HOWARD COUNTY STD DWG. D-5 PAGE 60

BITUMINOUS CONCRETE SURFACE	1½" BAND	C-3
BITUMINOUS CONCRETE BASE	5" (GRAVEL MIX)	
CLEARING and GRADING:	ARTICLE	C-1
SUBGRADE:	ARTICLE	C-2
BASE COURSE:	ARTICLE	C-33
SURFACE COURSE:	ARTICLE	C-31

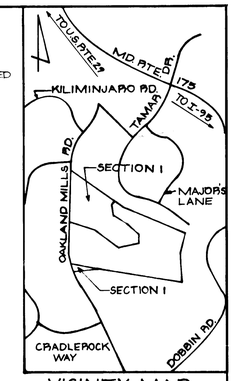
ALL CONSTRUCTION TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS, 1961.

2. THE BASE WILL BE PLACED IN ACCORDANCE WITH SECTION C-30-8 AS PROVIDED IN THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.
3. A TACK COAT IS REQUIRED IN ACCORDANCE WITH SECTION C-31-4 OF THE HOWARD CODE ROAD CONSTRUCTION CODE AND AND STANDARD SPECIFICATION.
4. OAKLAND MILLS ROAD IS AN EXISTING ROAD.

NOTE: PROPOSED CURB & GUTTER ADDITION TO OAKLAND MILLS RD IS TO MATCH THE EXISTING EDGE OF ROAD FOR GRADE.

LEGEND

- PHYSICALLY HANDICAPPED RAMP
- STOP SIGN
- 25 MPH SPEED LIMIT SIGN



VICINITY MAP
SCALE 1"=2000'

STA. 183+20 LIMIT OF SUBMISSION (LIMIT OF CURB & GUTTER)

I 12A

I 12 — 13' PIT STA 183+80 A-5 INLET & SUMP

I 22 — CONSTRUCT INLET AND INVERT TO CONNECT TO EX. STORM DRAIN

OAKLAND MILLS ROAD

DAWN DAY DRIVE

60' R/W

36'

STA. 191+06.44 ℄ OAKLAND MILLS RD = STA. 0+00 ℄ SEWELL'S ORCHARD DRIVE

ROAD

N 448,500

E 846,750

STA. 197+25 LIMIT OF SUBMISSION

STA. 197+10 LIMIT OF SIDEWALK & CURB & GUTTER

TIE TO EX. CURB

5' TRANS TO EX. BITUMINOUS CURB

TO EX. CURB

EX. C & P

EX. 34' PAVING

REMOVE EX. BITUMINOUS CURB

REMOVE EXIST. PIPE AND ENDWALL

PROP. SIDEWALK

PROP. CURB & GUTTER

EX. ℄ ROAD

STD 6' D MANHOLE M 12

42 LF 24" BCCMP-16GA

METAL END SECTION S 6

S 2

OPEN SPACE

SEWELL'S ORCHARD DRIVE

STOP SIGN

FOR STORM DRAIN PROFILE, SEE SHT 12
FOR R.I.P. RAP DETAIL SEE SHEET 9

SEE SHEET 2

N 449,250

E 847,000

N 448,000

E 847,000

PLAN
SCALE 1"=50'

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD.
COLUMBIA, MD. 21045

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 919
COLUMBIA, MD. 21044

STATE OF MARYLAND — BENJAMIN E. BOENDER — NO. 9100 — REGISTERED PROFESSIONAL ENGINEER

APPROVED DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — 9-30-80

APPROVED OFFICE OF PLANNING & ZONING
acting Director — 9-22-80

TITLE: OAKLAND MILLS RD.-ROAD WIDENING PLAN
PROJECT: SEWELL'S ORCHARDS-SECTION 1
LOCATION: 6TH ELECTION DISTRICT — HOWARD COUNTY, MD.

DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:
JANUARY, 1980	B.L.M.	G.E.M.	B.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 1 OF 16	

boender associates — engineers surveyors planners
BALTIMORE 301 465 7777 • SALISBURY 301 749 1286

INDEX OF SHEETS

SHT. 1	- OAKLAND MILLS ROAD - STA. 183+20 TO STA. 197+25
SHT. 2	- SEWELL'S ORCHARD DRIVE - STA. 0+00 TO 12+48
SHT. 3	- SEWELL'S ORCHARD DRIVE - STA. 12+48 TO 19+40
SHT. 4	- BLACKBERRY CIRCLE & CINQUEFOIL PLACE
SHT. 5	- IRONWOOD WAY
SHT. 6	- SUMMERCREST DRIVE
SHT. 7	- SUNHIGH PLACE
SHT. 8	- WHITE PEACH PLACE
SHT. 9	- RED HAVEN ROAD
SHT. 10	- EARLY GLOW CT. & BARITAN CT.
SHT. 11	- STORM DRAIN PROFILES & DETAILS
SHT. 12	- STORM DRAIN PROFILES & DETAILS
SHT. 13	- SEDIMENT CONTROL PLAN & DETAILS PLAN 1"=100'
SHT. 14	- SEDIMENT CONTROL PLAN & DETAILS PLAN 1"=50'
SHT. 15	- SEDIMENT CONTROL DETAILS & SPEC'S
SHT. 16	- DRAINAGE AREA MAP

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

EX. ℄ ROAD

STA. 183+20 LIMIT OF SUBMISSION

STA. 197+25 LIMIT OF SUBMISSION

420
410
400

194+00 195+00 196+00 197+00 197+50

PLAN
NOTE BOOK
No.
SURVEYED
PLOTTED
DRAWING CHECKED
AS-BUILTS NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

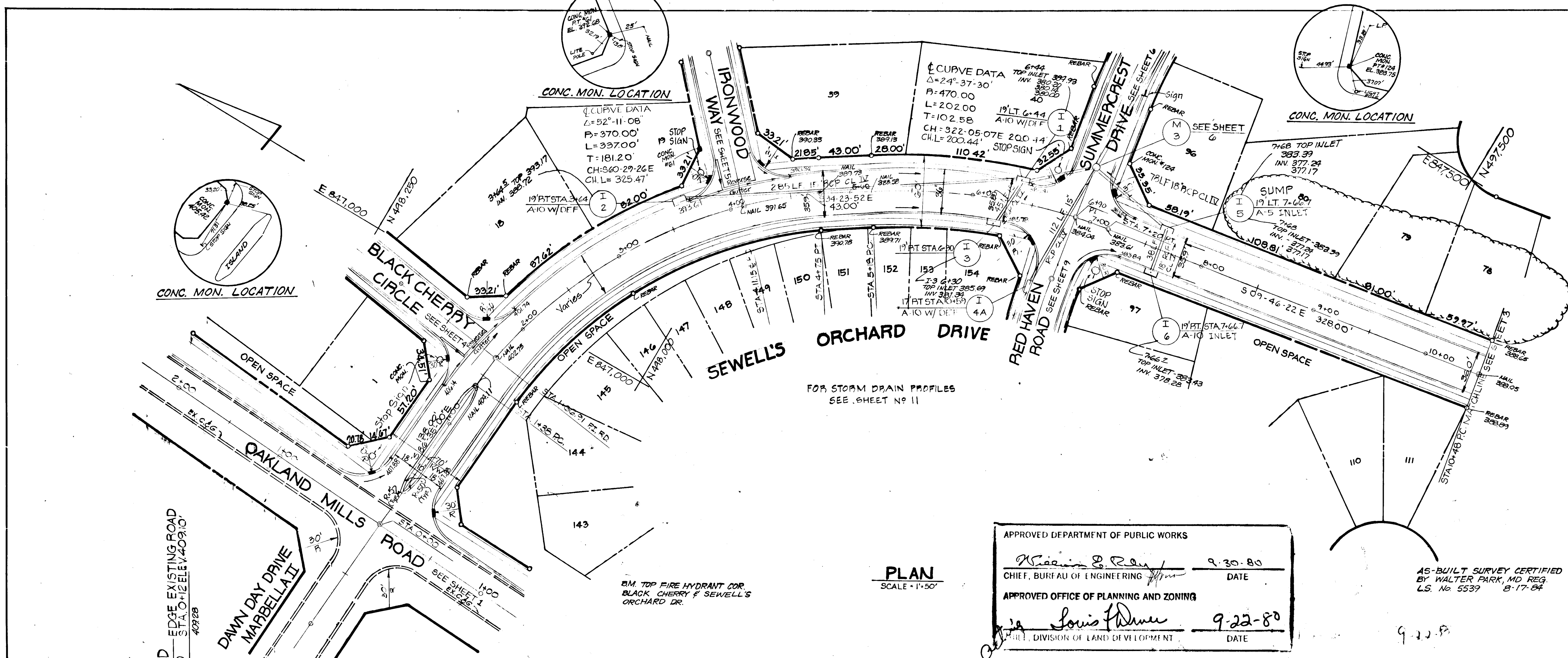
PROFILE
NOTE BOOK
No.
SURVEYED
PLOTTED
DRAWING CHECKED
AS-BUILTS NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

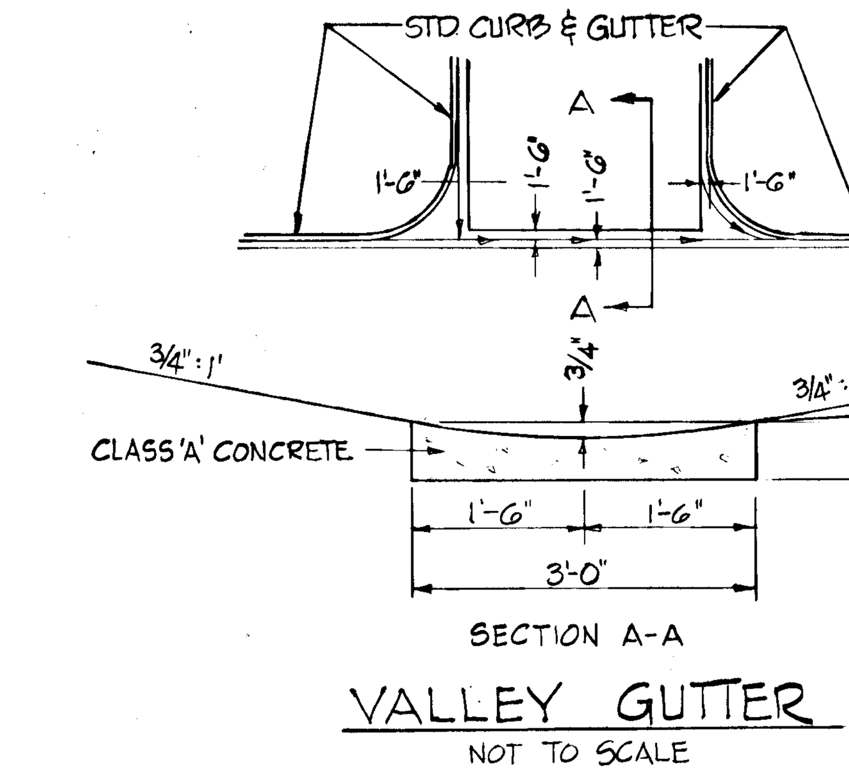
#850

K-E PLATE 1. PLAN-PROFILE KEUFFEL & ESSER CO. 48 7024 MADE IN U.S.A.

AS-BUILT SEPT. 5, 1984

F-80-105





STATE OF MARYLAND
PROFESSIONAL ENGINEER

2-13-80

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD.
COLUMBIA, MD 21045

DEVELOPER
LIGHTPOINT ASSOC.
P.O. BOX 919
COLUMBIA, M.D 21044

APPROVED DEPARTMENT OF PUBLIC WORKS	
CHIEF, BUREAU OF ENGINEERING	9-30-80 DATE
APPROVED OFFICE OF PLANNING AND ZONING	
CHIEF, DIVISION OF LAND DEVELOPMENT	9-22-80 DATE

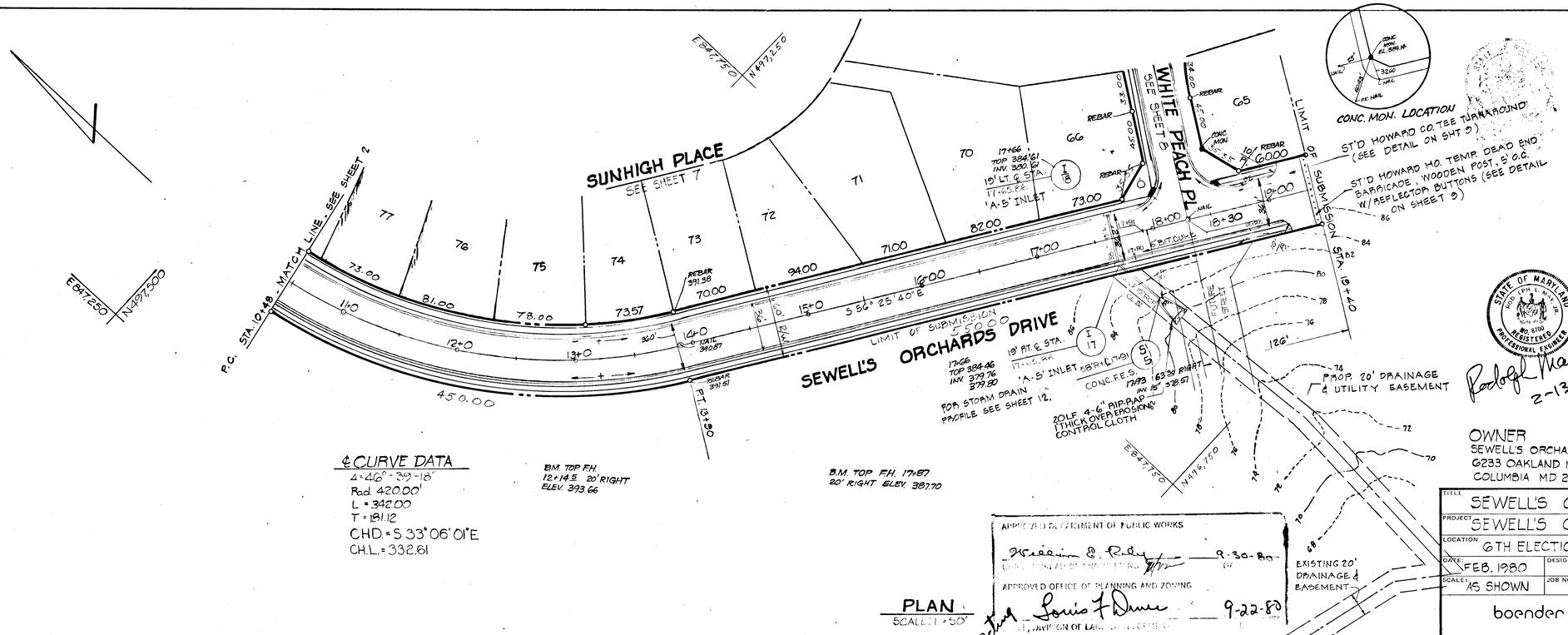
TITLE: SEWELL'S ORCHARDS DRIVE-STA. 0+00 TO 10+48			
PROJECT: SEWELL'S ORCHARDS SECTION I			
LOCATION: 6TH ELECTION DISTRICT		HOWARD COUNTY, MD.	
DATE: JANUARY, 1980	DESIGN BY: W.H.N.	DRAWN BY: G.E.M./W.C.L.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 2 OF 16	

boender associates — engineers, surveyors, planners
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286

AS-BUILT 8-17-84

F-80-105

PLAN — SURVEYED — PLOTTED — NOTE BOOK — No. — BY — DATE — ALL CHANGES CHECKED — ALL NOTATIONS CHECKED



℄ CURVE DATA

Δ = 46° - 39' - 18"
Rad. 420.00'
L = 342.00
T = 181.12
CHD. = S 33° 06' 01" E
CH. L. = 332.61

PLAN
SCALE 1" = 50'

APPROVED DEPARTMENT OF PUBLIC WORKS
William E. Ruby 9-30-80
DIRECTOR OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING
Louis F. Dunn 9-22-80
DIVISION OF LAND DEVELOPMENT

STATE OF MARYLAND — RODOLPH WAYNE — No. 8700 — REGISTERED PROFESSIONAL ENGINEER
Rodolph Wayne 2-13-80

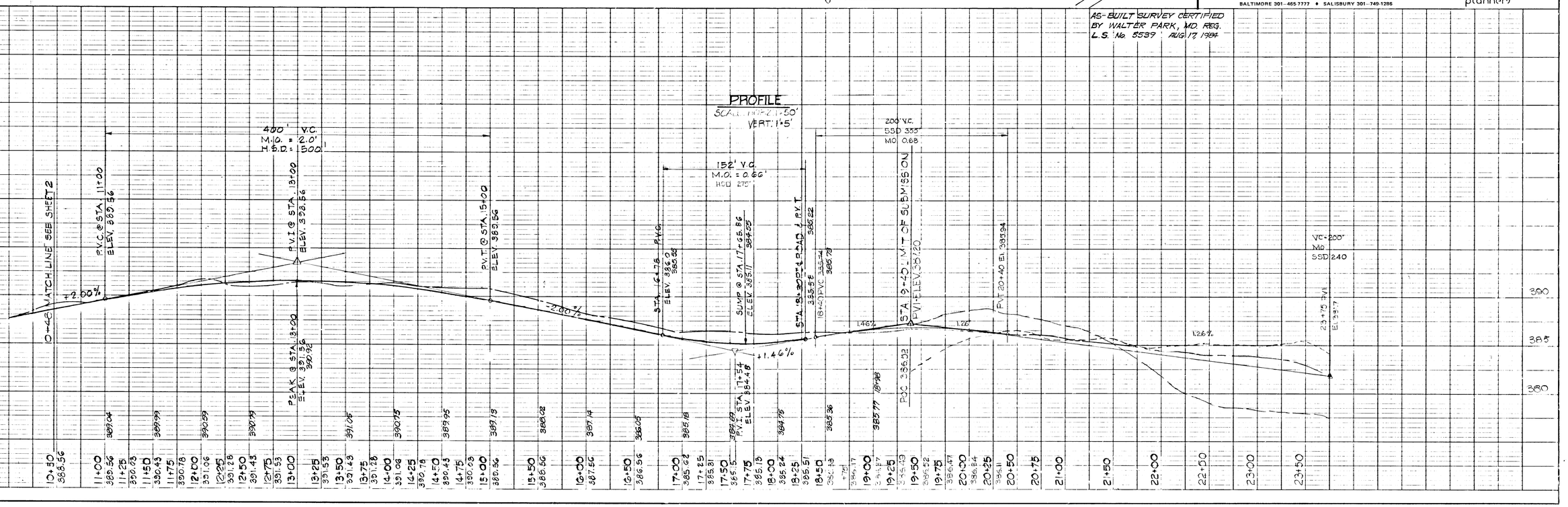
AS-BUILT SURVEY CERTIFIED BY WALTER PARK, MD. REG. L.S. No. 5539 AUG. 17 1984

OWNER	DEVELOPER
SEWELL'S ORCHARDS	LIGHTPOINT ASSOC.
6233 OAKLAND MILLS RD.	P.O. BOX 919
COLUMBIA MD 21045	COLUMBIA, MD 21044

TITLE	SEWELL'S ORCHARDS DRIVE		
PROJECT	SEWELL'S ORCHARDS SECTION 1		
LOCATION	6TH ELECTION DISTRICT	HOWARD COUNTY, MD	
DATE: FEB. 1980	DESIGN BY: R.L.M.	DRAWN BY: W.C.L.	CHECKED BY:
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 3 OF 16	

boender associates — engineers surveyors planners
BALTIMORE 301-465-7777 ◆ SALISBURY 301-749-1286

PROFILE — SURVEYED — PLOTTED — NOTE BOOK — No. — BY — DATE — ALL CHANGES CHECKED — ALL NOTATIONS CHECKED

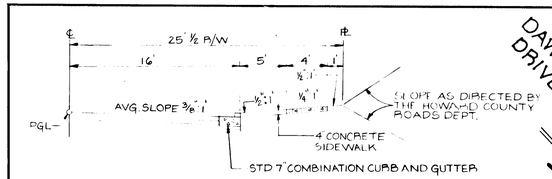


850

K+E PLATE 1 PLAN-PROFILE KEUFFEL & ESSER CO. 48 7024 MADE IN U.S.A.

AS-BUILT 8-17-84

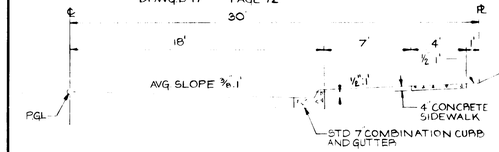
F-80-105



TYPICAL HALF SECTION

FOR BLACK CHERRY CIRCLE, IRONWOOD WAY, SUMMERCREST DRIVE, SUNHIGH PLACE, WHITE PEACH PLACE, BED HAVEN ROAD, EARLY GLOW COURT, RAPITAN COURT.

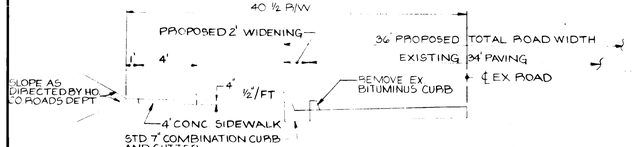
NOT TO SCALE
RESIDENTIAL STREET
DESIGN SPEED 25 MPH EX ZONING R-S-C
DRWG D-17 PAGE 72



TYPICAL HALF SECTION

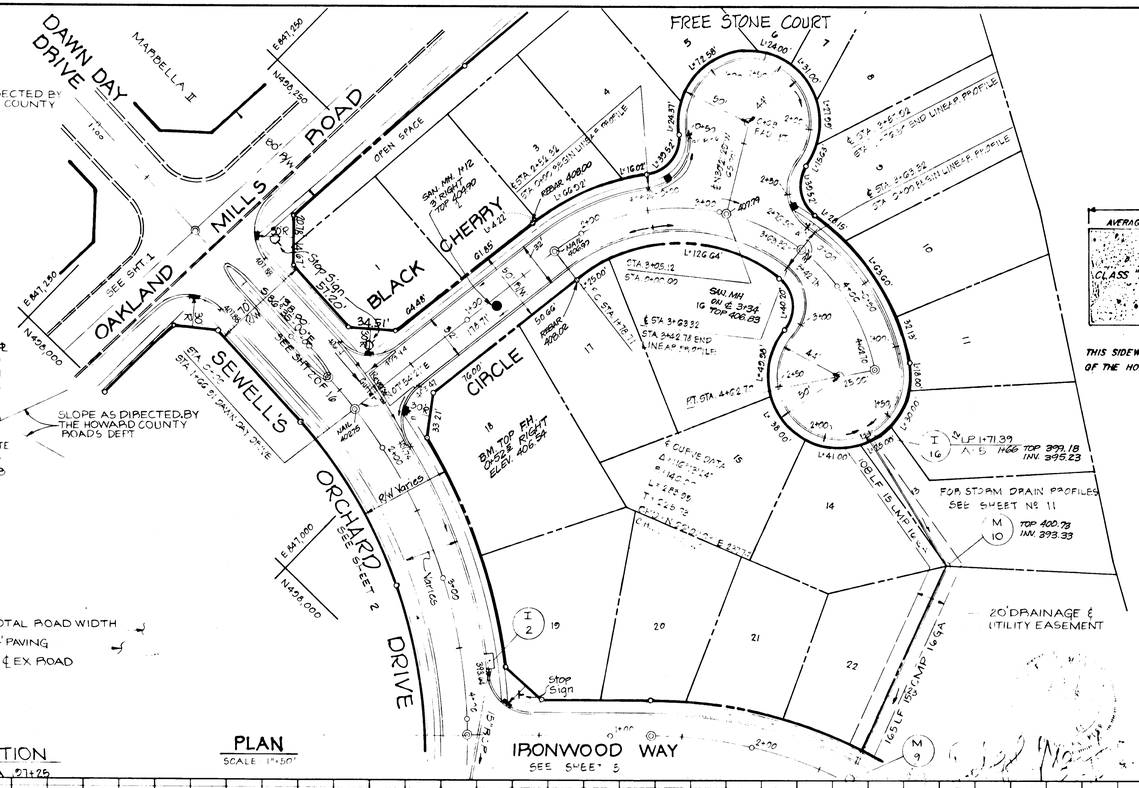
FOR SEWELL'S ORCHARD DRIVE

NOT TO SCALE
COLLECTOR STREET
DESIGN SPEED 30 MPH EX ZONING R-S-C



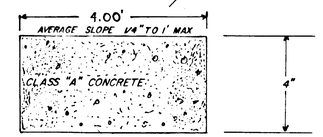
OAKLAND MILLS RD WIDENING HALF SECTION

NOT TO SCALE STA. 82+20 TO STA. 87+25
COLLECTOR STREET
DESIGN SPEED 40 MPH EX ZONING R-S-C
DPWG D-18 PAGE 75



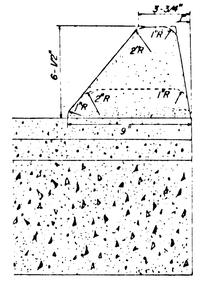
PLAN

SCALE 1"=50'



THIS SIDEWALK TO BE CONSTRUCTED IN ACCORDANCE WITH ARTICLE C-35 OF THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS

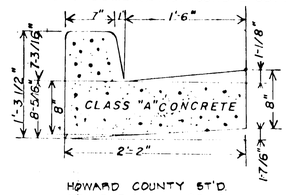
STANDARD CONCRETE SIDEWALK - H. CO.
DRWG D-14 PAGE 69



STD MOUNTABLE CURB

NOT TO SCALE - HO CO.
DRWG D-30 PG. 04

STANDARD 7" COMBINATION CURB & GUTTER



HOWARD COUNTY STD.
DRWG. D-40 PG. 55

STATE OF MARYLAND — No. 9700 REGISTERED PROFESSIONAL ENGINEER

Rodolph May Jr. 2-13-80

APPROVED DEPARTMENT OF PUBLIC WORKS
William E. Ray 9-30-80
CHIEF BUREAU OF ENGINEERING — DATE

APPROVED OFFICE OF PLANNING AND ZONING
acting Louis F. Duncan 9-22-80
DIRECTOR — DATE

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS ROAD
COLUMBIA, MD. 21045

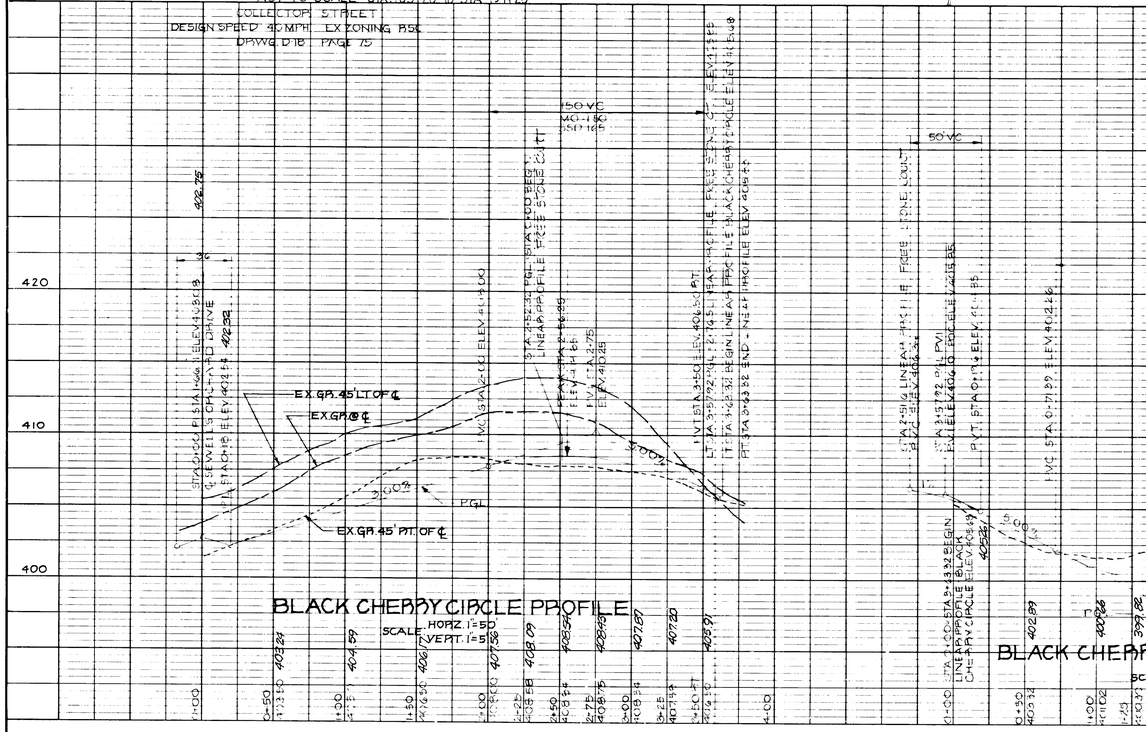
DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 919
COLUMBIA, MD. 21044

TITLE BLACK CHERRY CIRCLE / FREE STONE COURT ROAD CONSTRUCTION PLAN
PROJECT SEWELL'S ORCHARDS - SECTION I
LOCATION 6TH ELECTION DISTRICT HOWARD COUNTY, MD.

DATE	DESIGN BY	DRAWN BY	CHECKED BY
FEB., 1980	W.H.N.	J.J.B./G.E.M.	R.L.M.
SCALE: AS SHOWN	JOB NO.: 75158	DRAWING NO. 4 OF 16	

boender associates — engineers surveyors planners
BALTIMORE 301 465-7777 • SALISBURY 301 749-1286

AS-BUILT SURVEY CERTIFIED BY WALTER PARK, REG. L.S. NO. 8536 - AUG. 17, 1984



PLAN / PROFILE — SURVEYED, PLOTTED, NOTE BOOK, FIELD CHECKED, R.W.'S NOTED, STRUCTURE NOTATIONS CHECKED, BY, DATE, No.

K&E PLATE 1, PLAN PROFILE KEUFFEL & ESSER CO. 48 7024 MADE IN U.S.A.

AS-BUILT 8-17-84

8.50

T-84-10.5


ROAD CONSTRUCTION PLAN - IRONWOOD WAY
SEWELL'S ORCHARDS SECTION 1
6TH ELECTION DISTRICT
HOWARD COUNTY, MD.
DATE: FEB., 1980
DESIGN BY: W.H.N. / R.L.M.
DRAWN BY: J.J.B. / W.H.N.
CHECKED BY: R.L.M.
SCALE: AS SHOWN
JOB NO.: 75158
DRAWING NO.: 5 OF 16
boender associates
engineers surveyors planners
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286
OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS ROAD
COLUMBIA, MD. 21043
DEVELOPER
LIGHTPOINT ASSOCIATES.
P.O. BOX 919
COLUMBIA, MD. 21044
APPROVED DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
9-30-80
DATE
APPROVED OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT
9-22-80
DATE
AS-BUILT SURVEY CERTIFIED
BY WALTER PARK, MD. REG. L.S.
No. 5539 - AUG. 17, 1984
REV. 3-3-80 POND GRADING AND RIPRAP APRON AT S-4
2-13-80
STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
PLAN
SCALE: 1" = 50'
IRONWOOD WAY
SEWELL'S ORCHARD DRIVE
SEE SHEET 2
BLACK CHERRY CIRCLE
SEE SHEET No 4
108 L.F. 15" R.C.P. CL III
ST'D. M.H.
20' DRAINAGE & UTILITY EASEMENT
4' WIDE MACADAM PATHWAY TO OPEN SPACE
FOR STORM DRAIN PROFILES
SEE SHEET No 11
RIO POND
SEE SHT. 14 OF 16
SECTION
EX 20' SEWER EASEMENT
LOT 45
STA. 0+00
STA. 4+11.19 DAWN DAY DR.
℄ CURVE DATA
Δ = 43° 12' 24"
R = 300.00'
L = 230.00'
T = 120.78'
CHD = N 67° 10' 04" E
CH.L. 224.59'
℄ CURVE DATA
Δ = 42° 38' 15"
R = 215.00'
L = 160.00'
T = 83.91'
CHD = S 05° 43' 34" E
CH.L. 156.33'
PROFILE
SCALE: HORZ. 1" = 50' VERT. 1" = 5'
LINEAR PROFILE
SCALE: HORZ. 1" = 50' VERT. 1" = 5'
200' V.C.
M.O. = 1.75'
S.S.D. = 200'
200' V.C.
M.O. = 1.63'
H.S.D. = 175'
100' V.C.
M.O. = 0.25
EX. GR. 45' RT. OF ℄
EX. GR. @ ℄
EX. GR. 45' LT. OF ℄
EX. GR.
P.G.L.
PLAN
NOTE BOOK
PROFILE
850
AS-BUILT - AUG. 17, 1984
F-80-105
K+E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

APPROVED DEPARTMENT OF PUBLIC WORKS

William E. Riley 9-30-80
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING

9-22-80
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

STATE OF MARYLAND
RODOLPH L. MAY, JR.
NO. 8700
REGISTERED PROFESSIONAL ENGINEER

Rodolph May Jr
2-13-80

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD.
COLUMBIA, MD. 21045

DEVELOPER
LIGHTPOINT ASSOC.
P.O. BOX 919
COLUMBIA, MD. 21044

TITLE SUMMERCREST DRIVE: ROAD CONSTRUCTION PLAN
PROJECT SEWELL'S ORCHARDS - SECTION 1
LOCATION 6TH ELECTION DISTRICT HOWARD COUNTY, MD.

DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:
FEB., 1980	W.H.N. / R.L.M.	G.E.M. / W.H.N.	R.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 6 OF 16	

boender associates
engineers
surveyors
planners
BALTIMORE 301-465-7777 ◆ SALISBURY 301-749-1286

AS-BUILT SURVEY CERTIFIED BY
WALTER PARK MD. REG. LAND
SURVEYOR No. 5539 8-17-84

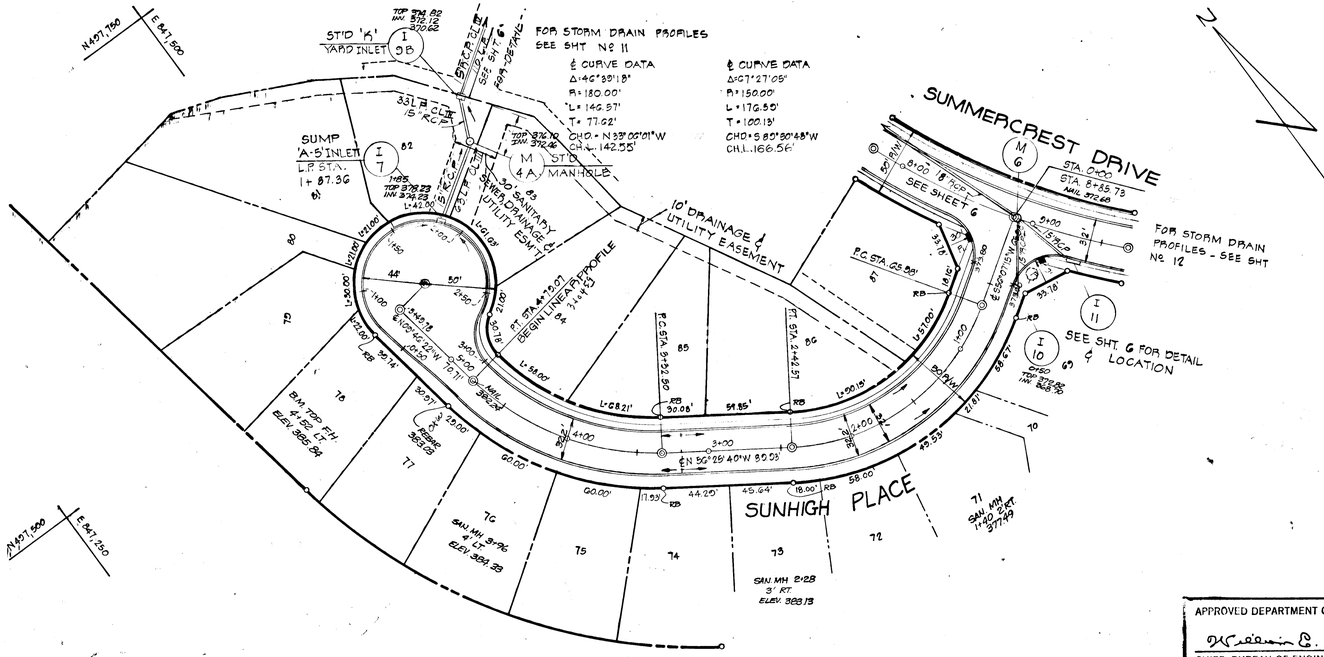
PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NOTE BOOK
No.

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHECKED
NOTE BOOK
No.

850

AS-BUILT AUG. 17, 1984

F 80-105



PLAN
SCALE 1"=50'

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8701 — REGISTERED PROFESSIONAL ENGINEER

Rodolph May Jr.
2-13-80

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD.
COLUMBIA, M.D. 21045

DEVELOPER
LIGHTPOINT ASSOC.
P.O. BOX 919
COLUMBIA, M.D. 21044

APPROVED DEPARTMENT OF PUBLIC WORKS
William E. Riley 9-30-80
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING
acting Louis F. Dunee 9-22-80
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

TITLE	SUNHIGH PLACE		
PROJECT	SEWELL'S ORCHARD SECTION 1		
LOCATION	6TH ELECTION DISTRICT		HOWARD COUNTY, MD.
DATE: FEB., 1980	DESIGN BY: R.L.M.	DRAWN BY: J.A.B./W.C.L.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 7 OF 16	

boender associates
engineers
surveyors
planners
BALTIMORE 301-465-7777 ♦ SALISBURY 301-749-1286

AS-BUILT SURVEY CERTIFIED BY
WALTER PARK, MD. REG. LAND
SURVEYOR No. 5539 - AUG. 17, 1984

PLAN
NOTE BOOK
No.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK
No.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'S NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

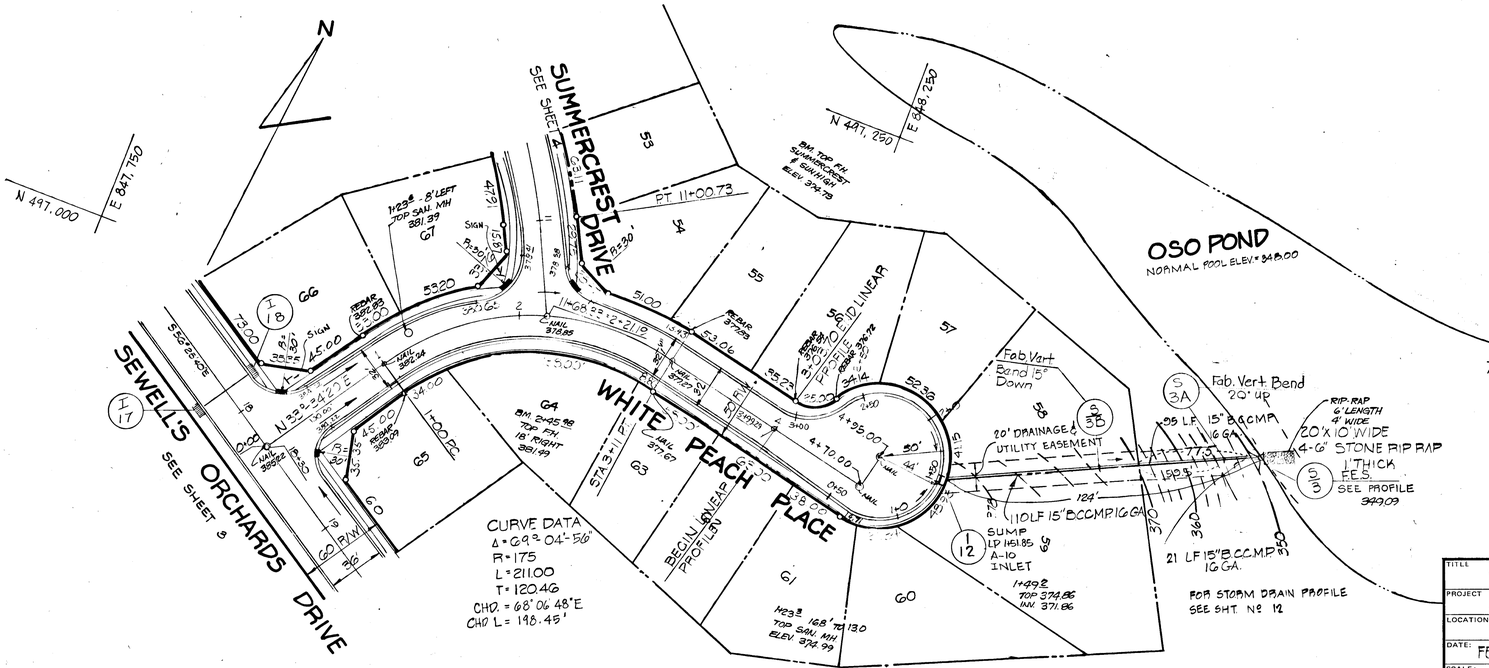
PROFILE
SCALE: HORZ. 1"=50'
: VERT. 1"=5'

LINEAR PROFILE
SCALE: HORZ. 1"=50'
: VERT. 1"=5'

850

AS-BUILT AUG. 17, 1984

F-80-105



OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD
COLUMBIA, M.D. 21045

DEVELOPER
LIGHTPOINT ASSOC.
P.O. BOX 919
COLUMBIA, M.D. 21044

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
No. 8700

Rodolph Mayr Jr.
2-13-80

PLAN
SCALE: 1"=50'

REVISED: 3-3-80 POND GRADING AND OUTFALL AT S-3

APPROVED DEPARTMENT OF PUBLIC WORKS

William E. Riley 9-30-80
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING

acting Louis F. Dunn 9-22-80
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

TITLE WHITE PEACH PLACE			
PROJECT SEWELL'S ORCHARDS SECTION 1			
LOCATION 6TH ELECTION DISTRICT		HOWARD COUNTY MD	
DATE: FEB, 1980	DESIGN BY: R.L.M.	DRAWN BY: W.C.L.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 8 OF 16	

boender associates
engineers
surveyors
planners

BALTIMORE 301-465-7777 ♦ SALISBURY 301-749-1286

AS-BUILT SURVEY CERTIFIED BY
WALTER PARK, MD. REG. LAND
SURVEYOR No. 5539 - AUG. 17, 1984

PLAN
SURVEYED
PLOTTED
NOTE BOOK
No.
ALIGNMENT CHECKED
R/W CHECKED
BY
DATE

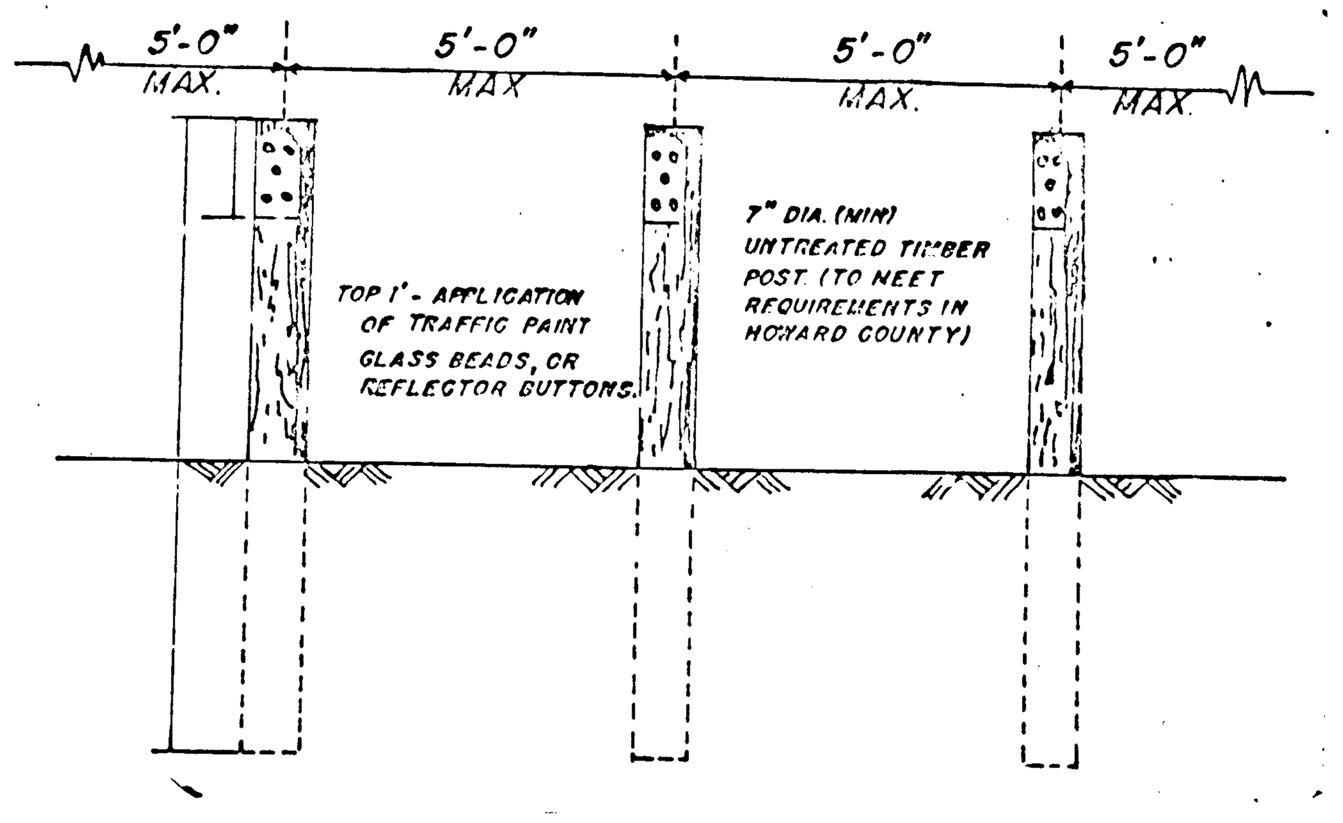
PROFILE
SURVEYED
PLOTTED
NOTE BOOK
No.
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE

850

K&E PLATE 1, PLAN PROFILE
KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

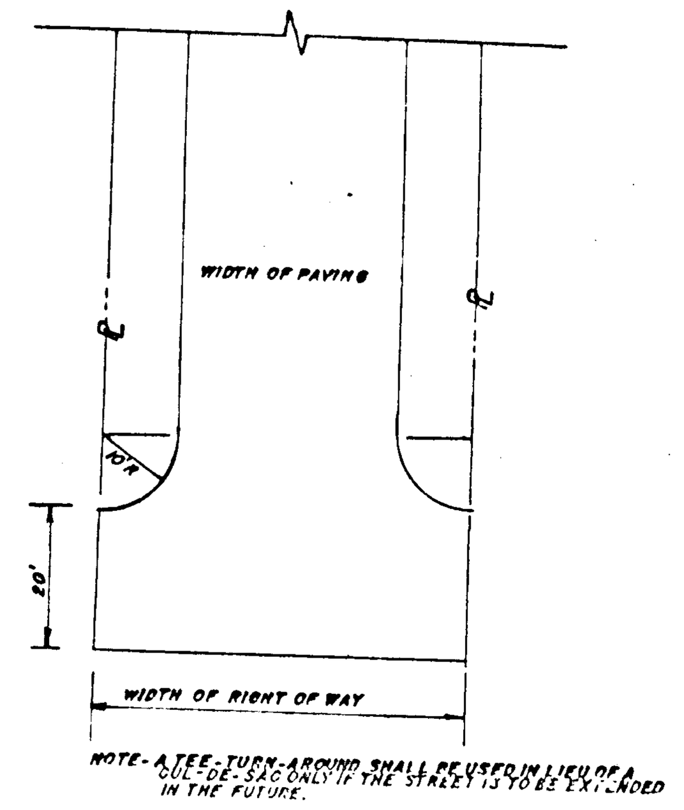
AS-BUILT AUG. 17, 1984

F-80-105

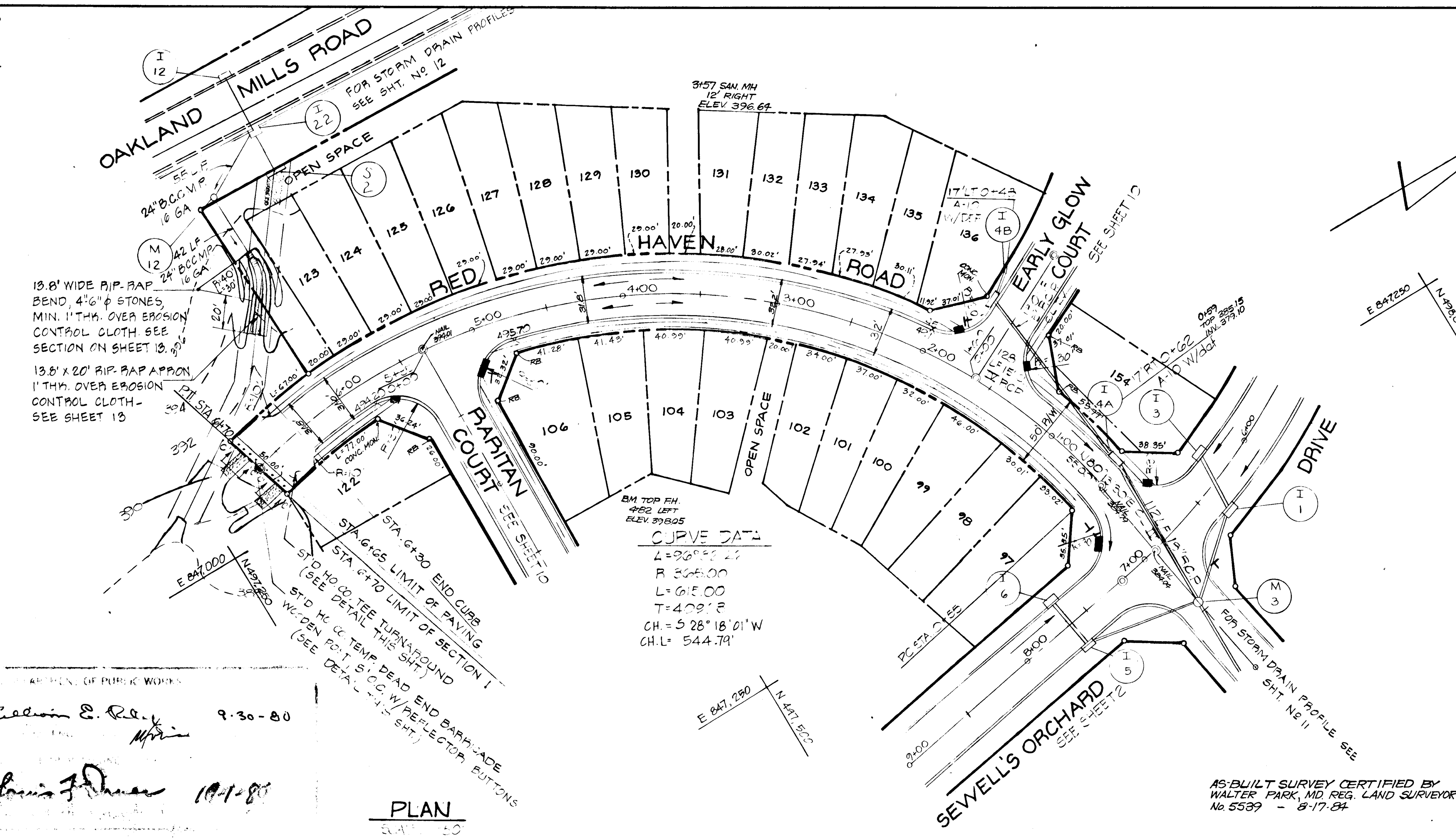


Temporary Dead End Barricade.

DRAWING D-109 Page 164



TEE TURN AROUND
DRWG D-33 PAGE 88



9-30-80

10-1-80

PLAN

AS-BUILT SURVEY CERTIFIED BY WALTER PARK, MD. REG. LAND SURVEYOR No 5539 - 8-17-84

2-13-80

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD.
COLUMBIA, MD. 21045

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 919
COLUMBIA, MD. 21044

TITLE: RED HAVEN ROAD-ROAD CONSTRUCTION PLAN			
PROJECT: SEWELL'S ORCHARDS- SECTION 1			
LOCATION: 6TH ELECTION DISTRICT			HOWARD COUNTY, MD.
DATE: FEB., 1980	DESIGN BY: R.L.M./W.H.N.	DRAWN BY: G.E.M.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 9 OF 16	

boender associates — engineers surveyors planners
BALTIMORE 301 465 7777 ♦ SALISBURY 301 749 1286

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

PLAN
PROFILE

K+E PLATE 1 PLAN PROFILE KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

AS-BUILT AUG. 17, 1984

850

EARLY GLOW COURT

RARITAN COURT

RED HAVEN ROAD

OAKLAND MILLS RD

80' R/W

EARLY GLOW
SAN. MH 0121 5' LEFT
ELEV. 389.91
SAN. MH 1171 4' LEFT
ELEV. 394.82

1+75.23 END PGL

Δ = 40°13' 44"
R = 235.00'
L = 165.00'
T = 86.06'
CH = N 45° 35' 05" W
CH.L = 161.64'

OPEN SPACE FOR GRADING SEE SHEET NO. 1

SEE SHEET 9

N 498,250
E 846,750

N 497,000
E 846,500

N 497,250
E 847,250

EARLY GLOW CT.
CONC. MON.
RED HAVEN RD
6" STY. FENCING #6310

CONC. MON. LOCATION

RARITAN CT.
RED HAVEN RD
CONC. MON.
6" STY. FENCING

CONC. MON. LOCATION

STATE OF MARYLAND
RODOLPH MAY JR.
NO. 5199
REGISTERED
PROFESSIONAL ENGINEER

Rodolph May Jr.
2-13-80

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD
COLUMBIA, MD 21045

DEVELOPER
LIGHTPOINT ASSOC.
P.O. BOX 919
COLUMBIA MD 21044

APPROVED DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — DATE 9-30-80

APPROVED OFFICE OF PLANNING AND ZONING

acting DIRECTOR OF PLANNING — 9-22-80

AS-BUILT SURVEY CERTIFIED BY WALTER PARK MD. REG. LAND SURVEYOR, No. 5539 - AUG. 17, 1984

PLAN
SCALE: 1"=50'

TITLE	EARLY GLOW COURT, RARITAN COURT ROAD CONSTRUCTION PLAN
PROJECT	SEWELL'S ORCHARDS SECTION 1
LOCATION	6TH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: JANUARY, 1980	DESIGN BY: P.L.M. / DRAWN BY: W.C.L. / CHECKED BY: P.L.M.
SCALE: AS SHOWN	JOB NO.: 79158 / DRAWING NO.: 10 OF 16

boender associates
engineers
surveyors
planners
BALTIMORE 301-465-7777 ◆ SALISBURY 301-749-1286

PLAN | SURVEYED | PLOTTED | NOTE BOOK | GRADES CHECKED | No. | BY | DATE | REVISIONS CHECKED

EARLY GLOW COURT PROFILE
SCALE: HORZ. 1"=50' VERT. 1"=5'

STA 0+00 PVI ℄ PD
STA 0+16 PT.
ELEV 389.03 382.24
STA 0+00 PVI ℄ PD
STA 0+75
ELEV 390.80
STA 1+25
ELEV 392.30
STA 1+75
PGL ELEV 395.31
VC = 100
M.O. = 0.38
H.S.D. = 270'
ELEV 395.30
BEGIN LINEAR PROFILE
32'
3.00%
EXGR ℄
EXGR

0+00	0+50	1+00	1+25	1+50	1+75				
389.51	390.85	391.64	392.28	393.89	395.30				
389.48	389.85	391.61	392.46	393.50	395.06				

EARLY GLOW COURT LINEAR PROFILE
SCALE: HORZ. 1"=50' VERT. 1"=5'

STA 1+75.23 PGL
ELEV 395.31 395.32
STA 1+111.7 PVC
ELEV 401.28 402.16
STA 1+61.7 P.V.I.
ELEV 404.98
STA 2+11.7 P.V.T.
ELEV 402.93 402.08
3+22.84 PGL = 1+75.23 PGL
ELEV 395.31 395.37
100' V.C.
M.O. 1.5
10.00%
6.00%
PGL
EXGR

0+00	0+50	1+00	1+25	1+50	1+75	2+00	2+50	3+00									
398.31	398.31	401.31	402.70	403.41	403.22	403.60	402.08	399.67	396.61								
398.31	398.31	401.56	402.84	403.22	403.60	403.36	402.08	399.67	396.59								

RARITAN COURT PROFILE
SCALE: HORZ. 1"=50' VERT. 1"=5'

STA 0+00 PVI ℄
STA 0+16
ELEV 393.84 393.72
STA 0+00 PVI ℄
STA 0+16
ELEV 393.84 393.72
EXGR 45' LEFT OF ℄
EXGR ℄
1.30%
EXGR 45' RT OF ℄
STA 1+39.99 BEGIN LINEAR PROFILE
ELEV 395.70
PGL

0+00	0+50	1+00	1+50						
394.32	394.28	394.13	395.57						
394.64	394.69	395.55	395.70						

RARITAN COURT LINEAR PROFILE
SCALE: HORZ. 1"=50' VERT. 1"=5'

STA 0+00 LINEAR PROFILE
STA 1+39.99 PGL ELEV 395.70 395.58
+1.30%
STA 1+01.85
ELEV 397.02 396.81
VC = 100'
M.O. = 0.85
PGL
-1.30%
STA 2+01.85
ELEV 397.22
EXGR
STA 3+03.70 END LINEAR PROFILE
ELEV = 395.20 394.09

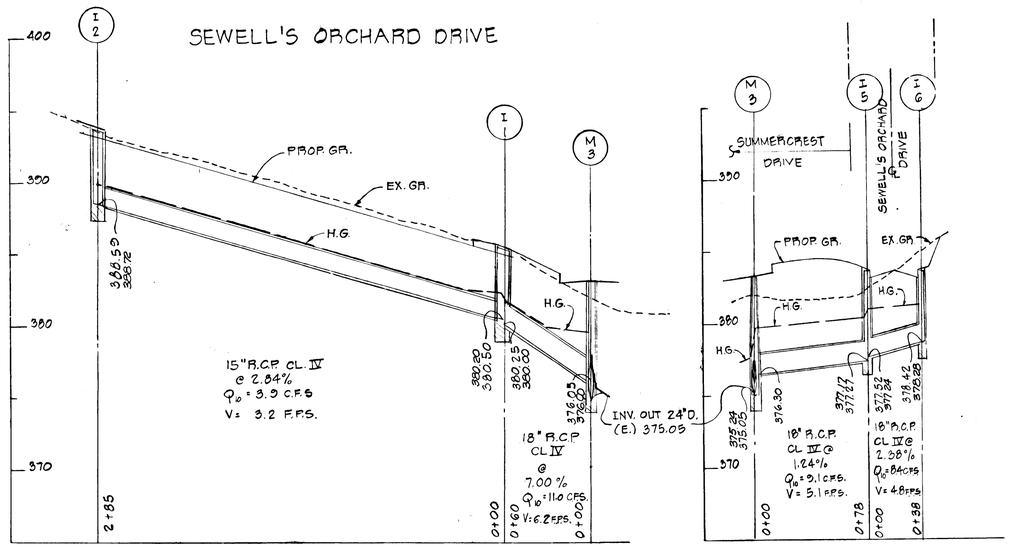
0+00	0+50	1+00	1+25	1+50	1+75	2+00	2+50	3+00									
396.22	396.35	397.00	397.25	397.35	397.09	397.05	396.85	396.38									
396.58	396.68	397.12	397.25	397.35	397.09	397.05	396.85	396.18									

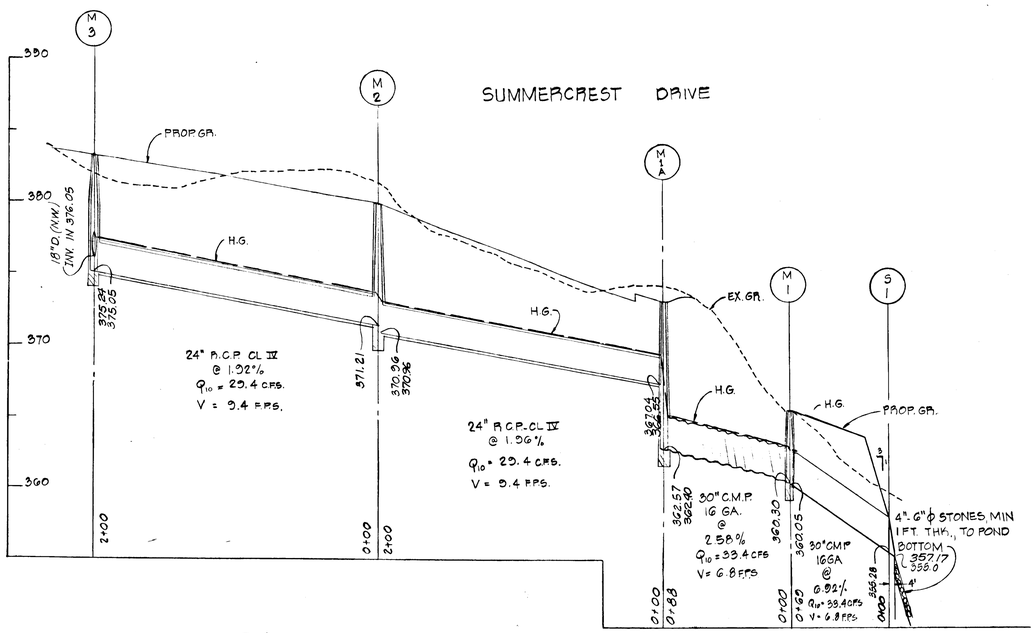
850

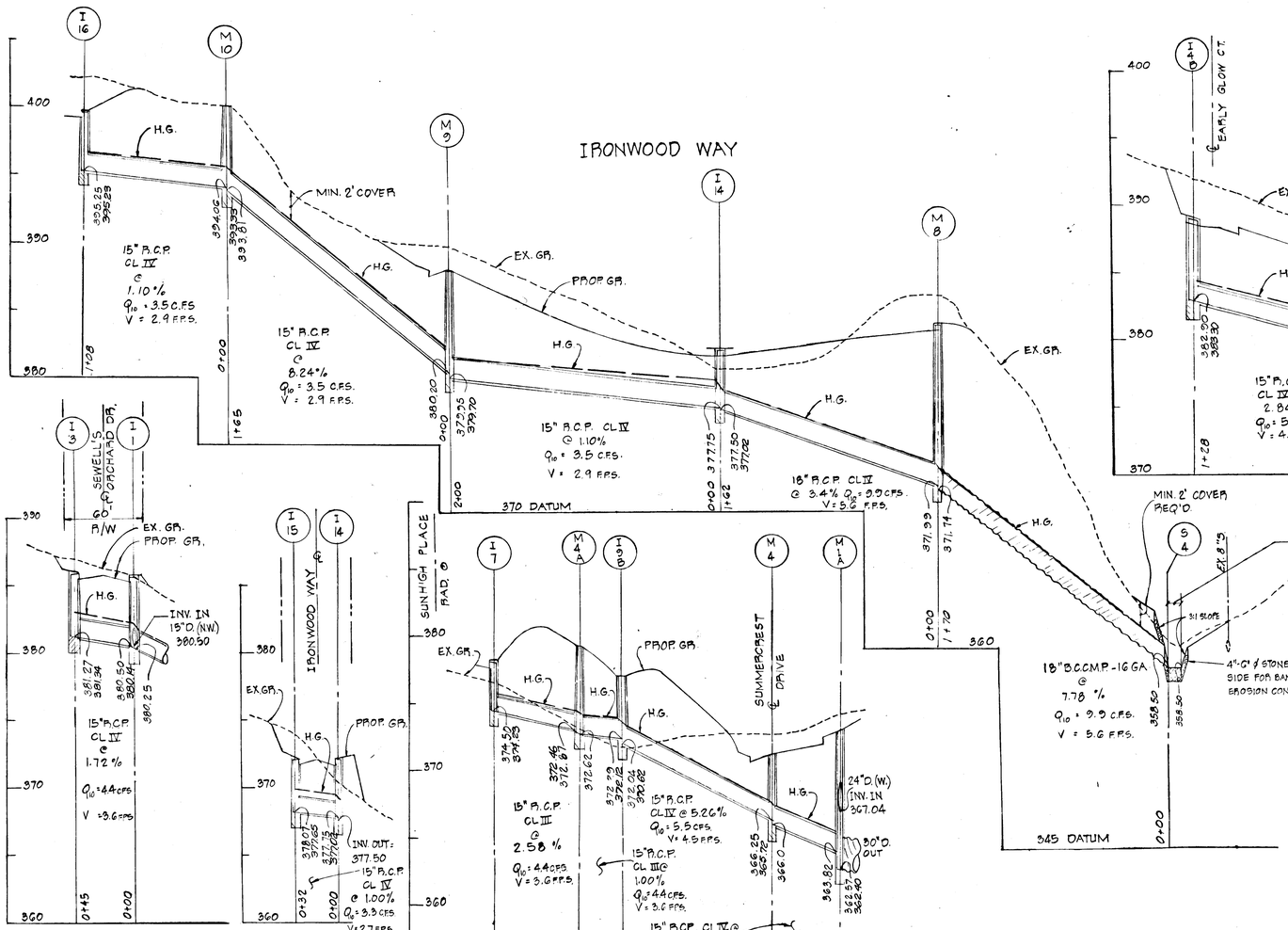
PLATE 1, PLAN PROFILE
REUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

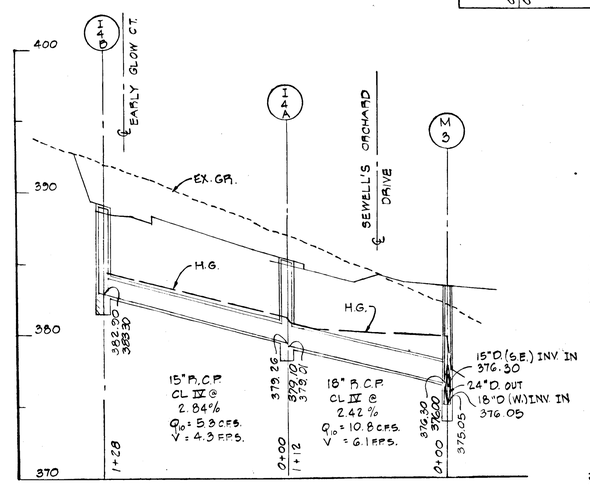
AS-BUILT AUG. 17, 1984

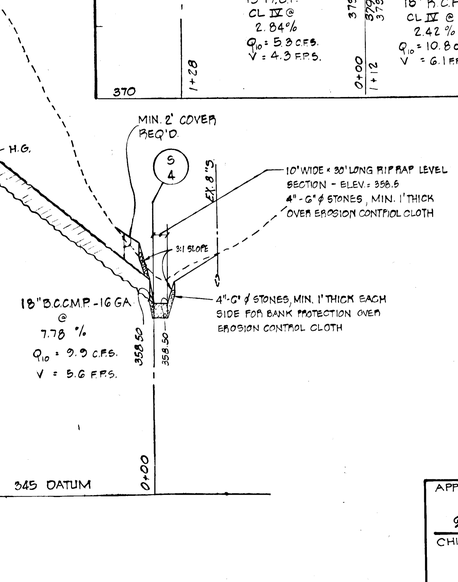
F-80-105











CERTIFICATION BY THE ENGINEER

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

STATE OF MARYLAND — RODOLPH L. MAY JR. — No. 8110 — REGISTERED PROFESSIONAL ENGINEER

RODOLPH L. MAY JR.

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

L. Earl Armiger GENERAL PARTNER — 2/8/80

DEVELOPER - L. EARL ARMIGER — DATE

THESE PLANS FOR SMALL POND CONSTRUCTION MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Robert W. Zielman — 9-17-80

APPROVED, H.O. CO. S.C.D. — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

James W. Helm — 9-17-80

U.S. SOIL CONSERVATION SERVICE — DATE

PROPOSED STRUCTURE SCHEDULE

	NO.	TYPE	INV IN	INV. OUT	TOP ELEV.	REMARKS
*	I-1	HO. CO. ST'D. CLASS A-10 INLET	380.50	380.25	T.G. 385.53	SEE HO. CO. DRWG. G4-A, PG. 119 A
	I-7	" " " " A-5 "	-	374.49	378.84	" " " " G4-A, " 119A
*	I-2	" " " " A-10 "	-	388.59	393.40	" " " " G4-A, " 119A
*	I-3	" " " " A-10 "	-	381.27	385.32	" " " " G4-A, " 119A
*	I-4A	" " " " A-10 "	379.26	379.01	385.22	" " " " G4-A, " 119A
	I-5	" " " " A-5 "	377.52	377.27	383.72	" " " " G4-A, " 119A
	I-6	" " " " A-10 "	-	378.42	383.72	" " " " G4-A, " 119A
	M-1	SHALLOW MANHOLE	360.30	360.05	365.30	SEE DETAIL - SHEET 16 OF 16
	M-2	HO. CO. ST'D. MANHOLE	371.21	370.96	380.18	SEE HO. CO. DRW. D-103, PG. 158
	S-1	MD. ST'D. METAL END SECTION	-	359.00	357.50	SEE MD. ST'D. DRWG. - 370.01, SHT. 16
	S-4	" " " "	-	358.50	360.00	" " " " " SHT. 16
	M-3	HO. CO. ST'D. MANHOLE	376.30	376.05	383.18	SEE HO. CO. DRW. D-103, " 158
	M-4	SHALLOW MANHOLE	366.25	366.00	371.14	SEE DETAIL - SHEET 16 OF 16
	M-8	HO. CO. ST'D. MANHOLE	371.99	371.74	383.50	SEE HO. CO. DRW. D-103, " 158
	M-9	" " "	380.20	379.95	388.30	" " " " D-103, " 158
	M-10	" " "	394.06	393.81	400.10	" " " " D-103, " 158
	I3-B	" " " CLASS "A" INLET	372.29	372.04	377.0	" " " " D-98, PG. 148
*	I4-B	" " " CLASS A-10 INLET	-	382.90	388.99	" " " " G4-A, PG. 119 A
	I 14	" " " CLASS A-5 INLET	377.75	377.50	382.01	" " " " G4-A, " 119 A
	I 15	" " " " A-5 "	-	378.07	382.01	" " " " G4-A, " 119 A
	I 16	" " " " A-5 "	-	389.86	393.76	" " " " G4-A, " 119 A
	M-1A	" " " MANHOLE	367.04	362.57	372.8	" " " " D-103, " 158
	M-4A	" " " "	372.87	372.62	378.5	" " " " D-103, " 158

* DENOTES INLETS TO BE INSTALLED WITH DEFLECTORS.

AS-BUILT SURVEY CERTIFIED BY WALTER PARK, MD. REG. LAND SURVEYOR No. 5539 - AUG. 17, 1984

STATE OF MARYLAND — WALTER PARK — No. 5539 — REGISTERED PROFESSIONAL ENGINEER

Rodolph L. May Jr. 2-1?

OWNER
SEWELL'S ORCHARD
6233 OAKLAND MILLS RD.
COLUMBIA, MARYLAND 21044

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 519
BALTIMORE, MD. 21203

REVISED: 3-30-80 OUTFALL AND RIPRAP APRON AT S-4 AND S-1

APPROVED DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — 9-30-80 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 9-22-80 DATE

TITLE: STORM DRAIN PROFILES & DETAILS

PROJECT: SEWELL'S ORCHARD - SECTION 1

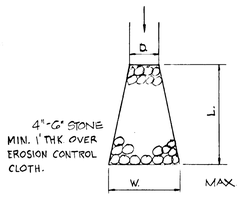
LOCATION: 6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:
FEB. 1980	W.H.N.	W.H.N.	R.L.M.
SCALE: HOR.: 1"=50' VER.: 1"=5'	JOB NO.: 79158	DRAWING NO.: 11 OF 16	

boender associates — engineers surveyors planners
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1286

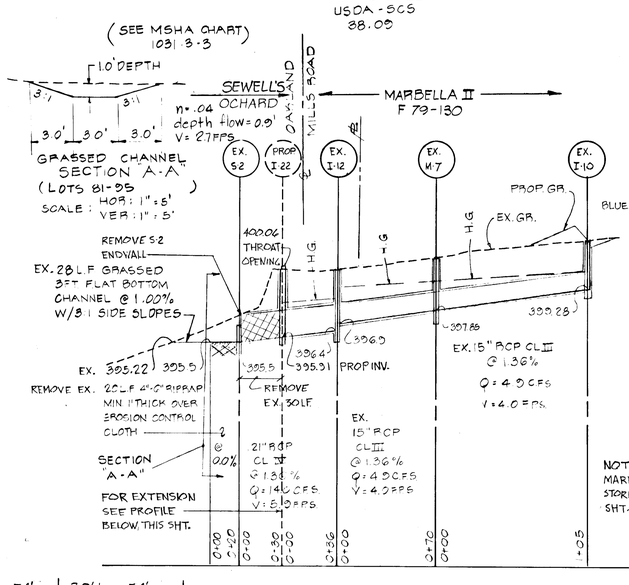
#850

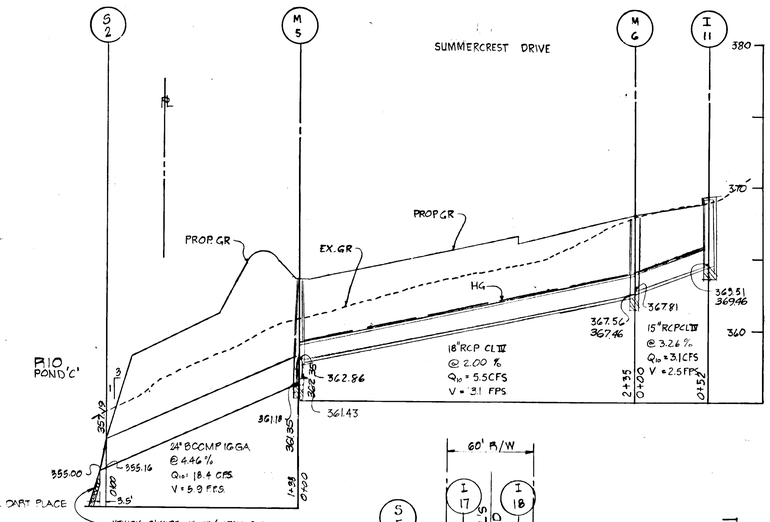
AS-BUILT 877-84 F-80-105

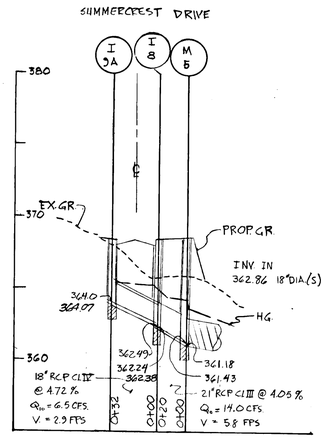


RIPRAP @ OUTFALL S-5

NOT TO SCALE
USDA - SCS
88.09







CERTIFICATION BY THE ENGINEER

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

RODOLPH L. MAY JR. 2-13-80

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

L. Earl Armiger GENERAL PARTNER 2/8/80

DEVELOPER - L. EARL ARMIGER — DATE

THESE PLANS FOR SMALL POND CONSTRUCTION MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

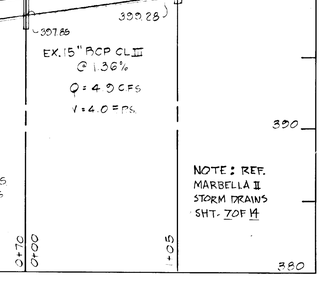
Robert W. Zichm 9-17-80

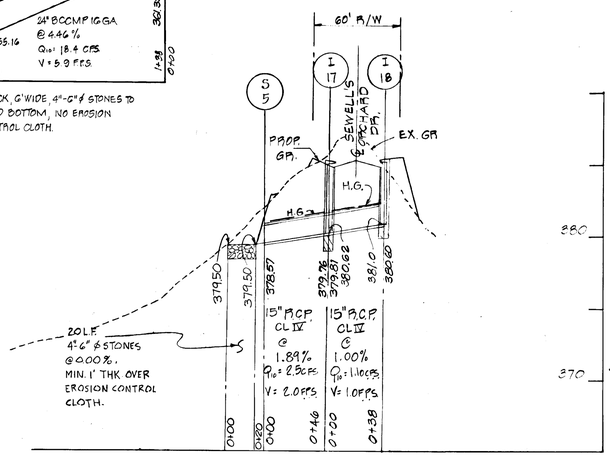
APPROVED H.O. CO. S.C.D. — DATE

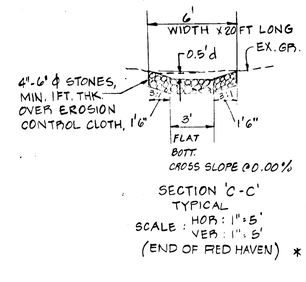
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

James M. Hicks 9-17-80

U.S. SOIL CONSERVATION SERVICE — DATE







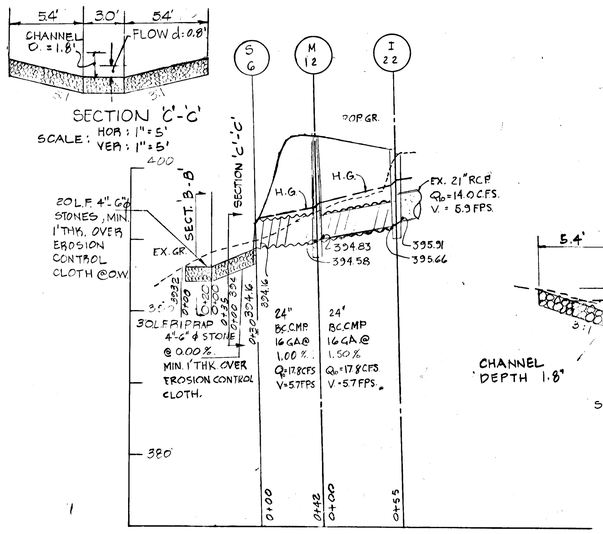
SECTION 'C-C'
TYPICAL
SCALE: HOR: 1"=5'
VER: 1"=5'
(END OF RED HAVEN) *

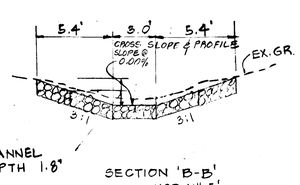
AS-BUILT SURVEY CERTIFIED BY WALTER PARK, MD. REG. LAND SURVEYOR No. 5539 - AUG. 17, 1984

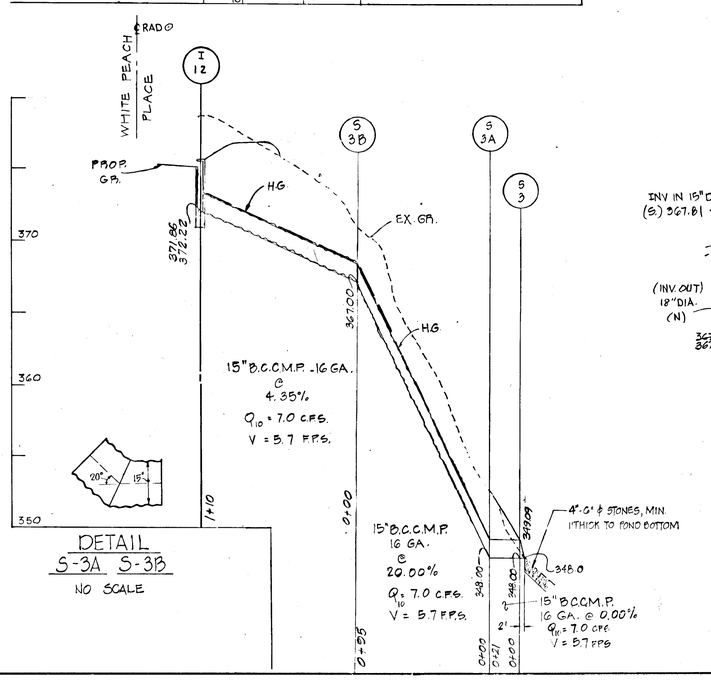
PROPOSED STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
I-10	HO. CO. ST'D. CLASS A-5 INLET	-	368.58	374.83	SEE HO CO DRWG 64-A PG 10A
I-11	" " " " A-10 "	-	369.58	374.83	" " " " " " "
I-12	HO. CO. ST'D. CLASS A-10 INLET	-	372.22	375.56	SEE HO. CO DRWG 64-A, PG. 10A
I-8	HO. CO. STD. CLASS A-10 INLET	362.49	362.24	368.58	SEE HO. CO. DRWG 64-A, PG. 10A
I-9A	HO. CO. ST'D. CLASS A-5 INLET	-	364.07	368.58/5	SEE HO. CO. DRWG 64-A PG 10A
I-17	HO. CO. ST'D. CLASS A-5 INLET	380.62	380.37	385.11	SEE HO. CO. DRWG 64-A, PG 10A
I-18	HO. CO. STD. CLASS A-5 INLET	-	381.00	385.11	SEE HO. CO. DRWG 64-A, PG 10A
M-12	HO. CO. STD. MANHOLE	394.83	394.58	402.00	SEE HO. CO DRWG D-163, PG 58
M-5	HO. CO. ST'D. MANHOLE	361.43	361.18	368.00	SEE HO. CO. DRWG D-103, PG 58
S-6	MD. ST'D. METAL END SECTION	-	394.16	396.10	SEE MD. ST'D. DRWG. - 370.01, SHT. 16
S-5	MD. STD. CONC. END SECTION	-	379.50	380.75	SEE MD. ST'D. DRWG. - 368.01
S-3	MD ST'D METAL END SECTION	-	348.00	349.25	SEE MD. ST'D. DRWG - 370.01, SHT. 16
S-2	" " " " "	-	355.00	357.00	SEE MD. ST'D. DRWG. 370.01, SHT. 16
I-22	HO CO STD CLASS A-5 INLET	395.91	395.66	401.10	SEE HO CO. DRWG D-46, PG 101
M-6	HO CO STD. MANHOLE	367.81	367.56	373.45	SEE HO CO DRWG D-103, PG 158
S-3A	FABRICATED 20° VERTICAL BEND	349.0	349.00	350.25	15" BCCMP -16 GA.
S-3B	FABRICATED 20° VERTICAL BEND	367.0	367.0	368.25	15" B.C.C.M.P.-16 GA.

* DENOTES INLET TO BE INSTALLED WITH A DEFLECTOR

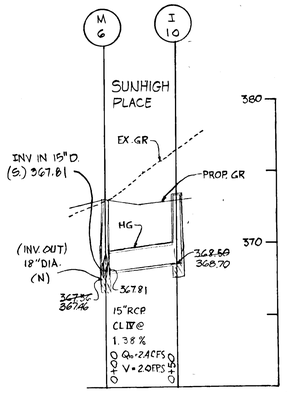






DETAIL S-3A S-3B

NO SCALE



Rodolph May Jr. 2-13-80

APPROVED DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — 9-30-80 DATE

APPROVED OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 9-22-80 DATE

OWNER
SEWELL'S ORCHARD
6239 OAKLAND MILLS ROAD
COLUMBIA, MARYLAND 21045

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 919
COLUMBIA, MD. 21044

REVISED: 8-30-80 OUTFALLS AT S-2 AND S-3

TITLE: STORM DRAIN PROFILES & DETAILS

PROJECT: SEWELL'S ORCHARD SECT. 1

LOCATION: 6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:
JAN. 1980	W.H.N	G.M. / W.N	R.L.M.
SCALE: HOR: 1"=50' VER: 1"=5'	JOB NO.: 79158	DRAWING NO.: 12 OF 16	

boender associates — engineers surveyors planners
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1288

#850

AS-BUILT AUG. 17, 1984 F-80-105

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OF THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.

L. Ballinger GENERAL PARTNER — 2/8/80

DEVELOPER L. CARL ARMIGER — DATE

ENGINEER'S CERTIFICATE

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

Rodolph May Jr. — 2-2-80

ENGINEER RODOLPH L. MAY JR. — DATE

Reviewed for NOWARD S.C.D.
and meets Technical Requirements
Date 2-18-80
U.S. Soil Conservation Service

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

Approved Wm Rouse Date 2-19-80
Howard S.C.D.

SEDIMENT TRAP SCHEDULE

NO.	D.A.	VOL. REQ'D	VOL. PROV.	BOTT. DIMEN.'s	DEPTH	BOTT. EL.	C.O. EL.	EMER SP. LEN.	EMER SP. ELEV
1	4.0 AC.	7200 C.F.	9000 C.F.	60'X40'	3'	386.0	387.5	24'	389.0
2	1.0 AC	1800 C.F.	2392 C.F.	20'X45'	2'	374.0	375.0	6'	376.0

EARTHWORK TABULATION

EXCAVATION LOCATION	CUT C.Y.'S	FILL C.Y.'S	COMPACT. (@ 25%)	TOTAL FILL C.Y.'S
ALL ROADS	10770	8,415	2,104	10,519
ROADWAY STRIPPING	19,929	-	-	-
POND "C" ENLARGEMENT	5,743	2,624	656	3,280
POND "C" EARTH DAM	-	464	116	579
POND "B"	-	486	121	607
TOTAL	36,442			
TOTAL				14,985 C.Y.'S
EXCESS MATERIAL 21,457 C.Y.'S				

PRIMARY DISPOSAL AREAS

LOCATION	C.Y.'S	15% SETTLEMT ALLOW.	TOTAL C.Y.'S.
EARTH BERM ADJACENT TO OAKLAND MILLS RD	1479	222	1,701
SIGN BERM @ ENTRANCE	389	58	447
LOTS 46 - 68 CUT: 2667 C.Y.'S FILL: 16,129 C.Y.'S (INCLUDES 15% ALLOW.)		-	7,356
LOTS 78 - 86 CUT: 2,748 C.Y.'S FILL: 22,276 C.Y.'S (INCLUDES 15% ALLOW.)	-		15,870
TOTALS	22,064 C.Y.'S	3310 C.Y.'S.	25,374 C.Y.'S

SECONDARY DISPOSAL AREAS

LOCATION	FILL	15% Allow. Settlemt.	TOTAL FILL
PARCEL "B"	805	121	926
PARCEL "C"	1,081	162	1,243
TOTAL 2,169 C.Y.'S			

#850

SECTION EARTH BERM
NOT TO SCALE
ZONED: R-SC

VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS

AREA COMPUTATIONS

TOTAL GROSS AREA:	40.1 AC.
AREA OF PAVING:	5.7 AC.
AREA OF REVEGETATION:	22.7 AC.
AREA UNDISTURBED:	8.3 AC.

FLOODPLAIN AND STEEP SLOPES: 3.4 AC.

CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT.
2. NOTIFY HOWARD COUNTY BUREAU OF LICENSE, INSPECTIONS AND PERMITS 24 HOURS PRIOR TO GRADING OPERATIONS.
3. INSTALL S.C.E., TEMP. SED. CONTROL MEASURES (P.D., TRAPS #1, 2)
4. GRADE ROADS, INSTALL UTILITIES AND STORM DRAINS, BLOCK UPSTREAM END EACH NIGHT. BLOCK INLET I-18.
5. ROUGH GRADE SITE MAINTAINING SED CONTROL MEASURES.
6. STABILIZE ROADS WITH BASE COURSE AND SITE GRADING WITH TEMP. SEDIMENT CONTROL MEASURES.
7. OPEN INLET I-18 AND REMOVE WITH APPROVAL OF SEDIMENT CONTROL INSPECTORS. LEAVE SEDIMENT BASINS 1 AND 2 IN SERVICE.
8. REMOVE TEMPORARY SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF THE HOWARD COUNTY BUREAU OF LICENSE, INSPECTIONS & PERMITS.

OSO POND SEDIMENT BASIN #2
EX. 70' 15" BCCMP BARREL INV. 339.9
EX. 21" BCCMP RISER ELEV 349.2
POND 'A'

REVISED 3-3-80
POND GRADING AND LIMIT OF SUBMISSION.

OWNER
SEWELL'S ORCHARDS
6238 OAKLAND MILLS RD
COLUMBIA, MD 21045

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 519
COLUMBIA, MD 21044

APPROVED DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 9-30-80

APPROVED OFFICE OF PLANNING AND ZONING
DIVISION OF LAND DEVELOPMENT — DATE 9-22-80

SEDIMENT CONTROL PLAN

PROJECT: SEWELL'S ORCHARDS - SECTION 1
LOCATION: 6TH ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: FEB 1980 — DESIGN BY: R.L.M. — DRAWN BY: G.E.M. — CHECKED BY: R.L.M.
SCALE: 1" = 100' — JOB NO: 79158 — DRAWING NO: 80516

boender associates — engineers surveyors planners
SUITE 102 107 TOWN & COUNTRY PROFESSIONAL BUILDING ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301 465 7333 SALISBURY 301 749 1288

AS-BUILT SEPT. 5, 1984 F-80-105

EX. PROFILE OF DAM/PIPE SECTION

OSO POND

SCALE: HORZ 1"=20' VERT 1"=4'

PLAN

SCALE: 1"=50'

NOTE: FOR PROFILE OSO POND DAM, SEE S.C.S. EX DETAILS & COMPS.

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 completely all spaces under and adjacent to the pipe. At no time during 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 the contractor drive equipment 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.

RIO POND

PROFILE OF DAM LOOKING DOWNSTREAM

SCALE: HORZ. 1" = 30' VERT. 1" = 5'

#850

EXISTING

SECTION ON CENTERLINE OF PIPE

RIO POND

AS-BUILT SURVEY CERTIFYS THAT THE STORM WATER MANAGEMENT WAS CONSTRUCTED TO MEETS THE APPROVED MINIMUM STANDARDS AND SPECIFICATIONS.
AS-BUILT CERTIFICATION BY RODOLPH. L. MAY JR. MD. REG. ENGINEER No. 8700 ON SEPT. 5, 1984

9-30-80

9-22-80

Rodolph May Jr.

REVISED: 7-6-84 PER PONDS REV. F-80-105 (6-20-84)

EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free from 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 at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans.

Placement

Areas on which fill is 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 sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly.

CERTIFICATION BY THE ENGINEER

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

Rodolph May Jr. 2-15-80
RODOLPH L. MAY JR

No. 8700

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

L. Earl Armiger 2/8/80
DEVELOPER L. EARL ARMIGER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Robert W. Ziehm 9-17-80
APPROVED HO. CO. SCD DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

James M. Kelm 9-17-80
U.S. SOIL CONSERVATION SERVICE DATE

STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by seeding and applying straw mulch in accordance with Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.

OWNER
SEWELLS ORCHARDS
6233 OAKLAND MILLS RD
COLUMBIA MD 21045

DEVELOPER
LIGHTPOINT ASSOC.
P.O. BOX 919
COLUMBIA MD 21044

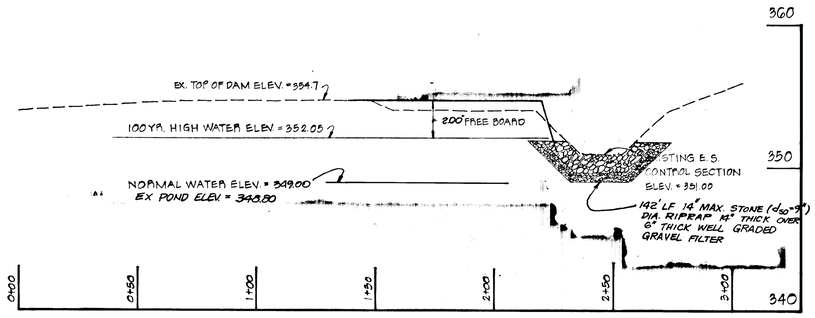
REVISED: 3-30-80 POND GRADING AND STORM DRAIN OUTFALLS

TITLE SEWELL'S ORCHARDS POND PLAN			
PROJECT SEWELL'S ORCHARDS - SECTION 1			
LOCATION 6TH ELECTION DISTRICT HOWARD COUNTY MD			
DATE: FEB. 1980	DESIGN BY: R.L.M	DRAWN BY: W.C.L.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 79158	DRAWING NO.: 14 OF 16	

boender associates
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1286

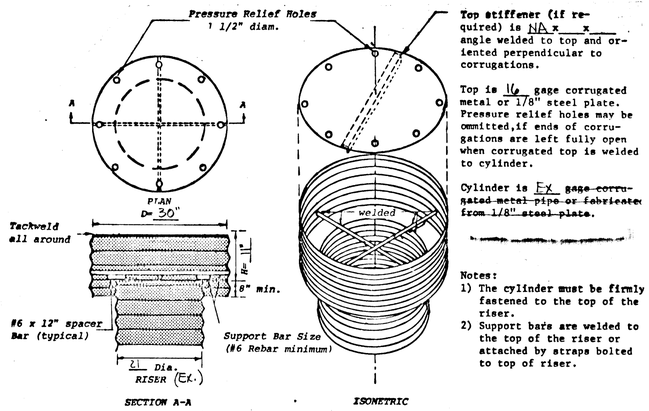
engineers
surveyors
planners

AS-BUILT SEPT. 5, 1984 F-80-105



OSO POND

DAM PROFILE
LOOKING DOWNSTREAM
SCALE: HORZ. 1"=30'
VERT. 1"= 5'



Top stiffener (if required) is NA x x angle welded to top and oriented perpendicular to corrugations.

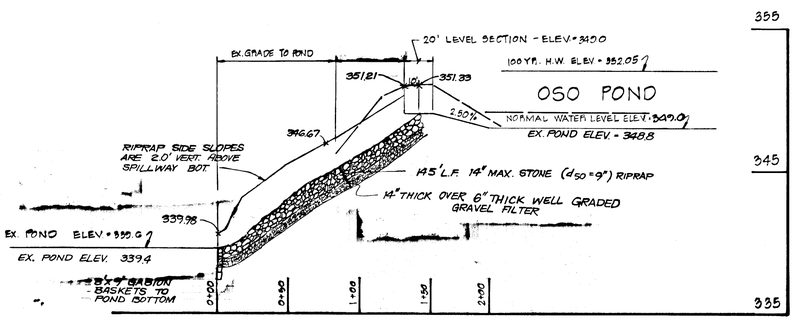
Top is 16 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be ommitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is Ex ~~gage corrugated metal pipe or fabricate from 1/8" steel plate.~~

Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

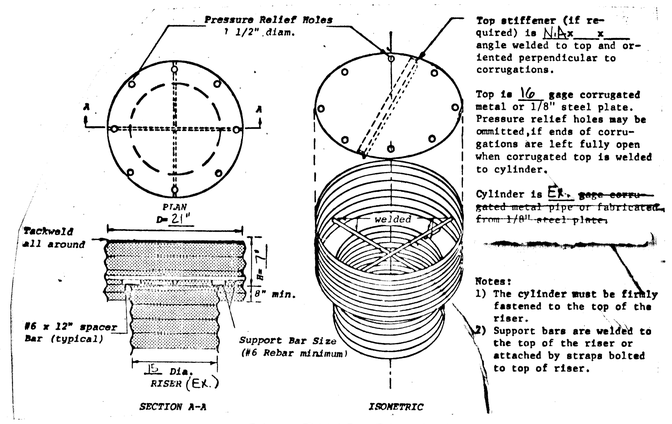
OSO POND REVISED

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE
(not to scale)



PROFILE : EMERGENCY SPILLWAY

SCALE: HORZ. 1"=50'
VERT. 1"=5'



Top stiffener (if required) is N.A. x x angle welded to top and oriented perpendicular to corrugations.

Top is 16 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be ommitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is Ex. ~~gage corrugated metal pipe or fabricated from 1/8" steel plate.~~

Notes:
1) The cylinder must be firmly fastened to the top of the riser.
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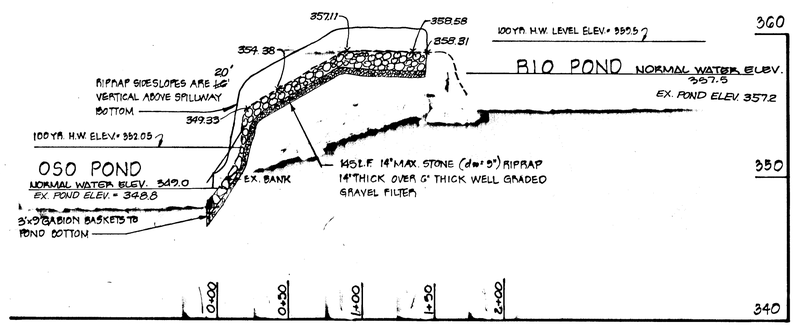
RIO POND REVISED

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE
(not to scale)



PROFILE : EMERGENCY SPILLWAY

SCALE: HORZ. 1"=50'
VERT. 1"=5'

#850

CERTIFICATION BY THE ENGINEER

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

Rudolph L. May Jr. — 3-3-80
RODOLPH L. MAY, JR. — DATE

STATE OF MARYLAND · RODOLPH L. MAY, JR. · NO. 8700 · REGISTERED PROFESSIONAL ENGINEER

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

L Earl Armiger — 3-3-80
DEVELOPER - L. EARL ARMIGER — DATE

THESE PLANS FOR SMALL POND CONSTRUCTION MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Robert W. Zichum — 9-17-80
APPROVED H.O. CO. S.C.D. — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

James M. Hobbs — 9-17-80
U.S. SOIL CONSERVATION SERVICE — DATE

STATE OF MARYLAND · RODOLPH L. MAY, JR. · NO. 8700 · REGISTERED PROFESSIONAL ENGINEER

Rodolph L. May Jr.

OWNER
SEWELLS ORCHARD
6233 OAKLAND MILLS RD.
COLUMBIA, MD. 21044

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 515
COLUMBIA, MD 21044

AS-BUILT SURVEY CERTIFYS THAT THE STORM WATER MANAGEMENT WAS CONSTRUCTED TO MEET THE APPROVED MINIMUM STANDARDS AND SPECIFICATIONS. BY RODOLPH L. MAY JR., MD. REG. ENGINEER No. 8700 ON SEPT. 5, 1984

APPROVED DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — 9-30-80 DATE

APPROVED OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 9-22-80 DATE

ADDED: 3-3-80

TITLE

PROJECT: SEWELLS ORCHARD SECTION 1

LOCATION: 6TH ELECTION DISTRICT — HOWARD COUNTY, MD.

DATE: MARCH, 1980	DESIGN BY:	DRAWN BY: J.J.B.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 75158	DRAWING NO.: 14 A OF 16	

boender associates
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1288
engineers surveyors planners

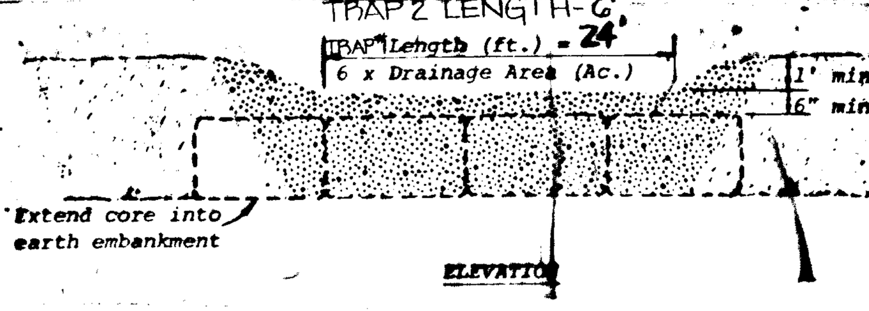
AS-BUILT SEPT. 5, 1984

F-80-105

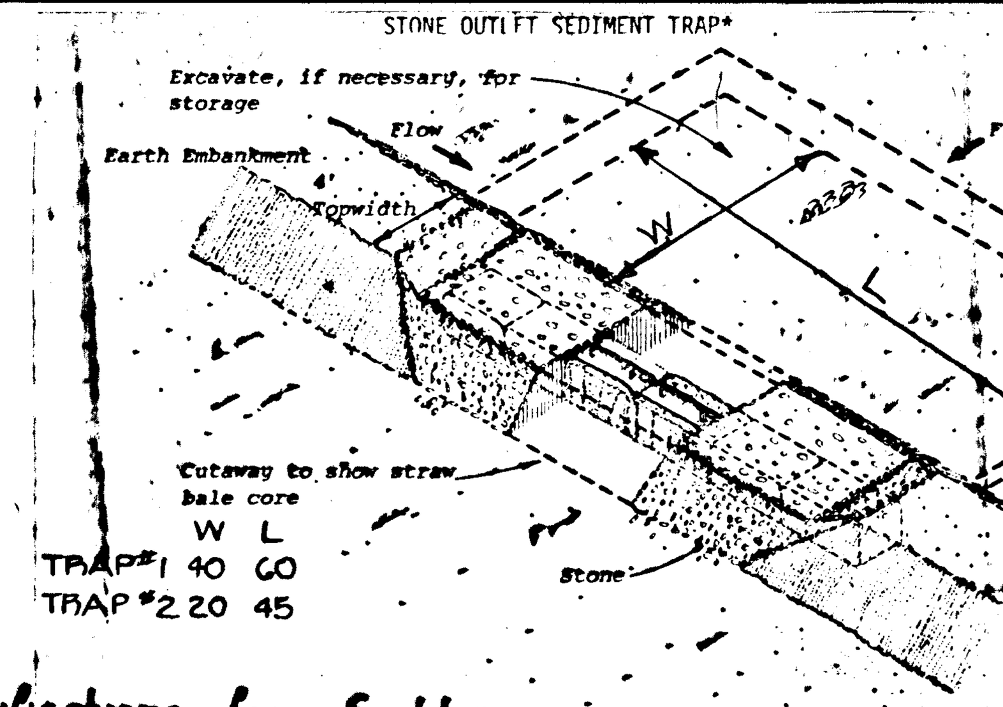
Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
4. The structure shall be inspected after each rain and repairs made as needed.
5. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
6. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
7. All cut and fill slopes shall be 2:1 or flatter.
8. The crushed stone used in the outlet shall meet AASHTO designation M43, Size No. 2 or 24 or its equivalent such as MSHA No. 2. Gravel, meeting the above gradation, may be used if crushed stone is not available. Crusher run is not acceptable.

STONE OUTLET SEDIMENT TRAP



STONE OUTLET SEDIMENT TRAP*



Soil Preparation

For short slopes, small areas, and mass plantings with close spacings, apply a commercial granular fertilizer such as 5-10-10 and organic supplement such as composted cow manure, peat or well-rotted sawdust, and work into the soil prior to planting. Fertilizer rate - 3 to 5 lbs. per 100 sq. ft. The organic material needed will depend upon the soil and plant being used. Plants such as pachysandra require a high rate of organic material, about a 2-inch layer worked into the root zone. Depending on the soil type and steepness of slope, the depth of soil working will vary from 4 to 6 inches.

For steep slopes and large area plantings, working up the entire planting area would be impractical and would probably induce erosion. Center hole planting, a hole dug for each plant, would be more desirable. If the soil on the slope is poorly suited to the species being planted, incorporate organic material into the planting hole. Whether organic material in needed or not, fertilize each plant at the rate of one ounce per plant of some complete fertilizer such as 10-10-10. Mix fertilizer with soil below the roots of the plants.

Another alternative is to add to the planting hole a sandy loam soil mixed with peat, composted cow manure and cocoa shells, or well-rotted sawdust at the rate of 1:1 or 2:1.

The entire planted slope shall be covered with a protective mulch such as excelsior, wood chips, straw or wood pulp fiber to conserve moisture and control erosion. Weeds shall be controlled by pulling or other acceptable means. Where fresh woodchips, wood shavings or sawdust are used as mulches or to add organic material to planting bed, a slow release fertilizer such as 7-40-6, 38-0-0 or organic forms should be used.

Where erosion hazard is very high, heavy jute metting stapled to the slope will provide excellent erosion control, as will landscape mats of excelsior or fiber glass.

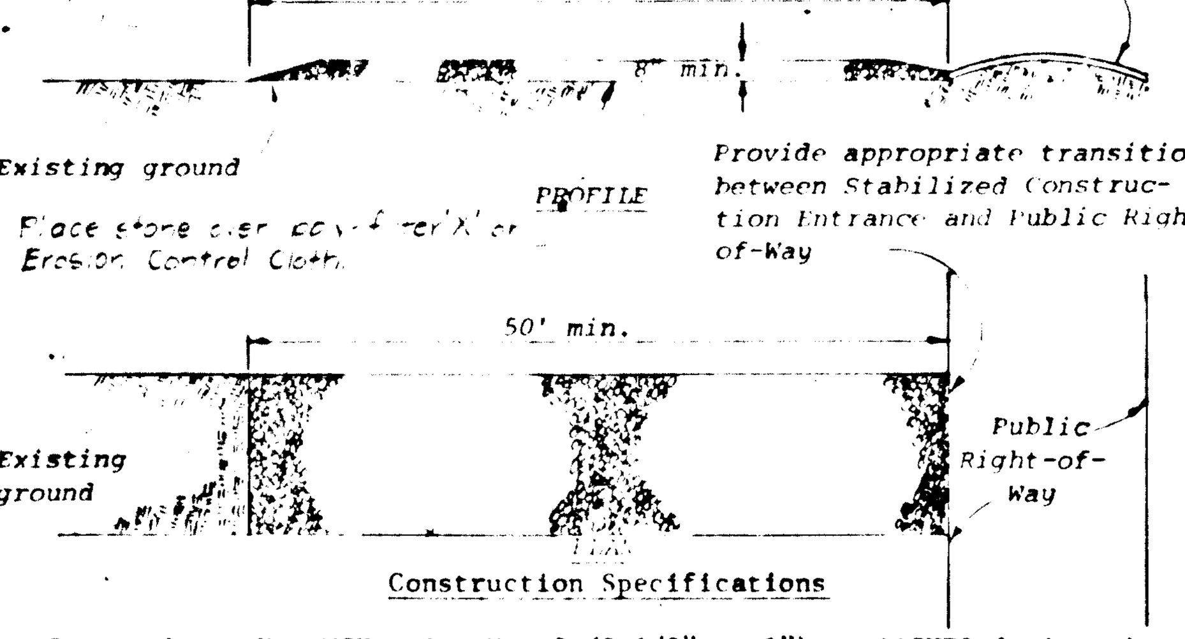
Where individual plants are planted, a temporary cover crop of annuals will be used for erosion control until planted materials offer protective cover. (See standards and specifications for temporary seeding).

Maintenance

Some watering, remulching and fertilizing may be required of a new planting during the period of establishment. Cultivation is not recommended. This will encourage erosion and cause root injury. Competing weeds will be controlled.

If a controlled release fertilizer was used at time of planting, additional fertilizing may not be necessary for several years. Otherwise, fertilize plantings during the spring of the second growing season and thereafter as needed, using 2 to 3 pounds of a granulated commercial fertilizer such as 5-10-10 per 100 square feet.

STABILIZED CONSTRUCTION ENTRANCE
(not to scale)



Construction Specifications

1. Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
2. Length - As effective, but not less than 50 feet.
3. Thickness - Not less than eight (8) inches.
4. Width - Not less than full width of all points of ingress or egress.
5. Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
6. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

Standard Symbol SCE

#850

Specifications for Sodding

I. Site Preparation

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

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

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

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

II. Sod Installation

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

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

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

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

III. Sod Maintenance

A. In the absence of adequate rainfall, watering shall be performed daily or as often as deemed necessary by the inspector during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done during the heat of the day to help prevent wilting.

B. After the first week, sod shall be watered as necessary to maintain adequate moisture and insure establishment.

C. First mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 and 3 inches unless otherwise specified.

D. Maintenance of established sod should follow specifications outlined in table 54-1.

Conditions Where Practice Applies

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

SPECIFICATIONS

1. Class of turfgrass sod shall be Maryland or Virginia State Certified, or Maryland or Virginia State approved sod.
2. Sod shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness shall exclude top growth and thatch.
3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10% of the section.
4. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5%. Broken pads and torn or uneven ends will not be acceptable.
5. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
6. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved by the contracting officer or his designated representative prior to its installation.

Specifications for Seeding

I. Site Preparation

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

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

II. Seedbed Preparation

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

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

III. Soil Amendments

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

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

IV. Seeding

A. Select a mixture from table 51-1.

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

V. Mulching

A. Materials and Amounts

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

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

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

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

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

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

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

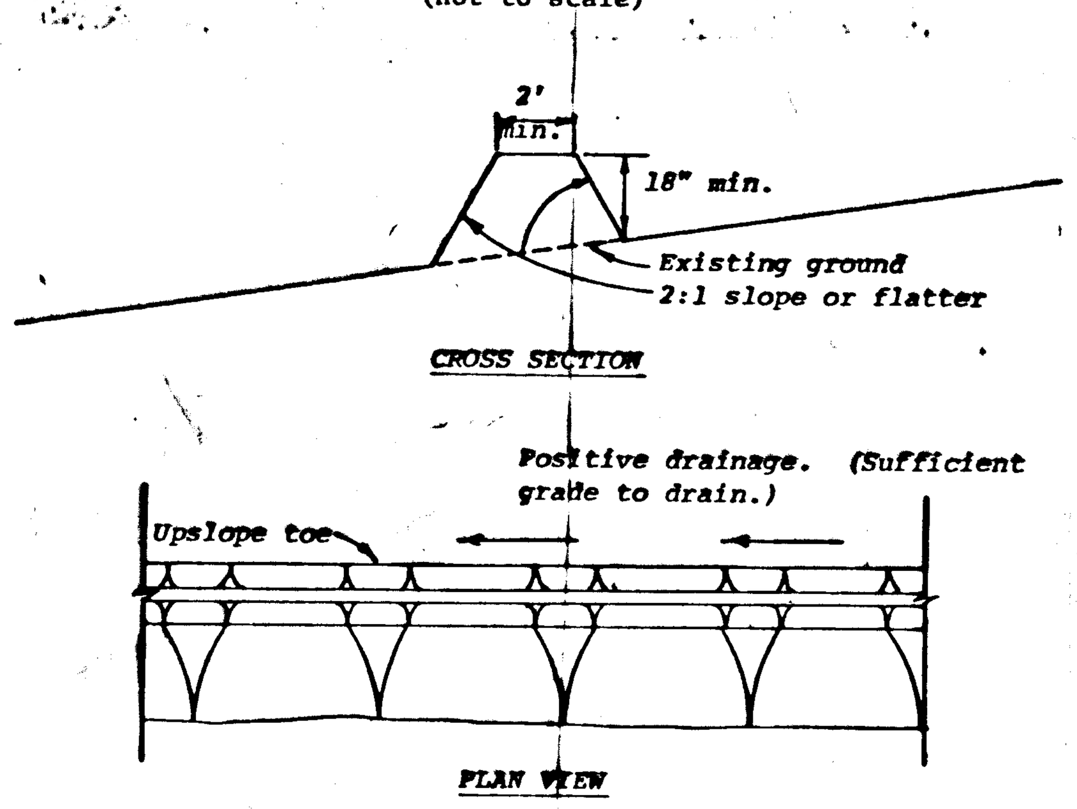
2. Mulch Nettings - Staple lightweight biodegradable paper, plastic or cotton nettings over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4 feet wide and up to 300 feet long.

APPROVED
William E. Riley 9-30-80
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING
[signature] 9-22-80
DIVISION OF LAND DEVELOPMENT DATE

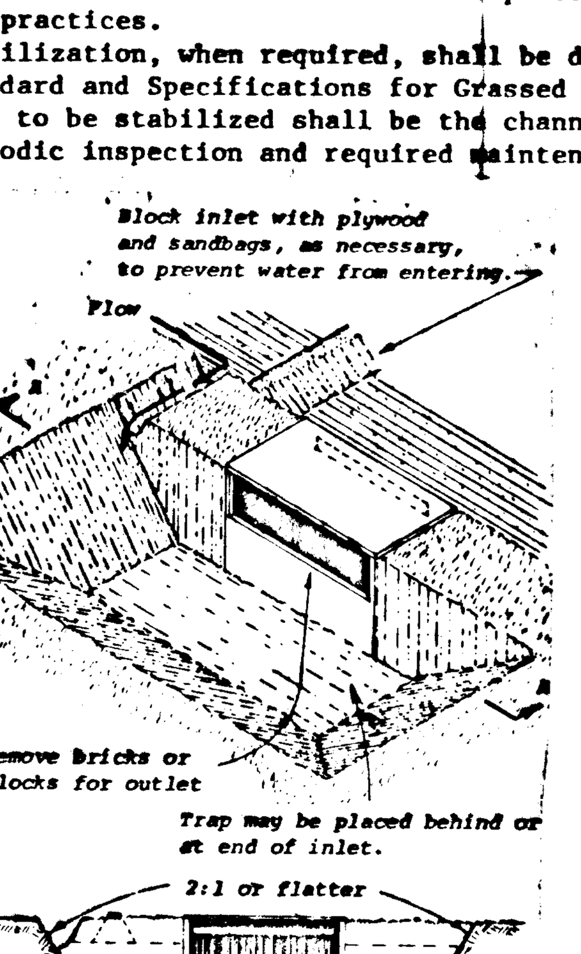
Owner:	Developer:
Sewell's Orchards	Light Point Associates
6233 Oakland Mills Rd.	P.O. Box 919
Columbia, Md. 21045	Columbia, Md 21045

PERIMETER DIKE*
(not to scale)



Construction Specifications

1. All dikes shall be machine compacted.
2. All perimeter dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area or into a level spreader or grade stabilization structure.
   B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, when required, shall be done in accordance with Standard and Specifications for Grassed Waterway. The minimum area to be stabilized shall be the channel flow area.
5. Periodic inspection and required maintenance shall be provided.



STORM INLET SEDIMENT TRAP	Standard Drawing ST-4

CONSTRUCTION SPECIFICATIONS

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

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 — REGISTERED PROFESSIONAL ENGINEER
Rodolph L. May Jr.
Rodolph L. May Jr. 2-13-80

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
James M. Helm 9-17-80
SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
William T. Rowe 9-17-80
HOWARD

Fills and Grading

CONSTRUCTION SPECIFICATIONS

1. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved sediment control plan until they are permanently stabilized.
2. All sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved sediment control plan and the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas"
3. Topsoil required for the establishment of vegetation shall be stockpiled in amount necessary to complete finished grading of all exposed areas.
4. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable material.
5. Areas which are to be topsoiled shall be scarified to a minimum depth of three inches prior to placement of topsoil.
6. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with HOWARD COUNTY STANDARD SPECIFICATIONS
7. All fill shall be placed and compacted in layers not to exceed 8 inches in thickness.
8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory fills.
9. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fills.
10. Fill shall not be placed on a frozen foundation.
11. Seeps or springs encountered during construction shall be handled in accordance with the Standard and Specifications for Subsurface Drain or other approved methods.

SEDIMENT CONTROL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" PREPARED BY THE U.S.D.A. SOIL CONSERVATION SERVICE
2. APPLY FOR GRADING PERMIT
3. NOTIFY THE BUREAU OF LICENSE, INSPECTIONS AND PERMITS 24 HOURS PRIOR TO GRADING OPERATIONS.
4. CONSTRUCTION SHALL ADHERE TO THE CONSTRUCTION SEQUENCE
5. CUT AND FILL SLOPES SHALL BE 2:1 MAXIMUM
6. ELEVATIONS MARKED THUS (*) SHALL BE FINISHED GRADE
7. ANY EXCESS MATERIAL SHALL BE STOCKPILED IN A CLEARED LOCATION ON SITE WHICH SHALL BE PROTECTED BY SEDIMENT CONTROL MEASURES. MAXIMUM FILL SLOPE SHALL BE 2:1. STOCKPILED MATERIAL SHALL BE STABILIZED ACCORDING TO SEEDING SPECIFICATIONS BELOW.
8. SEDIMENT CONTROL STRUCTURES SHALL BE REMOVED ONLY WITH PERMISSION OF THE BUREAU OF LICENSE, INSPECTIONS AND PERMITS.
9. STABILIZATION MEASURES:

TEMPORARY STABILIZATION
- APPLY 2000 LBS/AC OR 46 LBS/1000 SQ FT OF PULVERIZED DOLOMIC LIMESTONE
- 500 LBS/AC OR 11.5 LBS/1000 SQ FT OF 10-10-10 FERTILIZER
- PLANT WITH RYEGRASS AT 40 LBS/AC. MULCH ALL DISTURBED AREAS IMMEDIATELY AFTER GRADING.

PERMANENT STABILIZATION:
- APPLY 2000 LBS/AC OF PULVERIZED DOLOMIC LIMESTONE
- 500 LBS/AC OF 10-10-10 FERTILIZER
- SEED 45 LBS/AC OF KENTUCKY 31 TALL FESCUE; 40 LBS/AC OF KENTUCKY BLUE GRASS; 15 LBS/AC OF ANNUAL RYEGRASS
- NOTE: SEEDING MAY BE DONE BETWEEN MARCH 1 - MAY 1 OR AUG. 1 - OCT 1 ONLY
- MULCH 2 TONS/AC OF UNWEATHERED WHEAT STRAW. TIE MULCH DOWN WITH 200 GAL/AC OF LIQUID ASPHALT.

DEVELOPER'S CERTIFICATE

... THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE ACCORDING TO THIS PLAN OF ... AND SEDIMENT CONTROL ... ALSO AUTHORIZE PERIODIC ... HOWARD SOIL CONSERVATION ... THEIR AUTHORIZED ... DEVIATION FROM THIS PLAN WILL BE MADE UNLESS ... BY THE HOWARD SOIL CONSERVATION DISTRICT

L. Earl Armiger, GENERAL PARTNER 2/8/80
L. EARL ARMIGER DATE

ENGINEER'S CERTIFICATE

... SEDIMENT CONTROL REPRESENTS A PRACTICAL AND ... OF THE SITE CONDITIONS AND THAT IT WAS ... OF THE ... SOIL CONSERVATION ...

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 — REGISTERED PROFESSIONAL ENGINEER

Rodolph L. May Jr. 2-13-80
RODOLPH L. MAY, JR. DATE

Construction Specifications

1. The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSHA Size No. 2 or AASHTO designation M43 Size No. 2 or 24.
2. The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of four inches.
4. The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
5. The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, washout, construction traffic damage, etc.

SEDIMENT CONTROL DETAIL SHEET			
PROJECT: SEWELL'S ORCHARD - SECTION 1			
LOCATION: 6TH. ELECTION DISTRICT HOWARD COUNTY, MD.			
DATE: JAN. 1980	DESIGN BY: WHN.	DRAWN BY: G.E.M.	CHECKED BY: RLM.
SCALE: NONE	JOB NO.: 79158	DRAWING NO.: 15 OF 16	

boender associates — engineers, surveyors, planners
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1288

AS-BUILT 9-5-84 F-80-105

Notes:

1. Walls, bottom slab and invert shall be brick.

4. Apply two coats of a Waterproof Bitumastic Compound over cement mortar.

Note:
Manhole frame and cover to be placed as shown.

STANDARD STORM DRAINAGE DETAILS
TYPE "B" MANHOLE
(SHALLOW)
M1 AND M4

* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS.

NOTES:

1. ALL 3 PIECE BODIES TO HAVE 12 GA SIDES AND 10 GA CENTER PANELS. WIDTH OF CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIPHERY. MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY 3/8" ϕ GALVANIZED RIVETS OR BOLTS.

2. FOR 60" THRU 84" SIZES, REINFORCED EDGES TO BE SUPPLEMENTED WITH GALVANIZED STIFFENER ANGLES. THE ANGLES WILL BE 2" x 2" x 1/4" FOR 60" THRU 72" DIAMETER AND 2 1/2" x 2 1/2" x 1/4" FOR 78" AND 84" DIAMETER. THE ANGLES TO BE ATTACHED BY 3/8" ϕ GALVANIZED NUTS AND BOLTS.

3. TOE PLATE SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF TOE PLATE TO BE INCLUDED IN BID PRICE PER EACH OF METAL END SECTION.

TABLE OF DIMENSIONS

PIPE DIAM.	GA.	A 1"±	B MAX.	H 1"±	L 1 1/2"±	W 2"±	APPROX. SLOPE	BODY
15"	16	7"	8"	6"	26"	30"	2 1/2	1PC.
18"	16	8"	10"	6"	31"	36"	2 1/2	1PC.
21"	16	9"	12"	6"	36"	42"	2 1/2	1PC.
24"	16	10"	13"	6"	41"	48"	2 1/2	1PC.
30"	14	12"	16"	8"	51"	60"	2 1/2	1PC.

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD METAL END SECTION
ROUND METAL PIPE

STANDARD NO. MD-370.01

#850

"C" FACTOR FOR DETACHED HOUSES = .43

"C" FACTOR FOR ATTACHED HOUSES = .54

APPROVED DEPARTMENT OF PUBLIC WORKS

William E. Riley 9-30-80
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING

for Louis F. Dunn 9-22-80
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NOTE: FOR STORM DRAIN PROFILES, SEE SHEETS № 11 AND № 12.

NO. 8700

Rodolph May Jr.

Rodolph L. May Jr.
2-13-80

REVISED: 9-5-80 POND GRADING AND FLOODPLAIN LIMITS

OWNER
SEWELL'S ORCHARDS
6233 OAKLAND MILLS RD.
COLUMBIA, MD 21045

DEVELOPER
LIGHTPOINT ASSOCIATES
P.O. BOX 919
COLUMBIA, MD 21044

TITLE	DRAINAGE AREA MAP
PROJECT	SEWELL'S ORCHARDS - SECTION 1
LOCATION	6TH ELECTION DISTRICT HOWARD COUNTY, MD
DATE	FEB. 1980
DESIGN BY	WHN.
DRAWN BY	W H N
CHECKED BY	RLM
SCALE:	1" = 100'
JOB NO	79158
DRAWING NO	16 OF 16

boender associates
SUITE 102 107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY MARYLAND 21043
BALTIMORE 301 465 7777 SALISBURY 301 749 1284

engineers
surveyors
planners

AS-BUILT 9-5-84 T-80-105