

GENERAL NOTES

- TOPOGRAPHIC INFORMATION WAS TAKEN FROM HAND PLOTTED MANUSCRIPTS BY AIR SURVEY AND DESIGN INC. AND PROVIDED BY LAND DESIGN ENGINEERING INC. BENCH MARKS: CONTROL STA 37EA EL=291.77 CONTROL STA 37F3 EL=248.11
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS & SPECIFICATIONS AND MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UN-ACCEPTABLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND MAINTAIN MINIMUM COVER IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 48 HOURS BEFORE THE START OF WORK SHOWN ON THESE PLANS:
MISS UTILITY 1-800-257-7777
BALTIMORE GAS & ELECTRIC CO. (410) 954-6260
C & P TELEPHONE CO. (410) 393-3648
- FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NOT NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FOR CONSTRUCTION.
- ALL UTILITIES ARE TO BE RETAINED UNLESS MARKED OTHERWISE AND APPURTENANCES ARE TO BE ADJUSTED TO FINISHED GRADE.
- THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 24 HOURS IN ADVANCE OF THE COMMENCEMENT OF WORK.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL CONSTRUCTION AND VERIFY ALL OFFSETS, SETBACKS, EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL), AND DIMENSIONS.
- SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE ENGINEER. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL FILL SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS AND REQUIREMENTS. REFER TO GEOTECHNICAL REPORT BY MKM ENGINEERS, INC. DATED MARCH 1995.
- ALL NON-TIDAL WETLANDS, WETLAND BUFFERS, AND STREAM BUFFERS WHICH AFFECT THE SITE ARE SHOWN. DELINEATIONS WERE TAKEN FROM INFORMATION PROVIDED BY LAND DESIGN ENGINEERING INC. REFER TO WETLANDS REPORT BY EXPLORATION RESEARCH INC. DATED 1991, APPROVED BY USCOE 6/92.
- THE LOCATION OF OFF-SITE GRAVITY SEWER WAS TAKEN FROM PLANS BY LAND DESIGN ENGINEERING INC. SEWER CONTRACT 14-3314-D. INFORMATION ON THE EXISTING 36 INCH WATER MAIN WAS TAKEN FROM CONTRACT 628-W. INFORMATION ON THE PROPOSED 36 INCH WATER MAIN WAS TAKEN FROM CONTRACT 44-3327 (CP W-8169).
- TRAFFIC CONTROL SIGNS AND MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO PLACEMENT OF ANY ASPHALT.
- STORMWATER MANAGEMENT QUALITY CONTROL IS BEING PROVIDED BY AN ON SITE POND UTILIZING EXTENDED DETENTION. WATER QUANTITY CONTROL IS BEING PROVIDED FOR 2- AND 10- YEAR STORMS WITHIN THE POND. THE EMBANKMENT IS CLASS A. FACILITY WILL BE OWNED AND MAINTAINED BY HOWARD COUNTY.
- ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS PRIOR TO SUCH ADJUSTMENTS. SEE THE SEDIMENT CONTROL PLAN FOR ADDITIONAL NOTES.
- ALL CONSTRUCTION RELATING TO THE GOLF COURSE INCLUDING CARTPATHS, BRIDGES, TEES, GREENS, ETC. ARE SHOWN ON SDP-93-75 BY LAND DESIGN ENGINEERING INC.. USER SHALL REFER TO THOSE PLANS FOR CONSTRUCTION DETAILS.
- ALL PROPOSED SEWER LINES ARE PUBLIC. THESE SHALL BE MAINTAINED BY THE HOWARD COUNTY DEPARTMENT OF UTILITIES. SEWER LINES SHOWN ARE FOR SERVICING THE CLUBHOUSE AND MAINTENANCE BUILDINGS ONLY. ALL PROPOSED 6 INCH AND 8 INCH WATER LINES INCLUDING FIRE HYDRANTS ARE PUBLIC. LINES 4 INCH AND 2 INCH ARE PRIVATE. REFER TO CONTRACT 14-3423-D FOR DETAILS.
- TWO TRAFFIC STUDIES WERE PREPARED BY LEE CUNNINGHAM & ASSOCIATES, INC. THE FIRST WAS DATED 12/31/92 AND APPROVED 12/31/92 (S-93-02) THE SECOND WAS DATED 9/93 AND APPROVED 6/10/94 (F-94-26)
- FLOODPLAIN DELINEATIONS ARE BASED ON F-94-26. REFER TO REPORT BY LAND DESIGN ENGINEERING, INC. DATED 12/92 AND APPROVED ON 12/31/92
- WAIVER PETITION WP-95-108 REQUESTING A WAIVER FROM THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116(a)(1) AND 16.116(a)(2)(ii) WAS FILED ON MAY 1, 1995 AND WAS APPROVED ON 5/18/95. USCOE PERMIT No. CENAB-OP-RP 91-00469-7.
- SECTION 16.116(a)(1) AND 16.116(a)(2)(ii) ARE TO PERMIT CONSTRUCTION OF THE SWM OUTFALL WITHIN THE 25' WETLAND AND 50' STREAM BUFFERS.

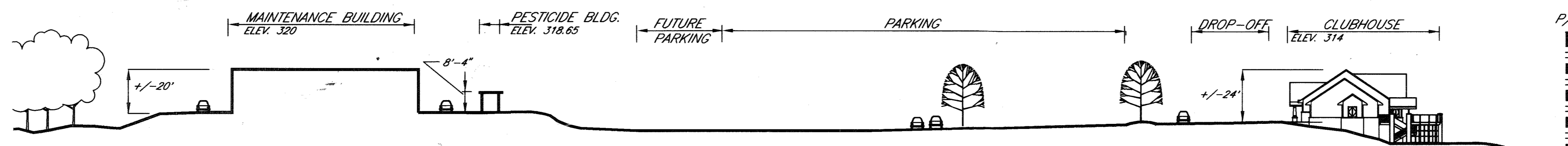
CENTRE 9500 PARCEL K

THE TIMBERS AT TROY GOLF COURSE SITE DEVELOPMENT PLAN CLUBHOUSE AND MAINTENANCE FACILITIES

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
JAMES J. [Signature] 5/26/95
DIRECTOR DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 5/31/95
DIRECTOR DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY HEALTH DEPARTMENT
Joyce M. [Signature] 5/30/95
COUNTY HEALTH OFFICER DATE

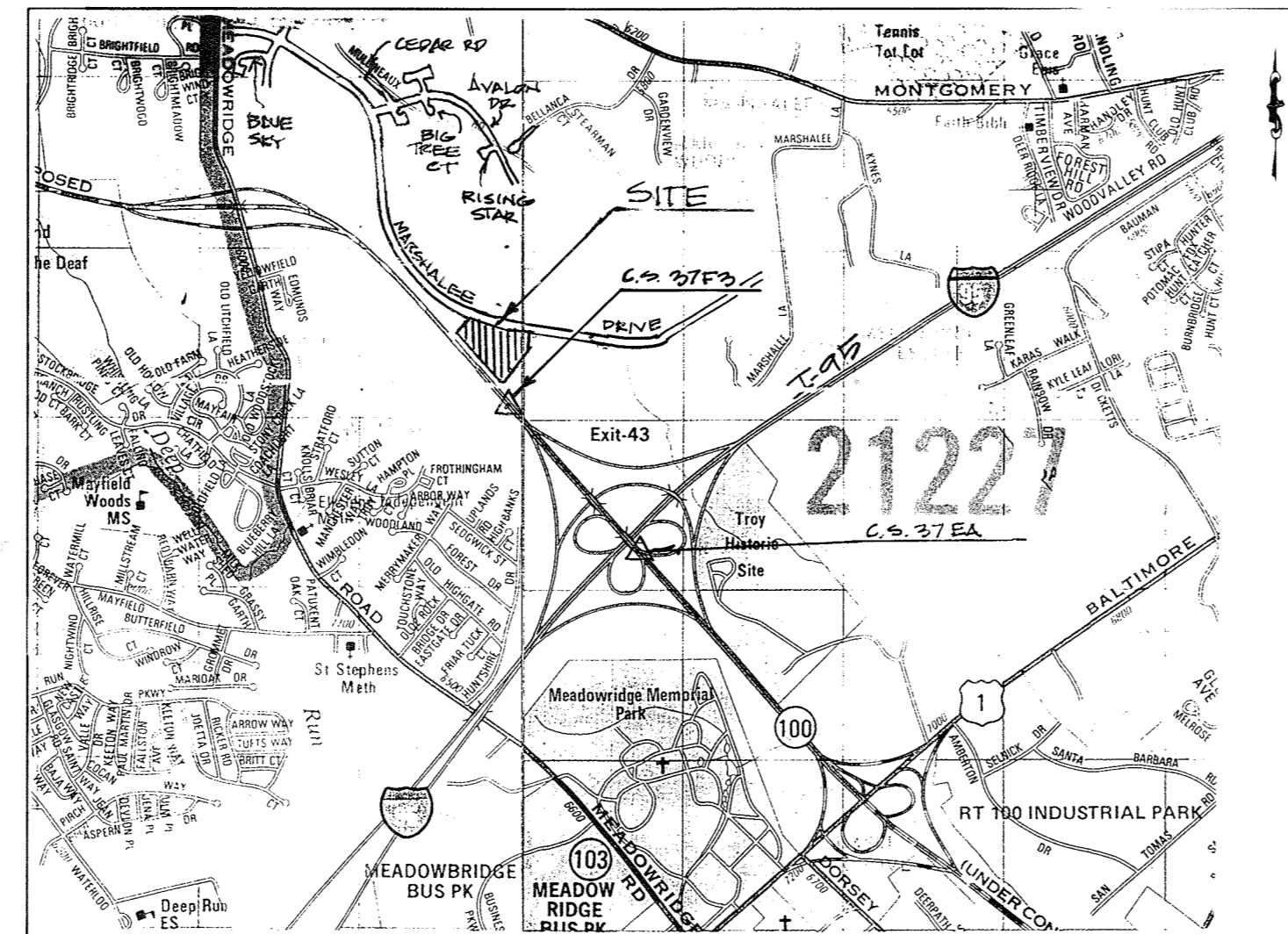


SECTION A-A
Scale: 1" = 50'

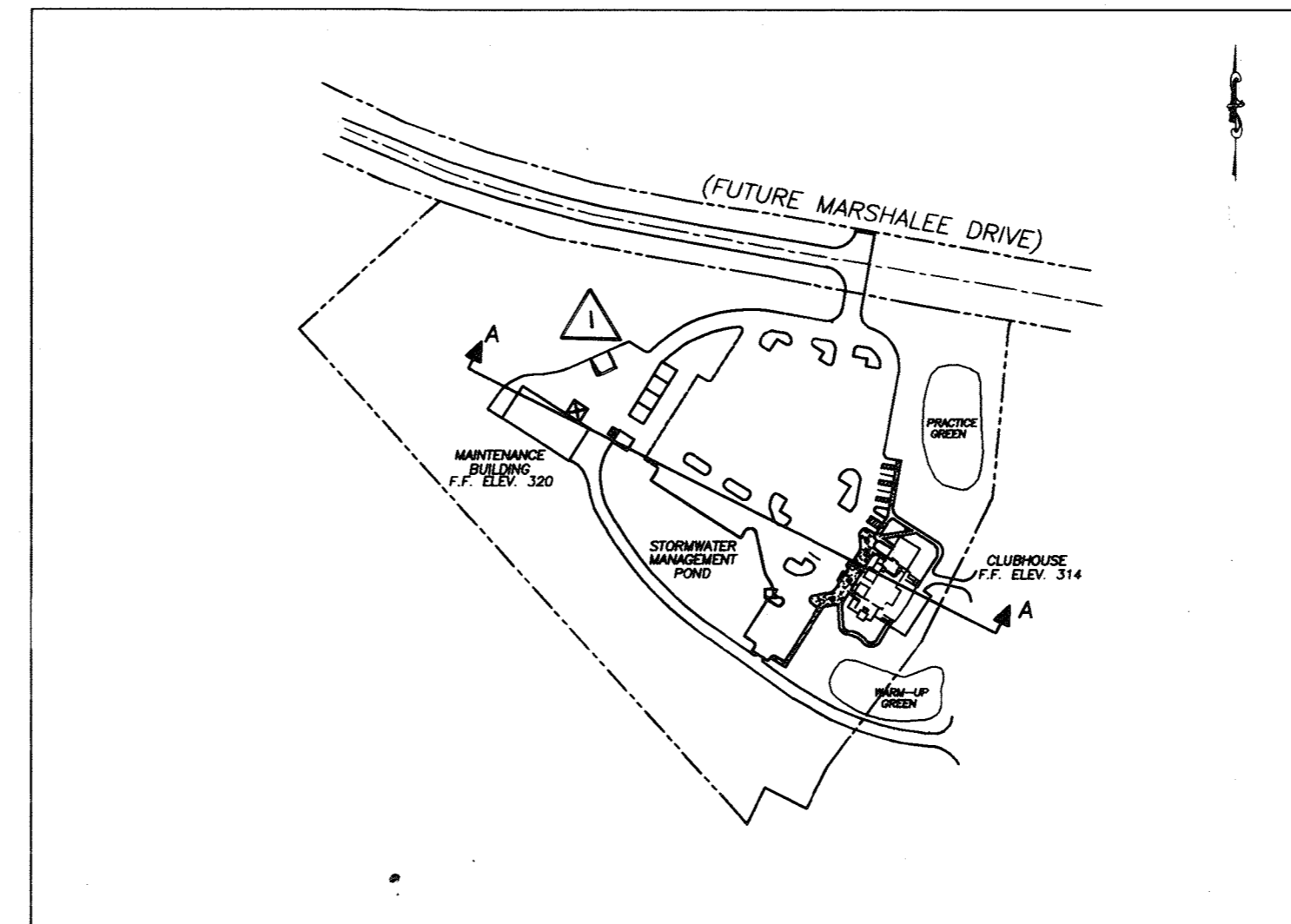
SHEET INDEX

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3	EXISTING CONDITIONS PLAN	C-3
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- SITE ANALYSIS**
- AREA OF PARCEL: 9.0666 AC. (394,941 SQ. FT.)
 - ZONING: PEC
 - PROPOSED USE OF STRUCTURE: CLUBHOUSE, MAINTENANCE BUILDING AND STORAGE BUILDING.
 - PROPOSED CLUBHOUSE FLOOR AREA:
FIRST FLOOR: 3,049 SF COVERED PORCH: 906 SF
BASEMENT: 4,065 SF OPEN DECK: 1,164 SF
 - MAINTENANCE BUILDING FLOOR AREA: 5000 SF
 - PROPOSED PARKING:
TYPICAL STALLS 155
BARRIER FREE 8
TOTAL 163
 - FUTURE PARKING: TYPICAL STALLS 42
TOTAL FUTURE PARKING 205
 - REQUIRED PARKING: 8 SP. PER HOLE x 18 HOLES = 144
DRIVING RANGE (40 TEES) 13
TOTAL SPACES REQUIRED: 157
 - GREEN SPACE TO REMAIN: 265,903 SQ. FT. (6.10 AC.) 67.33% OF GROSS AREA
 - BUILDING COVERAGE: 10,119 SQ. FT. (0.23 AC.) 2.56% OF GROSS AREA
 - PARKING AREAS (INCLUDING ISLES):
PROPOSED: 91,315 SQ. FT. (2.10 AC.) 23.12% OF GROSS AREA
FUTURE: 14,100 SQ. FT. (0.32 AC.) 3.57% OF GROSS AREA
 - OTHER IMPERVIOUS AREA: 13,504 SQ. FT. (0.31 AC.) 3.42% OF GROSS AREA
 - TOTAL LIMITS OF DISTURBANCE: 7.09 AC.
 - NUMBER OF LANDSCAPE ISLAND:
REQUIRED: (1 PER 20 SPACES): 8
PROVIDED: 8



VICINITY MAP
Scale: 1" = 2000'



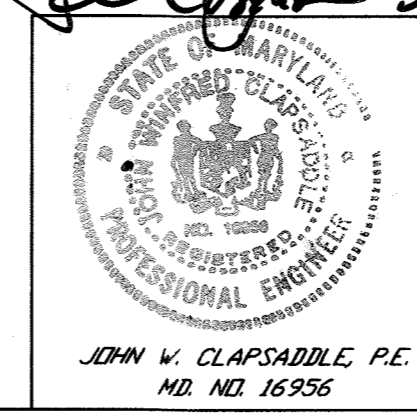
LOCATION PLAN
Scale: 1" = 200'

PREPARED FOR:
RAINMAKER / KILLIAN L.L.C.
5111 AVOCA AVENUE
ELLCOTT CITY, MARYLAND 21043
(410) 750-0733

OWNER:
HOWARD COUNTY
3430 COURTHOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043
(410) 313-2354

CERTIFICATION IS LIMITED TO SITE REVISIONS FOR PUMP SYSTEM MODIFICATIONS.
PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19453, EXPIRATION DATE: 07/02/2021.

[Signature]
5/29/2020



revisions

no.	description	date
1	ADDED ABOVE GROUND STORAGE TANKS AND ASSOCIATED FEATURES	5/2020

prepared by:
RBA ENGINEERS • ARCHITECTS • PLANNERS
7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410/312-0966

owner:
HOWARD COUNTY
3430 COURTHOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043

ADDRESS CHART

BUILDING	STREET ADDRESS
CLUBHOUSE	6100 MARSHALEE DRIVE
MAINT. BLDG.	6070 MARSHALEE DRIVE

TITLE SHEET

SCALE AS SHOWN	CHECKED JVC
2610000	
PROJ. NO. J1212	DATE 5/16/95
SHEET 1	SHEET REF.
OF 20	C-1

1 ST. ELECTION DISTRICT
TAX MAP 92 CENSUS TRACT 60101
WATER CODE: 104 SEWER CODE: 2610000
SDP-95-92
DRAWING FILE: 1212CV

LEGEND:

EXISTING	PROPOSED
CONTOUR	CONTOUR
TREE LINE	TREE LINE
PAVING	SPOT ELEVATIONS
PROPERTY LINE	CURB AND GUTTER
WETLAND LIMIT	SOIL BORING
WETLAND BUFFER	BUILDING STRUCTURE
STREAM LINE	GREEN LIMIT
STREAM BUFFER	STORM SEWER
WATER LINE	SANITARY SEWER (GRAVITY)
EASEMENT LINE INFORMATION	SANITARY SEWER (FORCED)
WETLAND W 135	WATER LINE
FLOODPLAIN FP 33	PARKING SPACE COUNT
(REFER TO TABLE OF VALUES, SHEET 9)	PATHWAY
	CONCRETE
	RETAINING WALL
	HEAVY DUTY PAVING

SOILS

KEY	DESCRIPTION	HYDRIC?	HYDROLOGIC GROUP
C1C3	CHILLUM GRAVELLY LOAM 5-10%, SEVERELY ERODED	NO	C
C1D2	CHILLUM GRAVELLY LOAM 10-15%, MODERATELY ERODED	NO	C
C1B2	CHILLUM SILT LOAM 1-5%, MODERATELY ERODED	NO	C
Cs	COMUS SILT LOAM	NO	B
M0	MIXED ALLUVIAL	YES (WADLE UNIT)	
S1D2	SASSAFRAS GRAVELLY SANDY LOAM 10-15%, MODERATELY ERODED	NO	B
S1B2	SASSAFRAS GRAVELLY SANDY LOAM 1-5%, MODERATELY ERODED	NO	B
SsE	SASSAFRAS SOILS 1-5%, MODERATELY ERODED	NO	B

REFER TO SHEET 3 FOR CONTINUATION

KEY

SLOPES 15% - 24.9%	
SLOPES >= 25%	

APPROVED FOR PUBLIC WATER PUBLIC SEWERAGE SYSTEMS
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James J. Lewis 5/26/95
DIRECTOR DATE

Elizabeth Anderson Palan 5/26/95
CHIEF, BUREAU OF ENGINEERING & PLANNING DATE

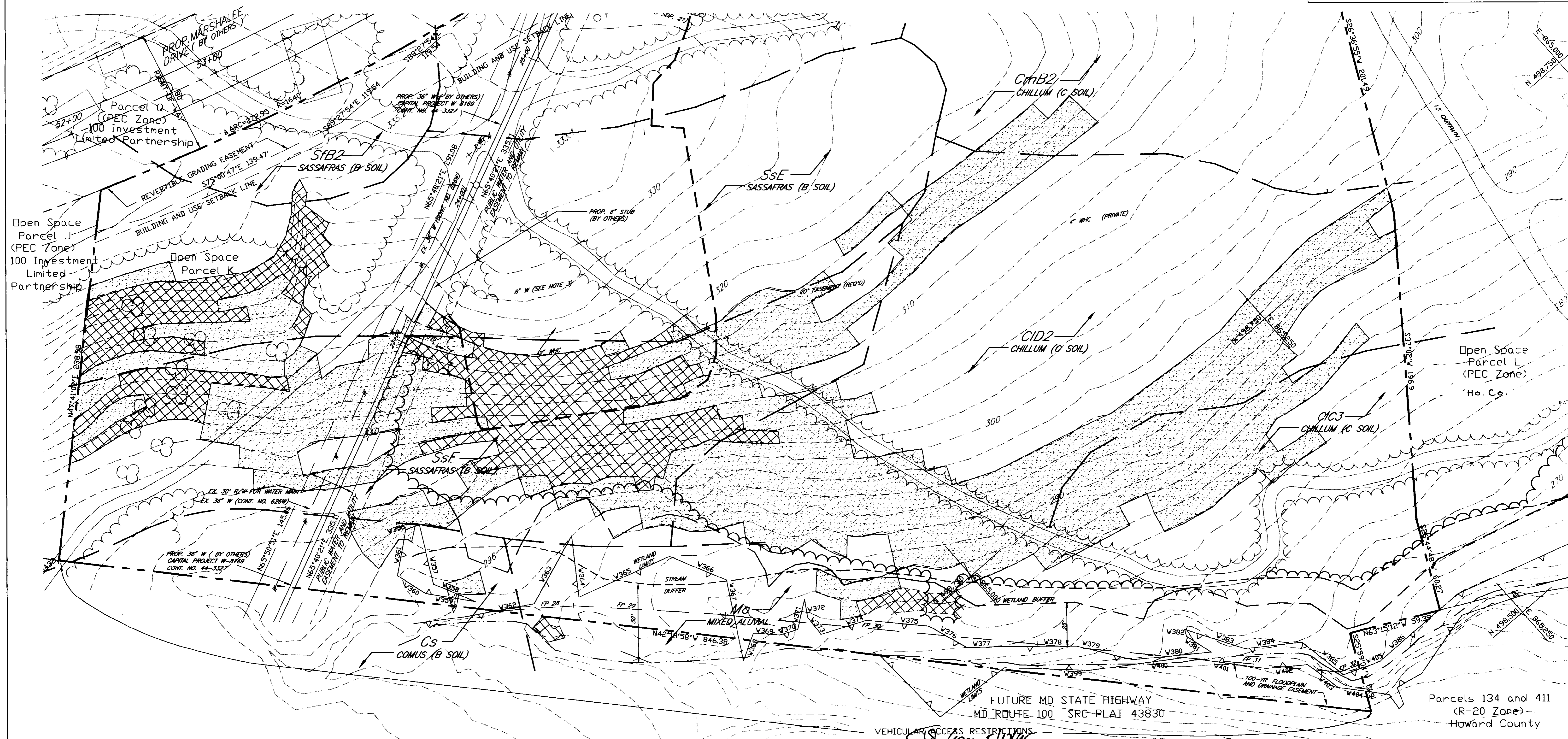
APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING

James J. Lewis 5/31/95
DIRECTOR DATE

Richard B. Gode 5/31/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

George M. Bond 5/30/95
COUNTY HEALTH OFFICER DATE



VEHICULAR ACCESS RESTRICTIONS

DATE: 5/11/95

revisions	no	description	date

prepared by: **RBA** ENGINEERS - ARCHITECTS - PLANNERS
7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410-312-0966

owner: HOWARD COUNTY
3430 COURTHOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043

STATE OF MARYLAND
JAMES W. CLAPSADLE, P.E.
NO. MD. 16306

EXISTING CONDITIONS PLAN

CENTRE 9500, PARCEL K
THE TIMBERS AT TRYON GOLF COURSE
CLUBHOUSE AND MAINTENANCE FACILITIES

SCALE: 1"=30'

DRAWN	ELB	CHECKED	JVC
PROJ. NO.	J212	DATE	5/16/95
SHEET	2	SHEET REF.	
OF	20		

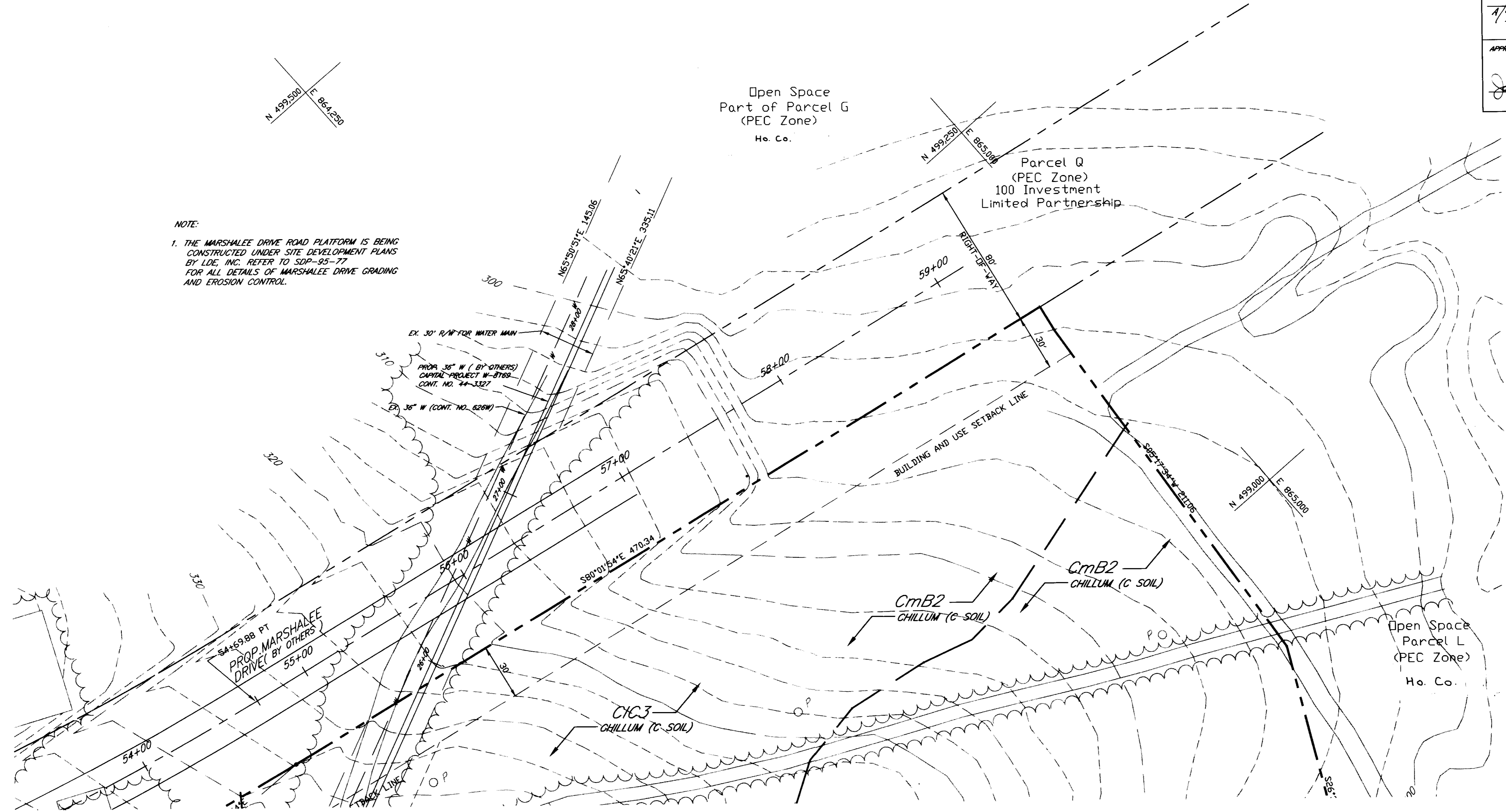
1" ST. ELEVATION DISTRICT
1" ST. AND 3" ST. DISTRICT TRACT 681A
WATER CODE: SAN SEWER CODE: 200000
HOWARD COUNTY, MARYLAND
SDP-95-92
DRAWING FILE: 1212PLA

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR *James J. Smith* DATE 5/26/95
 ALA-CHIEF, BUREAU OF ENGINEERING CO. *Richard B. Conrad* DATE 5/26/95
 APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR *James Smith* DATE 5/31/95
 A/CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH *Richard B. Conrad* DATE 5/31/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER *James M. Bondaroff, Jr.* DATE 5/30/95

KEY
 SLOPES 15% - 24.9% [Symbol]
 SLOPES >= 25% [Symbol]

N 499,250 E 864,250

NOTE:
 1. THE MARSHALEE DRIVE ROAD PLATFORM IS BEING CONSTRUCTED UNDER SITE DEVELOPMENT PLANS BY LDC, INC. REFER TO SDP-95-77 FOR ALL DETAILS OF MARSHALEE DRIVE GRADING AND EROSION CONTROL.



REFER TO SHEET 2 FOR CONTINUATION

SOILS

KEY	DESCRIPTION	HYDRIC?	HYDROLOGIC GROUP
C1C3	CHILLUM GRAVELLY LOAM 5-10% SEVERELY ERODED	NO	C
C1D2	CHILLUM GRAVELLY LOAM 10-15% MODERATELY ERODED	NO	C
CmB2	CHILLUM SILT LOAM 1-5% MODERATELY ERODED	NO	C
Cs	COMUS SILT LOAM	NO	B
No	MIXED ALLUVIAL	YES (WHOLE UNIT)	
SYD2	SASSAFRAS GRAVELLY SANDY LOAM 10-15% MODERATELY ERODED	NO	B
SYB2	SASSAFRAS GRAVELLY SANDY LOAM 1-5% MODERATELY ERODED	NO	B
S5E	SASSAFRAS SOILS 1-5% MODERATELY ERODED	NO	B

Richard Conrad 5/16/95

STATE OF MARYLAND PROFESSIONAL ENGINEER JOHN V. CLAPSABLE, P.E. NO. 16306

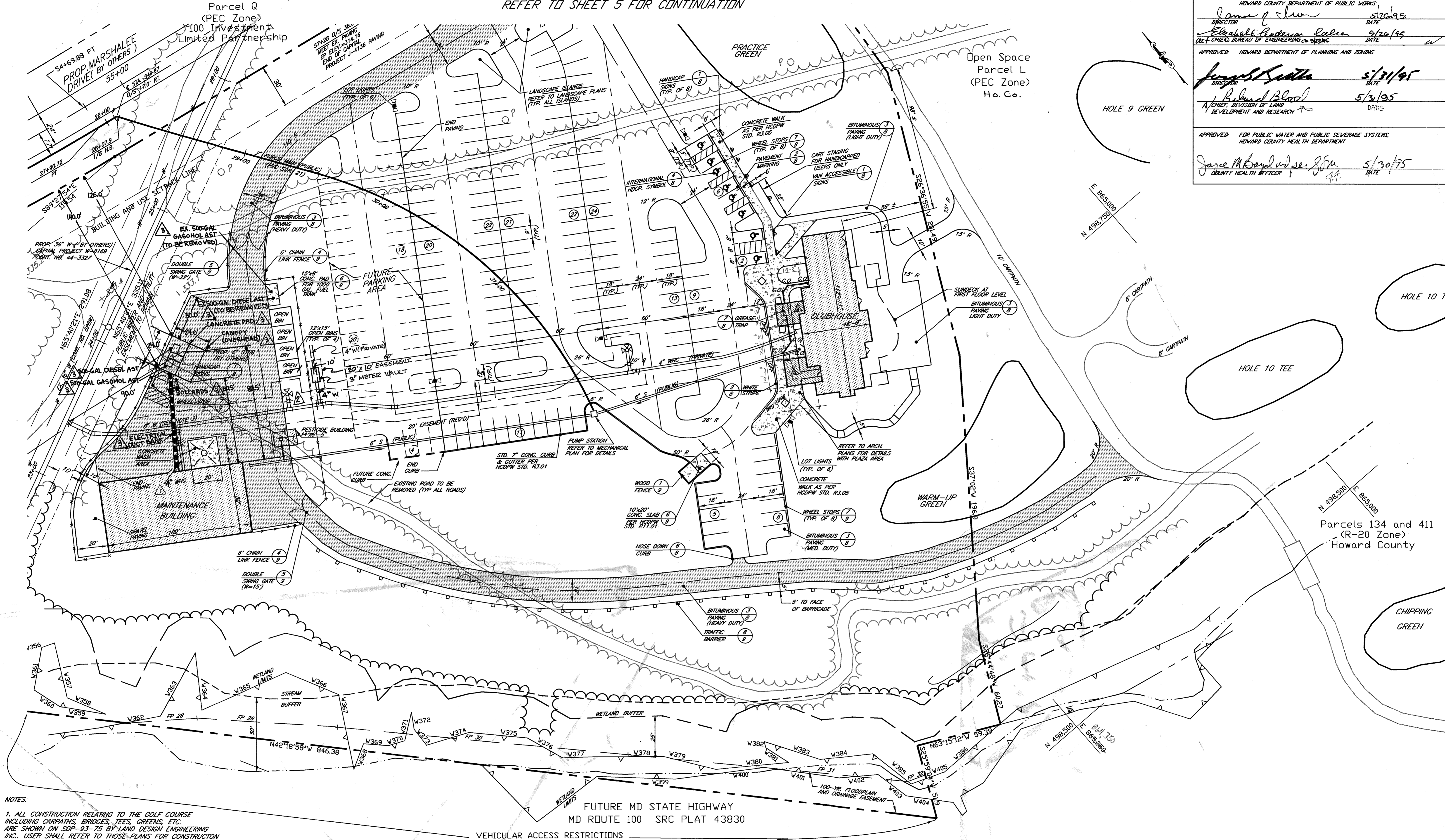
PREPARED BY: **RBA** ENGINEERS - ARCHITECTS - PLANNERS
 7164 COLUMBIA GATEWAY DRIVE SUITE 205 COLUMBIA, MARYLAND 21046 410-312-0966
 OWNER: HOWARD COUNTY 3430 COURTHOUSE DRIVE ELLICOTT CITY, MARYLAND 21043

EXISTING CONDITIONS PLAN
 CENTRE 9500 PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES
 1 ST. ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TAX MAP 37, GEORGIS TRACT 68141 WATER CORP. 3RD SEWER CORP. 610000
 SDP-95-92

SCALE 1" = 30'
 DRAWN: ELB CHECKED: JVC
 PROJ. NO: J1212 DATE: 5/16/95
 SHEET: 3 SHEET REF.:
 OF: 20 OF: C-

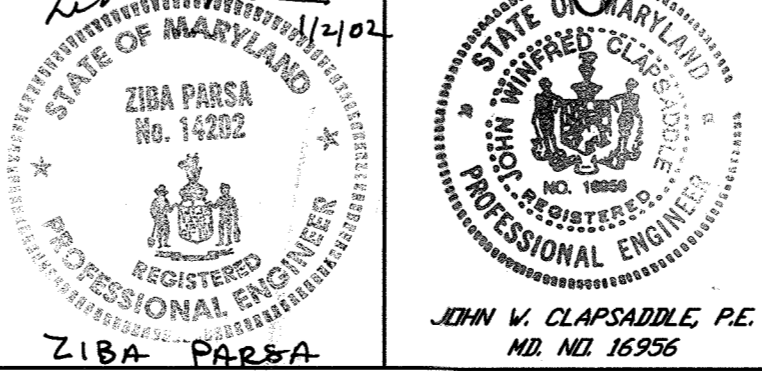
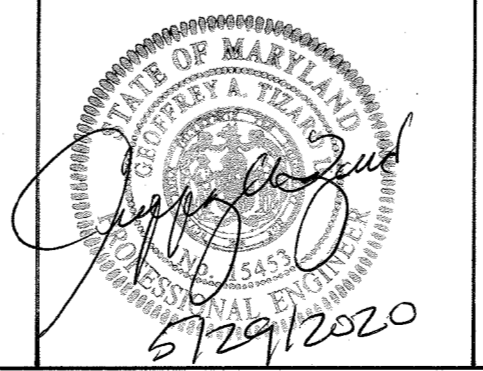
REFER TO SHEET 5 FOR CONTINUATION

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	<i>James J. Shaw</i> DIRECTOR	5/26/95 DATE
APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING	<i>Elizabeth Anderson Lacey</i> DIRECTOR	5/20/95 DATE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS: HOWARD COUNTY HEALTH DEPARTMENT	<i>Richard Blood</i> DIRECTOR	5/31/95 DATE
	<i>Jane M. Anderson</i> COUNTY HEALTH OFFICER	5/30/95 DATE



- NOTES:
1. ALL CONSTRUCTION RELATING TO THE GOLF COURSE INCLUDING CARPATHS, BRIDGES, TEES, GREENS, ETC. ARE SHOWN ON SDP-93-75 BY LAND DESIGN ENGINEERING INC.. USER SHALL REFER TO THOSE PLANS FOR CONSTRUCTION DETAILS.
 2. ALL RADII ARE 5' UNLESS NOTED OTHERWISE.
 3. 8 INCH PUBLIC WATERLINE AND SEWER LINES ARE TO BE CONSTRUCTED UNDER CONTRACT NO. 14-3423-D. REFER CONTRACT DRAWINGS FOR DETAILS.
 4. ALL EXISTING STRUCTURES, ROADS AND UTILITIES ON SITE ARE TO BE REMOVED OR RELOCATED.
 5. ALL WATER METERS ARE INSIDE OF THE BUILDINGS. NO OUTSIDE METER VAULTS ARE PROPOSED.

CERTIFICATION IS LIMITED TO SITE REVISIONS FOR PUBL. SYSTEM MODIFICATIONS.
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 151453.
EXPIRES ON DATE: 01/30/21



no.	description	date
1	MAINTENANCE BLDG. W/HC SIZE	6/95
2	ADDED IRRIGATION METER VAULT EASEMENT	8/96
3	CLUBHOUSE EXPANSION	12/02
4	ADDED ABOVE GROUND STORAGE TANKS AND ASSOCIATED FEATURES	5/2020

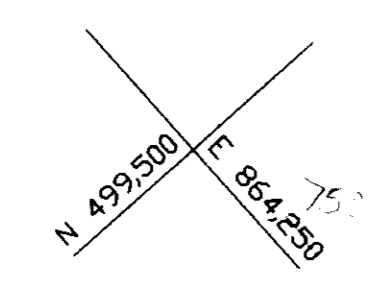
prepared by: **RBA ENGINEERS + ARCHITECTS + PLANNERS**
7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410/212-0966

owner: HOWARD COUNTY
3430 COURTHOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

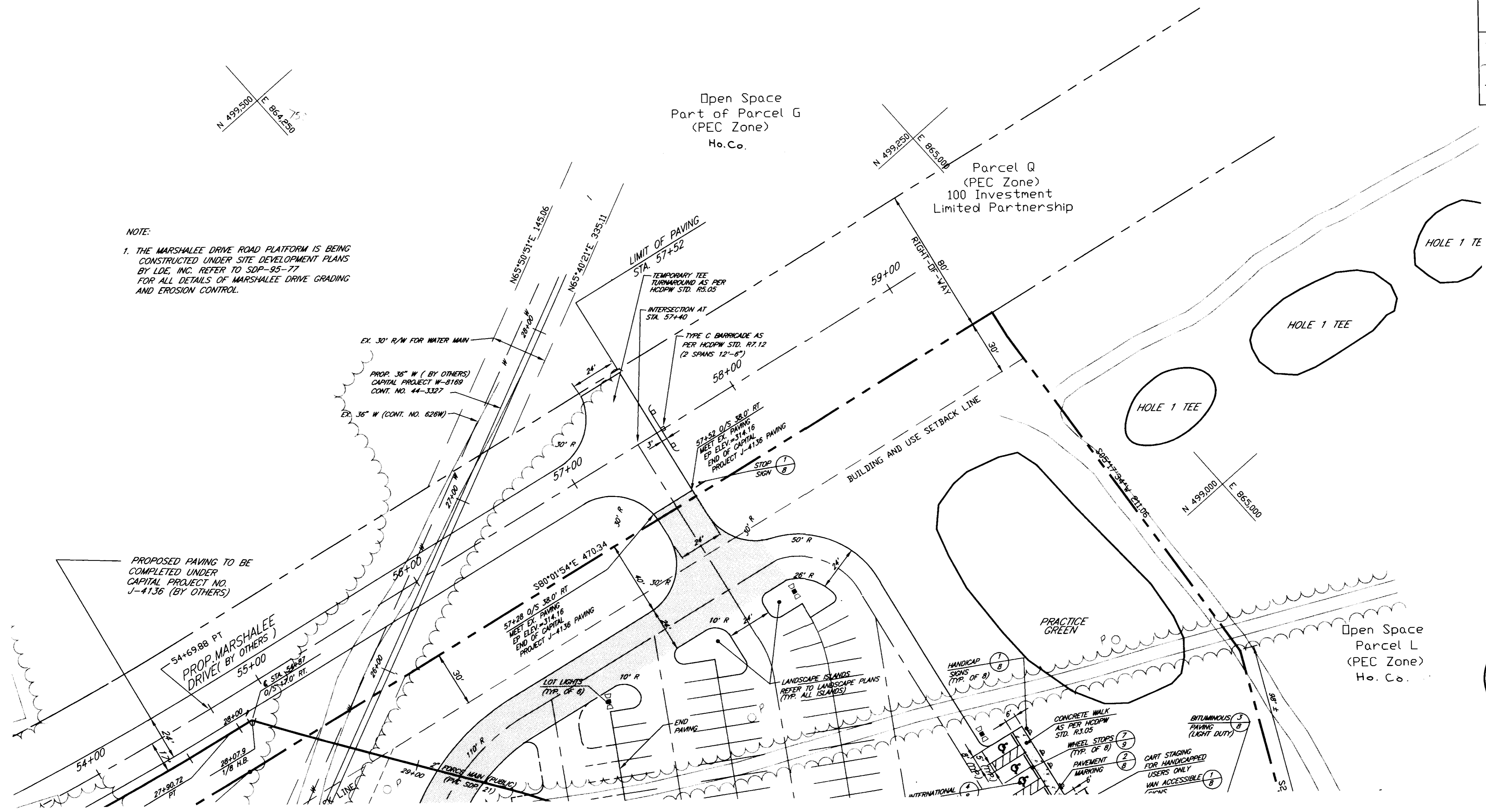
SITE LAYOUT AND UTILITIES PLAN		SCALE
CENTRE 9500 PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES		1"=30'
DRAWN	ELB	CHECKED
JL1212	JVC	DATE
5/16/95		
SHEET	4	SHEET
REF.		REF.
OF	20	C-4

1. ST. ELECTION DISTRICT: HOWARD COUNTY, MARYLAND
TAX MAP 37, CENSUS TRACT 60101
WATER CURB 204 SEWER CURB 260000
SDP-95-92
DRAWING FILE: 1212PLAT

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HENRIK COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *James P. [Signature]* DATE: 5/20/95
 ACT. CHIEF, BUREAU OF ENGINEERING & SURVEYING: *Elizabeth Anderson-Coleman* DATE: 5/20/95
 APPROVED: HENRIK COUNTY DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR: *James South* DATE: 5/31/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *Richard Beard* DATE: 5/31/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HENRIK COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *Wm. H. [Signature]* DATE: 5/30/95



NOTE:
 1. THE MARSHALEE DRIVE ROAD PLATFORM IS BEING CONSTRUCTED UNDER SITE DEVELOPMENT PLANS BY LDE, INC. REFER TO SDP-95-77 FOR ALL DETAILS OF MARSHALEE DRIVE GRADING AND EROSION CONTROL.



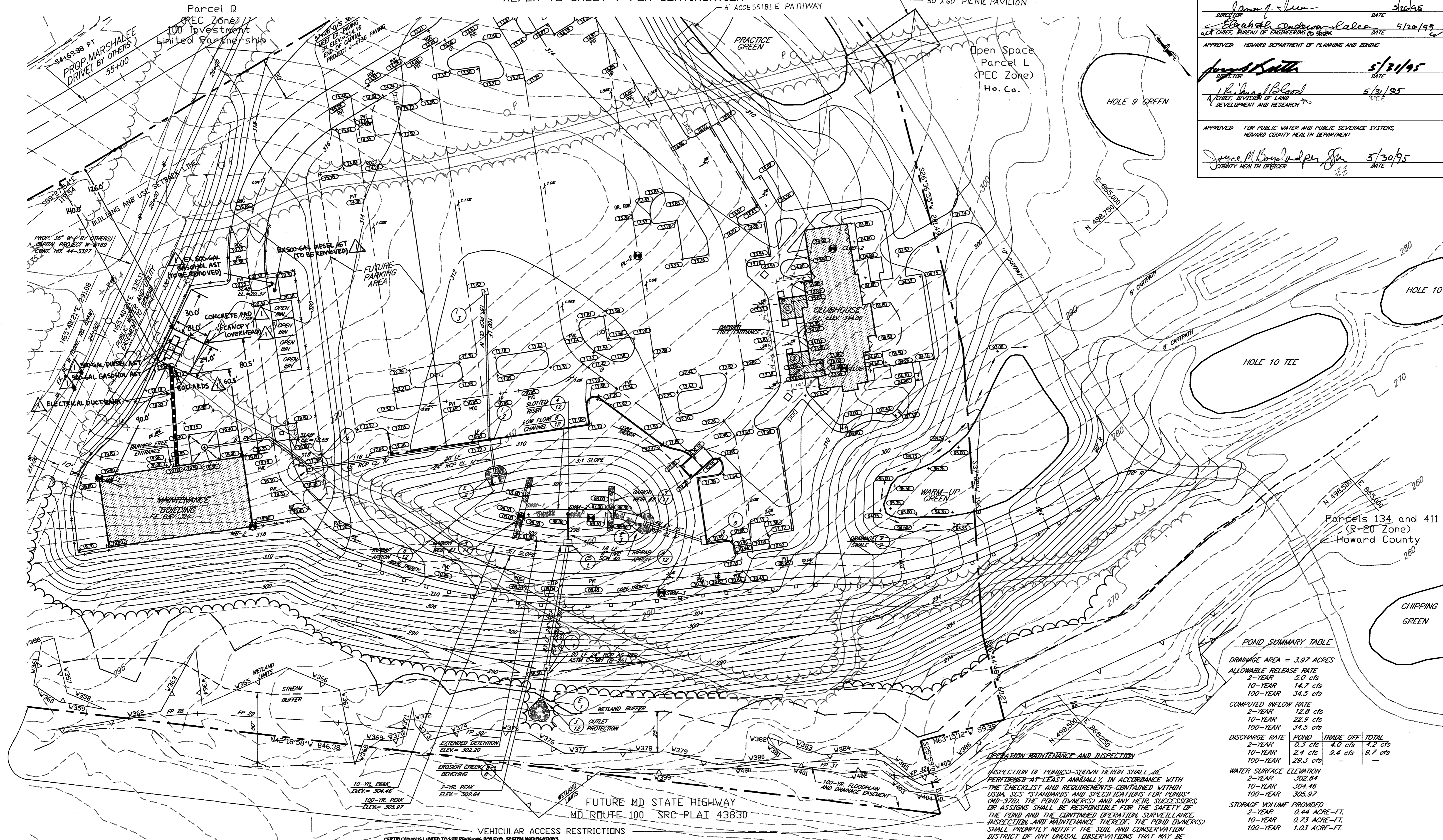
REFER TO SHEET 4 FOR CONTINUATION

D. [Signature] 5/17/95

	REVISIONS no. description date		prepared by RBA ENGINEERS-ARCHITECTS-PLANNERS 7164 COLUMBIA GATEWAY DRIVE SUITE 205 COLUMBIA, MARYLAND 21046 410/312-0966 OWNER: HENRIK COUNTY 3450 CLEVERHOUSE DRIVE ELLICOTT CITY, MARYLAND 21043	SCALE 1"=30' DRAWN: ELB CHECKED: JN PROJ. NO.: J1212 DATE: 5/11 SHEET: 5 SHEET REF.: OF 20 DRAWING FILE: 1212
	SITE LAYOUT AND UTILITIES PLAN CENTRE 9500, PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES 1 ST. ELECTION DISTRICT TAX MAP 52, CENSUS TRACT 6012A WATER CODE: 044 SEWER CODE: 050000 HENRIK COUNTY, MARYLAND SDP-95-92			

REFER TO SHEET 7 FOR CONTINUATION

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY HEALTH DEPARTMENT



POND SUMMARY TABLE

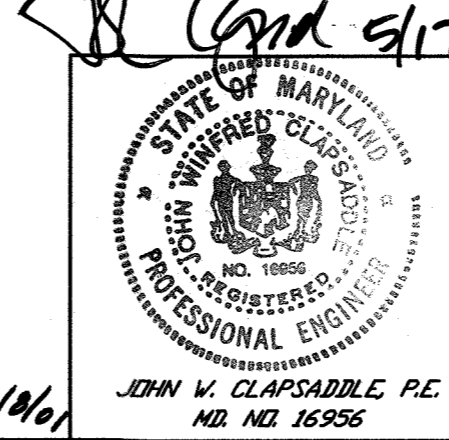
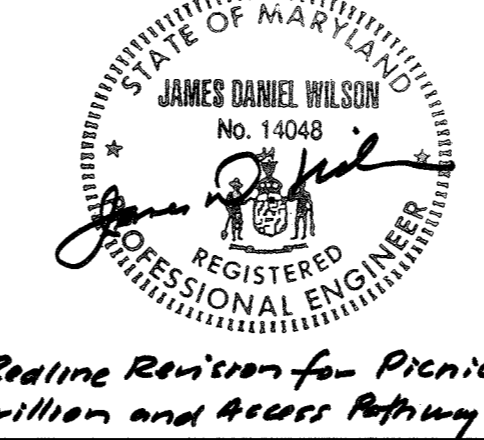
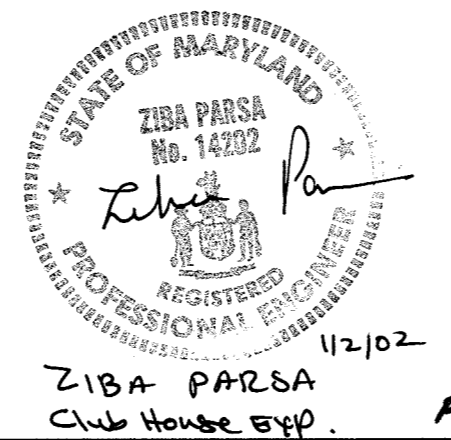
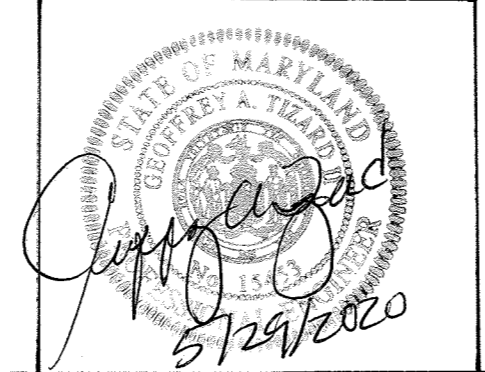
DRAINAGE AREA = 3.97 ACRES			
ALLOWABLE RELEASE RATE			
2-YEAR	5.0 cfs		
10-YEAR	14.7 cfs		
100-YEAR	34.5 cfs		
COMPUTED INFLOW RATE			
2-YEAR	12.8 cfs		
10-YEAR	22.9 cfs		
100-YEAR	34.5 cfs		
DISCHARGE RATE			
2-YEAR	0.3 cfs	TRADE OFF	TOTAL
10-YEAR	2.4 cfs	4.0 cfs	4.2 cfs
100-YEAR	29.3 cfs	9.4 cfs	9.7 cfs
WATER SURFACE ELEVATION			
2-YEAR	302.64		
10-YEAR	304.46		
100-YEAR	305.97		
STORAGE VOLUME PROVIDED			
2-YEAR	0.44 ACRE-FT.		
10-YEAR	0.73 ACRE-FT.		
100-YEAR	1.03 ACRE-FT.		

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF PONDS: SHOWN HEREIN SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS OBTAINED WITHIN USGA, JCS STANDARDS AND SPECIFICATIONS FOR PUNDS, AND THE POND OWNERS AND ANY THEIR SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNERS SHALL PROMPTLY NOTIFY THE SOIL AND CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING. OWNER SHALL ALSO FOLLOW THE DM SCHEDULE ON SHEET 13 OF 20.

- NOTES:**
1. POND PROVIDES WATER QUALITY BY EXTENDED DETENTION AND WATER QUANTITY CONTROL FOR THE 2- AND 10- YEAR STORMS.
 2. POND EMBANKMENT IS HAZARD CLASS "A".
 3. THE STORMWATER MANAGEMENT POND IS PRIVATE AND IS TO BE MAINTAINED BY THE OWNER.

VEHICULAR ACCESS RESTRICTIONS
 CERTIFICATION IS LIMITED TO SITE REVISIONS FOR FUEL SYSTEM MODIFICATIONS
 PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15463 EXPIRES ON DATE: 07/02/2021



Revisions

no.	description	date
1	ADDED PAVILION & PATH	1-18-01
2	ADDED ABOVE GROUND STORAGE TANKS AND ASSOCIATED FEATURES	5/2020

prepared by: **RBA ENGINEERS - ARCHITECTS - PLANNERS**
 7164 COLUMBIA GATEWAY DRIVE SUITE 205
 COLUMBIA, MARYLAND 21046
 410/212-0966
 owner: HOWARD COUNTY
 3430 COURTHOUSE DRIVE
 ELLICOTT CITY, MARYLAND 21043

GRADING AND DRAINAGE PLAN

CENTRE 9500, PARCEL K
 THE TIMBERS AT TROY GOLF COURSE
 CLUBHOUSE AND MAINTENANCE FACILITIES

SCALE	1"=30'
DRAWN	ELB
CHECKED	JWC
PROJ. NO.	JW12
DATE	5/16/95
SHEET	6
SHEET	RET.
OF	20
C-6	

1. ST. ELECTION DISTRICT
 TAX MAP 32, 220000 TRACT 0001
 WATER CODE, 204 SEVER CODE 2610000
 HOWARD COUNTY, MARYLAND
 SDP-95-92
 DRAWING FILE: 12E12PL1

APPROVED FOR PUBLIC WATER PUBLIC SEWERAGE SYSTEMS
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James J. Lee 5/20/95
DIRECTOR DATE

Robert R. ... 5/20/95
CHIEF, BUREAU OF ENGINEERING & SURVEYING DATE

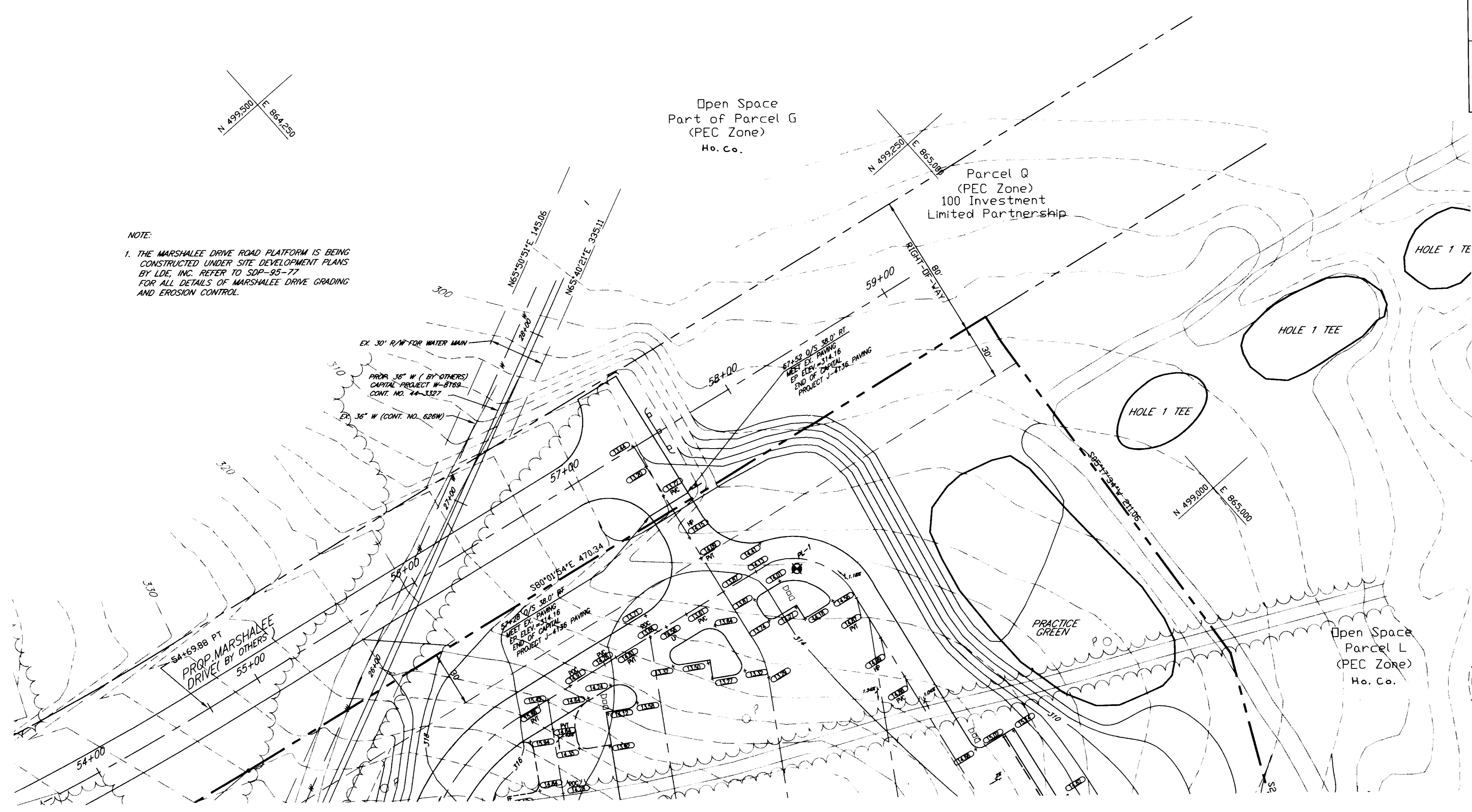
APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING

James S. ... 5/31/95
DIRECTOR DATE

Richard B. ... 5/31/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

James M. ... 5/30/95
COUNTY HEALTH OFFICER DATE

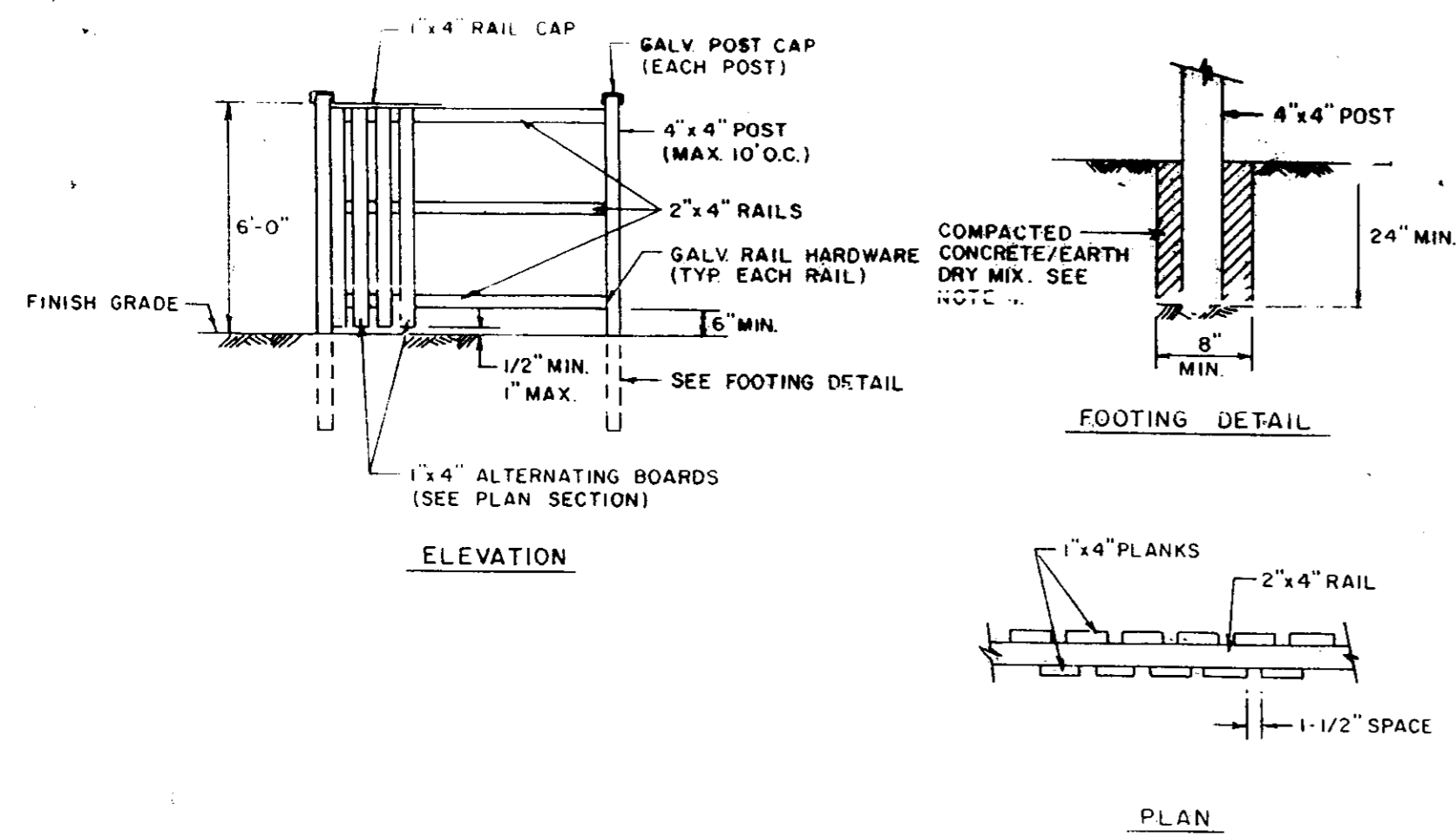


NOTE:
1. THE MARSHALEE DRIVE ROAD PLATFORM IS BEING CONSTRUCTED UNDER SITE DEVELOPMENT PLANS BY LDE, INC. REFER TO SDP-95-77 FOR ALL DETAILS OF MARSHALEE DRIVE GRADING AND EROSION CONTROL.

REFER TO SHEET 6 FOR CONTINUATION

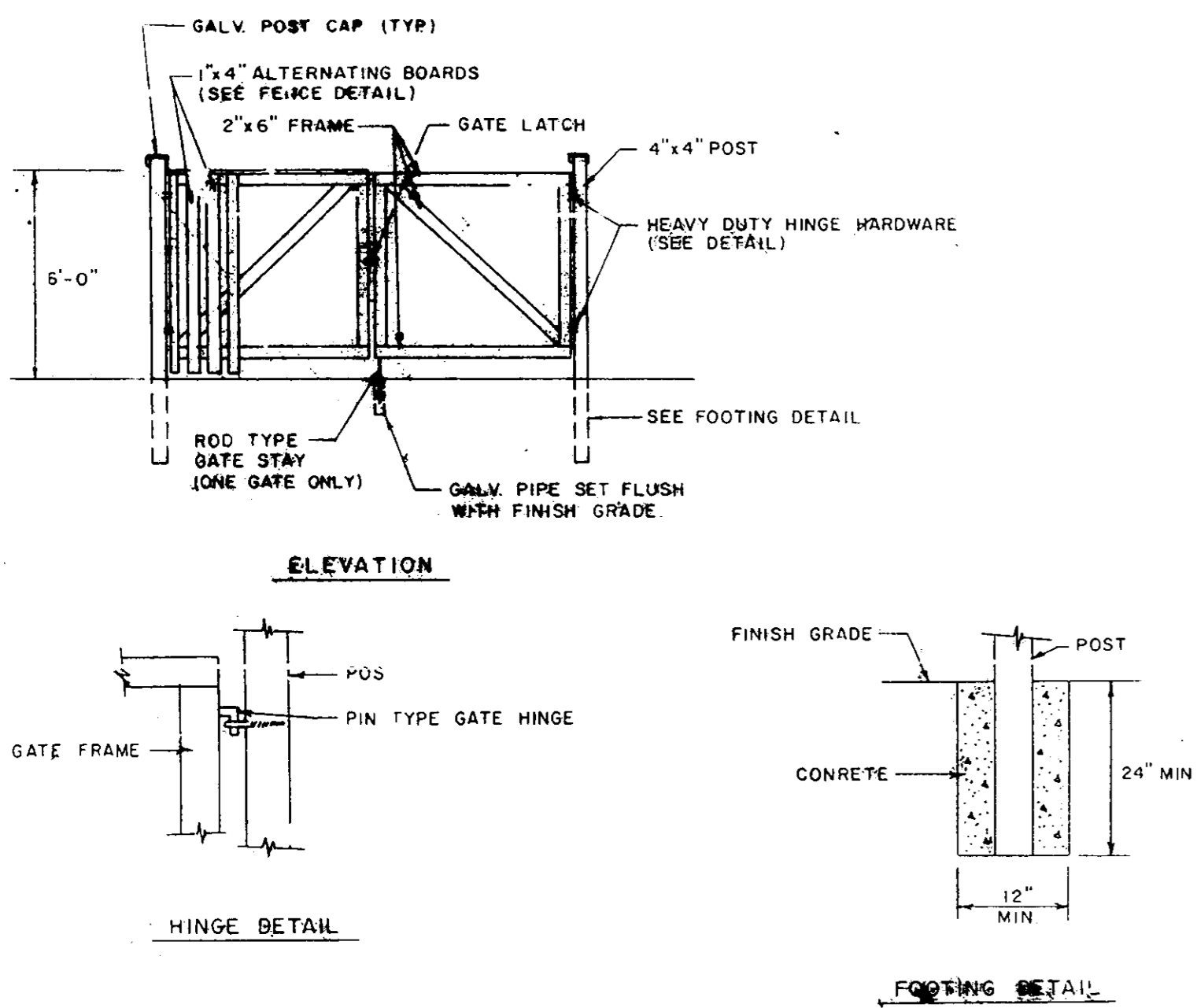
JD Lynch 5/17/95

	REVISIONS no. description date		prepared by RBA ENGINEERS - ARCHITECTS - PLANNERS 7164 COLUMBIA GATEWAY DRIVE SUITE 205 COLUMBIA, MARYLAND 21046 410-312-0965 OWNER: HOWARD COUNTY 3430 COURTHOUSE DRIVE ELLICOTT CITY, MARYLAND 21043	GRADING AND DRAINAGE PLAN CENTRE 9500, PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES	SCALE 1" = 30' DRAWN E.L.B. CHECKED J.W.C. PROJ. NO. J1212 DATE 5/16/95 SHEET 7 SHEET REF. OF 20 C-
	JOHN V. CLAPSADDE, P.E. NO. 16956			HOWARD COUNTY, MARYLAND 1 ST. ELECTION DISTRICT TAX MAP 95, CENSUS TRACT 00101 WATER CODE 304 SEWER CODE 9510000	SDP-95-92 DRAWING FILE: 1212PL



NOTES:
 1) ALL LUMBER SHALL BE CCA TREATED #2 OR BETTER.
 2) ALL HARDWARE AND NAILS SHALL BE GALVANIZED FOR CORROSION RESISTANCE.
 3) ASSEMBLE WITH APPROPRIATE SIZE NAILS OR FASTENERS.
 4) MIX SHALL CONSIST OF 50% CONCRETE MIX (DRY) AND EARTH BACKFILL POURED (WET) CONCRETE MAY BE SUBSTITUTED.

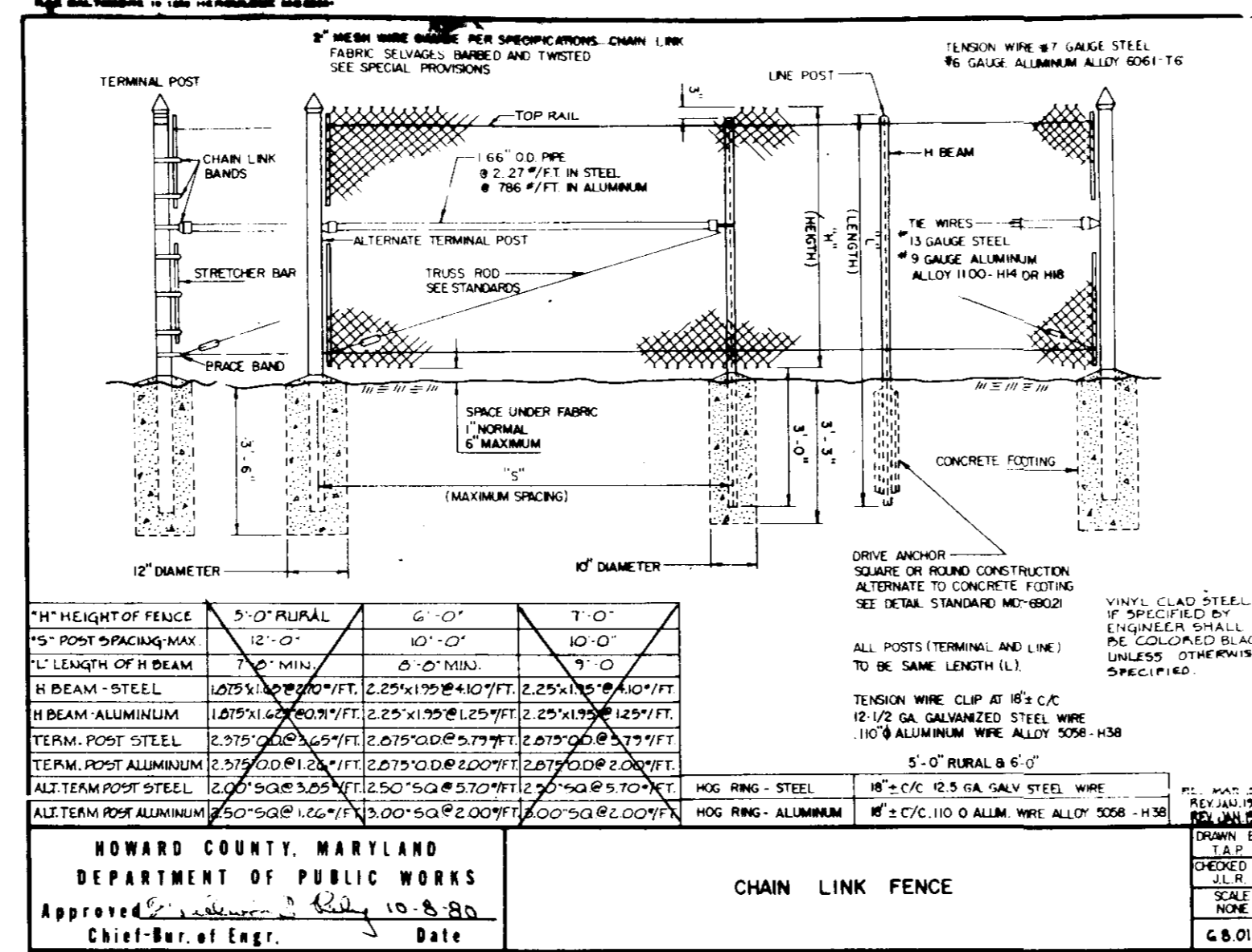
1 WOOD FENCE
 SCALE: SCALE



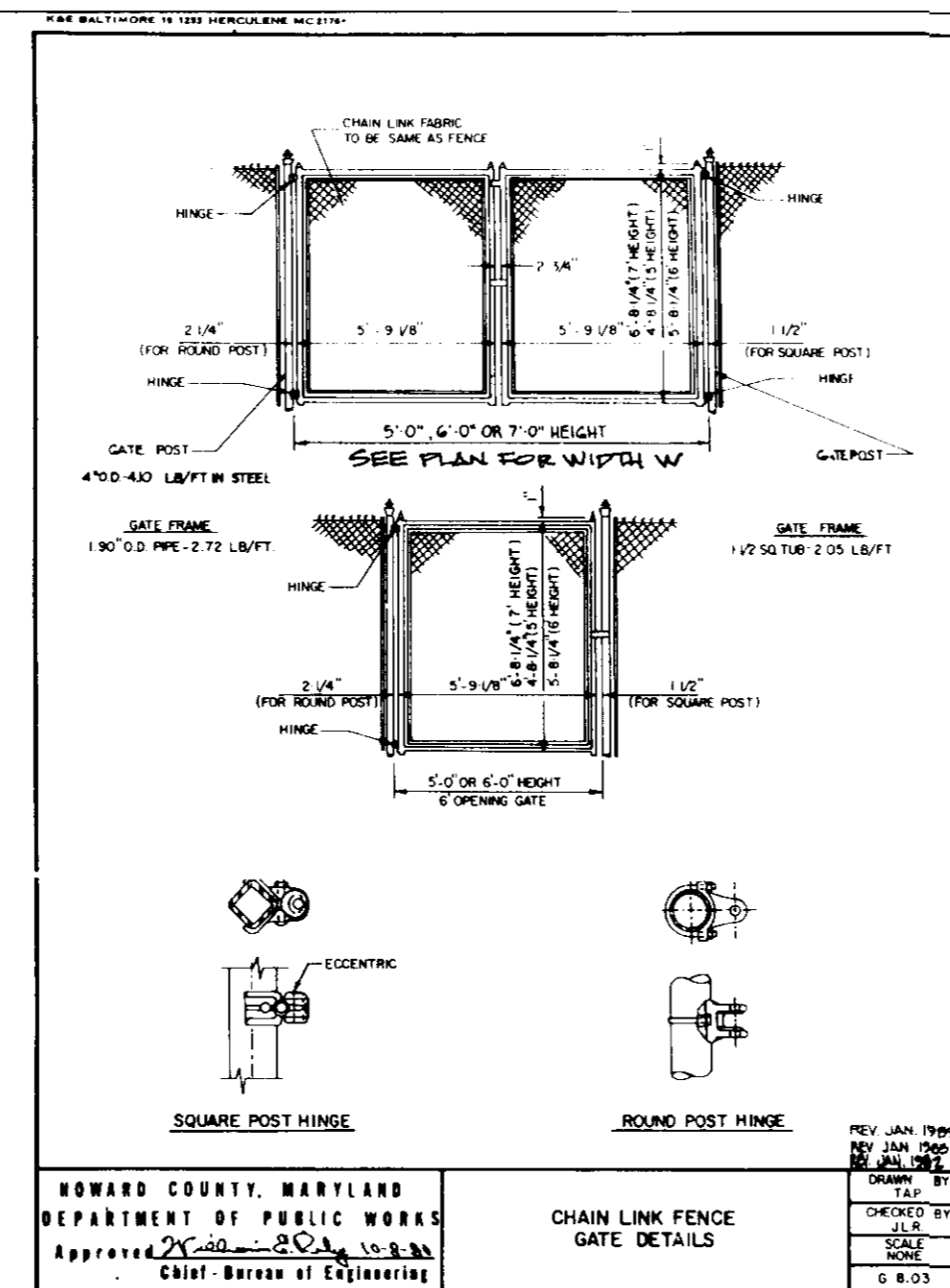
2 WOOD GATE
 SCALE: NTS

WETLAND TABLE			FLOODPLAIN TABLE		
W356 S 68° 07' 19" E	9.30'	W376 S 19° 22' 35" E	28.19'	FP28 S 53° 38' 02" E	54.84'
W357 S 27° 52' 53" W	38.90'	W377 S 50° 36' 38" E	21.90'	FP29 S 45° 55' 49" E	96.13'
W358 S 25° 59' 30" E	28.96'	W378 S 49° 08' 34" E	48.19'	FP30 S 43° 15' 30" E	207.04'
W359 N 39° 35' 04" W	32.18'	W379 S 35° 11' 21" E	36.93'	FP31 S 43° 13' 22" E	196.10'
W360 N 16° 02' 56" W	21.21'	W380 S 54° 16' 11" E	50.58'	FP32 S 73° 27' 20" E	11.57'
W361 N 51° 11' 18" E	29.82'	W381 N 16° 05' 27" W	18.66'		
W362 S 59° 45' 32" E	24.62'	W382 N 26° 07' 35" E	4.49'		
W363 N 69° 57' 15" E	49.99'	W383 S 31° 16' 57" E	40.50'		
W364 S 34° 28' 33" W	39.81'	W384 S 55° 28' 37" E	36.49'		
W365 S 73° 14' 37" E	63.61'	W385 S 10° 45' 54" E	33.73'		
W366 S 26° 16' 53" E	39.67'	W386 S 89° 53' 14" E	16.59'		
W367 S 29° 26' 16" W	38.56'	W399 S 48° 15' 46" E	54.37'		
W368 N 61° 23' 40" E	51.3'	W400 S 56° 19' 10" E	62.42'		
W369 S 44° 35' 55" E	17.20'	W401 S 41° 11' 03" E	51.91'		
W370 S 65° 15' 43" E	11.85'	W402 S 54° 04' 17" E	26.96'		
W371 N 54° 13' 33" E	20.15'	W403 S 12° 08' 46" E	24.53'		
W372 S 31° 59' 03" W	11.91'	W404 S 47° 05' 54" E	17.55'		
W373 S 02° 30' 36" W	13.88'	W405 S 68° 46' 33" E	11.07'		
W374 S 65° 41' 00" E	30.49'				
W375 S 43° 40' 16" E	40.41'				

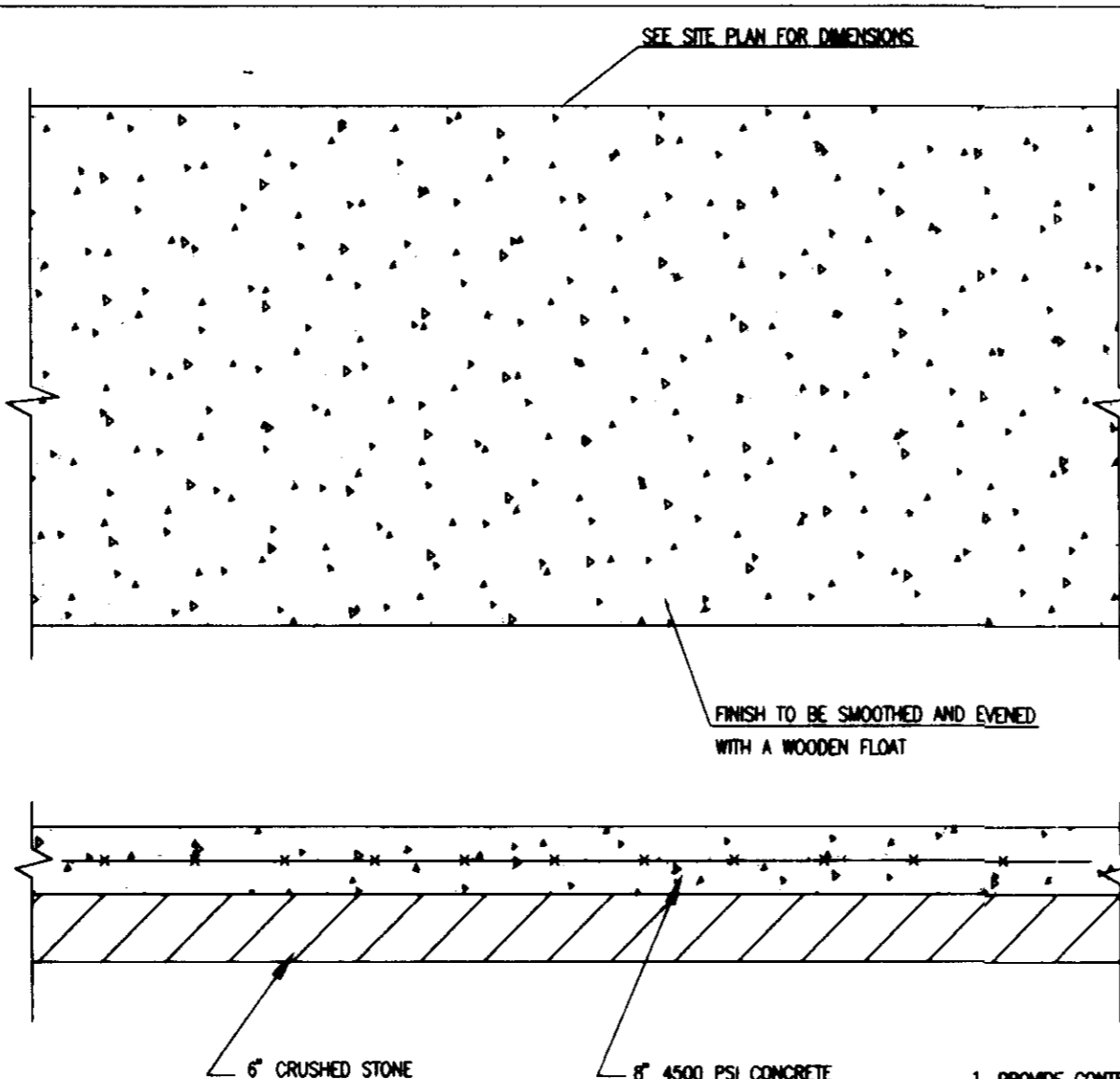
3 TABLE OF VALUES
 SCALE: NTS



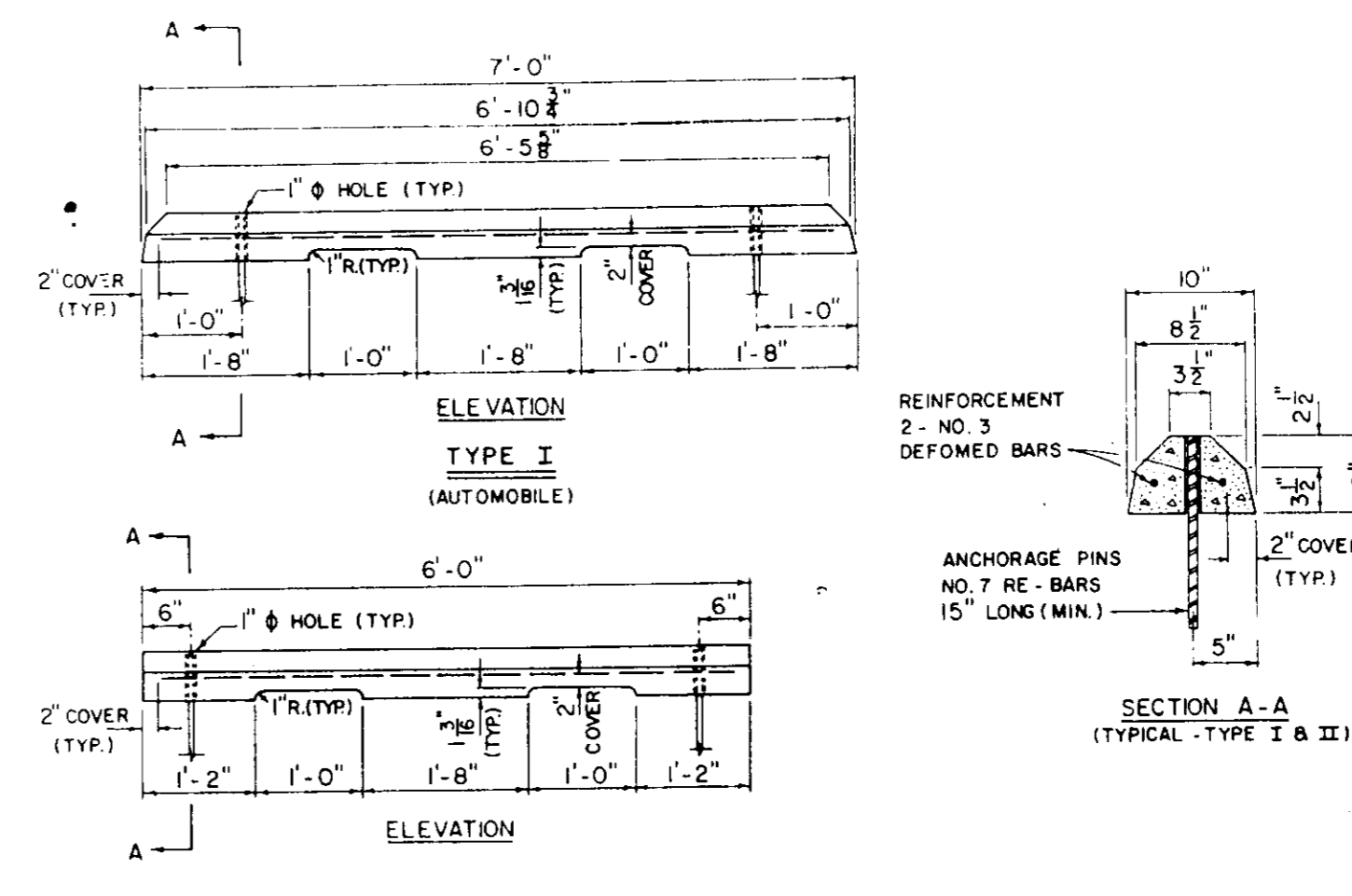
4 CHAIN LINK FENCE
 SCALE: SCALE



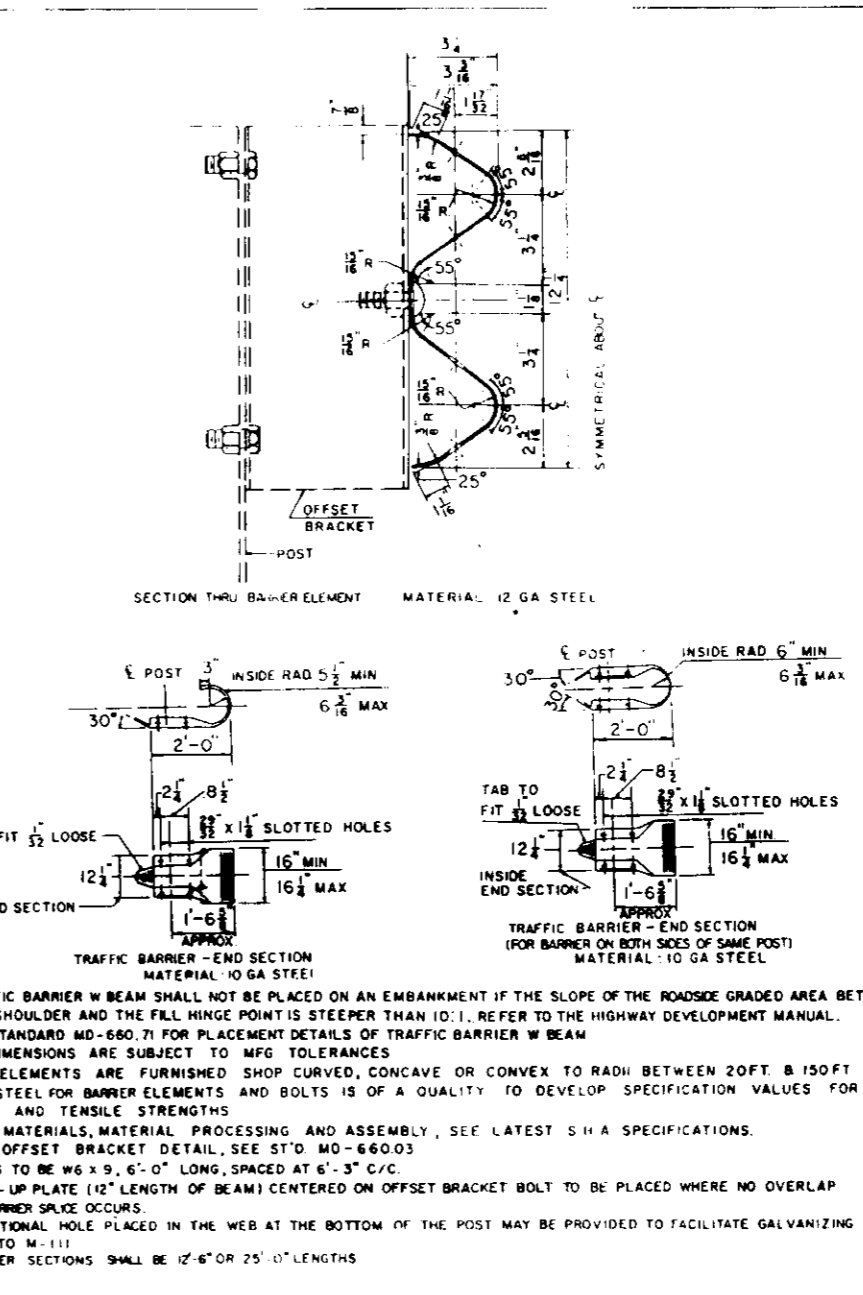
5 DOUBLE SWING GATE
 SCALE: NTS



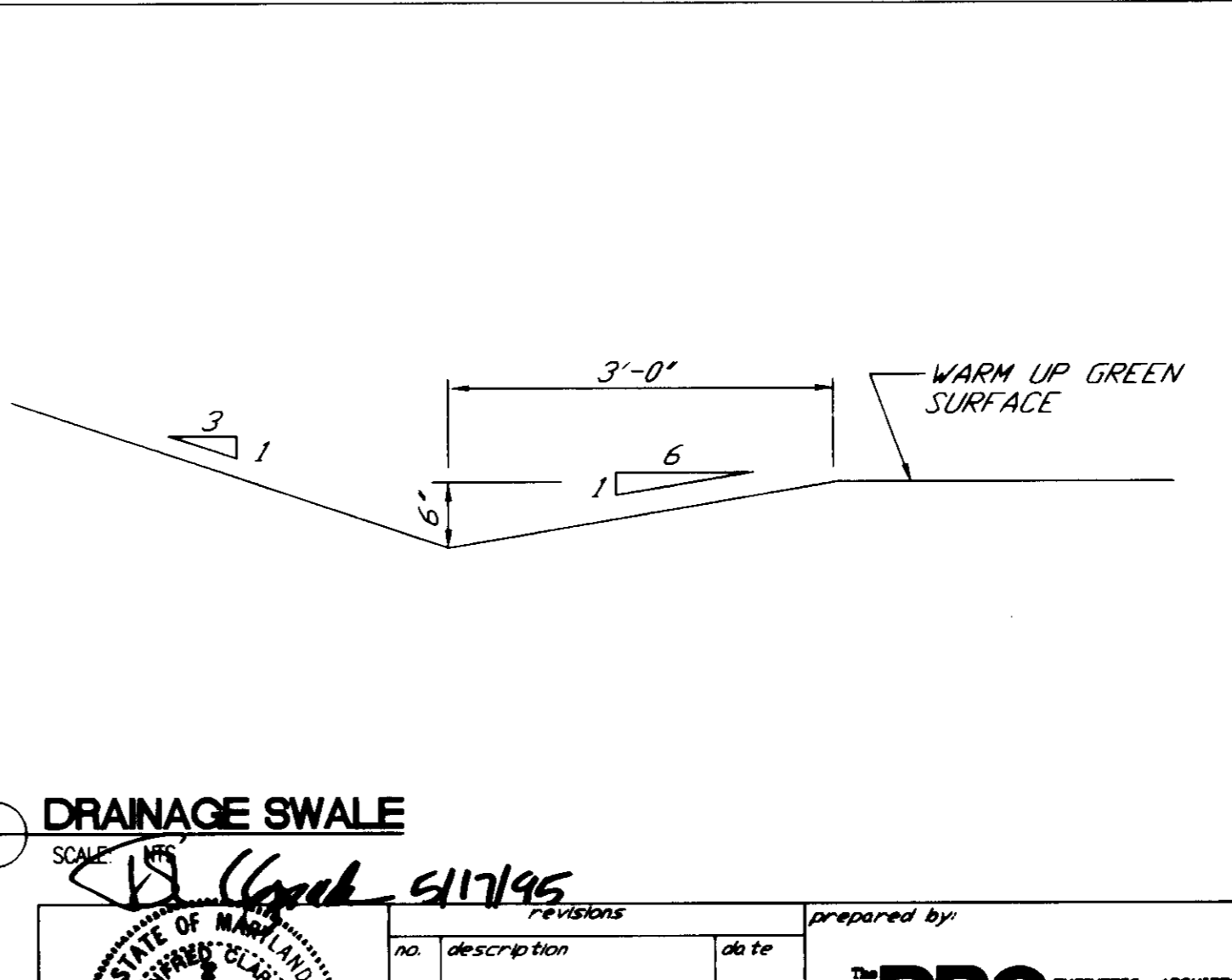
6 CONCRETE PAD
 SCALE: NTS



7 CONCRETE WHEEL STOP
 MDOT SHA STD. NO. MD-725.01
 SCALE: NTS



8 TRAFFIC BARRIER
 MDOT SHA STD. NO. MD-660.01
 SCALE: NTS

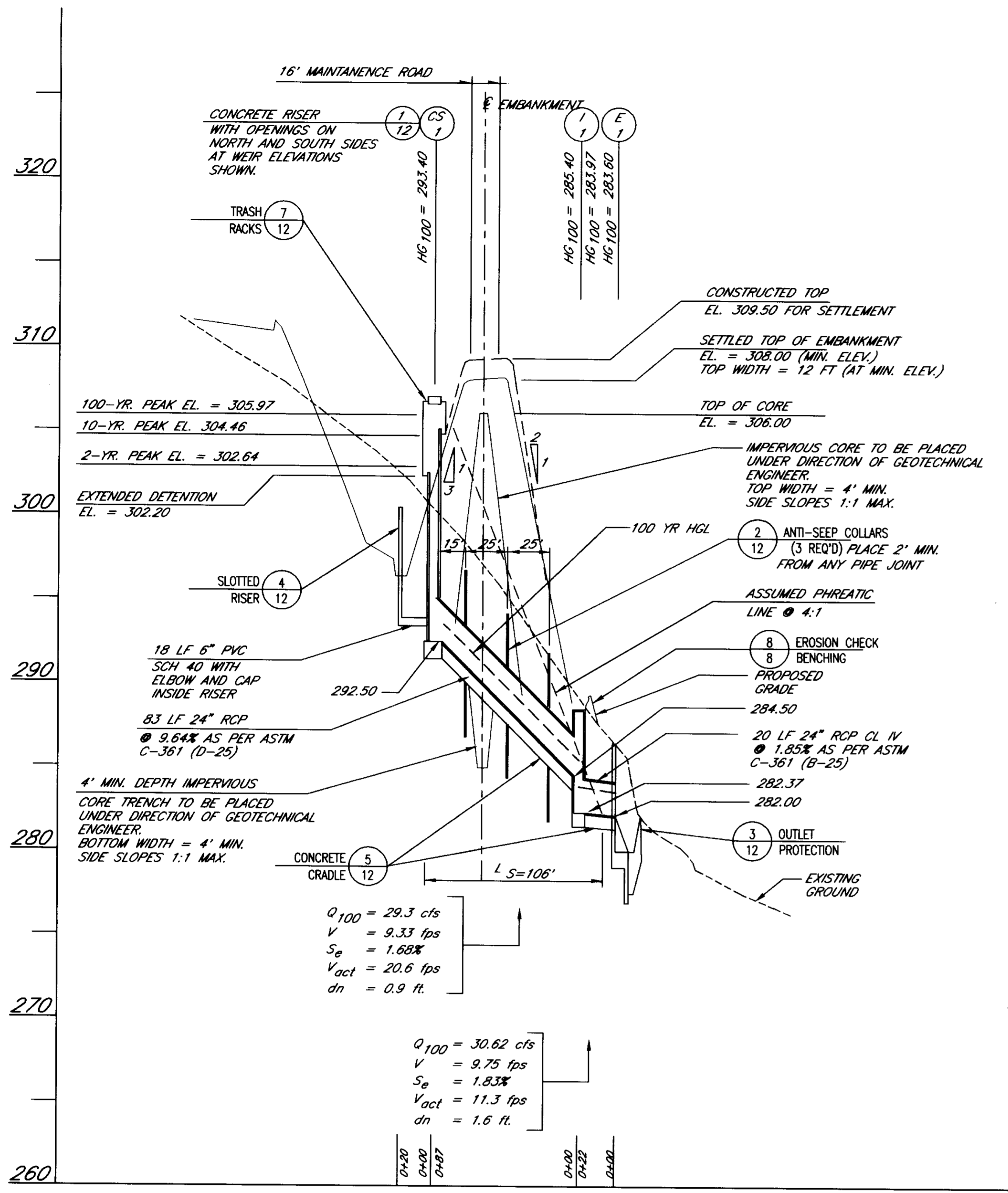


9 DRAINAGE SWALE
 SCALE: NTS

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Director: James J. ... DATE: 5/20/95
 Approved: Elizabeth Robinson ... DATE: 5/16/95
 Approved: Howard County Department of Planning and Zoning
 Approved: Richard Blouel ... DATE: 5/21/95
 Approved: Joseph M. ... DATE: 5/30/95

STATE OF MARYLAND PROFESSIONAL ENGINEERS
 JOHN V. CLAPSADLE, P.E.
 7164 COLUMBIA GATEWAY DRIVE SUITE 205
 COLUMBIA MARYLAND 21046
 410-312-0566

SITE DETAILS
 CENTRE 9500 PARCEL K
 THE TIMBERS AT TROY GOLF COURSE
 CLUBHOUSE AND MAINTENANCE FACILITIES
 SCALE: AS SHOWN
 DRAWN: ELD
 CHECKED: JWC
 PROJ. NO: J212
 DATE: 5/16/95
 SHEET: 9
 SHEET REF.:
 OF: 20
 C-9
 SDP-95-92
 DRAWING FILE: 121212

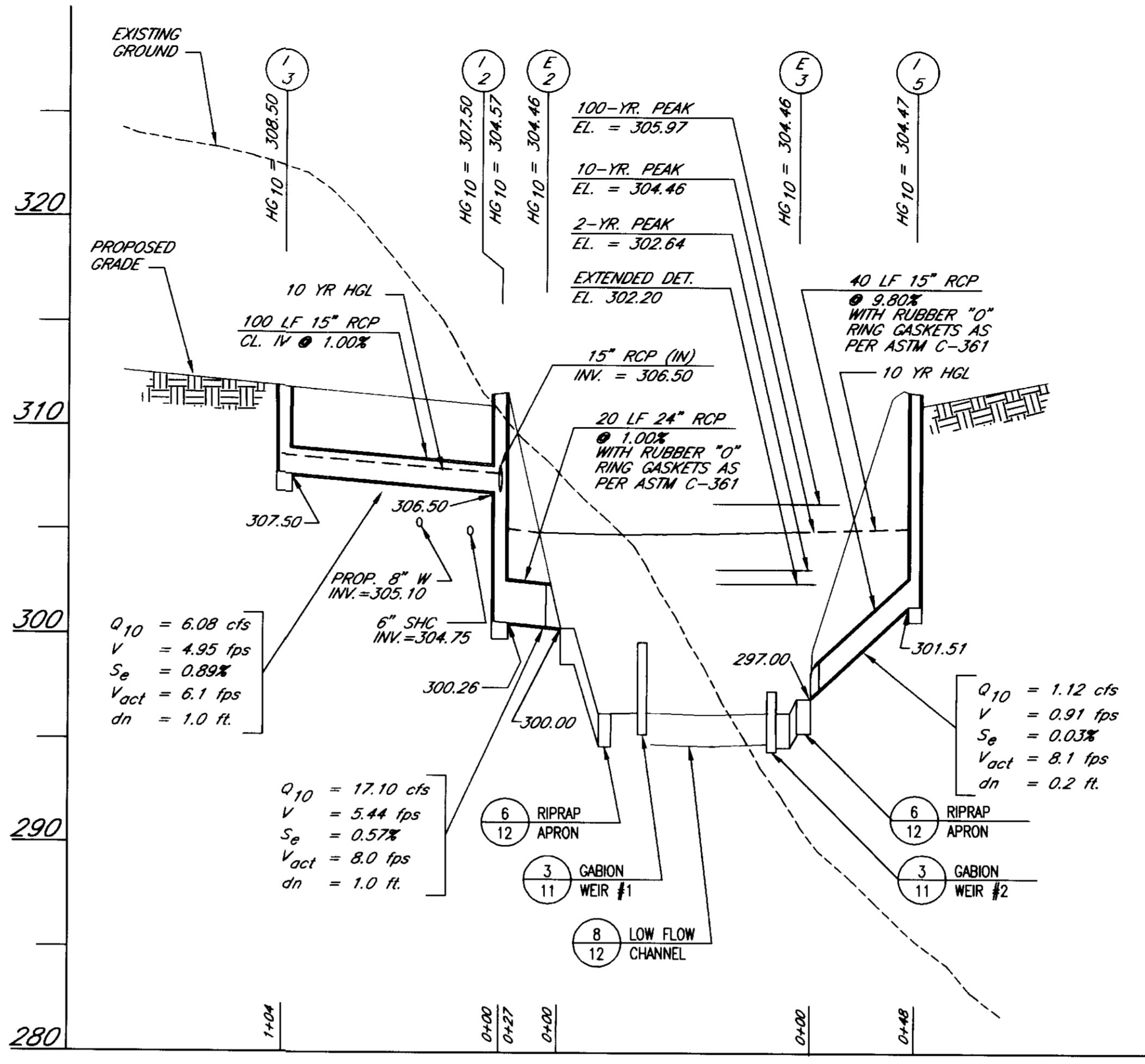


1 PRINCIPAL SPILLWAY PROFILE
SCALE: HORIZ: 1"=50' VERT: 1"=5'

PIPE SCHEDULE 1

SIZE	TYPE	LENGTH
15"	RCP CL IV	216 LF
15"	RCP ASTM C-361	40 LF
24"	RCP CL IV	23 LF
24"	ASTM C-361 (D-25)	83 LF
24"	ASTM C-361 (B-25)	20 LF

- NOTES:
- PIPE SCHEDULE IS GIVEN FOR STORM SEWER PIPE ONLY. REFER TO PROFILES FOR ADDITIONAL PIPE QUANTITIES.
 - ALL PIPE SHALL BE LAID ON A SHAPED SUBGRADE AS PER HCDPW STD. G2.01 UNLESS NOTED OTHERWISE.

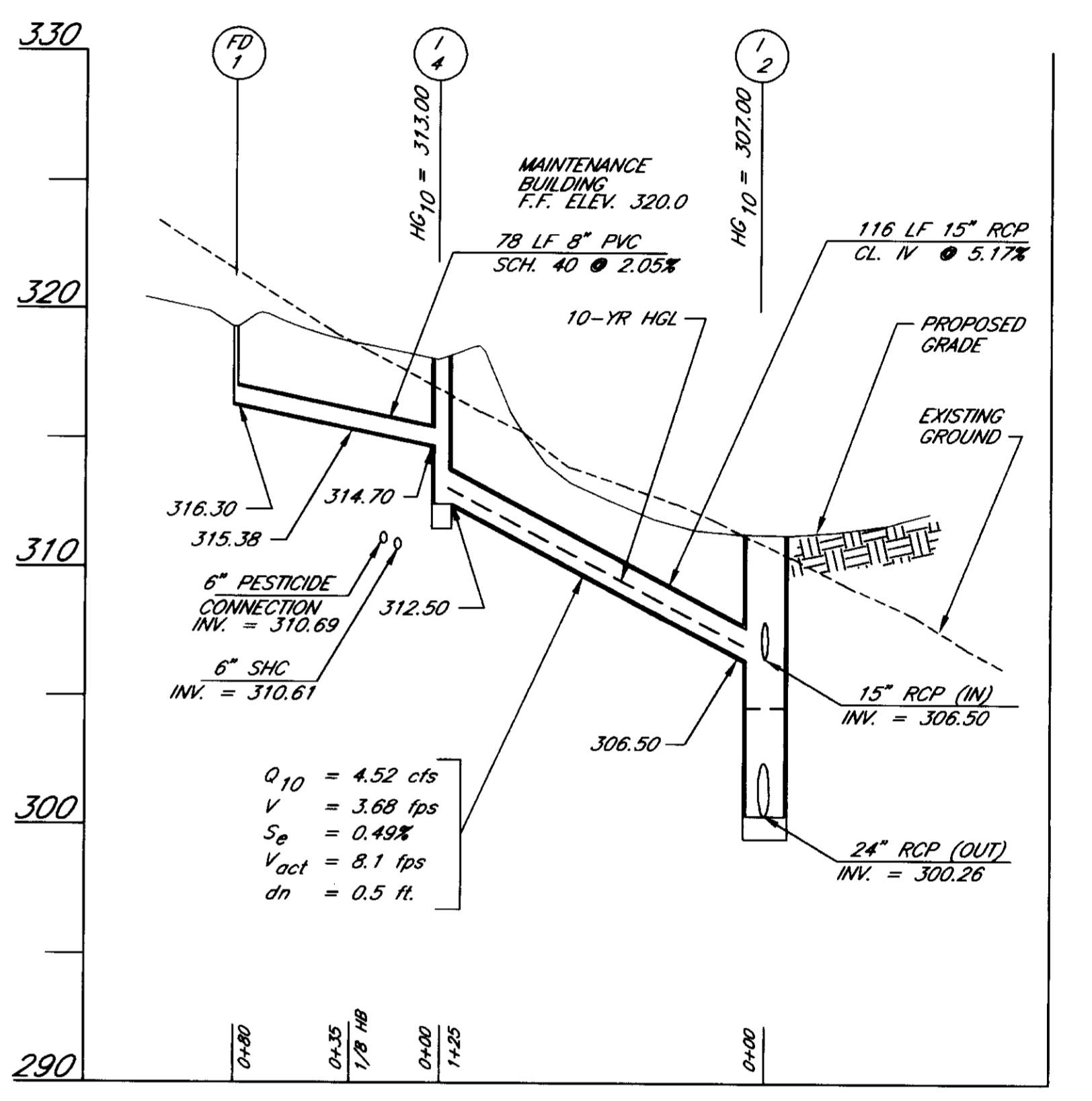


2 STORM DRAIN PROFILE
SCALE: HORIZ: 1"=50' VERT: 1"=5'

STRUCTURE SCHEDULE

NUMBER	TYPE	INVERT		TOP ELEVATION		SIZE	REMARKS
		IN	OUT	UPPER	LOWER		
I-1	PRECAST MANHOLE	284.50	282.37	288.50	-	4'-0"	HCDPW STD G 5.12 ②
I-2	A-15 INLET	306.50(2)	300.26	311.22	311.22	W=3'-0"	HCDPW STD SDA.02 ③
I-3	E INLET	-	307.50	311.62	-	2'-6"x4' 1/2"	HCDPW STD SDA.21
I-4	YARD INLET	-	312.50	317.70	-	24"	HCDPW STD SDA.14
I-5	A-5 INLET	-	301.51	311.24	311.12	W=3'-0"	HCDPW STD SDA.01
E-1	END WALL	-	282.00	288.50	-	④	HCDPW STD SDA.11(60")
E-2	END SECTION	-	300.00	-	-	24"	HCDPW STD SDA.51(24")
E-3	END SECTION	-	297.00	-	-	15"	HCDPW STD SDA.51(15")
CS-1	CONTROL STRUCTURE	⑤	⑤	⑤	⑤	⑤	SEE NOTE 5
FD-1	FLOOR DRAIN	-	316.30	319.30	-	⑥	SEE NOTE 6

- NOTES:
- ALL INLETS ARE HOWARD COUNTY DPW STANDARDS UNLESS NOTED OTHERWISE. INLETS MAY BE PRE-CAST.
 - PROVIDE GRATED MANHOLE LID - NEEVAH R-2390, TYPE C GRADE.
 - MODIFY LENGTH TO 16'-0".
 - USE END WALL SPECIFICATIONS FOR D=60" SET INVERTS AS SHOWN ON PLANS.
 - SPECIAL DESIGN - SEE DETAILS ON SHEET 12
 - PROVIDE STANDARD 4 INCH FLOOR DRAIN.



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

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR: *James J. Lee* DATE: 5/26/95
 DEPUTY CHIEF: *Robert Anderson* DATE: 5/26/95
 APPROVED: *James J. Lee* DATE: 5/31/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *James J. Lee* DATE: 5/31/95

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

James M. Anderson DATE: 5/30/95
 COUNTY HEALTH OFFICER

STATE OF MARYLAND PROFESSIONAL ENGINEERS

JOHN V. CLAPSADLE, P.E. NO. 16256

revisions: *2/26/95*

prepared by: *RBA*

7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410-312-0965

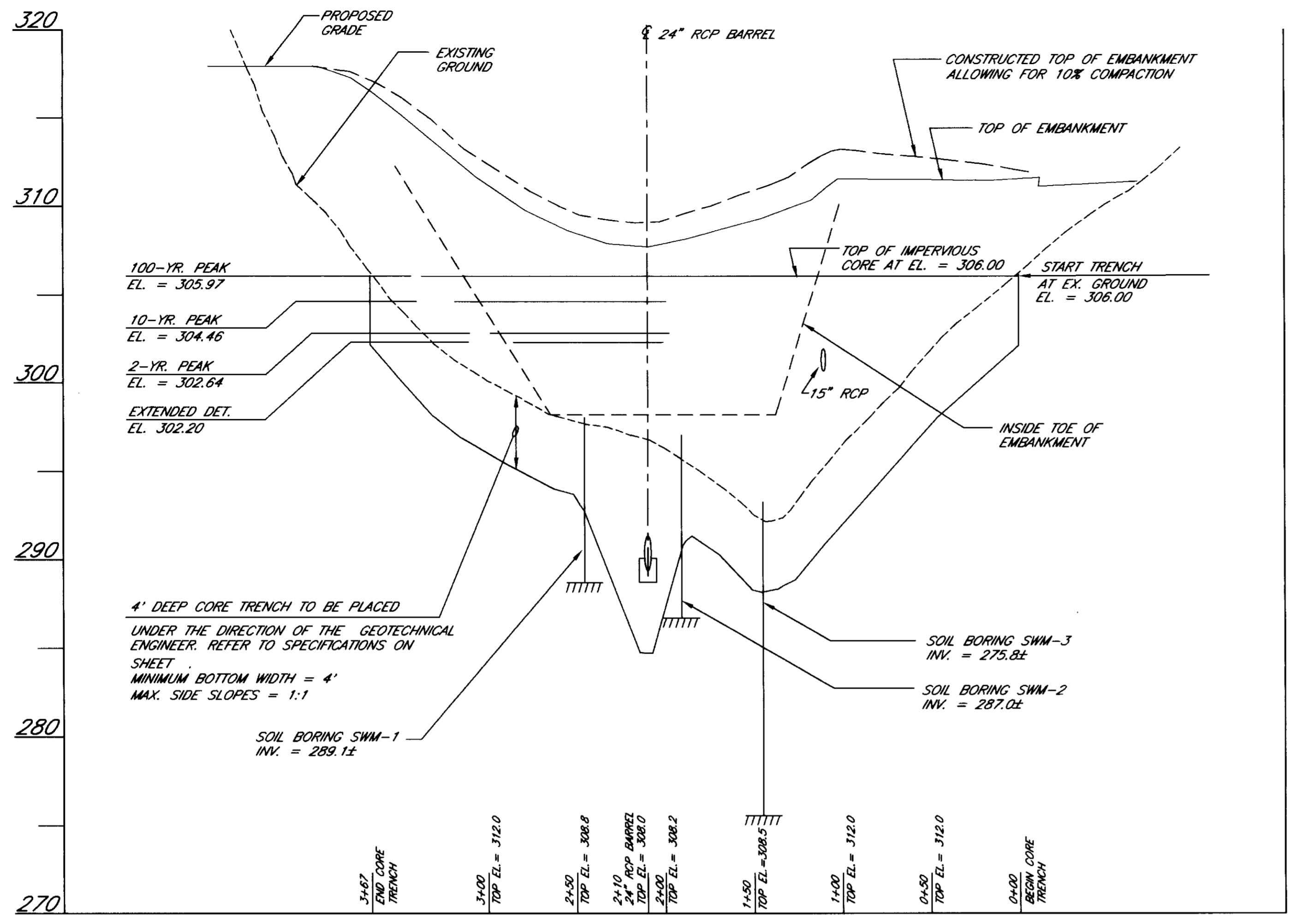
PROFILES

CENTRE 9500 PARCEL K
THE TIMBERS AT TROY GOLF COURSE
CLUBHOUSE AND MAINTENANCE FACILITIES

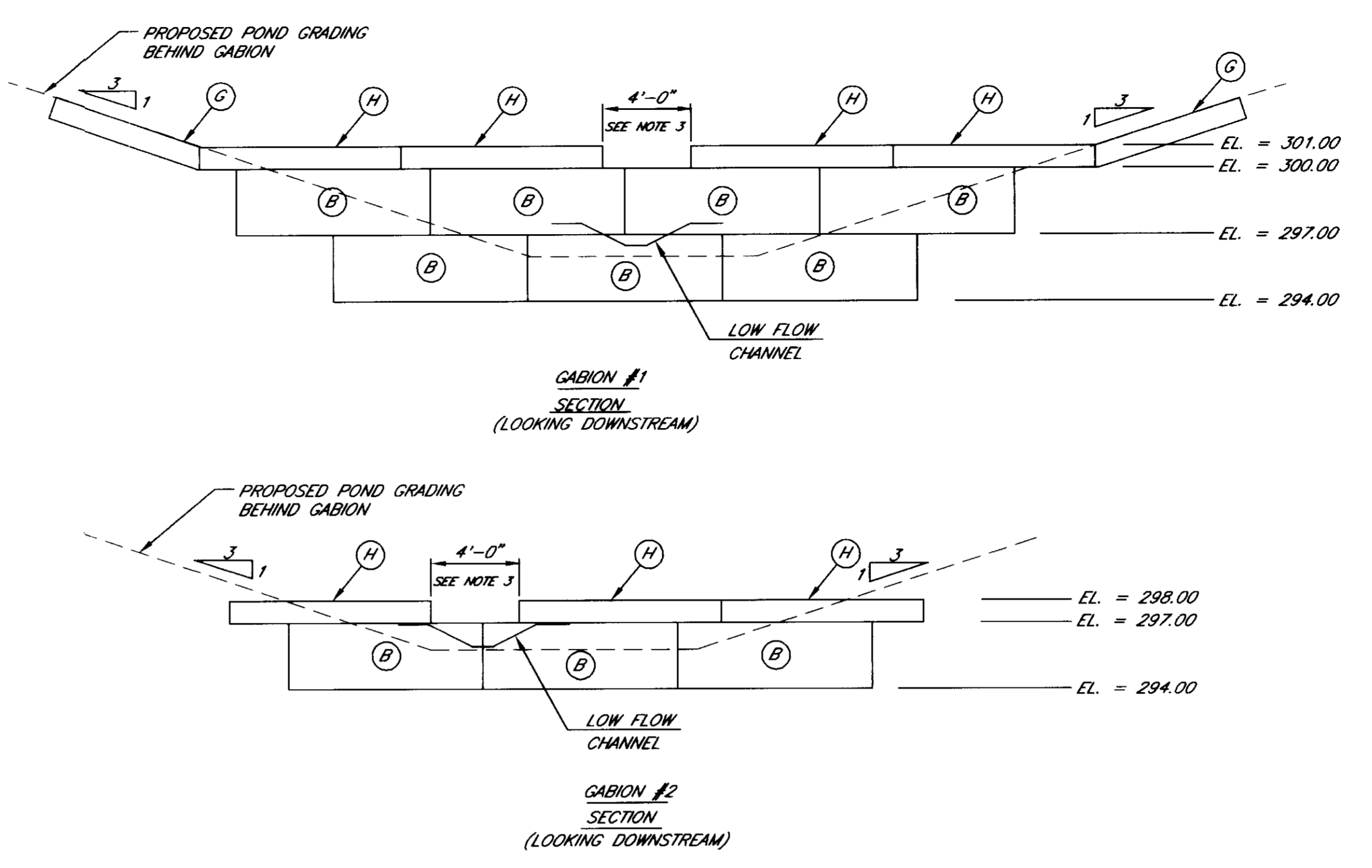
SCALE AS SHOWN

DRAWN	CHECKED
ELB	JWC
PROJ. NO.	DATE
J1212	5/16/95
SHEET	SHEET
10	REF.
OF	C-10
20	

DRAWING FILE: 1212PRO



1 PROFILE THROUGH CENTERLINE EMBANKMENT
SCALE: HORIZ: 1"=50' VERT: 1"=5'

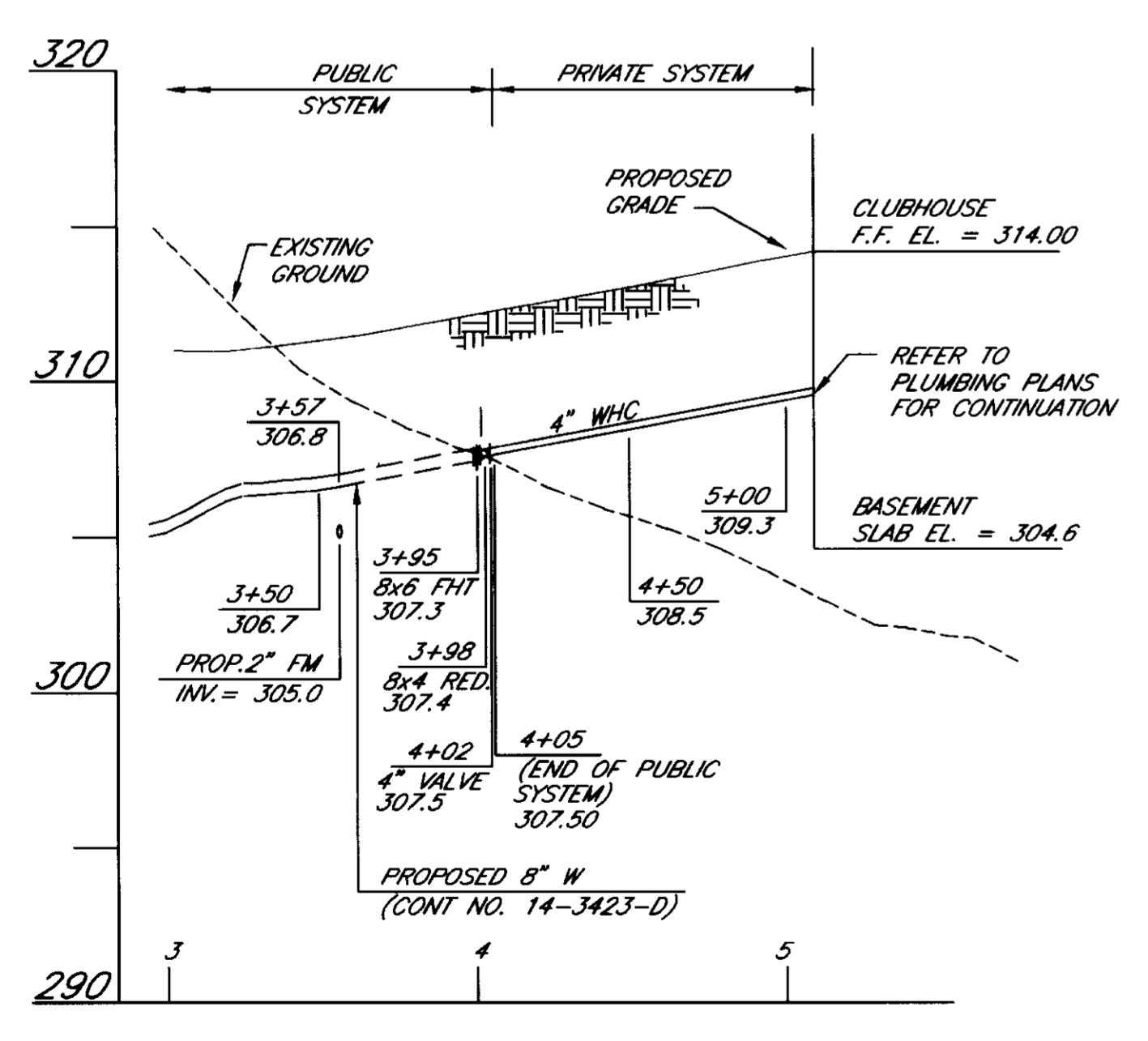


SIZE CHART

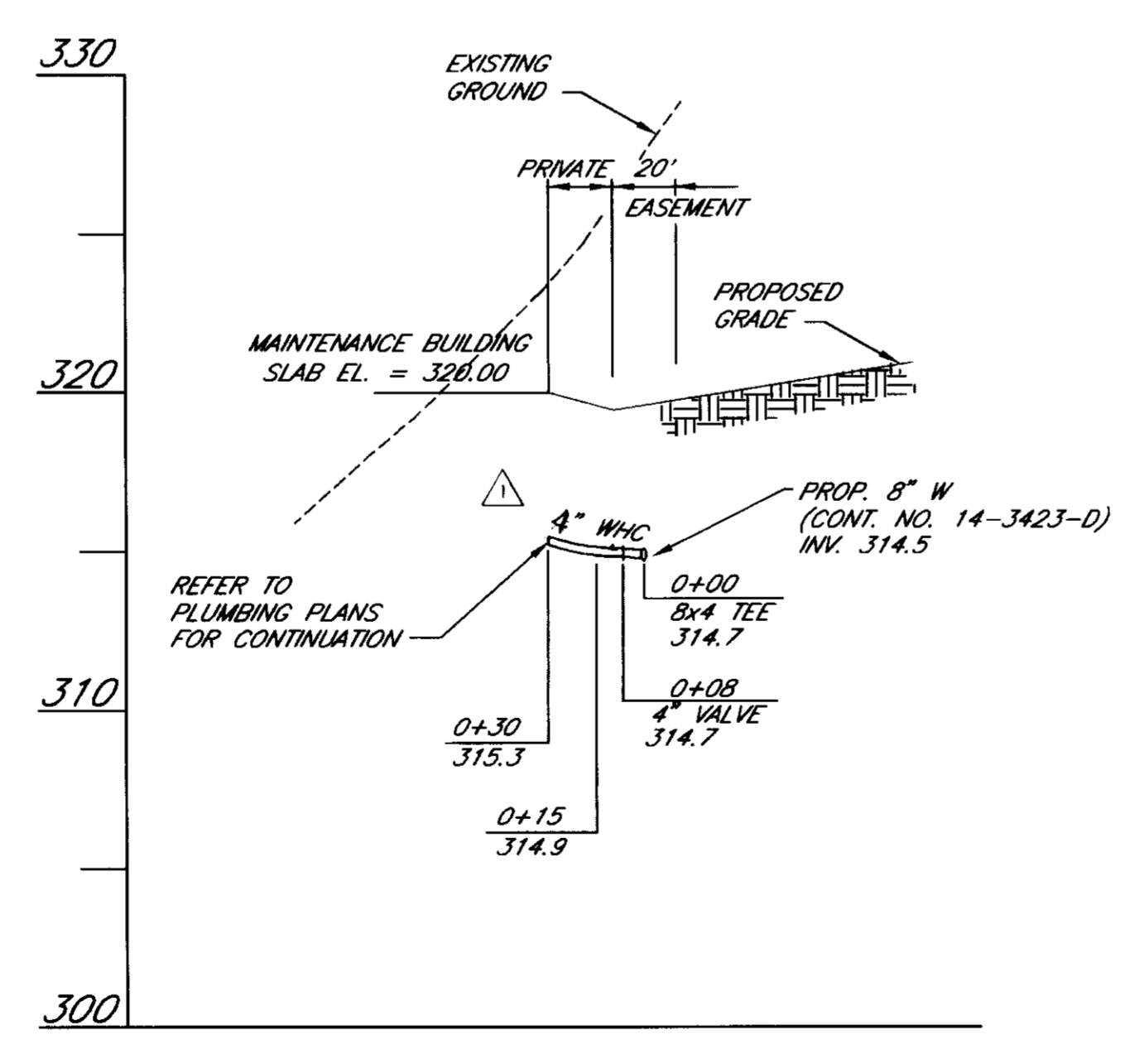
LETTER CODE	LENGTH (ft)	WIDTH (ft)	HEIGHT (ft)	QUANTITY
B	9	3	3	10
H	9	3	1	7
C	6	3	1	2

- NOTES:
- GABIONS SUPPLIED BY MACCAFERRI GABIONS INC. 10303 GOVERNOR LANE BLVD. WILLIAMSPORT, MD. 21795-9602 PHONE: (301) 223-6910
 - ALL GABIONS SHALL BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS.
 - POSITION WEIR OPENING TO BE CENTERED OVER LOW FLOW CHANNEL.

3 GABION WEIRS
SCALE: NTS

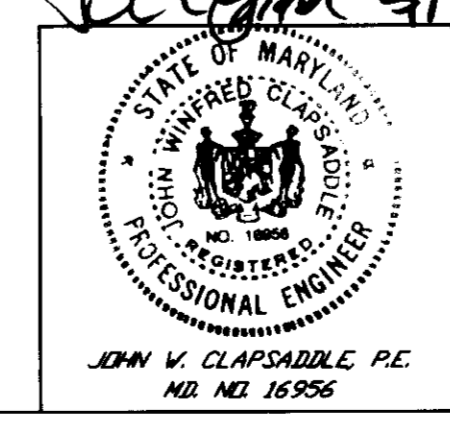


2 CLUBHOUSE BUILDING WHC PROFILE
SCALE: HORIZ: 1"=50' VERT: 1"=5'



4 MAINTENANCE BUILDING WHC PROFILE
SCALE: HORIZ: 1"=50' VERT: 1"=5'

John V. Clapsaddle 5/17/95



DESCRIPTION: MAINTENANCE BLDG. WHC SIZE

DATE: 6/95

prepared by: RBA ENGINEERS - ARCHITECTS - PLANNERS
7164 COLUMBIA GATEWAY DRIVE SUITE 205 COLUMBIA, MARYLAND 21046 410/312-0966

PROFILES

CENTRE 9500 PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES

1 ST. ELECTION DISTRICT THE MAP IS CORRECT SUBJECT SHALL WATER CODE: 204 SILVER CODE: 2610000

SCALE: AS SHOWN

DRAWN: ELB

CHECKED: JVC

DATE: 5/16/95

SHEET: 11

SHEET REF: C-11

OF: 20

DRAWING FILE: 1212PR01

APPROVED FOR PUBLIC WATER PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR: James J. Lewis 5/26/95

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: Joyce M. Bondarper 5/30/95

STORMWATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-37B. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

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

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

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

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, VOID, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVELLED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT RUBBER TIRE OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIALS SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL, IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 4% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

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

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY SPECIFIED TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A WITH WATER TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THE FOLLOWING COATINGS OR AN APPROVED EQUAL MAY BE USED: NEXON, PLASTICOTE, BLAC-KLAD, AND BETH-CO. COATED CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M-245 AND M-246.

MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.

MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS.

COUPLING BANDS - ANTI-SEEP COLLARS, END SECTIONS, ETC. MUST BE COMPOSED OF THE SAME MATERIAL AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT 24 MILS IN THICKNESS.

CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DIPLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24" IN DIAMETER. FLANGES ON BOTH ENDS OF THE PIPE, A 12" WIDE STANDARD LAP TYPE BAND WITH 12" WIDE HUGGER TYPE BAND WITH 12" WIDE HUGGER TYPE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2" GREATER THAN THE CORRUGATION DEPTH. PIPES 24" IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24" LONG ANNULAR CORRUGATED BAND USING RODS AND LUGS. A 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED ON THE END OF EACH PIPE FOR A TOTAL OF 24".

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.

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

SHALL EQUAL OR EXCEED ASTM DESIGNATION C-261.

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 902, MIX NO. 3.

ROCK RIP-RAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 90102.

THE RIP-RAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIP-RAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS. FILTER CLOTH SHALL BE PLACED UNDER ALL RIP-RAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET STRUCTURE AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN

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A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO PUMPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

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

EROSION AND SEDIMENT CONTROL

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

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James P. Law 5/22/95
DIRECTOR DATE

Robert Robinson 5/22/95
ACT. CHIEF BUREAU OF ENGINEERING CO. 5/22/95
DATE

APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING

Joseph Smith 5/21/95
DIRECTOR DATE

Richard Blood 5/31/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

James M. Boyd 5/30/95
HEALTH OFFICER DATE

* REFER TO GEOTECHNICAL REPORT BY MKM ENGINEERS, INC. DATED MARCH 1995 FOR ADDITIONAL REQUIREMENTS CONCERNING CONSTRUCTION OF STORMWATER MANAGEMENT POND EMBANKMENT.

MKM

DRILLING LOG

HOLE NO.: SWM-3
HLEV.:
STA.:

Client: Rainmaker/Kilian L.L.C.
Project: Howard County Golf Course Project Number: 950201
Location: Howard County, Maryland

Date: Started 02/24/95 Completed 02/24/95 Driller: John Shindedecker
Sampler: Dia 2" ins. Type SS Hammer Wt. 140 lbs. Fall 30 ins.
Casing: Dia 3 1/4" ins. Type HSA Hammer Wt. lbs. Fall ins.
Water/Mud used in drilling Yes No X Number Other

SOIL BORING LOGS

MKM

DRILLING LOG

HOLE NO.: SWM-1
HLEV.: 304.1
STA.:

Client: Rainmaker/Kilian L.L.C.
Project: Howard County Golf Course Project Number: 950201
Location: Howard County, Maryland

Date: Started 02/24/95 Completed 02/24/95 Driller: John Shindedecker
Sampler: Dia 2" ins. Type SS Hammer Wt. 140 lbs. Fall 30 ins.
Casing: Dia 3 1/4" ins. Type HSA Hammer Wt. lbs. Fall ins.
Water/Mud used in drilling Yes No X Number Other

Elev. (Fl.)	Depth (Fl.)	Material Description	Sample No.	Blows/0.5'	N	Rec (Fl.)
305.6	0.0	TOP SOIL				
301.1	4.5	Brown SANDY SILT damp (S-L)				
	4.0	Dense to very dense reddish brown and gray CLAYEY SAND (SC)	1	3.5	05-11-20	31 1.0
	8.0		2	8.5	10-18-25	43 0.8
	14.0		3	13.5	18-26-47	50+ 0.9
289.1	15.0	TERMINATION DEPTH 15.0'				

Water Depth: During Drilling - Ft.; Upon Compl. - Ft.; - Hrs. after Compl.

MKM

DRILLING LOG

HOLE NO.: SWM-2
HLEV.: 302.0
STA.:

Client: Rainmaker/Kilian L.L.C.
Project: Howard County Golf Course Project Number: 950201
Location: Howard County, Maryland

Date: Started 02/24/95 Completed 02/24/95 Driller: John Shindedecker
Sampler: Dia 2" ins. Type SS Hammer Wt. 140 lbs. Fall 30 ins.
Casing: Dia 3 1/4" ins. Type HSA Hammer Wt. lbs. Fall ins.
Water/Mud used in drilling Yes No X Number Other

Elev. (Fl.)	Depth (Fl.)	Material Description	Sample No.	Blows/0.5'	N	Rec (Fl.)
301.5	0.0	TOP SOIL				
	4.0	Medium stiff reddish brown SANDY CLAY, some silt moist (CL-ML)	1	3.5	07-06-09	15 1.0
297.5	8.0	Hard brown and gray SILTY CLAY, moist to wet (CL-ML)	2	8.5	10-19-49	68 1.0
	14.0		3	13.5	10-24-23	47 1.1
287.0	15.0	TERMINATION DEPTH 15.0'				

Water Depth: During Drilling - Ft.; Upon Compl. - Ft.; - Hrs. after Compl.

DRILLING LOG

HOLE NO.: SWM-3
HLEV.:
STA.:

Client: Rainmaker/Kilian L.L.C.
Project: Howard County Golf Course Project Number: 950201
Location: Howard County, Maryland

Date: Started 02/24/95 Completed 02/24/95 Driller: John Shindedecker
Sampler: Dia 2" ins. Type SS Hammer Wt. 140 lbs. Fall 30 ins.
Casing: Dia 3 1/4" ins. Type HSA Hammer Wt. lbs. Fall ins.
Water/Mud used in drilling Yes No X Number Other

Elev. (Fl.)	Depth (Fl.)	Material Description	Sample No.	Blows/0.5'	N	Rec (Fl.)
	0.0	TOP SOIL				
	4.0	Hard reddish brown and gray SILTY CLAY trace to little sand, damp (CL-ML)	1	3.5	14-28-36	54 1.2
	8.0		2	8.5	14-28-36	64 0.9
	14.0	Very dense brown SAND, wet (SP-SM)	3	13.5	38-40-35	75 1.2
	15.0	TERMINATION DEPTH 15.0'				

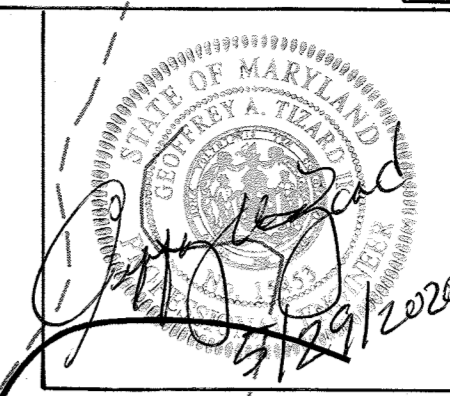
Water Depth: During Drilling - Ft.; Upon Compl. - Ft.; - Hrs. after Compl.

<p>revisions</p> <table border="1"> <thead> <tr> <th>no.</th> <th>description</th> <th>date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	no.	description	date				<p>prepared by</p> <p>RBA ENGINEERS - ARCHITECTS - PLANNERS</p> <p>7164 COLUMBIA GATEWAY DRIVE SUITE 205 COLUMBIA, MARYLAND 21046 410/312-0966</p> <p>owner: HOWARD COUNTY 3430 COURTHOUSE DRIVE ELLICOTT CITY, MARYLAND 21043</p>	<p align="center">STORMWATER NOTES</p> <p align="center">CENTRE 9500, PARCEL K THE TIMBERS AT TRIDY GULF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES</p> <p>SCALE: NONE</p> <p>DRAWN: ELB CHECKED: JWC</p> <p>PROJ. NO.: 1212 DATE: 5/16/95</p> <p>SHEET: 13 SHEET REF.:</p> <p>OF 20 C-13</p> <p align="right">SDP-95-92 DRAWING FILE: 1212VSP</p>
no.	description	date						

REFER TO SHEET 15 FOR CONTINUATION

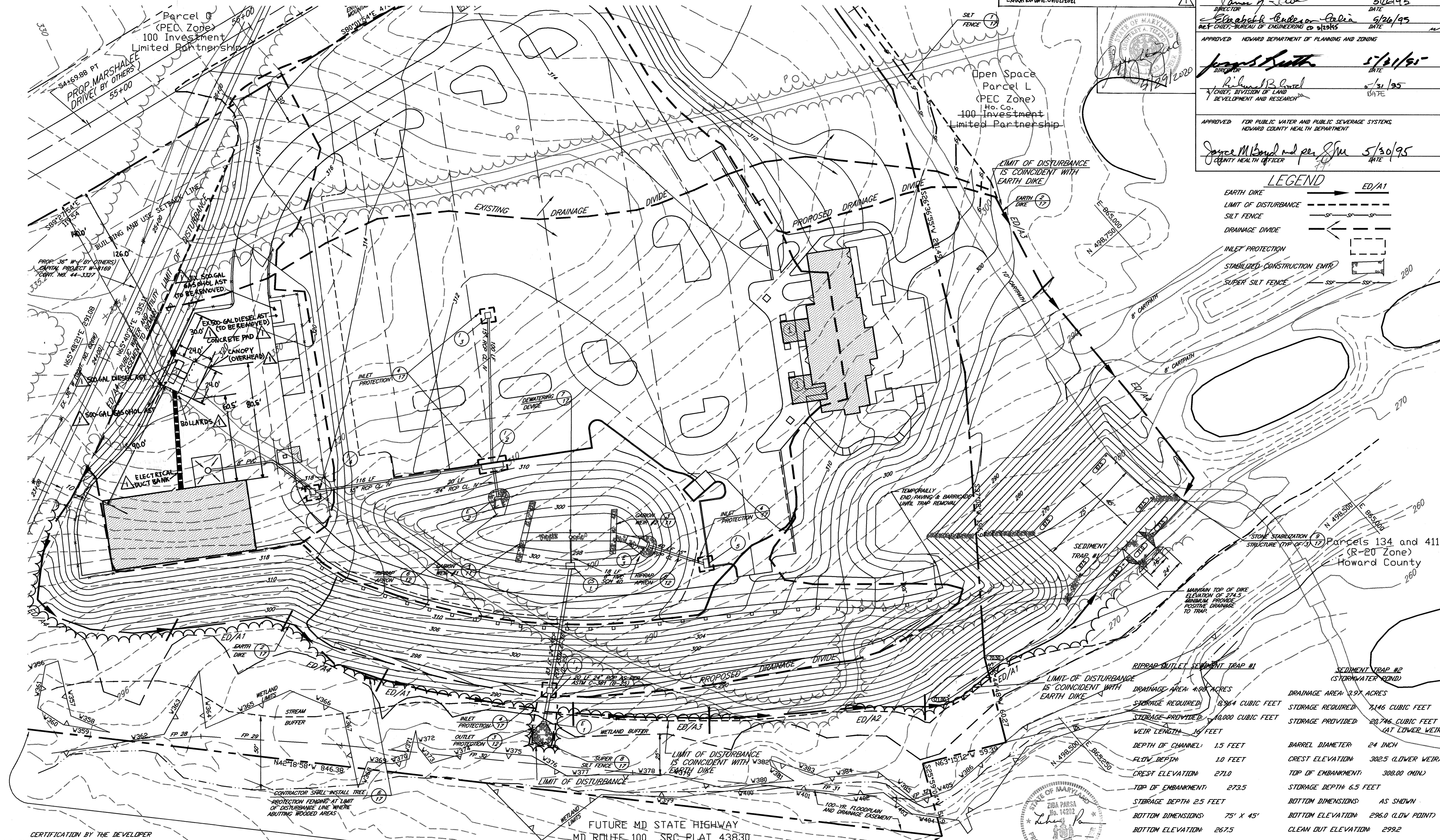
CERTIFICATION IS LIMITED TO SITES/REVISIONS FOR PUB. SYSTEM MODIFICATIONS
 PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 151453 EXPIRATION DATE: 01/01/2021

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Director: *James G. Lewis* 5/26/95
 DATE: 5/26/95
 APPROVED FOR HOWARD DEPARTMENT OF PLANNING AND ZONING:
 Director: *James G. Lewis* 5/26/95
 DATE: 5/26/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS:
 HOWARD COUNTY HEALTH DEPARTMENT
 Director: *James M. Bond* 5/30/95
 DATE: 5/30/95



LEGEND

ED/A1
 EARTH DIKE
 LIMIT OF DISTURBANCE
 SILT FENCE
 DRAINAGE DIVIDE
 INLET PROTECTION
 STABILIZED CONSTRUCTION ENTR.
 SUPER SILT FENCE



Parcel 134 and 411 (R-20 Zone) Howard County

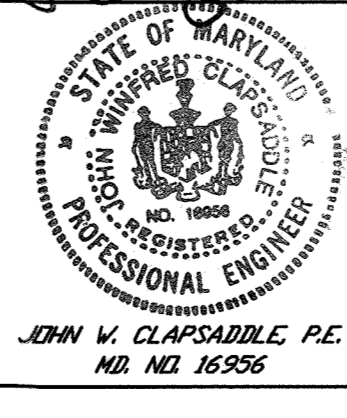
SEDIMENT TRAP #1 (STORMWATER RUNOFF)	SEDIMENT TRAP #2 (STORMWATER RUNOFF)
DRAINAGE AREA: 4.98 ACRES	DRAINAGE AREA: 2.97 ACRES
STORAGE REQUIRED: 8,964 CUBIC FEET	STORAGE REQUIRED: 7,146 CUBIC FEET
STORAGE PROVIDED: 10,000 CUBIC FEET	STORAGE PROVIDED: 20,746 CUBIC FEET (AT LOWER WEIR)
WEIR LENGTH: 16 FEET	BARREL DIAMETER: 24 INCH
DEPTH OF CHANNEL: 1.5 FEET	CREST ELEVATION: 302.5 (LOWER WEIR)
FLOW DEPTH: 1.0 FEET	TOP OF EMBANKMENT: 308.00 (MIN)
CREST ELEVATION: 271.0	STORAGE DEPTH: 6.5 FEET
TOP OF EMBANKMENT: 273.5	BOTTOM DIMENSIONS: AS SHOWN
STORAGE DEPTH 2.5 FEET	BOTTOM ELEVATION: 296.0 (LOW POINT)
BOTTOM DIMENSIONS: 75' X 45'	CLEAN OUT ELEVATION: 299.2
BOTTOM ELEVATION: 267.5	
CLEAN OUT ELEVATION: 268.5	

CERTIFICATION BY THE DEVELOPER
 I, BY THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PROVIDING ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
Scott E. Artgerburn 5/18/95
 SIGNATURE OF DEVELOPER DATE
 (PRINT NAME BELOW SIGNATURE)
SCOTT E. ARTGERBURN

CERTIFICATION BY THE ENGINEER
 I, BY THE ENGINEER, CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER THAT HE/ONE 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.
John Clapsaddle 5/17/95
 SIGNATURE OF ENGINEER DATE
 (PRINT NAME BELOW SIGNATURE)
JOHN CLAPSADDLE

APPROVED *John W. Schrimm* 5/25/95
 DATE: 5/25/95
 APPROVED *Patricia Smal* 5/25/95
 DATE: 5/25/95
 U.S. NATURAL RESOURCES CONSERVATION SERVICE

APPROVED *John W. Schrimm* 5/25/95
 DATE: 5/25/95
 APPROVED *Patricia Smal* 5/25/95
 DATE: 5/25/95
 U.S. NATURAL RESOURCES CONSERVATION SERVICE



revisions
 no. 1 description CLUB HOUSE EXPANSION
 date 1/2/02
 prepared by: **RBA**
 7164 COLUMBIA GATEWAY DRIVE SUITE 205
 COLUMBIA, MARYLAND 21046
 410-312-0966
 owner: HOWARD COUNTY
 3430 COURTHOUSE DRIVE
 ELLICOTT CITY, MARYLAND 21043

SEDIMENT CONTROL PLAN
 CENTRE 9500, PARCEL K
 THE TIMBERS AT TRYON GOLF COURSE
 CLUBHOUSE AND MAINTENANCE FACILITIES
 1 ST. ELECTION DISTRICT
 141 AND 32 CROSS STREET GOLF
 WATER CODES 204 SEWER CODES 2600000
 SCALE: 1"=30'
 DRAWN: ELB CHECKED: JWC
 PROJ. NO: J1212 DATE: 5/16/95
 SHEET: 14 SHEET REF.:
 OF: 20 C-14
 SDP-95-92
 DRAWING FILE: 12E12PL1

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *James J. Lee* DATE: 5/22/95
 PLD CHIEF: *Richard B. Cotton* DATE: 5/22/95
 APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR: *Joseph S. Smith* DATE: 5/31/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *Richard B. Cotton* DATE: 5/31/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *Joyce M. Boyd* DATE: 5/30/95

N 499,500 E 865,500

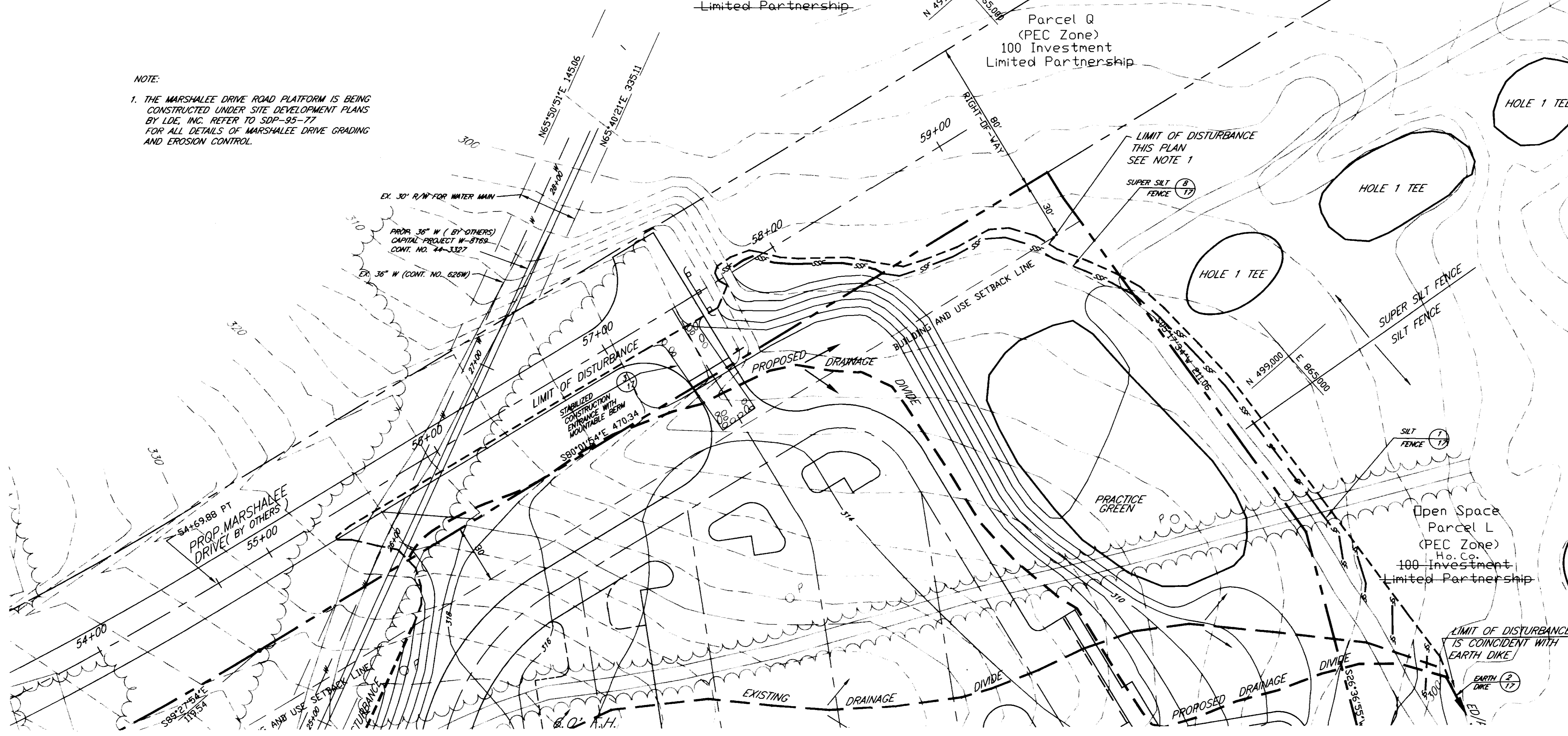
Open Space
 Part of Parcel G
 (PEC Zone)
 Ho. Co.
 100 Investment
 Limited Partnership

Parcel Q
 (PEC Zone)
 100 Investment
 Limited Partnership

Open Space
 Parcel L
 (PEC Zone)
 Ho. Co.
 100 Investment
 Limited Partnership

NOTE:
 1. THE MARSHALEE DRIVE ROAD PLATFORM IS BEING CONSTRUCTED UNDER SITE DEVELOPMENT PLANS BY LDC, INC. REFER TO SDP-95-97 FOR ALL DETAILS OF MARSHALEE DRIVE GRADING AND EROSION CONTROL.

LEGEND
 EARTH DIKE ———→ ED/A1
 LIMIT OF DISTURBANCE - - - - -
 SILT FENCE ———S———S———
 DRAINAGE DIVIDE ———<———
 STABILIZED CONSTRUCTION ENTRANCE []
 SUPER SILT FENCE ———SSF———SSF———



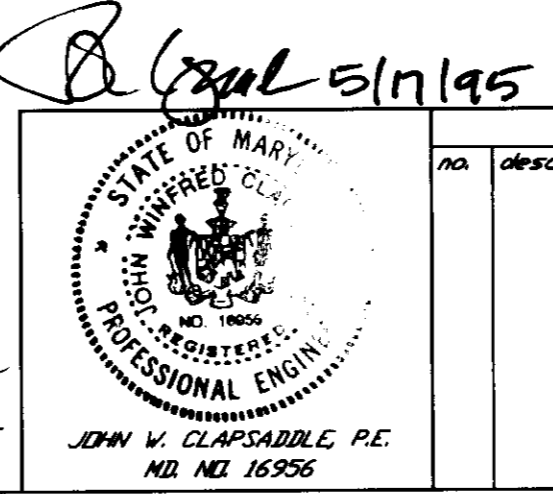
REFER TO SHEET 14 FOR CONTINUATION

CERTIFICATION BY THE DEVELOPER
 I, THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *Scott E. Heterburn* DATE: 5/18/95
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)
 SCOTT E. HETEBURN

CERTIFICATION BY THE ENGINEER
 I, THE ENGINEER, CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 Signature: *John Clapsmole* DATE: 5/17/95
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)
 JOHN CLAPSMOLE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: *John W. Schminy* DATE: 5/25/95
 HOWARD SOIL CONSERVATION DISTRICT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 APPROVED: *Patricia Probst* DATE: 5/25/95
 U.S. NATURAL RESOURCES CONSERVATION SERVICE



revisions table:
 no. description date
 prepared by: **RBA** ENGINEERS • ARCHITECTS • PLANNERS
 7164 COLUMBIA GATEWAY DRIVE SUITE 205
 COLUMBIA, MARYLAND 21046
 410/312-0965
 owner: HOWARD COUNTY
 3430 COURTHOUSE DRIVE
 ELLICOTT CITY, MARYLAND 21043

SEDIMENT CONTROL PLAN		SCALE
CENTRE 9500, PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES		1"=30'
DRAWN	CHECKED	
ELB	JWC	
PROJ. NO.	DATE	
J1212	5/16/95	
SHEET	SHEET REF.	
15	20	C-15
1 ST. ELECTION DISTRICT HOWARD COUNTY, MARYLAND OF		
TAX MAP 312, CENSUS TRACT 081114		
WATER CODE: 204 WATER CODE: 080000		
SDP-95-92		DRAWING FILE: 1212PLA.P

SEDIMENT AND EROSION CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MD STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS HERETO.
- FOLLOWING THE INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETE WITHIN A) SEVEN (7) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOIL (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY 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 OF THE SITE:	9.07	ACRES
AREA DISTURBED:	7.09	ACRES
AREA TO BE ROOFED OR PAVED:	2.96	ACRES
AREA TO BE VEGETATIVELY STABILIZED:	4.13	ACRES
TOTAL CUT:	26,790	CU. YDS.
TOTAL FILL:	45,345	CU. YDS.

 OFFSITE WASTE/BORROW AREA LOCATION: EXCESS TO BE MOVED TO GOLF COURSE (SDP-93-75 OR SDP-95-77)
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY DEPT. OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES, DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT. CHANGES IN THE SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.
- ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
- AT THE END OF EACH WORK DAY ALL SEDIMENT CONTROL PRACTICE WILL BE INSPECTED AND LEFT IN THE OPERATIONAL CONDITION.
- ALL SEDIMENT AND EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE AGREEMENT MADE BETWEEN COLUMBIA ASSOCIATION AND HSCD AND AS AMENDED 8/1/90.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- THE SEDIMENT CONTROL APPROVALS ON THIS PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK AND SHALL APPLY AS IF SHOWN ON ALL PLANS.
- THE APPROVAL OF THE PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH ANY FEDERAL/STATE/COUNTY REQUIREMENTS PERTAINING TO ENVIRONMENTAL ISSUES.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TESTS RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING APPLY 400 LB. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.)

2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING- FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/100 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE 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 UNROTTED SMALL GRAN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOL DR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT AL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING 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 THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/100 SQ. FT.) FOR THE PERIOD OF MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ. FT.) FOR THE PERIOD OF NOVEMBER 16 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOD.

MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOLL DR 218 GALLONS PER ACRE (5 GAL /1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

- OBTAIN ALL NECESSARY PERMITS FOR THE PROPOSED WORK AND HAVE ALL EXISTING UTILITIES MARKED IN THE FIELD. SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE ASSIGNED INSPECTOR. RESOLVE ALL SITE RELATED ISSUES BEFORE PROCEEDING. 2 WEEKS
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE APPROVED PLANS. INSTALL TREE PROTECTION FENCING ALONG ALL LIMITS OF DISTURBANCE ABUTTING TREES. CLEAR AND GRUB ONLY AREAS NECESSARY AND INSTALL PERIMETER EARTH DIKES, SILT FENCES AND RIP-RAP OUTLET SEDIMENT TRAP. 2 WEEKS
- OBTAIN INSPECTOR APPROVAL OF ALL SEDIMENT CONTROL DEVICES PRIOR TO PROCEEDING. 1 WEEK
- CLEAR AND GRUB REMAINDER OF SITE. MAINTAIN ALL SEDIMENT CONTROL DEVICES AS NECESSARY. 4 WEEKS
- BEGIN CONSTRUCTION OF STORMWATER MANAGEMENT POND EMBANKMENT, RISER AND BARREL. PROCEED AS FOLLOWS:
 - UNDERCUT POND AND MAINTENANCE ROAD EMBANKMENT AND BEGIN CORE TRENCH CONSTRUCTION. 1 WEEK
 - BEGIN INSTALLATION OF BARREL INLET I-1 AND OUTLET PROTECTION. EFFECTIVELY BLOCK BARREL AT UPSTREAM END AT THE END OF EACH DAY TO ELIMINATE SITE DRAINAGE ENTERING BARREL. MAINTAIN ALL PERIMETER EARTH DIKES TO INSURE DIVERSION OF WATER TO SEDIMENT TRAP NO. 1. 1 WEEK
 - BEGIN EMBANKMENT CONSTRUCTION INCLUDING IMPERVIOUS CORE. WORK UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER TO INSURE ALL SOIL CONDITIONS ARE MONITORED AND ADJUSTED AS NECESSARY TO MEET PLAN SPECIFICATIONS. 2 WEEKS
 - COMPLETE RISER CONSTRUCTION INCLUDING DEWATERING DEVICE. UPON COMPLETION OF RISER AND EMBANKMENT, REMOVE BLOCKING FROM BARREL AND DIVERT ALL UPLAND FLOW INTO STORMWATER POND TO BE USED AS A SEDIMENT TRAP. DELAY CONSTRUCTION OF GABION WEIRS AND RIP-RAP APRONS AT STORM DRAIN OUTFALLS. 1 WEEK
- AS ROUGH GRADING IS ACHIEVED, BEGIN BUILDING AND UTILITY CONSTRUCTION. 16 WEEKS
- INSTALL INLET PROTECTION DEVICES IMMEDIATELY UPON STORM DRAIN CONSTRUCTION. 1 WEEK
- UPON COMPLETION OF UTILITIES, BACKFILL AND BEGIN FINE GRADING AND PAVEMENT CONSTRUCTION. DELAY CONSTRUCTION OF SURFACE PAVING UNTIL ALL HEAVY EQUIPMENT HAS BEEN REMOVED FROM SITE. 4 WEEKS
- REMOVE SILT FROM SEDIMENT TRAPS AS REQUIRED AND MAINTAIN ALL SEDIMENT AND CONTROL DEVICES. 1 WEEK
- UPON COMPLETION OF WORK IN A GIVEN AREA, STABILIZE AREA IMMEDIATELY. 1 WEEK
- UPON COMPLETE STABILIZATION OF ALL CONTRIBUTING DRAINAGE AREAS AND UPON INSPECTOR APPROVAL, REMOVE RIP-RAP OUTLET SEDIMENT TRAP NO. 1. CONTINUE USING STORMWATER POND AS SEDIMENT TRAP NO. 2. STABILIZE ALL DISTURBED AREAS RESULTING FROM TRAP NO. 1 REMOVAL IMMEDIATELY. 2 WEEKS
- UPON COMPLETION OF BUILDING CONSTRUCTION AND BASE PAVING, AND UPON COMPLETE STABILIZATION OF ALL CONTRIBUTING DRAINAGE AREAS, FLUSH ALL STORM SEWERS CLEAN AND BEGIN POND RESTORATION. PROCEED WITH SEDIMENT CONTROL REMOVAL ONLY AFTER INSPECTOR APPROVAL. 2 WEEKS
- INSTALL REMAINING STORMWATER MANAGEMENT POND FEATURES AND STABILIZE POND AREAS WITH FINAL VEGETATION. INSTALL REMAINING LANDSCAPE MATERIALS. APPLY FINAL SURFACE COURSE PAVING. 2 WEEKS

B:SDC:ASC

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Conrad J. Linn 5/26/95
DIRECTOR DATE
Blair G. Galloway 5/26/95
DIST. CHIEF, BUREAU OF ENGINEERING DATE

APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING

James R. Smith 5/31/95
DIRECTOR DATE
Richard B. Coates 5/31/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

James M. Bond 5/30/95
COUNTY HEALTH OFFICER DATE

CERTIFICATION BY THE DEVELOPER

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

Scott E. Aterburn 5/10/95
SIGNATURE OF DEVELOPER DATE
SCOTT E. ATERBURN

CERTIFICATION BY THE ENGINEER

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

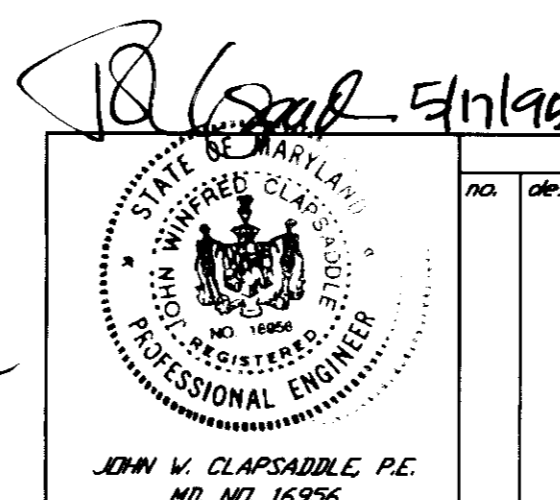
John Clapsaddle 5/10/95
SIGNATURE OF ENGINEER DATE
JOHN CLAPSADDLE

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

APPROVED *Harvey W. Schmitt* 5/10/95
HOWARD COUNTY

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

APPROVED *Patricia Engle* 5/10/95
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE



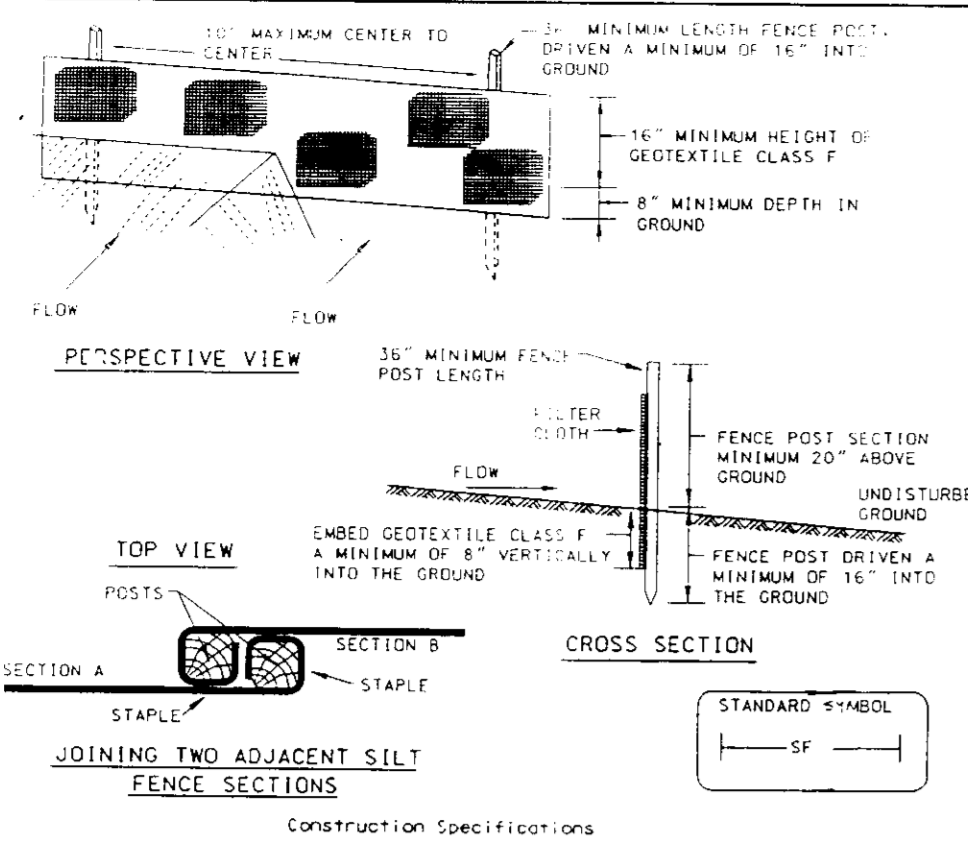
no.	description	date

prepared by
RBA
ENGINEERS - ARCHITECTS - PLANNERS
7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410-312-0966

owner: HOWARD COUNTY
3430 EDENWATER DRIVE
ELLCOTT CITY, MARYLAND 21043

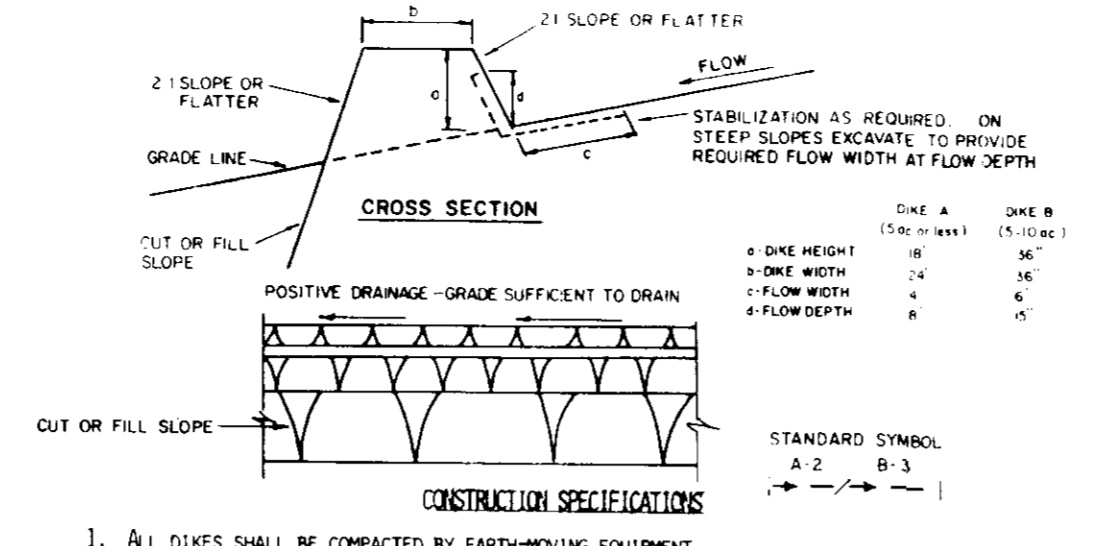
SEDIMENT CONTROL NOTES
CENTRE 9500, PARCEL K
THE TIMBERS AT TROY GOLF COURSE
CLUBHOUSE AND MAINTENANCE FACILITIES

SCALE	NAME
DRAWN	CHECKED
ELB	JVC
PROJ. NO.	DATE
J212	5/16/95
SHEET	SHEET
16	REF.
OF	20
	C-16



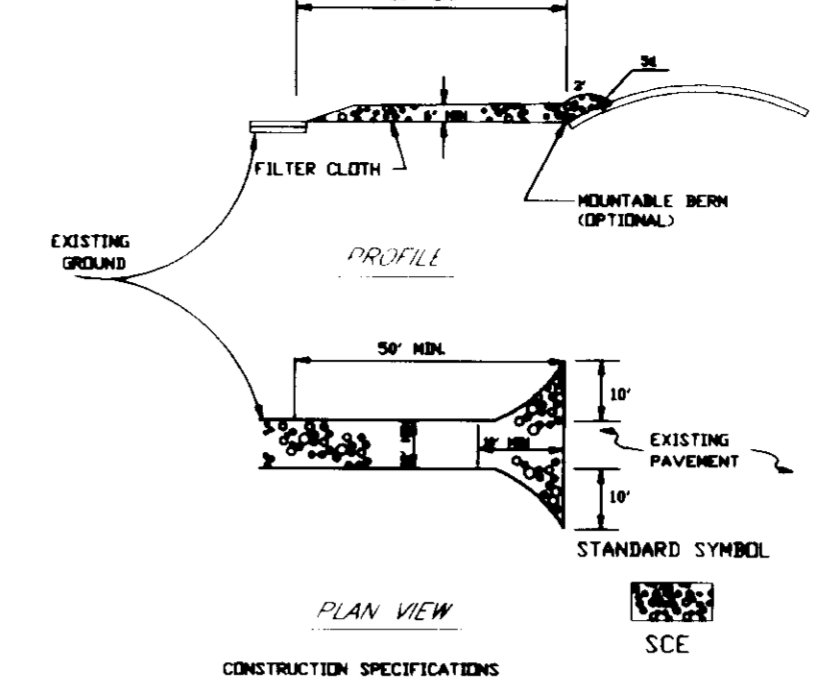
- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut) or 1 1/2" diameter (minimum round) and shall be of sound quality hardwood. Steel posts will be standard I or U section weighing not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

1 SILT FENCE
SCALE: NTS



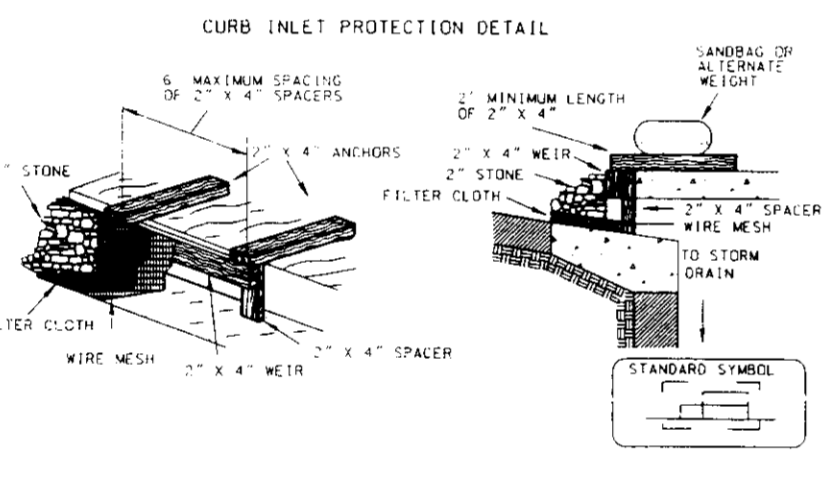
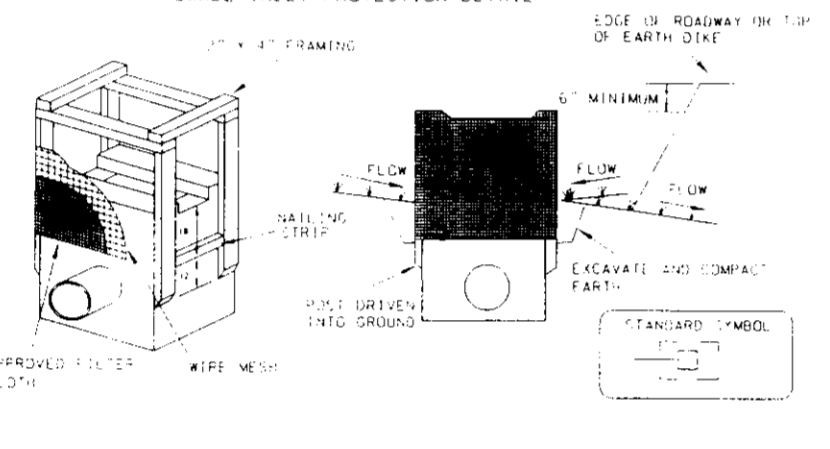
- Construction Specifications**
- All dikes shall be compacted by earth-moving equipment.
 - All dikes shall have positive drainage to an outlet.
 - Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
 - Field location should be adjusted as needed to utilize a stabilized safe outlet.
 - Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
 - Stabilization shall be: (a) in accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (b) flow channel as per the chart below.
- | TYPE OF INSTABILITY | CHANNEL WIDTH | DIKE A | DIKE B |
|---------------------|---------------|----------------------------------|--|
| 1 | 5-3.00 | SEED AND STRAW MULCH | SEED AND STRAW MULCH |
| 2 | 3.1-5.00 | SEED AND STRAW MULCH | SEED USING JUTE, OR EXCELSTON, 300; 2" STONE |
| 3 | 5.1-8.00 | SEED WITH JUTE, OR 300; 2" STONE | LINED RIP-RAP 4-8" |
| 4 | 8.1-200 | LINED RIP-RAP 4-8" | ENGINEERING DESIGN |
- A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.
B. Rip-rap to be 4-8 inches in a layer at least 8 inches thickness and pressed into the soil.
C. Approved equivalents can be substituted for any of the above materials.
D. Periodic inspection and required maintenance shall be provided after each rain event.

2 EARTH DIKE
SCALE: NTS



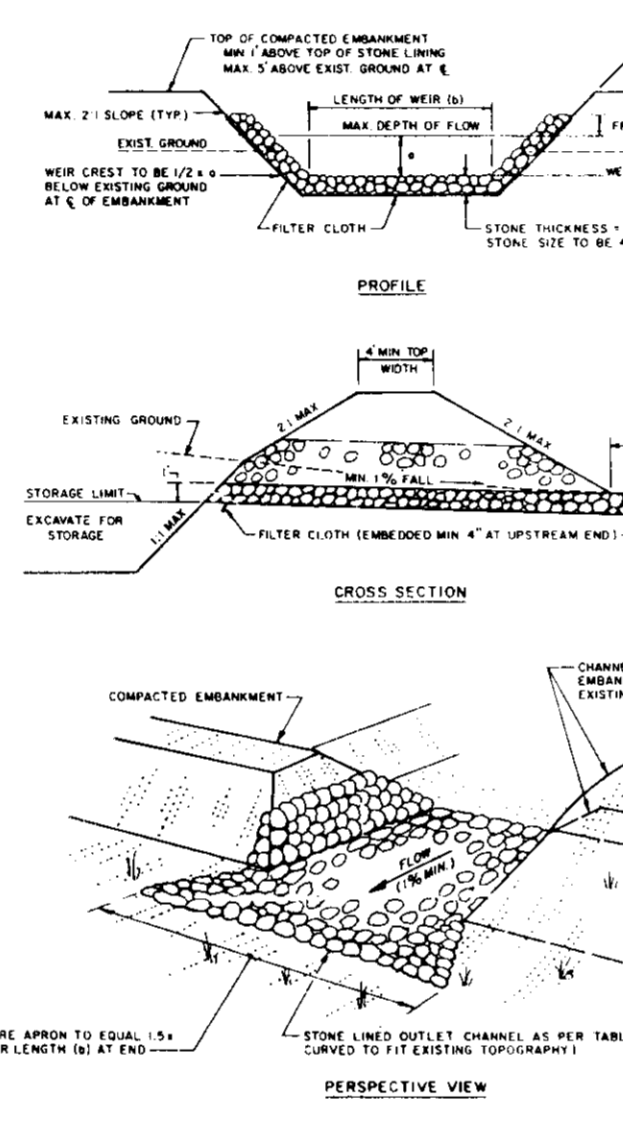
- Construction Specifications**
- STONE SIZE - USE # 2 STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH - AS REQUIRED BUT NOT LESS THAN 30 FEET (EXCEPT IN A RESIDENCE LOT WHERE A 30 FEET MINIMUM LENGTH VOLS. APPLY).
 - THICKNESS - NOT LESS THAN SIX (6) INCHES.
 - WIDTH - TEN (10) FEET MINIMUM BUT NOT LESS THAN FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 - FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE, IF PIPING IS IMPRACTICAL, A HEAVY DUTY BORN WITH 36 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC PRESSING WITH ADDITIONAL STONE AS CONDITIONS SOON AND REPAIR AND/OR CLEANUP OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DISPOSED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY WHEN WASHING IS REQUIRED IT SHALL BE DONE IN AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

3 STABILIZED CONSTRUCTION ENTRANCE
SCALE: NTS



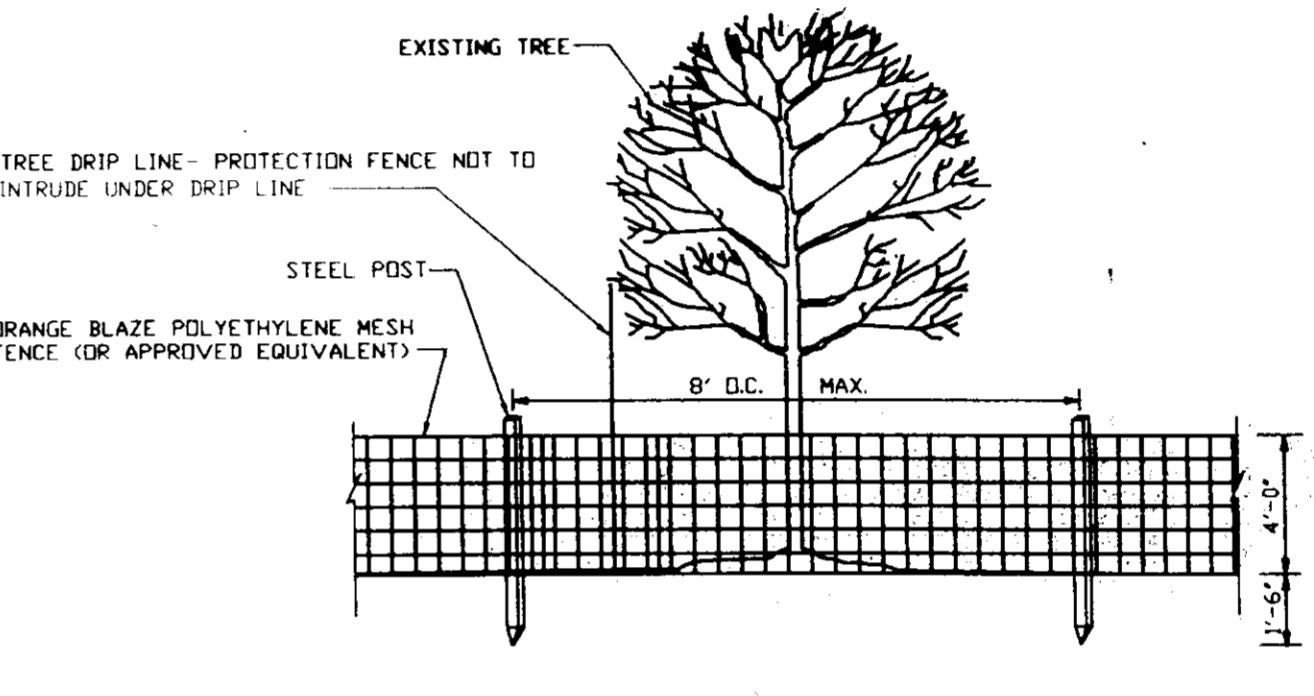
4 INLET PROTECTION
SCALE: NTS

RIPRAP OUTLET SEDIMENT TRAP ST-VI



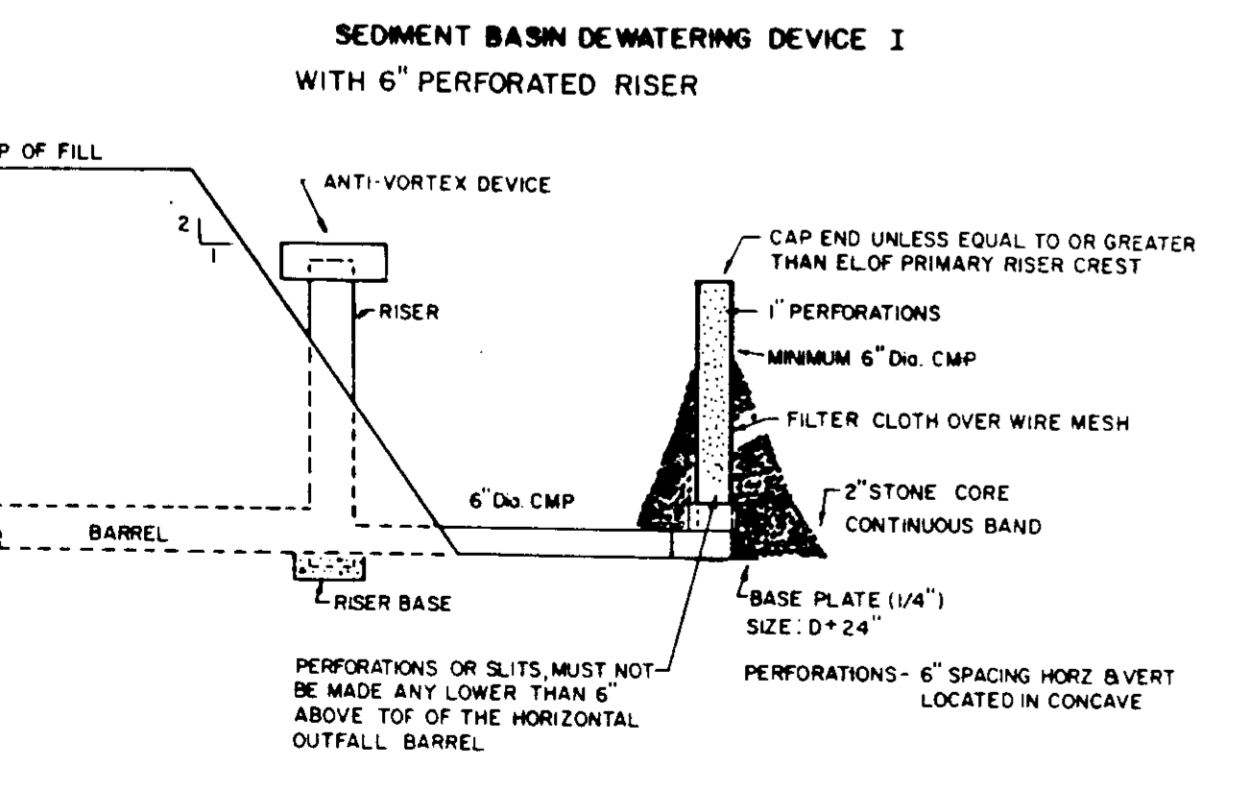
- CONSTRUCTION SPECIFICATIONS FOR ST-VI**
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots or other woody objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
 - All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
 - Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
 - Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level crest.
 - Filter cloth shall be placed over the bottom - 4 sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
 - Stone used in the outlet channel shall be four (4) to eight(8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected after each rain and repaired as needed.
 - Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
 - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
 - Drainage area for this practice is limited to 15 acres or less.

5 RIPRAP OUTLET SEDIMENT TRAP
SCALE: NTS

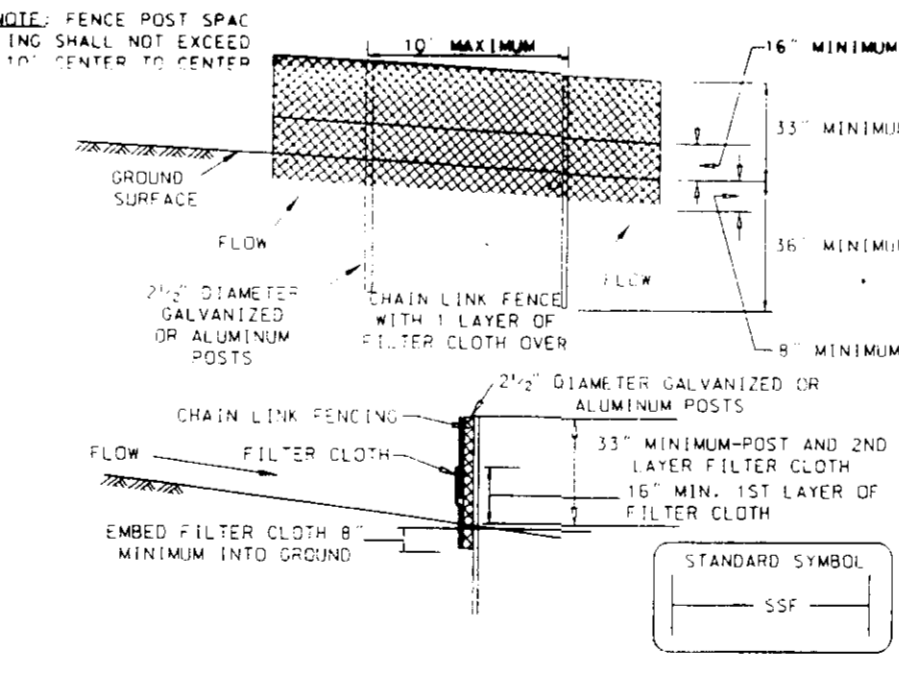


- TREE PROTECTION PROCEDURES**
- TREE PROTECTION FENCES SHALL BE INSTALLED AT THE DRIP LINE OF THE TREES TO BE PROTECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
 - THE GENERAL CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR TREE PROTECTION. HE SHALL TAKE CARE TO PROTECT TREE ROOT SYSTEMS FROM DAMAGE INCLUDING EXCAVATING, FLOODING, AND SPILLAGE.
 - REMOVAL OF TWIGS OR BRUSH WITHIN THE TREE PROTECTION AREA WILL BE PROHIBITED.
 - FEED AND VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM IN THE TREE PROTECTION AREA. CONSTRUCTION ACTIVITIES ARE PROHIBITED PLACING MATERIAL IN THE PROTECTED AREA, BURNING IN OR IN CLOSE PROXIMITY TO PROTECTED AREA, FELLING TREES IN THE PROTECTED AREA, STUMPING, SPLITTING IN THE PROTECTED AREA OR CONDUCTING TRUCKING OPERATIONS IN THE PROTECTED AREA.
 - ALL TREES TO BE REMOVED WITHIN OR NEAR THE TREE PROTECTION AREA ARE TO BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE TREES OR ROOTS OF THE TREES IN THE TREE PROTECTION AREA.

6 TREE PROTECTION FENCE
SCALE: NTS

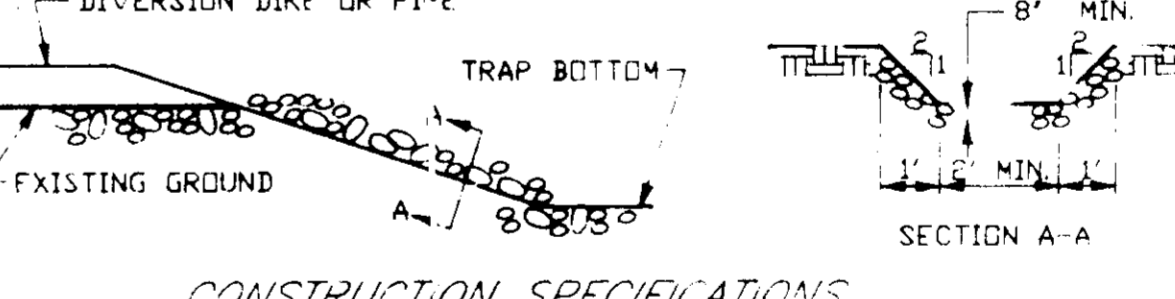


7 DEWATERING DEVICE TYPE I
SCALE: NTS



- Construction Specifications**
- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.
- The poles do not need to set in concrete.
 - Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 6" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt bulges removed when "bulges" develop in the silt fence.

8 SUPER SILT FENCE
SCALE: NTS



- CONSTRUCTION SPECIFICATIONS**
- STONE SIZE 2"-4"
 - LENGTH - AS EFFECTIVE
 - THICKNESS - NOT LESS THAN 8"
 - WIDTH - NOT LESS THAN 4"
 - PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.
 - COMPACT STONE AFTER PLACEMENT WITH AVAILABLE EQUIPMENT.

9 STONE STABILIZATION STRUCTURE
SCALE: NTS

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR: *James J. Lewis* DATE: 5/26/95
DEPUTY CHIEF: *Charles H. Anderson-Pedra* DATE: 5/26/95
APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING
DIRECTOR: *Joseph B. Kauter* DATE: 5/28/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *Richard B. Blair* DATE: 5/21/95
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER: *Joseph M. Boyd and per J. G. J. M.* DATE: 5/30/95

CERTIFICATION BY THE DEVELOPER
I, THE DEVELOPER, HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
Scott E. Metzger DATE: 5/18/95
SIGNATURE OF DEVELOPER: *SCOTT E. METZGER*

CERTIFICATION BY THE ENGINEER
I, THE ENGINEER, HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
John Clapsaddle DATE: 5/11/95
SIGNATURE OF ENGINEER: *JOHN CLAPSADDE*

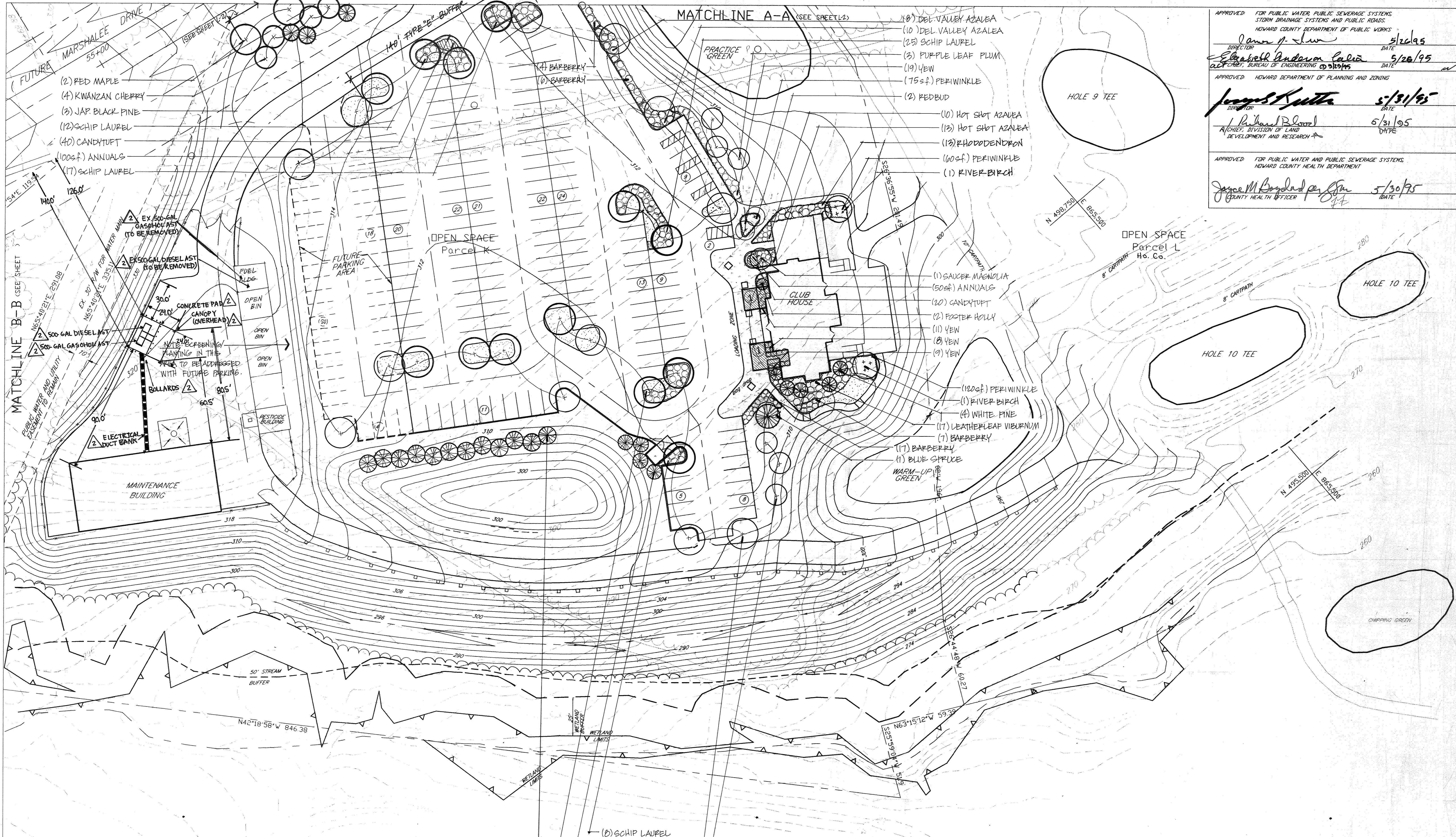
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: *Patricia Engle* DATE: 5/28/95
U.S. NATURAL RESOURCES CONSERVATION SERVICE

SEDIMENT CONTROL DETAILS		SCALE SHOWN	
DRAWN	ELB	CHECKED	JVC
PROJ. NO.	J1212	DATE	5/16/95
SHEET	17	SHEET REF.	
OF	20	DRAWING FILE:	TR12501

OWNER: HOWARD COUNTY
7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410-312-0966

ENGINEER: ARCHITECTS - PLANNERS
RBA
7164 COLUMBIA GATEWAY DRIVE SUITE 205
COLUMBIA, MARYLAND 21046
410-312-0966

DATE: 5/11/95



APPROVED FOR PUBLIC WATER PUBLIC SEWERAGE SYSTEMS
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR: *James J. Law* DATE: 5/26/95
 ARCHITECT: *Marina Schofield* DATE: 5/26/95
 APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR: *August Kutter* DATE: 5/31/95
 ARCHITECT: *Richard Blount* DATE: 5/31/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *Joyce M. Bonded per Jim* DATE: 5/30/95

- (8) DEL VALLEY AZALEA
- (10) DEL VALLEY AZALEA
- (25) SCHIP LAUREL
- (3) PURPLE LEAF PLUM
- (19) YEW
- (75 sf) PERIWINKLE
- (2) REDBUD
- (10) HOT SHOT AZALEA
- (13) HOT SHOT AZALEA
- (13) RHODODENDRON
- (60 sf) PERIWINKLE
- (1) RIVER BIRCH

- (1) SAUCE MAGNOLIA
- (50 sf) ANNUALS
- (20) CANDY TUFT
- (2) EASTER HOLLY
- (11) YEW
- (8) YEW
- (9) YEW
- (120 sf) PERIWINKLE
- (1) RIVER BIRCH
- (4) WHITE PINE
- (17) LEATHERLEAF VIBURNUM
- (7) BARBERRY
- (17) BARBERRY
- (1) BLUE SPRUCE
- WARM-UP WARM GREEN

- (8) SCHIP LAUREL
- (25) LONDON PLANE
- (3) PURPLELEAF PLUM
- (4) JAP. BLACK PINE
- (18) SCHIP LAUREL
- (12) WHITE PINE

CERTIFICATION IS LIMITED TO SITE REVISIONS FOR FUEL SYSTEM MODIFICATIONS.
 PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE
 PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL
 ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453
 EXPIRATION DATE: 07/01/2001

James J. Law
 5/29/2000

Ziba Parsa
 1/21/02 ZIBA PARSA

FUTURE
 MARYLAND STATE HIGHWAY
 MD. ROUTE 100
 SRC PLAT 43830

Marina Schofield
 Marina Schofield
 LANDSCAPE ARCHITECT

no.	description	date
1	REV. PERI COUNTY COMMENTS	4-19-95
2	GRADING REVISIONS	1/2/02
3	CLUB HOUSE EXPANSION	5/20/02
4	ADDED ABOVE GROUND STORAGE TANKS AND ASSOCIATED FEATURES	

prepared by:
MARINA SCHOFIELD
LANDSCAPE ARCHITECTURE
 117 MAPLE DRIVE
 ANNAPOLIS, MD 21403
 (410)263-4496

The Timbers at Troy Golf Course

LANDSCAPE PLAN		SCALE
CENTRE 9500 PARCEL K		1"=30'
HOWARD COUNTY GOLF COURSE CLUB HOUSE AND MAINTENANCE FACILITIES		DRAWN CHECKED
PROJECT NO.	DATE	
SHEET		
L-1	3/20/95	
HOWARD COUNTY 3430 COWHOUSE DR., ELLICOTT CITY, MD 21043 SDP-95-92		MARYLAND 21043 sheet 18 of 20

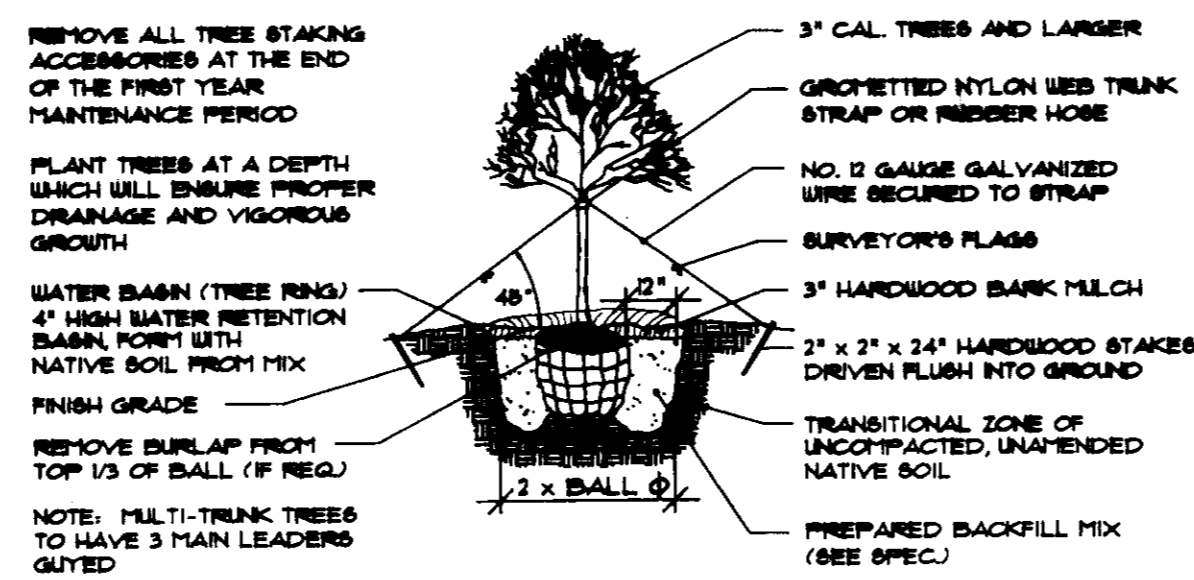
Quantity	Botanical/ Common Names	Caliper	Size	Spread	Spacing	Comments
25	Pistacia x scortifolia "Bloodgood" London Planetree	2 1/2-3"	12-14"		See Plan	B&B; Full Crown, <i>Center Leader</i>
5	Acer rubrum "October Glory" London Planetree	2 1/2-3"	12-14"		See Plan	B&B; Full Crown, <i>Center Leader</i>
1	Picea pungens Glauca/ Blue Colorado Spruce		10-12"		See Plan	B&B; Full Specimen
16	Pinus strobus/ Eastern White Pine		6-8"		See Plan	B&B; Full
5	Pinus thunbergiana/ Japanese Black Pine		6-8"		See Plan	B&B; Full
2	Ilex x attenuata "Fosteri #2" Foster Holly		7-8"		See Plan	B&B; Full Matching Specimens
2	Cercis canadensis/ Eastern Redbud	2-2 1/2"	8-10"		See Plan	B&B; Full Crown
6	Prunus cerasifera "Thundercloud" Purple-leaf Plum	2-2 1/2"	8-10"		See Plan	B&B; Full Crown
1	Magnolia soulangeana/ Saucer magnolia		8-10"		See Plan	B&B; Multistem Specimen
7	Prunus serrulata "Kwanzan" Kwanzan Cherry	2-2 1/2"	8-10"		See Plan	B&B; Full Crown
2	Betula nigra "Heritage" River Birch		10-12"		See Plan	B&B; Multistem specimen
13	Rhododendron spp. "P.J.M." Rhododendron	30-36"	30-36"	4' o.c.	Full	
30	Rhododendron spp. "Delaware Valley" Delaware Valley Azalea	24-30"	24-30"	3' o.c.	Full	
23	Rhododendron spp. "Girard Hot Shot" Hot Shot Azalea	24-30"	24-30"	3' o.c.	Full	
49	Berberis thunbergii var. atropurpurea "Crimson Pygmy" Barberry	18-24"	18-24"	3' o.c.	Full	
17	Viburnum rhytidophyllum/ Leatherleaf Viburnum	30-36"	24-30"	4' o.c.	Full	
80	Prunus laurocerasus "Schipkaensis" Schip Laurel	24-30"	24-30"	4' o.c.	Full	
60	Taxus baccata "Repandens" Spreading English Yew	18-24"	24-30"	3' o.c.	Full	
60	Iberis sempervirens/ Candytuft			12" o.c.	1 gal. pots	
255 p.f.	Vinca minor/ Pervinca			6" o.c.	2 1/4" pots	
150 p.f.	Annuals			6" o.c.	2 1/4" pots	
7	Pinus strobus/ Eastern White Pine		4"		See Plan	B&B; Full

PLANTING NOTES:

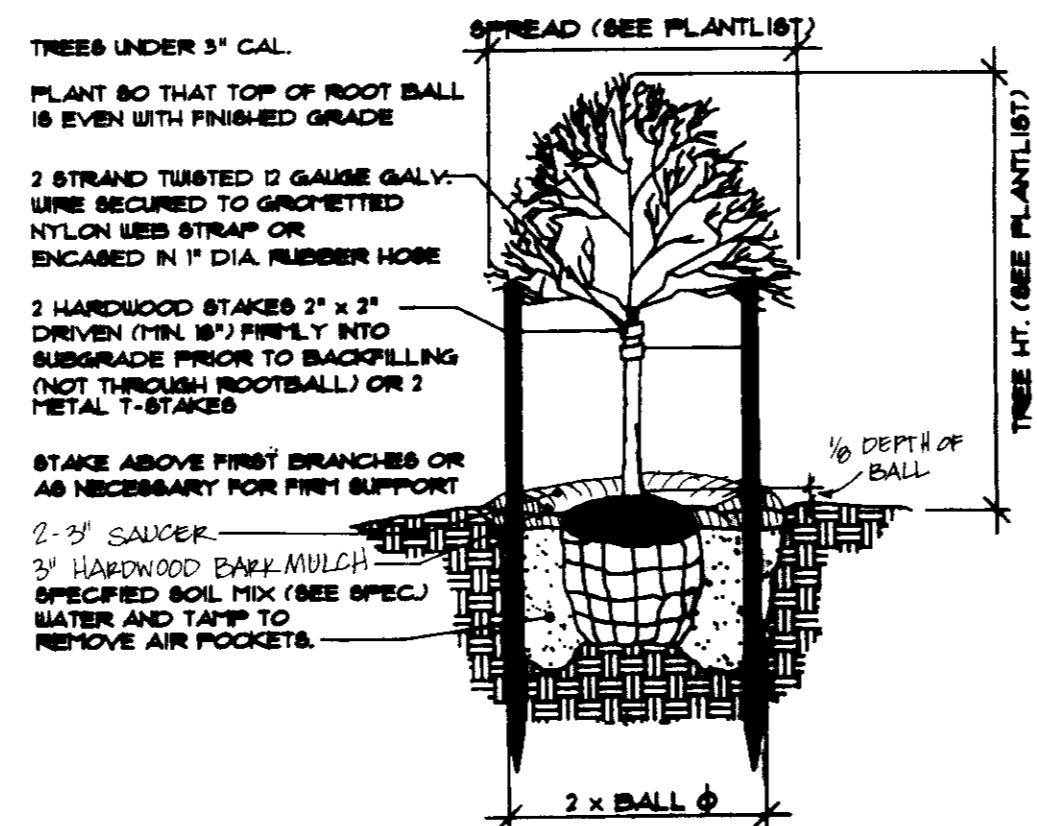
- No planting to occur on any utility line or within any utility easement. Contractor to verify locations of utilities and shift planting to avoid them, if necessary.
- All plant material to be nursery stock, healthy, vigorous, full, well shaped, and conform to the standards as given in "Grades and Standards for Nursery Plants" published by the American Association of Nurserymen.
- Any substitutions in specified plant material, or changes to plan, must be approved by landscape architect prior to planting.
- Maintenance agreement and guarantee period to be determined by owner.
- Plant beds:
Soil mix to consist of (1) part existing topsoil, to (1) part peat moss, to (1) part clean sand. If the contractor should find the existing soil conditions to be adverse to normal planting, it is his/her responsibility to modify the soil so that the plants will thrive.
Fertilizer - All plant beds to receive an osmocote fertilizer applied at the rate of 4 lb/100 sq. ft.
Mulch - All plant beds and tree rings to be mulched with a 3" layer of shredded, hardwood bark mulch.
Bedlines - Curvilinear planting bed edges are to be smooth and continuous as shown on plan. All beds and tree rings to have neatly defined spaced edges. Proposed trees are to be planted either completely in or completely out of planting beds, without obstructing the planting bed edges.

GRAPHIC NOTES:

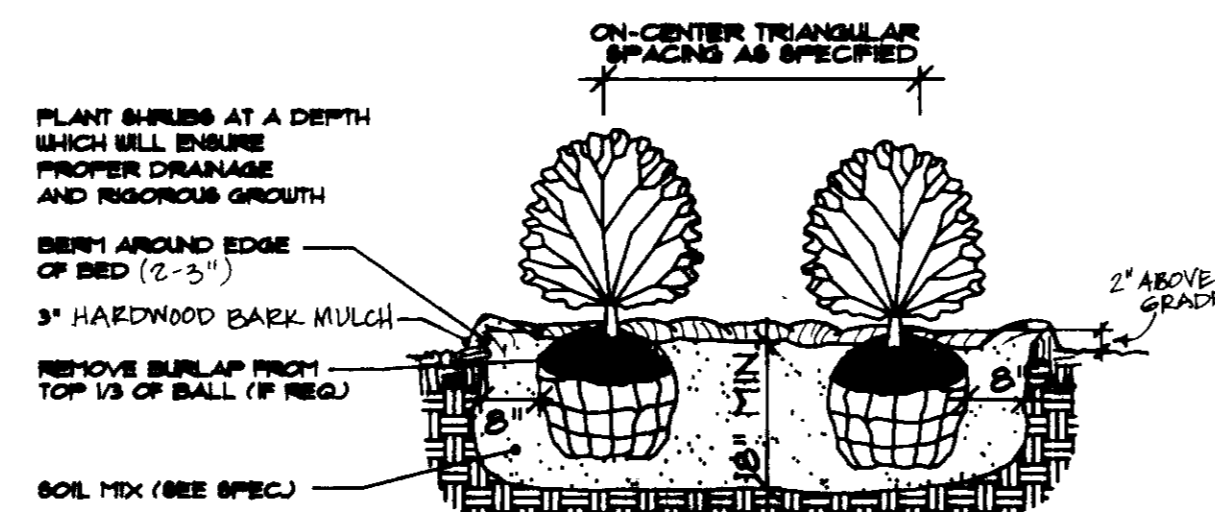
- AREAS SHOWN STIPPLED TO BE SODDED. ALL OTHER NON-PLANTED OR NON-PAVED OPEN AREAS TO BE SEEDED W/ SAME SEED MIX USED ON GOLF COURSE PROUGH.
- TREES SHOWN IN DARK OUTLINE INDICATE TREES COUNTED TOWARD COUNTY REQUIREMENTS.



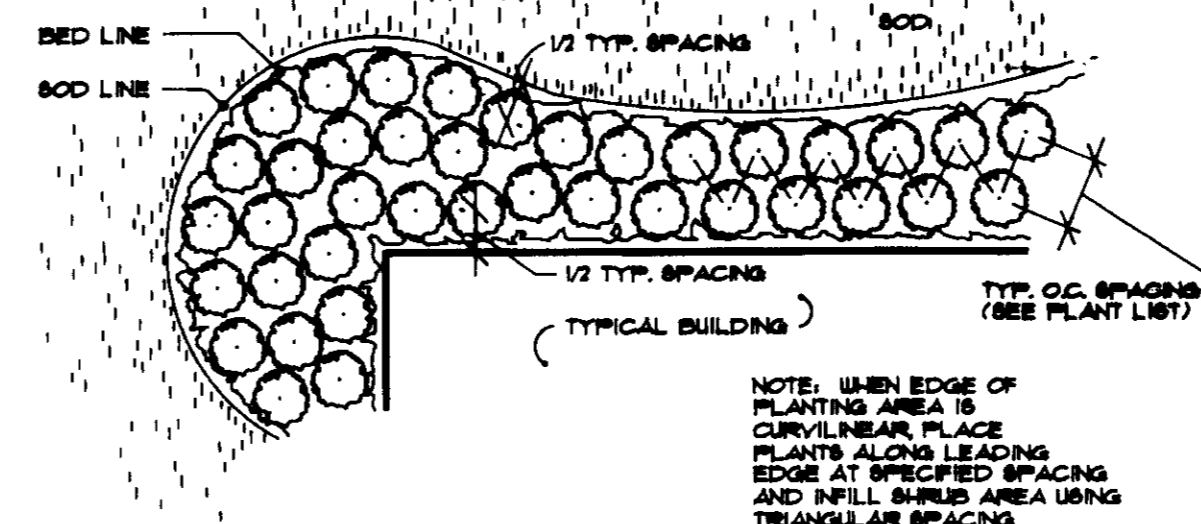
Tree Planting/Guying Detail



Tree Staking Detail



Shrub Planting Detail



Triangular Spacing/Bed Line Detail

SCHEDULE A PERIMETER LANDSCAPE EDGE

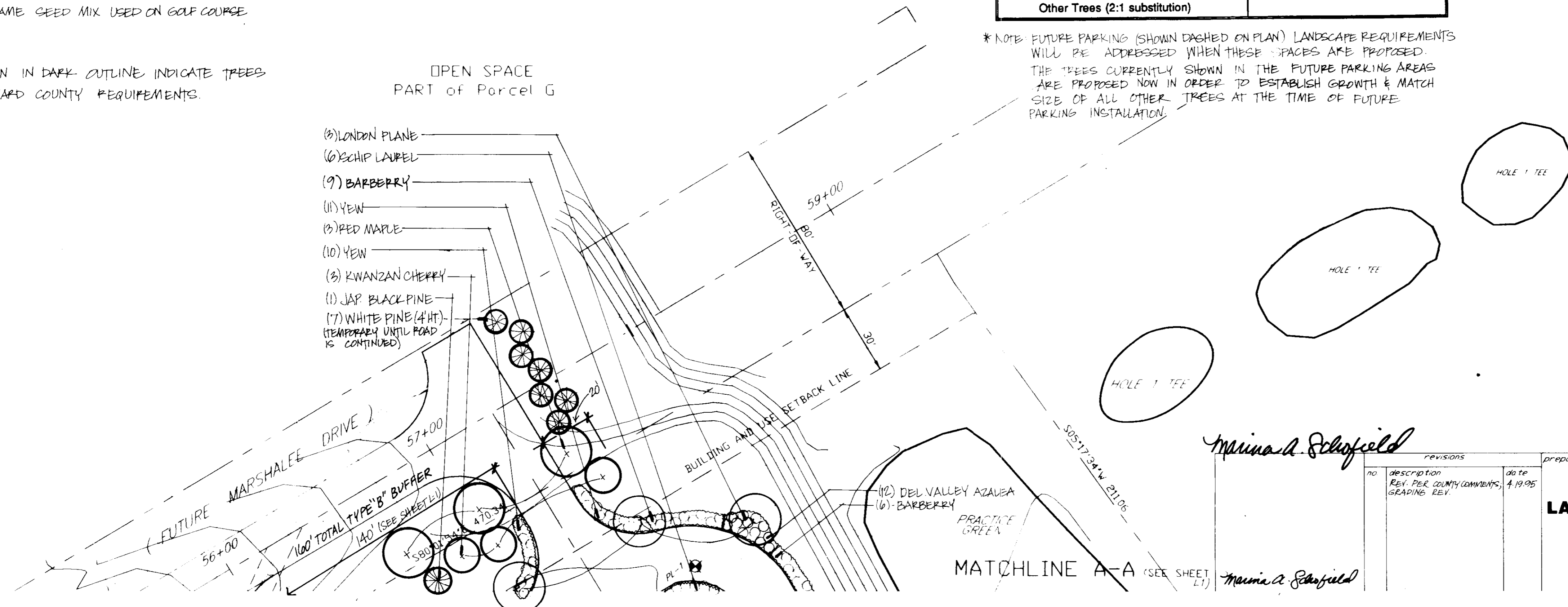
Category	Adjacent to Roadways	Adjacent to Curvilinear Placements
Landscape Type	Non-residential	N/A
Linear Feet of Roadway Frontage/Perimeter (TYPE 'B')	160 LF	"
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	"
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	"
Number of Plants Required Shade Trees Evergreen Trees Shrubs	32 (1:50) 4 (1:40) 0	"
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	0 4 7 0	"
BUFFER PARKING TYPE 'E' ADJACENT TO ROADWAY	140 LF	"
# OF PLANTS REQUIRED SHADE (1:40) = 35; SHRUBS (10:1) = 35		# OF PLANTS PROVIDED SHADE TREES: 5; SHRUBS: 35

Comments: Flowering trees substituted for shade trees at a 2:1 ratio to provide seasonal interest and understory canopy (required). Street trees fulfill the upperstory canopy in this same area and do not allow room for more shade trees. Note: Street trees do not fulfill frontage/perimeter planting requirements.)

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces (CURRENTLY PROPOSED)	166 SPACES
Number of Trees Required (NO. OF LANDSCAPED ISLANDS REQUIRED)	1:20 SPACES = 8.3 = 9 REQUIRED
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	NO. OF TREES PROVIDED = 16 NO. OF ISLANDS PROVIDED = 16*

* NOTE: FUTURE PARKING (SHOWN DASHED ON PLAN) LANDSCAPE REQUIREMENTS WILL BE ADDRESSED WHEN THESE SPACES ARE PROPOSED. THE TREES CURRENTLY SHOWN IN THE FUTURE PARKING AREAS ARE PROPOSED NOW IN ORDER TO ESTABLISH GROWTH & MATCH SIZE OF ALL OTHER TREES AT THE TIME OF FUTURE PARKING INSTALLATION.



APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Director: James J. Lee DATE: 5/26/95
 Chief: Charles E. Anderson-Cole DATE: 5/26/95
 APPROVED HOWARD DEPARTMENT OF PLANNING AND ZONING
 Director: James A. Butler DATE: 5/21/95
 Chief: Richard Blood DATE: 5/21/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 Director: Joyce M. Boydland per Jim DATE: 5/30/95

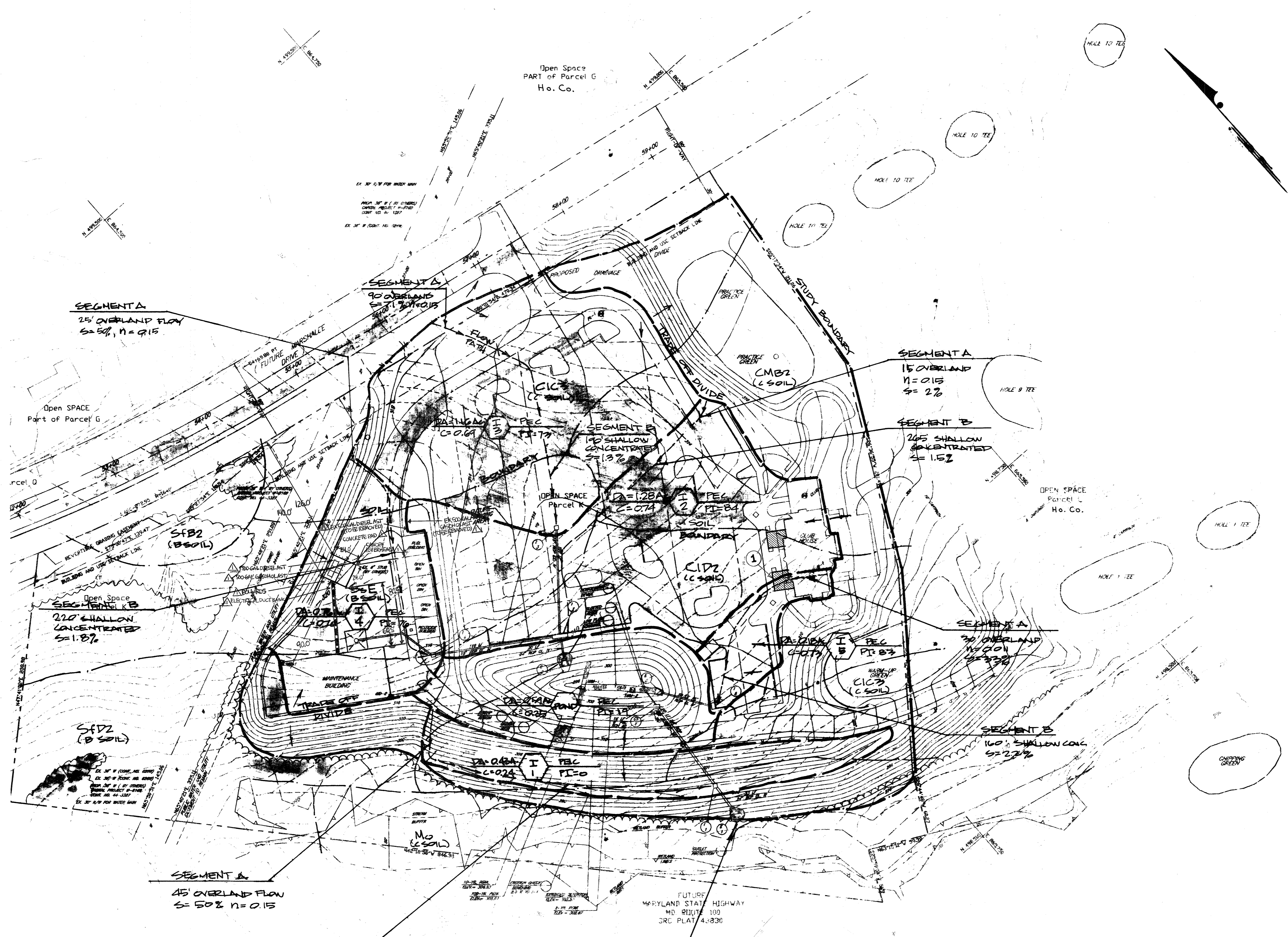
The Timbers at Troy Golf Course

prepared by: **MARINA SCHOFIELD LANDSCAPE ARCHITECTURE**
 117 MAPLE DRIVE
 ANNAPOLIS, MD 21403
 (410)263-4496

LANDSCAPE PLAN
 CENTRE 9500
 PARCEL K
 HOWARD COUNTY GOLF COURSE
 CLUB HOUSE AND MAINTENANCE FACILITIES
 HOWARD COUNTY, MARYLAND
 3430 Courthouse Dr., Ellicott City, MD 21043
 SDP-95-92

SCALE: 1"=30'
 DRAWN: THE MK
 FILE NO: 3/20/95
 SHEET: L-2
 SHEET 19 OF 20

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE SYSTEMS, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *James P. Jew* DATE: 5/26/95
 CHIEF, BUREAU OF ENGINEERING: *Elizabeth Anderson-Cole* DATE: 5/26/95
 APPROVED: HOWARD DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR: *James Smith* DATE: 5/31/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *Richard Blood* DATE: 5/31/95
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *Jane M. Boydland per JPM* DATE: 5/30/95



LEGEND

PAVING

TREE LINE

DRAINAGE DRIPE

STUDY BOUNDARY

FLOW PATH

SOIL BOUNDARY

CERTIFICATION IS LIMITED TO SITE REVISIONS FOR PUMP SYSTEM MODIFICATIONS.
 PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453 EXPIRATION DATE: 07/02/2021

James P. Jew
 6/24/2020

STUDY POINT

TO POND: DRAINAGE AREA = 3.97 AC
 $R_{CN} = 90$ $Q_2 = 0.3$ cfs
 $T_c = 0.09$ hr. $Q_0 = 2.4$ cfs

TRADE: DRAINAGE AREA = 2.39 AC
 $R_{CN} = 70$ $Q_2 = 4.0$ cfs
 $T_c = 0.08$ hr. $Q_0 = 9.4$ cfs

COMBINED: DRAINAGE AREA = 6.30 AC
 $Q_2 = 4.2$ cfs
 $Q_0 = 9.7$ cfs

ZIBA PARRA
 JOHN V. CLASSADOLE, P.E.
 MD. REG. 16536

Elizabeth Anderson-Cole
 5/26/95

no.	description	date
1	CLUBHOUSE EXPANSION	12/02
2	ADDED ABOVE GROUND STORAGE TANKS AND ASSOCIATED FEATURES	5/2020

prepared by: **RBA** ENGINEERS - ARCHITECTS - PLANNERS
 7164 COLUMBIA GATEWAY DRIVE SUITE 205
 COLUMBIA, MARYLAND 21046
 TEL: 410-326-9666
 FAX: 410-326-9665
 HOWARD COUNTY
 3430 COURTHOUSE DRIVE
 ELLICOTT CITY, MARYLAND 21043

DRAINAGE AREA MAP POST DEVELOPED CONDITION		SCALE 1" = 50'
CENTRE 5500 PARCEL K THE TIMBERS AT TROY GOLF COURSE CLUBHOUSE AND MAINTENANCE FACILITIES	DRAWN ELB	CHECKED JVC
	DATE 3/95	SHEET 20
	SHEET REF. 20	D-1