

### General Notes

- All storm drain paving shall be constructed in accordance with the latest edition & specifications of Howard County MSHA.
- Types of Storm Drainage refer to the standard details of Howard County MSHA.
- Trench compacting for storm drains within road or street right of way limits shall be in accordance with Howard County Design Manual Vol. IX (Class C trench bedding to be used for all storm drains except where shown otherwise).
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of the main by digging test pits by hand, or all utility crossings, well in advance of construction.
- All utility companies shall be notified 24 hours in advance of construction.
- All traffic services, parking signing to be done in accordance with the Manual of Uniform Traffic Control Devices, 1988 edition.
- 50g and Cross Vertical Curves were designed in accordance with Howard County Design Manual Vol. III.
- Grade classifications shown are according to the "General Plan".
- All existing utilities not being used within the future county R/W will be abandoned and removed as noted on sheets 1 of 7 see Storm Drain note 2.
- The contractor or developer shall contact the construction inspection survey Division 24 hours in advance of commencement of work.
- Design Speed: 30a Chart, sht. G of 7, Zoning: M-1-I-D.
- Stormwater management provided by an off regional facility on site whose adequacy was studied under plans prepared by Whitman, Raquel, & Associates.
- Stopping sight distance are shown in accordance with Howard County Design Manual Vol. III figure 2.21.
- Street lights shall be provided at the locations shown in the street light schedule shown on sheet 2 of 7 and in accordance with Volume III of the Howard County Design Manual.
- Private access drives for Buildings 112 and through A-13 are not part of the public construction and shall not be bonded as part of public road construction.
- Stubs being provided for future drainage systems shall be maintained by the property owner (Stubs 10-14).
- Contractor shall provide steps continuously to bottom of the structure.
- The continuation of Robert Fulton Dr. to Snowden River Pkwy. has been submitted under 5-72-10.

### For Legend of Existing Features See Sheet 5 of 7.

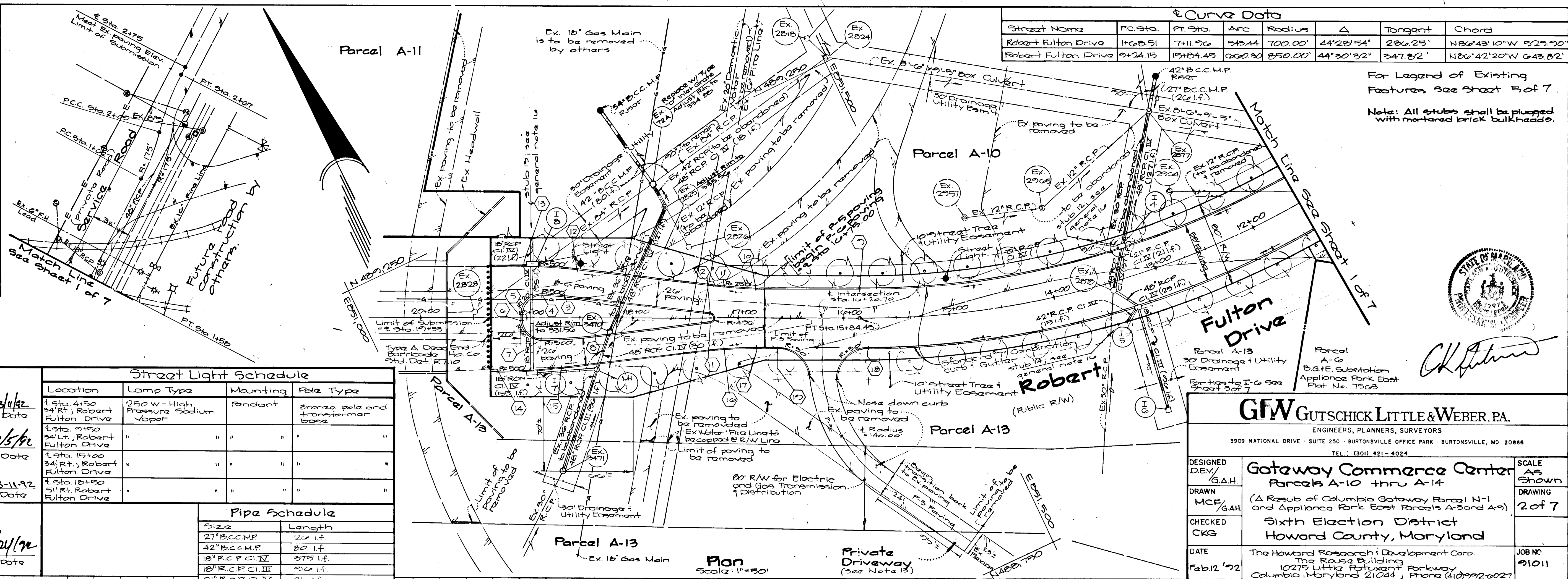
- #### Storm Drain Notes
- All proposed stubs shall be plugged and buttressed.
  - The following storm drain runs shall be removed and their openings capped and buttressed at the manhole: 2028-2079 (12" R.C.P.), 2070-2075 (12" R.C.P.), 2076-2077 (12" R.C.P.), 2078-2079 (12" R.C.P.), 2080-2081 (12" R.C.P.), 2082-2083 (12" R.C.P.), 2084-2085 (12" R.C.P.), 2086-2087 (12" R.C.P.), 2088-2089 (12" R.C.P.), 2090-2091 (12" R.C.P.), 2092-2093 (12" R.C.P.), 2094-2095 (12" R.C.P.), 2096-2097 (12" R.C.P.), 2098-2099 (12" R.C.P.), 2100-2101 (12" R.C.P.), 2102-2103 (12" R.C.P.), 2104-2105 (12" R.C.P.), 2106-2107 (12" R.C.P.), 2108-2109 (12" R.C.P.), 2110-2111 (12" R.C.P.), 2112-2113 (12" R.C.P.), 2114-2115 (12" R.C.P.), 2116-2117 (12" R.C.P.), 2118-2119 (12" R.C.P.), 2120-2121 (12" R.C.P.), 2122-2123 (12" R.C.P.), 2124-2125 (12" R.C.P.), 2126-2127 (12" R.C.P.), 2128-2129 (12" R.C.P.), 2130-2131 (12" R.C.P.), 2132-2133 (12" R.C.P.), 2134-2135 (12" R.C.P.), 2136-2137 (12" R.C.P.), 2138-2139 (12" R.C.P.), 2140-2141 (12" R.C.P.), 2142-2143 (12" R.C.P.), 2144-2145 (12" R.C.P.), 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3142-3143 (12" R.C.P.), 3144-3145 (12" R.C.P.), 3146-3147 (12" R.C.P.), 3148-3149 (12" R.C.P.), 3150-3151 (12" R.C.P.), 3152-3153 (12" R.C.P.), 3154-3155 (12" R.C.P.), 3156-3157 (12" R.C.P.), 3158-3159 (12" R.C.P.), 3160-3161 (12" R.C.P.), 3162-3163 (12" R.C.P.), 3164-3165 (12" R.C.P.), 3166-3167 (12" R.C.P.), 3168-3169 (12" R.C.P.), 3170-3171 (12" R.C.P.), 3172-3173 (12" R.C.P.), 3174-3175 (12" R.C.P.), 3176-3177 (12" R.C.P.), 3178-3179 (12" R.C.P.), 3180-3181 (12" R.C.P.), 3182-3183 (12" R.C.P.), 3184-3185 (12" R.C.P.), 3186-3187 (12" R.C.P.), 3188-3189 (12" R.C.P.), 3190-3191 (12" R.C.P.), 3192-3193 (12" R.C.P.), 3194-3195 (12" R.C.P.), 3196-3197 (12" R.C.P.), 3198-3199 (12" R.C.P.), 3200-3201 (12" R.C.P.), 3202-3203 (12" R.C.P.), 3204-3205 (12" R.C.P.), 3206-3207 (12" R.C.P.), 3208-3209 (12" R.C.P.), 3210-3211 (12" R.C.P.), 3212-3213 (12" R.C.P.), 3214-3215 (12" R.C.P.), 3216-3217 (12" R.C.P.), 3218-3219 (12" R.C.P.), 3220-3221 (12" R.C.P.), 3222-3223 (12" R.C.P.), 3224-3225 (12" R.C.P.), 3226-3227 (12" R.C.P.), 3228-3229 (12" R.C.P.), 3230-3231 (12" R.C.P.), 3232-3233 (12" R.C.P.), 3234-3235 (12" R.C.P.), 3236-3237 (12" R.C.P.), 3238-3239 (12" R.C.P.), 3240-3241 (12" R.C.P.), 3242-3243 (12" R.C.P.), 3244-3245 (12" R.C.P.), 3246-3247 (12" R.C.P.), 3248-3249 (12" R.C.P.), 3250-3251 (12" R.C.P.), 3252-3253 (12" R.C.P.), 3254-3255 (12" R.C.P.), 3256-3257 (12" R.C.P.), 3258-3259 (12" R.C.P.), 3260-3261 (12" R.C.P.), 3262-3263 (12" R.C.P.), 3264-3265 (12" R.C.P.), 3266-3267 (12" R.C.P.), 3268-3269 (12" R.C.P.), 3270-3271 (12" R.C.P.), 3272-3273 (12" R.C.P.), 3274-3275 (12" R.C.P.), 3276-3277 (12" R.C.P.), 3278-3279 (12" R.C.P.), 3280-3281 (12" R.C.P.), 3282-3283 (12" R.C.P.), 3284-3285 (12" R.C.P.), 3286-3287 (12" R.C.P.), 3288-3289 (12" R.C.P.), 3290-3291 (12" R.C.P.), 3292-3293 (12" R.C.P.), 3294-3295 (12" R.C.P.), 3296-3297 (12" R.C.P.), 3298-3299 (12" R.C.P.), 3300-3301 (12" R.C.P.), 3302-3303 (12" R.C.P.), 3304-3305 (12" R.C.P.), 3306-3307 (12" R.C.P.), 3308-3309 (12" R.C.P.), 3310-3311 (12" R.C.P.), 3312-3313 (12" R.C.P.), 3314-3315 (12" R.C.P.), 3316-3317 (12" R.C.P.), 3318-3319 (12" R.C.P.), 3320-3321 (12" R.C.P.), 3322-3323 (12" R.C.P.), 3324-3325 (12" R.C.P.), 3326-3327 (12" R.C.P.), 3328-3329 (12" R.C.P.), 3330-3331 (12" R.C.P.), 3332-3333 (12" R.C.P.), 3334-3335 (12" R.C.P.), 3336-3337 (12" R.C.P.), 3338-3339 (12" R.C.P.), 3340-3341 (12" R.C.P.), 3342-3343 (12" R.C.P.), 3344-3345 (12" R.C.P.), 3346-3347 (12" R.C.P.), 3348-3349 (12" R.C.P.), 3350-3351 (12" R.C.P.), 3352-3353 (12" R.C.P.), 3354-3355 (12" R.C.P.), 3356-3357 (12" R.C.P.), 3358-3359 (12" R.C.P.), 3360-3361 (12" R.C.P.), 3362-3363 (1



Symbol	Station	Tc Elevation	Offset
1	17+28.77	332.72	4.90' L
2	17+28.77	332.72	4.90' R
3	18+04.00	332.80	21.07' R
4	18+05.40	330.51	23.17' R
5	17+07.00	330.66	3.23' R
6	19+07.00	330.70	1.06' L
7	18+06.71	330.54	21.06' L
8	18+24.82	331.22	17.50' L
9	15+04.45	333.01	27.50' R
10	16+03.55	332.74	27.50' R
11	17+13.17	332.35	23.26' R
12	18+42.45	330.53	44.05' R
13	19+01.55	330.06	48.21' R
14	19+27.02	330.07	51.10' L
15	18+07.47	330.17	47.07' L
16	17+13.17	332.35	23.26' L
17	16+03.55	332.74	27.50' L
18	15+04.45	333.01	27.50' L
19	14+02.10	333.00	27.50' L

Street Name	P.C. Sta.	P.T. Sta.	Arc	Radius	Δ	Tangent	Chord
Robert Fulton Drive	14+05.51	7+11.96	543.44	700.00'	44°28'54"	286.25'	N86°49'10"W 529.70'
Robert Fulton Drive	9+24.15	15+04.45	600.90	850.00'	44°30'32"	347.82'	N86°42'20"W 643.82'

For Legend of Existing Features See Sheet 5 of 7.  
 Note: All stubs shall be plugged with mortared brick bulkheads.



Approved Department of Public Works  
 Chief, Land Development Div. M.K. Data  
 Date: 3/4/92

Approved Department of Highways  
 Chief, Bureau of Highways  
 Date: 3/5/92

Approved Department of Engineering  
 Chief, Bureau of Engineering  
 Date: 3-11-92

Location	Lamp Type	Mounting	Pole Type
Sta. 4+50 34' Rt. Robert Fulton Drive	250 W - High Pressure Sodium Vapor	Pendant	Bronze pole and transformer base
Sta. 9+50 34' Lt. Robert Fulton Drive	"	"	"
Sta. 19+00 34' Rt. Robert Fulton Drive	"	"	"
Sta. 18+50 51' Rt. Robert Fulton Drive	"	"	"

Size	Length
27" BCCMP	20 ft.
42" BCCMP	80 ft.
18" RCP C.I.V	275 ft.
18" RCP C.I.III	90 ft.
21" RCP C.I.V	21 ft.
24" RCP C.I.V	77 ft.
36" RCP C.I.III	49 ft. (tamp)
42" RCP C.I.V	151 ft.
48" RCP C.I.V	364 ft.
48" RCP C.I.III	90 ft.

Approved Department of Planning and Zoning  
 Chief, Division of Community Planning and Land Development  
 Date: 3/4/92

**GFW GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866  
 TEL.: (301) 421-4024

**Gateway Commerce Center**  
 Parcels A-10 thru A-14  
 (A Part of Columbia Gateway Parcel N-1 and Appliance Park East Parcels A-3 and A-9)

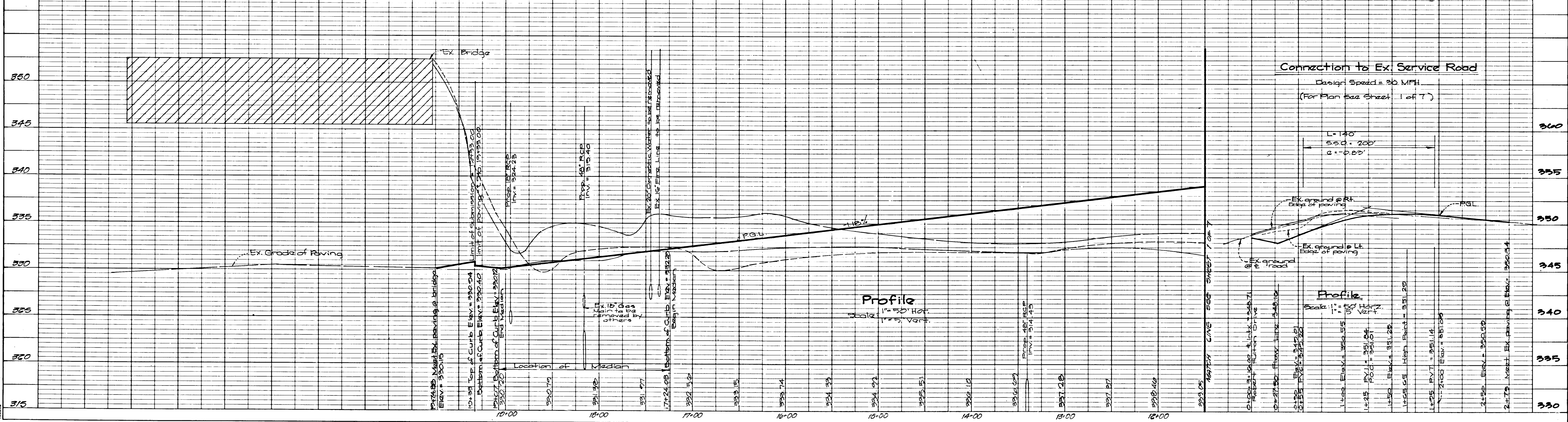
**Sixth Election District**  
 Howard County, Maryland

DESIGNED BY: G.A.H.  
 DRAWN BY: M.C.F./G.A.H.  
 CHECKED BY: C.K.G.  
 DATE: Feb 12 '92

SCALE: As Shown  
 DRAWING: 2 of 7

THE HOWARD ROSEBUD DEVELOPMENT CORP.  
 THE ROUSE BUILDING  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044 - Phone (410) 992-6027

JOB NO: 91011



1158



Approved: *Walter Damman* 2/1/72  
 Chief, Land Development Division M.K.  
 Date: 2/5/72

Approved: *Anna Kuznetsov* 3/24/72  
 Chief, Bureau of Engineering  
 Date: 3/11/72

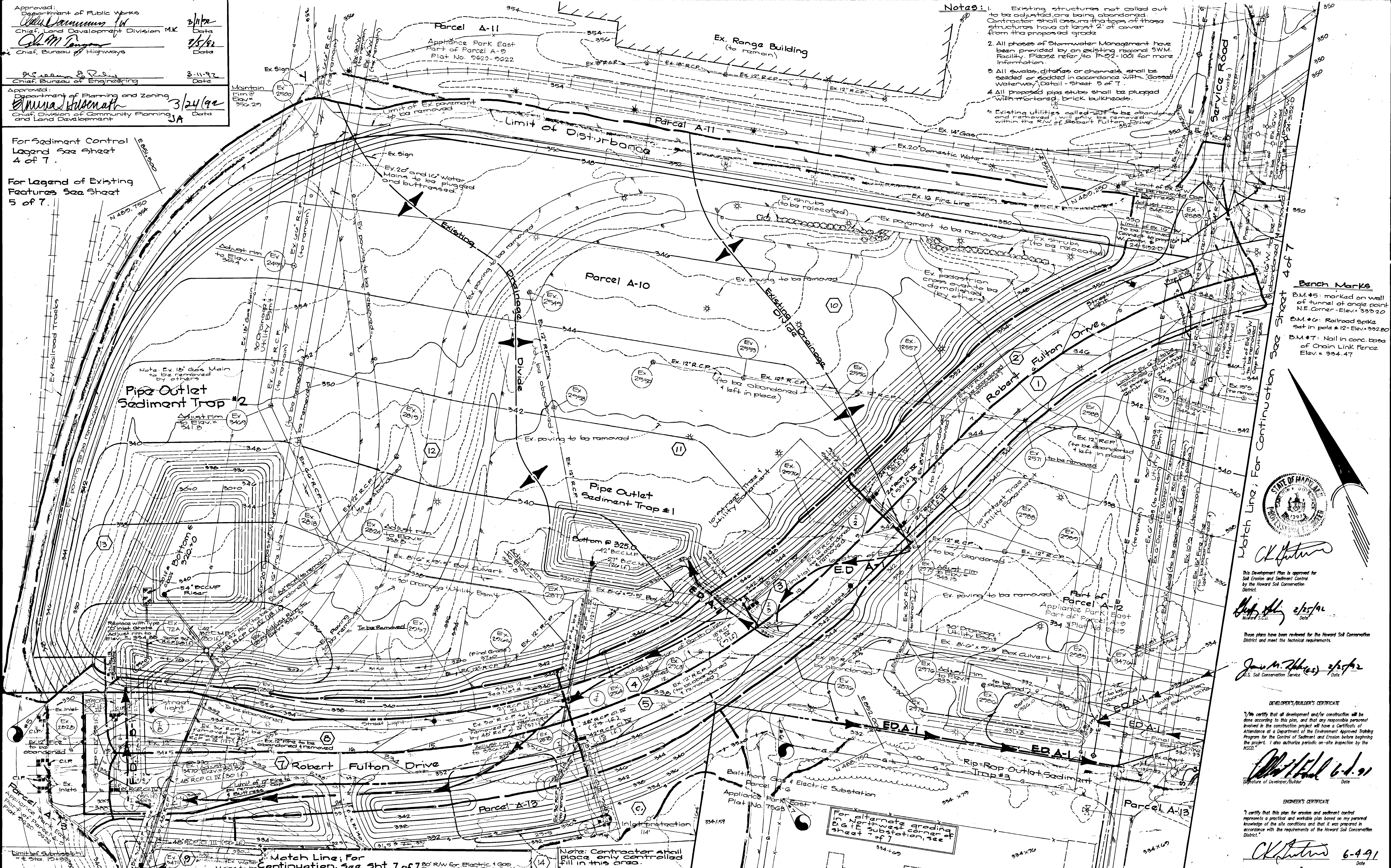
Approved: *Anna Kuznetsov* 3/24/72  
 Chief, Bureau of Planning and Zoning  
 Date: 3/24/72

For Sediment Control Legend See Sheet 4 of 7.

For Legend of Existing Features See Sheet 5 of 7.

**Notes:**

- Existing structures not called out to be adjusted, are being abandoned. Contractor shall ensure that these structures have at least 2' of cover from the proposed grade.
- All phases of Stormwater Management have been provided by an existing regional SWM Facility. Please refer to P-22-1001 for more information.
- All swales, ditches or channels shall be seeded or sodded in accordance with "Grass Waterway" Detail - Sheet 5 of 7.
- All proposed pipe stubs shall be plugged with mortar and brick bulkheads.
- Existing utilities called out to be abandoned and removed will only be removed within the R/W of Robert Fulton Drive.



**Bench Marks**

BM #5: marked on wall of tunnel at angle point N.E. Corner - Elev. 333.20

BM #6: Railroad Spike set in pole # 12 - Elev. 332.80

BM #7: Nail in conc. base of Chain Link Fence Elev. 334.47



*CK Kutzner*  
 This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
 Date: 2/5/72

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

*James M. Rhodes* 2/27/72  
 U.S. Soil Conservation Service

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I 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 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.

*Walter Damman* 6-4-72  
 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.

*CK Kutzner* 6-4-72  
 Date

<b>1158</b> <b>G. W. GUTSCHICK LITTLE &amp; WEBER, P.A.</b> ENGINEERS, PLANNERS, SURVEYORS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866 TELEPHONE: (301) 421-4024	DES. DEV. G.A.L.	DRN. G.A.H.	CHK. C.K.G.	DATE	REVISION	BY	APP'R.	PREPARED FOR: Howard Research & Development Corp. The Rouse Building 10275 Little Patuxent Parkway Columbia, Maryland 21044 (410) 932-6027	<b>Mass Grading Plan</b> <b>Gateway Commerce Center</b> Parcels A-10 thru A-14 (A Resub of Columbia Gateway Parcel N-1 and Appliance Park East Parcels A-9 and A-8) Sixth Election District Howard County, Maryland	SCALE 1" = 50' ZONING I.D./M-1 G.L.W. FILE No. 91011	DATE Feb. 12, '72 TAX MAP No. 26.42 & 43 SHEET 3 of 7
	Match Line; For Continuation, See Sht 7 of 7.								Note: Contractor shall place only controlled fill in this area.	For alternate grading in Northwest corner of sheet, see sheet 1 of 7.	Parcel A-13



Approved: *W. J. Cummings* 3/11/92  
 Chief, Land Development Division, M&C  
 Date: 3/11/92

Approved: *W. M. Longman* 3/15/92  
 Chief, Bureau of Highways  
 Date: 3/15/92

Approved: *W. M. Longman* 3-11-92  
 Chief, Bureau of Engineering  
 Date: 3-11-92

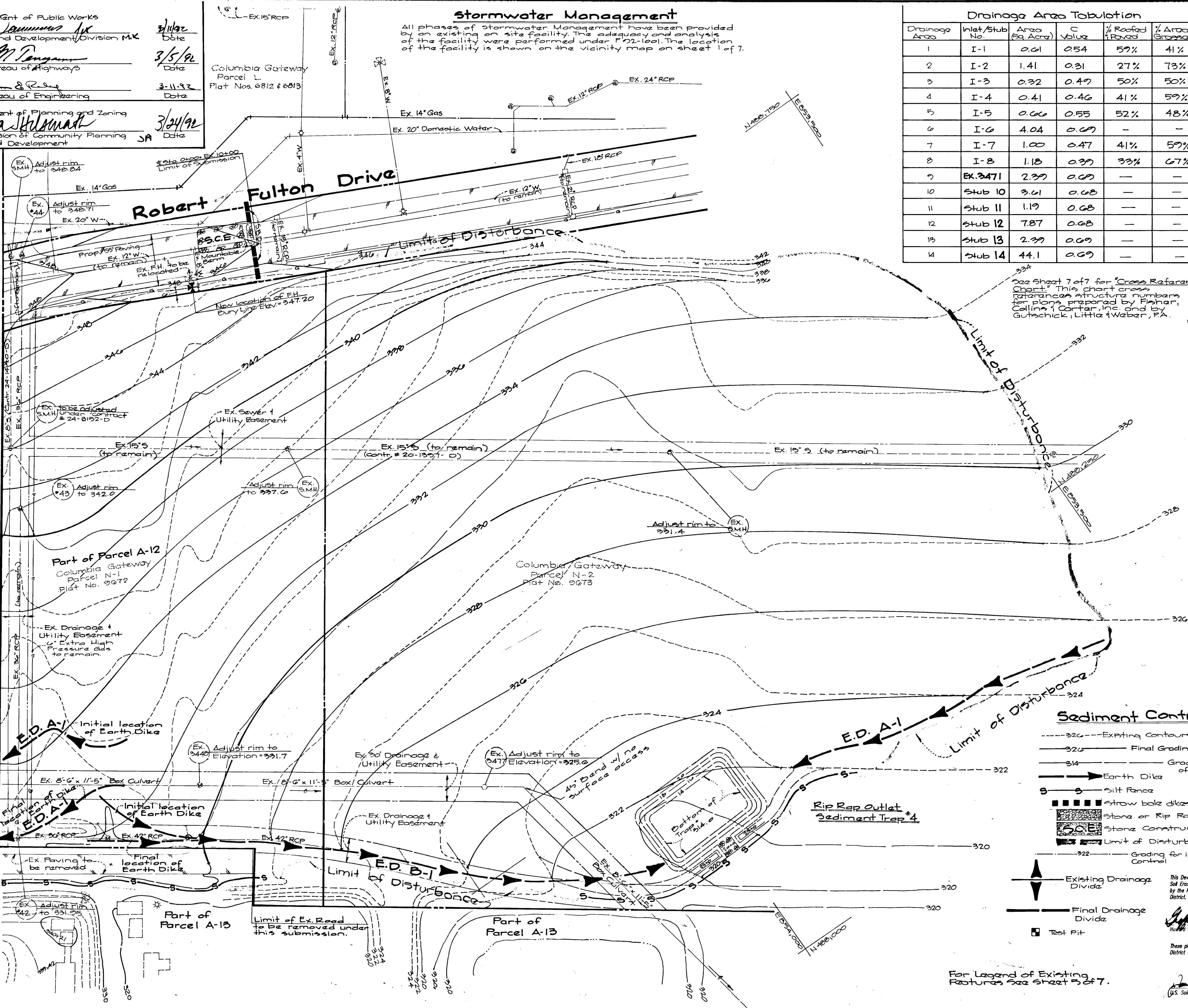
Approved: *Anna Skolman* 3/24/92  
 Department of Planning and Zoning  
 Chief, Division of Community Planning and Land Development  
 Date: 3/24/92

### Stormwater Management

All phases of Stormwater Management have been provided by an existing on-site facility. This adequacy and analysis of the facility were performed under F-22-1001. The location of the facility is shown on the vicinity map on sheet 1 of 7.

Drainage Area Tabulation						Structure Schedule							
Drainage Area	Inlet/Stub No.	Area (Sq. Area)	C Value	% Roofed Pavement	% Area Grassed	Struct.	Type	Inverts in	Top Elev. Upper/Lower	Remarks	± Road Sta.		
1	I-1	0.01	0.54	59%	41%	I-1	A-5	331.37	331.00	342.54	342.46	H.C. Std. 4.01	B+30.50 Robert Fulton Dr. 27.50' Lt.
2	I-2	1.41	0.31	27%	73%	I-2	A-5	336.04	331.82	342.54	342.46	"	B+30.50 Robert Fulton Dr. 27.50' Rt.
3	I-3	0.32	0.47	50%	50%	I-3	A-5	339.90	333.80	340.13	340.05	"	B+24.00 Robert Fulton Dr. 27.50' Rt.
4	I-4	0.41	0.46	41%	59%	I-4	A-5	319.99	317.42	337.09	336.95	"	B+26.00 Robert Fulton Dr. 27.50' Rt.
5	I-5	0.06	0.55	52%	48%	I-5	A-5	323.70	320.53	337.00	336.92	"	B+26.00 Robert Fulton Dr. 27.50' Lt.
6	I-6	4.04	0.69	-	-	I-6	D-Inlet	325.00	330.00	-	-	H.C. Std. 4.11	See Plan
7	I-7	1.00	0.47	41%	59%	I-7	A-10	323.52	322.76	329.85	329.89	H.C. Std. 4.02	B+24.00 Robert Fulton Dr. 27.50' Lt.
8	I-8	1.18	0.39	33%	67%	I-8	A-10	323.30	324.95	330.05	330.09	"	B+24.00 Robert Fulton Dr. 27.50' Rt.
9	EX. 3471	2.39	0.69	-	-	MAN	5+4 Manhole	321.93	319.92	331.26	-	H.C. Std. 6.50	B+34.00 Robert Fulton Dr. 49' Lt.
10	Stub 10	3.61	0.68	-	-								
11	Stub 11	1.19	0.68	-	-								
12	Stub 12	7.87	0.68	-	-								
13	Stub 13	2.39	0.69	-	-								
14	Stub 14	44.1	0.69	-	-								

Match Line - For Continuation See Sheet 3 of 7



See Sheet 7 of 7 for "Cross Reference Chart." This chart cross references structure numbers for plans prepared by Fisher, Collins, & Carter, Inc. and by Gutschick, Little & Weber, P.A.

Ex. Structure #3471 with top opening to be modified to a grate opening.  
 \*\*Offset distances shown are to face of the inlet at the top of the structure and to that of a manhole.  
 \*\*\*Inlets and manholes shall have 36-inch frame and covers.

**Pipe Outlet Sediment Trap #1**  
 Trap Drainage Area = 6.01 Ac.±  
 Existing Drainage Area = 5.32 Ac.±  
 Storage Required = 6.01 x 1800 = 10,818 c.f.  
 Rear crest Elevation = 328.05  
 Storage Provided @ 328.05 = 19,335 c.f.  
 Design High Water @ (10 yr.) = 328.72  
 Top of Dam = 336.00  
 Invert of Inflow Channel = 330.00  
 Cleanout Elevation = 326.53  
 Depth = 3.05'  
 Bottom of Trap = 323.00

**Pipe Outlet Sediment Trap #2**  
 Existing Drainage Area = 12.64 Ac.±  
 Intermediate Drainage Area = 17.25 Ac.±  
 Proposed Drainage Area = 14.0 Ac.±  
 Storage Required = 17.25 x 1800 = 31,050 c.f.  
 Rear crest Elevation = 323.89  
 Storage Provided @ 323.89 = 43,580 c.f.  
 Design High Water @ (10 yr.) = 325.47  
 Top of Dam = 334.00  
 Invert of Inflow Channel = 326.00  
 Cleanout Elevation = 321.92  
 Depth = 3.88'  
 Bottom of Trap = 320.00

**Rip-Rap Outlet Sediment Trap #3**  
 EX. Drainage Area = 10.97 Ac.  
 Volume required = 19,746 c.f.  
 Volume provided = 24,500 c.f.  
 Weir length = 14.0'  
 depth of Channel = 1.5'  
 Fringedesign = 1.0'  
 Weir crest = 328.75 top = 331.8  
 Bottom = 326.00 L.O.S. = 328.5  
 Cleanout = 327.25

**Rip-Rap Outlet Sediment Trap #4**  
 Drainage Area = 14.00 Ac.±  
 Volume required = 25,200 c.f.  
 Volume provided = 33,100 c.f.  
 Weir length = 10'  
 Channel Depth = 2.0' Fringedesign = 1.0'  
 Weir crest = 320.00 Top = 323.0  
 Bottom = 314.00 L.O.S. = 319.00  
 Cleanout = 316.50

### Sediment Control Legend

- 326 --- Existing Contours
- 326 --- Final Grading
- 314 --- Grading for Initial phase of Sediment Control
- Earth Dike
- Silt Fence
- Straw bale dikes / Inlet protection
- Stone or Rip Rap
- Stone Construction Entrance
- Limit of Disturbance
- Grading for Intermediate phase of sediment control
- Existing Drainage Divide
- Final Drainage Divide
- Test Pit

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*Jeff. Kelly* 2/15/92  
 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.  
*John M. Williams* 2/20/92  
 Date

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 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.  
*W. J. Cummings* 6-4-91  
 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.  
*W. J. Cummings* 6-4-91  
 Date

For Legend of Existing Features See Sheet 3 of 7.

**G.L.W. GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20886  
 TELEPHONE: (301) 421-4024

PREPARED FOR:  
 Howard Research & Development Corp.  
 The Ross Building  
 10275 Little Patuxent Parkway  
 Columbia, Maryland 21044  
 (410) 392-6027

Mass Grading Plan  
**Gateway Commerce Center**  
 Parcel A-10 thru A-14  
 (A Sub of Columbia Gateway Parcel N-1 and Appliances Park East Parcel A-3 and A-9)  
 Sixth Election District  
 Howard County, Maryland

SCALE	ZONING	G.L.W. FILE NO.
1"=50'	LD/M-1	01011
DATE	TAX MAP NO.	SHEET
Feb. 12, '92	36.42 # 43 Parcel 587	4 of 7

1158



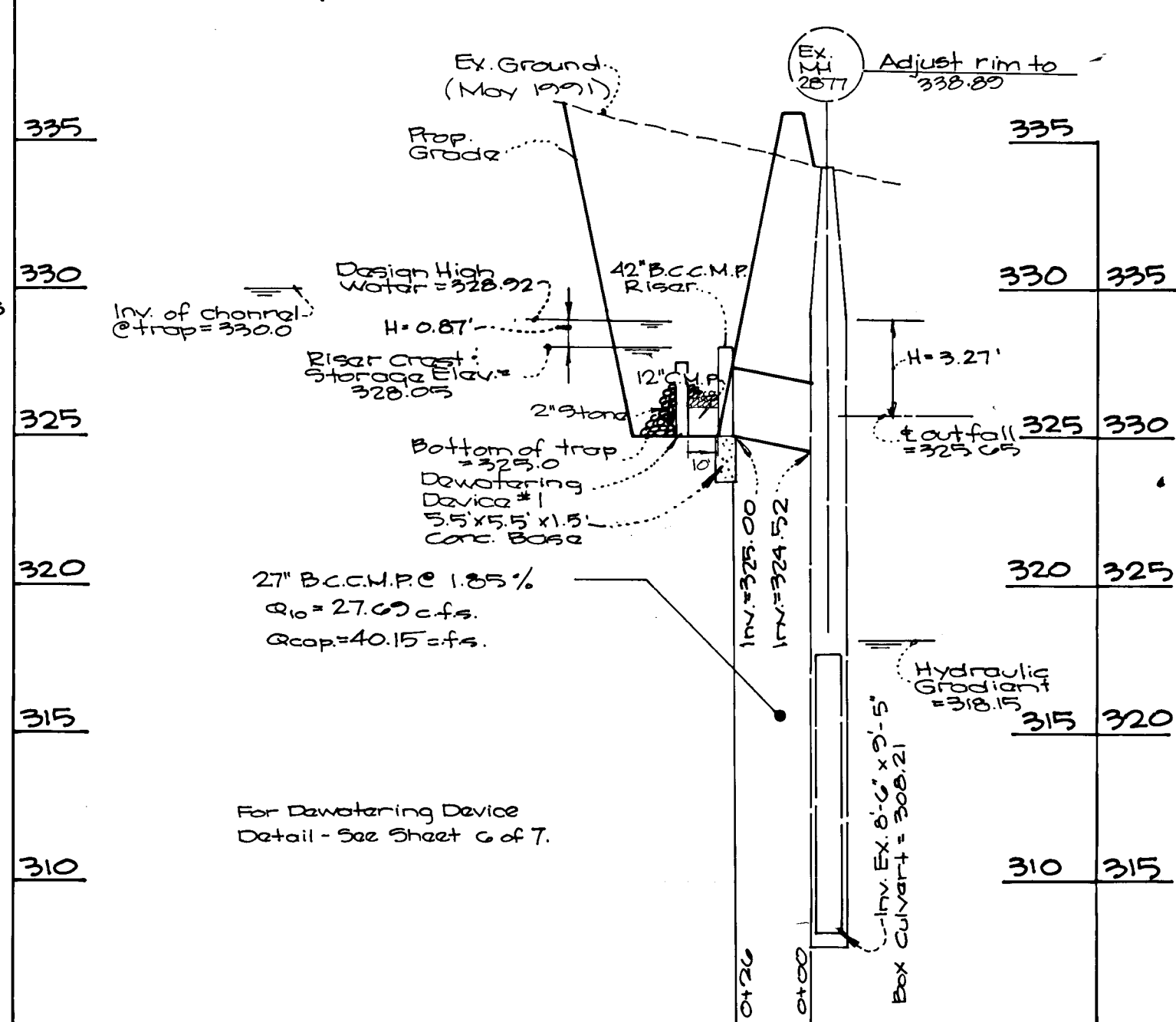
**Legend: Existing Features**

- ⊙ Existing Sewer Manhole
- ⊙ Existing Storm Drain Manhole with Grate
- ⊙ Existing Storm Drain Manhole
- ⊙ Existing Acid Manhole
- ⊙ Existing Cyanide Manhole
- ⊙ Existing Chromium Manhole
- ⊙ Existing Electric Manhole
- ⊙ Existing Water Valve
- ⊙ Existing Water Crank Valve (Above ground)
- ⊙ Existing Fire Hydrant
- ⊙ Existing Gas Valve
- ⊙ Existing Water Valve on Building
- Existing Water Main
- Existing Sewer Main
- Existing Storm Drain Pipe
- Existing Gas Main
- Existing Electric Line
- Existing Industrial Chemical Mains
- \* Existing Street Light to be Removed
- \* Existing Street Light to Remain
- ⊙ Existing Sign (Typical)
- mmmm Existing Tree Line
- Existing Railroad Tracks
- Existing Guardrail
- Existing Fenceline

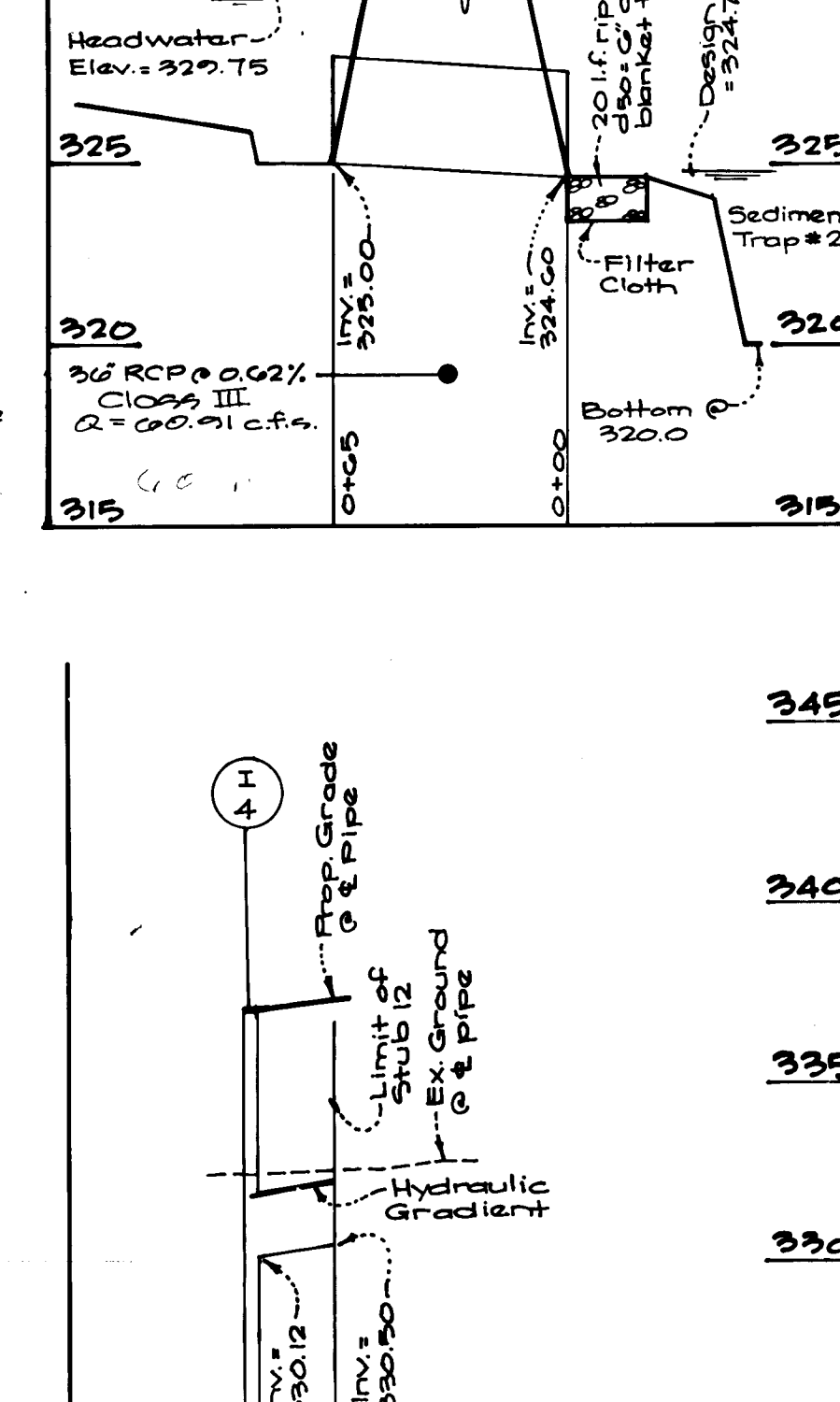
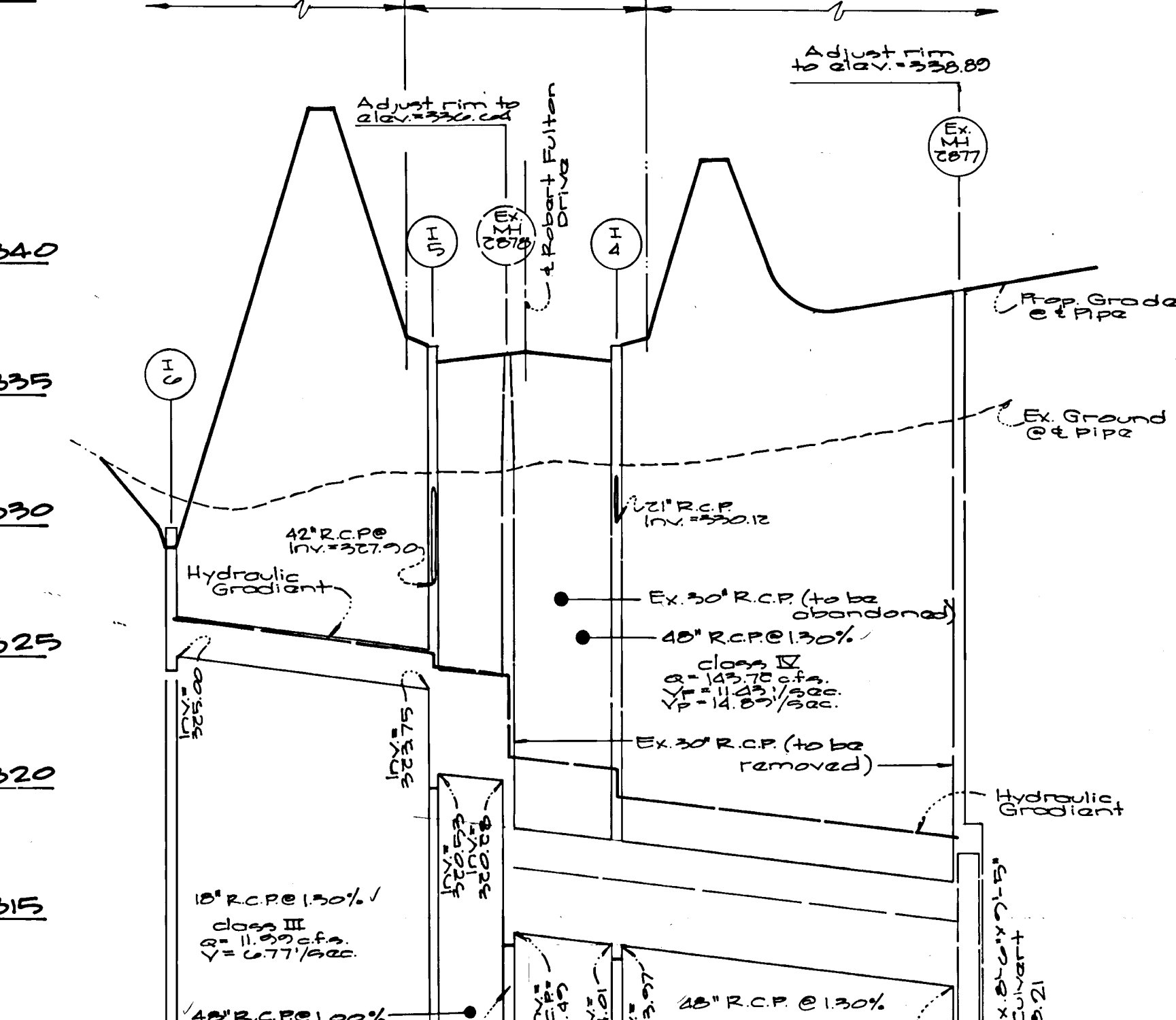
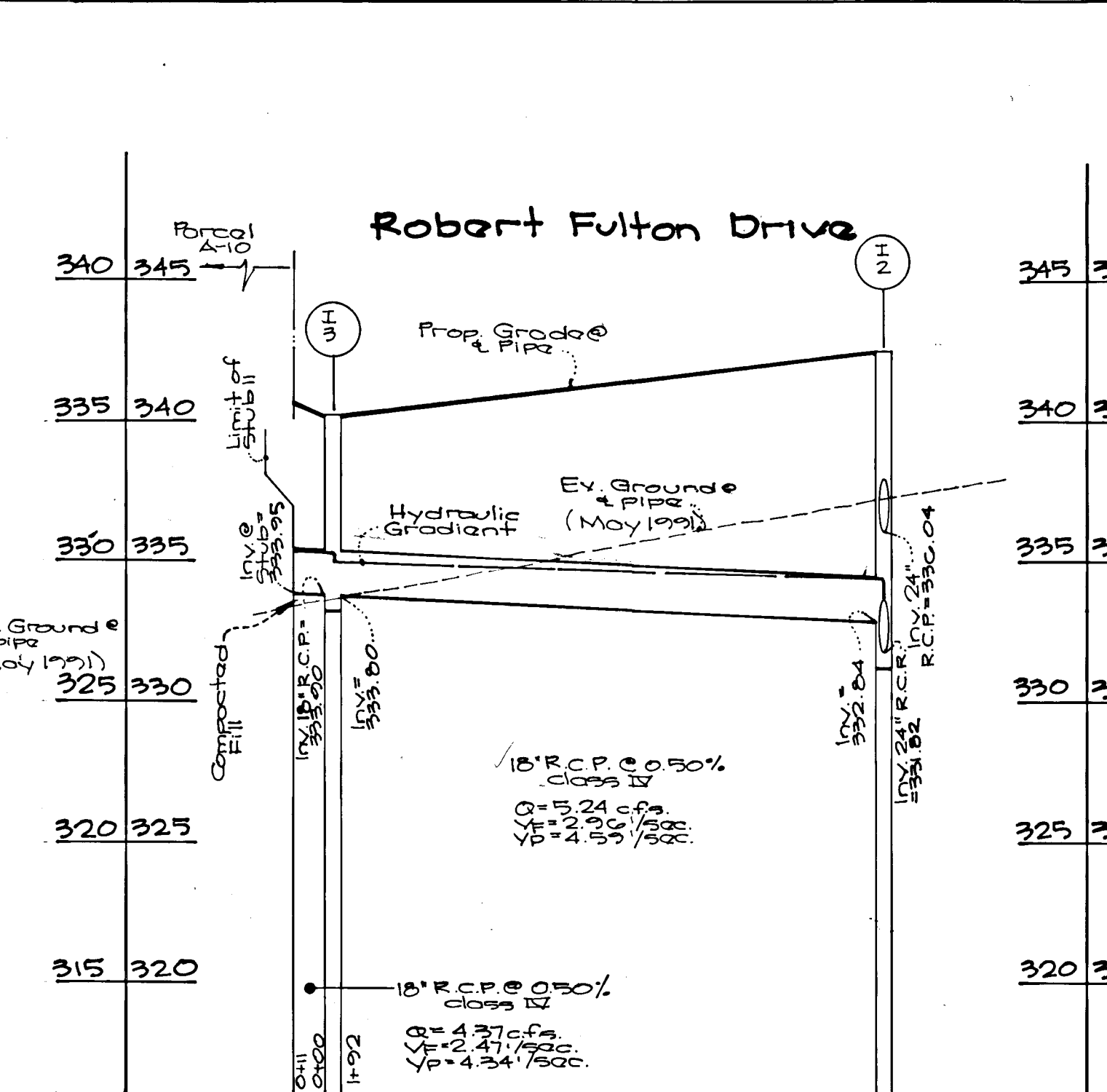
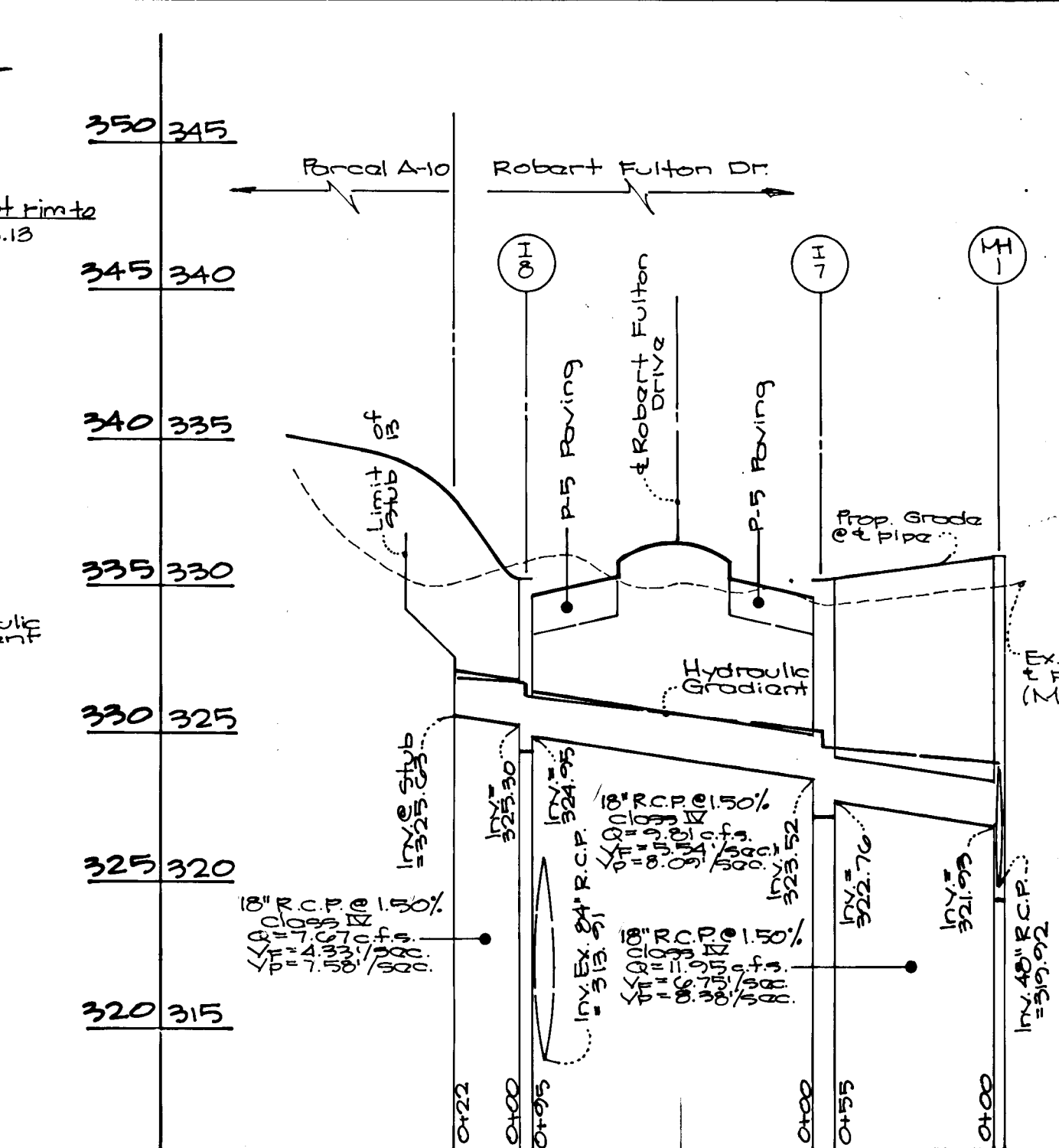
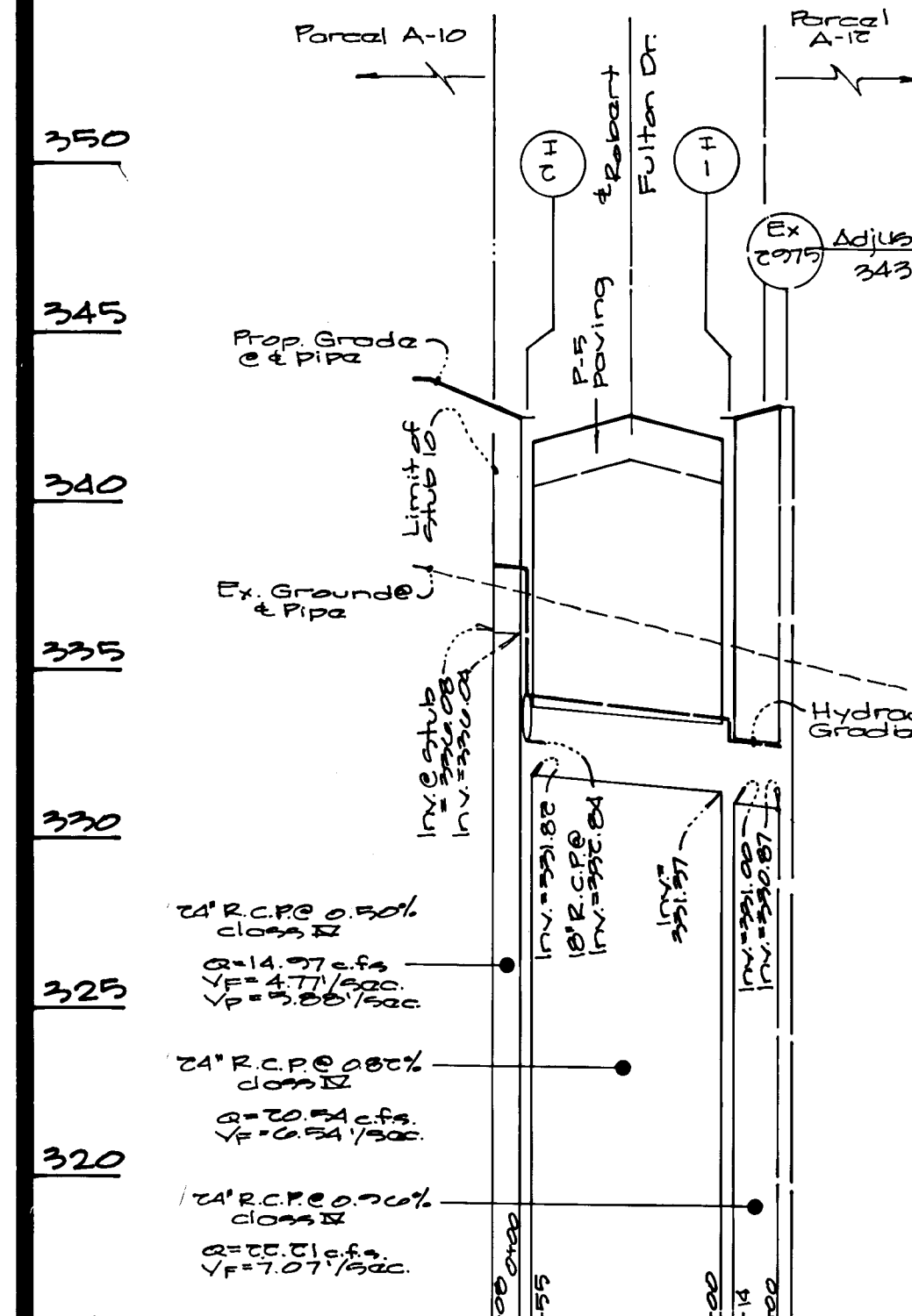
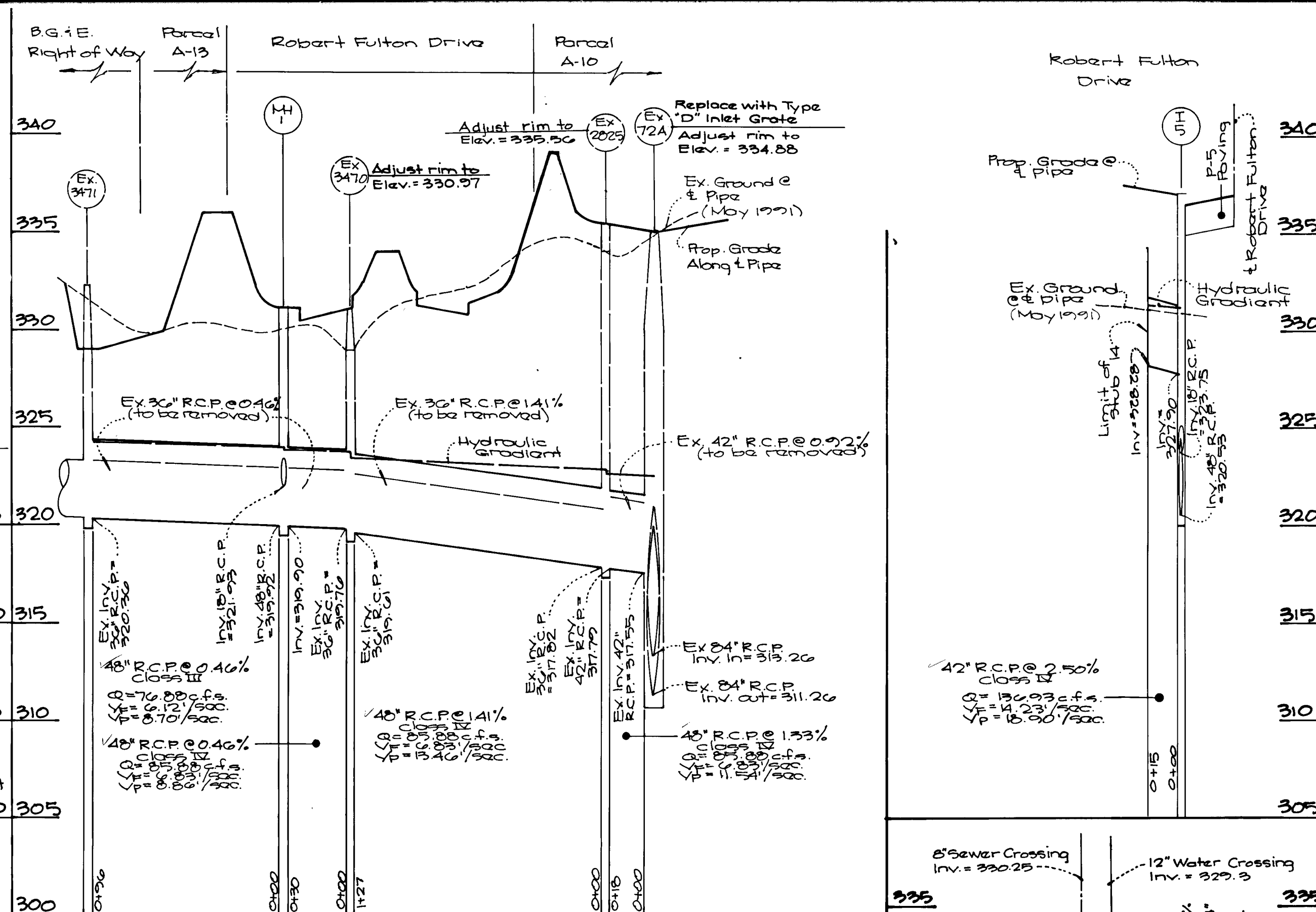
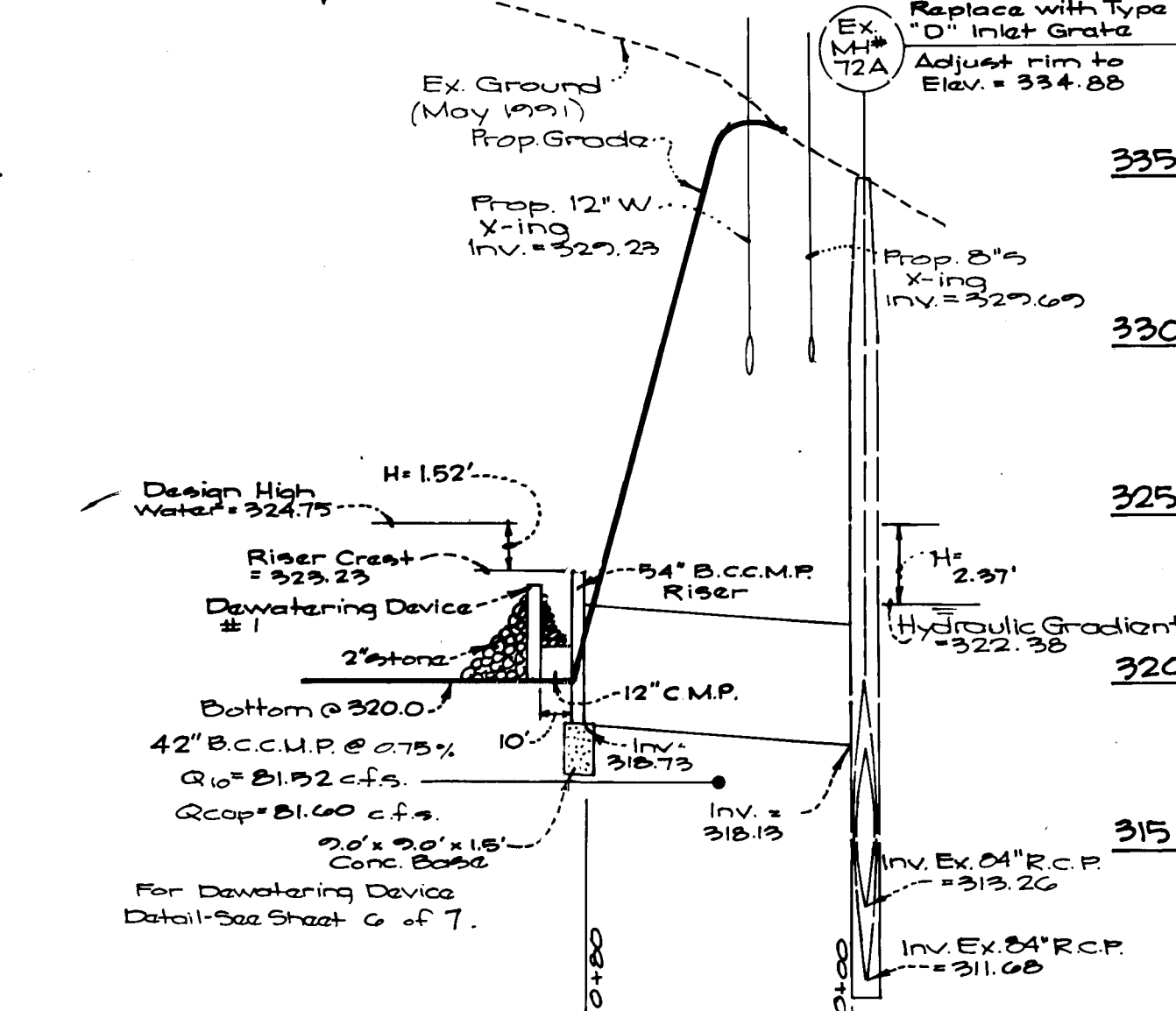


*CK Futner*

**Pipe Outlet Sediment Trap #1**



**Pipe Outlet Sediment Trap #2**



Approved: Department of Public Works  
 Chief, Land Development Division M.R.  
 Date: 3/4/92  
 Chief, Bureau of Highways  
 Date: 3/5/92  
 Chief, Bureau of Engineering  
 Date: 3-11-92

**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.  
 CK Futner  
 Date: 6-4-91

**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 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.  
 Signature of Developer/Builder: [Signature]  
 Date: 6-4-91

Reviewed for: **HOWARD** S.C.D.  
 Name: [Name]  
 and meets Technical Requirements  
 Date: 3/5/92  
 Service: [Service]

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
 Date: 3/5/92  
 Note: Ex. 30" R.C.P. from Ex. MH 2677 to Ex. MH 2677 is to be abandoned and removed. The Ex. 30" R.C.P. is to be replaced with a 48" R.C.P. (d. 12) from Ex. MH 2677 to Prop. T-2 and from Prop. T-2 to Ex. MH 2677.

**GIW GUTSCHICK LITTLE & WEBER, P.A.**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866  
 TELEPHONE: (301) 421-4024

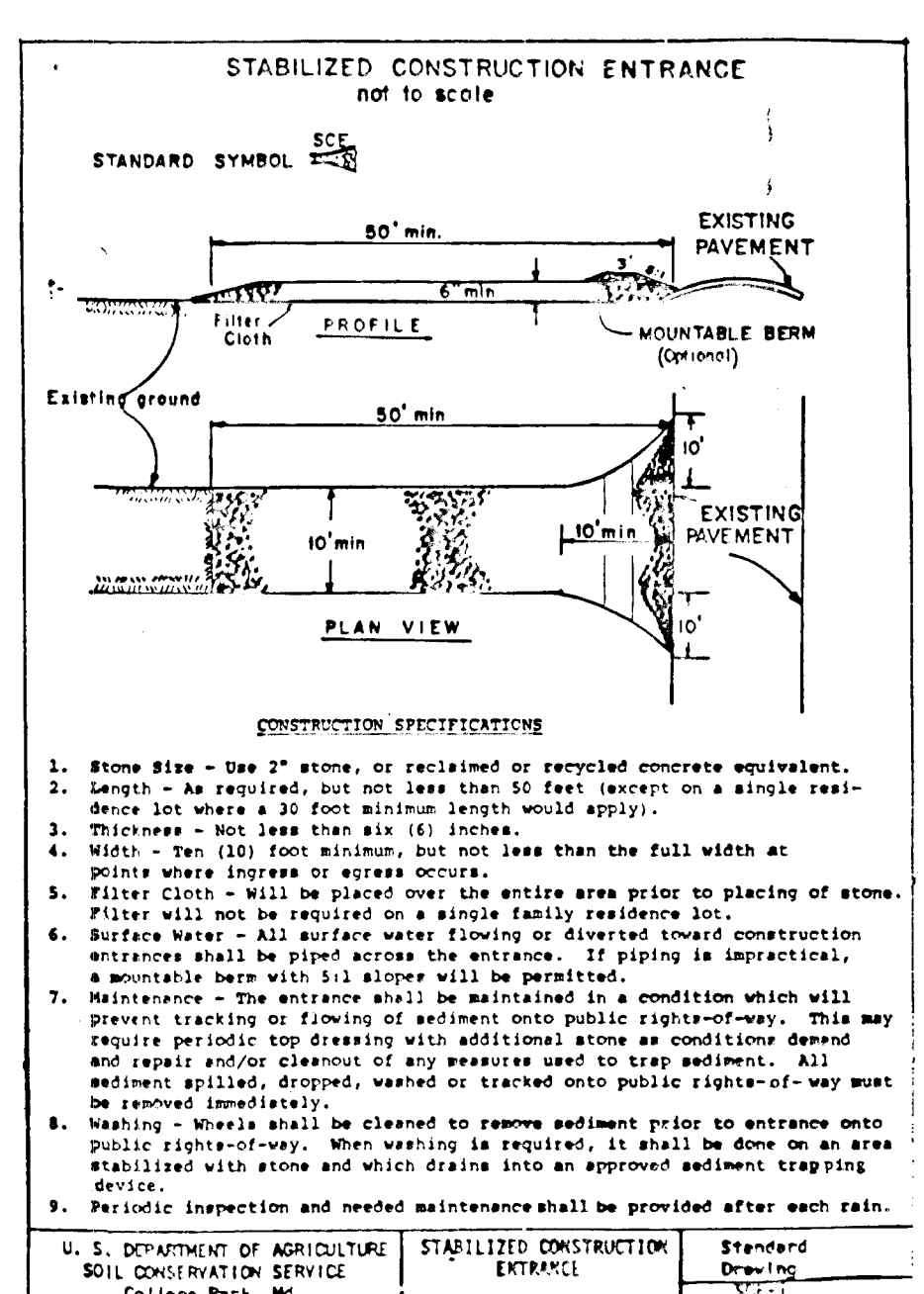
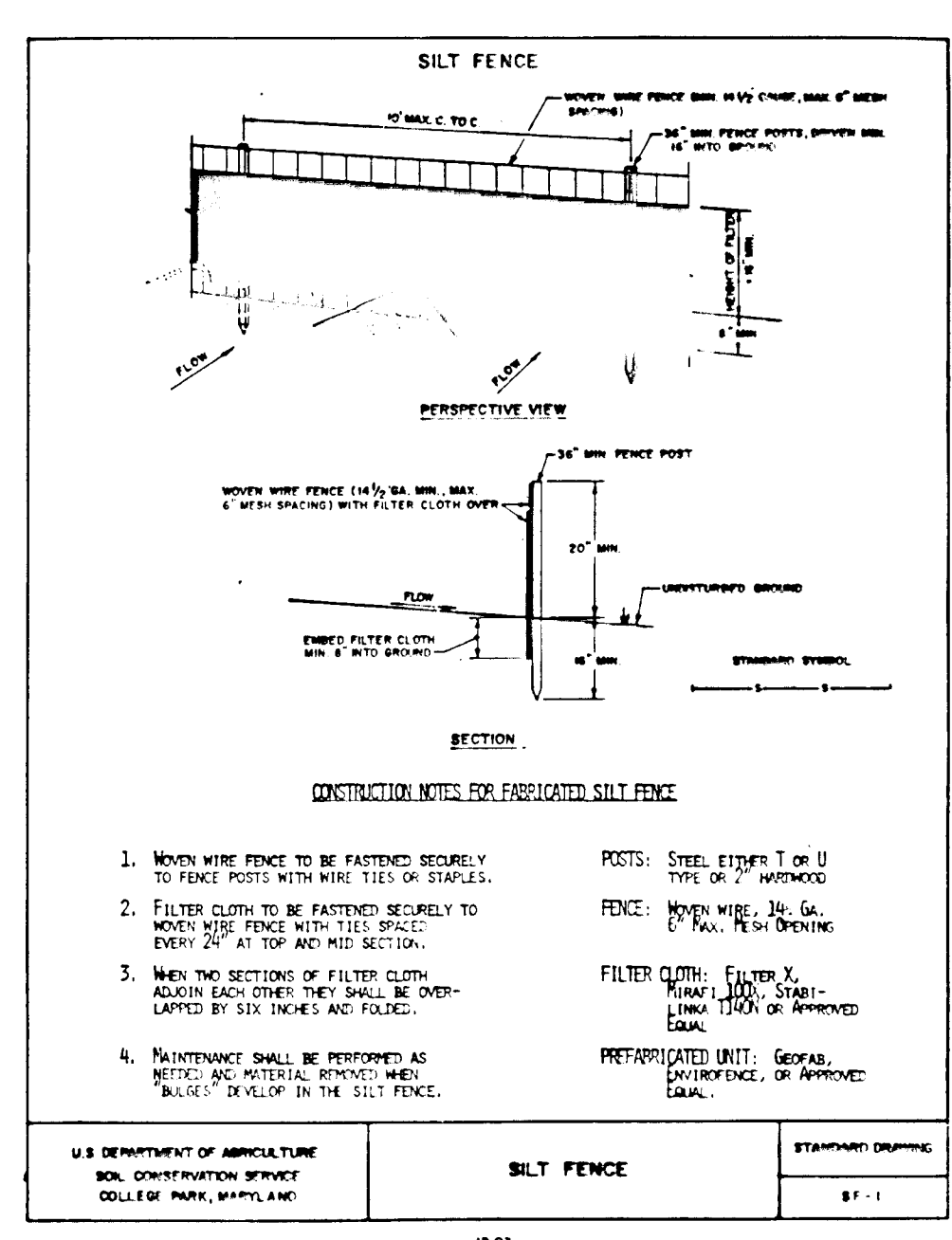
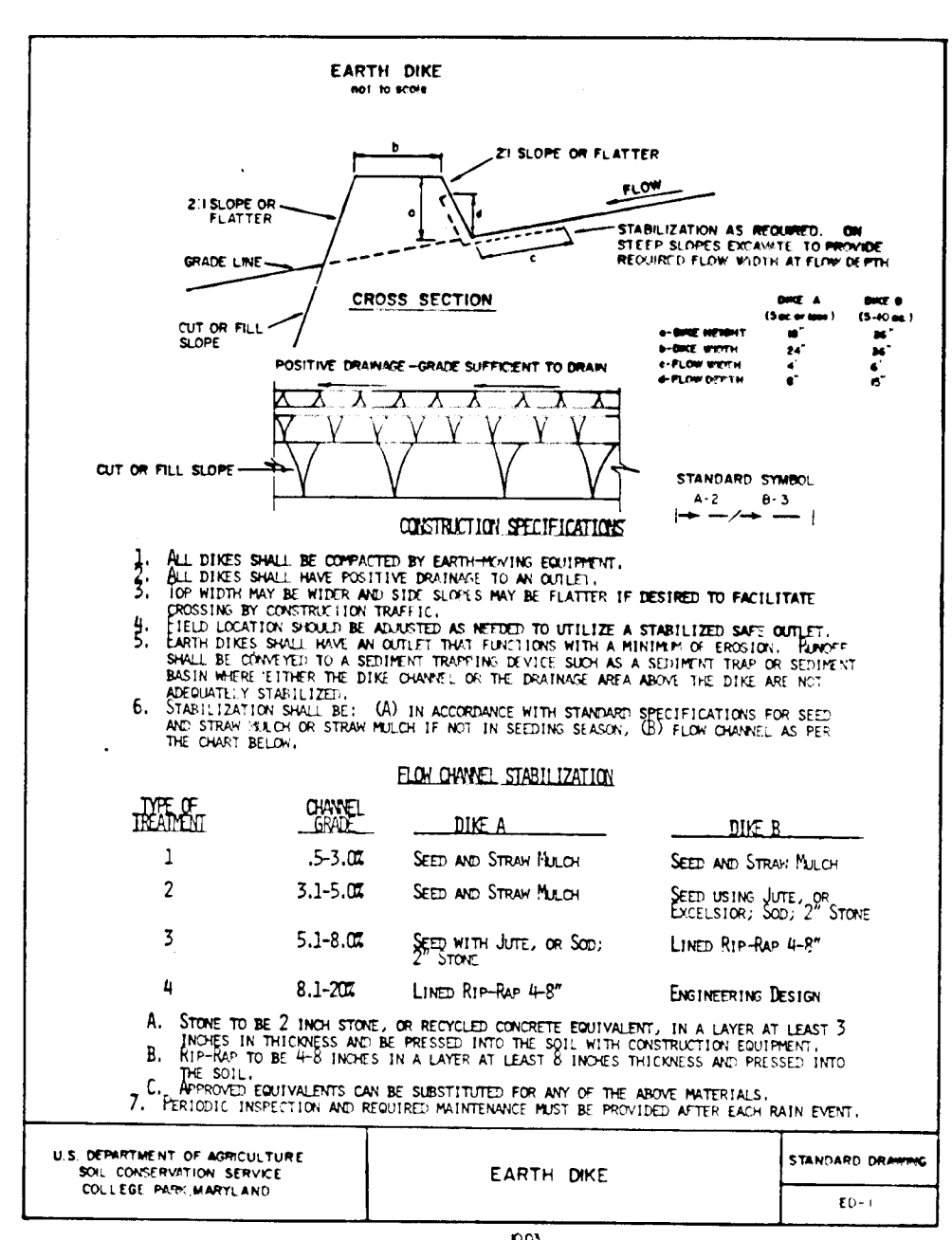
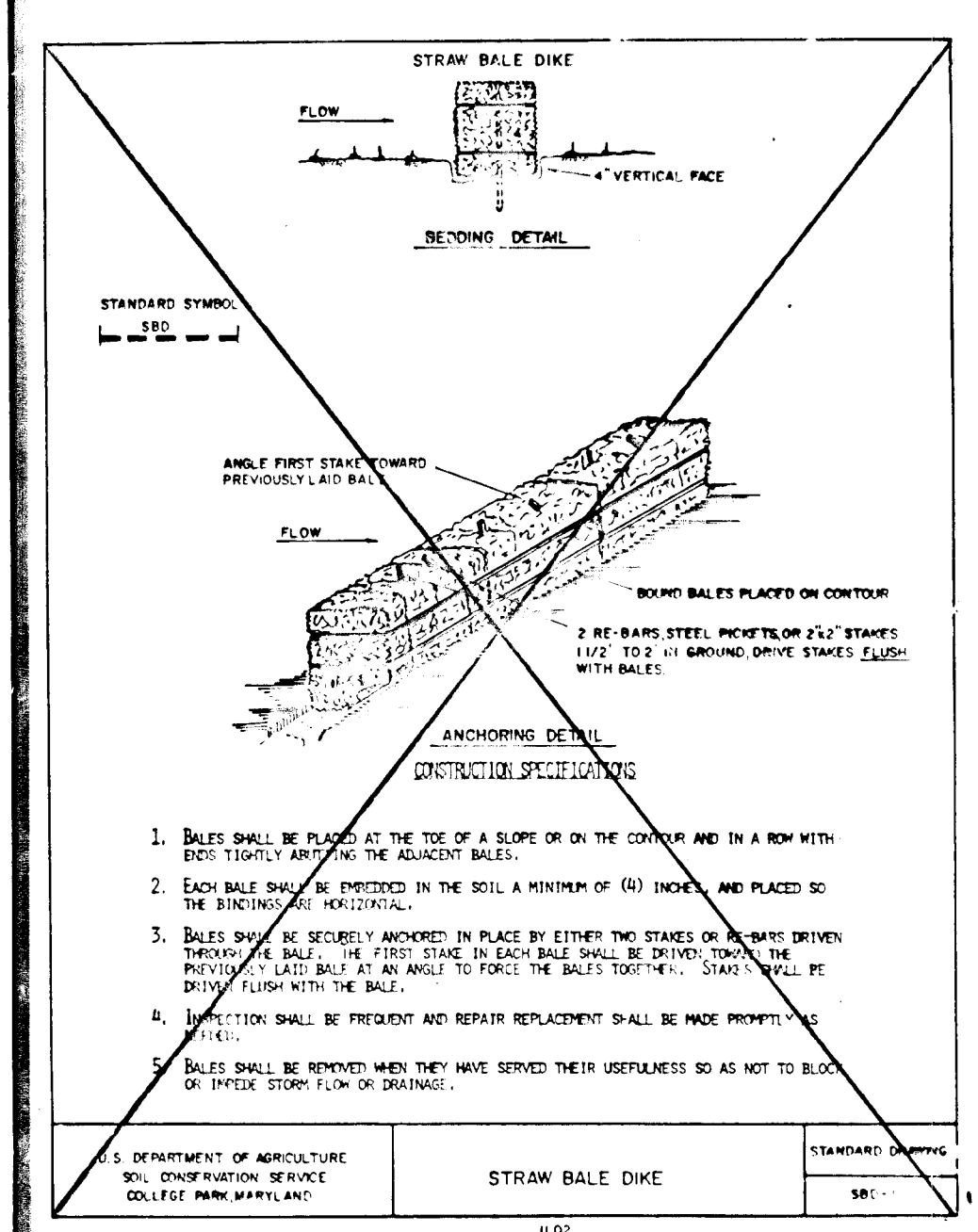
PREPARED FOR:  
 Howard Research and Development Corp.  
 The Rouse Building  
 10275 Little Patuxent Parkway  
 Columbia, Maryland 21044  
 (410) 992-6027

**Storm Drain Profiles and Mass Grading Plan Legend**  
**Gateway Commerce Center**  
 Parcels A-10 thru A-14  
 (A Sublot of Columbia Gateway Parcel N-1  
 And Adjacent Park East Parcels A-3 and A-9)  
 Sixth Election District  
 Howard County, Maryland

SCALE	ZONING	G.L.W. FILE No.
AS SHOWN	I.D./M-1	91011
DATE	TAX MAP No.	SHEET
Feb. 12, 1992	30, 42 & 43	5 of 7
	Parcel 587	

1158



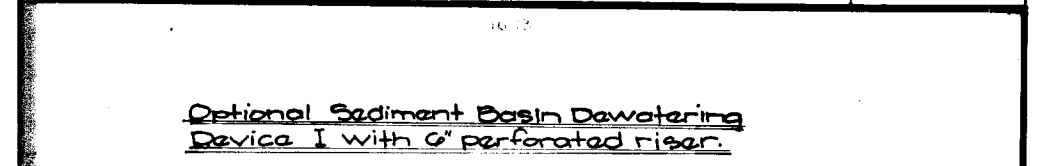
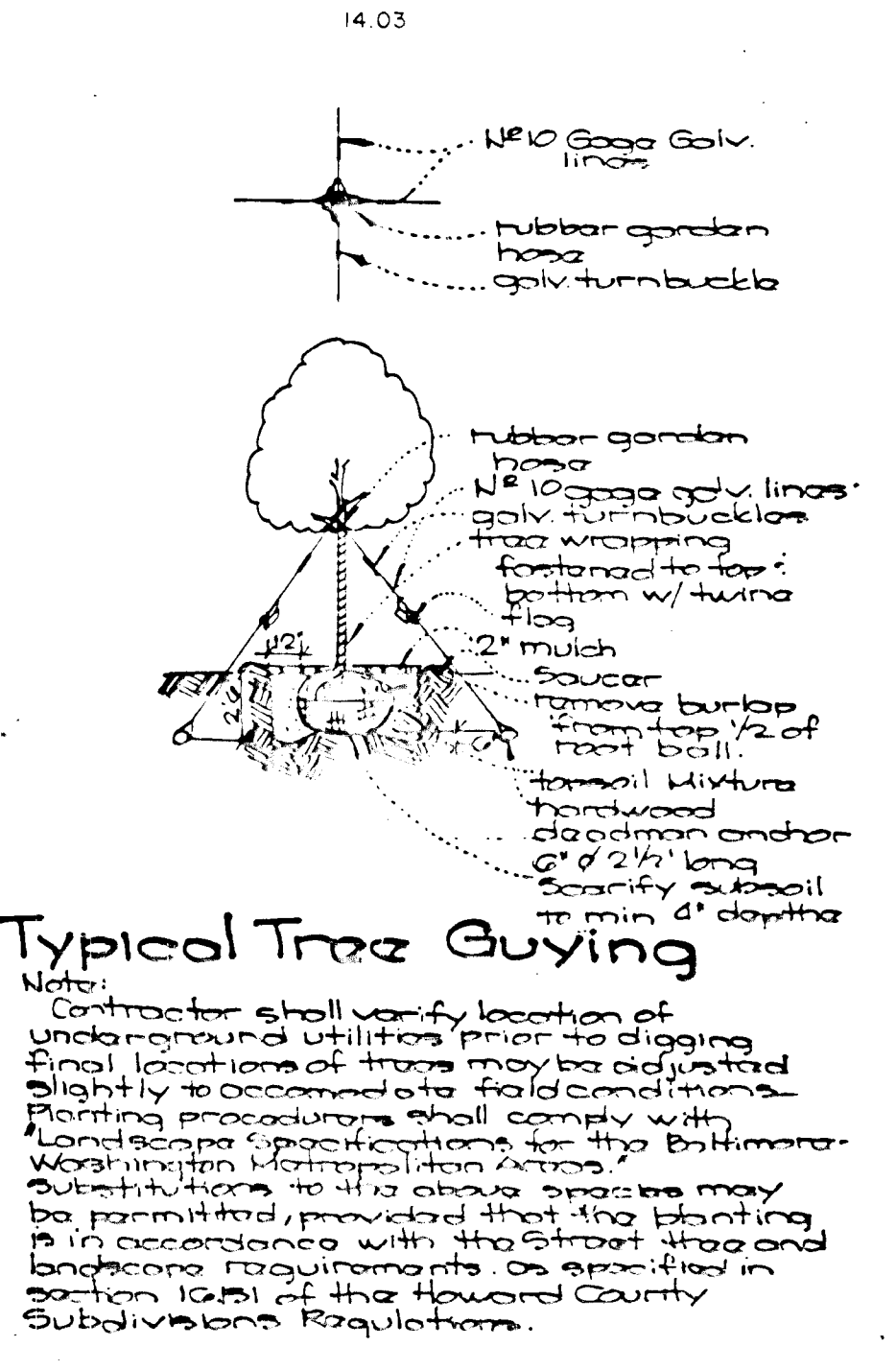
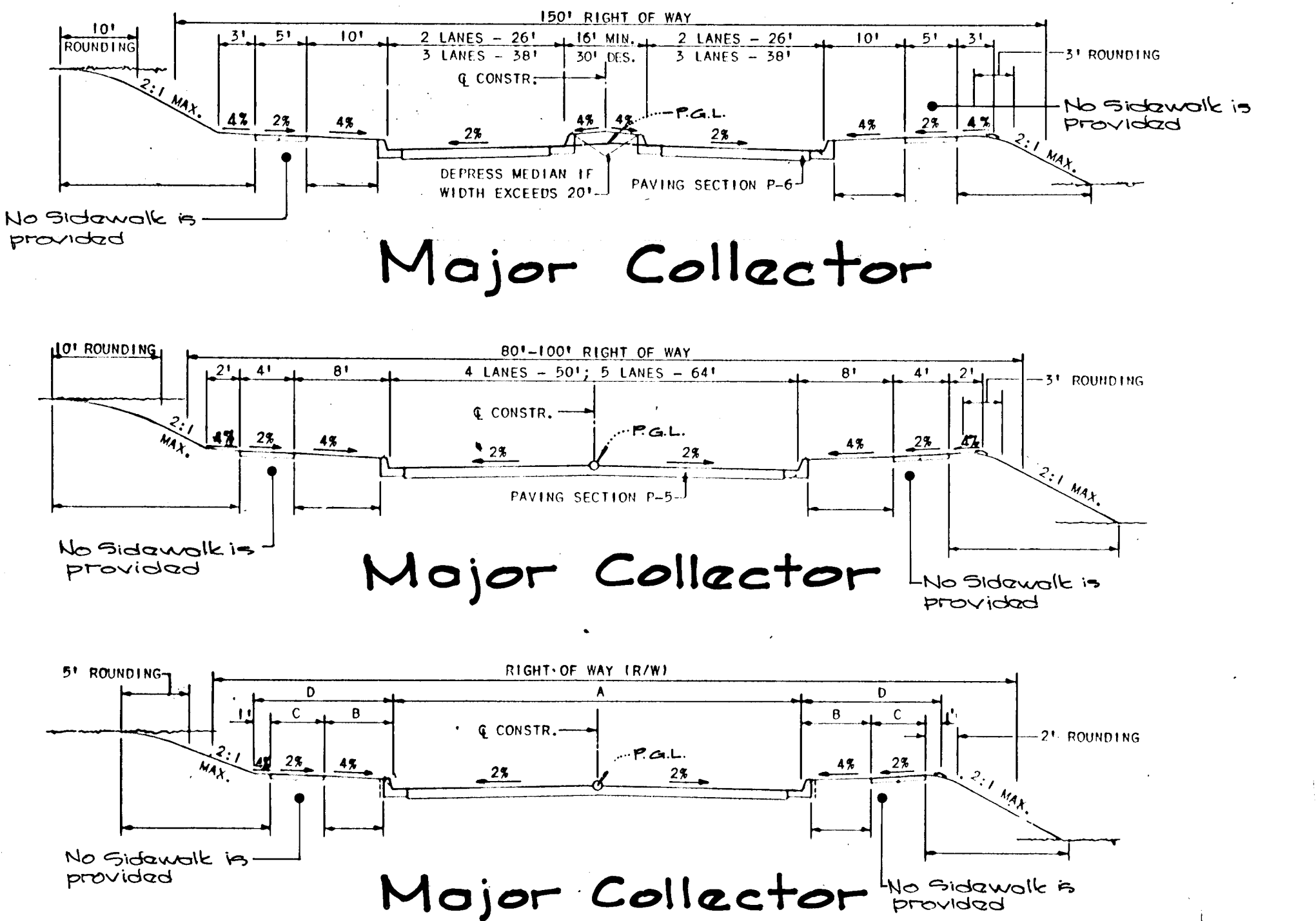
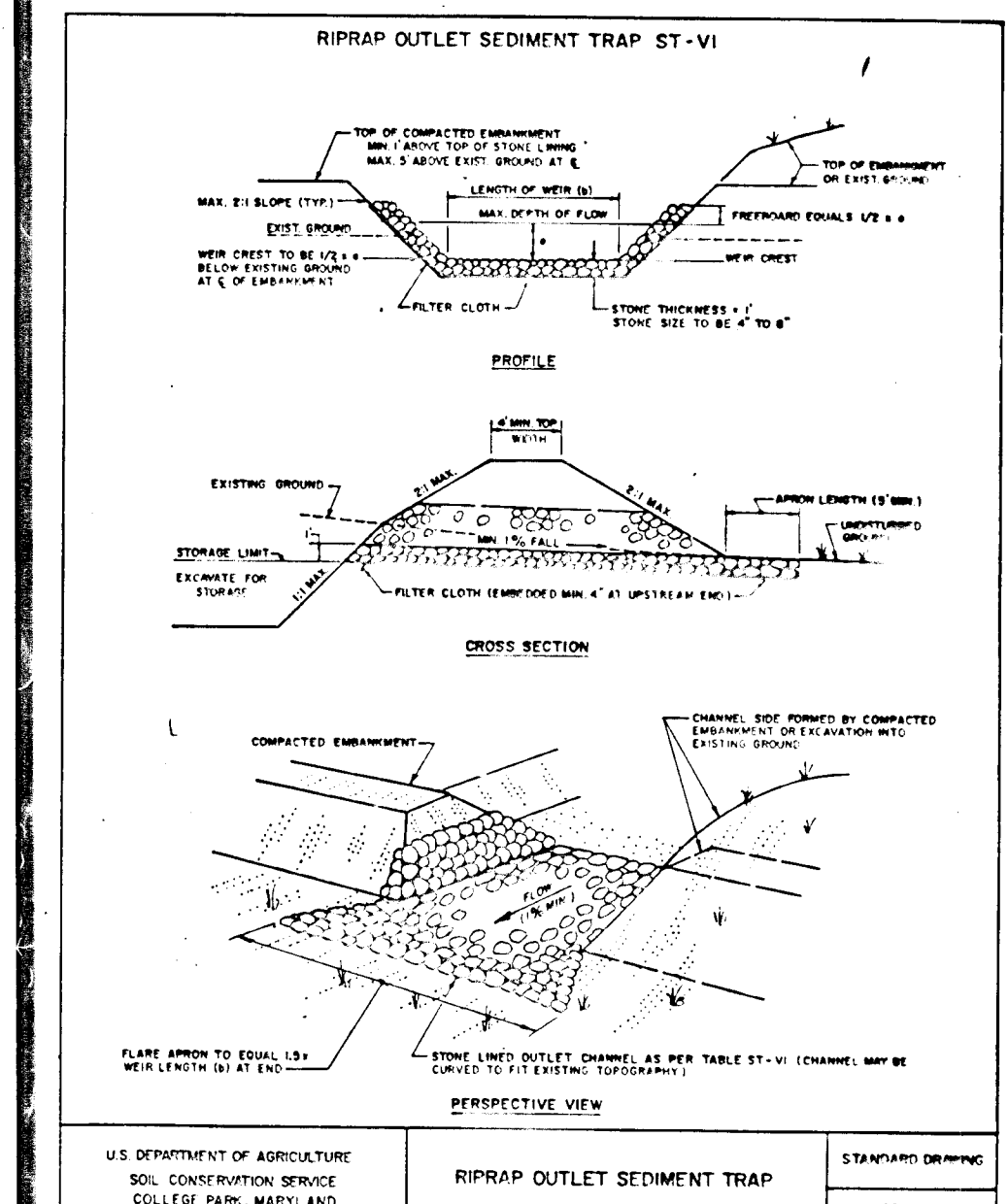


**SEDIMENT CONTROL NOTES**

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or 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.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:  
Total Area of Site: 475.70 Acres  
Area Disturbed: 42.38 Acres  
Area to be roofed or paved: 2.06 Acres  
Area to be vegetatively stabilized: 40.32 Acres  
Total Cut 79,400 Cu Yds.  
Total Fill 105,862 Cu Yds.  
Off-Site waste/borrow area location: Columbia Gateway (within an area with an approved and active sediment control plan.)
- 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 control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
- 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.

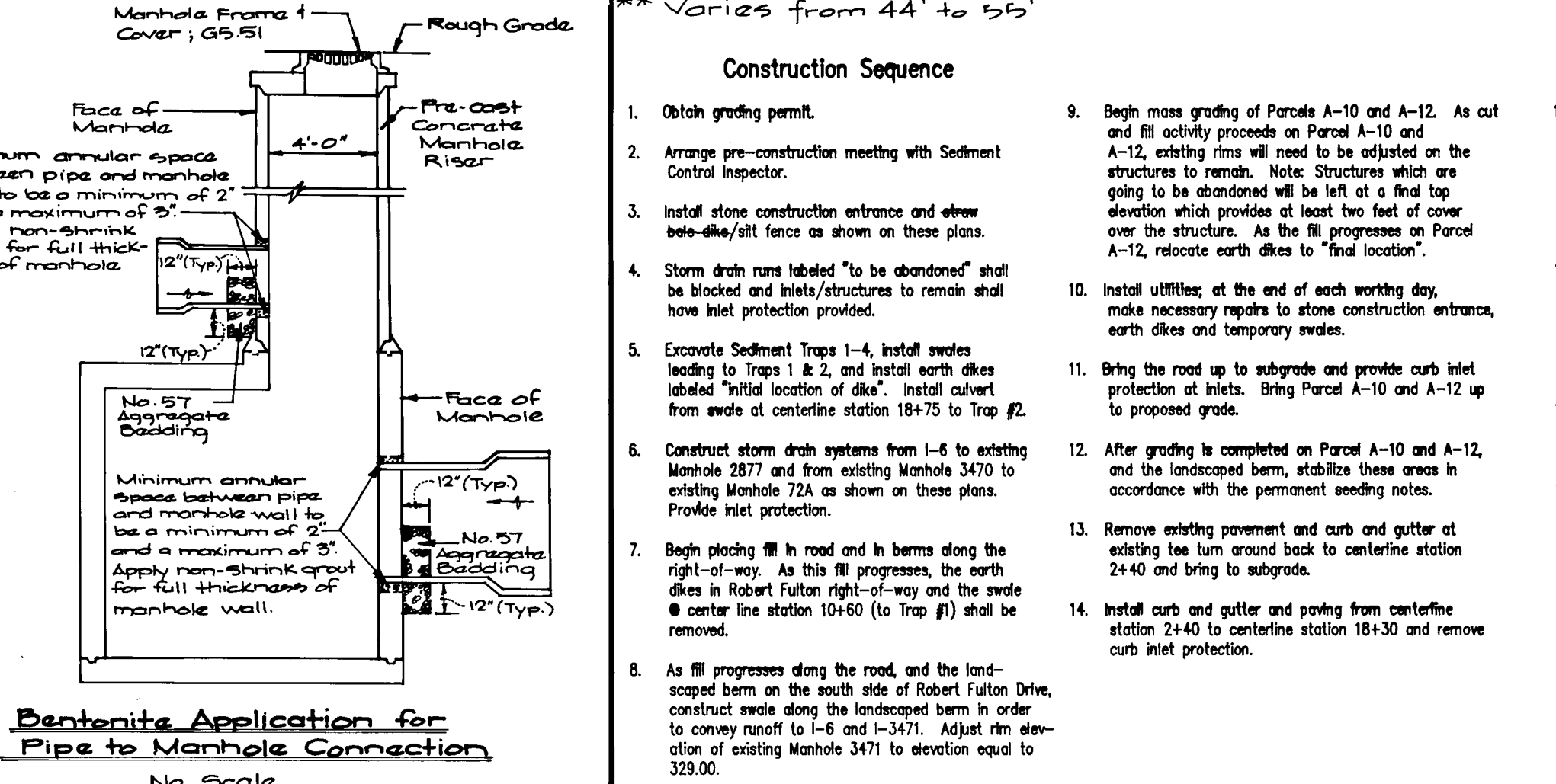
**PERMANENT SEEDING NOTES**

- 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
- 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).
  - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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.



Street Name & Station	Type of Traffic	A	B	C	D	R/W	Zoning	E	Length (ft)	Paving Section
Robert Fulton Dr. 1+00.00 - 1+02.00	Major Collector	**	N/A	N/A	N/A	80'	M-1/ID	-	40	P-5
Robert Fulton Dr. 1+02.00 - 1+04.00	"	**	55'	N/A	N/A	80'	M-1/ID	10'	40	P-5
Robert Fulton Dr. 1+04.00 - 1+06.00	"	**	26'	N/A	N/A	150'	M-1/ID	-	50	P-6

\*\* Varies from 44' to 55'



- Construction Sequence**
- Obtain grading permit.
  - Arrange pre-construction meeting with Sediment Control Inspector.
  - Install stone construction entrance and silt fence as shown on these plans.
  - Storm drain runs labeled "to be abandoned" shall be blocked and inlets/structures to remain shall have inlet protection provided.
  - Erect Sediment Traps 1-4, install dikes leading to Traps 1 & 2, and install earth dikes labeled "initial location of dikes". Install culvert from swale at centerline station 184-75 to Trap #2.
  - Construct storm drain systems from I-8 to existing Manhole 2877 and from existing Manhole 3470 to existing Manhole 724 as shown on these plans. Provide inlet protection.
  - Begin placing 18" in road and 18" in berms along the right-of-way. As this fill progresses, the earth dikes in Robert Fulton right-of-way and the swale center line station 104-90 (to Trap #1) shall be removed.
  - As fill progresses along the road, the landscaped berm on the south side of Robert Fulton Drive, construct swale along the landscaped berm in order to convey runoff to I-8 and I-3471. Adjust rim elevation of existing Manhole 3471 to elevation equal to 329.00.
  - Begin mass grading of Parcel A-10 and A-12. As cut and fill activity proceeds on Parcel A-10 and A-12, existing trees will need to be retained on the structures to remain. Note: Structures which are going to be abandoned will be left at a final top elevation which provides at least two feet of cover over the structure. As the fill progresses on Parcel A-12, relocate earth dikes to "final location".
  - Upon approval of the Sediment Control Inspector, and permanent stabilization of the contributing drainage area, remove earth dikes and temporary swale at center-line station 184-75 and bring to subgrade. Continue curb and gutter and paving to limit of work at center-line station 194-33. Remove blocking at existing inlets of the entrance to the tunnel.
  - Upon approval of the Sediment Control Inspector and permanent stabilization of the contributing drainage area, backfill pipe outlet Sediment Traps 1 & 2 and grade these areas as shown on these plans. Also remove any other sediment control devices and stabilize these remaining areas.
  - Convert manhole top of existing 724 to a "D" inlet in order to pick up discharge from Parcel A-10 into 48" RCP.
  - Upon approval of the Sediment Control Inspector, and permanent stabilization of the contributing drainage area, backfill rip rap outlet Sediment Traps 3 and 4 and grade these areas as shown on these plans. Also remove any remaining earth dikes and all fence/straw bale dikes and stabilize these remaining areas.
  - Install curb and gutter and paving from centerline station 244-0 to centerline station 184-30 and remove curb inlet protection.
  - Upon approval of the Sediment Control Inspector, and permanent stabilization of the contributing drainage area, remove the stone construction entrance and make whatever repairs are necessary to the roadway.



**DEVELOPER'S/BUILDER'S CERTIFICATE**

I 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 Department of the Environment Approval Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the inspector.

*CK Jeter*  
Signature of Developer/Builder  
Date: 6-1-92

**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.

*CK Jeter*  
Signature of Engineer  
Date: 6-4-92

Approved:  
Department of Public Works  
*John Damman* 3/1/92  
Chief, Land Development Division  
M.K.

Approved:  
Department of Planning & Zoning  
*Anna Helms* 3/1/92  
Chief, Division of Community Planning and Land Development

Approved:  
Department of Engineering  
*John M. Ferguson* 3/1/92  
Chief, Bureau of Highways

Approved:  
Department of Engineering  
*John M. Ferguson* 3-11-92  
Chief, Bureau of Engineering

**GUTSCHICK LITTLE & WEBER, P.A.**  
ENGINEERS, PLANNERS, SURVEYORS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD 20866  
TELEPHONE: (301) 421-4024

DATE	REVISION	BY	APP'D.

PREPARED FOR:  
Howard Research & Development Corp.  
The Research Building  
10275 Little Bluff Road  
Columbia, Maryland 21044  
(410) 870-0077

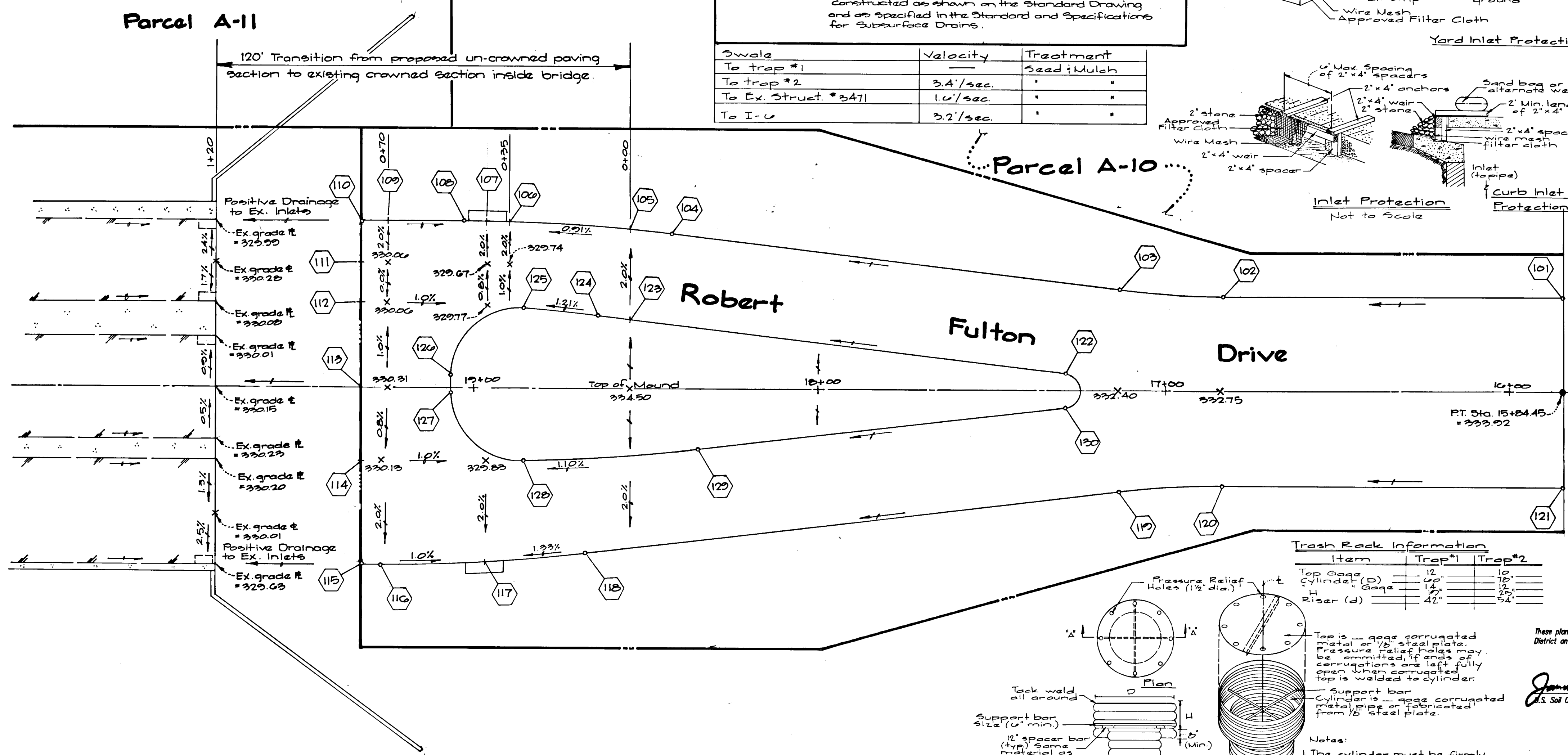
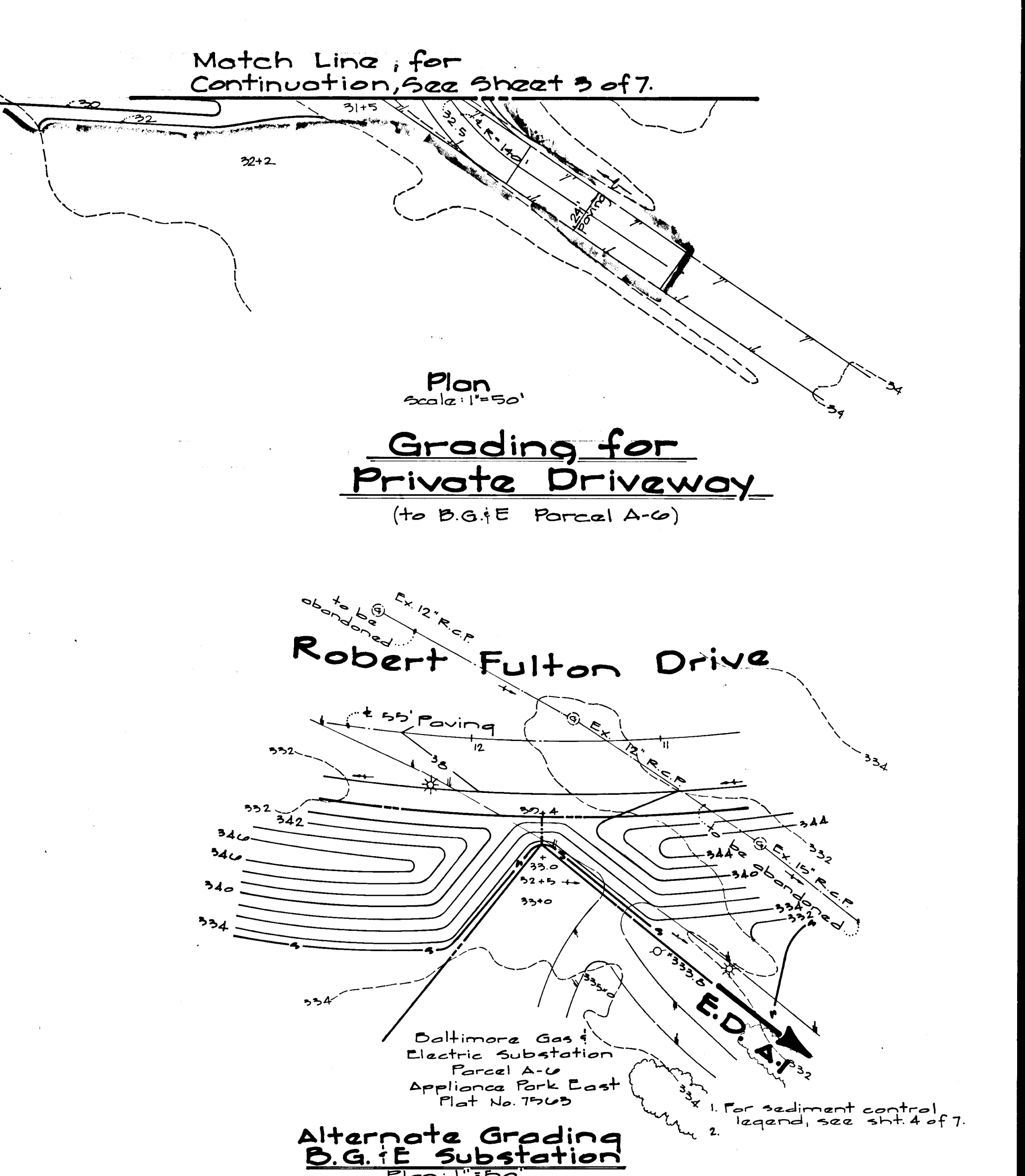
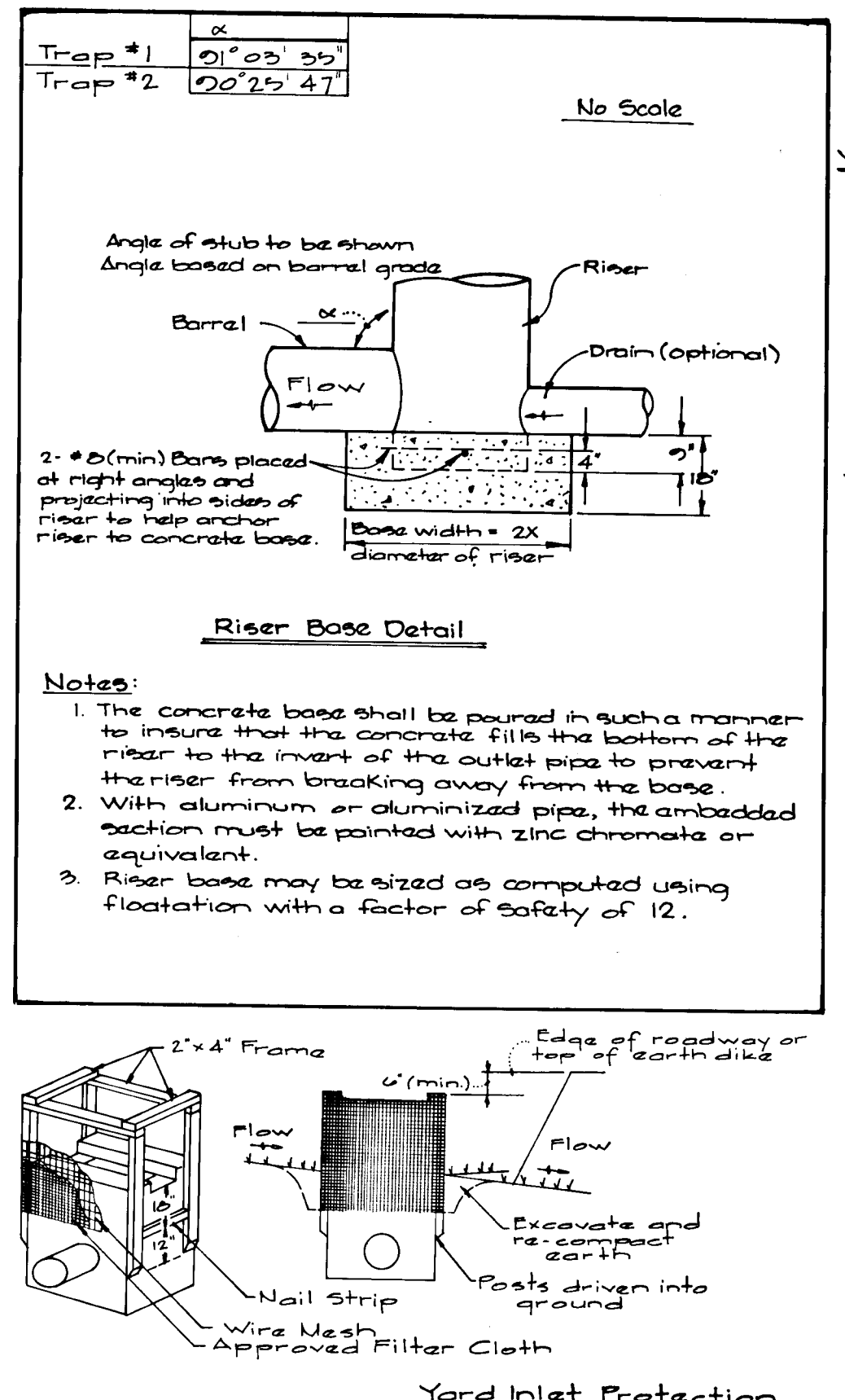
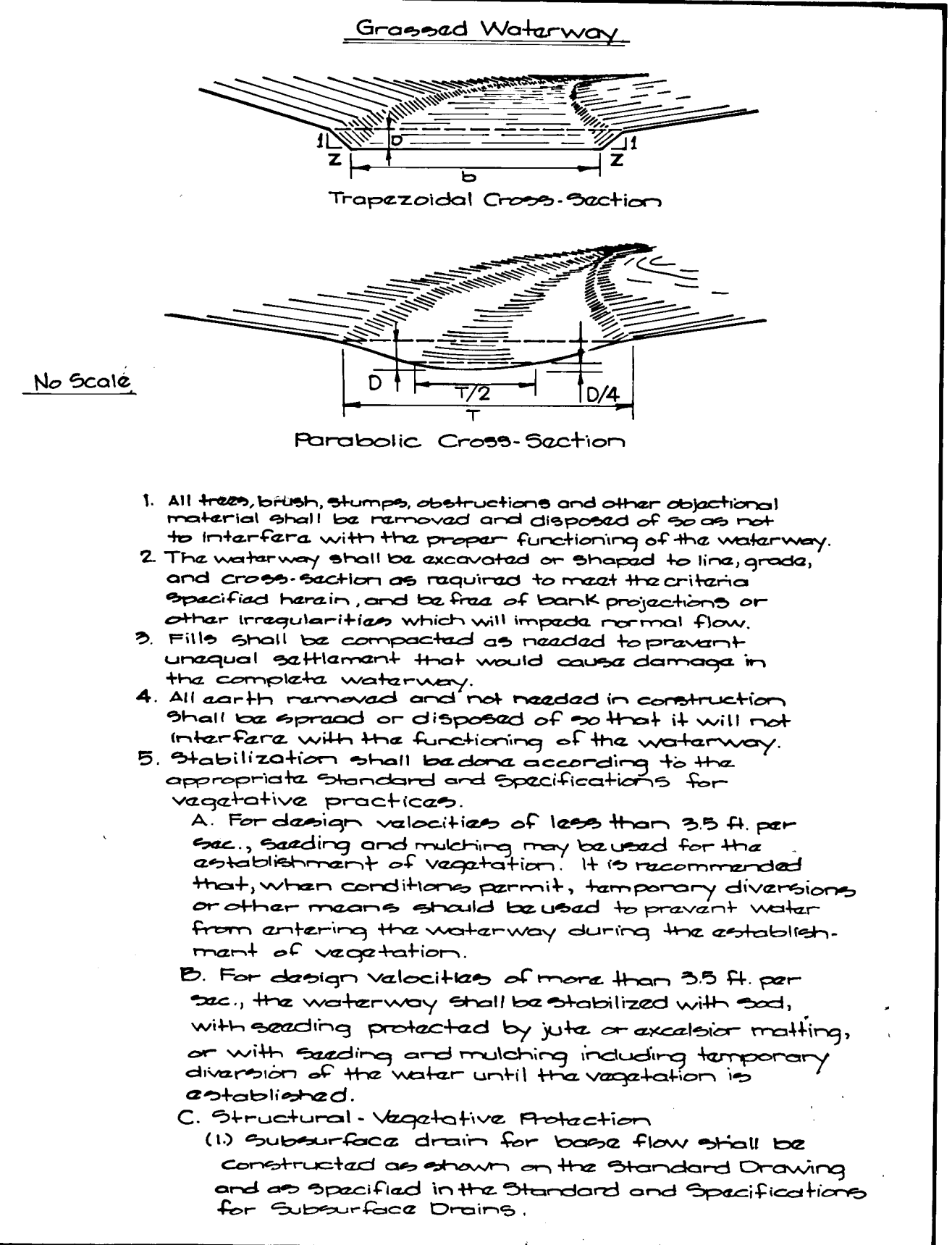
Notes and Details  
**Gateway Commerce Center**  
Parcel A-10 thru A-14  
(A Resub of Columbia Gateway Parcel N-1 and Application Park East Parcel and A-9)  
Sixth Election District  
Howard County, Maryland

SCALE	ZONING	G.L.W. FILE NO.
As Shown	M-1/ID	01-011
DATE	TAX MAP NO.	SHEET
Feb. 12, '92	36,42 & 43	6 of 7

1158



Point No.	Station	Offset	B.C. Elev.	T.C. Elev.	Description
101	15+84.45	27.50' Rt.	335.31	335.71	P.T. @ curb line
102	16+85.55	27.50' Rt.	332.14	332.74	P.C. @ Curb line
103	17+13.17	29.26' Rt.	331.75	332.35	P.T. @ Curb line
104	18+42.45	44.05' Rt.	330.53	330.53	P.C. @ Curb line
105	18+54.88	45.93' Rt.	330.70	330.30	Curb line - Begin transition
106	18+89.88	48.05' Rt.	330.44	330.04	Curb line - Left lane @ 10%
107	18+95.50	48.17' Rt.	330.37	330.97	± Prop. Inlet @ curb line
108	19+01.99	48.21' Rt.	330.46	330.06	P.T. @ Curb line
109	19+24.88	48.21' Rt.	330.76	330.36	Curb line - Left lane @ 0.0%
110	19+33.00	48.21' Rt.	330.53	330.53	Curb line @ limit of paving
111	19+33.00	36.33' Rt.	330.23	330.77	± Westbound lane @ limit of paving
112	19+33.00	24.50' Rt.	330.14	330.68	Future curb line @ limit of paving
113	19+33.00	0.00' -	330.40	330.94	± Road @ limit of paving
114	19+33.00	21.05' Lt.	330.15	330.73	Future curb line @ limit of paving
115	19+33.00	51.15' Lt.	330.53	330.13	Curb line @ limit of paving
116	19+27.02	51.15' Lt.	330.47	330.07	P.T. @ Curb line
117	18+95.50	30.22' Lt.	330.17	330.77	± Prop. Inlet @ curb line
118	18+67.47	47.67' Lt.	330.57	330.17	P.C. @ Curb line
119	17+13.17	29.26' Lt.	331.75	332.35	P.T. @ Curb line
120	16+85.55	27.50' Lt.	332.14	332.74	P.C. @ Curb line
121	15+84.45	27.50' Lt.	335.31	335.71	P.T. @ Curb line
122	17+28.99	4.96' Rt.	332.12	332.73	P.T. @ median curb line
123	18+54.88	19.88' Rt.	330.34	330.94	Median curb line - Begin transition
124	18+64.00	21.07' Rt.	330.20	330.80	P.C. @ median curb line
125	18+85.49	23.17' Rt.	330.51	330.51	P.C.C. @ median curb line
126	19+07.00	4.96' Rt.	330.06	330.66	P.T. @ median curb line
127	19+07.00	1.06' Lt.	330.10	330.70	P.C. @ median curb line
128	18+86.71	21.06' Lt.	330.34	330.94	P.C.C. @ median curb line
129	18+34.82	17.55' Lt.	330.62	331.22	P.T. @ median curb line
130	17+28.99	4.96' Lt.	332.12	332.72	P.C. @ median curb line



**Cross Reference Chart for Ex. Storm Drain Structures**

Structure Numbers F-72-15	Structure Numbers F-72-1000
As per plans prepared by: G.L.W.	As per plans prepared by: F.C.C.
#3477	MH#202 A
#3448	MH#201 E
#3470	MH#200
#2976	MH#170 B
#2877	MH#105 A
#2824	MH#100
#2409	MH#152
#2405	MH#151 E
#72 A	MH#72 A
#2828	MH#70
#2573	MH#191
#2503	MH#190

**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 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.

*James M. Haly* 2/25/92 Date  
S.S. Soil Conservation Service

*John M. Haly* 2/25/92 Date  
S.S. Soil Conservation Service

**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.

*C.K. Dutton* 6-4-91 Date  
Howard S.C.D.

**APPROVED:** Department of Public Works  
*Chief, Land Development Division* 3/11/92 Date

**APPROVED:** Department of Planning & Zoning  
*Chief, Division of Community Planning and Land Development* 3/11/92 Date

<b>GLW GUTSCHICK LITTLE &amp; WEBER, P.A.</b> CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20886 TELEPHONE: (301)421-4024 NO. VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186	DATE	REVISION	BY	APP'R.	<b>NOTES AND DETAILS</b> <b>Gateway Commerce Center</b> Parcels A-10 thru A-14 (A re-subdivision of Columbia Gateway Parcel N-1 and Appliance Park East Parcels A-3 and A-8) Sixth Election District Howard County, Maryland	DES.: G.A.H. SCALE: As Shown ZONING: M-1/I-D G.L.W. FILE NO.: 01011
	PREPARED FOR: The Howard Research and Development Corporation The Rouse Building 10275 Little Patuxent Parkway Columbia, Maryland 21044 (410) 292-6027	DES.: G.A.H. DATE: Feb. 12, '92 TAX MAP NO.: 30,42,44B PAR. 587	SHEET: 7 of 7			