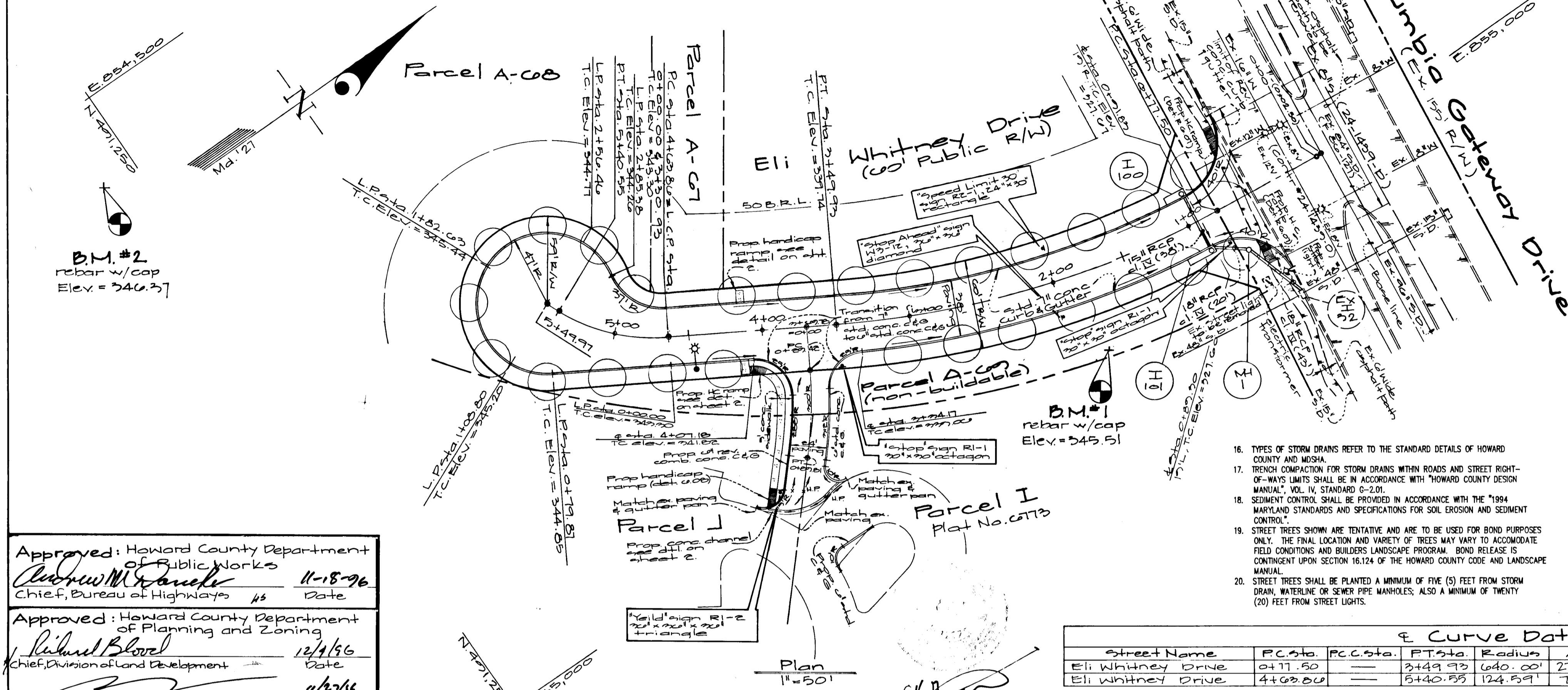


Date	Rev	Description	By	Appr
4/8/97	1	Rev Eli Whitney Drive by adding connector Rd. i added Rev. block	k.l.p	B.S.L
		Revision		

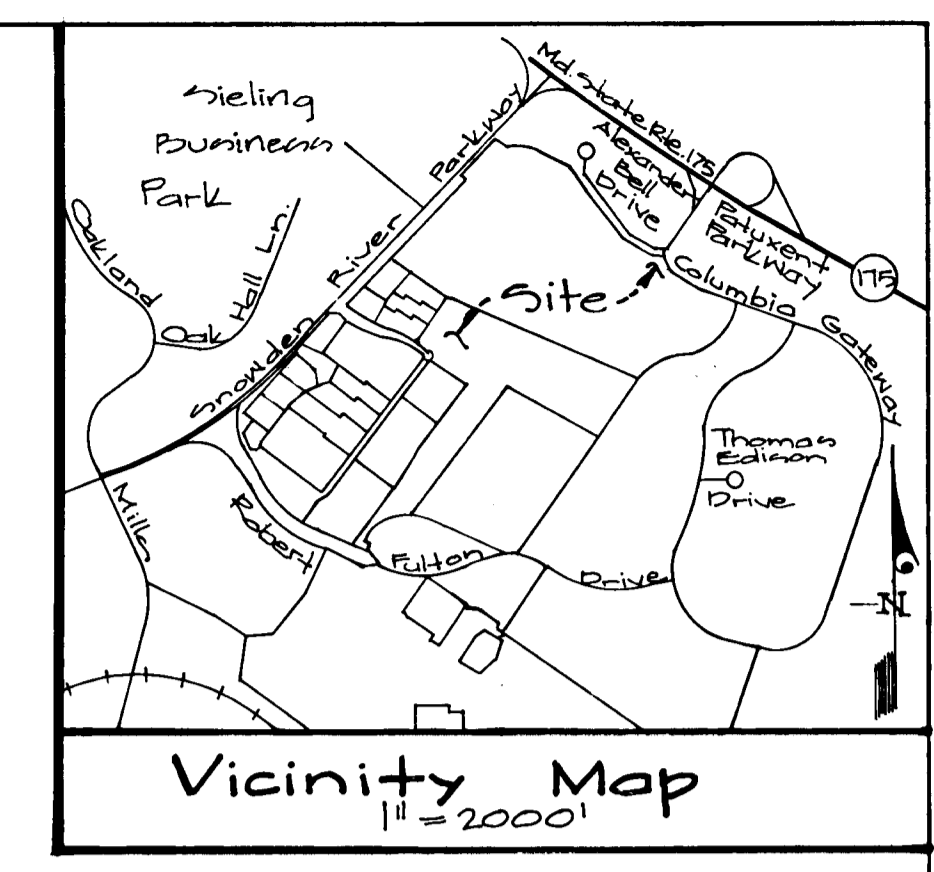


Approved: Howard County Department of Public Works
Richard M. Spence 11-18-96
 Chief, Bureau of Highways

Approved: Howard County Department of Planning and Zoning
Richard Blood 12/1/96
 Chief, Division of Land Development

Approved: Chief, Development Engineering Division
 Date

- GENERAL NOTES**
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST (5) FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS:
 M.S. UTILITY 1-800-257-7777
 CAP TELEPHONE COMPANY 725-9976
 HOWARD COUNTY BUREAU OF UTILITIES 313-4900
 A.T.E.T. CABLE LOCATION DIVISION 793-3553
 BALTIMORE GAS & ELECTRIC CO. 850-4620 & 787-9068
 STATE HIGHWAY ADMINISTRATION 531-5533
 - PROJECT BACKGROUND:
 LOCATION: COLUMBIA GATEWAY DRIVE AND ALEXANDER BELL DRIVE
 TAX MAP: 42 PARCEL: A-66 THRU A-70 ZONING: M-1
 ELECTION DISTRICT: 6
 TOTAL TRACT AREA: 133.53 AC.
 SECTION AREA: 133.53 AC.
 NUMBER OF PROPOSED LOTS: 5
 APPROVED AND DPT REFERENCE #s: S-84-14, S-85-55, F-88-91, F-87-96, F-85-55, VP-84-150, W-85-34, F-85-34, F-89-175, W-88-81, W-88-17, W-88-83, W-90-141, AA-91-15, ZB-91-5, S-90-210, SDP-92-49, F-92-15, F-92-57, FDP-215, F-92-136, SDP-93-42, F-92-140, W-93-48, W-92-172, F-93-47, ZB-94BM, F-95-175, F-96-127 & F-88-127.
 - TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
 A. STOP SIGNS: 30" x 30" OCTAGON.
 B. STOP AHEAD SIGNS: W3-1A, 30" x 30" DIAMOND.
 C. SPEED LIMIT SIGNS: R2-1, 24" x 30" RECTANGLE.
 TOPOGRAPHY SHOWN IS AT TWO FOOT CONTOUR INTERVALS AND WAS DETERMINED BY AERIAL PHOTOGRAPHY AND FIELD SURVEY.
 HORIZONTAL AND VERTICAL CONTROLS WERE ESTABLISHED USING HOWARD COUNTY CONTROL POINTS 2243002 AND 2243003.
 LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME II, ROADS AND BRIDGES.
 STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED BY AN EXISTING FACILITY CONSTRUCTED UNDER F-86-122.
 THE INTERSECTION OF ELI WHITNEY DRIVE AND COLUMBIA GATEWAY DRIVE WAS PLANNED FOR IN THE ORIGINAL TRAFFIC STUDY OF GATEWAY. THERE IS NO INCREASE IN PLANNED INTENSITY OF DEVELOPMENT.
 A NOISE STUDY WAS NOT REQUIRED FOR THIS SUBDIVISION.
 A GEOTECHNICAL REPORT IS NOT REQUIRED FOR STORMWATER MANAGEMENT. SOIL TESTING FOR PROPER SUBGRADES WILL BE PERFORMED IN ADVANCE OF BASE PAVING IN ACCORDANCE WITH SECTION 2.10 OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME II.
 EXISTING UTILITIES SHOWN WERE OBTAINED BY FIELD SURVEY AND AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY GROUND TEST. THIS IS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF CONSTRUCTION. ANY DISCREPANCIES MUST BE COMMUNICATED TO THE ENGINEER FOR POSSIBLE RE-DESIGN. ANY UTILITIES MARKED BY M.S. UTILITY SHALL ALSO BE TEST PILED BY HAND AND ANY IMPACTS TO THE DESIGNED FACILITIES SHALL BE REPORTED TO THE ENGINEER.
 - TYPES OF STORM DRAINS REFER TO THE STANDARD DETAILS OF HOWARD COUNTY AND MSHA.
 - TRENCH CONSTRUCTION FOR STORM DRAINS WITHIN ROADS AND STREET RIGHT-OF-WAYS LIMITS SHALL BE IN ACCORDANCE WITH "HOWARD COUNTY DESIGN MANUAL", VOL. IV, STANDARD G-2.01.
 - SEEDMENT CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".
 - STREET TREES SHOWN ARE TENTATIVE AND ARE TO BE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND BUILDERS LANDSCAPE PROGRAM. BOND RELEASE IS CONTINGENT UPON SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
 - STREET TREES SHALL BE PLANTED A MINIMUM OF FIVE (5) FEET FROM STORM DRAIN, WATERLINE OR SEWER PIPE MANHOLES; ALSO A MINIMUM OF TWENTY (20) FEET FROM STREET LIGHTS.



Street Tree Schedule

Symbol	Name (Botanical/Common)	Size	Quantity	Remarks
○	Acer saccharum - Green	2'-2 1/2" Cal.	even	DIP Heavyheads
○	Mountain Sugar Maple	Cal.		

Drawing List

No.	Description
1	Eli Whitney Drive Station 0+00-5+47.97
2	Grading and Sediment Control Plan
3	Storm Drain Profiles and Schedules
4	Notes and details

G.W. GUTSCHICK, LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE, SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20868
 TEL: (301) 421-4024 BALTO: (410) 880-1820 DC/VA: (301) 989-2524 FAX: (301) 421-4186

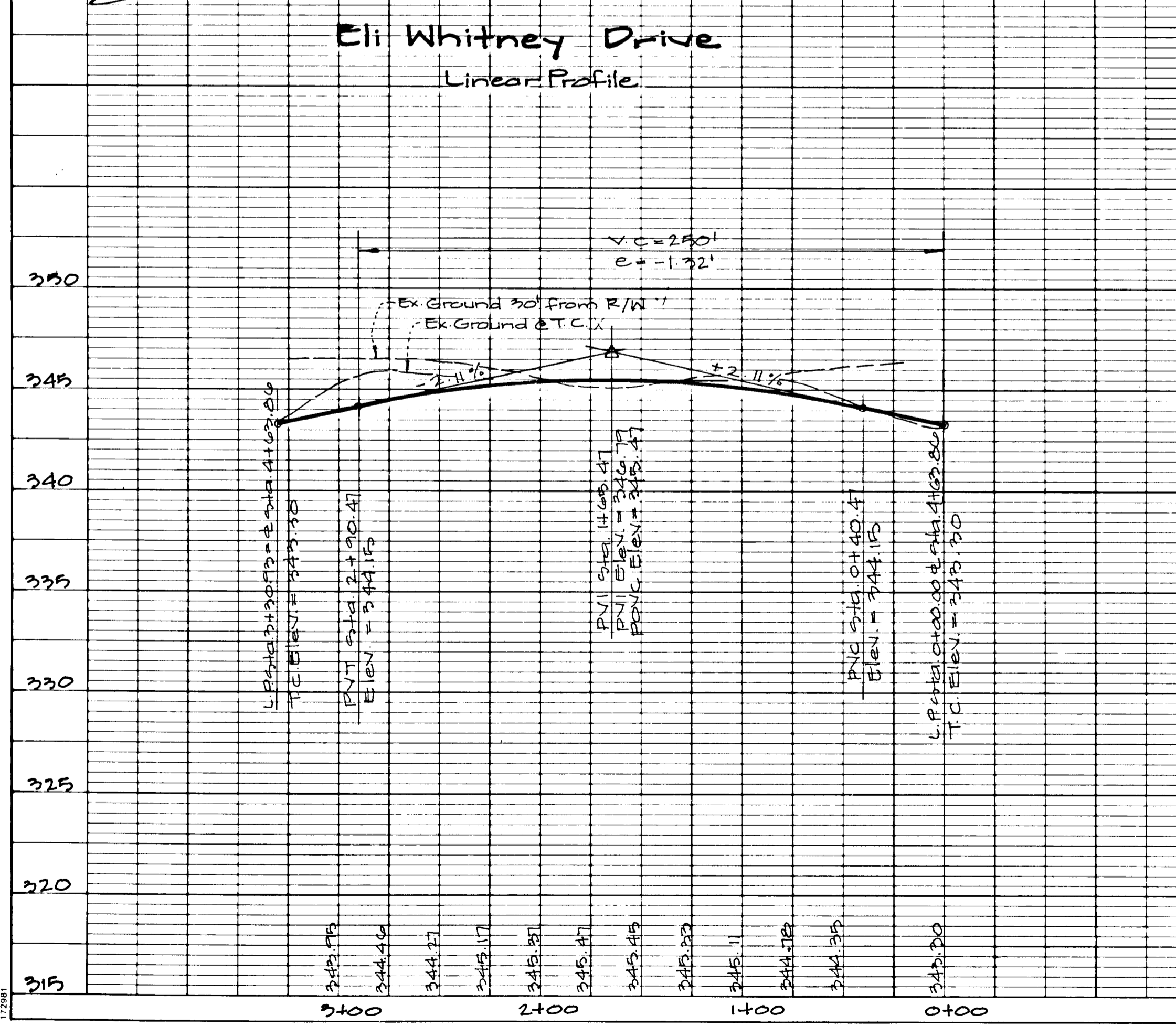
OWNER
 The Howard Real Estate Development Corp.
 10755 The Rouse Building
 Columbia, Maryland 21044
 Phone: (410) 942-6370

DESIGNED: B.S.L./M.C.F.
 DRAWN: GT
 CHECKED: DEV
 DATE: Oct, 96

Scale 1"=50'
Drawing 1 of 4
Job No. 96006

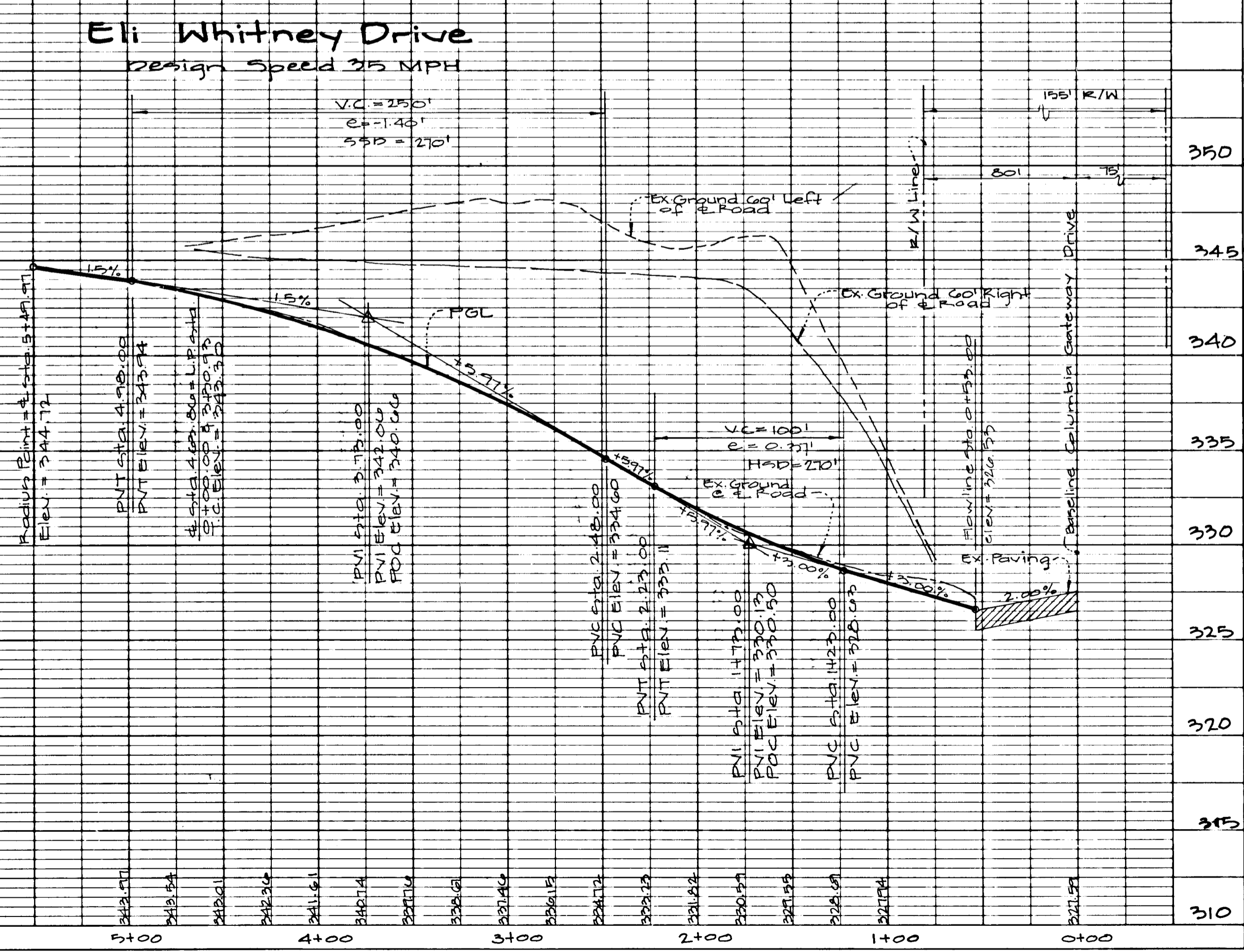
Curve Data

Street Name	P.C. Sta.	P.C.C. Sta.	P.T. Sta.	Radius	Arc	Tangent	Chord	Bearing	Delta
Eli Whitney Drive	0+17.50	—	2+42.50	(640.00)	272.43'	128.21'	272.90'	S 15°14'11"W	242.21°22"
Eli Whitney Drive	4+62.00	—	5+40.55	(24.59')	76.61'	29.60'	75.48'	S 48°01'38"W	25°15'52"



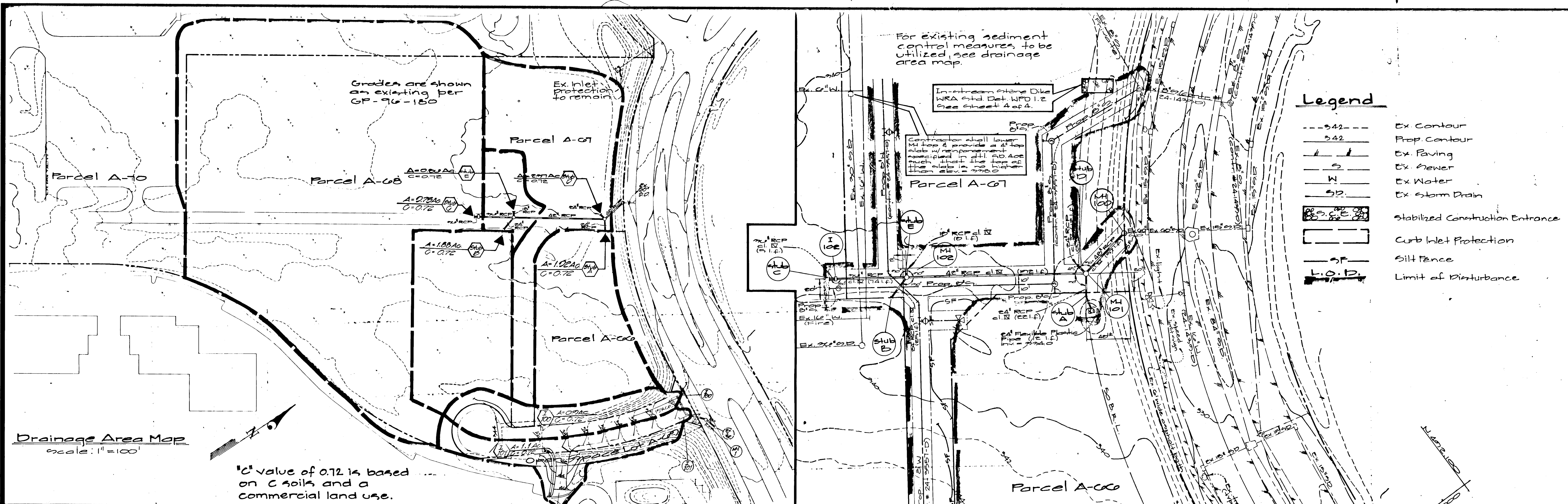
Street Light Information

- 150 Watt high pressure sodium Vapor fixture (bronze) mounted at 25' with 15' arm on steel post (brown metal finish). Place 2' from face of curb.



Profiles
 Scale: 1"=5' Horiz.
 1"=50' Vert.

1158



- Legend**
- 342 --- Ex Contour
 - 342 --- Prop Contour
 - |-|- Ex Paving
 - |-|- Ex Sewer
 - |-|- Ex Water
 - |-|- Ex Storm Drain
 - [Symbol] Stabilized Construction Entrance
 - [Symbol] Curb Inlet Protection
 - |-|- Silt Fence
 - [Symbol] Limit of Disturbance

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD.

Abt Edwards
Signature of Developer/Builder

5/23/96
Date

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Chris
Signature

5/23/96
Date

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John Robertson
Howard S.C.D.
Date

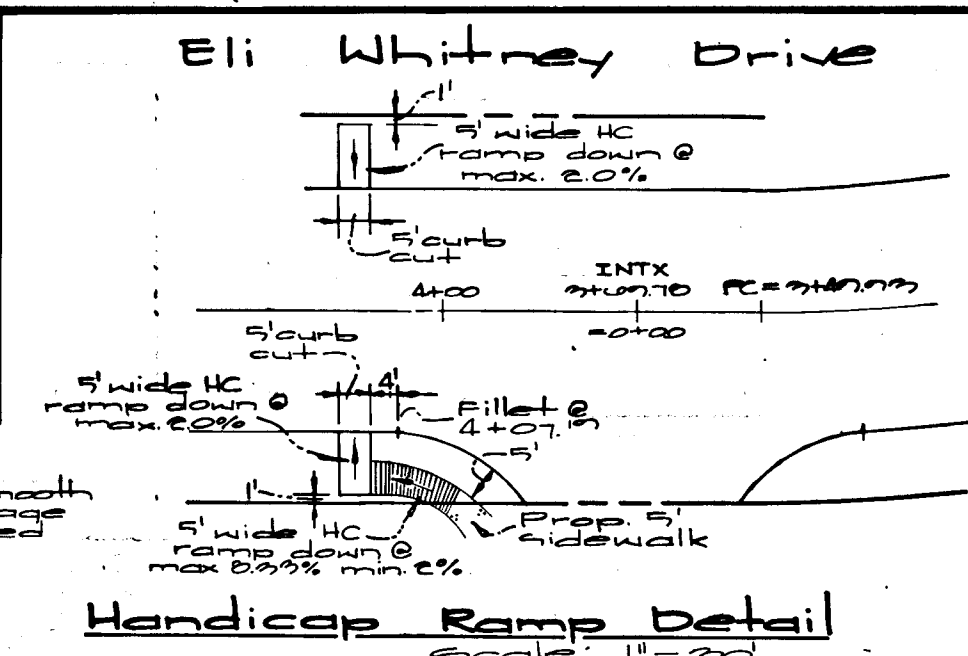
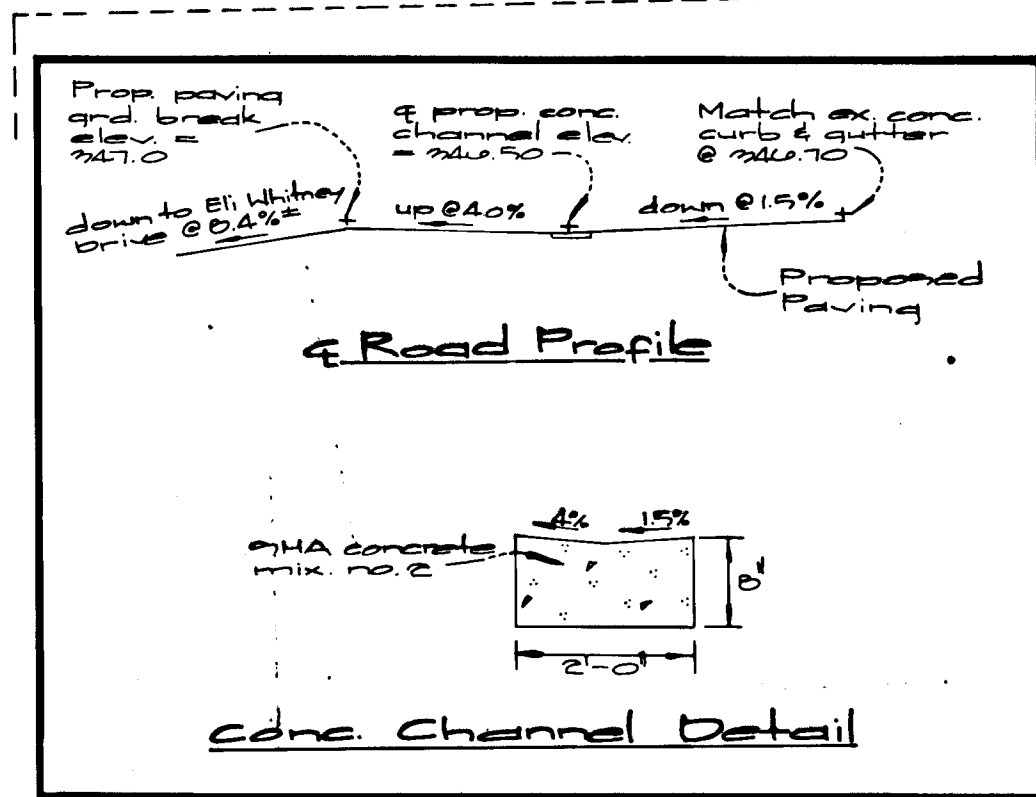
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Carol Simmons
Natural Resources Conservation Service
Date

Approved: Howard County Department of Public Works.
Richard M. Smith
Chief Bureau of Highways HS
Date: 11-18-94

Approved: Howard County Department of Planning and Zoning.
Richard Board
Chief, Division of Land Development
Date: 11/15/96

Chief Development Engineering Division
Date: 11/15/96



G.W. GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MARYLAND 20866 TEL: (301) 421-4024 NO. VA: (301) 989-2524 BAL: (410) 880-1820 FAX: (301) 421-4186 DES. DRN. CHK.										PREPARED FOR: The Howard Research and Development Corporation The Rouse Building 10275 Little Patuxent Parkway Columbia, Maryland 21044 (410) 992-6027 Attn: Al Edwards			Grading and Sediment Control Plan Gateway Commerce Center Parcels A-66 thru A-70 6th Election District Howard County, Maryland			SCALE As Shown	ZONING M-1	G. L. W. FILE NO. 96-000	DATE October, 1996	TAX MAP No. 42	SHEET 2 of 4
4/8/97	Rev. 2.0, layout of Parcel A-67, added connector rd. & curb, approval & tie ramp details.	K.P.	B.A.L.																		
	REVISION	BY	APP'R.																		

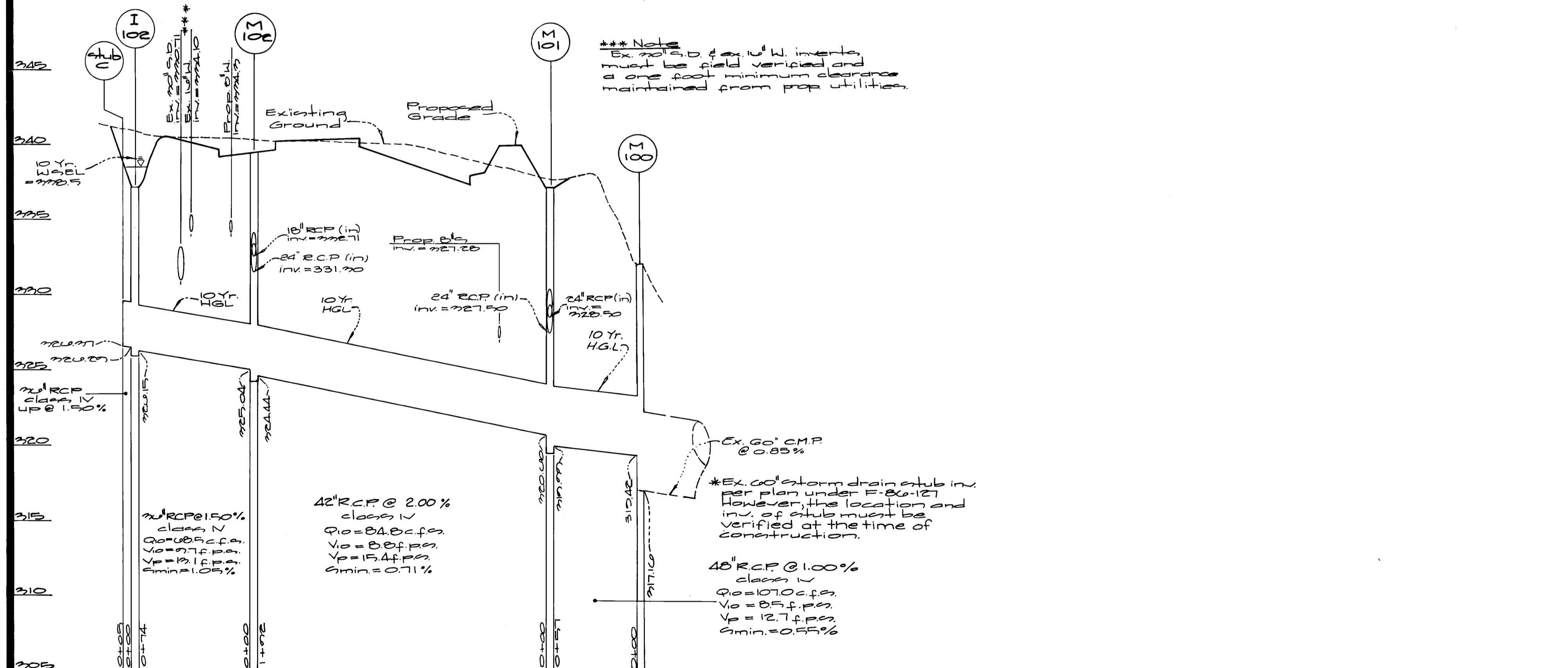
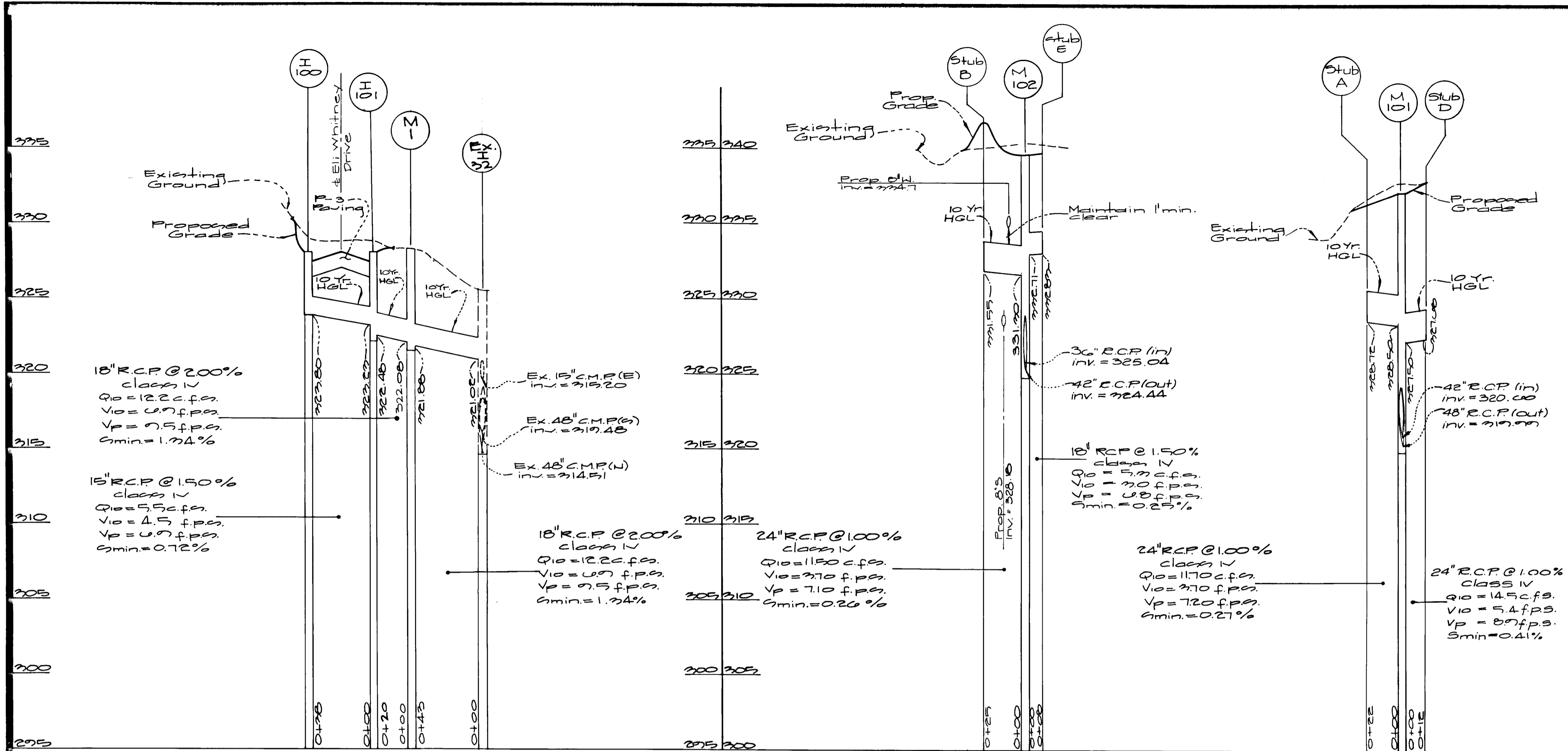
Structure Schedule

No.	Type	Width (Inside)	Top Elevation	Invert Elevation	Std. Detail	Locations	Remarks
I-100	208-15	4'-0"	328.20	327.75	MS 374.51	Est. 10350 10' Rt.	
I-101	208-20	4'-0"	328.75	327.75	MS 374.51	Est. 10350 10' Rt.	
Ex. 102	A-5	2'-0"	325.53	324.53		Est. 10350 10' Rt.	
M-11	Type A	4'-0"	322.0	322.08	G.S. 01	Est. 0472 34' Lt.	
M-100	Manhole	7'-0"	332.3	319.48	Std. # G.S. 11	See Plan **	
M-101	Manhole	7'-0"	331.7	328.84	Std. # G.S. 11	See Plan **	
M-102	Manhole	7'-0"	333.7	335.71	Std. # G.S. 11	See Plan **	
I-102	Type B Inlet	2'-0"	331.0	328.0	Std. # 40-421	See Plan **	

* See note at ex. 102 RCP in profile below.
 ** See dimensions on sheet 2 of 4 which locate these structures from property lines rather than center line stations.

Pipe Schedule

Type & Size	Class	Quantity	Remark
15" RCP	IX	38 L.F.	
18" RCP	IX	71 L.F.	
24" RCP	IX	59 L.F.	
30" RCP	IX	79 L.F.	
42" RCP	IX	172 L.F.	
48" RCP	IX	57 L.F.	



Approved: Howard County Department of Public Works
Richard M. [Signature] 11/18/96
 Chief, Bureau of Highways

Approved: Howard County Department of Planning & Zoning
Richard [Signature] 12/1/96
 Chief, Division of Land Development

Approved: Chief, Development Engineering
[Signature] 11/16/96

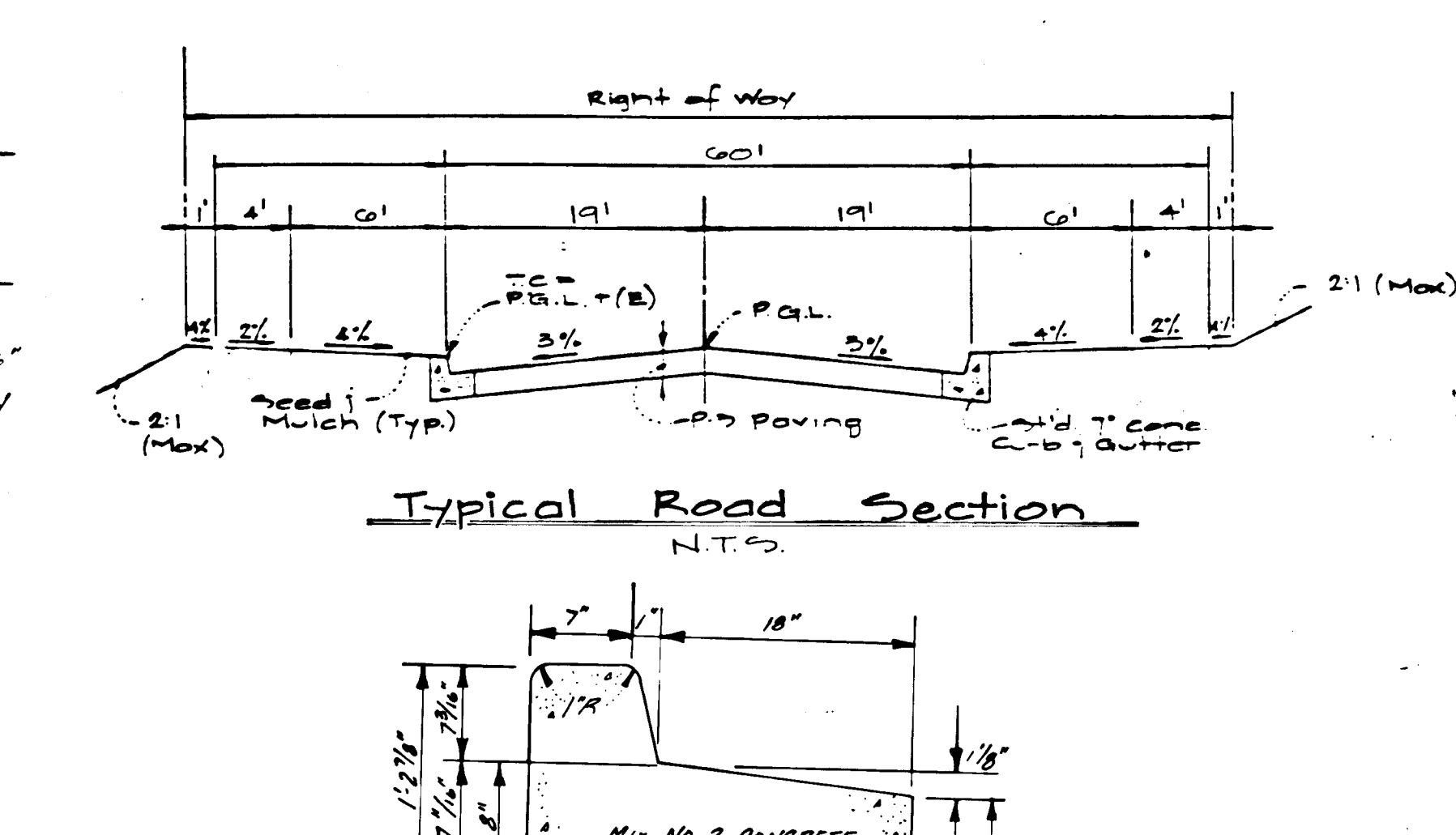
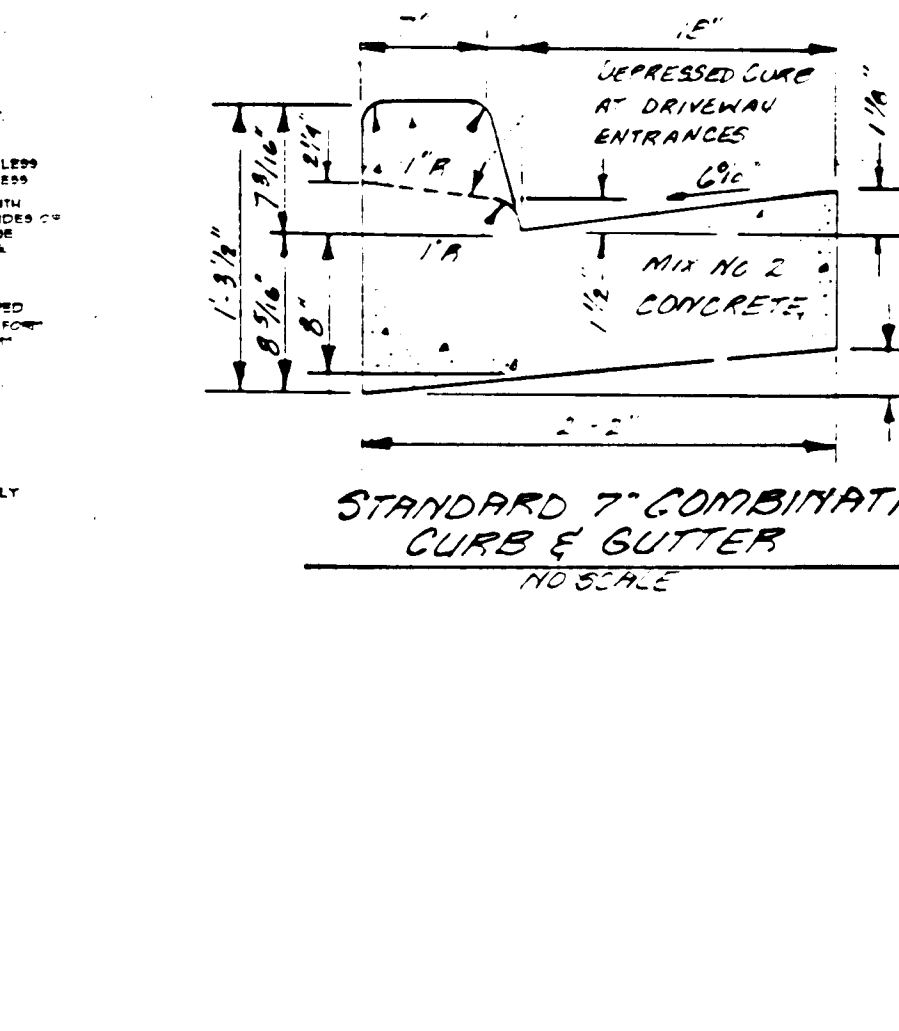
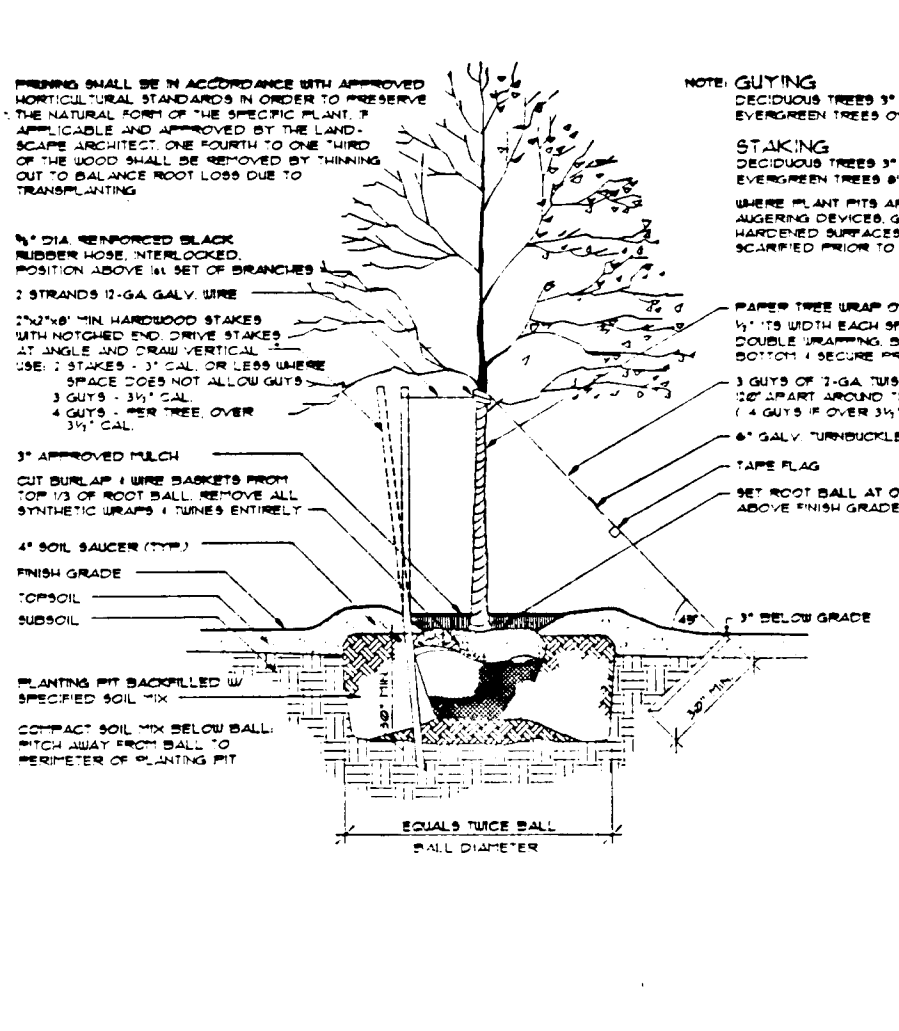
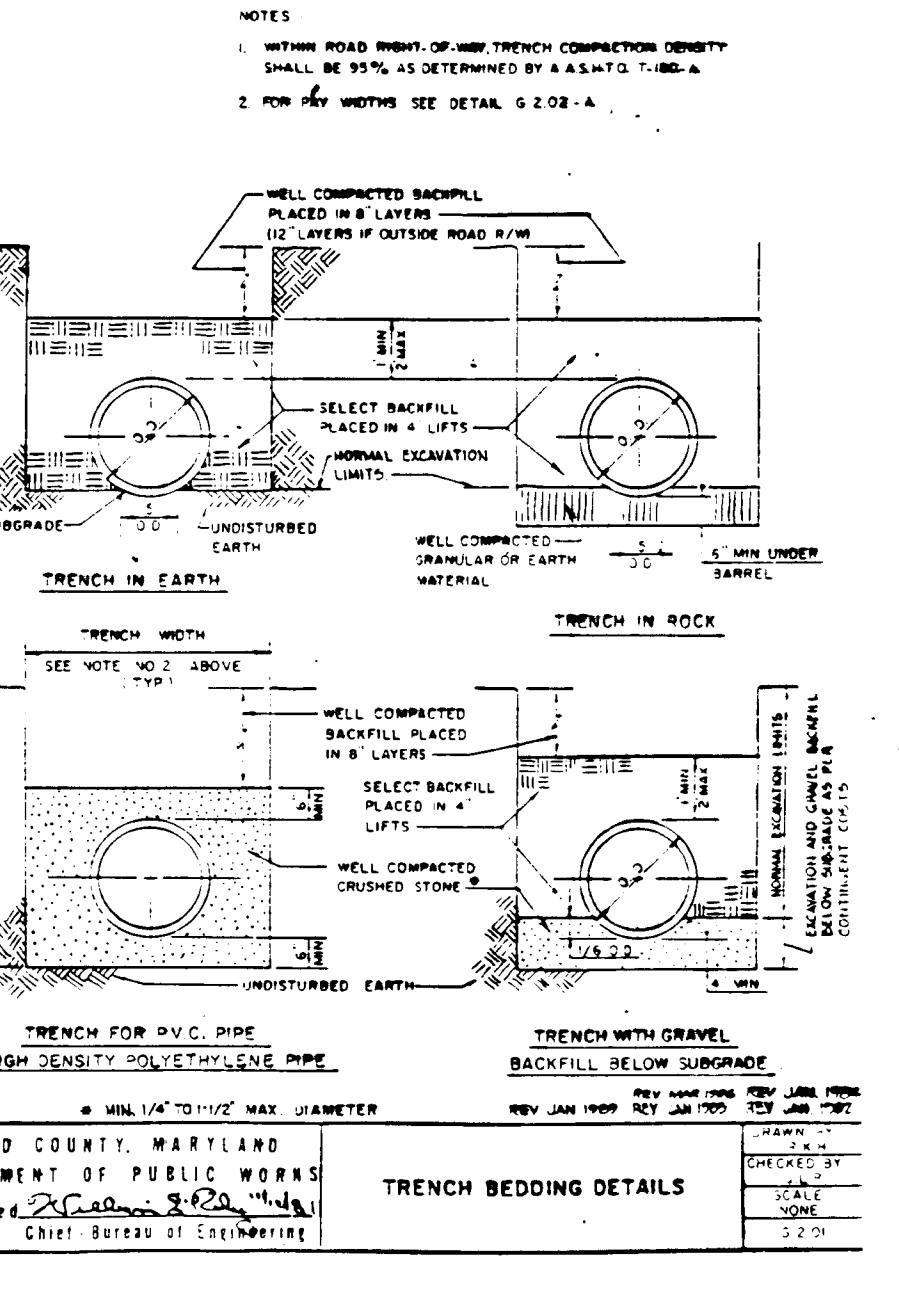
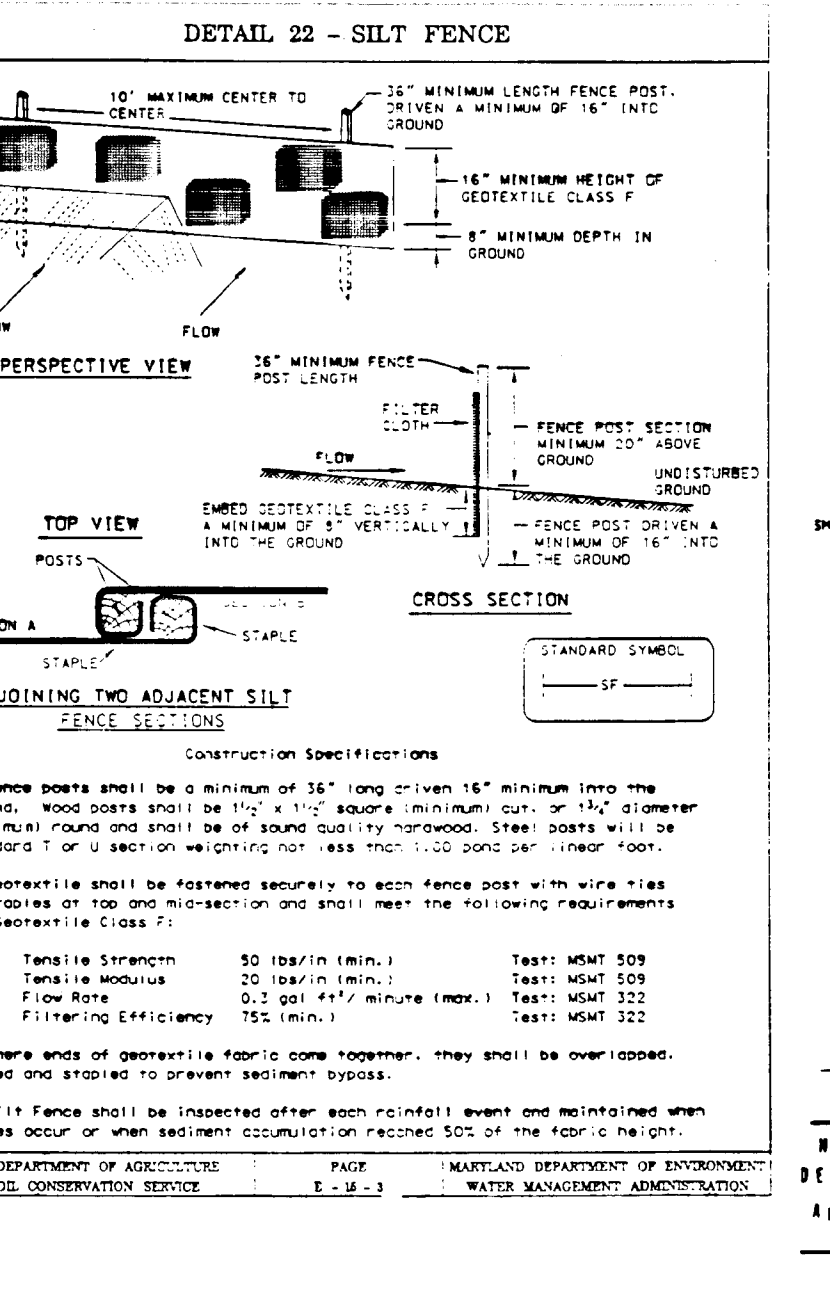
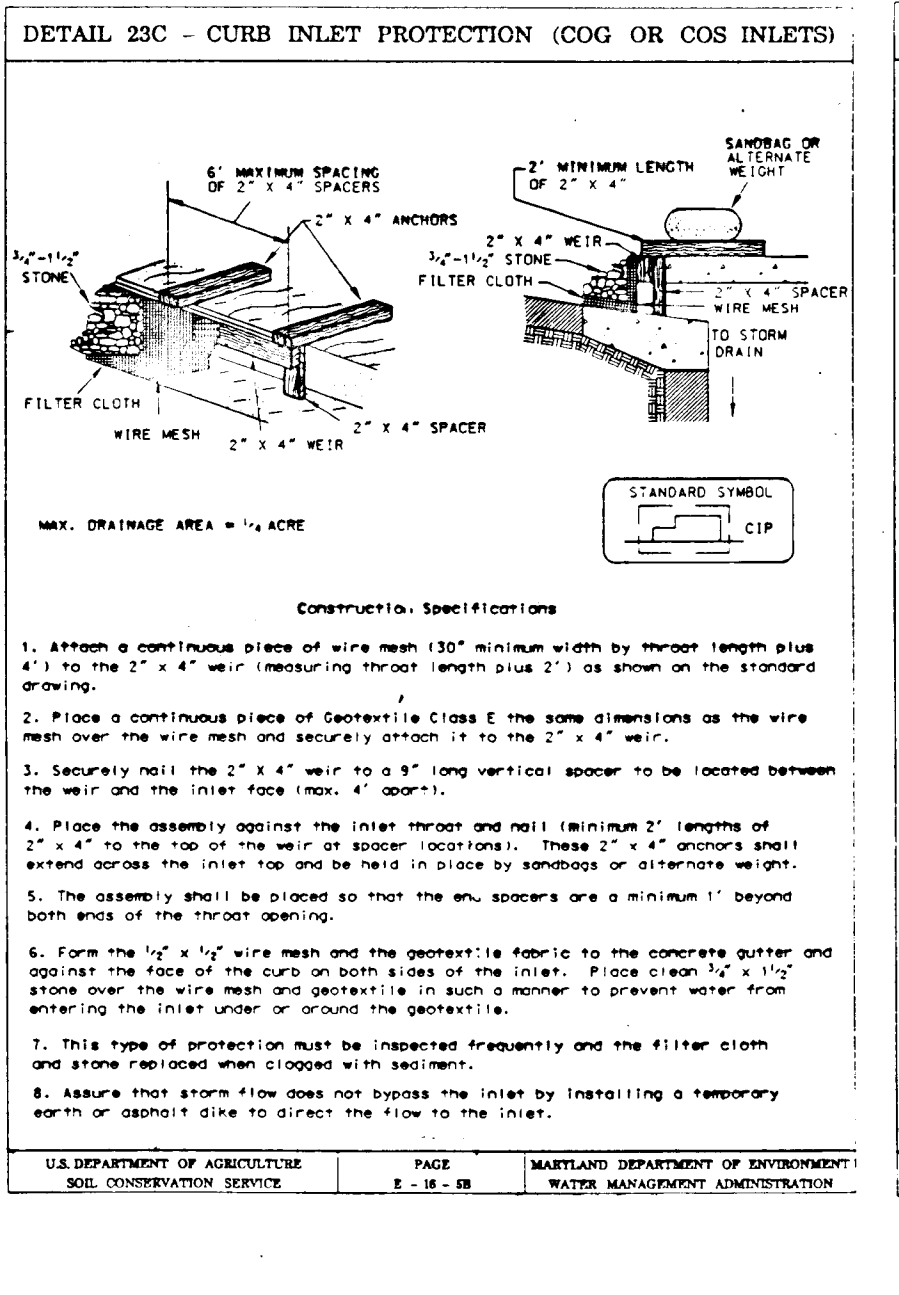
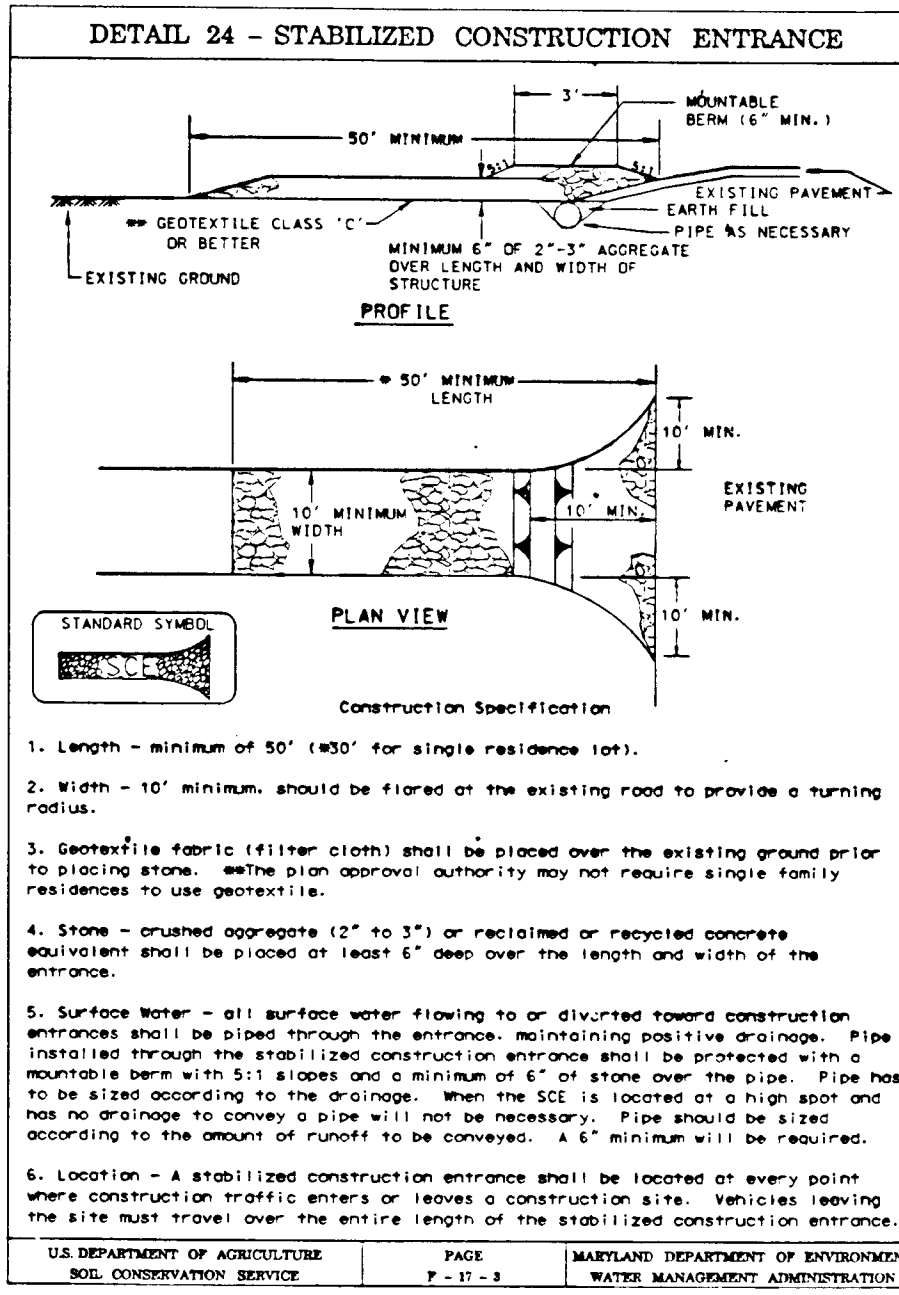
GIW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD 20866
 TELEPHONE: (301)421-4024 NO. VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.
4/4/97	Rev. pipe profiles, etc. & pipe schedules per studio plan & dgs. KLP	B.S.L.	

PREPARED FOR: The Howard Research and Development Corporation
 The Rouse Building
 10275 Little Patuxent Pkwy.
 Columbia, Maryland 21044
 (410) 772-0027

Storm Drain Profiles & Schedules
Gateway Commerce Center
 Parcels A-00 thru A-70
 6th Election District
 Howard County, Maryland

DES.: B.S.L.	SCALE: As Shown	ZONING: M-1	G.L.W. FILE NO.: 96-000
DRN.: Wes.J.	DATE: October, 1996	TAX MAP NO.: 42	SHEET: 3 of 4
CHK.:			



DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD.

Chris Andrews
Signature of Developer/Builder
5/23/96
Date

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Chris Simmons
Natural Resources Conservation Service
11/19/96
Date

Sequence of Construction

1. Obtain grading permit. (1 day)
2. Arrange for an on-site meeting with Howard County Sediment Control Inspector. (1 day)
3. Check sediment control devices installed under G.P. 26- and make repairs as needed. (1 day)
4. Fine grade roadway area. (2 days)
5. Construct utilities, make repairs to sediment control devices as necessary at the end of each working day. (2 weeks)
6. Install curb & gutter and base paving, stabilize remaining areas with seed & mulch. (2 weeks)
7. When areas draining to the sediment control devices has been stabilized and permission is granted from the sediment control inspector, remove the sediment control measures and stabilize any areas disturbed in the process. (2 days)
8. Install surface paving. (2 days)
9. Install street trees. (1 week)

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John R. Blanton
Howard S.C.D.
11/19/96
Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Chris Simmons
Natural Resources Conservation Service
11/19/96
Date

Approved: Howard County Dept. of Public Works
Andrew M. Daniels
Chief, Bureau of Highways
11/19/96
Date

Approved: Howard County Dept. of Planning & Zoning
Richard Blood
Chief, Div. of Land Development
11/29/96
Date

Chief, Development Engineering Div.
Date

GIW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MARYLAND 20866
TEL: (301) 421-4024 NO. VA.: (301) 989-2524 BALT.: (410) 880-1820 FAX: (301) 421-4186

DES.	DRN.	CHK.	DATE	REVISION	BY	APP'R.

PREPARED FOR:
The Howard Research and Development Corporation
The Rouse Building
10275 Little Patuxent Parkway
Columbia, Maryland 21044
Phone (410) 992-6027

Gateway Commerce Center
Parcels A-600 thru A-700
6th Election District
Howard County, Maryland

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	90-000
DATE	TAX MAP No.	SHEET
October 1996	42	A of A

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. (410) 313-1000
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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and 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, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (Sec. G-20) for permanent seedings, sod, temporary seedings, and mulching. Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for 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 : 155.55 Acres
Area Disturbed : 15.5 Acres
Area to be roofed or paved : 0.55 Acres
Area to be vegetatively stabilized : 1.00 Acres
Total Cut : 0.55 Cu. Yds.
Total Fill : 0.55 Cu. Yds.
Off-site waste/borrow area location:
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 control 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.

PERMANENT SEEDING NOTES

- Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).
- Soil Amendments: In lieu of soil test recommendations, use one of the following schedules
- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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 Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 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.

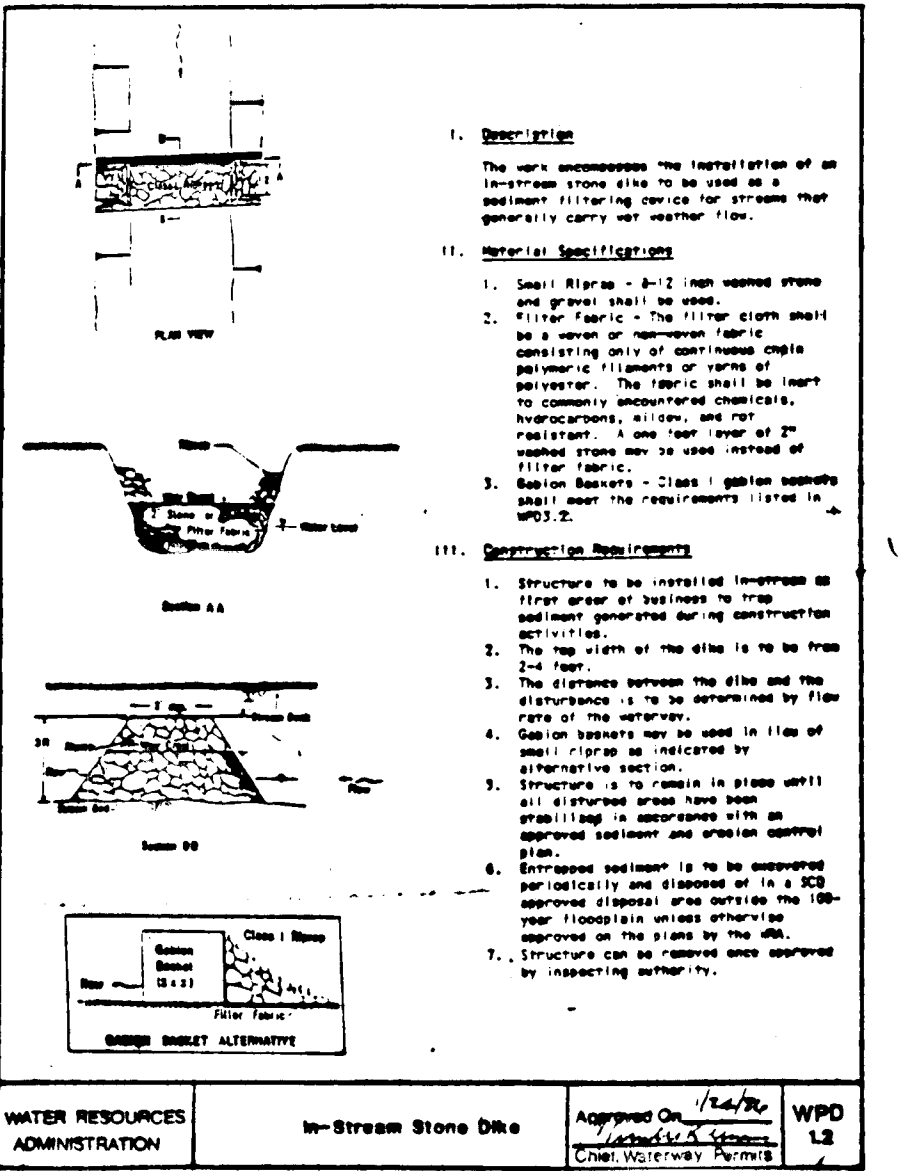
TEMPORARY SEEDING NOTES

- Apply to graded or cleared areas likely to be redistributed 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 (unless 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 2-1/2 bushel per acre 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 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



WATER RESOURCES ADMINISTRATION
In-Stream Stone Dike
Approved On: 11/19/96
Date: 11/19/96
WPD 14

1158