STREET TREE TABLE

SYM	TYPE	SIZE	QUANT.	REMARKS
AR	ACER RUBRUM 'RED SUNSET' RED SUNSET MAPLE	2½" CAL.	47	B&B Heavy Heads
LT	TILIA CORDATA 'GREENSPIRE' LITTLELEAF LINDEN	"	40	"

1. The contractor shall verify location of underground utilities prior to digging. Location of trees may be adjusted slightly to meet field conditions.
2. The location, type & number of trees shown are tentative and are used for bond purposes only. The final location and variety of trees may vary to accomodate field conditions and builders landscape program. Bond release is contingent upon Section 16.131 of the Howard County Subdivision Regulations as approved by the Office of Planning and Zoning

CURB & GUTTER LEGEND.

- Modified C&G
- Rev. 7" Std C&G
- Std. 7" C&G
- Rev. 6" Std. C&G
- Std. 6" C&G

*STREET LIGHT LEGEND:
- 30' Steel Pole Pendant 250-400 Watt Hy or Sodium Equivalent.
- 14' Fiberglass Pole, 175 Watt Hy. or Sodium Equivalent

* Note: Street lights to be installed in accordance with Ho. Co. Design Manual, Vol. III.

VICINITY MAP
SCALE: 1"= 2000'

TAMAR DRIVE, ROBBIN ROAD, SNOWDEN RIVER PKWY., OLD MONTGOMERY ROAD, Waterloo Road MD Rte. 108, LITTLE PATUXENT PKWY MD Rte. 175, SITE

GENERAL NOTES

1. All work shall be done in accordance with Ho. Co. Design Manual, Vol. III Stds. and Specs. and details for Construction, 1989 Amendments.
2. Types of storm drainage refer to the standard details of Ho. Co. & MDSHA.
3. Trench compaction for storm drains within road or street right-of-way limits shall be in accordance with "Ho. Co. Design Manual, Vol. III" Std. S.2.01.
4. In formation concerning underground utilities was obtained from available records but the contractor must determine the exact location and elevation of mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
5. All utility companies shall be notified 24 hrs. in advance of construction.
6. All traffic services, parking and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices, " 1988 Revised Edition.
7. Sag and Crest Vertical Curves were designed in accordance with "Ho. Co. Design Manual," Vol. III.
8. Provide Conc. Sidewalk Ramps: Ho. Co. Std. Type A R-4.01 where shown in plan.
9. Design Speed: See Table Zoning: N.T. SP (Attached)
10. The contractor or developer shall contact the Construction Inspection/Survey Division 24 hrs. in advance of commencement of work: Ph. 792-7272.
11. Stormwater management is provided for in previously approved plan F-88-171. Plan subject to Water Quality Certification 87-0516.

Note: Warp paving from Sta. 12+33.51 to Sta. 13+33.15 in order to provide positive drainage to inlets I-9 & I-10.

Note: The stream buffer indicated on this plat does not affect the initial construction of a residential unit on a lot. It does prohibit subsequent clearing, grading or construction in the buffer area. Maintenance of residences landscaping, and utilities is permitted.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

John D. Troutman — 5-15-89
Signature of Developer/Builder — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Director — 6/23/89 Date
Chief, Land Development Division — 8/22/89 Date
Chief, Bureau of Highways.
Chief, Bureau of Engineering — 8-24-89 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.

Chief, Division of Community Planning & Land Development — 8/28/89 Date

DATE: 05/12/23
THE PROFESSIONAL SEALING FOR THE REDLINE REVISION NUMBER 3.

STATE OF MARYLAND — G. NELSON CLARK — NO. 7139 — REGISTERED PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE

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

G. Nelson Clark — 5-16-89
G. Nelson Clark — Date

STATE OF MARYLAND — 22004 — PROFESSIONAL ENGINEER

5-16-89

Date	Revision	
5/12/23	NEW PARKING ADDED (MIN. REQUIRED)	3
5/11/90	Revised I-16 to A-5 Inlet	

CENTERLINE CURVE DATA

PC. to PT.	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
PC. 2+31.10 to P.T. 3+34.17	210.00'	28°07'19"	103.07'	52.60'	102.04'	N76°03'40"E
PC. 4+41.45 to P.T. 5+53.15	200.00'	32°00'00"	111.70'	57.35'	110.26'	N78°00'00"E
PC. 13+41.21 to PT. 14+19.10	500.00'	21°40'48"	188.18'	95.74'	188.06'	N13°50'23"E

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
James M. Ally 8/17/89
Signature Date
U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Approved 8/17/89 Date

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 — BALTO. • (301) 621-8100 — WASH.

DESIGNED	MCB
DRAWN	GG KIW
CHECKED	MCB
DATE	7.19.89

ROAD CONSTRUCTION PLANS
GOOD HUNTERS RIDE
COLUMBIA
VILLAGE OF LONGREACH
SECTION 3 AREA 2
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND.

FOR: The Trowman Company, Wilde Lake Village Green #300, Columbia Md. 21044
OWNER: HOWARD RESEARCH & DEVEL. LAND COMPANY, 10275 Little Patuxent Parkway, Columbia Md. 21044

SCALE	As Shown
DRAWING	10F 5
JOB NO.	88-051
FILE NO.	88-051-D

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

PROFILE - GOOD HUNTERS RIDE

LINEAR PROFILE

SSD= 215.38' 200' VC e=1.25'
SSD= 210.48' 200' VC e=1.50'
200' VC e=2.26'
200' VC e=2.26'
B.R.L. (Lt.)
Ex. ℄
B.R.L. (Rt.)
P.G.L.
-2.00%
+3.00%
-3.00%
+3%
+4.50%
-4.52%
+4.50%

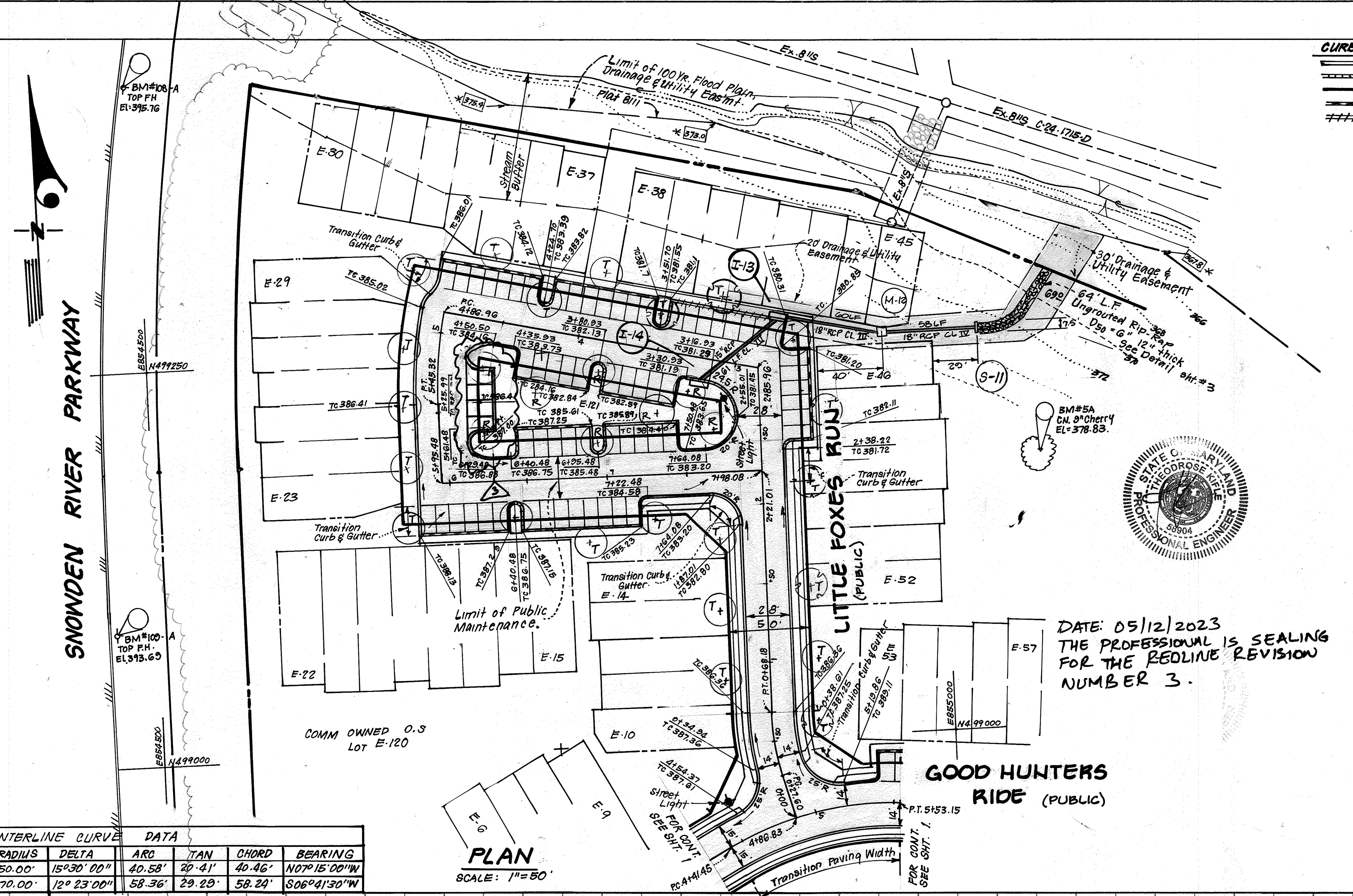
0+00=0+25.83 | 0+15 | 0+41 | Meet Ex. Paving | 1+00 PVC. | 2+00 | 2+00 PVC. | 3+00 POC. PVI. | 3+00 | 3+86 ± P 384.31 | 3+88.11 | 4+00 PVT. | 4+10 | 4+50 PVC. | 4+86.83 = 0+00 & Inl. Little Foxes Run | 5+00 | 5+50 POC. H.P. | 5+50 | 5+80.61 | 6+00 | 6+50 PVT. | 6+87.61 | 7+00 | 7+40.06 Flowline | 7+54.15 = 14+65.44 & Inl. | 7+95.22 PVC. | 8+00 | 8+95.22 POC. PVI. | 9+00 | 9+39.68 | 10+00 | 10+14.22 | 10+14.22 | 10+50 | 11+00 | 11+50 PVC. | 12+00 | 12+50 | 12+50.22 LP | 13+00 | 13+33.15 POC. PVI. | 13+38.15 | 13+50 PVT. | 14+00 | 14+65.44 = 7+54.15 & Inl.

0 | +50 | 1 | +50 | 2 | +50 | 3 | +50 | 4 | +50 | 5 | +50 | 6 | +50 | 7 | +50 | 8 | +50 | 9 | +50 | 10 | +50 | 11 | +50 | 12 | +50 | 13 | +50 | 14 | +50 | 15

405 400 395 390 385 380 375 370 365 360

100

F-89-225



CURB & GUTTER LEGEND

- Modified C&G
- Rev. 7" Std. C&G
- Std. 7" C&G.
- Rev. 6" Std. C&G.
- Std. 6" C&G.

REVISIONS		
1	Relocated Str. S-11 & M-12 AND REV. R/W	7-12-90
3	NEW PARKING ADDED (MIN. 9'-0"x18'-0")	5.12.23

Reviewed for HOWARD S.C.D. and meets Technical Requirements
Signature 8/17/87 Date
U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Approved 8/17/87 Date

DEVELOPER'S/BUILDERS CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

Signature of Developer/Builder — 5-15-89 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chief, Land Development Division — 8/23/89 Date
Chief, Bureau of Highways — 8/22/89 Date
Chief, Bureau of Engineering — 8-24-89 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.

Chief, Division of Community Planning & Land Development — 8/24/89 Date

ENGINEER'S CERTIFICATE

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G. Nelson Clark — 5-16-89 Date

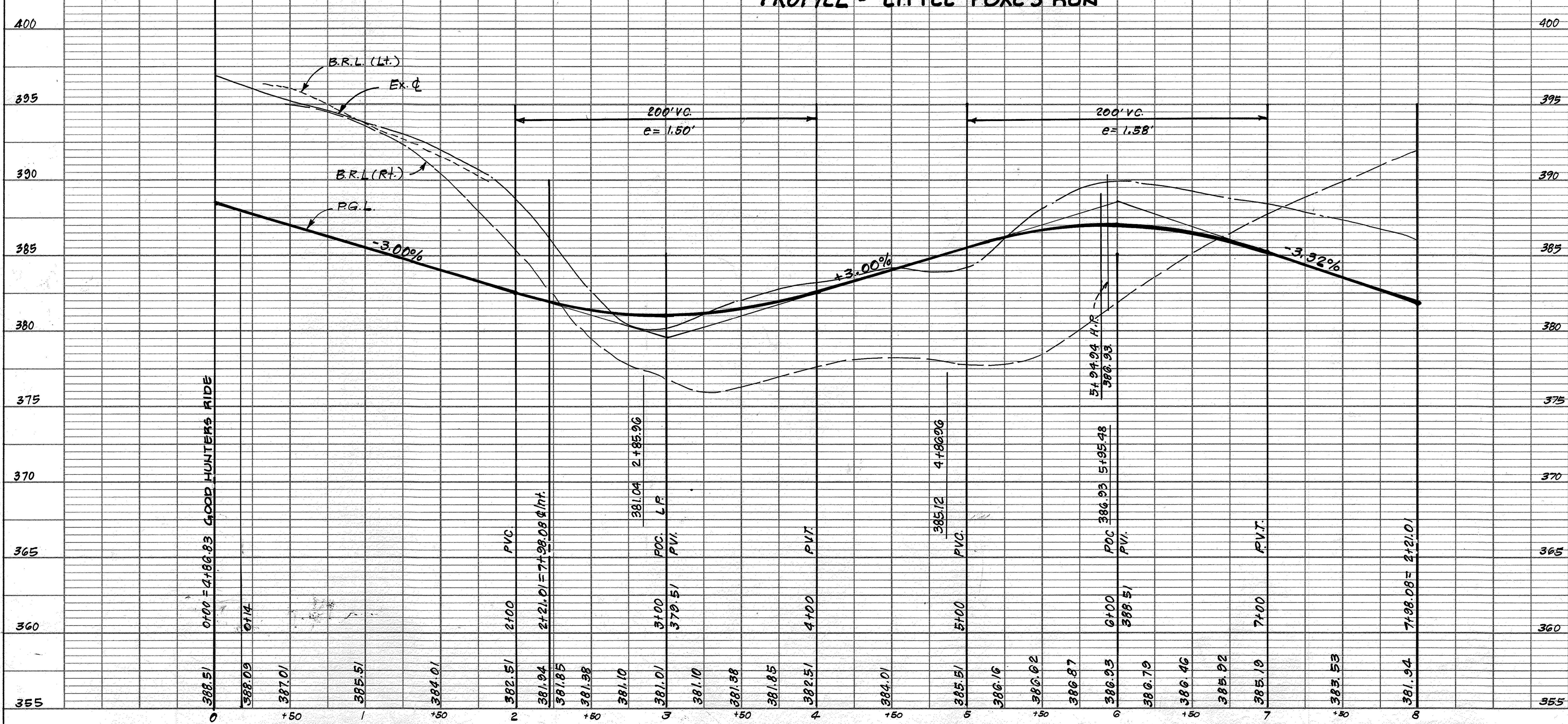
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 — BALTO. • (301) 621-8100 — WASH.

DESIGNED MCB	ROAD CONSTRUCTION PLANS FOX RUN COURT **COLUMBIA** VILLAGE OF LONGREACH SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		SCALE As Shown
DRAWN GS. KIW			DRAWING 2 OF 5
CHECKED MCB			JOB NO. 88.051
DATE 7-19-89	FOR: The Troutman Company Wilde Lake Village Green #300 Columbia, Md. 21044	OWNER: HOWARD RESEARCH & DEVEL. LAND COMPANY 10275 Little Patuxent Pkwy. Columbia, Md. 21044	FILE NO. 88.051-D

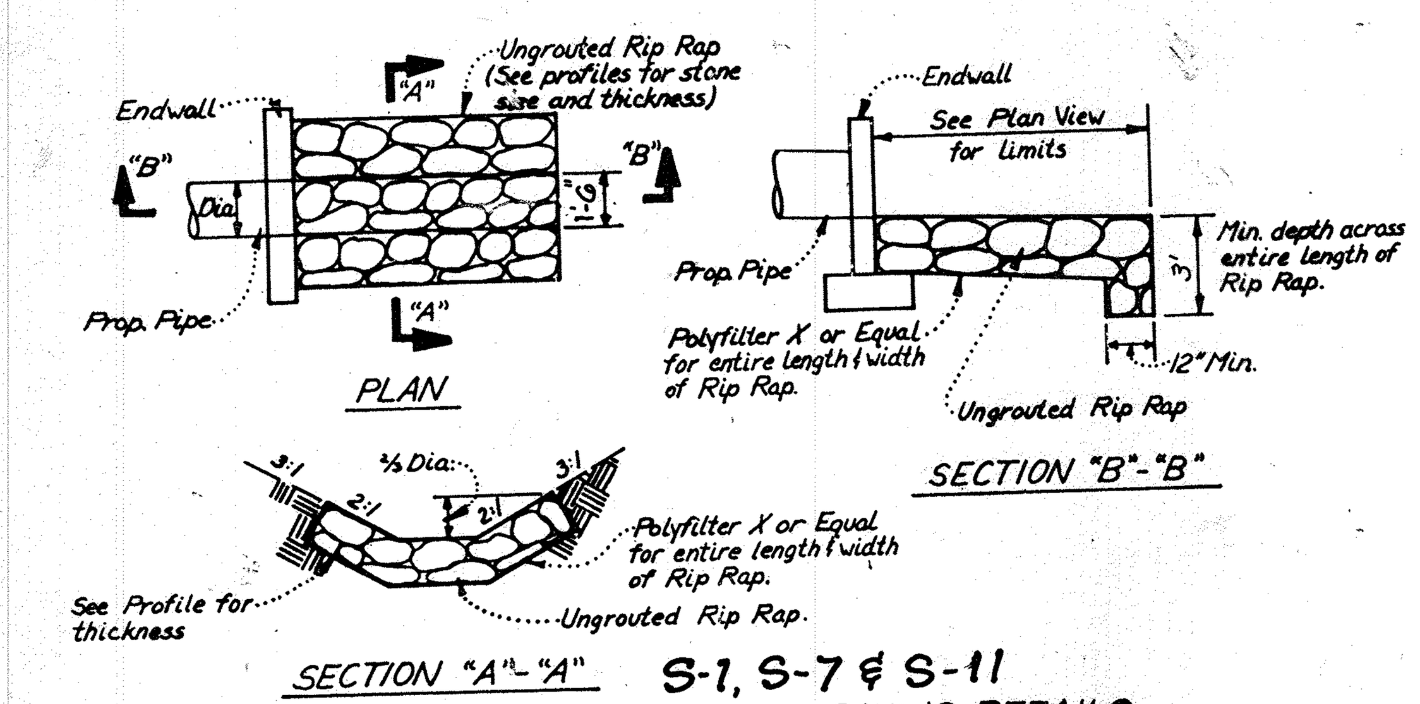
CENTERLINE CURVE DATA						
PC to P.T.	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
P.C. 0+27.60 to P.T. 0+68.18	150.00'	15°30'00"	40.58'	20.41'	40.46'	N07°15'00"W
P.C. 4+86.96 to P.T. 5+45.32	270.00'	12°23'00"	58.36'	29.29'	58.24'	S06°41'30"W

PROFILE - LITTLE FOXES RUN

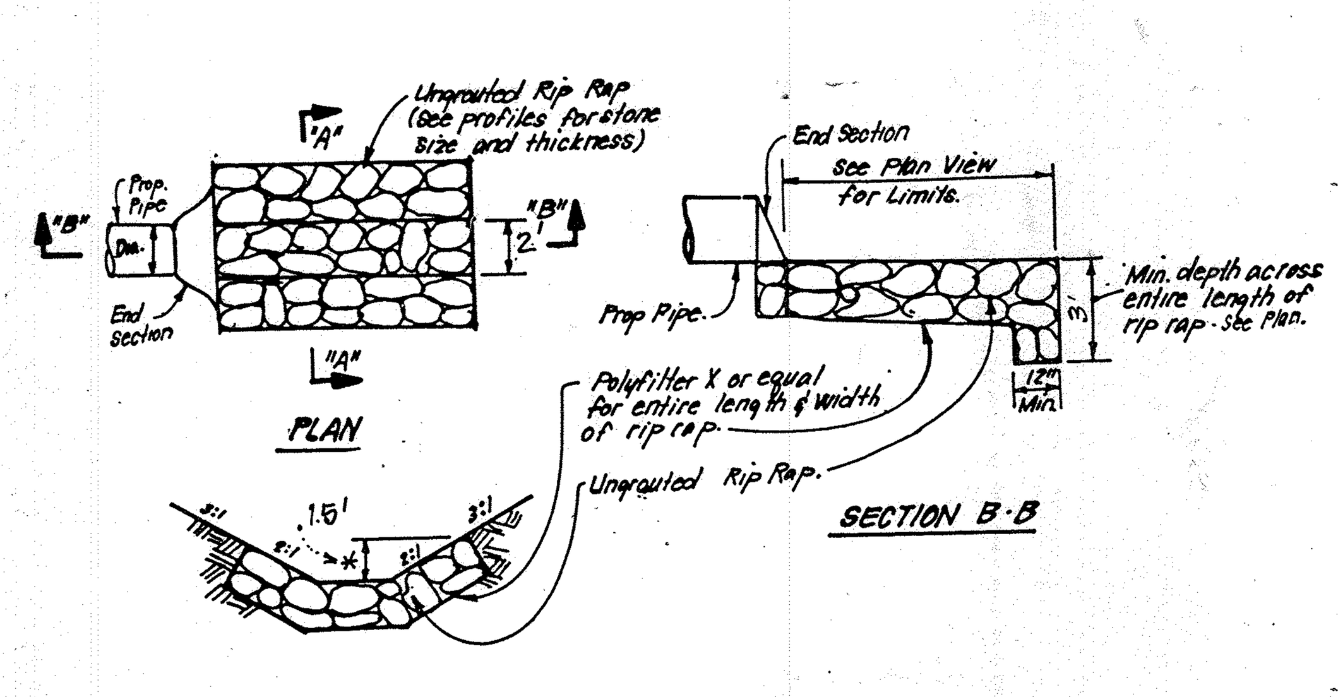
PROFILE SCALE
HORIZ. 1"=50'
VERT. 1"=5'



F-89-225

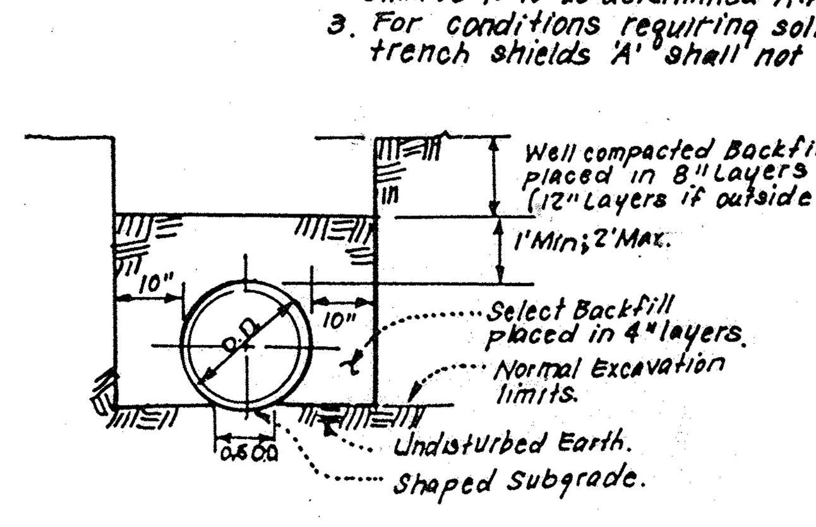


S-1, S-7 & S-11
UNGROUTED RIP RAP PAVING DETAILS
NO SCALE

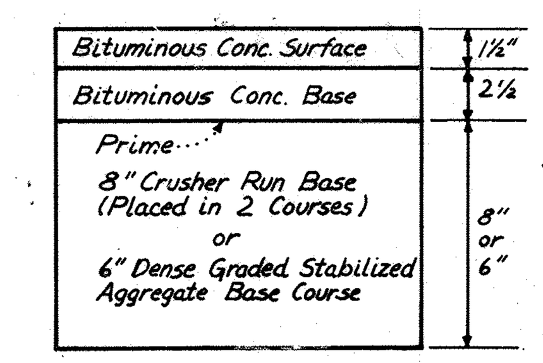


S-15
UNGROUTED RIPRAP PAVING DETAILS
NO SCALE

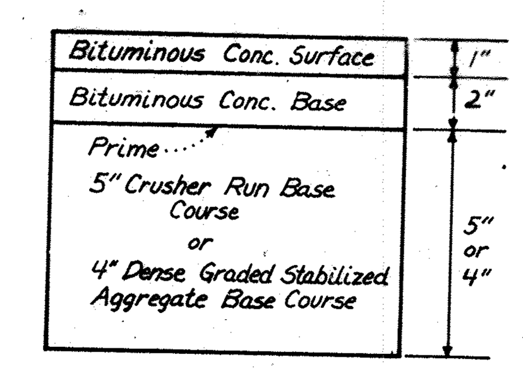
Notes:
1. For O.D. of pipe see manufacturers specs. or field measure circumference of pipe and divide by 3.14.
2. Within road R/W, trench compaction density shall be 95% as determined A.ASH.T.O. T-180-A.
3. For conditions requiring solid sheeting or trench shields 'A' shall not exceed 30".



TRENCH COMPACTION DETAIL
NO SCALE



ALTERNATE PAVING SECTION FOR PUBLIC ROADS
NO SCALE
(SECTION P-2)

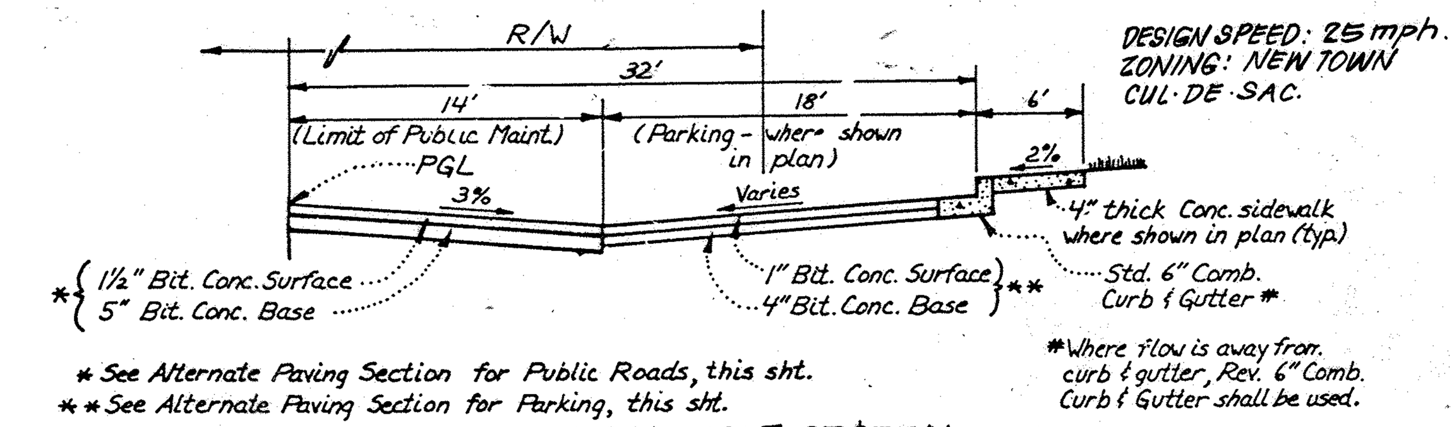


ALTERNATE PAVING SECTION FOR PARKING AREAS
NO SCALE
(SECTION P-1)

STRUCTURE SCHEDULE △

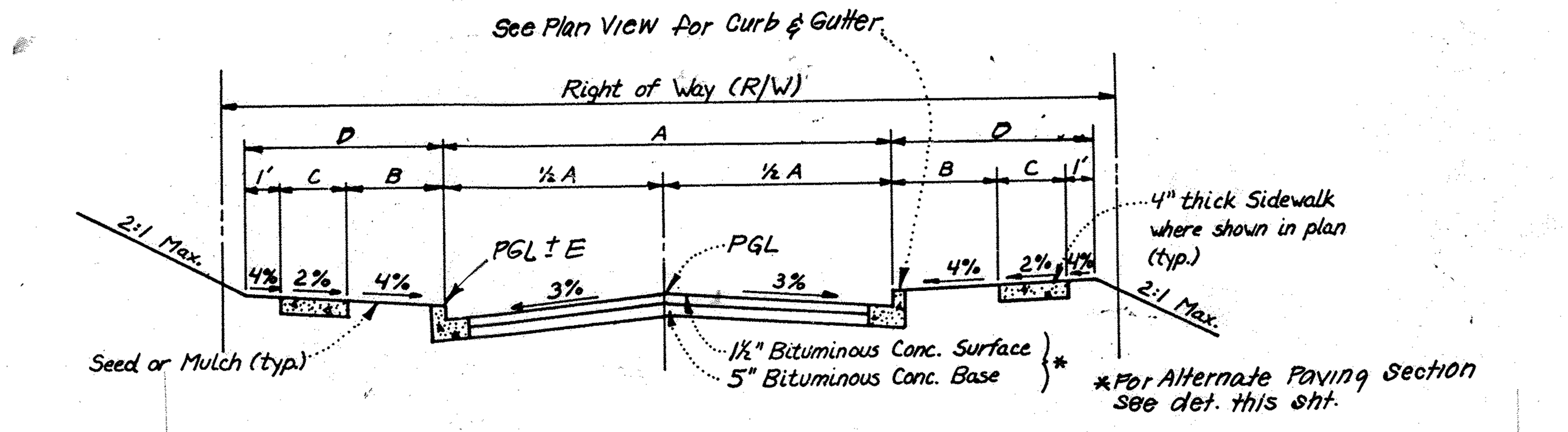
№	TYPE	INV. IN	INV. OUT	TOP ELEVATION UPPER	TOP ELEVATION LOWER	REMARKS	LOCATION
S-1	TYPE "C" ENDWALL 15"ø	370.10	—	372.10		Ho. Co. Std. SD-5.21	See Plan
M-2	STD. MANHOLE 48"ø	373.00	371.50	Ex. Ground		" " " G-5.01	See Plan
I-3	A-10 INLET 2'-6"W	380.19	379.69	384.42		" " " SD-4.02	GOOD HUNTERS RIDE STA 2+80 15' RT to ¢ STR @ FC
I-4	A-10 INLET 2'-6"W	380.73	380.50	384.42		" " " SD-4.02	GOOD HUNTERS RIDE STA 2+80 15' LT. to ¢ STR @ FC
M-5	SHALLOW MANHOLE 48"Sq	382.65	382.55	387.57		" " " G-5.05	See Plan
I-6	YARD INLET	—	383.25	386.50		" " " SD-4.14	" "
S-7	TYPE "C" ENDWALL 18"ø	367.60	—	369.85		" " " SD-5.21	" "
M-8	SHALLOW MANHOLE 48"Sq.	369.00	368.32	372.00		" " " G-5.05	" "
I-9	A-10 INLET 2'-6"W	373.17	372.50	377.03	376.70	" " " SD-4.02	" "
I-10	A-10 INLET 2'-6"W	—	374.75	378.17	377.95	" " " SD-4.02	" "
S-11	TYPE "C" ENDWALL 18"ø	372.20	—	374.45		" " " SD5.21	" "
M-12	SHALLOW MANHOLE 48"Sq	373.91	373.72	378.20		" " " G-5.05	" "
I-13	A-10 INLET 2'-6"W	376.39	375.64	380.45	380.31	" " " SD-4.02	" "
I-14	A-10 INLET 2'-6"W	—	377.00	381.26	381.19	" " " SD-4.02	See Plan
S-15	CONC. END SECTION 18"ø	—	382.70	—		" " " S.D-5.51	SNOWDEN RIVER PKWY STA 47+02 75' LT. to ¢ end sect.
I-16	A-5 INLET 2'-6"W	—	385.50	#389.43	389.37	" " " S.D-4.01	SNOWDEN RIVER PKWY STA 47+02 41' RT to ¢ STR @ F.C.

△ All inverts to be fully developed
Adjust Inlet Top to meet ex. curb & gutter



* See Alternate Paving Section for Public Roads, this sht.
** See Alternate Paving Section for Parking, this sht.
*Where flow is away from curb & gutter, Rev. 6" Comb. Curb & Gutter shall be used.

TYPICAL HALF SECTION
PARKING ADJACENT TO PUBLIC ROADS
NO SCALE
GOOD HUNTERS RIDE STA. 5+40.22 to STA. 14+65.44
LITTLE FOXES RUN STA. 2+38.22 to STA. 7+50.48



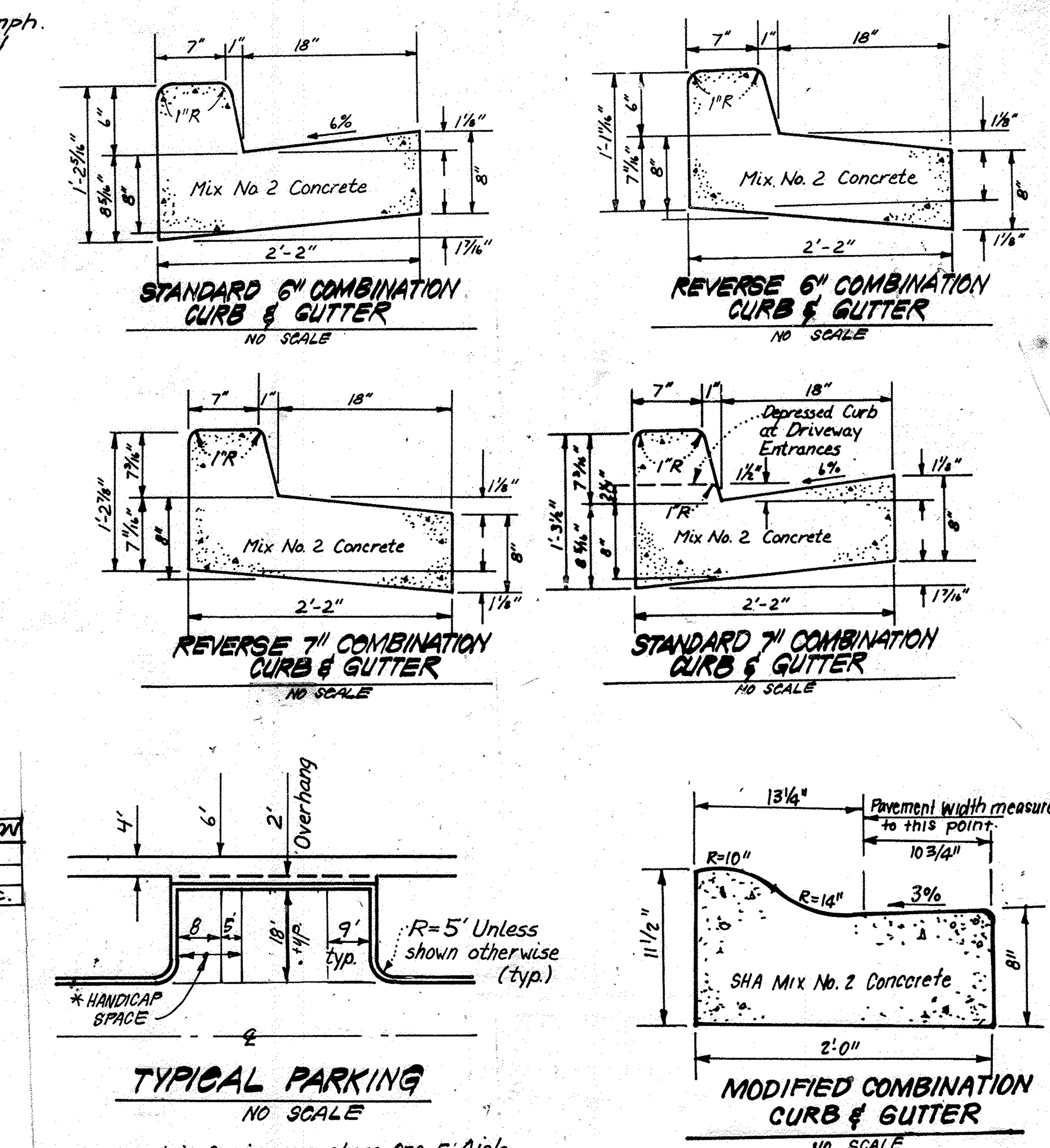
TYPICAL PAVING SECTION - PUBLIC ROADS
NO SCALE

NAME & STATION	A	B	C	D	E	ZONING	DESIGN SPEED	CLASSIFICATION
+ Good Hunters Ride Sta. 1+05.5 to 4+86.83	30'	4'	4'	9'	±.11	N.T.	30 mph	LOCAL
+ Good Hunters Ride. Sta. 4+86.83 to 5+40.22	28'	4'	4'	9'	±.14	N.T.	25 mph	CUL-DE-SAC.
Little Foxes Run 0+00 to 2+38.22 & 7+50.48-7+98.08	28'	4'	4'	9'	±.14	N.T.	25 mph.	CUL-DE-SAC.

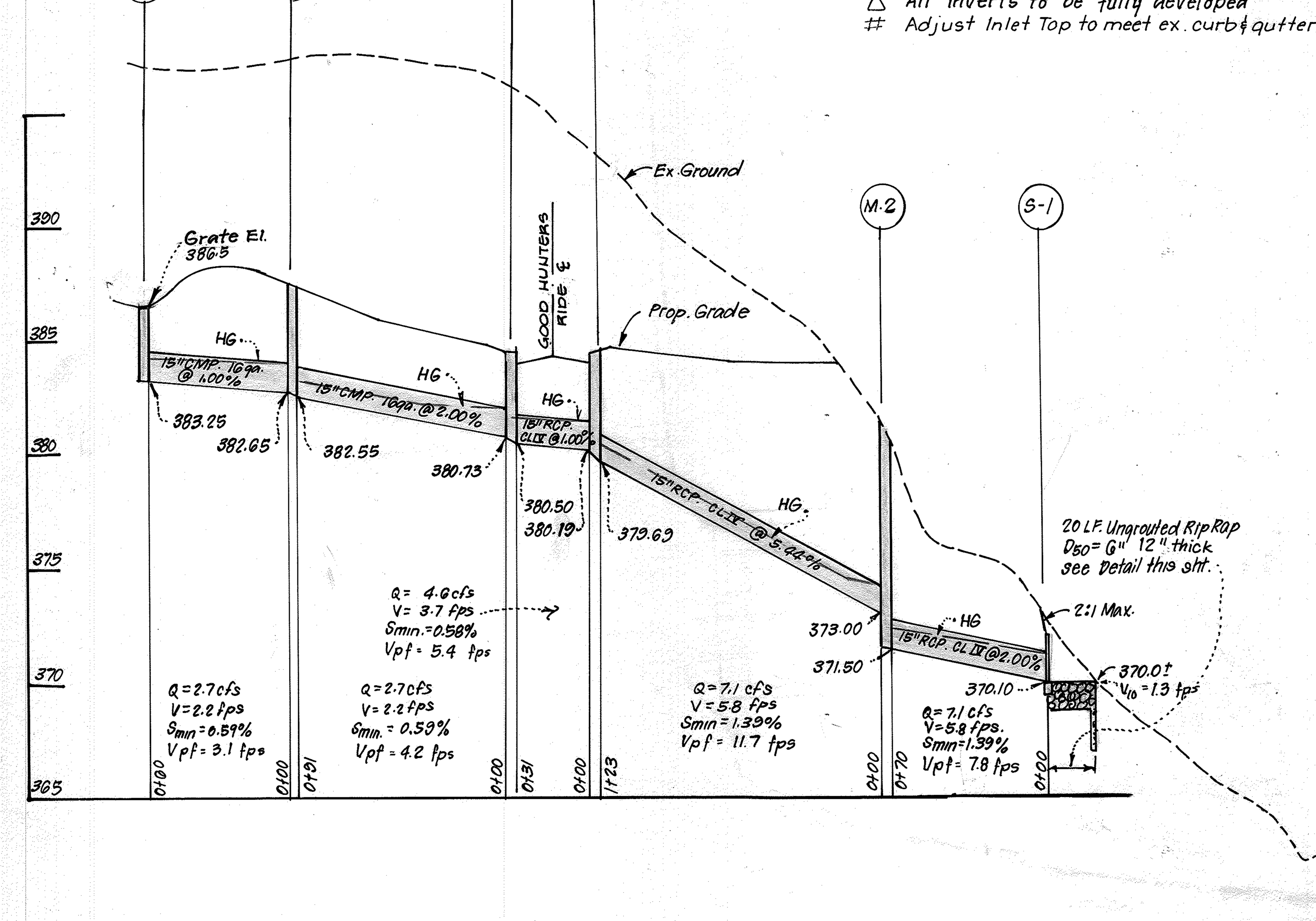
+ See Plan View for Paving Transitions.

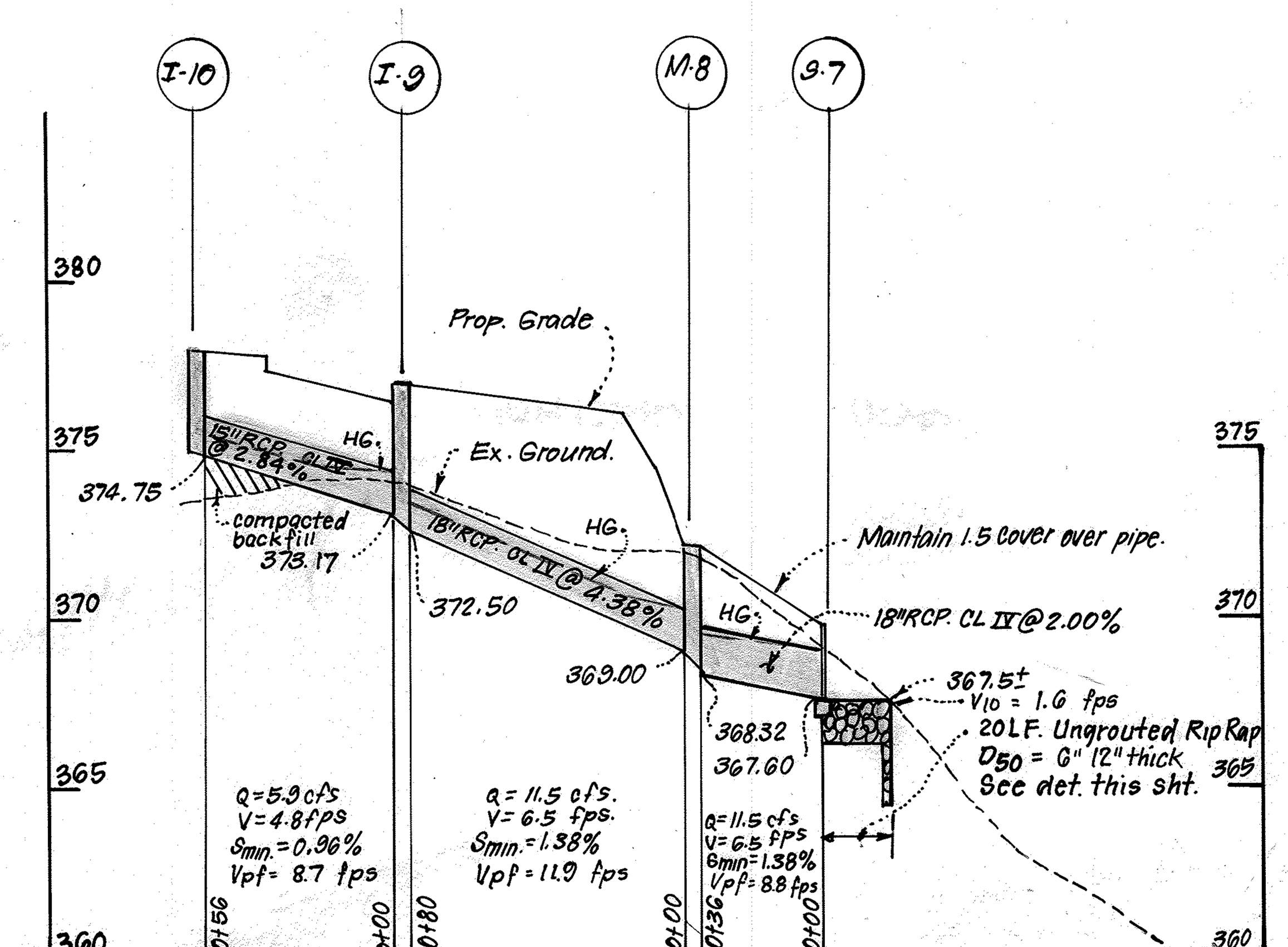
PIPE SCHEDULE

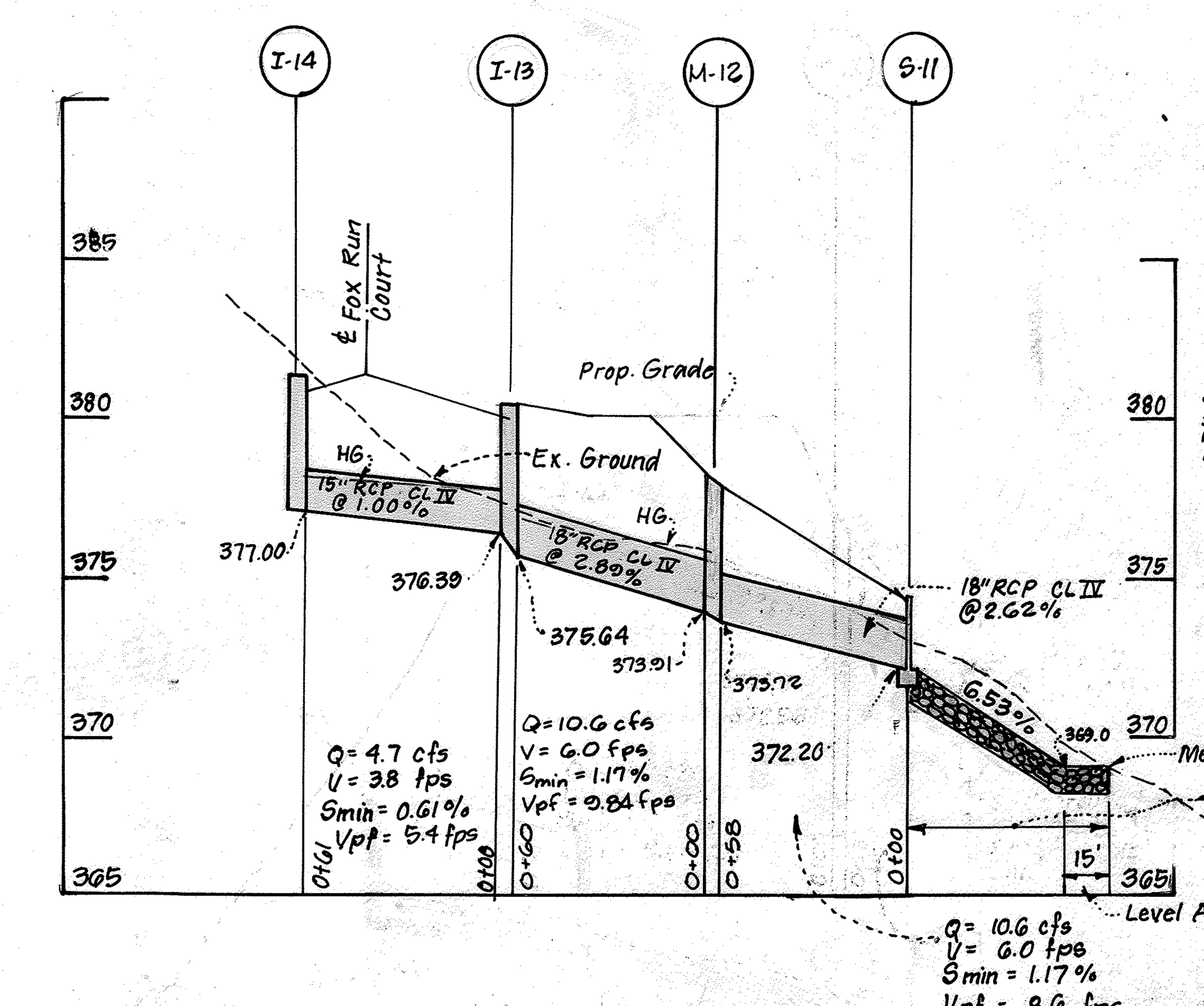
SIZE	TYPE	LENGTH
15"	CMP 16ga	151 LF
15"	RCP CL. IV	341 LF
18"	RCP CL. IV	344 LF

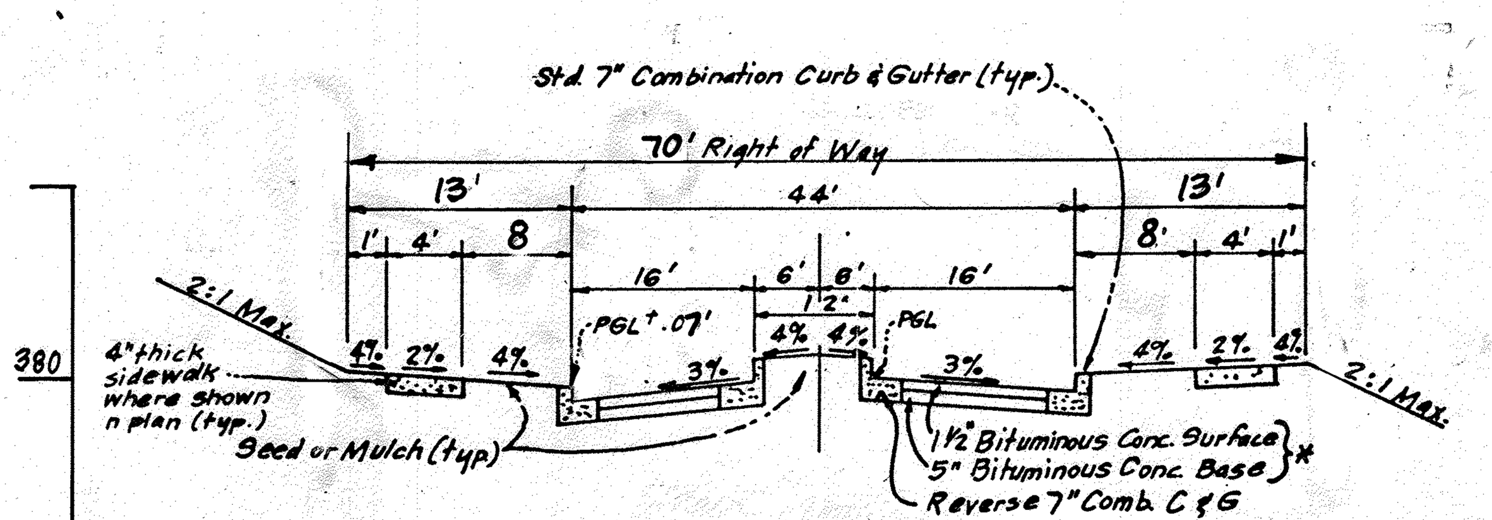


* Two 8' Handicap Spaces may share one 5' Aisle

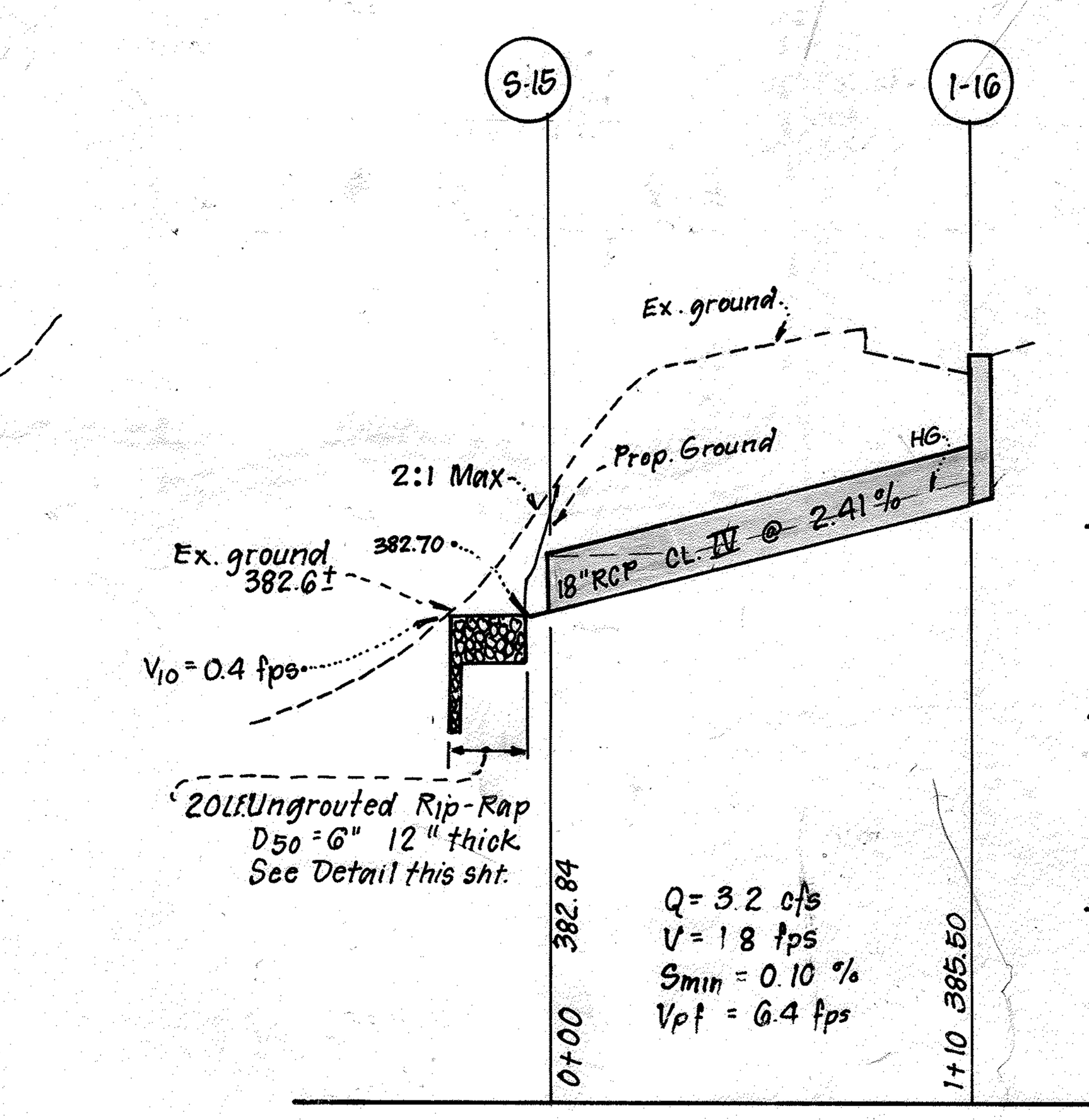








TYPICAL PAVING SECTION
Entrance to: GOOD HUNTERS RIDE
STA 0+40 to 1+05.5
NO SCALE



ENGINEER'S CERTIFICATE

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

G. Nelson Clark 5-16-89
Date

5-16-89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chief, Land Development Division 8/23/89 Date
Chief, Bureau of Highways. 8/22/89 Date
Chief, Bureau of Engineering 8-24-89 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.

Chief, Division of Community Planning & Land Development 8/24/89 Date

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
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DESIGNED MCB	ROAD CONSTRUCTION PLANS GOOD HUNTERS RIDE **COLUMBIA** VILLAGE OF LONGREACH SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND.		SCALE As Shown
DRAWN GS KIW			DRAWING 3 OF 5
CHECKED MCB			JOB NO. 88.051
DATE 7-19-89	FOR: The Troutman Company Wilde Lake Village Green #300 Columbia, Md. 21044	OWNER: HOWARD RESEARCH & DEVELOP. LAND COMPANY 10275 Little Patuxent Pkwy. Columbia, Md. 21044	FILE NO. 88.051-D

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
Signature 8/17/89 Date
U.S. Soil Conservation Service

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

Approved 8/17/89 Date

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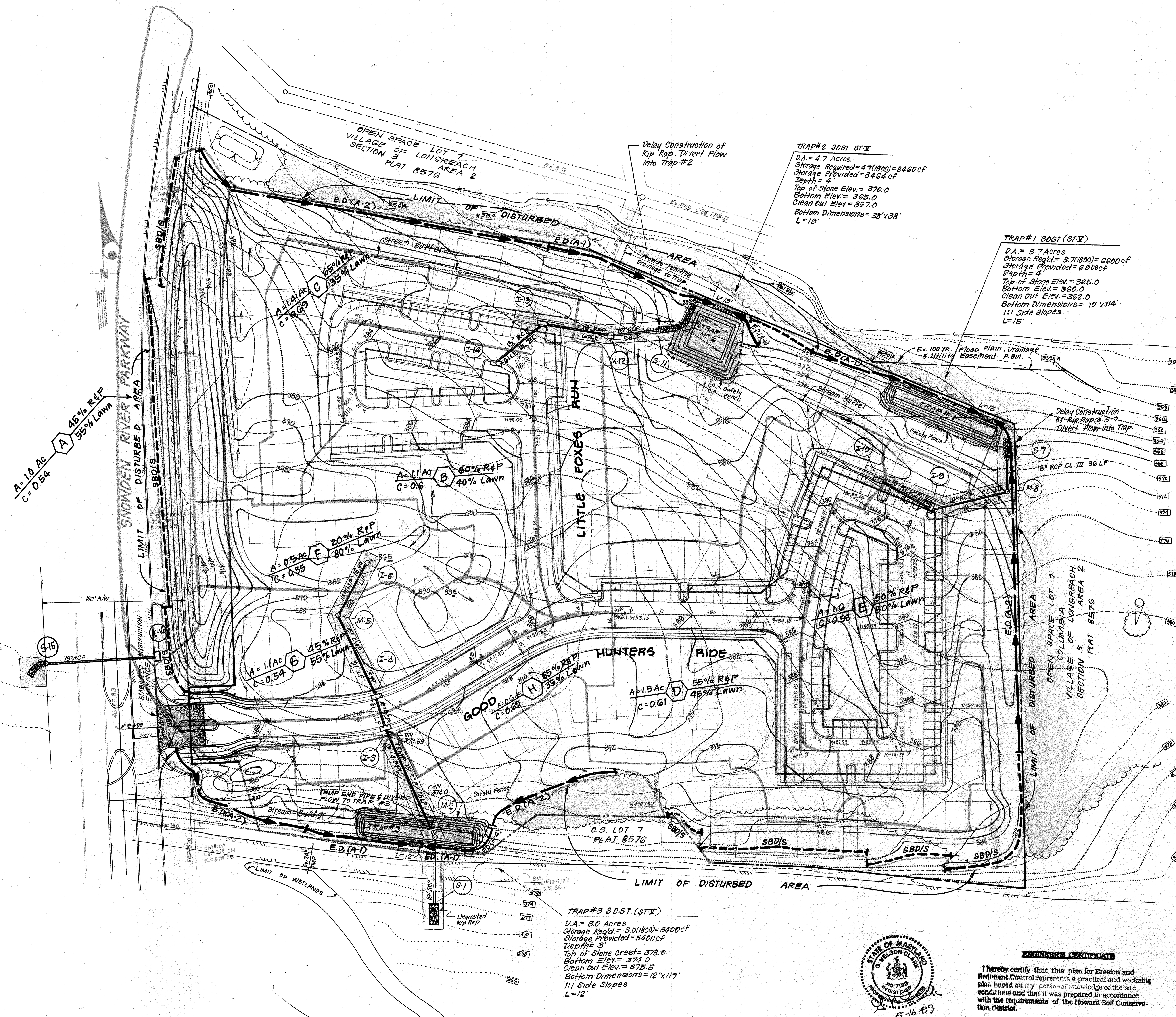
Signature of Developer/Builder 5.15.89 Date

Date	Revision
7-12-90	Rev. Profile S-11 to I-13, Conn. Pipes & Structure Schedule
5/11/90	Revised. I-16 to A-5 Inlet

F-89-225



LEGEND:

Contour Interval	2 Ft.
Existing Contour	370
Proposed Contour	370
Existing Trees to be Saved	
Earth Dike	E.D.(A-1)
Straw Bale Dike or Silt Fence.	SBD/S

DEVELOPER'S/BUILDERS CERTIFICATE

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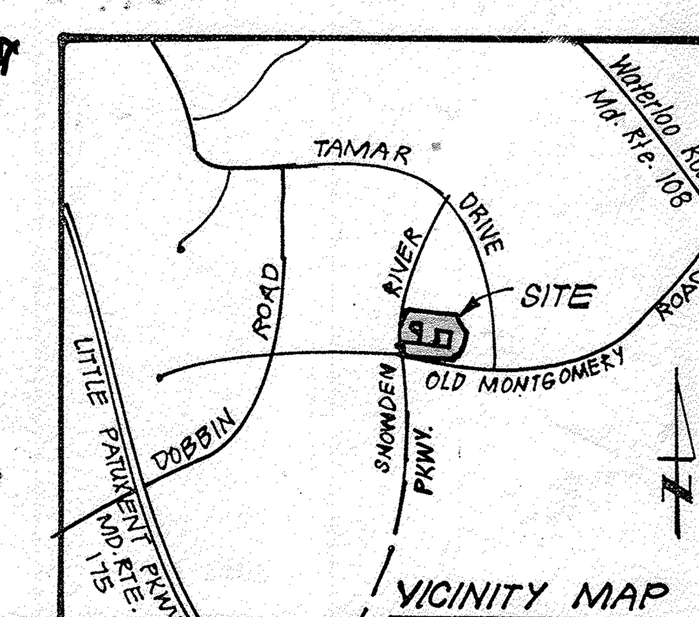
John L. Troutman — Signature of Developer/Builder — 5·15·89 Date

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
James M. Healy 8-19-89
Signature Date
U.S. Soil Conservation Service

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

Approved — 8/17/89 Date



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chief, Land Development Division — 8/23/89 Date

Chief, Bureau of Highways — 8/22/89 Date

Chief, Bureau of Engineering — 8-24-89 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.

Chief, Division of Community Planning & Land Development — 8/28/89 Date

ENGINEER'S CERTIFICATE

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G. Nelson Clark — 5-16-89 Date

STATE OF MARYLAND — G. NELSON CLARK — No. 7138 — REGISTERED PROFESSIONAL ENGINEER — 5-16-89

1	Relocated Str. S11 & M-12 & Rev. R/W	7-12-90
	REVISION	

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
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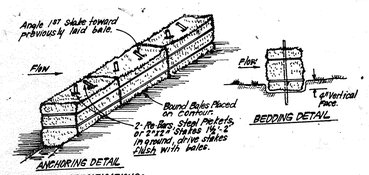
DESIGNED: GLB	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL PLAN AND DRAINAGE AREA MAP. **COLUMBIA** VILLAGE OF LONGREACH SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND.	SCALE: As Shown
DRAWN: G.S. KIW		DRAWING: 4 OF 5
CHECKED: MCB GLB		JOB NO.: 88·051
DATE: 7·19·89	FOR: The Troutman Company, Wilde Lake Village Green #300, Columbia, Md. 21044 / OWNER: HOWARD RESEARCH & DEVELOP. LAND COMPANY, 10275 Little Patuxent Pkwy., Columbia, Md. 21044	FILE NO.: 88·051-D

F-89-225

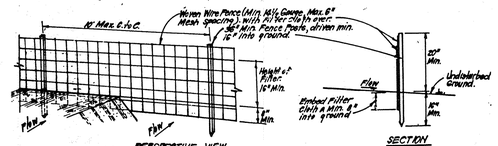


CONSTRUCTION SPECIFICATIONS:

1. Bales shall be placed at the Toe of a Slope or on the contour and in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by either 2 stakes or re-bars driven thru the bale. The 1st stake or rebar in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bale. The bales together. Stakes shall be driven flush with the bale. The bales together. Stakes shall be driven flush with the bale.
4. Inspection shall be frequent and repair replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE DETAIL (SBD)

NO SCALE



PERSPECTIVE VIEW

SECTION

CONSTRUCTION SPECIFICATIONS:

1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter Cloth to be fastened securely to woven wire fence with ties spaced every 36" at top and mid section.
3. When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and stapled.
4. Maintenance shall be performed as needed and material removed when "bulges" develop in silt fence.

POSTS: Steel either T or U Type or Hardwood

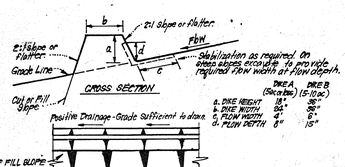
FENCE: Woven Wire, 14½ Gauge Max. Mesh Openings

FILTER CLOTH: Filter X, Mirafi 100X, Stabilinka, T140N or Approv. Equal

PREFABRICATED UNIT: GeoFab, Enviroface, or Approv. equal

SILT FENCE DETAIL (SI)

NO SCALE



	DIKE A (See note 3)	DIKE B (5-10 ac)
a. DIKE HEIGHT	18"	30"
b. DIKE WIDTH	24"	48"
c. FLOW WIDTH	6'	8'
d. FLOW DEPTH	6"	15"

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. Dike 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 chart below.

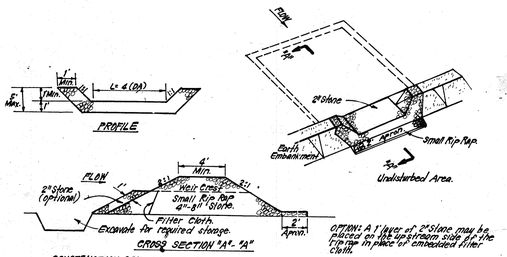
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5 – 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	3.1 – 5.0%	Seed & Straw Mulch	Seed w/Jute, or Excelsior; Sod, 2"Stone
3	5.1 – 8.0%	Seed w/Jute, or Sod, 2"Stone	Lined Rip Rap 4"-8" Stone
4	8.1 – 20.0%	Lined Rip Rap 4-8" Stone	Engineering Design

A. Stone to be 2" Stone, or recycled concrete equivilent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B. Rip Rap to be 4"-8" in a layer at least 8" thick, pressed into 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.

EARTH DIKE DETAIL (E.D.)

NO SCALE



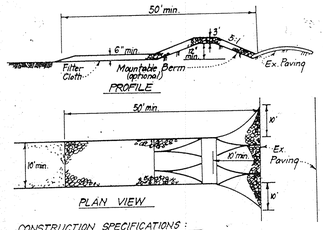
OPTION: A 1' layer of 2" Stone may be placed on the upstream side of the trap in lieu of embedded filter cloth.

CONSTRUCTION SPECIFICATIONS:

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pond area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment of while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small rip rap 4"-8" stone with 1' thickness of 2" aggregate placed on the up-grade side on the small rip rap, as embedded filter cloth in the rip rap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STY.

NO SCALE



CONSTRUCTION SPECIFICATIONS:

1. Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply.
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) feet minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. 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.
7. 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.
8. 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.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)

NO SCALE

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, Chaper 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (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.
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	11.7 Acres
Area Disturbed	11.6 Acres
Area to be roofed or paved	1.9 Acres
Area to be vegetatively stabilized	8.7 Acres
Total Cut	48382 Cu. yds
Total Fill	35377 Cu. yds
Offsite waste/borrow area location	N/A

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.
11) If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented. N/A
12) All pipes to be blocked at the end of each day (see detail below).
13) The total amount of straw bale dikes, silt fence equals 1690 L.F.

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 three inches of soil by raking, discing or other acceptable means before seeding, if not 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 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 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 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 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 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 ft 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 SEQUENCE:

	No. OF DAYS
1. Obtain grading permit.	2
2. Clear & grub for installation of sediment controls.	5
3. Install sediment & erosion controls.	7
4. Clear & rough grade site & temporarily stabilize.	30
5. Install utilities, storm drains & paving.	120
6. Fine grade and stabilize site.	30
7. Upon approval of the sediment control inspector, remove sediment controls and stabilize and construct remaining storm drain.	5

* Temporarily divert storm drainage to Traps as shown in plan. Construct Storm Drainage S-1 to M-2 after Trap #3 has been removed.

Reviewed for HOWARD S.C.D. (Name)
and meets Technical Requirements
Signature 8-17-89 Date
U.S. Soil Conservation Service

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

Approved 8/17/89 Date

DEVELOPER/BUILDER CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

John L. Trautman 5-15-89
Signature of Developer/Builder Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chief, Land Development Division — 8/23/89 Date

Granville W. Welland — 8/22/89 Date
Chief, Bureau of Highways.

Chief, Bureau of Engineering — 8-24-89 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.

Chief, Division of Community Planning & Land Development — 8/25/89 Date

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 – BALTO. • (301) 621-8100 – WASH.

DESIGNED GLB	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL DETAILS	SCALE As Shown
DRAWN GB KJW	COLUMBIA VILLAGE OF LONGREACH SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND.	DRAWING 5 OF 5
CHECKED GLB.		JOB NO. 88-051
DATE 5-12-89	FOR: The Trautman Company Wilde Lake Village Green #300 Columbia, Md. 21044 / OWNER: HOWARD RESEARCH & DEVELOP. LAND COMPANY 10275 Little Patuxent PKWY. Columbia, Md. 21044	FILE NO. 88-051-D

STATE OF MARYLAND GUELSON CLARK MD. 7139 REGISTERED PROFESSIONAL ENGINEER
5-16-89

ENGINEER'S CERTIFICATE

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

G. Nelson Clark — 5-16-89 Date

F89-225