

**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A FEASIBLE 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 COUNTY SOIL CONSERVATION DISTRICT.

EARL D. COLLINS  
 DATE: 7-28-82

**DEVELOPER'S CERTIFICATE**  
 I/WE 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 ONSITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DATE: 7-28-82

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MET ITS TECHNICAL REQUIREMENTS.

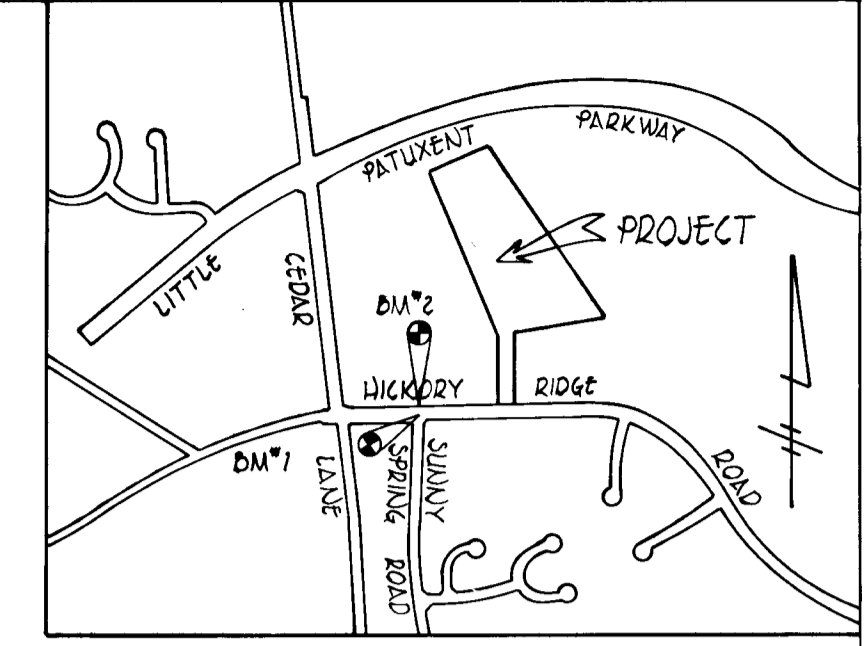
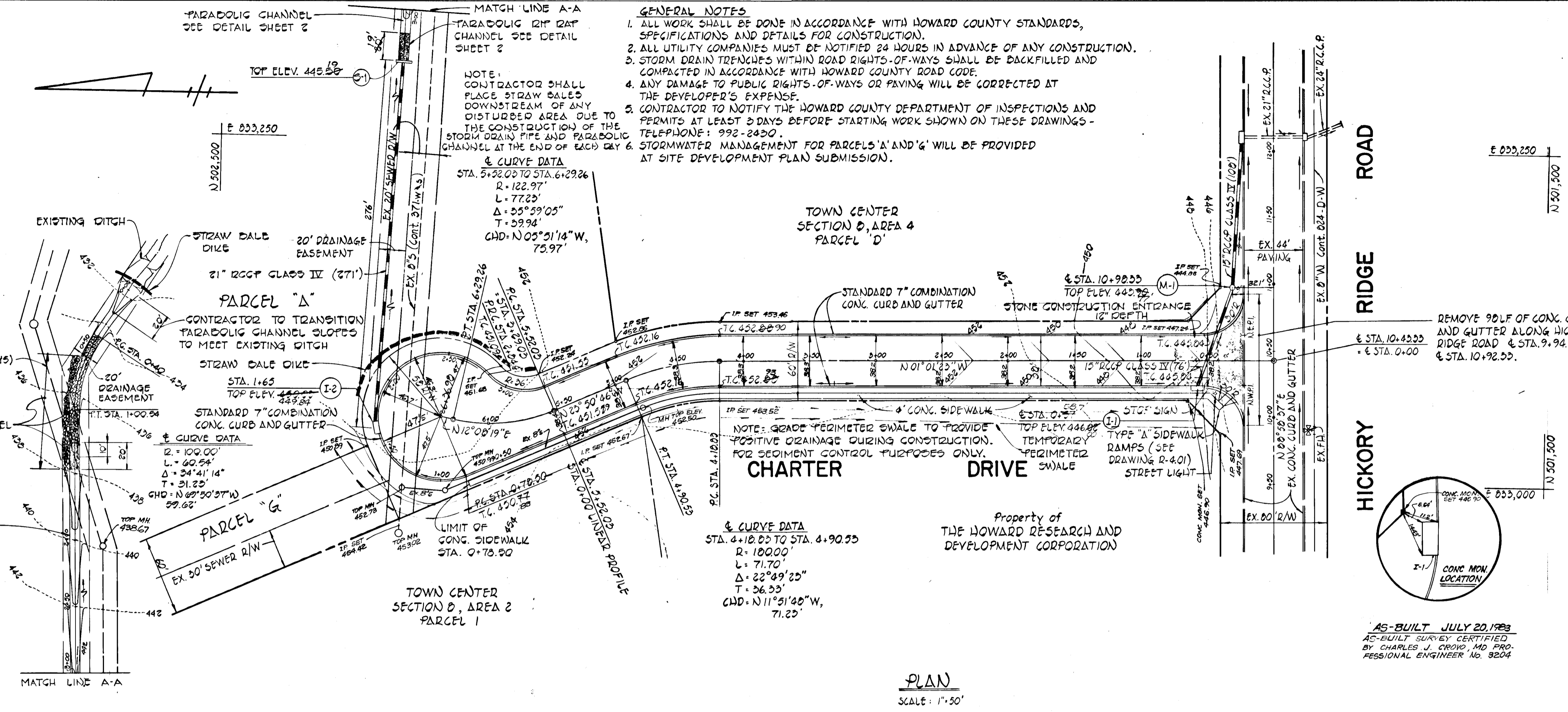
DATE: 9-1-82

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

DATE: 8-31-82

APPROVED DEPARTMENT OF PUBLIC WORKS  
 DATE: 9-3-82

APPROVED OFFICE OF PLANNING AND ZONING  
 DATE: 9-1-82



REV. DATE	REV. NO.	REVISION DESCRIPTION

**COLUMBIA MARYLAND**  
 Owner and Developer  
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA: TOWN CENTER SEC. 8, AREA 4 5TH ELECTION DISTRICT

PROJECT TITLE: CHARTER DRIVE PLAN & PROFILE

DES. BY: C. CROVO  
 SCALE: AS SHOWN  
 DWG. NO. 1 OF 2

DRN. BY: A. M. VITUCCI  
 DATE: JULY 28, 1982  
 C.C.F. NO.

CHK. BY: R. B. CARTER  
 APPROVED:

DATE	BY	REVISION

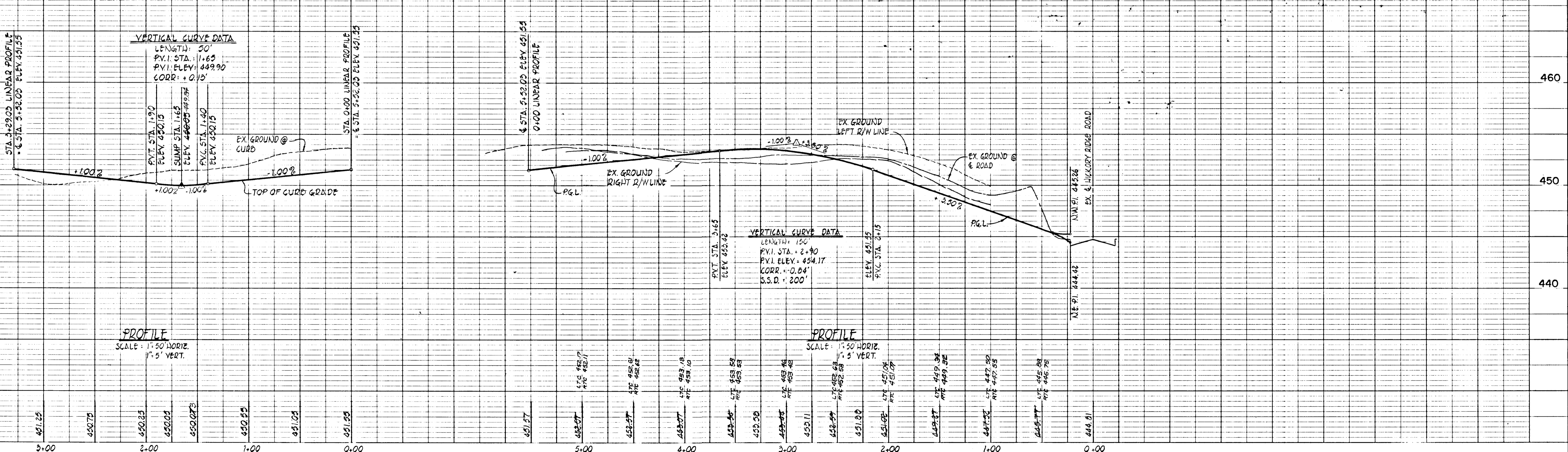
PLAN  
 SURVEYED, PLOTTED, CHECKED, ALIGNED, RT. OF WAY CHECKED.

DATE	BY	REVISION

PROFILE  
 SURVEYED, PLOTTED, CHECKED, STRUCTURE NOTATIONS CHK'D.

**LINEAR PROFILE**

**CHARTER DRIVE**



**ENGINEER'S CERTIFICATE**  
 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.

*Carl D. Collins* 8-27-82  
 CARL D. COLLINS P.L.L. REG. NO. 9753 DATE

*John M. Adams* 9-1-82  
 JOHN M. ADAMS P.L.L. REG. NO. 9754 DATE

*William J. Rowe* 8-1-82  
 WILLIAM J. ROWE P.L.L. REG. NO. 9755 DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND METES TECHNICAL REQUIREMENTS

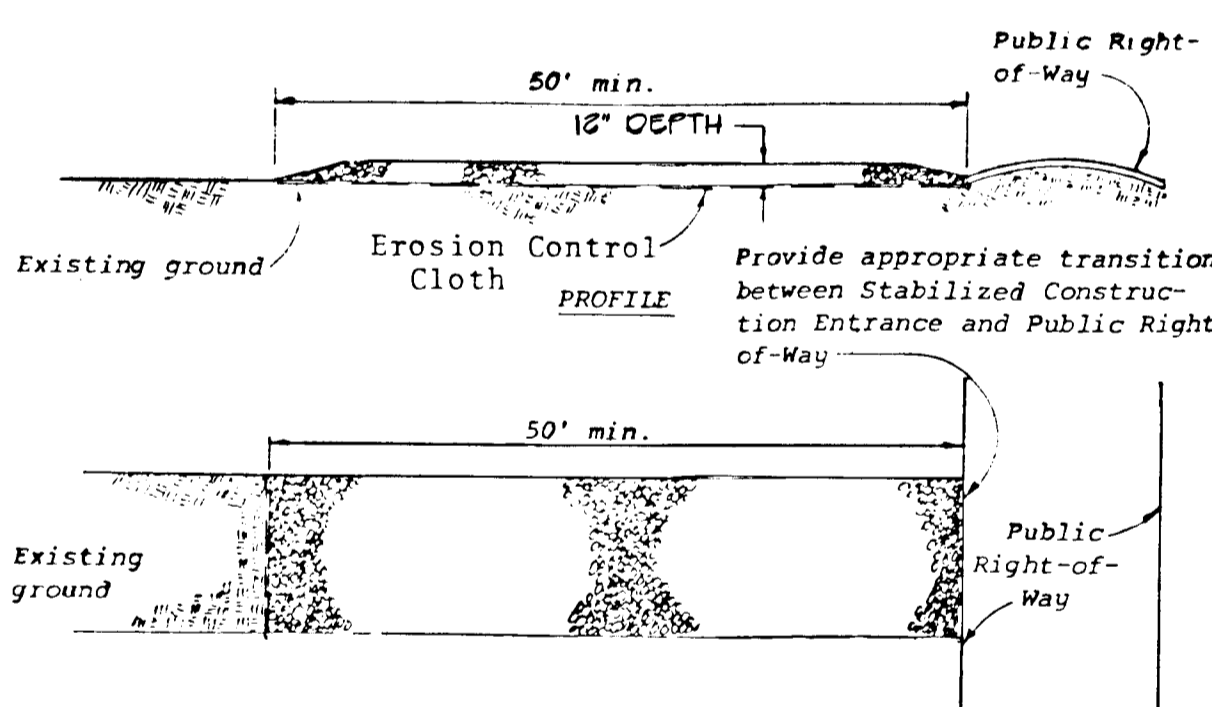
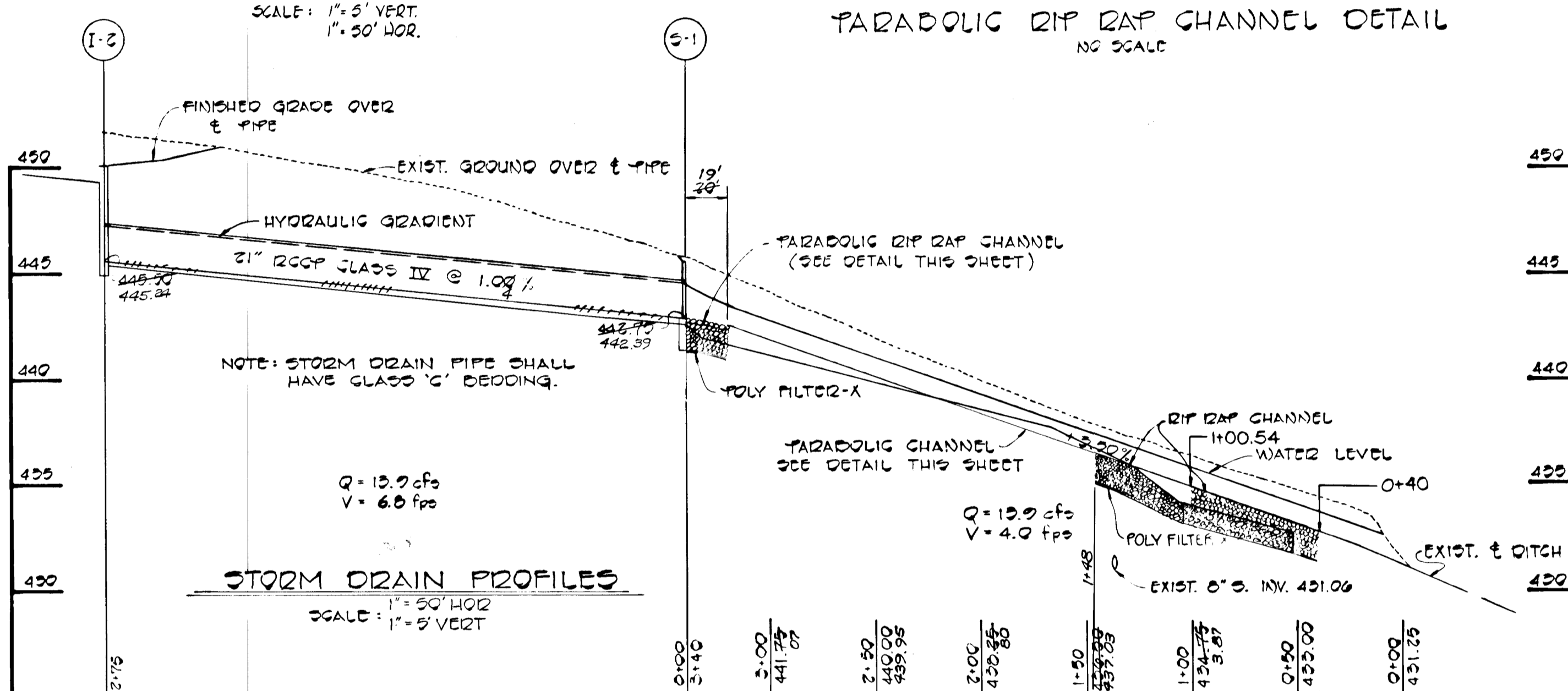
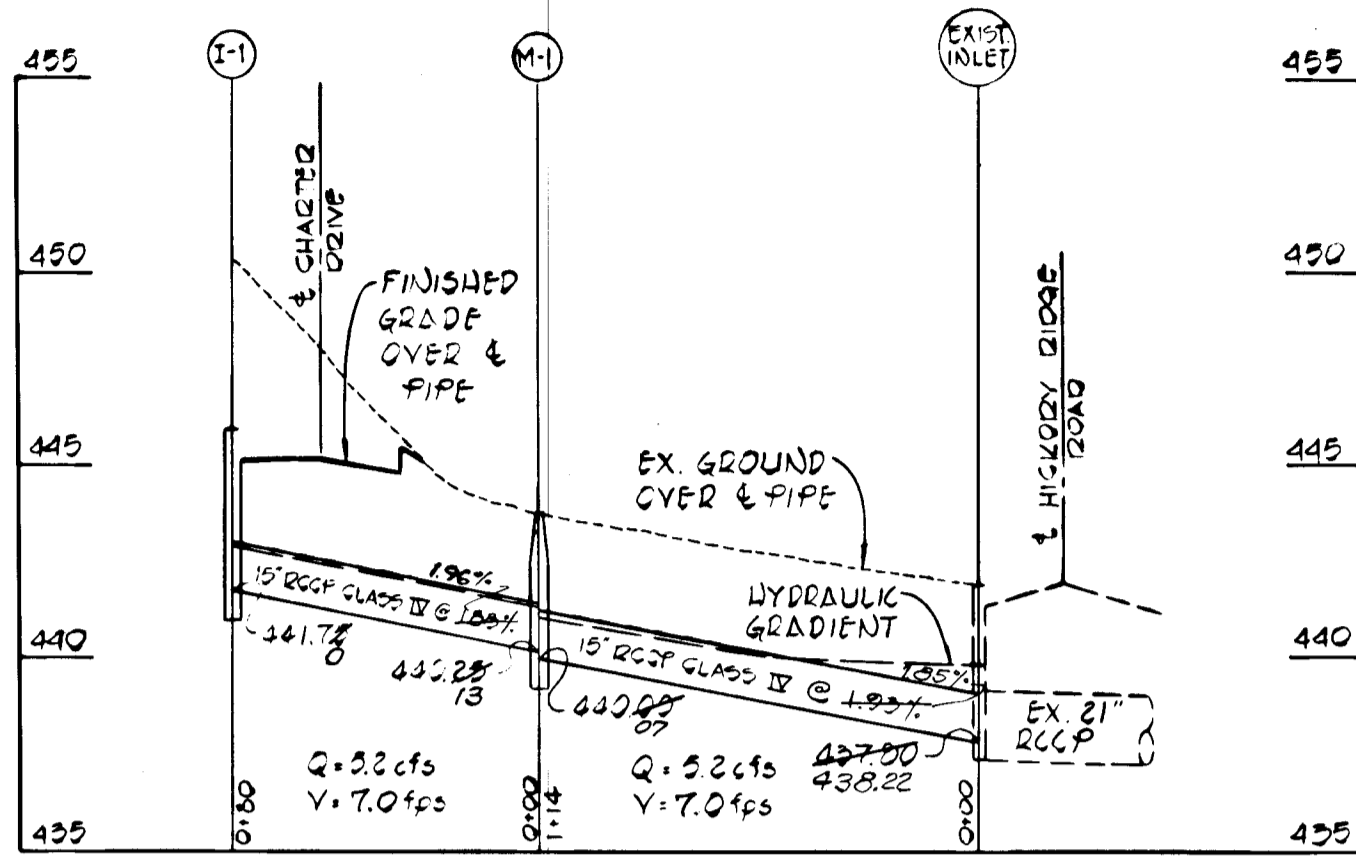
THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

DISTRICT ENGINEER  
 HOWARD SOIL CONSERVATION DISTRICT

STRUCTURE SCHEDULE					
NO.	TYPE	INVERT IN	INVERT OUT	TOP ELEVATION	REMARKS
I-1	2'-0" WITH DEFLECTORS	—	441.780	446.020	DRAWING SD-402 AND SD-403
I-2	2'-10	—	445.24	449.82	DRAWING SD-402
M-1	SHALLOW MA	440.88	440.00	440.90??	DRAWING G-503
S-1	TYPE "A" ENDWALL	—	442.35	442.73	DRAWING SD-521

**SEDIMENT CONTROL NOTES**

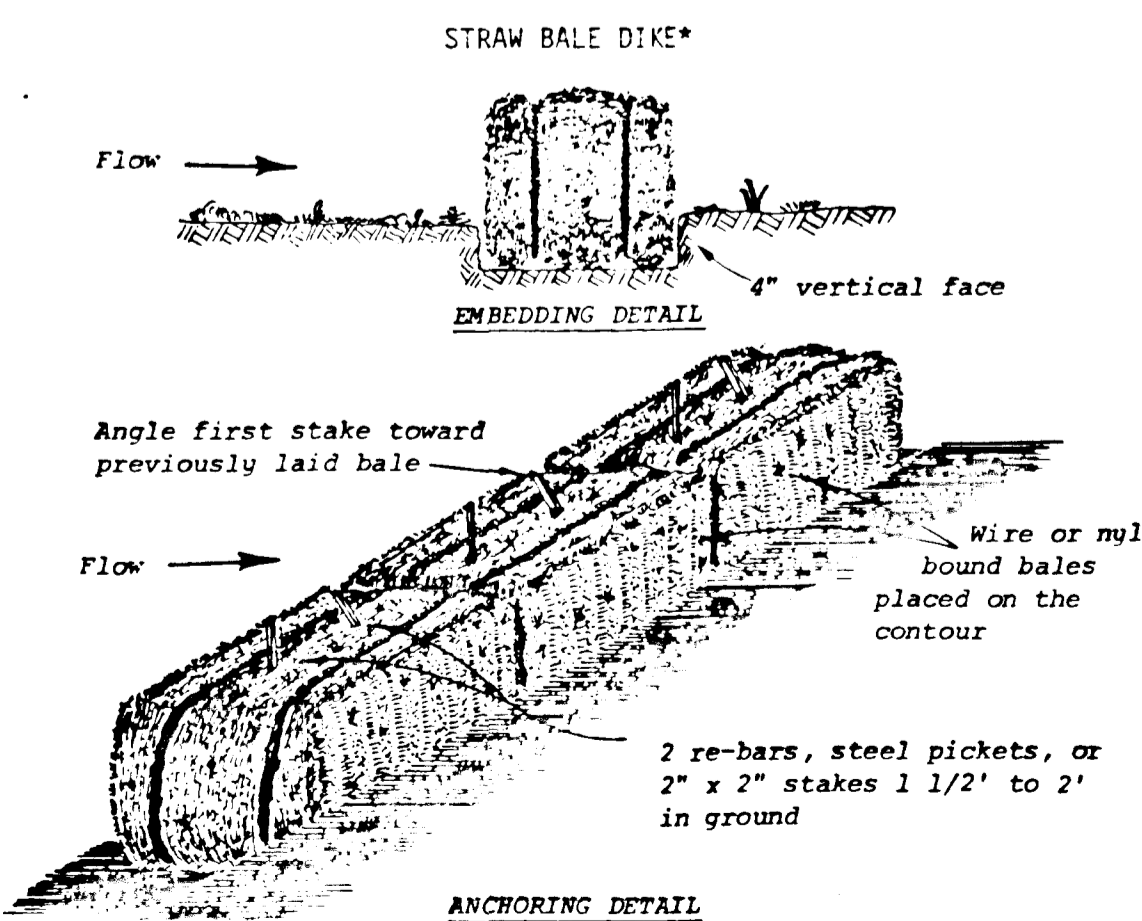
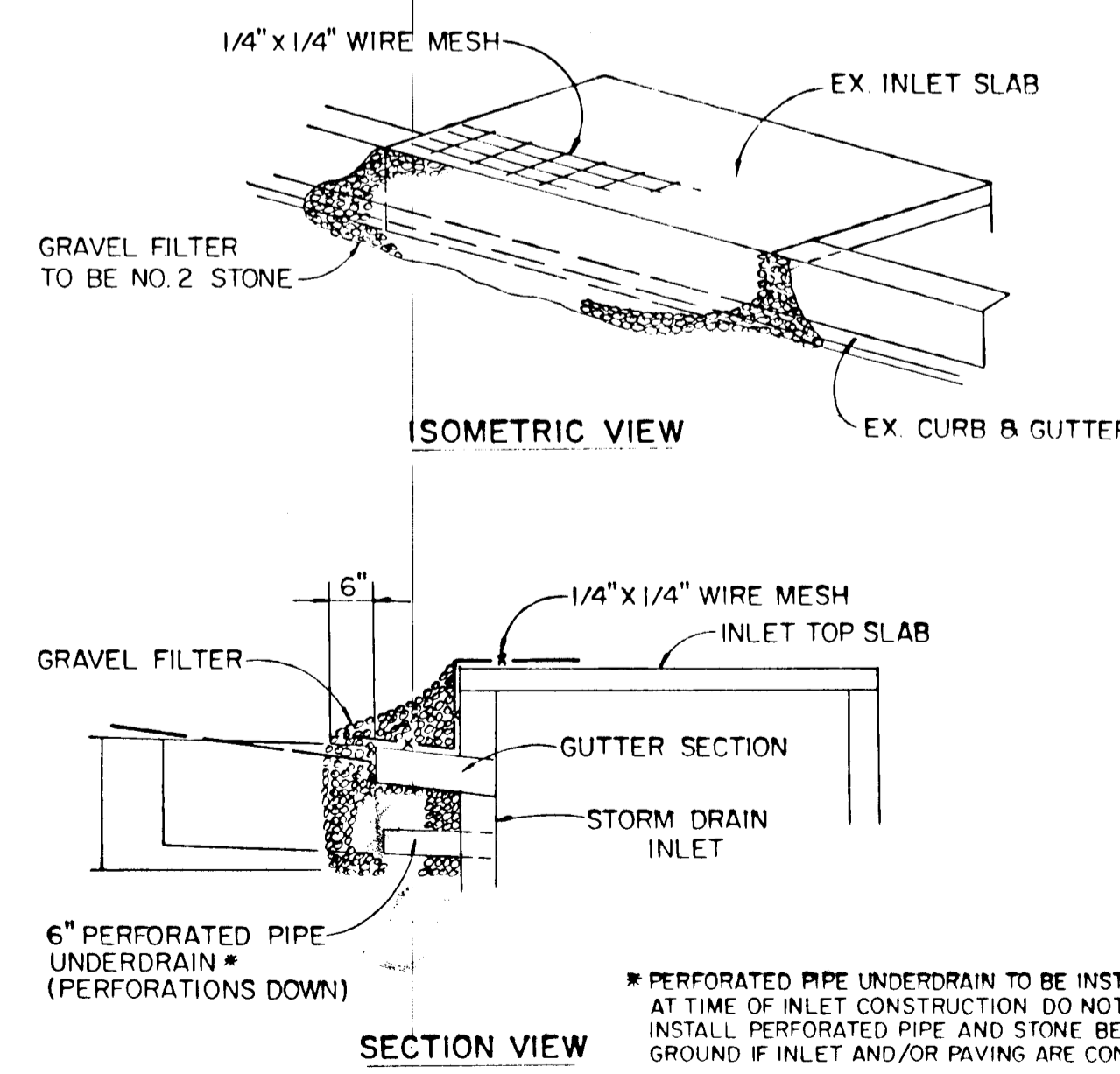
- Specifications for the Sediment Control Details shown hereon are included in the U.S.D.A. Soil Conservation Service "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas."
- The developer shall notify the Howard County Office of Inspection and Permits at least 24 hours prior to beginning any construction shown hereon (992-2433).
- Sediment control structures to be constructed prior to any on-site grading or disturbance to any existing surface material, and are to be stabilized as soon as constructed.
- All sediment control structures to remain in place until permission for their removal has been obtained from the Howard County Office of Inspection and Permits. (992-2433).
- All graded areas not to be sodded shall be stabilized by seeding and mulching in accordance with the following:
  - Site Preparation
    - Harrow or disc in areas proposed to be seeded the following materials:
      - Pulverized limestone at 2 tons/acre.
      - Commercial fertilizer 10-10-10 at 3/4 tons/acre.
      - Super phosphate at 600 lbs./acre.
  - Seeding
    - Sow the following seed mixture at the rate of 200 lbs./acre with a mechanical spreader:
      - Temporary: Italian or Perennial Rye Grass
      - Permanent: 40% Marion Blue Grass, 40% South Dakota Blue Grass and 20% Penn Lawn Creeping Fescue.
    - The seeded area shall then be raked with a York Rake (a minimum of 2 passes) covered and compacted with Cultipacker or other approved method.
  - Mulching
    - Seeded areas shall be uniformly mulched immediately after seeding with unweathered small grain straw at the rate of 1 1/2 - 2 tons/acre.
    - Tie mulch down with liquid asphalt at 0.1 gal./s.y. or emulsified asphalt at 0.04 gal./s.y. or mulch netting.
- A grading plan must be developed by the builder and approved before beginning construction of dwellings.



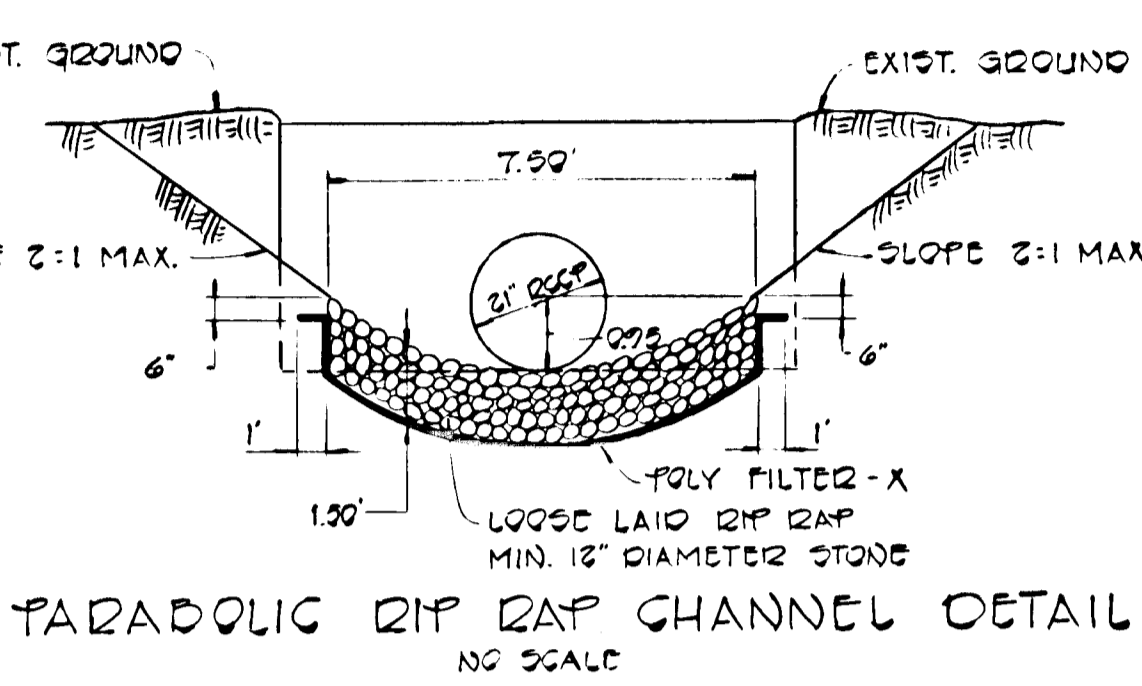
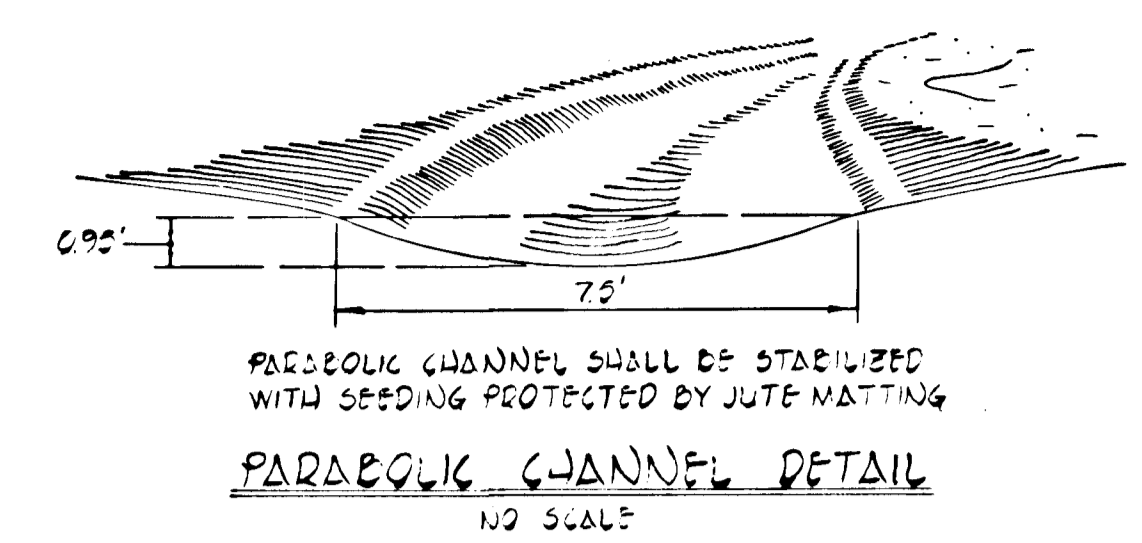
**SITE ANALYSIS**

TOTAL AREA OF PROPERTY - 14.5 Ac.  
 DISTURBED AREA - 1.5 Ac.  
 IMPERVIOUS AREA - 0.8 Ac.  
 AREA TO BE VEGETATED - 0.9 Ac.

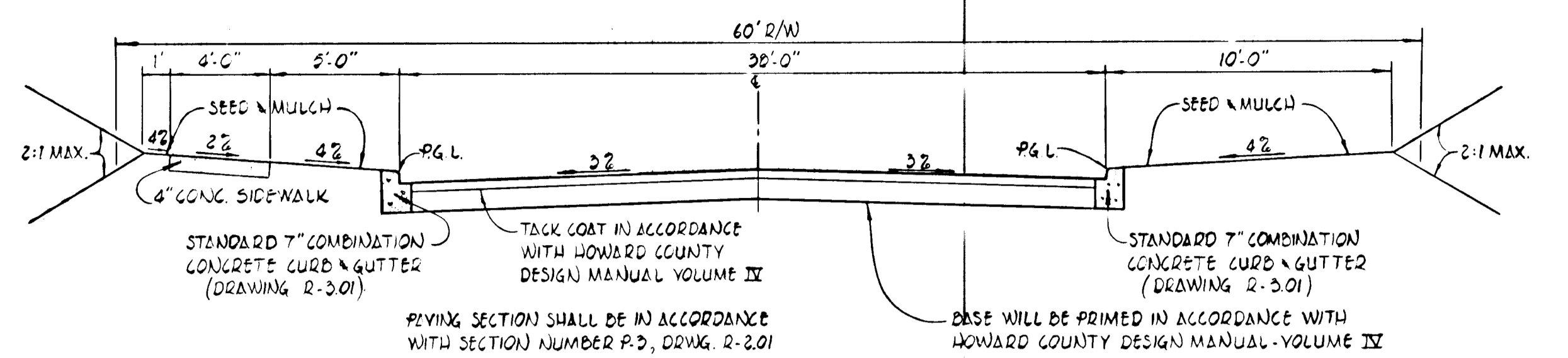
- CONSTRUCTION SEQUENCE**
- OBTAIN GRADING PERMIT.
  - REMOVE EXISTING CONCRETE CURB AT HICKORY RIDGE ROAD AND CONSTRUCT STONE CONSTRUCTION ENTRANCE.
  - CONSTRUCT PERIMETER SWALE AND STABILIZE WITH TEMPORARY SEEDING. INSTALL STRAW BALE DIKE.
  - CONSTRUCT PARABOLIC CHANNEL AND STABILIZE WITH PERMANENT SEEDING.
  - CONSTRUCT STORM DRAIN SYSTEM FROM I-2 TO S-1. INSTALL RIP RAP APRON @ S-1 AND STONE FILTER INLET PROTECTION DEVICE @ I-2.
  - GRADE CHARTER DRIVE TO SUBGRADE. STABILIZE SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB, AND CUT AND FILL SLOPE AREAS DUE TO ROAD GRADING WITH PERMANENT SEEDING.
  - CONSTRUCT STORM DRAIN SYSTEM FROM I-1 TO EXISTING INLET.
  - CONSTRUCT CONCRETE CURB AND LAY BASE COURSE.
  - UPON STABILIZATION OF GRADED AREAS, INLETS SHALL BE OPENED AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM. DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
  - CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSE, LAY SURFACE COURSE, CONSTRUCT SIDEWALKS AND STABILIZE SHOULDERS.
  - BACKFILL PERIMETER SWALE AND STABILIZE WITH PERMANENT SEEDING. REMOVE STRAW BALE DIKE.
  - ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED WITH PERMANENT SEEDING.



NOTE: FOR CONSTRUCTION DETAIL AND SPECIFICATIONS SEE STANDARD DRAWING GW-1, U.S. DEPARTMENT OF AGRICULTURE STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL.

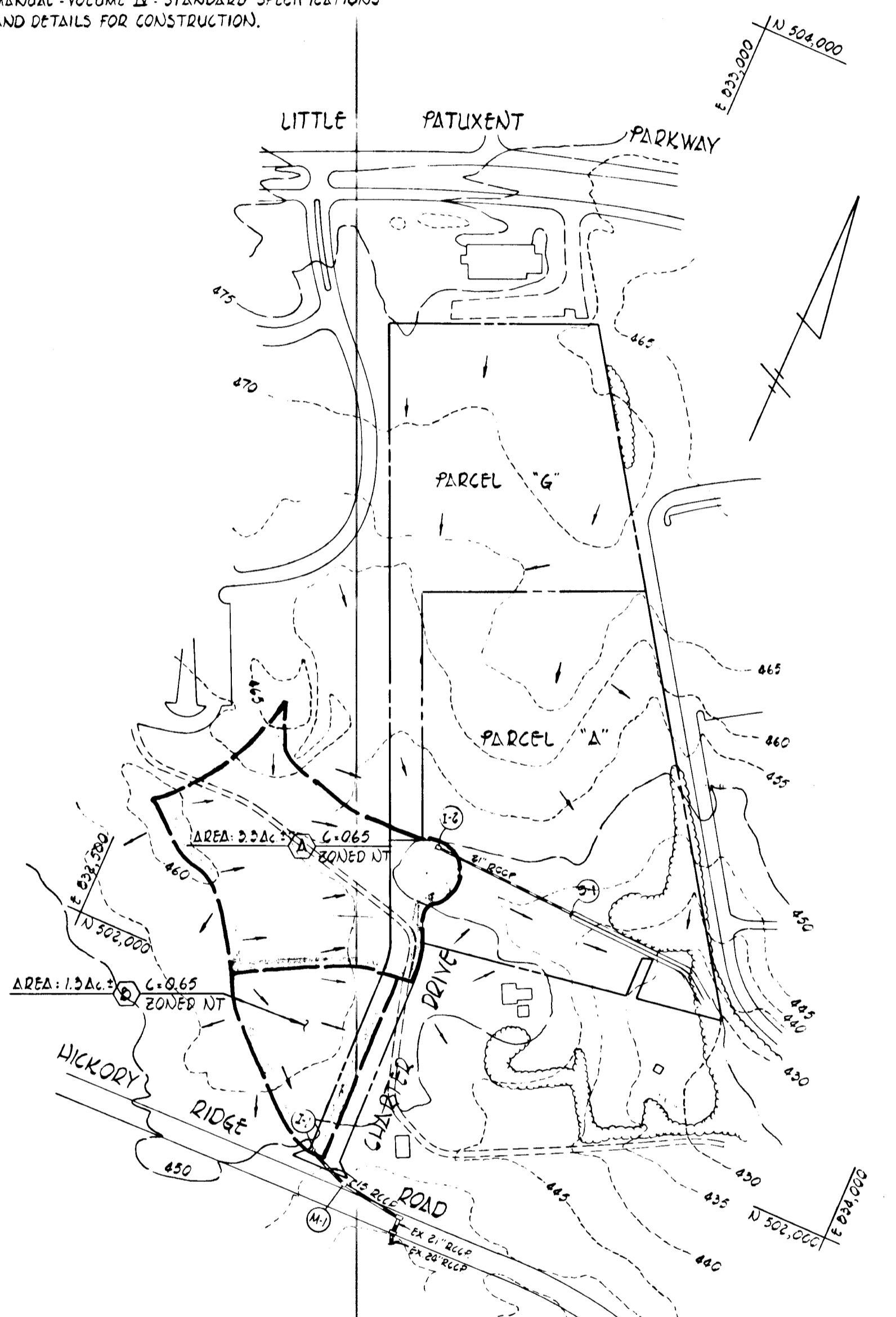


**CHARTER DRIVE**  
 DESIGN SPEED 30MPH ZONED NEW TOWN COMMERCIAL



**TYPICAL ROADWAY SECTION**

NO SCALE  
 ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL - VOLUME III - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.



**DRAINAGE AREA MAP**  
 SCALE: 1" = 200'

AS-BUILT - JULY 20, 1983  
 AS-BUILT SURVEY CERTIFIED BY CHARLES J. CROVO, MD, REG. PROFESSIONAL ENGINEER NO. 3204

APPROVED: *William C. Reilly* 9-3-82  
 CHIEF, BUREAU OF ENGINEERING

APPROVED: *Louis J. Owen* 9-1-82  
 ACTING CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b> MARYLAND		
Owner and Developer HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA	TOWN CENTER SEC. 8, AREA 4 5TH ELECTION DISTRICT	
PROJECT TITLE	STORM DRAIN PROFILES AND DETAILS	
DES. BY: C. CROVO	SCALE: AS SHOWN	DWG. NO. 2 OF 2
DRN. BY: A. M. VITUCCI	DATE: JULY 27, 1982	CCF NO.
CHK. BY: R. B. CARTER	APPROVED:	

FISHER, COLLINS AND CARTER, INC.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 6000 COURT AVENUE  
 BELMONT CITY, MARYLAND 21045