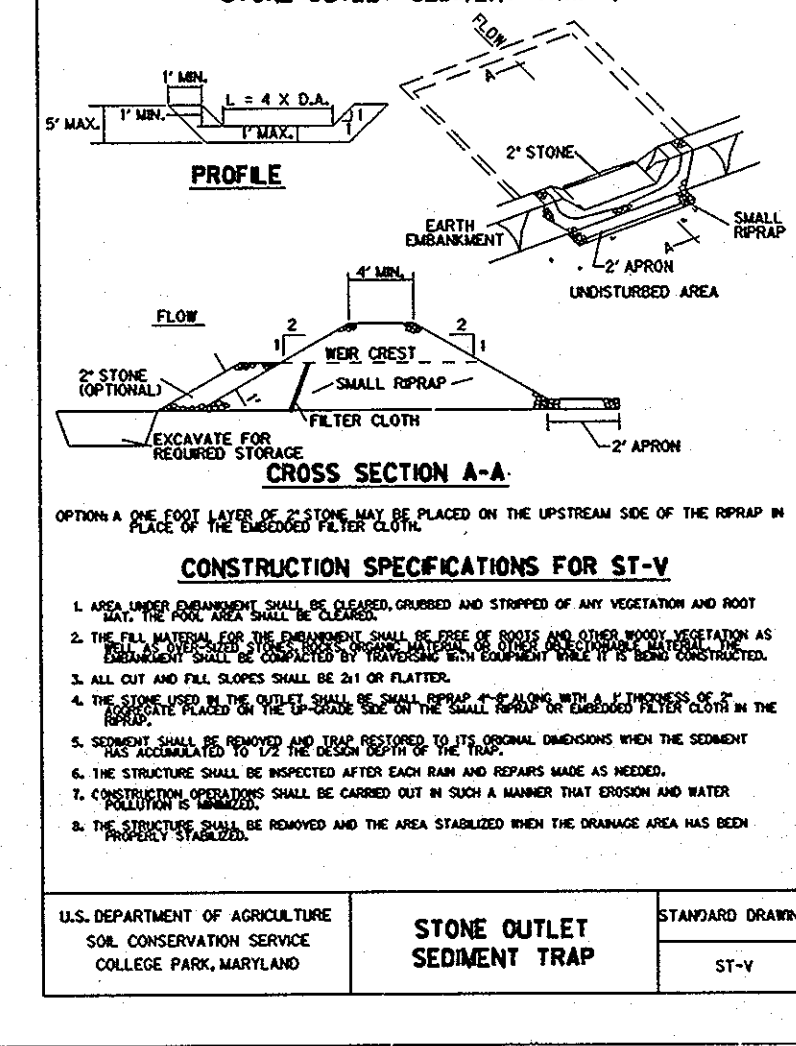
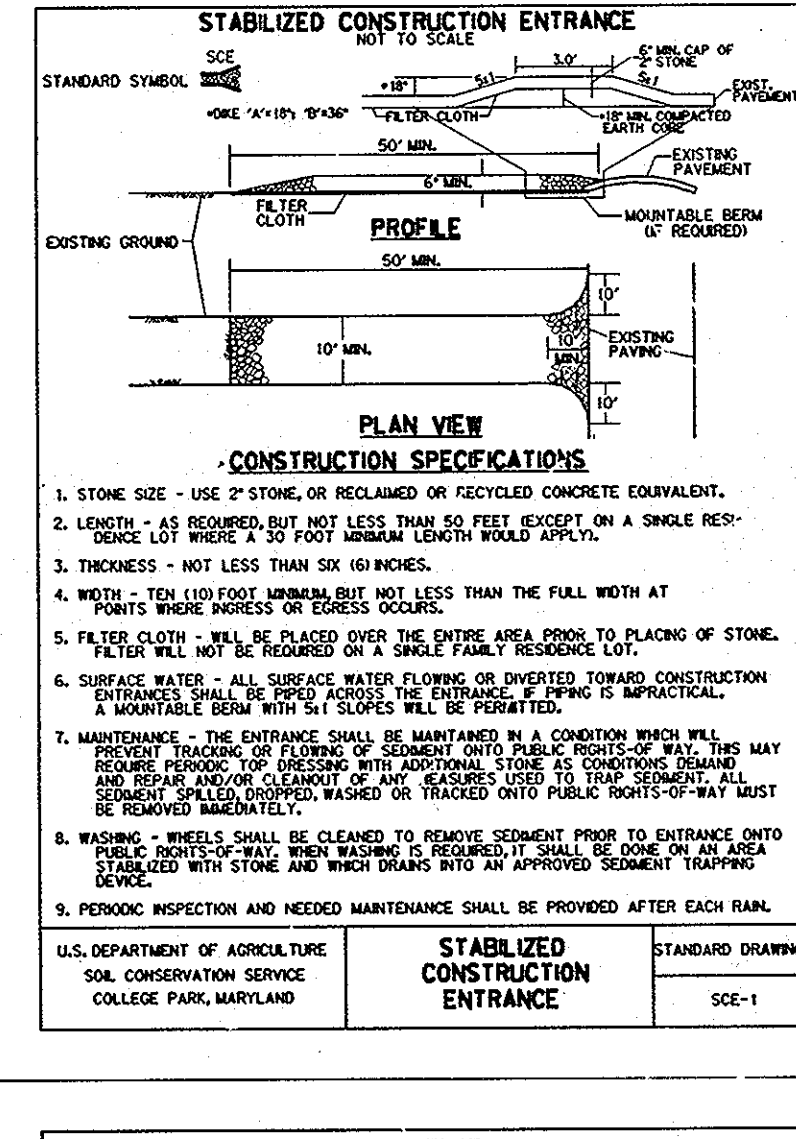
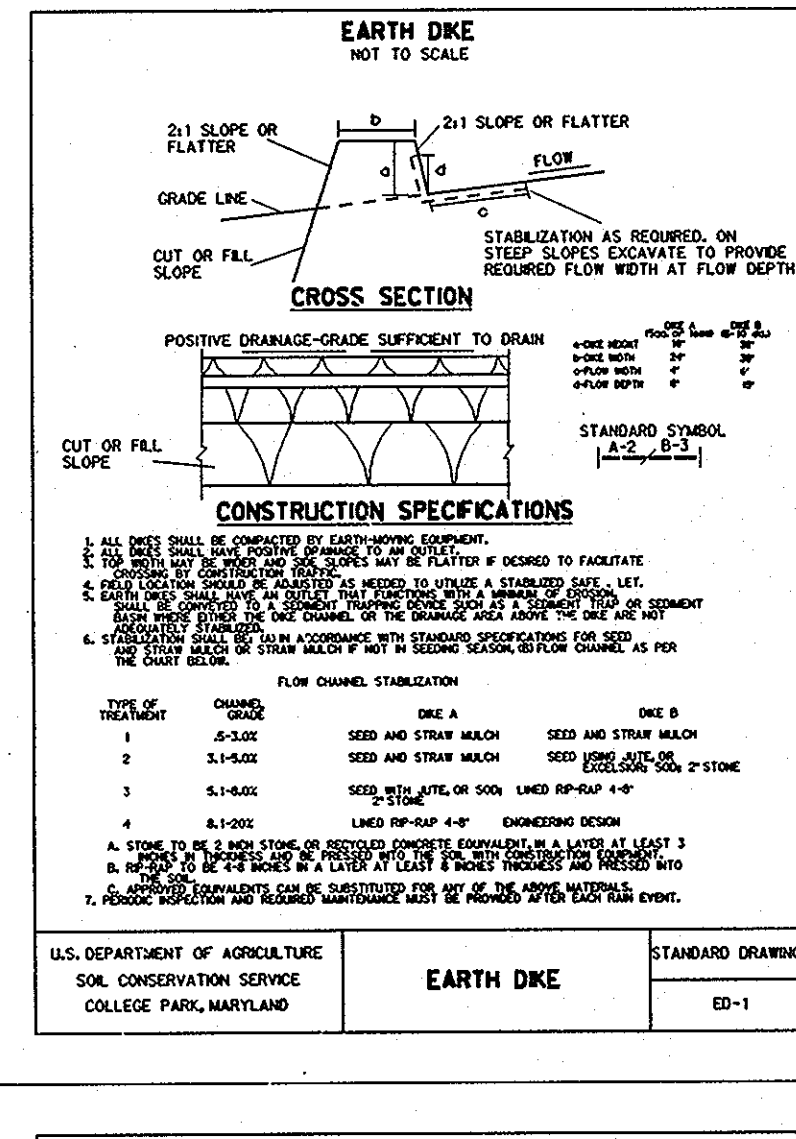
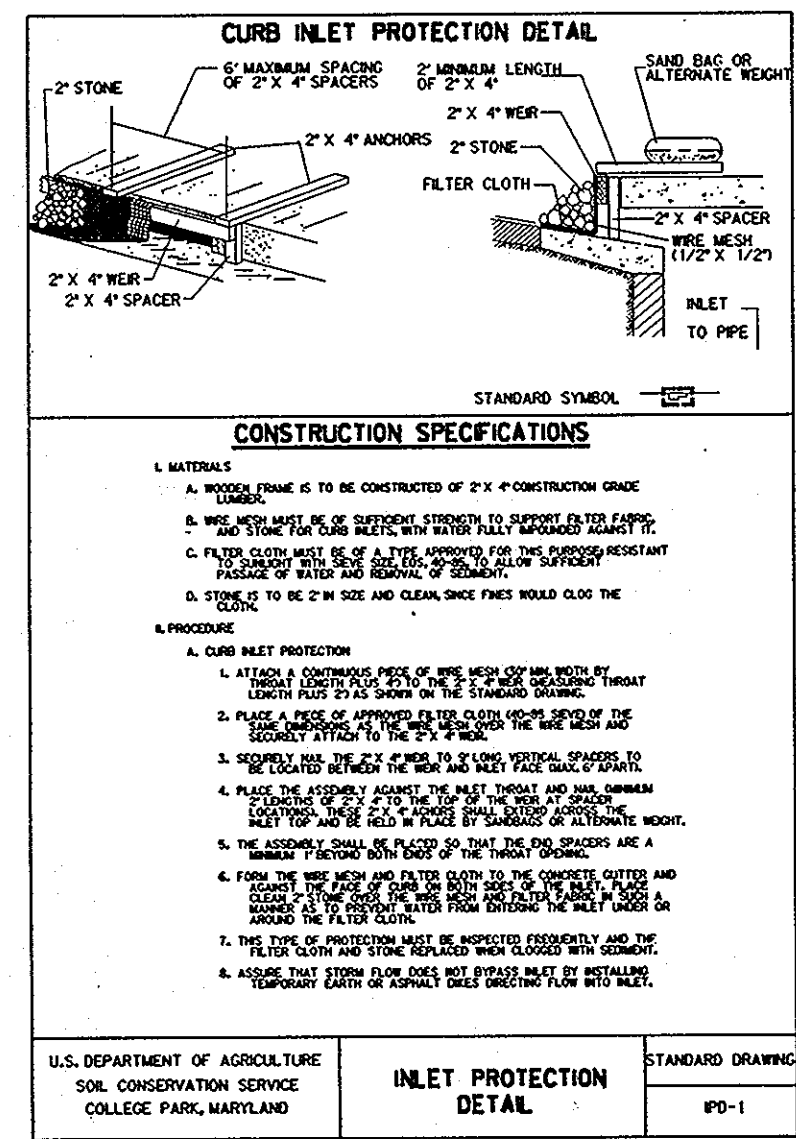
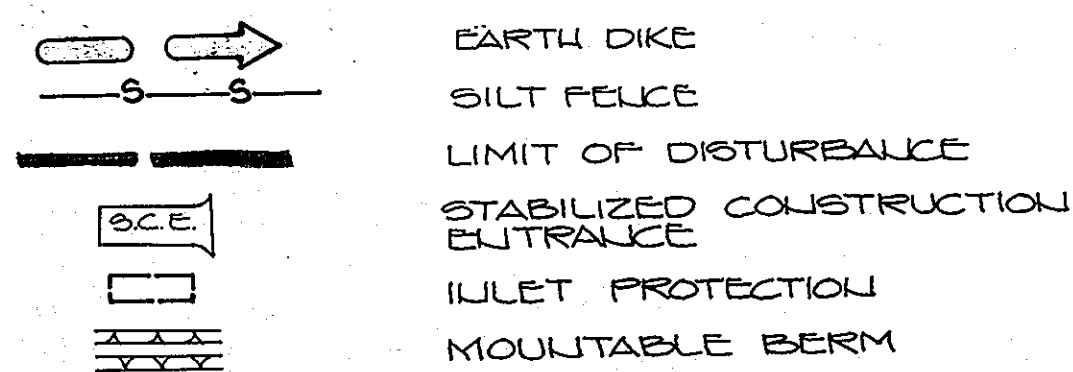
MAINTENANCE

- INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS, AND RESEEDINGS.
- GENERAL NOTES
- REFER TO 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.
 - WITH THE APPROVAL OF SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT CHANGES IN SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 - AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (A) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND (B) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.
 - DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS. REFER TO 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, P.P. 62-01 AND 62-02 FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR DUST CONTROL.
 - ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
 - ANY EXCESS CUT OR BORROW MATERIAL WILL BE TAKEN TO OR BROUGHT FROM A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.
 - TOTAL AREA OF TRACT:
 - TOTAL DISTURBED AREA:

SEQUENCE OF OPERATION

- OBTAIN A GRADING PERMIT.
- NOTIFY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR 24 HOURS BEFORE BEGINNING WORK.
- INSTALL S.C.C.E.
- INSTALL STORM DRAIN FROM EX. S-42 TO PROPOSED I-2. INSTALL ONLY THAT LENGTH OF STORM DRAIN WHICH CAN BE BACKFILLED AND STABILIZED WITHIN (1) WORKING DAY, PROVIDE I-2 WITH INLET PROTECTION.
- CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL PRACTICES ONLY.
- INSTALL EARTH DIKE MAINTAINING POSITIVE FLOW TO INLET AT ALL TIMES.
- STABILIZE DIKE IMMEDIATELY. INSTALL REMAINING SEDIMENT CONTROL DEVICES.
- WITH PERMISSION OF SEDIMENT AND EROSION INSPECTOR, CLEAR AND GRUB WITHIN THE LIMITS OF DISTURBANCE.
- GRADE THE SITE, AND STABILIZE.
- INSTALL UTILITIES, PROVIDE INLET PROTECTION AS REQUIRED.
- INSTALL CURB AND GUTTER AND LAY SUBBASE FOR ROADS.
- STABILIZE DISTURBED AREAS WITH SEED AND MULCH.
- PAVE ROADS.
- WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES.
- STABILIZE REMAINING DISTURBANCE WITH SEED AND MULCH.

LEGEND



OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

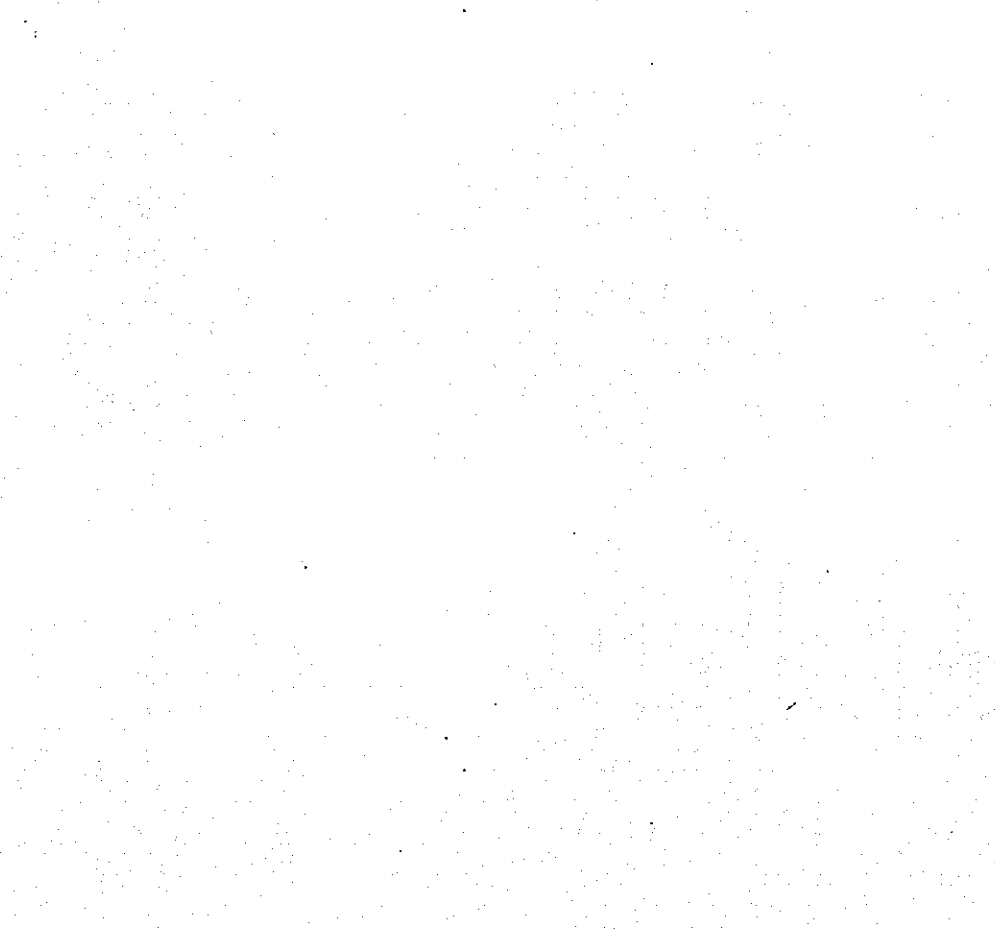
John M. Edick 2-15-90
DEVELOPER DATE

PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *R.L. Umbarger* MD. LICENSE NO. 10868
NAME: R.L. UMBARGER DATE: 2/20/90



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

John M. Edick 7/13/90
SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE

Steph H. Edick 7/13/90
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John M. Edick 7/23/90
CHIEF, LAND DEVELOPMENT DIVISION MK DATE

Francis W. Weisand 7/18/90
CHIEF, BUREAU OF HIGHWAYS DATE

Richard E. Ridgway 7-30-90
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Paul V. DeCay 8/4/90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

STATE OF MARYLAND PROFESSIONAL ENGINEER

KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED: J.L.D.
DRAWN: M.D.D.
CHECKED: D.L.M.
DATE: 2/9/90

SCALE: AS SHOWN
DRAWING: S O P S
JOB NO.: 88225
FILE NO.:

OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044