

Construction Notes

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPT THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
13. CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN PER FOOT).
14. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
15. CONTRACTOR SHALL PLACE 4" MINIMUM TOPSOIL IN LANDSCAPE AREAS. TOPSOIL SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
16. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
17. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
18. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
19. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
20. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.
21. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
22. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REILLED AND COMPACTED.
23. THE CONTRACTOR SHALL PLACE PROPOSED SURFACE COURSE OVERLAY 5 FEET BEYOND LIMITS OF REPLACEMENT PAVING, UNLESS DIRECTED OTHERWISE BY THE ENGINEER IN THE FIELD. ALL OVERLAYS SHALL HAVE SMOOTH, STRAIGHT EDGES. STRIP AND RESURFACE EXISTING PAVING AS NEEDED TO PROVIDE SMOOTH TRANSITION.
24. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
25. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
26. STORMCEPTORS SHALL BE AS MANUFACTURED BY THE STORMCEPTOR CORPORATION 600 E. JEFFERSON STREET, SUITE 304 ROCKVILLE, MARYLAND 20852 TELEPHONE: 301-762-8361
27. ALL STORMCEPTORS SHALL BE CONCRETE.
28. ALL WATERMAIN TEES, BENDS, CAPS, ETC. SHALL BE BUTTRESSED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN REQUIREMENTS.
29. ALL WATERMAINING SHALL HAVE 4" COVER UNLESS OTHERWISE NOTED.
30. ALL EXTERIOR LIGHTING SHALL CONFORM TO ZONING REGULATIONS, SECTION 134.
31. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY GEORGE W. STEPHENS JR. AND ASSOCIATES DATED FEB. 01, 1998.
32. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY NUMBERS 2445004 AND 2445005 WERE USED FOR THIS PROJECT.
33. WATER IS PUBLIC. CONTRACT NO. 44 - 3691-D
34. SEWER IS PUBLIC.
35. STORMWATER MANAGEMENT CONTROL IS DRY / EXTENDED DETENTION. THE MAINTENANCE OF THIS FACILITY IS THE RESPONSIBILITY OF THE OWNER WHICH IS MANEKIN CORPORATION. THE STORMWATER MANAGEMENT POND IS PRIVATE.
36. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY VIKI DATED 1-30-91, AND WAS APPROVED ON DATE 1993.
37. THE WETLANDS FOR THIS PROJECT WAS PREPARED BY ESA, INC., DATED 1993, AND WAS APPROVED ON DATE JULY 21, 1993.
38. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY INTEGRATED TRANSPORTATION SOLUTIONS, INC. DATED AUGUST OF 1992 AND WAS APPROVED ON DATE 1993.

Legend

- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours
- Prop. 10' Contours
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop. Water
- Heavy Duty Paving (P-5)
See Sheet 4 OF 19
for Detail
- Light Duty Paving (P-3)
See Sheet 4 of 19
for Detail
- Proposed Sidewalk

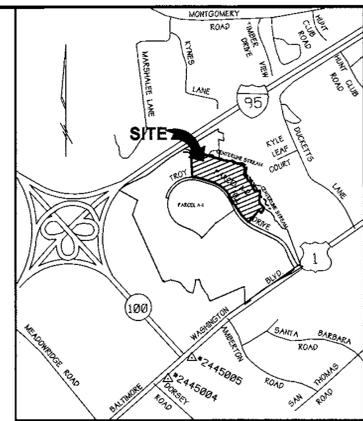
NOTE:

The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

BENCHMARKS

- BENCHMARK #1
IRON PIN @ TRAVERSE #1066
N 496,501.3597 E 869,134.4576
ELEVATION = 175.92'
- BENCHMARK #2
IRON PIN @ TRAVERSE #1061
N 498,036.6945 E 868,791.1502
ELEVATION = 242.49'
- BENCHMARK #3
IRON PIN @ TRAVERSE #1034
N 497,636.7437 E 869,835.6586
ELEVATION = 214.85'

COORDINATES BASED ON NAD 27, AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS #2445004 AND #2445005



Site Data

Vicinity Map

SCALE: 1" = 2000'

TOTAL PROJECT AREA -	1,251,194 SQ.FT. OR 28.74 Ac. +/-
EXISTING ZONING -	M-1
PROPERTY REFERENCE -	F 91-24 ; 1795/347 ; 1818/465 ; 2122/417 ; 2259/644 ; 1818/472 ; 2689/276
EXISTING USE -	VACANT
PROPOSED USE -	WAREHOUSE/DISTRIBUTION
BUILDING COVERAGE -	311,350 Sq.Ft.
% OF BUILDING COVERAGE -	24.87%
FLOOR AREA -	7.15 Ac.
FLOOR AREA RATIO -	24.87%
AREA TO BE PAVED PLUS BUILDING AREA -	14.11 Ac. +/-
OPEN SPACE -	7.48 Ac. +/-
TOTAL AREA OF PARKING LOT -	28%
% OF PARKING LOT COVERAGE -	247
NUMBER OF PARKING SPACES REQUIRED	311 INCLUDING
NUMBER OF PARKING SPACES PROVIDED	14 HANDICAPPED
AREA TO BE DISTURBED -	1,036,728 SQ.FT. OR 23.80 Ac. +/-
AREA TO BE VEGETATIVELY STABILIZED -	312,761 SQ.FT. OR 7.18 Ac. +/-
SKETCH PLAN NO. -	S 90-05
PRELIMINARY PLAN NO. -	P 90-25
FINAL PLAN NO. -	F 96-136
WAIVER PETITION :	WP-96-91

Site Development Plans

for

Parcel A-2

Troy Hill Corporate Center

Howard County, Maryland

S.D.P. 98 - 114

Parking Tabulations

Total Building Area 311,350 Sq. Ft.
 Parking Required -
 279,000 Sq.Ft. Warehouse Distribution @ 0.5 Spaces /1000 Sq. Ft. = 140 Spaces
 32,350 Sq. Ft. Office @ 3.3 Spaces/1000 Sq. Ft. = 107 Spaces
 Total Required = 247 Spaces
 Parking Provided - 311 Spaces (Includes 14 Handicapped)

Index of Sheets

SHEET NO. 1 -	TITLE SHEET, GENERAL NOTES
SHEET NO. 2 -	PLAN VIEW
SHEET NO. 3 -	PLAN VIEW
SHEET NO. 4 -	DETAILS & SECTIONS
SHEET NO. 5 -	DETAILS & SECTIONS
SHEET NO. 6 -	DRAINAGE AREA MAP
SHEET NO. 7 -	STORM DRAIN PROFILES
SHEET NO. 8 -	PROFILES & DETAILS
SHEET NO. 9 -	STORMCEPTOR DETAILS
SHEET NO. 10,11,12 -	SEDIMENT CONTROL
SHEET NO. 13 & 14	SEDIMENT BASIN
SHEET NO. 15, 16 & 17	STORMWATER MANAGEMENT
SHEET NO. 18 & 19	LANDSCAPE PLANS

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER _____ DATE _____

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE _____ DATE _____

APPROVED: Howard County Department of Planning and Zoning

John Dammann 9/16/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE

Cindy Hamilton 9/22/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Frank Butts 10/16/98
 DIRECTOR DATE

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

SUBDIVISION NAME	SECTION NAME	PARCEL #
TROY HILL CORPORATE CENTER	1	A-2

PLAT *	BLOCK *	ZONE	TAX MAP	ELECT. DIST.	CENSUS TRACT
12428		M-1		1st	6011.02

WATER CODE C04 SEWER CODE 4020000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
 Civil Engineers and Land Surveyors
 658 Kenilworth Drive, Suite 100
 Towson, Maryland 21204
 (410) 825-8120

OWNER/DEVELOPER

TROY HILL BUSINESS PARK PARTNERSHIP
 c/o MANEKIN CORPORATION
 7165 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046
 410-290-1400

COVER SHEET

FOR

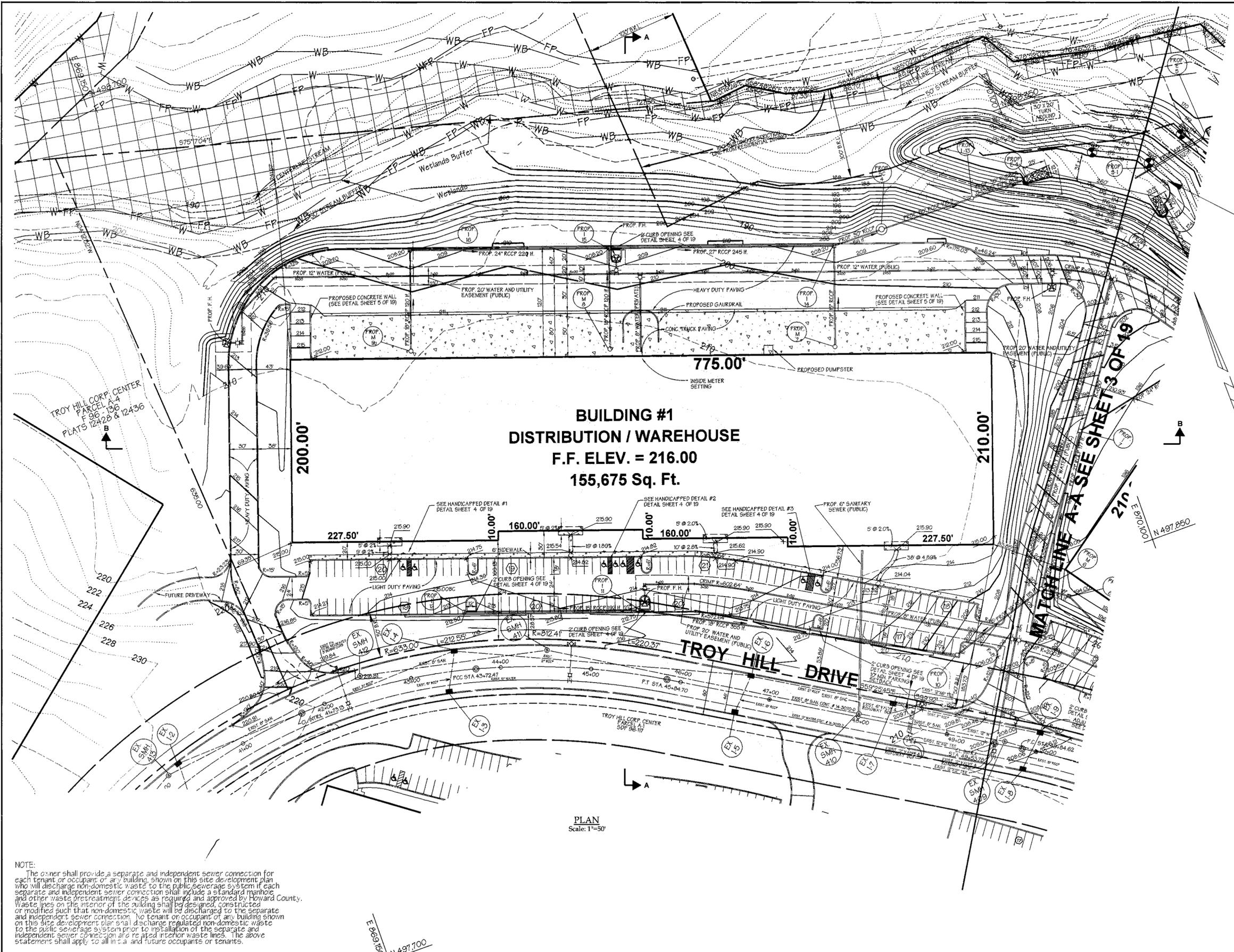
TROY HILL CORPORATE CENTER

PHASE 1 PARCEL A-2

PREVIOUS FILE #S 990-05, P90-25, F91-24, WP 96-91, P96-136

HOWARD COUNTY, MARYLAND SHEET 1 of 19 SCALE: AS SHOWN
 1st ELECTION DISTRICT JUNE 03, 1998

SDP 98-114 P/N: 8130 K.E. NAME: sheetcovr01 08-22-98



Legend

- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours
- Prop. 10' Contours
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop. Water
- Heavy Duty Paving (P-5)
- Light Duty Paving (P-3)
- Proposed Sidewalk

NOTE:
FOR STORMWATER MANAGEMENT
POND DESIGN AND DETAILS SEE
SHEET 16 OF 19.

BUILDING #1
DISTRIBUTION / WAREHOUSE
F.F. ELEV. = 216.00
155,675 Sq. Ft.

TROY HILL DRIVE

WATCHLINE A-A SEE SHEETS 3 OF 19

PLAN
Scale: 1"=50'

NOTE:
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection also related interior waste lines. The above statement shall apply to all in the a and future occupants or tenants.

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT	
PLAN NUMBER	DATE
Reviewed for the Howard Conservation District and meets technical requirements.	
NATURAL RESOURCES CONSERVATION SERVICE	DATE
APPROVED: Howard County Department of Planning and Zoning	
<i>Mr. Danner</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	9/16/98
<i>Candy Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	10/16/98
<i>James Butler</i> DIRECTOR	10/16/98

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

SUBDIVISION NAME		SECTION NAME	PARCEL #		
TROY HILL CORPORATE CENTER		1	A-2		
PLAT #	BLOCK #	ZONE	TAX MAP	ELECT. DIST.	CENSUS TRACT
12428		M-1	37	1st	6011.02
WATER CODE C04		SEWER CODE 4020000			

PREPARED BY:

GWS

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120



OWNER/DEVELOPER

TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN COPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046
410-290-1400

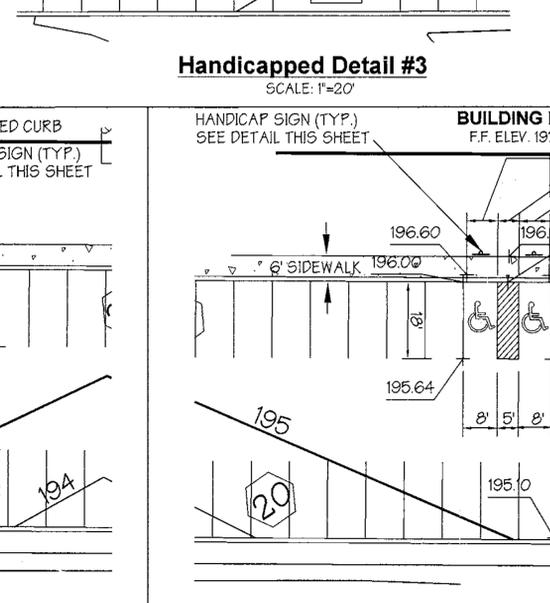
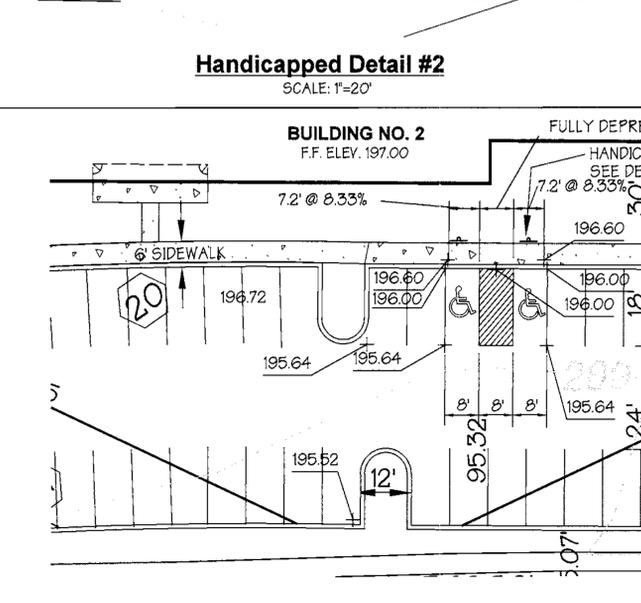
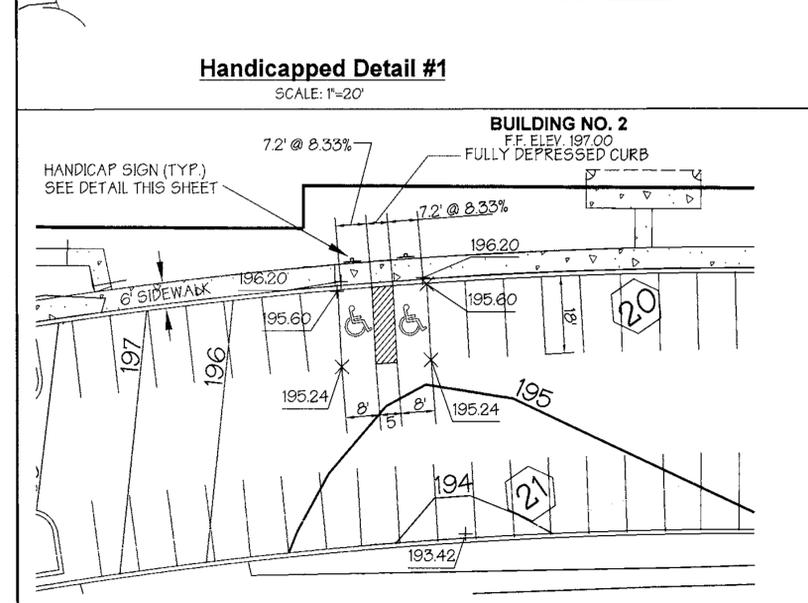
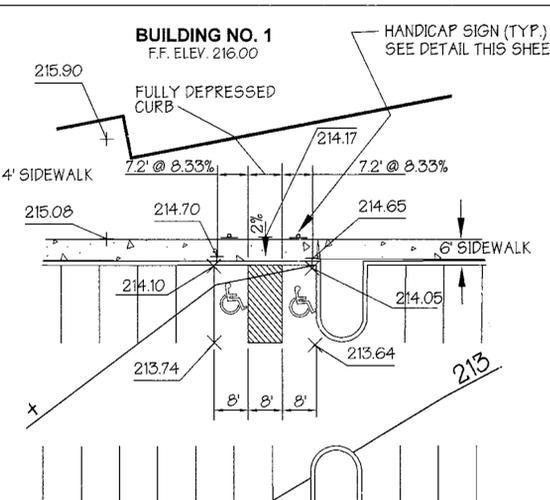
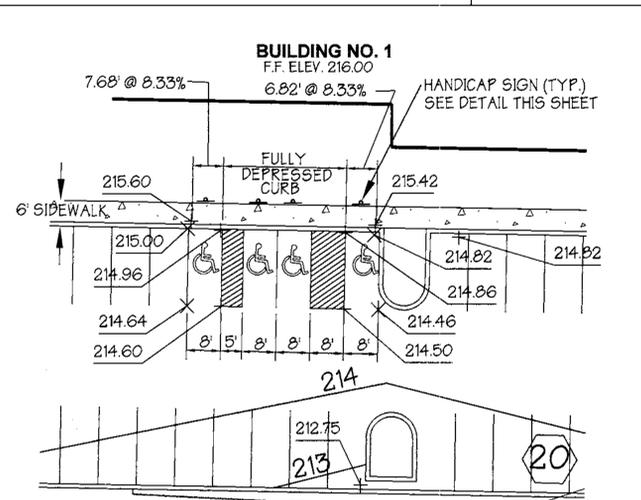
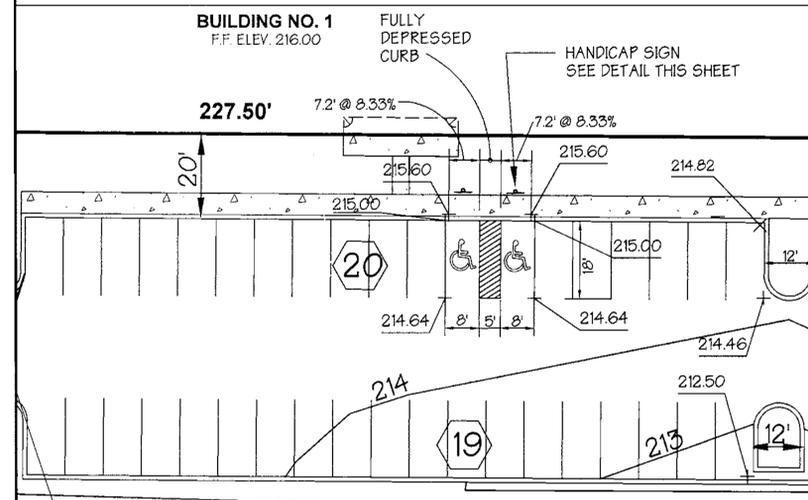
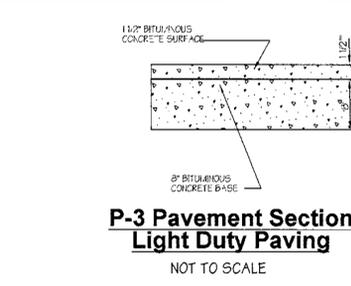
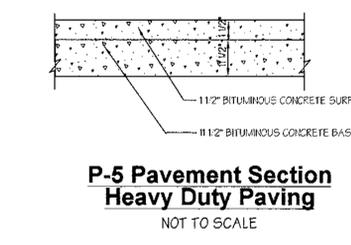
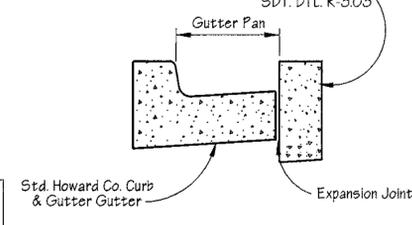
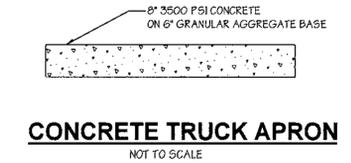
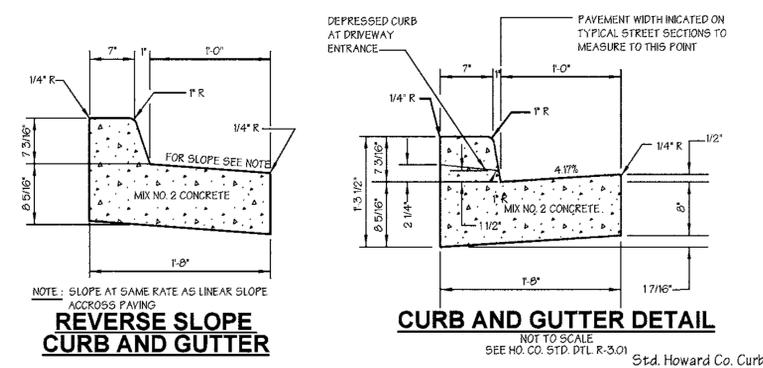
SITE PLAN FOR
TROY HILL CORPORATE CENTER
PHASE 1 PARCEL A-2
PREVIOUS FILE #S 890-05, P90-25, F91-24, W9-91, P96-136
HOWARD COUNTY, MARYLAND
1st ELECTION DISTRICT

SHEET 2 of 19

SCALE: AS SHOWN
JUNE 03, 1998



Handicapped Parking Sign Detail
NOT TO SCALE



These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER _____ DATE _____

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE DATE _____

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION 9/16/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 10/16/98 DATE

DIRECTOR 10/16/98 DATE

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

SUBDIVISION NAME	SECTION NAME	PARCEL #
TROY HILL CORPORATE CENTER	1	A-2
PLAT #	BLOCK #	ZONE
12428		M-1
TAX MAP	ELECT. DIST.	CENSUS TRACT
37	1st	6011.02
WATER CODE	SEWER CODE	
C04	4020000	

PREPARED BY:

GWS

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
 Civil Engineers and Land Surveyors
 658 Kenilworth Drive, Suite 100
 Towson, Maryland 21204
 (410) 825-8120



OWNER/DEVELOPER

TROY HILL BUSINESS PARK PARTNERSHIP
 c/o MANEKIN CORPORATION
 7165 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046
 410-290-1400

DETAILS AND SECTIONS FOR TROY HILL CORPORATE CENTER

PHASE 1 PARCEL A-2

PREVIOUS FILE #S 590-05, P90-25, P91-24, WP 96-91, P96-136

HOWARD COUNTY, MARYLAND

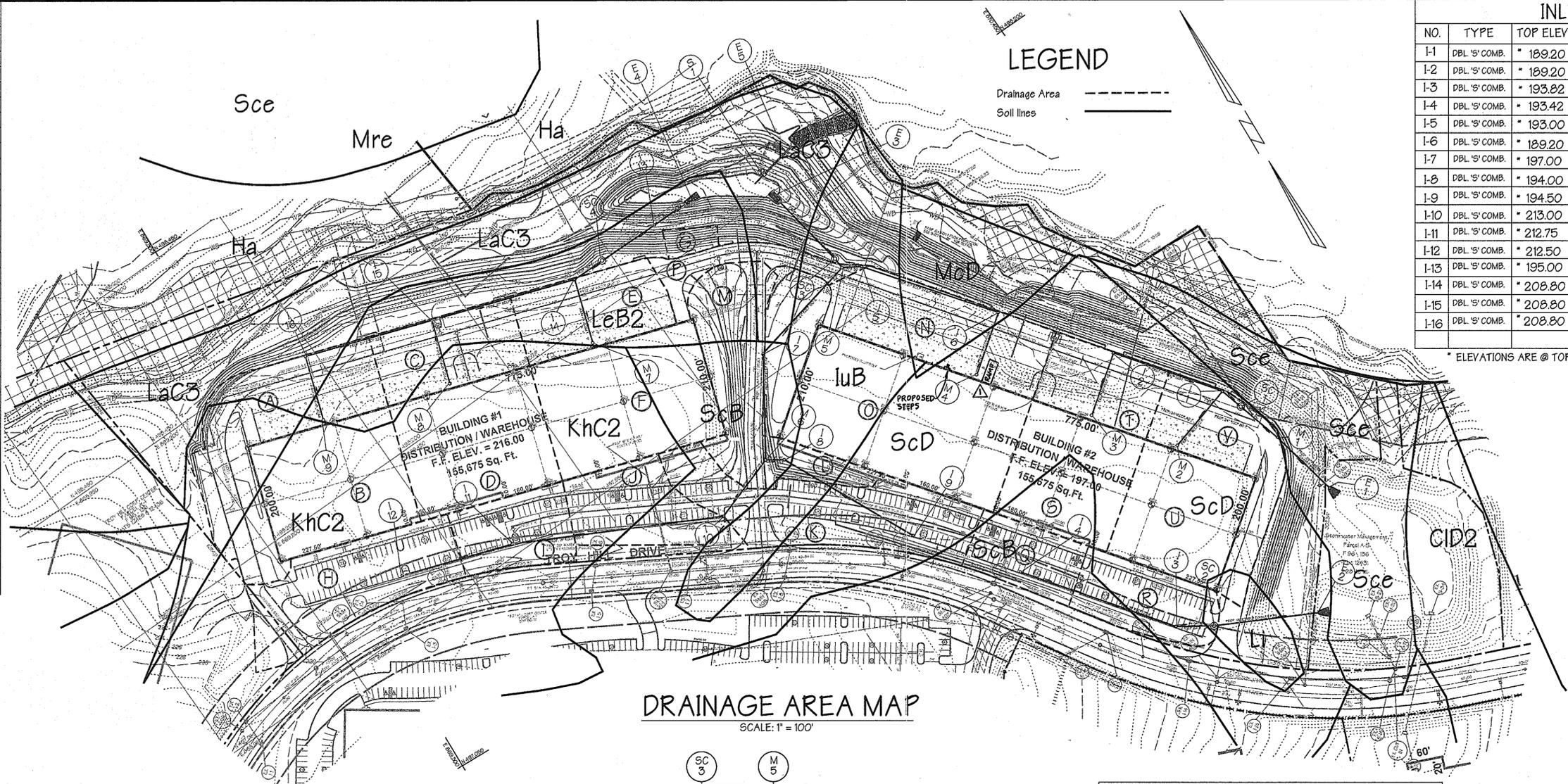
1st ELECTION DISTRICT

SCALE: AS SHOWN

JUNE 03, 1998

SHEET 4 of 19

COORDINATES		
STRUCT./ INLET NO.	NORTHING	EASTING
I-1	497495.26	870658.33
I-2	497652.31	870545.22
I-3	497217.85	870369.55
I-4	497441.89	870208.47
I-5	498012.13	870282.86
I-6	497818.20	870426.20
I-7	497988.48	870064.34
I-8	497822.45	869992.01
I-9	497594.56	870095.99
I-10	497803.55	869854.07
I-11	497968.06	869537.99
I-12	498030.76	869356.56
I-13	498237.22	870045.62
I-14	498270.49	869876.60
I-15	498351.76	869641.45
I-16	498423.61	869433.41
MH-1	497379.37	870689.50
MH-2	497464.67	870544.62
MH-3	497588.06	870455.91
MH-4	497753.84	870336.72
MH-5	498029.78	870254.79
MH-6	497840.15	869965.90
MH-7	498166.33	869840.60
MH-8	498247.60	869605.45
MH-9	498319.49	869397.43
SC-1	497456.63	870668.72
SC-2	497182.20	870422.46
SC-3	498048.76	870253.81
SC-4	498249.89	869974.50
E-1	497261.60	870121.40
E-2	497100.18	870577.27
E-3	498191.28	870230.23
E-4	498270.44	870137.82
E-5	498273.75	870288.94
S-1	498240.33	870234.64

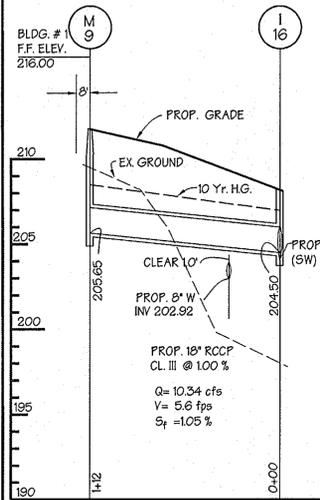


DRAINAGE AREA MAP
SCALE: 1" = 100'

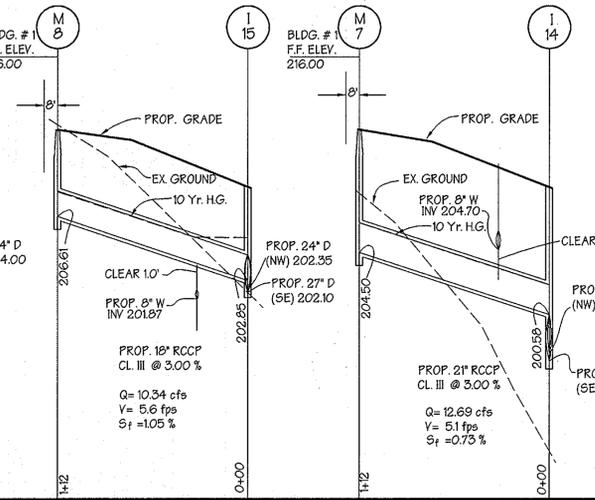
INLET SCHEDULE						
NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	Qc.f.s.	HO. CO. DTL.
I-1	DBL. 5" COMB.	* 189.20	184.09	183.84	23.86	SD 4.34
I-2	DBL. 5" COMB.	* 189.20	185.50	185.25	12.37	SD 4.34
I-3	DBL. 5" COMB.	* 193.82	187.85	187.60	5.66	SD 4.34
I-4	DBL. 5" COMB.	* 193.42	N/A	189.50	2.84	SD 4.11
I-5	DBL. 5" COMB.	* 193.00	182.94	182.84	20.56	SD 4.34
I-6	DBL. 5" COMB.	* 189.20	N/A	185.00	19.44	SD 4.11
I-7	DBL. 5" COMB.	* 197.00	187.56	187.31	19.38	SD 4.34
I-8	DBL. 5" COMB.	* 194.00	189.00	188.90	7.03	SD 4.34
I-9	DBL. 5" COMB.	* 194.50	N/A	109.50	6.91	SD 4.34
I-10	DBL. 5" COMB.	* 213.00	203.00	202.50	10.96	SD 4.34
I-11	DBL. 5" COMB.	* 212.75	207.27	207.02	8.11	SD 4.34
I-12	DBL. 5" COMB.	* 212.50	N/A	209.00	5.76	SD 4.34
I-13	DBL. 5" COMB.	* 195.00	179.66	177.16	43.38	SD 4.34
I-14	DBL. 5" COMB.	* 208.80	198.33	198.08	43.38	SD 4.34
I-15	DBL. 5" COMB.	* 208.80	202.35	202.10	29.44	SD 4.34
I-16	DBL. 5" COMB.	* 208.80	N/A	204.00	17.31	SD 4.34

* ELEVATIONS ARE @ TOP OF GRATE

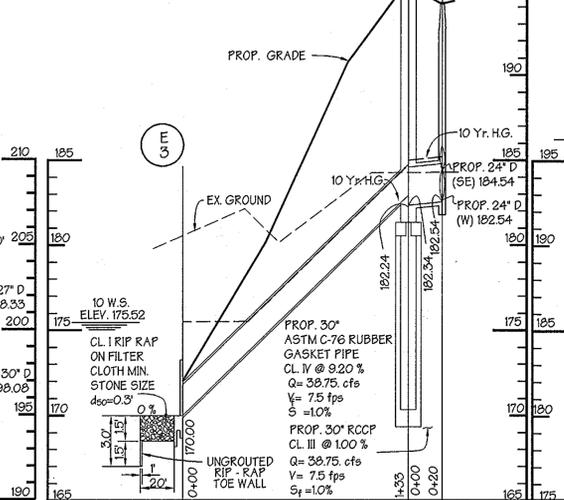
AREA	ACREAGE	'C'	% IMP.
A	126 AC.±	0.87	87%
B	110 AC.±	0.96	100%
C	0.66 AC.±	0.96	100%
D	1.10 AC.±	0.96	100%
E	0.71 AC.±	0.96	100%
F	1.35 AC.±	0.96	100%
G	0.09 AC.±	0.24	00%
H	1.03 AC.±	0.63	54%
I	0.54 AC.±	0.63	54%
J	0.65 AC.±	0.57	46%
K	1.20 AC.±	0.65	58%
L	0.20 AC.±	0.30	0%
M	0.82 AC.±	0.35	33%
N	1.52 AC.±	0.74	69%
O	1.75 AC.±	0.96	100%
P	0.29 AC.±	0.90	90%
Q	0.43 AC.±	0.74	67%
R	0.55 AC.±	0.71	64%
S	0.92 AC.±	0.96	100%
T	0.55 AC.±	0.96	100%
U	0.90 AC.±	0.96	100%
V	0.78 AC.±	0.87	88%



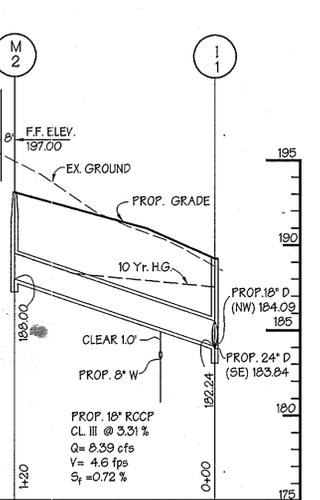
STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



STRUCTURE SCHEDULE					
NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	HO. CO. DTL.
MH-1	STD.	192.10	178.45	176.54	G5.12
MH-2	STD.	193.00	190.22	188.00	G5.12
MH-3	STD.	193.00	-	187.50	G5.12
MH-4	STD.	193.00	N/A	187.00	G5.12
MH-5	STD.	193.70	184.54	182.54	G5.12
MH-6	STD.	204.00	190.22	188.62	G5.12
MH-7	STD.	212.00	-	204.50	G5.12
MH-8	STD.	212.00	-	206.61	G5.12
MH-9	STD.	212.00	-	205.65	G5.12
SC-1	STC. 3600	190.45	183.60	183.50	
SC-2	STC. 800	195.15	187.21	187.13	
SC-3	STC. 6000	195.50	182.34	182.24	
SC-4	STC. 7200	208.00	196.96	196.88	
E-1	TYPE A 24"	-	164.50	-	S.D. 5.11
E-2	TYPE A 18"	-	172.00	-	S.D. 5.11
E-3	TYPE A 30"	-	172.00	-	S.D. 5.11
E-4	TYPE A 30"	-	172.00	-	S.D. 5.11

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT *[Signature]* 9/11/98 DATE

PLAN NUMBER _____

Reviewed for the Howard Conservation District and meets technical requirements.

[Signature] 9/11/98 DATE

NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: Howard County Department of Planning and Zoning

[Signature] 9/10/98 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/6/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/16/98 DATE

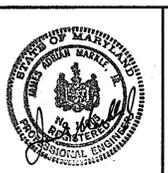
DIRECTOR

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120



OWNER/DEVELOPER

TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN CORPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046
410-290-1400

NO.	DATE	REVISION	BY
1	9/9/11	ADD LOADING RAMP & STAIR	CND

DRAINAGE AREA MAP & PROFILES FOR TROY HILL CORPORATE CENTER PHASE 1 PARCEL A-2

PREVIOUS FILE #S S90-05, P90-25, P91-24, WP 96-91, P96-136

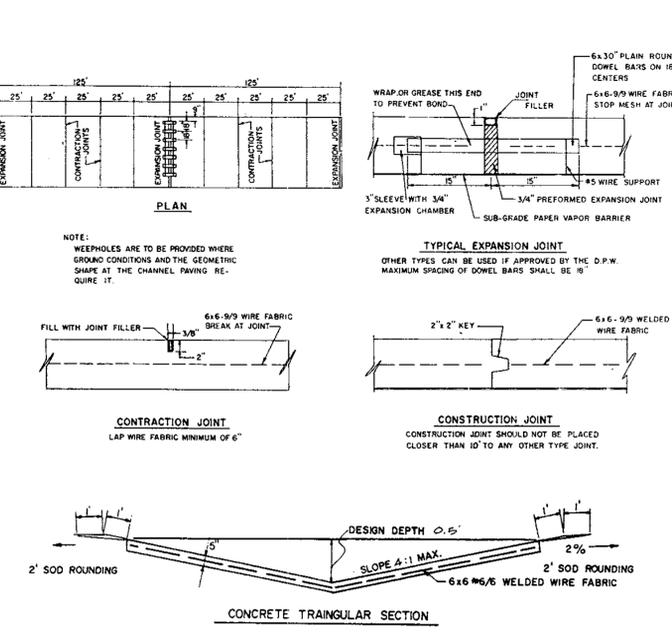
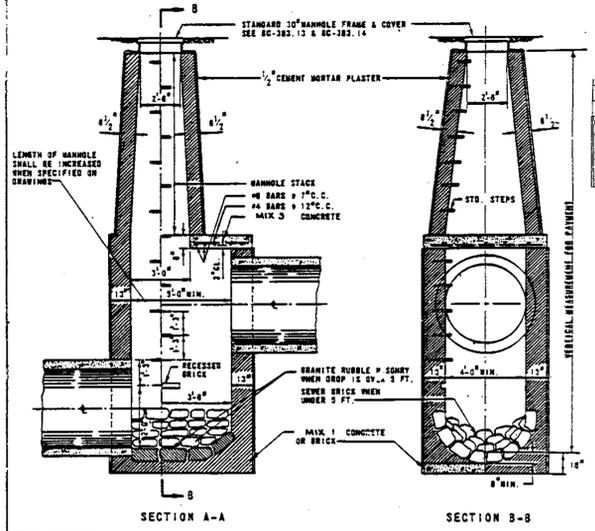
HOWARD COUNTY, MARYLAND 1st ELECTION DISTRICT

SHEET 6 of 19

SCALE: AS SHOWN

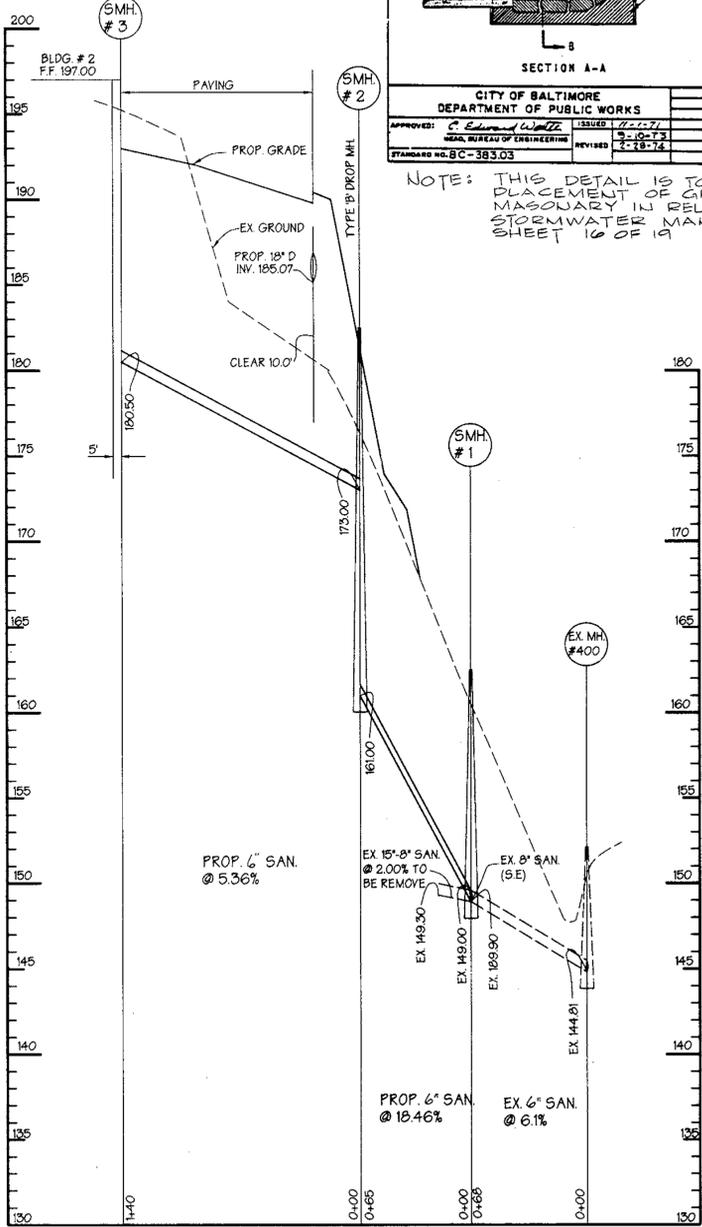
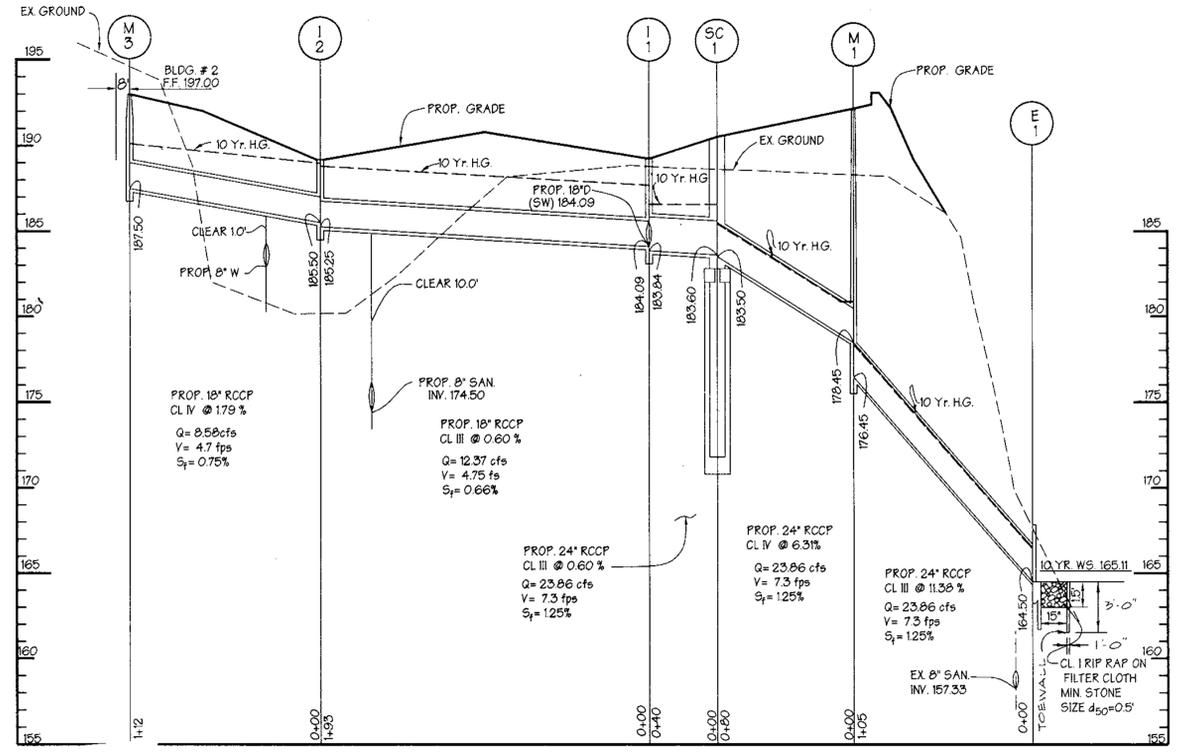
JUNE 03, 1998

SDP 98-114 P.N.: 8130 K.E. NAME: drainmaps01 08/22/98

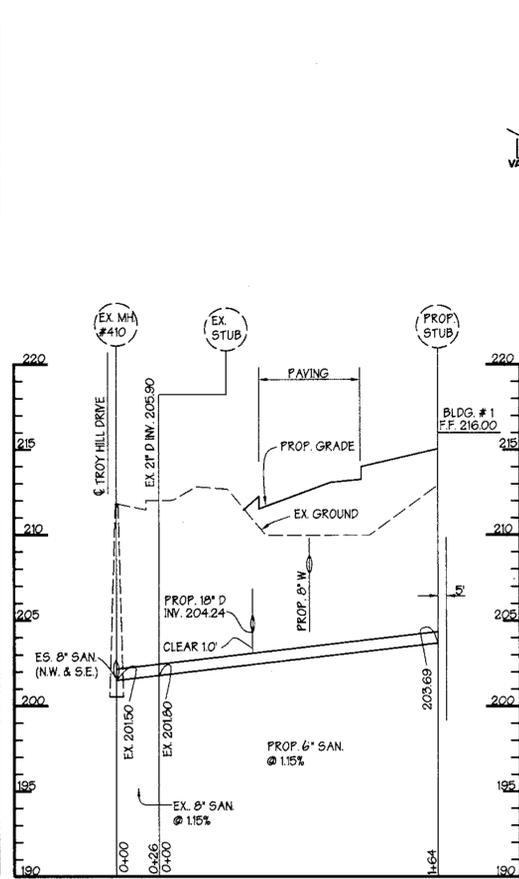


LOW FLOW CONCRETE CHANNEL
DETAILS FOR STORM WATER
MANAGEMENT POND

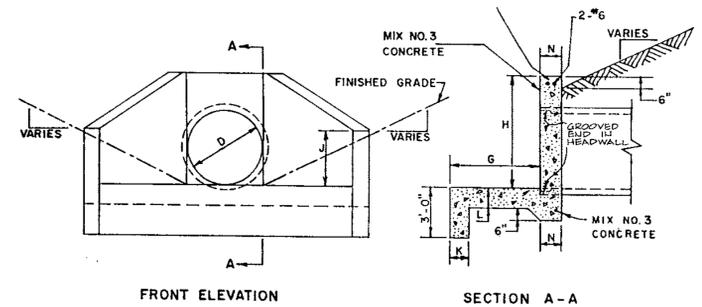
NO SCALE
SEE SHEET 16 OF 19



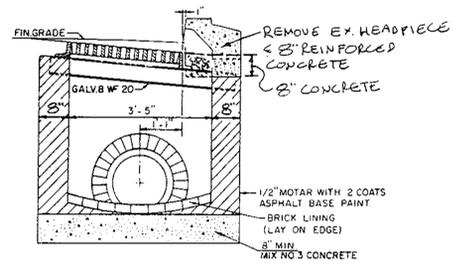
SANITARY SEWER PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



SANITARY SEWER PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'

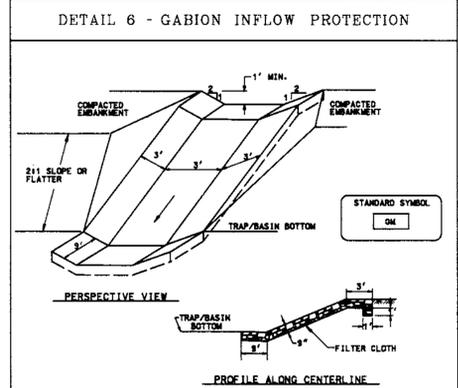


HEADWALL DETAIL
NO SCALE
NOTE: THIS IS TO BE USED FOR GROOVED END DETAIL ONLY. FOR MORE DETAILS AND REINFORCEMENT SEE HOWARD CO. STD. DETAIL SD 15.11. THIS ALSO APPLIES TO THE INFLOW END OF THE BARREL IN THE RELEASE STRUCTURE.



MODIFIED
DOUBLE TYPE S COMB. INLET
INLETS I-9 AND I-14
ON TROY HILL DRIVE
(STANDARD DETAIL
SD-434)

STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VER. 1"=5'



- Construction Specifications
- Gabion inflow protection shall be constructed of 3' x 3' x 3' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile class C shall be installed under all gabion baskets.
 - The stone used to fill the gabion baskets shall be 4" - 7".
 - Gabions shall be installed in accordance with manufacturer's recommendations.
 - Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

These plans for storm construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: [Signature] HOWARD SOIL CONSERVATION DISTRICT DATE: 9/11/98

PLAN NUMBER: [Blank]

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: [Signature] NATURAL RESOURCES CONSERVATION SERVICE DATE: 9/4/98

APPROVED: [Signature] HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE: 9/16/98

CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: [Signature] DATE: 10/16/98

CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] DATE: 10/14/98

DIRECTOR

ADDRESS CHART	SECTION NAME	PARCEL #
PARCEL NO. 12428	TROY HILL CORPORATE CENTER	A-2
BLOCK # M-1	ZONE # M-1	ELECT. DIST. 1st
TAX MAP	CENSUS TRACT 6011.02	
WATER CODE C04	SEWER CODE 4020000	

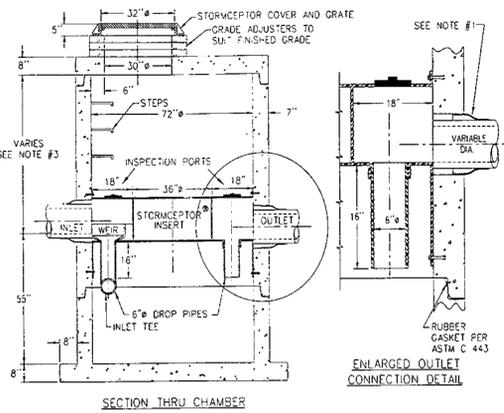
GWS
GEORGE W. STEPHENS, JR.
AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120



OWNER/DEVELOPER
TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN CORPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046
410-290-1400

PROFILES & DETAILS
FOR
TROY HILL CORPORATE CENTER
PHASE 1 PARCEL A-2
PREVIOUS FILE #S S90-05, P90-25, P91-24, WP 96-91, P96-136
HOWARD COUNTY, MARYLAND
1st ELECTION DISTRICT SHEET 8 of 19
SCALE: AS SHOWN
JUNE 03, 1998

SC-2 IMPERVIOUS AREA 0.35 AC ±
STC 900 Precast Concrete Stormceptor®
(900 US Gallon Capacity)

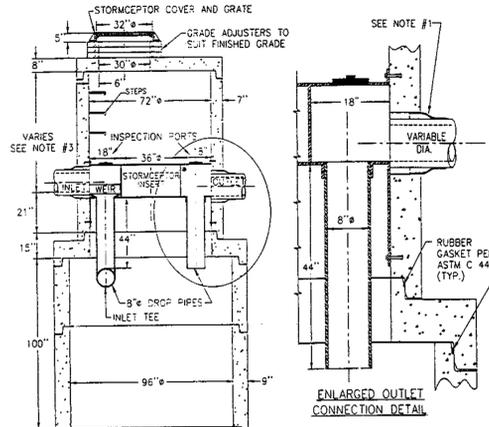


DESIGN SPECIFICATIONS
1. ASTM C 478
2. BASE WEIGHT = 6.46 TONS

NOTE:
1. CSR RECOMMENDS THE USE OF FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET WHERE APPLICABLE.
2. COVER TO BE POSITIONED OVER INLET INSPECTION PORT.
3. THIS IS A GENERAL ARRANGEMENT DRAWING. CONSULT LOCAL REPRESENTATIVE FOR SPECIAL CONDITIONS.

STC-900
REVISED 5/96

SC-1 IMPERVIOUS AREA - 3.06 AC ±
STC 3600 Precast Concrete Stormceptor®
(3600 US Gallon Capacity)

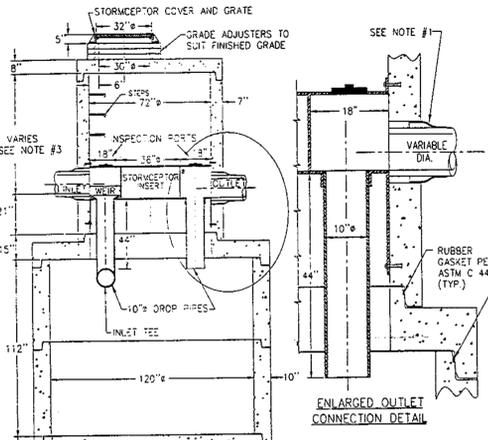


DESIGN SPECIFICATIONS
1. ASTM C 478
2. BASE WEIGHT = 11.28 TONS

NOTE:
1. CSR RECOMMENDS THE USE OF FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET WHERE APPLICABLE.
2. COVER TO BE POSITIONED OVER INLET INSPECTION PORT.
3. THIS IS A GENERAL ARRANGEMENT DRAWING. CONSULT LOCAL REPRESENTATIVE FOR SPECIAL CONDITIONS.

STC-3600
REVISED 5/96

SC-3 IMPERVIOUS AREA - 4.92 AC ±
STC 6000 Precast Concrete Stormceptor®
(6000 US Gallon Capacity)

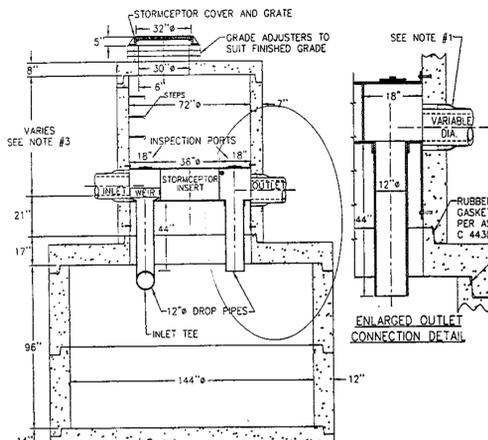


DESIGN SPECIFICATIONS
1. ASTM C 478
2. BASE WEIGHT = 19.72 TONS

NOTE:
1. CSR RECOMMENDS THE USE OF FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET WHERE APPLICABLE.
2. COVER TO BE POSITIONED OVER INLET INSPECTION PORT.
3. THIS IS A GENERAL ARRANGEMENT DRAWING. CONSULT LOCAL REPRESENTATIVE FOR SPECIAL CONDITIONS.

STC-6000
REVISED 5/96

SC-4 IMPERVIOUS AREA 6.02 AC ±
STC 7200 Precast Concrete Stormceptor®
(7200 US Gallon Capacity)



DESIGN SPECIFICATIONS
1. ASTM C 478
2. BASE WEIGHT = 27.25 TONS

NOTE:
1. CSR RECOMMENDS THE USE OF FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET WHERE APPLICABLE.
2. COVER TO BE POSITIONED OVER INLET INSPECTION PORT.
3. THIS IS A GENERAL ARRANGEMENT DRAWING. CONSULT LOCAL REPRESENTATIVE FOR SPECIAL CONDITIONS.

STC-7200
REVISED 5/96

OPERATIONS AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

- The stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the stormceptor unit yearly at a minimum, utilizing the stormceptor inspection/monitoring form. Inspection shall be done by using a clear plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depth exceeds the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available for the Howard County officials upon their request.

Concrete Stormceptor® Order Request Form *

Contractor Information
Name _____
Address _____
City _____ State _____ Zip Code _____
Contact _____ Phone _____ Fax _____

Office Use Only
Order # _____
Date _____
Internal Sale _____

Owner Information
Name TROY HILL BUSINESS PARK
Phone 410-290-1400
Fax _____

Please draw orientation of inlet and outlet pipes on diagram along with pipe inside diameter (in.) and invert elevation (ft). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor Model	Insert Size	Manhole Number
900 <input checked="" type="checkbox"/> 3600 <input type="checkbox"/>	22" <input type="checkbox"/>	Top Elevation (ft) 187.21
1200 <input type="checkbox"/> 4800 <input type="checkbox"/>	32" <input type="checkbox"/>	Inlet Pipe Invert (ft) 187.21
1800 <input type="checkbox"/> 6000 <input type="checkbox"/>	44" <input type="checkbox"/>	Outlet Pipe Invert (ft) 187.13
2400 <input type="checkbox"/> 7200 <input type="checkbox"/>	Custom _____	Pipe Type: RCCP
		Pipe Inside Diameter (in) [ID] 18"
		Pipe Outside Diameter (in) [OD] 18"

Project Name TROY HILL CORPORATE CENTER PARCEL A-2
Approximate time frame until required delivery (weeks) _____
Delivery Address: Street _____
City _____ State _____ Zip Code _____
Designer Company GEORGE W. STEPHENS, JR. & ASSOC.
Designer Contact PAT CIARLO Phone 410-825-8120 Fax 410-825-0288

Please fax this order to Stormceptor at (301) 762-4190
For Technical Assistance Please Call Stormceptor Corporation at (301) 762-8361 or toll free at 1 (800) 762-4705

ALL LIFTING APPARATUS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR
* TO BE INCLUDED ON SWM PLAN BY DESIGNER

Concrete Stormceptor® Order Request Form *

Contractor Information
Name _____
Address _____
City _____ State _____ Zip Code _____
Contact _____ Phone _____ Fax _____

Office Use Only
Order # _____
Date _____
Internal Sale _____

Owner Information
Name TROY HILL BUSINESS PARK
Phone 410-290-1400
Fax _____

Please draw orientation of inlet and outlet pipes on diagram along with pipe inside diameter (in.) and invert elevation (ft). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor Model	Insert Size	Manhole Number
900 <input type="checkbox"/> 3600 <input checked="" type="checkbox"/>	22" <input type="checkbox"/>	Top Elevation (ft) 185.00
1200 <input type="checkbox"/> 4800 <input type="checkbox"/>	32" <input type="checkbox"/>	Inlet Pipe Invert (ft) 185.00
1800 <input type="checkbox"/> 6000 <input type="checkbox"/>	44" <input type="checkbox"/>	Outlet Pipe Invert (ft) 185.24
2400 <input type="checkbox"/> 7200 <input type="checkbox"/>	Custom _____	Pipe Type: RCCP
		Pipe Inside Diameter (in) [ID] 24"
		Pipe Outside Diameter (in) [OD] 24"

Project Name TROY HILL CORPORATE CENTER PARCEL A-2
Approximate time frame until required delivery (weeks) _____
Delivery Address: Street _____
City _____ State _____ Zip Code _____
Designer Company GEORGE W. STEPHENS, JR. & ASSOC.
Designer Contact PAT CIARLO Phone 410-825-8120 Fax 410-825-0288

Please fax this order to Stormceptor at (301) 762-4190
For Technical Assistance Please Call Stormceptor Corporation at (301) 762-8361 or toll free at 1 (800) 762-4705

ALL LIFTING APPARATUS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR
* TO BE INCLUDED ON SWM PLAN BY DESIGNER

Concrete Stormceptor® Order Request Form *

Contractor Information
Name _____
Address _____
City _____ State _____ Zip Code _____
Contact _____ Phone _____ Fax _____

Office Use Only
Order # _____
Date _____
Internal Sale _____

Owner Information
Name TROY HILL BUSINESS PARK
Phone 410-290-1400
Fax _____

Please draw orientation of inlet and outlet pipes on diagram along with pipe inside diameter (in.) and invert elevation (ft). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor Model	Insert Size	Manhole Number
900 <input type="checkbox"/> 3600 <input type="checkbox"/>	22" <input type="checkbox"/>	Top Elevation (ft) 182.24
1200 <input type="checkbox"/> 4800 <input type="checkbox"/>	32" <input type="checkbox"/>	Inlet Pipe Invert (ft) 182.24
1800 <input type="checkbox"/> 6000 <input checked="" type="checkbox"/>	44" <input type="checkbox"/>	Outlet Pipe Invert (ft) 182.24
2400 <input type="checkbox"/> 7200 <input type="checkbox"/>	Custom _____	Pipe Type: RCCP
		Pipe Inside Diameter (in) [ID] 30"
		Pipe Outside Diameter (in) [OD] 30"

Project Name TROY HILL CORPORATE CENTER PARCEL A-2
Approximate time frame until required delivery (weeks) _____
Delivery Address: Street _____
City _____ State _____ Zip Code _____
Designer Company GEORGE W. STEPHENS, JR. & ASSOC.
Designer Contact PAT CIARLO Phone 410-825-8120 Fax 410-825-0288

Please fax this order to Stormceptor at (301) 762-4190
For Technical Assistance Please Call Stormceptor Corporation at (301) 762-8361 or toll free at 1 (800) 762-4705

ALL LIFTING APPARATUS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR
* TO BE INCLUDED ON SWM PLAN BY DESIGNER

Concrete Stormceptor® Order Request Form *

Contractor Information
Name _____
Address _____
City _____ State _____ Zip Code _____
Contact _____ Phone _____ Fax _____

Office Use Only
Order # _____
Date _____
Internal Sale _____

Owner Information
Name TROY HILL BUSINESS PARK
Phone 410-290-1400
Fax _____

Please draw orientation of inlet and outlet pipes on diagram along with pipe inside diameter (in.) and invert elevation (ft). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor Model	Insert Size	Manhole Number
900 <input type="checkbox"/> 3600 <input type="checkbox"/>	22" <input type="checkbox"/>	Top Elevation (ft) 190.00
1200 <input type="checkbox"/> 4800 <input type="checkbox"/>	32" <input type="checkbox"/>	Inlet Pipe Invert (ft) 190.00
1800 <input type="checkbox"/> 6000 <input type="checkbox"/>	44" <input type="checkbox"/>	Outlet Pipe Invert (ft) 190.00
2400 <input type="checkbox"/> 7200 <input checked="" type="checkbox"/>	Custom _____	Pipe Type: RCCP
		Pipe Inside Diameter (in) [ID] 30"
		Pipe Outside Diameter (in) [OD] 30"

Project Name TROY HILL CORPORATE CENTER PARCEL A-2
Approximate time frame until required delivery (weeks) _____
Delivery Address: Street _____
City _____ State _____ Zip Code _____
Designer Company GEORGE W. STEPHENS, JR. & ASSOC.
Designer Contact PAT CIARLO Phone 410-825-8120 Fax 410-825-0288

Please fax this order to Stormceptor at (301) 762-4190
For Technical Assistance Please Call Stormceptor Corporation at (301) 762-8361 or toll free at 1 (800) 762-4705

ALL LIFTING APPARATUS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR
* TO BE INCLUDED ON SWM PLAN BY DESIGNER

These plans for S.W.M. construction soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
PLAN NUMBER _____ DATE _____
Reviewed for the Howard Conservation District and meets technical requirements.
NATIONAL RESOURCES CONSERVATION SERVICE DATE _____
APPROVED: Howard County Department of Planning and Zoning
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 9/16/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 10/16/98
DIRECTOR DATE 10/16/98

ADDRESS CHART	PARCEL NO.	STREET ADDRESS
	Building # 1	7055 Troy Hill Drive
	Building # 2	7095 Troy Hill Drive

SUBDIVISION NAME	SECTION NAME	PARCEL #
TROY HILL CORPORATE CENTER	1	A-2
PLAT #	BLOCK #	ZONE
12428	M-1	/ZONING MAP 37
WATER CODE	ELECT. DIST.	CENSUS TRACT
C04	1st	6011.02
	SEWER CODE	4020000

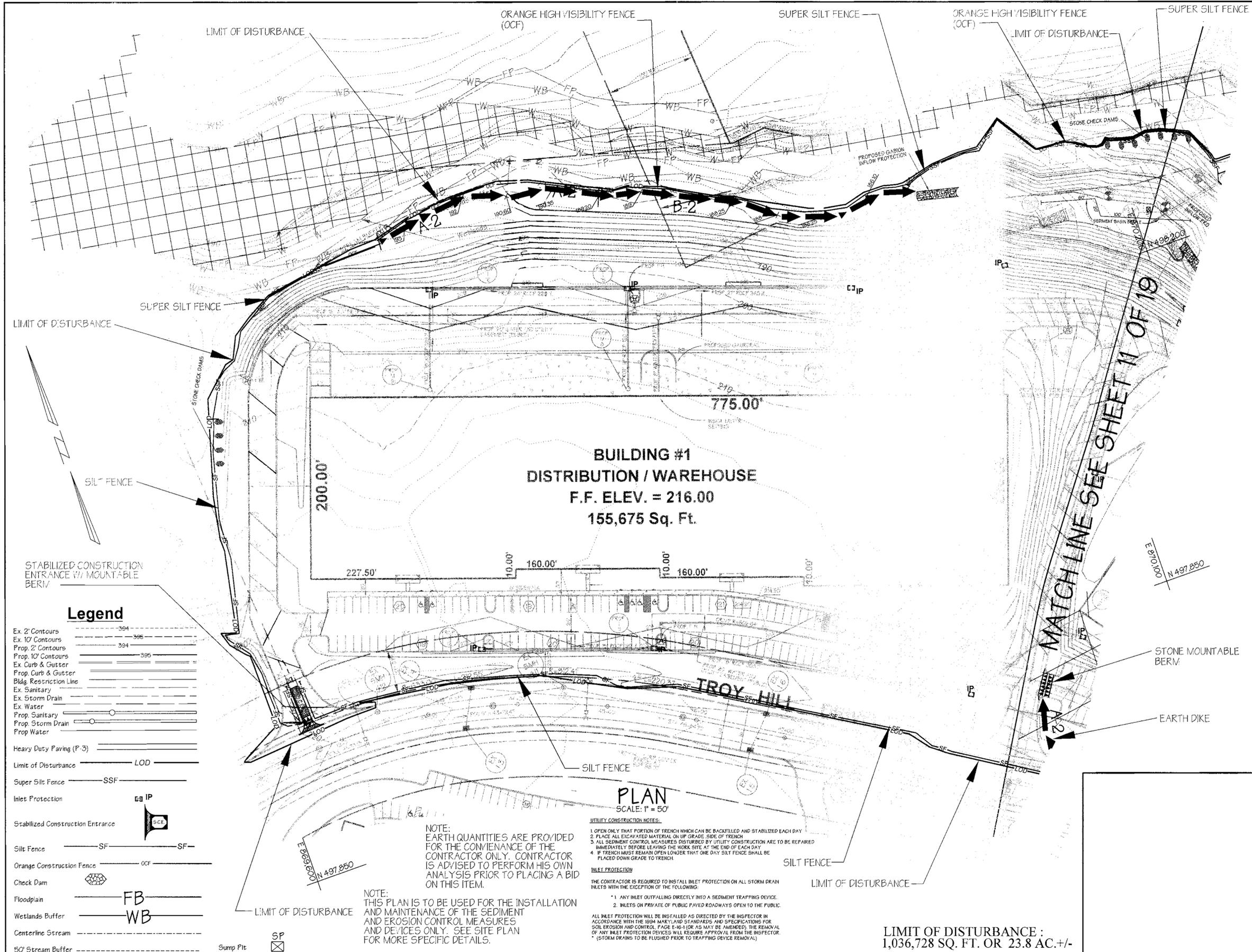
PREPARED BY:
GWS
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

ENGINEER CERTIFICATION:
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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
Engineer: James A. Markle Jr. Date: 8/31/98
Name: JAMES A. MARKLE JR. PE # 11005

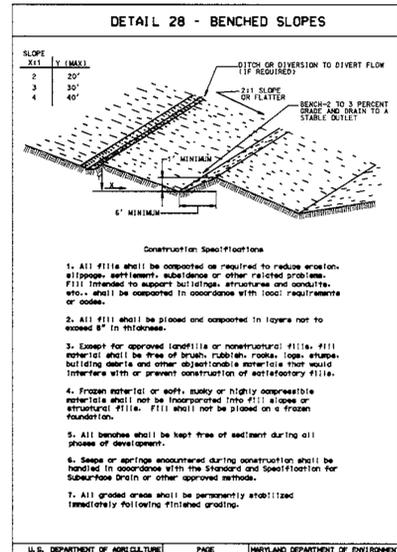
OWNER/DEVELOPER
TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN CORPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046
410-290-1400

DEVELOPER CERTIFICATION:
I/We certify that development and construction will be done according to this plan, 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/We authorize periodic on-site inspection by the Howard Soil Conservation District.
Developer: David E. Meiners Date: 3/29/98
Name: DAVID E. MEINERS

STORMCEPTOR DETAILS
FOR
TROY HILL CORPORATE CENTER
PHASE 1 PARCEL A-2
PREVIOUS FILE #S 890-05, F90-25, F91-24, W6-96-91, F96-136
HOWARD COUNTY, MARYLAND SCALE: AS SHOWN
1st ELECTION DISTRICT SHEET 9 of 19 JUNE 03, 1998



- ### Sequence of Operation
- OBTAIN GRADING PERMIT.
 - NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES 48 HOURS BEFORE BEGINNING WORK. (1 DAY)
 - INSTALL STABILIZED CONSTRUCTION ENTRANCES (2 DAYS)
 - INSTALL HIGH VISIBILITY FENCE AT THE LIMIT OF DISTURBANCE WHEN THE LIMIT OF DISTURBANCE IS WITHIN 50' OF WETLANDS BUFFER. CLEAR AND GRUB AND INSTALL SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES FOR INSTALLATION OF SEDIMENT BASIN. (10 DAYS)
 - INSTALL SEDIMENT BASIN ACCORDING TO S.W.M. PLANS AND SPECIFICATIONS WITH MODIFICATIONS FOR SEDIMENT CONTROL. (10 DAYS)
 - CLEAR AND GRUB FOR THE REMAINING SEDIMENT CONTROL MEASURES AND DEVICES. (3 DAYS)
 - INSTALL REMAINING SEDIMENT CONTROL MEASURES AND DEVICES. (5 DAYS)
 - WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR CLEAR AND GRUB REMAINING OF THE SITE AND BEGIN GRADING OPERATIONS. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASIN. (15 DAYS)
 - BEGIN BUILDING FOOTINGS AND BUILDING CONSTRUCTION. (6 DAYS)
 - CONTINUE GRADING. GRADE AREA BELOW EARTH DIKE (A) TO (B) TO THE FINISH GRADES. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASIN. ADJUST EARTH DIKE IF NECESSARY. (8 DAYS)
 - INSTALL UTILITIES. PROVIDE INLET PROTECTION AS SHOWN ON THE PLAN. (12 DAYS)
 - WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE EARTH DIKE FROM (A) TO (B). (8 DAYS)
 - CONTINUE GRADING. FINE GRADE AND INSTALL STONE SUBBASE AND CURB AND GUTTER. STABILIZE ANY REMAINING AREAS. (10 DAYS)
 - WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR FLUSH THE STORM DRAIN SYSTEM. REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES. (3 DAYS)
 - CONVERT EXISTING SEDIMENT BASIN TO THE S.W.M. POND AS PER APPROVED DRAINAGE AND PROCEED WITH PAVING AND LANDSCAPING OPERATIONS. (10 DAYS)



Legend

Ex. 2' Contours	---
Ex. 10' Contours	---
Prop. 2' Contours	---
Prop. 10' Contours	---
Ex. Curb & Gutter	---
Prop. Curb & Gutter	---
Bldg. Restriction Line	---
Ex. Sanitary	---
Ex. Storm Drain	---
Ex. Water	---
Prop. Sanitary	---
Prop. Storm Drain	---
Prop. Water	---
Heavy Duty Paving (P.3)	---
Limit of Disturbance	LOD
Super Silt Fence	SSF
Inlet Protection	IP
Stabilized Construction Entrance	SCE
Silt Fence	SF
Orange Construction Fence	OCF
Check Dam	CD
Floodplain	FB
Wetlands Buffer	WB
Centerline Stream	---
50' Stream Buffer	---
Sump Pit	SP

NOTE:
EARTH QUANTITIES ARE PROVIDED FOR THE CONVIENANCE OF THE CONTRACTOR ONLY. CONTRACTOR IS ADVISED TO PERFORM HIS OWN ANALYSIS PRIOR TO PLACING A BID ON THIS ITEM.

NOTE:
THIS PLAN IS TO BE USED FOR THE INSTALLATION AND MAINTENANCE OF THE SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES ONLY. SEE SITE PLAN FOR MORE SPECIFIC DETAILS.

PLAN
SCALE: 1" = 50'

UTILITY CONSTRUCTION NOTES:

- OPEN ONLY THAT PORTION OF TRENCH WHICH CAN BE BACKFILLED AND STABILIZED EACH DAY
- PLACE ALL EXCAVATED MATERIAL ON UP GRADE SIDE OF TRENCH
- ALL SEDIMENT CONTROL MEASURES DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY BEFORE LEAVING THE WORK SITE AT THE END OF EACH DAY
- IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY SILT FENCE SHALL BE PLACED DOWN GRADE TO TRENCH

INLET PROTECTION

THE CONTRACTOR IS REQUIRED TO INSTALL INLET PROTECTION ON ALL STORM DRAIN INLETS WITH THE EXCEPTION OF THE FOLLOWING:

- ANY INLET OUTFALLING DIRECTLY INTO A SEDIMENT TRAPPING DEVICE.
- INLETS ON PRIVATE OR PUBLIC PAVED ROADWAYS OPEN TO THE PUBLIC.

ALL INLET PROTECTION WILL BE INSTALLED AS DIRECTED BY THE INSPECTOR IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND CONTROL, PAGE E-H-1 (OR AS MAY BE AMENDED). THE REMOVAL OF ANY INLET PROTECTION DEVICES WILL REQUIRE APPROVAL FROM THE INSPECTOR. (STORM DRAINS TO BE FLUSHED PRIOR TO TRAPPING DEVICE REMOVAL)

LIMIT OF DISTURBANCE:
1,036,728 SQ. FT. OR 23.8 AC. +/-

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
[Signature] 2/4/98
DATE

PLAN NUMBER _____

Reviewed for the Howard Conservation District and meets technical requirements.
APPROVED: NATURAL RESOURCES CONSERVATION SERVICE
[Signature] 2/1/98
DATE

APPROVED: Howard County Department of Planning and Zoning
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 2/16/98
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 10/16/97
DATE

DIRECTOR
[Signature] 10/16/97
DATE

PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

SUBDIVISION NAME	SECTION NAME	PARCEL #
TROY HILL CORPORATE CENTER	1	A-2

PLAT #	BLOCK #	ZONE	TAX MAP / ZONE	ELECT. DIST.	CENSUS TRACT
12428	M-1	M-1	37	1st	6011.02

WATER CODE C04 SEWER CODE 4020000

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

ENGINEER CERTIFICATION:

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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Engineer: *[Signature]* Date: 2/1/98
Name: JAMES A. MARKLE JR. PE # 11005

OWNER/DEVELOPER

TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN COPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046
410-290-1400

DEVELOPER CERTIFICATION:

I/We certify that all development and construction will be done according to this plan, 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 also authorize periodic on-site inspection by the Howard Soil Conservation District.

Developer: *[Signature]* Date: 2/29/98
Name: DAVID E. MEINERS

SEDIMENT CONTROL PLAN
FOR
TROY HILL CORPORATE CENTER
PHASE 1 PARCEL A-2
PREVIOUS FILE #S 890-05, P90-25, F91-24, WP 96-91, F96-136
HOWARD COUNTY, MARYLAND SHEET 10 of 19 SCALE: AS SHOWN
1st ELECTION DISTRICT JUNE 03, 1998

ORANGE HIGH VISIBILITY FENCE (OCF)

SUPER SILT FENCE

ORANGE HIGH VISIBILITY FENCE (OCF)

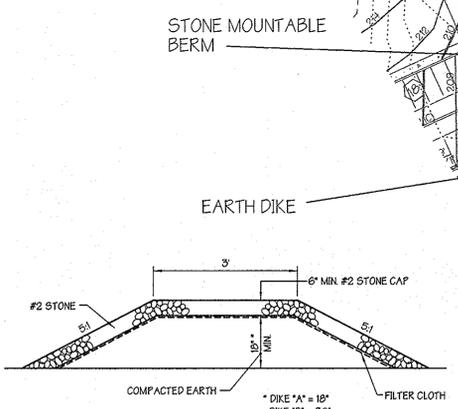
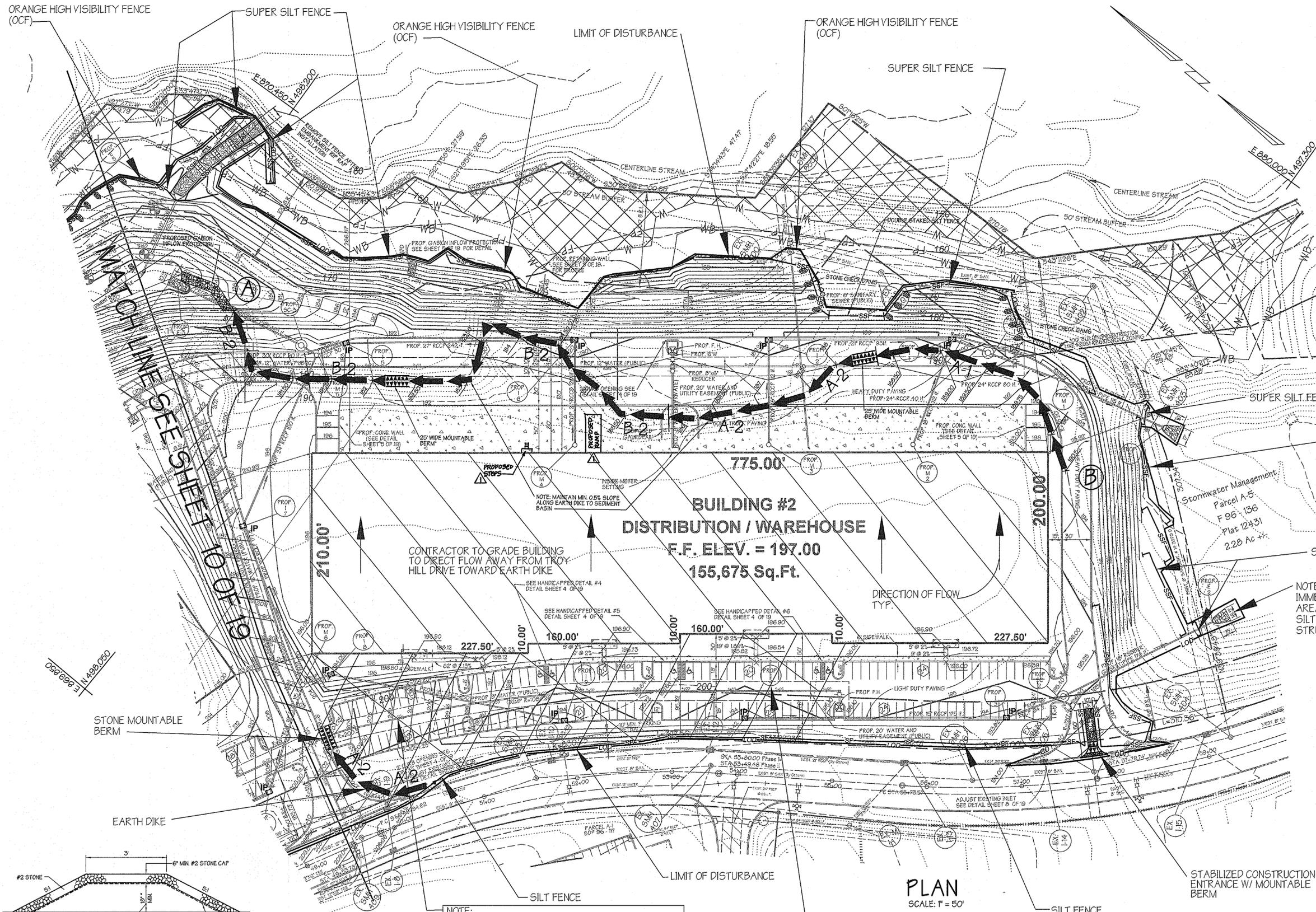
LIMIT OF DISTURBANCE

ORANGE HIGH VISIBILITY FENCE (OCF)

SUPER SILT FENCE

Legend

- Ex. 2' Contours ----- 394
- Ex. 10' Contours ----- 395
- Prop. 2' Contours ----- 394
- Prop. 10' Contours ----- 395
- Ex. Curb & Gutter -----
- Prop. Curb & Gutter -----
- Ex. Restriction Line -----
- Prop. Restriction Line -----
- Ex. Sanitary -----
- Prop. Sanitary -----
- Ex. Storm Drain -----
- Prop. Storm Drain -----
- Prop. Water -----
- Heavy Duty Paving (P-3) -----
- Limit of Disturbance ----- LOD
- Super Silt Fence ----- SSF
- Inlet Protection ----- IP
- Stabilized Construction Entrance ----- SCE
- Silt Fence ----- SF
- Orange Construction Fence ----- OCF
- Check Dam -----
- Floodplain ----- FP
- Wetland Buffer ----- WB
- Centerline Stream -----
- 50' Stream Buffer -----
- Sump Pit ----- SP



Stone Mountable Berm

NOT TO SCALE

NOTE:
THIS AREA TO BE GRADED TO MAINTAIN POSITIVE DRAINAGE TOWARDS THE BUILDING AND THE EARTH DIKE. ONLY AFTER STORM DRAIN AND INLET PROTECTION IS IN PLACE CAN THIS AREA BE GRADED TO SUBGRADE.

PLAN SCALE: 1" = 50'

LIMIT OF DISTURBANCE : 1,036,728 SQ. FT. OR 23.8 AC. +/-

1	3/11/11	ADD LOADING RAMP AND STAIRS	CND
These plans for construction soil erosion and sediment control meet the requirements of Howard Soil Conservation District.			
APPROVED: HOWARD SOIL CONSERVATION DISTRICT			9/11/08
PLAN NUMBER			DATE
Reviewed for the Howard Conservation District and meets technical requirements.			
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING			9/11/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION			DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING			10/16/08
CHIEF, DIVISION OF LAND DEVELOPMENT			DATE
DIRECTOR			10/16/08
DATE			
ADDRESS CHART			
PARCEL NO.	STREET ADDRESS		
Building #1	7055 Troy Hill Drive		
Building #2	7045 Troy Hill Drive		
SUBDIVISION NAME			
TROY HILL CORPORATE CENTER		SECTION NAME	PARCEL #
		1	A-2
PLAT #	BLOCK #	ZONE	ELECT. DIST. CENSUS TRACT
12428		M-1	1st 6011.02
WATER CODE C04		SEWER CODE 402000	

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120



ENGINEER CERTIFICATION:
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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Engineer: James A. Markle Jr. Date: 8/21/08
Name: JAMES A. MARKLE JR. PE # 11005

OWNER/DEVELOPER
TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN CORPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046
410-290-1400

DEVELOPER CERTIFICATION:
I/We certify that all development and construction will be done according to this plan, 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 also authorize periodic on-site inspection by the Howard Soil Conservation District.

Developer Name: David E. Meiners Date: 3/27/08
DAVID E. MEINERS



SEDIMENT CONTROL PLAN
FOR
TROY HILL CORPORATE CENTER
PHASE 1 PARCEL A-2
PREVIOUS FILE #S S90-05, P90-25, P91-24, WP 96-91, P96-136
HOWARD COUNTY, MARYLAND SHEET 11 of 19 SCALE: AS SHOWN
1st ELECTION DISTRICT JUNE 03, 1998

POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard 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 material 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, stumps, and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

MATERIAL: The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" frozen or other objectionable material. Fill material for the center of the embankment and cut-off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration will 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 a maximum 6" 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 method of the hauling and spreading equipment, over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of the equipment or compaction shall be achieved by a minimum of four complete passes of a subsoiler, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be attained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that the water can be squeezed out. Minimum required density shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and it is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall any 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.

PIPE CONDUITS All pipes shall be circular in cross section.

REINFORCED CONCRETE PIPE: 18 pipe to be circular in cross section.

All the following of items shall apply for reinforced concrete pipe:

1. Material: Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-501.
2. Bedding: All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe to at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. Laying: Pipe bell and spigot joints shall be placed with the bell end upstream. Joints shall be placed in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be placed within 2 feet from the man.
4. Backfilling shall conform to structure B-4.144.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

PRECASTED PIPE

3 luminous coated prestressed metal pipe (BCKMP) shall conform to the requirements of AASHTO M196. Pipe should be specified to be fully luminous coated in accordance with AASHTO M196D. Prestressed pipe shall be 18" PE III. Pipe shall have 4" x 3.5" perforations 3.0" in diameter.

CONCRETE

Concrete shall meet the requirements of Maryland Department of Transportation State Highway Administration Standard Specifications for Construction and Materials, Section 910 (Portland Cement Concrete Mixture), Mix No. 3.

REINFORCING STEEL IN CONCRETE STRUCTURES

Reinforcing steel shall be ASTM A 615 Grade 60. Steel angles and anchor bars shall be ASTM 136.

ROCK RIP RAP

Rock rip rap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

FENCE

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact with the smaller rocks filling the voids between the larger rocks. Stone for outfalls may be placed by equipment. Riprap or gabion outlets shall be constructed to full course thickness in one operation and in such a manner as to avoid any displacement of underlying materials. The contractor shall avoid damage to the filter blankets or cloth during placement of riprap. Hand placement shall be required as needed to prevent damage to the permanent works. Filter cloth shall be placed under all riprap and gabions.

OUTFALL PROTECTION

Subgrade for riprap or gabion outfalls shall be prepared to the required line and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material. All rock or gravel shall conform to the specified grading limits when installed in the riprap or gabion. All stone shall be delivered and placed in a manner that will insure the stone in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Stone for outfalls may be placed by equipment. Riprap or gabion outlets shall be constructed to full course thickness in one operation and in such a manner as to avoid any displacement of underlying materials. The contractor shall avoid damage to the filter blankets or cloth during placement of riprap. Hand placement shall be required as needed to prevent damage to the permanent works. Filter cloth shall be placed under all riprap and gabions.

GABIONS

Gabions shall meet the requirements of Maryland Department of Transportation State Highway Administration Standard Specifications for Construction and Materials, Section 312 and must be Class B PVC coated.

PERMANENT SLOPE SEEDING

After spreading 4" topsoil, seed with a mixture of 30% Inoculated Crown Vetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 lbs/acre; 10-20-20 fertilizer shall be applied at a rate of 25 lbs/1000 sq. ft. time at a rate of 92 lbs/1000 sq. ft. match area with unweathered small grain straw at a rate of 15 tons/acre; anchor with a rapid curing asphalt (RC-70, R-250 or RC-800) at a rate of 0.1 gal/SY.

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.

CARE OF WATER DURING CONSTRUCTION

All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the work area. The contractor shall be responsible 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 works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slope and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to pumps from which 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 spoil 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.

SEEDING

1. Seeded Preparation - loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.

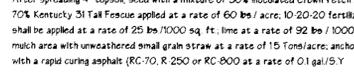
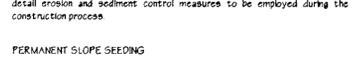
2. Soil Amendments - apply 2 tons per acre Dolomitic Limestone (92 lbs/1000 sq. ft.), 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.), and 400 lbs per acre of 30-0-0 Ureaform Fertilizer (32 lbs/1000 sq. ft.). Harrow or disc time and fertilizer into upper 3 inches of soil. At time of seeding, apply 400 lbs (92 lbs/1000 sq. ft.) of 30-0-0 Ureaform Fertilizer and 500 lbs per acre (115 lbs/1000 sq. ft.) of 10-0-0 Fertilizer.

3. Seeding - for the period March 1 through April 30 seed with 40 lbs per acre Kentucky 31 Tall Fescue, and 15 lbs per acre Inoculated Crown Vetch. For the period May 1 through July 31 seed with 60 lbs per acre Kentucky 31 Tall Fescue and 2 lbs per acre inoculated Weeping Lovegrass. For the period August 1 through October 15 seed with 40 lbs per acre Kentucky 31 Tall Fescue and 20 lbs per acre inoculated Intermediate Sericea Lespedeza. For the period October 16 through February 28 protect the site by Option (1); 2 tons per acre of well anchored straw. For the period May 1 through February 28 inoculated Crown Vetch shall be applied during the subsequent period of March 1 through April 30 at the rate of 15 lbs per acre.

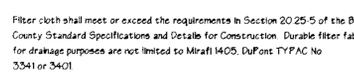
4. Mulching - apply 15 to 2 tons per acre of an rotted small grain straw immediately after seeding. Anchor much immediately after application using 210 gallons per acre of emulsified asphalt. On flat areas of slope 0 feet or higher, use 340 gallons per acre of anchoring.

5. Maintenance - inspect all seeded areas and make needed repairs, replacements and re seeding.

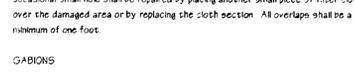
ACCESS RAMP



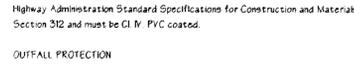
CONCRETE CRADLE



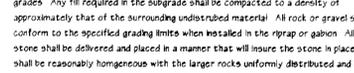
CONCRETE ANTI-SEEP COLLAR



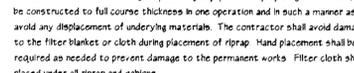
CONCRETE ANTI-SEEP COLLAR



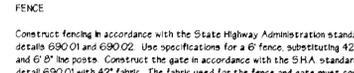
CONCRETE ANTI-SEEP COLLAR



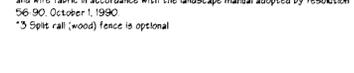
CONCRETE ANTI-SEEP COLLAR



CONCRETE ANTI-SEEP COLLAR



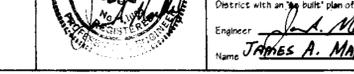
CONCRETE ANTI-SEEP COLLAR



CONCRETE ANTI-SEEP COLLAR



CONCRETE ANTI-SEEP COLLAR

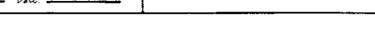
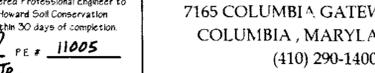
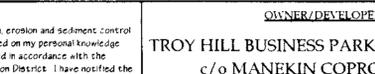
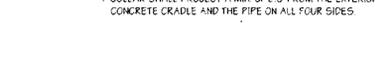
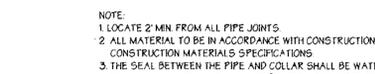
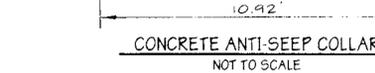
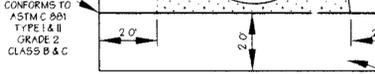
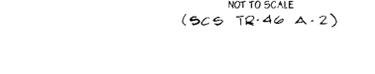
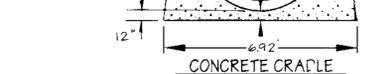
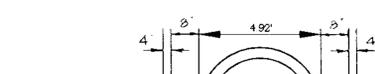
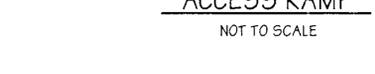
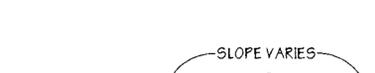
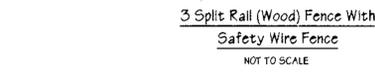
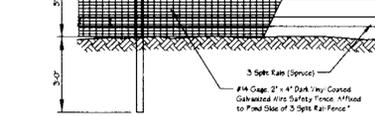


CONCRETE ANTI-SEEP COLLAR

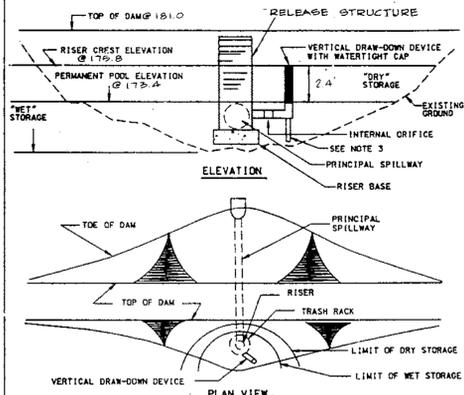


CUT-OFF TRENCH: THE CUT OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE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

IMPERVIOUS CORE: THE CORE SHALL BE FILLED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE FILL SHALL BE GOVERNED BY THE EQUIPMENT USED, WITH MINIMUM WIDTH BEING FOUR FEET. THE TOP WIDTH SHALL BE SHOWN ON THE PLAN. THE SIDE SLOPES OF THE FILL SHALL BE 1:1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS OR HAND TAMPERS TO ASSURE MAX. IMPERVIOUSABILITY.



BASIN DRAW-DOWN SCHEMATIC VERTICAL DRAW-DOWN DEVICE

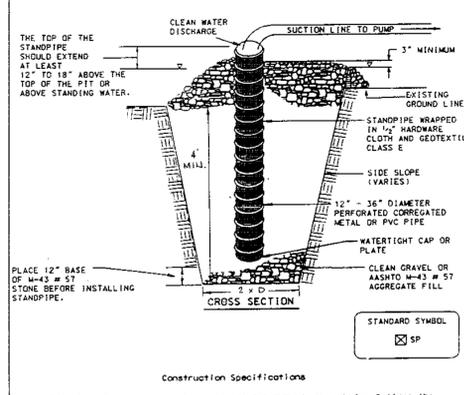


CONSTRUCTION SPECIFICATIONS

1. Perforations in the draw-down device may not extend into the wet storage.
2. The total area of the perforations must be greater than 4 times the area of the internal orifice.
3. The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
4. Provide support of draw-down device to prevent sagging and flotation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wood posts set 3" minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

DETAIL 20B - SUMP PIT

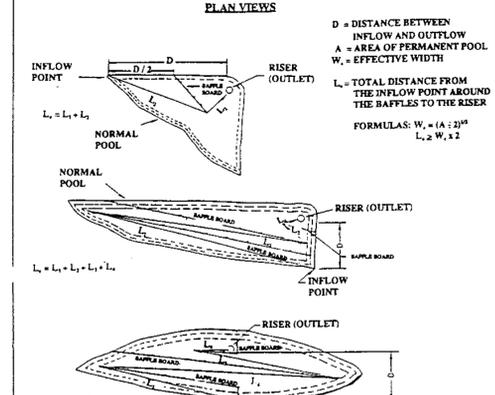


CONSTRUCTION SPECIFICATIONS

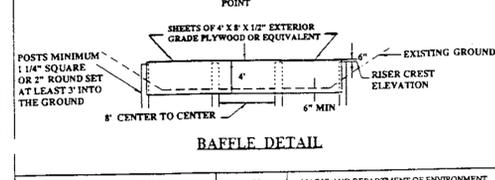
1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and geotextile class E. The perforations shall be 1/2" x 6" slots or 1" diameter holes.
3. A base of filter material consisting of clean gravel or #57 aggregate should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin venting only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE D-15-2 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

DETAIL 18 - SEDIMENT BASIN BAFFLES



BAFFLE DETAIL



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

SEDIMENT BASIN

PERFORATED PIPE (AASHTO M-36) STANDARD PATTERN FOR PERFORATION HAS A MIN. OF THIRTY (30) 3/8" DIA. ROUND HOLES PER SQ. FT. OF PIPE SURFACE

SIZE OF PERFORATIONS = 3/8" DIA. AREA OF PERFORATION = 0.00077 FT²

LENGTH OF PERFORATED SECTION OF PIPE = 2.4 FT. MAX. ORIFICE AREA (A) = 0.34 FT.² DRAW-DOWN ORIFICE DIA. = 3.0" NUMBER OF PERFORATIONS PER LINEAR FOOT OF PIPE (Two double rows of perforations) = 28 x 4 = 112 TOTAL AREA OF PERFORATIONS = 0.207 FT.²

Basin Volume Design: 1. Min. required vol. = 3600 ft³ x 0.75 = 2700 ft³ ac. drainage = 74.700 ac. 2. Actual Volume of basin = 128,025 ft³

3. Excessage: 128,025 ft³ / 2700 ft³ = 47.42 to obtain required capacity. 4. Vol. at desludging elev. = 1800 ft³/ac x 36.75 ac. = 66,150 ft³ 5. Vol. of basin at cleanout = 900 ft³/ac x 36.75 ac. = 33,075 ft³ 6. Elevation corresponding to min. required volume of basin (riser crest elevation) = 176.80 ft. 7. Permanent pool elevation = 173.4 ft. 8. Distance from riser crest elevation to permanent pool elevation = 3.4 ft. 9. Basin channel elevation = 172.0 ft. 10. Distance from riser crest elevation to cleanout elevation = 3.80 ft.

Spillway Design: 11. Q₁₀ = 119,532 cfs (peak discharge from 10-yr. 24-hr storm event, at peak computation) Principal Spillway (See Detail 11)

12. Design Principal Spillway (barrel) discharge, Design Q₁₀ = 83,228 cfs (min. 10% of 10 year peak to 18" diameter pipe) 13. H = 2.41 ft., Barrel length = 62 ft. 14. Barrel Diam. = 18". Note: Q₁₀ must equal or exceed Design Q₁₀. Q₁₀ = Q (from Table 13 or 14) / 0.85 x (length correction factor) / 0.1 = 187 cfs. 15. Riser Diameter = 18" in.; Riser Height = 1.0 ft.; Riser Head (h) = 1.0 ft. 16. Trash Rack Diam. = 18" in.; Trash Rack Height = 18" in.

NOTE: A table showing design data shall be included on the plan for each basin.

Surface Area Design: 17. Emergency spillway cap, Q₁₀ = Q₁₀ - Q₁₀ = _____ cfs 18. Width, ft. = 10 ft. 19. Entrance channel slope = 0.001 20. Exit channel slope = 0.001

Anti-Seep Collar Design (See Detail 18)

21. y = 3 ft.; z = 3 ft.; pipe slope = 1:1; L₁ = 30 ft. 22. Use 1 collars, 10 ft. x 6 in. in square; projection = 3.0 ft.

Design Elevation: 23. Riser Crest = 175.8 ft. 24. Design High Water = 176.22 ft. 25. Emergency Spillway Crest = 174 ft. 26. Min. settled top of dam = 181.95 ft. 27. Elevation pool = 173.4 ft. 28. Bottom of Basin = 170.60 ft. 29. Draw-down orifice invert = 169.5 ft.

Surface Area Design: 30. Min. basin surface area; SA = 0.0035 x Q₁₀ = 0.0035 x 119,532 cfs = 0.32 ac.

Draw-down Device: 31. Draw-down device orifice diameter = 3.0 in. (from Table 11) 32. A = Total area of perforations = 4A₁ (c) corr₁ (d) A₁ = (4) (0.00077 ft²/perforation area ft²)(perforated section length ft.) A₁ = 0.207 ft.² A₁ = internal orifice area (from Table 11) or computed

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

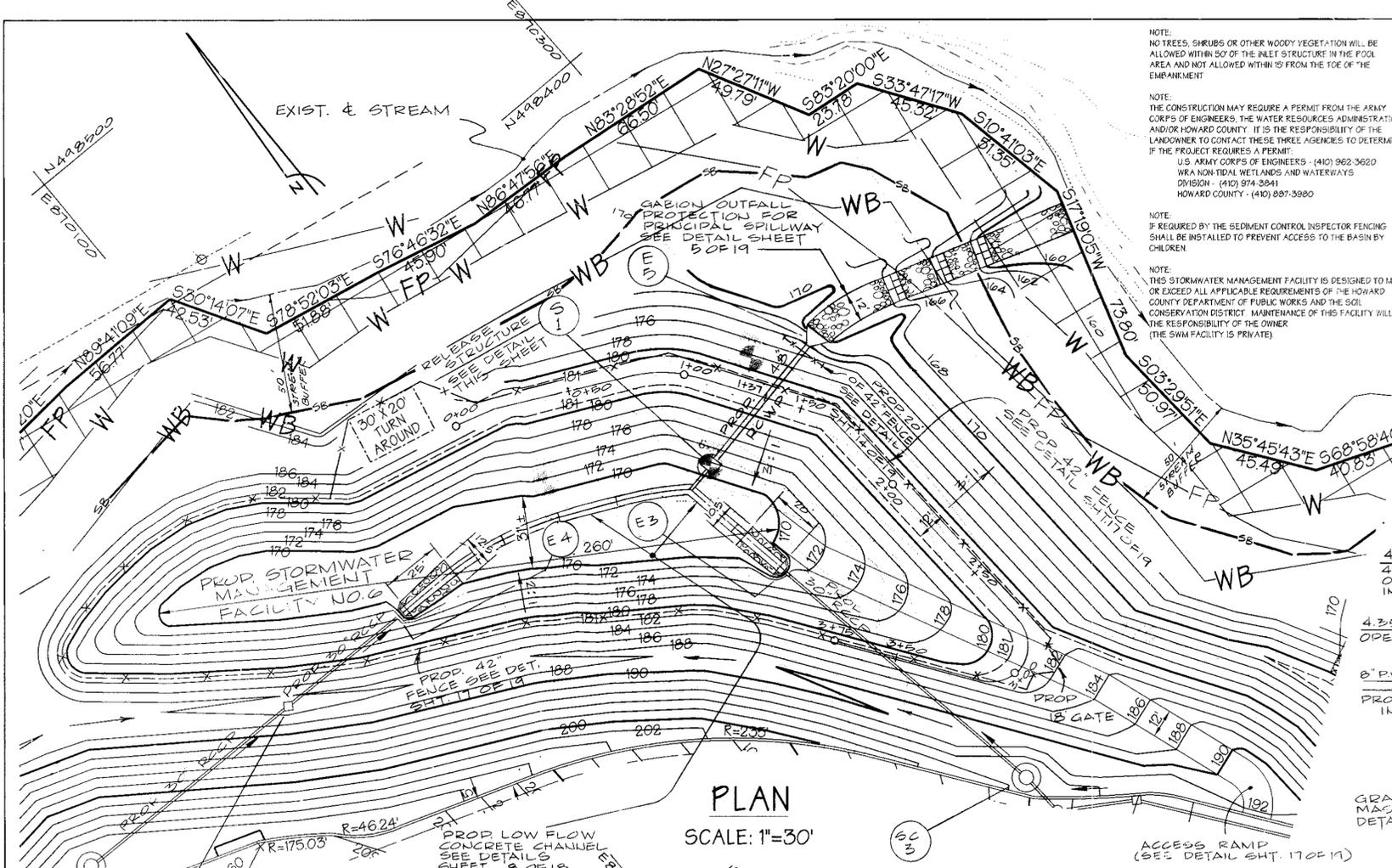
NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

NOTE: A table showing design data shall be included on the plan for each basin.

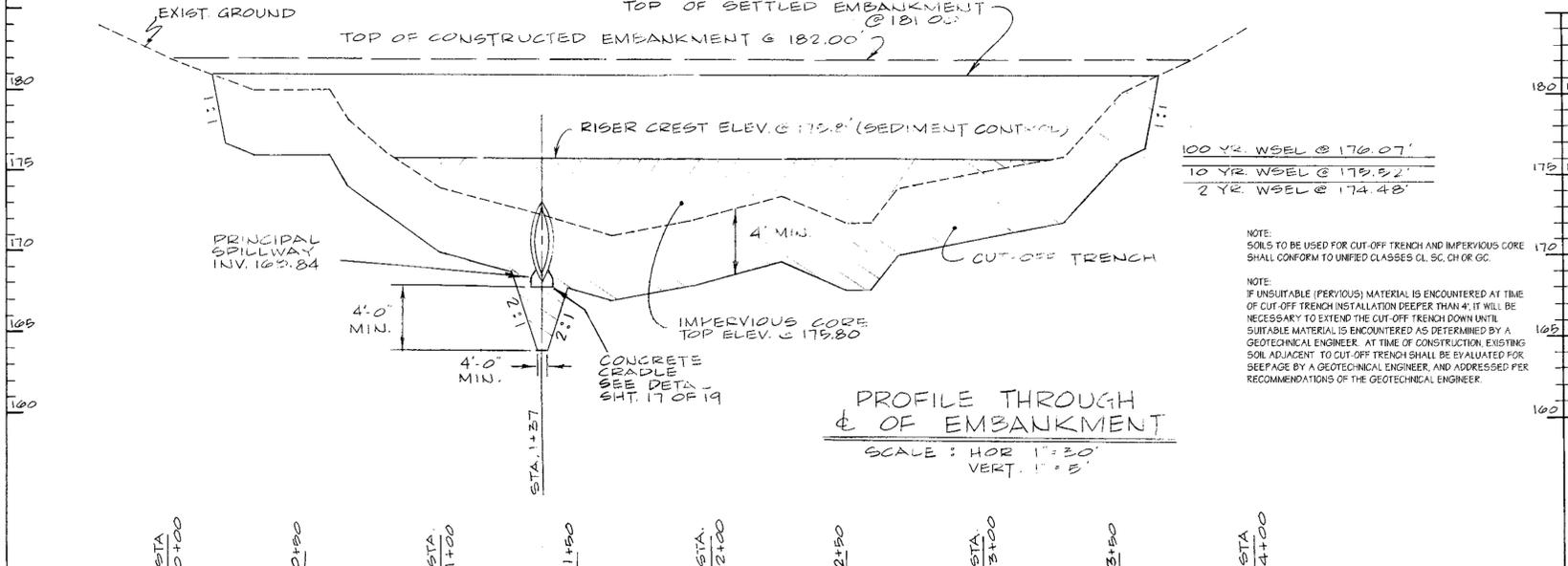
NOTE: A table showing design data shall be included on the plan for



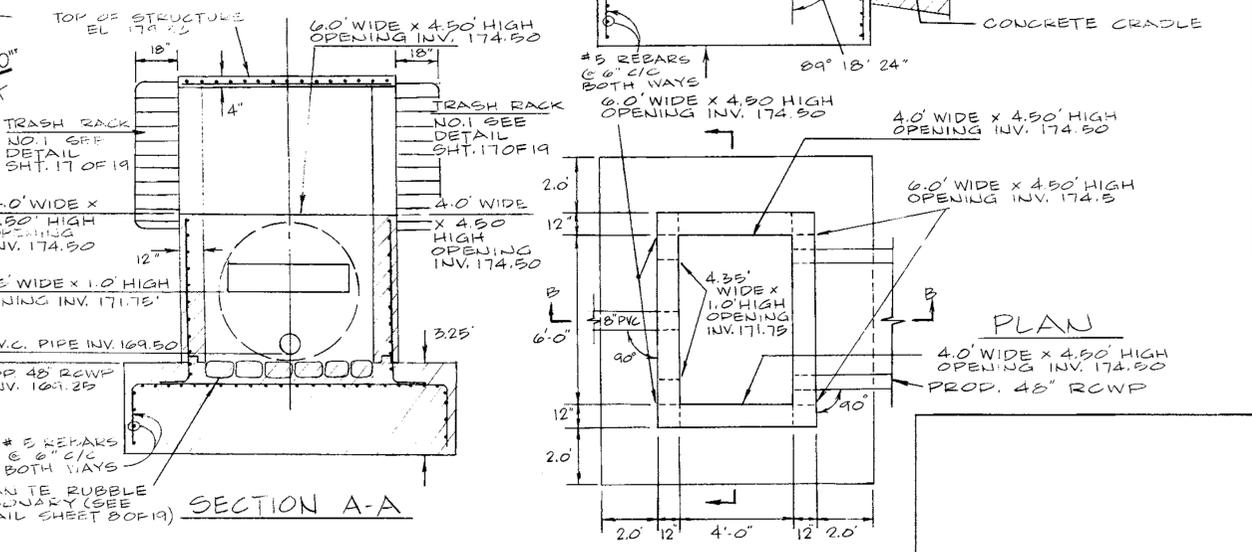
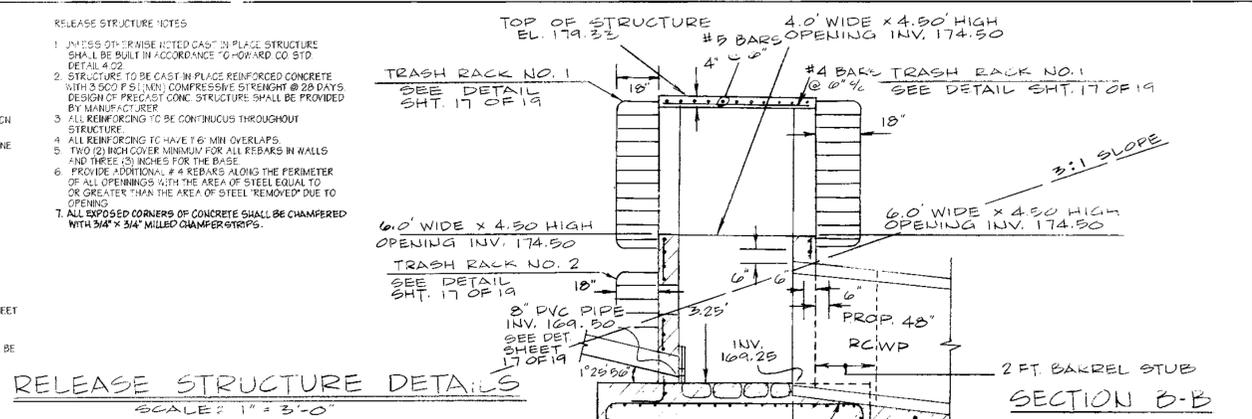
HEADWALL E-4
 $Q_{10} = 43.38$ cfs
 $V_{10} = 8.5$ fps
 $S_f = 1.25\%$
 PARTIAL DEPTH 171.00

HEADWALL E-3
 $Q_{10} = 38.75$ cfs
 $V_{10} = 7.5$ fps
 $S_f = 1.00\%$
 PARTIAL DEPTH = 171.00

- STORMWATER MANAGEMENT MAINTENANCE SCHEDULE FOR POND**
- REMOVAL OF SILT WHEN ACCUMULATION EXCEEDS FOUR (4) INCHES IN THE FOREBAY.
 - REMOVAL OF ACCUMULATED PAPER, TRASH AND DEBRIS AS NECESSARY.
 - VEGETATION GROWING ON THE EMBANKMENT TOP OR FACES IS NOT ALLOWED TO EXCEED 18 INCHES IN HEIGHT AT ANY TIME.
 - ANNUAL INSPECTION AND REPAIR OF THE STRUCTURE.
 - CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME THE FOREBAY DOES NOT DRAIN DOWN COMPLETELY WITHIN 96 HOURS (i.e. NO STANDING WATER ALLOWED).



- NOTE:**
SOILS TO BE USED FOR CUT-OFF TRENCH AND IMPERVIOUS CORE SHALL CONFORM TO UNIFIED CLASSES CL, SC, CH OR GC.
- NOTE:**
IF UNSUITABLE (PERVIOUS) MATERIAL IS ENCOUNTERED AT TIME OF CUT-OFF TRENCH INSTALLATION DEEPER THAN 4"; IT WILL BE NECESSARY TO EXTEND THE CUT-OFF TRENCH DOWN UNTIL SUITABLE MATERIAL IS ENCOUNTERED AS DETERMINED BY A GEOTECHNICAL ENGINEER. AT TIME OF CONSTRUCTION, EXISTING SOIL ADJACENT TO CUT-OFF TRENCH SHALL BE EVALUATED FOR SEEPAGE BY A GEOTECHNICAL ENGINEER, AND ADRESSED PER RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.



These plans for stormwater construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
DATE: 9/11/98

Reviewed for the Howard Conservation District and meets technical requirements:
APPROVED: NATURAL RESOURCES CONSERVATION SERVICE
DATE: 9/11/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 9/16/98

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10/6/98

DIRECTOR
DATE: 10/16/98

ADDRESS CHART	
PARCEL NO. 1	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive
SUBDIVISION NAME	SECTION NAME
TROY HILL CORPORATE CENTER	1
PARCEL #	A-2
PLAT #	BLOCK #
12428	M-1
ZONE	YAX MAP
	37
ELECT. DIST.	CENSUS TRACT
1st	6011.02
WATER CODE	SEWER CODE
C04	4020000

PREPARED BY:
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

ENGINEER CERTIFICATION:
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.
Engineer: *James A. Markle* PE # 11005
Name: **JAMES A. MARKLE** Date: 8/31/98

OWNER/DEVELOPER
TROY HILL BUSINESS PARK PARTNERSHIP
c/o MANEKIN CORPORATION
7165 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND 21046
(410) 290-1400

DEVELOPER CERTIFICATION:
I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an as-built plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.
Developer: *David E. Meiners* Date: 3/29/98
Name: **DAVID E. MEINERS**

AS-BUILT CERTIFICATION:
I hereby certify that the facility shown on this plan was constructed as shown on the as-built plans and meets the approved plans and specifications.
Signature: _____ Date: _____
Certify means to state or declare a professional opinion based upon on-site inspections and material tests which are conducted during construction. The on-site inspections and material tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the engineer nor does an engineer's certification relieve any other party from meeting requirements imposed by contract, employment, or other means, including meeting commonly accepted industry practices.

STORMWATER MANAGEMENT PLAN FOR TROY HILL CORPORATE CENTER
PHASE 1 PARCEL A-2
PREVIOUS FILE #S 590-05, P90-25, F91-24, W9-96-91, F96-136
HOWARD COUNTY, MARYLAND
1st ELECTION DISTRICT
SHEET 16 of 19
SCALE: AS SHOWN
DATE: JUNE 03, 1998
SDP 98114

POND CONSTRUCTION SPECIFICATIONS

These specifications are applicable to all ponds within the scope of the Standard Practice No. 207-2. References to ASTM and AASHTO specifications apply to the most recent editions.

SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, graded, and staked. All trees, vegetation, roots and stumps, brush, logs, and other debris shall be removed. Channels and sharp breaks shall be smoothed, straightened.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, brush, stumps, and other debris. Areas of all trees, brush, logs, brush, stumps, and other debris shall be removed. Channels and sharp breaks shall be smoothed, straightened.

All cleared and graded material shall be disposed of outside and below the limits of the dam and reservoir. The owner or his representative when approved a sufficient quantity of topsoil will be stockpiled in a suitable location for use in the embankment and other designated areas.

EMBRANKMENT

EMBRANKMENT: The fill material shall be taken from approved designated borrow areas. It shall be free from roots, stumps, logs, brush, debris, or other material that will be detrimental to the stability of the embankment. The fill shall be compacted in layers not exceeding 12 inches in thickness. The compacted embankment shall be finished to the required grade and slope. The embankment shall be finished to the required grade and slope. The embankment shall be finished to the required grade and slope.

EMBRANKMENT: Areas in which fill is to be placed shall be scarified prior to placement of fill. The maximum thickness of a maximum 8" thick before compacting layers shall not exceed the length of the fill. The maximum thickness of a maximum 8" thick before compacting layers shall not exceed the length of the fill. The maximum thickness of a maximum 8" thick before compacting layers shall not exceed the length of the fill.

EMBRANKMENT: The movement of the lining and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four passes of a sheepfoot, rubber tired or vibratory roller. The maximum depth of the equipment shall not exceed the required depth of the embankment. The maximum depth of the equipment shall not exceed the required depth of the embankment.

EMBRANKMENT: Minimum required density shall be not less than 95% of maximum dry density with a moist unit weight within 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the engineer at the time of construction. All compaction is to be determined by ASTM D 1556-92.

STRUCTURE DETAILS

STRUCTURE DETAILS: Structure shall be constructed of concrete or masonry. The structure shall be constructed of concrete or masonry. The structure shall be constructed of concrete or masonry. The structure shall be constructed of concrete or masonry.

PERMANENT SLOPE SEEDING

PERMANENT SLOPE SEEDING: After spreading 4" topsoil, seed with a mixture of 30% inoculated Crown Vetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 lbs/acre. 10-20-20 fertilizer shall be applied at a rate of 25 lbs/1000 sq. ft. lime at a rate of 92 lbs/1000 sq. ft. mulch area with unweathered small grain straw at a rate of 15 tons/acre. anchor with a rapid curing asphalt (RC-70, RC-250 or RC-800) at a rate of 0.1 gal/sq. yd.

FILTER CLOTH

FILTER CLOTH: Filter cloth shall meet or exceed the requirements in Section 202.5 of the Baltimore County Standard Specifications and Details for Construction. Durable filter fabrics for drainage purposes are not limited to Mafra 1400, DuPont TYPAC No. 3341 or 3401. Filter cloth shall be protected from punching or tearing. Any damage other than an occasional small hole shall be repaired by placing another small piece of filter cloth over the damaged area or by replacing the cloth section. All overlaps shall be a minimum of one foot.

GABIONS

GABIONS: Gabions shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 312 and must be Class B, P.V.C. coated.

OUTFALL PROTECTION

OUTFALL PROTECTION: Subgrade for riprap or gabion outfalls shall be prepared to the required line and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material. All rock or gravel shall conform to the specified grading limits when installed in the riprap or gabion. All stone shall be delivered and placed in a manner that will insure the stone in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another, with the smaller rocks filling the voids between the larger rocks. Stone for outfalls may be placed by equipment. Riprap or gabion outfalls shall be constructed to full design thickness in one operation. Riprap shall be placed so as to avoid any displacement of underlying materials. The contractor shall avoid damage to the filter blankets or cloth during placement of riprap. Hand placements shall be required as needed to prevent damage to the permanent works. Filter cloth shall be placed under all riprap and gabions.

FENCE

FENCE: Construction fencing in accordance with the State Highway Administration standard details 690.01 and 690.02. Use specifications for a 6" fence substituting 42" fabric and 6" x 6" posts. Construct the gate in accordance with the S.H.A. standard detail 690.01 with 42" fabric. The fabric used for the fence and gate must conform to AASHTO designation M1074. Dark vinyl coating is required for the fence posts and wire fabric in accordance with the landscape manual adopted by resolution 56.90 October 1, 1990. 3" Split rail (wood) fence is optional.

CARE OF WATER DURING CONSTRUCTION

CARE OF WATER DURING CONSTRUCTION: All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish material, labor, and equipment necessary to maintain the flow of water to and from 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 works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to pumps from which water shall be pumped.

CARE OF WATER DURING CONSTRUCTION: IMPERVIOUS CORE: THE CORE SHALL BE FILLED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE FILL SHALL BE GOVERNED BY THE EQUIPMENT USED, WITH MINIMUM WIDTH BEING FOUR FEET. THE TOP WIDTH SHALL BE SHOWN ON THE PLAN. THE SIDE SLOPES OF THE FILL SHALL BE 11 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STABILIZATION

STABILIZATION: All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, 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 Planning (MD 342) or as shown on the accompanying drawings.

Stormwater management facility will be stabilized with permanent slope seeding as follows:

1. Soil Amendments: loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.
 - a. Soil Amendments: apply 2 tons per acre Dolomitic Limestone (92 lbs/1000 sq. ft.), 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.), and 400 lbs per acre of 30-0-0 Urea-form Fertilizer (92 lbs/1000 sq. ft.). Harvest or disc lime and fertilizer into upper 3 inches of soil. At time of seeding, apply 400 lbs/acre (92 lbs/1000 sq. ft.) of 30-0-0 Urea-form Fertilizer and 500 lbs per acre (115 lbs/1000 sq. ft.) of 10-0-0 fertilizer.
2. Seeding: for the period March 1 through April 30 seed with 40 lbs per acre Kentucky 31 Tall Fescue and 15 lbs per acre inoculated Crown Vetch. For the period May 1 through July 31 seed with 60 lbs per acre Kentucky 31 Tall Fescue and 2 lbs per acre inoculated Weeping Lovegrass. For the period August 1 through October 15 seed with 40 lbs per acre Kentucky 31 Tall Fescue and 20 lbs per acre inoculated Interstate Seneca Lespedeza. For the period October 16 through February 28 protect the site by Option (1); 2 tons per acre of well anchored straw. For the period May 1 through February 28 inoculated Crown Vetch shall be applied during the subsequent period of March 1 through April 30 at the rate of 15 lbs per acre.
 - a. Mulching: apply 15 to 20 tons per acre of rotted small grain straw immediately after seeding. Anchor mulch immediately after application using 2lb gallons per acre of emulsified asphalt. On flat areas of slope 8 feet or higher, use 34B gallons per acre of anchoring.
3. Maintenance: inspect all seeded areas and make needed repairs, replacements and re seeding.

EROSION AND SEDIMENT CONTROL

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.

PERMANENT SLOPE SEEDING

PERMANENT SLOPE SEEDING: After spreading 4" topsoil, seed with a mixture of 30% inoculated Crown Vetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 lbs/acre. 10-20-20 fertilizer shall be applied at a rate of 25 lbs/1000 sq. ft. lime at a rate of 92 lbs/1000 sq. ft. mulch area with unweathered small grain straw at a rate of 15 tons/acre. anchor with a rapid curing asphalt (RC-70, RC-250 or RC-800) at a rate of 0.1 gal/sq. yd.

FILTER CLOTH

FILTER CLOTH: Filter cloth shall meet or exceed the requirements in Section 202.5 of the Baltimore County Standard Specifications and Details for Construction. Durable filter fabrics for drainage purposes are not limited to Mafra 1400, DuPont TYPAC No. 3341 or 3401. Filter cloth shall be protected from punching or tearing. Any damage other than an occasional small hole shall be repaired by placing another small piece of filter cloth over the damaged area or by replacing the cloth section. All overlaps shall be a minimum of one foot.

GABIONS

GABIONS: Gabions shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 312 and must be Class B, P.V.C. coated.

OUTFALL PROTECTION

OUTFALL PROTECTION: Subgrade for riprap or gabion outfalls shall be prepared to the required line and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material. All rock or gravel shall conform to the specified grading limits when installed in the riprap or gabion. All stone shall be delivered and placed in a manner that will insure the stone in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another, with the smaller rocks filling the voids between the larger rocks. Stone for outfalls may be placed by equipment. Riprap or gabion outfalls shall be constructed to full design thickness in one operation. Riprap shall be placed so as to avoid any displacement of underlying materials. The contractor shall avoid damage to the filter blankets or cloth during placement of riprap. Hand placements shall be required as needed to prevent damage to the permanent works. Filter cloth shall be placed under all riprap and gabions.

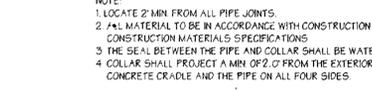
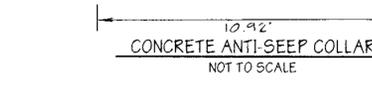
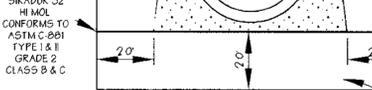
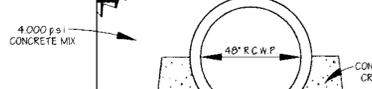
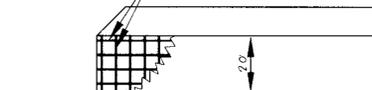
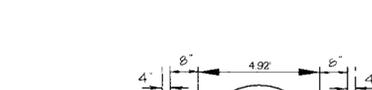
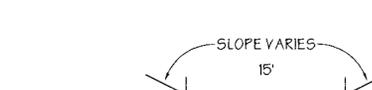
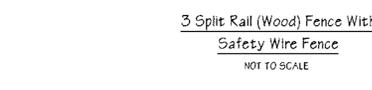
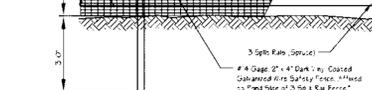
FENCE

FENCE: Construction fencing in accordance with the State Highway Administration standard details 690.01 and 690.02. Use specifications for a 6" fence substituting 42" fabric and 6" x 6" posts. Construct the gate in accordance with the S.H.A. standard detail 690.01 with 42" fabric. The fabric used for the fence and gate must conform to AASHTO designation M1074. Dark vinyl coating is required for the fence posts and wire fabric in accordance with the landscape manual adopted by resolution 56.90 October 1, 1990. 3" Split rail (wood) fence is optional.

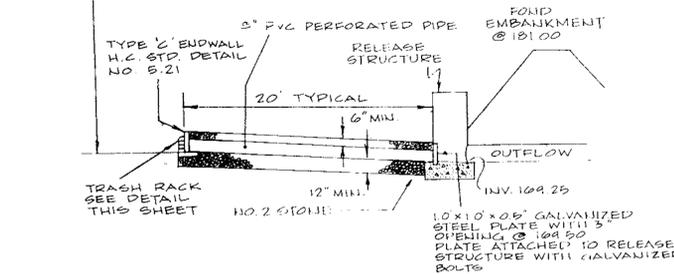
CUT OFF TRENCH: THE CUT OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 11 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

IMPERVIOUS CORE: THE CORE SHALL BE FILLED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE FILL SHALL BE GOVERNED BY THE EQUIPMENT USED, WITH MINIMUM WIDTH BEING FOUR FEET. THE TOP WIDTH SHALL BE SHOWN ON THE PLAN. THE SIDE SLOPES OF THE FILL SHALL BE 11 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

IMPERVIOUS CORE: THE CORE SHALL BE FILLED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE FILL SHALL BE GOVERNED BY THE EQUIPMENT USED, WITH MINIMUM WIDTH BEING FOUR FEET. THE TOP WIDTH SHALL BE SHOWN ON THE PLAN. THE SIDE SLOPES OF THE FILL SHALL BE 11 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

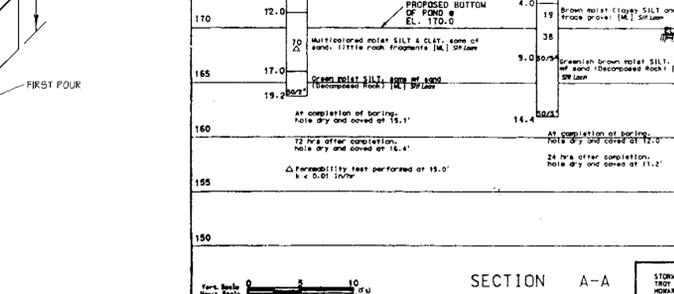
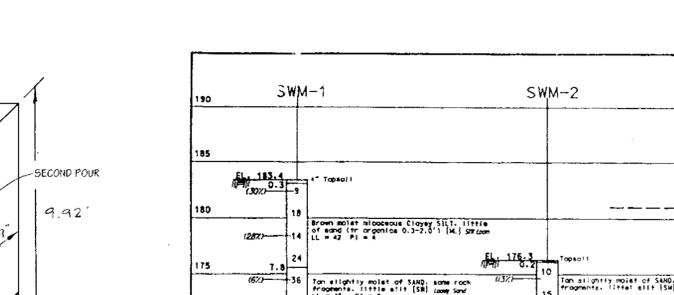
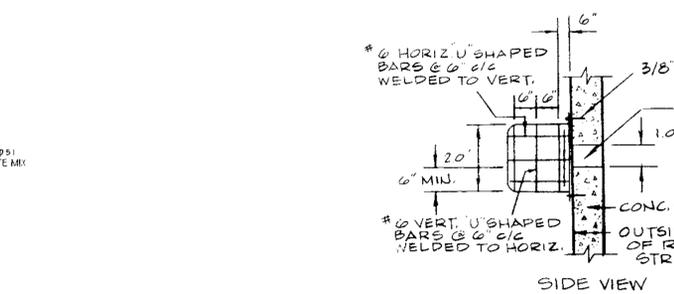
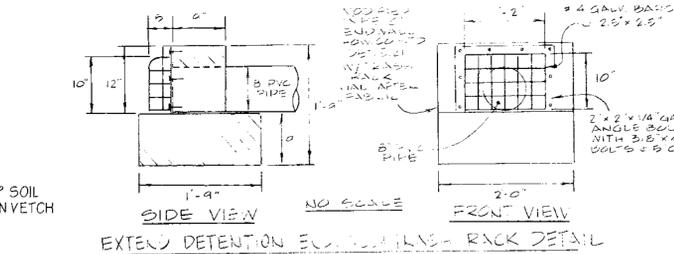


PROPOSED POND INV. 110.00 GRADED TO DRAIN TOWARD PERFORATED PIPE SET AT OR ABOVE TOP OF PERFORATED PIPE



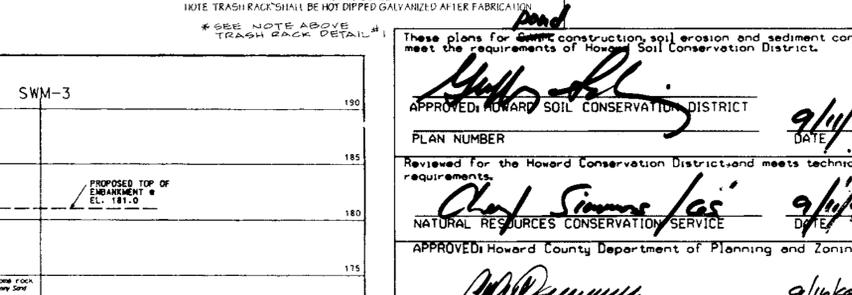
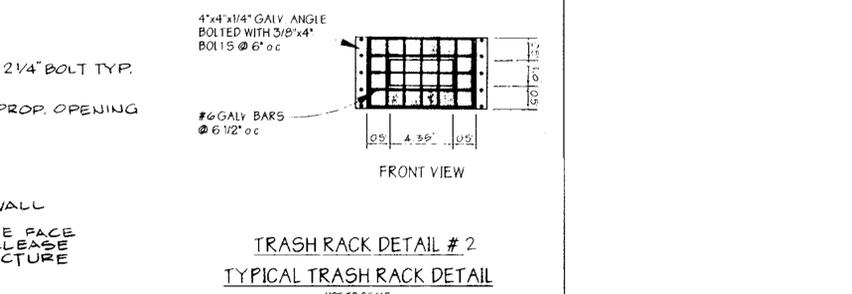
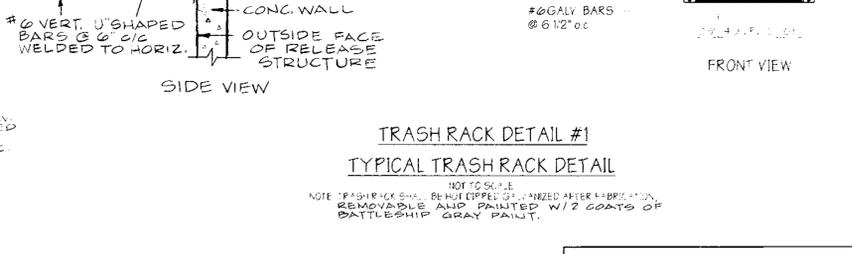
EXTENDED DETENTION POND DEWATERING DEVICE

- NOTES:
1. PERFORATED PIPE SHALL HAVE METAL CAP WELDED TO OTHER END OF PIPE.
 2. PERFORATED PIPE SHALL BE COVERED ON ALL SIDES WITH 12" MINIMUM OF #2 STONE - EXCEPT WHERE OTHERWISE NOTED.
 3. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
 4. SET PERFORATED PIPE AT INVERTS SPECIFIED ON STORM WATER MANAGEMENT PLANS - PRINCIPAL SPILLWAY PROFILE.



POND SPECIFICATIONS FOR STORMWATER MANAGEMENT FACILITY #6	
DESCRIPTION	DATA
STRUCTURE CLASSIFICATION	A
STORAGE X HEIGHT PRODUCT	(183 AC FT)(6.46 FT) = 1182 AC FT ²
AT RISHED AREA TO THE POND	212 A'
POND TYPE	DRY-EAT DEE
FREEBOARD	REQUIRED/PROVIDED
IMPERVIOUS AREA	480 A'
TOP OF EMBANKMENT	181.0

DESIGN		FACILITY INFLOW (CFS)		FACILITY DISCHARGE (CFS)		POND SUMMARY		TOTAL DISCHARGE (CFS)		WATER SURFACE ELEVATION (FT)		STORAGE (A')	
STORM	INFLOW	DISCHARGE	DISCHARGE	DISCHARGE	DISCHARGE	DESIGN PT	DESIGN PT	DESIGN PT	DESIGN PT	DESIGN PT	DESIGN PT	DESIGN PT	DESIGN PT
2 YR	615	31.63	1.4	30.18	174.48	1.2924							
10 YR	1087	42.80	1.4	85.75	179.62	1.6130							
100 YR	1803	130.32	1.4	142.07	170.07	1.8035							



APPROVED HOWARD COUNTY SOIL CONSERVATION DISTRICT		DATE	
PLAN NUMBER	9/14/98	DATE	9/14/98
Reviewed for the Howard Conservation District and meets technical requirements.			
NATURAL RESOURCES CONSERVATION SERVICE		DATE	
APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING		DATE	
CHIEF, DEVELOPMENT ENGINEERING DIVISION		DATE	
CHIEF, DIVISION OF LAND DEVELOPMENT		DATE	
DIRECTOR		DATE	
ADDRESS CHART			
PARCEL NO.	STREET ADDRESS		
Building # 1	7055 Troy Hill Drive		
Building # 2	7045 Troy Hill Drive		
SUBDIVISION NAME		SECTION NAME	PARCEL #
TROY HILL CORPORATE CENTER		I	A-2
PLAT #	BLOCK #	ZONE	ELECT. DIST.
12428		M-1	1st
WATER CODE C04		SEWER CODE 4020000	

PREPARED BY:
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
 Civil Engineers and Land Surveyors
 658 Kenilworth Drive, Suite 100
 Towson, Maryland 21204
 (410) 825-8120

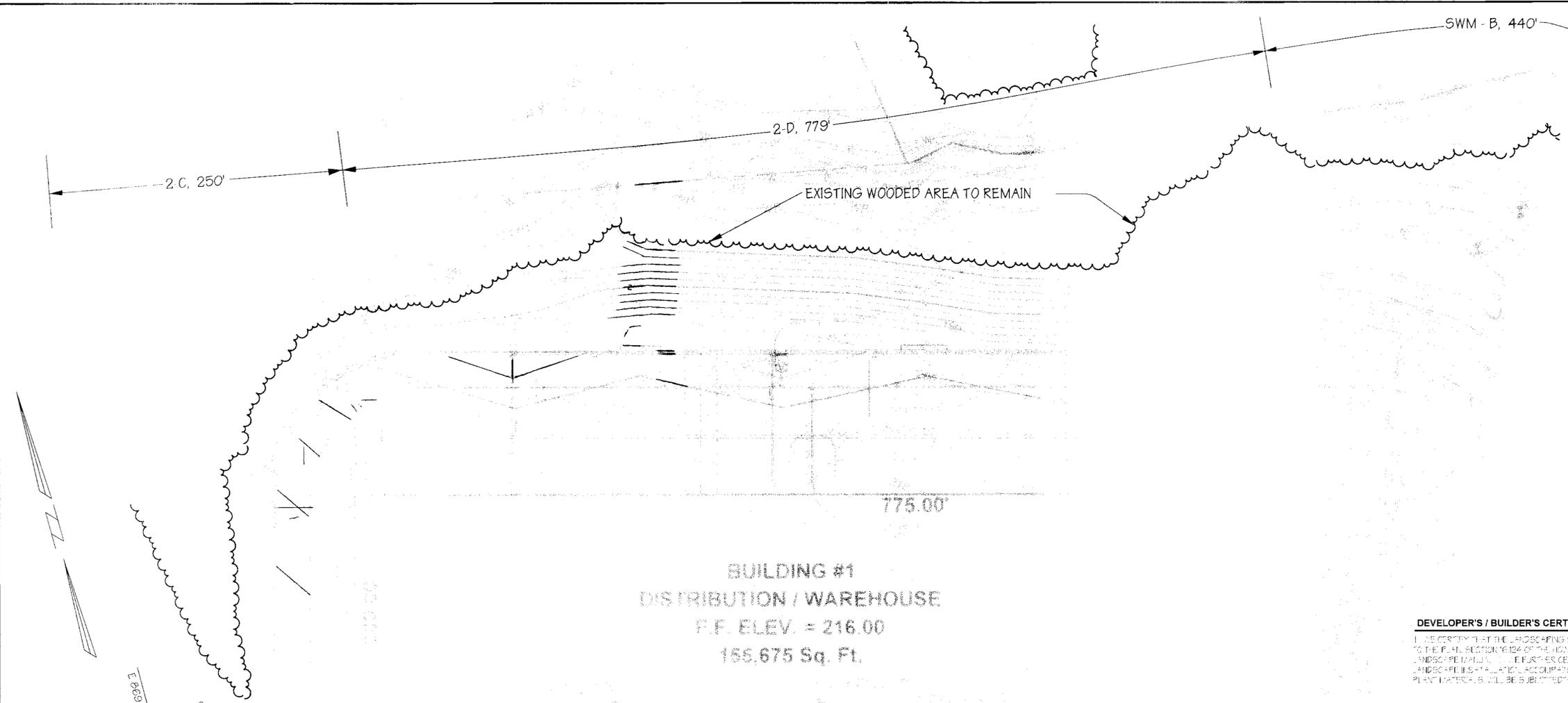
ENGINEER CERTIFICATION:
 I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard County Department of Planning and Zoning. I have notified the developer that he/she must engage a registered Professional Engineer to supervise pond construction and provide the Howard County Department of Planning and Zoning with an approved plan of the pond within 30 days of completion.
 Engineer: *James A. Markle Jr.* P.E. # 11005
 Name: *JAMES A. MARKLE JR.* Date: *8/31/98*

OWNER/DEVELOPER:
 TROY HILL BUSINESS PARK PARTNERSHIP
 c/o MANEKIN CORPORATION
 7165 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND 21046
 (410) 290-1400

DEVELOPER CERTIFICATION:
 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 as a Dept. of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I warrant to provide a Professional Engineer to supervise pond construction and provide the Howard County Department of Planning and Zoning with a plan of the pond within 30 days of completion. I also warrant to provide the Howard County Department of Planning and Zoning with a plan of the pond within 30 days of completion.
 Developer: *David E. Meiners* Date: *8/27/98*
 Name: *DAVID E. MEINERS*

CONSULTANT'S HAZARD CLASS CERTIFICATION:
 I certify that this pond meets all requirements for hazard class B or C. (Requirements as stated in the Soil Conservation Service Maryland Standards and Specifications for Pond, Code 370, November 1992). All necessary investigations and computations have been performed to verify this finding. A copy of said information has been supplied to the Howard County Department of Planning and Zoning.
 Signature: _____ P.E. # _____
 Name: _____ Date: _____

STORMWATER MANAGEMENT PLAN FOR TROY HILL CORPORATE CENTER
 PHASE 1 PARCEL A-2
 PREVIOUS FILE # S 590-05, P90-25, P91-24, W P 96-91, P96-136
 HOWARD COUNTY, MARYLAND 1st ELECTION DISTRICT SHEET 17 of 19 SCALE: AS SHOWN JUNE 03, 1998
 SDP 98114



PLANTING NOTES
 PLANTING NOTES SHALL BE FIELD-CHECKED TO A 30' DISTANCE FROM THE PERIMETER OF THE PROJECT PRIOR TO START OF WORK. ALL PLANTS AND SHRUBS SHALL BE PLANTED TO A MINIMUM OF 18" BEYOND THE EXISTING PERIMETER. ALL SHRUBS PLANTED SHALL BE PLANTED IN CONTINUOUS MOUND BEDS. ALL TREE PLANTINGS SHALL BE SPACED FROM TOP OF THE SOIL SURFACE.

PLANT STANDARDS
 ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE STANDARDS OF THE ASSOCIATION OF NURSERYMEN, INC. (A.N.S.I.) AND THE NATIONAL NURSERY STOCK ASSOCIATION (N.N.S.A.). ALL NURSERY STOCK SHALL BE SUBJECT TO INSPECTION BY THE LANDSCAPE ARCHITECT. BASE ROOT SHALL NOT BE ALLOWED FOR ANY TREE SPECIES UNLESS SPECIFICALLY NOTED OTHERWISE.

CHANGES MAY IMPACT REQUIRED CERTIFICATION
 PLANT TYPES, QUANTITIES, SPECIES, ELEVATIONS, ETC., QUANTITIES, SPECIES, LOCATION, AND SPECIES ENDED ON THE APPROVED LANDSCAPE PLAN. ANY CHANGES TO THE LATEST HANDBOOK COUNTY LANDSCAPE PLAN. ANY CHANGES TO THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE PROJECT. PLANTING OWNER IS REQUIRED TO RE-APPROVE AND RE-APPROVE CERTIFICATION BY LANDSCAPE ARCHITECT.

LANDSCAPE SPECIFICATIONS
 LANDSCAPE SPECIFICATIONS SHALL CONFORM TO LOCAL LANDSCAPE SPECIFICATIONS GUIDELINES FOR BALTIMORE / ANNE ARUNDEL METROPOLITAN AREA INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIALS. FIVE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO LOOK THE ONE YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT.

SPECIAL PROVISIONS TO LCA STANDARD SPECIFICATIONS
 CONTRACTOR IS REQUIRED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTS SHALL NOT BE CONSIDERED PROVISIONS.

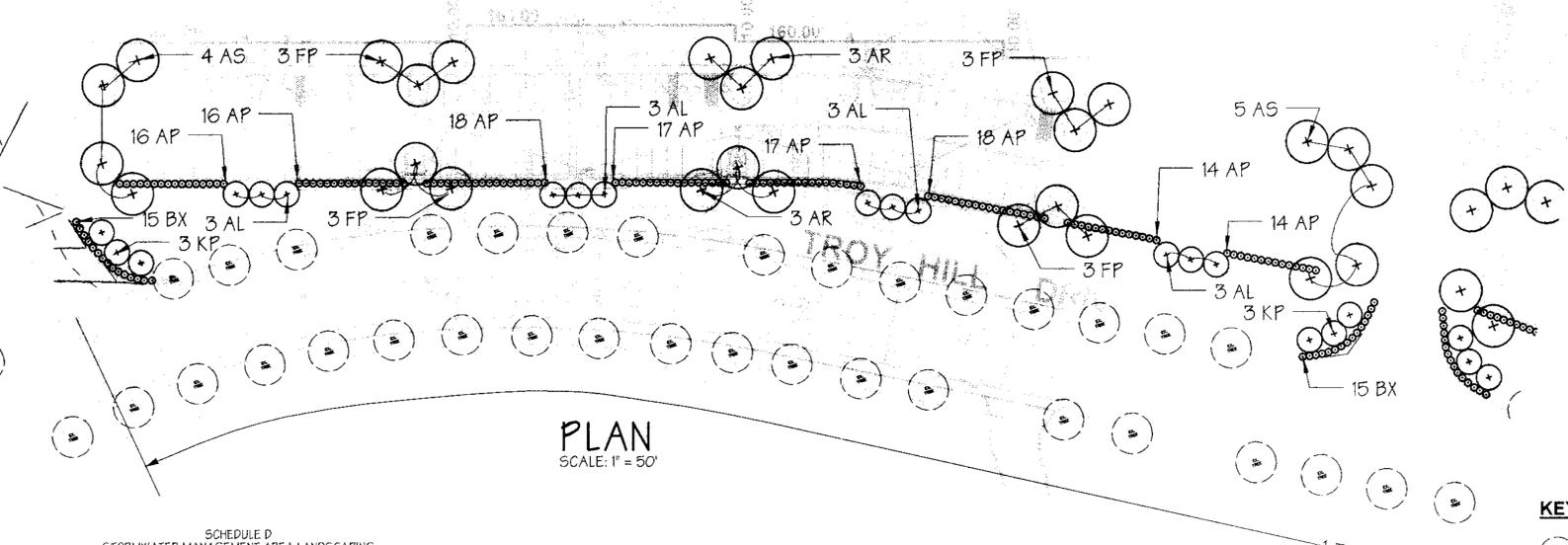
CONTRACTOR SHALL REPAIR AND TEST SUBSOIL DRAINAGE OPERATIONS TO MEET FROM TO BUILDING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS.

NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS ASKED IN WRITING PRIOR TO PLANTING.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 18.04 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S OBLIGATION TO THE COUNTY OF \$10,000.00.

THE OWNER, ARCHITECT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS INCLUDING BOTH PLANT MATERIALS AND SERVICE PERMITS AND ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND ANY NECESSARILY REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH THE PERMITS. ALL OTHERS REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARILY REPLACED OR REPAIRED.

PROPERTY LINE BETWEEN INTERIOR PARCELS WITHIN TROY HILL SUBDIVISION NO SCREENING OR BUFFERING REQUIRED



PLAN SCALE: 1" = 50'

DEVELOPER'S / BUILDER'S CERTIFICATION

I HEREBY CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PERMITS AND SECTION 18.04 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I WILL FURTHER CERTIFY THAT UPON COMPLETION AND CERTIFICATION OF LANDSCAPING SHALL BE ACCOMPANIED BY THE REQUIRED ONE YEAR GUARANTEE OF PLANT MATERIALS. I WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

David E. Meiners DATE 3/29/98
 DAVID E. MEINERS PROJECT MANAGER

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Linear Feet of Property Frontage	163'	300'
Credits for existing vegetation (Trees, No Linear Feet)	NO	YES 300'
Credits for Wall, Fence or Barn (Yes, No Linear Feet)	NO	NO
Number of Plants Required	41	10
Shade Trees	3	9
Evergreen Trees (21 sub)	407	30
Shrubs		78
Number of Plants Provided	35	10
Shade Trees	3	9
Evergreen Trees (21 sub)	36	30
Shrubs	3	78

Comments: PROVIDED BY EXISTING PLANTS IN WOODED AREA TO REMAIN ALONG NORTHEASTERN TRACT BOUNDARY.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	440' (B)
Number of Trees Required	9
Shade Trees	0
Evergreen Trees	0
Credits for Existing Vegetation (No, Yes and %)	YES 0%
Credits for Other Landscaping (No, Yes and %)	NO
Number of Plants Provided	9
Shade Trees	0
Evergreen Trees	0
Other Trees (21 substitution)	9

PROVIDED BY EXISTING PLANTS IN WOODED AREA TO REMAIN

PLANT SCHEDULE

KEY	QUANT	BOTANICAL NAME/COMMON NAME	SIZE/COND	SPACING	REMARKS
TREES					
AS	18	Acer saccharum / Green Mountain / Green Mountain Sugar Maple	2 1/2" cal / B&B	25' o.c. as shown	full crown
AR	12	Acer rubrum / October Glory / October Glory Red Maple	2 1/2" cal / B&B	25' o.c. as shown	full crown
FP	24	Fraxinus pennsylvanica / Patmore / Patmore Green Ash	2 1/2" cal / B&B	25' o.c. as shown	full crown
KP	15	Koeleria paniculata / Golden Rain Tree	2-2 1/2" cal / B&B	15' o.c. as shown	matched
AL	24	Amelanchier x grandiflora / Lamarkif / Lamarkif Serviceberry	8-10" ht. / B&B	15' o.c. as shown	multi-stem, matched
SHRUBS					
AP	260	Azalea poukhanensis / Korean Azalea	24-30" ht. / cont.	4" o.c. as shown	
BX	45	Berberis x gladiwynensis / Wm. Penn / William Penn Barberry	24-30" spr. / cont.	4" o.c. as shown	

- KEY**
- (-) EXISTING TREE
 - (x) PROPOSED SHADE TREE
 - (*) PROPOSED ORNAMENTAL TREE
 - (S) PROPOSED SHRUBS

These plans for construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE 9/14/98

PLAN NUMBER

Reviewed for the Howard Conservation District and meets technical requirements.

Clay Srinivasan, Inc. DATE 9/14/98

NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: Howard County Department of Planning and Zoning

Chief, Development Engineering Division DATE 9/14/98

Chief, Division of Land Development DATE 10/14/98

DIRECTOR DATE 10/14/98

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

SUBDIVISION NAME TROY HILL CORPORATE CENTER SECTION NAME 1 PARCEL # A-2

PLAT # 12428 BLOCK # ZONE M-1 / ZONE MAP 37 ELECT. DIST. 1st CENSUS TRACT 6011.02

WATER CODE C04 SEWER CODE 4020000

PREPARED BY:

GWS GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
 Civil Engineers and Land Surveyors
 658 Kenilworth Drive, Suite 100
 Towson, Maryland 21204
 (410) 825-8120

OWNER/DEVELOPER

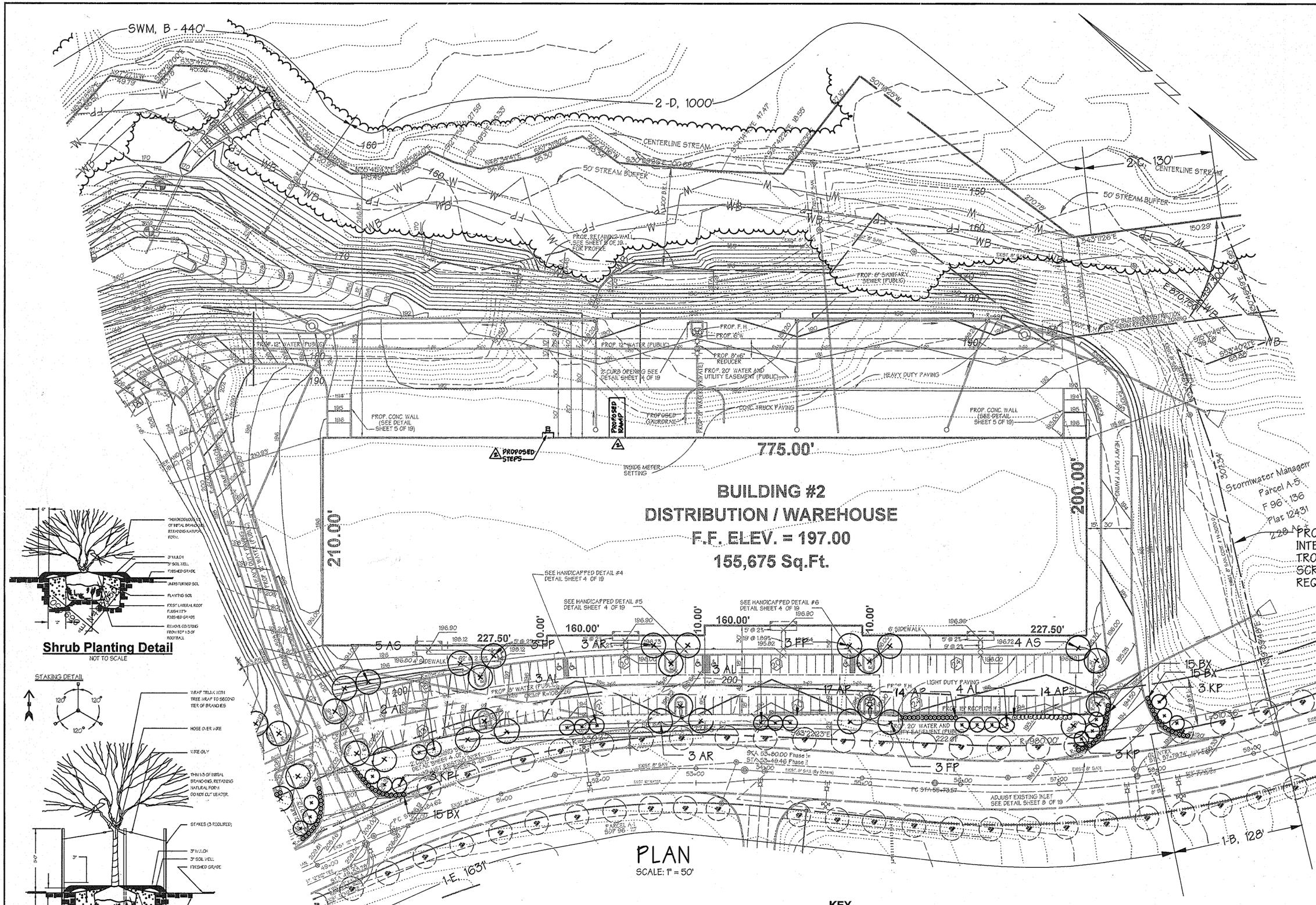
TROY HILL BUSINESS PARK PARTNERSHIP
 c/o MANEKIN CORPORATION
 7165 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046
 410-290-1400

LANDSCAPE PLAN FOR TROY HILL CORPORATE CENTER PHASE 1 PARCEL A-2

PREVIOUS FILE #S 590-05, P90-25, F91-24, WP 96-91, F96-136

HOWARD COUNTY, MARYLAND SCALE: AS SHOWN
 1st ELECTION DISTRICT SHEET 18 of 19 JUNE 03, 1998

SDP 98-114



PLANTING NOTES
 PLANT LOCATIONS SHALL BE FIELD ADJUSTED TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO START OF WORK. ALL TREES AND SHRUBS SHALL BE MULCHED TO A MINIMUM OF 18" BEYOND THE EDGE OF THE ROOT BALL. SHRUBS/MASSES SHALL BE PLANTED IN CONTINUOUS MULCH BEDS. ALL WIRE, PLASTIC AND TWINE TIES SHALL BE REMOVED FROM TOP OF THE ROOT BALL.

PLANT STANDARDS
 ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERMEN, INC. "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION. INFERIOR NURSERY STOCK WILL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT. BARE-ROOT SHALL NOT BE ALLOWED FOR ANY TREE DEFINED AS MAJOR DECIDUOUS, MINOR DECIDUOUS OR EVERGREEN.

CHANGES MAY IMPACT REQUIRED CERTIFICATION
 PLANT TYPES (DECIDUOUS TREES, EVERGREEN ETC.), QUANTITIES, SPACING, LOCATION, AND SPECIES SHOWN ON THE APPROVED LANDSCAPE PLAN ARE BASED ON REQUIREMENTS STATED IN THE LATEST BALTIMORE COUNTY LANDSCAPE MANUAL ANY CHANGE IN THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE INSTALLED PLANTING. OWNER IS REQUIRED TO ARRANGE AND PAY FOR CERTIFICATION BY LANDSCAPE ARCHITECT.

LANDSCAPE SPECIFICATIONS
 LANDSCAPE SPECIFICATION SHALL CONFORM TO LCA LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREA, INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIAL BEDS. A ONE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO HONOR THE ONE-YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT.

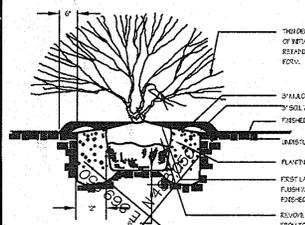
SPECIAL PROVISIONS TO LCA STANDARD SPECIFICATIONS
 CONTRACTOR IS ENCOURAGED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTING WILL NOT VOID GUARANTEE PROVISIONS.

CONTRACTOR SHALL REVIEW AND TEST SUBSOIL DRAINAGE CHARACTERISTICS 30 DAYS PRIOR TO PLANTING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS.

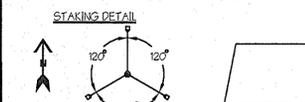
NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS AGREED TO IN WRITING PRIOR TO PLANTING.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$116,000.00.

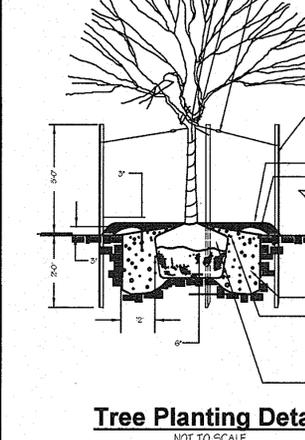
THE OWNER, TENANT, AND / OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED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



Shrub Planting Detail
 NOT TO SCALE



Tree Planting Detail
 NOT TO SCALE



Tree Planting Detail
 NOT TO SCALE

PLANT SCHEDULE

KEY	QUANT.	BOTANICAL NAME/COMMON NAME	SIZE/COND.	SPACING	REMARKS
LARGE TREES					
AS	18	Acer saccharum / Green Mountain / Green Mountain Sugar Maple	2 1/2-3" cal / B&B	25' o.c. as shown	full crown
AR	12	Acer rubrum / October Glory / October Glory Red Maple	2 1/2-3" cal / B&B	25' o.c. as shown	full crown
FP	24	Fraxinus pennsylvanica / Patmore / Patmore Green Ash	2 1/2-3" cal / B&B	25' o.c. as shown	full crown
KP	15	Koeleruteria paniculata / Golden Rain Tree	2-2 1/2" cal / B&B	15' o.c. as shown	matched
AL	24	Amelanchier x grandiflora / Lamarkii / Lamarkii Serviceberry	8-10" ht. / B&B	15' o.c. as shown	multi-stem, matched
SMALL TREES					
AP	40	TAXUS PENNSYLVANICA / Taxus / William Penn Barberry	24-30" ht. / cont.	4' o.c. as shown	
BX	75	Barberis x gladiolensis / Wm. Penn / William Penn Barberry	24-30" spr. / cont.	4' o.c. as shown	

- KEY**
- EXISTING TREE
 - ⊗ PROPOSED SHADE TREE
 - ⊗ PROPOSED ORNAMENTAL TREE
 - ⊗ PROPOSED SHRUBS

DEVELOPER'S / BUILDER'S CERTIFICATION

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

David E. Meiners
 NAME
 DAVID E. MEINERS
 PRINT NAME

3/29/08
 DATE

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER _____ DATE _____

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE DATE _____

APPROVED: Howard County Department of Planning and Zoning

Chief, Development Engineering Division 9/16/08
 DATE

Chief, Division of Land Development 10/16/08
 DATE

Director 10/16/08
 DATE

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
Building #1	7055 Troy Hill Drive
Building #2	7045 Troy Hill Drive

SUBDIVISION NAME TROY HILL CORPORATE CENTER
SECTION NAME 1
PARCEL # A-2

PLAT # 12428 **BLOCK #** 17 **ZONE** M-1 **ELECT. DIST.** 1st **CENSUS TRACT** 6011.02

WATER CODE C04 **SEWER CODE** 4020000

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
 Civil Engineers and Land Surveyors
 658 Kenilworth Drive, Suite 100
 Towson, Maryland 21204
 (410) 825-8120

OWNER/DEVELOPER

TROY HILL BUSINESS PARK PARTNERSHIP
 c/o MANEKIN COPORATION
 7165 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046
 410-290-1400

REVISION	DATE	DESCRIPTION
1	10-31-02	REV. PER AS-BUILT CONDITIONS
2	5/19/11	ADD LOADING RAMP & STEPS

LANDSCAPE PLAN
 FOR
TROY HILL CORPORATE CENTER
 PHASE 1 PARCEL A-2
 PREVIOUS FILE #S 590-05, P90-25, F91-24, WP 96-91, P96-136
 HOWARD COUNTY, MARYLAND
 1st ELECTION DISTRICT

SHEET 19 OF 19
 SCALE: AS SHOWN
 JUNE 03, 1998

SDP 98-114 P.N.: 0150 K.E. NAME: landscape01 08-24-98