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# FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

## STONE MANOR

### SECTION ONE

### LOTS 1-31

(A RESUBDIVISION OF LOT 1, FEARING ESTATES - PLAT No. 10146 AND TAX PARCEL 2)

ZONING: R-20

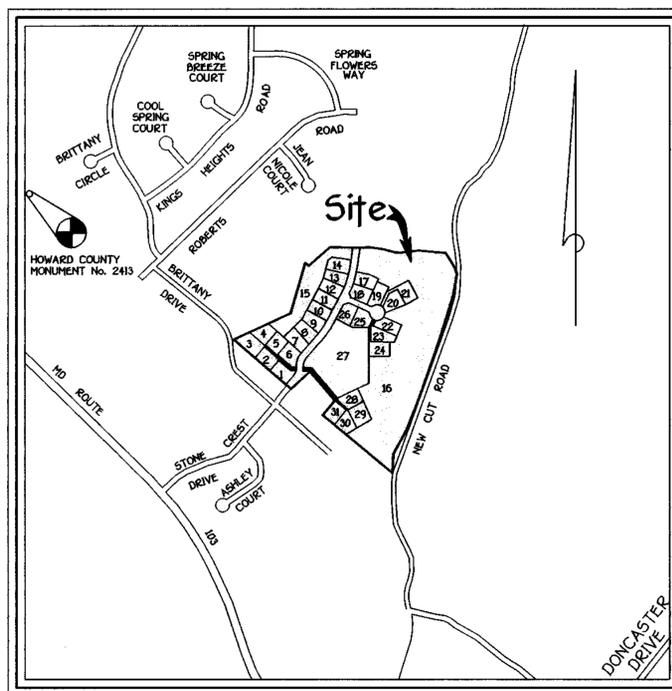
TAX MAP No. 31, GRID 18, PARCELS No. 2 & 805

APPROVED: DEPARTMENT OF PUBLIC WORKS <i>Richard M. Damer</i> CHIEF, BUREAU OF HIGHWAYS	6-12-01 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Cindy Hamstra</i> CHIEF, DIVISION OF LAND DEVELOPMENT	6/12/01 DATE
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	6/14/01 DATE

REVISIONS		
NO.	DESCRIPTION	DATE

ROAD CLASSIFICATION		
ROAD NAME	CLASSIFICATION	R/W
STONECREST DRIVE	PUBLIC ACCESS STREET	50'
POPLAR CREEK COURT	PUBLIC ACCESS PLACE	40'

TRAFFIC CONTROL SIGNS				
STREET NAME	CL. STATION	OFFSET	POSTED SIGN	SIGN CODE
STONECREST DRIVE	0+50	16' R	SPEED LIMIT 25	R2-1
STONECREST DRIVE	1+32	17' L	STOP	R1-1
STONECREST DRIVE	1+63	17' R	STOP	R1-1
STONECREST DRIVE	4+40	16' L	SPEED LIMIT 25	R2-1
STONECREST DRIVE	5+40	12' R	ROAD NARROWS	W5-1
STONECREST DRIVE	6+10	12' L	ROAD NARROWS	W5-1
STONECREST DRIVE	9+50	12' R	ROAD NARROWS	W5-1
STONECREST DRIVE	10+25	12' L	ROAD NARROWS	W5-1
POPLAR CREEK COURT	0+40	11.5' L	STOP	R1-1



### VICINITY MAP

SCALE: 1" = 600'

## SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1000 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY PREPARED BY WINGS AERIAL MAPPING CO., INC., FLOWN IN JULY 1997 AND FIELD RUN DATA BY FISHER, COLLINS & CARTER, INC., OCTOBER 1997.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT Nos. 21E2 AND 21E3 WERE USED FOR THIS PROJECT.
- 2411 N 577290.662 437.980' 2413 N 500648.910 404.580' E 1366075.175 E 1364974.459
- SEWER IS PUBLIC BY CONT. No. 14-3899-D.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY LEE CUNNINGHAM & ASSOCIATES, DATED JULY, 1997.
- BACKGROUND INFORMATION:
  - SUBDIVISION NAME: STONE MANOR
  - TAX MAP NO.: 31, GRID 1
  - PARCEL NO.: 2 & 805
  - ZONING: R-20
  - ELECTION DISTRICT: SECOND
  - TOTAL TRACT AREA: 30.81 AC.
  - NO. OF BUILDABLE LOTS: 28
  - NO. OF PRESERVATION PARCELS: 0
  - NO. OF OPEN SPACE LOTS: 3
  - PRELIMINARY PLAN APPROVAL DATE: MAY 14, 1999
  - PREVIOUS FILE Nos.: SP-98-15
  - TOTAL AREA OF OPEN SPACE REQUIRED: (30.81 AC. x 30%) = 9.24 AC.
  - TOTAL AREA OF OPEN SPACE PROVIDED: 14.824 AC.
- REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE PIPE / FLAG STEM AND THE ROAD R/W AND NOT ONTO THE PIPE / FLAG STEM DRIVEWAY.
- NO CEMETERIES EXIST ON THE PROPERTY.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF ASTM T-100.
- THE WETLAND AND FOREST STAND DELINEATION WAS PREPARED BY EXPLORATION RESEARCH, INC. AND APPROVED UNDER SP-98-15.
- THE FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.  
THE FOREST CONSERVATION OBLIGATION WILL BE MET BY 10.615 ACRES OF RETENTION ON OPEN SPACE LOT 15 AND 16. THE SURETY AMOUNT WILL BE \$22,450.00 FOR THE REQUIRED 7-TACHE RETENTION.
- STORMWATER MANAGEMENT FACILITY:  
TYPE - RETENTION FACILITY FOR QUANTITY AND QUALITY  
OWNER - PUBLIC  
MAINTENANCE - PUBLIC
- THIS PROJECT IS SUBJECT TO WF-98-121. THE REQUEST TO WAIVE SECTION 16.116.1 AND 16.116.2 TO ALLOW GRADING WITHIN WETLAND AND STREAM BUFFERS FOR THE PURPOSE OF UPGRADING AN EXISTING POND INTO A SWM POND THAT MEETS MD-378 SPECIFICATIONS WAS APPROVED ON JUNE 23, 1998. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:  
a) THIS APPROVAL APPLIES ONLY TO THE RECONSTRUCTION OF THE EXISTING POND FOR SWM.  
b) DISTURBANCE SHALL BE TO THE MINIMUM EXTENT NECESSARY AND SHALL BE SHOWN AS A LIMIT OF DISTURBANCE ON CONSTRUCTION DRAWINGS.  
c) PROVIDE COPIES OF ALL REQUIRED PERMITS PRIOR TO APPROVAL OF CONSTRUCTION PLANS.
- SOILS INFORMATION TAKEN FROM SOIL MAP No. 20, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY, 1968 ISSUE.
- HISTORIC STRUCTURE HO-398 (BON AIR MANOR) IS TO REMAIN ON SITE AS PART OF THE PROPOSED LOT 28. OTHER ASSOCIATED HISTORIC STRUCTURES WILL REMAIN ON OPEN SPACE LOT 10. THIS INFORMATION IS PER THE HOWARD COUNTY HISTORIC INVENTORY LISTING.
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THIS PROJECT IS SUBJECT TO MDE PERMIT/TRACKING NUMBER 199981721 AND WMA No. 99-PO-2009.
- THE PERIMETER LANDSCAPING SURETY IN THE AMOUNT OF \$22,450.00 SHOWN ON SHEET 12 WILL BE PART OF THE DEVELOPER'S AGREEMENT.
- OPEN SPACE LOTS 15 AND 16 TO BE OWNED AND MAINTAINED BY THE HOWARD COUNTY DEPARTMENT OF RECREATION & PARKS.
- OPEN SPACE LOT 10 TO BE OWNED AND MAINTAINED BY THE STONE MANOR HOMEOWNER'S ASSOCIATION FOR THE BENEFIT OF THE RESIDENTS OF STONE MANOR, SECTION ONE SUBDIVISION.

STREET LIGHT CHART				
DWG. No.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2	STONECREST DRIVE	C.L. STA. 0+95	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 2+67	15' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 5+70	8' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 7+25	18' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 9+95	8' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
3	POPLAR CREEK COURT	C.L. STA. 2+45	3' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
4100 40 - 2995

OWNER  
Mrs. Helen Fearing Irwin  
805 River Road  
Sykesville, Md. 21784

OWNER  
Mr. Harry Grant &  
Mrs. Mary Grant  
4445 Stonecrest Drive  
Ellicott City, Md. 21043

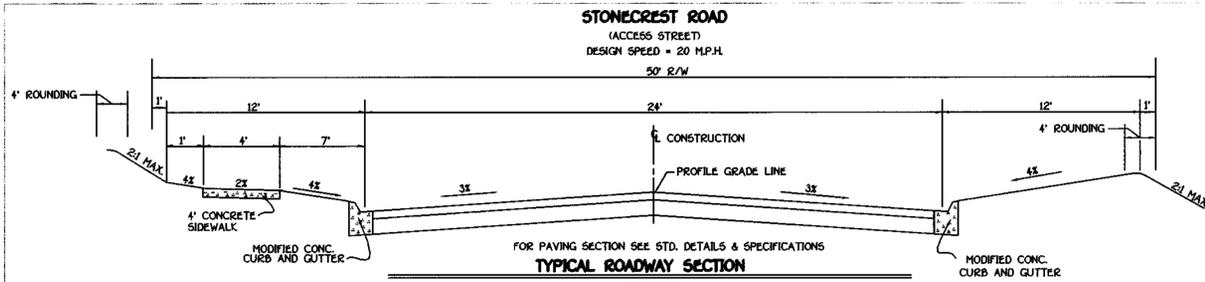
DEVELOPER  
Stonecrest Manor, L.L.C.  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Md. 21043  
410490-9105



Aldo M. Vitucci  
5-24-01

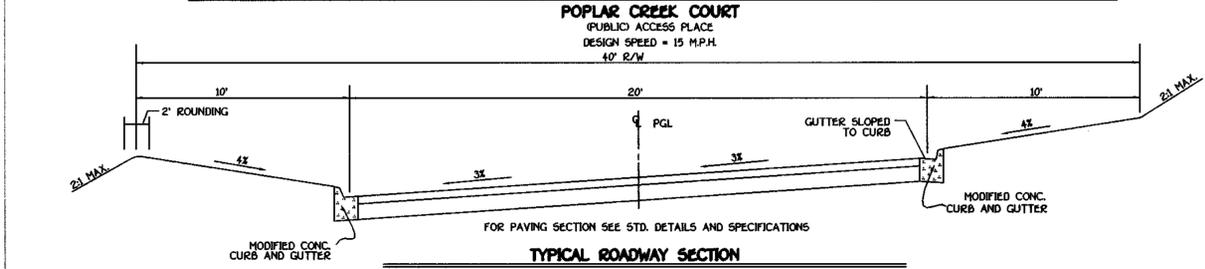
FINAL PLAN  
STONE MANOR  
SECTION ONE  
LOTS 1 THRU 31  
(A RESUBDIVISION OF LOT 1, FEARING ESTATES - PLAT No. 10146 AND TAX PARCEL 2)  
TAX MAP 31, PARCELS No. 2 AND 805, GRID 1  
SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
DATE: MAY 21, 2001  
SHEET 1 OF 14





NO SCALE

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	A	B	C	D	R/W	PAVING SECTION
STONECREST ROAD	PUBLIC ACCESS STREET	25 MPH.	R-20	0+00 TO 10+57	24'	7'	4'	12'	50'	P-2



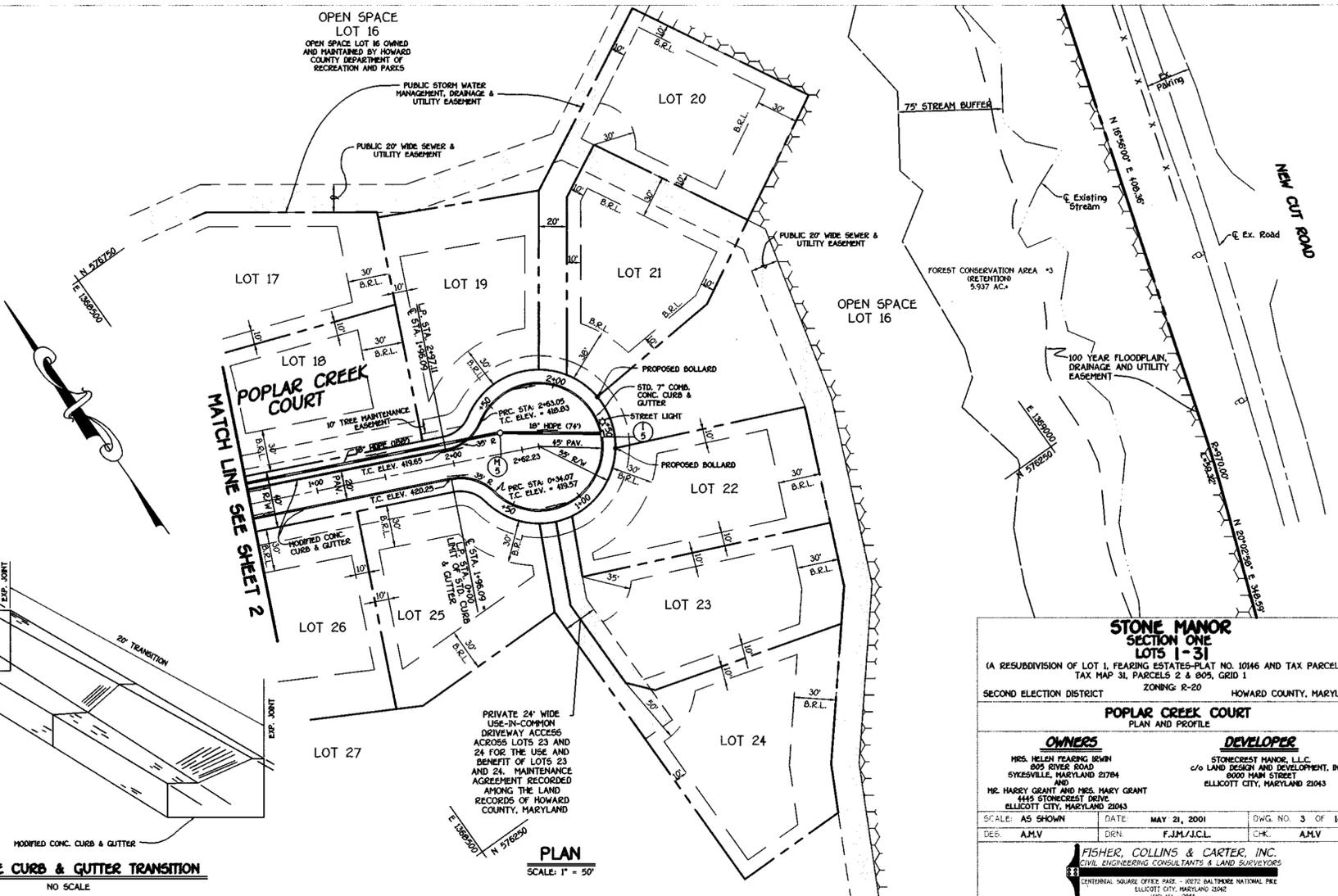
NO SCALE

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	A	D	R/W	PAVING SECTION
POPLAR CREEK COURT	PUBLIC ACCESS PLACE	15 MPH.	R-20	0+00 TO 1+96.09	20'	10'	40'	P-2

APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hamner* 6/28/01  
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
*John Deussen* 6/28/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danks* 6-12-01  
CHIEF, BUREAU OF HIGHWAYS



CONCRETE CURB & GUTTER TRANSITION  
NO SCALE

PLAN  
SCALE: 1" = 50'

**STONE MANOR SECTION ONE LOTS 1-31**  
(A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 20 TAX MAP 31, PARCELS 2 & 205, GRID 1)  
SECOND ELECTION DISTRICT ZONING R-20 HOWARD COUNTY, MARYLAND

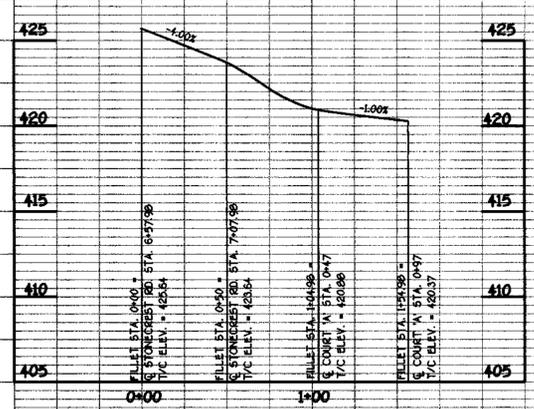
**POPLAR CREEK COURT**  
PLAN AND PROFILE

**OWNERS**  
MRS. HELEN FEARING IRWIN  
805 RIVER ROAD  
SYKESVILLE, MARYLAND 21784  
MR. HARRY GRANT AND MRS. HARRY GRANT  
4445 STONECREST DRIVE  
ELLCOTT CITY, MARYLAND 21043

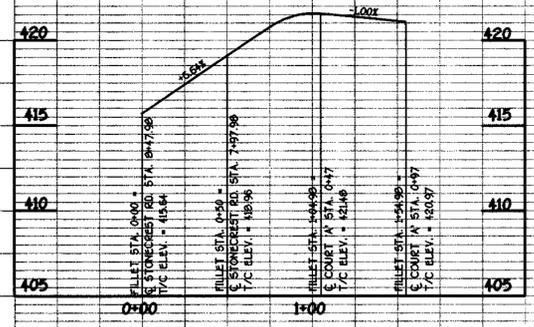
**DEVELOPER**  
STONECREST MANOR, L.L.C.  
c/o LAND DESIGN AND DEVELOPMENT, INC.  
8000 MAIN STREET  
ELLCOTT CITY, MARYLAND 21043

SCALE: AS SHOWN DATE: MAY 21, 2001 DWG. NO. 3 OF 14  
DES. AMV DRN. F.J.M./J.C.L. CHK. AMV

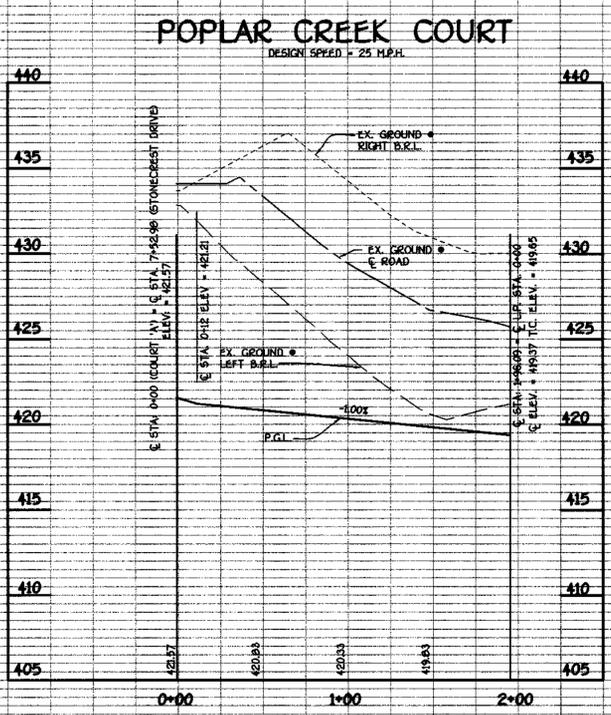
**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21042  
(410) 661-2225



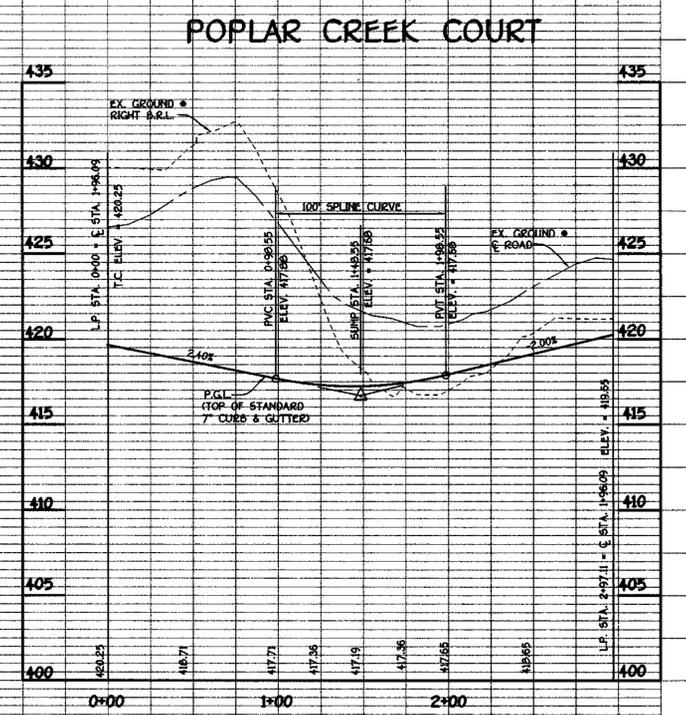
SW FILLET PROFILES @ POPLAR CREEK COURT  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'



NE FILLET PROFILES @ POPLAR CREEK COURT  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'



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



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

**STREET TREE SCHEDULE**

SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
○	46	ACER BURNING VICTOR'S GLORY RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
○	15	PLATANUS OCCIDENTALIS BLOODGOOD LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

NOTE: FINANCIAL SURETY FOR THE 46 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$65,000.00.

By The Developer:

I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That We Are Responsible For Obtaining All Necessary Permits From The Howard Soil Conservation District For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Post Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

*Bruce Taylor Munge* 10-2-00  
Signature Of Developer  
Printed Name Of Developer

By The Engineer:

I Certify That These Plans For Small Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Method For The Control Of Sediment And Erosion. The Plans Have Been Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Noted All Applicable Regulations And Have Provided The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

*William C. Smith* 5-24-01  
Signature Of Engineer  
Printed Name Of Engineer

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.

*Jim Rogers* 4/25/01  
Signature Of Inspector  
Printed Name Of Inspector

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

*Michael W. Dwyer* 6-12-01  
Signature Of Inspector  
Printed Name Of Inspector

Approved Department Of Public Works  
*Michael W. Dwyer* 6-12-01  
Signature Of Inspector  
Printed Name Of Inspector

Approved Department Of Planning And Zoning  
*Candy Hamilton* 6/10/01  
Signature Of Inspector  
Printed Name Of Inspector

*William C. Smith* 6/14/01  
Signature Of Inspector  
Printed Name Of Inspector

AS-BUILT CERTIFICATION

I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature \_\_\_\_\_ P.E. No. \_\_\_\_\_  
Date \_\_\_\_\_

Certify Means To State Or Declare A Professional Opinion Based Upon Creative Inspection And Material Tests Which Are Conducted During Construction. The Creative Inspection And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Consistent Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Release Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Community Accepted Industry Practices.

NOTE: EXISTING WET POND TO BE DEWATERED AND RECONSTRUCTED TO MEET MD-37B SPECIFICATIONS.

**LEGEND**

— 50' —	50'	— S-S —	SUPER-SILT FENCE
— SF —	SF	— SF —	SILT FENCE
— TP —	TP	— TP —	TREE PROTECTION FENCE
— E —	E	— E —	EARTH DIKE
— L —	L	— L —	LIMIT OF DISTURBANCE

NO WOODY VEGETATION ZONE

LIMITS OF 100 YEAR FLOODPLAIN PER SP '98-15

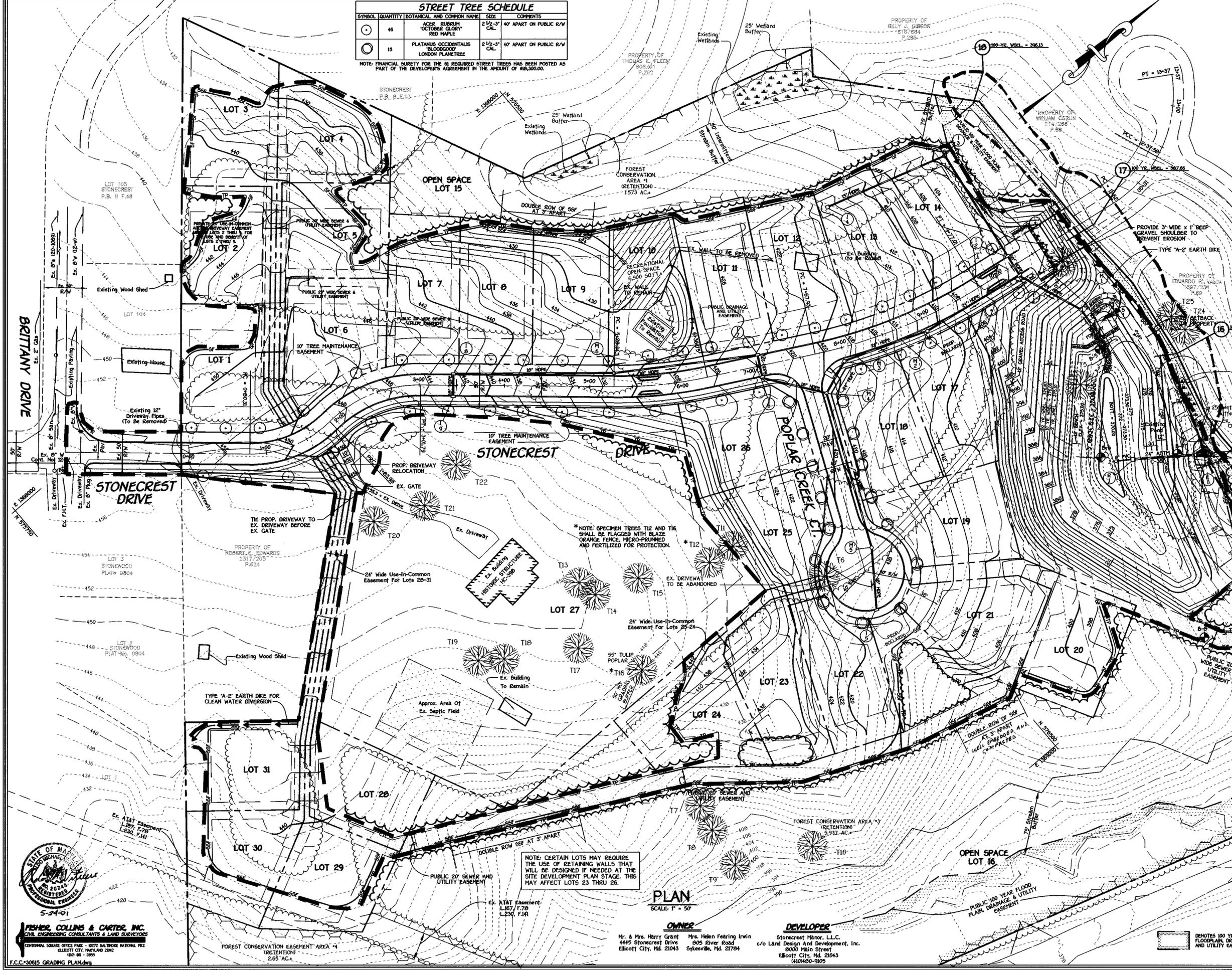
EX. PRIVATE DRIVEWAY

FOREST CONSERVATION AREA 2 (RETENTION) 0455 AC.

**TEMPORARY S.W.M. SEDIMENT BASIN DATA**

INITIAL DRAINAGE AREA = 5.45 AC.  
FINAL DRAINAGE AREA = 9.65 AC.  
STORAGE REQUIRED:  
WET = 1800 x 9.65 = 17,370 cu. ft.  
DRY = 1800 x 9.65 = 17,370 cu. ft.  
STORAGE PROVIDED:  
WET = 19,305 @ 374.00  
DRY = 21,120 @ 375.75  
BOTTOM ELEV. = 370.00  
STORAGE DEPTH = 5.75'  
SIDE SLOPES = 3:1  
TOP OF EMBANKMENT = 360.00  
CLEAN-OUT ELEV. = 372.20  
12" L.W. FLOW WEIR CREST = 375.75  
RISER CREST ELEV. = 376.50  
O2 EXISTING = 33 cfs  
O2 PROPOSED = 15 cfs

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN  
**STONE MANOR SECTION ONE**  
LOTS 1-31  
TOWNING 0-20  
TAX MAP NO. 31, PARCEL NO. 2 & 805, GRID NO. 18  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: MAY 21, 2001  
SHEET 4 OF 14



NOTE: CERTAIN LOTS MAY REQUIRE THE USE OF RETAINING WALLS THAT WILL BE DESIGNED IF NEEDED AT THE SITE DEVELOPMENT PLAN STAGE. THIS MAY AFFECT LOTS 23 THRU 26.

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

**OWNER**  
Mr. & Mrs. Harry Grant  
4445 Stonecrest Drive  
Ellicott City, Md. 21043

**DEVELOPER**  
Mrs. Helen Fearing Irwin  
205 River Road  
Sykesville, Md. 21784

**STONECREST MANOR, L.L.C.**  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Md. 21043  
(410)480-9105

**STATE OF MARYLAND**  
**PROFESSIONAL ENGINEER**  
5-24-01

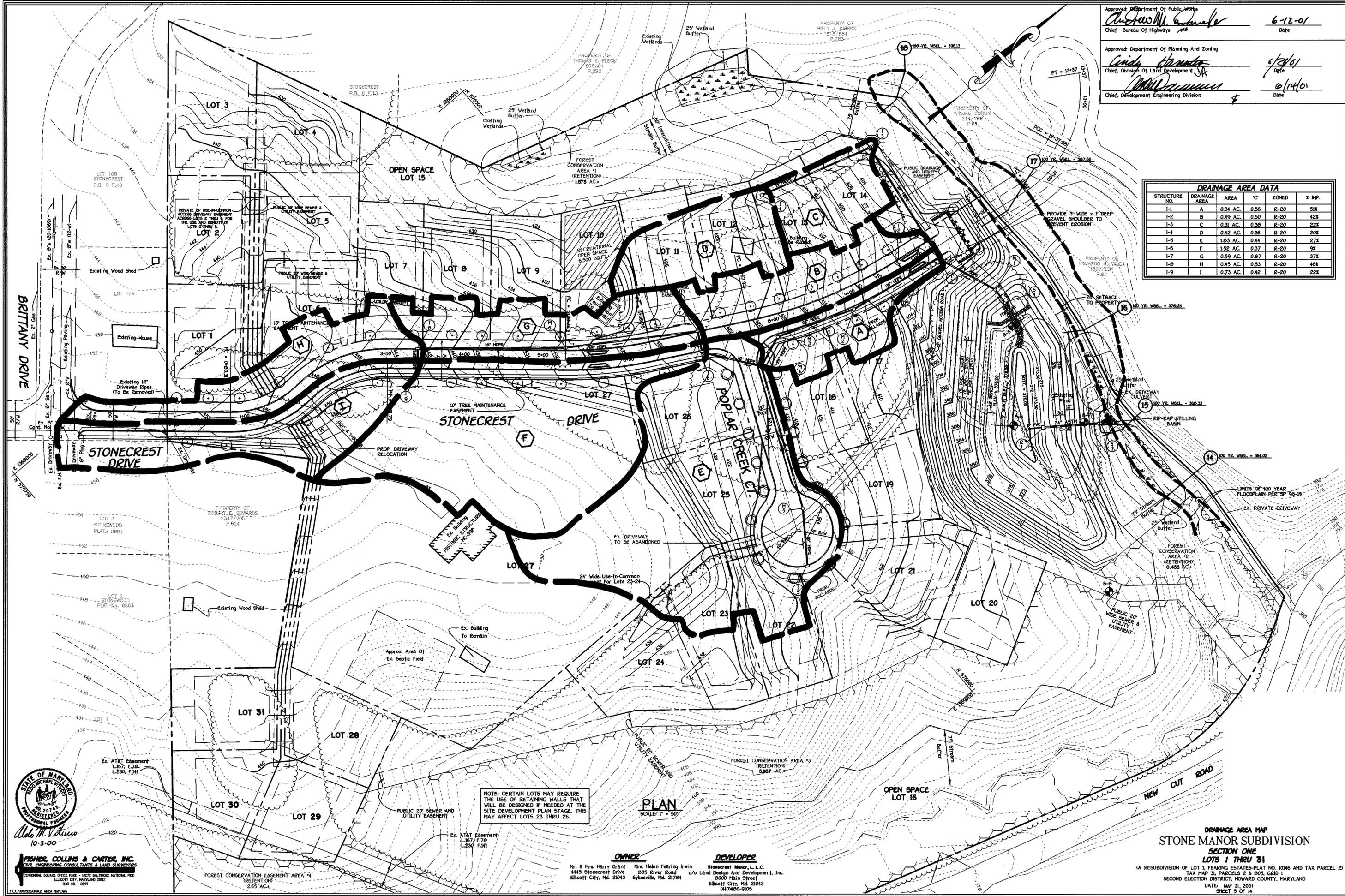
**FEHSE, COLLINS & CARTER, INC.**  
CIVIL, ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL FREE  
ELICOTT CITY, MARYLAND 21042  
410 461-2295

Approved: Department Of Public Works  
*Andrew M. Dwyer* 6-12-01  
 Chief, Bureau Of Highways Date

Approved: Department Of Planning And Zoning  
*Cindy Hamilton* 5/24/01  
 Chief, Division Of Land Development Date

*William J. ...* 6/14/01  
 Chief, Development Engineering Division Date

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	0.34 AC.	0.56	R-20	51%
I-2	B	0.49 AC.	0.50	R-20	42%
I-3	C	0.31 AC.	0.38	R-20	22%
I-4	D	0.42 AC.	0.36	R-20	20%
I-5	E	1.83 AC.	0.44	R-20	27%
I-6	F	1.32 AC.	0.37	R-20	9%
I-7	G	0.59 AC.	0.87	R-20	37%
I-8	H	0.45 AC.	0.53	R-20	46%
I-9	I	0.73 AC.	0.42	R-20	22%



STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 10-3-00  
 FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 18277 BALTIMORE NATIONAL FREE  
 ELLICOTT CITY, MARYLAND 21114  
 (410) 481-2395

**OWNER**  
 Mr. & Mrs. Harry Grant  
 4445 Stonecrest Drive  
 Ellicott City, Md. 21043

**DEVELOPER**  
 Stonecrest Manor, L.L.C.  
 c/o Land Design And Development, Inc.  
 8000 Main Street  
 Ellicott City, Md. 21043  
 (410) 480-9105

**DRAINAGE AREA MAP**  
**STONE MANOR SUBDIVISION**  
**SECTION ONE**  
**LOTS 1 THRU 31**  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2)  
 TAX MAP 31, PARCELS 2 & 909, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 5 OF 14

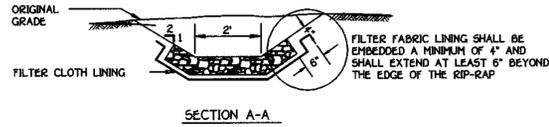
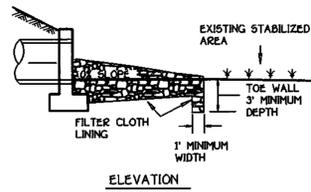
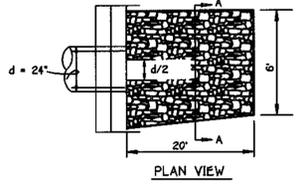
*Cindy Howard*  
 Chief, Division Of Land Development  
 Date: 4/25/01

*Michael J. ...*  
 Chief, Development Engineering Division  
 Date: 6/14/01

*Robert M. ...*  
 Chief, Bureau Of Highways  
 Date: 6-12-01

ROCK OUTLET PROTECTION III • 5-1

ROCK OUTLET PROTECTION



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

Construction Specifications

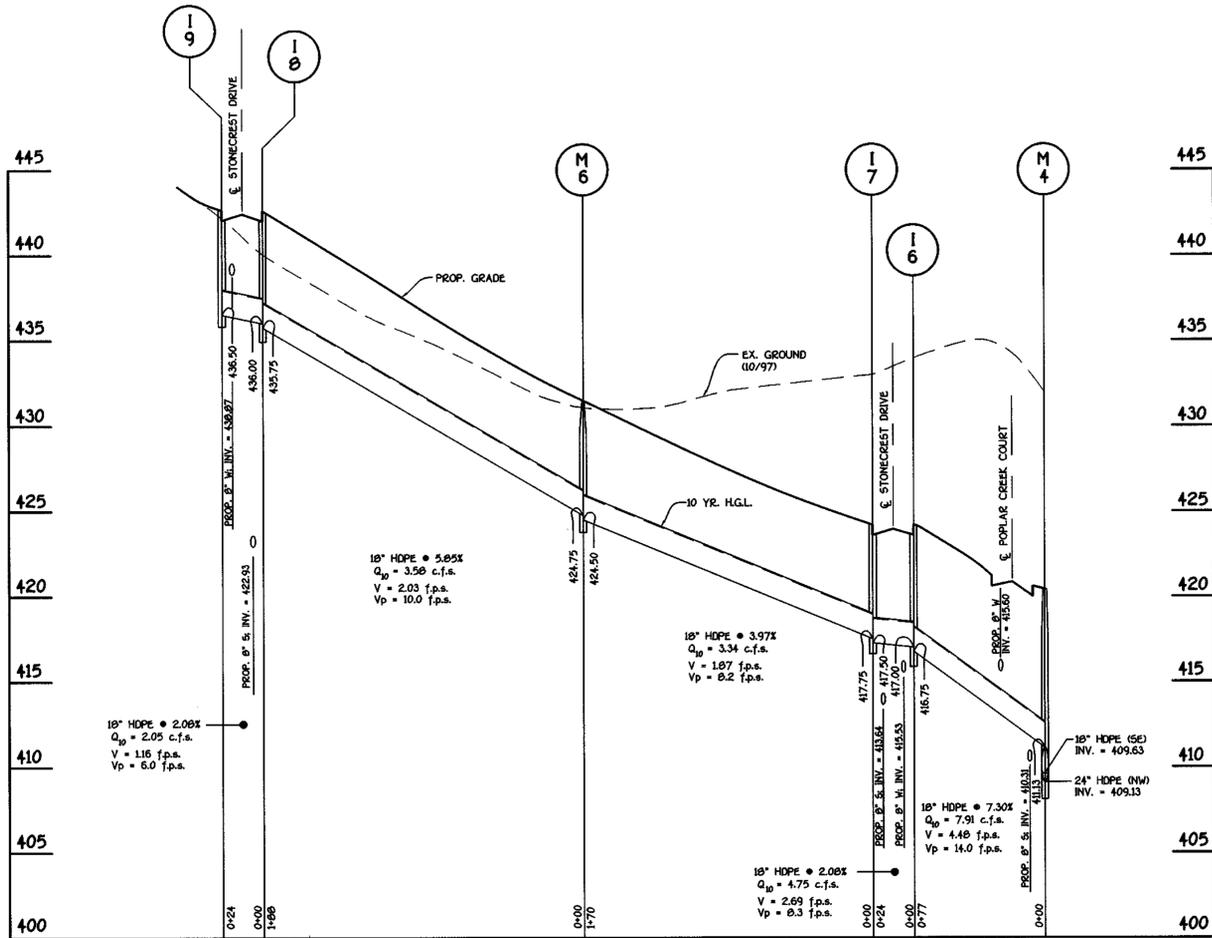
1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	W	REMARKS
I-1	403.77	393.00	391.50	STONECREST DRIVE	C.L. STA. 10+24.10	12' RT	A-5 INLET	2.5'	S.D. 4.40
I-2	403.77	392.11	391.06	STONECREST DRIVE	C.L. STA. 10+24.10	12' LT	A-5 INLET	2.5'	S.D. 4.40
I-3	399.00	394.43	394.18				'S' INLET	--	S.D. 4.22
I-4	416.00		411.50				'S' INLET	--	S.D. 4.22
I-5	417.60		412.50	POPLAR CREEK COURT	L.P. STA. 14+48.55				
I-6	424.15	417.00	416.75	STONECREST DRIVE	C.L. STA. 7+01.74	12' RT	A-5 INLET	2.5'	S.D. 4.40
I-7	424.15	417.75	417.50	STONECREST DRIVE	C.L. STA. 7+01.74	12' LT	A-5 INLET	2.5'	S.D. 4.40
I-8	422.86	436.00	435.75	STONECREST DRIVE	C.L. STA. 3+40.00	12' LT	A-5 INLET	2.5'	S.D. 4.40
I-9	422.86		436.50	STONECREST DRIVE	C.L. STA. 3+40.00	12' RT	A-5 INLET	2.5'	S.D. 4.40
M-1	382.50	377.00	376.75				STD. MANHOLE		G - 5.05
M-2	411.62	402.25	402.00	STONECREST DRIVE	C.L. STA. 8+99.96	16' RT	STD. MANHOLE		G - 5.05
M-3	419.40	408.25	408.00	STONECREST DRIVE	C.L. STA. 7+99.08	16' RT	STD. MANHOLE		G - 5.05
M-4	420.50	411.13	409.63	POPLAR CREEK COURT	C.L. STA. 0+48.87	15' LT	STD. MANHOLE		G - 5.05
M-5	418.50	411.76	411.51	POPLAR CREEK COURT	C.L. STA. 2+36.87	15' LT	STD. MANHOLE		G - 5.05
M-6	431.50	424.75	424.50	STONECREST DRIVE	C.L. STA. 5+28.34	16' RT	STD. MANHOLE		G - 5.05
S-1	378.00		376.00				CONC. END SECT.		S.D. 5.51

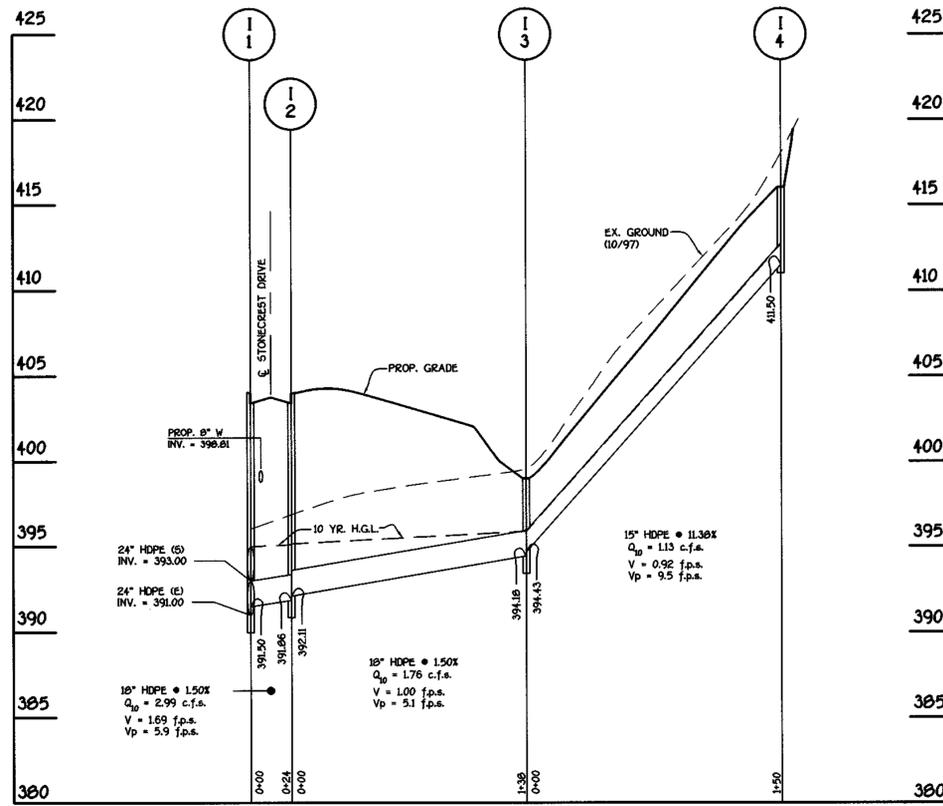
PIPE SCHEDULE

SIZE	MATERIAL	LENGTH
15"	HDPE	150'
18"	HDPE	907'
24"	HDPE	380'



PROFILE

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



PROFILE

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



FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 1827 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 410.411.2000

*Robert M. ...*  
 10-5-00

OWNERS

MRS. HELEN FEARING IRWIN  
 805 RIVER ROAD  
 SYKESVILLE, MARYLAND 21784  
 AND  
 MR. HARRY GRANT AND MRS. MARY GRANT  
 4445 STONECREST DRIVE  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER

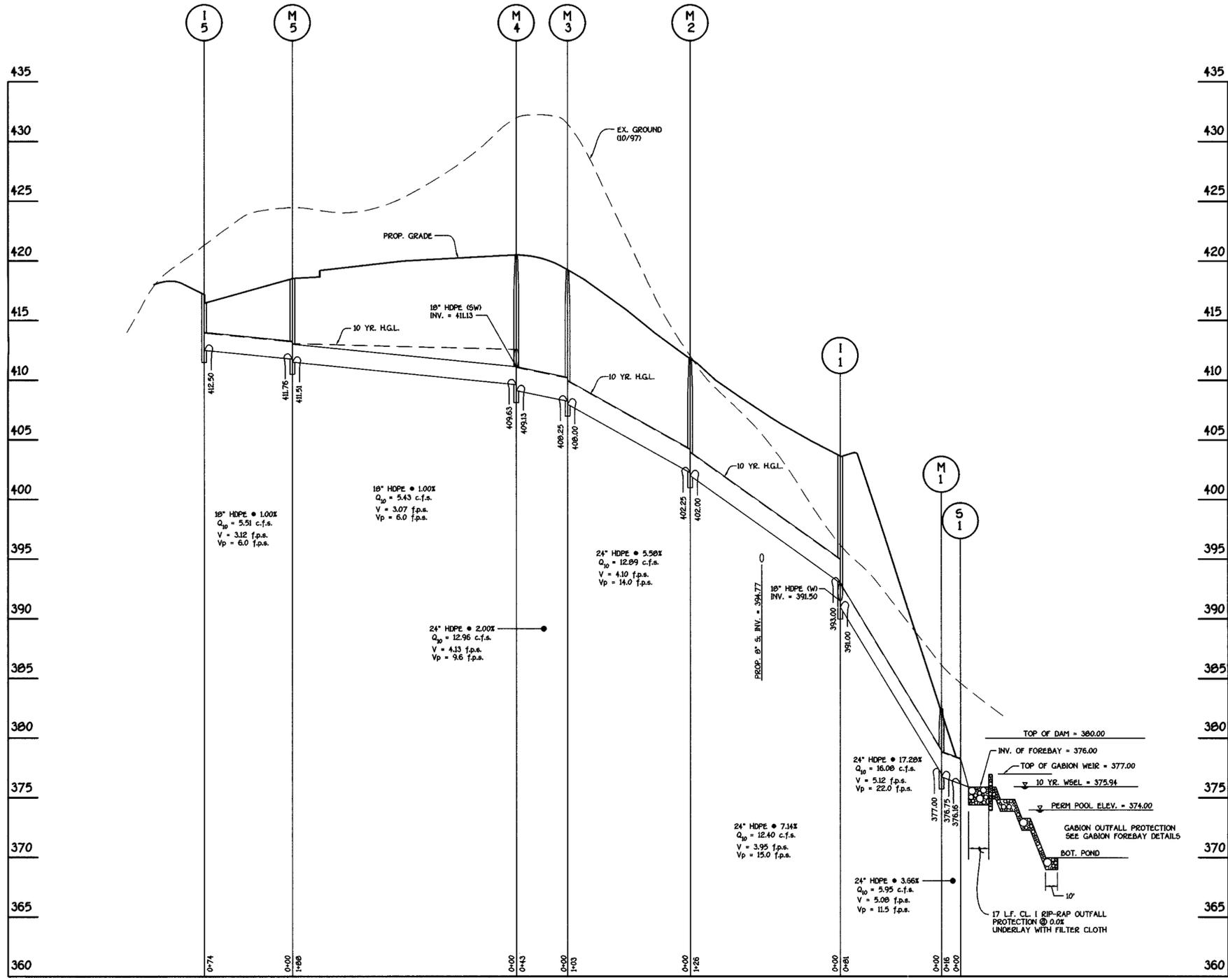
STONECREST MANOR, L.L.C.  
 c/o LAND DESIGN AND DEVELOPMENT, INC.  
 8000 MAIN STREET  
 ELLICOTT CITY, MARYLAND 21043

STORM DRAIN PROFILES  
 STONE MANOR  
 SECTION ONE

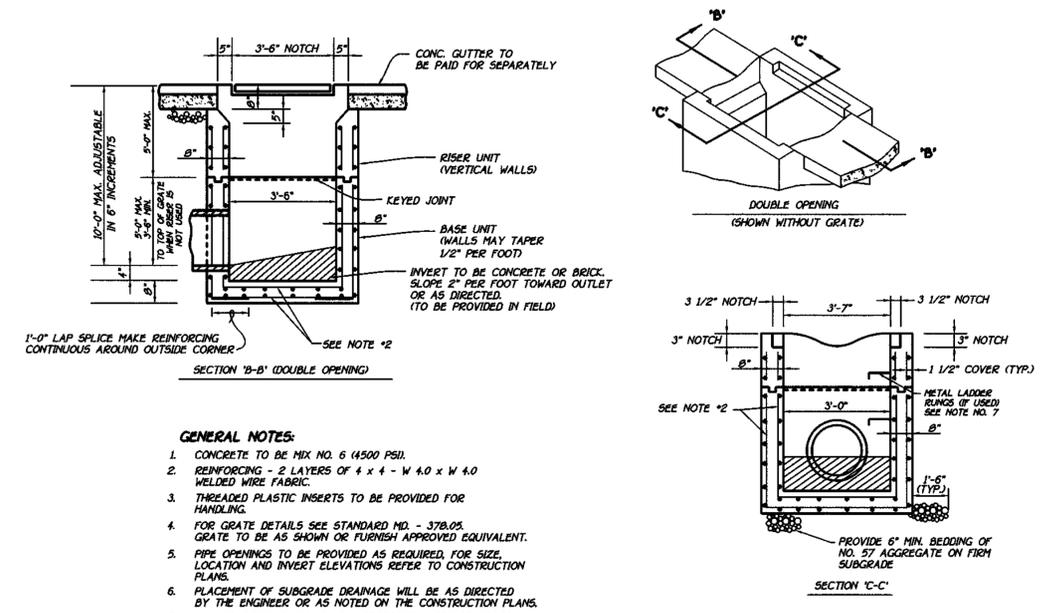
LOTS 1 THRU 31  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2)  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 6 OF 14

Approved: Department Of Planning And Zoning  
 Chief, Division Of Land Development  
 Chief, Development Engineering Division  
 Approved: Howard County Department Of Public Works  
 Chief, Bureau Of Highways

6/26/01  
 6/14/01  
 6-12-01

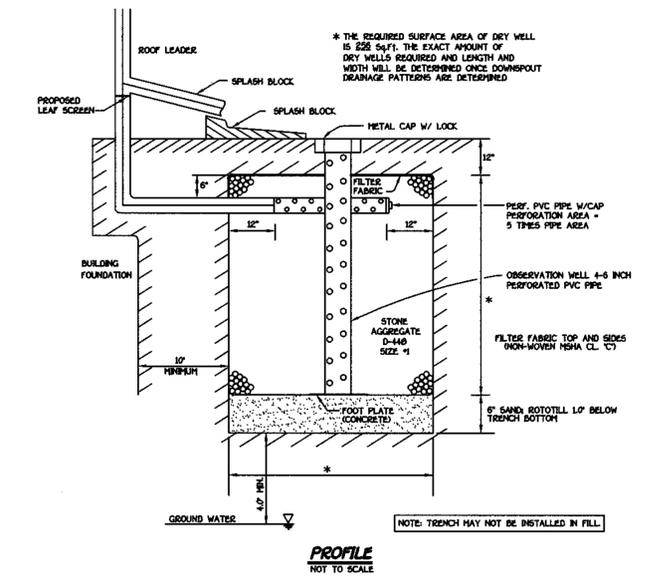


**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'



- GENERAL NOTES:**
1. CONCRETE TO BE MIX NO. 6 (4500 PSI).
  2. REINFORCING - 2 LAYERS OF 4 x 4 - W 4.0 x W 4.0 WELDED WIRE FABRIC.
  3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
  4. FOR GRATE DETAILS SEE STANDARD MD - 378.05. GRATE TO BE AS SHOWN OR FURNISH APPROVED EQUIVALENT.
  5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED, FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
  6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
  7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD - 383.95 AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  8. MINIMUM DEPTH PAYMENT PER EACH INLET INCLUDES DEPTHS UP TO 3'-6\"/>
  - 9. A 6\"/>

**WATER QUALITY TREATMENT FOR LOTS 2-5, 7-9, 22-24 & 28-31**  
**TYPICAL DRY WELL CROSS SECTION**  
**INFILTRATION MANUAL**



**OWNERS**  
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 AND  
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**DEVELOPER**  
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**STORM DRAIN PROFILES**  
**STONE MANOR**  
**SECTION ONE**  
**LOTS 1 THRU 31**  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2)  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 7 OF 14



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKWY  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 861-2855

# STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

## SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

**I. SITE PREPARATION AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1.**

AREAS TO BE COVERED BY THE POND OR RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCE, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREE, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH GROUND SURFACE. FOR DRY STORM WATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

## II. EARTH FILL:

**MATERIAL:** THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA OR AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZE STONES, FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IF THE DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

**PLACEMENT:** AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL 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 PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

**COMPACTION:** THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE 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 SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORKED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

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. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

**CUTOFF TRENCH:** THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACK FILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

**STRUCTURE BACK FILL:** BACK FILL ADJACENT TO PIPES OR STRUCTURES 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 MANUALLY DIRECTED EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACK FILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE PIPE UNLESS THERE IS A COMPACTED FILL OF TWENTY-FOUR INCHES OR GREATER OVER THE STRUCTURE OR PIPE.

## III. PIPE CONDUITS: ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

**REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:**

- MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-301.**
- BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.**
- LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.**
- BACK FILLING SHALL CONFORM TO "STRUCTURE BACK FILL".**
- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.**

**POLYVINYL CHLORIDE (PVC) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:**

- MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1795 OR ASTM D-2241.**
- JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.**
- BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.**
- BACK FILLING SHALL CONFORM TO "STRUCTURE BACK FILL".**
- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.**

## IV. CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 608, MIX NO. 3.

## V. ROCK RIP RAP

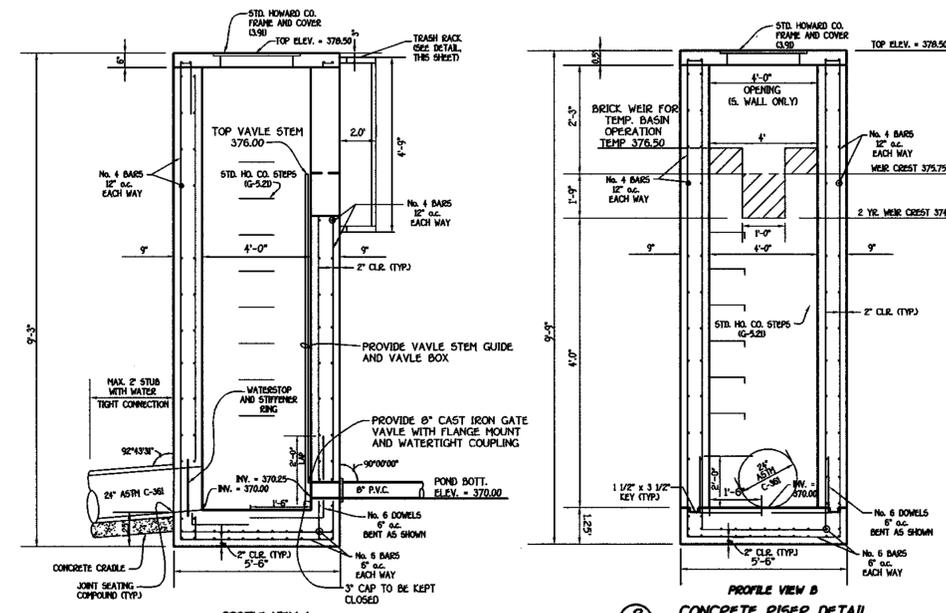
ROCK RIP RAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 905.

## VI. CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELLED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

## VII. STABILIZATION: ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING AS REQUIRED IN ACCORDANCE WITH THE MARYLAND AND FEDERAL SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

## VIII. EROSION & SEDIMENT CONTROL: CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED & WATER & AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.



PROFILE VIEW A CONCRETE RISER DETAIL (NO SCALE)

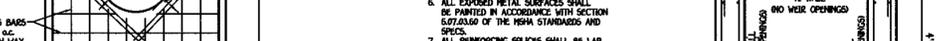
PROFILE VIEW B CONCRETE RISER DETAIL (NO SCALE)



TOP SLAB (NO SCALE)



PLAN VIEW (NO SCALE)



TRASH RACK DETAIL (NO SCALE)

- REBAR NOTES:**
- CONCRETE SHALL BE PERM MIX NO. 3 (C) 3500 P.S.I.
  - REINFORCING STEEL GRADE 60
  - FACE FORMS FOR WALLS OF OUTLET STRUCTURE SHALL UTILIZE L.H. SCORLOD CO. T-9955 FORM LINERS (RANDOM SPLIT-FACE) (30" MAX. SPACING)
  - PROVIDE SMOOTH BROOM FINISH ON TOP OF SLAB.
  - ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 607.01.09 OF THE PERM STANDARDS AND SPECS.
  - ALL EXPOSED METAL SURFACES SHALL BE PAINTED IN ACCORDANCE WITH SECTION 607.02.03 OF THE PERM STANDARDS AND SPECS.
  - ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA UNLESS OTHERWISE SHOWN.
  - ALL FILTER FABRIC SHALL BE POLY FILTER-X OR EQUAL.
  - ALL EXPOSED EDGES OF CONCRETE TO BE CHAMFERED 1/2" x 1/2".

## STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

### (PUBLIC FACILITY)

#### A. PUBLIC ROUTINE MAINTENANCE

- Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as rip-rap outlet area shall be repaired as soon as it is noticed.

#### B. PUBLIC NON-ROUTINE MAINTENANCE

- Structural components of the pond such as the dam, riser structure and the pipes shall be repaired upon the detection of any damage. The components should be inspected during maintenance operations.
- Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.

DESCRIPTION OF MATERIALS	DEPTH	REMARKS
TOPSOIL	SURFACE	
BROWN AND GREEN, DRY TO MOIST, VERY LOOSE TO DENSE, SILTY FINE SAND WITH SOME ROCK FRAGMENTS (G9)	0.5'	6" TOPSOIL
		GROUNDWATER ENCOUNTERED AT 15.0' WHILE DRILLING
		CAVED IN AT 14.0' AT COMPLETION
	16.0'	
		BOTTOM OF HOLE AT 16.0'

DESCRIPTION OF MATERIALS	DEPTH	REMARKS
TOPSOIL	SURFACE	
BROWN MOIST TO WET, MICACEOUS SANDY SILT WITH WEATHERED ROCK FRAGMENTS (9L)	0.5'	6" TOPSOIL
	2.5'	GROUNDWATER ENCOUNTERED AT 1.5' WHILE DRILLING
		GREEN, WET, FINE SANDY SILT WITH SOME MICA AND WEATHERED ROCK FRAGMENTS (G9)
		* CAVED IN AT 4.5' AT COMPLETION
	8.0'	
		BOTTOM OF HOLE AT 8.0'

DESCRIPTION OF MATERIALS	DEPTH	REMARKS
TOPSOIL	SURFACE	
BROWN AND GREEN, DRY TO WET, MEDIUM DENSE TO VERY DENSE, SILTY SAND WITH ROCK FRAGMENTS (G9)	0.25'	3" TOPSOIL
		GROUNDWATER ENCOUNTERED AT 7.5' WHILE DRILLING
		AUGERED VERY HARD AT 4.5' TO 6.0'
	15.5'	
		BOTTOM OF HOLE AT 15.5'

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 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: Bruce Taylor, manager Date: 1-12-00  
 Printed Name Of Developer: Bruce Taylor, manager

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 I Will 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 Of Engineer: Aldo M. Vitucci Date: 4-20-00  
 Printed Name Of Engineer: Aldo M. Vitucci

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. These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer: Jim Reynolds Date: 6/25/01  
 Printed Name Of Engineer: Jim Reynolds

Signature Of Engineer: Andrew M. Daniels Date: 6-12-01  
 Printed Name Of Engineer: Andrew M. Daniels

Signature Of Engineer: Cindy Hester Date: 6/26/01  
 Printed Name Of Engineer: Cindy Hester

Signature Of Engineer: [Signature] Date: 6/14/01  
 Printed Name Of Engineer: [Signature]

## AS-BUILT CERTIFICATION

I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: \_\_\_\_\_ P.E. No. \_\_\_\_\_  
 Date: \_\_\_\_\_

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

DESIGN STORM	ALLOWABLE RELEASE RATE	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEVATION	STORAGE VOLUME (AC.FT.)
2 YEAR	5.6 c.f.s.	14.1 c.f.s.	3.6 c.f.s.	375.10	0.296
10 YEAR	21.1 c.f.s.	33.5 c.f.s.	10.5 c.f.s.	376.03	0.737
100 YEAR	N/A	57.0 c.f.s.	25.7 c.f.s.	376.05	1.174

STRUCTURE CLASSIFICATION: LOW HAZARD, CLASS "A" POND  
 STORAGE - HEIGHT PRODUCT 0.737 AC. FT. x 1000' = 737  
 WATERSHED AREA TO FACILITY (ACRES) ULTIMATE 9.65 ACRES  
 LEVEL OF MANAGEMENT PROVIDED BY FACILITY: TWO AND TEN YEAR STORMS

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10772 SALTWATER NATIONAL PKWY.  
 ELLICOTT CITY, MARYLAND 21117  
 (410) 461-2395

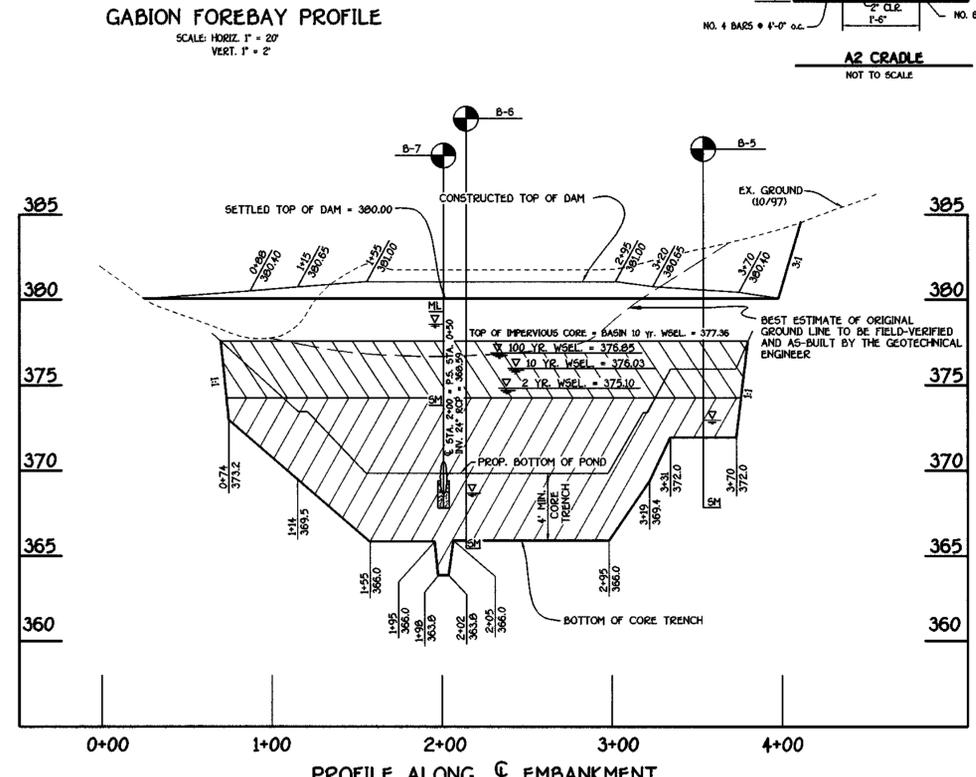
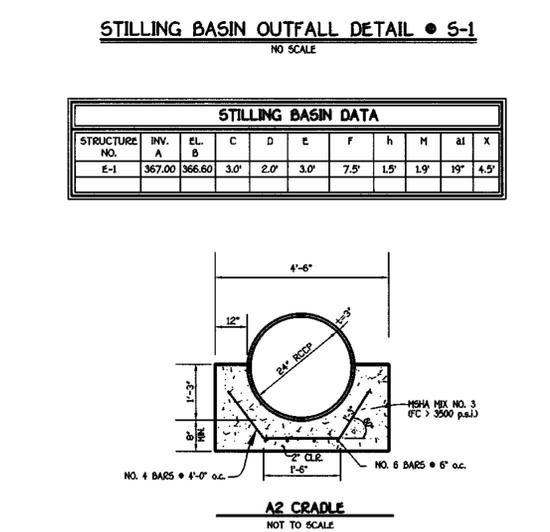
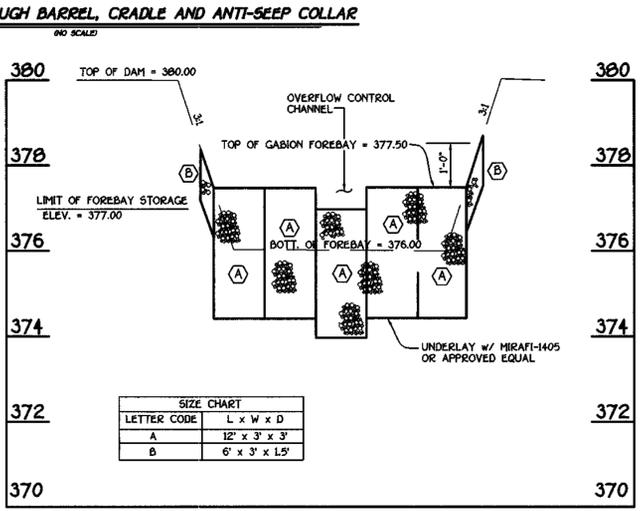
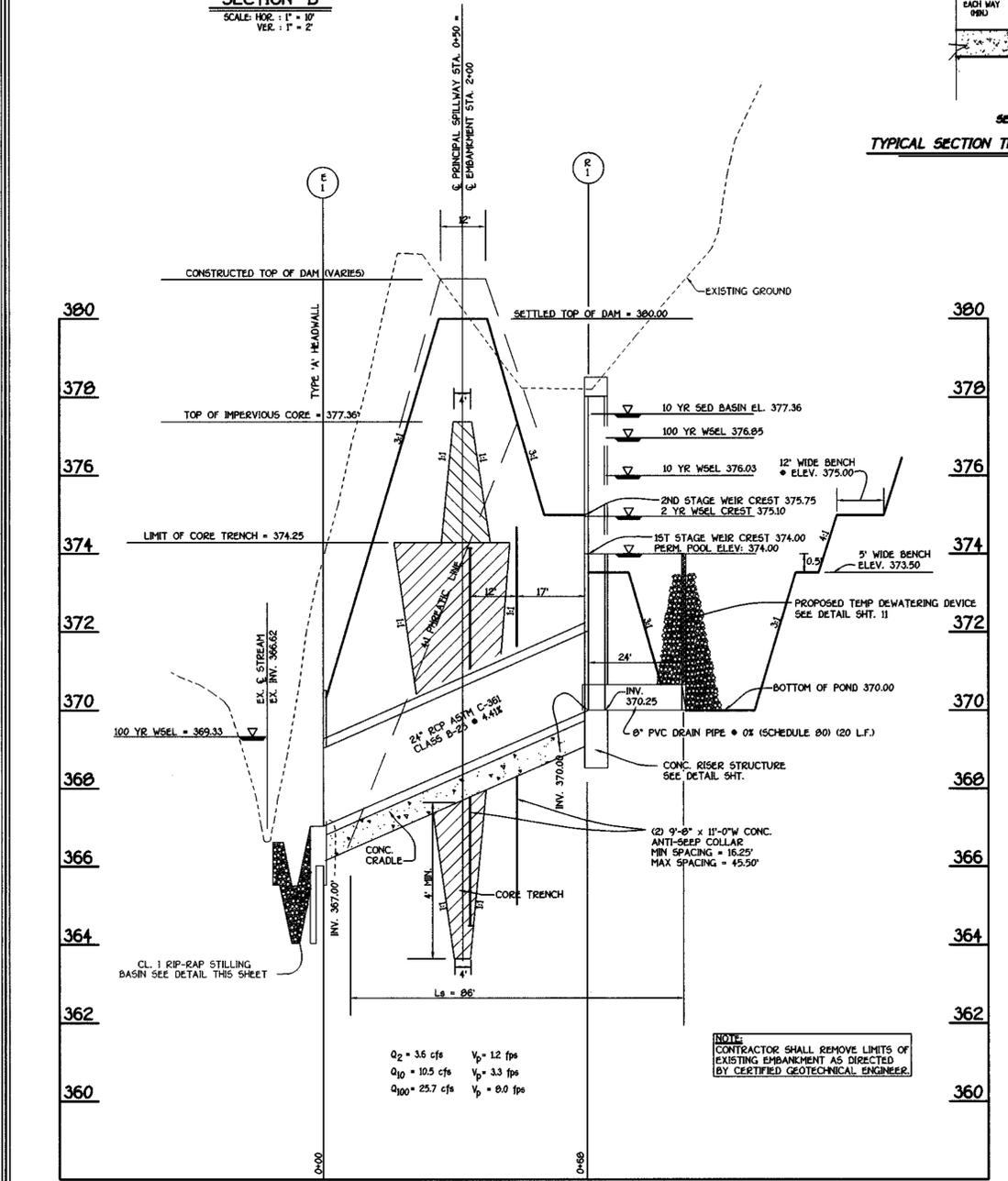
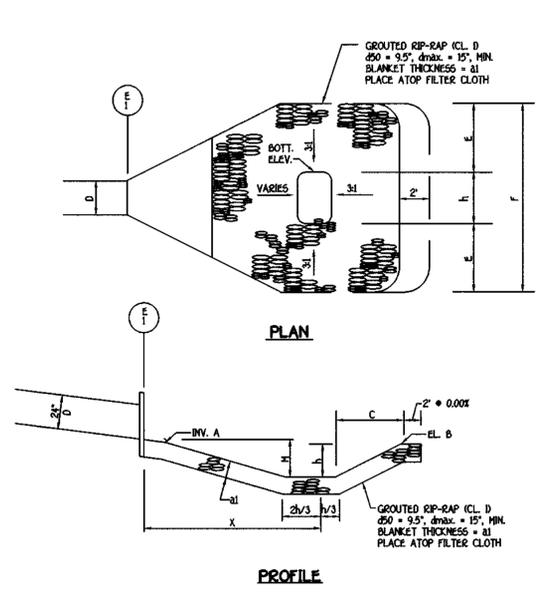
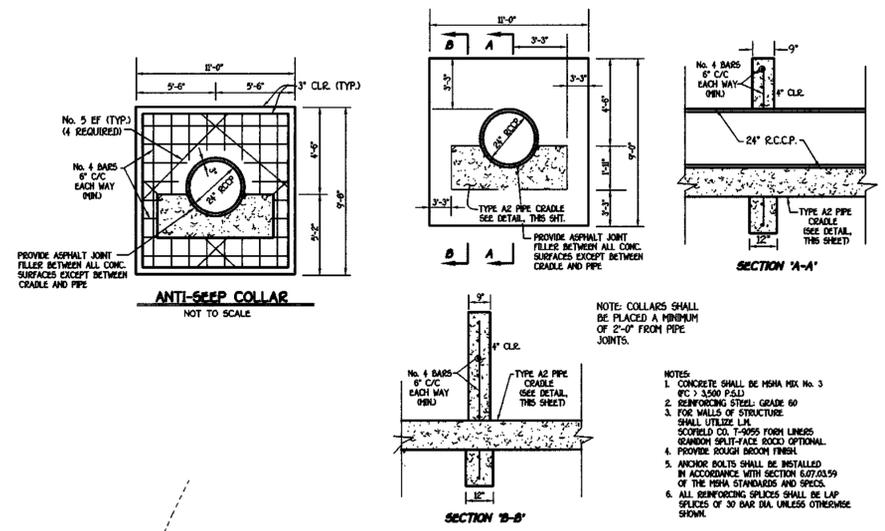
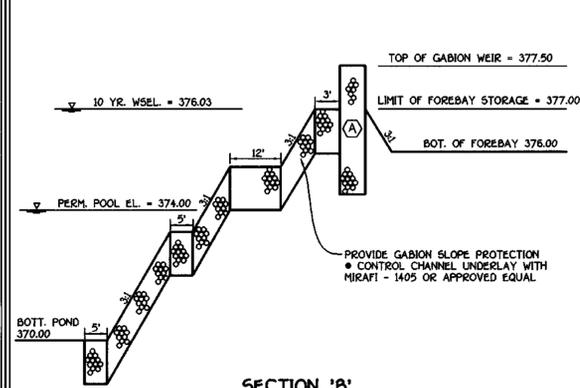
**STATE OF MARYLAND**  
 PROFESSIONAL ENGINEER  
 ALDO M. VITUCCI  
 4-20-00

**OWNERS**  
 MRS. HELEN FEARING IRWIN  
 805 RIVER ROAD  
 SYKESVILLE, MARYLAND 21784  
 AND  
 MR. HARRY GRANT AND MRS. MARY GRANT  
 4445 STONECREST DRIVE  
 ELLICOTT CITY, MARYLAND 21043

**DEVELOPER**  
 STONECREST MANOR, L.L.C.  
 C/O LAND DESIGN AND DEVELOPMENT, INC.  
 6000 MAIN STREET  
 ELLICOTT CITY, MARYLAND 21043

**STORMWATER MANAGEMENT NOTES AND DETAILS**  
**STONE MANOR SUBDIVISION**  
**SECTION ONE**  
**LOTS 1 THRU 31**  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2D  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND)

DATE: MAY 21, 2001  
 SHEET 8 OF 14



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 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: Bruce Taylor, manager Date: 10/2/00  
 Printed Name Of Developer: Bruce Taylor, manager  
 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 Regulations Of The Howard Soil Conservation District. I Have Notified The Developer That 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 Days Of Completion.

Signature Of Engineer: Alpo M. Vitucci Date: 1-20-00  
 Printed Name Of Engineer: Alpo M. Vitucci  
 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.

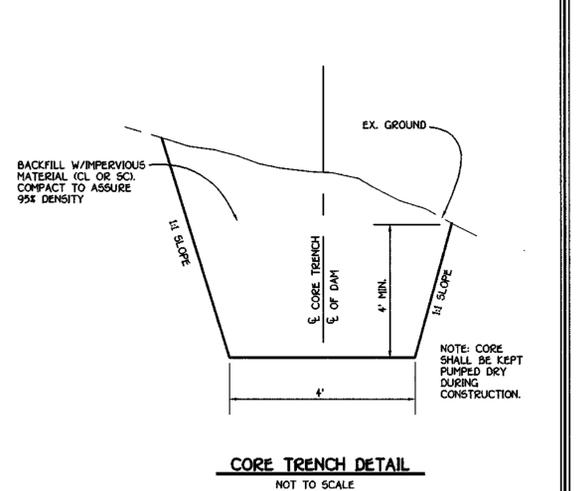
Signature: Jim Nguyen/CS Date: 6/25/01  
 US Department of Agriculture Conservation Service  
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: Andrew M. Daniels Date: 6-12-01  
 Howard Soil Conservation District  
 Approved Department Of Public Works  
 Chief Bureau Of Highways  
 Approved Department Of Planning And Zoning  
 Signature: Chris Chantia Date: 6/26/01  
 Chief, Division Of Land Development  
 Signature: John Dammann Date: 6/6/01  
 Chief, Development Engineering Division

AS-BUILT CERTIFICATION  
 I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and meets the approved plans and specifications.

Signature: \_\_\_\_\_ P.E. No. \_\_\_\_\_  
 Date: \_\_\_\_\_

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK • 1072 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21114  
 (410) 461-2855

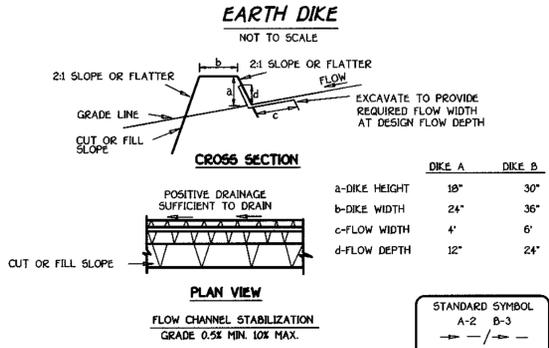
**STATE OF MARYLAND**  
 PROFESSIONAL ENGINEER  
 No. 21148  
 Alpo M. Vitucci 4-20-00

**OWNERS**  
 MRS. HELEN FEARING IRWIN  
 805 RIVER ROAD  
 SYKESVILLE, MARYLAND 21784  
 AND  
 MR. HARRY GRANT AND MRS. MARY GRANT  
 445 STONECREST DRIVE  
 ELLICOTT CITY, MARYLAND 21043

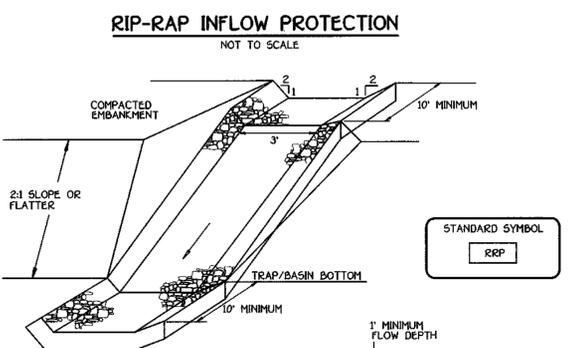
**DEVELOPER**  
 STONECREST MANOR, L.L.C.  
 c/o LAND DESIGN AND DEVELOPMENT, INC.  
 8000 MAIN STREET  
 ELLICOTT CITY, MARYLAND 21043

S.W.M. NOTES AND DETAILS  
 STONE MANOR SUBDIVISION  
 SECTION ONE  
 LOTS 1 THRU 31  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2)  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 ZONED R-20  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 9 OF 14

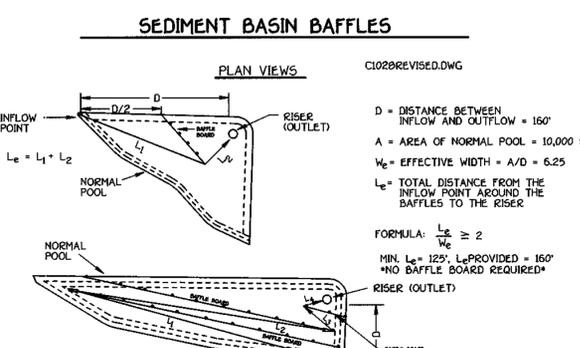




1. Seed and cover with straw mulch.  
2. Seed and cover with Erosion Control Matting or line with sod.  
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum
- Construction Specifications**
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
  - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
  - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
  - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
  - The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
  - Fill shall be compacted by earth moving equipment.
  - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
  - Inspection and maintenance must be provided periodically and after each rain event.



- Construction Specifications**
- Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3" (min) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 10".
  - Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
  - Entrance and exit sections shall be installed as shown on the detail section.
  - Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
  - Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
  - Rip-rap should blend into existing ground.
  - Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.



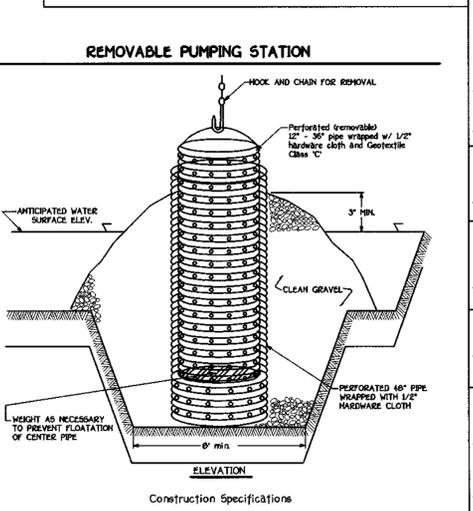
- Construction Specifications**
- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
  - After installing the outer pipe, backfill around outer pipe with 2" aggregate.
  - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slots or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
  - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

**AS-BUILT CERTIFICATION**

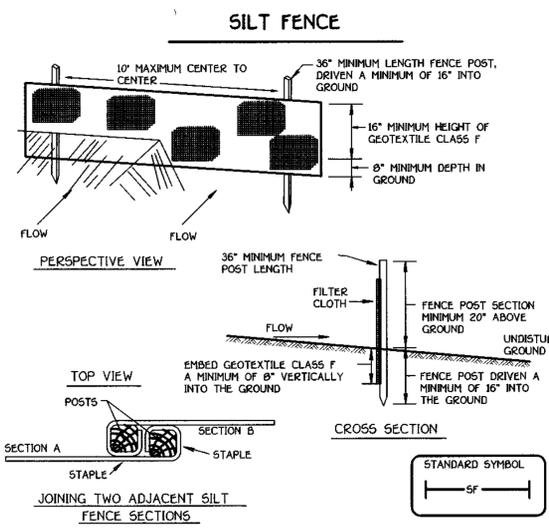
I hereby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature \_\_\_\_\_ P.E. No. \_\_\_\_\_  
Date \_\_\_\_\_

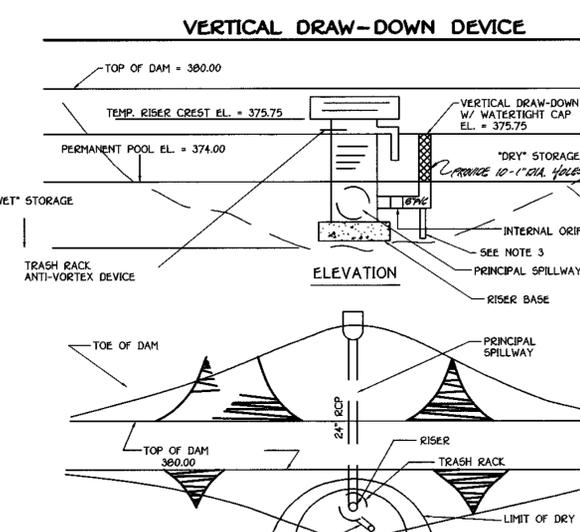
Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



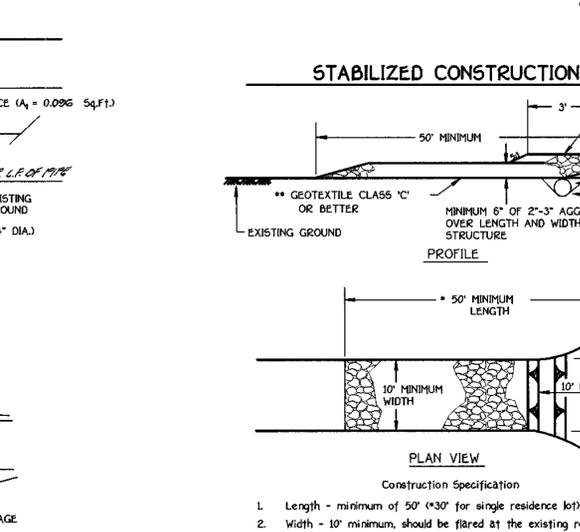
- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
  - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
  - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
  - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:



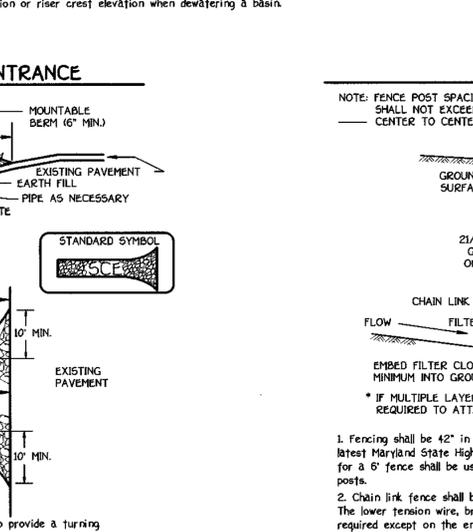
- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- |                      |                           |                |
|----------------------|---------------------------|----------------|
| Tensile Strength     | 50 lbs/in (min)           | Test: MSMT 509 |
| Tensile Modulus      | 20 lbs/in (min)           | Test: MSMT 509 |
| Flow Rate            | 0.3 gal/ft / minute (max) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min)                 | Test: MSMT 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
  - Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.



- Construction Specifications**
- PERFORATIONS IN THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE.
  - THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF THE INTERNAL ORIFICE.
  - THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.
  - PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE, OR 1" BY 4" SQUARE OR 2" ROUND WOODEN POSTS SET 3" MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 12 GAUGE MINIMUM WIRE.



- Construction Specifications**
- Length - minimum of 50' (\*30' for single residence lot).
  - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
  - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
  - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
  - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
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  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
  - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- |                      |                           |                |
|----------------------|---------------------------|----------------|
| Tensile Strength     | 50 lbs/in (min)           | Test: MSMT 509 |
| Tensile Modulus      | 20 lbs/in (min)           | Test: MSMT 509 |
| Flow Rate            | 0.3 gal/ft / minute (max) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min)                 | Test: MSMT 322 |

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 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Bruce Taylor, Manager* Date: 4/2/00

Printed Name Of Developer: Bruce Taylor, Manager

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 And The Howard Soil Conservation District That I Am 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 Of Engineer: *Alfred M. Vitucci* Date: 4-20-00

Printed Name Of Engineer: Alfred M. Vitucci

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: *Jim Myers* Date: 6/25/01

USDA Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *John S. Kelly* Date: 6/25/01

Howard Soil Conservation District

Approved: Department Of Public Works  
Signature: *Andrew M. Dwyer* Date: 6-12-01  
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning  
Signature: *Carol R. Banta* Date: 6/25/11  
Chief, Division Of Land Development

Signature: *Alfred M. Vitucci* Date: 6/14/01  
Chief, Development Engineering Division

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 3872 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 481-2295

**STATE OF MARYLAND**  
ALFRED M. VITUCCI  
REGISTERED PROFESSIONAL ENGINEER

Alfred M. Vitucci 4-20-00

**OWNERS**

MRS. HELEN FEARING IRWIN  
805 OIVER ROAD  
SYKESVILLE, MARYLAND 21784  
AND  
MR. HARRY GRANT AND MRS. MARY GRANT  
4445 STONECREST DRIVE  
ELICOTT CITY, MARYLAND 21043

**DEVELOPER**

STONECREST MANOR, L.L.C.  
805 OIVER ROAD  
C/O LAND DESIGN AND DEVELOPMENT, INC.  
8000 MAIN STREET  
ELICOTT CITY, MARYLAND 21043

**SEDIMENT AND EROSION CONTROL DETAILS AND NOTES**

**STONE MANOR SUBDIVISION**

**SECTION ONE**

**LOTS 1 THRU 31**

(A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAN NO. 10146 AND TAX PARCEL 21 TAX MAP 31, PARCELS 2 & 805, GRID 1 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND DATE: MAY 21, 2001 SHEET 11 OF 14

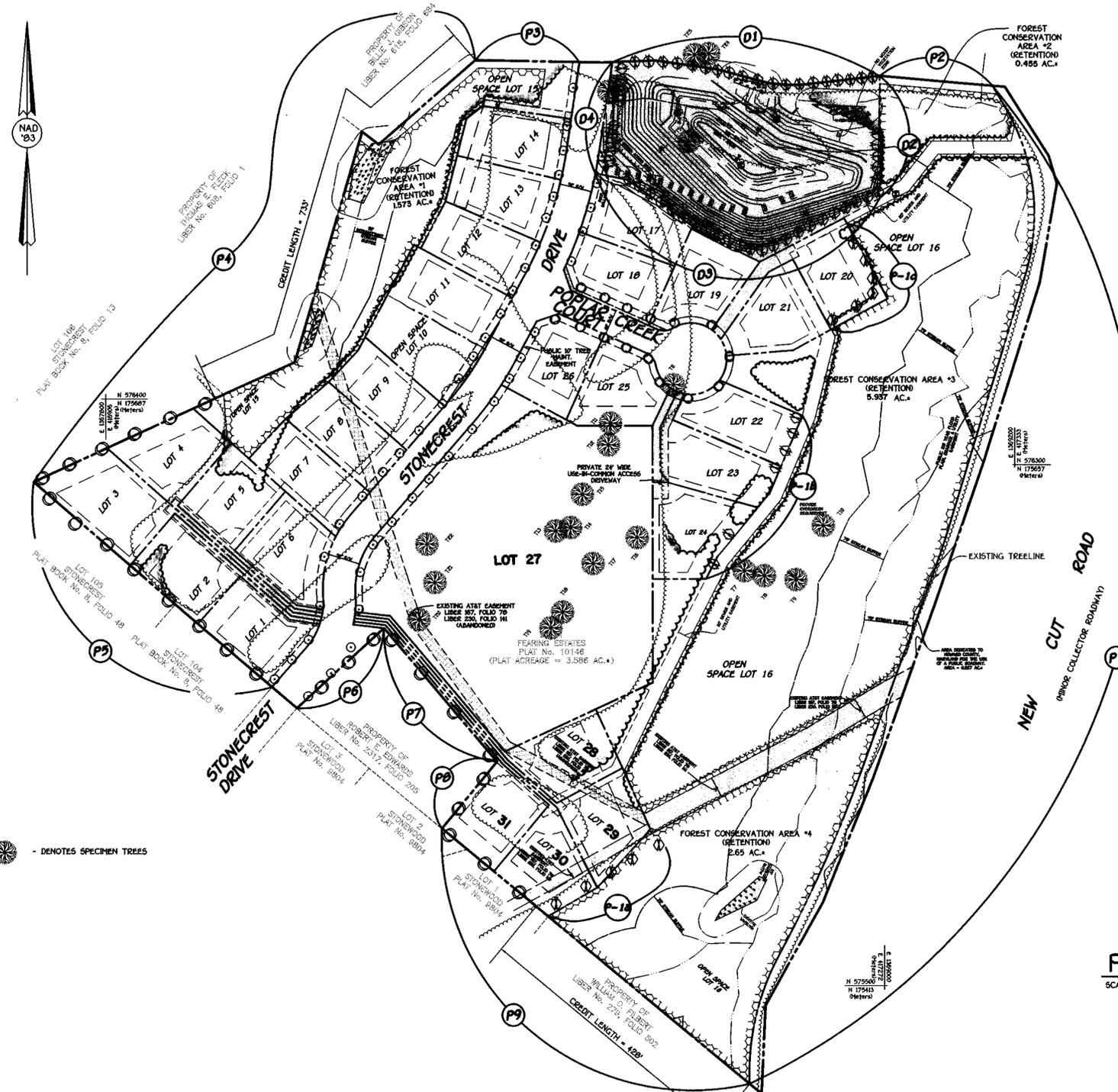
STREET TREE SCHEDULE				
SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
⊙	46	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
⊙	15	PLATANUS OCCIDENTALIS 'BLOODGOOD' LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

NOTE: FINANCIAL SURETY FOR THE 61 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$18,300.00.

Approved: Department of Public Works  
*Richard M. Queller*  
 Chief, Bureau of Highways 6-12-01  
 Date

Approved: Department of Planning And Zoning  
*David Hamilton*  
 Chief, Division of Land Development 6/14/01  
 Date

*Michael Dammus*  
 Chief, Development Engineering Division 6/14/01  
 Date



SCHEDULE A PERIMETER LANDSCAPE EDGE						
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED AND PROVIDED SHADE TREES EVERGREEN TREES SHRUBS
P-1	ADJACENT TO ROADWAY	B	1610'	YES (610')	NO	0 - -
P-2	ADJACENT TO PERIMETER	A	175'	YES (175')	NO	0 - -
P-3	ADJACENT TO PERIMETER	A	160'	YES (160')	NO	0 - -
P-4	ADJACENT TO PERIMETER	A	1040'	YES (733')	NO	6 - -
P-5	ADJACENT TO PERIMETER	A	484'	NO	NO	0 - -
P-6	ADJACENT TO PERIMETER	A	102'	NO	NO	3 - -
P-7	ADJACENT TO PERIMETER	A	269'	NO	NO	4 - -
P-8	ADJACENT TO PERIMETER	A	133'	NO	NO	2 - -
P-9	ADJACENT TO PERIMETER	A	615'	YES (420')	NO	3 - -
P-1a	ADJACENT TO ROAD	B	210'	YES (FOR SHADE)	NO	0 5 -
P-1b	ADJACENT TO ROAD	B	230'	YES (FOR SHADE)	NO	0 6 -
P-1c	ADJACENT TO ROAD	B	230'	YES (FOR SHADE)	NO	0 6 -

LANDSCAPE SCHEDULE				
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
25	⊙	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2"-3"
49	⊙	PINUS STROBUS	WHITE PINE	6'-8' HT.
26	⊙	PLATANUS OCCIDENTALIS 'BLOODGOOD'	LONDON PLANETREE	2 1/2"-3"

NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 18.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 100 LANDSCAPING TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$22,650.00.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING				
LINEAR FEET OF PERIMETER	D1: 417'	D2: 108'	D3: 503'	D4: 173'
NUMBER OF TREES REQUIRED:				
SHADE TREES	9	2	10	4
EVERGREEN TREES	11	3	13	5
CREDIT FOR EXISTING VEGETATION (NO, YES AND X)	NO	YES (87')	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND X)	NO	NO	NO	NO
NUMBER OF TREES PROVIDED:				
SHADE TREES	9	2	10	4
EVERGREEN TREES	11	3	13	5
OTHER TREES (2:1 SUBSTITUTION)				

PLAN  
SCALE: 1" = 100'

STATE OF MARYLAND  
 PROFESSIONAL ENGINEERS  
 No. 20716  
*Walter M. Vetter*  
 10-3-00

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 481-3355

**OWNERS**  
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 AND  
 MR. HARRY GRANT AND MRS. MARY GRANT  
 4445 STONECREST DRIVE  
 ELICOTT CITY, MARYLAND 21043

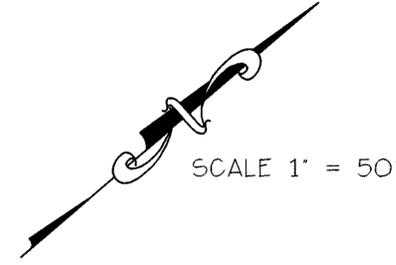
**DEVELOPER**  
 STONECREST MANOR, L.L.C.  
 c/o LAND DESIGN AND DEVELOPMENT, INC.  
 8000 MAIN STREET  
 ELICOTT CITY, MARYLAND 21043

LANDSCAPE PLAN  
**STONE MANOR**  
 SECTION ONE  
 LOTS 1 THRU 31  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2)  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 12 OF 14

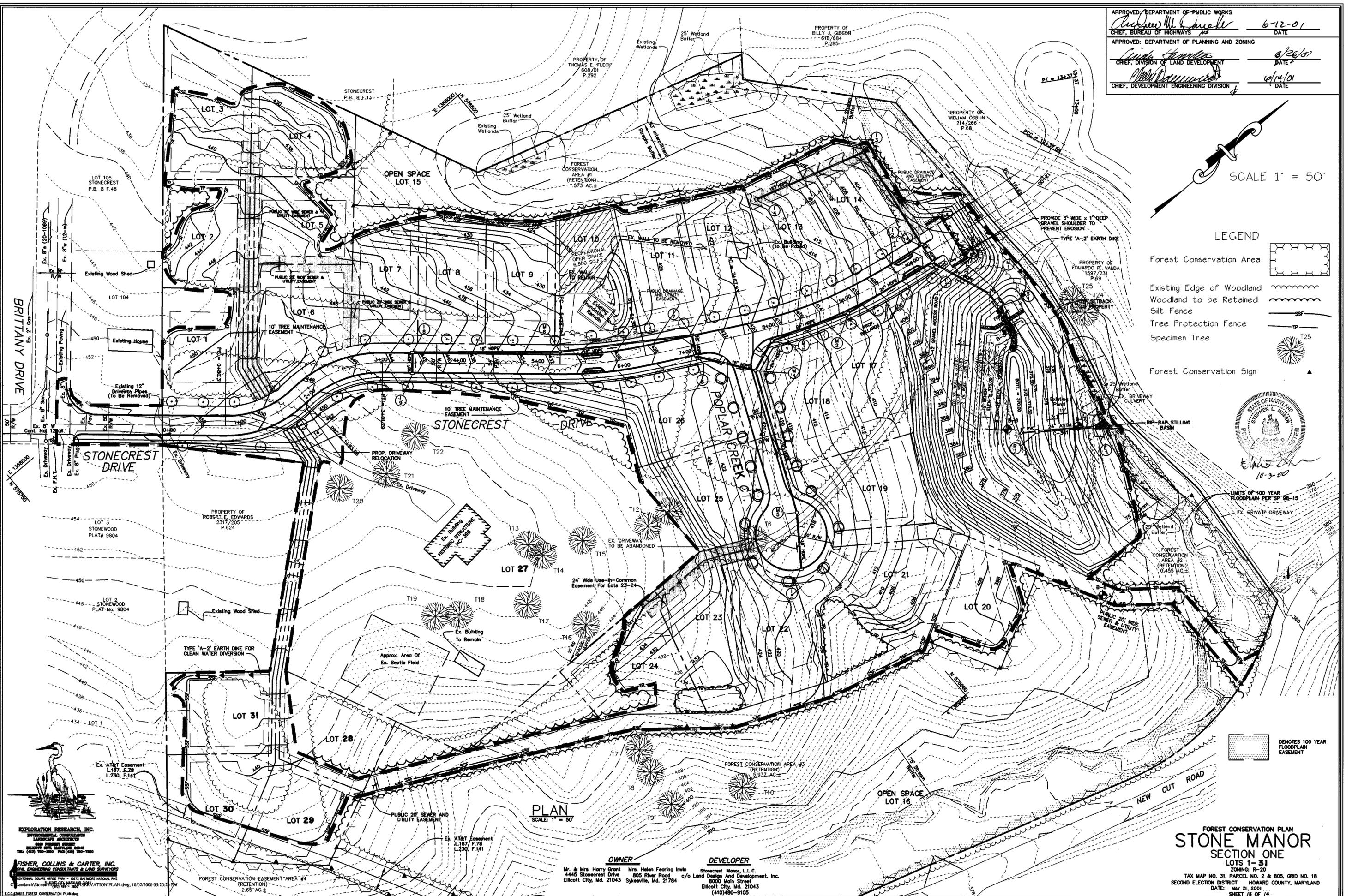
APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Richard M. Casella* 6-12-01  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 6/26/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Walter Drummond* 6/14/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



- LEGEND**
- Forest Conservation Area
  - Existing Edge of Woodland
  - Woodland to be Retained
  - Silt Fence
  - Tree Protection Fence
  - Specimen Tree
  - Forest Conservation Sign



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

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 1000 HANOVER AVENUE  
 BALTIMORE, MD 21201  
 TEL: (410) 528-3300 FAX: (410) 528-3300

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 1000 HANOVER AVENUE  
 BALTIMORE, MD 21201  
 TEL: (410) 528-3300 FAX: (410) 528-3300

**OWNER**  
 Mr. & Mrs. Harry Grant Mrs. Helen Fearing Irwin  
 4445 Stonecrest Drive 805 River Road c/o Land Design And Development, Inc.  
 Ellicott City, Md. 21043 Sykesville, Md. 21784 8000 Main Street  
 Ellicott City, Md. 21043  
 (410)480-9105

**DEVELOPER**  
 Stonecrest Manor, L.L.C.  
 Land Design And Development, Inc.  
 8000 Main Street  
 Ellicott City, Md. 21043  
 (410)480-9105

**FOREST CONSERVATION PLAN**  
**STONE MANOR**  
**SECTION ONE**  
 LOTS 1-31  
 ZONING: R-20  
 TAX MAP NO. 31, PARCEL NO. 2 & 805, GRID NO. 18  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 18 OF 14

**NARRATIVE**

This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Manual and the 1991 Forest Conservation Act.

The existing site consists of 30.81 acres. Lot 28 which surrounds the existing historic dwelling is not included in the development parcel. Floodplain easement areas consisting of 3.38 acres are also excluded from net tract area. The site has 16.57 acres of existing forest within the net tract area. 8.80 acres of existing forest will be cleared. Retention areas have been prioritized to provide protection to steep slopes and highly erodible soils. 10.62 acres of woodland will be retained under easement in these areas. However only 7.77 acres is credited towards conservation requirements as the remaining 2.85 acres of easement area is located within the floodplain. The area retained is greater than the Break-Even point, so no reforestation is required.

**FOREST CONSERVATION WORKSHEET**

	Acres
Net Tract Area	(1/100 ac.)
A. Total Tract Area	30.814
B. Area Within 100 Year Floodplain	3.288
C. Other deductions	0
D. Net Tract Area	27.526
Zoning Use Category: High Density Residential	
Land Use Category	
E. Afforestation Minimum (15% x D)	4.12
F. Conservation Threshold (20% x D)	5.51
Existing Forest Cover	
G. Existing Forest on Net Tract Area	16.57
H. Forest Area Above Afforestation Threshold	12.44
I. Forest Area Above Conservation Threshold	11.07
Break-even Point	
J. Forest Retention Above Threshold with no Mitigation	7.72
K. Clearing Permitted without Mitigation	8.85
Proposed Forest Clearing	
L. Forest Areas to be Cleared	8.80
M. Forest Areas to be Retained	7.77
Planting Requirements	
N. Reforestation for Clearing Above Threshold	2.20
P. Reforestation for Clearing Below the Threshold	0
Q. Credit for Retention Above Conservation Threshold	2.27
R. Total Reforestation Required	0
S. Total Afforestation Required	0
T. Total Reforestation and Afforestation Requirement	0

**FOREST CONSERVATION AREA SUMMARY**

Conservation Area #1	1.44 Ac.
Conservation Area #2	0.22 Ac.
Conservation Area #3	4.44 Ac.
Conservation Area #4	1.67 Ac.
<b>Total Conservation Area</b>	<b>7.77 Ac.</b>

\*NOTE: These areas reflect the Easement area less the area within the floodplain.



**MANAGEMENT NOTES FOR FOREST RETENTION AREAS**

- All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
- After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place on-site, a preconstruction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate County inspectors shall attend.
- Tree protection for all retained areas:
  - All retention areas within 50 feet of proposed construction activities shall be protected by highly visible, well anchored temporary protection devices (silt fence or blaze orange plastic mesh).
  - All protection devices shall be in place prior to any grading or land clearing.
  - All protection devices shall be properly maintained and shall remain in place until construction has ceased.
  - Attachment of signs, fencing or other objects to trees is prohibited.
  - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.

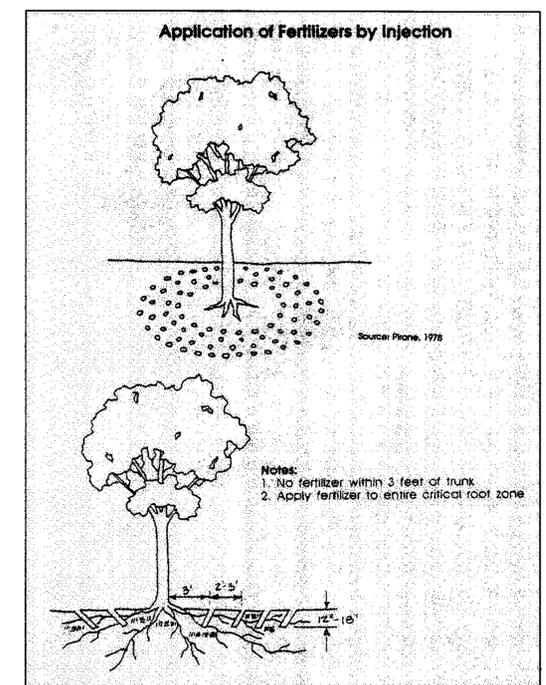
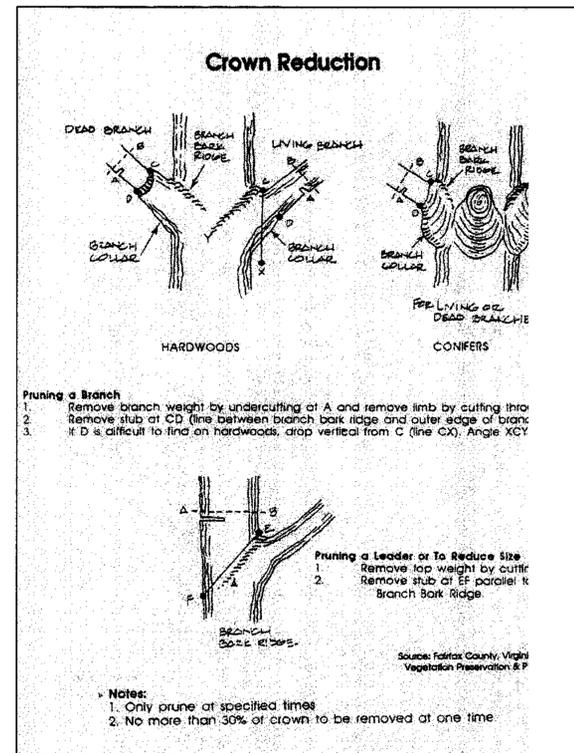
4. If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:

- Prune roots with a clean cut using proper pruning equipment (see root pruning detail)
- Water and fertilize as needed.

5. During construction phase, monitor and correct condition of retained trees for: soil compaction, root injury, flood conditions, drought conditions and other stress signs.

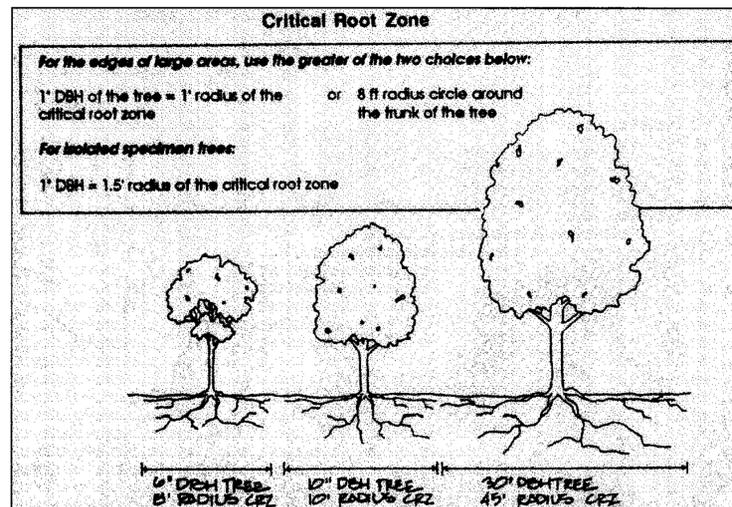
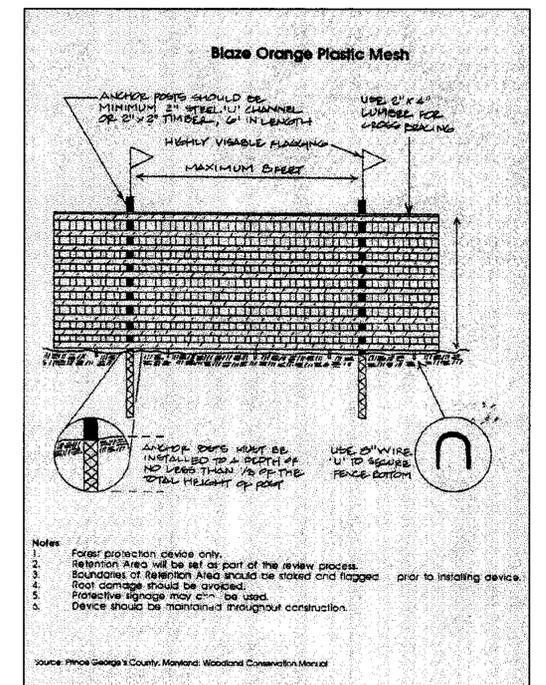
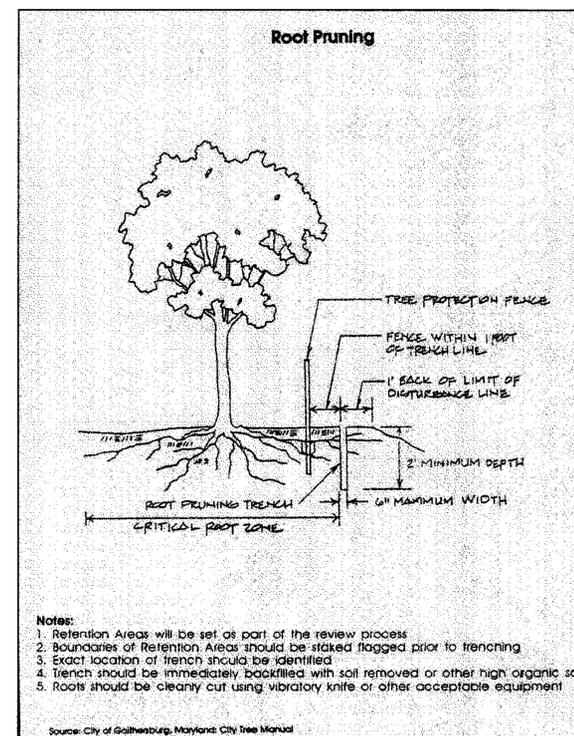
**6. Post-Construction Phase**

- Inspect existing trees around the perimeter of disturbed limits for evidence of soil compaction, root injury, limb injury, or other stress signs and correct with proper management techniques such as root or limb pruning, soil aeration, fertilization, crown reduction or watering. Inspection and evaluation shall be performed by a licensed arborist.
- Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
- No burial of discarded materials will occur onsite within the conservation areas.
- No burning within 100 feet of wooded area.
- All temporary forest protection structures will be removed after construction.
- Following completion of construction, prior to use, the County inspector shall inspect the entire area.



**SPECIMEN TREE LIST**

Tree#	DBH	Botanical Name	Common Name	Condition	Remarks
1	31	Liriodendron tulipifera	Tulip Poplar	Poor	Retain
2	42	Liriodendron tulipifera	Tulip Poplar	Poor	Retain
3	42	Liriodendron tulipifera	Tulip Poplar	Poor	Retain
4	35	Liriodendron tulipifera	Tulip Poplar	Poor	Retain
5	37	Quercus alba	White Oak	Poor	Remove
6	35	Quercus cocinea	Red Oak	Poor	Remove
7	34	Acer saccharinum	Red Maple	Poor	Retain
8	32	Liriodendron tulipifera	Tulip Poplar	Fair	Retain
9	31	Liriodendron tulipifera	Tulip Poplar	Fair	Retain
10	36	Liriodendron tulipifera	Tulip Poplar	Fair	Retain
11	32	Acer rubrum	Red Maple	Fair	Retain
12	31	Pinus strobus	White Pine	Fair	Offsite
13	34	Tilia americana	American Linden	Poor	Offsite
14	34	Tilia americana	American Linden	Fair	Offsite
15	34	Juglans nigra	Black walnut	Fair	Offsite
16	35	Liriodendron tulipifera	Tulip Poplar	Fair	Offsite
17	35	Juglans nigra	Black walnut	Fair	Offsite
18	35	Juglans nigra	Black walnut	Fair	Offsite
19	37	Tilia americana	American Linden	Fair	Offsite
20	30	Larix laricina	Larch	Fair	Offsite
21	35	Acer platanoides	Norway Maple	Poor	Offsite
22	37	Larix laricina	Larch	Fair	Offsite
23	38	Quercus alba	White Oak	Poor	Remove
24	34	Acer platanoides	Norway Maple	Fair	Offsite
25	35	Liriodendron tulipifera	Tulip Poplar	Fair	Offsite



APPROVED: DEPARTMENT OF PUBLIC WORKS  
 [Signature] 6-12-01  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/20/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 6/14/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



FOREST CONSERVATION PLAN  
**STONE MANOR**  
 SECTION ONE  
 LOTS 1-31  
 ZONING: R-29  
 TAX MAP NO. 31, PARCEL NO. 2 & 805, GRID NO. 18  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 14 OF 14

SHEET INDEX	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	STONECREST DRIVE PLAN & PROFILE
3	POPLAR CREEK COURT PLAN & PROFILE
4	STREET TREE GRADING & SEDIMENT CONTROL PLAN
5	DRAINAGE AREA MAP
6	STORM DRAIN PROFILES
7	STORM DRAIN PROFILES
8	SWM DETAILS, NOTES & SPECIFICATIONS
9	SWM DETAILS, NOTES & SPECIFICATIONS
10	SEDIMENT CONTROL, NOTES & SPECIFICATIONS
11	SEDIMENT CONTROL, NOTES & SPECIFICATIONS
12	LANDSCAPE PLAN
13	FOREST CONSERVATION PLAN
14	FOREST CONSERVATION PLAN

# FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

## STONE MANOR

### SECTION ONE LOTS 1-31

(A RESUBDIVISION OF LOT 1, FEARING ESTATES  
- PLAT No. 10146 AND TAX PARCEL 2)

ZONING: R-20

TAX MAP No. 31, GRID 18, PARCELS No. 2 & 805

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Richard M. Sauer* 6-12-01  
CHIEF, BUREAU OF HIGHWAYS  
DATE

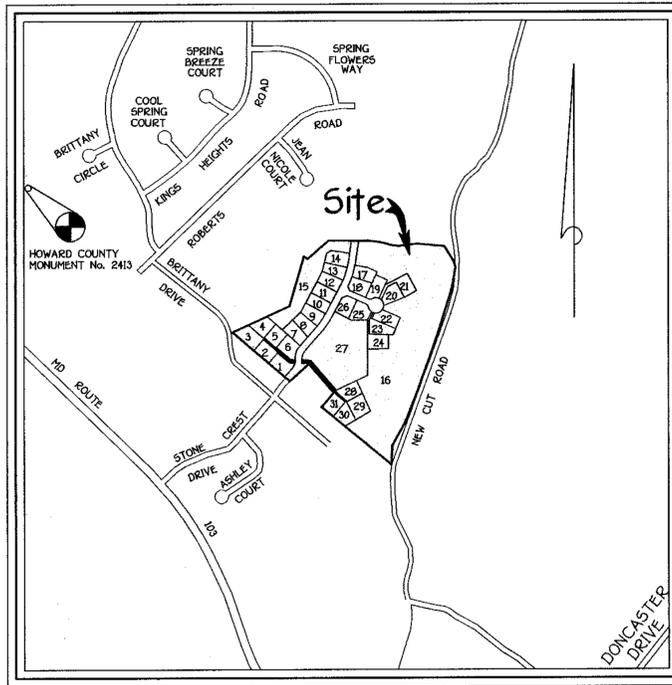
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hamlin* 6/10/01  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE

*William J. ...* 6/14/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE

REVISIONS		
NO.	DESCRIPTION	DATE
1	Raised Profile Grade Lines of Stone Crest Dr & Poplar Creek Ct, site grading as req'd. Added 15" x 18" storm drainage system bet. 1-9 & 1-11; revised Drainage Area Map, & Pipe & Structure Schedules as req'd.	10-1-04

ROAD CLASSIFICATION		
ROAD NAME	CLASSIFICATION	R/W
STONECREST DRIVE	PUBLIC ACCESS STREET	50'
POPLAR CREEK COURT	PUBLIC ACCESS PLACE	40'

TRAFFIC CONTROL SIGNS				
STREET NAME	CL. STATION	OFFSET	POSTED SIGN	SIGN CODE
STONECREST DRIVE	0+50	15' R	SPEED LIMIT 25	R2-1
STONECREST DRIVE	1+32	17' L	STOP	R1-1
STONECREST DRIVE	1+63	17' R	STOP	R1-1
STONECREST DRIVE	4+40	16' L	SPEED LIMIT 25	R2-1
STONECREST DRIVE	5+40	12' R	ROAD NARROWS	W5-1
STONECREST DRIVE	6+10	12' L	ROAD NARROWS	W5-1
Poplar Creek Court	0+10	11.5' L	Stop	R1-1



### VICINITY MAP

SCALE: 1" = 600'

## SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY PREPARED BY WINGS AERIAL MAPPING CO., INC., FLOWN IN JULY 1997 AND FIELD RUN DATA BY FISHER, COLLINS & CARTER, INC., OCTOBER 1997.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT Nos. 21E2 AND 21E3 WERE USED FOR THIS PROJECT.  
2411 N 577298.662 437.918' 2413 N 580648.910 404.518'  
E 1366075.175 E 1364974.459
- WATER IS PUBLIC BY CONT. No. 14-3895-D.
- SEWER IS PUBLIC BY PROPOSED NEW CUT ROAD SEWAGE PUMPING STATION AND CONT. No. 14-3899-D.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY LEE CUNNINGHAM & ASSOCIATES, DATED JULY, 1997.
- BACKGROUND INFORMATION:  
A. SUBDIVISION NAME: STONE MANOR  
B. TAX MAP No.: 31, GRID: 1  
C. PARCEL No.: 2 & 805  
D. ZONING: R-20  
E. ELECTION DISTRICT: SECOND  
F. TOTAL TRACT AREA: 30.81 AC. +  
G. NO. OF BUILDABLE LOTS: 28  
H. NO. OF PRESERVATION PARCELS: 0  
I. NO. OF OPEN SPACE LOTS: 3  
J. PRELIMINARY PLAN APPROVAL DATE: MAY 14, 1999  
K. PREVIOUS FILE No.: SP-98-15  
L. TOTAL AREA OF OPEN SPACE REQUIRED: (30.81 AC. x 30%) = 9.24 AC. +  
M. TOTAL AREA OF OPEN SPACE PROVIDED: 14.824 AC. +
- REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE PIPE / FLAG STEM AND THE ROAD R/W AND NOT ONTO THE PIPE / FLAG STEM DRIVEWAY.
- NO CEMETERIES EXIST ON THE PROPERTY.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 98% COMPACTION OF ASTM T-180.
- THE WETLAND AND FOREST STAND DELINEATION WAS PREPARED BY EXPLORATION RESEARCH, INC. AND APPROVED UNDER SP98-15.
- THE FOREST CONSERVATION EASEMENTS HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.  
THE FOREST CONSERVATION OBLIGATION WILL BE MET BY 10.815 ACRES OF RETENTION ON OPEN SPACE LOT 15 AND 16. THE SURETY AMOUNT WILL BE \$99,046.00 for the required 7.7 acres retention.
- STORMWATER MANAGEMENT FACILITY:  
TYPE - RETENTION FACILITY FOR QUANTITY AND QUALITY  
OWNER - PUBLIC  
MAINTENANCE - PUBLIC
- THIS PROJECT IS SUBJECT TO WP-98-121. THE REQUEST TO WAIVE SECTION 16.116.1 AND 16.116.2. TO ALLOW GRADING WITHIN WETLAND AND STREAM BUFFERS FOR THE PURPOSE OF UPGRADING AN EXISTING POND INTO A SWM POND THAT MEETS MD-37B SPECIFICATIONS WAS APPROVED ON JUNE 23, 1998. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:  
a) THIS APPROVAL APPLIES ONLY TO THE RECONSTRUCTION OF THE EXISTING POND FOR SWM.  
b) DISTURBANCE SHALL BE TO THE MINIMUM EXTENT NECESSARY AND SHALL BE SHOWN AS A LIMIT OF DISTURBANCE ON CONSTRUCTION DRAWINGS.  
c) PROVIDE COPIES OF ALL REQUIRED PERMITS PRIOR TO APPROVAL OF CONSTRUCTION PLANS.
- SOILS INFORMATION TAKEN FROM SOIL MAP No. 20, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY, 1968 1556L.
- HISTORIC STRUCTURE HD-398 (BON AIR MANOR) IS TO REMAIN ON SITE AS PART OF THE PROPOSED LOT 28. OTHER ASSOCIATED HISTORIC STRUCTURES WILL REMAIN ON OPEN SPACE LOT 10. THIS INFORMATION IS PER THE HOWARD COUNTY HISTORIC INVENTORY LISTING.
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL, STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THIS PROJECT IS SUBJECT TO MDE PERMIT/TRACKING NUMBER 1999E1721 AND WMA No. 99-PO-2009.
- THE PERIMETER LANDSCAPING SURETY IN THE AMOUNT OF \$22,450.00 SHOWN ON SHEET 12 WILL BE PART OF THE DEVELOPER'S AGREEMENT.
- OPEN SPACE LOTS 15 AND 16 TO BE OWNED AND MAINTAINED BY THE HOWARD COUNTY DEPARTMENT OF RECREATION & PARKS.
- OPEN SPACE LOT 10 TO BE OWNED AND MAINTAINED BY THE STONE MANOR HOMEOWNERS' ASSOCIATION FOR THE BENEFIT OF THE RESIDENTS OF STONE MANOR, SECTION ONE SUBDIVISION.

STREET LIGHT CHART				
DWG. No.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2	STONECREST DRIVE	C.L. STA. 0+95	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 2+67	15' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 9+70	0' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 7+25	18' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
2	STONECREST DRIVE	C.L. STA. 9+95	15' R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
3	POPLAR CREEK COURT	C.L. STA. 2+45	3' L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL OFFICE: 10272 BALDWIN NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
410-481-2955

OWNER  
Mrs. Helen Fearing Irwin  
805 River Road  
Sykesville, Md. 21784

OWNER  
Mr. Harry Grant &  
Mrs. Betty Grant  
4445 Stonecrest Drive  
Ellicott City, Md. 21043

DEVELOPER  
Stonecrest Manor, LLC  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Md. 21043  
(410)860-9105

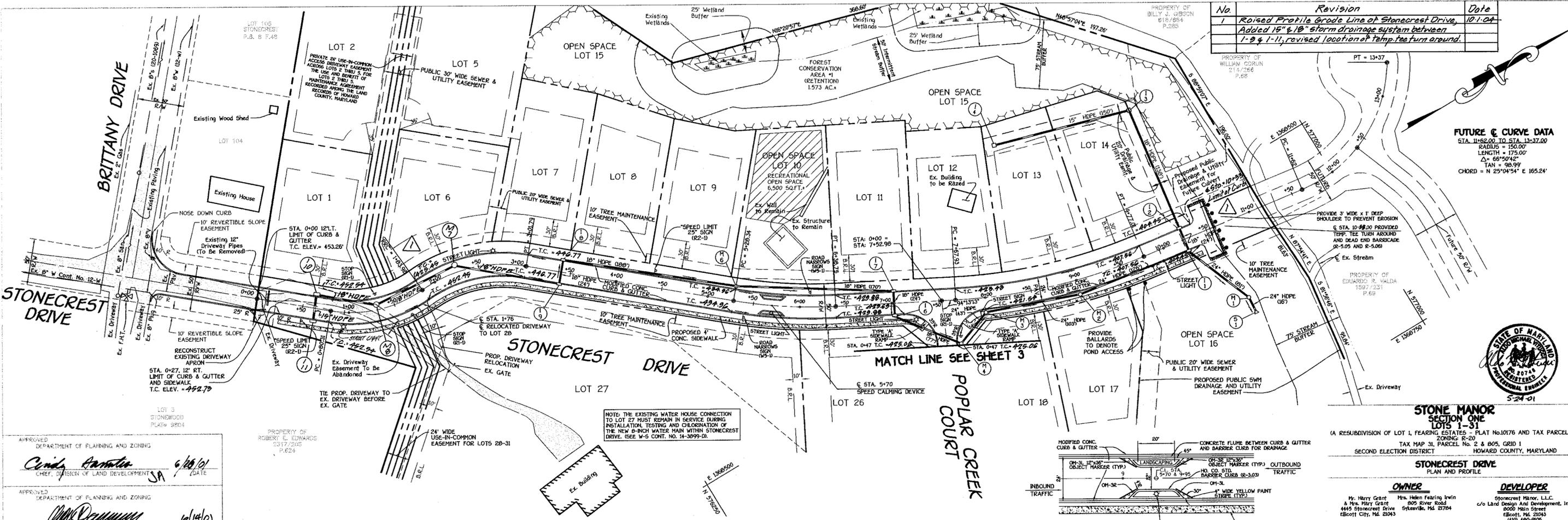


### FINAL PLAN STONE MANOR SECTION ONE LOTS 1 THRU 31

(A RESUBDIVISION OF LOT 1, FEARING ESTATES - PLAT No. 10146 AND TAX PARCEL 2)  
TAX MAP 31, PARCELS No. 2 AND 805, GRID 1  
SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
DATE: MAY 21, 2001  
SHEET 1 OF 14

No.	Revision	Date
1	Raised Profile Grade Line of Stonecrest Drive, Added 15" & 18" storm drainage system between 1-2 & 1-11, revised location of temp. tee turn around.	10-1-04

**FUTURE CURVE DATA**  
 STA. 11+62.00 TO STA. 13+37.00  
 RADIUS = 150.00'  
 LENGTH = 175.00'  
 $\Delta = 66^{\circ}50'42''$   
 TAN = 98.99'  
 CHORD = N 25°04'54" E 165.24'

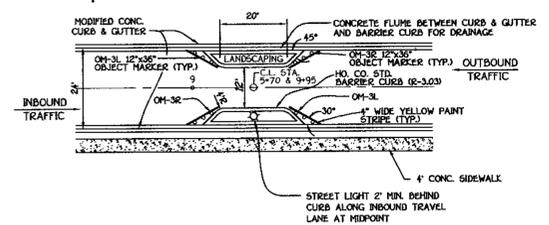


APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hamilton* 6/16/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT SA DATE

APPROVED  
 DEPARTMENT OF PLANNING AND ZONING  
*William M. Deneke* 6/14/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William M. Deneke* 6-12-01  
 SHEET, BUREAU OF HIGHWAYS DATE

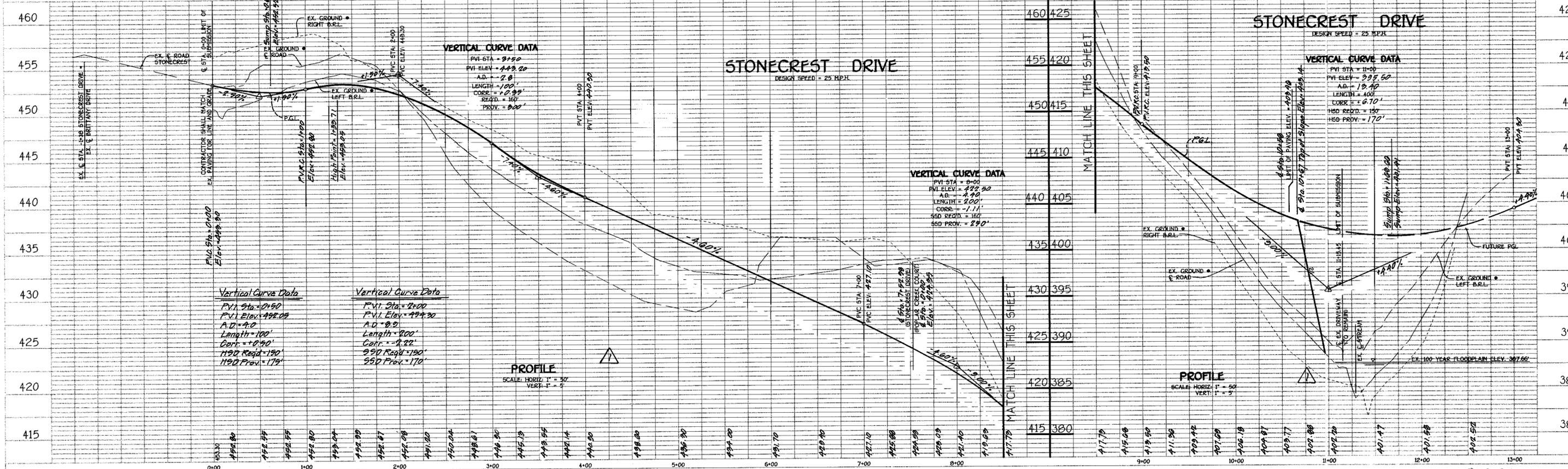
STATION	RADIUS	LENGTH	TAN	CHORD
STA. 1+20.31 TO STA. 1+23.98	132.00'	103.67'	45°00'00"	N 18°27'31" E 101.03'
STA. 1+23.98 TO STA. 3+01.79	150.00'	117.91'	45°00'00"	N 18°27'31" E 114.91'
STA. 5+23.34 TO STA. 6+38.25	500.00'	110.41'	12°39'07"	N 34°37'57" E 110.19'
STA. 7+67.93 TO STA. 9+77.01	600.00'	209.08'	19°57'57"	N 18°19'25" E 209.02'

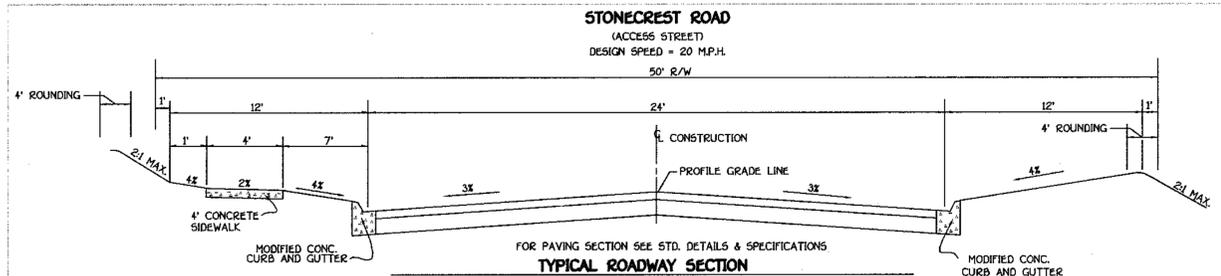


(STONECREST DRIVE)  
**SPEED CONTROL DEVICE**  
 N.T.S.

SCALE: AS SHOWN DATE: MAY 21, 2001 DWG. NO. 2 OF 14  
 DES. AMV DRN. F.J.M./J.C.L. CHK. AMV

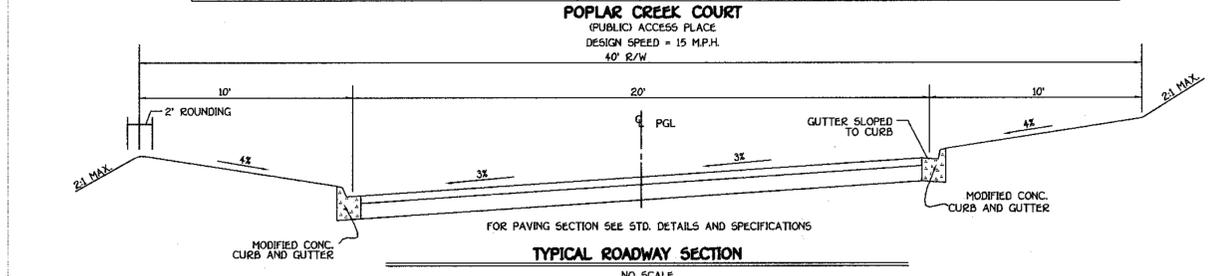
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 NATIONAL SQUARE OFFICE PARK - SUITE 200 BALTIMORE, MARYLAND 21204  
 TEL: 410-528-2000 FAX: 410-528-2001





**ROADWAY INFORMATION CHART**  
NO SCALE

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	A	B	C	D	R/W	PAVING SECTION
STONECREST ROAD	PUBLIC ACCESS STREET	25 M.P.H.	R-20	0+00 TO 10+37	24'	7'	4'	12'	50'	P-2



**ROADWAY INFORMATION CHART**  
NO SCALE

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	A	D	R/W	PAVING SECTION
POPLAR CREEK COURT	PUBLIC ACCESS PLACE	15 M.P.H.	R-20	0+00 TO 1+96.09	20'	10'	40'	P-2

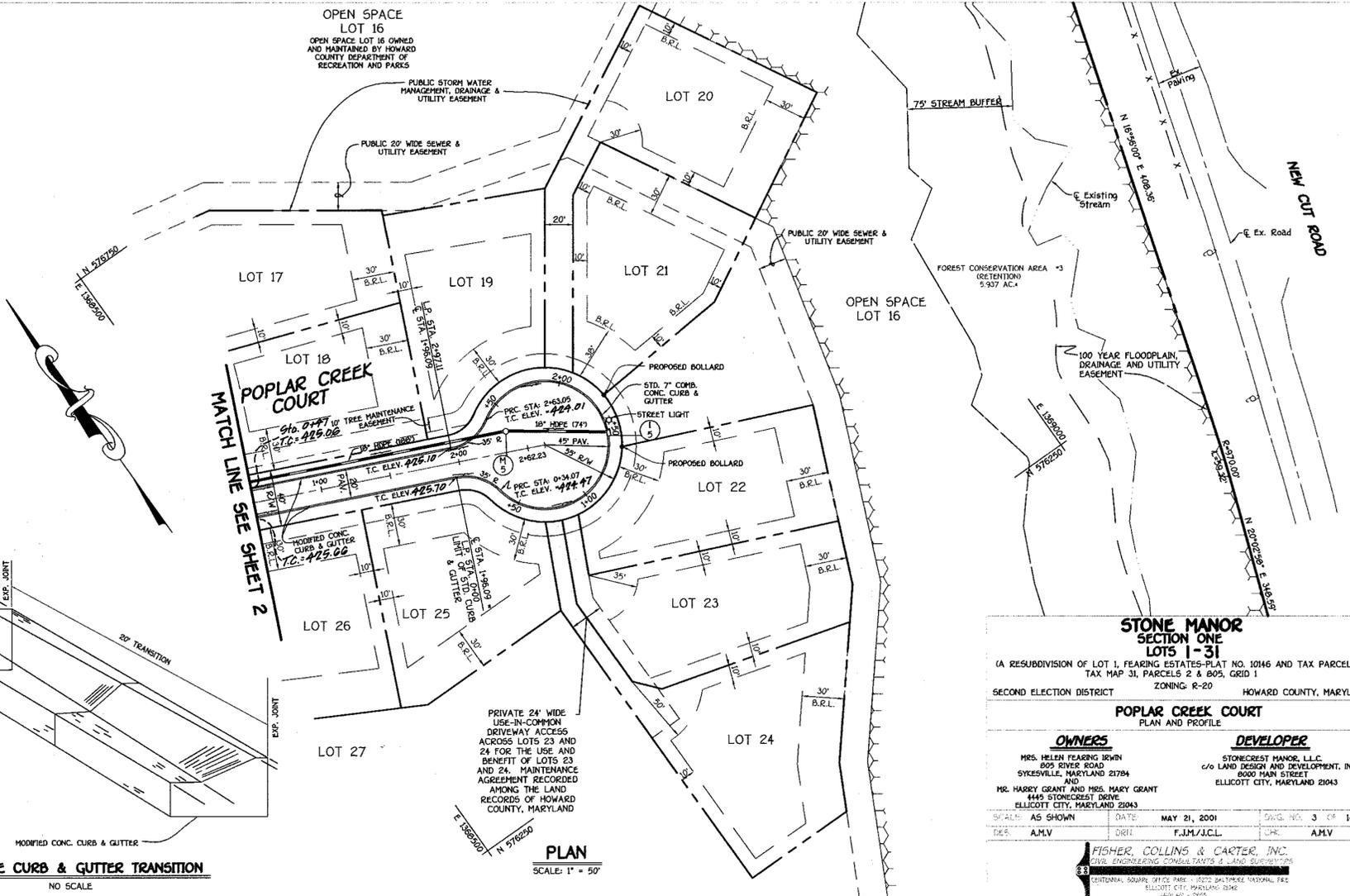
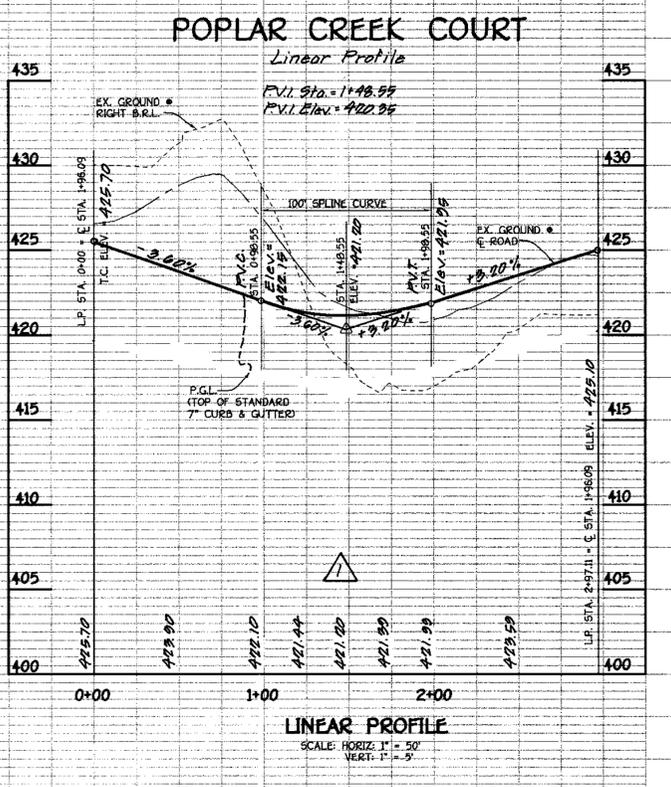
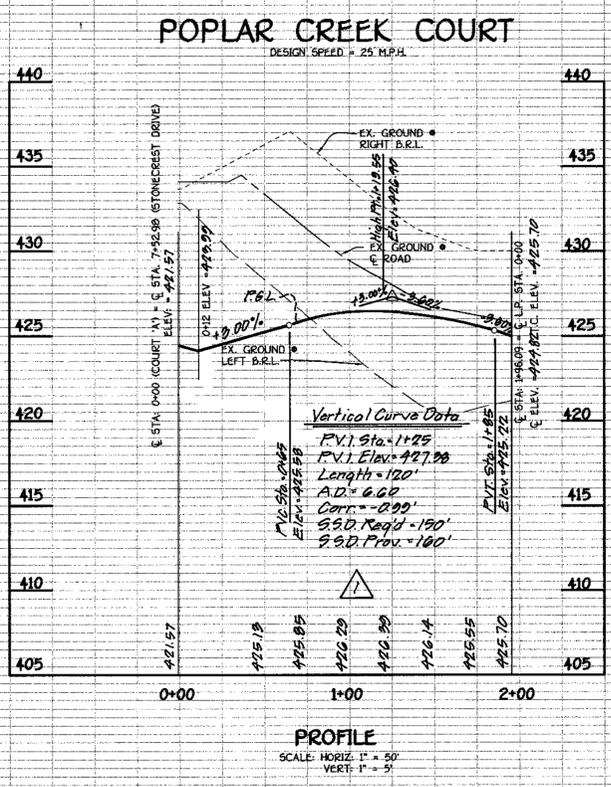
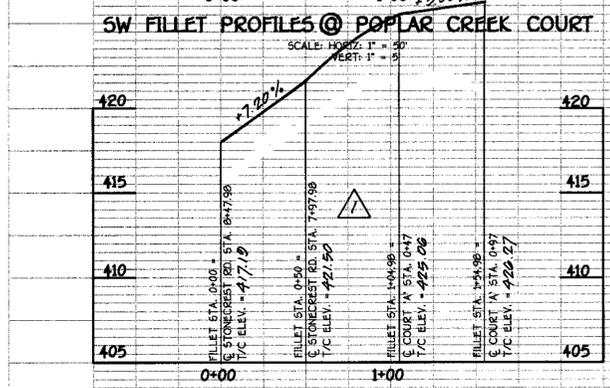
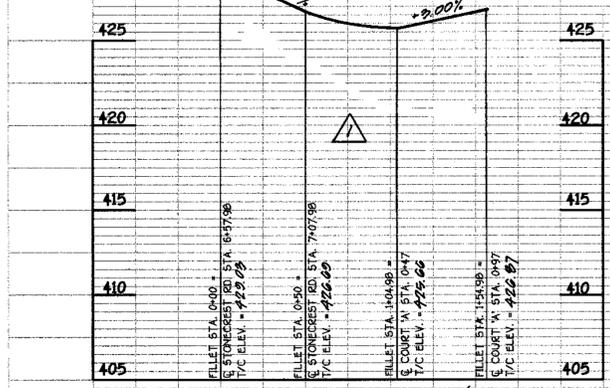
APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hamada* 6/18/01  
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED  
DEPARTMENT OF PLANNING AND ZONING  
*John DeWitt* 6/18/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danek* 6-12-01  
CHIEF, BUREAU OF HIGHWAY



No.	Revision	Date
1	Raised Profile Grade Lines for Poplar Creek Court	10-1-04



**STONE MANOR SECTION ONE LOTS 1-31**  
(A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 20 TAX MAP 31, PARCELS 2 & 805, GRID 1)  
SECOND ELECTION DISTRICT ZONING R-20 HOWARD COUNTY, MARYLAND

**OWNERS**  
MRS. HELEN FEARING IRWIN  
805 RIVER ROAD  
SYLVESVILLE, MARYLAND 21784  
AND  
MR. HARRY GRANT AND MRS. MARY GRANT  
1445 STONECREST DRIVE  
ELLCOTT CITY, MARYLAND 21043

**DEVELOPER**  
STONECREST MANOR, L.L.C.  
c/o LAND DESIGN AND DEVELOPMENT, INC.  
8000 MAIN STREET  
ELLCOTT CITY, MARYLAND 21043

SCALE: AS SHOWN DATE: MAY 21, 2001 SHEET NO. 3 OF 14  
DES: AMV DRN: F.J.M./J.C.L. CHK: AMV

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK, 10270 BALTIMORE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21043  
MAP NO. 2-2005

STREET TREE SCHEDULE				
SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
⊙	46	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
⊙	15	PLATANUS OCCIDENTALIS LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

NOTE: FINANCIAL SURETY FOR THE 61 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$18,300.00.

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 Heavily Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature of Developer: *Bruce Taylor* Manager 10-2-00  
 Date

Signature of Developer: *Bruce Taylor* Manager  
 Printed Name of Developer

By The Engineer:  
 I Certify That The Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Method To Do My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Noted The Requirements Of The Howard Soil Conservation District. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Heavily Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature: *Alpo* 5-24-01  
 Date

These Plans Have Been Approved For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *Jim Mungas* 4/25/01  
 Date

USDA-Natural Resources Conservation Service  
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *John A. ...* 4/25/01  
 Date

Approved Department of Public Works  
 Signature: *Robert M. ...* 6-12-01  
 Date

Approved Department of Planning And Zoning  
 Signature: *Cindy Hamilton* 6/10/01  
 Date

Signature: *William ...* 6/14/01  
 Date

AS-BUILT CERTIFICATION  
 I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: \_\_\_\_\_ P.E. No. \_\_\_\_\_  
 Date: \_\_\_\_\_

Certify Means To State Or Declare A Professional Opinion Based Upon On-site Inspections And Material Tests Which Are Conducted During Construction. The On-site Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Release Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

NOTE: EXISTING WET POND TO BE DEWATERED AND RECONSTRUCTED TO MEET MD-37B SPECIFICATIONS.

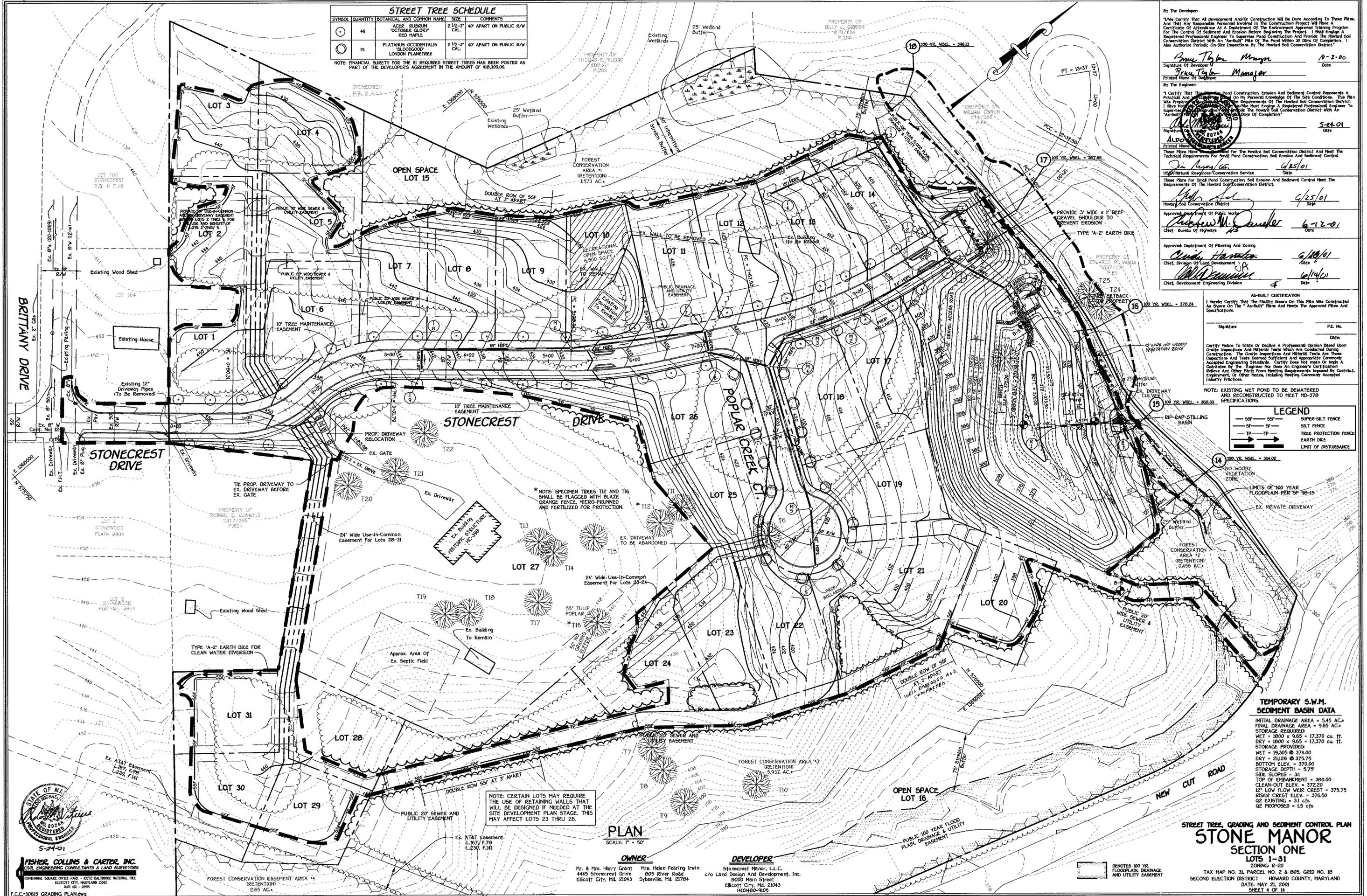
LEGEND

— SF — SF —	SUPER-SILT FENCE
— SF —	SILT FENCE
— TP — TP —	TREE PROTECTION FENCE
—	EARTH DIKE
—	LIMIT OF DISTURBANCE

TEMPORARY S.W.M. SEDIMENT BASIN DATA

INITIAL DRAINAGE AREA = 5.45 AC.  
 FINAL DRAINAGE AREA = 9.65 AC.  
 STORAGE REQUIRED:  
 WET = 1800 x 9.65 = 17,370 cu. ft.  
 DRY = 1800 x 9.65 = 17,370 cu. ft.  
 STORAGE PROVIDED:  
 WET = 19,305 @ 374.00  
 DRY = 21,128 @ 375.75  
 BOTTOM ELEV. = 370.00  
 STORAGE DEPTH = 5.75'  
 SIDE SLOPES = 3:1  
 TOP OF EMBANKMENT = 380.00  
 CLEAN-OUT ELEV. = 372.20  
 12" LOW FLOW WEIR CREST = 375.75  
 RISER CREST ELEV. = 376.50  
 Q2 EXISTING = 33 cfs  
 Q2 PROPOSED = 15 cfs

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN  
**STONE MANOR**  
 SECTION ONE  
 LOTS 1-31  
 ZONING R-20  
 TAX MAP NO. 31, PARCEL NO. 2 & 805, GRID NO. 18  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2003  
 SHEET 4 OF 14



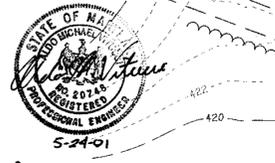
NOTE: CERTAIN LOTS MAY REQUIRE THE USE OF RETAINING WALLS THAT WILL BE DESIGNED IF NEEDED AT THE SITE DEVELOPMENT PLAN STAGE. THIS MAY AFFECT LOTS 23 THRU 26.

PLAN  
 SCALE: 1" = 50'

OWNER  
 Mr. & Mrs. Harry Grant  
 4445 Stonecrest Drive  
 Ellicott City, Md. 21043

Mrs. Helen Fearing Irwin  
 805 River Road  
 Sykesville, Md. 21784

DEVELOPER  
 Stonecrest Manor, L.L.C.  
 c/o Land Design And Development, Inc.  
 8000 Main Street  
 Ellicott City, Md. 21043  
 (410)480-9102



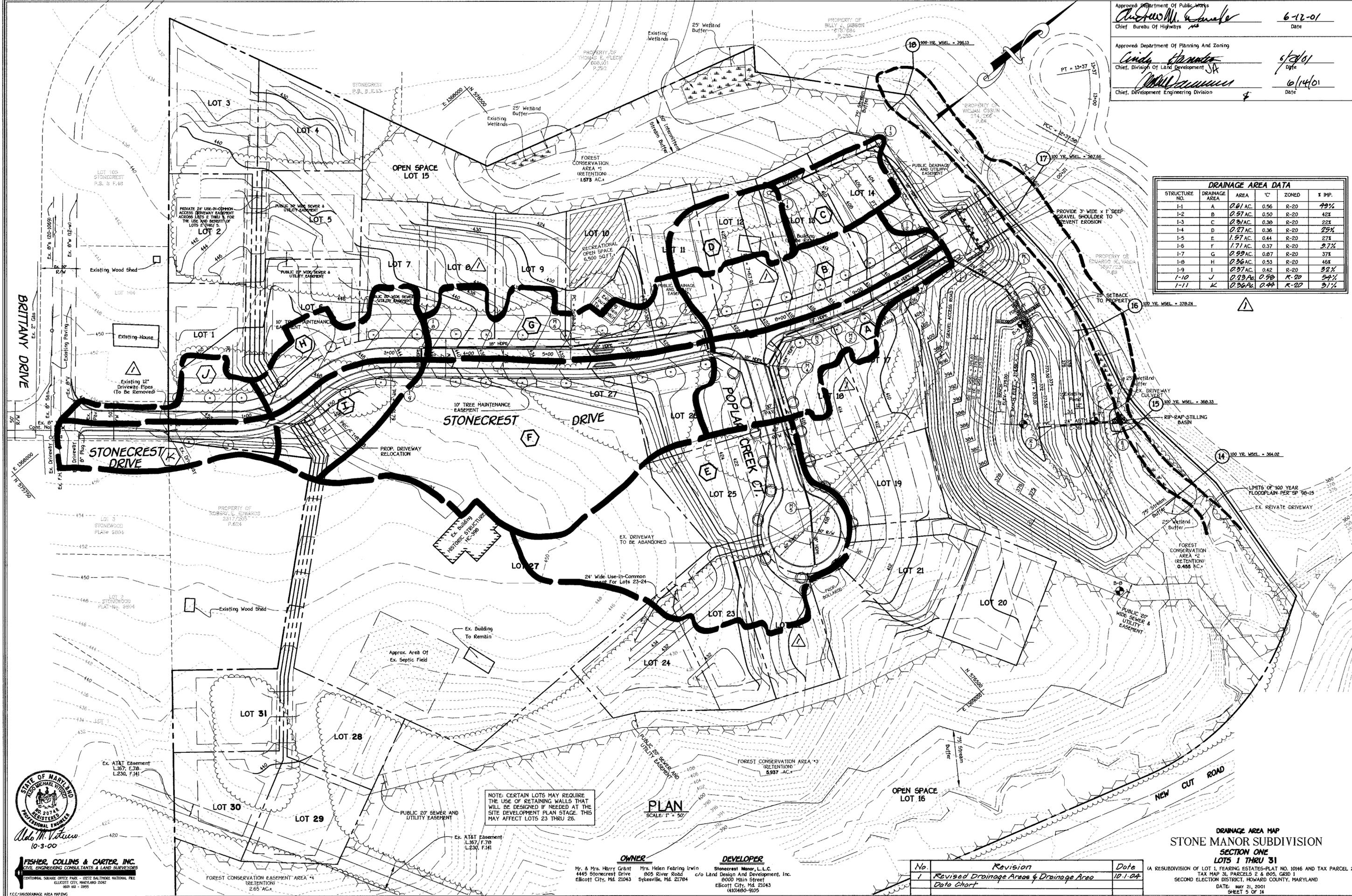
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE: 1400 - 1870 BALDWIN NATIONAL FPK  
 ELICOTT CITY, MARYLAND 21043  
 (410) 661-2000  
 F.C.C.-30615 GRADING PLAN.dwg

Approved: Department of Public Works  
*August M. Dwyer* 6-12-01  
 Chief, Bureau of Highways Date

Approved: Department of Planning and Zoning  
*Cindy Winters* 6/28/01  
 Chief, Division of Land Development Date

*William J. ...* 6/14/01  
 Chief, Development Engineering Division Date

STRUCTURE NO.	DRAINAGE AREA	AREA	C	ZONED	% IMP.
1-1	A	0.61 AC.	0.56	R-20	93%
1-2	B	0.57 AC.	0.50	R-20	42%
1-3	C	0.51 AC.	0.38	R-20	22%
1-4	D	0.27 AC.	0.36	R-20	25%
1-5	E	1.57 AC.	0.44	R-20	27%
1-6	F	1.71 AC.	0.37	R-20	37%
1-7	G	0.59 AC.	0.87	R-20	37%
1-8	H	0.36 AC.	0.53	R-20	45%
1-9	I	0.37 AC.	0.42	R-20	32%
1-10	J	0.23 AC.	0.58	R-20	54%
1-11	K	0.36 AC.	0.44	R-20	31%



STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 No. 20748  
 REGISTERED  
*Walter M. ...*  
 10-3-00

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 FEDERAL SQUARE OFFICE BUILDING - 1072 BALTIMORE NATIONAL FIRE  
 ELLICOTT CITY, MARYLAND 21114  
 410-461-2595

**OWNER**  
 Mr. & Mrs. Harry Grant  
 4445 Stonecrest Drive  
 Ellicott City, Md. 21043

**DEVELOPER**  
 Stonecrest Manor, L.L.C.  
 c/o Land Design and Development, Inc.  
 8000 Main Street  
 Ellicott City, Md. 21043  
 410-460-9105

No.	Revision	Date
1	Revised Drainage Areas & Drainage Area	10-1-04
	Date Chart	

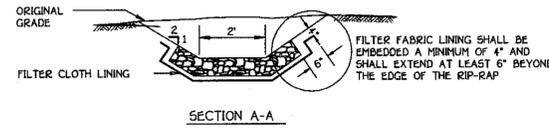
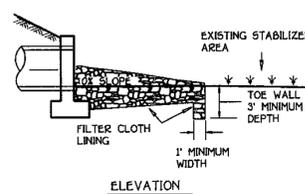
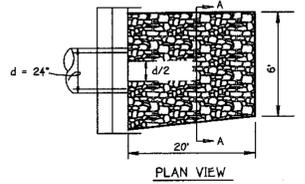
**DRAINAGE AREA MAP**  
**STONE MANOR SUBDIVISION**  
**SECTION ONE**  
**LOTS 1 THRU 31**  
 (A RESUBDIVISION OF LOT 1, FEASING ESTATES-PLAN NO. 10146 AND TAX PARCEL 23  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 5 OF 14

Approved: Department Of Planning And Zoning  
 Chief, Division Of Land Development  
 Approved: Howard County Department Of Public Works  
 Chief, Bureau Of Highways

6/28/01  
 6/14/01  
 6-12-01

ROCK OUTLET PROTECTION III • 5-1

ROCK OUTLET PROTECTION



- Construction Specifications
- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
  - The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
  - Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
  - Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
  - The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

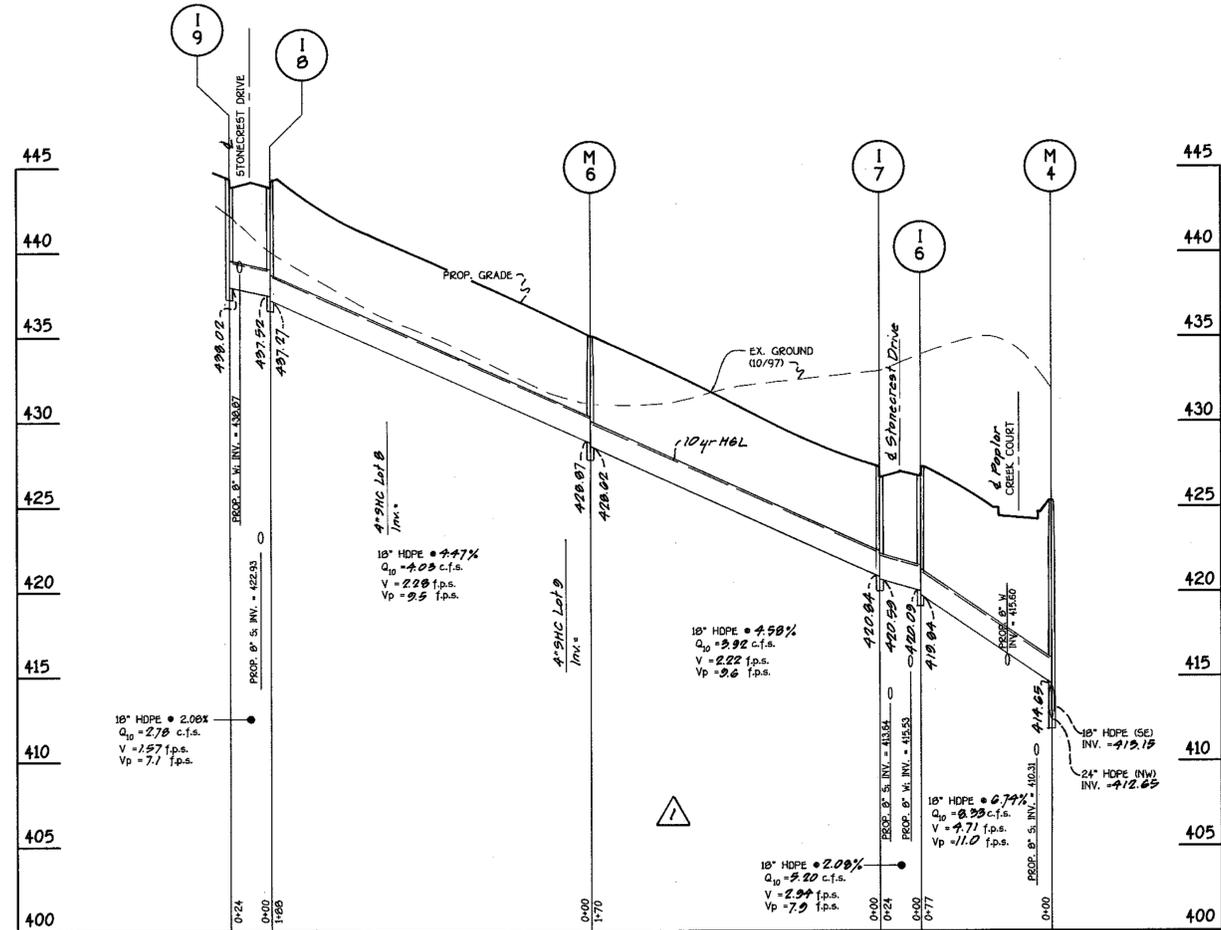
NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	W	REMARKS
I-1	405.15	393.00	391.50	STONECREST DRIVE	C.L. STA. 10+24.10	12' RT	A-5 INLET	2.5'	S.D. 4.40
I-2	405.15	392.11	391.86	STONECREST DRIVE	C.L. STA. 10+24.10	12' LT	A-5 INLET	2.5'	S.D. 4.40
I-3	399.00	394.43	394.18				'S' INLET		S.D. 4.22
I-4	416.00		411.50				'S' INLET		S.D. 4.22
I-5	421.20		418.02	POPLAR CREEK COURT	L.P. STA. 14+48.55		A-10 Inlet	2.5'	S.D. 4.41
I-6	427.24	420.09	418.84	STONECREST DRIVE	C.L. STA. 7+01.74	12' RT	A-5 INLET	2.5'	S.D. 4.40
I-7	427.24	420.04	420.09	STONECREST DRIVE	C.L. STA. 7+01.74	12' LT	A-5 INLET	2.5'	S.D. 4.40
I-8	444.50	437.52	437.27	STONECREST DRIVE	C.L. STA. 3+40.00	12' LT	A-5 INLET	2.5'	S.D. 4.40
I-9	444.50		438.02	STONECREST DRIVE	C.L. STA. 3+40.00	12' RT	A-5 INLET	2.5'	S.D. 4.40
M-1	382.50	377.00	376.75				STD. MANHOLE		G - 5.05
M-2	413.02	404.05	403.80	STONECREST DRIVE	C.L. STA. 8+99.96	16' RT	STD. MANHOLE		G - 5.05
M-3	421.58	410.68	410.43	STONECREST DRIVE	C.L. STA. 7+99.08	16' RT	STD. MANHOLE		G - 5.05
M-4	425.58	414.65	412.65	POPLAR CREEK COURT	C.L. STA. 0+48.87	15' LT	STD. MANHOLE		G - 5.05
M-5	429.06	418.28	415.09	POPLAR CREEK COURT	C.L. STA. 2+36.87	15' LT	STD. MANHOLE		G - 5.05
M-6	435.12	428.87	428.62	STONECREST DRIVE	C.L. STA. 5+28.34	16' L	STD. MANHOLE		G - 5.05
S-1	378.00		376.16				CONC. END SECT.		S.D. 5.51
M-7	451.11	442.67	442.42	Stonecrest Drive	C.L. Sta. 2+22.00	7' L	Std Manhole		B-5.05
M-8	442.90	443.86	443.61	"	C.L. Sta. 1+33.71	5' L	Std Manhole		B-5.05
I-10	422.74	424.76	424.51	"	C.L. Sta. 0+62.50	12' L	A-10 Inlet	2.5'	S.D. 4.41
I-11	422.74		423.00	"	C.L. Sta. 0+62.50	12' R	A-10 Inlet	2.5'	S.D. 4.41

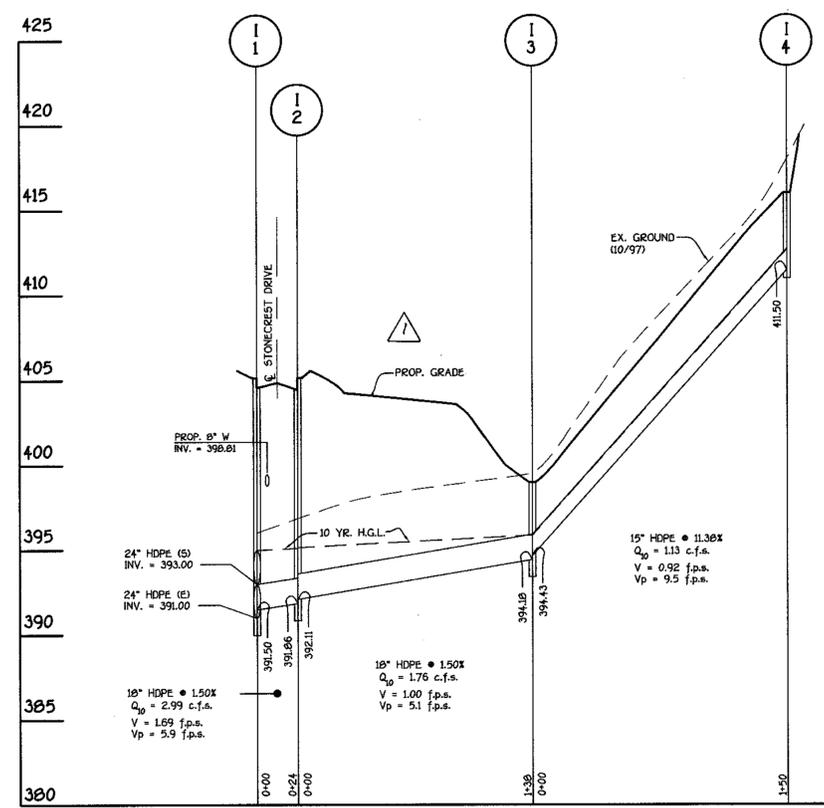
PIPE SCHEDULE

SIZE	MATERIAL	LENGTH
15"	HDPE	174'
18"	HDPE	1104'
24"	HDPE	380'



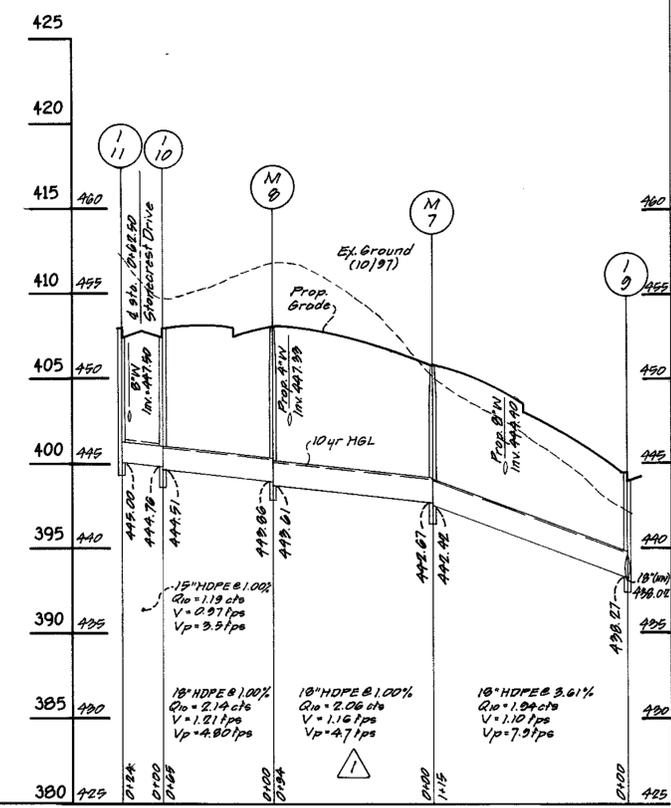
PROFILE

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



PROFILE

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



STORM DRAIN PROFILES  
 STONE MANOR  
 SECTION ONE

LOTS 1 THRU 31  
 (A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2)  
 TAX MAP 31, PARCELS 2 & 805, GRID 1  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2004  
 SHEET 6 OF 11

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21114  
 (410) 411-2999



No.	Revision	Date
1	Raised proposed grade & storm drainage system between M-4 & I-9; raised proposed grade between I-1 & I-9; added storm drainage system between I-9 & I-11; revised structure & pipe schedules as required.	10-1-04

OWNERS

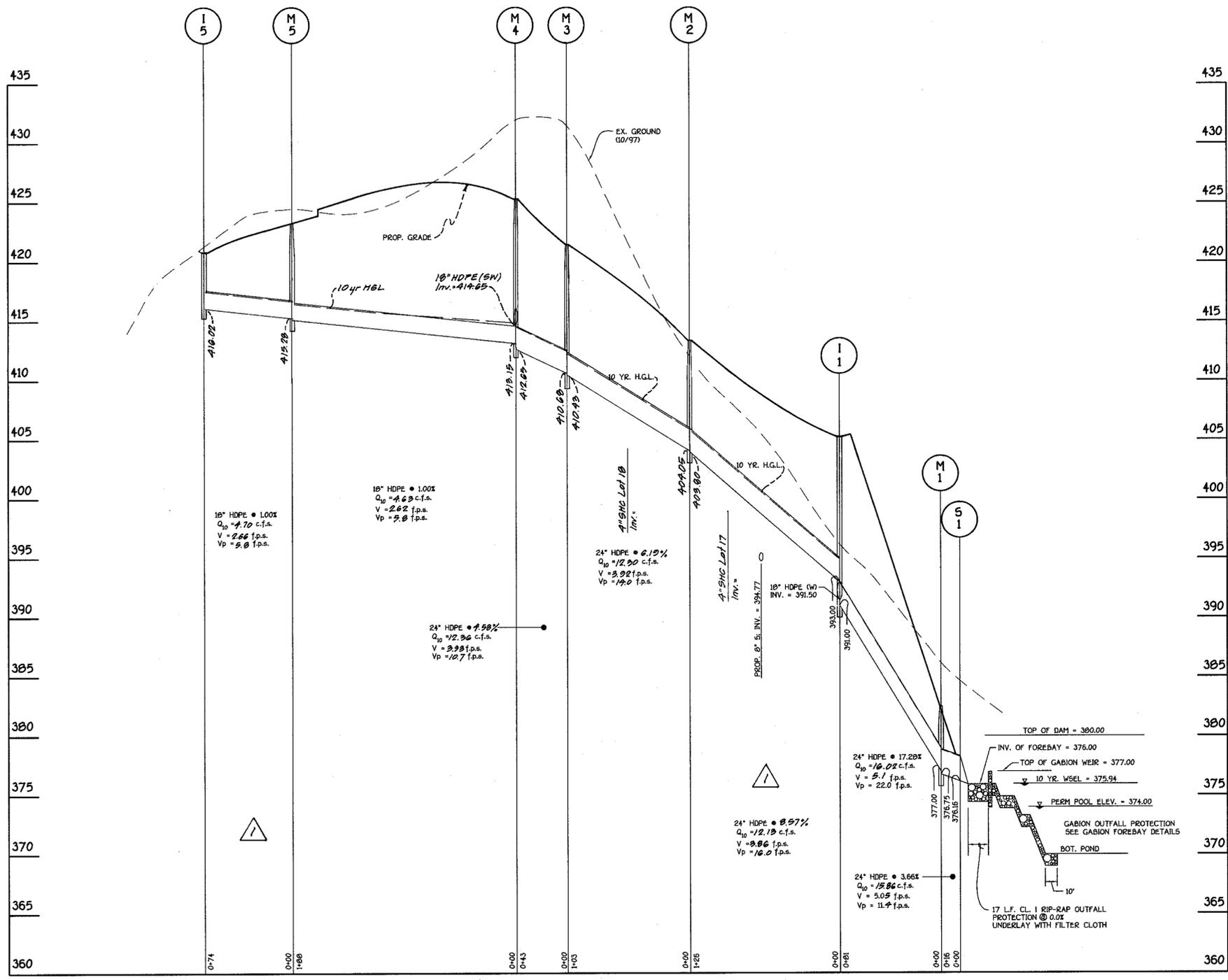
MRS. HELEN FEARING IRWIN  
 805 RIVER ROAD  
 SYKESVILLE, MARYLAND 21784  
 AND  
 MR. HARRY GRANT AND MRS. MARY GRANT  
 4445 STONECREST DRIVE  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER

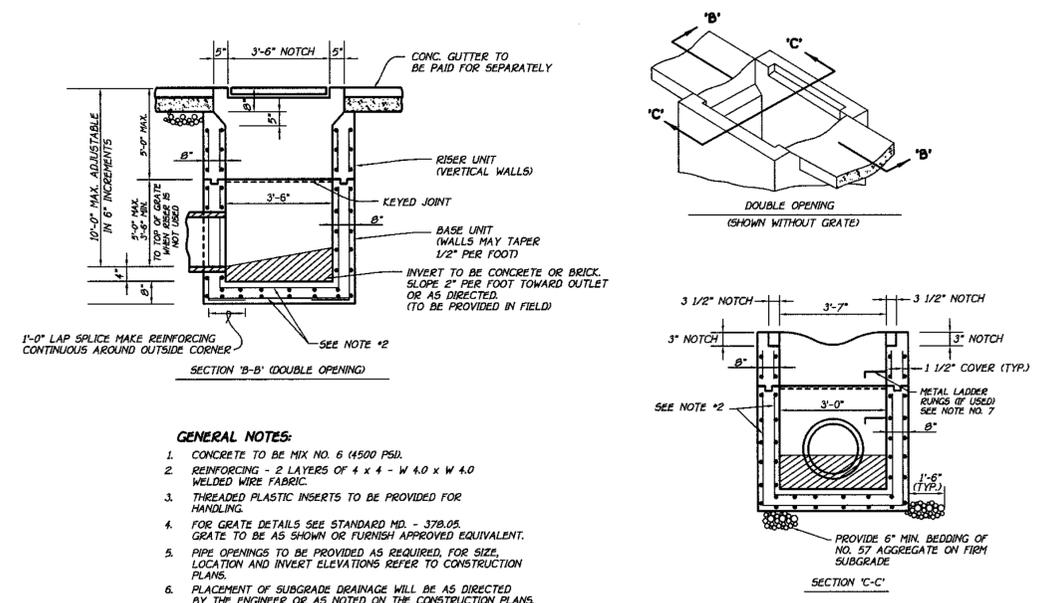
STONECREST MANOR, L.L.C.  
 c/o LAND DESIGN AND DEVELOPMENT, INC.  
 8000 MAIN STREET  
 ELLICOTT CITY, MARYLAND 21043

Approved: Department Of Planning And Zoning  
 Chief, Division Of Land Development  
 Chief, Development Engineering Division  
 Approved: Howard County Department Of Public Works  
 Chief, Bureau Of Highways

6/26/01  
 6/14/01  
 6-12-01



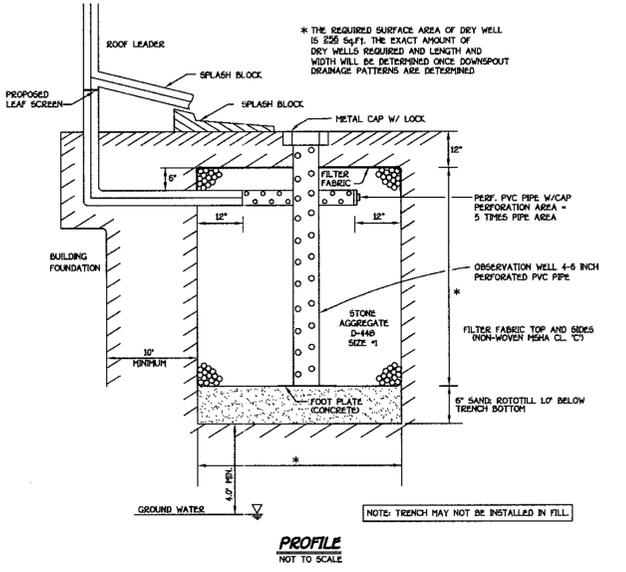
**PROFILE**  
 SCALE: HORIZ. 1" = 50'  
 VERT. 1" = 5'



- GENERAL NOTES:**
- CONCRETE TO BE MIX NO. 6 (4500 PSI).
  - REINFORCING - 2 LAYERS OF 4 x 4 - W 4.0 x W 4.0 WELDED WIRE FABRIC.
  - THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
  - FOR GRATE DETAILS SEE STANDARD MD - 378.05. GRATE TO BE AS SHOWN OR FURNISH APPROVED EQUIVALENT.
  - PIPE OPENINGS TO BE PROVIDED AS REQUIRED, FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
  - PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
  - LADDER RINGS SHALL BE IN ACCORDANCE WITH STANDARD MD - 383.91, AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  - MINIMUM DEPTH PAYMENT PER EACH INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT INCLUDES DEPTHS IN EXCESS OF 3'-6".
  - A 6" PERFORATED CIRCULAR PIPE FOR EROSION AND SEDIMENT CONTROL, SHALL BE PLACED IN THE INLET WALL AT ALL INLET SEDIMENT TRAPS AS SHOWN ON THE PLANS.

**MODIFIED OPEN END GRATE**  
 NOT TO SCALE

**WATER QUALITY TREATMENT FOR LOTS 2-5, 7-9, 22-24 & 28-31**  
**TYPICAL DRY WELL CROSS SECTION**  
**INFILTRATION MANUAL**



**PROFILE**  
 NOT TO SCALE

**STORM DRAIN PROFILES**  
**STONE MANOR**  
**SECTION ONE**  
**LOTS 1 THRU 31**

(A RESUBDIVISION OF LOT 1, FEARING ESTATES-PLAT NO. 10146 AND TAX PARCEL 2) (A RESUBDIVISION OF LOT 31, PARCELS 2 & 805, GRID 1) SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 7 OF 14



**OWNERS**  
 MRS. HELEN FEARING IRWIN  
 805 RIVER ROAD  
 SYKESVILLE, MARYLAND 21784  
 AND  
 MR. HARRY GRANT AND MRS. MARY GRANT  
 4445 STONECREST DRIVE  
 ELLICOTT CITY, MARYLAND 21043

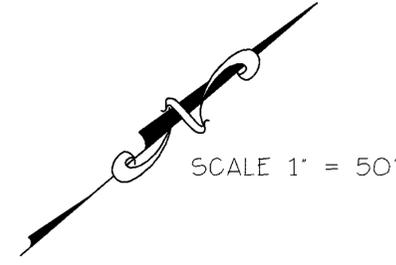
**DEVELOPER**  
 STONECREST MANOR, L.L.C.  
 c/o LAND DESIGN AND DEVELOPMENT, INC.  
 8000 MAIN STREET  
 ELLICOTT CITY, MARYLAND 21043

No.	Revision	Date
1	Raised proposed grade & storm drain system between I-1 & I-5	10.1.01

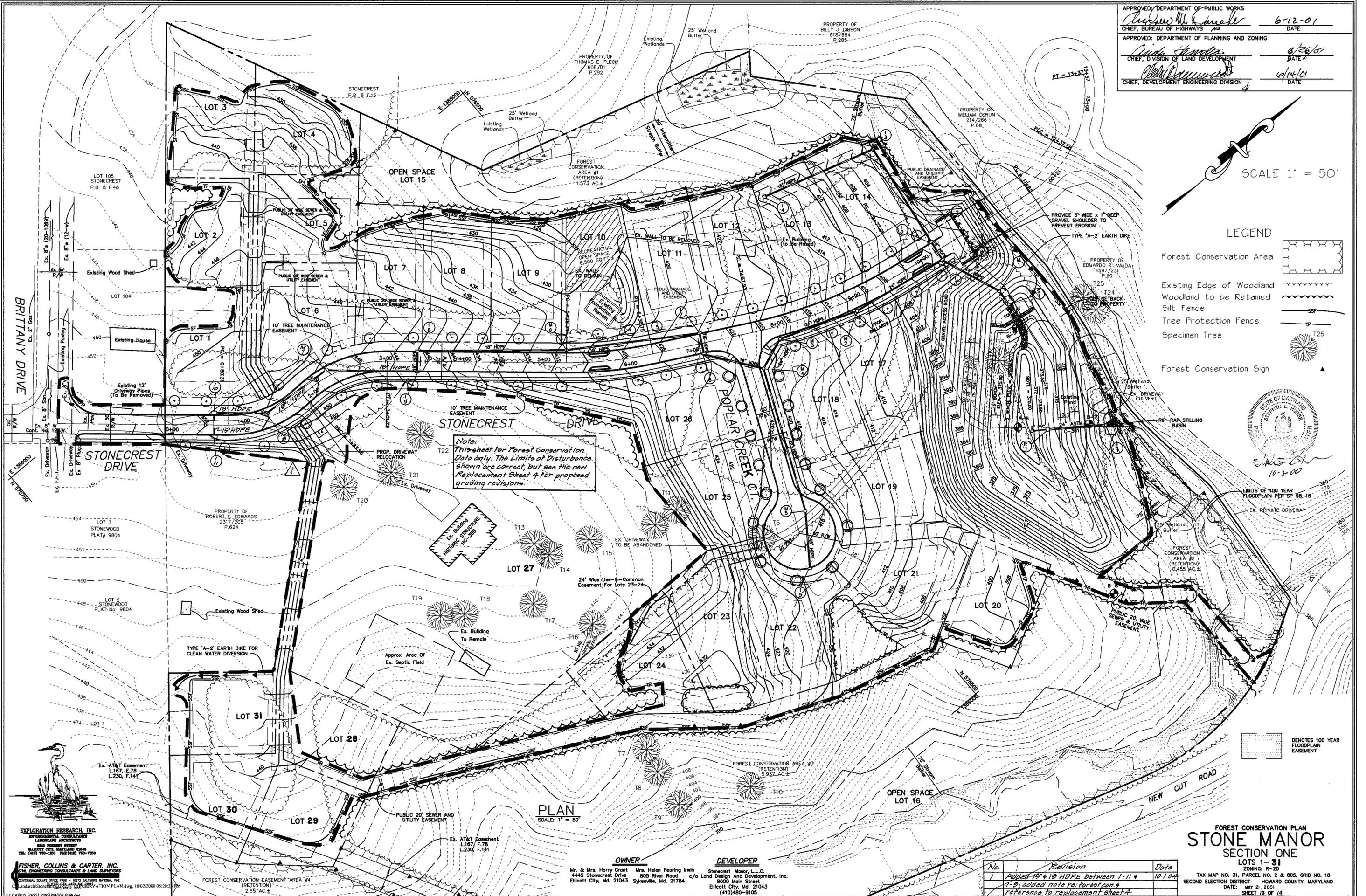
APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Charles M. Carole* 6-12-01  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 6/26/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Walter Drummond* 6/14/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



- LEGEND**
- Forest Conservation Area
  - Existing Edge of Woodland
  - Woodland to be Retained
  - Silt Fence
  - Tree Protection Fence
  - Specimen Tree
  - Forest Conservation Sign



**Note:**  
 This sheet for Forest Conservation Data only. The Limits of Disturbance shown are correct, but see the new Replacement Sheet 4 for proposed grading revisions.

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

**FOREST CONSERVATION PLAN**  
**STONE MANOR**  
 SECTION ONE  
 LOTS 1-31  
 ZONING: R-20  
 TAX MAP NO. 31, PARCEL NO. 2 & 805, GRID NO. 18  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: MAY 21, 2001  
 SHEET 13 OF 14

No.	Revision	Date
1	Added 18' & 18' HDPE between 1-11 & 1-9, added note re: forest con. & reference to replacement sheet 4	10-1-04

**OWNER**  
 Mr. & Mrs. Harry Grant Mrs. Helen Fearing Irwin  
 4445 Stonecrest Drive 805 River Road c/o Land Design And Development, Inc.  
 Ellicott City, Md. 21043 Sykesville, Md. 21784 8000 Main Street  
 Ellicott City, Md. 21043  
 (410)480-9105

**DEVELOPER**  
 Stonecrest Manor, L.L.C.  
 8000 Main Street  
 Ellicott City, Md. 21043  
 (410)480-9105

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 AND FORESTRY SPECIALISTS  
 10000 WOODBURN ROAD  
 BELLEVILLE, MARYLAND 21038  
 TEL: (410) 790-1500 FAX: (410) 790-1500

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 LANDSCAPE ARCHITECTS  
 CENTRAL SQUARE OFFICE PARK # 10772 BALTIMORE NATIONAL PIKE  
 BALTIMORE, MARYLAND 21286  
 C:\andarch\stonecrest\forest\CONSERVATION PLAN.dwg, 10/02/2000 05:20:32 PM  
 F.C.C. 00015 FOREST CONSERVATION PLAN.dwg