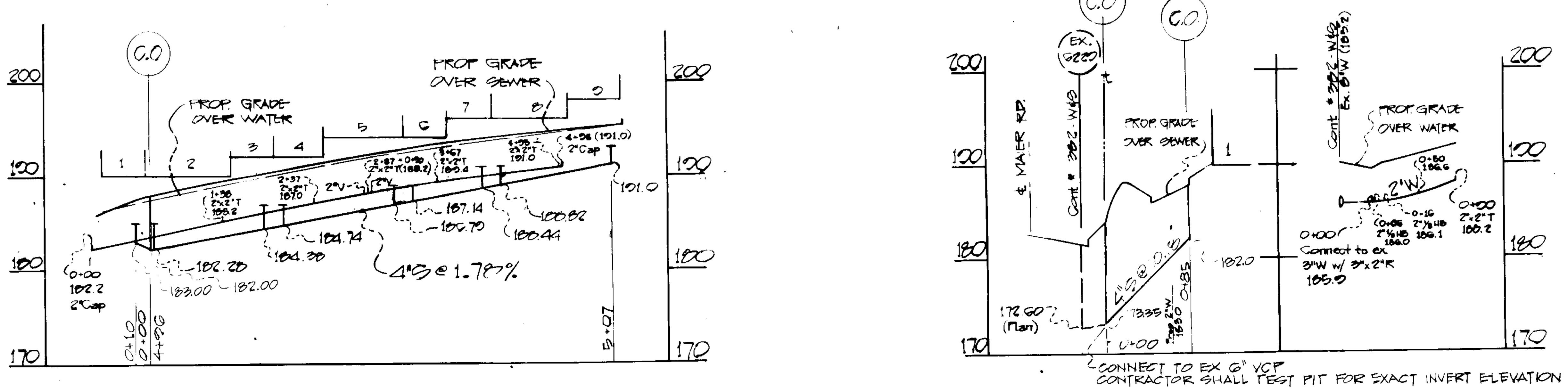
1-27-83



7-31-84 NOTE: PROFILES WERE REVISED @ TIME OF PLAN REVISION. REVISED AND RELOCATED SEWER ON-SITE

PROFILE SCALE: Horz. = 1"=100' Vert. = 1"=10'

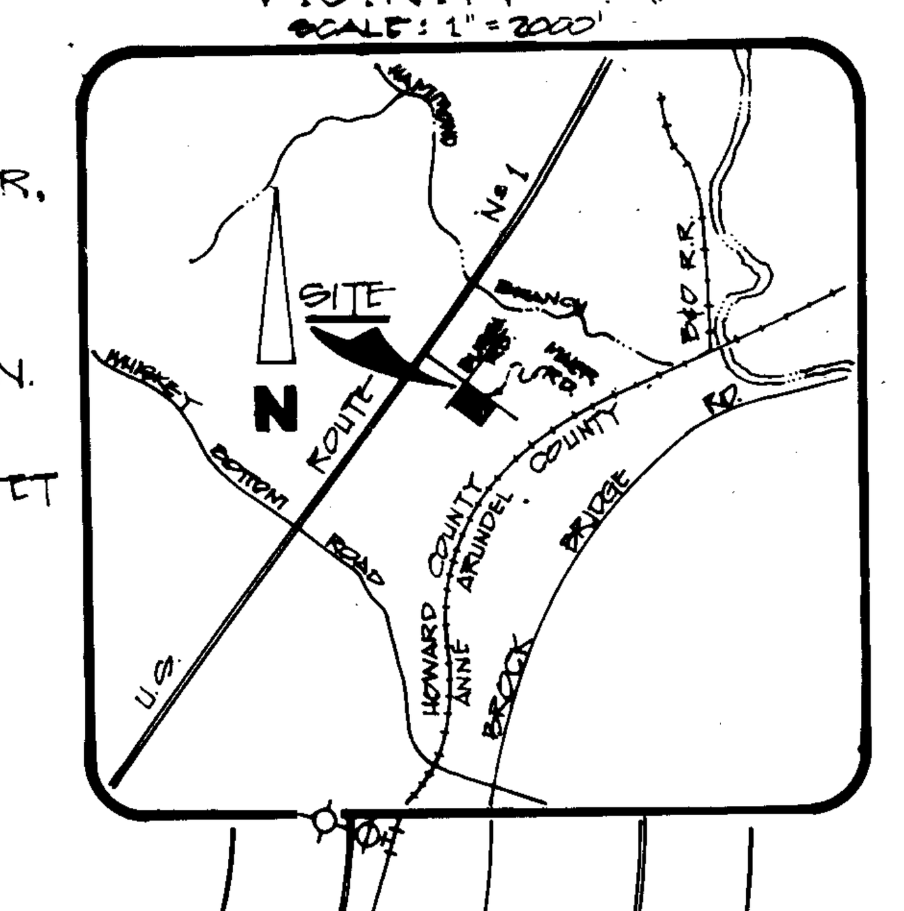
INDEX-SITE DEVELOPMENT PLANS

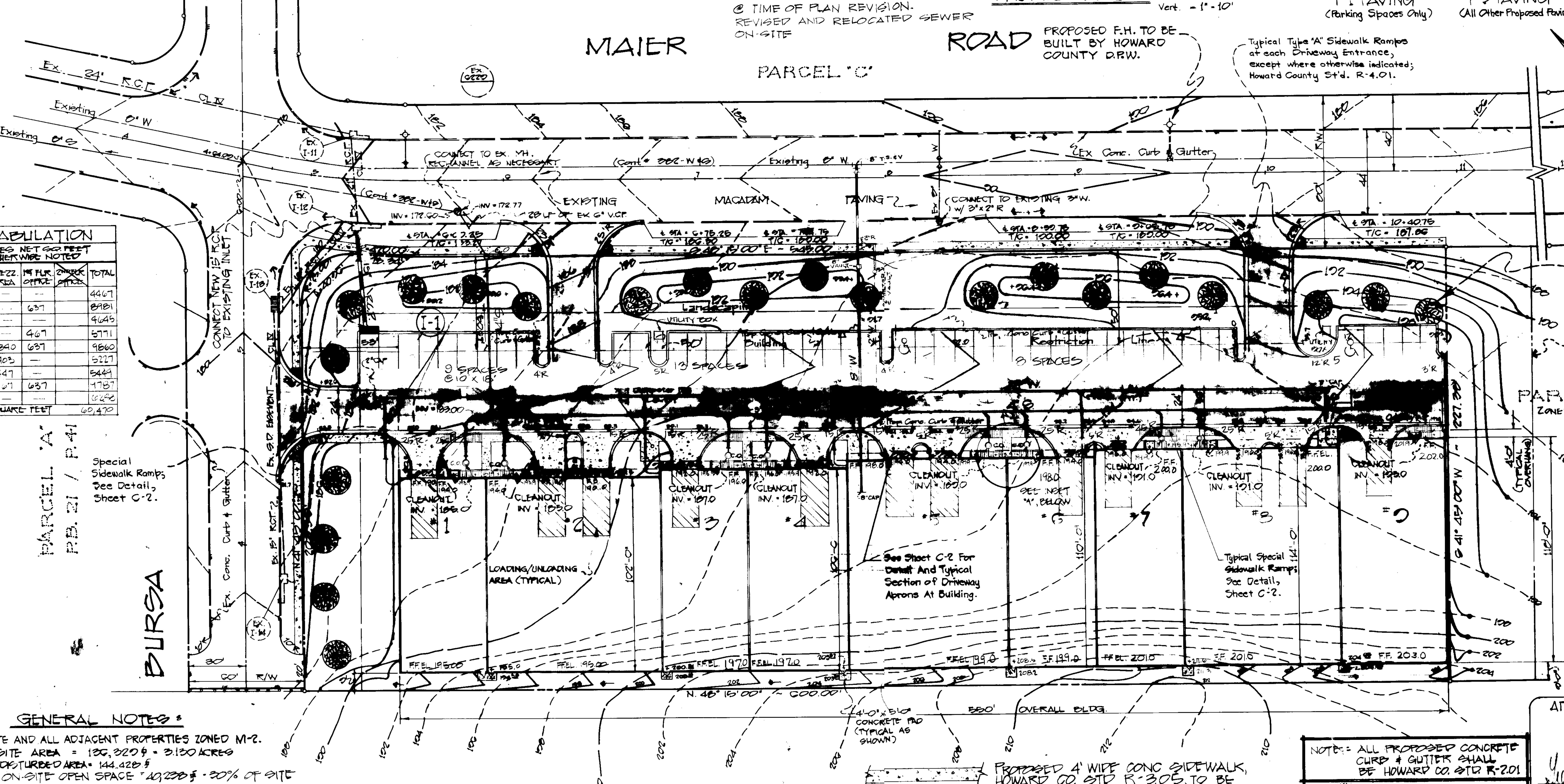
SHEET NO	TITLE
C-1	SITE DEVELOPMENT, WATER, SEWER, STORM DRAIN, & PAVING PLAN.
C-2	STORM DRAIN & PAVING NOTES, DETAILS & SECTIONS
C-3	STORM WATER MANAGEMENT PLAN.
C-4	SEDIMENT CONTROL PLAN
C-5	SEDIMENT CONTROL DETAIL SHEET
C-6	" " " "
C-7	DRAINAGE AREA MAP

LEGEND

P-1 PAVING (Parking Spaces Only)

P-3 PAVING (All Other Proposed Paving)





UNIT TABULATION

ALL FIGURES NET SQ. FEET UNLESS OTHERWISE NOTED

UNIT Nº	WHSE. AREA	MEZZ. AREA	1st FLR. OFFICE	~~2nd FLR. OFFICE~~	TOTAL
1	4467	—	—		4467
2	8344	—	637		8981
3	4645	—	—		4645
4	5304	—	467		5771
5	8383	840	637		9860
6	4824	403	—		5227
7	5002	447	—		5449
8	8383	767	637		9787
9	4233	—	—		6233
TOTAL NET SQUARE FEET					60,470

NOTE: EXTERIOR LIGHTING SHALL BE DIRECTED OR REFLECTED AWAY FROM ADJACENT PUBLIC ROAD RIGHT-OF-WAYS AND RESIDENTIALLY ZONED PROPERTIES.

NOTE: FOR STORM DRAIN PROFILES, NOTES, STRUCTURE SCHEDULE, PIPE SCHEDULE & PAVING DETAILS & NOTES, SEE SHEET "C-2".

FOR DETAILS OF ROOF DRAINS SEE SHEET "C-3" AND MECHANICAL PLANS BY BROOKS CROSS, CONSULTING ENGINEERS.

PROPOSED 4' WIDE CONC SIDEWALK, HOWARD CO. STD R-3.05, TO BE BUILT IN ROAD R/W'S AS SHOWN.

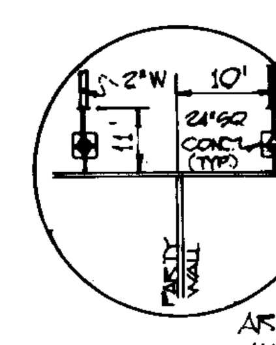
NOTE: ALL PROPOSED CONCRETE CURB & GUTTER SHALL BE HOWARD CO. STD R-2.01

GENERAL NOTES:

1. THIS SITE AND ALL ADJACENT PROPERTIES ZONED M-2.
2. TOTAL SITE AREA = 136,320 SF = 3.130 ACRES
   TOTAL DISTURBED AREA = 144,428 SF
   TOTAL ON-SITE OPEN SPACE = 40,238 SF - 30% OF SITE
3. BUILDING AREA - 65,630 SF (WAREHOUSES)*
4. DEED REFERENCE - MAIER INDUSTRIAL PARK, PARCEL "D", LOT D-1, SECTION 1 PLAT BOOK. 26, PLAT 22 (RESUBED PLAT # 3549)
5. REQ'D. PARKING - 3 PER UNIT = 27
6. PARKING PROV'D. - 43-TOTAL - 2 HANDICAPPED (12'×18') - 41 REGULAR (10'×18')
   'RETAIL SALES, SERVICE/REPAIR & PRINCIPAL OFFICE USES SHALL NOT BE ESTABLISHED ON SITE WITHOUT OFFICE OF PLANNING & ZONING APPROVAL.
7. PAVING TO BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD & SPECIFICATIONS, ALL EXPOSED CONCRETE TO BE TROWELLED & BROOM FINISHED.
8. TOPOGRAPHIC SURVEY PREPARED BY ROBERT J. BANKS & ASSOCITES, P.A. HYATTSVILLE, MD.
9. ALL SEWER CLEANOUTS ARE TO BE PLACED IN A 24" SQ. CONC. PAD, SEE DWG. M-2 FOR DETAIL.
10. TAX MAP # 47., SEE VP-84-77

OWNER: HOWARD CO. JOINT VENTURE
4700 ANNAPOLIS ROAD
BLADENSBURG, MD. 20710
301-927-8300

* SEE ABOVE FOR BREAKDOWN



NOTE: THESE DIMENSIONS ARE TYPICAL, UNLESS OTHERWISE NOTED.

INSET "A"
NO SCALE

COUNTY COMMISSIONER'S OF HOWARD COUNTY 498 / 667

ZONED M-2

NOTE: ALL ON-SITE SIDEWALKS TO BE 5' WIDE, HOWARD COUNTY STD. R-3.05.

8-14-86 RELOCATED FRONT PARKING AREA
8-17-84 REVISED IN ACCORDANCE W/HOWARD CO. REVIEW. RELOCATED WATER LINE.
7-31-84 REVISED IN ACCORDANCE W/ HOWARD CO. REVIEW.
3-14-83 REVISED IN ACCORDANCE W/ HOWARD CO. REVIEW.
12-30-82 REVISED IN ACCORDANCE W/ HOWARD CO. REVIEW.

APPROVED: For Public Water and Public Sewerage Systems
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 4-5-84

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMIN.

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAIN SYSTEMS & ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR — DATE 4-2-84
CHIEF, BUREAU OF ENGINEERING — DATE 4-2-84

PLAN SCALE: 1"=30'

3-6-84

warring associates
engineers · planners · surveyors
college park, maryland
13 francis street annapolis, maryland
design: ___
draft: ___
check: ___
approved: ___

SITE DEVELOPMENT, WATER, SEWER STORM DRAIN AND PAVING PLAN

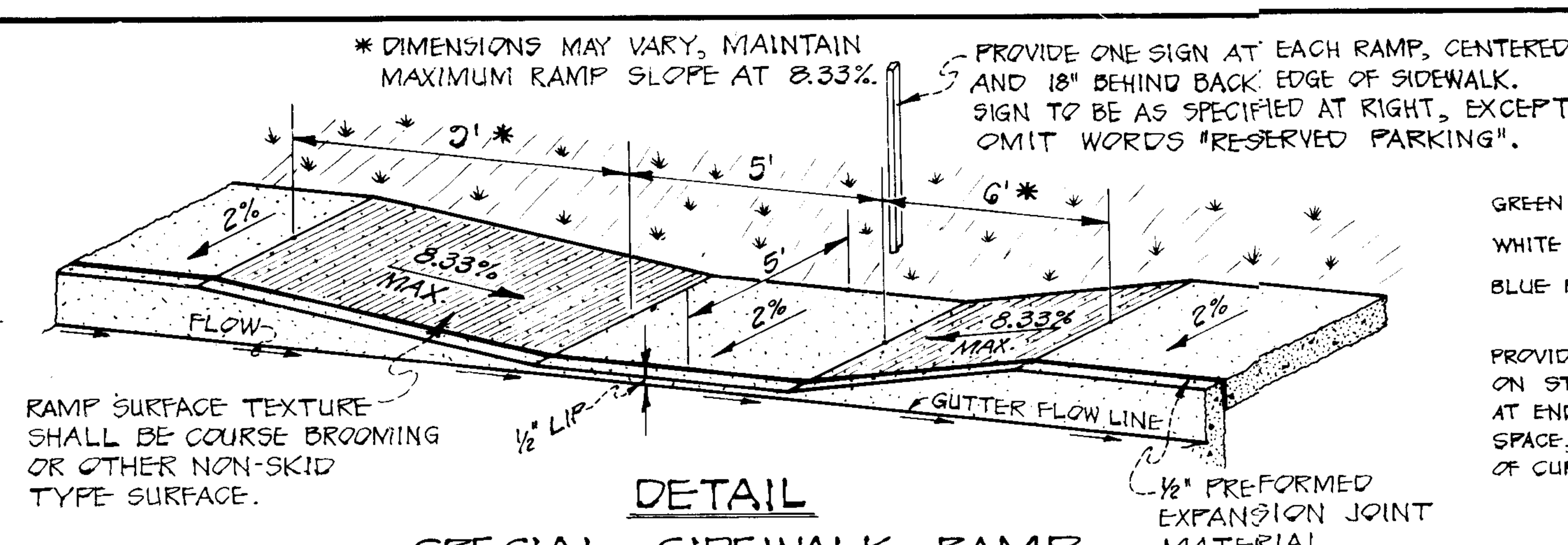
MAIER WAREHOUSES
MAIER INDUSTRIAL PARK
SECTION 1 PARCEL D-1
GUILFORD ELECTION DIST. #6
HOWARD COUNTY, MARYLAND

date: 1/15/84 JULY 1982
job number: 82-02

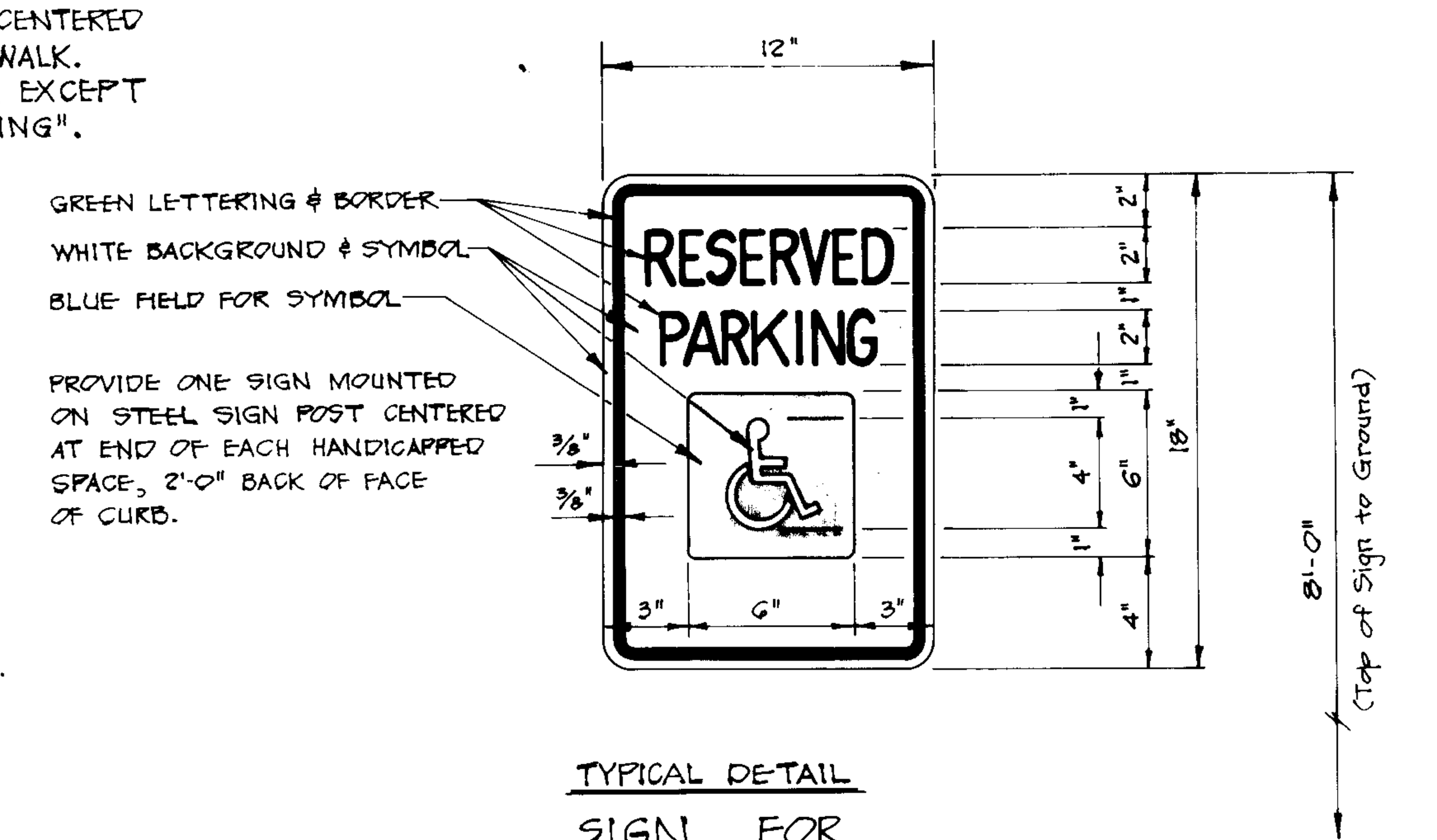
C-1
1 of 7

SDP-83-44

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 1-27-83



DETAIL
SPECIAL SIDEWALK RAMP
NO SCALE

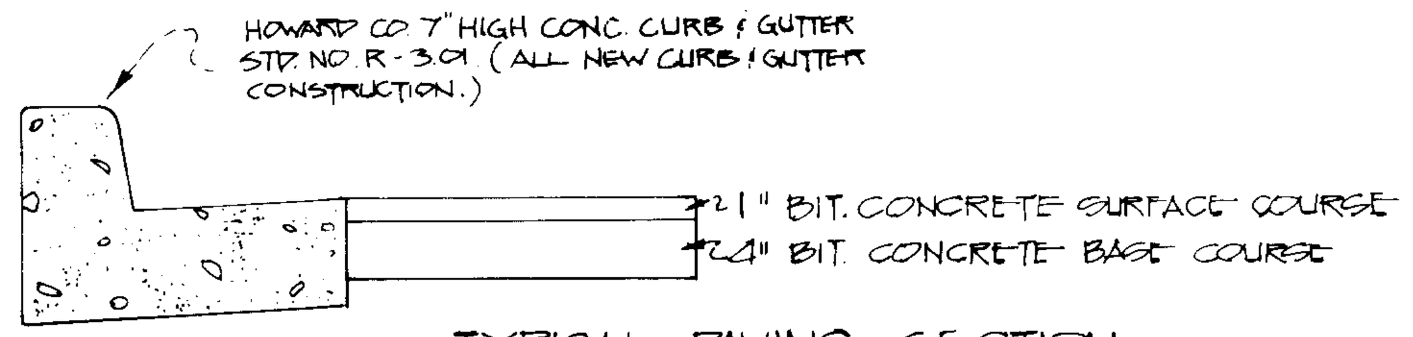


TYPICAL DETAIL
SIGN FOR
HANDICAPPED PARKING SPACES
NO SCALE

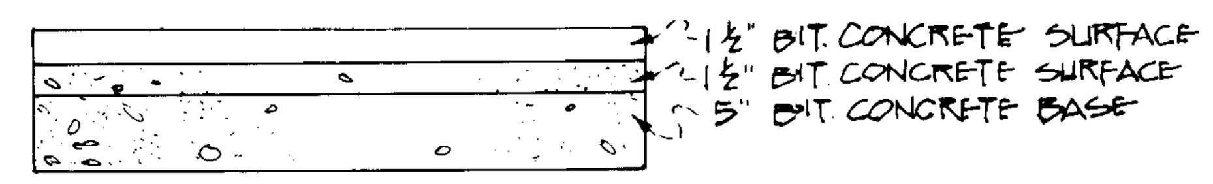
FOR ALL DETAILS NOT SHOWN HERE, SEE SIGN # R 7-8 IN DOCUMENT TITLED "STANDARD HIGHWAY SIGNS - AS SPECIFIED IN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (FOR STREETS AND HIGHWAYS)", U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

GENERAL STORM DRAIN NOTES

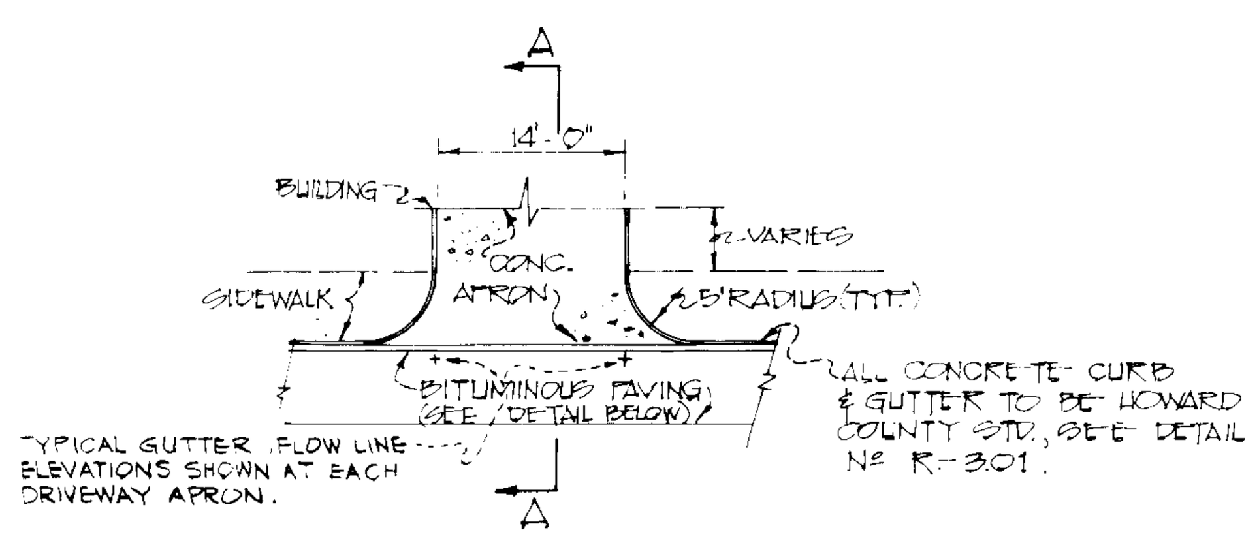
1. ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE GENERAL SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD CO. "STORM DRAINAGE DESIGN MANUAL" AND "STANDARD SPECIFICATIONS & DETAILS FOR CONSTRUCTION", UNLESS OTHERWISE NOTED.
2. TYPES OF STRUCTURES REFER TO THE STANDARD STORM-DRAINAGE DETAILS OF HOWARD COUNTY.
3. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION & ELEVATIONS OF ALL THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER OR THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BEFORE PROCEEDING WITH CONSTRUCTION.
4. ALL EXCAVATED MATERIAL NOT USED FOR CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AT HIS EXPENSE. THIS ITEM WILL NOT BE MEASURED OR BID, BUT CONSIDERED INCIDENTAL TO THE CONSTRUCTION.
5. GRADE ALL DISTURBED AREAS TO PROVIDE POSITIVE DRAINAGE.



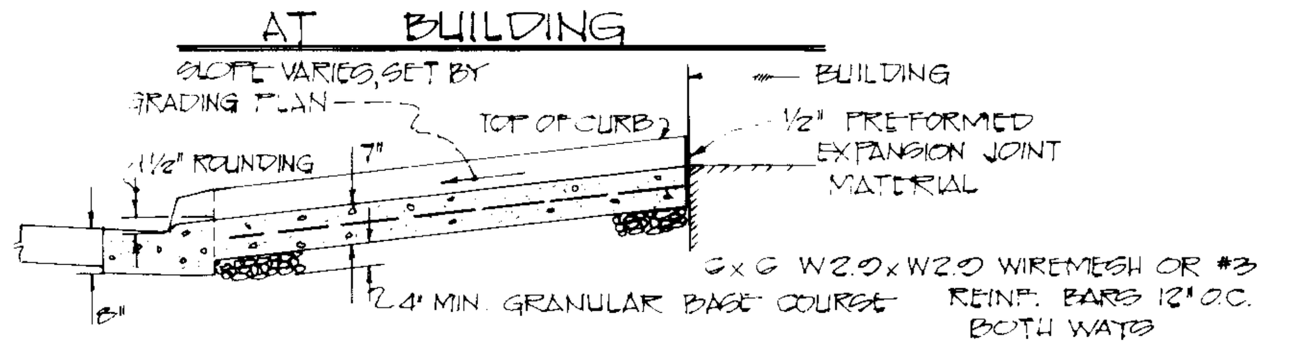
TYPICAL PAVING SECTION
PARKING SPACES
(HOWARD CO. STD. SECTION P-1 STD. NO. R-2.01)



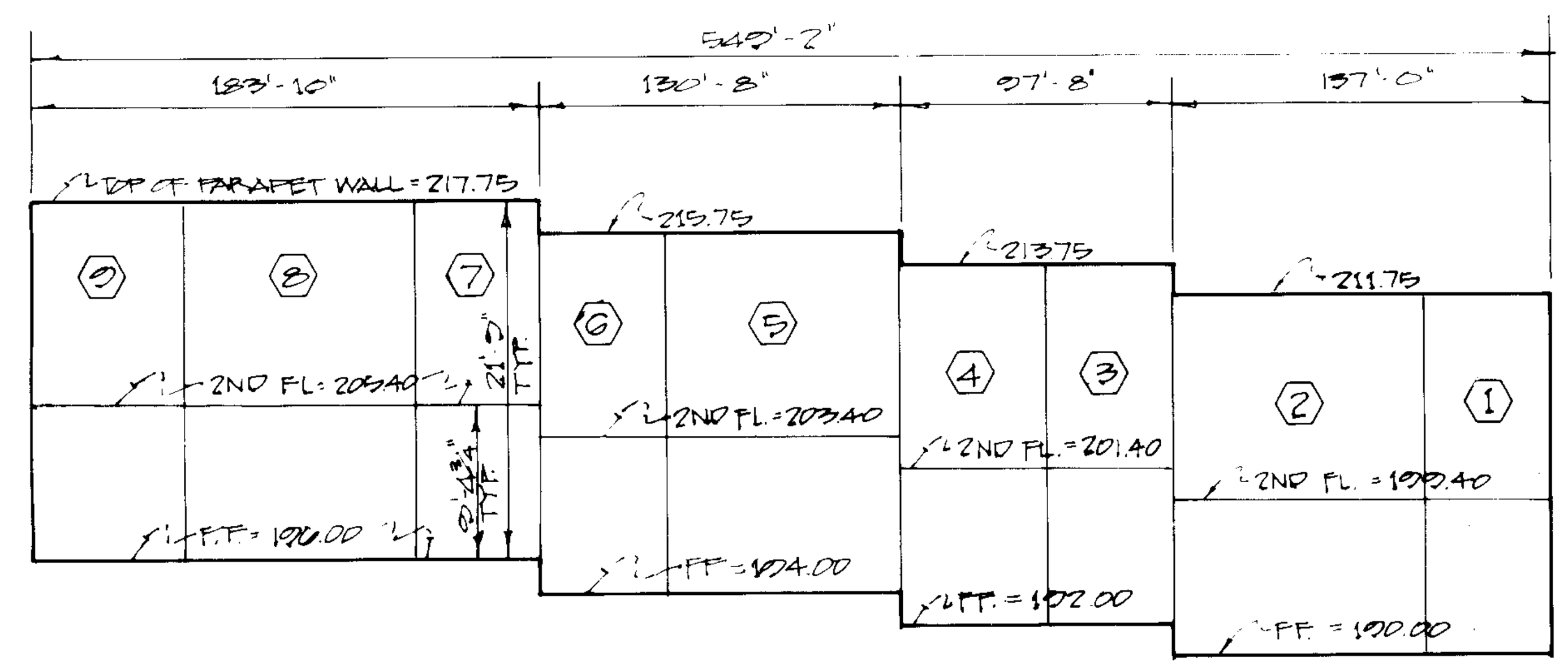
TYPICAL PAVING SECTION
ALL OTHER DRIVEWAY AREA
(HOWARD CO. STD. SECTION P-3)



TYPICAL CONCRETE APRON
AT BUILDING



SECTION "A-A"



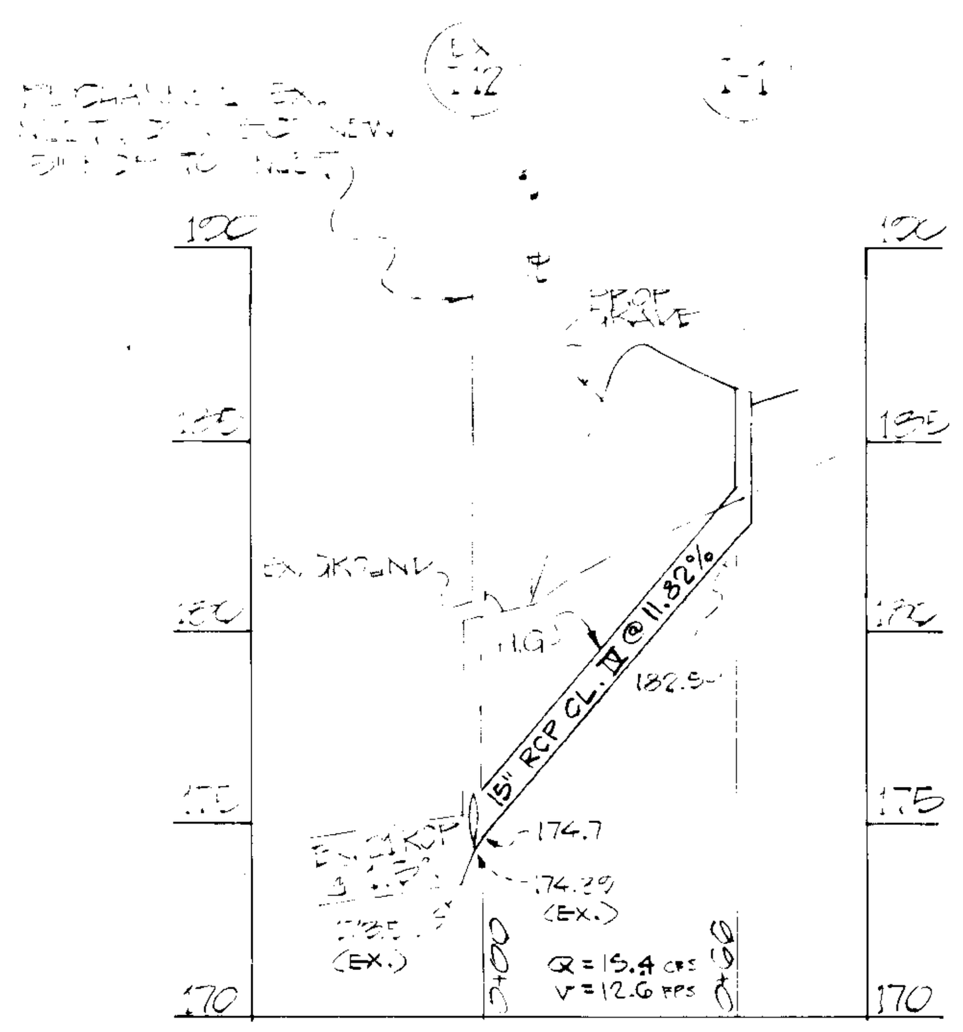
BUILDING PROFILE
NO SCALE
(not to be used for construction of building; see architect's plans)

STORM DRAIN COMPUTATIONS

PIPE															
FROM	TO	INC. AREA	TOTAL AREA	R.	AR	ΣAR	TIME	I 10	Q 10	MIN. SLOPE	DIAM.	VEL.	LENGTH	TIME	REMARKS
TO	NO.	AC.	AC.				MIN. SEC.	IN./HR.	CFS	%	IN.	FT./SEC.	FT	SEC	
I-1	EX. I-12	2.5	2.5	0.8	2.0	2.0	6 m 52 s	7.7	15.4	5.7%	15"	12.6	66'	5 s	T.O.C. = 175 - 85/8 = 6M 52S

STRUCTURE SCHEDULE						
NO.	TYPE	¢ STA.	OFFSET	TOP ELEVATIONS UPPER	TOP ELEVATIONS LOWER	REMARKS
I-1	A-10 INLET	—	—	186.5	186.3	HOWARD CO. STD. SD 4.02

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15"	RCP CL IV	66'

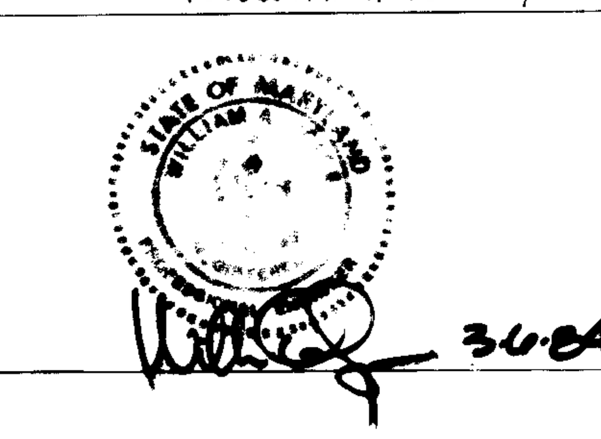


STORM DRAIN PROFILE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAIN SYSTEMS & ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
4-2-84 DIRECTOR DATE
4-2-84 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
4-5-84
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
4-6-84 PLANNING DIRECTOR DATE
4-13-84 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. DATE

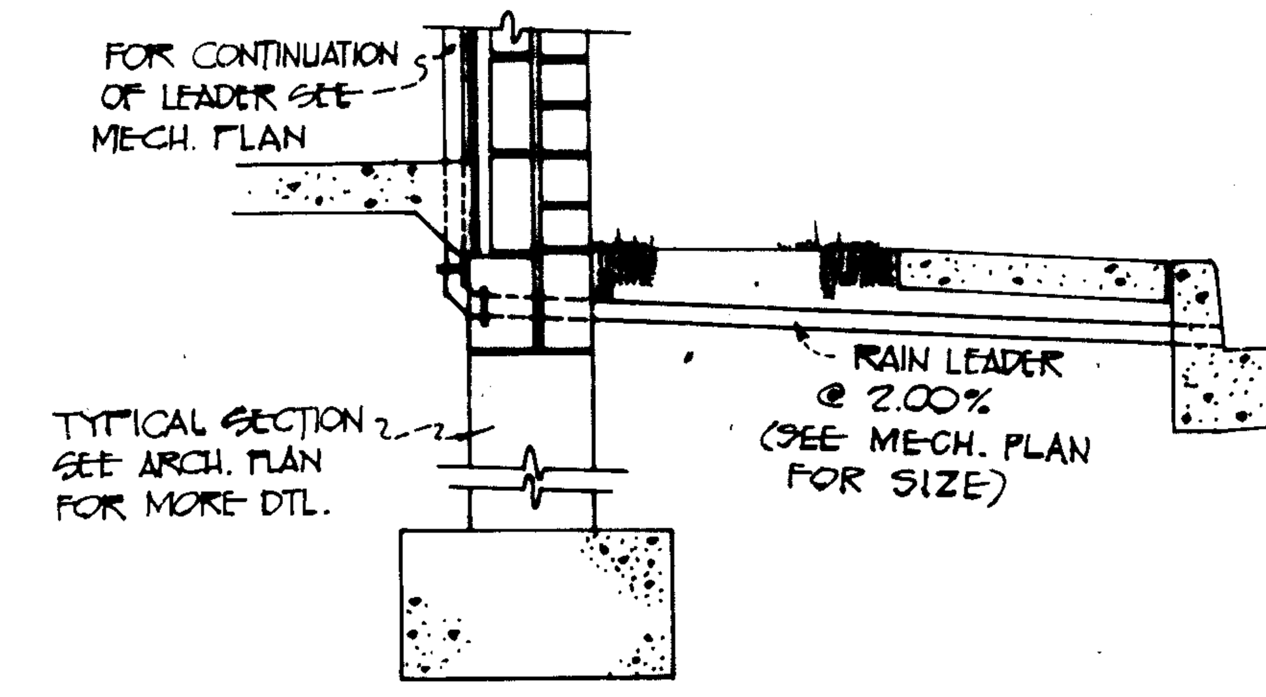


2-14-83 REVISED IN ACCORDANCE W/ HOWARD CO. REVIEW.
12-30-82 REVISED IN ACCORDANCE W/ HOWARD CO. REVIEW.

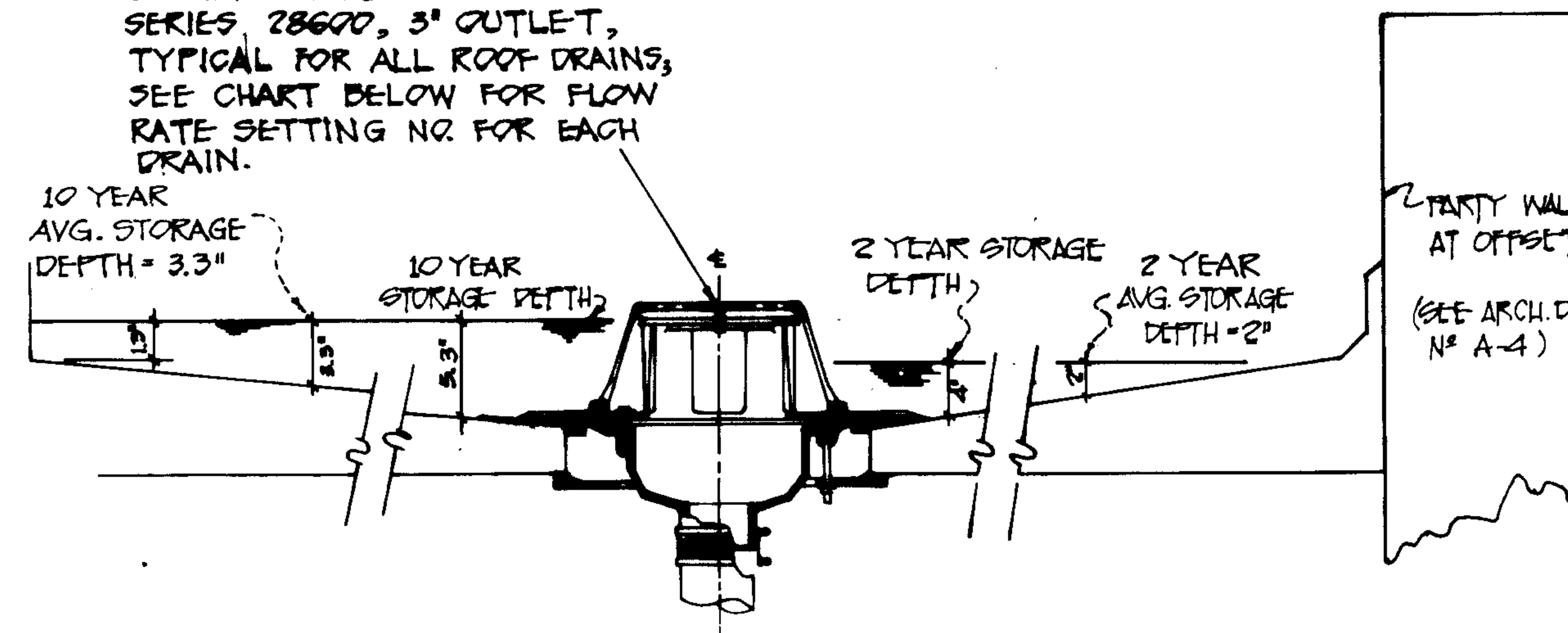
warring associates engineers · planners · surveyors 4970 niagara road suite 400 college park, maryland 21146 345-0400 13 francis street annapolis maryland design: TWC/WAJ draft: JBT check: WAJ approved:	STORM DRAIN & PAVING NOTES, DETAILS & SECTIONS MAIER WAREHOUSES MAIER INDUSTRIAL PARK SECTION 1 PARCEL D-1 GUILFORD ELECTION DIST. # 6 HOWARD COUNTY, MARYLAND TAX MAP NO. 47	date: JULY 1982 job number: 22-89 C-2 2 of 7

SDP-83-44

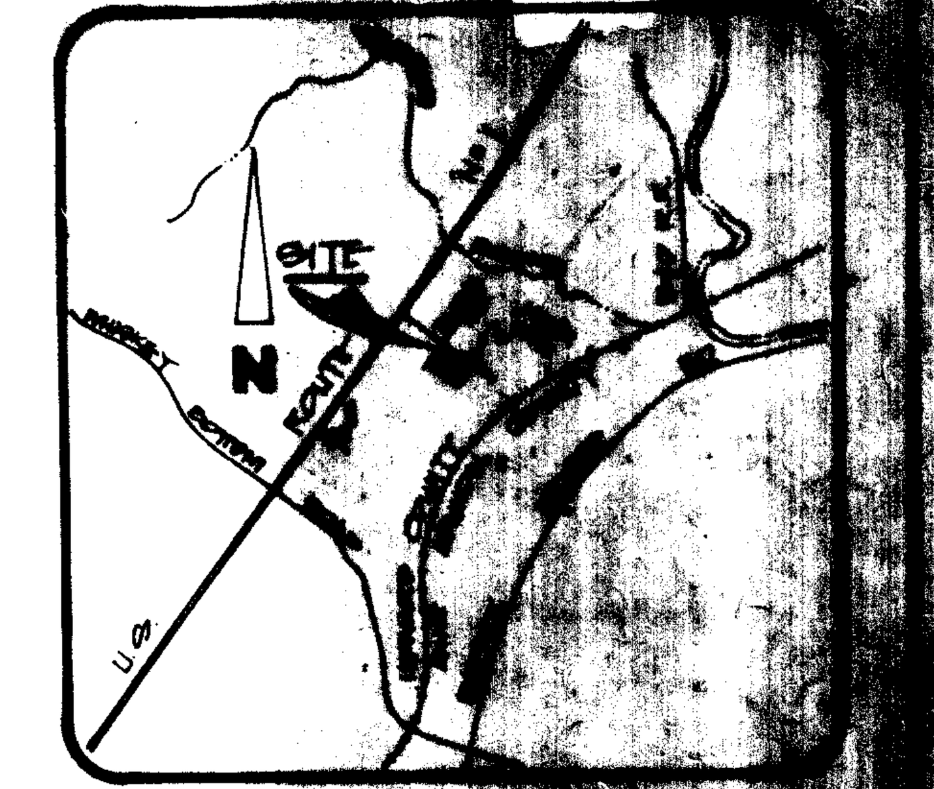
APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 1-27-83



TYPICAL SECTION RAIN LEADER CONNECTION TO CURB
NOT TO SCALE

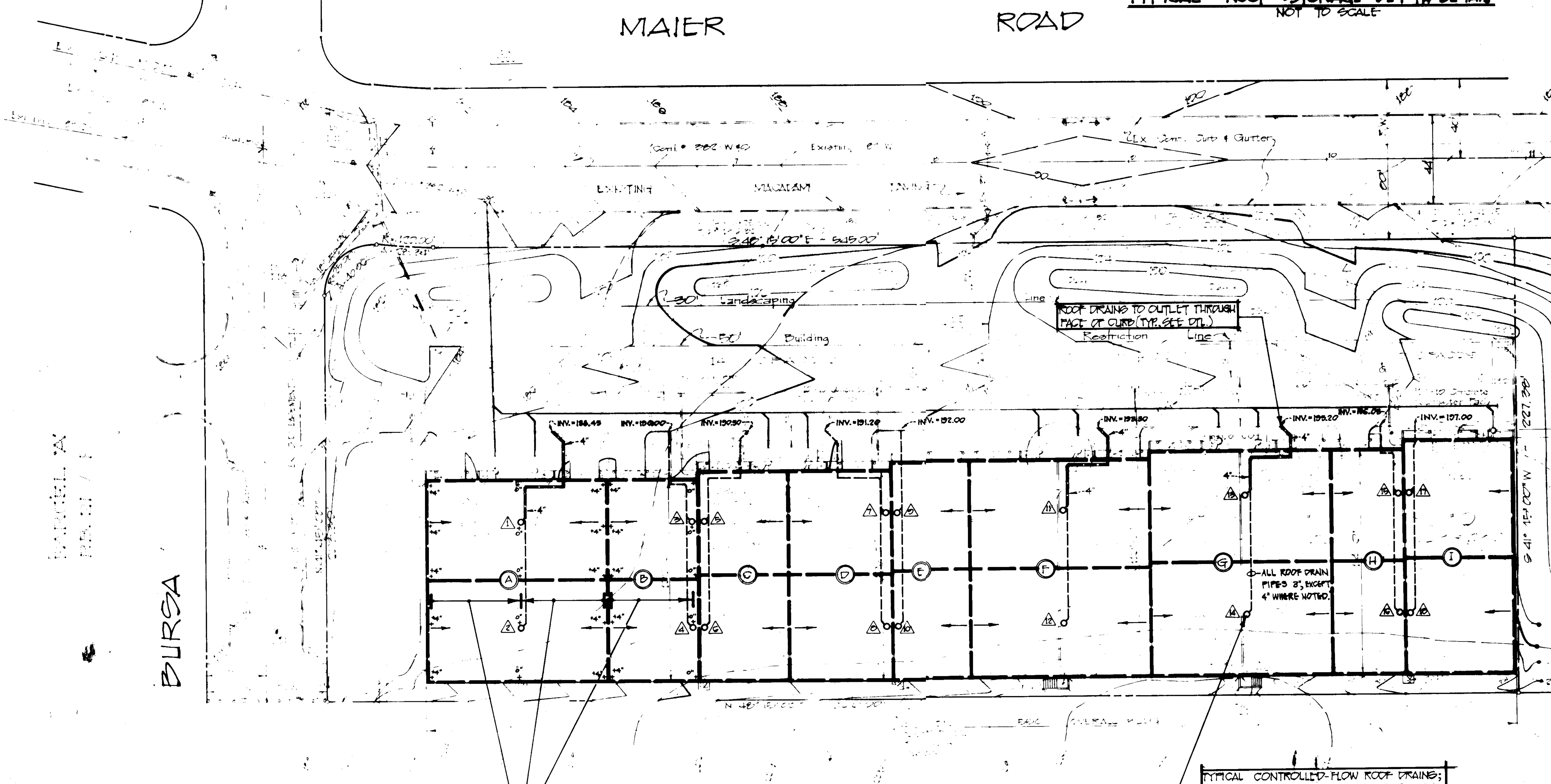


TYPICAL ROOF STORAGE DEPTH DETAIL
NOT TO SCALE



VICINITY MAP

AREA	ROOF DRAIN #	SQ. FT.	FLOW RATE SETTING NO.	[illegible]	[illegible]	[illegible]	[illegible]
A	1 2	4050 4050	1 1	[illegible]	[illegible]	[illegible]	[illegible]
B	3 4	2425 2425	1 1	17 17	[illegible]	[illegible]	[illegible]
C	5 6	2510 2510	1 1	17 17	[illegible]	[illegible]	[illegible]
D	7 8	2860 2860	1 1	17 17	[illegible]	[illegible]	[illegible]
E	9 10	2245 2245	1 1	17 [illegible]	[illegible]	[illegible]	[illegible]
F	11 12	5195 5195	1 1	[illegible]	[illegible]	[illegible]	[illegible]
G	13 14	[illegible]	1 1	[illegible]	[illegible]	[illegible]	[illegible]
H	15 16	2195 2195	1 1	17 17	[illegible]	[illegible]	[illegible]
I	17 18	3395 3395	1 1	17 17	[illegible]	[illegible]	[illegible]
		62,000		370gpm or [illegible]	10,350	[illegible]	[illegible]



OWNER: HOWARD [illegible]
4700 [illegible]
BLADENSBURG, MD [illegible]

APPROVED: FOR PUBLIC WATER & PUBLIC [illegible] STORM DRAIN [illegible]
HOWARD COUNTY DEPARTMENT OF [illegible]
DIRECTOR 4-2-84 DATE

TYPICAL 4" SLOPE FROM RIDGE TO VALLEY OF EACH PLANE OF ROOF; SEE ARCHITECTURAL PLANS FOR DETAILS AND EXACT ELEVATIONS.

TYPICAL CONTROLLED-FLOW ROOF DRAINS; "JOSAM" FLO-SET OR EQUIVALENT; SEE MECHANICAL PLANS FOR DETAILS OF ROOF DRAINS AND LEADERS. SEE CHART, THIS SHEET, FOR FLOW RATE SETTINGS FOR ROOF DRAINS.

PLAN SCALE: 1"=30'

NOTE: ALL ROOF DRAIN PIPES (HORIZ. & VERT.) ARE 3" DIA., FROM ROOF DRAIN TO CURB OUTLET, EXCEPT 4" AS INDICATED THUS: 4"

	2 YEAR	10 YEAR
EXISTING PEAK DISCHARGE & MAX. RELEASE RATE ALLOWED	2.4 cfs	7.6 cfs
DEVELOPED PEAK DISCHARGE:		
PARKING LOT & GRASS	1.6 cfs	5.7 cfs
BUILDING ROOF	+ 8.1	+ 13.1
TOTAL	9.7 cfs	18.8 cfs
TOTAL SITE		
MAX. RELEASE RATE ALLOWED	2.4 cfs	7.6 cfs
UNCONTROLLED RELEASE RATE FROM PARKING LOT & GRASS	- 1.6 cfs	- 5.7 cfs
MAX. RELEASE RATE FROM ROOF	0.8 cfs	1.9 cfs
MINIMUM STORAGE REQUIRED	10,350 cf	14,700 cf
TOTAL AREA OF ROOF	62,000 sq. ft.	
AVERAGE DEPTH OF WATER @ MIN. STORAGE VOLUME = 2"		2 7/8"
DEPTH OF WATER @ ROOF DRAINS/MIN. STOR. VOLUME = 4"		4 7/8"

APPROVED: For Public Water and Public Sewerage Systems
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER 4-5-84 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR 4-6-84 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. 4-18-84 DATE

12-30-82 REVISED IN ACCORDANCE W/ HOWARD CO. REVIEW.
10-25-82 ROOF DRAIN INFORMATION ADDED.

warring associates
engineers · planners · surveyors
[illegible] niagara road · suite 400
college park, maryland 20740
345-0400

design W.a.J.
draft a.b.j.
check W.a.J.
approved

STORM WATER MANAGEMENT [illegible]
MAIER WAREHOUSE[illegible]
MAIER INDUSTRIAL PARK
SECTION 1 PARCEL D-1
GUILFORD ELECTION DI[illegible]
HOWARD COUNTY, [illegible]

3


APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 1-27-83
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAIN SYSTEMS & ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR
DATE
CHIEF, BUREAU OF ENGINEERING
DATE
REVIEW FOR: HOWARD S.C.D.
NAME
AND MEETS TECHNICAL REQUIREMENTS
U.S. SOIL CONSERVATION SERVICE
3-12-84
DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD COUNTY S.C.D.
3-9-84
DATE
VICINITY MAP
SITE
N
PROVIDE TEMPORARY 4'-0" HIGH SNOW FENCE AROUND EACH SEDIMENT TRAP.
MAIER ROAD
BURSA ROAD
PARCEL A
P.B. 21 / 84
PARCEL "B"
STONE OUTLET SEDIMENT TRAP # 2
MAX. DRAINAGE AREA = 1.0 ACRES
STORAGE REQ'D. = 1800 CU. FT.
STORAGE PROV'D. = 1800 CU. FT.
BOTTOM DIMENSIONS = 3'x 34'x 8'
CREST ELEV. = 188±; L-6'
STONE OUTLET SEDIMENT TRAP Nº 1
DRAINAGE AREA = 3.5 Acres
STORAGE REQ'D. = 6300 CF
STORAGE PROV'D. = 6656 CF
BOTTOM DIM. = 4'x 24'x 44'
CREST ELEV. = 182±; L-21'
TEMP. CURB INLET PROTECTION (TYP.)
TEMP. STABILIZED CONSTRUCTION ENTRANCE (TYP.)
TEMP. DIVERSION DIKE
TEMP. MOUNTABLE DIVERSION DIKE (TYP.)
Building Restriction Line
EX. Conc. Curb & Gutter
DRAINAGE DIVIDE MAX. AREA TO TRAP # 2
350' OVERALL BLDG.
LIMITS OF DISTURBANCE
EX. DRAINAGE DIVIDE
DEVELOPER'S CERTIFICATION
I/WE CERTIFY THAT ALL DEVELOPMENT 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT
12-30-82
DATE
SIGNATURE
ENGINEER'S CERTIFICATION
I CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A WORKABLE AND PRACTICAL PLAN BASED ON MY PERSONAL KNOWLEDGE OF SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD COUNTY SOIL CONSERVATION DISTRICT.
10/22/82
DATE
MD. RE. SIGNATURE
OWNER: HOWARD CO. JOINT VENTURE
4700 ANNAPOLIS ROAD
BLADENSBURG, MD. 20710
301-927-8300
LEGEND:
TEMP. DIVERSION DIKE
TEMP. MOUNTABLE DIV. DIKE
LIMIT OF DISTURBANCE
COUNTY COMMISSIONER'S OF HOWARD COUNTY 498 / 667
INSET "A"
NOTE: THESE DIMENSIONS ARE TYPICAL, UNLESS OTHERWISE NOTED.
SEE SHEET C-6 FOR ANALYSIS OF PROPOSED DISTURBED, IMPERVIOUS, AND AREAS TO BE STABILIZED WITH VEGETATION.
PLAN SCALE: 1"=30'
SDP-83-44
SEQUENCE OF CONSTRUCTION
STARTING DATE
JAN., '83
JAN., '83
FUNCTION
INSTALL SEDIMENT CONTROL
ROUGH GRADE SITE
BUILDING CONSTRUCTION
TIME
2 WEEKS
2 WEEKS
SEDIMENT CONTROL PLAN
SECTION 1 PARCEL

STANDARD AND SPECIFICATIONS

FOR

CRITICAL AREA STABILIZATION
(With Permanent Seedings)

Definition

Planting vegetation such as grasses and legumes on critical areas.

Purpose

To stabilize the soil; to reduce damages from sediment and runoff to downstream areas; improve wildlife habitat; enhance natural beauty.

Conditions Where Practices Apply

Graded or cleared areas subject to erosion and where a permanent, long-lived vegetative cover is needed.

SPECIFICATIONS

Vegetation cannot be expected to provide an erosion control cover and prevent soil slippage on a soil that is not stable due to its texture, structure, water movement or excessive slope.

Minimum soil conditions needed for the establishment and maintenance of a long-lived vegetative cover:

A. Enough fine-grained materials (over 30 percent silt plus clay) to provide the capacity to hold at least a moderate amount of available moisture. Noticeable exception would be planting lovegrass and sericea lespedeza which can be planted on a sandier soil.

B. Sufficient pore space to permit adequate root penetration.

C. The soil shall be free from any material harmful to plant growth.

D. If these minimum conditions cannot be met, see specification, Topsoiling (57.01).

I. Site Preparation

A. Install needed erosion control practices such as interceptor dikes, berms and spreaders, contour ripping, erosion stops, channel liners and sediment basins.

B. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, anchoring and maintenance.

II. Seedbed Preparation

Flat areas and slopes up to 3 to 1 grade shall be loose and friable to a depth of at least 3 inches. The top layer of soil shall be loosened by raking, discing or other acceptable means before seeding.

Slopes steeper than 3 to 1 shall have the top 1-3 inches of soil loose and friable before seeding.

III. Soil Amendments

Lime and fertilize according to soil tests. Lime and fertilizer needs can be determined by a soil testing laboratory, such as the University of Maryland's Soil Testing Laboratory.

In lieu of soil test results, apply 2 tons dolomitic limestone and 600 pounds 0-20-20, or equivalent per acre before seeding. Harrow or disc lime and 0-20-20, or equivalent fertilizer uniformly into the soil to minimum depth of 3 inches on slopes flatter than 3 to 1. On slopes of greater than 3 to 1 grade, the lime and fertilizer shall be worked in as directed by the contracting officer. On sloping land, the final harrowing or discing operation should be on the contour wherever feasible. No attempt should be made to drag any disced area to make the soil surface very smooth after discing. At time of seeding, apply 400 pounds 38-0-0 ureaform fertilizer and 500 pounds 10-20-20, or equivalent fertilizer per acre. For mixtures containing perennial legumes, the 500 pounds of 10-20-20 may be omitted.

IV. Seeding

A. Select a mixture from table 51-1.

B. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed and fertilizer) on a firm, moist seedbed. Maximum seeding depth should be 1/4 inch on clayey soils and 1/2 inch on sandy soils, when using other than hydroseeder method of application.

V. Mulching

A. Materials and Amounts

1. Straw - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds per 1,000 sq. ft. Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds which are: Canada thistle, Johnsongrass and quackgrass.

Spread uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 sq. ft. section and place 70-90 lbs. of mulch in each section.

2. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre or 35 pounds per 1,000 sq. ft. may be applied by hydroseeding. Use is limited to < 3% and < 150' length of slope and during optimum seeding periods in spring and fall.

3. Mulch nettings such as jute or excelsior blanket may be used. Staple to surface in waterways and on steep slopes. Lighter materials of paper, plastic and cotton mulch nettings may be used where erosion hazard is not severe. If area is to be mowed, do not use metal staples.

4. Wood chips at the rate of approximately 6 tons per acre or 275 lbs. per 1,000 sq. ft. may be used when available and when feasible to use. Particularly well-suited for utility and road rights-of-way.

B. Mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost. On sloping land, practice No. 3 below, should be done on the contour wherever possible. Applies to all straw and to wood chips or more critical sites, except "tracking" should be done up and down the slope with 1-1/2 inch cleat marks running across the slope.

1. Peg and Twine - Drive 8 to 10-inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross within a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings - Staple lightweight biodegradable paper, plastic or cotton nettings over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4 feet wide and up to 300 feet long.

3. Mulch Anchoring Tool - A tractor drawn implement designed to punch and anchor mulch into the surface 2 inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. Tracking - primarily used on > 3:1 cut and fill slopes to cut the mulch into the soil with bulldozer cleats.

4. Liquid Mulch Binders

Applications of liquid binders should be heavier at edges where wind catches mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance. Caution should be used with asphalt in residential and similar areas.

a. Cutback asphalt - rapid curing (RC-70, RC-250, and RC-800) or medium curing (MC-250 or MC-800). Apply 5 gallons per 1,000 sq. ft. or 200 gallons per acre on flat areas, and on slopes less than 8 feet high. On slopes 8 feet or more high, use 8 gallons per 1,000 sq. ft. or 348 gallons per acre.

b. Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, and CRS-2). Apply 5 gallons per 1,000 sq. ft. or 200 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 feet or more high, use 8 gallons per 1,000 sq. ft. or 348 gallons per acre.

All asphalt designations are from the Asphalt Institute Specifications.

c. Synthetic binders - Synthetic binders such as Curasol, DCA-70, Petroset and Terra Tack may be used at rates recommended by the manufacturer to anchor mulch material.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

VI. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth until they are firmly established, if feasible. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

VII. Maintenance

Maintenance is a vital factor in maintaining an adequate vegetative erosion control cover. See Table 51-2.

A. Irrigation - If soil moisture becomes deficient, irrigate to prevent loss of stand of protective vegetation, if feasible.

B. Repairs - Inspect all seed areas for failures and make necessary repairs, replacements, and reseedings within the planting season, if possible.

1. If stand is inadequate for erosion control, overseed and fertilize using half of the rates originally applied.

2. If stand is over 60% damaged, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendations.

TABLE 51-1
Permanent Seedings and Seeding Dates,

Mix. No.	SEEDING MIXTURES (Use Certified Seed if available)	SEEDING RATE Lbs/ Acre	Lbs/1000 Sq. Ft.	OPTIMUM SEEDING DATES (a) COASTAL PLAIN 2/1-4/30	5/1-8/14	8/15-10/31	PIEDMONT 3/1-4/30	5/1-3/31	8/1-10/15	MOUNTAINS 3/5-5/31	6/1-7/31	8/1-9/30
1.	'Kentucky 31' Tall Fescue *	60	1.38	x	-	x	x	-	x	x	-	x
★ 2.	'Kentucky 31' Tall Fescue * Weeping lovegrass (a)	60 2	1.38 .05	-	x	-	-	x	-	-	x	-
3.	'Kentucky 31' Tall Fescue * 'Korean' lespedeza (b) inoculated	50 15	1.15 .34	x	-	-	x	-	-	-	-	-
4.	'Kentucky 31' Tall Fescue * Sericea lespedeza (b) inoculated	40 20	.92 .46	x	-	x	x	-	x	x	-	x
5.	'Kentucky 31' Tall Fescue * Birdsfoot trefoil, inoculated	40 10	.92 .23	-	-	-	-	-	-	x 2000' elev. & above	-	
6.	Crownvetch, inoculated Redtop	15 3	.34 .07	x	-	-	x	-		x	-	
7.	Crownvetch, inoculated 'Kentucky 31' Tall Fescue *	15 40	.46 .92	x	-		x	-		x	-	
8.	Droughty Areas 'Kentucky 31' Tall Fescue * Redtop	30 5	.69 .11	x	-	x	x	-	x	x	-	x
9.	Weeping lovegrass Sericea lespedeza (b) inoculated	2 20	.05 .46	x	x	-	x	x	-	x	x	-
10.	Poorly Drained Areas 'Kentucky 31' Tall Fescue *	30	.69	x	-	x	x	-	x	x	-	x
11.	Reed canarygrass (c)	10	.23									
12.	Shaded Areas 'Kentucky 31' Tall Fescue *	60	1.38	x	-	x	x	-	x	x	-	x
13.	Red Fescue 'Jamestown' or 'Pennlawn'	40	.92	x	-	x	x	-	x	x	-	x
14.	Lawns & High Maintenance Areas 'Merion' Kentucky Bluegrass * Common Kentucky Bluegrass* (d) Red Fescue, 'Pennlawn' or 'Jamestown'	40 40 20	.92 .92 .46	x	-	x	x	-	x	x	-	x
15.	'Kentucky 31' Tall Fescue (e)	[illegible]	[illegible]	x	x (f)	x	x	x (f)	x	x	x (f)	x

* [illegible]

★ USE SEEDING MIXTURE NO. 2 FOR PERMANENT SEEDING ON THIS PROJECT.

STANDARD AND SPECIFICATIONS

FOR

CRITICAL AREA STABILIZATION
(With Mulching Only)

Definition

Applying plant residues or other suitable materials not produced on the site to the soil surface.

Purpose

To conserve moisture; prevent surface compaction or crusting; reduce runoff and erosion; control weeds; and help establish plant cover.

Conditions Where Practice Applies

On graded or cleared areas (not to finished condition) which are subject to erosion for 6 months or less; where seedings may not have a suitable growing season to produce an erosion retardant cover, but which can be stabilized with a mulch cover.

SPECIFICATIONS

I. Site Preparation

A. Prior to mulching, install needed erosion control practices such as diversions, grade stabilization structures, berms, dikes, level spreaders, grassed waterways and sediment basins.

B. Final grading is not required prior to mulching. However, mulching may be applied after final grade is reached.

II. Mulching

A. Materials and Amounts

1. Straw - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds per 1,000 sq. ft. Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds which are: Canada thistle, Johnsongrass and quackgrass.

Spread uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 sq. ft. section and place 70-90 lbs. of mulch in each section.

2. Asphalt emulsion or cutback asphalt at 600 to 1,200 gallons per acre. This is suitable for a limited period of time where travel by people, animals or machines is not a problem.

3. Synthetic soil stabilizers may be used according to manufacturers recommendations--under suitable conditions.

4. Mulch nettings such as jute or excelsior blanket may be used. Staple to surface in waterways and on steep slopes. Lighter materials of paper, plastic and cotton mulch nettings may be used where erosion hazard is not severe. If area is to be mowed do not use metal staples.

5. Wood chips at the rate of approximately 6 tons per acre or 275 lbs. per 1,000 sq. ft. may be used when available and when feasible to use.

6. Crushed rock, stones, gravel or shale blankets. Apply at rate of 20 to 100 tons per acre or 900 to 4,500 lbs. per 1,000 sq. ft. with coarsest material applied at the highest rate.

B. Mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost. On sloping land, practice No. 3 below, should be done on the contour wherever possible. Applies to straw and to wood chips on more critical sites, except "tracking" should be done up and down the slope with 1-1/2" cleats making grooves across the slope.

1. Peg and Twine - Drive 8 to 10-inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross within a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings - Staple lightweight biodegradable paper, plastic or cotton netting over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4 feet wide and up to 300 feet long.

3. Mulch Anchoring Tool - (not a disc) - A tractor drawn implement designed to punch and anchor mulch into the surface 2 inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely, primarily used on steeper than 3:1 cut and fill slopes to cut the mulch into the soil with bulldozer cleats.

4. Liquid Mulch Binders

Applications of liquid binders should be heavier at edges where wind catches mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance. Caution should be used with asphalt in residential and similar areas.

a. Cutback asphalt - rapid curing (RC-70, RC-250 and RC-800) or medium curing (MC-250 or MC-800). Apply 5 gallons per 1,000 sq. ft. or 200 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 feet or more high, use 8 gallons per 1,000 sq. ft. or 348 gallons per acre.

b. Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, and CRS-2). Apply 5 gallons per 1,000 sq. ft. or 200 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 ft. or more high, use 8 gallons per 1,000 square feet or 348 gallons per acre.

All asphalt designations are from the Asphalt Institute Specifications.

c. Synthetic binders - Synthetic binders such as Curasol, DCA-70, Petroset and Terra Tack may be used at rates recommended by the manufacturer to anchor mulch material.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAIN SYSTEMS & ROAD
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 4-2-84
DIRECTOR DATE

[signature] 4-2-84
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

[signature] 4-5-84
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE PLANNING & ZONING

[signature] 4-6-84
PLANNING DIRECTOR DATE

[signature] 4-?-84
CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION DATE

STANDARD AND SPECIFICATIONS

FOR

CRITICAL AREA STABILIZATION
(With Sod)

Definition

Stabilizing silt-producing areas by establishing long-term stands of grass with sod.

Purpose

To stabilize the soil; reduce damage from sediment and runoff to downstream areas; enhance natural beauty.

Conditions Where Practice Applies

On exposed soils that have a potential for causing off-site environmental damage where a quick vegetative cover is desired; on sites which can be maintained with ground equipment. (2:1 or flatter slopes)

SPECIFICATIONS

1. Class of turfgrass sod shall be Maryland or Virginia State Certified, or Maryland or Virginia State approved sod.

2. Sod shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness shall exclude top growth and thatch.

3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10% of the section.

4. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5%. Broken pads and torn or uneven ends will not be acceptable.

5. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

6. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved by the contracting officer or his designated representative prior to its installation.

I. Site Preparation

Fertilizer and lime application rates shall be determined by soil tests. Under unusual circumstances where there is insufficient time for a complete soil test and the contracting officer agrees, fertilizer and lime materials may be applied in amounts shown under B. and C., below.

A. Prior to sodding, the surface shall be cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.

B. Where the soil is acid or composed of heavy clays, ground limestone shall be spread at the rate of 100 pounds per 1,000 square feet. In all soils 30 pounds of 5-10-5, or equivalent, per 1,000 square feet shall be uniformly applied and mixed into the top 3 inches of soil with the required lime.

C. Slow release nitrogen at the rate of 3.5 lbs. N/1000 square feet shall be applied to the prepared soil just prior to sod installation. This material shall be approximately 1/3 immediately available and 2/3 water insoluble nitrogen. Urea formaldehyde (UF) and isobutylidene urea (IBDU) meet these standards.

II. Sod Installation

A. During periods of excessively high temperature the soil shall be lightly irrigated immediately prior to laying the sod.

B. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Insure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.

C. On sloping areas where erosion may be a problem, sod shall be laid with the long edges parallel to the contour and with staggered joints. Secure the sod by tamping and pegging or other approved methods.

D. As sodding is completed in any one section, the entire area shall be rolled or tamped to insure solid contact of roots with the soil surface. Sod shall be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 1-27-83
[signature]

☆ TEMPORARY SEEDING FOR THIS PROJECT SHALL BE ONE OF THESE, DEPENDING ON TIME OF YEAR SEEDING IS DONE.

TABLE 50-1

Temporary Seedings by Rates, Depths and Dates

Species 3/	Seeding Rate Per Acre	Lbs/1000 sq. ft.	Planting Depth 2/ (Inches)	Seeding Dates 6/ COASTAL PLAIN 2/1-4/30	5/1-8/14	8/15-11/30	PIEDMONT 3/1-4/30	5/1-8/14	8/15-11/15	MOUNTAINS 3/15-5/31	6/1-7/31	8/1-10/31
☆ Choose one:				5/			5/					
Barley	2-1/2 bu.	2.8	1-2	x	-	By 10/15	x	-	By 10/15	x	-	By 10/1
Oats	3 bu.	2.2	1-2	x	-	-	x	-	-	x	-	-
Rye	2-1/2 bu.	3.2	1-2	x	-	x	x	-	x	x	-	x
~~Italian or perennial ryegrass 1/~~	~~40 lbs.~~	~~.92~~	~~1/4-1/2~~	~~5/ x~~	~~-~~	~~By 11/1~~	~~5/ x~~		~~By 11/1~~	~~x~~		~~By 8/15~~
~~Millet~~	~~40 lbs.~~	~~.92~~	~~1-2~~		~~x~~			~~x~~			~~x~~	
☆ Weeping, Boer, or Lehmann's lovegrass	3 lbs.	.07	1/4-1/2	-	x	-	-	x	-	-	x	-
~~Sudangrass 4/~~	~~40 lbs.~~	~~.92~~	~~1-2~~	~~-~~	~~x~~	~~-~~	~~-~~	~~x~~	~~-~~	~~-~~	~~x~~	~~-~~

1/ Use only on areas where seed stalks and volunteer growth are acceptable.

2/ Applicable on slopes 3:1 or less.

3/ Use varieties currently recommended for Maryland. Use certified seed when available.

4/ Use common sudangrass varieties only. Do not use hybrids.

5/ Twenty pounds per acre of annual lespedeza may be added to 1/2 the seeding rate of any species used for spring seedings.

6/ Between fall and spring seeding dates, use mulching only or sodding practices

x Applicable during entire period.

\- Not applicable in period.

REVIEW FOR:
HOWARD S.C.D.
NAME
AND MEETS TECHNICAL REQUIREMENTS
[signature] 3-12-84
U.S. SOIL CONSERVATION SERVICE DATE

STANDARD AND SPECIFICATIONS

FOR

CRITICAL AREA STABILIZATION
(With Temporary Seeding)

Definition

Planting short-term vegetation on critical areas.

Purpose

To stabilize the soil; to reduce damages from sediment and runoff to downstream areas; improve wildlife habitat; enhance natural beauty.

Conditions Where Practice Applies

On graded or cleared areas which are subject to erosion for a year or less; permanent structures are to be installed or extensive grading of the area will be done prior to establishment of permanent vegetation.

SPECIFICATIONS

I. Site Preparation

A. Prior to seeding, install needed erosion control practices such as diversions, grade stabilization structures, berms, dikes, level spreaders, grassed waterways, and sediment basins.

B. Final grading and shaping has usually not been completed for temporary seedings.

II. Soil Amendments

For temporary seedings, fertilizer shall be applied at the rate of 600 lbs/ac. or 15 lbs/1000 sq. ft., using 10-20-10 or equivalent. Soils which are known to be highly acid should be limed.

III. Seedbed Preparation

When the area to be seeded has been recently loosened to the extent that an adequate seedbed exists, no additional treatment is required.

However, when the area to be seeded is packed, crusted, and hard, the top layer of soil shall be loosened by discing, raking or other acceptable means before seeding.

IV. Seeding

A. Select a mixture from Table 50-1.

B. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed and fertilizer).

V. Mulching

When seedings are made on critical sites or adverse soil conditions, other than optimum seeding dates, mulch material will be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soils and site conditions will not need to be mulched.

A. Materials and Amounts

1. Straw - Material shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds per 1,000 sq. ft. Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds which are: Canada thistle, Johnsongrass and quackgrass.

Spread uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 sq. ft. section and place 70-90 lbs. of mulch in each section..

2. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre or 35 pounds per 1,000 sq. ft. may be applied by hydroseeding. Use is limited to <3% and <150' length of slope and during optimum seeding periods in spring and fall.

3. Mulch nettings such as jute or excelsior blanket may be used. Staple to surface in waterways and on steep slopes. Lighter materials of paper, plastic and cotton mulch nettings may be used where erosion hazard is not severe. If area is to be mowed, do not use metal staples.

4. Wood chips at the rate of approximately 6 tons per acre or 275 lbs. per 1,000 sq. ft. may be used when available and when feasible to use.

B. Mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost. On sloping land, practice No. 3 below, should be done on the contour wherever possible, except "tracking" should be done up and down the slope with 1-1/2 inch cleat marks running across the slope.

1. Peg and Twine - Drive 8 to 10-inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross within a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings - Staple lightweight biodegradable paper, plastic or cotton nettings over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4 feet wide and up to 300 feet long.

3. Mulch Anchoring Tool (not a disc) - A tractor drawn implement designed to punch and anchor mulch into the surface 2 inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. Tracking - primarily used on steeper than 3:1 cut and fill slopes to cut the mulch into the soil with cleated bulldozer tracks.

4. Liquid Mulch Binders
Applications of liquid binders should be heavier at edges where wind catches mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance. Caution should be used with asphalt in residential and similar areas.

a. Cutback asphalt - rapid curing (RC-70, RC-250, and RC-800) or medium curing (MC-250 or MC-800). Apply 5 gallons per 1,000 sq. ft. or 218 gallons per acre on flat areas, and on slopes less than 8 feet high. On slopes 8 feet or more high, use 8 gallons per 1,000 sq. ft. or 348 gallons per acre.

b. Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, and CRS-2). Apply 5 gallons per 1,000 sq. ft. or 218 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 ft. or more high, use 8 gallons per 1,000 sq. ft. or 348 gallons per acre.

All asphalt designations are from the Asphalt Institute Specifications.

c. Synthetic binders - Synthetic binders such as Curasol, DCA-70, Petroset and Terra Tack may be used at rates recommended by the manufacturer to anchor mulch material.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

[signature] 3-6-84

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

[signature] 3-9-84
HOWARD COUNTY, S.C.D. DATE

[signature] 10/22/82

warring associates
engineers · planners · surveyors

SEDIMENT CONTROL DETAIL SHEET

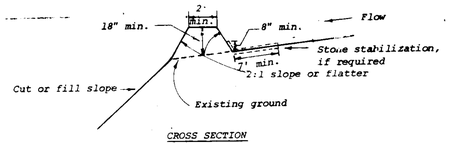
MAIER WAREHOUSES
MAIER INDUSTRIAL PARK
SECTION 1 PARCEL D-1

date: JULY '82

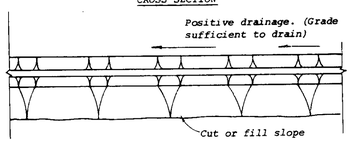
job number: 22-82

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 1-27-83

DIVERSION DIKE



CROSS SECTION



PLAN VIEW

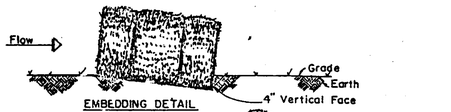
Construction Specifications.

1. All dikes shall be machine compacted.
2. All diversion dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized area shall outlet directly to an undisturbed stabilized area or into a level spreader or grade stabilization structure.
   B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, as specified by the plans, shall be: (1) in accordance with Standard and Specifications for Grassed Waterway, and the area to be stabilized shall be the channel (flow area); or (2) the flow area shall be lined with stone that meets MSHA size No. 2 or AASHTO M43 size No. 2 or 24 which is placed in a 3 inch thick layer and pressed into the soil. The area covered by the stone shall be as shown on the drawing above.
5. Periodic inspection and required maintenance shall be provided.

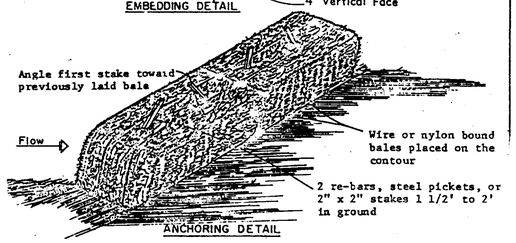
Standard Symbol — DD →

* Drainage area less than 5 acres

STRAW BALE DIKE



EMBEDDING DETAIL



ANCHORING DETAIL

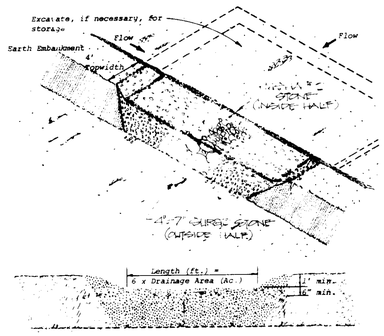
Construction Specifications

1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of 4" on one side.
3. Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
4. Inspection shall be frequent and repair or 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.

Standard Symbol — SBD —

* Drainage area less than 1/2 acre.

STONE OUTLET SEDIMENT TRAP



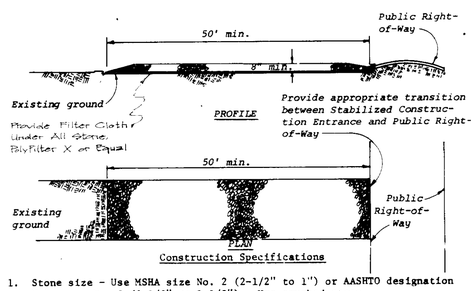
ELEVATION

Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or 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 while it is being constructed.
3. 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. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
4. The structure shall be inspected after each rain and repairs made as needed.
5. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
6. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
7. All cut and fill slopes shall be 2:1 or flatter.
8. The crushed stone used in the trap shall be MSHA #2 stone on the inside half and 4"-7" surge stone on the outside half.

* Drainage area less than 5 acres.

STABILIZED CONSTRUCTION ENTRANCE



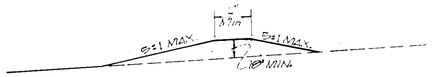
Construction Specifications

1. Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
2. Length - As effective, but not less than 50 feet.
3. Thickness - Not less than eight (8) inches.
4. Width - Not less than full width of all points of ingress or egress.
5. Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
6. 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.

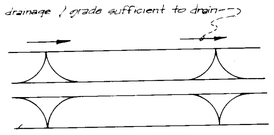
Standard Symbol — SCE —

SITE ANALYSIS: DISTURBED/IMPERVIOUS AREAS

DISTURBED AREA ON-SITE	=	136,320 ☐
DISTURBED AREA IN RIGHT OF-WAY	=	8,080 ☐
TOTAL DISTURBED AREA	=	144,428 ☐
PROP. ON-SITE IMPERVIOUS AREA	=	96,091 ☐
PROP. IMPERVIOUS AREA IN R/W		5,315 ☐
TOTAL PROP. IMPERVIOUS AREA		101,406 ☐
PROP. ON-SITE AREA TO BE STABILIZED W/VEGETATION	=	40,238 ☐
PROP. AREA IN R/W TO BE STABILIZED W/VEGETATION	=	2,784 ☐
TOTAL DISTURBED AREA TO BE STABILIZED W/VEGETATION	=	43,022 ☐



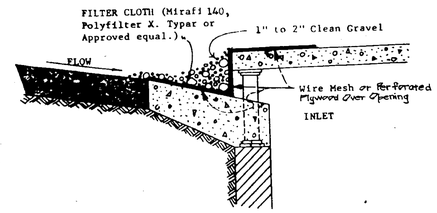
CROSS SECTION



PLAN VIEW

MOUNTABLE DIVERSION DIKE DETAIL

CURB INLET PROTECTION DETAIL



STATE OF MARYLAND
3-6-84

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAIN SYSTEMS & ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 4-2-84

CHIEF, BUREAU OF ENGINEERING — DATE 4-2-84

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

PLANNING DIRECTOR — DATE 4-6-84

CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION — DATE 4-18-84

REVIEW FOR:
Howard — S.C.D.
NAME
AND MEETS TECHNICAL REQUIRMENTS
U.S. SOIL CONSERVATION SERVICE — DATE 3-12-84

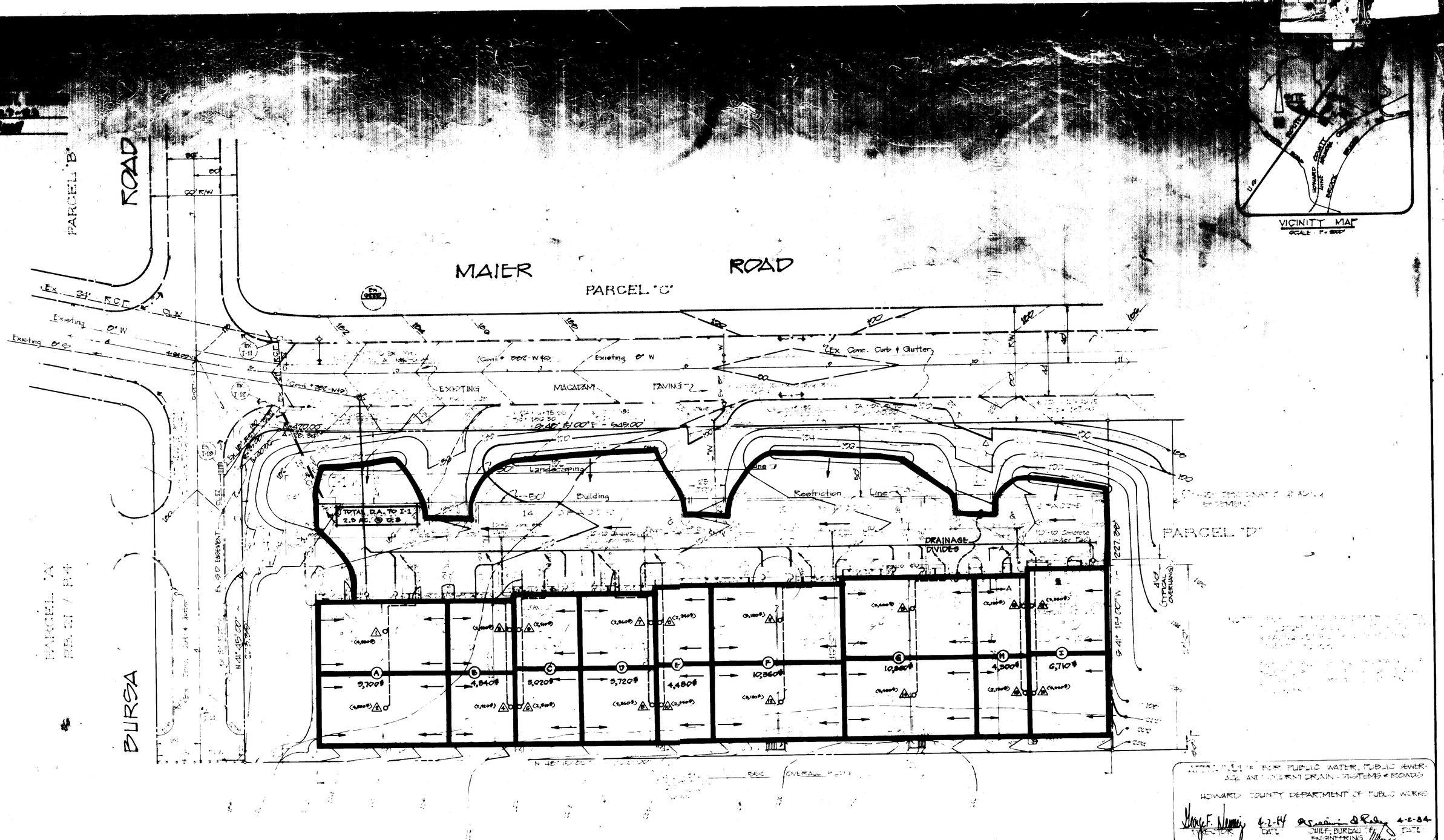
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD COUNTY S.C.D. — DATE 3-9-84

SEDIMENT CONTROL DETAIL SHEET

date: JULY '82

MAIER WAREHOUSE



FOR PUBLIC WATER, PUBLIC SEWER, A.D. AND STORM DRAIN SYSTEMS & ROADS

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE 4-2-84

CHIEF, BUREAU OF ENGINEERING — DATE 4-2-84

COUNTY COMMISSIONERS OF HOWARD COUNTY

PLAN SCALE : 1"=30'

STATE OF MARYLAND — WILLIAM A. JOYCE — REGISTERED PROFESSIONAL ENGINEER

3-6-84

APPROVED: For Public Water and Public Sewerage Systems

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER F.S. — DATE 4-5-84

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

PLANNING DIRECTOR — DATE 4-6-84

CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMIN. — DATE 4/6/84

OWNER: HOWARD CO. JOINT VENTURE
4700 ANNAPOLIS ROAD
BLADENSBURG, MD. 20710
301-927-8300

warring associates
engineers planners surveyors
[illegible] niagara road suite [illegible]
college park maryland [illegible]
345-0400
design [illegible] waj
draft [illegible] abj
check waj
approved: [illegible]

DRAINAGE AREA MAP

date JULY 1983

MAIER WAREHOUSES
MAIER INDUSTRIAL PARK
SECTION 1 PARCEL D-1
GUILFORD ELECTION DIST. # 6
HOWARD COUNTY, MARYLAND

TAX MAP NO. 47

C-7
7 OF 7

SDP-83-[illegible]

83-019-22[illegible]