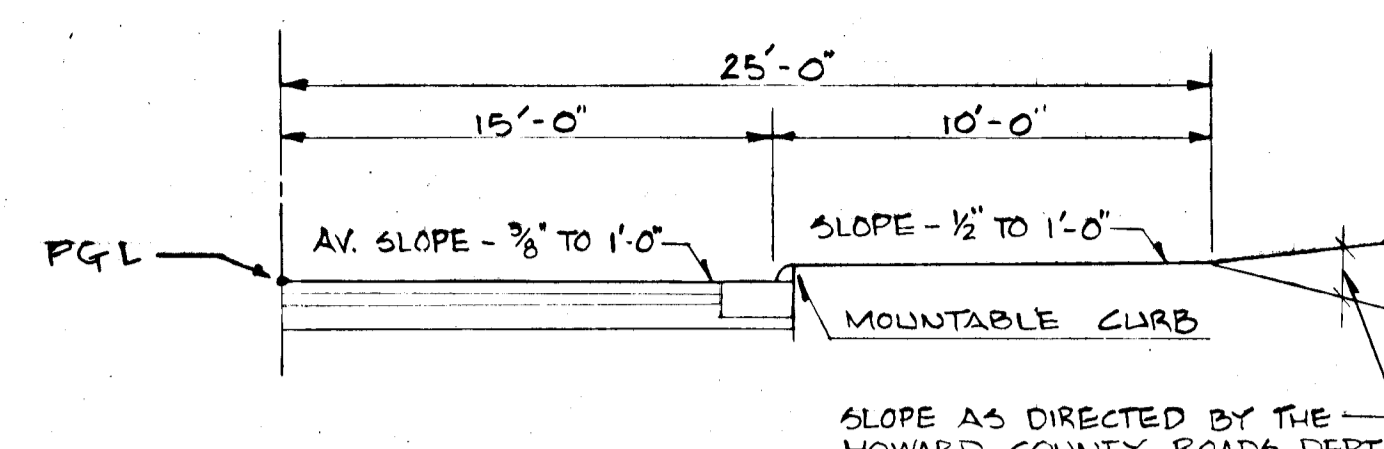
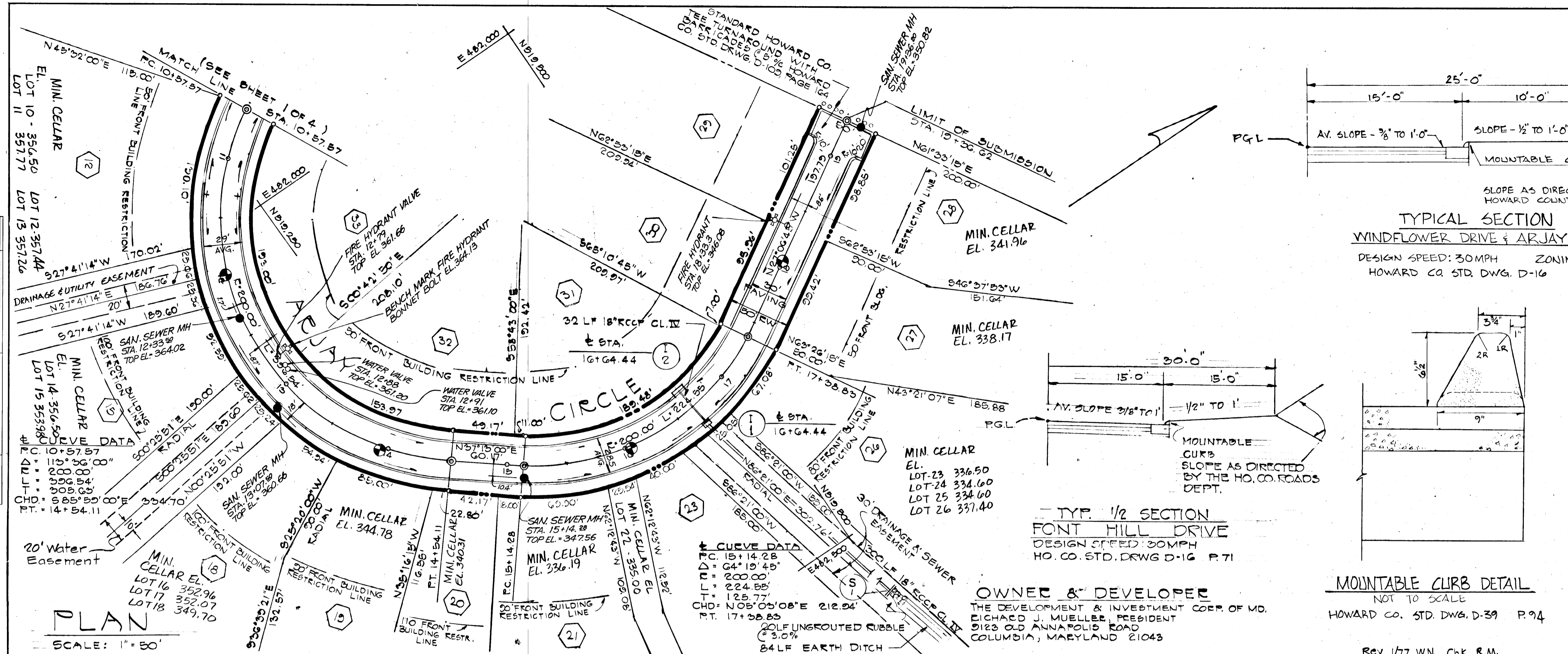
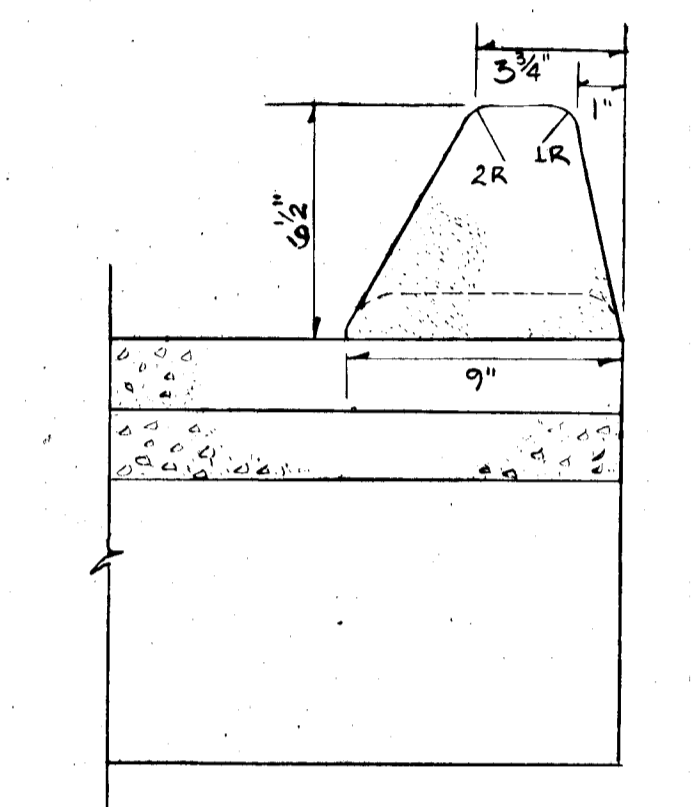


DATE	
BY	
REVIEWED	
PLANNED	
NOTED	
NO.	

DATE	
BY	
REVIEWED	
PLANNED	
NOTED	
NO.	



TYPICAL SECTION
 WINDFLOWER DRIVE & ARJAY CIRCLE
 DESIGN SPEED: 30MPH ZONING: R-20
 HOWARD CO. STD. DWG. D-16 P.71



MOUNTABLE CURB DETAIL
 NOT TO SCALE
 HOWARD CO. STD. DWG. D-39 P.74
 Rev. 1/77 WN - Chk. R.M.

BITUMINOUS CONCRETE SURFACE	1"	BAND C-3
BITUMINOUS CONCRETE BINDER	2 1/2"	BAND C-2
CRUSHER RUN BASE	7"	

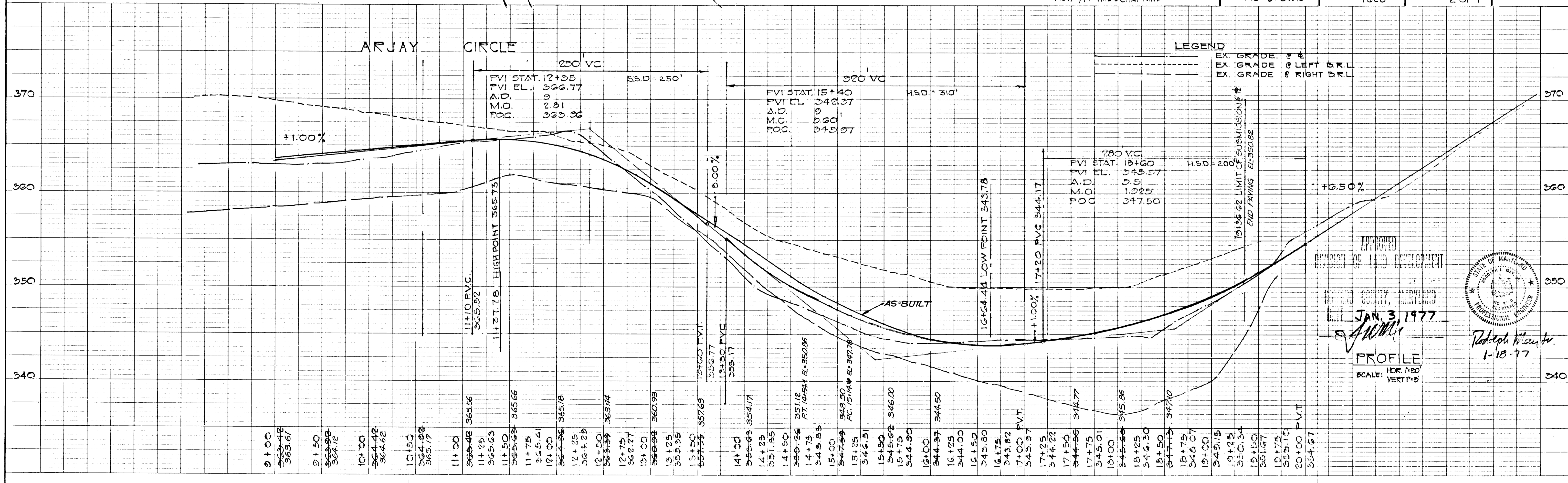
CLEARING & GRADING: ARTICLE C-1
 SUBGRADE: ARTICLE C-2
 BASE COURSE: ARTICLE C-25
 BINDER COURSE: ARTICLE C-31 OR C-33
 SURFACE COURSE: ARTICLE C-31

1. BASE WILL BE PRIMED IN ACCORDANCE WITH SECTION C-30-3 AS PROVIDED IN THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECS.
 2. TACK COAT IS REQUIRED IN ACCORDANCE WITH SECTION C-31-4 OF THE HOWARD COUNTY ROAD CONSTRUCTION CODE & STANDARD SPECS.

TYPICAL PAVING SECTION
 NOT TO SCALE
 HOWARD CO. STD. DWG. D-4 P.59

OWNER & DEVELOPER
 THE DEVELOPMENT & INVESTMENT CORP. OF MD.
 RICHARD J. MUELLE, PRESIDENT
 9123 OLD ANNAPOLIS ROAD
 COLUMBIA, MARYLAND 21043

DEPARTMENT OF PUBLIC WORKS	
Chief, Bureau of Highways	2/2/77 DATE
OFFICE OF PLANNING AND ZONING	
Chief, Division of Land Development and Transportation Planning	1-28-77 DATE
TITLE: STA. 10+57.57 TO STA. 9+36.22	
PROJECT: SECTION 15	
LOCATION: GWYNN ACRES	
ENGINEERING PLANNING SURVEYING BY: BOENDER ASSOCIATES INC.	
DATE: 5/10/76	DES. BY: TKS
DRAWN BY: TD	CHKD. BY: TG
SCALE: AS SHOWN	JOB NO. 7628
DRWG. NO.: 2 OF 7	



APPROVED
 DEPARTMENT OF LAND DEVELOPMENT
 HOWARD COUNTY, MARYLAND
 JAN. 3, 1977
 PROFILE
 SCALE: HOR. 1"=50'
 VERT. 1"=5'

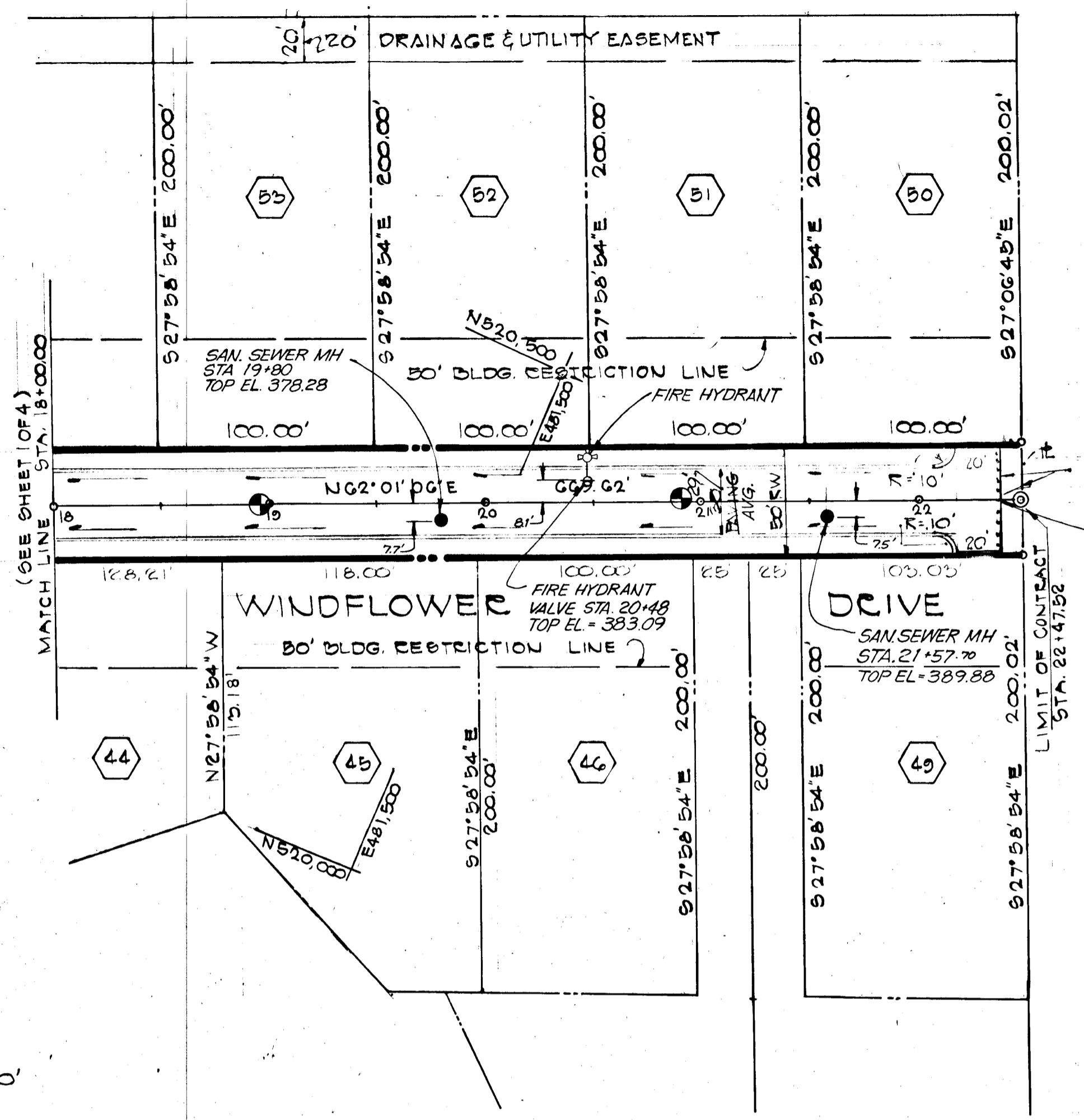


DATE: _____
 BY: _____
 SUPERVISED BY: _____
 NOTE BOOK NO. _____
 ALTERNATE CHECKED BY: _____
 FT. OF WAY CHECKED BY: _____
 NO. _____

DATE: _____
 BY: _____
 SUPERVISED BY: _____
 NOTE BOOK NO. _____
 GRADES CHECKED BY: _____
 B. M. NOTED BY: _____
 STRUCTURE TOTALS CHECKED BY: _____

E481.000
 N820.000

PLAN
 SCALE: 1" = 50'



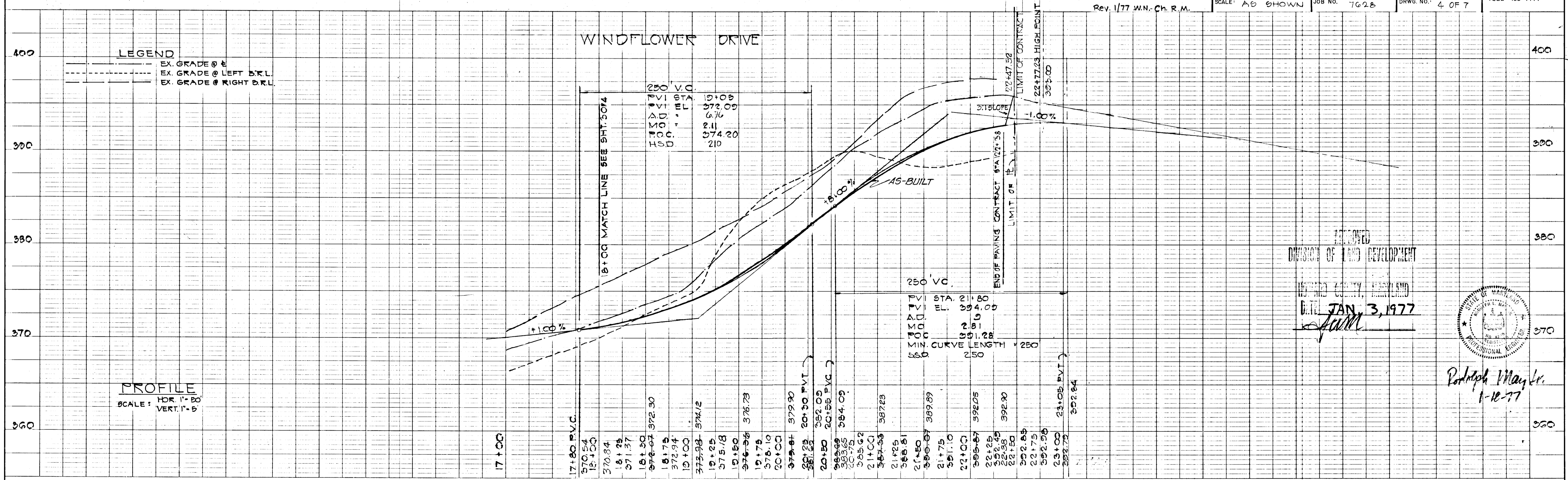
STANDARD HOWARD CO. TEE TURNAROUND WITH BARRICADES @ 5' 0" HOWARD CO. STD. DRAWG. D-100, PAGE 104.
 END PAVING @ STA. 22+38

OWNER & DEVELOPER
 THE DEVELOPMENT & INVESTMENT CORP. OF MD.
 71 RICHARD J. MUELLER, PRESIDENT
 9123 OLD ANNAPOLIS ROAD
 COLUMBIA, MD. 21045

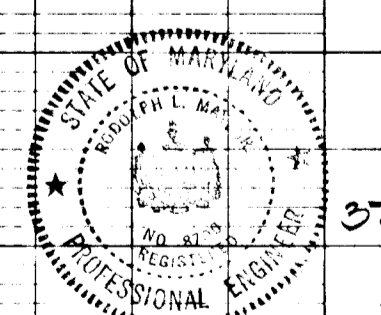
DEPARTMENT OF PUBLIC WORKS		2/2/77 DATE	
Grawville M. Mclelland CHIEF, BUREAU OF HIGHWAYS		1-28-77 DATE	
OFFICE OF PLANNING AND ZONING		DATE	
Shull Woodman CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING		DATE	
TITLE STA. 22+00 TO STA. 22+47.52 WINDFLOWER DRIVE		ENGINEERING PLANNING SURVEYING BY	
PROJECT SECTION 15 GWYNN ACES		BOENDER ASSOCIATES INC.	
LOCATION END ELECTION DISTRICT HOWARD CO., MD.		ELLICOTT CITY, MD. TELE 465-7777	
DATE: 5/20/76	DES. BY: TKS	DRAWN BY: TD	CHKD. BY: TB
SCALE: AS SHOWN	JOB NO. 7628	DRWG. NO.: 4 OF 7	

LEGEND
 --- EX. GRADE @ E
 - - - EX. GRADE @ LEFT S.K.L.
 - - - EX. GRADE @ RIGHT D.R.L.

PROFILE
 SCALE: HOR. 1" = 50'
 VERT. 1" = 5'

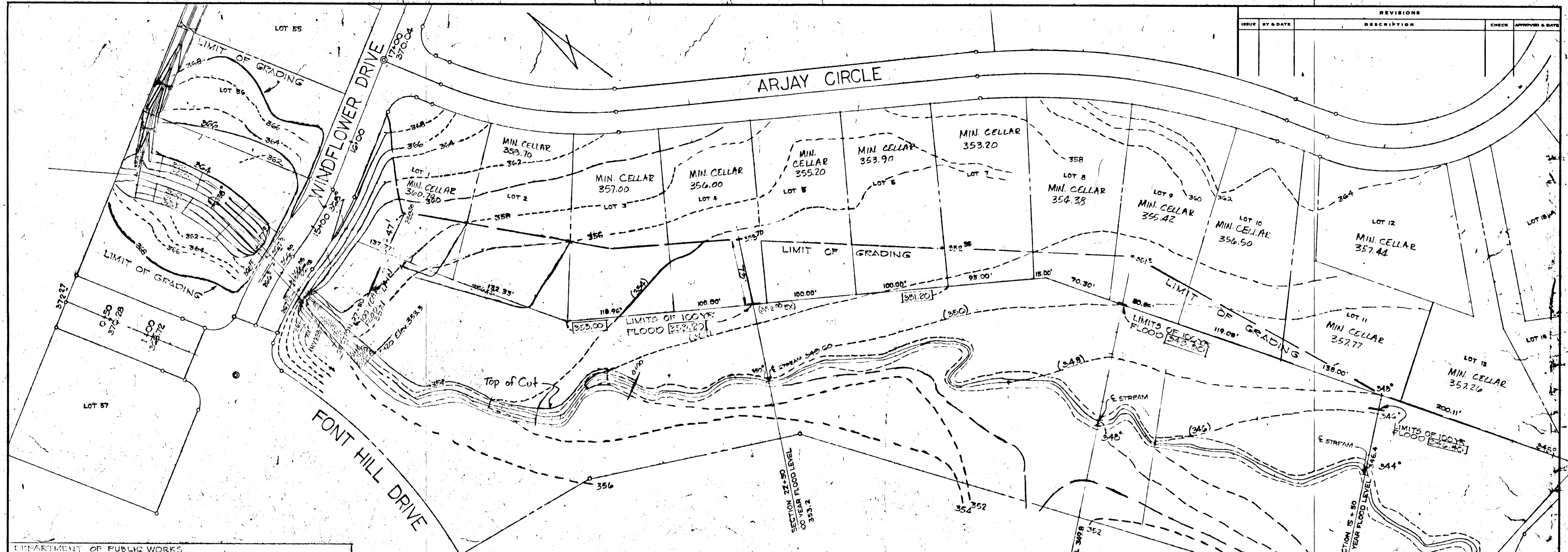


RECEIVED
 DIVISION OF LAND DEVELOPMENT
 HOWARD COUNTY, MARYLAND
 DATE JAN 3, 1977
[Signature]



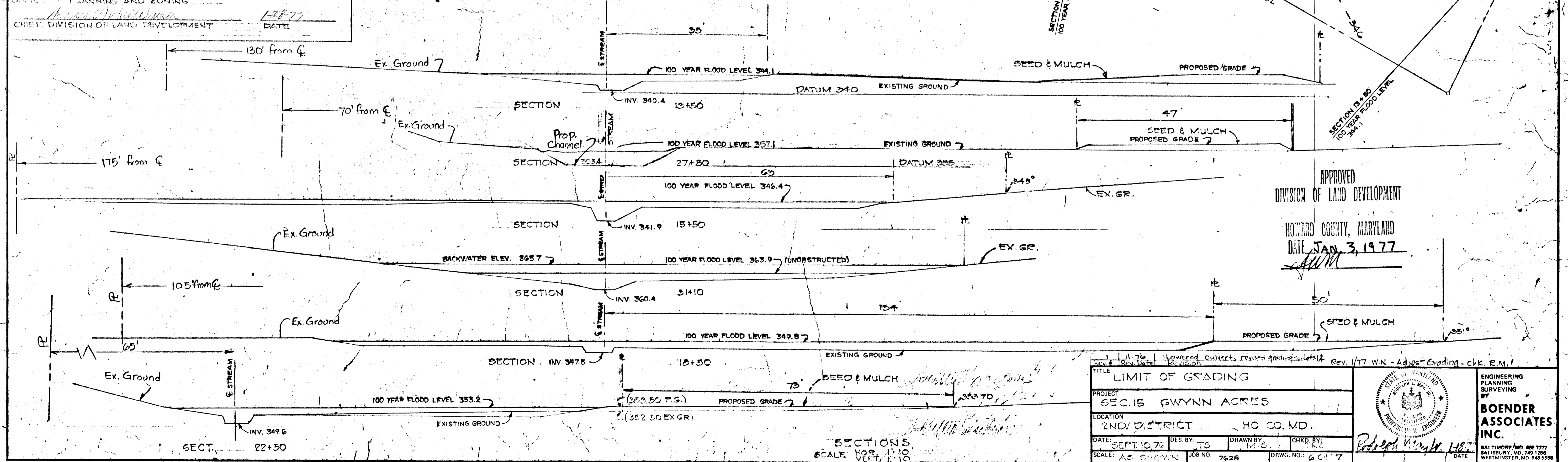
Randolph May Jr.
 1-12-77

REVISIONS	ISSUE	BY	DATE	DESCRIPTION	CHECK	APPROVED & DATE



DEPARTMENT OF PUBLIC WORKS
James M. Walden 2/2/77
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
James M. Walden 1-28-77
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

PLAN
 SCALE: 1"=50'



APPROVED
 DIVISION OF LAND DEVELOPMENT
 HOWARD COUNTY, MARYLAND
 DATE JAN 3, 1977
AWM

TITLE LIMIT OF GRADING		
PROJECT SEC. 15 GWYNN ACRES		
LOCATION 2ND DISTRICT HO CO. MD.		BOENDER ASSOCIATES INC. ENGINEERING PLANNING SURVEYING BALTIMORE, MD. 410-7777 SALISBURY, MD. 410-1288 WESTMINSTER, MD. 848-5528
DATE: SEPT 10, 76	DES. BY: TS	
SCALE: AS SHOWN	JOB NO. 7628	
DRAWN BY: M.S.	DRWG. NO.: 601-7	

AS-BUILT AUG. 10, 1979 P-76-91

LOTS 56-50 SOD CHANNEL COMPS @ EACH DITCH TRANSITION (n.-0.25)

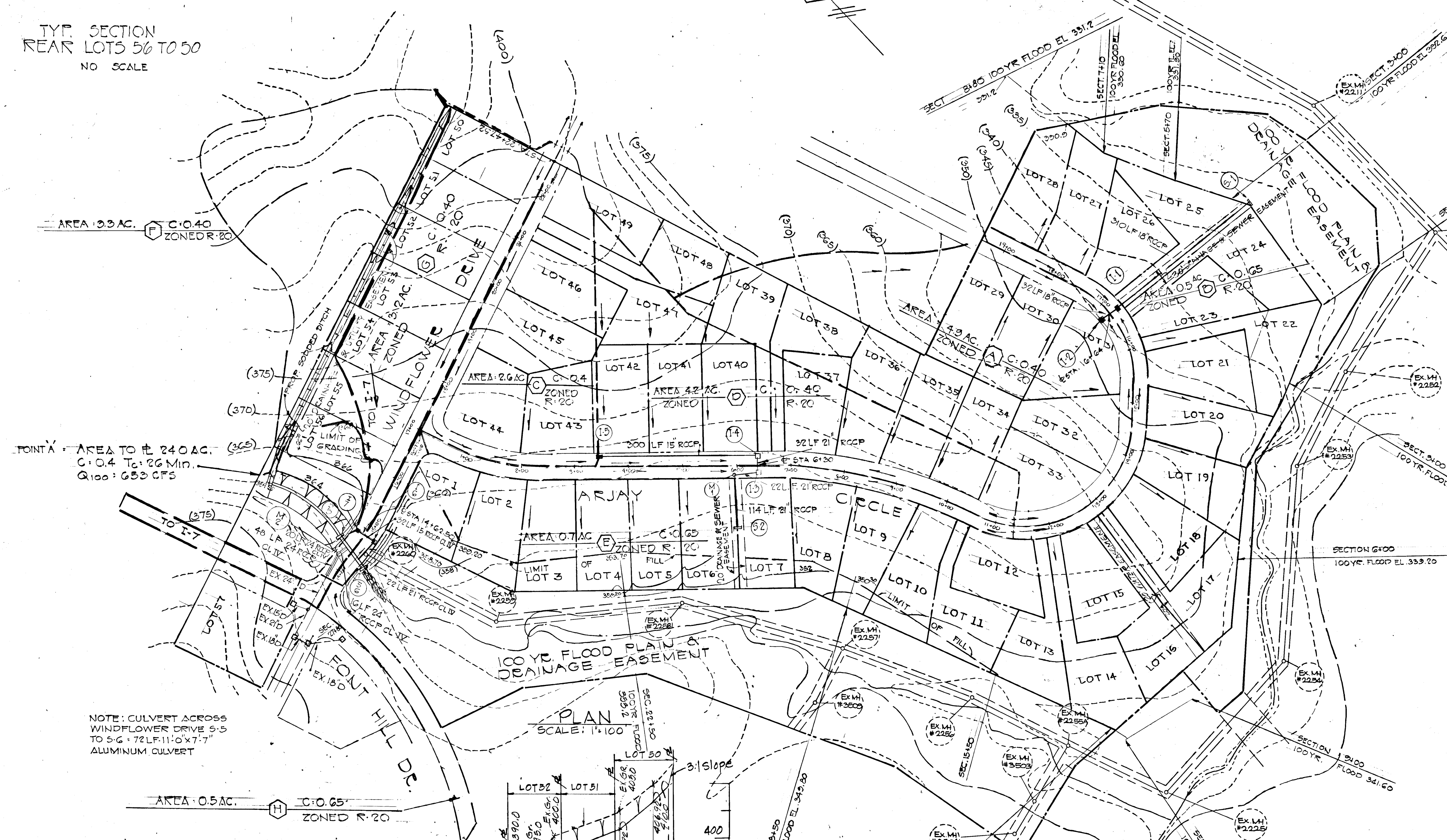
LOT #'S	Station	Slope	S _{1/2}	R	R ^{2/3}	V _A	A	Depth	Q _d	Q _{Req'd}
Flood Plain - lot 56	0+00 to 1+15	4.63%	0.22	0.32	0.46	4.37	1.68	0.40	7.22 cfs	6.99 f.s.
56 to 55	1+15 to 1+35	9.96%	0.32	0.27	0.41	5.37	1.37	0.34	7.63 "	6.99 "
55 to 54	1+35 to 2+10	6.66%	0.26	0.29	0.44	4.86	1.47	0.36	7.14 "	6.99 "
54 to 52	2+10 to 3+15	9.96%	0.32	0.27	0.41	5.57	1.37	0.34	7.63 "	6.99 "
52 to 51	3+15 to 4+72	2.89%	0.17	0.35	0.50	3.61	2.13	0.48	7.69 "	6.99 "
51 to 50	4+72 to 5+75	9.43%	0.31	0.27	0.41	5.40	1.37	0.34	7.59 "	6.99 "
50 to 50	5+75 to 6+75	9.96%	0.32	0.27	0.41	5.57	1.37	0.34	7.63 "	6.99 "
50 to 50	6+75 to 7+35	4.47%	0.21	0.33	0.47	3.99	1.97	0.451	7.86 "	6.99 "
50 to 50	7+35 to 7+72	9.96%	0.32	0.27	0.41	5.42	1.47	0.36	7.96 "	6.99 "

SOD/CHANNEL COVER

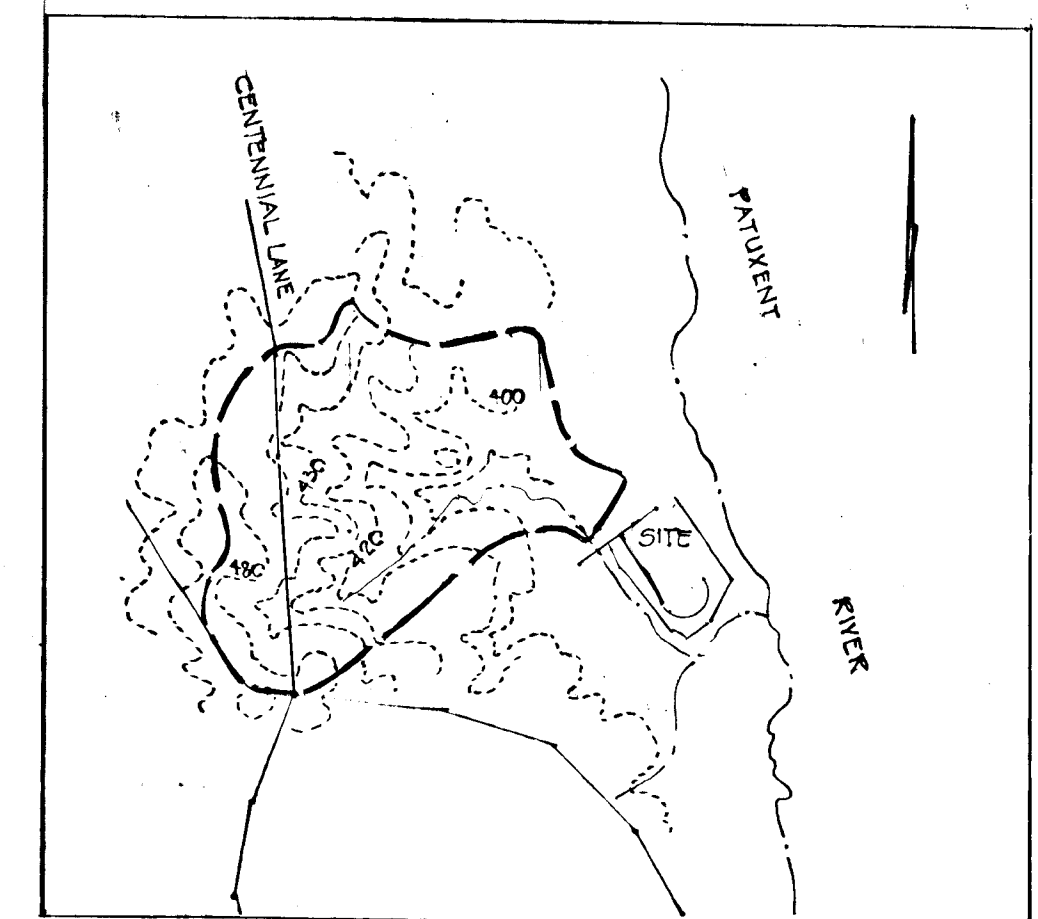
SOD/CHANNEL COVER	SLOPE RANGE *	PERMISSIBLE VELOCITY * (F.P.S.)
Buffalograss	0-5	7.0
KENTUCKY BLUEGRASS	5-10	6.0
Smooth Brome	Over 10	5.0

* Table 3: Handbook for Design for Open Channel Flow
U.S. Dept. of Transportation - Hydraulic Design Series No. 3

TYP. SECTION REAR LOTS 56 TO 50
NO SCALE



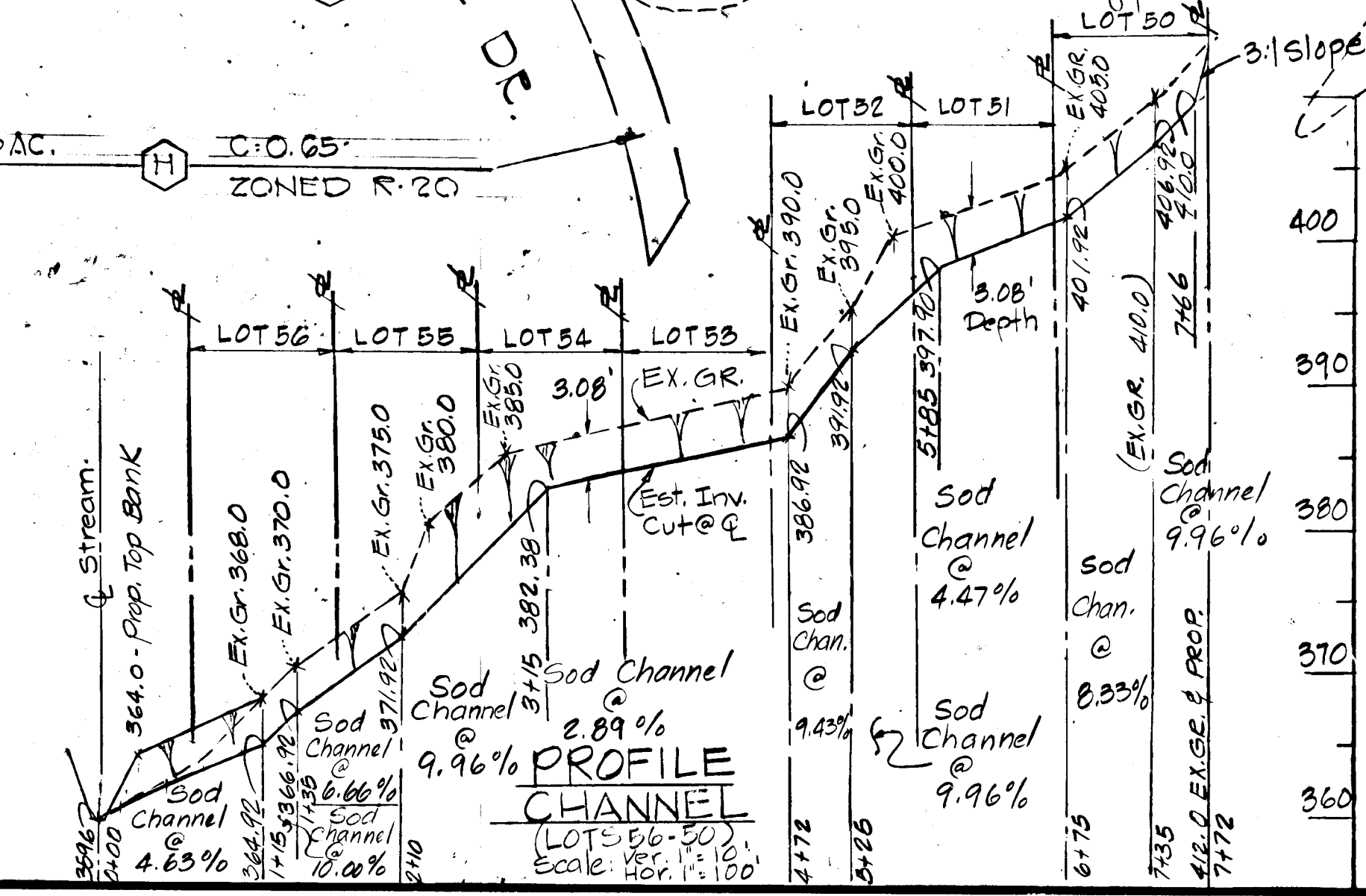
APPROVED
DIVISION OF LAND DEVELOPMENT
HOWARD COUNTY, MARYLAND
DATE **JAN 3 1977**



NOTE: CULVERT ACROSS WINDFLOWER DRIVE 5-5 TO 5-6 - 72 LF. 11" x 7" ALUMINUM CULVERT

PLAN SCALE: 1" = 100'

AREA: 0.5 AC. C.O. 0.5 ZONED R-20



DEPARTMENT OF PUBLIC WORKS
Granville W. McElwain 2/2/77
CHIEF, BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
William W. Swales 1-28-77
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

TITLE: DRAINAGE AREA MAP
PROJECT: SECTION 15 GWYNN ACRES
LOCATION: 2ND ELECTION DISTRICT HOWARD CO., MD.
DATE: 5/5/76 DES BY: TKS DRAWN BY: TD CHKD BY: TKS
SCALE: AS SHOWN JOB NO. 7628 DRWG. NO. 7 OF 7

ENGINEERING PLANNING SURVEYING BY: **BOENDER ASSOCIATES INC.**
ELLICOTT CITY, MD. TEL: 485-7777

DEVELOPER'S CERTIFICATION:

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OF THESE ACTIVITIES AUTHORIZED, AS ARE DEEMED NECESSARY.

Richard J. Keller 1/17/77
DEVELOPER DATE

ENGINEER'S CERTIFICATION:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert May Jr. 1-21-77
ENGINEER DATE

SEDIMENT CONTROL NOTES

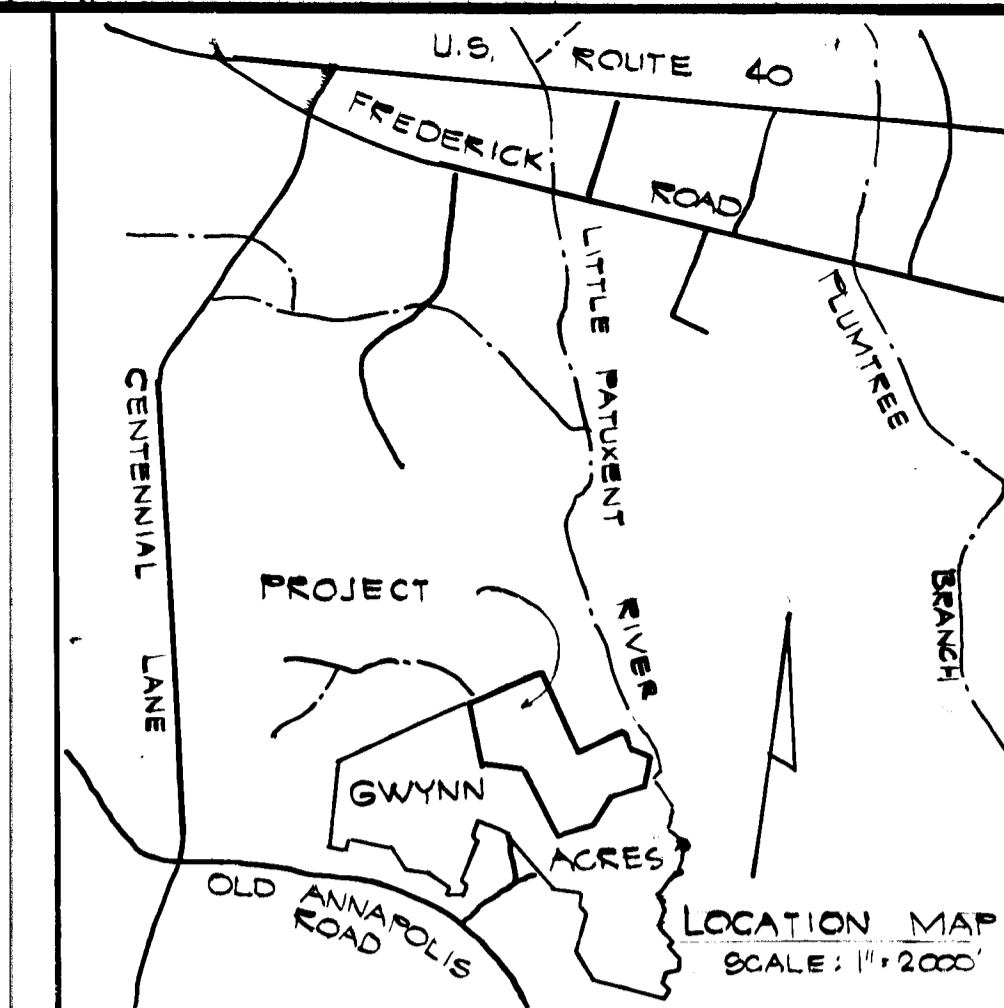
11. SODDING

SOD SHALL BE WELL ROOTED KENTUCKY BLUE GRASS SOD CONTAINING NOT MORE THAN 30% OF OTHER GRASSES NATIVE TO THE HOWARD COUNTY, MARYLAND AREA, AND NOT MORE THAN 5% CLOVER. IT MUST BE REASONABLY FREE OF FREEZE OR GRASSGRASS, ORCHARD GRASS, QUACK GRASS, TIMOTHY, PLANTAIN, DANDELION AND OTHER UNDESIRABLE GROWTH. THE SOD SHALL BE CUT IN STRIPS NOT MORE THAN 15 INCHES WIDE BY NOT MORE THAN 6 FEET LONG AND SHALL BE UNIFORMED 2-INCHES THICK. AFTER CUTTING, THE SOD SHALL BE IMMEDIATELY ROLLED WITH THE GRASS INSIDE AND SHALL BE KEPT MOISTENED TO PREVENT DRYING. SOD SHALL BE LAID WITH CLOSE TIGHT JOINTS ON A SMOOTH BED OF TOPSOIL 4" THICK THAT HAS BEEN ROLLED WITH A ROLLER WEIGHING 100 LBS PER FOOT OF ROLLER WIDTH AND LEVELLED UP WITH SCREENED TOPSOIL TO PREVENT VOIDS. AFTER THE SOD HAS BEEN LAID AND PEGGED, IT SHALL BE ROLLED AND THOROUGHLY WETTED.

1. THE H.S.C.D. AND BUREAU OF LICENSE, INSPECTION AND PERMITS WILL BE GIVEN 24 HOURS NOTICE TO ANY GRADING.
2. ALL SEDIMENT CONTROL STRUCTURES SHOWN ON THIS PLAN UNLESS OTHERWISE SPECIFIED, WILL BE INSTALLED AND STABILIZED IN ACCORDANCE WITH NOTE #9 PRIOR TO ANY GRADING OR EARTH DISTURBANCE ON THIS SITE.
3. AS SOON AS ROUGH GRADING IS COMPLETED, AREA TO BE PAVED WILL BE STABILIZED WITH DUNE MATERIAL.
4. ALL CUT AND FILL SLOPES WILL BE A MAXIMUM OF 2:1 SLOPE.
5. FOLLOWING THE STABILIZATION OF ALL AREAS, UPGRADE THE AREA OF THE SEDIMENT CONTROL MEASURES MAY BE REMOVED AND GRADED TO THE FINAL GRADES PLANNED AND STABILIZED IMMEDIATELY.
6. ELEVATIONS MARKED THUS (X) ARE FINISHED GRADES.
7. IN THE EVENT OF EXCESS OF MATERIAL, THE WASTE WILL BE STOCKPILED WITH A MAXIMUM 2:1 SLOPE ON AREA WHICH HAS BEEN STABILIZED IN ACCORDANCE WITH NOTE #9.
8. SEDIMENT CONTROL MEASURES WILL NOT BE REMOVED UNTIL APPROVAL IS OBTAINED FROM THE H.S.C.D.

9. TEMPORARY STABILIZATION:
APPLY: 2000 LBS./AC. OR 46 LBS./1000 SQ. FT. OF PULVERIZED DOLOMITIC LIMESTONE OR 200 LBS./AC. OR 11-9 LBS./1000 SQ. FT. OF 10-10 FERTILIZER, PLANT TO EYE GRASS @ 40 LBS./AC.
10. PERMANENT STABILIZATION:
APPLY: 2000 LBS./AC. OF PULVERIZED DOLOMITIC LIMESTONE OR 700 LBS./AC. OF 0-20-0 SUPER PHOSPHATE OR 200 LBS./AC. OF 10-10 FERTILIZER
SEED: 8 LBS./AC. OF KENTUCKY 31 TALL FESCUE OR 40 LBS./AC. OF KENTUCKY BLUE GRASS
NOTE: SEEDING MAY BE DONE BETWEEN MARCH 1 - MAY 1, OR AUGUST 1 - OCTOBER 1 ONLY.
MULCH: 2 TONS/AC. OF UNWEATHERED WHEATSTRAW, TIE MULCH DOWN W/40 GAL./AC. OF LIQUID ASPHALT.

PERMANENT STABILIZATION FOR SLOPES STEEPER THAN 2:1 TREATMENT WILL BE SAME AS NOTE 10, EXCEPT 40% OF KENTUCKY 31 TALL FESCUE/AC. AND 15% OF CROWN VETCH (INNOCULATED & SCARIFIED) WILL BE USED.

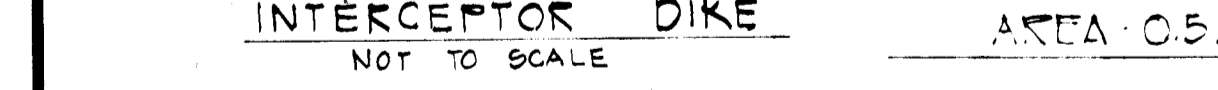
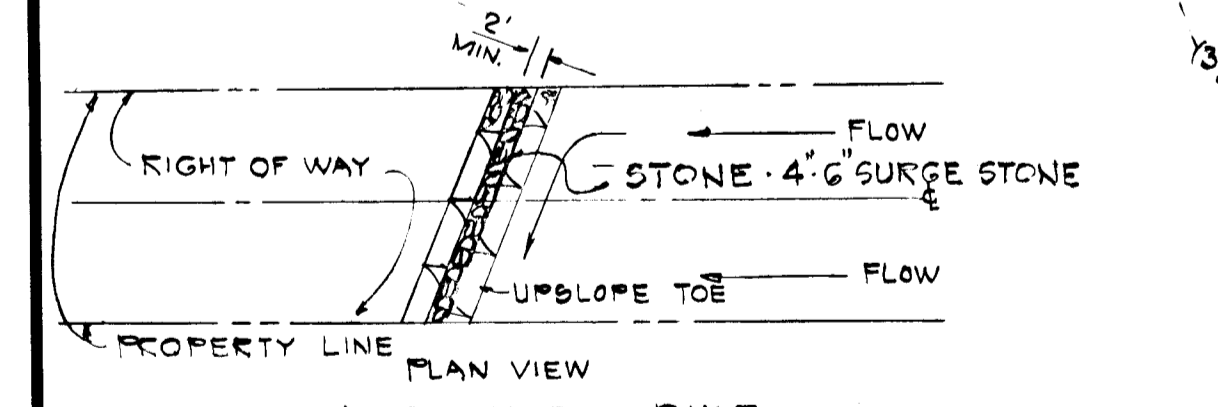
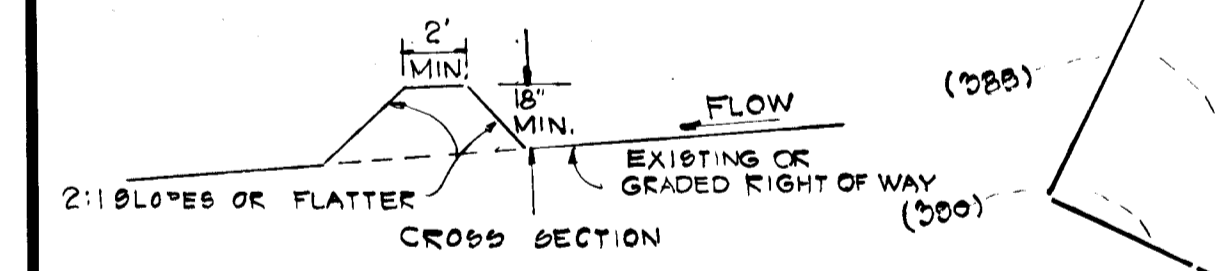
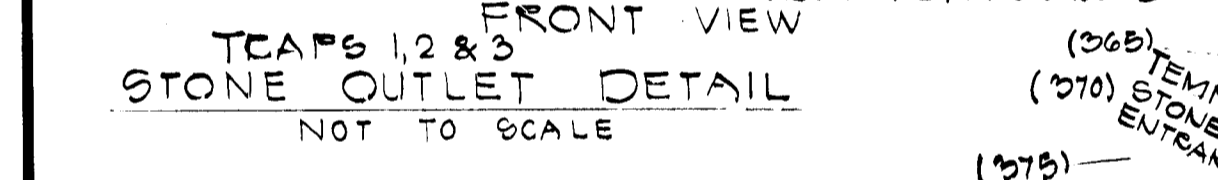
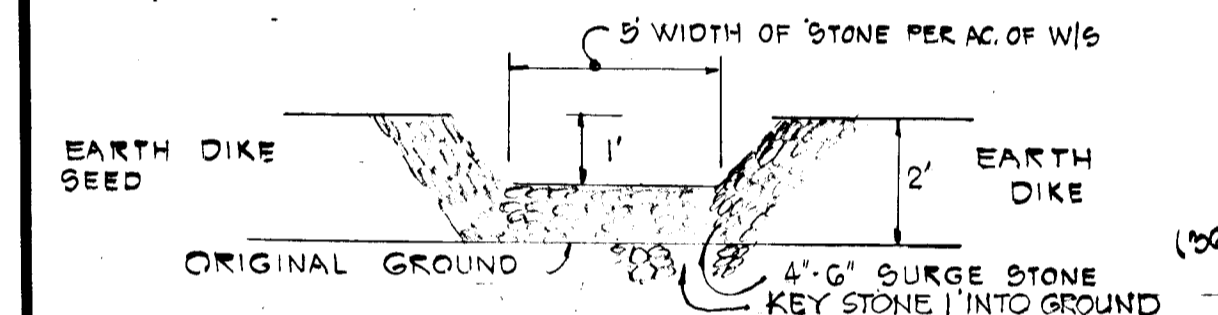
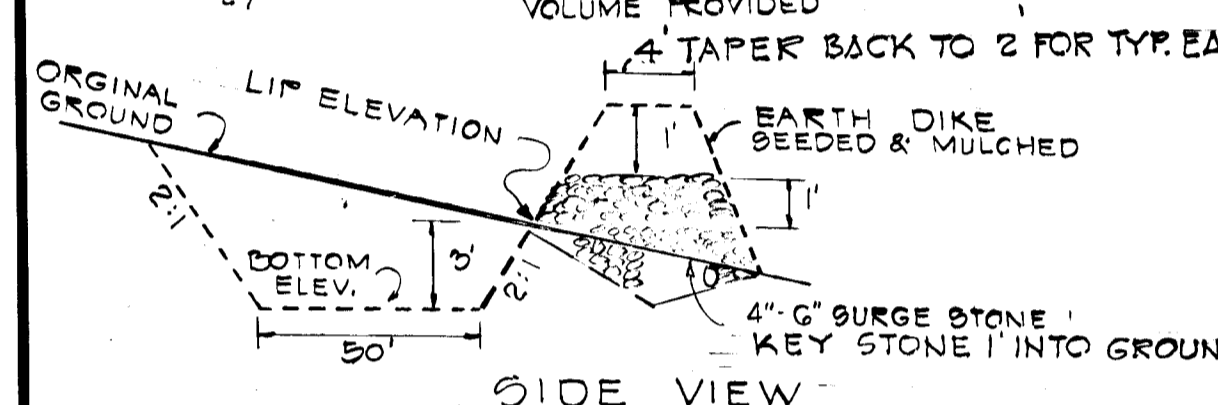


CUT & FILL ANALYSIS:

CUT: 9796 CU.YDS.
FILL: 8450 CU.YDS.

SOD SHALL BE LAID ON SLOPES OF 3:1. SOD SHALL BE LAID PARALLEL WITH THE CONTOUR AND EACH STRIP WILL BE PEGGED WITH AT LEAST TWO WOODEN PEGS. 18 INDIVIDUAL LOT GRADING ADDITIONAL SEDIMENT CONTROL MEASURES, IF REQUIRED, TO BE APPROVED BY S.C.D. PRIOR TO HOUSE CONSTRUCTION.

- DRAINAGE AREA**
- TRAP #1: 50 AC. X 7' = 350 CU.YDS. (VOL. REQUIRED)
 - TRAP #2: 50 AC. X 7' = 350 CU.YDS.
 - TRAP #3: 50 AC. X 7' = 350 CU.YDS.
 - TRAP #4: 50 AC. X 7' = 350 CU.YDS.
- 288.88 CU.YD. CAPACITY VOLUME PROVIDED

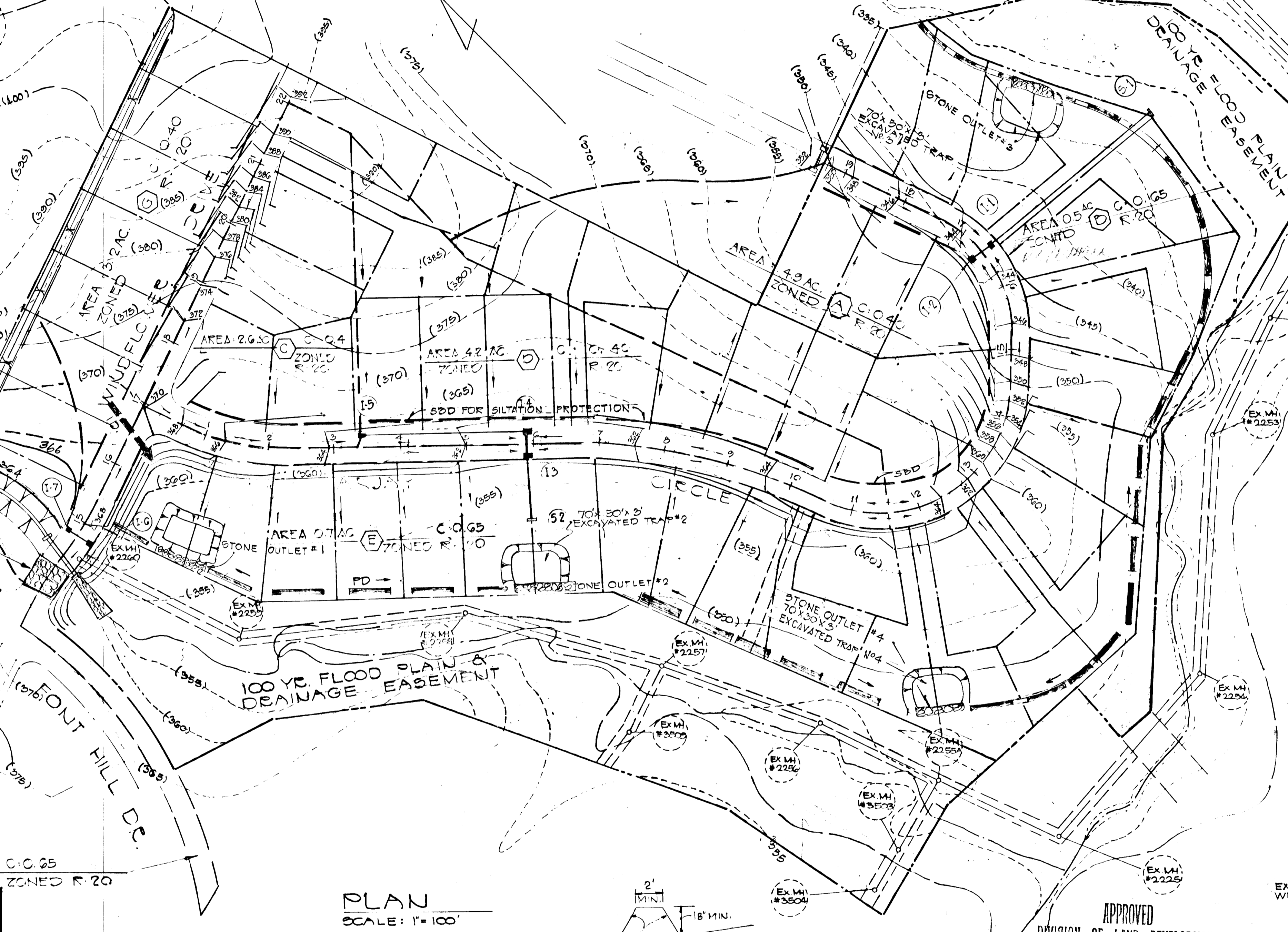


DEPARTMENT OF PUBLIC WORKS
Drayville H. Hebeard 2/2/77
CHIEF, BUREAU OF HIGHWAYS DATE

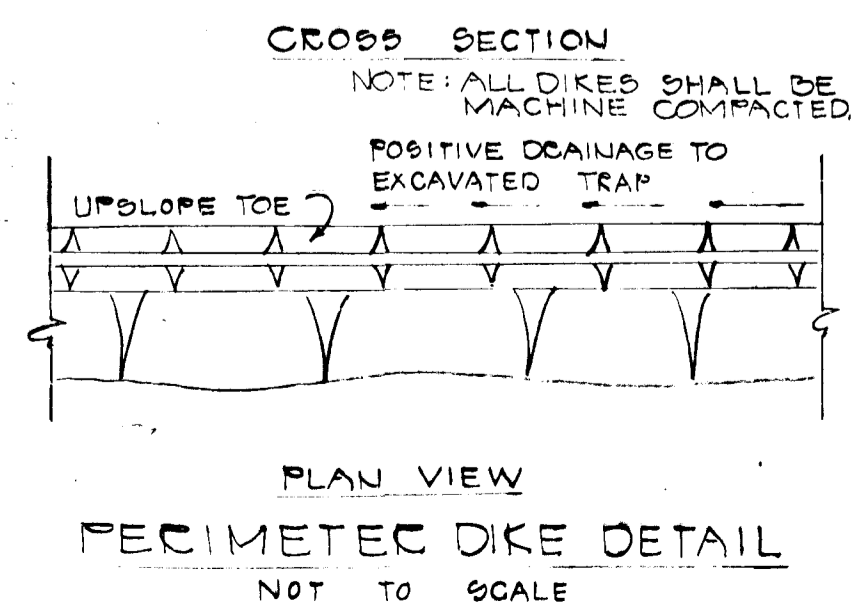
OFFICE OF PLANNING AND ZONING
Richard J. Keller 1-21-77
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
Eric V. Herman 1/24/77
U.S. SOIL CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert May Jr. 1/24/77
HOWARD SOIL CONSERVATION SERVICE DATE

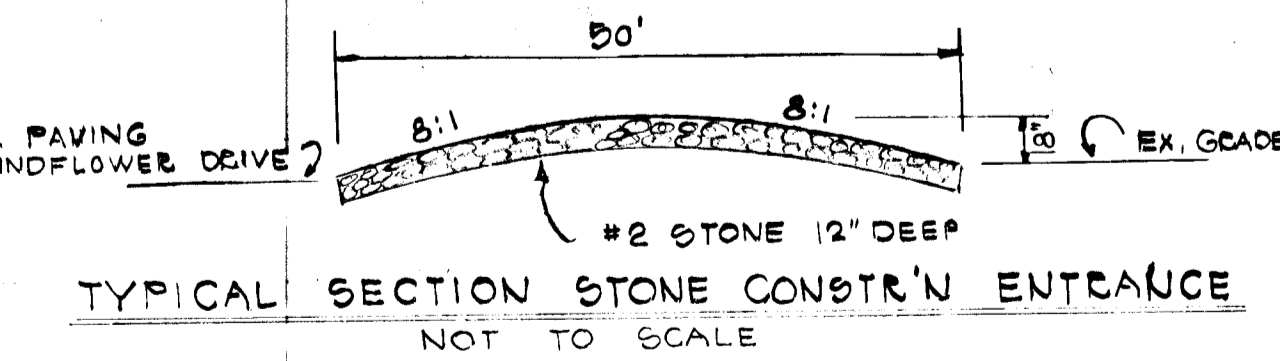
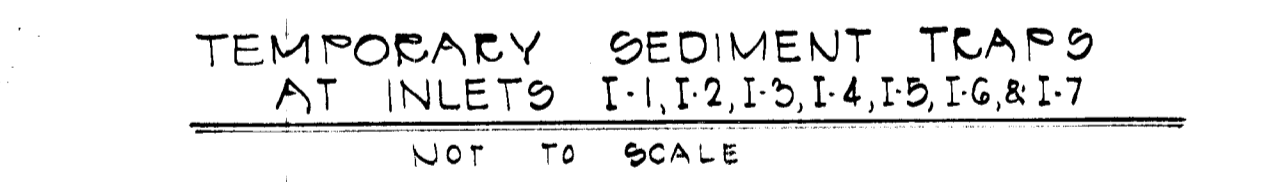
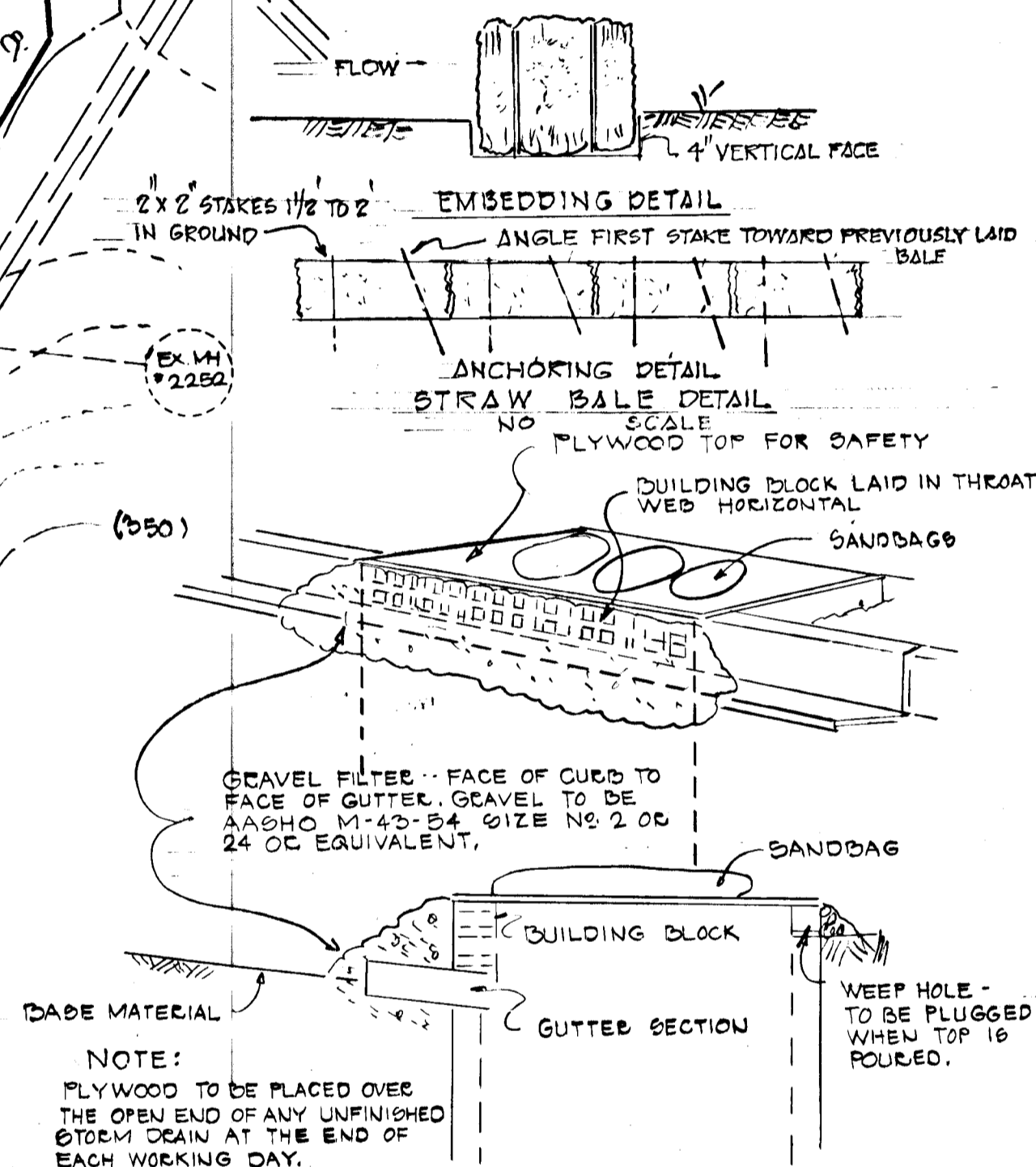


- CONSTRUCTION SEQUENCE**
1. CONSTRUCT ALL TEMPORARY SEDIMENT CONTROL DEVICES (TEMP. STONE CONSTR. ENTS., TEMP. PERIMETER DIKES AND STONE OUTLETS.)
 2. BEGIN ROAD GRADING.
 3. BEGIN STORM DRAIN CONSTRUCTION.
 4. CONTINUE ROAD GRADING TO SUBGRADE, BEGIN CURB INSTALLATION.
 5. COMPLETE STORM DRAIN CONSTRUCTION.
 6. COMPLETE GRADING OF ROAD AND RIGHT OF WAY.
 7. PAVE TO FINISH GRADE.
 8. A SUPPLEMENTAL SEDIMENT CONTROL PLAN IS REQUIRED BEFORE BUILDING PERMITS ARE RELEASED FOR CONSTRUCTION ON LOTS.



SITE ANALYSIS

1. PAVED AREA	= 3.26 AC.
2. DISTURBED AREA	= 10.50 AC.
3. AREA TO BE SEEDED	= 1.25 AC.
4. TOTAL AREA OF SITE	= 41.30 AC.



APPROVED
DIVISION OF LAND DEVELOPMENT
HOWARD COUNTY, MARYLAND
DATE JAN. 3, 1977

REVISIONS MADE 7/30/76 G.P.# 76-99

TITLE	SEDIMENT CONTROL PLAN		ENGINEERING PLANNING SURVEYING BY
PROJECT	SECTION 15 GWYNN ACRES		BOENDER ASSOCIATES INC.
LOCATION	2ND ELECTION DISTRICT	HOWARD CO., MD.	ELLCOTT CITY MD. TELE: 463-7777
DATE	5.5.76	DWG BY: TKD	CHKD BY: TKD
SCALE	AS SHOWN	JOB NO. 7628	DRWG NO. 10F1