

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN OF MONTGOMERY RD, WHEATFIELD WAY, AND HARVEST VIEW COURT & STORM DRAIN PROFILES
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8	SWM PLAN AND DETAILS
9	SWM SPECIFICATIONS
10	STREET TREE PLAN

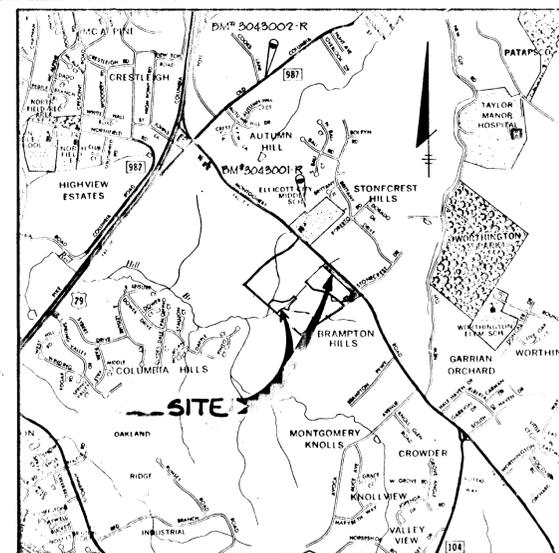
# ROADWAY, STORM DRAIN & STORM WATER MANAGEMENT

## LONG GATE

### SECTION I, AREA 1

### 2ND ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND



**VICINITY MAP**  
SCALE: 1" = 2000'

BM # 3043001-R ELEV. 497.919  
CONCRETE MONUMENT AT 4 IN TRANSMISSION  
LINES BACK OF SCHOOL

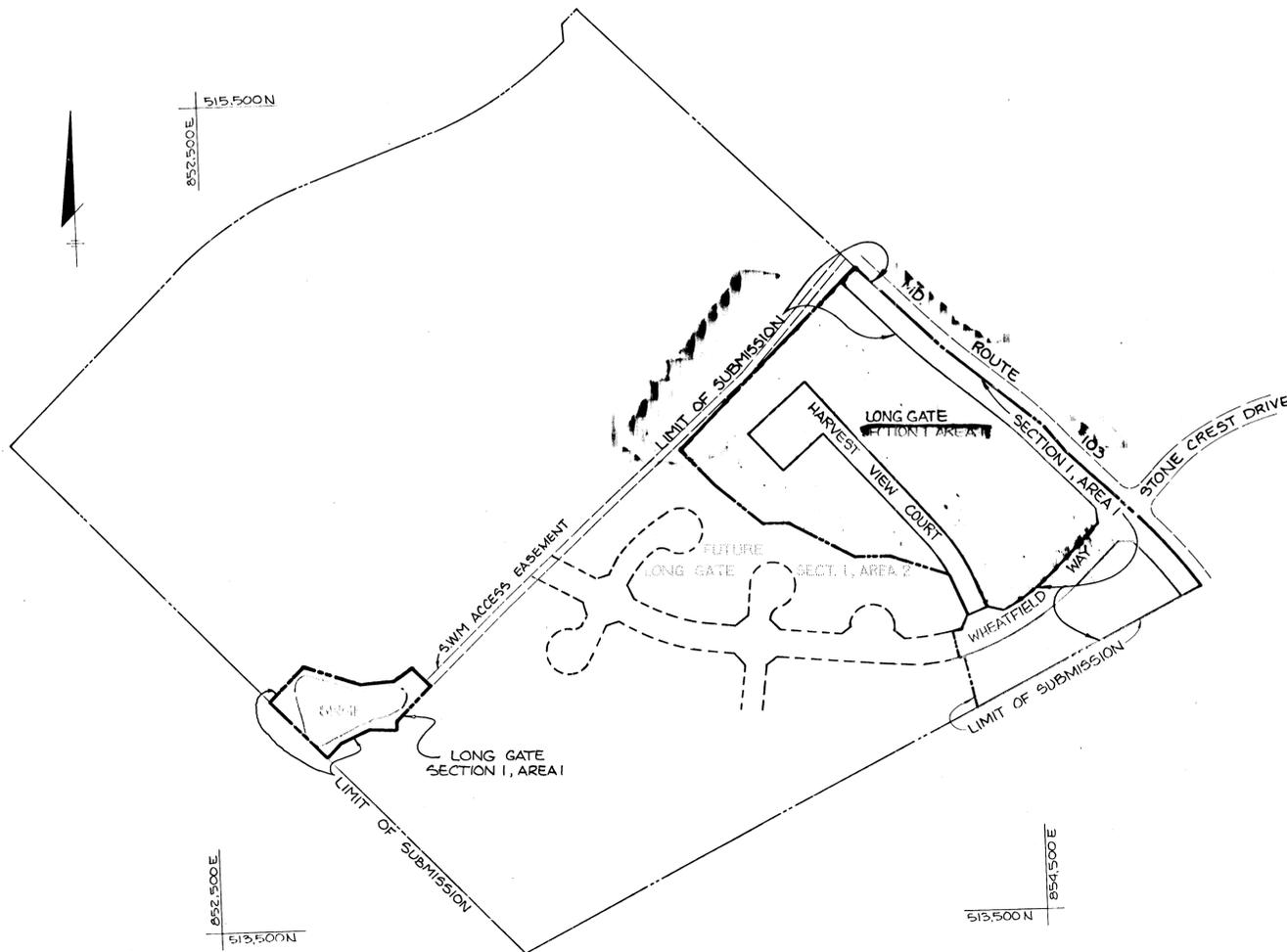
BM # 3043002-R ELEV. 377.581  
CONCRETE MONUMENT 0.5' BELOW SURFACE 14' ±  
NW ¼ OLD COLUMBIA PIKE 175' ± NE ¼ OF COOKS LANE

**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR ROAD CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS AND ELECTRIC	539-8000 EXT. 691
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION INSPECTION SURVEY DIVISION	992-2417/2418
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS. ALL STREET CURB RETURNS SHALL HAVE 20.0' RADII UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1971 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

CUL-DE-SAC DESIGNED FOR 30 M.P.H., LOCAL STREETS DESIGNED FOR 30 M.P.H.,
MINOR COLLECTOR DESIGNED FOR 35 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% OF MAXIMUM OBTAINABLE DENSITY DETERMINED BY MARSHALL PROCTOR.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT  $\phi$  ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED R-SC AS PER 8-2-85 COMPREHENSIVE ZONING PLAN
- TOPO TAKEN FROM FIELD RUN SURVEY BY PURDUM AND JESCHKE, INC., DATED JANUARY, 1984.



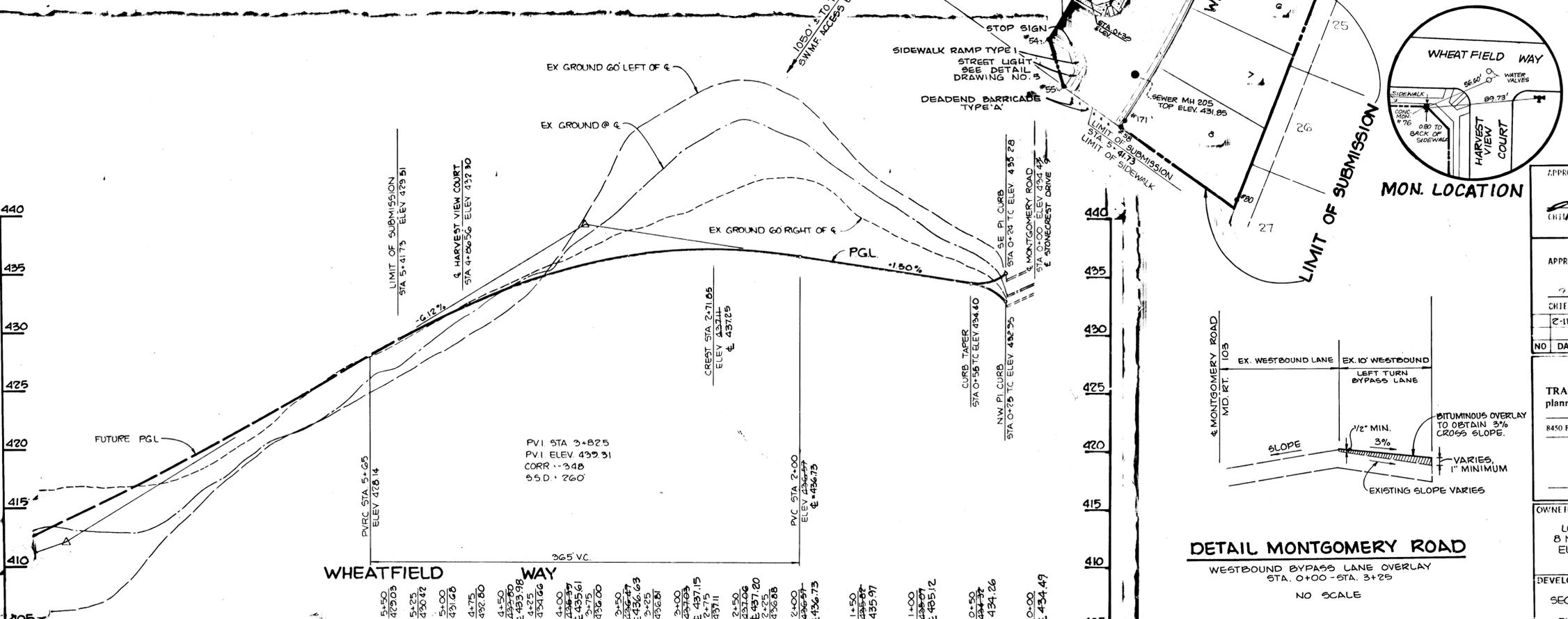
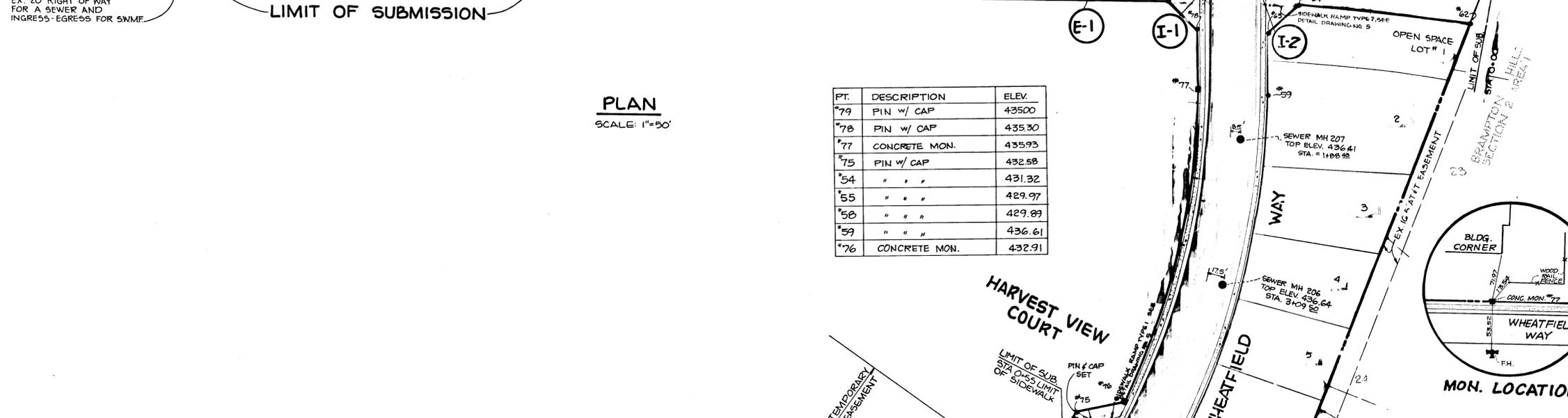
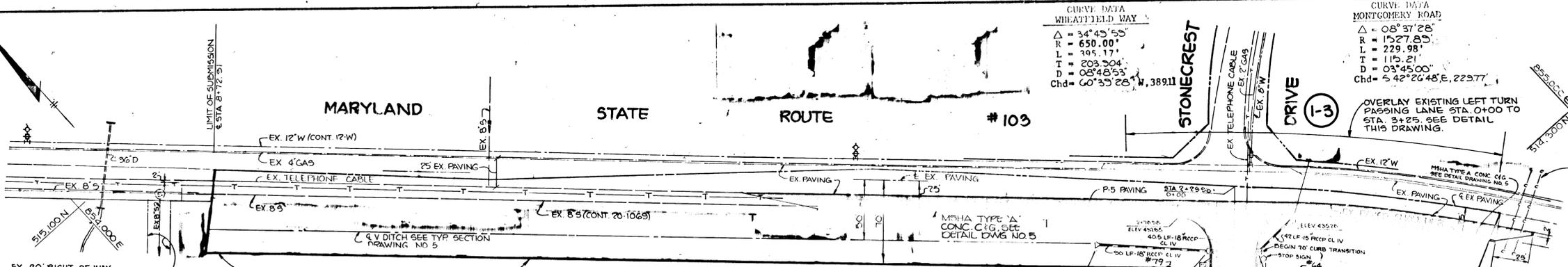
**PLAN**  
SCALE: 1" = 200'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>John M. Munchman</i>	12-11-85
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>James B. Ray</i>	12-11-85
CHIEF, BUREAU OF ENGINEERING	
<i>John K. Tracy</i>	12-12-85
NO	DATE
	REVISION

TRACY, SCHULTZ & ASSOCIATES INC.  
planning • architecture • engineering

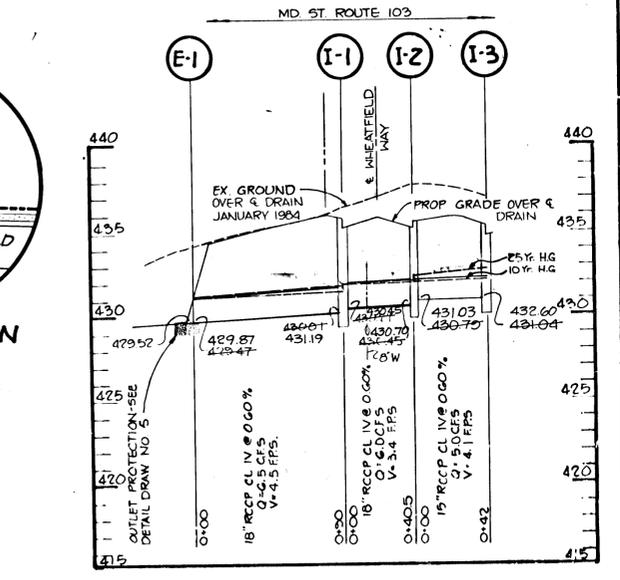
8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105

OWNER: LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	PROJECT <b>LONG GATE</b> SECTION I, AREA 1 LOTS 1 THRU 3
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MD 21043	LOCATION 2ND ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS 30431 ZONING MAP NOS 30431 PARCEL 1B
<b>TITLE SHEET</b>	
DATE MARCH 13, 1984	PROJECT NO 0482 RSD
DES JKT	DRN KAM
SCALE 1" = 200'	DRAWING 1 OF 10



NO.	TYPE	LOCATION	INV IN	INV OUT	TOP ELEV	REMARKS
E-1	15" Concrete End Section	See Plan	429.47	425.87	-	H.C. Std. S.D. 5.51
I-1	A-5	19' Lt. of Sta. 04575 Wheatfield Way	430.21	430.19	434.61	H.C. Std. S.D. 4.01
I-2	A-5	19' Lt. of Sta. 04575 Wheatfield Way	430.70	430.70	434.58	H.C. Std. S.D. 4.01
I-3	COG IO	See Plan	432.47	432.60	435.85	S.H. STD 374.51

NOTE: All Storm Drain Pipe Bedding Shall Be Class 'C'



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John M. Muschman*  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
 DATE: 12-11-85

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 CHIEF, BUREAU OF ENGINEERING  
 DATE: 12-12-85

2-11-87 SUBJECT TO THE STATE HIGHWAY ADMINISTRATION APPROVAL

NO. DATE REVISION

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 8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105

STATE OF MARYLAND  
 REGISTERED PROFESSIONAL ENGINEER

OWNER: LONG GATE VENTURE  
 8 NORMANDY SHOPPING CENTER  
 ELLICOTT CITY, MD. 21043

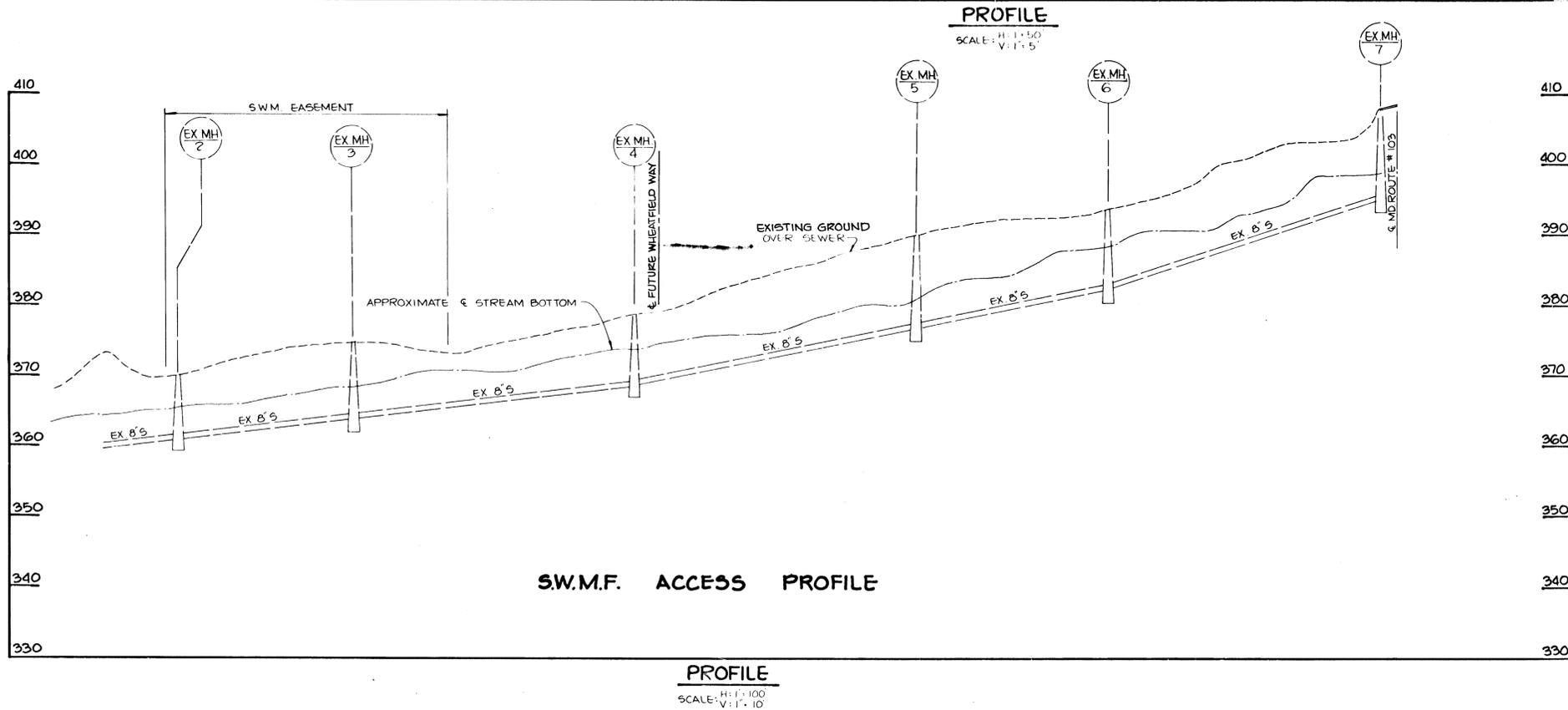
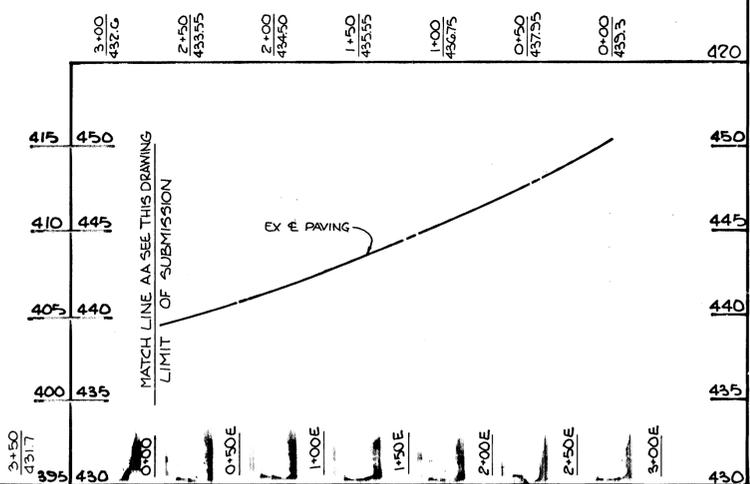
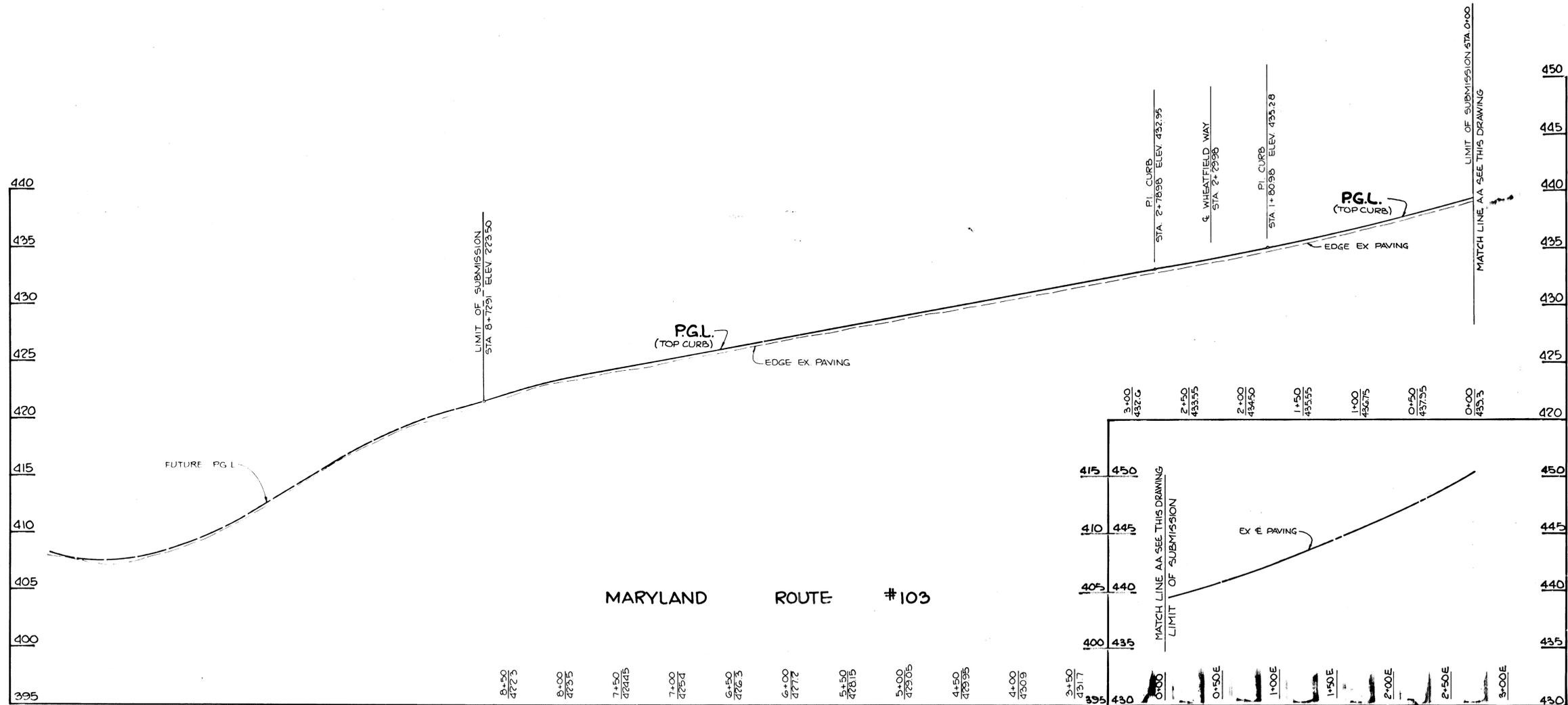
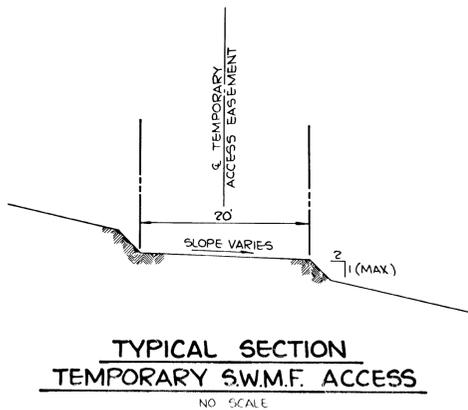
PROJECT: LONG GATE SECTION I AREA I LOTS 1 THRU 3  
 LOCATION TAX MAP NOS 30 & 31 PARCEL 1B  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DEVELOPER: SECURITY DEVELOPMENT CORP  
 20. BOX 417  
 ELLICOTT CITY, MD 21043

TITLE: PLAN, PROFILES AND STORM DRAINS FOR MONTGOMERY ROAD AND WHEATFIELD WAY

DATE: MARCH 13, 1984 PROJECT NO: 0482 R5D

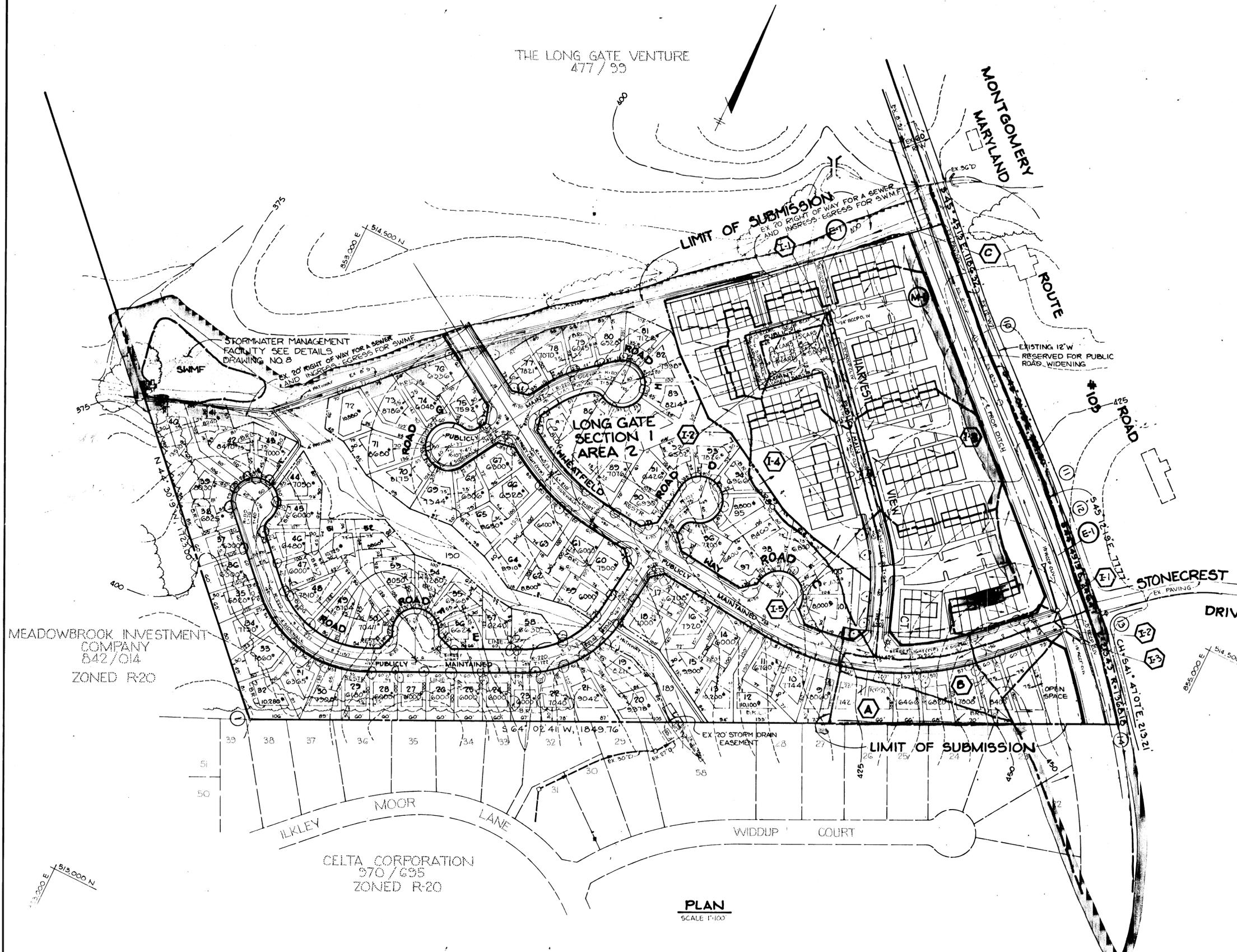
DES. JKT DRN. KAM SCALE AS SHOWN DRAWING 2 OF 10



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING <i>John M. ...</i> 12-11-85 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE		
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>...</i> 12-11-85 CHIEF, BUREAU OF ENGINEERING DATE		
NO	DATE	REVISION
TRACY, SCHULTE & ASSOCIATES INC. planning • architecture • engineering 8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105		
OWNER LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043		PROJECT <b>LONG GATE</b> SECTION 1 AREA 1 LOTS 1 THRU 9
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MD 21043		LOCATION 2ND ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS. 30 & 31 ZONING MAP NOS 30+31 PARCEL 1B
TITLE <b>PROFILE - MARYLAND ROUTE 103          TEMPORARY ACCESS TO S.W.M.F.</b>		DATE MARCH 13, 1984 PROJECT NO 0482 R5D
DES RJW	DRN KAM	SCALE H: 1" = 50' V: 1" = 5'
		DRAWING 3 OF 10

#1162

THE LONG GATE VENTURE  
477 / 93



MEADOWBROOK INVESTMENT COMPANY  
842/014  
ZONED R-20

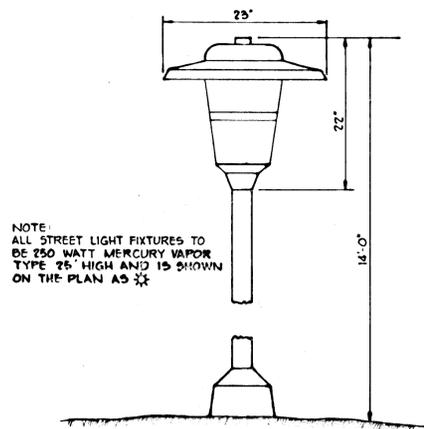
CELTA CORPORATION  
970 / 035  
ZONED R-20

PLAN  
SCALE 1"=100'

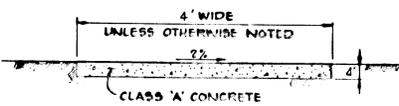
DRAINAGE AREA TABULATION				
Area	Area	C	Imp (%)	Zoning
1-1	2.17	.59	.48	RSA
1-2	0.59	.75	.72	RSA
1-3	1.65	.55	.44	RSA
1-4	1.65	.47	.32	RSA
1-5	1.48	.84	.55	RSA
1-1	0.13	.80	.75	RSC
1-2	0.30	.66	.60	RSC
1-3	2.27	.41	.22	RSC
A	0.54	.36	.15	RSC
B	0.56	.47	.32	RSC
C	3.80	.29	5.9	RSC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		12-12-85
 CHIEF, BUREAU OF ENGINEERING		DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING		12-11-85
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION		DATE
NO	DATE	REVISION
<b>TRACY, SCHULTE &amp; ASSOCIATES INC.</b> planning • architecture • engineering 8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105		
OWNER	PROJECT	
LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	LONG GATE SECTION I, AREA 1 LOTS 1 THRU 5	
DEVELOPER	LOCATION	
SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MD 21043	2ND ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS 30431 ZONING MAP NOS 30431 PARCEL 18	
TITLE		
DRAINAGE AREA MAP		
DATE: MARCH 15, 1984	PROJECT NO: 0482 RSD	
DES: JKT	DRN: JLT	SCALE: 1"=100'
		DRAWING: 4 OF 10

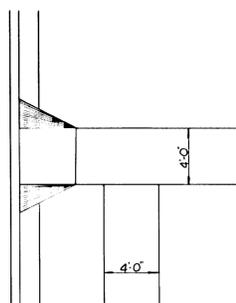
#1162



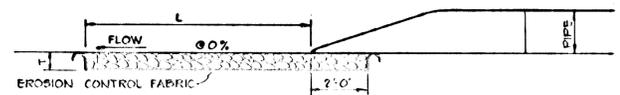
**DETAIL - LIGHTING FIXTURE**  
NO SCALE



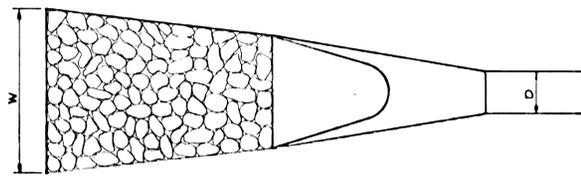
**CONCRETE SIDEWALK DETAIL**  
NO SCALE



PLAN



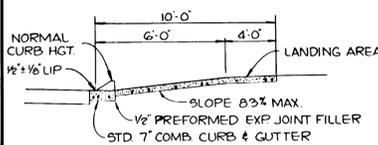
SECTION



PLAN

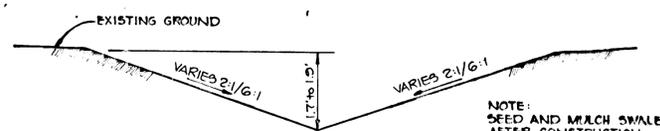
STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	4"	10'	11.5'	6"

**OUTLET PROTECTION DETAIL**  
NO SCALE



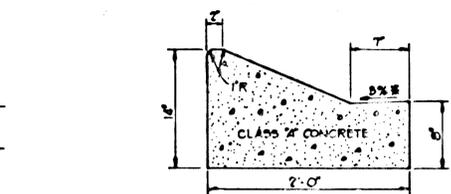
SECTION

**SIDEWALK RAMP TYPE TWO**  
NO SCALE



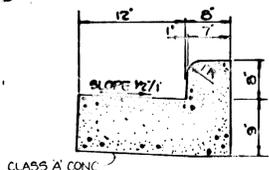
**GRASSED V DITCH**  
NO SCALE

NOTE: SEED AND MULCH SHALL BE APPLIED AFTER CONSTRUCTION

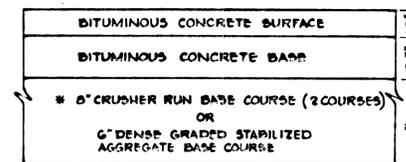


**MODIFIED COMBINATION CURB AND GUTTER**  
NO SCALE

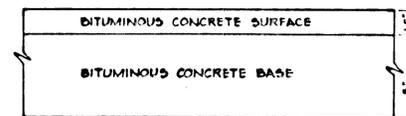
HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-201)  
\* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE MATERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.



**MSHA TYPE 'A' CURB AND GUTTER**  
NO SCALE

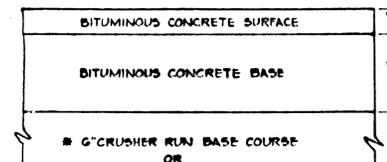


(ALTERNATE)

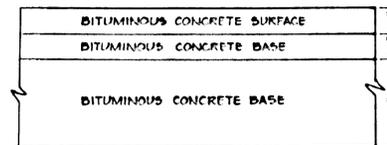


**6 1/2" PAVING, P-2**

(HARVEST VIEW COURT)

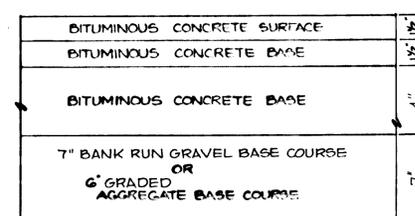


(ALTERNATE)



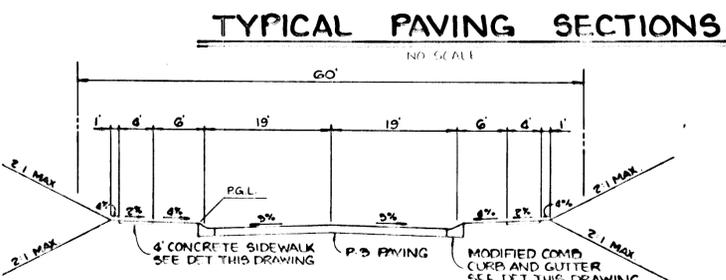
**8" PAVING, P-3**

(WHEATFIELD WAY)



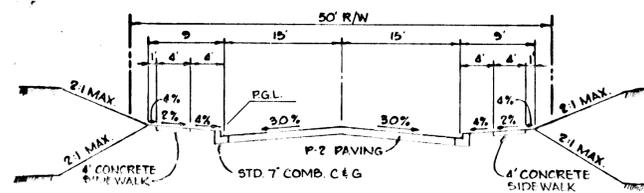
**PAVING**

(MARYLAND STATE ROUTE #103)



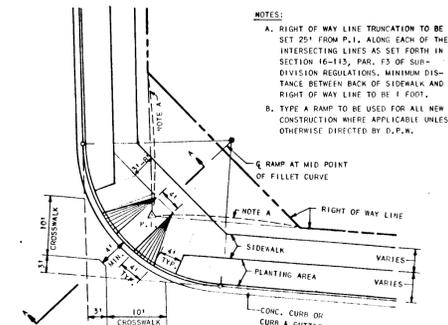
WHEATFIELD WAY  
STA 0+55 - STA 5+41.73  
CLASSIFICATION MINOR COLLECTOR  
DESIGN SPEED 30 MPH  
ZONED R5C

**TYPICAL SECTION**  
NO SCALE



HARVEST VIEW COURT  
STA 0+39 - STA 0+65  
CLASSIFICATION LOCAL STREET  
DESIGN SPEED 30 MPH  
ZONED R5C

**TYPICAL SECTION**  
NO SCALE



**SIDEWALK RAMP TYPE ONE**  
NO SCALE

NOTES:  
A. RIGHT OF WAY LINE TRUNCATION TO BE SET 25' FROM P.I. ALONG EACH OF THE INTERSECTING LINES AS SET FORTH IN SECTION 16-15, PAR. 13 OF SUB-DIVISION REGULATIONS. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT OF WAY LINE TO BE 1 FOOT.  
B. TYPE A RAMP TO BE USED FOR ALL NEW CONSTRUCTION WHERE APPLICABLE UNLESS OTHERWISE DIRECTED BY D.P.W.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING *[Signature]* 12-12-85 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION *[Signature]* 12-11-85 DATE

NO	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.  
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OWNER: LONG GATE VENTURE CENTER  
8 NORMANDY SHOPPING CENTER  
ELLCOTT CITY, MD 21043

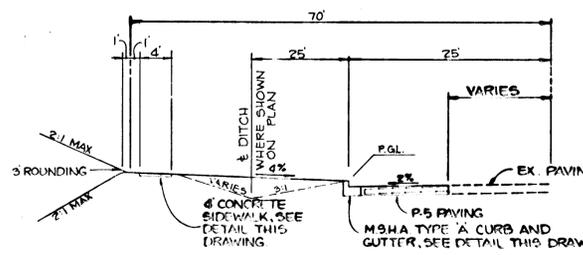
PROJECT: LONG GATE SECTION 1 AREA 1  
LOTS 1 THRU 5  
PARCEL 18  
2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

DEVELOPER: SECURITY DEVELOPMENT CORP.  
PO BOX 417  
ELLCOTT CITY, MD 21043

TITLE: DETAILS

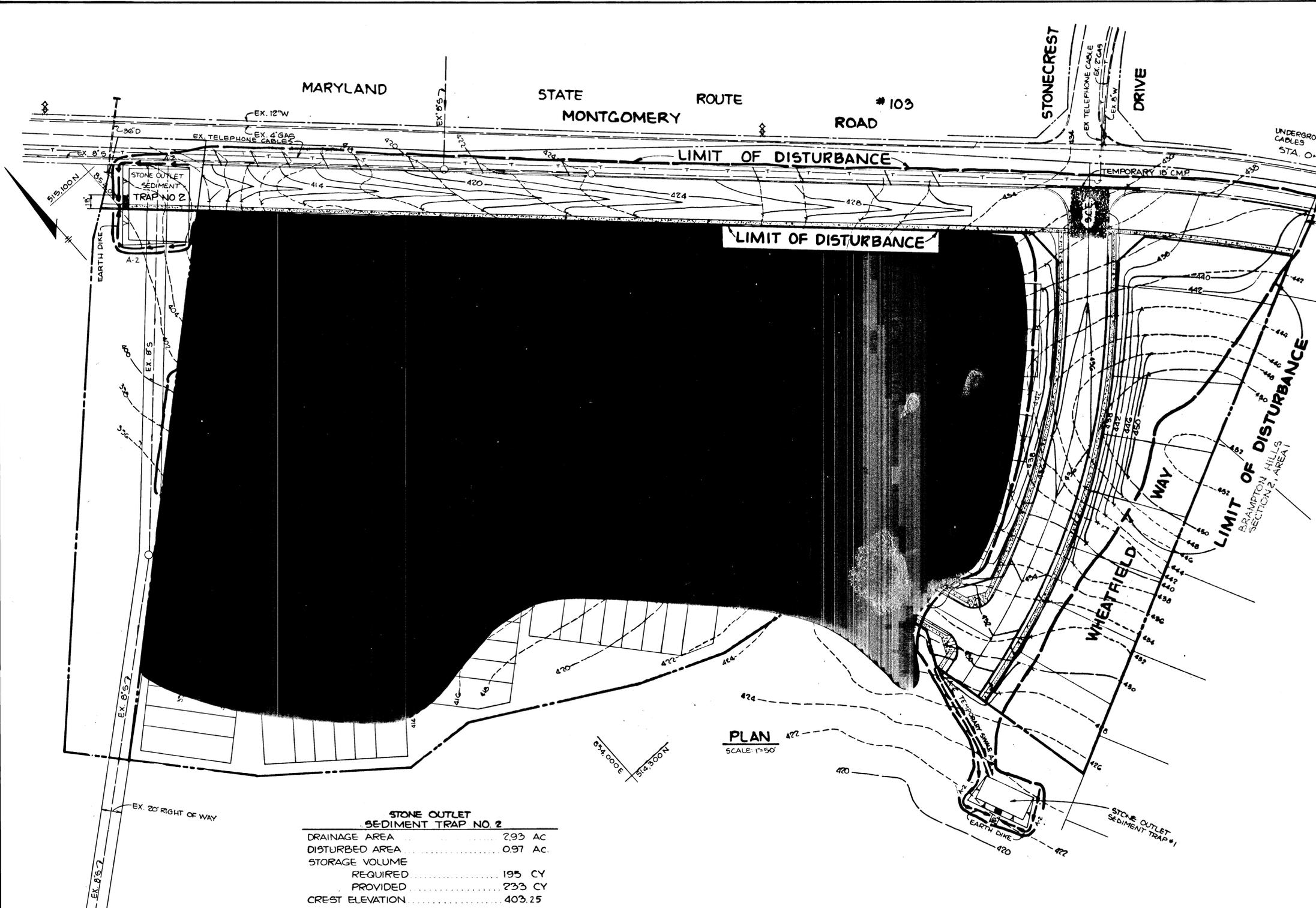
DATE: MARCH 13, 1984 PROJECT NO: 0482 RSD

DES. JKT. DRN. KAM. SCALE: AS SHOWN DRAWING 5 OF 10



MARYLAND STATE ROUTE #103  
CLASSIFICATION - MINOR ARTERIAL ZONED R5C

**TYPICAL SECTION**  
NO SCALE



CLEAR AND GRADE WITHIN OFFSITE S.H.A. ROW, AS NECESSARY, TO ACHIEVE UNRESTRICTED SITE DISTANCE TO 250 FEET EAST OF STA. 0+00

LIMIT OF DISTURBANCE

LIMIT OF DISTURBANCE

PLAN SCALE: 1"=50'

**STONE OUTLET SEDIMENT TRAP NO. 2**

DRAINAGE AREA	2.93 AC
DISTURBED AREA	0.97 AC
STORAGE VOLUME	
REQUIRED	195 CY
PROVIDED	233 CY
CREST ELEVATION	403.25
BOTTOM ELEVATION	400.75
CLEANOUT ELEVATION	401.50
TRAP DIMENSIONS	60'x70'x1.5'

**STONE OUTLET SEDIMENT TRAP NO. 1**

DRAINAGE AREA	1.04 AC
DISTURBED AREA	0.99 AC
STORAGE VOLUME	
REQUIRED	70 CY
PROVIDED	85 CY
CREST ELEVATION	423.25
BOTTOM ELEVATION	420.25
CLEANOUT ELEVATION	421.25
TRAP DIMENSIONS	23'x50'x2.0'

BY THE ENGINEER:  
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
*James K. Tracy*  
 ENGINEER: JAMES K. TRACY DATE: 3-13-84

BY THE DEVELOPER:  
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
*James R. Moxley*  
 DEVELOPER: JAMES R. MOXLEY, JR. DATE: 3-13-84

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
*James M. Helm*  
 U.S. SOIL CONSERVATION SERVICE DATE: 12/10/85

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 APPROVED: *Robert W. Ziehm*  
 HOWARD S.C.D. DATE: 12/10/85

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. Mosechman*  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE: 12-11-85

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James R. Moxley*  
 CHIEF, BUREAU OF ENGINEERING DATE: 12-12-85

NO	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.  
 planning • architecture • engineering  
 8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105

OWNER: LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLCOTT CITY, MD 21043	PROJECT: <b>LONG GATE</b> SECTION 1 AREA 1 LOTS 1 THRU 9 LOCATION TAX MAP NOS. 30 & 31 PARCEL 18 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER: SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLCOTT CITY, MD 21043	TITLE: <b>GRADING AND SEDIMENT CONTROL PLAN</b>
DES: JKT	DRN: KAM
DATE: MARCH 13, 1984	PROJECT NO: 0482 RSD
SCALE: 1"=50'	DRAWING: 6 OF 10

- DAY 1. Obtain a grading permit.
- DAY 2-3. Install stabilized construction entrance (SCE) and install temporary 18" CMP
- DAY 3-5. Clear and grub areas for sediment control device installation.
- DAY 5-10. Install all sediment control devices and stabilize in accordance with "Temporary Seeding Notes".
- DAY 10-23. Complete clearing and grubbing operations and grade site.
- DAY 23-27. Install storm water management facility.
- DAY 23-50. Install utilities (water, sewer and storm drains).
- DAY 50-54. Install stone filter at all inlets (INLET PROTECTION)
- DAY 50-54. Install curb and gutter, sidewalks and roadways.
- DAY 50-54. Stabilize all disturbed areas in accordance with "Permanent Seeding Notes".
- DAY 52-54. Upon approval of the Soil Conservation District Inspector remove all sediment control devices and stabilize disturbed areas in accordance with "Permanent Seeding Notes".

- SEDIMENT CONTROL NOTES**
- A NOTICE OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS 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 RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETE WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DITCHES, 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 MARKING 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 SEEDING (SEC 51) AND TEMPORARY SEEDING (SEC 52) AND MULCHING (SEC 53), TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER CONSTRUCTION AND ESTABLISHMENT OF GRASSES.
  - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

- 7) SITE ANALYSIS:**
- |                                     |                 |
|-------------------------------------|-----------------|
| TOTAL AREA OF SITE                  | 4.67 ACRES      |
| AREA DISTURBED                      | 2.45 ACRES      |
| AREA TO BE GRADED OR PAVED          | 1.05 ACRES      |
| AREA TO BE VEGETATIVELY STABILIZED  | 1.48 ACRES      |
| TOTAL CUT                           | 17,774 CU. YDS. |
| TOTAL FILL                          | 2,015 CU. YDS.  |
| OFFSITE MASTER/BORROW AREA LOCATION | SD 24-297       |
- 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 CONTROLS MUST BE PROVIDED, IF NEEDED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
  - ALL SEDIMENT TRAPS SHOWN MUST BE FENCED AND MARKING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

*James R. Moxley, Jr.*  
 DEVELOPER: JAMES R. MOXLEY, JR. DATE: 3-13-84

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

*James K. Tracy*  
 ENGINEER: JAMES K. TRACY DATE: 3-13-84

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*James M. Helton*  
 U. S. SOIL CONSERVATION SERVICE DATE: 12/10/85

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert J. Ziehm*  
 HOWARD S.C.D. DATE: 12/10/85

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. M... ..*  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE: 12-11-85

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William A. Klein*  
 CHIEF, BUREAU OF ENGINEERING DATE: 12-13-85

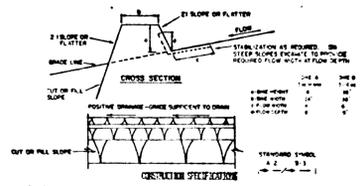
NO	DATE	REVISION
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*James K. Tracy*

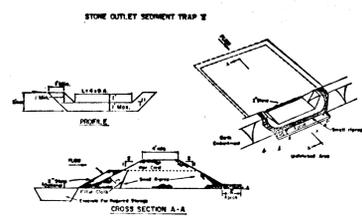


OWNER	LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	PROJECT	LONG GATE SECTION I AREA I LOTS 1 THRU 3
DEVELOPER	SECURITY DEVELOPMENT CORP. PO BOX 417 ELLICOTT CITY, MD 21043	LOCATION	TAX MAP NOS 30 & 31 PARCEL 1B 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DES	JKT	DRN	KAM
TITLE	SEDIMENT CONTROL NOTES AND DETAILS		
DATE	MARCH 13, 1984	PROJECT NO	0482 R5D
SCALE	AS SHOWN	DRAWING	7 OF 10



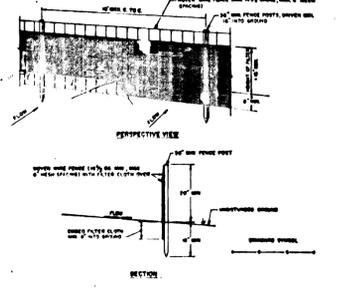
- CONSTRUCTION SPECIFICATIONS**
- ALL STONES SHALL BE COMPACTED BY EMPLOYING EQUIPMENT.
  - STONES SHALL BE PLACED IN A LAYER AT AN OUTLET.
  - STONES SHALL BE PLACED IN A LAYER AT AN OUTLET.
  - STONES SHALL BE PLACED IN A LAYER AT AN OUTLET.
- PLAN CHANNEL STABILIZATION**
- | TYPE OF PROTECTIVE | CHANNEL | TIME A                     | TIME B                      |
|--------------------|---------|----------------------------|-----------------------------|
| 1                  | 5-1-0-0 | SEED AND STRAW MULCH       | SEED AND STRAW MULCH        |
| 2                  | 3-1-5-0 | SEED AND STRAW MULCH       | SEED USING LATE OF EXISTING |
| 3                  | 5-1-8-0 | SEED WITH LATE OF EXISTING | LINED 4-8" RIP-RAP          |
| 4                  | 8-1-0-0 | LINED 4-8" RIP-RAP         | ENGINEERING DESIGN          |
- STONE TO BE 2" THICK, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3" TO 4" IN THICKNESS AND BE PREPARED WITH CONSTRUCTION EQUIPMENT.

**EARTH DIKE**  
NO SCALE



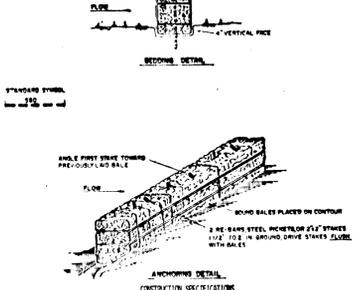
- CONSTRUCTION SPECIFICATIONS FOR STONE**
- STONE TO BE 2" THICK, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3" TO 4" IN THICKNESS AND BE PREPARED WITH CONSTRUCTION EQUIPMENT.
  - STONES SHALL BE PLACED IN A LAYER AT AN OUTLET.
  - STONES SHALL BE PLACED IN A LAYER AT AN OUTLET.
  - STONES SHALL BE PLACED IN A LAYER AT AN OUTLET.

**STONE OUTLET SEDIMENT TRAP**  
NO SCALE



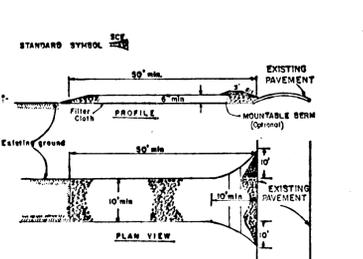
- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- REMOVE EXISTING FENCE TO BE REPLACED NATURALLY TO EXISTING POSTS WITH THE FILL OF STONES.
  - FILTER CLOTH TO BE FASTENED SECURELY TO EXISTING POSTS WITH WIRE TIES AT EVERY 2' AT TOP AND MID SECTION.
  - MIN. TWO SECTIONS OF FILTER CLOTH TO BE OVERLAPPED BY 12" INCHES AND POSTED.
  - ANCHORMENT SHALL BE PROVIDED AS SHOWN AND MAINTAINED UNTIL PERMITS FOR REMOVAL OF SILT FENCE.

**SILT FENCE**  
NO SCALE



- CONSTRUCTION SPECIFICATIONS**
- BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH EACH BALING THE ADJACENT BALE.
  - SOIL SHALL BE OBTAINED IN THE SOIL A MINIMUM OF (6) INCHES, AND PLACED TO THE INTERSTICES BETWEEN BALE.
  - BALES SHALL BE PLACED IN PLACE BY EITHER THE STRAW OR THE BALE DRIVER. THE BALE DRIVER SHALL BE USED TO PLACE THE BALE TOGETHER. STAKES SHALL BE PLACED TO HOLD THE BALE.
  - DIKE SHALL BE MAINTAINED AND REPAIRS REPLACED SHALL BE MADE PROMPTLY AS DIRECTED.
  - BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR PURPOSE AS NOT TO BLOCK OR DISTURB STORM FLOW OR CHANNEL.

**STRAW BALE DIKE**  
NO SCALE

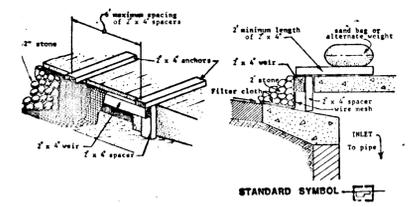


- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 3" stone, or recycled concrete equivalent.
  - Length - As required, but not less than 20 feet (except on a single residential lot where a 25 foot minimum length would apply).
  - Thickness - Not less than 18" inches.
  - Width - Two (2) foot minimum, but not less than the full width at points where ingress of grass occurs.
  - 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.
  - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a portable berm with 3:1 slope will be provided.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and removal of sediment or any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
  - Mulching - Mulch shall be placed to remove sediment prior to entrance onto public right-of-way. When watering is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
  - Periodic Inspection and needed maintenance shall be provided after each rain.

**STABILIZED CONSTRUCTION ENTRANCE**  
NO SCALE

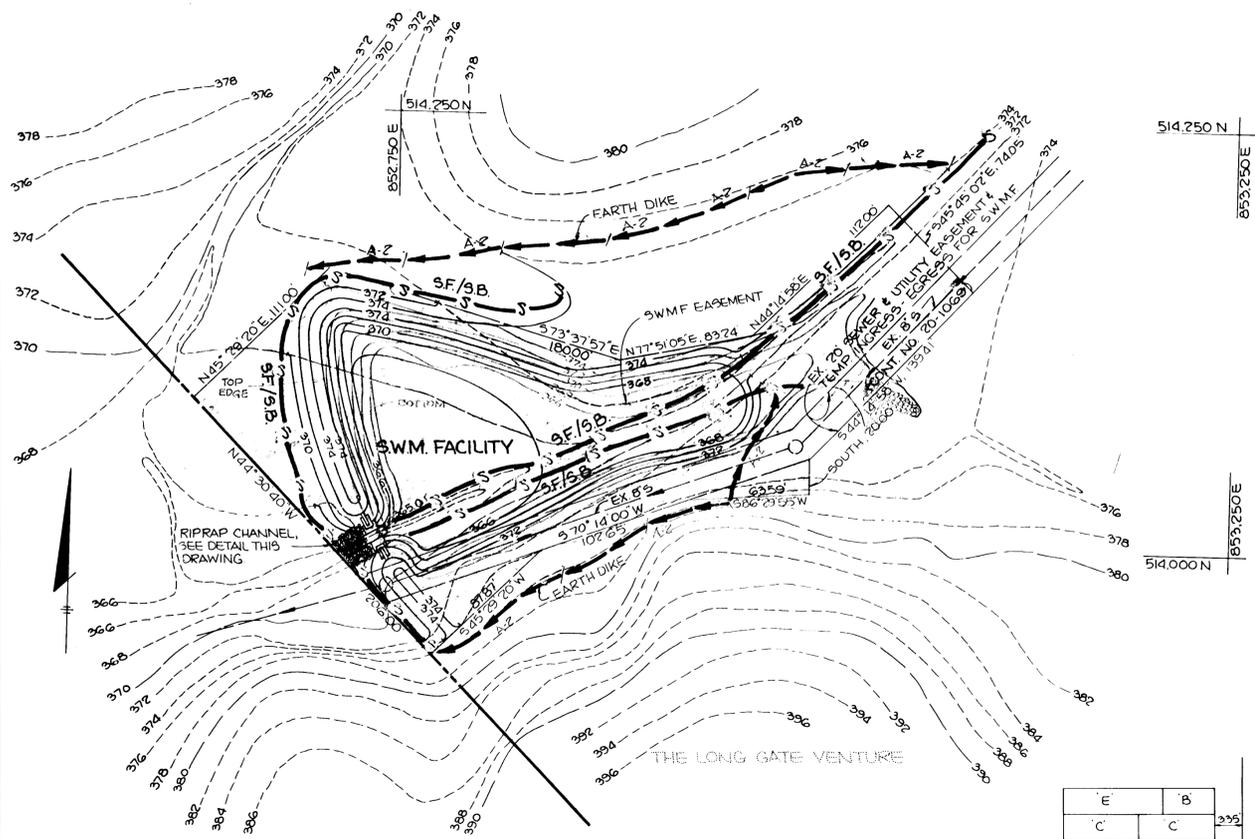
- PERMANENT SEEDING NOTES**
- SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL ANALYSIS: IN LINE OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRE DELTAIC LIME (92 1b/1000 sq ft) AND 400 LBS PER ACRE 10-10-10 FERTILIZER (14 1b/1000 sq ft) BEFORE SEEDING. MARKING OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAIFORM FERTILIZER (9 1b/1000 sq ft).
  - ACCEPTABLE - APPLY 2 TONS PER ACRE DELTAIC LIME (92 1b/1000 sq ft) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (21 1b/1000 sq ft) BEFORE SEEDING. MARK 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 1b/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 (0.5 1b/1000 sq ft) OF HERBICIDE. 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 SOO. 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 1b/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 1b/1000 sq ft) OF UNROTTED ASPHALT OR FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 1b/1000 sq ft) FOR ANCHORING.
- MAINTENANCE - INSPECT ALL SEEDING 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.
- SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL ANALYSIS: APPLY 400 LBS PER ACRE 10-10-10 FERTILIZER (14 1b/1000 sq ft)
- SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU NOVEMBER 15, SEED WITH 15 BUSHES PER ACRE OF ANNUAL RYE (3.2 1b/1000 sq ft). FOR THE PERIOD MAY 1 THRU AUGUST 31, SEED WITH 3 LBS PER ACRE OF MIXING LOWGROWERS (0.7 1b/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 SOO.
- MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 1b/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 1b/1000 sq ft) OF UNROTTED ASPHALT OR FLAT AREAS, ON SLOPES, 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 1b/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.



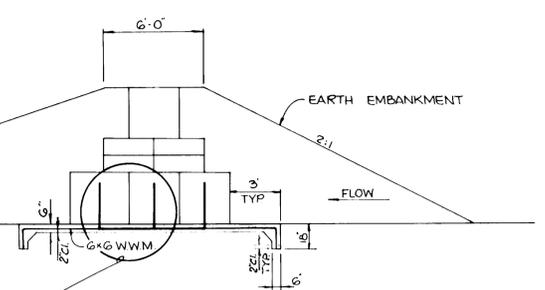
**INLET PROTECTION DETAIL**  
NO SCALE

#1162

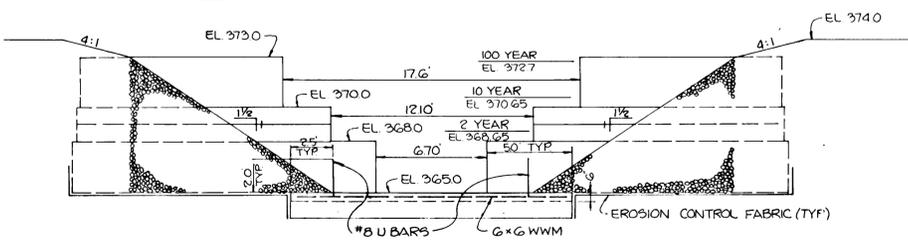
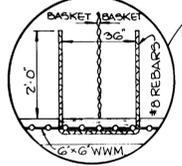


MEADOWBROOK INVESTMENT COMPANY

**PLAN**  
SCALE: 1"=50'



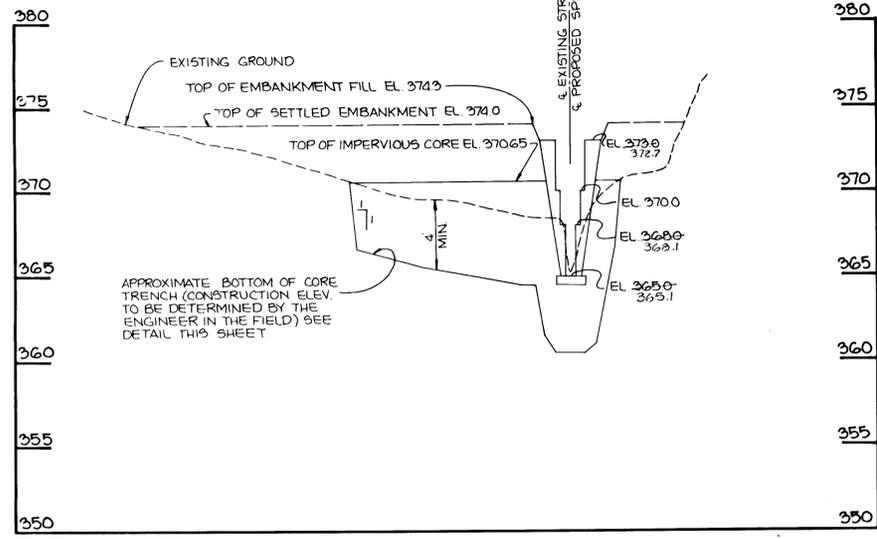
**TYPICAL SECTION**



**ELEVATION**

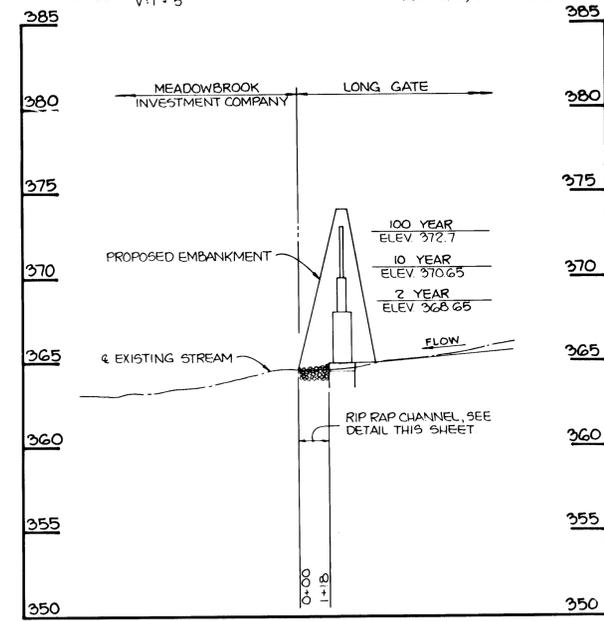
**SPILLWAY DETAILS**

SCALE: 1"=5'



**EMBANKMENT PROFILE**

SCALE: H:1"=50'  
V:1"=5'



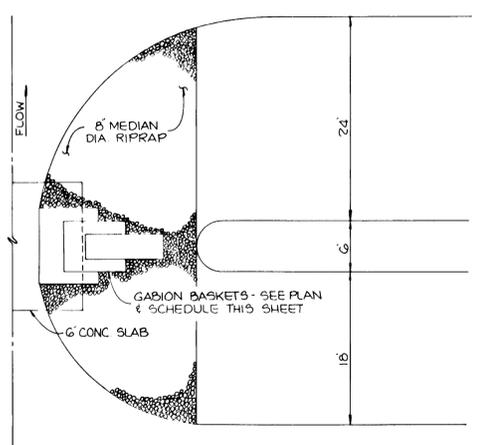
**SPILLWAY AND CHANNEL PROFILE**

SCALE: H:1"=50'  
V:1"=5'

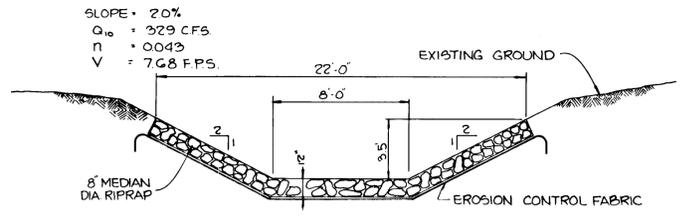
GABION SCHEDULE				
TYPE	DIMENSIONS			QUANTITY
	Height	Width	Length	
'A'	1'	3'	6'	4
'B'	3'	3'	6'	4
'C'	3'	3'	9'	4
'D'	1'	3'	12'	8
'E'	3'	3'	12'	6

**GABION PLAN**

SCALE: 1"=10'  
(TYPICAL EACH SIDE OF SPILLWAY)



**TYPICAL EMBANKMENT RIPRAP @ SPILLWAY**



**RIPRAP CHANNEL @ SPILLWAY OUTLET**

BY THE DEVELOPER:  
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

*James R. Moxley, Jr.*  
DEVELOPER: JAMES R. MOXLEY, JR.

3-13-84  
DATE

BY THE ENGINEER:  
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

*James K. Tracy*  
ENGINEER: JAMES K. TRACY

3-13-84  
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Joseph M. Nelson*  
U. S. SOIL CONSERVATION SERVICE

8-13-84  
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert J. Ziehm*  
HOWARD S.C.D.

12/10/85  
8-13-84  
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*William M. ...*  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

12-11-85  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William B. ...*  
CHIEF, BUREAU OF ENGINEERING

12-11-85  
DATE

NO	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.  
planning • architecture • engineering  
8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465 6105

OWNER LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD. 21043	PROJECT <b>LONG GATE</b> SECTION I, AREA 1 LOTS 1 THRU 3 LOCATION TAX MAP NOS. 30 & 31 PARCEL 1B 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLICOTT CITY, MD. 21043	TITLE <b>STORMWATER MANAGEMENT PLAN AND DETAILS</b>
DATE MARCH 13, 1984	PROJECT NO. 0482 R5D
DES. JKT	DRN. KAM
SCALE AS SHOWN	DRAWING 8 OF 10

I. SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

II. EARTH FILL

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

Cutoff Trench

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

All pipes shall be circular in cross section.

A. Corrugated Metal Pipe

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings are commercially available: Nexon, Plast-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

- Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.
- Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
- Backfilling shall conform to structural backfill as shown above.
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

B. Reinforced Concrete Pipe

- Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. An approved equivalent is AWWA Specification C-301.
- Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3", or as shown on the drawings.
- Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.
- Backfilling shall conform to structural backfill as shown above.
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

C. For pipes of other materials, specific specifications shall be shown on the drawings.

V. CONCRETE

- Materials
  - Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.
  - Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
  - Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.
  - Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.
  - Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/4 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

- Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.
- Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.
- Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.
- Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.
- Placing Temperature - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34° with the temperature rising.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VII. EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

BY THE DEVELOPER:  
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
 James R. Moxley Jr. 3-12-84  
 DEVELOPER: JAMES R. MOXLEY JR. DATE

BY THE ENGINEER:  
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
 James K. Tracy 3-13-84  
 ENGINEER: JAMES K. TRACY PE #9566 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
 James M. Nelson 8-13-84  
 U. S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Robert J. Johnson 12-10-85  
 APPROVED HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 John M. Marchman 12-11-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

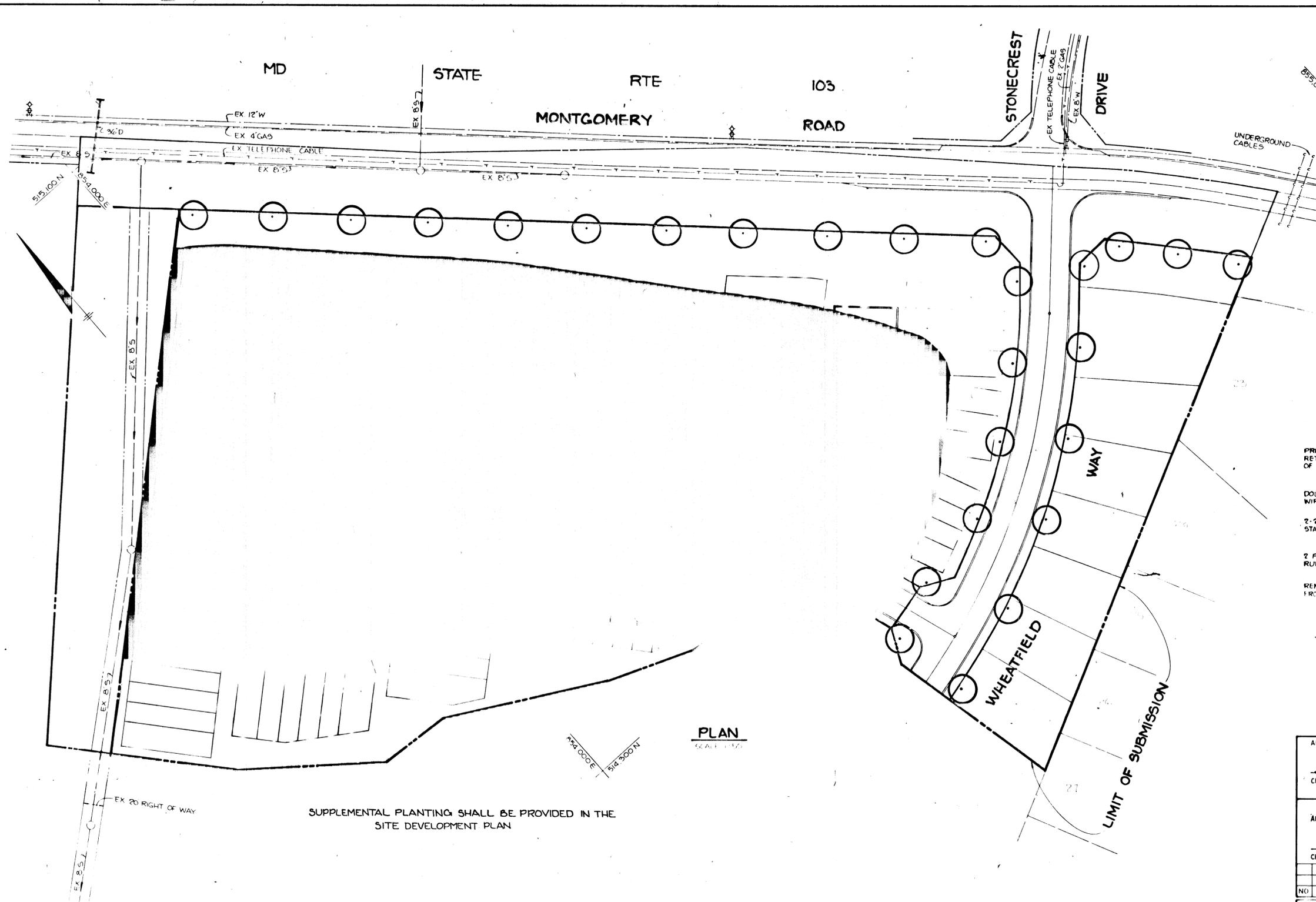
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 12-11-85  
 CHIEF, BUREAU OF ENGINEERING DATE

NO	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.  
 planning • architecture • engineering  
 8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105



OWNER LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	PROJECT <b>LONG GATE</b> SECTION 1, AREA 1 LOTS 1 THRU 31 LOCATION TAX MAP NOS 30 & 31 PARCEL 1B 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX ELLICOTT CITY, MD 21043	TITLE <b>S.W.M. SPECIFICATIONS</b>
DATE MARCH 13, 1984	PROJECT NO 0487 R5D
DES. J.K.T.	DRN. K.A.M.
SCALE: NONE	DRAWING 9 OF 10

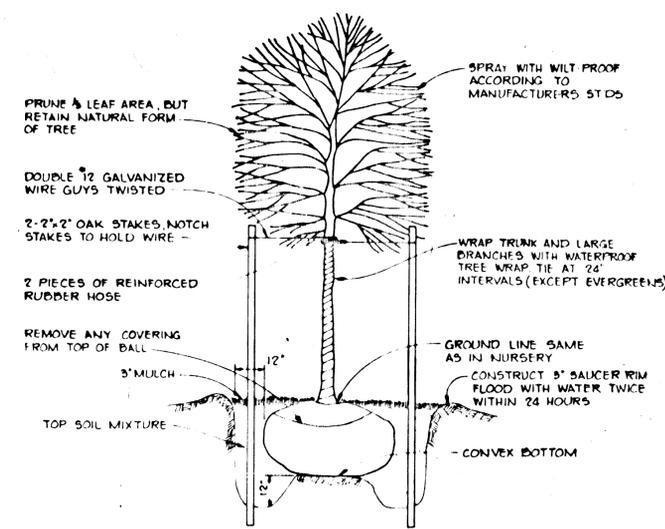


**PLAN**  
SCALE: 1"=50'

SUPPLEMENTAL PLANTING SHALL BE PROVIDED IN THE SITE DEVELOPMENT PLAN

PLANT LIST			
SYMBOL	QUANTITY	NAME	REMARKS
●	7	ACER RUBRUM Red Maple	2 1/4 Min Cal B & B
●	7	QUERCUS PALUSTRIS Pin Oak	Full Head
●	6	ACER SACCHARUM Sugar Maple	
●	6	QUERCUS BOREALIS Red Oak	
TOTAL	26		

**STREET TREE TABULATION**  
ROAD RIGHT OF WAY: 1040  
ONE TREE PER 40' FRONTAGE: TREES REQUIRED: 26  
TREES PROVIDED: 26



**TREE PLANTING DETAIL**  
NO SCALE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. Muschman* 12-11-85  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William B. Ray* 12-11-85  
CHIEF, BUREAU OF ENGINEERING DATE

NO	DATE	REVISION

TRACY, SCHULTZ & ASSOCIATES INC.  
planning • architecture • engineering

STATE OF MARYLAND  
PROFESSIONAL ENGINEER

*James K. Tracy*

OWNER: LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	PROJECT: <b>LONG GATE</b> SECTION I, AREA I LOTS 1 THRU 5 LOCATION: TAX MAP NOS 30 & 31 PARCEL 18 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER: SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MD 21043	TITLE: <b>STREET TREE PLAN</b>
DATE: MARCH 13, 1984	PROJECT NO: 0487, R5D
DES: RJW	DRN: KAM
SCALE: AS SHOWN	DRAWING: 10 OF 10