

SIGNAGE LOCATION CHART				
DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 18	HURSTBORNE RD.	0+18	27' RIGHT	R1-1 "STOP" STREET NAME SIGN ASSEMBLY
3 OF 18	PRIVATE USE-IN COMMON DRIVE	0+10	22' LEFT	R1-1 "STOP" STREET NAME SIGN ASSEMBLY

LINE TABLE		
LINE	LENGTH	BEARING
L1	100.55	S66°11'36"W
L2	58.91	S01°08'23"W
L3	0.00	N64°12'19"W
L4	137.05	S64°12'19"E
L5	62.51	N66°25'52"E
L6	150.15	N37°45'24"W

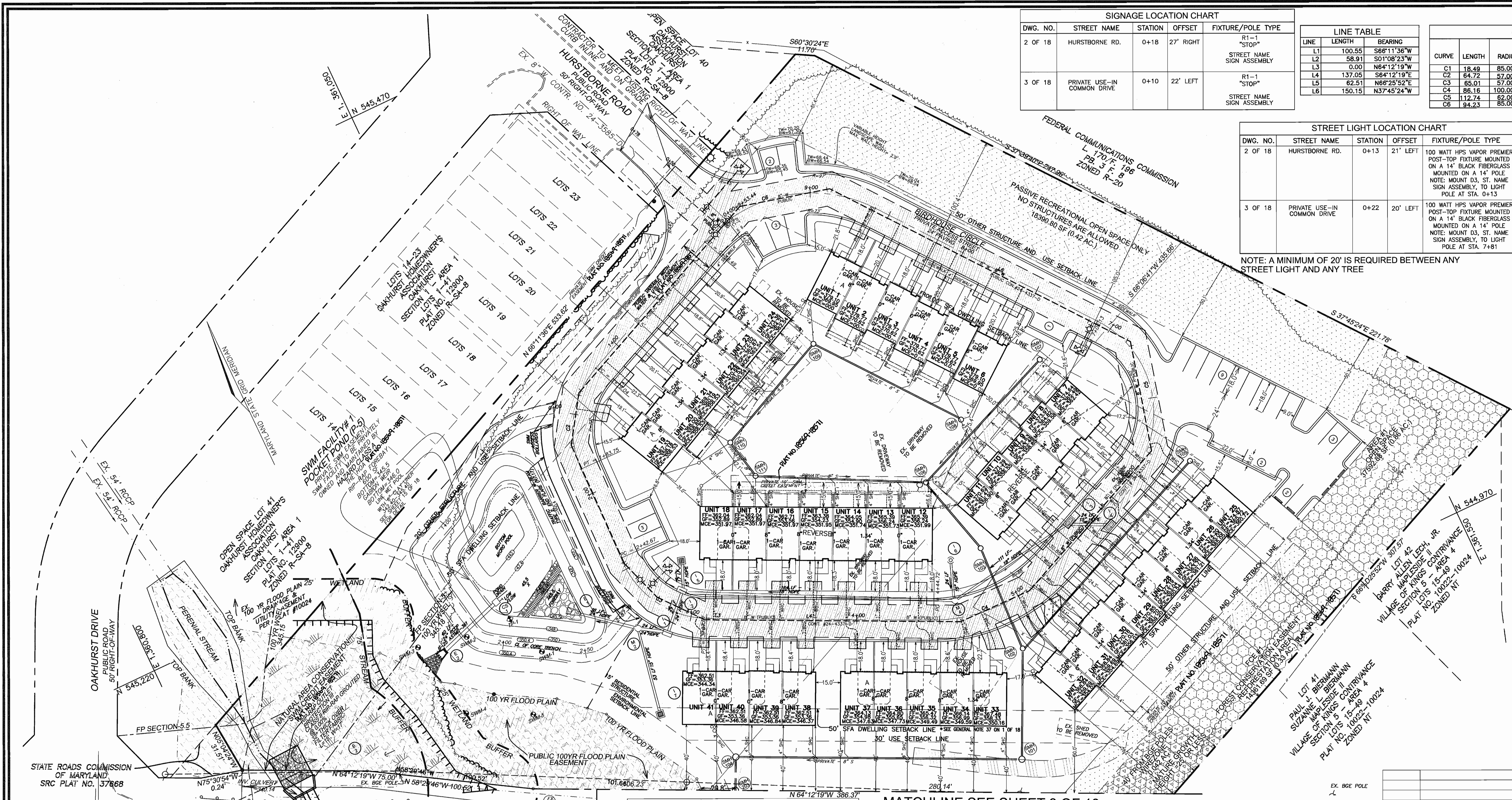
CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
C1	18.49	85.00	122°37'	9.28	S72°25'25"W	18.45
C2	64.72	57.00	65°03'13"	36.35	S33°40'00"W	61.30
C3	85.01	57.00	65°20'42"	36.55	S31°31'58"E	61.54
C4	86.16	100.00	49°21'50"	45.96	S88°53'13"E	83.52
C5	112.74	69.00	104°11'14"	73.62	N14°20'14"E	97.84
C6	94.23	85.00	63°30'54"	52.61	N69°50'50"W	89.48

STREET LIGHT LOCATION CHART				
DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 18	HURSTBORNE RD.	0+13	21' LEFT	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE NOTE: MOUNT D3, ST. NAME SIGN ASSEMBLY, TO LIGHT POLE AT STA. 0+13
3 OF 18	PRIVATE USE-IN COMMON DRIVE	0+22	20' LEFT	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE NOTE: MOUNT D3, ST. NAME SIGN ASSEMBLY, TO LIGHT POLE AT STA. 7+81

NOTE: UNITS 25 THRU 32 ARE LOCATED ON THE MINIMUM 75' DWELLING SETBACK LINE. THE OPTIONAL MORNING ROOM IS NOT PERMITTED ON UNITS 25 THRU 32.

- LEGEND**
- VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT
 - OPENSOURCE
 - FOREST CONSERVATION RETENTION EASEMENT
 - FOREST CONSERVATION REFORESTATION EASEMENT
 - PRIVATE SWM MANAGEMENT EASEMENT
 - RECREATIONAL OPEN
 - WETLAND
 - LIMIT OF WETLAND
 - PUBLIC 100 YR FLOODPLAIN EASEMENT
 - PRIVATE SWM CREDIT EASEMENT (SHEET FLOW TO BUFFER) SEE SHEET 3 OF 18
 - PRIVATE SWM CREDIT EASEMENT GRASS CHANNEL CREDIT EASEMENT SEE SHEET THIS SHEET
 - WETLAND BUFFER
 - STREAM BUFFER

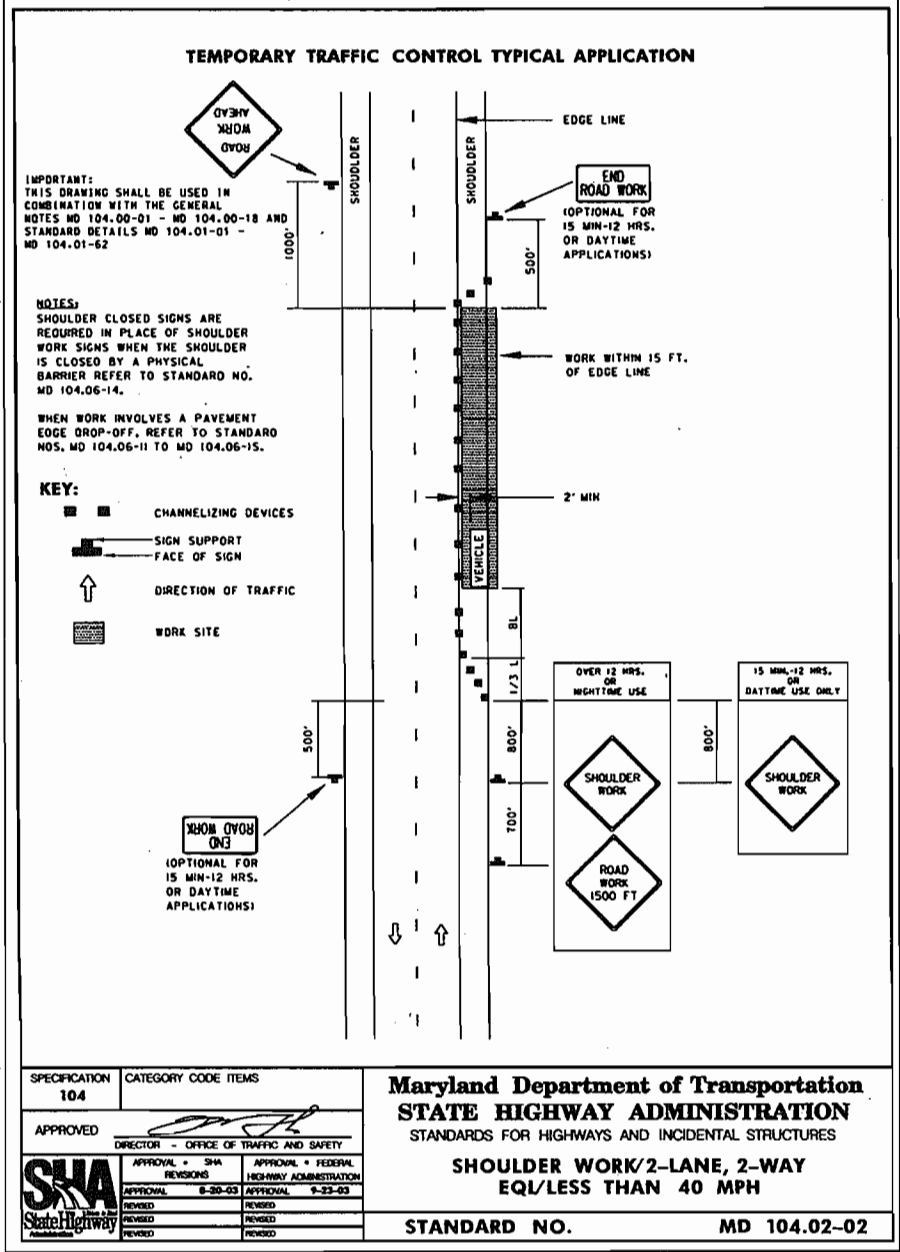
NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE



MATCHLINE SEE SHEET 3 OF 18

PLAN

SCALE: 1"=30'



TRAFFIC CONTROL FOR THE CONSTRUCTION ON F CULVERTS ON GILFORD ROAD

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
SHOULDER WORK/2-LANE, 2-WAY
EQUALLY THAN 40 MPH
STANDARD NO. MD 104.02-02

OWNER/DEVELOPER
ELICOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR. SITE 102
ELICOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hansen
CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 10/15/06

Mark McLaughlin
CHIEF, DEVELOPMENT ENGINEERING DIVISION & DIRECTOR DATE: 10/20/06

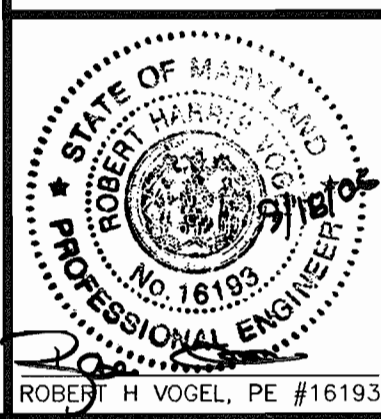
NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45
SITE AND UTILITY PLAN**

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
EX. PARCEL '71' & '73'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



DESIGN BY: RJR/HV
DRAWN BY: RJR/CMH
CHECKED BY: RHV
DATE: AUGUST, 2006
SCALE: AS SHOWN
W.O. NO.: 04-99.00

LEGEND

- SSF DOUBLE ROW OF SUPER SILT FENCE
- SSF SUPER SILT FENCE
- LOD LIMIT OF DISTURBANCE
- EROSION CONTROL MATTING
- INTERNAL DIKE
- EARTHDIKE
- STABILIZED CONSTRUCTION ENTRANCE
- TREE PROTECTION FENCE
- GABION INFLOW PROTECTION
- TREE PROTECTION FENCE
- RPS REMOVABLE PUMPING STATION
- VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT
- OPENSOURCE
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- PRIVATE SWM CREDIT EASEMENT (SHEET FLOW TO BUFFER) SEE SHEET 3 OF 18
- PRIVATE SWM CREDIT EASEMENT GRASS CHANNEL CREDIT EASEMENT SEE SHEET THIS SHEET
- WETLAND BUFFER
- STREAM BUFFER
- LIMIT OF WETLAND
- DIVERSION SWALE

MATCHLINE SEE SHEET 2 OF 18

MATCHLINE SEE SHEET 2 OF 18

PLAN
SCALE: 1"=30'

FLOODPLAIN
SCALE: 1"=30'

FLOODPLAIN
SCALE: 1"=30'

OWNER/DEVELOPER
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ELLICOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
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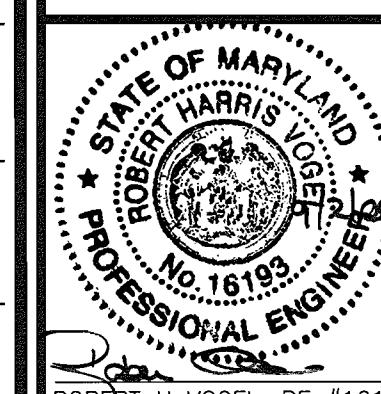
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OAKHURST II
TOWNHOUSE UNITS 1-45
SITE AND UTILITY PLAN

TAX MAP 42 BLOCK 17
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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Linda Hamrick 1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Demmons 10/20/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Mark D. Lytle 10/20/06
DIRECTOR DATE

BASIN NO.1
 TRAP TYPE: BASIN
 EX. DRAINAGE AREA: 3.6 AC.
 PROP. DRAINAGE AREA: 2.7 AC.
 TOTAL STORAGE REQUIRED: 12960 CF
 TOTAL STORAGE PROVIDED: 12960 CF
 BOTTOM ELEV.: 342.40
 CREST ELEVATION: 349.20*
 TEMPORARILY BLOCKED

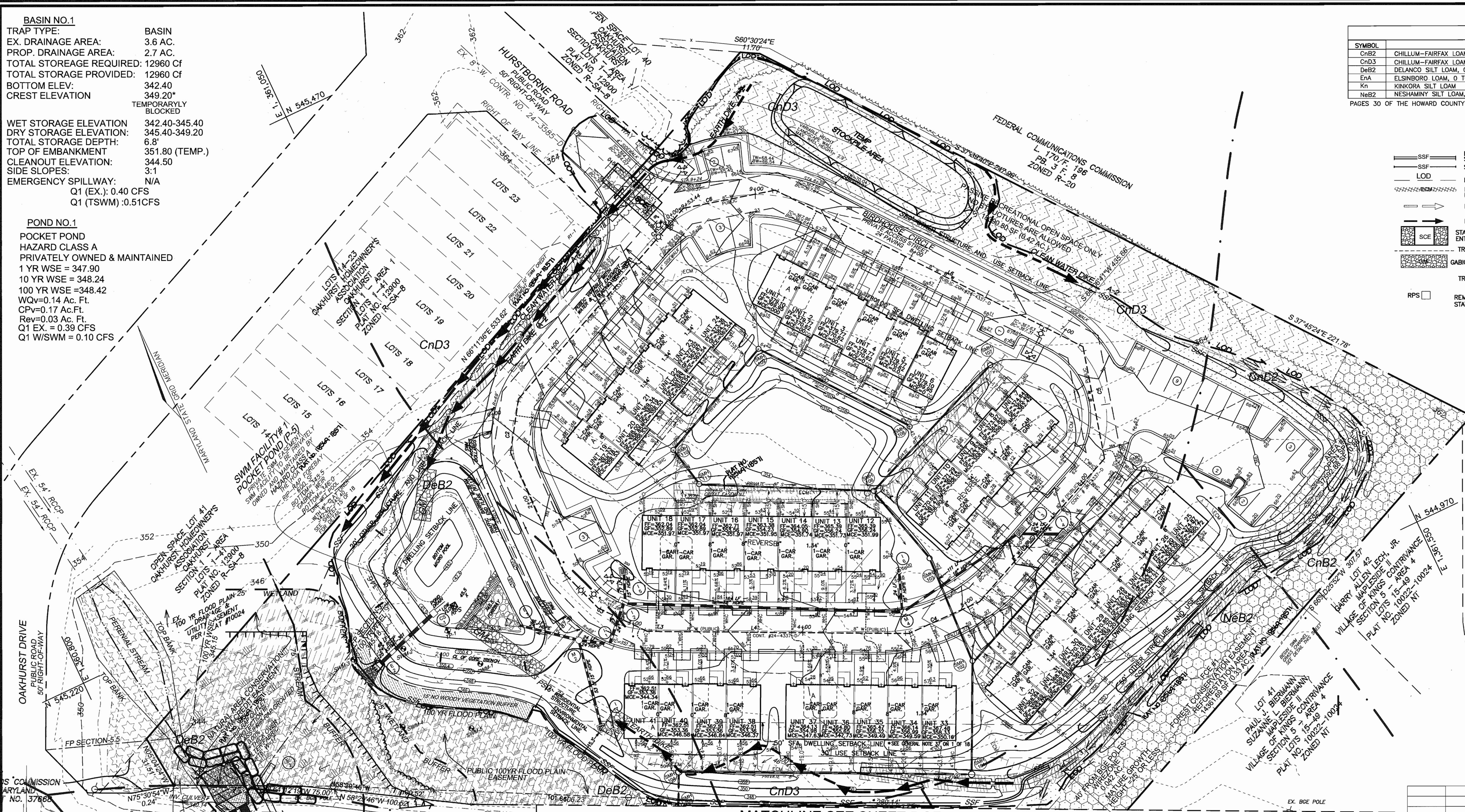
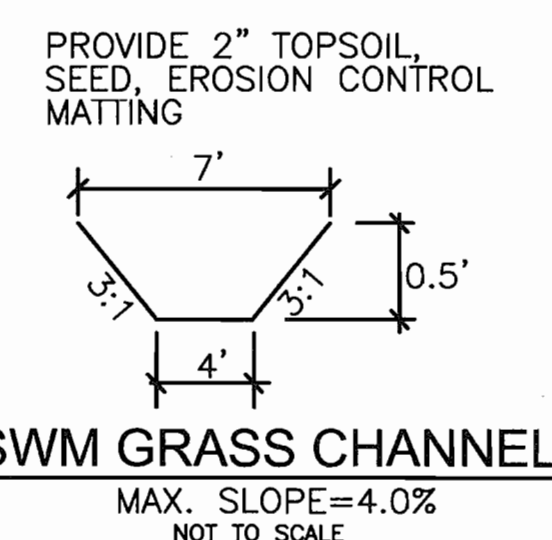
WET STORAGE ELEVATION: 342.40-345.40
 DRY STORAGE ELEVATION: 345.40-349.20
 TOTAL STORAGE DEPTH: 6.8'
 TOP OF EMBANKMENT: 351.80 (TEMP.)
 CLEANOUT ELEVATION: 344.50
 SIDE SLOPES: 3:1
 EMERGENCY SPILLWAY: N/A
 Q1 (EX.): 0.40 CFS
 Q1 (TSWM): 0.51 CFS

POND NO.1
 POCKET POND
 HAZARD CLASS A
 PRIVATELY OWNED & MAINTAINED
 1 YR WSE = 347.90
 10 YR WSE = 348.24
 100 YR WSE = 348.42
 WQV=0.14 AC. FT.
 Rev=0.03 AC. FT.
 Q1 EX. = 0.39 CFS
 Q1 WSWM = 0.10 CFS

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
Cb2	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
DeB2	DELANCO SILT LOAM, 0 TO 3 PERCENT SLOPES	C
EnA	ELLSBORO LOAM, 0 TO 3 PERCENT SLOPES	B
Kn	KINKORA SILT LOAM	D
NeB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B

PAGES 30 OF THE HOWARD COUNTY SOIL SURVEY

LEGEND	
SSSF	DOUBLE ROW OF SUPER SILT FENCE
SSF	SUPER SILT FENCE
LOD	LIMIT OF DISTURBANCE
ECM	EROSION CONTROL MATTING
ED	INTERNAL DIKE
ED	EARTHDIKE
SCE	STABILIZED CONSTRUCTION ENTRANCE
TPF	TREE PROTECTION FENCE
GIP	GABION INFLOW PROTECTION
RPS	REMOVABLE PUMPING STATION
Variable Width Hatched	VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT
Open Space	OPENSOURCE
Forest Conservation Hatched	FOREST CONSERVATION RETENTION EASEMENT
Forest Conservation Hatched	FOREST CONSERVATION REFORESTATION EASEMENT
Private SWM Hatched	PRIVATE SWM MANAGEMENT EASEMENT
Recreational Open Hatched	RECREATIONAL OPEN EASEMENT
Public 100 Yr Floodplain Hatched	PUBLIC 100 YR FLOODPLAIN EASEMENT
Private SWM Credit Easement Hatched	PRIVATE SWM CREDIT EASEMENT (SHEET FLOW TO BUFFER) SEE SHEET 3 OF 18
Private SWM Credit Easement Hatched	PRIVATE SWM CREDIT EASEMENT GRASS CHANNEL CREDIT EASEMENT SEE SHEET THIS SHEET
Wetland Buffer	WETLAND BUFFER
Stream Buffer	STREAM BUFFER
Limit of Wetland	LIMIT OF WETLAND
Diversion Swale	DIVERSION SWALE



MATCHLINE SEE SHEET 5 OF 18

ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 IMBRICATE SF/SSF IN 25' SEGMENTS AND CURL ENDS UPHILL BY 2' IN ELEVATION AS REQUIRED.

PLAN
 SCALE: 1"=30'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Amy Hanna 10/10/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William 10/25/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Mark A. Gough 10/25/06
 DIRECTOR DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION AND SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED 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 9/18/06
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. 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.

Carl Key 9/13/06
 SIGNATURE OF DEVELOPER DATE

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

Jim Murrillo 10/10/06
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Howard SCD 10/19/06
 HOWARD_SCD DATE

NO.	REVISION	DATE
SITE DEVELOPMENT PLAN OAKHURST II TOWNHOUSE UNITS 1-45 GRADING AND SEDIMENT CONTROL PLAN		
TAX MAP 42 BLOCK 17 6TH ELECTION DISTRICT	FUTURE PARCEL 'A' EX. PARCEL 71 & 73 HOWARD COUNTY, MARYLAND	
ROBERT H. VOGEL ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8966		
DESIGN BY: RJR/HV	DRAWN BY: RJM/CMH	CHECKED BY: RHV
DATE: AUGUST, 2006	SCALE: AS SHOWN	W.O. NO.: 04-99.00
		4 SHEET OF 18

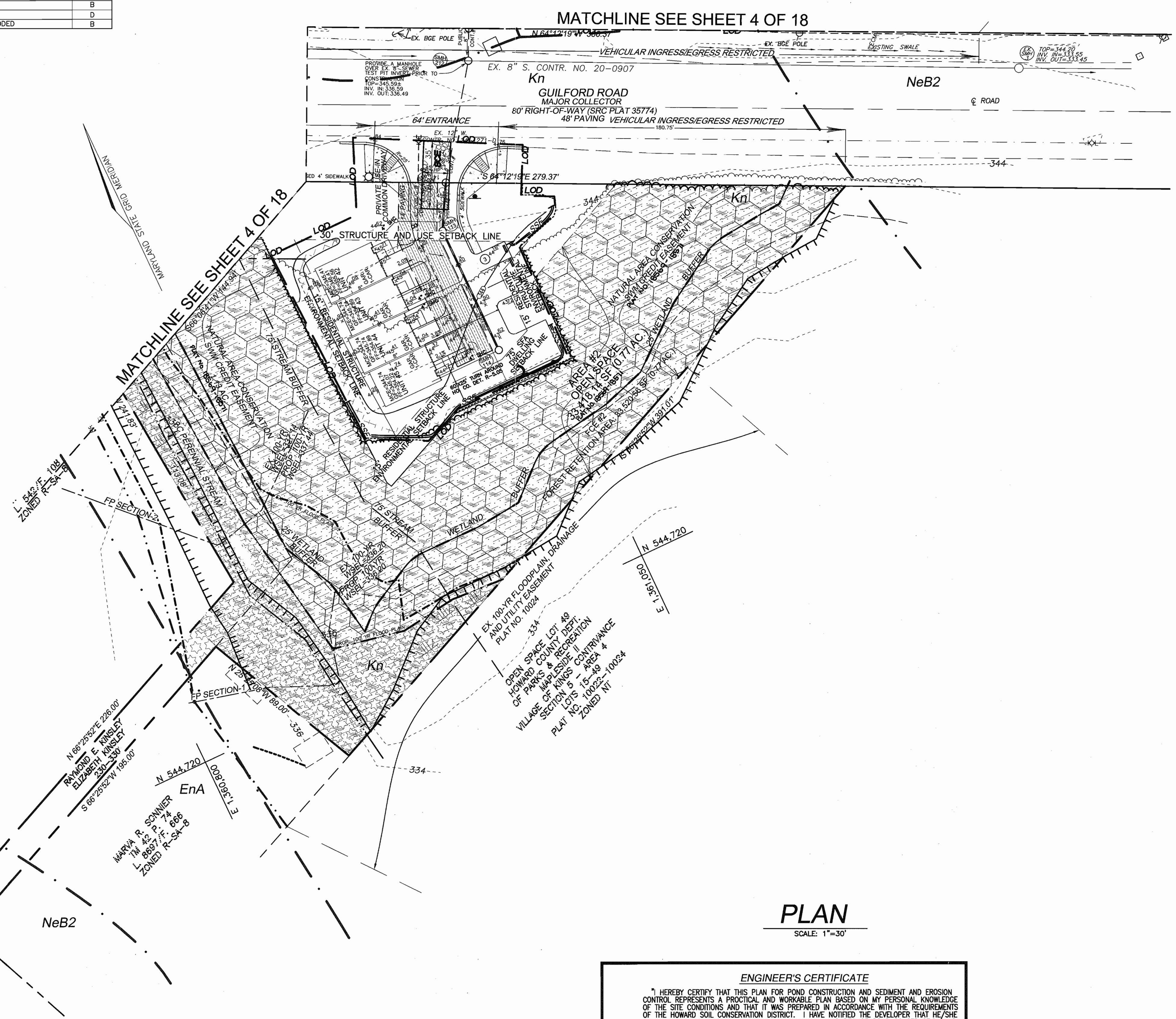
SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
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CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
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Kn	KINKORA SILT LOAM	D
NeB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B

PAGES 30 OF THE HOWARD COUNTY SOIL SURVEY

LEGEND

- SF— DOUBLE ROW OF SUPER SILT FENCE
- SS— SUPER SILT FENCE
- LOD— LIMIT OF DISTURBANCE
- EROSION CONTROL MATTING
- INTERNAL DIKE
- EARTHDIKE
- STABILIZED CONSTRUCTION ENTRANCE
- TREE PROTECTION FENCE
- GABION INFLOW PROTECTION
- TREE PROTECTION FENCE
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IMBRICATE SF/SS IN 25' SEGMENTS AND CURL ENDS UPHILL BY 2" IN ELEVATION AS REQUIRED.



PLAN
SCALE: 1"=30'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cinda Hamm 10/31/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 08/26/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Mark DiCuglia 10/31/06
DIRECTOR DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION AND SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD 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 8/2/06
SIGNATURE OF ENGINEER DATE
ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. 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.

Robert H. Vogel 9/6/06
SIGNATURE OF DEVELOPER DATE

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

Robert H. Vogel 10/19/06
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Robert H. Vogel 10/19/06
HOWARD SOIL CONSERVATION DISTRICT DATE

OWNER/DEVELOPER
ELLCOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL, DR. STE. 102
ELLCOTT CITY, MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

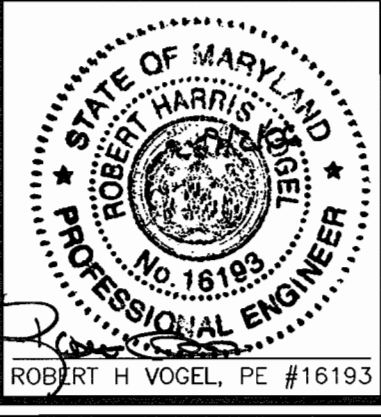
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45
GRADING AND SEDIMENT CONTROL PLAN

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
EX. PARCEL 71' & 73'
HOWARD COUNTY, MARYLAND

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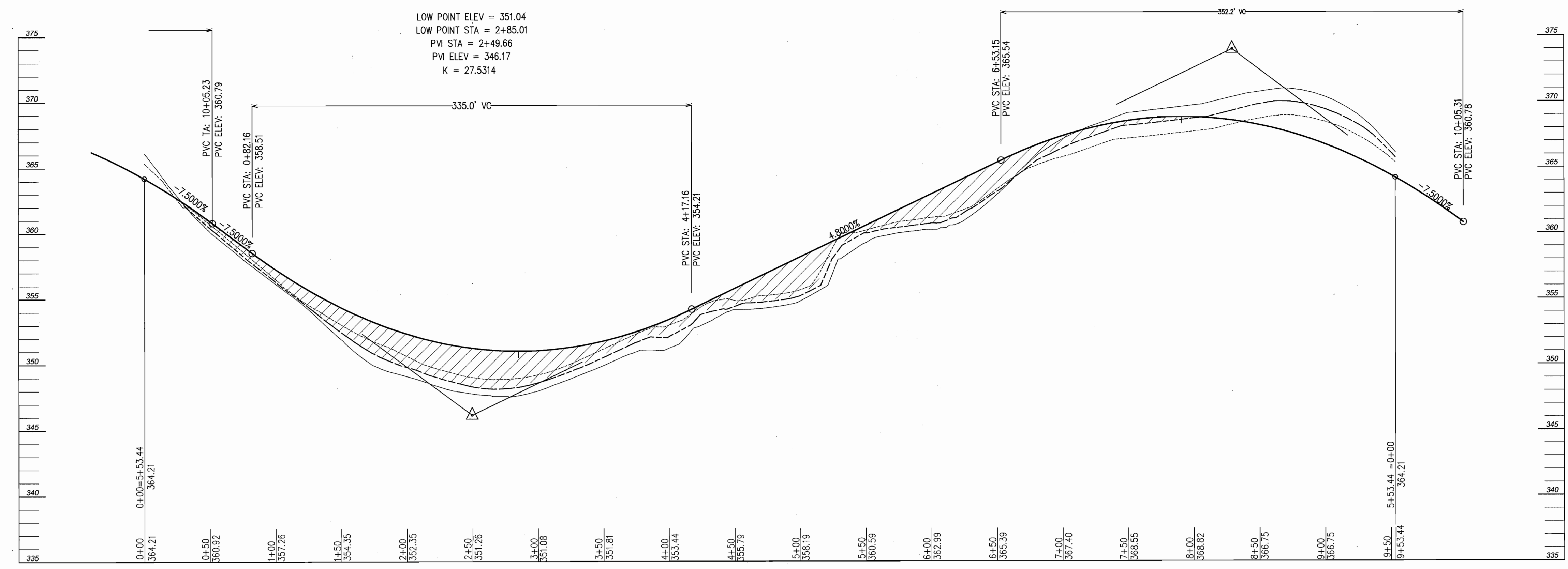
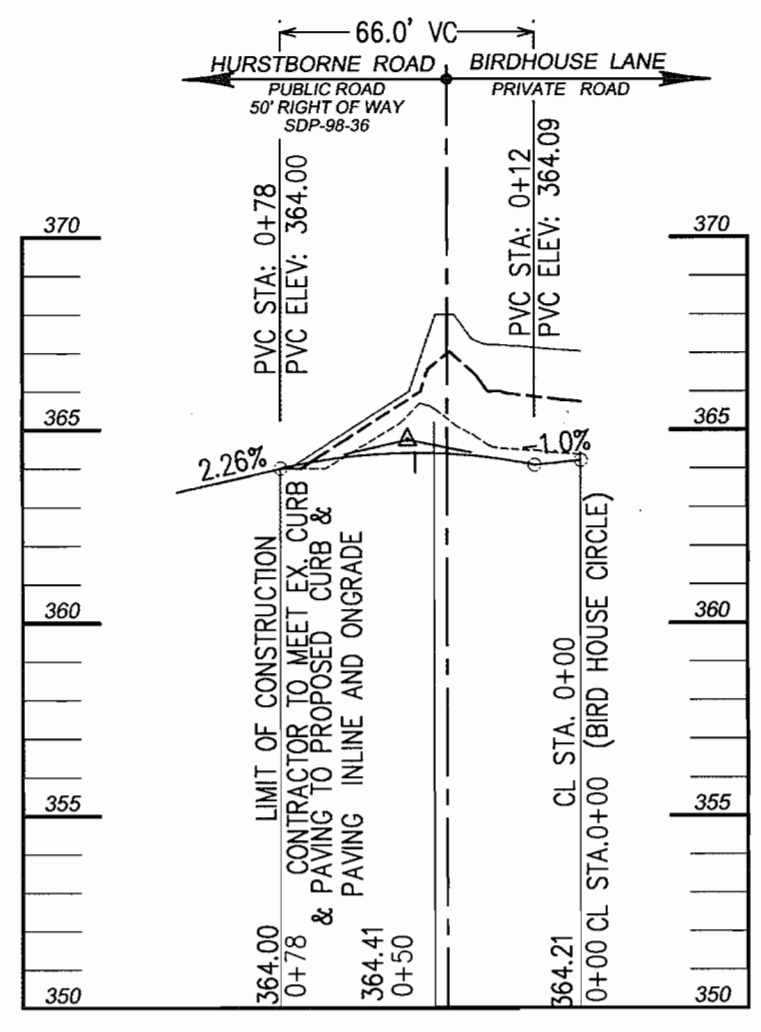
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5 SHEET OF 18

HIGH POINT ELE. 368.84
 HIGH POINT STA = 7+90.58
 PVI STA = 8+29.23
 PVI ELEV = 373.99
 A.D. = -12.3000
 K = 28.6306

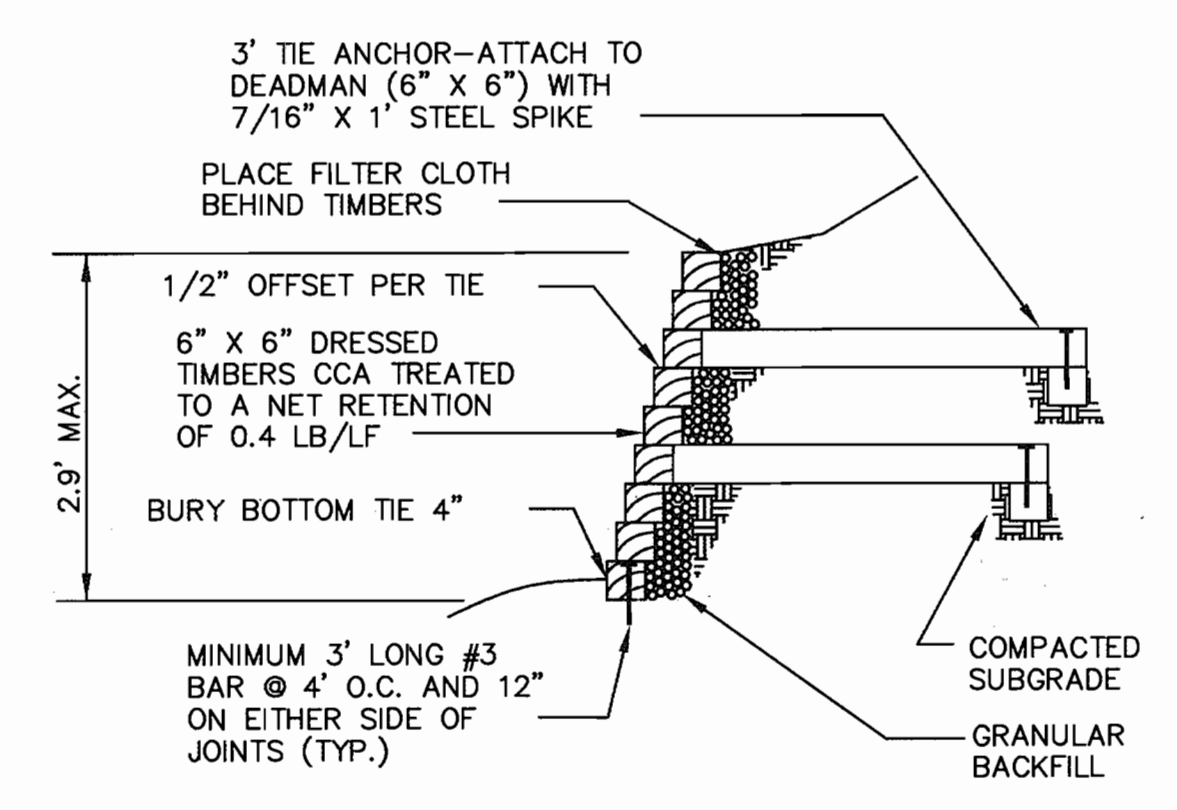
LOW POINT ELEV = 351.04
 LOW POINT STA = 2+85.01
 PVI STA = 2+49.66
 PVI ELEV = 346.17
 K = 27.5314

HIGH POINT ELEV = 364.40
 HIGH POINT STA = 0+42.97
 PVI STA = 0+44.92
 PVI ELEV = 364.75



**HURSTBORNE ROAD
 BIRDHOUSE CIRCLE**
 SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.

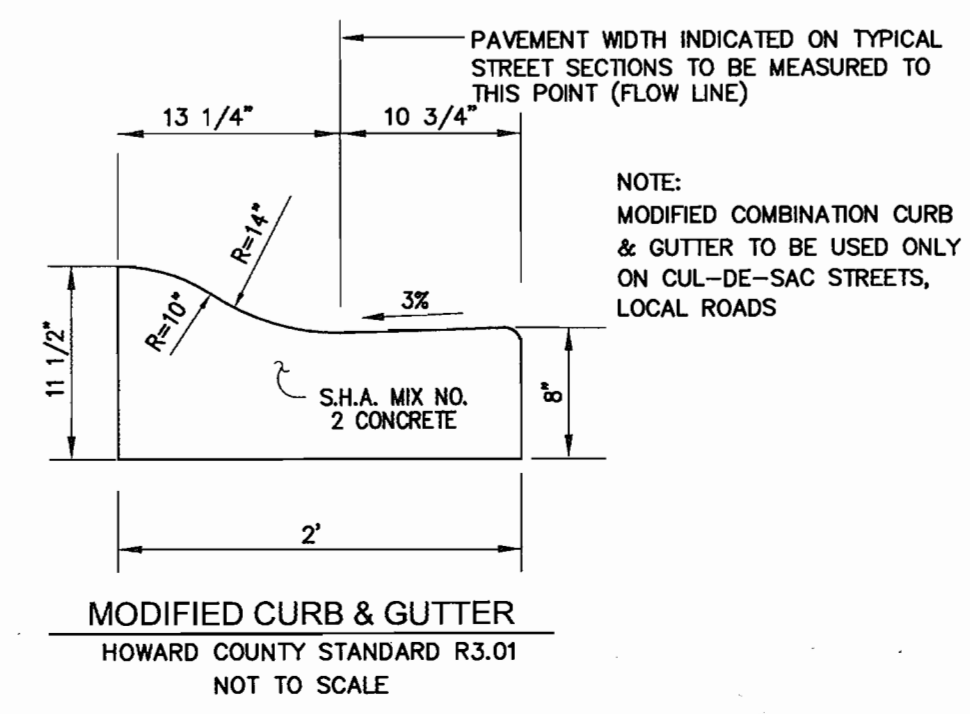
BIRDHOUSE CIRCLE
 CLASSIFICATION: PRIVATE ACCESS STREET
 ROAD: BIRDHOUSE CIRCLE
 DESIGN SPEED: 15 MPH
 SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.



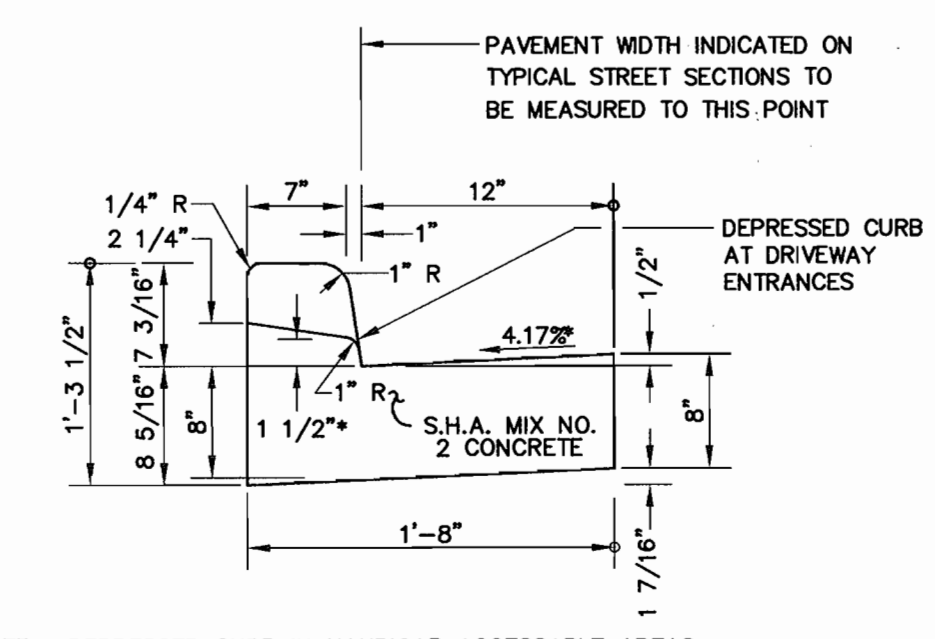
TIMBER RETAINING WALL DETAIL
 NOT TO SCALE

TIMBER WALL NOTES:

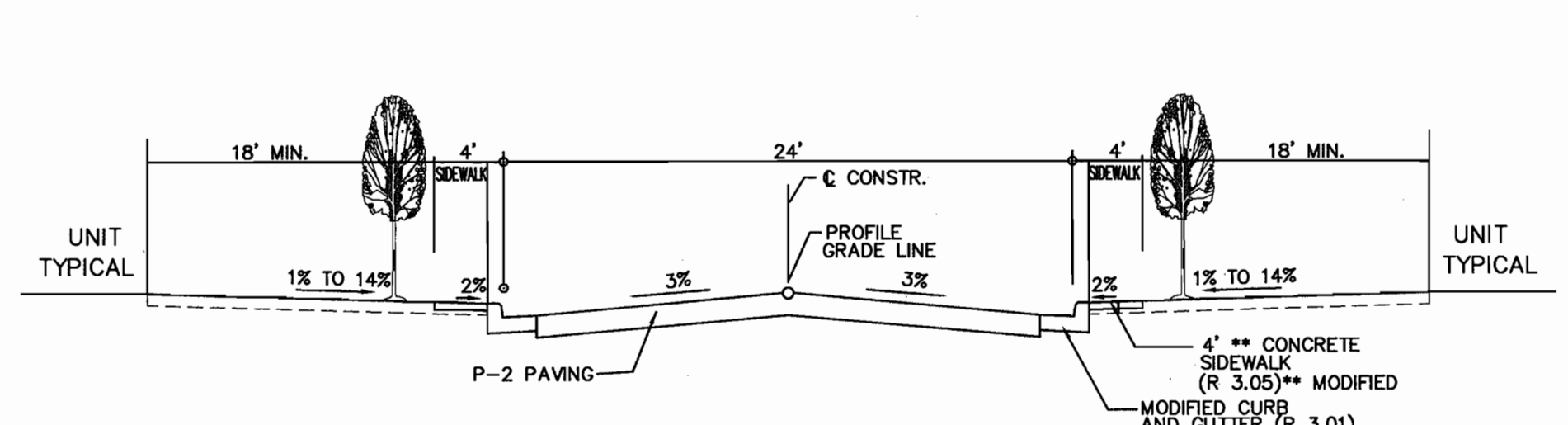
- TOP OF WALL TO REMAIN ON CONTINUOUS GRADE AT ALL POINTS. STEP TOP OF WALL WITH FINISHED GRADE FOR TRANSITION.
- FOR WALLS UP TO 2.9' HIGH, WALL REQUIRES 6' DEADMEN @ 6' O.C. STAGGERED IN THE 4TH AND 7TH COURSE FROM SUBGRADE.
- GALVANIZED 60d NAILS @ 4' O.C. AND 12" EITHER SIDE OF JOINTS.
- WALL TO BE BACKFILLED TO TOP OF WALL AFTER CONSTRUCTION.



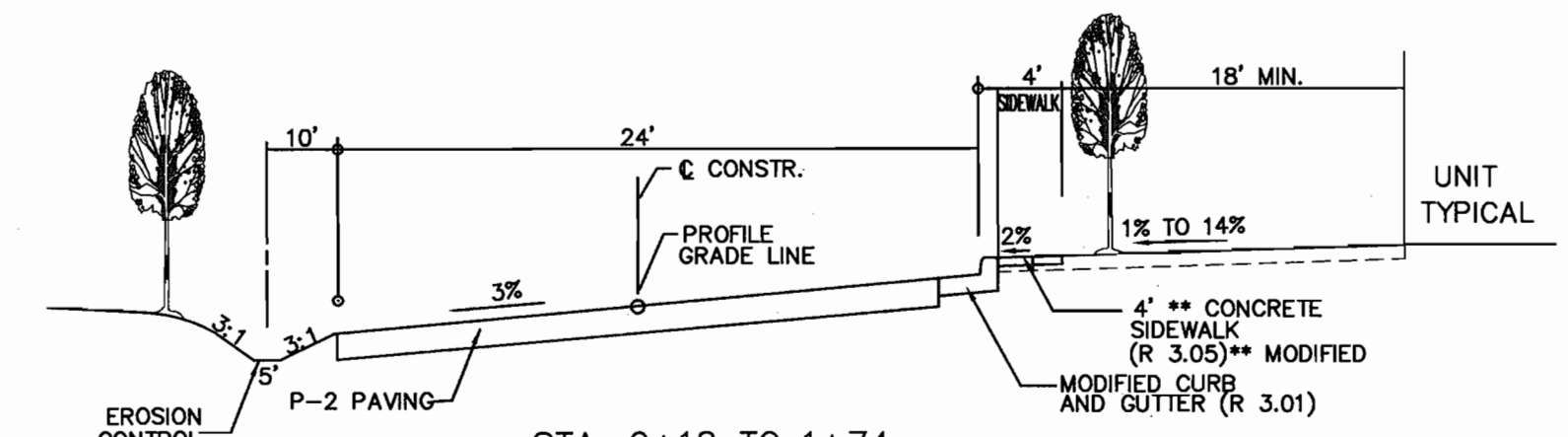
MODIFIED CURB & GUTTER
 HOWARD COUNTY STANDARD R3.01
 NOT TO SCALE



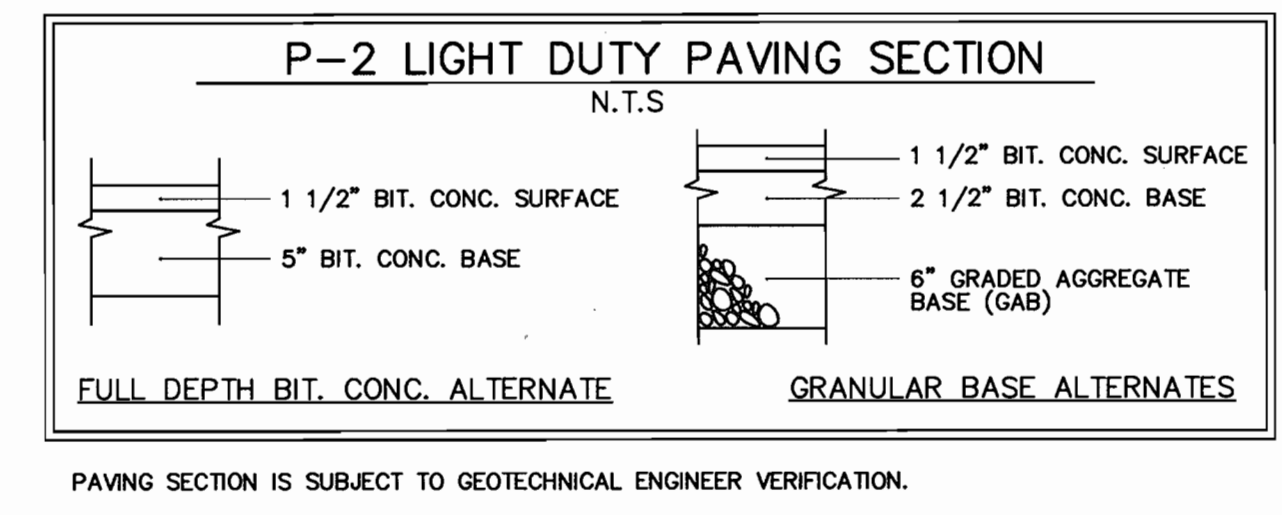
NOTE: DEPRESSED CURB IN HANDICAP ACCESSIBLE AREAS SHALL HAVE A 0.0417(1/24") RISE FROM PAVING TO TOP OF CURB.
STANDARD COMBINATION CURB AND GUTTER
 HOWARD COUNTY STANDARD R-3.01
 NOT TO SCALE



TYPICAL ROADWAY SECTION
 CLASSIFICATION: PRIVATE ACCESS STREET
 ROAD: BIRDHOUSE CIRCLE
 DESIGN SPEED: 15 MPH
 SECTION NOT TO SCALE



STA. 0+18 TO 1+74 ROADWAY SECTION
 CLASSIFICATION: PRIVATE ACCESS STREET
 ROAD: BIRDHOUSE CIRCLE
 DESIGN SPEED: 15 MPH
 SECTION NOT TO SCALE



OWNER/DEVELOPER
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APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development: *Andy Hamilton* 10/21/06
 Chief, Development Engineering Division: *Mark Pennington* 10/25/06
 Director: *Frankie D. Long* 10/25/06

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
 OAKHURST II
 TOWNHOUSE UNITS 1-45
 ROAD PROFILES AND DETAILS**

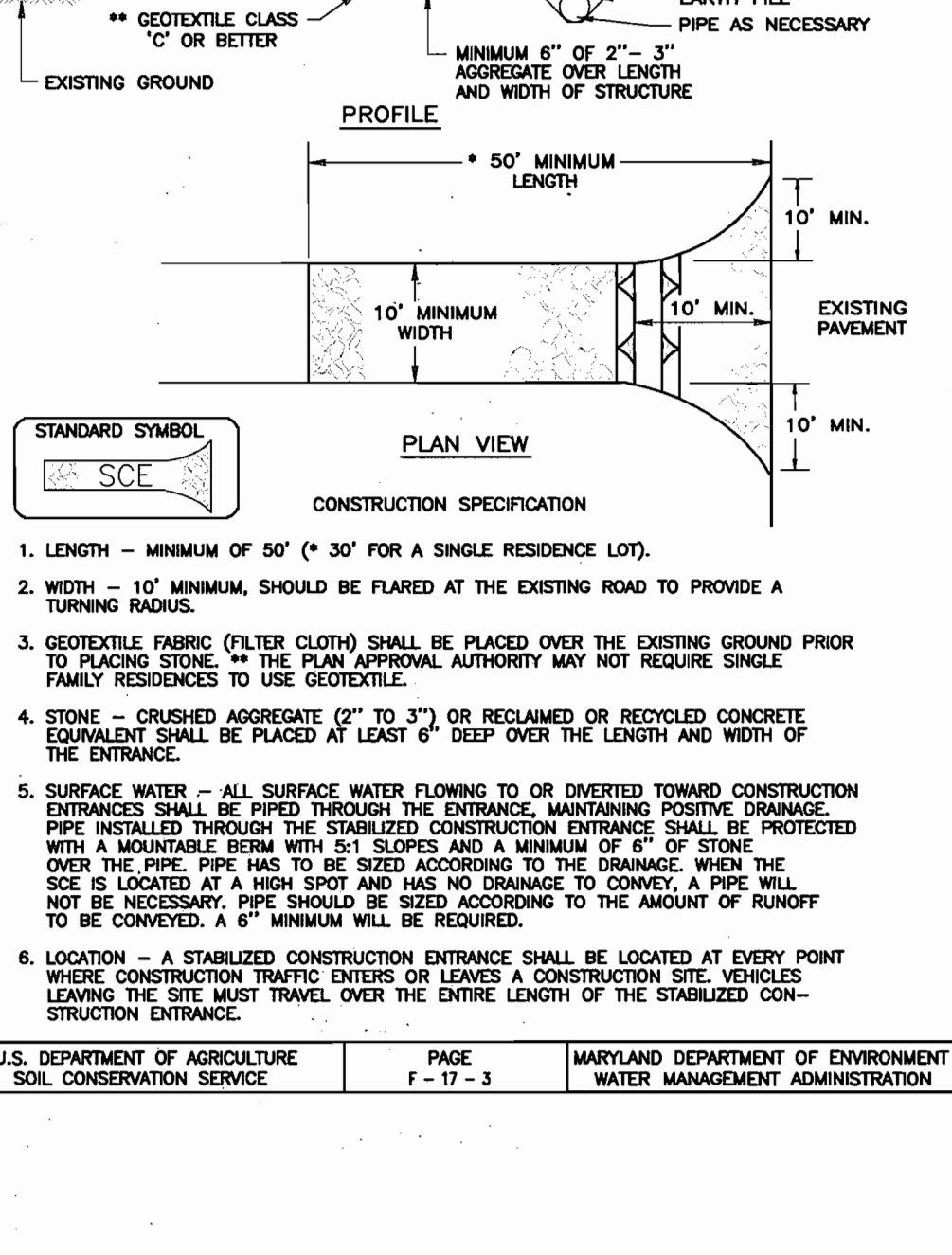
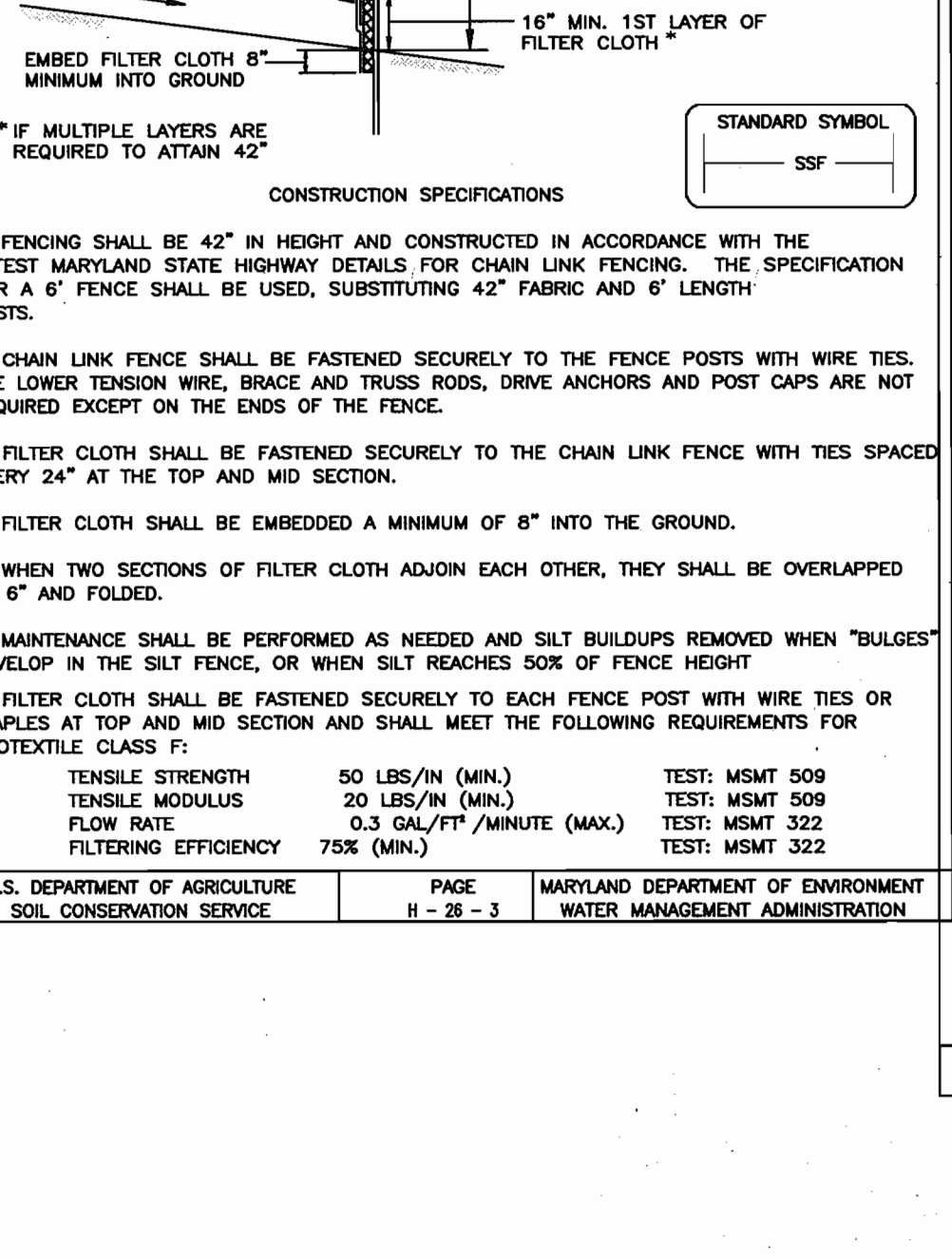
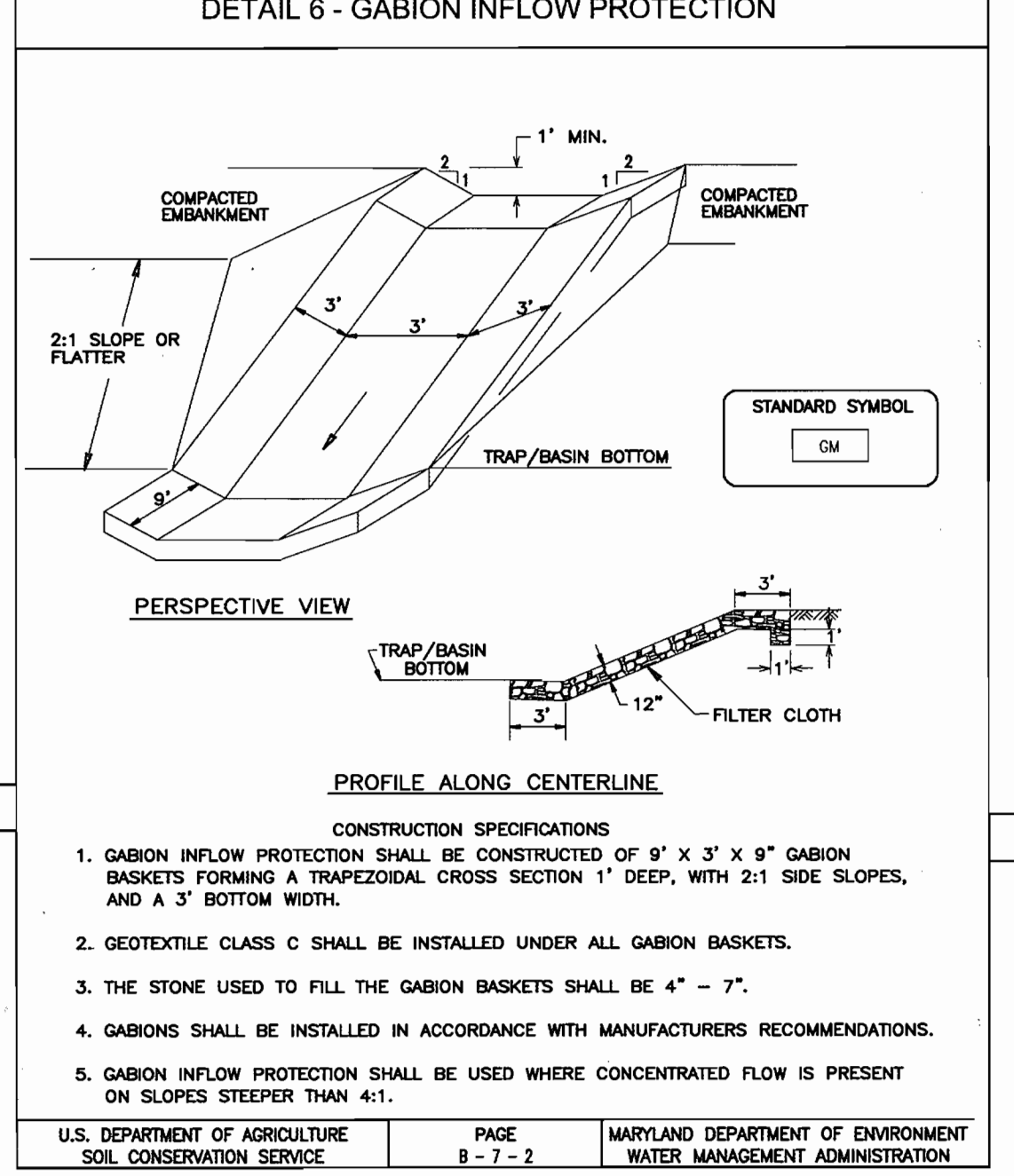
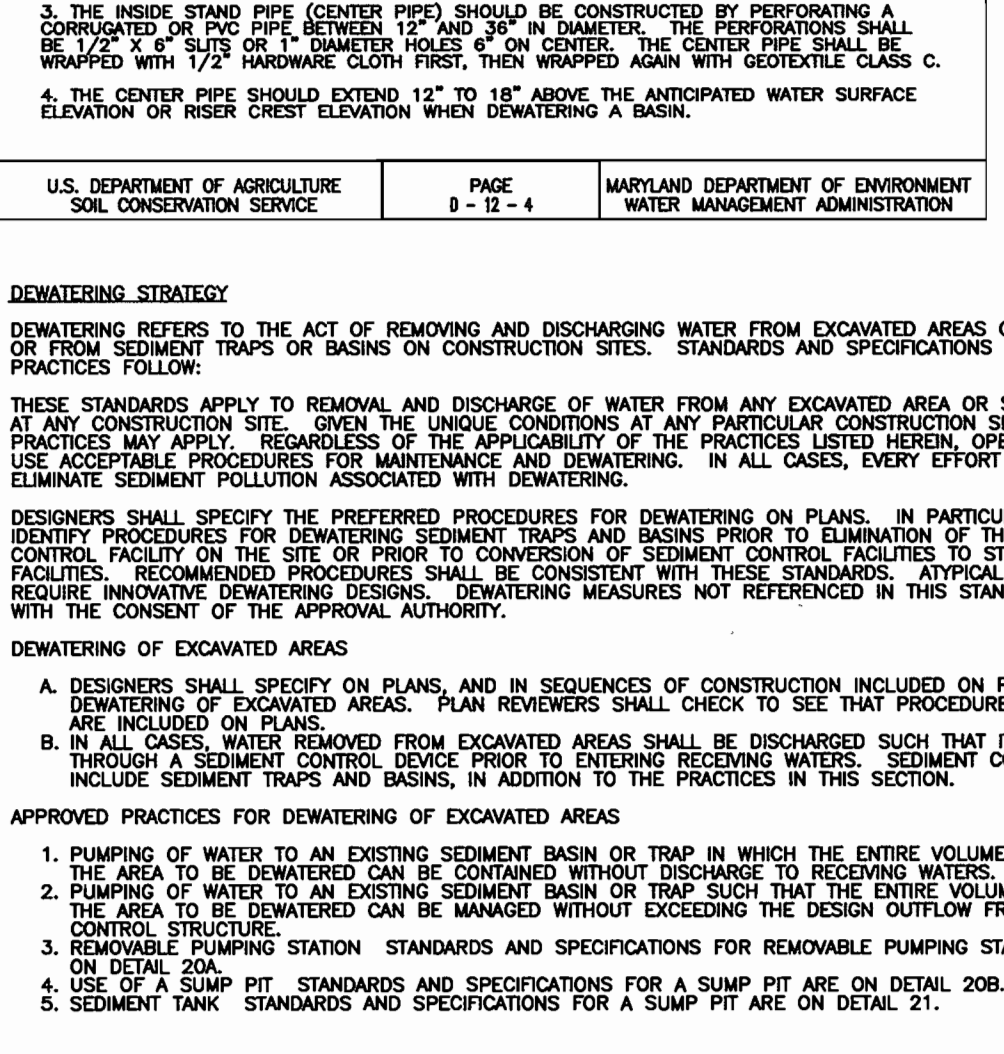
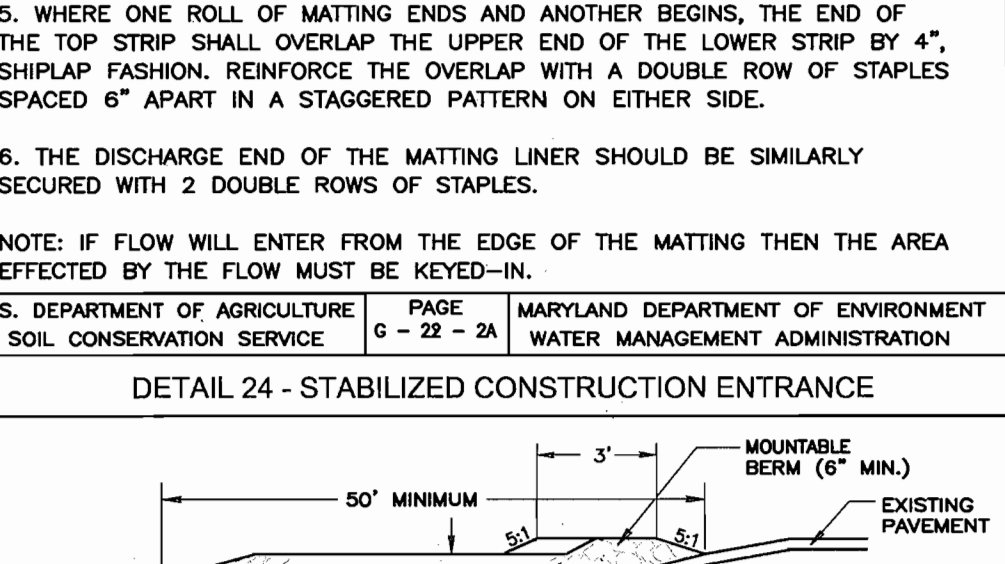
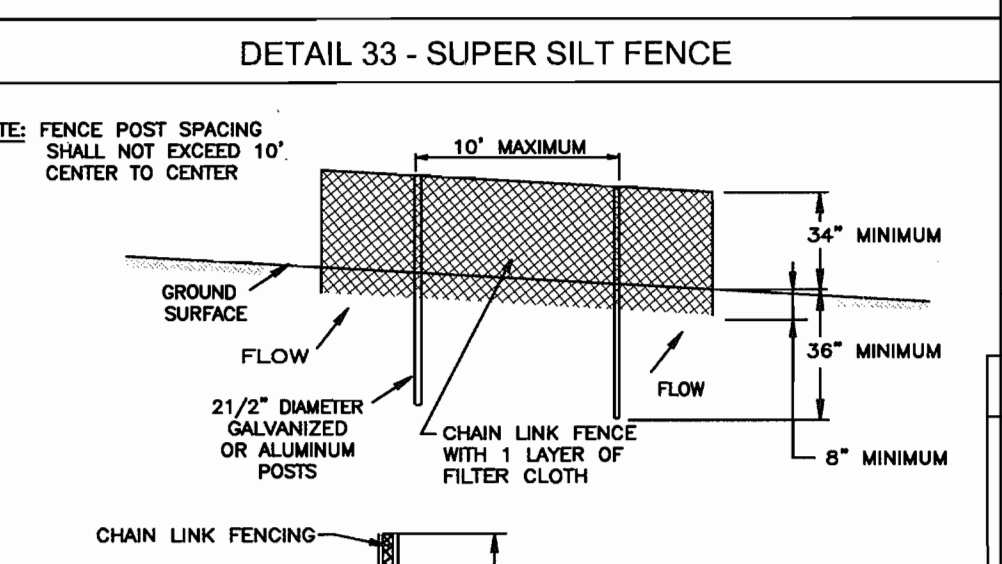
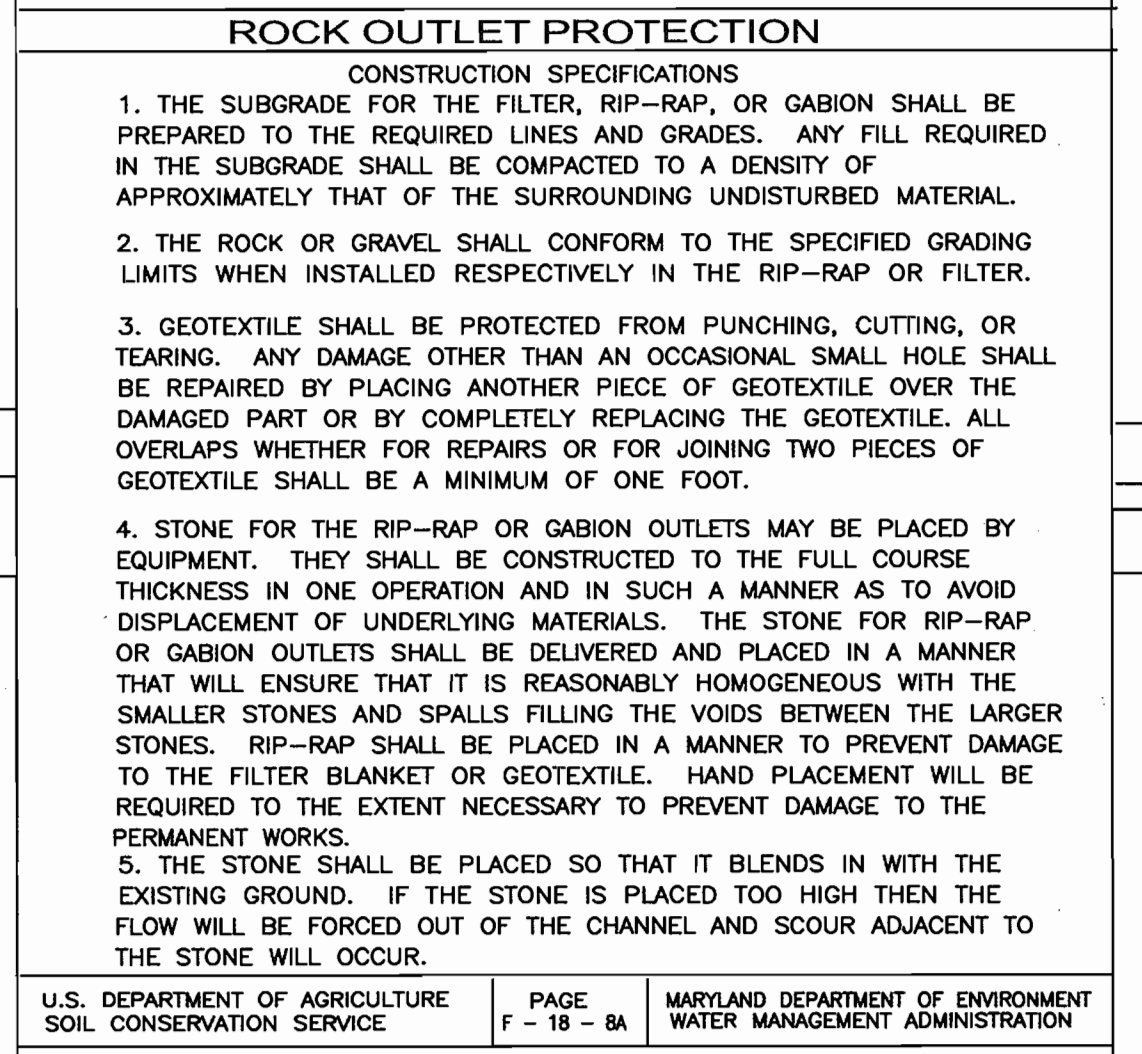
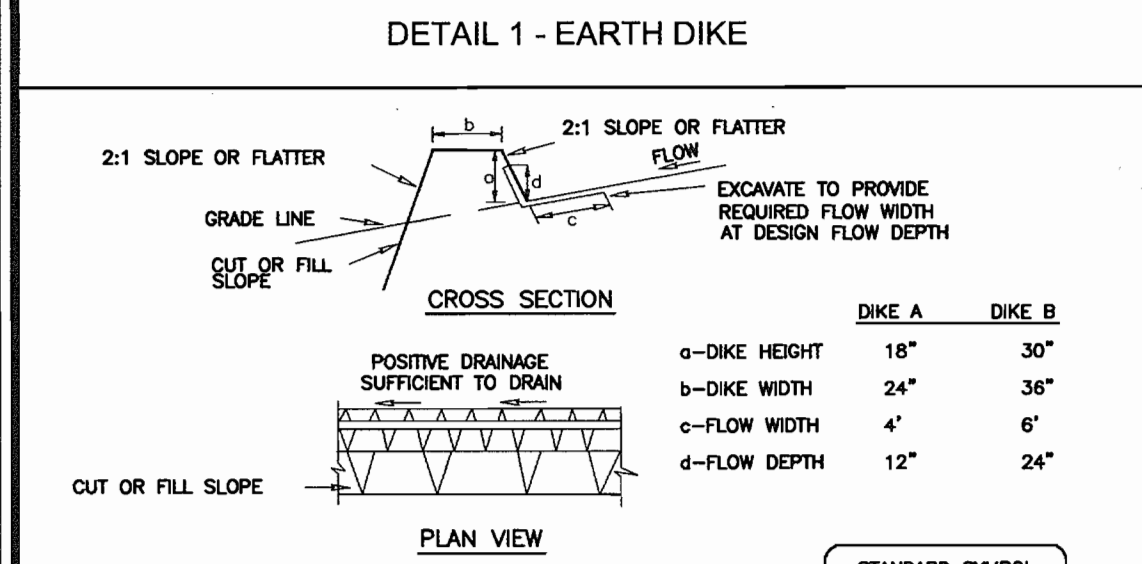
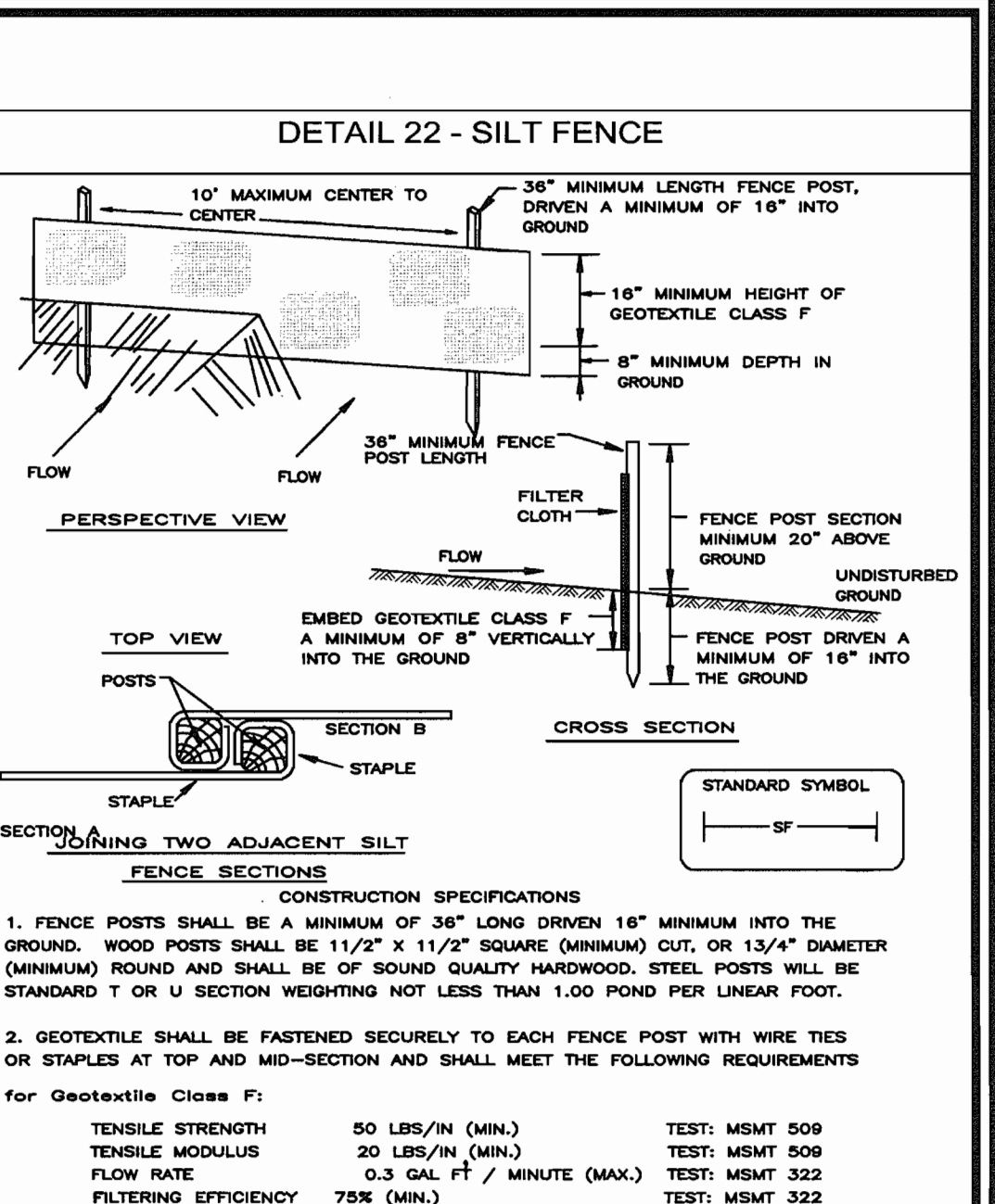
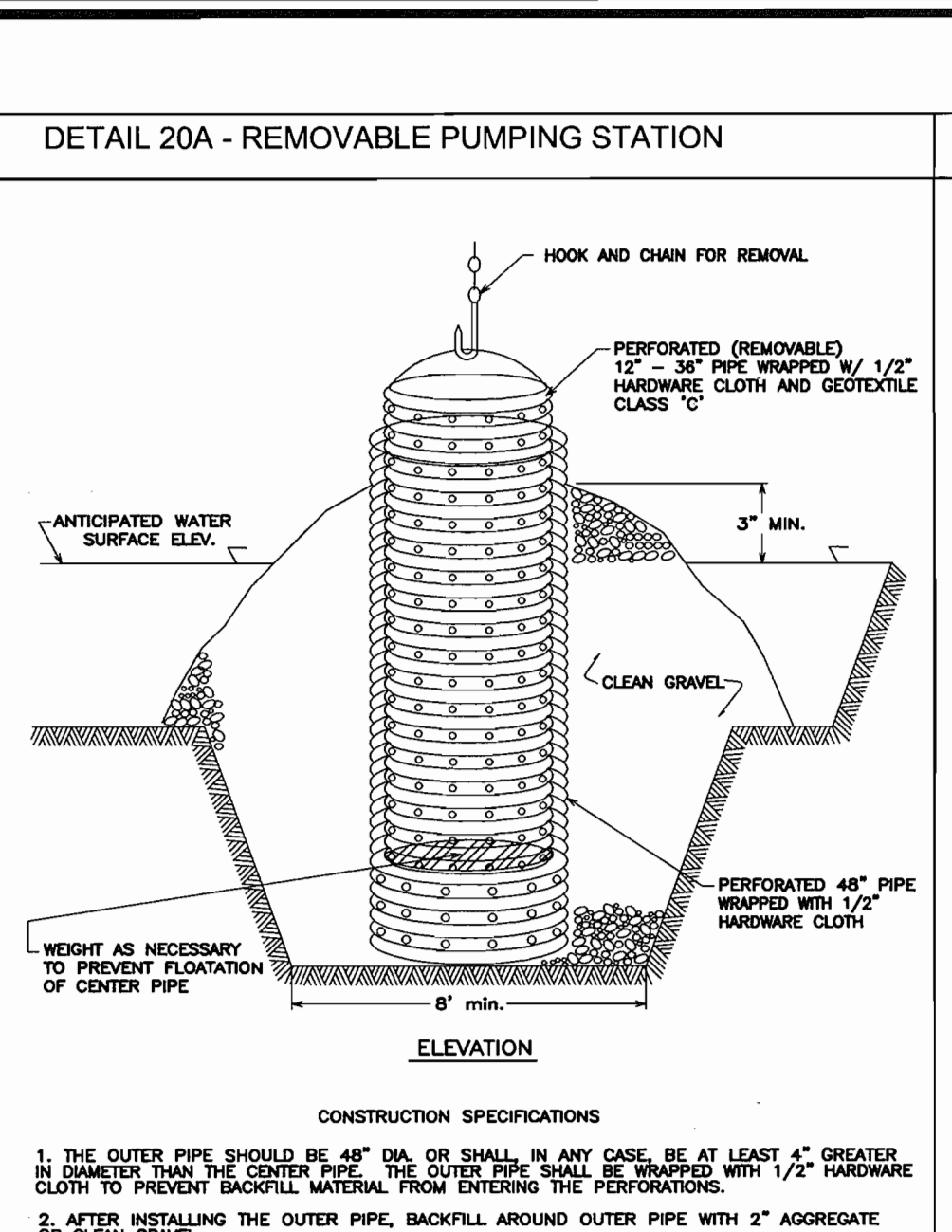
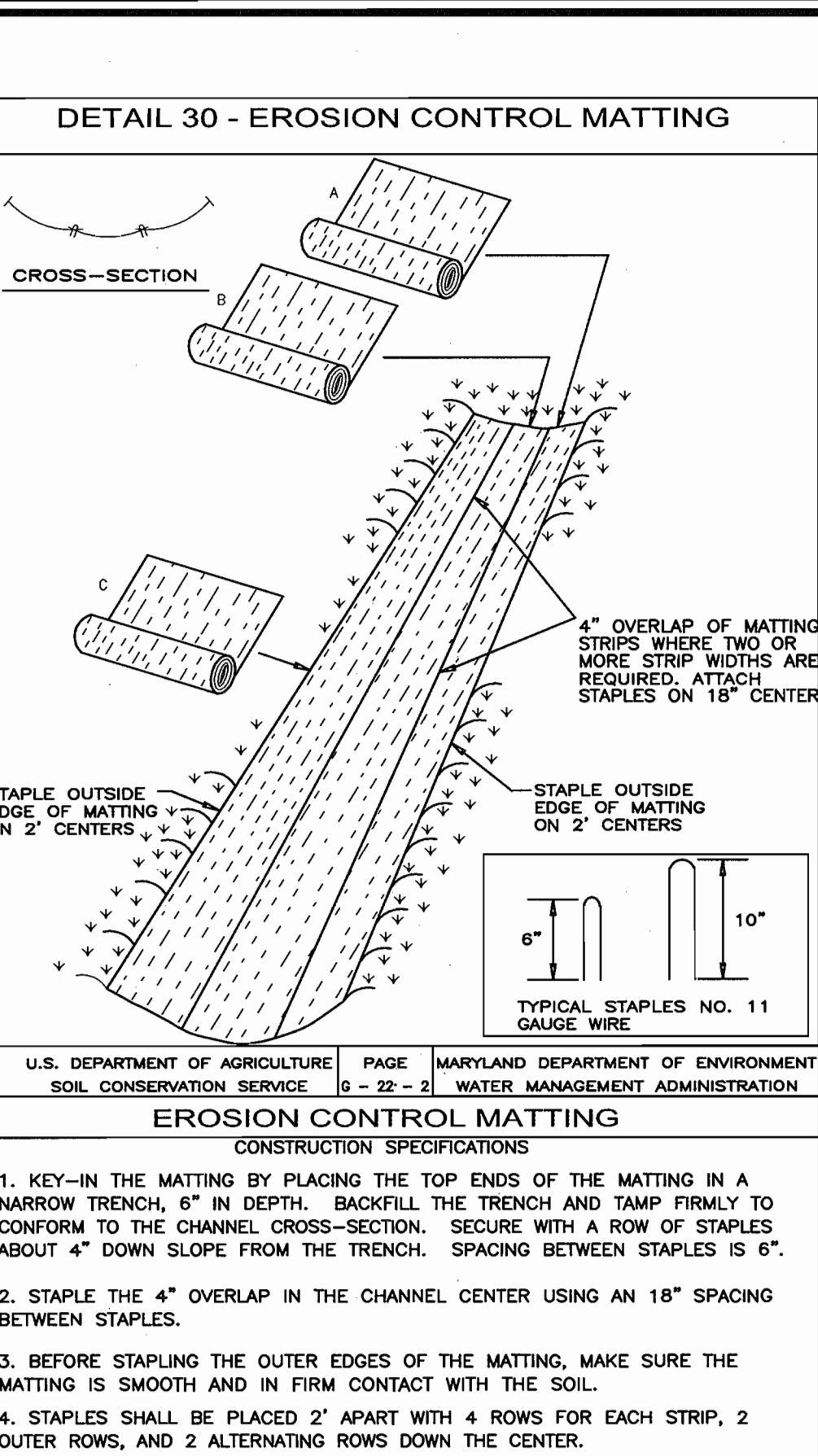
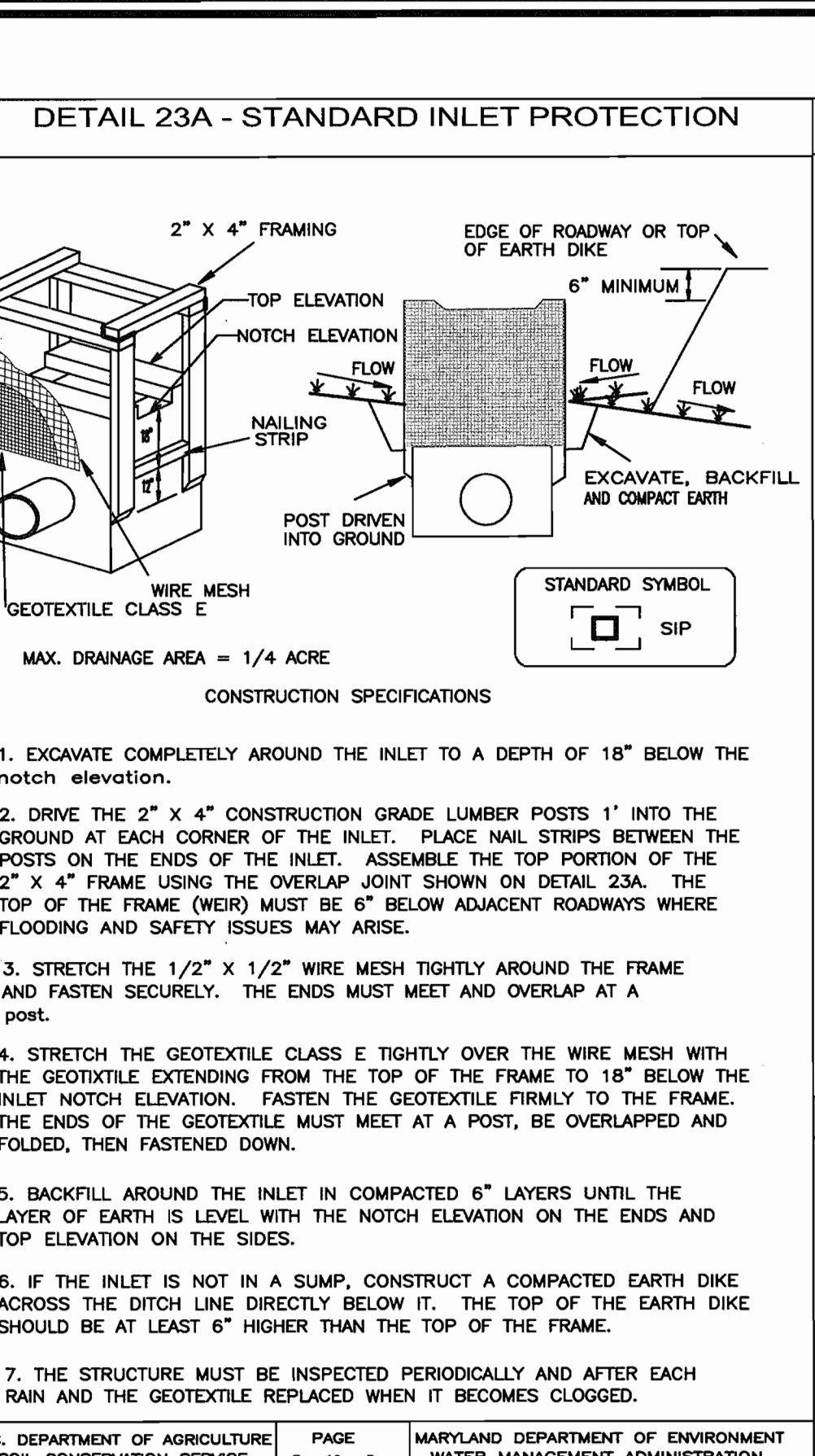
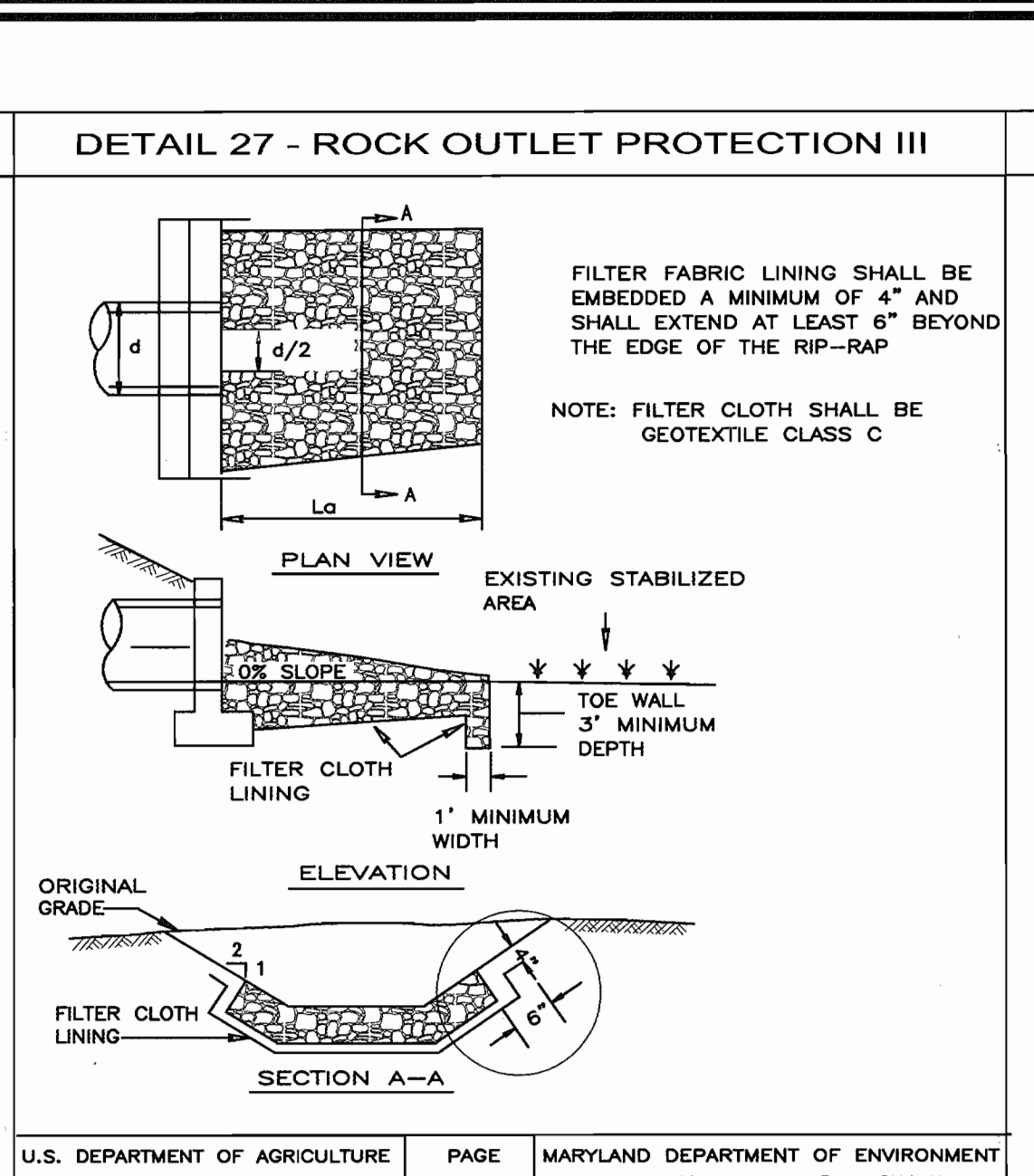
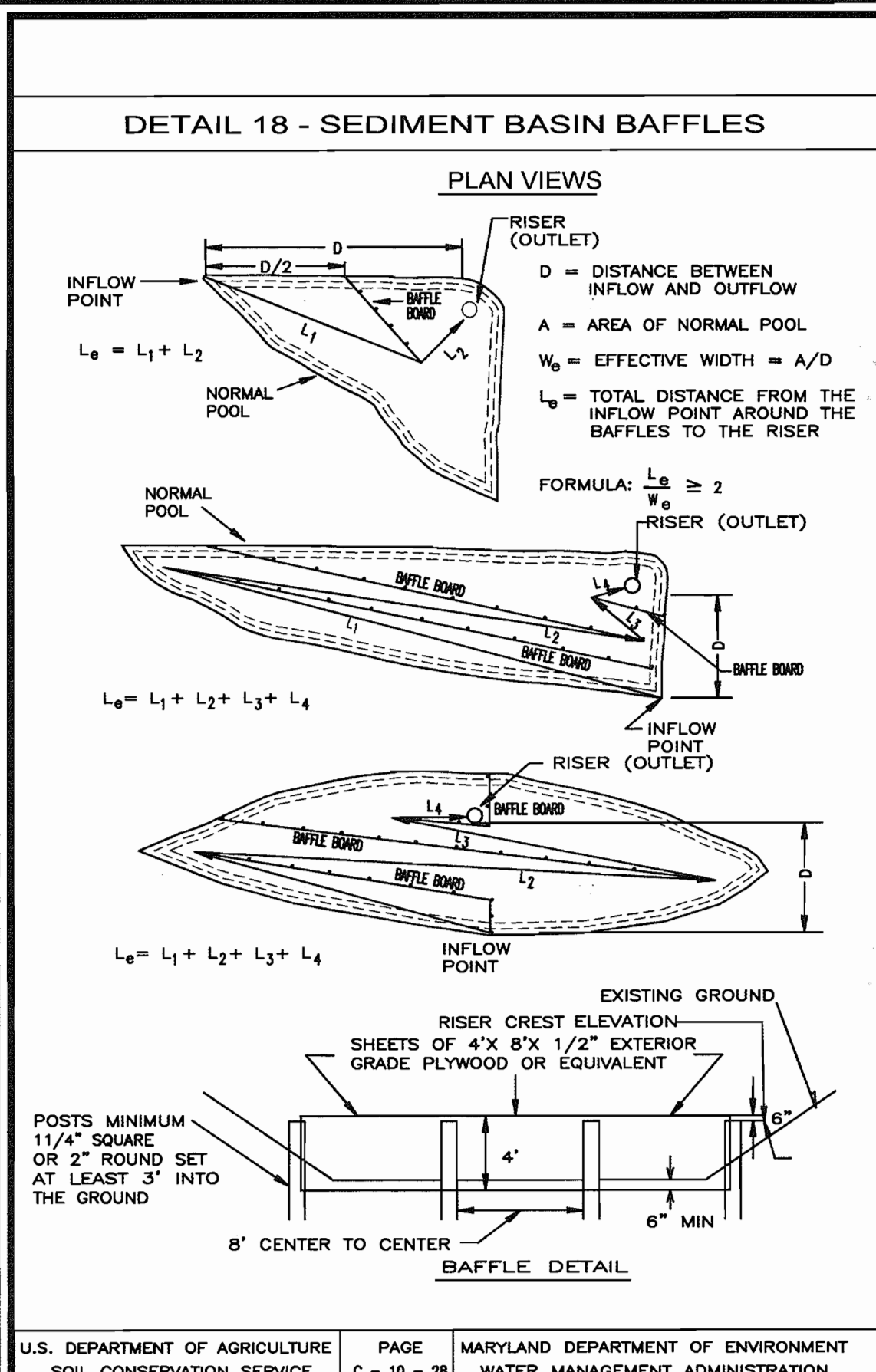
TAX MAP 42 BLOCK 17
 6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
 EX. PARCEL '71' & '73'
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043
 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RJRHV
 DRAWN BY: RJCMH
 CHECKED BY: RHH
 DATE: AUGUST, 2006
 SCALE: AS SHOWN
 W.O. NO.: 04-99-00

6 SHEET OF 18



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamant 10/21/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Deane 10/25/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Denise McLaughlin 10/21/06
DIRECTOR DATE

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. 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."

Robert H. Vogel 10/21/06
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION AND SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD 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 10/21/06
SIGNATURE OF ENGINEER DATE

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

Howard Vogt 10/25/06
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Howard Vogt 10/25/06
HOWARD SOIL CONSERVATION SERVICE DATE

OWNER/DEVELOPER

ELLIOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELLIOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 387-0422

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45

SEDIMENT & EROSION CONTROL DETAILS
FUTURE PARCEL 'A'
EX. PARCEL 71 & 73
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
ELLIOTT CITY MD 21043
TEL: 410.461.7666
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DESIGN BY: RJRHV
DRAWN BY: RJCMH
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DATE: AUGUST 2006
SCALE: AS SHOWN
W.O. NO.: 04-9900

8 SHEET OF 18

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
 PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
 TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, AND ARE UNDESIRABLE TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAINATIONS.

CONDITIONS WHERE PRACTICE APPLIES
 I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WIDER.
 A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 B. THE SOIL MATERIAL IS SO SMALL THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

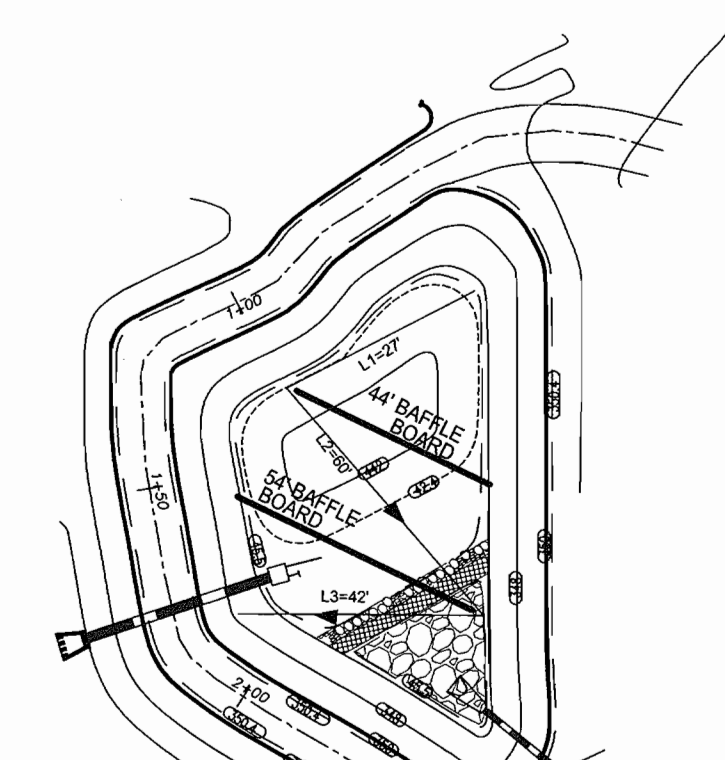
V. TOPSOIL APPLICATION
 I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
 II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PRODUCE TO BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
 III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOILING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

PERMANENT SEEDING NOTES
 APPLY TO THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGNATION FOR PERMANENT VEGETATION. SEEDING PREPARATION LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCOING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
 1) PREVIOUSLY ESTABLISHED AREAS: APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (80 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREA/FORM FERTILIZER (9 LBS./1000 SQ.FT.)
 2) UNDISTURBED AREAS: APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (80 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (28 LBS./1000 SQ.FT.) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. FOR PERIODS MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (28 LBS./1000 SQ.FT.) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOIL OPTION (3) SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELLS ANCHORED STRAW.
 MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (14 GAL/1000 SQ.FT.) FOR ANCHORING.
 MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES
 SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCOING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)
 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 1 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WINTER LOVEGRASS (07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.
 MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (14 GAL/1000 SQ.FT.) FOR ANCHORING.
 REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1805).
- ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND RESOURCES HERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 10 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1 (60' 14' DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE).
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FINISHED AND WARNING SIGNS POSTED, AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING, SOIL TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**
 TOTAL AREA (NET TRACT 6.34 AC) = 5.72 AC.
 AREA TO BE ROOFED OR PAVED = 4.82 AC.
 AREA TO BE VEGETATIVELY STABILIZED = 1.50 AC.
 TOTAL CUT = 11,400 CY.
 OFFSITE WASTE/BORROW AREA LOCATION = *



D=43'
 A=2369 SF
 We = 55
 Le = 129
 Lc = 2.3
 We = 2.3

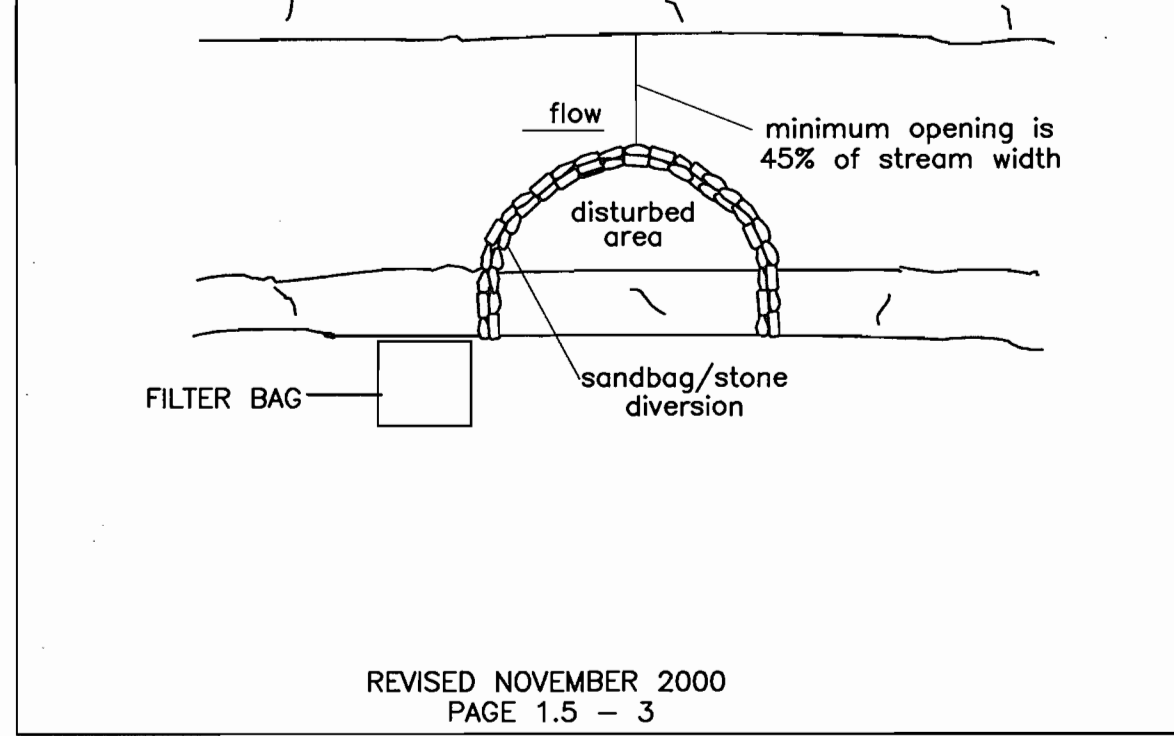
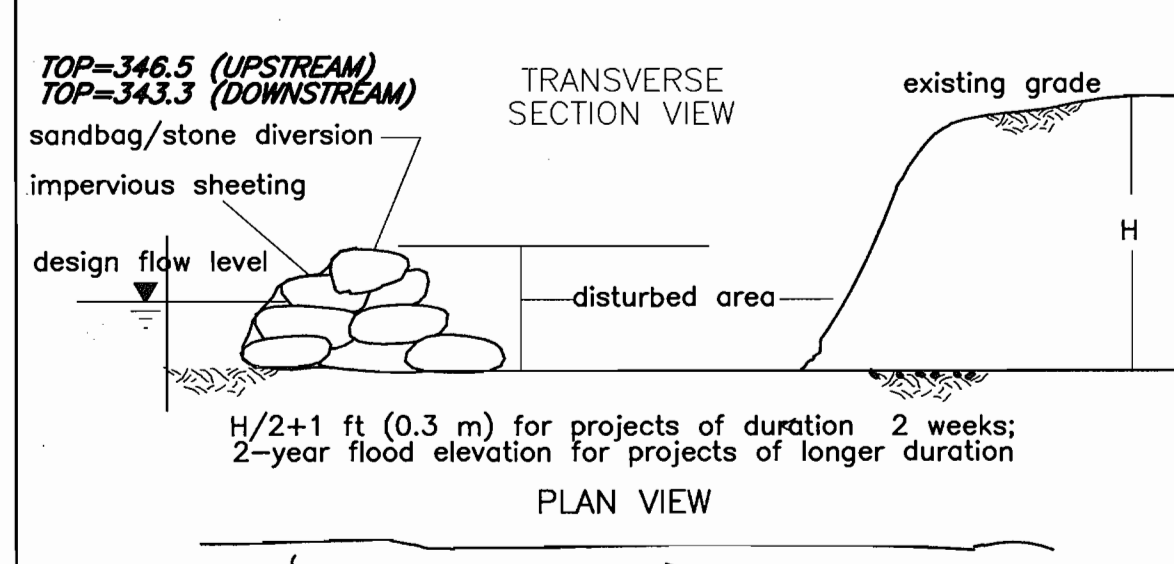
BAFFLE DETAIL SEDIMENT BASIN NO. 1
 NOT TO SCALE

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1800) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL SILT FENCE, SLOPE SILT FENCE, AND CLEAN WATER DIKES.
- WITH INSPECTOR'S APPROVAL, INSTALL STREAM DIVERSION MEASURES AND SILT FENCES, BEHIND EX. CUT AND INSTALL AND FULLY STABILIZE ALL CULVERTS. MAKE PERMIT NO. APPLICATION TRACKING NUMBERS-NT-0172/2005E3001 STREAM CLOSURE CLASS 2, NO WORK BETWEEN 03/01 AND 06/15.
- WITH ALL POND PRINCIPAL SPILLWAY MATERIAL ON SITE AND PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES (SEDIMENT BASINS) AND CONSTRUCT SEDIMENT CONTROL DEWATERING DEVICES.
- ONCE SEDIMENT BASINS ARE CONSTRUCTED, INSTALL EARTHDIKES.
- WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING.
- WITH GRADING IN PROCESS MAINTAIN FLOW TO BASINS AND BEGIN GRADING OF ROADS.
- GRADE REMAINING ROADS TO SUB-BASE AND SITE IS GRADED. INSTALL STORM DRAIN SYSTEMS, WATER AND SEWER AS ROADS ARE GRADED TO SUB-BASE.
- BEGIN PAVING ROADS AND INSTALL SIDEWALKS.
- WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE BEGIN INSTALLATION OF CURBS AND GUTTERS. INSPECTOR'S APPROVAL, CONVERT SEDIMENT BASIN #3 TO FINAL GRADING.
- STABILIZE ALL DISTURBED AREAS IMMEDIATELY AND WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE AND REMOVE ALL JUNK TRASH AND DEBRIS (OLD AND NEW) FROM BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS.
- AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'A', SEE SHEET 14 OF 18. FOR SCHEDULE TABLES.
- WITH INSPECTOR'S APPROVAL AND ROAD PAVING, SIDEWALKS, ALL SFA UNITS COMPLETE AND CONTRIBUTING DRAINAGE AREAS STABILIZED, CONVERT SEDIMENT BASIN #3 TO FINAL STORMWATER MANAGEMENT BY REMOVING DEWATERING DEVICE FROM POND 1 AND INSTALL 8" POND DRAIN, CONVERT DEWATERING DEVICE IN POND 1 TO A PERMANENT POCKET POND PER DETAILS.

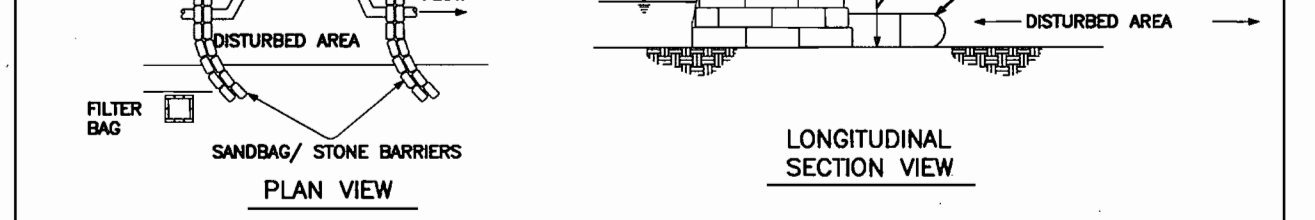
DURATION	ACTIVITY
2 WEEK	1. OBTAIN GRADING PERMIT.
2 WEEK	2. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1800) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
1 WEEK	3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL SILT FENCE, SLOPE SILT FENCE, AND CLEAN WATER DIKES.
2 DAYS	4. WITH INSPECTOR'S APPROVAL, INSTALL STREAM DIVERSION MEASURES AND SILT FENCES, BEHIND EX. CUT AND INSTALL AND FULLY STABILIZE ALL CULVERTS.
1 WEEK	5. WITH ALL POND PRINCIPAL SPILLWAY MATERIAL ON SITE AND PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES (SEDIMENT BASINS) AND CONSTRUCT SEDIMENT CONTROL DEWATERING DEVICES.
2 WEEKS	6. ONCE SEDIMENT BASINS ARE CONSTRUCTED, INSTALL EARTHDIKES.
1 WEEK	7. WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING.
3 WEEKS	8. WITH GRADING IN PROCESS MAINTAIN FLOW TO BASINS AND BEGIN GRADING OF ROADS.
3 WEEKS	9. GRADE REMAINING ROADS TO SUB-BASE AND SITE IS GRADED. INSTALL STORM DRAIN SYSTEMS, WATER AND SEWER AS ROADS ARE GRADED TO SUB-BASE.
2 WEEKS	10. BEGIN PAVING ROADS AND INSTALL SIDEWALKS.
1 WEEK	11. WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE BEGIN INSTALLATION OF CURBS AND GUTTERS.
1 WEEK	12. STABILIZE ALL DISTURBED AREAS IMMEDIATELY AND WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE AND REMOVE ALL JUNK TRASH AND DEBRIS (OLD AND NEW) FROM BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS.
1 WEEK	13. AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'A', SEE SHEET 14 OF 18. FOR SCHEDULE TABLES.
2 WEEKS	14. WITH INSPECTOR'S APPROVAL AND ROAD PAVING, SIDEWALKS, ALL SFA UNITS COMPLETE AND CONTRIBUTING DRAINAGE AREAS STABILIZED, CONVERT SEDIMENT BASIN #3 TO FINAL STORMWATER MANAGEMENT BY REMOVING DEWATERING DEVICE FROM POND 1 AND INSTALL 8" POND DRAIN, CONVERT DEWATERING DEVICE IN POND 1 TO A PERMANENT POCKET POND PER DETAILS.

DETAIL 1.5: SANDBAG/STONE DIVERSION



REVISED NOVEMBER 2000
 PAGE 1.5 - 3

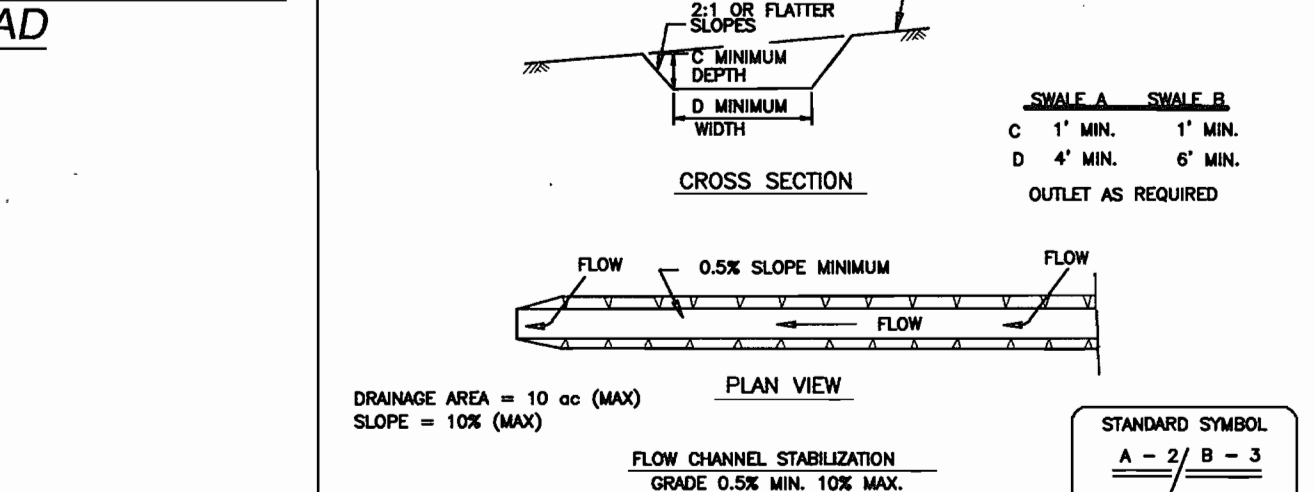
DETAIL 1.4: DIVERSION PIPE



NOTES:
 I. DESCRIPTION
 THE WORK SHOULD CONSIST OF INSTALLING FLOW DIVERSION PIPES IN COMBINATION WITH SANDBAG OR STONE DIVERSIONS WHEN CONSTRUCTION ACTIVITIES OCCUR WITHIN THE STREAM CHANNEL.
 II. EFFECTIVE USES & LIMITATIONS
 DIVERSIONS PIPES WITH AN INSUFFICIENT FLOW CAPACITY CAN CAUSE THE CHANNEL DEGREE TO FAIL, THEREBY RESULTING IN SEVERE EROSION OF THE DISTURBED CHANNEL SECTION UNDER CONSTRUCTION. THEREFORE, IN-CHANNEL CONSTRUCTION ACTIVITIES SHOULD OCCUR ONLY DURING PERIODS OF LOW FLOW.
 III. MATERIAL SPECIFICATIONS
 MATERIALS FOR STREAM DIVERSIONS SHOULD MEET THE FOLLOWING REQUIREMENTS:
 -RIPRAP: STONE SHOULD BE WASHED AND HAVE A MINIMUM DIAMETER OF 6 INCHES (15 CENTIMETERS).
 -SANDBAGS: SANDBAGS SHOULD CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARS, AND PUNCTURE AND SHOULD BE WORKED THOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (I.E. SAND, FINE GRAVEL, ETC.).
 -SHEETING: SHEETING SHOULD CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.
 IV. INSTALLATION GUIDELINES
 ALL EROSION AND SEDIMENT CONTROL DEVICES INCLUDING MANDATORY DEWATERING BASINS SHOULD BE INSTALLED AS THE FIRST ORDER OF BUSINESS ACCORDING TO A PLAN APPROVED BY THE WMA OR LOCAL AUTHORITY. INSTALLATION SHOULD PROCEED FROM UPSTREAM TO DOWNSTREAM DURING LOW FLOW CONDITIONS. IF NECESSARY, SILT FENCE OR STRAW BALES SHOULD BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 DIVERSION PIPES WITH SANDBAG OR STONE BARRIERS SHOULD BE COMPLETED AS FOLLOWS (REFER TO DETAIL 1.4):
 1. SANDBAG/STONE BARRIERS SHOULD BE SIZED AND INSTALLED AS DETAILED IN M.W. 1.5.
 2. ALL EXCAVATED MATERIAL SHOULD BE DEPOSITED AND STABILIZED IN AN APPROVED AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE AUTHORIZED BY THE WMA.
 3. SEDIMENT-LADEN WATER FROM THE CONSTRUCTION AREA SHOULD BE PUMPED TO A DEWATERING BASIN. 4. THE DIVERSION PIPE SHOULD HAVE A MINIMUM CAPACITY SUFFICIENT TO CONVEY THE 2-YEAR FLOW FOR PROJECTS WITH A DURATION OF TWO WEEKS OR GREATER. FOR PROJECTS OF SHORTER DURATION, THE CAPACITY OF THE PIPE CAN BE REDUCED ACCORDINGLY.
 5. IF NECESSARY, SILT FENCE OR STRAW BALES SHOULD BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 6. SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

TEMPORARY INSTREAM CONSTRUCTION MEASURES	REVISED NOVEMBER 2000 PAGE 1.4-2	MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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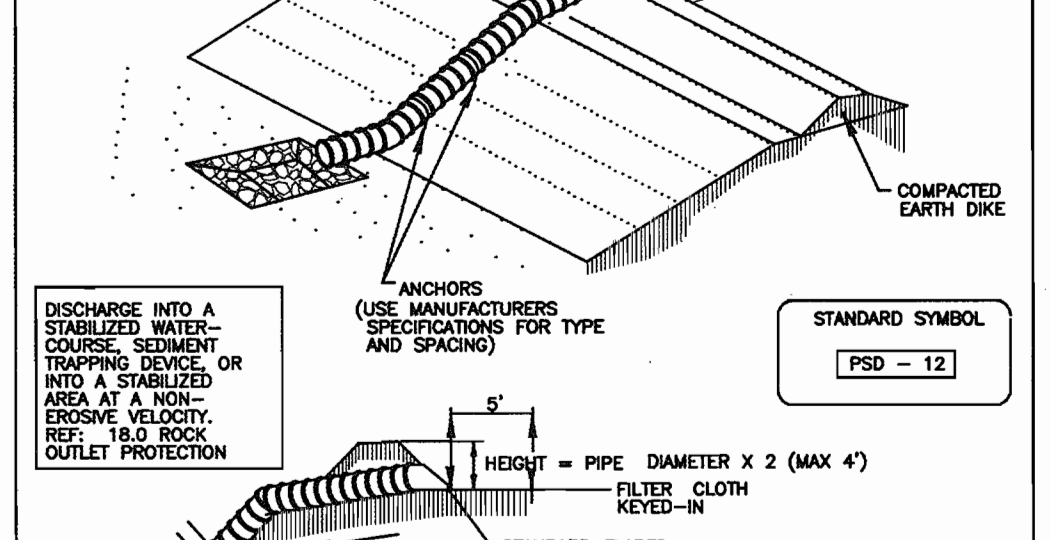
DETAIL 2 - TEMPORARY SWALE



- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or line with sod.
- 4" x 7" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.
- Construction Specifications
1. All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
4. 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 swale.
5. The swale 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.
6. Fill, if necessary, shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A-2-4	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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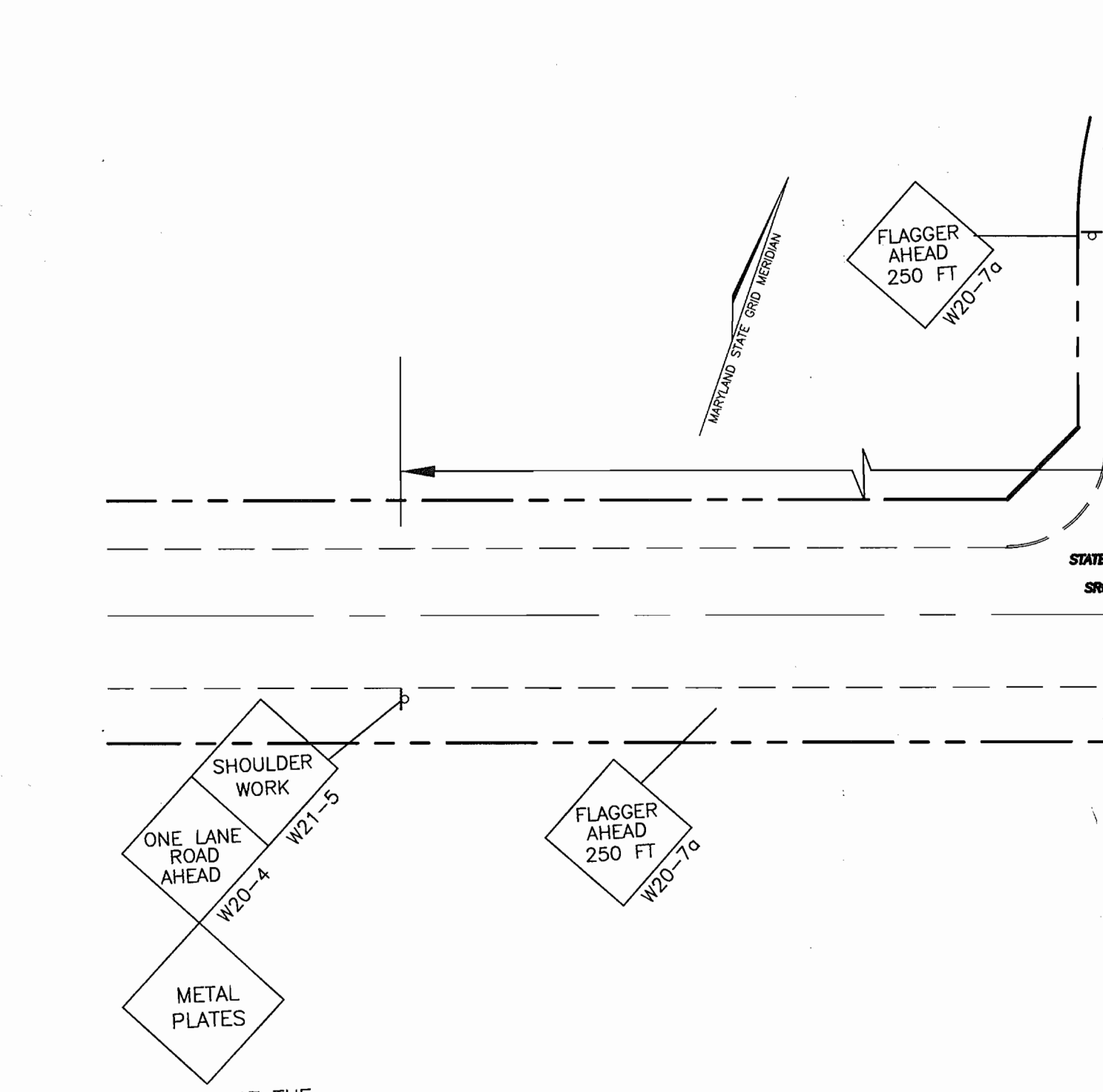
DETAIL 4 - PIPE SLOPE DRAIN



Size	Pipe/Tubing Diameter (D) in	Maximum Drainage Area (Acres)
PSD-12	12	0.5
PSD-18	18	1.5
PSD-21	21	2.5
PSD-24	24	4.5
PSD-24 (2)	24	5.0

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-5-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TRAFFIC CONTROL PLAN



SIGN TO BE PLACED AT THE END OF EACH NIGHT AS NEEDED.

DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 DATE: 7/6/06
 SIGNATURE OF DEVELOPER: [Signature]

ENGINEER'S CERTIFICATE
 THESE PLANS HAVE BEEN REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION AND SOIL EROSION AND SEDIMENT CONTROL.
 I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 DATE: 7/19/06
 SIGNATURE OF ENGINEER: [Signature]
 ROBERT H. VOGEL

OWNER/DEVELOPER
 ELLICOTT CITY LAND HOLDING, INC.
 5300 DORSEY HALL DR STE 102
 ELLICOTT CITY MD 21042-7819
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 10/21/06

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10/21/06

[Signature]
 DIRECTOR
 DATE: 10/21/06

SITE DEVELOPMENT PLAN
OAKHURST II
 TOWNHOUSE UNITS 1-45

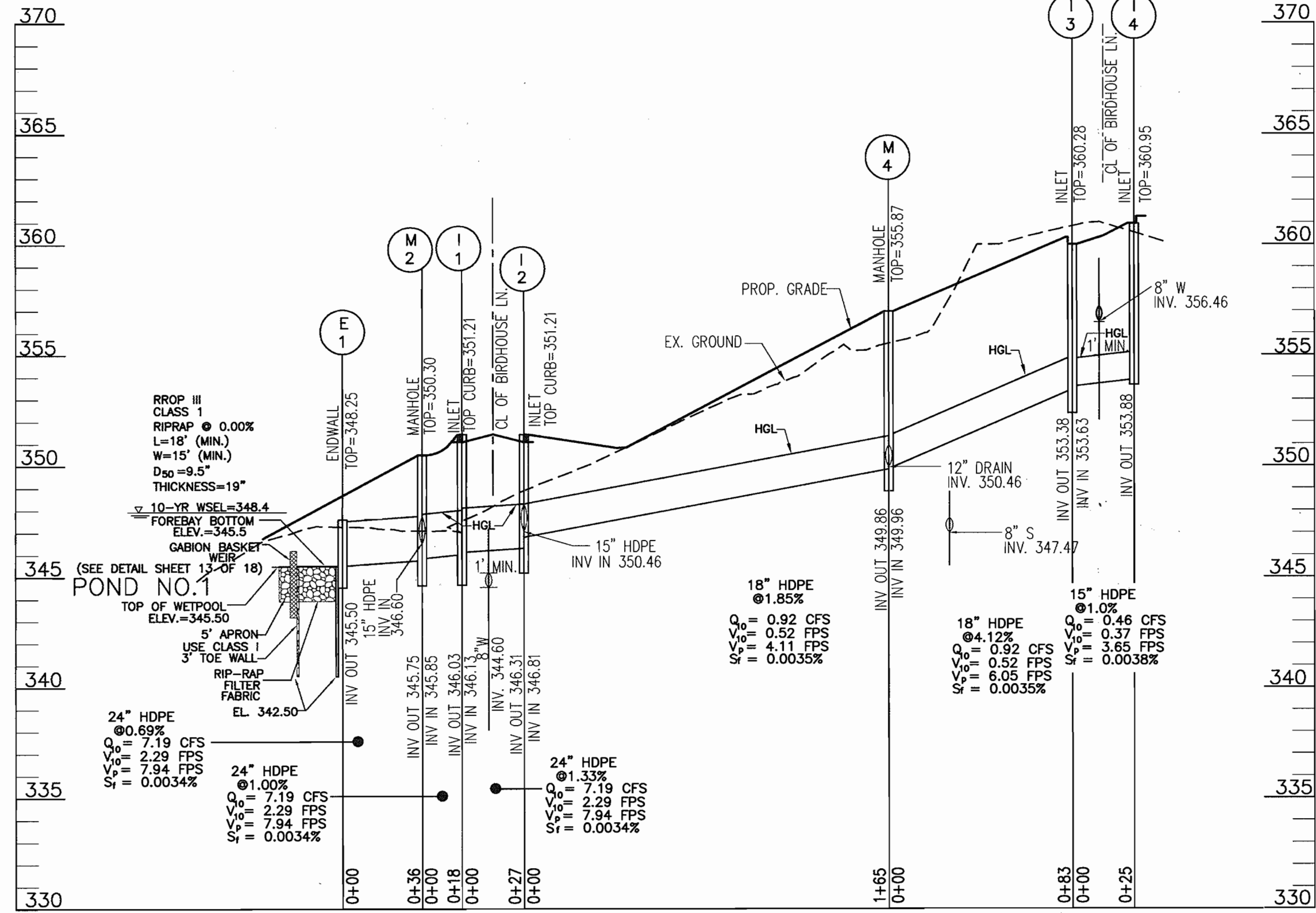
SEDIMENT & EROSION CONTROL DETAILS
 TAX MAP 42 BLOCK 17
 6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS - SURVEYORS - PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

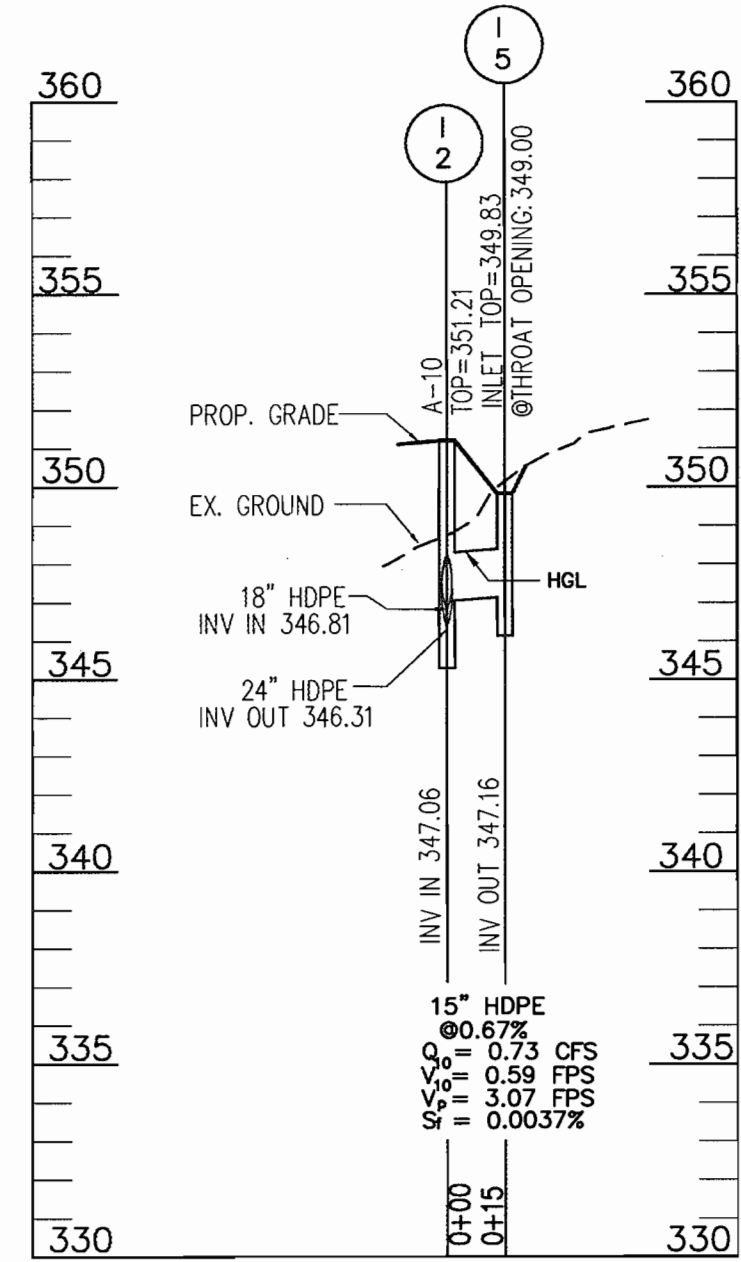
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 CHECKED BY: RHW
 DATE: AUGUST, 2006
 SCALE: AS SHOWN
 W.O. NO.: 04-99.00

9 SHEET OF 18

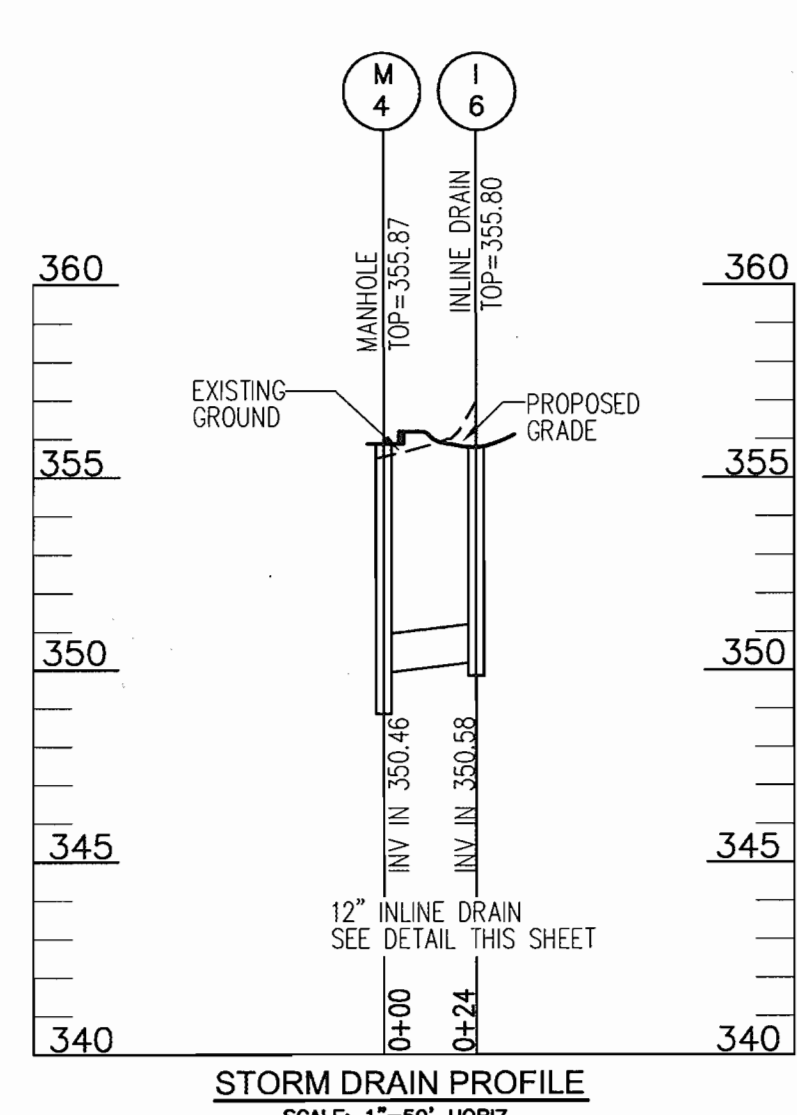
SDP-05-151



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



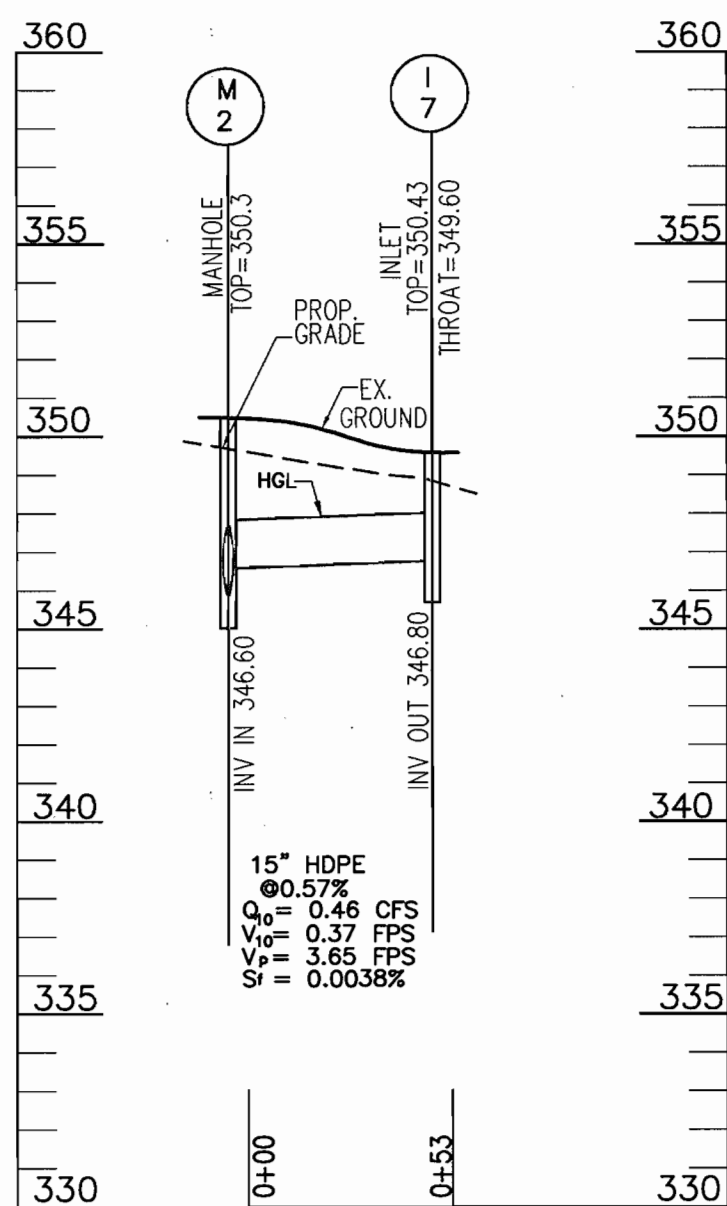
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SCALE: 1"=50' HORIZ.
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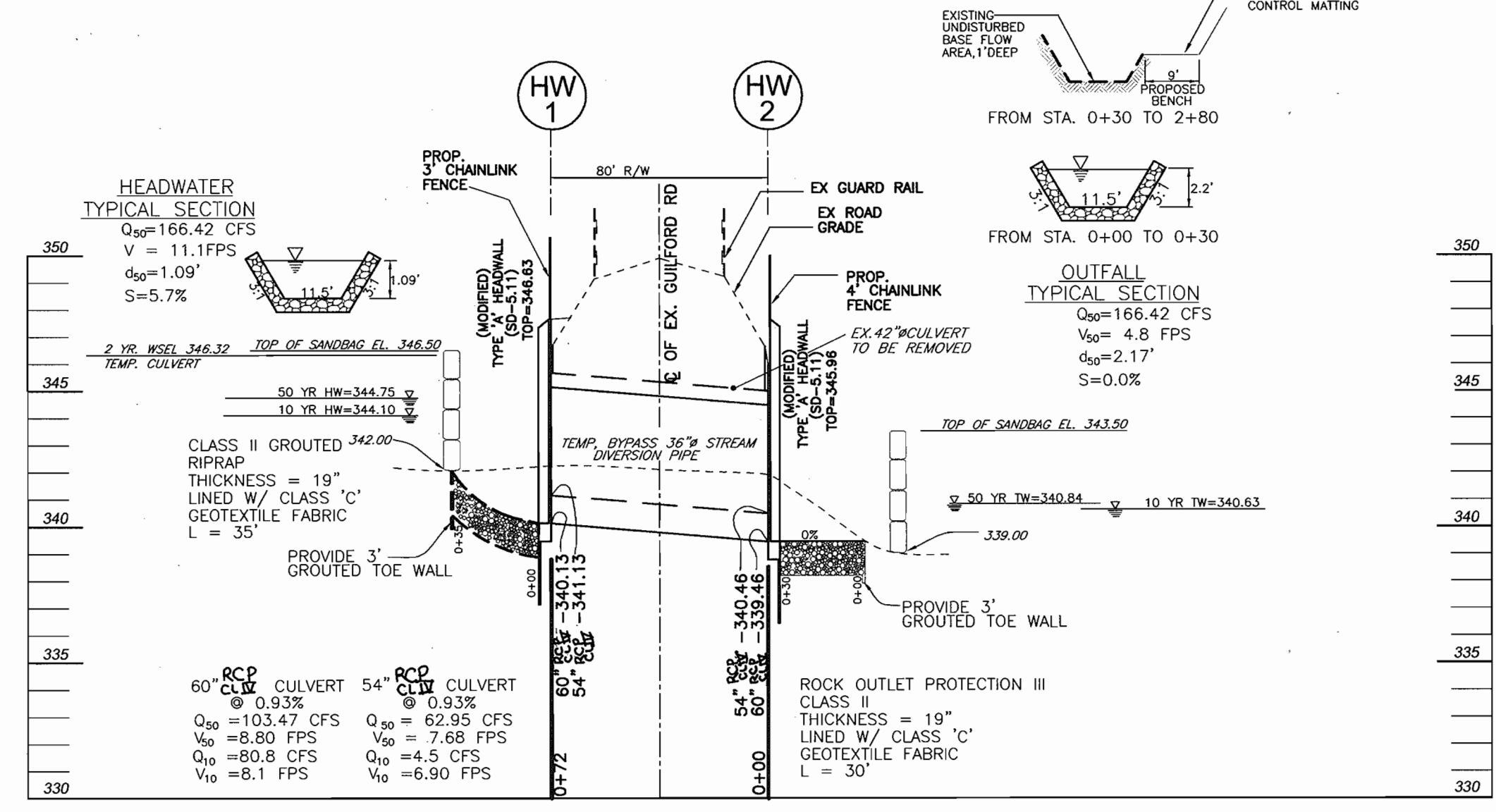
STORM DRAIN PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.

SIZE	TYPE	LENGTH
15"	HDPE	99 LF
18"	HDPE	254 LF
24"	HDPE	136 LF
24"	RCCP (OUTFALL)	105 LF
54"	RCCP (CULVERT)	72 LF
60"	RCCP (CULVERT)	72 LF
12"	INLINE DRAIN (NYLOPLAST OF APPROVED EQUAL)	72 LF

1. TOP ELEVATION ARE TO THE CENTER OF THE STRUCTURE AT TOP OF CURB FOR TYPE A-5 INLETS, CENTER TOP OF GRATE FOR DOUBLE TYPE 'S' INLET AND TOP OF MANHOLE COVER FOR PRECAST MANHOLES.
2. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN DETAILS.



NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
E-1	24" CONCRETE TYPE 'C' ENDWALL	N 545198.9226 E 1361017.5437	348.25	345.50	345.50	SD-5.51
M-2	STANDARD 4' MANHOLE	CL STA. 2+81, 23' RT. BIRDHOUSE LN.	350.30	348.80	345.75	G-5.12
I-1	A-10	CL STA. 3+08, 14' RT. BIRDHOUSE LN.	351.21	346.13	346.03	SD-4.02
I-2	A-10	CL STA. 3+09, 14' RT. BIRDHOUSE LN.	351.21	347.06	346.31	SD-4.02
M-4	STANDARD 5' MANHOLE	CL STA. 4+87, 8' LT. BIRDHOUSE LN.	355.87	350.46	349.96	G-5.12
I-3	DOUBLE TYPE 'S' INLET	CL STA. 5+51.2, 8.56' LT. BIRDHOUSE LN.	360.28	353.63	353.38	SD-4.23
I-4	DOUBLE TYPE 'S' INLET	CL STA. 5+65.42, 8.56' RT. BIRDHOUSE LN.	360.95	353.63	353.88	SD-4.23
I-5	TYPE 'D' INLET	CL STA. 3+57, 36' LT. BIRDHOUSE LN.	349.83	-	347.46	SD-4.11
HW-1	60"-54" CIRCULAR TWIN HEADWALL TYPE 'A' HEADWALL(MODIFIED)	N 545115.08 E 1360850.11	346.63	60" C/P-340.13 54" C/P-341.13	-	SEE DETAIL 12 OF 18
HW-2	60"-54" CIRCULAR TWIN HEADWALL TYPE 'A' HEADWALL(MODIFIED)	N 545040.67 E 1360852.77	345.96	60" RCP-339.46 54" RCP-340.46	-	SEE DETAIL 12 OF 18
I-7	TYPE 'D' INLET	N 545073.68 E 1361065.76	350.43	346.80	346.80	SD-4.11
I-6	12" INLINE DRAIN	N 545069.85 E 1361270.16	355.80	-	350.58	-



CULVERT PROFILE
SCALE: HORIZONTAL-1"=50'
VERTICAL-1"=5'

THE INLINE DRAIN CAN BE USED TO ENTER AN EXISTING LINE BY USE OF A RISER AND A TEE

THE INLINE DRAIN CAN BE USED AT THE BEGINNING OF A DRAIN LINE

TYPICAL INSTALLATIONS

TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN

1. CHANGE ELEVATION

2. CHANGE DIAMETER

3. CHANGE PIPE

4. CHANGE DIRECTION

AVAILABLE IN SIZES 8" THROUGH 30".
ADAPT TO PIPE SIZES 4" THROUGH 30".

OWNER/DEVELOPER
ELLICOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELLICOTT CITY, MD 21042-7819
ATTN: MR. DONALD R. REUWER
(410) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development

Chief, Development Engineering Division

Director

DATE: 1/12/06

DATE: 10/25/06

DATE: 10/21/06

GRAPE OR SOLID COVER

CONCRETE FOUR RING

DECK DRAIN BODY

12" DRAIN BASIN

10" INLINE DRAIN

INLET ADAPTERS CAN BE PUT ON ANY ANGLE

10" INLINE DRAIN

12" DRAIN BASIN

NYLOPLAST

3101 VERONA AVE
BUREAU, GA 30114
PH (770) 932-2442
FAX (770) 932-8880
www.nyloplast-us.com

DATE: 12/19/05
SCALE: 1/2"=1'-0"

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45

STORM DRAIN PROFILES

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

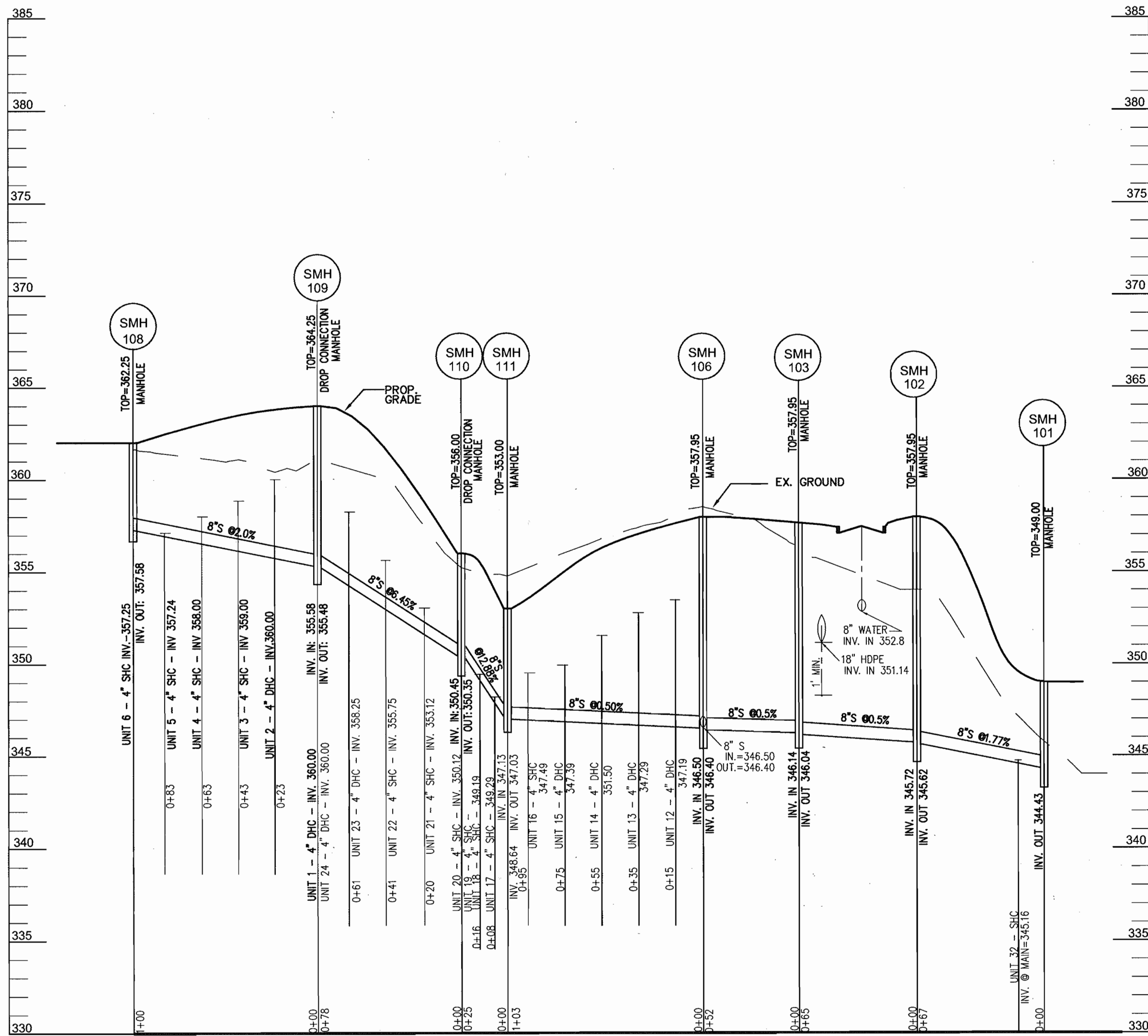
FUTURE PARCEL 'A'
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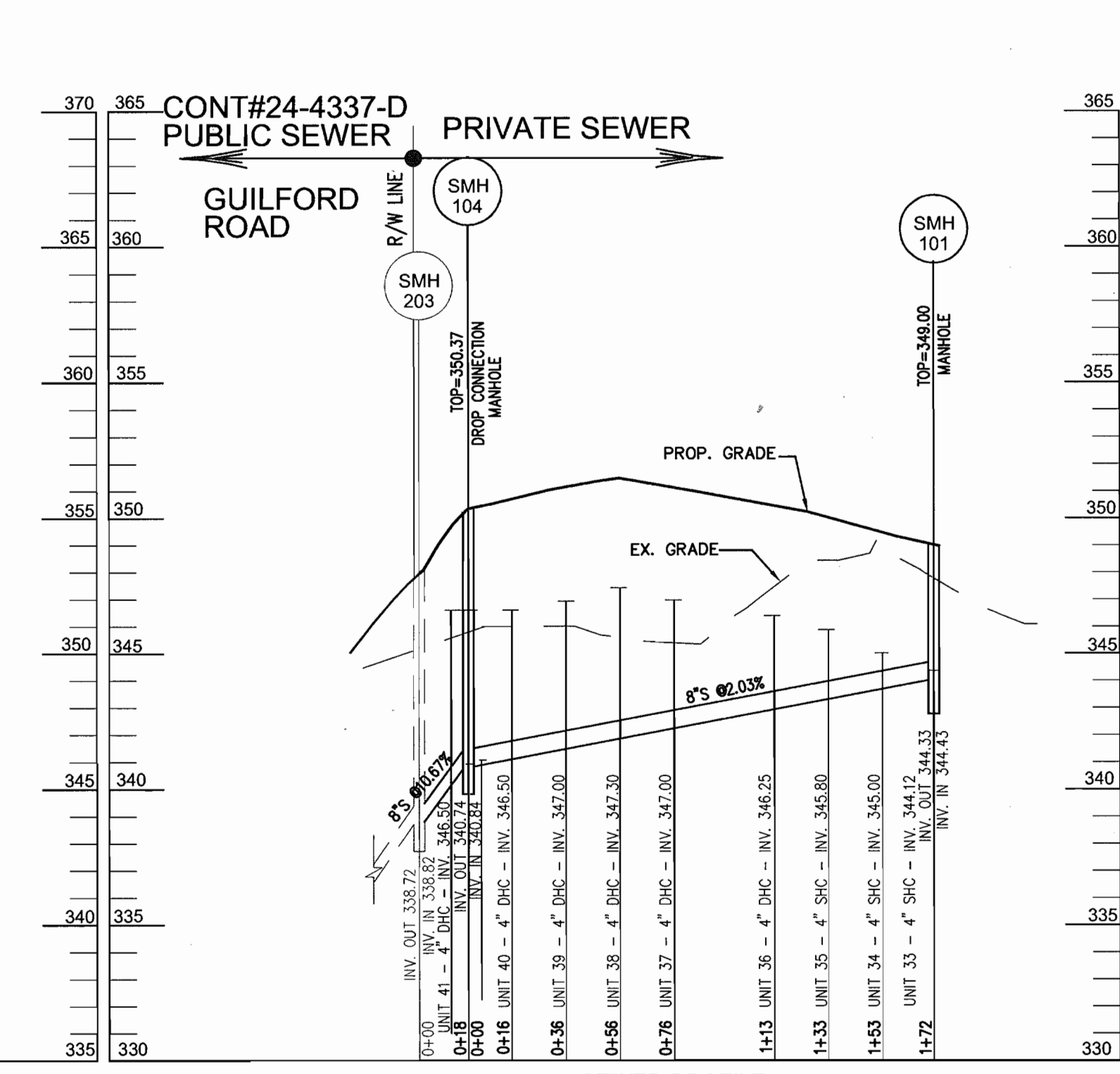
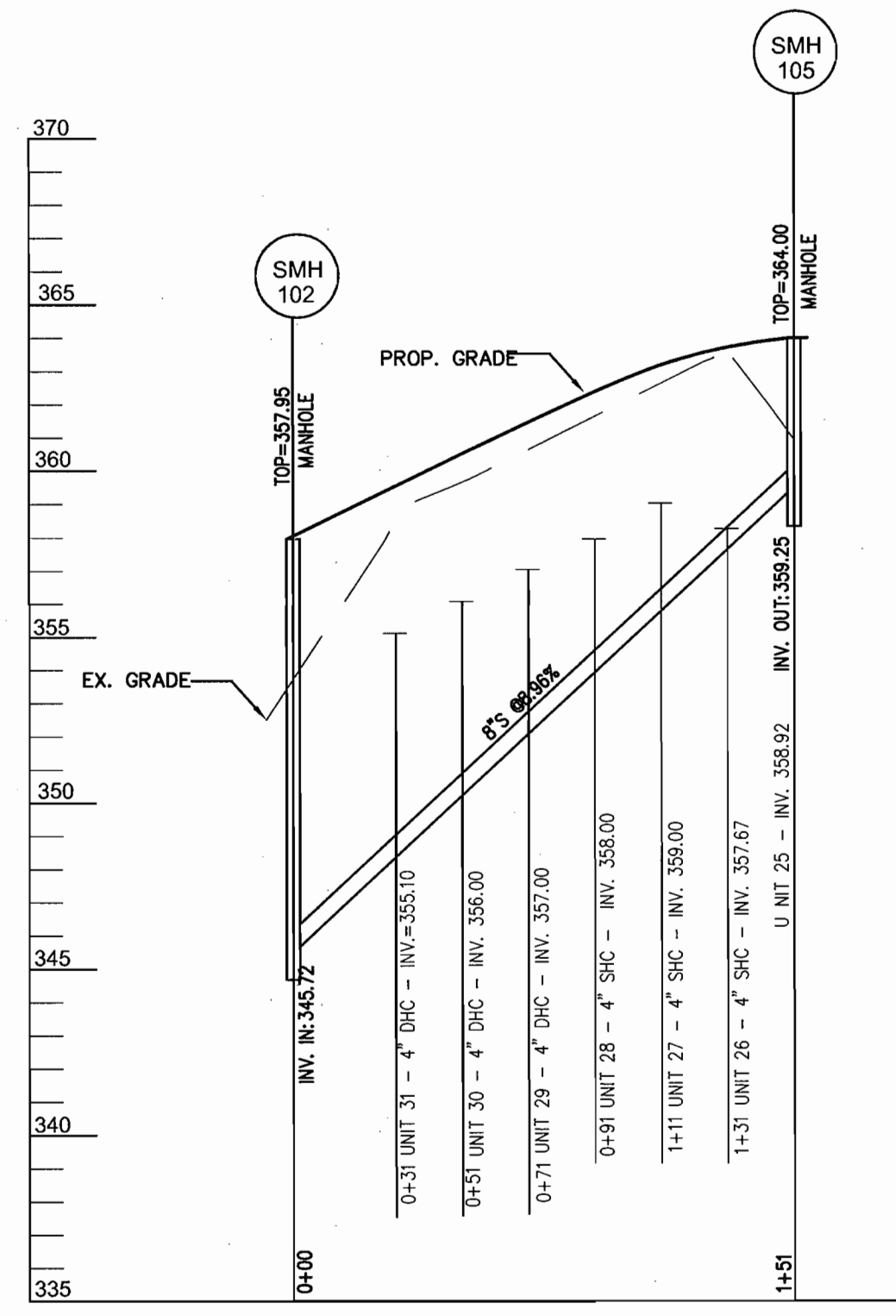
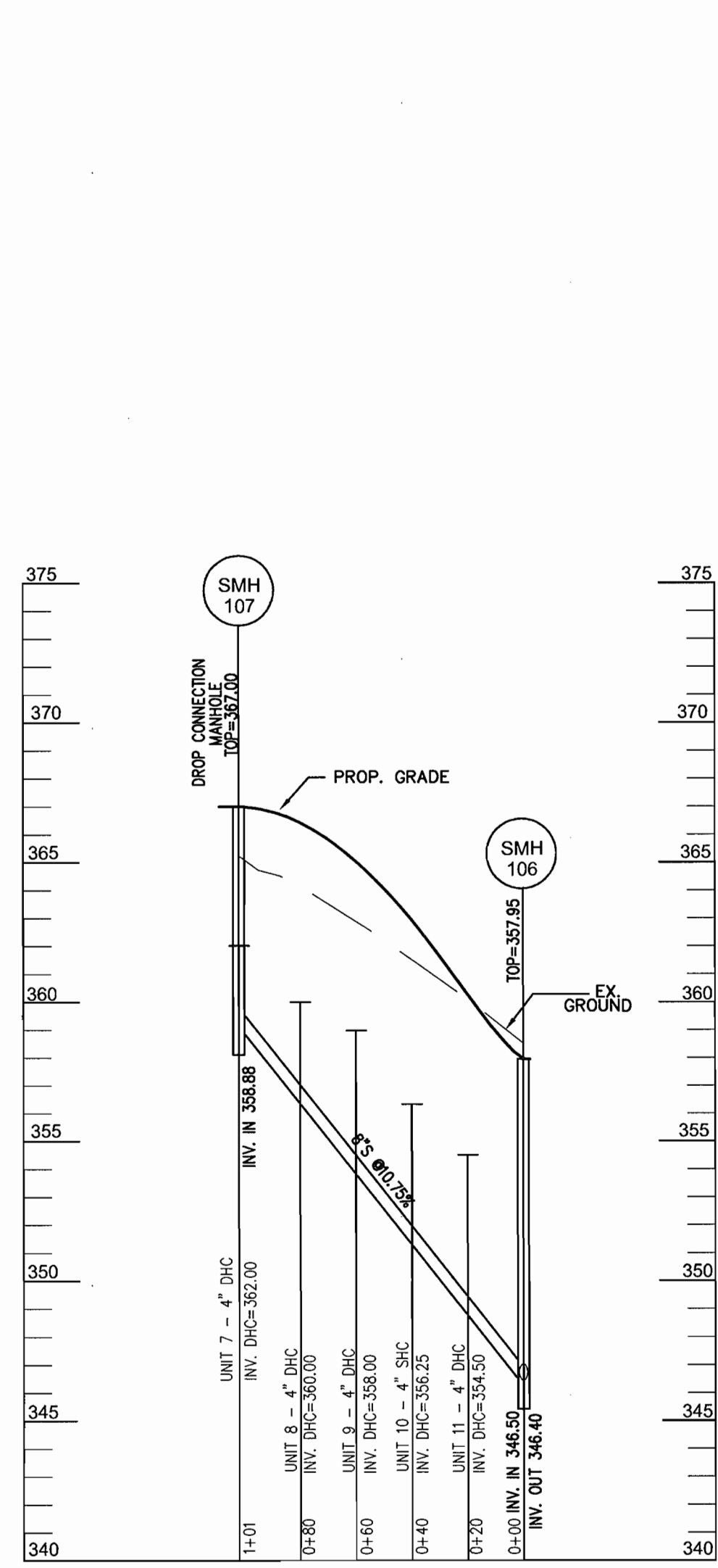
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DRAWN BY: RJCMH
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DATE: AUGUST, 2006
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10 SHEET OF 18

SDP-05-151

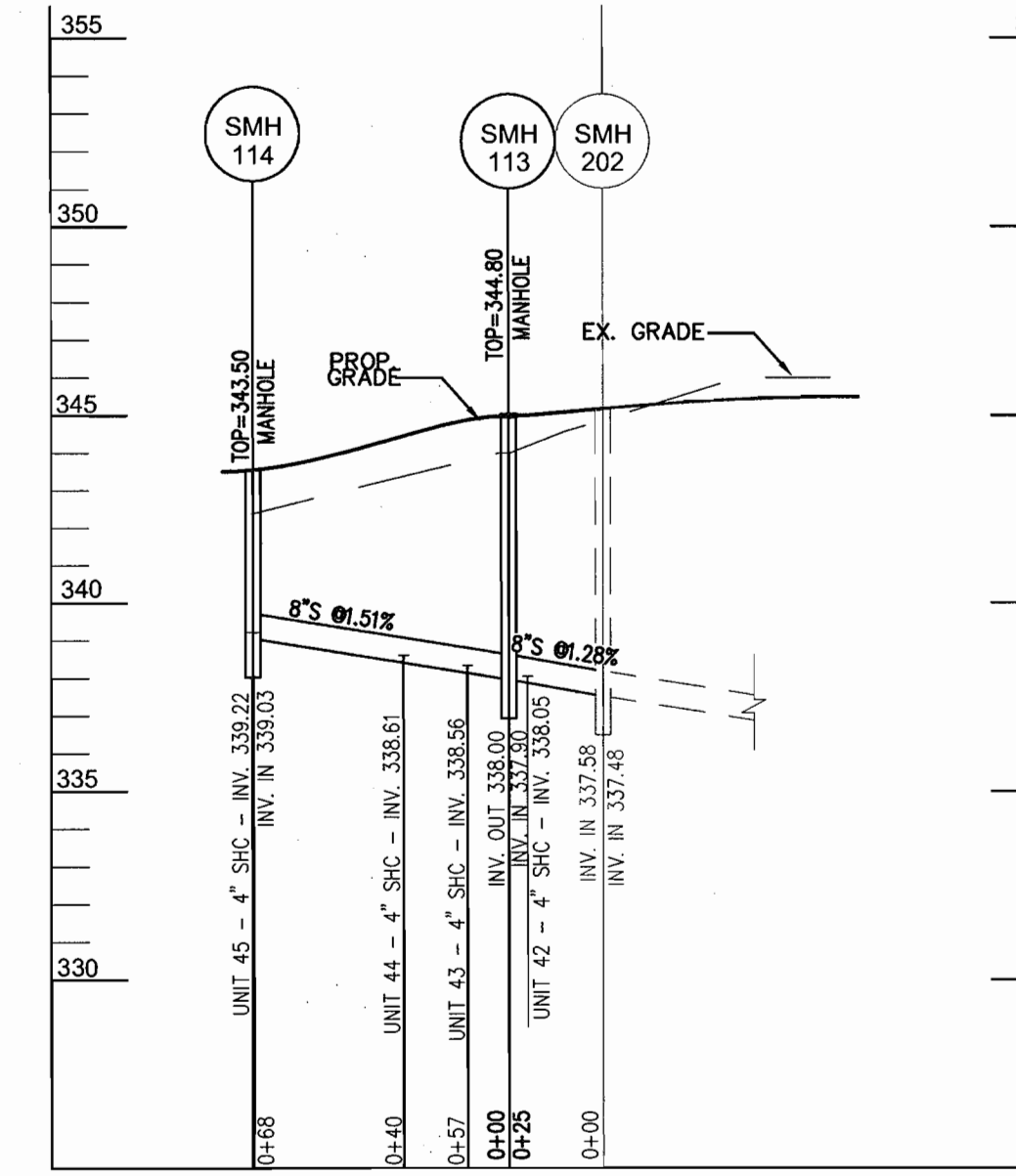


SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



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

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



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

SEWER CONNECTION TABULATION					
LOT NO.	TYPE	ELEVATION @ MAN	ELEVATION @ UNIT	M.C.E.	BASEMENT
ROSE PETAL CT.					
1	22' DHC @ 2%	360.00	360.44	363.60	369.95
2	22' DHC @ 2%	360.00	360.44	363.60	370.62
3	22' SHC @ 5%	359.00	360.10	362.60	370.62
4	22' SHC @ 5%	358.00	359.10	361.60	370.62
5	22' SHC @ 5%	357.24	358.34	360.84	370.62
6	22' SHC @ 5%	357.25	358.35	360.85	369.95
7	21' DHC @ 2%	362.00	362.42	364.92	365.49
8	19' DHC @ 2%	360.00	360.38	363.45	364.82
9	22' DHC @ 2%	358.00	358.44	362.60	363.48
10	20' DHC @ 2%	356.25	356.69	359.75	362.14
11	23' DHC @ 2%	354.50	354.96	358.15	361.47
12	16' DHC @ 2%	347.19	347.51	350.01	356.24
13	17' DHC @ 2%	347.29	347.63	350.13	356.24
14	17' DHC @ 2%	351.50	351.84	354.34	354.90
15	18' SHC @ 2%	347.39	347.75	350.25	354.23
16	18' SHC @ 2%	347.49	347.85	350.35	353.56
17	27' SHC @ 2%	347.26	347.80	350.30	352.89
18	43' SHC @ 2%	347.26	348.12	350.62	352.89
19	44' SHC @ 2%	350.12	351.00	353.50	358.18
20	19' SHC @ 2%	350.12	350.50	353.00	358.88
21	19' SHC @ 5%	353.12	354.07	356.57	360.19
22	20' SHC @ 5%	355.75	356.75	359.25	361.53
23	25' DHC @ 2%	358.25	358.75	362.00	362.87
24	25' DHC @ 2%	360.00	360.50	363.75	364.21
25	20' SHC @ 5%	358.92	359.92	362.42	365.72
26	20' SHC @ 2%	357.67	358.07	360.57	365.05
27	20' SHC @ 5%	359.00	360.00	362.50	363.71
28	20' SHC @ 5%	358.00	359.00	361.50	363.04
29	20' DHC @ 2%	357.00	357.40	360.50	361.70
30	20' DHC @ 2%	356.00	356.40	359.50	361.03
31	20' DHC @ 2%	355.10	355.60	358.60	359.69
32	20' SHC @ 5%	345.16	346.16	348.66	359.69
33	20' SHC @ 5%	344.05	345.05	347.55	358.33
34	20' SHC @ 5%	345.00	346.15	347.65	357.66
35	20' SHC @ 5%	345.80	346.80	349.30	356.32
36	20' DHC @ 2%	346.25	346.65	349.75	355.65
37	20' DHC @ 2%	347.00	347.40	350.50	354.98
38	20' DHC @ 2%	347.30	347.70	350.80	353.36
39	20' DHC @ 2%	347.00	347.40	349.90	353.36
40	20' DHC @ 2%	346.50	346.90	350.00	353.36
41	20' DHC @ 2%	346.50	346.90	350.00	353.36

SEWER CONNECTION TABULATION					
LOT NO.	TYPE	ELEVATION @ MAN	ELEVATION @ UNIT	M.C.E.	BASEMENT
ROSE PETAL CT.					
42	50' SHC @ 5%	338.05	340.55	345.41	346.41
43	50' SHC @ 5%	338.56	341.06	344.74	345.74
44	50' SHC @ 5%	338.61	341.11	344.74	345.74
45	30' SHC @ 2%	339.22	339.82	344.74	345.07

SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.	
SMH 101	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 544947.82 E 1361249.66	349.00	344.43	344.33	
SMH 102	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545008.30 E 1361278.89	357.95	345.72	345.62	
SMH 103	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545073.28 E 1361281.56	357.95	346.14	346.04	
SMH 104	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545022.91 E 1361094.37	350.37	340.84	340.74	
SMH 105	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545068.51 E 1361417.46	364.00	-	359.25	
SMH 106	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545123.23 E 1361268.75	357.95	346.50	346.40	
SMH 107	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545161.97 E 1361365.35	367.00	-	358.88	
SMH 108	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545148.36 E 1361304.04	362.25	357.25(4')	357.58	
SMH 109	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545227.73 E 1361243.08	364.25	355.58	355.48	
SMH 110	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545195.48 E 1361172.41	356.00	350.45	350.35	
SMH 111	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 545170.80 E 1361177.53	353.00	347.13	347.03	
SMH 113	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 544915.87 E 1361028.52	344.80	338.00	337.90	
SMH 114	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 544847.74 E 1361028.52	343.50	339.22	339.03	

FOR INVERT IN OF 4" SHC IN MANHOLES, SEE PROFILES

OWNER/DEVELOPER
ELLCOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELLCOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamer 10/2/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
David D... .. 10/25/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Donald R. Reuwer 10/2/06
DIRECTOR DATE

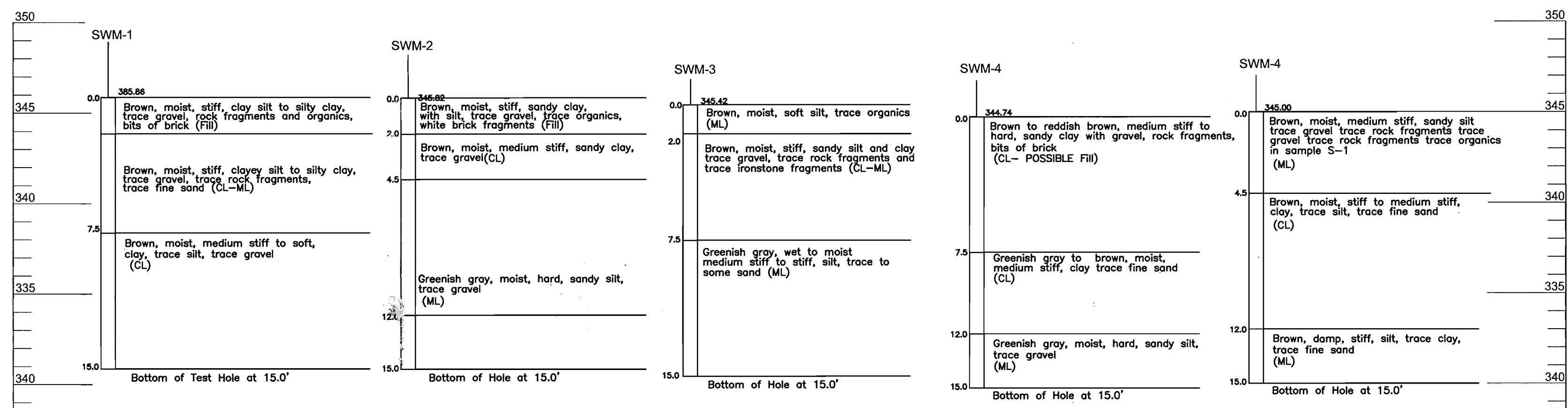
SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45
SEWER PROFILES
FUTURE PARCEL 'A'
EX. PARCEL '71' & '73'
HOWARD COUNTY, MARYLAND

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RJR/HV
DRAWN BY: RUC/MH
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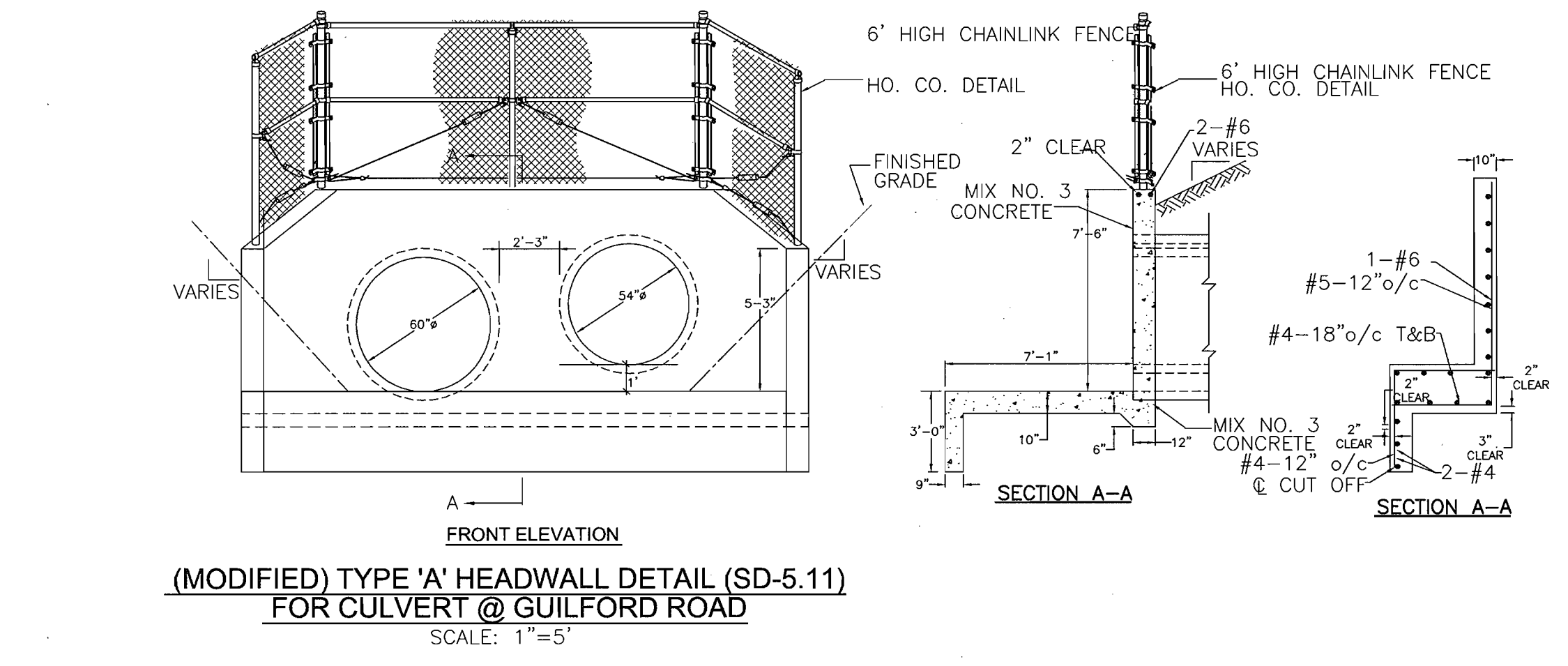
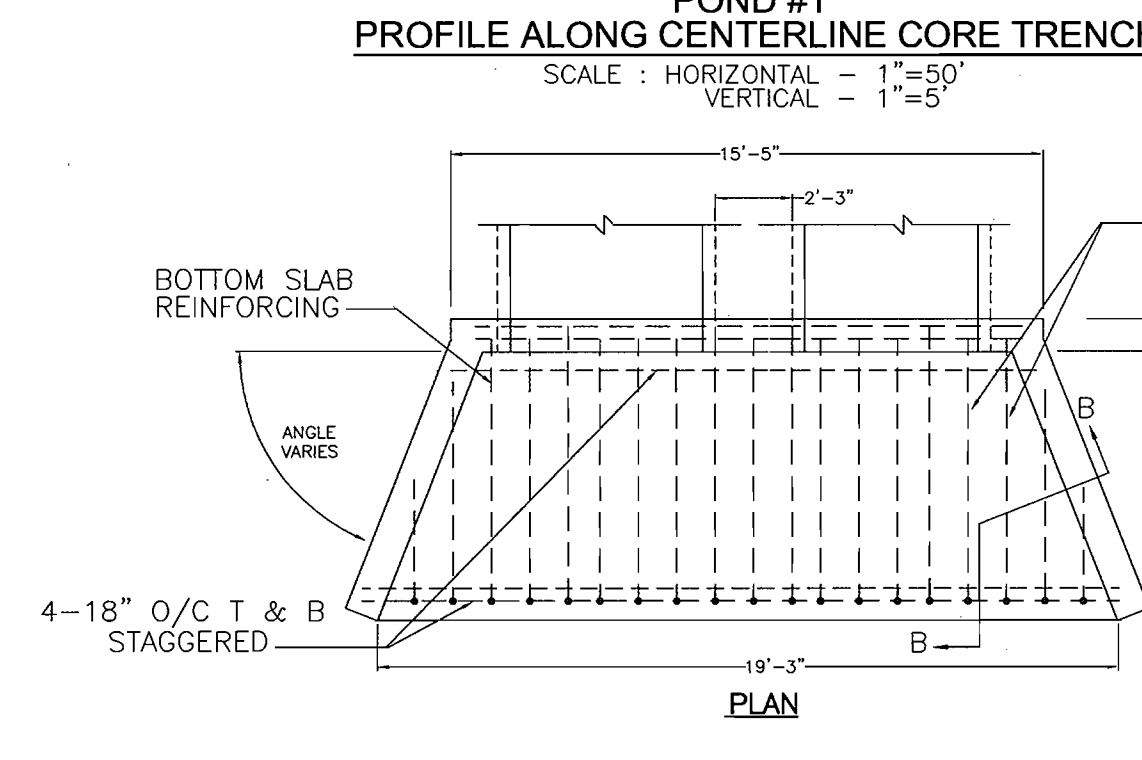
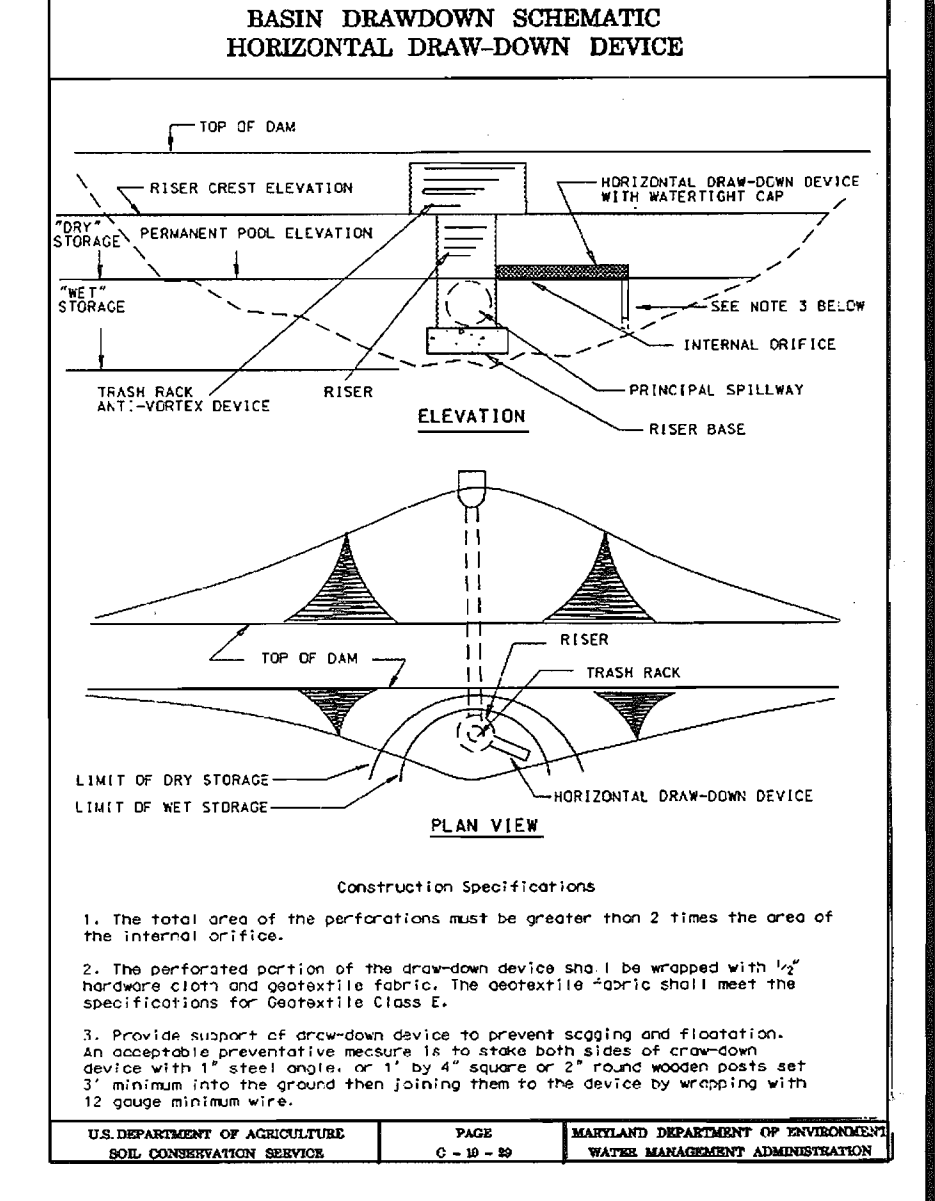
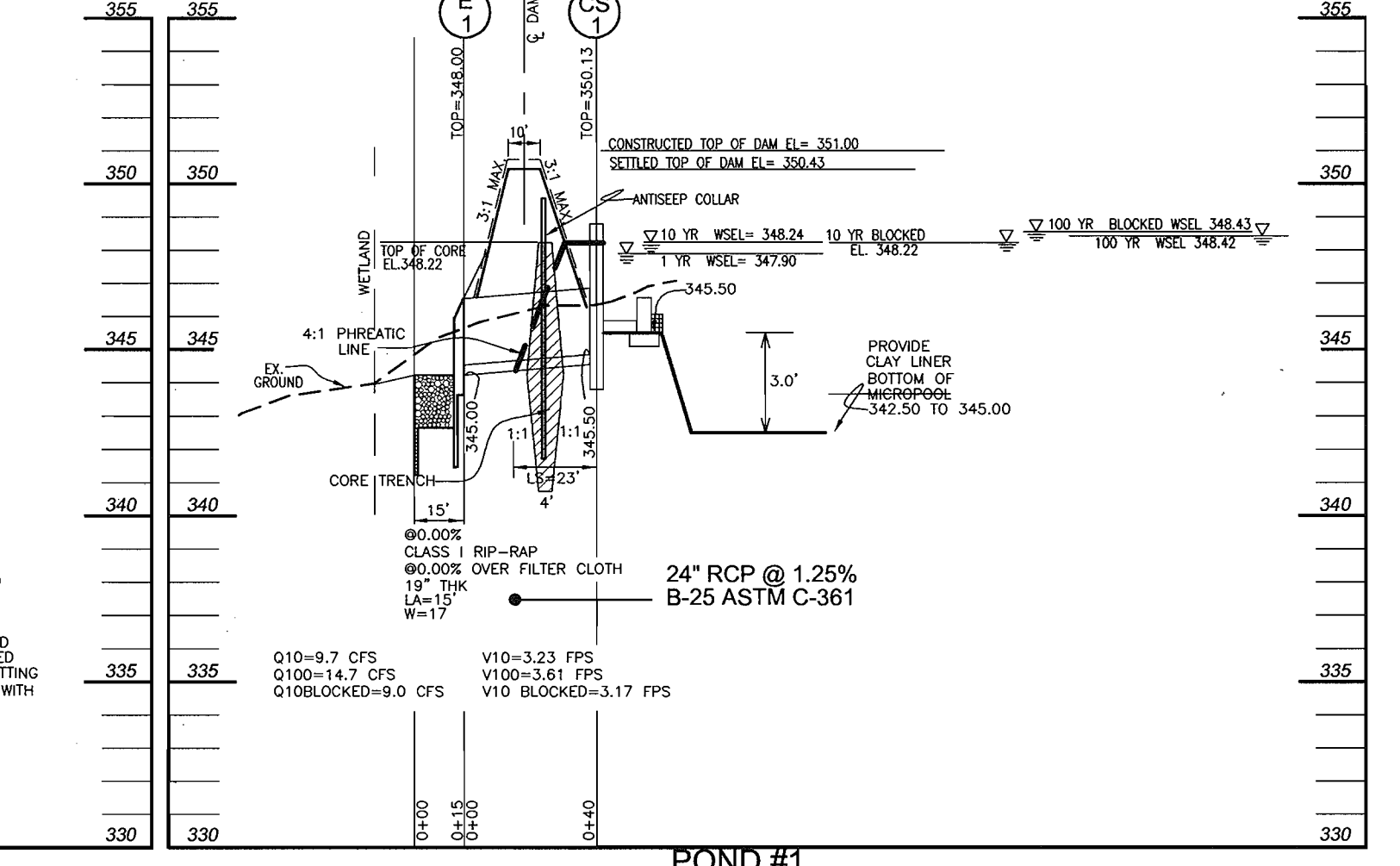
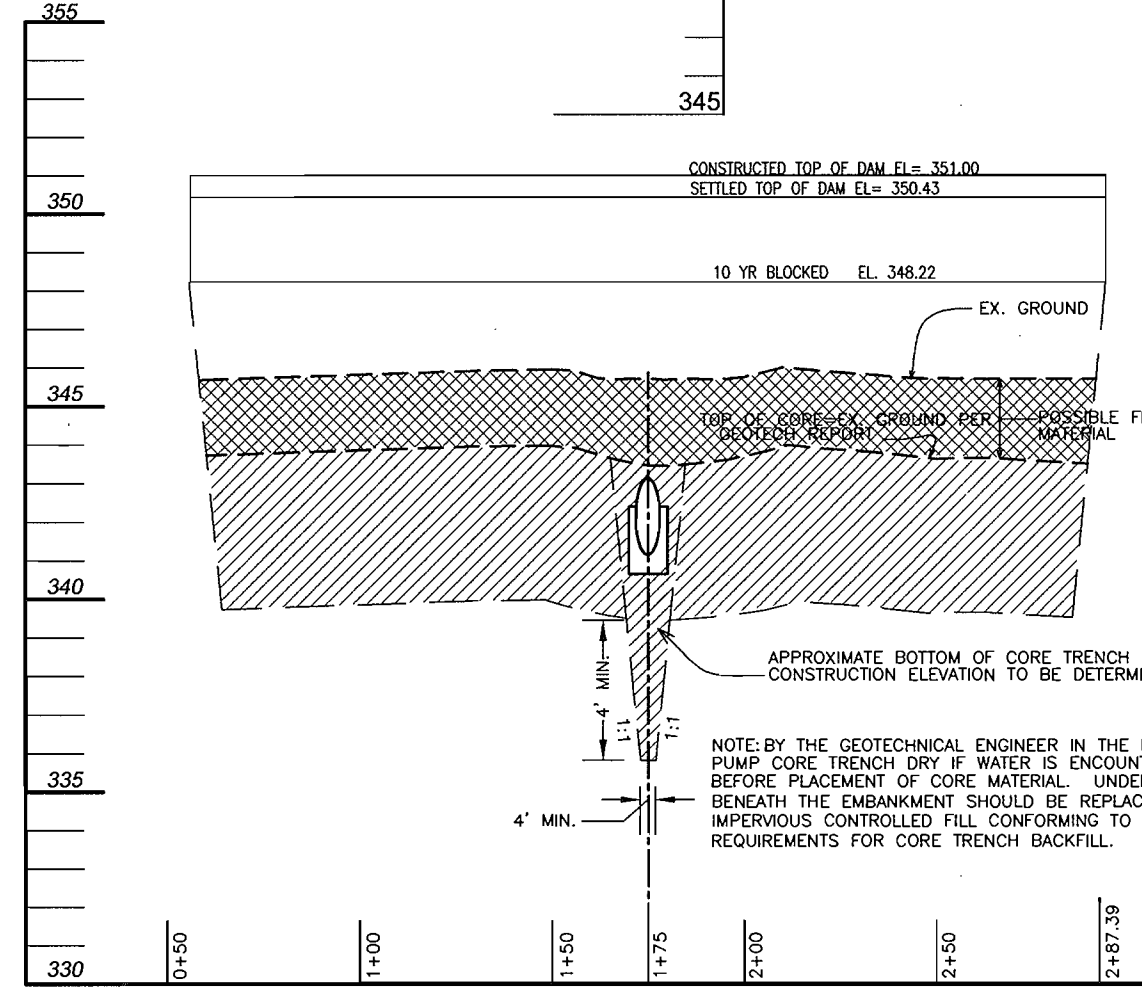
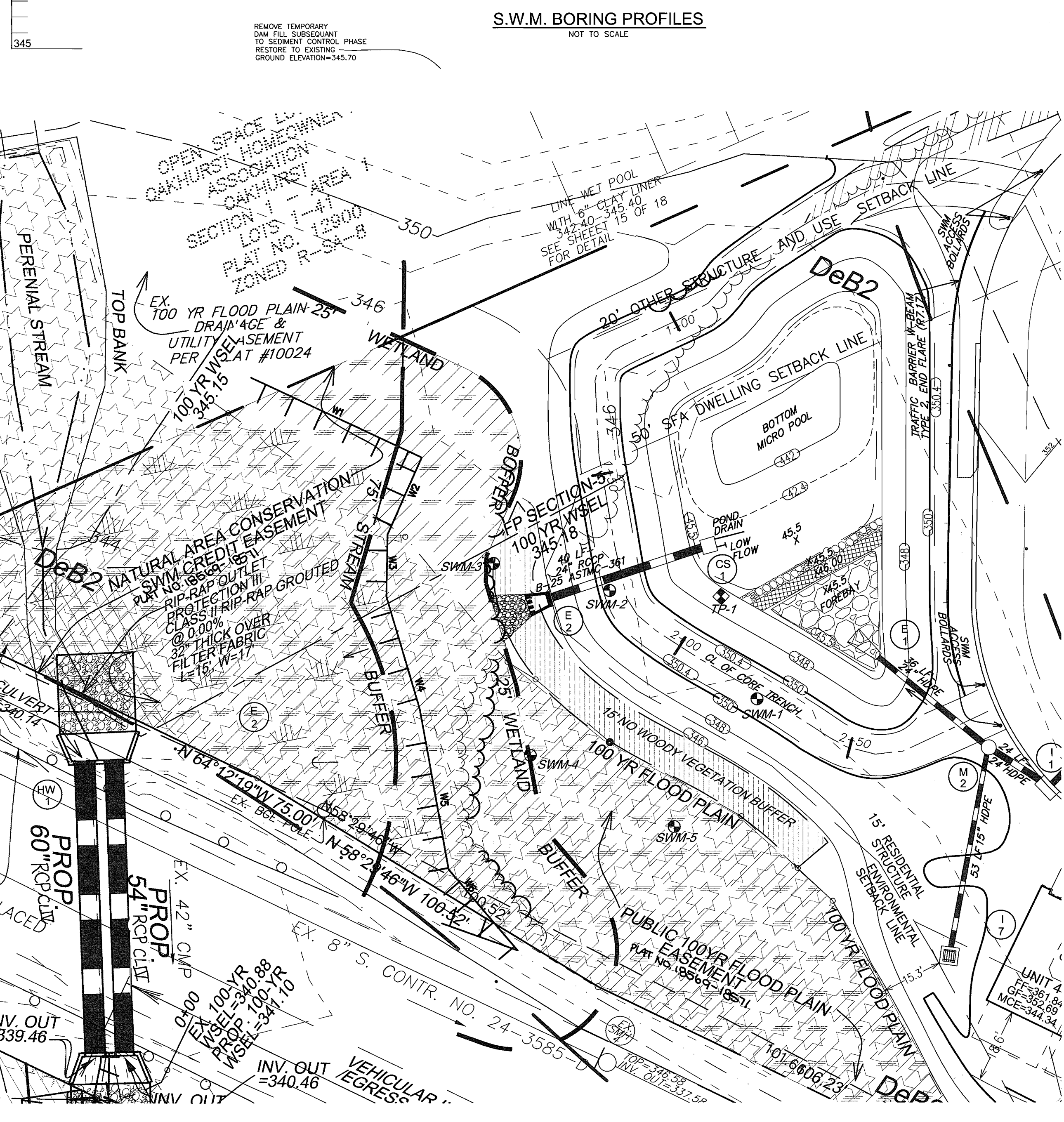
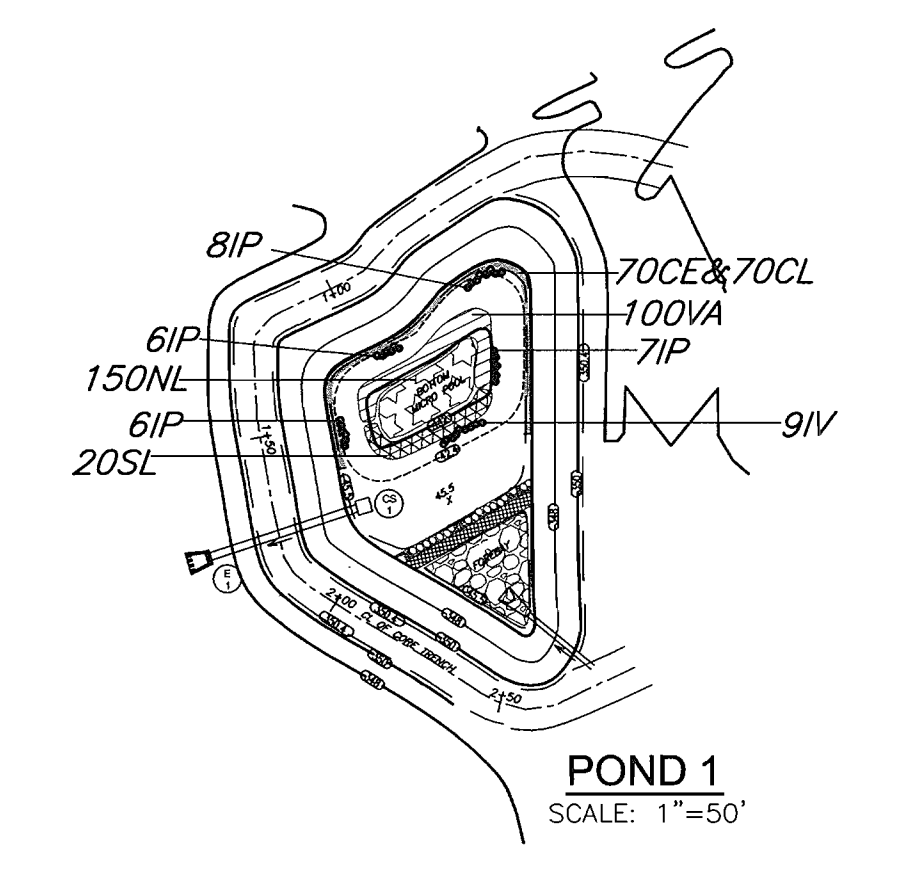
11 SHEET OF 18



POND 1
2' DEEP STORMWATER POND HERBACEOUS LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
VA	100	Vallisneria americana Wild Celery	plug	2' oc
IP	20	Iris pseudacaris Yellow Water Iris	plug	1.5' oc
IV	9	Iris versicolor Blue Flag (wear gloves)	plug	1.5' oc
SL	20	Sagittaria latifolia Duck Potato (do not plant tubers)	plug	4' oc
CE	150	Cyperus esculentus Yellow Nut Sedge	plug	2' oc
NL	70	Nuphar luteum Spatterdock	plug	1.5' oc
CL	70	Coryx lacustris Lake Sedge	plug	2' oc

REMOVE Baffle boards PRIOR TO INSTALLATION OF PLANT MATERIALS.
ADD THREE INCHES OF TOPSOIL TO PLANTING AREA. STABILIZE WITH 40 POUNDS PER ACRE OF A HYDROSEED MIX (WET MIX AND MEADOW MIX) FROM SYLVA NATIVE NURSERY OR EQUAL.
ALL PLANT MATERIALS TO CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAMW SPECIFICATIONS.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chris Harris 10/21/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David DeMunn 10/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Marsha P. Laugel 10/21/06
DIRECTOR DATE

DEVELOPER'S CERTIFICATE

I, WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. 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.

Robert H. Vogel 9-5-06
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION AND SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD 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 9/21/06
SIGNATURE OF ENGINEER DATE

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

Jim Meyer 10/19/06
USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Robert H. Vogel 10/19/06
HOWARD SCD DATE

OWNER/DEVELOPER
ELLICOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELLICOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

NO. REVISION DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45

SWM FACILITY DETAILS

TAX MAP 42 BLOCK 17 FUTURE PARCEL 'A'
6TH ELECTION DISTRICT EX. PARCEL '71' & '73'
HOWARD COUNTY, MARYLAND

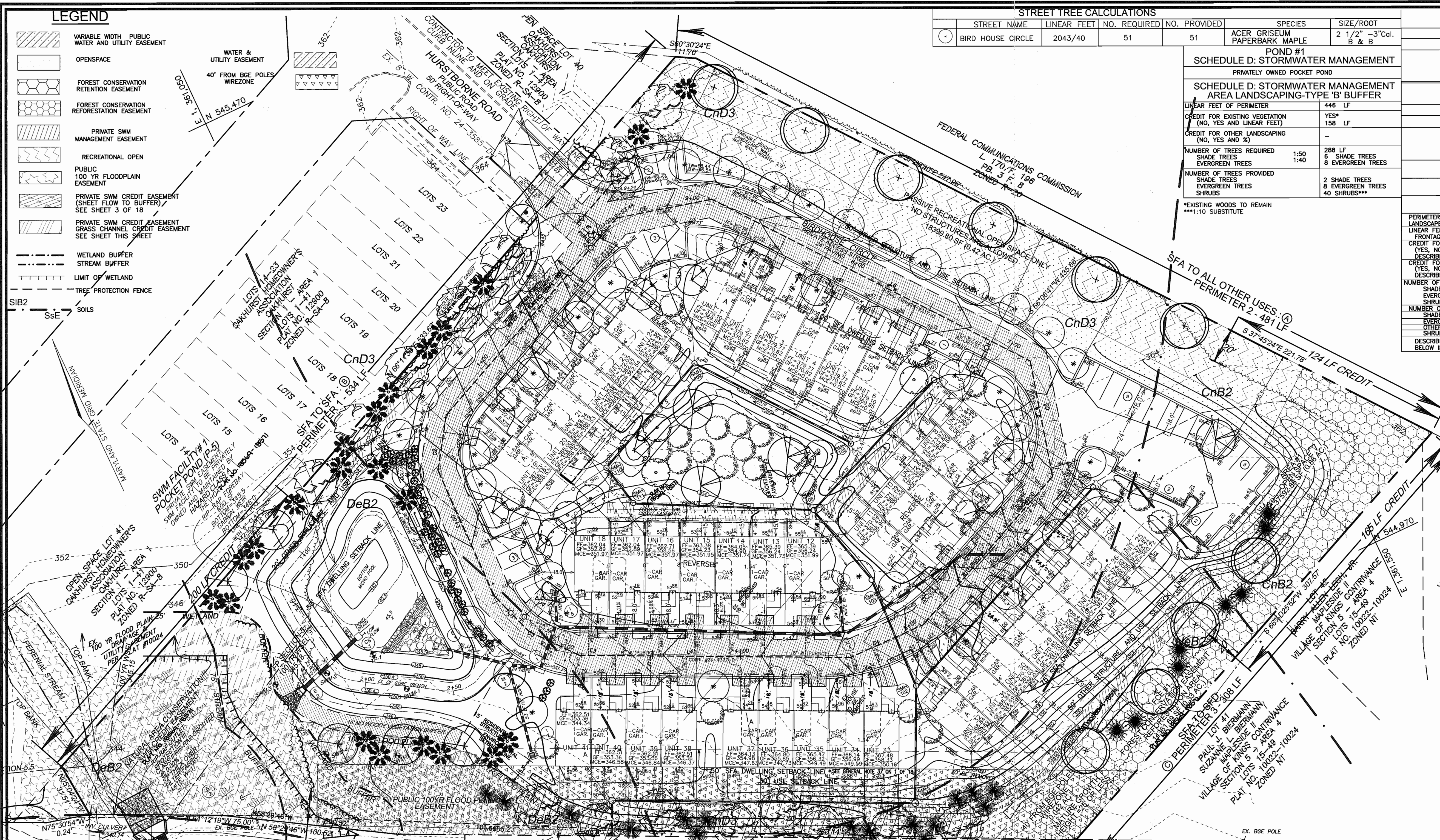
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RJR/RV
DRAWN BY: RJR/CMH
CHECKED BY: RHV
DATE: AUGUST 2006
SCALE: AS SHOWN
W.O. NO.: 04-99.00

12 SHEET OF 18

LEGEND

- VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT
- OPENSACE
- FOREST CONSERVATION RETENTION EASEMENT
- PRIVATE SWM MANAGEMENT EASEMENT
- RECREATIONAL OPEN
- PUBLIC 100 YR FLOODPLAIN EASEMENT
- PRIVATE SWM CREDIT EASEMENT (SHEET FLOW TO BUFFER) SEE SHEET 3 OF 18
- PRIVATE SWM CREDIT EASEMENT GRASS CHANNEL CREDIT EASEMENT SEE SHEET THIS SHEET
- WETLAND BUFFER STREAM BUFFER
- LIMIT OF WETLAND
- TREE PROTECTION FENCE



STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED	SPECIES	SIZE/ROOT
BIRD HOUSE CIRCLE	2043/40	51	51	ACER GRISEUM PAPERBARK MAPLE	2 1/2" - 3" Cal. B & B

SCHEDULE D: STORMWATER MANAGEMENT
PRIVATELY OWNED POCKET POND

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING-TYPE 'B' BUFFER

LINEAR FEET OF PERIMETER	CREDIT FOR EXISTING VEGETATION (NO. YES AND LINEAR FEET)	CREDIT FOR OTHER LANDSCAPING (NO. YES AND X)	NUMBER OF TREES REQUIRED	NUMBER OF TREES PROVIDED
446 LF	YES* 158 LF	-	288 LF	2 SHADE TREES 8 EVERGREEN TREES
150	150	-	150	2 SHADE TREES 8 EVERGREEN TREES
140	140	-	140	2 SHADE TREES 8 EVERGREEN TREES

EXISTING WOODS TO REMAIN
****1:10 SUBSTITUTE

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	NUMBER OF TREES PROVIDED	SHADE TREES	OTHER TREES (2:1 SUBSTITUTION)
45	45	45	-

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	NUMBER OF ISLANDS/TREES REQUIRED	NUMBER OF ISLANDS/TREES PROVIDED	SHADE TREES	OTHER TREES (2:1 SUBSTITUTION)
25	2	2	2	-

LANDSCAPE ISLAND 200SF X 2 = 400SF REQ. PROVIDED 400 SF

SCHEDULE A: PERIMETER LANDSCAPE EDGE

PERIMETER/FRONTAGE DESIGNATION	ADJACENT TO PERIMETER PROPERTIES								ADJACENT TO ROADWAYS							
	B	A	C	4	5	6	7	8	B	A	C	4	5	6	7	8
LANDSCAPE TYPE	534'	481'	308'	562'	376'	242'	89'	391'	534'	481'	308'	562'	376'	242'	89'	391'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*	YES*
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (LF REMAINING)	334'	357'	143'	441'	193'	0'	0'	0'	334'	357'	143'	441'	193'	0'	0'	0'
SHADE TREES	1:50	1:60	1:40	1:40	1:40	1:50	1:50	1:40	1:50	1:60	1:40	1:40	1:50	1:50	1:40	1:20
EVERGREEN TREES	1:40	9	0	1:20	8	0	0	0	1:40	9	0	1:20	8	0	0	0
SHRUBS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NUMBER OF PLANTS PROVIDED	7	6	4	11	5	0	0	0	7	6	4	11	5	0	0	0
SHADE TREES	9	0	0	8	22	10	0	0	9	0	0	8	22	10	0	0
EVERGREEN TREES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED

* EXISTING WOODS OR TREE TO REMAIN
** CREDITED FROM FOREST CONSERVATION EASEMENT PLANTING

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT MAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LANDY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

DEVELOPER'S AGREEMENT
FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL HAS BEEN POSTED AS A PART OF DEVELOPER'S AGREEMENT LANDSCAPE SURETY IN THE AMOUNT OF \$ 49,650.00 FOR THE REQUIRED 137 SHADE TREES (\$41,100) AND 57 EVERGREEN TREES (\$8,550)

DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE
I/WE CERTIFY THAT LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY, UPON COMPLETION OF THE PROJECT, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER'S/OWNER'S NAME: MR. DONALD R. REUWER

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS _____ DATE _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT _____ DATE 6/5

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____

MATCHLINE SEE SHEET 15 OF 18

SFA TO ROAD:
PERIMETER 4 - 562 LF

PLAN

SCALE: 1"=30'

LANDSCAPE SCHEDULE THIS SHEET

SYMBOL	QUAN.	BOTANICAL NAME	SIZE	REM.
	10	Acer rubrum 'Armstrong' Columnar Red Maple (Shade trees) P-2, (6), P-3, (4)	2 1/2" - 3" Cal.	B & B
	7	Acer rubrum 'Autumn Flame' Autumn Flame Red Maple (Shade trees) P-1, (7), P-4, (8), P-5 (5)	2 1/2" - 3" Cal.	B & B
	6	Acer saccharum 'Goldspire' Columnar Sugar Maple (Shade trees) INTRNAL LANDSCAPING(3), LANDSCAPE ISLAND(3)	2 1/2" - 3" Cal.	B & B
	5	Zelkova serrata 'Village Green' Village Green Zelkova (Shade trees) INTRNAL LANDSCAPING(4)	2 1/2" - 3" Cal.	B & B
	4	Quercus coccinea 'Scarlet Oak' (Shade trees) INTRNAL LANDSCAPING(4)	2 1/2" - 3" Cal.	B & B
	8	Acer rubrum 'Bowhall' Bowhall Red Maple (Shade trees) INTRNAL LANDSCAPING(8)	2 1/2" - 3" Cal.	B & B
	29	Cornelian Cherry Cornus mas (Shade trees - Growth Height=25') INTRNAL LANDSCAPING(30)	2 1/2" - 3" Cal.	B & B
	8	Pinus strobus 'Eastern White Pine' (Evergreen trees) P-3, (8)	6' - 8' Ht.	B & B
	4	ARBORVITAE TECHNY THUJA OCCIDENTALIS, 'TECHNY' (Evergreen tree) mature height - 20') P-4, (17), P-5 - (10)	6' - 8' Ht.	B & B
	22	Pinus nigra 'Austrian Pine' (Evergreen trees) P-1, (8), P-4, (5), SCHD(8)	6' - 8' Ht.	B & B
	40	ILEX CORNUTA CHINESE HOLLY SCHD: 1: 10 SUBSTITUTION (40)	24" X 36" HT 24" X 36" SPD	B & B

NOTES:

- THE LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS, AS SHOWN ON THIS PLAN.
- BGE RESERVE THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE SOLE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY. THIS RIGHT SHALL NOT BE RESTRICTED BY FOREST CONSERVATION OR OTHER APPLICABLE PERPETUAL EASEMENTS ON THE LAND.

SYMBOL	QUAN.	BOTANICAL NAME	SIZE	REM.
	73	Amur Maple Acer ginnala (Shade trees - Growth Height=20')	2" - 3" Cal.	B & B
	7	Japanese red maple Acer palmatum atropurpureum (Shade trees - growth height=20')	4' - 6" Ht.	B & B
	23	YOSHINO FLOWERING CHERRY PRUNUS X YEDDENSIS - (GROWTH HEIGHT=25')	4' - 6" Ht.	B & B

OWNER/DEVELOPER
ELICOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELICOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hanna 10/21/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Don Reuwer 10/25/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Don Reuwer 10/21/06
DIRECTOR DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45
LANDSCAPE PLAN AND DETAILS

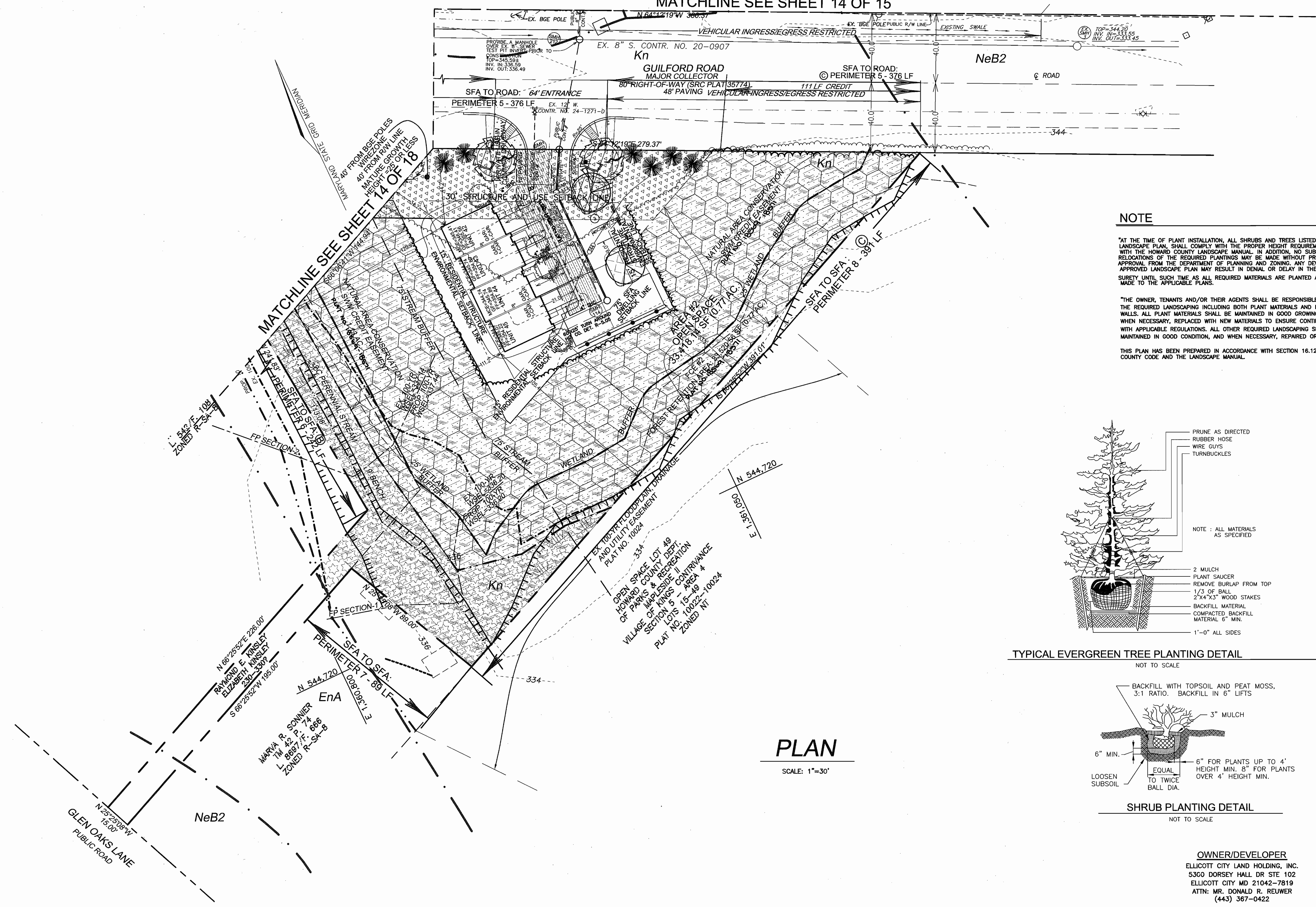
TAX MAP 42 BLOCK 17 FUTURE PARCEL 'A'
6TH ELECTION DISTRICT EX. PARCEL 71' & 73'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
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14 SHEET OF 18

MATCHLINE SEE SHEET 14 OF 15



PLAN
SCALE: 1"=30'

LEGEND

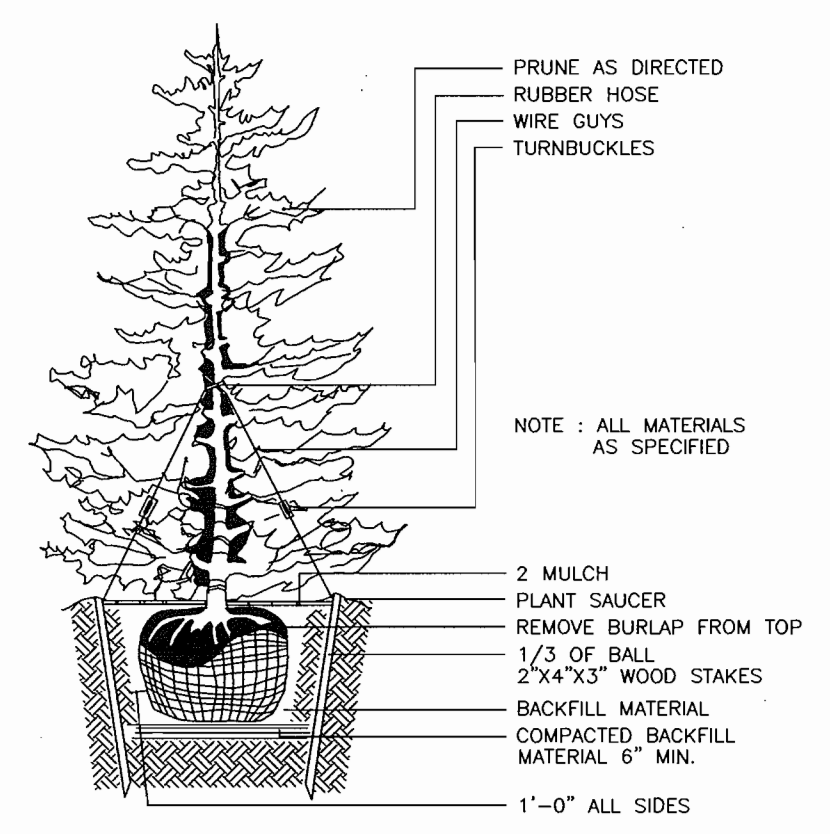
EXISTING CONTOUR	---+40---
SPOT ELEVATION	+82.23
DIRECTION OF FLOW	→
PROPOSED CONTOUR	---(17)---
EXISTING TREES TO REMAIN	
TREE PROTECTION FENCE	SIB2
SOILS	SsE
VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT	
OPENSOURCE	
FOREST CONSERVATION RETENTION EASEMENT	
FOREST CONSERVATION REFORESTATION EASEMENT	
PRIVATE SWM MANAGEMENT EASEMENT	
RECREATIONAL OPEN SPACE	
PUBLIC 100 YR FLOODPLAIN EASEMENT	
PRIVATE SWM CREDIT EASEMENT (SHEET FLOW TO BUFFER) SEE SHEET 3 OF 18	
PRIVATE SWM CREDIT EASEMENT GRASS CHANNEL CREDIT EASEMENT SEE SHEET THIS SHEET	
WETLAND BUFFER	
STREAM BUFFER	
LIMIT OF WETLAND	
WATER & UTILITY EASEMENT	
40' FROM BOE POLES WIREZONE	

NOTE

AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.

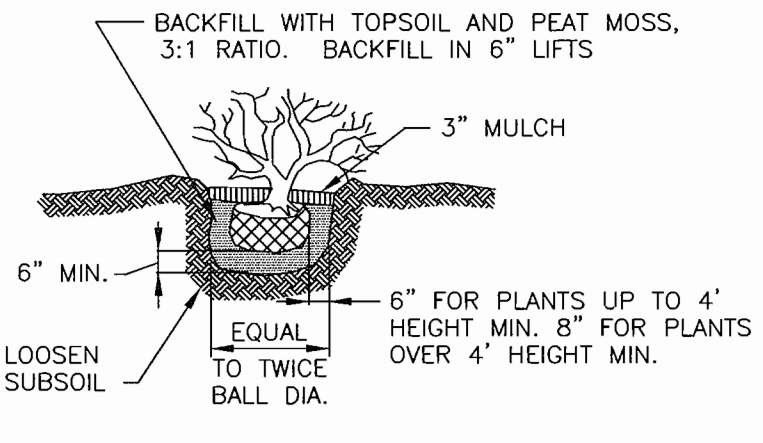
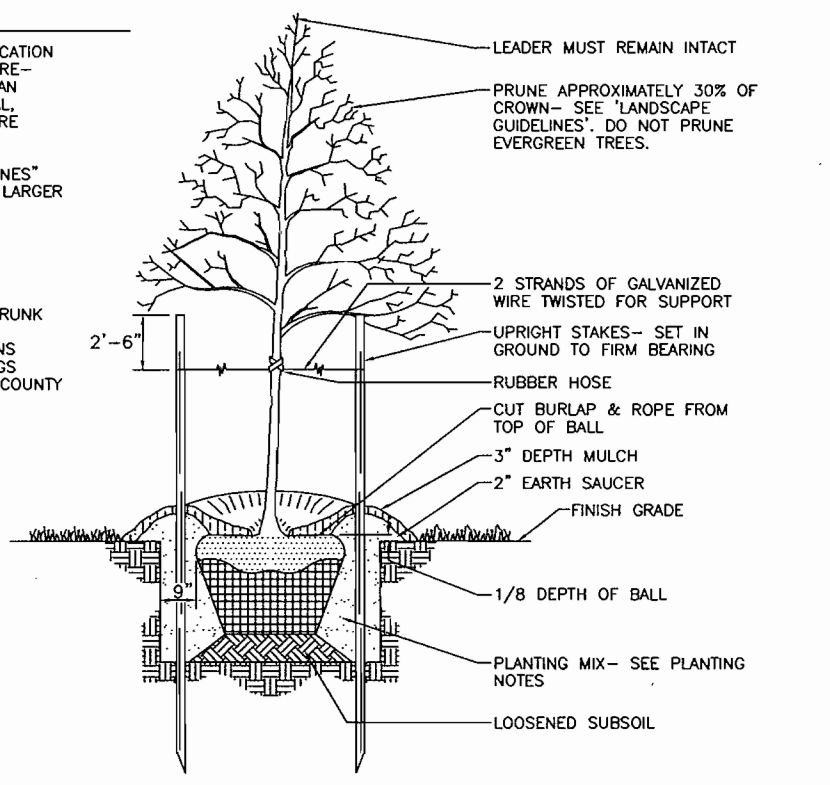
THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.



NOTES

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



OWNER/DEVELOPER
ELLCOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELLCOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Harris
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 10/16/06

Mark A. Unger
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/25/06

Mark A. Unger
DIRECTOR DATE 10/25/06

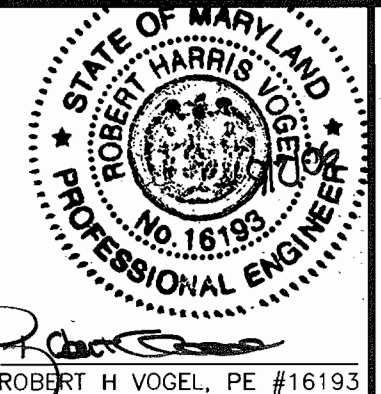
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45
LANDSCAPE PLAN AND DETAILS

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
EX. PARCEL 71' & 73'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043 TEL: 410.461.7666
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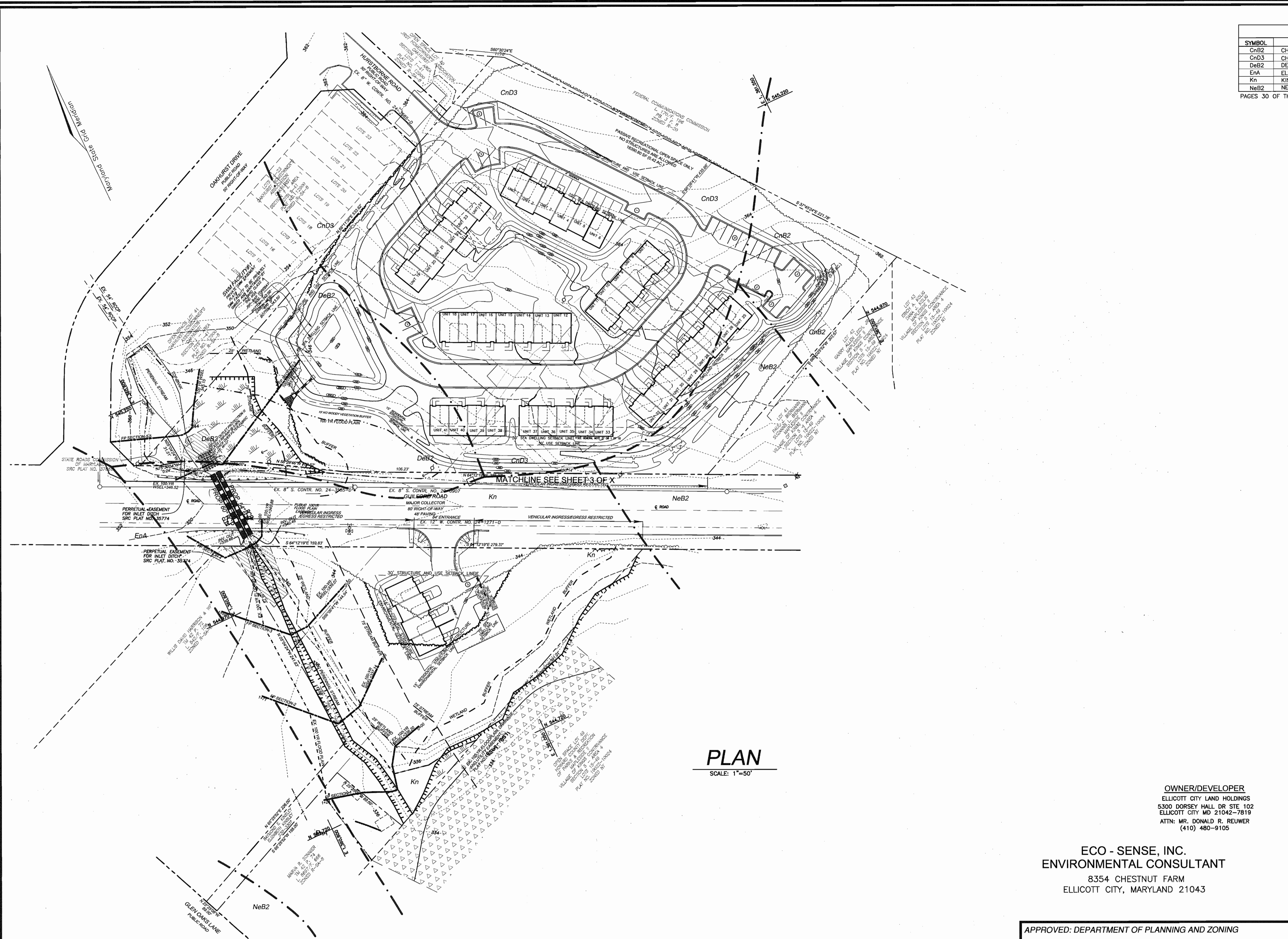


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15 SHEET OF 18

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
DeB2	DELANCO SILT LOAM, 0 TO 3 PERCENT SLOPES	C
EnA	ELSBORO LOAM, 0 TO 3 PERCENT SLOPES	B
Kn	KINKORA SILT LOAM	D
NeB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B

PAGES 30 OF THE HOWARD COUNTY SOIL SURVEY



PLAN
SCALE: 1"=50'

OWNER/DEVELOPER
ELLCOTT CITY LAND HOLDINGS
5300 DORSEY HALL DR STE 102
ELLCOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(410) 480-9105

ECO - SENSE, INC.
ENVIRONMENTAL CONSULTANT
8354 CHESTNUT FARM
ELLCOTT CITY, MARYLAND 21043

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Korman 10/21/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 16

Mark DeLuca 10/25/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6

Mark DeLuca 10/21/06
DIRECTOR DATE

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45
FLOODPLAIN STUDY**

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
EX. PARCEL 771 & 73'
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
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ELLCOTT CITY, MD 21043 FAX: 410.461.8961

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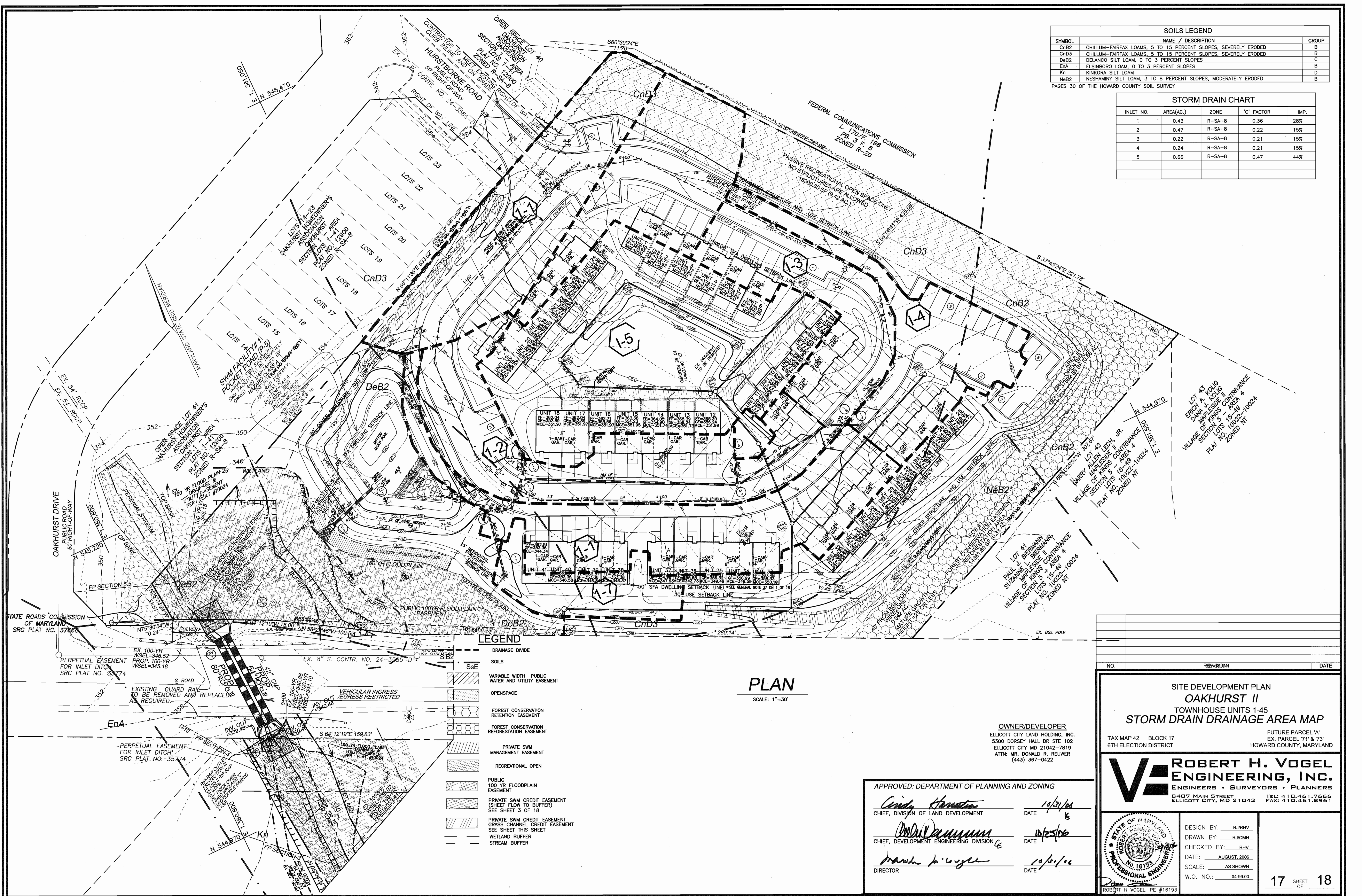
16 SHEET OF 18

SDP-05-151

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
DeB2	DELANCO SILT LOAM, 0 TO 3 PERCENT SLOPES	C
EnA	ELSNORO LOAM, 0 TO 3 PERCENT SLOPES	B
Kn	KINKORA SILT LOAM	D
NeB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B

PAGES 30 OF THE HOWARD COUNTY SOIL SURVEY

STORM DRAIN CHART				
INLET NO.	AREA(AC.)	ZONE	'C' FACTOR	IMP.
1	0.43	R-SA-B	0.36	28%
2	0.47	R-SA-B	0.22	15%
3	0.22	R-SA-B	0.21	15%
4	0.24	R-SA-B	0.21	15%
5	0.66	R-SA-B	0.47	44%



NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
OAKHURST II
 TOWNHOUSE UNITS 1-45
STORM DRAIN DRAINAGE AREA MAP

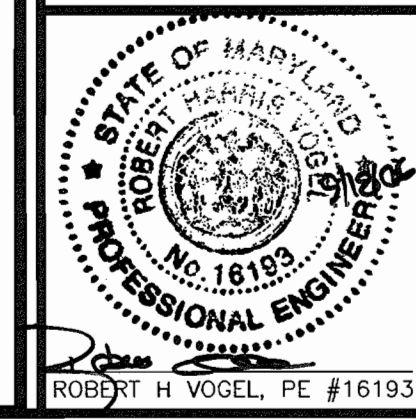
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17 SHEET OF 18

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 10/21/06

Donald Deamus
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10/25/06

Robert H. Vogel
 DIRECTOR
 DATE: 10/16/06

OWNER/DEVELOPER
 ELLICOTT CITY LAND HOLDING, INC.
 5300 DORSEY HALL DR STE 102
 ELLICOTT CITY MD 21042-7819
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

HOWARD COUNTY
FOREST CONSERVATION WORKSHEET

ZONED R-20

NET TRACT AREA: 6.34 AC

A. TOTAL TRACT AREA: 6.34 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN: 0.62 AC
C. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD: 0.00 AC
D. NET TRACT AREA: 5.72 AC

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-SA-8.

ARA MDR IDA HDR MPD CIA
0 0 0 1 0 0

E. AFFOREST THRESHOLD: 15% X D = 0.86 AC
F. CONSERVATION THRESHOLD: 20% X D = 1.14 AC

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 1.41 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 0.55 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.27 AC

BREAK EVEN POINT:

(0.2 x I) + F = BREAK EVEN POINT (6.11 AC)

J. FOREST RETENTION WITH NO MITIGATION = 1.20 AC
K. CLEARING PERMITTED WITHOUT MITIGATION = 0.21 AC

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED = 0.64 AC
M. TOTAL AREA OF FOREST TO BE RETAINED = 0.77 AC

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.07 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.75 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q) = 0.81 AC
S. TOTAL AFFORESTATION REQUIRED = 0.00 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 0.81 AC

TOTAL FOREST CONSERVATION OBLIGATION FOR THE PROJECT - 1.58 AC. OBLIGATION TO BE FULFILLED BY ON-SITE RETENTION OF 0.77 AC. (33,541.20 SF), ON-SITE REFORESTATION OF 0.33 AC. (14,374.80 SF) AND FEE-IN-LIEU FOR THE REMAINING 0.48 AC. (20,908.80 SF)

BOND FOR THE REQ. 1.10 AC. HAS BEEN PAID IN THE AMOUNT OF \$13,895.24 (RETENTION - (0.77 AC.) 33,541.20 SF x .20 = \$6,708.24 (REFORESTATION - (0.33 AC.) 14,374.80 SF x .50 = \$7,187.00)

FEE-IN-LIEU FOR THE (0.48 AC.) 20,908.80 SF x 0.50 = \$10,454.40

NOTES:

1. THE PROJECT BOUNDARY IS BASED ON A SURVEY PREPARED BY ROBERT H. VOGEL, INC. DATED OCTOBER 2004.

2. THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL, DATED OCTOBER 2004.

LEGEND

EXISTING CONTOUR: --- 4.40 ---
SPOT ELEVATION: +82.53
DIRECTION OF FLOW: --->---
PROPOSED CONTOUR: --- 4.12 ---

EXISTING TREES TO REMAIN: [Symbol]

TREE PROTECTION FENCE: [Symbol]

FOREST CONSERVATION EASEMENT SIGN: SIB2

SOILS: SsE

VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT: [Symbol]

OPENSACE: [Symbol]

FOREST CONSERVATION RETENTION EASEMENT: [Symbol]

FOREST CONSERVATION REFORESTATION EASEMENT: [Symbol]

PRIVATE SWM MANAGEMENT EASEMENT: [Symbol]

RECREATIONAL OPEN: [Symbol]

PUBLIC 100 YR FLOODPLAIN EASEMENT: [Symbol]

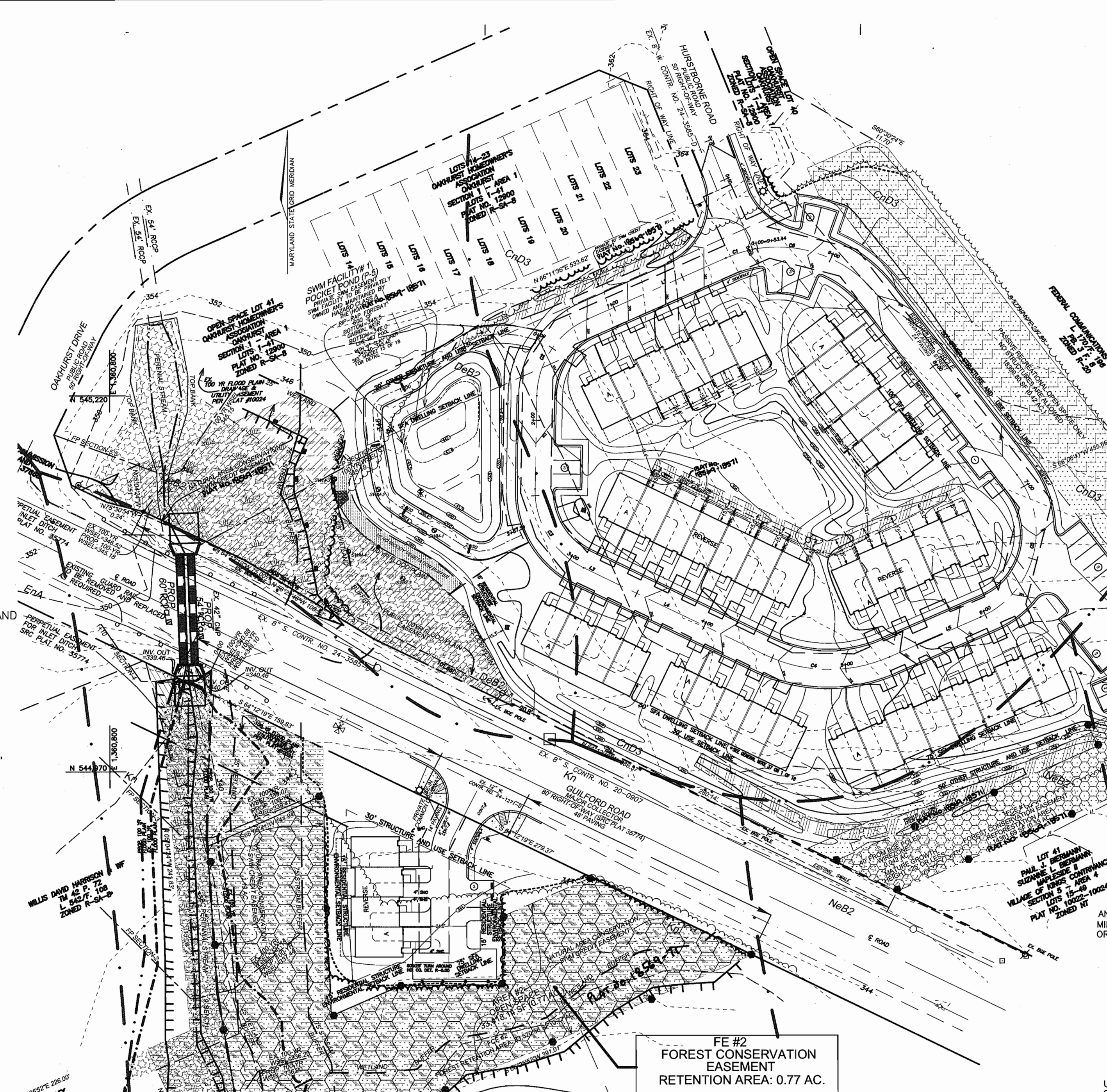
PRIVATE SWM CREDIT EASEMENT (SHEET FLOW TO BUFFER) SEE SHEET 3 OF 18: [Symbol]

PRIVATE SWM CREDIT EASEMENT GRASS CHANNEL CREDIT EASEMENT SEE SHEET THIS SHEET: [Symbol]

WETLAND BUFFER: [Symbol]

STREAM BUFFER: [Symbol]

LIMIT OF WETLAND: [Symbol]



REFORESTATION PLANT SCHEDULE
TOTAL REFORESTATION AREA = 0.33 AC.

** LANDSCAPING SIZE TREES=2,400SF(0.055 AC.) SPACING 20'X20'
PLANTING DENSITY: 0.288 AC. OF 1" CAL. TREES @ 200 PER ACRE
0.042 AC.=9 TREES
TOTAL AREA 0.33 AC.= 66 TREES

QTY.	BOTANICAL NAME	SIZE	SPACING
12	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
12	LIQUIDAMBAR STRACIFLLIA AMERICAN SWEETGUM	1" CAL.	15' x 15'
12	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
12	PRUNUS SEROTINA BLACK CHERRY	1" CAL.	15' x 15'
12	QUERCUS PALUSTRIS PIN OAK	1" CAL.	15' x 15'
6	ACER RUBRUM RED MAPLE	2" CAL.	20' x 20'
9	CORNELIUS CHERRY CORNUS MAS (SHADE TREES-GROWTH HEIGHT=25')	1" CAL.	15' x 15'

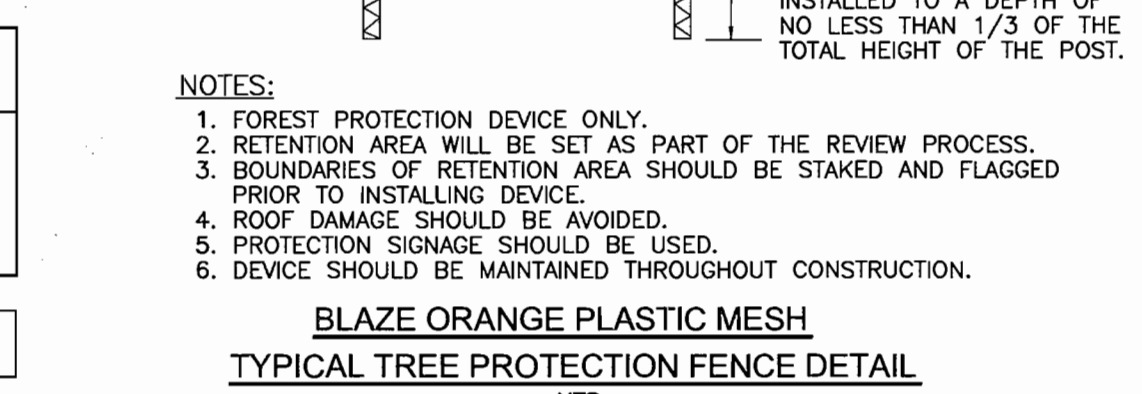
FOREST CONSERVATION EASEMENT TABLE

FOREST CONSERVATION EASEMENTS
REFORESTATION-FCE#1 0.33 AC. (0.042 AC.-WIREZONE)
RETENTION-FCE#2 0.77 AC.

REFORESTATION PROVIDED - FCE-1 FOR WIRE ZONE

0.042 ACRES OR 1830 SF

1" CALIPER TREES
9 TREES @ 200 TREES PER ACRE



BLAZE ORANGE PLASTIC MESH

NOTES:

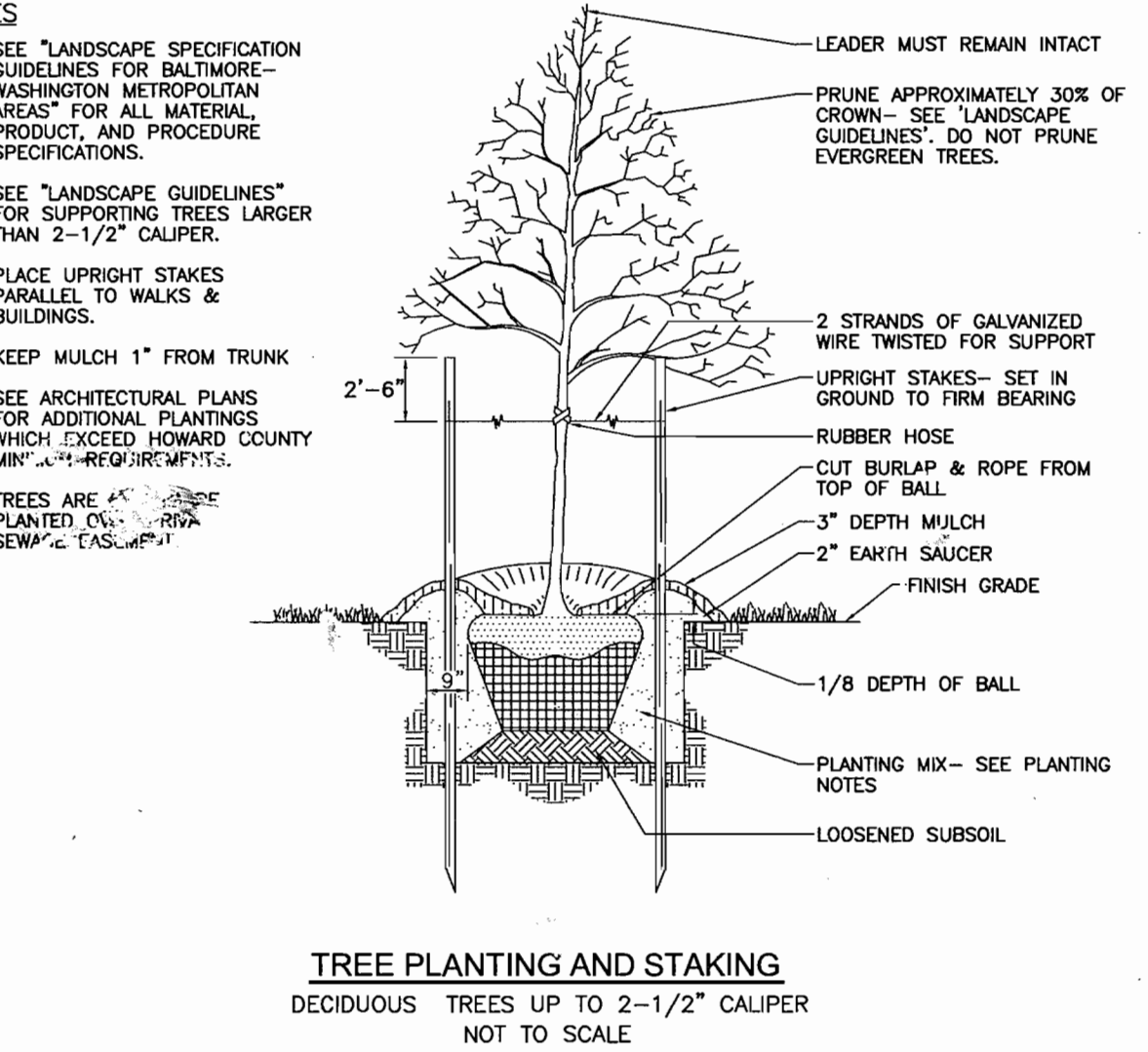
- FOREST PROTECTION DEVICE ONLY.
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- ROOF DAMAGE SHOULD BE AVOIDED.
- PROTECTION SIGNAGE SHOULD BE USED.
- DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

OWNER/DEVELOPER
ELICOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR STE 102
ELICOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: [Signature] 10/31/06
Chief, Development Engineering Division: [Signature] 10/25/06
Director: [Signature] 10/30/06

25' AND LESS MATURE GROWTH HEIGHT TREES FOR BGE WIREZONE



NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
OAKHURST II
TOWNHOUSE UNITS 1-45

FOREST CONSERVATION PLAN

TAX MAP 42 BLOCK 17
6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
EX. PARCEL 711 & 713
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RJR/RHV
DRAWN BY: RJ/CMM
CHECKED BY: RHV
DATE: AUGUST, 2006
SCALE: AS SHOWN
W.O. NO.: 04-99.00

18 SHEET OF 18

SDP-05-151

REFORESTATION PLANTING NOTES

- REFORESTATION AREAS MAY BE PLANTED AS SOON AS REASONABLE TO DO SO - LATE WINTER-EARLY SPRING PLANTINGS ARE PREFERRED. EARLIEST PLANTING DATES WILL VARY FROM YEAR TO YEAR BUT PLANTING MAY GENERALLY BEGIN AS SOON AS THE GROUND IS NO LONGER FROZEN. ALTERNATE PLANTING DATES MAY BE CONSIDERED AS CONDITION WARRANTS.
- SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND pH. IF REQUIRED, FERTILIZER WILL BE PROVIDED USING A SLOW RELEASE, SOLUBLE 16-16-16 ANALYSIS DESIGNED TO LAST 5-8 YEARS CONTAINED IN POLYETHYLENE PERFORATED BAGS SUCH AS MANUFACTURED BY ACCO WORKS, P.O. BOX 310 HOLLIS, N.Y. 11423 OR APPROVED EQUAL.
- PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
- PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, FORM, VIGOR, OR ROOTS, OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE MUST BE REPLACED.
- PLANTING STOCK MUST BE PROTECTED FROM DESICCATION AT ALL TIMES PRIOR TO PLANTING. MATERIALS HELD FOR PLANTING SHALL BE MOISTENED AND PLACED IN COOL SHADED AREAS UNTIL READY FOR PLACEMENT.
- NEWLY PLANTED TREES MAY REQUIRE WATERING AS LEAST ONCE PER WEEK DURING THE FIRST GROWING SEASON DEPENDING ON RAINFALL IN ORDER TO GET ESTABLISHED. THE INITIAL PLANTING OPERATION SHOULD ALLOW FOR WATERING DURING INSTALLATION TO COMPLETELY SOAK BASKET/MATERIAL.
- MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDDED HARDWOOD BARK MULCH, FREE OF WOOD ALCOHOL.
- ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONTAINING BIRDFIX, SUCH AS REPELLEX. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPELLEX TABLETS.

REFORESTATION AREA MONITORING NOTES

- MONTHLY VISITS DURING THE FIRST GROWING SEASON ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING, PEST CONTROL OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DOCUMENT WINTER KILL AND AUTUMN VISITS WILL DOCUMENT SUMMER KILL.
- THE MINIMUM SURVIVAL RATE SHALL BE 75% OF THE TOTAL NUMBER OF TREES PLANTED PER ACRE AT THE END OF THE TWO YEAR MAINTENANCE PERIOD. WILD TREE SEEDLINGS FROM NATURAL REGENERATION ON THE PLANTING SITE MAY BE COUNTED UP TO 50% TOWARD THE TOTAL SURVIVAL NUMBER IF THE ARE HEALTHY NATIVE SPECIES AT LEAST 12 INCHES TALL.
- SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE PLANTINGS. THE SPECIES COMPOSITION OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.
- EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVABILITY DURING THE FIRST GROWING SEASON AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

FOREST RETENTION AREAS AND NOTES

- FORESTED STREAM AND WETLAND BUFFERS ARE RETAINED IN OPEN SPACE LOTS.
- NO RAKE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
- FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
- THERE ARE NO ISOLATED FOREST STANDS ON THIS SITE.
- CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES. RETAIN SEDIMENT WITHIN CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE FOREST CONSERVATION EASEMENT ARE ALLOWED.

FOREST PROTECTION NOTES

- PRE-CONSTRUCTION ACTIVITIES**
- FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
 - FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
 - A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

- CONSTRUCTION PHASE**
- NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
 - NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANNIES.
 - IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

- POST-CONSTRUCTION ACTIVITIES**
- AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
 - SPACE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
 - DO NOT REMOVE SIGNS.

COST ESTIMATE: (For bonding purposes, only)
RETENTION - (0.77 AC.) 33,541.20 SF x .20 = \$6,708.24
REFORESTATION - (0.33 AC.) 14,374.80 SF x .50 = \$7,187.00

SURETY NOTE
FINANCIAL SURETY IN THE AMOUNT OF \$13,895.24 WILL BE POSTED WITH THE FC MAINTENANCE AGREEMENT.
FEE-IN-LIEU FOR THE (0.48 AC.) 20,908.80 SF x 0.50 = \$10,454.40

SEQUENCE OF CONTRACTION-FOREST CONSERVATION

- PRE-CONSTRUCTION MEETING / SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO REVIEW THE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- INSTALL TREE PROTECTION FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
- PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
- TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
 PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.
PURPOSE
 TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES
 I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 C. THE ORIGINAL SOIL TO BE TREATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS REQUIRED.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLAN.

CONSTRUCTION AND MATERIAL SPECIFICATIONS
 I. TOPSOIL OBTAINED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE THICKNESS OF TOPSOIL TO BE SALVAGED FOR A GIVEN SLOPE TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A Mixture OF COMPACTED, TIGHTENED, SUBSOLIDS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CHALK, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 AND 1/2" IN DIAMETER.

II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTCRACK, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

III. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONNECTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES:

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

II. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 I. ON SOIL HAVING DISTURBED AREAS OVER 5 ACRES, OBTAIN TEST RESULTS FROM FERTILIZER AND LIME ANALYSIS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 A. PH FOR PERIODS MARCH 15 THROUGH APRIL 30 AND JULY 15 THROUGH SEPTEMBER 30 SHALL BE BETWEEN 6.0 AND 7.5.
 B. SUPPLEMENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 C. ORGANIC MATTER OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 D. ORGANIC MATTER OF SUBSOIL SHALL NOT BE LESS THAN 5.0 PERCENT BY WEIGHT.
 E. SOIL SHOULD BE SALT CONTENT OF LESS THAN 200 PPM TREATED WITH SOIL FERTILIZERS OR CHEMICALS USED FOR WEED CONTROL AFTER APPLICATION USING MULCH ANCHORING TOOLS OR 218 GALLONS PER ACRE (10 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT (14 DAYS MIN.) TO PERMIT DISPERSION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL, SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

III. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION-SECTION I-VEGETATIVE STABILIZATION METHODS AND MATERIALS.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (013-1655).
 2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1 (5) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, 500 TEMPORARY SEEDING, AND MULCHING (SEE G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING LATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 7. SITE ANALYSIS:

AREA DISTURBED: 4.52 AC.
 AREA TO BE ROOFED OR PAVED: 1.50 AC.
 AREA TO BE VEGETATIVELY STABILIZED: 11.25 AC.
 TOTAL CUT: 11.25 AC.
 TOTAL FILL: 11.25 AC.
 OFFSITE WASTE/DRAINAGE AREA LOCATION: *

PERMANENT SEEDING NOTES
 APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LEIVED VEGETATIVE COVER IS NEEDED.
 SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
 1) PREPARED-APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING. APPLY 400 LBS. PER ACRE 10-4 UNIFORM FERTILIZER (8 LBS./1000 SQ.FT.)
 2) ACCEPTABLE-APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS./1000 SQ.FT.) AND APPLY 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND AUGUST 1 THRU OCTOBER 15, SEED WITH 90 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR PERIOD MAY 1 THRU JULY 31, SEED WITH 90 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF WEEDING LOVEGRASS. DURING THE PERIOD OF COVER TO 100% FEBRUARY 20, PROTECT SITE BY APPLYING 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. USE 500 LBS. PER ACRE (0.7 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.
 MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNWEEDING SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOLS OR 218 GALLONS PER ACRE (10 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (9 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

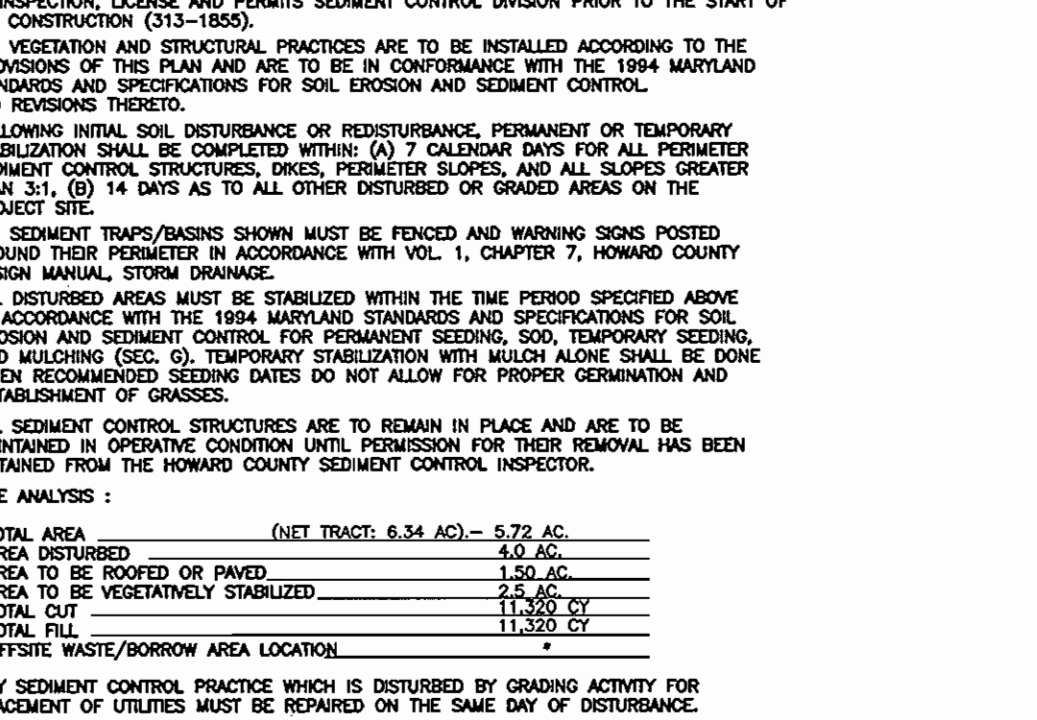
TEMPORARY SEEDING NOTES
 SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)
 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BU/ACR. PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEDING LOVEGRASS (0.7 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 20, PROTECT SITE BY APPLYING 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. USE 500 LBS. PER ACRE (0.7 LBS./1000 SQ.FT.) FOR ANCHORING.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNWEEDING SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOLS OR 218 GALLONS PER ACRE (10 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (9 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

USE 1 WATER: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.

10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
 11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACES SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPROVE WATER.



BAFFLE DETAIL SEDIMENT BASIN NO. 1
 NOT TO SCALE

SEQUENCE OF CONSTRUCTION

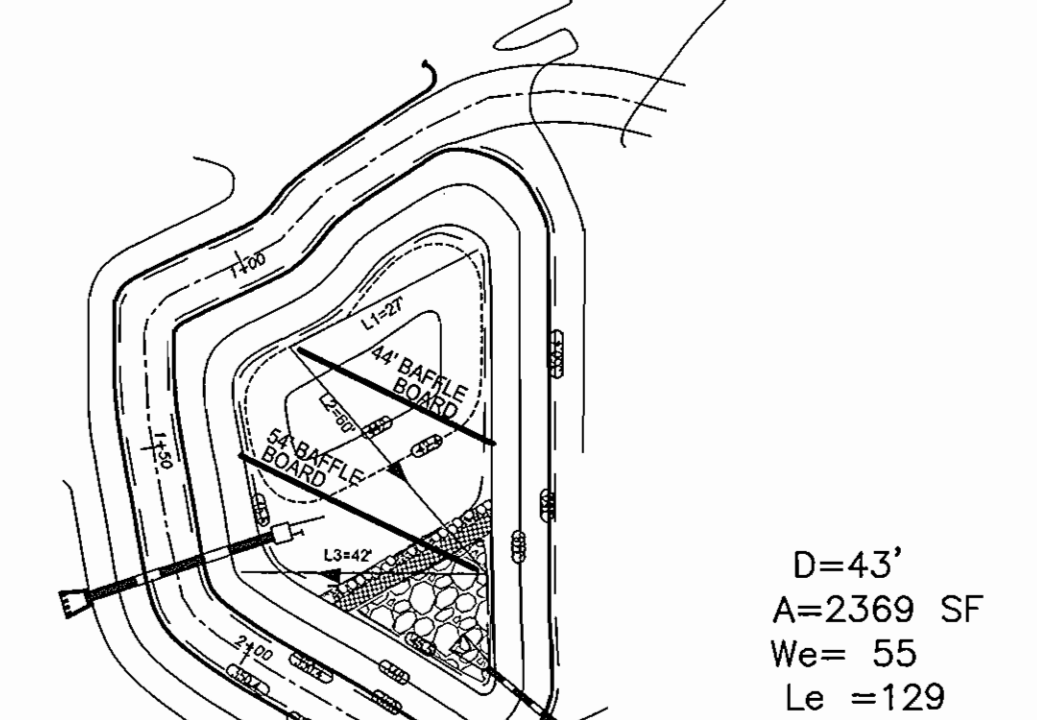
- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (013-1650) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL SILT FENCE, STRAW SILT FENCE AND CLEAN WATER DIPS.
- WITH INSPECTOR'S APPROVAL, INSTALL STREAM DIVERSION MEASURES AND SILT FENCES, BARRIERS, CURBS AND INSTALL AND FULLY STABILIZE ALL CULVERTS.
- WITH INSPECTOR'S APPROVAL, TRACKING NUMBERS=NT-0172(2006S3001) STREAM CLOSURE CLASS 3E, NO WORK BETWEEN 03/01 AND 06/15.
- WITH ALL POND PRINCIPAL SPILLWAY MATERIAL ON SITE AND PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES (SEDIMENT BASINS) AND CONSTRUCT SEDIMENT CONTROL DEMAINTERING DEVICES.
- ONCE SEDIMENT BASINS ARE CONSTRUCTED, INSTALL EXHIBITORS.
- WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING.
- WITH GRADING IN PROCESS MAINTAIN FLOW TO BASINS AND BEGIN GRADING OF ROADS.
- GRADE REMAINING ROADS TO SUB-BASE AS SITE IS GRADED. INSTALL STORM DRAIN SYSTEMS, WATER AND SEWER AS ROADS ARE GRADED TO SUB-BASE.
- BEGIN PAVING ROADS AND INSTALL SIDEWALKS.
- WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE, BEGIN INSTALLATION OF CURBS AND GUTTERS. INSPECTOR'S APPROVAL, CONVERT SEDIMENT BASIN #3 TO FINAL GRADING.
- STABILIZE ALL DISTURBED AREAS IMMEDIATELY AND WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE AND REMOVE ALL JUNK TRASH AND DEBRIS (OLD AND NEW) FROM BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS.
- AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'A', SEE SHEET 14 OF 18, FOR SCHEDULE TABLES.
- WITH INSPECTOR'S APPROVAL AND ROAD PAVING, SIDEWALKS, ALL SFA UNITS COMPLETE AND CONTRIBUTING DRAINAGE AREAS STABILIZED, CONVERT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT BY REMOVING DEMAINTERING DEVICE FROM POND 1 AND INSTALL 8" POND DRAIN CONVERT DEMAINTERING DEVICE IN POND 1 TO A PERMANENT POCKET POND PER DETAILS.

DURATION

2 WEEKS	WITH INSPECTOR'S APPROVAL, TRACKING NUMBERS=NT-0172(2006S3001) STREAM CLOSURE CLASS 3E, NO WORK BETWEEN 03/01 AND 06/15.
2 WEEKS	WITH ALL POND PRINCIPAL SPILLWAY MATERIAL ON SITE AND PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES (SEDIMENT BASINS) AND CONSTRUCT SEDIMENT CONTROL DEMAINTERING DEVICES.
2 DAYS	ONCE SEDIMENT BASINS ARE CONSTRUCTED, INSTALL EXHIBITORS.
1 WEEK	WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING.
3 WEEKS	WITH GRADING IN PROCESS MAINTAIN FLOW TO BASINS AND BEGIN GRADING OF ROADS.
3 WEEKS	GRADE REMAINING ROADS TO SUB-BASE AS SITE IS GRADED. INSTALL STORM DRAIN SYSTEMS, WATER AND SEWER AS ROADS ARE GRADED TO SUB-BASE.
2 WEEKS	BEGIN PAVING ROADS AND INSTALL SIDEWALKS.
2 WEEKS	WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE, BEGIN INSTALLATION OF CURBS AND GUTTERS. INSPECTOR'S APPROVAL, CONVERT SEDIMENT BASIN #3 TO FINAL GRADING.
1 WEEK	STABILIZE ALL DISTURBED AREAS IMMEDIATELY AND WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE AND REMOVE ALL JUNK TRASH AND DEBRIS (OLD AND NEW) FROM BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS.
1 WEEK	AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'A', SEE SHEET 14 OF 18, FOR SCHEDULE TABLES.
2 WEEKS	WITH INSPECTOR'S APPROVAL AND ROAD PAVING, SIDEWALKS, ALL SFA UNITS COMPLETE AND CONTRIBUTING DRAINAGE AREAS STABILIZED, CONVERT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT BY REMOVING DEMAINTERING DEVICE FROM POND 1 AND INSTALL 8" POND DRAIN CONVERT DEMAINTERING DEVICE IN POND 1 TO A PERMANENT POCKET POND PER DETAILS.

NOTES:
 DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREIN.
 FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLIED WITH:

- A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES SLOPES AND ALL SLOPES GREATER THAN 3:1.
- 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.



BAFFLE DETAIL SEDIMENT BASIN NO. 1
 NOT TO SCALE

SEQUENCE OF CONSTRUCTION

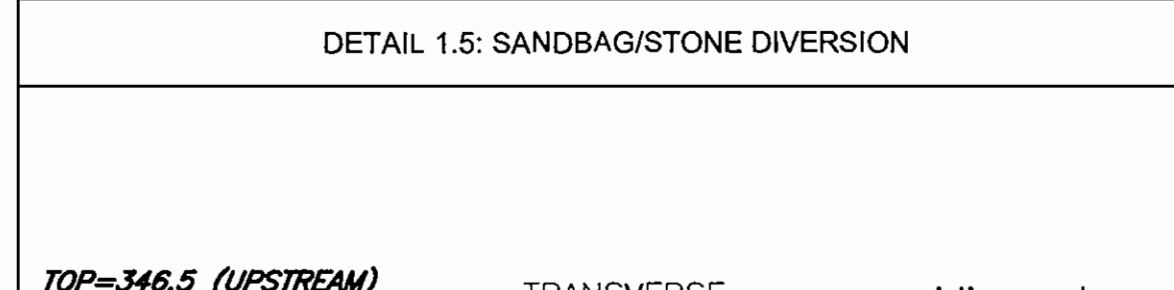
- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (013-1650) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL SILT FENCE, STRAW SILT FENCE AND CLEAN WATER DIPS.
- WITH INSPECTOR'S APPROVAL, INSTALL STREAM DIVERSION MEASURES AND SILT FENCES, BARRIERS, CURBS AND INSTALL AND FULLY STABILIZE ALL CULVERTS.
- WITH INSPECTOR'S APPROVAL, TRACKING NUMBERS=NT-0172(2006S3001) STREAM CLOSURE CLASS 3E, NO WORK BETWEEN 03/01 AND 06/15.
- WITH ALL POND PRINCIPAL SPILLWAY MATERIAL ON SITE AND PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES (SEDIMENT BASINS) AND CONSTRUCT SEDIMENT CONTROL DEMAINTERING DEVICES.
- ONCE SEDIMENT BASINS ARE CONSTRUCTED, INSTALL EXHIBITORS.
- WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING.
- WITH GRADING IN PROCESS MAINTAIN FLOW TO BASINS AND BEGIN GRADING OF ROADS.
- GRADE REMAINING ROADS TO SUB-BASE AS SITE IS GRADED. INSTALL STORM DRAIN SYSTEMS, WATER AND SEWER AS ROADS ARE GRADED TO SUB-BASE.
- BEGIN PAVING ROADS AND INSTALL SIDEWALKS.
- WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE, BEGIN INSTALLATION OF CURBS AND GUTTERS. INSPECTOR'S APPROVAL, CONVERT SEDIMENT BASIN #3 TO FINAL GRADING.
- STABILIZE ALL DISTURBED AREAS IMMEDIATELY AND WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE AND REMOVE ALL JUNK TRASH AND DEBRIS (OLD AND NEW) FROM BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS.
- AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'A', SEE SHEET 14 OF 18, FOR SCHEDULE TABLES.
- WITH INSPECTOR'S APPROVAL AND ROAD PAVING, SIDEWALKS, ALL SFA UNITS COMPLETE AND CONTRIBUTING DRAINAGE AREAS STABILIZED, CONVERT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT BY REMOVING DEMAINTERING DEVICE FROM POND 1 AND INSTALL 8" POND DRAIN CONVERT DEMAINTERING DEVICE IN POND 1 TO A PERMANENT POCKET POND PER DETAILS.

DURATION

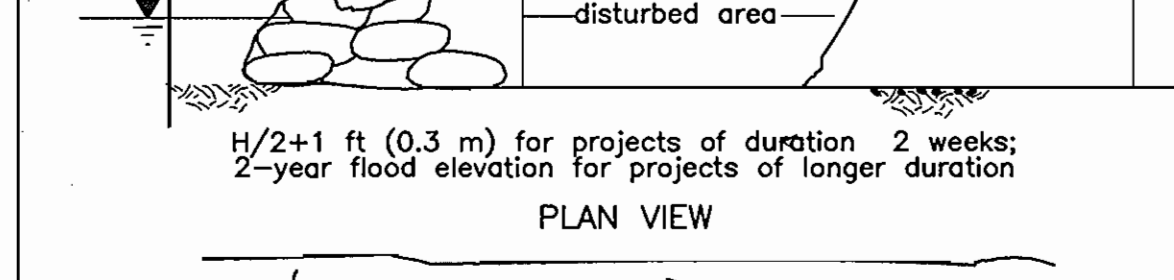
2 WEEKS	WITH INSPECTOR'S APPROVAL, TRACKING NUMBERS=NT-0172(2006S3001) STREAM CLOSURE CLASS 3E, NO WORK BETWEEN 03/01 AND 06/15.
2 WEEKS	WITH ALL POND PRINCIPAL SPILLWAY MATERIAL ON SITE AND PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES (SEDIMENT BASINS) AND CONSTRUCT SEDIMENT CONTROL DEMAINTERING DEVICES.
2 DAYS	ONCE SEDIMENT BASINS ARE CONSTRUCTED, INSTALL EXHIBITORS.
1 WEEK	WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING.
3 WEEKS	WITH GRADING IN PROCESS MAINTAIN FLOW TO BASINS AND BEGIN GRADING OF ROADS.
3 WEEKS	GRADE REMAINING ROADS TO SUB-BASE AS SITE IS GRADED. INSTALL STORM DRAIN SYSTEMS, WATER AND SEWER AS ROADS ARE GRADED TO SUB-BASE.
2 WEEKS	BEGIN PAVING ROADS AND INSTALL SIDEWALKS.
2 WEEKS	WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE, BEGIN INSTALLATION OF CURBS AND GUTTERS. INSPECTOR'S APPROVAL, CONVERT SEDIMENT BASIN #3 TO FINAL GRADING.
1 WEEK	STABILIZE ALL DISTURBED AREAS IMMEDIATELY AND WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE AND REMOVE ALL JUNK TRASH AND DEBRIS (OLD AND NEW) FROM BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS.
1 WEEK	AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'A', SEE SHEET 14 OF 18, FOR SCHEDULE TABLES.
2 WEEKS	WITH INSPECTOR'S APPROVAL AND ROAD PAVING, SIDEWALKS, ALL SFA UNITS COMPLETE AND CONTRIBUTING DRAINAGE AREAS STABILIZED, CONVERT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT BY REMOVING DEMAINTERING DEVICE FROM POND 1 AND INSTALL 8" POND DRAIN CONVERT DEMAINTERING DEVICE IN POND 1 TO A PERMANENT POCKET POND PER DETAILS.

NOTES:
 DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREIN.
 FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLIED WITH:

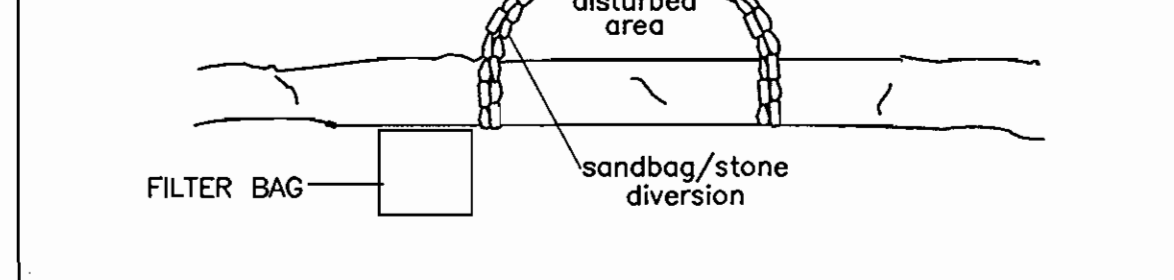
- A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES SLOPES AND ALL SLOPES GREATER THAN 3:1.
- 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.



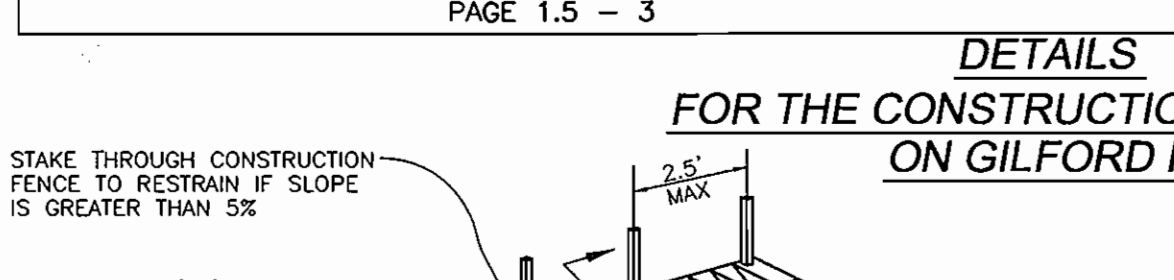
DETAIL 1.5: SANDBAG/STONE DIVERSION



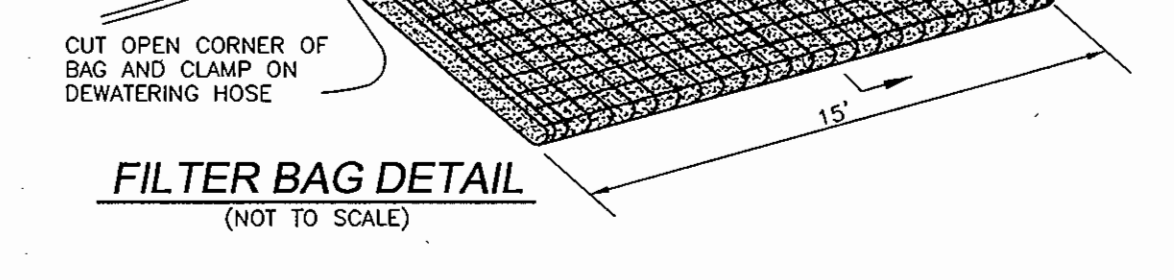
DETAIL 1.4: DIVERSION PIPE



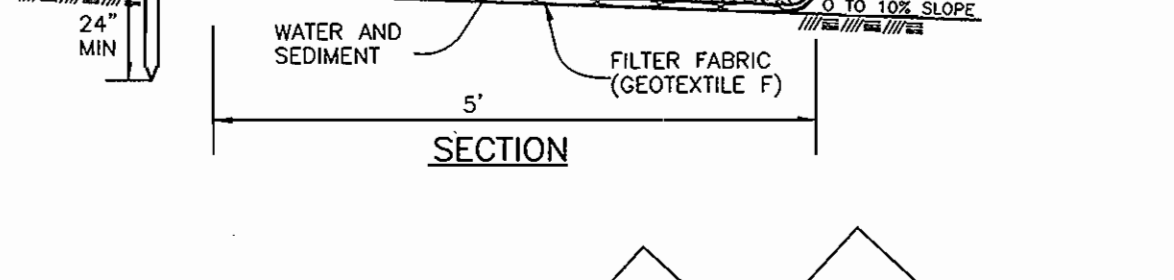
DETAIL 2 - TEMPORARY SWALE



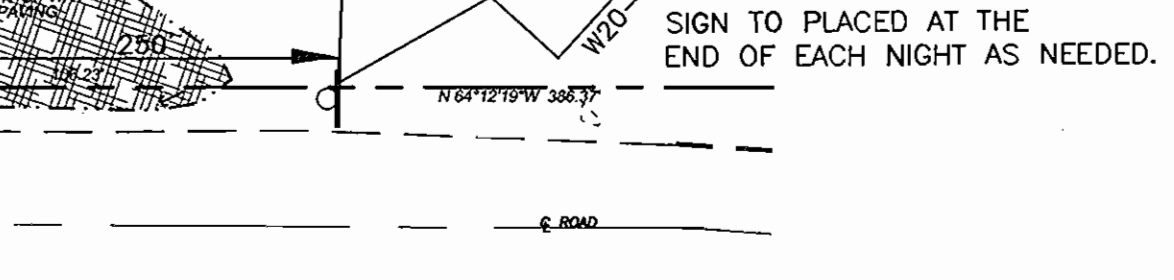
FILTER BAG DETAIL
 (NOT TO SCALE)



TRAFFIC CONTROL PLAN



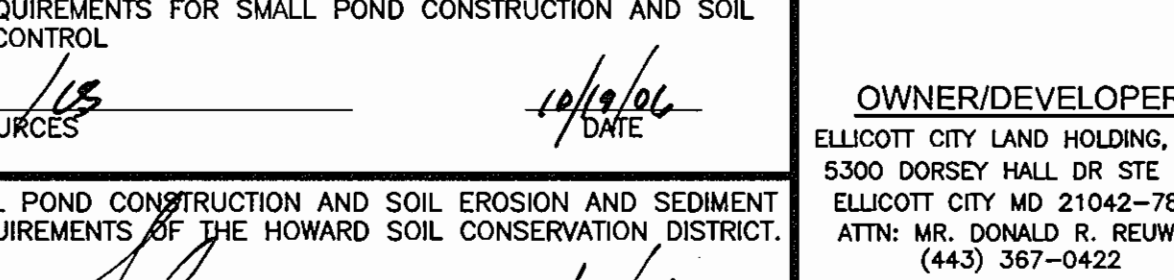
SECTION



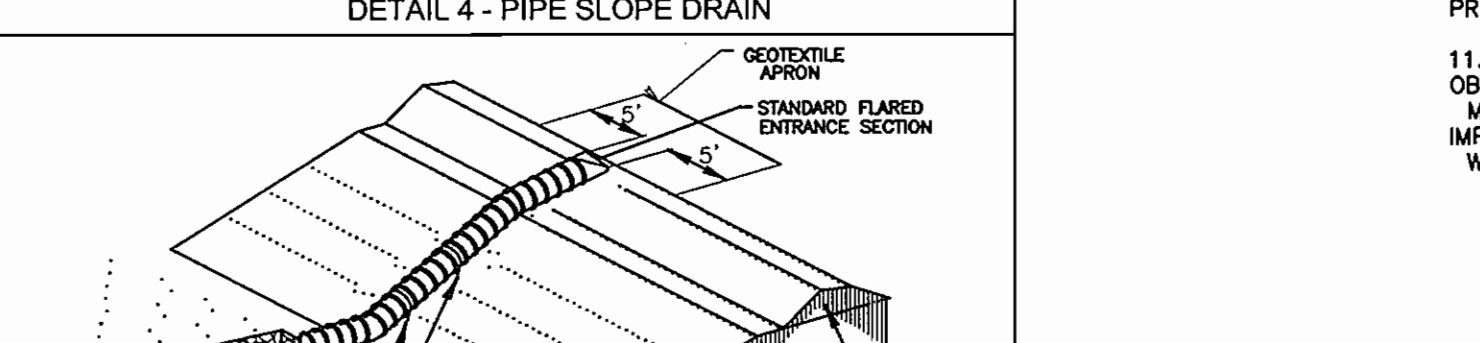
PLAN VIEW



PLAN VIEW



PLAN VIEW



DETAIL 4 - PIPE SLOPE DRAIN

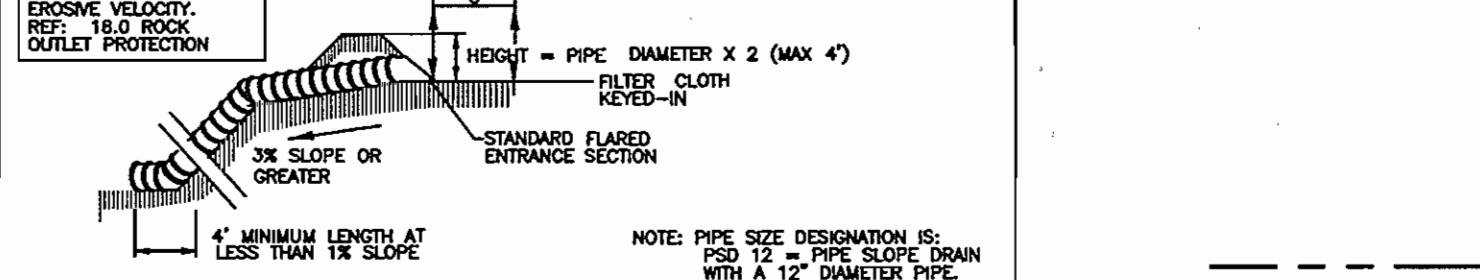


Table 6 Design Criteria for Pipe Slope Drain

U.S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT
 WATER MANAGEMENT ADMINISTRATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development

Chief, Development Engineering Division

Director

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF DEVELOPER
 DATE: 7/6/06

ENGINEER'S CERTIFICATE

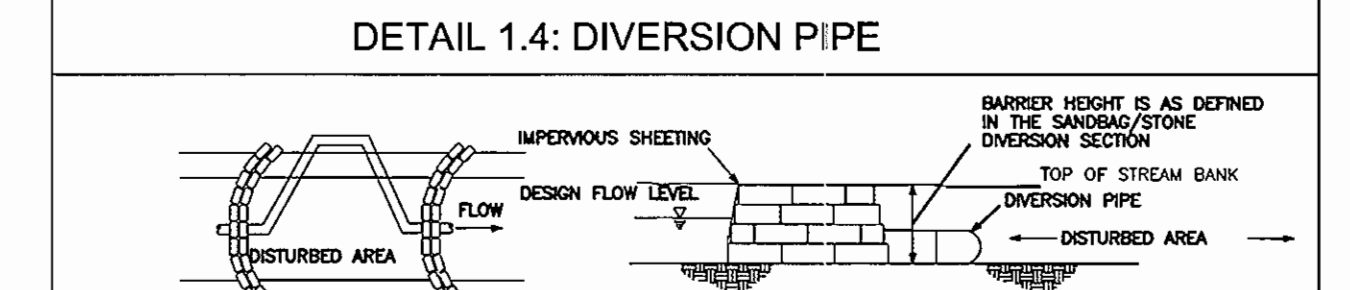
I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION AND SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED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

SIGNATURE OF ENGINEER
 DATE: 7/19/06

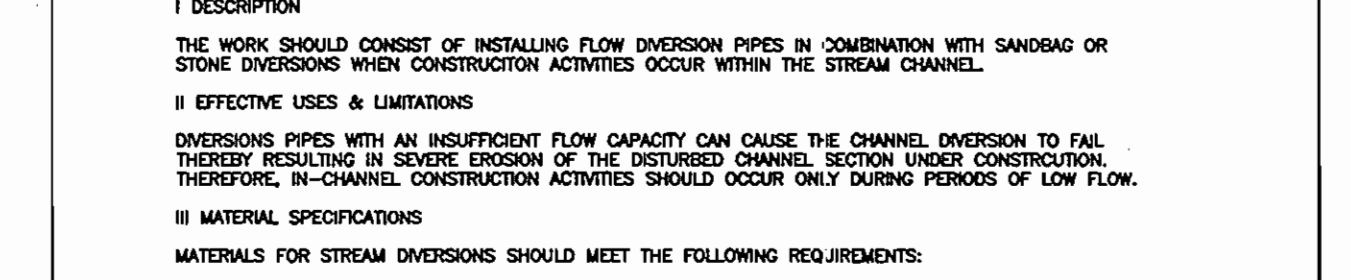
THESE PLANS HAVE BEEN REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION AND SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE
 DATE: 7/19/06

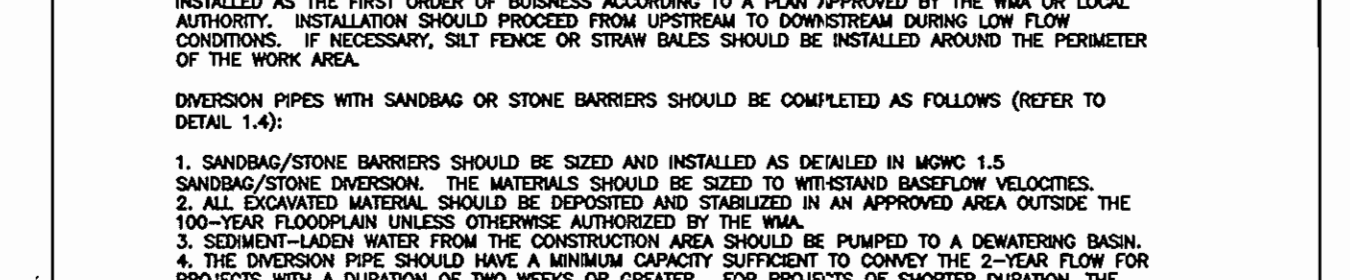
HOWARD COUNTY SOIL CONSERVATION DISTRICT



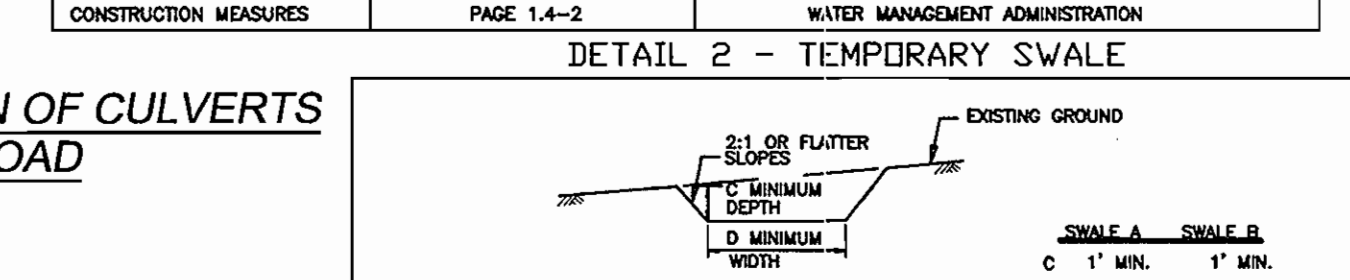
PLAN VIEW



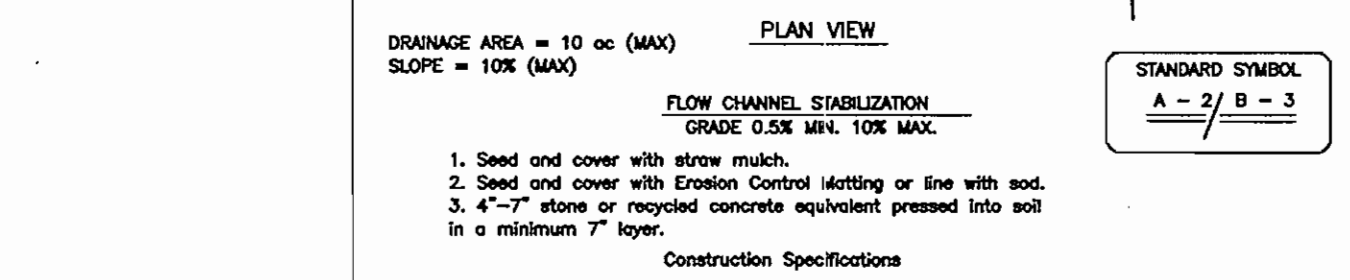
PLAN VIEW



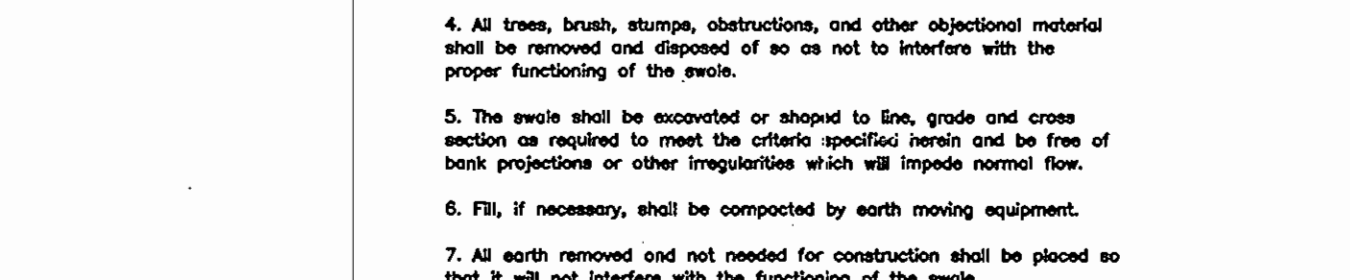
PLAN VIEW



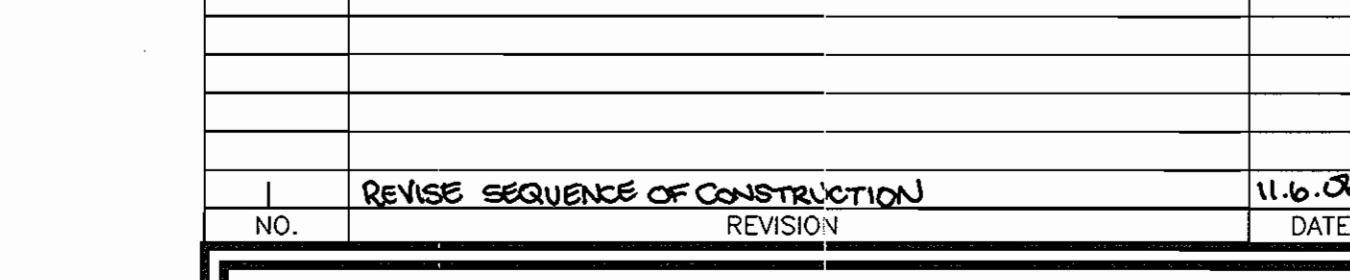
PLAN VIEW



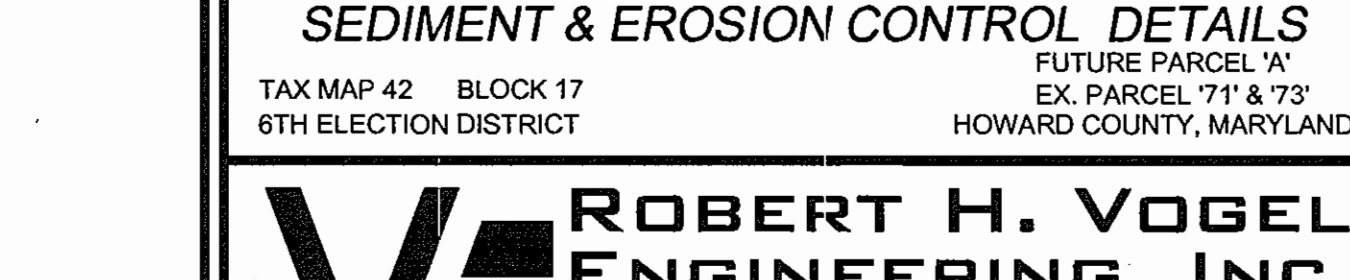
PLAN VIEW



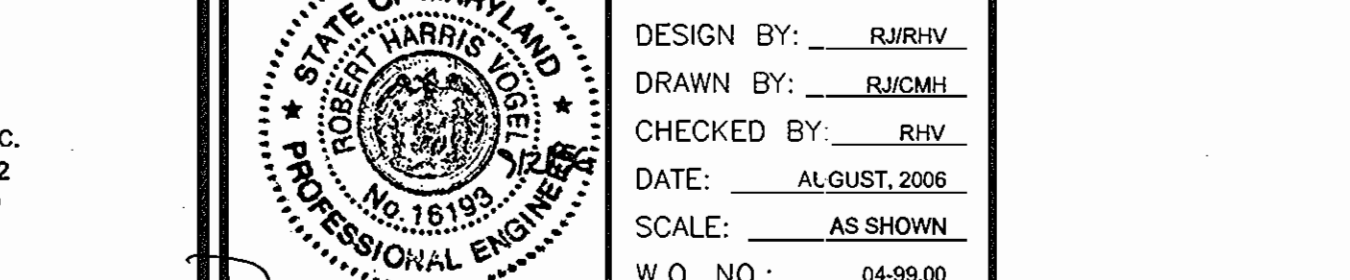
PLAN VIEW



PLAN VIEW



PLAN VIEW



PLAN VIEW

SITE DEVELOPMENT PLAN OAKHURST II TOWNHOUSE UNITS 1-45

SEDIMENT & EROSION CONTROL DETAILS
 TAX MAP 42 BLOCK 17
 6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS - SURVEYORS - PLANNERS
 8487 MAIN STREET
 ELLICOTT CITY, MD 21043

DESIGN BY: RHR/HV
 DRAWN BY: RUC/CMH
 CHECKED BY: RHV
 DATE: ALGUST, 2006
 SCALE: AS SHOWN
 W.O. NO.: 04-99.00

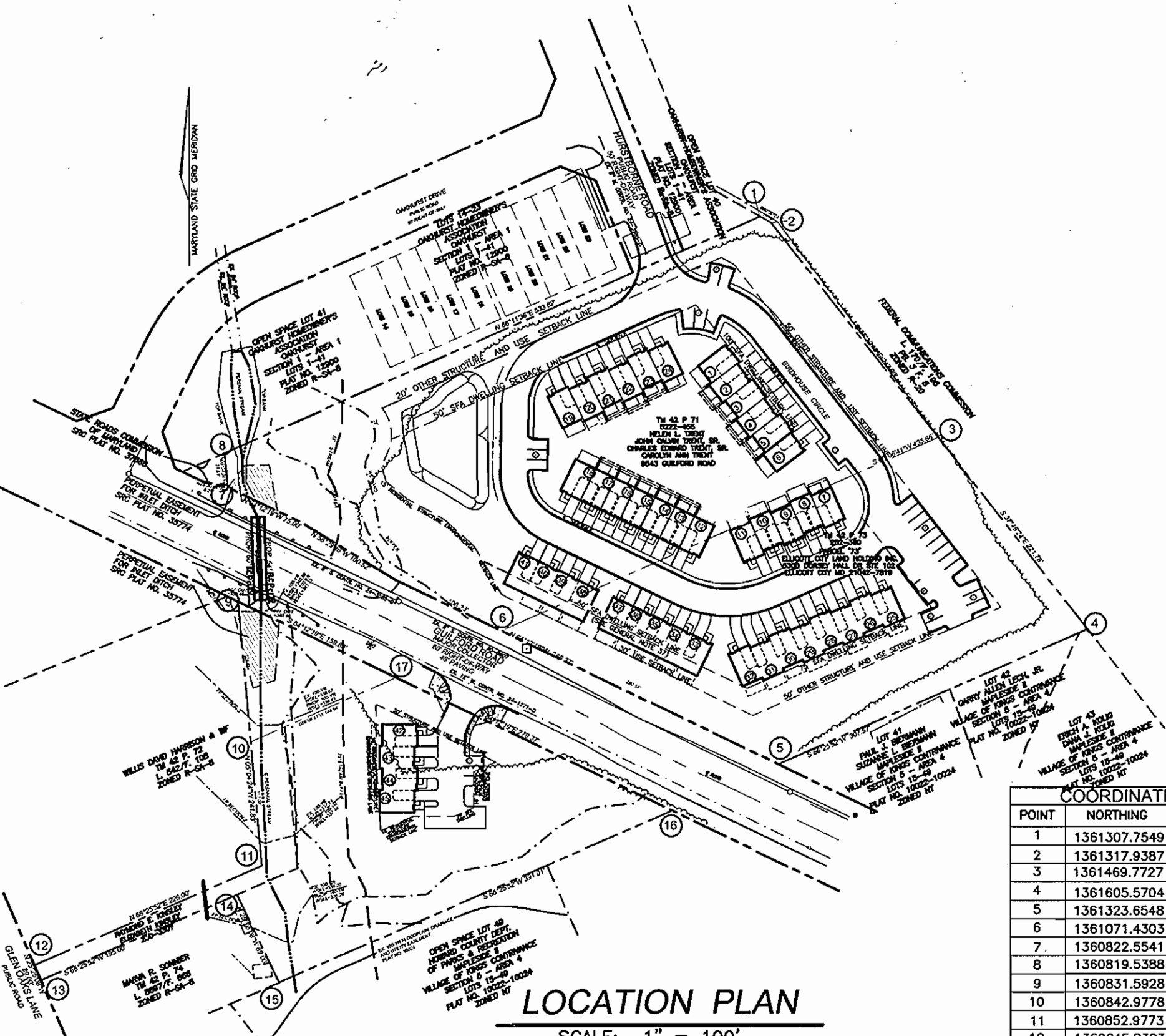
9 SHEET OF 18
 SDP-05-151

GENERAL NOTES

- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 - MISS UTILITY 1-800-257-7777
 - VERIZON TELEPHONE 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 - AT&T CABLE LOCATION DIVISION: 393-3553
 - B.G.&E. CO. CONTRACTOR SERVICES: 850-4620
 - B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
 - STATE HIGHWAY ADMINISTRATION: 531-5533
- PROJECT BACKGROUND:
 - LOCATION: TAX MAP 42, PARCEL 71 7& 73, GRID 17
 - ZONING: R-SA-8
 - DEED REFERENCE: 542/0108 5222/455
 - DPZ REFERENCES: WP-06-20 AND F-06-087, AA-06-15
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- 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 FIVE (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.
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PREPARED BY ROBERT H. VOGEL, INC. DATED OCTOBER 2004.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL, DATED OCTOBER 2004.
- COORDINATE DATUM IS BASED ON THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS: 42E3 & 42E4
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC AND PROVIDED THROUGH 12" W-CONT.#24-1271-D, 8" S-CONT.#20-0907.
- STORMWATER MANAGEMENT IS PROVIDED FOR THIS DEVELOPMENT. THE STORMWATER MANAGEMENT FACILITY IS P-5 POCKET POND PROVIDING THE REQUIRED W_Q AND C_{PV} FOR THE DEVELOPMENT. THE FACILITY IS HAZARD CLASS "A".
- STORMWATER MANAGEMENT SOIL BORINGS FOR THIS SITE ARE BASED ON A GEOTECHNICAL ANALYSIS PREPARED BY HILLS-CARNES ENGINEERING ASSOC, DATED OCTOBER, 2004.
- WETLANDS AND STREAMS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION BY ECO-SCIENCE, DATED OCTOBER 2005.
- FLOODPLAIN SHOWN ON-SITE IS BASED ON A STUDY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED APRIL 2005.
- A FOREST STAND DELINEATION PLAN WAS PREPARED FOR THIS SITE BY ECO-SCIENCE PROFESSIONALS, INC. DATED MAY 2005.
- FOREST CONSERVATION PLAN PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JANUARY 2002. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.132 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL. OBLIGATION FOR THIS PROJECT IS 1.58 AC. THE OBLIGATION WILL BE FULFILLED BY THE RETENTION OF EXISTING FOREST IN THE AMOUNT OF 0.77 ACRES, ON-SITE REFORESTATION IN THE AMOUNT OF 0.33 AC. AND FEE-IN-LIEU FOR THE REMAINING 0.48 AC. BOND FOR THE REQ. 1.10 AC. HAS BEEN PAID IN THE AMOUNT OF \$13,095.24 (RETENTION = (0.77 AC.) 33,541.20 SF x .20 = \$6,708.24) (REFORESTATION = (0.33 AC.) 14,374.80 SF x .50 = \$7,187.40) (FEE-IN-LIEU FOR THE (0.48 AC.) 20,908.80 SF x 0.50 = \$10,454.40) SEE FINAL PLAN F-06-087 FOR FOREST CONSERVATION EASEMENTS BOUNDARY RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR BUFFERS, THE FOREST CONSERVATION EASEMENTS AND 100 YR FLOOD PLAIN AREA.
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED APRIL 14, 2005.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT LANDSCAPE SURETY IN THE AMOUNT OF \$49,650.00 FOR THE REQUIRED 137 SHADE TREES (\$41,100) AND 57 EVERGREEN TREES (\$8,550)
- TREE PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO FOREST CONSERVATION RETENTION AREAS AND SENSITIVE ENVIRONMENTAL AREAS, SUCH AS STREAM BUFFERS AND STEEP SLOPES.
- STREET LIGHTING HAS BEEN PROVIDED FOR THE PUBLIC ROAD IN ACCORDANCE WITH SECTION 16.135 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE DESIGN MANUAL. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- SEDIMENT AND EROSION CONTROL HAS BEEN PROVIDED FOR THIS SITE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETARY LOCATIONS ON SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- OPEN SPACE TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
- REFUSE COLLECTION FOR THIS SITE WILL BE PRIVATE. THERE WILL BE NO COMMUNITY TRASH DUMPSTER FOR THIS PROJECT.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A. WIDTH - 12' (14' FOR SERVING MORE THAN ONE RESIDENCE)
 - B. SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN)
 - C. GEOMETRY - MAX 15% GRADE, MAX 10% GRADE CHANGE, AND MIN 45' TURNING RADIUS
 - D. STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
 - E. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT OF DEPTH OVER DRIVEWAY SURFACE
 - F. MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- GARAGES SHALL BE USED FOR PARKING PURPOSES ONLY AND ARE NOT PERMITTED TO BE CONVERTED TO OTHER USES PER THE HOWARD COUNTY ZONING REGULATIONS, UNLESS THE 2 OFF-STREET PARKING SPACES ARE PROVIDED WITHIN THE RESIDENTIAL UNIT DRIVEWAY.
 - A. SUPPLEMENTARY BULK REGULATIONS
 - THE FOLLOWING SUPPLEMENTARY REGULATIONS SHALL APPLY IN ADDITION TO THE REQUIREMENTS OF THE APPLICABLE ZONING DISTRICT.
 - EXCEPTIONS TO SETBACK REQUIREMENTS
 - a. IN ALL DISTRICTS EXCEPT THE NT DISTRICT, CORNICES, EAVES AND CANTILEVERED BUILDING FEATURES MAY PROJECT NOT MORE THAN THREE FEET INTO ANY REQUIRED SETBACK AREA.
 - b. IN ALL DISTRICTS EXCEPT THE NT DISTRICT, THE FOLLOWING BUILDING FEATURES, IF NOT MORE THAN 16 FEET IN WIDTH, MAY PROJECT NOT MORE THAN FOUR FEET INTO ANY REQUIRED SETBACK AREA OR REQUIRED DISTANCE BETWEEN BUILDINGS: BAY WINDOWS AND WINDOW WELLS; DRILLS; VESTIBULES BALCONIES; CHIMNEYS; HEATING OR AIR CONDITIONING UNITS; AND EXTERIOR STAIRWAYS OR RAMPS, WHETHER ABOVE OR BELOW GROUND LEVEL.
 - c. IN ALL RESIDENTIAL DISTRICTS (BUT NOT IN THE NT DISTRICT), OPEN OR ENCLOSED PORCHES AND DECKS MAY PROJECT NOT MORE THAN 10 FEET INTO ANY REQUIRED FRONT OR REAR SETBACK AREA OR INTO A REQUIRED SETBACK FROM A PROJECT BOUNDARY OR DIFFERENT ZONING DISTRICT. EXTERIOR STAIRWAYS OR RAMPS, ABOVE OR BELOW GROUND LEVEL, MAY EXTEND NOT MORE THAN 10 FEET INTO A FRONT SETBACK AREA OR A SETBACK FROM A PROJECT BOUNDARY OR DIFFERENT ZONING DISTRICT, AND NOT MORE THAN 16 FEET INTO A REAR SETBACK AREA.
 - EXCEPTIONS TO LOT COVERAGE REQUIREMENTS
 - IN RESIDENTIAL DISTRICTS AND RESIDENTIAL LAND USE AREAS OF THE PGCC AND MXD DISTRICTS, BUT NOT IN THE NT DISTRICT, OPEN DECKS (DECKS WITHOUT ROOF OR WALLS) SHALL NOT BE CONSIDERED STRUCTURES FOR LOT COVERAGE PURPOSES WHEN CONSTRUCTED INTO A SINGLE-FAMILY ATTACHED DWELLING.
- THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO 45-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO 75-2003, DEVELOPMENT OR CONSTRUCTION MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- THIS PLAN IS SUBJECT TO AN APPROVAL OF JOINT FEDERAL/ STATE APPLICATION FOR THE ALTERATION OF ANY FLOOD PLAN, WATERWAY, TIDAL OR NON TIDAL WETLAND IN MARYLAND BY THE NON TIDAL WETLANDS AND WATERWAYS DIVISION OF THE WATER MANAGEMENT ADMINISTRATION (WMA). APPLICATION TRACKING NUMBER :05-NT-0172/200563801.
- THIS PLAN IS SUBJECT TO THE APPROVAL OF WAIVER PETITION, WP-06-20 APPROVED ON JUNE 22, 2006. FOR THE FOLLOWING WAIVERS:
 - SECTION 16.134(c)(1) WHICH REQUIRES THE CONSTRUCTION OF SIDEWALKS ON BOTH SIDES OF ALL STREET WITHIN A MULTI-FAMILY RESIDENTIAL DEVELOPMENT PROJECT, AND FROM SECTION 16.116(c) WHICH PROHIBITS THE GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, PAVING AND NEW STRUCTURES WITHIN 25 FEET OF A WETLANDS AND 75 FEET OF A PERENNIAL STREAM FOR THE REPLACEMENT OF AN EXISTING METAL PIPE CULVERT UNDERNEATH GUILFORD ROAD WITH DUAL 54" AND 60" METAL PIPES.
 - APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE WAIVER PETITION APPROVAL PERTAINS ONLY TO THE LIMIT OF DISTURBANCE WITHIN THE 25' WETLANDS AND 75' STREAM BUFFERS AS SHOWN ON THE REVISED WAIVER PETITION PLAN EXHIBIT AND THE REVISED SITE DEVELOPMENT PLAN, SDP-05-151 SUBMITTED ON MAY 12, 2006. THE LIMIT OF DISTURBANCE SHALL BE THE MINIMUM NECESSARY FOR THE REPLACEMENT OF AN EXISTING METAL PIPE CULVERT UNDERNEATH GUILFORD ROAD. ALL WATER QUALITY PERMITS, MDE PERMITS AND U.S. ARMY CORPS OF ENGINEERS PERMITS WILL BE OBTAINED.
 - BEST MANAGEMENT PRACTICES FOR WORKING WITHIN THE STREAM, FLOOD PLAIN AND BUFFER AREAS SHALL BE USED BY ALL CONTRACTORS WHEN REPLACING THE GUILFORD ROAD PIPE CULVERT. STABILIZATION SHALL BE INITIATED IMMEDIATELY UPON COMPLETION OF THE CONSTRUCTION WORK.

OWNER/DEVELOPER
 ELLICOTT CITY LAND HOLDING, INC.
 5300 DORSEY HALL DR STE 102
 ELLICOTT CITY MD 21042-7819
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

SITE DEVELOPMENT PLAN OAKHURST II UNITS 1-45 HOWARD COUNTY, MARYLAND



LOCATION PLAN
 SCALE: 1" = 100'

**SITE ANALYSIS:
 DENSITY TABULATION**

TRACT AREA	6.34 AC.
100-YEAR FLOODPLAIN	0.62 AC.
STEEP SLOPES OUTSIDE FLOODPLAIN	0.0 AC.
NET AREA	5.72 AC.
DENSITY	8.0 DWELLING UNITS/NET AREA
TOTAL NUMBER OF UNITS ALLOWED AND PROPOSED	45
OPEN SPACE CALCULATION: 25% OF GROSS PROPERTY AREA	
OPEN SPACE REQUIRED:	1.59 AC (69,260 SF)
CREDITED OPEN SPACE PROVIDED (26%):	71,874 SF (1.65 AC.)
NON CREDITED OPEN SPACE PROVIDED:	79,279.20 SF (1.82 AC.)
RECREATION OPEN SPACE REQUIRED:	400 SF PER UNIT (18,000 SF)
RECREATION OPEN SPACE PROVIDED:	18,390 SF (0.42 AC.)
PASSIVE RECREATIONAL OPEN SPACE ONLY:	NO STRUCTURES ARE ALLOWED.
RECREATIONAL FACILITIES SUCH AS BASKETBALL OR TENNIS COURTS, FENCES, SWIMMING POOLS, PLAYGROUND EQUIPMENT OR TOT LOTS, ETC. THAT ARE PERMANENTLY ATTACHED TO THE GROUND ARE CONSIDERED TO BE STRUCTURES AND ARE NOT PERMITTED WITHIN THE PROPOSED RECREATIONAL AREA.	

GENERAL SITE DATA
 PRESENT ZONING: R-SA-8
 APPLICABLE DPZ FILE REFERENCE: WP-06-20, F-06-87, AA-06-15
 PROPOSED USE OF SITE: SINGLE FAMILY ATTACHED
 PROPOSED WATER SYSTEM: PUBLIC
 PROPOSED SEWER SYSTEM: PUBLIC

AREA TABULATION
 TOTAL AREA OF BUILDABLE UNITS: 28,642 SF. (0.66 AC.)
 TOTAL PROJECT AREA: 6.34 AC.
 NET AREA OF SITE: 5.72 AC.
 APPROXIMATE LIMIT OF DISTURBANCE: 174,540.77 (4.0 AC.)

PARKING TABULATION
 TOTAL NUMBER OF UNITS ALLOWED AND PROPOSED: 45
 REQUIRED AT 2.0 SPACES PER DU: 90
 PARKING SPACES REQUIRED: 2 SPACES PER UNIT=90 SPACES
 0.3 SPACES PER UNIT FOR GUEST/OVERFLOW PARKING= 14 SPACES
 TOTAL PARKING SPACES REQUIRED: =104 SPACES
 HC. ACCESSIBLE SPACES: MIN 2% OF TOTAL SPACES REQ.= 2 SPACES
 PARKING SPACES PROVIDED: UNIT= 1 GARAGE/1 DRIVEWAY=2 SPACES
 1 SPACE IN GARAGE=45 SPACES (FOR 45 UNITS)
 1 SPACE ON DRIVEWAY=45 SPACES (FOR 45 UNITS)
 PARKING ON SITE=25 SPACES
 TOTAL PARKING SPACES PROVIDED: =115 SPACES

IN ACCORDANCE WITH ZONING SECTIONS 133.C.1.a AND 133.D.2.a IN THE GARAGES IN UNITS 1-45 MUST BE USED FOR PARKING ONLY, PARKING IS NOT PERMITTED WITHIN THE SHOWN 30' OR 50' STRUCTURE AND USE SETBACK.

3. THE DEVELOPER SHALL PROVIDE A CONTINUOUS SIDEWALK LOCATED THE INSIDE LOOP OF BIRDHOUSE CIRCLE AROUND THE 3 PARKING SPACES LOCATED DIRECTLY ACROSS FROM THE SWM FACILITY SIMILAR TO THE OTHER PARKING SPACES AREAS ON THE INSIDE LOOP. ADDITIONALLY, A 4' WIDE CONCRETE SIDEWALK SHALL BE PROVIDED ALONG THE OUTSIDE EDGE OF BIRDHOUSE CIRCLE ADJACENT TO ALL COMMUNITY OWNED OPEN SPACES AREAS OR A 4' WIDE ASPHALT PATHWAY SHALL BE PROVIDED WITHIN THE OPEN SPACES AREAS.

34. ALL TRASH COLLECTION TO BE PRIVATE.

35. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.

36. FOLLOWING REQUESTS OF ALTERNATIVE COMPLIANCE TO DESIGN MANUAL, VOLUME I HAVE BEEN DENIED ON SEPTEMBER 16, 2005 BY DEPARTMENT OF PLANNING & ZONING & DEVELOPMENT ENGINEERING DIVISION, HOWARD COUNTY.

REQUEST TO WAIVE SECTION 5.2.7.B.4 - REQUIRING A SAFETY BENCH.
 REQUEST TO WAIVE SECTION 5.2.6.D.1 - REQUIRING A MAINTENANCE REQUEST TO WAIVE SECTION 5.2.7.A.4 - REQUIRING A POND DRAIN.

ANY FUTURE IMPROVEMENTS OR THE ADDITION OF ANY IMPERVIOUS AREAS WILL REQUIRE THE SUBMISSION OF A NEW SDP TO DPZ-DED FOR REVIEW AND APPROVAL (EXCLUDING DECKS).

STORMWATER MANAGEMENT SUMMARY TABLE AREA 1

AREA	REQUIREMENT	VOLUME REQUIREMENT W/O CREDITS	CREDITS	VOLUME REQUIREMENT AFTER CREDITS	NOTES
1	WATER QUALITY VOLUME WQV	0.1391 AC.FT.	0.37 AC.	0.1256 AC. FT.	POCKET POND(P-5) NATURAL AREA CONSERVATION CREDIT
2	RECHARGE VOLUME REV	0.03 AC.FT. 0.3776 AC.	0.3776 AC.	0	GRASS CHANNEL CREDIT
3	CHANNEL PROTECTION VOLUME CPV	0.1715 AC. FT.	N/A	0.1715 AC.FT.	POCKET POND(P-5)
4	OVERBANK FLOOD PROTECTION, OF	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME, OF	N/A	N/A	N/A	

STORMWATER MANAGEMENT SUMMARY TABLE AREA 2

AREA	REQUIREMENT	VOLUME REQUIREMENT W/O CREDITS	CREDITS	VOLUME REQUIREMENT AFTER CREDITS	NOTES
1	WATER QUALITY VOLUME WQV	0.0154 AC.FT.	1.00 AC.FT.	0	GRASS CHANNEL CREDIT
2	RECHARGE VOLUME REV	0.0040 AC.FT. 0.0390 AC.	0.0390 AC.	0	GRASS CHANNEL CREDIT
3	CHANNEL PROTECTION VOLUME CPV	0	N/A	0.36 AC.FT.	01 DEV = 0.13 CFS 01 EX = 0.14 CFS
4	OVERBANK FLOOD PROTECTION, OF	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME, OF	N/A	N/A	N/A	

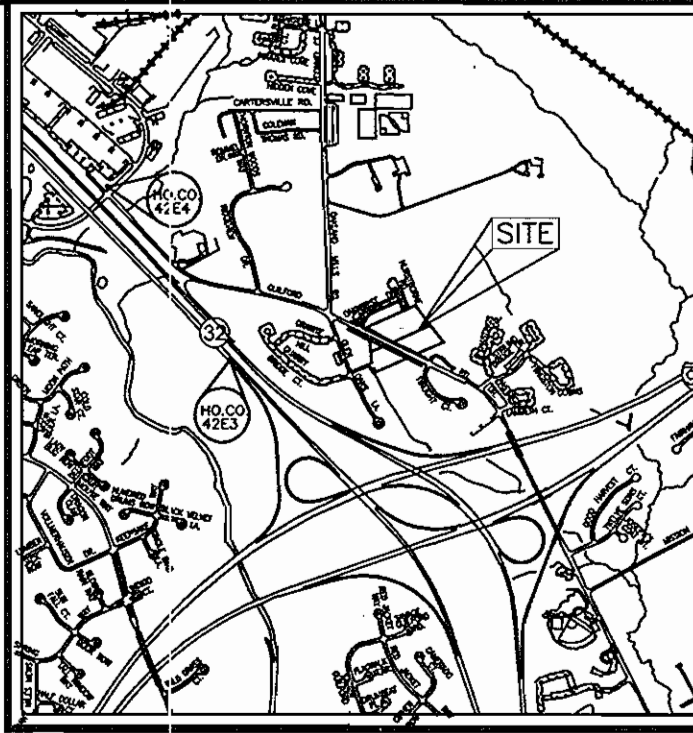
STORMWATER MANAGEMENT SUMMARY TABLE AREA 3

AREA	REQUIREMENT	VOLUME REQUIREMENT W/O CREDITS	CREDITS	VOLUME REQUIREMENT AFTER CREDITS	NOTES
1	WATER QUALITY VOLUME WQV	0.0248 AC.FT.	1.52 AC.	0 AC.FT.	SHEET FLOW TO BUFFER (0.30) CREDIT(0.30) NATURAL AREA CONSERVATION CREDIT(1.5)
2	RECHARGE VOLUME REV	0.0017 AC.FT. 0.0189 AC.	0.0189 AC.	0 AC.FT.	SHEET FLOW TO BUFFER (0.30) CREDIT(0.30) NATURAL AREA CONSERVATION CREDIT(1.5)
3	CHANNEL PROTECTION VOLUME CPV	INCLUDED WITH AREA 1	-	0 AC.FT.	
4	OVERBANK FLOOD PROTECTION, OF	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME, OF	N/A	N/A	N/A	

BENCHMARK INFORMATION

HO. CO. #42E3
 CONC. MONUMENT 13' OFF OF LEFT SHOULDER WEST BOUND ROUTE 32, 54.2' NORTH/WEST OF EXISTING CUT IN BRIDGE WALL.
 N 546528.8416 (FT) E 135789.375(FT)
 N 166582.3241 (M) E 413887.0332

HO. CO. #42E4
 CONC. MONUMENT IN GRASS MEDIAN WEST BOUND MD ROUTE 32, 20.1' OFF OF LEFT SHOULDER 107.5' EAST OF STORMDRAIN INLET
 N 544851.1973 (FT) E 135789.375(FT)
 N 166070.9771 (M) E 414366.1877(M)



VICINITY MAP
 SCALE: 1" = 2000'

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ADDRESS CHART

UNIT NO	STREET ADDRESS	UNIT NO	STREET ADDRESS	LOT NO	STREET ADDRESS
1	9410 BIRDHOUSE CIRCLE	19	9470 BIRDHOUSE CIRCLE	37	9449 BIRDHOUSE CIRCLE
2	9412 BIRDHOUSE CIRCLE	20	9472 BIRDHOUSE CIRCLE	38	9453 BIRDHOUSE CIRCLE
3	9414 BIRDHOUSE CIRCLE	21	9474 BIRDHOUSE CIRCLE	39	9455 BIRDHOUSE CIRCLE
4	9416 BIRDHOUSE CIRCLE	22	9476 BIRDHOUSE CIRCLE	40	9457 BIRDHOUSE CIRCLE
5	9418 BIRDHOUSE CIRCLE	23	9478 BIRDHOUSE CIRCLE	41	9459 BIRDHOUSE CIRCLE
6	9420 BIRDHOUSE CIRCLE	24	9480 BIRDHOUSE CIRCLE	42	9441 GUILFORD ROAD
7	9422 BIRDHOUSE CIRCLE	25	9423 BIRDHOUSE CIRCLE	43	9443 GUILFORD ROAD
8	9424 BIRDHOUSE CIRCLE	26	9425 BIRDHOUSE CIRCLE	44	9445 GUILFORD ROAD
9	9428 BIRDHOUSE CIRCLE	27	9427 BIRDHOUSE CIRCLE	45	9447 GUILFORD ROAD
10	9430 BIRDHOUSE CIRCLE	28	9429 BIRDHOUSE CIRCLE		
11	9432 BIRDHOUSE CIRCLE	29	9431 BIRDHOUSE CIRCLE		
12	9446 BIRDHOUSE CIRCLE	30	9433 BIRDHOUSE CIRCLE		
13	9448 BIRDHOUSE CIRCLE	31	9435 BIRDHOUSE CIRCLE		
14	9450 BIRDHOUSE CIRCLE	32	9437 BIRDHOUSE CIRCLE		
15	9452 BIRDHOUSE CIRCLE	33	9441 BIRDHOUSE CIRCLE		
16	9454 BIRDHOUSE CIRCLE	34	9443 BIRDHOUSE CIRCLE		
17	9456 BIRDHOUSE CIRCLE	35	9445 BIRDHOUSE CIRCLE		
18	9458 BIRDHOUSE CIRCLE	36	9447 BIRDHOUSE CIRCLE		

PERMIT INFORMATION CHART

PROJECT NAME	SECTION/AREA	UNIT
OAKHURST II	N/A	1 THRU 45
DEED REF/PLAT	BLOCK NO	ZONE
10021/219	17	R-SA-8
TAX MAP	ELECT DIST	CENSUS TR
6TH	6TH	6069.03
WATER CODE:	E-14	SEWER CODE:
		5200400

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Windy Hunt 10/2/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Deussen 10/25/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Mark P. Layton 10/31/06
 DIRECTOR DATE

NO.	REVISION SEQUENCE OF CONSTRUCTION	DATE
1	REVISE SEQUENCE OF CONSTRUCTION	11.6.06

**SITE DEVELOPMENT PLAN
 OAKHURST II
 TOWNHOUSE UNITS 1-45
 COVER SHEET**

TAX MAP 42 BLOCK 17
 6TH ELECTION DISTRICT

FUTURE PARCEL 'A'
 EX. PARCEL '71' & '73'
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
 ENGINEERING, INC.**
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RJRHV
 DRAWN BY: RJCMH
 CHECKED BY: RHV
 DATE: AUGUST, 2006
 SCALE: AS SHOWN
 W.O. NO.: 04-99.00

1 SHEET OF 18