

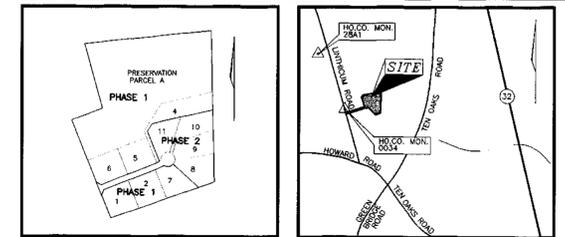
SHEET INDEX	
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2	ROAD CONSTRUCTION PLAN & PROFILES
3	GRADING AND SEDIMENT CONTROL PLAN
4	STORM DRAIN DRAINAGE AREA MAP
5	LANDSCAPE PLAN
6	STORM DRAIN PROFILES AND STORMWATER MANAGEMENT DETAILS
7	SEDIMENT CONTROL NOTES & DETAILS

# HOLLY CREST

## PHASE 2

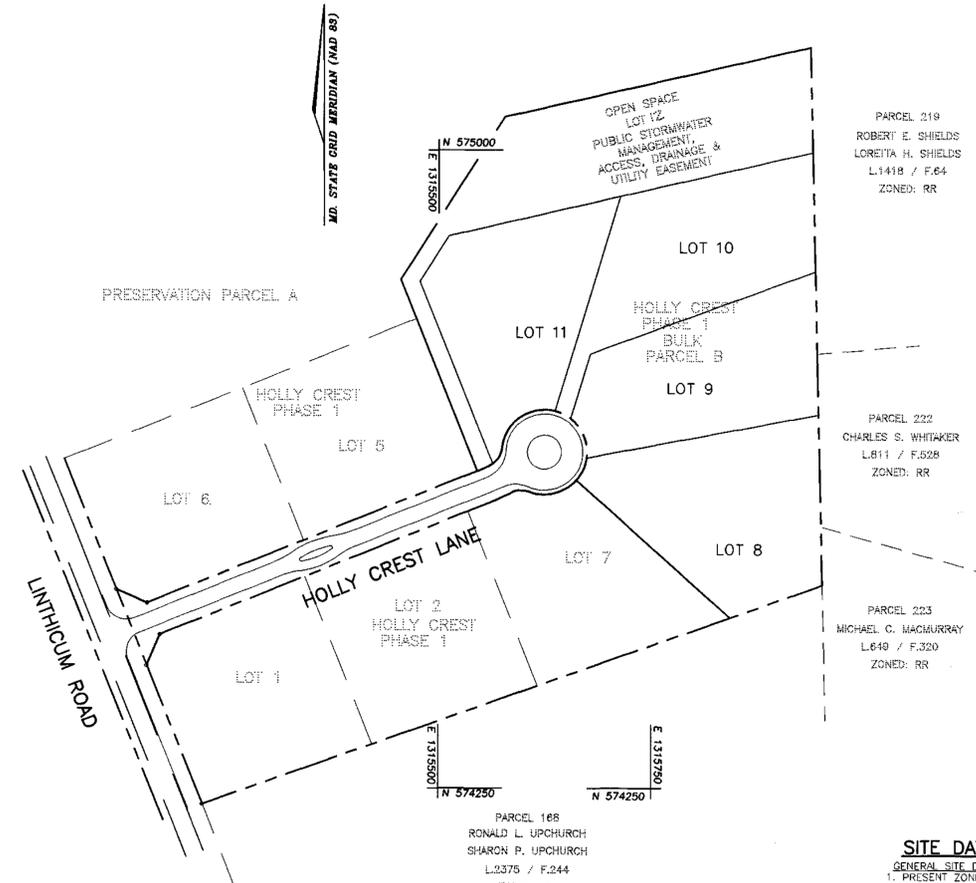
### FINAL ROAD CONSTRUCTION PLANS

#### HOWARD COUNTY, MARYLAND



LOCATION MAP  
SCALE: 1"=600'

VICINITY MAP  
SCALE: 1"=2000'



#### GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
  - PROJECT BACKGROUND:  
LOCATION: TAX MAP 28 BLOCK 1 PARCEL 4  
1ST ELECTION DISTRICT  
ZONING: RR  
TOTAL TRACT AREA: 5.7434 AC.  
NUMBER OF PROPOSED LOTS: 4SFD; 1 OPEN SPACE LOT  
APPLICABLE DPZ FILE NUMBERS: S-98-10, WP-98-111, F-98-04, F-99-39
  - TRACT BOUNDARY ESTABLISHED BY A BOUNDARY SURVEY BY J.E. CLARK COMPANY AND VERIFIED BY VOGEL & ASSOCIATES, INC. DATED SEPTEMBER, 1998.
  - TOPOGRAPHY BASED ON A FIELD RUN SURVEY PREPARED BY VOGEL & ASSOCIATES, INC. DATED OCTOBER, 1998. CONTOUR INTERVAL IS 2 FEET.
  - COORDINATES: HORIZONTAL DATUMS BASED ON NAD 83  
HO. CO. GEODETIC CONTROL STATIONS 0034 AND 2841
  - WATER AND SEWER FOR THIS PROJECT WILL BE PRIVATE.
  - EXISTING UTILITIES WERE LOCATED PER COUNTY DRAWINGS AND FIELD RUN SURVEY.
  - STORMWATER MANAGEMENT METHOD: EXTENDED DETENTION OF 1 YR. (WATER QUALITY), 2 YR. AND 10 YR. STORMS. THE FACILITY IS TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY HOWARD COUNTY AND THE HOMEOWNERS ASSOCIATION.
  - FOREST CONSERVATION PLAN PREPARED BY EXPLORATION RESEARCH, INC. DATED SEPTEMBER, 1998. ~~The Forest Conservation obligation addressed under F-99-39.~~
  - A TRAFFIC STUDY WAS APPROVED (S-98-10) FOR THIS PROJECT.
  - THERE IS NO FLOODPLAIN ON SITE.
  - GEOTECHNICAL REPORT PROVIDED BY HERBST/BENSON & ASSO. DATE OCTOBER 1998.
  - ALL LANDSCAPING REQUIREMENTS, AS SET FORTH IN THE LANDSCAPE MANUAL, FOR SECTION 1 AND SECTION 2 SHALL BE COMPLIED WITH UNDER SECTION 2. FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPING WILL BE POSTED AS PART OF THE D.P.W. DEVELOPER'S AGREEMENT.
  - STREET LIGHTS ARE NOT REQUIRED FOR THIS PROJECT.
  - THIS PLAN IS SUBJECT TO WP-98-111, APPROVED JUNE 4, 1998, TO WAIVE SECTION 16.120(C)(2) AND SECTION 16.144(F) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS FOR PHASE ONE ONLY, SUBJECT TO THE FOLLOWING:  
THE OWNERS OF LOTS 1-7, 5 AND 6 MUST JOIN IN THE RESUBDIVISION OF NON-BUILDABLE PRESERVATION PARCEL B TO OBTAIN PUBLIC ROAD FRONTAGE, AND TO RELINQUISH THEIR USE-IN-COMMON ACCESS AND MAINTENANCE AGREEMENT.
  - ALL WELLS TO BE DRILLED PRIOR TO RECORD PLAT SUBMITTAL.
  - ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
  - ROAD CONSTRUCTION, LANDSCAPING, STORMWATER MANAGEMENT AND SEDIMENT CONTROL ARE PROVIDED FOR BOTH SECTIONS UNDER SECTION 2.
  - BASED ON A FIELD INVESTIGATION BY EXPLORATION RESEARCH, INC. DATED SEPTEMBER, 1998 THERE ARE NO WETLANDS ONSITE.
- 2D. Open Space Lot 12 is to be dedicated to the Holly Crest Home Owners Association.

**OWNER/DEVELOPER**  
ALLAN HOMES, INC.  
P.O. BOX 1058  
COLUMBIA, MARYLAND 21044

#### SITE DATA TABULATION

- GENERAL SITE DATA**
- PRESENT ZONING: RR-DEO
  - APPLICABLE DPZ FILE REFERENCES: S-98-10, WP-98-111, F-98-04, F-99-39
  - PROPOSED USE OF SITE: 4 SFD HOMES
  - PROPOSED WATER AND SEWER SYSTEMS: PRIVATE
- AREA TABULATION**
- TOTAL AREA OF SITE: 5.7434 AC.
  - AREA OF 100 YEAR FLOODPLAIN: N/A
  - AREA OF STEEP SLOPES (25% OR GREATER): N/A
  - AREA OF THIS PLAN SUBMISSION: 5.7434 AC.
  - APPROXIMATE LIMIT OF DISTURBANCE: 2.20 AC.
  - AREA OF PROPOSED BUILDABLE LOTS: 3.789 AC.
  - AREA OF PROPOSED OPEN SPACE LOTS: 1.915 AC.
  - AREA OF PROPOSED PUBLIC ROAD R/W DEDICATION: 0.640 AC.
- LOT TABULATION**
- TOTAL NUMBER OF RESIDENTIAL LOTS: 4
  - TOTAL NUMBER OF OPEN SPACE LOTS: 1
  - TOTAL NUMBER OF LOTS: 5
- DENSITY/YIELD TABULATION**
- TOTAL AREA OF PARCEL: 26 AC. / 2 = 13 UNITS MAX YIELD  
26 / 4.25 = 6 UNITS YIELD BY RIGHT  
(4 UNITS UTILIZED BY ALLENS ACRES PLAT NO. 12966)  
(2 UNITS UTILIZED BY HOLLY CREST SECTION I F-99-39)  
(3 DEO UNITS REQUIRED BY THE CREATION OF BY HOLLY CREST SECTION I F-99-39)  
(4 DEO UNITS REQUIRED BY THE CREATION OF BY HOLLY CREST SECTION II

**PLAN**  
SCALE: 1"=100'

NO.	REVISION	DATE

**HOLLY CREST**  
PHASE 2, LOTS 5 & 6, 8 - 12  
TITLE SHEET

DPZ FILE # S-98-10, WP-98-111, F-98-04, F-99-39, P-99-09  
TAX MAP #28 PARCEL #4 BLOCK #1  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**VOGEL & ASSOCIATES**  
ENGINEERS-SURVEYORS-PLANNERS  
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043  
Tel 410.461.5828 Fax 410.465.3966



DESIGN BY: J.C.O.  
DRAWN BY: J.C.O.  
CHECKED BY: R.H.V.  
DATE: AUGUST 6, 1999  
SCALE: AS SHOWN  
W.O. NO.: 97-90

1 SHEET OF 7

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

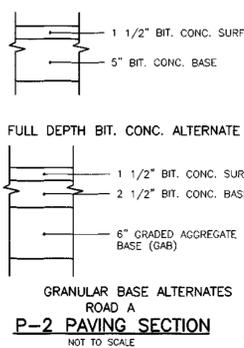
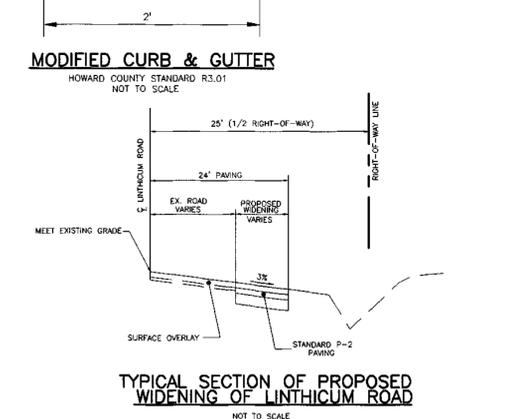
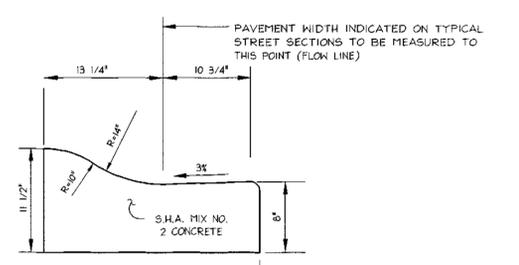
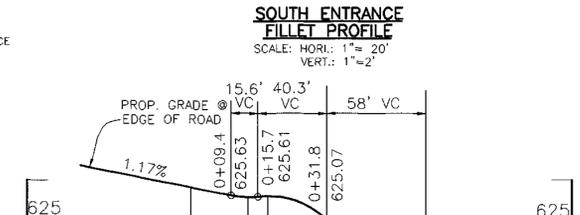
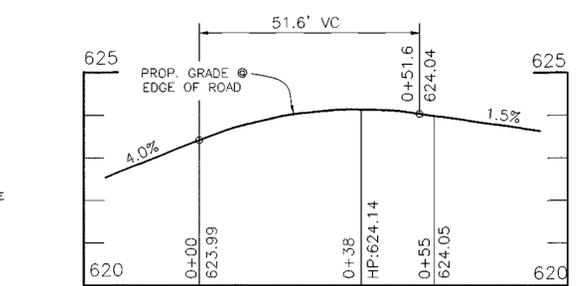
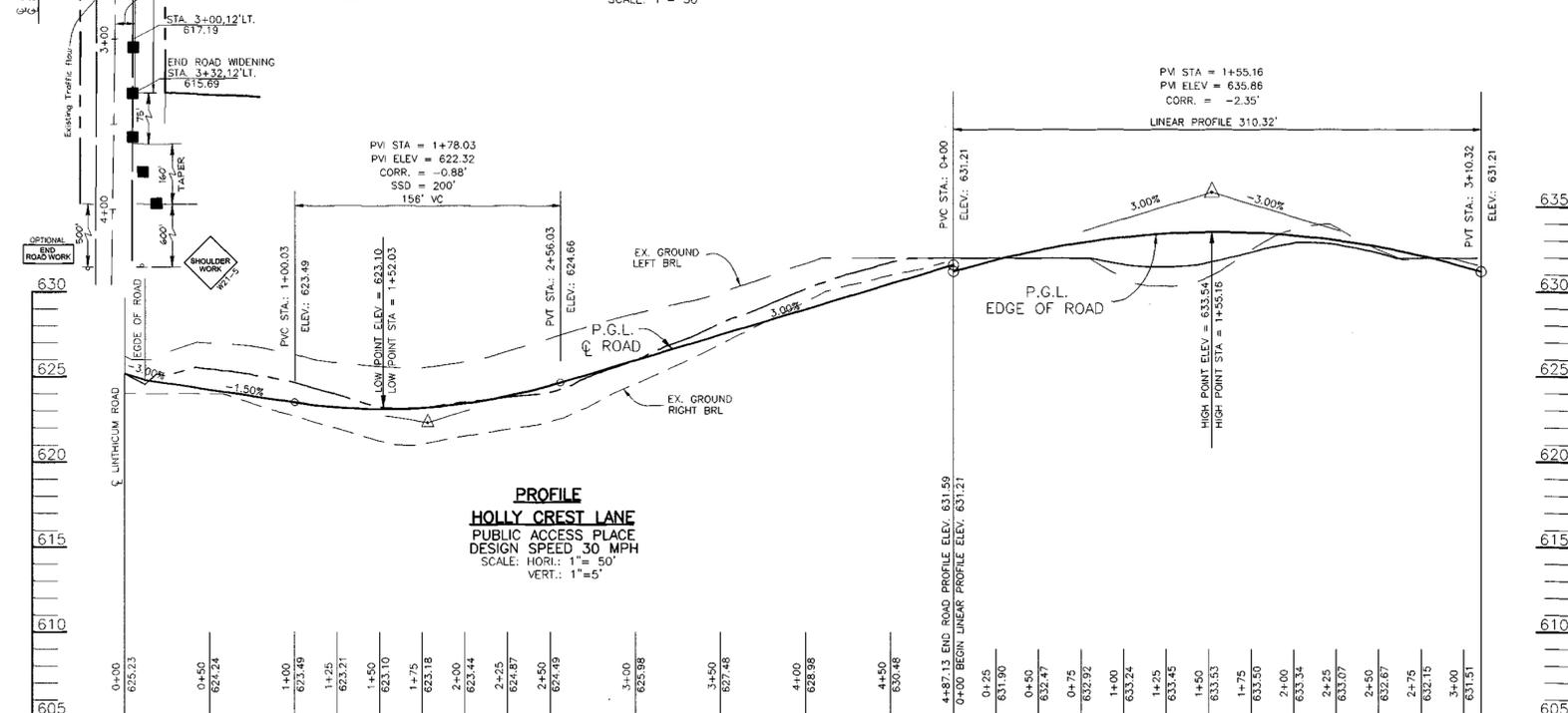
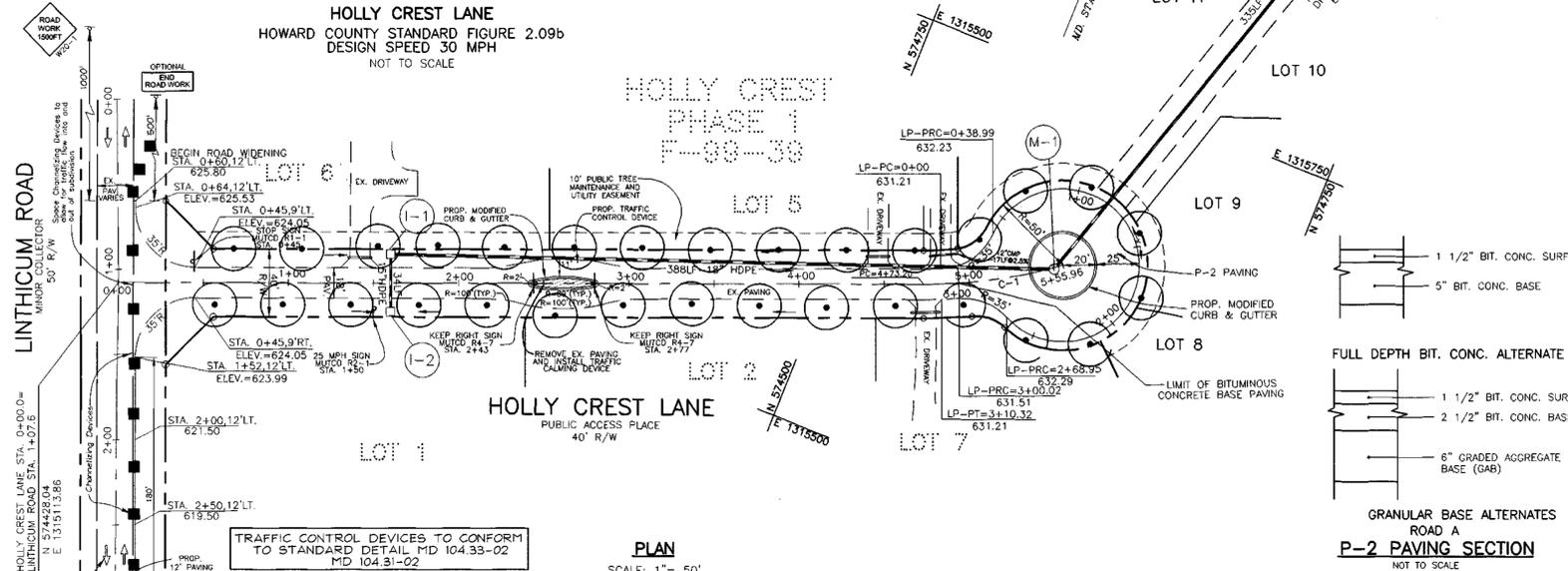
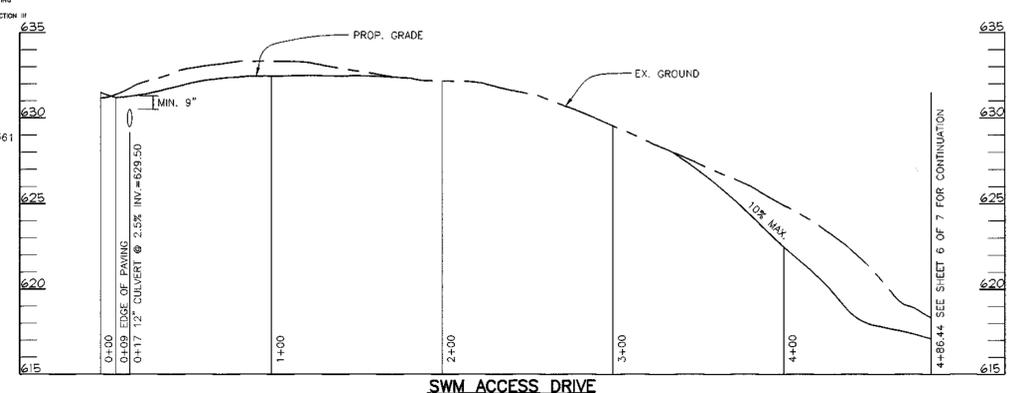
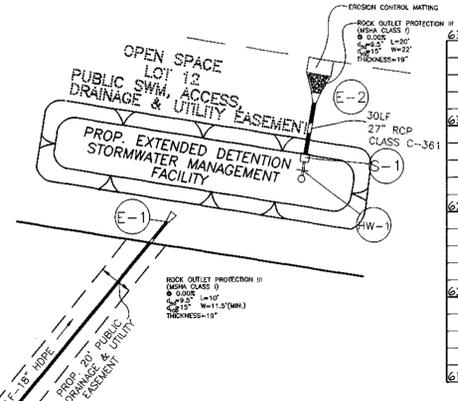
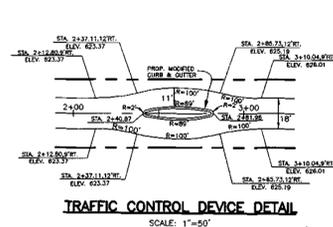
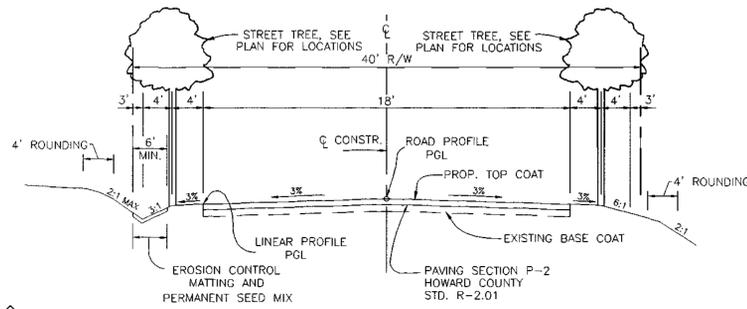
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*Michael M. Donohue* 2/22/00  
CHIEF, BUREAU OF HIGHWAYS DATE

*Chris Hanuta* 3/1/00  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Robert H. Vogel* 2/22/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CENTERLINE CURVE DATA CHART						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	300.00'	82.76'	41.65'	82.50'	S60°13'56"W	15°48'24"



OWNER/DEVELOPER  
 ALLAN HOMES, INC.  
 P.O. BOX 1058  
 COULMBIA, MARYLAND 21044

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
*Andrew M. Daniels* 2/22/00  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*David Ramirez* 7/1/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Robert H. Vogel* 2/20/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

HOLLY CREST  
 PHASE 2, LOTS 5 & 6, 8 - 12  
 ROAD CONSTRUCTION  
 PLAN AND PROFILE  
 DPZ FILE # S-98-10, WP-98-111, F-98-04, F-99-39  
 TAX MAP #28 PARCEL #4 BLOCK #1  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043  
 Tel 410.461.5628 Fax 410.463.3966

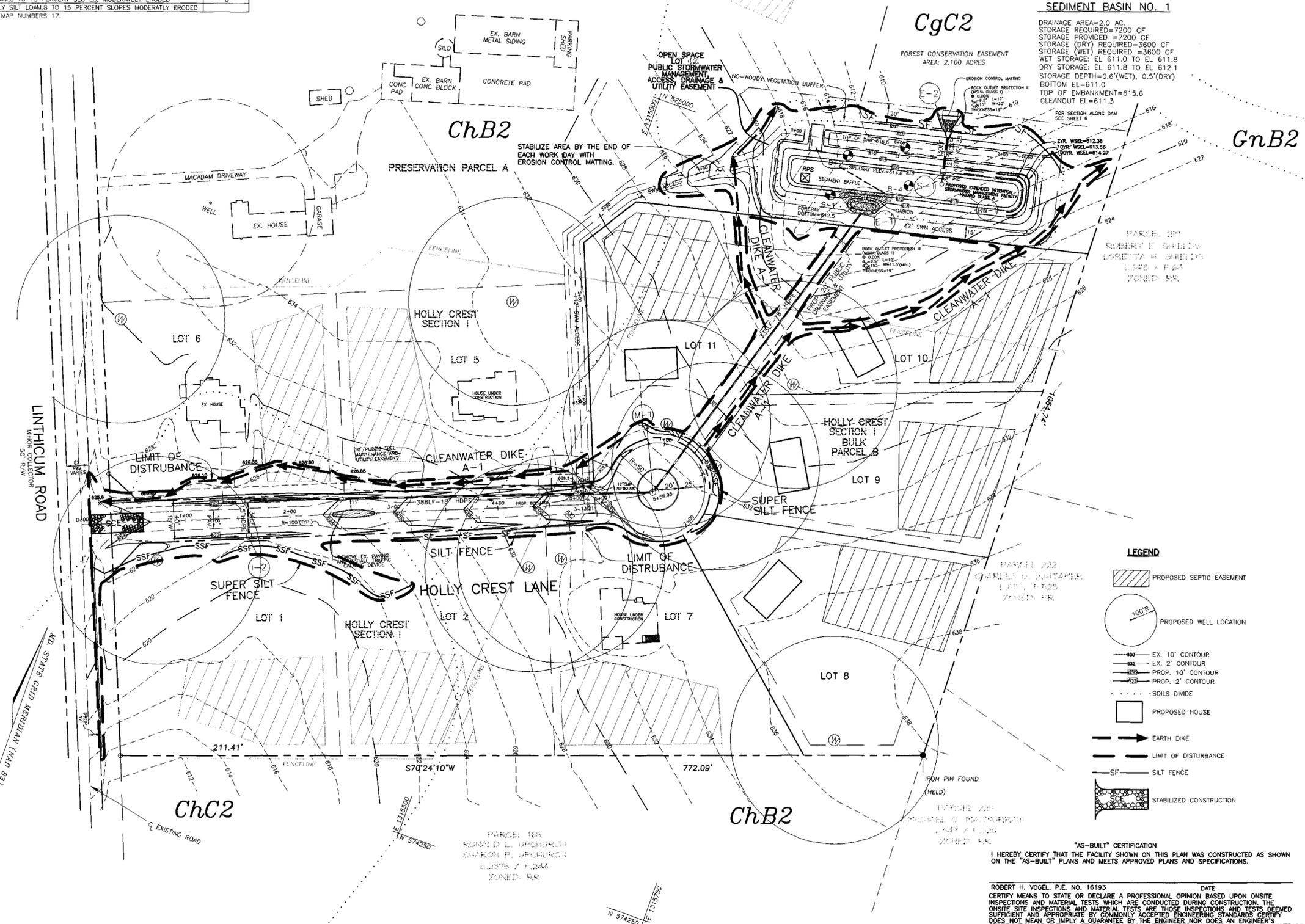
DESIGN BY: J.C.O.  
 DRAWN BY: J.C.O.  
 CHECKED BY: R.H.V.  
 DATE: AUGUST 6, 1999  
 SCALE: AS SHOWN  
 W.D. NO.: 87-90

STATE OF MARYLAND  
 ROBERT H. VOGEL, P.E. #16193

2 SHEET 7

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GnB2	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	C
ChC2	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
GIC2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
GgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChB2	CHESTER SILT LOAM, 3 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CgC2	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B

NOTE: -HOWARD SOIL SURVEY, MAP NUMBERS 17.



**SEDIMENT BASIN NO. 1**  
 DRAINAGE AREA=2.0 AC.  
 STORAGE REQUIRED=7200 CF  
 STORAGE PROVIDED=7200 CF  
 STORAGE (DRY) REQUIRED=3600 CF  
 STORAGE (WET) REQUIRED=3600 CF  
 WET STORAGE: EL 611.0 TO EL 611.8  
 DRY STORAGE: EL 611.8 TO EL 612.1  
 STORAGE DEPTH=0.6'(WET), 0.5'(DRY)  
 BOTTOM EL=611.0  
 TOP OF EMBANKMENT=615.6  
 CLEANOUT EL=611.3

**LEGEND**

- PROPOSED SEPTIC EASEMENT
- PROPOSED WELL LOCATION
- EX. 10' CONTOUR
- EX. 2' CONTOUR
- PROP. 10' CONTOUR
- PROP. 2' CONTOUR
- SOILS DIVIDE
- PROPOSED HOUSE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- SILT FENCE
- STABILIZED CONSTRUCTION

**OWNER/DEVELOPER**  
 ALLAN HOMES, INC.  
 P.O. BOX 1058  
 COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE

**HOLLY CREST**  
 PHASE 2, LOTS 5 & 6, 8 - 12  
**GRADING & SEDIMENT CONTROL PLAN**  
 DPZ FILE # S-98-10, WP-98-111, F-98-04, F-99-39, P-99-09  
 TAX MAP #28 PARCEL #4 BLOCK #1  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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3 SHEET OF 7

**"AS-BUILT" CERTIFICATION**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL, P.E. NO. 16193 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 BY 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.

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

*Cheryl Sumner* 2/10/00  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*Robert H. Vogel* 2/10/00  
 HOWARD SOIL CONSERVATION DISTRICT DATE

**ENGINEER'S CERTIFICATE**

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

*Robert H. Vogel* 2/10/00  
 SIGNATURE OF ENGINEER DATE  
 ROBERT H. VOGEL

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

*William J. Jones* 2/10/00  
 SIGNATURE OF DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Andrew M. Jones* 2-22-00  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

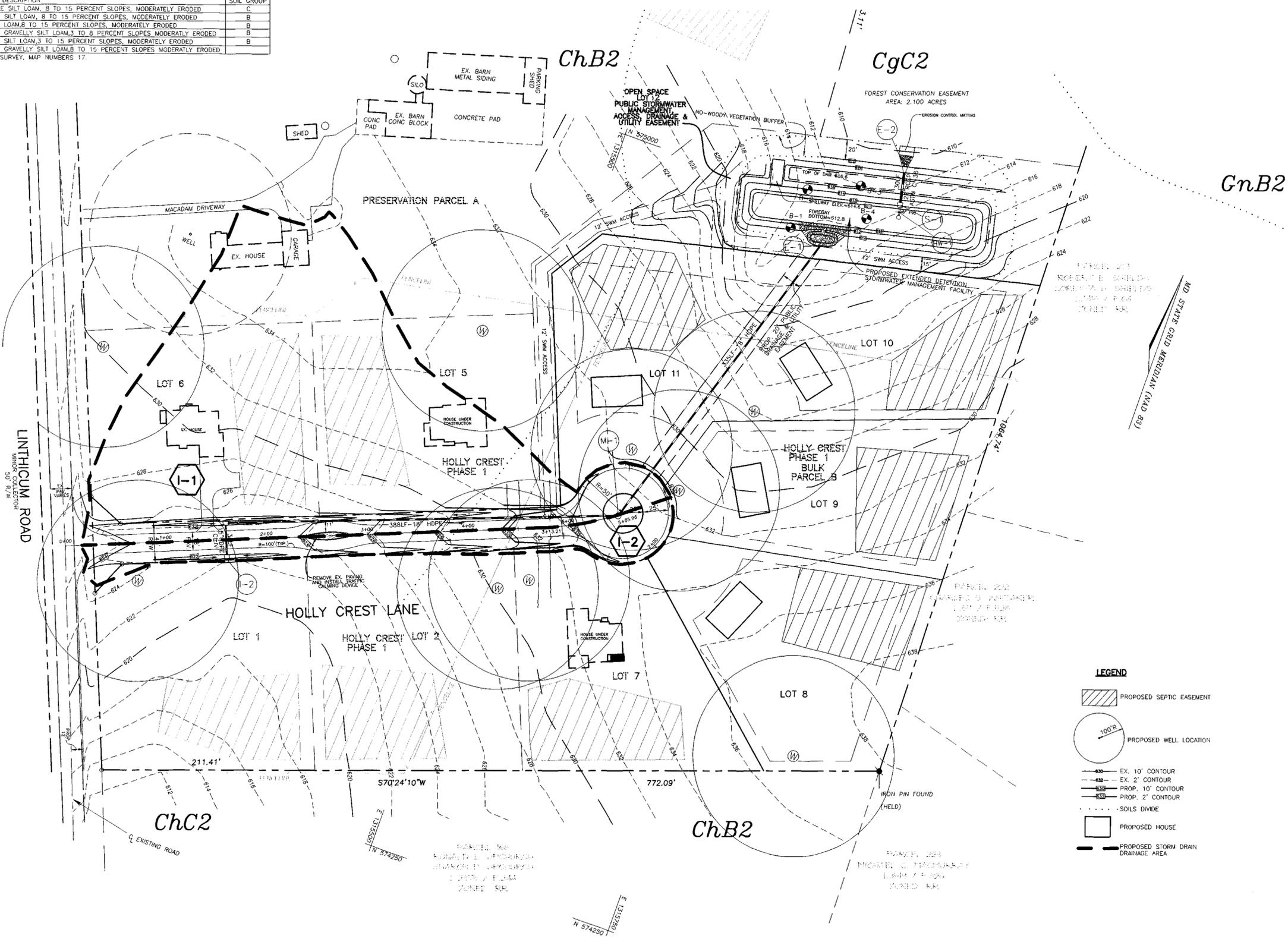
*Cindy Khondra* 2/10/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*John Dammann* 2/10/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GnB2	GLENNVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	C
ChC2	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
GnC2	GLENEIG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
GgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChB2	CHESTER SILT LOAM, 3 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CgC2	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B

NOTE: -HOWARD SOIL SURVEY, MAP NUMBERS 17.

DRAINAGE AREA TABULATIONS					
NO.	AREA	'C'	% IMP.	SOIL TYPE	ZONE
I-1	2.27 AC.	0.26	8%	B	RR
I-2	0.34 AC.	0.52	52%	B	RR



- LEGEND**
- PROPOSED SEPTIC EASEMENT
  - PROPOSED WELL LOCATION
  - EX. 10' CONTOUR
  - EX. 2' CONTOUR
  - PROP. 10' CONTOUR
  - PROP. 2' CONTOUR
  - SOILS DIVIDE
  - PROPOSED HOUSE
  - PROPOSED STORM DRAIN DRAINAGE AREA

**OWNER/DEVELOPER**  
 ALLAN HOMES, INC.  
 P.O. BOX 1058  
 COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE

**HOLLY CREST**  
**PHASE 2, LOTS 5 & 6, 8 - 12**  
**STORM DRAIN DRAINAGE AREA MAP**  
 DPZ FILE # S-98-10, WP-98-111, F-98-04, F-99-39, P-99-09  
 TAX MAP #28 PARCEL #4 BLOCK #1  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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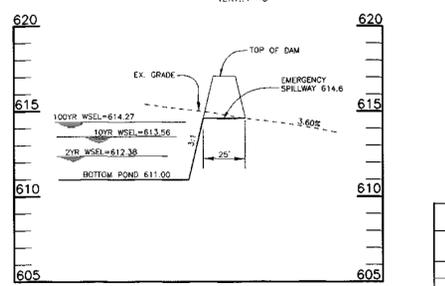
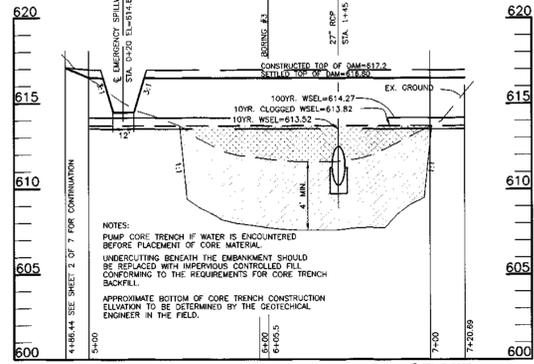
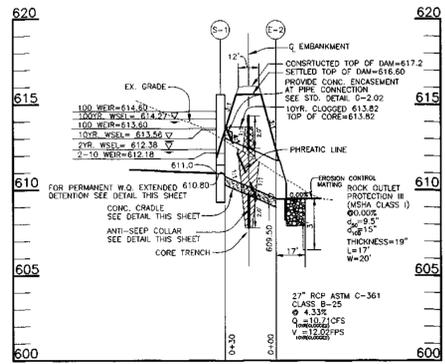
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 W.O. NO.: 97-90

4 SHEET OF 7

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
  
 CHIEF, BUREAU OF HIGHWAYS DATE 2-22-00

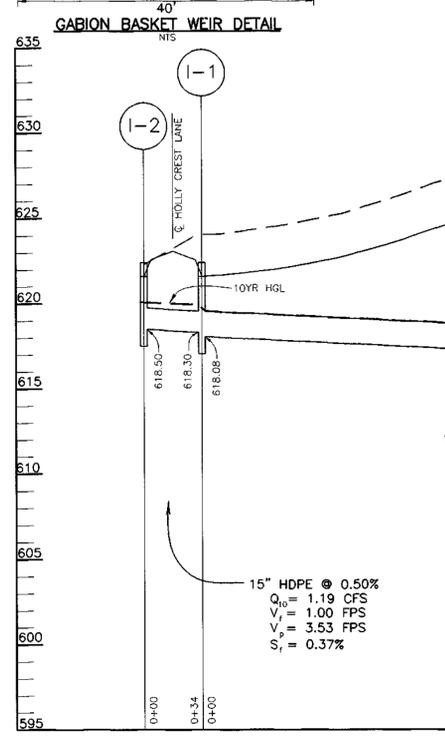
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 3/1/00





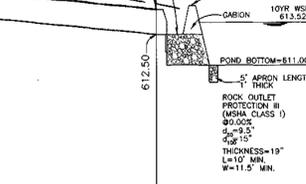
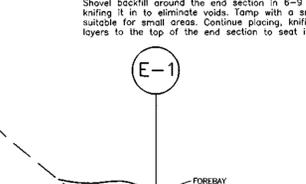
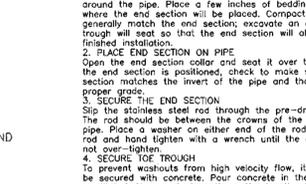
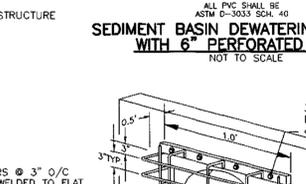
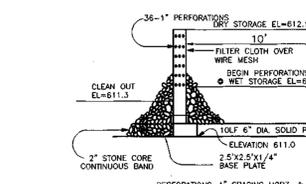
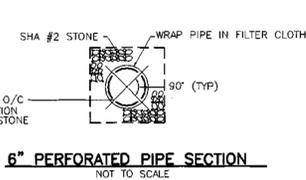
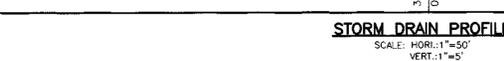
SIZE	TYPE	LENGTH
6"	PVC	10 LF
15"	HDPE	34 LF
18"	HDPE	726 LF
27"	RCP ASTM C-361 CLASS B-25	30 LF

STRUCTURE SCHEDULE							
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS	
I-1	TYPE 'D' INLET	N574,503.47 E1,315,526.04	*621.60	618.30	618.08	SD 4.39	
I-2	TYPE 'D' INLET	N574,471.85 E1,315,268.68	*621.60	-	618.50	SD 4.39	
M-1	STANDARD 6" MANHOLE	N574,641.23 E1,315,620.80	634.10	616.14	616.04	SEE DETAIL THIS SHEET	
E-1	HDPE 18" END SECTION	N574,961.47 E1,315,719.91	614.00	-	612.50	SEE DETAIL THIS SHEET	
E-2	27" END SECTION	N575,058.03 E1,315,773.81	611.75	-	609.50	SD 5.52	
E-3	15" END SECTION	N574,401.64 E1,315,140.20	623.15	-	621.90	SD 5.52	
E-4	15" END SECTION	N574,452.68 E1,315,119.72	623.95	-	622.70	SD 5.52	
S-1	CONCRETE CONTROL STRUCTURE	N575,026.28 E1,315,780.76	615.60	-	610.80	SD 4.39	
HW-1	12" HEAD WALL TYPE C	SEE PLAN	SEE DETAIL	SEE DETAIL	SD 5.21		



18" HDPE @ 0.50%  
 $Q_{10} = 4.97$  CFS  
 $V_1 = 2.81$  FPS  
 $V_2 = 5.12$  FPS  
 $S_1 = 0.41\%$

18" HDPE @ 1.05%  
 $Q_{10} = 4.97$  CFS  
 $V_1 = 2.81$  FPS  
 $V_2 = 6.6$  FPS  
 $S_1 = 0.41\%$



HOPE FLARED END SECTION			
DIMENSION	10/12	15	18
A	42	41	49
B	14 1/2	19	22
C	33	34	43
D	6	6	6

POND SUMMARY			
	2 YEAR	10 YEAR	100 YEAR
FLOW INTO POND	5.28 c.f.s.	14.92 c.f.s.	27.50 c.f.s.
FLOW OUT OF POND	0.61 c.f.s.	5.48 c.f.s.	23.85 c.f.s.
W.S. ELEVATION	612.38	613.56	614.27
STORAGE VOLUME	0.20 AC FT	0.42 AC FT	0.49 AC FT

"AS-BUILT" CERTIFICATION  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
 SIGNATURE OF ENGINEER: [Signature]  
 DATE: 2/10/00

ENGINEERS CERTIFICATE  
 I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.  
 SIGNATURE OF ENGINEER: [Signature]  
 DATE: 2/10/00

DEVELOPER'S CERTIFICATE  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.  
 SIGNATURE OF DEVELOPER: [Signature]  
 DATE: 2/10/00

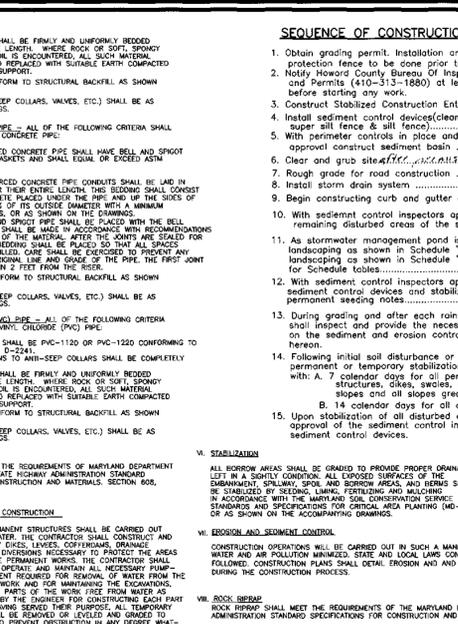
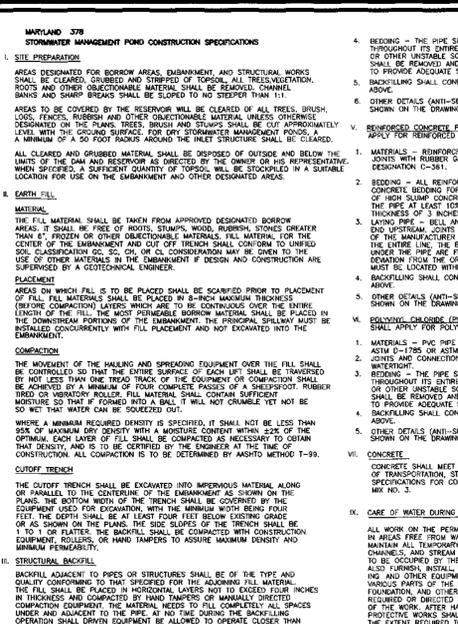
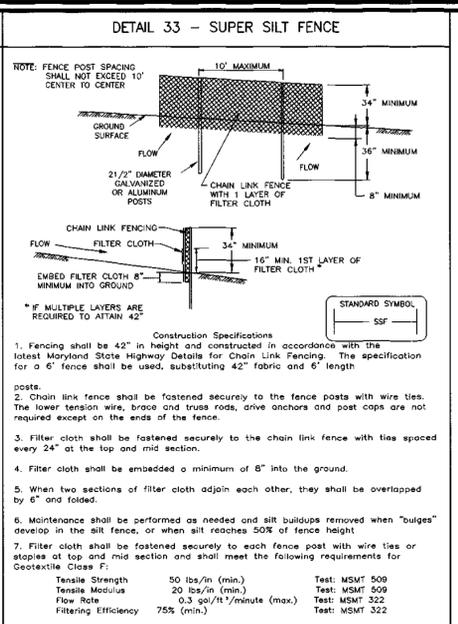
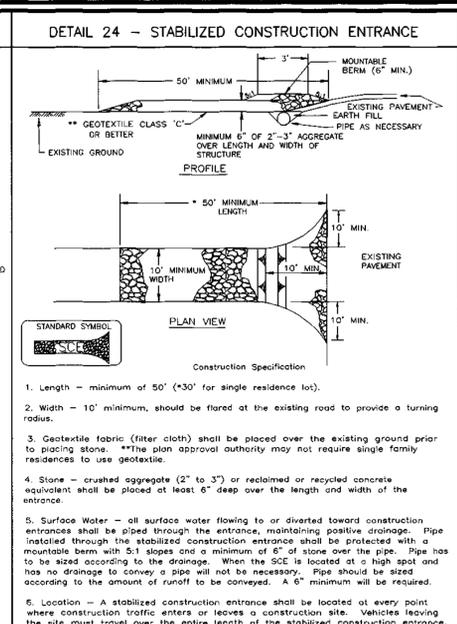
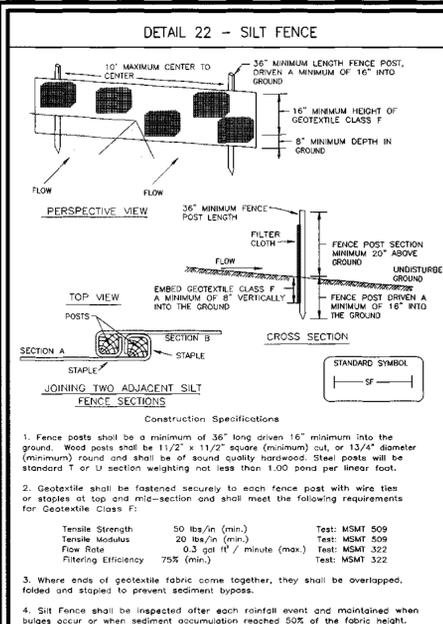
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 SIGNATURE: [Signature]  
 DATE: 2-22-00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 SIGNATURE: [Signature]  
 DATE: 3/10

HOLLY CREST  
 PHASE 2, LOTS 5 & 6, 8 - 12  
 STORM DRAIN PROFILES AND  
 STORMWATER MANAGEMENT DETAILS  
 DPZ FILE # S-98-10, WP-98-111, F-98-04, F-99-39, P-99-09  
 TAX MAP #28 PARCEL #4 BLOCK #1  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

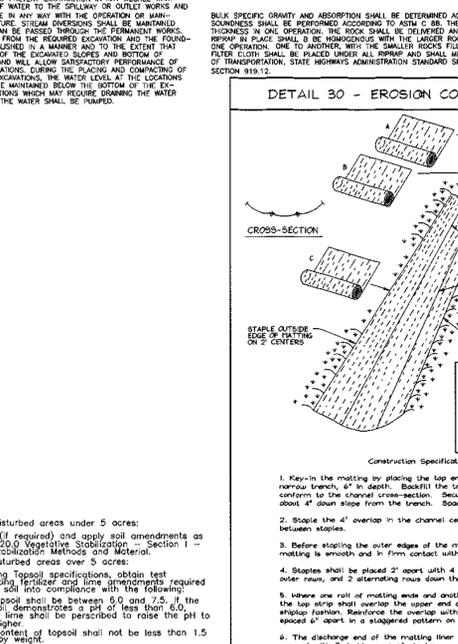
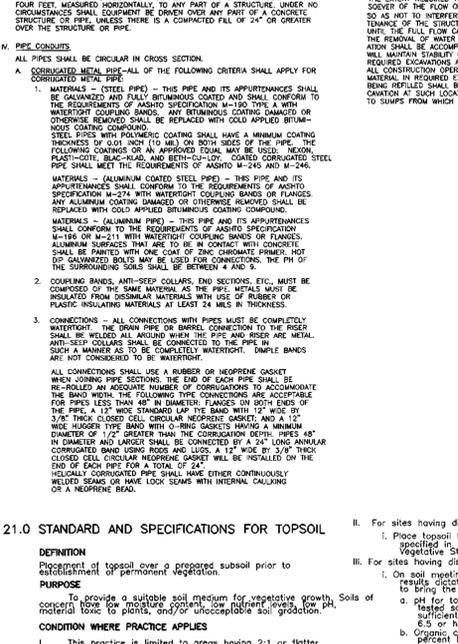
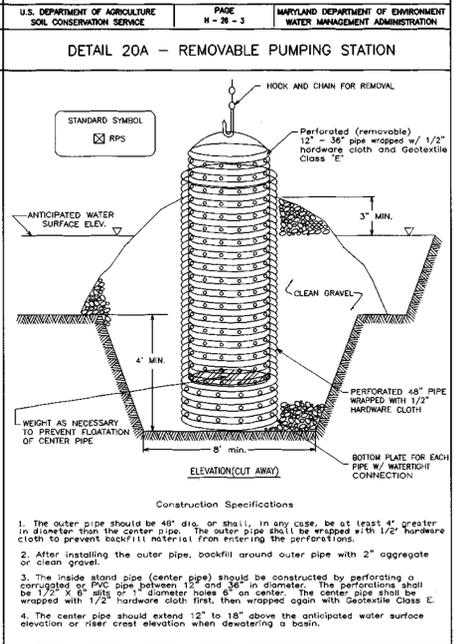
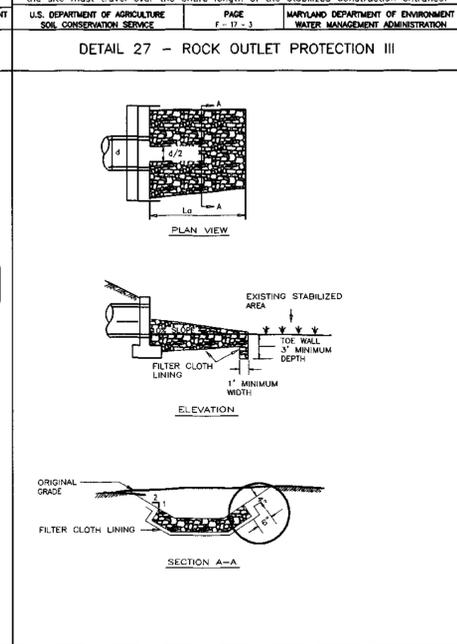
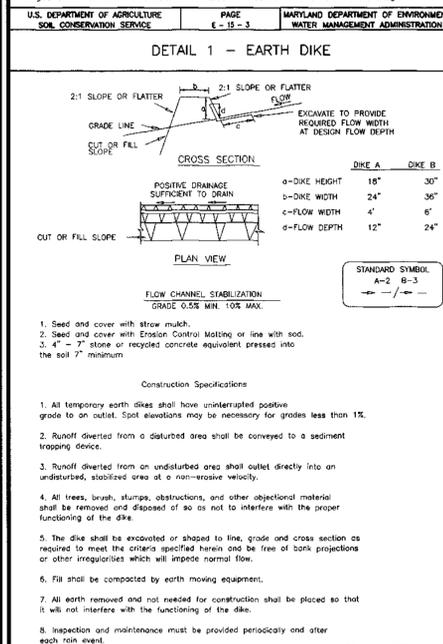
VOGEL & ASSOCIATES  
 ENGINEERS SURVEYORS PLANNERS  
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043  
 Tel 410-461-5828 Fax 410-465-3956

DESIGN BY: J.C.O.  
 DRAWN BY: J.C.O.  
 CHECKED BY: R.H.V.  
 DATE: AUGUST 6, 1999  
 SCALE: AS SHOWN  
 W.O. NO.: 97-90  
 6 SHEET OF 7



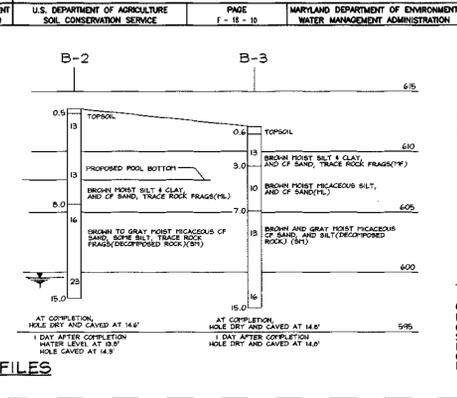
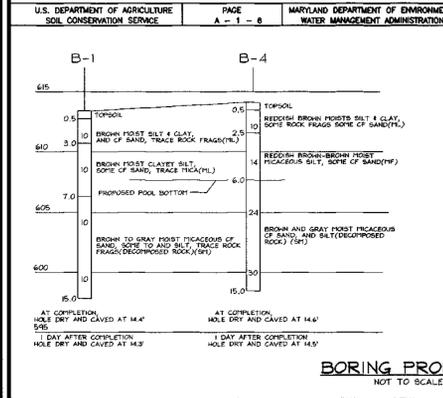
**TEMPORARY SEEDING**  
Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

**PERMANENT SEEDING NOTES**  
Apply to graded or cleared areas not subject to immediate further disturbance where a permanent, long-term vegetative cover is needed.



**SEDIMENT CONTROL NOTES**  
A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control prior to the start of any construction.

**CONCLUSIONS**  
From the boring and laboratory data, we consider that the subsurface is acceptable for the plan construction. After striping the topsoil, the area to receive embankment shall be thoroughly rolled to a uniform dense condition with any soil or otherwise unsuitable spots cut out and replaced with contained fill. The specified core trench shall then be excavated and backfilled followed by the embankment construction. All materials and construction methods shall be in accordance with the specifications of the controlling agency.



**"AS-BUILT" CERTIFICATION**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

**ROBERT H. VOGEL, P.E. NO. 16193**  
I HEREBY MEANS TO STATE AND DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION, THE ON-SITE TEST INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS OF THE DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

**CONSTRUCTION AND MATERIAL SPECIFICATIONS**  
1. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. A given soil type can be found in the following locations: (a) on the site; (b) in the vicinity of the site; (c) in the vicinity of the site; (d) in the vicinity of the site.

**CONSTRUCTION AND MATERIAL SPECIFICATIONS (continued)**  
1. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. A given soil type can be found in the following locations: (a) on the site; (b) in the vicinity of the site; (c) in the vicinity of the site; (d) in the vicinity of the site.

**HOLLY CREST**  
PHASE 2, LOTS 5 & 6, 8 - 12  
SEDIMENT CONTROL NOTES & DETAILS

**OWNER/DEVELOPER**  
ALLAN HOMES, INC.  
P.O. BOX 1058  
COLUMBIA, MARYLAND 21044

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**  
CINDY HAMILTON, CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 3/1/00

**APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
ROBERT H. VOGEL, CHIEF, BUREAU OF HIGHWAYS  
DATE: 2-22-00

**DESIGN BY: J.C.O.**  
DRAWN BY: J.C.O.  
CHECKED BY: R.H.V.  
DATE: AUGUST 5, 1999  
SCALE: AS SHOWN  
W.O. NO.: 97-90  
7 SHEET OF 7

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

**Cheryl Simon / 6/5 2/10/00**  
USDA-NATURAL RESOURCES CONSERVATION SERVICE  
DATE: 2/10/00

**ENGINEERS CERTIFICATE**  
I HEREBY 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 COUNTY CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

**Robert H. Vogel / 2/2/00**  
SIGNATURE OF ENGINEER  
ROBERT H. VOGEL  
DATE: 2/2/00

**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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 COUNTY CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

**Robert H. Vogel / 2/2/00**  
SIGNATURE OF DEVELOPER  
ROBERT H. VOGEL  
DATE: 2/2/00

**APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
ROBERT H. VOGEL, CHIEF, BUREAU OF HIGHWAYS  
DATE: 2-22-00

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**  
CINDY HAMILTON, CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 3/1/00

**VOGEL & ASSOCIATES**  
ENGINEERS/SURVEYORS/PLANNERS

3691 Park Avenue, Suite 101 • Elkort City/Maryland 21043  
Tel 410-661-5828 Fax 410-465-3966

**STATE OF MARYLAND**  
REGISTERED PROFESSIONAL ENGINEER  
ROBERT H. VOGEL, P.E. # 16193