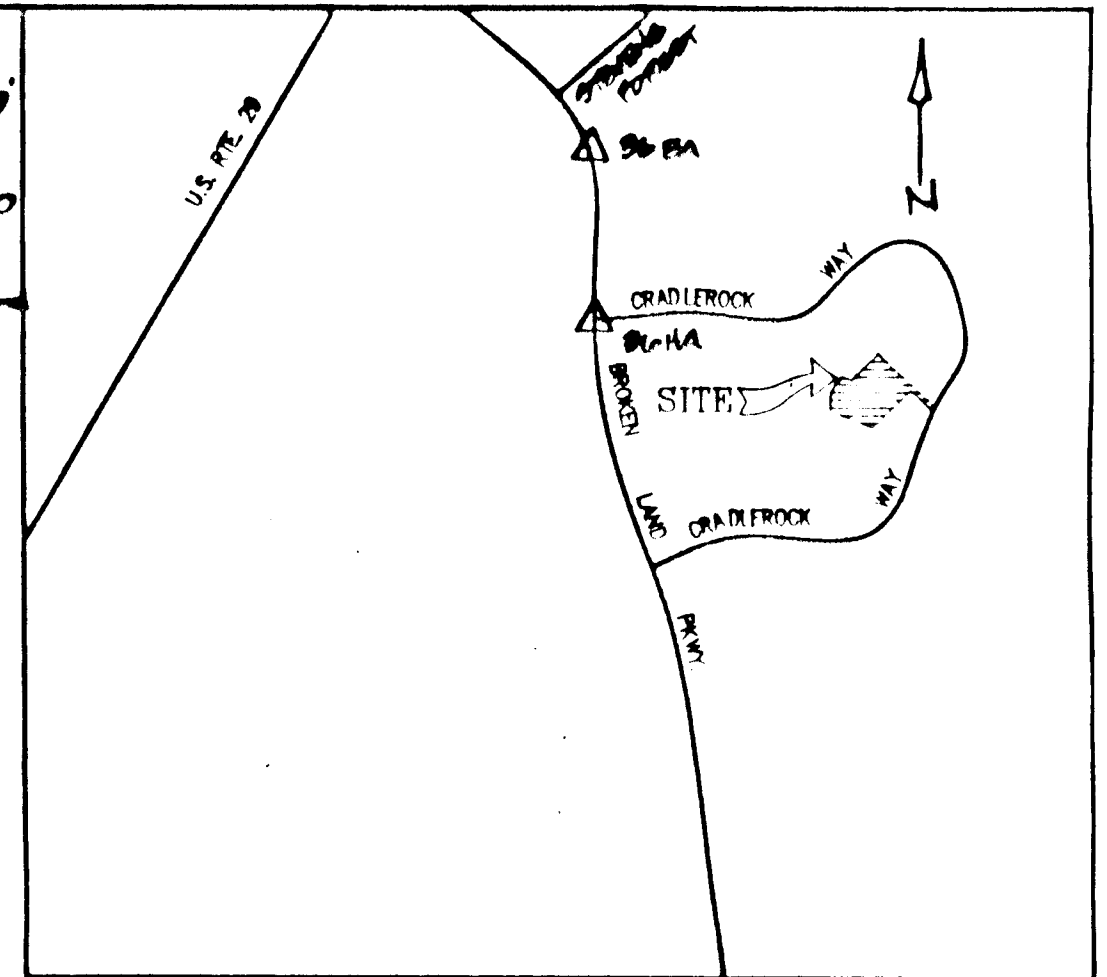


HOWARD COUNTY CONTROL DATA.  
 266A N100W00 E41P010 E1'00.00'  
 366A N100W02 E41P010 E1'00.00'



VICINITY MAP  
 SCALE: 1" = 2000'

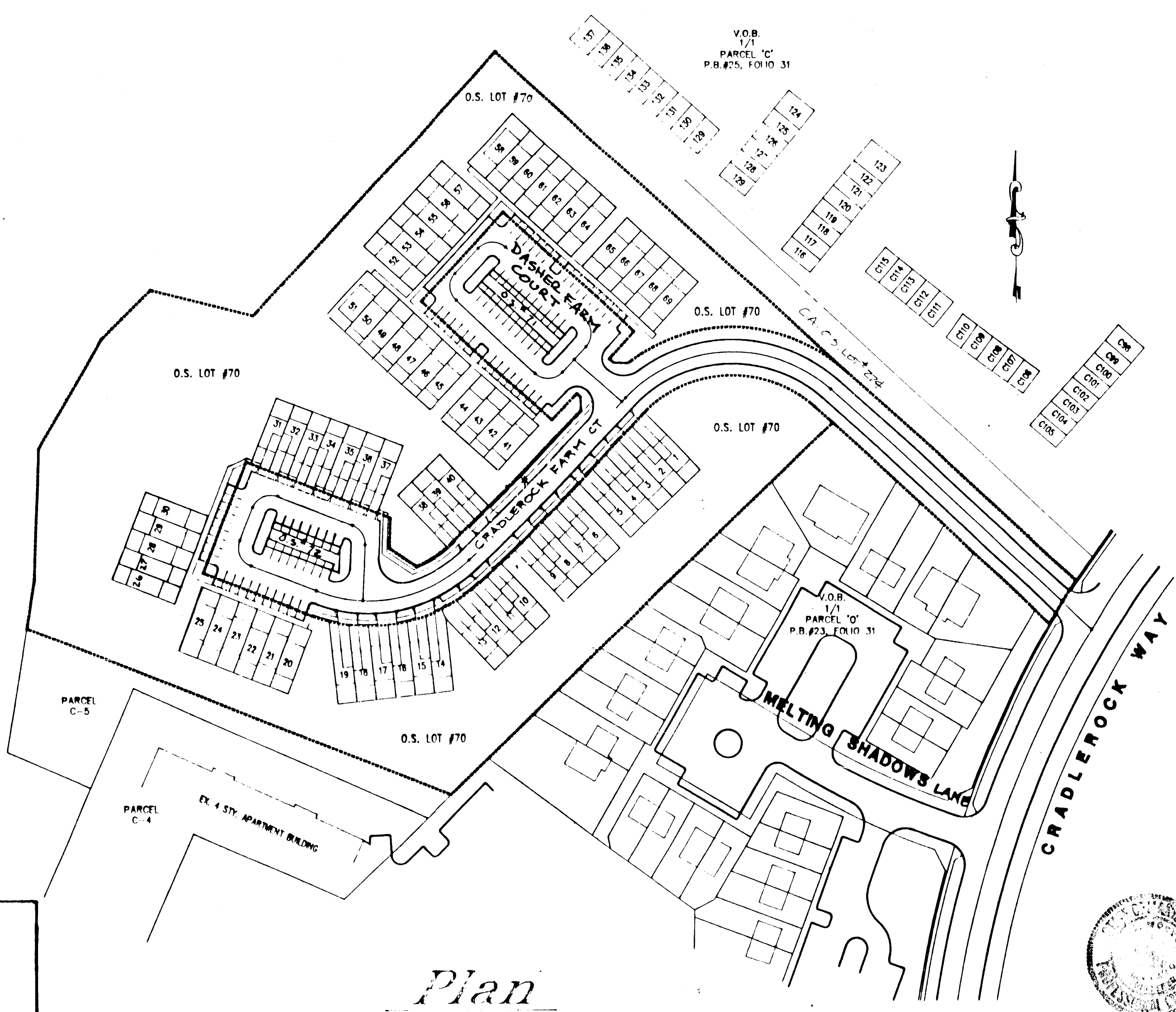
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN MINIMUM 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 AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:  
 MISS UTILITY- 1-800-257-7777  
 BELL TELEPHONE SYSTEM- 393-3649  
 LONG DISTANCE CABLE DIVISION- 393-3553 or 3553  
 BALTIMORE GAS AND ELECTRIC CO.- 539-8000 ext. 691  
 COLONIAL PIPELINE- 795-1390  
 HOWARD COUNTY BUREAU OF UTILITIES- 992-2368  
 HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION- 313-1830  
 (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- A TOWNSE COLLECTION SYSTEM WILL BE PART OF THE SDP THAT WILL CONVEY WATER FROM THE REAR OF LOTS 1-31 TO THE TRAIL.
- STORM DRAIN TRENCHES WITHIN THE ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- 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.  
 ALL 50' RIGHT-OF-WAYS = 30 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN THE ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT (I) ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED RSA-8 PER 10-10-93 COMPREHENSIVE ZONING PLAN.
- TOPOGRAPHY WAS FIELD RUN BY W.L. MEKINS INC MAY, 1994.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN FIG. 11.4 VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE Nos.: S-94-42, P-95-04, WP-95-07, F-95-75, WP-95-07 GRANTED PERMISSION TO PLACE SW ON SOUTH SIDE OF ENTRANCE ROAD ONLY.
- LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROADS AND BRIDGES.
- STORM WATER MANAGEMENT WILL BE PROVIDED AT LAKE ELKRON. WATER TREATMENT WILL BE ON SITE UTILIZING THE RETENTION POND.
- MDE GENERAL PERMIT HAS BEEN ISSUED # 95-HO-0028. DNR, WRA LETTER OF AUTHORIZATION #1-0994/11960103
- THE PRIVATE STORM DRAIN SYSTEM WILL BE CONSTRUCTED AS PART OF THE SITE DEVELOPMENT PLAN.

# CRADLEROCK FARM

## ROADS, STORM DRAINS, & STORMWATER FINAL PLAN

SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND.



SHEET INDEX	
SHT. NO.	DESCRIPTION
1 OF 9	TITLE SHEET
2 OF 9	ROAD PLAN
3 OF 9	ROAD PROFILES
4 OF 9	GRADING & SEDIMENT CONTROL
5 OF 9	DRAINAGE AREA MAP
6 OF 9	STORM DRAIN AND SWM PROFILES
7 OF 9	LANDSCAPE AND FOREST CONSERVATION PLAN
8 OF 9	DETAIL SHEET
9 OF 9	SOILS MAP

NO.	BY	REVISION	DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Gault* 8-1-95  
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blood* 8/1/95  
 Chief, Division and Land Development and Research Date

*John Summers* 8/4/95  
 Chief, Development Engineering Division Date

TITLE SHEET

PROJECT NAME: CRADLEROCK FARM

LOTS 1-72  
 PARCEL A6 AND A SUBDIVISION OF LOT 217  
 TAX MAP 36  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND.

PREPARED BY: American Land Development and Engineering Inc.  
 871-A MAIN STREET  
 LAUREL, MARYLAND 20707  
 WASH. (301) 853-1221  
 BALT. (301) 890-3039

OWNER: DASHNER GREEN ASSOCIATES LTD.  
 839 ELKRIDGE LANDING ROAD  
 LINTHICUM, MARYLAND 21090

DEVELOPER: DASHNER GREEN ASSOCIATES LTD.  
 839 ELKRIDGE LANDING ROAD  
 LINTHICUM, MARYLAND 21090

DES.: B.S. JOB: 92105  
 DRW.: B.S. FILE: DASHFC  
 CHK.: D.C.W. DATE: 9-18-92

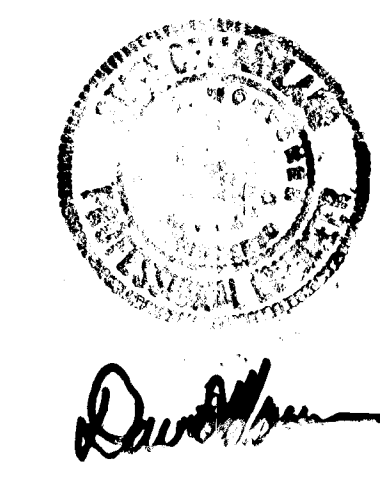
SCALE: AS SHOWN SHEET 19 OF 19

THIS IS TO CERTIFY THAT THE STORMWATER MANAGEMENT FACILITIES AND ROADS HAVE BEEN CONSTRUCTED TO LINES AND GRADES SHOWN HEREON IN RED AND THEY ARE SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PLANS.

*John W. Clapsaddle* 12/10/98 DATE  
 JOHN W. CLAPSADDLE, P.E.  
 THE RBA GROUP  
 7144 COLUMBIA GATEWAY DRIVE  
 SUITE 205  
 COLUMBIA, MARYLAND 21046  
 (410) 312-0966

17472

Plan  
 NOT TO SCALE





CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
34.58.40 TO 34.59.18	153.00	239.78	152.45	215.99	N 87°37'47" E	89°47'39"
64.54.07 TO 34.56.74	1500.00	91.87	43.85	91.85	N 44°28'59" E	02°30'05"
84.32.12 TO 84.51.82	1500.00	119.70	63.24	118.54	N 69°05'58" E	45°43'13"
104.51.82 TO 104.03.04	1500.00	51.22	25.86	50.97	S 78°15'47" E	19°33'57"
104.03.04 TO 114.04.41	20.00	31.42	20.00	28.28	N 23°28'48" W	90°00'00"
114.04.41 TO 114.48.82	20.00	31.42	20.00	28.28	S 66°21'12" W	90°00'00"
124.52.87 TO 124.77.28	20.00	24.59	14.12	23.07	N 33°15'47" W	70°26'03"
124.77.28 TO 124.77.28	20.00	31.42	20.00	28.28	S 87°43'57" W	90°00'00"
24.16.42 TO 24.47.83	20.00	31.42	20.00	28.28	S 02°16'03" E	90°00'00"
24.47.83 TO 34.13.25	20.00	31.42	20.00	28.28	S 87°43'57" W	90°00'00"
44.15.25 TO 44.46.86	20.00	31.42	20.00	28.28	N 02°16'03" W	90°00'00"

OPERATION, MAINTENANCE AND INSPECTION

Inspection of the pond(s) shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards And Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

\* H.O.A.

SM OPERATIONS AND MAINTENANCE SCHEDULE

HGA ROUTINE RESPONSIBILITY

- Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations as needed.
- Sediment should be removed when its accumulation significantly reduces design storage, interferes with the function of the riser, or when deemed necessary by Howard County Department of Public Works.
- Top and side slopes of the embankment shall be mowed a minimum of 2 times per year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Check for mosquito larvae. If present notify the MD Department of Agriculture.

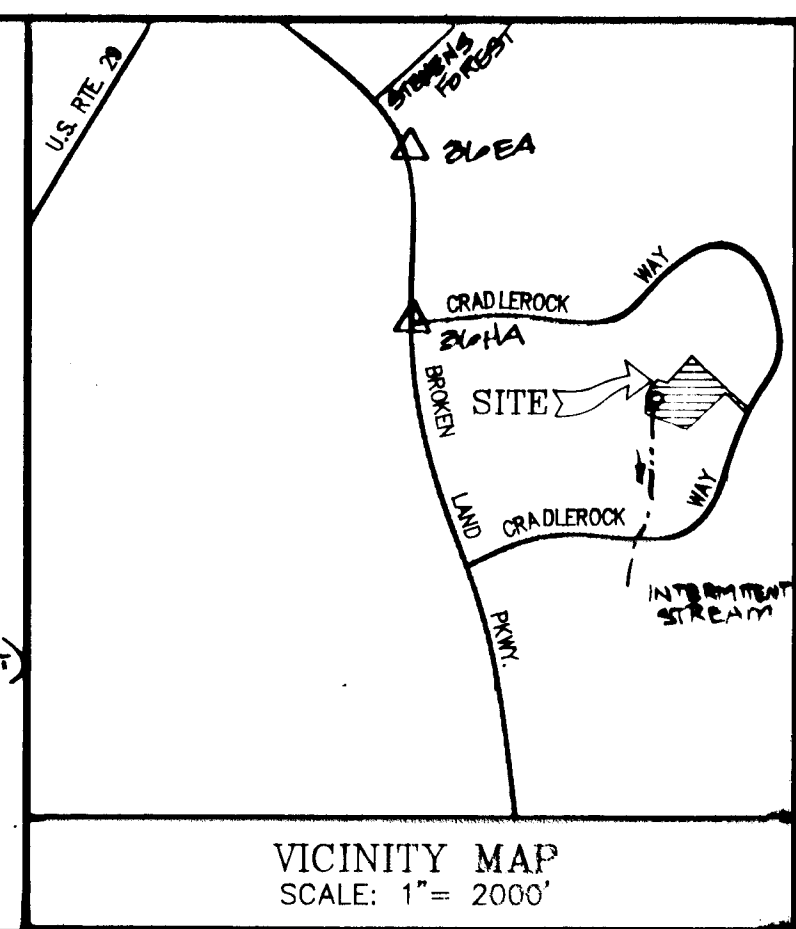
PARKING SPACE TABLE

ASPEN WAY COURT = 36 SPACES (ON STREET)  
 CRADLEROCK FARM = 25 SPACES (ON STREET)  
 COURT  
 TOTAL PARKING SP. = 61 (ON STREET)  
 OFF STREET PARKING SP. 9100  
 (GARAGE UNITS)

TOTAL 161 SPACES (2.33/UNIT)

HOWARD COUNTY CONTROL STATIONS

30HA N 10°10'00" E 4120.10 20 EL: 180.230  
 30EA N 10°10'00" E 4120.17 17 EL: 240.005



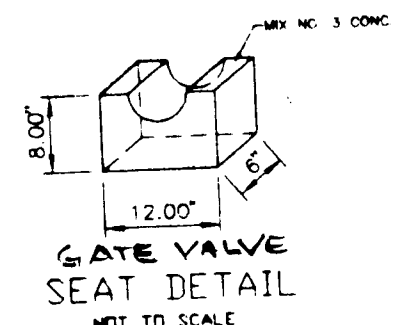
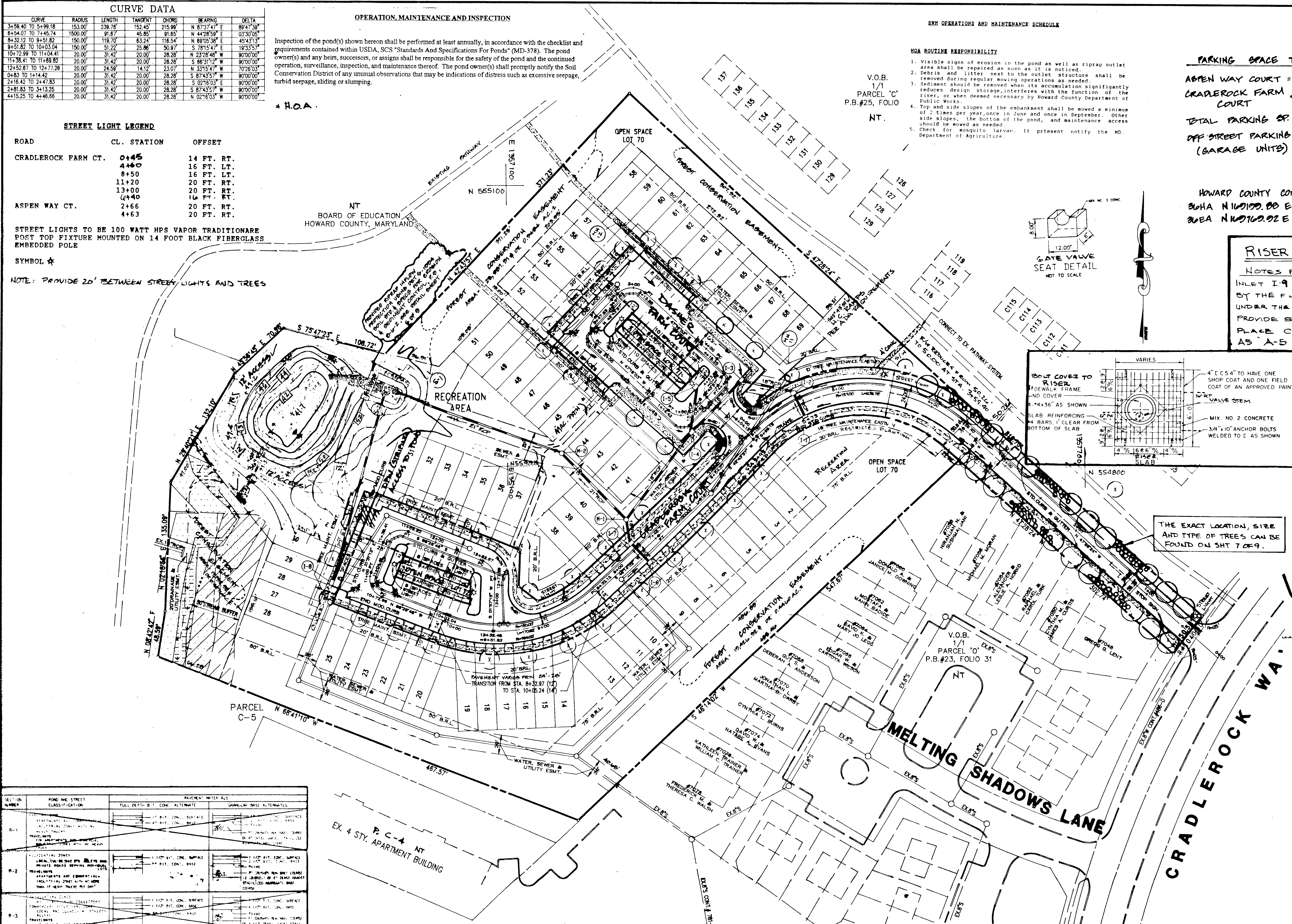
STREET LIGHT LEGEND

ROAD	CL. STATION	OFFSET
CRADLEROCK FARM CT.	0+45 4+00 8+50 11+20 13+00 14+40	14 FT. RT. 16 FT. LT. 16 FT. LT. 20 FT. RT. 20 FT. RT. 16 FT. RT.
ASPEN WAY CT.	2+66 4+63	20 FT. RT. 20 FT. RT.

STREET LIGHTS TO BE 100 WATT HPS VAPOR TRADITIONARE POST TOP FIXTURE MOUNTED ON 14 FOOT BLACK FIBERGLASS EMBEDDED POLE

SYMBOL \*

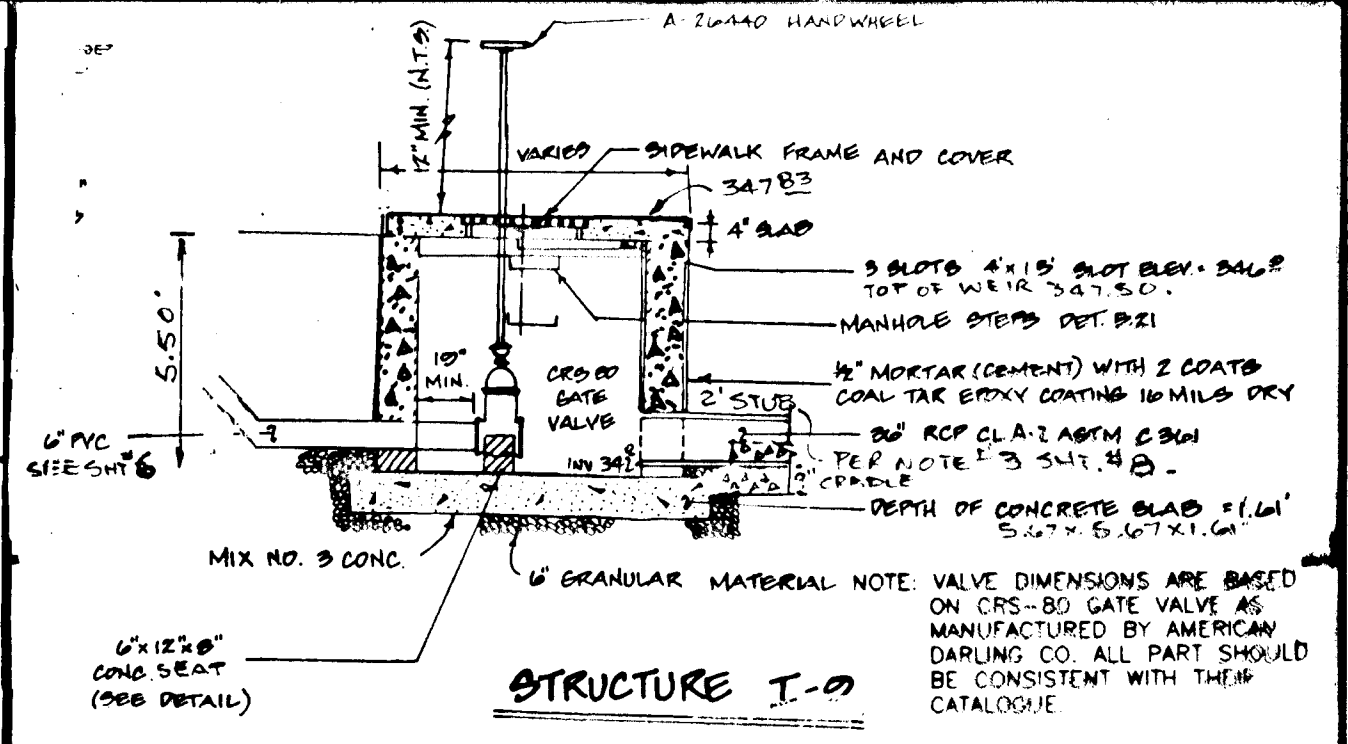
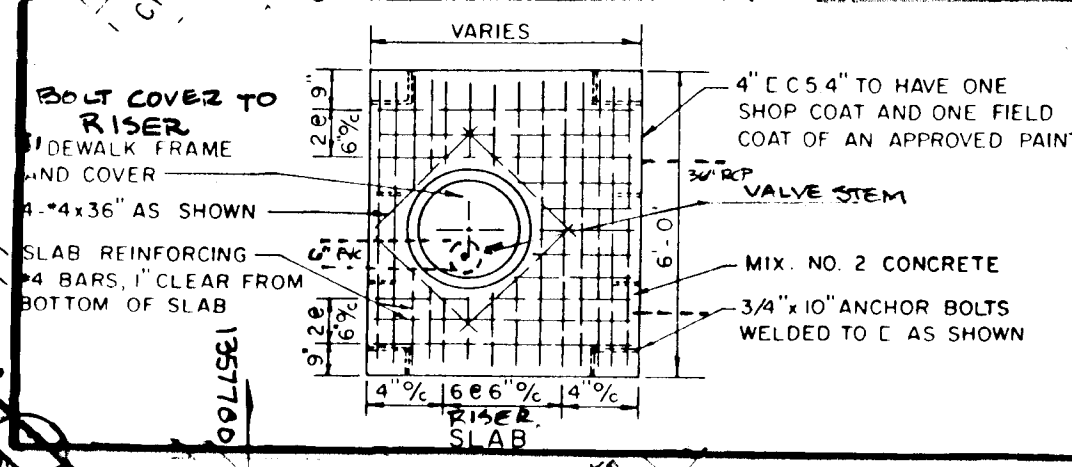
NOTE: PROVIDE 20' BETWEEN STREET LIGHTS AND TREES



RISER DETAIL

NOTES FOR STRUCTURE I-9 (RISER)

INLET I-9 A SHALLOW BRICK VANHOLE, STD. NO. G.E.05, MODIFIED BY THE FOLLOWING (1) 18" HIGH X 4'-0" LONG SLOTS ON 3 SIDES DIRECTLY UNDER THE TOP SLAB (2) USE A-5 INLET SLAB TO COVER VANHOLE, PROVIDE SIDEWALK FRAME AND COVER (3) MANHOLE TO BE CAST-IN-PLACE CONCRETE, REINFORCING AND CONCRETE TO BE THE SAME AS A-5 INLET, STD. NO. SD 4.01.



APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Conner* 9-1-95  
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard B. Boyd* 8/4/95  
 Chief, Division of Land Development and Research Date

*David J. ...* 8/4/95  
 Chief, Development Engineering Division Date

NO.	BY	REVISION	DATE

NOTE: STANDARD CURB AND GUTTER WILL BE UTILIZED ON THE ENTRANCE ROAD TO STATION 5475 AT THAT POINT THERE WILL BE A 20 FOOT TRANSITION TO MODIFIED CURB AND GUTTER BEGINNING AT STATION 5495, SEE DETAIL SHEET.

MODIFIED CURB AND GUTTER ENDS AT UNIT 25 PER PLAN. STANDARD CURB AND GUTTER IS EMPLOYED UNTIL UNIT 25 WHEREBY IT TRANSITIONS TO MODIFIED CURB AND GUTTER ALLOWING OPEN ACCESS TO THE FACILITY. SEE DETAIL SHEET R3.02.

MODIFIED CURB AND GUTTER IS EMPLOYED AT ALL GARAGE UNITS UNTIL ASPEN WAY COURT WHEREBY IT TRANSITIONS TO STANDARD CURB AND GUTTER AND CONTINUES UNTIL UNIT 52, SEE PLAN. MODIFIED CURB AND GUTTER IS USED FOR GARAGE UNITS 52-57, SEE PLAN. STANDARD CURB AND GUTTER IS THEN USED UNTIL REACHING CRADLEROCK WAY, SEE PLAN.

PLAN  
 SCALE: 1" = 50'

( ) 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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."  
*David J. ...* 7-10-95  
 Signature of Engineer Date

( ) By the Developer:  
 "I/We 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 the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 day of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."  
*David J. ...* 7/10/95  
 Signature of Developer Date



TITLE  
**ROAD PLAN & STORM DRAIN**

PROJECT NAME  
**CRADLEROCK FARM**  
 LOTS 1-72  
 A SUBDIVISION OF PARCEL 46  
 SIXTH ELECTION DISTRICT TAX MAP # 38  
 HOWARD COUNTY, MARYLAND.

PREPARED BY:  
**American Engineering Inc.**  
 CIVIL ENGINEERING CONSULTANTS  
 AND LAND PLANNERS  
 671-A MAIN STREET  
 LAUREL, MARYLAND 20707  
 WASH. (301) 953-1221  
 BALT. (301) 880-3039

OWNER / DEVELOPER  
 DASHER GREEN ASSOCIATES LTD.  
 839 ELKRIE LANDING ROAD  
 LINTHICUM, MD. 21090

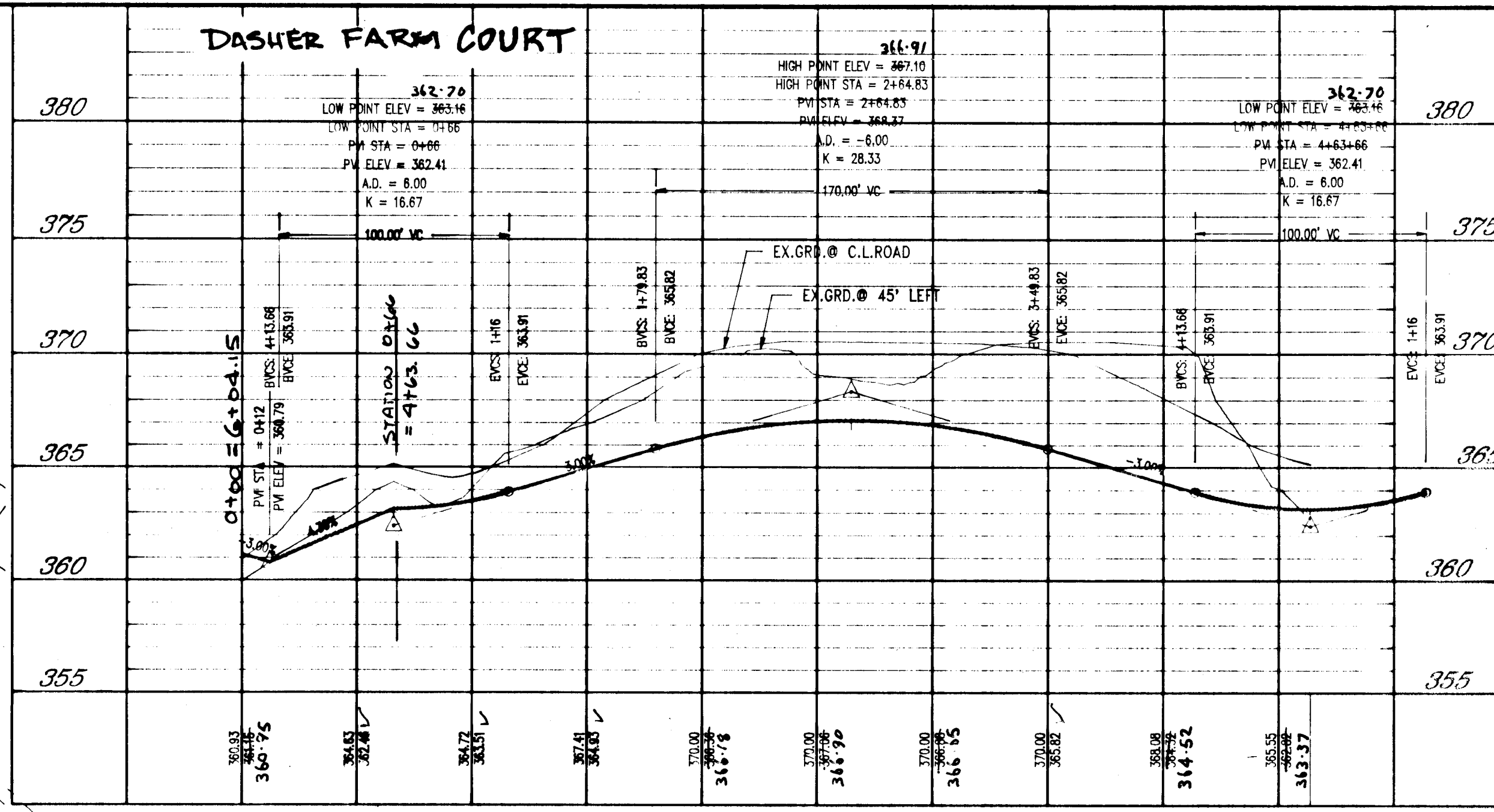
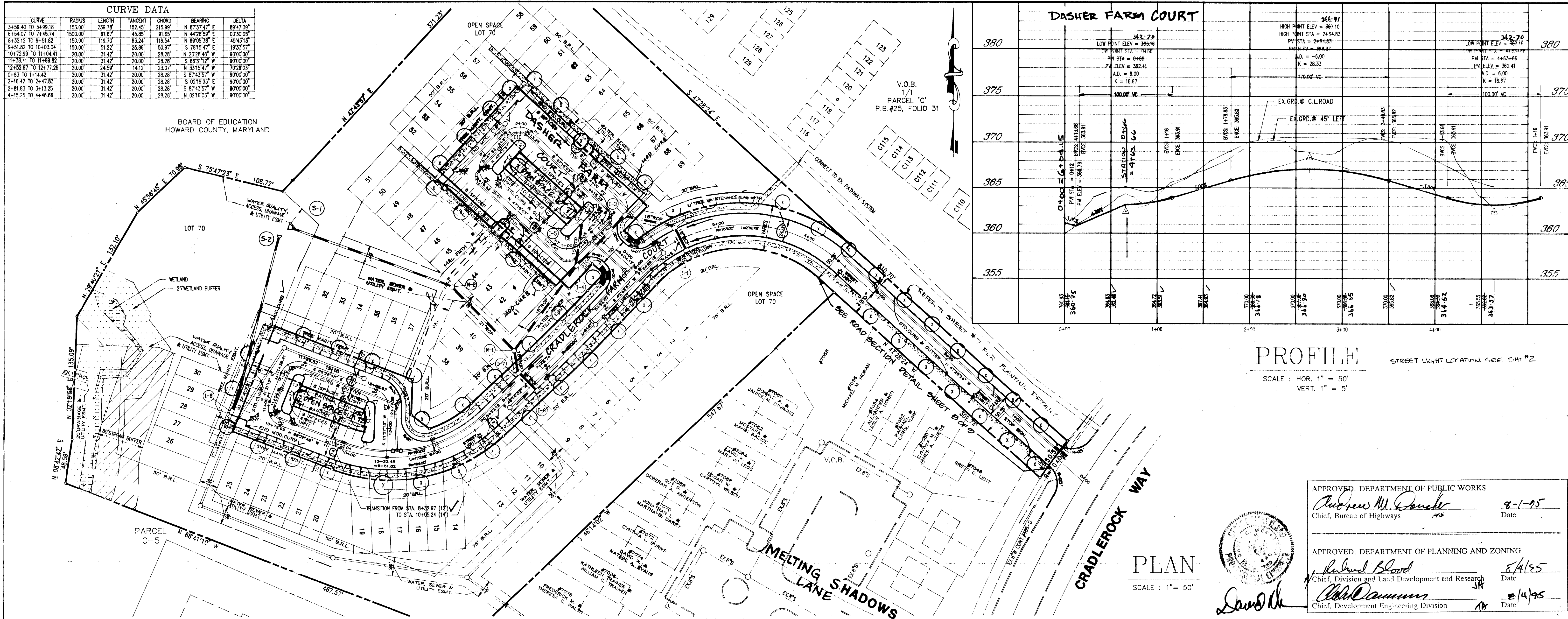
DES.: W.D.F. JOB: 92105  
 DRW.: W.D.F. FILE: DASHGSC SCALE: SHEET 2 OF 9  
 CHK.: D.C.W. DATE: 9-18-92 1" = 50'

1742



CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
3+59.40 TO 5+99.16	153.00	239.78	152.45	215.99	N 87°37'47" E	89°47'39"
6+54.07 TO 7+45.74	1500.00	91.67	45.85	91.65	N 44°28'59" E	03°30'05"
8+32.12 TO 9+51.82	150.00	119.70	63.24	116.54	N 89°05'38" E	43°43'13"
9+51.82 TO 10+03.04	150.00	51.22	28.96	50.97	S 78°14'47" E	18°35'57"
10+72.96 TO 11+04.41	20.00	31.42	20.00	28.28	N 23°28'46" W	90°00'00"
11+38.41 TO 11+88.82	20.00	31.42	20.00	28.28	S 66°31'12" W	90°00'00"
12+52.67 TO 12+77.26	20.00	24.59	14.12	23.07	N 33°15'47" W	70°28'03"
0+83 TO 1+14.42	20.00	31.42	20.00	28.28	S 87°43'57" W	90°00'00"
2+16.42 TO 2+47.83	20.00	31.42	20.00	28.28	S 02°16'03" E	90°00'00"
2+81.83 TO 3+13.25	20.00	31.42	20.00	28.28	S 87°43'57" W	90°00'00"
4+15.25 TO 4+46.66	20.00	31.42	20.00	28.28	N 02°16'03" E	90°00'00"

BOARD OF EDUCATION  
HOWARD COUNTY, MARYLAND



**PROFILE**  
STREET LIGHT LOCATION SEE SHIT #2  
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

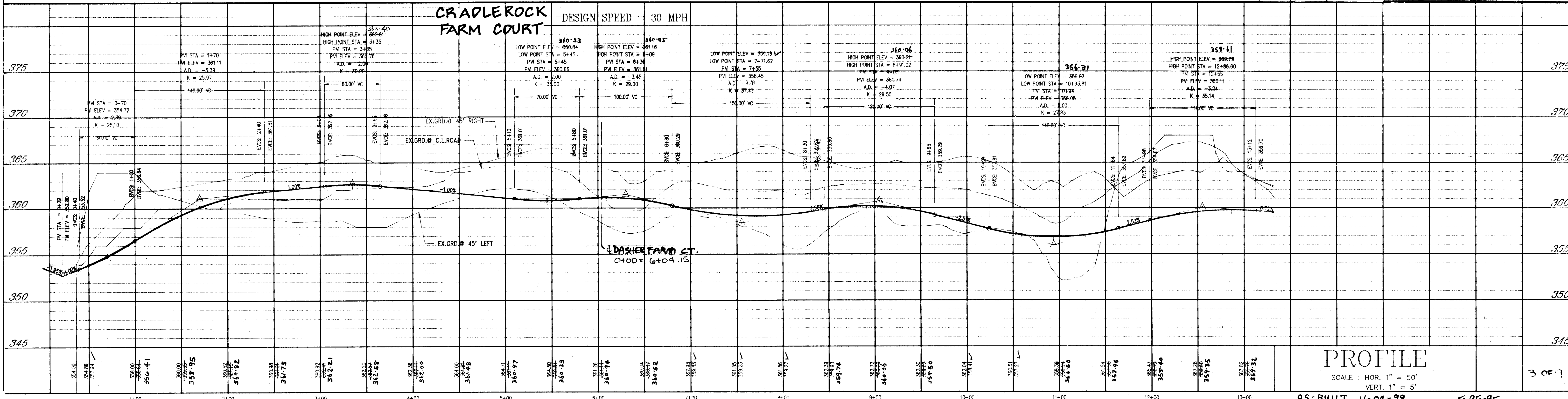
**PLAN**  
SCALE: 1" = 50'

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Christopher M. Daniels* 8-1-95  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blood* 8/4/95  
Chief, Division and Land Development and Research Date

*David M. ...* 8/4/95  
Chief, Development Engineering Division Date

17A-2



**PROFILE**  
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'  
AS-BUILT 11-04-98 F-95-95 3 OF 7



SEQUENCE OF CONSTRUCTION

1. Obtain grading permit and install tree protection fencing. 2 DAYS
2. Install stabilized construction entrance per plan. 2 DAYS
3. Install all sediment control devices, including sediment traps, sediment control entrance, and storm water management facility. 10 DAYS
4. Clear and grub per plan. 10 DAYS
5. Grade and construct roads and install storm drains and utilities per plan. The SCE maybe removed with the approval of the inspector to facilitate paving. Place inlet protection at all inlets. 90 DAYS
6. Sediment shall be removed from the traps when the cleanout elevation has been reached. AS NEEDED
7. Inspect each sediment control device daily, and after each rain. AS NEEDED
8. Complete site grading per plan. 100 DAYS
9. Stabilize all disturbed areas with permanent seeding mixture per plan. 2 DAYS
10. When road construction is complete, traps 1 and 2 maybe removed along with associated dikes. Silt fence will then be placed at the toe of all fill slopes created during the grading operation. AS NEEDED
11. After permission is granted from the inspector remove all control features, and convert trap #3 to a SWM facility per plan (remove block of low flow orifice). 10 DAYS
12. All areas disturbed during the removal of sediment control devices shall be seeded and mulched. 10 DAYS

STRUCTURE SCHEDULE

STRUCTURE	TYPE	INV. IN	INV. OUT	TOP ELEV.	DETAIL	LOCATION
I-1	A-5	-	357.55	361.03	SD 4.01	5+45.00 12'LT
I-2	A-5	357.30	356.90	361.03	SD 4.01	5+45.00 12'RT
I-3	A-5	356.45	356.20	361.18	SD 4.01	4+35.52 20'LT
I-4	A-5	357.70	355.10	361.18	SD 4.01	0+94.14 20'LT
I-5	A-5	-	359.00	362.29	SD 4.01	0+66.00 14'RT
I-6	A-5	-	355.80	359.12	SD 4.01	7+71.60 12'LT
I-7	A-5	355.55	355.05	359.12	SD 4.01	7+71.60 12'RT
I-8	A-5	-	352.90	356.36	SD 4.01	10+95.4 57.9'RT
I-9	MH	-	342.00	347.83	G 5.05	SRR PLAN
M-1	MH	354.15	353.20	359.70	G 5.12	7+59.00 35'RT
M-2	MH	352.35	352.05	364.20	G 5.12	1+61.50 111.5'LT
S-1	CES	-	349.00	-	SD 5.52	SRR PLAN
S-2	CES	-	349.00	-	SD 5.52	SRR PLAN
S-3	C'ENDWALL	-	340.00	-	SD 5.31	SRR PLAN

SEDIMENT TRAP DATA

TRAP #1	TRAP #2	TRAP #3
4.70% AC	1.28% AC	17.62 AC
7470 CF	2314 CF	31710 CF
7770 FT	2388 FT	34243 CF
17.0 FT	5.2 FT	2.91 FT
348.0	342.0	343.25 ***
349.0	343.0	349.50 **
345.0	339.0	342.50 *
20' X 9.5'	18' X 4.5'	SEE PLAN
2:1	2:1	SEE PLAN
346.5	340.0	341.9

\* TWO FEET ABOVE FINAL GRADE (340.50)  
 \*\* TOP OF SWM WALL  
 \*\*\* BLOCK WEIR AT ELEVATION 343.25 FOR TEMPORARY SED CONTROL

"I/We 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 the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 day of completion. I also authorize periodic on site inspections by the Howard Soil Conservation District."

*[Signature]* 7.17.95  
 Signature of Developer V.P. Date

By the Engineer

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion."

*[Signature]* 7/10/95  
 Signature of Engineer Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

*[Signature]* 7/28/95  
 USDA-Natural Resources Conservation Service Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

*[Signature]* 7/25/95  
 Howard Soil Conservation District Date

APPROVED: DEPARTMENT OF PUBLIC WORKS

*[Signature]* 8-1-95  
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 8/1/95  
 Chief, Division and Land Development and Research Date  
*[Signature]* 8/1/95  
 Chief, Development Engineering Division Date

TITLE  
 GRADING & SEDIMENT CONTROL

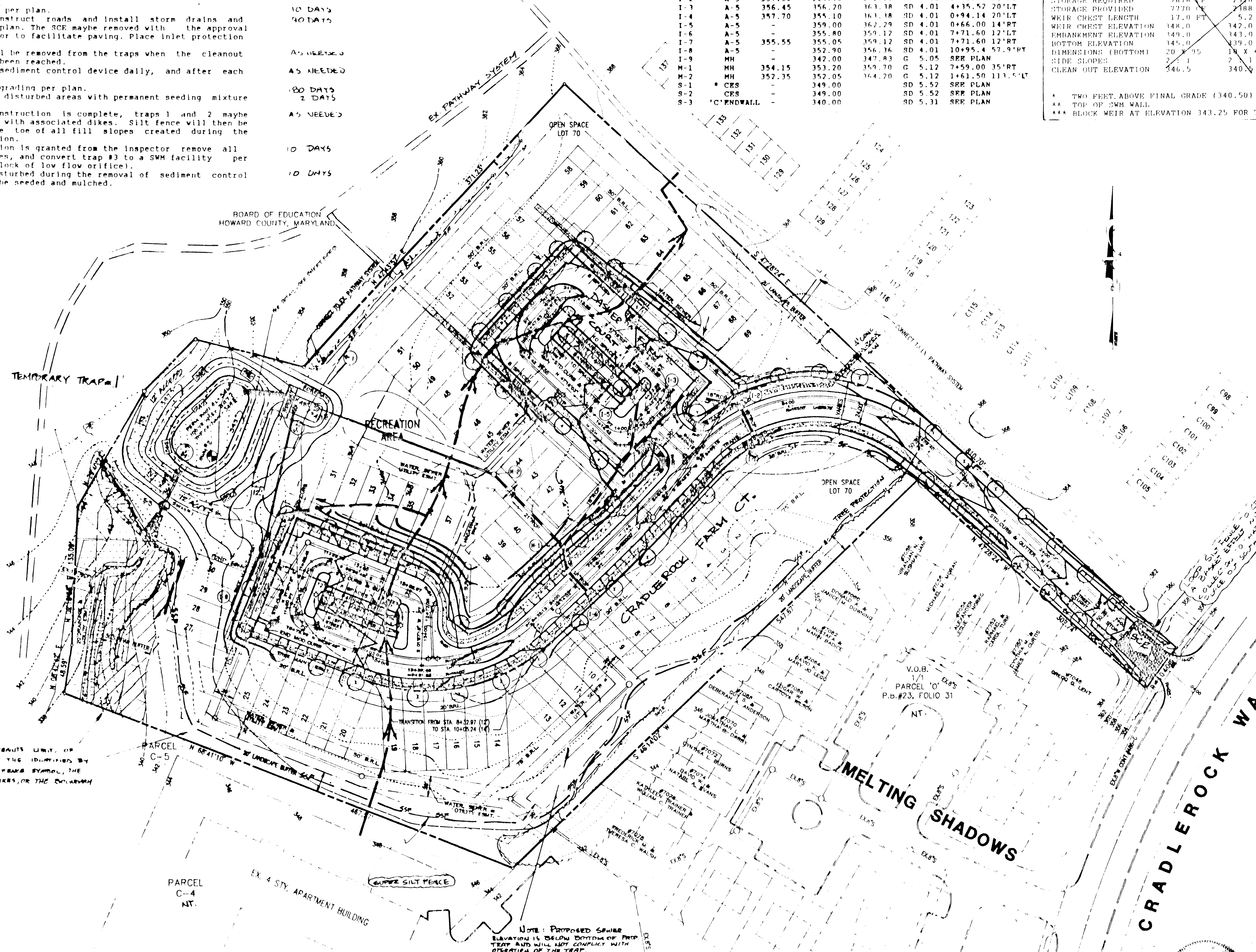
PROJECT NAME  
 CRADLEROCK FARM  
 LOTS 1-72  
 A SUBDIVISION OF PARCEL 49  
 SIXTH ELECTION DISTRICT TAX MAP # 16  
 HOWARD COUNTY, MARYLAND

PREPARED BY:  
 American Engineering Inc.  
 CIVIL ENGINEERING CONSULTANTS  
 AND LAND PLANNERS  
 671-A MAIN STREET  
 LAUREL, MARYLAND 20707  
 WASH. (301) 953-1221  
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OWNER / DEVELOPER  
 DASHER GREEN & ASSOCIATES, LTD.  
 839 ELKRIDGE LANE/PIG ROAD  
 LINTHICUM, MD. 21090

DES.: W.D.F. JOB: 92105  
 DRW.: W.D.F. FILE: DASHGSC  
 CHK.: D.C.W. DATE: 9-18-92

SCALE: 1" = 50'  
 SHEET 4 OF 9



PLAN

SCALE: 1" = 50'

DO TO DRAINAGE CONSTRAINTS LIMIT OF DISTURBANCE WILL BE THE IDENTIFIED BY THE TREE PROTECTION FENCE SYMBOL, THE SEDIMENT CONTROL DIKES, OR THE BOUNDARY LINE.

NOTE: PROPOSED SEWER ELEVATION IS BELOW BOTTOM OF TRAP TRAP AND WILL NOT CONFLICT WITH OPERATION OF THE TRAP.

1792

NO	BY	REVISION	DATE



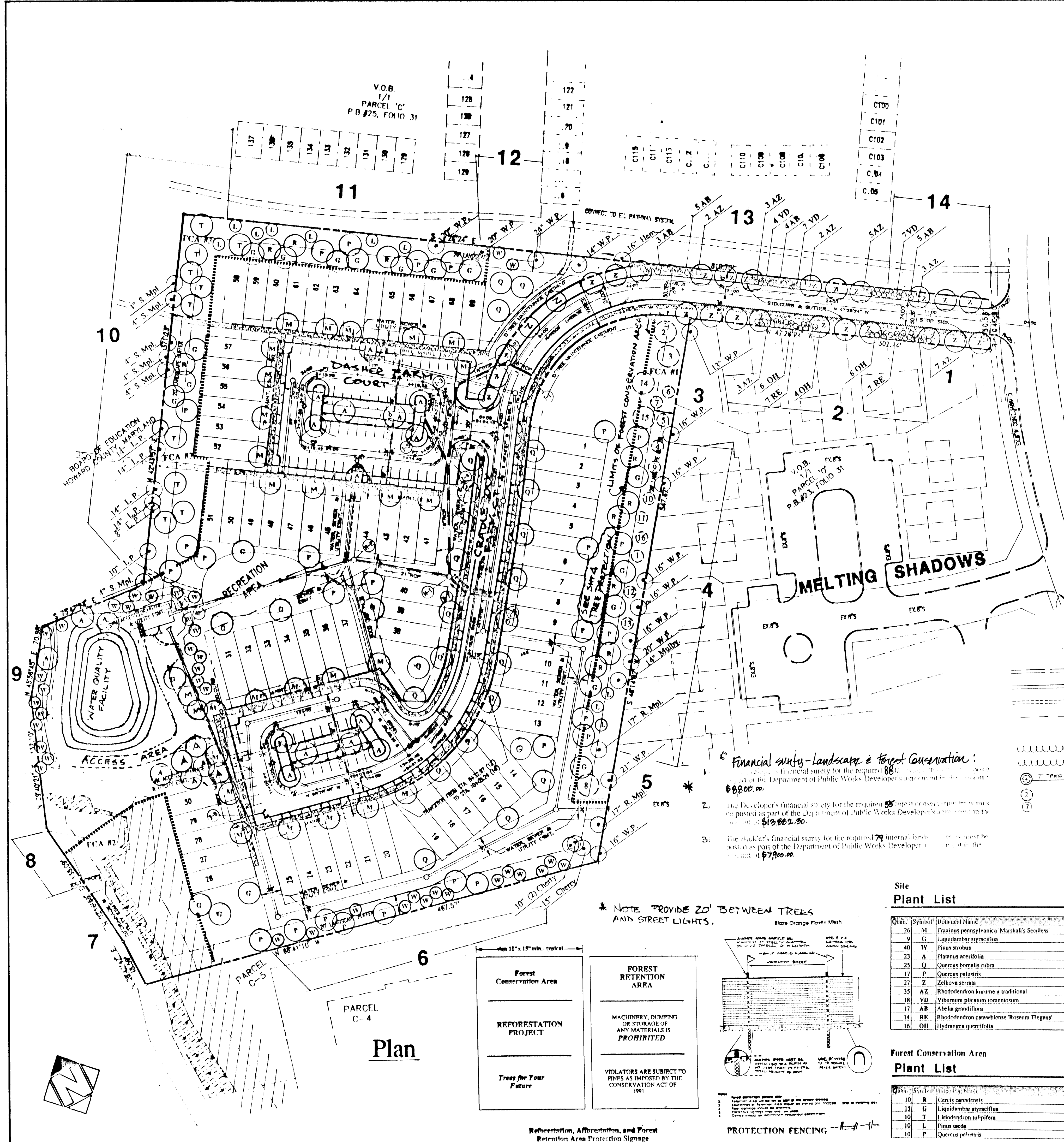




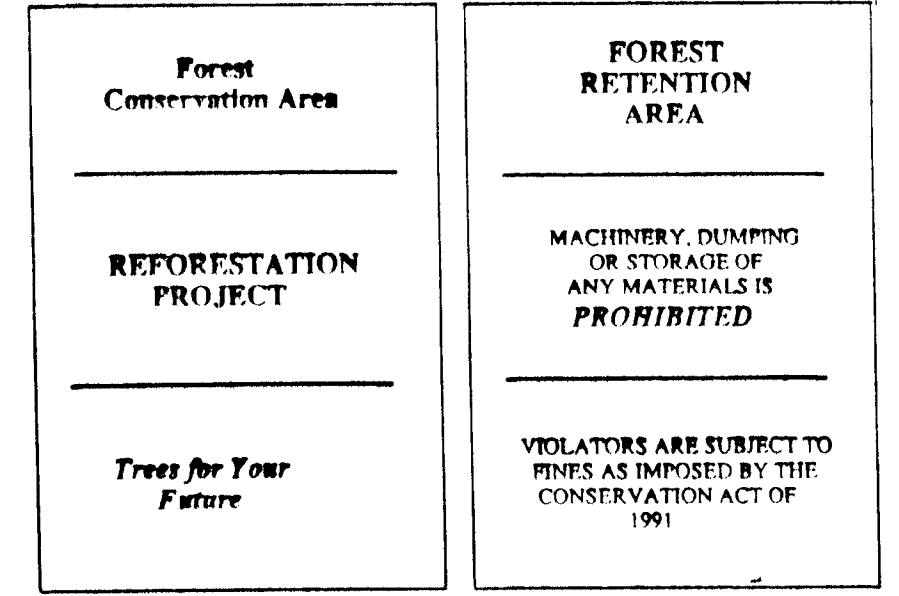




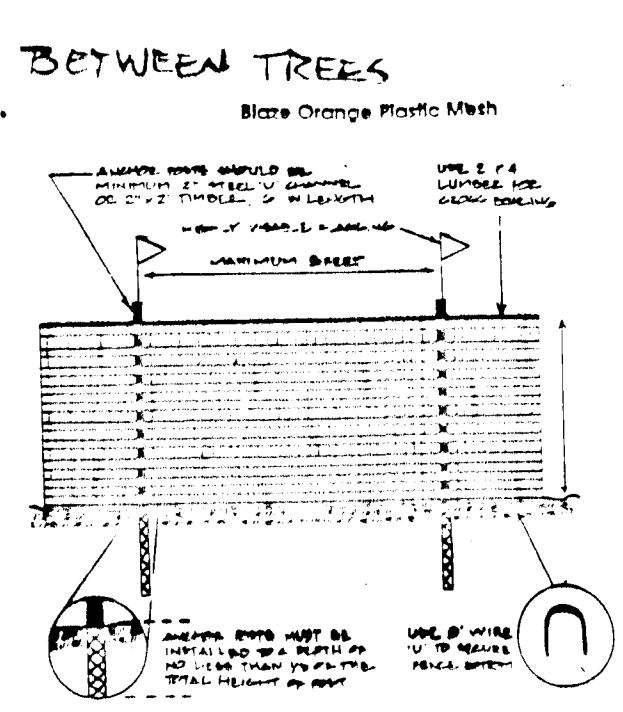
1742



**Plan**



Reforestation, Afforestation, and Forest Retention Area Protection Signage



PROTECTION FENCING

**Financial surety - Landscaping & Forest Conservation:**

1. The Developer's financial surety for the required 88% of the total cost of the Department of Public Works Developer's area is \$8800.00.
2. The Developer's financial surety for the required 55% of the total cost of the Department of Public Works Developer's area is \$13662.50.
3. The Developer's financial surety for the required 79% internal landscaping is \$7900.00.

\* NOTE PROVIDE 20' BETWEEN TREES AND STREET LIGHTS.

**LEGEND**

---	EXISTING SIDEWALK
- - - -	PROPOSED SIDEWALK
- - - -	PROPOSED PATHWAY
---	EXISTING CONTOUR
*	NO PARKING ALONG CURB
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
○	EXISTING TREE TO REMAIN
○	TRANSPLANTED TREE
○	PERIMETER PLANTING ZONE

**LEGEND - TRANSPLANTED PLANT MATERIAL**

CODE No.	NAME	SIZE
1.	Hemlock	4" cal. (2)
2.	Crabapple Var.	8" cal.
3.	Crabapple Var.	10" cal.
4.	Am. Holly	8 - 10' Ht.
5.	Am. Holly	14 - 16' Ht.
6.	Am. Holly	5 - 6' Ht.
7.	Am. Holly	8 - 10' Ht.
8.	Burpenut	8" cal.
9.	White Pine	10" cal.
10.	White Pine	8" cal.
11.	White Pine	8" cal.
12.	Blue Spruce	12-14' Ht.
13.	Blue Spruce	12-14' Ht.
14.	Crabapple Var.	4" cal.
15.	Norway Maple	10" cal.
16.	Norway Spruce	5 - 6' Ht.

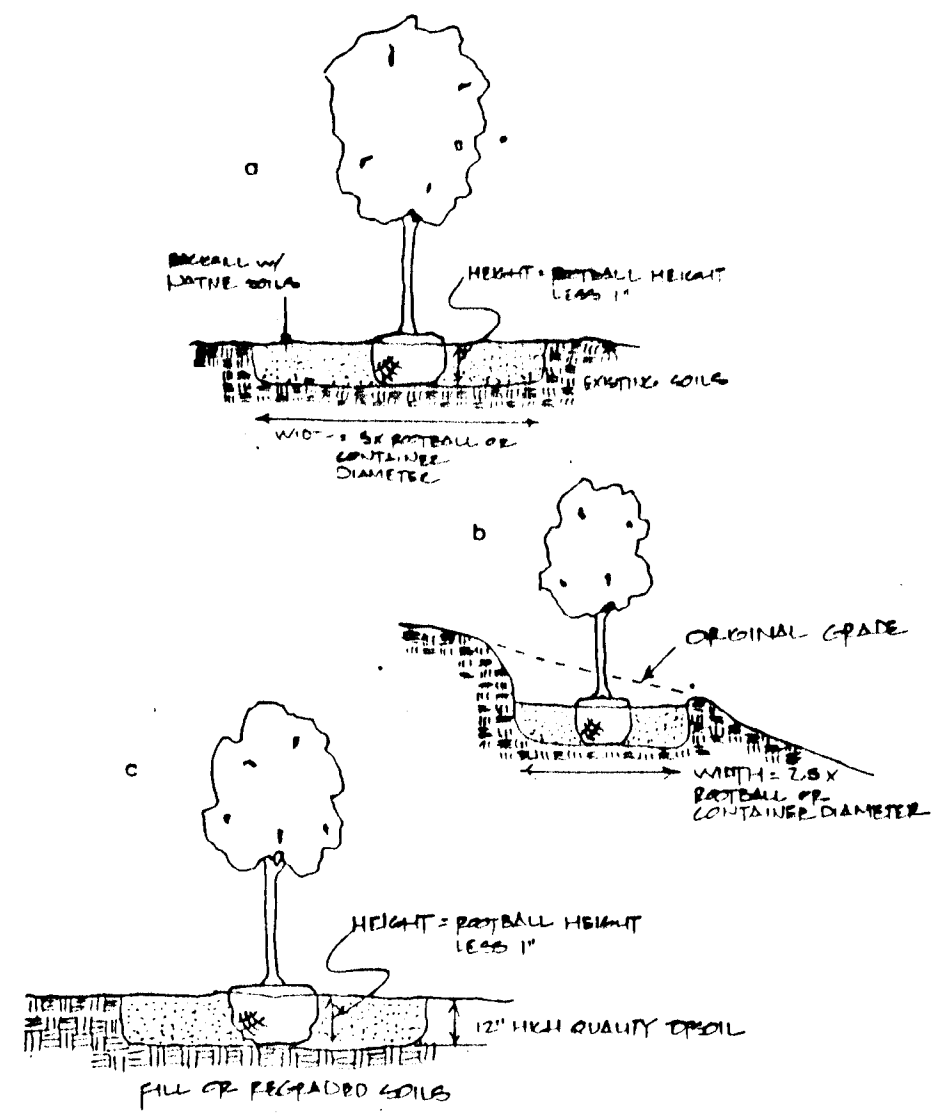
**Site Plant List**

Qtn.	Symbol	Botanical Name	Common Name	Remarks
26	M	Fraxinus pennsylvanica 'Marshall's Seedless'	Seedless Ash	2-1/2" cal.
9	G	Liquidambar styraciflua	Sweetgum	2-1/2" cal.
40	W	Pinus strobus	White Pine	6-8' Hgt.
23	A	Pinus acerifolia	Landing Pinestree	2-1/2" cal.
25	Q	Quercus borealis rubra	Northern Red Oak	2-1/2" cal.
17	P	Quercus palustris	Pin Oak	2-1/2" cal.
27	Z	Zelkova serena	Japanese Zelkova	2-1/2" cal.
35	AZ	Rhododendron kurume x traditional	Traditional Azalea	18-24"
18	YD	Viburnum plicatum tomentosum	Doublefile Viburnum	42-48"
17	AB	Abelia gniflora	Glossy Abelia	24-30"
14	RE	Rhododendron carawilense 'Roseum Elegans'	Roseum Elegans Rhododendron	24-30"
16	OH	Hydrangea quercifolia	Oak Leaf Hydrangea	24-30"

**Forest Conservation Area Plant List**

Qtn.	Symbol	Botanical Name	Common Name	Remarks
10	B	Cercis canadensis	Eastern Redbud	2-1/2" cal.
13	G	Liquidambar styraciflua	Sweetgum	2-1/2" cal.
10	T	Liriodendron tulipifera	Tulipree	2-1/2" cal.
10	L	Pinus taeda	Loblolly Pine	6-8' Hgt.
10	P	Quercus palustris	Pin Oak	2-1/2" cal.

**Planting Specifications:**  
Container Grown and Balled and Burlapped Stock



PLANTING DETAILS

**PLANTING RESPONSIBILITIES**

	Builder	Developer	Final Plan
Street Trees		X	X
Edges		X	X
SWM		X	X
Parking		X	X
Internal	X		

Zone	Adjacent Land Use	Buffer Type	Shrub Trees	Evergreens	Required Shrubs	Required Evergreens	Shrubs	Evergreens			
1	AD where	A	80	100	NA	1	NA	0			
2	2FA	C	204	140	120	1	10	0			
3	AD where	A	105	140	NA	1	NA	0			
4	2FA	B	305	150	140	4	1	0			
5	AD where	A	170	140	NA	3	NA	0			
6	AD where	A	380	140	NA	1	NA	0			
7	AD where	A	240	140	NA	4	NA	0			
8	AD where	A	46	140	NA	1	NA	0			
9	AD where	B	187	150	140	12	15	0			
10	AD where	A	237	140	NA	7	NA	0			
11	2FA	B	237	150	140	3	0	0			
12	AD where	A	46	140	NA	1	NA	0			
13	2FA where	C	150	140	120	0	18	0			
14	AD where	A	105	140	NA	2	NA	0			
TOTAL									14	33	0

**GENERAL NOTES:**

1. TOTAL GROSS AREA = 8.70 AC.  
TOTAL NET AREA = 8.36 AC.
2. PREDOMINATE SOIL TYPE IS GIB2 (GELNGL LOAM). THIS SOIL HAS POTENTIAL FOR INFILTRATION CAPABILITY.
3. REFER TO ENGINEER'S PLAN FOR ADDITIONAL INFORMATION ON THE SIZE AND LOCATION OF OPEN SPACE / RECREATION AREAS.
4. REFER TO ENGINEER'S GRADING PLAN FOR LIMITS OF DISTURBANCE. INSTALL ORANGE SAFETY FENCE ALONG LIMIT LINE ADJACENT TO TRANSPLANT AREA. EXISTING TREES TO REMAIN AND EXISTING FOREST STREAM BUFFER AREA FOR TREE PROTECTION. POST APPROPRIATE SIGNS AS SHOWN.

In the disturbed portions of the Forest Conservation Area, utilize the following seed mix:

Grass Type	Rate
Annual Rye Grass	3 lbs./1000 s.f.
FCA Mix (30% Little Bluestem, 20% Indian Grass, 20% Sheep Fescue, 10% Switchgrass, 10% Side Oats Grama and 10% Big Bluestem)	40 lbs./acre

**Forest Conservation Area (FCA) Summary**

Area #	Area (s.f.)	Area (ac.)
Area #1	19,426.32 s.f.	(0.450 ac.)
Area #2	17,762.92 s.f.	(0.411 ac.)
Area #3	23,887.51 s.f.	(0.55 ac.)
<b>TOTAL</b>	<b>61,076.75 s.f.</b>	<b>(1.41 ac.)</b>

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Donaker* 8-1-95  
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Richard Blood* 8/4/95  
Chief, Division and Land Development and Research Date  
*Michael Cummins* 8/4/95  
Chief, Development Engineering Division Date

**PROJECT NAME**  
CRADLEROCK FARM  
LOTS 1-12

SIXTH ELECTION DISTRICT TAX MAP # 36  
HOWARD COUNTY, MARYLAND.

PREPARED BY:  
**American Engineering Inc.**  
CIVIL ENGINEERING CONSULTANTS  
AND LAND PLANNERS  
3560 Sherret Place  
Suite 302  
Columbia, MD 21044  
(410) 992-1000 (fax) (410) 992-0212

OWNER / DEVELOPER  
DASHER GREEN ASSOCIATES, LTD.  
839 ELKRIE LANE ROAD  
LINTHICUM, MD 21086

D.S. : W.D.F. JOB : 92105  
DRW : W.D.F. FILE : DASHGSC  
CHK : D.C.W. DATE : 8-18-95

SCALE : 1" = 50'  
SHEET 7 OF 9



STORMWATER MANAGEMENT NOTES

Site Preparation
Areas designated for borrow areas, embankment, and structural works shall be cleared of all vegetation, trees, brush, logs, stumps, roots and other objectionable material...

Earth Fill
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 8"...

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers...

Concrete
Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum...

Structure Backfill
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the pipe or structure material. The fill shall be placed in horizontal layers...

Pipe Conduits
All pipe shall be circular in cross section.
Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

- 1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully laminated...
2. Connections - All connections with pipe shall be completely watertight...

Excavation and Sediment Control
Construction operations will be carried out in such a manner that erosion will be controlled and water and sediment minimized.

Tree Protection Fence
A minimum 100 lb. test, 42 inch high, 1 1/2 inch diameter, galvanized steel pipe shall be used for the fence posts...

- 1. Backfilling shall conform to "Structure Backfill"
2. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice will be given to the HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION...

- 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...
3. FOLLOWING INITIAL SITE DISTURBANCE OR RESTORATION, PERMITS OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1...

Table with columns: TYPE OF DISTURBANCE, AREA TO BE RESTORED OR STABILIZED, and COMMENTS. Includes rows for ROADWAY, CONSTRUCTION, and OTHER.

- 4. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE...
5. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR...

TEMPORARY SEDIMENT PREPARATION
APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

PERMANENT SEDIMENT PREPARATION
SETBACK PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL, BY RAKING, DISCHING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING...

- 1. PREPARED - APPLY 3 TONS PER ACRE DELICIOUS LIMESTONE (23 LBS/1000 SQ FT) AND 800 LBS PER ACRE 10-10-10 FERTILIZER...
2. ACCEPTABLE - APPLY 3 TONS PER ACRE DELICIOUS LIMESTONE (23 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER...

MAINTENANCE: INSPECT ALL SETBACK AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESTORATIONS.

Table with columns: DATE, TIME, LOCATION, and DESCRIPTION. Includes entries for sediment control inspections on 11/11/95 and 11/12/95.

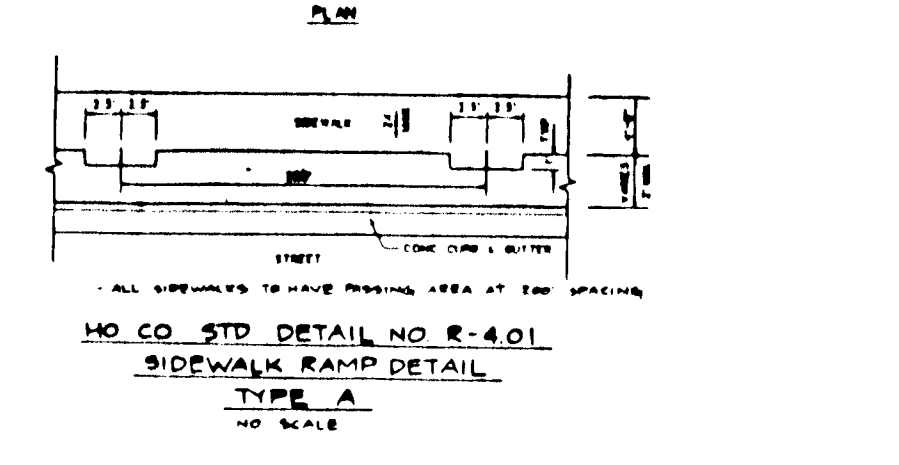
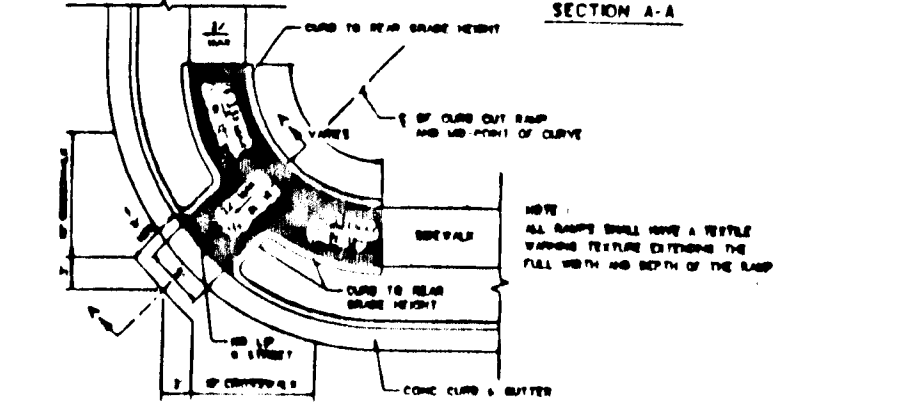
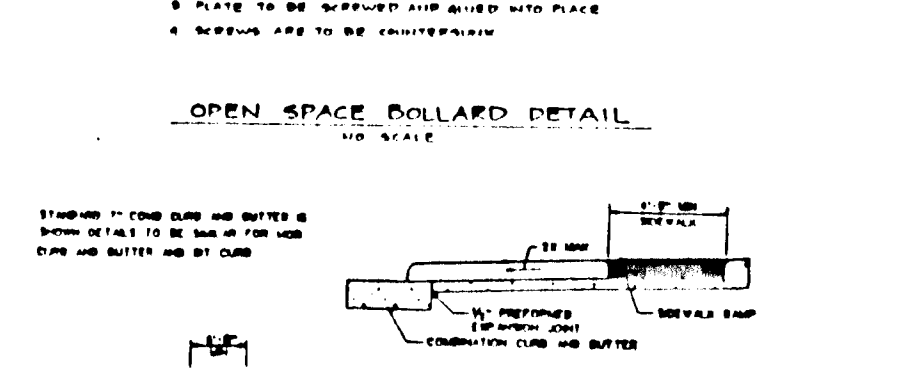
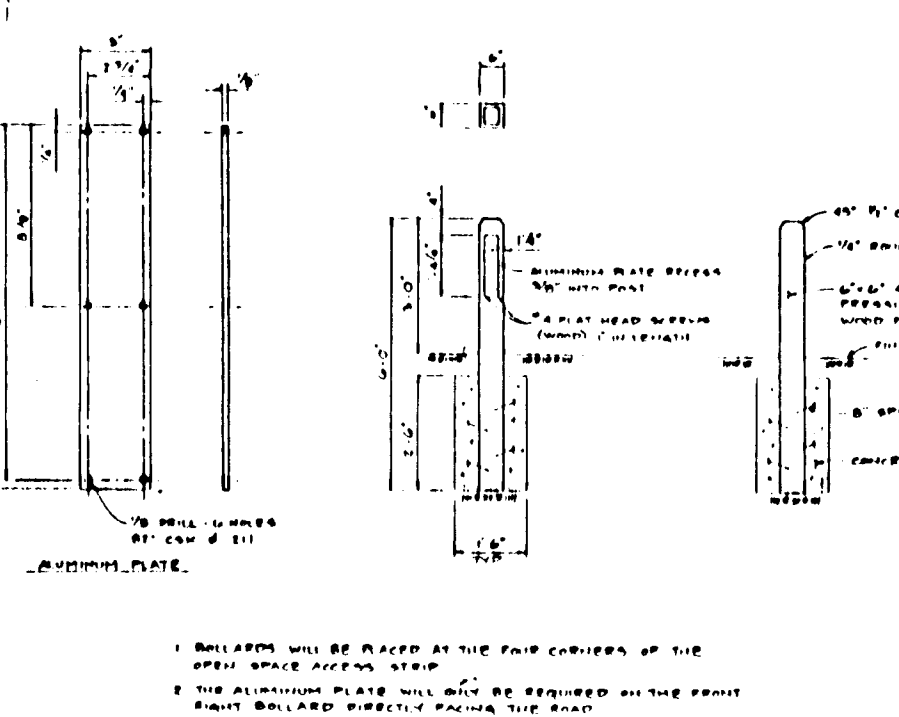
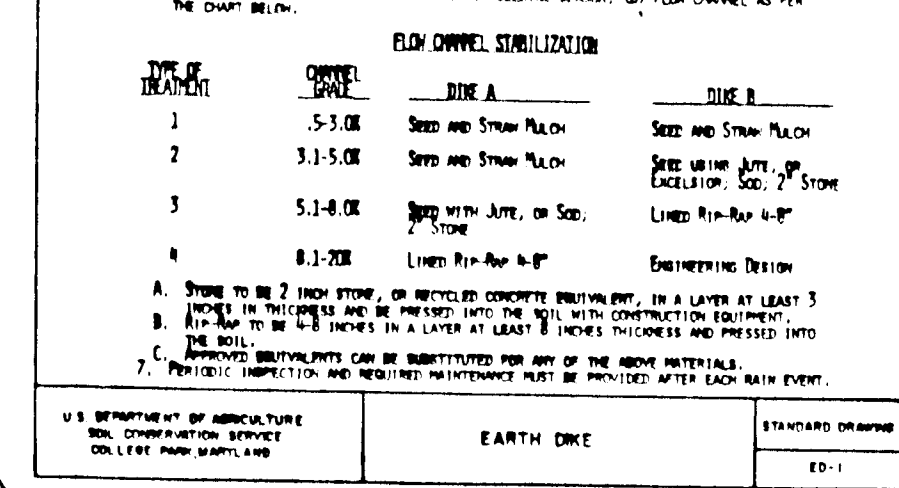
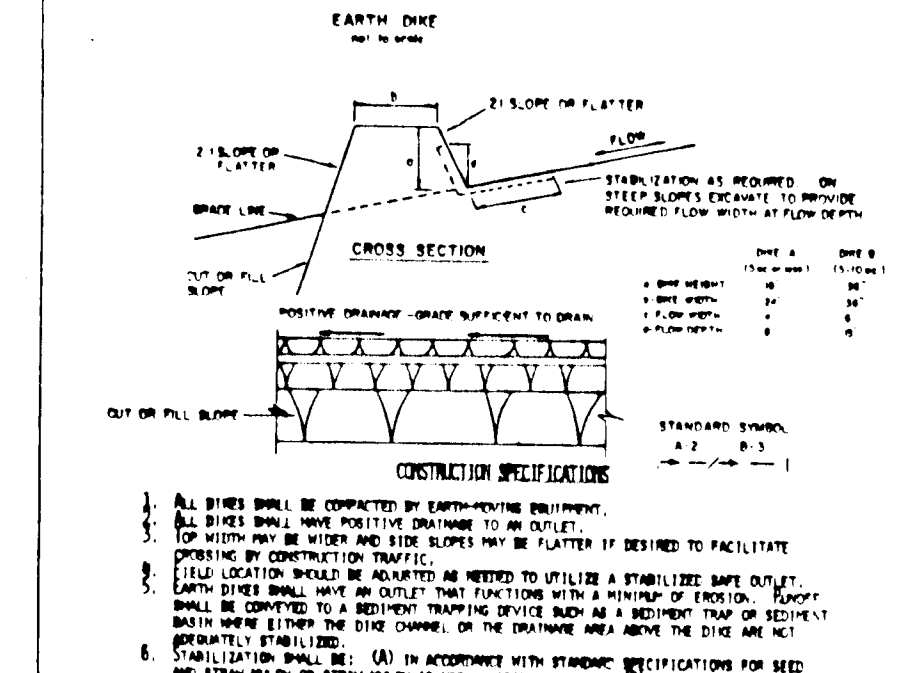


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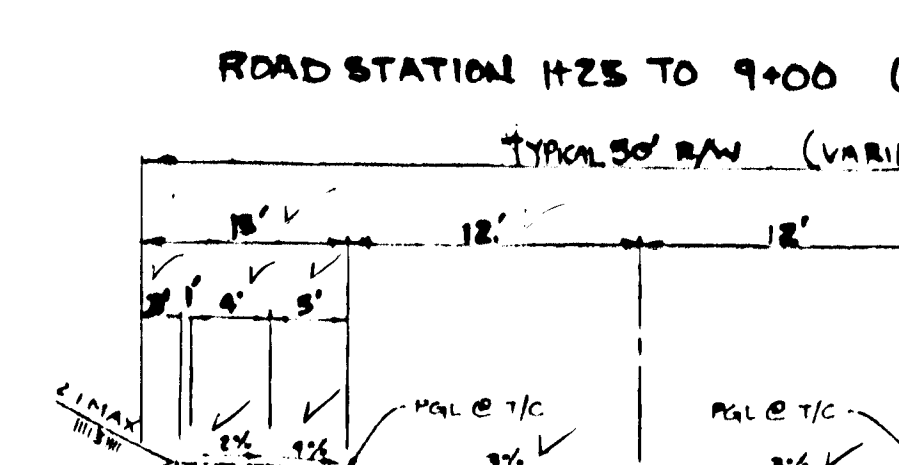
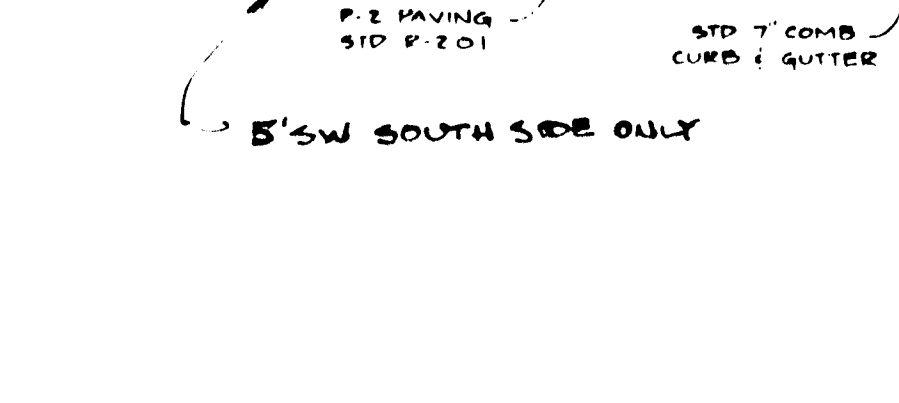
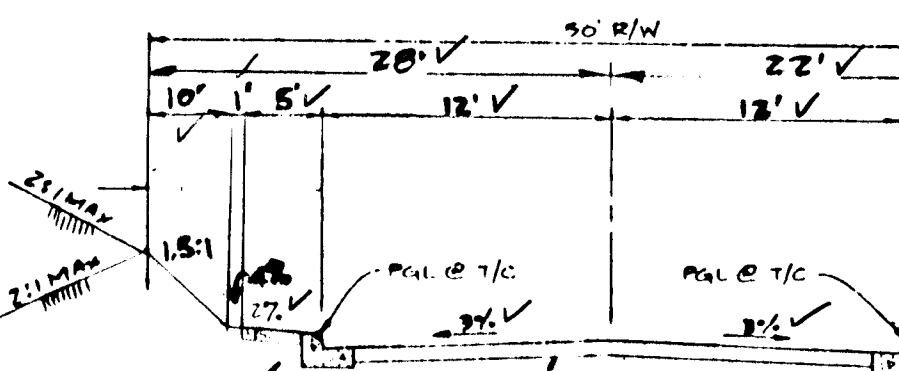
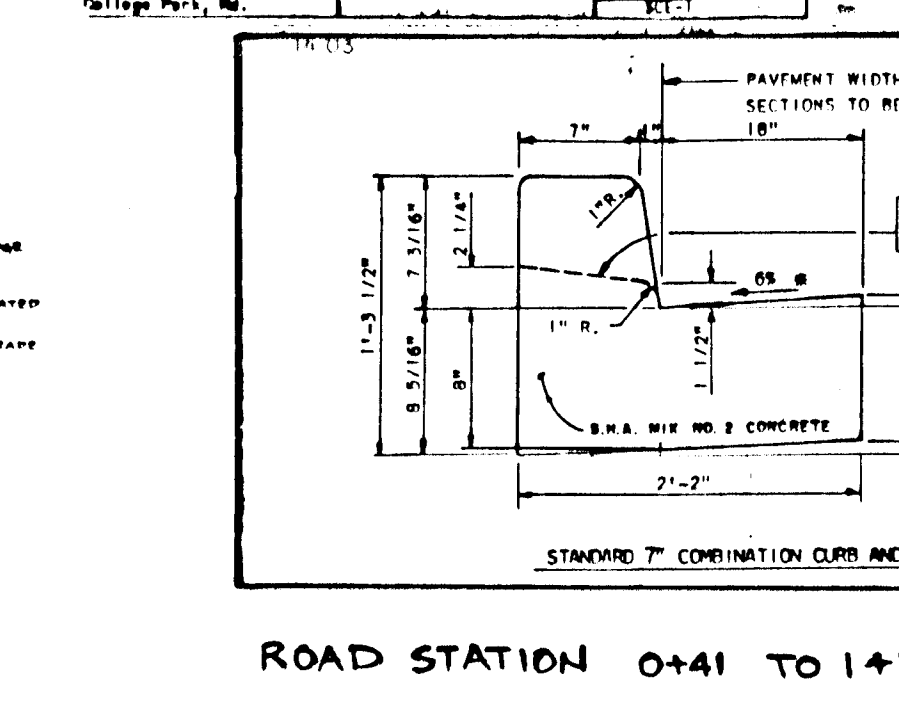
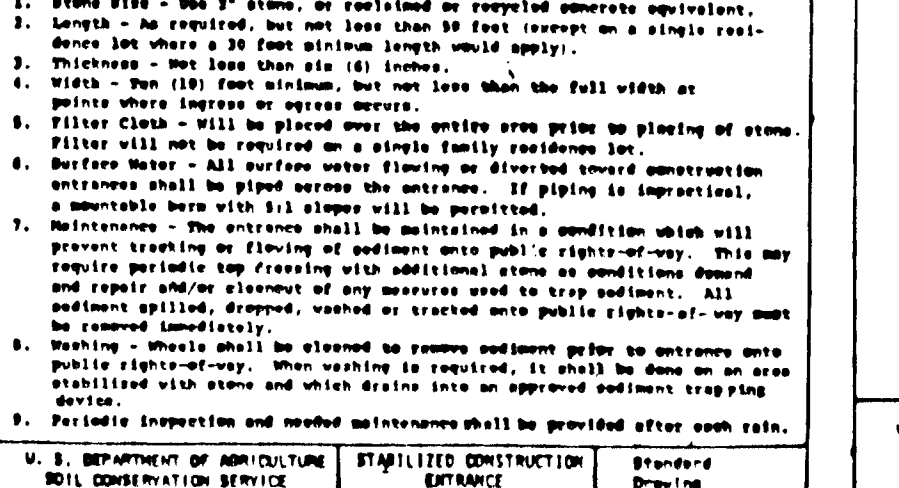
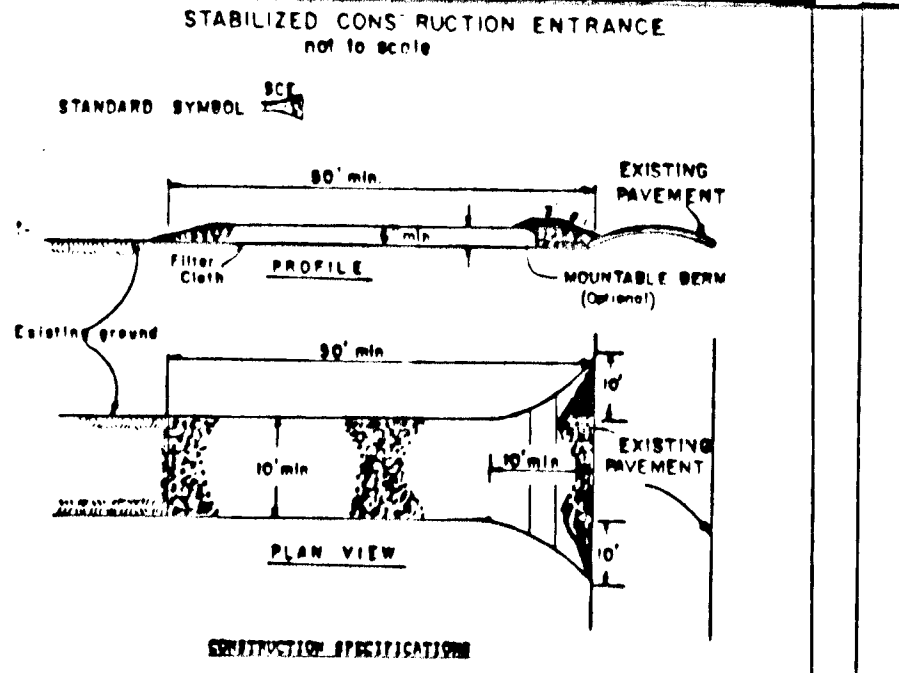


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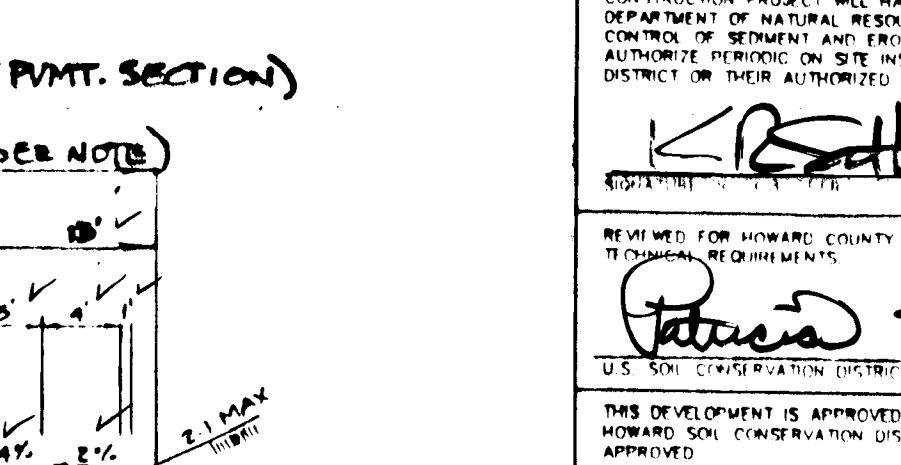
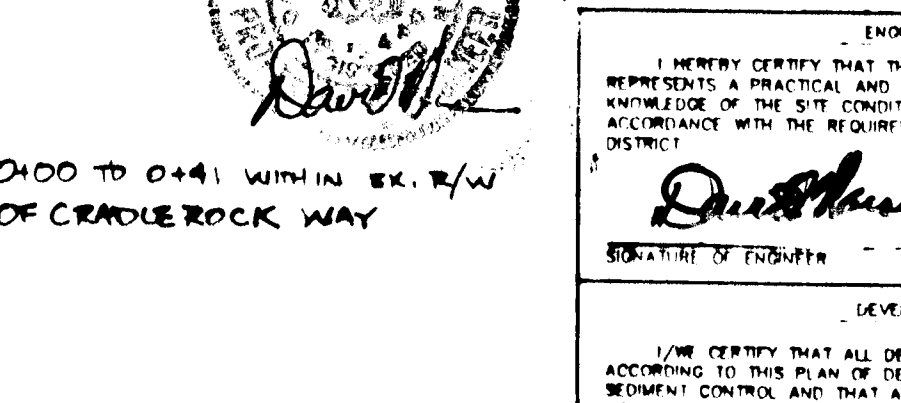
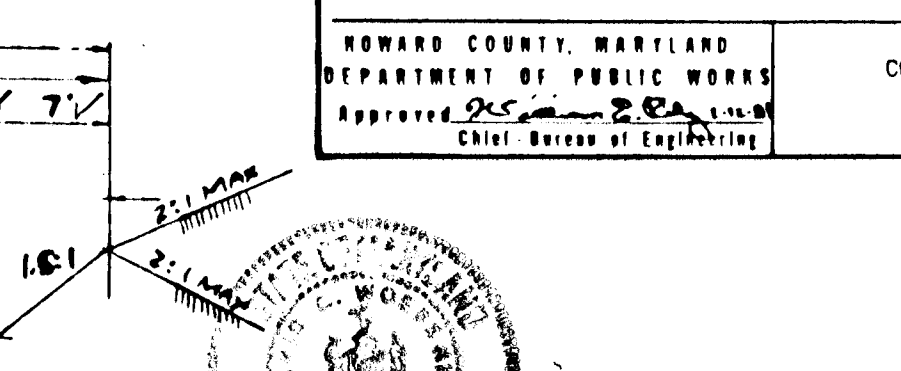
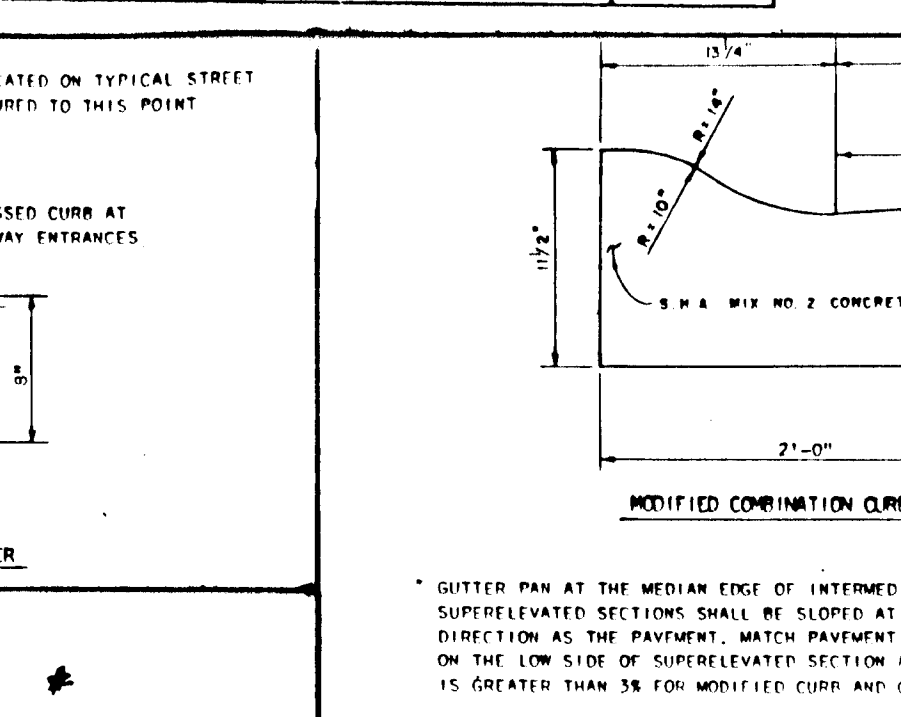
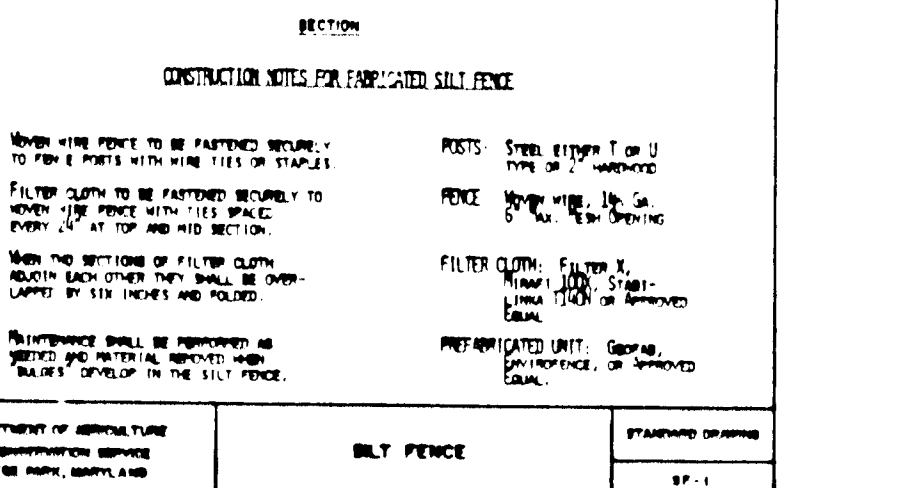
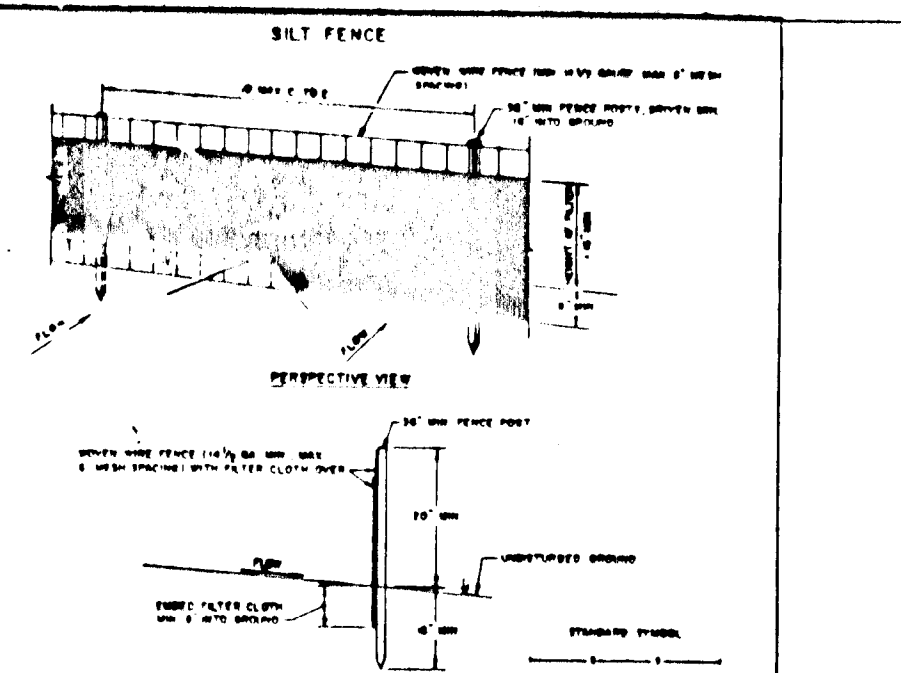


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APPROVED: DEPARTMENT OF PUBLIC WORKS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
PROJECT NAME: CRADLEROCK FARM
LOTS 1-72
A SUBDIVISION OF PARCEL 46
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

1742



