

CURB & GUTTER LEGEND

7" Sid. C&G	
7" Rev. C&G	
6" Sid. C&G	
6" Rev. C&G	
Barrier Curb	

Note: Convert Ex I-45 to Gate Inlet and convert I-40 to a Manhole. See profile sheet.

THE HOWARD RESEARCH & DEVELOPMENT CORP.
BLUE FEBRUARY WAY
F. 84-105

V.O.H.R. 3/6 PLAT 5902
LITTLE PATUXENT PARKWAY
F. 84-51

VICINITY MAP
SCALE: 1"=100'

GENERAL NOTES

- All storm drain and paving shall be constructed in accordance with the latest details and specifications of Howard County & MDSHA.
- Types of storm drain structures refer to the Std. Details of Howard County & Md State Highway Administration.
- Trench compaction for storm drains, within road or street rights-of-way limits shall be in accordance with Ho. Co. Design Manual Vol. IV. (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 mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
- All utility companies shall be notified 24 hrs. in advance of construction.
- All traffic control services, parking, and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices," 1978 Edition.
- Sag & Crest vertical curves were designed in accordance with Ho. Co. Design Manual, Vol. III.
- Provide concrete ramps. Ho. Co. Std. Type A, R-4-D1. Where shown.
- Design Speed: 30 mph Zoning: M1.
- Storm Water Management is provided by a central facility. F-83-120 & F-84-51.
- Contractor or Developer shall contact the Construction Inspection/Survey Division 24 hrs. before commencing work @ 792-7272.
- Street lights to be provided where shown in accordance with Ho. Co. Design Manual Vol III. Intersection of Bright Passage & Stonagate Lane, 250 W. Hg. Pendant Fixture on 30" Bronze Alum. Pole Sta. 4+33.86± Stonegate Ln., 175 W. Hg. Post top colorial or modern fixture on a 12" fiberless pole.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Engineering *[Signature]* 3-3-86 Date
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.
[Signature] 2-19-86 Date
Chief, Division of Land Development & Zoning Administration

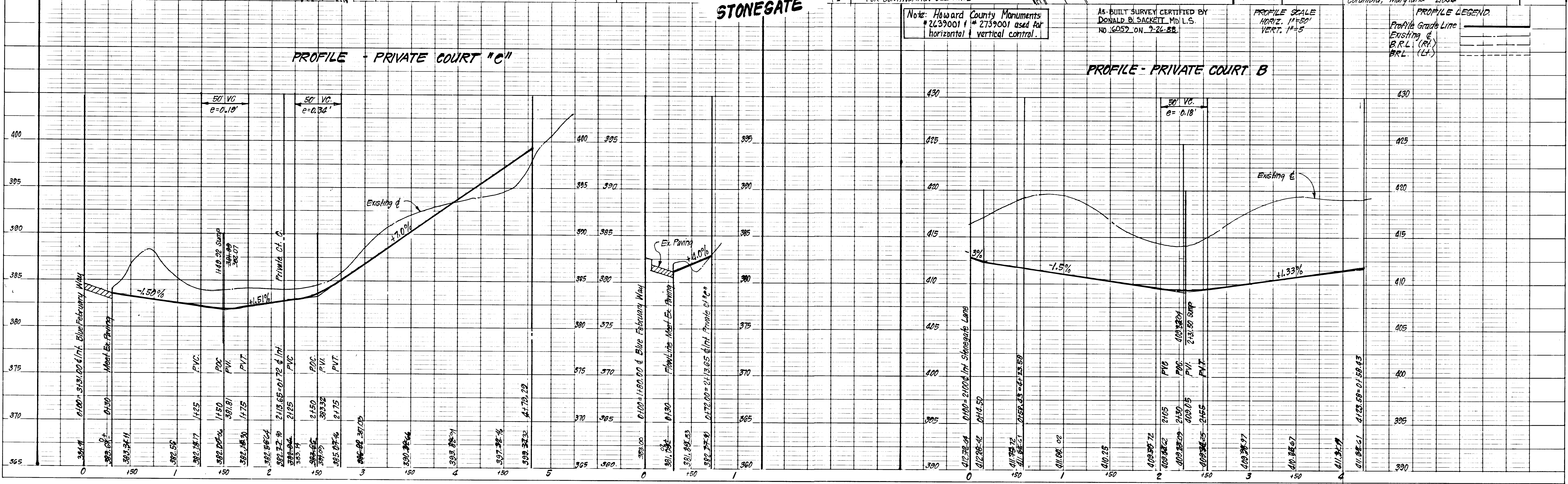
CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS
11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301) 593-3400

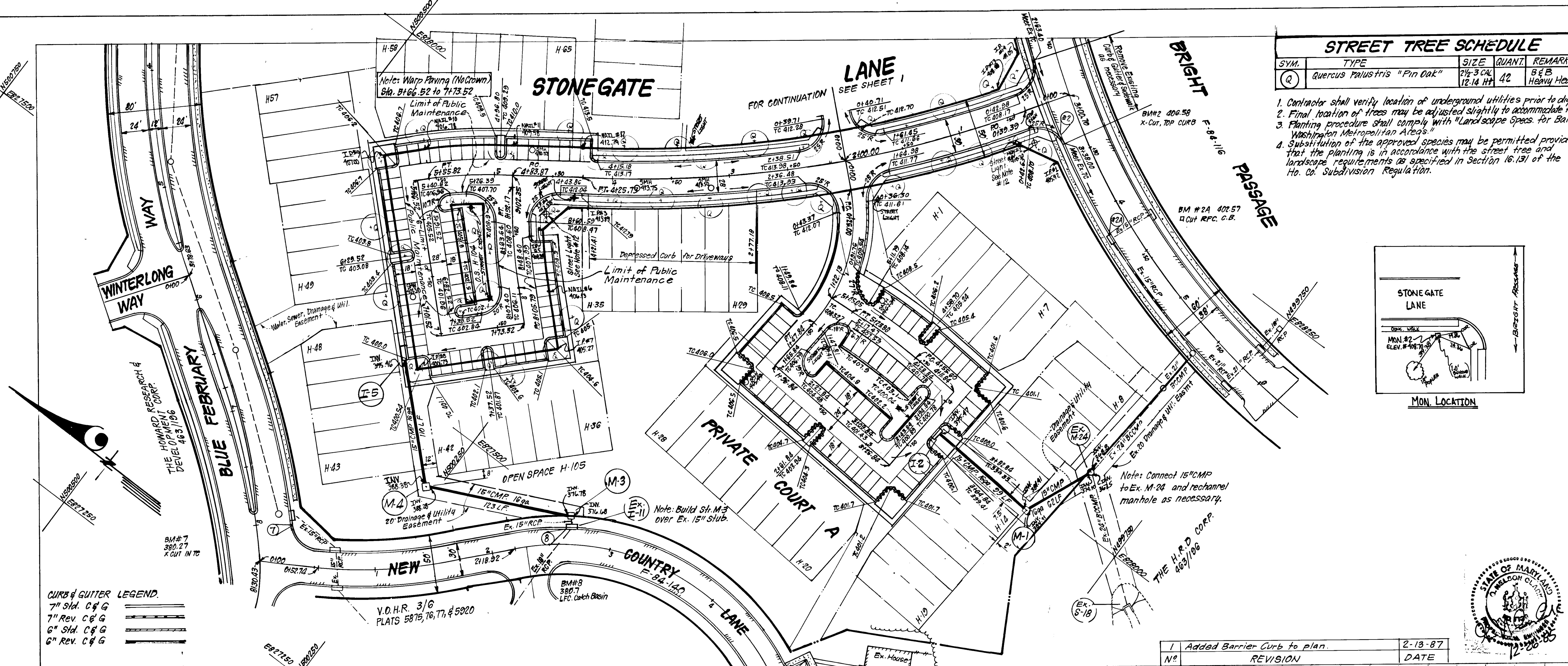
DESIGNED	JLS	SCALE	As Shown
DRAWN	KTW	DRAWING	10F5
CHECKED	JLS	JOB NO.	85-017
DATE	12-26-85	FILE NO.	85-017-D

FOR: The Troutman Company
Suite 300, White Lake Village Green
Columbia, Maryland 21044

CENTERLINE CURVE DATA

PC to PT STA.	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
PC 2172.00 to PT 1142.21	5241.00	07°28'09"	70.21	35.15	70.16	N62°07'08"E
PC 2128.21 to PT 5185.49	100.00	30°10'00"	57.08	100.00	14.14	S30°00'00"E
PC 2158.43 to PT 1182.87	330.00	15°13'50"	102.54	51.57	102.25	N33°31'55"E
PC 2129.40 to PT 3165.08	158.00	12°56'10"	35.68	17.31	35.60	S40°08'05"E

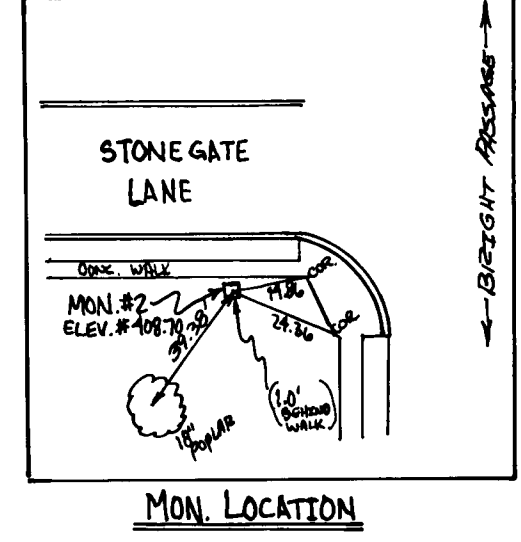




STREET TREE SCHEDULE				
SYM.	TYPE	SIZE	QUANT.	REMARKS
(Q)	Quercus palustris "Pin Oak"	2 1/2" CAL 12-14 Ht.	42	B & B Heavy Heads

- Contractor shall verify location of underground utilities prior to digging.
- Final location of trees may be adjusted slightly to accommodate field conditions.
- Planting procedure shall comply with "Landscape Specs. for Baltimore Washington Metropolitan Areas".
- Substitution of the approved species may be permitted provided that the planting is in accordance with the street tree and landscape requirements as specified in Section 16.131 of the Ho. Co. Subdivision Regulation.

CENTERLINE CURVE DATA							
PC	PT	STA	RADIUS	DELTA	ARC TAN	CHORD	BEARING
PC 110.39	PT 114.25	112.32	100.00	22°08'10"	386.34	125.61	283.95
PC 114.25	PT 118.11	116.18	100.00	11°00'00"	71.95	36.09	71.84
PC 118.11	PT 121.97	120.04	100.00	11°00'00"	71.95	36.09	150°30'00"W
PC 121.97	PT 125.83	123.90	100.00	11°00'00"	71.95	36.09	150°30'00"E
PC 125.83	PT 129.69	127.76	100.00	11°00'00"	71.95	36.09	150°30'00"E
PC 129.69	PT 133.55	131.62	100.00	11°00'00"	71.95	36.09	150°30'00"E
PC 133.55	PT 137.41	135.48	100.00	11°00'00"	71.95	36.09	150°30'00"E
PC 137.41	PT 141.27	139.34	100.00	11°00'00"	71.95	36.09	150°30'00"E
PC 141.27	PT 145.13	143.20	100.00	11°00'00"	71.95	36.09	150°30'00"E
PC 145.13	PT 148.99	147.06	100.00	11°00'00"	71.95	36.09	150°30'00"E



APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Engineering: *John W. McArthur* 3-3-88
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Chief, Division of Land Development & Zoning Administration: *John W. McArthur* 2-19-88

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 11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301) 593-3400

DESIGNED: JLS
 DRAWN: KIW
 CHECKED: JLS
 DATE: 12-26-85

ROAD CONSTRUCTION PLAN
STONEGATE LANE

COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 6
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR: The Troutman Company
 Suite 300, White Lake Village Green
 Columbia, Md. 21044

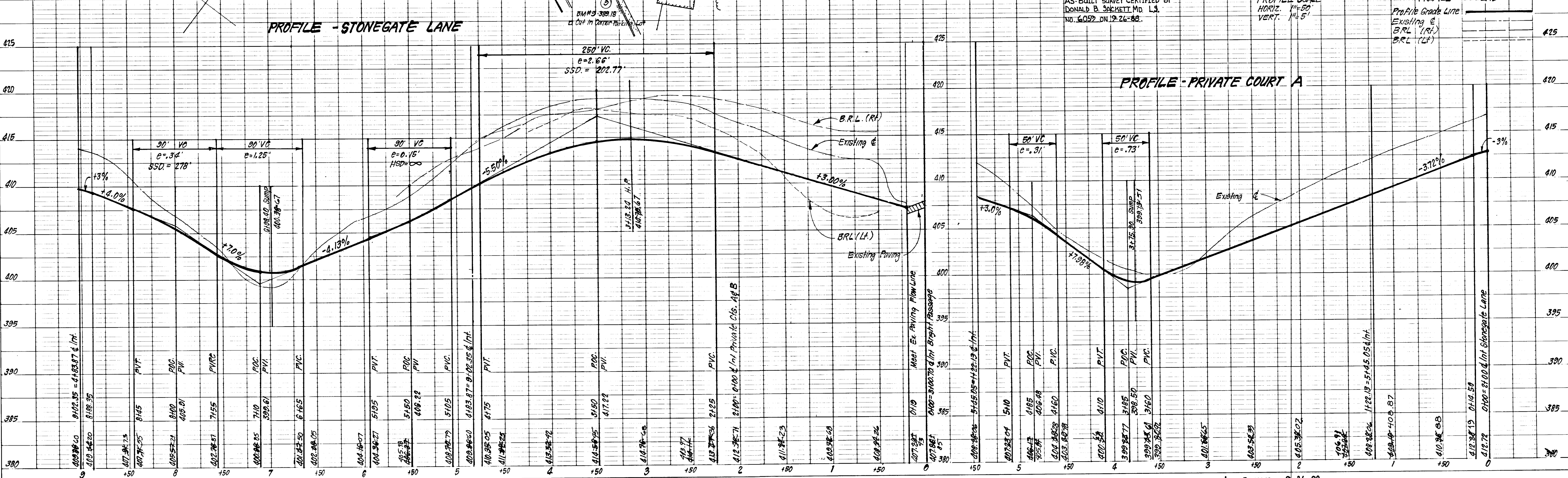
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 JOB NO.: 85-017
 FILE NO.: 85-017-D

CURBS & GUTTER LEGEND

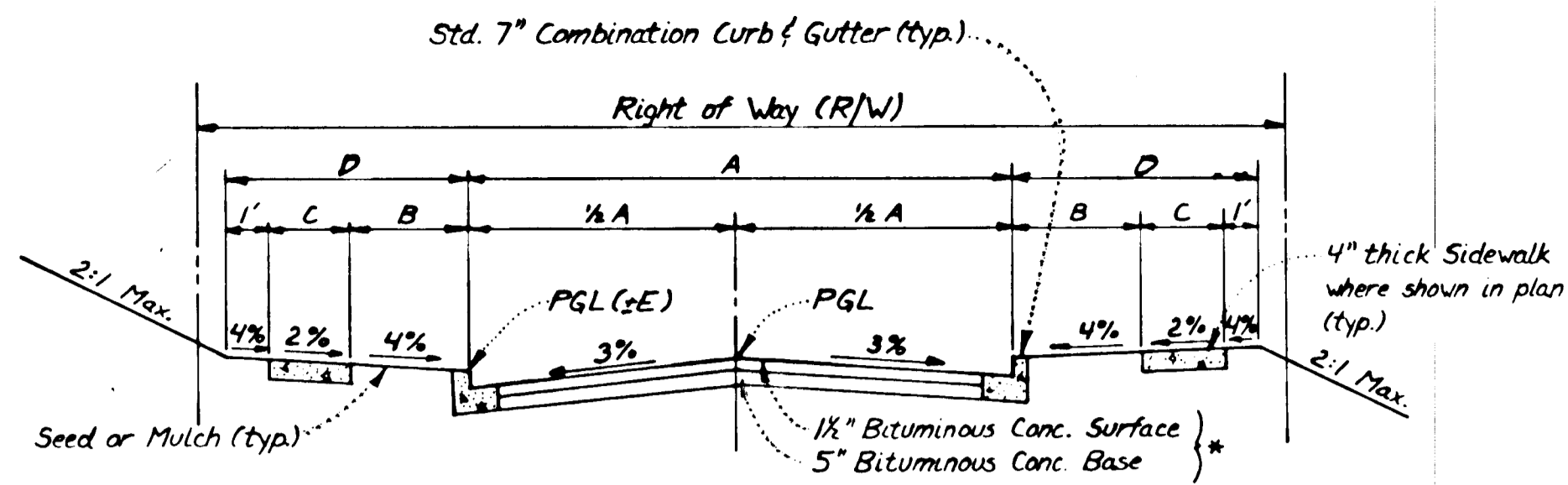
7" Std. C & G	=====
7" Rev. C & G	=====
6" Std. C & G	=====
6" Rev. C & G	=====

NO.	REVISION	DATE
1	Added Barrier Curb to plan.	2-13-87

AS-BUILT SURVEY CERTIFIED BY
 DONALD B. SACKETT MD. L.S.
 NO. 6052 ON 12-26-88.

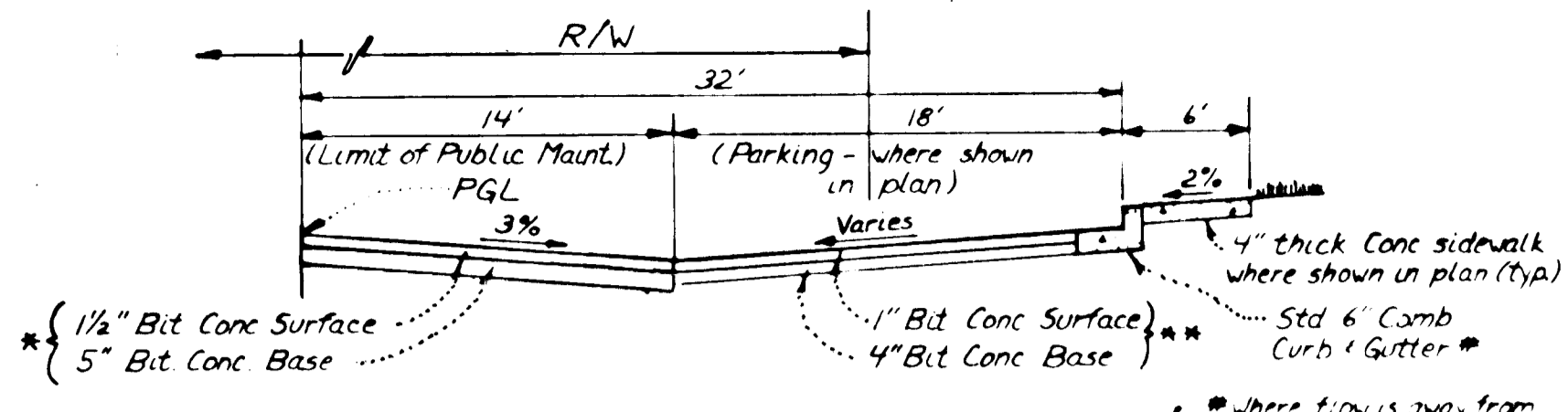


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TYPICAL PAVING SECTION - PUBLIC ROADS
NO SCALE

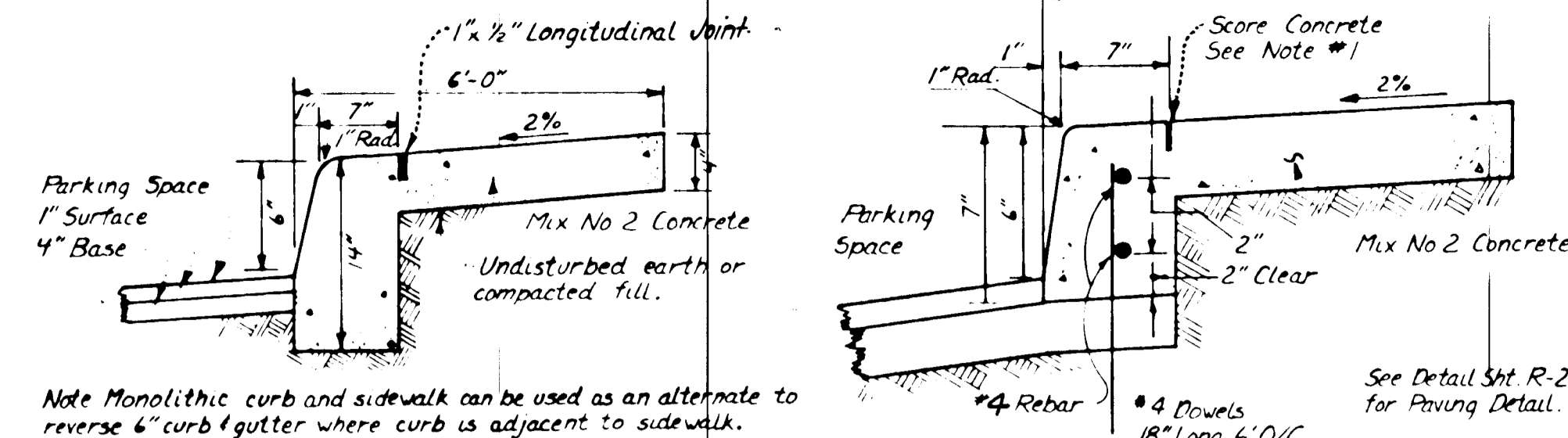
* For Alternate Paving Section - See det. this sht.



TYPICAL HALF SECTION
PARKING ADJACENT TO PUBLIC ROADS
STONEGATE LANE - STA. 415.18 TO 4102.85
NO SCALE

* See Alternate Paving Section for Public Roads, this sht.
* See Alternate Paving Section for Parking, this sht.

Notes:
1. Longitudinal Joint between sidewalk & curb shall be continuous and to a depth of 1/4 the thickness of the sidewalk or 1" Longitudinal Joints shall run from back edge of sidewalk continuous to the bottom face of curb to a depth of 1/4" and spaced 5' apart.
2. Provide 1/4" expansion joints at 15' intervals in longitudinal joints to full cross section.



MONOLITHIC CURB & SIDEWALK - PRIVATE PARKING AREA
NO SCALE

Note: Monolithic curb and sidewalk can be used as an alternate to reverse 6" curb & gutter where curb is adjacent to sidewalk.
See Detail Sht. R-201 for Paving Detail.

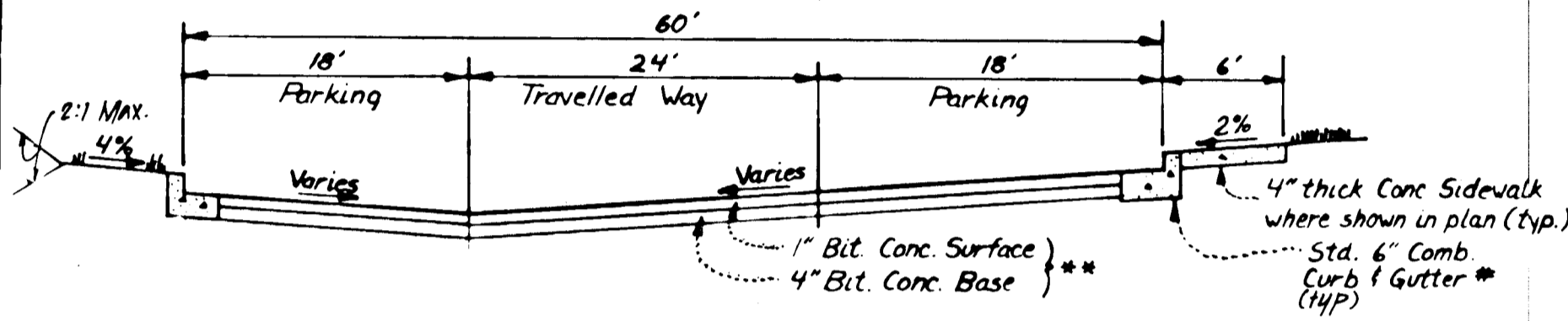
STREET NAME & STATION	TYPE OF TRAFFIC	A	B	C	D	R/W	ZONING	DESIGN SPEED	E
STONEGATE LANE Sta. 0+00 to 2+00	LOCAL	30'	4'	4'	9'	50'	NT	30	10
STONEGATE LANE Sta. 2+00 to 4+15.18	CUL-DE-SAC	28'	4'	4'	9'	50'	NT	30	14

No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
M-1	Shallow Brick Manhole	389.80	389.09	389.06	389.06	Ho. Co. Std. G-5.05	48" Sq. See Plan
I-2	A-10 Inlet	395.50	395.50	399.28	399.28	" " " SD 4.02	W=2'-6" 6 Str. 3473.81 12' R
M-3	Shallow Brick Manhole	376.28	Ex. 376.28	381.08	381.08	" " " G-5.05	48" Sq. See Plan
M-4	Shallow Brick Manhole	382.28	388.15	392.58	392.58	" " " G-5.05	48" Sq. " "
I-5	A-10 Inlet	394.00	394.00	400.00	400.00	" " " SD 4.02	W=2'-6" " "
I-7	A-5 Inlet w/Deflector	379.30	379.30	383.85	383.85	" " " SD 4.01	W=2'-6" 6 Str. 2422.79 12' L
M-8	Brick Manhole	380.28	380.28	389.02	389.02	" " " G 5.01	48" Rd See Plan
I-9	D Inlet	381.50	381.50	385.85	385.85	" " " SD 4.11	2'-6" Sq. " "
I-10	D Inlet	388.30	388.27	392.85	392.85	" " " SD 4.11	2'-6" Sq. " "
M-11	Shallow Brick Manhole	388.50	399.25	394.03	394.03	" " " G-5.05	48" Sq. " "
I-12	A-10 Inlet	395.00	395.00	399.10	399.10	" " " SD 4.02	W=2'-6" " "
I-13	A-10 Inlet	378.80	378.80	382.28	382.28	" " " SD 4.02	W=2'-6" 6 Str. 1429.92 12' L

Δ All Inverts to be fully developed.
* See Ho. Co. Std. 8D. 4.83 for Inlet deflectors.
* Provide Slots in all sides.

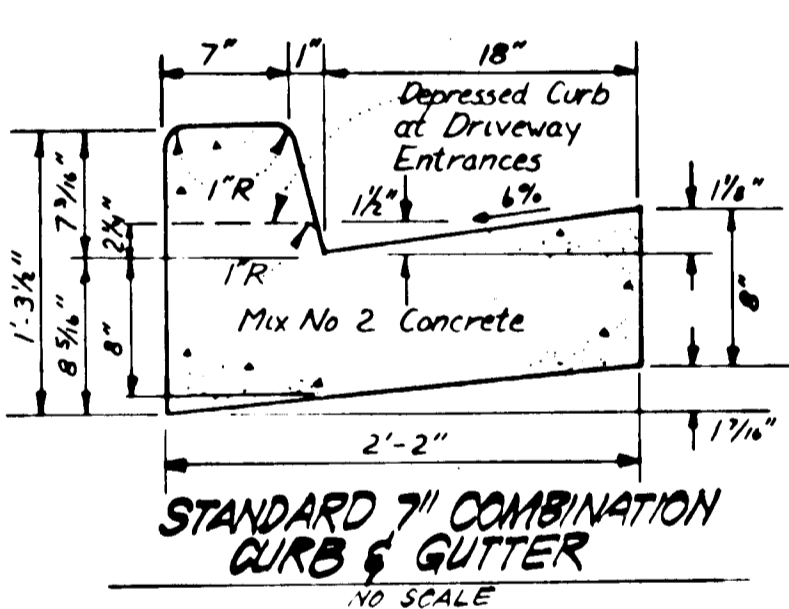
SIZE	TYPE	LENGTH
15"	CMP 16ga.	652 LF
15"	RCP CL V	64 LF
18"	RCP CL IV	60 LF
18"	RCP CL V	117 LF
18"	CMP 16ga.	20 LF

* 2 3/8" x 1/2" Corrugations.

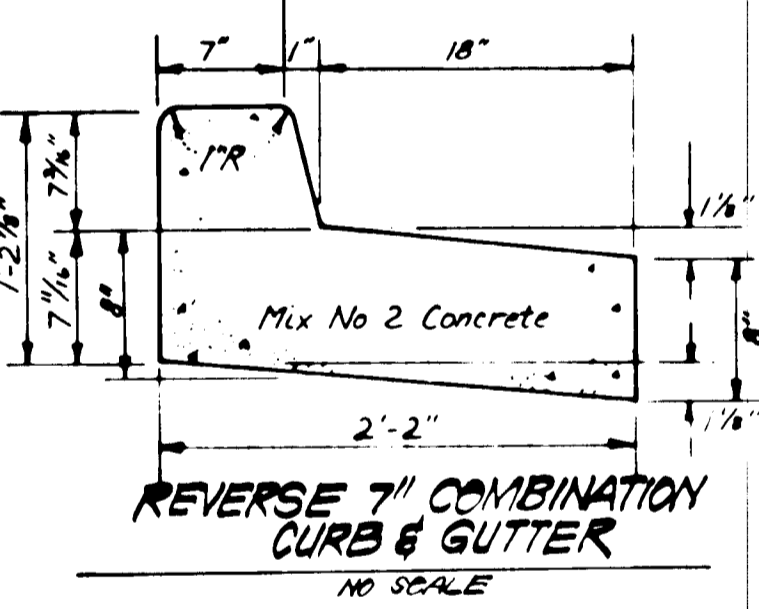


TYPICAL SECTION
PRIVATE DRIVE & PARKING
NO SCALE

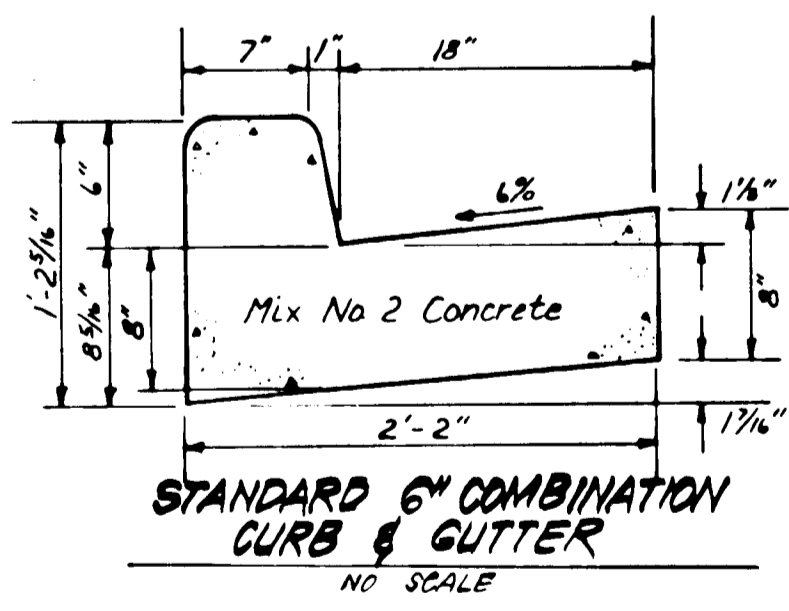
** See Alternate Paving Section for Parking this sht.
* Where flow is away from curb & gutter, Rev. 6" Comb. Curb & Gutter shall be used.



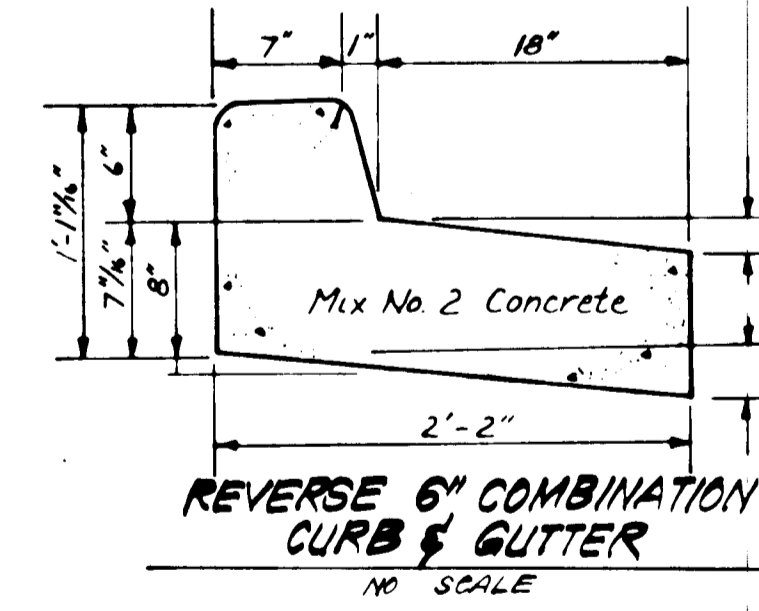
STANDARD 7" COMBINATION
CURB & GUTTER
NO SCALE



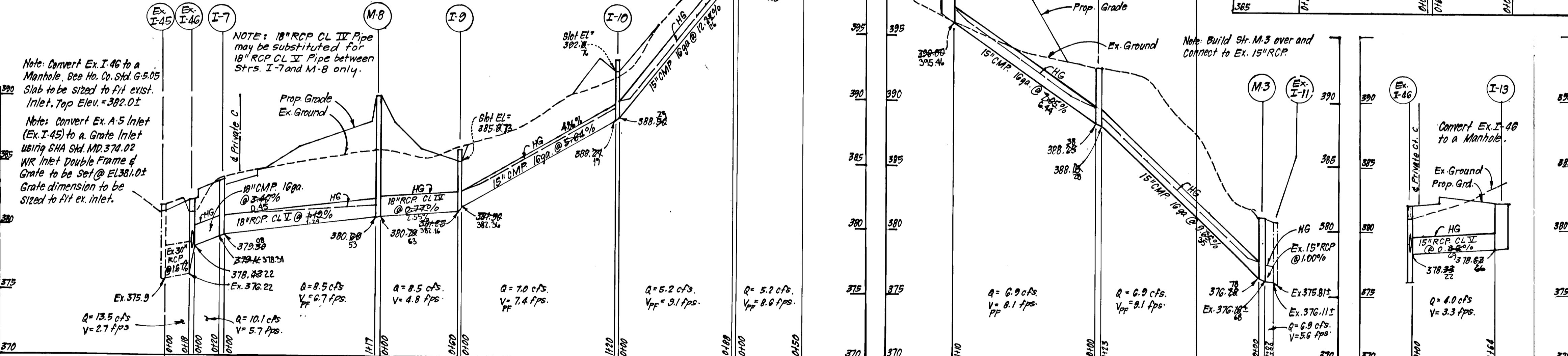
REVERSE 7" COMBINATION
CURB & GUTTER
NO SCALE



STANDARD 6" COMBINATION
CURB & GUTTER
NO SCALE



REVERSE 6" COMBINATION
CURB & GUTTER
NO SCALE



STORM DRAINAGE PROFILES

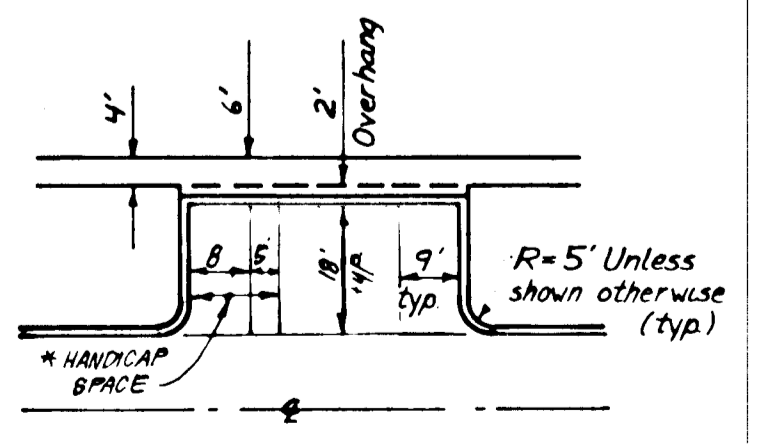
SCALES: HORIZ. 1"=50'
VERT. 1"=5'

Layer	Thickness
Bituminous Conc Surface	1 1/2"
Bituminous Conc Base	2 1/4"
Prime	
8" Crusher Run Base (Placed in 2 Courses)	8"
or	
6" Dense Graded Stabilized Aggregate Base Course	6"

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

Layer	Thickness
Bituminous Conc Surface	1 1/2"
Bituminous Conc Base	2"
Prime	
5" Crusher Run Base	5"
or	
4" Dense Graded Stabilized Aggregate Base Course	4"

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



TYPICAL PARKING
NO SCALE

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

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Engineering
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
Chief, Division of Land Development & Zoning Administration

CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS
1131 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 · (301) 593-3400

DESIGNED: JLS
DRAWN: R/W
CHECKED: JLS
DATE: 12-26-85

ROAD CONSTRUCTION PLANS
PROFILES & DETAILS
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 6
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: The Trautman Company
Suite 300, Wilde Lake Village Green
Columbia, Md. 21044

SCALE: AS SHOWN
DRAWING: 3 OF 5
JOB NO: 85-017
FILE NO: 85-017-D

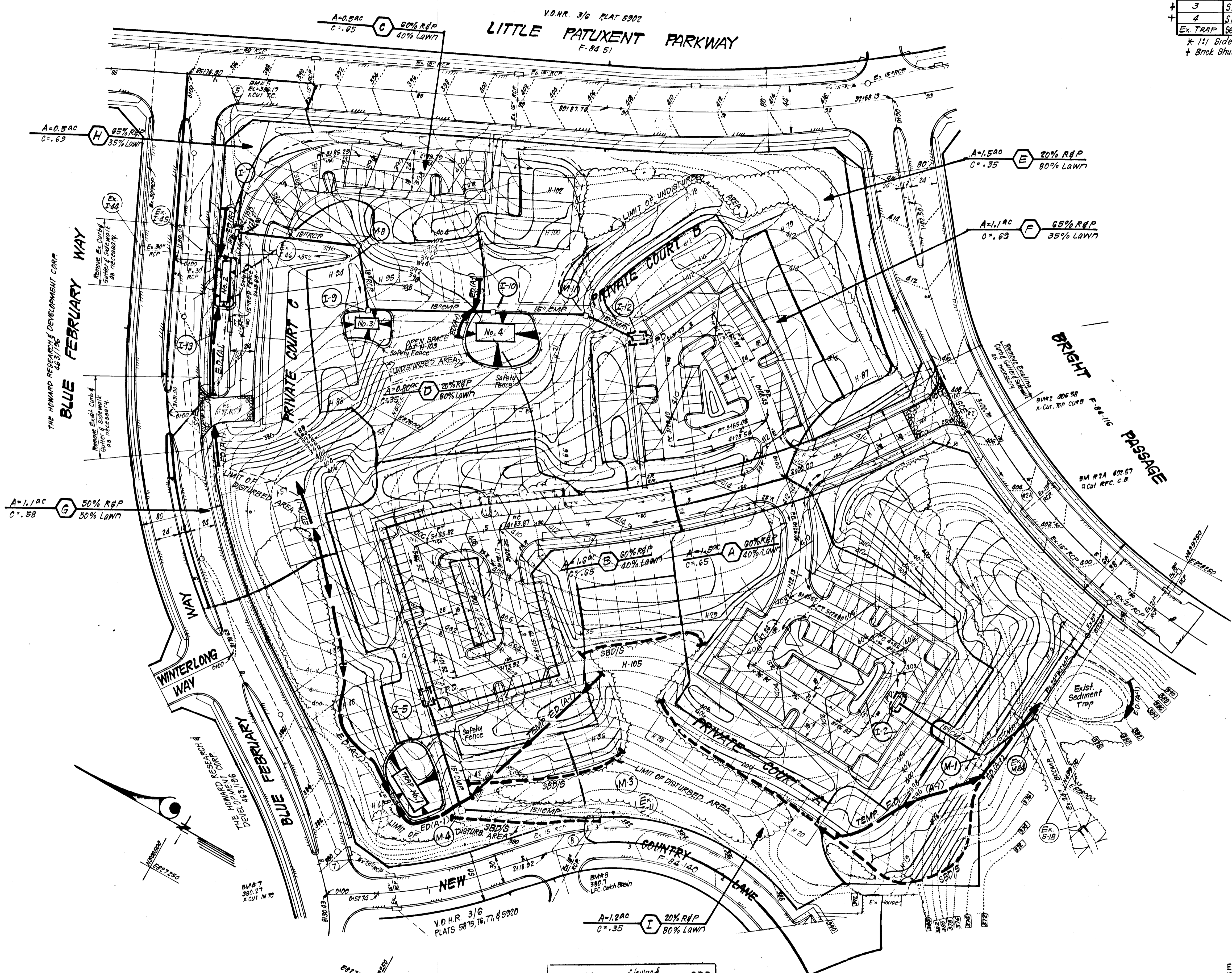
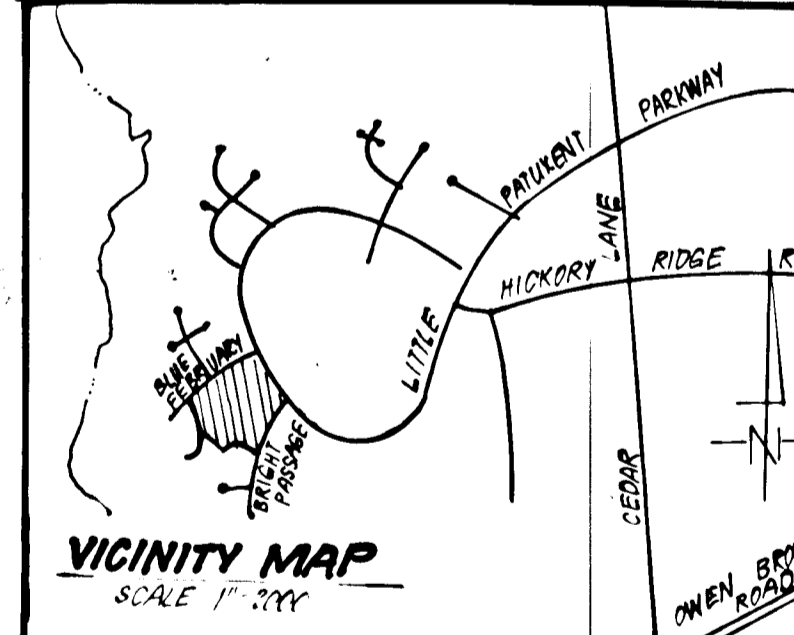
#42

SEDIMENT TRAP TABLE									
No of TRAP	TYPE OF TRAP	DRAINAGE AREA	STORAGE REQUIRED	STORAGE PROVIDED	DEPTH	TOP CREST ELEV.	BOTTOM ELEV.	CLEANOUT ELEV.	BOTTOM DIMENSIONS
1	S.D. ST. ST. V	2.0 Ac.	3600 cf	3600 cf	4'	390.0	385.0	387.0	4' X 16'
2	S.I. ST. ST. III	1.3 Ac.	2340 cf	2340 cf	4'	381.0	377.0	379.0	9' X 41'
3	S.I. ST. ST. III	0.8 Ac.	1440 cf	1440 cf	3'	385.0	382.0	383.5	10' X 24'
4	S.I. ST. ST. III	2.6 Ac.	4680 cf	4680 cf	4'	392.0	388.0	390.0	18' X 37'
Ex. TRAP	See F-84-116	2.6 Ac.	4680 cf	4725 cf	3'	378.0	374.0	376.5	EXIST.

* 1/4 Side Slopes.
 + Brick Shut Slots on N, S, & E Sides of yard inlet

- LEGEND:**
- 1. Existing Contour
 - 2. Proposed Contour
 - 3. Proposed Storm Drain
 - 4. Earth Dike
 - 5. Straw Bale Dike or Silt Fence
 - 6. Stabilized Construction Entrance
 - 7. Inlet Protection

Note: All slopes in excess of 3:1 shall be stabilized within 7 calendar days after initial soil disturbance or redistribution.
 Temporary E.D. to be removed after drainage areas to traps have been established.



#42

Reviewed for Howard S.C.D.
 and meets Technical Requirements
J. Helms 2/19/86
 State of Maryland
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Stephen L. Nash 2/19/86
 District Administrator

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 M. Trotman 12-26-85
 Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE

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

G. Nelson Clark 12-26-85
 State of Maryland Professional Engineer Date

APPROVED: DEPARTMENT OF PUBLIC WORKS
John M. Trotman 2-19-86
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John M. Trotman 2-19-86
 Chief, Division of Land Development & Zoning Administration Date

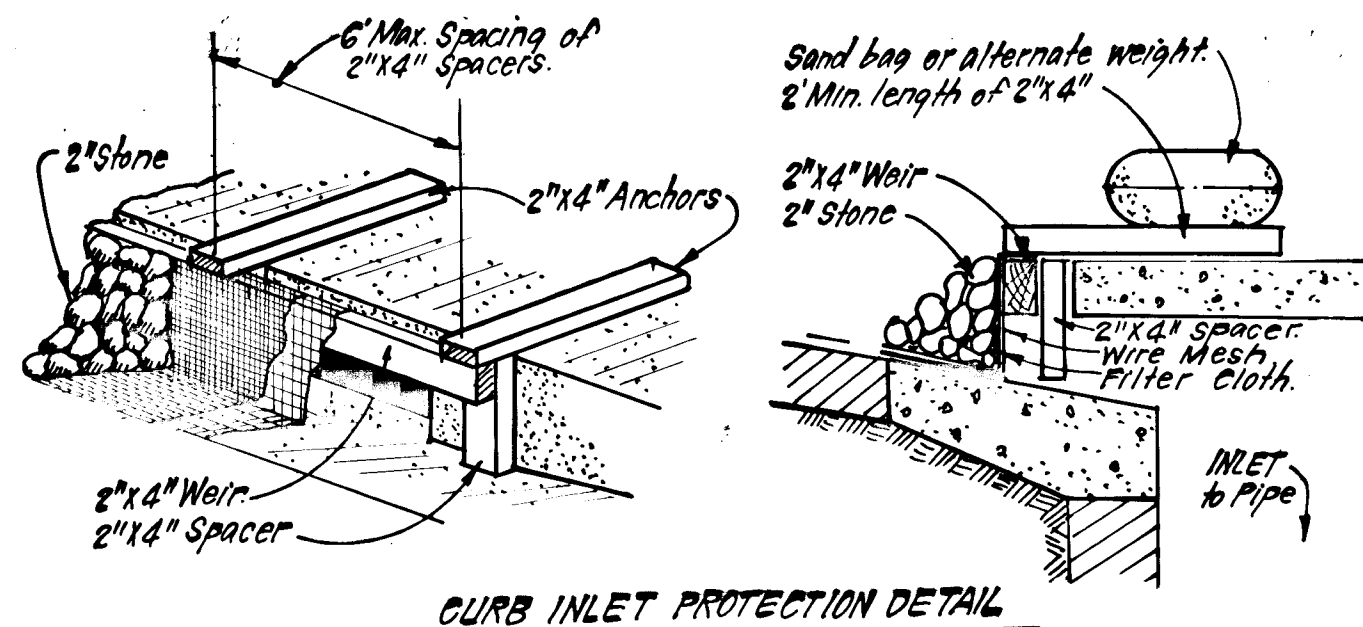
CLARK · FINEFROCK & SACKETT
 ENGINEERS · PLANNERS · SURVEYORS
 11315 LOCKWOOD DRIVE · SILVER SPRING, MARYLAND 20904 (301) 593-3400

DESIGNED: JLS
 DRAWN: KIW
 CHECKED: JLS
 DATE: 12-26-85

**ROAD CONSTRUCTION PLAN
 SEDIMENT & EROSION CONTROL PLAN
 AND DRAINAGE AREA MAP**
COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 6
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE: As Shown
 DRAWING: 40F5
 JOB NO.: 85-017
 FILE NO.: 85-017-D

FOR: The Troutman Company
 Suite 300, Wide Lake Village Green
 Columbia, Maryland 21032



CURB INLET PROTECTION DETAIL

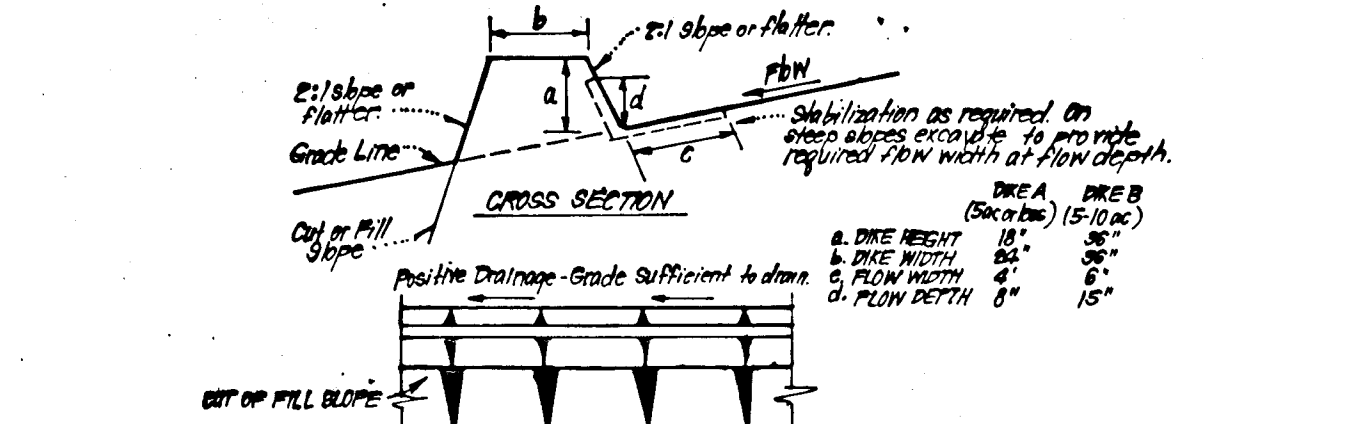
CONSTRUCTION SPECIFICATIONS:
MATERIALS:
 A. Wooden frame is to be constructed of 2x4 construction grade lumber.
 B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
 C. Filter cloth must be of a type approved for this purpose resistant to sunlight with sieve size, EFS, 40-85, to allow sufficient passage of water and removal of sediment.
 D. Stone is to be 2" in size and clean since fines would clog the cloth.

II PROCEDURE: SWALE, DITCHLINE OR YARD INLET PROTECTION
 1. Excavate completely around inlet to a depth of 18" below notch elevation.
 2. Drive 2x4 curb 1" into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2x4 frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
 3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
 4. Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
 5. Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation on sides.
 6. If the inlet is not in a low point, construct a compacted earth dike in the ditch line below it. The top of this earth dike is to be at least 6" higher than the top of frame (weir).
 7. The structure must be inspected frequently and filter to be replaced when clogged.

II PROCEDURE: CURB INLET PROTECTION
 1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2x4 weir (measuring throat length plus 2" as shown on std. drawing).
 2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2x4 weir.
 3. Securely nail the 2x4 weirs to 6" long vertical spacers to be located between the weir and inlet place (max 6' apart).
 4. Place the assembly against the inlet throat and nail (min. 2" lengths of 2x4" to the top of the weir at spacer locations. These 2x4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
 5. The assembly shall be placed so that the end spacers are a min 1" beyond both ends of throat opening.
 6. From the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
 7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
 8. Assume that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow to inlet.

INLET PROTECTION DETAIL (I.P.D.)

NO SCALE



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. Final location should be adjusted as needed to utilize a stabilized slope 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.

TYPE OF TREATMENT	CHANNEL	DIKE A	DIKE B
1	0.5-1.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	1.1-2.0%	Seed & Straw Mulch	Seed or Straw Mulch
3	2.1-3.0%	Seed or Straw Mulch	Seed or Straw Mulch
4	3.1-4.0%	Seed or Straw Mulch	Seed or Straw Mulch
5	4.1-5.0%	Seed or Straw Mulch	Seed or Straw Mulch

A. Stone to be 2" Stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
 B. Rip Rap to be 4" in a layer at least 3" thick, pressed into soil.
 C. Approved equivalent can be substituted for any of the above materials.
 7. Periodic inspection and required maintenance must be provided after each rain.

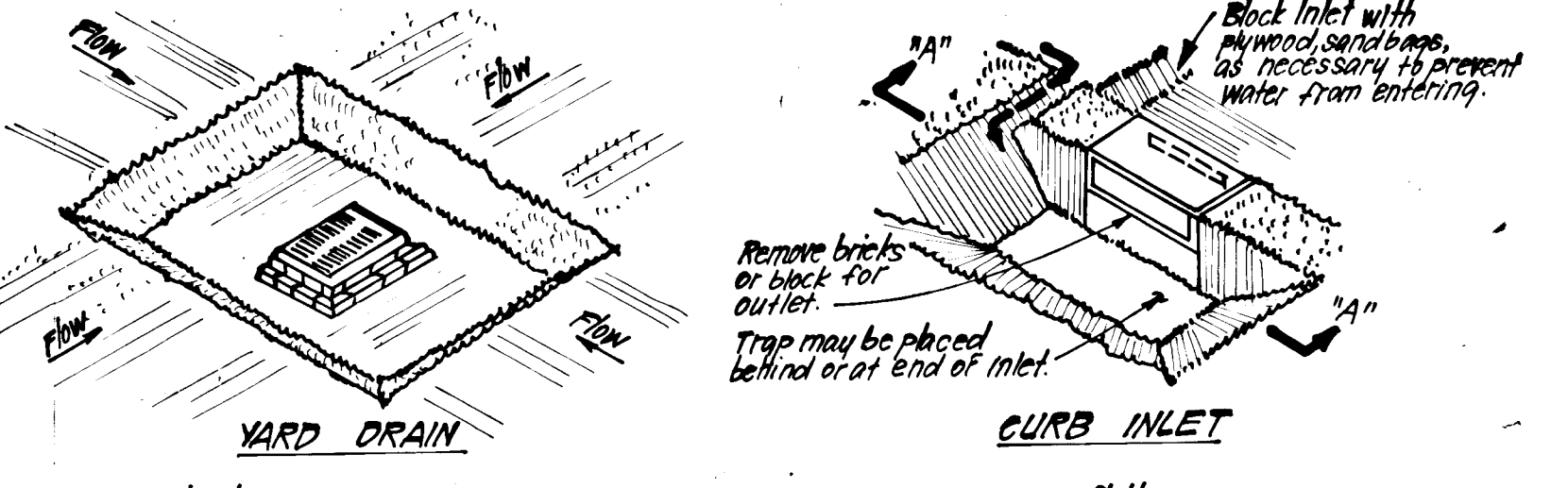
EARTH DIKE DETAIL (E.D.)

NO SCALE

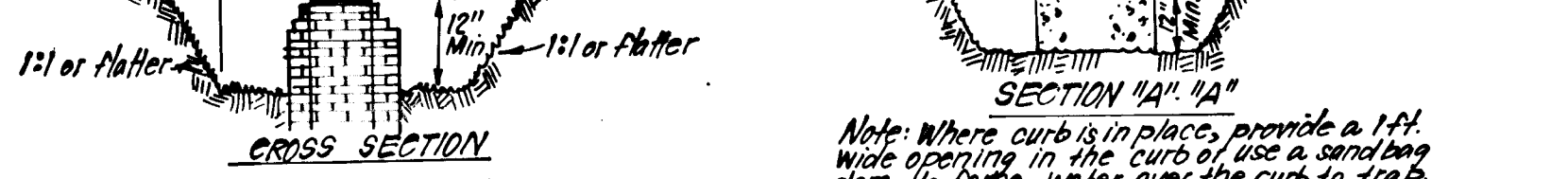
Reviewed for Howard Co. S.C.D. and meets Technical Requirements
 J. Nelson
 U.S. Soil Conservation Service

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

Approved: Stephen L. Duke 2/19/86



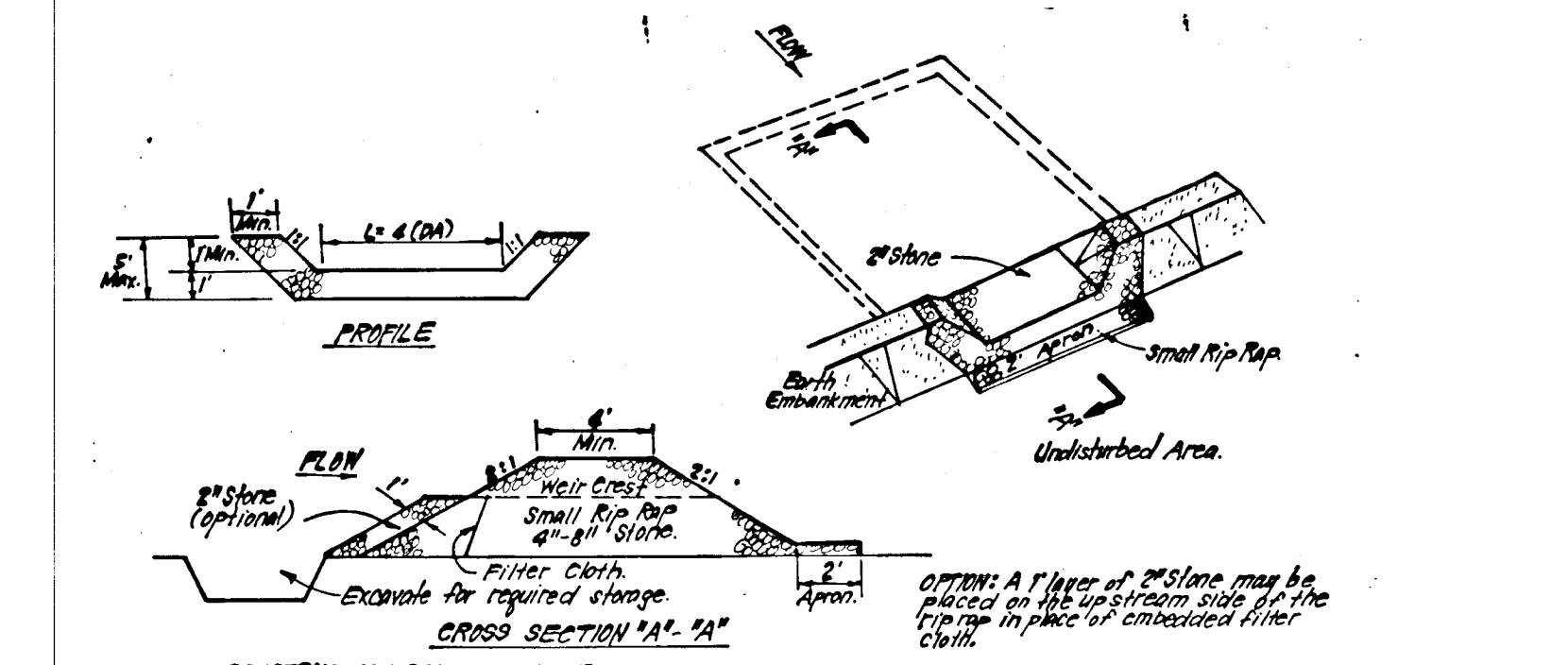
YARD DRAIN CURE INLET



CONSTRUCTION SPECIFICATIONS:
 1. Sediment shall be removed and the trap restored to its original dimensions when sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 2. The volume of sediment storage shall be 1000 cu. ft. per acre of contributory drainage.
 3. The structure shall be inspected after each rain and repairs made as needed.
 4. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
 5. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
 6. All cut slopes shall be 1:1 or flatter.

STORM INLET SEDIMENT TRAP (S.I.S.T.) ST II

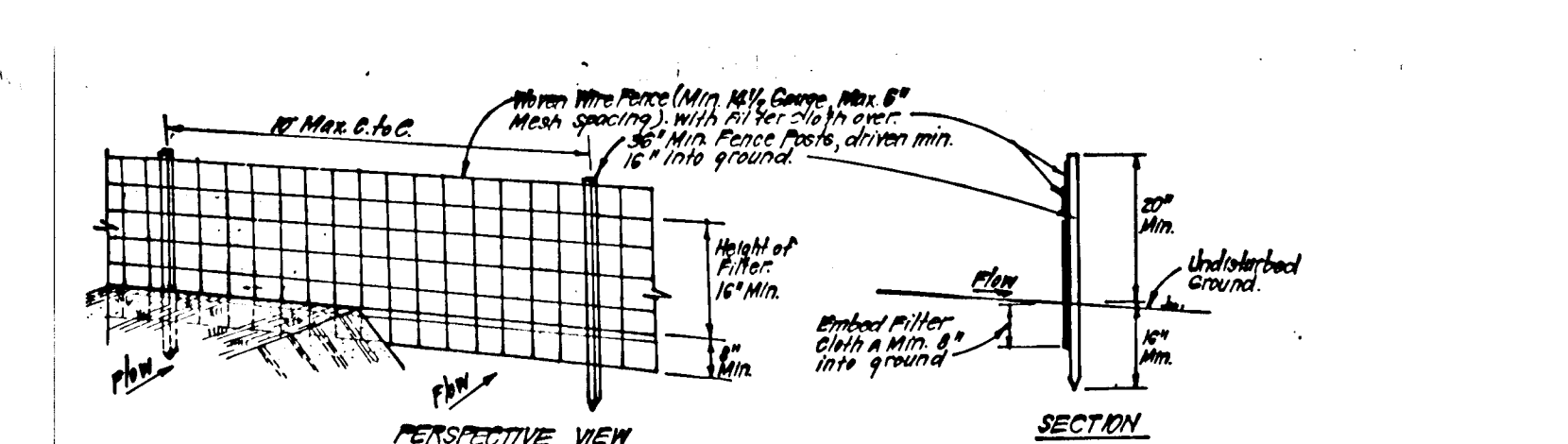
NO SCALE



CONSTRUCTION SPECIFICATIONS:
 1. Trap under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The trap area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by tamping with equipment 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" in thickness of 2" aggregate placed on the up-grade side on the small rip rap or checkered filter cloth to the inlet. Sediment has accumulated to 1/2 the design depth of the trap.
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 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.) STV.

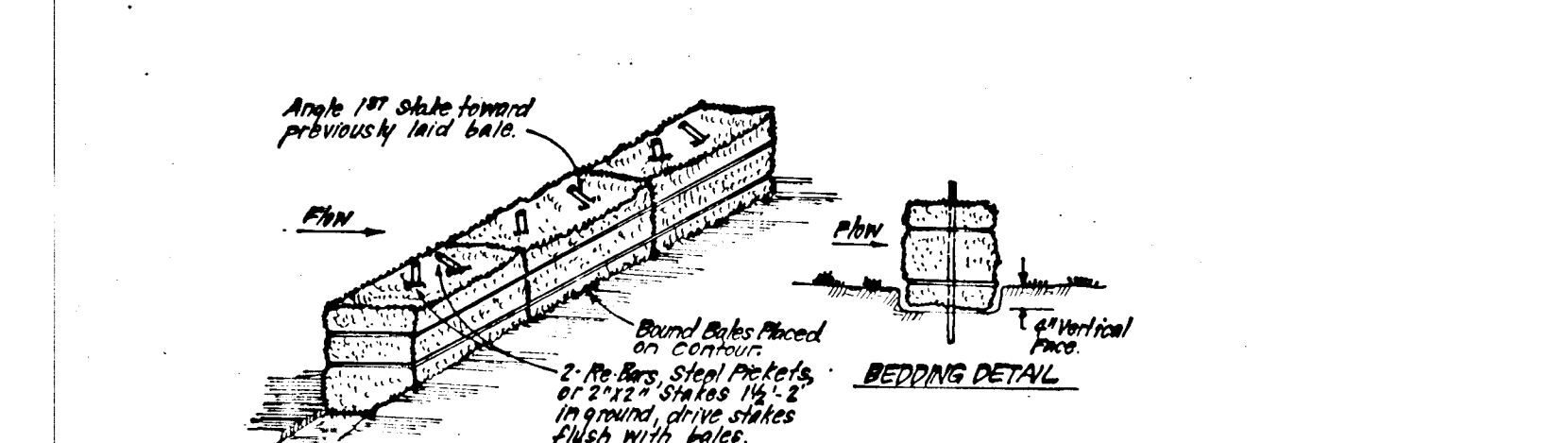
NO SCALE



CONSTRUCTION SPECIFICATIONS:
 1. Weir wire fence to be fastened securely to fence posts with wire ties or staples.
 2. Filter cloth to be fastened securely to weaver wire fence with ties spaced every 60" at top and mid section.
 3. When 2 sections of filter cloth join each other they shall be overlapped by 6" and stapled.
 4. Maintenance shall be performed as needed and material removed when "bags" develop in Silt Fence.
 POSTS: Steel either T or U Type or 2" hardwood
 FENCE: Weaver Wire, 144 Gauge
 FILTER CLOTH: Filter Cloth, 40-85 Sieve
 PREFABRICATED UNITS: Geotextiles, TIRON or approved equal

SILT FENCE DETAIL (S)

NO SCALE



CONSTRUCTION SPECIFICATIONS:
 1. Bales shall be placed at the top of a slope or on the contour and in a row with ends slightly overlapping 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 2 nails driven thru the bale. The stakes or nails shall be driven through the binding and into the soil at an angle to force the bales together. Stakes shall be driven flush with the top of the dike.
 4. Inspection shall be frequent and repairs made 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

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 L. [Signature] 12-26-85

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, disking or other acceptable means before seeding.
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 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

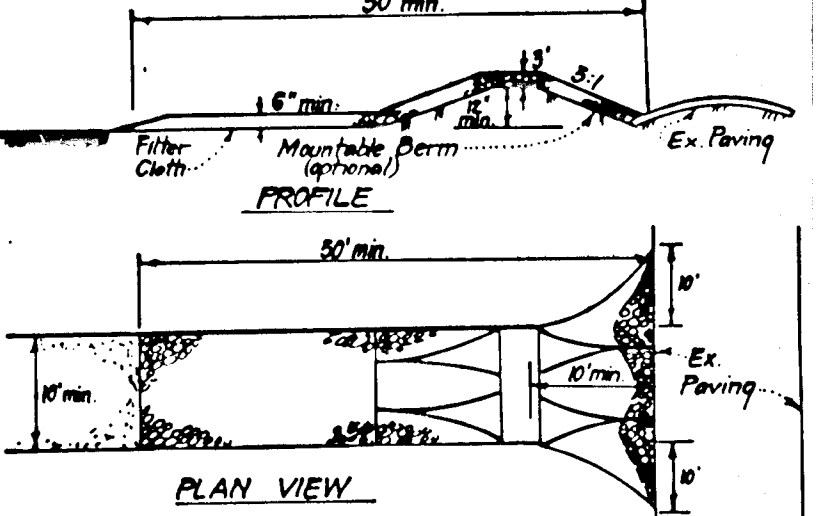
Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.
Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.

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



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) foot minimum, but not less than the full width of 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 blowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone be condition demand and repair and/or cleanup of any impurities used to trap sediment. All sediment applied, 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

- 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 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.
- 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 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.
- 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	11,544.5 Acres
Area Disturbed	2,440 Acres
Area to be roofed or paved	2,450.2 Acres
Area to be vegetatively stabilized	6,290.2 Acres
Total Cut	25,870 Cu. yds
Total Fill	25,840 Cu. yds
Offsite waste/borrow area location	N/A
- 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 DEW 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.
- If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
- All pipes to be blocked at the end of each day (see detail below).
- The total amount of straw bale dikes/silt fence equals 885 L.F.

- Obtain Grading Permit. 2 days
- Install Sediment & Erosion Control measures except Traps 3 & 4 and clean out and reconstruct existing Stone Outlet trap per 1983 Standards and Specs. 14 days
- Construct Storm Drainage EX 1-46 to I-10. No Grading or tree removal other than that necessary to construct storm drainage or sediment control measures shall be allowed at this stage. 14 days
- Construct Sediment Traps 3 & 4. 2 days
- Clear and Rough Grade site. 30 days
- Construct remaining storm drainage (except I-13 to Ex. I-46) & install IPDs. 14 days
- Construct Utilities. 60 days
- Fine grade and construct paving except in the area of Trap #2. 120 days
- Stabilize all dist. areas onsite in accordance with stds. and specs. 14 days
- Upon approval of the sediment control inspector remove sediment & erosion control measures and stabilize and restore area disturbed by existing sediment trap off property. 14 days
- Construct remaining paving and storm drainage and stabilize. 28 days

APPROVED: DEPARTMENT OF PUBLIC WORKS.
 Chief, Bureau of Engineering 3-3-86
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.
 Chief, Division of Land Development & Zoning Administration 2-19-86

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 12-26-85

CLARK • FINEFROCK & SACKETT
 ENGINEERS • PLANNERS • SURVEYORS
 11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED: JWS
 DRAWN: JWS
 CHECKED: JWS
 DATE: 12-26-85

SCALE: As Shown
 DRAWING: 5 OF 5
 JOI NO.: 85-017
 FILE NO.: 85-017-D

FOR: The Troutman Company
 SUITE 300, WIDE LAKES VILLAGE GREEN
 Columbia, Md. 21044