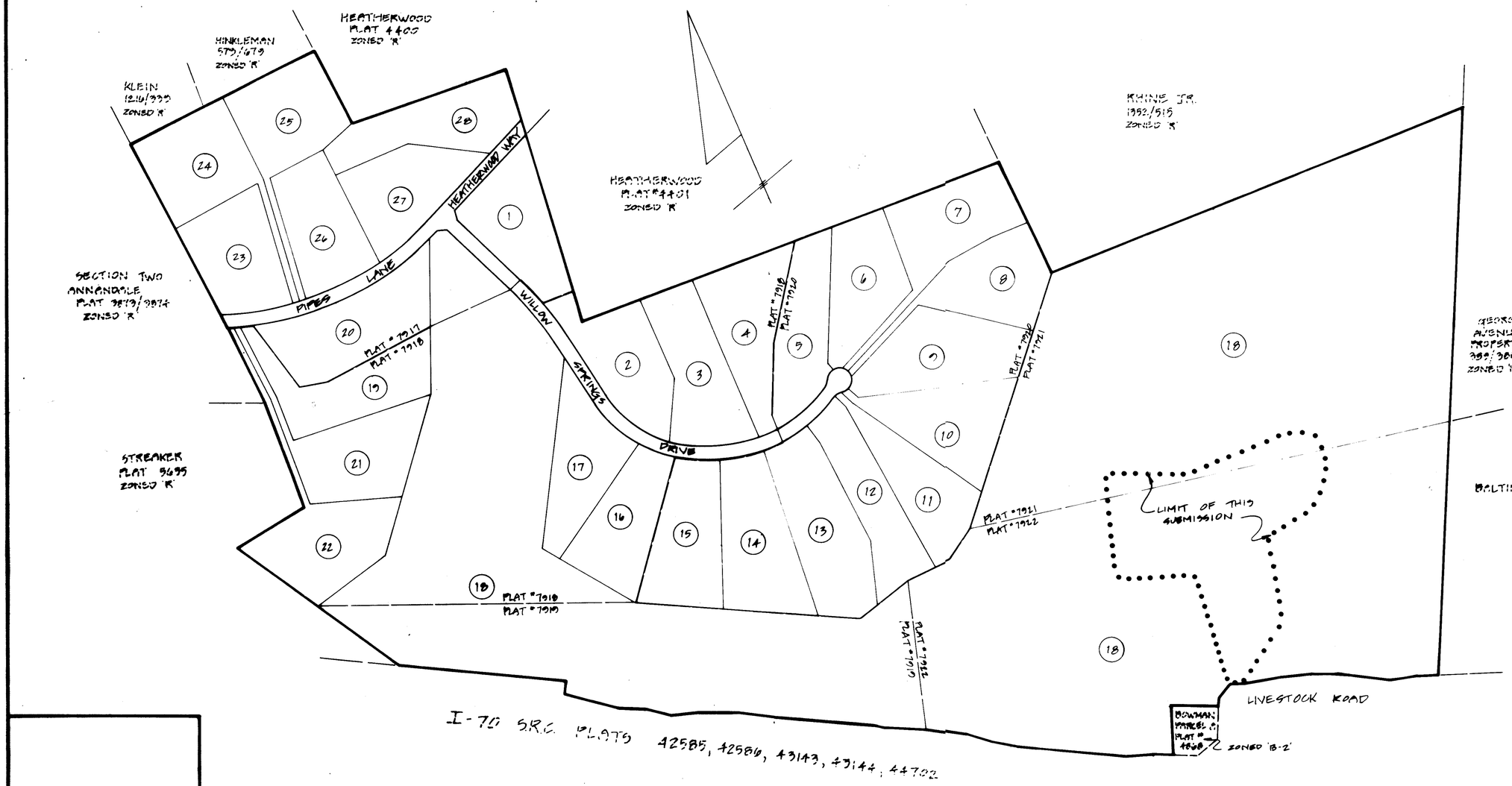
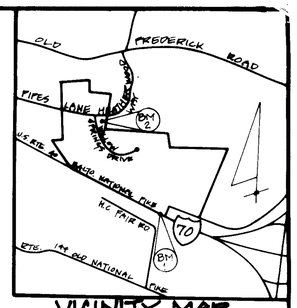




VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS

1. AREA OF PARCEL 109.916 AC.
2. ZONING: 'R'
3. PROPOSED USE: GOLF COURSE CLUB HOUSE AND MAINTENANCE BUILDINGS.
4. FLOOR STACLE: BUILDING A = 3150
   BUILDING B = 3200
   ① SECURITY PERSONNEL RESIDENCE = 2880
   MAINTENANCE BUILDING = 1584
5. TOTAL NUMBER OF UNITS ALLOWED:
6. TOTAL NUMBER OF UNITS PROVIDED: 4
7. MAXIMUM NUMBER OF EMPLOYEES
8. NUMBER OF PARKING SPACES REQUIRED
9. NUMBER OF PARKING SPACES PROVIDED: 84 246.-86
10. BUILDING COVERAGE OF SITE: 14,350 ± = 0.329 AC.
    PERCENTAGE OF SITE = 0.3%
11. EXISTING CONTOURS BASED ON AERIAL TOPOGRAPHY.
12. BENCHMARKS:
    1) HOWARD CO. TRAV. PT. # 3536007 EL. 560.48
    2) SHANABERGER & LANE TRAV. PT. # B13 EL. 548.28
13. PREVIOUS COUNTY FILES: BA-86-04 WP-90-147
    S-87-17 BA-86-04E
    P-87-11
    F-88-195
    SP-88-05
    SP-89-13
    SP-89-26
14. THERE ARE NO WETLANDS OR STREAMS WITHIN THE LIMITS OF THIS SUBMISSION.
15. STORMWATER MANAGEMENT IS PROVIDED UNDER SP-89-26.
16. AN AUTOMATIC SPRINKLER SYSTEM FOR CLUBHOUSE IS RECOMMENDED PER REQUEST OF DEPARTMENT OF FIRE AND RESCUE SERVICES, HOWARD COUNTY, MD.
17. AN ACCESS LANE FOR EMERGENCY FIRE EQUIPMENT BETWEEN POND #2 AND CLUBHOUSE AREA IS PROVIDED ON PLAN SHEET # 2.
18. WATER METER TO BE INSTALLED ON ALL INDIVIDUAL WATER LINES
19. EXISTING SEPTIC SYSTEM SERVING CLUBHOUSE TO BE ABANDONED

"I CERTIFY THAT THIS PLAN FOR 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."

Sayed A. Sadat — 2/19/90
SAYED A. SADAT, PROFESSIONAL ENGINEER #16493 — DATE

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

NAME AND TITLE — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL. — 8/1/90

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. — 8/1/90

10-3-90

10.24.90

2/7/90

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
18	12970 LIVESTOCK Rd

LOT NO.	GROSS AREA	FLOOD PLAIN/ STEEP SLOPES	NET AREA	PRESTEM AREA	50% CREATED STEEP SLOPES	MINIMUM LOT AREA
PART OF LOT 18	8.440 AC	0/1.3966 AC.	7.0434 AC	0	0.1368 AC	7.1802 AC.

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD
MONKTON, MD 21111
(301) 947-8722

SHANABERGER & LANE
SUITE 100 & COUNTRY BLVD.
OFFICE 100 & 101
BOWIE CITY, MD 21715
(301) 261-8900

STATE OF MARYLAND — SAYED A. SADAT — NO. 16493 — PROFESSIONAL ENGINEER

DESIGNED	SAM	①	REVISE NOTE NO. 4 — 4/15/91
DRAWN			
CHECKED			
DATE			
BY	NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
COVER SHEET

WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE

HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: 1" = 200'
SHEET 1 OF 7

SDP-90-159

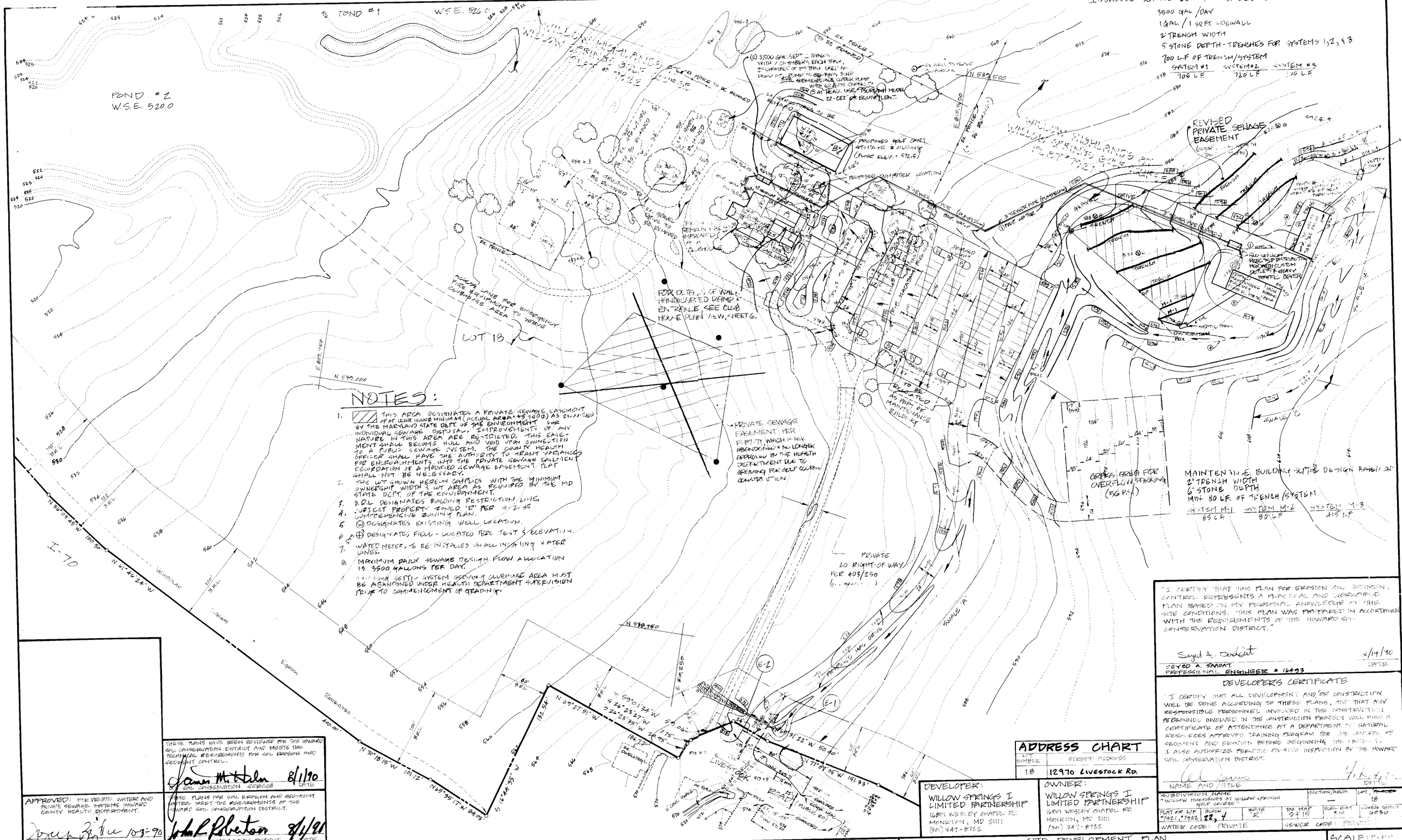
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL
"WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"	—	18

PLAT NO. L/F	BLOCK	ZONE	TAX MAP	ELEC. DIST.	CENSUS TRACT
"7921", "7922"	22, 4	'R'	9 & 15	5TH	6030

WATER CODE: PRIVATE — SEWER CODE: PRIVATE

CLUBHOUSE SEPTIC DESIGN BASED ON:
3500 GAL/DAY
1 GAL / 1 SQ.FT. SIDEWALL
2' TRENCH WIDTH
5' STONE DEPTH - TRENCHES FOR SYSTEMS 1, 2, & 3
700 L.F OF TRENCH/SYSTEM

SYSTEM #1	SYSTEM #2	SYSTEM #3
705 L.F.	720 L.F	710 L.F



MAINTENANCE BUILDING SEPTIC DESIGN BASED ON:
2' TRENCH WIDTH
6' STONE DEPTH
MIN. 80 L.F. OF TRENCH/SYSTEM

SYSTEM M-1	SYSTEM M-2	SYSTEM M-3
85 L.F	80 L.F	415 L.F

NOTES:

1. THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 MINIMUM (ACTUAL AREA = 15,760 □') AS REQUIRED BY THE MARYLAND STATE DEPT. OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
2. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH & LOT AREA AS REQUIRED BY THE MD STATE DEPT. OF THE ENVIRONMENT.
3. B.R.L. DESIGNATES BUILDING RESTRICTION LINE.
4. SUBJECT PROPERTY ZONED 'R' PER 3-2-55 COMPREHENSIVE ZONING PLAN.
5. (W) DESIGNATES EXISTING WELL LOCATION.
6. (P) DESIGNATES FIELD - LOCATED PERC TEST & ELEVATION.
7. WATER METER, TO BE INSTALLED ON ALL INCOMING WATER LINES.
8. MAXIMUM DAILY SEWAGE DESIGN FLOW ALLOCATION IS 3500 GALLONS PER DAY.
9. EXISTING SEPTIC SYSTEM SERVING CLUBHOUSE AREA MUST BE ABANDONED UNDER HEALTH DEPARTMENT SUPERVISION PRIOR TO COMMENCEMENT OF GRADING.

"I CERTIFY THAT THIS PLAN FOR 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."

Seyed A. Sadat — 8/14/90
SEYED A. SADAT — DATE
PROFESSIONAL ENGINEER # 16493

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

NAME AND TITLE — DATE

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
18	12970 LIVESTOCK RD.

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

SUBDIVISION NAME "WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			SECTION/AREA —	LOT 18
PLAT OR L/F #7921, #7922	BLOCK 22, 4	ZONE 'R'	TAX MAP 24 15	ELEC. DIST. 9TH	CENSUS TRACT 6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE	

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
James M. Helm — 8/1/90
SOIL CONSERVATION SERVICE — DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John C. Robertson — 8/1/90
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
10-3-90
COUNTY HEALTH OFFICER — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY.
10.24.90
PLANNING DIRECTOR — DATE
1/1/93
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
9/7/90
DIRECTOR — DATE
8.27.90
CHIEF, BUREAU OF ENGINEERING — DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-0563

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER

	BY	NO.	REVISION	DATE
DESIGNED GLM	GLM	1	SHOW WATER SERVICE TO MAINTENANCE & SECURITY PERSONNEL BUILDINGS	4/15/91
DRAWN GLM	GLM	2	REVISE PROPOSED MAINTENANCE BUILDING & PROPOSED SECURITY BUILDING	4/15/91
CHECKED GLM	GLM	3	SHOW SEPTIC SYSTEM FOR SECURITY PERSONNEL RESIDENCE	4/15/91
DATE	GLM	4	REVISE PROPOSED GRADING AROUND PROPOSED STRUCTURES	4/15/91

SITE DEVELOPMENT PLAN
CLUBHOUSE FACILITY AND MAINTENANCE FACILITY
WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE
HOWARD COUNTY, MARYLAND
DATE JANUARY 18, 1990

SCALE: 1" = 50'
SHEET 2 OF 7

SDP-90-159

HYDROLOGIC CRITERIA

PRINCIPAL SPILLWAY ROUTING : 2 AND BULK OF 5 YR STORM
EMERGENCY SPILLWAY ROUTING : 10 AND ALL 100 YEAR STORMS

STRUCTURE CLASSIFICATION

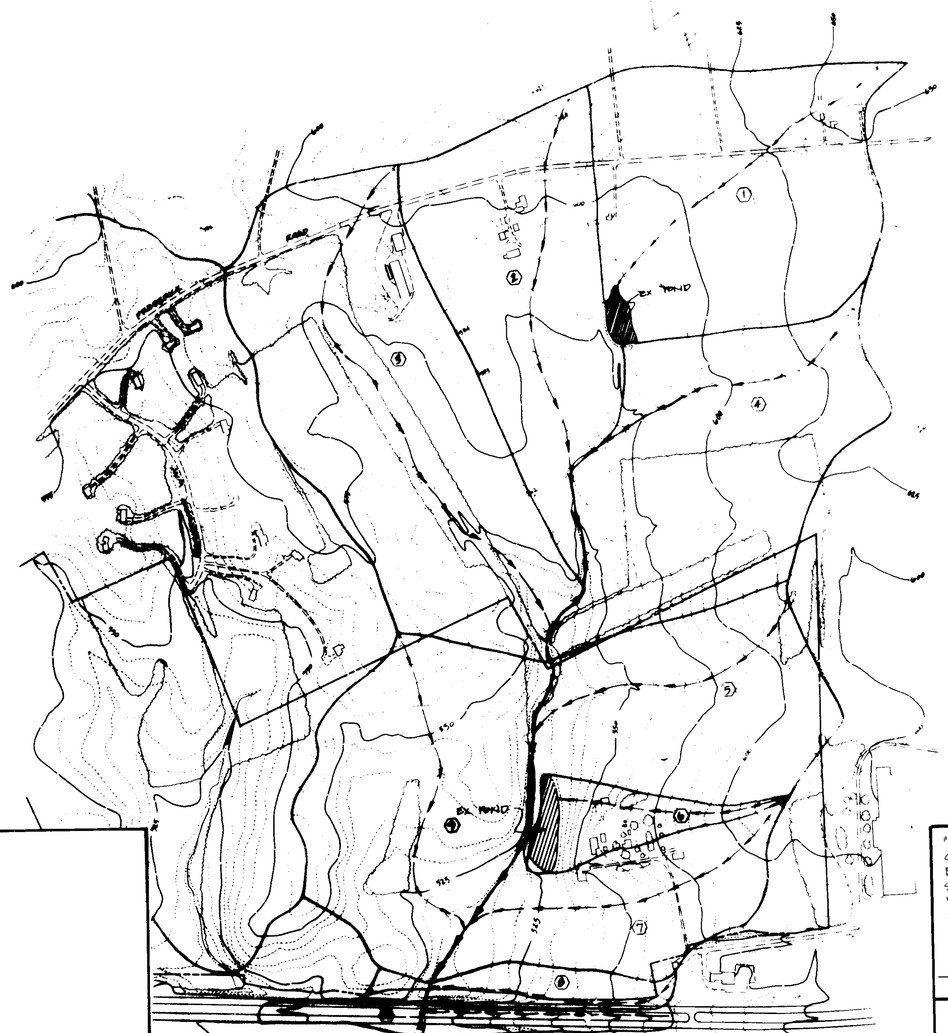
STRUCTURE CLASS 'A'
STRUCTURE LOCATION : RURAL
WATERSHED AREA : 337 AC. ±
NORMAL SURFACE AREA :
POND 1 : 526.0 ; POND 2 : 520.0 ; POND 3 : 517.0
HEIGHT TO EMERGENCY SPILLWAY CREST :
POND 1 : 7.0' ; POND 2 : 7.5 POND 3 : 6.5
STRUCTURE TYPE : WET DETENTION EMBANKMENT POND

PEAK FLOW SUMMARY

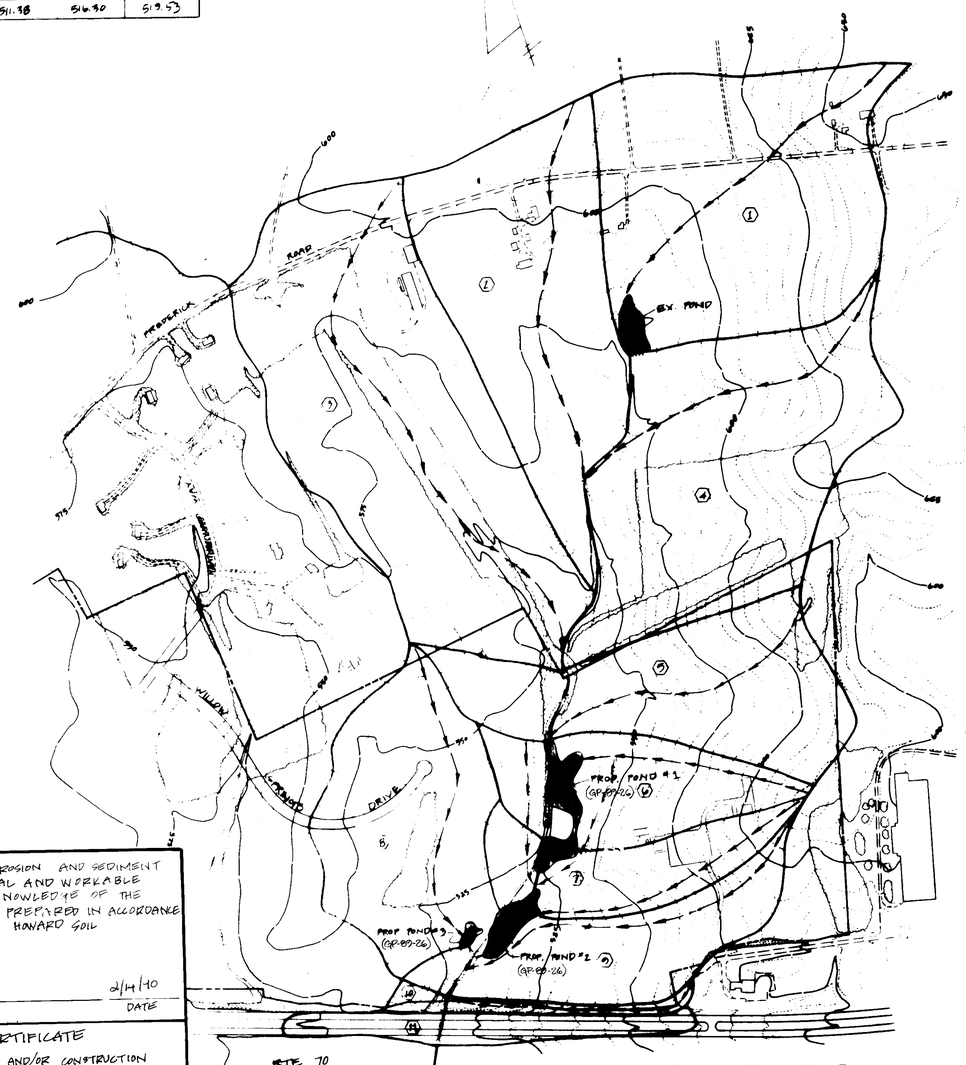
POND DESIGNATION		2 YEAR	10 YEAR	100 YEAR
1	INFLOW (CFS)	33.2	350.0	619.8
	OUTFLOW (CFS)	103.2	521.5	603.71
	ELEVATION	522.6	527.77	528.27
	STORAGE (AC. FT.)	2.63	4.21	[illegible]
2	INFLOW (CFS)	24.4	317.4	573.3
	OUTFLOW (CFS)	97.71	399.0	646.9
	ELEVATION	521.09	522.22	522.93
	STORAGE (AC. FT.)	2.39	3.51	3.98
3	INFLOW (CFS)	12.4	42.4	91.2
	OUTFLOW (CFS)	31.0	86.4	124.4
	ELEVATION	517.50	518.87	519.05
	STORAGE (AC. FT.)	0.55	1.81	1.7
AT DESIGN POINT (INLET OF 72" CULVERT UNDER I-70)				
EXISTING CONDITIONS	PEAK FLOW	33.6	436.5	2050
	ELEVATION	512.14	516.38	519.45
PROPOSED	PEAK FLOW	106.70	228.70	297.60
	ELEVATION	511.38	516.30	519.53

POND MAINTENANCE SCHEDULE

THE PONDS, RISER STRUCTURES AND OUTFALL DEVICES SHOULD BE INSPECTED ON A ROUTINE BASIS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. REPAIRS SHOULD BE MADE AS REQUIRED. INSPECTION CAN BE MADE ON A SEMI-ANNUAL BASIS BUT SHOULD ALWAYS BE CONDUCTED FOLLOWING EVERY STORM.



RTE. 70
PRE-DEVELOPMENT DRAINAGE AREA MAP
SCALE : 1" = 400'



RTE 70
POST-DEVELOPMENT DRAINAGE AREA MAP
SCALE : 1" = 400'

"I CERTIFY THAT THIS PLAN FOR 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."

Syed A. Sadat — 2/14/90
SEYED A. SADAT — DATE
PROFESSIONAL ENGINEER # 16493

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

NAME AND TITLE — DATE

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson — 8/1/90
HOWARD SOIL CONSERVATION DISTRICT — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Lewis M. Nelson — 8/1/90
U.S. SOIL CONSERVATION SERVICE — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY.
10.24.90
PLANNING DIRECTOR — DATE
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
7.7.90
DIRECTOR — DATE
CHIEF, BUREAU OF ENGINEERING — DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD
SUITES 106 & 107
ELLICOTT CITY, MD 21042
(301) 461-9563

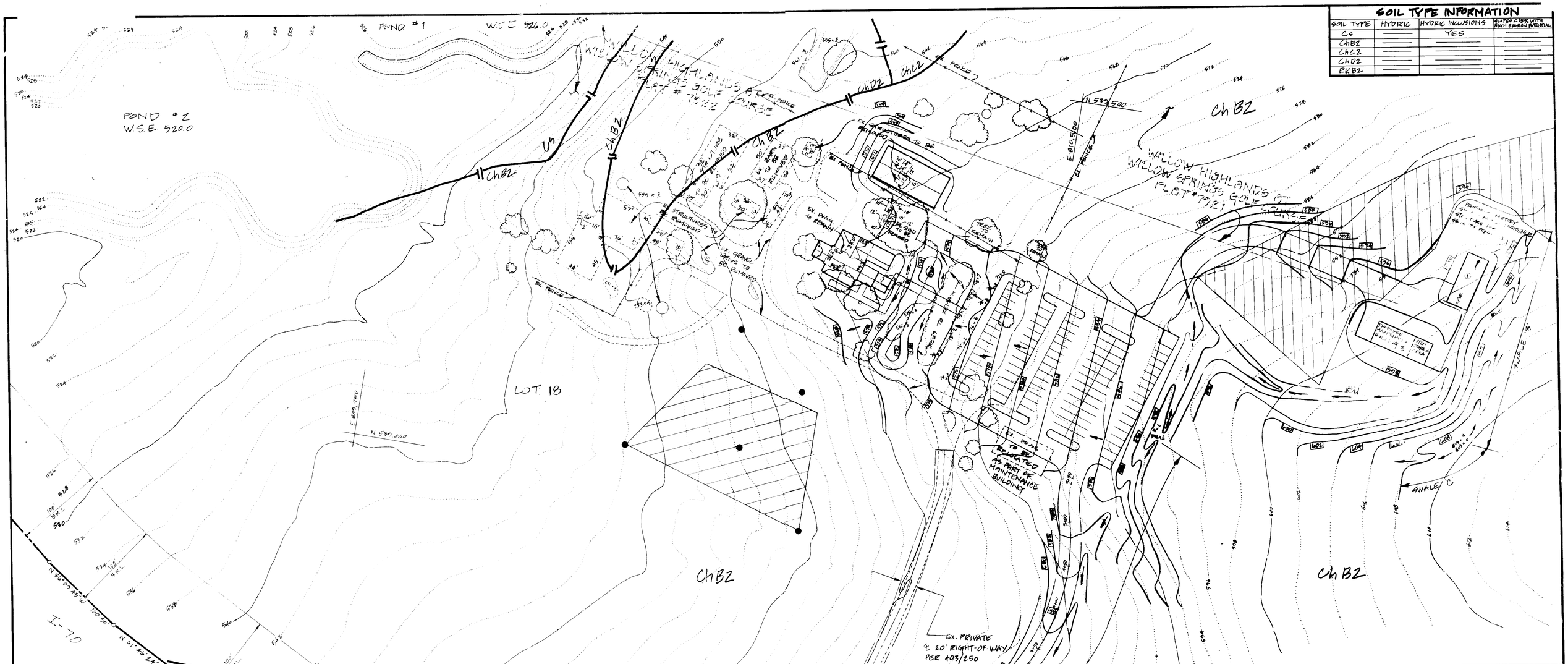
DESIGNED			
DRAWN			
CHECKED			
DATE	BY	NO.	REVISION	DATE

SUBDIVISION NAME: "WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"
SECTION/AREA: -
LOT/PARCEL: 18
PLAT OR L/F: "7021", "7022" BLOCK: 22, 4 ZONE: "R" TAX MAP: 9 & 15 ELEC. DIST.: 3rd CENSUS TRACT: 6030
WATER CODE: PRIVATE SEWER CODE: PRIVATE

SITE DEVELOPMENT PLAN
DRAINAGE AREA MAPS
WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE
HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: AS SHOWN
SHEET 3 OF 7

SDP-91-159



SOIL TYPE INFORMATION

SOIL TYPE	HYDRIC	HYDRIC INCLUSIONS	SLOPES ≥ 15% WITH HIGH EROSION POTENTIAL
CG	—	YES	—
ChB2	—	—	—
ChC2	—	—	—
ChD2	—	—	—
EkB2	—	—	—

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Seyed A. Sadat — 2/14/90
SEYED A. SADAT, PROFESSIONAL ENGINEER # 16493 — DATE

DEVELOPER'S CERTIFICATE

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NAME AND TITLE — DATE

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL
"WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"	—	18

PLAT NO. L/F	BLOCK	ZONE	TAX MAP	ELEC. DIST	CENSUS TRACT
"7921", "7922"	22, 4	"R"	24 & 15	5TH	6030

WATER CODE: PRIVATE — SEWER CODE: PRIVATE

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
18	12990 LIVESTOCK RD

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

8/1/90
US SOIL CONSERVATION SERVICE — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.

10-3-90
COUNTY HEALTH OFFICER — DATE

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

8/1/90
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY.

10.29.90
PLANNING DIRECTOR — DATE

10/29/90
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

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

9/7/90
DIRECTOR — DATE

CHIEF, BUREAU OF ENGINEERING — DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-0563

STATE OF MARYLAND — SEYED A. SADAT — NO. 16493 — REGISTERED PROFESSIONAL ENGINEER

	BY	NO.	REVISION	DATE
DESIGNED	GLM	1	REVISED FACILITY PERSONNEL BUILDING & PROPOSED GRADING	4/15/91
DRAWN	GLM	2	REVISED PROPOSED MAINTENANCE BUILDING & PROPOSED GRADING	4/16/91
CHECKED				
DATE				

SOILS MAP
CLUBHOUSE FACILITY AND MAINTENANCE FACILITY

WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE

HOWARD COUNTY, MARYLAND
DATE: JANUARY 19, 1990

SCALE: 1" = 80'

SHEET 4 OF 7

SDP-90-159

"I CERTIFY THAT THIS PLAN FOR 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."

Seyed A. Saadat — 2/14/90
SEYED A. SAADAT
PROFESSIONAL ENGINEER # 16493 — DATE

DEVELOPER'S CERTIFICATE

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NAME AND TITLE — DATE

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
18	12970 LIVESTOCK RD

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

SUBDIVISION NAME			SECTION/AREA	LOT
"WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			—	18
PLAT OR L/F #7921, #7922	BLOCK 22, 4	ZONE R	TAX MAP 9 & 15	ELEC. DIST. 3rd	CENSUS TR. 6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE	

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
James M. Holm — 8/1/90
U.S. SOIL CONSERVATION SERVICE — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.
10-3-90
COUNTY HEALTH OFFICER — DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John L. Robertson — 8/1/90
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING OF HOWARD COUNTY.
10.29.90
PLANNING DIRECTOR — DATE
10/12/90
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
9/7/90
DIRECTOR — DATE
8-27-90
CHIEF, BUREAU OF ENGINEERING MK — DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-9563

STATE OF MARYLAND — SEYED A. SAADAT — NO. 16493 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED: GSS
DRAWN: SLM
CHECKED: GAS
DATE:

BY	NO.	REVISION	DATE
SLM	1	REVISED SECURITY PERSONNEL BUILDING & PROPOSED GRADING	4/15/91
SLM	2	REVISED PROPOSED MAINTENANCE BUILDING & PROPOSED GRADING	4/15/91

SITE DEVELOPMENT PLAN
EROSION AND SEDIMENT CONTROL PLAN
WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE
LOT 18
HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: 1"=100'
SHEET 5 OF 7

SDP-90-159

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 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 lbs. PER ACRE 10-10-10 FERTILIZER (14 lbs. / 1000 SQ. FT.)

SEEDING: FOR PERIOD MARCH 4 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 lbs./1000 SQ. FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 lbs. PER ACRE OF WEEPING LOVEGRASS (.07 lbs./1000 SQ. FT.) FOR THE PERIOD 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 GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 8 FT. OR HIGHER USE 348 GAL. 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.

PERMANENT SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

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

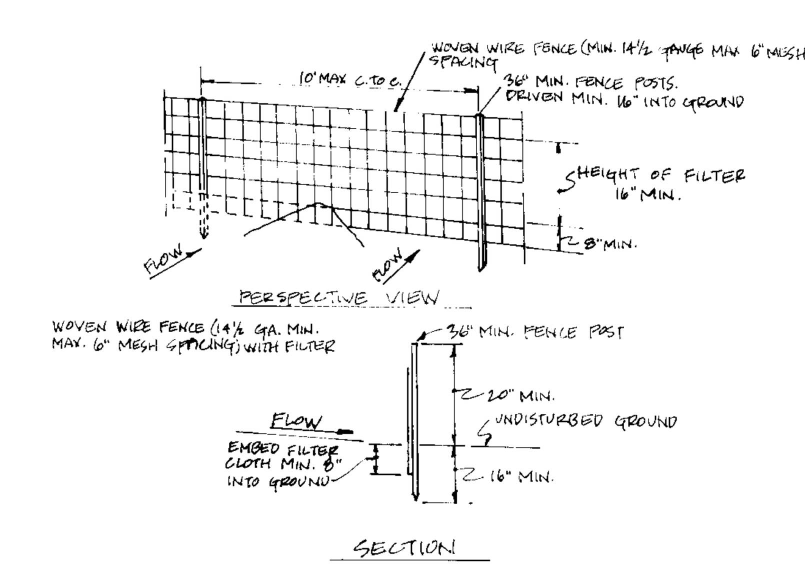
1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs./1000 SQ. FT.) AND 600 lbs/ACRE 10-10-10 FERTILIZER (14 lbs./1000 sq. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 lbs./ACRE 30-0-0 UREAFORM FERTILIZER (9 lbs./1000 SQ. FT.).

2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 SQ. FT.) AND 100 lbs./ACRE 10-10-10 FERTILIZER (23 lbs./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC 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 (1.4 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/1000 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 GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL./1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. 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.



CONSTRUCTION SPECIFICATIONS FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER "T" OR "U" TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING

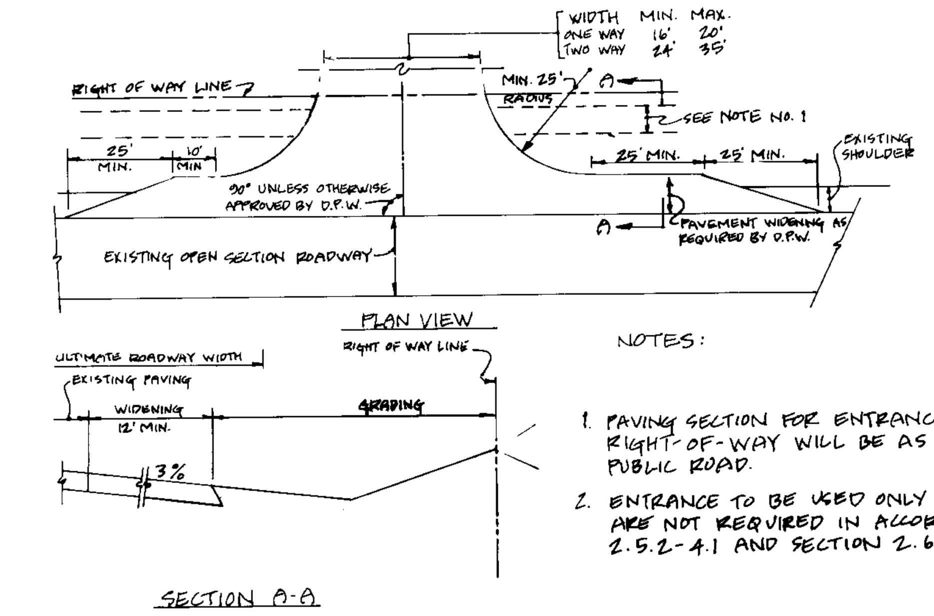
FILTER CLOTH: FILTER X, MIRAF 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, "ENVIROFENCE", OR APPROVED EQUAL

SILT FENCE

PAVING SECTION

SECTION NUMBER	ROAD AND STREET CLASSIFICATION
P-2	RESIDENTIAL ZONES: LOCAL, CUL-DE-SAC STREETS, ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS. TRAVELWAYS: FOR APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCKS
PAVEMENT MATERIALS	
FULL DEPTH BIT. CONC. ALTERNATE	
1 1/2" BIT. CONC. SURFACE; 5" BIT. CONC. BASE	
GRANULAR BASE ALTERNATES	
1 1/2" BIT. CONC. SURFACE; 2 1/2" BIT. CONC. BASE; PRIME; 8" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	



NOTES:

1. PAVING SECTION FOR ENTRANCE WITHIN THE PUBLIC RIGHT-OF-WAY WILL BE AS REQUIRED FOR A PUBLIC ROAD.
2. ENTRANCE TO BE USED ONLY IF AUXILIARY LANES ARE NOT REQUIRED IN ACCORDANCE WITH SECTION 2.5.2-4.1 AND SECTION 2.6.7.

COMMERCIAL·INDUSTRIAL·APARTMENT·ENTRANCE ON OPEN SECTION ROADWAY

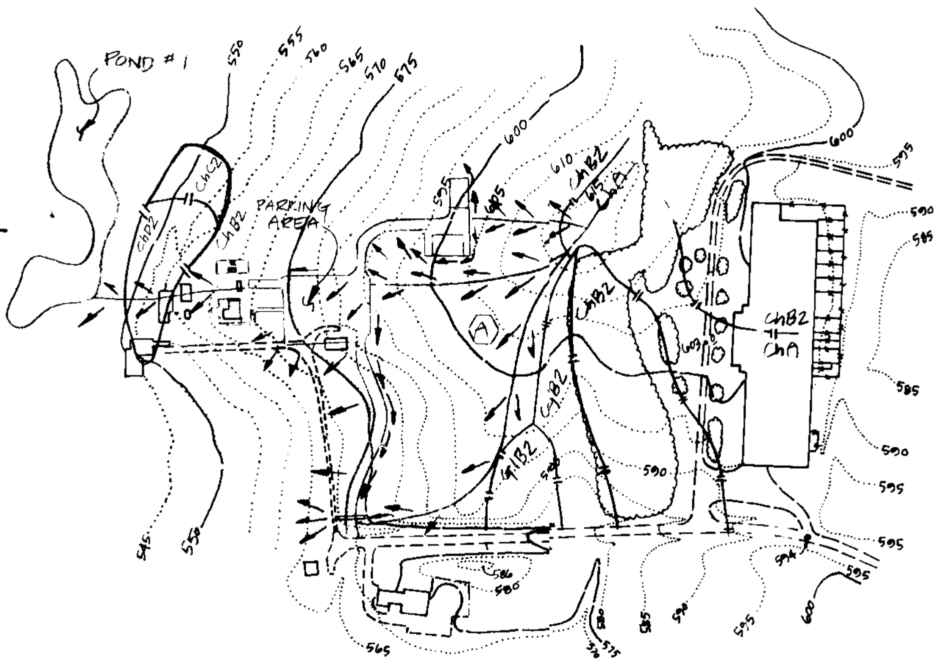
TRAFFIC VOLUME LESS THAN 100 V.P.H.

SEDIMENT CONTROL NOTES:

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE STARTS OF ANY CONSTRUCTION.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 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.
4. 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.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

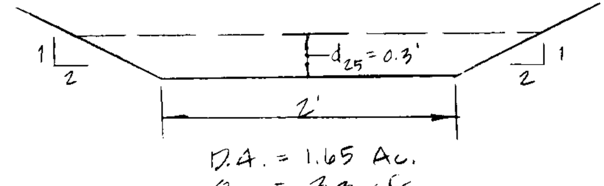
TOTAL AREA OF SITE	109.916 Ac.
AREA DISTURBED	3.675 Ac.
AREA TO BE ROOFED OR PAVED	2.120 Ac.
AREA TO BE VEGETATIVELY STABILIZED	6.555 Ac.
TOTAL CUT	10,704 C.Y.
TOTAL FILL	2,904 C.Y.
OFFSITE WASTE/BORROW AREA LOCATION	WILLOW SPRINGS GOLF COURSE (GP 88-05, GP 89-13, GP 89-26)

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH [illegible]
11. [illegible]
12. [illegible] 1090 [illegible]



DRAINAGE AREA MAP

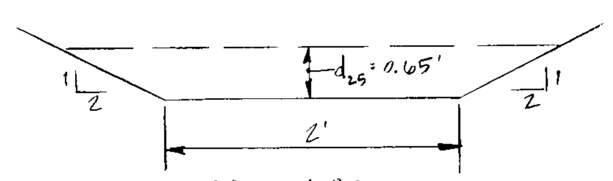
SCALE: 1" = 400'



D.A. = 1.65 Ac.
Q_{25} = 3.3 cfs
V = 4.3 Fps

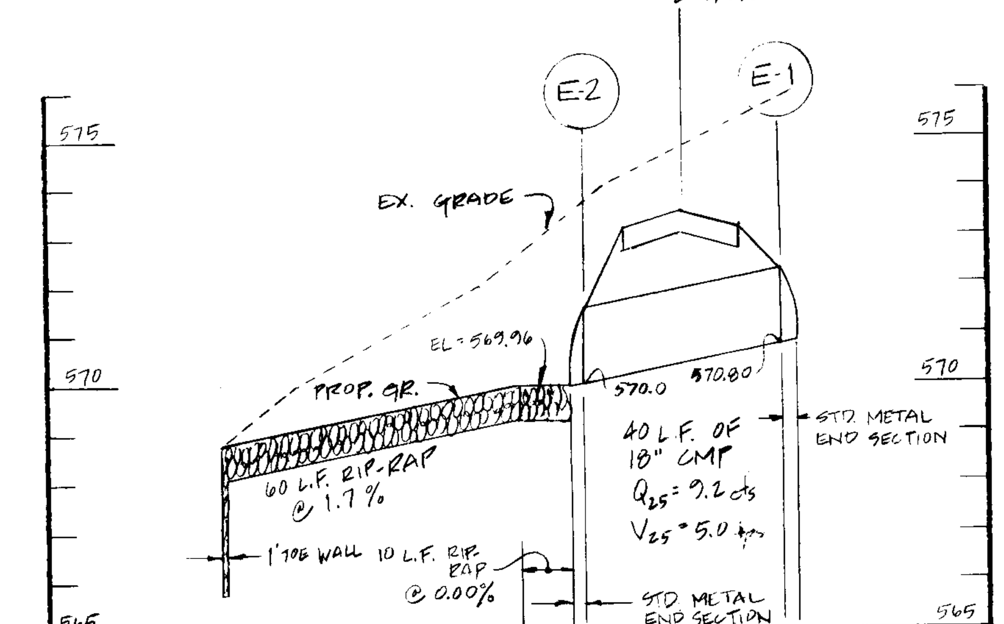
VEGETATED SWALE 'B' AND 'C'

NOT TO SCALE



D.A. = 4.88 Ac.
Q_{25} = 7.8 cfs
V = 4.2 Fps

VEGETATED SWALE 'A'

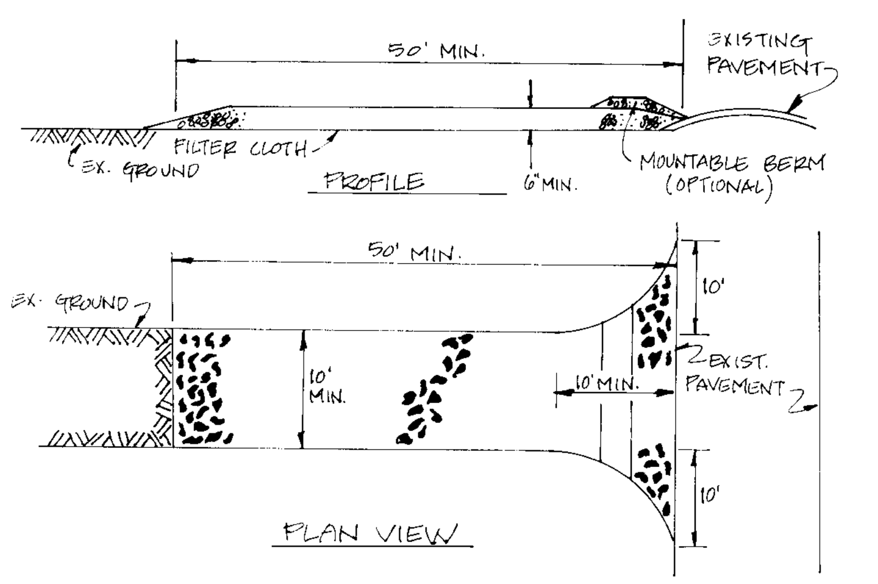


PIPE PROFILE

SCALE: HORIZ - 1" = 30'
VERT - 1" = 3'

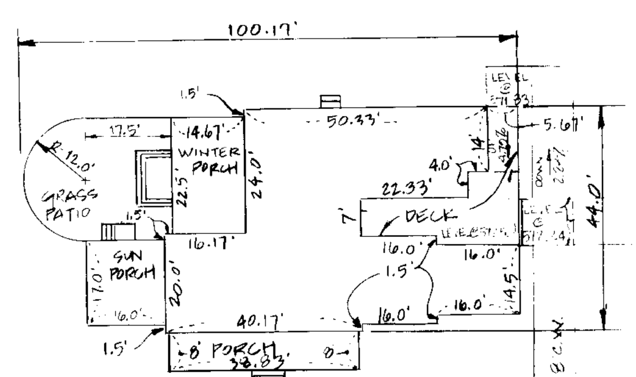
STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

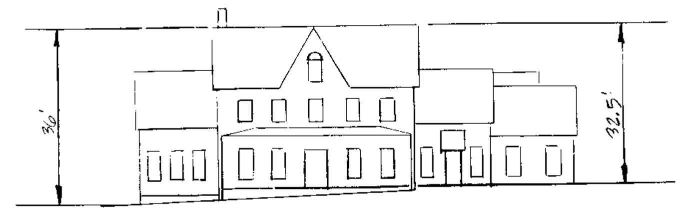


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THICKNESS - NOT LESS THAN (6) SIX INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. 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.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. 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 TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTIONS AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



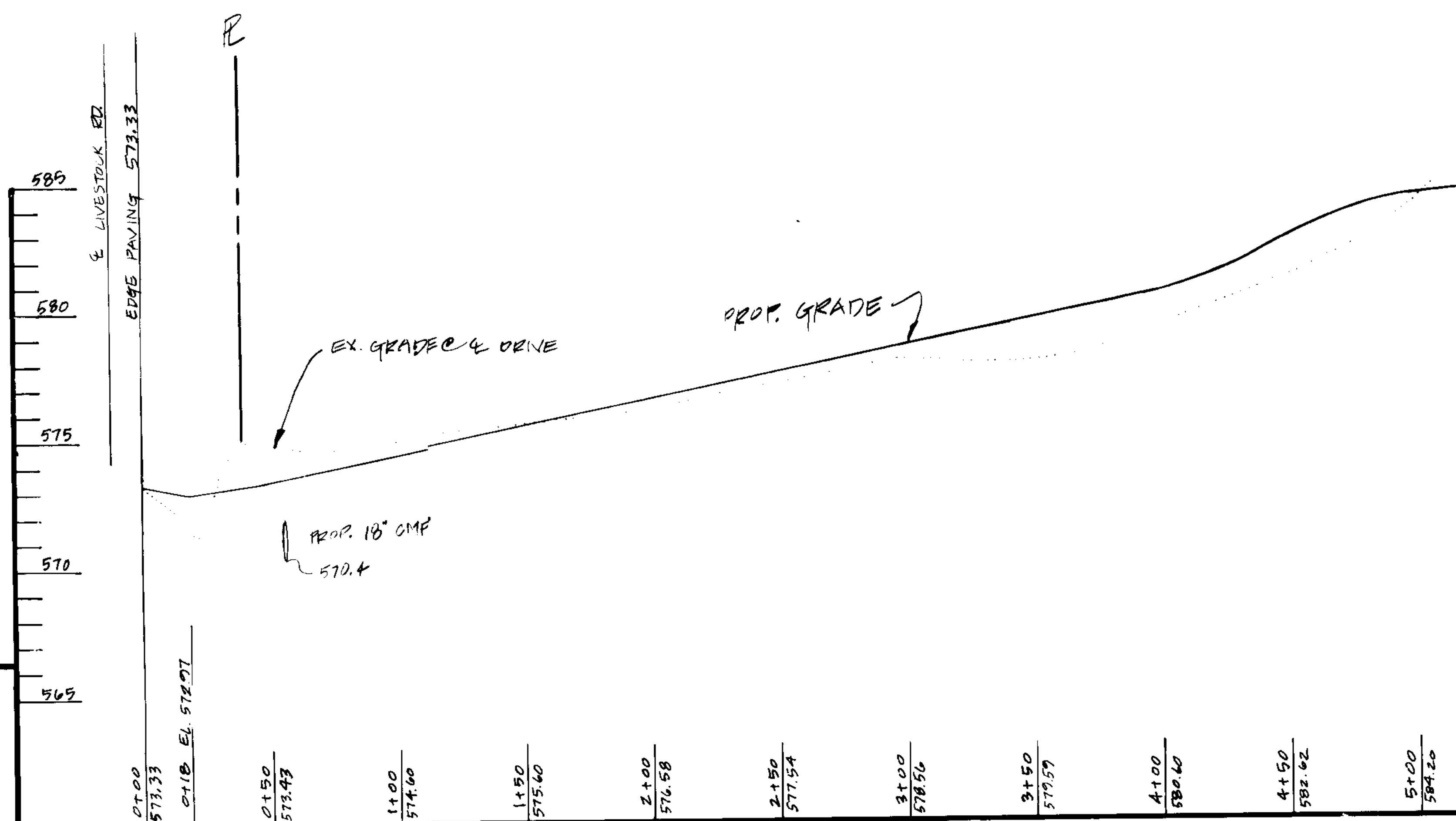
PLAN VIEW 1" = 30'



ELEVATION 1" = 30'

PROPOSED CLUBHOUSE

BUILDING 'A'



DRIVEWAY PROFILE

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

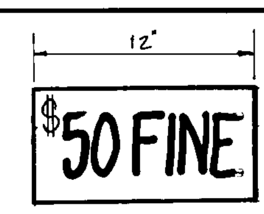
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Seyed A. Saadat (signature) 2/14/90
SEYED A. SAADAT
PROFESSIONAL [illegible] #16493 DATE

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

(signature) (date)
NAME AND TITLE DATE



NOTES:

1. $50 FINE SIGN TO BE WHITE WITH GREEN TEXT AND BORDER TO MATCH RESERVED PARKING SIGN AT LEFT.
2. THE ABOVE FINE SIGN TO BE MOUNTED UNDERNEATH THE RESERVED PARKING SIGN WITH BOTTOM EDGE A MINIMUM OF 7' ABOVE GROUND.

COLOR SCHEME

LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

HANDICAPPED PARKING SIGN SPECIFICATIONS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
(signature) 8/1/90
U.S. SOIL CONSERVATION SERVICE DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
(signature) 10-3-90
COUNTY HEALTH OFFICER DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson (signature) 8/1/90
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING OF HOWARD COUNTY.
(signature) 10.[illegible]
PLANNING DIRECTOR DATE
(signature) 1/12/[illegible]
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
(signature) 9/7/90
DIRECTOR DATE
(signature) 8.27.90
CHIEF, BUREAU OF ENGINEERING DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-9563

STATE OF MARYLAND SEYED A. SAADAT NO. 16493 REGISTERED PROFESSIONAL ENGINEER

DESIGNED	BY	NO.	REVISION	DATE
DRAWN				
CHECKED				
DATE				

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

SUBDIVISION NAME				SECTION/AREA	LOT / PARCEL
"WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"				—	18
PLAT OR L/F	BLOCK	ZONE	TAX MAP	ELEC. DIST.	CENSUS TRACT
#7921, #7922	22,4	'R'	9 & 15	3rd	6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE		

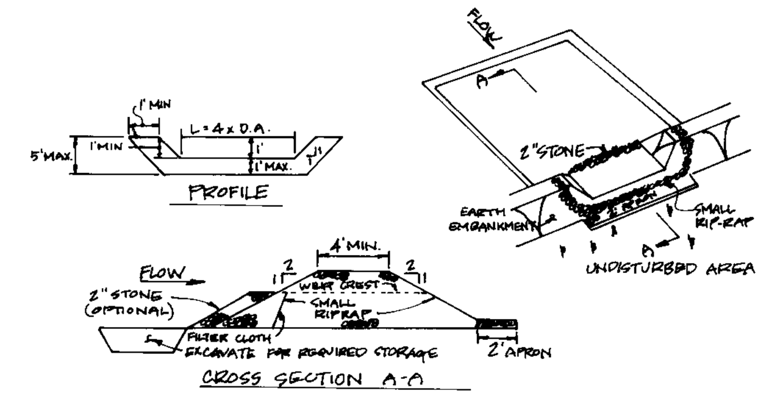
SITE DEVELOPMENT PLAN
NOTES AND DETAILS SHEET

WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE

HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: AS SHOWN
SHEET 6 OF 7

SDP-90-159



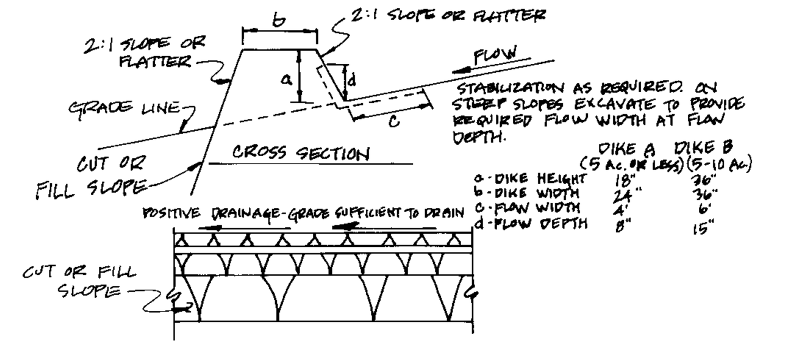
OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIP-RAP IN PLACE OF THE EMBEDDED FILTER CLOTH

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UPGRADE SIDE OF THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT ACCUMULATES TO ½ THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

STONE OUTLET SEDIMENT TRAP

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE A POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. 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.
6. 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.

FLOW CHANNEL STABILIZATION

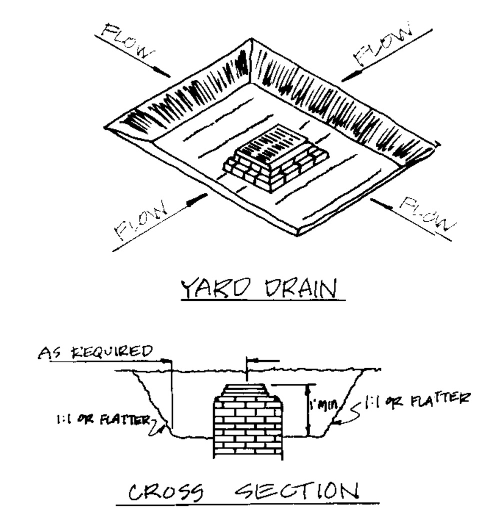
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5 - 3.0 %	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1 - 5.0 %	SEED AND STRAW MULCH	SEED AND STRAW MULCH
3	5.1 - 8.0 %	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1 - 20 %	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

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 IN THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE

NOT TO SCALE

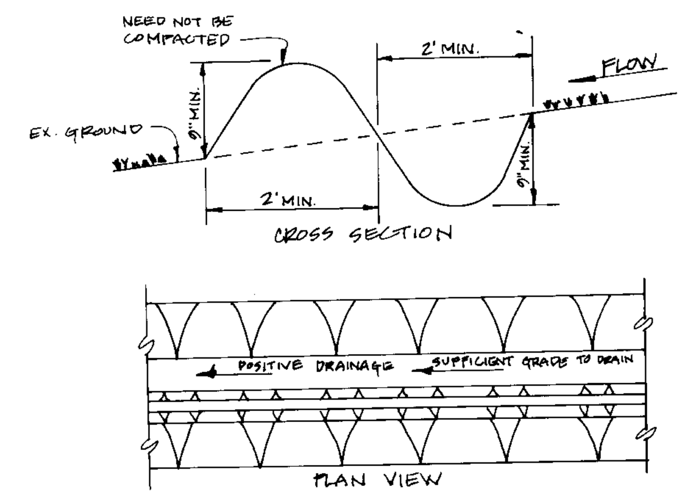


CONSTRUCTION SPECIFICATIONS

1. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ½ 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.
2. THE VOLUME OF SEDIMENT STORAGE SHALL BE 1800 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE.
3. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
5. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
6. ALL CUT SLOPES SHALL BE 1:1 OR FLATTER.

STORM INLET SEDIMENT TRAP

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSION VELOCITY.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SEED AND STRAW MULCH, AND SHALL BE DONE WITHIN 10 DAYS.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

PERIMETER DIKE/SWALE

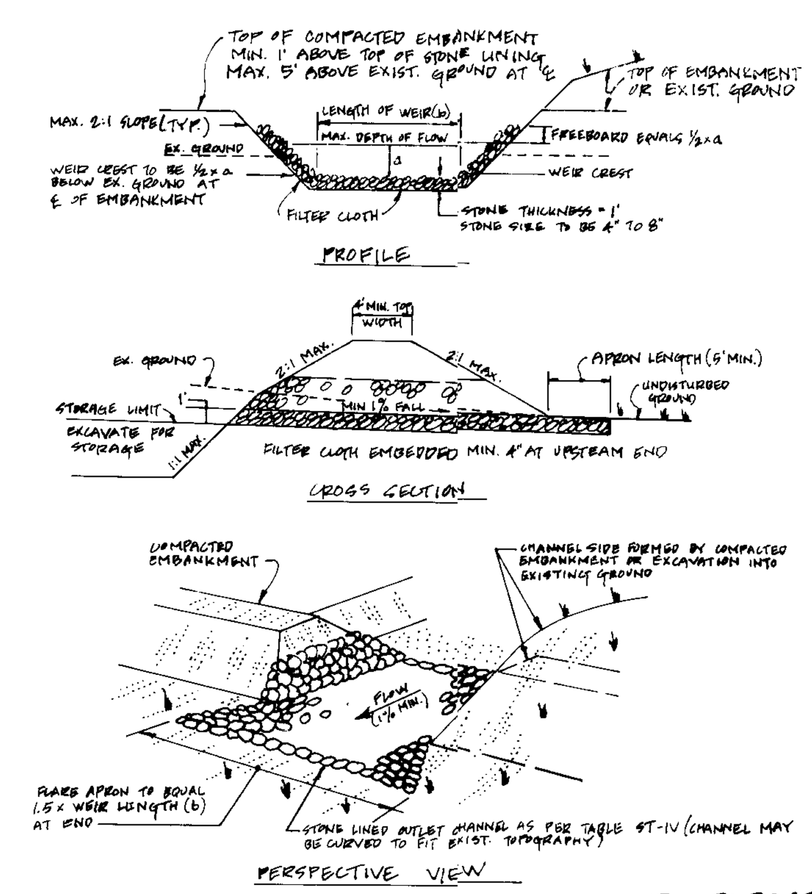
NOT TO SCALE

NOTE:

EXISTING SEPTIC SYSTEM SERVING CLUBHOUSE AREA MUST BE ABANDONED UNDER HEALTH DEPARTMENT SUPERVISION PRIOR TO COMMENCEMENT OF GRADING SEQUENCE.

SEQUENCE OF CONSTRUCTION

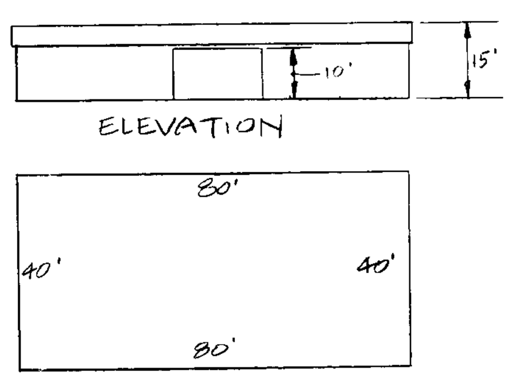
1. OBTAIN GRADING PERMIT.
2. NOTIFY D.P.W. SEDIMENT CONTROL INSPECTOR 48 HOURS BEFORE STARTING WORK.
3. CLEAR & GRUB AREAS NECESSARY TO INSTALL SEDIMENT CONTROL MEASURES.
4. INSTALL SEDIMENT TRAPS, EARTH DIKES, PERIMETER DIKE/SWALES, SILT FENCE.
5. INSTALL STORM DRAIN E-1 TO E-2.
6. CLEAR & ROUGH GRADE SITE & APPLY TEMPORARY STABILIZATION.
7. REMOVE EXISTING STRUCTURES.
8. RELOCATE EXISTING HOUSE AS PART OF MAINTENANCE BUILDING.
9. BEGIN BUILDING CONSTRUCTION.
10. FINE GRADE PARKING AREA & DRIVEWAYS.
11. INSTALL GRAVEL AND MACADAM.
12. APPLY PERMANENT STABILIZATION.
13. AFTER OBTAINING APPROVAL FROM SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE.
14. AFTER REMOVAL OF SEDIMENT TRAP #2 CONSTRUCT REMAINDER OF RIP-RAP OUTFALL FROM E-2 TO MEET EXISTING GRADE.
15. CONSTRUCT BUILDINGS.



RIP-RAP OUTLET SEDIMENT TRAP

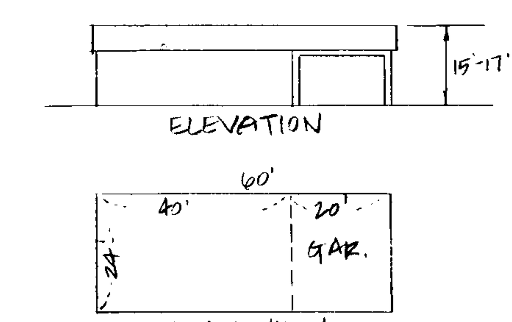
CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTLET SEDIMENT TRAP

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER 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.
3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER.
4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF EMBANKMENT.
5. 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 WEIR CREST.
6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND 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.
7. STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCHES (RIP-RAP). 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.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ½ 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.
9. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
11. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
12. DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES OR LESS.



GOLF CART STORAGE BUILDING (B) - METAL SHED STRUCTURE ①

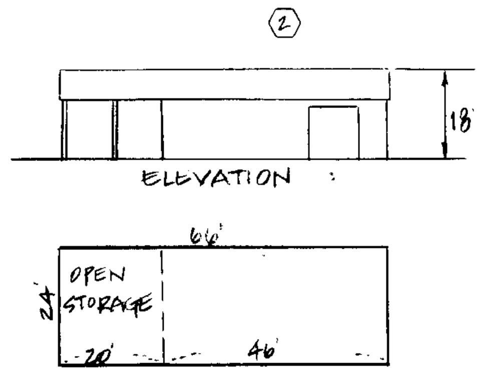
SCALE: 1" = 30'



SINGLE FAMILY RESIDENCE STRUCTURE FOR SECURITY PERSONNEL

SCALE: 1" = 30'

②



PROPOSED MAINTENANCE BUILDING ③

SCALE: 1" = 30'

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

[signature] 8/1/90
U.S. SOIL CONSERVATION SERVICE — DATE

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

[signature] 8/1/90
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

[signature] 10-3-90
COUNTY HEALTH OFFICER — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING OF HOWARD COUNTY.

[signature] 10.24.90
PLANNING DIRECTOR — DATE

[signature] 10/12/90
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

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

[signature] 9/7/90
DIRECTOR — DATE

[signature] 8.27.90
CHIEF, BUREAU OF ENGINEERING MK — DATE

"I CERTIFY THAT THIS PLAN FOR 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."

[signature] 2/14/90
SEYED A. SAADAT, PROFESSIONAL ENGINEER #16493 — DATE

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

[signature] Feb 14, 90
NAME AND TITLE — DATE

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

SUBDIVISION NAME			SECTION/AREA	LOT/~~PARCEL~~
"WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			—	18
PLAT OR L/F: #7921, #7922	BLOCK: 22,4	ZONE: 'R'	TAX MAP: 9 & 15	ELEC. DIST.: 3rd / CENSUS TRACT: 6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE	

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-9563

DESIGNED / DRAWN / CHECKED / DATE	BY	NO.	REVISION	DATE
	SLM	①	DELETE MAINTENANCE BUILDINGS C & D	4/15/91
	SLM	②	ADD SINGLE FAMILY RESIDENCE STRUCTURE FOR SECURITY PERS.	4/15/91
	SLM	③	ADD PROPOSED MAINTENANCE BUILDING	4/15/91

GRADING AND SEDIMENT CONTROL PLAN
DETAIL SHEET

WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE

HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: AS SHOWN

SHEET 7 OF 7

SDP-90-159

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 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 lbs. PER ACRE 10-10-10 FERTILIZER (14 lbs./1000 SQ. FT.)

SEEDING: FOR PERIOD MARCH 4 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 ½ BUSHELS PER ACRE OF ANNUAL RYE (3.2 lbs./1000 SQ. FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 lbs. PER ACRE OF WEEPING LOVEGRASS (.07 lbs./1000 SQ. FT.) FOR THE PERIOD 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 1½ TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 8 FT. OR HIGHER USE 348 GAL. 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.

PERMANENT SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

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

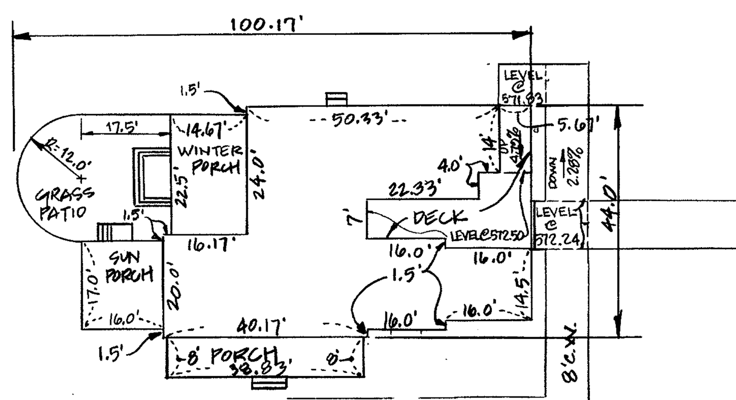
1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs./1000 SQ. FT.) AND 600 lbs/ACRE 10-10-10 FERTILIZER (14 lbs./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 lbs./ACRE 30-0-0 UREAFORM FERTILIZER (9 lbs./1000 SQ. FT.).

2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 SQ. FT.) AND 100 lbs./ACRE 10-10-10 FERTILIZER (23 lbs./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

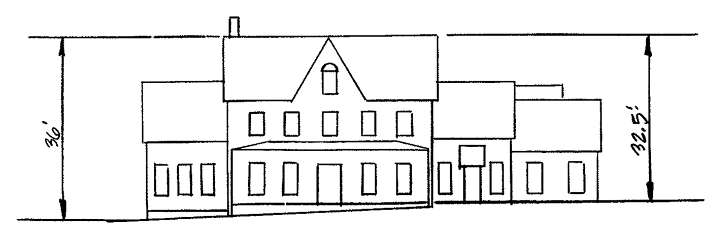
SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 lbs. PER ACRE (1.4 lbs./1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 lbs. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 lbs. PER ACRE (.05 lbs/1000 SQ. FT.) OF WEEPING LOVEGRASS. 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 1½ TO 2 TONS PER ACRE (70 TO 90 lbs./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL./1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. 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.



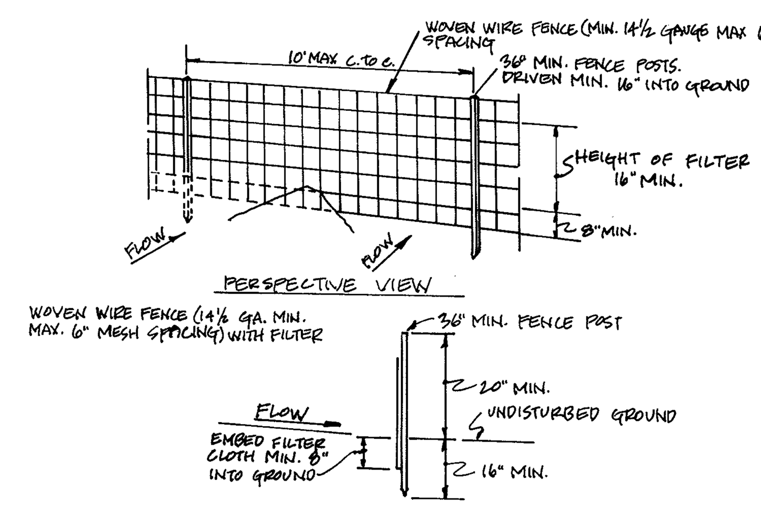
PLAN VIEW 1"=30'



ELEVATION 1"=30'

PROPOSED CLUBHOUSE

BUILDING 'A'



CONSTRUCTION SPECIFICATIONS FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PRE FORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER "T" OR "U" TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING

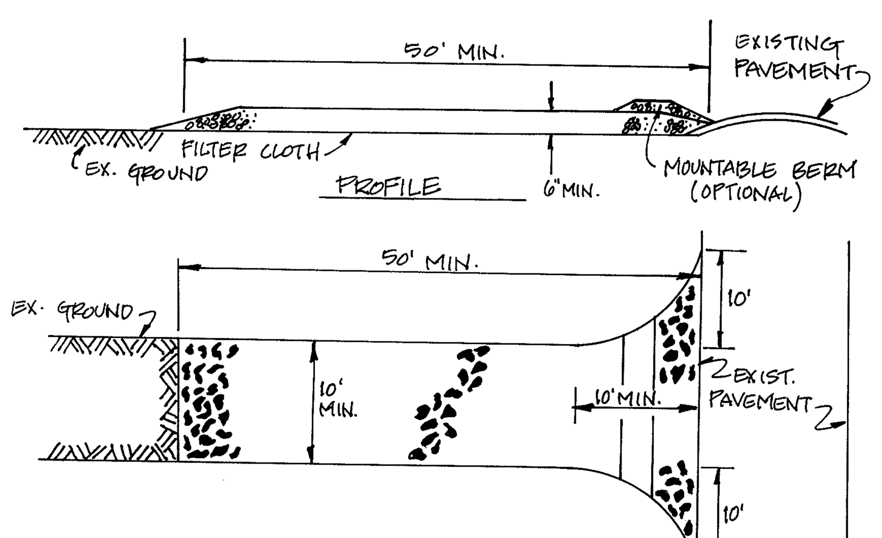
FILTER CLOTH: FILTER X, MIRAF 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, "ENVIROFENCE", OR APPROVED EQUAL

SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

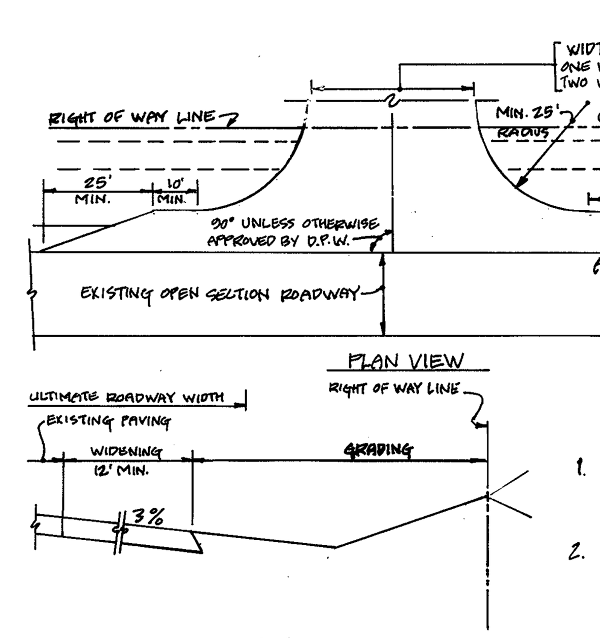


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THICKNESS - NOT LESS THAN (6) SIX INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. 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.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. 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 TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTIONS AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

PAVING SECTION

SECTION NUMBER	ROAD AND STREET CLASSIFICATION
P-2	RESIDENTIAL ZONES: LOCAL, CUL-DE-SAC STREETS, ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS TRAVELWAYS: FOR APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCKS
PAVEMENT MATERIALS	
FULL DEPTH BIT. CONC. ALTERNATE	1½" BIT. CONC. SURFACE 5" BIT. CONC. BASE
GRANULAR BASE ALTERNATES	1½" BIT. CONC. SURFACE 2½" BIT. CONC. BASE PRIME 8" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE

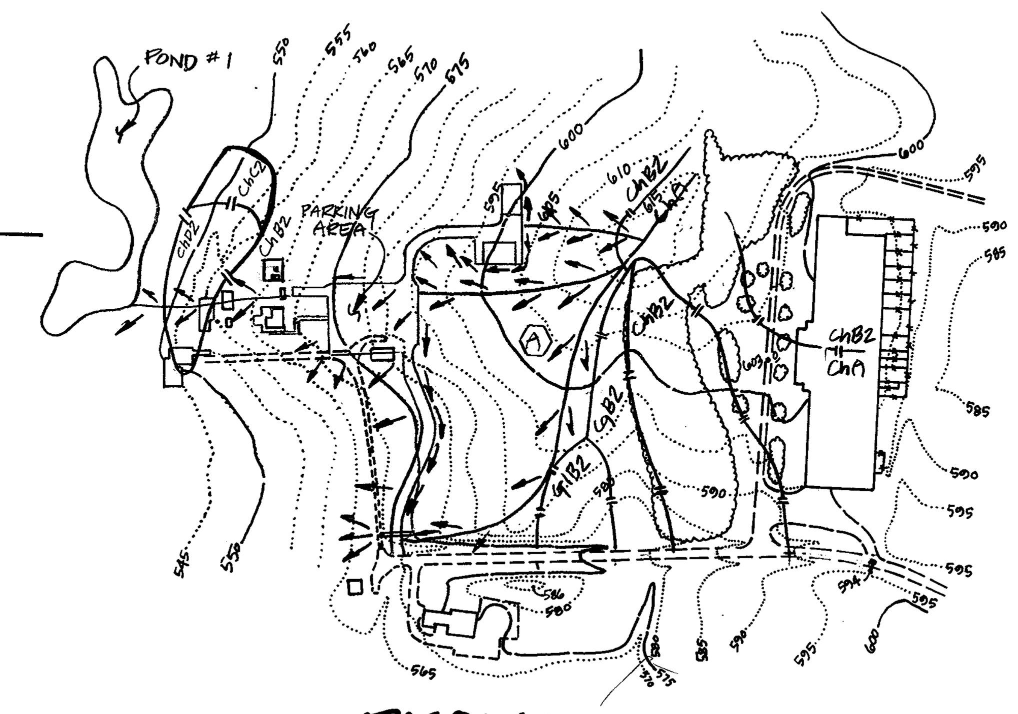


NOTES:

1. PAVING SECTION FOR ENTRANCE WITHIN THE PUBLIC RIGHT-OF-WAY WILL BE AS REQUIRED FOR A PUBLIC ROAD.
2. ENTRANCE TO BE USED ONLY IF AUXILIARY LANES ARE NOT REQUIRED IN ACCORDANCE WITH SECTION 2.5.2-4.1 AND SECTION 2.6.7.

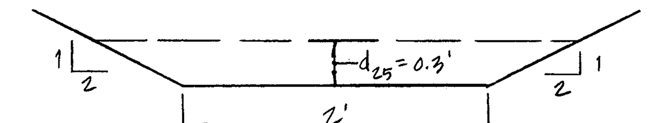
COMMERCIAL · INDUSTRIAL · APARTMENT · ENTRANCE ON OPEN SECTION ROADWAY

TRAFFIC VOLUME LESS THAN 100 V.P.H.



DRAINAGE AREA MAP

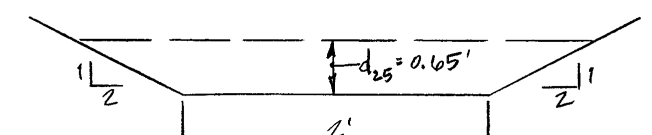
SCALE: 1" = 400'



D.A. = 1.65 Ac.
Q_{25} = 3.3 cfs
V = 4.3 Fps

VEGETATED SWALE 'B' AND 'C'

NOT TO SCALE



D.A. = 4.88 Ac.
Q_{25} = 7.8 cfs
V = 4.2 Fps

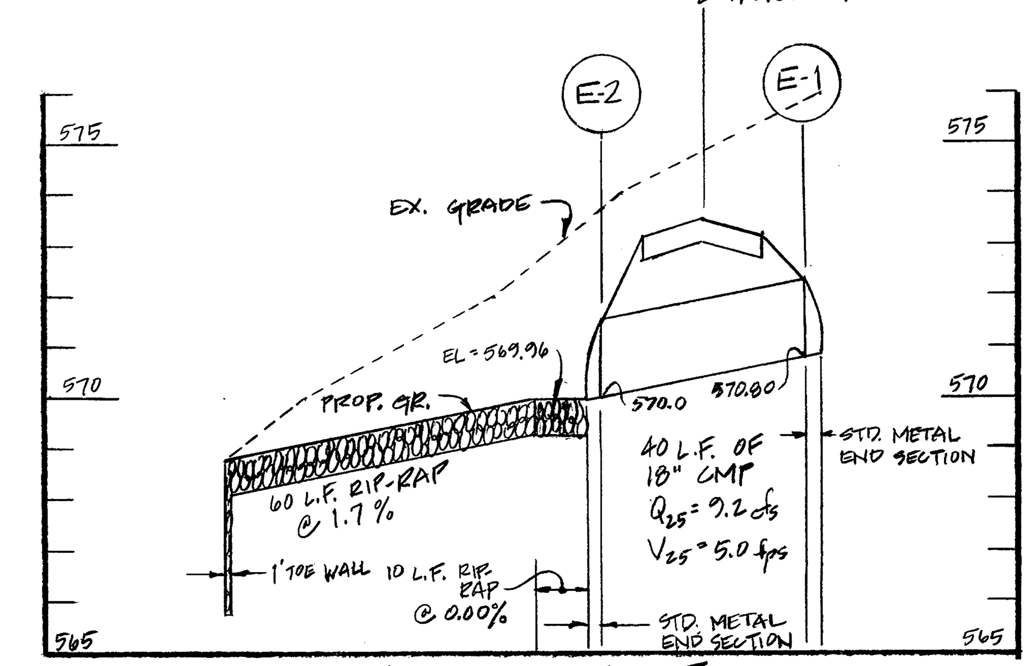
VEGETATED SWALE 'A'

SEDIMENT CONTROL NOTES:

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE STARTS OF ANY CONSTRUCTION.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 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.
4. 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.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) 500 (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

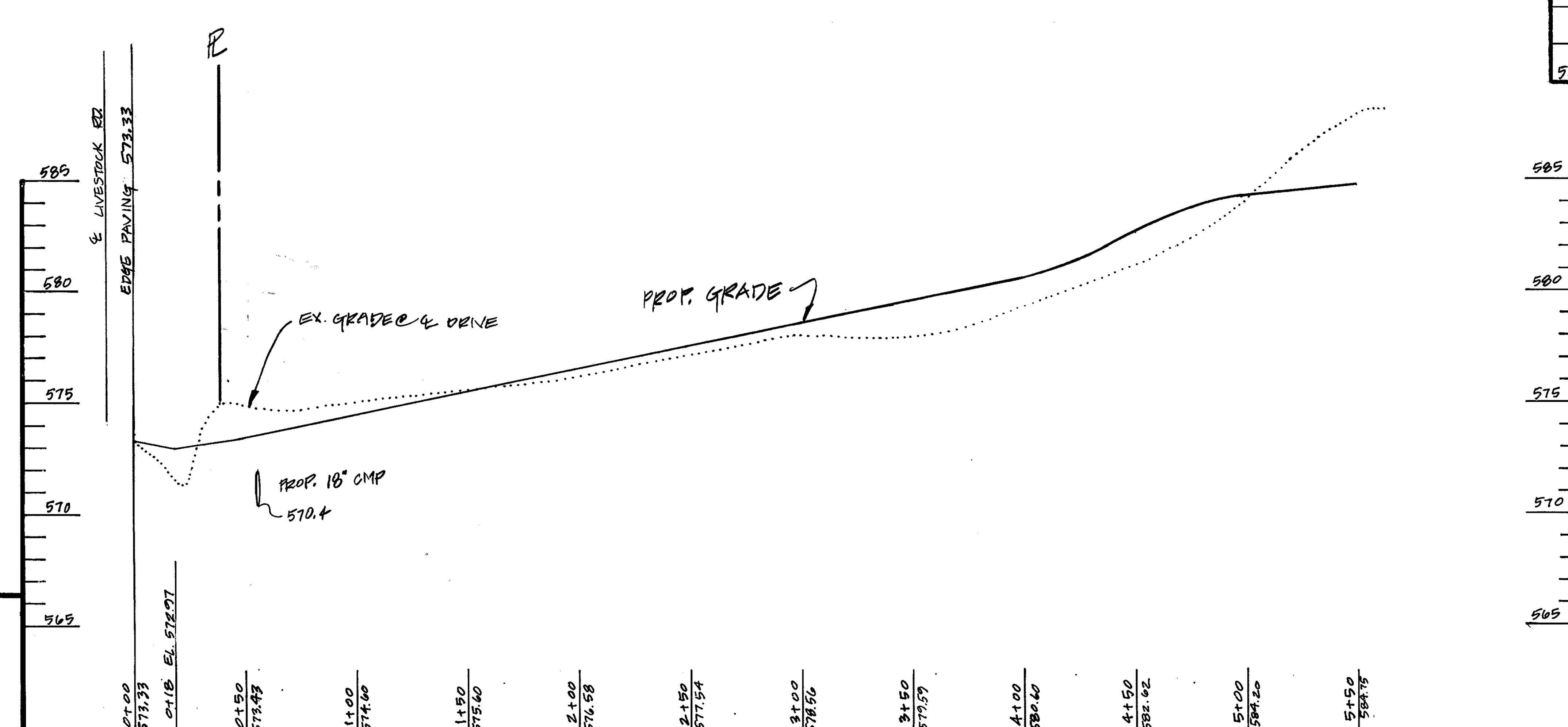
TOTAL AREA OF SITE	109.916 Ac.
AREA DISTURBED	8.675 Ac.
AREA TO BE ROOFED OR PAVED	2.120 Ac.
AREA TO BE VEGETATIVELY STABILIZED	6.555 Ac.
TOTAL CUT	10,704 C.Y.
TOTAL FILL	2,904 C.Y.
OFFSITE WASTE/BORROW AREA LOCATION	WILLOW SPRINGS GOLF COURSE (GP 88-05, GP 89-13, GP 89-26)

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH 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.
11. ALL PIPES TO BE BLOCKED AT THE END OF EACH DAY.
12. THE TOTAL AMOUNT OF STRAW BALE DIKES/SILT FENCE EQUALS 1090 L.F.



PIPE PROFILE

SCALE: HORIZ - 1" = 30'
VERT - 1" = 3'



DRIVEWAY PROFILE

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

"I CERTIFY THAT THIS PLAN FOR 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."

Seyed A. Saadat 2/14/90

SEYED A. SAADAT PROFESSIONAL ~~ENGINEER~~ #16493 — DATE

DEVELOPER'S CERTIFICATE

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[signature] Feb 14 90

NAME AND TITLE — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

[signature] 8/1/90

U.S. SOIL CONSERVATION SERVICE — DATE

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

John R. Robertson 8/1/90

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.

[signature] 10-3-90

COUNTY HEALTH OFFICER — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING OF HOWARD COUNTY.

[signature] 10-[illegible]

PLANNING DIRECTOR — DATE

[signature] 1/12/[illegible]

DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

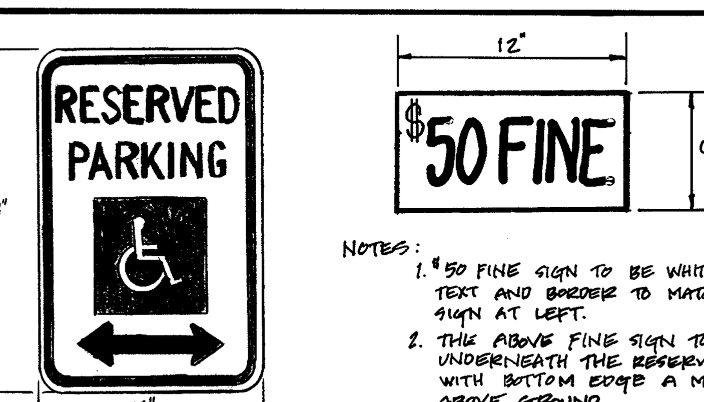
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James [signature] 9/7/90

DIRECTOR — DATE

[signature] 8-27-90

CHIEF, BUREAU OF ENGINEERING — DATE



NOTES:

1. $50 FINE SIGN TO BE WHITE WITH GREEN TEXT AND BORDER TO MATCH RESERVED PARKING SIGN AT LEFT.
2. THE ABOVE FINE SIGN TO BE MOUNTED UNDERNEATH THE RESERVED PARKING SIGN WITH BOTTOM EDGE A MINIMUM OF 7' ABOVE GROUND.

COLOR SCHEME

LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

HANDICAPPED PARKING SIGN SPECIFICATIONS

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

SUBDIVISION NAME			SECTION/AREA		LOT / ~~PARCEL~~
"WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			—		18
PLAT OR L/F	BLOCK	ZONE	TAX MAP	ELEC. DIST.	CENSUS TRACT
#7921, #7922	22, 4	'R'	9 & 15	3rd	6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE		

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-9563

STATE OF MARYLAND — SEYED A. SAADAT — NO. 16493 — REGISTERED PROFESSIONAL ENGINEER

	BY	NO.	REVISION	DATE
DESIGNED	GSS	1	CHANGED GOLF CART BUILDING SIZE	2/20/07
DRAWN				
CHECKED				
DATE				

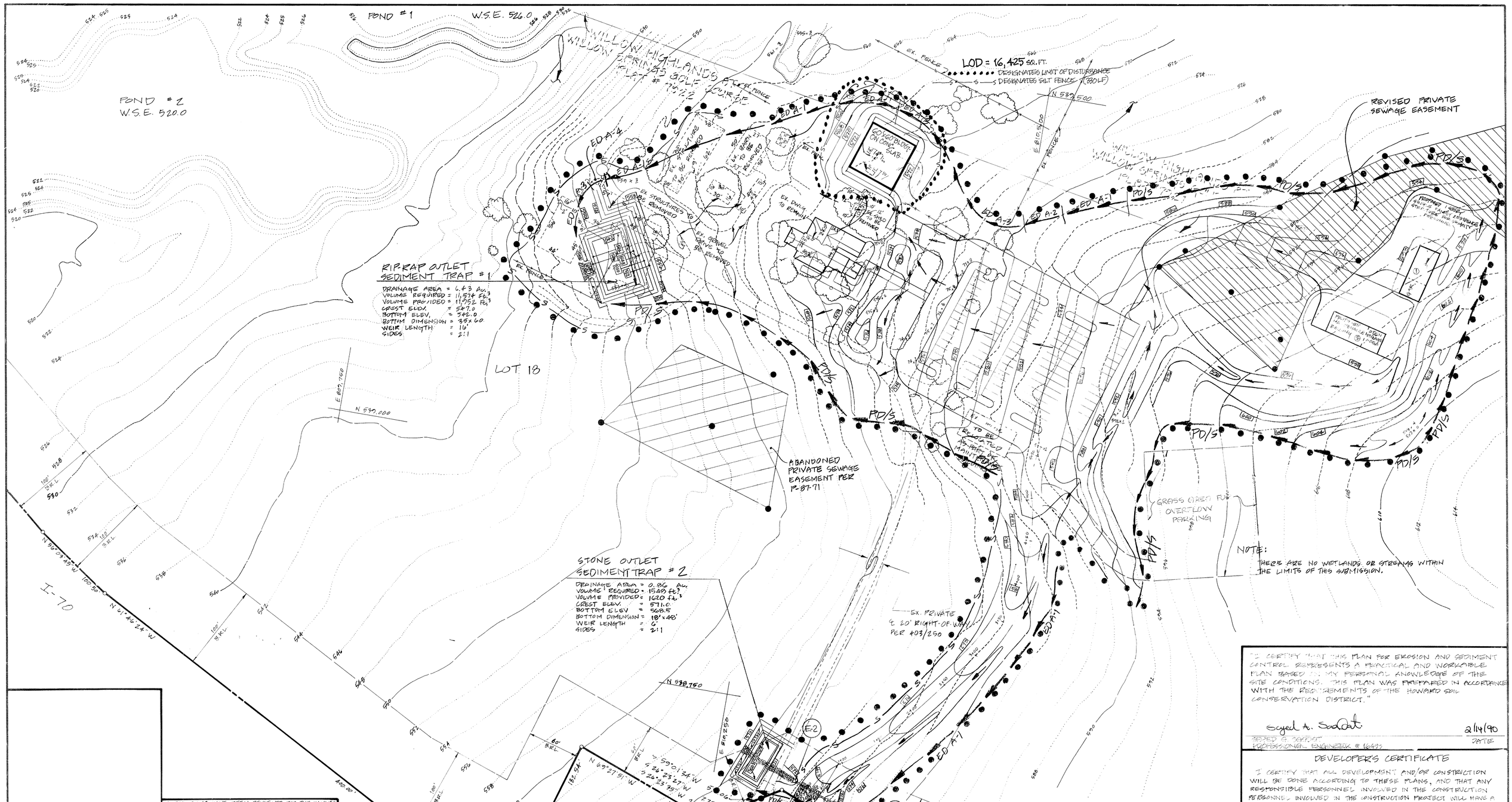
SITE DEVELOPMENT PLAN
NOTES AND DETAILS SHEET

WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE

HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: AS SHOWN
SHEET 6 OF 7

SDP-90-159



"I CERTIFY THAT THIS PLAN FOR 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."

Seyed A. Sadat — 2/14/90
SEYED A. SADATI — DATE
PROFESSIONAL ENGINEER # 16493

DEVELOPER'S CERTIFICATE

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

NAME AND TITLE — DATE

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
18	12970 LIVESTOCK RD

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 947-8722

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
HOWARD SOIL CONSERVATION SERVICE — 8/1/90 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — 10-2-90 DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — 8/1/90 DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING OF HOWARD COUNTY.
PLANNING DIRECTOR — 10.2.90 DATE
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 10/1/90 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — 9/7/90 DATE
CHIEF, BUREAU OF ENGINEERING — 8-27-90 DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-0563

STATE OF MARYLAND — SEYED A. SADATI — NO. 16493 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED	GSS
DRAWN	SLM
CHECKED	GAS
DATE	

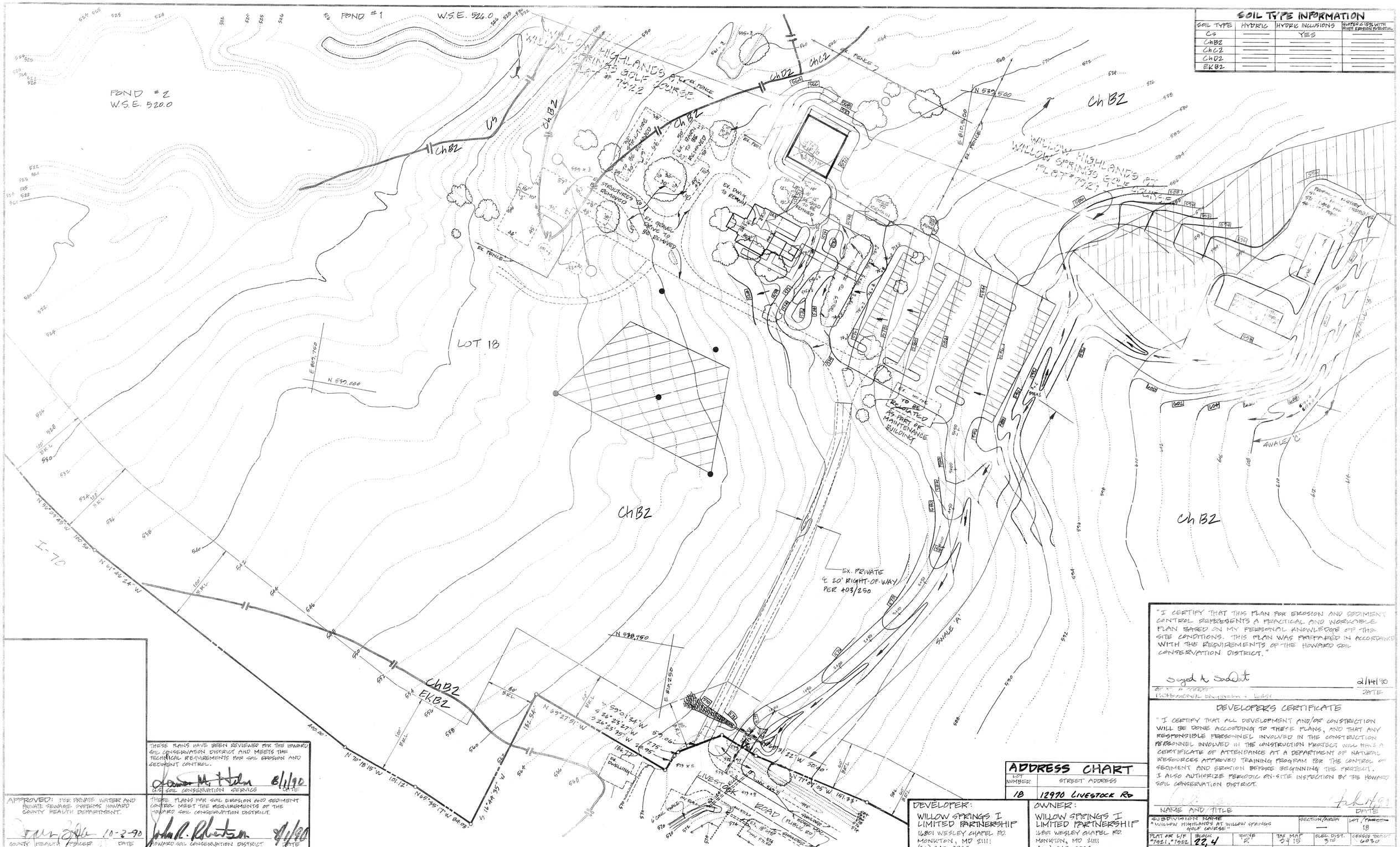
BY	NO.	REVISION	DATE
SLM	1	REVISED SECURITY PERSONNEL BUILDING & PROPOSED GRADING	4/15/91
SLM	2	REVISED PROPOSED MAINTENANCE BUILDING & PROPOSED GRADING	4/15/91
GAS	3	CHANGED GOLF CART BUILDING SIZE, ASSOCIATED GRADING & SED CONTROL	2/10/07

SITE DEVELOPMENT PLAN
EROSION AND SEDIMENT CONTROL PLAN
WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE
LOT 18
HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: 1" = 50'
SHEET 5 OF 7

SUBDIVISION NAME "WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			SECTION/AREA —	LOT ~~NUMBER~~ 18
PLAT OR L/F "7921, "7922	BLOCK 22, 4	ZONE R	TAX MAP 37 15	ELEC. DIST. 3RD	CENSUS TRACT 6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE	

SDP-90-159



SOIL TYPE INFORMATION

SOIL TYPE	HYDRIC	HYDRIC INCLUSIONS	SLOPES 6-15% WITH HIGH EROSION POTENTIAL
CG		YES	
ChB2			
ChC2			
ChD2			
EkB2			

"I CERTIFY THAT THIS PLAN FOR 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."

Seyed A. Sadat — 2/14/90
SEYED A. SADAT, PROFESSIONAL ENGINEER — DATE

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

NAME AND TITLE — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. SOIL CONSERVATION SERVICE — 8/1/90 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 8/1/90 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — 10-2-90 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY.

PLANNING DIRECTOR — 10.29.90 DATE

DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

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

DIRECTOR — 9.7.90 DATE

CHIEF, BUREAU OF ENGINEERING — DATE

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
18	12970 LIVESTOCK RD

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

SUBDIVISION NAME "WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			SECTION/AREA —		LOT/PARCEL 18
PLAT OR L/F "7021, "7022	BLOCK 22, 4	ZONE R	TAX MAP 9 & 15	ELEC. DIST. 5TH	CENSUS TRACT 6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE		

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-0563

STATE OF MARYLAND — SEYED A. SADAT — NO. 13483 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED	GLM	1	REVISED SECURITY PERSONNEL BUILDING & PROPOSED GRADING	4/15/91
DRAWN	GLM	2	REVISED PROPOSED MAINTENANCE BUILDING & PROPOSED GRADING	4/15/91
CHECKED	GSS	3	CHANGED GOLF COURSE BUILDING SIZE & ASSOCIATED GRADING	2/19/07
DATE	BY	NO.	REVISION	DATE

SOIL MAP
CLUBHOUSE FACILITY AND MAINTENANCE FACILITY

WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE

HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: 1" = 50'

SHEET 4 OF 7

SDP-90-159

HYDROLOGIC CRITERIA

PRINCIPAL SPILLWAY ROUTING : 2 AND BULK OF 5 YR STORM
EMERGENCY SPILLWAY ROUTING : 10 AND ALL 100 YEAR STORMS

STRUCTURE CLASSIFICATION

STRUCTURE CLASS "A"
STRUCTURE LOCATION : RURAL
WATERSHED AREA : 337 AC.±
NORMAL SURFACE AREA :
POND 1 : 526.0 ; POND 2 : 520.0 ; POND 3 : 517.0
HEIGHT TO EMERGENCY SPILLWAY CREST :
POND 1 : 7.0' ; POND 2 : 7.5 POND 3 : 6.5'
STRUCTURE TYPE : WET DETENTION EMBANKMENT POND

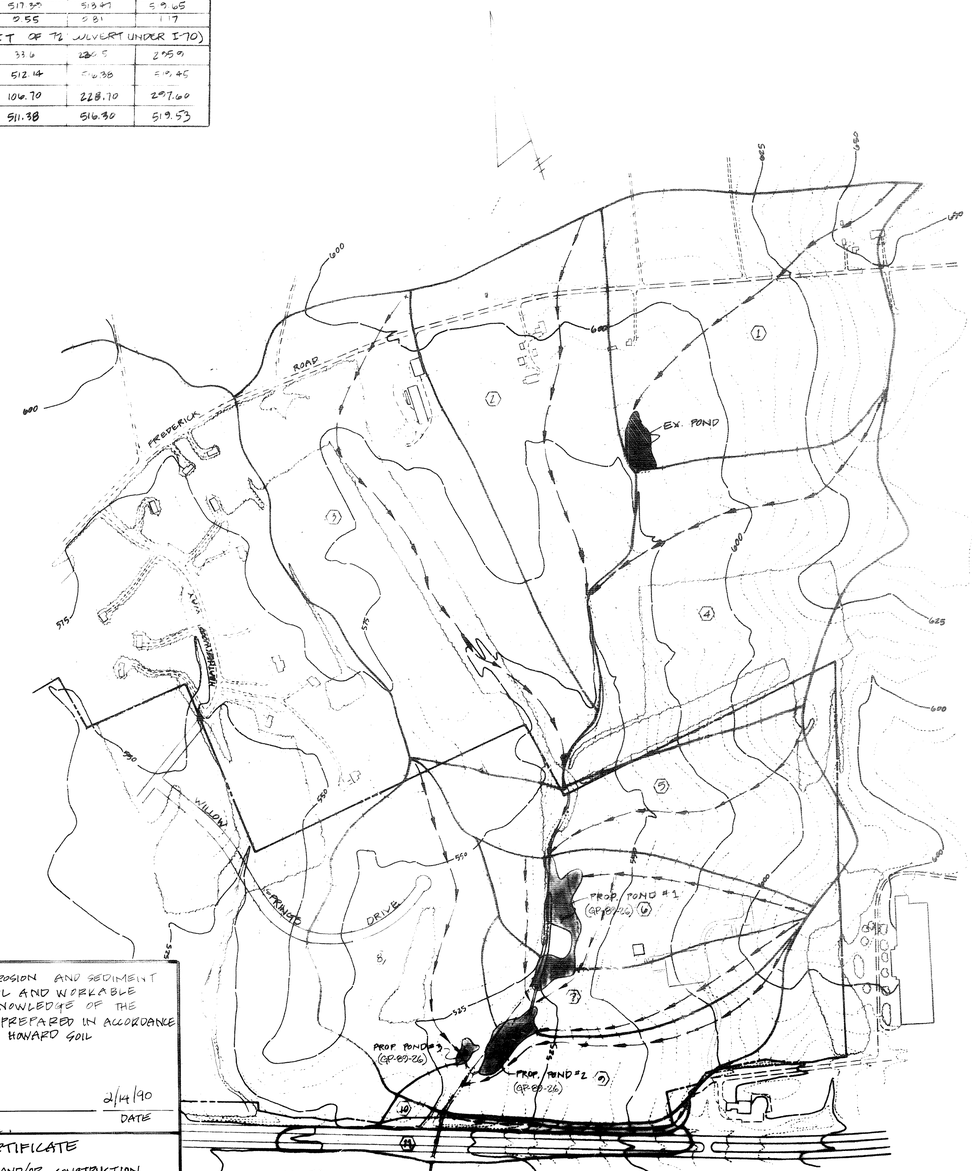
PEAK FLOW SUMMARY

POND DESIGNATION		2 YEAR	5 YEAR	100 YEAR
1	INFLOW (C.F.S.)	133.2	356.0	619.8
	OUTFLOW (C.F.S.)	133.2	341.5	603.11
	ELEVATION	521.6	527.77	528.27
	STORAGE (AC. FT.)	1.53	3.27	4.05
2	INFLOW (C.F.S.)	106.4	307.4	573.3
	OUTFLOW (C.F.S.)	97.71	373.0	646.9
	ELEVATION	521.05	522.22	522.92
	STORAGE (AC.-FT.)	1.33	2.31	3.48
3	INFLOW (C.F.S.)	12.4	42.4	91.2
	OUTFLOW (C.F.S.)	11.0	36.6	73.4
	ELEVATION	517.35	518.41	519.65
	STORAGE (AC. FT.)	5.55	5.81	6.17
AT DESIGN POINT (INLET OF 72" CULVERT UNDER I-70)				
EXISTING	PEAK FLOW	33.6	226.5	205.9
	ELEVATION	512.14	516.38	519.45
PROPOSED	PEAK FLOW	106.70	228.70	207.60
	ELEVATION	511.38	516.30	519.53

POND MAINTENANCE SCHEDULE

THE PONDS, RISER STRUCTURES AND OUTFALL DEVICES SHOULD BE INSPECTED ON A ROUTINE BASIS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. REPAIRS SHOULD BE MADE AS REQUIRED. INSPECTION CAN BE MADE ON A SEMI-ANNUAL BASIS BUT SHOULD ALWAYS BE CONDUCTED FOLLOWING EVERY STORM.

PRE-DEVELOPMENT DRAINAGE AREA MAP
SCALE : 1" = 400'



POST-DEVELOPMENT DRAINAGE AREA MAP
SCALE : 1" = 400'

"I CERTIFY THAT THIS PLAN FOR 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."

Syed A. Sadat — 2/14/90
SEYED A. SADAT — DATE
PROFESSIONAL ENGINEER # 16403

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

NAME AND TITLE — DATE

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

SUBDIVISION NAME "WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			SECTION/AREA --	LOT/PARCEL 18
PLAT OR L/F "7921", "7922"	BLOCK 22, 4	ZONE "R"	TAX MAP 9 & 15	ELEC. DIST. 3rd	CENSUS TRACT 6030
WATER CODE: PRIVATE			SEWER CODE: PRIVATE	

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson — 8/1/90
HOWARD SOIL CONSERVATION DISTRICT — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
James M. Nelson — 8/1/90
U.S. SOIL CONSERVATION SERVICE — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING, HOWARD COUNTY.
10.24.90
PLANNING DIRECTOR — DATE
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
9/7/90
DIRECTOR — DATE
CHIEF, BUREAU OF ENGINEERING — DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-9563

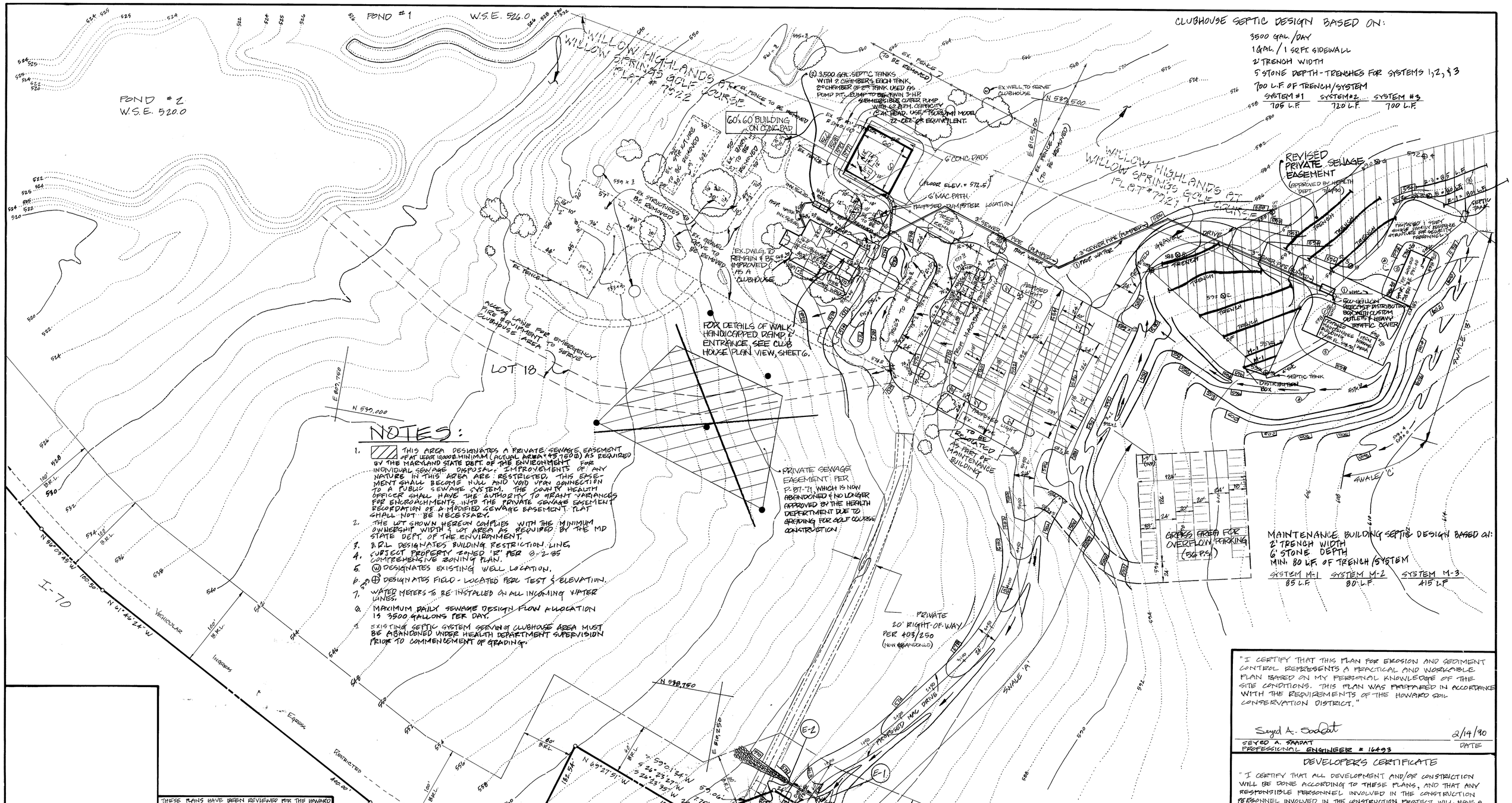
STATE OF MARYLAND — SEYED A. SADAT — NO. 16403 — REGISTERED PROFESSIONAL ENGINEER

	BY	NO.	REVISION	DATE
DESIGNED	GGS	1	CHANGED GOLF CART BUILDING SIZE	2/07/07
DRAWN				
CHECKED				
DATE				

SITE DEVELOPMENT PLAN
DRAINAGE AREA MAPS
WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE
HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SCALE: AS SHOWN
SHEET 3 OF 7

SDP-90-159



CLUBHOUSE SEPTIC DESIGN BASED ON:

3500 GAL./DAY
1 GAL. / 1 SQ.FT. SIDEWALL
2' TRENCH WIDTH
5' STONE DEPTH - TRENCHES FOR SYSTEMS 1, 2, & 3
700 L.F. OF TRENCH/SYSTEM

SYSTEM #1	SYSTEM #2	SYSTEM #3
705 L.F.	720 L.F.	700 L.F.

MAINTENANCE BUILDING SEPTIC DESIGN BASED ON:
2' TRENCH WIDTH
6' STONE DEPTH
MIN. 80 L.F. OF TRENCH/SYSTEM

SYSTEM M-1	SYSTEM M-2	SYSTEM M-3
85 L.F.	80 L.F.	415 L.F.

NOTES:

1. THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 ☐. MINIMUM (ACTUAL AREA = 45,750 ☐) AS REQUIRED BY THE MARYLAND STATE DEPT. OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
2. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH & LOT AREA AS REQUIRED BY THE MD STATE DEPT. OF THE ENVIRONMENT.
3. B.R.L. DESIGNATES BUILDING RESTRICTION LINE.
4. SUBJECT PROPERTY ZONED 'R' PER 0-2-85 COMPREHENSIVE ZONING PLAN.
5. (W) DESIGNATES EXISTING WELL LOCATION.
6. 570 ⊕ DESIGNATES FIELD-LOCATED PERC TEST & ELEVATION.
7. WATER METERS TO BE INSTALLED ON ALL INCOMING WATER LINES.
8. MAXIMUM DAILY SEWAGE DESIGN FLOW ALLOCATION IS 3500 GALLONS PER DAY.
9. EXISTING SEPTIC SYSTEM SERVING CLUBHOUSE AREA MUST BE ABANDONED UNDER HEALTH DEPARTMENT SUPERVISION PRIOR TO COMMENCEMENT OF GRADING.

"I CERTIFY THAT THIS PLAN FOR 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."

Seyed A. Saadat — 2/14/90
SEYED A. SAADAT — DATE
PROFESSIONAL ENGINEER # 16493

DEVELOPER'S CERTIFICATE

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

NAME AND TITLE — 7/14/90 DATE

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
18	12970 LIVESTOCK RD.

DEVELOPER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

OWNER:
WILLOW SPRINGS I LIMITED PARTNERSHIP
16801 WESLEY CHAPEL RD.
MONKTON, MD 21111
(301) 347-8722

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
U.S. SOIL CONSERVATION SERVICE — 8/1/90 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — 8-3-90 DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — 8/1/90 DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING, HOWARD COUNTY.
PLANNING DIRECTOR — 10.24.90 DATE
DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 11/29/90 DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — 9/7/90 DATE
CHIEF, BUREAU OF ENGINEERING — 8-27-90 DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITES 106 & 107
ELLICOTT CITY, MD 21043
(301) 461-0563

STATE OF MARYLAND — SEYED A. SAADAT — NO. 16493 — REGISTERED PROFESSIONAL ENGINEER

	BY	NO.	REVISION	DATE
DESIGNED	SLM	1	SHOW WATER SERVICE TO MAINTENANCE & SECURITY PERSONNEL BUILDINGS	4/15/91
DRAWN	SLM	2	REVISE PROPOSED MAINTENANCE BUILDING & PROPOSED SECURITY BUILDING	4/15/91
CHECKED	SLM	3	SHOW SEPTIC SYSTEM FOR SECURITY PERSONNEL RESIDENCE	4/15/91
	SLM	4	REVISE PROPOSED GRADING ALONG PROPOSED STRUCTURES	4/15/91
DATE	CGS	5	CHANGED GOLF CART BUILDING SIZE & ASSOCIATED GRADING	2/8/07

SITE DEVELOPMENT PLAN
CLUBHOUSE FACILITY AND MAINTENANCE FACILITY
WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE
HOWARD COUNTY, MARYLAND
DATE: JANUARY 18, 1990

SUBDIVISION NAME "WILLOW HIGHLANDS AT WILLOW SPRINGS GOLF COURSE"			SECTION/AREA —	LOT/PARCEL 18
PLAT NR L/F "7921, "7922 32, 4	BLOCK	ZONE R	TAX MAP 24 & 15	ELEC. DIST. 5TH
WATER CODE: PRIVATE			SEWER CODE: PRIVATE	CENSUS TRACT 6050

SCALE: 1" = 50'
SHEET 2 OF 7

SDP-90-159