HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

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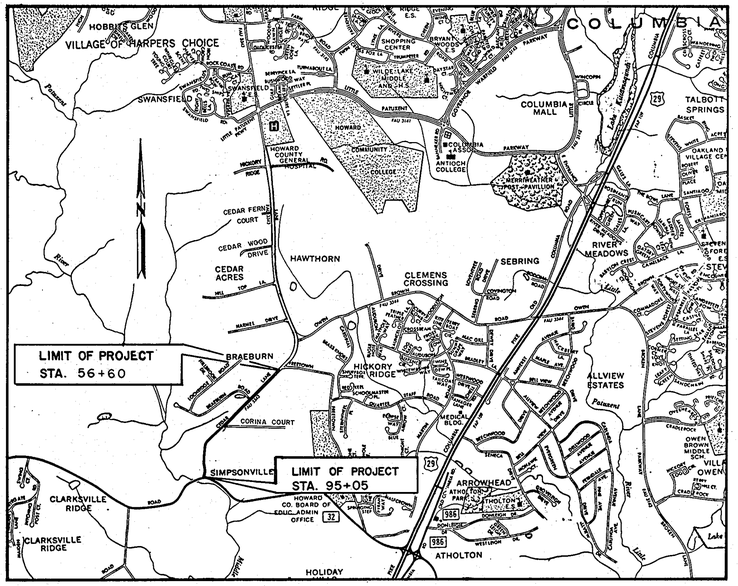


LOCATION MAP
SCALE: 1" = 2000'

CERTIFICATION BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

SIGNATURE OF DEVELOPER — DATE 4-9-90

CERTIFICATION 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"

William E. Purdum
SIGNATURE - PURDUM AND JESCHKE — DATE

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

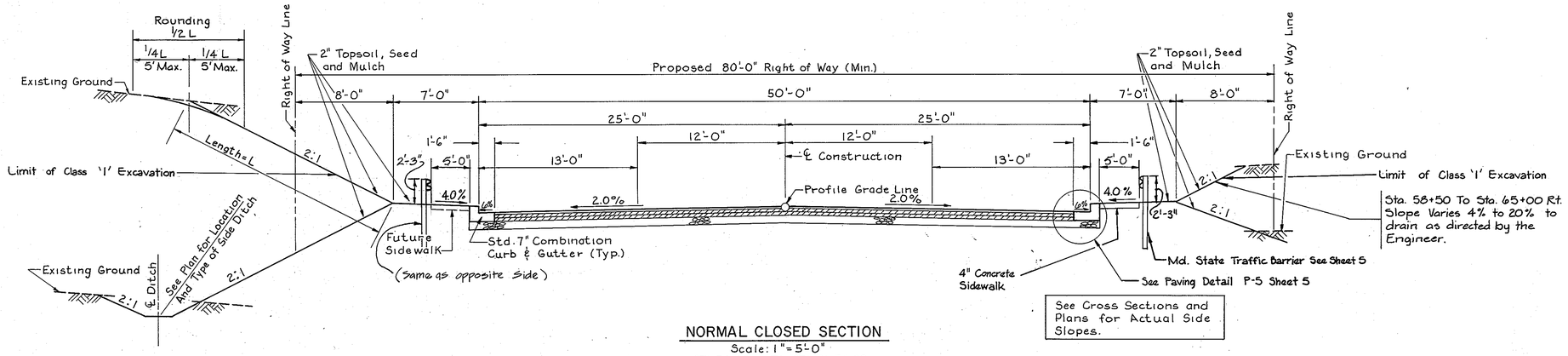
SIGNATURE — DATE: 7/12/90
U.S. SOIL CONSERVATION SERVICE

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

APPROVED: — DATE 7/12/90
HOWARD S.C.D.

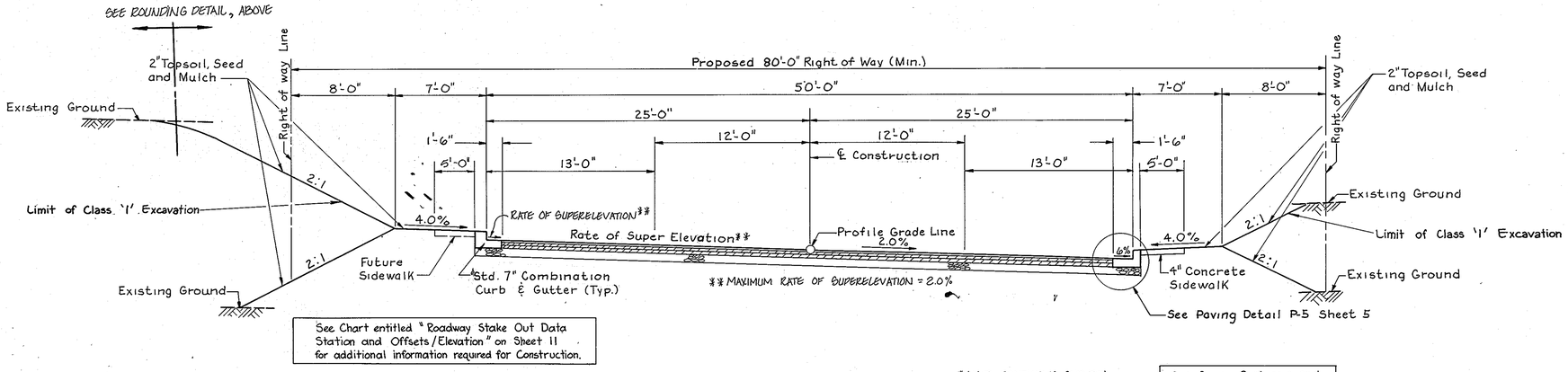
CEDAR LANE (AS-BUILT)
PHASE 2
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086

FINAL XXCE-90-001



NORMAL CLOSED SECTION

Scale: 1"=5'-0"
STA. 56+60 To STA. 81+56.38



See Chart entitled "Roadway Stake Out Data Station and Offsets/Elevation" on Sheet 11 for additional information required for Construction.

SUPERELEVATED CLOSED SECTION *(FOR ROADWAYS CURVED TO THE RIGHT.)

Scale: 1"=5'-0"
STA. 81+56.38 To STA. 85+00

See Cross Sections and Plans For Actual Side Slopes, and Roadway Cross Slopes.

* FOR SUPERELEVATED ROADWAYS CURVED TO THE LEFT THE ROADWAY TYPICAL SECTION WOULD BE THE MIRROR IMAGE OF THIS TYPICAL SECTION.

GENERAL NOTES

1. Right of Way Lines shown on these Plans are shown for assistance in interpreting the Plans; for any Fee Right of Way and Easement information see Right of Way Plats.
2. Endwalls are not to be constructed until grading is completed. The types of endwalls are subject to modifications.
3. Existing Private Sidewalks disturbed by the work shall be reconstructed. Steps shall be provided where necessary as a result of grading.
4. All Pipes Elevation shown are invert (I)-Elevations.
5. All Slopes and/or Disturbed Areas shall receive Solid Sodding on lawn areas and Seeding and Mulching for areas around trees and bushes except where otherwise indicated on the plans or as directed by the Engineer.
6. The Contractor shall install and maintain all temporary Sediment Control Measures as shown on the drawings. However, any Sediment Control Measures not Specifically indicated in the Contract Documents, but required as a result of the Contractor's Excavations or activities shall not be cause of Extra Payment.
7. Location Points for Inlets, Manholes and Structures

Item	Horizontal Location	Vertical Location
Curb Type Inlets	Center Face of Curb	Top of Curb
Grate Type Inlets	Center of Grate	Top of Grate
Manholes	Center of Cover	Top of Cover
Structures w/Stack	Center of Cover	Top of Cover
Endwalls	Center of Wall	Top of Wall

8. Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense.
9. The Contractor shall locate Existing Utilities a minimum of two weeks in advance of Construction operations in vicinity of utilities. Costs for locating existing utilities and for adjusting utility appurtenances to meet finished grades will be included in other items of the Contract.
10. Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:

    Miss Utility (collect) - 257-7777
    Baltimore Gas & Electric Company, Underground Electric Distribution Engineering "Damage Control" - 234-6313
    Baltimore Gas & Electric Company, Underground Gas Distribution Engineering - 234-5533
    Chesapeake and Potomac Telephone Company - 597-8585
    State Highway Administration - 531-5533
    Howard Cable TV - 461-1156
    Howard County Division of Traffic Engineering - 992-2430

11. All manholes shall be 4'-0" inside diameter.
12. Standard Details for this Contract shall be the Howard County Standard Details as Supplemented by the Maryland State Highway Administration Standard Details, Maryland State Standards and Specifications for Soil Erosion and Sediment Control and Manual on Uniform Traffic Control Devices of the U. S. Department of Transportation.
13. Trees are to be protected from damage to the maximum extent.
14. Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in the lump sum price bid for Clearing and Grubbing.
15. Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
16. Top Elevations of structures shall be adjusted in the field to meet existing conditions as directed by the Engineer.
17. Grading shall be done in such a manner so as to insure positive drainage to the proposed inlet Structures.
18. Horizontal and Vertical controls are based on the Maryland State Grid Coordinate System.
19. Clearance between existing and proposed utilities shall be a minimum of 6". Clearance between all utility poles and proposed utilities shall be a minimum of 2'-0". Cost of bracing at poles shall be included in the bid for Storm Drain lines.
20. Size and type of pipe utilized for through-wall connections between Double A-10 Inlet installations will be equivalent to the outlet pipe.
21. See Sheet No. 4 for Maintenance of Traffic Notes.
22. Proposed culverts under driveways will be with std. end sections.

985

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED STATE OF MARYLAND
William D. Purdum

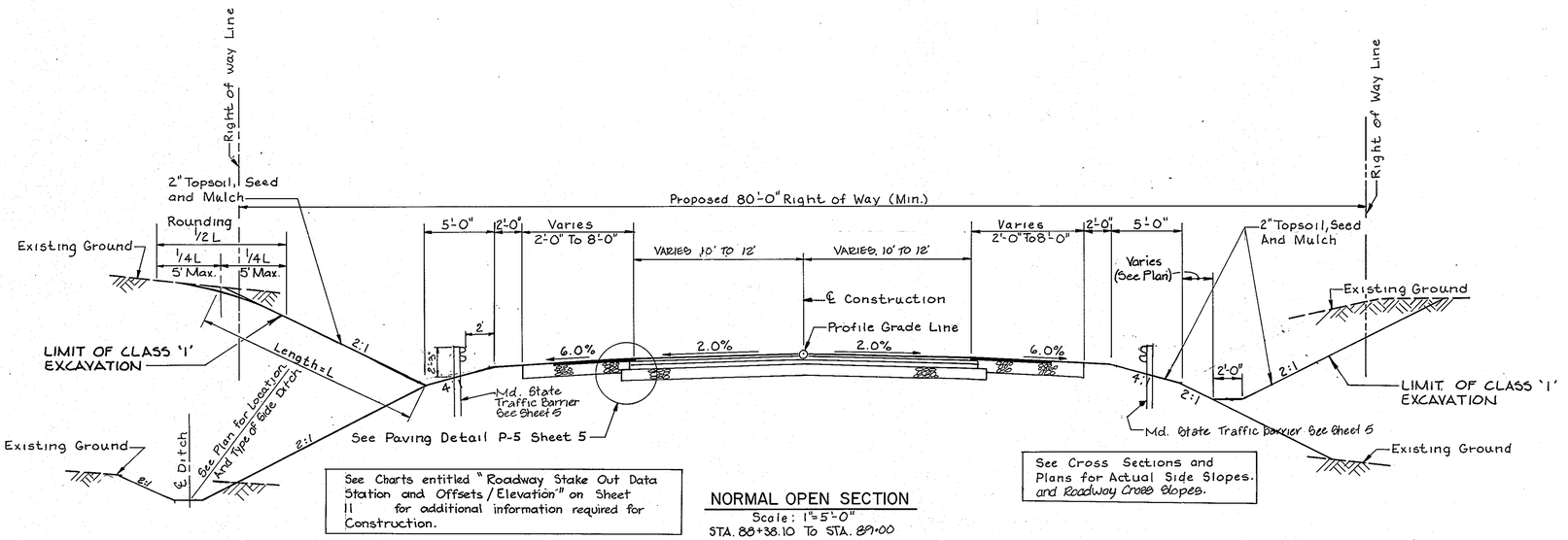
DES: JCT					
DRN: PWR					
CHK: WDP					
DATE 6/90			REVISION	DATE	

TYPICAL SECTIONS & GENERAL NOTES
CEDAR LANE — PHASE 2
600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 28

FINAL XXCE-90-002

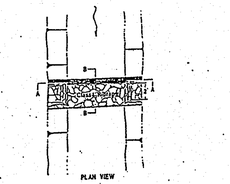


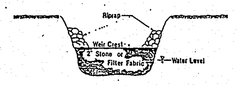
See Charts entitled "Roadway Stake Out Data Station and Offsets / Elevation" on Sheet 11 for additional information required for Construction.

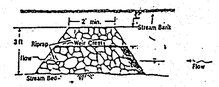
NORMAL OPEN SECTION

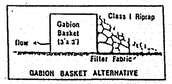
Scale: 1"=5'-0"
STA. 88+38.10 To STA. 89+00

See Cross Sections and Plans for Actual Side Slopes. and Roadway Cross Slopes.









I. Description

The work encompasses the installation of an in-stream stone dike to be used as a sediment filtering device for streams that generally carry wet weather flow.

II. Material Specifications

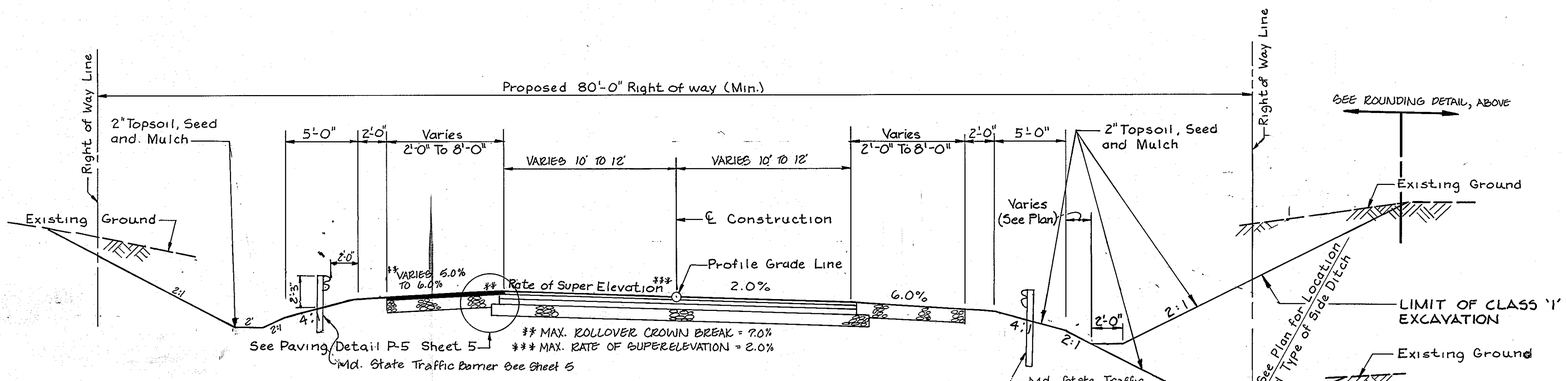
1. Small Riprap - 6-12 inch washed stone and gravel shall be used.
2. Filter Fabric - The filter cloth shall be a woven or non-woven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. A one foot layer of 2" washed stone may be used instead of filter fabric.
3. Gabion Baskets - Class I gabion baskets shall meet the requirements listed in MD03.2.

III. Construction Requirements

1. Structure to be installed in-stream as first order of business to trap sediment generated during construction activities.
2. The top width of the dike is to be from 2-4 feet.
3. The distance between the dike and the disturbance is to be determined by flow rate of the waterway.
4. Gabion baskets may be used in lieu of small riprap as indicated by alternative section.
5. Structure is to remain in place until all disturbed areas have been stabilized in accordance with an approved sediment and erosion control plan.
6. Entrapped sediment is to be excavated periodically and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
7. Structure can be removed once approved by inspecting authority.

IN - STREAM STONE DIKE

NO SCALE



** MAX. ROLLOVER CROWN BREAK = 7.0%
*** MAX. RATE OF SUPERELEVATION = 2.0%

See Charts entitled "Roadway Stake Out Data Station and Offsets / Elevation" on Sheet 11 for additional information required for Construction.

SUPERELEVATED OPEN SECTION

*(FOR ROADWAYS CURVED TO THE RIGHT.

Scale: 1"=5'-0"
STA. 85+00 To STA. 88+38.10

See Cross Sections and Plans for Actual Side Slopes. and Roadway Cross Slopes.

* FOR SUPERELEVATED ROADWAYS CURVED TO THE LEFT, THE ROADWAY TYPICAL SECTION WOULD BE THE MIRROR IMAGE OF THIS TYPICAL SECTION.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

PURDUM & JESCHKE
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1029 North Calvert Street
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PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED STATE OF MARYLAND

DES: JCT
DRN: PWR
CHK: WDP
DATE: 6/90

BY	NO.	REVISION	DATE

TYPICAL SECTIONS

CEDAR LANE — PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

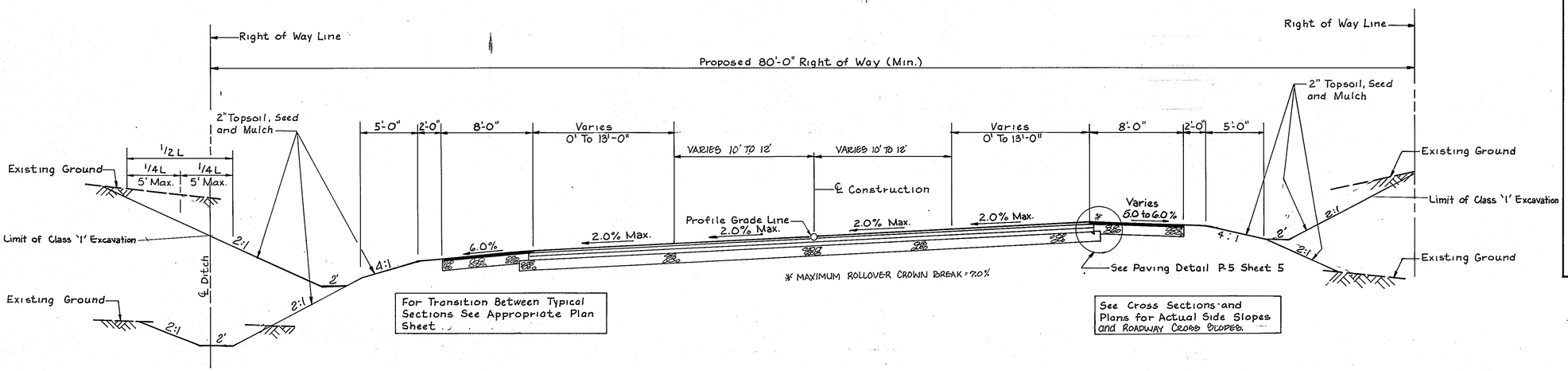
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 28

985

FINAL XXCE-90-003



TRANSITION FROM 4-LANE (50'-0" WIDE) TO 2-LANE (24'-0" WIDE)

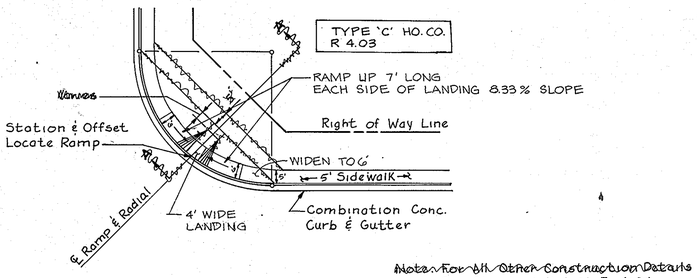
Sta. 85+00 To Sta. 86+50

See Charts Entitled "Roadway Stake Out Data Station and Offsets/Elevations" on Sheet 11 for Additional Information Required for Construction.

MAINTENANCE OF TRAFFIC

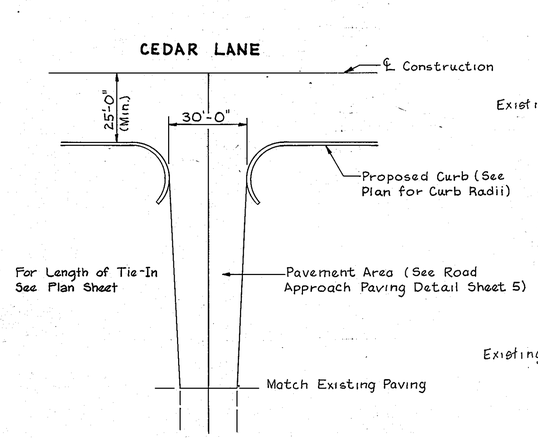
1. All maintenance of traffic plans, materials, and devices shall be in accordance with the 1978 Manual on Uniform Traffic Control devices, and any subsequent addenda.
2. Access to all private driveways shall be maintained at all times between the hours of 3:00 p.m. and 9:00 a.m. Between the hours of 9:00 a.m. and 3:00 p.m., access shall be maintained except when prohibited by an open trench. All affected residents shall be notified at least one (1) hour prior to closing of any driveway.
3. Access to cross streets shall be maintained at all times.
4. Road Construction Ahead signs (W20-1) shall be placed in advance of any construction areas as follows:
   a. On Cedar Lane, at 1500, feet in advance of construction.
   b. On all other cross streets, minimum 250 feet in advance of construction.
   c. Wherever else as directed by the Engineer.

   End Construction signs (G20-2) shall be placed on Cedar Lane minimum 250 feet beyond the end of any construction area.
5. Where traffic is being maintained on one side of the road while construction takes place on the other, appropriate barriers, barricades, or drums shall be placed between the traveled way and the construction area. Approved Type A low intensity flashing warning lights shall be used during hours of darkness. Travel directions will be posted as shown on Traffic Control Plans (TCPS) in the Special Provisions.



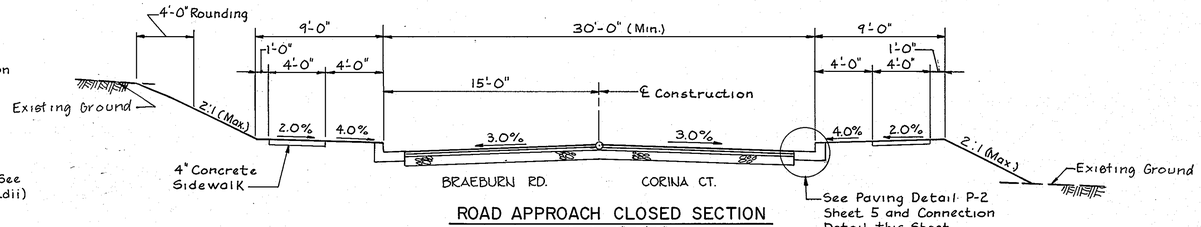
MODIFIED SIDEWALK RAMP

Not To Scale



CONNECTION DETAIL FOR OPEN SECTION ROAD APPROACHES

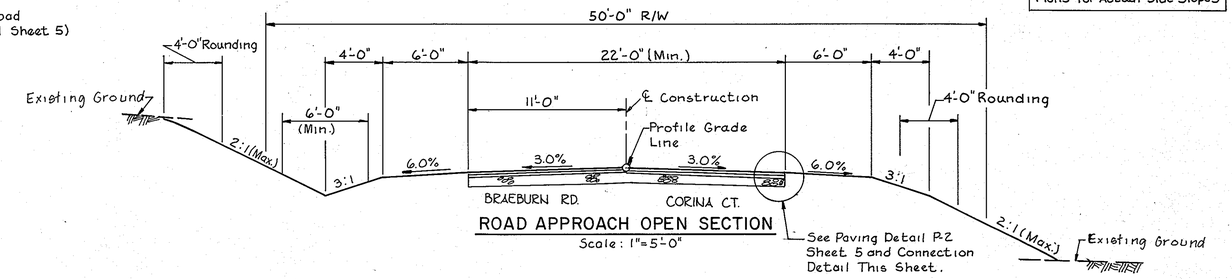
Not To Scale



ROAD APPROACH CLOSED SECTION

Scale: 1"=5'-0"

See Cross Sections and Plans for Actual Side Slopes



ROAD APPROACH OPEN SECTION

Scale: 1"=5'-0"

See Cross Sections and Plans for Actual Side Slopes

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

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PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED — STATE OF MARYLAND
William D. Purdum

DES: JCT	HAKMS & ASSOCIATES	2	AS-BUILT	1/2/92	
DRN: PWR					
CHK: WDP					
DATE: 6/90	BY	NO.	REVISION	DATE	

600' SCALE MAP NO. _____ BLOCK NO. _____

TYPICAL SECTIONS & DETAILS
CEDAR LANE — PHASE 2

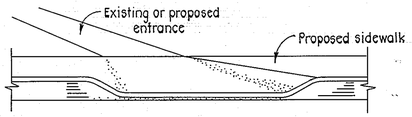
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 28

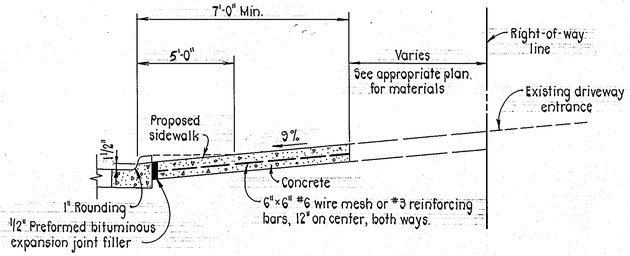
985

FINAL

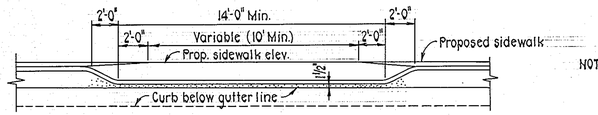
XXCE90-004



DRIVEWAY ENTRANCE



SIDE VIEW



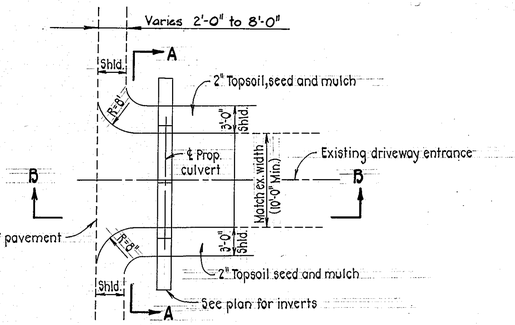
NOTE: For all other construction details, see Standard Detail R-6.02.

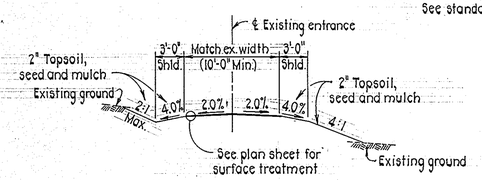
FRONT VIEW

NOTE: See plan for tie in limit.

MODIFIED CLOSED-SECTION DRIVEWAY ENTRANCE DETAIL

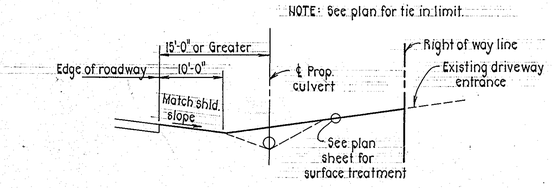
Not to Scale





NOTE: For all other construction details. See standard detail R-6.06.

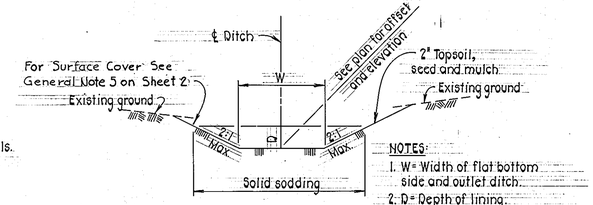
SECTION A-A



SECTION B-B

TYPICAL OPEN-SECTION DRIVEWAY ENTRANCE DETAIL

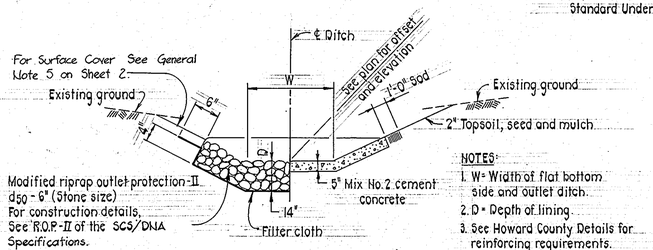
Not to Scale



NOTES:
1. W = Width of flat bottom side and outlet ditch.
2. D = Depth of lining. (See appropriate plan for W & D)

SOD SIDE DITCH

Not to Scale



NOTES:
1. W = Width of flat bottom side and outlet ditch.
2. D = Depth of lining.
3. See Howard County Details for reinforcing requirements. (See appropriate plan for W & D)

CONCRETE & RIPRAP SIDE AND OUTLET DITCH

Not to Scale

Construction code shown on plans

PROPOSED ROADWAY CONSTRUCTION LEGEND

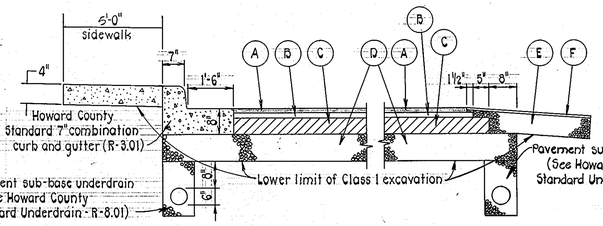
1. Cedar Lane main line (See paving detail this sheet and typical section sheets 2, 3, & 4)
2. Road approach tie ins (See paving detail this sheet and typical section sheet 4).
3. Curb and gutter (See standard R-3.01).
4. Sidewalks (For materials see standard R-3.05)
5. Modified type "A" sidewalk ramp (See detail this sheet).
6. Storm drains
   - Inlets — *Stations, *Offset distance, I *No.
   - *(As shown on appropiate plans)
   - Denotes cut line.
   - Denotes fill line.
   - Denotes directional flow at proposed ditch and swale ℄ (See appropiate plan for offsets and elevations of proposed ditch and swale ℄)
7. 6" Base course, using graded aggregate base course (CR-6).
8. 1" Bituminous concrete surface course. 4" Base course, using graded aggregrate base course (CR-6).
9. 7" Mix No. 2 plain cement concrete.
10. Md. State Traffic Barrier W Beam (Std. Nos. 660.01, 660.02, 660.03, 660.31, 660.32, 660.33, 660.34) For Location See Normal Closed Section Sheet 2 and appropriate plan Sheets.

RIGHT OF WAY LEGEND

- E — Drainage and utility easement line
- ER — Revertible easement line
- R/W — Existing Right of Way line
- R — Proposed Right of Way Line

DRIVEWAY ENTRANCE TREATMENT LEGEND

(See modified closed section driveway entrance detail this sheet)

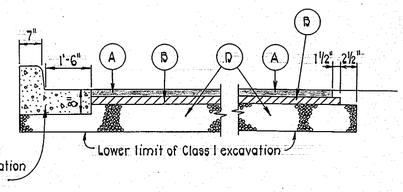


CLOSED SECTION — OPEN SECTION

- (A) 1 1/2" Bituminous concrete surface (SN).
- (B) 1 1/2" Bituminous concrete base (BI).
- (C) 5" Bituminous concrete base (BI).
- (D) 8" Base course, using graded aggregate base course (CR-6).
- (E) 6" Base course, using graded aggregate base course (CR-6).
- (F) Double bituminous surface treatment.

PROPOSED CEDAR LANE PAVING DETAIL P-5

Not to Scale



CLOSED SECTION — OPEN SECTION

- (A) 1 1/2" Bituminous concrete surface (SN).
- (B) 2 1/2" Bituminous concrete base (BI).
- (D) 8" Base course, using graded aggregate base course (CR-6).

PROPOSED ROAD APPROACHES PAVING DETAIL P-2

Not to Scale

BRAEBURN ROAD
CORINA COURT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 7/12/90
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED STATE OF MARYLAND

DES: JCT
DRN: ARW
CHK: WDP
DATE: 6/90

BY	NO.	REVISION	DATE

CONSTRUCTION — R/W LEGEND & DETAILS
CEDAR LANE — PHASE 2
600' SCALE MAP NO. ____ BLOCK NO. ____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 of 28

985

FINAL XXCE-90-005

SEDIMENT CONTROL NOTES

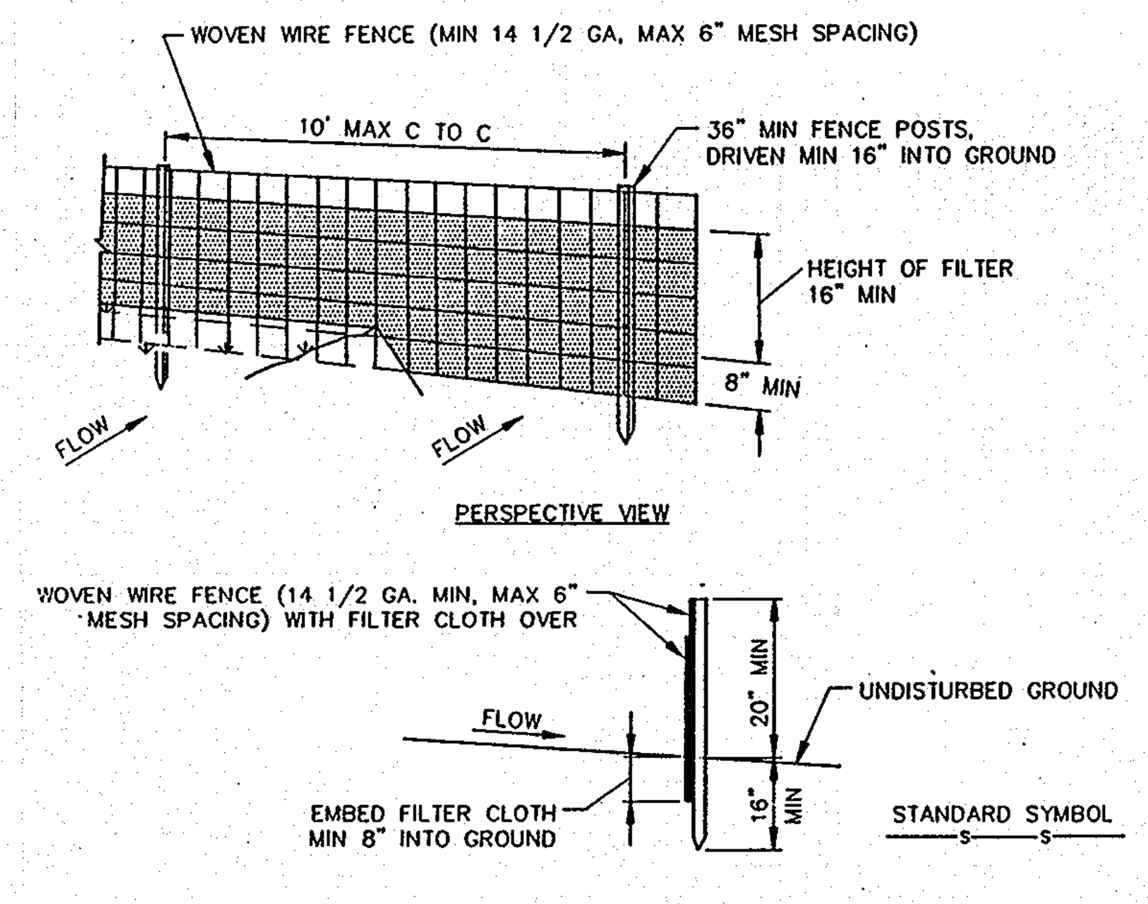
All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

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 DPW sediment control inspector.

SILT FENCE

NOT TO SCALE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- 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 OVER-LAPPEDMBY 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

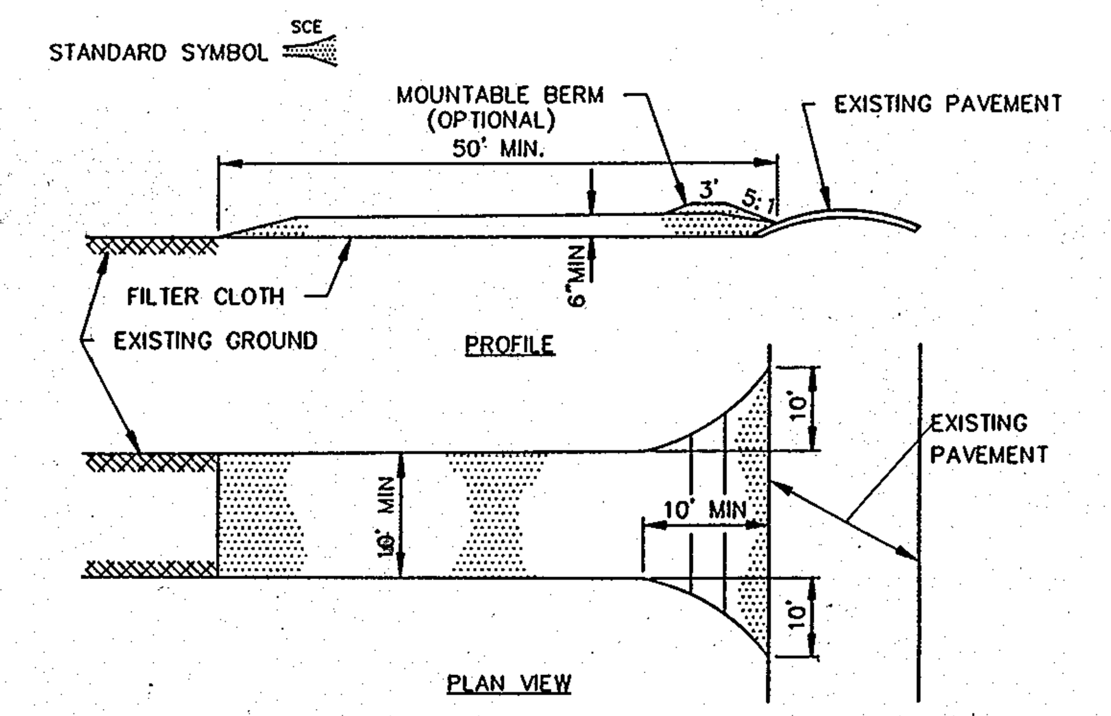
FILTER CLOTH:
FILTER X, MIRAFI 100X, STABLINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT:
GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



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 (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 priop to placing of stone.
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 5:1 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.

STABILIZED CONSTRUCTION ENTRANCE

SEDIMENT CONTROL NOTES

1. 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).
2. 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.
3. 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.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, Storm Drainage, of the HOWARD COUNTY DESIGN MANUAL.
5. 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 seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50), and mulching (Sec. 52). Temporary stabilization with mulch along can only be done when recommended seeding dates do not allow proper germination and establishment of grasses.
6. 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 R/W and Easements	10.84	acres
Area disturbed	9.18	acres
Area to be roofed or paved	4.03	acres
Area to be vegetatively stabilized	5.15	acres
Total cut	18,640	cu.yds.
Total fill	14,818	cu.yds.
Offsite waste/borrow area location	To be determined by Contractor	

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. 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 approvals may not be authorized until this initial approval by the inspection agency is made.
11. See sheet Nos. 7 and 8 for additional Sediment and Erosion Control Notes and Details.

EARTHWORK SUMMARY

△

TOTAL CLASS I EXCAVATION	10,715 CY
Leaf Mulch Removal under Shallow Fill	- 69 CY
Cut From Grading Table	10,646 CY
Minus *Class I-A From Grading Table	-*1143 CY
TOTAL CLASS I EXCAVATION	9503 CY
Minus Topsoil Removed in Cut	-2,022 CY
Cut Adjusted From Grading Table	7481 CY
Loss Due To Densification (20±%)	-1,445 CY
ESTIMATED CLASS I AVAILABLE FOR EMBANKMENT	6,036 CY
CLASS 2 EXCAVATION	
From Grading Table 2843 CY	
TOTAL CLASS 2 EXCAVATION	6376 CY
Loss Due To Handling and Densification (12±%)	765 CY
ESTIMATED CLASS 2 AVAILABLE FOR EMBANKMENT	5611 CY
CLASS 5 EXCAVATION	
From Grading Table 335 CY	
TOTAL CLASS 5 EXCAVATION	335 CY
Loss Due To Handling and Densification (10%)	- 34 CY
ESTIMATED CLASS 5 AVAILABLE FOR EMBANKMENT	301 CY

EXCAVATION AVAILABLE FOR EMBANKMENT	
Class 1 Excavation Densified	6036 CY
Class 2 Excavation Densified	5611 CY
Class 5 Excavation Densified	+ 301 CY
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	11,948 CY
EMBANKMENT REQUIRED	16,253 CY
Leaf Mulch Removal Refill	+ 69 CY
Total Embankment Required	16,322 CY
Available Excavation	-11,948 CY
Estimated Borrow Excavation	4,374 CY

PROPOSAL QUANTITIES

CLASS I EXCAVATION	11,000 CY
CLASS I-A EXCAVATION	1200 CY
CLASS 2 EXCAVATION	6,400 CY
CLASS 5 EXCAVATION	400 CY
BORROW EXCAVATION	4500 CY

GRADING TABLE

STATION FROM	STATION TO	CUT	EMBANKMENT	TOPSOIL CUT	TOPSOIL FILL	UNSUITABLE MATERIAL CUT	UNSUITABLE MATERIAL FILL	CLASS 2	CLASS 5	CUT ADJUST.	CUT DEN.	REMARKS
												T/S Denotes Topsoil, L/M Denotes Leaf Mulch
												S Denotes Shrinkage factor for cut adjusted
												STA.56± to 68± Shrinkage factor = 10% (S=10%)
												STA.68± to 85± Shrinkage factor = 25% (S=25%)
												for cuts of 5'depth or less
												STA.68± to 85± Shrinkage factor = 10% (S-10%)
												for cuts below 5'depth
												STA.85± to 95± Shrinkage factor = (20%)
56+50	65+50	2494		546						1948	1753	6"T/S In Open Areas, 8"T/S & 4"L/M in woods (S=10%)
56+50	63+50	*891								—	—	*CL I-A Undercutting (Not Avail. For Embank.)
56+50	67+00		3211				69					4"Leaf Mulch Removal Under Shallow fills 3"or less
58+50	60+00							167				Side Ditch
65+00	67+00							511				Side Ditch
67+00	80+00		9530									
67+00	76+00							1769	335			Side Ditch & Stormwater Management Pond Lt Sta. 74+50
68+00	74+00	3252		863						2389	1792	6"T/S in open areas, 14"T/S & 4' L/M in woods
												Cut less then 5'depth (S=25%)
68+00	72+00	693								693	624	Cut below 5'depth (S=10%)
70+50	73+50	*252								—	—	*CLI-A Undercutting (Not Avail. for Embank.)
76+00	80+00	1270		207						1063	797	6" T/S in open areas, Cut less then 5' depth (S=25%)
78+50	80+00	128								128	115	Cut below 5' depth (S=10%)
BRAEBURN RD.												Approach Road Rt. Sta. 68+61.48
0+50	1+30		170					396				Side Ditch
0+50	1+30	49								49	37	(S= 25%)
ENTRANCES												
LT. 73+70		2	10							2	2	(S=25%)
LT. 75+36		4	40							4	3	(S= 25%)
80+00	85+50	1183 △		244 △						939 △	704 △	6" T/S in open areas, Cut less then 5'depth (S-25%)
80+00	89+00							1600 △				SIDE DITCH
80+00	89+00		3122 △									
85+50	89+00	255 △		*162 △						93 △	74 △	*3½ Ave. T/S & L/M not estimated for landscaping. (S=20%)
CORINA CT.												Approach Road Rt. Sta. 82+38.46
0+(	1+75	89								89	67	Cut less then 5'depth (S=25%)
0+	1+75		68									
ENTRANCES												
RT. 84+81		2	14							2	2	(S: 25%)
RT. 85+01		2	16							2	2	(S= 25%)
RT. 85+92		2	18							2	2	(S= 20%)
LT 88+29		4	52							4	3	(S: 20%)
89+00	95+50							1,933				SIDE DITCH
ENTRANCE												
RT 91+08		74	2							74	59	(S: 20%)
TOTALS		10,646 △	16253 △	2,022 △			69	6,376 △		7,481 △	6,036 △	
				NOTE: DENSIFICATION FACTORS VARY SEE REMARKS								

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent, long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: 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 (9 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. of 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. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well-anchored straw.

Mulching: Apply 1½ 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 218 gallons per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 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.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

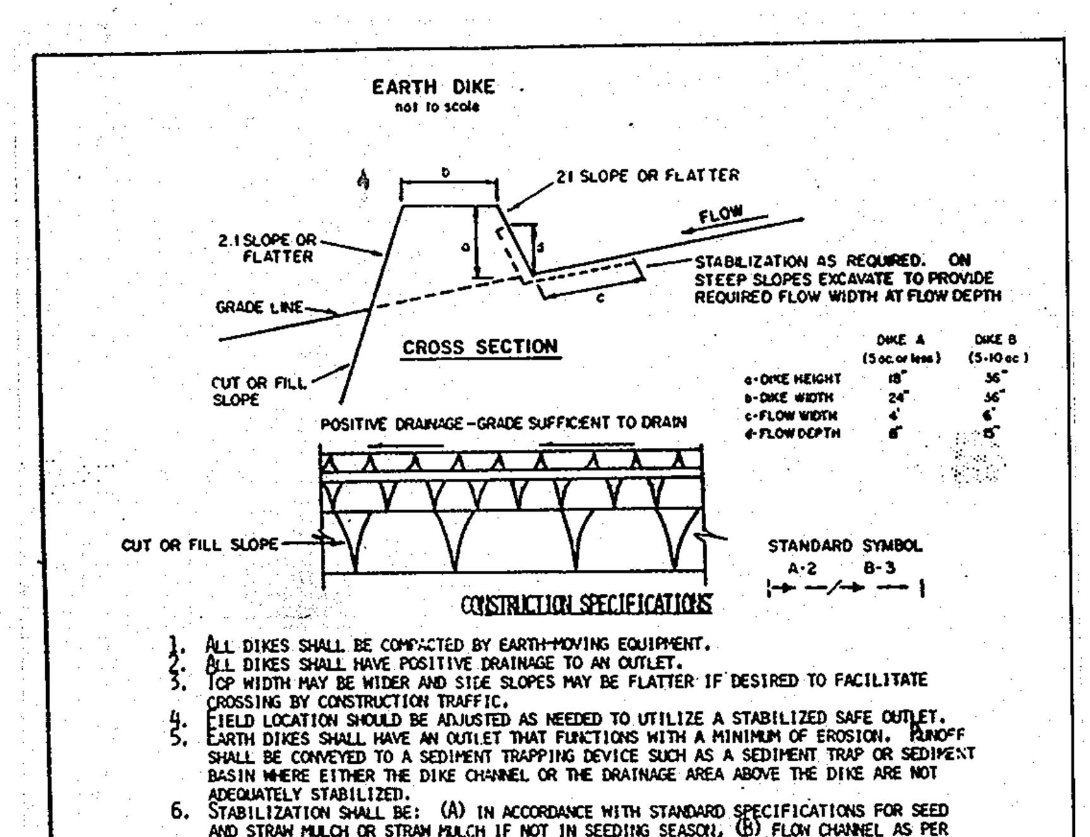
Seedbed Preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2½ bushel per area of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 16 thru February 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 1½ 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 218 gal. per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal. per acre (8 gal./1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

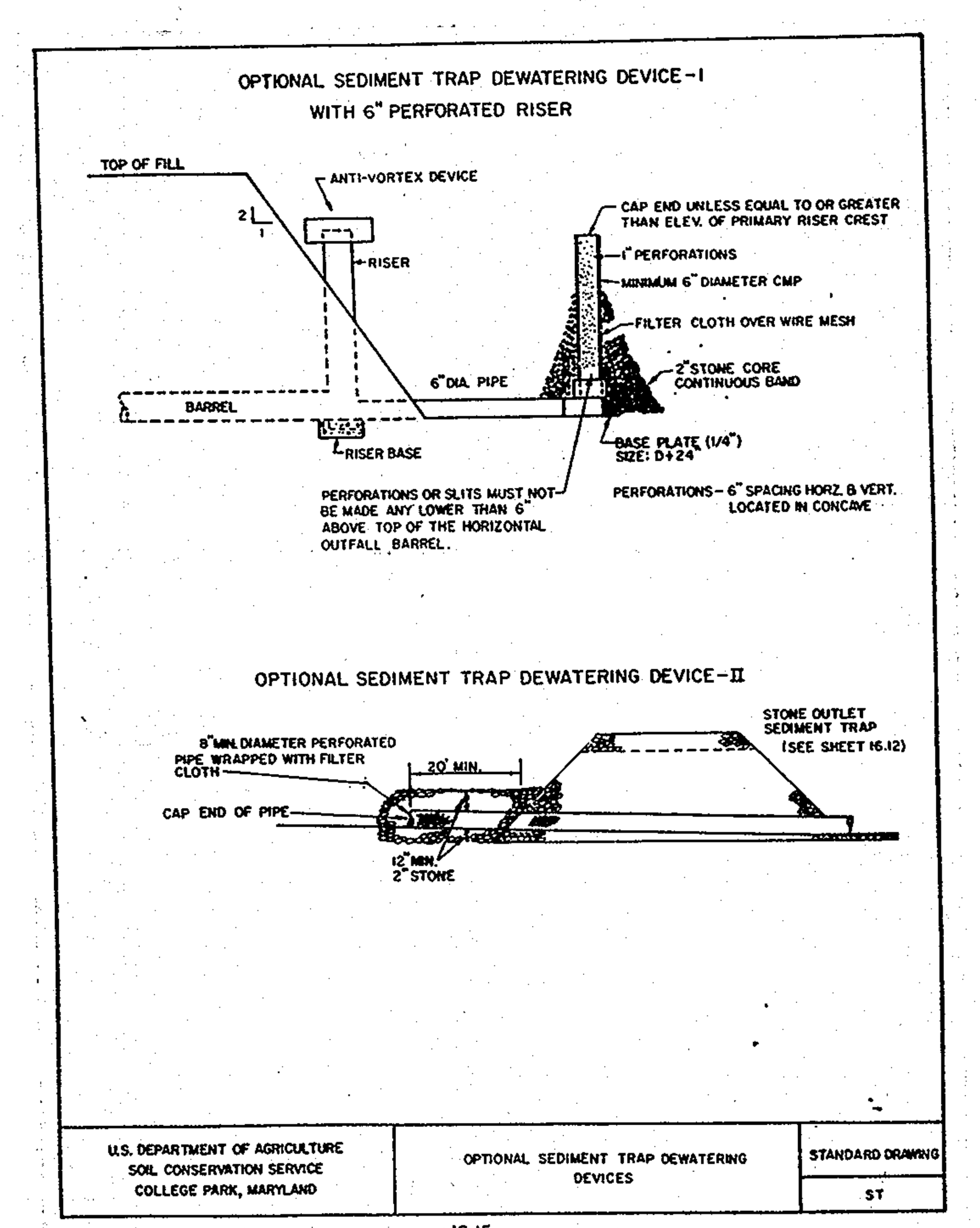
TYPE OF TREATMENT	CHANNEL & GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH.
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND | EARTH DIKE | STANDARD DRAWING ED-1

10.03

NOTE: ALL CHANNELS SHALL BE LINED WITH JUTE MATTING OR RIPRAP UNLESS OTHERWISE SPECIFIED ON PLANS.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND | OPTIONAL SEDIMENT TRAP DEWATERING DEVICES | STANDARD DRAWING ST

16.15

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[illegible] 11/8/88 — DIRECTOR OF PUBLIC WORKS, DATE
[illegible] 11-8-88 — CHIEF, BUREAU OF ENGINEERING, DATE
[illegible] 11/8/88 — CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE, DATE

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

STATE OF MARYLAND — RICHARD HENRY BERICH — No. 10959 — REGISTERED PROFESSIONAL ENGINEER

DES: JCT		△	PROFILE CHANGE	9/90
DRN: PWR				
CHK: WDP				
DATE: 6/90	BY	NO.	REVISION	DATE

SEDIMENT CONTROL DETAILS & EARTHWORK ANALYSIS

CEDAR LANE – PHASE 2

600' SCALE MAP NO. ______ BLOCK NO. ______

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

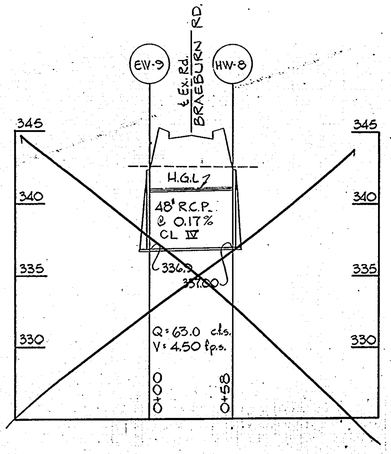
SCALE AS SHOWN

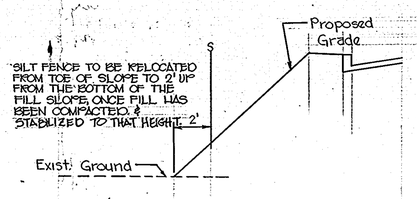
SHEET 6 OF 28

985

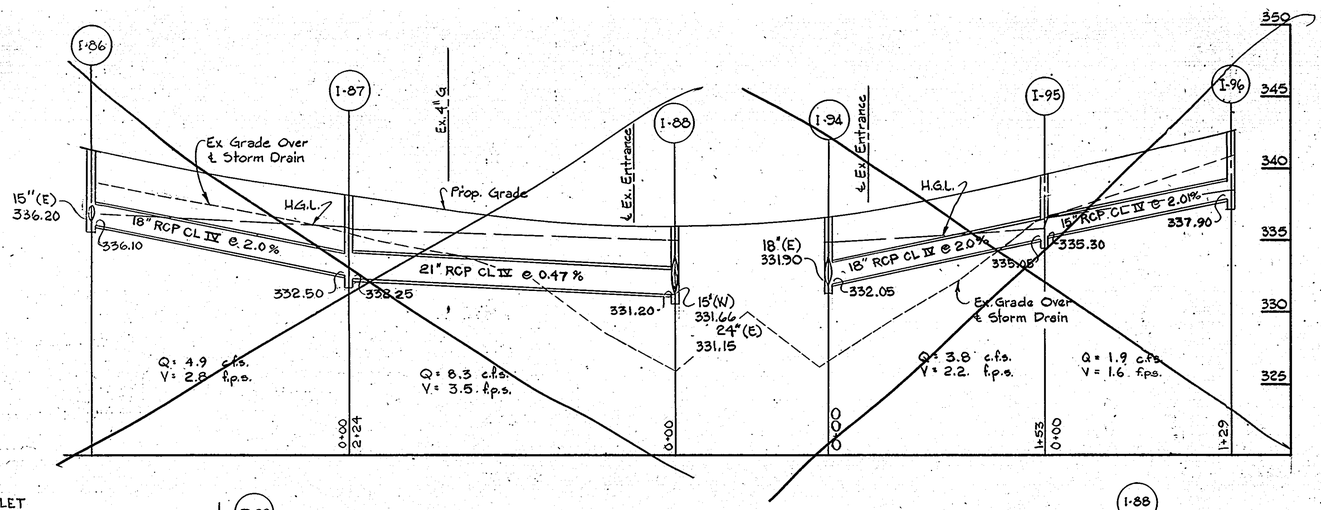
FINAL

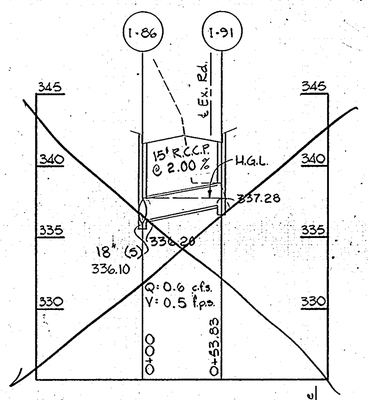
XCE-90-006

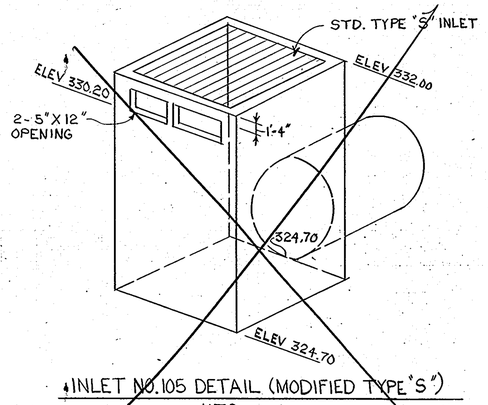




Silt Fence Placement Detail



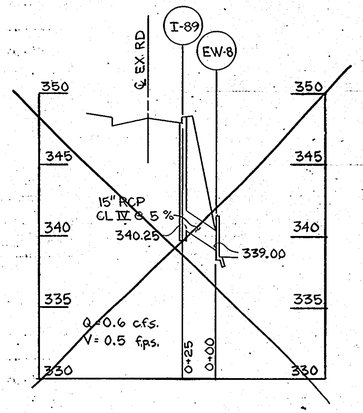




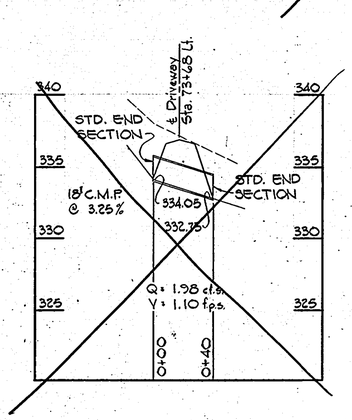
INLET NO. 105 DETAIL (MODIFIED TYPE "S")

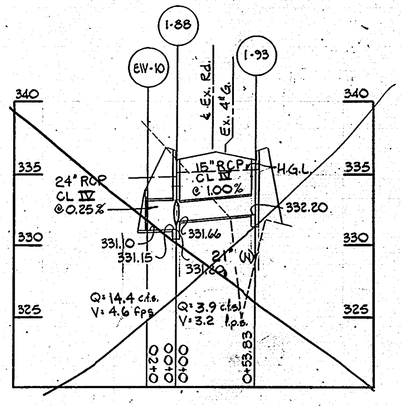
NTS

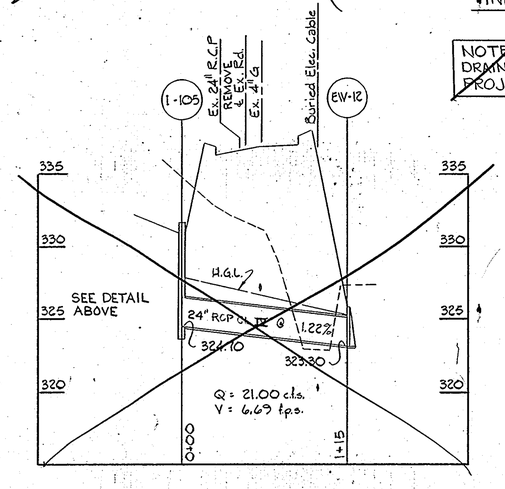
NOTE: INVERT ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE ON CULVERT GRADES PROJECT TO ℄ OF PROP. INLETS.

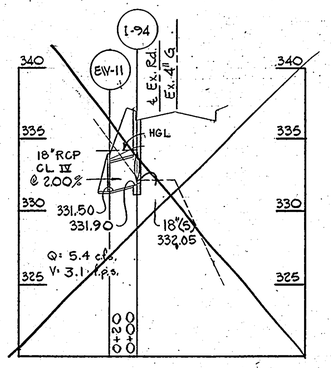


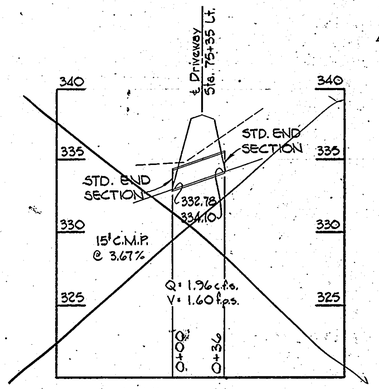
NOTE: ALL STORM DRAIN PIPE TO BE CLASS 4 UNLESS OTHERWISE STATED.

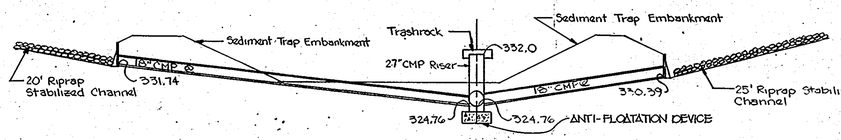






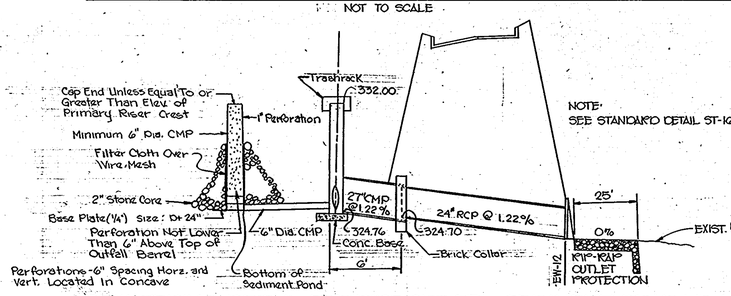






PROFILE OF TWIN 18" BYPASS PIPE OUTLET - SEDIMENT TRAP NO. 1

NOT TO SCALE



DEWATERING DETAIL FOR PIPE OUTLET - SEDIMENT TRAP NO. 1

NOT TO SCALE

9/20/00

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88

CHIEF, BUREAU OF ENGINEERING — DATE 11/8/88

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/6/88

PURDUM & JESCHKE
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Baltimore, Maryland 21202 301/837-0194

STATE OF MARYLAND — No. 10959 — REGISTERED PROFESSIONAL ENGINEER

DES: JK					
DRN: RWW					
CHK: JCT					
DATE: 6/90	BY	NO.	REVISION	DATE	

SEDIMENT & EROSION CONTROL PLAN
CEDAR LANE — PHASE 2 (Detail)
600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

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

SHEET
7 OF 28

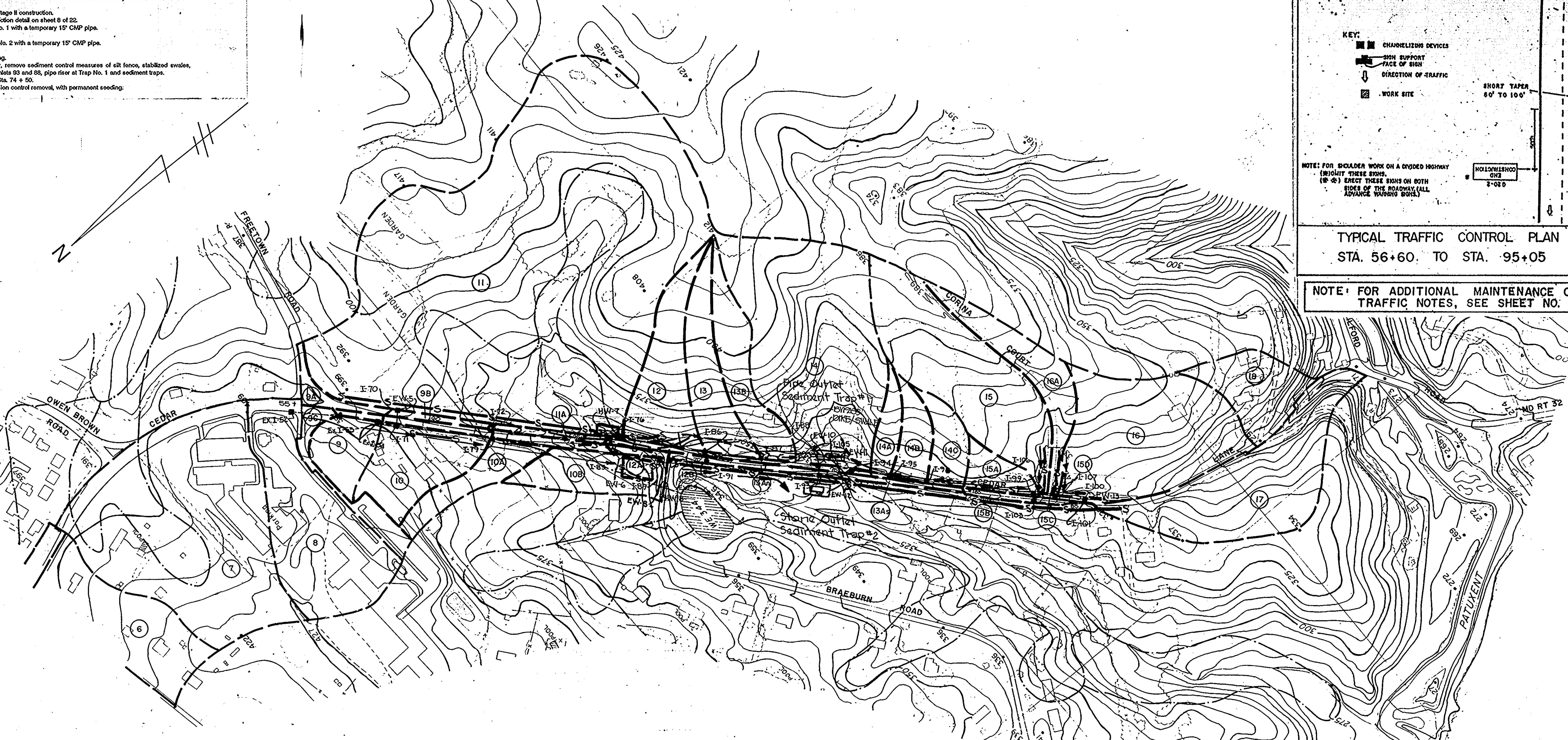
FINAL

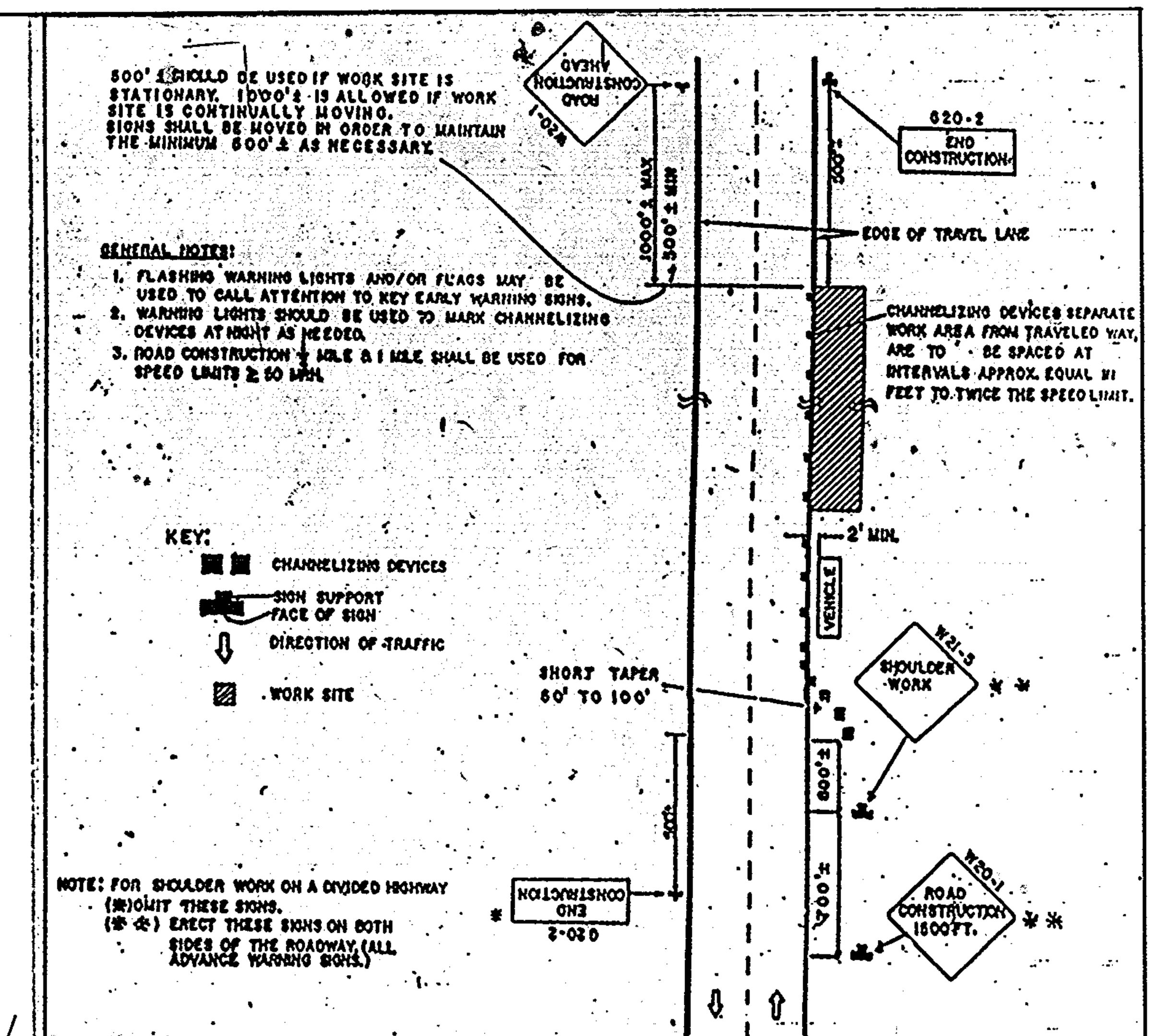
XXCE-90-007

985

SEQUENCE OF CONSTRUCTION

1. Obtain all proper permits.
2. Notify Howard County SCS at least 48 hours prior to beginning Installation of Sediment and Erosion Control facilities (phone: 301/880-3450. HOWARD COUNTY SEDIMENT CONTROL INSPECTION DIVISION.)
3. Clear and grub areas on the north and south sides of the road for installing lined waterway and other sediment control measures from Sta. 56 + 50 to Sta. 85 + 50.
4. Install sediment and erosion control silt fence and diversion berms as per approved plans.
5. Install sediment and erosion control basins.
6. Stabilize all disturbed areas with 14-day stabilization.
7. Install 24" RCP cross culvert and riprap outlet ditch for future SWM pond and pipe outlet sediment trap no. 1.
8. Construct 27" CMP riser and 27" CMP extension with 2-18" CMP collectors in pipe outlet sediment trap No. 1 on the south side of the road at Sta. 74 + 50.
9. Construct dike/swale around sediment trap No. 1.
10. Install 15" flexible pipe on the south side of the road in front of the stand of trees from Sta. 71 + 89 to Sta. 73 + 00.
11. Install 18" CMP driveway culvert and 15" CMP driveway culvert on the south side of the road at Sta. 73 + 70 and Sta. 75 + 34, respectively.
12. Construct lined waterway on the south side from Sta. 73 + 00 and the end of the 15" flexible pipe to the 18" CMP driveway culvert.
13. Construct temporary lined waterways on the south side of the road from the ends of the driveway culverts to the 18" CMP into the sediment trap no. 1.
14. Install curbs and inlets and drainage systems for stage II construction.
15. Install inlet sediment control as per curb inlet protection detail on sheet 8 of 22.
16. Connect inlet I-88 with pipe outlet sediment trap No. 1 with a temporary 15" CMP pipe.
17. Connect inlet I-93 with stone outlet sediment trap No. 2 with a temporary 15" CMP pipe.
18. Construct roadway improvements.
19. Stabilize all disturbed areas with permanent seeding.
20. Upon approval by Howard County SCS Inspector, remove sediment control measures of silt fence, stabilized swales, temporary flexible pipe, temporary 15" CMP from inlets 93 and 88, pipe riser at Trap No. 1 and sediment traps.
21. Construct yard inlet at 24" RCP in SWM facility at Sta. 74 + 50.
22. Stabilize all areas, disturbed by sediment and erosion control removal, with permanent seeding.





TYPICAL TRAFFIC CONTROL PLAN
STA. 56+60. TO STA. 95+05

NOTE: FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES, SEE SHEET NO. 4.

LEGEND

DRAINAGE AREA

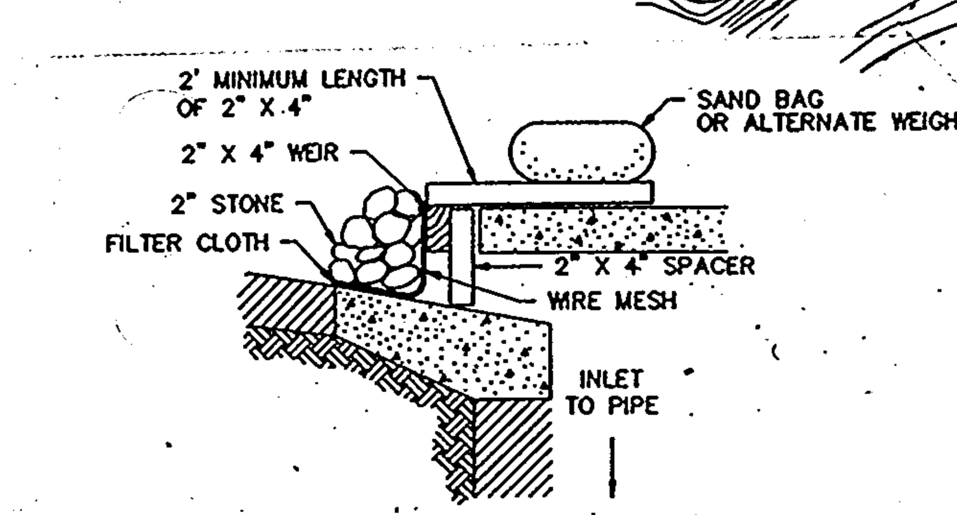
HYDROLOGIC SOIL GROUP

SILT FENCE S——S——S—

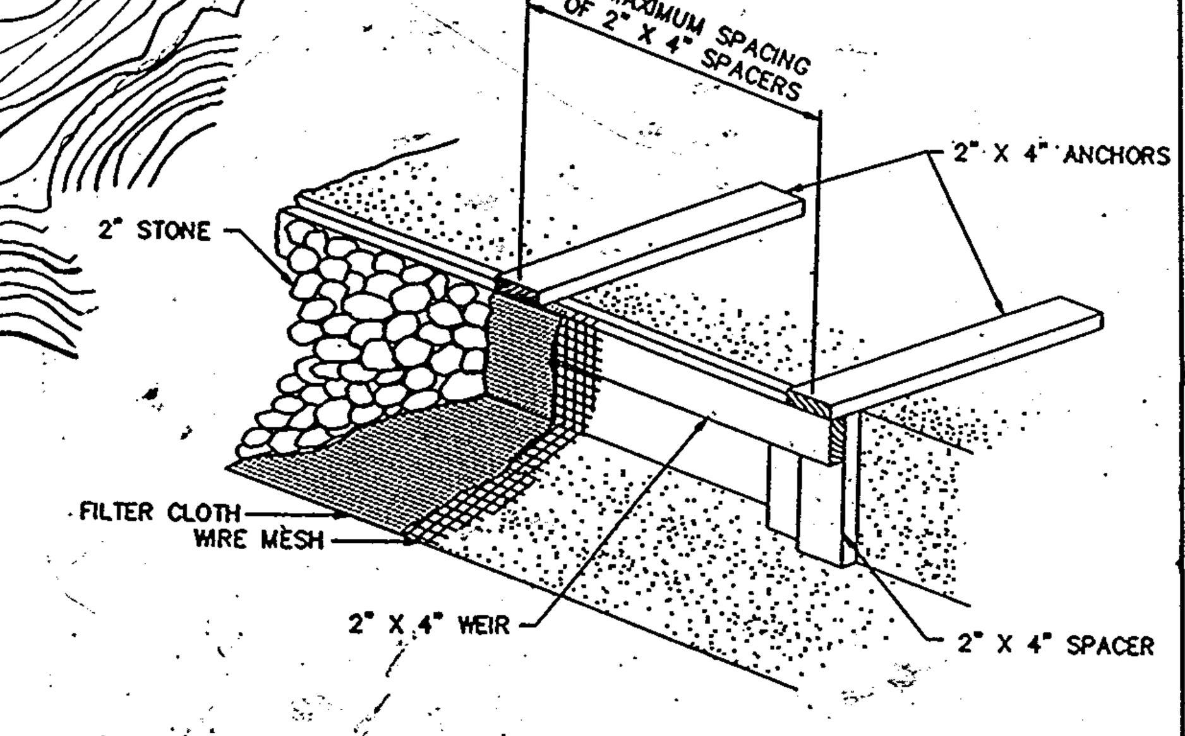
LINED WATERWAY

STONE OUTLET SEDIMENT TRAP

PIPE OUTLET SEDIMENT TRAP



CROSS SECTION



PERSPECTIVE VIEW

4/5 6 CURB INLET PROTECTION DETAIL

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS — 7/12/90 DATE CHIEF, BUREAU OF ENGINEERING — 7-11-90 DATE CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — 7/11/90 DATE	PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 301/837-0194	STATE OF MARYLAND — RICHARD HENRY BERICH — No. 10959 — REGISTERED PROFESSIONAL ENGINEER	DES: DRN: CHK DATE 6/90

BY	NO	REVISION	DATE

SEDIMENT & EROSION CONTROL
DRAINAGE AREAS

CEDAR LANE - PHASE 2

600' SCALE MAP NO. ______ BLOCK NO. ______

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE: 1" = 200'

SHEET 8 OF 28

985

XXCE-90-008

NOTE: SEE SHEETS 6, 7, 8, 20, 21 & 22 FOR SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

STA. 56+70 LT. TO STA. ~~59+85~~ 60+30 LT.
30D SIDE DITCH
W= 2' D= 1'
SEE DETAIL SHEET 5

LIMIT OF PAVING
STA. ~~56+79~~ 56+05

CEDAR LANE

FREETOWN RD.

CURVE DATA
Δ=1° 14' 57.1"
Dc= 1° 00'
R= 5729.58'
T= 62.46'
L= 124.92'
TP # 912

STA. 65+70± TO STA. 67+00
LT. TRAFFIC BARRIER W BEAM
INCLUDES TYPE 1 END FLARES
(SEE SHEET 5)

STA. 65+00 LT. TO STA. 67+00 LT.
RIPRAP SIDE DITCH
W= 2' D= 2'
SEE DETAIL SHEET 5

REMOVE EXISTING CULVERT

TP # 913

INV.= 344.80

MATCH EXISTING GRADE

SEE SHEET 10

CURVE DATA
Δ= 65° 25' 03"
Dc= 6° 30' 00"
R= 881.47'
T= 566.09'
L= 1006.42'
E= 166.12'

P.C.=STA. 45+30.09

P.T.=STA. 55+36.61

STA. 56+70 TO ~~58+50~~ 58+00
MILL EXIST. PAVEMENT TO RECEIVE PROPOSED 1½" BITUMINOUS CONC. SURFACE COURSE.

STA. 58+00
CONNECT NEW 18" SD. TO EXISTING INLET

STA. 59+85 RT.
GRADING AROUND EXIST. TREE TO BE MINIMIZED AS DIRECTED BY THE ENGINEER.

REMOVE EX. 18" AND 25"x16" CMPS
STA. 58+00 TO 59+00

STA. 55+70 TO 65+00 RT.
EXTEND PROPOSED 5' SIDEWALK SLOPE TO MEET EXISTING SIDE SLOPE AND DRAIN TO PROPOSED ROADWAY AS DIRECTED BY THE ENGINEER

P.C.=STA. 62+01.76
P.T.=STA. 63+26.68

STA. 66+05± TO STA. 67+00 RT.
TRAFFIC BARRIER W BEAM INCLUDES TYPE 1 END FLARE (SEE SHEET 5)

LIMIT OF WORK
STA. 55+70

FOR STORM DRAIN PROFILES SEE SHEET 14

E 832,300 N 496,500

E 832,300 N 496,000

N 496,000 E 831,700

NEW DRIVEWAY
42+05 RT.

STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
I-70	A-10	391.56	——	386.51	SD 4.02
I-72	A-5 D	375.43	—	370.64	SD 4.01 WITH DEFLECTORS
I-79	A-10 D	375.43	370.10 369.80	369.60	SD 4.02 WITH DEFLECTORS
I-83	A-10 D	353.23	347.31 344.82	344.82	SD 4.02 WITH DEFLECTORS
I-76	A-10 D	354.40	344.90	344.89	SD 4.02 WITH DEFLECTORS
HW-7	A	—	344.92	—	SD 5.11
EW-6	C	—	—	344.80	SD 5.21 L=21'-6" H= 4'-6" E= 3'-6" C= 12"
I-71	A-5	391.56	385.98 385.73	385.53	SD 4.01

P.V.R.C.=STA. 49+50 =ELEV. 402.25
P.V.T.=STA. 53+50 =ELEV. 401.33
P.V.I.=STA. 51+50 ELEV.= 401.79 V.C.= 400' CORR.= -0.80
P.V.I.=STA. 57+00 ELEV.= 391.88 V.C.= 200' CORR.= -0.55
P.V.C.=STA. 55+00 =ELEV. 394.58
P.V.T.=STA. 60+00 =ELEV. 386.98
P.V.C.=STA. 65+00 =ELEV. 352.65
-2.70%
-4.90%
-4.90%

PROFILE LEGEND
PROFILE GRADE LINE
EXISTING AT B.
R/W LINE RT.
R/W LINE LT.

Full Superelevation = Remove Crown | Transition "C"=0.00016 | Normal Section End Transition

54+94.84 57+44.84

54+00	55+00	56+00	57+00	58+00	59+00	60+00	61+00	62+00	63+00	64+00	65+00	66+00	67+00
404.4 / 404.42	403.6 / 403.61	402.6 / 402.57	401.3 / 401.33	400.0 / 399.78	398.7 / 398.63	397.3 / 397.28	395.9 / 395.93	394.58	393.09	389.0 / 391.33	387.1 / 389.29	384.3 / 384.98	382.6 / 384.33	381.4 / 382.08	379.8 / 379.63	378.8 / 377.16	377.5 / 374.73	374.1 / 372.28	371.6 / 369.83	368.4 / 367.38	364.6 / 364.93	359.9 / 362.48	355.5 / 360.03	352.4 / 357.58	350.0 / 355.13	347.2 / 352.68

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/18/92
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-92
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/18/92

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR WILLIAM D. PURDUM No. 1992 REGISTERED STATE OF MARYLAND
William D. Purdum

DES: JCT
DRN: PWR
CHK: WDP
DATE: 6/90

BY	NO	REVISION	DATE
HARNESS & HESSON	2	AS-BUILT	1/2/92

PLAN & PROFILE
STA. 54+00 TO STA. 67+00
CEDAR LANE — PHASE 2
600' SCALE MAP NO. ____ BLOCK NO. ____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 9 OF 28

985

FINAL XXCE-90-009

STA. 67+00 LT. TO STA. 67+50 LT.
SOD SIDE DITCH
W= 2' D= 1'
SEE DETAIL SHEET 5

STA. 67+00 TO STA. 67+55 ± LT.
END OF TYPE I END FLARE
BEGINNING ON PREVIOUS
SHEET (SEE SHEET 5)

STA. 67+00 TO STA. 1+50 ± P.T.
TRAFFIC BARRIER W BEAM
INCLUDES 75 LF ON 50' PAD.
AND TYPE I END FLARE
(SEE SHEET 5)

REMOVE EXISTING CULVERT
STA. 68+00
25' RT.

STA. 68+00
50' RT.

REMOVE EXISTING WALL

STA. 67+00 RT. TO STA. 67+60 RT.
RIPRAP SIDE DITCH
TO MEET BEGINNING OF
(60' L × 20' W BOTTOM)
S.W.M. POND
W= 2' D= 2'
SEE DETAIL SHEET 5

STA. 0+57
31' RT INV. 337.0

NOTE: PERMENANT S.W.M. POND RT. STA. 68 TO SERVE TEMPORARILY AS A SEDIMENT TRAP DURING CONSTRUCTION BY MAINTAINING POND INVERT 2'± BELOW FINISHED ELEVATIONS SHOWN ON THE PLAN.

STA. 1+50 LT TO STA. 69+90 ± TRAFFIC BARRIER W BEAM INCLUDES 75 LF ON 50' PAD. AND TYPE I END FLARES EACH END. (SEE SHEET 5)

STA. 71+89 TO 73+00 LT.
CONSTRUCT TIMBER TIE RETAINING WALL. EXCAVATION WILL BE LIMITED TO WITHIN 10' OF THE EXISTING TREES.
(SEE DETAILS SHEET 17)

STA. 73+35 LT. TO STA. 74+36 LT.
STA. 74+66 LT. TO STA. 76+00 LT.
SOD SIDE DITCHES
TO MEET (BOTTOM OF
30' L × 20' W) S.W.M. POND
W= 2' D= 1'
SEE DETAIL SHEET 5

NOTE: SEE SHEET 6, 7, 8, 19, 20, 21 AND 22 FOR SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

STA. 79+30 TO STA. 80+00 LT.
RELOCATE TREES TO TOP OF CUT SLOPE.

STA. 68+61.45 CEDAR LANE
STA. 0+00 BRAEBURN RD.

CEDAR LANE

BRAEBURN RD.

SHEET 9 SEE SHEET 11 MATCH LINE

ENTR. FOR FUTURE D.W. STA. 68+61 LT'

Soil Boring B-20 & B-20A

Soil Boring B-22

Soil Boring B-21

T.P.#913

T.P.#914

T.P.#915

I-86 STA. 69+90 25' LT.

I-87 STA. 71+70 25' LT.

I-88 STA. 73+94 25' LT.

I-94 STA. 75+10 25' LT.

I-95 STA. 76+63 25' LT.

I-96 STA. 77+92 25' LT.

I-89 STA. 68+00 25' RT.

EW-8 STA. 68+00 50' RT.

I-91 STA. 69+90 25' RT.

EW-9 STA. 0+50 32' LT.

EW-10 STA. 74+09 38' LT.

I-105 STA. 74+62 47' LT.

EW-11 STA. 74+98 39' LT.

I-93 STA. 73+94 25' RT.

EW-12 STA. 75+13 58' RT.

HW-8

E 831,000 N 495,250

E 831,000 N 494,750

E 831,000 N 495,250

STA. 69+20 RT. TO STA. 72+25 RT.
STA. 69+20 RT. TO STA. 72+25 RT.
SOD SIDE DITCH
W= 2' D= 2'
SEE DETAIL SHEET 5

LIMIT OF WORK
STA. 1+30

STA. 75+13 RT. CONSTRUCT
25' L.F. RIPRAP OUTLET DITCH
W= 2' D= 2'
SEE DETAIL SHEET 5

FOR STORM DRAIN PROFILES SEE SHEET 15

STA. 78+00 TO 80+00 RT.
PROP. ROADWAY SLOPE TO BE PLACED USING BENCHING AS DIRECTED BY THE ENGINEER, (SEE (SHA) SPEC. SECT. 206.03.04)

NOTE: S.W.M. POND LT. OF STA. 74+50 TO SERVE TEMPORARILY DURING CONSTRUCTION AS A SEDIMENT TRAP BY USE OF TEMP. 1:1 MAX. SLOPES AND A POND INVERT 2'± BELOW FINISHED ELEV. SHOWN ON THE PLAN.

STA. 74+10± TO STA. 80+00 P.T.
TRAFFIC BARRIER W BEAM INCLUDES
TYPE I END FLARE (SEE SHEET 5)

BRAEBURN ROAD
℄ @ STA. 68+61.45
BS. STA. 67+00
FS. 272° 09' 43" D=250'

P.V.I.=STA.69+00
ELEV.=342.88
V.C.=400'
CORR.=+1.70'

P.V.C.=STA.67+00
=ELEV 352.68

P.V.T.=STA.71+00
=ELEV 339.88

P.V.C.=STA.72+50
=ELEV. 337.63

P.V.I.=STA.74+50
ELEV.=334.63
V.C.=400'
CORR.=+2.09'

P.V.C.=STA.76+50
=ELEV. 339.95

P.V.I.=STA.78+50
ELEV.=345.27
V.C.=400'
CORR.=-2.09'

P.V.T.=STA.80+50
=ELEV. 342.27

-4.90%
-1.50%
+2.66%
-1.50%
+2.66%

CURB STAKE OUT DATA	
CEDAR LANE BASE LINE	
STATION	OFFSET
PC 68+14.34	25.00' RT
PT 69+04.41	25.00' RT
BRAEBURN ROAD BASE LINE	
STATION	OFFSET
PT 0+53.34	15.00' LT
PC 0+56.74	15.00' RT

STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
I-89	A-5 D	348.22	–	340.25	SD 4.01 WITH DEFLECTORS
EW-8	C	–	–	339.00	SD 5.21
HW-8	A	–	337.00	–	SD 5.21
EW-9	C	–	–	336.90	L=21'-6" E=3'-6" H=4'-6" C= 12"
I-91	A-5	342.05	–	337.28	SD 4.01
I-86	A-5 D	342.05	336.20	336.10	SD 4.01 WITH DEFLECTORS
I-87	A-5 D	338.84	332.50	332.25	SD 4.01 WITH DEFLECTORS
I-88	A-5	336.56	331.89 331.65	331.15	SD 4.01
EW-10	C	–	–	331.10	SD 5.21
I-93	A-10	336.56	–	332.20	SD 4.02
I-105	S MOD.	332.00	–	324.70	SD 4.22 AND DETAIL
I-94	A-5	337.26	332.05	331.90	SD 4.01
I-95	A-5 D	340.30	335.30	335.05	SD 4.01 WITH DEFLECTORS
I-96	A-5	342.69	–	337.90	SD 4.01
EW-11	C	–	–	331.50	SD 5.21
EW-12	C	–	–	323.30	SD 5.21
I-94A	D	337.50	–	334.00	IRON GRATE TOP

PROFILE LEGEND
PROFILE GRADE LINE
EXISTING AT ℄
R/W LINE RT.
R/W LINE LT.

67+00	68+00	69+00	70+00	71+00	72+00	73+00	74+00	75+00	76+00	77+00	78+00	79+00	80+00
347.2 352.68	344.8 350.34	343.5 348.21	342.0 346.29	340.8 344.58	342.1 343.09	343.6 341.81	342.4 340.74	341.6 339.88	340.1 338.13	338.4 338.38	335.8 337.63	332.5 337.01	332.6 336.65	332.0 336.55	331.6 336.71	331.6 337.13	333.0 337.81	334.1 338.75	336.6 339.95	339.2 341.15	340.7 342.09	341.4 342.77	341.5 343.19	341.8 343.35	342.3 343.25	341.9 342.89

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/5/88

CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/7/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR WILLIAM D. PURDUM No. 1992 REGISTERED STATE OF MARYLAND
William D. Purdum

DES: JCT
DRN: PWR
CHK: WDP
DATE 6/90

BY	NO.	REVISION	DATE
HARMS & ASSOC	2	AS BUILT	1/2/92

PLAN & PROFILE
STA. 67+00 TO STA. 80+00
CEDAR LANE – PHASE 2
600' SCALE MAP NO. ____ BLOCK NO. ____

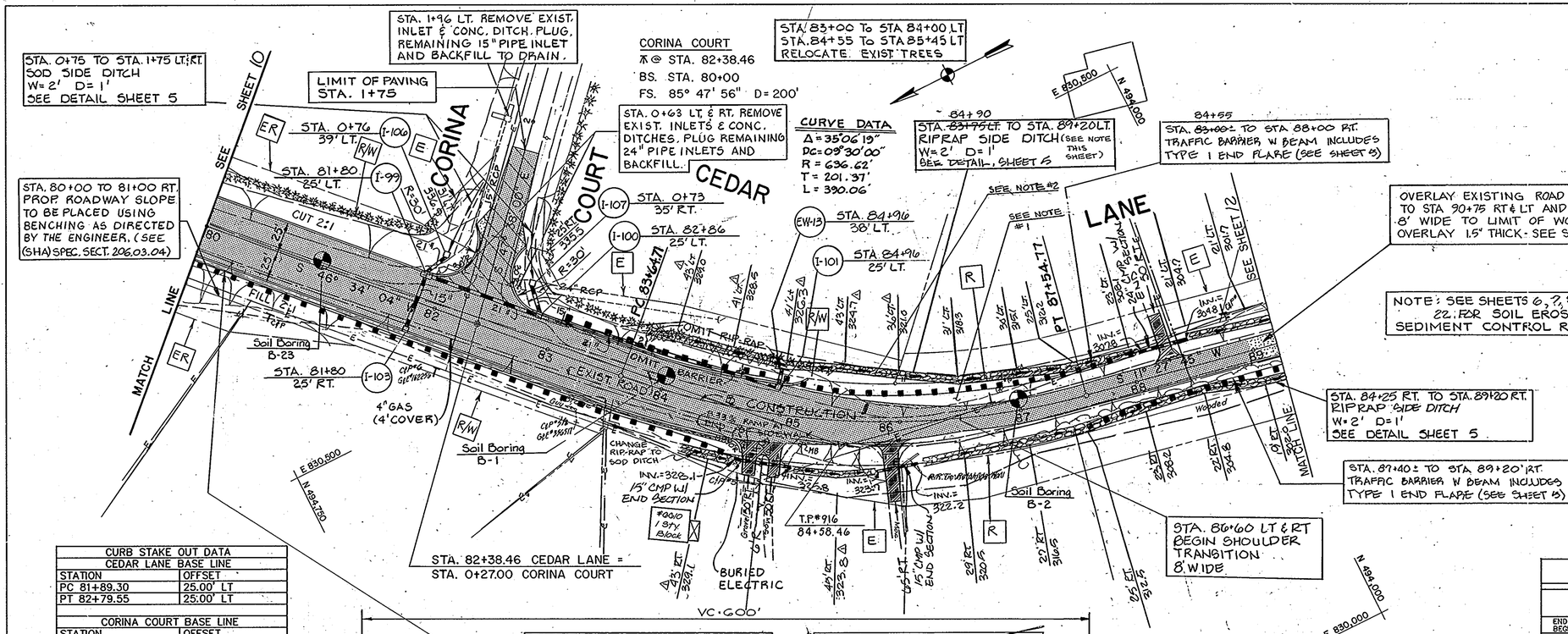
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'

SHEET 10 OF 28

FINAL XXCE90-010

0285



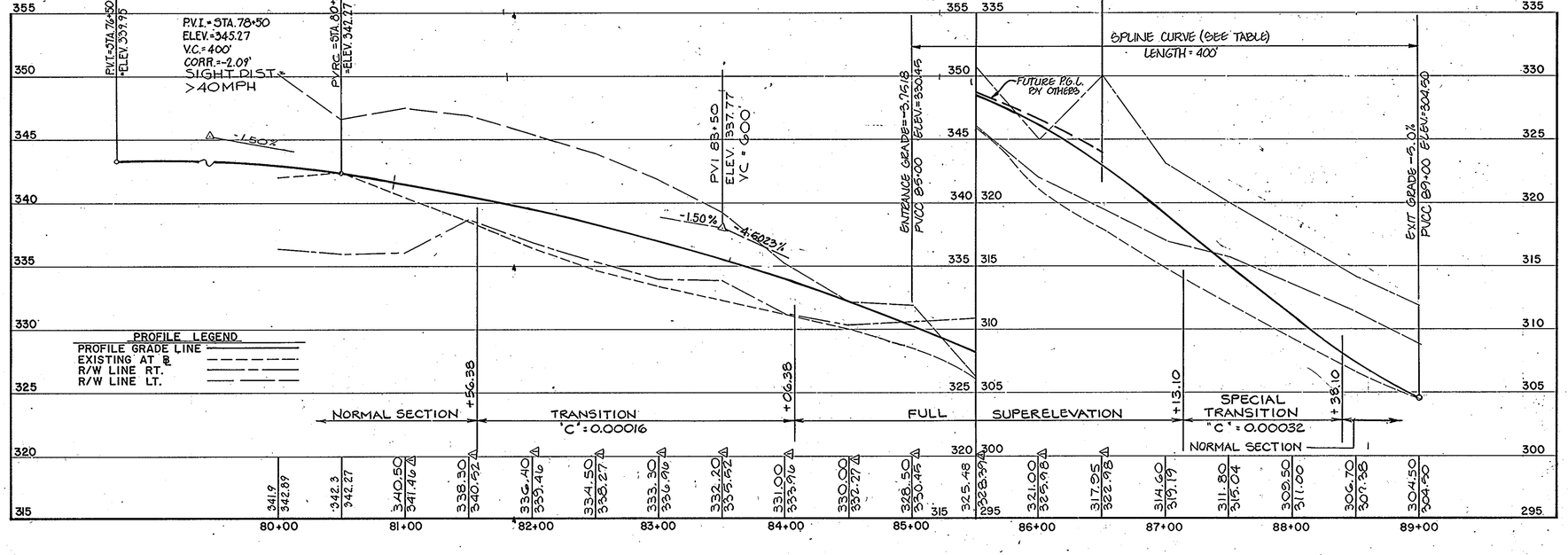
STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
EW-13	C	—	—	326.60 △1	SD 5.21
I-103	A-5 D	340.09 △1	—	335.20	SD 4.01 WITH DEFLECTORS
I-99	A-5 D	339.94 △1	334.37 333.42	333.22	SD 4.01 WITH DEFLECTORS
I-106	D	336.70	—	333.62	SD 4.11
I-107	D	335.20	—	331.71	SD 4.11
I-100	A-5	337.69 △1	331.45 331.22	331.12	SD 4.01
I-101	A-5	330.63 △1	327.13 △1	327.03 △1	SD 4.01

NOTES:

1) SHOULDER STA 85+00 TO 89+00 LT. CHANGE SHOULDER TO 4" CR 6 BASE + 4" BI ASPHALT + 1½" SC ASPHALT TAPERED FROM ROAD TO EDGE OF SHOULDER. TOP FUTURE SHOULDER WITH D.S.T.

2) DITCH FROM STA 85+20 TO 87+90 LT. TO HAVE C.L.I. RIP-RAP EXTEND UP SIDE OF DITCH TO TRAFFIC BARRIER LINE. GROUT RIP-RAP. SHOULDER AREA BETWEEN ASPHALT AND TRAFFIC BARRIER LINE TO BE CONCRETE 5" THICK. EXTEND D.S.T. OVER CONCRETE TO WITHIN ± 6" OF TRAFFIC BARRIER LINE.

CURB STAKE OUT DATA	
CEDAR LANE BASE LINE	
STATION	OFFSET
PC 81+89.30	25.00' LT
PT 82+79.55	25.00' LT
CORINA COURT BASE LINE	
STATION	OFFSET
PT 0+78.84	15.00' RT
PC 0+85.45	15.00' LT



ROADWAY STAKE OUT DATA STATIONS AND OFFSETS / ELEVATION						
LEFT				RIGHT		
REMARKS	SHOULDER WIDTH & ELEVATION	OFFSET TO EDGE & ELEVATION	BASELINE STATION & ELEVATION	OFFSET TO EDGE & ELEVATION	SHOULDER WIDTH & ELEVATION	REMARKS
END NORMAL SECTION, BEGIN S/E TRANSITION		25.00 339.83	81+56.38 340.99	25.0 339.89		END NORMAL SECTION, BEGIN S/E TRANSITION
		25.00 339.44	81+75.00 340.00	25.0 339.57		
		25.00 339.00	82+00.00 339.44	25.0 338.13		
		25.00 338.32	82+25.00 338.88	25.0 338.45		
		25.00 337.71	82+50.00 338.27	25.0 338.14		
		25.00 337.07	82+75.00 337.65	25.0 337.60		
		25.00 336.90	82+81.38 337.46	25.0 337.46		1/2 LEVEL
		25.00 336.40	83+00.00 336.96	25.0 337.03		
		25.00 335.69	83+25.00 336.25	25.0 336.42		
		25.00 334.96	83+50.00 336.62	25.0 335.79		
		25.00 334.19	83+75.00 334.75	25.0 335.12		
		25.00 333.40	84+00.00 333.96	25.0 334.43		
		25.00 333.19	84+06.38 333.75	25.0 334.25		END S/E TRANSITION, BEGIN FULL SUPER
		25.00 332.67	84+25.00 333.13	25.0 333.63		
		25.00 331.71	84+50.00 332.27	25.0 332.77		
		25.00 330.82	84+75.00 331.38	25.0 331.85		
PC @ CURB, BEGIN TRANSITION TO EX. RD.		25.00 329.89	85+00.00 330.45	25.0 330.95		BEGIN LANE TRANSITION TO EX. ROAD
	8.0 328.63	22.5 329.01	85+25.00 329.46	22.5 328.91	8.0 329.51	
	8.0 327.51	20.0 327.99	85+50.00 328.39	20.0 328.79	8.0 328.34	
	8.0 326.40	17.5 326.88	85+75.00 327.23	17.5 327.68	8.0 327.18	
	8.0 325.20	15.0 325.68	86+00.00 326.05	15.0 326.28	8.0 325.88	
	8.0 323.85	12.5 324.33	86+25.00 324.68	12.5 324.85	8.0 324.43	
	8.0 322.80	10.0 322.98	86+50.00 323.28	10.0 323.18	8.0 322.78	
BEGIN SHOULDER TRANSITION	8.0 321.81	10.0 322.09	86+60.00 322.20	10.0 322.49	8.0 322.09	BEGIN SHOULDER TRANSITION
	7.625 320.62	10.0 320.98	86+75.00 321.16	10.0 321.35	7.625 321.00	
	7.0 318.57	10.0 318.99	87+00.00 319.24	10.0 319.39	7.0 319.04	
	6.672 317.50	10.0 317.90	87+13.10 318.10	10.0 318.30	6.672 317.97	END FULL SUPER, BEGIN S/E TRANSITION
	6.375 316.53	10.0 316.91	87+25.00 317.11	10.0 317.27	6.375 316.93	
	5.75 314.50	10.0 314.84	87+50.00 315.04	10.0 315.12	5.75 314.78	
	5.63 314.12	10.0 314.46	87+54.77 314.66	10.0 314.73	5.63 314.39	P.T. ℄ BASELINE CONSTRUCTION
	5.125 312.50	10.0 312.81	87+75.00 313.01	10.0 313.01	5.125 312.70	
	5.11 312.45	10.0 312.76	87+75.60 312.96	10.0 312.96	5.11 312.65	1/2 LEVEL
	4.50 310.53	10.0 310.80	88+00.00 311.00	10.0 310.92	4.50 310.65	
	3.875 308.66	10.0 308.89	88+25.00 309.09	10.0 308.94	3.875 308.71	
END S/E TRANSITION, BEGIN NORMAL SECTION	3.548 307.76	10.0 307.97	88+38.10 308.17	10.0 307.97	3.548 307.76	END S/E TRANSITION BEGIN NORMAL SECTION
	3.25 306.99	10.0 307.18	88+50.00 307.38	10.0 307.18	3.25 306.99	
	2.625 305.48	10.0 305.64	88+75.00 305.84	10.0 305.64	2.625 305.48	
	2.0 304.18	10.0 304.30	89+00.00 304.50	10.0 304.30	2.0 304.18	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88 — CHIEF, BUREAU OF ENGINEERING — DATE 11-3-88

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/21/88

STATE OF MARYLAND — ELIZABETH A. CALLAS — No. 21577 — REGISTERED PROFESSIONAL ENGINEER

DES: JSN				
DRN: SMI				
CHK:				
DATE: 6/90				
BY	NO.	REVISION	DATE	
MARKS & ASSOC.	2	PROFILE CHANGE AS BUILT	9/90 11/2/92	

PLAN & PROFILE
STA. 80+00 TO STA. 89+20
CEDAR LANE — PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'

SHEET 11 OF 28

985

FINAL XXCE-90-011

NOTES:

EXAMPLE

OFFSET LT. OR RT.
ELEVATION

OFFSETS AND ELEVATIONS SHOWN IN BLOCKS LOCATE PAVED SWALES ON PROPOSED DRIVEWAYS AT FINISHED GRADE

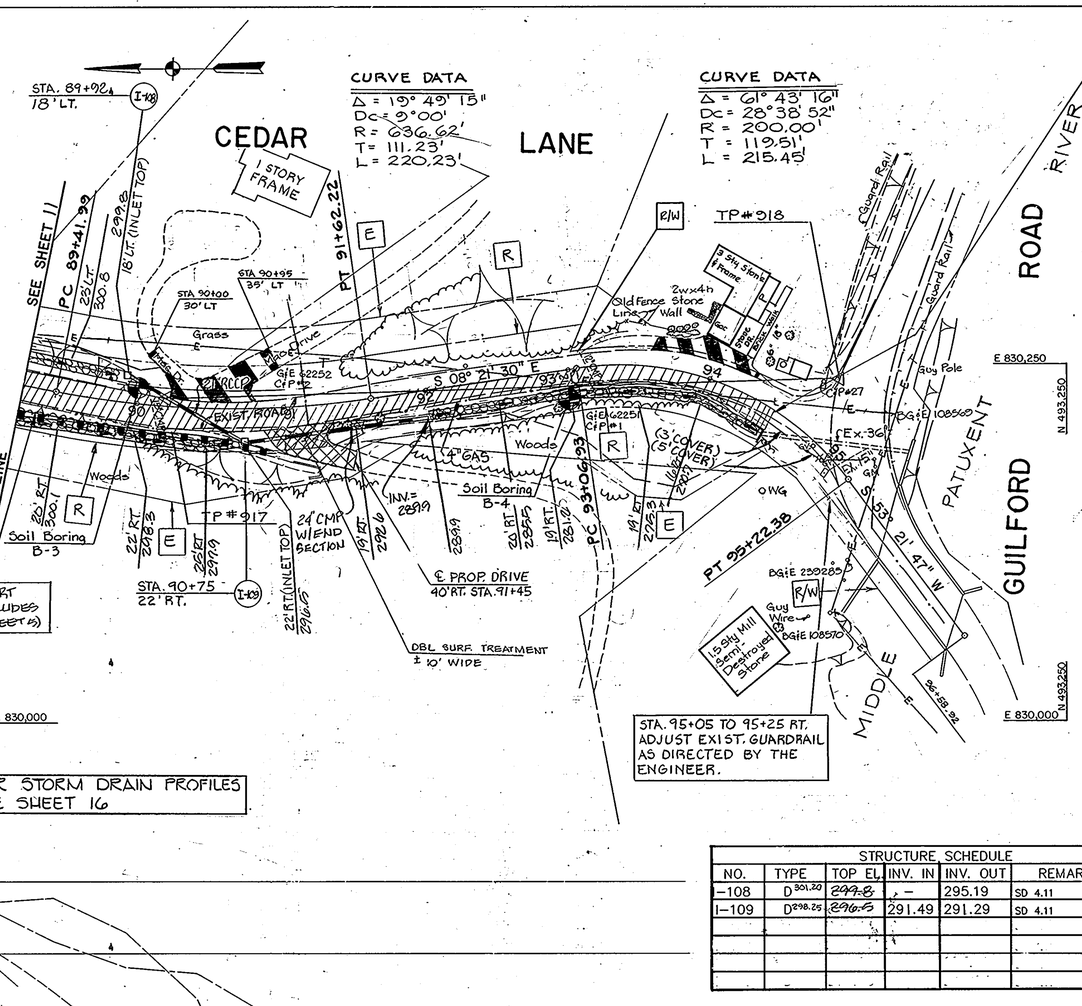
THE CONTRACTOR SHALL MODIFY STANDARD "D" INLETS TO ACCOMODATE PIPE REQUIRING WIDTHS GREATER THAN 30"

STA. 90+10 Remove Ex. Culvert

STA. 89+20 RT. TO STA. 94+48 RT.
RIP RAP SIDE DITCH
W=2' D=1'
SEE DETAIL SHEET 5

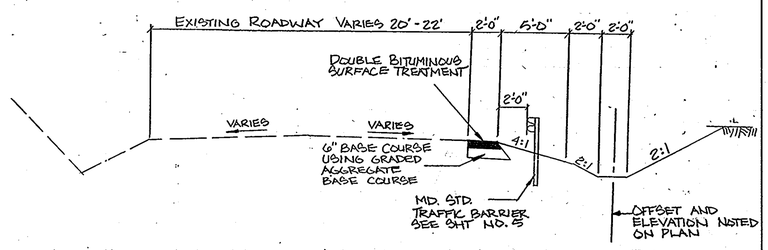
STA 89+20 LT. to STA 89+80 LT
RIP RAP SIDE DITCH 89+90
W=2' D=1'
SEE DETAIL SHEET 5

STA 89+20 ± TO STA 90+80 ± RT
TRAFFIC BARRIER W BEAM INCLUDES TYPE 1 END FLARE (SEE SHEET 5)



STA. 95+05 TO 95+25 RT.
ADJUST EXIST. GUARDRAIL AS DIRECTED BY THE ENGINEER.

LIMIT OF WORK
STA. 94+50

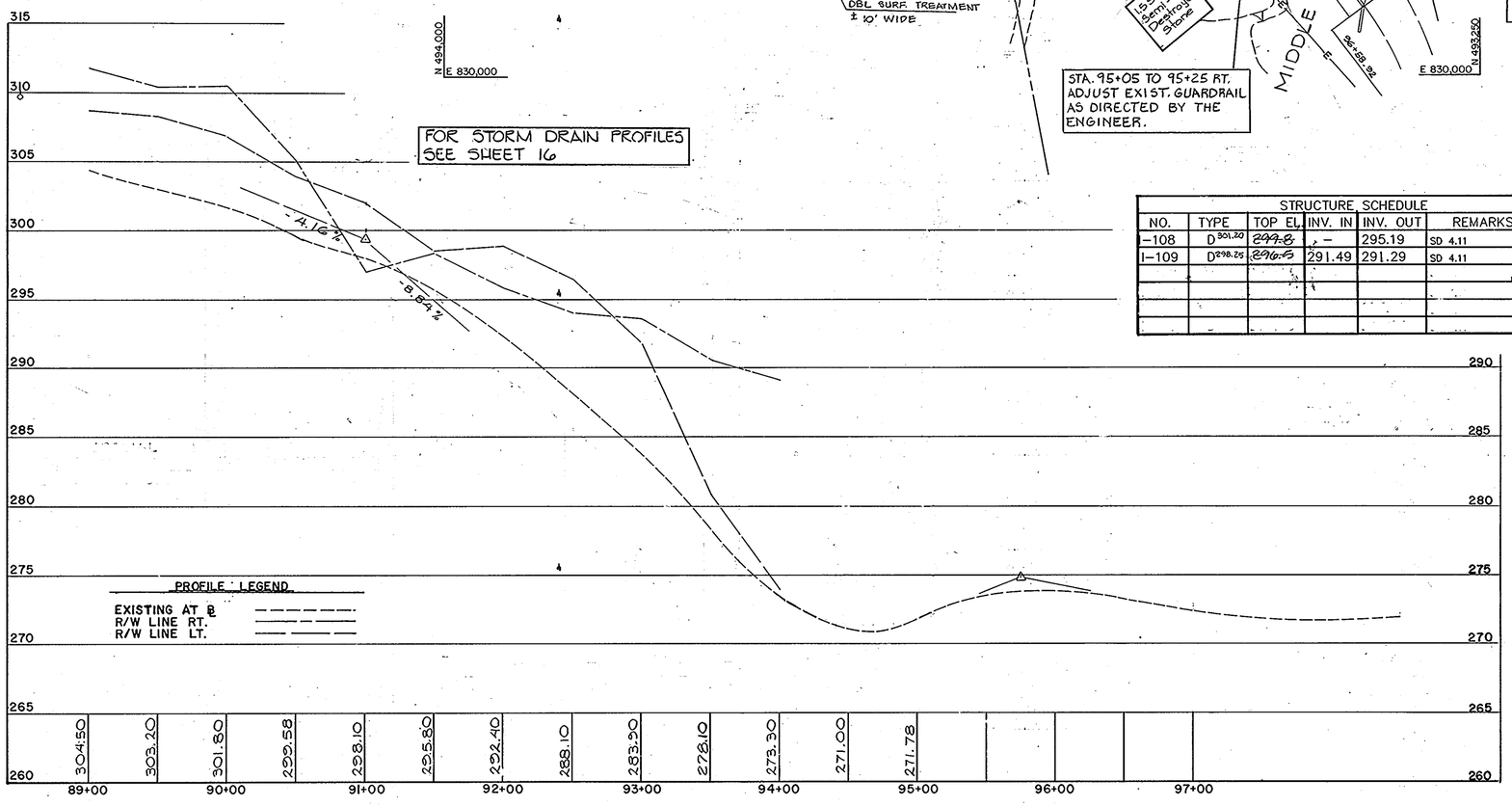


PROPOSED TYPICAL SECTION

NO SCALE
STA 89+00 TO 94+50

NOTE: SEE SHEETS 6, 7, 8, 20, 21 AND 22 FOR SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

FOR STORM DRAIN PROFILES SEE SHEET 16



STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
I-108	D 301.20	~~299.8~~	-	295.19	SD 4.11
I-109	D 298.25	~~296.5~~	291.49	291.29	SD 4.11

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 11/8/88
DIRECTOR OF PUBLIC WORKS — DATE

Kristen S. Day 11-8-88
CHIEF, BUREAU OF ENGINEERING — DATE

Herbert L. Goldman Chief 11/8/88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

STATE OF MARYLAND — ELIZABETH A. CALLAS — No. 21705 — REGISTERED PROFESSIONAL ENGINEER

DES: JCT					
DRN: PWR					
CHK: WDP					
DATE: 6/90	HARRIS & ASSOC.	2.	AS-BUILT	1/2/92	
	BY	NO.	REVISION	DATE	

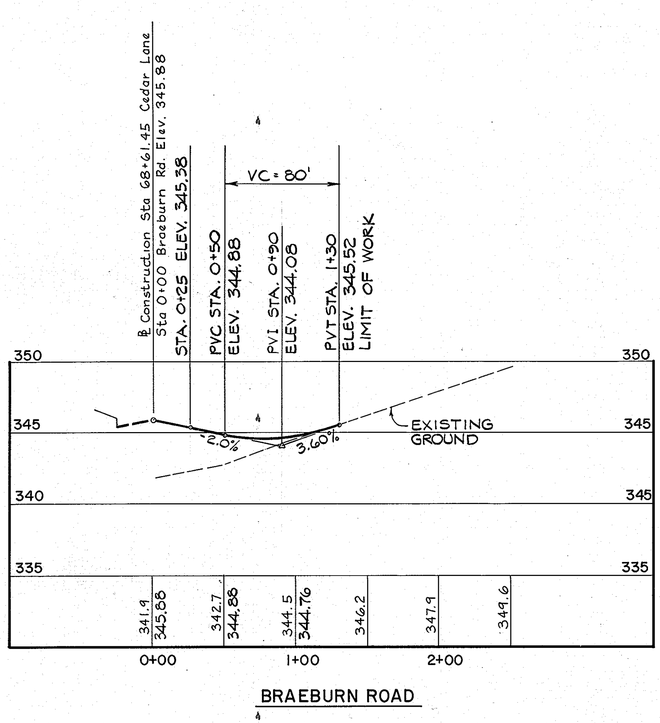
PLAN & PROFILE 94+50
STA. 89+20 TO STA. ~~94+50~~
CEDAR LANE — PHASE 2
600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

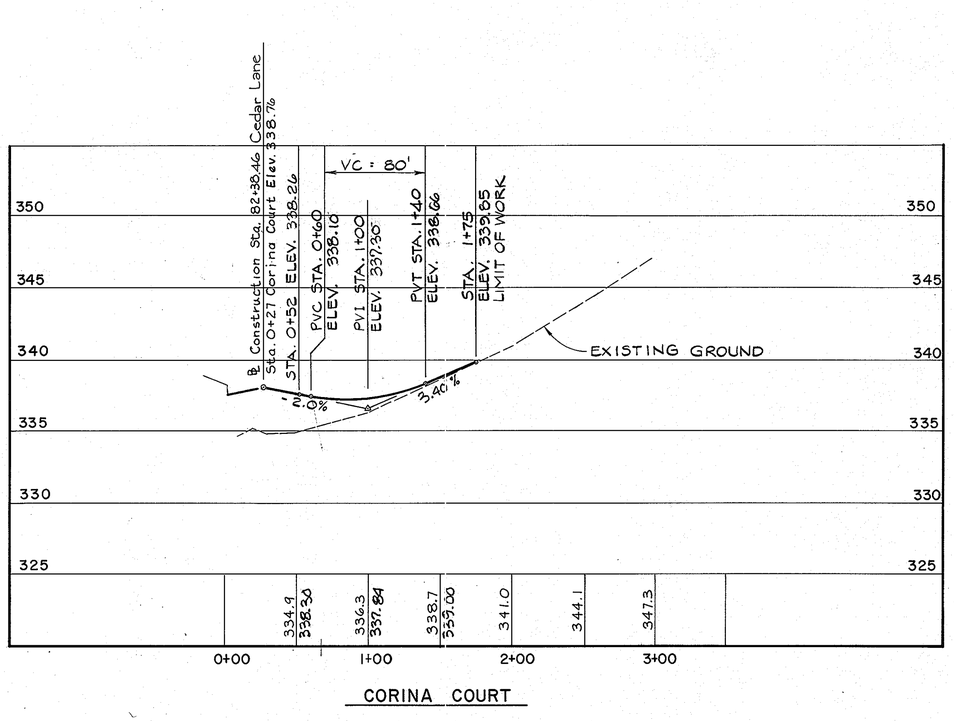
SCALE 1"=50'
SHEET 12 OF 28

986

FINAL 3/15/89 XXCE-90-012



BRAEBURN ROAD



CORINA COURT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 11/8/88
DIRECTOR OF PUBLIC WORKS DATE

R. Caleen S. Riley 11-8-88
CHIEF, BUREAU OF ENGINEERING DATE

Elizabeth H. Anderson Rec'd 11/8/88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE

Elizabeth H. Anderson
REGISTERED PROFESSIONAL ENGINEER
STATE OF NORTH CAROLINA
SEAL 7000

DES: JSN
DRN: SMI
CHK:
DATE: 6/90

BY	NO.	REVISION	DATE

CONNECTING ROAD PROFILES

CEDAR LANE – PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

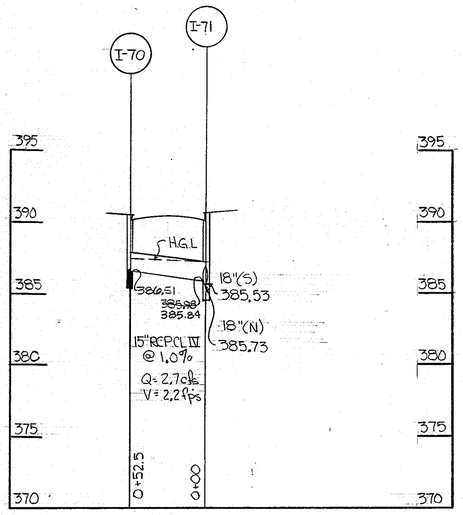
SCALE
HORIZ. 1"=50'
VERT. 1"=5'

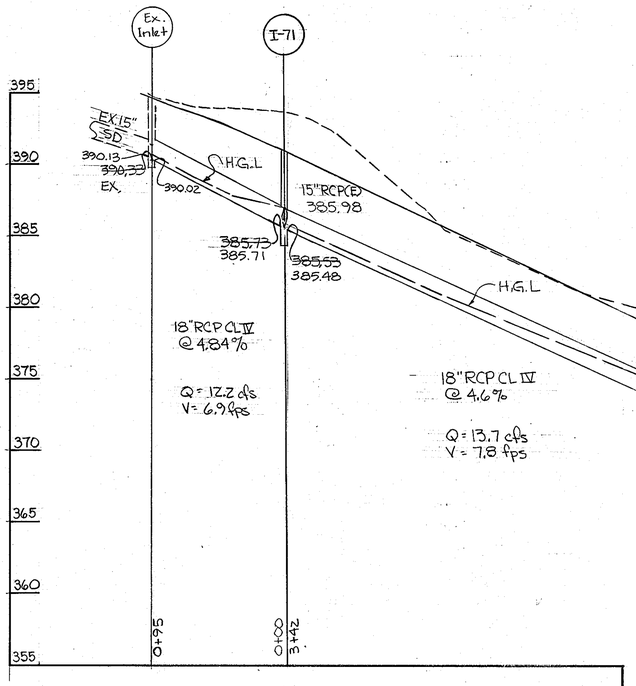
SHEET
13 OF 28

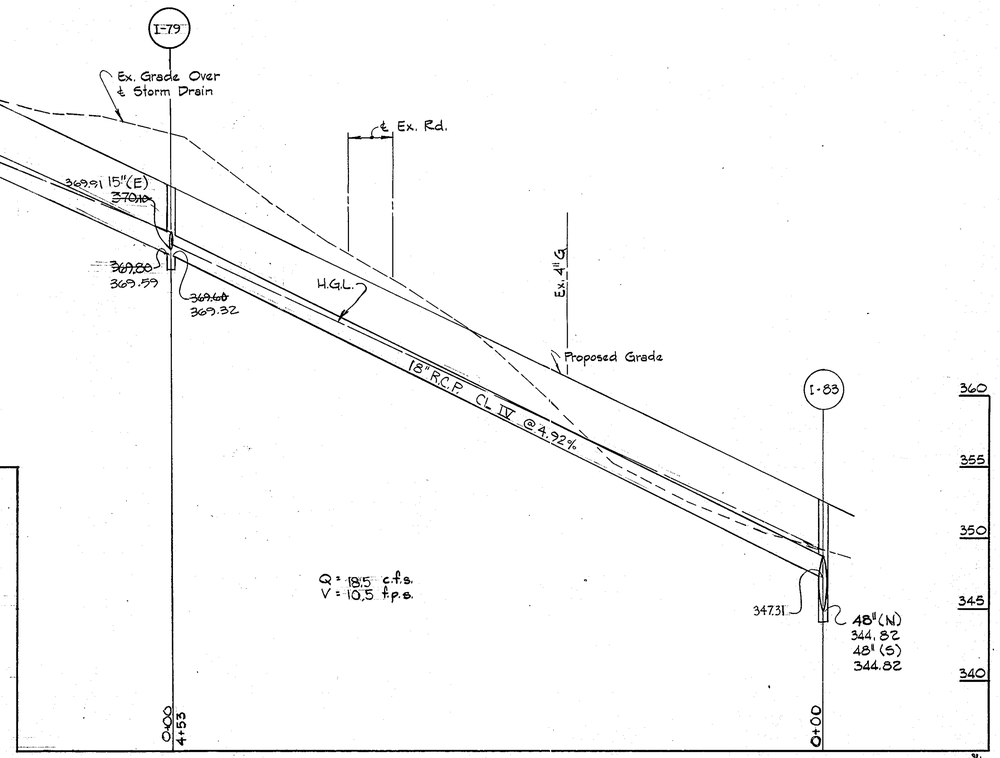
FINAL

XXCE-90-013

985

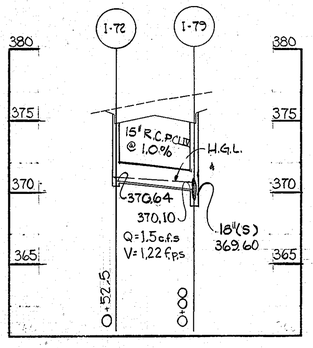


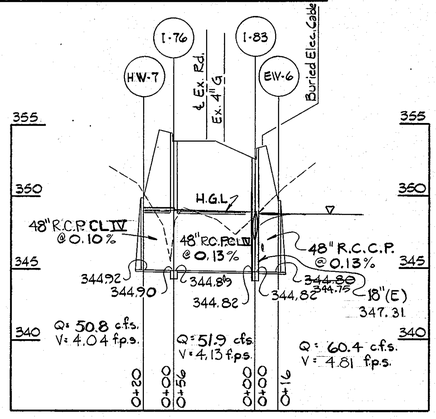




NOTE: ALL STORM DRAIN PIPE TO BE CLASS 4 UNLESS OTHERWISE STATED.

NOTE: INVERT ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE ON CULVERT GRADES PROJECTED TO ℄ OF PROP. INLETS.





DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88 — CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED STATE OF MARYLAND

DES: JK					
DRN: PWR					
CHK: JCT					
DATE: 6/90	HARRIS & ASSOC.	2	AS-BUILT	1/2/92	
	BY	NO.	REVISION	DATE	

STORM DRAIN PROFILES

CEDAR LANE – PHASE 2

600' SCALE MAP NO. ____ BLOCK NO. ____

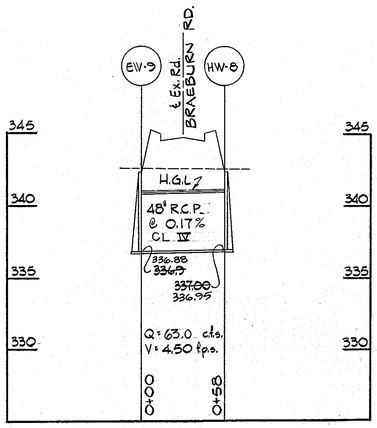
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

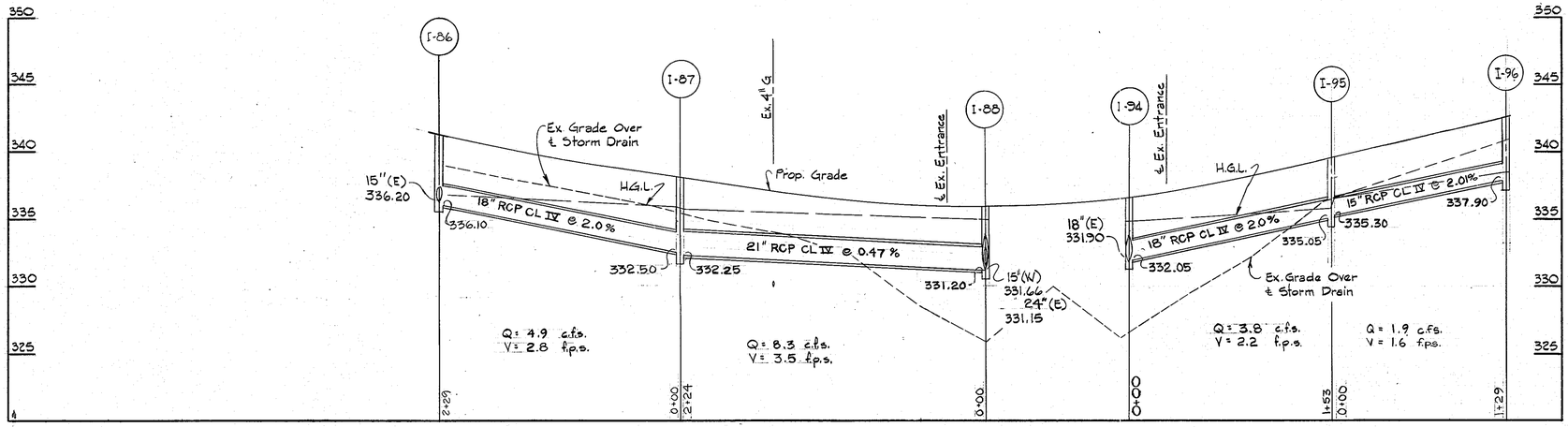
SCALE
HORIZ. 1"=50'
VERT. 1"=5'

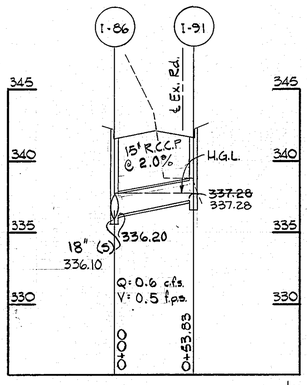
SHEET
14 OF 28

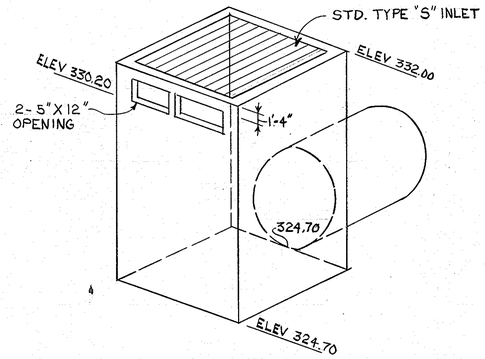
985

FINAL XXCE-90-014



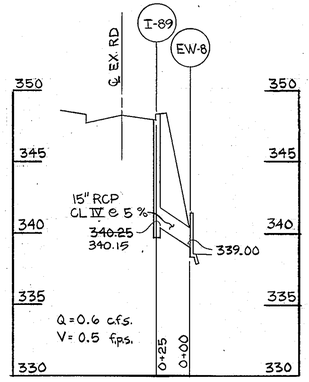


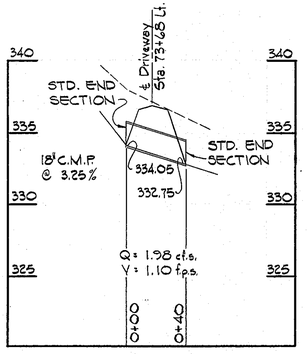


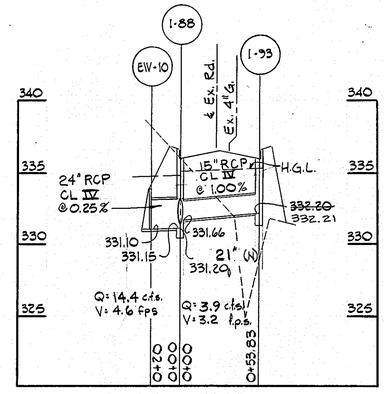


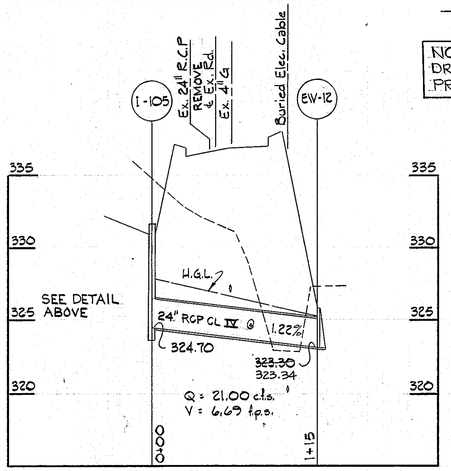
INLET NO.105 DETAIL (MODIFIED TYPE "S")

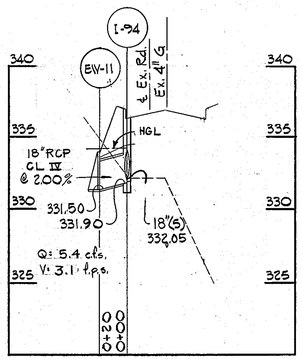
NTS

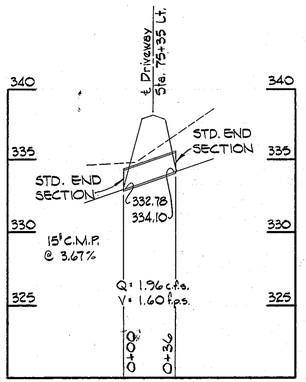












NOTE: INVERT ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE ON CULVERT GRADES. PROJECT TO ℄ OF PROP. INLETS.

NOTE: ALL STORM DRAIN PIPE TO BE CLASS 4 UNLESS OTHERWISE STATED.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED — STATE OF MARYLAND — William D. Purdum

DES: JK
DRN: RWW
CHK: JCT
DATE: 6/90

BY	NO.	REVISION	DATE
MARINAS & ASSOC.	2	AS-BUILT	1/2/92

STORM DRAIN PROFILES

CEDAR LANE — PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

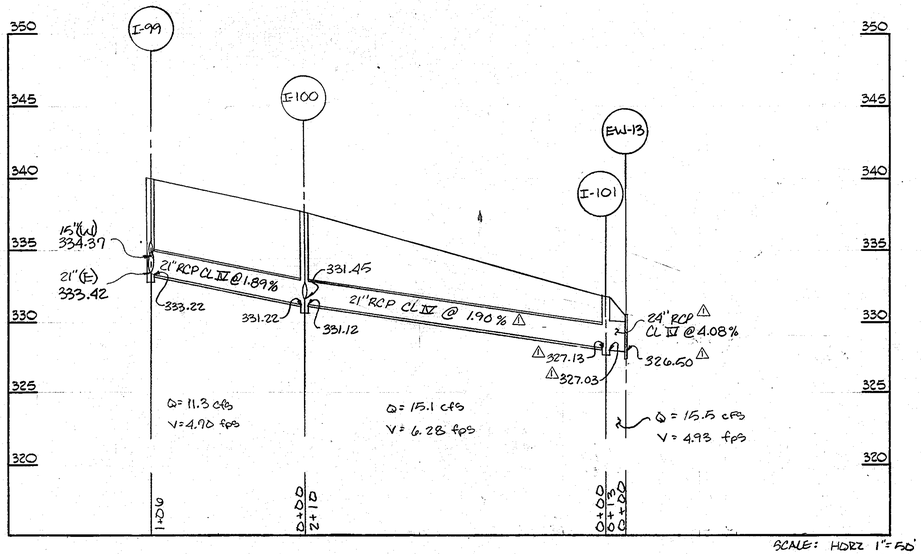
SCALE
HORIZ. 1"=50'
VERT. 1"=5'

SHEET
15 OF 28

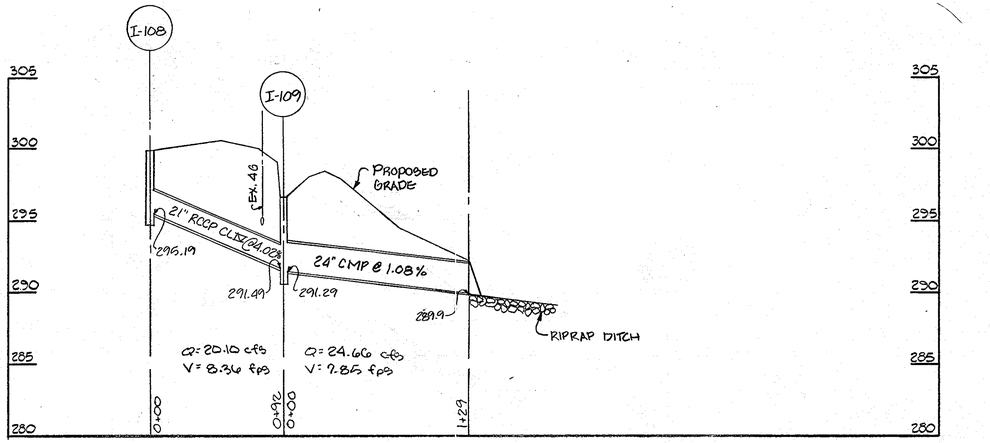
985

FINAL

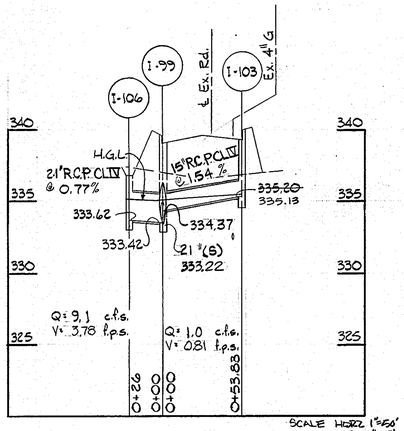
XXCE-90-015



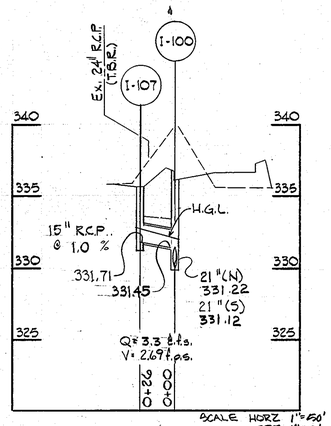
SCALE: HORZ 1"=50'
VERT 1"=5'



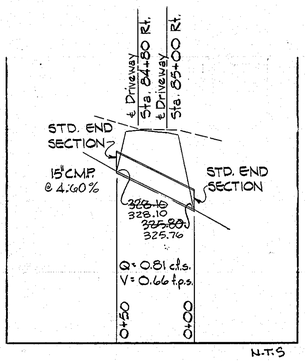
SCALE HORZ 1"=50'
VERT 1"=5'



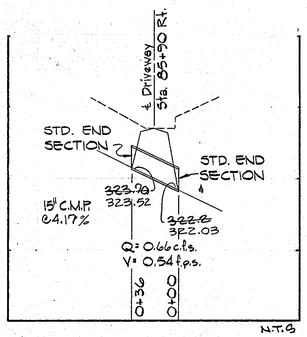
SCALE HORZ 1"=50'
VERT 1"=5'



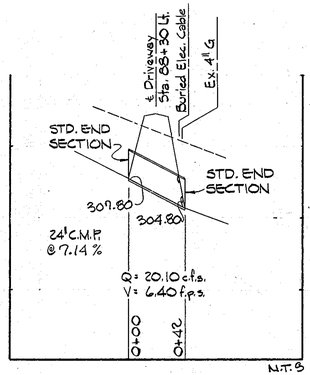
SCALE HORZ 1"=50'
VERT 1"=5'



N.T.S



N.T.S



N.T.S

985

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 11/6/88
DIRECTOR OF PUBLIC WORKS — DATE

William E. Ring 11-8-88
CHIEF, BUREAU OF ENGINEERING — DATE

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

DES: JSN
DRN: SMI
CHK:
DATE: 6/90

BY	NO.	REVISION	DATE
HARMS & ASSOC.	2	PROFILE CHANGE AS-BUILT	1/2/92

STORM DRAIN PROFILES
CEDAR LANE – PHASE 2

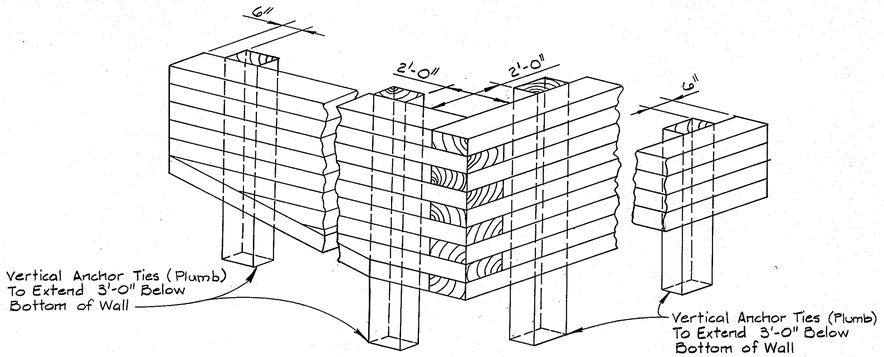
600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

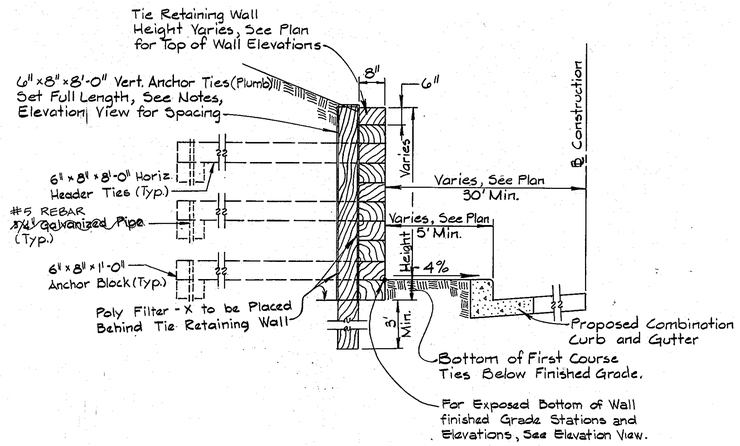
SHEET 16 OF 28

FINAL XXCE-90-016



CORNER AND END OF WALL DETAIL

NOT TO SCALE

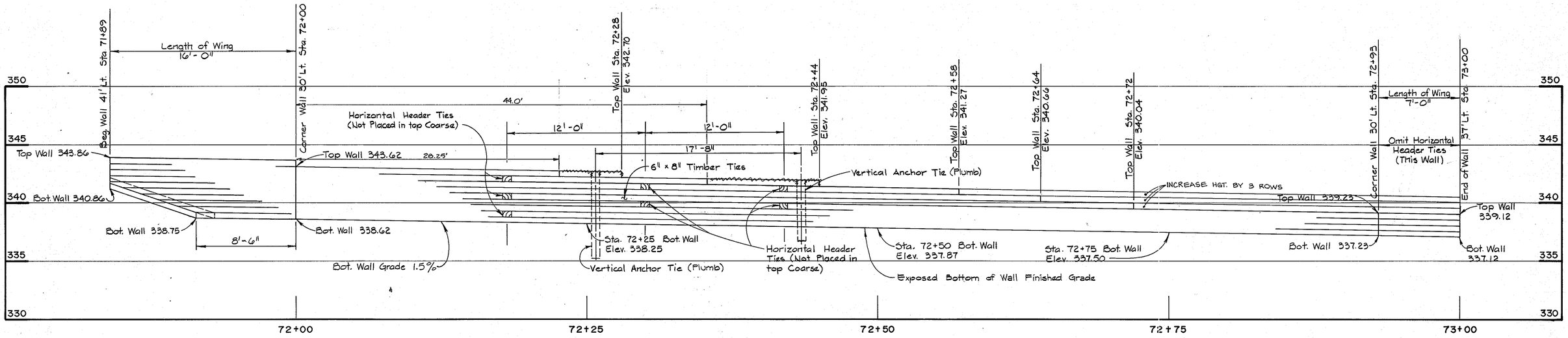


TYPICAL TIE RETAINING WALL

NOT TO SCALE

NOTES:

1. Bottom of wall elevations are finished elevations.
2. Top of wall elevations are approximate due to nominal sizes of ties and are furnished as a convenience to the Contractor.
3. Horizontal header ties to be set approximately every third course, excepting the top course where they will be omitted. Spacing of horizontal header ties to be determined in the field to yield maximum clearance from existing trees using 8'-6"o/c minimum to 25'-6"o/c maximum except at corners and ends of wall, (see details this sheet). Toe nail ties minimum 4 per tie with 60 penny nails.
4. Vertical anchor ties to be spaced 16'-0"o/c minimum to 24'-0"o/c maximum except at corners and ends of wall. (see details this sheet). Toe nail ties to vertical anchor ties with 60 penny nails.
5. Ties to be treated and meet the requirements of No.2 Southern Pine or better (see special provisions).



TIMBER TIE RETAINING WALL
LT. STA. 71+89 TO STA. 73+00
ELEVATION

SCALE: 1/4"= 1'-0"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88 — CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR — WILLIAM D. PURDUM — No. 1992 — REGISTERED — STATE OF MARYLAND
William D. Purdum

DES: JCT					
DRN: PWR					
CHK: WDP					
DATE: 6/90	RAMOS & ASSOC.	2	AS-BUILT	1/2/92	
	BY	NO.	REVISION	DATE	

TIMBER TIE RETAINING WALL & DETAILS
LT. STA. 71+89 TO STA. 73+00
CEDAR LANE — PHASE 2
600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

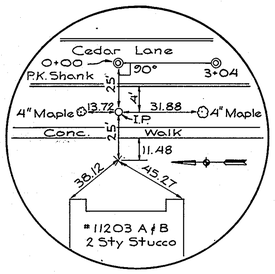
SCALE AS SHOWN
SHEET 17 OF 28

985

FINAL XXCE-90-017

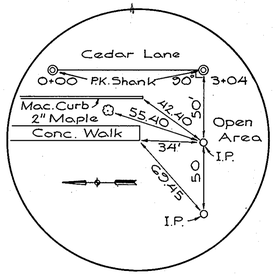
NOTE: CONTROL POINTS 1,2,3,4,5,6,7,& 8 SHOWN ON THIS SHEET ARE NOT PART OF THIS CONTRACT.

1



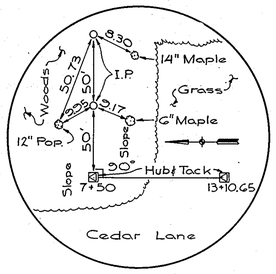
STA. 0+00
N 501805.783
E 832032.204

2



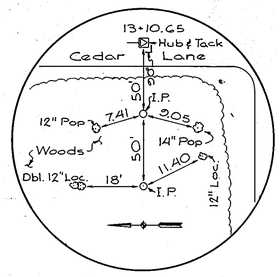
P.C.=STA. 3+04.00
N 501505.362
E 832078.747

3



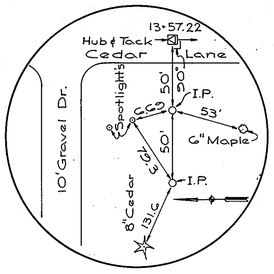
P.T.=STA. 7+50.91
N 501061.506
E 832129.884

4



P.C.=STA. 13+10.65
N 500503.367
E 832172.219

5



P.T.=STA. 15+57.22
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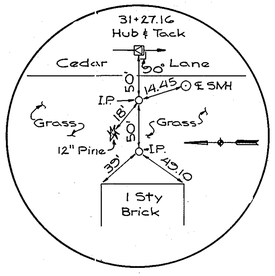
E 832188.221

6



P.C.=STA. 31+27.16
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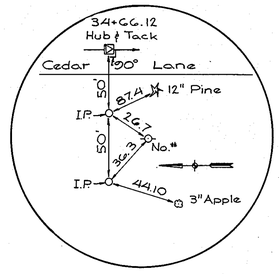
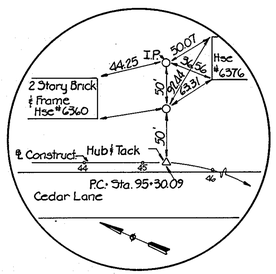
E 832273.252

7



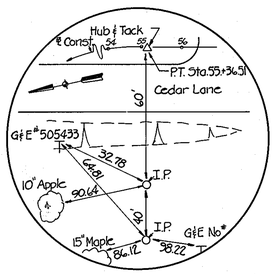
EQUALITY STATION
P.T.=STA. 34+67.05 = STA. 34+66.17
N 498357.966
E 832341.355

8



P.C.=STA.45+30.09
N 497358.836
E 832706.963

P.T.=STA.55+36.51
N 496429.177
E 832498.991



P.C.=STA.62+01.76
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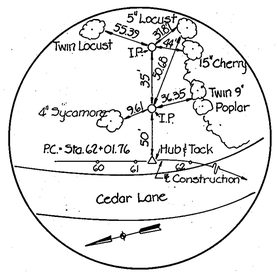
E 832025.978



P.T.=STA.63+26.68
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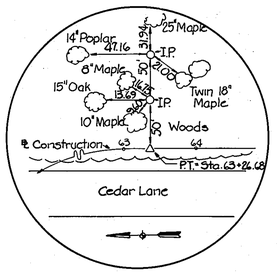
E 831936.205



P.O.L.=STA.80+00.00
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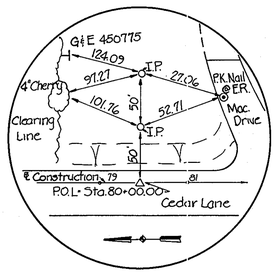
E 830721.059



P.C.= STA. 83+64.71
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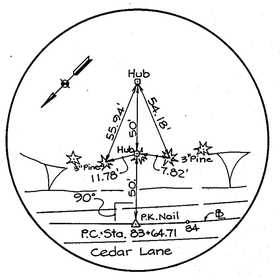
E 830456.215



BM# 107 Elev. 457.36
□-Cut ℄/Ac. Southeast Corner intersection of Cedar Lane & Hickory Ridge Rd.
30± Southeast of Δ 907

BM# 108 Elev. 437.21
Cut nail East side of C&P#35, West side of Cedar Lane
70± Northwest of Δ 908

BM# 109 Elev. 404.69
Cut nail East side of C&P#45, West side of Cedar Lane,
100± South of intersection of Hilltop Rd.
40± Southwest of Δ 909

BM# 110 Elev. 392.15
Cut nail West side of G&E#23871 Northwest Corner
Intersection of Owen Brown & Cedar Lane
30± North of Δ 910

BM# 111 Elev. 410.31
Cut nail, East Side of C&P#20 West Side Cedar Lane
@ Entrance of Convalescent Home
40± Northwest of Δ 911

NOTE: BM NOS. 107, 108, 109, 110, & 111 ARE OUTSIDE THE LIMITS OF THIS CONTRACT.

BM# 111-A Elev. 398.80
Cut nail, East side of C&P#18, West side Intersection of Freetown Rd. & Cedar Lane.

BM# 112 Elev. 381.74
Cut nail set West side of 30 Locust tree, East side of Cedar Lane.
15'± Northeast of Δ 912

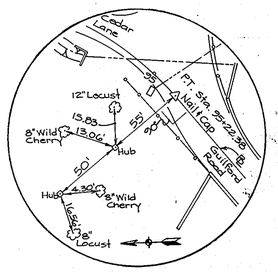
BM# 113 Elev. 351.03
Cut nail set in West side of G&E#22262, West side of Cedar Lane, 100± North of intersection @ Braeburn Rd., 100'± West of Δ 913.

BM# 114 Elev. 337.46
P.K. nail @ Edge of Road = Δ 914.

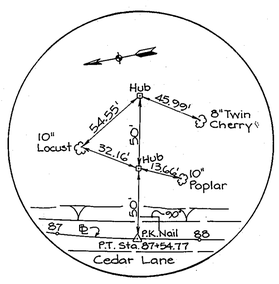
BM# 115 Elev. 360.21
Spike, West side of B&E#4507174, 30'± East of Δ 915, East side of Cedar Lane.

BM# 116 Elev. 317.15
Cut nail West side of G&E# 132254, East side of Cedar Lane. 100'± Δ 916

BM# 117 Elev. 303.39
Spike, West side of G&E# 142252, East side of Cedar Lane, 300'± North of Route 32. 100'± South of Δ 917.



P.T.=STA. 95+22.38
N 493402.334
E 830169.333



P.T.= STA. 87+54.77
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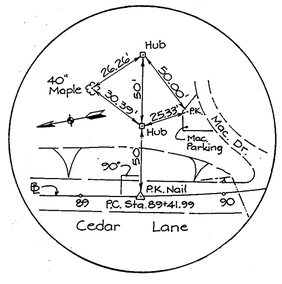
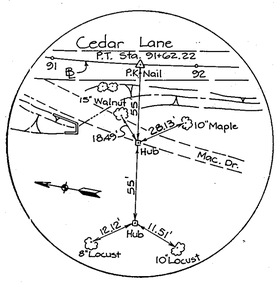
E 830269.966



P.C.= STA. 89+41.99
N 493954.118
E 830232.761



P.T.= STA. 91+62.22
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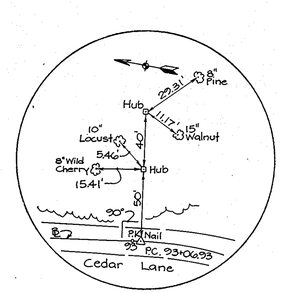
E 830226.825



P.C.=STA 93+06.93
N 493591.892
E 830247.860

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR WILLIAM D. PURDUM No. 1092 REGISTERED STATE OF MARYLAND
William D. Purdum

DES: JRL					
DRN: PWR					
CHK: WDP					
DATE 6/90			REVISION	DATE	600' SCALE MAP NO. ____ BLOCK NO. ____

HORIZONTAL & VERTICAL CONTROLS

CEDAR LANE — PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE N/A
SHEET 18 OF 28

985

FINAL XXCE-90-018

BORING DATA

HERBST & ASSOCIATES
FOR
JOHNSON, McCORDIC & THOMPSON
FOR
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS — JAN. 7, 1981

Boring No.	Depth (Ft.) From	To	Description and Remarks
B-16 Sta. 57+00 15'L	0.0	1.5	Brown moist cf SAND, and silt, trace rock fragments
	1.5	4.5	Brown moist Clayey SILT, some mf sand, trace rock fragments
	4.5	6.0	Brown moist CLAY & SILT, little f sand (Eight days after completion, hole dry and caved @ 2.2'.)
B-17 Sta. 61+00 10'R	0.0	5.0	Dark gray to brown very moist CLAY & SILT, trace f sand and organic matter
	5.0	7.0	Tan moist micaceous mf SAND and clayey silt (Eight days after completion, water @ 2.0', hole caved @ 3.3'.)
B-18 Sta. 65+00 5'L	0.0	0.3	Topsoil and road stone
	0.3	2.0	Dark brown very moist Clayey SILT, little mf sand, trace rock fragments and mica
	2.0	7.0	Brown wet micaceous Clayey SILT, little mf sand, trace rock fragments (Eight days after completion, water @ 3.5', hole caved @ 5.9'.)
B-19 FT Rd. Sta. 2+50 10'L	0.0	1.0	Topsoil and root mat
	1.0	6.0	Brown wet CLAY & SILT, trace f sand (Eight days after completion, water @ 2.2', hole caved @ 2.3'.)
B-20 Sta. 69+00 10'L	0.0	0.2	Leaf mat and topsoil
	0.2	7.0	Brown moist cf SAND, some silt, trace to little rock fragments Auger Refusal @ 7.0'. (One day after completion, hole dry and caved @ 3.3'.)
B-20A Sta. 69+05 10'L	0.0	0.2	Leaf mat and topsoil
	0.2	7.0	Brown moist cf SAND, some silt, trace to little rock fragments Auger Refusal @ 7.0'. (One day after completion, hole dry and caved @ 5.3'.)
B-21 Sta. 73+00 CL	0.0	0.3	Crushed stone and topsoil
	0.3	1.5	Dark gray moist cf SAND, and clayey silt, trace rock fragments
	1.5	6.0	Tan very moist cf SAND, some silt, trace rock fragments (Eight days after completion, water @ 3.0', hole caved @ 4.5'.)
B-22 Sta. 77+00 10'L	0.0	0.2	Topsoil and road stone
	0.2	2.0	Brown very moist CLAY & SILT, little cf sand
	2.0	3.0	Brown moist cf SAND, and clay & silt, trace rock fragments
	3.0	6.0	Brown moist cf SAND, little silt, little rock fragments (One day after completion, hole dry and caved @ 4.3'.)
B-23 Sta. 81+00 5'L	0.0	0.3	Topsoil and road stone
	0.3	6.0	Brown moist micaceous cf SAND, some silt, trace rock fragments (One day after completion, hole dry and caved @ 4.5'.)

TEST PIT DATA

Test Pit	Description and Remarks
~~TP-1~~	~~2' x 6' x 7' deep - No pipe encountered.~~
~~TP-2~~	~~3' x 4' x 5' deep - 12" steel water main encountered at a depth of 4.6' x 35.6' from base line of new road.~~
TP-3	3' x 3' x 3.5' deep - 4 1/2" steel gas line encountered at a depth of 3.2' under white line on edge of existing pavement.
~~TP-4~~	~~3.5' x 4' x 6.5' deep - Tunneled under road 3' for gas line. 4 1/2" steel gas line encountered at depth of 3.5' under white line on edge of existing pavement. Water line found at 11.5' from existing road edge.~~

Form No.: 503

BORING LOG

SINCE 1881

FROEHLING & ROBERTSON, INC.
FULL SERVICE LABORATORIES • ENGINEERING/CHEMICAL
"OVER ONE HUNDRED YEARS OF SERVICE"

Report No. 068108 DATE November 25, 1987

Made for: Howard County Department of Public Works

Project: Cedar Lane Improvement, Howard County, Maryland

Hole No.: 1 | Total Depth: 10.0 ft. | Elevation—Top of Hole: – | Hole Location: See Boring Location Plan
Type of Boring: Hollow-stem auger | Started: 10-23-87 | Completed: 10-28-87 | Driller: A. Wilhelm, CME-45

Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Sample Depth (Feet)	% Core Recovery	REMARKS
	0.2	Topsoil				
		Orangish/reddish-brown micaceous fine to medium SAND with some clayey silt, moist to damp, medium dense	8 7 7	1.5		M/C - 15.2%
			4 5 6	3.5		
	4.7	Yellowish-tan micaceous clayey silty fine to medium SAND, damp to moist, medium dense	5 5 6	7.0		
			4 5 7	10.0		
	10.0	BORING TERMINATED @ 10.0 FEET				Boring dry upon completion

Hole No.: 2 | Total Depth: 10.0 ft. | Elevation—Top of Hole: – | Hole Location: See Boring Location Plan
Type of Boring: Hollow-stem auger | Started: 10-23-87 | Completed: 10-23-87 | Driller: A. Wilhelm, CME-45

Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Sample Depth (Feet)	% Core Recovery	REMARKS
	0.2	Topsoil				
		Medium brown slightly micaceous clayey silty fine to medium SAND with a trace of organic matter, moist, loose to medium dense	4 5 5	1.5		
	1.5	Brown slightly micaceous silty clayey fine to coarse SAND with a little rock fragments/ gravel, moist, medium dense	3 6 12	3.5		
	5.0	Light brown to yellowish-white and brown micaceous fine to coarse SAND with some to a little rock fragments/gravel and a trace of silty clay, damp, dense (Weathered Rock)	15 21 15	7.0		
			15 22 26	10.0		
	10.0	BORING TERMINATED @ 10.0 FEET				Boring dry upon completion

Hole No.: 3 | Total Depth: 10.0 ft. | Elevation—Top of Hole: – | Hole Location: See Boring Location Plan
Type of Boring: Hollow-stem auger | Started: 10-23-87 | Completed: 10-23-87 | Driller: A. Wilhelm, CME-45

Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Sample Depth (Feet)	% Core Recovery	REMARKS
	0.2	Topsoil				
		Light brown slightly micaceous silty clayey fine to medium SAND with a trace of rock fragments/gravel, moist, medium dense	7 7 12	1.5		
	2.0	Light brown to yellowish-tan micaceous clayey silty fine to medium SAND, moist, medium dense	5 5 5	3.5		
			5 6 12	7.0		
			6 7 11	10.0		
	10.0	BORING TERMINATED @ 10.0 FEET				Boring dry upon completion

Hole No.: 4 | Total Depth: 18.7 ft. | Elevation—Top of Hole: – | Hole Location: See Boring Location Plan
Type of Boring: Hollow-stem auger | Started: 10-23-87 | Completed: 10-23-87 | Driller: A. Wilhelm, CME-45

Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Sample Depth (Feet)	% Core Recovery	REMARKS
	0.2	Topsoil				
		Dark brown and black fine to medium SAND with a little gravel and organic material, moist, medium dense (Fill)	7 5 5	1.5		
	1.5	Reddish-brown micaceous fine to medium SAND with a little silty clay and a little gravel, moist, loose to medium dense	4 5 6	3.5		Free water initially encountered in Sample No. 2 (13.5'-14.0')
	5.5	Yellowish/reddish-brown to black, tan, olive brown and white speckled micaceous fine to coarse SAND with decomposed rock fragments and a little silt, damp to wet, very dense (Weathered Rock)	20 25 31	7.0		After one hour, groundwater at 9.5 feet.
			18 27 35	10.0		
			50/.5	14.0		Cont. on next sheet

Hole No.: 4, cont. | Total Depth: 18.7 ft. | Elevation—Top of Hole: – | Hole Location: See Boring Location Plan
Type of Boring: Hollow-stem auger | Started: 10-23-87 | Completed: 11-18-87 | Driller: A. Wilhelm, CME-45

Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Sample Depth (Feet)	% Core Recovery	REMARKS
						Cont. from prior sheet
		Black, tan, olive brown and white speckled micaceous fine to coarse SAND with decomposed rock fragments and a little silt, damp to wet, very dense				
	18.7	(Weathered Rock)	50/.2	18.7		
		SPLIT-SPOON SAMPLE & AUGER REFUSAL @ 18.7 FEET				

NOTE: Additional Boring data and Analysis is available from geotechnical investigations performed by Johnson, McCordic and Thompson and Herbst and Associates on January 7, 1981 and Froehling and Robertson, Inc. on November 25, 1987 for Howard County. Prospective Contractors shall avail themselves of additional information from the Howard County Department of Public Works, prior to submission of the proposal.

No. of Blows 140-lb. Hammer, 30-in. Fall, Required to Drive 2-in. O.D., 1.375 in I.D. Sample 6-in. The first 6 in. is considered to be a Seating Drive. The sum of the second and third 6 in. of penetration is termed the Penetration Resistance, N.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 11/8/88
DIRECTOR OF PUBLIC WORKS DATE

J. Crockham & T. Ruby 11.8.88
CHIEF, BUREAU OF ENGINEERING DATE

Elmer Hoffman Gardner 11/8/88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE

985

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

PROFESSIONAL ENGINEER & LAND SURVEYOR WILLIAM D. PURDUM No. 1998 REGISTERED STATE OF MARYLAND
William D. Purdum

DES: JCT
DRN: PWR
CHK: WDP
DATE: 6/90

BY	NO.	REVISION	DATE

BORING DATA

CEDAR LANE — PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE N/A

SHEET 19 OF 28

FINAL

XXCE-90-019

NOTE: SEE SHEETS 6, 7, & 8 FOR ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

LIMIT OF WORK STA. 56+60

FREETOWN RD.

CEDAR LANE

CURVE DATA
Δ=65° 25' 03"
Dc=6° 30' 00"
R=881.47'
T=566.09'
L=1006.42'
E=166.12'
P.C.=STA. 45+30.09
P.T.=STA. 55+36.51

CURVE DATA
Δ=1° 14' 57.1"
Dc=1° 00'
R=5729.58'
T=62.46'
L=124.92'
TP # 912

NOTE: THIS SHEET IS INTENDED TO CONVEY INFORMATION PERTINANT TO PLACEMENT OF SEDIMENT AND EROSION CONTROLS ONLY. SEE ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE.

STA. 56+70 TO 58+50 MILL EXIST. PAVEMENT TO RECEIVE PROPOSED 1½" BITUMINOUS CONC. SURFACE COURSE.

STA. 58+00 CONNECT NEW 18" SD. TO EXISTING INLET

STA. 59+35 RT. GRADING AROUND EXIST. TREE TO BE MINIMIZED AS DIRECTED BY THE ENGINEER.

STA. 58+50 TO 65+00 RT. EXTEND PROPOSED 5' SIDEWALK SLOPE TO MEET EXISTING SIDE SLOPE AND DRAIN TO PROPOSED ROADWAY AS DIRECTED BY THE ENGINEER

STA. 65+70± TO STA. 67+00 LT. TRAFFIC BARRIER W BEAM INCLUDES TYPE 1 END FLARES (SEE SHEET 5)

STA. 66+05± TO STA. 67+00 RT. TRAFFIC BARRIER W BEAM INCLUDES TYPE 1 END FLARE (SEE SHEET 5)

FOR STORM DRAIN PROFILES SEE SHEET 14

STA. 65+00 LT. TO STA. 67+00 LT. SOD SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

STA. 66+00 RT. TO STA. 66+90 RT. SOD SIDE DITCH W=2' D=1'
STA. 66+90 RT. TO STA. 67+00 RT. RIPRAP SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

REMOVE EXISTING CULVERT

INV.=344.80

SEE SHEET 21

P.V.R.C.=STA. 49+50 =ELEV. 402.25
P.V.T.=STA. 45+50 =ELEV. 401.33
P.V.I.=STA. 59+00 ELEV.=391.88 V.C.=200' CORR.=0.55
P.V.C.=STA. 55+00 =ELEV. 394.58
P.V.T.=STA. 60+00 =ELEV. 386.98
P.V.C.=STA. 67+00 =ELEV. 352.68
STA. 56+70 LIMIT OF WORK
-2.70%
-4.90%
-4.90%

STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
I-70	A-10	391.53	387.19	385.50	SD 4.02
I-72	A-5 D	375.43	–	370.64	SD 4.01 WITH DEFLECTORS
I-79	A-10 D	375.43	370.10	369.60	SD 4.02 WITH DEFLECTORS
I-83	A-10 D	353.23	347.31 344.82	344.82	SD 4.02 WITH DEFLECTORS
I-76	A-10 D	354.40	344.90	344.89	SD 4.02 WITH DEFLECTORS
HW-7	A	–	344.92	–	SD 5.11
EW-6	C	–	–	344.80	SD 5.21 L=21'-6" H= 4'-6" E= 3'-6" C= 12"

PROFILE LEGEND
PROFILE GRADE LINE
EXISTING AT ℄
R/W LINE RT.
R/W LINE LT.

Full Superelevation = Remove Crown | Transition "C"=0.00016 | Normal Section / End Transition

54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00

54+94.84 57+44.84

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

STATE OF MARYLAND — JAMES C. THOMPSON — No. 10959 — REGISTERED PROFESSIONAL ENGINEER

DES: JCT
DRN: PWR
CHK: WDP
DATE: 6/90

BY	NO	REVISION	DATE

SEDIMENT & EROSION CONTROL PLAN
STA. 54+00 TO STA. 67+00
CEDAR LANE – PHASE 2
600' SCALE MAP NO. ____ BLOCK NO. ____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 20 OF 28

985

FINAL

XXCE-90-020

STA. 67+00 LT. TO STA. 67+50 LT.
SOD SIDE DITCH
W= 2' D= 1'
SEE DETAIL SHEET 5

STA. 67+00 TO STA. 67+55 ± LT.
END OF TYPE I END FLARE
BEGINNING ON PREVIOUS
SHEET (SEE SHEET 5)

STA. 67+00 TO STA. 1+50 ± RT.
TRAFFIC BARRIER W BEAM
INCLUDES 75 LF ON 50' RAD.
AND TYPE I END FLARE
(SEE SHEET 5)

REMOVE EXISTING CULVERT

STA. 68+00
25' RT.
I-89

STA. 68+00
50' RT.
EW-8

REMOVE EXISTING WALL

STA. 67+00 RT. TO STA. 67+40 RT.
RIPRAP SIDE DITCH
TO MEET BEGINNING OF
(60'L x 20'W BOTTOM)
S.W.M. POND
W= 2' D= 2'
SEE DETAIL SHEET 5

STA. 0+57
31' RT
INV. 337.0
HW-8

NOTE: PERMENANT S.W.M. POND
RT. STA. 68 TO SERVE
TEMPORARILY AS A SEDIMENT
TRAP DURING CONSTRUCTION
BY MAINTAINING POND INVERT
2'± BELOW FINISHED ELEVATIONS
SHOWN ON THE PLAN.

STA. 1+50 LT TO STA. 69+90 ±
TRAFFIC BARRIER W BEAM
INCLUDES 75 LF ON 50' RAD.
AND TYPE I END FLARE
(SEE SHEET 5)

STA. 71+89 TO 73+00 LT.
CONSTRUCT TIMBER TIE RETAINING
WALL. EXCAVATION WILL BE LIMITED TO
WITHIN 10' OF THE EXISTING TREES.
(SEE DETAILS SHEET 17)

STA. 73+35 LT. TO STA. 74+36 LT.
STA. 74+66 LT. TO STA. 76+00 LT.
SOD SIDE DITCHES
TO MEET (BOTTOM OF
30'L x 20'W) S.W.M. POND
W= 2' D= 1'
SEE DETAIL SHEET 5

NOTE: SEE SHEET 6, 7, & 8
FOR ADDITIONAL SOIL
EROSION AND SEDIMENT
CONTROL REQUIREMENTS.

STA. 79+30 TO STA. 80+00 LT.
RELOCATE TREE TOP OF
CUT SLOPE.

Pipe Outlet Sediment Trap No.1	
Drainage Area	= 1.92 Ac.
Barrel Size	= 27" CMP
Riser Size	= 27" CMP
Volume Reqd	= 345.6 cu.ft.
Volume Provided	= 25'x35'x4' = 3500 cu.ft
Depth	= 4'
Bottom Elev.	= 328.5
Top of Embankment	= 334.5
Cleanout Elev.	= 331.0
Bottom Dimensions	= 20'x30'
Trap Depth	= 5'

Stone Outlet Sediment Trap No.2	
Drainage Area	= 1.72 Ac.
Weir Length	= 5'
Volume Reqd	= 3093 cu.ft.
Volume Provided	= 25'x20'x4' = 3100 cu.ft
Depth	= 4'
Bottom Elev.	= 324.0
Top of Embankment	= 330.0
Outlet Weir Crest Elev.	= 328.5
Cleanout Elev.	= 326.0
Bottom Dimensions	= 17'x23'
Trap Depth	= 5'

STA. 68+61.45 CEDAR LANE
STA. 0+00 BRAEBURN RD.

BRAEBURN ROAD
℄ @ STA. 68+61.45
BS. STA. 67+00
FS. 272° 09' 43" D=250'

P.V.I. = STA. 69+00
ELEV. = 342.88
V.C. = 400'
CORR. = +1.70'

P.V.C. = STA. 67+00
= ELEV. 332.68

P.V.I. = STA. 71+00
= ELEV. 339.88

P.V.C. = STA. 72+50
= ELEV. 357.63

P.V.I. = STA. 74+50
ELEV. = 334.63
V.C. = 400'
CORR. = +2.09'

P.V.I. = STA. 76+50
ELEV. = 345.27
V.C. = 400'
CORR. = -2.09'

P.V.C. = STA. 74+50
= ELEV. 339.95

P.V.I. = STA. 80+50
= ELEV. 341.27

-4.90%
-1.50%
+2.66%
-1.50%
+2.66%

CURB STAKE OUT DATA CEDAR LANE BASE LINE	
STATION	OFFSET
PC 68+14.34	25.00' RT
PT 69+04.41	25.00' RT

BRAEBURN ROAD BASE LINE	
STATION	OFFSET
PT 0+53.34	15.00' LT
PC 0+56.74	15.00' RT

STA. 68+95 RT. TO STA. 69+20 RT.
RIPRAP SIDE DITCH
W= 2' D= 2'
STA. 69+20 RT. TO STA. 72+25 RT.
SOD SIDE DITCH
W= 2' D= 2'
SEE DETAIL SHEET 5

STA. 72+70 RT. PLACE
IN-STREAM STONE DIKE
SEE DETAIL SHEET 3.

STA. 75+13 RT. CONSTRUCT
25' L.F. RIPRAP OUTLET DITCH
W= 2' D= 2'
SEE DETAIL SHEET 5

NOTE: SILT FENCE TO BE
PLACED ADJACENT TO RIPRAP
LINED SWALE

FOR STORM DRAIN PROFILES
SEE SHEET 15

STA. 78+00 TO 80+00 RT.
PROP. ROADWAY SLOPE
TO BE PLACED USING
BENCHING AS DIRECTED
BY THE ENGINEER. (SEE
(SHA) SPEC. SECT. 206.03.04)

STA. 74+10 ± TO STA. 80+00 RT.
TRAFFIC BARRIER W BEAM INCLUDES
TYPE I END FLARE (SEE SHEET 5)

STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
I-89	A-5 D	348.22	–	340.25	SD 4.01 WITH DEFLECTORS
EW-8	C	–	–	339.00	SD 5.21
HW-8	A	–	337.00	–	SD 5.21
EW-9	C	–	–	336.90	L=21'-6" E=3'-6" H=4'-6" C= 12"
I-91	A-5	342.05	–	337.28	SD 4.01
I-86	A-5 D	342.05	336.20	336.10	SD 4.01 WITH DEFLECTORS
I-87	A-5 D	338.84	332.50	332.25	SD 4.01 WITH DEFLECTORS
I-88	A-5	336.56	331.20	331.15	SD 4.01
EW-10	C	–	–	331.10	SD 5.21
I-93	A-10*	336.56	–	332.20	SD 4.02
I-105	S MOD.	332.00	–	324.70	SD 4.22 AND DETAIL
I-94	A-5	337.26	332.05	331.90	SD 4.01
I-95	A-5 D	340.30	335.30	335.05	SD 4.01 WITH DEFLECTORS
I-96	A-5	342.69	–	337.90	SD 4.01
EW-11	C	–	–	331.50	SD 5.21
EW-12	C	–	–	323.30	SD 5.21

* Denotes Maryland Standard Plate

STA.	67+00	68+00	69+00	70+00	71+00	72+00	73+00	74+00	75+00	76+00	77+00	78+00	79+00	80+00
	347.2	344.8	343.5	342.0	340.8	342.1	343.6	342.4	341.6	340.1	338.4	335.8	332.5	332.6
	352.68	350.34	348.21	346.29	344.58	345.09	341.81	340.74	339.88	339.13	338.38	337.63	337.01	336.65
	332.0	331.6	333.0	334.1	334.6	339.2	340.7	341.4	341.5	341.8	342.3	341.9		
	336.55	331.6	337.81	338.75	339.95	341.15	342.09	342.77	343.19	343.35	343.25	342.89		

NOTE: THIS SHEET IS INTENDED TO CONVEY INFORMATION PERTINANT TO PLACEMENT OF SEDIMENT AND EROSION CONTROLS ONLY. SEE ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE.

PROFILE LEGEND
PROFILE GRADE LINE
EXISTING AT ℄
R/W LINE RT.
R/W LINE LT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS — DATE 11/8/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/7/88

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194

STATE OF MARYLAND — JAMES W. PURDUM — No. 5000 — REGISTERED PROFESSIONAL ENGINEER

DES: JCT				
DRN: PWR				
CHK: WDP				
DATE 6/88	BY	NO.	REVISION	DATE

SEDIMENT & EROSION CONTROL PLAN
STA. 67+00 TO STA. 80+00
CEDAR LANE – PHASE 2
600' SCALE MAP NO. — BLOCK NO.

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 21 OF 28
FINAL
XXCE-90-021

985

NOTE: SILT FENCE TO BE PLACED ADJACENT TO RIP RAP LINED SWALE

STA. 1+96 LT. REMOVE EXIST. INLET & CONC. DITCH. PLUG, REMAINING 15" PIPE INLET AND BACKFILL TO DRAIN.

STA. 0+75 TO STA. 1+75 LT. & RT. SOD SIDE DITCH W= 2' D= 1' SEE DETAIL SHEET 5

LIMIT OF PAVING STA. 1+75

CORINA COURT
℄ @ STA. 82+38.46
BS. STA. 80+00
FS. 85° 47' 56" D= 200'

STA. 83+00 To STA 84+00 LT
STA. 84+55 To STA 85+45 LT
RELOCATE EXIST TREES

STA. 0+63 LT. & RT. REMOVE EXIST. INLETS & CONC. DITCHES, PLUG REMAING 24" PIPE INLETS AND BACKFILL.

CURVE DATA
Δ = 35°06'19"
DC= 09°30'00"
R = 636.62'
T = 201.37'
L = 390.06'

STA. 83+99 LT. TO STA. 84+24 LT. RIPRAP SIDE DITCH W= 2' D= 1'
STA. 84+24 LT. TO STA. 89+20 LT. CONC. SIDE DITCH W= 2' D= 1'
SEE DETAIL SHEET 5

NOT PART OF THIS CONTRACT

TEMP. RIPRAP LINED WATERWAY

STA. 80+00 TO 81+00 RT. PROP. ROADWAY SLOPE TO BE PLACED USING BENCHING AS DIRECTED BY THE ENGINEER. (SEE (SHA) SPEC. SECT. 206.03.04)

SHEET 21

MATCH LINE

SEE SHEET 23

STA. 0+76 39' LT.
STA. 81+80 25' LT.
STA. 0+73 35' RT.
STA. 82+86 25' LT.
STA. 83+99 42' LT.
STA. 83+75 25' LT.
STA. 81+80 25' RT.

PC STA. 83+86.38 @ 24.64' LT.
PC STA. 83+43.84 @ 25' Rt.

Soil Boring B-23
Soil Boring B-1
Soil Boring B-2

LIMIT OF DISTURBANCE

4" GAS (4' COVER)

SILT FENCE AT TOE OF SLOPE

EXIST. ROAD #4

CONSTRUCTION

CUT 2:1

W/END SECT.

INV. 327.0
INV. 324.4
INV. 320.8
INV. 319.3

15" CMP W/END SECT.

R.P. To Retaining Wall

#900 I.B.V. Block

T.P. #916 84+58.46

BURIED ELECTRIC

LIMITS OF COUNTY CONSTRUCTION

STA. 82+38.46 CEDAR LANE = STA. 0+27.00 CORINA COURT

VC=600'

FOR STORM DRAIN PROFILES SEE SHEET 16

RESTORE EXISTING WALL TO EXISTING CONDITIONS AFTER INSTALLATION OF DRIVEWAY CULVERT

STA. 80+00 TO STA. 81+00 ± RT. TRAFFIC BARRIER W BEAM INCLUDES TYPE 1 END FLARE (SEE SHEET 5)

E 830,600
N 494,000
E 830,000
N 494,750

PC STA. 83+64.71

PC STA. 83+86.38 @ CURB & GUTTER

CURB & GUTTER
30'R
8' SHOULD.
℄ CONSTRUCTION
25'
83
24'
84
PC STA. 83+43.84 @ CURB & GUTTER

CURB & GUTTER TO SHOULDER DETAILS
NOT TO SCALE

NOTE: SEE SHEETS 6, 7, & 8 FOR ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

NOTE: THIS SHEET IS INTENDED TO CONVEY INFORMATION PERTINANT TO PLACEMENT OF SEDIMENT AND EROSION CONTROLS ONLY. SEE ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE

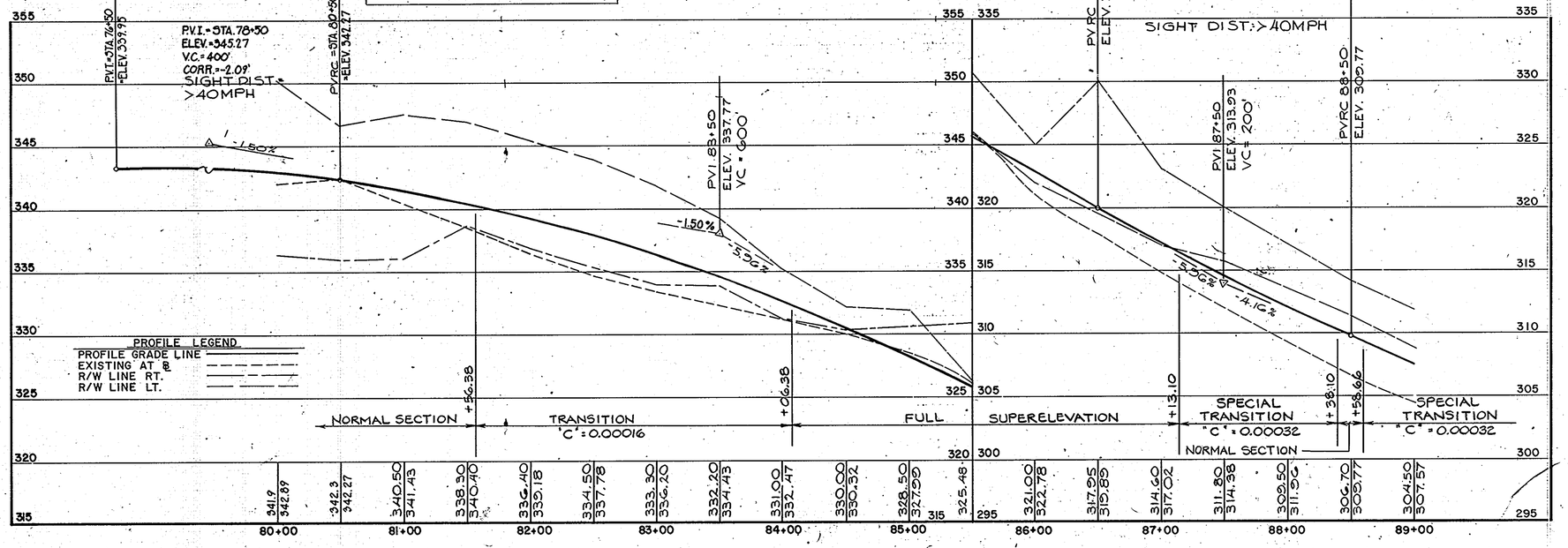
STA. 88+75 RT. TO STA. 89+20 RT. SOD SIDE DITCH W= 2' D= 1' SEE DETAIL SHEET 5

STA. 84+15 RT. TO STA. 88+75 RT. SOD 'V' DITCH W= N/A D= 1' SEE DETAIL SHEET 12

STA. 87+60' LT & RT BEGIN SHOULDER TRANSITION 8' WIDE

STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
EW-13	C	—	—	327.80	SD 5.21
I-103	A-5 D	339.88	—	335.20	SD 4.01 WITH DEFLECTORS
I-99	A-5 D	339.73	334.37	333.22	SD 4.01 WITH DEFLECTORS
			333.42		
I-106	D	336.70	—	333.62	SD 4.11
I-107	D	335.20	—	331.71	SD 4.11
I-100	A-5	336.70	331.45	330.12	SD 4.01
			330.22		
I-101	A-5	333.51	327.40	327.15	SD 4.01

CURB STAKE OUT DATA CEDAR LANE BASE LINE	
STATION	OFFSET
PC 81+89.30	25.00' LT
PT 82+79.55	25.00' LT
CORINA COURT BASE LINE	
STATION	OFFSET
PT 0+78.84	15.00' RT
PC 0+85.45	15.00' LT



ROADWAY STAKE OUT DATA STATION AND OFFSETS / ELEVATION C=0.00016						
	LEFT			RIGHT		
REMARKS	SHOULDER WIDTH & ELEVATION	OFFSET TO EDGE & ELEVATION	℄ STATION & ELEVATION	OFFSET TO EDGE & ELEVATION	SHOULDER WIDTH & ELEVATION	REMARKS
NORMAL SECTION		25.00'	81+41.38	25.00'		NORMAL SECTION
ELEVATION @ FACE CURB		340.03	340.59	340.03		ELEVATION @ FACE CURB
		25.00'	81+56.38	25.00'		END NORMAL SECTION
		339.69	340.25	339.75		BEGIN TRANSITION
		25.00'	81+75	25.00'		
		339.25	339.81	339.35		
		25.00'	82+00	25.00'		
		338.62	339.18	338.91		
		25.00'	82+25	25.00'		
		337.95	338.51	338.28		
		25.00'	82+50	25.00'		
		337.22	337.78	337.65		
		25.00'	82+81.38	25.00'		1/2 LEVEL
		336.25	336.81	336.81		
		25.00'	82+75	25.00'		
		336.45	337.01	336.98		
		25.00'	83+00	25.00'		
		335.64	336.20	336.27		
		25.00'	83+25	25.00'		
		334.77	335.33	335.50		
			83+43.84	25.00'		PC @ CURB & GUTTER
			334.85	334.90		
		25.00'	83+50	23.90'		CURB & GUTTER RUNOUT
		333.87	334.43	334.70		
PC @ CONSTRUCTION		25.00'	83+64.71	23.68'	8'	PC @ CONSTRUCTION
		333.31	333.87	334.19	334.03	BEGIN SHOULDER
		24.92'	83+75	23.32'	8'	
		332.97	333.47	333.82	333.66	
PC @ CURB & GUTTER		24.64'	83+86.38			
		332.53	333.02			
CURB & GUTTER RUNOUT		23.19'	84+00	22.50'	8'	
		331.97	332.47	332.90	332.74	
BEGIN SHOULDER	8'	22.98'	84+06.38	22.30'	8'	END TRANSITION
	331.54	331.70	332.20	332.66	332.50	FULL SUPERELEVATION
	8'	22.37'	84+25	21.69'	8'	
	330.81	330.97	331.42	331.85	331.69	
	8'	21.55'	84+50	20.88'	8'	
	329.73	329.89	330.32	330.74	330.58	
	8'	20.74'	84+75	20.07'	8'	
	328.61	328.77	329.18	329.58	329.42	
	8'	19.93'	85+00	19.27'	8'	
	327.43	327.59	327.99	328.38	328.22	
	8'	19.12'	85+25	18.48'	8'	
	326.22	326.38	326.76	327.13	328.97	
	8'	18.33'	85+50	17.70'	8'	
	324.95	325.11	325.48	325.83	325.67	
	8'	17.54'	85+75	16.93'	8'	
	323.64	323.80	324.15	324.49	324.33	
	8'	16.76'	86+00	16.17'	8'	
	322.33	322.49	322.83	323.15	322.99	
	8'	16.00'	86+25	15.42'	8'	
	320.88	321.04	321.36	321.67	321.51	
	8'	15.24'	86+50	14.69'	8'	
	319.43	319.59	319.89	320.18	320.02	
	8'	14.50'	86+75	13.96'	8'	
	317.98	318.14	318.43	318.71	318.55	
	8'	13.77'	87+00	13.28'	8'	
	316.58	316.74	317.02	317.29	317.13	
	8'	13.39'	87+13.10	12.90'	8'	BEG. TRANSITION BACK TO NORMAL SECTION
	315.88	316.04	316.31	316.57	316.41	
	8'	13.06'	87+25	12.57'	8'	
	315.25	315.41	315.67	315.87	315.71	
			87+38.01	12.22'	8'	PT @ EDGE OF ROAD
			314.89	315.14	314.98	
	8'	12.38'	87+50	12.02'	8'	
	313.97	314.13	314.38	314.48	314.32	
PT @ ℄ CONSTRUCTION	8'	12.23'	87+54.77	12.00'	8'	PT @ ℄ CONSTRUCTION
	313.74	313.90	314.14	314.22	314.06	
BEGIN SHOULDER TRANSITION	8'	12.16'	87+60	12.00'	8'	BEGIN SHOULDER TRANSITION
	313.48	313.64	313.88	314.20	314.04	
PT @ EDGE OF ROAD	7.70'	12.00'	87+71.83			PT @ EDGE OF ROAD
	312.91	313.06	313.30			
SHOULDER TRANSITION	7.63'	12.00'	87+75	12.00'	7.63'	
	312.75	312.89	313.14	313.14	312.99	
	7.61'	12.00'	87+75.60	12.00'	7.61'	1/2 LEVEL
	312.72	312.87	313.11	313.11	312.96	
	7.00'	12.00'	88+00	12.00'	7.00'	
	311.58	311.72	311.96	311.87	311.73	
	6.38'	12.00'	88+25	12.00'	6.38'	
	310.47	310.60	310.84	310.65	310.52	
	6.00'	12.00'	88+38.10	12.00'	6.00'	END TRANSITION
	309.91	310.03	310.27	310.03	309.91	BEG. NORMAL SECTION
	5.75'	12.00'	88+50	12.00'	5.75'	
	309.42	309.53	309.77	309.53	309.42	
	5.53'	12.00'	88+58.66	12.00'	5.53'	END NORMAL SECTION
	309.06	309.17	309.41	309.17	309.06	BEGIN TRANSITION
	5.13'	12.00'	88+75	12.00'	5.13'	
	308.36	308.46	308.70	308.52	308.42	
	4.50'	12.00'	89+00	12.00'	4.50'	
	307.24	307.33	307.57	307.49	307.40	
	3.97'	12.00'	89+21.16	12.00'	3.97'	1/2 LEVEL
	306.25	306.33	306.57	306.57	306.49	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 11/8/88 — DIRECTOR OF PUBLIC WORKS — DATE
K. Kittleman & Riley 11-8-88 — CHIEF, BUREAU OF ENGINEERING — DATE
Elizabeth Anderson Colao 11/8/88 — CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

STATE OF MARYLAND — CHARLES W. DORSEY — PROFESSIONAL ENGINEER

DES: JCT
DRN: PWR
CHK: WDP
DATE: 6/90

BY	NO.	REVISION	DATE

SEDIMENT & EROSION CONTROL PLAN
STA. 80+00 TO STA. 89+20
CEDAR LANE — PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'

SHEET 22 OF 28

985

FINAL

XXCE-90-022

NOTE: SEE SHEETS 6, 7, & 8 FOR ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

LIMIT OF WORK STA. 53+60

FREETOWN RD.

CEDAR LANE

STA. 58+70 LT. TO STA. 59+60 LT.
30D SIDE DITCH
W= 2' D= 1'
SEE DETAIL SHEET 5

STA. 65+70± TO STA. 67+00 LT. TRAFFIC BARRIER W BEAM INCLUDES TYPE I END FLARES (SEE SHEET 5)

STA. 65+00 LT. TO STA. 67+00 LT.
30D SIDE DITCH
W= 2' D= 2'
SEE DETAIL SHEET 5

REMOVE EXISTING CULVERT

SEE SHEET 24

MATCH LINE

CURVE DATA
Δ= 1° 14' 57.1"
Dc= 1° 00'
R= 5729.58'
T= 62.46'
L= 124.92'
TP # 912

CURVE DATA
Δ= 65° 25' 02.8"
Dc= 6° 30' 00"
R= 881.47'
T= 566.09'
L= 1066.42'
E= 166.12'

P.C.= STA. 45+30.09
P.T.= STA. 55+36.51
P.C.= STA. 62+01.76
P.T.= STA. 63+26.68

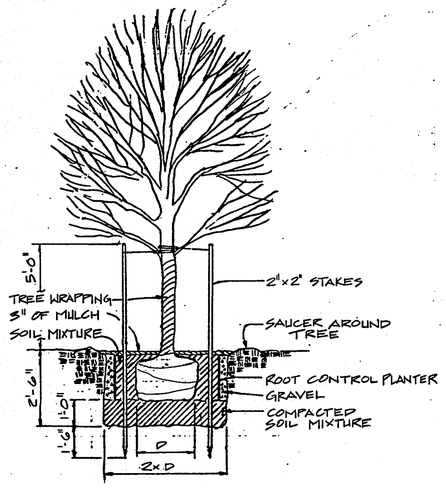
HRD IS BUILDING AN ENTRANCE AT THIS POINT ELIMINATE 1 TREE AND RELOCATE AS SHOWN.

Soil Boring B-16
Soil Boring B-17
Soil Boring B-18

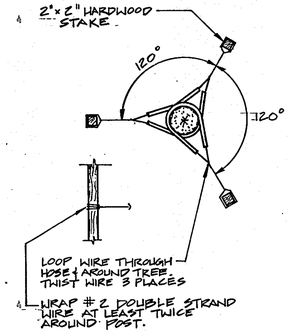
EXIST. ROAD (3.5' COVER)

FILL ± 2'

PLANT LIST				
QTY.	SYMBOL	NAME	SIZE	REMARKS
42 44		ACER RUBRUM RED MAPLE	2½"-3" CAL. 13'-15' HGT.	B+B, FULL HEAD
44		GINKGO BILOBA [MALE ONLY] MAIDEN HAIR TREE	2½"-3" CAL. 10'-12' HGT.	B+B, FULL HEAD
25		QUERCUS PALUSTRIS PIN OAK	2½"-3" CAL.	B+B, FULL HEAD
2		EUONYMUS ALATUS - BURNING BUSH	30"-36"	B & B



TYPICAL TREE PLANTING DETAIL
(NOT TO SCALE)



BRACE DETAIL
(NOT TO SCALE)

LANDSCAPING NOTES:

NOTE: SHEET NO'S 23 THROUGH 26 ARE INTENDED TO CONVEY INFORMATION PERTINENT TO PLACEMENT OF STREET TREES AND LANDSCAPING DETAILS ONLY. SEE OTHER ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE.

1. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES BEFORE DIGGING.
2. TREES SHALL BE PLANTED 1' BEHIND THE FACE OF CURB, HOWEVER ACTUAL LOCATIONS OF TREES MAY VARY TO ACCOMODATE FIELD CONDITIONS.
3. POLYETHYLENE ROOT CONTROL PLANTERS ARE REQUIRED FOR EACH TREE TO MINIMIZE ROOT SPREADING. ALL PLANTERS SHALL BE MANUFACTURED BY DEEP ROOT CORPORATION OF WESTMINSTER, CALIFORNIA (48" UNIVERSAL BARRIER, STOCK UB-48-2) OR APPROVED EQUAL AND SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. SEE SPECIFICATIONS FOR GENERAL PLANTING REQUIREMENTS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 7/12/90
CHIEF, BUREAU OF ENGINEERING — DATE 7-11-90
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 7/12/90

DES: JSN
DRN: SMI
DATE: 6/90

NO	REVISION	DATE
2	AS-BUILT	1/2/92

600' SCALE MAP NO. ____ BLOCK NO. ____

LANDSCAPING PLAN
STA. 54+00 TO STA. 67+00
CEDAR LANE – PHASE 2

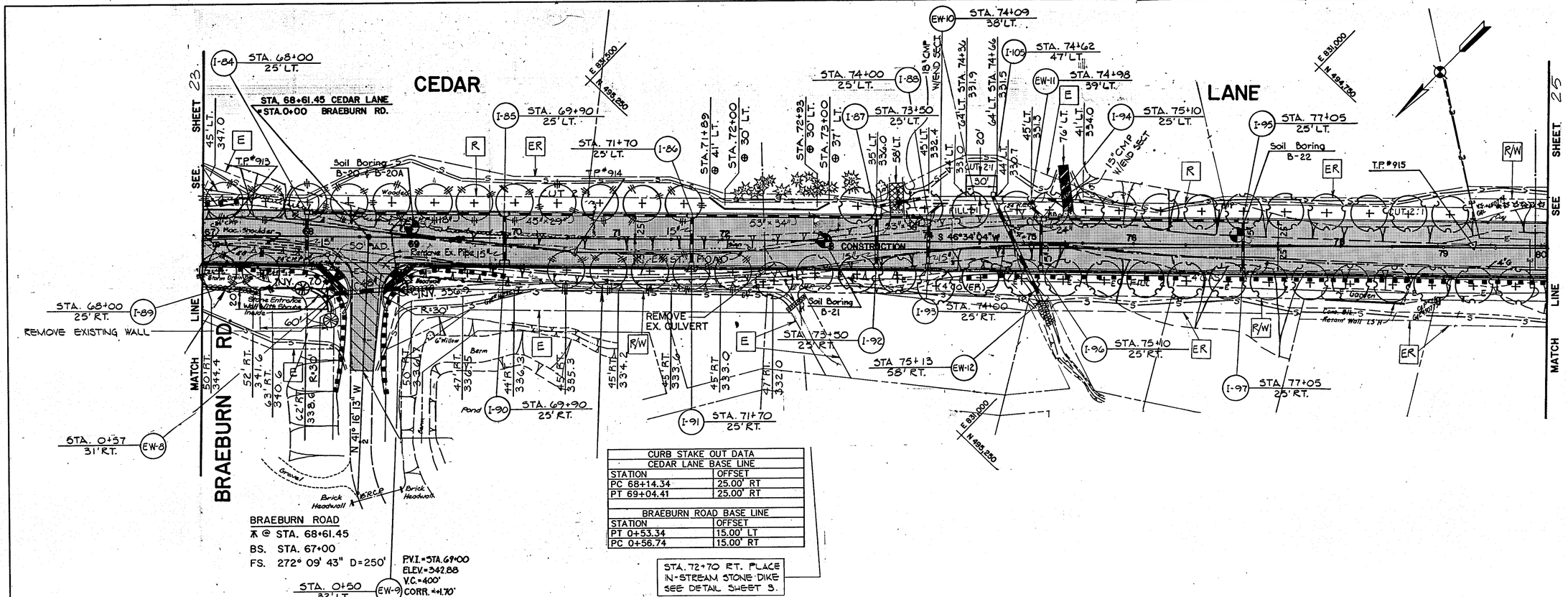
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 23 of 28

985

FINAL

XXCE-90-023



CURB STAKE OUT DATA	
CEDAR LANE BASE LINE	
STATION	OFFSET
PC 68+14.34	25.00' RT
PT 69+04.41	25.00' RT
BRAEBURN ROAD BASE LINE	
STATION	OFFSET
PT 0+53.34	15.00' LT
PC 0+56.74	15.00' RT

NOTE: SEE SHEET 23 FOR LANDSCAPING GENERAL NOTES AND LANDSCAPING DETAILS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/9/88
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-88
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/8/88

STATE OF MARYLAND — RICHARD A. CLEM — 21603 — REGISTERED PROFESSIONAL ENGINEER

DES: JCT					
DRN: PWR					
CHK: WDP					
DATE 6/90	BY	NO.	REVISION	DATE	600' SCALE MAP NO. ____ BLOCK NO. ____

LANDSCAPING PLAN
STA. 67+00 TO STA. 80+00
CEDAR LANE — PHASE 2

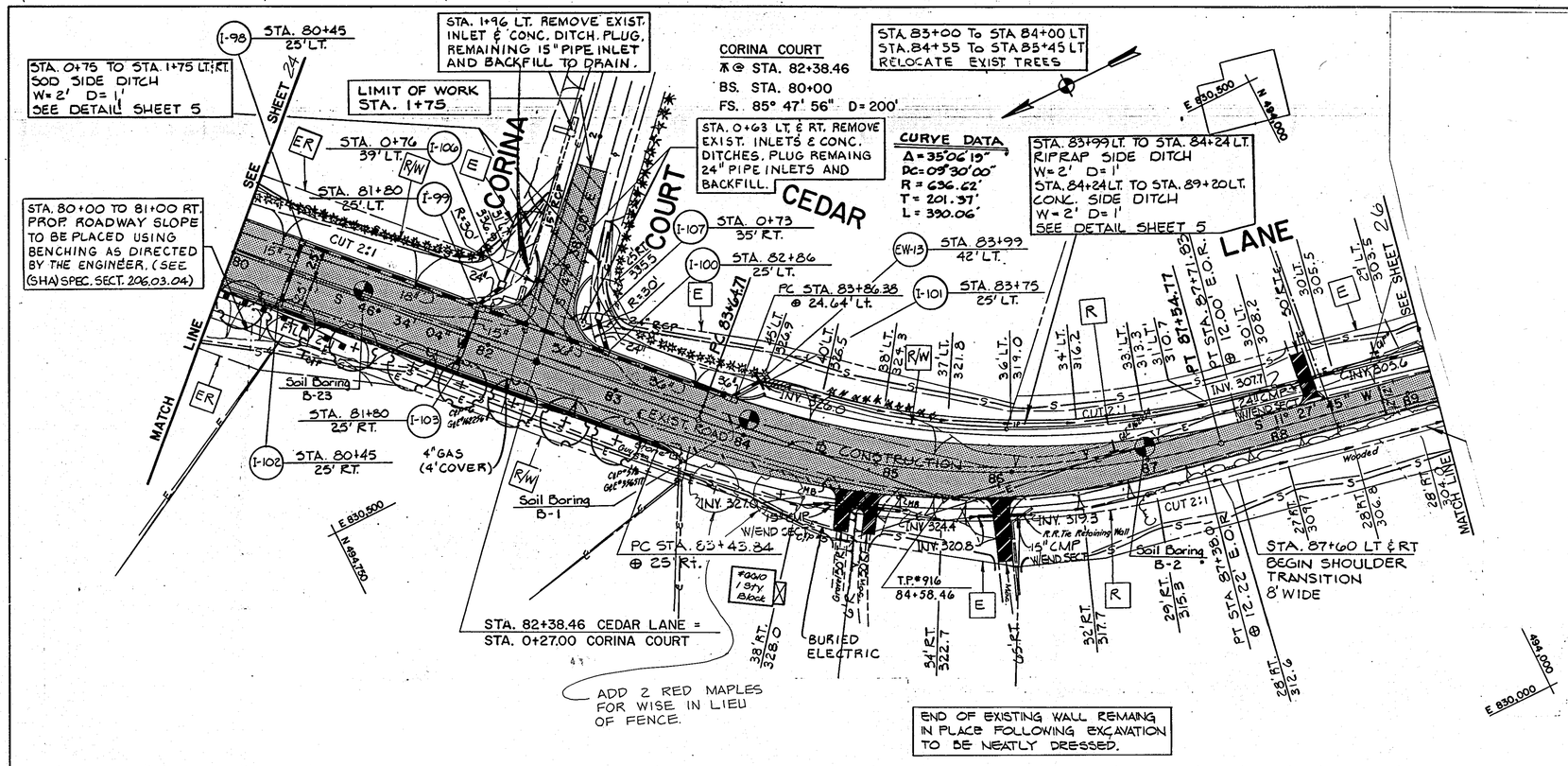
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 24 of 28

985

FINAL

XXCE-90-024



NOTE: SEE SHEET 23 FOR LANDSCAPING GENERAL NOTES AND LANDSCAPING NOTES.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/6/92
CHIEF, BUREAU OF ENGINEERING — DATE 11-8-92
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE 11/6/92

DES: JCT
DRN: PWR
CHK: WDP
DATE: 6/90

BY	NO.	REVISION	DATE
Hanover & Assoc	2	AS-BUILT	1/2/92

LANDSCAPING PLAN
STA. 80+00 TO STA. 89+20
CEDAR LANE — PHASE 2

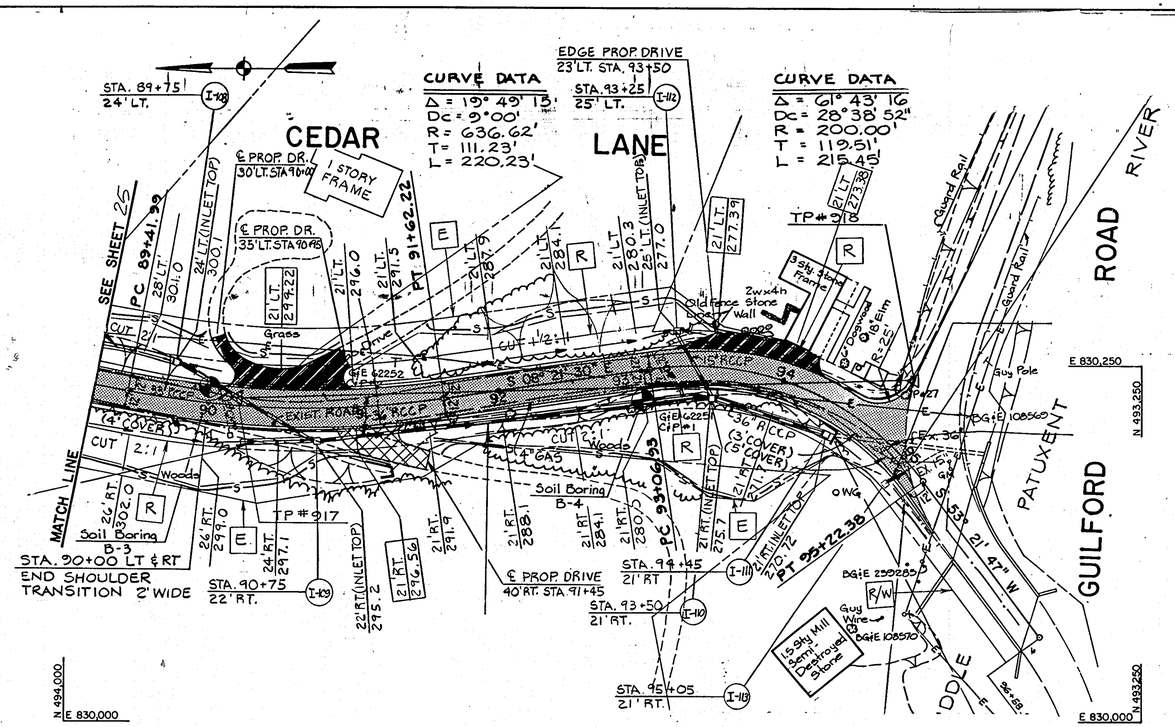
600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 25 OF 28

985

XXCE-90-025



NOTE: SEE SHEET 23 FOR LANDSCAPING GENERAL NOTES AND LANDSCAPING DETAILS.

985

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 11/8/88 — DIRECTOR OF PUBLIC WORKS — DATE
William E. Ray 11-8-88 — CHIEF, BUREAU OF ENGINEERING — DATE
Hayden Yanosky Carr 11/8/88 — CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

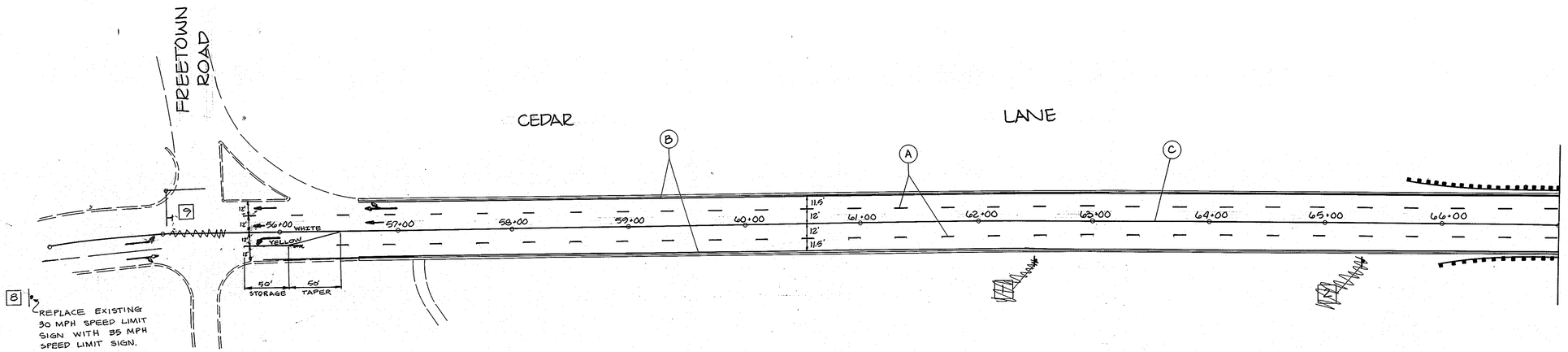
DES: JCT				
DRN: PWR				
CHK: WDP				
DATE: 6/90	BY	NO.	REVISION	DATE

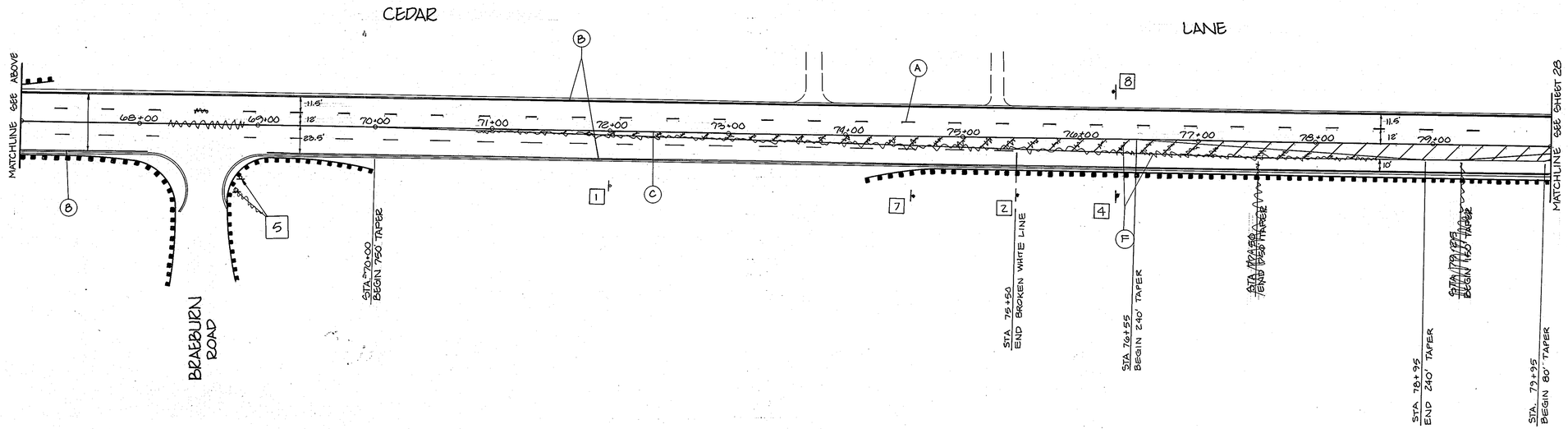
LANDSCAPING PLAN
STA. 89+20 TO STA. 95+05
CEDAR LANE – PHASE 2

600' SCALE MAP NO. ____ BLOCK NO. ____

SOUTH OF FREETOWN RD TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY MARYLAND
XXCE-90-020

SCALE 1"=50'
SHEET 26 of 28





985

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin — 7/12/90
DIRECTOR OF PUBLIC WORKS — DATE

[signature] — 7-11-90
CHIEF, BUREAU OF ENGINEERING — DATE

Elizabeth Landerman Lalor — 7/12/90
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

DES: JSN
DRN: GMI
CHK:
DATE: 6/90

BY	NO.	REVISION	DATE
HARMS & ASSOC.	2	AS-BUILT	1/2/92

STRIPING AND PERMANENT SIGNING PLAN

CEDAR LANE — PHASE 2

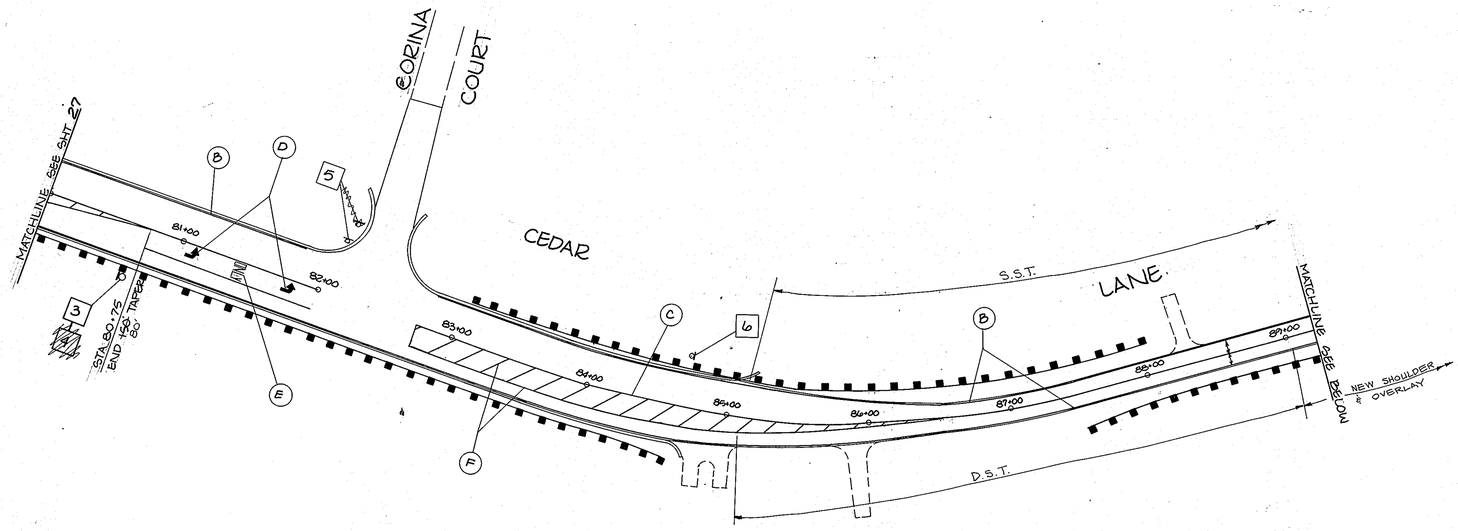
600' SCALE MAP NO. _____ BLOCK NO. _____

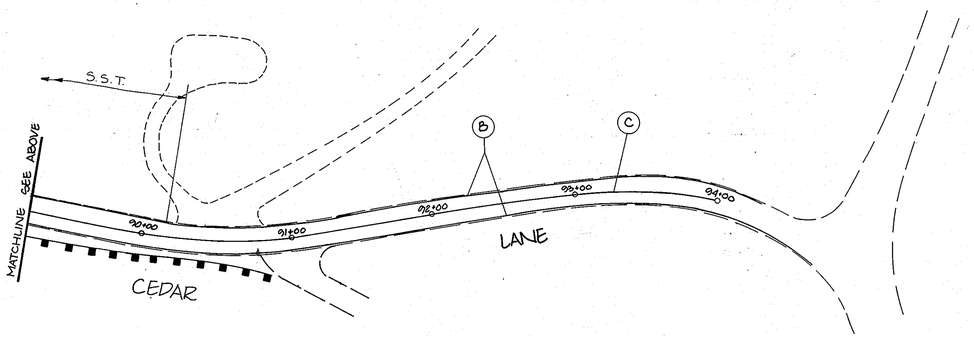
SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 27 OF 28

XXCE-90-027





SIGN SCHEDULE			
SIGN NO.	M.U.T.C.D	SIZE	MESSAGE
1	~~W9-1 W9-2~~	36" x 36"	LEFT LANE ENDS ~~LANE ENDS MERGE LEFT~~
2	W4-2	36" x 36"	
3	W1-1L	30" x 30"	
~~4~~	~~W13-1~~	~~48" x 48"~~	~~20 MPH~~
5	R1-1	30" x 30"	STOP
6	W12-2	30" x 30"	
4	R2-1	24" x 30"	SPEED LIMIT 30
7	R2-5A	24" x 30"	REDUCE SPEED AHEAD
8	R2-1	24" x 30"	SPEED LIMIT 35
9	R10-12	24" x 30"	LEFT YIELD ON GREEN

PAVEMENT MARKING DETAILS

A. INSTALL 10' STRIPE WITH 30' GAP PAINTED WHITE PAVEMENT MARKING (4" WIDTH) AS SHOWN.

B. INSTALL PAINTED WHITE PAVEMENT MARKING (4" WIDTH) AS SHOWN. 1½' FROM FACE OF CURB.

C. INSTALL PAINTED YELLOW PAVEMENT MARKINGS (4" WIDTH - CENTERLINES) AS SHOWN

D. INSTALL CURVED ARROW (SYMBOL) PREFORMED PAVEMENT MARKING (LEFT). SEE M.U.T.C.D 3B-20

E. INSTALL "ONLY" (WORD) PREFORMED PAVEMENT MARKING. SEE M.U.T.C.D 3B-20

F. INSTALL MEDIAN ISLAND FORMED BY PAVEMENT MARKINGS. SEE M.U.T.C.D 3B-10

LEGEND

TRAFFIC SIGN NO. —— □

TRAFFIC SIGN AND SUPPORT —— o

STRIPING TYPE NO. —— ○

985

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Irvin 7/12/90
DIRECTOR OF PUBLIC WORKS — DATE

Theodore D. Ridge 7.11.90
CHIEF, BUREAU OF ENGINEERING — DATE

Elizabeth A. Anderson-Calvi 7/12/90
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE — DATE

DES: JSN
DRN: GM1
CHK:
DATE: 6/90

BY	NO.	REVISION	DATE
RAINS & ASSOC	2	AS-BUILT	1/2/92

STRIPING AND PERMANENT SIGNING PLAN
CEDAR LANE — PHASE 2

600' SCALE MAP NO. _____ BLOCK NO. _____

SOUTH OF FREETOWN RD. TO GUILFORD RD.
CAPITAL PROJECT J-4086
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 28 OF 28

XXCE-90-028