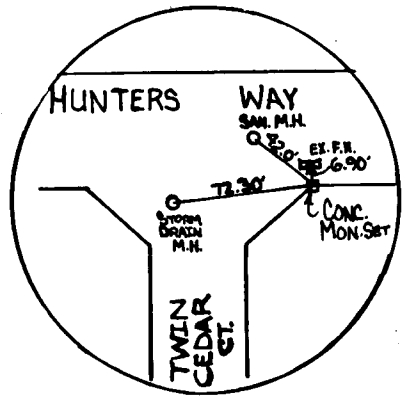


VICINITY MAP  
SCALE: 1"=1200'

**STREET LIGHTS**  
TYPE 'A' 175 WATT MERCURY VAPOR  
POST TOP FIXTURES INSTALLED ON 14' (FOOT)  
GRAY FIBERGLASS POLES.

**± CURVE DATA**  
± STA. 3+51.51 TO ± STA. 6+44.57  
R = 200.00'  
L = 293.08'  
Δ = 74° 37' 42"  
T = 171.49'  
CHD. = N 67° 00' 43" E, 272.73'

**± CURVE DATA**  
± STA. 0+00.70 TO ± STA. 10+11.07  
R = 200.00'  
L = 20.37'  
Δ = 34° 22' 00"  
T = 60.07'  
CHD. = N 47° 09' 21" E, 110.57'



**WARFIELD'S RANGE**  
SECTION TWO, AREA TWO  
LOTS 1-28  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**HUNTERS WAY**  
PLAN & PROFILE

OWNER AND DEVELOPER  
JANET W. PHELPS  
10604 GORMAN ROAD  
LAUREL, MARYLAND 20707

PHILIPS ASSOCIATES  
3570 STERETT PLACE  
SUITE 201  
COLUMBIA, MARYLAND 21044

SCALE AS SHOWN DATE: NOV. 23, 1983 DWG. NO. 1 OF 4  
DESIGNED BY: C. CROVO CHECKED BY: A. BOGDAN  
DRAWN BY: R. CARTER

FISHER, COLLINS AND CARTER, INC.  
CIVIL ENGINEERS AND LAND SURVEYORS  
11110 CITY, MARYLAND 21043

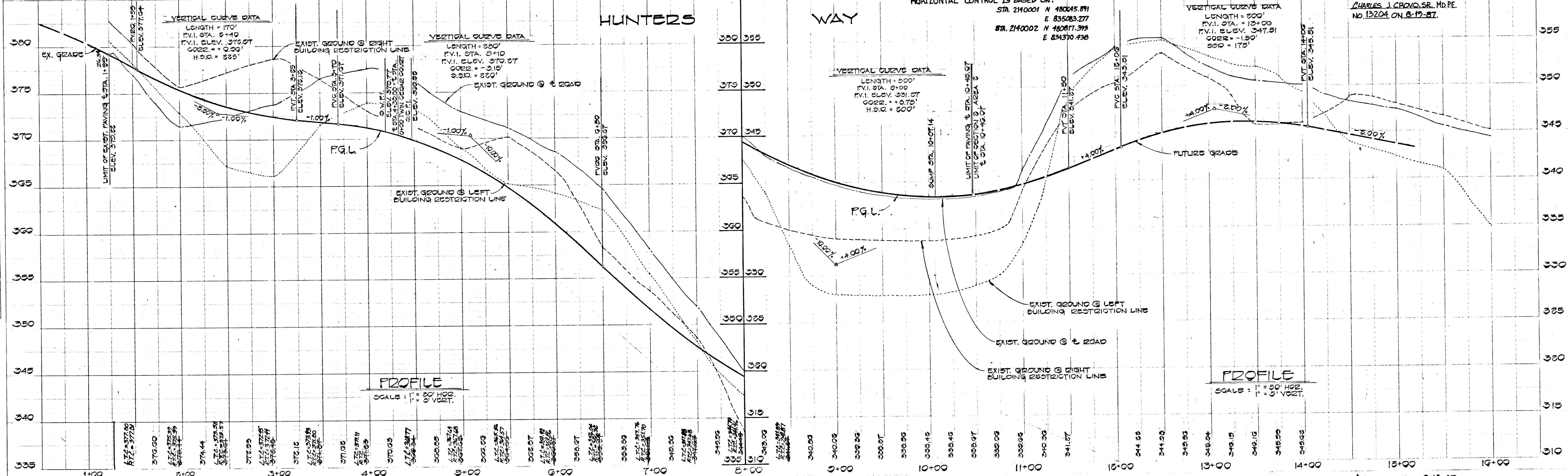


- GENERAL NOTES**
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  - ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HRS. IN ADVANCE OF ANY CONSTRUCTION.
  - STORM DRAINAGE TRENCHES WITHIN ROAD RIGHTS-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
  - ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS OR PAVING WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
  - CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND SURVEY DIVISION AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE: 792-7272
  - TWIN CEDARS COURT AND HUNTERS WAY ARE PUBLIC ROADS.
  - STORM WATER MANAGEMENT FACILITIES HAVE BEEN PROVIDED UNDER WARFIELD'S RANGE SECTION 2 AREA 1 F 84-94

APPROVED  
DEPARTMENT OF PUBLIC WORKS  
1-30-85

APPROVED  
OFFICE OF PLANNING AND ZONING  
1-28-85

AND ZONING ADM. V. 5-14-85 DATE



NO.	REVISION

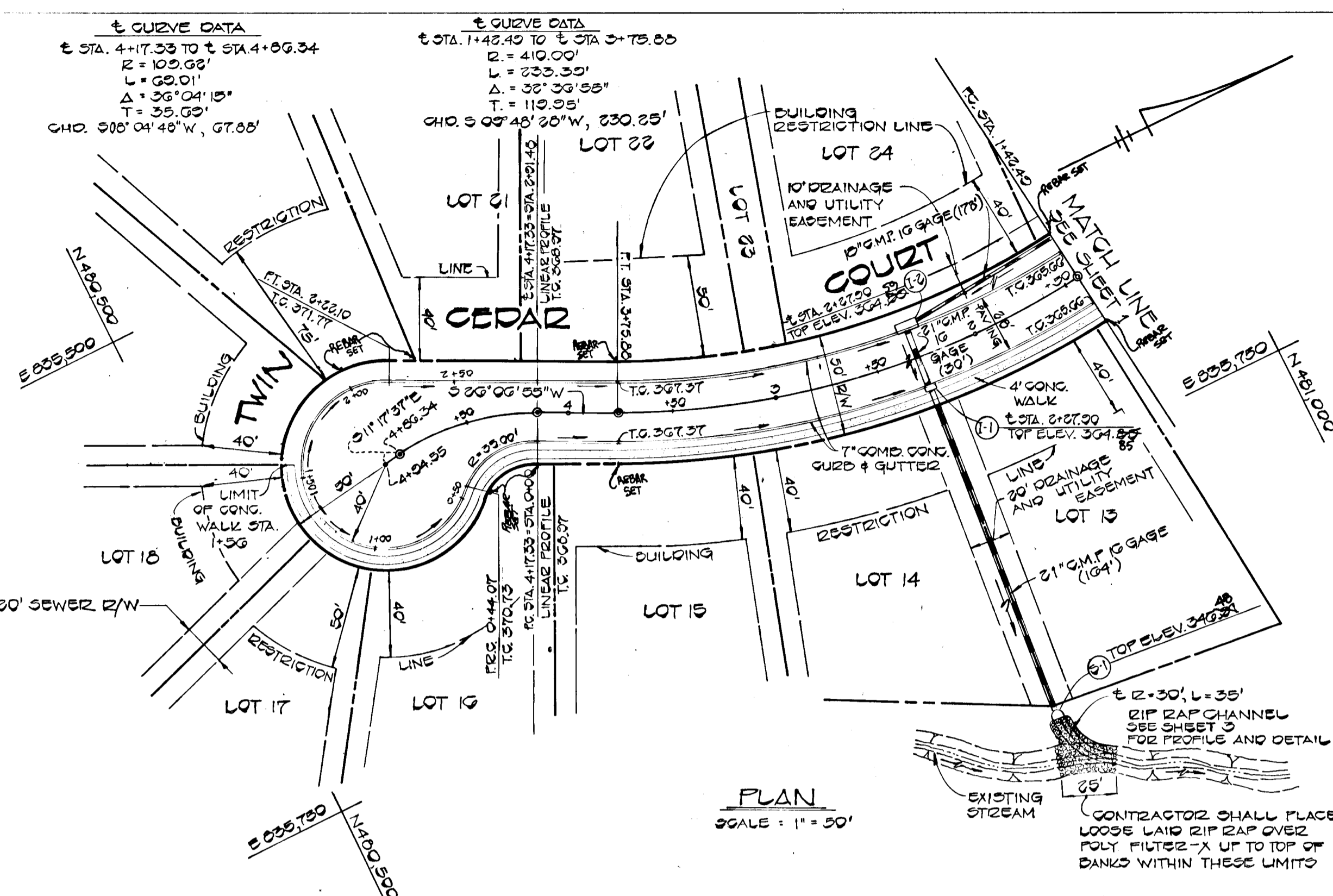
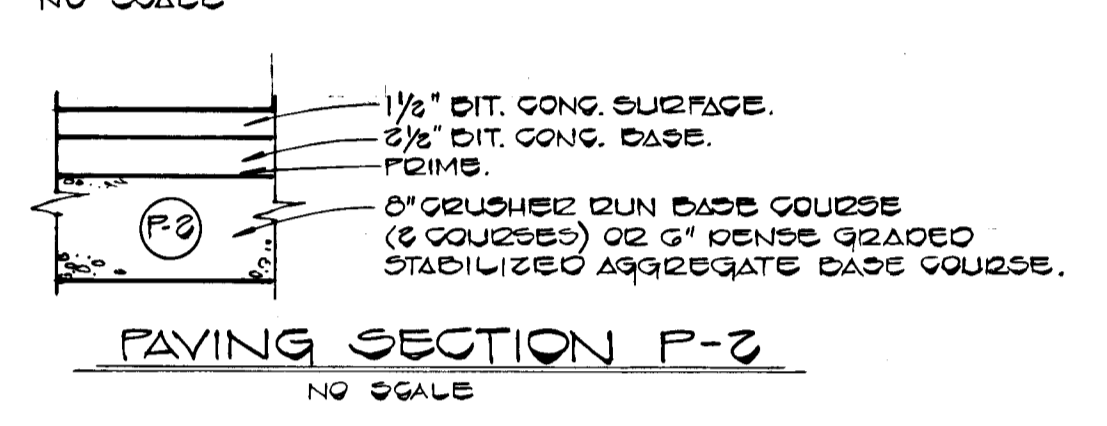
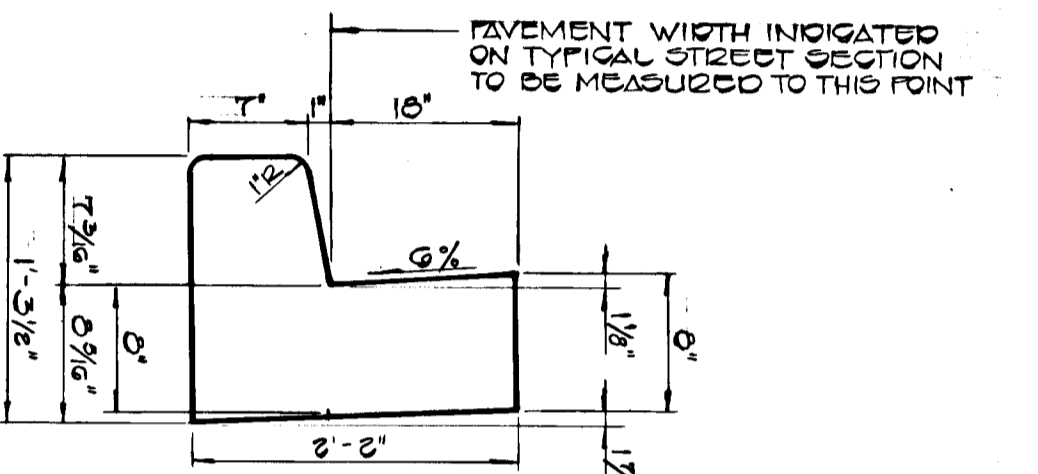
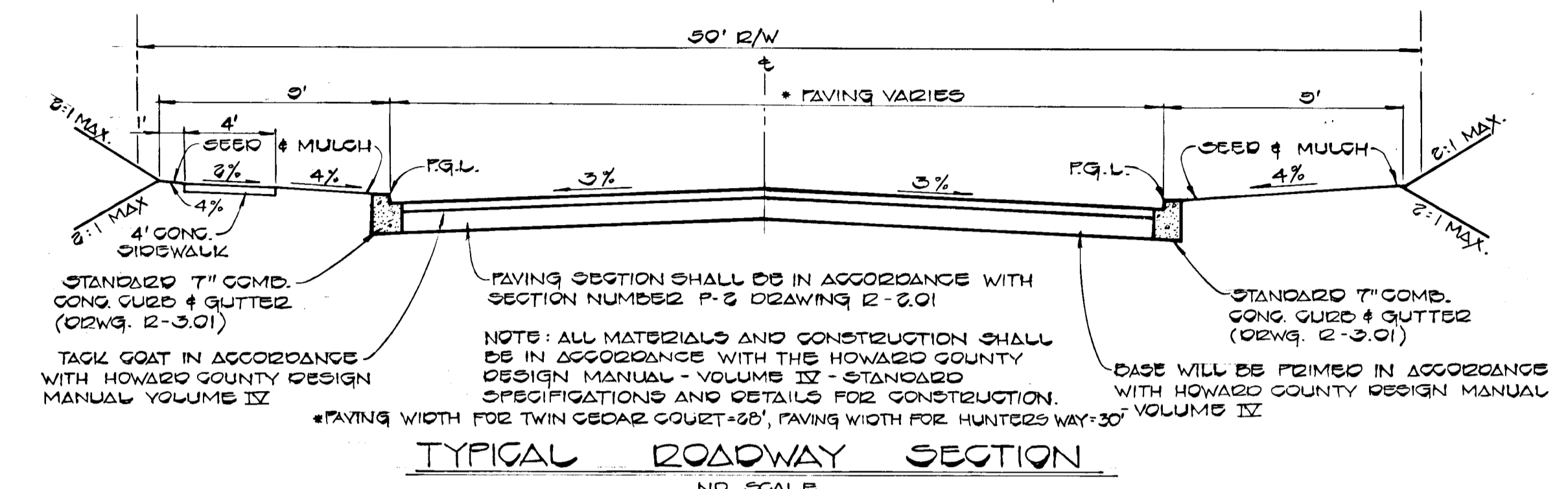
NO.	REVISION

1038

**TWIN CEDAR COURT**  
 ± STA. 0+00 TO ± STA. 4+34.55

**HUNTERS WAY**  
 ± STA. 1+25 TO ± STA. 10+45.07

TYPE OF TRAFFICWAY - LOCAL RESIDENTIAL 20'± R/W DESIGN SPEED - 30 M.P.H.



**WARFIELD'S RANGE**  
 SECTION TWO, AREA TWO  
 LOTS 1-28  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**TWIN CEDAR COURT**  
 PLAN, PROFILE, & DETAILS

OWNER AND DEVELOPER  
 JANET W. PHELPS  
 10304 GORMAN ROAD  
 LAUREL, MARYLAND 20707

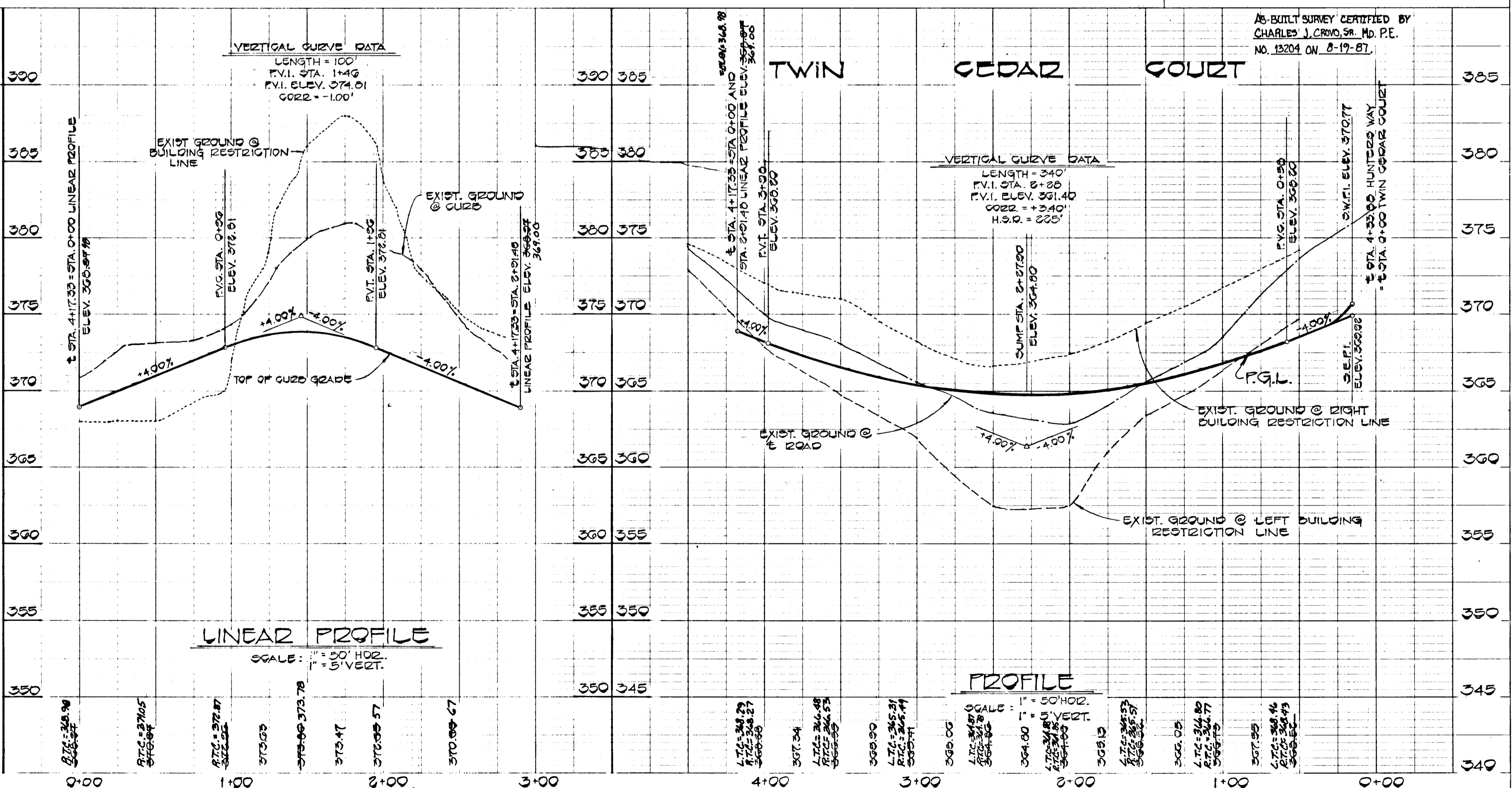
PHELPS ASSOCIATES  
 5570 STRETT PLACE  
 SUITE 201  
 COLUMBIA, MARYLAND 21044

SCALE AS SHOWN DATE NOV 23, 1983 DWG. NO. 2 OF 4  
 DES. C. CROVO DRN. A. BOGDAN CHK. R. CARTER

FISHER, COLLINS AND CARTER, INC.  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

APPROVED  
 DEPARTMENT OF PUBLIC WORKS  
 1-30-85

APPROVED  
 OFFICE OF PLANNING AND ZONING  
 AND ZONING ADMINISTRATION  
 1-28-85



REVISIONS  
 NO. DATE BY  
 1 11/23/83 CJC  
 2 12/1/83 CJC  
 3 12/1/83 CJC  
 4 12/1/83 CJC  
 5 12/1/83 CJC  
 6 12/1/83 CJC  
 7 12/1/83 CJC  
 8 12/1/83 CJC  
 9 12/1/83 CJC  
 10 12/1/83 CJC

REVISIONS  
 NO. DATE BY  
 1 11/23/83 CJC  
 2 12/1/83 CJC  
 3 12/1/83 CJC  
 4 12/1/83 CJC  
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 10 12/1/83 CJC

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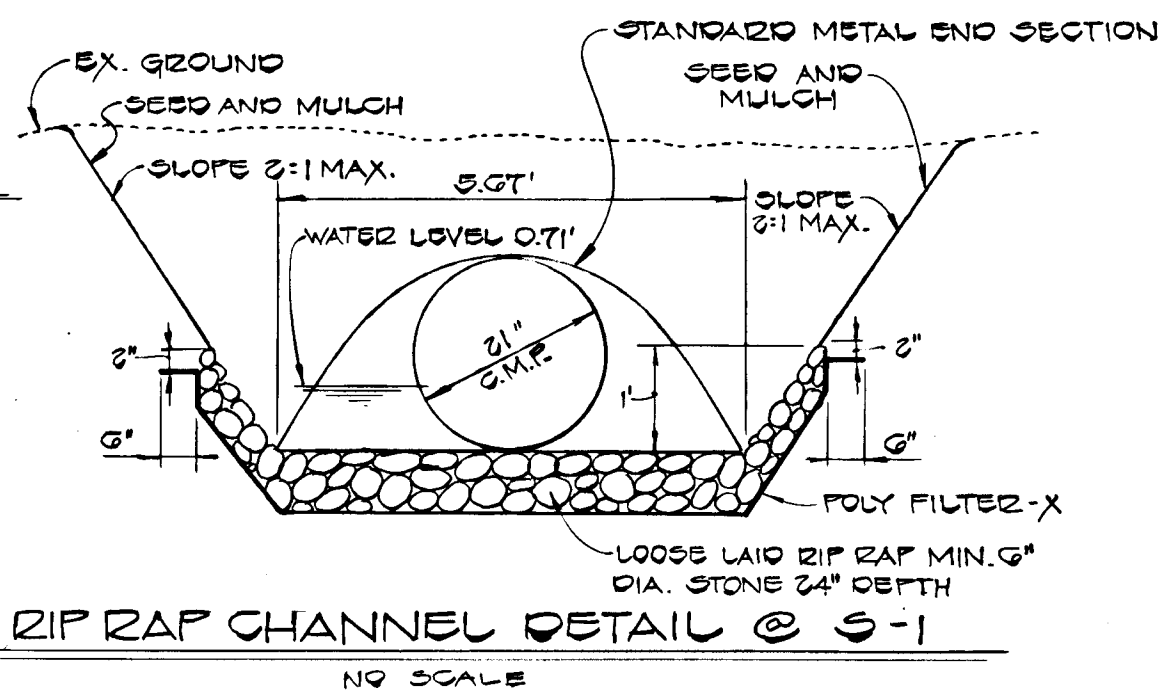
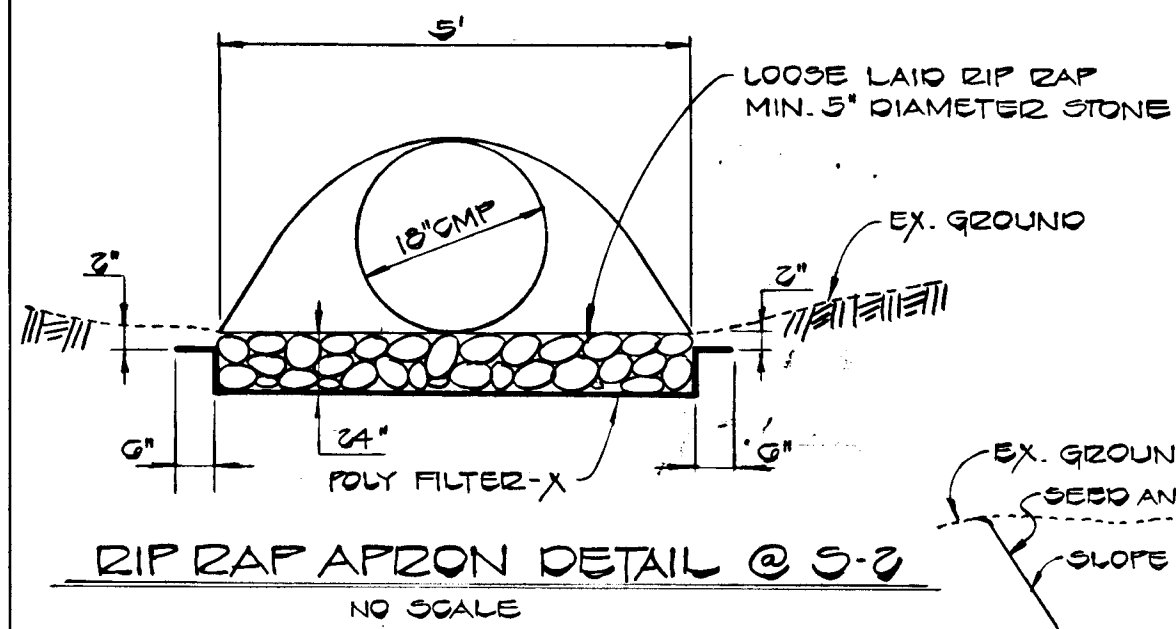
STRUCTURE SCHEDULE					
NO.	TYPE	INVERT IN	INVERT OUT	TOP ELEVATION	REMARKS
I-1	A-S	333.387	333.387	334.9085	DRAWING SD 4.01
I-2	A-10	333.387	333.387	334.9085	DRAWING SD 4.02
I-3	A-10	333.387	333.387	334.9085	DRAWING SD 4.03
I-4	A-S WITH DEFLECTORS	333.387	333.387	334.9085	DRAWING SD 4.01 AND SD 4.03
M-1	DTU M3 METAL END SECTION	333.387	333.387	334.9085	DRAWING G 3.01
I-5	A-S	333.387	333.387	334.9085	DRAWING SD 4.01
I-6	A-S	333.387	333.387	334.9085	DRAWING SD 4.01
S-2	METAL END SECTION	333.387	333.387	334.9085	DRAWING SD 5.01

DATE	
BY	
CHECKED	
APPROVED	
NO.	

DATE	
BY	
CHECKED	
APPROVED	
NO.	

DATE	
BY	
CHECKED	
APPROVED	
NO.	

DATE	
BY	
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NO.	

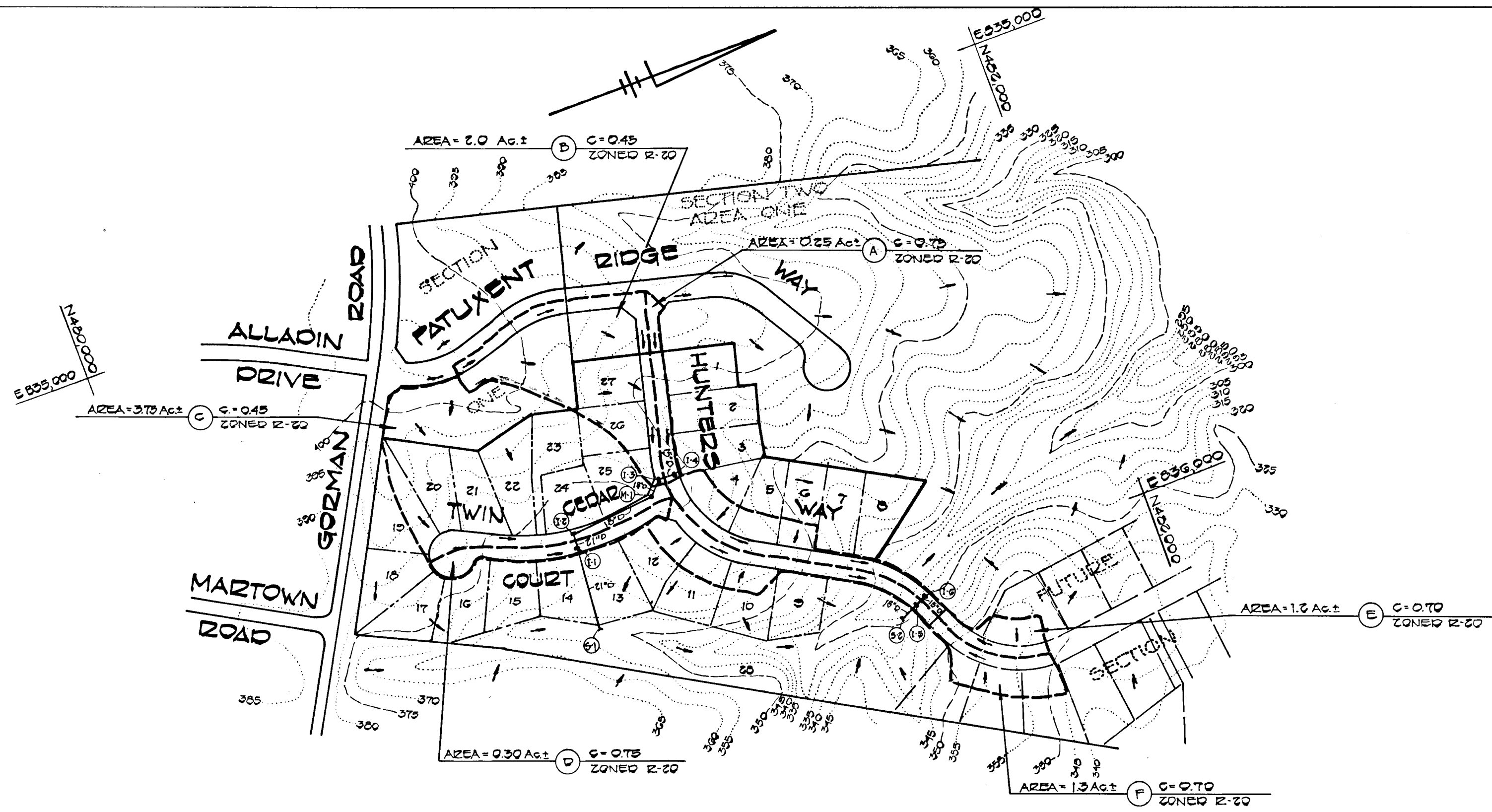


CHANNEL DESIGN DATA @ S-1

$A = 5.03'$   
 $V = 1.86'$   
 $Q = A \times V = 5.03 \times 3.57 = 18.0 cfs$

DRAINAGE AREA MAP

SCALE = 1" = 200'



**WARFIELD'S RANGE**  
SECTION TWO, AREA TWO  
LOTS 1-28  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**DRAINAGE AREA MAP**  
STORM DRAIN PROFILES AND DETAILS

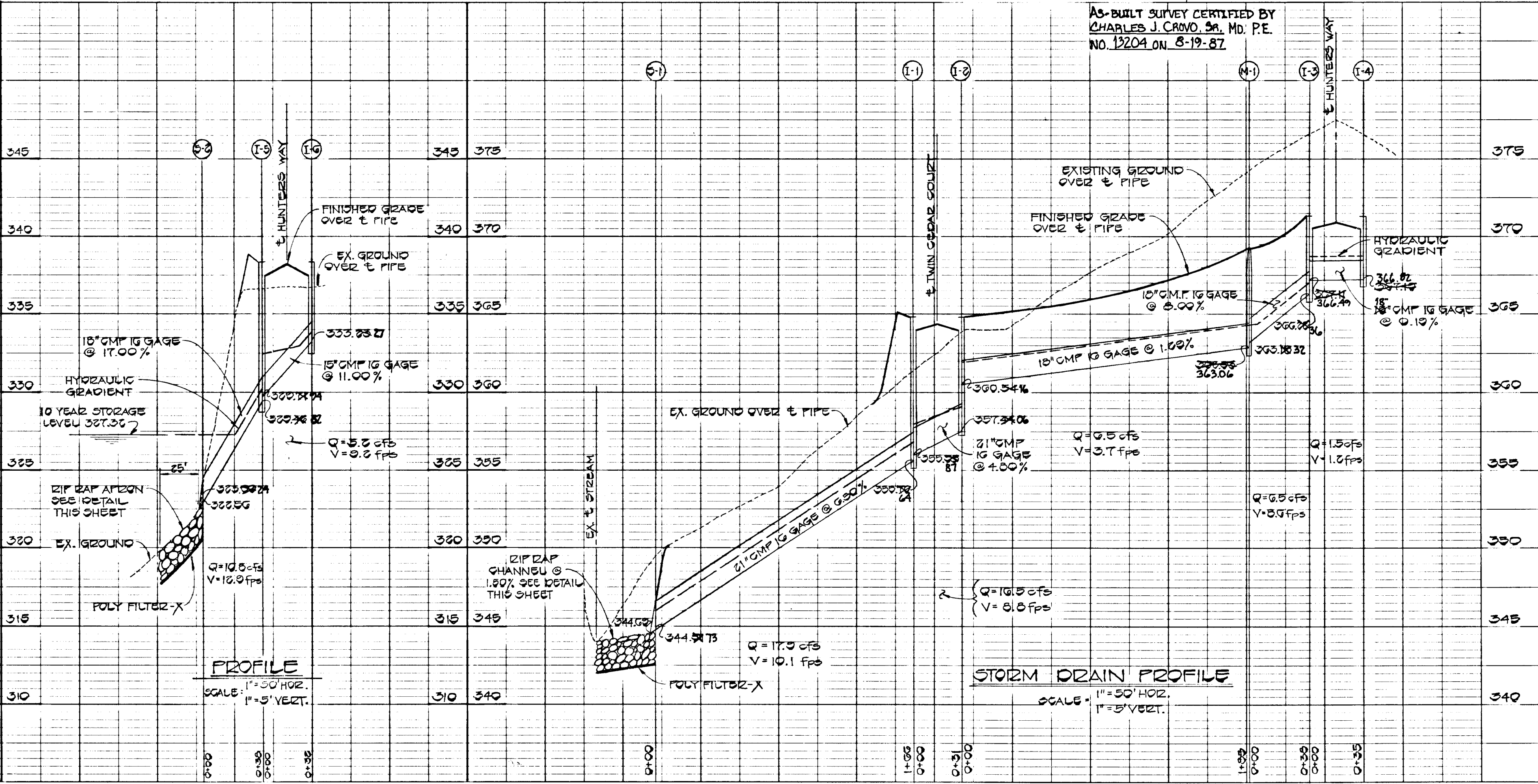
OWNER AND DEVELOPER  
JANET W. PHELPS  
10504 GORMAN ROAD  
LAUREL, MARYLAND 20707

PHILIPS ASSOCIATES  
3570 STERRETT PLACE  
SUITE 201  
COLUMBIA, MARYLAND 21044

SCALE AS SHOWN DATE NOV. 23, 1983 DWG. NO. 3 OF 4  
DES. C. CROVO DRN. A. BOGDAN CHK. R. CARTER

FISHER, COLLINS AND CARTER, INC.  
CIVIL ENGINEERS AND LAND SURVEYORS  
8388 COURT AVE.  
ELICOTT CITY, MARYLAND 21043

AS-BUILT SURVEY CERTIFIED BY  
CHARLES J. CROVO, SR., MD. P.E.  
NO. 12204 ON 8-19-87



1038

**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 ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

*James L. Newton* 11-25-83  
SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

I HEREBY 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.

*Charles J. Crovo* 12/4/83  
SIGNATURE OF ENGINEER DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Hahn* 1/28/85  
U.S. SOIL CONSERVATION SERVICE DATE

APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT:

*Stephen L. Hahn* 1/29/85  
DISTRICT HOWARD SOIL CONSERVATION DISTRICT DATE

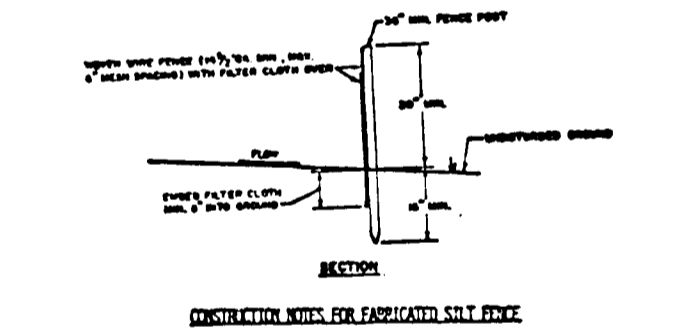
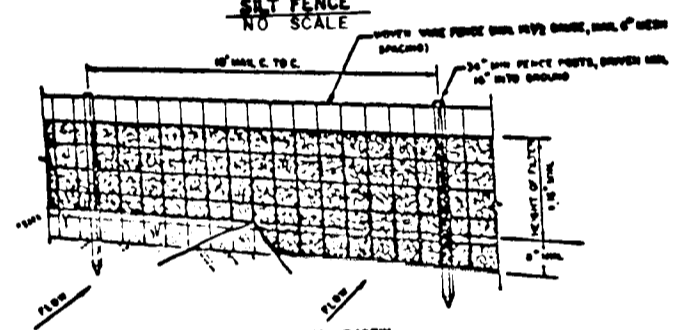
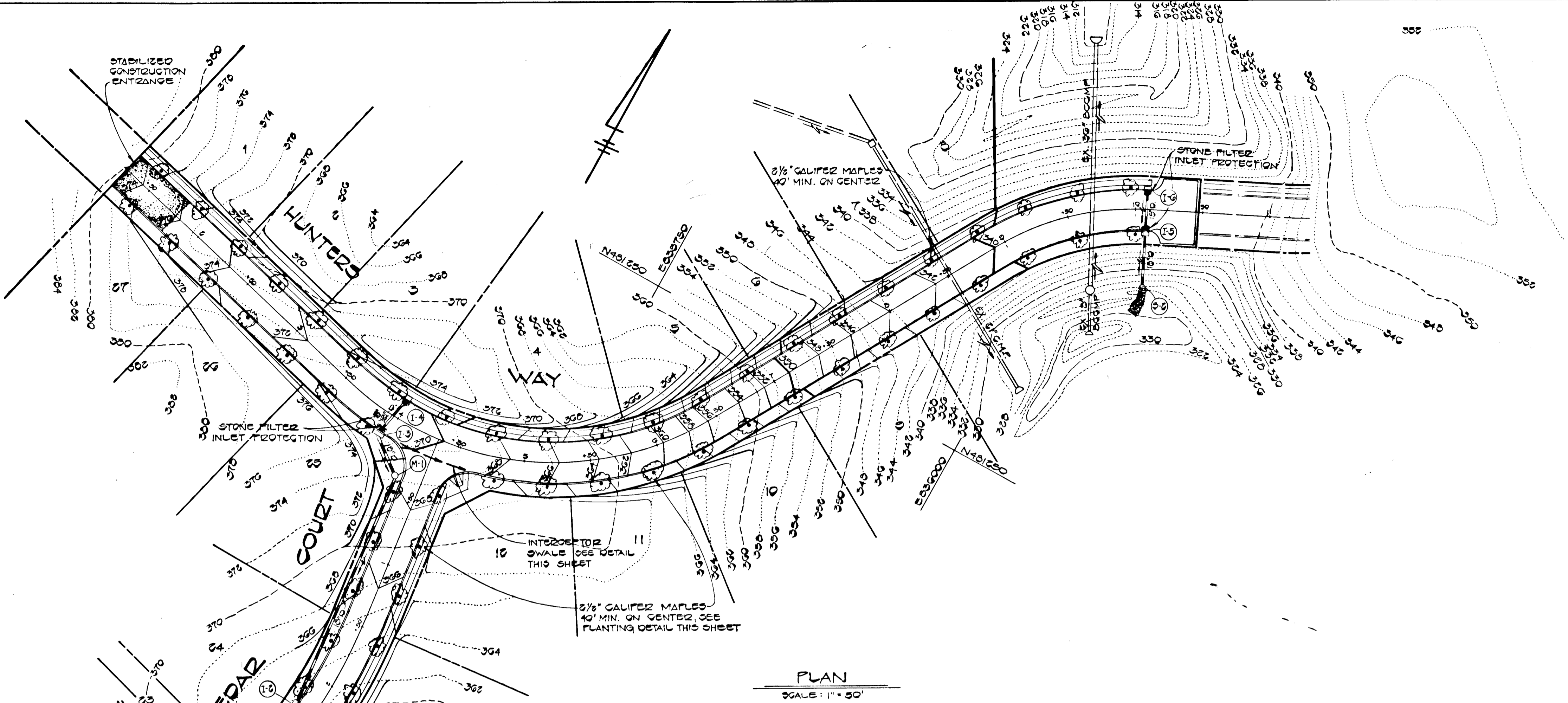
APPROVED: DEPARTMENT OF PUBLIC WORKS.

*William E. Row* 1-30-85  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING

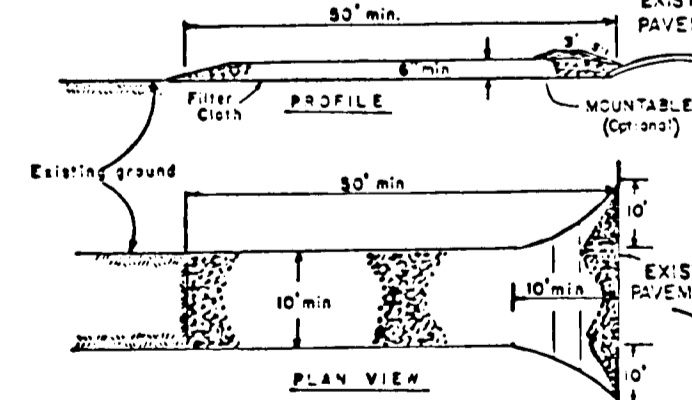
*Philip M. Macdonald* 1-28-85  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

- SEDIMENT CONTROL NOTES**
- SPECIFICATIONS FOR THE SEDIMENT CONTROL DETAILS 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 SEED 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% DAKOTA BLUE GRASS AND 20% PENN LAMN CREEPING FESCUE.
        - THE SEEDED AREA SHALL THEN BE RAKED WITH A YORK RATE (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.



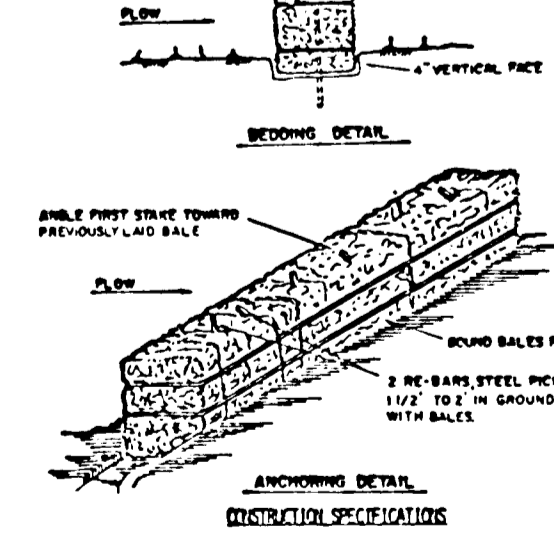
- When wire mesh is fastened securely to the filter cloth, it should be secured to the filter cloth with 2x4 stakes.
- Filter cloth to be fastened securely to the filter cloth with 2x4 stakes.
- When the sections of filter cloth are joined, the joint should be secured with 2x4 stakes.
- Maintenance shall be provided as needed to maintain the filter cloth in place.

**STABILIZED CONSTRUCTION ENTRANCE**



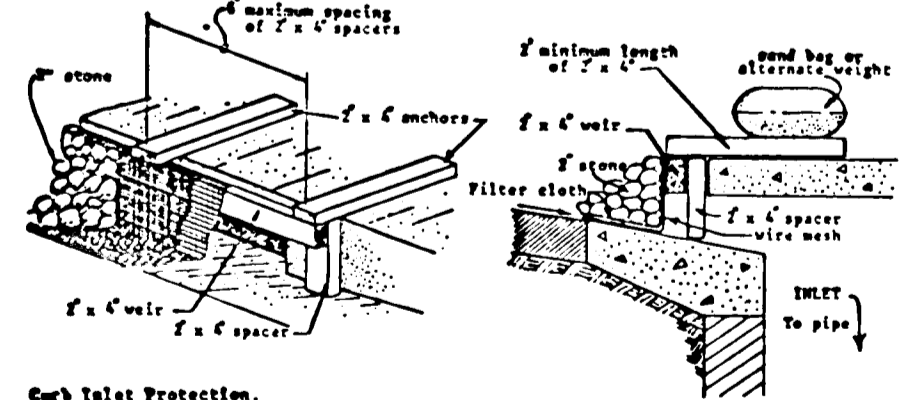
- CONSTRUCTION SPECIFICATIONS**
- Stone Bales - 24" x 24" x 18" or equivalent or recycled concrete equivalent.
  - Length - as required, but not less than 30 feet (except on a single east-west lot where a 30 foot minimum length would apply).
  - Thickness - not less than 18" (18" thick).
  - Width - 10' (10' wide) minimum, but not less than the full width at points where slopes or grades occur.
  - Filter Cloth - will be placed over the entire area prior to placing of stone. Filter will not be fastened on a single family residence.
  - Berms - Berms - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a berm shall be built with 18" stone or equivalent.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or blowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and regular periodic cleaning of any material used to keep sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
  - Washing - Trucks shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trap/ditch.
  - Periodic inspection and needed maintenance shall be provided after each rain.

**STRAW BALE DIKE**

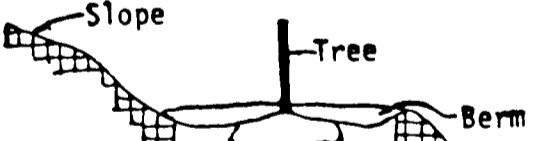


- Bales shall be placed on the top of a slope or on the contour and in a row with tight fitting abutting the adjacent bales.
- Each bale shall be secured in place by either two stakes or re-bar driven through the bale. The first stake in each bale shall be driven through the individual bale in an angle to force the bales together. Stakes shall be driven flush with the bales.
- Direction shall be provided and repair replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

**STONE FILTER INLET PROTECTION**



- Curb Inlet Protection**
- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (connecting throat length plus 2") as shown on the standard drawing.
  - Place a piece of approved filter cloth (40-85 ams) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
  - Securely nail the 2" x 4" weir to 8" long vertical spacers to be located between the weir and inlet face (max. 8" apart).
  - Place the assembly against the inlet throat and nail (minimum 2" length of 2" x 4" to the top of the weir at spacer locations. Three 2" x 4" anchors shall extend across the inlet top and be held in place by weights or alternate weight.
  - The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
  - Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter cloth in such a manner as to prevent water from entering the inlet under or around the filter cloth.
  - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
  - Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.



**GRADING FOR PLANTING ON SLOPES**



**CONSTRUCTION SPECIFICATIONS**

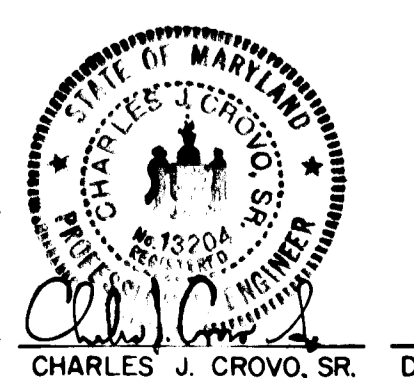
- All temporary shales shall have unobstructed positive grade to an outlet.
  - Diverted runoff from a disturbed area shall be conveyed to a sediment trapping device.
  - Diverted runoff from an undisturbed area shall outlet directly into an unobstructed stabilized area of non-erosive velocity.
  - All trees, shrubs, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the shale.
  - The shale shall be excavated or shaped to line, slope, and cross section as required to meet the criteria specified herein and be free of sharp projections or other irregularities which will impede normal flow.
  - Fills shall be compacted by earth moving equipment.
  - All earth removed and not needed in construction shall be placed so that it will not interfere with the functioning of the shale.
  - Stabilization shall be as per the chart below:
- | TYPE OF DISTURBANCE | GRADE     | 1 (5 ac or less)             | 2 (5 ac - 20 ac)     |
|---------------------|-----------|------------------------------|----------------------|
| 1                   | 0.5-3.0%  | SEED AND STRAW MULCH         | SEED AND STRAW MULCH |
| 2                   | 3.1-5.0%  | SEED AND STRAW MULCH         | SEED AND STRAW MULCH |
| 3                   | 5.1-8.0%  | SEED WITH LIME OR FERTILIZER | LIME OR FERTILIZER   |
| 4                   | 8.1-12.0% | LIME OR FERTILIZER           | LIME OR FERTILIZER   |
8. Periodic inspection and needed maintenance must be provided after each rain event.

**CONSTRUCTION SEQUENCE**

- OBTAIN GRADING PERMIT.
- CONSTRUCT STONE CONSTRUCTION ENTRANCE AS SHOWN ON PLAN.
- THE STORM WATER MANAGEMENT POND IN PHELPS MANOR SECTION TWO - AREA ONE, WILL BE UTILIZED FOR SEDIMENT CONTROL MEASURES. IF AN "AS BUILT CERTIFICATION" OF THE POND HAS BEEN APPROVED PRIOR TO CONSTRUCTION OF PHELPS MANOR SECTION TWO - AREA TWO, A SEDIMENT CONTROL PLAN WILL BE REQUIRED FOR PERMITS AND APPROVAL BY THE HOWARD SOIL CONSERVATION DISTRICT.
- THE CONTRACTOR SHALL INSPECT THE BLOCKING DEVICE AT THE 18" BCCMP IN THE STORM WATER MANAGEMENT POND PRIOR TO GRADING.
- GRADE ROAD TO SUBGRADE STABILIZING SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB USING PERMANENT SEEDING. INSTALL INTERCEPTOR SWALE AS SHOWN.
- CONSTRUCT STORM DRAIN SYSTEM.
- INSTALL STONE FILTER INLET PROTECTION DEVICES AT INLETS 1-1 TO 1-6.
- 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, SEDIMENT SHALL BE REMOVED FROM THE STORM WATER MANAGEMENT POND WHEN THE CLEANOUT ELEVATION 325.10 HAS BEEN REACHED.
- DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES.
- REMOVE STONE CONSTRUCTION ENTRANCE.
- CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSE, LAY SURFACE COURSE AND INSTALL CONCRETE SIDEWALK. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING. THE SEDIMENT BASIN SHALL BE DEWATERED BY PUMPING.
- THE SEDIMENT FROM THE STORM WATER MANAGEMENT POND SHALL BE PLACED ALONG LOT 9.
- THE STORM WATER MANAGEMENT POND SHALL BE GRADED IN ACCORDANCE WITH SHEET 3 OF THE ROAD CONSTRUCTION DRAWINGS IN PHELPS MANOR, SECTION TWO, AREA TWO. STABILIZATION SHALL BE IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS IN THE SEDIMENT CONTROL NOTES. INSTALL RIP RAP APRONS.
- ALL DISTURBED AREAS SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.

**SITE ANALYSIS**

- TOTAL AREA OF SECTION 2 AREA 2..... 14.07 Ac ±
- IMPERVIOUS AREA..... 1.10 Ac ±
- AREA TO BE VEGETATED..... 1.41 Ac ±
- UNDISTURBED AREA..... 11.56 Ac ±



**GRADING AND SEDIMENT CONTROL PLAN**  
**WARFIELD'S RANGE**  
 SECTION TWO AREA TWO  
 LOTS 1-28  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN  
 NOVEMBER 23, 1983  
 SHEET 4 OF 4

1038

FISHER, COLLINS AND CARTER, INC.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVENUE  
 ELLICOTT CITY, MARYLAND 21043  
 TELEPHONE: (301) 461-2855