

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN OF WHEATFIELD WAY, HEDGEROW COURT, GOLDEN GRAIN COURT, HONEYSUCKLE COURT, AND AUTUMN HARVEST
3	PROFILES OF WHEATFIELD WAY, AUTUMN HARVEST, AND GOLDEN GRAIN COURT
4	PROFILES OF HEDGEROW CT., HONEYSUCKLE CT., AND STORM DRAINS
5	DETAILS AND DRAINAGE AREA MAP
6	GRADING, SEDIMENT CONTROL, AND S.W.M. PLAN
7	SEDIMENT CONTROL AND S.W.M. DETAILS AND NOTES
8	STORM WATER MANAGEMENT SPECIFICATIONS AND DETAILS
9	STREET TREE PLAN

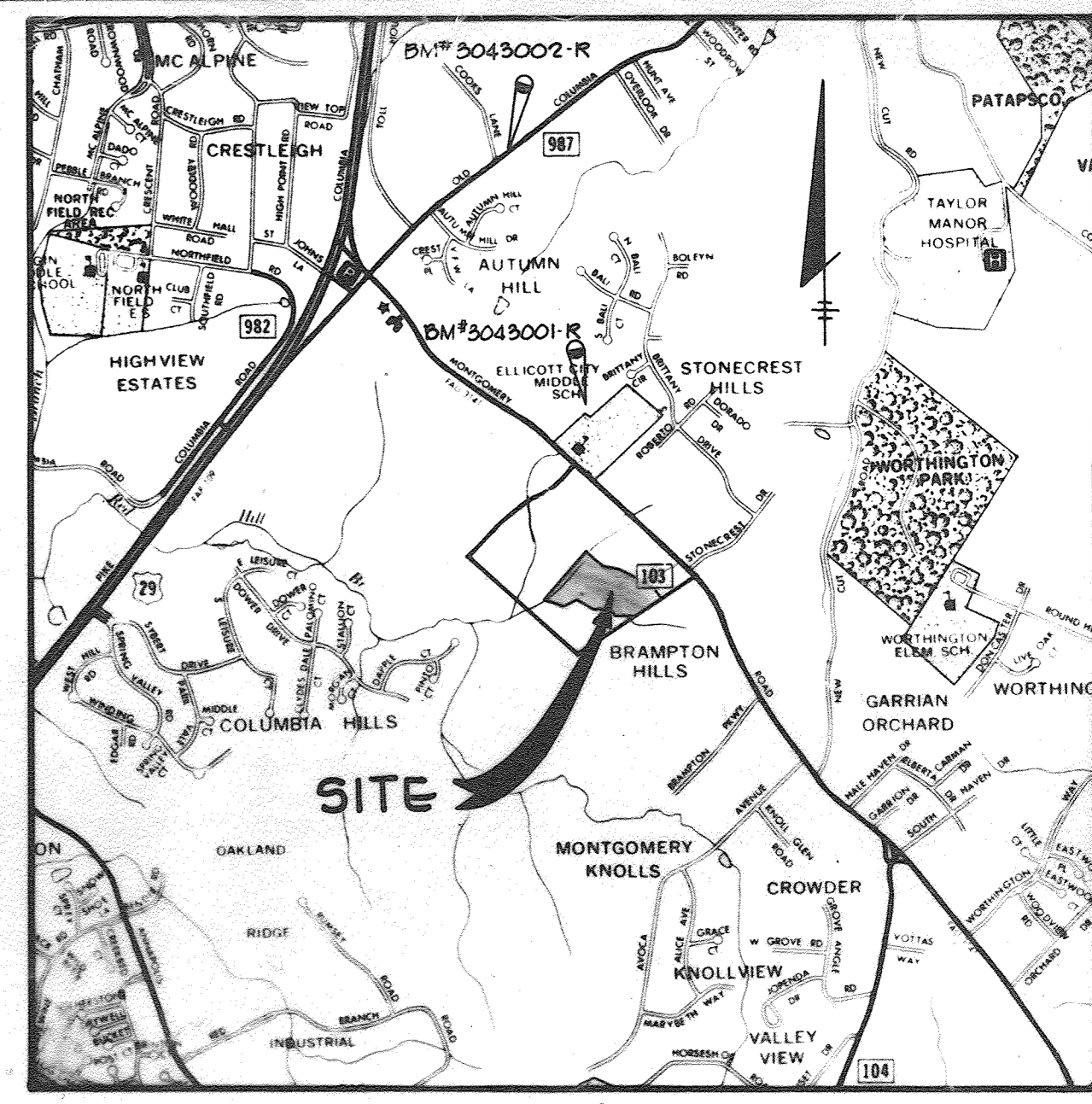
# ROADWAY, STORM DRAIN & STORM WATER MANAGEMENT

## LONG GATE

### SECTION 1, AREA 2

### 2ND ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND



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

BM # 3043001-R ELEV 437.915  
CONCRETE MONUMENT AT 4 IN TRANSMISSION LINES BACK OF SCHOOL

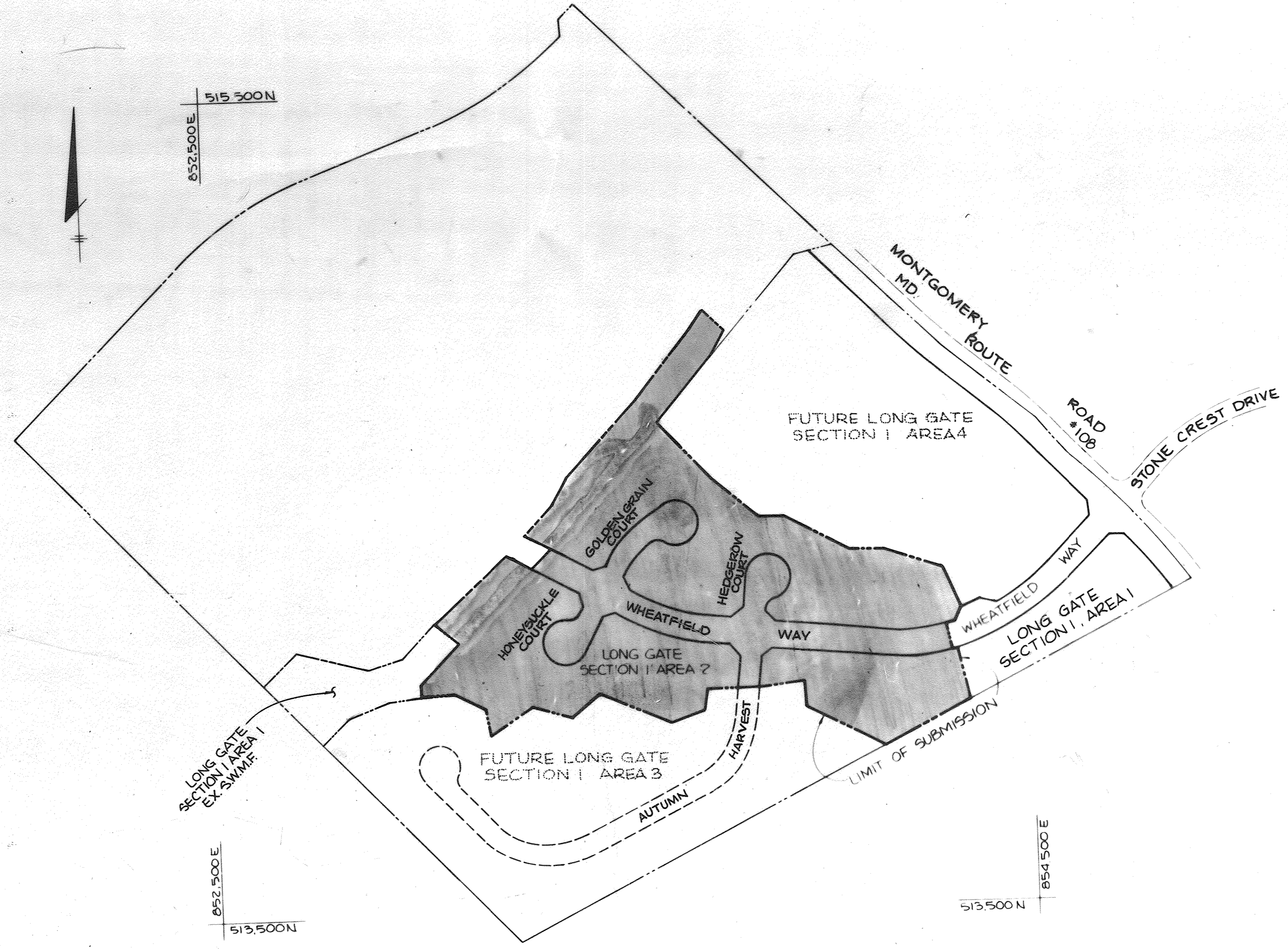
BM # 3043002-R ELEV 377.581  
CONCRETE MONUMENT 0.5 BELOW SURFACE 14' NW & OLD COLUMBIA PIKE 175' NE & OF COOKS LANE

**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 1978 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  $\Omega$  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'

NOTE: WP-23-058 (APPROVED 3-16-2023) AUTUMN HARVEST STREAM STABILIZATION DESIGNED UNDER CAPITAL PROJ. D-1153 AND CONSTRUCTED UNDER D-1176. THIS PROJECT ADDRESSES INABILITY ALONG THE STREAM CHANNEL WITH GRADE CONTROL STRUCTURES AND TELS TO DISGATE ENERGY. EX-20-000 PAVES CAN REFERENCED FOR ALTERNATIVE COMPLIANCE WP-20-058 TO SECTIONS 16.116 (A)(1) AND 16.116 (A)(2)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Shu W. Muechman</i>	7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	
DATE: _____	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>William E. ...</i>	7-24-86
CHIEF, BUREAU OF ENGINEERING	
DATE: _____	
NO	REVISION
<b>TRACY, SCHULTE &amp; ASSOCIATES INC.</b> planning • architecture • engineering <small>8450 Baltimore National Pike • Suite 34 • Ellicott City, Maryland 21043 • (301) 465-6105</small>	
OWNER	PROJECT
LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	<b>LONG GATE</b> SECTION 1 AREA 2 LOTS 10-22
DEVELOPER	LOCATION
SECURITY DEVELOPMENT CORP PO BOX 417 ELLICOTT CITY, MD 21043	2ND ELECTION DISTRICT HOWARD COUNTY MD TAX MAP NOS 30 & 31 ZONING MAP NOS 30 & 31 PARCEL 1B
TITLE	
<b>TITLE SHEET</b>	
DATE: NOV 1985	PROJECT NO: 8533 RSD
DES: JKT/JRS DRN: KAM	SCALE: 1" = 200' DRAWING: 1 OF 2

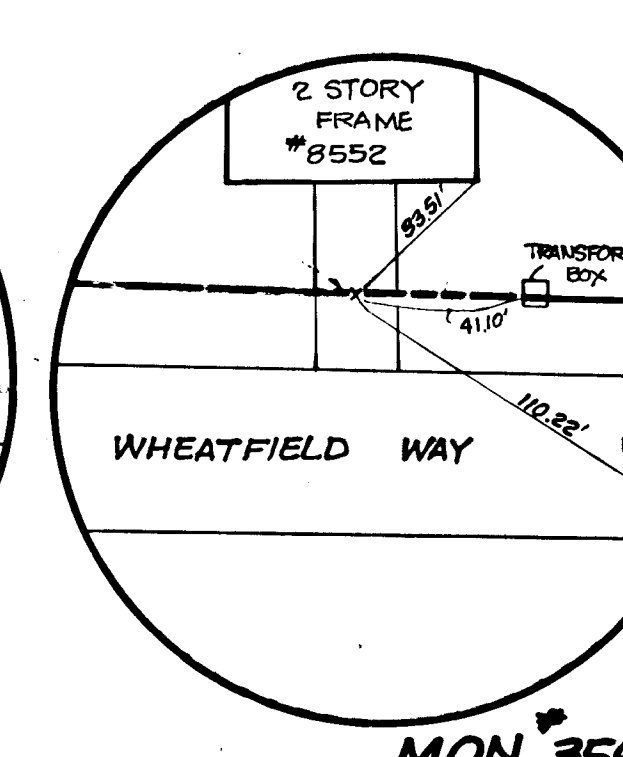
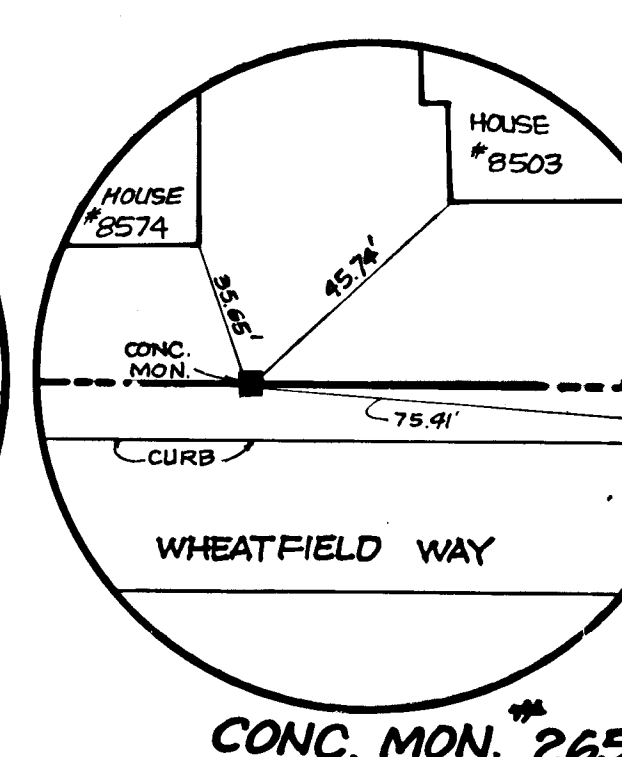
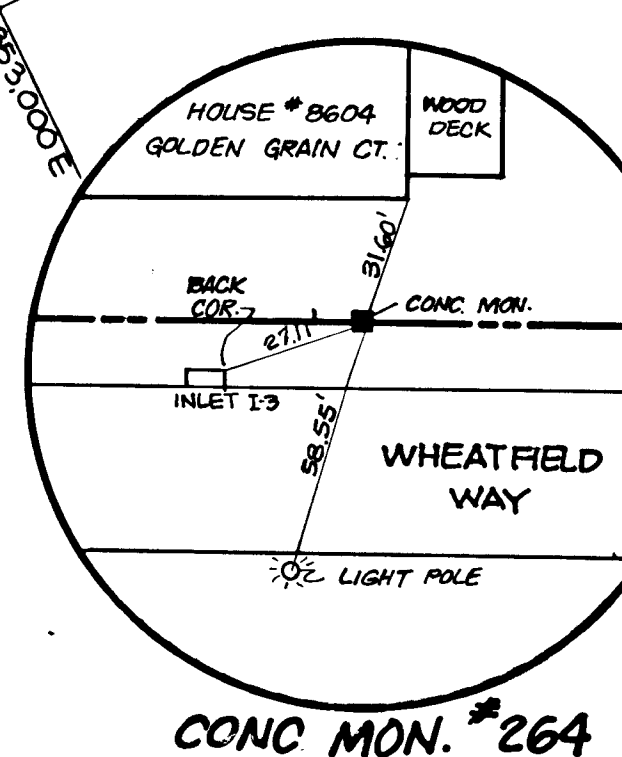
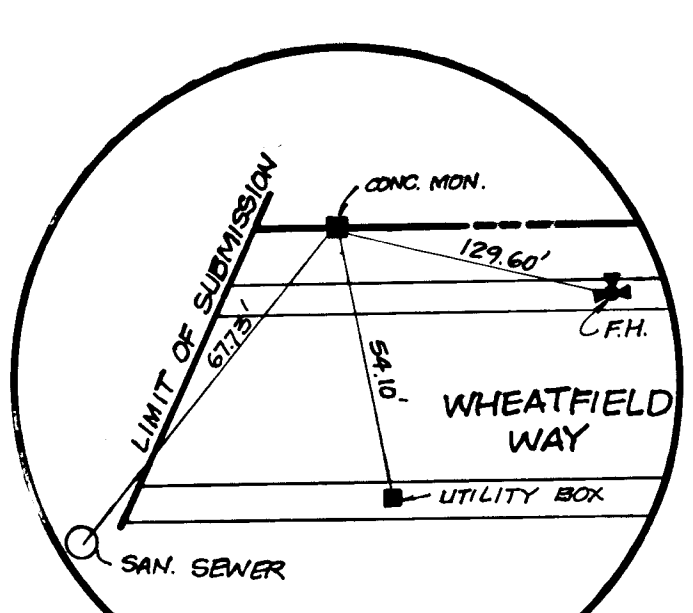
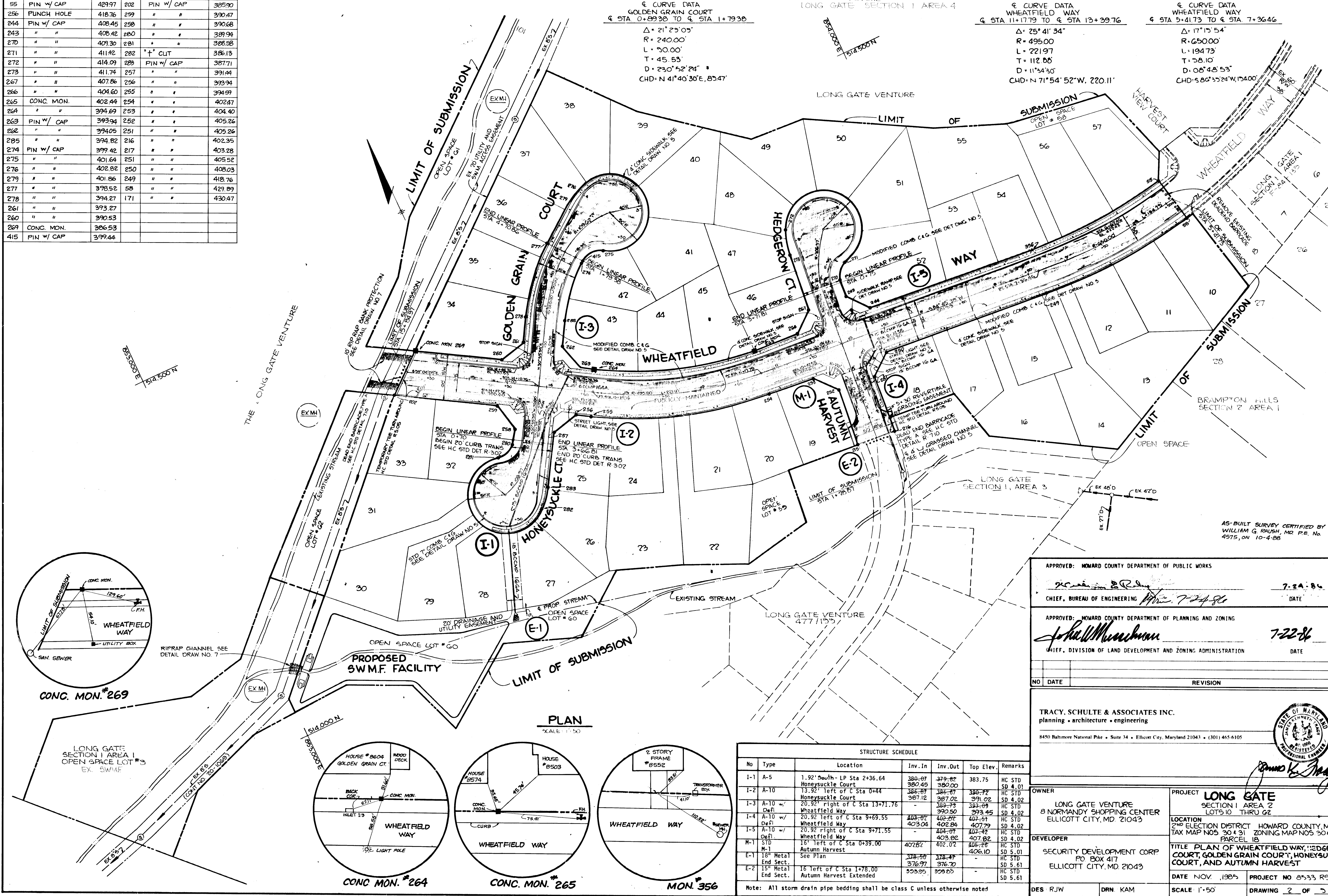
#1162

PT.	DESCRIPTION	ELEV.	PT.	DESCRIPTION	ELEV.
95	PIN W/ CAP	429.97	202	PIN W/ CAP	385.90
256	PUNCH HOLE	418.76	259	" "	390.47
244	PIN W/ CAP	408.45	258	" "	390.68
243	" "	408.42	260	" "	389.94
270	" "	409.30	261	" "	388.58
271	" "	411.42	282	" CUT	386.13
272	" "	414.09	283	PIN W/ CAP	387.71
273	" "	411.74	257	" "	391.44
267	" "	407.86	256	" "	393.94
266	" "	404.60	255	" "	394.99
265	CONC. MON.	402.44	254	" "	402.47
264	" "	394.69	253	" "	404.40
263	PIN W/ CAP	393.94	252	" "	405.26
262	" "	394.05	251	" "	405.26
285	" "	394.82	216	" "	402.35
274	PIN W/ CAP	399.42	217	" "	403.28
275	" "	401.64	251	" "	405.52
276	" "	402.82	250	" "	408.03
279	" "	401.86	249	" "	418.76
277	" "	398.52	58	" "	429.89
278	" "	394.27	171	" "	430.47
261	" "	393.27			
260	" "	390.53			
269	CONC. MON.	386.53			
415	PIN W/ CAP	399.44			

CURVE DATA  
 GOLDEN GRAIN COURT  
 STA 0+89.38 TO STA 1+79.38  
 $\Delta = 21^{\circ}25'05"$   
 $R = 240.00'$   
 $L = 90.00'$   
 $T = 45.53'$   
 $D = 230^{\circ}52'24"$   
 $CHD = N 41^{\circ}40'30"E, 85.47'$

CURVE DATA  
 WHEATFIELD WAY  
 STA 11+17.79 TO STA 13+39.76  
 $\Delta = 25^{\circ}41'34"$   
 $R = 495.00'$   
 $L = 221.97'$   
 $T = 112.08'$   
 $D = 11^{\circ}34'30"$   
 $CHD = N 71^{\circ}54'52"W, 220.11'$

CURVE DATA  
 WHEATFIELD WAY  
 STA 5+41.73 TO STA 7+36.46  
 $\Delta = 17^{\circ}15'54"$   
 $R = 650.00'$   
 $L = 194.73'$   
 $T = 58.10'$   
 $D = 08^{\circ}48'53"$   
 $CHD = S 86^{\circ}35'24"W, 134.00'$



No	Type	Location	Inv. In	Inv. Out	Top Elev.	Remarks
I-1	A-5	1.92' South - LP Sta 2+36.64	380.07	379.87	383.75	HC STD SD 4.01
I-2	A-10	13.92' left of C Sta 0+44	386.87	386.87	390.72	HC STD SD 4.02
I-3	A-10 w/ Defl	20.92' right of C Sta 13+71.76	387.12	387.12	391.02	HC STD SD 4.02
I-4	A-10 w/ Defl	20.92' left of C Sta 9+69.55	403.07	402.87	393.45	HC STD SD 4.02
I-5	A-10 w/ Defl	20.92' right of C Sta 9+71.55	403.04	402.84	407.79	HC STD SD 4.02
M-1	STD	16' left of C Sta 0+39.00	402.82	402.82	407.82	HC STD SD 5.01
E-1	18" Metal End Sect.	See Plan	378.58	378.47	406.10	HC STD SD 5.61
E-2	15" Metal End Sect.	16' left of C Sta 1+78.00	376.97	376.70	-	HC STD SD 5.61

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 7-24-86  
 CHIEF, BUREAU OF ENGINEERING

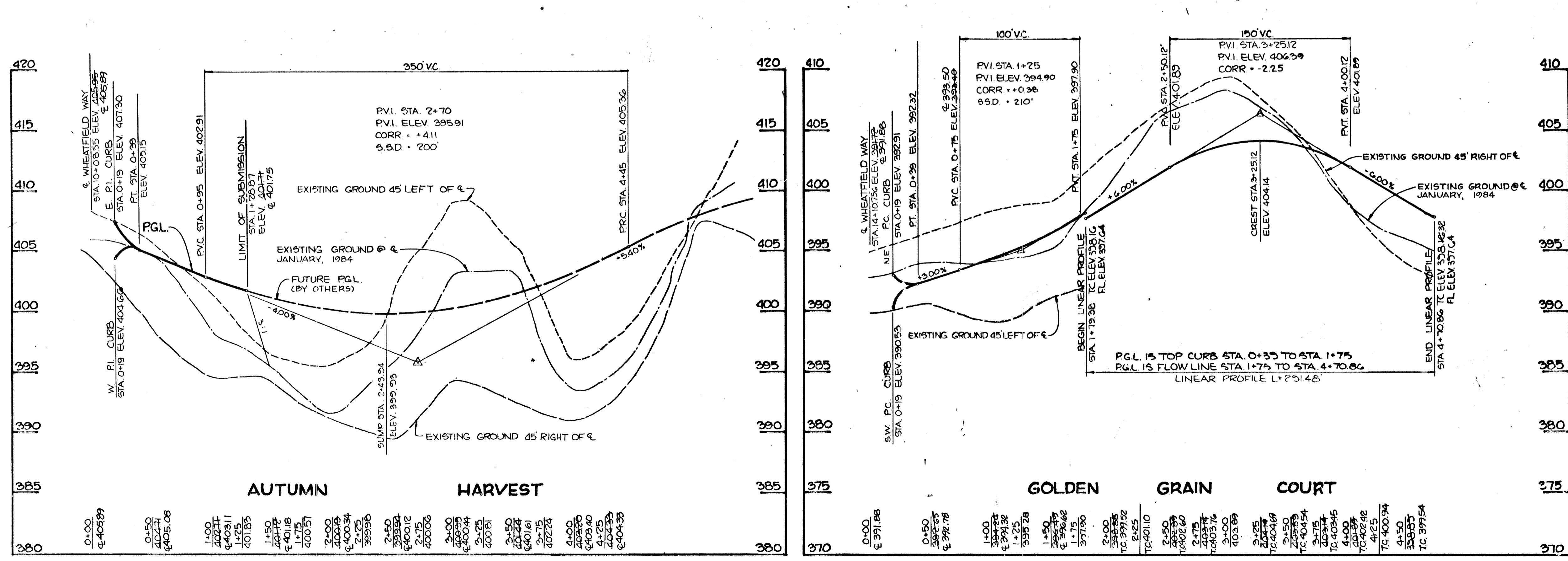
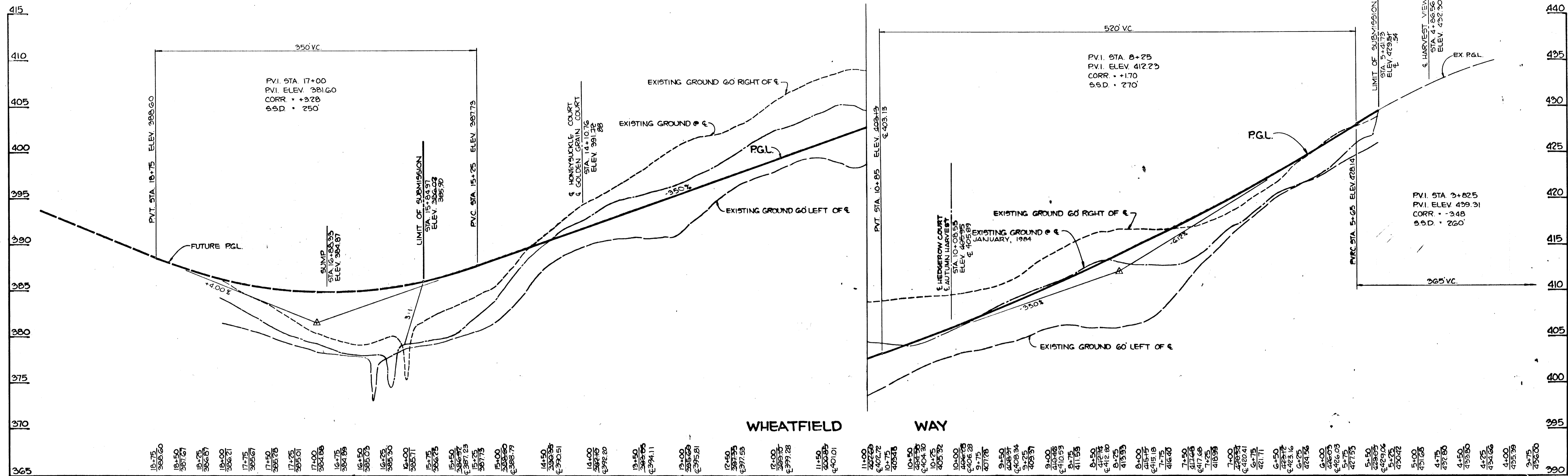
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 7-22-86  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

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: LONG GATE SECTION I AREA 2 LOTS 10 THRU 22  
 LOCATION: 2ND ELECTION DISTRICT HOWARD COUNTY, MD. TAX MAP NOS 30 & 31 ZONING MAP NOS 30 & 31 PARCEL 1B  
 DEVELOPER: SECURITY DEVELOPMENT CORP, PO BOX 417, ELLICOTT CITY, MD 21043  
 DATE: NOV. 1985 PROJECT NO: 8533 RSD  
 DES: RJW DRN: KAM SCALE: 1"=50' DRAWING: 2 OF 3

# 1162

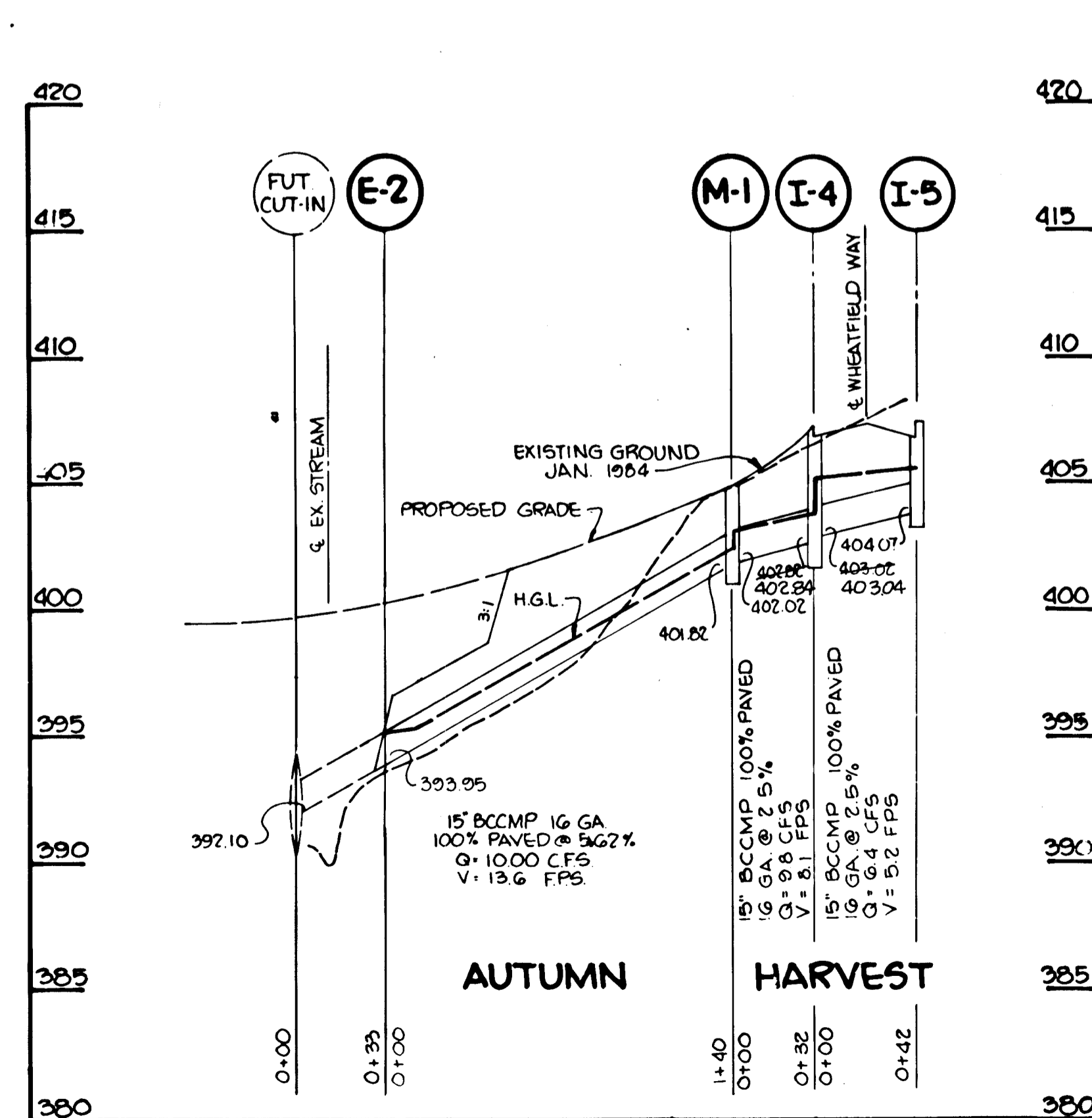
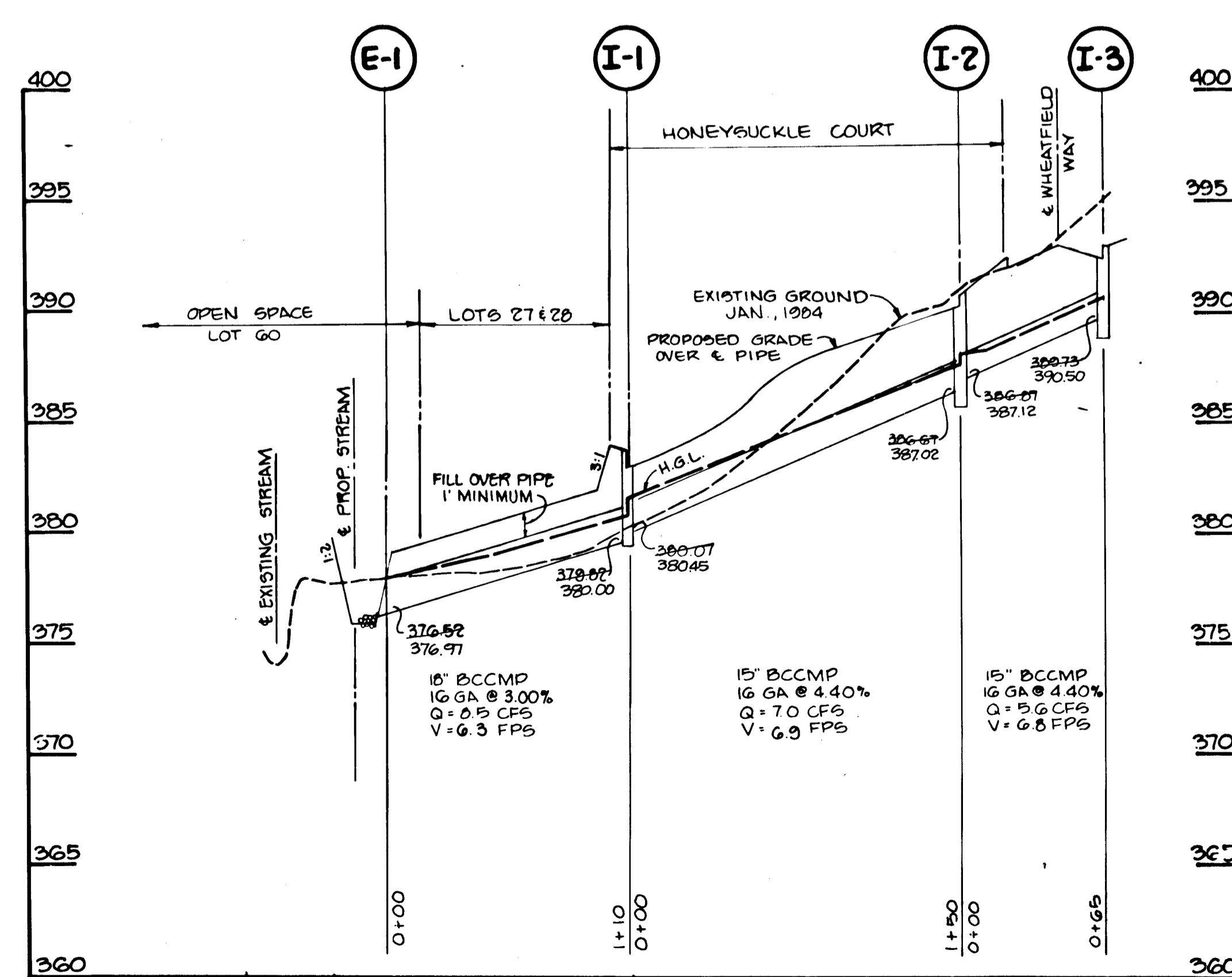
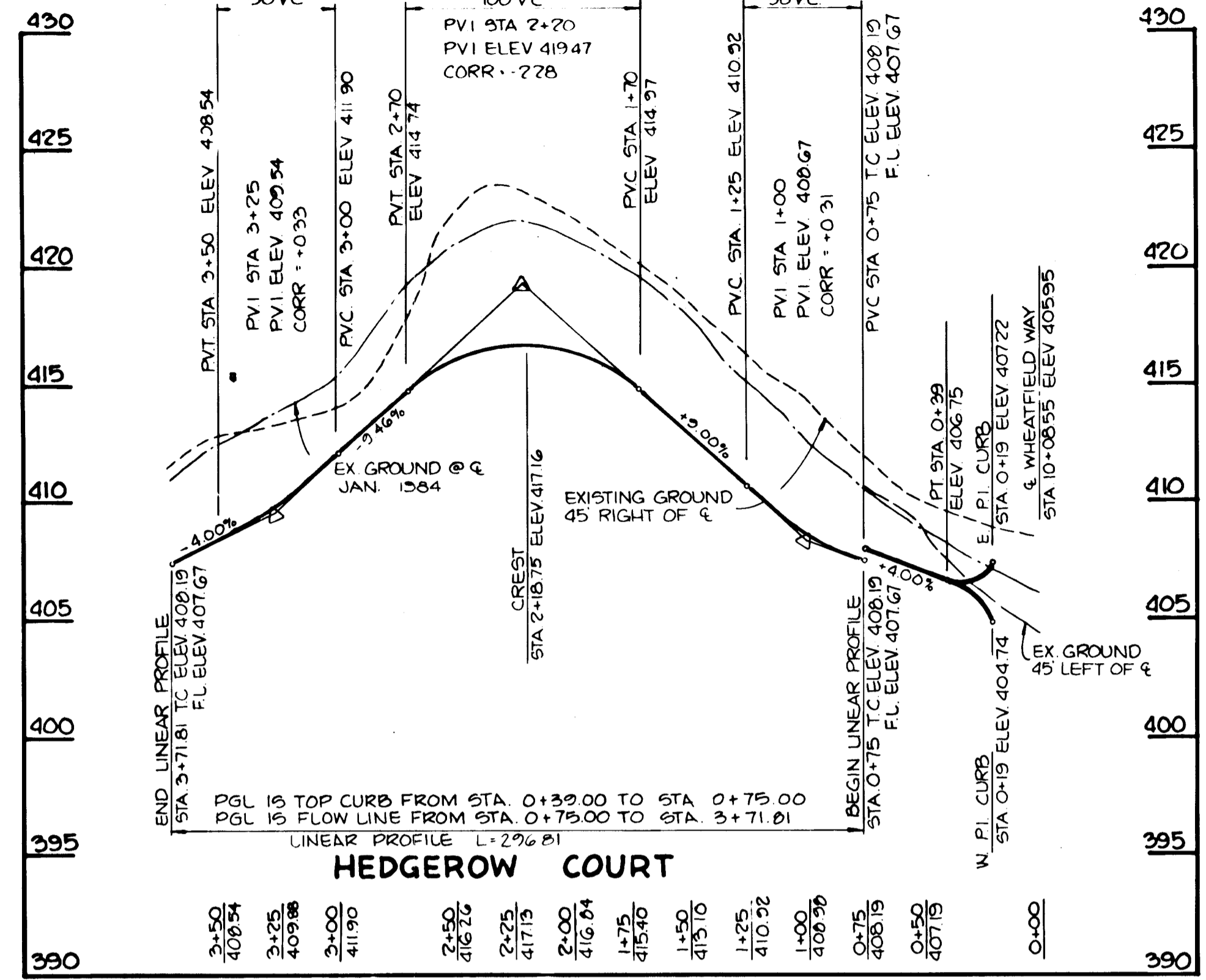
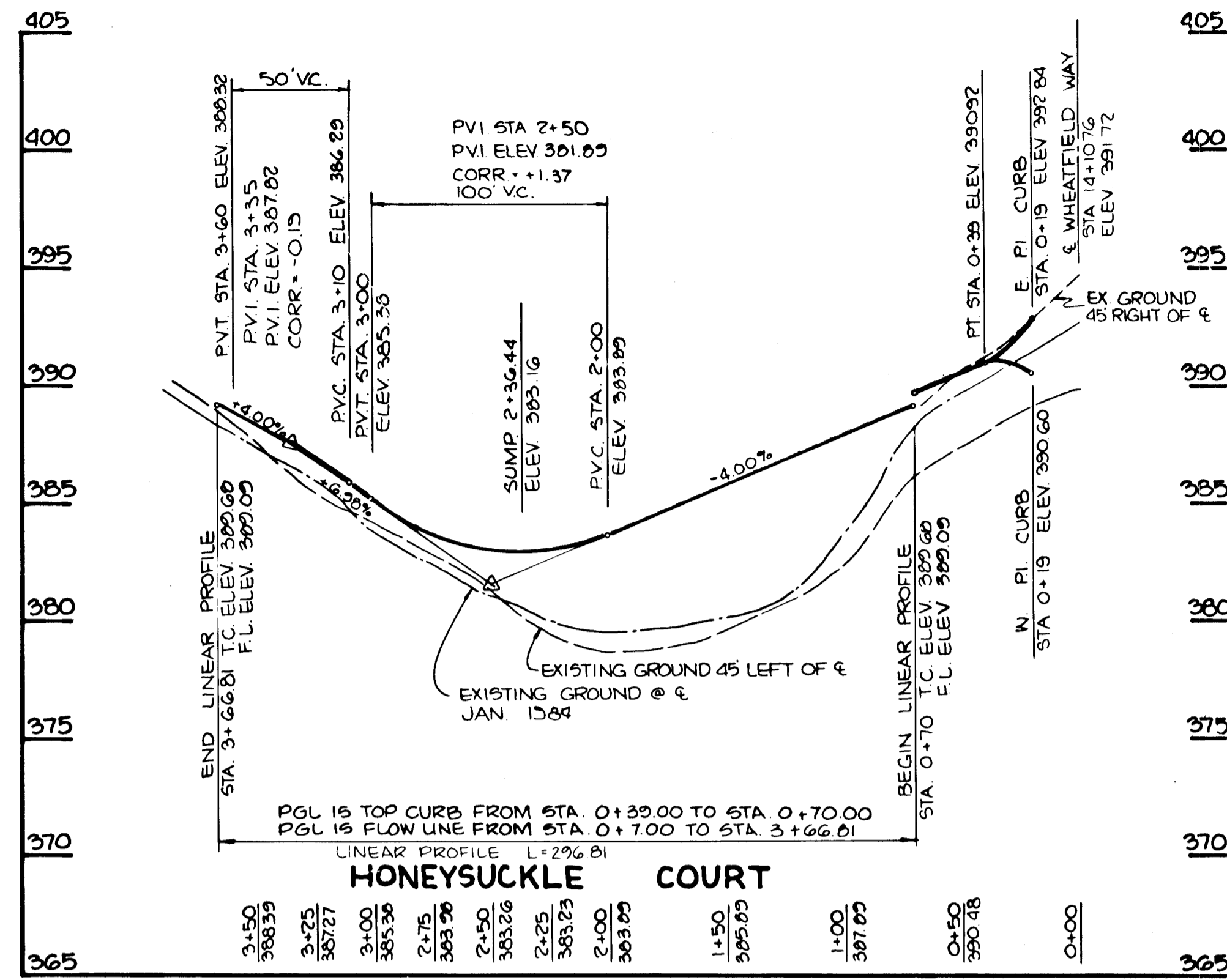


AS-BUILT SURVEY CERTIFIED BY  
WILLIAM G. RAUSH, MD. P.E. No. 4575  
ON 10-14-88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
CHIEF, BUREAU OF ENGINEERING	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	
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 1 AREA 2 LOTS 10 THRU 62
DEVELOPER	LOCATION
SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MD. 21043	2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS 30 & 31 ZONING MAP NOS 30 & 31 PARCEL 1B
TITLE	DATE
PROFILES OF WHEATFIELD WAY AUTUMN HARVEST AND GOLDEN GRAIN CT.	NOV 1985
DES: RJW	DRN: KAM
SCALE: H: 1"=50' V: 1"=5'	PROJECT NO: 8533 RDD
	DRAWING 3 OF 3

AS-BUILT 10-4-88 1-86-95

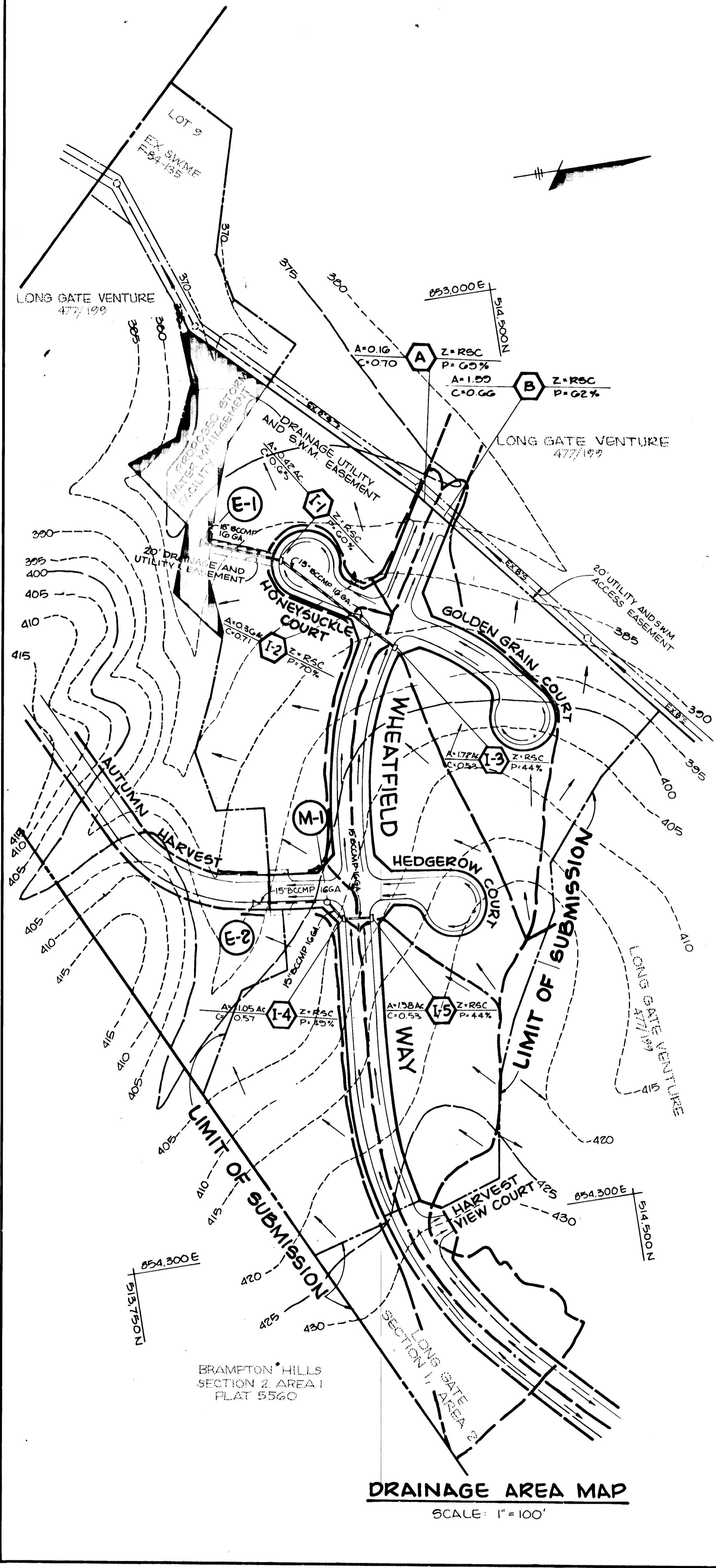
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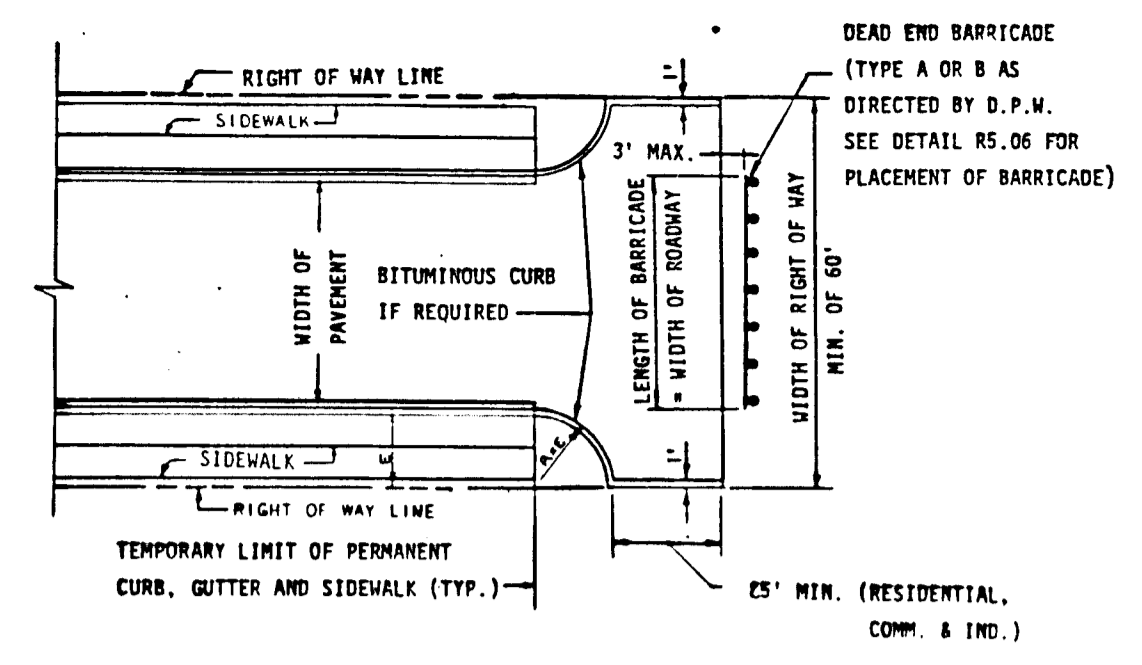
AS-BUILT SURVEY CERTIFIED BY  
WILLIAM G. RAUSH, MD. P.E. No.  
4575 ON 10-4-88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	7-24-86
CHIEF, BUREAU OF ENGINEERING	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	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 & NORMANDY SHOPPING CENTER, ELLICOTT CITY, MD 21043 PROJECT: LONG GATE SECTION I AREA 2 LOTS 10 THRU 62 LOCATION: 2 <sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS. 30 & 31 ZONING MAP NOS. 30 & 31 PARCEL 1B DEVELOPER: SECURITY DEVELOPMENT CORP, PO BOX 417, ELLICOTT CITY, MD 21043 TITLE: PROFILES OF HEDGEROW COURT HONEYSUCKLE COURT & STORM DRAINS DATE: NOV. 1985 PROJECT NO: 8533 PSD DES: RJW DRN: KAM SCALE: H: 1"=50' V: 1"=5' DRAWING: 4 OF 2	

# 1162

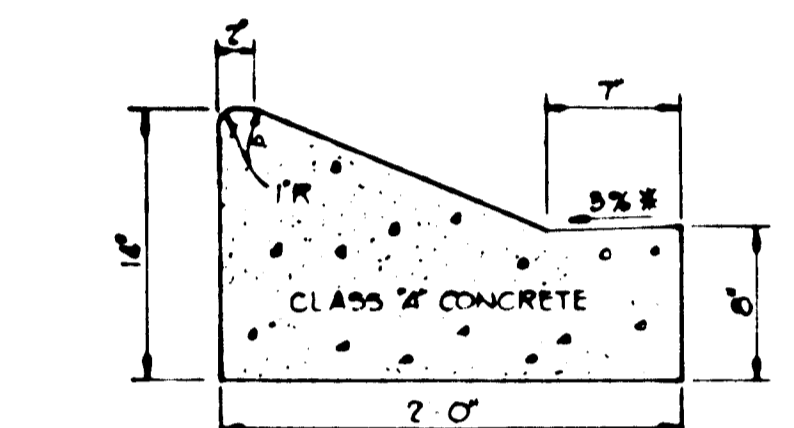


**DRAINAGE AREA MAP**  
SCALE: 1" = 100'



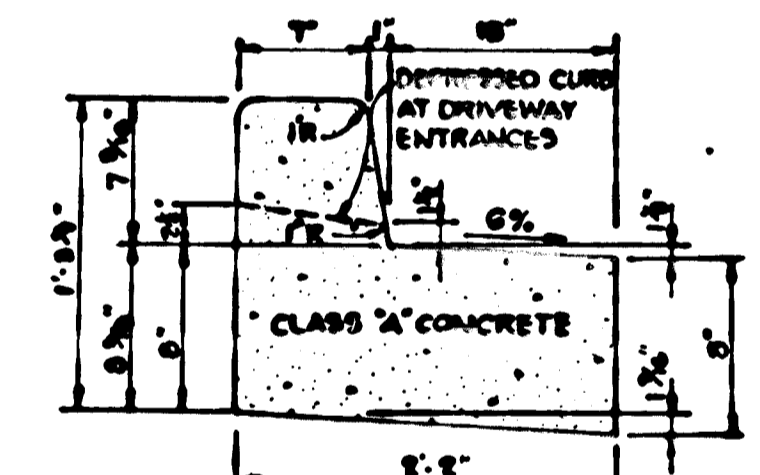
- NOTES:**
1. A TEE TURN-AROUND SHALL BE USED IN LIEU OF A CUL-DE-SAC ONLY IF THE STREET IS TO BE EXTENDED IN THE FUTURE.
  2. BITUMINOUS CURB SHALL EXTEND AROUND THE TEE TURN-AROUND IF AND AS REQUIRED TO CONTROL CURB DRAINAGE FROM THE ROADWAY SECTION.
  3. REFER TO STANDARD R-5.06 FOR TYPICAL ROADWAY PROFILE OF TEMPORARY LIMIT OF PAVING.
  4. PROVIDE EASEMENTS AS REQUIRED FOR PLACEMENT OF BARRICADE AND ANY NECESSARY GRADING (SEE DETAIL R5.06)

**TEMPORARY TEE TURN-AROUND**  
NO SCALE

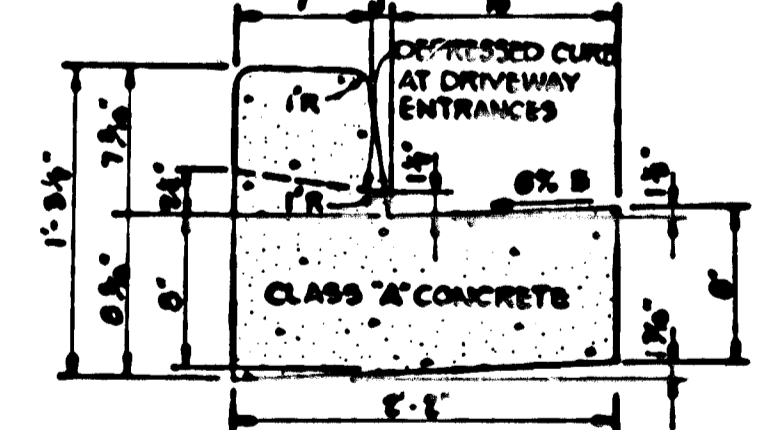


HOWARD COUNTY DESIGN MANUAL VOLUME IV  
STANDARD SPECIFICATIONS AND DETAILS FOR  
CONSTRUCTION (DRAWING R-8.01)  
\* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE  
ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED  
SECTIONS SHALL BE SLOPED AT THE SAME RATE  
AS THE PAVEMENT.

**MODIFIED COMBINATION  
CURB AND GUTTER**  
No Scale

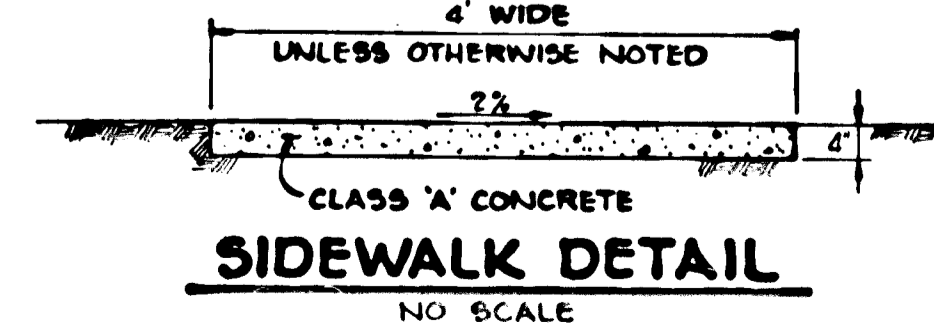


**REVERSE**

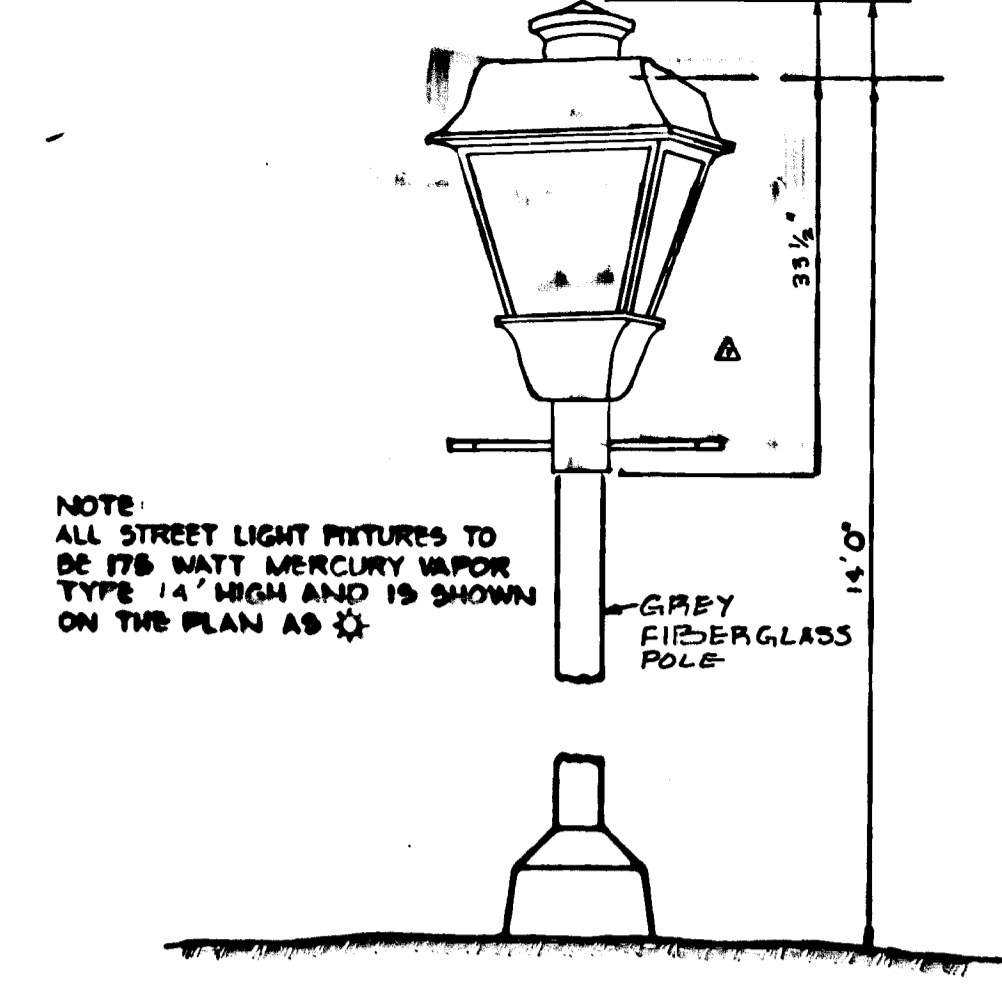


HOWARD COUNTY DESIGN MANUAL VOLUME IV  
STANDARD SPECIFICATIONS AND DETAILS FOR  
CONSTRUCTION (DRAWING R-8.01)  
\* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE  
ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED  
SECTIONS SHALL BE SLOPED AT THE SAME RATE  
AS THE PAVEMENT.

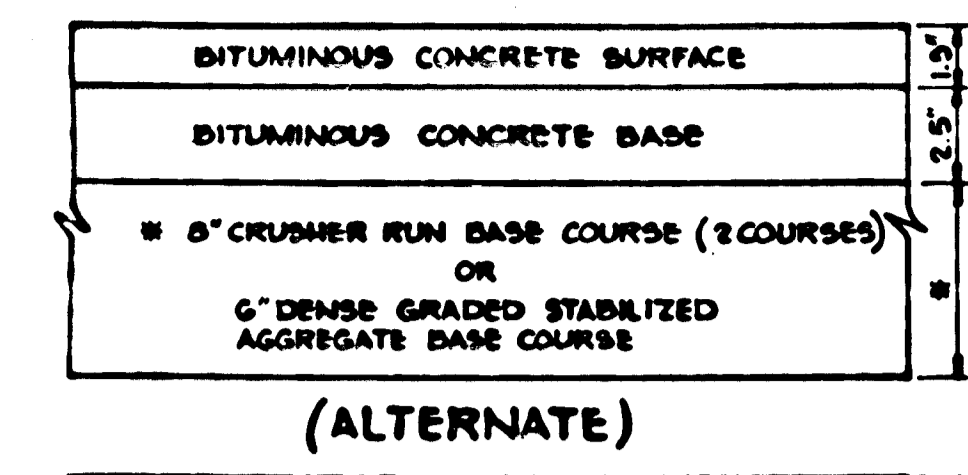
**STANDARD 7" COMBINATION  
CURB AND GUTTER**



**SIDEWALK DETAIL**  
NO SCALE

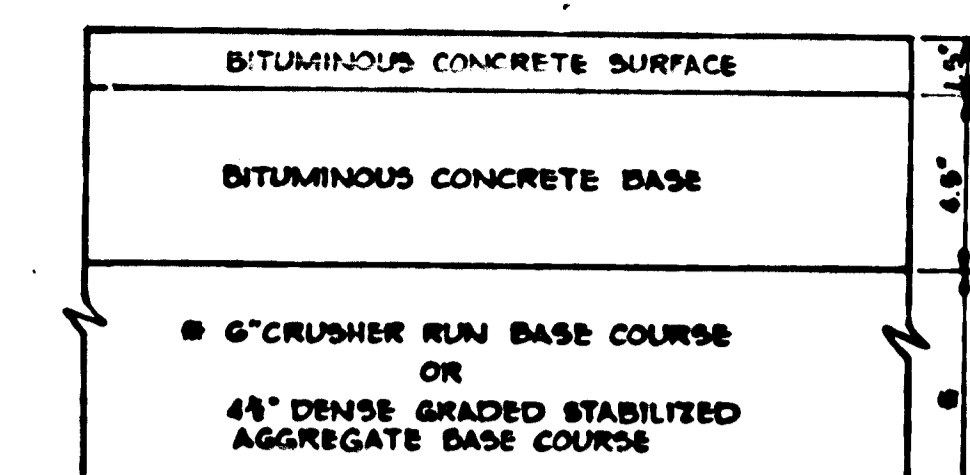


**DETAIL - LIGHTING FIXTURE**  
NO SCALE



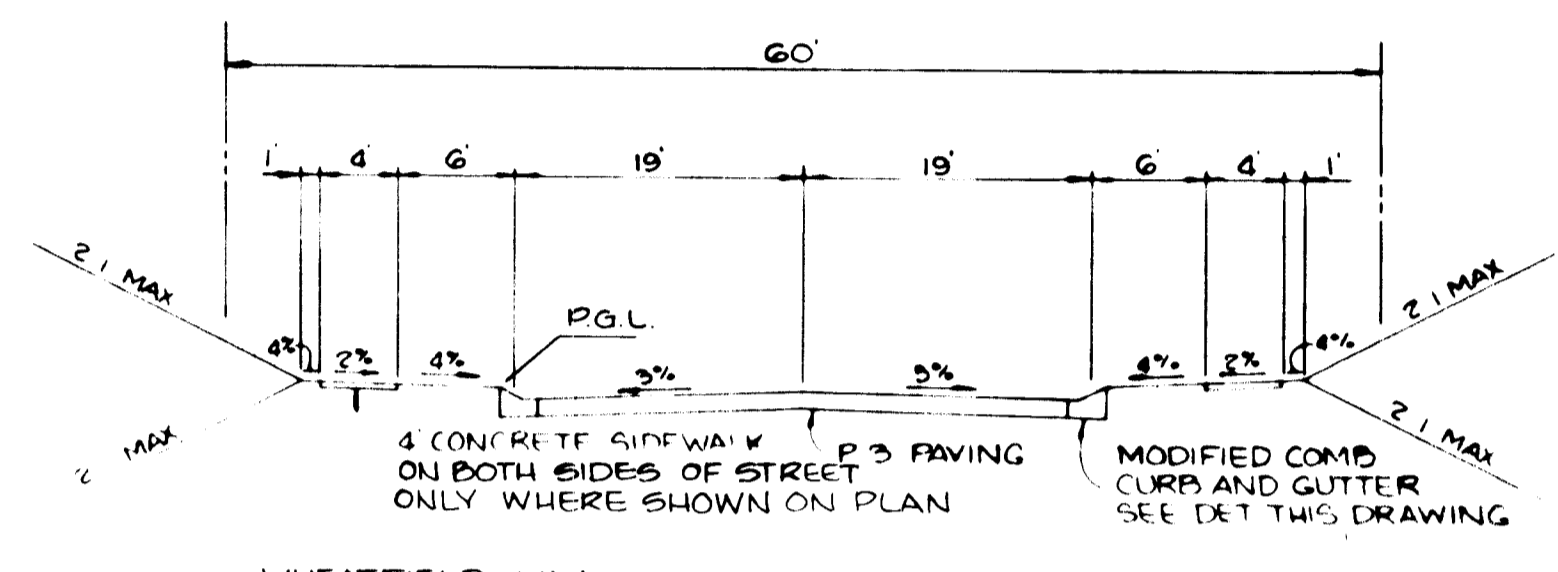
**(ALTERNATE)**  
BITUMINOUS CONCRETE SURFACE  
BITUMINOUS CONCRETE BASE

**6\"/>**

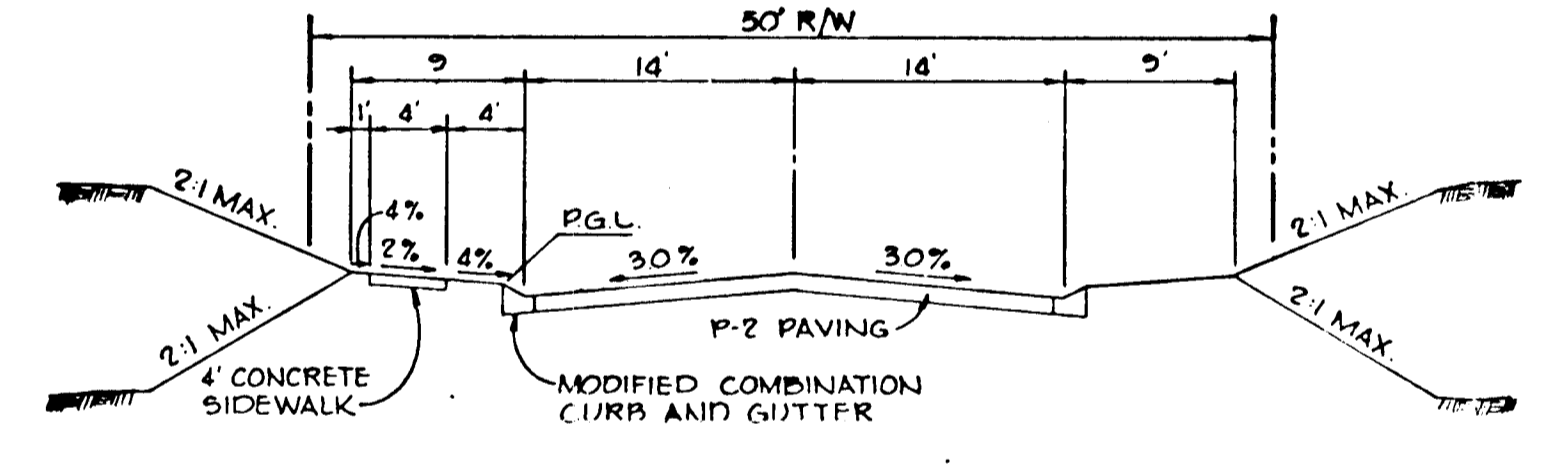


**(ALTERNATE)**  
BITUMINOUS CONCRETE SURFACE  
BITUMINOUS CONCRETE BASE

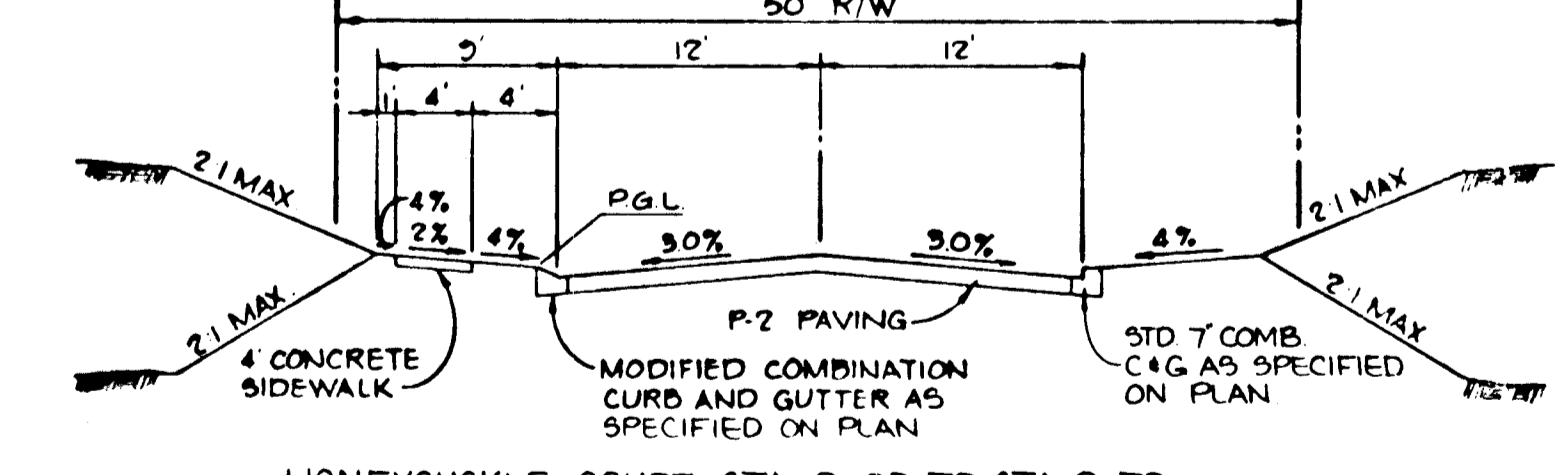
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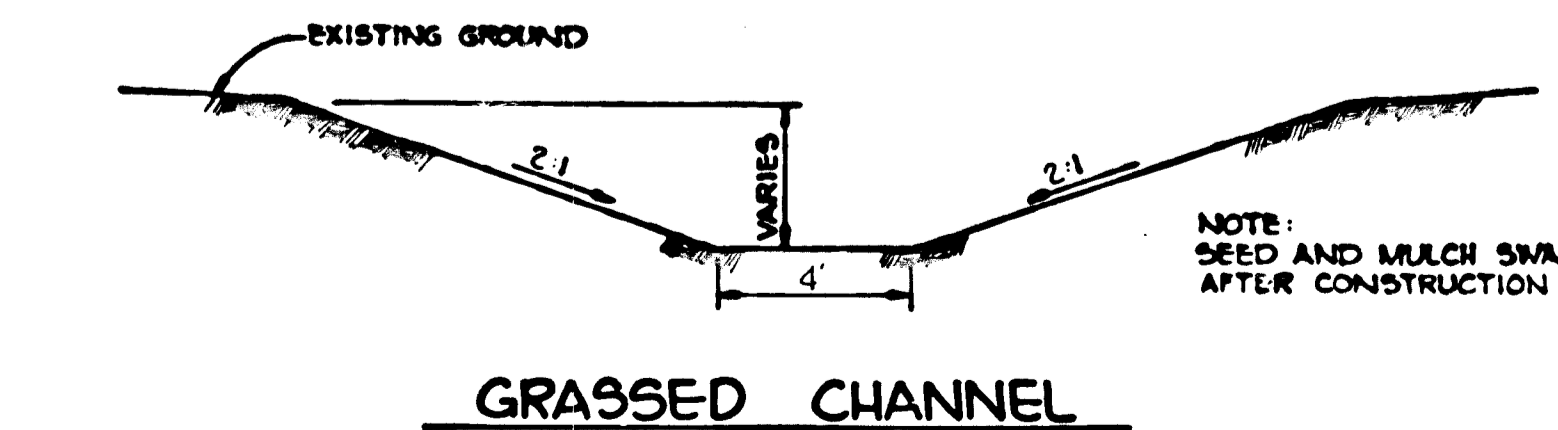
WHEATFIELD WAY STA 5+47.3 TO STA 15+84.57  
CLASSIFICATION MINOR COLLECTOR ZONED RSC  
DESIGN SPEED 35 MPH  
**TYPICAL SECTION**  
NO SCALE



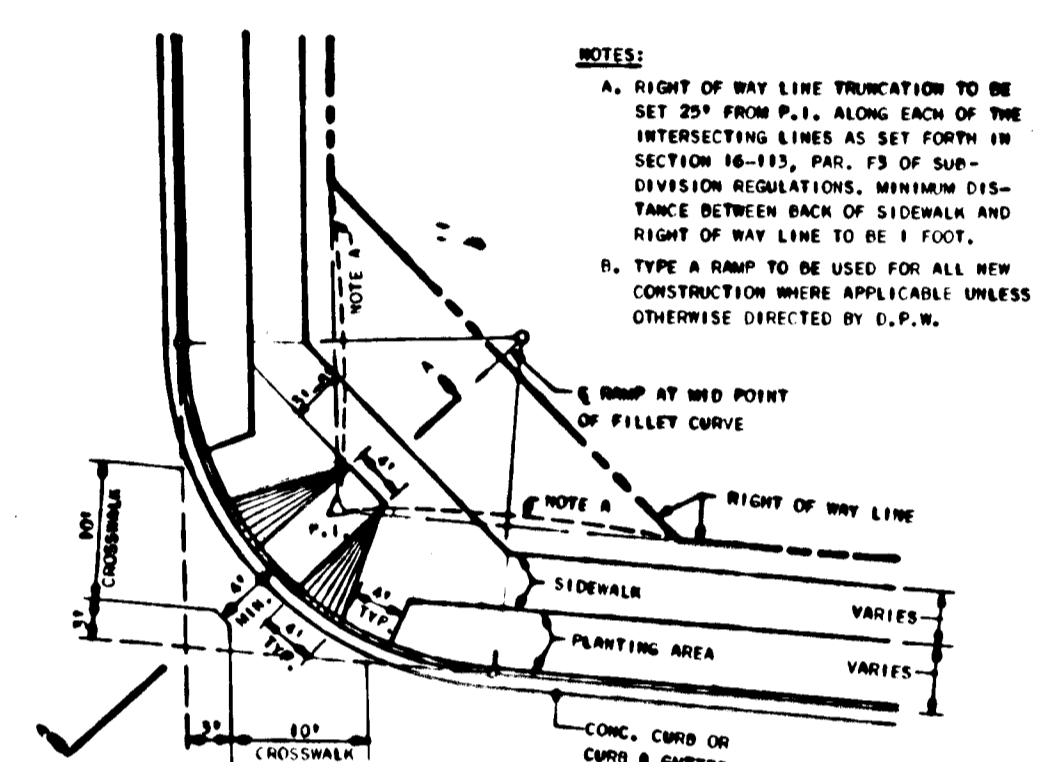
AUTUMN HARVEST STA 0+35.00 TO STA 1+28.87  
GOLDEN GRAIN COURT STA 0+35.00 TO STA 1+75.38  
CLASSIFICATION CUL-DE-SAC ZONED RSC  
DESIGN SPEED 30 MPH  
**TYPICAL SECTION**  
NO SCALE



HONEYSUCKLE COURT STA 0+35 TO STA 0+70  
HEDGEROW COURT STA 0+35 TO STA 0+75  
CLASSIFICATION CUL-DE-SAC ZONED RSC  
DESIGN SPEED 30 MPH  
**TYPICAL SECTION**  
NO SCALE



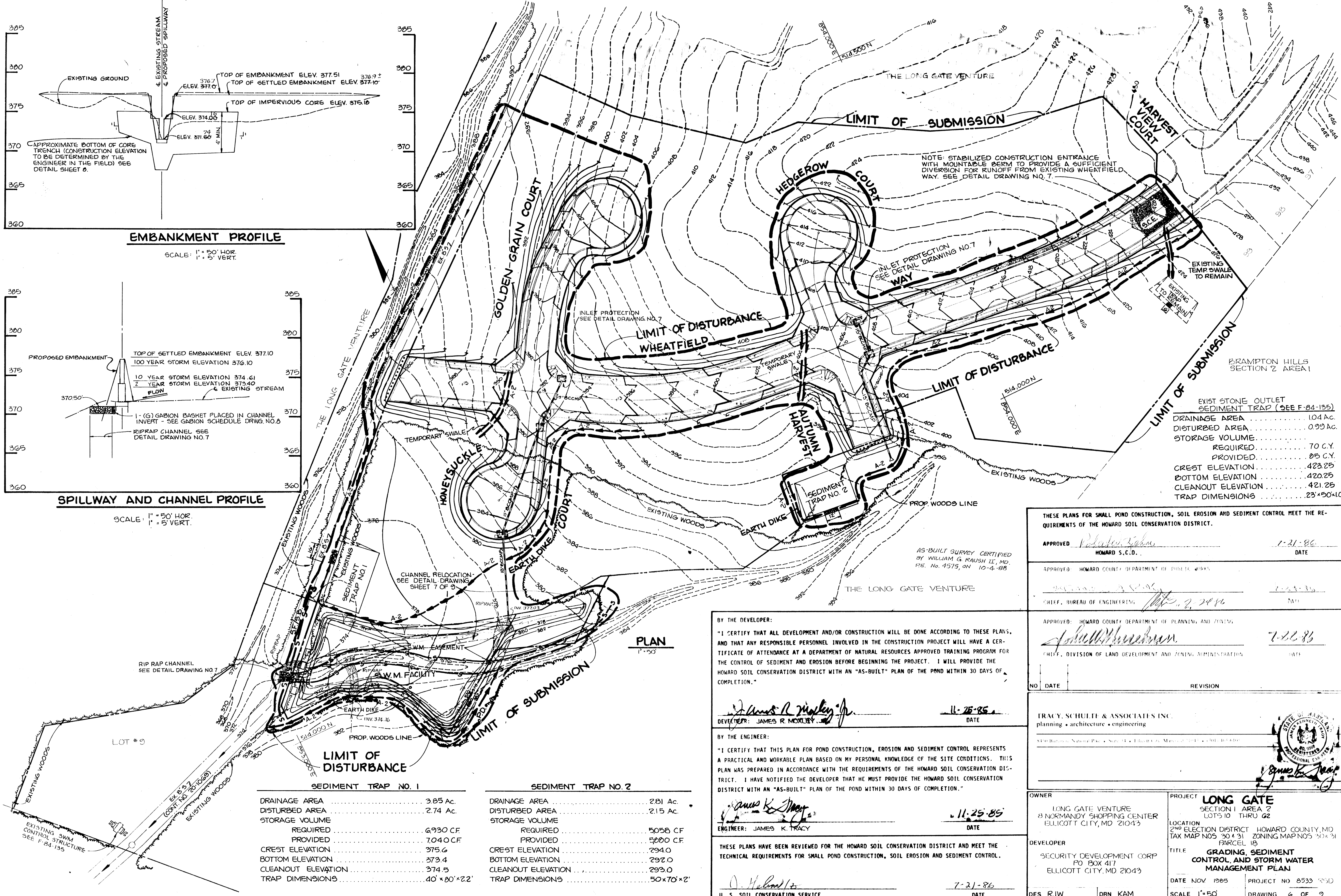
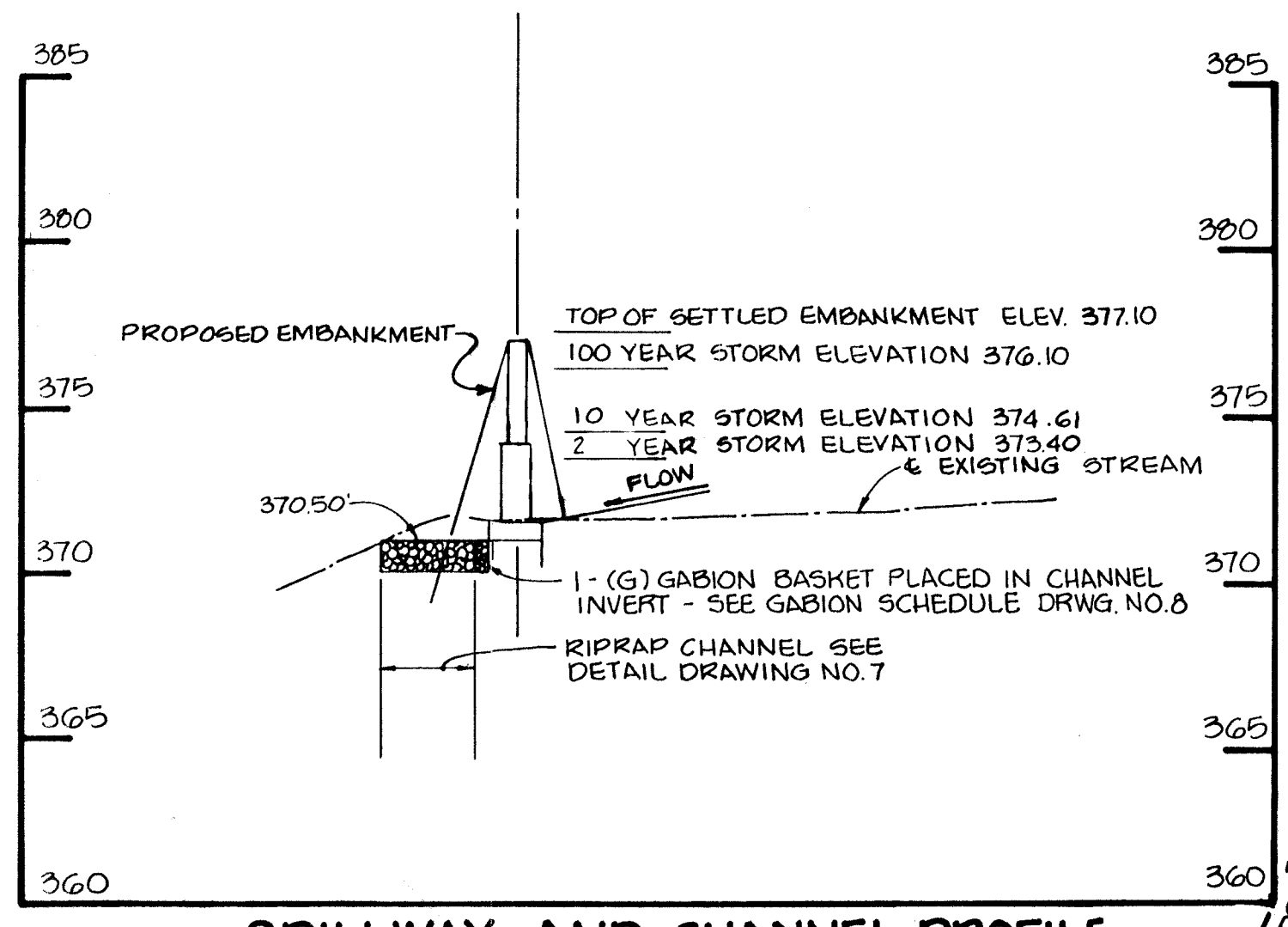
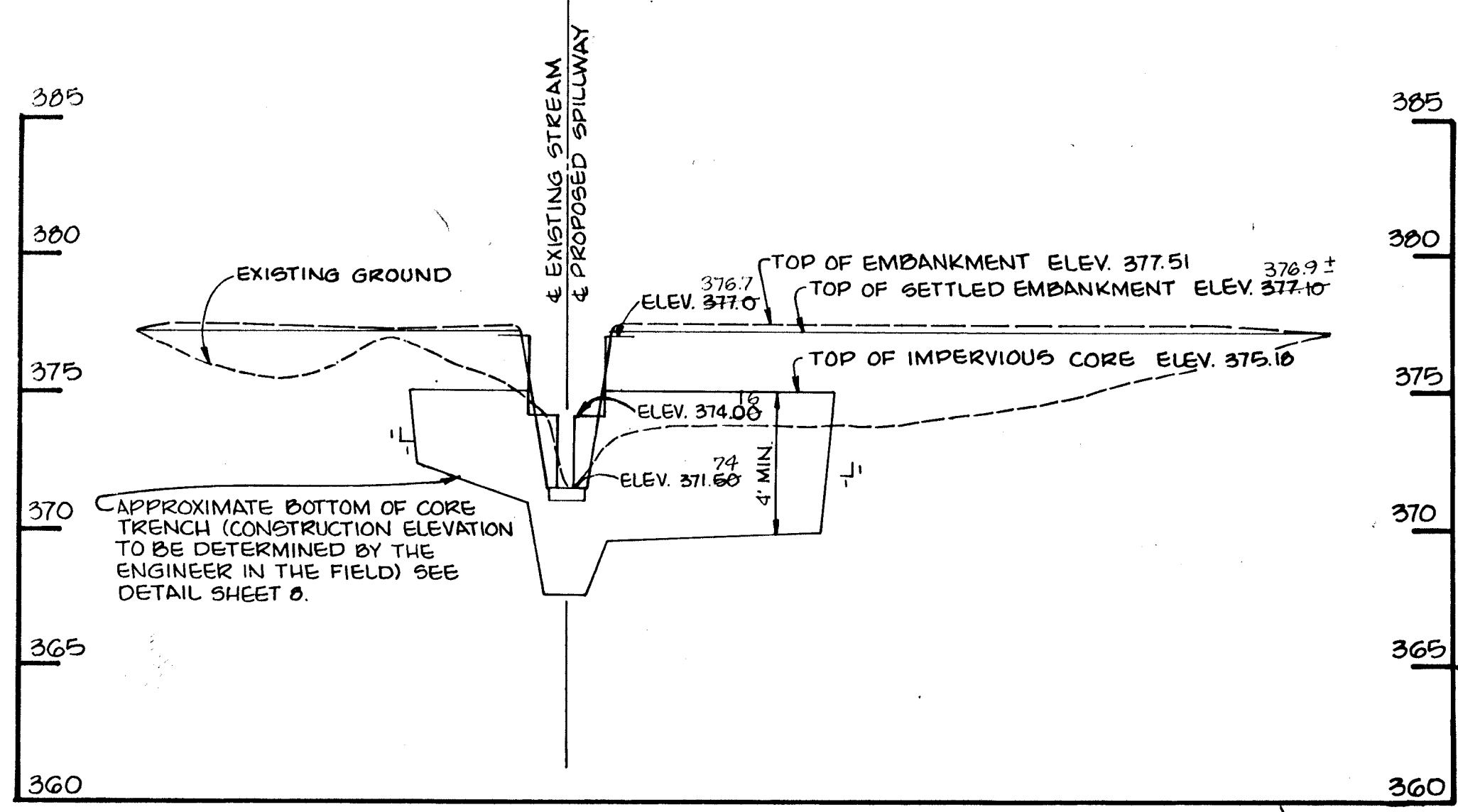
**GRASSED CHANNEL**  
NO SCALE



**NOTES:**  
A. RIGHT OF WAY LINE TRUNCATION TO BE SET 20' FROM P.L. ALONG EACH OF THE INTERSECTING LINES AS SET FORTH IN SECTION 16-113, PAR. F3 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 UNLESS OTHERWISE DIRECTED BY D.P.W.

**SIDEWALK RAMP**  
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		7-24-86
CHIEF, BUREAU OF ENGINEERING	<i>[Signature]</i>	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING		7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	<i>[Signature]</i>	DATE
1 10-21-86	CHANGED LIGHTING DETAIL TO COLONIAL MODEL	REVISION
NO DATE		
TRACY, SCHULTE & ASSOCIATES INC. planning • architecture • engineering 8450 Baltimore National Pike • Suite 74 • Ellicott City, Maryland 21043 • (301) 465-6105		
OWNER	PROJECT <b>LONG GATE</b> SECTION I AREA 2 LOTS 10 THRU 62	
DEVELOPER	LOCATION 2ND ELECTION DISTRICT - HOWARD COUNTY, MD TAX MAP NOS. 30 & 31 ZONING MAP NOS 30 & 31 PARCEL 18	
DES. RJW	DRN. KAM/KMN	TITLE <b>DETAILS AND DRAINAGE AREA MAP</b>
		DATE NOV, 1985 PROJECT NO 8533 R5D
		SCALE AS SHOWN DRAWING 5 OF 5



EXIST STONE OUTLET SEDIMENT TRAP (SEE F-84-135)

DRAINAGE AREA	104 AC.
DISTURBED AREA	0.99 AC.
STORAGE VOLUME	
REQUIRED	70 C.Y.
PROVIDED	85 C.Y.
CREST ELEVATION	423.25
BOTTOM ELEVATION	420.25
CLEANOUT ELEVATION	421.25
TRAP DIMENSIONS	23' x 50' x 10'

SEDIMENT TRAP NO. 1

DRAINAGE AREA	3.85 AC.
DISTURBED AREA	2.74 AC.
STORAGE VOLUME	
REQUIRED	6930 CF
PROVIDED	7040 CF
CREST ELEVATION	375.6
BOTTOM ELEVATION	373.4
CLEANOUT ELEVATION	374.5
TRAP DIMENSIONS	40' x 80' x 22'

SEDIMENT TRAP NO. 2

DRAINAGE AREA	2.81 AC.
DISTURBED AREA	2.15 AC.
STORAGE VOLUME	
REQUIRED	5058 CF
PROVIDED	5280 CF
CREST ELEVATION	294.0
BOTTOM ELEVATION	292.0
CLEANOUT ELEVATION	293.0
TRAP DIMENSIONS	50' x 70' x 2'

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."

DEVELOPER: *James R. Moxley*  
DATE: 11-25-85

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."

ENGINEER: *James K. Tracy*  
DATE: 11-25-85

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.

*D. Helms*  
U. S. SOIL CONSERVATION SERVICE  
DATE: 7-21-86

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

APPROVED: *William G. Raush II*  
HOWARD S.C.D.  
DATE: 1-21-86

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William G. Raush II*  
CHIEF, BUREAU OF ENGINEERING  
DATE: 1-23-86

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*John M. ...*  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
DATE: 7-26-86

NO. DATE REVISION

TRACY, SCHULTE & ASSOCIATES INC.  
planning • architecture • engineering  
8100 Business National Park • Suite 114 • Ellicott City, Maryland 21043 • (410) 436-4400  
*James K. Tracy*  
REGISTERED PROFESSIONAL ENGINEER

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

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

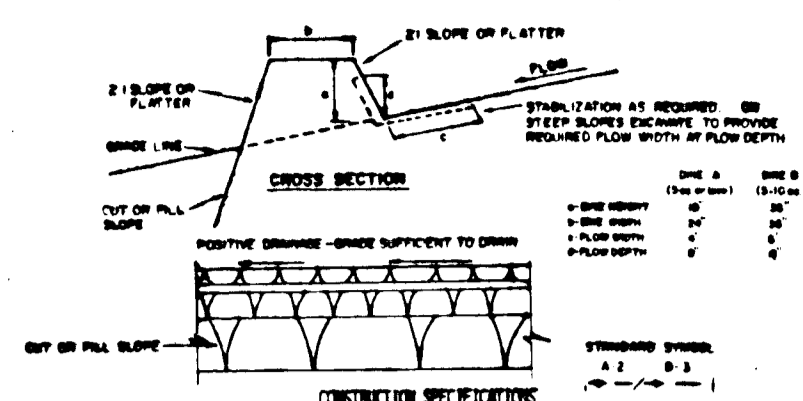
PROJECT: LONG GATE SECTION 1 AREA 2  
LOTS 10 THRU 22

LOCATION: 2ND ELECTION DISTRICT HOWARD COUNTY, MD  
TAX MAP NOS 30 & 31 ZONING MAP NOS 30 & 31  
PARCEL 18

TITLE: GRADING, SEDIMENT CONTROL, AND STORM WATER MANAGEMENT PLAN

DATE: NOV 1985 PROJECT NO: 8533 000

DES: RJW DRN: KAM SCALE: 1" = 50' DRAWING: 6 OF 9



**CONSTRUCTION SPECIFICATIONS**

1. ALL DIKES SHALL BE CONSTRUCTED BY EARTHWORKING EQUIPMENT.
2. DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. DIKES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
4. DIKES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
5. DIKES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
6. DIKES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.

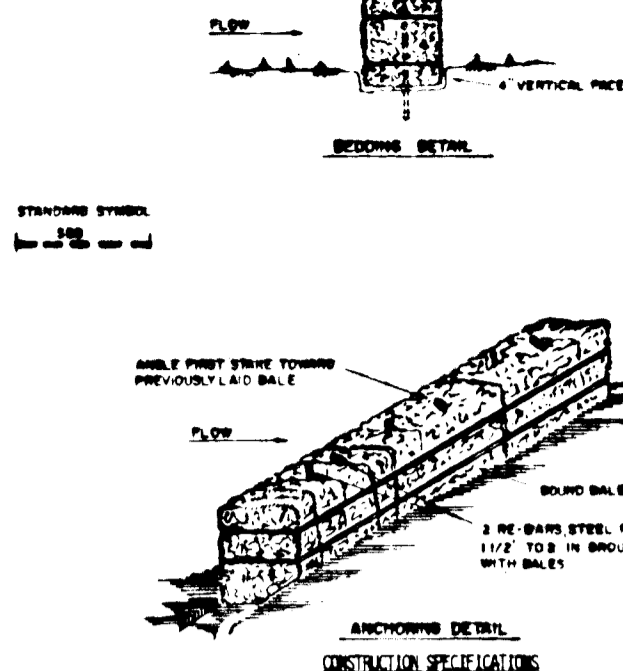
**FLAN CHANNEL STABILIZATION**

TYPE OF CHANNEL	CHANNEL SIZE	LINE A	LINE B
1	5-1/2' x 6"	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3-1/2' x 6"	SEED AND STRAW MULCH	SEED AND STRAW MULCH
3	5-1/2' x 6"	SEED WITH RATE OF SEED	SEED WITH RATE OF SEED
4	8-1/2' x 6"	LINED RIP-RAP	ENGINEERED DESIGN

A. Stone to be 2 inch stone or recycled concrete (not to exceed 10% in a layer at least 3 inches thick) in a layer at least 12 inches thick. Construction proceeds into the dike.

B. Periodic inspection and needed maintenance shall be provided after each rain event.

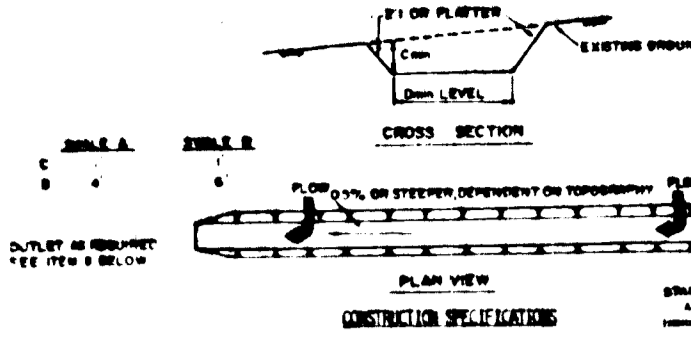
**EARTH DIKE**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS**

1. Bales shall be placed at the toe of a slope or on the contour and in a row with ends tightly meeting the adjacent bales.
2. Each bale shall be oriented in the soil a minimum of 90 degrees and placed to the existing and new contours.
3. Bales shall be securely anchored in place by either two stakes or rebar driven through the bale. The first stake or rebar shall be driven through the bale at an angle to force the bale together. Stakes shall be driven through the bale.
4. Inspection shall be provided and repair replacement shall be made properly as needed.
5. Bales shall be removed when they have served their purpose so as not to block or impede flow of drainage.

**STRAW BALE DIKE**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS**

1. ALL TEMPORARY SWALES SHALL HAVE UNFILTERED POSITIVE DRAINAGE TO AN OUTLET.
2. SWALES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
3. SWALES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
4. SWALES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
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8. SWALES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.
9. SWALES SHALL BE CONSTRUCTED TO FACILITATE PROPER FLOW PATTERN TO PREVENT UNDESIRABLE FLOW PATTERN.

**TEMPORARY SWALE**  
NO SCALE

**PERMANENT SEEDING NOTES**

1. 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.

2. SEEDING SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERMANENT SEEDING PRACTICES. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

3. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

4. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

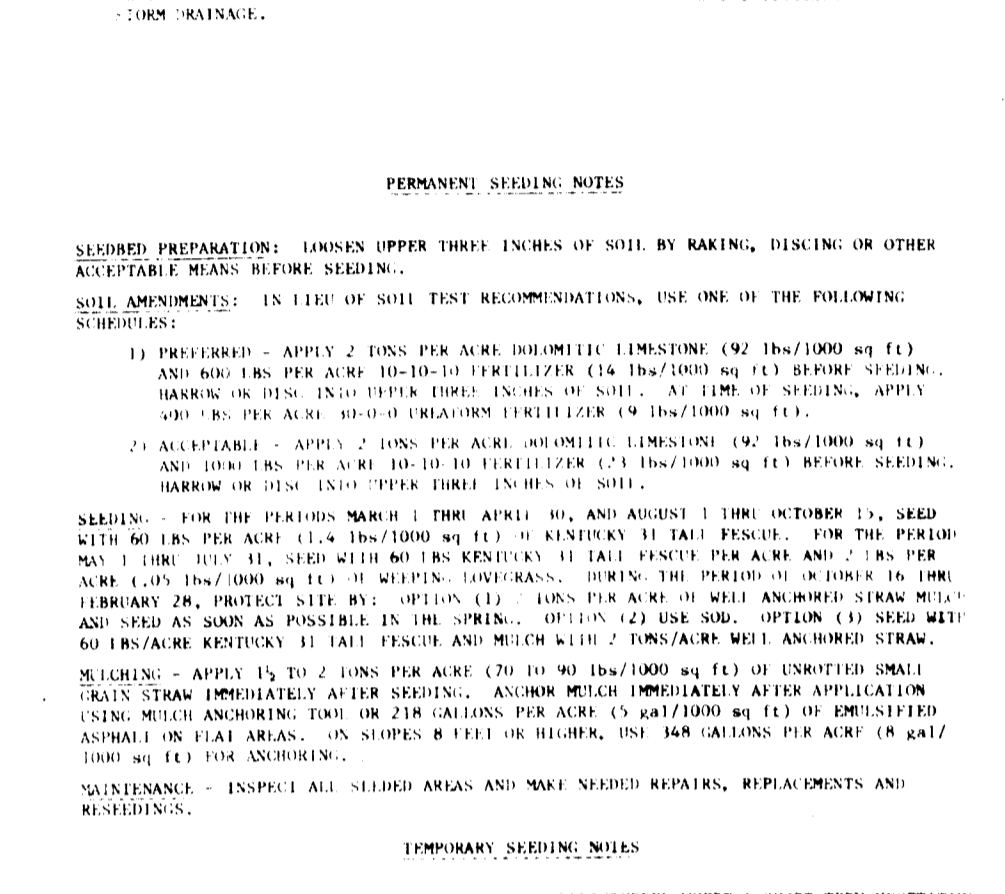
5. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

6. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

7. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

8. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.

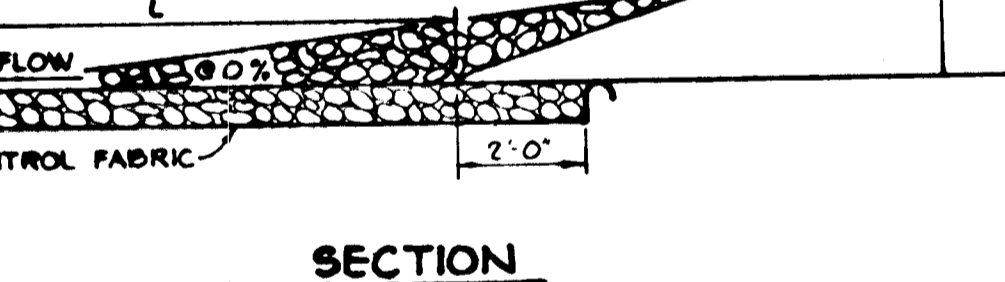
9. SEEDING SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL TEMPORARY SEEDING PRACTICES.



**CONSTRUCTION SPECIFICATIONS**

1. Stone Size - Use 2" stone, or crushed concrete equivalent.
2. Length - As required, but not less than 30 feet (concrete on a single radius for where a 30 foot minimum length would apply).
3. Thickness - Not less than 18 inches.
4. Spacing - One (1) foot minimum, but not more than the full width of the filter where increase or spread occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Slope - All surface water flowing on dispersed toward construction entrances shall be piped across the entrance. If piping is impractical, a removable device with 1/4" slope will be permitted.
7. 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 repair and/or removal of any material used to trap sediment. All sediment applied, dropped, washed or tracked onto public right-of-way must be removed immediately.
8. Warning - Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done so as not to stabilize with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

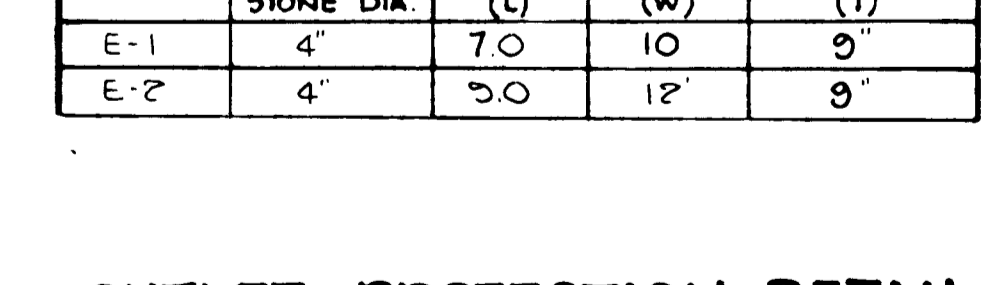
**STABILIZED CONSTRUCTION ENTRANCE**  
NO SCALE



**CONSTRUCTION NOTES FOR FURROWED SILT FENCE**

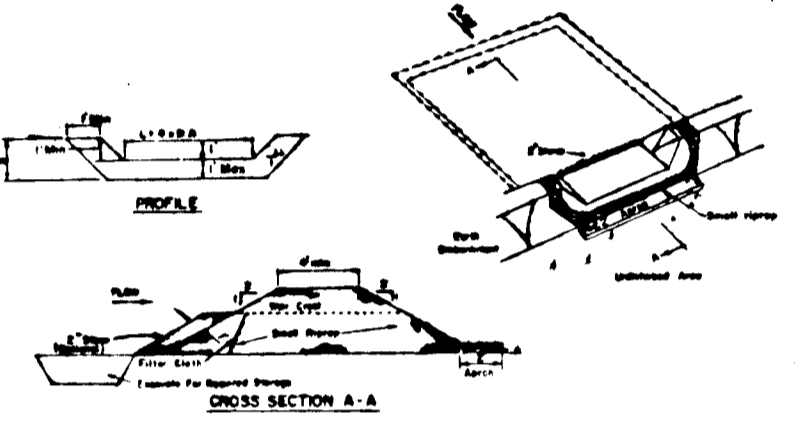
1. WHEN THE FENCE IS TO BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOOD POSTS WITH WIRE TIES OR STAPLES EVERY 24" AT TOP AND MID SECTION.
3. WHEN THE SECTION OF FILTER CLOTH ALONG BACK OF THE FENCE IS OVERLAPPED BY 18" IN THE MID SECTION.
4. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO KEEP THE FENCE EFFECTIVE IN THE SILT FENCE.

**SILT FENCE**  
NO SCALE



STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	4"	7'0"	10'	9"
E-2	4"	5'0"	12'	9"

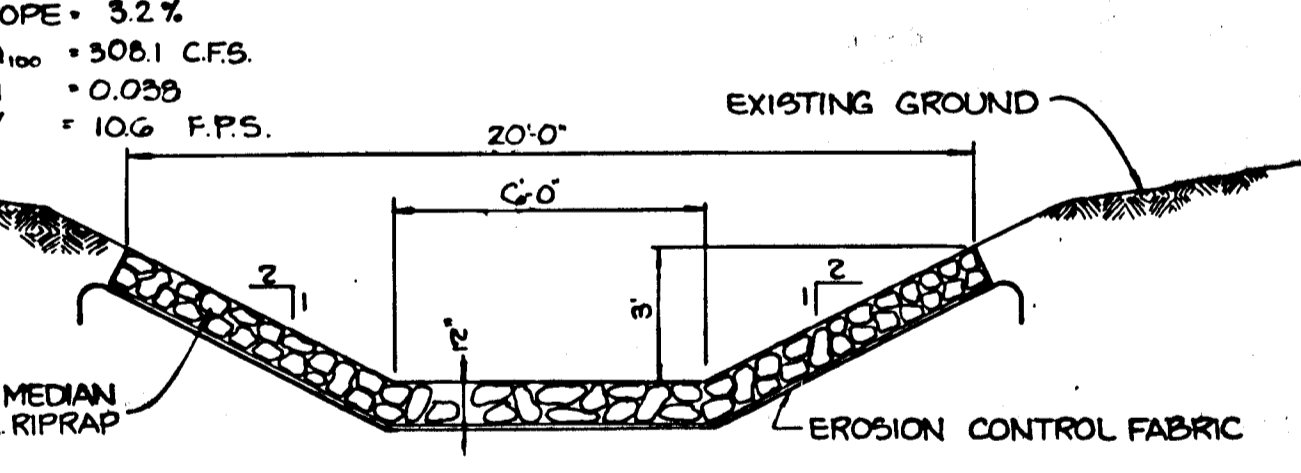
**OUTLET PROTECTION DETAIL**  
NO SCALE



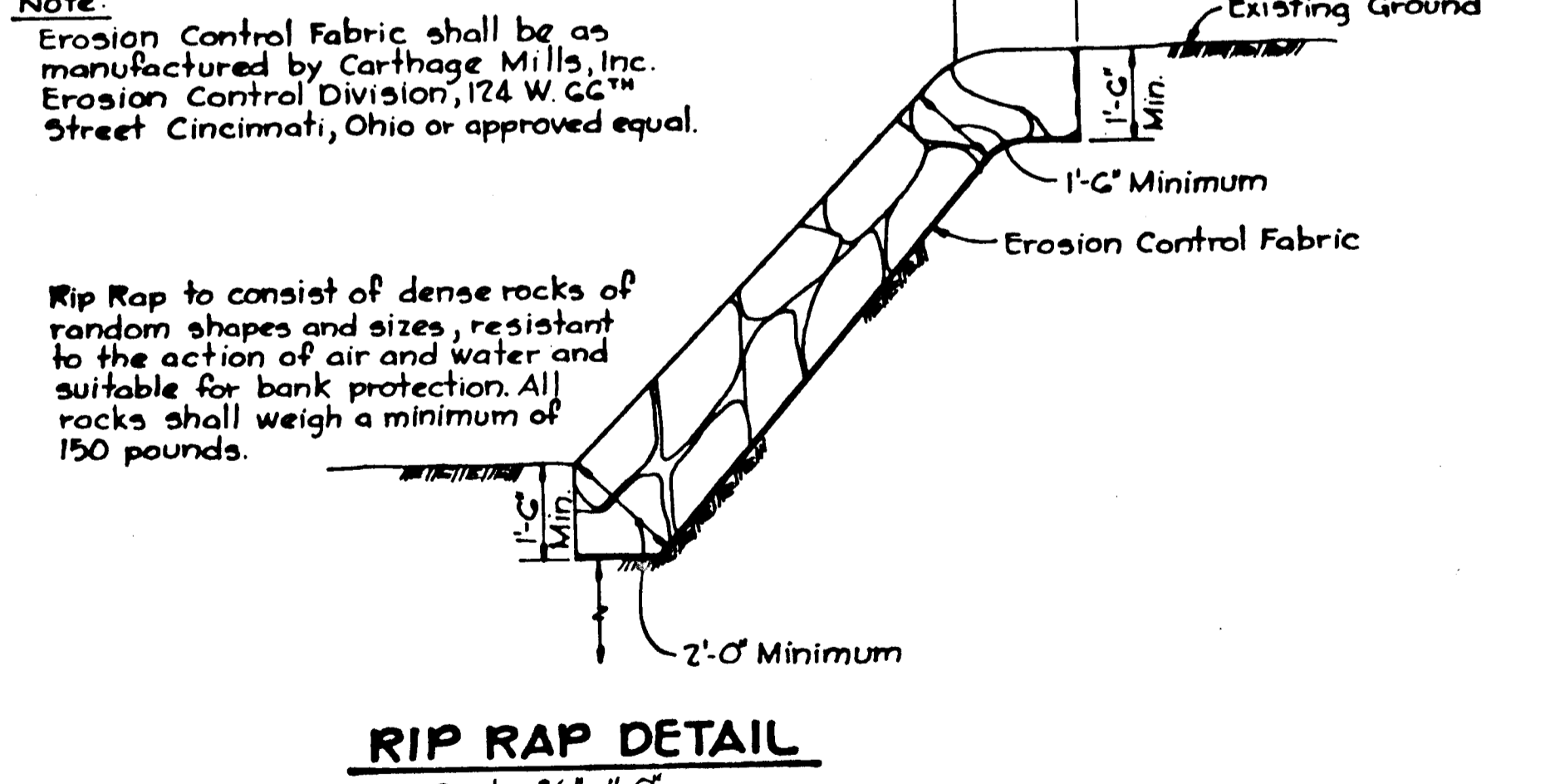
**CONSTRUCTION SPECIFICATIONS FOR SILT**

1. Stone shall be placed at the toe of a slope or on the contour and in a row with ends tightly meeting the adjacent bales.
2. Each bale shall be oriented in the soil a minimum of 90 degrees and placed to the existing and new contours.
3. Bales shall be securely anchored in place by either two stakes or rebar driven through the bale. The first stake or rebar shall be driven through the bale at an angle to force the bale together. Stakes shall be driven through the bale.
4. Inspection shall be provided and repair replacement shall be made properly as needed.
5. Bales shall be removed when they have served their purpose so as not to block or impede flow of drainage.

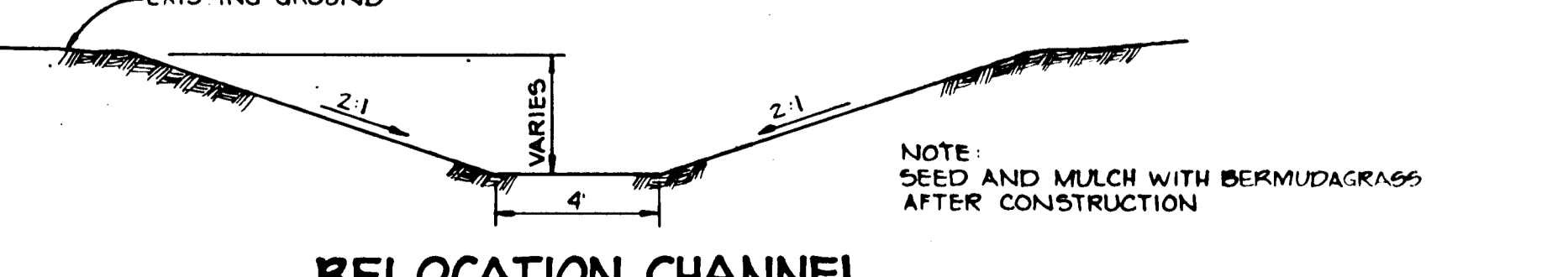
**STONE OUTLET SEDIMENT TRAP**  
NO SCALE



**RIPRAP CHANNEL @ SPILLWAY OUTLET**  
NO SCALE



**RIP RAP DETAIL**  
Scale: 3/8" = 1'-0"



**RELOCATION CHANNEL**  
NO SCALE

SEQUENCE OF CONSTRUCTION

DAY	ACTIVITY
DAY 1	1. OBTAIN A GRADING PERMIT.
DAY 2-3	2. CLEAR AND GRUB AREA FOR AND INSTALL STABILIZED CONSTRUCTION ENTRANCE. SCE
DAY 3-9	3. CLEAR AND GRUB REMAINING AREAS FOR SEDIMENT CONTROL DEVICE INSTALLATION.
DAY 9-11	4. INSTALL SEDIMENT TRAPS 1 AND 2 AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.
DAY 11-16	5. INSTALL REMAINDER OF SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.
DAY 16-25	6. CLEAR AND GRUB REMAINDER OF SITE.
DAY 25-45	7. GRADE SITE, INCLUDING STORM WATER MANAGEMENT FACILITY, LEAVING EXISTING STREAM CHANNEL UNDISTURBED AT THIS TIME.
DAY 45-87	8. INSTALL UTILITIES (WATER, SEWER, AND STORM DRAINS) BLOCKING ALL INLETS AS PER INLET PROTECTION DETAIL.
DAY 87-90	9. STABILIZE ALL SLOPES IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
DAY 90-111	10. COMPLETE ALL ROADWAY CONSTRUCTION AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
DAY 111-116	11. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, a) REMOVE ALL SEDIMENT CONTROL DEVICES EXCEPTING SEDIMENT TRAP NO. 2 WHICH IS TO REMAIN IN PLACE TO BE UTILIZED DURING CONSTRUCTION OF LONG GATE SECTION 1, AREA 3 AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES, b) AS THE LAST OPERATION, GRADE EXISTING STREAM CHANNEL IN SWM AND STABILIZE IMMEDIATELY IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

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: 11-25-85

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: 11-25-85

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.

*J. Helwig*  
U.S. SOIL CONSERVATION SERVICE DATE: 7-21-86

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

APPROVED: *Robert W. Ziehm* DATE: 7-21-86  
HOWARD S.C.D.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Robert W. Ziehm* DATE: 7-24-86  
CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*John W. Munschman* DATE: 7-22-86  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

NO	DATE	REVISION

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

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

*James K. Tracy*

OWNER	PROJECT	LOCATION	TITLE	DATE	PROJECT NO	DRAWING
LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLICOTT CITY, MD 21043	LONG GATE SECTION 1 AREA 2 LOTS 10 THRU 02	2ND ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS 30E31 ZONING MAP NOS 30E31 PARCEL 18	SEDIMENT CONTROL AND SWM NOTES AND DETAILS	NOV., 1985	0593 RSD	7 OF 9
DEVELOPER SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLICOTT CITY, MD 21043						
DES. R.J.W.	DRN. K.M.N.	SCALE AS SHOWN				

**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 tread 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, Plasti-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.

2. **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 the completely watertight. Dimple bands are not considered to be watertight.

3. **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.

4. **Laying pipe** - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. **Backfilling** shall conform to structural backfill as shown above.

6. **Other details** (anti-seep collars, valves, etc.) shall be as shown on the drawings.

**B. Reinforced Concrete Pipe**

1. **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.

2. **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.

3. **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.

4. **Backfilling** shall conform to structural backfill as shown above.

5. **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**

**1. Materials**

a. **Cement** - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. **Water** - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. **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.

d. **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.

e. **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 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.

5. **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.

6. **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.

7. **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.

8. **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.

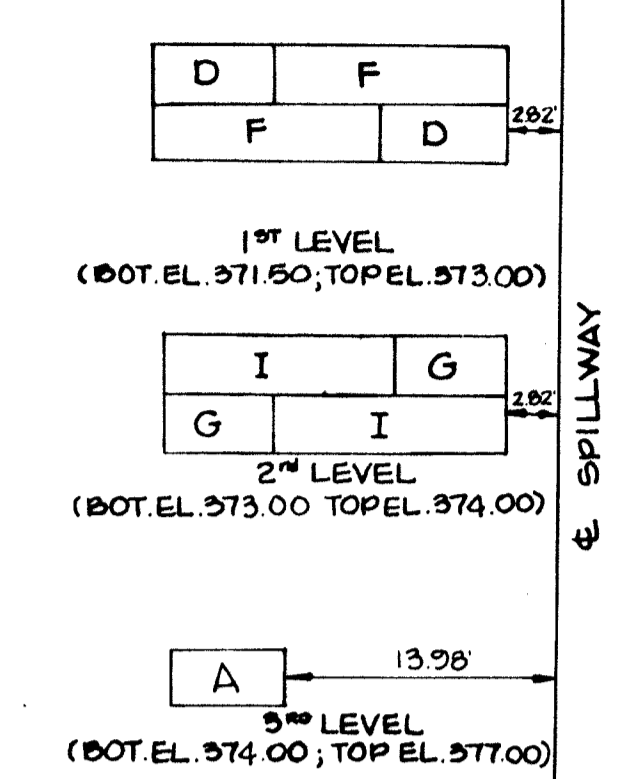
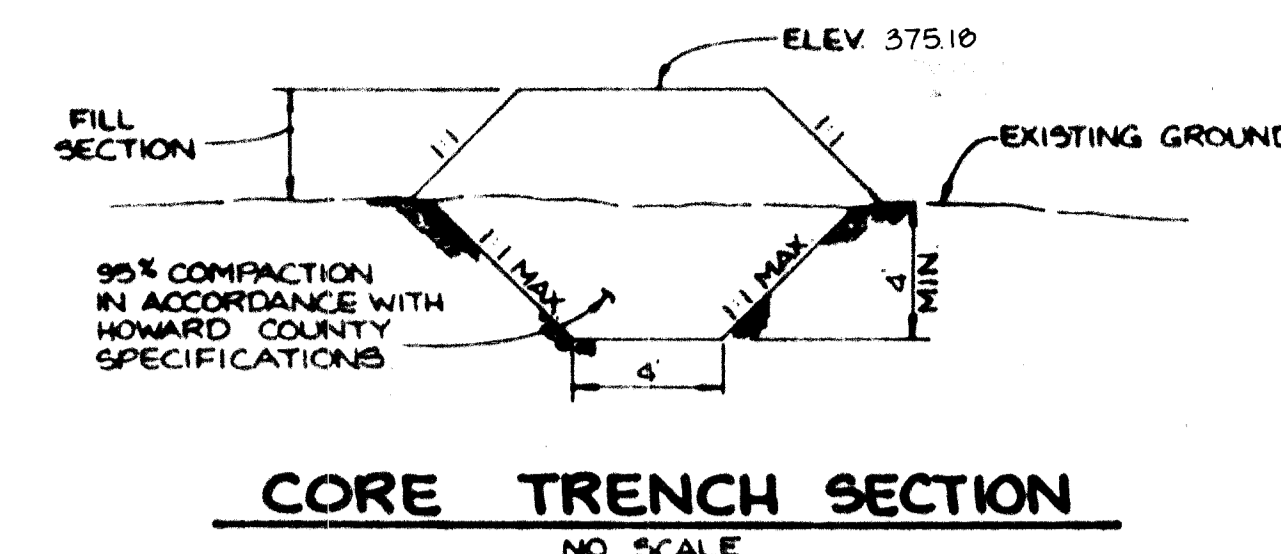
9. **Placing Temperature** - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34° with the temperature rising.

**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.

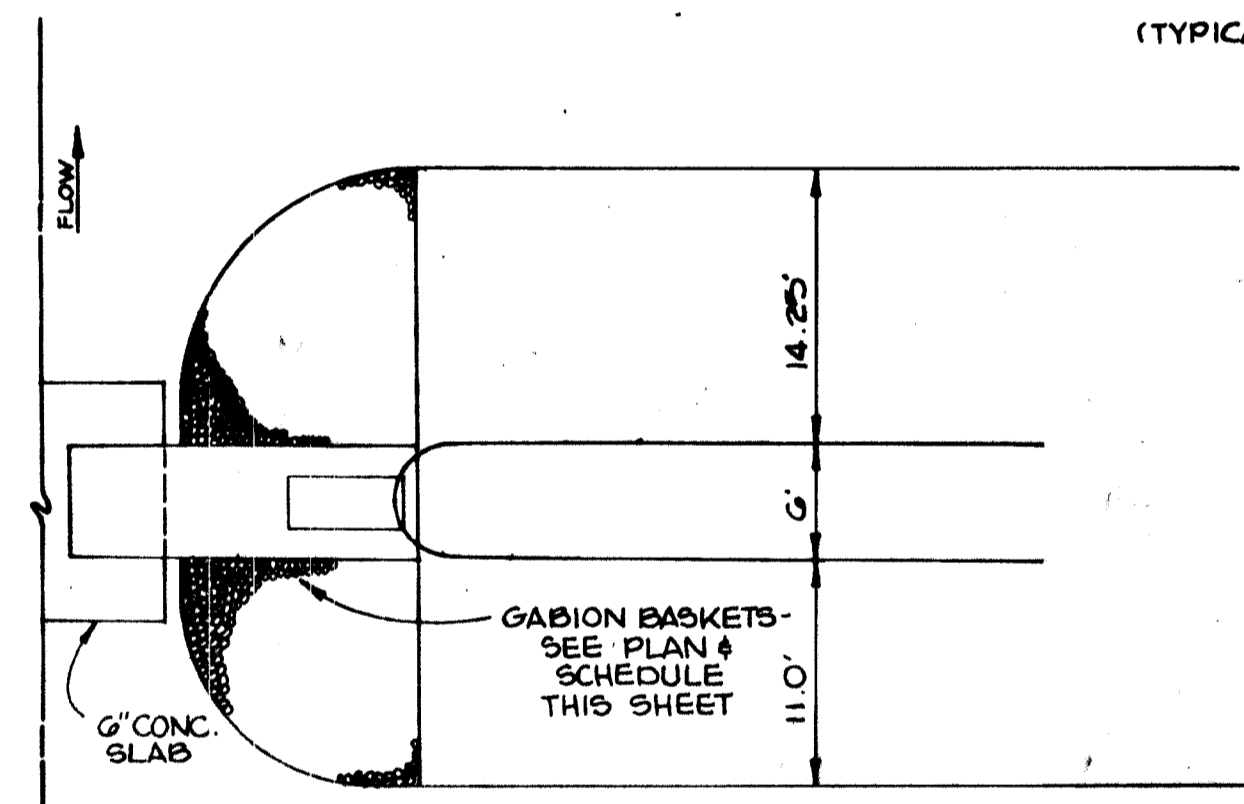
**VII. EROSION AND SEDIMENT CONTROL**

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.

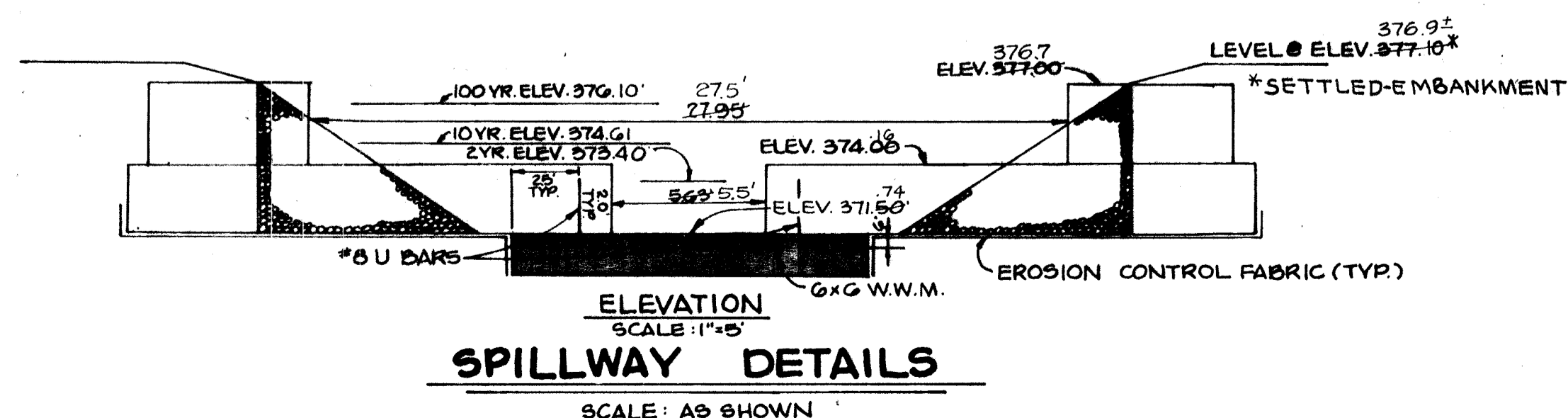
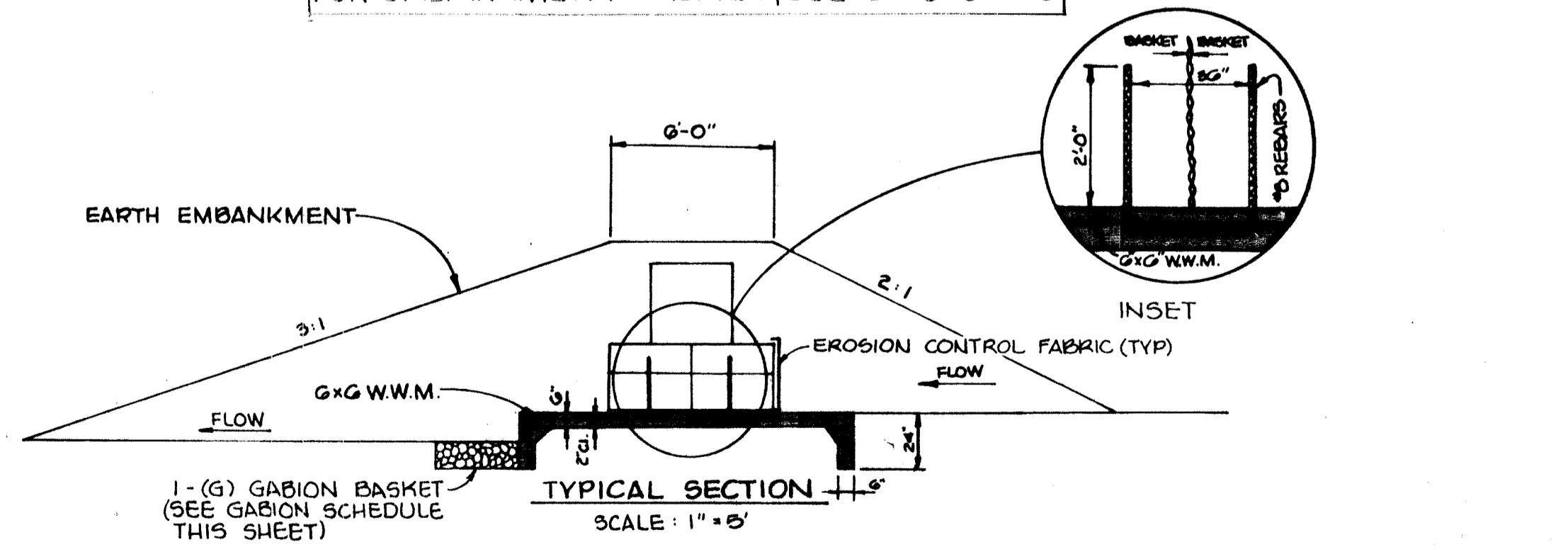


GABION SCHEDULE				
TYPE	DIMENSIONS			QUANTITY
	Height	Width	Length	
A	3'	3'	X 6'	1
D	1.5'	3'	X 6'	2
F	1.5'	3'	X 12'	2
G	1'	3'	X 6'	3
I	1'	3'	X 12'	2

**GABION PLAN**  
SCALE: 1" = 10'  
(TYPICAL EACH SIDE OF E SPILLWAY)



FOR EMBANKMENT PROFILE, SEE DWG. 6 OF 9



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: 11-25-85

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. Morley, Jr.*  
DEVELOPER: JAMES R. MORLEY, JR.  
DATE: 11-25-85

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.  
*D. Helm*  
U.S. SOIL CONSERVATION SERVICE  
DATE: 7-21-86

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: 7-21-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. Muehlman*  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
DATE: 7-22-86

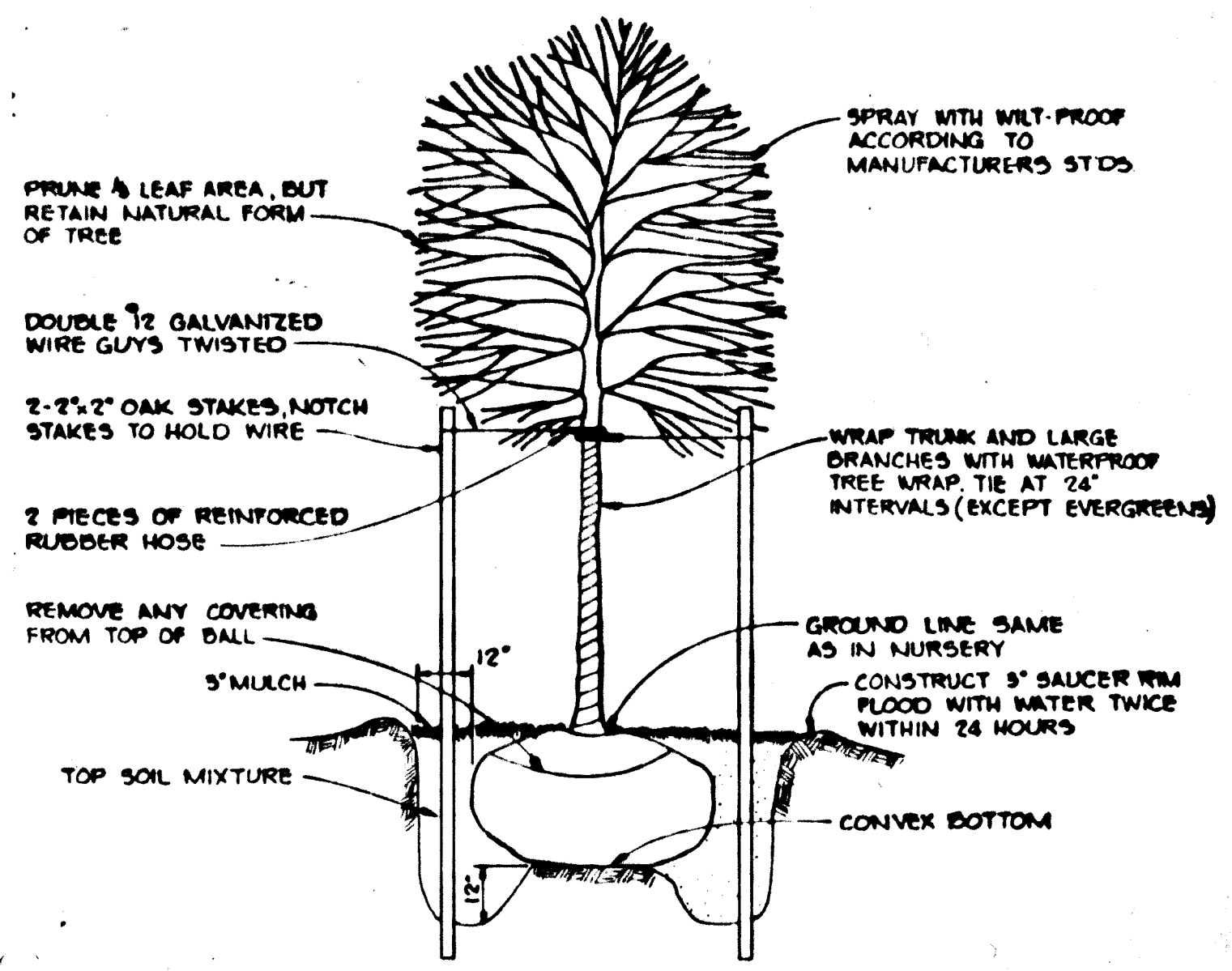
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William G. Rausch II*  
CHIEF, BUREAU OF ENGINEERING  
DATE: 7-22-86

NO.	DATE	REVISION

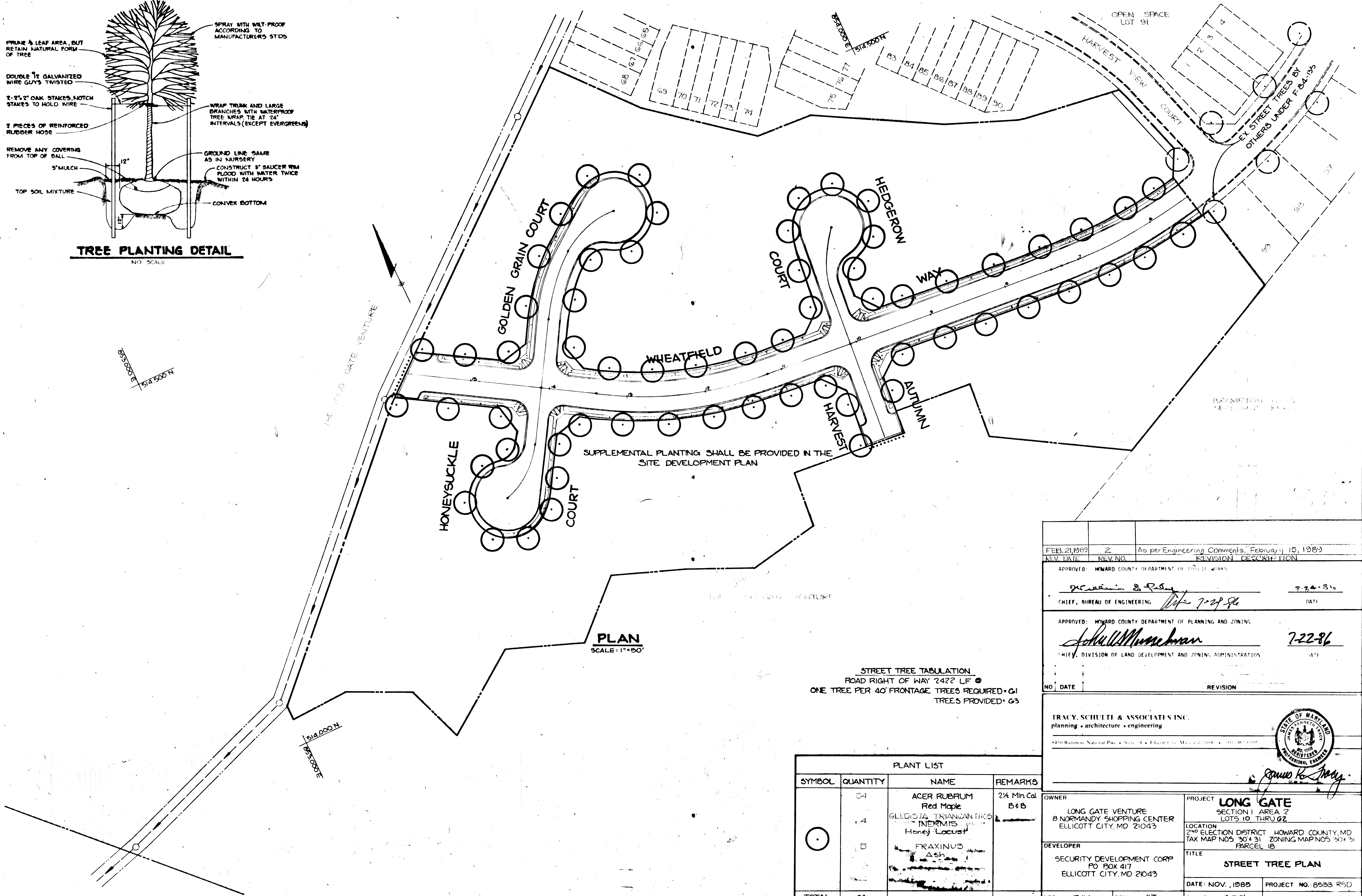
TRACY, SCHULTE & ASSOCIATES INC.  
planning • architecture • engineering  
1000 North Point Blvd., Suite 314, Elkridge, Maryland 21029 • (410) 251-0000  
*James K. Tracy*  
REGISTERED PROFESSIONAL ENGINEER

OWNER: LONG GATE VENTURE, 8 NORMANDY SHOPPING CTR., ELLICOTT CITY, MD 21043  
DEVELOPER: SECURITY DEVELOPMENT CORP., P.O. BOX 417, ELLICOTT CITY, MD 21043  
DESIGNER: J.K.T., ORN/K.A.M./J.L.B.  
PROJECT: LONG GATE SECTION 1 AREA 2 LOTS 10-22  
LOCATION: 299 ELECTION DISTRICT HOWARD COUNTY, MD. TAX MAP NOS. 30 431 ZONING MAP NOS. 30 431 PARCEL 1B  
TITLE: STORM WATER MANAGEMENT SPECIFICATIONS AND DETAILS  
DATE: NOV. 1985 PROJECT NO. 8533 RSD  
SCALE: AS SHOWN DRAWING 8 OF 9





**TREE PLANTING DETAIL**  
NO SCALE



SUPPLEMENTAL PLANTING SHALL BE PROVIDED IN THE SITE DEVELOPMENT PLAN

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

**STREET TREE TABULATION**  
ROAD RIGHT OF WAY 242' LF @  
ONE TREE PER 40' FRONTAGE TREES REQUIRED • 61  
TREES PROVIDED • 63

PLANT LIST			
SYMBOL	QUANTITY	NAME	REMARKS
○	54	ACER RUBRUM Red Maple	2 1/2 Min Cal B & B
○	4	GLEDITSIA TRIANGULARIS INERMIS Honey Locust	
○	5	FRAXINUS Ash	
TOTAL	63		

FEB. 21, 1989	2	As per Engineering Comments, February 15, 1989
REV. DATE	REV. NO.	REVISION DESCRIPTION
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
<i>[Signature]</i>		7-24-86
CHIEF, BUREAU OF ENGINEERING		DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING		
<i>[Signature]</i>		7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION		DATE
NO.	DATE	REVISION

TRACY SCHULTE & ASSOCIATES INC.  
planning • architecture • engineering

4400 Rattomac National Pike • Suite 4 • Ellicott City, Maryland 21043 • (410) 421-1100

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER

*[Signature]*

OWNER LONG GATE VENTURE 8 NORMANDY SHOPPING CENTER ELLCOTT CITY, MD 21043	PROJECT <b>LONG GATE</b> SECTION I AREA 2 LOTS 10 THRU 22
DEVELOPER SECURITY DEVELOPMENT CORP PO BOX 417 ELLCOTT CITY, MD 21043	LOCATION 2ND ELECTION DISTRICT HOWARD COUNTY, MD TAX MAP NOS 30 & 31 ZONING MAP NOS 30 & 31 PARCEL 1B
TITLE <b>STREET TREE PLAN</b>	
DATE: NOV., 1985	PROJECT NO. 8533 R5D
DES: RJW	DRN: JLT
SCALE: 1"=50'	DRAWING: 2 OF 2

#1162